

Product Range

# PVC-U



# List of abbreviations

ANSI	American National Standard	Tg	Malleable Iron
ASTM	American Society for Testing and Materials	d	Pipe outside diameter
BS	British Standard	FM	Fusion Method
DIN	Deutsche Industrie-Normen	DN	Nominal diameter
ISO	International Standardization Organisation	PN	Nominal pressure at 20°C, water
ABS	Acrylnitril Butadien Styrene	kg	Weight in kilograms
PVC-U	Polyvinyl Chloride unplasticized	g	Weight in grams
PVC-C	Polyvinyl Chloride chlorinated	SP	Standard pack. The figure given indicates the quantity of fittings contained in a standard pack
PP	Polypropylene, heat stabilised	GP	Gross pack. The figure given indicates the quantity of fittings contained in a gross pack
PP-N	Polypropylene, Random copolymer unpigmented	G	Pipe thread, not pressure tight in the thread to ISO 228/1
PE	Polyethylene	NPT	Taper male thread pressure tight in the thread to ANSI B 1.20.1
PVDF	Polyvinylidene fluoride	R	Taper male thread, pressure tight in the thread to ISO 7/DIN 2999/1
EPDM	Ethylene Propylene Diene Monomer	Rc	Taper female thread, pressure tight in the thread to ISO 7/1
FKM	Fluorine Rubber, e.g. Viton®	Rp	Parallel female thread, pressure tight in the thread to ISO 7/DIN 999/1
NBR	Nitrile Butadiene Rubber	Tr	Trapezoid thread
IIR	Butyl Rubber	SC	Size of hexagon bolts
CSM	Chlore Sulphonyl Polythene, e.g. Hypalon®	s	A/F
CR	Chloroprene Rubber, e.g. Neoprene®	e	Wall thickness
PROGEF	GF of PP	AL	Number of bolt holes
PTFE	Polytetrafluorethylene, e.g. Teflon®	®	Registered trade-mark
UP-GF	Unsaturated polyester resin glassfibre reinforced		
St	Steel		
Ms	Brass		

# Building the lifelines of the world

GF Piping Systems is the global expert for the safe and reliable transportation of water, chemicals, and gas. The maintenance-free and long-lived piping systems made of plastics help implement vital applications of our customers faster, more cost-effectively and more sustainably. GF Piping Systems supports its customers throughout all phases of their projects from planning to commissioning.

## + Maintenance-free plastic

Piping systems made of plastics are maintenance-free, light and very durable. They help reduce repair and overall costs and are suitable for the transport of drinking water, abrasive and aggressive liquids, as well as gas.

## + Complete system solutions

With more than 60'000 products, GF Piping Systems can offer complete system solutions. In addition, custom-made special parts and special series are also possible. Customers benefit from perfectly matched solutions from a single source.

## + Local support

GF Piping Systems has its own sales companies in 31 countries, which means it is always by its customers' side. Our production sites in 36 locations in America, Europe, and Asia ensure sufficient availability and quick, reliable delivery.

## + Service in all project phases

GF Piping Systems supports its customers both in the initial switch from metal to plastic and in retrofits – across all project phases. They benefit from more than 60 years of experience in plastic systems and application knowledge from 100 countries.

## + Partner for digitization

With its advanced automation and digitization solutions, GF Piping Systems allows its customers to optimize their applications and gives them easier access to their system data. Digital tools support you in every phase of the project.

## Facts and figures

- **Established:** 1802 (Georg Fischer AG) in Schaffhausen, Switzerland
- **Locations:** 31 countries with own sales offices
- **Turnover:** CHF 1.7082 billion (2020)
- **Employees:** 6'893 (2020)



The GF Piping Systems plant in Schaffhausen, Switzerland.

# Value added services

## From planning support to implementation – our specialists are always close by

As a leading provider of piping systems, we offer our customers not only reliable products, but also a large package of services. Our support ranges from a comprehensive technical manuals or the extensive CAD library to an international team of experts, who work closely together with local sales companies. And when it comes to implementing a project, our customers additionally benefit from a wide range of training courses, either on site or in our modern training centres worldwide.

Generating a genuinely individual added value for our customers is our ultimate goal when implementing our tailor-made solutions. With our application knowledge and product expertise, we support our customers during the planning process, the sustainable realization of the projects and the provision of services. Our expertise in developing and producing piping systems, combined with our profound industry and market knowledge, based on longstanding experience, makes us a qualified and professional partner for our customers.

### 1 Chemical resistance

Our specialist teams have decades of experience in the area of chemical resistance. They can offer individual support and advice in selecting the right material for the corresponding system solution. On request, a team will examine and select the appropriate material for special applications.

### 2 CAD library

The extensive CAD library is the most frequently used planning tool at GF Piping Systems. The database comprises over 30'000 drawings and additional technical data regarding pipes, fittings, measurement and control technology as well as manual and actuated valves. The main advantage of the CAD library is that the data can be integrated directly in CAD models.

### 3 Technical support

Technical support and material selection are key factors for a successful installation. A team of specialists headquartered in Switzerland is available to support the GF Piping Systems sales companies around the world. For technical advice or for general information, our customers are supported individually by the specialist team in the corresponding sales company.

### 4 Online and mobile calculation tools

Our numerous, multilingual online calculation tools are very useful for configurations and calculations. By means of pressure / temperature diagrams, the pressure of liquid media recommended for pipes and fittings at various temperatures can be easily defined. FlowCalc App, the mobile application of GF Piping Systems, is an on-site planning tool for pipe diameter and flow velocity calculation to select the right dimension of piping systems when no expert is near by.

### 5 On-site training

Our experts are available to support our customers locally and conduct trainings in diverse fusion and jointing techniques at their location. The duration and structure of the training depends on the project and the system being installed.

### 6 Customizing

The customizing teams at GF Piping Systems work closely together around the globe. The focus of these teams is to manufacture custom parts for special systems. In addition, a variety of special solutions can be produced in small series. Standardized processes warrant the highest level of quality for individual solutions of our customers.



**7 Technical manual**

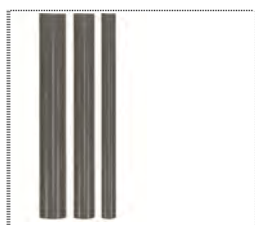
For our customers, we have documented the extensive know-how of GF Piping Systems in planning and installing plastic piping systems in our technical manual. This detailed documentation is available in both printed and digital version. The additional reference book is helpful in planning large and small projects.

**8 Training courses**

GF Piping Systems offers a wide range of training courses that allow participants to gain confidence in working with our products and proven jointing technologies. The practical training is clearly defined, structured and adapted to the various levels of participants' experience.

## PVC-U Piping System

The piping system made of PVC-U material can be used for operating temperatures in the range of 0 °C to +60 °C. Thanks to outstanding chemical resistance, PVC-U piping systems withstand demanding conditions, particularly during the transport of aggressive media, such as acids, bases and salts. The PVC-U piping system is used primarily in the chemical and textile industries, in water treatment and drinking water purification as well as in vacuum lines.



Pipes



Fittings



Jointing technology



Automation



Valves

### Essential system properties

- Food and drinking water approvals, proven physiological harmless
- First-class solution for aggressive media, such as acids, bases and salts
- Possible compact plant construction using PRO-FIT spigots, sockets, fittings
- Safe and simple joining technologies with low costs for tools and materials

### Most important market segments

- Water treatment
- Chemical process industry
- Marine

### Technical data

Nominal pressure	Up to 16 bar
Temperature range	0 °C to +60 °C
Jointing technology	Solvent cementing
Standards and guidelines <sup>1)</sup>	ISO, EN ISO, BS, DIN, DVS, JIS
Approvals <sup>1)</sup>	DIBt, GOST-R, DGS (ACS), KIWA, CSTB, IIP, ABS, BV, CCS, DNV, GL, LR, RINA, RMROS, BSI, LR

<sup>1)</sup> For additional information about standards, guidelines and approvals, see [www.gfps.com](http://www.gfps.com)

## PVC-U product overview

The following table uses metric units of measure.

Products	PN (bar)	d (mm)	
		DN (mm)	
		6	8
		10	12
		16	20
		25	32
		40	50
		63	75
		90	110
		125	140
		160	180
		200	225
		250	280
		300	315
		355	400
		400	
Pipes	16		
	10		
	4		
	6		
Fittings	16		
	10		
	6		
Ball valves	10		
Butterfly valves	16		
	10		
	6		
Check valves	16		
Diaphragm valves	10		
Pressure regulating valves	10		
Flanges			
Gaskets and pipe clips			
Automation			

The following table uses units of measure based on the BS inch system.

Products	PN (bar)	d (mm)																
		3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"
	15 - class E																	
	12 - class D																	
	12 - class T																	
Pipes	9 - class C																	
	15 - class E																	
Fittings	9 - class C																	
Ball valves	16																	
Butterfly valves	9																	
Check valves	10																	
Diaphragm valves	10																	
Pressure regulating valves	10																	
Flanges																		
Gaskets and pipe clips																		
Automation																		

For more information about the system specification of PVC-U, visit [www.gfps.com](http://www.gfps.com)

# Polyvinyl chloride, unplasticized (PVC-U)



## PVC-U properties (reference values)

Property	Value <sup>1</sup>	Units	Test standard
Density	1.38	g/cm <sup>3</sup>	EN ISO 1183-1
Yield stress at 23 °C	≥ 54	N/mm <sup>2</sup>	EN ISO 527-1
Tensile e-modulus at 23 °C	≥ 2,700	N/mm <sup>2</sup>	EN ISO 527-1
Charpy notched impact strength at 23 °C	≥ 3	kJ/m <sup>2</sup>	EN ISO 179-1/1eA
Charpy notched impact strength at 0 °C	≥ 2	kJ/m <sup>2</sup>	EN ISO 179-1/1eA
Vicat-heat distortion temperature B/50N	≥ 76	°C	ISO 306
Thermal conductivity at 23 °C	0.15	W/m K	EN 12664
Water absorption at 23 °C	≤ 0.1	%	EN ISO 62
Color	7,011	-	RAL
Limiting oxygen index (LOI)	42	%	ISO 4589-1

<sup>1</sup> Typical characteristics measured at the material should not be used for calculations.



## General

Polyvinylchloride (PVC) is one of the most important and oldest plastics. Worldwide consumption of PVC is exceeded only by PE and PP. PVC was produced for the first time as early as the middle of the 19th century. But an industrial manufacturing process was not patented until the year 1913. Nowadays, many industrial applications could not be implemented without PVC, but PVC has also become irreplaceable in the use of daily products.

PVC is a polymer having approximately 56 % by weight of chlorine. The PVC resin becomes a processable and usable material only by using additives. The choice of the additives allows a wide variation of its characteristics and an adjustment to the planned application. There are two classes of PVC materials. Soft PVC (PVC-P) which is created by adding plasticizers (e.g. phthalates). This type is not used at GF Piping Systems. Hard PVC, also called unplasticized PVC (PVC-U), is used for piping system construction.

PVC-U is an amorphous thermoplastic. The properties of PVC-U molded parts are strongly dependent on the composition of the individual components, but also on the processing. Because of our 65 years of experience in PVC processing and the continuous advancement of our own formulation of materials, GF Piping Systems has become a benchmark in the field of PVC-U piping. Long-term creep strength was tested in long-term tests according to ISO 1167 and calculated according to ISO 9080. According to ISO 12162, our PVC-U types are classified as MRS 25.

## Advantages of PVC-U

- Versatility of use
- Very good chemical and corrosion resistance
- Proven physiological harmlessness and therefore suitable for contact with food
- No influence on drinking water quality
- Biologically inert; no support of microbial growth
- High mechanical tensile strength
- Secure solvent cementing using Tangit
- Use of tin stabilizers for fittings and valves





### UV and weather resistance

PVC-U is very weather-resistant. Even longer exposure to direct sunlight, wind and rain does hardly any damage to the material. In extreme applications, it can be advantageous to protect the material from direct sunlight exposure. Despite its very good weather resistance to ultraviolet radiation, PVC-U loses some of its impact strength. Contact your GF Piping Systems representative for suitable protective measures.



### Chemical resistance

PVC-U shows a good resistance against a broad range of media. For detailed information, observe the comprehensive list of chemical resistance from GF Piping Systems or contact an authorized GF Piping Systems representative.



### Abrasion resistance

As a relatively hard thermoplastic, the resistance of PVC-U against abrasive stress is lower than those of other pipe materials. For this reason, it is seldom used for applications in the area of solid transport.



### Application limits

The application limits of the material on the one hand depend on embrittlement and softening temperatures and on the other hand on the nature and the expected service life of the application. The pressure-temperature diagrams give details on application temperatures and pressures.



### Combustion behavior

The high chlorine content of PVC-U causes an advantageous combustion behavior. Self-ignition resulting from temperature influences occurs only at 450 °C. PVC-U burns when exposed to an open flame, but extinguishes immediately after removing the flame. The oxygen index (LOI) amounts to 42 % (materials that burn with less than 21 % of oxygen in the air are considered to be flammable).

PVC-U thus also falls in the best flammability class V0 according to UL94, and in the building materials classes:

- B1 (flame retardant) for pipe wall thicknesses less than 3.2 mm
  - B2 (normal flammable) for pipe wall thicknesses greater than 3.2 mm according to DIN 4102-1.
- According to the French test method NF P 92-501, PVC-U from GF Piping Systems is tested as M2.

Because the combustion of PVC-U produces hydrogen chloride, which forms a corrosive acid in connection with water, immediate cleaning of areas susceptible to corrosion is necessary after a fire. Danger to personnel from hydrochloric acid (HCl) is minimal because its pungent odor allows early escape from toxic combustion gases, mainly from the odorless carbon monoxide. There are no restrictions for the choice of firefighting agents.



### Electrical properties

PVC-U, like all unmodified thermoplastics, is non-conductive. This means that no electrochemical corrosion takes place in PVC-U systems. On the other hand, these non-conductive properties have to be taken into account because an electrostatic charge can develop in the piping. Special attention must be paid to this fact in environments in which explosive gases may occur. Various methods are available to prevent the occurrence of electrostatic charges. GF Piping Systems representatives can provide support in selecting the right one. The specific volume resistance is at least 1,015 Ωcm.




















### Physiological properties


















The PVC-U formulas were developed by GF Piping systems for use with drinking water and food. PVC-U's physiological harmlessness regarding neutral, acidic and alcoholic foodstuffs, and the non-influence on drinking water with respect to odor, taste or microbiological effects are not affected and regularly checked and monitored by neutral institutions in various countries. GF Piping Systems offers PVC-U systems free from lead and cadmium for your applications in the fields of drinking water or food. The residual monomer content of vinyl chloride lies below the detection limit of modern analytical methods. For details regarding existing approvals for applications with drinking water or foodstuffs, please contact your authorized GF Piping Systems representative.



Cover	1
PVC-U metric	12
PVC-U BS / JIS	348
PVC-U silicon free	500
Electric and pneumatic actuators	553
Solvent cements and tools	574
Spare parts	578
Index	625
Back cover and sales conditions	660

## PVC-U metric

	Pipes	16
	Fittings	21
	Adaptor fittings	32
	Threaded fittings	41
	Unions	44
	Seals	64
	Flange adaptors and flanges	67
	Branch and tapping saddles	73
	Saddles	75
	Installation fittings	76
	Ball valve type 546 Pro	114
	Accessory for Ball valve type 546 Pro	121
	Ball valve type 542	126
	Ball valves electric type 107	137
	Ball valves electric type 127 EA new	145
	Ball valves electric type 179 EA new	153
	Ball valves electric type 104	156

	Ball valves pneumatic type 230	158
	3-Way ball valves type 543	187
	3-Way ball valves electric type 167	199
	3-Way ball valves electric type 170	205
	3-Way ball valves electric type 189	207
	3-Way ball valves pneumatic type 285	209
	Metering ball valves type 523	217
	Laboratory ball valves	219
	Diaphragm valves	221
	Diaphragm valves pneumatic	242
	Diaphragm valves electric	264
	Butterfly valves type 567	269
	Butterfly valves electric type 145	274
	Butterfly valves pneumatic type 240	278
	Lugstyle butterfly valve type 578	281
	Lugstyle butterfly valves electric type 146	284
	Lugstyle butterfly valves pneumatic type 243	288



Pressure regulating valves

291



Process control valves

298



Cone check valves

303



Wafer check valves

314



Angle seat valves

317



Solenoid valves

319



Variable area flow meters

328



Strainers

340



Screen assemblies and Inspection glass

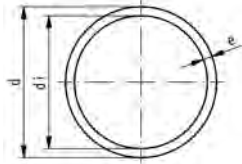
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Pipe clips

344

# Pipes

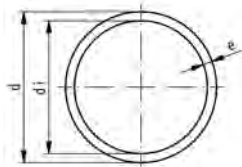


## Pipe PVC-U grey SDR13,6/PN16/S6,4

### Model:

- Material: PVC-U
- Dimension: acc. to DIN 8061/62
- Colour: darkgrey RAL 7011
- Pipe length: 5000mm, with plain ends
- \* SDR 11
- **Note 1:** DIBT Z-40.23-1 approval
- **Note 3:** DVGW approval + DIN plus
- Attention: Pressure rates refer to operating temperatures at 20°C. Higher temperatures and aggressive flow media reduce pressure load (see above DIN and our technical documentation). Pressure load capacity has to be determined in consideration with safety demands of the respective applications and calculated in accordance.

Note	d (mm)	SDR	PN (bar)	Code	Weight (kg/m)	e (mm)
*	12	11	16	<b>161 017 104</b>	0.062	1.1
1, 3	16	13.6	16	<b>161 017 105</b>	0.091	1.2
1, 3	20	13.6	16	<b>161 017 106</b>	0.139	1.5
1, 3	25	13.6	16	<b>161 017 107</b>	0.215	1.9
1, 3	32	13.6	16	<b>161 017 108</b>	0.347	2.4
1, 3	40	13.6	16	<b>161 017 109</b>	0.533	3.0
1, 3	50	13.6	16	<b>161 017 110</b>	0.821	3.7
1, 3	63	13.6	16	<b>161 017 111</b>	1.310	4.7
1, 3	75	13.6	16	<b>161 017 112</b>	1.850	5.6
1, 3	90	13.6	16	<b>161 017 113</b>	2.640	6.7
1, 3	110	13.6	16	<b>161 017 114</b>	3.910	8.1
1, 3	125	13.6	16	<b>161 017 115</b>	5.040	9.2
1, 3	140	13.6	16	<b>161 017 116</b>	6.030	10.3
1, 3	160	13.6	16	<b>161 017 117</b>	8.230	11.8



## Pipe PVC-U grey SDR9 High Performance

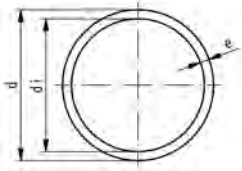
### Model:

- SDR 9 / High Performance
- Material: PVC-U
- Dimension: acc. to DIN 8061/62
- Colour: darkgrey RAL 7011
- Pipe length: 5000mm, with plain ends
- **Note 1:** DIBT Z-40.23-1 approval
- Attention: Pressure rates refer to operating temperatures at 20°C. Higher temperatures and aggressive flow media reduce pressure load (see above DIN and our technical documentation). Pressure load capacity has to be determined in consideration with safety demands of the respective applications and calculated in accordance.

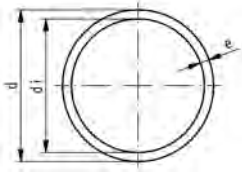
Note	d (mm)	SDR	PN (bar)	Code	Weight (kg/m)	e (mm)
1	6	9	16	<b>161 017 126</b>	0.025	1.0
1	8	9	16	<b>161 017 127</b>	0.035	1.0
1	10	9	16	<b>161 017 128</b>	0.054	1.2
1	12	9	16	<b>161 017 129</b>	0.074	1.4
1	16	9	16	<b>161 017 130</b>	0.125	1.8
1	20	9	16	<b>161 017 131</b>	0.199	2.3
1	25	9	16	<b>161 017 132</b>	0.299	2.8
1	32	9	16	<b>161 017 133</b>	0.489	3.6
1	40	9	16	<b>161 017 134</b>	0.761	4.5
1	50	9	16	<b>161 017 135</b>	1.180	5.6

table continued on the next page





Note	d (mm)	SDR	PN (bar)	Code	Weight (kg/m)	e (mm)
1	63	9	16	<b>161 017 136</b>	1.880	7.1
1	75	9	16	<b>161 017 137</b>	2.640	8.4
1	90	9	16	<b>161 017 138</b>	3.800	10.1
1	110	9	16	<b>161 017 139</b>	5.560	12.3

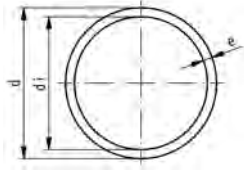


### Pipe PVC-U grey SDR21/PN10/S10

#### Model:

- Material: PVC-U
- Dimension: acc. to DIN 8061/62
- Colour: darkgrey RAL 7011
- Pipe length: 5000mm, with plain ends
- \* SDR 17
- **Note 1:** DIBT Z-40.23-1 approval
- **Note 3:** DVGW approval + DIN plus
- Attention: Pressure rates refer to operating temperatures at 20°C. Higher temperatures and aggressive flow media reduce pressure load (see above DIN and our technical documentation). Pressure load capacity has to be determined in consideration with safety demands of the respective applications and calculated in accordance.

Note	d (mm)	SDR	PN (bar)	Code	Weight (kg/m)	e (mm)	
*	1,3	25	17	10	<b>161 017 082</b>	0.177	1.5
*	1,3	32	17	10	<b>161 017 083</b>	0.280	1.9
	1,3	40	21	10	<b>161 017 084</b>	0.355	1.9
	1,3	50	21	10	<b>161 017 085</b>	0.560	2.4
	1,3	63	21	10	<b>161 017 086</b>	0.866	3.0
	1,3	75	21	10	<b>161 017 087</b>	1.240	3.6
	1,3	90	21	10	<b>161 017 088</b>	1.770	4.3
	1,3	110	21	10	<b>161 017 089</b>	2.650	5.3
	1,3	125	21	10	<b>161 017 090</b>	3.390	6.0
	1,3	140	21	10	<b>161 017 091</b>	4.240	6.7
	1,3	160	21	10	<b>161 017 092</b>	5.550	7.7
	1,3	180	21	10	<b>161 017 093</b>	6.970	8.6
	1,3	200	21	10	<b>161 017 094</b>	8.640	9.6
	1,3	225	21	10	<b>161 017 095</b>	10.900	10.8
		250	21	10	<b>161 017 096</b>	13.300	11.9
		280	21	10	<b>161 017 097</b>	16.800	13.4
		315	21	10	<b>161 017 098</b>	21.200	15.0

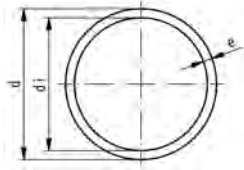


### Pipe PVC-U transparent SDR34,4/Series S16,7

**Model:**

- Material: PVC-U
- Dimension: acc. to DIN 8062
- Colour: transparent - Transparency depends on outer diameter and wall thickness! Chemical and thermal stress can cause discolouration
- Pipe length: 5000mm, with plain ends
- Approval: food grade, with declaration of conformity acc. EU 10/2011 and EU 1953/2004, Approval on request
- Attention: Pressure rates refer to operating temperatures at 20°C. Higher temperatures and aggressive flow media reduce pressure load (see above DIN and our technical documentation). Pressure load capacity has to be determined in consideration with safety demands of the respective applications and calculated in accordance.
- \* pcs in foil

	d SDR (mm)		Code	Weight (kg/m)	e (mm)
* 5	50	34.4	<b>192 017 060</b>	0.366	1.5
* 1	160	34.4	<b>192 017 080</b>	3.490	4.7

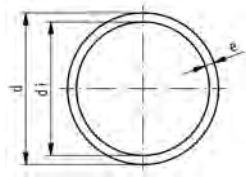


### Pipe PVC-U transparent SDR51/Series S25

**Model:**

- Material: PVC-U
- Dimension: acc. to DIN 8062
- Colour: transparent - Transparency depends on outer diameter and wall thickness! Chemical and thermal stress can cause discolouration
- Pipe length: 5000mm, with plain ends
- **Note 1:** Dimensional variations of wall thickness not acc. to DIN 8062
- Approval: food grade, with declaration of conformity acc. EU 10/2011 and EU 1953/2004, Approval on request
- Attention: Pressure rates refer to operating temperatures at 20°C. Higher temperatures and aggressive flow media reduce pressure load (see above DIN and our technical documentation). Pressure load capacity has to be determined in consideration with safety demands of the respective applications and calculated in accordance.
- \* pcs in foil

	Note	d SDR (mm)		Code	Weight (kg/m)	e (mm)	di (mm)
* 5	SDR 34,4	63	34.4	<b>192 017 036</b>	0.571	1.9	59.4
* 3	SDR 41	75	41	<b>192 017 037</b>	0.683	1.9	71.4
* 2		90	51	<b>192 017 038</b>	0.785	1.8	86.4
* 1	1	110	51	<b>192 017 039</b>	1.180	2.2	105.6
* 1		125	51	<b>192 017 040</b>	1.500	2.5	120.0
* 1		140	51	<b>192 017 041</b>	1.860	2.8	134.4
* 1		160	51	<b>192 017 042</b>	2.440	3.2	153.6
* 1		200	51	<b>192 017 044</b>	3.670	3.9	192.0
* 1	1	225	51	<b>192 017 045</b>	4.670	4.4	216.0
* 1		250	51	<b>192 017 046</b>	5.730	4.9	240.2
* 1	1	280	51	<b>192 017 047</b>	7.210	5.5	269.0

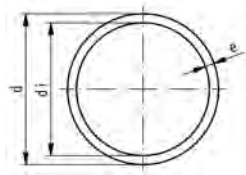


### Pipe PVC-U transparent SDR13,5/Series S6,3

#### Model:

- Material: PVC-U
- Dimension: acc. to DIN 8062
- Colour: transparent - Transparency depends on outer diameter and wall thickness! Chemical and thermal stress can cause discolouration
- Pipe length: 5000mm, with plain ends
- Food grade, with declaration of conformity acc. EU 10/2011 and EU 1953/2004
- Attention: Pressure rates refer to operating temperatures at 20°C. Higher temperatures and aggressive flow media reduce pressure load (see above DIN and our technical documentation). Pressure load capacity has to be determined in consideration with safety demands of the respective applications and calculated in accordance.
- \* SDR 11

	pcs in foil	Note	d (mm)	SDR	PN (bar)	Code	Weight (kg/m)	di (mm)	e (mm)
* 20	20	*	12	11	16	<b>192 017 104</b>	0.062	10.0	1.1
* 20	20		16	13.5	16	<b>192 017 105</b>	0.091	13.6	1.2
* 20	20		20	13.5	16	<b>192 017 106</b>	0.139	17.0	1.5
* 20	20		25	13.5	16	<b>192 017 107</b>	0.215	21.2	1.9
* 10	10		32	13.5	16	<b>192 017 108</b>	0.347	27.2	2.4
* 5	5		40	13.5	16	<b>192 017 109</b>	0.533	34.0	3.0
* 5	5		50	13.5	16	<b>192 017 110</b>	0.821	42.6	3.7
* 3	3		63	13.5	16	<b>192 017 111</b>	1.310	53.6	4.7

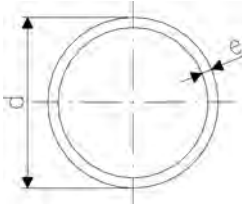


### Pipe PVC-U transparent SDR21 /Series S10

#### Model:

- Material: PVC-U
- Dimension: acc. to DIN 8062
- Colour: transparent - Transparency depends on outer diameter and wall thickness! Chemical and thermal stress can cause discolouration
- Pipe length: 5000mm, with plain ends
- Approval: food grade, with declaration of conformity acc. EU 10/2011 and EU 1953/2004, Approval on request
- Attention: Pressure rates refer to operating temperatures at 20°C. Higher temperatures and aggressive flow media reduce pressure load (see above DIN and our technical documentation). Pressure load capacity has to be determined in consideration with safety demands of the respective applications and calculated in accordance.
- \* SDR17
- \* pcs in foil

	Note	d (mm)	SDR	Code	Weight (kg/m)	e (mm)	di (mm)
* 20	*	25	17	<b>192 017 082</b>	0.177	1.5	22.0
* 10	*	32	17	<b>192 017 083</b>	0.280	1.9	28.4
* 10		40	21	<b>192 017 084</b>	0.355	1.9	36.2
* 5		50	21	<b>192 017 085</b>	0.560	2.4	45.2
* 3		63	21	<b>192 017 086</b>	0.866	3.0	57.0
* 3		75	21	<b>192 017 087</b>	1.240	3.6	67.8
* 2		90	21	<b>192 017 088</b>	1.770	4.3	81.4
* 1		110	21	<b>192 017 089</b>	2.650	5.3	99.4

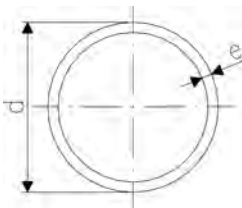


### Pipe PVC-U grey SDR34,4/PN6/S16,7

#### Model:

- Material: PVC-U
- Dimension: acc. to DIN 8061/62
- Colour: darkgrey RAL 7011
- Pipe length: 5000mm, with plain ends
- **Note 2:** according to DIN 8062
- Attention: Pressure rates refer to operating temperatures at 20°C. Higher temperatures and aggressive flow media reduce pressure load (see above DIN and our technical documentation). Pressure load capacity has to be determined in consideration with safety demands of the respective applications and calculated in accordance.

Note	d (mm)	SDR	PN (bar)	Code	Weight (kg/m)	e (mm)
2	50	34.4	6	161 017 060	0.366	1.5
2	63	34.4	6	161 017 061	0.571	1.9
2	75	34.4	6	161 017 062	0.793	2.2
2	90	34.4	6	161 017 063	1.150	2.7
2	110	34.4	6	161 017 064	1.660	3.2
2	125	34.4	6	161 017 065	2.160	3.7
2	140	34.4	6	161 017 066	2.690	4.1
2	160	34.4	6	161 017 067	3.490	4.7
2	180	34.4	6	161 017 068	4.430	5.3
2	200	34.4	6	161 017 069	5.440	5.9
2	225	34.4	6	161 017 070	6.850	6.6
2	250	34.4	6	161 017 071	8.430	7.3
2	315	34.4	6	161 017 072	13.300	9.2
2	355	34.4	6	161 017 073	17.000	10.4
2	400	34.4	6	161 017 074	21.400	11.7



### Pipe PVC-U grey SDR51/PN4/S25

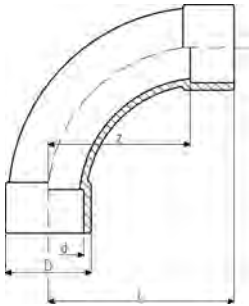
#### Model:

- Material: PVC-U
- Dimension: acc. to DIN 8061/62
- Colour: darkgrey RAL 7011
- Pipe length: 5000mm, with plain ends
- \* SDR 41
- **Note 2:** according to DIN 8062
- **Note 3:** DVGW approval + DIN plus
- Attention: Pressure rates refer to operating temperatures at 20°C. Higher temperatures and aggressive flow media reduce pressure load (see above DIN and our technical documentation). Pressure load capacity has to be determined in consideration with safety demands of the respective applications and calculated in accordance.

Note	d (mm)	SDR	PN (bar)	Code	Weight (kg/m)	e (mm)	
*	2	75	41	4	161 017 037	0.683	1.9
	2	90	51	4	161 017 038	0.785	1.8
	2	110	51	4	161 017 039	1.180	2.2
	2	125	51	4	161 017 040	1.500	2.5
	2	140	51	4	161 017 041	1.860	2.8
	2	160	51	4	161 017 042	2.440	3.2
	2	180	51	4	161 017 043	3.060	3.6
	2	200	51	4	161 017 044	3.670	3.9
	2	225	51	4	161 017 045	4.670	4.4
	2	250	51	4	161 017 046	5.730	4.9
	2	280	51	4	161 017 047	7.210	5.5
	2	315	51	4	161 017 048	9.150	6.2

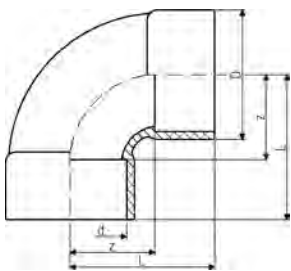
# Fittings

## Bend 90° PVC-U metric



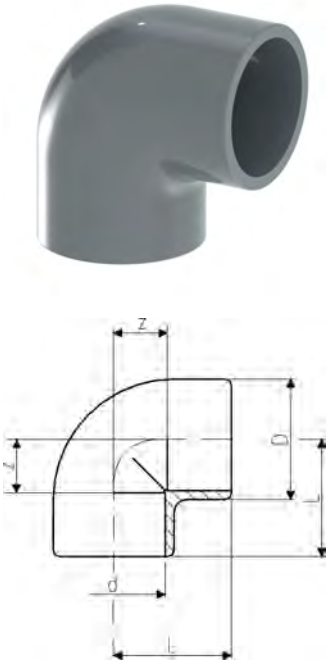
d (mm)	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	D (mm)	L (mm)
20		16	<b>721 000 106</b>	10	0.029	40	27	56
25		16	<b>721 000 107</b>	10	0.049	50	33	69
32		16	<b>721 000 108</b>	10	0.074	64	38	86
40		16	<b>721 000 109</b>	30	0.121	80	47	106
50		16	<b>721 000 110</b>	5	0.298	100	61	131
63		16	<b>721 000 111</b>	6	0.516	126	76	164
75	2 ½	16	<b>721 000 112</b>	5	0.798	150	90	194
90		16	<b>721 000 113</b>	5	1.373	180	108	231
110		16	<b>721 000 114</b>	5	2.699	220	137	281
140	5	16	<b>721 000 116</b>	2	5.204	280	168	356
160		16	<b>721 000 117</b>	1	8.298	320	192	406

## Bend 90° short pattern PVC-U metric



d (mm)	PN (bar)	Code	SP	Weight (kg)	z (mm)	D (mm)	L (mm)
225	10	<b>721 010 120</b>	1	7.554	168	256	287
280	10	<b>721 010 122</b>	1	16.100	210	318	357
315	6	<b>721 010 123</b>	1	21.567	237	356	402
400	6	<b>721 010 125</b>	1	30.000	300	442	521

### Elbow 90° PVC-U metric



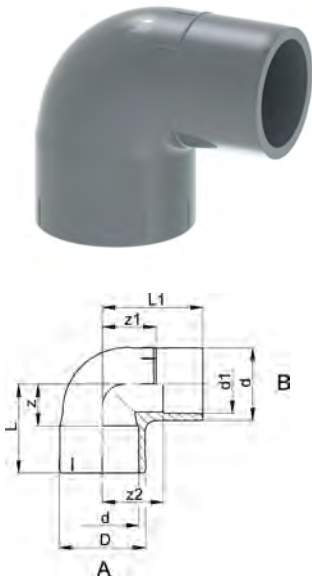
d (mm)	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	D (mm)	L (mm)
6		16	721 100 101	10	0.004	4	11	16
8		16	721 100 102	10	0.004	5	13	17
10		16	721 100 103	10	0.004	6	14	18
12		16	721 100 104	10	0.006	7	17	19
16		16	721 100 105	10	0.007	9	21	23
20		16	721 100 106	10	0.012	11	25	27
25		16	721 100 107	10	0.024	14	32	33
32		16	721 100 108	10	0.043	17	40	39
40		16	721 100 109	10	0.062	23	47	49
50		16	721 100 110	10	0.107	26	59	57
63		16	721 100 111	10	0.205	33	73	71
75	2 ½	16	721 100 112	5	0.336	40	87	83
90		16	721 100 113	5	0.576	46	105	97
110		16	721 100 114	4	1.009	55	128	116
125		16	721 100 115	1	1.522	63	146	131
140	5	16	721 100 116	4	1.945	70	162	146
160		16	721 100 117	5	2.873	80	185	166
200		10	721 100 119	1	4.446	101	225	207
225		10	721 100 120	1	5.989	114	252	233
250		10	721 100 121	1	10.014	131	282	263

### Elbow 45° PVC-U metric



d (mm)	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	D (mm)	L (mm)
16		16	721 150 105	10	0.008	5	21	19
20		16	721 150 106	10	0.011	5	25	21
25		16	721 150 107	10	0.017	6	31	25
32		16	721 150 108	10	0.021	8	38	30
40		16	721 150 109	10	0.048	10	47	36
50		16	721 150 110	5	0.086	12	59	43
63		16	721 150 111	5	0.160	14	73	52
75	2 ½	16	721 150 112	5	0.253	17	87	61
90		16	721 150 113	4	0.430	20	105	71
110		16	721 150 114	4	0.750	25	127	86
125		16	721 150 115	1	1.193	28	146	97
140	5	16	721 150 116	1	1.570	32	162	108
160		16	721 150 117	4	2.280	36	185	122
200		10	721 150 119	2	3.288	43	225	149
225		10	721 150 120	1	4.191	49	250	168
250		10	721 150 121	1	7.115	60	282	192
280		10	721 150 122	1	10.340	66	318	213
315		6	721 150 123	1	14.292	74	356	239
400		6	721 150 125	1	25.268	94	442	302

### PRO-FIT elbow 90° PVC-U metric

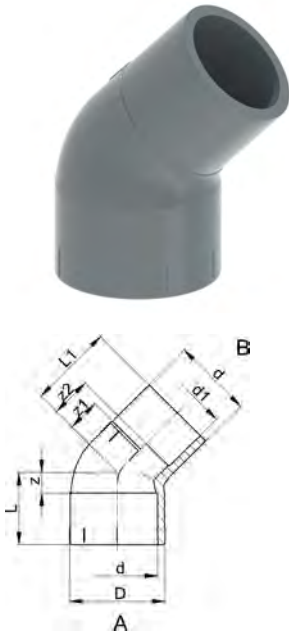


#### Model:

- Outlet: A = solvent cemented socket metric
- Outlet: B = solvent cemented spigot in combination with reducing socket metric
- Direct connection from fitting to fitting allowing shortest possible overall length

d (mm)	d1 (mm)	PN (bar)	Code	SP	Weight (kg)	z (mm)	z1 (mm)	z2 (mm)	D (mm)	L (mm)	L1 (mm)
20	16	16	721 100 306	10	0.011	11	16	18	25	27	32
25	20	16	721 100 307	10	0.020	14	18	21	31	33	37
32	25	16	721 100 308	10	0.038	17	22	25	38	39	44
40	32	16	721 100 309	10	0.069	23	30	34	47	49	56
50	40	16	721 100 310	10	0.122	26	36	41	58	57	67
63	50	16	721 100 311	10	0.237	33	45	52	73	71	83

### PRO-FIT elbow 45° PVC-U metric

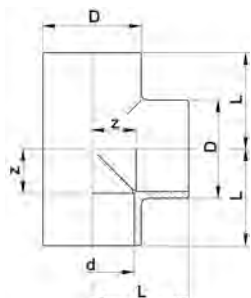


#### Model:

- Outlet: A = solvent cemented socket metric
- Outlet: B = solvent cemented spigot in combination with reducing socket metric
- Direct connection from fitting to fitting allowing shortest possible overall length

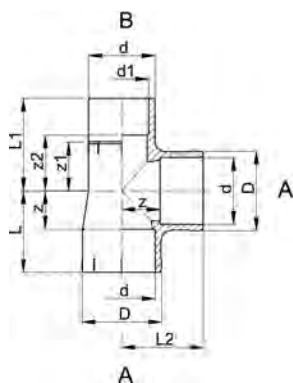
d (mm)	d1 (mm)	PN (bar)	Code	SP	Weight (kg)	z (mm)	z1 (mm)	z2 (mm)	D (mm)	L (mm)	L1 (mm)
20	16	16	721 150 306	10	0.010	5	9	11	25	21	25
25	20	16	721 150 307	10	0.015	6	11	14	31	25	30
32	25	16	721 150 308	10	0.027	8	13	16	38	30	35
40	32	16	721 150 309	5	0.053	10	17	21	47	36	43
50	40	16	721 150 310	5	0.090	12	18	23	58	43	49
63	50	16	721 150 311	5	0.175	14	23	30	73	52	61

### Tee 90° equal PVC-U metric



d (mm)	Size (inch)	PN (bar)	d (inch)	Code	SP	Weight (kg)	D (mm)	L (mm)	z (mm)
6		16		721 200 101	10	0.004	11	16	4
8		16		721 200 102	10	0.008	13	17	5
10		16		721 200 103	10	0.008	16	18	6
12		16		721 200 104	10	0.011	19	19	7
16		16		721 200 105	10	0.011	21	23	9
20		16		721 200 106	10	0.019	25	27	11
25		16		721 200 107	10	0.029	31	33	14
32		16		721 200 108	10	0.055	38	39	17
40		16		721 200 109	10	0.100	48	49	23
50		16		721 200 110	10	0.156	58	57	26
63		16		721 200 111	10	0.291	73	71	33
75	2 ½	16	2 ½	721 200 112	5	0.476	87	83	39
90		16		721 200 113	4	0.824	105	97	46
110		16		721 200 114	6	1.411	127	116	55
125		16		721 200 115	2	2.521	151	135	66
140	5	16	5	721 200 116	4	3.410	169	147	71
160		16		721 200 117	4	4.982	193	167	81
200		10		721 200 119	1	5.868	225	207	101
225		10		721 200 120	1	9.268	256	233	114
250		10		721 200 121	1	14.350	282	263	132
280		10		721 200 122	1	19.541	318	298	152
315		6		721 200 123	1	27.254	356	332	168
400		6		721 200 125	1	35.000	442	420	214

### PRO-FIT tee 90° equal PVC-U metric



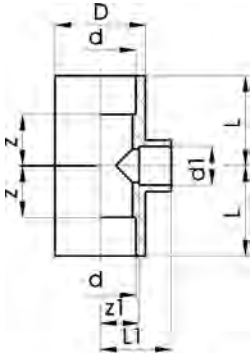
#### Model:

- Outlet: A = solvent cemented socket metric
- Outlet: B = solvent cemented spigot in combination with reducing socket metric
- Direct connection from fitting to fitting allowing shortest possible overall length

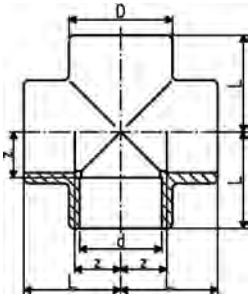
d (mm)	d1 (mm)	PN (bar)	Code	SP	Weight (kg)	z (mm)	z1 (mm)	z2 (mm)	D (mm)	L (mm)	L1 (mm)	L2 (mm)
20	16	16	721 200 306	10	0.017	11	17	19	25	27	33	27
25	20	16	721 200 307	10	0.022	14	19	22	31	33	38	33
32	25	16	721 200 308	10	0.051	17	24	27	38	39	46	39
40	32	16	721 200 309	10	0.098	23	30	34	47	47	56	49
50	40	16	721 200 310	10	0.164	26	36	41	58	57	67	57
63	50	16	721 200 311	10	0.329	33	45	52	73	71	83	71



Tee 90° reducing PVC-U metric

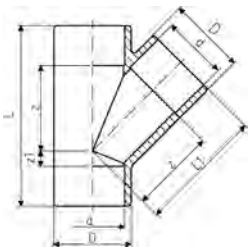


d (mm)	d1 (mm)	PN (bar)	Size (inch)	Code	SP	Weight (kg)	z (mm)	z1 (mm)	D (mm)	L (mm)	L1 (mm)
25	20	16		721 200 134	10	0.038	14	14	33	33	30
32	20	16		721 200 141	10	0.061	17	17	41	39	33
32	25	16		721 200 138	10	0.063	17	17	41	39	36
40	20	16		721 200 155	10	0.103	23	23	50	49	39
40	25	16		721 200 151	10	0.107	23	23	50	49	42
40	32	16		721 200 147	10	0.109	23	23	50	49	45
50	20	16		721 200 009	5	0.179	28	28	62	59	44
50	25	16		721 200 010	5	0.183	28	28	62	59	47
50	32	16		721 200 164	5	0.189	28	28	62	59	50
50	40	16		721 200 161	5	0.208	28	28	62	59	54
63	25	16		721 200 011	10	0.332	35	34	77	73	53
63	32	16		721 200 178	5	0.336	35	34	77	73	56
63	40	16		721 200 174	5	0.347	35	34	77	73	60
63	50	16		721 200 170	5	0.354	35	34	77	73	65
75	32	16	2 ½	721 200 181	9	0.535	40	41	92	84	63
75	40	16	2 ½	721 200 182	9	0.555	40	41	92	84	67
75	50	16	2 ½	721 200 183	8	0.541	40	41	92	84	72
75	63	16	2 ½	721 200 184	8	0.570	40	41	92	84	79
90	32	16		721 200 142	6	0.855	46	55	110	97	77
90	50	16		721 200 144	6	0.907	46	55	110	97	86
90	63	16		721 200 145	5	0.931	46	55	110	97	93
90	75	16		721 200 146	5	0.959	46	55	110	97	99
110	32	16		721 200 135	3	1.441	56	67	133	117	89
110	50	16		721 200 136	3	1.471	56	67	133	117	98
110	63	16		721 200 132	3	1.522	56	65	133	117	103
110	75	16		721 200 133	3	1.543	56	65	133	117	109
110	90	16		721 200 137	3	1.634	56	65	133	117	116
125	50	16		721 200 139	4	1.970	64	75	151	133	106
125	90	16		721 200 140	4	2.200	64	75	151	133	126
140	50	16	5	721 200 148	1	3.235	72	82	172	148	113
140	75	16	5	721 200 149	1	3.319	72	78	172	148	122
140	110	16	5	721 200 150	1	3.422	72	74	172	148	135
160	110	16		721 200 152	1	4.305	81	81	192	167	142
200	110	10		721 200 153	1	8.782	107	131	232	213	192
200	160	10		721 200 154	1	8.036	107	106	232	213	192
225	110	10		721 200 156	1	10.619	120	143	257	239	204
225	160	10		721 200 157	1	9.760	120	119	257	239	205
250	160	10		721 200 159	1	14.520	132	151	282	263	237
250	200	10		721 200 162	1	12.213	132	131	282	263	237
280	160	10		721 200 165	1	18.402	120	180	318	266	266
280	225	10		721 200 167	1	16.145	120	148	318	266	268
315	160	6		721 200 169	1	22.189	120	197	356	284	283
315	225	6		721 200 172	1	20.154	120	165	356	284	284
400	225	6		721 200 176	1	40.000	163	258	442	369	377
400	315	6		721 200 180	1	35.000	163	213	442	369	377



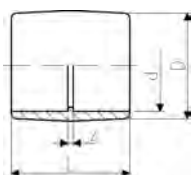
### Cross PVC-U metric

d (mm)	d (inch)	PN (bar)	Size (inch)	Code	SP	Weight (kg)	D (mm)	L (mm)	z (mm)
10		16		721 300 103	100	0.009	16	19	7
12		16		721 300 104	100	0.010	18	20	8
16		16		721 300 105	100	0.020	23	24	10
20		16		721 300 106	10	0.036	29	27	11
25		16		721 300 107	10	0.054	35	33	14
32		16		721 300 108	10	0.092	43	39	17
40		16		721 300 109	5	0.155	52	49	23
50		16		721 300 110	5	0.259	63	59	28
63		16		721 300 111	5	0.482	79	72	34
75	2 ½	10	2 ½	721 300 112	3	0.725	92	83	40
90		10		721 300 113	4	1.221	106	97	48
110		10		721 300 114	4	2.111	128	117	59



### Tee 45° PVC-U metric

d (mm)	d (inch)	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	z1 (mm)	D (mm)	L (mm)	L1 (mm)
10			10	721 250 103	100	0.013	18	4	16	46	30
12			10	721 250 104	100	0.014	21	4	18	49	33
16			10	721 250 105	100	0.022	25	5	23	58	39
20			10	721 250 106	10	0.035	30	6	28	68	46
25			10	721 250 107	10	0.056	36	9	33	83	55
32			10	721 250 108	10	0.096	45	10	41	99	67
40			10	721 250 109	10	0.159	56	10	50	118	82
50			10	721 250 110	8	0.265	66	12	60	140	97
63			10	721 250 111	5	0.439	85	14	74	175	123
75	2 ½	2 ½	6	721 250 112	5	0.816	101	18	91	207	145
90			6	721 250 113	1	1.275	122	20	107	245	173
110			6	721 250 114	3	2.579	149	27	134	298	210
125			6	721 250 115	2	3.616	167	30	147	335	236
140	5	5	6	721 250 116	1	5.628	190	34	168	376	266
160			6	721 250 117	1	7.187	213	41	190	428	300
200			6	721 250 119	1	12.314	265	48	232	527	372
225			6	721 250 120	1	15.735	296	54	260	590	416
250			6	721 250 121	1	20.350	330	60	286	654	462

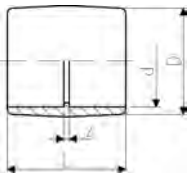


### Socket equal PVC-U metric

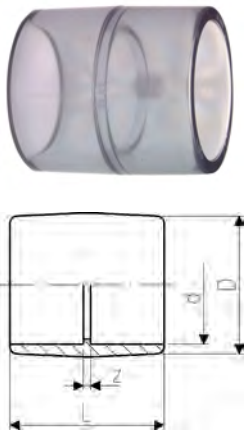
<sup>1</sup> Socket d355 and d400 fabricated from pipe. The socket length can vary up to +/- 20mm

d (mm)	d (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	D (mm)	L (mm)
6		16	721 910 101	10	0.004	3	12	27
8		16	721 910 102	10	0.005	3	14	27
10		16	721 910 103	1	0.004	3	16	27
12		16	721 910 104	1	0.004	3	19	27
16		16	721 910 105	10	0.006	3	22	31
20		16	721 910 106	10	0.011	3	26	35
25		16	721 910 107	10	0.015	3	32	41
32		16	721 910 108	10	0.026	3	39	47
40		16	721 910 109	10	0.045	3	48	55

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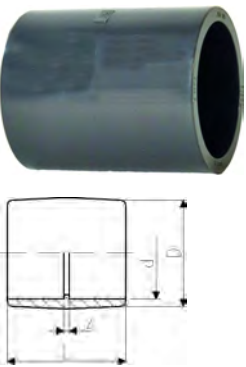


	d (mm)	d (inch)	PN (bar)	Code	SP Weight (kg)	z (mm)	D (mm)	L (mm)	
	50		16	<b>721 910 110</b>	10	0.064	3	58	65
	63		16	<b>721 910 111</b>	10	0.118	3	73	79
	75	2 ½	16	<b>721 910 112</b>	10	0.188	4	87	92
	90		16	<b>721 910 113</b>	10	0.328	5	105	107
	110		16	<b>721 910 114</b>	6	0.554	6	128	128
	125		16	<b>721 910 115</b>	3	0.825	7	142	145
	140	5	16	<b>721 910 116</b>	2	1.118	7	162	159
	160		16	<b>721 910 117</b>	2	1.540	8	183	180
	200		10	<b>721 910 119</b>	1	2.559	9	221	221
	225		10	<b>721 910 120</b>	2	3.519	10	253	248
	250		10	<b>721 910 121</b>	1	5.394	16	284	284
	280		10	<b>721 910 122</b>	1	8.312	16	321	314
	315		6	<b>721 910 123</b>	1	10.388	16	356	348
1	355		6	<b>721 910 124</b>		10.706	68	383	480
1	400		6	<b>721 910 125</b>		11.326	73	425	531



### Socket equal PVC-U transparent metric

	d (mm)	PN (bar)	Code	SP Weight (kg)	z (mm)	D (mm)	L (mm)	
	16	16	<b>752 910 105</b>	10	0.009	3	23	31
	20	16	<b>752 910 106</b>	1	0.012	3	27	35
	25	16	<b>752 910 107</b>	1	0.016	3	32	41
	32	16	<b>752 910 108</b>	1	0.027	3	40	47
	40	16	<b>752 910 109</b>	1	0.061	3	52	55
	50	16	<b>752 910 110</b>	1	0.068	3	60	65
	63	16	<b>752 910 111</b>	5	0.115	3	75	79



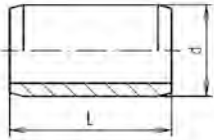
### Adaptor socket PVC-U metric Inch/BS

#### Model:

- With solvent cement sockets metric and BS inch

	d (mm)	PN (bar)	Size (inch)	d (inch)	Code	SP Weight (kg)	z (mm)	D (mm)	L (mm)	
	16	16	¾	¾	<b>721 913 105</b>	10	0.010	5	23	35
	20	16	½	½	<b>721 913 106</b>	10	0.012	5	27	38
	25	16	¾	¾	<b>721 913 107</b>	10	0.020	5	33	45
	32	16	1	1	<b>721 913 108</b>	10	0.031	5	41	51
	40	16	1 ¼	1 ¼	<b>721 913 109</b>	10	0.054	5	51	60
	50	16	1 ½	1 ½	<b>721 913 110</b>	10	0.074	4	59	65
	63	16	2	2	<b>721 913 111</b>	5	0.155	5	75	79
	90	16	3	3	<b>721 913 113</b>	10	0.340	6	104	108
	110	16	4	4	<b>721 913 115</b>	5	0.488	4	128	128

### Barrel nipple PVC-U metric

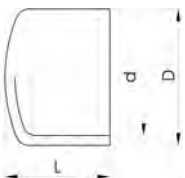


#### Model:

- With solvent cement spigots on both sides
- Overall length  $L = 2 \times$  socket length
- For the shortest possible distance between fittings

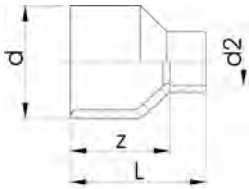
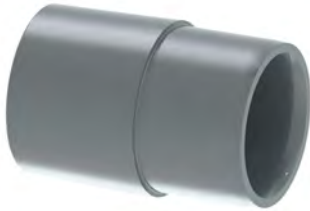
d (mm)	Size (inch)	PN (bar)	d (inch)	Code	Weight (kg)	L (mm)
16		16		<b>721 900 905</b>	0.002	28
20		16		<b>721 900 906</b>	0.005	32
25		16		<b>721 900 907</b>	0.009	38
32		16		<b>721 900 908</b>	0.015	44
40		16		<b>721 900 909</b>	0.027	52
50		16		<b>721 900 910</b>	0.048	62
63		16		<b>721 900 911</b>	0.092	76
75	2 ½	16	2 ½	<b>721 900 912</b>	0.156	88
90		16		<b>721 900 913</b>	0.260	102
110		16		<b>721 900 914</b>	0.455	122
125		16		<b>721 900 915</b>	0.673	138
140	5	16	5	<b>721 900 916</b>	0.932	152
160		16		<b>721 900 917</b>	1.565	192
200		10		<b>721 900 919</b>	1.779	212
225		10		<b>721 900 920</b>	2.566	238

### Cap PVC-U metric



d (mm)	d (inch)	PN (bar)	Code	SP	Weight (kg)	D (mm)	L (mm)
12		16	<b>721 960 104</b>	10	0.004	19	15
16		16	<b>721 960 105</b>	10	0.005	23	21
20		16	<b>721 960 106</b>	10	0.008	27	24
25		16	<b>721 960 107</b>	10	0.013	33	28
32		16	<b>721 960 108</b>	10	0.020	40	32
40		16	<b>721 960 109</b>	10	0.029	47	37
50		16	<b>721 960 110</b>	10	0.051	58	45
63		16	<b>721 960 111</b>	5	0.095	73	56
75	2 ½	16	<b>721 960 112</b>	5	0.152	87	65
90		16	<b>721 960 113</b>	5	0.269	105	77
110		16	<b>721 960 114</b>	12	0.457	128	94
140	5	10	<b>721 960 116</b>	10	1.036	164	114
160		10	<b>721 960 117</b>	2	1.534	188	130
200		10	<b>721 960 119</b>	3	2.614	230	170
225		10	<b>721 960 120</b>	2	3.320	257	185
280		10	<b>721 960 122</b>	1	6.200	318	230
315		6	<b>721 960 123</b>	1	8.500	356	255

## Reducing bush long PVC-U metric

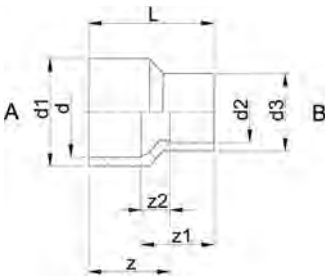


### Model:

- With solvent cement spigot and socket metric

d (mm)	d2 (mm)	PN (bar)	Size (inch)	Code	SP	Weight (kg)	z (mm)	L (mm)
8	6	16		721 910 323	10	0.003	15	27
10	6	16		721 910 326	10	0.003	15	27
10	8	16		721 910 325	10	0.003	15	27
20	16	16		721 910 334	10	0.009	21	35
25	20	16		721 910 337	10	0.014	25	41
32	25	16		721 910 341	10	0.024	30	49
40	32	16		721 910 346	10	0.044	36	58
50	40	16		721 910 352	10	0.074	44	70
63	50	16		721 910 358	5	0.148	54	85
75	63	16	2 ½	721 910 364	5	0.211	62	100
90	75	16		721 910 370	8	0.335	74	118
140	110	16	5	721 910 385	2	0.808	111	172

## PRO-FIT reducing bush PVC-U metric



### Model:

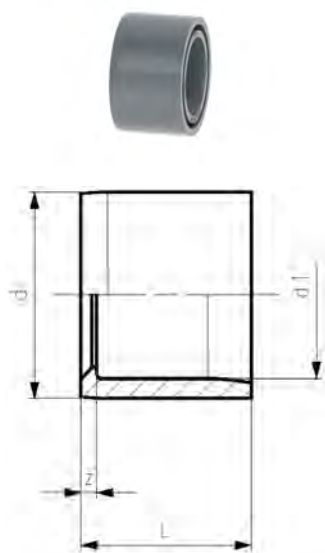
- Outlet: A and B = solvent cemented spigot in combination with reducing socket metric

d (mm)	d1 (mm)	d2 (mm)	d3 (mm)	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	z1 (mm)	z2 (mm)	L (mm)
10	14	8	12		16	721 910 903	10	0.003	15	15	3	27
12	16	8	12		16	721 910 905	10	0.004	18	18	6	30
12	16	10	16		16	721 910 906	10	0.004	18	18	6	30
16	20	10	16		16	721 910 908	10	0.003	21	19	7	33
16	20	12	16		16	721 910 909	10	0.004	21	19	7	33
20	25	12	16		16	721 910 910	10	0.008	25	21	9	37
20	25	16	20		16	721 910 911	10	0.008	25	23	9	39
25	32	12	16		16	721 910 912	10	0.014	30	23	11	42
25	32	16	20		16	721 910 913	10	0.015	30	26	12	44
25	32	20	25		16	721 910 914	10	0.017	30	27	11	46
32	40	16	20		16	721 910 915	10	0.025	36	28	14	50
32	40	20	25		16	721 910 916	10	0.026	36	30	14	52
32	40	25	32		16	721 910 917	10	0.031	36	33	14	55
40	50	20	25		16	721 910 918	10	0.045	44	34	18	60
40	50	25	32		16	721 910 919	10	0.052	44	37	18	63
40	50	32	40		16	721 910 920	10	0.058	44	40	18	66
50	63	25	32		16	721 910 921	5	0.092	54	42	23	73
50	63	32	40		16	721 910 922	5	0.098	54	45	23	76
50	63	40	50		16	721 910 923	5	0.111	54	49	23	80
63	75	32	40		16	721 910 924	5	0.127	62	46	24	84
63	75	40	50		16	721 910 925	5	0.139	62	50	24	88
63	75	50	63		16	721 910 926	5	0.167	62	55	24	93
75	90	40	50	2 ½	16	721 910 927	10	0.224	74	56	30	100
75	90	50	63	2 ½	16	721 910 928	10	0.253	74	61	30	105
75	90	63	75	2 ½	16	721 910 929	10	0.265	74	68	30	112

## Reducing bush short PVC-U metric

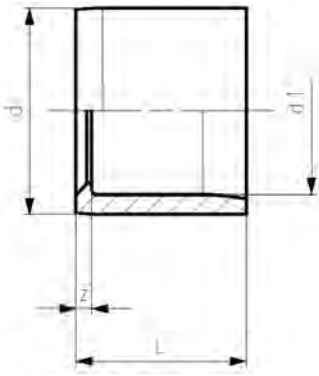
### Model:

- With solvent cement spigot and socket metric



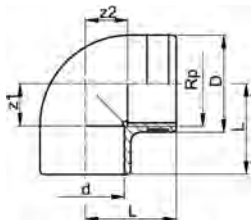
	d (mm)	d1 (mm)	PN (bar)	Size (inch)	Code	SP	Weight (kg)	z (mm)	L (mm)
*	12	8	16		721 900 329	1	0.002	2	14
*	16	12	16		721 900 331	10	0.002	2	14
*	20	16	16		721 900 334	10	0.002	2	16
*	25	20	16		721 900 337	10	0.004	3	19
*	32	20	16		721 900 342	10	0.014	6	22
*	32	25	16		721 900 341	10	0.009	3	22
	40	20	16		721 900 348	10	0.021	10	26
	40	25	16		721 900 347	10	0.021	7	26
*	40	32	16		721 900 346	10	0.016	4	26
	50	20	16		721 900 355	10	0.037	15	31
	50	25	16		721 900 354	10	0.034	12	31
	50	32	16		721 900 353	10	0.036	9	31
*	50	40	16		721 900 352	10	0.030	5	31
	63	32	16		721 900 360	10	0.064	16	38
	63	40	16		721 900 359	10	0.067	12	38
*	63	50	16		721 900 358	10	0.058	7	38
	75	50	16	2 ½	721 900 365	10	0.109	13	44
*	75	63	16	2 ½	721 900 364	10	0.078	6	44
	90	50	16		721 900 372	10	0.181	20	51
	90	63	16		721 900 371	12	0.183	13	51
*	90	75	16		721 900 370	10	0.135	7	51
	110	50	16		721 900 379	5	0.316	30	61
	110	63	16		721 900 378	5	0.308	23	61
	110	75	16		721 900 377	20	0.295	17	61
*	110	90	16		721 900 376	5	0.259	10	61
	125	90	16		721 900 381	5	0.465	18	69
*	125	110	16		721 900 380	5	0.267	8	69
	140	90	16	5	721 900 386	5	0.562	25	76
*	140	110	16	5	721 900 385	5	0.605	15	76
*	140	125	16	5	721 900 384	5	0.331	7	76
	160	90	16		721 900 391	6	0.751	35	86
	160	110	16		721 900 390	6	0.883	25	86
*	160	140	16		721 900 388	5	0.551	10	86
	200	110	10		721 900 393	3	1.985	45	108
	200	125	10		721 900 325	3	2.024	37	108
	200	140	10		721 900 394	3	1.928	29	108
*	200	160	10		721 900 392	2	1.085	20	108
	225	110	10		721 900 397	4	2.544	57	120
	225	125	10		721 900 399	4	2.563	49	120
	225	140	10		721 900 398	4	2.609	41	120
	225	160	10		721 900 396	2	2.199	31	119
*	225	200	10		721 900 181	9	1.360	13	119
	250	125	10		721 900 326	4	3.150	11	131
	250	140	10		721 900 300	4	3.200	54	133
	250	160	10		721 900 301	4	3.390	44	133
*	250	200	10		721 900 302	4	3.198	24	133
*	250	225	10		721 900 303	4	1.686	11	133
	280	140	10		721 900 307	1	4.157	69	148
	280	160	10		721 900 308	1	4.170	60	148
	280	200	10		721 900 304	1	4.577	39	148
*	280	225	10		721 900 305	1	4.409	27	146
*	280	250	10		721 900 306	1	2.515	14	148
	315	160	6		721 900 313	1	5.188	77	166
	315	200	6		721 900 309	1	5.480	57	166
	315	225	6		721 900 310	1	6.035	44	166
*	315	250	6		721 900 311	1	6.481	32	166
*	315	280	6		721 900 312	1	4.055	28	167
	355	315	6		721 900 315	1	5.792	23	206

table continued on the next page



	<b>d</b>	<b>d1</b>	<b>PN</b>	<b>Size</b>	<b>Code</b>	<b>SP</b>	<b>Weight</b>	<b>z</b>	<b>L</b>
	(mm)	(mm)	(bar)	(inch)			(kg)	(mm)	(mm)
	400	250	6		<b>721 900 319</b>	1	11.528	60	206
	400	280	6		<b>721 900 320</b>	1	11.366	60	206
*	400	315	6		<b>721 900 321</b>	1	13.006	42	206
*	400	355	6		<b>721 900 322</b>	1	7.524	22	206

# Adaptor fittings

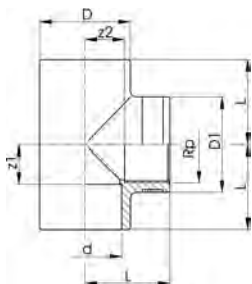


## Elbow 90° PVC-U metric Rp

### Model:

- With solvent cement socket metric and parallel female thread Rp
- Reinforcing ring stainless (A2)
- Connection to plastic or metal threads
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U

d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z1 (mm)	z2 (mm)	D (mm)	L (mm)
12	Rp	¼	16	<b>721 100 204</b>	10	0.010	7	7	20	19
16	Rp	⅜	16	<b>721 100 205</b>	10	0.015	9	9	25	23
20	Rp	½	16	<b>721 100 206</b>	10	0.023	13	11	30	27
25	Rp	¾	16	<b>721 100 207</b>	10	0.035	16	15	35	33
32	Rp	1	16	<b>721 100 208</b>	10	0.060	19	19	45	39
40	Rp	1 ¼	16	<b>721 100 209</b>	10	0.122	23	27	55	50
50	Rp	1 ½	16	<b>721 100 210</b>	5	0.187	27	36	62	58
63	Rp	2	16	<b>721 100 211</b>	10	0.324	33	46	75	73

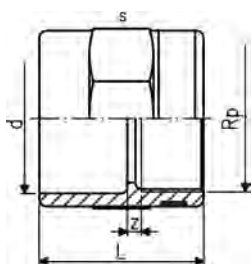


## Tee 90° PVC-U metric Rp

### Model:

- With solvent cement socket metric, branch with parallel female thread Rp
- Reinforcing ring stainless (A2)
- Connection to plastic or metal threads
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U

d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z1 (mm)	z2 (mm)	D (mm)	D1 (mm)	L (mm)
12	Rp	¼	16	<b>721 200 204</b>	10	0.015	7	7	17	20	19
16	Rp	⅜	16	<b>721 200 205</b>	10	0.027	9	9	21	25	23
20	Rp	½	16	<b>721 200 206</b>	10	0.029	11	13	26	30	29
25	Rp	¾	16	<b>721 200 207</b>	10	0.043	14	15	32	35	33
32	Rp	1	16	<b>721 200 208</b>	10	0.080	17	19	40	45	39
40	Rp	1 ¼	16	<b>721 200 209</b>	10	0.134	23	26	47	55	49
50	Rp	1 ½	16	<b>721 200 210</b>	5	0.212	27	36	59	59	59
63	Rp	2	16	<b>721 200 211</b>	5	0.379	33	46	74	75	71



## Adaptor socket PVC-U metric Rp Reinforced

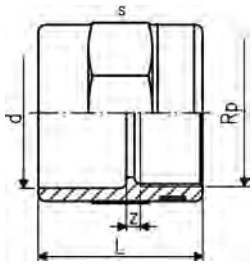
### Model:

- With solvent cement socket metric and parallel female thread Rp
- Reinforcing ring stainless (A2)
- Connection to plastic or metal threads
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U

d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	L (mm)	s (mm)
12	Rp	¼	16	<b>721 910 204</b>	10	0.010	4	27	22
16	Rp	⅜	16	<b>721 910 205</b>	10	0.016	5	31	27
20	Rp	½	16	<b>721 910 206</b>	10	0.025	5	36	32
25	Rp	¾	16	<b>721 910 207</b>	10	0.032	5	40	36

table continued on the next page





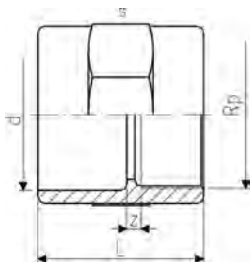
d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	L (mm)	s (mm)
32	Rp	1	16	<b>721 910 208</b>	10	0.057	5	45	46
40	Rp	1 ¼	16	<b>721 910 209</b>	10	0.087	5	51	55
50	Rp	1 ½	16	<b>721 910 210</b>	10	0.126	7	59	65
63	Rp	2	16	<b>721 910 211</b>	5	0.206	7	69	80



#### Adaptor socket PVC-U metric Rp

##### Model:

- With solvent cement socket metric and parallel female thread Rp
- Connection to plastic thread only
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U



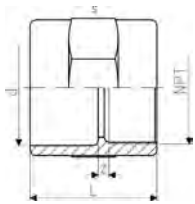
d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	L (mm)	s (mm)
75	Rp	2 ½	10	<b>721 916 012</b>	10	0.220	7	82	90
90	Rp	3	10	<b>721 916 013</b>	5	0.365	9	94	110
110	Rp	4	10	<b>721 916 014</b>	5	0.536	9	110	130



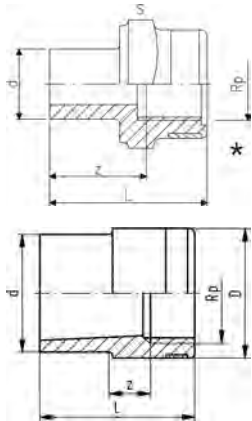
#### Adaptor socket PVC-U metric NPT

##### Model:

- With solvent cement socket metric and NPT (ASTM) taper female thread
- Connection to plastic thread only
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U



d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	L (mm)	s (mm)
20	NPT	¾	10	<b>721 914 206</b>	10	0.021	5	35	32
25	NPT	1	10	<b>721 914 207</b>	10	0.028	6	40	36
32	NPT	1 ¼	10	<b>721 914 208</b>	10	0.049	6	45	46
40	NPT	1 ½	10	<b>721 914 209</b>	100	0.076	6	51	55
50	NPT	2	10	<b>721 914 210</b>	10	0.110	10	59	65
63	NPT	2 ½	10	<b>721 914 211</b>	5	0.175	10	69	80

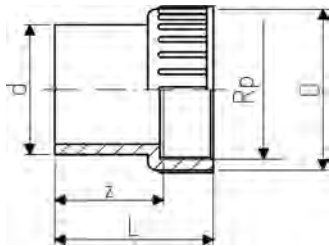


### Reducing bush PVC-U metric Rp

#### Model:

- With solvent cement spigot metric and parallel female thread Rp
- Reinforcing ring stainless (A2)
- Connection to plastic or metal threads
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U

	d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	D (mm)	L (mm)	s (mm)
*	12	Rp	½	16	<b>721 910 404</b>	10	0.008	3	20	27	22
	20	Rp	¾	16	<b>721 910 434</b>	10	0.014	7	25	35	
	25	Rp	½	16	<b>721 910 437</b>	10	0.021	7	30	41	
	32	Rp	¾	16	<b>721 910 441</b>	10	0.032	15	35	48	
	40	Rp	1	16	<b>721 910 446</b>	10	0.058	20	45	56	
	50	Rp	1 ½	16	<b>721 910 452</b>	10	0.097	20	55	66	
	63	Rp	1 ½	16	<b>721 910 458</b>	5	0.151	10	62	77	

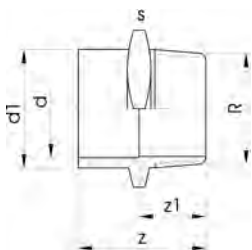


### Adaptor PVC-U metric Rp

#### Model:

- With solvent cement spigot metric and parallel female thread Rp
- Connection to plastic thread only
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U

	d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	D (mm)	L (mm)
	20	Rp	½	10	<b>721 900 406</b>	10	0.012	22	28	37
	25	Rp	¾	10	<b>721 900 407</b>	10	0.018	25	34	41
	32	Rp	1	10	<b>721 900 408</b>	10	0.035	29	42	48
	40	Rp	1 ¼	10	<b>721 900 409</b>	10	0.063	34	52	56
	50	Rp	1 ½	10	<b>721 900 410</b>	10	0.097	40	62	61
	63	Rp	2	10	<b>721 900 411</b>	5	0.170	49	77	74

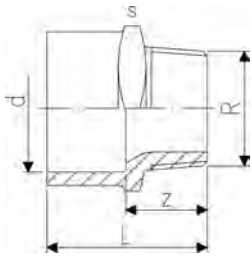


### Adaptor socket nipple PVC-U metric R

#### Model:

- With solvent cement spigot/socket reducing metric and taper male thread R
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U

	d (mm)	Thread Type	Size (inch)	PN (bar)	d1 (mm)	Code	SP	Weight (kg)	z (mm)	z1 (mm)	s (mm)
	12	R	¾	16	16	<b>721 910 555</b>	10	0.010	35	23	27
	16	R	½	16	20	<b>721 910 556</b>	10	0.016	42	28	32
	20	R	¾	16	25	<b>721 910 557</b>	10	0.023	47	31	36
	25	R	1	16	32	<b>721 910 558</b>	10	0.040	54	35	46
	32	R	1 ¼	16	40	<b>721 910 559</b>	10	0.061	60	38	55
	40	R	1 ½	16	50	<b>721 910 560</b>	10	0.094	66	40	65
	50	R	2	16	63	<b>721 910 561</b>	5	0.164	78	47	80



### Adaptor bush equal PVC-U metric R

**Model:**

- With solvent cement socket metric and taper male thread R
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U

d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	L (mm)	s (mm)
16	R	3/8	16	721 910 705	10	0.011	20	34	27
20	R	1/2	16	721 910 706	10	0.018	24	40	32
25	R	3/4	16	721 910 707	10	0.025	25	44	36
32	R	1	16	721 910 708	10	0.039	28	50	46
40	R	1 1/4	16	721 910 709	10	0.061	31	57	55
50	R	1 1/2	16	721 910 710	10	0.092	32	63	65
63	R	2	16	721 910 711	5	0.161	38	76	80
75	R	2 1/2	10	721 910 712	6	0.227	42	86	90
90	R	3	10	721 910 713	5	0.389	46	97	110
110	R	4	10	721 910 714	5	0.572	53	114	130

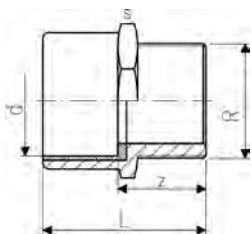


### Adaptor nipple PVC-U metric R

**Model:**

- With solvent cement spigot metric and taper male thread R
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U

d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)
16	R	3/8	10	721 913 505	10	0.006	31
20	R	1/2	10	721 913 506	10	0.010	35
25	R	3/4	10	721 913 507	10	0.017	40
32	R	1	10	721 913 508	10	0.026	46

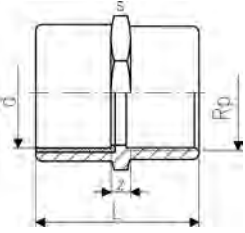


### Adaptor socket PVC-U metric brass R

**Model:**

- Brass with taper male thread R and PVC-U solvent cement socket insert, metric
- Install with low mechanical stress and avoid large cyclic temperature changes

d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	L (mm)	s (mm)
40	R	1 1/4	16	720 910 709	1	0.437	36	64	58
50	R	1 1/2	16	720 910 710	1	0.671	38	72	70
63	R	2	16	720 910 711	1	1.035	43	84	85



### Adaptor socket PVC-U metric brass Rp

**Model:**

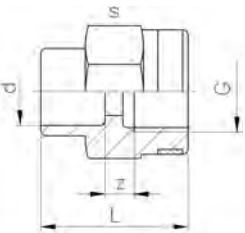
- Brass with parallel female thread Rp and PVC-U solvent cement socket insert, metric
- Install with low mechanical stress and avoid large cyclic temperature changes

d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP Weight (kg)	z (mm)	L (mm)	s (mm)	
40	Rp	1 ¼	16	<b>720 910 209</b>	1	0.482	17	66	58
50	Rp	1 ½	16	<b>720 910 210</b>	1	0.737	19	74	70
63	Rp	2	16	<b>720 910 211</b>	1	1.130	19	86	83

### Manometer adaptor sockets PVC-U metric G

**Model:**

- With solvent cement socket metric and female thread G
- Reinforcing ring stainless (A2)
- Connection to plastic or metal threads
- Do not use thread sealing pastes that are harmful to PVC-U
- Install with low mechanical stress and avoid large cyclic temperature changes

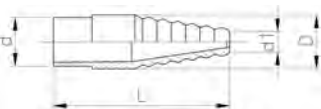


d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP Weight (kg)	z (mm)	L (mm)	s (mm)	
12	G	¼	16	<b>721 916 204</b>	10	0.010	4	27	22
16	G	½	16	<b>721 916 206</b>	10	0.026	7	36	32

### Laboratory hose connector PVC-U metric

**Model:**

- With solvent cement spigot metric and tapered hose connection



d (mm)	PN (bar)	Code	SP Weight (kg)	d1 (mm)	D (mm)	L (mm)	
10	16	<b>721 960 303</b>	10	0.004	6	12	51
12	16	<b>721 960 304</b>	10	0.004	6	12	51
16	16	<b>721 960 305</b>	10	0.007	8	16	57
20	16	<b>721 960 306</b>	10	0.016	11	22	73

### Hose connector PVC-U metric



**Model:**

- With solvent cement spigot metric and parallel hose connection

d (mm)	PN (bar)	Code	SP	Weight (kg)	D (mm)	L (mm)
10	16	721 960 403	10	0.002	8	47
12	16	721 960 404	10	0.003	12	51
16	16	721 960 405	10	0.008	16	57
20	16	721 960 406	10	0.016	20	73
25	16	721 960 407	10	0.021	25	79
32	16	721 960 408	10	0.035	30	89
32	16	721 960 508	10	0.035	32	89
40	16	721 960 409	5	0.060	40	100
50	16	721 960 410	5	0.112	50	105
63	16	721 960 411	5	0.180	60	120



### Hose connector PVC-U R

**Model:**

- With taper male thread R
- With parallel hose connector
- Do not use thread sealing pastes that are harmful to PVC-U

Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	D (mm)	L (mm)	s (mm)
R	¼	10	721 960 704	10	0.003	12	59	14
R	⅜	10	721 960 705	10	0.006	16	67	19
R	½	10	721 960 706	10	0.019	20	86	22
R	¾	10	721 960 707	10	0.026	25	92	27
R	1	10	721 960 708	5	0.048	30	103	36
R	1 ¼	10	721 960 709	5	0.079	40	115	46



### Hose connector PVC-U R reduced

**Model:**

- With taper male thread R
- With parallel hose connector
- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PVC-U

d (mm)	Thread Type	Size (inch)	Code	SP	Weight (kg)	s (mm)	L (mm)
14	R	½	721 961 706	10	0.012	22	70
20	R	¾	721 961 707	10	0.021	27	80
27	R	1	721 961 708	5	0.042	36	90

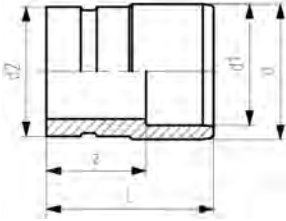
### Adaptor fitting PVC-U metric - Victaulic



**Model:**

- With solvent cement spigot and socket metric
- For metal couplings (type Victaulic)

d	Size	PN	d1	d2- victaulic	Code	SP Weight	L	z
(mm)	(inch)	(bar)	(mm)	(inch)		(kg)	(mm)	(mm)
50		10	40	1 1/2	<b>721 910 090</b>	50 0.150	71	45
63		10	50	2	<b>721 910 091</b>	50 0.200	78	47
75	2 1/2	10	63	2 1/2	<b>721 910 092</b>	50 0.250	84	46



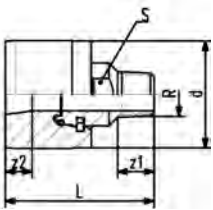
### Adaptor fitting PVC-U metric stainless steel R



**Model:**

- Stainless steel WN 1.4404 (316L) with taper male thread R
- Gasket: O-ring EPDM

d	Thread Type	Size	PN	Code	SP Weight	z1	z2	L	S
(mm)		(inch)	(bar)		(kg)	(mm)	(mm)	(mm)	(mm)
40	R	1/2	10	<b>721 940 631</b>	10 0.335	17.0	12.4	63.2	25
50	R	1/2	10	<b>721 940 632</b>	10 0.402	17.0	12.5	69.2	25
50	R	3/4	10	<b>721 940 633</b>	10 0.414	18.5	13.0	72.9	30
63	R	1/2	10	<b>721 940 634</b>	10 0.521	17.0	7.1	81.2	25
63	R	3/4	10	<b>721 940 635</b>	10 0.533	18.5	13.0	84.9	30
63	R	1	10	<b>721 940 636</b>	10 0.542	21.5	18.9	89.7	36



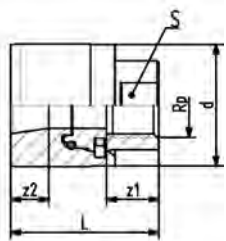
### Adaptor fitting PVC-U metric stainless steel Rp



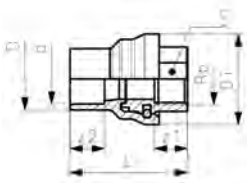
**Model:**

- Stainless steel WN 1.4404 (316L) with parallel female thread Rp
- Gasket: O-ring EPDM

d	Thread Type	Size	PN	Code	SP Weight	z1	z2	L	S
(mm)		(inch)	(bar)		(kg)	(mm)	(mm)	(mm)	(mm)
40	Rp	1/2	10	<b>721 940 131</b>	10 0.267	17.0	12.4	63.2	25
50	Rp	1/2	10	<b>721 940 132</b>	10 0.345	17.0	12.5	69.2	25
50	Rp	3/4	10	<b>721 940 133</b>	10 0.352	18.5	13.0	72.9	30
63	Rp	1/2	10	<b>721 940 134</b>	10 0.432	17.0	7.1	81.2	25
63	Rp	3/4	10	<b>721 940 135</b>	10 0.441	18.5	13.0	84.9	30
63	Rp	1	10	<b>721 940 136</b>	10 0.453	21.5	18.9	89.7	36



### Adaptor Fitting PVC-U metric stainless steel Rp

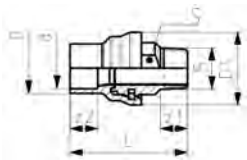


#### Model:

- Adaptor fitting equally suitable as socket and spigot
- Stainless steel WN 1.4404 (316L) with parallel female thread Rp
- Gasket: O-ring EPDM

d (mm)	Thread Type	Size (inch)	PN (bar)	D (mm)	Code	SP Weight (kg)	z1 (mm)	z2 (mm)	D1 (mm)	L (mm)	S (mm)	
20	Rp	½	16	25	<b>721 940 106</b>	10	0.095	17	17	40	70	25
25	Rp	¾	16	32	<b>721 940 107</b>	5	0.171	19	19	50	83	30
32	Rp	1	16	40	<b>721 940 108</b>	5	0.262	22	23	59	96	36

### Adaptor Fitting PVC-U metric stainless steel R

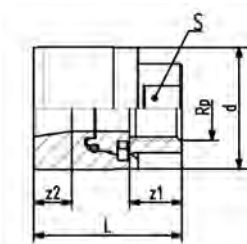


#### Model:

- Adaptor fitting equally suitable as socket and spigot
- Stainless steel with taper male thread R
- Gasket: O-ring EPDM

d (mm)	Thread Type	Size (inch)	PN (bar)	D (mm)	Code	SP Weight (kg)	D1 (mm)	S (mm)	z2 (mm)	z1 (mm)	L (mm)	
20	R	½	16	25	<b>721 940 606</b>	10	0.120	40	25	17	17	70
25	R	¾	16	32	<b>721 940 607</b>	5	0.213	50	30	19	19	83
32	R	1	16	40	<b>721 940 608</b>	5	0.320	59	36	23	22	96

### Adaptor fitting PVC-U metric brass Rp



#### Model:

- Brass with parallel female thread Rp
- Gasket: O-ring EPDM

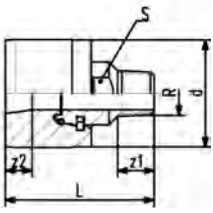
d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP Weight (kg)	z1 (mm)	z2 (mm)	L (mm)	S (mm)	
40	Rp	½	10	<b>721 950 131</b>	10	0.279	17.0	12.4	48.2	25
50	Rp	½	10	<b>721 950 132</b>	5	0.355	17.0	12.5	54.2	25
50	Rp	¾	10	<b>721 950 133</b>	10	0.362	18.5	13.0	54.9	30
63	Rp	½	10	<b>721 950 134</b>	10	0.526	17.0	7.1	66.2	25
63	Rp	¾	10	<b>721 950 135</b>	5	0.531	18.5	13.0	66.9	30
63	Rp	1	10	<b>721 950 136</b>	5	0.542	21.5	18.9	70.7	36



### Adaptor fitting PVC-U metric brass R

**Model:**

- Brass with taper male thread R
- Gasket: O-ring EPDM



d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z1 (mm)	z2 (mm)	L (mm)	S (mm)
40	R	½	10	721 950 631	10	0.352	17.0	12.4	63.2	25
50	R	½	10	721 950 632	10	0.438	17.0	12.5	69.2	25
50	R	¾	10	721 950 633	10	0.442	18.5	13.0	72.9	30
63	R	½	10	721 950 634	10	0.498	17.0	7.1	81.2	25
63	R	¾	10	721 950 635	10	0.512	18.5	13.0	84.9	30
63	R	1	10	721 950 636	10	0.521	21.5	18.9	89.7	36



### Adaptor Fitting PVC-U metric brass Rp

**Model:**

- Adaptor fitting equally suitable as socket and spigot
- Brass with parallel female thread Rp
- Gasket: O-ring EPDM



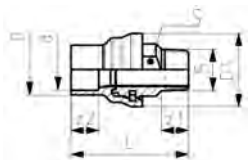
d (mm)	Thread Type	Size (inch)	PN (bar)	D (mm)	Code	SP	Weight (kg)	z1 (mm)	z2 (mm)	D1 (mm)	L (mm)	S (mm)
20	Rp	½	16	25	721 950 106	10	0.098	17.0	16.5	40	54.5	25
25	Rp	¾	16	32	721 950 107	5	0.181	18.5	19.0	50	65.2	30
32	Rp	1	16	40	721 950 108	5	0.270	21.5	22.5	59	76.5	36



### Adaptor Fitting PVC-U metric brass R

**Model:**

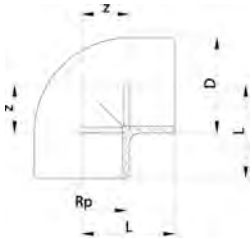
- Adaptor fitting equally suitable as socket and spigot
- Brass with taper male thread R
- Gasket: O-ring EPDM



d (mm)	Thread Type	Size (inch)	PN (bar)	D (mm)	Code	SP	Weight (kg)	z1 (mm)	z2 (mm)	D1 (mm)	L (mm)	S (mm)
20	R	½	16	25	721 950 606	10	0.129	17	17	40	70	25
25	R	¾	16	32	721 950 607	5	0.232	19	19	50	83	30
32	R	1	16	40	721 950 608	5	0.390	22	23	59	96	36



# Threaded fittings



## Elbow 90° PVC-U Rp

### Model:

- With parallel female thread Rp
- Connection to plastic thread only
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U

Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	D (mm)	L (mm)
Rp	3/8	10	721 101 605	10	0.013	9	23	23
Rp	1/2	10	721 101 606	10	0.017	12	27	27
Rp	3/4	10	721 101 607	10	0.029	15	33	33
Rp	1	10	721 101 608	10	0.042	19	39	39
Rp	1 1/4	10	721 101 609	10	0.070	27	48	49
Rp	1 1/2	10	721 101 610	5	0.178	35	61	59
Rp	2	10	721 101 611	5	0.322	44	75	72

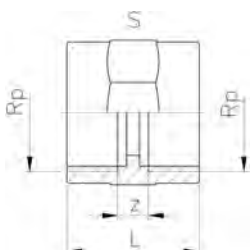


## Tee 90° equal PVC-U Rp

### Model:

- With parallel female thread Rp
- Connection to plastic thread only
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U

Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	D (mm)	L (mm)
Rp	3/8	10	721 201 605	10	0.016	9	23	23
Rp	1/2	10	721 201 606	10	0.027	12	28	27
Rp	3/4	10	721 201 607	10	0.039	15	33	33
Rp	1	10	721 201 608	5	0.072	19	41	39
Rp	1 1/4	10	721 201 609	100	0.146	27	50	49
Rp	1 1/2	10	721 201 610	10	0.267	36	62	60
Rp	2	10	721 201 611	10	0.485	44	77	72



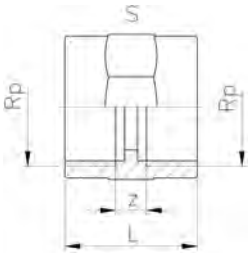
## Socket PVC-U Rp

### Model:

- With parallel female thread Rp
- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PVC-U
- Install with low mechanical stress and avoid large cyclic temperature changes

Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	L (mm)	s (mm)
Rp	1/4	10	721 910 604	10	0.010	7	27	22
Rp	3/8	10	721 910 605	10	0.015	7	29	27
Rp	1/2	10	721 910 606	10	0.024	9	35	32
Rp	3/4	10	721 910 607	10	0.029	9	39	36

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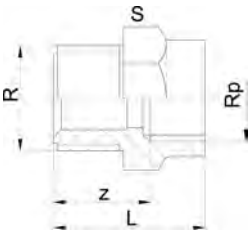
Thread Type	Size (inch)	PN (bar)	Code	SP Weight (kg)	z (mm)	L (mm)	s (mm)	
Rp	1	10	721 910 608	10	0.053	11	45	46
Rp	1 ¼	10	721 910 609	10	0.076	11	49	55
Rp	1 ½	10	721 910 610	10	0.106	11	49	65
Rp	2	10	721 910 611	5	0.180	11	57	80



### Reducing bush PVC-U R Rp

#### Model:

- With taper male thread R and parallel female thread Rp
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U



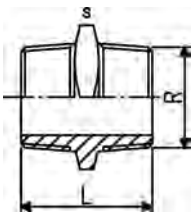
Thread Type	Size (inch)	Thread Type 2	Size 2 (inch)	PN (bar)	Code	SP Weight (kg)	z (mm)	L (mm)	s (mm)	
R	½	Rp	¾	10	721 910 834	10	0.014	25	36	27
R	¾	Rp	1	10	721 910 837	10	0.021	25	39	32
R	1	Rp	1 ½	10	721 910 842	10	0.029	31	45	32
R	1	Rp	¾	10	721 910 841	10	0.031	29	45	36
R	1 ¼	Rp	1	10	721 910 846	10	0.050	32	50	46
R	1 ½	Rp	1 ¼	10	721 910 852	10	0.065	35	55	55
R	2	Rp	1 ½	10	721 910 858	5	0.127	45	65	65



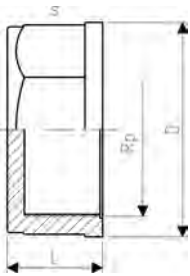
### Double nipple PVC-U R

#### Model:

- With taper male thread R
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U



Thread Type	Size (inch)	PN (bar)	Type	Code	SP Weight (kg)	L (mm)	s (mm)	
R	¾	10	A	721 911 905	10	0.007	37	19
R	1	10	A	721 911 906	10	0.012	45	22
R	1 ¼	10	A	721 911 907	10	0.019	49	27
R	1 ½	10	A	721 911 908	10	0.034	57	36
R	2	10	A	721 911 909	10	0.052	62	46
R	2	10	A	721 911 910	10	0.070	67	50
R	2	10	A	721 911 911	10	0.126	76	65



### Cap PVC-U Rp

**Model:**

- With parallel female thread Rp
- Connection to plastic thread only
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U

Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	D (mm)	L (mm)	s (mm)
Rp	3/8	10	<b>721 960 605</b>	10	0.012	31	19	27
Rp	1/2	10	<b>721 960 606</b>	10	0.018	37	21	32
Rp	3/4	10	<b>721 960 607</b>	10	0.024	42	24	36
Rp	1	10	<b>721 960 608</b>	10	0.040	50	26	46
Rp	1 1/4	10	<b>721 960 609</b>	10	0.060	60	29	55
Rp	1 1/2	10	<b>721 960 610</b>	10	0.072	65	31	60
Rp	2	10	<b>721 960 611</b>	5	0.127	81	36	75

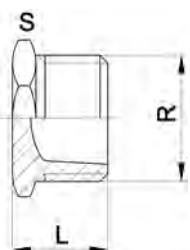


### Plug PVC-U G

**Model:**

- With parallel male thread G
- Flat gasket necessary for sealing
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U

Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	L (mm)	s (mm)
G	3/8	10	<b>721 960 905</b>	10	0.005	21	22
G	1/2	10	<b>721 960 906</b>	10	0.010	25	27
G	3/4	10	<b>721 960 907</b>	10	0.018	29	36
G	1	10	<b>721 960 908</b>	10	0.029	32	41
G	1 1/4	10	<b>721 960 909</b>	10	0.048	36	50
G	1 1/2	10	<b>721 960 910</b>	10	0.070	37	60
G	2	10	<b>721 960 911</b>	5	0.120	42	75



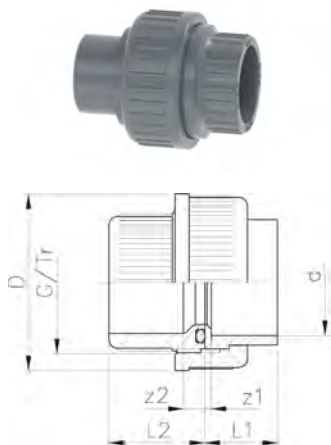
### Plug PVC-U R

**Model:**

- With taper male thread R
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U

Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	L (mm)	s (mm)
R	3/8	10	<b>721 961 905</b>	10	0.006	21	22
R	1/2	10	<b>721 961 906</b>	10	0.011	25	27
R	3/4	10	<b>721 961 907</b>	10	0.020	29	36
R	1	10	<b>721 961 908</b>	10	0.030	32	41
R	1 1/4	10	<b>721 961 909</b>	10	0.048	36	50
R	1 1/2	10	<b>721 961 910</b>	10	0.071	37	60
R	2	10	<b>721 961 911</b>	5	0.119	42	75

# Unions



## Union PVC-U metric

### Model:

- Union End: solvent socket metric
- Union Bush: Solvent socket metric
- Jointing face: With O-ring groove
- Gasket: O-Ring EPDM code no. 748 410 004-016; d90 748 410 248; FKM: 749 410 004-016; d90 749 410 248

d (mm)	d (inch)	Size (inch)	PN (bar)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
10			16	721 510 103	10	0.021	721 510 128
12			16	721 510 104	10	0.020	721 510 129
16			16	721 510 105	10	0.025	721 510 130
20			16	721 510 106	10	0.041	721 510 131
25			16	721 510 107	10	0.058	721 510 132
32			16	721 510 108	10	0.083	721 510 133
40			16	721 510 109	10	0.147	721 510 134
50			16	721 510 110	5	0.203	721 510 135
63			16	721 510 111	5	0.356	721 510 136
75	2 1/2	2 1/2	10	721 510 112	2	0.614	721 510 137
90			10	721 510 313	2	0.920	721 510 338
110			10	721 510 114	1	1.434	721 510 139

d (mm)	z1 (mm)	z2 (mm)	D (mm)	L1 (mm)	L2 (mm)	G/Tr (inch)
10	3	10	31	15	22	5/8
12	3	10	31	15	22	5/8
16	3	10	35	17	24	3/4
20	3	10	43	19	26	1
25	3	10	51	22	29	1 1/4
32	3	10	58	25	33	1 1/2
40	3	12	72	29	39	2
50	3	14	83	34	46	2 1/4
63	3	18	100	41	58	2 3/4
75	3	18	135	47	62	Tr108x5
90	5	18	158	56	69	Tr128x5
110	5	11	188	66	72	Tr154x6



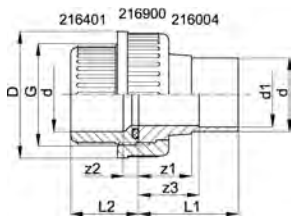
## PRO-FIT union PVC-U metric

### Model:

- Union End: Solvent cemented spigot in combination with reducing socket metric
- Union Bush: Solvent socket metric
- Gasket: O-Ring EPDM code no. 748 410 005-011; FKM: 749 410 005-011

	d (mm)	PN (bar)	d1 (mm)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
*	16	16	12	721 510 305	10	0.029	721 510 330
*	20	16	16	721 510 306	10	0.046	721 510 331
*	25	16	20	721 510 307	10	0.073	721 510 332
*	32	16	25	721 510 308	10	0.097	721 510 333
	40	16	32	721 510 309	10	0.169	721 510 334
	50	16	40	721 510 310	10	0.250	721 510 335
	63	16	50	721 510 311	5	0.437	721 510 336

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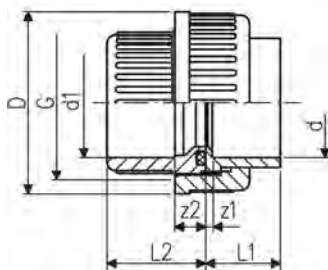
	d	G	z1	z2	z3	D	L1	L2
	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
*	16	¾	22	10	24	35	36	24
*	20	1	24	10	26	43	40	26
*	25	1 ¼	25	10	28	51	44	29
*	32	1 ½	27	10	30	58	49	33
	40	2	31	12	35	74	57	39
	50	2 ¼	35	14	40	83	66	46
	63	2 ¾	39	18	46	100	77	58

### Adaptor union PVC-U metric BS



#### Model:

- Union End: Solvent cement socket metric
- Union Bush: Solvent cement socket BS inch
- Gasket: O-ring EPDM code no. 748 410 005-011
- Gasket: O-ring FKM code no. 749 410 005-011 (to be ordered separately)



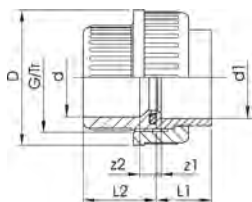
d	d1	Size	PN	Code	SP	Weight	G	z1	z2	D	L1	L2
(mm)	(inch)	(inch)	(bar)			(kg)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)
16	¾	¾	15	<b>721 513 105</b>	10	0.025	¾	3	8	35	17	24
20	½	½	15	<b>721 513 106</b>	10	0.040	1	3	9	43	19	26
25	¾	¾	15	<b>721 513 107</b>	10	0.065	1 ¼	3	9	51	22	29
32	1	1	15	<b>721 513 108</b>	10	0.090	1 ½	3	9	58	25	33
40	1 ¼	1 ¼	15	<b>721 513 109</b>	10	0.155	2	3	10	72	29	39
50	1 ½	1 ½	15	<b>721 513 110</b>	5	0.200	2 ¼	3	10	83	34	46
63	2	2	15	<b>721 513 111</b>	5	0.341	2 ¾	3	10	100	41	58

### Union PVC-U metric ASTM



#### Model:

- Union End: Solvent cement socket ASTM
- Union Bush: Solvent socket metric
- Gasket: O-ring EPDM code no. 748 410 005-011
- Gasket: O-ring FKM code no. 749 410 005-011 (to be ordered separately)



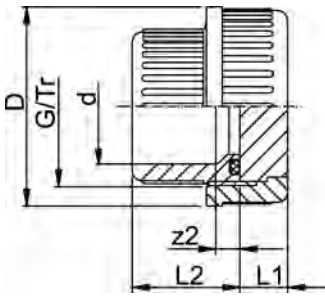
d	d1	Size	PN	Code	SP	Weight	G	z1	z2	D	L1	L2
(mm)	(inch)	(inch)	(bar)			(kg)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)
16	¾	¾	16	<b>721 514 105</b>	10	0.022	¾	3	10	35	22	24
20	½	½	16	<b>721 514 106</b>	10	0.042	1	3	10	43	25	26
25	¾	¾	16	<b>721 514 107</b>	10	0.065	1 ¼	3	10	51	28	29
32	1	1	16	<b>721 514 108</b>	10	0.103	1 ½	3	10	58	32	33
40	1 ¼	1 ¼	16	<b>721 514 109</b>	10	0.174	2	3	12	72	35	39
50	1 ½	1 ½	16	<b>721 514 110</b>	5	0.239	2 ¼	3	14	83	38	46
63	2	2	16	<b>721 514 111</b>	5	0.356	2 ¾	3	18	100	41	58



### Union with union end blank PVC-U metric

**Model:**

- Union Bush: Solvent socket metric
- Jointing face: With O-ring groove
- Gasket: O-Ring EPDM code no. 748 410 004-016; d90 748 410 248; FKM: 749 410 004-016; d90 749 410 248



d (mm)	Size (inch)	PN (bar)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
10		16	<b>721 510 003</b>	10	<b>721 510 028</b>	10
12		16	<b>721 510 004</b>	10	<b>721 510 029</b>	10
16		16	<b>721 510 005</b>	10	<b>721 510 030</b>	10
20		16	<b>721 510 006</b>	10	<b>721 510 031</b>	10
25		16	<b>721 510 007</b>	10	<b>721 510 032</b>	10
32		16	<b>721 510 008</b>	10	<b>721 510 033</b>	10
40		16	<b>721 510 009</b>	10	<b>721 510 034</b>	10
50		16	<b>721 510 010</b>	5	<b>721 510 035</b>	5
63		16	<b>721 510 011</b>	10	<b>721 510 036</b>	10
75	2 ½	10	<b>721 510 012</b>	2	<b>721 510 037</b>	2
90		10	<b>721 510 213</b>	2	<b>721 510 238</b>	2
110		10	<b>721 510 014</b>	1	<b>721 510 039</b>	1

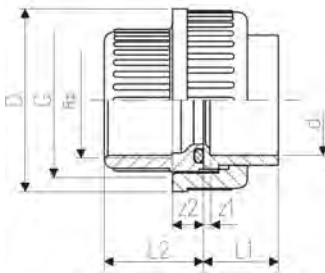
d (mm)	z2 (mm)	L2 (mm)	D (mm)	L1 (mm)	G/Tr (inch)
10	9	22	31	10	5/8
12	9	22	31	15	5/8
16	10	24	35	10	3/4
20	10	26	43	11	1
25	10	29	51	11	1 1/4
32	10	33	58	12	1 1/2
40	12	39	72	13	2
50	14	46	83	16	2 1/4
63	18	58	100	18	2 3/4
75	18	62	135	22	Tr108x5
90	18	69	158	24	Tr128x5
110	11	72	188	26	Tr154x6



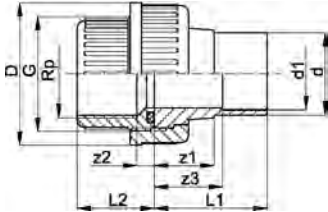
### Adaptor union PVC-U metric Rp

**Model:**

- Union End: Solvent cement socket metric
- Union Bush: Parallel female thread Rp
- Gasket: O-ring EPDM code no. 748 410 004-011
- Gasket: O-ring FKM code no. 749 410 004-011 (to be ordered separately)
- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PVC-U



d (mm)	Thread Type	Size (inch)	PN (bar)	EPDM Code	SP Weight (kg)	G (inch)	z1 (mm)	z2 (mm)	D (mm)	L1 (mm)	L2 (mm)
12	Rp	¼	10	<b>721 510 204</b>	10	5/8	3	12	31	15	22
16	Rp	⅜	10	<b>721 510 205</b>	10	¾	3	13	35	17	24
20	Rp	½	10	<b>721 510 206</b>	10	1	3	13	43	19	26
25	Rp	⅝	10	<b>721 510 207</b>	10	1 ¼	3	14	51	22	29
32	Rp	1	10	<b>721 510 208</b>	10	1 ½	3	15	58	25	33
40	Rp	1 ¼	10	<b>721 510 209</b>	10	2	3	19	72	29	39
50	Rp	1 ½	10	<b>721 510 210</b>	2	2 ¼	3	26	83	34	46
63	Rp	2	10	<b>721 510 211</b>	2	2 ¾	3	33	100	41	58



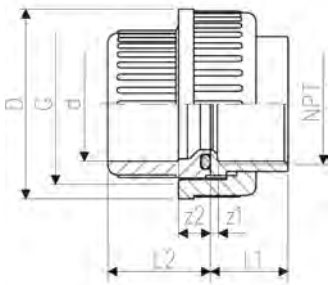
### PRO-FIT adaptor union PVC-U metric Rp

#### Model:

- Union End: Solvent cemented spigot in combination with reducing socket metric
- Union Bush: Threaded socket with parallel female thread Rp
- Gasket: O-ring EPDM code no. 748 410 005-011
- Gasket: O-ring FKM code no. 749 410 005-011 (to be ordered separately)
- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PVC-U

	d (mm)	Thread Type	Size (inch)	PN (bar)	d1 (mm)	EPDM Code	SP	Weight (kg)
*	16	Rp	¾	10	12	<b>721 510 405</b>	10	0.032
*	20	Rp	½	10	16	<b>721 510 406</b>	10	0.046
*	25	Rp	¾	10	20	<b>721 510 407</b>	10	0.079
*	32	Rp	1	10	25	<b>721 510 408</b>	10	0.116
	40	Rp	1 ¼	10	32	<b>721 510 409</b>	10	0.192
	50	Rp	1 ½	10	40	<b>721 510 410</b>	10	0.263
	63	Rp	2	10	50	<b>721 510 411</b>	10	0.496

	d (mm)	G (inch)	z1 (mm)	z2 (mm)	z3 (mm)	D (mm)	L1 (mm)	L2 (mm)
*	16	¾	22	13	24	35	36	24
*	20	1	24	13	26	43	40	26
*	25	1 ¼	25	14	28	51	44	29
*	32	1 ½	27	15	30	58	49	32
	40	2	31	19	35	74	57	38
	50	2 ¼	35	26	40	83	66	45
	63	2 ¾	39	33	46	100	77	56



### Adaptor union PVC-U metric NPT

#### Model:

- Union End: Taper female thread NPT (ASTM)
- Union Bush: Solvent socket metric
- Gasket: O-ring EPDM code no. 748 410 005-011
- Gasket: O-ring FKM code no. 749 410 005-011 (to be ordered separately)
- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PVC-U

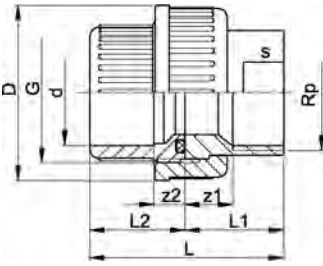
	d (mm)	Thread Type	Size (inch)	PN (bar)	EPDM Code	SP	Weight (kg)	G (inch)	z1 (mm)	z2 (mm)	D (mm)	L1 (mm)	L2 (mm)
	16	NPT	¾	10	<b>721 514 205</b>	10	0.026	¾	4	10	35	17	24
	20	NPT	½	10	<b>721 514 206</b>	10	0.042	1	2	10	43	19	26
	25	NPT	¾	10	<b>721 514 207</b>	10	0.068	1 ¼	4	10	51	22	29
	32	NPT	1	10	<b>721 514 208</b>	10	0.093	1 ½	4	10	58	25	33
	40	NPT	1 ¼	10	<b>721 514 209</b>	2	0.150	2	6	12	72	29	39
	50	NPT	1 ½	10	<b>721 514 210</b>	2	0.228	2 ¼	11	14	83	34	46
	63	NPT	2	10	<b>721 514 211</b>	2	0.387	2 ¾	17	18	100	41	58



### Adaptor union PVC-U/stainless steel metric Rp

#### Model:

- Union Nut: PVC-U
- Union Bush: Solvent cement socket PVC-U metric
- Union End: Stainless Steel 1.4404 (316L), parallel female thread Rp
- Gasket: O-ring EPDM code no. 748 410 005-011



d (mm)	Thread Type	Size (inch)	PN (bar)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	Rp	¾	16	<b>721 540 205</b>	10	0.053	<b>721 540 230</b>
20	Rp	½	16	<b>721 540 206</b>	10	0.096	<b>721 540 231</b>
25	Rp	¾	16	<b>721 540 207</b>	5	0.154	<b>721 540 232</b>
32	Rp	1	16	<b>721 540 208</b>	5	0.212	<b>721 540 233</b>
40	Rp	1 ¼	16	<b>721 540 209</b>	2	0.356	<b>721 540 234</b>
50	Rp	1 ½	16	<b>721 540 210</b>	2	0.455	<b>721 540 235</b>
63	Rp	2	16	<b>721 540 211</b>	2	0.730	<b>721 540 236</b>

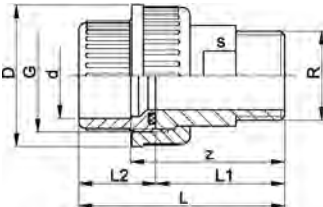
d (mm)	G (inch)	z1 (mm)	z2 (mm)	D (mm)	L (mm)	L1 (mm)	L2 (mm)	s (mm)
16	¾	9	10	35	43	19	24	19
20	1	11	10	43	50	24	26	24
25	1 ¼	11	10	51	55	26	29	29
32	1 ½	12	10	58	61	29	33	36
40	2	14	12	72	71	33	39	45
50	2 ¼	15	14	83	79	34	46	54
63	2 ¾	15	18	100	95	39	58	63



### Adaptor union PVC-U/stainless steel metric R

#### Model:

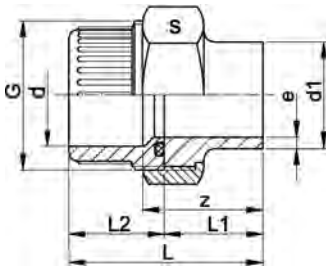
- Union Nut: PVC-U
- Union Bush: Solvent cement socket PVC-U metric
- Union End: Stainless Steel 1.4404 (316L), taper male thread R
- Gasket: O-ring EPDM code no. 748 410 005-011



d (mm)	Thread Type	Size (inch)	PN (bar)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	R	¾	16	<b>721 540 705</b>	10	0.073	<b>721 540 730</b>
20	R	½	16	<b>721 540 706</b>	10	0.126	<b>721 540 731</b>
25	R	¾	16	<b>721 540 707</b>	10	0.174	<b>721 540 732</b>
32	R	1	16	<b>721 540 708</b>	5	0.262	<b>721 540 733</b>
40	R	1 ¼	16	<b>721 540 709</b>	2	0.476	<b>721 540 734</b>
50	R	1 ½	16	<b>721 540 710</b>	2	0.535	<b>721 540 735</b>
63	R	2	16	<b>721 540 711</b>	2	0.934	<b>721 540 736</b>

d (mm)	G (inch)	z (mm)	D (mm)	L (mm)	L1 (mm)	L2 (mm)	s (mm)
16	¾	40	35	54	30	24	19
20	1	44	43	60	34	26	24
25	1 ¼	46	51	65	36	29	32
32	1 ½	50	58	72	40	33	37
40	2	58	72	84	46	39	48
50	2 ¼	62	83	93	48	46	54
63	2 ¾	73	100	111	55	58	69





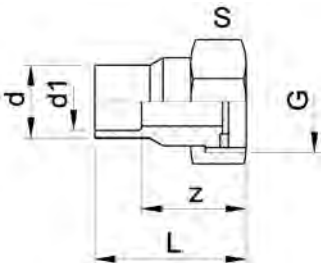
### Adaptor union PVC-U metric/stainless steel metric welding end

**Model:**

- Union Bush: Solvent cement socket PVC-U metric
- Union End: Stainless Steel 1.4404 (316L) with welding end
- Union Nut: Stainless Steel WN 1.4404 (316L)
- Gasket: O-ring EPDM code no. 748 410 005-011

d (mm)	PN (bar)	d1 (mm)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	16	17	721 545 505	10	0.101	721 545 530	1	0.101
20	16	21	721 545 506	10	0.176	721 545 531	1	0.168
25	16	27	721 545 507	5	0.204	721 545 532	1	0.198
32	16	34	721 545 508	5	0.313	721 545 533	1	0.313
40	16	42	721 545 509	2	0.493	721 545 534	1	0.493
50	16	48	721 545 510	2	0.566	721 545 535	1	0.605
63	16	60	721 545 511	2	0.902	721 545 536	1	0.902

d (mm)	G (inch)	z (mm)	L (mm)	L1 (mm)	L2 (mm)	e (mm)	s (mm)
16	¾	28	42	18	24	1.6	32
20	1	32	48	22	26	2.0	41
25	1 ¼	33	52	23	29	2.0	46
32	1 ½	36	58	26	33	2.0	55
40	2	38	64	26	39	2.0	68
50	2 ¼	42	73	28	46	2.0	74
63	2 ¾	50	88	32	58	2.6	88

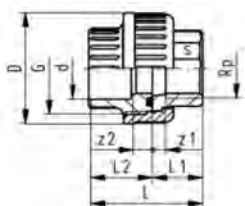


### Tap connectors PVC-U/brass metric G

**Model:**

- Union End: PVC-U, solvent cement socket / spigot metric
- Union Nut: brass with female thread G
- Gasket: flat gasket EPDM code no. 748 400 030; 748 400 005-006

d (mm)	d1 (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	L (mm)	s (mm)
16	12	G	½	16	721 550 305	10	0.031	22	34	24
20	16	G	¾	16	721 550 306	10	0.049	24	38	30
25	20	G	1	16	721 550 307	10	0.079	27	43	38



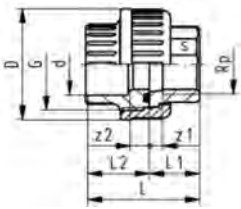
### Adaptor union PVC-U/brass metric Rp

**Model:**

- Union Nut: PVC-U
- Union bush: Solvent cement socket metric
- Union End: Brass with parallel female thread Rp
- Gasket: O-ring EPDM code no. 748 410 006-014; d90 748 410 248

d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)
20	Rp	½	16	721 550 506	10	0.088
25	Rp	¾	16	721 550 507	10	0.145
32	Rp	1	16	721 550 508	5	0.175
40	Rp	1 ¼	16	721 550 509	2	0.322

table continued on the next page



d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)
50	Rp	1 1/2	16	721 550 510	2	0.467
63	Rp	2	16	721 550 511	8	0.776
75	Rp	2 1/2	10	721 550 512	2	1.360
90	Rp	3	10	721 550 513	2	2.003

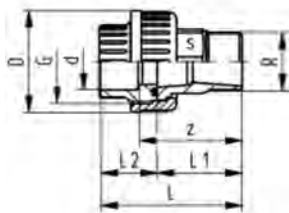
d (mm)	D (mm)	L (mm)	L1 (mm)	L2 (mm)	s (mm)	z1 (mm)	z2 (mm)	G (inch)
20	43	48	22	26	25	7	10	1
25	51	54	25	29	30	9	10	1 1/4
32	58	60	27	33	36	8	11	1 1/2
40	72	70	31	39	46	10	13	2
50	83	81	35	46	55	13	15	2 1/4
63	100	98	40	58	65	14	20	2 3/4
75	127	109	47	62	85	16	18	Tr 108x5
90	150	121	52	69	95	18	18	Tr 128x5



### Adaptor union PVC-U/brass metric R

#### Model:

- Union Nut: PVC-U
- Union Bush: Solvent cement socket PVC-U metric
- Union End: Brass with taper male thread R
- Gasket: O-ring EPDM code no. 748 410 006-014; d90 748 410 248



d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)
20	R	1/2	16	721 550 906	10	0.125
25	R	1/2	16	721 550 957	5	0.196
25	R	3/4	16	721 550 907	5	0.196
25	R	1	16	721 550 967	5	0.307
32	R	1/2	16	721 550 958	5	0.297
32	R	3/4	16	721 550 968	5	0.297
32	R	1	16	721 550 908	5	0.283
40	R	1 1/4	16	721 550 909	2	0.502
50	R	1 1/2	16	721 550 910	2	0.681
63	R	2	16	721 550 911	2	1.101
75	R	2 1/2	10	721 550 912	2	1.706
90	R	3	10	721 550 913	1	2.662

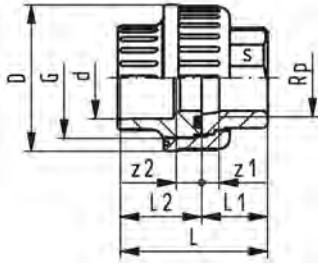
d (mm)	D (mm)	L (mm)	L1 (mm)	L2 (mm)	z (mm)	G (inch)	s (mm)
20	43	63	37	26	47	1	25
25	51	66	37	29	47	1 1/4	30
25	51	71	42	29	52	1 1/4	30
25	51	75	46	29	56	1 1/4	30
32	58	70	37	33	48	1 1/2	36
32	58	75	42	33	53	1 1/2	36
32	58	79	46	33	57	1 1/2	36
40	72	91	52	39	65	2	46
50	83	102	56	46	71	2 1/4	55
63	100	125	67	58	87	2 3/4	65
75	127	139	77	62	95	Tr 108x5	85
90	150	155	86	69	104	Tr 125x8	95



### Adaptor union PVC-U metric/malleable iron galvanised Rp

**Model:**

- Union Nut: PVC-U
- Union Bush: Solvent cement socket PVC-U metric
- Union End: malleable iron with parallel female thread Rp
- Gasket: O-ring EPDM code no. 748 410 006-014; d90 748 410 248



d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)
20	Rp	½	16	<b>721 530 306</b>	10	0.073
25	Rp	¾	16	<b>721 530 307</b>	5	0.107
32	Rp	1	16	<b>721 530 308</b>	5	0.154
40	Rp	1 ¼	16	<b>721 530 309</b>	2	0.282
50	Rp	1 ½	16	<b>721 530 310</b>	2	0.377
63	Rp	2	16	<b>721 530 311</b>	2	0.594
75	Rp	2 ½	10	<b>721 530 312</b>	2	1.008
90	Rp	3	10	<b>721 530 313</b>	2	1.350

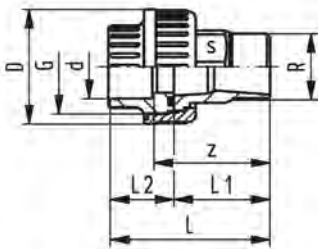
d (mm)	D (mm)	L (mm)	L1 (mm)	L2 (mm)	z1 (mm)	z2 (mm)	G (inch)	s (mm)
20	43	48	22	26	9	10	1	25
25	51	51	22	29	7	10	1 1/4	31
32	58	58	26	33	9	10	1 1/2	38
40	72	69	31	39	12	12	2	48
50	83	78	33	46	14	14	2 1/4	54
63	100	91	35	58	11	18	2 3/4	67
75	127	101	39	62	12	18	Tr 108x5	85
90	150	114	45	69	15	19	Tr 128x5	96



### Adaptor union PVC-U metric/malleable iron galvanised R

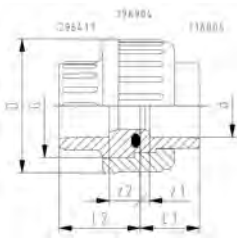
**Model:**

- Union Nut: PVC-U
- Union Bush: Solvent cement socket PVC-U metric
- Union End: Malleable iron with taper male thread R
- Gasket: O-ring EPDM code no. 748 410 006-014; d90 748 410 248



d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)
20	R	½	16	<b>721 530 806</b>	10	0.107
25	R	¾	16	<b>721 530 807</b>	5	0.159
32	R	1	16	<b>721 530 808</b>	5	0.213
40	R	1 ¼	16	<b>721 530 809</b>	2	0.426
50	R	1 ½	16	<b>721 530 810</b>	2	0.528
63	R	2	16	<b>721 530 811</b>	5	0.863
75	R	2 ½	10	<b>721 530 812</b>	2	1.441
90	R	3	10	<b>721 530 813</b>	1	1.873

d (mm)	D (mm)	L (mm)	L1 (mm)	L2 (mm)	z (mm)	G (inch)	s (mm)
20	43	66	40	26	50	1	25
25	51	72	43	29	53	1 1/4	31
32	58	80	48	33	58	1 1/2	38
40	72	95	57	39	69	2	48
50	83	104	59	46	73	2 1/4	54
63	100	118	62	58	80	2 3/4	67
75	127	137	75	62	93	Tr 108x5	85
90	150	149	80	69	99	Tr 128x5	96

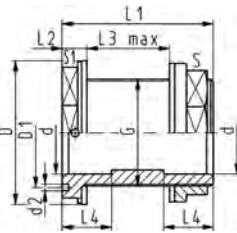


### Thread union PVC-U Rp Rp

**Model:**

- Union Nut: PVC-U
- Union Bush: Parallel female thread Rp
- Union End: Parallel female thread Rp
- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PVC-U
- Gasket: O-ring EPDM code no. 748 410 004-011
- Gasket: O-ring FKM code no. 749 410 004-011 (to be ordered separately)

Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	G (inch)	z1 (mm)	z2 (mm)	D (mm)	L1 (mm)	L2 (mm)
Rp	¼	10	<b>721 510 604</b>	10	0.019	⅝	3	12	31	22	15
Rp	⅜	10	<b>721 510 605</b>	10	0.027	¾	3	13	35	24	17
Rp	½	10	<b>721 510 606</b>	10	0.042	1	3	13	43	26	19
Rp	¾	10	<b>721 510 607</b>	10	0.065	1 ¼	3	14	51	29	22
Rp	1 ¼	10	<b>721 510 609</b>	10	0.160	2	3	19	72	38	29
Rp	1 ½	10	<b>721 510 610</b>	2	0.220	2 ¼	3	26	83	45	34
Rp	1	10	<b>721 510 608</b>	10	0.093	1 ½	3	15	58	32	25
Rp	2	10	<b>721 510 611</b>	5	0.415	2 ¾	3	33	100	56	41



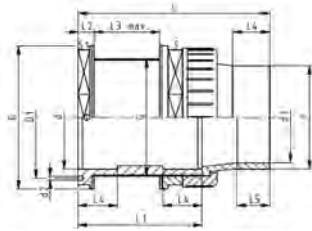
### Tank adaptor type 050 PVC-U Compact

**Model:**

- End connection: solvent cement socket, metric
- Gasket: flat gasket EPDM
- Washer: PP
- Run-out holes: two holes in octagonal head
- FKM flat gasket available for tank adaptor type 050

d (mm)	PN (bar)	EPDM Code	SP	Weight (kg)
16	16	<b>161 050 445</b>	75	0.048
20	16	<b>161 050 446</b>	50	0.066
25	16	<b>161 050 447</b>	70	0.170
32	16	<b>161 050 448</b>	50	0.144
40	16	<b>161 050 449</b>	30	0.238
50	16	<b>161 050 450</b>	20	0.260
63	16	<b>161 050 451</b>	15	0.398

d (mm)	L3 max (mm)	Diameter of bore in tank side (mm)	D1 (mm)	S (mm)	D (mm)	L2 (mm)	S1 (mm)	L4 (mm)	L1 (mm)	d2 (mm)	G (inch)
16	28	28	29	32	44	11	40	14	58	5	¾
20	28	35	35	40	54	12	50	16	61	5	1
25	28	43	42	50	60	13	55	19	65	5	1 ¼
32	28	49	49	56	69	13	65	22	67	5	1 ½
40	29	61	59	69	84	13	80	26	72	5	2
50	30	67	70	76	92	15	85	31	76	5	2 ¼
63	35	83	82	95	108	15	100	38	84	5	2 ¾



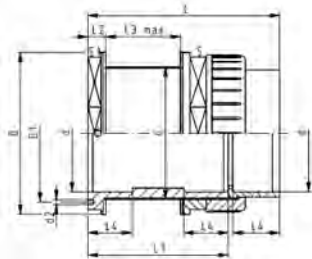
### Tank adaptor type 050 PVC-U Reduced socket metric

#### Model:

- Gaskets: flat gaskets EPDM
- Washer: PP
- Run-out holes: two holes in octagonal head
- FKM flat gaskets available for tank adaptor type 050

d (mm)	PN (bar)	d1 (mm)	EPDM Code	SP	Weight (kg)
16	16	12	<b>161 050 345</b>	1	0.068
20	16	16	<b>161 050 346</b>	1	0.102
25	16	20	<b>161 050 347</b>	1	0.157
32	16	25	<b>161 050 348</b>	1	0.220
40	16	32	<b>161 050 349</b>	1	0.353
50	16	40	<b>161 050 350</b>	1	0.438
63	16	50	<b>161 050 351</b>	1	0.680

d (mm)	L (mm)	D (mm)	L1 (mm)	L5 (mm)	L4 (mm)	S1 (mm)	L2 (mm)	S (mm)	D1 (mm)	Diameter of bore in tank side (mm)	L3 max (mm)	G (inch)	d2 (mm)
16	96	44	58	12	14	40	11	32	29	28	19	¾	5
20	104	54	61	14	16	50	12	40	35	35	17	1	5
25	112	60	65	16	19	55	13	50	42	43	18	1 ¼	5
32	119	69	67	19	22	65	13	56	49	49	19	1 ½	5
40	132	84	72	22	26	80	13	69	59	61	16	2	5
50	145	92	76	26	31	85	15	76	70	67	16	2 ¼	5
63	163	108	84	31	38	100	15	95	82	83	19	2 ¾	5



### Tank adaptor type 050 PVC-U metric with O-Ring

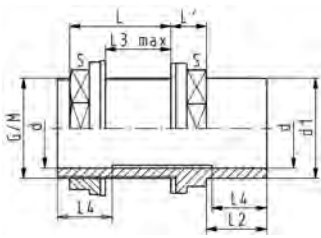
#### Model:

- Gaskets: O-ring EPDM, flat gasket EPDM
- Washer: PP
- Run-out holes: two holes in octagonal head
- For round tanks

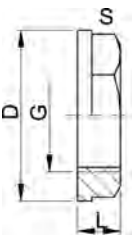
d (mm)	PN (bar)	Code	SP	Weight (kg)
16	16	<b>161 050 385</b>	1	0.040
20	16	<b>161 050 386</b>	1	0.070
25	16	<b>161 050 387</b>	1	0.160
32	16	<b>161 050 388</b>	1	0.200
40	16	<b>161 050 389</b>	1	0.240
50	16	<b>161 050 390</b>	1	0.400
63	16	<b>161 050 391</b>	1	0.530

d (mm)	G (inch)	d2 (mm)	D1 (mm)	S (mm)	L3 max (mm)	Diameter of bore in tank side (mm)	S1 (mm)	L4 (mm)	L (mm)	L2 (mm)	L1 (mm)	D (mm)
16	¾	5	29	32	19	28	40	14	77	11	58	44
20	1	5	35	40	17	35	50	16	83	12	61	54
25	1 ¼	5	42	50	18	43	55	19	90	13	65	60
32	1 ½	5	49	56	19	49	65	22	95	13	67	69
40	2	5	59	69	16	61	80	26	104	13	72	84
50	2 ¼	5	70	76	16	67	85	31	113	15	76	92
63	2 ¾	5	82	95	19	83	100	38	128	15	84	108





d (mm)	L3 max (mm)	Diameter of bore in tank side (mm)	G (inch)	L1 (mm)	L2 (mm)	L (mm)	L4 (mm)	s (mm)	M
63	23	77	2 ½	23	44	53	38	85	
75	20	89	3	26	51	56	44	100	
90	20	115		32	61	62	51	125	M113
110	22	135		36	69	66	61	147	M133

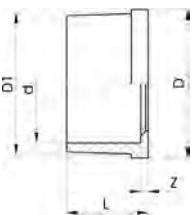
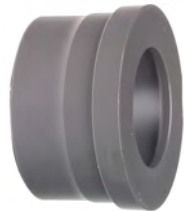


### Backing nut PVC-U tank adaptor

#### Model:

- With G thread ISO 228/1
- Spare part for tank adaptor type 050

Thread Type	Size (inch)	M	Code	SP	Weight (kg)	D (mm)	L (mm)	s (mm)
G	¾		161 490 630	400	0.007	39	13	32
G	1		161 490 632	200	0.012	48	15	40
G	1 ¼		161 490 634	100	0.019	58	17	50
G	1 ½		161 490 635	100	0.027	65	18	56
G	1 ¾		161 490 636	75	0.036	72	19	64
G	2		161 490 637	50	0.043	79	21	69
G	2 ¼		161 490 638	50	0.053	86	21	76
G	2 ½		161 490 639	25	0.063	94	23	85
G	2 ¾		161 490 640	25	0.092	106	25	95
G	3		161 490 641	20	0.099	112	26	100
G	4		161 490 644	10	0.164	139	32	126



### Union end PVC-U metric

#### Model:

- Solvent cement socket metric
- Suitable for unions, tank connectors and diaphragm valves Type 514

\* Must **not** be used for unions 721510112, 721510313 and 721510137, 721510338, only suitable for Variable area flow meter

d (mm)	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	D (mm)	D1 (mm)	L (mm)
10		16	721 500 103	10	0.004	3	20	18	15
12		16	721 500 104	10	0.003	3	20	18	15
16		16	721 500 105	10	0.003	3	24	22	17
20		16	721 500 106	10	0.008	3	30	28	19
25		16	721 500 107	10	0.014	3	39	36	22
32		16	721 500 108	10	0.020	3	45	42	25
40		16	721 500 109	10	0.037	3	57	53	29
50		16	721 500 110	10	0.039	3	63	59	34
63		16	721 500 111	10	0.072	3	78	74	41
75	2 ½	10	721 500 162	20	0.140	3	101	90	47
90		10	721 500 163	12	0.242	5	121	108	56
110		10	721 500 164	10	0.390	5	146	131	66
*	75	2 ½	721 600 112	110	0.155	3	97	90	47
*	90		721 600 113		0.188	5	110	105	56



### Spigot union end PVC-U metric

**Model:**

- Solvent cement spigot in combination with reducing socket metric
- Suitable for unions, tank connectors and diaphragm valves Type 514

	d (mm)	PN (bar)	d1 (mm)	Code	SP	Weight (kg)	z (mm)	z1 (mm)	D (mm)	D1 (mm)	L (mm)
*	16	16	12	<b>721 500 405</b>	10	0.010	22	24	24	22	36
*	20	16	16	<b>721 500 406</b>	10	0.009	24	26	30	28	40
*	25	16	20	<b>721 500 407</b>	10	0.026	25	28	39	36	44
*	32	16	25	<b>721 500 408</b>	10	0.035	27	30	45	42	49
	40	16	32	<b>721 500 409</b>	10	0.055	31	35	57	53	57
	50	16	40	<b>721 500 410</b>	10	0.085	35	40	63	59	66
	63	16	50	<b>721 500 411</b>	10	0.108	39	46	79	74	77

### Union end PVC-U metric

For tap connector code no. 721 550 305-307

**Model:**

- For tap connector code no. 721 550 305-307

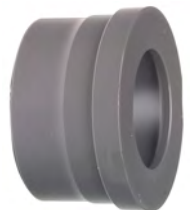


d (mm)	PN (bar)	d1 (mm)	Code	SP	Weight (kg)	z (mm)	D (mm)	L (mm)	L1 (mm)
16	16	12	<b>721 600 305</b>	2000	0.005	22	19	34	3
20	16	16	<b>721 600 306</b>	800	0.009	24	24	38	5
25	16	20	<b>721 600 307</b>	1200	0.016	27	30	43	5

### Union end PVC-U Rp

**Model:**

- Parallel female thread Rp



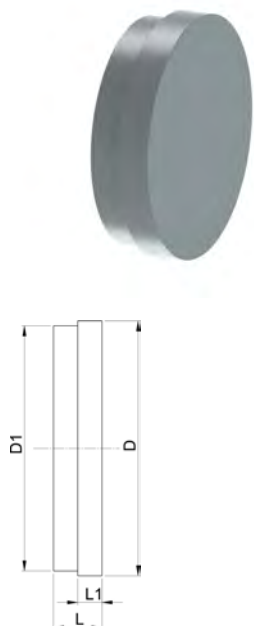
Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	D (mm)	D1 (mm)	L (mm)
Rp	¼	10	<b>721 600 654</b>	970	0.004	5	20	18	15
Rp	⅜	10	<b>721 600 655</b>	2000	0.005	6	24	22	17
Rp	½	10	<b>721 600 656</b>	1430	0.010	6	30	28	19
Rp	¾	10	<b>721 600 657</b>	1200	0.015	7	39	36	22
Rp	1	10	<b>721 600 658</b>	800	0.019	8	45	42	25
Rp	1 ¼	10	<b>721 600 659</b>	500	0.038	10	57	53	29
Rp	1 ½	10	<b>721 600 660</b>	300	0.057	11	63	59	34
Rp	2	10	<b>721 600 661</b>	170	0.102	18	78	74	41



## Union end blank PVC-U

### Model:

- For unions, tank adaptor and diaphragm valve type 514
- Flat sealing faces



d (mm)	DN (mm)	PN (bar)	Inch (inch)	Code	SP	Weight (kg)	D (mm)	D1 (mm)	L (mm)	L1 (mm)
10/12		16	1/8	721 600 004	0	0.006	20	18	9	4
16	10	16	3/8	721 600 005	0	0.004	24	22	10	5
20	15	16	1/2	721 600 006	0	0.009	30	28	11	5
25	20	16	3/4	721 600 007		0.017	39	36	11	6
32	25	16	1	721 600 008		0.025	45	42	12	6
40	32	16	1 1/4	721 600 009		0.042	57	53	13	7
50	40	16	1 1/2	721 600 010		0.061	63	59	16	7
63	50	16	2	721 600 011		0.108	78	74	18	8
75	65	10	2 1/2	721 600 012		0.216	101	90	22	10
90	80	10	3	721 600 013		0.333	121	108	24	11
110	100	10	4	721 600 014		0.530	146	131	26	12

## Union nut PVC-U

\* for Adaptor unions PVC-U / malleable iron only



d (mm)	PN (bar)	Code	SP	Weight (kg)	Tr	G (inch)	D (mm)	L (mm)
10 - 12	16	721 890 004	10	0.009		5/8	19	19
16	16	721 890 005	10	0.011		3/4	22	21
20	16	721 890 006	10	0.020		1	28	23
25	16	721 890 007	10	0.020		1 1/4	36	24
32	16	721 890 008	10	0.030		1 1/2	41	26
40	16	721 890 009	10	0.049		2	53	29
50	16	721 890 010	10	0.087		2 1/4	59	34
63	16	721 890 011	10	0.138		2 3/4	74	38
75	10	721 890 012	20	0.256	Tr 108x5		92	40
90	10	721 890 013	12	0.370	Tr 128x5		110	43
*	90	721 890 023	12	0.355	Tr 128x5		105	43
	110	721 890 014	1	0.574	Tr 154x6		133	48

## Backing nut PVC-U tank adaptor

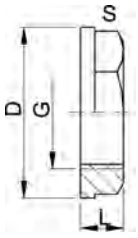
### Model:

- With G thread ISO 228/1
- Spare part for tank adaptor type 050



Thread Type	Size (inch)	M	Code	SP	Weight (kg)	D (mm)	L (mm)	s (mm)
G	3/4		161 490 630	400	0.007	39	13	32
G	1		161 490 632	200	0.012	48	15	40
G	1 1/4		161 490 634	100	0.019	58	17	50
G	1 1/2		161 490 635	100	0.027	65	18	56
G	1 3/4		161 490 636	75	0.036	72	19	64
G	2		161 490 637	50	0.043	79	21	69
G	2 1/4		161 490 638	50	0.053	86	21	76

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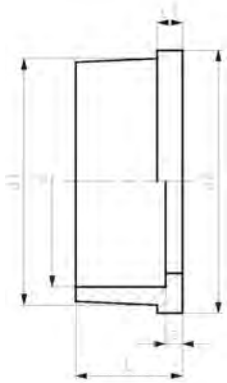
Thread Type	Size (inch)	M	Code	SP	Weight (kg)	D (mm)	L (mm)	s (mm)
G	2 1/2		<b>161 490 639</b>	25	0.063	94	23	85
G	2 3/4		<b>161 490 640</b>	25	0.092	106	25	95
G	3		<b>161 490 641</b>	20	0.099	112	26	100
G	4		<b>161 490 644</b>	10	0.164	139	32	126



### ecoFIT Union end PE d20-63mm / SDR17

#### Model:

- Material: PE80
- With fusion socket metric
- Suitable for unions, tank connectors and diaphragm valves Type 514



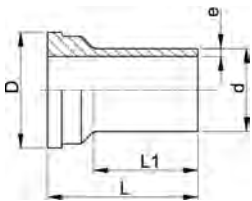
d (mm)	DN (mm)	PN (bar)	Code	Weight (kg)	d1 (mm)	d2 (mm)	L (mm)	L1 (mm)	z (mm)
20	15	10	<b>734 600 106</b>	0.006	28	30	19	5	5
25	20	10	<b>734 600 107</b>	0.013	36	39	21	5	5
32	25	10	<b>734 600 108</b>	0.015	42	45	23	6	5
40	32	10	<b>734 600 109</b>	0.026	53	57	25	6	5
50	40	10	<b>734 600 110</b>	0.027	59	63	28	7	5
63	50	10	<b>734 600 111</b>	0.044	74	79	32	8	5



### ecoFIT Union end PE d20-110mm / SDR11

#### Model:

- Material: PE100
- IR = Infrared- (IR Plus) compatible.
- **For the dimensions d75-110 please see instructions for the installation**
- Conventional butt-welding according to DVS 2207



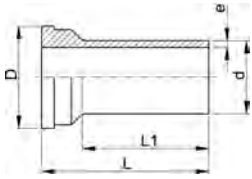
d (mm)	DN (mm)	PN (bar)	SDR	FM	Code	Weight (kg)	D (mm)	L (mm)	L1 (mm)	e (mm)
20	15	16	11	IR	<b>753 508 606</b>	0.011	30	54	38	1.9
25	20	16	11	IR	<b>753 508 607</b>	0.018	39	57	42	2.3
32	25	16	11	IR	<b>753 508 608</b>	0.027	45	60	41	2.9
40	32	16	11	IR	<b>753 508 609</b>	0.044	57	63	42	3.7
50	40	16	11	IR	<b>753 508 610</b>	0.061	63	66	44	4.6
63	50	16	11	IR	<b>753 508 611</b>	0.100	78	69	45	5.8
75	65	10	11	IR	<b>753 608 612</b>	0.147	101	66	34	6.8
90	80	10	11	IR	<b>753 608 613</b>	0.156	101	66	55	8.2
110	100	10	11	IR	<b>753 608 614</b>	0.226	121	66	55	10.0



### ecoFIT Union end long PE100 d20-63mm / SDR11

**Model:**

- Material: PE100
- Suitable for unions, tank connectors and diaphragm valves Type 514
- For butt-, IR Plus® and electrofusion



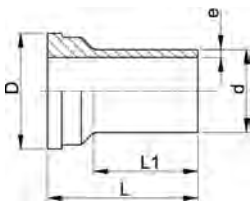
d	DN	PN	SDR	FM	Code	Weight	D	L	L1	e
(mm)	(mm)	(bar)				(kg)	(mm)	(mm)	(mm)	(mm)
20	15	16	11	IR	753 508 616	0.006	30	67	52	1.9
25	20	16	11	IR	753 508 617	0.019	39	71	53	2.3
32	25	16	11	IR	753 508 618	0.027	45	73	55	2.9
40	32	16	11	IR	753 508 619	0.048	57	81	60	3.7
50	40	16	11	IR	753 508 620	0.069	63	87	66	4.6
63	50	16	11	IR	753 508 621	0.120	78	93	70	5.8



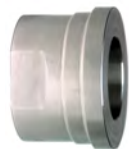
### ecoFIT Union end PE d75-110mm / SDR17

**Model:**

- Material: PE100
- IR = Infrared- (IR Plus) compatible.
- **For the dimensions d75-110 please see instructions for the installation**
- Conventional butt-welding according to DVS 2207



d	DN	PN	SDR	FM	Code	Weight	D	L	L1	e
(mm)	(mm)	(bar)				(kg)	(mm)	(mm)	(mm)	(mm)
75	65	10	17	IR	753 608 412	0.124	101	66	34	4.3
90	80	10	17	IR	753 608 413	0.131	101	66	57	5.1
110	100	10	17	IR	753 608 414	0.178	121	66	55	6.3



### Union end stainless steel Rp

**Model:**

- Material: stainless steel 1.4404 (316L)
- Parallel female thread Rp



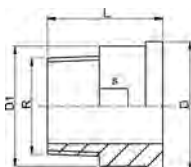
d	Thread Type	Size	PN	Code	Weight	z	D	D1	L	s
(mm)		(inch)	(bar)		(kg)	(mm)	(mm)	(mm)	(mm)	(mm)
16	Rp	3/8	16	724 600 655	0.030	9	24	22	19	19
20	Rp	1/2	16	724 600 656	0.060	11	30	28	24	24
25	Rp	3/4	16	724 600 657	0.092	11	39	36	26	29
32	Rp	1	16	724 600 658	0.137	12	45	42	29	36
40	Rp	1 1/4	16	724 600 659	0.226	14	57	53	33	45
50	Rp	1 1/2	16	724 600 660	0.314	15	63	59	34	54
63	Rp	2	16	724 600 661	0.438	15	78	74	39	63



### Union end stainless steel R

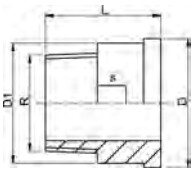
**Model:**

- Material: stainless steel 1.4404 (316L)
- Taper male thread R



d	Thread Type	Size	PN	Code	Weight	D	D1	L	s
(mm)		(inch)	(bar)		(kg)	(mm)	(mm)	(mm)	(mm)
16	R	3/8	16	724 600 705	0.052	24	22	30	19
20	R	1/2	16	724 600 706	0.083	30	28	34	24
25	R	3/4	16	724 600 707	0.125	39	36	36	32

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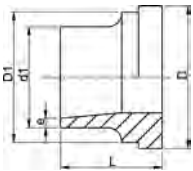
d (mm)	Thread Type	Size (inch)	PN (bar)	Code	Weight (kg)	D (mm)	D1 (mm)	L (mm)	s (mm)
32	R	1	16	<b>724 600 708</b>	0.189	45	42	40	37
40	R	1 ¼	16	<b>724 600 709</b>	0.356	57	53	46	48
50	R	1 ½	16	<b>724 600 710</b>	0.407	63	59	48	54
63	R	2	16	<b>724 600 711</b>	0.668	78	74	55	69

### Union end stainless steel welding end



#### Model:

- Material: stainless steel 1.4404 (316L)



d (mm)	PN (bar)	d1 (mm)	Code	Weight (kg)	D (mm)	D1 (mm)	L (mm)	e (mm)
16	16	17	<b>724 605 505</b>	0.029	24	22	18	1.6
20	16	21	<b>724 605 506</b>	0.046	30	28	22	2.0
25	16	27	<b>724 605 507</b>	0.080	39	36	23	2.0
32	16	34	<b>724 605 508</b>	0.112	45	42	26	2.0
40	16	42	<b>724 605 509</b>	0.188	57	53	26	2.0
50	16	48	<b>724 605 510</b>	0.222	63	59	28	2.0
63	16	60	<b>724 605 511</b>	0.361	78	74	32	2.6

### Union nut stainless steel 1.4404 (316L)



- \* Octagon union nut



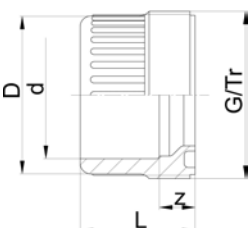
d (mm)	PN (bar)	Code	SP	Weight (kg)	G (inch)	closest inch (inch)	L (mm)	s (mm)
16	16	<b>724 690 105</b>	10	0.060	¾	¾	19	32
20	16	<b>724 690 106</b>	10	0.105	1	½	21	41
25	16	<b>724 690 107</b>	10	0.091	1 ¼	¾	23	46
32	16	<b>724 690 108</b>	10	0.170	1 ½	1	24	55
*	40	<b>724 690 109</b>	10	0.218	2	1 ¼	27	68
*	50	<b>724 690 110</b>	10	0.316	2 ¼	1 ½	31	74
*	63	<b>724 690 111</b>	10	0.364	2 ¾	2	35	88

### Union bush PVC-U metric



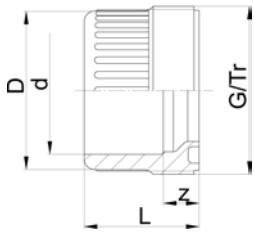
#### Model:

- Solvent cement socket metric
- Jointing face: with O-ring groove
- Gasket: O-ring EPDM code no. 748 410 004-016; d90 748 410 248



d (mm)	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	D (mm)	L (mm)	G/Tr (inch)
10		16	<b>721 840 103</b>	10	0.002	10	20	22	5/8
12		16	<b>721 840 104</b>	10	0.007	10	20	22	5/8
16		16	<b>721 840 105</b>	10	0.009	10	24	24	3/4
20		16	<b>721 840 106</b>	10	0.014	10	29	26	1
25		16	<b>721 840 107</b>	10	0.020	10	34	29	1 1/4
32		16	<b>721 840 108</b>	10	0.032	10	42	33	1 1/2
40		16	<b>721 840 109</b>	10	0.057	12	52	39	2
50		16	<b>721 840 110</b>	10	0.073	14	62	46	2 1/4

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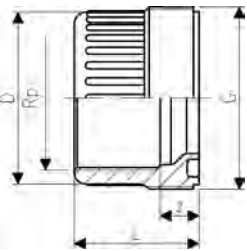
d	Size	PN	Code	SP	Weight	z	D	L	G/Tr
(mm)	(inch)	(bar)		(kg)	(mm)	(mm)	(mm)	(mm)	(inch)
63		16	<b>721 840 111</b>	10	0.137	18	78	58	2 3/4
75	2 1/2	10	<b>721 840 112</b>	20	0.210	18	93	62	Tr108x5
90		10	<b>721 840 123</b>	12	0.355	18	110	69	Tr128x5
110		10	<b>721 840 114</b>	10	0.445	11	133	72	Tr154x6



### Union bush PVC-U Rp

#### Model:

- With parallel female thread Rp
- Jointing face: with O-ring groove
- Gasket: O-ring EPDM code no. 748 410 004-011
- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PVC-U



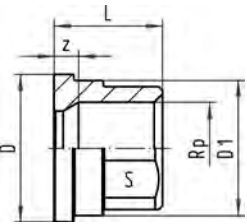
Thread Type	Size	PN	Code	SP	Weight	G	z	D	L
	(inch)	(bar)		(kg)	(mm)	(mm)	(mm)	(mm)	(mm)
Rp	1/4	10	<b>721 840 604</b>	10	0.007	3/8	12	20	22
Rp	3/8	10	<b>721 840 605</b>	10	0.009	3/4	13	24	24
Rp	1/2	10	<b>721 840 606</b>	10	0.013	1	13	29	26
Rp	3/4	10	<b>721 840 607</b>	10	0.026	1 1/4	14	34	29
Rp	1	10	<b>721 840 608</b>	10	0.036	1 1/2	15	42	32
Rp	1 1/4	10	<b>721 840 609</b>	10	0.063	2	19	53	38
Rp	1 1/2	10	<b>721 840 610</b>	10	0.098	2 1/4	26	63	45
Rp	2	10	<b>721 840 611</b>	10	0.187	2 3/4	33	78	56



### Union end brass Rp

#### Model:

- Union End: Brass with parallel female thread Rp



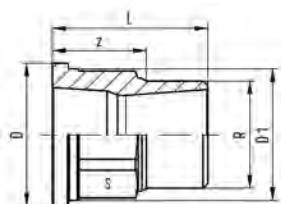
d	Thread Type	Size	Code	SP	Weight	L	s	D	D1	z
(mm)		(inch)		(kg)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
20	Rp	1/2	<b>720 600 236</b>	1	0.059	22	25	30	28	5
25	Rp	3/4	<b>720 600 237</b>	1	0.100	25	30	39	36	6
32	Rp	1	<b>720 600 238</b>	1	0.128	27	36	45	42	6
40	Rp	1 1/4	<b>720 600 239</b>	1	0.211	31	46	56	53	7
50	Rp	1 1/2	<b>720 600 240</b>	1	0.324	35	55	62	59	7
63	Rp	2	<b>720 600 241</b>	1	0.510	40	65	78	74	8
75	Rp	2 1/2	<b>720 600 242</b>	1	0.893	47	85	100	92	10
90	Rp	3	<b>720 600 243</b>	1	1.395	52	95	121	110	11



### Union end brass R

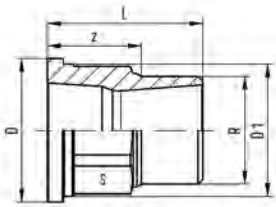
#### Model:

- Union End: Brass with taper male thread R



d	Thread Type	Size	Code	SP	Weight	z	D1	D	s	L
(mm)		(inch)		(kg)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
20	R	1/2	<b>720 600 246</b>	1	0.092	22	28	30	25	37
25	R	3/4	<b>720 600 247</b>	1	0.151	25	36	39	30	42
25	R	1/2	<b>720 600 257</b>	1	0.142	27	36	39	30	42
32	R	1	<b>720 600 248</b>	1	0.216	28	42	45	36	46
32	R	1/2	<b>720 600 258</b>	1	0.113	31	42	45	36	46
32	R	3/4	<b>720 600 268</b>	1	0.206	30	42	45	36	46

table continued on the next page



d (mm)	Thread Type	Size (inch)	Code	SP Weight (kg)	z (mm)	D1 (mm)	D (mm)	s (mm)	L (mm)
40	R	1 1/4	720 600 249	1	0.408	32	53	46	52
50	R	1 1/2	720 600 250	1	0.538	36	59	55	56
63	R	2	720 600 251	1	0.859	42	74	65	67
75	R	2 1/2	720 600 252	1	1.446	49	92	85	77
90	R	3	720 600 253	1	2.063	54	110	95	86

### Union nut, brass

- d12 - d20 for tap connector No. 21 55 03

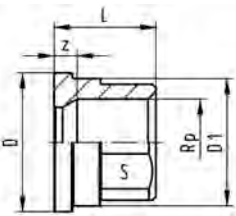


PN (bar)	d (mm)	G (inch)	Code	SP Weight (kg)	L (mm)	s (mm)
16	16	1/2	720 690 405	1	0.024	16
16	16	3/4	720 690 005	1	0.040	17
16	20	1	720 690 006	250	0.065	19
16	25	1 1/4	720 690 007	1	0.105	20
16	32	1 1/2	720 690 008	1	0.102	22
16	40	2	720 690 009	1	0.199	25
16	50	2 1/4	720 690 010	1	0.268	25
16	63	2 3/4	720 690 011	1	0.280	27
16	75	3 1/2	720 690 012	1	0.675	34

### Union end malleable iron galvanized Rp

#### Model:

- Union End: malleable iron with parallel female thread Rp

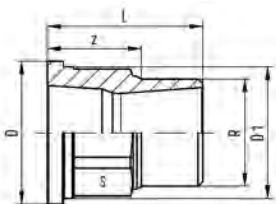


d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP Weight (kg)	D (mm)	L (mm)	s (mm)	z (mm)	D1 (mm)
20	Rp	1/2	16	724 600 206	1	0.037	30	22	25	9
25	Rp	3/4	16	724 600 207	0	0.072	39	22	31	7
32	Rp	1	16	724 600 208	120	0.088	44	26	38	9
40	Rp	1 1/4	16	724 600 209	0	0.172	56	31	48	12
50	Rp	1 1/2	16	724 600 210	10	0.210	62	33	54	14
63	Rp	2	16	724 600 211	0	0.324	78	35	67	11
75	Rp	2 1/2	16	724 600 212	35	0.557	100	39	85	12
90	Rp	3	16	724 600 213	0	0.650	121	45	96	15

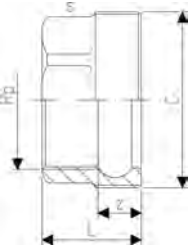
### Union end malleable iron galvanized R

#### Model:

- Union End: Malleable iron with taper male thread R



d (mm)	Thread Type	Size (inch)	Code	SP Weight (kg)	D (mm)	L (mm)	D1 (mm)	z (mm)	s (mm)
20	R	1/2	724 600 806	1	0.069	30	40	25	23
25	R	3/4	724 600 807	1	0.115	39	43	27	30
32	R	1	724 600 808	0	0.161	44	48	29	36
40	R	1 1/4	724 600 809	0	0.294	56	57	36	48
50	R	1 1/2	724 600 810	0	0.353	62	59	37	54
63	R	2	724 600 811	1	0.570	78	62	36	66
75	R	2 1/2	724 600 812	0	0.980	97	75	45	85
90	R	3	724 600 813	0	1.217	110	80	47	95



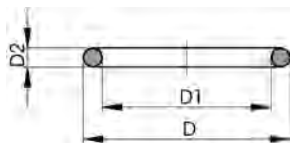
## Union bush malleable iron galvanized Rp

### Model:

- Parallel female thread Rp

d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	G (inch)	z (mm)	s (mm)	L (mm)
20	Rp	½	16	<b>724 630 606</b>	1	0.058	1	12	25	25
25	Rp	¾	16	<b>724 630 607</b>	1	0.100	1 ¼	13	31	28
32	Rp	1	16	<b>724 630 608</b>	1	0.127	1 ½	14	28	31
40	Rp	1 ¼	16	<b>724 630 609</b>	1	0.204	2	14	47	33
50	Rp	1 ½	16	<b>724 630 610</b>	24	0.268	2 ¼	17	53	36
63	Rp	2	16	<b>724 630 611</b>	1	0.443	2 ¾	18	66	42
75	Rp	2 ½	16	<b>724 630 612</b>	1	0.679	3 ½	19	82	46
90	Rp	3	16	<b>724 630 613</b>	1	0.913	4	22	96	52

# Seals



## Joins toriques

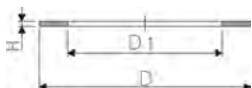
### Model:

- For unions and adaptor unions
- Hardness approx. 65° Shore
- EPDM minimum temperature -40°C
- FKM minimum temperature -15°C

\* For unions PVC-U, PVC-C and ABS: 21 51 01, 21 51 11, 21 53 03, 21 53 08, 21 55 04, 21 55 13, 21 55 18, 23 51 01 and 29 51 01 only

d (mm)	DN (mm)	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
10 - 12	8	<b>748 410 004</b>	0.002	<b>749 410 004</b>	0.020
16	10	<b>748 410 005</b>	0.002	<b>749 410 005</b>	0.002
20	15	<b>748 410 006</b>	0.002	<b>749 410 006</b>	0.002
25	20	<b>748 410 007</b>	0.002	<b>749 410 007</b>	0.002
32	25	<b>748 410 008</b>	0.001	<b>749 410 008</b>	0.002
40	32	<b>748 410 009</b>	0.003	<b>749 410 009</b>	0.007
50	40	<b>748 410 010</b>	0.004	<b>749 410 010</b>	0.060
63	50	<b>748 410 011</b>	0.005	<b>749 410 011</b>	0.003
75	65	<b>748 410 014</b>	0.007	<b>749 410 014</b>	0.012
90	80	<b>748 410 015</b>	0.008	<b>749 410 015</b>	0.015
*	90	<b>748 410 248</b>	0.002	<b>749 410 248</b>	0.002
110	100	<b>748 410 016</b>	0.016	<b>749 410 016</b>	0.031

d (mm)	DN (mm)	D (mm)	D1 (mm)	D2 (mm)	closest inch (inch)
10 - 12	8	17.62	12.37	2.62	¼
16	10	20.78	15.54	2.62	¾
20	15	27.28	20.22	3.53	½
25	20	35.23	28.17	3.53	¾
32	25	39.99	32.93	3.53	1
40	32	51.33	40.65	5.34	1 ¼
50	40	57.68	46.99	5.34	1 ½
63	50	70.37	59.69	5.34	2
75	65	92.60	81.92	5.34	2 ½
90	80	111.68	101.00	5.34	3
*	90	105.30	94.62	5.34	3
110	100	134.00	120.20	6.99	4



## Flat gasket For tank adaptors

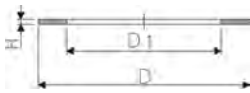
### Model:

- Hardness approx. 65° Shore
- For adaptor unions

Size (inch)	EPDM Code	Weight (kg)	FKM Code	Weight (kg)	D (mm)	D1 (mm)	H (mm)
¼	<b>748 400 004</b>	0.002			20	13	2
¾	<b>748 400 005</b>	0.002	<b>749 400 005</b>	0.020	24	17	2
½	<b>748 400 006</b>	0.002	<b>749 400 006</b>	0.003	30	21	3
¾	<b>748 400 007</b>	0.003	<b>749 400 007</b>	0.004	38	27	3
1	<b>748 400 008</b>	0.010	<b>749 400 008</b>	0.002	44	32	3
1 ¼	<b>748 400 009</b>	0.007	<b>749 400 009</b>	0.003	55	42	3

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Size (inch)	EPDM Code	Weight (kg)	FKM Code	Weight (kg)	D (mm)	D1 (mm)	H (mm)
1 ½	748 400 010	0.004	749 400 010	0.007	62	46	3
2	748 400 011	0.005	749 400 011	0.006	78	60	3
2 ½	748 400 012	0.010	749 400 012	0.009	97	75	3
3	748 400 013	0.011	749 400 013	0.011	109	88	3



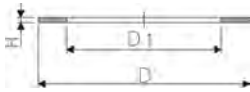
### Flat gasket

#### Model:

- Hardness approx. 65° Shore
- For tap connectors No. 21 55 03

#### Attention:

- For tap connector d16 - 1/2": 748 400 030
- For tap connector d20 - 3/4": 748 400 005
- For tap connector d25 - 1": 748 400 006



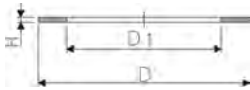
d (mm)	EPDM Code	Weight (kg)	D (mm)	D1 (mm)	H (mm)
16	748 400 030	0.020	18	14	2
20	748 400 005	0.002	24	17	2
25	748 400 006	0.002	30	21	3



### Flat Gasket inside the tank EPDM/FKM For tank adaptors type 050

#### Model:

- Hardness approx. 65° Shore
- Dimension size "inch" correspond with the thread dimension "G" of the tank adaptor



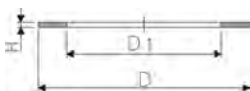
Size (inch)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)	D (mm)	D1 (mm)	H (mm)	
1	748 400 042	1	749 400 042	1	0.003	46	34	3
1 ¼			749 400 009	1	0.003	55	42	3
1 ½	748 400 043	1	749 400 043	1	0.009	69	49	3
2			749 400 011	1	0.006	78	60	3
2 ¼	748 400 044	1	749 400 044	1	0.009	90	64	3
2 ¾	748 400 045	1	749 400 045	1	0.011	106	82	3



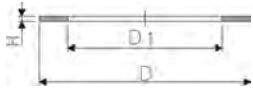
### Flat Gasket inside the tank For tank adaptors

#### Model:

- Hardness approx. 65° Shore
- Dimension size "inch" correspond with the thread dimension "G" of the tank adaptor



Size (inch)	EPDM Code	Weight (kg)	FKM Code	Weight (kg)	D (mm)	D1 (mm)	H (mm)
¾	748 400 005	0.002	749 400 005	0.020	24	17	2
1	748 400 006	0.002	749 400 006	0.003	30	21	3
1 ¼	748 400 007	0.003	749 400 007	0.004	38	27	3
1 ½	748 400 008	0.010	749 400 008	0.002	44	32	3
2	748 400 009	0.007	749 400 009	0.003	55	42	3
2 ¼	748 400 010	0.004	749 400 010	0.007	62	46	3
2 ¾	748 400 011	0.005	749 400 011	0.006	78	60	3



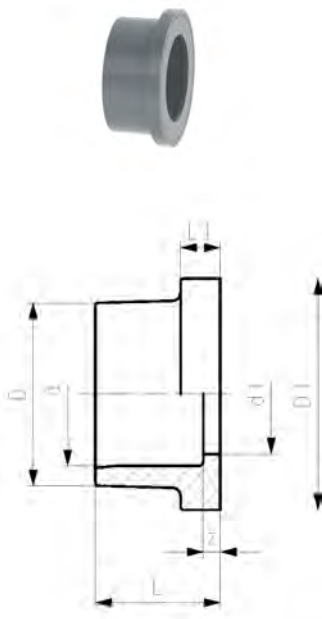
**Washer PP**  
**For tank adaptor**

**Model:**

- Spare part for tank adaptor type 050

<b>d</b> (inch)	<b>Code</b>	<b>SP</b>	<b>Weight</b> (kg)	<b>H</b> (mm)	<b>D1</b> (mm)	<b>D</b> (mm)
3/4	<b>727 490 005</b>	0	0.002	3	27	39
1	<b>727 490 006</b>	0	0.002	3	34	47
1 1/4	<b>727 490 007</b>	0	0.010	3	43	58
1 3/4	<b>727 490 008</b>		0.024	4	55	72
2	<b>727 490 009</b>		0.028	4	61	79
2 1/4	<b>727 490 010</b>	0	0.007	4	67	86
2 1/2	<b>727 490 011</b>	10	0.008	4	77	95
3	<b>727 490 012</b>		0.013	5	90	112
M113	<b>727 490 013</b>		0.021	5	115	139
M133	<b>727 490 014</b>		0.025	5	135	160

# Flange adaptors and flanges



## Flange adaptor PVC-U Combined jointing face flat and serrated metric

### Model:

- Solvent cement socket metric
- d16 - d50: Sealing surface flat
- d63 - d400: combined jointing face flat and serrated
- Combination with gasket: profile flange gasket EPDM code no. 748 440 705-725, FKM code no. 749 440 705-725 or flat gasket EPDM code no. 748 440 705-725, only use O-ring EPDM code no. 748 410 000-174, FKM code no. 749 410 000-174 in combination with counterpart flange adaptor code no. 721 810 105-123
- Combination with flanges (metric & ANSI): PVC-U, PP-V, PP-Steel

### Note:

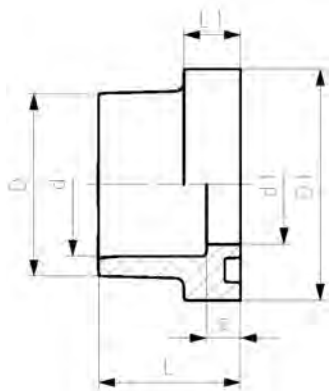
\* bevel on pipe may be needed if used with butterfly valve type 037/038/039

**The flat gasket affects the maximum allowable operating pressure!**

d (inch)	d (mm)	Size (inch)	DN (mm)	PN (bar)	Code	SP	Weight (kg)
	16		10	16	721 800 105	10	0.006
	20		15	16	721 800 106	10	0.009
	25		20	16	721 800 107	10	0.015
	32		25	16	721 800 108	10	0.024
	40		32	16	721 800 109	10	0.039
	50		40	16	721 800 110	10	0.056
	63		50	16	721 790 111	10	0.103
2 ½	75	2 ½	65	16	721 790 112	10	0.159
	90		80	16	721 790 113	10	0.253
	110		100	16	721 790 114	10	0.417
	125		125	16	721 790 115	5	0.533
5	140	5	125	16	721 790 116	6	0.725
	160	6	150	16	721 790 117	2	1.093
*	200		200	10	721 790 119	2	1.460
	225		200	10	721 790 120	2	1.743
*	250		250	10	721 790 121	1	2.203
	280		250	10	721 790 122	1	2.930
*	315		300	6	721 790 123	1	4.455
	355		350	6	721 790 124	1	5.963
	400		400	6	721 790 125	1	9.041

D (mm)	D1 (mm)	d1 (mm)	L (mm)	L1 (mm)	z (mm)	
22	29	13	17	6	3	
27	34	16	19	6	3	
33	41	21	22	7	3	
41	50	28	25	7	3	
50	61	36	29	8	3	
61	73	45	34	8	3	
77	90	57	41	9	3	
91	106	69	47	10	3	
108	125	82	56	11	5	
131	150	102	66	12	5	
148	170	117	74	13	5	
165	188	132	81	14	5	
188	213	152	91	16	5	
*	224	250	192	112	24	6
	248	274	217	125	25	6
*	274	303	240	140	23	9
	308	329	270	151	23	5
*	346	379	302	172	27	8
	384	430	341	194	32	10
	438	482	384	216	34	10

## Flange adaptor PVC-U Joining face with O-ring groove metric

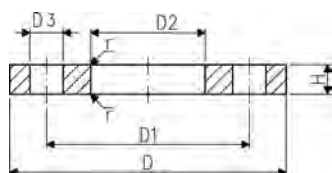


### Model:

- Solvent cement socket metric
- Counterpart: flange adaptor flat code no. 721 800 105-721 790 111-125, combined flange adaptor (d160, d200, d225, d280, d315)
- Gasket: O-ring EPDM code no. 748 410 000-176, FKM code no. 749 410 000-176
- Flange: PVC-U code no. 721 700 005-138, PP/steel code no. 727 700 206-223, PP-V for socket systems metric code no. 727 700 406-423

d (inch)	d (mm)	DN (mm)	PN (bar)	Code	SP	Weight (kg)	D (mm)	D1 (mm)	d1 (mm)	L (mm)	L1 (mm)	z
	16	10	16	<b>721 810 105</b>	10	0.008	22	29	13	20	9	6
	20	15	16	<b>721 810 106</b>	10	0.011	27	34	16	22	9	6
	25	20	16	<b>721 810 107</b>	10	0.018	33	41	21	25	10	6
	32	25	16	<b>721 810 108</b>	10	0.027	41	50	28	28	10	6
	40	32	16	<b>721 810 109</b>	10	0.046	50	61	36	34	13	8
	50	40	16	<b>721 810 110</b>	10	0.068	61	73	45	39	13	8
	63	50	16	<b>721 810 111</b>	10	0.120	77	90	57	46	14	8
2 ½	75	65	16	<b>721 810 112</b>	10	0.183	91	106	69	52	15	8
	90	80	16	<b>721 810 113</b>	10	0.286	108	125	82	61	16	10
	110	100	16	<b>721 810 114</b>	10	0.478	131	150	102	72	18	11
	125	125	16	<b>721 810 115</b>	5	0.607	148	170	117	80	19	11
5	140	125	16	<b>721 810 116</b>	6	0.804	165	188	132	87	20	11
	160	150	16	<b>721 810 117</b>	2	1.226	188	213	152	97	22	11
	200	200	10	<b>721 810 119</b>	2	1.593	224	250	192	118	30	12
	225	200	10	<b>721 810 120</b>	2	1.878	248	274	217	131	31	12
	250	250	10	<b>721 810 121</b>	1	2.175	274	303	240	140	23	9
	280	250	10	<b>721 810 122</b>	1	3.170	308	329	270	158	30	13
	315	300	6	<b>721 810 123</b>	1	4.891	346	379	302	180	35	17

## Backing flange PVC-U metric



### Model:

- For socket systems metric and BS
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- **Lochkreis PN 10**
- Maximum medium- or ambient temperature 45 °C

<sup>1)</sup> Suitable for socket -and butt fusion systems

<sup>2)</sup> Connecting dimension: ISO 2536. bolt circle acc. DN125. suitable for flange adaptor d125/ DN100

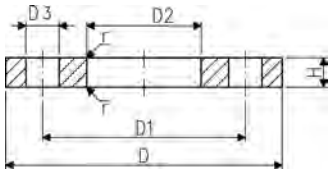
<sup>3)</sup> Connecting dimension: ISO 2536. bolt circle acc. DN225. suitable for flange adaptor d250/ DN250

<sup>4)</sup> Not for BS

AL: number of holes

d (mm)	Size (inch)	DN (mm)	PN (bar)	Code	SP	Weight (kg)
16	¾	10	10	<b>721 700 005</b>	100	0.053
1	20	½	15	<b>721 700 006</b>	90	0.067
1	25	¾	20	<b>721 700 007</b>	50	0.092
1	32	1	25	<b>721 700 008</b>	40	0.133
1	40	1 ¼	32	<b>721 700 009</b>	25	0.198
1	50	1 ½	40	<b>721 700 010</b>	20	0.247
1	63	2	50	<b>721 700 011</b>	30	0.312
1	75	2 ½	65	<b>721 700 012</b>	25	0.376
	90	3	80	<b>721 700 013</b>	20	0.464
4	110	4	100	<b>721 700 014</b>	30	0.543
2	125	4 ½	125	<b>721 700 015</b>	12	0.904
	140	5	125	<b>721 700 016</b>	12	0.758
4	160	6	150	<b>721 700 017</b>	5	1.009
	200	7	200	<b>721 700 019</b>	8	1.669
	225	8	200	<b>721 700 020</b>	8	1.377

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	d	Size	DN	PN	Code	SP	Weight
	(mm)	(inch)	(mm)	(bar)			(kg)
	250	9	250	6	721 700 021	1	2.376
3	250	9	225	6	721 700 136	1	1.800
	280	10	250	6	721 700 137	1	1.746
	315	12	300	6	721 700 138	1	2.349
	355	14	350	6	721 700 139	1	3.485
	400	16	400	6	721 700 140	1	4.500

	d	D	D1	D2	D3	H	r	AL	SC
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
	16	90	60	23	14	10	1	4	M12
1	20	95	65	28	14	11	1	4	M12
1	25	105	75	34	14	12	2	4	M12
1	32	115	85	42	14	14	2	4	M12
1	40	140	100	51	18	15	2	4	M16
1	50	150	110	62	18	16	2	4	M16
1	63	165	125	78	18	18	3	4	M16
1	75	185	145	92	18	19	3	4	M16
	90	200	160	110	18	20	3	8	M16
4	110	220	180	133	18	22	3	8	M16
2	125	250	210	150	18	26	5	8	M16
	140	250	210	167	18	26	4	8	M16
4	160	285	240	190	22	28	4	8	M20
	200	340	295	226	22	32	4	8	M20
	225	340	295	250	22	32	4	8	M20
	250	395	350	277	22	36	4	12	M20
3	250	370	325	277	22	36	4	8	M20
	280	395	350	310	22	36	4	12	M20
	315	445	400	348	22	36	4	12	M20
	355	505	460	388	22	38	5	16	M20
	400	565	515	442	26	42	5	16	M24

### Backing flange PVC-U Inch ANSI/ASME

#### Model:

- For socket systems metric and BS
- Connecting dimension: ANSI/ASME B 16.5 class 150, ASTM D 4024, BS 1560, BS EN 1759
- **Bolt circle class 150**

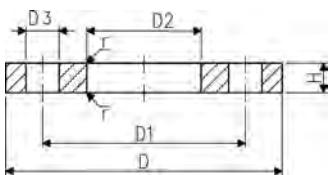
<sup>1)</sup> Suitable for socket -and butt fusion systems

<sup>2)</sup> Not for BS

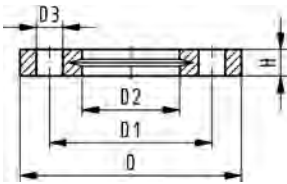
<sup>3)</sup> Not for metric

<sup>4)</sup> combined version, bolt circle metric - ANSI

AL: number of holes



	Size	DN	PN	Code	SP	Weight	D	D1	D2	D3	H	r	AL
	(inch)	(mm)	(bar)			(kg)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
1	½	15	10	721 702 206	90	0.068	95	60	28	16	11	1	4
1	¾	20	10	721 702 207	50	0.090	105	70	34	16	12	2	4
1	1	25	10	721 702 208	40	0.128	115	79	42	16	14	2	4
1	1 ¼	32	10	721 702 209	25	0.203	140	89	51	16	15	2	4
1	1 ½	40	10	721 702 210	20	0.238	150	98	62	16	16	2	4
1	2	50	10	721 702 211	30	0.302	165	121	78	19	18	3	4
1	2 ½	65	10	721 702 212	27	0.369	185	140	92	19	19	3	4
	3	80	10	721 702 213	20	0.509	200	152	110	19	20	3	4
3	4	100	10	721 702 214	30	0.516	220	190	138	19	22	3	8
	5	125	10	721 702 216	12	0.737	250	216	167	22	26	4	8
3	6	150	10	721 702 217	5	1.910	285	241	200	22	28	4	8
2, 4	6	150	10	721 700 017	5	1.009	285	240	190	22	28	4	8
	8	200	10	721 702 220	8	1.360	340	298	250	22	32	4	8



### Backing flange PP-V metric For socket systems metric and BS

#### Model:

- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- **Lochkreis PN 10**
- Full-plastic flange PP-GF (30 % glass-fibre reinforced)

- <sup>1)</sup> Suitable for socket- and butt fusion systems  
<sup>2)</sup> Not for BS  
<sup>3)</sup> Combined version, metric - ANSI

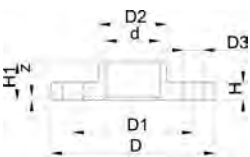
AL: number of holes

	d (mm)	DN (mm)	PN (bar)	Code	Weight (kg)	D (mm)	D1 (mm)	D2 (mm)	D3 (mm)	H max. (mm)	AL	SC
1	20	15	16	<b>727 700 406</b>	0.093	95	65	28	14	16	4	M12
1	25	20	16	<b>727 700 407</b>	0.120	105	75	34	14	17	4	M12
1	32	25	16	<b>727 700 408</b>	0.151	115	85	42	14	18	4	M12
1	40	32	16	<b>727 700 409</b>	0.244	140	100	51	18	20	4	M16
1	50	40	16	<b>727 700 410</b>	0.297	150	110	62	18	22	4	M16
1	63	50	16	<b>727 700 411</b>	0.362	165	125	78	18	24	4	M16
1	75	65	16	<b>727 700 412</b>	0.487	185	145	92	18	26	4	M16
	90	80	16	<b>727 700 413</b>	0.550	200	160	110	18	27	8	M16
2	110	100	16	<b>727 700 414</b>	0.640	220	180	133	18	28	8	M16
	140	125	16	<b>727 700 416</b>	0.781	250	210	167	18	30	8	M16
2/3	160	150	16	<b>727 700 417</b>	1.050	285	240	190	22	32	8	M20
3	200	200	16	<b>727 700 419</b>	1.629	340	295	226	22	34	8	M20
3	225	200	16	<b>727 700 420</b>	1.400	340	295	250	22	34	8	M20
	250	250	10	<b>727 700 421</b>	2.229	395	350	277	22	38	12	M20
	280	250	10	<b>727 700 422</b>	1.651	395	350	310	22	38	12	M20
	325	300	10	<b>727 700 423</b>	2.461	445	400	348	22	42	12	M20
	355	350	10	<b>727 700 424</b>	3.000	515	460	388	22	46	16	M20
	400	400	10	<b>727 700 425</b>	5.135	574	515	442	26	50	16	M24

### Fixed flange PVC-U Jointing face flat metric

#### Model:

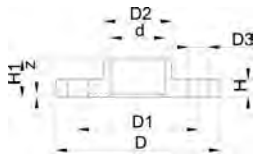
- **Lochkreis PN 10**
- Solvent cement socket metric
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, BS 4504 PN 10
- \* Combined Flange, connecting dimensions EN1092 PN 10 and ANSI B 16.5 Class 150



	d (mm)	DN (mm)	Size (inch)	PN (bar)	Code	SP	Weight (kg)
	20	15	½	16	<b>721 730 206</b>		0.098
	25	20	¾	16	<b>721 730 207</b>		0.130
	32	25	1	16	<b>721 730 208</b>	0	0.183
	40	32	1 ¼	16	<b>721 730 209</b>		0.305
	50	40	1 ½	16	<b>721 730 210</b>		0.365
	63	50	2	16	<b>721 730 211</b>	0	0.510
*	75	65	2 ½	10	<b>721 730 212</b>	10	0.520
*	90	80	3	10	<b>721 730 213</b>	16	0.720
*	110	100	4	10	<b>721 730 214</b>	12	0.920
*	140	125	5	10	<b>721 730 216</b>	1	1.380
*	160	150	6	10	<b>721 730 217</b>	1	2.039

	d (mm)	D (mm)	D1 (mm)	D2 (mm)	D3 (mm)	z (mm)	H (mm)	H1 (mm)	AL	SC
	20	95	65	27	14	3	12	19	4	M12
	25	105	75	33	14	3	13	22	4	M12
	32	115	85	41	14	3	14	25	4	M12
	40	140	100	51	18	3	17	29	4	M16
	50	150	110	62	18	3	17	34	4	M16

table continued on the next page



	d (mm)	D (mm)	D1 (mm)	D2 (mm)	D3 (mm)	z (mm)	H (mm)	H1 (mm)	AL	SC
	63	165	125	77	18	3	20	41	4	M16
*	75	185	142	91	22	3	21	47	4	M20
*	90	200	156	108	22	5	22	56	8	M20
*	110	220	186	131	24	5	24	66	8	M20
*	140	250	215	165	23	5	28	91	8	M20
*	160	285	240	188	23	5	30	91	8	M20

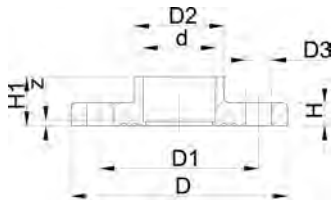
**Fixed flange PVC-U metric**  
**Combined jointing face: flat and serrated metric**

**Model:**

- Solvent cement socket metric
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, BS 4504 PN 10
- **Lochkreis PN 10**

\* Combined Flange, connecting dimensions EN1092 PN 10 and ANSI B 16.5 Class 150  
d75 - d110: bolt hole as long hole version

AL: number of holes



	d (mm)	DN (mm)	PN (bar)	d Type (inch)	Code	SP	Weight (kg)
	20	15	16		A 721 740 106	50	0.100
	25	20	16		A 721 740 107	1	0.130
	32	25	16		A 721 740 108	1	0.185
	40	32	16		A 721 740 109	1	0.306
	50	40	16		A 721 740 110	1	0.368
	63	50	16		A 721 740 111	1	0.513
*	75	65	10	2 ½	B 721 740 112	10	0.536
*	90	80	10	3	B 721 740 113	16	0.710
*	110	100	10	4	B 721 740 114	12	0.941
*	140	125	10	5	B 721 740 116	1	1.395
*	160	150	10	6	B 721 740 117	1	2.029

	d (mm)	D (mm)	D1 (mm)	D1 max. (mm)	D1 min. (mm)	D2 (mm)	D3 (mm)	z (mm)	H (mm)	H1 (mm)	AL	SC
	20	95	65			27	14	3	12	19	4	M12
	25	105	75			33	14	3	13	22	4	M12
	32	115	85			41	14	3	14	25	4	M12
	40	140	100			51	18	3	17	29	4	M16
	50	150	110			62	18	3	17	34	4	M16
	63	165	125			77	18	3	20	41	4	M16
*	75	185		140	144	91	19	3	21	47	4	M16
*	90	200		153	159	108	19	5	22	56	8	M16
*	110	220		181	191	131	24	5	24	66	8	M20
*	140	250	215			165	23	5	28	91	8	M20
*	160	285	240			188	23	5	30	91	8	M20



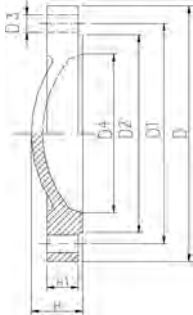
**Blanking flange PVC-U**  
**Jointing face serrated metric**

**Model:**

- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10
- **d63 to d160: combined jointing face (serrated and flat)**
- d250: connecting dimension: ISO 2536
- **Lochkreis PN 10**

\* Combined Flange, connecting dimensions EN1092 PN 10 and ANSI B 16.5 Class 150  
 d20 - d110: bolt hole as long hole version

AL: number of holes

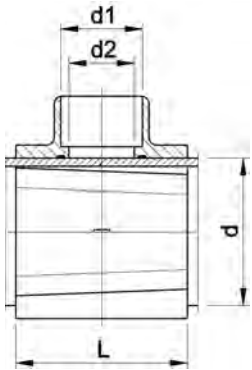


	d (mm)	DN (mm)	PN (bar)	Inch (inch)	Code	SP	Weight (kg)
*	20	15	10	1/2	<b>721 700 506</b>	75	0.075
*	25	20	10	3/4	<b>721 700 507</b>	50	0.097
*	32	25	10	1	<b>721 700 508</b>	30	0.145
*	40	32	10	1 1/4	<b>721 700 509</b>	20	0.214
*	50	40	10	1 1/2	<b>721 700 510</b>	18	0.298
*	63	50	10	2	<b>721 700 511</b>	15	0.352
*	75	65	10	2 1/2	<b>721 700 512</b>	10	0.538
*	90	80	10	3	<b>721 700 513</b>	20	0.679
*	110	100	10	4	<b>721 700 514</b>	10	0.870
*	140	125	10	5	<b>721 700 516</b>	1	1.286
*	160	150	10	6	<b>721 700 517</b>	1	1.761
	225	200	10	8	<b>721 700 520</b>	1	2.731
	250	250	10	10	<b>721 700 521</b>	1	3.329
	280	250	10	10	<b>721 700 522</b>	1	3.769
	315	300	6	12	<b>721 700 523</b>	1	4.856
	355	350	6	14	<b>721 700 524</b>	1	6.972
	400	400	6	16	<b>721 700 525</b>	1	9.125

	d (mm)	D (mm)	D1 (mm)	D1 min. (mm)	D1 max. (mm)	D2 (mm)	D3 (mm)	D4 (mm)	H (mm)	H1 (mm)	AL
*	20	95		61	63	34	16	15	15	12	4
*	25	105		70	73	41	16	20	16	13	4
*	32	115		79	83	50	16	25	19	15	4
*	40	140		91	100	61	18	34	20	16	4
*	50	150		101	110	74	18	44	22	17	4
*	63	165		121	124	91	19	57	25	20	4
*	75	185		140	145	106	22	69	29	21	4
*	90	200		152	160	125	22	82	32	22	8
*	110	220		180	191	150	24	102	36	24	8
*	140	250	215			184	23	120	41	28	8
*	160	285	240			212	23	152	45	30	8
	225	340	295			261	22	213	63	36	8
	250	370	325			292	22	238	63	36	8
	280	395	350			320	22	266	65	36	12
	315	445	400			371	22	299	65	36	12
	355	505	460			430	22	341	67	38	16
	400	565	515			482	26	384	71	42	16



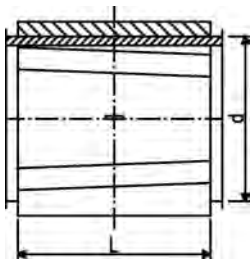
# Branch and tapping saddles



## Rubber sealed branch saddle PVC-U d63-225mm / Outlet with solvent cement socket

- 1 bar Gas / 10 bar Water
- NBR sealing

d (mm)	DN (mm)	PN (bar)	Code	SP	Weight (kg)	d1 (mm)	d2 (mm)	L (mm)
63	50	10	161 111 035	1	0.697	40	22	105
63	50	10	161 111 036	1	0.733	50	22	105
75	65	10	161 111 046	1	0.778	50	31	105
90	80	10	161 111 055	1	0.829	40	31	105
90	80	10	161 111 056	1	0.867	50	31	105
110	100	10	161 111 065	1	0.935	40	31	105
110	100	10	161 111 066	1	0.970	50	40	105
110	100	10	161 111 067	1	1.003	63	40	105
160	150	10	161 111 095	1	1.252	40	31	120
160	150	10	161 111 096	1	1.281	50	40	120
160	150	10	161 111 097	1	1.488	63	40	120
225	200	10	161 111 116	1	1.587	50	40	120
225	200	10	161 111 117	1	1.756	63	40	120



## Solvent cement repair saddle PVC-U d63-225mm / No outlet

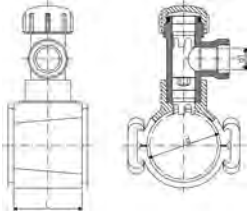
- 1 bar Gas / 10 bar Water
- For repair of damaged pipes
- Cementing only possible on dry mains without pressure

d (mm)	DN (mm)	PN (bar)	Code	SP	Weight (kg)	Max. pipe aperture (mm)	L (mm)
63	50	10	161 110 230	1	0.663	39	105
90	80	10	161 110 250	1	0.761	48	105
110	100	10	161 110 260	1	0.900	48	105
160	150	10	161 110 290	1	1.369	60	120
225	200	10	161 110 310	1	1.490	60	120



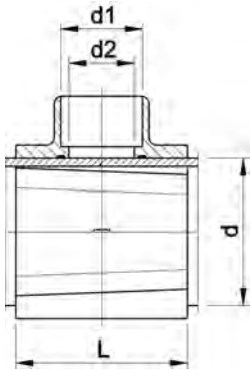
**Rubber sealed tapping saddle PVC-U**  
**d63-225mm / With integral cutter / Outlet with PVP thread**

- 1 bar Gas / 10 bar Water
- No standard thread
- For PVC pipes for tapping under operating pressure
- Hexagon KEY for tapping: 799 150 008 (32 - 40 mm); 799 150 009 (50 - 63 mm)
- NBR sealing



d (mm)	DN (mm)	PN (bar)	Thread Type	Code	SP	Weight (kg)	d1 (mm)	Connection	Tapping-Ø (mm)	L (mm)
63	50	10	G	<b>161 114 409</b>	1	1.228	32	1	21	105
75	65	10	G	<b>161 114 415</b>	1	1.150	32	1	30	105
90	80	10	G	<b>161 114 422</b>	1	1.198	32	1	30	105
110	100	10	G	<b>161 114 430</b>	1	1.486	32	1	30	105
110	100	10	G	<b>161 114 433</b>	1	1.473	63	2	39	105
160	150	10	G	<b>161 114 454</b>	1	1.398	32	1	30	120
160	150	10	G	<b>161 114 457</b>	1	2.351	63	2	39	120
225	200	10	G	<b>161 114 470</b>	1	2.023	32	1	30	120
225	200	10	G	<b>161 114 473</b>	1	2.503	63	2	39	120

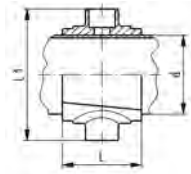
# Saddles



## Rubber sealed branch saddle PVC-U Inch version / Outlet with solvent cement socket

- 1 bar Gas / 10 bar Water
- BS Inch
- NBR sealing

d (inch)	d1 (inch)	PN (bar)	SDR	Size (inch)	Thread Type	Code	Weight (kg)	L (mm)
3	2	10		3	G	<b>161 117 057</b>	0.767	106
4	2	10		4	G	<b>161 117 067</b>	0.930	106
6	2	10		6	G	<b>161 117 097</b>	1.364	120



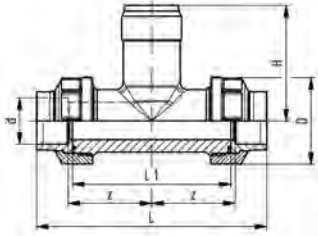
## Saddle double branch (rubber gasket joint to main)

### Model:

- Top saddle with NBR rubber gasket
- Outlet with solvent cement socket, BS Inch
- Allowance should be made for a possible weakening effect on the main of the two diametrically opposed tappings. Particular attention should therefore be given to the class of pipe used in relation to the expected maximum working pressures.

d-d (inch)	PN (bar)	Code	Weight (kg)	L (mm)	L1 (mm)
1 ¼ - 3	10	<b>161 137 055</b>	0.800	106	88
1 ½ - 3	10	<b>161 137 056</b>	0.840	106	88
1 ¼ - 4	10	<b>161 137 065</b>	0.910	106	101
1 ½ - 4	10	<b>161 137 066</b>	0.930	106	101
1 ¼ - 6	10	<b>161 137 095</b>	1.250	120	121

# Installation fittings



## Installation fitting type 310 PVC-U For socket systems metric

### Range of use:

- Compatible Signet flow sensors: type 2551, 2537, 515, 8510, 2536, 8512
- Compatible Signet pH/ORP sensors: type 2724, 2725, 2726, 2734, 2736, 2735

### Attention:

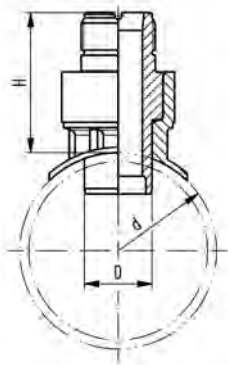
- sensor length depends on installation fitting

### Model:

- Threaded outlet 1 ¼" NPSM
- Union end with solvent cement socket PVC-U

d (mm)	DN (mm)	PN (bar)	Type	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
20	15	16	PVMT005	<b>721 310 006</b>	1	0.181	<b>721 310 036</b>	1	0.181
25	20	16	PVMT007	<b>721 310 007</b>	1	0.226	<b>721 310 037</b>	1	0.226
32	25	16	PVMT010	<b>721 310 008</b>	1	0.303	<b>721 310 038</b>	1	0.304
40	32	16	PVMT012	<b>721 310 009</b>	1	0.419	<b>721 310 039</b>	1	0.479
50	40	16	PVMT015	<b>721 310 010</b>	1	0.568	<b>721 310 040</b>	1	0.571
63	50	16	PVMT020	<b>721 310 011</b>	1	0.879	<b>721 310 041</b>	1	0.881

d (mm)	DN (mm)	L (mm)	L1 (mm)	D (mm)	H (mm)	z (mm)	Sensor Type
20	15	128	90	43	76	48	flow X0, pH XX
25	20	144	100	51	78	53	flow X0, pH XX
32	25	160	110	58	81	58	flow X0, pH XX
40	32	168	110	72	85	58	flow X0, pH XX
50	40	188	120	83	89	63	flow X0, pH XX
63	50	212	130	100	95	68	flow X0, pH XX



**Installation fitting type 312 PVC-U  
Glue on saddle metric**

**Model:**

- Top saddle for solvent cement bonding
- Saddle with threaded outlet 1 ¼" NPSM

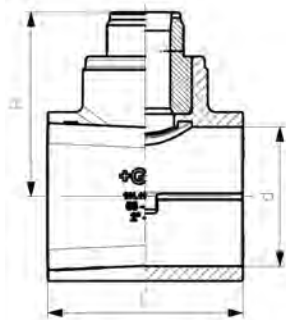
**Range of use:**

- Compatible Signet flow sensors: type 2551, 2537, 515, 8510, 2536, 8512

**Attention:**

- sensor length depends on installation fitting

d (mm)	DN (mm)	PN (bar)	Code	SP	Weight (kg)	D (mm)	Sensor Type	H (mm)
75	65	10	721 312 012	1	0.220	38	flow X1	89
90	80	10	721 312 013	1	0.228	38	flow X1	89
110	100	10	721 312 014	1	0.225	38	flow X1	89
125	100	10	721 312 015	1	0.218	38	flow X1	81
140	125	10	721 312 016	1	0.213	38	flow X1	79
160	150	10	721 312 017	1	0.217	38	flow X1	76
200	200	10	721 312 019	1	0.192	38	flow X1	69
225	200	10	721 312 020	1	0.297	38	flow X2	141
250	250	10	721 312 021	1	0.295	38	flow X2	137
315	300	10	721 312 023	1	0.290	38	flow X2	127



**Installation fitting type 312 PVC-U  
metric clamp on saddle**

**Model:**

- Saddle with threaded outlet 1 ¼" NPSM
- Top saddle for solvent cement bonding
- Seal: Lip seal EPDM

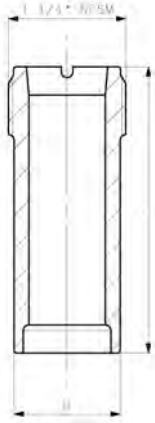
**Range of use:**

- Compatible Signet flow sensors: type 2551, 2537, 515, 8510, 2536, 8512
- Compatible Signet pH/ORP sensors: type 2724, 2725, 2726, 2734, 2736, 2735

**Attention:**

- sensor length depends on installation fitting

d (mm)	DN (mm)	PN	Code	SP	Weight (kg)	Sensor Type	H (mm)	L (mm)
75	65	16	198 150 538	1	0.780	flow X0, pH XX	99	105
90	80	16	198 150 539	1	0.835	flow X0, pH XX	105	105
110	100	16	198 150 540	1	0.885	flow X0, pH XX	114	105
160	150	16	198 150 543	1	1.375	flow X1	157	120
225	200	16	198 150 545	1	1.700	flow X1	184	120



**Installation fitting type 314 PVC-U**  
**Weld on metric**

**Model:**

- Threaded outlet 1 ¼" NPSM
- For conventional hot gas back welding according to DVS 2207 part 3

**Attention:**

- pH sensors can also be used for dimensions above d180/DN150 and below d75/DN65 with 721 314 000 The length might have to be adjusted (sensor has to touch the medium)
- only for pressureless or low pressure application
- pressure rate depends on quality of hot gas back welding
- please consult the instruction manual
- Installation by trained and certified welders only
- sensor length depends on installation fitting

**Range of use:**

- Compatible Signet flow sensors: type 2551, 2537, 515, 8510, 2536, 8512
- Compatible Signet pH/ORP sensors: type 2724, 2725, 2726, 2734, 2736, 2735

d (mm)	DN	Code	SP	Weight (kg)	Sensor Type	D (mm)	L (mm)
75 - 180	65 - 150	<b>721 314 000</b>	1	0.054	flow X0, pH XX	38	68
200 - 355	200 - 350	<b>721 314 001</b>	1	0.078	flow X1	38	102
400 - 630	350 - 600	<b>721 314 002</b>	1	0.153	flow X2	38	178

# Automation made easy for you

Accurate measurement  
Precise control  
Reliable actuation



Automation

# Automation made easy

The all-in-one solution for your automation needs



GF Piping Systems is your experienced partner with a full portfolio of measurement, control and actuation components, which are easy to install and use and have local support through all phases of the project. Measurement encompasses a wide range of measurement technologies and parameters. Most of these products are available in plastic and are offered with dedicated fittings, which integrate our sensors perfectly into your piping system. Control comprises various control functionalities (from simple relays to PID controllers) and all major communication technologies. Actuation includes pneumatic, electric and magnetic actuators, which can be seamlessly combined with all kinds of valves and accessories.





## + Modular system approach

GF Piping Systems offers a complete system solution. It is easy to add automation components to any existing installation to meet your needs and concerns - from actuation of individual valves to full-system upgrades.

## + One partner for all your automation needs

GF Piping System simplifies automation by serving as your partner for all your automation needs - measurement, control, and actuation from a single source. No wasted project time or risk of compatibility issues.

## + Corrosion-free with high chemical resistance

Our automation solutions are housed in high-quality plastic, like the other components of your piping system. This makes them corrosion-free and resistant to critical media, too, so maintenance costs are reduced.

## + Local support on a global scale

Automation can be intimidating when you are just getting started. The experts at GF Piping Systems support you through all phases of your automation project - from planning to initial startup - and are available in 34 countries.

## + Easy to use designs

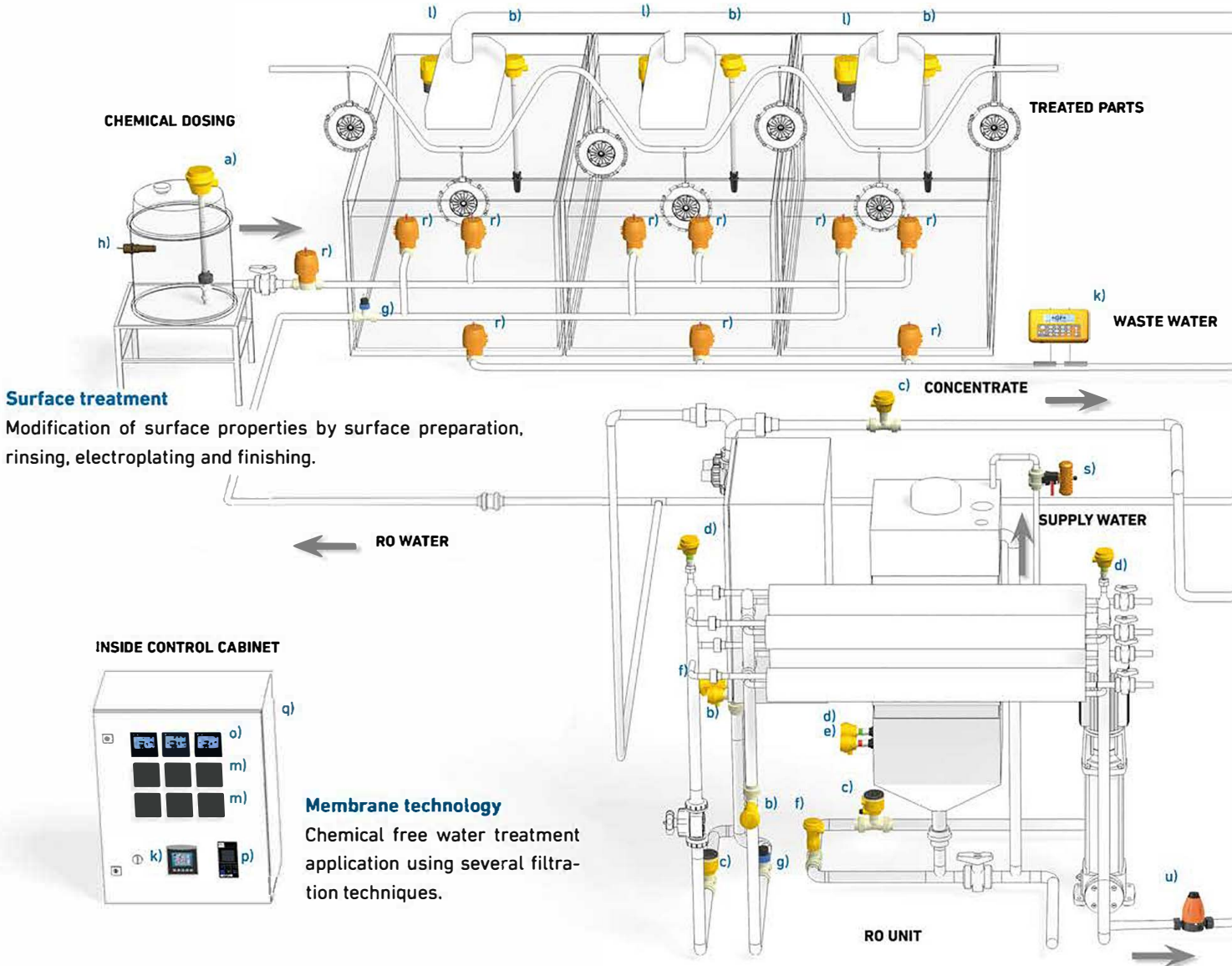
The automation solutions from GF Piping Systems are powerful, but only as complex as is really needed. This makes them easy to use, with easy-to-understand functions and intuitive menus. Employees are instructed and trained in a short time.



## Automation

# Industrial automation made easy

We have a comprehensive automation offering for your industrial applications.

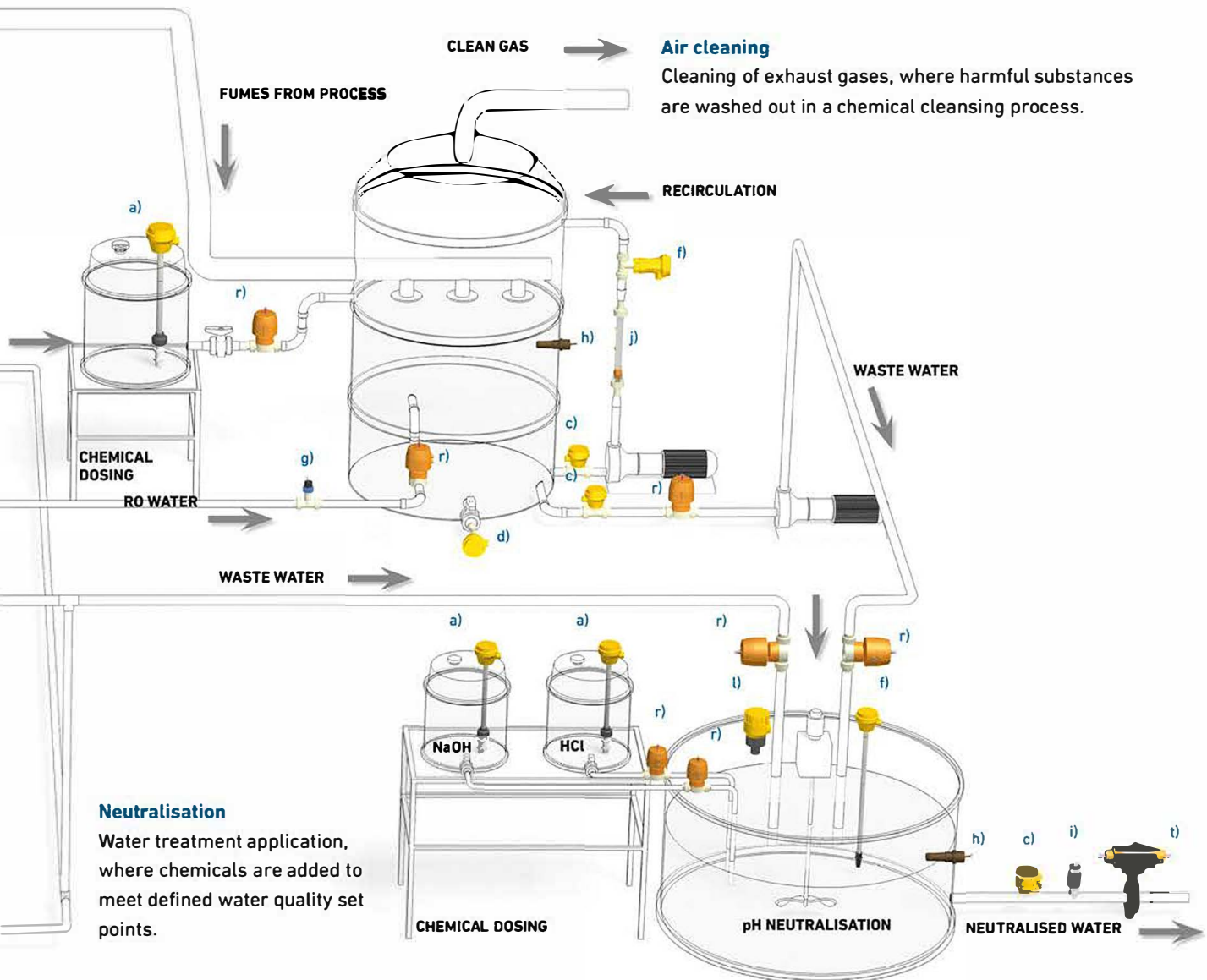


## Measurement

- a) Level sensor type 2250
- b) Conductivity sensor using 2850 sensor electronics
- c) Electromagnetic flow sensor type 2551
- d) Pressure sensor type 2450
- e) Temperature sensor type 2350
- f) pH-sensor type 2724
- g) Paddlewheel flow sensor type 2536
- h) Limit switch
- i) pH / ORP Wet-tap unit type 3719
- j) Variable area flow meter type 335
- k) Portaflow ultrasonic flowmeter type 330/220
- l) Ultrasonic level sensor type 2270

## + Main benefits

- Safety** = Completely controlled and regulated processes
- Simplicity** = Easy to install, handle and operate
- Efficiency** = Economical and durable system solutions from a single source
- Economy** = Optimized cost of ownership due to low-maintenance systems



**Neutralisation**  
Water treatment application, where chemicals are added to meet defined water quality set points.

### Control

- m) Multi-parameter transmitter type 9900
- n) Customer PLC
- o) Dual channel transmitter type 9950
- p) PID controller
- q) Profibus concentrator

### Actuation / Valves

- r) Diaphragm valve, pneumatic, type DIASTAR Ten
- s) Pneumatic ball valve type 230
- t) Pneumatic butterfly valve type 240
- u) Pressure retaining valve type 586

The rendering above shows an exemplary selection of industrial applications, where our automation offering can be used.

# Measurement

Accurate measurement is the basis for reliable process control

Our measurement offering will cover your needs: flow, pH, conductivity, level, temperature and various water quality parameters. Corresponding to our piping systems, most sensors are available in plastic and are therefore highly resistant to chemicals. Our plug-and-play measurement products are self-explanatory, easy to maintain and offered with suitable installation fittings.





# Measurement

An overview of the key products

## Paddlewheel flow sensor



**Rotor-X paddlewheel flow sensor type 515**

Non-powered  
0.3-6 m/s (1 to 20 ft/s)  
DN15 - DN900 (½ to 36 in.)  
PP 12.5 bar @ 20 °C (180 psi @ 68 °F)  
PVDF 14 bar @ 20 °C (203 psi @ 68 °F)  
19.7 Hz per m/s nominal  
(6 Hz per ft/s nominal)  
Wet tap sensors available



**Rotor-X paddlewheel flow sensor type 2536**

0.1 - 6 m/S (0.3 to 20 ft/S)  
DN15 - DN900 (½ to 36 in.)  
DN15 - DN100 (½ to 4 in.) for PVC  
PP 12.5 bar @ 20 °C (180 psi @ 68 °F)  
PVDF 14 bar @ 20 °C (203 psi @ 68 °F)  
PVC 14 bar @ 20 °C (203 psi @ 68 °F)  
49 Hz per m/S nominal  
(15 Hz per ft/S nominal)



**Paddlewheel flow sensor type 2537**

0.1 - 6 m/s (0.3 to 20 ft/s)  
DN15 - DN200 (½ to 8 in.)  
PP 12.5 bar @ 20 °C (181 psi @ 68 °F)  
PVDF 14 bar @ 20 °C (203 psi @ 68 °F)  
4-20 mA, digital (S<sup>3</sup>L), flow switch or pulse outputs (based on part number)



**Stainless steel paddlewheel flow sensor - type 2540**

0.1 - 6 m/s (0.3 to 20 ft/s)  
DN40 - DN900 (1 ½ to 36 in.)  
316 stainless steel  
17 bar @ 100 °C (250 psi @ 212 °F)  
49 Hz per m/s nominal  
(15 Hz per ft/s nominal)  
Open collector output



**Metalex paddlewheel flow sensor type 525**

0.5 - 6 m/s (1.6-20 ft/s)  
DN15 - DN300 (½-12 in.)  
316 stainless steel  
103 bar (1500 psi @ safety factor 1.5)  
@149 °C (300 °F)  
39 Hz per m/s nominal  
(12 Hz per ft/s nominal)

## Magmeter



**FlowtraMag® Meter type 2580 (Hastelloy® C)**

0.02 - 10 m/s (0.07 to 33 ft/s)  
DN15 - DN900 (½ to 36 in.)  
10 bar @ 23 °C (145 psi @ 73 °F)  
4 - 20 mA, 4 to 20 mA per ANSI-ISA  
50.00.01 Class H



**Metal magmeter type 2552**

0.05 - 10 m/s (0.15 to 33 ft/s)  
DN50 - DN2550 (2 to 102 in.)  
316 stainless steel & PVDF  
20.7 bar @ 25 °C (300 psi @ 77 °F)  
4 - 20 mA, frequency/digital (S<sup>3</sup>L)  
Hot-tap using ball or gate valves



**Magmeter (blind or display) type 2551**

0.05 - 10 m/s (0.15 to 33 ft/s)  
DN15 - DN900 (½ to 36 in.)  
10.3 bar @ 25 °C (150 psi @ 77 °F)  
4 - 20 mA, or frequency/digital (S<sup>3</sup>L) outputs  
Optional relay outputs

# When the level ma

## Inline flow sensors



**Turbine flow sensor  
type 2100**

0.38 to 38 lpm (0.10 to 10 gpm)  
DN15 (½ in.)  
PVDF  
16 bar @ 20 °C (232 psi @ 68 °F)  
Open collector output  
Use with end fitting: 3-2100-31  
to 3-2100-38



**Micro-flow rotor sensor  
type 2000**

0.11 - 12.11 lpm (0.03- 3.2 gpm)  
¼ in. NPT or ISO 7/1-R1/4 threads  
Polyphenylene sulphide and PEEK  
5.5 bar @ 0 ° to 80 °C  
(80 psi @ 32 °F to 176 °F)  
Open collector output  
Standard cable 7.6 m (25 ft)



**Mini-flow rotor sensor  
type 2507**

400 - 12 000 mL/m (0.1 to 3.2 U.S. gpm)  
G ¼ in. ports, ¼ in. NPT pipe adapters  
PVDF  
5.5 bar @ 24 °C (80 psi @ 75 °F)  
Open Collector output  
Standard cable 7.6 m (25 ft)

## Transmitters



**Flow integral mount  
type 9900**

Local display for sensor mounted  
instruments  
Provides 4-20 mA output  
"At a glance" visibility  
"Dial-type" digital bar graph  
NEMA 4X/IP65



**Battery powered flow totaliser  
type 8150**

Displays GPS, GPM, GPH, GPD, LPS,  
LPM, LPH, LPD  
Battery powered  
Single input  
Panel or field mount  
3 totalisers, auto calibration  
Use with 515 or 525 flow sensors

An overview about multi-parameter instruments  
is shown on page 19.

## Variable area flow meters



**Variable area flow meters**  
type 335 / 350, SK50-73

Taper tubes in PVC transparent,  
PA, PSU, PVDF  
Union connection with PVC (std)  
DN10-DN65 (1/8" - 3 1/2")  
PN10  
Optional switch feedback  
Special scales on request

## Ultrasonic flow meters



**Ultrasonic flow meter**  
type U1000 V2

0.1 m/s - 10 m/s  
d22 - d180  
DC 12 - 24 V  
Output: 4-20 mA,  
pulse/frequency, Modbus  
Transit-time measurement



**Ultrasonic wall mount flowmeter**  
type U3000 / U4000

0.1 m/s - 20 m/s  
d13 - d2000  
DC 24 V or AC 86 - 240 V  
Output: 4-20 mA,  
pulse/frequency, RS232, USB  
Integrated datalogger (U4000)  
Transit-time measurement



**Portable ultrasonic flowmeter**  
type PF220 / PF330

0.1 m/s - 20 m/s  
d13 - d2000  
Battery powered, AC 110 - 240 V  
Output: 4-20 mA, USB  
Integrated datalogger (PF330)  
Transit-time measurement



**Ultrasonic doppler flowmeter**  
type UD2100

Especially designed for  
dirty/aerated liquids  
0.03 m/s - 12.2 m/s  
d16 - d4000  
DC 24 V or AC 86 - 240 V  
Output: 4 - 20 mA,  
pulse/frequency, Modbus  
integrated datalogger  
Doppler measurement

# Easy to install

## pH/ORP sensors and instruments



### Threaded DryLoc pH/ORP electrode - type 2774 - 2777

0 - 14 pH,  $\pm 2,000$  mV ORP  
Ryton body, PTFE junction  
Use sensor  $\frac{3}{4}$ " threads for mounting  
DryLoc preamplifier connection with gold plated pins  
Suitable for submersible applications  
For use with 2751/2760 preamplifiers



### DryLoc pH/ORP electrodes type 2724-2726

0 - 14 pH,  $\pm 2,000$  mV ORP  
Ryton body, PE junction  
Use fittings for in-line applications or  $\frac{3}{4}$ " NPT or ISO  
Suitable for submersible applications  
DryLoc preamplifier connection with gold plated pins



### Differential DryLoc pH/ORP electrodes type 2744 - 2747

0 - 14 pH,  $\pm 1,500$  mV ORP  
Ryton body, PTFE double junction  
Use sensor 1 inch threads for mounting  
DryLoc preamplifier connection with gold plated contacts  
For use with 2751/2760 preamplifiers



### pH/ORP Wet-Tap assembly - type 3719/2756, Wet-Tap electrodes type 2757

Use a wet-tap style sensor for 0 - 14 pH  $\pm 2,000$  mV ORP  
CPVC, PVC  
1  $\frac{1}{2}$  or larger  
1  $\frac{1}{2}$  or 2 NPT, ISO 7/1 - R1.5 or R2  
Electrode removal without process shutdown



### DryLoc pH/ORP electrodes for harsh applications - type 2734 - 2736

Enhanced reference and bridge gels to resist chemical poisoning  
Ryton (PPS) body and PTFE junction for broad range of chemical compatibility  
PTFE reference junction resists fouling and chemical attack  
Mounts in Signet standard fittings from DN15 to DN100 ( $\frac{1}{2}$  to 4 in.)



### DryLoc pH/ORP Smart Sensor Electronics type 2751

-1 - 15 pH,  $\pm 2,000$  mV ORP  
PBT, CPVC (PVC-C)  
Probe health monitoring, glass impedance and broken glass detection  
Memory chip interface  
Use with 8900, 9900 and 9950  
In-line and submersible versions available





## Conductivity/resistivity sensors and instruments



### Conductivity integral system with 9900 transmitter

Local display for sensor mounted instruments  
Provides 4 - 20 mA output  
"At a glance" visibility  
"Dial-type" digital bar graph  
NEMA 4X/IP65



### Conductivity sensor electronics with PVDF type 2850

0.055 - 4 000 000  $\mu\text{S}$  (0.02 - 200 000 ppm)  
(18.2 M $\Omega$  - 1 K $\Omega$ )  
PBT (integral mount) /PBT/CPVC  
(universal J-box)  
Integral systems connect to the 2839 series electrodes or 2819 series electrode via 3-286X universal j-box assembly  
4 - 20 mA or digital (S<sup>3</sup>L)  
Factory NIST certified



### Conductivity/resistivity electrodes type 2818 - 2823

0.055 - 4 000 000  $\mu\text{S}$  (0.02 - 200 000 ppm)  
(18.2 M $\Omega$  - 1 K $\Omega$ )  
316 SS or titanium (Hastelloy C also available upon request)  
Reversible threads or sanitary flange connections  
Connect to 2850 sensor electronics



### PVDF conductivity electrodes type 2839 - 1V(D) - 2842 - 1V(D)

0.055 - 200 000  $\mu\text{S}$  (0.02 - 100 000 ppm)  
(18.2 M $\Omega$  - 1 K $\Omega$ )  
316 SS and PVDF  
Dual threaded NPT or ISO  
Connection to 8900, 9900 and 9950 instruments or 2850 sensor electronics  
NIST certificate

## Temperature and pressure sensors and instruments



### Temperature integral system with 9900 transmitter

Local display for sensor mounted instruments  
Provides 4 - 20 mA output  
"At a glance" visibility  
"Dial-type" digital bar graph  
NEMA 4X/IP65



### Temperature sensor type 2350

In-line mounting: 10°C to 100°C  
(14° - 212 °F)  
Submersible mounting: 10°C to 85°C  
(14° - 185°F)  
PVDF  
¾ inch dual threaded for in-line or submersible installation  
4 - 20 mA or digital (S<sup>3</sup>L)



### Pressure integral system with 9900 transmitter

Utilizes the 2450 sensor for pressure or hydrostatic level measurement  
Local display for sensor mounted instruments  
Provides 4 - 20 mA output  
"At a glance" visibility  
"Dial-type" digital bar graph  
NEMA 4X/IP65



### Pressure sensor type 2450

0 - 0.7 bar (0 - 10 psig) - U  
0 - 3.4 bar (0 - 50 psig) - L  
0 - 17 bar (0 - 250 psig) - H  
Vacuum range available  
Wetted material: PVDF, ceramic and FKM  
½" union, dual threaded  
4 - 20 mA or digital (S<sup>3</sup>L)

## Level sensors and transmitters



**Non-contact principle radar level transmitter type 2290**

Non-contact principle  
 Robust against most interfering factors such as fumes, light foaming or fluctuations of pressure or temperature  
 Display and comprehensive configuration menu  
 PP, PTFE or steel antenna enclosures



**Guided radar level transmitter type 2291**

Reliable guidance of measuring signal along probe  
 Advanced resilience in case of extreme fumes, thick foam layers or agitation  
 Great performance also on media of low dielectric constants  
 Special coatings for probes available: PP, PFA and FEP



**Ultrasonic integral level transmitter type 2260**

Non-contact principle  
 Narrow 5 and 6° beam  
 Range: 4, 6, 15 meters (13, 20, 50 ft)  
 4-20 mA, HART, relay output  
 PP and PVDF bodies  
 ATEX versions  
 Quick-set and advanced menu  
 Large multi-parameter display  
 Allows for open channel measurement



**Ultrasonic level sensor type 2270**

Non-contact principle  
 Narrow 5 and 6° beam  
 Range: 4, 6, meters (13, 20 ft)  
 4-20 mA, HART  
 PP and PVDF bodies  
 Easy to use EView programming software  
 Allows for open channel measurement



**Hydrostatic level sensor type 2250**

0-10 psi = 0-7.03 m = 0-23.06 ft  
 0-50 psi = 0-35.15 m = 0-115.32 ft  
 Wetted material: PVDF, PVC, ceramic and FKM  
 Submersible sensor  
 4-20 mA or digital (S<sup>3</sup>L)  
 Uses hydrostatic pressure for level and depth control

## Point level switches



**Vibration forks type 2280**

- For safe operation in critical applications
- Cable, DIN connector and connection terminals
- Easy wiring in various applications
- No moving parts
- No maintenance costs



**Ultrasonic gap switch type 2284**

- PPS Full-plastic body
- Reliable point level detection even in very corrosive or viscous liquids
- Optimized chemical compatibility
- Compact size
- Easy installation in pipes and small systems
- Robust ultrasonic principle even in highly viscous liquid



**Conductive multipoint switch type 2281**

- Individual cutting of electrodes
- Most economic solution to indicate multiple point levels
- Easy adaptation of switching points on site
- Up to 4 switching points in one sensor
- 4 times faster installation
- Cost effective solution



**Guided float switch type 2282**

- PP or PVDF full-plastic body
- Compact and cost attractive solution for small vessels
- Optimized chemical compatibility
- Ultra compact housing
- Easy installation in compact systems



**Float switch type 2285**

- Double chambered enclosure
- Easiest way to monitor point levels in open tanks and basins
- High operational safety
- Mercury free switching contact
- Safe use in drinking- and waste water applications

## Water analysis



**Chlorine analyzer system  
type 4630**

- Continuous free chlorine measurement without chemical reagents
- Optional pH sensor for increased accuracy
- Pre-wired panel for easy installation
- Built in pressure regulator and variable area flow meter



**Chlorine dioxide system  
type 4632**

- Complete turnkey system – no additional parts required to install
- Now available with a flow switch interrupt (chlorine and chlorine dioxide)
- Complies with EPA standard 334.0
- Chemical free measuring system – 0 - 2 ppm
- Optional pH measurement



**Process optical dissolved  
oxygen sensor type 2610**

- Optical DO measurement with no flow requirements
- No membranes or filling solutions
- Flexible communications, 4 - 20 mA or modbus 3-2610-51
- Measurement range: 0 - 20 mg/L, 0 - 200 % saturation

# Easy to monitor



# Easy to operate

## Accessories



### Switching power supplies type 7310

Universal AC input/full range  
 Protections: short circuit/overload/  
 over-voltage  
 Cooling by free air convection  
 Install on DIN rail TS-35/7.5 or 15  
 Built in DC DK active signal  
 LED indicator for power on



### i-GO signal converter type 8058

Connects third party 4-20 mA signals  
 to the 8900 and 9900  
 Available for single or dual 4-20 mA  
 sensor inputs  
 Compatible with 8900, 9900 and 9950



### 8059 external relay module

AC and DC powered versions  
 External relays controlled by host  
 instrument  
 Digital pass-through (DC versions) to  
 simplify wiring  
 Relay can be tested locally, and also  
 via the host instrument  
 Only compatible with 8900



### HART – USB modem

HART to USB converter  
 Portable or DIN rail version  
 ATEX



### pH/ORP system tester type 2759

Battery powered  
 Simulates pH and ORP  
 Compatible with 2751 and 2760 preamp  
 Connects to any pH/ORP instrument



### Configuration tool type 0252

Back up and restore SmartPro  
 transmitters and blind sensors  
 configurations to a computer file  
 User-friendly interface  
 Configure settings such as instrument  
 type, units, scale 4 to 20 current loops  
 and modify labels from the computer  
 Use a single file to clone multiple  
 SmartPro transmitters and blind  
 sensors



### Conductivity/resistivity tools type 2850-101-X

Available in 5 different values  
 Verifies electronic independent of  
 electrode  
 Compatible with all conductivity and  
 resistivity instruments  
 Temperature compensated to 25 °C



### 9900 pH/ORP Calibrator

9900 battery operated calibrator  
 Works with new line of 2751 Smart pH/  
 ORP sensor electronics  
 This unit can be kept in a lab or taken in  
 to the field  
 Runs on (8) AA Alkaline batteries  
 (included)  
 Allows the user the ability to rotate elec-  
 trodes, meaning unplug an aged/dirty  
 electrode replace with a pre-calibrated  
 electrode



### Flow wet-tap valve type 3519

DN15-DN900 (½ to 36 in.)  
 PVC  
 7 bar @ 20 °C (100 psi max @ 68 °F)  
 Use with wet-tap paddlewheel flow  
 sensors type 515 and 2536



**Buffer solutions  
type pH/ORP**

NIST Traceable  
Easily identifiable colour coded buffer solutions  
Liquid or powder versions  
Temperature compensated values  
Kits for easy use



**Wall mount  
accessory kit**

Compact enclosure that works with 9900 transmitter and other 1/4 DIN size instruments  
Equipped with a 1/4 DIN cutout and two 1/2" holes at the base  
Mounting hardware and liquid tight connectors are included



**Limit contacts GK 10/GK11 for  
type 335/350 and short version**

Reed contact  
IP65  
230 V



**4 - 20 mA sensor GK 15 for VAFM  
type 335/350**

12-24 V DC  
IP65  
4 - 20 mA (3 wire)



**Rear enclosure kits for 9900**

Compatible with all existing 9900-1P transmitters  
NEMA TYPE 4X/IP66 rated for indoor or outdoor installations  
Spacious for any 9900 transmitter accessory module  
Hinged cover design for easy to access wiring  
Hinged cover suitable for wall mount or pipe mount installations

# Easy to connect

## Installation fitting tees



### Plastic - metric tees

ABS*	DN20 - DN50
PVC	DN15 - DN50
PP	DN15 - DN50
PVDF	DN15 - DN50
PE	DN15 - DN50



### Plastic - fiberglass tees

- Fiberglass 1.5 - 2.0" / SCH 80
- Special order 1/2 saddles available up to 12 inch / DN 300



### Plastic - PVC tees

PVC	0.50 - 2.0" / SCH 80
PVC-C	0.50 - 2.0" / SCH 80
PVC BSP*	0.50 - 2.0"
Fiberglass	1.50 - 2.0" / SCH 80



### Metal - tees

Carbon steel NPT	0.50 - 2.0" / SCH 40
Copper sweat-on	0.50 - 2.0" / SCH K
Galvanized iron NPT	1.00 - 2.0" / SCH 40



### Metal - tees

316 SS NPT	0.50 - 2.00" / SCH 40
Brass NPT	1.00 - 2.00" / SCH 40

\* BSP and ABS fittings are available through your local Georg Fischer sales company.

## Weldolets / brazolets



### Weldolet

PVC-U	DN65 - DN600
PP	DN65 - DN600
PE	DN65 - DN600
PVDF	DN65 - DN600
SS	DN50 - DN630



### Weldolets / brazolets

Carbon steel	2.5 - 12.0" / SCH 40
Brass	2.5 - 12.0" / SCH 40
316 SS	2.5 - 12.0" / SCH 40



## Metalex



### Metalex

SS socket            0.50 - 1.00"  
 SS weld-on         1.25 - 12"



### Metalex weld-on mini-tap

1.25 - 12"

## Wafer fittings



### Wafer

PP            DN65 - DN300  
               (2.5 - 4.0")  
 PVDF       DN65 - DN200  
               (3.0")

## Saddles



### Electrofusion transition

PE            2.0 - 12.0"



### Clamp-on

PVC            2.0 - 8.0"/SCH 80  
 PVC-U        metric DN65 - DN200  
 BSP            3" - 6"



### Strap-on

Iron 2.0 - 12.0"/SCH 80  
 Schedule 80 available up to 48  
 inches/DN 1200  
 Sch 52 and K9 metric ductile iron saddle  
 56 to 400 mm



### Electrofusion

PE            DN65 - DN400



### PVC-U Glue-on

PVC            10" - 12"/SCH 80  
 Special order up to 20 inch



### Glue-on

PVC-U        DN65 - DN300  
 ABS            DN65 - DN200

# Control

## Precise control throughout your automation loop

Clever design makes life easy. All our measurement parameters can be connected with one and the same transmitter, a true multi-parameter controller. Additional functionalities like batch control or communication technologies can be added anytime because of the modular design. Our control products are simple to operate, have intuitive menu structures and can be upgraded modularly.



## Multi-parameter instruments



**SmartPro transmitter type 9900**

Multi-parameter input selection  
Large auto-sensing backlit display  
„Dial-type“ digital bar graph  
Optional field upgradable relays  
Selectable error mode for current outputs, 3.6 mA or 22 mA  
Optional relay, direct conductivity/resistivity, 4-20 mA output, and HART modules are available



**Dual channel transmitter type 9950**

- Independent dual channel multi-parameter, flow, pH, ORP, conductivity, resistivity, pressure, temperature, level, volume, salinity, dissolved oxygen, other (4-20 mA)
- 2 Passive 4-20 mA loop outputs standard
- Options for up to 4 relays – dry contact or solid state
- Derived functions: ratio, difference, sum, % rejection, % recovery

## Accessories



**i-GO signal converter type 8058**

Connects third party 4-20 mA signals to the 8900 and 9900  
Available for single or dual 4-20 mA sensor inputs  
Compatible with 8900, 9900  
Requires programming at the factory with the 8350, 8450



**PID controller type 3216**

Easy set-up  
Auto-tune  
24 V or 100-230 V  
External set-point  
Manual override via push button  
Compact design





# Control

An overview of the key products

## Modules



**Relay Module  
type 9900**

Adds two programmable dry-contact relays  
Hysteresis and time delay available for each relay  
Depending on the sensor type, there are a total of 23 relay modes available



**Conductivity/Resistivity Module  
type 9900**

Interfaces Conductivity/Resistivity and Salinity directly to the 9900 transmitter  
Conductivity/Resistivity and Salinity measurements may also be performed via the 2850 Sensor Electronics connected through the 9900 Digital (S<sup>2</sup>L) inputs)



**H COMM Module  
type 9900**

Allows communication between the 9900 Transmitter and a HART®-enabled device  
Allows access to primary and secondary measurements remotely  
Allows user to remotely adjust the 4 and 20 mA settings  
Not compatible with Batch module



**Batch Module  
type 9900**

Adds batch capability to the 9900 Transmitter (Generation II or later)  
Compatible with all Signet flow sensors  
Up to 10 batch sizes can be stored in one 9900 with customized names and K-Factors available for each batch  
Batch module plugs in the same location as the conductivity and 4-20 mA module.  
Only one can be used at one time



**4 to 20 mA Module  
type 9900**

Adds one extra 4-20 mA output to the Output can be used for primary or secondary measurement  
Settings are independent from 4-20 mA output in base unit



**Modbus Module  
type 9900**

Ability to transfer live readings, units of measure, and measurement status  
Connects to PLCs and SCADA system  
Supports the serial Modbus RS485 standard



**Relay Module  
type 9950**

Interface up to four binary inputs  
Binary inputs are compatible with either open collector or mechanical contacts  
The binary inputs can supply power to the four inputs or accepts powered outputs from external devices



**Dual Channel 4 to 20 mA Module  
Current Loop Output Module  
type 9950**

Up to six 4 to 20mA current loops in one 9950  
Passive loops, requires external 12 to 24 VDC power



**Single Channel Conductivity/Resistivity  
Module type 9950**

Two conductivity modules can be added for conductivity, resistivity or salinity measurements



**Dual Channel Conductivity Module  
type 9950**

Monitor two different conductivities with a single module  
The module design allows for additional expansion opportunities with the 9950 such as additional current loop outputs



**Modbus Module  
type 9950**

Connects the 9950 to existing Modbus RTU, serial RS485 and automation networks  
Allows digital access to live measurement readings  
Simplifies the interfacing of the 9950 to automation networks

# Actuation

## Reliable actuation with configuration flexibility

With our modular set-up, valves and actuators can be combined flexibly and additional functionalities, like positioners or monitoring devices, can be added optionally. Naturally, we offer the whole range in all-plastic designs, which are capable of withstanding harsh environments. A wide range of pressure regulating valves and accessories complete our actuation portfolio.





# Actuation

An overview of the key products

## Actuators electric and pneumatic



**Electric actuator smart type  
dEA25/45/120/250**  
100 – 230 V AC, 24 V AC/DC  
Torques from 10 Nm – 250 Nm  
LED stripe for visual open/close  
360° feedback  
Heating element, position feedback  
(Open/Close/ Middle)  
Connectivity via NFC and Wi-Fi Direct  
ensuring control



**Pneumatic actuator  
type PA11/PA21**  
FC, FO, DA  
Rack and pinion principle  
Accessory interface acc. ISO5211  
Visual position indication  
Full plastic solution  
PA11: 10 Nm /PA21: 20 Nm



**Electric actuator  
type EA25, 45, 120, 250**  
100 – 230 V AC, 24 V AC/DC  
Torques from 25 Nm – 250 Nm  
LED enforced position feedback  
Standard: position feedback, heater  
Optional: fail-safe return unit integrated,  
positioner, monitoring, profibus DP V0



**Pneumatic actuator  
type PA30 - PA90**  
FC, FO, DA  
Scotch Yoke principle  
Accessory interface acc. ISO5211  
Visual position indication  
Adjustable end stops  
Various coatings on request



**Electric actuator  
type EA15**  
100 - 230 V AC, 24 V AC/DC  
Torques from 20 Nm  
LED enforced position feedback  
Standard: position feedback, heater  
Optional: fail-safe return unit integrated

## Actuated butterfly valves



**Butterfly valve electric  
type 145/146/147\***  
Electric actuated butterfly valve  
Actuator type: dEA45/120/250  
and EA45/120/250  
(24 V, 110-230 V)  
Plastic butterfly valve wafer/lugstyle  
Butterfly valve type 567/578  
PVC-U, PVC-C, ABS, PP-H, PVDF  
567: DN50 - DN600; 578: DN50 - DN300



**Butterfly valve electric  
type 038-E/039-E**  
Electric actuated butterfly valve  
Actuator type: dEA45/120/250  
and EA45/120/250  
(24 V, 110 - 230 V)  
Metal butterfly valve wafer/lugstyle  
Butterfly valve type 038/039  
038/039: Ductile iron with powder/epoxy/  
rilsan coating  
038: DN50 - DN600,  
039: DN50 - DN1200

\* Predecessor type 140/143/144 with electric actuators type EA31/42

# Easy to modify

## Actuated butterfly valves



**Butterfly valve pneumatic  
type 240/243/244**

Pneumatic actuated butterfly valve  
Actuator type: PA30-PA90  
Plastic butterfly valve wafer/lugstyle  
Butterfly valve type 567/578  
PVC-U, PVC-C, ABS, PP-H, PVDF  
567: DN50 - DN600; 578: DN50 - DN300



**Butterfly valve pneumatic  
type 038 - P/039 - P**

Pneumatic actuated butterfly valve  
Actuator type: PA30 -PA70  
Metal butterfly valve wafer/lugstyle  
Butterfly valve type 038/039  
038/039: ductile iron with powder/epoxy  
coating/rilsan coating  
038: DN50 -DN600; 039: DN50 -DN1 200

## Actuated ball valves



**Pneumatic ball valve  
type 230 - 235**

Pneumatic actuated 2-way ball valve  
Actuator type: PA11/PA21 (<DN65)  
Actuator type: PA30-PA90 (>DN50)  
Ball valve 546 Pro  
ABS, PVC-C, PVC-U, PP-H, PVDF  
DN10 - DN100



**Electric ball valve  
type 127**

Electric actuated 2-way ball valve  
Actuator type: EA15 (24 V, 110-230 V)  
Actuating angle 90°  
Ball valve 546 Pro  
ABS, PVC-C, PVC-U, PP-H, PVDF  
DN10-DN50



**Pneumatic ball valve  
type 285 - 288**

Pneumatic actuated 3-way ball valve  
Actuator type: PA11/PA21  
Actuating angle 90°  
Ball valve 543  
ABS, PVC-C, PVC-U, PP, PVDF  
DN10 - DN50



**Electric ball valve  
type 167 - 170\*\***

Electric actuated 3-way ball valve  
Actuator type: dEA25 and EA25  
(24 V, 110-230 V)  
Actuating angle 90°; max. 180°  
Ball valve 543  
ABS, PVC-C, PVC-U, PP, PVDF  
DN10-DN50



**Electric ball valve  
type 179 - 184\***

Electric actuated 2-way ball valve  
Actuator type: dEA25/45/120  
and EA25/45/120(24 V, 110-230 V)  
Actuating angle 90°  
Ball valve 546 Pro  
ABS, PVC-C, PVC-U, PP-H, PVDF  
EA25 DN10-DN50; EA45/120 DN65-DN100



**Electric ball valve  
type 104**

Electric actuated 2-way ball valve  
Actuator type: EA04 (24 V, 85-230 V)  
Actuating angle 0 - 90°  
Ball valve 546 Pro  
PVC-C, PVC-U, PP-H  
DN10 - DN50 3/8 - 2"  
Limited access sory range  
Low cycle applications

\* Predecessor type 130 - 135 with electric actuators type EA21 / 31

\*\* Predecessor type 185 - 188 with electric actuator type EA21

## Actuated diaphragm valves



**Diaphragm valve  
type 604/605**

PVC-U, PVC-C, PP-H, PVDF  
EPDM, FKM, PTFE/EPDM, PTFE/FKM  
DN15  
PN6  
pneumatic actuated FC, FO, DA



**Diaphragm valve  
DIASTAR Sixteen**

PVDF, PVDF-HP  
EPDM, FKM, PTFE/EPDM, PTFE/FKM  
DN15-DN50  
PN16  
pneumatic actuated FC, FO, DA  
Accessories available



**Diaphragm valve DIASTAR  
Six**

ABS, PVC-U, PVC-C, PP-H,  
EPDM, FKM  
DN15-DN50  
PN6  
pneumatic actuated FC



**Diaphragm valve  
DIASTAR 025**

ABS, PVC-U, PVC-C, PP-H,  
PVDF, PVDF-HP  
EPDM, FKM, PTFE/EPDM, PTFE/FKM  
DN65-DN150  
up to PN10  
pneumatic actuated FC, FO, DA  
Accessories available



**Diaphragm valve  
DIASTAR Ten**

ABS, PVC-U, PVC-C, PP-H, PP-N,  
PVDF, PVDF-HP  
EPDM, FKM, PTFE/EPDM, PTFE/FKM  
DN15-DN50  
PN10  
pneumatic actuated FC, FO, DA  
Accessories available



**eDiastar – type 514 (threaded sockets)  
and type 515 (spigots)**

PVC-U, PVC-C, ABS, PP-H, PVDF  
Retrofittable: PVDF-HP  
EPDM, PTFE/EPDM, NBR, FKM,  
PTFE/FKM  
d32/DN25 and d63/DN50  
DN25: PN10 / DN50: PN6  
electric actuated FC



**Diaphragm valve  
DIASTAR TenPLUS**

ABS, PVC-U, PVC-C, PP-H, PVDF,  
PVDF-HP  
EPDM, FKM, PTFE/EPDM, PTFE/FKM  
DN15-DN50  
PN10 (both sides)  
pneumatic actuated FC, FO, DA  
Accessories available

## Actuated process control valves



**Solenoid valve  
type 157**

direct acting pivoted armature valve  
2/2-Ways  
PVC-U  
EPDM, FKM  
230 V AC, 24 V AC, 24 V DC  
DN4-DN8  
0-4 bar depending on dimension



**Solenoid valve  
type 160/161**

direct acting pivoted armature valve  
2/2- or 3/2-ways  
PVC-U  
EPDM, FKM  
230 V AC, 24 V AC, 24 V DC  
DN10-DN20  
0-3 bar depending on dimension



**Solenoid valve  
type 165**

Pilot assisted solenoid valve  
2/2-Ways  
PVC-U, PVDF  
EPDM, FKM  
230 V AC, 110 V AC, 24 V AC, 24 V DC  
DN15-DN50  
0.5-6 bar



**Solenoid valve  
type 166**

direct acting pivoted armature valve  
2/2- or 3/2-Ways  
PVC-U, PVDF  
EPDM, FKM  
230 V AC, 110 V AC, 24 V AC, 24 V DC  
DN3-DN5  
0-10 bar depending on dimension

# Easy to regulate

## Pressure regulating valves



### Pressure reducing valve type 582

PVC-U, CPVC, PP-H, PVDF  
Spigot or union connection  
O-ring Material: EPDM, FKM  
DN10 - DN50  
0.5 - 9 bar or 0.3 - 3 bar  
Manometer with or without gauge guard optional



### Pressure reducing valve type V82

PVC-U, PP, PVDF  
EPDM, EPDM-PTFE-coated  
V82 DN65 - 80: 0.5 - 6 bar  
DN100: 0.5 - 4 bar



### Pressure retaining valve type 586

PVC-U, CPVC, PP-H, PVDF  
Spigot or union connection  
O-ring Material: EPDM, FKM  
DN10 - DN50  
0.5 - 9 bar or 0.3 - 3 bar  
Manometer with or without gauge guard optional



### Pressure retaining valve type V86

PVC-U, PP, PVDF  
EPDM, EPDM-PTFE-coated  
V86 DN65 - 80: 1 - 6 bar  
DN100: 1 - 4 bar

## Electric accessories



### Monitoring board (EA15-250)

Easy monitoring for on/off actuation  
"Plug & Play" installation  
Cycle time extension  
Cycle time monitoring  
Cycle counter  
Motor current monitoring



### Profibus (EA25-250)

Version DP V0  
M12 connectors for daisy chain  
Integrated in actuator housing  
(no external box)  
Can be used in combination with fail-safe return unit  
Monitoring or positioner can be activated via software



### Fail-safe return unit (E15-250)

Integrated battery including charging management  
Error messages for low battery  
Optional fail safe open/fail safe close  
Optional without battery for external 24V DC source



### Modbus

Modbus interface network upgrade for EA25-250 electric actuators  
Integrated in actuator housing  
(no external box)  
Control and setup functions via Modbus  
Serial Modbus via RS485  
Bidirectional Modbus enabling control & live diagnostics



### Positioner (EA25-250)

Input 4 - 20mA or 0 - 10V (can be inverted)  
Output/Feedback 4 - 20 mA (can be inverted)  
Motor current monitoring on board  
"Plug & Play" installation



## Pneumatic accessories



**Solenoid pilot valve 3/2-ways type PV94**

230 V, 50 - 60 Hz  
115 V, 50 - 60 Hz  
24 V, 50 - 60 Hz  
24 V DC  
G $\frac{1}{4}$ , G $\frac{1}{8}$ , G6mm  
DN1.2



**Solenoid pilot valve 3/2-ways type PV95**

230 V, 50 - 60 Hz  
115 V, 50 - 60 Hz  
24 V, 50 - 60 Hz  
24 V DC  
G $\frac{1}{4}$ , G $\frac{1}{8}$   
DN1.5 - DN2



**Solenoid pilot valve type 2000**

Modular version for 3/2-way and 5/2-way valves  
24 V DC  
Connection module AS-Interface  
Connection module profibus interface



**Solenoid pilot valve type MNL 532**

Version for 3/2-way and 5/2-way  
Namur connection  
Material of body: Aluminum  
24 V AC, 24 V DC, 48 V AC, 110 V AC, 230 V AC



**Electric position feedback type ER 52-1/ER53-1**

For pneumatic stroke actuators  
For DIASTAR Ten, TenPLUS, Sixteen, 025  
Mechanical switches (AgNi or Au)  
NPN/ PNP, Namur connection  
With visual position indication



**Electric position feedback limit switch box**

For pneumatic rotary actuators  
For PA11 - 90:  
Mechanical switches (AgNi or Au)  
NPN/ PNP, Namur connection  
With visual position indication



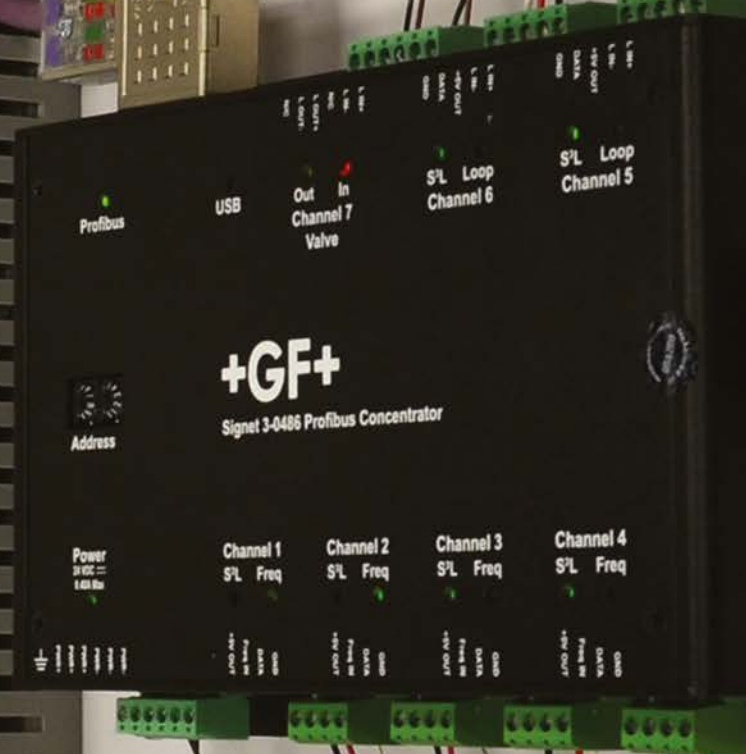
**Stroke limiter/ manual override**

For DIASTAR all type Ten, TenPLUS, Sixteen, 025

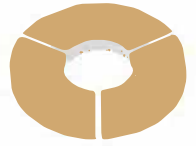
# Communication Products

Different communication protocols for different needs

Our automation loop can be managed with various communication technologies and can therefore be seamlessly integrated into existing plant management systems. We offer analogue and digital communication technologies which support on / off or continuous control loops. Benefits are less wiring, faster installations and more efficient diagnostic and parameterization capabilities.





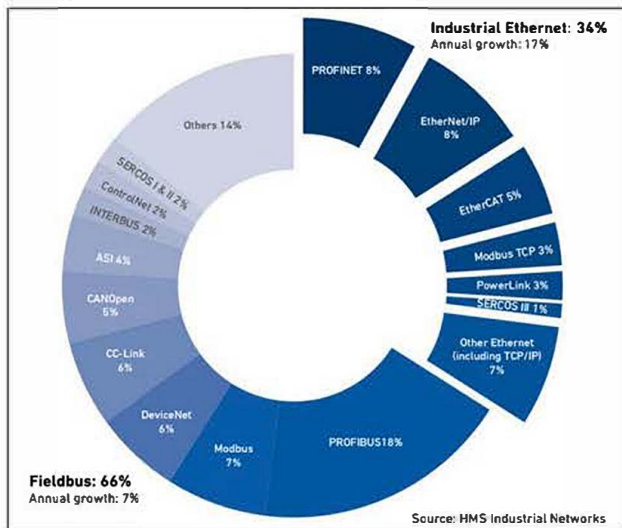


# Actuation

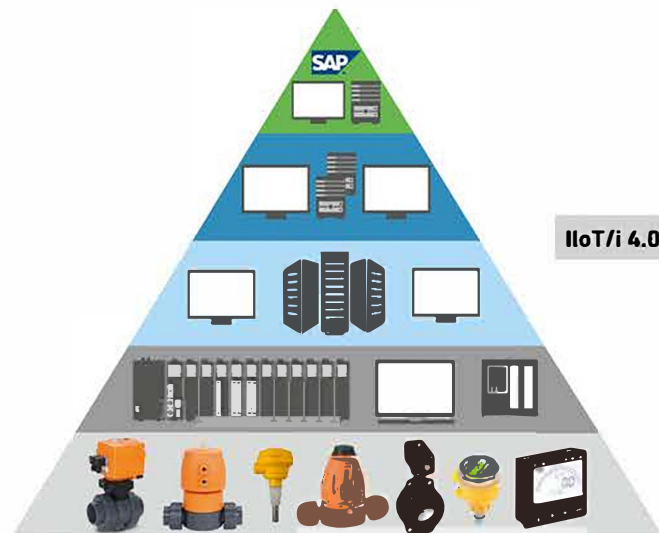
## Communication in industry

Digital communications with instruments, sensors, and valves is a growing necessity in many applications. The ability to digitally control and gather information from remote devices offers increased flexibility. Internet of Things (IoT), Industrial Internet of Things (IIoT), and Industry 4.0 (i 4.0) are movements in technology that connect individual sensors and actuators to information networks allowing automation and enterprise systems unparalleled access to real time data and information. Already today digital communication is used via different field bus protocols. GF is providing options for Profibus, HART and AS-Interface. Converters can be used to transition from one protocol to the other. For the bus communication split please refer to the chart. Very often also standard analogue or digital signals are connected to PLCs to make them accessible for programming. In the future the different layers of system automation will disappear and merge into each other. GF is getting ready to support you in the best way today and in the future.

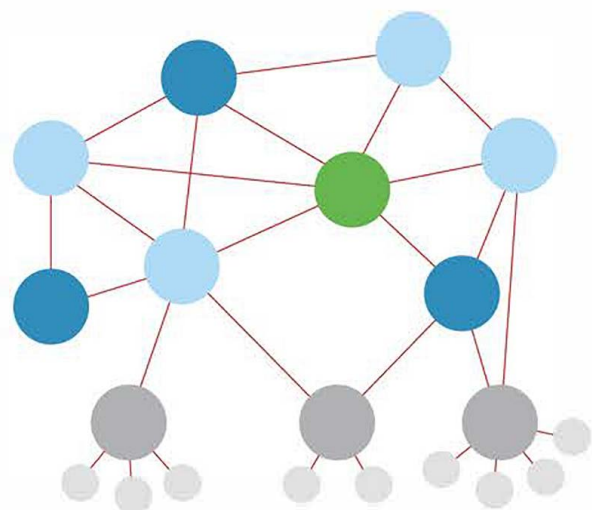
### Fieldbus vs. industrial ethernet



### Today (Automation pyramid/hierarchic)



### Future (Cyber-Physical-Systems)





**Profibus concentrator type 3-0486**  
 Connect GF actuated valves and sensors to profibus automation networks  
 Supports six S<sup>3</sup>L sensors or relay modules plus a proportional controlled actuated valve  
 Four of the (S<sup>3</sup>L) inputs support flow frequency devices for cost effective flow monitoring  
 Two of the (S<sup>3</sup>L) inputs support 4 to 20 mA current loop inputs for connections to third party sensors



**Profibus (EA25-250)**  
 Connectable to Profibus DPVD networks  
 Using all the advantages of the standard full plastic GF electric actuator



**Profibus for valve cluster**

- Modular version for 3/2-way and 5/2-way valves
- Connection module profibus interface
- 24 V DC
- Optional available module AS-Interface

## Modbus



**Modbus (EA25-250)**  
 Modbus interface network upgrade for EA25-250 electric actuators  
 Using all the advantages of the standard full plastic GF electric actuator  
 For 24 VAC/DC as well as for 100-230 VAC actuator versions  
 Serial Modbus via RS485  
 Bidirectional Modbus enabling control & live diagnostics



**Transmitter type 9900**

Optional module available



**AS-Interface for pneumatic rotary actuators**

Pilot valve 5/2-ways  
Electric feedback integrated  
Full plastic housing  
Optical status indicator  
AS interface version 3.0



**Ultrasonic level sensor type 2260/  
ultrasonic level transmitter type 2270**

Non-contact principle  
Robust against most interfering factors such as fumes, light foaming or fluctuations of pressure or temperature  
Display and comprehensive configuration menu  
PP, PTFE or steel antenna enclosures



**AS-Interface for manual valves with feedback**

With integrated feedback  
Ideal for ball valves  
Ideal for butterfly valves  
Ideal for diaphragm valves



**Non-contact principle radar level transmitter type 2290**

Non-contact principle  
Robust against most interfering factors such as fumes, light foaming or fluctuations of pressure or temperature  
Display and comprehensive configuration menu  
PP, PTFE or steel antenna enclosures



**AS-Interface for sensor with switch output**

With switching output  
For level switch  
For flow switch  
For pressure switch  
For temperature switch



**AS-Interface for electric actuators**

Integrated control and electric feedback  
For 24 V DC actuators  
For EA11 - EA42  
Manual override standard



**AS-Interface for pneumatic stroke actuators**

Pilot valve 3/2-ways  
Compact design  
Full plastic housing  
Optical status indicator  
AS Interface Version 3.0

# Valves

The right valve  
for your application

We offer one of the most comprehensive valve product ranges, which enables you to find the right match for your application.

Our valves are available in a wide selection of dimensions, materials, chemical resistances, standards, actuation, operation principles and pipe connections and are designed for long service life. The combination of the right valve selection and our high product quality leads to a favorable total cost of ownership.



# Valves

## Manual ball valves



**Ball valve  
type 546 Pro**

ABS, PVC-C, PVC-U, PP-H, PVDF  
EPDM, FKM, ball seat: PTFE, PVDF  
DN10 - DN100  
Up to PN16 = PVC-U, PVC-C, PVDF;  
up to PN10 = PP-H, ABS  
Lockable lever, multifunctional module  
Linear version



**Linear ball valve  
type 546**

PVC-U, PVC-C, ABS, PP-H, PVDF  
DN15 - DN50  
Lockable lever  
Multifunctional module



**Ball valve  
type 542**

PVC-U / PVC-C PP-H  
PE (blue lever)  
PTFE (red lever)  
EPDM, FKM, ball seat: PTFE, PVDF  
DN 10 - 50 (3/8"-2")  
PN 10 for PP-H  
PN 16 for PVC-U and PVC-C



**3-Way ball valve  
type 543**

ABS, PVC-C, PVC-U, PP-H, PVDF  
EPDM, FKM, ball seat: PTFE, PVDF  
DN10 - DN50  
Up to PN10  
Lockable Lever, multifunctional module



**Metering ball valve  
type 523**

PVC-U, PP-H, PVDF  
EPDM, FKM, Ball Seat: PTFE  
DN10 - DN15  
Up to PN16



**Ball valve  
type 375**

PVC-U, PVC-C  
EPDM, FKM, ball seat: PTFE  
DN10-DN100  
PN16  
Not actuated

## Manual Diaphragm valves



**Diaphragm Valve  
type 514**

PVC-U, PVC-C, ABS, PP-H, PVDF,  
PVDF-HP  
EPDM, PTFE/EPDM, FKM, PTFE/FKM  
DN15-DN50  
Up to PN16  
Lockable handwheel  
Electrical feedback module



**Diaphragm valve  
type 515**

PVC-U, PVC-C, ABS, PP-H, PP-N,  
PVDF, PVDF-HP  
EPDM, PTFE/EPDM, FKM, PTFE/FKM  
DN15-DN50  
Up to PN16  
Lockable handwheel  
Electrical feedback module



**Diaphragm valve  
type 517 (317)**

PVC-U, PVC-C, PP-H, PVDF, PVDF-HP  
EPDM, PTFE/EPDM, FKM, PTFE/FKM  
DN15-DN50 (type 317: DN65 - DN150)  
Up to PN16  
Lockable handwheel  
Electrical feedback module



**Diaphragm valve  
type 519**

PP-H, PP-N, PVDF-HP  
EPDM, PTFE/EPDM, PTFE/FKM  
DN20-DN20 : d110- d63  
Up to PN16  
Lockable handwheel  
Electrical feedback module

# Valves

## Manual butterfly valves



**Butterfly valve manual type 567**

ABS, PVC-C, PVC-U, PP-H, PVDF  
Sealings: EPDM, FKM, PTFE/FKM  
DN50 - DN600  
PN10  
Lever, Gear, 230 V o. 24 V, FC/FO/DA  
Optional: Integrated position indicator in valve body



**Metal butterfly valve type 038/039**

038: GGG, LUG; 039: GGG Wafer  
Sealings: EPDM, FKM  
038: DN50 - DN300;  
039: DN50 - DN1200  
PN10 /PN16  
Lever, gear, 230 V o. 24 V, FC/FO/DA



**Butterfly valve manual type 578**

ABS, PVC-C, PVC-U, PP-H, PVDF  
Sealings: EPDM, FKM, PTFE/FKM  
DN50 - DN300  
PN10  
Lever, gear, 230 V o. 24 V, FC/FO/DA  
Optional: Integrated position indicator in valve body

## Accessories



**Manual interface module**

Accessory for manual ball valve type 546 Pro  
Possibility of electrical feedback, incl. LED in combination with double sensor (accessory)  
Inclusive labelling clip



**Manual spring return unit Retrofit kit**

Manual spring return unit („Dead-man lever“) ensures that the valve closes after operation  
For safe sampling, dosing, cleaning or draining - Retrofit possible with ball valve 546 (Pro)  
Includes transparent clip for valve labelling  
Option: double sensor for position feedback



**Interface module for GF actuators**

Accessory for ball valve type 546 Pro  
Interface module acts as interface for GF actuators  
Possibility of electrical feedback, incl. LED in combination with double sensor (accessory)  
Inclusive labelling clip



**Electrical feedback module**

Electrical feedback module  
Accessory for (manual) diaphragm valves 514 - 519  
Limit switch AgNi or Au  
Self adjusting mechanism



**Interface module for norm actuators**

Accessory for ball valve type 546 Pro  
For ball valve norm interfaces according to EN ISO 5211  
Inclusive labelling clip



**Ball valve labeling**

Labelling system for ball valve 546 Pro/543/523/547



**Double sensor for electrical position feedback**

Accessory for ball valve type 546 Pro  
Enables electrical position feedback, incl. LED, in combination with GF interface module  
IP67 rating



**Integrated position indicator**

Integrated position indicator  
Accessory for butterfly valves 567/578  
Limit switch AgNi, AU, Namur, NPN, PNP

## Process control valves



**Check valve  
type 561/562**

ABS, PVC-C, PVC-U, PP-H, PVDF  
EPDM, FKM  
DN10 - DN100  
Up to PN16  
Type 562 with spring



**Ventilating valve type 595 /  
Ventilating and bleed valve type 591**

ABS, PVC-C, PVC-U, PP-H, PVDF  
EPDM, FKM  
DN10 - DN100  
Up to PN16  
Type 595 with spring  
Float PP-H / PVDF

## Process control valves



**Angle seat check valve  
type 303/304**

PVC-U, ABS)  
EPDM, FKM  
DN10 - DN80  
PN10



**Wafer check valve  
type 369**

PVC-U, PP-H, PVDF  
EPDM, FKM  
DN32 - DN300, 1¼" - 12"  
PN10



**Line strainer  
type 305/306**

PVC-U, PVC-C, ABS, PP-H, PVC-U  
transparent  
EPDM, FKM  
DN15 - DN50, PVC-U up to DN80  
PN10  
Screen: stainless-steel and PVC-U



**Throttle valve  
type V251**

PVC-U, PP-H, PVDF  
EPDM, FKM  
DN10 - DN50  
PN10



**Water jet suction pump (eductor)  
type P20**

PVC-U, PP-H, PVDF  
EPDM, FKM  
DN10 - DN80  
PN10

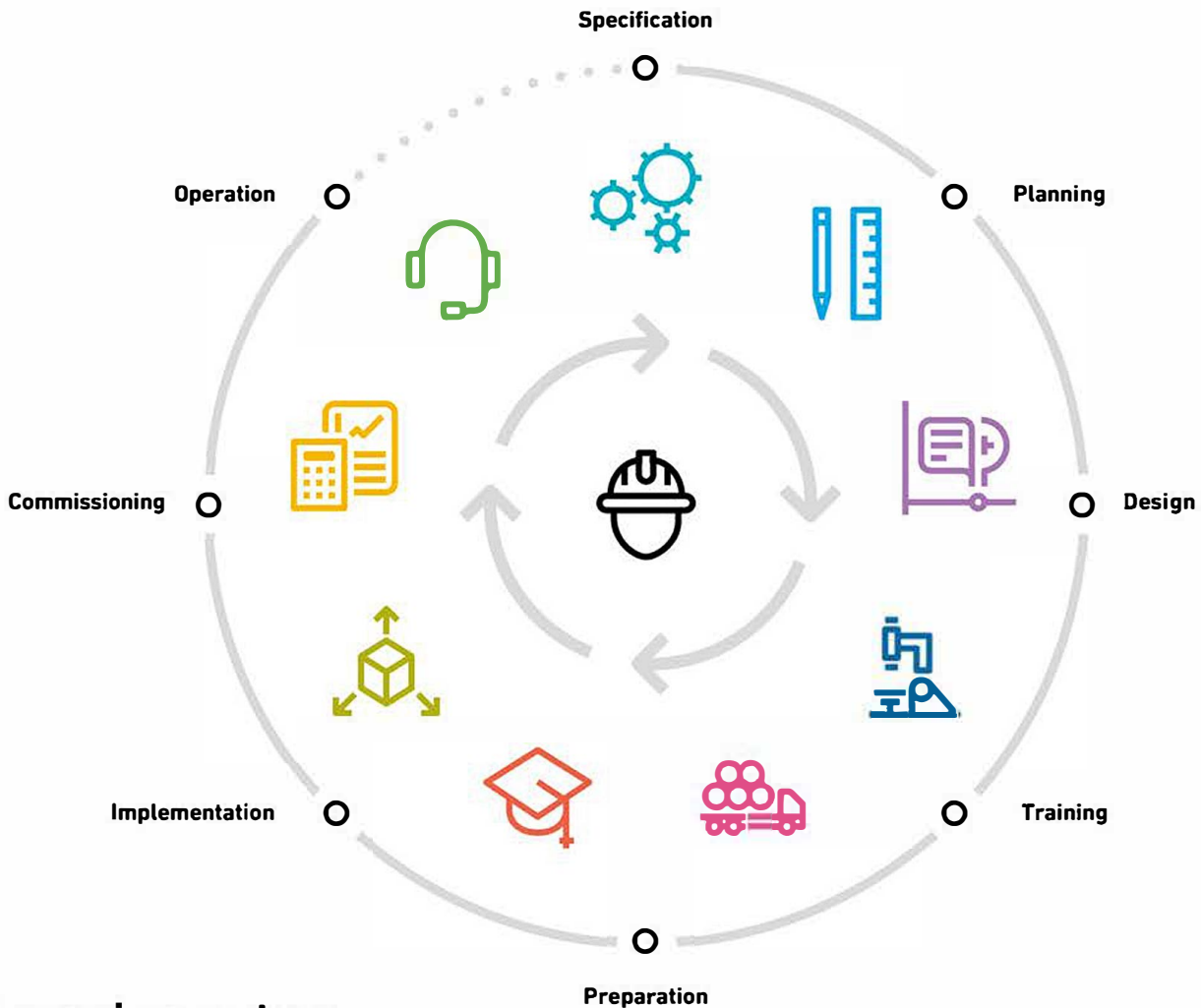


**Gauge guard  
type Z500/501**

True plastic design (no metal screws!)  
PVC-U, PP-H, PVDF  
EPDM, EPDM-PTFE-coated  
DN20 or DN 25  
PN10  
With or without pressure gauge

# Taking care of your needs

With Specialized Solutions, GF Piping Systems supports the design and installation of state of the art plastic piping systems, so that owners and planners can concentrate on their daily business without interruption. GF Piping Systems is present every step of the way, from providing planning support on new projects to testing the condition of old systems.



## A premium partner you can count on

With over 60 years of experience with plastic, GF Piping Systems provides all the expertise and equipment necessary for a smooth installation and operation. Our range of Specialized Solutions covers every aspect of a project's process, from the design phase all the way through to installation and maintenance. Construction projects come with a number of challenges. By trusting GF Piping Systems as a partner, you can avoid costly interruptions or even failure of your operation.

Excellent training and documentation technology ensures installers can perform at their best, implementing a reliable system with a monitored workflow and eradicating any potential for failure. In order to ascertain the state of piping systems and welds, high-precision testing and analysis eliminates any doubt about the condition of a system and provides the necessary information to decide on replacement for optimum economic performance. Specialized Solutions simply provides the all-round package for worry-free installation and operation.



## Centers of excellence

# Competent support for you

Competent support offered by all GF sales companies and our Centers of Excellence (CoE)

-  Technical support
-  Chemical resistance
-  Training courses
-  On-site training
-  CAD library
-  Online and mobile calculation tools
-  Technical manual
-  Customising



## + Easy access support

Quick, reliable and competent service is as important as a comprehensive product offering

We ensure that our staff in all countries has state-of-the-art knowledge of products, applications and technology. As a result, our local GF automation specialists can support you professionally in choosing the right products and defining a system which truly satisfies your needs, in addition to commissioning and after-sales service. Furthermore, GF is setting up a global network of centers of excellence (CoE) for automation where dedicated teams for sales, service and automation training are available to you.

## + Value Added Services

From planning support to implementation – our specialists are always close by

As a leading provider of piping systems in plastic and metal, we offer our customers not only reliable products, but also a large package of services. Our support ranges from a comprehensive technical manual or the extensive CAD library to an international team of experts, who work closely together with local sales companies. And when it comes to implementing a project, our customers additionally benefit from a wide range of training courses, either on site or in our modern training centers worldwide.

For more information on our automation system please contact our local sales companies and our sales representatives.  
[www.gfps.com](http://www.gfps.com)

## Ball valve type 546 Pro



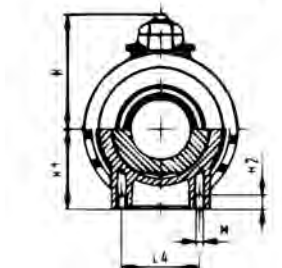
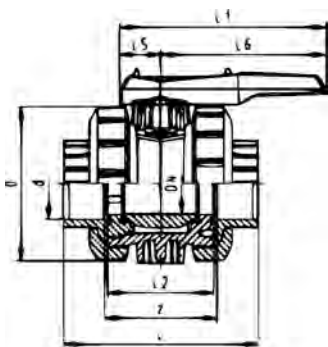
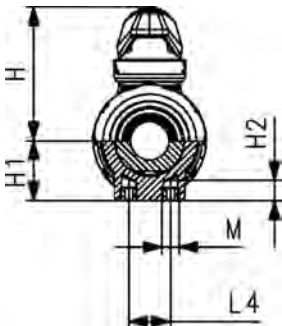
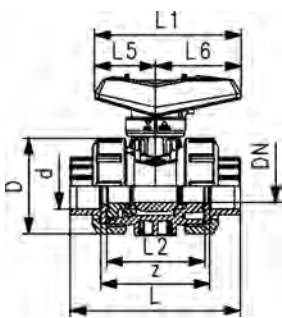
### Ball valve type 546 Pro PVC-U With solvent cement sockets metric

#### Model:

- Lockable lever as standard (DN10-DN50)
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Z-dimension, valve end and union nut **are compatible** with type 546 (1<sup>st</sup> Generation)

#### Option:

- Interface-module with position feedback sensor, incl. LED feedback (DN10-50)
- Manual spring return lever ("Dead man") (DN10-25)
- Pneumatic or electric actuators from GF
- Individual configuration of the valve possible
- Multifunctional module with integrated limit switches (DN65-100)



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	3/8	16	71	161 546 061	1	0.153	161 546 071	1	0.156
20	15	1/2	16	185	161 546 062	1	0.156	161 546 072	1	0.158
25	20	3/4	16	350	161 546 063	1	0.240	161 546 073	1	0.242
32	25	1	16	700	161 546 064	1	0.343	161 546 074	1	0.345
40	32	1 1/4	16	1000	161 546 065	1	0.610	161 546 075	1	0.615
50	40	1 1/2	16	1600	161 546 066	1	0.838	161 546 076	1	0.844
63	50	2	16	3100	161 546 067	1	1.537	161 546 077	1	1.552
75	65	2 1/2	16	5000	161 546 068	1	4.343	161 546 078	1	3.563
90	80	3	16	7000	161 546 069	1	6.184	161 546 079	1	5.376
110	100	4	16	11000	161 546 070	1	8.642	161 546 080	1	11.600

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M	z (mm)
16	50	61	27	12	92	82	56	25	35	47	M6	64
20	50	61	27	12	95	82	56	25	35	47	M6	64
25	58	74	30	12	110	106	65	25	44	62	M6	72
32	68	80	36	12	123	106	71	25	44	62	M6	79
40	84	95	44	15	146	131	85	45	57	74	M8	94
50	97	102	51	15	157	131	89	45	57	74	M8	95
63	124	117	64	15	183	152	101	45	66	86	M8	107
75	166	150	85	15	233	270	136	70	64	206	M8	144
90	200	161	105	15	255	270	141	70	64	206	M8	151
110	238	178	123	22	301	320	164	120	64	256	M12	174



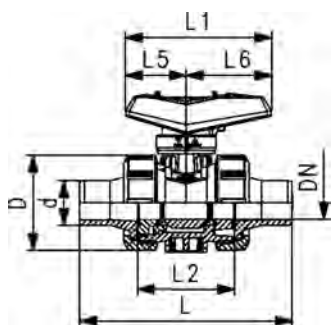
**Ball valve type 546 Pro PVC-U**  
**With solvent cement spigots metric**

**Model:**

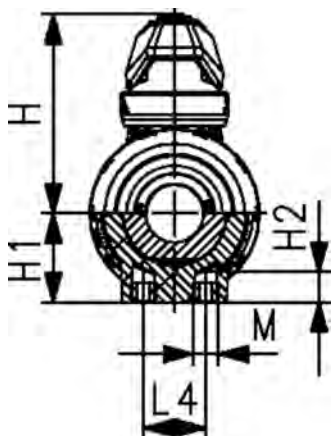
- Lockable lever as standard (DN10-DN50)
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Z-dimension, valve end and union nut **are compatible** with type 546 (1<sup>st</sup> Generation)

**Option:**

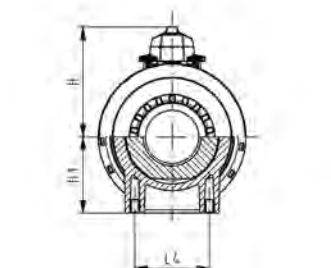
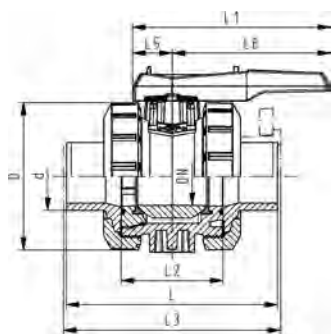
- Interface-module with position feedback sensor, incl. LED feedback (DN10-50)
- Manual spring return lever ("Dead man") (DN10-25)
- Pneumatic or electric actuators from GF
- Individual configuration of the valve possible
- Multifunctional module with integrated limit switches (DN65-100)



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	16	71	161 546 721	1	0.157	161 546 731	1	0.157
20	15	16	185	161 546 722	1	0.157	161 546 732	1	0.157
25	20	16	350	161 546 723	1	0.242	161 546 733	1	0.242
32	25	16	700	161 546 724	1	0.359	161 546 734	1	0.347
40	32	16	1000	161 546 725	1	0.620	161 546 735	1	0.620
50	40	16	1600	161 546 726	1	0.869	161 546 736	1	0.845
63	50	16	3100	161 546 727	1	1.550	161 546 737	1	1.550
75	65	16	5000	161 546 728	1	3.689	161 546 738	1	5.100
90	80	16	7000	161 546 729	1	5.512	161 546 739	1	7.500
110	100	16	11000	161 546 730	1	11.900	161 546 740	1	11.900



d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M	z (mm)
16	50	61	27	12	114	82	56	25	35	47	M6	90
20	50	61	27	12	124	82	56	25	35	47	M6	96
25	58	74	30	12	143	105	65	25	44	62	M6	109
32	68	80	36	15	154	105	71	45	44	62	M6	114
40	84	95	44	15	174	131	85	45	57	74	M8	126
50	97	102	51	15	193	131	89	45	57	74	M8	135
63	124	117	64	15	223	152	101	70	66	86	M8	151
75	166	150	85	15	284	269	136	70	64	206	M8	199
90	200	161	105	15	301	269	141	70	64	206	M8	202
110	238	178	123	22	340	319	164	120	64	256	M12	221



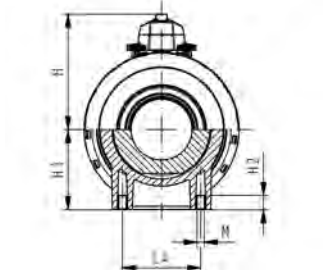
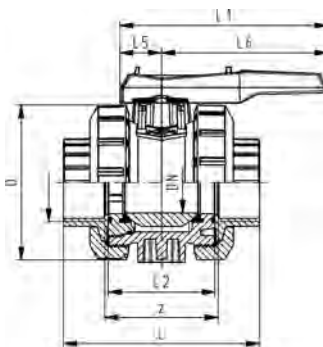
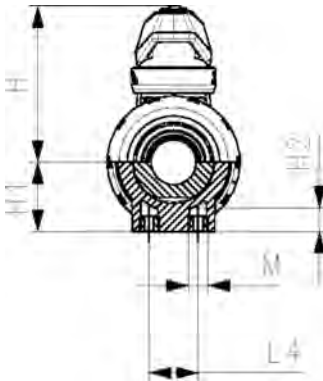
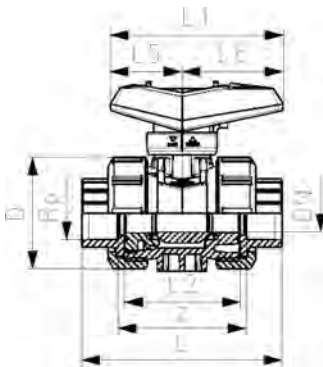
**Ball valve type 546 Pro PVC-U**  
**With threaded sockets Rp**

**Model:**

- Lockable lever as standard (DN10-DN50)
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Z-dimension, valve end and union nut **are compatible** with type 546 (1<sup>st</sup> Generation)

**Option:**

- Interface-module with position feedback sensor, incl. LED feedback (DN10-50)
- Manual spring return lever ("Dead man") (DN10-25)
- Pneumatic or electric actuators from GF
- Individual configuration of the valve possible
- Multifunctional module with integrated limit switches (DN65-100)



d (mm)	DN (mm)	Thread Type	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (L/min)	EPDM Code	SP	Weight (kg)
16	10	Rp	3/8	10	71	161 546 741	1	0.152
20	15	Rp	1/2	10	185	161 546 742	1	0.159
25	20	Rp	3/4	10	350	161 546 743	1	0.242
32	25	Rp	1	10	700	161 546 744	1	0.352
40	32	Rp	1 1/4	10	1000	161 546 745	1	0.605
50	40	Rp	1 1/2	10	1600	161 546 746	1	0.805
63	50	Rp	2	10	3100	161 546 747	1	1.580
75	65	Rp	2 1/2	10	5000	161 546 748	1	5.000
90	80	Rp	3	10	7000	161 546 749	1	6.300
110	100	Rp	4	10	11000	161 546 750	1	11.700

FKM Code	SP	Weight (kg)
161 546 751	1	0.152
161 546 752	1	0.152
161 546 753	1	0.232
161 546 754	1	0.332
161 546 755	1	0.605
161 546 756	1	0.805
161 546 757	1	1.465
161 546 758	1	5.000
161 546 759	1	7.500
161 546 760	1	11.700

D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M	z (mm)
50	61	27	12	95	82	56	25	35	47	M6	73
50	61	27	12	100	82	56	25	35	47	M6	71
58	74	30	12	114	106	65	25	44	62	M6	82
68	80	36	12	127	106	71	25	44	62	M6	89
84	95	44	15	146	131	85	45	57	74	M8	104
97	102	51	15	152	131	89	45	57	74	M8	110
124	117	64	15	176	152	101	45	66	86	M8	125
166	150	85	15	233	270	136	70	64	206	M8	176
200	161	105	15	254	270	141	70	64	206	M8	191
238	178	123	22	301	320	164	120	64	256	M12	211



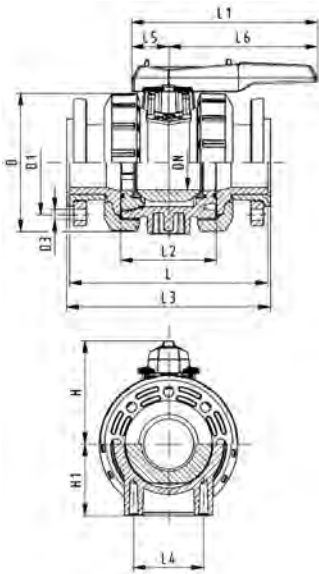
**Ball valve type 546 Pro PVC-U**  
**With backing flanges PVC-U metric**

**Model:**

- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Z-dimension, valve end and union nut **are compatible** with type 546 (1<sup>st</sup> Generation)
- Overall length according to EN 558
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- Hole circle PN10

**Option:**

- Pneumatic or electric actuators from GF
- Multifunctional module with integrated limit switches (DN65-100)
- Individual configuration of the valve possible



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
75	65	10	5000	<b>161 546 108</b>	1 4.764	<b>161 546 118</b>	1 7.200
90	80	10	7000	<b>161 546 109</b>	1 6.983	<b>161 546 119</b>	1 7.008
110	100	10	11000	<b>161 546 110</b>	1 11.879	<b>161 546 120</b>	1 16.500

d (mm)	D (mm)	D1 (mm)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M
75	185	145	18	150	85	15	269	136	290	70	64	206	M8
90	200	160	18	161	105	15	269	141	310	70	64	206	M8
110	238	180	18	178	123	22	319	164	350	120	64	256	M12



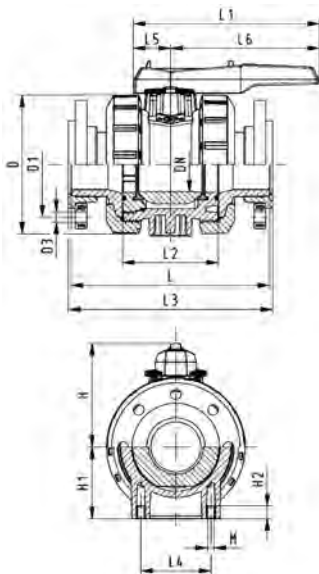
**Ball valve type 546 Pro PVC-U**  
**With backing flanges PP-st metric**

**Model:**

- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Z-dimension, valve end and union nut **are compatible** with type 546 (1<sup>st</sup> Generation)
- Overall length according to EN 558
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- Hole circle PN10

**Option:**

- Pneumatic or electric actuators from GF
- Individual configuration of the valve possible
- Multifunctional module with integrated limit switches (DN65-100)



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
75	65	16	5000	<b>161 546 948</b>	1 9.100	<b>161 546 958</b>	1 9.100
90	80	16	7000	<b>161 546 949</b>	1 12.400	<b>161 546 959</b>	1 12.400
110	100	16	11000	<b>161 546 950</b>	1 13.825	<b>161 546 960</b>	1 18.500

d (mm)	D (mm)	D1 (mm)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M
75	185	145	18	150	85	15	269	136	290	70	64	206	M8
90	200	160	18	161	105	15	269	141	310	70	64	206	M8
110	238	180	18	178	123	22	319	164	350	120	64	256	M12



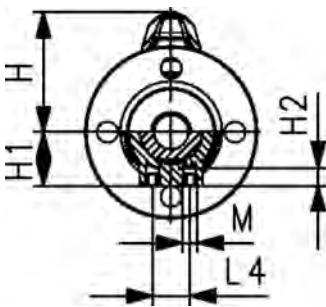
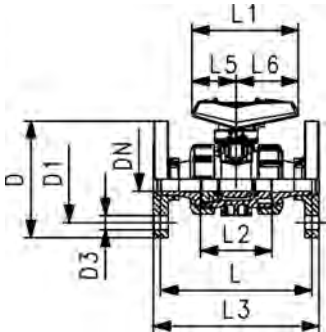
**Ball valve type 546 Pro PVC-U**  
**With fixed flanges PVC-U serrated metric**

**Model:**

- Lockable as a standard (DN10-50)
- Integrated stainless steel mounting inserts
- Z-dimension, valve end and union nut **are compatible** with type 546 (1<sup>st</sup> Generation)
- For easy installation and removal
- Ball seals PTFE
- Overall length according to EN 558
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

**Option:**

- Individual configuration of the valve possible
- Pneumatic or electric actuators from GF
- Interface-module with position feedback sensor, incl. LED feedback (DN10-50)
- Manual spring return lever ("Dead man") (DN10-25)
- Multifunctional module with integrated limit switches (DN65-100)



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
20	15	16	185	800 000 182	1	0.370	800 042 709	1	0.420
25	20	16	350	800 026 579	1	0.520	800 000 193	1	0.510
32	25	16	700	800 011 080	1	0.730	800 011 076	1	0.731
40	32	16	1000	800 011 174	1	1.245	800 000 195	1	1.230
50	40	16	1600	800 011 171	1	1.617	800 042 713	1	1.640
63	50	16	3100	800 011 039	1	2.656	800 011 040	1	2.710

d (mm)	D (mm)	D1 (mm)	D3 (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	closest inch (inch)
20	95	65	14	57	27	130	77	56	124	25	32	45	1/2
25	105	75	14	67	30	150	97	65	144	25	39	58	3/4
32	115	85	14	73	36	160	97	71	154	25	39	58	1
40	140	100	18	90	44	180	128	85	174	45	54	74	1 1/4
50	150	110	18	97	51	200	128	89	194	45	54	74	1 1/2
63	165	125	18	116	64	230	152	101	224	45	66	87	2



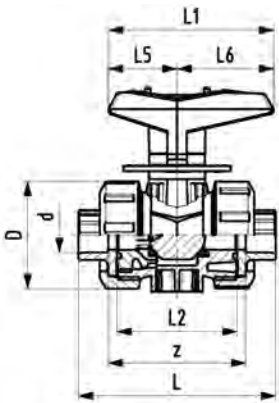
**Linear ball valve type 546 PVC-U**  
**With mounting inserts/With solvent cement sockets metric**

**Model:**

- Excellent control characteristics
- Designed for easy installation and removal
- Ball seals PTFE
- Angle of operation 90° with scale
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve
- Pneumatic or electric actuators from GF
- Other materials on demand



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
20	15	10	90	<b>800 052 602</b>	1	0.156
25	20	10	166	<b>800 052 603</b>	1	0.240
32	25	10	235	<b>800 052 604</b>	1	0.343
40	32	10	417	<b>800 052 605</b>	1	0.610
50	40	10	626	<b>800 052 606</b>	1	0.838
63	50	10	781	<b>800 052 607</b>	1	1.537

d (mm)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	z (mm)	closest inch (inch)
20	50	57	27	95	77	56	25	32	45	64	1/2
25	58	67	30	110	97	65	25	39	58	72	3/4
32	68	73	36	123	97	71	25	39	58	79	1
40	84	90	44	146	128	85	45	54	74	94	1 1/4
50	97	97	51	157	128	89	45	54	74	95	1 1/2
63	124	116	64	183	152	101	45	66	87	107	2



# Accessory for Ball valve type 546 Pro



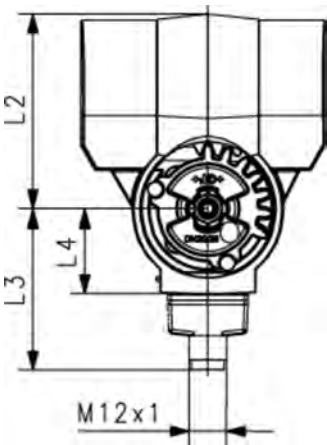
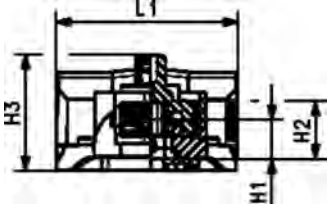
## Manual spring return unit Retrofit kit

### Model:

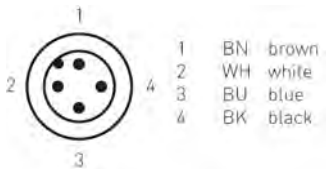
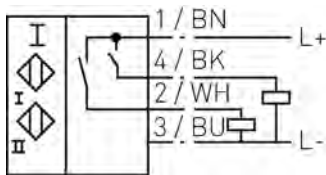
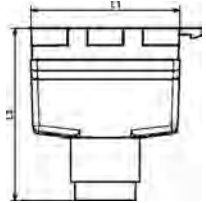
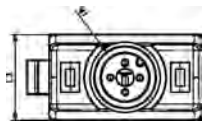
- Manual spring return unit ("Dead-man lever") ensures that the valve closes after operation
- For safe sampling, dosing, cleaning or draining
- Retrofit possible with ball valve 546 (Pro)
- Includes transparent clip for valve labelling

### Option:

- Double sensor for position feedback



d (mm)	DN (mm)	Code	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	H1 (mm)	H2 (mm)	H3 (mm)
16 - 20	10 - 15	<b>198 546 082</b>	74	42.5	46.0	22	11.0	20.0	42.5
25 - 32	20 - 25	<b>198 546 083</b>	79	63.0	51.5	27	17.5	25.5	50.5



### Double sensor for electrical position feedback For double sensor (Ball valve 546 Pro and Butterfly Valve 565)

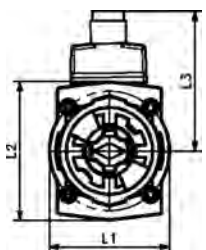
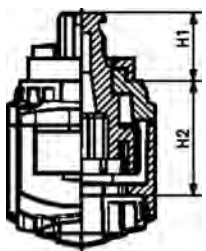
#### Model:

- Accessory for Ball Valve type 546 Pro and Butterfly Valve 565
- Enables electrical position feedback, incl. LED, in combination with GF interface module
- IP67 rating

#### Specifications:

- Housing material: PBTGF20
- Switching function: 2x normally open (NO)
- Output type: PNP
- Output polarity: DC
- Output type: 3-wire
- Operating voltage ( $U_B$ ): 10... 30V DC
- Reverse polarity protection: all connections
- Voltage drop ( $U_d$ ):  $\leq 3V$
- Operating current ( $I_L$ ): 0... 150mA
- Off-state current ( $I_r$ ): 0... 0.5mA typ. 0.1  $\mu A$  at 25°C
- No-load supply current ( $I_o$ ):  $\leq 25mA$
- Ambient temperature: -25...70°C (-13...158°F)
- Connection (system side): 4-pin, M12 x 1 connector
- Standards: EN 60947-5-2:2007, EN 60947-5-2/A1:2012 IEC 60947-5-2:2007, IEC 60947-5-2 AMD 1:2012
- MTTFa 948 a

DN (mm)	LED Signal Colour	PNP Code	SP	Weight (kg)	L1 (mm)	L2 (mm)	L3 (mm)	M1
10 - 50	Closed: Green / Open: Red	<b>198 546 001</b>	1	0.050	26	30	15	M12
10 - 50	Closed: Red / Open: Green	<b>198 546 002</b>	1	0.050	26	30	15	M12

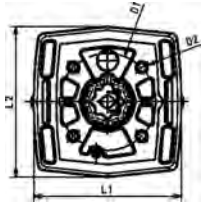
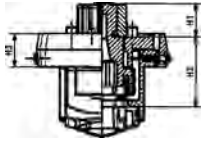


### Manual Interface module For Ball Valve Type 546 Pro

#### Model:

- Accessory for manual ball valve type 546 Pro
- Possibility of electrical feedback, incl. LED in combination with double sensor (accessory)
- Inclusive labelling clip

DN (mm)	Manual Code	SP	Weight (kg)	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)
10 - 15	<b>198 546 102</b>	1	0.042	15	32	37	44	46
20 - 25	<b>198 546 103</b>	1	0.052	20	32	41	47	48
32 - 40	<b>198 546 105</b>	1	0.097	23	33	53	60	54
50	<b>198 546 107</b>	1	0.111	26	36	56	62	55



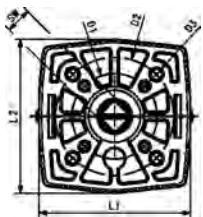
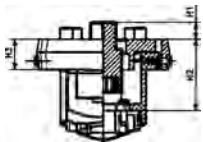
### Interface module for GF actuators For Ball Valve Type 546 Pro

**Model:**

- Accessory for ball valve type 546 Pro
- Interface module acts as interface for GF actuators
- Possibility of electrical feedback, incl. LED in combination with double sensor (accessory)
- Inclusive labelling clip

DN (mm)	PA11, PA21 Code	SP	Weight (kg)	EA15, EA25 Code	SP	Weight (kg)
10 - 15	<b>198 546 132</b>	1	0.130	<b>198 546 142</b>	1	0.100
20	<b>198 546 133</b>	1	0.105	<b>198 546 143</b>	1	0.100
25	<b>198 546 134</b>	1	0.105	<b>198 546 144</b>	1	0.105
32	<b>198 546 135</b>	1	0.001	<b>198 546 145</b>	1	0.140
40	<b>198 546 136</b>	1	0.001	<b>198 546 146</b>	1	0.140
50	<b>198 546 137</b>	1	0.001	<b>198 546 147</b>	1	0.140

H1 (mm)	H2 (mm)	H3 (mm)	L1 (mm)	L2 (mm)	D1 (mm)	D3 (mm)	D4 (mm)
16	35	17	65	65	42		M5
16	35	17	65	65	42		M5
16	35	17	65	65	42		M5
18	33	15	72	79	50	M6	
18	33	15	72	79	50	M6	
18	36	15	72	79	50	M6	



### Interface module for Norm actuators For Ball Valve Type 546 Pro

**Model:**

- Accessory for ball valve type 546 Pro
- For ball valve norm interfaces according to EN ISO 5211
- Inclusive labelling clip
- No electrical position feedback possible with inductive sensor

DN (mm)	Norm Code	SP	Weight (kg)
DN 10-15 SW09, F03/F05	<b>198 546 122</b>	1	0.111
DN 10-15 SW11/14, F03/F05	<b>198 546 123</b>	1	0.111
DN 20-25 SW09, F03/F05	<b>198 546 124</b>	1	0.120
DN 20-25 SW11/14, F03/F05	<b>198 546 125</b>	1	0.120
DN 32-40 SW11/14, F05	<b>198 546 126</b>	1	0.130
DN 50 SW11/14, F05	<b>198 546 127</b>	1	0.130

H1 (mm)	H2 (mm)	H3 (mm)	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)
9	35	15	65	65	36	50	M6	M5
11	35	15	65	65	36	50	M6	M5
9	35	15	65	65	36	50	M6	M5
11	35	15	65	65		50	M6	
11	33	13	72	79		50	M6	
11	36	13	72	79		50	M6	



### Adapter for padlocks For Ball valve type 546 Pro

**Model:**

- Accessory for ball valve type 546 Pro
- Accepts Shackle Diameter up to 9/32in (7mm)
- Holds up to 2 safety padlocks

DN (mm)	Code	SP
10-50	<b>198 546 099</b>	1



### Female connector For double sensor (Ball valve 546 Pro and Butterfly Valve 565)

**Model:**

- Accessory for Ball Valve type 546 Pro and Butterfly Valve 565
- Connects double sensor to PLC
- Cable is flame-resistant
- Degree of protection IP67 / IP68 / IP69K

**Note:**

Degree of protection: EN60529:2000

Standards: IEC 61076-2-101:2008

Ambient temperature:

- Body: -40 ... 90 °C (-40 ... 194 °F)

- cable, fixed: -25 ... 70 °C (-13 ... 158 °F)

- cable, flexing: -5 ... 70 °C (23 ... 158 °F)

Pollution degree: 3

DN (mm)	Code	Model
10-50	<b>198 546 150</b>	Connector without cable
10-50	<b>198 546 151</b>	Connector with cable (5m PVC)
10-50	<b>198 546 152</b>	Connector with cable (10m PVC)
10-50	<b>198 546 153</b>	Connector with cable (5m PUR)
10-50	<b>198 546 154</b>	Connector with cable (10m PUR)



### Transparent lever clip for ball valve labelling

**Option:**

- Component for ball valve Type 546, 543, 523, 547
- Material: SAN
- UV-, weather- and chemical resistant
- Allows valve marking in conjunction with perforated printing sheets
- Perforated printing sheets are not included (depending on dimension see 198 807 231 - 198 807 234)

Inch (inch)	d-d (mm)	DN-DN (mm)	Code	Quantity
¾ - ½	16 - 20	10 - 15	<b>198 807 221</b>	10 pc's
¾ - 1	25 - 32	20 - 25	<b>198 807 222</b>	10 pc's
1 ¼ - 1 ½	40 - 50	32 - 40	<b>198 807 223</b>	5 pc's
2	63	50	<b>198 807 224</b>	5 pc's

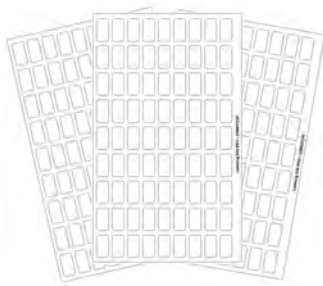


### Printing sheets for ball valve labelling

**Option:**

- Component for ball valve Type 546, 543, 523, 547
- Material: DIN A4 Polymer-sheet
- UV-, weather- and chemical resistant
- Allows valve marking in conjunction with transparent lever clip
- Can be labelled with laser printers or by hand
- Transparent lever clip is not included (depending on dimension see 198 807 221 - 198 807 224)

Inch (inch)	d-d (mm)	DN-DN (mm)	Code	Quantity
3/8 - 1/2	16 - 20	10 - 15	<b>198 807 231</b>	25 Sheets with each 48 Labels
3/4 - 1	25 - 32	20 - 25	<b>198 807 232</b>	25 Sheets with each 24 Labels
1 1/4 - 1 1/2	40 - 50	32 - 40	<b>198 807 233</b>	25 Sheets with each 18 Labels
2	63	50	<b>198 807 234</b>	25 Sheets with each 11 Labels
3/8 - 1/2	16 - 20	10 - 15	<b>198 807 241</b>	100 Sheets with each 48 Labels
3/4 - 1	25 - 32	20 - 25	<b>198 807 242</b>	100 Sheets with each 24 Labels
1 1/4 - 1 1/2	40 - 50	32 - 40	<b>198 807 243</b>	100 Sheets with each 18 Labels
2	63	50	<b>198 807 244</b>	100 Sheets with each 11 Labels



### Printing sheets for ball valve labelling

**Option:**

- Component for ball valve Type 546 Pro
- Material: Polymer-sheet
- UV-, weather- and chemical resistant
- Allows valve marking in interface module
- Can be labelled with laser printers or by hand
- Compatible with interface module

Inch (inch)	d-d (mm)	DN-DN (mm)	Code	Quantity
3/8 - 2	16 - 63	10 - 50	<b>198 807 230</b>	25 Sheets à 81 Labels

# Ball valve type 542



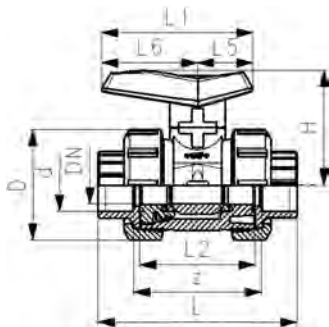
## Ball valve type 542 PVC-U With cemented socket (metric) With PTFE ball seal

### Model:

- For easy installation and removal
- Ball seals PTFE/ red lever

### Option:

- Individual configuration of the valve possible
- Assembling of a valve tag possible



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)		
16	10	3/8	16	71	161 542 001	1	0.148	161 542 011	1	0.148
20	15	1/2	16	185	161 542 002	1	0.150	161 542 012	1	0.150
25	20	3/4	16	350	161 542 003	1	0.233	161 542 013	1	0.233
32	25	1	16	700	161 542 004	1	0.336	161 542 014	1	0.336
40	32	1 1/4	16	1000	161 542 005	1	0.600	161 542 015	1	0.600
50	40	1 1/2	16	1600	161 542 006	1	0.830	161 542 016	1	0.830
63	50	2	16	3100	161 542 007	1	1.523	161 542 017	1	1.523

d (mm)	D (mm)	H (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	z (mm)
16	50	54	92	72	56	26	46	64
20	50	54	95	72	56	26	46	63
25	58	66	110	93	65	34	59	73
32	68	71	124	93	71	34	59	79
40	84	85	147	110	85	41	69	94
50	97	92	157	110	89	41	69	95
63	124	108	184	128	101	49	79	108

## Ball valve type 542 PVC-U With threaded socket (Rp)

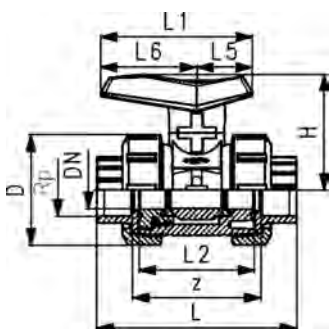


### Model:

- For easy installation and removal
- Ball seals PTFE/ red lever

### Option:

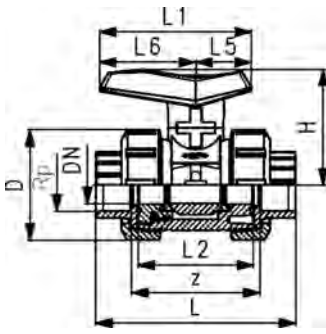
- Individual configuration of the valve possible
- Assembling of a valve tag possible



d (mm)	DN (mm)	Thread Type	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	
16	10	Rp	3/8	16	71	161 542 021	1	0.150
20	15	Rp	1/2	16	185	161 542 022	1	0.155
25	20	Rp	3/4	16	350	161 542 023	1	0.238
32	25	Rp	1	16	700	161 542 024	1	0.348
40	32	Rp	1 1/4	16	1000	161 542 025	1	0.603
50	40	Rp	1 1/2	16	1600	161 542 026	1	0.800
63	50	Rp	2	16	3100	161 542 027	1	1.575

d (mm)	FKM Code	SP Weight (kg)	D (mm)	H (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	z (mm)	
16	161 542 031	1	0.150	50	54	95	72	56	26	46	69
20	161 542 032	1	0.155	50	54	100	72	56	26	46	67
25	161 542 033	1	0.238	58	66	115	93	65	34	59	79

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d (mm)	FKM Code	SP Weight (kg)	D (mm)	H (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	z (mm)
32	161 542 034	1 0.348	68	71	128	93	71	34	59	86
40	161 542 035	1 0.603	84	85	146	110	85	41	69	100
50	161 542 036	1 0.800	97	92	152	110	89	41	69	106
63	161 542 037	1 1.575	124	108	177	128	101	49	79	122



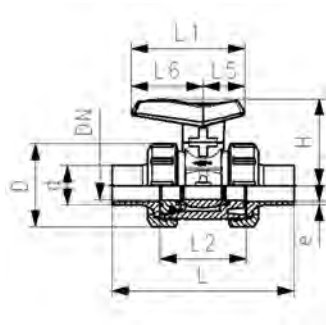
**Ball valve type 542 PVC-U  
With cemented spigots metric**

**Model:**

- For easy installation and removal
- Ball seals PTFE/ red lever

**Option:**

- Individual configuration of the valve possible
- Assembling of a valve tag possible



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	3/8	16	71	161 542 041	1 0.155	161 542 051	1 0.155
20	15	1/2	16	185	161 542 042	1 0.155	161 542 052	1 0.155
25	20	3/4	16	350	161 542 043	1 0.240	161 542 053	1 0.240
32	25	1	16	700	161 542 044	1 0.351	161 542 054	1 0.351
40	32	1 1/4	16	1000	161 542 045	1 0.610	161 542 055	1 0.610
50	40	1 1/2	16	1600	161 542 046	1 0.840	161 542 056	1 0.840
63	50	2	16	3100	161 542 047	1 1.602	161 542 057	1 1.602

d (mm)	D (mm)	H (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	e (mm)
16	50	54	114	72	56	26	46	3.1
20	50	54	124	72	56	26	46	3.1
25	58	66	144	93	65	34	59	3.1
32	68	71	155	93	71	34	59	4.1
40	84	85	175	110	85	41	69	4.6
50	97	92	193	110	89	41	69	5.6
63	124	108	224	128	101	49	79	7.1



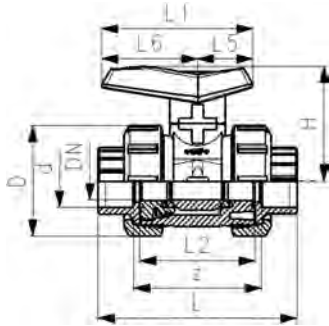
**Ball valve type 542 PVC-U**  
**With cemented socket (BS)**  
**With PTFE ball seal**

**Model:**

- For easy installation and removal
- Ball seals PTFE/ red lever

**Option:**

- Individual configuration of the valve possible
- Assembling of a valve tag possible



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)		
16	10	3/8	16	71	161 542 201	1	0.151	161 542 211	1	0.151
20	15	1/2	16	185	161 542 202	1	0.149	161 542 212	1	0.149
25	20	3/4	16	350	161 542 203	1	0.229	161 542 213	1	0.229
32	25	1	16	700	161 542 204	1	0.334	161 542 214	1	0.334
40	32	1 1/4	16	1000	161 542 205	1	0.588	161 542 215	1	0.588
50	40	1 1/2	16	1600	161 542 206	1	0.843	161 542 216	1	0.843
63	50	2	16	3100	161 542 207	1	1.564	161 542 217	1	1.564

d (mm)	D (mm)	H (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	z (mm)
16	50	54	92	72	56	26	46	60
20	50	54	95	72	56	26	46	60
25	58	66	111	93	65	34	59	69
32	68	71	124	93	71	34	59	76
40	84	85	147	110	85	41	69	89
50	97	92	157	110	89	41	69	96
63	124	108	184	128	101	49	79	110



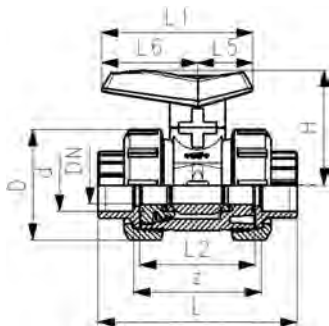
**Ball valve type 542 PVC-U**  
**With cemented socket (inch-ASTM)**  
**With PTFE ball seal**

**Model:**

- For easy installation and removal
- Ball seals PTFE/ red lever

**Option:**

- Individual configuration of the valve possible
- Assembling of a valve tag possible

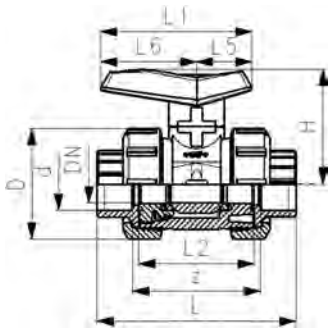


d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)		
16	10	3/8	16	71	161 542 301	1	0.180	161 542 311	1	0.180
20	15	1/2	16	185	161 542 302	1	0.227	161 542 312	1	0.227
25	20	3/4	16	350	161 542 303	1	0.329	161 542 313	1	0.329
32	25	1	16	700	161 542 304	1	0.477	161 542 314	1	0.477
40	32	1 1/4	16	1000	161 542 305	1	0.786	161 542 315	1	0.786
50	40	1 1/2	16	1600	161 542 306	1	1.082	161 542 316	1	1.082
63	50	2	16	3100	161 542 307	1	1.920	161 542 317	1	1.920

d (mm)	D (mm)	H (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	z (mm)
16	50	54	105	72	56	26	46	67
20	50	54	105	72	56	26	46	60
25	58	66	122	93	65	34	59	70

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d	D	H	L	L1	L2	L5	L6	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
32	68	71	134	93	71	34	59	77
40	84	85	155	110	85	41	69	90
50	97	92	164	110	89	41	69	94
63	124	108	184	128	101	49	79	107



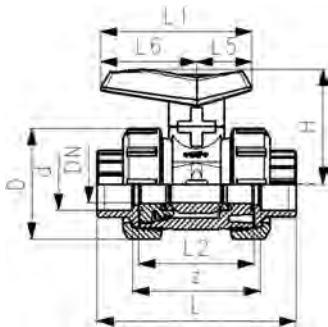
**Ball valve type 542 PVC-U**  
**With cemented socket (JIS)**  
**With PTFE ball seal**

**Model:**

- For easy installation and removal
- Ball seals PTFE/ red lever

**Option:**

- Individual configuration of the valve possible
- Assembling of a valve tag possible



d	DN	Size	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(mm)	(inch)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
				(l/min)						
20	15	½	16	185	<b>161 542 402</b>	1	0.150	<b>161 542 412</b>	1	0.150
25	20	¾	16	350	<b>161 542 403</b>	1	0.232	<b>161 542 413</b>	1	0.232
32	25	1	16	700	<b>161 542 404</b>	1	0.232	<b>161 542 414</b>	1	0.232
40	32	1 ¼	16	1000	<b>161 542 405</b>	1	0.611	<b>161 542 415</b>	1	0.611
50	40	1 ½	16	1600	<b>161 542 406</b>	1	0.844	<b>161 542 416</b>	1	0.844
63	50	2	16	3100	<b>161 542 407</b>	1	1.563	<b>161 542 417</b>	1	1.563

d	D	H	L	L1	L2	L5	L6	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
20	50	54	95	72	56	26	46	63
25	58	66	111	93	65	34	59	72
32	68	71	124	93	71	34	59	80
40	84	85	147	110	85	41	69	94
50	97	92	157	110	89	41	69	94
63	124	108	184	128	101	49	79	108



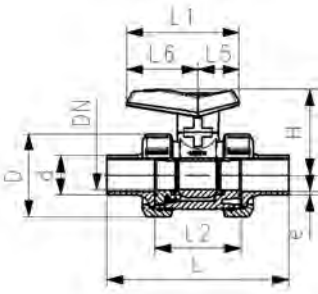
**ecoFIT Ball valve type 542 PVC-U**  
**With butt fusion spigots PE100 - SDR11 metric**  
**With PTFE ball seal**

**Model:**

- Material: PVC-U/ PE
- For easy installation and removal
- Ball seals PTFE/ red lever

**Option:**

- Individual configuration of the valve possible
- Assembling of a valve tag possible



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	SDR	EPDM Code	SP	Weight (kg)
20	15	½	10	185	11	161 542 782	1	0.151
25	20	¾	10	350	11	161 542 783	1	0.231
32	25	1	10	700	11	161 542 784	1	0.329
40	32	1 ¼	10	1000	11	161 542 785	1	0.583
50	40	1 ½	10	1600	11	161 542 786	1	0.817
63	50	2	10	3100	11	161 542 787	1	1.505

d (mm)	FKM Code	SP	Weight (kg)	D (mm)	H (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	e (mm)
20	161 542 792	1	0.151	50	54	130	72	56	26	46	1.9
25	161 542 793	1	0.231	58	66	144	93	65	34	59	2.3
32	161 542 794	1	0.329	68	71	151	93	71	34	59	2.9
40	161 542 795	1	0.583	84	85	171	110	85	41	69	3.7
50	161 542 796	1	0.817	97	92	189	110	89	41	69	4.6
63	161 542 797	1	1.505	124	108	220	128	101	49	79	5.8



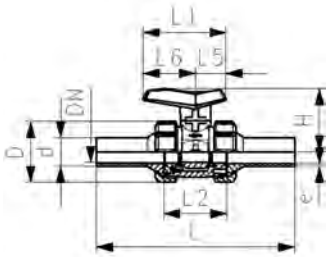
**ecoFIT Ball valve type 542 PVC-U**  
**With butt fusion spigots long PE100 - SDR11 metric**  
**With PTFE ball seal**

**Model:**

- Material: PVC-U/ PE
- For easy installation and removal
- Ball seals PTFE/ red lever

**Option:**

- Individual configuration of the valve possible
- Assembling of a valve tag possible



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	SDR	EPDM Code	SP	Weight (kg)
20	15	½	10	185	11	161 542 822	1	0.162
25	20	¾	10	350	11	161 542 823	1	0.248
32	25	1	10	700	11	161 542 824	1	0.362
40	32	1 ¼	10	1000	11	161 542 825	1	0.550
50	40	1 ½	10	1600	11	161 542 826	1	0.886
63	50	2	10	3100	11	161 542 827	1	1.630

d (mm)	FKM Code	SP	Weight (kg)	D (mm)	H (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	e (mm)
20	161 542 832	1	0.162	50	54	193	72	56	26	46	1.9
25	161 542 833	1	0.248	58	66	218	93	65	34	59	2.3
32	161 542 834	1	0.362	68	71	224	93	71	34	59	2.9
40	161 542 835	1	0.550	84	85	250	110	85	41	69	3.7
50	161 542 836	1	0.886	97	92	271	110	89	41	69	4.6
63	161 542 837	1	1.630	124	108	321	128	101	49	79	5.8



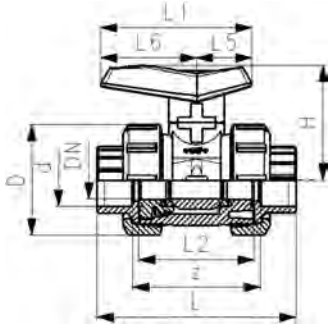
**Ball valve type 542 PVC-U**  
**With cemented socket (metric)**  
**With PE ball seal**

**Model:**

- For easy installation and removal
- Ball seals PE/ blue lever
- For water application

**Option:**

- Individual configuration of the valve possible
- Assembling of a valve tag possible



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)
16	3/8	10	16	71	161 541 001	0	0.148
20	1/2	15	16	185	161 541 002	0	0.150
25	3/4	20	16	350	161 541 003	0	0.233
32	1	25	16	700	161 541 004	0	0.336
40	1 1/4	32	16	1000	161 541 005	0	0.600
50	1 1/2	40	16	1600	161 541 006	0	0.830
63	2	50	16	3100	161 541 007	0	1.523

d (mm)	D (mm)	H (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	z (mm)
16	50	54	92	72	56	26	46	64
20	50	54	95	72	56	26	46	63
25	58	66	110	93	65	34	59	73
32	68	71	124	93	71	34	59	79
40	84	85	147	110	85	41	69	94
50	97	92	157	110	89	41	69	95
63	124	108	184	128	101	49	79	108



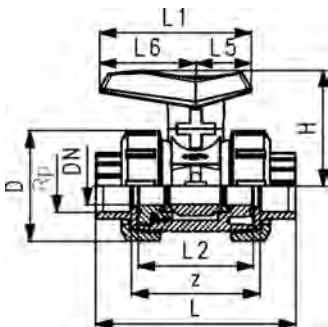
**Ball valve type 542**  
**With PVC-U threaded socket (Rp)**

**Model:**

- For easy installation and removal
- Ball seals PE/ blue lever
- For water application

**Option:**

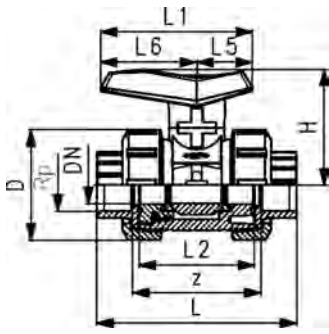
- Individual configuration of the valve possible
- Assembling of a valve tag possible



d (mm)	DN (mm)	Thread Type	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)
16	10	Rp	3/8	16	71	161 541 021	1	0.150
20	15	Rp	1/2	16	185	161 541 022	1	0.155
25	20	Rp	3/4	16	350	161 541 023	1	0.238
32	25	Rp	1	16	700	161 541 024	1	0.348
40	32	Rp	1 1/4	16	1000	161 541 025	1	0.603
50	40	Rp	1 1/2	16	1600	161 541 026	1	0.800
63	50	Rp	2	16	3100	161 541 027	1	1.575

d (mm)	D (mm)	H (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	z (mm)
16	50	54	95	72	56	26	46	69
20	50	54	100	72	56	26	46	67
25	58	66	115	93	65	34	59	79

table continued on the next page



d	D	H	L	L1	L2	L5	L6	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
32	68	71	128	93	71	34	59	86
40	84	85	146	110	85	41	69	100
50	97	92	152	110	89	41	69	106
63	124	108	177	128	101	49	79	122



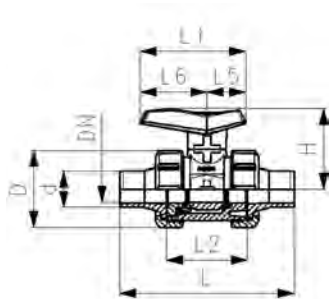
**Ball valve type 542 PVC-U**  
With cemented spigots metric

**Model:**

- For easy installation and removal
- Ball seals PE/ blue lever
- For water application

**Option:**

- Individual configuration of the valve possible
- Assembling of a valve tag possible



d	DN	Size	PN	kv-value	EPDM	SP	Weight
(mm)	(mm)	(inch)	(bar)	( $\Delta p=1 \text{ bar}$ )	Code		(kg)
				(l/min)			
16	10	3/8	16	71	<b>161 541 041</b>	1	0.155
20	15	1/2	16	185	<b>161 541 042</b>	1	0.155
25	20	3/4	16	350	<b>161 541 043</b>	1	0.240
32	25	1	16	700	<b>161 541 044</b>	1	0.351
40	32	1 1/4	16	1000	<b>161 541 045</b>	1	0.610
50	40	1 1/2	16	1600	<b>161 541 046</b>	1	0.840
63	50	2	16	3100	<b>161 541 047</b>	1	1.602

d	D	H	L	L1	L2	L5	L6	e
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
16	50	54	114	72	56	26	46	3.1
20	50	54	124	72	56	26	46	3.1
25	58	66	144	93	65	34	59	3.1
32	68	71	155	93	71	34	59	4.1
40	84	85	175	110	85	41	69	4.6
50	97	92	193	110	89	41	69	5.6
63	124	108	224	128	101	49	79	7.1



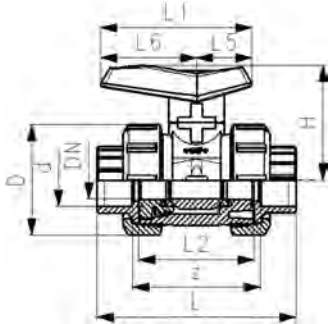
**Ball valve type 542 PVC-U**  
**With cemented socket (BS)**  
**With PE ball seal**

**Model:**

- For easy installation and removal
- Ball seals PE/ blue lever
- For water application

**Option:**

- Individual configuration of the valve possible
- Assembling of a valve tag possible



DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
10	3/8	16	71	<b>161 541 201</b>	1	0.151
15	1/2	16	185	<b>161 541 202</b>	1	0.149
20	3/4	16	350	<b>161 541 203</b>	1	0.229
25	1	16	700	<b>161 541 204</b>	1	0.334
32	1 1/4	16	1000	<b>161 541 205</b>	1	0.588
40	1 1/2	16	1600	<b>161 541 206</b>	1	0.843
50	2	16	3100	<b>161 541 207</b>	1	1.564

D (mm)	H (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	z (mm)
50	54	92	72	56	26	46	60
50	54	95	72	56	26	46	60
58	66	111	93	65	34	59	69
68	71	124	93	71	34	59	76
84	85	147	110	85	41	69	89
97	92	157	110	89	41	69	96
124	108	184	128	101	49	79	110



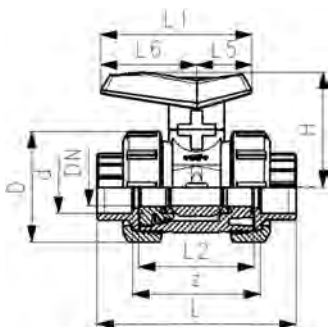
**Ball valve type 542 PVC-U**  
**With cemented socket (inch-ASTM)**  
**With PE ball seal**

**Model:**

- For easy installation and removal
- Ball seals PE/ blue lever
- For water application

**Option:**

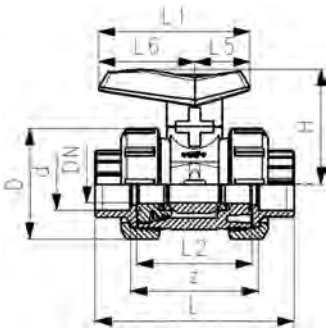
- Individual configuration of the valve possible
- Assembling of a valve tag possible



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
16	10	3/8	16	71	<b>161 541 301</b>	0.180
20	15	1/2	16	185	<b>161 541 302</b>	0.227
25	20	3/4	16	350	<b>161 541 303</b>	0.329
32	25	1	16	700	<b>161 541 304</b>	0.477
40	32	1 1/4	16	1000	<b>161 541 305</b>	0.786
50	40	1 1/2	16	1600	<b>161 541 306</b>	1.082
63	50	2	16	3100	<b>161 541 307</b>	1.920

d (mm)	D (mm)	H (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	z (mm)
16	50	54	105	72	56	26	46	67
20	50	54	105	72	56	26	46	60
25	58	66	122	93	65	34	59	70

table continued on the next page



d	D	H	L	L1	L2	L5	L6	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
32	68	71	134	93	71	34	59	77
40	84	85	155	110	85	41	69	90
50	97	92	164	110	89	41	69	94
63	124	108	184	128	101	49	79	107



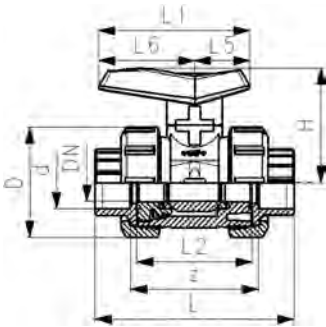
**Ball valve type 542 PVC-U**  
**With cemented socket (JIS)**  
**With PE ball seal**

**Model:**

- For easy installation and removal
- Ball seals PE/ blue lever
- For water application

**Option:**

- Individual configuration of the valve possible
- Assembling of a valve tag possible



d	DN	Size	PN	EPDM Code	Weight	D	H	L	L1	L2	L5	L6	z
(mm)	(mm)	(inch)	(bar)		(kg)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
20	15	½	16	<b>161 541 402</b>	0.150	50	54	95	72	56	26	46	63
25	20	¾	16	<b>161 541 403</b>	0.232	58	66	111	93	65	34	59	72
32	25	1	16	<b>161 541 404</b>	0.232	68	71	124	93	71	34	59	80
40	32	1 ¼	16	<b>161 541 405</b>	0.611	84	85	147	110	85	41	69	94
50	40	1 ½	16	<b>161 541 406</b>	0.844	97	92	157	110	89	41	69	94
63	50	2	16	<b>161 541 407</b>	1.563	124	108	184	128	101	49	79	108



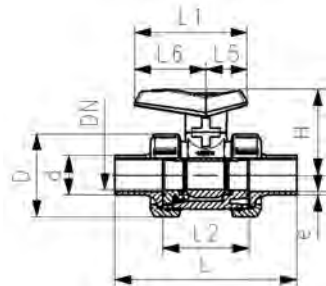
**ecoFIT Ball valve type 542 PVC-U**  
**With butt fusion spigots PE100 - SDR11 metric**  
**With PE ball seal**

**Model:**

- Material: PVC-U/ PE
- For easy installation and removal
- Ball seals PE/ blue lever
- For water application

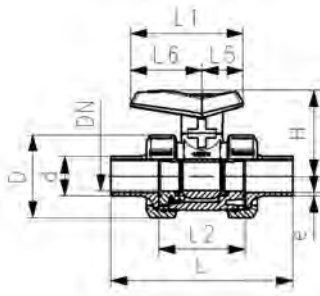
**Option:**

- Individual configuration of the valve possible
- Assembling of a valve tag possible



d	DN	Size	PN	kv-value	SDR	EPDM Code	SP	Weight
(mm)	(mm)	(inch)	(bar)	(Δp=1 bar)				(kg)
				(l/min)				
20	15	½	16	185	11	<b>161 541 782</b>	1	0.151
25	20	¾	16	350	11	<b>161 541 783</b>	1	0.231
32	25	1	16	700	11	<b>161 541 784</b>	1	0.329
40	32	1 ¼	16	1000	11	<b>161 541 785</b>	1	0.583
50	40	1 ½	16	1600	11	<b>161 541 786</b>	1	0.817
63	50	2	16	3100	11	<b>161 541 787</b>	1	1.505

table continued on the next page



d	D	H	L	L1	L2	L5	L6	e
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
20	50	54	130	72	56	26	46	1.9
25	58	66	144	93	65	34	59	2.3
32	68	71	151	93	71	34	59	2.9
40	84	85	171	110	85	41	69	3.7
50	97	92	189	110	89	41	69	4.6
63	124	108	220	128	101	49	79	5.8



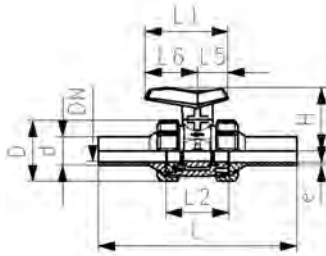
**ecoFIT Ball valve type 542 PVC-U**  
**With butt fusion spigots long PE100 - SDR11 metric**  
**With PE ball seal**

**Model:**

- Material: PVC-U/ PE
- For easy installation and removal
- Ball seals PE/ blue lever
- For water application

**Option:**

- Individual configuration of the valve possible
- Assembling of a valve tag possible



d	DN	Size	PN	kv-value	SDR	EPDM	SP	Weight
(mm)	(mm)	(inch)	(bar)	( $\Delta p=1$ bar)		Code		(kg)
				(l/min)				
20	15	½	16	185	11	<b>161 541 822</b>	1	0.162
25	20	¾	16	350	11	<b>161 541 823</b>	1	0.248
32	25	1	16	700	11	<b>161 541 824</b>	1	0.362
40	32	1 ¼	16	1000	11	<b>161 541 825</b>	1	0.550
50	40	1 ½	16	1600	11	<b>161 541 826</b>	1	0.886
63	50	2	16	3100	11	<b>161 541 827</b>	1	1.630

d	D	H	L	L1	L2	L5	L6	e
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
20	50	54	193	72	56	26	46	1.9
25	58	66	218	93	65	34	59	2.3
32	68	71	224	93	71	34	59	2.9
40	84	85	250	110	85	41	69	3.7
50	97	92	271	110	89	41	69	4.6
63	124	108	321	128	101	49	79	5.8

# Product Configurator

Create your own ball valve

## Variant Type

- A01 Ball Valve 2-Way
- A02 Linear Ball Valve 2-Way

## Material

- B01 PVC-U

## Diameter

- C05 d16 DN10 3/8"
- C06 d20 DN15 1/2"
- C07 d25 DN20 3/4"
- C08 d32 DN25 1"
- C09 d40 DN32 1 1/4"
- C10 d50 DN40 1 1/2"
- C11 d63 DN50 2"
- C12 d75 DN65 2 1/2"
- C13 d90 DN80 3"
- C14 d110 DN100 4"

## Treatment

- D01 Standard PTFE Ball Seal
- D02 Oil-Free PTFE Ball Seal
- D03 Silicone-Free/Paint Compatible PTFE Ball Seal (ASTM)
- D04 Silicone-Free/Paint Compatible PVDF Ball Seal (ISO)

## Sealmaterial

- E01 EPDM
- E02 FPM
- E03 FFPM

## Threaded Inserts

- F02 With Threaded Inserts

## Endings\*

- G01 PVC-U Solvent Cement Socket ISO
- ...
- G80 PVC-U PVC-U Valve End blank

## Mounting plate

- L02 With Mounting Plate

## Multi-Functional Module (MFM)

- I01 Standard Interface
- I02 Empty Multi-Functional Module
- I03 Multi-Functional Module with 2 Limit Switches Ag, Ni
- I04 Multi-Functional Module with 2 Limit Switches Au
- I05 Multi-Functional Module with 2 Inductive Switches Namur
- I06 Multi-Functional Module with 2 Inductive Switches PNP
- I07 Multi-Functional Module with 2 Inductive Switches NPN

## Manual Operation

- K01 Standard Lever Red
- K02 Standard Lever Black
- K11 Multi-Functional/Ratched Lever Red

## \*Endings

- G01 PVC-U Solvent Cement Socket ISO
- G02 PVC-U Solvent Cement Socket JIS
- G03 PVC-U Solvent Cement Socket ASTM
- G04 PVC-U Solvent Cement Socket BS
- G05 PVC-U Solvent Cement Spigot ISO
- G06 PVC-U Threaded Socket ISO Rp
- G07 PVC-U Threaded Socket ISO Rp Reinforced
- G08 PVC-U Threaded Socket ISO/JIS Rc
- G09 PVC-U Threaded Socket ASTM NPT
- G53 PVDF Threaded Socket ASTM NPT
- G60 Fixed Flange PVC-U gerillt metrisch
- G61 Fixed Flange PVC-U flach ISO
- G62 Fixed Flange PVC-U JIS
- G70 Backing Flange PVC-U ISO
- G70150 Backing Flange PVC-U ISO d160 DN150
- G71 Backing Flange PVC-U ANSI
- G71150 Backing Flange PVC-U ANSI 6" DN150
- G72PVCU Backing Flange PP-Stahl ISO with PVC-U Endings
- G72PVCU150 Backing Fl. PP-Steel ISO d160 DN150 with PVC-U Endings
- G73PVCU PVCU Backing Flange PP-Stahl ANSI with PVC-U Endings
- G73PVCU150 PVCU150 Backing Fl. PP-Steel ANSI 6" DN150 with PVC-U Endings
- G78PVCU PVCU Backing Flange PVC-U JIS with PVC-U Endings
- G78PVCU150 PVCU150 Backing Fl. PVC-U JIS d160 DN150 with PVC-U Endings
- G80 PVC-U PVC-U Valve End blank



A01 B01 C08 D01 E01 F02 G01 L02 I01 K01 =



# Ball valves electric type 107



DN10/15 - 50

**Ball valve type 107 PVC-U 100-230V**  
**With manual emergency override**  
**With solvent cement sockets metric**

**Model:**

- Built on with electric actuator EA11
- Voltage 100-230V, 50-60Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

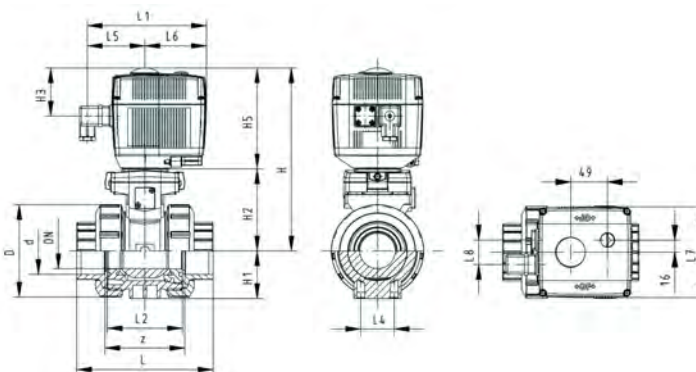
**Option:**

- Individual configuration of the valve

d (mm)	DN (mm)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	10	70	199 107 002	1	2.072	199 107 012	1	2.072
20	15	10	185	199 107 003	1	2.138	199 107 013	1	2.072
25	20	10	350	199 107 004	1	2.231	199 107 014	1	2.232
32	25	10	700	199 107 005	1	2.340	199 107 015	1	2.189
40	32	10	1000	199 107 006	1	2.596	199 107 016	1	2.592
50	40	10	1600	199 107 007	1	2.829	199 107 017	1	2.914
63	50	10	3100	199 107 008	1	3.562	199 107 018	1	2.914

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)
16	50	200	27	64	64	137	92	161	56	25	77	83	122	33	64
20	50	200	27	64	64	137	95	161	56	25	77	83	122	33	64
25	58	209	30	73	64	137	110	161	65	25	77	83	122	33	72
32	68	209	36	73	64	137	123	161	71	25	77	83	122	33	79
40	84	220	44	84	64	137	146	161	85	45	77	83	122	33	94
50	97	220	51	84	64	137	157	161	89	45	77	83	122	33	95
63	124	243	64	106	64	137	183	161	101	45	77	83	122	33	107

d (mm)	closest inch (inch)
16	3/8
20	1/2
25	3/4
32	1
40	1 1/4
50	1 1/2
63	2





DN10/15 - 50

**Ball valve type 107 PVC-U 100-230V**  
**With manual emergency override**  
**With solvent cement spigots metric**

**Model:**

- Built on with electric actuator EA11
- Voltage 100-230V, 50-60Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

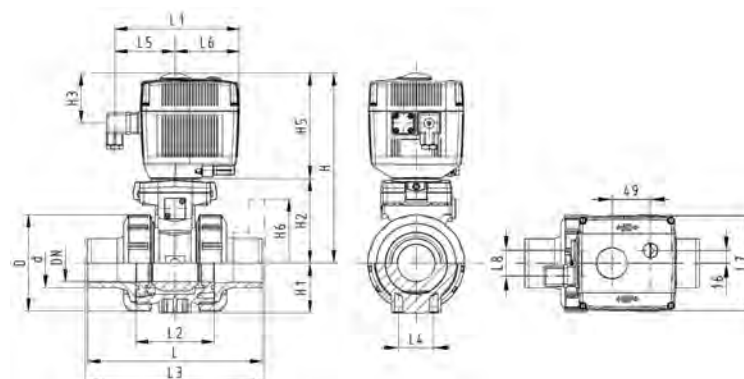
- Individual configuration of the valve

d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	10	70	199 107 022	1	2.072	199 107 032	1	2.072
20	15	10	185	199 107 023	1	2.072	199 107 033	1	2.072
25	20	10	350	199 107 024	1	2.189	199 107 034	1	2.189
32	25	10	700	199 107 025	1	2.189	199 107 035	1	2.189
40	32	10	1000	199 107 026	1	2.603	199 107 036	1	2.592
50	40	10	1600	199 107 027	1	2.914	199 107 037	1	2.914
63	50	10	3100	199 107 028	1	3.772	199 107 038	1	3.772

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)
16	50	200	27	64	64	137	114	161	56	130	25	77	83	122	33
20	50	200	27	64	64	137	124	161	56	130	25	77	83	122	33
25	58	209	30	73	64	137	144	161	65	150	25	77	83	122	33
32	68	209	36	73	64	137	154	161	71	160	25	77	83	122	33
40	84	220	44	84	64	137	174	161	85	180	45	77	83	122	33
50	97	220	51	84	64	137	194	161	89	200	45	77	83	122	33
63	124	243	64	106	64	137	224	161	101	230	45	77	83	122	33

**d closest  
(mm) inch  
(inch)**

16	3/4
20	1/2
25	3/4
32	1
40	1 1/4
50	1 1/2
63	2





DN10/15 - 50

**Ball valve type 107 PVC-U 100-230V**  
**With manual emergency override**  
**With threaded sockets Rp**

**Model:**

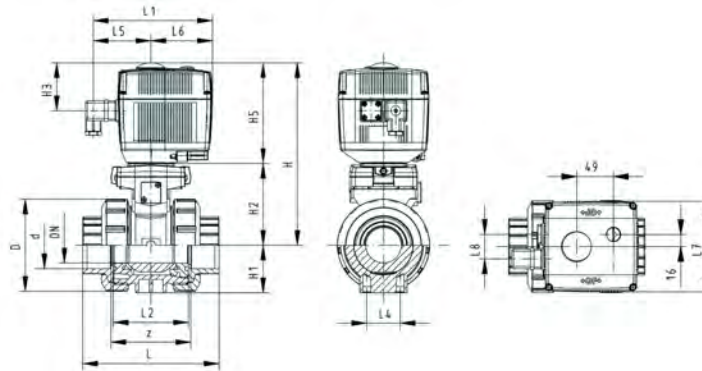
- Built on with electric actuator EA11
- Voltage 100-230V, 50-60Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

Rp (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
3/8	10	10	70	199 107 622	1	2.100	199 107 632	1	2.100
1/2	15	10	185	199 107 623	1	2.100	199 107 633	1	2.100
3/4	20	10	350	199 107 624	1	2.232	199 107 634	1	2.200
1	25	10	700	199 107 625	1	2.300	199 107 635	1	2.300
1 1/4	32	10	1000	199 107 626	1	2.592	199 107 636	1	2.600
1 1/2	40	10	1600	199 107 627	1	2.914	199 107 637	1	3.000
2	50	10	3100	199 107 628	1	3.772	199 107 638	1	3.800

Rp (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)
3/8	50	200	27	64	64	137	92	161	56	25	77	83	122	33	64
1/2	50	200	27	64	64	137	95	161	56	25	77	83	122	33	64
3/4	58	209	30	73	64	137	110	161	65	25	77	83	122	33	72
1	68	209	36	73	64	137	123	161	71	25	77	83	122	33	79
1 1/4	84	220	44	84	64	137	146	161	85	45	77	83	122	33	94
1 1/2	97	220	51	84	64	137	157	161	89	45	77	83	122	33	95
2	124	243	64	106	64	137	183	161	101	45	77	83	122	33	107





DN10/15 - 50

**Ball valve type 107 PVC-U 100-230V**  
**With manual emergency override**  
**With fixed flanges serrated metric**

**Model:**

- Built on with electric actuator EA11
- Voltage 100-230V, 50-60Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimension: ISO 7005 / EN 1092 / DIN 25 PN10 / BS4504

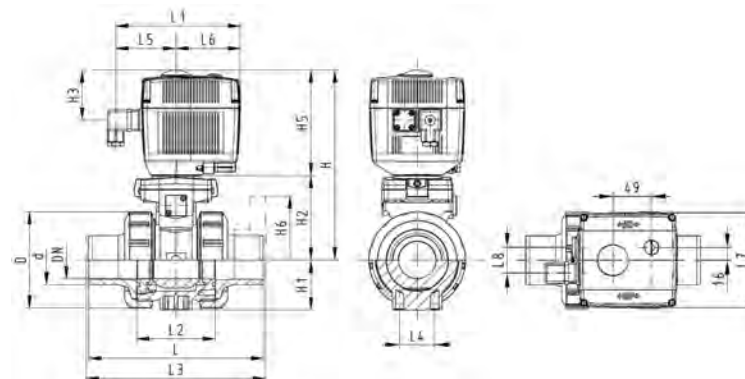
**Option:**

- Individual configuration of the valve

d	Size	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(inch)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
				(l/min)						
20	½	15	10	185	199 107 603	1	2.300	199 107 613	1	2.300
25	¾	20	10	350	199 107 604	1	2.500	199 107 614	1	2.500
32	1	25	10	700	199 107 605	1	2.717	199 107 615	1	2.700
40	1 ¼	32	10	1000	199 107 606	1	3.200	199 107 616	1	3.200
50	1 ½	40	10	1600	199 107 607	1	3.700	199 107 617	1	3.700
63	2	50	10	3100	199 107 608	1	4.676	199 107 618	1	4.776

d	D	H	H1	H2	H3	H5	H6	L	L1	L2	L3	L4	L5	L6	L7
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
20	50	201	27	64	65	138	48	124	160	56	130	25	77	83	122
25	58	210	30	73	65	138	53	144	160	65	150	25	77	83	122
32	68	210	36	73	65	138	58	154	160	71	160	25	77	83	122
40	84	221	44	84	65	138	70	174	160	85	180	45	77	83	122
50	97	221	51	84	65	138	75	194	160	89	200	45	77	83	122
63	124	244	64	106	65	138	83	224	160	101	230	45	77	83	122

d	L8
(mm)	(mm)
20	33
25	33
32	33
40	33
50	33
63	33





DN10/15 - 50

**Ball valve type 107 PVC-U 24V**  
**With manual emergency override**  
**With solvent cement sockets metric**

**Model:**

- Built on with electric actuator EA11
- Voltage 24V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

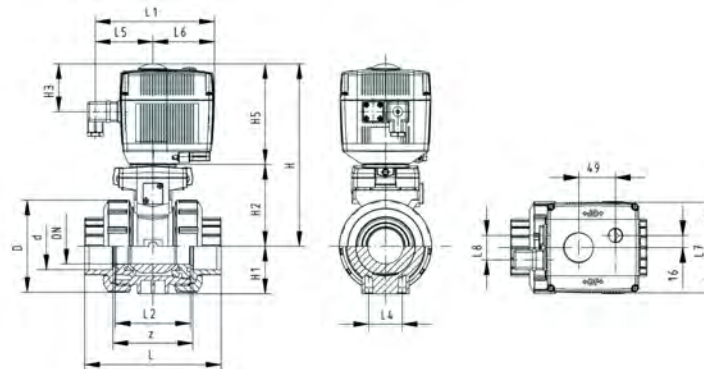
- Individual configuration of the valve

d (mm)	DN (mm)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	10	70	199 107 042	1	2.122	199 107 052	1	2.072
20	15	10	185	199 107 043	1	2.122	199 107 053	1	2.125
25	20	10	350	199 107 044	1	2.216	199 107 054	1	2.860
32	25	10	700	199 107 045	1	2.321	199 107 055	1	2.189
40	32	10	1000	199 107 046	1	3.831	199 107 056	1	2.592
50	40	10	1600	199 107 047	1	2.809	199 107 057	1	3.437
63	50	10	3100	199 107 048	1	3.547	199 107 058	1	3.772

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)
16	50	200	27	64	64	137	92	161	56	25	77	83	122	33	64
20	50	200	27	64	64	137	95	161	56	25	77	83	122	33	64
25	58	209	30	73	64	137	110	161	65	25	77	83	122	33	72
32	68	209	36	73	64	137	123	161	71	25	77	83	122	33	79
40	84	220	44	84	64	137	146	161	85	45	77	83	122	33	94
50	97	220	51	84	64	137	157	161	89	45	77	83	122	33	95
63	124	243	64	106	64	137	183	161	101	45	77	83	122	33	107

**d** closest  
 (mm) inch  
 (inch)

16	¾
20	½
25	¾
32	1
40	1 ¼
50	1 ½
63	2





DN10/15 - 50

**Ball valve type 107 PVC-U 24V**  
**With manual emergency override**  
**With solvent cement spigots metric**

**Model:**

- Built on with electric actuator EA11
- Voltage 24V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

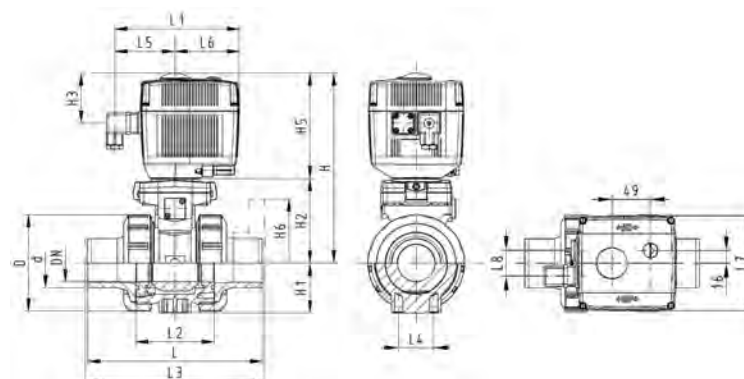
- Individual configuration of the valve

d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	10	70	199 107 062	1	2.072	199 107 072	1	2.072
20	15	10	185	199 107 063	1	2.072	199 107 073	1	1.830
25	20	10	350	199 107 064	1	2.387	199 107 074	1	2.189
32	25	10	700	199 107 065	1	2.189	199 107 075	1	2.189
40	32	10	1000	199 107 066	1	2.592	199 107 076	1	2.592
50	40	10	1600	199 107 067	1	2.914	199 107 077	1	2.914
63	50	10	3100	199 107 068	1	3.772	199 107 078	1	3.772

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)
16	50	200	27	64	64	137	114	161	56	130	25	77	83	122	33
20	50	200	27	64	64	137	124	161	56	130	25	77	83	122	33
25	58	209	30	73	64	137	144	161	65	150	25	77	83	122	33
32	68	209	36	73	64	137	154	161	71	160	25	77	83	122	33
40	84	220	44	84	64	137	174	161	85	180	45	77	83	122	33
50	97	220	51	84	64	137	194	161	89	200	45	77	83	122	33
63	124	243	64	106	64	137	224	161	101	230	45	77	83	122	33

**d closest  
(mm) inch**

16	3/8
20	1/2
25	3/4
32	1
40	1 1/4
50	1 1/2
63	2





DN10/15 - 50

**Ball valve type 107 PVC-U 24V**  
**With manual emergency override**  
**With threaded sockets Rp**

**Model:**

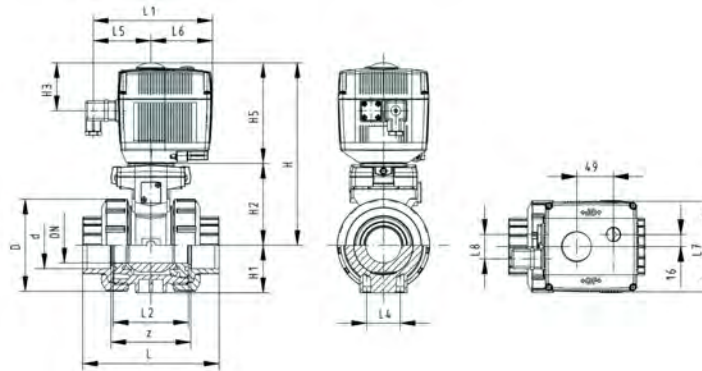
- Built on with electric actuator EA11
- Voltage 24V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

Rp (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
3/8	10	10	70	199 107 662	1	2.135	199 107 672	1	2.100
1/2	15	10	185	199 107 663	1	2.100	199 107 673	1	2.100
3/4	20	10	350	199 107 664	1	2.200	199 107 674	1	2.200
1	25	10	700	199 107 665	1	2.327	199 107 675	1	2.300
1 1/4	32	10	1000	199 107 666	1	2.600	199 107 676	1	2.600
1 1/2	40	10	1600	199 107 667	1	2.837	199 107 677	1	3.000
2	50	10	3100	199 107 668	1	3.602	199 107 678	1	3.800

Rp (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)
3/8	50	200	27	64	64	137	92	161	56	25	77	83	122	33	64
1/2	50	200	27	64	64	137	95	161	56	25	77	83	122	33	64
3/4	58	209	30	73	64	137	110	161	65	25	77	83	122	33	72
1	68	209	36	73	64	137	123	161	71	25	77	83	122	33	79
1 1/4	84	220	44	84	64	137	146	161	85	45	77	83	122	33	94
1 1/2	97	220	51	84	64	137	157	161	89	45	77	83	122	33	95
2	124	243	64	106	64	137	183	161	101	45	77	83	122	33	107





DN10/15 - 50

**Ball valve type 107 PVC-U 24V**  
**With manual emergency override**  
**With fixed flanges serrated metric**

**Model:**

- Built on with electric actuator EA11
- Voltage 24V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimension: ISO 7005 / EN 1092 / DIN 25 PN10 / BS4504

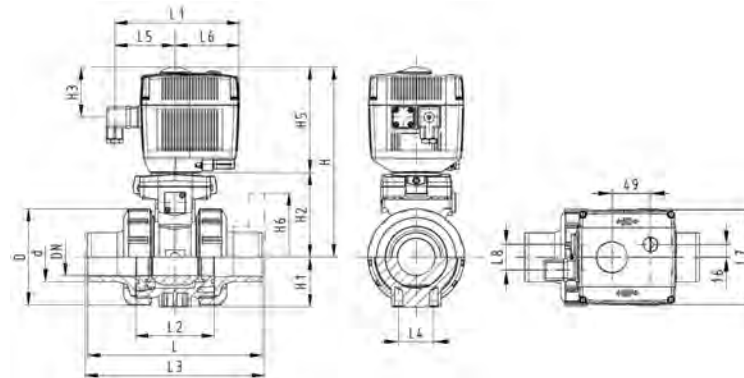
**Option:**

- Individual configuration of the valve

d	Size	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(inch)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
				(l/min)						
20	½	15	10	185	199 107 643	1	2.300	199 107 653	1	2.300
25	¾	20	10	350	199 107 644	1	2.500	199 107 654	1	2.500
32	1	25	10	700	199 107 645	1	2.700	199 107 655	1	2.700
40	1 ¼	32	10	1000	199 107 646	1	3.200	199 107 656	1	3.200
50	1 ½	40	10	1600	199 107 647	1	4.216	199 107 657	1	3.700
63	2	50	10	3100	199 107 648	1	4.663	199 107 658	1	4.800

d	D	H	H1	H2	H3	H5	H6	L	L1	L2	L3	L4	L5	L6	L7
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
20	50	201	27	64	65	138	48	124	160	56	130	25	77	83	122
25	58	210	30	73	65	138	53	144	160	65	150	25	77	83	122
32	68	210	36	73	65	138	58	154	160	71	160	25	77	83	122
40	84	221	44	84	65	138	70	174	160	85	180	45	77	83	122
50	97	221	51	84	65	138	75	194	160	89	200	45	77	83	122
63	124	244	64	106	65	138	83	224	160	101	230	45	77	83	122

d	L8
(mm)	(mm)
20	33
25	33
32	33
40	33
50	33
63	33





# Ball valves electric type 127 EA new



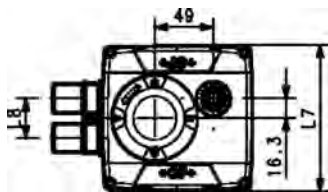
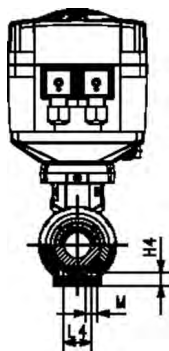
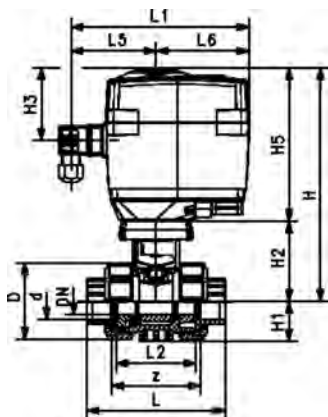
**Ball valve type 127 PVC-U**  
**100-230V**  
**With manual emergency override**  
**With solvent cement sockets metric**

**Model:**

- Built on with electric actuator EA15
- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close)
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
16	10	10	70	199 127 002	2.072	199 127 012	2.072
20	15	10	185	199 127 003	2.138	199 127 013	2.072
25	20	10	350	199 127 004	2.231	199 127 014	2.232
32	25	10	700	199 127 005	2.340	199 127 015	2.189
40	32	10	1000	199 127 006	2.596	199 127 016	2.592
50	40	10	1600	199 127 007	2.829	199 127 017	2.914
63	50	10	3100	199 127 008	3.562	199 127 018	2.914

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)
16	50	197	27	60	64	12	137	92	161	56	25	77	83	122	33
20	50	197	27	60	64	12	137	95	161	56	25	77	83	122	33
25	58	201	30	64	73	12	137	110	161	65	25	77	83	122	33
32	68	207	36	70	73	12	137	123	161	71	25	77	83	122	33
40	84	213	44	76	84	15	137	146	161	85	45	77	83	122	33
50	97	219	51	82	84	15	137	157	161	89	45	77	83	122	33
63	124	234	64	97	106	15	137	183	161	101	45	77	83	122	33

d (mm)	M	z (mm)	closest inch (inch)
16	M6	68	3/8
20	M6	67	1/2
25	M6	76	3/4
32	M6	82	1
40	M8	98	1 1/4
50	M8	99	1 1/2
63	M8	111	2



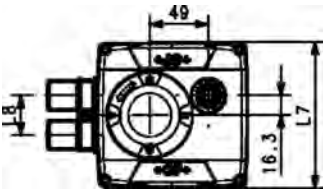
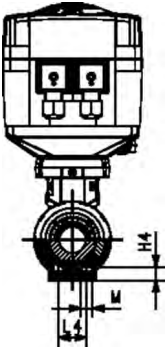
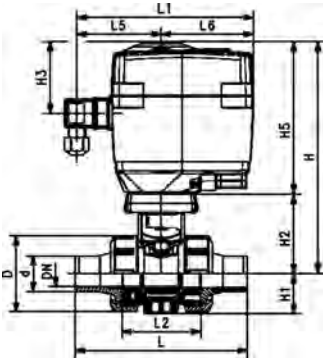
**Ball valve type 127 PVC-U**  
**24V**  
**With manual emergency override**  
**With solvent cement sockets metric**

**Model:**

- Built on with electric actuator EA15
- Voltage 24V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close)
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
16	10	10	70	199 127 042	2.122	199 127 052	2.072
20	15	10	185	199 127 043	2.122	199 127 053	2.125
25	20	10	350	199 127 044	2.216	199 127 054	2.860
32	25	10	700	199 127 045	2.321	199 127 055	2.189
40	32	10	1000	199 127 046	3.831	199 127 056	2.592
50	40	10	1600	199 127 047	2.809	199 127 057	3.437
63	50	10	3100	199 127 048	3.547	199 127 058	3.772

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)
16	50	197	27	60	64	12	137	92	161	56	25	77	83	122	33
20	50	197	27	60	64	12	137	95	161	56	25	77	83	122	33
25	58	201	30	64	73	12	137	110	161	65	25	77	83	122	33
32	68	207	36	70	73	12	137	123	161	71	25	77	83	122	33
40	84	213	44	76	84	12	137	146	161	85	45	77	83	122	33
50	97	219	51	82	84	12	137	157	161	89	45	77	83	122	33
63	124	234	64	97	106	12	137	183	161	101	45	77	83	122	33

d (mm)	M	z (mm)	closest inch (inch)
16	M6	68	$\frac{3}{8}$
20	M6	67	$\frac{1}{2}$
25	M6	76	$\frac{3}{4}$
32	M6	82	1
40	M8	98	$1\frac{1}{4}$
50	M8	99	$1\frac{1}{2}$
63	M8	111	2

**Ball valve type 127 PVC-U**  
**100-230V**  
**With manual emergency override**  
**With solvent cement spigots metric**

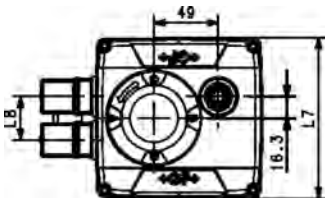
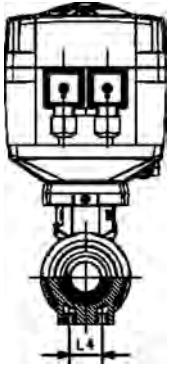
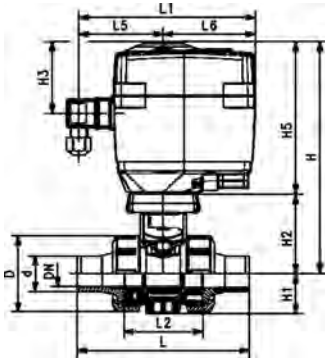


**Model:**

- Built on with electric actuator EA15
- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close)
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit



d (mm)	DN (mm)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
16	10	10	70	199 127 022	2.072	199 127 032	2.072
20	15	10	185	199 127 023	2.072	199 127 033	2.072
25	20	10	350	199 127 024	2.189	199 127 034	2.189
32	25	10	700	199 127 025	2.189	199 127 035	2.189
40	32	10	1000	199 127 026	2.603	199 127 036	2.592
50	40	10	1600	199 127 027	2.914	199 127 037	2.914
63	50	10	3100	199 127 028	3.772	199 127 038	3.772

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)
16	50	197	27	60	64	12	137	114	161	56	25	77	83	122	33
20	50	197	27	60	64	12	137	124	161	56	25	77	83	122	33
25	58	201	30	64	64	12	137	143	161	65	25	77	83	122	33
32	68	207	36	70	64	12	137	154	161	71	25	77	83	122	33
40	84	213	44	76	64	15	137	174	161	85	45	77	83	122	33
50	97	219	51	82	64	15	137	193	161	89	45	77	83	122	33
63	124	234	64	97	64	15	137	223	161	101	45	77	83	122	33

d (mm)	M	closest inch (inch)
16	M6	3/8
20	M6	1/2
25	M6	3/4
32	M6	1
40	M8	1 1/4
50	M8	1 1/2
63	M8	2

## Ball valve type 127 PVC-U

24V

With manual emergency override

With solvent cement spigots metric

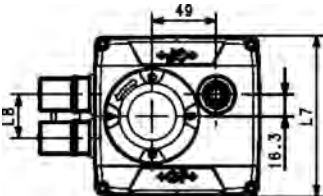
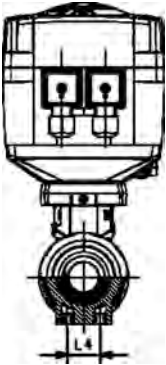
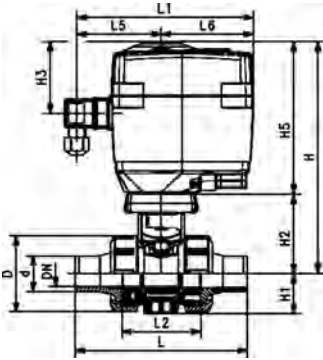


### Model:

- Built on with electric actuator EA15
- Voltage 24V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close)
- Integrated stainless steel mounting inserts

### Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
16	10	10	70	199 127 062	2.072	199 127 072	2.072
20	15	10	185	199 127 063	2.072	199 127 073	1.830
25	20	10	350	199 127 064	2.387	199 127 074	2.189
32	25	10	700	199 127 065	2.189	199 127 075	2.189
40	32	10	1000	199 127 066	2.592	199 127 076	2.592
50	40	10	1600	199 127 067	2.914	199 127 077	2.914
63	50	10	3100	199 127 068	3.772	199 127 078	3.772

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)
16	50	197	27	60	64	12	137	114	161	56	25	77	83	122	33
20	50	197	27	60	64	12	137	124	161	56	25	77	83	122	33
25	58	201	30	64	73	12	137	143	161	65	25	77	83	122	33
32	68	207	36	70	73	12	137	154	161	71	25	77	83	122	33
40	84	213	44	76	84	12	137	174	161	85	45	77	83	122	33
50	97	219	51	82	84	12	137	193	161	89	45	77	83	122	33
63	124	234	64	97	106	12	137	223	161	101	45	77	83	122	33

d (mm)	M	closest inch (inch)
16	M6	$\frac{3}{8}$
20	M6	$\frac{1}{2}$
25	M6	$\frac{3}{4}$
32	M6	1
40	M8	1 $\frac{1}{4}$
50	M8	1 $\frac{1}{2}$
63	M8	2

**Kugelhahn Typ 127 PVC-U**  
**100-230V**  
**Mit integrierter Handnotbetätigung**  
**Mit Gewindemuffen Rp**

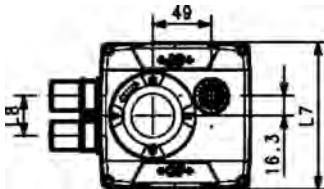
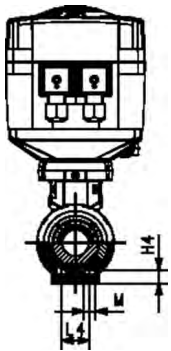
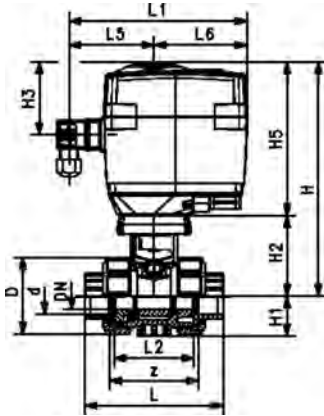


**Model:**

- Built on with electric actuator EA15
- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close)
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit



d (mm)	DN (mm)	Thread	Type	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (L/min)	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
16	10	Rp		3/8	10	70	199 127 622	2.100	199 127 632	2.100
20	15	Rp		1/2	10	185	199 127 623	2.100	199 127 633	2.100
25	20	Rp		3/4	10	350	199 127 624	2.232	199 127 634	2.200
32	25	Rp		1	10	700	199 127 625	2.300	199 127 635	2.300
40	32	Rp		1 1/4	10	1000	199 127 626	2.592	199 127 636	2.600
50	40	Rp		1 1/2	10	1600	199 127 627	2.914	199 127 637	3.000
63	50	Rp		2	10	3100	199 127 628	3.772	199 127 638	3.800

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	M
50	197	27	60	64	12	137	95	161	56	25	77	83	122	33	M6
50	197	27	60	64	12	137	100	161	56	25	77	83	122	33	M6
58	201	30	64	73	12	137	114	161	65	25	77	83	122	33	M6
68	207	36	70	73	12	137	127	161	71	25	77	83	122	33	M6
84	213	44	76	84	15	137	146	161	85	45	77	83	122	33	M8
97	219	51	82	84	15	137	152	161	89	45	77	83	122	33	M8
124	234	64	97	106	15	137	176	161	101	45	77	83	122	33	M8

**z**  
(mm)

73
71
82
89
104
110
125



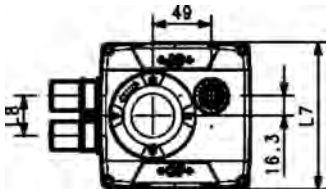
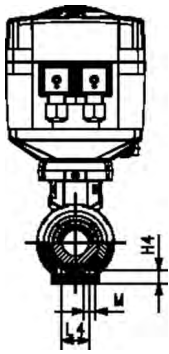
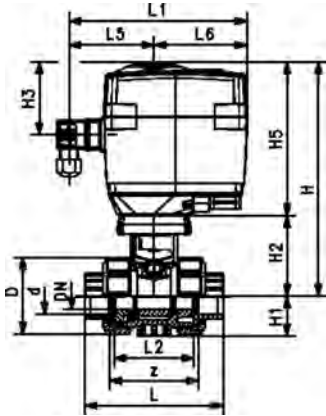
**Ball valve type 127 PVC-U  
24V  
With manual emergency override  
With threaded sockets Rp**

**Model:**

- Built on with electric actuator EA15
- Voltage 24V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close)
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit



d (mm)	DN (mm)	Thread Type	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (L/min)	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
16	10	Rp	3/8	10	70	199 127 662	2.135	199 127 672	2.100
20	15	Rp	1/2	10	185	199 127 663	2.100	199 127 673	2.100
25	20	Rp	3/4	10	350	199 127 664	2.200	199 127 674	2.200
32	25	Rp	1	10	700	199 127 665	2.327	199 127 675	2.300
40	32	Rp	1 1/4	10	1000	199 127 666	2.600	199 127 676	2.600
50	40	Rp	1 1/2	10	1600	199 127 667	2.837	199 127 677	3.000
63	50	Rp	2	10	3100	199 127 668	3.602	199 127 678	3.800

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	M
50	197	27	60	64	12	137	95	161	56	25	77	83	122	33	M6
50	197	27	60	64	12	137	100	161	56	25	77	83	122	33	M6
58	201	30	64	73	12	137	114	161	65	25	77	83	122	33	M6
68	207	36	70	73	12	137	127	161	71	25	77	83	122	33	M6
84	213	44	76	84	12	137	146	161	85	45	77	83	122	33	M8
97	219	51	82	84	12	137	152	161	89	45	77	83	122	33	M8
124	234	64	97	106	12	137	176	161	101	45	77	83	122	33	M8

Z (mm)
73
71
82
89
104
110
125

**Ball valve type 127 PVC-U**  
**24V**  
**With manual emergency override**  
**With fixed flanges serrated metric**

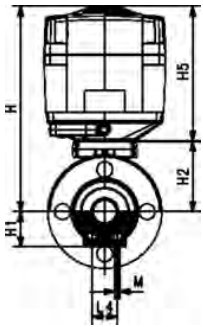
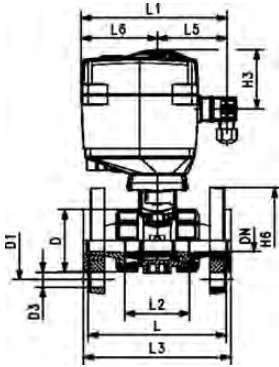


**Model:**

- Built on with electric actuator EA15
- Voltage 24V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close)
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
20	15	½	10	185	199 127 643	2.300	199 127 653	2.300
25	20	¾	10	350	199 127 644	2.500	199 127 654	2.500
32	25	1	10	700	199 127 645	2.700	199 127 655	2.700
40	32	1 ¼	10	1000	199 127 646	3.200	199 127 656	3.200
50	40	1 ½	10	1600	199 127 647	4.216	199 127 657	3.700
63	50	2	10	3100	199 127 648	4.663	199 127 658	4.800

d (mm)	D (mm)	D1 (mm)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)
20	50	65	14	197	27	60	64	12	137	95	95	161	56	169	25
25	58	75	14	201	30	64	73	12	137	105	108	161	65	192	25
32	68	85	14	207	36	70	73	12	137	115	118	161	71	207	25
40	84	100	18	213	44	76	84	12	137	140	137	161	85	232	45
50	97	110	18	219	51	82	84	12	137	150	147	161	89	258	45
63	124	125	18	234	64	97	106	12	137	165	168	161	101	297	45

d (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	M
20	77	83	122	33	M6
25	77	83	122	33	M6
32	77	83	122	33	M6
40	77	83	122	33	M8
50	77	83	122	33	M8
63	77	83	122	33	M8

**Ball valve type 127 PVC-U  
100-230V  
With manual emergency override  
With fixed flanges serrated metric**

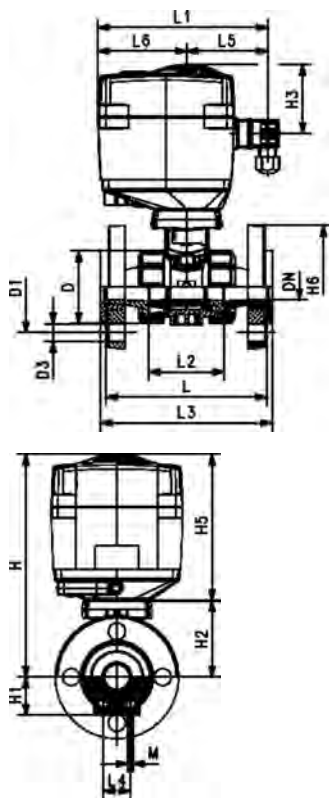


**Model:**

- Built on with electric actuator EA15
- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close)
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
20	15	½	10	185	199 127 603	2.300	199 127 613	2.300
25	20	¾	10	350	199 127 604	2.500	199 127 614	2.500
32	25	1	10	700	199 127 605	2.717	199 127 615	2.700
40	32	1 ¼	10	1000	199 127 606	3.200	199 127 616	3.200
50	40	1 ½	10	1600	199 127 607	3.700	199 127 617	3.700
63	50	2	10	3100	199 127 608	4.676	199 127 618	4.776

d (mm)	D (mm)	D1 (mm)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)
20	50	65	14	197	27	60	64	12	137	95	161	56	130	25	77
25	58	75	14	201	30	64	73	12	137	105	161	65	149	25	77
32	68	85	14	207	36	70	73	12	137	115	161	71	160	25	77
40	84	100	18	213	44	76	84	15	137	140	161	85	180	45	77
50	97	110	18	219	51	82	84	15	137	150	161	89	200	45	77
63	124	125	18	234	64	97	106	15	137	165	161	101	230	45	77

d (mm)	L6 (mm)	L7 (mm)	L8 (mm)	M
20	83	122	33	M6
25	83	122	33	M6
32	83	122	33	M6
40	83	122	33	M8
50	83	122	33	M8
63	83	122	33	M8



# Ball valves electric type 179 EA new



**Ball valve type 179 PVC-U**  
**100-230V**  
**With manual emergency override**  
**With backing flanges PP-st metric**

**Model:**

- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501

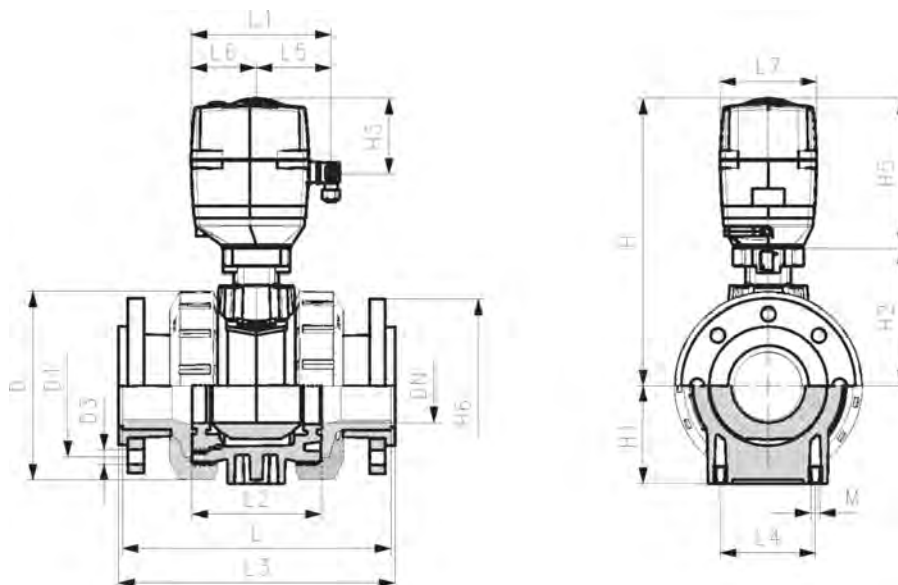
**Option:**

- Other valve and actuator configurations available

d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
75	65	10	5000	EA45	<b>199 179 349</b>	10.749	<b>199 179 359</b>	11.500
90	80	10	7000	EA120	<b>199 179 350</b>	14.900	<b>199 179 360</b>	14.900
110	100	10	11000	EA120	<b>199 179 351</b>	20.900	<b>199 179 361</b>	20.900

d (mm)	D (mm)	D1 (mm)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)
75	166	145	18	323	85	156	94	15	167	185	180	136	290	70	98
90	200	160	18	335	105	168	94	15	167	200	180	141	310	70	98
110	238	180	18	342	123	175	94	22	167	220	180	164	350	120	98

d (mm)	L6 (mm)	L7 (mm)	M
75	82	122	M8
90	82	122	M8
110	82	122	M12





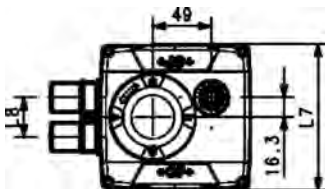
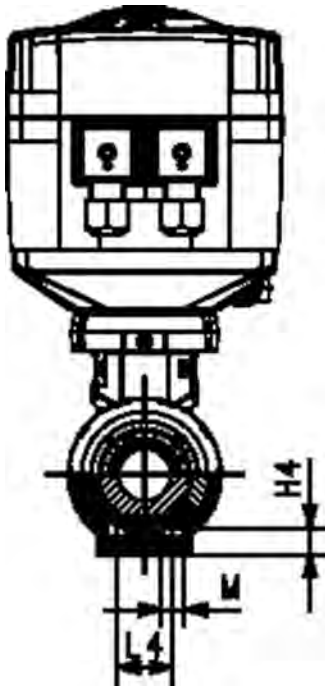
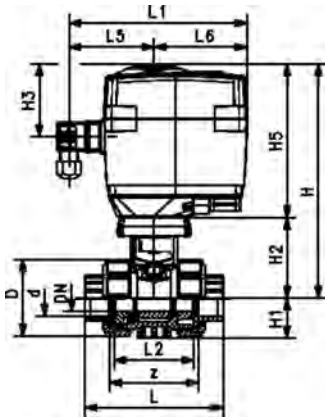
**Ball valve type 179 PVC-U  
24V**  
With manual emergency override  
With solvent cement sockets metric

**Model:**

- Voltage 24V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	DN (mm)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EA	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
16	10	10	70	EA25	199 179 042	3.112	199 179 052	2.100
20	15	10	185	EA25	199 179 043	2.447	199 179 053	2.100
25	20	10	350	EA25	199 179 044	2.542	199 179 054	2.543
32	25	10	700	EA25	199 179 045	2.645	199 179 055	2.647
40	32	10	1000	EA25	199 179 046	2.905	199 179 056	2.600
50	40	10	1600	EA25	199 179 047	3.000	199 179 057	3.144
63	50	10	3100	EA25	199 179 048	3.880	199 179 058	3.886
75	65	10	5000	EA45	199 179 049	7.531	199 179 059	7.400
90	80	10	7000	EA120	199 179 050	9.800	199 179 060	9.800
110	100	10	11000	EA120	199 179 051	14.100	199 179 061	14.100

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	M
16	50	227	27	60	94	12	167	92	180	56	25	97	83	122	M6
20	50	227	27	60	94	12	167	95	180	56	25	97	83	122	M6
25	58	231	30	64	94	12	167	110	180	65	25	97	83	122	M6
32	68	237	36	70	94	12	167	123	180	71	25	97	83	122	M6
40	84	243	44	76	94	15	167	146	180	85	45	97	83	122	M8
50	97	249	51	82	94	15	167	157	180	89	45	97	83	122	M8
63	124	264	64	97	94	15	167	183	180	101	45	97	83	122	M8
75	166	323	85	156	94	15	167	233	180	136	70	98	82	122	M8
90	200	335	105	168	94	15	167	255	180	141	70	98	82	122	M8
110	238	342	123	175	94	22	168	301	180	164	120	98	82	122	M12

d (mm)	z (mm)	closest inch (inch)
16	68	3/8
20	67	1/2
25	76	3/4
32	82	1
40	98	1 1/4
50	99	1 1/2
63	111	2
75	148	2 1/2
90	156	3
110	178	4



**Ball valve type 179 PVC-U  
100-230V  
With manual emergency override  
With solvent cement sockets metric**

**Model:**

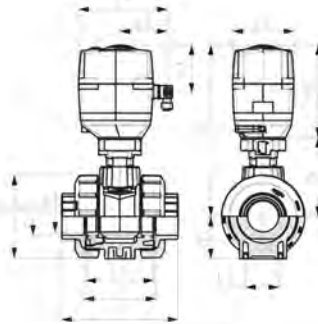
- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

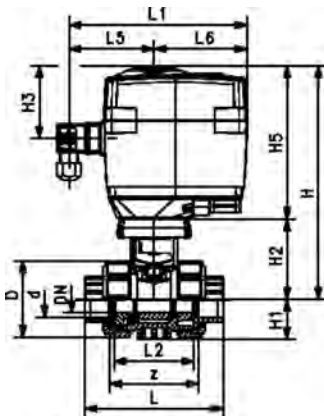


d (mm)	DN (mm)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EA	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
16	10	10	70	EA25	<b>199 179 002</b>	2.100	<b>199 179 012</b>	2.100
20	15	10	185	EA25	<b>199 179 003</b>	2.462	<b>199 179 013</b>	2.100
25	20	10	350	EA25	<b>199 179 004</b>	2.563	<b>199 179 014</b>	2.200
32	25	10	700	EA25	<b>199 179 005</b>	2.300	<b>199 179 015</b>	2.300
40	32	10	1000	EA25	<b>199 179 006</b>	2.692	<b>199 179 016</b>	2.600
50	40	10	1600	EA25	<b>199 179 007</b>	3.154	<b>199 179 017</b>	3.168
63	50	10	3100	EA25	<b>199 179 008</b>	3.888	<b>199 179 018</b>	3.800
75	65	10	5000	EA45	<b>199 179 009</b>	7.631	<b>199 179 019</b>	7.400
90	80	10	7000	EA120	<b>199 179 010</b>	9.800	<b>199 179 020</b>	9.800
110	100	10	11000	EA120	<b>199 179 011</b>	14.791	<b>199 179 021</b>	14.100

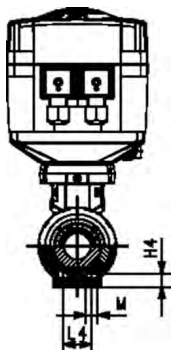


DN65-100

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	M
16	50	227	27	60	94	12	167	92	180	56	25	97	83	122	M6
20	50	227	27	60	94	12	167	95	180	56	25	97	83	122	M6
25	58	231	30	64	94	12	167	110	180	65	25	97	83	122	M6
32	68	237	36	70	94	12	167	123	180	71	25	97	83	122	M6
40	84	243	44	76	94	15	167	146	180	85	45	97	83	122	M8
50	97	249	51	82	94	15	167	157	180	89	45	97	83	122	M8
63	124	264	64	97	94	15	167	183	180	101	45	97	83	122	M8
75	166	323	85	156	94	15	167	233	180	136	70	98	82	122	M8
90	200	335	105	168	94	15	167	255	180	141	70	98	82	122	M8
110	238	342	123	175	94	22	167	301	180	164	120	98	82	122	M12



d (mm)	z (mm)	closest inch (inch)
16	68	3/4
20	67	1/2
25	76	3/4
32	82	1
40	98	1 1/4
50	99	1 1/2
63	111	2
75	148	2 1/2
90	156	3
110	178	4



# Ball valves electric type 104



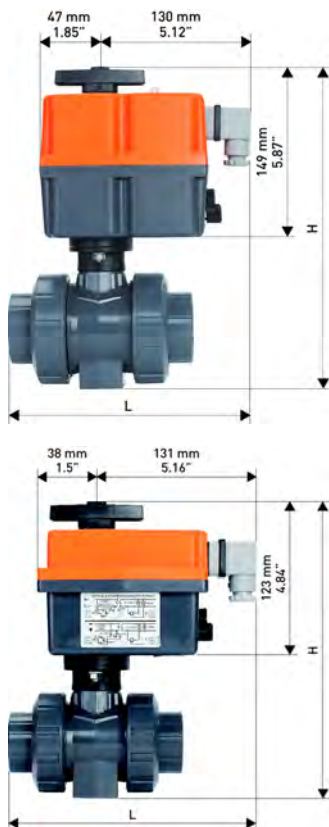
## Ball valve type 104 PVC-U 100-230V With solvent cement sockets metric

### Model:

- Voltage according data sheet
- Control range 90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	Voltage	EPDM Code	SP	Weight (kg)	FKM Code
16	10	10	70	100-230V	199 104 002	1	0.995	199 104 012
20	15	10	185	100-230V	199 104 003	1	0.995	199 104 013
25	20	10	350	100-230V	199 104 004	1	1.050	199 104 014
32	25	10	700	100-230V	199 104 005	1	1.120	199 104 015
40	32	10	1000	100-230V	199 104 006	1	1.290	199 104 016
50	40	10	1600	24-240V	199 104 047	1	3.625	199 104 057
63	50	10	3100	24-240V	199 104 048	1	2.395	199 104 058

d (mm)	B (mm)	H (mm)	L (mm)	Type of actuator
16	50	194	178.5	10Nm
20	50	194	178.5	10Nm
25	58	207	186.0	10Nm
32	68	217	192.5	10Nm
40	84	236	204.5	10Nm
50	97	275	208.5	20Nm
63	124	307	221.5	20Nm



## Ball valve type 104 PVC-U 24V With solvent cement sockets metric

### Model:

- Voltage according data sheet
- Control range 90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	Voltage	EPDM Code	SP	Weight (kg)	FKM Code
16	10	10	70	24V	199 104 042	1	0.995	199 104 052
20	15	10	185	24V	199 104 043	1	0.995	199 104 053
25	20	10	350	24V	199 104 044	1	1.050	199 104 054
32	25	10	700	24V	199 104 045	1	1.930	199 104 055
40	32	10	1000	24V	199 104 046	1	1.290	199 104 056
50	40	10	1600	24-240V	199 104 047	1	3.625	199 104 057
63	50	10	3100	24-240V	199 104 048	1	2.395	199 104 058

d (mm)	H (mm)	L (mm)	Type of actuator	B (mm)
16	194	178.5	10Nm	50
20	194	178.5	10Nm	50
25	207	186.0	10Nm	58
32	217	192.5	10Nm	68
40	236	204.5	20Nm	84
50	275	208.5	20Nm	97
63	307	221.5	20Nm	124

# Product Configurator

Create your own ball valve

## Electric Actuator

- T01 EA 1124V with Cable Plug
- T02 EA 11 100-230V with Cable Plug
- T07 EA 25 24V with Cable Plug
- T08 EA 25 100-230V with Cable Plug
- T09 EA 120 24V with Cable Plug
- T10 EA 120 100-230V with Cable Plug
- T11 EA 250 24V with Cable Plug
- T12 EA 250 100-230V with Cable Plug



## Angle (Open/ Close)

- W45 45°
- W90 90°
- W180 180°

## Middle Position

- W17 No
- W18 Yes

## Colour Assignment Feedback

- W20 Open = rot
- W21 Open = grün

## Position Feedback

- W23 Open/ Close
- W24 Open/ Close/ Middle
- W25 Middle

## Wiring Feedback

- W26 NC
- W28 NO

## Heating Threshold

- W29 5°
- ... [5°steps]
- W37 45°

## Failsafe Return unit

- W39 Integrated (Battery powered)
- W40 External (no Battery - 24V needed)

## Accessory

- W42 Positioner
- W43 Monitoring
- W44 Profibus

## Setting Positioner

- W46 BCD = 0
- ...
- W55 BCD = 9

## Setting Motor Current

- W56 BCD = 0
- ...
- W65 BCD = 9

## Setting Cycle Time Extension

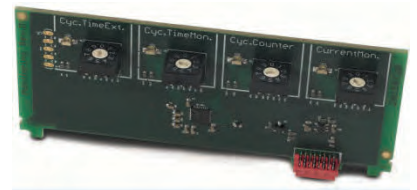
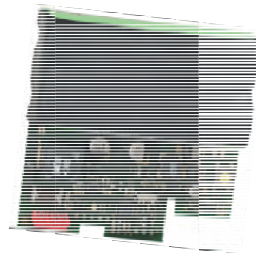
- W66 BCD = 0
- ...
- W75 BCD = 9

## Setting Cycle Time Monitoring

- W76 BCD = 0
- ...
- W85 BCD = 9

## Setting Cycle Counter

- W86 BCD = 0
- ...
- W96 BCD = 9



T08 W90 W17 W20 W23 W26 W29 W39 W42 W46 W65 - - - =

# Ball valves pneumatic type 230



DN10/15 - 50

**Ball valve type 230 PVC-U**  
**FC (Fail safe to close)**  
**With manual override**  
**With solvent cement sockets metric**

**Model:**

- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°<) 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

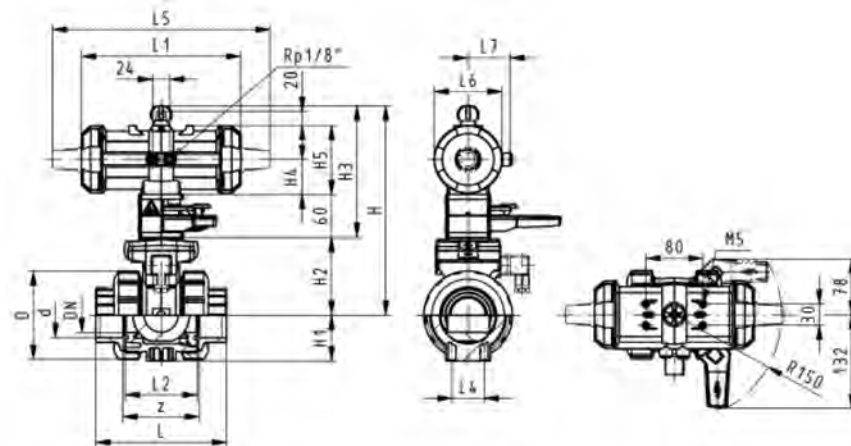
- Individual configuration of the valve

d	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(mm)	(bar)	( $\Delta p=1 \text{ bar}$ )	Code		(kg)	Code		(kg)
			(l/min)						
16	10	10	70	199 230 002	1	1.459	199 230 012	1	1.459
20	15	10	185	199 230 003	1	1.459	199 230 013	1	1.459
25	20	10	350	199 230 004	1	1.576	199 230 014	1	1.576
32	25	10	700	199 230 005	1	1.454	199 230 015	1	1.474
40	32	10	1000	199 230 006	1	2.436	199 230 016	1	2.443
50	40	10	1600	199 230 007	1	2.664	199 230 017	1	2.670
63	50	10	3100	199 230 008	1	4.364	199 230 018	1	3.419

d	D	H	H1	H2	H3	H4	H5	L	L1	L2	L4	L5	L6	L7	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
16	50	230	27	62	168	40	77	92	194	56	25	261	76	48	64
20	50	230	27	62	168	40	77	95	194	56	25	261	76	48	64
25	58	239	30	71	168	40	77	110	194	65	25	261	76	48	72
32	68	239	36	71	168	40	77	123	194	71	25	261	76	48	79
40	84	271	44	84	187	51	99	146	224	85	45	305	95	59	94
50	97	271	51	84	187	51	99	157	224	89	45	305	95	59	95
63	124	293	64	106	187	51	99	183	224	101	45	305	95	59	107

**d**    **closest**  
 (mm)    **inch**  
           (inch)

16	¾
20	½
25	¾
32	1
40	1 ¼
50	1 ½
63	2





DN10/15 - 50



DN10/15 - 50

**Ball valve type 230 PVC-U**  
**FC (Fail safe to close)**  
**With manual override**  
**With solvent cement spigots metric**

**Model:**

- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90° < 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

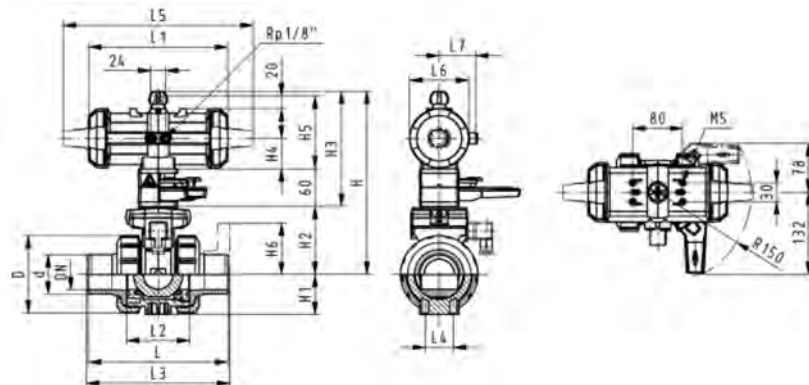
**Option:**

- Individual configuration of the valve

d (mm)	DN (mm)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	10	70	199 230 022	1	1.459	199 230 032	1	1.459
20	15	10	185	199 230 023	1	1.459	199 230 033	1	1.459
25	20	10	350	199 230 024	1	1.576	199 230 034	1	1.576
32	25	10	700	199 230 025	1	1.700	199 230 035	1	1.700
40	32	10	1000	199 230 026	1	2.751	199 230 036	1	2.751
50	40	10	1600	199 230 027	1	3.073	199 230 037	1	3.073
63	50	10	3100	199 230 028	1	3.931	199 230 038	1	3.931

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
16	50	230	27	62	168	40	77	114	194	56	130	25	261	76	48
20	50	230	27	62	168	40	77	124	194	56	130	25	261	76	48
25	58	239	30	71	168	40	77	144	194	65	150	25	261	76	48
32	68	239	36	71	168	40	77	154	194	71	160	25	261	76	48
40	84	271	44	84	187	51	99	174	224	85	180	45	305	95	59
50	97	271	51	84	187	51	99	194	224	89	200	45	305	95	59
63	124	293	64	106	187	51	99	224	224	101	230	45	305	95	59

d (mm)	closest inch (inch)
16	¾
20	½
25	¾
32	1
40	1 ¼
50	1 ½
63	2





DN10/15 - 50

**Ball valve type 230 PVC-U  
FC (Fail safe to close)  
With manual override  
With threaded sockets Rp**

**Model:**

- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°< 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

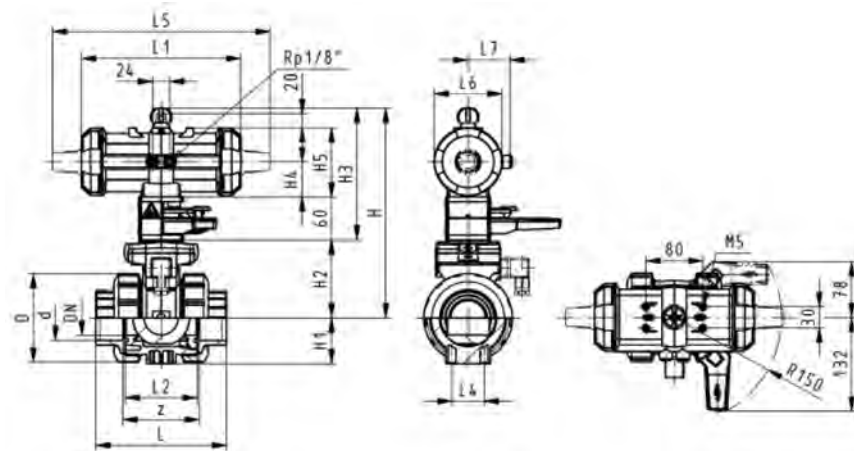
**Option:**

- Individual configuration of the valve

d (mm)	DN (mm)	Thread	Type	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
16	10	Rp		3/8	10	70	<b>199 230 362</b>	1	1.500
20	15	Rp		1/2	10	185	<b>199 230 363</b>	1	1.500
25	20	Rp		3/4	10	350	<b>199 230 364</b>	1	1.369
32	25	Rp		1	10	700	<b>199 230 365</b>	1	1.700
40	32	Rp		1 1/4	10	1000	<b>199 230 366</b>	1	2.800
50	40	Rp		1 1/2	10	1600	<b>199 230 367</b>	1	3.100
63	50	Rp		2	10	3100	<b>199 230 368</b>	1	4.000

FKM Code	SP	Weight (kg)
<b>199 230 372</b>	1	1.500
<b>199 230 373</b>	1	1.500
<b>199 230 374</b>	1	1.600
<b>199 230 375</b>	1	1.700
<b>199 230 376</b>	1	2.800
<b>199 230 377</b>	1	3.100
<b>199 230 378</b>	1	4.000

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	z (mm)
50	230	27	62	168	40	77	92	194	56	25	261	76	48	64
50	230	27	62	168	40	77	95	194	56	25	261	76	48	64
58	239	30	71	168	40	77	110	194	65	25	261	76	48	72
68	239	36	71	168	40	77	123	194	71	25	261	76	48	79
84	271	44	84	187	51	99	146	224	85	45	305	95	59	94
97	271	51	84	187	51	99	157	224	89	45	305	95	59	95
124	293	64	106	187	51	99	183	224	101	45	305	95	59	107







DN10/15 - 50

**Ball valve type 230 PVC-U**  
**FC (Fail safe to close)**  
**With manual override**  
**With fixed flanges serrated metric**

**Model:**

- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90° < 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimension: ISO 7005 / EN 1092 / DIN 25 PN10 / BS4504

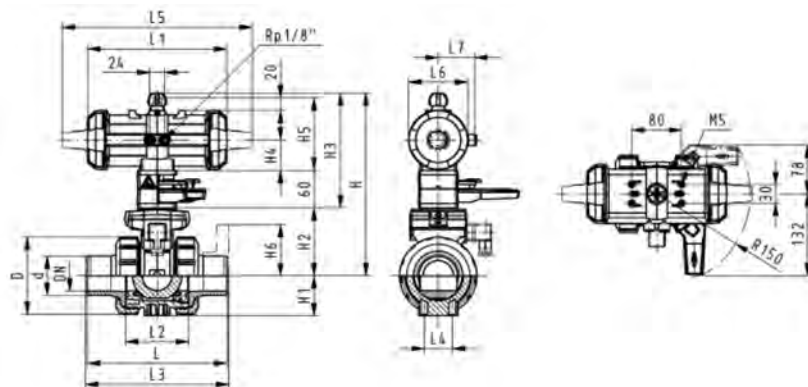
**Option:**

- Individual configuration of the valve

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
20	15	½	10	185	199 230 243	1	1.700	199 230 253	1	1.700
25	20	¾	10	350	199 230 244	1	1.900	199 230 254	1	1.900
32	25	1	10	700	199 230 245	1	1.858	199 230 255	1	2.100
40	32	1 ¼	10	1000	199 230 246	1	3.400	199 230 256	1	3.400
50	40	1 ½	10	1600	199 230 247	1	3.073	199 230 257	1	3.800
63	50	2	10	3100	199 230 248	1	4.900	199 230 258	1	4.900

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)
20	50	230	27	62	168	40	77	48	124	194	56	130	25	261	76
25	58	239	30	71	168	40	77	53	144	194	65	150	25	261	76
32	68	239	36	71	168	40	77	58	154	194	71	160	25	261	76
40	84	271	44	84	187	51	99	70	174	224	85	180	45	305	95
50	97	271	51	84	187	51	99	75	194	224	89	200	45	305	95
63	124	293	64	106	187	51	99	83	224	224	101	230	45	305	95

d (mm)	L7 (mm)
20	48
25	48
32	48
40	59
50	59
63	59





DN10/15 - 50

**Ball valve type 230 PVC-U**  
**FO (Fail safe to open)**  
**With manual override**  
**With solvent cement sockets metric**

**Model:**

- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°<) 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

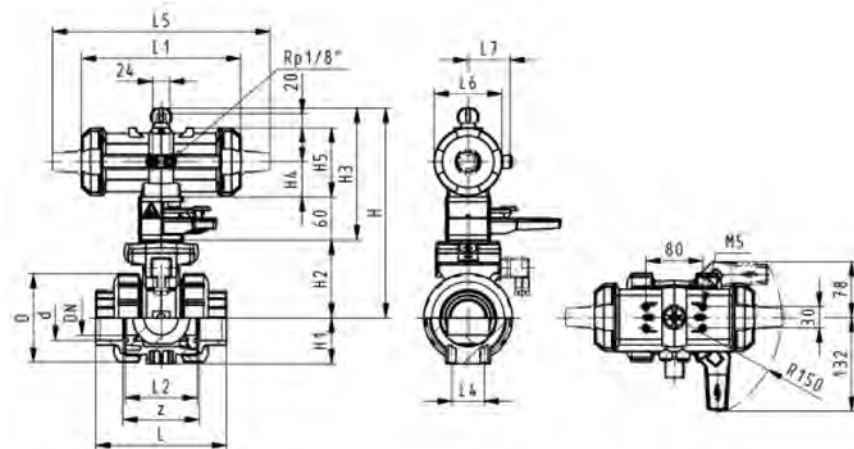
**Option:**

- Individual configuration of the valve

d	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
			(l/min)						
16	10	10	70	199 230 042	1	1.459	199 230 052	1	1.459
20	15	10	185	199 230 043	1	1.459	199 230 053	1	1.459
25	20	10	350	199 230 044	1	1.336	199 230 054	1	1.576
32	25	10	700	199 230 045	1	1.700	199 230 055	1	1.700
40	32	10	1000	199 230 046	1	2.751	199 230 056	1	2.751
50	40	10	1600	199 230 047	1	3.073	199 230 057	1	3.073
63	50	10	3100	199 230 048	1	3.360	199 230 058	1	3.931

d	D	H	H1	H2	H3	H4	H5	L	L1	L2	L4	L5	L6	L7	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
16	50	230	27	62	168	40	77	92	194	56	25	261	76	48	64
20	50	230	27	62	168	40	77	95	194	56	25	261	76	48	64
25	58	239	30	71	168	40	77	110	194	65	25	261	76	48	72
32	68	239	36	71	168	40	77	123	194	71	25	261	76	48	79
40	84	271	44	84	187	51	99	146	224	85	45	305	95	59	94
50	97	271	51	84	187	51	99	157	224	89	45	305	95	59	95
63	124	293	64	106	187	51	99	183	224	101	45	305	95	59	107

d	closest
(mm)	inch
	(inch)
16	3/8
20	1/2
25	3/4
32	1
40	1 1/4
50	1 1/2
63	2





DN10/15 - 50



DN10/15 - 50

**Ball valve type 230 PVC-U**  
**FO (Fail safe to open)**  
**With manual override**  
**With solvent cement spigots metric**

**Model:**

- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90° < 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

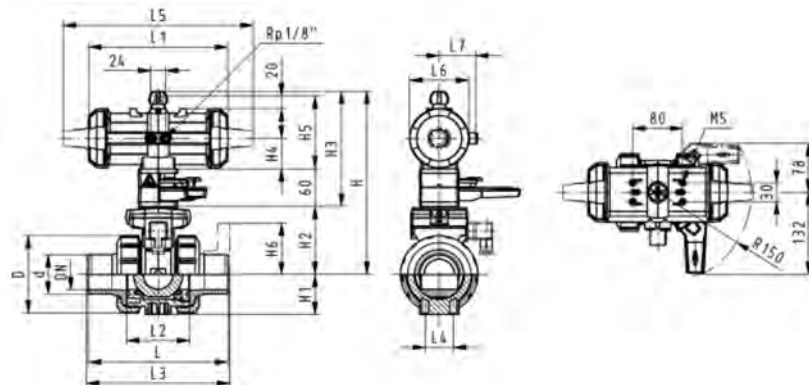
**Option:**

- Individual configuration of the valve

d (mm)	DN (mm)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	10	70	199 230 062	1	1.459	199 230 072	1	1.459
20	15	10	185	199 230 063	1	1.459	199 230 073	1	1.459
25	20	10	350	199 230 064	1	1.576	199 230 074	1	1.576
32	25	10	700	199 230 065	1	1.700	199 230 075	1	1.700
40	32	10	1000	199 230 066	1	2.751	199 230 076	1	2.751
50	40	10	1600	199 230 067	1	3.073	199 230 077	1	3.073
63	50	10	3100	199 230 068	1	3.931	199 230 078	1	3.931

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
16	50	230	27	62	168	40	77	114	194	56	130	25	261	76	48
20	50	230	27	62	168	40	77	124	194	56	130	25	261	76	48
25	58	239	30	71	168	40	77	144	194	65	150	25	261	76	48
32	68	239	36	71	168	40	77	154	194	71	160	25	261	76	48
40	84	271	44	84	187	51	99	174	224	85	180	45	305	95	59
50	97	271	51	84	187	51	99	194	224	89	200	45	305	95	59
63	124	293	64	106	187	51	99	224	224	101	230	45	305	95	59

d (mm)	closest inch (inch)
16	¾
20	½
25	¾
32	1
40	1 ¼
50	1 ½
63	2





DN10/15 - 50

**Ball valve type 230 PVC-U  
FO (Fail safe to open)  
With manual override  
With threaded sockets Rp**

**Model:**

- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°< 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

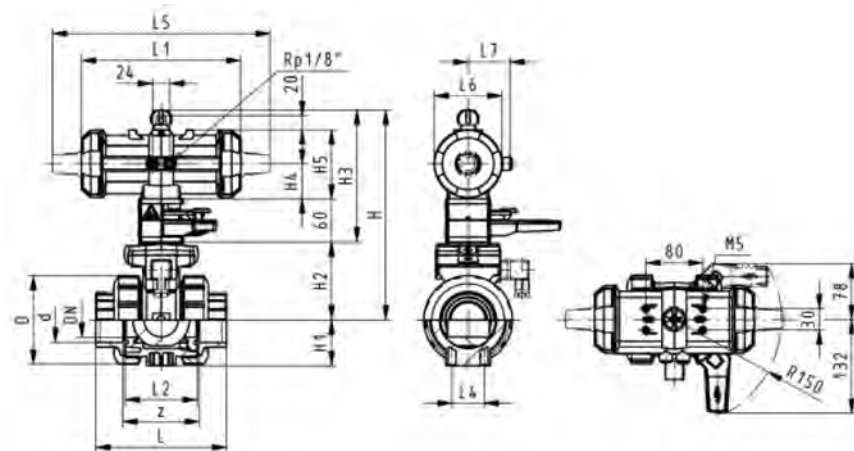
**Option:**

- Individual configuration of the valve

d (mm)	DN (mm)	Thread	Type	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)
16	10	Rp		3/8	10	70	<b>199 230 382</b>	1	1.500
20	15	Rp		1/2	10	185	<b>199 230 383</b>	1	1.500
25	20	Rp		3/4	10	350	<b>199 230 384</b>	1	1.600
32	25	Rp		1	10	700	<b>199 230 385</b>	1	1.700
40	32	Rp		1 1/4	10	1000	<b>199 230 386</b>	1	2.800
50	40	Rp		1 1/2	10	1600	<b>199 230 387</b>	1	3.100
63	50	Rp		2	10	3100	<b>199 230 388</b>	1	4.000

FKM Code	SP	Weight (kg)
<b>199 230 392</b>	1	1.500
<b>199 230 393</b>	1	1.500
<b>199 230 394</b>	1	1.600
<b>199 230 395</b>	1	1.700
<b>199 230 396</b>	1	2.800
<b>199 230 397</b>	1	3.100
<b>199 230 398</b>	1	4.000

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	z (mm)
50	230	27	62	168	40	77	92	194	56	25	261	76	48	64
50	230	27	62	168	40	77	95	194	56	25	261	76	48	64
58	239	30	71	168	40	77	110	194	65	25	261	76	48	72
68	239	36	71	168	40	77	123	194	71	25	261	76	48	79
84	271	44	84	187	51	99	146	224	85	45	305	95	59	94
97	271	51	84	187	51	99	157	224	89	45	305	95	59	95
124	293	64	106	187	51	99	183	224	101	45	305	95	59	107





DN10/15 - 50

**Ball valve type 230 PVC-U**  
**FO (Fail safe to open)**  
**With manual override**  
**With fixed flanges serrated metric**

**Model:**

- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90° < 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimension: ISO 7005 / EN 1092 / DIN 25 PN10 / BS4504

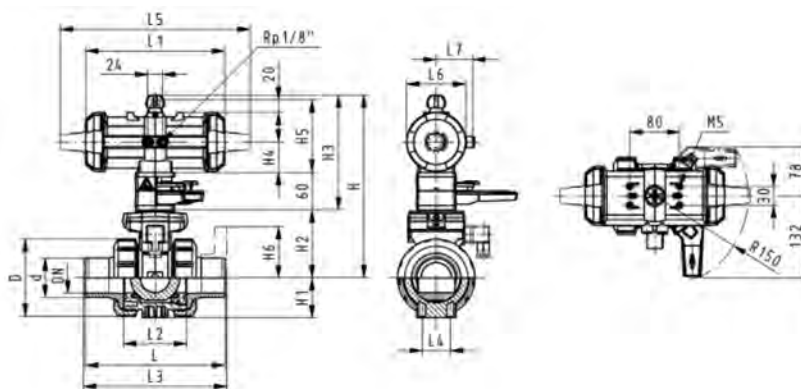
**Option:**

- Individual configuration of the valve

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
20	15	½	10	185	199 230 263	1	1.700	199 230 273	1	1.700
25	20	¾	10	350	199 230 264	1	1.900	199 230 274	1	1.900
32	25	1	10	700	199 230 265	1	2.100	199 230 275	1	2.100
40	32	1 ¼	10	1000	199 230 266	1	3.400	199 230 276	1	3.400
50	40	1 ½	10	1600	199 230 267	1	3.800	199 230 277	1	3.800
63	50	2	10	3100	199 230 268	1	4.900	199 230 278	1	4.900

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)
20	50	230	27	62	168	40	77	48	124	194	56	130	25	261	76
25	58	239	30	71	168	40	77	53	144	194	65	150	25	261	76
32	68	239	36	71	168	40	77	58	154	194	71	160	25	261	76
40	84	271	44	84	187	51	99	70	174	224	85	180	45	305	95
50	97	271	51	84	187	51	99	75	194	224	89	200	45	305	95
63	124	293	64	106	187	51	99	83	224	224	101	230	45	305	95

d (mm)	L7 (mm)
20	48
25	48
32	48
40	59
50	59
63	59





DN10/15 - 50

**Ball valve type 230 PVC-U**  
**DA (Double acting)**  
**With manual override**  
**With solvent cement sockets metric**

**Model:**

- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°<) 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

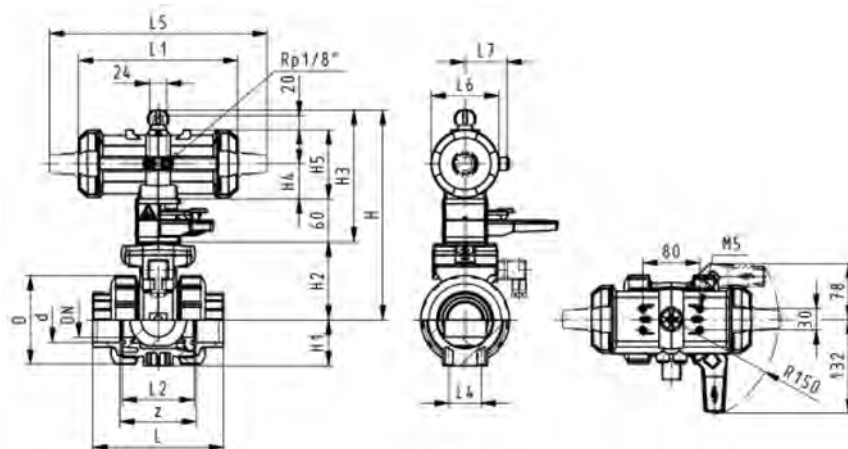
**Option:**

- Individual configuration of the valve

d (mm)	DN (mm)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	10	70	199 230 082	1	1.459	199 230 092	1	1.459
20	15	10	185	199 230 083	1	1.459	199 230 093	1	1.044
25	20	10	350	199 230 084	1	1.139	199 230 094	1	1.576
32	25	10	700	199 230 085	1	1.241	199 230 095	1	1.700
40	32	10	1000	199 230 086	1	1.941	199 230 096	1	2.751
50	40	10	1600	199 230 087	1	2.172	199 230 097	1	3.073
63	50	10	3100	199 230 088	1	2.912	199 230 098	1	2.923

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	z (mm)
16	50	230	27	62	168	40	77	92	194	56	25	261	76	48	64
20	50	230	27	62	168	40	77	95	194	56	25	261	76	48	64
25	58	239	30	71	168	40	77	110	194	65	25	261	76	48	72
32	68	239	36	71	168	40	77	123	194	71	25	261	76	48	79
40	84	271	44	84	187	51	99	146	224	85	45	305	95	59	94
50	97	271	51	84	187	51	99	157	224	89	45	305	95	59	95
63	124	293	64	106	187	51	99	183	224	101	45	305	95	59	107

d (mm)	closest inch (inch)
16	3/8
20	1/2
25	3/4
32	1
40	1 1/4
50	1 1/2
63	2





DN10/15 - 50



DN10/15 - 50

**Ball valve type 230 PVC-U**  
**DA (Double acting)**  
**With manual override**  
**With solvent cement spigots metric**

**Model:**

- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90° < 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

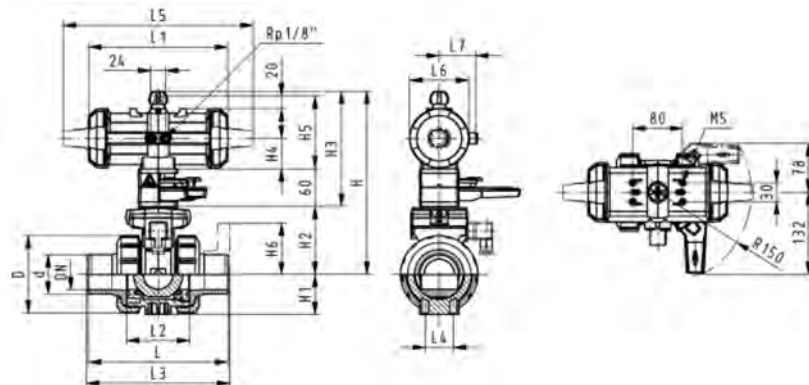
**Option:**

- Individual configuration of the valve

d (mm)	DN (mm)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	10	70	199 230 102	1	1.459	199 230 112	1	1.459
20	15	10	185	199 230 103	1	1.459	199 230 113	1	1.459
25	20	10	350	199 230 104	1	1.576	199 230 114	1	1.576
32	25	10	700	199 230 105	1	1.700	199 230 115	1	1.700
40	32	10	1000	199 230 106	1	2.751	199 230 116	1	2.751
50	40	10	1600	199 230 107	1	3.073	199 230 117	1	3.073
63	50	10	3100	199 230 108	1	3.931	199 230 118	1	3.931

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
16	50	230	27	62	168	40	77	114	194	56	130	25	261	76	48
20	50	230	27	62	168	40	77	124	194	56	130	25	261	76	48
25	58	239	30	71	168	40	77	144	194	65	150	25	261	76	48
32	68	239	36	71	168	40	77	154	194	71	160	25	261	76	48
40	84	271	44	84	187	51	99	174	224	85	180	45	305	95	59
50	97	271	51	84	187	51	99	194	224	89	200	45	305	95	59
63	124	293	64	106	187	51	99	224	224	101	230	45	305	95	59

d (mm)	closest inch (inch)
16	3/4
20	1/2
25	3/4
32	1
40	1 1/4
50	1 1/2
63	2





DN10/15 - 50

**Ball valve type 230 PVC-U  
DA (Double acting)  
With manual override  
With threaded sockets Rp**

**Model:**

- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°< 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

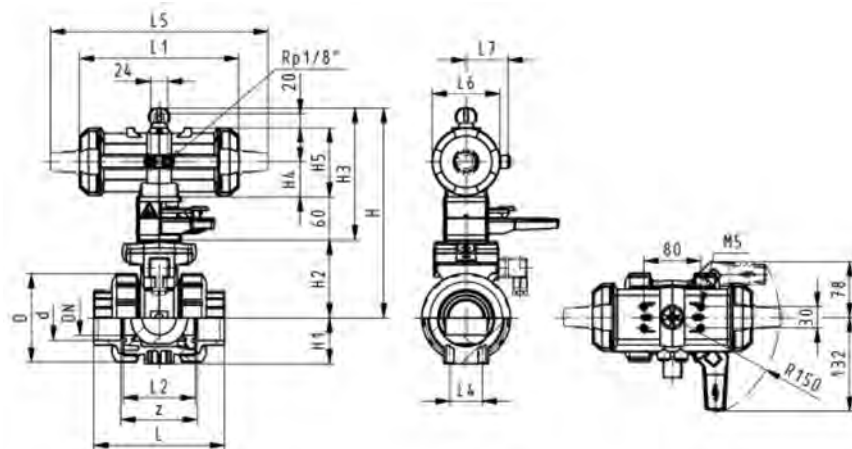
**Option:**

- Individual configuration of the valve

d (mm)	DN (mm)	Thread	Type	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)
16	10	Rp		3/8	10	70	<b>199 230 642</b>	1	1.500
20	15	Rp		1/2	10	185	<b>199 230 643</b>	1	1.500
25	20	Rp		3/4	10	350	<b>199 230 644</b>	1	1.600
32	25	Rp		1	10	700	<b>199 230 645</b>	1	1.700
40	32	Rp		1 1/4	10	1000	<b>199 230 646</b>	1	2.800
50	40	Rp		1 1/2	10	1600	<b>199 230 647</b>	1	3.100
63	50	Rp		2	10	3100	<b>199 230 648</b>	1	4.000

FKM Code	SP	Weight (kg)
<b>199 230 652</b>	1	1.500
<b>199 230 653</b>	1	1.500
<b>199 230 654</b>	1	1.600
<b>199 230 655</b>	1	1.700
<b>199 230 656</b>	1	2.800
<b>199 230 657</b>	1	3.100
<b>199 230 658</b>	1	4.000

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	z (mm)
50	230	27	62	168	40	77	92	194	56	25	261	76	48	64
50	230	27	62	168	40	77	95	194	56	25	261	76	48	64
58	239	30	71	168	40	77	110	194	65	25	261	76	48	72
68	239	36	71	168	40	77	123	194	71	25	261	76	48	79
84	271	44	84	187	51	99	146	224	85	45	305	95	59	94
97	271	51	84	187	51	99	157	224	89	45	305	95	59	95
124	293	64	106	187	51	99	183	224	101	45	305	95	59	107







DN10/15 - 50

**Ball valve type 230 PVC-U**  
**DA (Double acting)**  
**With manual override**  
**With fixed flanges serrated metric**

**Model:**

- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90° < 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimension: ISO 7005 / EN 1092 / DIN 25 PN10 / BS4504

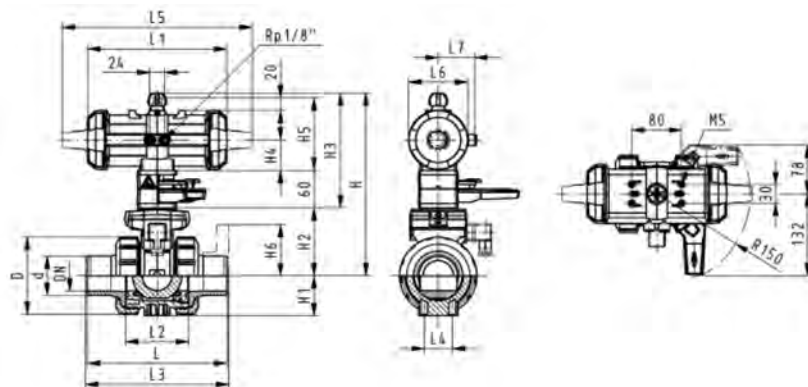
**Option:**

- Individual configuration of the valve

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
20	15	½	10	185	199 230 283	1	1.700	199 230 293	1	1.700
25	20	¾	10	350	199 230 284	1	1.900	199 230 294	1	1.900
32	25	1	10	700	199 230 285	1	2.100	199 230 295	1	2.100
40	32	1 ¼	10	1000	199 230 286	1	2.579	199 230 296	1	3.400
50	40	1 ½	10	1600	199 230 287	1	3.800	199 230 297	1	3.800
63	50	2	10	3100	199 230 288	1	4.900	199 230 298	1	4.900

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)
20	50	230	27	62	168	40	77	48	124	194	56	130	25	261	76
25	58	239	30	71	168	40	77	53	144	194	65	150	25	261	76
32	68	239	36	71	168	40	77	58	154	194	71	160	25	261	76
40	84	271	44	84	187	51	99	70	174	224	85	180	45	305	95
50	97	271	51	84	187	51	99	75	194	224	89	200	45	305	95
63	124	293	64	106	187	51	99	83	224	224	101	230	45	305	95

d (mm)	L7 (mm)
20	48
25	48
32	48
40	59
50	59
63	59





DN10/15 - 50



**Ball valve type 230 PVC-U  
FC (Fail safe to close)  
Without manual override  
With solvent cement sockets metric**

**Model:**

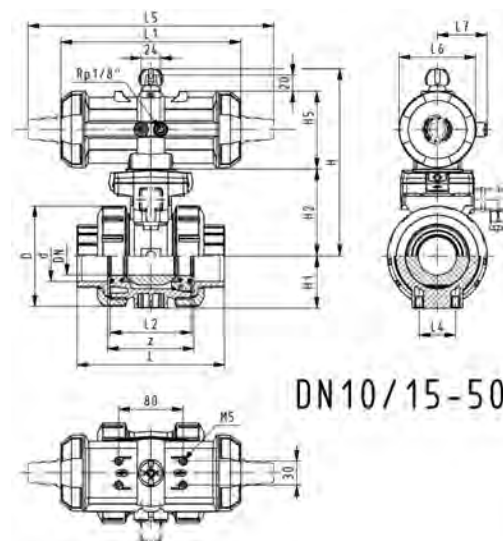
- Control time 90° < 1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA40 (DN80), PA40 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

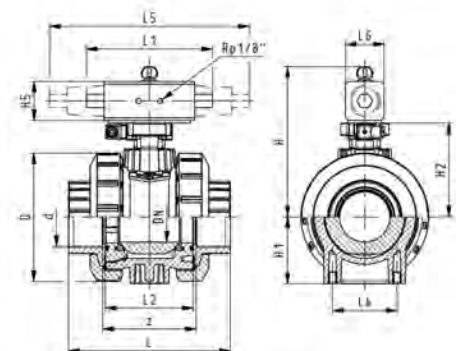
- Individual configuration of the valve

d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	10	70	199 230 122	1	3.074	199 230 132	1	1.159
20	15	10	185	199 230 123	1	1.034	199 230 133	1	1.034
25	20	10	350	199 230 124	1	1.133	199 230 134	1	1.133
32	25	10	700	199 230 125	1	1.233	199 230 135	1	1.238
40	32	10	1000	199 230 126	1	2.183	199 230 136	1	2.188
50	40	10	1600	199 230 127	1	2.408	199 230 137	1	2.421
63	50	10	3100	199 230 128	1	3.121	199 230 138	1	3.163
75	65	10	5000	199 230 129	1	6.136	199 230 139	1	7.800
90	80	10	7000	199 230 130	1	9.536	199 230 140	1	10.200
110	100	10	11000	199 230 131	1	15.500	199 230 141	1	15.500

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	z (mm)	closest inch (inch)
16	50	159	27	62	77	92	194	56	25	261	76	48	64	3/8
20	50	159	27	62	77	95	194	56	25	261	76	48	64	1/2
25	58	168	30	71	77	110	194	65	25	261	76	48	72	3/4
32	68	168	36	71	77	123	194	71	25	261	76	48	79	1
40	84	202	44	84	99	146	224	85	45	305	95	59	94	1 1/4
50	97	202	51	84	99	157	224	89	45	305	95	59	95	1 1/2
63	124	225	64	106	99	183	224	101	45	305	95	59	107	2
75	166	262	85	156	70	233		136	70	276	65		144	2 1/2
90	200	281	105	168	78	254		141	70	341	72		151	3
110	238	292	123	175	86	301		164	120	369	80		174	4



DN10/15-50



DN65-100



DN10/15 - 50



**Ball valve type 230 PVC-U**  
**FC (Fail safe to close)**  
**Without manual override**  
**With solvent cement spigots metric**

**Model:**

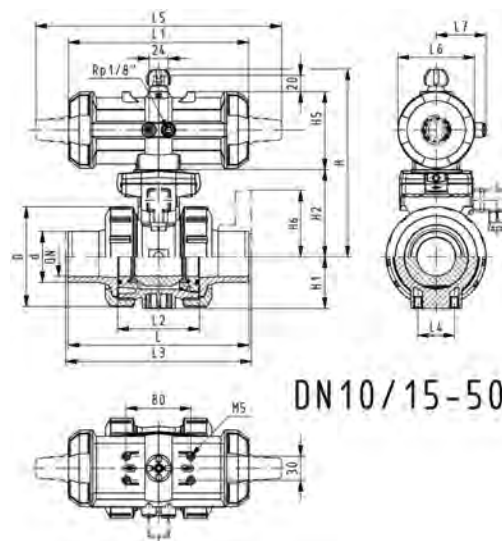
- Control time 90° < 1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA40 (DN80), PA40 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

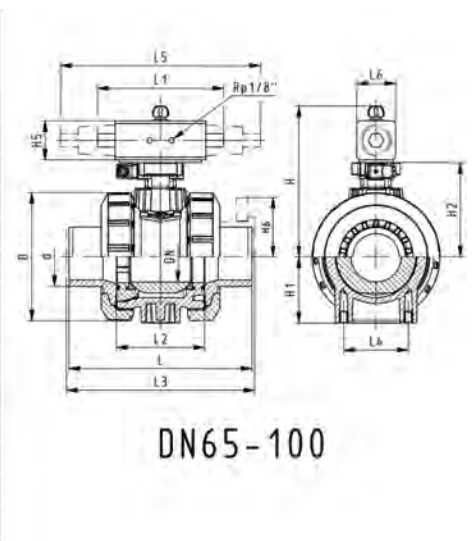
- Individual configuration of the valve

d	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
			(l/min)						
16	10	10	70	199 230 142	1	1.159	199 230 152	1	1.159
20	15	10	185	199 230 143	1	1.159	199 230 153	1	1.159
25	20	10	350	199 230 144	1	1.276	199 230 154	1	1.276
32	25	10	700	199 230 145	1	1.400	199 230 155	1	1.400
40	32	10	1000	199 230 146	1	2.451	199 230 156	1	2.451
50	40	10	1600	199 230 147	1	2.773	199 230 157	1	2.773
63	50	10	3100	199 230 148	1	3.631	199 230 158	1	3.631
75	65	10	5000	199 230 149	1	7.900	199 230 159	1	7.900
90	80	10	7000	199 230 150	1	10.400	199 230 160	1	10.400
110	100	10	11000	199 230 151	1	15.700	199 230 161	1	15.700

d	D	H	H1	H2	H5	L	L1	L2	L3	L4	L5	L6	L7	closest
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	inch
16	50	159	27	62	77	114	194	56	0	25	261	76	48	3/8
20	50	159	27	62	77	124	194	56	130	25	261	76	48	1/2
25	58	168	30	71	77	144	194	65	150	25	261	76	48	3/4
32	68	168	36	71	77	154	194	71	160	25	261	76	48	1
40	84	202	44	84	99	174	224	85	180	45	305	95	59	1 1/4
50	97	202	51	84	99	194	224	89	200	45	305	95	59	1 1/2
63	124	225	64	106	99	224	224	101	230	45	305	95	59	2
75	166	262	85	156	70	284		136	290	70	276	65		2 1/2
90	200	281	105	168	78	300		141	310	70	341	72		3
110	238	292	123	175	86	340		164	350	120	369	80		4



DN10/15-50



DN65-100



DN10/15 - 50



**Ball valve type 230 PVC-U  
FC (Fail safe to close)  
Without manual override  
With threaded sockets Rp**

**Model:**

- Control time 90° < 1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA40 (DN80), PA40 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

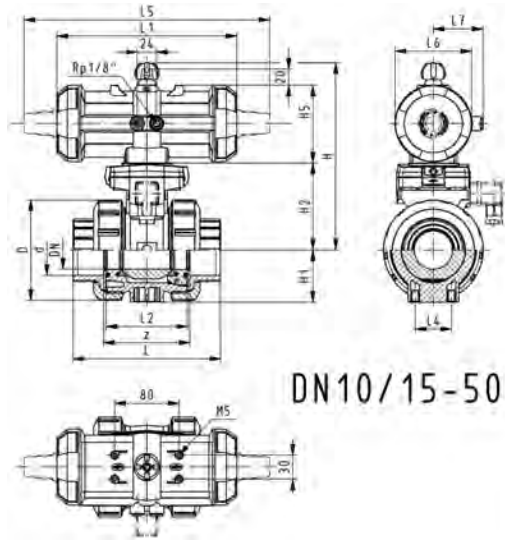
DN (mm)	Thread Type	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)
10	Rp	3/8	10	70	<b>199 230 662</b>	1	1.200
15	Rp	1/2	10	185	<b>199 230 663</b>	1	1.200
20	Rp	3/4	10	350	<b>199 230 664</b>	1	1.300
25	Rp	1	10	700	<b>199 230 665</b>	1	1.400
32	Rp	1 1/4	10	1000	<b>199 230 666</b>	1	2.500
40	Rp	1 1/2	10	1600	<b>199 230 667</b>	1	3.073
50	Rp	2	10	3100	<b>199 230 668</b>	1	3.931
65	Rp	2 1/2	10	5000	<b>199 230 669</b>	1	7.800
80	Rp	3	10	7000	<b>199 230 670</b>	1	10.300
100	Rp	4	10	11000	<b>199 230 671</b>	1	15.500

FKM Code	SP	Weight (kg)
<b>199 230 672</b>	1	1.200
<b>199 230 673</b>	1	1.200
<b>199 230 674</b>	1	1.300
<b>199 230 675</b>	1	1.400
<b>199 230 676</b>	1	2.500
<b>199 230 677</b>	1	2.800
<b>199 230 678</b>	1	3.700
<b>199 230 679</b>	1	7.800
<b>199 230 680</b>	1	10.300
<b>199 230 681</b>	1	15.500

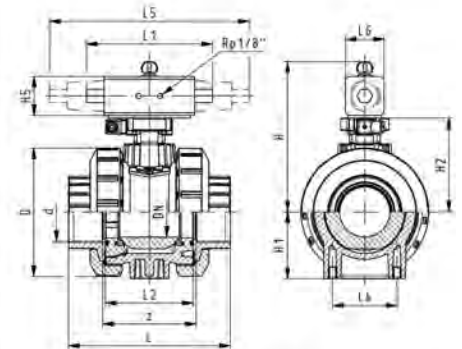
D	H	H1	H2	H5	L	L1	L2	L4	L5	L6	L7	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	159	27	62	77	92	194	56	25	261	76	48	64
50	159	27	62	77	95	194	56	25	261	76	48	64
58	168	30	71	77	110	194	65	25	261	76	48	72
68	168	36	71	77	123	194	71	25	261	76	48	79
84	202	44	84	99	146	224	85	45	305	95	59	94
97	202	51	84	99	157	224	89	45	305	95	59	95

table continued on the next page

D	H	H1	H2	H5	L	L1	L2	L4	L5	L6	L7	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
124	225	64	106	99	183	224	101	45	305	95	59	107
166	262	85	156	70	233		136	70	276	65		144
200	281	105	168	78	254		141	70	341	72		151
238	292	123	175	86	301		164	120	369	80		174



DN10/15-50



DN65-100



DN10/15 - 50

**Ball valve type 230 PVC-U  
FC (Fail safe to close)  
Without manual override  
With fixed flanges serrated metric**

**Model:**

- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90° < 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimension: ISO 7005 / EN 1092 / DIN 25 PN10 / BS4504

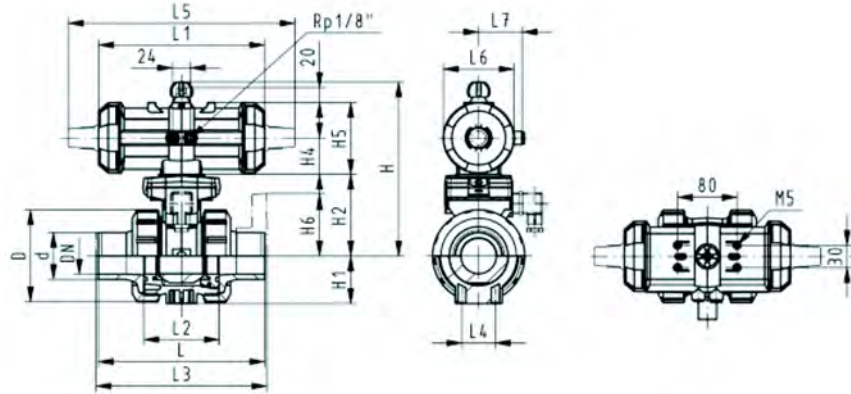
**Option:**

- Individual configuration of the valve

d	DN	Size	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(mm)	(inch)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
				(L/min)						
20	15	½	10	185	199 230 303	1	1.700	199 230 313	1	1.700
25	20	¾	10	350	199 230 304	1	1.900	199 230 314	1	1.900
32	25	1	10	700	199 230 305	1	2.100	199 230 315	1	2.100
40	32	1 ¼	10	1000	199 230 306	1	3.400	199 230 316	1	3.400
50	40	1 ½	10	1600	199 230 307	1	3.800	199 230 317	1	3.800
63	50	2	10	3100	199 230 308	1	4.900	199 230 318	1	4.900

table continued on the next page

d	D	H	H1	H2	H4	H5	H6	L	L1	L2	L3	L4	L5	L6	L7
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
20	50	159	27	62	40	77	48	124	194	56	130	25	261	76	48
25	58	168	30	71	40	77	53	144	194	65	150	25	261	76	48
32	68	168	36	71	40	77	58	154	194	71	160	25	261	76	48
40	84	202	44	84	51	99	70	174	224	85	180	45	305	95	59
50	97	202	51	84	51	99	75	194	224	89	200	45	305	95	59
63	124	225	64	106	51	99	83	224	224	101	230	45	305	95	59



**Ball valve type 230 PVC-U  
FC (Fail safe to close)  
Without manual override  
With backing flanges PP-st metric**

**Model:**

- Control time 90° < 1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA40 (DN80), PA40 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501

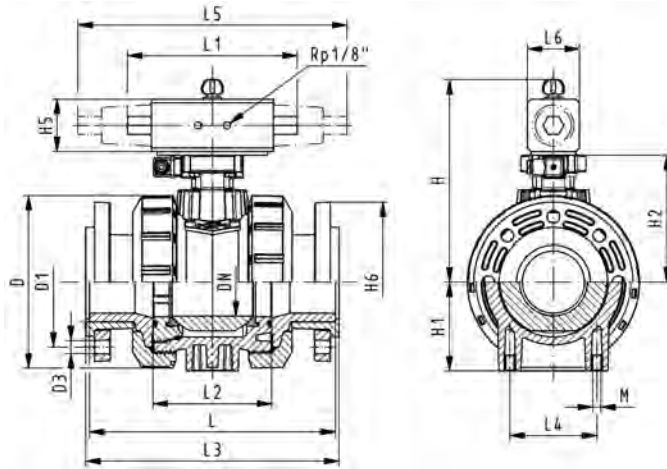
**Option:**

- Individual configuration of the valve

d	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
			(L/min)						
75	65	10	5000	199 234 469	1	11.900	199 234 479	1	9.625
90	80	10	7000	199 234 470	1	12.976	199 234 480	1	15.300
110	100	10	11000	199 234 471	1	22.300	199 234 481	1	22.300

table continued on the next page

d	D	H	H1	H2	H5	H6	L	L2	L3	L4	L5	L6
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
75	166	262	85	156	70	93	284	136	290	70	276	65
90	200	281	105	168	78	100	300	141	310	70	341	72
110	238	292	123	175	86	110	340	164	350	120	369	80



DN10/15 - 50



**Ball valve type 230 PVC-U  
FO (Fail safe to open)  
Without manual override  
With solvent cement sockets metric**

**Model:**

- Control time  $90^\circ <$  1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA40 (DN80), PA40 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

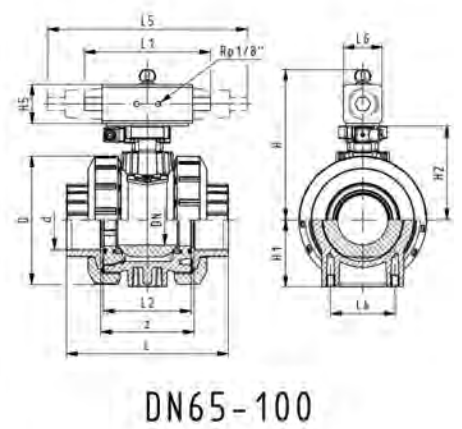
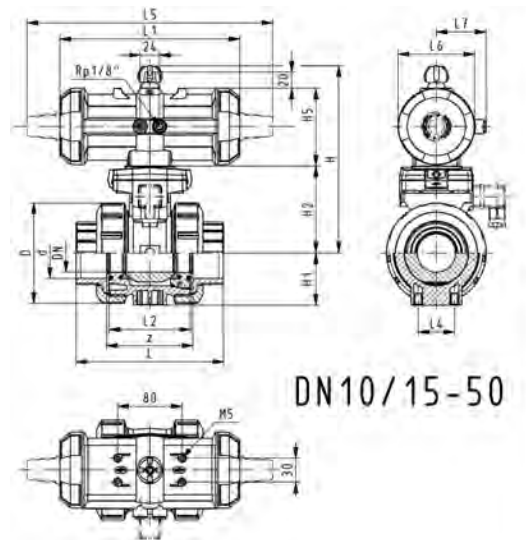
- Individual configuration of the valve

d	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
			(L/min)						
16	10	10	70	199 230 162	1	1.159	199 230 172	1	1.159
20	15	10	185	199 230 163	1	1.159	199 230 173	1	1.159
25	20	10	350	199 230 164	1	1.128	199 230 174	1	1.276
32	25	10	700	199 230 165	1	1.400	199 230 175	1	1.400
40	32	10	1000	199 230 166	1	2.184	199 230 176	1	2.451
50	40	10	1600	199 230 167	1	2.388	199 230 177	1	2.773
63	50	10	3100	199 230 168	1	3.156	199 230 178	1	3.631
75	65	10	5000	199 230 169	1	7.800	199 230 179	1	7.800
90	80	10	7000	199 230 170	1	10.200	199 230 180	1	10.200
110	100	10	11000	199 230 171	1	15.500	199 230 181	1	15.500

d	D	H	H1	H2	H5	L	L1	L2	L4	L5	L6	L7	z	closest
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	inch
														(inch)
16	50	159	27	62	77	92	194	56	25	261	76	48	64	$\frac{3}{8}$
20	50	159	27	62	77	95	194	56	25	261	76	48	64	$\frac{1}{2}$
25	58	168	30	71	77	110	194	65	25	261	76	48	72	$\frac{3}{4}$
32	68	168	36	71	77	123	194	71	25	261	76	48	79	1
40	84	202	44	84	99	146	224	85	45	305	95	59	94	1 $\frac{1}{4}$
50	97	202	51	84	99	157	224	89	45	305	95	59	95	1 $\frac{1}{2}$

table continued on the next page

d	D	H	H1	H2	H5	L	L1	L2	L4	L5	L6	L7	z	closest inch
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(inch)
63	124	225	64	106	99	183	224	101	45	305	95	59	107	2
75	166	262	85	156	70	233		136	70	276	65		144	2 1/2
90	200	281	105	168	78	254		141	70	341	72		151	3
110	238	292	123	175	86	301		164	120	369	80		174	4



DN10/15 - 50



**Ball valve type 230 PVC-U  
FO (Fail safe to open)  
Without manual override  
With solvent cement spigots metric**

**Model:**

- Control time 90° < 1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA40 (DN80), PA40 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

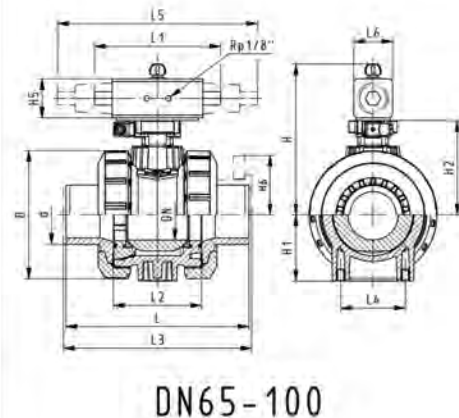
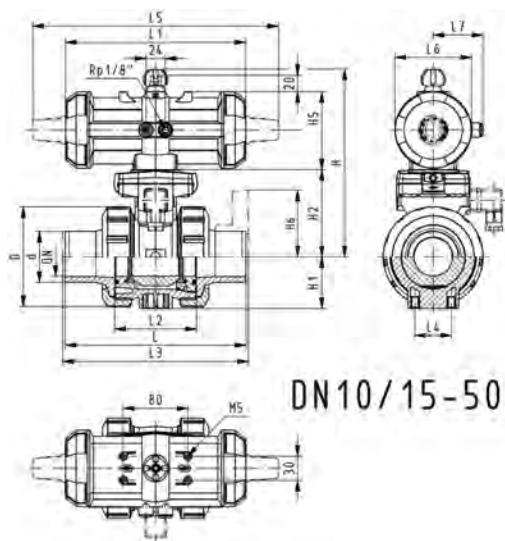
d	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
			(L/min)						
16	10	10	70	199 230 182	1	1.159	199 230 192	1	1.159
20	15	10	185	199 230 183	1	1.159	199 230 193	1	1.159
25	20	10	350	199 230 184	1	1.276	199 230 194	1	1.276
32	25	10	700	199 230 185	1	1.400	199 230 195	1	1.400
40	32	10	1000	199 230 186	1	2.451	199 230 196	1	2.451
50	40	10	1600	199 230 187	1	2.450	199 230 197	1	2.773
63	50	10	3100	199 230 188	1	3.233	199 230 198	1	3.631
75	65	10	5000	199 230 189	1	7.900	199 230 199	1	7.900
90	80	10	7000	199 230 190	1	10.400	199 230 200	1	10.400
110	100	10	11000	199 230 191	1	15.700	199 230 201	1	15.700

d	D	H	H1	H2	H5	L	L1	L2	L3	L4	L5	L6	L7	closest inch
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(inch)
16	50	159	27	62	77	114	194	56	0	25	261	76	48	3/8
20	50	159	27	62	77	124	194	56	130	25	261	76	48	1/2
25	58	168	30	71	77	144	194	65	150	25	261	76	48	3/4
32	68	168	36	71	77	154	194	71	160	25	261	76	48	1
40	84	202	44	84	99	174	224	85	180	45	305	95	59	1 1/4
50	97	202	51	84	99	194	224	89	200	45	305	95	59	1 1/2

table continued on the next page



d	D	H	H1	H2	H5	L	L1	L2	L3	L4	L5	L6	L7	closest inch
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(inch)
63	124	225	64	106	99	224	224	101	230	45	305	95	59	2
75	166	262	85	156	70	284		136	290	70	276	65		2 ½
90	200	281	105	168	78	300		141	310	70	341	72		3
110	238	292	123	175	86	340		164	350	120	369	80		4



DN10/15 - 50



**Ball valve type 230 PVC-U  
FO (Fail safe to open)  
Without manual override  
With threaded sockets Rp**

**Model:**

- Control time  $90^\circ <$  1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA40 (DN80), PA40 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

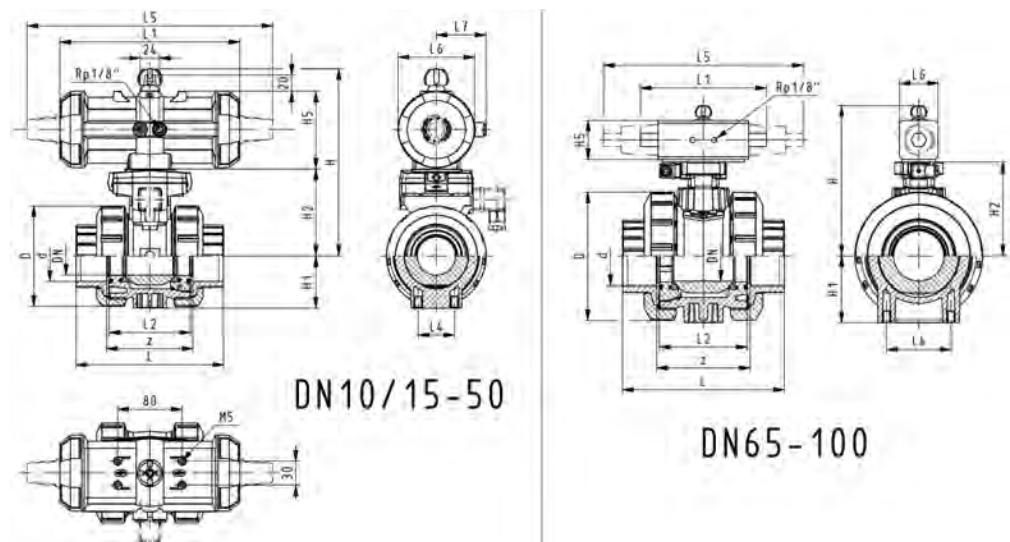
DN (mm)	Thread Type	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP Weight (kg)
10	Rp	3/8	10	70	<b>199 230 682</b>	1 1.200
15	Rp	1/2	10	185	<b>199 230 683</b>	1 1.200
20	Rp	3/4	10	350	<b>199 230 684</b>	1 1.300
25	Rp	1	10	700	<b>199 230 685</b>	1 1.400
32	Rp	1 1/4	10	1000	<b>199 230 686</b>	1 2.500
40	Rp	1 1/2	10	1600	<b>199 230 687</b>	1 2.800
50	Rp	2	10	3100	<b>199 230 688</b>	1 3.700
65	Rp	2 1/2	10	5000	<b>199 230 689</b>	1 7.800
80	Rp	3	10	7000	<b>199 230 690</b>	1 10.300
100	Rp	4	10	11000	<b>199 230 691</b>	1 15.500

FKM Code	SP Weight (kg)
<b>199 230 692</b>	1 1.200
<b>199 230 693</b>	1 1.200
<b>199 230 694</b>	1 1.300
<b>199 230 695</b>	1 1.400
<b>199 230 696</b>	1 2.500
<b>199 230 697</b>	1 2.800

table continued on the next page

FKM Code	SP	Weight (kg)
199 230 698	1	3.700
199 230 699	1	7.800
199 230 700	1	10.300
199 230 701	1	15.500

D	H	H1	H2	H5	L	L1	L2	L4	L5	L6	L7	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	159	27	62	77	92	194	56	25	261	76	48	64
50	159	27	62	77	95	194	56	25	261	76	48	64
58	168	30	71	77	110	194	65	25	261	76	48	72
68	168	36	71	77	123	194	71	25	261	76	48	79
84	202	44	84	99	146	224	85	45	305	95	59	94
97	202	51	84	99	157	224	89	45	305	95	59	95
124	225	64	106	99	183	224	101	45	305	95	59	107
166	262	85	156	70	233		136	70	276	65		144
200	281	105	168	78	254		141	70	341	72		151
238	292	123	175	86	301		164	120	369	80		174



DN10/15 - 50

**Ball valve type 230 PVC-U**  
**FO (Fail safe to open)**  
**Without manual override**  
**With fixed flanges serrated metric**

**Model:**

- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90° < 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimension: ISO 7005 / EN 1092 / DIN 25 PN10 / BS4504

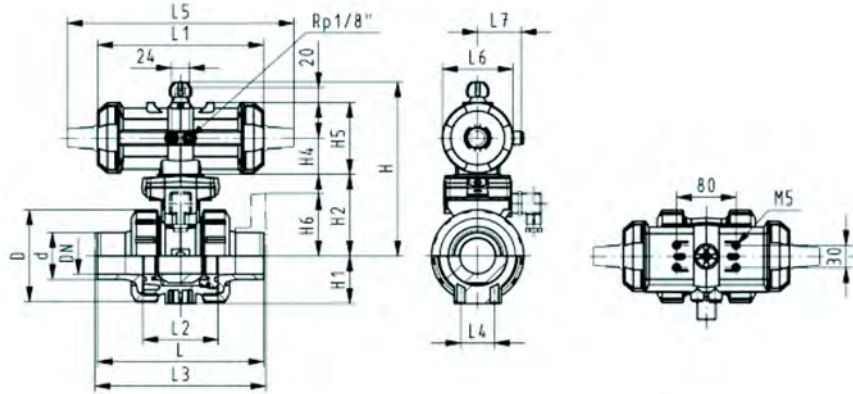
**Option:**

- Individual configuration of the valve

d	DN	Size	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(mm)	(inch)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
20	15	½	10	185	199 230 323	1	1.700	199 230 333	1	1.700
25	20	¾	10	350	199 230 324	1	1.900	199 230 334	1	1.900
32	25	1	10	700	199 230 325	1	2.100	199 230 335	1	2.100
40	32	1 ¼	10	1000	199 230 326	1	3.400	199 230 336	1	3.400
50	40	1 ½	10	1600	199 230 327	1	3.800	199 230 337	1	3.800
63	50	2	10	3100	199 230 328	1	4.900	199 230 338	1	4.900

table continued on the next page

d	D	H	H1	H2	H4	H5	H6	L	L1	L2	L3	L4	L5	L6	L7
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
20	50	159	27	62	40	77	48	124	194	56	130	25	261	76	48
25	58	168	30	71	40	77	53	144	194	65	150	25	261	76	48
32	68	168	36	71	40	77	58	154	194	71	160	25	261	76	48
40	84	202	44	84	51	99	70	174	224	85	180	45	305	95	59
50	97	202	51	84	51	99	75	194	224	89	200	45	305	95	59
63	124	225	64	106	51	99	83	224	224	101	230	45	305	95	59



**Ball valve type 230 PVC-U**  
**FO (Fail safe to open)**  
**Without manual override**  
**With backing flanges PP-st metric**

**Model:**

- Control time 90°<) 1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA40 (DN80), PA40 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501

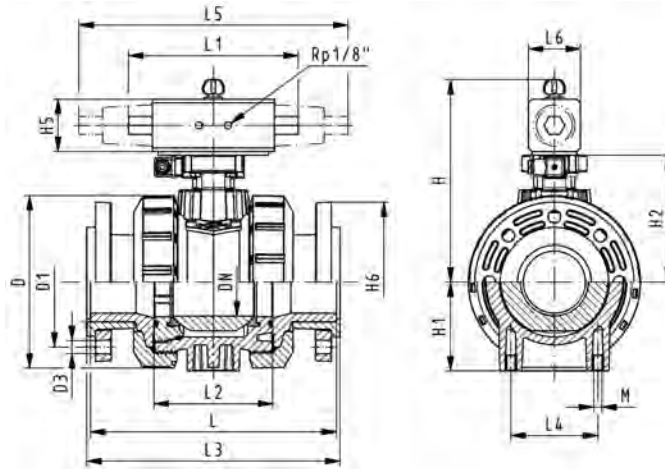
**Option:**

- Individual configuration of the valve

d	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
			(L/min)						
75	65	10	5000	<b>199 234 489</b>	1	11.900	<b>199 234 499</b>	1	11.900
90	80	10	7000	<b>199 234 490</b>	1	15.300	<b>199 234 500</b>	1	15.300
110	100	10	11000	<b>199 234 491</b>	1	22.300	<b>199 234 501</b>	1	22.300

table continued on the next page

d	D	H	H1	H2	H5	H6	L	L2	L3	L4	L5	L6
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
75	166	262	85	156	70	93	284	136	290	70	276	65
90	200	281	105	168	78	100	300	141	310	70	341	72
110	238	292	123	175	86	110	340	164	350	120	369	80



DN10/15 - 50

**Ball valve type 230 PVC-U  
DA (Double acting)  
Without manual override  
With solvent cement sockets metric**

**Model:**

- Control time 90° < 1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

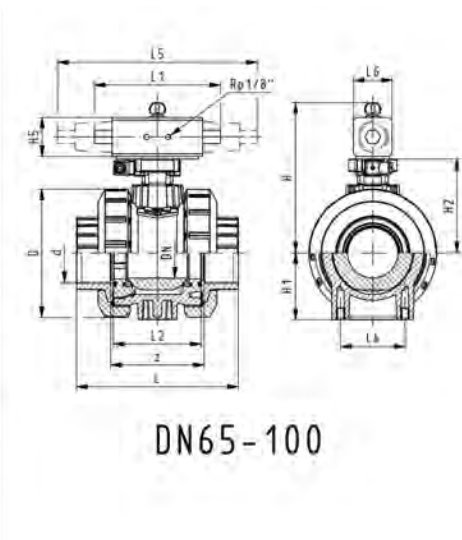
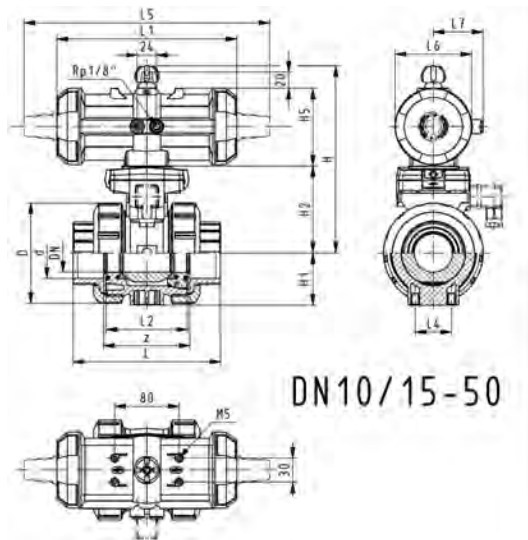


d	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
			(l/min)						
16	10	10	70	199 230 202	1	0.805	199 230 212	1	1.159
20	15	10	185	199 230 203	1	0.807	199 230 213	1	1.159
25	20	10	350	199 230 204	1	0.902	199 230 214	1	1.276
32	25	10	700	199 230 205	1	1.400	199 230 215	1	1.400
40	32	10	1000	199 230 206	1	1.691	199 230 216	1	2.451
50	40	10	1600	199 230 207	1	1.919	199 230 217	1	2.773
63	50	10	3100	199 230 208	1	2.651	199 230 218	1	2.673
75	65	10	5000	199 230 209	1	6.600	199 230 219	1	6.600
90	80	10	7000	199 230 210	1	9.500	199 230 220	1	9.500
110	100	10	11000	199 230 211	1	13.700	199 230 221	1	13.700

d	D	H	H1	H2	H5	L	L1	L2	L4	L5	L6	L7	z	closest
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	inch
														(inch)
16	50	159	27	62	77	92	194	56	25	261	76	48	64	3/8
20	50	159	27	62	77	95	194	56	25	261	76	48	64	1/2
25	58	168	30	71	77	110	194	65	25	261	76	48	72	3/4
32	68	168	36	71	77	123	194	71	25	261	76	48	79	1
40	84	202	44	84	99	146	224	85	45	305	95	59	94	1 1/4
50	97	202	51	84	99	157	224	89	45	305	95	59	95	1 1/2

table continued on the next page

d	D	H	H1	H2	H5	L	L1	L2	L4	L5	L6	L7	z	closest inch
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(inch)
63	124	225	64	106	99	183	224	101	45	305	95	59	107	2
75	166	257	85	156	66	233	144	136	70		60		144	2 ½
90	200	274	105	168	70	254	152	141	70		65		151	3
110	238	273	123	175	78	301	169	164	120		72		174	4



DN10/15 - 50



**Ball valve type 230 PVC-U  
DA (Double acting)  
Without manual override  
With solvent cement spigots metric**

**Model:**

- Control time 90° < 1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

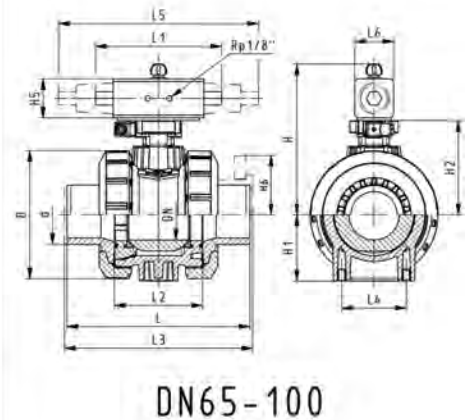
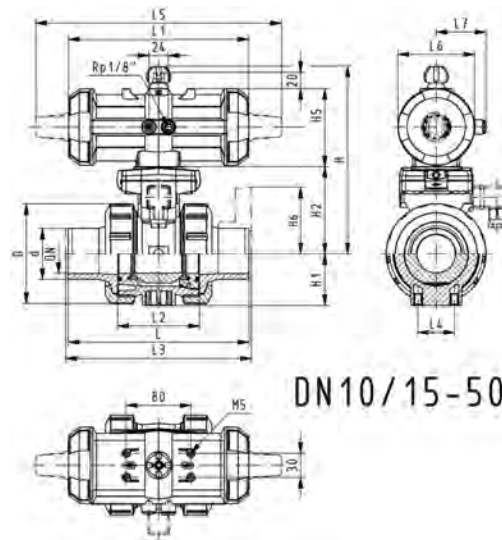
- Individual configuration of the valve

d	DN	PN	kv-value (Δp=1 bar)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
(mm)	(mm)	(bar)	(L/min)						
16	10	10	70	199 230 222	1	1.159	199 230 232	1	1.159
20	15	10	185	199 230 223	1	1.159	199 230 233	1	1.159
25	20	10	350	199 230 224	1	1.276	199 230 234	1	1.276
32	25	10	700	199 230 225	1	1.400	199 230 235	1	1.400
40	32	10	1000	199 230 226	1	2.451	199 230 236	1	2.451
50	40	10	1600	199 230 227	1	2.773	199 230 237	1	2.773
63	50	10	3100	199 230 228	1	3.631	199 230 238	1	3.631
75	65	10	5000	199 230 229	1	6.800	199 230 239	1	6.800
90	80	10	7000	199 230 230	1	9.700	199 230 240	1	9.700
110	100	10	11000	199 230 231	1	13.900	199 230 241	1	13.900

d	D	H	H1	H2	H5	L	L1	L2	L3	L4	L5	L6	L7	closest inch
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(inch)
16	50	159	27	62	77	114	194	56	0	25	261	76	48	¾
20	50	159	27	62	77	124	194	56	130	25	261	76	48	½
25	58	168	30	71	77	144	194	65	150	25	261	76	48	¾
32	68	168	36	71	77	154	194	71	160	25	261	76	48	1
40	84	202	44	84	99	174	224	85	180	45	305	95	59	1 ¼
50	97	202	51	84	99	194	224	89	200	45	305	95	59	1 ½

table continued on the next page

d	D	H	H1	H2	H5	L	L1	L2	L3	L4	L5	L6	L7	closest inch
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(inch)
63	124	225	64	106	99	224	224	101	230	45	305	95	59	2
75	166	257	85	156	66	284	144	136	290	70		60		2 ½
90	200	274	105	168	70	300	152	141	310	70		65		3
110	238	273	123	175	78	340	169	164	350	120		72		4



DN10/15 - 50



**Ball valve type 230 PVC-U  
DA (Double acting)  
Without manual override  
With threaded sockets Rp**

**Model:**

- Control time 90°< 1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

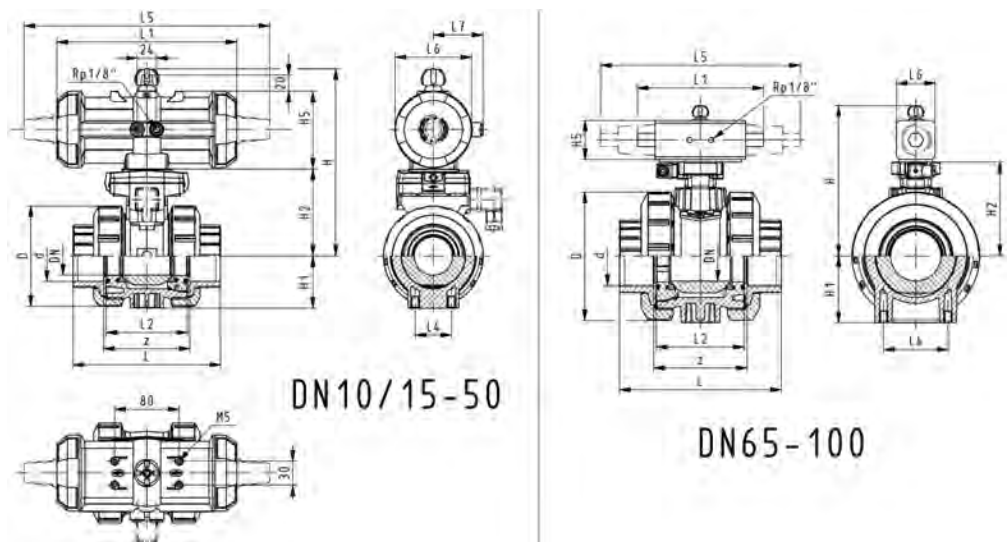
DN (mm)	Thread Type	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (L/min)	EPDM Code	SP	Weight (kg)
10	Rp	¾	10	70	<b>199 230 712</b>	1	1.200
15	Rp	½	10	185	<b>199 230 713</b>	1	1.200
20	Rp	¾	10	350	<b>199 230 714</b>	1	1.300
25	Rp	1	10	700	<b>199 230 715</b>	1	1.400
32	Rp	1 ¼	10	1000	<b>199 230 716</b>	1	2.500
40	Rp	1 ½	10	1600	<b>199 230 717</b>	1	2.800
50	Rp	2	10	3100	<b>199 230 718</b>	1	3.700
65	Rp	2 ½	10	5000	<b>199 230 719</b>	1	6.700
80	Rp	3	10	7000	<b>199 230 720</b>	1	9.700
100	Rp	4	10	11000	<b>199 230 721</b>	1	13.700

FKM Code	SP	Weight (kg)
<b>199 230 732</b>	1	1.200
<b>199 230 733</b>	1	1.200
<b>199 230 734</b>	1	1.300
<b>199 230 735</b>	1	1.400
<b>199 230 736</b>	1	2.500
<b>199 230 737</b>	1	2.800

table continued on the next page

FKM Code	SP	Weight (kg)
199 230 738	1	3.700
199 230 739	1	6.700
199 230 740	1	9.700
199 230 741	1	13.700

D	H	H1	H2	H5	L	L1	L2	L4	L5	L6	L7	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	159	27	62	77	92	194	56	25	261	76	48	64
50	159	27	62	77	95	194	56	25	261	76	48	64
58	168	30	71	77	110	194	65	25	261	76	48	72
68	168	36	71	77	123	194	71	25	261	76	48	79
84	202	44	84	99	146	224	85	45	305	95	59	94
97	202	51	84	99	157	224	89	45	305	95	59	95
124	225	64	106	99	183	224	101	45	305	95	59	107
166	257	85	156	66	233	144	136	70		60		144
200	274	105	168	70	254	152	141	70		65		151
238	273	123	175	78	301	169	164	120		72		174



DN10/15 - 50

**Ball valve type 230 PVC-U  
DA (Double acting)  
Without manual override  
With fixed flanges metric**

**Model:**

- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90° < 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimension: ISO 7005 / EN 1092 / DIN 25 PN10 / BS4504

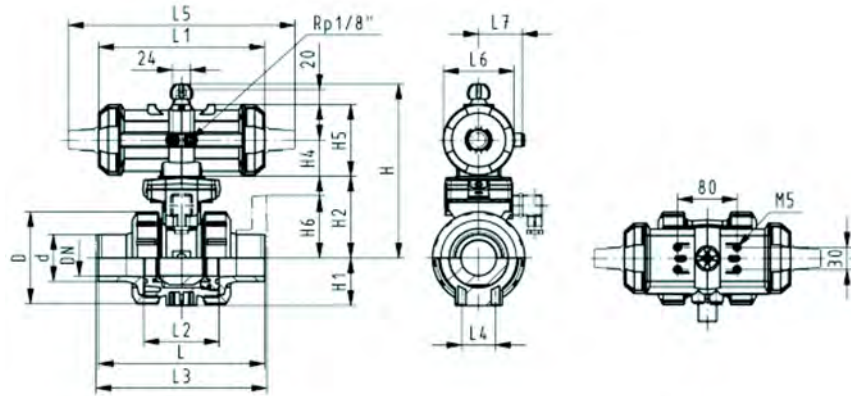
**Option:**

- Individual configuration of the valve

d	DN	Size	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(mm)	(inch)	(bar)	( $\Delta p=1$ bar)	Code	(kg)	(kg)	Code	(kg)	(kg)
20	15	½	10	185	199 230 343	1	1.700	199 230 353	1	1.700
25	20	¾	10	350	199 230 344	1	1.900	199 230 354	1	1.900
32	25	1	10	700	199 230 345	1	2.100	199 230 355	1	2.100
40	32	1 ¼	10	1000	199 230 346	1	3.400	199 230 356	1	3.400
50	40	1 ½	10	1600	199 230 347	1	3.800	199 230 357	1	3.800
63	50	2	10	3100	199 230 348	1	4.900	199 230 358	1	4.900

table continued on the next page

d	D	H	H1	H2	H4	H5	H6	L	L1	L2	L3	L4	L5	L6	L7
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
20	50	159	27	62	40	77	48	124	194	56	130	25	261	76	48
25	58	168	30	71	40	77	53	144	194	65	150	25	261	76	48
32	68	168	36	71	40	77	58	154	194	71	160	25	261	76	48
40	84	202	44	84	51	99	70	174	224	85	180	45	305	95	59
50	97	202	51	84	51	99	75	194	224	89	200	45	305	95	59
63	124	225	64	106	51	99	83	224	224	101	230	45	305	95	59



**Ball valve type 230 PVC-U  
DA (Double acting)  
Without manual override  
With backing flanges PP-st metric**

**Model:**

- Control time 90° < 1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501

**Option:**

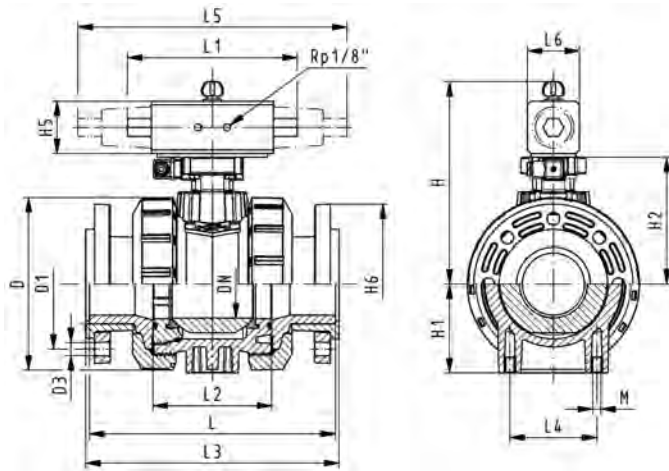
- Individual configuration of the valve

d	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
			(L/min)						
75	65	10	5000	<b>199 234 509</b>	1	10.800	<b>199 234 519</b>	1	10.800
90	80	10	7000	<b>199 234 510</b>	1	14.600	<b>199 234 520</b>	1	14.600
110	100	10	11000	<b>199 234 511</b>	1	20.600	<b>199 234 521</b>	1	20.600

table continued on the next page



<b>d</b>	<b>D</b>	<b>H</b>	<b>H1</b>	<b>H2</b>	<b>H5</b>	<b>H6</b>	<b>L</b>	<b>L1</b>	<b>L2</b>	<b>L3</b>	<b>L4</b>	<b>L6</b>
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
75	166	257	85	156	66	93	284	144	136	290	70	60
90	200	274	105	168	70	100	300	152	141	310	70	65
110	238	273	123	175	78	110	340	169	164	350	120	72



# Product Configurator

Create your own ball valve

## Pneumatic Actuator

P01 PA 1 1/2" Fail safe to close (FC)

P02 PA 1 1/2" Fail safe to open (FO)

P03 PA 1 1/2" Double acting (DA)

P30 PA 30/90 Fail safe to close (FC)

P31 PA 30/90 Fail safe to open (FO)

P32 PA 30/90 Double acting (DA)

## Stroke Limiter

-- without Stroke Limiter

R02 With Stroke Limiter

## Accessories

S01 Namur Mounting Bracket

S03 Limit Switch Unit with Switches Ag, Ni

S04 Limit Switch Unit with Switches Au

S05 Limit Switch Unit with Inductive Switches Namur Eexi

S06 Limit Switch Unit with Inductive Switches PNP

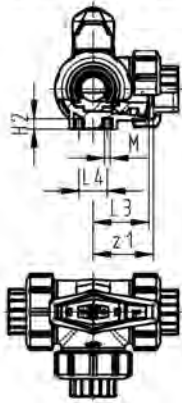
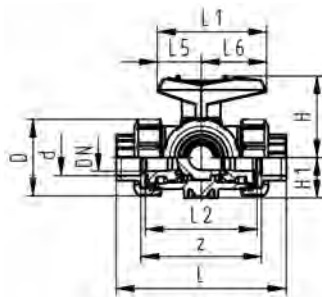
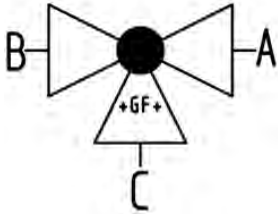
S07 Limit Switch Unit with Inductive Switches NPN

S08 Limit Switch Unit with Inductive Switches Namur Eexd

P01 S05 =



# 3-Way ball valves type 543



## 3-Way ball valve type 543 PVC-U Horizontal/L-port With solvent cement sockets metric

### Model:

- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Turn limiter 90° enclosed, in different positions usable as a clip-on ring
- Integrated stainless steel mounting inserts
- Delivery status A-C opened, see flow scheme

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	3/8	10	50	161 543 001	1 0.245	161 543 011	1 0.245
20	15	1/2	10	75	161 543 002	1 0.230	161 543 012	1 0.251
25	20	3/4	10	150	161 543 003	1 0.339	161 543 013	1 0.361
32	25	1	10	280	161 543 004	1 0.526	161 543 014	1 0.551
40	32	1 1/4	10	480	161 543 005	1 0.912	161 543 015	1 0.938
50	40	1 1/2	10	620	161 543 006	1 1.600	161 543 016	1 1.388
63	50	2	10	1230	161 543 007	1 2.681	161 543 017	1 2.705

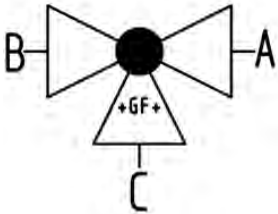
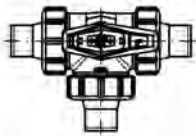
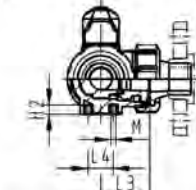
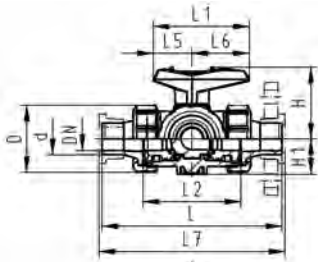
d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M (mm)	z (mm)	z1 (mm)	closest inch (inch)
16	50	57	28	8	109	77	73	36	25	32	45	6	81	40	3/8
20	50	57	28	8	112	77	73	36	25	32	45	6	81	40	1/2
25	58	67	32	8	131	97	86	43	25	39	58	6	94	47	3/4
32	68	73	36	8	151	97	99	50	25	39	58	6	107	54	1
40	84	90	45	9	181	128	120	60	45	54	74	8	130	65	1 1/4
50	97	97	51	9	205	128	137	69	45	54	74	8	143	72	1 1/2
63	124	116	65	9	261	152	179	89	45	66	87	8	185	92	2



**3-Way ball valve type 543 PVC-U**  
**Horizontal/L-port**  
**With solvent cement spigots metric**

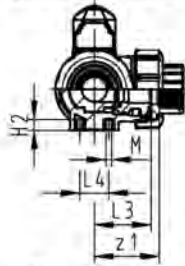
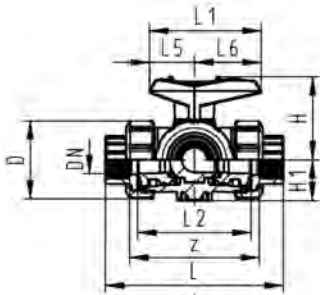
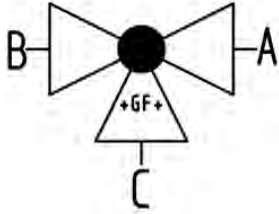
**Model:**

- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Turn limiter 90° enclosed, in different positions usable as a clip-on ring
- Integrated stainless steel mounting inserts
- Delivery status A-C opened, see flow scheme



d	DN	Size	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(mm)	(inch)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
16	10	3/8	10	50	<b>161 543 021</b>	1	0.251	<b>161 543 031</b>	1	0.251
20	15	1/2	10	75	<b>161 543 022</b>	1	0.260	<b>161 543 032</b>	1	0.260
25	20	3/4	10	150	<b>161 543 023</b>	1	0.376	<b>161 543 033</b>	1	0.376
32	25	1	10	280	<b>161 543 024</b>	1	0.546	<b>161 543 034</b>	1	0.575
40	32	1 1/4	10	480	<b>161 543 025</b>	1	0.959	<b>161 543 035</b>	1	0.959
50	40	1 1/2	10	620	<b>161 543 026</b>	1	1.429	<b>161 543 036</b>	1	1.453
63	50	2	10	1230	<b>161 543 027</b>	1	2.831	<b>161 543 037</b>	1	2.827

d	D	H	H1	H2	L	L1	L2	L3	L4	L5	L6	L7	M	closest inch
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(inch)
16	50	57	28	8	131	77	73	36	25	32	45	137	6	3/8
20	50	57	28	8	141	77	73	36	25	32	45	147	6	1/2
25	58	67	32	8	165	97	86	43	25	39	58	171	6	3/4
32	68	73	36	8	182	97	99	50	25	39	58	188	6	1
40	84	90	45	9	209	128	120	60	45	54	74	215	8	1 1/4
50	97	97	51	9	242	128	137	69	45	54	74	248	8	1 1/2
63	124	116	65	9	302	152	179	89	45	66	87	308	8	2



### 3-Way ball valve type 543 PVC-U Horizontal/L-port With threaded sockets Rp

#### Model:

- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Turn limiter 90° enclosed, in different positions usable as a clip-on ring
- Integrated stainless steel mounting inserts
- Delivery status A-C opened, see flow scheme

d (mm)	DN (mm)	Thread Type	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)
16	10	Rp	3/8	10	50	<b>161 543 041</b>	1	0.245
20	15	Rp	1/2	10	75	<b>161 543 042</b>	1	0.251
25	20	Rp	3/4	10	150	<b>161 543 043</b>	1	0.361
32	25	Rp	1	10	280	<b>161 543 044</b>	1	0.551
40	32	Rp	1 1/4	10	480	<b>161 543 045</b>	1	0.938
50	40	Rp	1 1/2	10	620	<b>161 543 046</b>	1	1.390
63	50	Rp	2	10	1230	<b>161 543 047</b>	1	2.705

FKM Code	SP	Weight (kg)
<b>161 543 051</b>	1	0.245
<b>161 543 052</b>	1	0.251
<b>161 543 053</b>	1	0.361
<b>161 543 054</b>	1	0.551
<b>161 543 055</b>	1	0.938
<b>161 543 056</b>	1	1.390
<b>161 543 057</b>	1	2.705

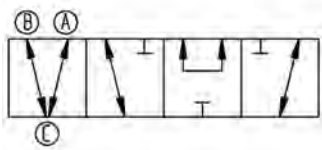
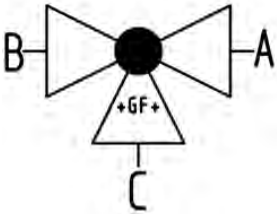
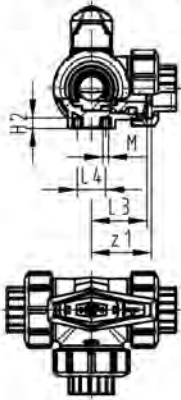
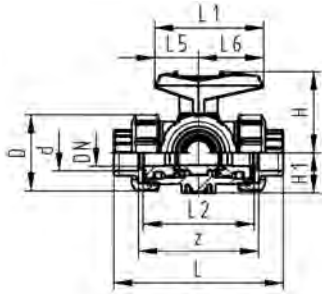
D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M	z	z1
50	57	28	8	113	77	73	36	25	32	45	6	87	43
50	57	28	8	117	77	73	36	25	32	45	6	85	42
58	67	32	8	135	97	86	43	25	39	58	6	100	50
68	73	36	8	155	97	99	50	25	39	58	6	113	57
84	90	45	9	179	128	120	60	45	54	74	8	134	67
97	97	51	9	201	128	137	69	45	54	74	8	155	78
124	116	65	9	255	152	179	89	45	66	87	8	199	99



**3-Way ball valve type 543 PVC-U**  
**Horizontal/T-port**  
**With solvent cement sockets metric**

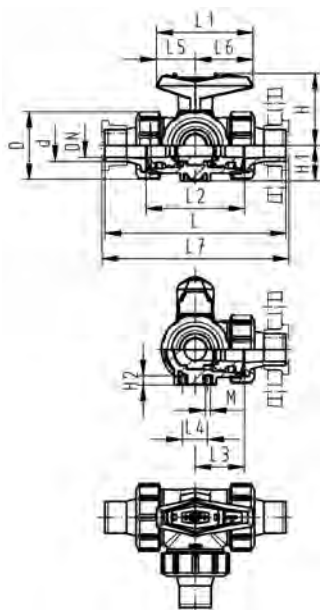
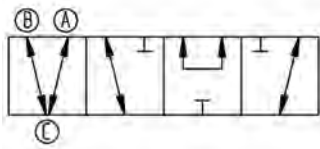
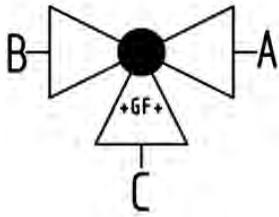
**Model:**

- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Turn limiter 90° enclosed, in different positions usable as a clip-on ring
- Integrated stainless steel mounting inserts
- Delivery status A-B-C opened, see flow scheme



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	FKM Code	SP	Weight (kg)
16	10	3/8	10	140	<b>161 543 201</b>	1	<b>161 543 211</b>	1	0.244
20	15	1/2	10	200	<b>161 543 202</b>	1	<b>161 543 212</b>	1	0.250
25	20		10	470	<b>161 543 203</b>	1	<b>161 543 213</b>	1	0.359
32	25		10	793	<b>161 543 204</b>	1	<b>161 543 214</b>	1	0.544
40	32	1 1/4	10	1290	<b>161 543 205</b>	1	<b>161 543 215</b>	1	0.927
50	40	1 1/2	10	1910	<b>161 543 206</b>	1	<b>161 543 216</b>	1	1.369
63	50	2	10	3100	<b>161 543 207</b>	1	<b>161 543 217</b>	1	2.660

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M (mm)	z (mm)	z1 (mm)	closest inch (inch)
16	50	57	28	8	109	77	73	36	25	32	45	6	81	40	3/8
20	50	57	28	8	112	77	73	36	25	32	45	6	81	40	1/2
25	58	67	32	8	131	97	86	43	25	39	58	6	94	47	3/4
32	68	73	36	8	151	97	99	50	25	39	58	6	107	54	1
40	84	90	45	9	181	128	120	60	45	54	74	8	130	65	1 1/4
50	97	97	51	9	205	128	137	69	45	54	74	8	143	72	1 1/2
63	124	116	65	9	261	152	179	89	45	66	87	8	185	92	2



**3-Way ball valve type 543 PVC-U**  
**Horizontal/T-port**  
**With solvent cement spigots metric**

**Model:**

- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Turn limiter 90° enclosed, in different positions usable as a clip-on ring
- Integrated stainless steel mounting inserts
- Delivery status A-B-C opened, see flow scheme

d	DN	Size	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(mm)	(inch)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
				(l/min)						
16	10	3/8	10	140	<b>161 543 221</b>	1	0.250	<b>161 543 231</b>	1	0.250
20	15	1/2	10	200	<b>161 543 222</b>	1	0.259	<b>161 543 232</b>	1	0.259
25	20	3/4	10	470	<b>161 543 223</b>	1	0.374	<b>161 543 233</b>	1	0.374
32	25		10	793	<b>161 543 224</b>	1	0.568	<b>161 543 234</b>	1	0.568
40	32	1 1/4	10	1290	<b>161 543 225</b>	1	0.948	<b>161 543 235</b>	1	0.948
50	40	1 1/2	10	1910	<b>161 543 226</b>	1	1.432	<b>161 543 236</b>	1	1.432
63	50	2	10	3100	<b>161 543 227</b>	1	2.747	<b>161 543 237</b>	1	2.786

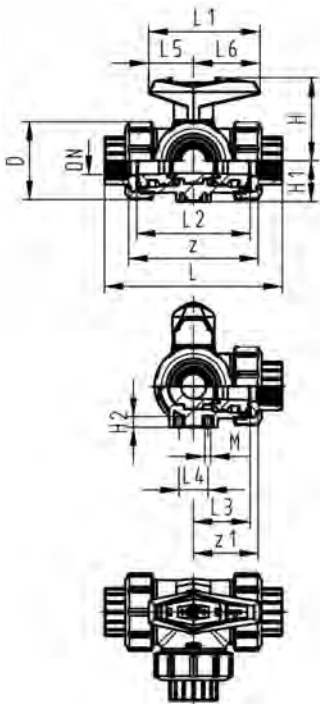
d	D	H	H1	H2	L	L1	L2	L3	L4	L5	L6	L7	M	closest
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	inch
														(inch)
16	50	57	28	8	131	77	73	36	25	32	45	137	6	3/8
20	50	57	28	8	141	77	73	36	25	32	45	147	6	1/2
25	58	67	32	8	165	97	86	43	25	39	58	171	6	3/4
32	68	73	36	8	182	97	99	50	25	39	58	188	6	1
40	84	90	45	9	209	128	120	60	45	54	74	215	8	1 1/4
50	97	97	51	9	242	128	137	69	45	54	74	248	8	1 1/2
63	124	116	65	9	302	152	179	89	45	66	87	308	8	2



**3-Way ball valve type 543 PVC-U**  
**Horizontal/T-port**  
**With threaded sockets Rp**

**Model:**

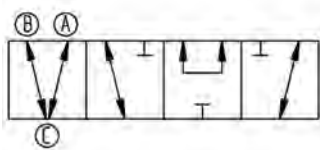
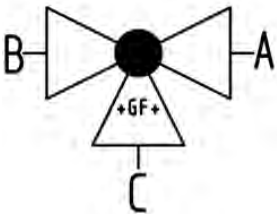
- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Turn limiter 90° enclosed, in different positions usable as a clip-on ring
- Integrated stainless steel mounting inserts
- Delivery status A-B-C opened, see flow scheme



d	DN	Thread size	Size	PN	kv-value	EPDM	SP	Weight
(mm)	(mm)		(inch)	(bar)	( $\Delta p=1$ bar)	Code		(kg)
					(l/min)			
16	10	Rp	3/8	10	140	<b>161 543 241</b>	1	0.244
20	15	Rp	1/2	10	200	<b>161 543 242</b>	1	0.250
25	20	Rp	3/4	10	470	<b>161 543 243</b>	1	0.359
	25	Rp	1	10	793	<b>161 543 244</b>	1	0.544
40	32	Rp	1 1/4	10	1290	<b>161 543 245</b>	1	0.927
50	40	Rp	1 1/2	10	1910	<b>161 543 246</b>	1	1.386
63	50	Rp	2	10	3100	<b>161 543 247</b>	1	2.660

FKM Code	SP	Weight
		(kg)
<b>161 543 251</b>	1	0.244
<b>161 543 252</b>	1	0.250
<b>161 543 253</b>	1	0.359
<b>161 543 254</b>	1	0.544
<b>161 543 255</b>	1	0.927
<b>161 543 256</b>	1	1.400
<b>161 543 257</b>	1	2.660

D	H	H1	H2	L	L1	L2	L3	L4	L5	L6	M	z	z1
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)
50	57	28	8	113	77	73	36	25	32	45	6	87	43
50	57	28	8	117	77	73	36	25	32	45	6	85	42
58	67	32	8	135	97	86	43	25	39	58	6	100	50
68	73	36	8	155	97	99	50	25	39	58	6	113	57
84	90	45	9	179	128	120	60	45	54	74	8	134	67
97	97	51	9	201	128	137	69	45	54	74	8	155	78
124	116	65	9	255	152	179	89	45	66	87	8	199	99







**3-Way ball valve type 543 PVC-U**  
**Vertical/L-port**  
**With solvent cement sockets metric**

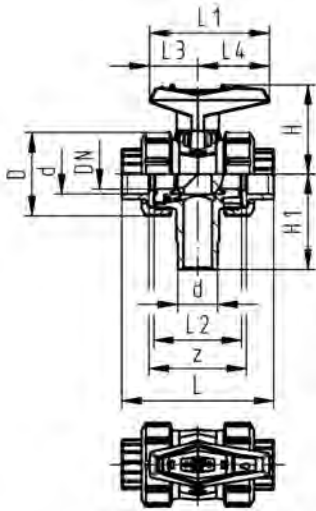
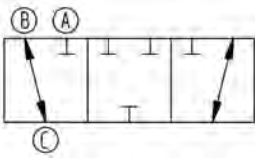
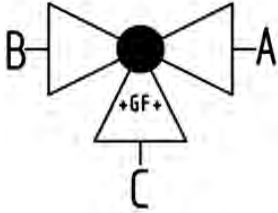
**Model:**

- Vertical inlet solvent cement spigot metric
- Easy installation and removal using union on third outlet
- Ball seals PTFE
- Electric actuator available separately
- Angle of operation 360° without turn limiter
- Delivery status B-C opened, see flow scheme

**Mode of action:**

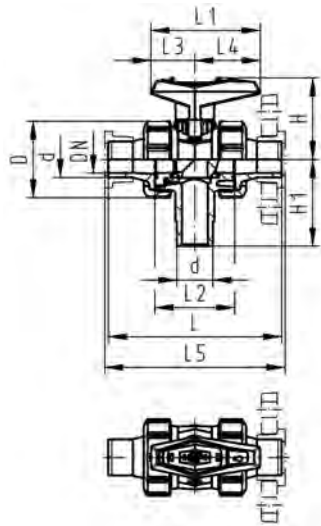
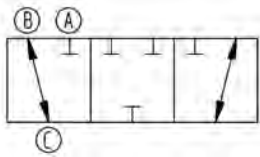
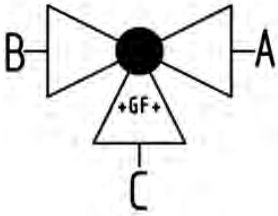
- For interconnection of two inputs

Individual configuration available on special request



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	FKM Code	SP	Weight (kg)
16	10	10	49	161 543 401	1	161 543 411	1	0.162
20	15	10	77	161 543 402	1	161 543 412	1	0.166
25	20	10	146	161 543 403	1	161 543 413	1	0.255
32	25	10	260	161 543 404	1	161 543 414	1	0.372
40	32	10	437	161 543 405	1	161 543 415	1	0.622
50	40	10	667	161 543 406	1	161 543 416	1	0.886
63	50	10	1293	161 543 407	1	161 543 417	1	1.617

d (mm)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	z (mm)	closest inch (inch)
16	50	57	62	92	77	56	32	45	64	3/8
20	50	57	62	95	77	56	32	45	64	1/2
25	58	67	72	111	97	66	39	58	74	3/4
32	68	73	77	123	97	71	39	58	79	1
40	84	90	87	146	128	85	54	74	95	1 1/4
50	97	97	97	157	128	89	54	74	95	1 1/2
63	124	116	112	183	152	101	66	87	107	2



**3-Way ball valve type 543 PVC-U**  
**Vertical/L-port**  
**With solvent cement spigots metric**

**Model:**

- Vertical inlet solvent cement spigot metric
- Easy installation and removal using union on third outlet
- Ball seals PTFE
- Electric actuator available separately
- Angle of operation 360° without turn limiter
- Delivery status B-C opened, see flow scheme

**Mode of action:**

- For interconnection of two inputs

d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	10	49	161 543 441	1	0.166	161 543 451
20	15	10	77	161 543 442	1	0.172	161 543 452
25	20	10	146	161 543 443	1	0.265	161 543 453
32	25	10	260	161 543 444	1	0.388	161 543 454
40	32	10	437	161 543 445	1	0.637	161 543 455
50	40	10	667	161 543 446	1	0.917	161 543 456
63	50	10	1293	161 543 447	1	1.701	161 543 457

d (mm)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	closest inch (inch)
16	50	57	62	114	77	56	32	45	120	$\frac{3}{8}$
20	50	57	62	124	77	56	32	45	130	$\frac{1}{2}$
25	58	67	72	144	97	66	39	58	150	$\frac{3}{4}$
32	68	73	77	154	97	71	39	58	160	1
40	84	90	87	174	128	85	54	74	180	1 $\frac{1}{4}$
50	97	97	97	194	128	89	54	74	200	1 $\frac{1}{2}$
63	124	116	112	224	152	101	66	87	230	2



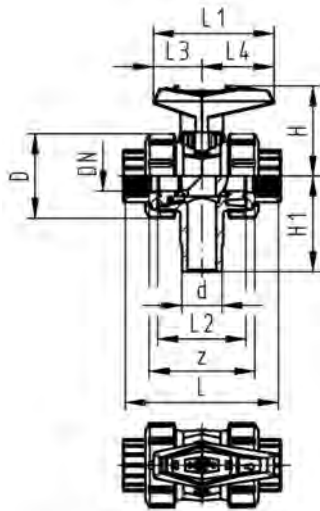
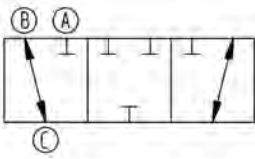
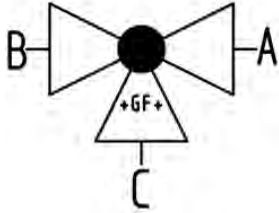
**3-Way ball valve type 543 PVC-U**  
**Vertical/L-port**  
**With threaded sockets Rp**

**Model:**

- Vertical inlet solvent cement spigot metric
- Easy installation and removal using union on third outlet
- Ball seals PTFE
- Electric actuator available separately
- Angle of operation 360° without turn limiter
- Delivery status B-C opened, see flow scheme

**Mode of action:**

- For interconnection of two inputs



DN (mm)	Thread size	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	FKM Code	SP	Weight (kg)
10	Rp	3/8	10	49	161 543 421	1	161 543 431	1	0.162
15	Rp	1/2	10	77	161 543 422	1	161 543 432	1	0.166
20	Rp	3/4	10	146	161 543 423	1	161 543 433	1	0.255
25	Rp	1	10	260	161 543 424	1	161 543 434	1	0.372
32	Rp	1 1/4	10	437	161 543 425	1	161 543 435	1	0.622
40	Rp	1 1/2	10	667	161 543 426	1	161 543 436	1	0.886
50	Rp	2	10	1293	161 543 427	1	161 543 437	1	1.617

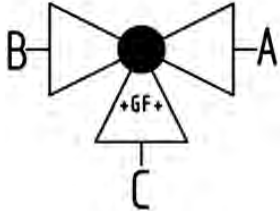
D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	z (mm)
50	57	62	96	77	56	32	45	69
50	57	62	99	77	56	32	45	67
58	67	72	115	97	66	39	58	78
68	73	77	127	97	71	39	58	85
84	90	87	144	128	85	54	74	100
97	97	97	153	128	89	54	74	106
124	116	112	177	152	101	66	87	121



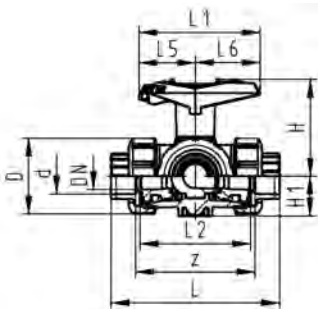
**3-Way ball valve type 543 PVC-U**  
**Horizontal/L-port**  
**With lockable handle**  
**With solvent cement sockets metric**

**Model:**

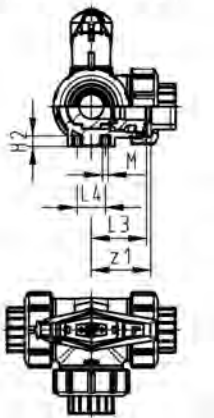
- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Integrated stainless steel mounting inserts
- Multifunctional lever red with ratched setting 45°, lockable
- Delivery status A-C opened, see flow scheme

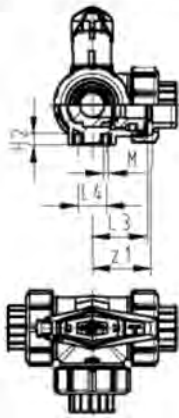
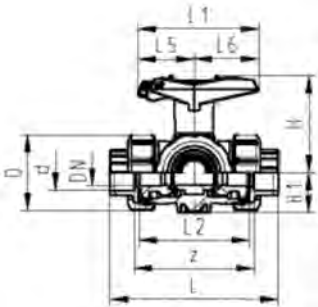
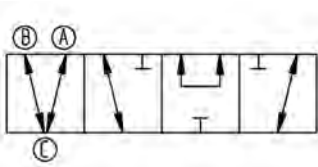
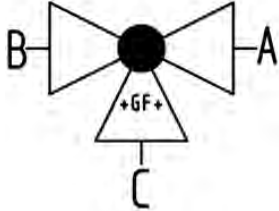


d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	3/8	10	50	<b>161 543 161</b>	1	0.259	<b>161 543 171</b>	1	0.259
20	15	1/2	10	75	<b>161 543 162</b>	1	0.265	<b>161 543 172</b>	1	0.265
25	20	3/4	10	150	<b>161 543 163</b>	1	0.378	<b>161 543 173</b>	1	0.378
32	25	1	10	280	<b>161 543 164</b>	1	0.568	<b>161 543 174</b>	1	0.568
40	32	1 1/4	10	480	<b>161 543 165</b>	1	0.961	<b>161 543 175</b>	1	0.961
50	40	1 1/2	10	620	<b>161 543 166</b>	1	1.413	<b>161 543 176</b>	1	1.413
63	50	2	10	1230	<b>161 543 167</b>	1	2.736	<b>161 543 177</b>	1	2.736



d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M (mm)	z (mm)	z1 (mm)	closest inch (inch)
16	50	79	28	8	109	87	73	36	25	42	45	6	81	40	3/8
20	50	79	28	8	112	87	73	36	25	42	45	6	81	40	1/2
25	58	88	32	8	131	108	86	43	25	50	58	6	94	47	3/4
32	68	94	36	8	151	108	99	50	25	50	58	6	107	54	1
40	84	113	45	9	181	141	120	60	45	66	75	8	130	65	1 1/4
50	97	119	51	9	205	141	137	69	45	66	75	8	143	72	1 1/2
63	124	141	65	9	261	165	179	89	45	78	87	8	185	92	2





**3-Way ball valve type 543 PVC-U**  
**Horizontal/T-port**  
**With lockable handle**  
**With solvent cement sockets metric**

**Model:**

- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Turn limiter 90° enclosed, in different positions usable as a clip-on ring
- Integrated stainless steel mounting inserts
- Multifunctional lever red with ratched setting 45°, lockable
- Delivery status A-B-C opened, see flow scheme

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	3/8	10	140	161 543 361	1	0.235	161 543 371	1	0.258
20	15	1/2	10	200	161 543 362	1	0.229	161 543 372	1	0.264
25	20	3/4	10	470	161 543 363	1	0.360	161 543 373	1	0.376
32	25		10	793	161 543 364	1	0.561	161 543 374	1	0.561
40	32	1 1/4	10	1290	161 543 365	1	0.950	161 543 375	1	0.950
50	40	1 1/2	10	1910	161 543 366	1	1.392	161 543 376	1	1.392
63	50	2	10	3100	161 543 367	1	2.691	161 543 377	1	2.691

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M (mm)	z (mm)	z1 (mm)	closest inch (inch)
16	50	79	28	8	109	87	73	36	25	42	45	6	81	40	3/8
20	50	79	28	8	112	87	73	36	25	42	45	6	81	40	1/2
25	58	88	32	8	131	108	86	43	25	50	58	6	94	47	3/4
32	68	94	36	8	151	108	99	50	25	50	58	6	107	54	1
40	84	113	45	9	181	141	120	60	45	66	75	8	130	65	1 1/4
50	97	119	51	9	205	141	137	69	45	66	75	8	143	72	1 1/2
63	124	141	65	9	261	165	179	89	45	78	87	8	185	92	2



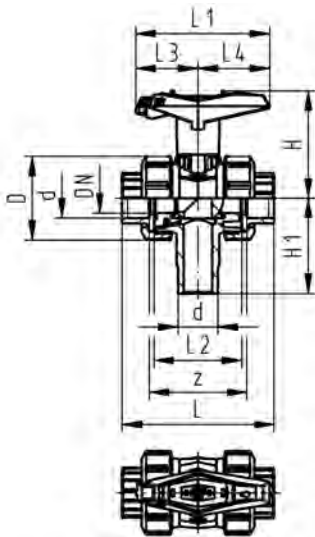
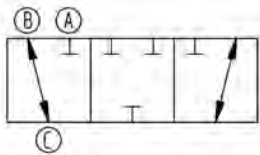
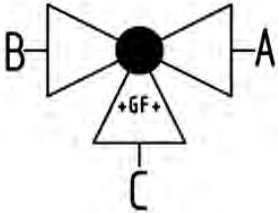
**3-Way ball valve type 543 PVC-U**  
**Vertical/L-port**  
**With lockable handle**  
**With solvent cement sockets metric**

**Model:**

- Vertical inlet solvent cement spigot metric
- Easy installation and removal using union on third outlet
- Ball seals PTFE
- Electric actuator available separately
- Angle of operation 360° without turn limiter
- Multifunctional lever red with ratched setting 45°, lockable
- Delivery status B-C opened, see flow scheme

**Mode of action:**

- For interconnection of two inputs



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	FKM Code	SP	Weight (kg)
16	10	10	49	161 543 501	1	161 543 511	1	0.185
20	15	10	77	161 543 502	1	161 543 512	1	0.189
25	20	10	146	161 543 503	1	161 543 513	1	0.281
32	25	10	260	161 543 504	1	161 543 514	1	0.398
40	32	10	437	161 543 505	1	161 543 515	1	0.663
50	40	10	667	161 543 506	1	161 543 516	1	0.927
63	50	10	1293	161 543 507	1	161 543 517	1	1.666

d (mm)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	z (mm)	closest inch (inch)
16	50	79	62	92	87	56	42	45	64	3/8
20	50	79	62	95	87	56	42	45	64	1/2
25	58	88	72	111	108	66	50	58	74	3/4
32	68	94	77	123	108	71	50	58	79	1
40	84	113	87	146	140	85	66	74	95	1 1/4
50	97	119	97	157	140	89	66	74	95	1 1/2
63	124	141	112	183	165	101	78	87	107	2

# 3-Way ball valves electric type 167



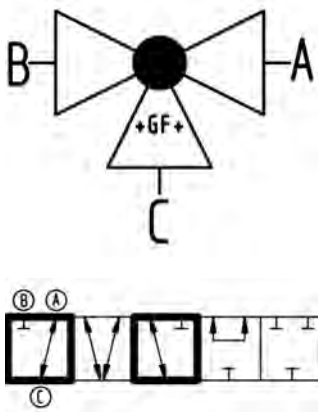
**3-Way ball valve type 167 PVC-U**  
**Horizontal/L-port 100-230V**  
**With manual emergency override**  
**With solvent cement sockets metric**

**Model:**

- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

**Option:**

- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

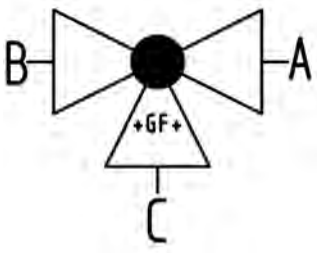


d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
16	10	3/8	10	50	EA25	<b>199 167 022</b>	2.122	<b>199 167 032</b>	2.122
20	15	1/2	10	75	EA25	<b>199 167 023</b>	2.540	<b>199 167 033</b>	2.128
25	20	3/4	10	150	EA25	<b>199 167 024</b>	2.256	<b>199 167 034</b>	2.256
32	25	1	10	280	EA25	<b>199 167 025</b>	2.842	<b>199 167 035</b>	2.446
40	32	1 1/4	10	480	EA25	<b>199 167 026</b>	3.234	<b>199 167 036</b>	2.870
50	40	1 1/2	10	620	EA25	<b>199 167 027</b>	3.683	<b>199 167 037</b>	3.322
63	50	2	10	1230	EA25	<b>199 167 028</b>	5.043	<b>199 167 038</b>	4.683

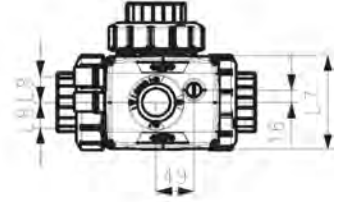
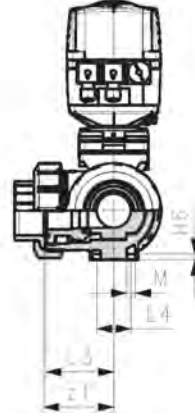
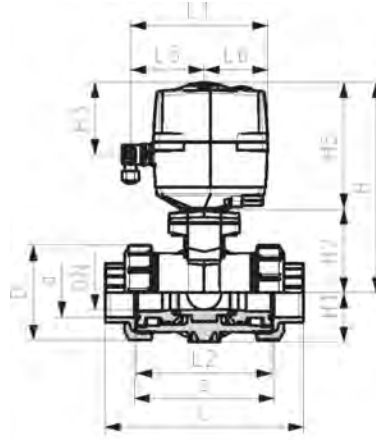
d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
16	50	231	28	64	94	167	8	109	180	73	36	25	97	83	122
20	50	231	28	64	94	167	8	112	180	73	36	25	97	83	122
25	58	240	32	73	94	167	8	131	180	86	43	25	97	83	122
32	68	240	36	73	94	167	8	151	180	99	50	25	97	83	122
40	84	251	45	84	94	167	9	181	180	120	60	45	97	83	122
50	97	251	51	84	94	167	9	205	180	137	69	45	97	83	122
63	124	273	65	106	94	167	9	261	180	179	89	45	97	83	122

d (mm)	L8 (mm)	M	z (mm)	z1 (mm)	closest inch (inch)
16	33	6	81	40	3/8
20	33	6	81	40	1/2
25	33	6	94	47	3/4

table continued on the next page



d (mm)	L8 (mm)	M	z (mm)	z1 (mm)	closest inch (inch)
32	33	6	107	54	1
40	33	8	130	65	1 ¼
50	33	8	143	72	1 ½
63	33	8	185	92	2







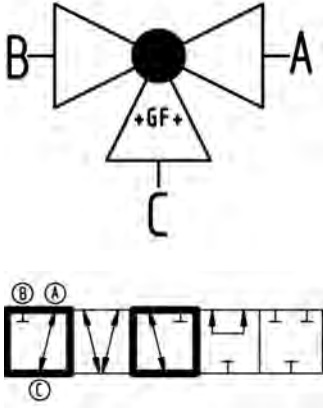
**3-Way ball valve type 167 PVC-U**  
**Horizontal/L-port 100-230V**  
**With manual emergency override**  
**With solvent cement spigots metric**

**Model:**

- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

**Option:**

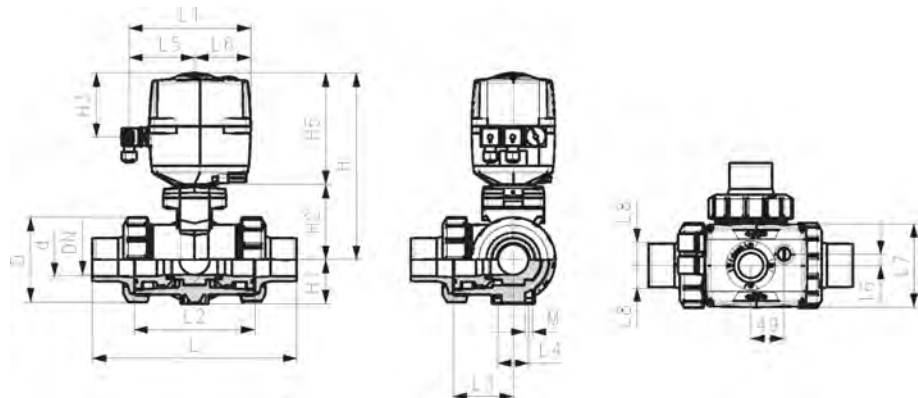
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
16	10	3/8	10	50	EA25	<b>199 167 002</b>	2.128	<b>199 167 012</b>	2.128
20	15	1/2	10	75	EA25	<b>199 167 003</b>	2.137	<b>199 167 013</b>	2.137
25	20	3/4	10	150	EA25	<b>199 167 004</b>	2.271	<b>199 167 014</b>	2.271
32	25	1	10	280	EA25	<b>199 167 005</b>	2.470	<b>199 167 015</b>	2.470
40	32	1 1/4	10	480	EA25	<b>199 167 006</b>	2.891	<b>199 167 016</b>	2.891
50	40	1 1/2	10	620	EA25	<b>199 167 007</b>	3.749	<b>199 167 017</b>	3.385
63	50	2	10	1230	EA25	<b>199 167 008</b>	4.809	<b>199 167 018</b>	4.809

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
16	50	231	28	64	94	167	8	131	180	194	36	25	97	83	122
20	50	231	28	64	94	167	8	141	180	194	36	25	97	83	122
25	58	240	32	73	94	167	8	165	180	194	43	25	97	83	122
32	68	240	36	73	94	167	8	182	180	194	50	25	97	83	122
40	84	251	45	84	94	167	9	209	180	194	60	45	97	83	122
50	97	251	51	84	94	167	9	242	180	194	69	45	97	83	122
63	124	273	65	106	94	167	9	302	180	194	89	45	97	83	122

d (mm)	L8 (mm)	M (mm)	closest inch (inch)
16	33	6	3/8
20	33	6	1/2
25	33	6	3/4
32	33	6	1
40	33	8	1 1/4
50	33	8	1 1/2
63	33	8	2





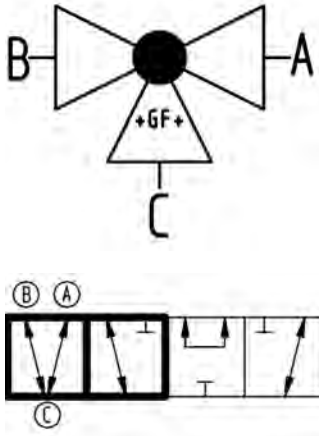
**3-Way ball valve type 167 PVC-U**  
**Horizontal/T-port 100-230V**  
**With manual emergency override**  
**With solvent cement sockets metric**

**Model:**

- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Basic position A-B-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

**Option:**

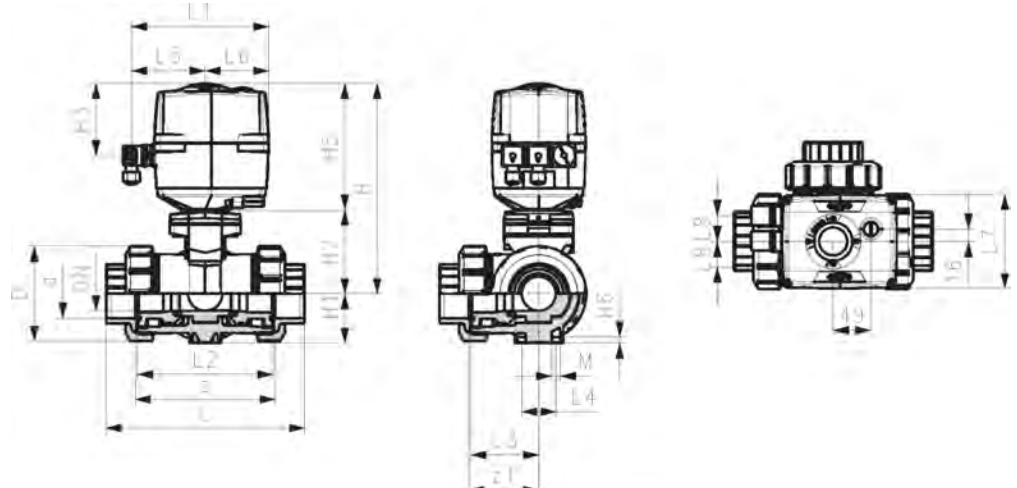
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
16	10	3/8	10	140	EA25	<b>199 167 062</b>	2.121	<b>199 167 072</b>	2.121
20	15	1/2	10	200	EA25	<b>199 167 063</b>	2.127	<b>199 167 073</b>	2.127
25	20	3/4	10	470	EA25	<b>199 167 064</b>	2.254	<b>199 167 074</b>	2.254
32	25	1	10	793	EA25	<b>199 167 065</b>	2.834	<b>199 167 075</b>	2.846
40	32	1 1/4	10	1290	EA25	<b>199 167 066</b>	3.217	<b>199 167 076</b>	2.859
50	40	1 1/2	10	1910	EA25	<b>199 167 067</b>	3.674	<b>199 167 077</b>	3.301
63	50	2	10	3100	EA25	<b>199 167 068</b>	4.638	<b>199 167 078</b>	4.638

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
16	50	231	28	64	94	167	8	109	180	73	36	25	97	83	122
20	50	231	28	64	94	167	8	112	180	73	36	25	97	83	122
25	58	240	32	73	94	167	8	131	180	86	43	25	97	83	122
32	68	240	36	73	94	167	8	151	180	99	50	25	97	83	122
40	84	251	45	84	94	167	9	181	180	120	60	45	97	83	122
50	97	251	51	84	94	167	9	205	180	137	69	45	97	83	122
63	124	273	65	106	94	167	9	261	180	179	89	45	97	83	122

d (mm)	L8 (mm)	M	z (mm)	z1 (mm)	closest inch (inch)
16	33	6	81	40	3/8
20	33	6	81	40	1/2
25	33	6	94	47	3/4
32	33	6	107	54	1
40	33	8	130	65	1 1/4
50	33	8	143	72	1 1/2
63	33	8	185	92	2





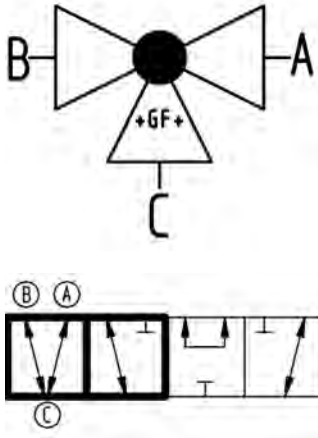
**3-Way ball valve type 167 PVC-U**  
**Horizontal/L-port 24V**  
**With manual emergency override**  
**With solvent cement sockets metric**

**Model:**

- Voltage 24V AC/DC
- Factory set control range 90°<
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

**Option:**

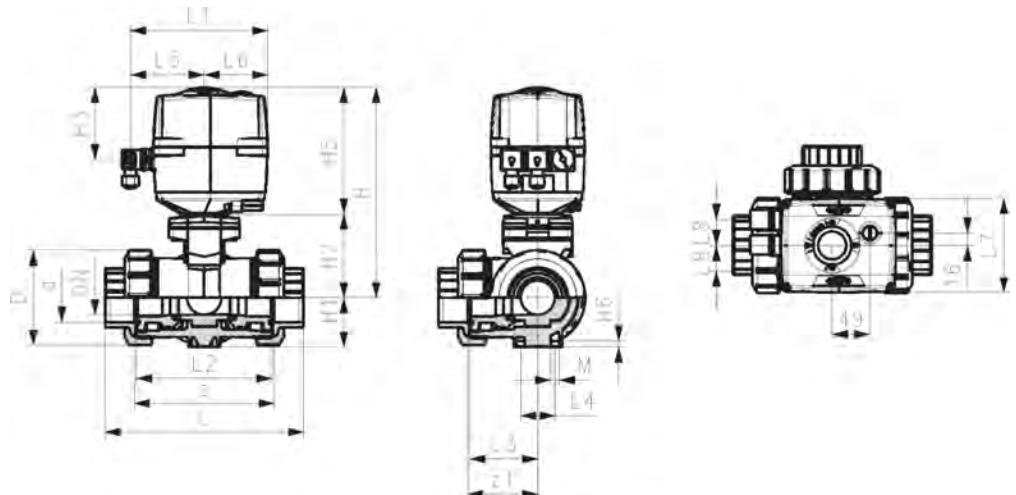
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
16	10	3/8	10	140	EA25	<b>199 167 202</b>	2.122	<b>199 167 212</b>	2.122
20	15	1/2	10	200	EA25	<b>199 167 203</b>	2.128	<b>199 167 213</b>	2.128
25	20	3/4	10	470	EA25	<b>199 167 204</b>	2.256	<b>199 167 214</b>	2.256
32	25	1	10	793	EA25	<b>199 167 205</b>	2.446	<b>199 167 215</b>	2.446
40	32	1 1/4	10	1290	EA25	<b>199 167 206</b>	2.870	<b>199 167 216</b>	2.870
50	40	1 1/2	10	1910	EA25	<b>199 167 207</b>	3.698	<b>199 167 217</b>	3.322
63	50	2	10	3100	EA25	<b>199 167 208</b>	5.018	<b>199 167 218</b>	4.683

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
16	50	231	28	64	94	167	8	109	180	73	36	25	97	83	122
20	50	231	28	64	94	167	8	112	180	73	36	25	97	83	122
25	58	240	32	73	94	167	8	131	180	86	43	25	97	83	122
32	68	240	36	73	94	167	8	151	180	99	50	25	97	83	122
40	84	251	45	84	94	167	9	181	180	120	60	45	97	83	122
50	97	251	51	84	94	167	9	205	180	137	69	45	97	83	122
63	124	273	65	106	94	167	9	261	180	179	89	45	97	83	122

d (mm)	L8 (mm)	M	z (mm)	z1 (mm)	closest inch (inch)
16	33	6	81	40	3/8
20	33	6	81	40	1/2
25	33	6	94	47	3/4
32	33	6	107	54	1
40	33	8	130	65	1 1/4
50	33	8	143	72	1 1/2
63	33	8	185	92	2





**3-Way ball valve type 167 PVC-U**  
**Horizontal/T-port 24V**  
**With manual emergency override**  
**With solvent cement sockets metric**

**Model:**

- Voltage 24V AC/DC
- Factory set control range 90°<
- Basic position A-B-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

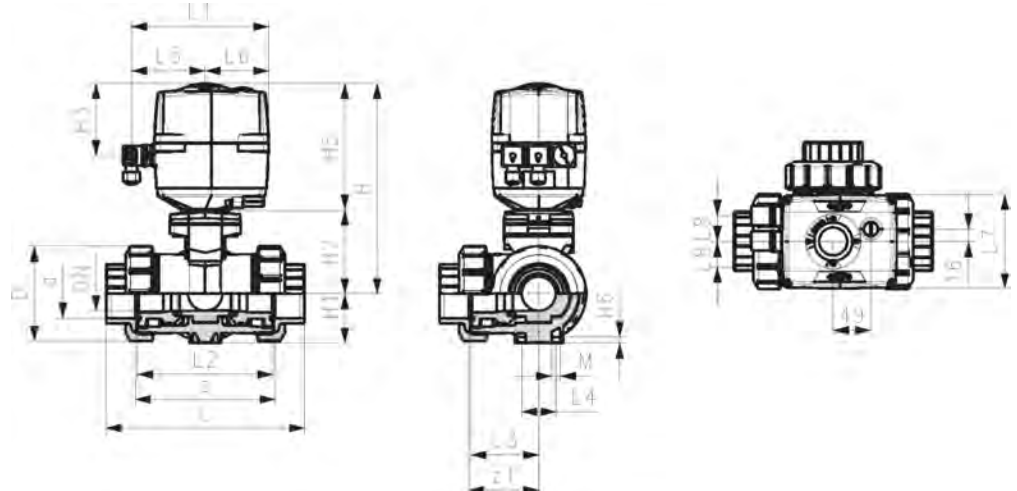
**Option:**

- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
16	10	3/8	10	140	EA25	<b>199 167 242</b>	2.121	<b>199 167 252</b>	2.121
20	15	1/2	10	200	EA25	<b>199 167 243</b>	2.127	<b>199 167 253</b>	2.127
25	20	3/4	10	470	EA25	<b>199 167 244</b>	2.254	<b>199 167 254</b>	2.254
32	25	1	10	793	EA25	<b>199 167 245</b>	2.817	<b>199 167 255</b>	2.439
40	32	1 1/4	10	1290	EA25	<b>199 167 246</b>	3.197	<b>199 167 256</b>	2.859
50	40	1 1/2	10	1910	EA25	<b>199 167 247</b>	3.654	<b>199 167 257</b>	3.301
63	50	2	10	3100	EA25	<b>199 167 248</b>	4.972	<b>199 167 258</b>	4.638

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
16	50	231	28	64	94	167	8	109	180	73	36	25	97	83	122
20	50	231	28	64	94	167	8	112	180	73	36	25	97	83	122
25	58	240	32	73	94	167	8	131	180	86	43	25	97	83	122
32	68	240	36	73	94	167	8	151	180	99	50	25	97	83	122
40	84	251	45	84	94	167	9	181	180	120	60	45	97	83	122
50	97	251	51	84	94	167	9	205	180	137	69	45	97	83	122
63	124	273	65	106	94	167	9	261	180	179	89	45	97	83	122

d (mm)	L8 (mm)	M	z (mm)	z1 (mm)	closest inch (inch)
16	33	6	81	40	3/8
20	33	6	81	40	1/2
25	33	6	94	47	3/4
32	33	6	107	54	1
40	33	8	130	65	1 1/4
50	33	8	143	72	1 1/2
63	33	8	185	92	2



# 3-Way ball valves electric type 170



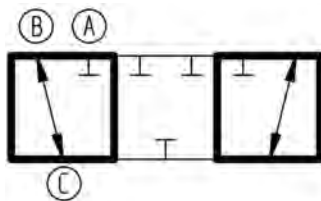
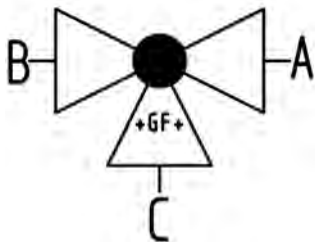
**3-Way ball valve type 170 PVC-U**  
**Vertical/L-port 100-230V**  
**With manual emergency override**  
**With solvent cement sockets metric**

**Model:**

- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Basic position B-C opened, activated position A-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

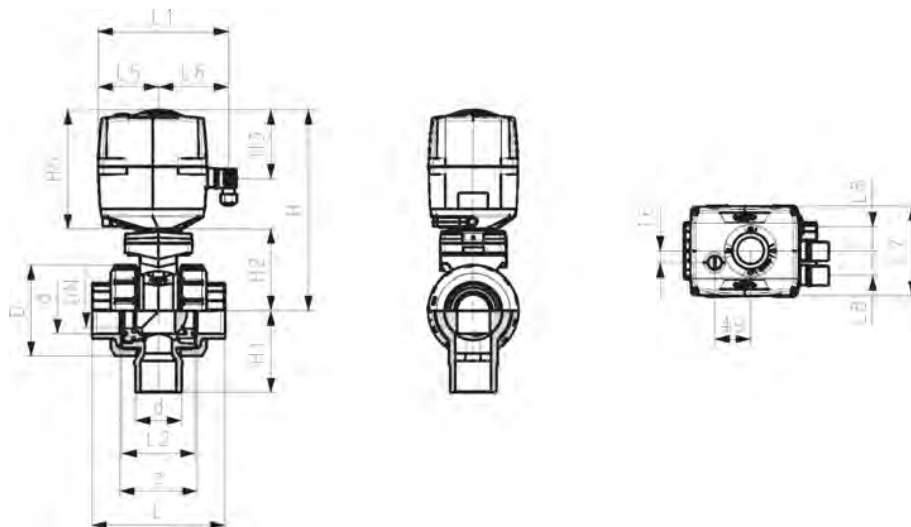
**Option:**

- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EA	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
16	10	3/8	10	49	EA25	<b>199 170 242</b>	2.039	<b>199 170 252</b>	2.039
20	15	1/2	10	77	EA25	<b>199 170 243</b>	2.043	<b>199 170 253</b>	2.043
25	20	3/4	10	146	EA25	<b>199 170 244</b>	2.150	<b>199 170 254</b>	2.150
32	25	1	10	260	EA25	<b>199 170 245</b>	2.267	<b>199 170 255</b>	2.267
40	32	1 1/4	10	437	EA25	<b>199 170 246</b>	2.554	<b>199 170 256</b>	2.554
50	40	1 1/2	10	667	EA25	<b>199 170 247</b>	3.203	<b>199 170 257</b>	2.818
63	50	2	10	1293	EA25	<b>199 170 248</b>	3.977	<b>199 170 258</b>	3.595

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)	closest inch (inch)
16	50	231	62	64	94	167	92	180	56	97	83	122	33	64	3/8
20	50	231	62	64	94	167	95	180	56	97	83	122	33	64	1/2
25	58	240	72	73	94	167	111	180	66	97	83	122	33	74	3/4
32	68	240	77	73	94	167	123	180	71	97	83	122	33	79	1
40	84	251	87	84	94	167	146	180	85	97	83	122	33	95	1 1/4
50	97	251	97	84	94	167	157	180	89	97	83	122	33	95	1 1/2
63	124	273	112	106	94	167	183	180	101	97	83	122	33	107	2



**3-Way ball valve type 170 PVC-U**  
**Vertical/L-port 24V**  
**With manual emergency override**  
**With solvent cement sockets metric**

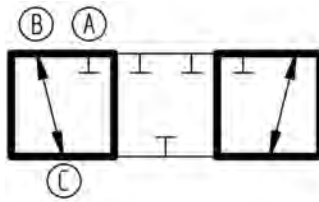
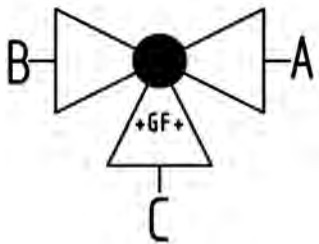


**Model:**

- Voltage 24V AC/DC
- Factory set control range 90°<
- Basic position B-C opened, activated position A-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

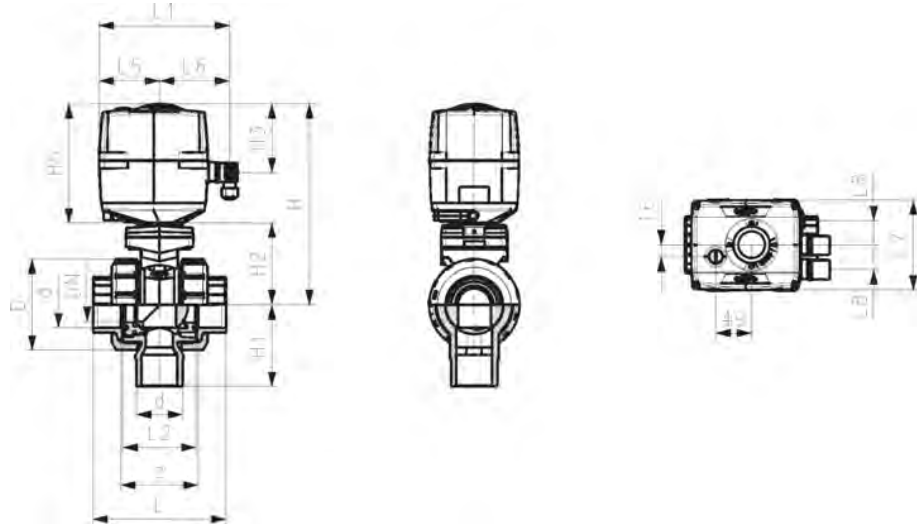
**Option:**

- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EA	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
16	10	3/8	10	49	EA25	<b>199 170 262</b>	2.039	<b>199 170 272</b>	2.039
20	15	1/2	10	77	EA25	<b>199 170 263</b>	2.043	<b>199 170 273</b>	2.043
25	20	3/4	10	146	EA25	<b>199 170 264</b>	2.546	<b>199 170 274</b>	2.150
32	25	1	10	260	EA25	<b>199 170 265</b>	2.267	<b>199 170 275</b>	2.267
40	32	1 1/4	10	437	EA25	<b>199 170 266</b>	2.922	<b>199 170 276</b>	2.554
50	40	1 1/2	10	667	EA25	<b>199 170 267</b>	2.818	<b>199 170 277</b>	2.818
63	50	2	10	1293	EA25	<b>199 170 268</b>	3.595	<b>199 170 278</b>	3.595

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)	closest inch (inch)
16	50	231	62	64	94	167	92	180	56	97	83	122	33	64	3/8
20	50	231	62	64	94	167	95	180	56	97	83	122	33	64	1/2
25	58	240	72	73	94	167	111	180	66	97	83	122	33	74	3/4
32	68	240	77	73	94	167	123	180	71	97	83	122	33	79	1
40	84	251	87	84	94	167	146	180	85	97	83	122	33	95	1 1/4
50	97	251	97	84	94	167	157	180	89	97	83	122	33	95	1 1/2
63	124	273	112	106	94	167	183	180	101	97	83	122	33	107	2



# 3-Way ball valves electric type 189



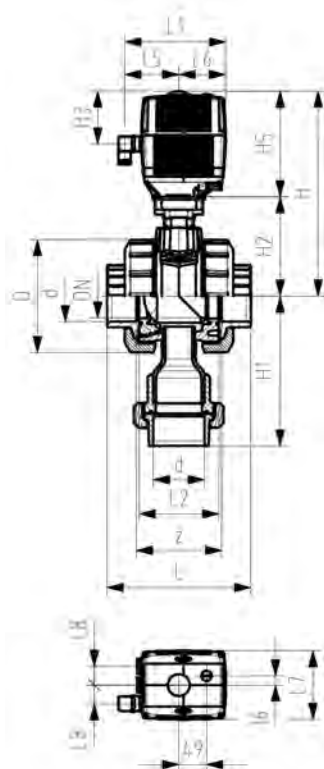
**3-Way ball valve type 189 PVC-U**  
**Vertical diverter ball 100-230**  
**With solvent cement sockets metric**

**Model:**

- Ball seals PTFE
- Voltage 100-230V, 50-60Hz for EA actuator
- Control time 15 s/90° EA31
- Special valve in general accordance to ISO 16135

**Mode of action:**

- For interconnection of two inputs
- Individual configuration available on special request



d (mm)	DN (mm)	PN (bar)	EPDM Code	SP	Weight (kg)	FKM Code
75	65	6	199 189 008	1	9.230	199 189 018
90	80	6	199 189 009	1	12.171	199 189 019
110	100	6	199 189 010	1	15.985	199 189 020

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)
75	166	346	226	156	94	190	233	180	136	64	98	82	122	33	144
90	200	358	264	168	94	190	254	180	141	64	98	82	122	33	151
110	238	365	289	175	94	190	301	180	164	64	98	82	122	33	174

**d closest inch**

(mm)	(inch)
75	2 ½
90	3
110	4



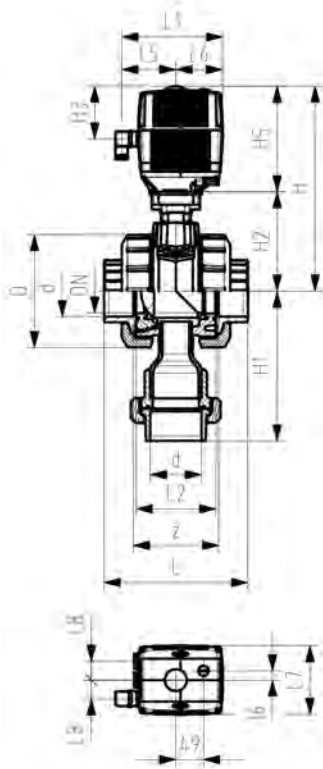
**3-Way ball valve type 189 PVC-U**  
**Vertical diverter ball 24V**  
**With solvent cement sockets metric**

**Model:**

- Ball seals PTFE
- Voltage 24V AC/DC
- Control time 15 s/90°<) EA31
- Special valve in general accordance to ISO 16135

**Mode of action:**

- For interconnection of two inputs
- Individual configuration available on special request



d (mm)	DN (mm)	PN (bar)	EPDM Code	SP	Weight (kg)	FKM Code
75	95	6	<b>199 189 068</b>	1	9.230	<b>199 189 078</b>
90	80	6	<b>199 189 069</b>	1	12.171	<b>199 189 079</b>
110	100	6	<b>199 189 070</b>	1	15.985	<b>199 189 080</b>

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)
75	166	346	226	156	94	190	233	180	136	64	98	82	122	33	144
90	200	358	264	168	94	190	254	180	141	64	98	82	122	33	151
110	238	365	289	175	94	190	301	180	164	64	98	82	122	33	174

**d closest inch**

(mm)	(inch)
75	2 ½
90	3
110	4



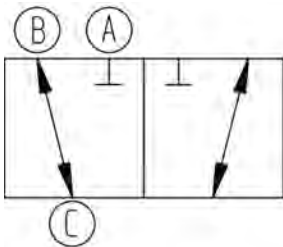
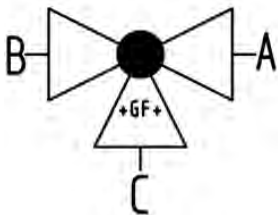
# 3-Way ball valves pneumatic type 285



**3-Way ball valve type 285 PVC-U**  
**Horizontal/L-port**  
**FC (Fail safe to close)**  
**Without manual override**  
**With solvent cement sockets metric**

**Model:**

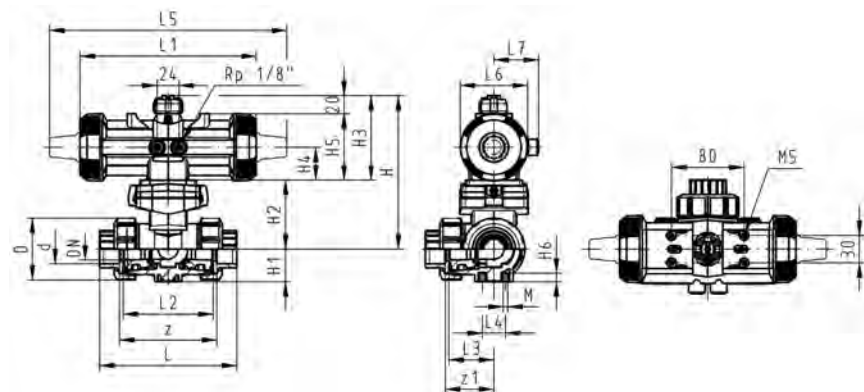
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Basic position B-C opened, activated position A-C opened, see flow scheme
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (L/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	3/8	10	50	<b>199 285 022</b>	1 1.115	<b>199 285 032</b>	1 1.115
20	15	1/2	10	75	<b>199 285 023</b>	1 1.121	<b>199 285 033</b>	1 1.121
25	20	3/4	10	150	<b>199 285 024</b>	1 1.227	<b>199 285 034</b>	1 1.228
32	25	1	10	280	<b>199 285 025</b>	1 1.439	<b>199 285 035</b>	1 1.413
40	32	1 1/4	10	480	<b>199 285 026</b>	1 2.539	<b>199 285 036</b>	1 2.539
50	40	1 1/2	10	620	<b>199 285 027</b>	1 3.592	<b>199 285 037</b>	1 2.991
63	50	2	10	1230	<b>199 285 028</b>	1 4.298	<b>199 285 038</b>	1 4.352

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)
16	50	159	28	62	97	40	77	8	109	194	73	36	25	261	76
20	50	159	28	62	97	40	77	8	112	194	73	36	25	261	76
25	58	168	32	71	97	40	77	8	131	194	86	43	25	261	76
32	68	168	36	71	97	40	77	8	151	194	99	50	25	261	76
40	84	203	45	84	119	51	99	9	181	224	120	60	45	305	95
50	97	203	51	84	119	51	99	9	205	224	137	69	45	305	95
63	124	225	65	106	119	51	99	9	261	224	179	89	45	305	95

d (mm)	L7 (mm)	M	z (mm)	z1 (mm)	closest inch (inch)
16	48	6	81	40	3/8
20	48	6	81	40	1/2
25	48	6	94	47	3/4
32	48	6	107	54	1
40	59	8	130	65	1 1/4
50	59	8	143	72	1 1/2
63	59	8	185	92	2

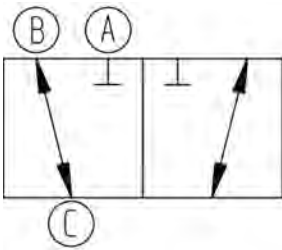
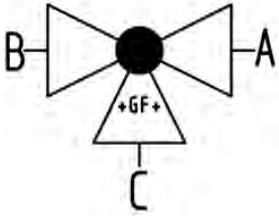




**3-Way ball valve type 285 PVC-U**  
**Horizontal/L-port**  
**FC (Fail safe to close)**  
**Without manual override**  
**With solvent cement spigots metric**

**Model:**

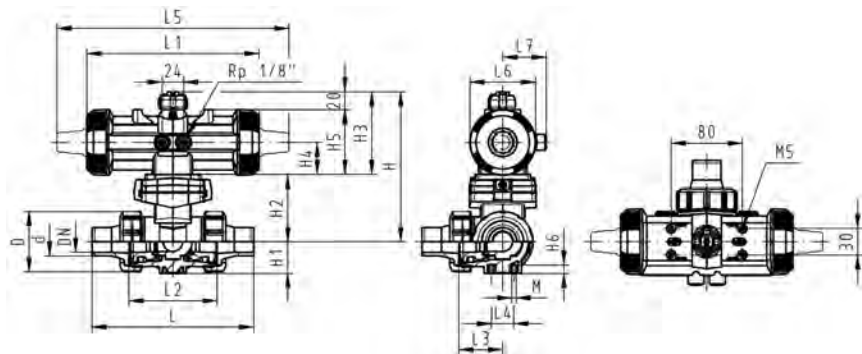
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Basic position B-C opened, activated position A-C opened, see flow scheme
- Control time 90° < 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	3/8	10	50	<b>199 285 002</b>	1	1.121	<b>199 285 012</b>	1	1.121
20	15	1/2	10	75	<b>199 285 003</b>	1	1.130	<b>199 285 013</b>	1	1.130
25	20	3/4	10	150	<b>199 285 004</b>	1	1.241	<b>199 285 014</b>	1	1.264
32	25	1	10	280	<b>199 285 005</b>	1	1.463	<b>199 285 015</b>	1	1.436
40	32	1 1/4	10	480	<b>199 285 006</b>	1	2.560	<b>199 285 016</b>	1	2.560
50	40	1 1/2	10	620	<b>199 285 007</b>	1	3.054	<b>199 285 017</b>	1	3.054
63	50	2	10	1230	<b>199 285 008</b>	1	4.478	<b>199 285 018</b>	1	4.451

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)
16	50	159	28	62	97	40	77	8	131	194	73	36	25	261	76
20	50	159	28	62	97	40	77	8	141	194	73	36	25	261	76
25	58	168	32	71	97	40	77	8	165	194	86	43	25	261	76
32	68	168	36	71	97	40	77	8	182	194	99	50	25	261	76
40	84	203	45	84	119	51	99	9	209	224	120	60	45	305	95
50	97	203	51	84	119	51	99	9	242	224	137	69	45	305	95
63	124	225	65	106	119	51	99	9	302	224	179	89	45	305	95

d (mm)	L7 (mm)	M	closest inch (inch)
16	48	6	3/8
20	48	6	1/2
25	48	6	3/4
32	48	6	1
40	59	8	1 1/4
50	59	8	1 1/2
63	59	8	2

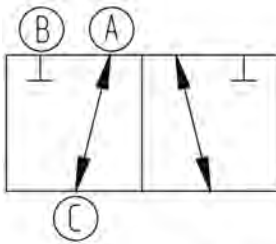
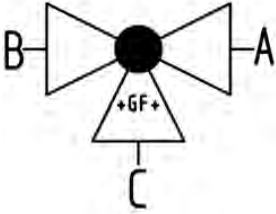




**3-Way ball valve type 285 PVC-U**  
**Horizontal/L-port**  
**DA (Double acting)**  
**Without manual override**  
**With solvent cement sockets metric**

**Model:**

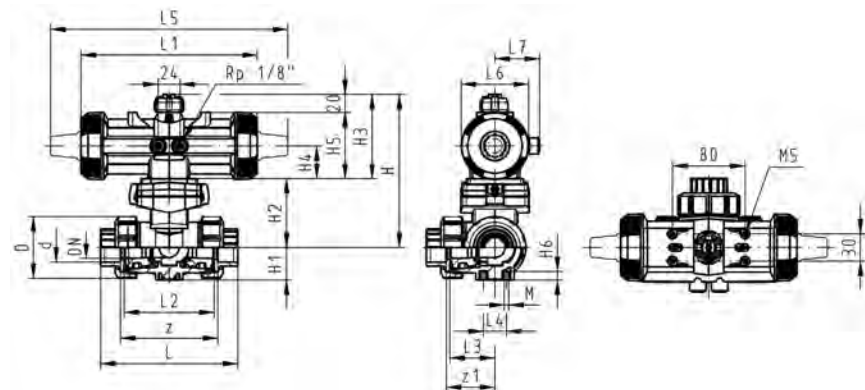
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts



d	DN	Size	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(mm)	(inch)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
16	10	3/8	10	50	<b>199 285 202</b>	1	0.925	<b>199 285 212</b>	1	0.925
20	15	1/2	10	75	<b>199 285 203</b>	1	0.931	<b>199 285 213</b>	1	0.885
25	20	3/4	10	150	<b>199 285 204</b>	1	1.059	<b>199 285 214</b>	1	1.059
32	25	1	10	280	<b>199 285 205</b>	1	1.183	<b>199 285 215</b>	1	1.249
40	32	1 1/4	10	480	<b>199 285 206</b>	1	2.115	<b>199 285 216</b>	1	2.115
50	40	1 1/2	10	620	<b>199 285 207</b>	1	2.452	<b>199 285 217</b>	1	2.463
63	50	2	10	1230	<b>199 285 208</b>	1	3.806	<b>199 285 218</b>	1	3.828

d	D	H	H1	H2	H3	H4	H5	H6	L	L1	L2	L3	L4	L5	L6
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
16	50	159	28	62	97	40	77	8	109	194	73	36	25	261	76
20	50	159	28	62	97	40	77	8	112	194	73	36	25	261	76
25	58	168	32	71	97	40	77	8	131	194	86	43	25	261	76
32	68	168	36	71	97	40	77	8	151	194	99	50	25	261	76
40	84	203	45	84	119	51	99	9	181	224	120	60	45	305	95
50	97	203	51	84	119	51	99	9	205	224	137	69	45	305	95
63	124	225	65	106	119	51	99	9	261	224	179	89	45	305	95

d	L7	M	z	z1	closest
(mm)	(mm)		(mm)	(mm)	inch
16	48	6	81	40	3/8
20	48	6	81	40	1/2
25	48	6	94	47	3/4
32	48	6	107	54	1
40	59	8	130	65	1 1/4
50	59	8	143	72	1 1/2
63	59	8	185	92	2

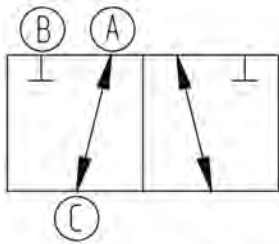
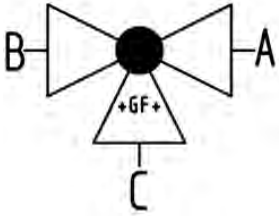




**3-Way ball valve type 285 PVC-U**  
**Horizontal/L-port**  
**DA (Double acting)**  
**Without manual override**  
**With solvent cement spigots metric**

**Model:**

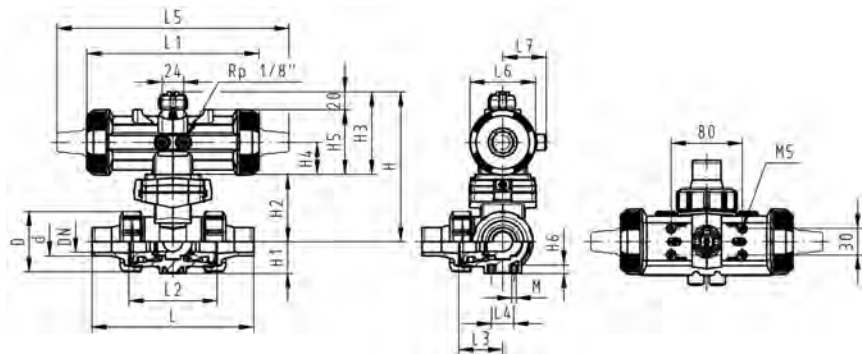
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Control time 90° < 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	3/8	10	50	199 285 182	1	0.931	199 285 192
20	15	1/2	10	75	199 285 183	1	0.940	199 285 193
25	20	3/4	10	150	199 285 184	1	1.074	199 285 194
32	25	1	10	280	199 285 185	1	1.273	199 285 195
40	32	1 1/4	10	480	199 285 186	1	2.136	199 285 196
50	40	1 1/2	10	620	199 285 187	1	2.630	199 285 197
63	50	2	10	1230	199 285 188	1	4.054	199 285 198

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)
16	50	159	28	62	97	40	77	8	131	194	73	36	25	261	76
20	50	159	28	62	97	40	77	8	141	194	73	36	25	261	76
25	58	168	32	71	97	40	77	8	165	194	86	43	25	261	76
32	68	168	36	71	97	40	77	8	182	194	99	50	25	261	76
40	84	203	45	84	119	51	99	9	209	224	120	60	45	305	95
50	97	203	51	84	119	51	99	9	242	224	137	69	45	305	95
63	124	225	65	106	119	51	99	9	302	224	179	89	45	305	95

d (mm)	L7 (mm)	M	closest inch (inch)
16	48	6	3/8
20	48	6	1/2
25	48	6	3/4
32	48	6	1
40	59	8	1 1/4
50	59	8	1 1/2
63	59	8	2

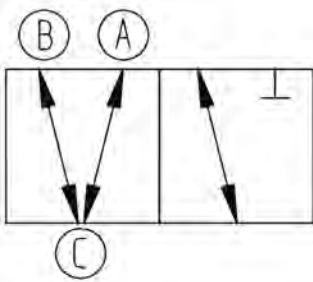
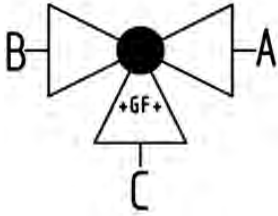




**3-Way ball valve type 285 PVC-U**  
**Horizontal/T-port**  
**FC (Fail safe to close)**  
**Without manual override**  
**With solvent cement sockets metric**

**Model:**

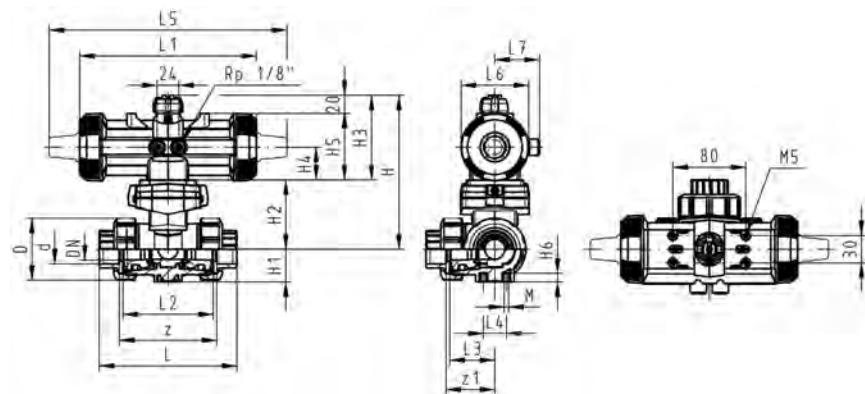
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Basic position B-C opened, activated position A-B-C opened, see flow scheme
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	3/8	10	140	199 285 062	1	1.114	199 285 072	1	1.114
20	15	1/2	10	200	199 285 063	1	1.120	199 285 073	1	1.120
25	20	3/4	10	470	199 285 064	1	1.247	199 285 074	1	1.247
32	25	1	10	793	199 285 065	1	1.404	199 285 075	1	1.432
40	32	1 1/4	10	1290	199 285 066	1	2.481	199 285 076	1	2.528
50	40	1 1/2	10	1910	199 285 067	1	2.970	199 285 077	1	2.970
63	50	2	10	3100	199 285 068	1	4.263	199 285 078	1	4.314

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)
16	50	159	28	62	97	40	77	8	109	194	73	36	25	261	76
20	50	159	28	62	97	40	77	8	112	194	73	36	25	261	76
25	58	168	32	71	97	40	77	8	131	194	86	43	25	261	76
32	68	168	36	71	97	40	77	8	151	194	99	50	25	261	76
40	84	203	45	84	119	51	99	9	181	224	120	60	45	305	95
50	97	203	51	84	119	51	99	9	205	224	137	69	45	305	95
63	124	225	65	106	119	51	99	9	261	224	179	89	45	305	95

d (mm)	L7 (mm)	M	z (mm)	z1 (mm)	closest inch (inch)
16	48	6	81	40	3/8
20	48	6	81	40	1/2
25	48	6	94	47	3/4
32	48	6	107	54	1
40	59	8	130	65	1 1/4
50	59	8	143	72	1 1/2
63	59	8	185	92	2

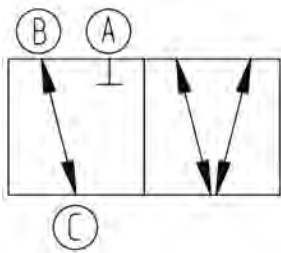
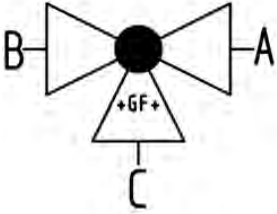




**3-Way ball valve type 285 PVC-U**  
**Horizontal/T-port**  
**FC (Fail safe to close)**  
**Without manual override**  
**With solvent cement spigots metric**

**Model:**

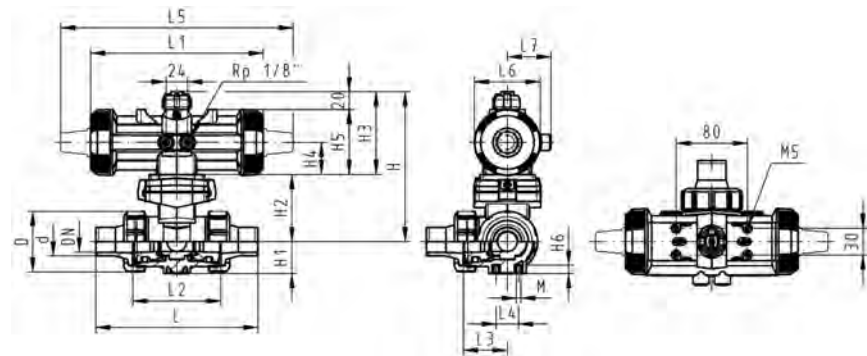
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Basic position B-C opened, activated position A-B-C opened, see flow scheme
- Control time 90° < 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	3/8	10	140	<b>199 285 042</b>	1	1.120	<b>199 285 052</b>	1	1.120
20	15	1/2	10	200	<b>199 285 043</b>	1	1.129	<b>199 285 053</b>	1	1.129
25	20	3/4	10	470	<b>199 285 044</b>	1	1.262	<b>199 285 054</b>	1	1.262
32	25	1	10	793	<b>199 285 045</b>	1	1.456	<b>199 285 055</b>	1	1.456
40	32	1 1/4	10	1290	<b>199 285 046</b>	1	2.549	<b>199 285 056</b>	1	2.549
50	40	1 1/2	10	1910	<b>199 285 047</b>	1	3.033	<b>199 285 057</b>	1	3.033
63	50	2	10	3100	<b>199 285 048</b>	1	4.433	<b>199 285 058</b>	1	4.433

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)
16	50	159	28	62	97	40	77	8	131	194	73	36	25	261	76
20	50	159	28	62	97	40	77	8	141	194	73	36	25	261	76
25	58	168	32	71	97	40	77	8	165	194	86	43	25	261	76
32	68	168	36	71	97	40	77	8	182	194	99	50	25	261	76
40	84	203	45	84	119	51	99	9	209	224	120	60	45	305	95
50	97	203	51	84	119	51	99	9	242	224	137	69	45	305	95
63	124	225	65	106	119	51	99	9	302	224	179	89	45	305	95

d (mm)	L7 (mm)	M	closest inch (inch)
16	48	6	3/8
20	48	6	1/2
25	48	6	3/4
32	48	6	1
40	59	8	1 1/4
50	59	8	1 1/2
63	59	8	2

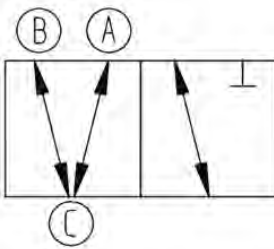
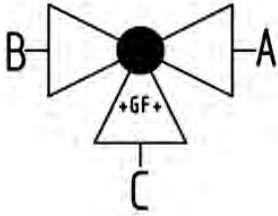




**3-Way ball valve type 285 PVC-U**  
**Horizontal/T-port**  
**DA (Double acting)**  
**Without manual override**  
**With solvent cement sockets metric**

**Model:**

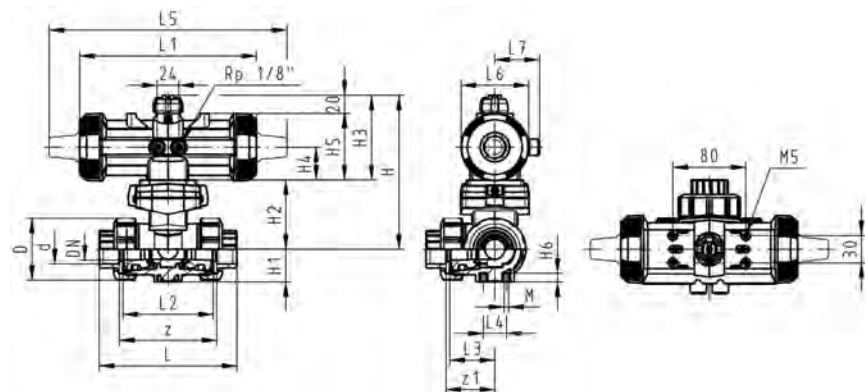
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Basic position A-B-C opened, activated position B-C opened, see flow scheme
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	3/8	10	140	199 285 242	1 0.924	199 285 252	1 0.924
20	15	1/2	10	200	199 285 243	1 0.930	199 285 253	1 0.930
25	20	3/4	10	470	199 285 244	1 1.057	199 285 254	1 1.057
32	25	1	10	793	199 285 245	1 1.242	199 285 255	1 1.242
40	32	1 1/4	10	1290	199 285 246	1 2.104	199 285 256	1 2.104
50	40	1 1/2	10	1910	199 285 247	1 2.546	199 285 257	1 2.546
63	50	2	10	3100	199 285 248	1 3.883	199 285 258	1 3.883

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)
16	50	159	28	62	97	40	77	8	109	194	73	36	25	261	76
20	50	159	28	62	97	40	77	8	112	194	73	36	25	261	76
25	58	168	32	71	97	40	77	8	131	194	86	43	25	261	76
32	68	168	36	71	97	40	77	8	151	194	99	50	25	261	76
40	84	203	45	84	119	51	99	9	181	224	120	60	45	305	95
50	97	203	51	84	119	51	99	9	205	224	137	69	45	305	95
63	124	225	65	106	119	51	99	9	261	224	179	89	45	305	95

d (mm)	L7 (mm)	M	z (mm)	z1 (mm)	closest inch (inch)
16	48	6	81	40	3/8
20	48	6	81	40	1/2
25	48	6	94	47	3/4
32	48	6	107	54	1
40	59	8	130	65	1 1/4
50	59	8	143	72	1 1/2
63	59	8	185	92	2

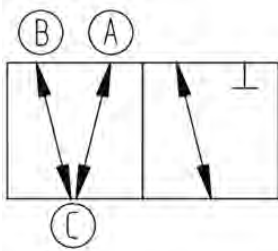
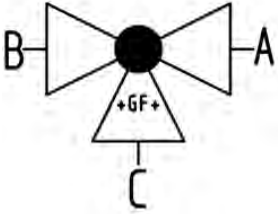




**3-Way ball valve type 285 PVC-U**  
**Horizontal/T-port**  
**DA (Double acting)**  
**Without manual override**  
**With solvent cement spigots metric**

**Model:**

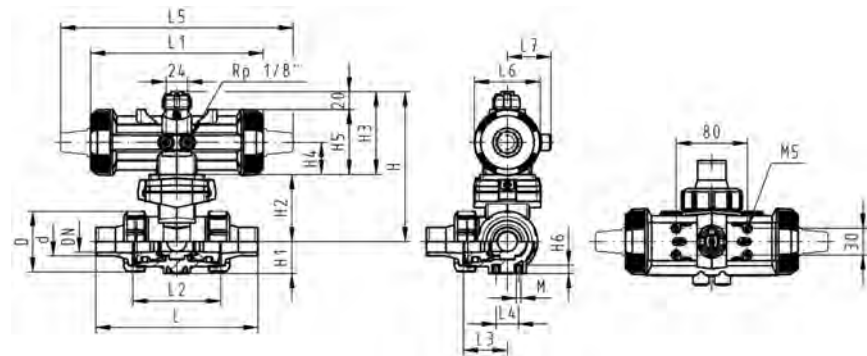
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Basic position A-B-C opened, activated position B-C opened, see flow scheme
- Control time 90° < 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	3/8	10	140	199 285 222	1	0.930	199 285 232
20	15	1/2	10	200	199 285 223	1	0.939	199 285 233
25	20	3/4	10	470	199 285 224	1	1.072	199 285 234
32	25	1	10	793	199 285 225	1	1.266	199 285 235
40	32	1 1/4	10	1290	199 285 226	1	2.125	199 285 236
50	40	1 1/2	10	1910	199 285 227	1	2.609	199 285 237
63	50	2	10	3100	199 285 228	1	4.009	199 285 238

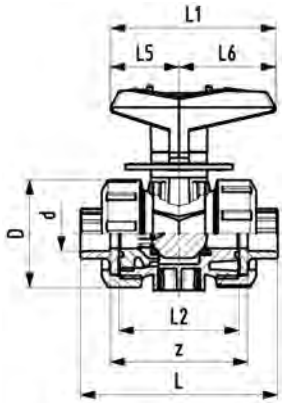
d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)
16	50	159	28	62	97	40	77	8	131	194	73	36	25	261	76
20	50	159	28	62	97	40	77	8	141	194	73	36	25	261	76
25	58	168	32	71	97	40	77	8	165	194	86	43	25	261	76
32	68	168	36	71	97	40	77	8	182	194	99	50	25	261	76
40	84	203	45	84	119	51	99	9	209	224	120	60	45	305	95
50	97	203	51	84	119	51	99	9	242	224	137	69	45	305	95
63	124	225	65	106	119	51	99	9	302	224	179	89	45	305	95

d (mm)	L7 (mm)	M	closest inch (inch)
16	48	6	3/8
20	48	6	1/2
25	48	6	3/4
32	48	6	1
40	59	8	1 1/4
50	59	8	1 1/2
63	59	8	2





# Metering ball valves type 523



## Metering ball valve type 523 PVC-U With mounting inserts/With solvent cement sockets metric

### Model:

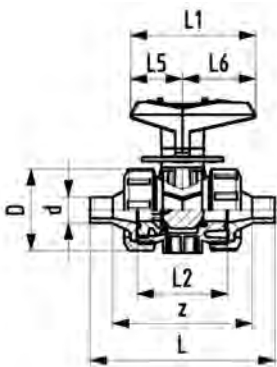
- Micro-doser
- Excellent control characteristics
- Designed for easy installation and removal
- Ball seals PTFE
- Angle of operation 180° with scale
- Integrated stainless steel mounting inserts
- Z-length, end connectors and union nuts **not compatible** to Type 323

### Option:

- Other materials on demand

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	3/8	10	11	161 523 401	1	0.170	161 523 411
20	15	1/2	10	20	161 523 402	1	0.169	161 523 412

d (mm)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	z (mm)	closest inch (inch)
16	50	68	27	92	77	56	25	32	45	64	3/8
20	50	68	27	95	77	56	25	32	45	64	1/2



## Metering ball valve type 523 PVC-U With mounting inserts/With solvent cement spigots metric

### Model:

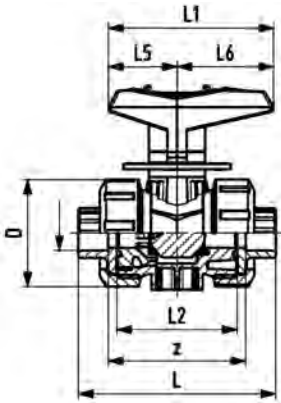
- Micro-doser
- Excellent control characteristics
- Designed for easy installation and removal
- Ball seals PTFE
- Angle of operation 180° with scale
- Integrated stainless steel mounting inserts
- Z-length, end connectors and union nuts **not compatible** to Type 323

### Option:

- Other materials on demand

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	3/8	10	11	161 523 441	1	0.170	161 523 451
20	15	1/2	10	20	161 523 442	1	0.170	161 523 452

d (mm)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	closest inch (inch)
16	50	68	27	114	77	56		25	32	45	3/8
20	50	68	27	124	77	56	130	25	32	45	1/2



**Metering ball valve type 523 PVC-U**  
**With mounting inserts/With threaded sockets Rp**

**Model:**

- Micro-doser
- Excellent control characteristics
- Designed for easy installation and removal
- Ball seals PTFE
- Angle of operation 180° with scale
- Integrated stainless steel mounting inserts
- Z-length, end connectors and union nuts **not compatible** to Type 323

**Option:**

- Other materials on demand

d	DN	Thread	Type	Size	PN	kv-value	EPDM	SP	Weight
(mm)	(mm)			(inch)	(bar)	( $\Delta p=1$ bar)	Code		(kg)
						(l/min)			
16	10	Rp		3/8	10	11	<b>161 523 421</b>	1	0.170
20	15	Rp		1/2	10	20	<b>161 523 422</b>	1	0.170

FKM	SP	Weight	D	H	H1	L	L1	L2	L4	L5	L6	z
Code		(kg)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
<b>161 523 431</b>	1	0.170	50	68	27	95	77	56	25	32	45	69
<b>161 523 432</b>	1	0.170	50	68	27	100	77	56	25	32	45	67

# Laboratory ball valves



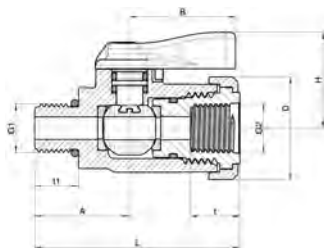
## Laboratory Ball Valve Type 522 PVC-U With female thread-male thread

### Model:

- Disconnection one end only
- Ball seal PTFE

### Following connections/parts are included for every valve:

- Hose Nozzle
- Blind plug
- Double nipple
- Clip tie
- Locking and metering ring
- 2 O-rings



d (mm)	DN (mm)	Size (inch)	PN (bar)	EPDM Code	SP	Weight (kg)	FKM Code
10	6	1/8	10	161 522 060	1	0.050	161 522 070
10	6	1/8	10	161 522 160	1	0.050	161 522 170

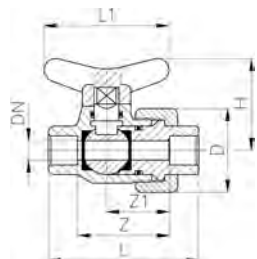
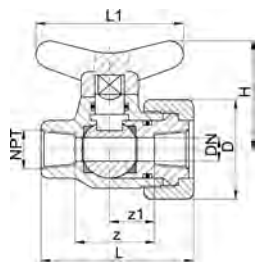
d (mm)	G1 (mm)	G2 (mm)	A (mm)	B (mm)	D (mm)	H (mm)	L (mm)	t (mm)	t1 (mm)
10	1/4" BSP	1/4" BSP	26.0	28.2	28	25.5	56.0	13.5	12
10	1/4" NPT	1/4" NPT	28.5	29.0	28	26.5	58.5	13.5	14.5



## Laboratory ball cock type 324 PVC-U With threaded sockets NPT

### Model:

- Disconnection one end only
- Ball seals PTFE
- Angle of operation 90°



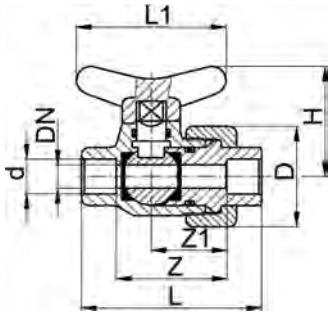
DN (mm)	Thread Type	Size (inch)	PN (bar)	EPDM Code	SP	Weight (kg)	D (mm)	H (mm)	L (mm)	L1 (mm)	z (mm)	z1 (mm)
8	NPT	1/4	10	161 324 454	5	0.042	34	38	52	45	26	15



**Laboratory ball cock type 322 PVC-U silicone free**  
**With solvent cement sockets metric**

**Model:**

- Silicone free/paint-compatible
- Disconnection one end only
- Ball seals PVDF



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
10	6	10	11	<b>161 322 251</b>	5	0.042	<b>161 322 256</b>	1	0.042
12	8	10	20	<b>161 322 252</b>	5	0.045	<b>161 322 257</b>	4	0.045

d (mm)	D (mm)	H (mm)	L (mm)	L1 (mm)	z (mm)	z1 (mm)
10	34	38	52	45	26	15
12	34	38	60	45	36	25

A class of their own

# Diaphragm valves



## System overview

# A solution for every situation

GF Piping Systems offers a wide range of diaphragm valves to cover the individual demands of our customers. No matter which pressure level, media temperature, dimension or actuator – we provide every kind of diaphragm valves to meet your expectations perfectly.

## + Manual diaphragm valves



**Type 514, 515, 517**  
Manual 2-way diaphragm valve

- Full plastic valve with optimized body design for improved flow profile
- Lockable handwheel
- Optical position indicator

Dimension range:  
d20/DN15 to d65/DN50

Pressure range:  
0 to 16 bar



**Type 519**  
3-way zero-static

- Full plastic valve with optimized body design for improved flow profile
- No dead space
- Different outlet sizes available

Dimension range:  
d16/DN15 to d110/DN50

Pressure range:  
0 to 16 bar



**Type 317**  
Big dimensions

- Proven screw design for big dimension
- Optical position indicator

Dimension range:  
d75/DN65 to d160/DN150

Pressure range:  
0 to 10 bar



## + Pneumatic diaphragm valves



### Type 604/605

- Full plastic valve with optimized body design for improved flow profile
- Control mode: FC, FO, DA
- Optical position indicator

Dimension:  
d20/DN15

Pressure range:  
0 to 6 bar



### DIASTAR range

- Full plastic valve with optimized body design for improved flow profile
- Control mode: FC, FO, DA
- Wide selection of accessories

Dimension range:  
d20/DN15 to d65/DN50

Pressure range:  
0 to 16 bar

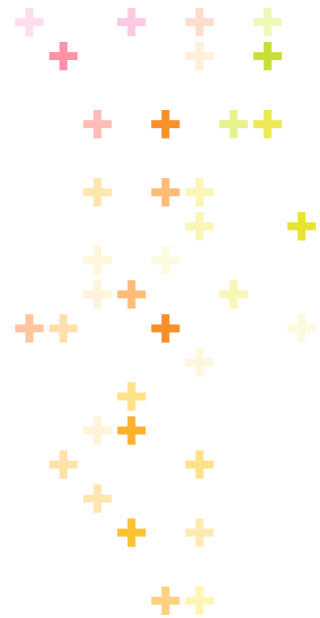


### Type 025 big dimensions

- Proven screw design for big dimensions
- Optical position indicator

Dimension range:  
d75/DN65 to d160/DN150

Pressure range:  
0 to 10 bar



Configurator

# A valve with hundreds of options

Due to the modularity of the GF diaphragm valves, there are many different options to choose from. You can easily adjust your valve to your process conditions to get the most out of it.

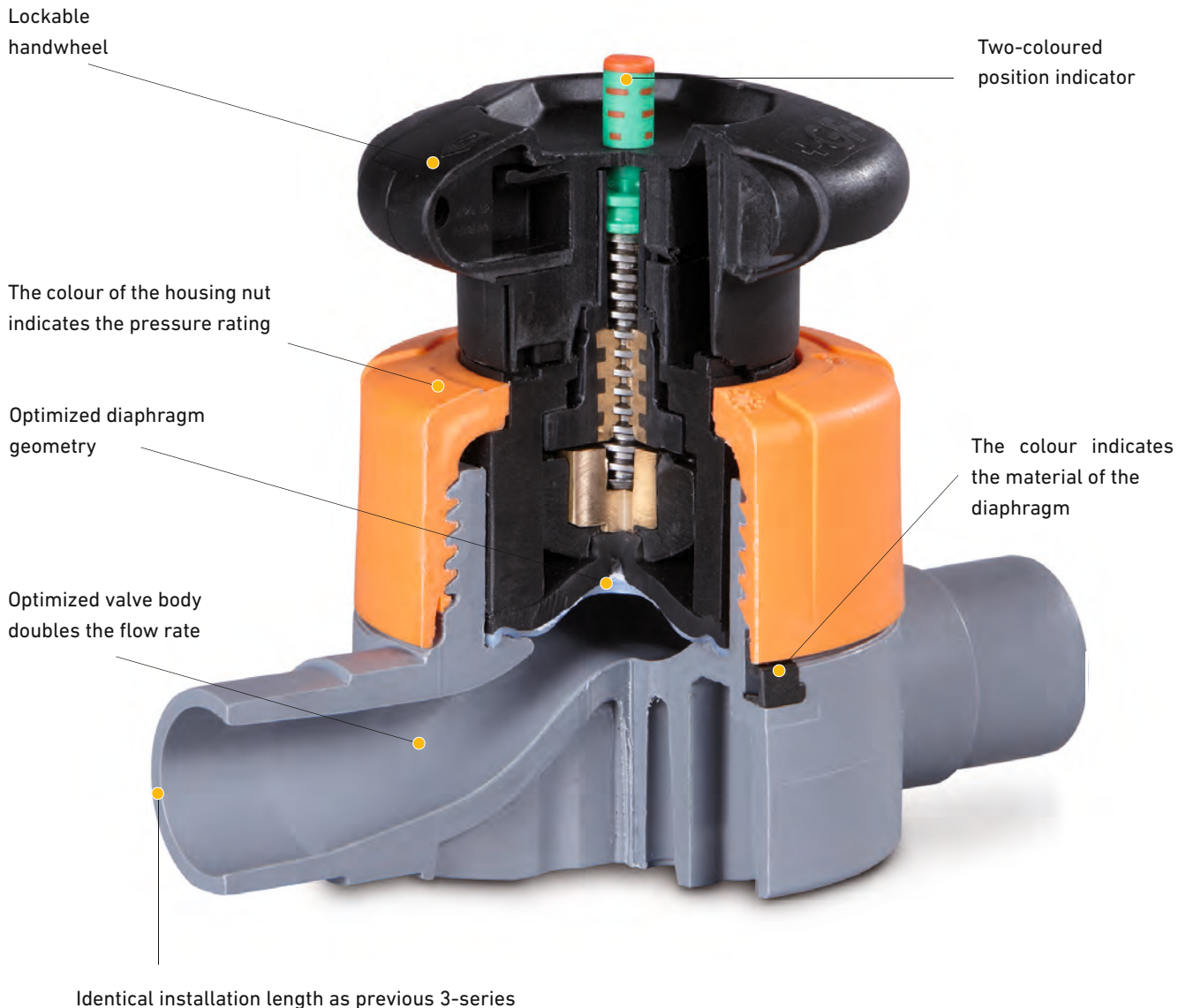




Features of the manual diaphragm valve

# Manual mode in every detail

Optimized valve body, higher flow rate, straightforward installation and a central housing, the strength of this full plastic diaphragm valve is located in every detail. Have a closer look and find out many other features.

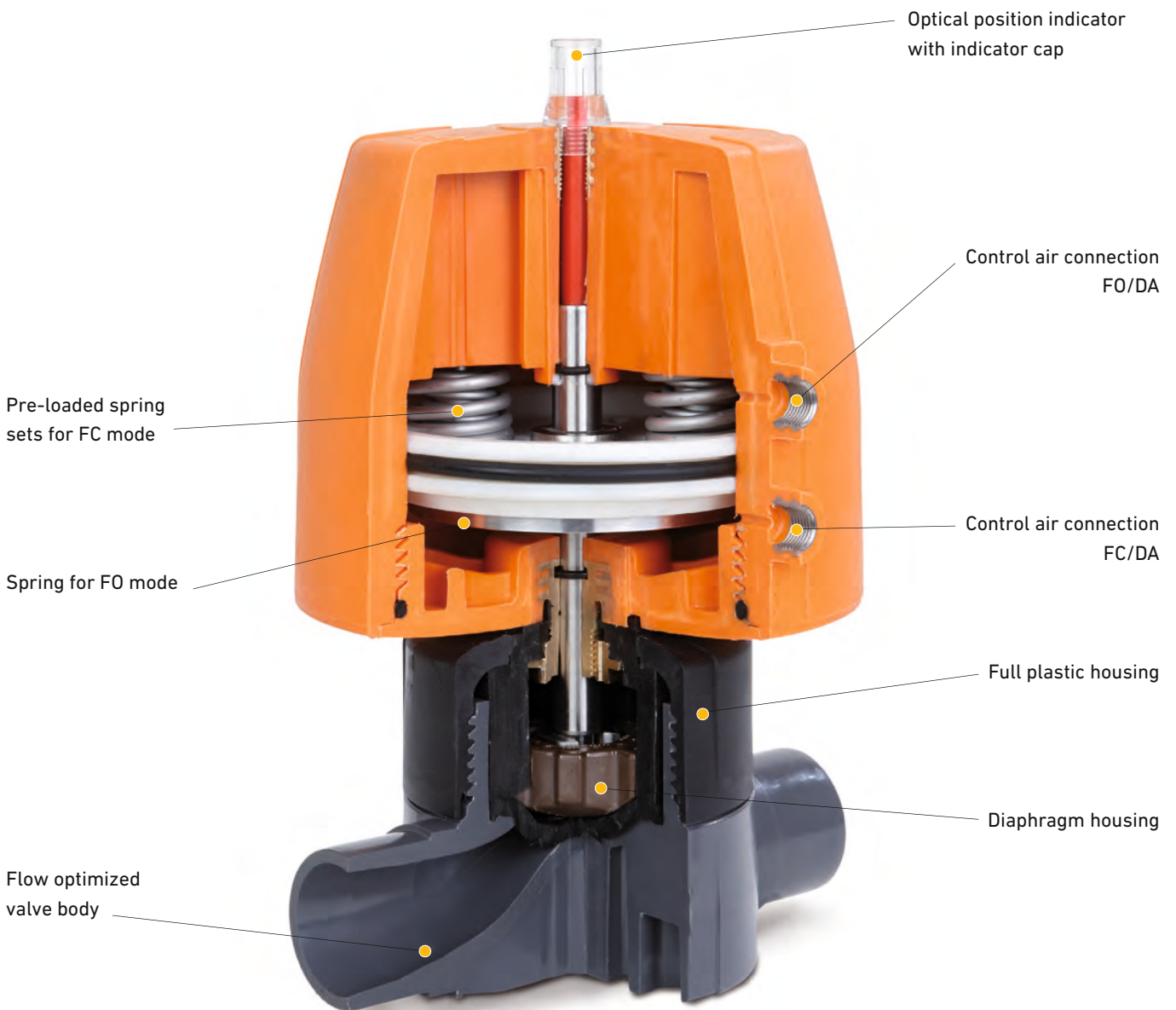


Functions and configurations can differ from the illustration, depending on the type.

Features of the pneumatic diaphragm valve

# Perfect teamwork

Same advantages and features, different technology. The perfect interaction of the pneumatic actuator and the high-tech body makes GF diaphragm valves a leading technology in this field.



## Features

# The DIASTAR system

Different pressure levels require different handling. Therefore, GF Piping Systems offers the optimal actuator configuration for your individual needs.



## + Differentiation DIASTAR



### DIASTAR Six

For low pressure applications

- DN15 to DN50
- FC-function
- Cost effective



### DIASTAR Ten

All-rounder for standard applications

- DN15 to DN50
- FC-, FO and DA-function



### DIASTAR TenPlus

Use only when pressure is applied from both sides

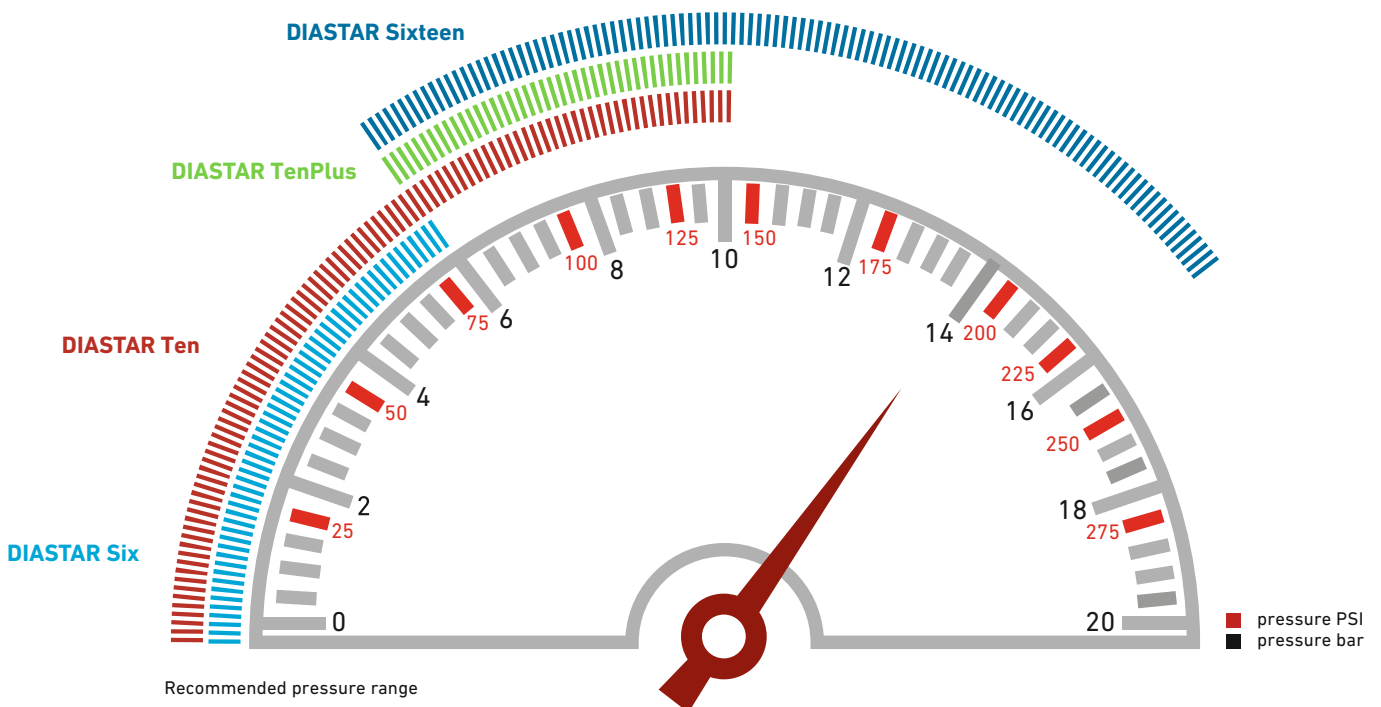
- DN15 to DN50
- FC-function



### DIASTAR Sixteen

For water applications with high pressure

- DN15 to DN50
- FC-, FO-, DA-function



## Diaphragm valves 5-series

# Full plastic solution brings safety

The full plastic design of GF diaphragm valves is a revolution and has a lot of advantages against the metal versions. The benefits of the design simplify your daily business and optimize your plant to make the best of your applications.

### + No corrosion & maintenance

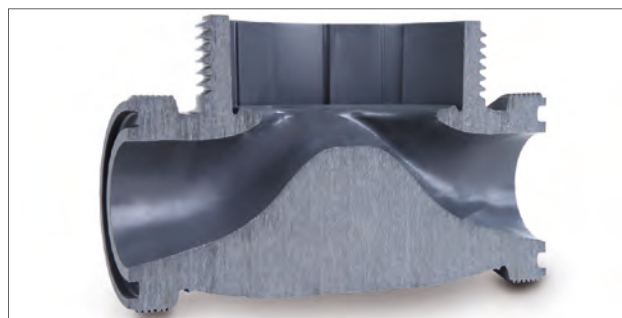
Instead of four metal screws the full plastic diaphragm valve has only one central housing nut. The result is a homogeneous expansion during temperature changes. This results in zero maintenance and no leakages during temperature cycles.



### + 100% more flow

The development aimed to increase the flow and provide a valve for a stable process. Through the optimization of the patented valve body you benefit from:

- Double flow rate
- Linear flow characteristics
- Minimized dead space for maximal hygiene



### + Absolute reliability

All diaphragm valves are 100% leak-tested. EvAfter exceeding the required tests of ISO 9393-2, the QR code and quality check sticker is put on the valve. scanning the QR code you will be directed to the online service site the service site online ([www.gfps.com/dv](http://www.gfps.com/dv)) with information regarding the latest developments.

- Product catalog
- Technical specification
- Service manuals
- Service videos
- Tips and tricks



Diaphragm valve type 604/605

# Packs a punch for dosing applications

The full-plastic diaphragm valve 604 / 605 with integrated pneumatic actuator from GF Piping Systems ensures best flow performance in compact design. With this corrosion free valve we offer an additional product with the most economic price-performance ratio which is suitable for many applications.

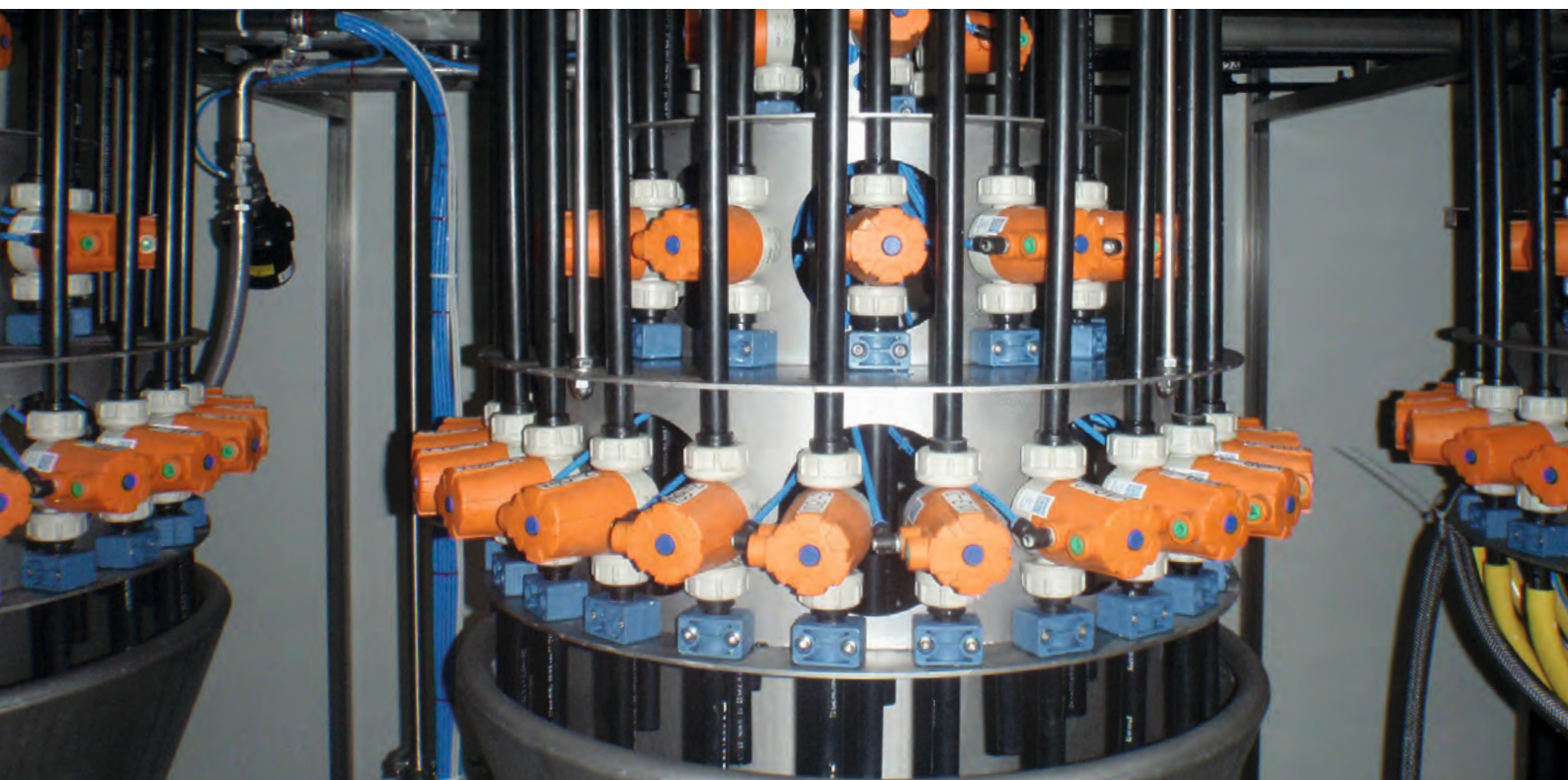
## Easy installation and operation

- The compact design enables installation in limited spaces
- No re-torquing needed due to full plastic design without metal parts and screws
- Radially dismountable due to true unions
- Maintenance free
- Same installation length as all GF diaphragm valves and market standard valves
- Integrated optical position feedback
- QR code on valve leads to online available product documents

## High safety

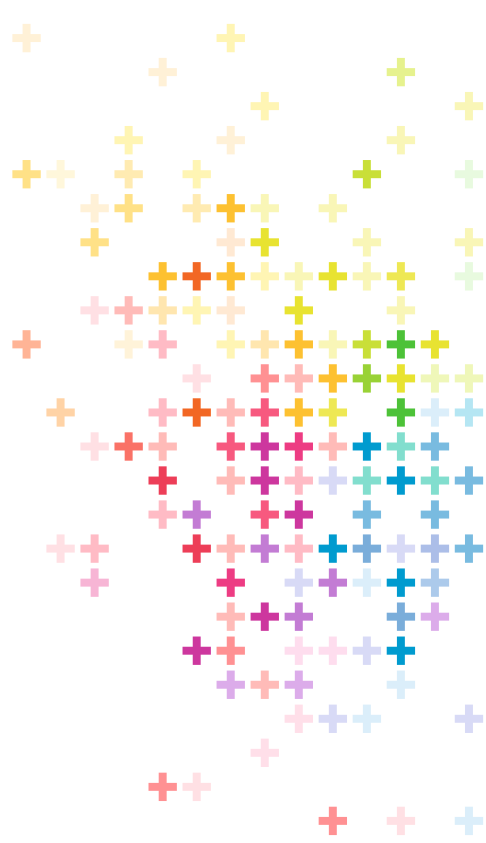
- Uniform temperature expansion of plastic to plastic connection prevents leakages
- High chemical resistance due to large material range
- Best quality and reliability for high number of cycles

## + Features



# System overview – it's your choice

GF Piping Systems offers you a wide variety of valves to meet your needs in every situation. The following valve overview should simplify your decision by offering every detail of the valves. Have a closer look to find the perfect valve.



## Manual operated

### General

Type	514	515	517	519	317
					
Description	True union	Spigot ends	Flange version	3-way	Big dimension
Dimension			DN15-DN50		DN65-DN150
Pressure level			PN10/PN16 *		PN10 (PN6*)
<b>Materials</b>					
PVC-U	✓	✓	✓		✓
PVC-C	✓	✓	✓		✓
ABS	✓	✓			✓
PP-H	✓	✓	✓	✓	✓
PP-n		✓			
PVDF	✓	✓	✓	✓	✓
PVDF-HP	✓	✓	✓	✓	✓
<b>Diaphragm materials</b>					
EPDM	✓	✓	✓	✓	✓
PTFE/EPDM	✓	✓	✓	✓	✓
PTFE/FKM	✓	✓	✓	✓	
FKM	✓	✓	✓		✓
NBR	✓	✓	✓		✓
<b>Accessories</b>					
Feedback electric	✓	✓	✓	✓	

\*See pressure-temperature diagram in the respective data sheet

## Pneumatically operated

### General

Type	604	605	DIASTAR Six	DIASTAR Ten	DIASTAR TenPlus	DIASTAR Sixteen	025
							
Dimension	DN15		DN15-DN50				DN65-DN150
Pressure level	PN6		PN6	PN10	PN10 on both sides	PN16	PN10 (PN6*)

### Functions

FC	✓	✓	✓	✓	✓	✓	✓
FO	✓	✓		✓		✓	✓
DA	✓	✓		✓		✓	✓

### Pneumatic connections

Size	G¼"	G¼"	G½"	to DN40: G½" from DN40: G¼"	to DN32: G½" from DN32: G¼"	to DN32: G½" from DN32: G¼"	G ¼"
PVC-U	✓	✓	✓	✓	✓		✓
PVC-C	✓	✓	✓	✓	✓		✓
ABS	✓	✓	✓	✓	✓		✓
PP-H	✓	✓	✓	✓	✓		✓
PP-n				✓			
PVDF	✓	✓		✓	✓	✓	✓
PVDF-HP				✓	✓	✓	✓

### Connection

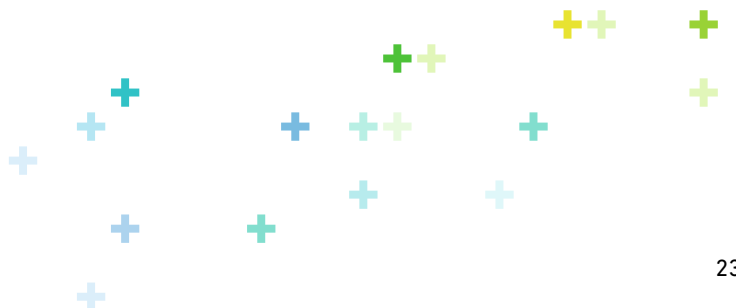
Sockets	✓		✓	✓	✓	✓	
Spigot		✓	✓	✓	✓	✓	
Flange			✓	✓	✓	✓	✓
Threaded socket			✓	✓	✓	✓	

### Diaphragm

EPDM	✓	✓	✓	✓	✓	✓	✓
PTFE/EPDM	✓	✓		✓	✓	✓	✓
PTFE/FKM	✓	✓		✓	✓	✓	
FKM	✓	✓	✓	✓	✓	✓	✓
NBR			✓	✓	✓	✓	✓

### Accessories

Feedback electric				✓	✓	✓	✓
Emergency manual override				✓	✓	✓	✓
Stroke limiter	✓	✓		✓	✓	✓	✓
Positioner				✓	✓	✓	✓
Bus connection				✓	✓	✓	✓



## Technical data

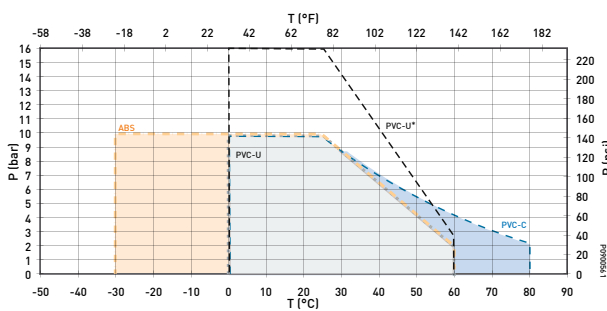
# Specifications

The most important data at a glance.

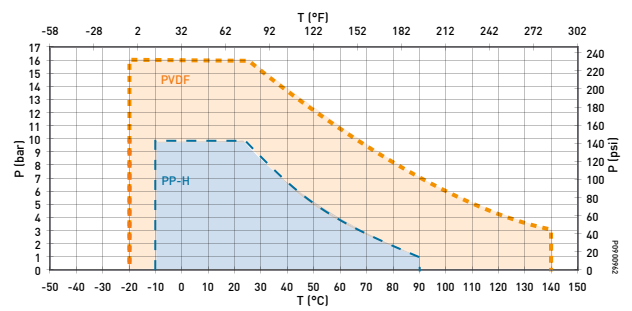


## + Pressure-temperature diagram

Pressure-temperature diagram ABS, PVC-U, PVC-C (water, 25 years)

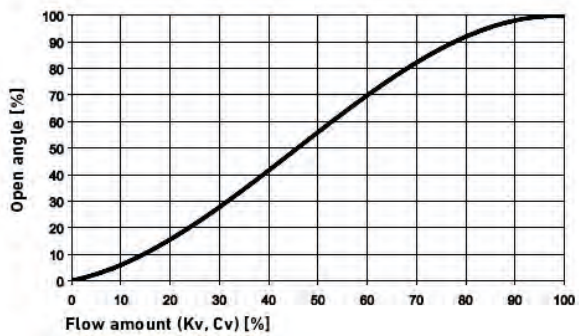


Pressure-temperature diagram PVDF, PP-H (water, 25 years)

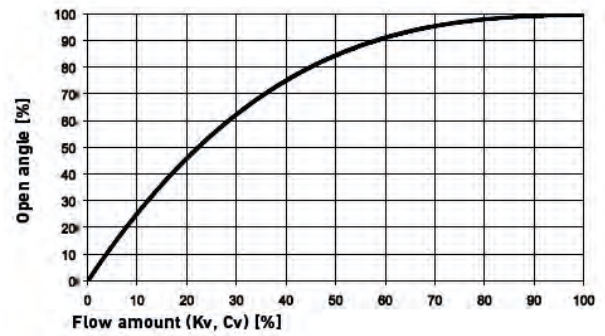


## + Flow characteristics

2-Way diaphragm valve type 514–517/DIASTAR



3-way diaphragm valve type 519/DIASTAR



### KV 100 values

d [mm]	DN	Inch	Kv 100 (l/min)	Cv 100 (gal/min)	Increased flow to comparable valve <sup>1</sup>
20	15	½	125	9	74%
25	20	¾	271	19	98%
32	25	1	481	33	132%
40	32	1 ¼	759	52	114%
50	40	1 ½	1263	87	144%
63	50	2	1728	119	142%

<sup>1</sup> Compared with the precursor type 317 in the correlation dimension.





## + Accessories and special valves



**Solenoid pilot valve 3/2-ways type PV94**

- 230 V, 50-60 Hz
- 115 V, 50-60 Hz
- 24 V, 50-60 Hz
- 24 V DC
- G $\frac{1}{8}$ , G $\frac{1}{4}$ , G6mm
- DN1.2



**Solenoid pilot valve 3/2-ways type PV95**

- 230 V, 50-60 Hz
- 115 V, 50-60 Hz
- 24 V, 50-60 Hz
- 24 V DC
- G $\frac{1}{8}$ , G $\frac{1}{4}$
- DN1.5 - DN2



**Height compensation and mounting plate**

- 5 different sizes to reach the required height
- Mounting plate for easy fixation
- Suitable for all 5-series diaphragm valves



**Solenoid pilot valve type MNL 532**

- Version for 3/2-way and 5/2-way
- Namur connection
- Material of body: Aluminum
- 24 V AC, 24 V DC, 48 V AC, 110 V AC, 230 V AC



**Electric position feedback type ER 52-1/ER 53-1**

- For pneumatic stroke actuators
- For DIASTAR Ten, TenPLUS, Sixteen, 025
- Mechanical switches (AgNi or Au)
- NPN/PNP, Namur connection
- With visual position indication



**Diaphragm Valve type 517 (317)**

- PVC-U, PVC-C, PP-H, PVDF, PVDF-HP
- EPDM, PTFE/EPDM, FPM, PTFE/FPM
- DN15-DN50 (type 317: DN65-DN150)
- Up to PN16
- Lockable handwheel
- Electrical feedback module



**Stroke limiter/ manual override**

- For DIASTAR types



**Digital electro-pneumatic positioner type DSR 500**

- Mounted on pneumatic control valves
- Linear and rotary actuators
- Nominal stroke 3 - 28 mm
- Self-learning
- Control signal 4 - 20 mA
- 24 V DC

High purity

# Clean room production



**Our quality aspirations are binding throughout the entire process chain and have been verified with numerous certificates and awards.**

Our clean room, one of the largest clean-room production facilities in Europe, is equipped with everything that is required for the perfect manufacturing of high-purity products consisting of synthetic materials.

Verified and monitored incoming and outgoing process, clean-room quality up to ISO Class 5 and a thoroughgoing double-door system ensure maximum purity.



## Reference case

# Full-plastic diaphragm valves in ion-exchange systems

Water treatment and environmental protection are becoming increasingly important in today's society. It is also a big cost-driver for companies. In many applications of metal processing companies, deionised water (DI-Water) with very low conductivity values is required. With an ion-exchange system, the water can be treated economically for the processes. The company Gross Wassertechnik GmbH, based in Pforzheim, Germany, is a specialist in the plant construction industry. The company specializes in industrial water treatment plants and wastewater treatment.

### Ion-exchange systems

In an ion-exchange system, water is passed through various resins. The resins absorb ions and organic substances from the water. The result is "DI-water", which can be used for various processes. As soon as the resins' capacity is reached, they are regenerated with hydrogen chloride (HCL) or sodium hydroxide (NaOH). Due to the use of chemicals, it is expedient to use plastics for this process for their excellent chemical and corrosion resistance. The application conditions and chemical resistance require the use of two different plastics in this ion-exchange system. 80% of the plant are built of PVC-U and the remaining 20% of PP-h. In addition, high quality standards are required, so that the process remains constant at a high level. In order to meet these customer requirements, GF Piping Systems develops and supplies the entire system of the pipes, valves and connection technology over the entire dimension range of the materials.

### Valves used in this ion-exchange system

- Manual diaphragm valve type 514 (d20 mm – d32 mm)
- Pneumatic diaphragm valve DIASTAR Six (d25 mm – d32 mm)
- Pneumatic diaphragm DIASTAR Ten (d32 mm – d63 mm)
- Manual butterfly valve type 567 (d63 mm – d90 mm)
- Manual ball valve type 546 (d20 mm – d63 mm)

### Reasons for GF Piping Systems

- Flow characteristics of the diaphragm valves
- Increase flow rate and improved flow control characteristics, lead to reduced dimensions and costs
- Corrosion free full plastic solution
- Excellent controllability and simple signal input of the diaphragm valves



# Diaphragm valves



## Diaphragm valve type 514 PVC-U With solvent cement sockets metric

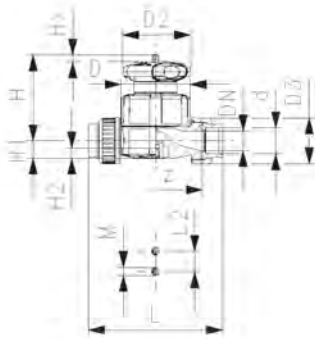
### Model:

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Handwheel with built-in locking mechanism
- For easy installation and removal
- Short overall length

### Option:

- Individual configuration of the valve
- Self adjusting multifunctional module with integrated limit switches
- PN16 available as a configuration

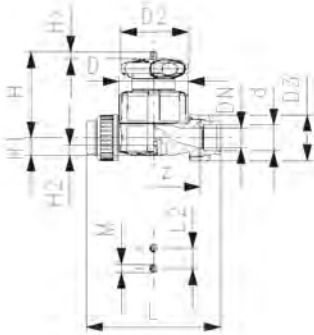
\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	NBR Code	SP	Weight (kg)	EPDM Code	SP	Weight (kg)
16	10	3/8	10	125	161 514 001	1	0.324	161 514 011	1	0.319
20	15	1/2	10	125	161 514 002	1	0.328	161 514 012	1	0.323
25	20	3/4	10	271	161 514 003	1	0.492	161 514 013	1	0.472
32	25	1	10	481	161 514 004	1	0.721	161 514 014	1	0.704
40	32	1 1/4	10	759	161 514 005	1	1.070	161 514 015	1	0.973
50	40	1 1/2	10	1263	161 514 006	1	1.643	161 514 016	1	1.618
63	50	2	10	1728	161 514 007	1	2.510	161 514 017	1	2.484

d (mm)	PTFE/ EPDM* Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)	PTFE/FKM* Code	SP	Weight (kg)
16	161 514 031	1	0.335	161 514 061	1	0.328	800 047 300	1	0.331
20	161 514 032	1	0.339	161 514 062	1	0.332	800 047 301	1	0.335
25	161 514 033	1	0.506	161 514 063	1	0.499	800 047 303	1	0.499
32	161 514 034	1	0.748	161 514 064	1	0.732	800 047 304	1	0.731
40	161 514 035	1	1.105	161 514 065	1	1.087	800 047 306	1	1.084
50	161 514 036	1	1.679	161 514 066	1	1.669	800 047 308	1	1.662
63	161 514 037	1	2.548	161 514 067	1	2.555	800 047 309	1	2.547

d (mm)	D (mm)	D2 (mm)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)	closest inch (inch)
16	65	65	43	73	14	12	170	25	M6	142	7	3/8
20	65	65	43	73	14	12	128	25	M6	96	7	1/2
25	80	65	51	81	18	12	152	25	M6	114	10	3/4
32	88	87	58	107	22	12	166	25	M6	122	13	1
40	101	87	72	115	26	15	192	45	M8	140	15	1 1/4
50	117	135	83	148	32	15	222	45	M8	160	19	1 1/2
63	144	135	100	166	39	15	266	45	M8	190	25	2



### Diaphragm valve type 514 PVC-U With solvent cement sockets metric PN16

#### Model:

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Handwheel with built-in locking mechanism
- Not recommended for oxidizing acids
- For easy installation and removal
- Short overall length
- **For water use only**

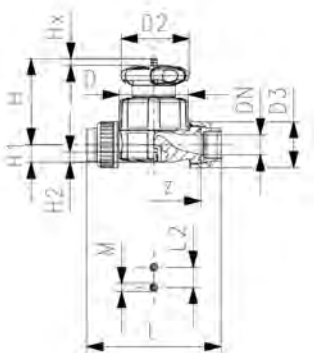
#### Option:

- Individual configuration of the valve
- Self adjusting multifunctional module with integrated limit switches

\* O-Ring material: FKM

d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP Weight (kg)	PTFE/ EPDM* Code	SP Weight (kg)
20	15	16	125	800 047 166	1	800 047 160	1 0.370
25	20	16	271	800 047 167	1	800 047 161	1 0.544
32	25	16	481	800 047 168	1	800 047 162	1 0.799
40	32	16	759	800 047 169	1	800 047 163	1 1.162
50	40	16	1263	800 047 170	1	800 047 164	1 1.761
63	50	16	1728	800 047 171	1	800 047 165	1 2.676

d (mm)	D (mm)	D2 (mm)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)	closest inch (inch)
20	65	65	43	73	14	12	128	25	M6	96	7	½
25	80	65	51	81	18	12	152	25	M6	114	10	¾
32	88	87	58	107	22	12	166	25	M6	122	13	1
40	101	87	72	115	26	15	192	45	M8	140	15	1 ¼
50	117	135	83	148	32	15	222	45	M8	160	19	1 ½
63	144	135	100	166	39	15	266	45	M8	190	25	2



### Diaphragm valve type 514 PVC-U With threaded sockets Rp

#### Model:

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Handwheel with built-in locking mechanism
- For easy installation and removal
- Short overall length

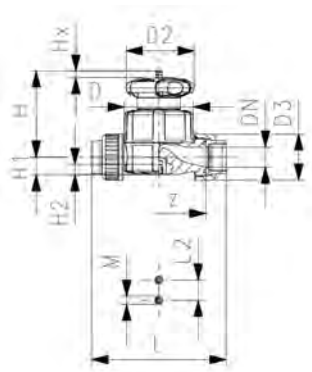
#### Option:

- Individual configuration of the valve
- Self adjusting multifunctional module with integrated limit switches
- PN16 available as a configuration

\* O-Ring material: FKM

d (mm)	DN (mm)	Thread Type	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	NBR Code	SP Weight (kg)
20	15	Rp	½	10	125	161 514 402	1 0.400
25	20	Rp	¾	10	271	161 514 403	1 0.523
32	25	Rp	1	10	481	161 514 404	1 0.678
40	32	Rp	1 ¼	10	759	161 514 405	1 1.429
50	40	Rp	1 ½	10	1263	161 514 406	1 2.528
63	50	Rp	2	10	1728	161 514 407	1 3.449

table continued on the next page



EPDM Code	SP Weight (kg)	PTFE/EPDM* Code	SP Weight (kg)	FKM Code	SP Weight (kg)
161 514 412	1 0.298	161 514 432	1 0.410	161 514 462	1 0.400
161 514 413	1 0.426	161 514 433	1 0.534	161 514 463	1 0.523
161 514 414	1 0.679	161 514 434	1 0.693	161 514 464	1 1.163
161 514 415	1 0.957	161 514 435	1 1.449	161 514 465	1 1.429
161 514 416	1 1.654	161 514 436	1 2.558	161 514 466	1 2.528
161 514 417	1 3.449	161 514 437	1 3.477	161 514 467	1 3.449

D (mm)	D2 (mm)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)
65	65	43	73	14	12	128	25	M6	96	7
80	65	51	81	18	12	152	25	M6	114	10
88	87	58	107	22	12	166	25	M6	122	13
101	87	72	115	26	15	192	45	M8	140	15
117	135	83	148	32	15	222	45	M8	160	19
144	135	100	166	39	15	266	45	M8	190	25



### Diaphragm valve type 515 PVC-U With solvent cement spigots metric

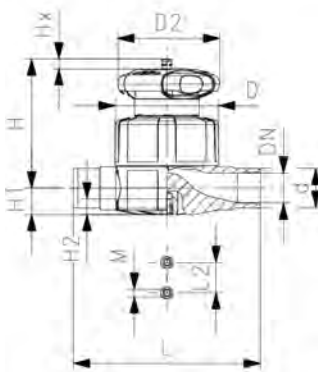
#### Model:

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Handwheel with built-in locking mechanism
- Overall length EN 558

#### Option:

- Individual configuration of the valve
- Self adjusting multifunctional module with integrated limit switches
- PN16 available as a configuration

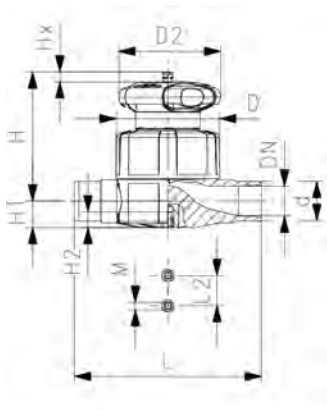
\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (l/min)	NBR Code	SP Weight (kg)	EPDM Code	SP Weight (kg)
20	15	½	10	125	161 515 002	1 0.335	161 515 012	1 0.240
25	20	¾	10	271	161 515 003	1 0.445	161 515 013	1 0.445
32	25	1	10	481	161 515 004	1 0.565	161 515 014	1 0.568
40	32	1 ¼	10	759	161 515 005	1 1.237	161 515 015	1 0.775
50	40	1 ½	10	1263	161 515 006	1 1.363	161 515 016	1 1.364
63	50	2	10	1728	161 515 007	1 2.963	161 515 017	1 2.248

d (mm)	PTFE/EPDM* Code	SP Weight (kg)	FKM Code	SP Weight (kg)
20	161 515 032	1 0.238	161 515 062	1 0.243
25	161 515 033	1 0.456	161 515 063	1 0.445
32	161 515 034	1 0.575	161 515 064	1 1.032
40	161 515 035	1 1.257	161 515 065	1 0.785
50	161 515 036	1 2.292	161 515 066	1 2.262
63	161 515 037	1 2.097	161 515 067	1 2.963

table continued on the next page



d (mm)	D (mm)	D2 (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L2 (mm)	M	Lift = Hx (mm)	closest inch (inch)
20	65	65	73	14	12	124	25	M6	7	½
25	80	65	81	18	12	144	25	M6	10	¾
32	88	87	107	22	12	154	25	M6	13	1
40	101	87	115	26	15	174	45	M8	15	1 ¼
50	117	135	148	32	15	194	45	M8	19	1 ½
63	144	135	166	39	15	224	45	M8	25	2



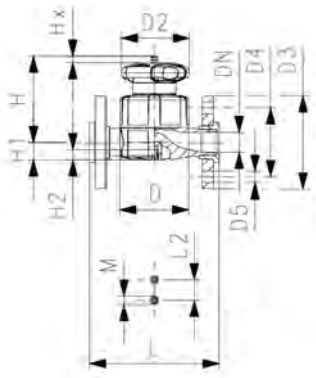
### Diaphragm valve type 517 PVC-U With backing flanges PVC-U metric/BS

#### Model:

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Handwheel with built-in locking mechanism
- Flat sealing faces
- Overall length EN 558
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, BS 4504 PN 10

#### Option:

- Individual configuration of the valve
  - Self adjusting multifunctional module with integrated limit switches
- \* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (L/min)	NBR Code	SP Weight (kg)	EPDM Code	SP Weight (kg)
20	15	½	10	125	161 517 002	1	0.493	161 517 012
25	20	¾	10	271	161 517 003	1	0.661	161 517 013
32	25	1	10	481	161 517 004	1	1.344	161 517 014
40	32	1 ¼	10	759	161 517 005	1	1.352	161 517 015
50	40	1 ½	10	1263	161 517 006	1	2.868	161 517 016
63	50	2	10	1728	161 517 007	1	3.789	161 517 017

d (mm)	PTFE/ EPDM* Code	SP Weight (kg)	FKM Code	SP Weight (kg)
20	161 517 032	1	0.503	161 517 062
25	161 517 033	1	0.672	161 517 063
32	161 517 034	1	1.364	161 517 064
40	161 517 035	1	1.247	161 517 065
50	161 517 036	1	1.992	161 517 066
63	161 517 037	1	2.939	161 517 067

d (mm)	D (mm)	D2 (mm)	D3 (mm)	D4 (mm)	D5 (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L2 (mm)	M	Lift = Hx (mm)	closest inch (inch)
20	65	65	95	65	14	73	14	12	130	25	M6	7	½
25	80	65	105	75	14	81	18	12	150	25	M6	10	¾
32	88	87	115	85	14	107	22	12	160	25	M6	13	1
40	101	87	140	100	18	115	26	15	180	45	M8	15	1 ¼
50	117	135	150	110	18	148	32	15	200	45	M8	19	1 ½
63	144	135	165	125	18	166	39	15	230	45	M8	25	2





**Diaphragm valve type 317 PVC-U  
With flanges PVC-U metric**

**Model:**

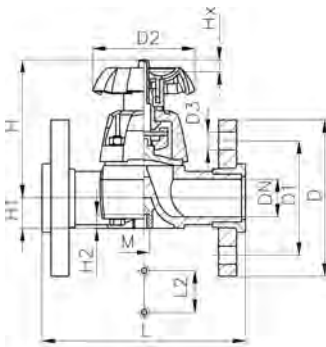
- Flat sealing faces
- Overall length according to EN 558
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, BS 4504 PN 10

**Option:**

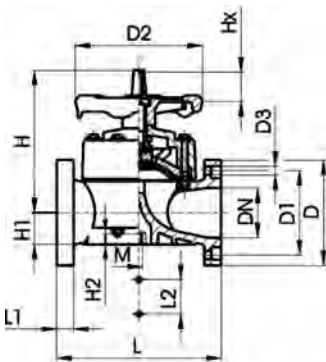
- Handwheel lockable DN65 (basic version not lockable)
- **DN80, DN100 and DN150 fixed flanges metric and inch ANSI B16.5**

	d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)
	75	65	2 ½	10	992
*	90	80	3	10	1700
*	110	100	4	6	2700
*	160	150	6	6	6033

d (mm)	NBR Code	EPDM Code	PTFE with EPDM supp. diaphragm Code	FKM Code	SP	Weight (kg)
75	161 317 508	161 317 523	161 317 538	161 317 568	1	5.090
*	161 317 009	161 317 024	161 317 039	161 317 069	1	9.700
*	161 317 010	161 317 025	161 317 040	161 317 070	1	13.600
*	161 317 012	161 317 027	161 317 042	161 317 072	1	27.000



DN 15-65



DN 80-100

d (mm)	D (mm)	D1 (mm)	D2 (mm)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	M	Lift = Hx (mm)	AL
75	185	145	152	18	201	46	15	290		70		M8	30	4
*	90	200	160	270	18	265	57	310	35	120		M12	40	8
*	110	225	180	270	18	304	69	350	35	120		M12	50	8
*	160	285	240	400	23	437	108	480	26	100	200	M12	70	8

# Copiable Configurator GF Diaphragm Valve

## Valve body type

- A20 Type 514 - True Union Design
- A21 Type 515 - Spigots
- A22 Type 517 - Flanges

## Material

- B01 PVC-U
- B02 PVC-C
- B03 ABS

## Dimension

- C05 DN 10 3/8"
- C06 DN 15 1/2"
- C07 DN 20 3/4"
- C08 DN 25 1"
- C09 DN 32 1 1/4"
- C10 DN 40 1 1/2"
- C11 DN 50 2"

## Version

- D11 standard
- D05 silicone free / oil free

## Diaphragm

- E01 EPDM
- E02 FPM
- E11 NBR
- E12 PTFE/EPDM
- E04 PTFE/FPM

## Connecting parts

- H01 PVC-U Cemented socket metric
- H02 PVC-U Cemented socket JIS
- H03 PVC-U Cemented socket ASTM
- H04 PVC-U Cemented socket Zoll BS
- H05 PVC-U Cemented spigot metric
- H06 PVC-U Threaded socket Rp (ISO)
- H08 PVC-U Threaded socket Rc (JIS)
- H09 PVC-U Threaded socket NPT (ASTM)
- H11 PVC-C Cemented socket metric
- H13 PVC-C Cemented socket Zoll ASTM
- H14 PVC-C Cemented spigot metric
- H20 ABS Cemented socket metric
- H21 ABS Cemented socket Zoll BS
- H24 ABS Cemented spigot metric
- H40 PE-80 Fusion socket metric
- H41 PE-100 Butt fusion spigot SDR11 metric
- H43 PE-100 Butt fusion spigot long SDR11 metric
- H62 Fixed flange PVC-U JIS
- H70 Backing flange PVC-U metric with PVC-U endings
- H71 Backing flange PVC-U Zoll ANSI with PVC-U endings
- H71 PVCC Backing flange PVC-U Zoll ANSI with PVC-C endings
- H72 PVCC Backing flange PP-steel metric with PVC-U endings
- H72 PVCC Backing flange PP-steel metric with PVC-C endings
- H72 ABS Backing flange PP-steel metric with ABS endings
- H73 PVCC Backing flange PP-steel Zoll ANSI with PVC-U endings
- H73 PVCC Backing flange PP-steel Zoll ANSI with PVC-C endings
- H73 ABS Backing flange PP-steel Zoll ANSI with ABS endings
- H74 PVCC Backing flange PP-V metric with PVC-U endings
- H74 PVCC Backing flange PP-V metric with PVC-C endings
- H74 ABS Backing flange PP-V metric with ABS endings
- H74 PVCC Backing flange PP-V metric with PVC-C endings
- H75 PVCC Backing flange PP-V ANSI with PVC-U endings
- H75 PVCC Backing flange PP-V ANSI with PVC-C endings
- H78 PVCC Backing flange PP-GF JIS with PVC-U endings
- H80 PVC-U valve end blank

## Electrical feedback

- I33 Electrical feedback with Ag, Ni limit switches
- I34 Electrical feedback with Au limit switches

## Manual actuated: pressure tight housing

- K30 Bonnet pressure tight
- K31 Bonnet not pressure tight

## Pressure range

- M01 PN10
- M02 PN16

## Pneumatic Actuator DIASTAR

- P40 DIASTAR Six FC fail safe to close
- P43 DIASTAR Ten FC fail safe to close
- P44 DIASTAR Sixteen FC fail safe to close
- P45 DIASTAR Sixteen FO fail safe to open
- P46 DIASTAR Sixteen DA double acting
- P47 DIASTAR Ten FO fail safe to open
- P48 DIASTAR Ten DA double acting



## Example:

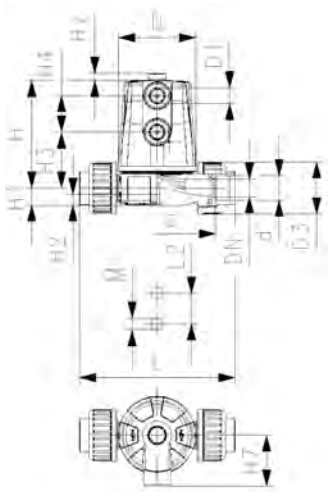
Diaphragm valve with valve body type 515, PVC-U, EPDM diaphragm, DN25, cemented spigots metric, electrical feedback, pressure tight housing, PN10

**A21 B01 C08 D11 E01 H05 I33 K30 M01**

**P =**



# Diaphragm valves pneumatic type 604 / 605



## Diaphragm valve type 604 PVC-U Unions with solvent cement socket metric

### Model:

- Compact full plastic design without screws
- High flow rate
- Actuator housing with thread for easy maintenance
- Quick opening & closing times
- For easy installation and removal
- Market standard installation length

### Option:

- Individual configuration of the valve
- \* O-Ring material: FKM

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	Actuator	EPDM Code	FKM Code	Weight (kg)
20	15	½	6	125	FC	161 604 012	161 604 062	0.40
20	15	½	6	125	FO	161 604 014	161 604 064	0.37
20	15	½	6	125	DA	161 604 015	161 604 065	0.35

### PTFE/ EPDM\* Code

161 604 032

161 604 034

161 604 035

D	D1_G	D3	H	H1	H2	H3	H4	H7	L	L2	M	z	Lift = Hx
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)
65	¼	43	89	14	12	46	30	42	128	25	M6	96	6
65	¼	43	89	14	12	46	30	42	128	25	M6	96	6
65	¼	43	89	14	12	46	30	42	128	25	M6	96	6



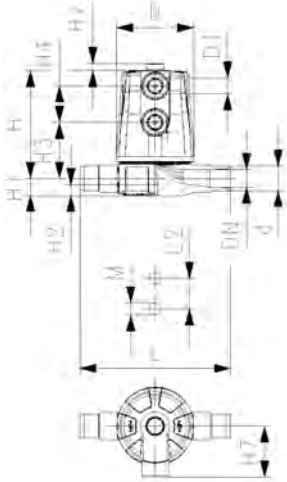
### Diaphragm valve type 605 PVC-U Cement spigot metric

#### Model:

- Compact full plastic design without screws
- High flow rate
- Actuator housing with thread for easy maintenance
- Quick opening & closing times
- For easy installation and removal
- Market standard installation length

#### Option:

- Individual configuration of the valve
- \* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	Actuator	EPDM Code	FKM Code	Weight (kg)
20	15	½	6	125	FC	161 605 012	161 605 062	0.34
20	15	½	6	125	FO	161 605 014	161 605 064	0.31
20	15	½	6	125	DA	161 605 015	161 605 065	0.29

PTFE/ EPDM* Code	D (mm)	D1_G (inch)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	Lift = Hx (mm)
161 605 032	65	¼	89	14	12	46	30	42	124	25	M6	6
161 605 034	65	¼	89	14	12	46	30	42	124	25	M6	6
161 605 035	65	¼	89	14	12	46	30	42	124	25	M6	6



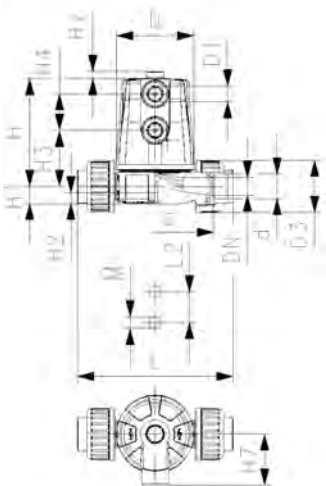
### Diaphragm valve type 604 PVC-U Unions with threaded socket Rp

#### Model:

- Compact full plastic design without screws
- High flow rate
- Actuator housing with thread for easy maintenance
- Quick opening & closing times
- For easy installation and removal
- Market standard installation length

#### Option:

- Individual configuration of the valve
- \* O-Ring material: FKM



Actuator	d (mm)	DN (mm)	Thread Type	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)
FC	20	15	Rp	½	6	125
FO	20	15	Rp	½	6	125
DA	20	15	Rp	½	6	125

Actuator	EPDM Code	FKM Code	Weight (kg)	PTFE/ EPDM* Code
FC	161 604 412	161 604 462	0.40	161 604 432
FO	161 604 414	161 604 464	0.37	161 604 434
DA	161 604 415	161 604 465	0.35	161 604 435

Actuator	D (mm)	D1_G (inch)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)
FC	65	¼	43	89	14	12	46	30	42	128	25	M6	102	6
FO	65	¼	43	89	14	12	46	30	42	128	25	M6	102	6
DA	65	¼	43	89	14	12	46	30	42	128	25	M6	102	6



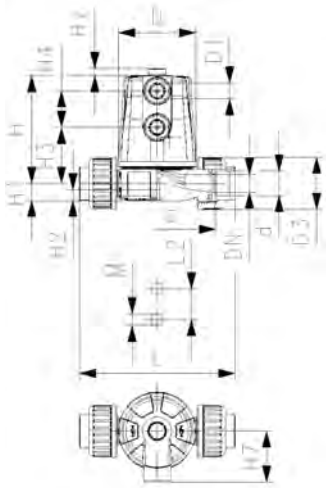
**Diaphragm valve Type 604 PVC-U  
With Stroke limiter  
Unions with solvent cement socket metric**

**Model:**

- Compact full plastic design without screws
- High flow rate
- Actuator housing with thread for easy maintenance
- Quick opening & closing times
- For easy installation and removal
- Market standard installation length
- Valve stroke can be easily adjusted with screw driver

**Option:**

- Individual configuration of the valve
- \* O-Ring material: FKM



Actuator	d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	FKM Code	PTFE/ EPDM* Code
FC	20	15	6	125	800 059 080	800 060 429	800 059 987

Actuator	D (mm)	D1_G (inch)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)
FC	65	¼	43	89	14	12	46	30	42	128	25	M6	96	6

# DIASTAR Six



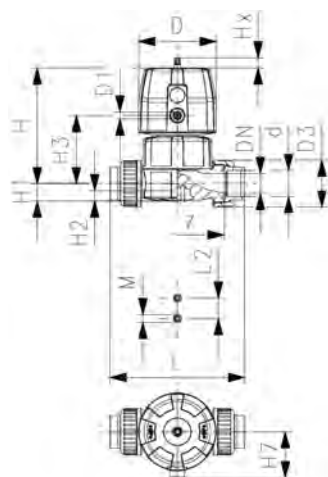
## Diaphragm valve DIASTAR Six PVC-U FC (Fail safe to close) Unions with solvent cement sockets metric

### Model:

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

### Option:

- Individual configuration of the valve



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	Weight (kg)
16	10	3/8	6	125	161 614 011	1	0.532		
25	20	3/4	6	271	161 614 013	1	1.009	800 047 328	1.760
32	25	1	6	481	161 614 014	1	1.246	800 047 329	1.259
40	32	1 1/4	6	759	161 614 015	1	2.112	800 047 330	3.760
50	40	1 1/2	6	960	161 614 016	1	2.618	800 047 331	2.782
63	50	2	6	1181	161 614 017	1	3.553	800 047 332	7.800

d (mm)	D (mm)	D1_G (inch)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)	closest inch (inch)
16	68	3/8	101	14	12	60	43	170	25	M6	142	7	3/8
25	96	3/4	132	18	12	73	57	152	25	M6	114	10	3/4
32	96	1	143	22	12	84	57	166	25	M6	122	13	1
40	120	1 1/4	173	26	15	99	69	192	45	M8	140	14	1 1/4
50	120	1 1/2	193	32	15	119	69	222	45	M8	160	16	1 1/2
63	120	2	205	39	15	132	69	266	45	M8	190	16	2



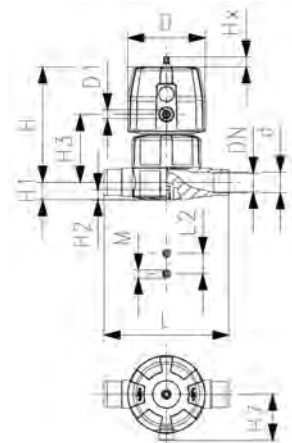
## Diaphragm valve DIASTAR Six PVC-U FC (Fail safe to close) With solvent cement spigots metric

### Model:

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Overall length EN 558

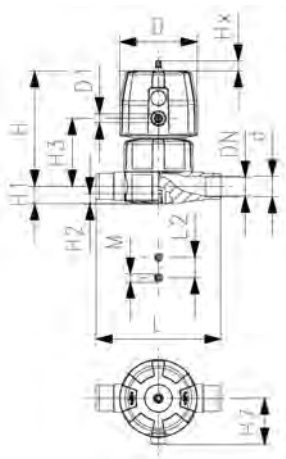
### Option:

- Individual configuration of the valve



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
25	20	3/4	6	271	161 615 013	1	0.964
32	25	1	6	481	161 615 014	1	1.137
40	32	1 1/4	6	759	161 615 015	1	2.414
50	40	1 1/2	6	960	161 615 016	1	2.482
63	50	2	6	1181	161 615 017	1	3.340

table continued on the next page



d (mm)	D (mm)	D1_G (inch)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	Lift = Hx (mm)	closest inch (inch)
25	96	3/8	132	18	12	73	57	144	25	M6	10	3/8
32	96	3/8	143	22	12	84	57	154	25	M6	13	1
40	120	3/8	173	26	15	99	69	174	45	M8	14	1 1/4
50	120	3/8	193	32	15	119	69	194	45	M8	16	1 1/2
63	120	3/8	205	39	15	132	69	224	45	M8	16	2



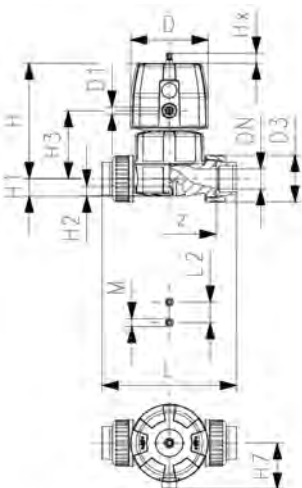
**Diaphragm valve DIASTAR Six PVC-U  
FC (Fail safe to close)  
Unions with threaded sockets Rp**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

**Option:**

- Individual configuration of the valve



d (mm)	DN (mm)	Thread Type	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (L/min)	EPDM Code	SP	Weight (kg)
25	20	Rp	3/8	6	271	<b>161 614 413</b>	1	1.008
32	25	Rp	1	6	481	<b>161 614 414</b>	1	1.277
40	32	Rp	1 1/4	6	759	<b>161 614 415</b>	1	2.068
50	40	Rp	1 1/2	6	960	<b>161 614 416</b>	1	2.678
63	50	Rp	2	6	1181	<b>161 614 417</b>	1	3.826

D (mm)	D1_G (inch)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)
96	3/8	132	18	12	73	57	152	25	M6	114	10
96	3/8	143	22	12	84	57	166	25	M6	122	13
120	3/8	173	26	15	99	69	192	45	M8	140	14
120	3/8	193	32	15	119	69	222	45	M8	160	16
120	3/8	205	39	15	132	69	266	45	M8	190	16



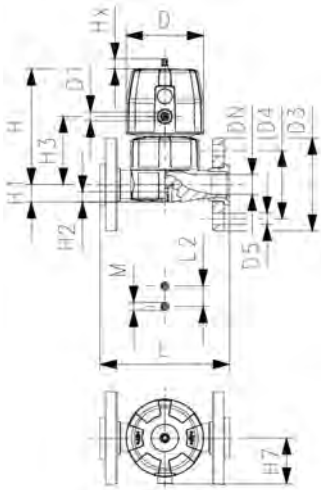
**Diaphragm valve DIASTAR Six PVC-U  
FC (Fail safe to close)  
With backing flanges PVC-U metric/BS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Flat sealing faces
- Overall length EN 558
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, BS 4504 PN 10

**Option:**

- Individual configuration of the valve



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
20	15	½	6	125	161 617 012	1	0.661
25	20	¾	6	271	161 617 013	1	1.180
32	25	1	6	481	161 617 014	1	1.456
40	32	1 ¼	6	759	161 617 015	1	1.991
50	40	1 ½	6	960	161 617 016	1	3.018
63	50	2	6	1181	161 617 017	1	4.159

d (mm)	D (mm)	D1_G (inch)	D3 (mm)	D4 (mm)	D5 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	Lift = Hx (mm)
20	68	⅝	95	65	14	101	14	12	60	43	130	25	M6	7
25	96	⅝	105	75	14	132	18	12	73	57	150	25	M6	10
32	96	⅝	115	85	14	143	22	12	84	57	160	25	M6	13
40	120	⅝	140	100	18	173	26	15	99	69	180	45	M8	14
50	120	⅝	150	110	18	193	32	15	119	69	200	45	M8	16
63	120	⅝	165	125	18	205	39	15	132	69	230	45	M8	16

d (mm)	closest inch (inch)
20	¾
25	⅝
32	1
40	1 ¼
50	1 ½
63	2





**Diaphragm valve DIASTAR Ten PVC-U  
FC (Fail safe to close)  
Unions with solvent cement sockets metric**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

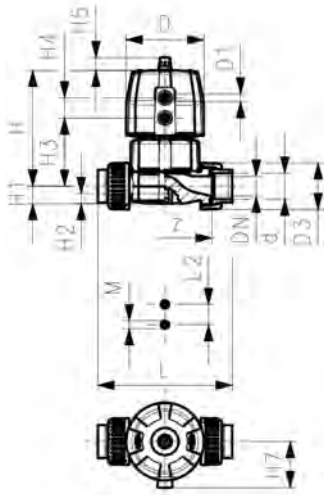
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)
16	10	3/8	10	10*	125	161 624 011	1	0.567
20	15	1/2	10	10*	125	161 624 012	1	0.592
25	20	3/4	10	10*	271	161 624 013	1	1.104
32	25	1	10	10*	481	161 624 014	1	1.337
40	32	1 1/4	10	10*	759	161 624 015	1	2.358
50	40	1 1/2	10	10*	1263	161 624 016	1	3.928
63	50	2	10	6*	1728	161 624 017	1	5.524

d (mm)	FKM Code	SP	Weight (kg)	PTFE/ EPDM* Code	SP	Weight (kg)	PTFE/FKM* Code	Weight (kg)
16	161 624 061	1	0.592	161 624 031	1	0.573		
20	161 624 062	1	0.592	161 624 032	1	0.602	161 624 052	0.602
25	161 624 063	1	1.121	161 624 033	1	1.111	161 624 053	1.111
32	161 624 064	1	1.347	161 624 034	1	1.352	161 624 054	1.352
40	161 624 065	1	2.216	161 624 035	1	2.236	161 624 055	2.236
50	161 624 066	1	3.804	161 624 036	1	3.958	161 624 056	3.958
63	161 624 067	1	4.683	161 624 037	1	4.643	161 624 057	4.643

d (mm)	D (mm)	D1_G (inch)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)
16	68	3/8	101	14	12	60	24	16	43	170	25	M6	142	7
20	68	1/2	101	14	12	60	24	16	43	128	25	M6	96	7
25	96	3/4	132	18	12	73	25	16	57	152	25	M6	114	10
32	96	1	143	22	12	84	25	16	57	166	25	M6	122	13
40	120	1 1/4	173	26	15	99	26	26	69	192	45	M8	140	15
50	150	1 1/2	214	32	15	119	36	26	88	222	45	M8	160	19
63	150	2	226	39	15	132	36	26	88	266	45	M8	190	23

d (mm)	closest inch (inch)
16	3/8
20	1/2
25	3/4
32	1
40	1 1/4
50	1 1/2
63	2



**Diaphragm valve DIASTAR Ten PVC-U  
FC (Fail safe to close)  
With solvent cement spigots metric**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Overall length EN 558

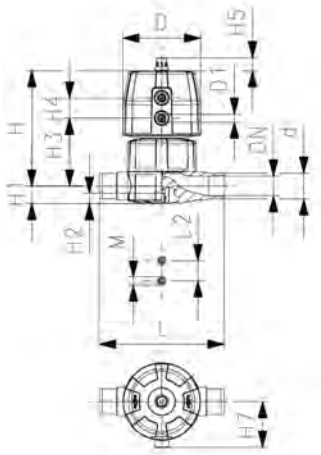
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP Weight (kg)
20	15	½	10	10*	125	<b>161 625 012</b>	1 0.497
25	20	¾	10	10*	271	<b>161 625 013</b>	1 1.029
32	25	1	10	10*	481	<b>161 625 014</b>	1 1.223
40	32	1 ¼	10	10*	759	<b>161 625 015</b>	1 2.026
50	40	1 ½	10	10*	1263	<b>161 625 016</b>	1 3.550
63	50	2	6	6*	1728	<b>161 625 017</b>	1 4.368

d (mm)	PTFE/ EPDM* Code	SP Weight (kg)
20	<b>161 625 032</b>	1 0.539
25	<b>161 625 033</b>	1 1.050
32	<b>161 625 034</b>	1 1.238
40	<b>161 625 035</b>	1 2.114
50	<b>161 625 036</b>	1 3.580
63	<b>161 625 037</b>	1 4.412

d (mm)	D (mm)	D1_G (inch)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	Lift = Hx (mm)	closest inch (inch)
20	68	⅞	101	14	12	60	24	16	43	124	25	M6	7	½
25	96	⅞	132	18	12	73	25	16	57	144	25	M6	10	¾
32	96	⅞	143	22	12	84	25	16	57	154	25	M6	13	1
40	120	⅞	173	26	15	99	26	26	69	174	45	M8	15	1 ¼
50	150	⅞	214	32	15	119	36	26	88	194	45	M8	19	1 ½
63	150	⅞	226	39	15	132	36	26	88	224	45	M8	23	2



**Diaphragm valve DIASTAR Ten PVC-U  
FC (Fail safe to close)  
With backing flanges PVC-U metric/BS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Flat sealing faces
- Overall length EN 558
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, BS 4504 PN 10

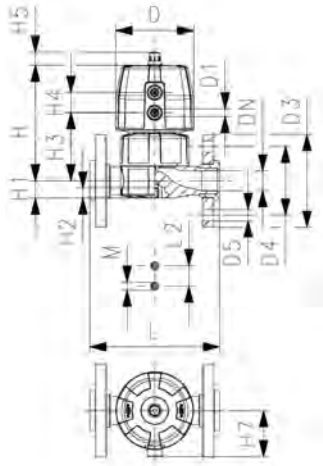
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (psi)	PN* (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
20	15	½	150	10*	125	<b>161 627 012</b>	1	0.657
25	20	¾	150	10*	271	<b>161 627 013</b>	1	1.240
32	25	1	150	10*	481	<b>161 627 014</b>	1	1.549
40	32	1 ¼	150	10*	759	<b>161 627 015</b>	1	2.570
50	40	1 ½	150	10*	1263	<b>161 627 016</b>	1	4.277
63	50	2	150/90*	6*	1728	<b>161 627 017</b>	1	5.188

d (mm)	FKM Code	SP	Weight (kg)	PTFE/ EPDM* Code	SP	Weight (kg)	PTFE/FKM* Code	SP	Weight (kg)
20	<b>161 627 062</b>	1	0.687	<b>161 627 032</b>	1	0.654	<b>161 627 052</b>	1	0.654
25	<b>161 627 063</b>	1	1.255	<b>161 627 033</b>	1	1.246	<b>161 627 053</b>	1	1.246
32	<b>161 627 064</b>	1	1.530	<b>161 627 034</b>	1	1.562	<b>161 627 054</b>	1	1.562
40	<b>161 627 065</b>	1	2.141	<b>161 627 035</b>	1	2.161	<b>161 627 055</b>	1	2.161
50	<b>161 627 066</b>	1	4.156	<b>161 627 036</b>	1	4.302	<b>161 627 056</b>	1	4.302
63	<b>161 627 067</b>	1	5.087	<b>161 627 037</b>	1	5.115	<b>161 627 057</b>	1	5.115

d (mm)	D (mm)	D1_G (inch)	D3 (mm)	D4 (mm)	D5 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H7 (mm)	L (mm)	L2 (mm)	M
20	68	¾	95	65	14	101	14	12	60	24	16	43	130	25	M6
25	96	¾	105	75	14	132	18	12	73	25	16	57	150	25	M6
32	96	¾	115	85	14	143	22	12	84	25	16	57	160	25	M6
40	120	¾	140	100	18	173	26	15	99	26	26	69	180	45	M8
50	150	¾	150	110	18	193	32	15	119	36	26	88	200	45	M8
63	150	¾	165	125	18	205	39	15	132	36	26	88	230	45	M8

d (mm)	Lift = Hx (mm)	closest inch (inch)
20	7	½
25	10	¾
32	13	1
40	15	1 ¼
50	19	1 ½
63	23	2



**Diaphragm valve DIASTAR Ten PVC-U**  
**FO (Fail safe to open)**  
**Unions with solvent cement sockets metric**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

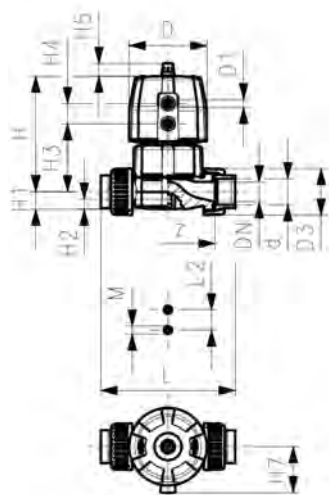
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value (Δp=1 bar) (L/min)	EPDM Code	SP	Weight (kg)
16	10	3/8	10	10*	125	<b>161 644 011</b>	1	0.542
20	15	1/2	10	10*	125	<b>161 644 012</b>	1	0.542
25	20	3/4	10	10*	271	<b>161 644 013</b>	1	1.308
32	25	1	10	10*	481	<b>161 644 014</b>	1	1.198
40	32	1 1/4	10	10*	759	<b>161 644 015</b>	1	1.935
50	40	1 1/2	10	10*	1263	<b>161 644 016</b>	1	3.271
63	50	2	10	10*	1728	<b>161 644 017</b>	1	4.765

d (mm)	PTFE/ EPDM* Code	SP	Weight (kg)
16	<b>161 644 031</b>	1	0.552
20	<b>161 644 032</b>	1	0.506
25	<b>161 644 033</b>	1	0.958
32	<b>161 644 034</b>	1	1.154
40	<b>161 644 035</b>	1	1.876
50	<b>161 644 036</b>	1	3.316
63	<b>161 644 037</b>	1	3.979

d (mm)	D (mm)	D1_G (inch)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)
16	68	1/8	101	14	12	60	24	16	43	170	25	M6	142	7
20	68	1/8	101	14	12	60	24	16	43	128	25	M6	96	7
25	96	1/8	132	18	12	73	25	16	57	152	25	M6	114	10
32	96	1/8	143	22	12	84	25	16	57	166	25	M6	122	13
40	120	1/8	173	26	15	99	26	26	69	192	45	M8	140	15
50	150	1/4	214	32	15	119	36	26	88	222	45	M8	160	19
63	150	1/4	226	39	15	132	36	26	88	266	45	M8	190	23

d (mm)	closest inch (inch)
16	3/8
20	1/2
25	3/4
32	1
40	1 1/4
50	1 1/2
63	2



**Diaphragm valve DIASTAR Ten PVC-U  
FO (Fail safe to open)  
With solvent cement spigots metric**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Overall length EN 558

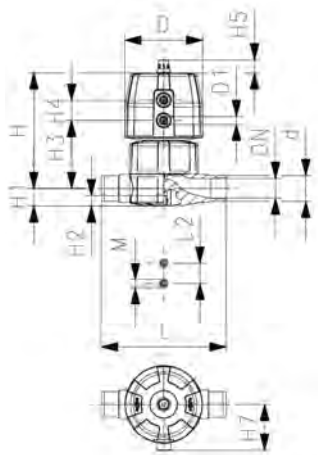
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
20	15	½	10	10*	125	<b>161 645 012</b>	1	0.479
25	20	¾	10	10*	271	<b>161 645 013</b>	1	0.865
32	25	1	10	10*	481	<b>161 645 014</b>	1	1.038
40	32	1 ¼	10	10*	759	<b>161 645 015</b>	1	1.734
50	40	1 ½	10	10*	1263	<b>161 645 016</b>	1	3.013
63	50	2	10	10*	1728	<b>161 645 017</b>	1	3.714

d (mm)	PTFE/ EPDM* Code	SP	Weight (kg)
20	<b>161 645 032</b>	1	0.489
25	<b>161 645 033</b>	1	0.876
32	<b>161 645 034</b>	1	1.058
40	<b>161 645 035</b>	1	1.686
50	<b>161 645 036</b>	1	3.490
63	<b>161 645 037</b>	1	4.199

d (mm)	D (mm)	D1_G (inch)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	Lift = Hx (mm)	closest inch (inch)
20	68	¾	101	14	12	60	24	16	43	124	25	M6	7	½
25	96	¾	132	18	12	73	25	16	57	144	25	M6	10	¾
32	96	¾	143	22	12	84	25	16	57	154	25	M6	13	1
40	120	¾	173	26	15	99	26	26	69	174	45	M8	15	1 ¼
50	150	¾	214	32	15	119	36	26	88	194	45	M8	19	1 ½
63	150	¾	226	39	15	132	36	26	88	224	45	M8	23	2



**Diaphragm valve DIASTAR Ten PVC-U  
FO (Fail safe to open)  
With backing flanges PVC-U metric/BS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Flat sealing faces
- Overall length EN 558
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, BS 4504 PN 10

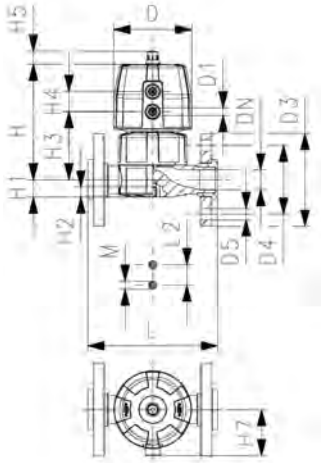
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP Weight (kg)
20	15	½	10	10*	125	<b>161 647 012</b>	1 0.637
25	20	¾	10	10*	271	<b>161 647 013</b>	1 1.081
32	25	1	10	10*	481	<b>161 647 014</b>	1 1.350
40	32	1 ¼	10	10*	759	<b>161 647 015</b>	1 1.781
50	40	1 ½	10	10*	1263	<b>161 647 016</b>	1 4.066
63	50	2	10	10*	1728	<b>161 647 017</b>	1 4.997

d (mm)	PTFE/ EPDM* Code	SP Weight (kg)
20	<b>161 647 032</b>	1 0.647
25	<b>161 647 033</b>	1 1.092
32	<b>161 647 034</b>	1 1.370
40	<b>161 647 035</b>	1 1.801
50	<b>161 647 036</b>	1 4.096
63	<b>161 647 037</b>	1 5.025

d (mm)	D (mm)	D1_G (inch)	D3 (mm)	D4 (mm)	D5 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H7 (mm)	L (mm)	L2 (mm)	M
20	68	¾	95	65	14	101	14	12	60	24	16	43	130	25	M6
25	96	¾	105	75	14	132	18	12	73	25	16	57	150	25	M6
32	96	¾	115	85	14	143	22	12	84	25	16	57	160	25	M6
40	120	¾	140	100	18	173	26	15	99	26	26	69	180	45	M8
50	150	¾	150	110	18	214	32	15	119	36	26	88	200	45	M8
63	150	¾	165	125	18	226	39	15	132	36	26	88	230	45	M8

d (mm)	Lift = Hx (mm)	closest inch (inch)
20	7	½
25	10	¾
32	13	1
40	15	1 ¼
50	19	1 ½
63	23	2



**Diaphragm valve DIASTAR Ten PVC-U  
DA (Double acting)  
Unions with solvent cement sockets metric**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

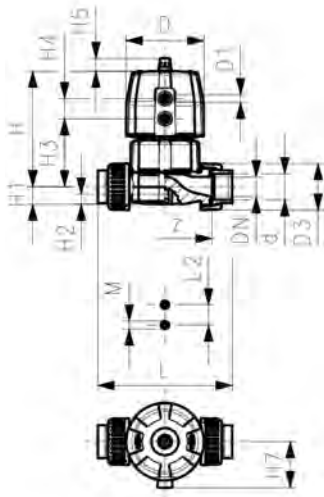
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP Weight (kg)
16	10	3/8	10	10*	125	<b>161 654 011</b>	1 0.526
20	15	1/2	10	10*	125	<b>161 654 012</b>	1 0.526
25	20	3/4	10	10*	271	<b>161 654 013</b>	1 0.923
32	25	1	10	10*	481	<b>161 654 014</b>	1 1.542
40	32	1 1/4	10	10*	759	<b>161 654 015</b>	1 2.521
50	40	1 1/2	10	10*	1263	<b>161 654 016</b>	1 3.250
63	50	2	10	10*	1728	<b>161 654 017</b>	1 4.732

d (mm)	PTFE/ EPDM* Code	SP Weight (kg)
16	<b>161 654 031</b>	1 0.536
20	<b>161 654 032</b>	1 0.507
25	<b>161 654 033</b>	1 0.922
32	<b>161 654 034</b>	1 1.157
40	<b>161 654 035</b>	1 1.816
50	<b>161 654 036</b>	1 2.994
63	<b>161 654 037</b>	1 3.961

d (mm)	D (mm)	D1_G (inch)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)
16	68	1/8	101	14	12	60	24	16	43	170	25	M6	142	7
20	68	1/8	101	14	12	60	24	16	43	128	25	M6	96	7
25	96	1/8	132	18	12	73	25	16	57	152	25	M6	114	10
32	96	1/8	143	22	12	84	25	16	57	166	25	M6	122	13
40	120	1/8	173	26	15	99	26	26	69	192	45	M8	140	15
50	150	1/4	214	32	15	119	36	26	88	222	45	M8	160	19
63	150	1/4	226	39	15	132	36	26	88	266	45	M8	190	23

d (mm)	closest inch (inch)
16	3/8
20	1/2
25	3/4
32	1
40	1 1/4
50	1 1/2
63	2



**Diaphragm valve DIASTAR Ten PVC-U  
DA (Double acting)  
With solvent cement spigots metric**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Overall length EN 558

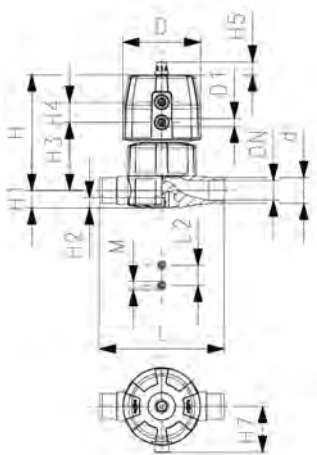
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP Weight (kg)
20	15	½	10	10*	125	<b>161 655 012</b>	1 0.463
25	20	¾	10	10*	271	<b>161 655 013</b>	1 0.829
32	25	1	10	10*	481	<b>161 655 014</b>	1 1.008
40	32	1 ¼	10	10*	759	<b>161 655 015</b>	1 1.606
50	40	1 ½	10	10*	1263	<b>161 655 016</b>	1 2.710
63	50	2	10	10*	1728	<b>161 655 017</b>	1 3.421

d (mm)	PTFE/ EPDM* Code	SP Weight (kg)
20	<b>161 655 032</b>	1 0.473
25	<b>161 655 033</b>	1 0.840
32	<b>161 655 034</b>	1 1.028
40	<b>161 655 035</b>	1 1.626
50	<b>161 655 036</b>	1 2.740
63	<b>161 655 037</b>	1 3.731

d (mm)	D (mm)	D1_G (inch)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	Lift = Hx (mm)	closest inch (inch)
20	68	¾	101	14	12	60	24	16	43	124	25	M6	7	½
25	96	¾	132	18	12	73	25	16	57	144	25	M6	10	¾
32	96	¾	143	22	12	84	25	16	57	154	25	M6	13	1
40	120	¾	173	26	15	99	26	26	69	174	45	M8	15	1 ¼
50	150	¾	214	32	15	119	36	26	88	194	45	M8	19	1 ½
63	150	¾	226	39	15	132	36	26	88	224	45	M8	23	2





**Diaphragm valve DIASTAR Ten PVC-U  
DA (Double acting)  
With backing flanges PVC-U metric/BS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Flat sealing faces
- Overall length EN 558
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, BS 4504 PN 10

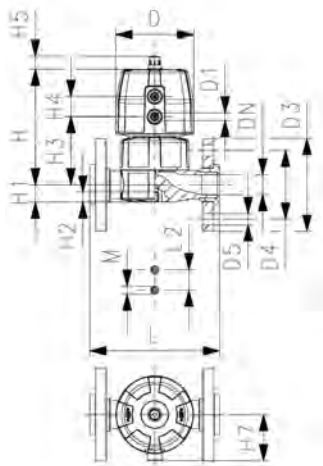
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)
20	15	½	10	10*	125	<b>161 657 012</b>	1 0.621
25	20	¾	10	10*	271	<b>161 657 013</b>	1 1.045
32	25	1	10	10*	481	<b>161 657 014</b>	1 1.320
40	32	1 ¼	10	10*	759	<b>161 657 015</b>	1 1.721
50	40	1 ½	10	10*	1263	<b>161 657 016</b>	1 3.316
63	50	2	10	10*	1728	<b>161 657 017</b>	1 4.247

d (mm)	PTFE/ EPDM* Code	SP Weight (kg)
20	<b>161 657 032</b>	1 0.631
25	<b>161 657 033</b>	1 1.056
32	<b>161 657 034</b>	1 1.340
40	<b>161 657 035</b>	1 1.741
50	<b>161 657 036</b>	1 3.346
63	<b>161 657 037</b>	1 4.275

d (mm)	D (mm)	D1_G (inch)	D3 (mm)	D4 (mm)	D5 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H7 (mm)	L (mm)	L2 (mm)	M
20	68	¾	95	65	14	101	14	12	60	24	16	43	130	25	M6
25	96	¾	105	75	14	132	18	12	73	25	16	57	150	25	M6
32	96	¾	115	85	14	143	22	12	84	25	16	57	160	25	M6
40	120	¾	140	100	18	173	26	15	99	26	26	69	180	45	M8
50	150	¾	150	110	18	214	32	15	119	36	26	88	200	45	M8
63	150	¾	165	125	18	226	39	15	132	36	26	88	230	45	M8

d (mm)	Lift = Hx (mm)	closest inch (inch)
20	7	½
25	10	¾
32	13	1
40	15	1 ¼
50	19	1 ½
63	23	2

# DIASTAR TenPlus



## Diaphragm valve DIASTAR TenPlus PVC-U FC (Fail safe to close) Unions with solvent cement sockets metric

### Model:

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

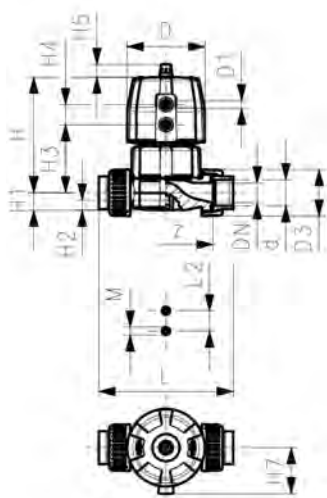
### Option:

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **both sides**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value (Δp=1 bar) (L/min)	EPDM Code	SP	Weight (kg)
16	10	3/8	10	10*	125	161 684 011	1	0.992
20	15	1/2	10	10*	125	161 684 012	1	1.384
25	20	3/4	10	10*	271	161 684 013	1	1.128
32	25	1	10	10*	481	161 684 014	1	2.048
40	32	1 1/4	10	10*	759	161 684 015	1	3.362
50	40	1 1/2	10	10*	1263	161 684 016	1	5.585
63	50	2	10	10*	1728	161 684 017	1	7.250

d (mm)	FKM Code	SP	Weight (kg)	PTFE/ EPDM* Code	SP	Weight (kg)	PTFE/FKM* Code	Weight (kg)
16	161 684 061	1	0.992	161 684 031	1	1.002		
20	161 684 062	1	1.384	161 684 032	1	0.996	161 684 052	0.996
25	161 684 063	1	1.128	161 684 033	1	1.131	161 684 053	1.131
32	161 684 064	1	2.048	161 684 034	1	2.055	161 684 054	2.055
40	161 684 065	1	3.362	161 684 035	1	3.306	161 684 055	3.306
50	161 684 066	1	5.585	161 684 036	1	5.242	161 684 056	5.242
63	161 684 067	1	7.250	161 684 037	1	6.572	161 684 057	6.572

d (mm)	D (mm)	D1_G (inch)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)
16	96	3/8	127	14	12	68	25	16	57	170	25	M6	142	7
20	96	1/2	127	14	12	68	25	16	57	128	25	M6	96	7
25	96	3/4	132	18	12	73	25	16	57	152	25	M6	114	10
32	120	1	167	22	12	93	26	26	69	166	25	M6	122	13
40	150	1 1/4	196	26	15	101	36	26	88	192	45	M8	140	15
50	180	1 1/2	239	32	15	124	37	26	103	222	45	M8	160	19
63	180	2	251	39	15	137	37	26	103	266	45	M8	190	23

d (mm)	closest inch (inch)
16	3/8
20	1/2
25	3/4
32	1
40	1 1/4
50	1 1/2
63	2



**Diaphragm valve DIASTAR TenPlus PVC-U  
FC (Fail safe to close)  
With solvent cement spigots metric**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Overall length EN 558

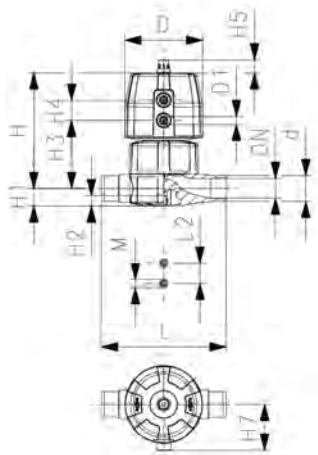
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **both sides**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
20	15	½	10	10*	125	<b>161 685 012</b>	1	0.929
25	20	¾	10	10*	271	<b>161 685 013</b>	1	1.039
32	25	1	10	10*	481	<b>161 685 014</b>	1	1.935
40	32	1 ¼	10	10*	759	<b>161 685 015</b>	1	3.096
50	40	1 ½	10	10*	1263	<b>161 685 016</b>	1	4.958
63	50	2	10	10*	1728	<b>161 685 017</b>	1	5.668

d (mm)	PTFE/ EPDM* Code	SP	Weight (kg)
20	<b>161 685 032</b>	1	0.939
25	<b>161 685 033</b>	1	1.050
32	<b>161 685 034</b>	1	1.832
40	<b>161 685 035</b>	1	3.116
50	<b>161 685 036</b>	1	5.360
63	<b>161 685 037</b>	1	5.696

d (mm)	D (mm)	D1_G (inch)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	Lift = Hx (mm)	closest inch (inch)
20	96	¾	127	14	12	68	25	16	57	124	25	M6	7	½
25	96	¾	132	18	12	73	25	16	57	144	25	M6	10	¾
32	120	1	167	22	12	93	26	26	69	154	25	M6	13	1
40	150	1 ¼	196	26	15	101	36	26	88	174	45	M8	15	1 ¼
50	180	1 ½	239	32	15	124	37	26	103	194	45	M8	19	1 ½
63	180	1 ½	251	39	15	137	37	26	103	224	45	M8	23	2



**Diaphragm valve DIASTAR TenPlus PVC-U  
FC (Fail safe to close)  
With backing flanges PVC-U metric/BS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Flat sealing faces
- Overall length EN 558
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, BS 4504 PN 10

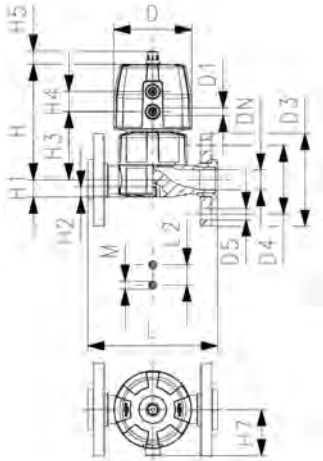
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available

\* PN: PTFE

Working Pressure: **both sides**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value (Δp=1 bar) (L/min)	EPDM Code	SP	Weight (kg)
20	15	½	10	10*	125	<b>161 687 012</b>	1	1.087
25	20	¾	10	10*	271	<b>161 687 013</b>	1	1.255
32	25	1	10	10*	481	<b>161 687 014</b>	1	2.124
40	32	1 ¼	10	10*	759	<b>161 687 015</b>	1	3.211
50	40	1 ½	10	10*	1263	<b>161 687 016</b>	1	5.564
63	50	2	10	10*	1728	<b>161 687 017</b>	1	6.922

d (mm)	FKM Code	SP	Weight (kg)	PTFE/ EPDM* Code	SP	Weight (kg)	PTFE/FKM* Code	SP	Weight (kg)
20	<b>161 687 062</b>	1	1.087	<b>161 687 032</b>	1	1.097	<b>161 687 052</b>	1	1.097
25	<b>161 687 063</b>	1	1.255	<b>161 687 033</b>	1	1.266	<b>161 687 053</b>	1	1.266
32	<b>161 687 064</b>	1	2.124	<b>161 687 034</b>	1	2.144	<b>161 687 054</b>	1	2.144
40	<b>161 687 065</b>	1	3.211	<b>161 687 035</b>	1	3.231	<b>161 687 055</b>	1	3.231
50	<b>161 687 066</b>	1	5.564	<b>161 687 036</b>	1	5.594	<b>161 687 056</b>	1	5.594
63	<b>161 687 067</b>	1	6.922	<b>161 687 037</b>	1	6.522	<b>161 687 057</b>	1	6.522

d (mm)	D (mm)	D1_G (inch)	D3 (mm)	D4 (mm)	D5 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H7 (mm)	L (mm)	L2 (mm)	M
20	96	¾	95	65	14	127	14	12	68	25	16	57	130	25	M6
25	96	¾	105	75	14	132	18	12	73	25	16	57	150	25	M6
32	120	¾	115	85	14	167	22	12	93	26	26	69	160	25	M6
40	150	¾	140	100	18	196	26	15	101	36	26	88	180	45	M8
50	180	¾	150	110	18	239	32	15	124	37	26	103	200	45	M8
63	180	¾	165	125	18	251	39	15	137	37	26	103	230	45	M8

d (mm)	Lift = Hx (mm)	closest inch (inch)
20	7	½
25	10	¾
32	13	1
40	15	1 ¼
50	19	1 ½
63	23	2



**Diaphragm valve type DIASTAR PVC-U**  
**Series 025 FC (Fail safe to close)**  
**With fixed flanges PVC-U metric**

**Model:**

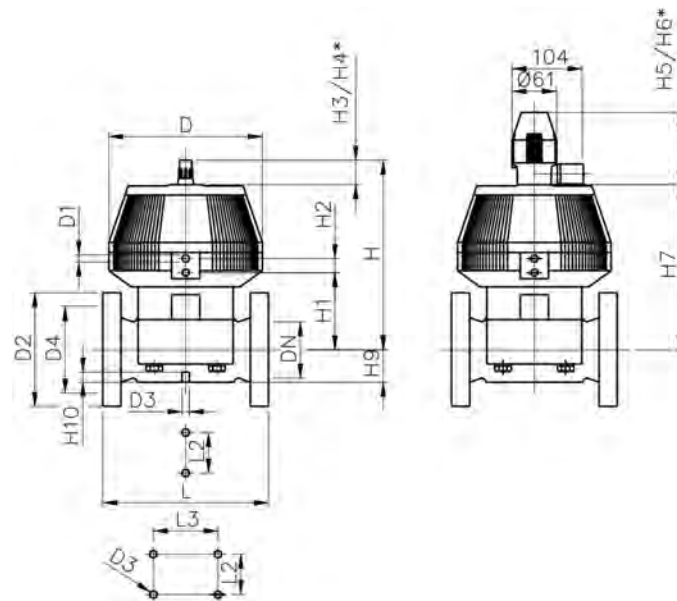
- Connecting dimension: ISO 7005 / EN 1092 / DIN 25 PN10 / BS4504
- With position indicator / Working pressure: **one side**
- \* with backing flanges PVC-U metric
- \*\* **DN80, DN100 and DN150 fixed flanges metric and inch ANSI B16.5**

	d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	Weight (kg)	FKM Code
*	75	2 ½	65	10	992	<b>199 025 127</b>	13.730	
**	90	3	80	10	1700	<b>199 025 128</b>	17.400	<b>199 025 068</b>
**	110	4	100	6	2700	<b>199 025 129</b>	7.963	<b>199 025 069</b>
**	160	6	150	6	6033	<b>199 025 130</b>	35.000	<b>199 025 070</b>

d (mm)	PTFE/EPDM Code	Weight (kg)
*	<b>199 025 157</b>	15.115
**	<b>199 025 158</b>	17.604
**	<b>199 025 159</b>	27.748
**		

d (mm)	D (mm)	D1_G (inch)	D2 (mm)	D3[M] (mm)	D4 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	H7 (mm)	H9 (mm)	
*	75	280	¼	185	8	145	344	148	24	46	100	129	195	298	46
**	90	280	¼	200	12	160	348	150	24	46	100	129	195	302	57
**	110	335	¼	225	12	180	395	176	24	46	100	129	195	349	69
**	160	335	¼	285	12	240	455	237	24	46	100	129	195	409	108

d (mm)	H10 (mm)	L (mm)	L2 (mm)	L3 (mm)
*	75	15	290	70
**	90	15	310	120
**	110	20	350	120
**	160	20	480	100





**Diaphragm valve type DIASTAR PVC-U**  
**Series 025 FO (Fail safe to open)**  
**With fixed flanges PVC-U metric**

**Model:**

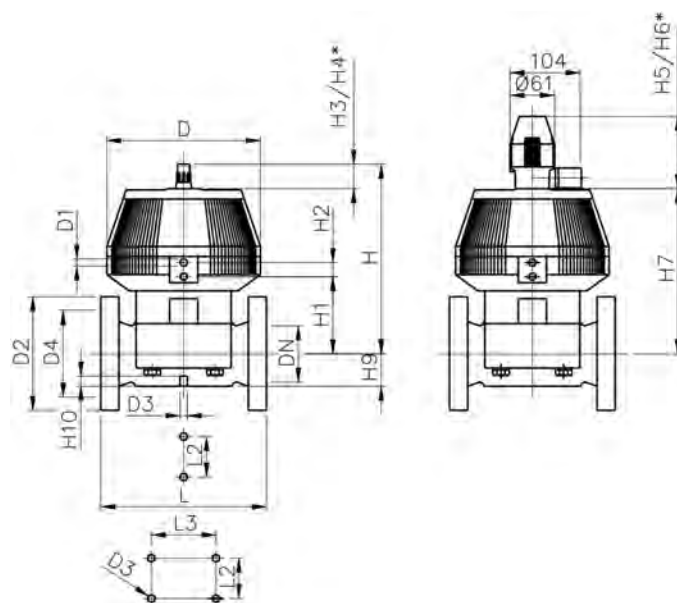
- Connecting dimension: ISO 7005 / EN 1092 / DIN 25 PN10 / BS4504
- With position indicator / Working pressure: **one side**
- \* with backing flanges PVC-U metric
- \*\* DN80, DN100 and DN150 fixed flanges metric and inch ANSI B16.5**

	d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	Weight (kg)
*	75	2 ½	65	10	992	<b>199 025 137</b>	11.744
**	90	3	80	10	1700	<b>199 025 138</b>	13.950
**	110	4	100	6	2700	<b>199 025 139</b>	21.901
**	160	6	150	6	6033	<b>199 025 140</b>	35.000

	d (mm)	FKM Code	PTFE/EPDM Code	Weight (kg)
*	75		<b>199 025 167</b>	13.600
**	90	<b>199 025 078</b>	<b>199 025 168</b>	14.137
**	110	<b>199 025 079</b>	<b>199 025 169</b>	24.700
**	160	<b>199 025 080</b>	<b>199 025 170</b>	35.000

	d (mm)	D (mm)	D1_G (inch)	D2 (mm)	D3[M] (mm)	D4 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	H7 (mm)	H9 (mm)
*	75	280	¼	185	8	145	344	148	24	46	100	129	195	298	46
**	90	280	¼	200	12	160	348	150	24	46	100	129	195	302	57
**	110	335	¼	225	12	180	395	176	24	46	100	129	195	349	69
**	160	335	¼	285	12	240	455	237	24	46	100	129	195	409	108

	d (mm)	H10 (mm)	L (mm)	L2 (mm)	L3 (mm)
*	75	15	290	70	
**	90	15	310	120	
**	110	20	350	120	
**	160	20	480	100	200





**Diaphragm valve type DIASTAR PVC-U**  
**Series 025 DA (Double acting)**  
**With fixed flanges PVC-U metric**

**Model:**

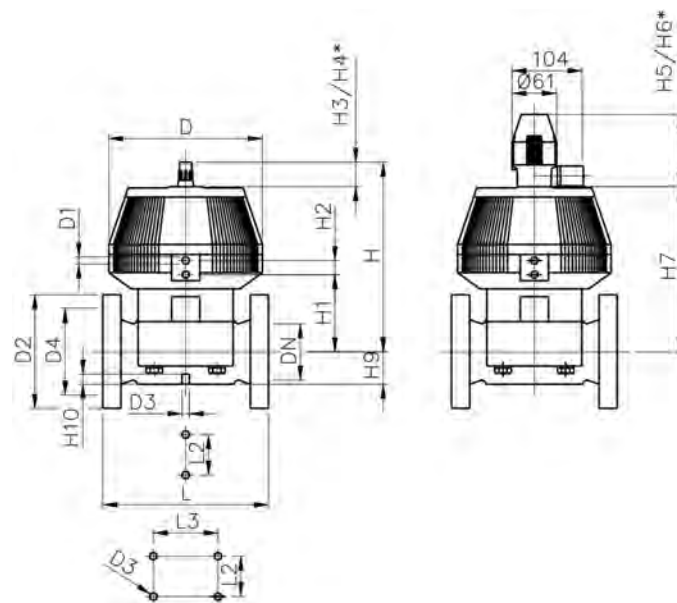
- Connecting dimension: ISO 7005 / EN 1092 / DIN 25 PN10 / BS4504
- With position indicator / Working pressure: **one side**
- \* with backing flanges PVC-U metric
- \*\* **DN80, DN100 and DN150 fixed flanges metric and inch ANSI B16.5**

	d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
*	75	2 ½	65	10	992	<b>199 025 147</b>	12.487
**	90	3	80	10	1700	<b>199 025 148</b>	14.590
**	110	4	100	6	2700	<b>199 025 149</b>	23.343
**	160	6	150	6	6033	<b>199 025 150</b>	35.000

	d (mm)	FKM Code	PTFE/EPDM Code	Weight (kg)
*	75		<b>199 025 177</b>	12.000
**	90	<b>199 025 088</b>	<b>199 025 178</b>	17.400
**	110	<b>199 025 089</b>	<b>199 025 179</b>	24.700
**	160	<b>199 025 090</b>	<b>199 025 180</b>	35.000

	d (mm)	D (mm)	D1_G (inch)	D2 (mm)	D3[M] (mm)	D4 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	H7 (mm)	H9 (mm)
*	75	280	¼	185	8	145	344	148	24	46	100	129	195	298	46
**	90	280	¼	200	12	160	348	150	24	46	100	129	195	302	57
**	110	335	¼	225	12	180	395	176	24	46	100	129	195	349	69
**	160	335	¼	285	12	240	455	237	24	46	100	129	195	409	108

	d (mm)	H10 (mm)	L (mm)	L2 (mm)	L3 (mm)
*	75	15	290	70	
**	90	15	310	120	
**	110	20	350	120	
**	160	20	480	100	200



# Diaphragm valves electric

## e-DIASTAR type 515



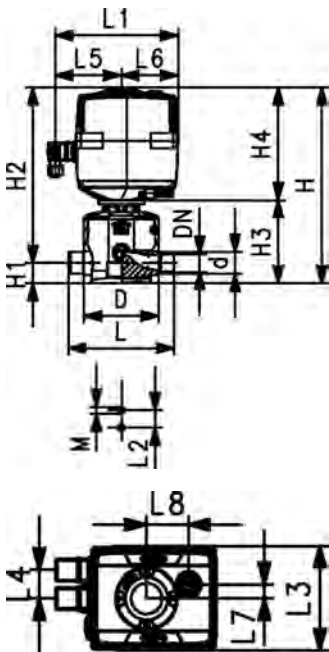
**e-DIASTAR Type 515 PVC-U**  
**24V**  
**With solvent cement spigots metric**

**Model:**

- Voltage 24V AC/DC
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-100-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)	PTFE/EPDM Code	Weight (kg)
32	25	1	10	442	161 705 014	3.601	161 705 034	3.621
63	50	2	6	1575	161 705 017	6.147	161 705 037	6.175

kv-value ( $\Delta p=1$ bar) (l/min)	D (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)	H (mm)	H1 (mm)
442	109	154	180	25	122	33	97	83	16	49	190	286	30
1575	168	223	180	45	122	33	97	83	16	49		341	53

H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	M
20	256	121	165	M6
29	289	176	165	M8





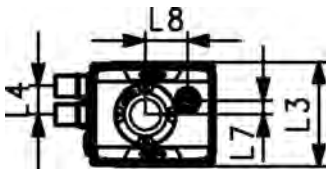
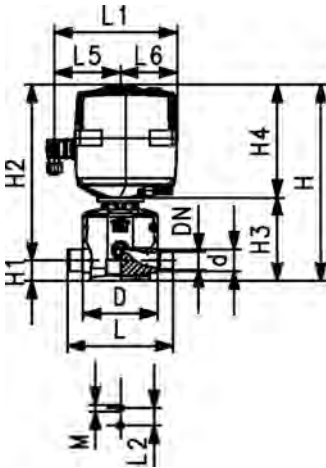
**e-DIASTAR Type 515 PVC-U**  
**100-230V**  
**With solvent cement spigots metric**

**Model:**

- Voltage 100-230V, 50-60Hz
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-100-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	Weight (kg)	PTFE/EPDM Code	Weight (kg)
32	25	1	10	442	161 715 014	3.601	161 715 034	3.621
63	50	2	6	1575	161 715 017	6.147	161 715 037	6.175

kv-value ( $\Delta p=1$ bar) (L/min)	D (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)	H (mm)	H1 (mm)
442	109	154	180	25	122	33	97	83	16	49	190	286	30
1575	168	223	180	45	122	33	97	83	16	49	341	341	53

H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	M
20	256	121	165	M6
29	289	176	165	M8

# e-DIASTAR type 514



## e-DIASTAR Type 514 PVC-U 24V With solvent cement sockets metric

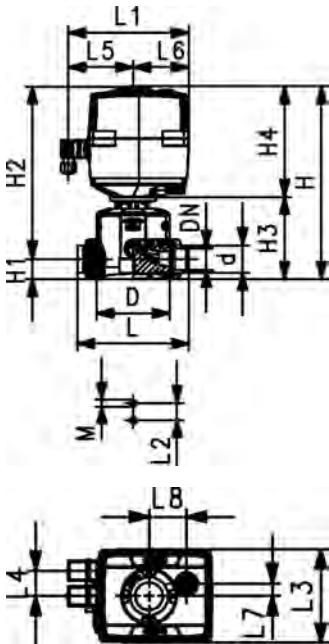
### Model:

- Voltage 24V AC/DC
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

### Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	Size (inch)	PN (bar)	EPDM Code	Weight (kg)	PTFE/EPDM Code	Weight (kg)
32	25	1	10	161 704 014	3.730	161 704 034	3.750
63	50	2	6	161 704 017	6.569	161 704 037	6.597



kv-value ( $\Delta p=1$ bar) (l/min)	D (mm)	D1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)	H (mm)
442	109	58	166	180	25	122	33	97	83	16	49	190	286
1575	168	101	266	180	45	122	33	97	83	16	49		341

H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	z (mm)	M
30	20	256	121	165	122	M6
53	29	289	176	165	122	M8



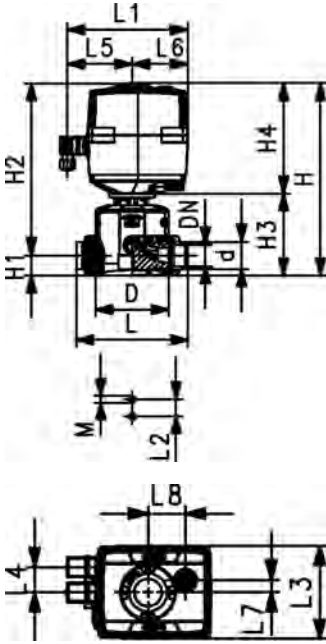
**e-DIASTAR Type 514 PVC-U**  
**100-230V**  
**With solvent cement sockets metric**

**Model:**

- Voltage 100-230V, 50-60Hz
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-100-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	Weight (kg)	PTFE/EPDM Code	Weight (kg)
32	25	1	10	442	161 714 014	3.730	161 714 034	6.569
63	50	2	6	1575	161 714 017	2.488	161 714 037	6.597

kv-value ( $\Delta p=1$ bar) (L/min)	D (mm)	D1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)	H (mm)
442	109	58	166	180	25	122	33	97	83	16	49	190	286
1575	168	101	266	180	45	122	33	97	83	16	49		341

H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	z (mm)	M
30	20	256	121	165	122	M6
53	29	289	176	165	190	M8

**Electric actuator MT's type EAMT**

**Model:**

- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- All: Adjustable heater and 7-segment error LED included
- Control open/close; position feedback open/close
- Contains: Retrofit kit with actuator, half shells and screws

**Option:**

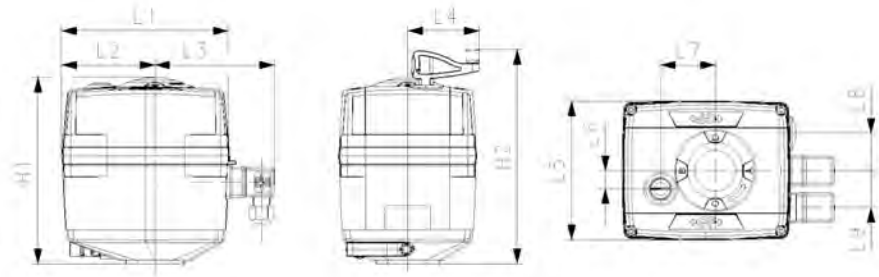
- All: Fail-safe return unit; monitoring board, positioner, profibus DP board



Type of actuator	Voltage	Torque nominal	Torque maximal	Interfaces	description	Code
EAMT	24V	10 Nm	25 Nm	F05* (WS 11/14)	EA MT DN25	198 153 211
EAMT	24V	20 Nm	45 Nm	F05* (WS 11/14)	EA MT DN50	198 153 213
EAMT	100-230V	10 Nm	25 Nm	F05* (WS 11/14)	EA MT DN25	198 153 210
EAMT	110-230V	20 Nm	45 Nm	F05* (WS 11/14)	EA MT DN50	198 153 212

table continued on the next page

H1	H2	L1	L2	L3	L4	L5	L6	L7	L8	L9
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
167	188	150	82.5	107	64.3	122	16	49	33	33
167	188	150	82.5	107	64.3	122	16	49	33	33
167	188	150	82.5	107	64.3	122	16	49	33	33
167	188	150	82.5	107	64.3	122	16	49	33	33



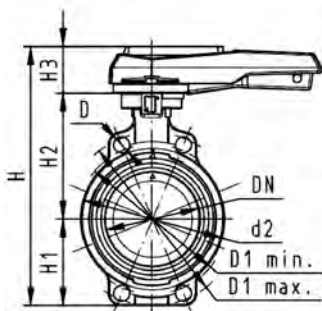
# Butterfly valves type 567



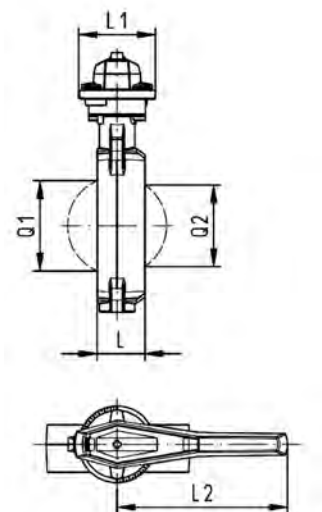
**Wafer-style, intermediate installation butterfly valve type 567 PVC-U**  
**With hand lever**  
**Flange standard metric/ANSI/BS/JIS**

**Model:**

- Up to DN 300: Overall length according to EN558 (DN 50-200: line 25, DN250, 300 line 16), ISO 5752
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220
- We recommend for the dimensions DN250 and DN300 only 6 bar maximum system pressure for the hand lever version



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	FKM Code	Weight (kg)
63	2	50	10	740	161 567 002	161 567 022	1.259
75	2 ½	65	10	1500	161 567 003	161 567 023	1.799
90	3	80	10	2400	161 567 004	161 567 024	1.534
110	4	100	10	3800	161 567 005	161 567 025	2.235
140	5	125	10	8600	161 567 006	161 567 026	2.799
160	6	150	10	11400	161 567 007	161 567 027	3.791
225	8	200	10	19900	161 567 008	161 567 028	6.570
280	10	250	10	34000	161 567 009	161 567 029	12.998
315	12	300	10	50000	161 567 010	161 567 030	19.139



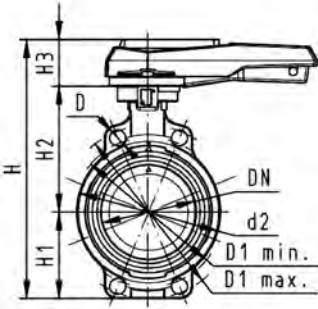
d (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	d2 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	Q1 (mm)	Q2 (mm)
63	19	120.0	125.0	104	265	77	134	54	45	106	205	40	35
75	19	139.7	145.0	115	268	83	140	45	46	106	205	54	
90	19	150.0	160.0	131	289	89	146	54	49	106	205	67	50
110	19	175.0	190.5	161	326	104	167	55	56	106	255	88	74
140	23	210.0	215.9	187	353	117	181	55	64	106	255	113	97
160	24	241.3	241.3	215	374	130	189	55	72	106	255	139	123
225	23	290.0	295.0	267	435	158	210	67	73	140	408	178	169
280	25	353.0	362.0	329	554	205	264	85	113	149	408	210	207
315	25	400.0	432.0	379	598	228	285	85	113	149	408	256	253



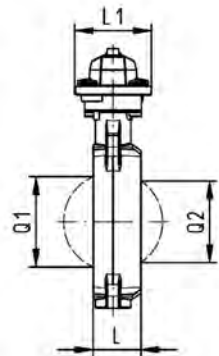
**Wafer-style, intermediate installation butterfly valve type 567 PVC-U oil free  
With hand lever  
Flange standard metric/ANSI/BS/JIS**

**Model:**

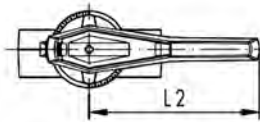
- Oil free
- Overall length according to EN 558, ISO 5752
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
63	2	50	10	740	<b>161 567 502</b>	1.040
75	2 ½	65	10	1500	<b>161 567 503</b>	1.344
90	3	80	10	2400	<b>161 567 504</b>	1.308
110	4	100	10	3800	<b>161 567 505</b>	1.969
140	5	125	10	8600	<b>161 567 506</b>	2.536
160	6	150	10	11400	<b>161 567 507</b>	3.731
225	8	200	10	19900	<b>161 567 508</b>	5.513



d (mm)	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	Q1 (mm)	Q2 (mm)
63	104	19	120	125	264	77	134	54	45	106	205	40	
75	115	19	140	145	277	83	140	54	46	106	205	54	35
90	131	19	150	160	289	89	146	54	49	106	205	67	50
110	161	19	175	191	325	104	167	55	56	106	255	88	74
140	187	23	210	216	352	117	181	55	64	106	255	113	97
160	215	24	241	241	373	130	189	55	72	106	255	139	123
225	267	23	290	295	435	158	210	67	73	140	408	178	169

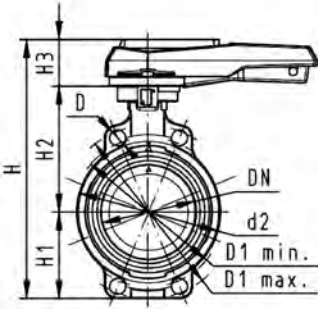




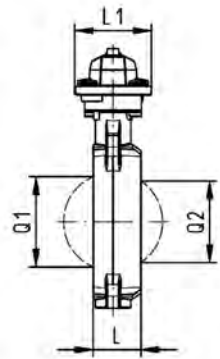
**Wafer-style, intermediate installation butterfly valve type 567 PVC-U silicon free  
With hand lever  
Flange standard metric/ANSI/BS/JIS**

**Model:**

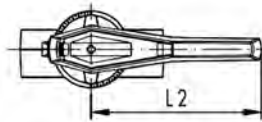
- Silicone free/paint-compatible
- Overall length according to EN 558, ISO 5752
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
63	2	50	10	740	<b>161 567 402</b>	1.040	<b>161 567 422</b>	1.044
75	2 ½	65	10	1500	<b>161 567 403</b>	1.350	<b>161 567 423</b>	1.148
90	3	80	10	2400	<b>161 567 404</b>	1.517	<b>161 567 424</b>	1.315
110	4	100	10	3800	<b>161 567 405</b>	2.528	<b>161 567 425</b>	1.983
140	5	125	10	8600	<b>161 567 406</b>	2.536	<b>161 567 426</b>	3.339
160	6	150	10	11400	<b>161 567 407</b>	3.541	<b>161 567 427</b>	3.564
225	8	200	10	19900	<b>161 567 408</b>	5.513	<b>161 567 428</b>	5.541



d (mm)	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	Q1 (mm)	Q2 (mm)
63	104	19	120	125	264	77	134	54	45	106	205	40	
75	115	19	140	145	277	83	140	54	46	106	205	54	35
90	131	19	150	160	289	89	146	54	49	106	205	67	50
110	161	19	175	191	325	104	167	55	56	106	255	88	74
140	187	23	210	216	352	117	181	55	64	106	255	113	97
160	215	24	241	241	373	130	189	55	72	106	255	139	123
225	267	23	290	295	435	158	210	67	73	140	408	178	169

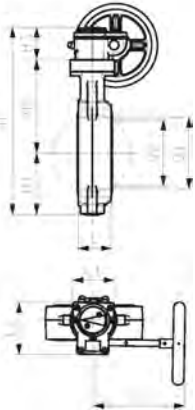
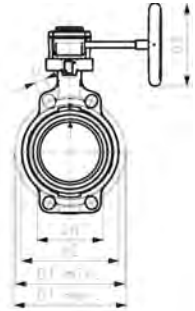




**Wafer-style, intermediate installation butterfly valve type 567 PVC-U**  
**With gear box**  
**Flange standard metric/ANSI/BS/JIS**

**Model:**

- Up to DN 300: Overall length according to EN558 (DN 50-200: line 25, DN250, 300 line 16), ISO 5752
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
63	2	50	10	740	<b>161 567 042</b>	1	3.078	<b>161 567 062</b>	1	3.082
75	2 ½	65	10	1500	<b>161 567 043</b>	1	3.181	<b>161 567 063</b>	1	3.186
90	3	80	10	2400	<b>161 567 044</b>	1	3.346	<b>161 567 064</b>	1	3.353
110	4	100	10	3800	<b>161 567 045</b>	1	4.022	<b>161 567 065</b>	1	3.973
140	5	125	10	8600	<b>161 567 046</b>	1	4.185	<b>161 567 066</b>	1	4.544
160	6	150	10	11400	<b>161 567 047</b>	1	5.174	<b>161 567 067</b>	1	5.181
225	8	200	10	19900	<b>161 567 048</b>	1	7.072	<b>161 567 068</b>	1	8.339
280	10	250	10	34000	<b>161 567 049</b>	1	14.741	<b>161 567 069</b>	1	15.115
315	12	300	10	50000	<b>161 567 050</b>	1	19.254	<b>161 567 070</b>	1	35.000

d (mm)	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	Q1 (mm)
63	104	19	120	125	160	273	77	134	62	45	78	112	179	40
75	115	19	140	145	160	285	83	140	62	46	78	112	179	54
90	131	19	150	160	160	297	89	146	62	49	78	112	179	67
110	160	19	175	191	160	333	104	167	62	56	78	112	179	88
140	187	23	210	216	160	360	117	181	62	64	78	112	179	113
160	215	24	241	241	160	381	130	189	62	72	78	112	179	139
225	267	23	290	295	160	430	158	210	62	73	78	112	179	178
280	329	25	353	362	200	538	205	264	69	113	97	130	198	210
315	379	25	400	432	200	582	228	285	69	113	97	130	198	256

d (mm)	Q2 (mm)
63	
75	35
90	50
110	74
140	97
160	123
225	169
280	207
315	253



**Wafer-style, intermediate installation butterfly valve type 567 PVC-U**

**Bare shaft**

**Flange standard metric/ANSI/BS/JIS**

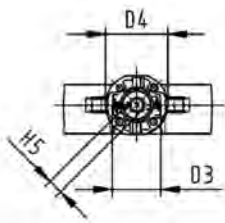
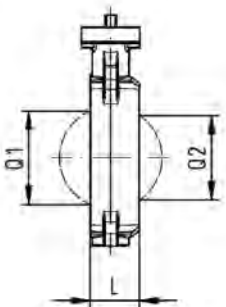
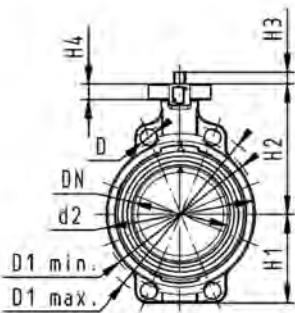


**Model:**

- Up to DN 300: Overall length according to EN558 (DN 50-200: line 25, DN250, 300 line 16), ISO 5752
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220
- Interface F07 for the dimensions DN50-200 according to DIN/ISO 5211
- Interface F10 for the dimensions DN250-300 according to DIN/ISO 5211
- Interface F12 for the dimensions DN350-400 according to DIN/ISO 5211

d	Size	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(inch)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
				(l/min)						
63	2	50	10	740	<b>161 567 802</b>	1	0.778	<b>161 567 822</b>	1	0.787
75	2 ½	65	10	1500	<b>161 567 803</b>	1	0.921	<b>161 567 823</b>	1	0.895
90	3	80	10	2400	<b>161 567 804</b>	1	1.052	<b>161 567 824</b>	1	1.068
110	4	100	10	3800	<b>161 567 805</b>	1	1.641	<b>161 567 825</b>	1	2.092
140	5	125	10	8600	<b>161 567 806</b>	1	2.266	<b>161 567 826</b>	1	2.236
160	6	150	10	11400	<b>161 567 807</b>	1	3.179	<b>161 567 827</b>	1	3.238
225	8	200	10	19900	<b>161 567 808</b>	1	5.063	<b>161 567 828</b>	1	5.127
280	10	250	10	34000	<b>161 567 809</b>	1	11.588	<b>161 567 829</b>	1	11.735
315	12	300	10	50000	<b>161 567 810</b>	1	16.050	<b>161 567 830</b>	1	15.936

d	d2	D	D1	D1	D3	D4	H1	H2	H3	H4	H5	L	Q1	Q2
(mm)	(mm)	(mm)	min.	max.	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
			(mm)	(mm)										
63	104	19	120	125	70	90	77	134	27	23	11	45	40	
75	115	19	140	145	70	90	83	140	27	23	11	46	54	35
90	131	19	150	160	70	90	89	146	27	23	11	49	67	50
110	161	19	175	191	70	90	104	167	16	23	14	56	88	74
140	187	23	210	216	70	90	117	181	16	23	14	64	113	97
160	215	24	241	241	70	90	130	189	19	23	17	72	139	123
225	267	23	290	295	70	90	158	210	19	23	17	73	178	169
280	329	25	353	362	102	125	205	264	40	23	22	113	210	207
315	379	25	400	432	102	125	228	285	40	23	22	113	256	253



# Butterfly valves electric type 145



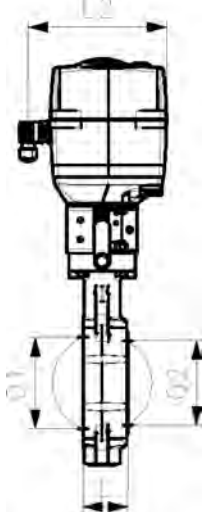
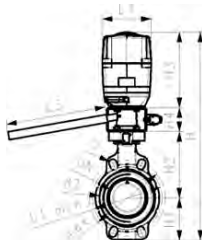
**Wafer-style, intermediate installation butterfly valve type 145 PVC-U**  
**With electric actuator 230V**  
**With manual override**  
**Flange standard metric/ANSI/BS/JIS**

**Model:**

- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
63	2	50	10	740	199 145 002	6.138	199 145 022	5.682
75	2 ½	65	10	1500	199 145 003	7.213	199 145 023	5.786
90	3	80	10	2400	199 145 004	6.360	199 145 024	5.953
110	4	100	10	3800	199 145 005	6.990	199 145 025	6.573
140	5	125	10	8600	199 145 006	7.508	199 145 026	7.147
160	6	150	10	11400	199 145 007	10.062	199 145 027	8.154
225	8	200	10	19900	199 145 008	14.106	199 145 028	14.134

d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)
63	EA-120	104	19	120	125	475	77	134	188	75	45	122	180	250
75	EA-120	115	19	140	145	488	83	140	188	75	46	122	180	250
90	EA-120	131	19	150	160	488	89	146	188	60	49	122	180	250
110	EA-120	161	19	175	191	520	104	167	188	60	56	122	180	250
140	EA-120	187	23	210	216	547	117	181	188	60	64	122	180	250
160	EA-120	215	24	241	241	568	130	189	188	60	72	122	180	250
225	EA-250	267	23	290	295	635	158	210	208	60	73	122	180	250

d (mm)	Q1 (mm)	Q2 (mm)
63	40	
75	54	35
90	67	50
110	88	74
140	113	97
160	139	123
225	178	169



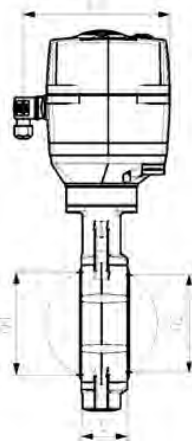
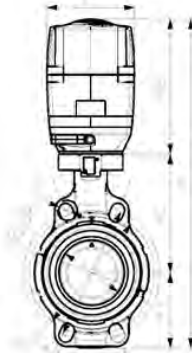
**Wafer-style, intermediate installation butterfly valve type 145 PVC-U**  
**With electric actuator 230V**  
**Without manual override**  
**Flange standard metric/ANSI/BS/JIS**

**Model:**

- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
63	2	50	10	740	199 145 042	4.408	199 145 062	4.182
75	2 ½	65	10	1500	199 145 043	4.509	199 145 063	4.286
90	3	80	10	2400	199 145 044	4.675	199 145 064	4.453
110	4	100	10	3800	199 145 045	6.890	199 145 065	5.073
140	5	125	10	8600	199 145 046	5.626	199 145 066	5.644
160	6	150	10	11400	199 145 047	6.631	199 145 067	6.654
225	8	200	10	19900	199 145 048	12.606	199 145 068	12.634
280	10	250	6	34000	199 145 049	14.334	199 145 069	14.481
315	12	300	4	50000	199 145 050	19.546	199 145 070	19.546

d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	Q1 (mm)	Q2 (mm)
63	EA-45	104	19	120	125	415	77	134	188	45	122	180	40	
75	EA-45	115	19	140	145	428	83	140	188	46	122	180	54	35
90	EA-120	131	19	150	160	428	89	146	188	49	122	180	67	50
110	EA-120	161	19	175	191	460	104	167	188	56	122	180	88	74
140	EA-120	187	23	210	216	487	117	181	188	64	122	180	113	97
160	EA-120	215	24	241	241	508	130	189	188	72	122	180	139	169
225	EA-250	267	23	290	295	575	158	210	208	73	122	180	178	169
280	EA-250	329	25	353	362	677	205	264	208	113	122	180	210	207
315	EA-250	379	25	400	432	721	228	285	208	113	122	180	256	253



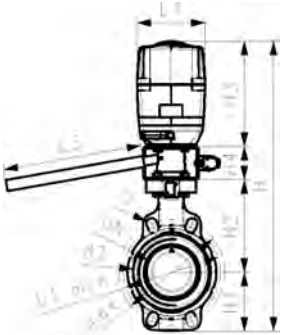
**Wafer-style, intermediate installation butterfly valve type 145 PVC-U**  
**With electric actuator 24V**  
**With manual override**  
**Flange standard metric/ANSI/BS/JIS**

**Model:**

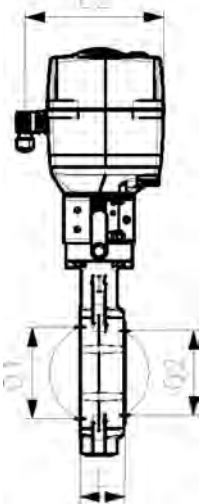
- Voltage 24V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	Weight (kg)
63	2	50	10	740	<b>199 145 082</b>	6.116
75	2 ½	65	10	1500	<b>199 145 083</b>	6.183
90	3	80	10	2400	<b>199 145 084</b>	6.327
110	4	100	10	3800	<b>199 145 085</b>	6.975
140	5	125	10	8600	<b>199 145 086</b>	9.142
160	6	150	10	11400	<b>199 145 087</b>	8.418
225	8	200	10	19900	<b>199 145 088</b>	14.106



d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)
63	EA-120	104	19	120	125	475	77	134	188	75	45	122	180	250
75	EA-120	115	19	140	145	488	83	140	188	75	46	122	180	250
90	EA-120	131	19	150	160	488	89	146	188	60	49	122	180	250
110	EA-120	161	19	175	191	520	104	167	188	60	56	122	180	250
140	EA-120	187	23	210	216	547	117	181	188	60	64	122	180	250
160	EA-120	215	24	241	241	568	130	189	188	60	72	122	180	250
225	EA-250	267	23	290	295	635	158	210	208	60	73	122	180	250

d (mm)	Q1 (mm)	Q2 (mm)
63	40	
75	54	35
90	67	50
110	88	74
140	113	97
160	139	123
225	178	169



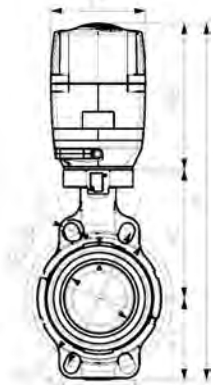
**Wafer-style, intermediate installation butterfly valve type 145 PVC-U**  
**With electric actuator 24V**  
**Without manual override**  
**Flange standard metric/ANSI/BS/JIS**

**Model:**

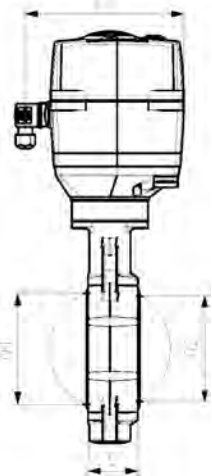
- Voltage 24V AC/DC
- Factory set control range 90°<-)
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
63	2	50	10	740	199 145 122	4.178	199 145 142	5.073
75	2 ½	65	10	1500	199 145 123	4.281	199 145 143	5.073
90	3	80	10	2400	199 145 124	4.660	199 145 144	5.073
110	4	100	10	3800	199 145 125	5.252	199 145 145	5.073
140	5	125	10	8600	199 145 126	5.793	199 145 146	4.286
160	6	150	10	11400	199 145 127	6.631	199 145 147	4.182
225	8	200	10	19900	199 145 128	12.606	199 145 148	12.634
280	10	250	6	34000	199 145 129	14.334	199 145 149	14.334
315	12	300	6	50000	199 145 130	19.546	199 145 150	19.546



d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	Q1 (mm)	Q2 (mm)
63	EA-45	104	19	120	125	415	77	134	188	45	122	180	40	
75	EA-45	115	19	140	145	428	83	140	188	46	122	180	54	35
90	EA-120	131	19	150	160	428	89	146	188	49	122	180	67	50
110	EA-120	161	19	175	191	460	104	167	188	56	122	180	88	74
140	EA-120	187	23	210	216	487	117	181	188	64	122	180	113	97
160	EA-120	215	24	241	241	508	130	189	188	72	122	180	139	123
225	EA-250	267	23	290	295	575	158	210	208	73	122	180	178	169
280	EA-250	329	25	353	362	677	205	264	208	113	122	180	210	207
315	EA-250	329	25	353	362	677	205	264	208	113	122	180	210	207

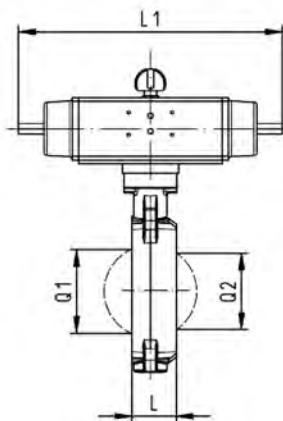
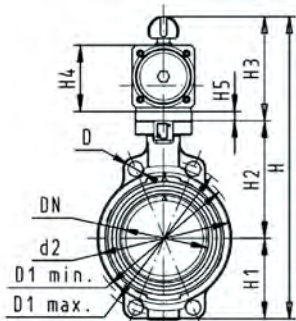
# Butterfly valves pneumatic type 240



**Wafer-style, intermediate installation butterfly valve type 240 PVC-U**  
**With pneumatic actuator - fail safe to close (FC)**  
**Without manual override**  
**Flange standard metric/ANSI/BS/JIS**

**Model:**

- Control range 90°<
- Overall length according to EN 558, ISO 5752
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220



d	Size	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(inch)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
				(L/min)						
63	2	50	10	740	199 240 002	1	2.976	199 240 022	1	3.222
75	2 ½	65	10	1500	199 240 003	1	3.086	199 240 023	1	3.075
90	3	80	10	2400	199 240 004	1	3.486	199 240 024	1	3.938
110	4	100	10	3800	199 240 005	1	5.224	199 240 025	1	5.263
140	5	125	10	8600	199 240 006	1	7.127	199 240 026	1	6.884
160	6	150	10	11400	199 240 007	1	10.047	199 240 027	1	10.095
225	8	200	10	19900	199 240 008	1	14.925	199 240 028	1	14.134
280	10	250	10	34000	199 240 009	1	28.200	199 240 029	1	28.000
315	12	300	10	50000	199 240 010	1	36.200	199 240 030	1	36.400

d	Actuator unit	d2	D	D1	D1	H	H1	H2	H3	H4	H5	L	L1
(mm)	type	(mm)	(mm)	min.	max.	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
				(mm)	(mm)								
63	PA-30 FC	104	19	120	125	327	77	134	117	70	15	45	276
75	PA-30 FC	115	19	140	145	340	83	140	117	70	15	46	276
90	PA-35 FC	131	19	150	160	361	89	146	126	78	15	49	326
110	PA-40 FC	161	19	175	191	400	104	167	129	86		56	370
140	PA-45 FC	187	23	210	216	436	117	181	139	96		64	411
160	PA-50 FC	215	24	241	241	468	130	189	149	106		72	423
225	PA-55 FC	267	23	290	295	529	158	210	161	118		73	452
280	PA-60 FC	329	25	353	362	808	205	264	191	148		113	648
315	PA-70 FC	379	25	400	432	866	228	285	196	157		113	663

d	L2	Q1	Q2
(mm)	(mm)	(mm)	(mm)
63	65	40	
75	65	54	35
90	72	67	50
110	80	88	74
140	90	113	97
160	100	139	123
225	112	178	169
280	137	210	207
315	145	256	253

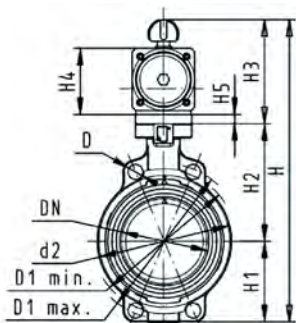


**Wafer-style, intermediate installation butterfly valve type 240 PVC-U**  
**With pneumatic actuator - fail safe to open (FO)**  
**Without manual override**  
**Flange standard metric/ANSI/BS/JIS**

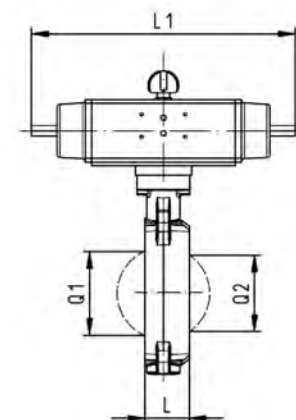
**Model:**

- Control range 90°<
- Overall length according to EN 558, ISO 5752
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220

d	Size	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(inch)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
63	2	50	10	740	<b>199 240 042</b>	1	3.218	<b>199 240 062</b>	1	3.222
75	2 ½	65	10	1500	<b>199 240 043</b>	1	3.321	<b>199 240 063</b>	1	3.326
90	3	80	10	2400	<b>199 240 044</b>	1	3.920	<b>199 240 064</b>	1	3.493
110	4	100	10	3800	<b>199 240 045</b>	1	5.219	<b>199 240 065</b>	1	5.266
140	5	125	10	8600	<b>199 240 046</b>	1	6.866	<b>199 240 066</b>	1	6.884
160	6	150	10	11400	<b>199 240 047</b>	1	10.192	<b>199 240 067</b>	1	10.215
225	8	200	10	19900	<b>199 240 048</b>	1	14.106	<b>199 240 068</b>	1	16.496
280	10	250	10	34000	<b>199 240 049</b>	1	31.800	<b>199 240 069</b>	1	31.600
315	12	300	10	50000	<b>199 240 050</b>	1	36.200	<b>199 240 070</b>	1	25.000



d	Actuator unit type	d2	D	D1 min.	D1 max.	H	H1	H2	H3	H4	H5	L	L1
(mm)		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
63	PA-30 FO	104	19	120	125	327	77	134	117	70	15	45	276
75	PA-30 FO	115	19	140	145	340	83	140	117	70	15	46	276
90	PA-35 FO	131	19	150	160	361	89	146	126	78	15	49	326
110	PA-40 FO	161	19	175	191	400	104	167	129	86		56	370
140	PA-45 FO	187	23	210	216	436	117	181	139	96		64	411
160	PA-50 FO	215	24	241	241	468	130	189	149	106		72	423
225	PA-55 FO	267	23	290	295	529	158	210	161	118		73	452
280	PA-70 FO	329	25	353	362	808	205	264	191	148		113	648
315	PA-70 FO	379	25	400	432	866	228	285	196	157		113	663



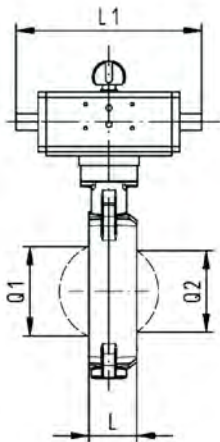
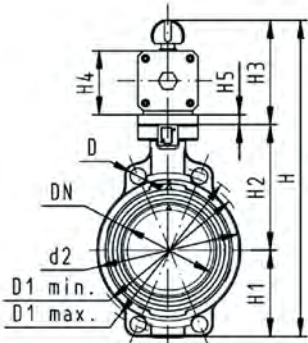
d	L2	Q1	Q2
(mm)	(mm)	(mm)	(mm)
63	65	40	
75	65	54	35
90	72	67	50
110	80	88	74
140	90	113	97
160	100	139	123
225	112	178	169
280	137	210	207
315	145	256	253



**Wafer-style, intermediate installation butterfly valve type 240 PVC-U**  
**With pneumatic actuator - double acting (DA)**  
**Without manual override**  
**Flange standard metric/ANSI/BS/JIS**

**Model:**

- Control range 90°<
- Up to DN 300: Overall length according to EN558 (DN 50-200: line 25, DN250, 300 line 16), ISO 5752
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220
- For DN350-DN400 pneumatic actuator supplied by Revac



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
63	2	50	10	740	199 240 082	1	2.936	199 240 102	1	2.072
75	2 ½	65	10	1500	199 240 083	1	2.402	199 240 103	1	2.176
90	3	80	10	2400	199 240 084	1	3.330	199 240 104	1	2.824
110	4	100	10	3800	199 240 085	1	3.765	199 240 105	1	3.563
140	5	125	10	8600	199 240 086	1	4.341	199 240 106	1	4.384
160	6	150	10	11400	199 240 087	1	7.042	199 240 107	1	6.694
225	8	200	10	19900	199 240 088	1	8.907	199 240 108	1	8.134
280	10	250	10	34000	199 240 089	1	18.948	199 240 109	1	19.100
315	12	300	10	50000	199 240 090	1	26.800	199 240 110	1	27.000

d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)
63	PA-35 DA	104	19	120	125	317	77	134	107	60	15	45	177
75	PA-35 DA	115	19	140	145	330	83	140	107	60	15	46	177
90	PA-40 DA	131	19	150	160	348	89	146	113	66	15	49	190
110	PA-45 DA	161	19	175	191	372	104	167	102	71		56	235
140	PA-45 DA	187	23	210	216	408	117	181	111	78		64	235
160	PA-55 DA	215	24	241	241	448	130	189	129	86		72	279
225	PA-55 DA	267	23	290	295	507	158	210	139	96		73	279
280	PA-65 DA	329	25	353	362	748	205	264	161	118		113	350
315	PA-70 DA	379	25	400	432	816	228	285	173	130		113	381

d (mm)	Q1 (mm)	Q2 (mm)
63	40	
75	54	35
90	67	50
110	88	74
140	113	97
160	139	123
225	178	169
280	210	207
315	256	253



# Lugstyle butterfly valve type 578



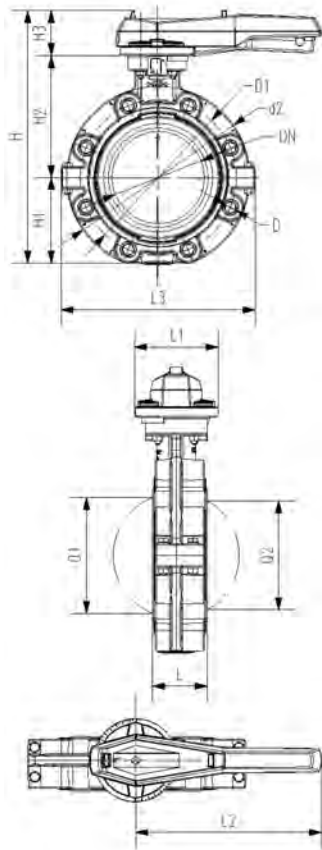
**Lug-style, end installation butterfly valve type 578 PVC-U**  
**With hand lever**  
**Flange standard metric**

**Model:**

- Housing material: PP-GF30 with SS316 lug-inserts
- Overall length according to EN 558, ISO 5752 (DN50 - 200 line 25, DN250 - 300 line 10)
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10
- We recommend for the dimensions DN250 and DN300 only 6 bar maximum system pressure for the hand lever version

**Option:**

- Optional accessory: Valve-Integrated position feedback with limit switches (limit switches have to be ordered separately)



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
63	2	50	10	740	161 578 002	1.800	161 578 022	1.800
75	2 ½	65	10	1500	161 578 003	1.895	161 578 023	1.895
90	3	80	10	2400	161 578 004	2.251	161 578 024	2.251
110	4	100	10	3800	161 578 005	3.146	161 578 025	3.146
140	5	125	10	8600	161 578 006	4.660	161 578 026	4.660
160	6	150	10	11400	161 578 007	6.430	161 578 027	6.430
225	8	200	10	19900	161 578 008	8.625	161 578 028	8.625
280	10	250	10	34000	161 578 009	19.528	161 578 029	19.528
315	12	300	10	50000	161 578 010	26.106	161 578 030	26.106

d (mm)	d2 (mm)	D	D1 (mm)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	Q1 (mm)	Q2 (mm)
63	160	M16	125	27	265	77	134	62	45	78	112	179	40	
75	180	M16	145	27	277	83	140	62	46	78	112	179	54	35
90	195	M16	160	27	289	89	146	62	49	78	112	179	67	50
110	226	M16	180	27	328	106	167	62	56	78	112	179	88	74
140	258	M16	210	27	357	121	181	62	64	78	112	179	113	97
160	284	M20	240	27	377	133	189	62	72	78	112	179	139	123
225	341	M20	295	27	436	159	210	62	73	78	112	179	178	169
280	412	M20	350	200	536	205	264	69	113	97	130	198	210	207
315	482	M20	400	200	586	234	285	69	113	97	130	198	256	253



### Lug-style, end installation butterfly valve type 578 PVC-U

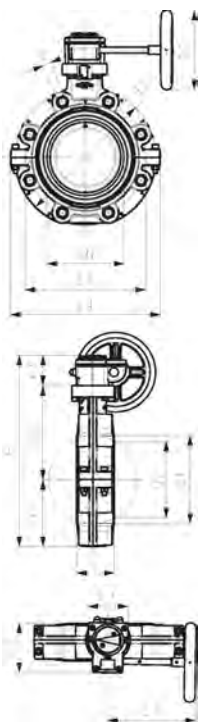
With gear box  
Flange standard metric

#### Model:

- Housing material: PP-GF30 with SS316 lug-inserts
- Overall length according to EN 558, ISO 5752 (DN50 - 200 line 25, DN250 - 300 line 10)
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

#### Option:

- Optional accessory: Valve-Integrated position feedback with limit switches (limit switches have to be ordered separately)



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
63	2	50	10	740	161 578 042	1	3.522	161 578 062	1	3.522
75	2 ½	65	10	1500	161 578 043	1	3.672	161 578 063	1	3.672
90	3	80	10	2400	161 578 044	1	3.929	161 578 064	1	3.929
110	4	100	10	3800	161 578 045	1	4.834	161 578 065	1	4.834
140	5	125	10	8600	161 578 046	1	6.348	161 578 066	1	6.348
160	6	150	10	11400	161 578 047	1	8.109	161 578 067	1	8.109
225	8	200	10	19900	161 578 048	1	9.353	161 578 068	1	9.353
280	10	250	10	34000	161 578 049	1	21.210	161 578 069	1	21.210
315	12	300	10	50000	161 578 050	1	27.746	161 578 070	1	27.746

d (mm)	d2 (mm)	D	D1 (mm)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	Q1 (mm)	Q2 (mm)
63	160	M16	125	160	273	77	134	62	45	78	112	179	165	40	
75	180	M16	145	160	285	83	140	62	46	78	112	179	182	54	35
90	195	M16	160	160	297	89	146	62	49	78	112	179	210	67	50
110	226	M16	180	160	335	106	167	62	56	78	112	179	240	88	74
140	258	M16	210	160	364	121	181	62	64	78	112	179	272	113	97
160	284	M20	240	160	384	133	189	62	72	78	112	179	300	139	123
225	341	M20	295	160	431	159	210	62	73	78	112	179	360	178	169
280	412	M20	350	200	538	205	264	69	113	97	130	198	440	210	207
315	482	M20	400	200	588	234	285	69	113	97	130	198	510	256	253



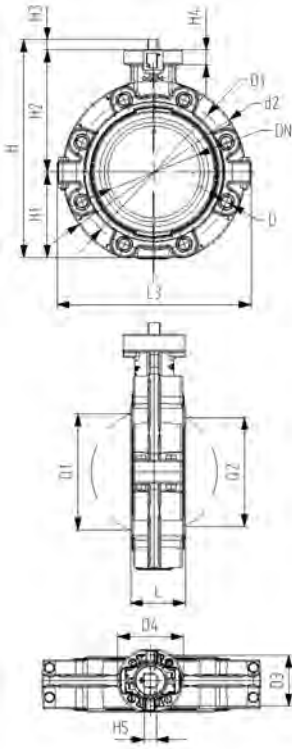
**Lug-style, end installation butterfly valve type 578 PVC-U**  
**Bare shaft**  
**Flange standard metric**

**Model:**

- Housing material: PP-GF30 with SS316 lug-inserts
- Overall length according to EN 558, ISO 5752
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10
- Interface F07 according to DIN/ISO 5211
- Interface F10 for the dimensions DN250-300 according to DIN/ISO 5211

**Option:**

- Optional accessory: Valve-Integrated position feedback with limit switches (limit switches have to be ordered separately)



d	Size	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP
(mm)	(inch)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code	Weight
				(l/min)					(kg)
63	2	50	10	740	<b>161 578 802</b>	1	1.299	<b>161 578 822</b>	1 1.299
75	2 ½	65	10	1500	<b>161 578 803</b>	1	1.456	<b>161 578 823</b>	1 1.456
90	3	80	10	2400	<b>161 578 804</b>	1	1.701	<b>161 578 824</b>	1 1.701
110	4	100	10	3800	<b>161 578 805</b>	1	2.606	<b>161 578 825</b>	1 2.606
140	5	125	10	8600	<b>161 578 806</b>	1	4.120	<b>161 578 826</b>	1 4.120
160	6	150	10	11400	<b>161 578 807</b>	1	5.881	<b>161 578 827</b>	1 5.881
225	8	200	10	19900	<b>161 578 808</b>	1	7.125	<b>161 578 828</b>	1 7.125
280	10	250	10	34000	<b>161 578 809</b>	1	17.880	<b>161 578 829</b>	1 17.880
315	12	300	10	50000	<b>161 578 810</b>	1	24.416	<b>161 578 830</b>	1 24.416

d	d2	D	D1	D3	D4	H5	H	H1	H2	H3	H4	L	Q1	Q2
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
63	160	M16	125	70	90	11	273	77	134	27	23	45	40	
75	180	M16	145	70	90	11	285	83	140	27	23	46	54	35
90	195	M16	160	70	90	11	297	89	146	27	23	49	67	50
110	226	M16	180	70	90	14	335	106	167	16	23	56	88	74
140	258	M16	210	70	90	14	364	121	181	16	23	64	113	97
160	284	M20	240	70	90	17	384	133	189	19	23	72	139	123
225	341	M20	295	70	90	17	431	159	210	19	23	73	178	169
280	412	M20	350	200	125	22	555	205	264	86	23	113	210	207
315	482	M20	400	200	125	22	605	234	285	86	23	113	256	253

# Lugstyle butterfly valves electric type 146



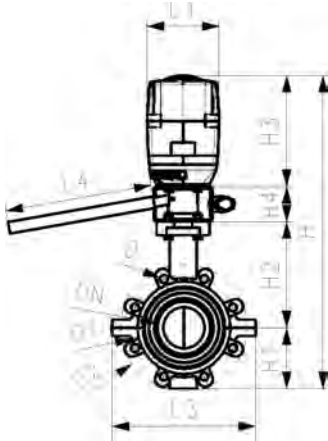
**Lug-Style, end installation butterfly valve type 146 PVC-U**  
**With electric actuator 230V**  
**With manual override**  
**Flange standard metric**

**Model:**

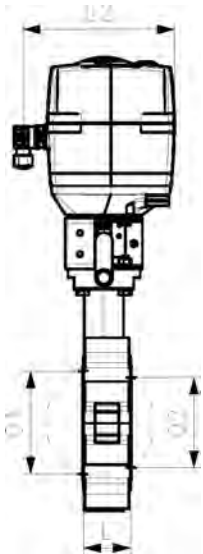
- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	Weight (kg)
63	2	50	10	740	<b>199 146 002</b>	5.799
75	2 ½	65	10	1500	<b>199 146 003</b>	5.956
90	3	80	10	2400	<b>199 146 004</b>	6.201
110	4	100	10	3800	<b>199 146 005</b>	7.106
140	5	125	10	8600	<b>199 146 006</b>	8.620
160	6	150	10	11400	<b>199 146 007</b>	10.381
225	8	200	10	19900	<b>199 146 008</b>	15.125



d (mm)	Actuator unit type	d2 (mm)	D	D1	H	H1	H2	H3	H4	L	L1	L2	L3	Q1	Q2
63	EA-120	160	M16	125	474	77	134	188	75	45	122	180	165	40	
75	EA-120	180	M16	145	486	83	140	188	75	46	122	180	182	54	35
90	EA-120	195	M16	160	483	89	146	188	60	49	122	180	210	67	50
110	EA-120	226	M16	180	521	106	167	188	60	56	122	180	240	88	74
140	EA-120	258	M16	210	550	121	181	188	60	64	122	180	272	113	97
160	EA-120	284	M20	240	570	133	189	188	60	72	122	180	300	139	123
225	EA-250	341	M20	295	637	159	210	208	60	73	122	180	360	178	169



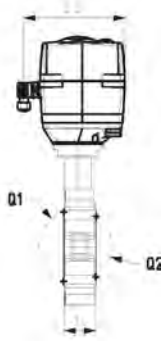
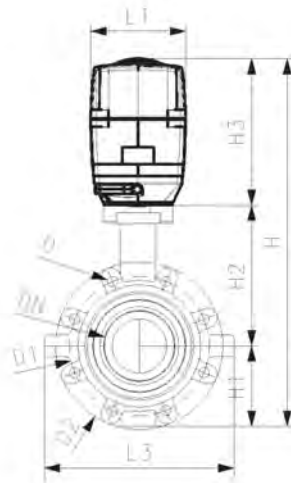
**Lug-Style, end installation butterfly valve type 146 PVC-U**  
**With electric actuator 230 V**  
**Without manual override**  
**Flange standard metric**

**Model:**

- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d	Size	DN	PN	kv-value	EPDM	Weight
(mm)	(inch)	(mm)	(bar)	( $\Delta p=1$ bar)	Code	(kg)
				(l/min)		
63	2	50	10	740	<b>199 146 042</b>	4.299
75	2 ½	65	10	1500	<b>199 146 043</b>	4.456
90	3	80	10	2400	<b>199 146 044</b>	4.456
110	4	100	10	3800	<b>199 146 045</b>	5.606
140	5	125	10	8600	<b>199 146 046</b>	7.120
160	6	150	10	11400	<b>199 146 047</b>	8.881
225	8	200	10	19900	<b>199 146 048</b>	13.625
280	10	250	6	34000	<b>199 146 049</b>	24.385
315	12	300	4	50000	<b>199 146 050</b>	30.916

d	Actuator	d2	D	D1	H	H1	H2	H3	L	L1	L2	L3	Q1	Q2
(mm)	unit type	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
63	EA-45	160	M16	125	414	77	134	188	45	122	180	165	40	
75	EA-45	180	M16	145	426	83	140	188	46	122	180	182	54	35
90	EA-120	195	M16	160	423	89	146	188	49	122	180	210	67	50
110	EA-120	226	M16	180	461	106	167	188	56	122	180	240	88	74
140	EA-120	258	M16	210	490	121	181	188	64	122	180	272	113	97
160	EA-120	284	M20	240	510	133	189	188	72	122	180	300	139	123
225	EA-250	341	M20	295	577	159	210	208	73	122	180	360	178	169
280	EA-250	412	M20	350	677	205	264	208	113	122	180	440	210	207
315	EA-250	482	M20	400	727	234	285	208	113	122	180	510	256	253



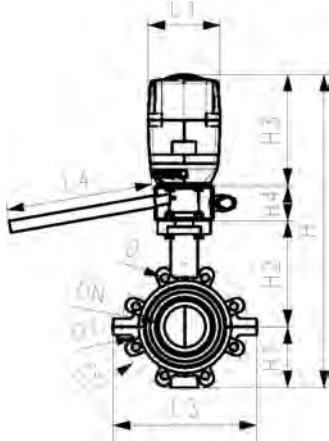
**Lug-style, end installation butterfly valve type 146 PVC-U**  
**With electric actuator 24V**  
**With manual override**  
**Flange standard metric**

**Model:**

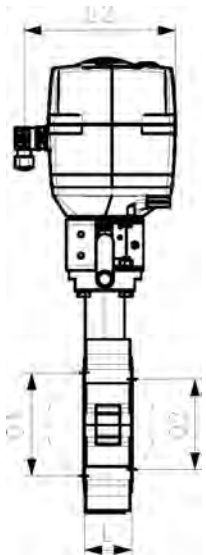
- Voltage 24V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d	Size	DN	PN	kv-value	EPDM	Weight
(mm)	(inch)	(mm)	(bar)	( $\Delta p=1$ bar)	Code	(kg)
				(l/min)		
63	2	50	10	740	<b>199 146 082</b>	5.799
75	2 ½	65	10	1500	<b>199 146 083</b>	5.956
90	3	80	10	2400	<b>199 146 084</b>	6.201
110	4	100	10	3800	<b>199 146 085</b>	7.106
140	5	125	10	8600	<b>199 146 086</b>	8.620
160	6	150	10	11400	<b>199 146 087</b>	10.381
225	8	200	10	19900	<b>199 146 088</b>	15.125



d	Actuator	d2	D	D1	H	H1	H2	H3	H4	L	L1	L2	L3	Q1	Q2
(mm)	unit type	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
63	EA-120	160	M16	125	459	77	134	188	60	45	122	180	165	40	
75	EA-120	180	M16	145	471	83	140	188	60	46	122	180	182	54	35
90	EA-120	195	M16	160	483	89	146	188	60	49	122	180	210	67	50
110	EA-120	226	M16	180	521	106	167	188	60	56	122	180	240	88	74
140	EA-120	258	M16	210	550	121	181	188	60	64	122	180	272	113	97
160	EA-120	284	M20	240	570	133	189	188	60	72	122	180	300	139	123
225	EA-250	341	M20	295	637	159	210	208	60	73	122	180	360	178	169



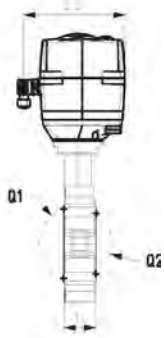
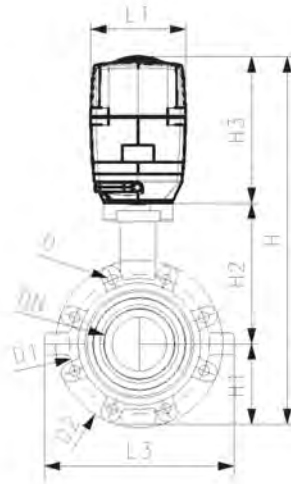
**Lug-Style, end installation butterfly valve type 146 PVC-U**  
**With electric actuator 24V**  
**Without manual override**  
**Flange standard metric**

**Model:**

- Voltage 24V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d	Size	DN	PN	kv-value	EPDM	Weight
(mm)	(inch)	(mm)	(bar)	( $\Delta p=1$ bar)	Code	(kg)
				(l/min)		
63	2	50	10	740	<b>199 146 122</b>	4.299
75	2 ½	65	10	1500	<b>199 146 123</b>	4.456
90	3	80	10	2400	<b>199 146 124</b>	4.701
110	4	100	10	3800	<b>199 146 125</b>	5.606
140	5	125	10	8600	<b>199 146 126</b>	7.120
160	6	150	10	11400	<b>199 146 127</b>	8.881
225	8	200	10	19900	<b>199 146 128</b>	13.625

d	Actuator	d2	D	D1	H	H1	H2	H3	L	L1	L2	L3	Q1	Q2
(mm)	unit type	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
63	EA-45	160	M16	125	414	77	134	188	45	122	180	165	40	
75	EA-45	180	M16	145	426	83	140	188	46	122	180	182	54	35
90	EA-120	195	M16	160	423	89	146	188	49	122	180	210	67	50
110	EA-120	226	M16	180	461	106	167	188	56	122	180	240	88	74
140	EA-120	258	M16	210	490	121	181	188	64	122	180	272	113	97
160	EA-120	284	M20	240	410	133	189	188	72	122	180	300	139	123
225	EA-250	341	M20	295	577	159	210	208	73	122	180	360	178	169

# Lugstyle butterfly valves pneumatic type 243



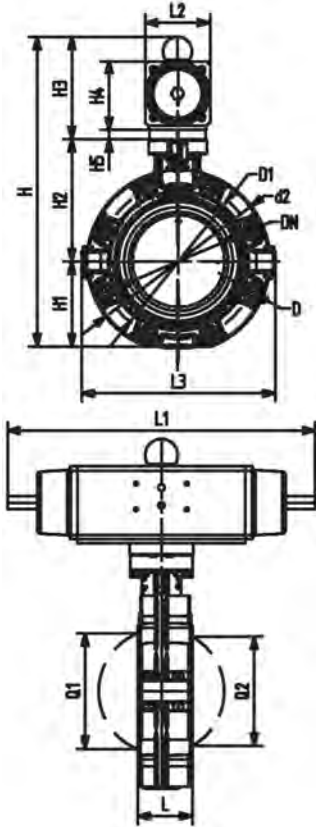
**Lug-style, end installation butterfly valve type 243 PVC-U**  
**With pneumatic actuator - fail safe to close (FC)**  
**Without manual override**  
**Flange standard metric**

**Model:**

- Housing material: PP-GF30 with SS316 lug-inserts
- Control range 90°<
- Overall length according to EN 558, ISO 5752 (DN50 - 200 line 25, DN250 - 300 line 10)
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

**Option:**

- Optional accessory: Valve-Integrated position feedback with limit switches (limit switches have to be ordered separately)



d	Size	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(inch)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
63	2	50	10	740	<b>199 243 002</b>	1	3.499	<b>199 243 022</b>	1	3.499
75	2 ½	65	10	1500	<b>199 243 003</b>	1	3.656	<b>199 243 023</b>	1	3.656
90	3	80	10	2400	<b>199 243 004</b>	1	4.692	<b>199 243 024</b>	1	4.692
110	4	100	10	3800	<b>199 243 005</b>	1	6.406	<b>199 243 025</b>	1	6.406
140	5	125	10	8600	<b>199 243 006</b>	1	9.222	<b>199 243 026</b>	1	9.222
160	6	150	10	11400	<b>199 243 007</b>	1	12.902	<b>199 243 027</b>	1	12.902
225	8	200	10	19900	<b>199 243 008</b>	1	16.691	<b>199 243 028</b>	1	16.691
280	10	250	10	34000	<b>199 243 009</b>	1	33.880	<b>199 243 029</b>	1	33.880
315	12	300	10	50000	<b>199 243 010</b>	1	43.985	<b>199 243 030</b>	1	43.985

d	Actuator unit type	d2	D	D1	H	H1	H2	H3	H4	H5	L	L1	L2	L3
(mm)		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
63	PA-30 FC	160	M16	125	328	77	134	117	70	15	45	276	65	165
75	PA-30 FC	180	M16	145	340	83	140	117	70	15	46	276	65	182
90	PA-35 FC	195	M16	160	361	89	146	126	78	15	49	326	72	210
110	PA-40 FC	226	M16	180	402	106	167	129	86		56	370	80	240
140	PA-45 FC	258	M16	210	441	121	181	139	96		64	411	90	272
160	PA-50 FC	284	M20	240	471	133	189	149	106		72	423	100	300
225	PA-55 FC	341	M20	295	530	159	210	161	118		73	452	112	360
280	PA-65 FC	412	M20	350	660	205	264	191	148		113	648	137	440
315	PA-70 FC	482	M20	400	715	234	285	196	157		113	663	145	510

d	Q1	Q2
(mm)	(mm)	(mm)
63	40	
75	54	35
90	67	50
110	88	74
140	113	97
160	139	123
225	178	169
280	210	207
315	256	253





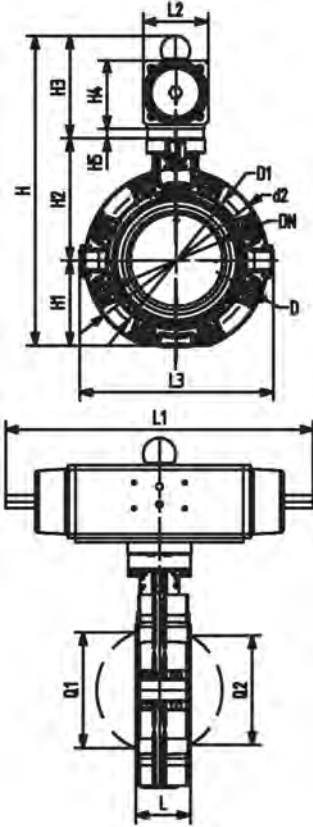
**Lug-style, end installation butterfly valve type 243 PVC-U**  
**With pneumatic actuator - fail safe to open (FO)**  
**Without manual override**  
**Flange standard metric**

**Model:**

- Housing material: PP-GF30 with SS316 lug-inserts
- Control range 90°<
- Overall length according to EN 558, ISO 5752 (DN50 - 200 line 25, DN250 - 300 line 10)
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

**Option:**

- Optional accessory: Valve-Integrated position feedback with limit switches (limit switches have to be ordered separately)



d	Size	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(inch)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
				(l/min)						
63	2	50	10	740	199 243 042	1	3.499	199 243 062	1	3.499
75	2 ½	65	10	1500	199 243 043	1	3.656	199 243 063	1	3.656
90	3	80	10	2400	199 243 044	1	4.692	199 243 064	1	4.692
110	4	100	10	3800	199 243 045	1	6.406	199 243 065	1	6.406
140	5	125	10	8600	199 243 046	1	9.222	199 243 066	1	9.222
160	6	150	10	11400	199 243 047	1	12.902	199 243 067	1	12.902
225	8	200	10	19900	199 243 048	1	16.691	199 243 068	1	16.691
280	10	250	10	34000	199 243 049	1	33.880	199 243 069	1	33.880
315	12	300	10	50000	199 243 050	1	43.985	199 243 070	1	43.985

d	Actuator unit	d2	D	D1	H	H1	H2	H3	H4	H5	L	L1	L2	L3
(mm)	type	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
63	PA-30 FO	160	M16	125	328	77	134	117	70	15	45	276	65	165
75	PA-30 FO	180	M16	145	340	83	140	117	70	15	46	276	65	182
90	PA-35 FO	195	M16	160	361	89	146	126	78	15	49	326	72	210
110	PA-40 FO	226	M16	180	402	106	167	129	86		56	370	80	240
140	PA-45 FO	258	M16	210	441	121	181	139	96		64	411	90	272
160	PA-50 FO	284	M20	240	471	133	189	149	106		72	423	100	300
225	PA-55 FO	341	M20	295	530	159	210	161	118		73	452	112	360
280	PA-70 FO	412	M20	350	660	205	264	191	148		113	648	137	440
315	PA-70 FO	482	M20	400	715	234	285	196	157		113	663	145	510

d	Q1	Q2
(mm)	(mm)	(mm)
63	40	
75	54	35
90	67	50
110	88	74
140	113	97
160	139	123
225	178	169
280	210	207
315	256	253



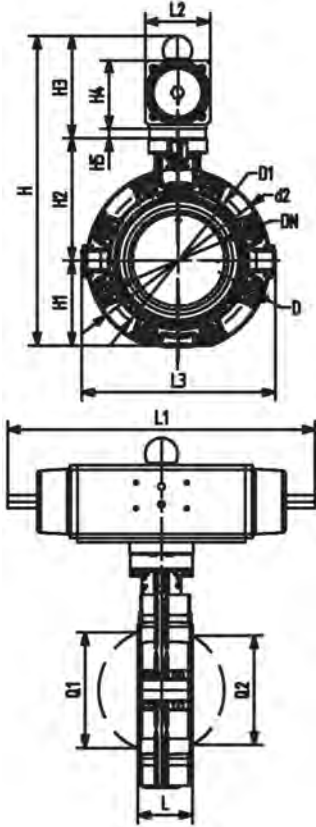
**Lug-style, end installation butterfly valve type 243 PVC-U**  
**With pneumatic actuator - double acting (DA)**  
**Without manual override**  
**Flange standard metric**

**Model:**

- Housing material: PP-GF30 with SS316 lug-inserts
- Control range 90°<
- Overall length according to EN 558, ISO 5752 (DN50 - 200 line 25, DN250 - 300 line 10)
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

**Option:**

- Optional accessory: Valve-Integrated position feedback with limit switches (limit switches have to be ordered separately)



d	Size	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(inch)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
				(l/min)						
63	2	50	10	740	199 243 082	1	3.499	199 243 102	1	3.499
75	2 ½	65	10	1500	199 243 083	1	3.656	199 243 103	1	3.656
90	3	80	10	2400	199 243 084	1	4.692	199 243 104	1	4.692
110	4	100	10	3800	199 243 085	1	6.406	199 243 105	1	6.406
140	5	125	10	8600	199 243 086	1	9.222	199 243 106	1	9.222
160	6	150	10	11400	199 243 087	1	12.902	199 243 107	1	12.902
225	8	200	10	19900	199 243 088	1	16.691	199 243 108	1	16.691
280	10	250	10	34000	199 243 089	1	33.880	199 243 109	1	33.880
315	12	300	10	50000	199 243 090	1	43.985	199 243 110	1	43.985

d	Actuator unit type	d2	D	D1	H	H1	H2	H3	H4	H5	L	L1	L2	L3
(mm)		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
63	PA-35 DA	160	M16	125	318	77	134	107	60	15	45	177	55	165
75	PA-35 DA	180	M16	145	330	83	140	107	60	15	46	177	55	182
90	PA-40 DA	195	M16	160	348	89	146	113	66	15	49	190	60	210
110	PA-45 DA	226	M16	180	375	106	167	102	71		56	235	65	240
140	PA-45 DA	258	M16	210	413	121	181	111	78		64	235	72	272
160	PA-55 DA	284	M20	240	451	133	189	129	86		72	279	80	300
225	PA-55 DA	341	M20	295	508	159	210	139	96		73	279	90	360
280	PA-65 DA	412	M20	350	630	205	264	161	118		113	350	112	440
315	PA-70 DA	482	M20	400	692	234	285	173	130		113	381	124	510

d	Q1	Q2
(mm)	(mm)	(mm)
63	40	
75	54	35
90	67	50
110	88	74
140	113	97
160	139	123
225	178	169
280	210	207
315	256	253

# Pressure regulating valves

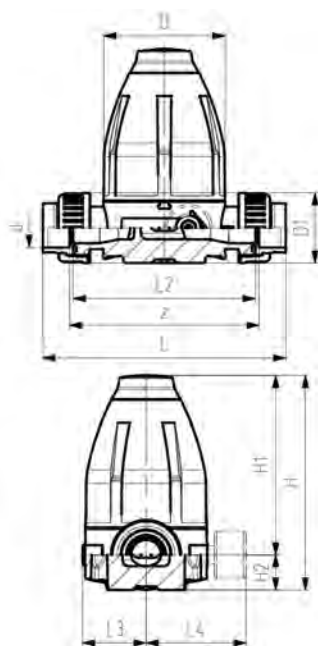
## Pressure reducing valve type 582



**Pressure reducing valve type 582 PVC-U**  
**Unions with solvent cement sockets metric**  
**With manometer**

**Model:**

- Diaphragm PTFE/EPDM
  - Integrated stainless steel mounting inserts
  - 0.5-9.0 bar (7-130 psi)
  - Attention: Manometer with brass connection in direct contact with medium. Check for chemical resistance, otherwise chose the optional manometer adapter for media separation.
- 0.3-3.0 bar (4-44 psi) on request



d (mm)	DN (mm)	Size (inch)	PN (bar)	O-rings EPDM Code	Weight (kg)	SP	O-rings FKM Code
16	10	3/8	10	161 582 121	0.724	1	161 582 131
20	15	1/2	10	161 582 122	0.730	1	161 582 132
25	20	3/4	10	161 582 123	1.520	1	161 582 133
32	25	1	10	161 582 124	1.550	1	161 582 134
40	32	1 1/4	10	161 582 125	4.100	1	161 582 135
50	40	1 1/2	10	161 582 126	4.270	1	161 582 136
63	50	2	10	161 582 127	4.500	1	161 582 137

d (mm)	D (mm)	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L2 (mm)	L3 (mm)	L4 (mm)	M	z (mm)	closest inch (inch)
16	79	43	132	111	21	12	200	120	42	77	M6	172	3/8
20	79	43	132	111	21	12	158	120	42	77	M6	126	1/2
25	100	51	177	148	29	14	194	150	53	88	M6	156	3/4
32	100	58	177	148	29	14	200	150	53	88	M6	156	1
40	147	72	251	207	44	21	263	205	76	111	M8	211	1 1/4
50	147	83	251	207	44	21	273	205	76	111	M8	211	1 1/2
63	147	101	251	207	44	21	287	205	76	111	M8	211	2

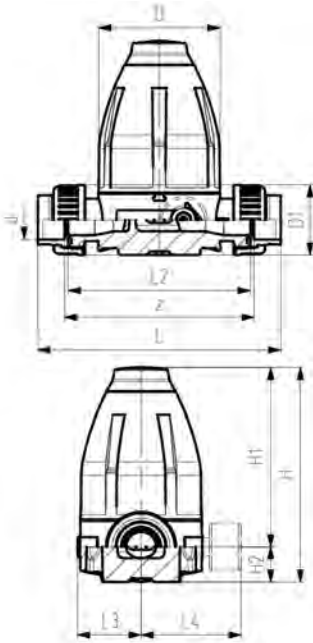


**Pressure reducing valve type 582 PVC-U  
Unions with solvent cement sockets metric  
Without manometer**

**Model:**

- Diaphragm PTFE/EPDM
- Integrated stainless steel mounting inserts
- 0.5-9.0 bar (7-130 psi)

0.3-3.0 bar (4-44 psi) on request  
Manometer on request



d (mm)	DN (mm)	Size (inch)	PN (bar)	O-rings EPDM Code	Weight (kg)	SP	O-rings FKM Code
16	10	3/8	10	<b>161 582 101</b>	0.694	1	<b>161 582 111</b>
20	15	1/2	10	<b>161 582 102</b>	0.700	1	<b>161 582 112</b>
25	20	3/4	10	<b>161 582 103</b>	1.490	1	<b>161 582 113</b>
32	25	1	10	<b>161 582 104</b>	1.520	1	<b>161 582 114</b>
40	32	1 1/4	10	<b>161 582 105</b>	4.070	1	<b>161 582 115</b>
50	40	1 1/2	10	<b>161 582 106</b>	4.240	1	<b>161 582 116</b>
63	50	2	10	<b>161 582 107</b>	4.470	1	<b>161 582 117</b>

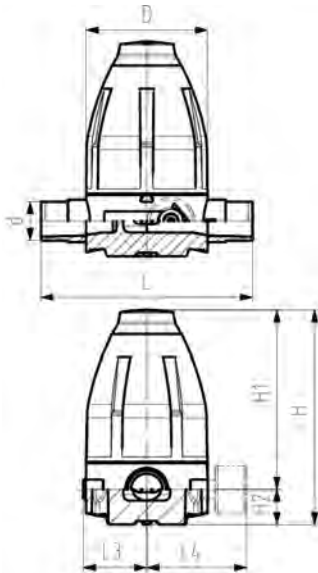
d (mm)	D (mm)	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L2 (mm)	L3 (mm)	M	z (mm)	closest inch (inch)
16	79	43	132	111	21	12	200	120	42	M6	172	3/8
20	79	43	132	111	21	12	158	120	42	M6	126	1/2
25	100	51	177	148	29	14	194	150	53	M6	156	3/4
32	100	58	177	148	29	14	200	150	53	M6	156	1
40	147	72	251	207	44	21	263	205	76	M8	211	1 1/4
50	147	83	251	207	44	21	273	205	76	M8	211	1 1/2
63	147	101	251	207	44	21	287	205	76	M8	211	2



**Pressure reducing valve type 582 PVC-U**  
**With solvent cement spigots metric**  
**With manometer**

**Model:**

- Diaphragm PTFE/EPDM
  - Integrated stainless steel mounting inserts
  - 0.5-9.0 bar (7-130 psi)
  - Attention: Manometer with brass connection in direct contact with medium. Check for chemical resistance, otherwise chose the optional manometer adapter for media separation.
- 0.3-3.0 bar (4-44 psi) on request



d (mm)	DN (mm)	Size (inch)	PN (bar)	O-rings EPDM Code	Weight (kg)	SP	O-rings FKM Code
16	10	3/8	10	161 582 021	0.650	1	161 582 031
20	15	1/2	10	161 582 022	0.660	1	161 582 032
25	20	3/4	10	161 582 023	1.430	1	161 582 033
32	25	1	10	161 582 024	1.440	1	161 582 034
40	32	1 1/4	10	161 582 025	3.960	1	161 582 035
50	40	1 1/2	10	161 582 026	3.970	1	161 582 036
63	50	2	10	161 582 027	4.040	1	161 582 037

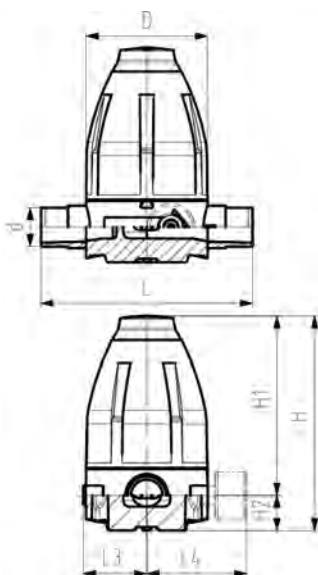
d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L3 (mm)	L4 (mm)	M	closest inch (inch)
16	79	132	111	21	12	134	42	77	M6	3/8
20	79	132	111	21	12	134	42	77	M6	1/2
25	100	177	148	29	14	174	53	88	M6	3/4
32	100	177	148	29	14	174	53	88	M6	1
40	147	251	207	44	21	224	76	111	M8	1 1/4
50	147	251	207	44	21	224	76	111	M8	1 1/2
63	147	251	207	44	21	244	76	111	M8	2



**Pressure reducing valve type 582 PVC-U**  
**With solvent cement spigots metric**  
**Without manometer**

**Model:**

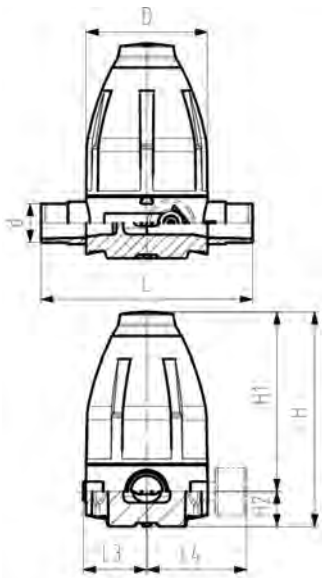
- Diaphragm PTFE/EPDM
  - Integrated stainless steel mounting inserts
  - 0.5-9.0 bar (7-130 psi)
- 0.3-3.0 bar (4-44 psi) on request  
 Manometer on request



d (mm)	DN (mm)	Size (inch)	PN (bar)	O-rings EPDM Code	Weight (kg)	O-rings FKM Code	SP
16	10	3/8	10	161 582 001	0.620	161 582 011	1
20	15	1/2	10	161 582 002	0.630	161 582 012	1
25	20	3/4	10	161 582 003	1.400	161 582 013	1
32	25	1	10	161 582 004	1.410	161 582 014	1
40	32	1 1/4	10	161 582 005	3.930	161 582 015	1
50	40	1 1/2	10	161 582 006	3.940	161 582 016	1
63	50	2	10	161 582 007	4.010	161 582 017	1

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L3 (mm)	M	closest inch (inch)
16	79	132	111	21	12	134	42	M6	3/8
20	79	132	111	21	12	134	42	M6	1/2
25	100	177	148	29	14	174	53	M6	3/4

table continued on the next page

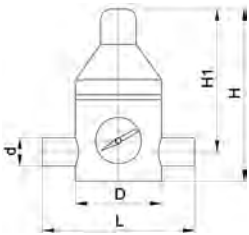


d	D	H	H1	H2	H3	L	L3	M	closest inch
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(inch)
32	100	177	148	29	14	174	53	M6	1
40	147	251	207	44	21	224	76	M8	1 ¼
50	147	251	207	44	21	224	76	M8	1 ½
63	147	251	207	44	21	244	76	M8	2

**Pressure reducing valve type V82 PVC-U  
With solvent cement spigots metric**



Type	d	DN	Size	PN	EPDM Code	Weight	PTFE Code
	(mm)	(mm)	(inch)	(bar)		(kg)	
V82	75	65	2 ½	6	199 041 019	11.685	199 041 029
V82	90	80	3	6	199 041 020	19.630	199 041 030
V82	110	100	4	4	199 041 021	31.640	199 041 031



D	H	H1	L	closest inch	Pressure range	PN
(mm)	(mm)	(mm)	(mm)	(inch)	(bar)	
200	350	250	300	2 ½	0.5 - 5.0	6
250	425	305	360	3	0.5 - 5.0	6
300	495	345	420	4	1.0 - 3.0	4

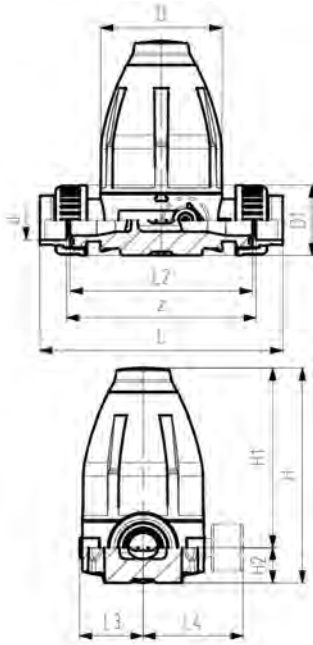
# Pressure retaining valve type 586



**Pressure retaining valve type 586 PVC-U**  
**Unions with solvent cement sockets metric**  
**Without manometer**

**Model:**

- Diaphragm PTFE/EPDM
  - Integrated stainless steel mounting inserts
  - 0.5-9.0 bar (7-130 psi)
- 0.3-3.0 bar (4-44 psi) on request  
 Manometer on request



d (mm)	DN (mm)	Size (inch)	PN (bar)	O-rings EPDM Code	Weight (kg)	SP	O-rings FKM Code
16	10	3/8	10	<b>161 586 101</b>	0.694	1	<b>161 586 111</b>
20	15	1/2	10	<b>161 586 102</b>	0.690	1	<b>161 586 112</b>
25	20	3/4	10	<b>161 586 103</b>	1.510	1	<b>161 586 113</b>
32	25	1	10	<b>161 586 104</b>	1.540	1	<b>161 586 114</b>
40	32	1 1/4	10	<b>161 586 105</b>	4.200	1	<b>161 586 115</b>
50	40	1 1/2	10	<b>161 586 106</b>	4.260	1	<b>161 586 116</b>
63	50	2	10	<b>161 586 107</b>	4.500	1	<b>161 586 117</b>

d (mm)	D (mm)	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L2 (mm)	L3 (mm)	M	z (mm)	closest inch (inch)
16	79	43	132	111	21	12	200	120	42	M6	172	3/8
20	79	43	132	111	21	12	158	120	42	M6	126	1/2
25	100	51	177	148	29	14	194	150	53	M6	156	3/4
32	100	58	177	148	29	14	200	150	53	M6	156	1
40	147	72	251	207	44	21	263	205	76	M8	211	1 1/4
50	147	83	251	207	44	21	273	205	76	M8	211	1 1/2
63	147	101	251	207	44	21	287	205	76	M8	211	2

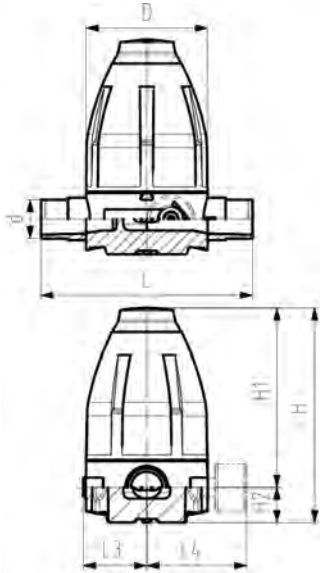


**Pressure retaining valve type 586 PVC-U  
With solvent cement spigots metric  
Without manometer**

**Model:**

- Diaphragm PTFE/EPDM
- Integrated stainless steel mounting inserts
- 0.5-9.0 bar (7-130 psi)

0.3-3.0 bar (4-44 psi) on request  
Manometer on request



d (mm)	DN (mm)	Size (inch)	PN (bar)	O-rings EPDM Code	Weight (kg)	SP	O-rings FKM Code
16	10	3/8	10	161 586 001	0.620	1	161 586 011
20	15	1/2	10	161 586 002	0.620	1	161 586 012
25	20	3/4	10	161 586 003	1.420	1	161 586 013
32	25	1	10	161 586 004	1.430	1	161 586 014
40	32	1 1/4	10	161 586 005	3.960	1	161 586 015
50	40	1 1/2	10	161 586 006	3.960	1	161 586 016
63	50	2	10	161 586 007	4.040	1	161 586 017

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L3 (mm)	M	closest inch (inch)
16	79	132	111	21	12	134	42	M6	3/8
20	79	132	111	21	12	134	42	M6	1/2
25	100	177	148	29	14	174	53	M6	3/4
32	100	177	148	29	14	174	53	M6	1
40	147	251	207	44	21	224	76	M8	1 1/4
50	147	251	207	44	21	224	76	M8	1 1/2
63	147	251	207	44	21	244	76	M8	2



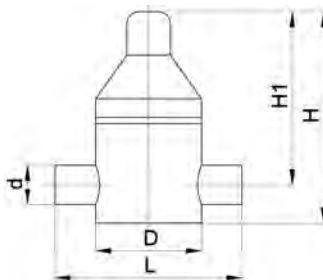
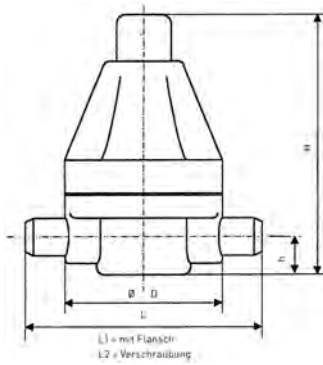


**Pressure retaining valve type V86 PVC-U  
With solvent cement spigots metric**

d (mm)	DN (mm)	Size (inch)	PN (bar)	Type	EPDM Code	Weight (kg)	PTFE Code	Weight (kg)
75	65	2 ½	6	V86	199 041 950	7.700	199 041 990	7.700
90	80	3	6	V86	199 041 988	17.700	199 041 991	17.700
110	100	4	4	V86	199 041 953	19.600	199 041 945	19.600



d (mm)	D (mm)	H (mm)	H1 (mm)	L (mm)	closest inch (inch)	Pressure range (bar)	PN
75	180	275	230	284	2 ½	0.5 - 5.0	6
90	250	410	320	360	3	0.5 - 5.0	6
110	250	485	415	380	4	1.0 - 3.0	4



# Process control valves

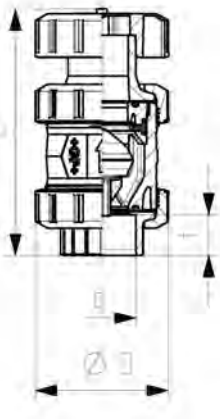
## Ventilating and bleed valve Type 591 PVC-U With solvent cement sockets metric



### Model:

- With protection cap up to DN50 made of PP-GF, DN65-100 made of POM
- Floater made of PP-H
- Designed for easy installation and removal
- Compact installation length

d (mm)	DN (mm)	PN (bar)	EPDM Code	FKM Code	D (mm)	L (mm)	t (mm)	closest inch (inch)
16	10	16	161 591 001	161 591 011	50	118	14	3/8
20	15	16	161 591 002	161 591 012	50	124	16	1/2
25	20	16	161 591 003	161 591 013	58	142	19	3/4
32	25	16	161 591 004	161 591 014	68	157	22	1
40	32	16	161 591 005	161 591 015	84	179	26	1 1/4
50	40	16	161 591 006	161 591 016	97	197	31	1 1/2
63	50	16	161 591 007	161 591 017	124	229	38	2
75	65	16	161 591 008	161 591 018	166	258	45	2 1/2
90	80	16	161 591 009	161 591 019	200	277	52	3
110	100	16	161 591 010	161 591 020	238	320	64	4



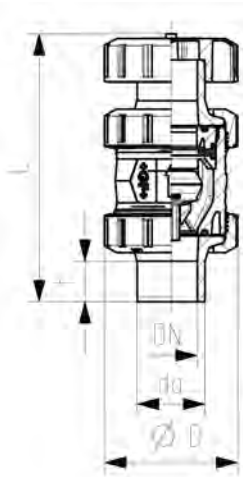


**Ventilating and bleed valve Type 591 PVC-U**  
With solvent cement spigots metric

**Model:**

- With protection cap up to DN50 made of PP-GF, DN65-100 made of POM
- Floater made of PP-H
- Designed for easy installation and removal
- Compact installation length

d (mm)	DN (mm)	PN (bar)	EPDM Code	FKM Code	D (mm)	L (mm)	t (mm)	closest inch (inch)
16	10	16	161 591 041	161 591 051	50	129	14	$\frac{3}{8}$
20	15	16	161 591 042	161 591 052	50	139	16	$\frac{1}{2}$
25	20	16	161 591 043	161 591 053	58	160	19	$\frac{3}{4}$
32	25	16	161 591 044	161 591 054	68	172	22	1
40	32	16	161 591 045	161 591 055	84	193	26	1 $\frac{1}{4}$
50	40	16	161 591 046	161 591 056	97	215	31	1 $\frac{1}{2}$
63	50	16	161 591 047	161 591 057	124	249	38	2
75	65	16	161 591 048	161 591 058	166	284	44	2 $\frac{1}{2}$
90	80	16	161 591 049	161 591 059	200	300	52	3
110	100	16	161 591 050	161 591 060	238	340	61	4

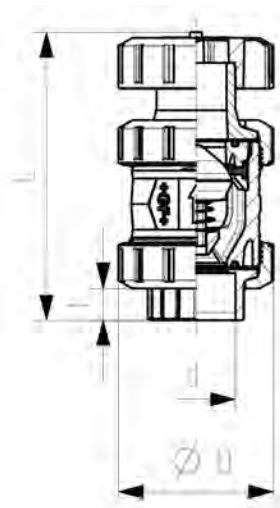


**Ventilating valve type 595 PVC-U**  
With solvent cement sockets metric

**Model:**

- With protection cap up to DN50 made of PP-GF, DN65-100 made of POM
- Spring HALAR coated
- Spring available in other materials, see spare parts
- Designed for easy installation and removal
- Compact installation length

d (mm)	DN (mm)	PN (bar)	EPDM Code	FKM Code	D (mm)	L (mm)	t (mm)	closest inch (inch)
16	10	16	161 595 001	161 595 011	50	118	14	$\frac{3}{8}$
20	15	16	161 595 002	161 595 012	50	124	16	$\frac{1}{2}$
25	20	16	161 595 003	161 595 013	58	142	19	$\frac{3}{4}$
32	25	16	161 595 004	161 595 014	68	157	22	1
40	32	16	161 595 005	161 595 015	84	179	26	1 $\frac{1}{4}$
50	40	16	161 595 006	161 595 016	97	197	31	1 $\frac{1}{2}$
63	50	16	161 595 007	161 595 017	124	229	38	2
75	65	16	161 595 008	161 595 018	166	258	45	2 $\frac{1}{2}$
90	80	16	161 595 009	161 595 019	200	277	52	3
110	100	16	161 595 010	161 595 020	238	320	64	4



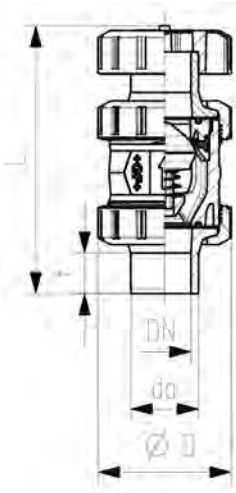


### Ventilating valve type 595 PVC-U With solvent cement spigots metric

#### Model:

- With protection cap up to DN50 made of PP-GF, DN65-100 made of POM
- Spring HALAR coated
- Spring available in other materials, see spare parts
- Designed for easy installation and removal
- Compact installation length

d (mm)	DN (mm)	PN (bar)	EPDM Code	FKM Code	D (mm)	L (mm)	t (mm)	closest inch (inch)
16	10	16	161 595 041	161 595 051	50	129	14	3/8
20	15	16	161 595 042	161 595 052	50	139	16	1/2
25	20	16	161 595 043	161 595 053	58	160	19	3/4
32	25	16	161 595 044	161 595 054	68	172	22	1
40	32	16	161 595 045	161 595 055	84	193	26	1 1/4
50	40	16	161 595 046	161 595 056	97	215	31	1 1/2
63	50	16	161 595 047	161 595 057	124	249	38	2
75	65	16	161 595 048	161 595 058	166	284	44	2 1/2
90	80	16	161 595 049	161 595 059	200	300	52	3
110	100	16	161 595 050	161 595 060	238	340	61	4



### Water jet suction pump type P20 PVC-U

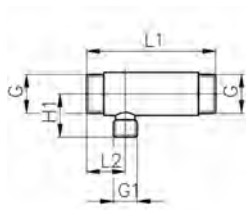
- DN 10-20: BSP parallel female thread and solvent cement socked metric included
- DN 25-50: Solvent cement socket metric
- DN 65-80: Solvent cement spigot metric

d (mm)	DN (mm)	Size (inch)	PN (bar)	EPDM Code	SP	Weight (kg)
16	10	3/8	10	199 041 120		0.138
20	15	1/2	10	199 041 121		0.228
25	20	3/4	10	199 041 122	1	0.363
32	25	1	10	199 041 123		0.468
40	32	1 1/4	10	199 041 124		0.841
50	40	1 1/2	10	199 041 125		1.360
63	50	2	10	199 041 126	1	2.440
75	65	2 1/2	10	199 041 127		2.313
90	80	3	10	199 041 128	1	4.090

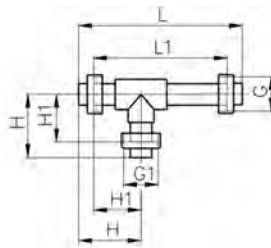
d (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	closest inch (inch)	G1 (inch)	G (inch)
16		35		110	40	3/8	3/8	R 3/4
20		35		125	40	1/2	3/8	R 1
25		45		145	45	3/4	3/8	R 1 1/4
32	96	71	245	195		1	1 1/2	R 1 1/2
40	116	87	297	239		1 1/4	2	R 2

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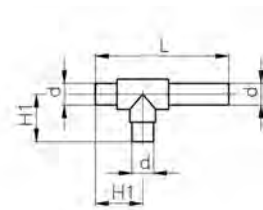
d	H	H1	L	L1	L2	closest inch	G1	G
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(inch)	(inch)	(inch)
50	139	105	369	301		1 ½	2 ¼	R 2 1/4
63	169	128	433	351		2	2 ¾	R 2 3/4
75		115	388			2 ½		
90		149	465			3		



DN 10 - 20

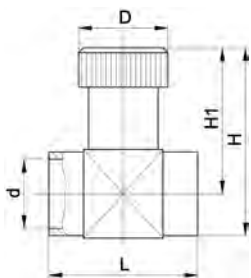


DN 25 - 50



DN 65 - 80

### Throttle valve type V251 PVC-U With solvent cement sockets metric

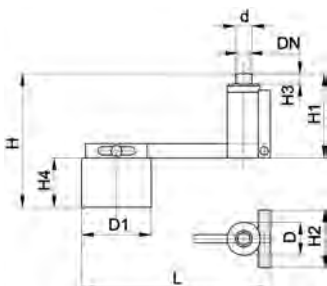


d	DN	Size	PN	EPDM Code	Weight (kg)	FKM Code	SP Weight (kg)
(mm)	(mm)	(inch)	(bar)				
16	10	¾	10	<b>199 041 203</b>	0.048	<b>199 041 210</b>	0.048
20	15	½	10	<b>199 041 204</b>	0.077	<b>199 041 211</b>	0.081
25	20	¾	10	<b>199 041 205</b>	0.123	<b>199 041 212</b>	0.122
32	25	1	10	<b>199 041 206</b>	0.217	<b>199 041 213</b>	0.219
40	32	1 ¼	10	<b>199 041 207</b>	0.352	<b>199 041 214</b>	0.329
50	40	1 ½	10	<b>199 041 208</b>	0.662	<b>199 041 215</b>	1
63	50	2	10	<b>199 041 209</b>	1.213	<b>199 041 216</b>	1.213

d	D	H	H1	L	closest inch
(mm)	(mm)	(mm)	(mm)	(mm)	(inch)
16	29	57	45	47	¾
20	35	66	51	55	½
25	40	80	63	66	¾
32	47	96	75	80	1
40	56	111	86	100	1 ¼
50	70	133	101	120	1 ½
63	88	158	118	146	2

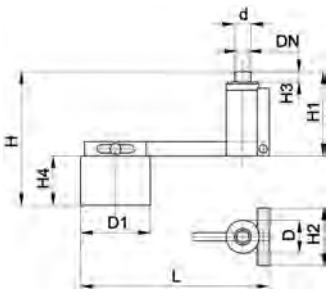
### Float valve type V140 PVC-U With solvent cement spigots metric

- Lever 1:10



d	DN	PN	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
(mm)	(mm)	(bar)				
16	10	6	<b>199 041 147</b>	0	<b>199 041 156</b>	0.300
20	15	6	<b>199 041 148</b>	0.300	<b>199 041 157</b>	0.300
25	20	6	<b>199 041 149</b>	2.469	<b>199 041 158</b>	0.300
32	25	6	<b>199 041 150</b>	0.400	<b>199 041 159</b>	0.400
40	32	6	<b>199 041 151</b>	4.500	<b>199 041 160</b>	0
50	40	6	<b>199 041 152</b>	6.200	<b>199 041 161</b>	0
63	50	6	<b>199 041 153</b>	8.100	<b>199 041 162</b>	0
75	65	6	<b>199 041 154</b>	10.400	<b>199 041 163</b>	0
90	80	6	<b>199 041 155</b>	11.400	<b>199 041 164</b>	0

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<b>d</b> (mm)	<b>D</b> (mm)	<b>D1</b> (mm)	<b>H</b> (mm)	<b>H1</b> (mm)	<b>H2</b> (mm)	<b>H3</b> (mm)	<b>H4</b> (mm)	<b>L</b> (mm)	<b>closest inch</b> (inch)
16	45	125	270	120	80	14	130	380	¾
20	45	125	270	120	80	16	130	380	½
25	65	200	340	160	110	19	170	530	¾
32	65	200	345	165	110	22	170	530	1
40	90	225	440	210	130	26	210	720	1 ¼
50	90	225	445	215	130	31	210	720	1 ½
63	130	315	595	255	160	38	290	975	2
75	130	315	600	260	160	44	290	975	2 ½
90	150	355	640	290	180	51	340	1140	3

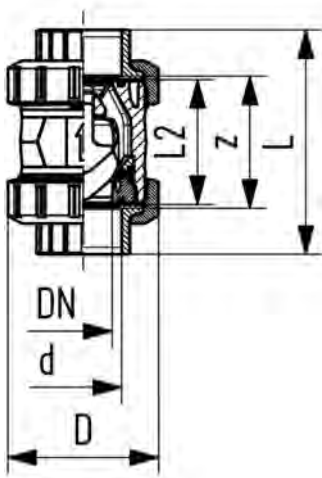
# Cone check valves



**Check valve type 561 PVC-U**  
**Without spring**  
**With transparent housing**  
**With solvent cement sockets metric**

**Model:**

- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- For vertical installation
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360
- Sealing at a minimum water column of 2 m



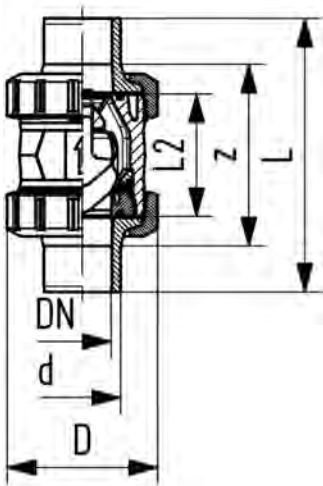
d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	D (mm)	L (mm)	L2 (mm)	z (mm)	closest inch (inch)
32	25	1	16	460	<b>192 561 004</b>	1	0.290	68	123	71	79	1
63	50	2	16	1670	<b>192 561 007</b>	1	1.330	124	183	101	107	2



**Check valve type 561 PVC-U**  
**Without spring**  
**With solvent cement spigots metric**

**Model:**

- Sealing at a minimum water column of 2 m
- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- For vertical installation
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	3/8	16	190	<b>161 561 041</b>	1	0.130	<b>161 561 051</b>	1	0.130
20	15	1/2	16	180	<b>161 561 042</b>	1	0.130	<b>161 561 052</b>	1	0.130
25	20	3/4	16	380	<b>161 561 043</b>	1	0.188	<b>161 561 053</b>	1	0.290
32	25	1	16	460	<b>161 561 044</b>	1	0.296	<b>161 561 054</b>	1	0.320
40	32	1 1/4	16	850	<b>161 561 045</b>	1	0.530	<b>161 561 055</b>	1	0.530
50	40	1 1/2	16	1080	<b>161 561 046</b>	1	0.762	<b>161 561 056</b>	1	0.810
63	50	2	16	1670	<b>161 561 047</b>	1	1.419	<b>161 561 057</b>	1	1.450
75	65	2 1/2	16	2950	<b>161 561 048</b>	1	3.370	<b>161 561 058</b>	1	3.380
90	80	3	16	3600	<b>161 561 049</b>	1	5.320	<b>161 561 059</b>	1	5.340
110	100	4	16	4150	<b>161 561 050</b>	1	8.500	<b>161 561 060</b>	1	8.540

d (mm)	D (mm)	L (mm)	L2 (mm)	closest inch (inch)
16	50	114	56	3/8
20	50	124	56	1/2
25	58	144	65	3/4
32	68	154	71	1
40	84	174	85	1 1/4
50	97	194	89	1 1/2
63	124	224	101	2
75	166	284	136	2 1/2
90	200	300	141	3
110	238	340	164	4

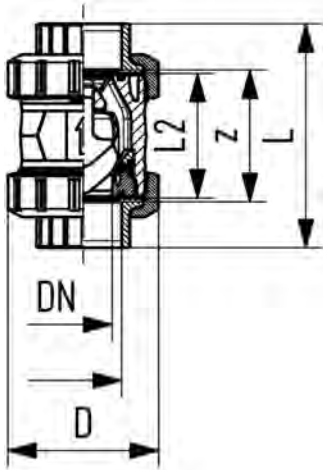




**Check valve type 561 PVC-U**  
**Without spring**  
**With threaded sockets Rp**

**Model:**

- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- For vertical installation
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360



d (mm)	DN (mm)	Thread Type	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)
16	10	Rp	3/8	10	190	<b>161 561 021</b>	1	0.130
20	15	Rp	1/2	10	180	<b>161 561 022</b>	1	0.130
25	20	Rp	3/4	10	380	<b>161 561 023</b>	1	0.260
32	25	Rp	1	10	460	<b>161 561 024</b>	1	0.300
40	32	Rp	1 1/4	10	850	<b>161 561 025</b>	1	0.510
50	40	Rp	1 1/2	10	1080	<b>161 561 026</b>	1	0.780
63	50	Rp	2	10	1670	<b>161 561 027</b>	1	1.390
75	65	Rp	2 1/2	10	2950	<b>161 561 028</b>	1	3.800
90	80	Rp	3	10	3600	<b>161 561 029</b>	1	5.160
110	100	Rp	4	10	4150	<b>161 561 030</b>	1	8.140

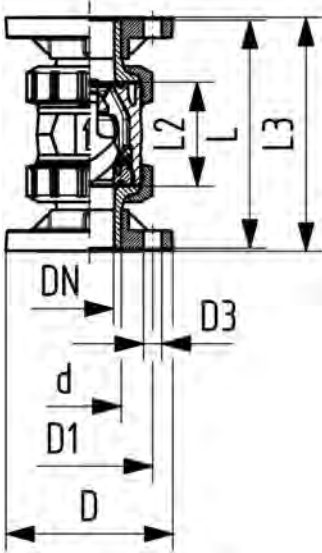
FKM Code	SP	Weight (kg)	D (mm)	L (mm)	L2 (mm)	z (mm)
<b>161 561 031</b>	1	0.130	50	95	56	69
<b>161 561 032</b>	1	0.130	50	100	56	67
<b>161 561 033</b>	1	0.280	58	114	65	78
<b>161 561 034</b>	1	0.300	68	127	71	85
<b>161 561 035</b>	1	0.520	84	146	85	100
<b>161 561 036</b>	1	0.790	97	152	89	106
<b>161 561 037</b>	1	1.400	124	177	101	121
<b>161 561 038</b>	1	3.820	166	233	136	144
<b>161 561 039</b>	1	5.180	200	254	141	151
<b>161 561 040</b>	1	8.180	238	301	164	174



**Check valve type 561 PVC-U**  
**Without spring**  
**With fixed flanges metric**

**Model:**

- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- For vertical installation
- Compact installation length, same as ball valve type 546
- Installation length according to EN 558-1
- Z-length, end connectors and union nuts **not** compatible with type 360
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10
- Sealing at a minimum water column of 2 m



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
20	15	½	16	180	161 561 082	1	0.330	161 561 092
25	20	¾	16	380	161 561 083	1	0.520	161 561 093
32	25	1	16	460	161 561 084	1	0.670	161 561 094
40	32	1 ¼	16	850	161 561 085	1	1.100	161 561 095
50	40	1 ½	16	1080	161 561 086	1	1.490	161 561 096
63	50	2	16	1670	161 561 087	1	2.430	161 561 097

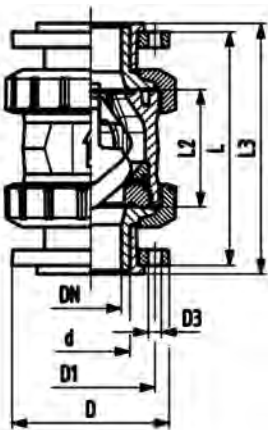
d (mm)	D (mm)	D1 (mm)	D3 (mm)	L (mm)	L2 (mm)	L3 (mm)	closest inch (inch)
20	95	65	14	124	56	130	½
25	105	75	14	144	65	150	¾
32	115	85	14	154	71	160	1
40	140	100	18	174	85	180	1 ¼
50	150	110	18	194	89	200	1 ½
63	165	125	18	224	101	230	2



**Check valve type 561 PVC-U**  
**Without spring**  
**With backing flanges PVC-U metric**

**Model:**

- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- For vertical installation
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360
- Overall length according to EN 558
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10
- Sealing at a minimum water column of 2 m



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
75	65	2 ½	10	2950	161 561 408	1	4.440	161 561 418
90	80	3	10	3600	161 561 409	1	6.740	161 561 419
110	100	4	10	4150	161 561 410	1	10.280	161 561 420

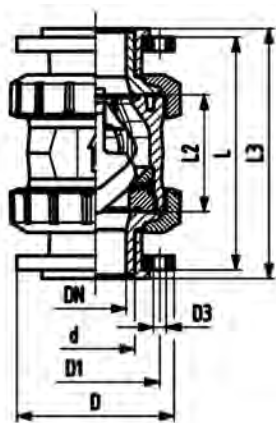
d (mm)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M	closest inch (inch)
75	166	149	85	284	270	136	70	64	206	M8	1 ¼
90	200	161	105	300	270	141	70	64	206	M8	1 ½
110	238	178	123	340	320	164	120	64	256	M12	2



**Check valve type 561 PVC-U**  
**Without spring**  
**With backing flanges PP-st metric**

**Model:**

- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- For vertical installation
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360
- Overall length according to EN 558
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- Sealing at a minimum water column of 2 m



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
75	65	2 ½	16	2950	<b>161 561 428</b>	1	4.640	<b>161 561 438</b>	1	4.640
90	80	3	16	3600	<b>161 561 429</b>	1	5.810	<b>161 561 439</b>	1	5.810
110	100	4	16	4150	<b>161 561 430</b>	1	8.160	<b>161 561 440</b>	1	8.160

d (mm)	D (mm)	D1 (mm)	D3 (mm)	L (mm)	L2 (mm)	L3 (mm)	closest inch (inch)
75	185	145	18	284	136	290	1 ¼
90	200	160	20	300	141	310	1 ½
110	220	180	20	340	164	350	2

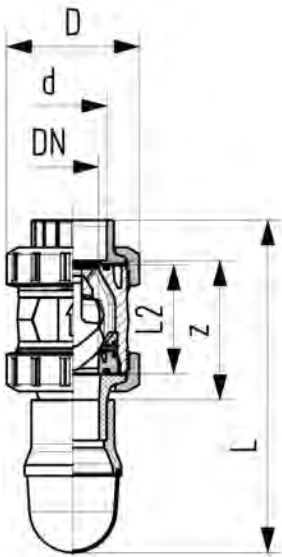


**Foot valve type 561 PVC-U**  
**Without spring**  
**With solvent cement sockets metric**

**Model:**

- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360
- Sealing at a minimum water column of 2 m

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
16	10	3/8	16	190	<b>161 561 901</b>	1	0.120
20	15	1/2	16	180	<b>161 561 902</b>	1	0.130
25	20	3/4	16	380	<b>161 561 903</b>	1	0.250
32	25	1	16	460	<b>161 561 904</b>	1	0.290
40	32	1 1/4	16	850	<b>161 561 905</b>	1	0.510
50	40	1 1/2	16	1080	<b>161 561 906</b>	1	0.750
63	50	2	16	1670	<b>161 561 907</b>	1	1.330



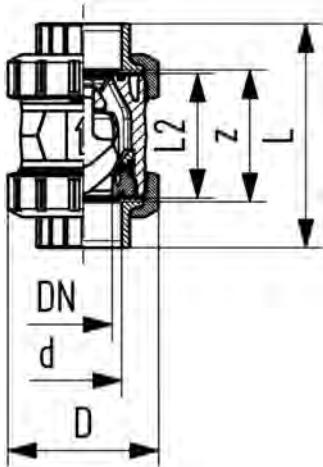
d (mm)	D (mm)	L (mm)	L2 (mm)	z (mm)	closest inch (inch)
16	50	173	56	64	3/8
20	50	175	56	64	1/2
25	58	192	65	72	3/4
32	68	204	71	79	1
40	90	267	85	94	1 1/4
50	90	282	83	95	1 1/2
63	90	310	101	107	2



**Check valve type 562 PVC-U**  
**With solvent cement sockets metric**

**Model:**

- For horizontal or vertical installation
- Sealing at a minimum water column of 1 m
- Spring loaded, spring made of stainless steel (1.4310)
- Spring available in other materials, see spare parts
- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	16	190	161 562 001	1	0.120	161 562 011	1	0.120
20	15	16	180	161 562 002	1	0.130	161 562 012	1	0.130
25	20	16	380	161 562 003	1	0.250	161 562 013	1	0.270
32	25	16	460	161 562 004	1	0.290	161 562 014	1	0.290
40	32	16	850	161 562 005	1	0.510	161 562 015	1	0.510
50	40	16	1080	161 562 006	1	0.750	161 562 016	1	0.750
63	50	16	1670	161 562 007	1	1.330	161 562 017	1	1.340
75	65	16	2950	161 562 008	1	3.160	161 562 018	1	3.170
90	80	16	3600	161 562 009	1	5.040	161 562 019	1	5.060
110	100	16	4150	161 562 010	1	8.130	161 562 020	1	8.170

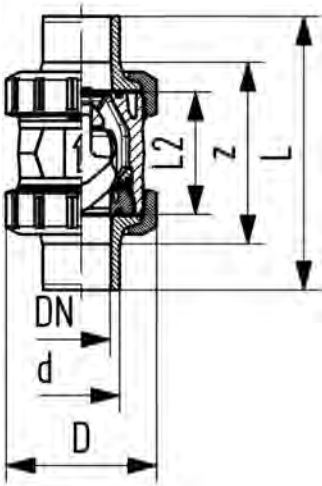
d (mm)	D (mm)	L (mm)	L2 (mm)	z (mm)	closest inch (inch)
16	50	92	56	64	3/8
20	50	95	56	64	1/2
25	58	110	65	72	3/4
32	68	123	71	79	1
40	84	146	85	94	1 1/4
50	97	157	89	95	1 1/2
63	124	183	101	107	2
75	166	233	136	144	2 1/2
90	200	254	141	151	3
110	238	301	164	174	4



**Check valve type 562 PVC-U**  
**With solvent cement spigots metric**

**Model:**

- For horizontal or vertical installation
- Spring loaded, spring made of stainless steel (1.4310)
- Spring available in other materials, see spare parts
- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	16	190	<b>161 562 041</b>	1	0.130	<b>161 562 051</b>	1	0.130
20	15	16	180	<b>161 562 042</b>	1	0.130	<b>161 562 052</b>	1	0.130
25	20	16	380	<b>161 562 043</b>	1	0.270	<b>161 562 053</b>	1	0.290
32	25	16	460	<b>161 562 044</b>	1	0.320	<b>161 562 054</b>	1	0.320
40	32	16	850	<b>161 562 045</b>	1	0.530	<b>161 562 055</b>	1	0.530
50	40	16	1080	<b>161 562 046</b>	1	0.810	<b>161 562 056</b>	1	0.810
63	50	16	1670	<b>161 562 047</b>	1	1.450	<b>161 562 057</b>	1	1.450
75	65	16	2950	<b>161 562 048</b>	1	3.370	<b>161 562 058</b>	1	3.380
90	80	16	3600	<b>161 562 049</b>	1	5.320	<b>161 562 059</b>	1	5.340
110	100	16	4150	<b>161 562 050</b>	1	8.500	<b>161 562 060</b>	1	8.540

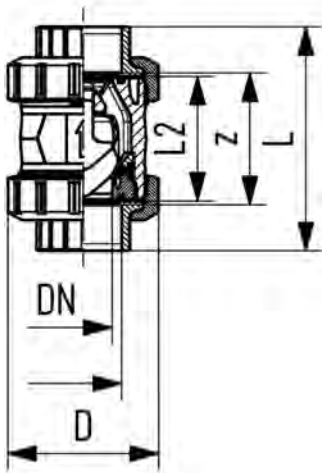
d (mm)	D (mm)	L (mm)	L2 (mm)	closest inch (inch)
16	50	114	56	$\frac{3}{8}$
20	50	124	56	$\frac{1}{2}$
25	58	144	65	$\frac{3}{4}$
32	68	154	71	1
40	84	174	85	1 $\frac{1}{4}$
50	97	194	89	1 $\frac{1}{2}$
63	124	224	101	2
75	166	284	136	2 $\frac{1}{2}$
90	200	300	141	3
110	238	340	164	4



**Check valve type 562 PVC-U**  
**With threaded sockets Rp**

**Model:**

- For horizontal or vertical installation
- Spring loaded, spring made of stainless steel (1.4310)
- Spring available in other materials, see spare parts
- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360



Rp (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
3/8	10	10	190	161 562 021	1	0.130	161 562 031	1	0.130
1/2	15	10	180	161 562 022	1	0.130	161 562 032	1	0.130
3/4	20	10	380	161 562 023	1	0.260	161 562 033	1	0.280
1	25	10	460	161 562 024	1	0.300	161 562 034	1	0.300
1 1/4	32	10	850	161 562 025	1	0.510	161 562 035	1	0.520
1 1/2	40	10	1080	161 562 026	1	0.780	161 562 036	1	0.790
2	50	10	1670	161 562 027	1	1.390	161 562 037	1	1.400
2 1/2	65	10	2950	161 562 028	1	3.800	161 562 038	1	3.820
3	80	10	3600	161 562 029	1	5.160	161 562 039	1	5.180
4	100	10	4150	161 562 030	1	8.140	161 562 040	1	8.180

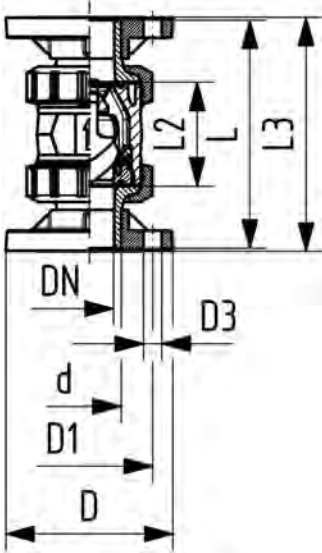
Rp (inch)	D (mm)	L (mm)	L2 (mm)	z (mm)
3/8	50	95	56	69
1/2	50	100	56	67
3/4	58	114	65	78
1	68	127	71	85
1 1/4	84	146	85	100
1 1/2	97	152	89	106
2	124	177	101	121
2 1/2	166	233	136	144
3	200	254	141	151
4	238	301	164	174



### Check valve type 562 PVC-U With fixed flanges metric

#### Model:

- For horizontal or vertical installation
- Spring loaded, spring made of stainless steel (1.4310)
- Spring available in other materials, see spare parts
- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- Compact installation length, same as ball valve type 546
- Installation length according to EN 558-1
- Z-length, end connectors and union nuts **not** compatible with type 360
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
20	15	16	180	161 562 082	1	0.330	161 562 092
25	20	16	380	161 562 083	1	0.520	161 562 093
32	25	16	460	161 562 084	1	0.670	161 562 094
40	32	16	850	161 562 085	1	1.100	161 562 095
50	40	16	1080	161 562 086	1	1.490	161 562 096
63	50	16	1670	161 562 087	1	2.430	161 562 097

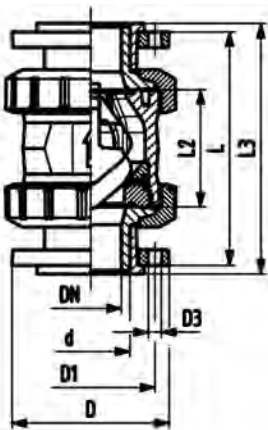
d (mm)	D (mm)	D1 (mm)	D3 (mm)	L (mm)	L2 (mm)	L3 (mm)	closest inch (inch)
20	95	65	14	124	56	130	½
25	105	75	14	144	65	150	¾
32	115	85	14	154	71	160	1
40	140	100	18	174	85	180	1 ¼
50	150	110	18	194	89	200	1 ½
63	165	125	18	224	101	230	2



### Check valve type 562 PVC-U With backing flanges PVC-U metric

#### Model:

- For horizontal or vertical installation
- Spring loaded, spring made of stainless steel (1.4310)
- Spring available in other materials, see spare parts
- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360
- Overall length according to EN 558
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
75	65	16	2950	161 562 408	1	4.440	161 562 418
90	80	16	3600	161 562 409	1	6.740	161 562 419
110	100	16	4150	161 562 410	1	10.280	161 562 420

d (mm)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M	closest inch (inch)
75	166	149	85	284	270	136	70	64	206	M8	1 ¼
90	200	161	105	300	270	141	70	64	206	M8	1 ½
110	238	178	123	340	320	164	120	64	256	M12	2

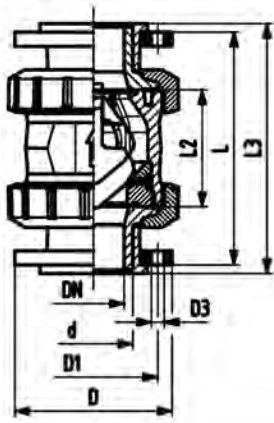




**Check valve type 562 PVC-U**  
**With backing flanges PP-st metric**

**Model:**

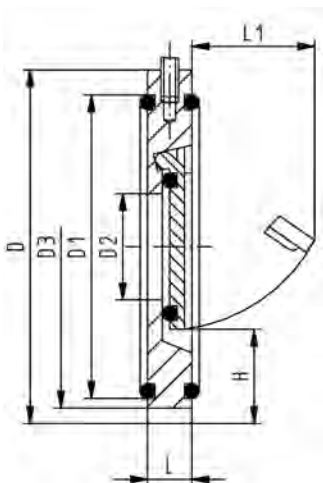
- For horizontal or vertical installation
- Spring loaded, spring made of stainless steel (1.4310)
- Spring available in other materials, see spare parts
- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360
- Overall length according to EN 558
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
75	65	10	2950	<b>161 562 428</b>	1	6.220	<b>161 562 438</b>
90	80	10	3600	<b>161 562 429</b>	1	8.330	<b>161 562 439</b>
110	100	10	4150	<b>161 562 430</b>	1	12.300	<b>161 562 440</b>

d (mm)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	closest inch (inch)
75	166	149	85	284	270	136	290	70	64	206	1 ¼
90	200	161	105	300	270	141	310	70	64	206	1 ½
110	238	178	123	340	320	164	350	120	64	256	2

# Wafer check valves



## Wafer check valve type 369 PVC-U Without spring

### Model:

- Supporting eyelets for simple fitting
- Suitable for vertical and horizontal mounting

### Installation instruction:

- Installation between ISO/DIN (all dimensions) and ANSI/BS flange adaptors (all except DN32 and DN125)
- Installation with ANSI/BS flange adaptor: for wafer check valves DN40 to DN80 you have to use ANSI/BS flange adaptors with the next bigger dimension (example DN40 wafer check valve between DN50 ANSI/BS flange adaptor)
- Centering by body diameter (ISO/DIN by D3, ANSI/BS by D)
- Sealing with special flange gasket (except DN32, o-ring)
- A stabilizing zone of at least 5 times nominal diameter (DN) should be provided before and after the wafer check valve (10 times DN is recommended)
- No direct installation on pump flange or following bend allowed
- The using of PVC-U pipe PN16 is only possible up to d63
- Wafer check valves without reset spring are not recommended for pulsating flows (production of noise)

d (mm)	DN (mm)	Size (inch)	PN (bar)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
40	32	1 ½	10	161 369 002	1 0.110	161 369 022	1 0.108
50	40	1 ½	10	161 369 003	1 0.174	161 369 023	1 0.202
63	50	2	10	161 369 004	1 0.273	161 369 024	1 0.277
75	65	2 ½	10	161 369 005	1 0.352	161 369 025	1 0.386
90	80	3	10	161 369 006	1 0.560	161 369 026	1 0.591
110	100	4	10	161 369 007	1 0.651	161 369 027	1 0.667
140	125	5	10	161 369 009	1 0.791	161 369 029	1 0.856
160	150	6	6	161 369 010	1 1.153	161 369 030	1 1.207
225	200	8	6	161 369 011	1 2.215	161 369 031	1 2.306
280	250	10	6	161 369 012	1 3.850	161 369 032	1 3.915
315	300	12	6	161 369 013	1 7.059	161 369 033	1 5.300

d (mm)	D (mm)	D1 (mm)	D2 (mm)	D3 (mm)	H (mm)	L (mm)	L1 (mm)	Opening pressure vertical (mbar)	Opening pres- sure horizontal (mbar)	Minimum water col- umn for seal- ing (m)
40	85	59	18	85	25	15	22	10	1	2
50	105	74	22	95	27	16	27	10	1	2
63	124	90	32	109	29	18	40	10	1	2
75	137	110	40	129	31	20	55	10	1	2
90	175	130	54	144	32	20	67	10	1	2
110	175	150	70	164	31	23	67	10	1	2
140	195	178	92	195	35	23	94	10	1	2
160	222	192	105	220	41	26	100	10	1	2
225	279	256	154	275	38	35	152	18	1	2
280	340	306	192	330	41	40	180	18	1	2
315	410	342	227	380	41	45	215	18	1	2



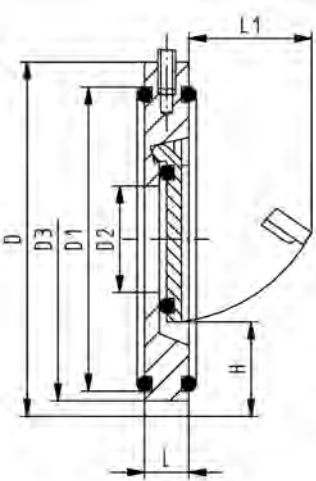
### Wafer check valve type 369 PVC-U With Hastelloy C spring

#### Model:

- Supporting eyelets for simple fitting
- Suitable for vertical and horizontal mounting

#### Installation instruction:

- Installation between ISO/DIN (all dimensions) and ANSI/BS flange adaptors (all except DN32 and DN125)
- Installation with ANSI/BS flange adaptor: for wafer check valves DN40 to DN80 you have to use ANSI/BS flange adaptors with the next bigger dimension (example DN40 wafer check valve between DN50 ANSI/BS flange adaptor)
- Centering by body diameter (ISO/DIN by D3, ANSI/BS by D)
- Sealing with special flange gasket (except DN32, o-ring)
- A stabilizing zone of at least 5 times nominal diameter (DN) should be provided before and after the wafer check valve (10 times DN is recommended)
- No direct installation on pump flange or following bend allowed
- The using of PVC-U pipe PN16 is only possible up to d63



d (mm)	DN (mm)	Size (inch)	PN (bar)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
40	32	1 1/4	10	161 369 082	1	0.130	161 369 102
50	40	1 1/2	10	161 369 083	1	0.174	161 369 103
63	50	2	10	161 369 084	1	0.250	161 369 104
75	65	2 1/2	10	161 369 085	1	0.320	161 369 105
90	80	3	10	161 369 086	1	0.390	161 369 106
110	100	4	10	161 369 087	1	0.654	161 369 107
140	125	5	10	161 369 089	1	0.750	161 369 109
160	150	6	6	161 369 090	1	1.164	161 369 110
225	200	8	6	161 369 091	1	2.100	161 369 111
280	250	10	6	161 369 092	1	3.500	161 369 112
315	300	12	6	161 369 093	1	5.300	161 369 113

d (mm)	D (mm)	D1 (mm)	D2 (mm)	D3 (mm)	H (mm)	L (mm)	L1 (mm)	Opening pressure vertical (mbar)	Opening pres- sure horizontal (mbar)	Minimum water col- umn for seal- ing (m)
40	85	59	18	85	25	15	22	30	20	2
50	105	74	22	95	27	16	27	30	20	2
63	124	90	32	109	29	18	40	30	20	2
75	137	110	40	129	31	20	55	30	20	2
90	175	125	54	144	32	20	67	30	20	2
110	175	150	70	164	31	23	67	30	20	2
140	195	178	92	195	35	23	94	30	20	2
160	222	192	105	220	41	26	100	30	20	2
225	279	256	154	275	38	35	152	38	20	2
280	340	306	192	330	41	40	180	38	20	2
315	410	342	227	380	41	45	215	38	20	2



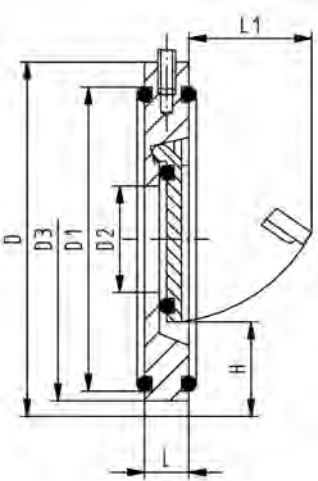
**Wafer check valve type 369 PVC-U  
With V4A spring (stainless steel 316)**

**Model:**

- Supporting eyelets for simple fitting
- Suitable for vertical and horizontal mounting

**Installation instruction:**

- Installation between ISO/DIN (all dimensions) and ANSI/BS flange adaptors (all except DN32 and DN125)
- Installation with ANSI/BS flange adaptor: for wafer check valves DN40 to DN80 you have to use ANSI/BS flange adaptors with the next bigger dimension (example DN40 wafer check valve between DN50 ANSI/BS flange adaptor)
- Centering by body diameter (ISO/DIN by D3, ANSI/BS by D)
- Sealing with special flange gasket (except DN32, o-ring)
- A stabilizing zone of at least 5 times nominal diameter (DN) should be provided before and after the wafer check valve (10 times DN is recommended)
- No direct installation on pump flange or following bend allowed
- The using of PVC-U pipe PN16 is only possible up to d63



d (mm)	DN (mm)	Size (inch)	PN (bar)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
40	32	1 ¼	10	161 369 042	1 0.130	161 369 062	1 0.107
50	40	1 ½	10	161 369 043	1 0.160	161 369 063	1 0.206
63	50	2	10	161 369 044	1 0.273	161 369 064	1 0.250
75	65	2 ½	10	161 369 045	1 0.357	161 369 065	1 0.320
90	80	3	10	161 369 046	1 0.561	161 369 066	1 0.390
110	100	4	10	161 369 047	1 0.651	161 369 067	1 0.684
140	125	5	10	161 369 049	1 0.791	161 369 069	1 0.750
160	150	6	6	161 369 050	1 1.171	161 369 070	1 1.100
225	200	8	6	161 369 051	1 2.252	161 369 071	1 2.100
280	250	10	6	161 369 052	1 3.790	161 369 072	1 3.500
315	300	12	6	161 369 053	1 6.274	161 369 073	1 5.300

d (mm)	D (mm)	D1 (mm)	D2 (mm)	D3 (mm)	H (mm)	L (mm)	L1 (mm)	Opening pressure vertical (mbar)	Opening pres- sure horizontal (mbar)	Minimum water col- umn for seal- ing (m)
40	85	59	18	85	25	15	22	30	20	2
50	105	74	22	95	27	16	27	30	20	2
63	124	90	32	109	29	18	40	30	20	2
75	137	110	40	129	31	20	55	30	20	2
90	175	125	54	144	32	20	67	30	20	2
110	175	150	70	164	31	23	67	30	20	2
140	195	178	92	195	35	23	94	30	20	2
160	222	192	105	220	41	26	100	30	20	2
225	279	256	154	275	38	35	152	38	20	2
280	340	306	192	330	41	40	180	38	20	2
315	410	342	227	380	41	45	215	38	20	2

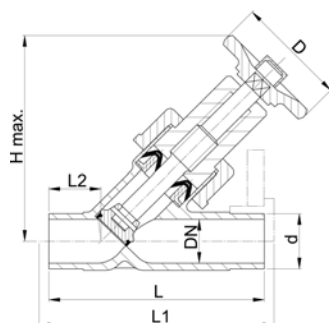
# Angle seat valves



## Angle seat valve type 300 PVC-U With solvent cement spigots metric

### Model:

- Overall length EN 558



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	PE Code	SP	Weight (kg)	PTFE Code	SP	Weight (kg)
16	10	10	41	161 300 250	1	0.125	161 300 299	1	0.128
20	15	10	95	161 300 300	1	0.164	161 300 349	1	0.168
25	20	10	180	161 300 350	1	0.223	161 300 399	1	0.255
32	25	10	327	161 300 400	1	0.352	161 300 449	1	0.389
40	32	10	484	161 300 450	1	0.534	161 300 499	1	0.590
50	40	10	725	161 300 500	1	0.970	161 300 549	1	1.000
63	50	10	1130	161 300 550	1	1.510	161 300 599	1	1.540
75	65	10	1700	161 300 600	1	2.664	161 300 649	1	2.713
90	80	10	2500	161 300 650	1	3.370	161 300 699	1	4.097

d (mm)	D (mm)	L (mm)	L1 (mm)	L2 (mm)	closest inch (inch)	H max. (mm)
16	50	114	120	24	3/8	105
20	63	124	130	28	1/2	126
25	63	144	150	37	3/4	140
32	80	154	160	37	1	166
40	80	174	180	44	1 1/4	191
50	100	194	200	48	1 1/2	233
63	100	224	230	60	2	264
75	160	284	290	74	2 1/2	335
90	200	300	310	85	3	390



## Angle seat valve bracket type 123 PVC-U

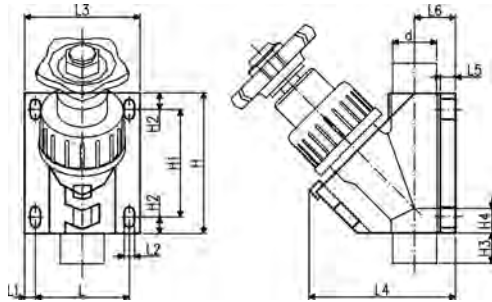
### Model:

- Can be fitted to existing installations without interrupting their operation
- Easily assembled without tools
- For Angle Seat Valves Type 300

d (mm)	DN (mm)	Code	SP	Weight (kg)
16	10	161 123 250	1	0.114
20	15	161 123 300	10	0.146
25	20	161 123 350	10	0.230
32	25	161 123 400	5	0.289
40	32	161 123 450	5	0.374

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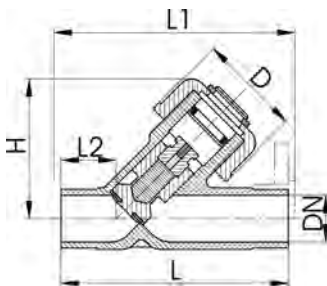
d	H	H1	H2	H3	H4	L	L1	L2	L3	L4	L5	L6	closest inch
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(inch)
16	76	55	11	15	9	62	8	7	78	67	10	22	¾
20	86	65	11	17	11	65	9	7	82	74	10	25	½
25	100	76	12	20	17	73	9	8	91	87	11	30	¾
32	102	78	12	23	14	84	9	8	102	104	13	35	1
40	116	85	16	27	17	90	9	8	107	122	15	42	1 ¼



### Angle seat check valve type 303 PVC-U With solvent cement spigots metric

#### Model:

- For horizontal or vertical installation
- Leakproof from: EPDM 2m, FKM 3m water column
- Specific gravity of piston approx. 2 kg/dm<sup>3</sup>
- Overall length EN 558



d	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(mm)	(bar)	(Δp=1 bar)	Code	(kg)	(kg)	Code	(kg)	(kg)
			(L/min)						
16	10	10	41	161 303 005	1	0.075	161 303 030	1	0.094
20	15	10	95	161 303 006	1	0.113	161 303 031	1	0.132
25	20	10	180	161 303 007	1	0.170	161 303 032	1	0.172
32	25	10	327	161 303 008	1	0.288	161 303 033	1	0.290
40	32	10	484	161 303 009	1	0.444	161 303 034	1	0.448
50	40	10	725	161 303 010	1	0.791	161 303 035	1	0.798
63	50	10	1130	161 303 011	1	1.345	161 303 036	1	1.345
75	65	10	1700	161 303 012	1	2.483	161 303 037	1	2.499
90	80	10	2500	161 303 013	1	3.514	161 303 038	1	3.540

d	D	H	L	L1	L2	closest inch
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(inch)
16	39	58	114	120	24	¾
20	43	65	124	130	28	½
25	47	75	144	150	37	¾
32	56	90	154	160	37	1
40	64	102	174	180	44	1 ¼
50	82	123	194	200	48	1 ½
63	95	144	224	230	60	2
75	92	186	284	290	74	2 ½
90	104	204	300	310	85	3

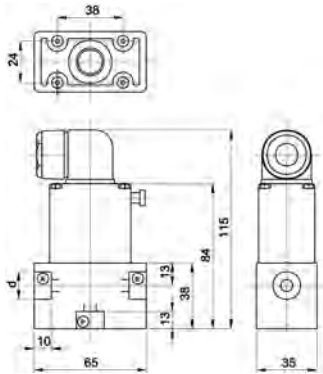
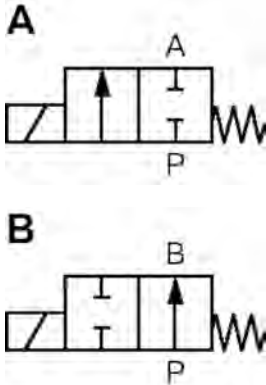
# Solenoid valves



## Solenoid valve type 157 PVC-U Straight-through valve 2/2 ways

### Model:

- Material PVC-U: with threaded sockets parallel female thread Rp
- With manual override
- Electrical connection: cable plug
- Protection class IP 65
- Circuit function A: FC, closed in rest position
- Circuit function B: FO, opened in rest position



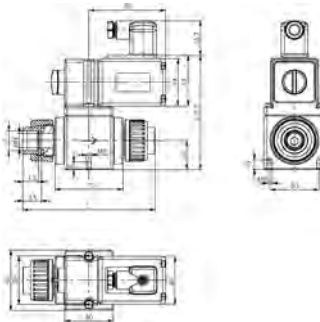
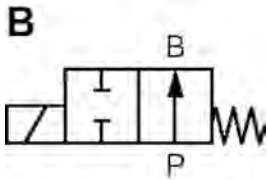
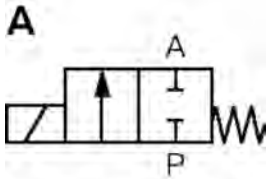
DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	Inner thread (inch)	Voltage	Function	EPDM Code	FKM Code
4	0 - 4	5.0	G3/8	24V DC	B	<b>199 157 647</b>	
6	0 - 2	10.0	G3/8	24V DC	B	<b>199 157 648</b>	
4	0 - 4	5.0	G3/8	230V 50Hz $\pm$ 10%	B	<b>199 157 027</b>	<b>199 157 022</b>
6	0 - 2	10.0	G3/8	230V 50Hz $\pm$ 10%	B	<b>199 157 028</b>	
8	0 - 1	16.7	G3/8	230V 50Hz $\pm$ 10%	B	<b>199 157 029</b>	
4	0 - 4	5.0	G3/8	24V DC	A	<b>199 157 627</b>	<b>199 157 622</b>
6	0 - 1	10.0	G3/8	24V DC	A	<b>199 157 628</b>	<b>199 157 623</b>
8	0 - 1	16.7	G3/8	24V AC/DC	A	<b>199 157 629</b>	<b>199 157 624</b>
4	0 - 4	5.0	G3/8	230V 50Hz $\pm$ 10%	A	<b>199 157 007</b>	<b>199 157 002</b>
6	0 - 2	10.0	G3/8	230V 50Hz $\pm$ 10%	A	<b>199 157 008</b>	<b>199 157 003</b>
8	0 - 1	16.7	G3/8	230V 50Hz $\pm$ 10%	A	<b>199 157 009</b>	<b>199 157 004</b>



### Solenoid valve type 160 PVC-U Straight through valve 2/2 ways

#### Model:

- Material: PVC-U
- With solvent cement socket metric
- With manual override
- Electrical connection: cable plug
- Protection class IP 65
- Circuit function A: FC, closed in rest position
- Circuit function B: FO, opened in rest position



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	Voltage	Function	EPDM Code	FKM Code
16	10	3/8	3.0	33	230V 50Hz $\pm$ 10%	A	199 160 010	199 160 005
20	10	1/2	3.0	33	230V 50Hz $\pm$ 10%	A	199 160 011	199 160 006
20	15	1/2	1.0	75	230V 50Hz $\pm$ 10%	A	199 160 012	199 160 007
25	15	1/2	1.0	75	230V 50Hz $\pm$ 10%	A	199 160 013	199 160 008
25	20	3/4	0.5	100	230V 50Hz $\pm$ 10%	A	199 160 014	199 160 009
16	10	3/8	2.0	33	230V 50Hz $\pm$ 10%	B	199 160 025	199 160 020
20	10	1/2	1.0	33	230V 50Hz $\pm$ 10%	B	199 160 026	199 160 021
20	15	1/2	1.0	75	230V 50Hz $\pm$ 10%	B	199 160 027	199 160 022
25	15	3/4	1.0	75	230V 50Hz $\pm$ 10%	B	199 160 028	199 160 023
25	20	3/4	0.5	100	230V 50Hz $\pm$ 10%	B	199 160 029	199 160 024
16	10	3/8	3.0	33	24V AC/DC	A	199 160 370	199 160 365
20	10	1/2	3.0	33	24V AC/DC	A	199 160 371	199 160 366
20	15	1/2	1.0	75	24V AC/DC	A	199 160 372	199 160 367
25	15	3/4	1.0	75	24V AC/DC	A	199 160 373	
25	20	3/4	0.5	100	24V AC/DC	A	199 160 374	199 160 369
16	10	3/8	2.0	33	24V AC/DC	B	199 160 385	199 160 380
20	10	1/2	2.0	33	24V AC/DC	B	199 160 386	199 160 381
25	20	3/4	0.5	100	24V AC/DC	B	199 160 389	

d (mm)	DN (mm)	L (mm)	L1 (mm)	L2 (mm)
16	10	130	17	14
20	10	134	19	16
20	15	136	19	16
25	15	142	22	19
25	20	144	22	19
16	10	130	17	14
20	10	134	19	16
20	15	136	19	16
25	15	142	19	19
25	20	144	22	19
16	10	130	17	14
20	10	134	19	16
20	15	136	19	16
25	15	142	22	19
25	20	144	22	19
16	10	130	17	14
20	10	134	19	16
25	20	144	22	19

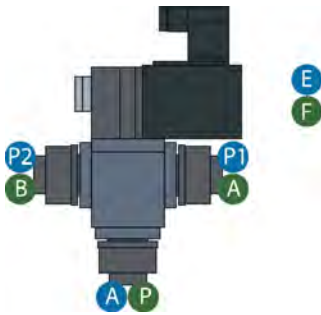




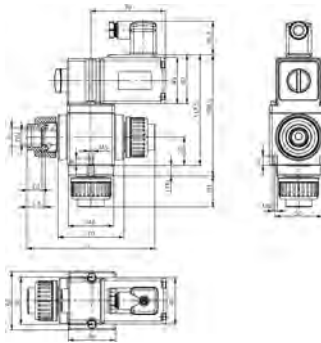
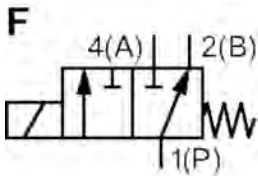
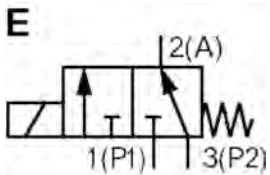
### Solenoid valve type 161 PVC-U Mixing valve 3/2 ways

#### Model:

- Material: PVC-U
- With solvent cement socket metric
- With manual override
- Electrical connection: cable plug
- Protection class IP 65
- Circuit function E: In rest position, pressure connection P2 connected to outlet A. P1 closed
- Circuit function F: In rest position, pressure connection P connected to outlet B. A closed



E  
F



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	Voltage	Function	EPDM Code	FKM Code
16	10	0.60	33	230V 50Hz $\pm$ 10%	E		<b>199 161 035</b>
20	15	0.30	67	230V 50Hz $\pm$ 10%	E		<b>199 161 037</b>
25	20	0.15	83	230V 50Hz $\pm$ 10%	E	<b>199 161 044</b>	<b>199 161 039</b>
20	10	1.00	33	230V 50Hz $\pm$ 10%	F		<b>199 161 051</b>
20	15	0.50	67	230V 50Hz $\pm$ 10%	F	<b>199 161 057</b>	<b>199 161 052</b>
25	20	0.15	83	24V AC/DC	E	<b>199 161 434</b>	<b>199 161 429</b>
16	10	0.60	33	24V AC/DC	E	<b>199 161 430</b>	
20	15	0.30	67	24V AC/DC	E	<b>199 161 432</b>	
25	15	0.30	67	24V AC/DC	E	<b>199 161 433</b>	
16	10	1.00	33	24V AC/DC	F	<b>199 161 445</b>	
20	15	0.50	67	24V AC/DC	F	<b>199 161 447</b>	
25	20	0.25	83	24V AC/DC	F	<b>199 161 449</b>	
16	10	1.00	33	230V 50Hz $\pm$ 10%	F	<b>199 161 055</b>	
25	20	0.25	83	230V 50Hz $\pm$ 10%	F	<b>199 161 059</b>	
25	15		67	230V 50Hz $\pm$ 10%	F	<b>199 158 058</b>	

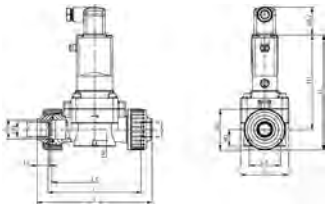
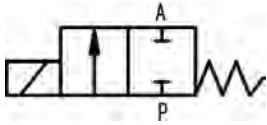
d (mm)	DN (mm)	Size (inch)	L (mm)	L2 (mm)	H1 (mm)	L1 (mm)
16	10	3/8	130	14	30	17
20	15	3/8	136	16	33	19
25	20	1/2	144	19	37	22
20	10	1/2	134	14	32	19
20	15	3/8	136	16	33	19
25	20	3/4	144	19	37	22
16	10	3/8	130	14	30	17
20	15	1/2	136	16	33	19
25	15	3/4	142	16	36	22
16	10	3/4	130	14	30	17
20	15	1/2	136	16	33	19
25	20	3/4	144	19	37	22
16	10	1/2	130	14	30	17
25	20	3/4	144	19	37	22
25	15	1/2	142	16	32	22



**Solenoid valve type 165 PVC-U**  
**Straight-through valve 2/2 ways/230V 50Hz/60Hz**

**Model:**

- PN 0.5-6bar
- Material PVC-U: with solvent cement socket metric
- Protection class IP 65
- Electrical connection: cable plug
- With manual override
- Circuit function A: FC, closed in rest position



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	PVC-U EPDM Code	PVC-U FKM Code
20	15	1/2	6	83	199 165 012	199 165 002
25	20	3/4	6	100	199 165 013	199 165 003
32	25	1	6	233	199 165 014	199 165 004
40	32	1 1/4	6	267	199 165 015	199 165 005
50	40	1 1/2	6	500	199 165 016	
63	50	2	6	600	199 165 017	199 165 007

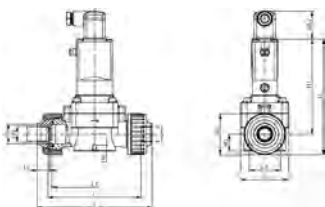
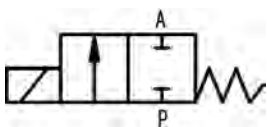
d (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	z (mm)
20	148	122	53	22	8	148	110	16	63	40	116
25	148	122	53	22	8	154	110	19	62	40	116
32	175	137	76	31	15	190	141	22	85	45	147
40	175	137	76	31	15	198	141	26	85	45	147
50	212	160	105	42	15	254	192	31	115	45	198
63	212	160	105	42	15	268	192	38	115	45	198



**Solenoid valve type 165 PVC-U**  
**Straight-through valve 2/2 ways/110V 50Hz/60Hz**

**Model:**

- PN 0.5-6bar
- Material PVC-U: with solvent cement socket metric
- Protection class IP 65
- Electrical connection: cable plug
- With manual override
- Circuit function A: FC, closed in rest position



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	PVC-U EPDM Code	PVC-U FKM Code
20	15	1/2	6	83	199 165 042	199 165 032
25	20	3/4	6	100	199 165 043	199 165 033
32	25	1	6	233	199 165 044	199 165 034
40	32	1 1/4	6	267	199 165 045	
50	40	1 1/2	6	500	199 165 046	
63	50	2	6	600	199 165 047	

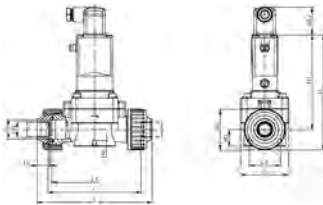
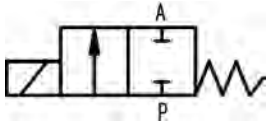
d (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	z (mm)
20	148	122	53	22	8	148	110	16	63	40	116
25	148	122	53	22	8	154	110	19	62	40	116
32	175	137	76	31	15	190	141	22	85	45	147
40	175	137	76	31	15	198	141	26	85	45	147
50	212	160	105	42	15	254	192	31	115	45	198
63	212	160	105	42	15	268	192	38	115	45	198



### Solenoid valve type 165 PVC-U Straight-through valve 2/2 ways/24V DC

#### Model:

- PN 0.5-6bar
- Material PVC-U: with solvent cement socket metric
- Protection class IP 65
- Electrical connection: cable plug
- With manual override
- Circuit function A: FC, closed in rest position



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	PVC-U EPDM Code	PVC-U FKM Code
20	15	1/2	6	83	199 165 022	199 165 072
25	20	3/4	6	100	199 165 023	199 165 073
32	25	1	6	233	199 165 024	199 165 074
40	32	1 1/4	6	267	199 165 025	199 165 075
50	40	1 1/2	6	500	199 165 026	199 165 076
63	50	2	6	600	199 165 027	199 165 077

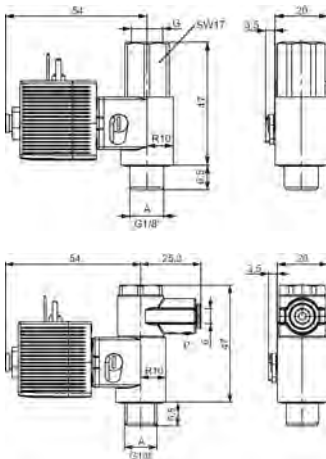
d (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	z (mm)
20	148	122	53	22	8	148	110	16	63	40	116
25	148	122	53	22	8	154	110	19	62	40	116
32	175	137	76	31	15	190	141	22	85	45	147
40	175	137	76	31	15	198	141	26	85	45	147
50	212	160	105	42	15	254	192	31	115	45	198
63	212	160	105	42	15	268	192	38	115	45	198

## Solenoid Pilot Valves



### Solenoid pilot valve type PV94 3/2-ways for single acting actuators

- For direct installation on single acting pneumatic actuators (FC/F0)
- Hollow screw
- Circuit function C: FC, closed in rest position
- Port A: G1/8 actuator connection
- Port P: compressed air
- Valve material: polyamid/brass
- IP 65 with socket connector
- Incl. reducer G 1/4 - G 1/8

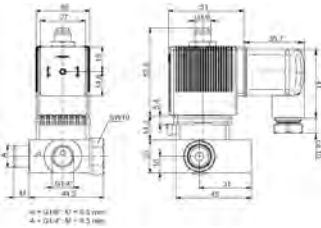


DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	Port P	Voltage	Cable plug form	NBR Code	SP	Weight (kg)
1.2	10	48	G 1/8	24 V DC	C	199 190 498	1	0.172
1.2	10	48	G 1/8	24 V, 50-60 Hz	C	199 190 499	1	0.175
1.2	10	48	G 1/8	110 V, 50-60 Hz	C	199 190 500	1	0.117
1.2	10	48	G 1/8	230 V, 50-60 Hz	C	199 190 501	1	0.117
1.2	10	48	push-in 6mm	24 V DC	C	199 190 510	1	0.177
1.2	10	48	push-in 6mm	24 V, 50-60 Hz	C	199 190 511	1	0.180
1.2	10	48	push-in 6mm	110 V, 50-60 Hz	C	199 190 512	1	0.184
1.2	10	48	push-in 6mm	230 V, 50-60 Hz	C	199 190 513	1	0.178
1.2	10	48	NPT 1/8	24 V DC	C	199 190 546	1	0.118
1.2	10	48	NPT 1/8	110 V, 50-60 Hz	C	199 190 547	1	0.173
1.2	10	48	NPT 1/8	24 V AC	C	199 190 561	1	0.177
1.2	10	48	push-in 6mm	230 V, 50-60 Hz	B	199 190 571	1	0.133
1.2	10	48	G 1/8	230 V, 50-60 Hz	B	199 190 572	1	0.126
1.2	10	48	push-in 6mm	24 V DC	B	199 190 573	1	0.130
1.2	10	48	G 1/8	24 V DC	B	199 190 574	1	0.187



**Solenoid pilot valve type PV95**  
**3/2-ways for single acting actuators**

- For direct installation on single acting pneumatic actuators (FC/FO)
- Hollow screw
- Circuit function C: FC, closed in rest position
- Port A: actuator connection
- Port P: compressed air
- Power consumption: 24VA at AC inrush; 17VA/8W at AC hold; 8W at DC
- Connector plug form A
- Valve material: polyamid/brass
- IP 65 with socket connector



DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	Port P	Port A	Voltage	FKM Code	SP	Weight (kg)
2	10	120	G 1/4	G 1/8	24 V DC	<b>199 190 532</b>	1	0.479
2	10	120	G 1/4	G 1/8	24 V, 50-60 Hz	<b>199 190 533</b>	1	0.406
2	10	120	G 1/4	G 1/8	110 V, 50-60 Hz	<b>199 190 534</b>	1	0.473
2	10	120	G 1/4	G 1/8	230 V, 50-60 Hz	<b>199 190 535</b>	1	0.435
2	10	120	NPT 1/8	G 1/4	24 V DC	<b>199 190 554</b>	1	0.487
2	10	120	NPT 1/8	G 1/4	110 V, 50-60 Hz	<b>199 190 555</b>	1	0.409



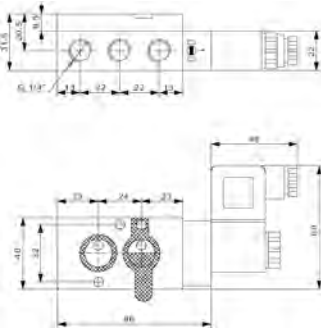
**Solenoid pilot valve type MNL532**  
**3/2 & 5/2-ways for single and double acting actuators**  
**with NAMUR interface**

**Model:**

- With NAMUR connection and two silencers/throttle screws

**Mode of action:**

- 3/2-way valve, in rest position pressure inlet 1 closed, outlet 3 exhausted
- 5/2-way valve, in rest position pressure inlet 1 connected to outlet 4, outlet 3 exhausted
- Material of body: Aluminum
- Electrical connection: cable plug
- **to pneumatic actuators**



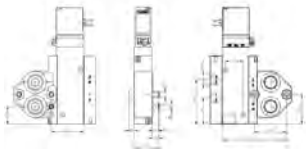
DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	Compressed air connection P	Voltage	NBR Code	SP	Weight (kg)
5	1/4	10	950	G 1/4	230 V, AC	<b>199 190 360</b>	1	0.332
5	1/4	10	950	G 1/4	110 V, AC	<b>199 190 359</b>	1	0.343
5	1/4	10	950	G 1/4	48 V, AC	<b>199 190 361</b>	1	0.341
5	1/4	10	950	G 1/4	24 V, AC	<b>199 190 358</b>	1	0.339
5	1/4	10	950	G 1/4	24 V, DC	<b>199 190 357</b>	1	0.343



**Solenoid pilot valve type 5470**  
**4/2-ways for double acting actuators**  
**with NAMUR interface**

- For AC 50-60 Hz and DC
- Version with NAMUR connection
- Circuit function: 4/2-way valve, in rest position pressure inlet 1 connected to outlet 2, outlet 4 exhausted
- Electrical connection: cable plug
- Valve material: polyamid
- **for pneumatic actuators DA (Double acting)**

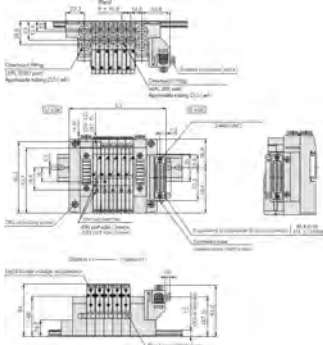
DN (mm)	PN (bar)	Compressed air connection P	kv-value ( $\Delta p=1$ bar) (l/min)	Voltage	NBR Code	SP	Weight (kg)
4	10	G 1/4	300	220-240V, AC/DC	<b>199 190 582</b>	1	0.150
4	10	G 1/4	300	110-120V, AC/DC	<b>199 190 583</b>	1	0.150
4	10	G 1/4	300	24 V, AC/DC	<b>199 190 584</b>	1	0.150



**Solenoid pilot valve type PV2000 (1)**  
**2 x 3/2-way valve**

- Version for 3/2-way valves
- Electrical control over multiple and field bus connector

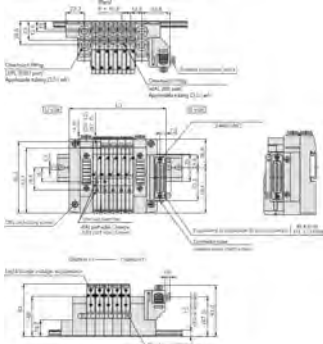
No	Voltage	Code	SP	Weight (kg)
1	24V/DC 100%	<b>199 190 435</b>	1	0.114



**Solenoid pilot valve type PV2000 (2)**  
**1 x 5/2-way valve**

- Version for 5/2-way valves
- Electrical control over multiple and field bus connector

No	Voltage	Code	SP	Weight (kg)
2	24 V/DC 100%	<b>199 190 436</b>	1	0.105



## Accessories



### Cable plug For solenoid pilot valves type PV94 & 5470

#### Model:

- Cable plug according to DIN EN 175301 - 8203 (DIN 43 650)

Cable plug form	Voltage	Version	NBR Code	SP	Weight (kg)
B	0-250 V	no circuitry	<b>199 190 578</b>	1	0.048
B	0-24 V	with LED	<b>199 190 579</b>	1	0.020
B	0-250 V	with LED	<b>199 190 580</b>	1	0.020
B	0-24 V	with rectifier LED	<b>199 190 581</b>	1	0.019
C	0-250 V	no circuitry	<b>199 190 518</b>		0.010
C	0-24 V	with LED	<b>199 190 519</b>		0.015
C	0-24 V	with LED and varistor	<b>199 190 520</b>		0.015
C	0-24 V	with rectifier LED and varistor	<b>199 190 521</b>		0.020
C	200-240 V	with LED	<b>199 190 522</b>		0.020
C	200-240 V	with LED and varistor	<b>199 190 523</b>		0.020



### Cable plug For solenoid pilot valves type PV95

#### Model:

- Cable plug according to DIN EN 175301-803 (DIN 43 650) form A

Voltage	Version	NBR Code	SP	Weight (kg)
0-250 V	no circuitry	<b>199 190 540</b>	1	0.030
0-24 V	with LED	<b>199 190 541</b>	1	0.020
0-24 V	with LED and varistor	<b>199 190 542</b>	1	0.020
0-24 V	with rectifier LED and varistor	<b>199 190 543</b>	1	0.020
200-240 V	with LED	<b>199 190 544</b>	1	0.020
200-240 V	with LED and varistor	<b>199 190 545</b>	1	0.020



### Connection module AS-interface (1) For solenoid pilot valve type PV2000

No	Code	Weight (kg)
1	<b>199 190 430</b>	0.200



### Connection module with bus interface (2) For solenoid pilot valve type PV2000

No	Code	SP	Weight (kg)
2	<b>199 190 425</b>	1	0.156



**Connection module with D-sub connector (3)  
For solenoid pilot valve type PV2000**

No	Code	SP	Weight (kg)
3	199 190 424	1	0.198



**End module (4)  
For solenoid pilot valve type PV2000**

No	Code	SP	Weight (kg)
4	199 190 426	1	0.148



**NAMUR connector plate  
for pilot valves type 5470 and type MNL532/ DIASTAR  
DN15-50/ PA11/21 and PA30-55**

- PA30 - PA55 FC/FO, PA30 - PA65 DA

DN (mm)	Pos	Series PA11/21 Code	SP	Weight (kg)	Series PA30-55 Code	SP	Weight (kg)
15	2	199 190 378	1	0.054	199 190 275	1	0.114
20	2	199 190 378	1	0.054	199 190 275	1	0.114
25	2	199 190 378	1	0.054	199 190 275	1	0.114
32	2	199 190 378	1	0.054	199 190 275	1	0.114
40	2	199 190 378	1	0.054	199 190 275	1	0.114
50	2	199 190 378	1	0.054	199 190 275	1	0.114

Ten/028 FC Code	SP	Weight (kg)	Sixteen/Ten +/025 FC Code	SP	Weight (kg)	Ten/025 FO/DA Code	SP	Weight (kg)
199 190 378	1	0.054	199 190 378	1	0.054	199 190 378	1	0.054
199 190 378	1	0.054	199 190 378	1	0.054	199 190 378	1	0.054
199 190 378	1	0.054	199 190 378	1	0.054	199 190 378	1	0.054
199 190 378	1	0.054	199 190 379	1	0.354	199 190 378	1	0.054
199 190 379	1	0.354	199 190 379	1	0.354	199 190 379	1	0.354
199 190 379	1	0.354	199 190 379	1	0.354	199 190 379	1	0.354

# Variable area flow meters

## Variable area flow meter type 335

**Variable area flow meter type 335**  
**Float in PVDF without magnet**  
**With solvent cement sockets PVC-U metric**  
**O-rings in EPDM**

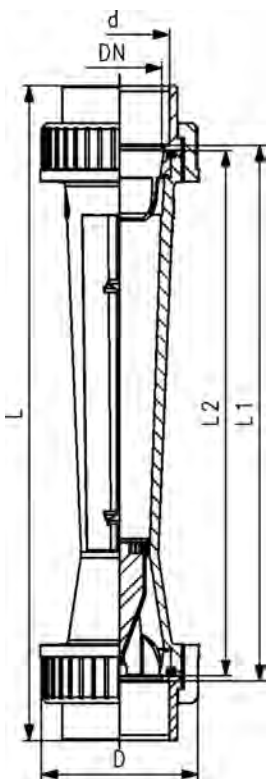


**Model:**

- Standard guiding rod PVDF with stainless steel core (V4A) for DN50 and DN65

**Option:**

- 4-20 mA sensor
- Limit contacts
- Special scales for different media
- Union nuts and connecting parts in other materials on request



Scale range (l/h)	d (mm)	DN (mm)	Size (inch)	PVC-U transp. Code	Weight (kg)	Polyamid Code	Weight (kg)
50 - 500	32	25	1	<b>199 335 000</b>	0.564	<b>199 335 020</b>	0.522
100 - 1000	32	25	1	<b>199 335 001</b>	0.473	<b>199 335 021</b>	0.423
150 - 1500	40	32	1 ¼	<b>199 335 002</b>	0.626	<b>199 335 022</b>	0.567
250 - 2500	40	32	1 ¼	<b>199 335 003</b>	0.706	<b>199 335 023</b>	0.620
200 - 2000	50	40	1 ½	<b>199 335 004</b>	0.972	<b>199 335 024</b>	0.885
300 - 3000	50	40	1 ½	<b>199 335 005</b>	0.952	<b>199 335 025</b>	0.874
600 - 6000	50	40	1 ½	<b>199 335 006</b>	1.019	<b>199 335 026</b>	0.840
600 - 6000	63	50	2	<b>199 335 007</b>	1.357	<b>199 335 027</b>	1.381
1000 - 10000	63	50	2	<b>199 335 008</b>	1.299	<b>199 335 028</b>	1.196
1500 - 15000	63	50	2	<b>199 335 009</b>	1.301	<b>199 335 029</b>	1.355
2000 - 20000	75	65	2 ½	<b>199 335 010</b>	2.513	<b>199 335 030</b>	2.536
3000 - 30000	75	65	2 ½	<b>199 335 011</b>	2.442	<b>199 335 031</b>	2.286
8000 - 60000	75	65	2 ½	<b>199 335 012</b>	2.293	<b>199 335 032</b>	2.333

Scale range (l/h)	Polysulfone Code	Weight (kg)	D (mm)	L (mm)	L1 (mm)	L2 (mm)	G (inch)
50 - 500	<b>199 335 040</b>	0.464	58	385	341	335	1 ½
100 - 1000	<b>199 335 041</b>	0.528	58	385	341	335	1 ½
150 - 1500	<b>199 335 042</b>	0.698	72	393	341	335	2
250 - 2500	<b>199 335 043</b>	0.561	72	393	341	335	2
200 - 2000	<b>199 335 044</b>	1.057	83	403	341	335	2 ¼
300 - 3000	<b>199 335 045</b>	1.038	83	403	341	335	2 ¼
600 - 6000	<b>199 335 046</b>	0.991	83	403	341	335	2 ¼
600 - 6000	<b>199 335 047</b>	1.307	101	417	341	335	2 ¾
1000 - 10000	<b>199 335 048</b>	1.252	101	417	341	335	2 ¾
1500 - 15000	<b>199 335 049</b>	1.302	101	417	341	335	2 ¾
2000 - 20000	<b>199 335 050</b>	2.639	135	429	341	335	3 ½
3000 - 30000	<b>199 335 051</b>	2.572	135	429	341	335	3 ½
8000 - 60000	<b>199 335 052</b>	2.432	135	429	341	335	3 ½



**Variable area flow meter type 335**  
**Float in PVDF with magnet**  
**With solvent cement sockets PVC-U metric**  
**O-rings in EPDM**



**Model:**

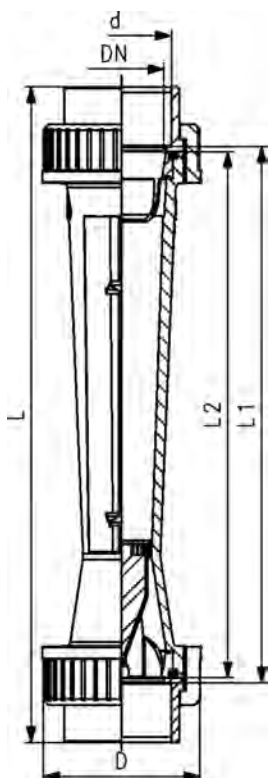
- Standard guiding rod PVDF with stainless steel core (V4A) for DN50 and DN65

**Option:**

- 4-20 mA sensor
- Limit contacts
- Special scales for different media
- Union nuts and connecting parts in other materials on request

d (mm)	DN (mm)	Size (inch)	Scale range (l/h)	PVC-U transp. Code	Weight (kg)	Polyamid Code	Weight (kg)
32	25	1	50 - 500	199 335 100	0.469	199 335 120	0.434
32	25	1	100 - 1000	199 335 101	0.547	199 335 121	0.423
40	32	1 ¼	150 - 1500	199 335 102	0.630	199 335 122	0.568
40	32	1 ¼	250 - 2500	199 335 103	0.714	199 335 123	0.547
50	40	1 ½	200 - 2000	199 335 104	0.973	199 335 124	0.887
50	40	1 ½	300 - 3000	199 335 105	0.952	199 335 125	0.874
50	40	1 ½	600 - 6000	199 335 106	1.024	199 335 126	0.836
63	50	2	600 - 6000	199 335 107	1.342	199 335 127	1.240
63	50	2	1000 - 10000	199 335 108	1.303	199 335 128	1.190
63	50	2	1500 - 15000	199 335 109	1.297	199 335 129	1.351
75	65	2 ½	2000 - 20000	199 335 110	2.508	199 335 130	2.378
75	65	2 ½	3000 - 30000	199 335 111	2.477	199 335 131	2.472
75	65	2 ½	8000 - 60000	199 335 112	2.294	199 335 132	2.150

Polysulfone Code	Weight (kg)	D (mm)	L (mm)	L1 (mm)	L2 (mm)	G (inch)
199 335 140	0.466	58	385	341	335	1 ½
199 335 141	0.452	58	385	341	335	1 ½
199 335 142	0.604	72	393	341	335	2
199 335 143	0.585	72	393	341	335	2
199 335 144	0.944	83	403	341	335	2 ¼
199 335 145	1.035	83	403	341	335	2 ¼
199 335 146	0.881	83	403	341	335	2 ¼
199 335 147	1.360	101	417	341	335	2 ¾
199 335 148	1.248	101	417	341	335	2 ¾
199 335 149	1.409	101	417	341	335	2 ¾
199 335 150	2.441	135	429	341	335	3 ½
199 335 151	2.377	135	429	341	335	3 ½
199 335 152	2.150	135	429	341	335	3 ½



# Variable Area Flow Meter Short Version

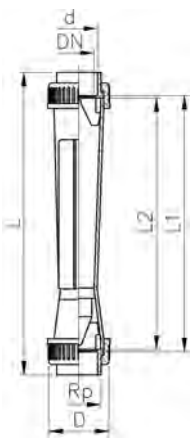


**Variable area flow meter short version type 123**  
**Float in PVDF without magnet**  
**With solvent cement sockets PVC-U metric**  
**O-rings in EPDM**

**Model:**

- Union nuts and valve ends in other materials on request

d (mm)	DN (mm)	Size (inch)	Type	Scale range (L/h)	Polysulfone Code	Weight (kg)	PVC-U transp. Code	Weight (kg)
16	10	3/8	SK 50	2.5 - 25.0	<b>198 801 880</b>	0.083	<b>198 803 310</b>	0.081
16	10	3/8	SK 51	5.0 - 50.0	<b>198 801 881</b>	0.078	<b>198 803 311</b>	0.079
16	10	3/8	SK 52	10.0 - 100.0	<b>198 801 882</b>	0.079	<b>198 803 312</b>	0.079
20	15	1/2	SK 60	8.0 - 80.0	<b>198 801 883</b>	0.125	<b>198 803 313</b>	0.127
20	15	1/2	SK 61	15.0 - 150.0	<b>198 801 884</b>	0.122	<b>198 803 314</b>	0.130
20	15	1/2	SK 62	20.0 - 200.0	<b>198 801 885</b>	0.119	<b>198 803 315</b>	0.125
32	25	1	SK 70	15.0 - 150.0	<b>198 801 886</b>	0.247	<b>198 803 316</b>	0.256
32	25	1	SK 71	30.0 - 300.0	<b>198 801 887</b>	0.244	<b>198 803 317</b>	0.254
32	25	1	SK 72	50.0 - 500.0	<b>198 801 888</b>	0.285	<b>198 803 318</b>	0.244
32	25	1	SK 73	100.0 - 1000.0	<b>198 801 889</b>	0.234	<b>198 803 319</b>	0.242



D (mm)	L (mm)	L1 (mm)	L2 (mm)	G (inch)
35	199	171	165	3/4
35	199	171	165	3/4
35	199	171	165	3/4
43	223	191	185	1
43	223	191	185	1
43	223	191	185	1
60	250	206	200	1 1/2
60	250	206	200	1 1/2
60	250	206	200	1 1/2
60	250	206	200	1 1/2

**Variable area flow meter short version type 123**  
**Float in PVDF with magnet**  
**With solvent cement sockets PVC-U metric**  
**O-rings in EPDM**

**Model:**

- Suitable limit switches see accessories for variable area flow meters
- Union nuts and valve ends in other materials on request

d (mm)	DN (mm)	Size (inch)	Scale range (L/h)	Type	Polysulfone Code	Weight (kg)	PVC-U transp. Code	Weight (kg)
16	10	3/8	2.5 - 25.0	SK 500	<b>198 801 890</b>	0.079	<b>198 803 320</b>	0.081
16	10	3/8	5.0 - 50.0	SK 510	<b>198 801 891</b>	0.102	<b>198 803 321</b>	0.080
16	10	3/8	10.0 - 100.0	SK 520	<b>198 801 892</b>	0.075	<b>198 803 322</b>	0.079
20	15	1/2	8.0 - 80.0	SK 600	<b>198 801 893</b>	0.123	<b>198 803 323</b>	0.129
20	15	1/2	15.0 - 150.0	SK 610	<b>198 801 894</b>	0.121	<b>198 803 324</b>	0.160
20	15	1/2	20.0 - 200.0	SK 620	<b>198 801 895</b>	0.119	<b>198 803 325</b>	0.125
32	25	1	15.0 - 150.0	SK 700	<b>198 801 896</b>	0.248	<b>198 803 326</b>	0.301
32	25	1	30.0 - 300.0	SK 710	<b>198 801 897</b>	0.289	<b>198 803 327</b>	0.255
32	25	1	50.0 - 500.0	SK 720	<b>198 801 898</b>	0.241	<b>198 803 328</b>	0.248
32	25	1	100.0 - 1000.0	SK 730	<b>198 801 899</b>	0.280	<b>198 803 329</b>	0.242

D (mm)	L (mm)	L1 (mm)	L2 (mm)	G (inch)
35	199	171	165	3/4
35	199	171	165	3/4
35	199	171	165	3/4
43	223	191	185	1
43	223	191	185	1
43	223	191	185	1
60	250	206	200	1 1/2
60	250	206	200	1 1/2
60	250	206	200	1 1/2
60	250	206	200	1 1/2





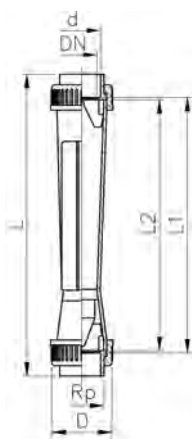
Short Version with special scale HCl 30 - 33% l/h  
 Float in PVDF without magnet  
 With solvent cement sockets PVC-U metric

**Model:**

- Union nuts and valve ends in other materials on request

Type	DN (mm)	Scale range (l/h)	d (mm)	Messrohr in PVC-U transparent mit EPDM Dichtungsringen Code	Weight (kg)	D (mm)	L (mm)	L1 (mm)	L2 (mm)
------	------------	----------------------	-----------	--	----------------	-----------	-----------	------------	------------

	25	5 - 125	32	<b>700 276 563</b>	0.260	60	250	206	200
SK 71	25	30 - 260	32	<b>700 276 564</b>	0.255	60	250	206	200
SK 73	25	100 - 850	32	<b>700 276 565</b>	0.243	60	250	206	200



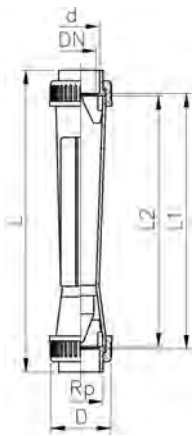
**Kurzausführung mit Sonderskala NaOH 30% l/h**  
**Schwebekörper in PVDF ohne Magnet**  
**Mit Klebemuffen PVC-U metrisch**



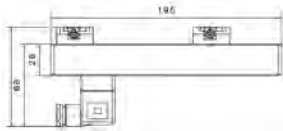
**Model:**

- Union nuts and valve ends in other materials on request

Type	Scale range (l/h)	d (mm)	DN (mm)	Taper tube in PVC- U transp. Orings in EPDM Code	Weight (kg)	D (mm)	L (mm)	L1 (mm)	L2 (mm)
SK 71	6 - 130	32	25	<b>700 276 566</b>	0.254	60	250	206	200
SK 72	10 - 250	32	25	<b>700 276 567</b>	0.251	60	250	206	200
SK 73	40 - 590	32	25	<b>700 276 568</b>	0.240	60	250	206	200

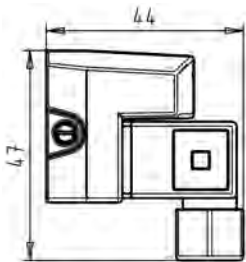


# Accessories



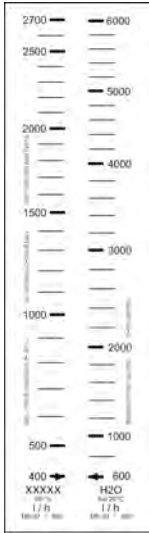
## Accessories 4-20 mA sensor For type 335 and type 350

Type	d (mm)	DN (mm)	Corresponds to water scale (l/h)	Code	Weight (kg)
GK 15	32	25	50-500	<b>198 335 962</b>	0.150
GK 15	32	25	100-1000	<b>198 335 963</b>	0.150
GK 15	40	32	150-1500	<b>198 335 964</b>	0.150
GK 15	40	32	250-2500	<b>198 335 965</b>	0.150
GK 15	50	40	200-2000	<b>198 335 966</b>	0.150
GK 15	50	40	300-3000	<b>198 335 967</b>	0.150
GK 15	50	40	600-6000	<b>198 335 968</b>	0.150
GK 15	63	50	600-6000	<b>198 335 969</b>	0.150
GK 15	63	50	1000-10000	<b>198 335 991</b>	0.150
GK 15	63	50	1500-15000	<b>198 335 992</b>	0.120
GK 15	75	65	2000-20000	<b>198 335 993</b>	0.150
GK 15	75	65	3000-30000	<b>198 335 994</b>	0.150
GK 15	75	65	8000-60000	<b>198 335 995</b>	0.150



## Accessories Limit contacts GK10/GK11 For type 335/350 and short version

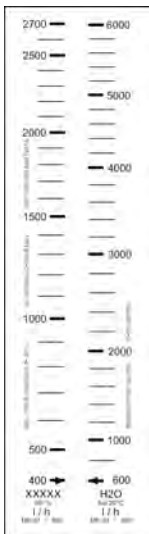
Type	Code	Weight (kg)
GK10 (min.)	<b>198 335 960</b>	0.035
GK11 (max.)	<b>198 335 961</b>	0.034



Example of special scale

### Special scale for type 335/350 % for H2O

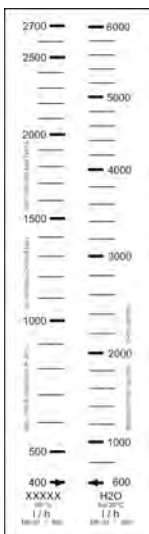
d (mm)	DN (mm)	Size (inch)	Scale range (L/h)	Corresponds to water scale (L/h)	Code	Weight (kg)
32	25	1	10-100 %	50-500	<b>199 335 084</b>	0.050
32	25	1	10-100 %	100-1000	<b>199 335 083</b>	0.003
40	32	1 ¼	10-100 %	150-1500	<b>199 335 069</b>	0.050
40	32	1 ¼	10-100 %	250-2500	<b>199 335 068</b>	0.050
50	40	1 ½	10-100 %	200-2000	<b>199 335 054</b>	0.050
50	40	1 ½	10-100 %	300-3000	<b>199 335 053</b>	0.002
50	40	1 ½	10-100 %	600-6000	<b>199 335 039</b>	0.050
63	50	2	10-100 %	600-6000	<b>199 335 038</b>	0.002
63	50	2	10-100 %	1000-10000	<b>199 335 037</b>	0.002
63	50	2	10-100 %	1500-15000	<b>199 335 036</b>	0.050
75	65	2 ½	10-100 %	2000-20000	<b>199 335 035</b>	0.050
75	65	2 ½	10-100 %	3000-30000	<b>199 335 034</b>	0.050
75	65	2 ½	13.3-100 %	8000-60000	<b>199 335 033</b>	0.050



Example of special scale

### Special scale for type 335/350 m<sup>3</sup>/h

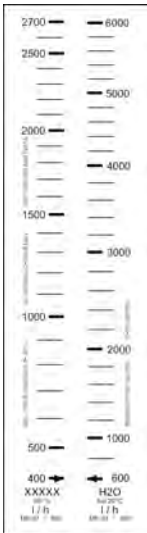
d (mm)	DN (mm)	Size (inch)	Scale range (m <sup>3</sup> /h)	Corresponds to water scale (L/h)	Code	Weight (kg)
32	25	1	0.05 - 0.50	50 - 500	<b>199 335 655</b>	0.050
32	25	1	0.10 - 1.00	100 - 1000	<b>199 335 656</b>	0.050
40	32	1 ¼	0.15 - 1.50	150 - 1500	<b>199 335 657</b>	0.050
40	32	1 ¼	0.25 - 2.50	250 - 2500	<b>199 335 658</b>	0.050
50	40	1 ½	0.20 - 2.00	200 - 2000	<b>199 335 659</b>	0.050
50	40	1 ½	0.30 - 3.00	300 - 3000	<b>199 335 660</b>	0.050
50	40	1 ½	0.60 - 6.00	600 - 6000	<b>199 335 661</b>	0.050
63	50	2	0.60 - 6.00	600 - 6000	<b>199 335 662</b>	0.050
63	50	2	1.00 - 10.00	1000 - 10000	<b>199 335 663</b>	0.050
63	50	2	1.50 - 15.00	1500 - 15000	<b>199 335 664</b>	0.050
75	65	2 ½	2.00 - 20.00	2000 - 20000	<b>199 335 665</b>	0.050
75	65	2 ½	3.00 - 30.00	3000 - 30000	<b>199 335 666</b>	0.008
75	65	2 ½	8.00 - 60.00	8000 - 60000	<b>199 335 667</b>	0.050



Example of special scale

### Special scale for type 335/350 Imp. GPM

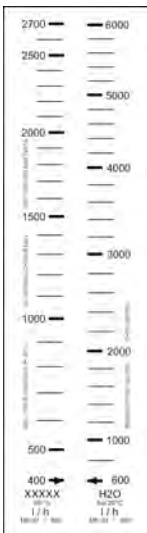
d (mm)	DN (mm)	Size (inch)	Scale range (gal/min)	Corresponds to water scale (L/h)	Code	Weight (kg)
32	25	1	0.183 - 1.830	50-500	<b>199 335 670</b>	0.050
32	25	1	0.366 - 3.660	100-1000	<b>199 335 671</b>	0.050
40	32	1 ¼	0.550 - 5.500	150-1500	<b>199 335 672</b>	0.050
40	32	1 ¼	0.916 - 9.160	250-2500	<b>199 335 673</b>	0.050
50	40	1 ½	0.733 - 7.330	200-2000	<b>199 335 674</b>	0.050
50	40	1 ½	1.090 - 10.900	300-3000	<b>199 335 675</b>	0.050
50	40	1 ½	2.190 - 21.900	600-6000	<b>199 335 676</b>	0.050
63	50	2	2.200 - 22.000	600-6000	<b>199 335 677</b>	0.050
63	50	2	3.660 - 36.600	1000-10000	<b>199 335 678</b>	0.050
63	50	2	5.490 - 54.900	1500-15000	<b>199 335 679</b>	0.050
75	65	2 ½	7.320 - 73.200	2000-20000	<b>199 335 680</b>	0.050
75	65	2 ½	10.980 - 109.800	3000-30000	<b>199 335 681</b>	0.050
75	65	2 ½	29.280 - 219.600	8000-60000	<b>199 335 682</b>	0.050



Example of special scale

### Special scale for type 335/350 US GPM

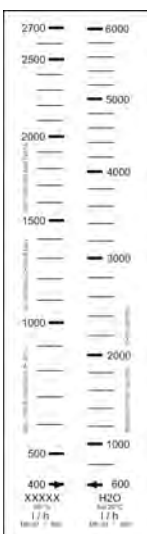
d (mm)	DN (mm)	Size (inch)	Scale range (gal./min)	Corresponds to water scale (l/h)	Code	Weight (kg)
32	25	1	0.22 - 2.20	50 - 500	<b>199 335 685</b>	0.050
32	25	1	0.44 - 4.40	100 - 1000	<b>199 335 686</b>	0.050
40	32	1 ¼	0.66 - 6.60	150 - 1500	<b>199 335 687</b>	0.002
40	32	1 ¼	1.10 - 11.00	250 - 2500	<b>199 335 688</b>	0.050
50	40	1 ½	0.88 - 8.80	200 - 2000	<b>199 335 689</b>	0.002
50	40	1 ½	1.32 - 13.20	300 - 3000	<b>199 335 690</b>	0.050
50	40	1 ½	2.64 - 26.40	600 - 6000	<b>199 335 691</b>	0.002
63	50	2	2.64 - 26.40	600 - 6000	<b>199 335 692</b>	0.050
63	50	2	4.40 - 44.00	1000 - 10000	<b>199 335 693</b>	0.002
63	50	2	6.60 - 66.00	1500 - 15000	<b>199 335 694</b>	0.050
75	65	2 ½	8.80 - 88.00	2000 - 20000	<b>199 335 695</b>	0.002
75	65	2 ½	13.20 - 132.00	3000 - 30000	<b>199 335 696</b>	0.002
75	65	2 ½	35.20 - 264.00	8000 - 60000	<b>199 335 697</b>	0.050



Example of special scale

### Special scale for type 335/350 l/h

d (mm)	DN (mm)	Size (inch)	Scale range (l/h)	Code	Weight (kg)
32	25	1	50 - 500	<b>199 335 861</b>	0.050
32	25	1	100 - 1000	<b>199 335 862</b>	0.050
40	32	1 ¼	150 - 1500	<b>199 335 863</b>	0.050
40	32	1 ¼	250 - 2500	<b>199 335 864</b>	0.050
50	40	1 ½	200 - 2000	<b>199 335 865</b>	0.050
50	40	1 ½	600 - 6000	<b>199 335 867</b>	0.050
50	40	1 ½	300 - 3000	<b>199 335 866</b>	0.050
63	50	2	600 - 6000	<b>199 335 868</b>	0.050
63	50	2	1000 - 10000	<b>199 335 869</b>	0.050
63	50	2	1500 - 15000	<b>199 335 870</b>	0.050
75	65	2 ½	2000 - 20000	<b>199 335 871</b>	0.050
75	65	2 ½	3000 - 30000	<b>199 335 872</b>	0.050
75	65	2 ½	8000 - 60000	<b>199 335 873</b>	0.050

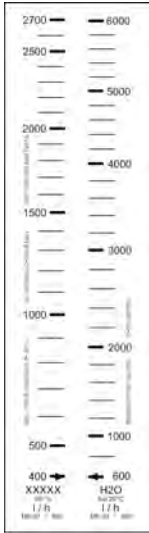


Example of special scale

### Special scale for type 335/350 Air/0bar/Nm3/h

d (mm)	DN (mm)	Size (inch)	Scale range (m <sup>3</sup> /h)	Corresponds to water scale (l/h)	Code	Weight (kg)
32	25	1	2.0 - 15.0	50 - 500	<b>199 350 655</b>	0.002
32	25	1	3.5 - 30.0	100 - 1000	<b>199 350 656</b>	0.050
40	32	1 ¼	5.0 - 45.0	150 - 1500	<b>199 350 657</b>	0.050
40	32	1 ¼	8.0 - 76.0	250 - 2500	<b>199 350 658</b>	0.050
50	40	1 ½	7.0 - 60.0	200 - 2000	<b>199 350 659</b>	0.050
50	40	1 ½	10.0 - 87.0	300 - 3000	<b>199 350 660</b>	0.002
50	40	1 ½	20.0 - 170.0	600 - 6000	<b>199 350 661</b>	0.050
63	50	2	25.0 - 180.0	600 - 6000	<b>199 350 662</b>	0.050
63	50	2	30.0 - 280.0	1000 - 10000	<b>199 350 663</b>	0.050
63	50	2	50.0 - 440.0	1500 - 15000	<b>199 350 664</b>	0.050
75	65	2 ½	70.0 - 580.0	2000 - 20000	<b>199 350 665</b>	0.050
75	65	2 ½	100.0 - 900.0	3000 - 30000	<b>199 350 666</b>	0.050
75	65	2 ½	230.0 - 1650.0	8000 - 60000	<b>199 350 667</b>	0.050

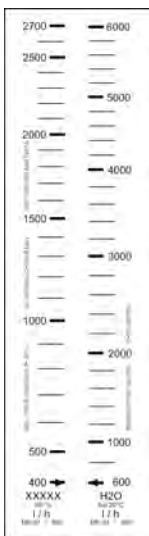




Example of special scale

### Special scale for type 335/350 HCl 30-33% l/h

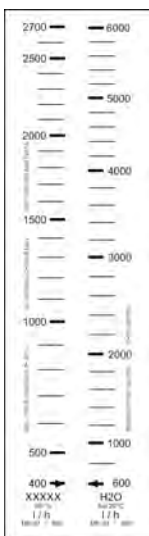
d (mm)	DN (mm)	Size (inch)	Scale range (l/h)	Corresponds to water scale (l/h)	Code	Weight (kg)
32	25	1	40 - 430	50-500	<b>199 350 670</b>	0.050
32	25	1	80 - 860	100-1000	<b>199 350 671</b>	0.002
40	32	1 ¼	150 - 1250	150-1500	<b>199 350 672</b>	0.050
40	32	1 ¼	200 - 2150	250-2500	<b>199 350 673</b>	0.050
50	40	1 ½	200 - 1850	200-2000	<b>199 350 674</b>	0.050
50	40	1 ½	300 - 2500	300-3000	<b>199 350 675</b>	0.050
50	40	1 ½	600 - 4900	600-6000	<b>199 350 676</b>	0.010
63	50	2	600 - 5400	600-6000	<b>199 350 677</b>	0.050
63	50	2	800 - 8400	1000-10000	<b>199 350 678</b>	0.050
63	50	2	1000 - 12750	1500-15000	<b>199 350 679</b>	0.050
75	65	2 ½	2000 - 17500	2000-20000	<b>199 350 680</b>	0.050
75	65	2 ½	3000 - 26500	3000-30000	<b>199 350 681</b>	0.050
75	65	2 ½	6000 - 50000	8000-60000	<b>199 350 682</b>	0.050



Example of special scale

### Special scale for type 335/350 NaOH 30% l/h

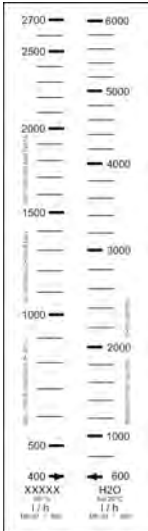
d (mm)	DN (mm)	Size (inch)	Scale range (l/h)	Corresponds to water scale (l/h)	Code	Weight (kg)
32	25	1	30 - 320	50-500	<b>199 350 685</b>	0.050
32	25	1	70 - 660	100-1000	<b>199 350 686</b>	0.050
40	32	1 ¼	100 - 900	150-1500	<b>199 350 687</b>	0.050
40	32	1 ¼	100 - 1600	250-2500	<b>199 350 688</b>	0.050
50	40	1 ½	200 - 1400	200-2000	<b>199 350 689</b>	0.002
50	40	1 ½	300 - 1950	300-3000	<b>199 350 690</b>	0.050
50	40	1 ½	500 - 3800	600-6000	<b>199 350 691</b>	0.050
63	50	2	500 - 4300	600-6000	<b>199 350 692</b>	0.050
63	50	2	600 - 6600	1000-10000	<b>199 350 693</b>	0.050
63	50	2	750 - 9500	1500-15000	<b>199 350 694</b>	0.050
75	65	2 ½	1300 - 13000	2000-20000	<b>199 350 695</b>	0.050
75	65	2 ½	2600 - 20000	3000-30000	<b>199 350 696</b>	0.050
75	65	2 ½	6000 - 40000	8000-60000	<b>199 350 697</b>	0.050



Example of special scale

### Special scale for type 335/350 NaOH 50% l/h

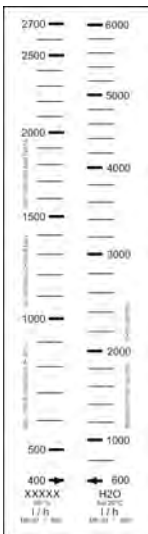
d (mm)	DN (mm)	Size (inch)	Scale range (l/h)	Corresponds to water scale (l/h)	Code	Weight (kg)
32	25	1	10 - 62	50-500	<b>199 350 755</b>	0.050
32	25	1	10 - 195	100-1000	<b>199 350 756</b>	0.050
40	32	1 ¼	20 - 350	150-1500	<b>199 350 757</b>	0.050
40	32	1 ¼	5 - 760	250-2500	<b>199 350 758</b>	0.050
50	40	1 ½	5 - 540	200-2000	<b>199 350 759</b>	0.050
50	40	1 ½	105 - 1200	300-3000	<b>199 350 760</b>	0.050
50	40	1 ½	400 - 2350	600-6000	<b>199 350 761</b>	0.002
63	50	2	100 - 2200	600-6000	<b>199 350 762</b>	0.050
63	50	2	100 - 4000	1000-10000	<b>199 350 763</b>	0.050
63	50	2	300 - 5000	1500-15000	<b>199 350 764</b>	0.050
75	65	2 ½	200 - 7000	2000-20000	<b>199 350 765</b>	0.050
75	65	2 ½	400 - 9800	3000-30000	<b>199 350 766</b>	0.050
75	65	2 ½	2000 - 15000	8000-60000	<b>199 350 767</b>	0.050



Example of special scale

### Special scale for short version Water l/h

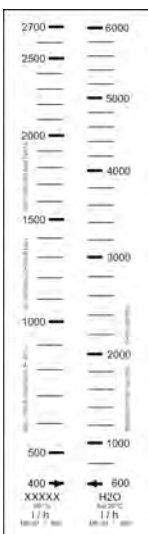
d (mm)	DN (mm)	Size (inch)	Type	Scale range (l/h)	Code
16	10	3/8	SK 50 / 500	2.5 - 25.0	<b>198 801 386</b>
16	10	3/8	SK 51 / 510	5.0 - 50.0	<b>198 801 387</b>
16	10	3/8	SK 52 / 520	10.0 - 100.0	<b>198 801 388</b>
20	15	1/2	SK 60 / 600	8.0 - 80.0	<b>198 801 389</b>
20	15	1/2	SK 61 / 610	15.0 - 150.0	<b>198 801 390</b>
20	15	1/2	SK 62 / 620	20.0 - 200.0	<b>198 801 391</b>
32	25	1	SK 70 / 700	15.0 - 150.0	<b>198 801 392</b>
32	25	1	SK 71 / 710	30.0 - 30.0	<b>198 801 393</b>
32	25	1	SK 72 / 720	50.0 - 500.0	<b>198 801 394</b>
32	25	1	SK 73 / 730	100.0 - 1000.0	<b>198 801 395</b>



Example of special scale

### Special scale for short version US GPM

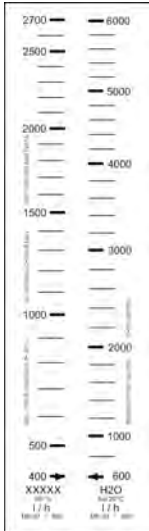
d (mm)	DN (mm)	Size (inch)	Type	Scale range (gal/min)	Code
16	10	3/8	SK 50 / 500	0.01 - 0.11	<b>198 801 961</b>
16	10	3/8	SK 51 / 510	0.02 - 0.22	<b>198 801 962</b>
16	10	3/8	SK 52 / 520	0.04 - 0.44	<b>198 801 963</b>
20	15	1/2	SK 60 / 600	0.03 - 0.35	<b>198 801 964</b>
20	15	1/2	SK 61 / 610	0.06 - 0.66	<b>198 801 965</b>
20	15	1/2	SK 62 / 620	0.08 - 0.88	<b>198 801 966</b>
32	25	1	SK 70 / 700	0.06 - 0.66	<b>198 801 967</b>
32	25	1	SK 71 / 710	0.13 - 1.32	<b>198 801 968</b>
32	25	1	SK 72 / 720	0.22 - 2.20	<b>198 801 969</b>
32	25	1	SK 73 / 730	0.44 - 4.40	<b>198 801 970</b>



Example of special scale

### Special scale for short version Air/0bar/Nm3/h

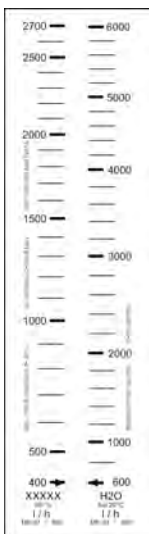
d (mm)	DN (mm)	Size (inch)	Type	Scale range (m <sup>3</sup> /h)	Code
16	10	3/8	SK 50 / 500	0.50 - 0.95	<b>198 801 308</b>
16	10	3/8	SK 51 / 510	0.50 - 1.90	<b>198 801 309</b>
16	10	3/8	SK 52 / 520	0.80 - 3.00	<b>198 801 310</b>
20	15	1/2	SK 60 / 600	0.60 - 2.80	<b>198 801 311</b>
20	15	1/2	SK 61 / 610	1.40 - 5.60	<b>198 801 312</b>
20	15	1/2	SK 62 / 620	1.50 - 7.00	<b>198 801 313</b>
32	25	1	SK 70 / 700	1.00 - 6.50	<b>198 801 314</b>
32	25	1	SK 71 / 710	1.50 - 11.00	<b>198 801 315</b>
32	25	1	SK 72 / 720	3.00 - 18.00	<b>198 801 316</b>
32	25	1	SK 73 / 730	6.00 - 30.00	<b>198 801 317</b>



Example of special scale

### Special scale for short version HCl 30 - 33% l/h

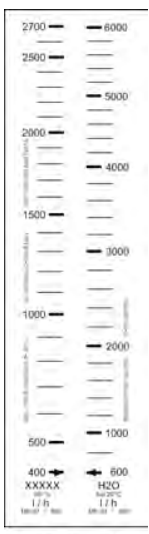
d (mm)	DN (mm)	Size (inch)	Type	Scale range (l/h)	Code
16	10	3/8	SK 50 / 500	2.5 - 20.0	<b>198 806 511</b>
16	10	3/8	SK 51 / 510	5.0 - 40.0	<b>198 806 512</b>
16	10	3/8	SK 52 / 520	10.0 - 85.0	<b>198 806 513</b>
20	15	1/2	SK 60 / 600	8.0 - 70.0	<b>198 806 514</b>
20	15	1/2	SK 61 / 610	15.0 - 125.0	<b>198 806 515</b>
20	15	1/2	SK 62 / 620	20.0 - 170.0	<b>198 806 516</b>
32	20	1	SK 71 / 710	30.0 - 260.0	<b>198 806 518</b>
32	20	1	SK 70 / 700	5.0 - 125.0	<b>198 806 517</b>
32	20	1	SK 72 / 720	50.0 - 425.0	<b>198 806 519</b>
32	20	1	SK 73 / 730	100.0 - 850.0	<b>198 806 520</b>



Example of special scale

### Special scale for short version NaOH 30% l/h

d (mm)	DN (mm)	Size (inch)	Type	Scale range (l/h)	Code
16	10	3/8	SK 50 / 500	0.2 - 5.0	<b>198 806 521</b>
16	10	3/8	SK 51 / 510	1.0 - 14.0	<b>198 806 522</b>
16	10	3/8	SK 52 / 520	3.0 - 35.0	<b>198 806 523</b>
20	15	1/2	SK 60 / 600	2.0 - 23.0	<b>198 806 524</b>
20	15	1/2	SK 61 / 610	3.0 - 55.0	<b>198 806 525</b>
20	15	1/2	SK 62 / 620	5.0 - 80.0	<b>198 806 526</b>
32	25	1	SK 70 / 700	3.0 - 55.0	<b>198 806 527</b>
32	25	1	SK 71 / 710	6.0 - 130.0	<b>198 806 528</b>
32	25	1	SK 72 / 720	10.0 - 250.0	<b>198 806 529</b>
32	25	1	SK 73 / 730	40.0 - 590.0	<b>198 806 530</b>

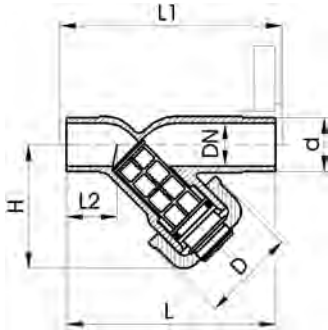


Example of special scale

### Special scale for short version NaOH 50% l/h

d (mm)	DN (mm)	Size (inch)	Type	Scale range (l/h)	Code
20	15	1/2	SK 60 / 600	0.2 - 3.5	<b>198 806 531</b>
20	15	1/2	SK 61 / 610	0.5 - 10.0	<b>198 806 532</b>
20	15	1/2	SK 62 / 620	0.5 - 16.0	<b>198 806 533</b>
32	25	1	SK 70 / 700	0.5 - 11.0	<b>198 806 534</b>
32	25	1	SK 71 / 710	1.0 - 33.0	<b>198 806 535</b>
32	25	1	SK 72 / 720	2.0 - 80.0	<b>198 806 536</b>
32	25	1	SK 73 / 730	10.0 - 220.0	<b>198 806 537</b>

# Strainers



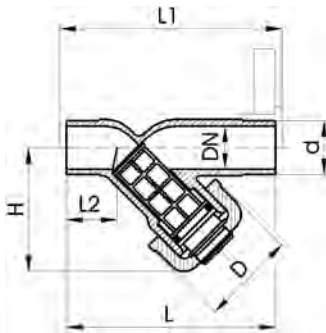
## Line strainer type 305 PVC-U With solvent cement spigots metric

### Model:

- Protects valves, pumps, etc. from becoming soiled
- Easy dismantling for cleaning the screens
- **Screen perforation need be ordered separately**
- Overall length according to EN 558

d (mm)	DN (mm)	Size (inch)	PN (bar)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
20	15	½	10	<b>161 305 300</b>	1	0.101	<b>161 305 349</b>
25	20	¾	10	<b>161 305 350</b>	1	0.141	<b>161 305 399</b>
32	25	1	10	<b>161 305 400</b>	1	0.226	<b>161 305 449</b>
40	32	1 ¼	10	<b>161 305 450</b>	1	0.348	<b>161 305 499</b>
50	40	1 ½	10	<b>161 305 500</b>	1	0.600	<b>161 305 549</b>
63	50	2	10	<b>161 305 550</b>	1	0.985	<b>161 305 599</b>
75	65	2 ½	10	<b>161 305 600</b>	1	1.868	<b>161 305 649</b>
90	80	3	10	<b>161 305 650</b>	1	2.590	<b>161 305 699</b>

d (mm)	D (mm)	H (mm)	L (mm)	L1 (mm)	L2 (mm)	closest inch (inch)
20	43	65	124	130	28	½
25	47	76	144	150	37	¾
32	56	90	154	160	37	1
40	64	104	174	180	44	1 ¼
50	82	124	194	200	48	1 ½
63	95	148	224	230	60	2
75	106	188	284	290	74	2 ½
90	120	205	300	310	85	3



**Line strainer type 305 PVC-U**  
**Transparent body with solvent cement spigots metric**

**Model:**

- Protects valves, pumps, etc. from becoming soiled
- Easy dismantling for cleaning the screens
- **Screen perforation need be ordered separately**
- Overall length according to EN 558

d (mm)	DN (mm)	PN (bar)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
20	15	10	<b>192 305 300</b>	1	<b>192 305 349</b>	1
25	20	10	<b>192 305 350</b>	1	<b>192 305 399</b>	1
32	25	10	<b>192 305 400</b>	1	<b>192 305 449</b>	1
40	32	10	<b>192 305 450</b>	1	<b>192 305 499</b>	1
50	40	10	<b>192 305 500</b>	1	<b>192 305 549</b>	1
63	50	10	<b>192 305 550</b>	1	<b>192 305 599</b>	1
75	65	10	<b>192 305 600</b>	1	<b>192 305 649</b>	1
90	80	10	<b>192 305 650</b>	1	<b>192 305 699</b>	1

d (mm)	D (mm)	H (mm)	L (mm)	L1 (mm)	L2 (mm)	closest inch (inch)
20	43	65	124	130	28	½
25	47	76	144	150	37	¾
32	56	90	154	160	37	1
40	64	104	174	180	44	1 ¼
50	82	124	194	200	48	1 ½
63	95	148	224	230	60	2
75	106	188	284	290	74	2 ½
90	120	205	300	310	85	3



**Cylindrical screen type 305 PVC-U**  
**Screen perforations 2.2 mm**

- For line strainers Type 305

d (mm)	DN (mm)	Size (inch)	kv-value (Δp=1 bar) (L/min)	Code	SP Weight (kg)	D (mm)	L (mm)	closest inch (inch)
20	15	½	35	<b>161 305 336</b>	10	0.005	14	39
25	20	¾	65	<b>161 305 386</b>	10	0.003	18	48
32	25	1	90	<b>161 305 436</b>	5	0.003	24	60
40	32	1 ¼	155	<b>161 305 486</b>	2	0.003	30	71
50	40	1 ½	225	<b>161 305 536</b>	1	0.005	38	87
63	50	2	370	<b>161 305 586</b>	2	0.008	48	106
75	65	2 ½	575	<b>161 305 636</b>	5	0.010	61	100
90	80	3	955	<b>161 305 686</b>	2	0.013	73	118



**Cylindrical screen type 305 PVC-U**  
**Screen perforations 1.4 mm**

- For line strainers Type 305

d (mm)	DN (mm)	Size (inch)	kv-value ( $\Delta p=1$ bar) (L/min)	Code	SP	Weight (kg)	D (mm)	L (mm)	closest inch (inch)
20	15	½	35	<b>161 305 337</b>	10	0.003	14	39	½
25	20	¾	65	<b>161 305 387</b>	10	0.003	18	48	¾
32	25	1	90	<b>161 305 437</b>	5	0.003	24	60	1
40	32	1 ¼	155	<b>161 305 487</b>	2	0.004	30	71	1 ¼
50	40	1 ½	225	<b>161 305 537</b>	1	0.005	38	87	1 ½
63	50	2	370	<b>161 305 587</b>	2	0.008	48	106	2
75	65	2 ½	575	<b>161 305 637</b>	5	0.011	61	100	2 ½
90	80	3	955	<b>161 305 687</b>	2	0.013	73	118	3



**Cylindrical screen type 305 PVC-U**  
**Screen perforations 0.8 mm**

- For line strainers Type 305

d (mm)	DN (mm)	Size (inch)	kv-value ( $\Delta p=1$ bar) (L/min)	Code	SP	Weight (kg)	D (mm)	L (mm)	closest inch (inch)
20	15	½	35	<b>161 305 338</b>	10	0.005	14	39	½
25	20	¾	65	<b>161 305 388</b>	10	0.007	18	48	¾
32	25	1	90	<b>161 305 438</b>	5	0.003	24	60	1
40	32	1 ¼	155	<b>161 305 488</b>	1	0.004	30	71	1 ¼
50	40	1 ½	225	<b>161 305 538</b>	1	0.006	38	87	1 ½
63	50	2	370	<b>161 305 588</b>	2	0.003	48	106	2
75	65	2 ½	575	<b>161 305 638</b>	5	0.012	61	100	2 ½
90	80	3	955	<b>161 305 688</b>	2	0.015	73	118	3



**Cylindrical screen type 305 PVC-U**  
**Screen perforations 0.5 mm**

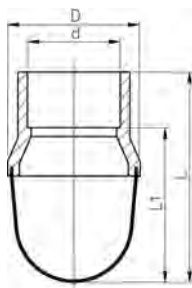
- For line strainers Type 305

d (mm)	DN (mm)	Size (inch)	kv-value ( $\Delta p=1$ bar) (L/min)	Code	SP	Weight (kg)	D (mm)	L (mm)
20	15	½	35	<b>161 305 339</b>	10	0.005	14	39
25	20	¾	65	<b>161 305 389</b>	10	0.007	18	48
32	25	1	90	<b>161 305 439</b>	5	0.003	24	60
40	32	1 ¼	155	<b>161 305 489</b>	2	0.004	30	71
50	40	1 ½	225	<b>161 305 539</b>	1	0.007	38	87
63	50	2	370	<b>161 305 589</b>	2	0.009	48	106
75	65	2 ½	575	<b>161 305 639</b>	5	0.012	61	100
90	80	3	955	<b>161 305 689</b>	2	0.016	73	118

# Screen assemblies and Inspection glass



DN 15 - 50



DN 15-50

## Screen assembly type 050 PVC-U With solvent cement sockets metric

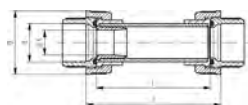
d (mm)	DN (mm)	Size (inch)	kv-value ( $\Delta p=1$ bar) (l/min)	Code	SP	Weight (kg)	D (mm)	L (mm)	L1 (mm)	perforations $\phi$ (mm)
20	15	1/2	105	161 050 026	1	0.035	50	80	64	2
25	20	3/4	228	161 050 027	1	0.039	50	83	64	2
32	25	1	390	161 050 028	1	0.046	50	86	64	2
40	32	1 1/4	563	161 050 029	1	0.147	90	131	105	2
50	40	1 1/2	813	161 050 030	1	0.172	90	136	105	2
63	50	2	1590	161 050 031	1	0.192	90	143	105	2

## Inspection glass type 001 PVC-U

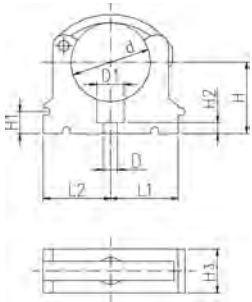
### Model:

- For visual inspection of the medium in the pipeline
- For horizontal or vertical installation

d (mm)	DN (mm)	PN (bar)	EPDM Code	SP	Weight (kg)	D (mm)	D1 (mm)	L (mm)	z (mm)	closest inch (inch)
50	40	10	199 001 240	1	0.567	83	29	150	178	1 1/2



# Pipe clips



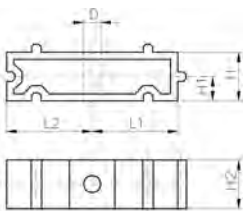
## KLIP-IT pipe clip type 061 PP metric

### Model:

- Material: clip and safety clip PP black, UV resistant
- d16 - d63: height designed for ball valve type 546 and 543
- **Minimum order quantity: standard packagings SP**

	d (mm)	d (inch)	Code	SP	Weight (kg)
*	10		<b>167 061 003</b>	10	0.003
*	12		<b>167 061 004</b>	10	0.003
*	16		<b>167 061 035</b>	10	0.007
*	20		<b>167 061 036</b>	10	0.007
*	25		<b>167 061 037</b>	10	0.009
*	32		<b>167 061 038</b>	10	0.012
	40		<b>167 061 039</b>	10	0.027
	50		<b>167 061 040</b>	10	0.031
	63		<b>167 061 041</b>	10	0.052
	75	2 ½	<b>167 061 012</b>	10	0.057
	90	3	<b>167 061 013</b>	10	0.092
	110	4	<b>167 061 014</b>	10	0.117
	125		<b>167 061 015</b>	10	0.180
	140	5	<b>167 061 016</b>	10	0.224
	160		<b>167 061 017</b>	10	0.242

	d (mm)	D (mm)	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L1 (mm)	L2 (mm)	SC	closest inch (inch)
*	10	5	8	20	10	6	12	11	14	M4	¼
*	12	5	8	21	10	6	12	11	14	M5	¼
*	16	6	11	27	10	6	16	14	17	M5	⅜
*	20	6	11	27	10	6	16	17	19	M5	½
*	25	6	11	30	10	6	16	19	22	M5	⅝
*	32	6	11	36	10	6	16	24	27	M5	1
	40	7	14	44	10	7	22	34	34	M6	1 ¼
	50	7	14	51	10	7	22	37	37	M6	1 ½
	63	9	17	64	10	10	25	45	45	M8	2
	75	9	17	58	10	10	25	52	52	M8	2 ½
	90	9	17	65	10	10	28	65	65	M8	3
	110	9	17	75	10	10	28	79	79	M8	4
	125	9	17	90	10	10	32	88	88	M8	
	140	9	17	110	10	10	32	98	98	M8	5
	160	9	17	108	10	10	32	109	109	M8	6



## KLIP-IT spacer type 061 PP

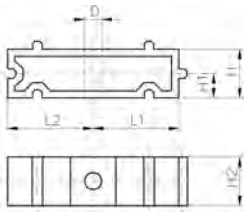
### Model:

- For pipe clips type 061/061H, PP black, UV resistant
- **Minimum order quantity: standard packaging SP**

	d (mm)	Inch (inch)	Code	SP	Weight (kg)	D (mm)	L1 (mm)	L2 (mm)	H (mm)	H1 (mm)	H2 (mm)	SC
	10 - 12	¼ - ½	<b>167 061 153</b>	10	0.003	5	11	14	20	10	12	M4
	16	⅝	<b>167 061 155</b>	10	0.005	6	14	17	20	10	16	M5
	20	½	<b>167 061 156</b>	10	0.005	6	17	19	20	10	16	M5
	25	¾	<b>167 061 157</b>	10	0.007	6	19	22	20	10	16	M5
	32	1	<b>167 061 158</b>	10	0.006	6	24	27	20	10	16	M5
	40	1 ¼	<b>167 061 159</b>	10	0.015	7	34	34	20	10	22	M6
	50	1 ½	<b>167 061 160</b>	10	0.017	7	37	37	20	10	22	M6
	63	2	<b>167 061 161</b>	10	0.020	9	45	45	20	10	25	M8

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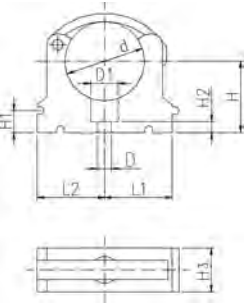


d (mm)	Inch (inch)	Code	SP	Weight (kg)	D (mm)	L1 (mm)	L2 (mm)	H (mm)	H1 (mm)	H2 (mm)	SC
75	2 ½	167 061 162	10	0.027	9	52	52	20	10	25	M8
90	3	167 061 163	10	0.039	9	65	65	20	10	28	M8
110	4	167 061 164	10	0.048	9	79	79	20	10	28	M8
125	4 ½	167 061 165	10	0.059	9	88	88	20	10	32	M8
140	5	167 061 166	10	0.065	9	98	98	20	10	32	M8
160	6	167 061 167	10	0.071	9	109	109	20	10	32	M8

### KLIP-IT pipe clip type 061 PE metric

#### Model:

- Material: clip PE and safety clip PP black, bolts galvanized
- **Minimum order quantity: standard packaging SP**
- Height not designed for ball valve 546 and 543. Please use spacer 73 06 11.

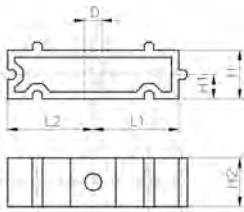


d (mm)	Code	SP	Weight (kg)	D (mm)	D1 (mm)	L1 (mm)	L2 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	SC
* 10	173 061 003	10	0.003	5	8	11	14	20	10	6	12	M4
* 12	173 061 004	10	0.006	5	8	11	14	21	10	6	12	M5
* 16	173 061 005	10	0.006	6	11	14	17	23	10	6	16	M5
* 20	173 061 006	10	0.007	6	11	17	19	25	10	6	16	M5
* 25	173 061 007	10	0.009	6	11	19	22	28	10	6	16	M5
* 32	173 061 008	10	0.011	6	11	24	27	31	10	6	16	M5
40	173 061 009	10	0.026	7	14	34	34	35	10	7	22	M6
50	173 061 010	10	0.028	7	14	37	37	40	10	7	22	M6
63	173 061 011	10	0.047	9	17	45	45	52	10	10	25	M8
75	173 061 012	10	0.061	9	17	52	52	58	10	10	25	M8
90	173 061 013	10	0.098	9	17	65	65	64	10	10	28	M8
110	173 061 014	10	0.125	9	17	79	79	75	10	10	28	M8
125	173 061 015	10	0.194	9	17	88	88	90	10	10	32	M8
140	173 061 016	10	0.243	9	17	98	98	110	10	10	32	M8
160	173 061 017	10	0.254	9	17	109	109	108	10	10	32	M8

### KLIP-IT spacer type 061 PE

#### Model:

- **Minimum order quantity: standard packaging SP**
- For pipe clips type 061, PE black, UV resistant



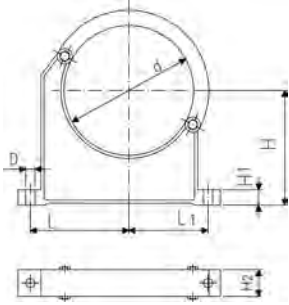
d (mm)	Inch (inch)	Code	SP	Weight (kg)	D (mm)	L1 (mm)	L2 (mm)	H (mm)	H1 (mm)	H2 (mm)	SC
16	1/8-1/4	173 061 153	10	0.003	5	11	14	20	10	12	M4
20	3/8	173 061 155	10	0.005	6	14	17	20	10	16	M5
25	1/2	173 061 156	10	0.005	6	17	19	20	10	16	M5
32	3/4	173 061 157	10	0.006	6	19	22	20	10	16	M5
40	1	173 061 158	10	0.008	6	24	27	20	10	16	M5
50	1 1/4	173 061 159	10	0.016	7	34	34	20	10	22	M6
63	1 1/2	173 061 160	10	0.017	7	37	37	20	10	22	M6
75	2	173 061 161	10	0.025	9	45	45	20	10	25	M8
90	2 1/2	173 061 162	10	0.027	9	52	52	20	10	25	M8
110	3	173 061 163	10	0.040	9	65	65	20	10	28	M8
125	4	173 061 164	10	0.050	9	79	79	20	10	28	M8
140	4 1/2	173 061 165	10	0.059	9	88	88	20	10	32	M8
160	5	173 061 166	10	0.065	9	98	98	20	10	32	M8
160	6	173 061 167	10	0.078	9	109	109	20	10	32	M8



### Pipe clip type 060 PP metric

#### Model:

- Material: clip and safety clip PP black, UV resistant
- **Minimum order quantity: standard packaging SP or gross packaging GP**
- Accidental opening of the safety clip is not possible
- Clip and safety clip are not assembled in the packaging.
- Pipes with flanges can be installed directly



d (mm)	Code	SP	Weight (kg)	D (mm)	L (mm)	L1 (mm)	H (mm)	H1 (mm)	H2 (mm)	SC	closest inch (inch)
90	167 060 038	10	0.144	9	89	71	105	15	33	M 8	3
110	167 060 039	10	0.158	9	94	80	115	15	33	M 8	4
125	167 060 040	10	0.249	11	116	91	130	20	35	M10	
140	167 060 041	10	0.260	11	121	99	130	20	35	M10	5
160	167 060 042	10	0.296	11	131	107	148	20	35	M10	6
180	167 060 043	10	0.327	11	143	115	163	20	35	M10	7
200	167 060 019	5	0.539	13	152	120	175	25	39	M12	8
225	167 060 020	5	0.612	13	164	132	175	25	39	M12	8
250	167 060 021	5	0.657	13	183	143	200	25	39	M12	9
280	167 060 022	5	0.722	13	197	156	200	25	39	M12	10
315	167 060 023	5	0.805	13	219	171	225	25	39	M12	12
355	167 060 024	5	1.251	17	275	209	258	30	50	M16	14
400	167 060 025	4	1.031	17	300	228	288	30	50	M16	16



### Wall mounting bracket brass/PVC-U

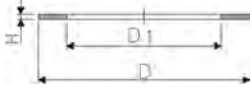
#### Model:

- Brass, with parallel female thread Rp and PVC-U solvent socket insert metric



d (mm)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)
20	Rp	1/2	16	160 100 300	5	0.278
25	Rp	3/4	16	160 100 350	5	0.258

z1 (mm)	z2 (mm)	D (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)
22	9	5	16	6	19	18
25	11	5	17	5	24	23

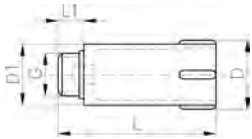


### Flat gasket

#### Model:

- Hardness: EPDM ca. 70° shore
- For wall inlet plugs

G (inch)	EPDM Code	SP	Weight (kg)	D (mm)	D1 (mm)	H (mm)
½	<b>748 400 001</b>	100	0.002	28	22	3




















### Wall inlet plug PVC-U

#### Model:

- Gasket: flat gasket code No. 748 400 001, EPDM
- Use: for all fittings with parallel female thread in accordance with ISO 7
- The wall inlet plug has a parallel male thread G

Thread Type	Size (inch)	Code	SP	Weight (kg)	D (mm)	D1 (mm)	L (mm)	L1 (mm)
G	½	<b>799 150 003</b>	10	0.044	39	32	87	11



	Pipes	351
	Fittings	353
	Adaptor fittings	359
	Unions	363
	Flange adaptors and flanges	370
	Installation fittings	371
 DN10/15 - 50	Ball valves type 546	373
 DN10/15 - 50	Ball valves electric type 107	382
	Ball valves electric type 183	386
	Ball valves electric type 184	388
	Ball valves electric type 104	392
 DN10/15 - 50	Ball valves pneumatic	394
	3-Way ball valves type 543	421
	3-Way ball valves electric type 167	431
	3-Way ball valves electric type 170	432
	3-Way ball valves pneumatic	434
	Metering ball valves type 523	441



Laboratory ball valves type 322

442



Diaphragm valves

443



Diaphragm valves pneumatic

446



Diaphragm valves electric

466



Pressure regulating valves

472



Process control valves

478



Cone check valves

481



Angle seat valves

485



Variable area flow meters

487



Strainers

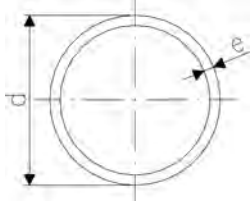
497



Screen assemblies

498

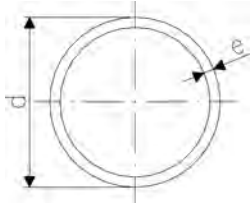
# Pipes



## Pipe PVC-U grey SDR13,6/PN16/S6,4

- Material: PVC-U, Polyvinylchloride unplasticised
- Dimensions: BS EN 1452 Part 1 & 2 (formerly BS 3505)
- Pipe length: 6m with plain ends
- Minimum order quantity: 1 length

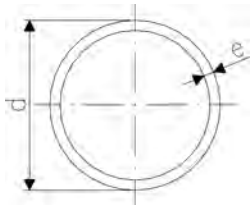
SDR	PN (bar)	Size (NB) (inch)	Code	Weight (kg/m)	e (mm)	di (mm)	d (mm)
13.6	15	3/8	161 018 080	0.114	1.5	14.1	17.1
13.6	15	1/2	161 018 082	0.161	1.7	17.9	21.3
13.6	15	3/4	161 018 083	0.225	1.9	22.9	26.7
13.6	15	1	161 018 084	0.325	2.2	29.0	33.4
13.6	15	1 1/4	161 018 085	0.503	2.7	36.8	42.2
13.6	15	1 1/2	161 018 086	0.659	3.1	42.1	48.3
13.6	15	2	161 018 087	1.038	3.9	52.5	60.3
13.6	16	2 1/2	161 017 112	1.850	5.6	58.2	75.0
13.6	15	3	161 018 088	2.245	5.7	77.5	88.9
13.6	15	4	161 018 089	3.667	7.3	99.7	114.3
13.6	16	5	161 017 116	6.030	10.3	119.4	140.0



## Pipe PVC-U grey class D 12 bar at 20°C

- Material: PVC-U, Polyvinylchloride unplasticised
- Dimensions: BS EN 1452 Part 1 & 2 (formerly BS 3505)
- Pipe length: 6m with plain ends
- Minimum order quantity: 1 length

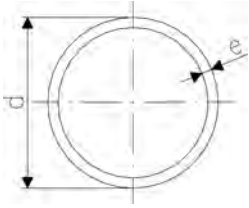
Size (NB) (inch)	PN (bar)	Code	Weight (kg/m)	e (mm)	di (mm)	d (mm)
1 1/4	12	161 018 059	0.420	2.2	37.8	42.2
1 1/2	12	161 018 060	0.550	2.5	43.3	48.3
2	12	161 018 061	0.900	3.1	54.1	60.3
3	12	161 018 063	1.930	4.6	79.7	88.9
4	12	161 018 064	3.230	6.0	102.3	114.3



## Pipe PVC-U grey class C 9 bar at 20°C

- Material: PVC-U, Polyvinylchloride unplasticised
- Dimensions: BS EN 1452 Part 1 & 2 (formerly BS 3505)
- Pipe length: 6m with plain ends
- Minimum order quantity: 1 length

Size (NB) (inch)	PN (bar)	Code	Weight (kg/m)	e (mm)	di (mm)	d (mm)
2	9	161 018 036	0.694	2.5	55.3	60.3
3	9	161 018 038	1.434	3.5	81.9	88.9
4	9	161 018 039	2.360	4.5	105.3	114.3
6	9	161 018 042	5.058	6.6	155.1	168.3
8	9	161 018 045	8.000	7.8	203.5	219.1



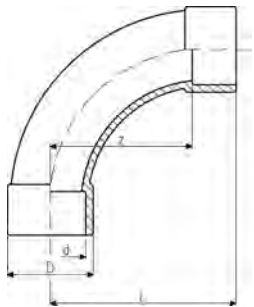
### Pipe PVC-U grey class 7 (T) 12 bar at 20°C

- Thick wall pipe to allow for threading
- Material: PVC-U, Polyvinylchloride unplasticised
- Dimensions: BS EN 1452 Part 1 & 2 (formerly BS 3505)
- Pipe length: 6m with plain ends
- Minimum order quantity: 1 length

Size (NB) (inch)	PN (bar)	Code	Weight (kg/m)	e (mm)	di (mm)	d (mm)
3/8	12	<b>161 018 255</b>	0.203	3.8	9.5	17.1
1/2	12	<b>161 018 256</b>	0.298	4.0	13.3	21.3
3/4	12	<b>161 018 257</b>	0.408	4.2	18.3	26.7
1	12	<b>161 018 258</b>	0.599	4.8	23.8	33.4
1 1/4	12	<b>161 018 259</b>	0.825	5.2	31.8	42.2
1 1/2	12	<b>161 018 260</b>	1.010	5.5	37.3	48.3
2	12	<b>161 018 261</b>	1.386	6.0	48.3	60.3

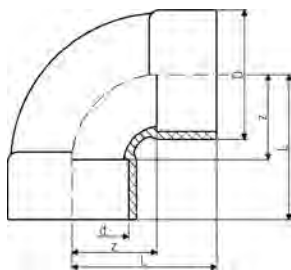


# Fittings



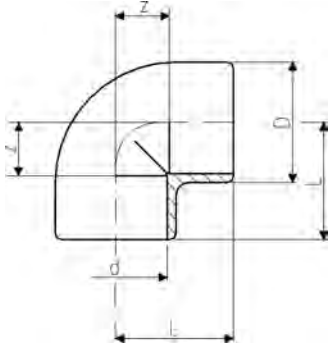
## Bend 90° PVC-U BS

d (mm)	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	D (mm)	L (mm)
	½	15	721 001 106	10	0.026	40	29	58
	¾	15	721 001 107	10	0.047	50	35	71
	1	15	721 001 108	10	0.069	64	43	88
	1 ¼	15	721 001 109	5	0.206	80	54	109
	1 ½	15	721 001 110	5	0.312	100	64	131
	2	15	721 001 111	4	0.556	126	76	163
75	2 ½	16	721 000 112	5	0.798	150	90	194
	3	15	721 001 113	5	1.763	180	113	231
	4	15	721 001 115	2	2.667	220	137	284
140	5	16	721 000 116	2	5.204	280	168	356
	6	15	721 001 117	1	7.700	320	201	411



## Bend 90° short pattern PVC-U BS

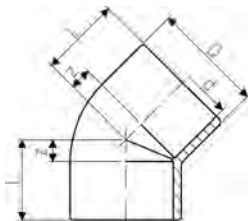
Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	D (mm)	L (mm)
8	9	721 011 120	1	8.297	168	256	287



### Elbow 90° PVC-U BS

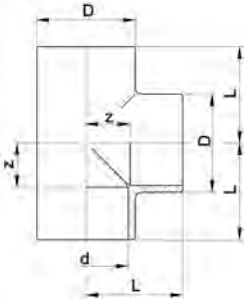
Size (inch)	PN (bar)	Code	SP	Weight (kg)	D (mm)	L (mm)	z (mm)
3/8	15	<b>721 101 105</b>	10	0.016	24	25	10
1/2	15	<b>721 101 106</b>	10	0.022	27	30	13
3/4	15	<b>721 101 107</b>	10	0.025	33	34	14
1	15	<b>721 101 108</b>	10	0.038	40	39	17
1 1/4	15	<b>721 101 109</b>	10	0.079	51	49	22
1 1/2	15	<b>721 101 110</b>	10	0.116	58	56	26
2	15	<b>721 101 111</b>	1	0.215	72	68	32
2 1/2	16	<b>721 100 112</b>	5	0.336	87	83	40
3	15	<b>721 101 113</b>	5	0.606	107	97	46
4	15	<b>721 101 115</b>	6	1.343	137	122	59
5	16	<b>721 100 116</b>	4	1.945	162	146	70
6	15	<b>721 101 117</b>	1	4.121	201	176	86

### Elbow 45° PVC-U BS



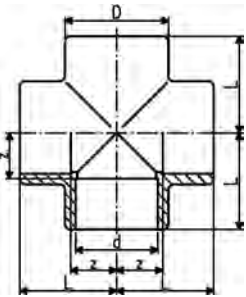
Size (inch)	PN (bar)	Code	SP	Weight (kg)	D (mm)	L (mm)	z (mm)
3/8	15	<b>721 151 105</b>	10	0.008	22	19	4
1/2	15	<b>721 151 106</b>	10	0.012	27	21	5
3/4	15	<b>721 151 107</b>	10	0.020	33	25	6
1	15	<b>721 151 108</b>	10	0.037	41	30	8
1 1/4	15	<b>721 151 109</b>	10	0.060	51	37	10
1 1/2	15	<b>721 151 110</b>	5	0.089	58	41	11
2	15	<b>721 151 111</b>	5	0.137	72	50	14
2 1/2	16	<b>721 150 112</b>	5	0.253	87	61	17
3	15	<b>721 151 113</b>	5	0.534	107	70	20
4	15	<b>721 151 115</b>	10	0.957	134	89	25
5	16	<b>721 150 116</b>	1	1.570	162	108	32
6	15	<b>721 151 117</b>	2	2.900	198	129	38
8	9	<b>721 151 120</b>	1	5.214	250	168	52

### Tee 90° equal PVC-U Inch BS

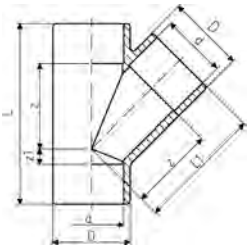


Size (inch)	PN (bar)	Code	SP	Weight (kg)	D (mm)	L (mm)	z (mm)
3/8	15	<b>721 201 105</b>	10	0.018	25	25	10
1/2	15	<b>721 201 106</b>	10	0.036	30	30	13
3/4	15	<b>721 201 107</b>	10	0.051	35	37	16
1	15	<b>721 201 108</b>	10	0.079	43	43	19
1 1/4	15	<b>721 201 109</b>	10	0.105	50	51	22
1 1/2	15	<b>721 201 110</b>	5	0.157	57	56	26
2	15	<b>721 201 111</b>	5	0.294	72	68	32
2 1/2	16	<b>721 200 112</b>	5	0.476	87	83	39
3	15	<b>721 201 113</b>	5	0.847	107	97	46
4	15	<b>721 201 115</b>	8	1.864	138	122	59
5	16	<b>721 200 116</b>	4	3.410	169	147	71
6	15	<b>721 201 117</b>	1	5.521	202	176	86
8	9	<b>721 201 120</b>	1	10.742	256	233	114

### Cross PVC-U BS

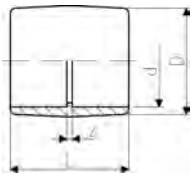


Size (inch)	PN (bar)	Code	SP	Weight (kg)	D (mm)	L (mm)	z (mm)
3/4	12	<b>721 301 107</b>	10	0.050	36	33	14
1	12	<b>721 301 108</b>	10	0.081	44	39	17
1 1/4	12	<b>721 301 109</b>	5	0.130	53	49	22
1 1/2	12	<b>721 301 110</b>	5	0.299	64	60	30
2	12	<b>721 301 111</b>	5	0.556	80	74	37
	10	<b>721 300 112</b>	3	0.725	92	83	40



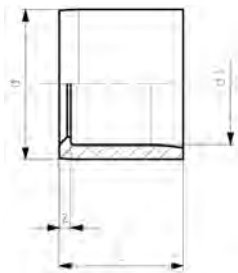
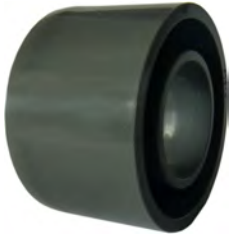
### Tee 45° PVC-U Inch BS

PN (bar)	Size (inch)	Code	SP Weight (kg)	D (mm)	L (mm)	L1 (mm)	z (mm)	z1 (mm)	
9	½	<b>721 251 106</b>	10	0.035	28	68	46	30	6
9	¾	<b>721 251 107</b>	10	0.052	33	83	55	35	8
9	1	<b>721 251 108</b>	10	0.090	41	99	67	43	8
9	1 ¼	<b>721 251 109</b>	10	0.145	50	118	82	55	9
9	1 ½	<b>721 251 110</b>	8	0.274	60	140	97	67	13
9	2	<b>721 251 111</b>	10	0.476	74	175	123	87	16
6	2 ½	<b>721 250 112</b>	5	0.816	91	207	145	101	18
6	3	<b>721 251 113</b>	1	1.324	107	245	173	122	20
6	4	<b>721 251 115</b>	3	2.403	134	298	210	147	25
6	5	<b>721 250 116</b>	1	5.628	168	376	266	190	34



### Socket equal PVC-U BS

d (mm)	PN (bar)	d Size (inch)	Size (inch)	Code	SP Weight (kg)	D (mm)	L (mm)	z (mm)	
	15	¾	¾	<b>721 911 105</b>	10	0.007	23	32	3
	15	½	½	<b>721 911 106</b>	10	0.011	27	36	3
	15	¾	¾	<b>721 911 107</b>	10	0.018	33	45	3
	15	1	1	<b>721 911 108</b>	10	0.029	41	51	3
	15	1 ¼	1 ¼	<b>721 911 109</b>	10	0.048	51	57	3
	15	1 ½		<b>721 911 110</b>	10	0.070	58	63	3
	15	2		<b>721 911 111</b>	5	0.128	72	77	3
75	16	2 ½		<b>721 910 112</b>	10	0.188	87	92	4
	15	3	3	<b>721 911 113</b>	10	0.350	104	107	7
	15	4	4	<b>721 911 115</b>	15	0.606	134	135	8
140	16	5		<b>721 910 116</b>	2	1.118	162	159	7
	15	6	6	<b>721 911 117</b>	2	1.800	197	192	11
	9	8		<b>721 911 120</b>	1	4.140	253	248	10

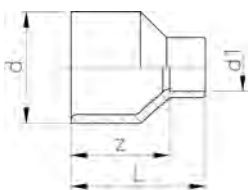


### Reducing bush short pattern PVC-U BS

**Model:**

- With solvent cement spigot and socket BS

	d (inch)	d1 (inch)	PN (bar)	Size (inch)	Code	SP	Weight (kg)	z (mm)	L (mm)
*	½	¾	15	½	721 901 334	10	0.003	2	18
*	¾	¾	15	¾	721 901 338	10	0.013	5	21
*	¾	½	15	¾	721 901 337	10	0.006	3	21
	1	¾	15	1	721 901 343	10	0.013	8	24
	1	½	15	1	721 901 342	10	0.015	6	24
	1	¾	15	1	721 901 341	10	0.010	3	24
	1 ¼	¾	15	1 ¼	721 901 349	10	0.024	13	29
	1 ¼	½	15	1 ¼	721 901 348	10	0.023	11	29
	1 ¼	¾	15	1 ¼	721 901 347	10	0.025	8	29
	1 ¼	1	15	1 ¼	721 901 346	10	0.018	5	29
	1 ½	½	15	1 ½	721 901 355	10	0.033	13	30
	1 ½	¾	15	1 ½	721 901 354	10	0.034	10	30
*	1 ½	1	15	1 ½	721 901 353	10	0.038	6	30
*	1 ½	1 ¼	15	1 ½	721 901 352	10	0.018	2	30
	2	¾	15		721 901 361	10	0.060	16	37
	2	1	15	2	721 901 360	10	0.063	13	37
	2	1 ¼	15	2	721 901 359	10	0.070	8	37
	2	1 ½	15	2	721 901 358	10	0.051	6	37
	2 ½	2	15	2 ½	721 901 364	10	0.094	8	45
	3	1	15	3	721 901 374	10	0.178	3	50
	3	1 ½	15	3	721 901 372	10	0.176	3	50
	3	2	15	3	721 901 371	10	0.178	3	50
	3	2 ½	15	3	721 901 370	140	0.124	6	51
	4	3	15	4	721 901 381	20	0.340	13	64
	5	4	15	5	721 901 384	12	0.530	13	76
	6	5	15	6	721 901 388	5	0.830	15	91
	8	6	9		721 901 396	2	1.769	33	119



### Reducing bush long pattern PVC-U BS

**Model:**

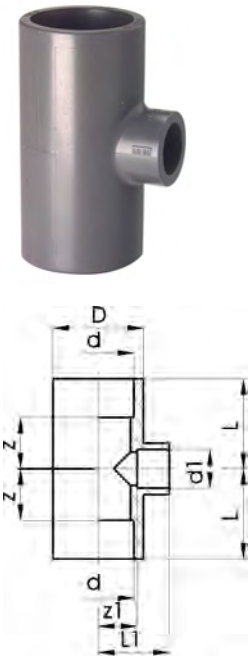
- With solvent cement spigot and socket metric

	d (inch)	d1 (inch)	PN (bar)	Size (inch)	Code	SP	Weight (kg)	z (mm)	L (mm)
	5	3	15	5	721 911 386	10	0.730	111	162
	6	4	15	6	721 911 389	6	1.312	133	197



### Cap PVC-U BS

d (mm)	Size (inch)	PN (bar)	d (inch)	Code	SP	Weight (kg)	D (mm)	L (mm)
	3/8	15	3/8	721 961 105	10	0.007	26	23
	1/2	15	1/2	721 961 106	10	0.009	30	25
	3/4	15	3/4	721 961 107	10	0.016	37	30
	1	15	1	721 961 108	10	0.025	44	34
	1 1/4	15	1 1/4	721 961 109	10	0.038	51	41
	1 1/2	15	1 1/2	721 961 110	10	0.071	62	44
	2	15	2	721 961 111	10	0.133	78	54
75		16	2 1/2	721 960 112	5	0.152	87	65
	3	15	3	721 961 113	10	0.323	112	77
	4	15	4	721 962 115	5	0.762	141	101
140		10	5	721 960 116	10	1.036	164	114



### Tee 90° reducing BS

Size (inch)	PN (bar)	d-d (inch)	Code	SP	Weight (kg)	D (mm)	L (mm)	L1 (mm)	z (mm)	z1 (mm)
3/4	15	3/4 - 1/2	721 201 134	10	0.034	33	33	30	14	14
1	15	1 - 1/2	721 201 141	10	0.056	41	39	33	17	17
1	15	1 - 3/4	721 201 138	10	0.058	41	39	36	17	17
1 1/4	15	1 1/4 - 3/4	721 201 151	10	0.132	50	49	42	22	22
1 1/4	15	1 1/4 - 1	721 201 147	10	0.128	62	59	44	29	28
1 1/2	15	1 1/2 - 1/2	721 201 009	5	0.206	62	59	50	29	28
1 1/2	15	1 1/2 - 3/4	721 201 010		0.185	77	73	53	37	34
1 1/2	15	1 1/2 - 1	721 201 164	5	0.211	77	73	56	37	34
2	15	2 - 3/4	721 201 011	10	0.385	77	73	53	37	32
2	15	2 - 1	721 201 178	5	0.380	77	73	56	37	32
2	15	2 - 1 1/2	721 201 170		0.511	73	68	68	38	32
4	15	4 - 3	721 201 137	10	1.990	138	122	122	72	59
	16	5 - 2 1/2	721 200 149	1	3.319	172	148	122	72	78



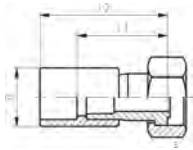
### Barrel nipple PVC-U metric

#### Model:

- With solvent cement spigots on both sides
- For the shortest possible distance between fittings
- Overall length L = 2 x socket length

d (inch)	d (mm)	Size (inch)	PN (bar)	Code	SP	Weight (kg)	L (mm)
3/8			16	721 901 905	0	0.002	29
1/2			16	721 901 906	0	0.004	33
3/4			16	721 901 907	0	0.008	39
1			16	721 901 908	0	0.015	45
1 1/4			16	721 901 909	0	0.027	54
1 1/2			16	721 901 910	0	0.050	60
2			16	721 901 911	0	0.098	72
2 1/2	75	2 1/2	16	721 900 912	30	0.156	88
3			16	721 901 913	0	0.226	101
4			16	721 901 914	0	0.476	126
5	140	5	16	721 900 916	4	0.932	152

# Adaptor fittings

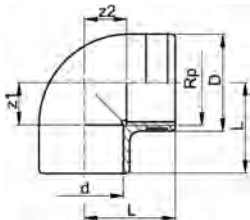


## Tap connector PVC-U Inch BS Rp

### Model:

- With solvent cement socket BS Inch and brass parallel female thread Rp

d (inch)	Thread Type	Size (inch)	Code	SP	Weight (kg)	s (mm)	D (mm)	l1 (mm)	l2 (mm)
3/8	Rp	1/2	<b>721 551 405</b>	10	0.040	24	23	39	55
1/2	Rp	3/4	<b>721 551 406</b>	10	0.042	31	27	43	60



## Elbow 90° PVC-U Inch BS Rp

### Model:

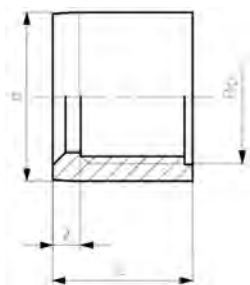
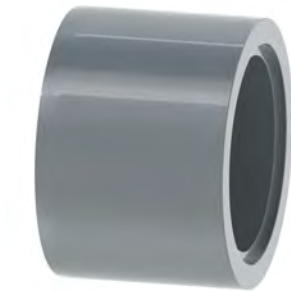
- With solvent cement socket BS Inch and parallel female thread Rp
- Reinforcing ring stainless (A2)
- Connection to plastic or metal threads
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U

d (inch)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z1 (mm)	z2 (mm)	D (mm)	L (mm)
1/2	Rp	1/2	15	<b>721 101 206</b>	10	0.022	10	15	30	27
3/4	Rp	3/4	15	<b>721 101 207</b>	10	0.033	13	19	35	33
1	Rp	1	15	<b>721 101 208</b>	10	0.052	16	24	45	39

## Reducing bush short PVC-U BS Rp

### Model:

- With solvent cement spigot BS and parallel female thread Rp
- Do not use thread sealing pastes that are harmful to PVC-U
- Install with low mechanical stress and avoid large cyclic temperature changes
- Connection to plastic thread only



d (inch)	Thread Type	Size (inch)	PN (bar)	Code	SP	Weight (kg)	z (mm)	L (mm)
1/2	Rp	1/2	15	<b>721 901 534</b>	10	0.003	3	18
3/4	Rp	3/4	15	<b>721 901 537</b>	10	0.007	5	21
1	Rp	1	15	<b>721 901 541</b>	10	0.011	4	24
1	Rp	1	15	<b>721 901 542</b>	10	0.017	8	24

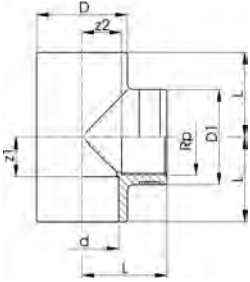


### Tee 90° PVC-U BS Rp

**Model:**

- With solvent cement socket BS Inch and parallel female thread Rp
- Reinforcing ring stainless (A2)
- Connection to plastic or metal threads
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U

Thread Type	Size (inch)	PN (bar)	d (inch)	Code	SP	Weight (kg)	z1 (mm)	z2 (mm)	D (mm)	D1 (mm)	L (mm)
Rp	3/8	16	3/8	<b>721 201 205</b>	10	0.028	10	14	25	25	26
Rp	1/2	16	1/2	<b>721 201 206</b>	10	0.028	10	13	30	26	29
Rp	3/4	16	3/4	<b>721 201 207</b>	10	0.039	13	15	35	32	33
Rp	1	16	1	<b>721 201 208</b>	10	0.111	17	19	45	40	39

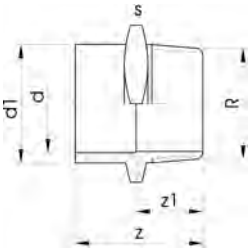


### Adaptor socket nipple PVC-U BS R

**Model:**

- With solvent cement spigot/reducing socket and taper male thread R
- Do not use thread sealing pastes that are harmful to PVC-U
- Install with low mechanical stress and avoid large cyclic temperature changes

Thread Type	Size (inch)	PN (bar)	d1 (inch)	d (inch)	Code	SP	Weight (kg)	z (mm)	z1 (mm)	s (mm)
R	3/8	15	3/8	1/4	<b>721 911 555</b>	0	0.013	36	21	27
R	1/2	15	1/2	3/8	<b>721 911 556</b>	10	0.019	43	28	32
R	3/4	15	3/4	1/2	<b>721 911 557</b>	10	0.019	48	31	36
R	1	15	1	3/4	<b>721 911 558</b>	10	0.040	55	35	46

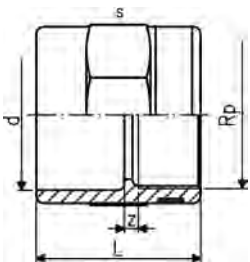


### Adaptor socket PVC-U BS Rp

**Model:**

- With solvent cement socket BS Inch and parallel female thread Rp
- Do not use thread sealing pastes that are harmful to PVC-U
- Install with low mechanical stress and avoid large cyclic temperature changes
- Reinforcing ring stainless (A2)
- Connection to plastic or metal threads

Thread Type	Size (inch)	PN (bar)	d (inch)	Code	SP	Weight (kg)	z (mm)	L (mm)	s (mm)
Rp		15	3/8	<b>721 911 005</b>	10	0.016	4	31	27
Rp		15	1/2	<b>721 911 006</b>	10	0.024	4	35	32
Rp	3/4	15	3/4	<b>721 911 007</b>	10	0.030	3	40	36
Rp	1	15	1	<b>721 911 008</b>	10	0.055	3	45	46
Rp	1 1/4	15	1 1/4	<b>721 911 009</b>	10	0.083	3	51	55
Rp	1 1/2	15	1 1/2	<b>721 911 010</b>	10	0.127	8	59	65
Rp	2	15	2	<b>721 911 011</b>	5	0.215	8	69	80



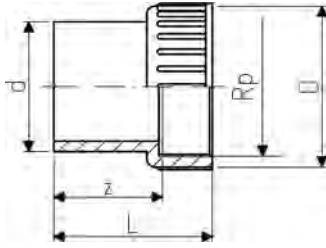




### Adaptor PVC-U BS Rp

**Model:**

- With solvent cement spigot BS Inch and parallel female thread Rp
- Do not use thread sealing pastes that are harmful to PVC-U
- Install with low mechanical stress and avoid large cyclic temperature changes
- Connection to plastic thread only



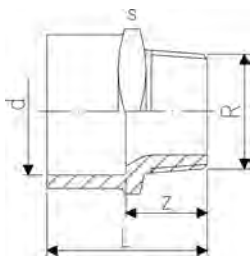
Thread Type	Size (inch)	PN (bar)	d (inch)	Code	SP	Weight (kg)	z (mm)	D (mm)	L (mm)
Rp	½	9	½	<b>721 901 406</b>	10	0.012	21	28	37
Rp	¾	9	¾	<b>721 901 407</b>	10	0.016	23	34	41
Rp	1	9	1	<b>721 901 408</b>	10	0.036	27	42	48
Rp	1 ¼	9	1 ¼	<b>721 901 409</b>	10	0.065	33	52	56
Rp	1 ½	9	1 ½	<b>721 901 410</b>	10	0.092	38	62	61
Rp	2	9	2	<b>721 901 411</b>	5	0.160	47	77	74



### Adaptor bush equal PVC-U BS R

**Model:**

- With solvent cement socket BS Inch and taper male thread R
- Do not use thread sealing pastes that are harmful to PVC-U
- Install with low mechanical stress and avoid large cyclic temperature changes



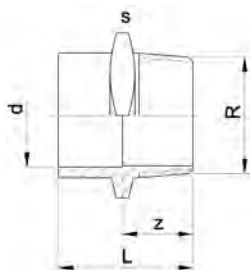
Thread Type	Size (inch)	PN (bar)	d (inch)	Code	SP	Weight (kg)	z (mm)	L (mm)	s (mm)
R	¾	15	¾	<b>721 911 705</b>	10	0.013	20	34	27
R	½	15	½	<b>721 911 706</b>	10	0.017	24	40	32
R	¾	15	¾	<b>721 911 707</b>	10	0.022	25	44	36
R	1	15	1	<b>721 911 708</b>	10	0.037	28	50	46
R	1 ¼	15	1 ¼	<b>721 911 709</b>	10	0.055	31	57	55
R		15	1 ½	<b>721 911 710</b>	10	0.097	32	63	65
R	2	15	2	<b>721 911 711</b>	5	0.176	38	76	80
R	2 ½	10	2 ½	<b>721 910 712</b>	6	0.227	42	86	90



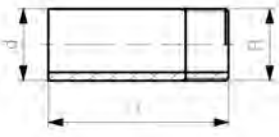
### Adaptor bush reducing PVC-U BS R

**Model:**

- With solvent cement socket BS Inch and taper male thread R
- Do not use thread sealing pastes that are harmful to PVC-U
- Install with low mechanical stress and avoid large cyclic temperature changes



Thread Type	Size (inch)	PN (bar)	d (inch)	Code	SP	Weight (kg)	z (mm)	L (mm)	s (mm)
R	½	15	½	<b>721 911 737</b>	10	0.050	22	40	36
R	¾	15	¾	<b>721 911 741</b>	10	0.034	27	48	46
R	1	15	1	<b>721 911 746</b>	10	0.052	29	53	55
R	1 ¼	15	1 ¼	<b>721 911 752</b>	10	0.060	29	58	65
R	1 ½	15	1 ½	<b>721 911 758</b>	5	0.071	34	64	80

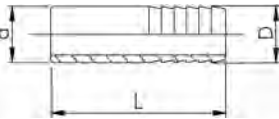


### Adaptor nipple PVC-U BS R

**Model:**

- With solvent cement spigot BS Inch and taper male thread R
- Install with low mechanical stress and avoid large cyclic temperature changes
- Do not use thread sealing pastes that are harmful to PVC-U

Thread Type	Size (inch)	PN (bar)	Code	SP Weight (kg)	L (mm)
R	3/8	15	721 913 905	0	43
R	1/2	15	721 913 906	0.013	50
R	3/4	15	721 913 907	0.022	56
R	1	15	721 913 908	0.034	63
R	1 1/4	15	721 913 909	0.060	75
R	1 1/2	15	721 913 910	0.082	88
R	2	15	721 913 911	0.111	88
R	3	15	721 913 913	0.253	128
R		15	721 913 915	0.560	153



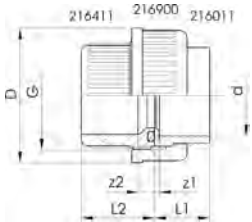
### Hose connector PVC-U Inch BS

**Model:**

- With solvent cement spigot and parallel hose connection

d (inch)	PN (bar)	Code	SP Weight (kg)	D (mm)	L (mm)
1/4	15	721 961 404	10	0.005	12

# Unions



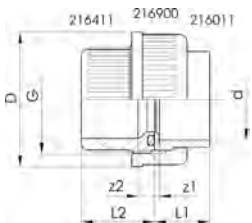
## Union for solvent cement jointing PVC-U BS

### Model:

- Union End: Solvent cement socket BS Inch
- Union Bush: Solvent cement socket BS Inch
- Gasket: O-Ring EPDM code no.748 410 005-014; FKM: 749 410 005-014

d	Size	PN	d	EPDM Code	SP Weight	FKM Code	SP Weight
(mm)	(inch)	(bar)	(inch)		(kg)		(kg)
	3/8	15	3/8	<b>721 511 105</b>	10	<b>721 511 130</b>	10
	1/2	15	1/2	<b>721 511 106</b>	10	<b>721 511 131</b>	10
	3/4	15	3/4	<b>721 511 107</b>	10	<b>721 511 132</b>	1
	1	15	1	<b>721 511 108</b>	10	<b>721 511 133</b>	10
	1 1/4	15	1 1/4	<b>721 511 109</b>	10	<b>721 511 134</b>	5
	1 1/2	15	1 1/2	<b>721 511 110</b>	5	<b>721 511 135</b>	5
	2	15	2	<b>721 511 111</b>	5	<b>721 511 136</b>	10
75	2 1/2	10	2 1/2	<b>721 510 112</b>	2	<b>721 510 137</b>	2

z1	z2	D	L1	L2	G/Tr
(mm)	(mm)	(mm)	(mm)	(mm)	(inch)
3	8	35	19	24	3/4
3	9	43	21	26	1
3	9	51	24	29	1 1/4
3	9	58	27	33	1 1/2
3	10	72	32	39	2
3	10	83	33	46	2 1/4
3	10	100	40	58	2 3/4
3	18	135	47	62	Tr108x5



## Union PVC-U JIS

### Model:

- Union End: Solvent cement socket JIS
- Gasket: O-ring EPDM or FKM
- Union Bush: Solvent cement socket JIS

Size	DN	PN	EPDM Code	SP Weight	FKM Code	SP Weight
(inch)	(mm)	(bar)		(kg)		(kg)
1/2	15	16	<b>721 515 106</b>	10	<b>721 515 156</b>	5
3/4	20	16	<b>721 515 107</b>	10	<b>721 515 157</b>	10
1	25	16	<b>721 515 108</b>	10	<b>721 515 158</b>	10
1 1/4	32	16	<b>721 515 109</b>	10	<b>721 515 159</b>	10
1 1/2	40	16	<b>721 515 110</b>	2	<b>721 515 160</b>	2
2	50	16	<b>721 515 111</b>	2	<b>721 515 161</b>	5

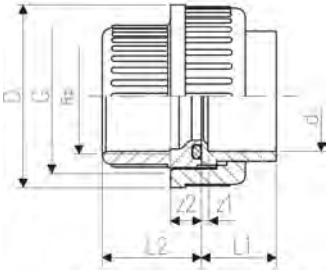
G	z1	z2	D	L1	L2
(inch)	(mm)	(mm)	(mm)	(mm)	(mm)
1 1/4	3	13	51	22	29
1 1/4	3	10	51	22	29
1 1/2	3	10	58	25	32
2	3	12	72	29	38
2 1/4	3	14	83	34	45
2 3/4	3	18	100	41	56



### Adaptor union PVC-U Inch BS Rp

**Model:**

- Union End: Solvent cement socket BS Inch
- Union Bush: Parallel female thread Rp
- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PVC-U
- Gasket: O-ring EPDM code no. 748 410 005-011



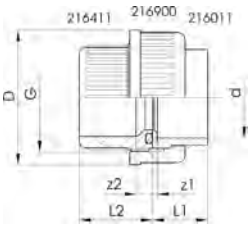
Thread Type	Size (inch)	PN (bar)	d (inch)	Code	SP Weight (kg)	z1 (mm)	z2 (mm)	D (mm)	L1 (mm)	L2 (mm)	G (inch)	
Rp	3/8	10	3/8	721 511 205	10	0.025	3	13	35	17	24	3/4
Rp	1/2	10	1/2	721 511 206	10	0.042	3	13	43	19	26	1
Rp	3/4	10	3/4	721 511 207	10	0.068	3	14	51	22	29	11/4
Rp	1	10	1	721 511 208	10	0.094	3	15	58	25	32	11/2
Rp	1 1/4	10	1 1/4	721 511 209	10	0.168	3	19	72	29	38	2
Rp	1 1/2	10	1 1/2	721 511 210	2	0.223	3	26	83	34	45	21/4
Rp	2	10	2	721 511 211	2	0.405	3	33	100	41	56	23/4



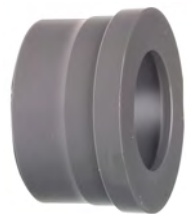
### Adaptor union PVC-U JIS metric

**Model:**

- Union Bush: Solvent cement socket metric
- Union End: Solvent cement socket JIS
- Gasket: O-ring EPDM



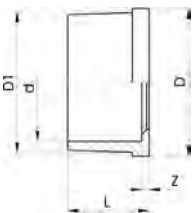
DN (mm)	PN (bar)	Inch (inch)	EPDM Code	SP Weight (kg)	z1 (mm)	z2 (mm)	D (mm)	L1 (mm)	L2 (mm)	G/Tr (inch)	
15	16	1/2	721 515 606	10	0.070	6	13	51	29	22	11/4
20	16	3/4	721 515 607	10	0.058	3	10	51	29	22	11/4
25	16	1	721 515 608	10	0.084	3	10	58	32	25	11/2
32	16	1 1/4	721 515 609	10	0.152	3	10	72	38	29	2
40	16	1 1/2	721 515 610	2	0.212	3	10	83	45	34	21/4
50	16	2	721 515 611	2	0.381	3	10	100	56	41	23/4



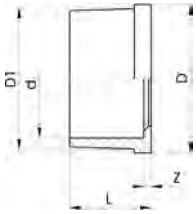
### Union end PVC-U BS

**Model:**

- Solvent cement socket BS inch



Size (inch)	PN (bar)	d (inch)	Code	SP Weight (kg)	z (mm)	D (mm)	D1 (mm)	L (mm)	
3/8	15	3/8	721 601 105	2000	0.003	3	24	22	19
1/2	15	1/2	721 601 106	2300	0.007	3	30	27	21
3/4	15	3/4	721 601 107	1400	0.013	3	38	36	24
1	15	1	721 601 108	1000	0.019	3	44	41	27
1 1/4	15	1 1/4	721 601 109	500	0.033	3	56	53	32
1 1/2	15	1 1/2	721 601 110	400	0.043	3	62	59	33
2	15	2	721 601 111	170	0.077	3	78	74	40
2 1/2	10	2 1/2	721 500 162	20	0.140	3	101	90	47
3	9	3	721 601 113		0.196	6	110	105	56

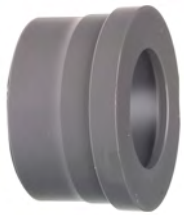


### Union end PVC-U JIS

**Model:**

- Solvent cement socket JIS

DN (mm)	PN (bar)	Size (inch)	Code	SP	Weight (kg)	z (mm)	D (mm)	D1 (mm)	L (mm)
15	16	½	721 605 106	980	0.020	6	39	36	22
20	16	¾	721 605 107	1300	0.014	3	39	36	22
25	16	1	721 605 108	900	0.021	3	45	42	25
32	16	1 ¼	721 605 109	450	0.043	3	57	53	29
40	16	1 ½	721 605 110	250	0.049	3	63	59	34
50	16	2	721 605 111	200	0.092	3	78	74	41
65	10	2 ½	721 605 112	125	0.144	3	101	90	47
80	10	3	721 605 113	0	0.140	5	121	108	56
100	10	4	721 605 114	0	0.390	5	146	131	66

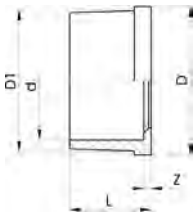
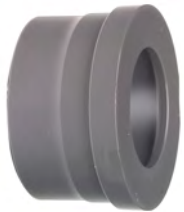


### Union end PVC-U Rc

**Model:**

- Taper female thread Rc

d (mm)	Size (inch)	DN (mm)	Code	Weight (kg)
20	½	15	721 605 606	0.020
25	¾	20	721 605 607	0.016
32	1	25	721 605 608	0.022
40	1 ¼	32	721 605 609	0.040
50	1 ½	40	721 605 610	0.055



### Union end PVC-U BS

**Model:**

- Solvent cement socket BS inch

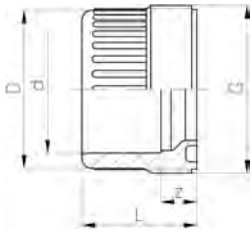
Size (inch)	PN (bar)	d (inch)	Code	Weight (kg)	z (mm)	D (mm)	D1 (mm)	L (mm)
½	15	½	721 601 106	0.007	3	30	27	21
¾	15	¾	721 601 107	0.013	3	38	36	24
1	15	1	721 601 108	0.019	3	44	41	27
1 ¼	15	1 ¼	721 601 109	0.033	3	56	53	32
1 ½	15	1 ½	721 601 110	0.043	3	62	59	33
2	15	2	721 601 111	0.077	3	78	74	40



### Union bush PVC-U BS

**Model:**

- Solvent cement socket BS inch
- Jointing face: with O-ring groove
- Gasket: O-ring EPDM code no. 748 410 005-015; d3 748 410 248



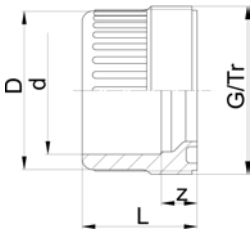
Size (inch)	PN (bar)	d (inch)	Code	SP Weight (kg)	z (mm)	D (mm)	L (mm)	G (inch)	
3/8	15	3/8	721 841 105	10	0.010	8	24	24	3/4"
1/2	15	1/2	721 841 106	10	0.012	9	29	26	1"
3/4	15	3/4	721 841 107	10	0.021	9	34	29	1 1/4"
1	15	1	721 841 108	10	0.031	9	42	33	1 1/2"
1 1/4	15	1 1/4	721 841 109	10	0.056	10	52	39	2"
1 1/2	15	1 1/2	721 841 110	10	0.075	10	62	46	2 1/4"
2	15	2	721 841 111	10	0.139	10	78	58	2 3/4"
3	9	3	721 641 123	36	0.371	19	110	69	Tr 128 x 5



### Union bush PVC-U JIS

**Model:**

- Solvent cement socket JIS
- Jointing face: with O-ring groove
- Gasket: O-ring EPDM code no. 748 410 004-010



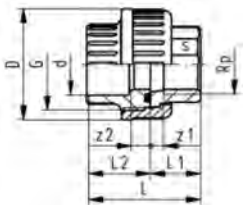
DN (mm)	PN (bar)	Inch (inch)	Code	SP Weight (kg)	z (mm)	D (mm)	L (mm)	G/Tr (inch)	
15	16	1/2	721 640 102	452	0.029	13	33	29	11/4
20	16	3/4	721 645 107	800	0.023	10	33	29	11/4
25	16	1	721 645 108	560	0.033	10	41	32	11/2
32	16	1 1/4	721 645 109	290	0.064	12	51	38	2
40	16	1 1/2	721 645 110	230	0.081	14	61	45	2 1/4
50	16	2	721 645 111	110	0.159	18	77	56	2 3/4



### Adaptor union PVC-U BS brass Rp

**Model:**

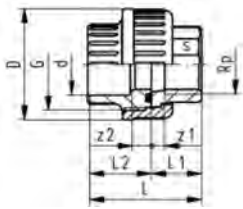
- Union Nut: PVC-U
- Union Bush: Solvent cement socket BS Inch
- Union End: Brass with parallel female thread Rp
- Gasket: O-ring EPDM Code No. 748 410 006-014; d3 748 410 248



Thread Type	Size (inch)	d (inch)	PN* (bar)	Code	SP Weight (kg)	
Rp	1/2	1/2	15	721 551 506	10	0.093
Rp	3/4	3/4	15	721 551 507	5	0.145
Rp	1	1	15	721 551 508	5	0.193
Rp	1 1/4	1 1/4	15	721 551 509	2	0.344
Rp	1 1/2	1 1/2	15	721 551 510	2	0.509
Rp	2	2	15	721 551 511	2	0.776
Rp	2 1/2	2 1/2	10	721 550 512	2	1.360
Rp	3	3	9	721 551 513	2	2.120

L1 (mm)	D (mm)	L (mm)	G (inch)	L2 (mm)	s (mm)	z1 (mm)	z2 (mm)
22	43	48	1	26	25	7	9
25	51	54	1 1/4	29	30	9	8
27	58	60	1 1/2	33	36	8	9
31	72	70	2	39	46	10	11

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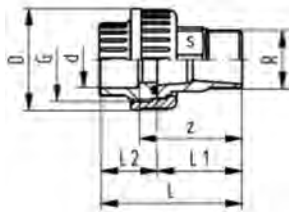
L1	D	L	G	L2	s	z1	z2
(mm)	(mm)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
35	83	75	2 1/4	41	55	13	11
40	100	88	2 3/4	48	65	14	12
47	127	109	Tr 108x5	62	85	16	18
52	150	121	Tr 128x5	69	95	18	19



### Adaptor union PVC-U BS brass R

#### Model:

- Union Nut: PVC-U
- Union Bush: Solvent cement socket BS inch
- Union End: Brass with taper male thread R
- Gasket: O-ring EPDM Code No. 748 410 006-014; d3 748 410 248



Thread Type	Size	d	PN*	Code	SP	Weight
	(inch)	(inch)	(bar)			(kg)
R	1/2	1/2	15	721 551 906	10	0.132
R	3/4	3/4	15	721 551 907	5	0.196
R	1	1	15	721 551 908	5	0.282
R	1 1/4	1 1/4	15	721 551 909	2	0.519
R	1 1/2	1 1/2	15	721 551 910	2	0.723
R	2	2	15	721 551 911	2	1.091
R	2 1/2	2 1/2	10	721 550 912	2	1.706
R	3	3	9	721 551 913	1	2.788

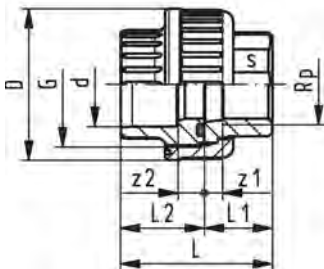
L	L2	L1	D	G	s	z
(mm)	(mm)	(mm)	(mm)	(inch)	(mm)	(mm)
63	26	37	43	1	25	46
71	29	42	51	1 1/4	30	50
79	33	46	58	1 1/2	36	55
91	39	52	72	2	46	63
97	41	56	83	2 1/4	55	67
115	48	67	100	2 3/4	65	78
139	62	77	127	Tr 108x5	85	95
155	69	86	150	Tr 128x5	95	104



### Adaptor union PVC-U BS malleable iron galvanised Rp

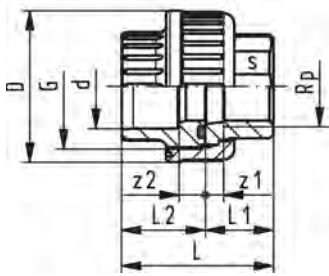
#### Model:

- Union Nut: PVC-U
- Union Bush: Solvent cement socket BS Inch
- Union End: malleable iron with parallel female thread Rp
- Gasket: O-ring EPDM Code No. 748 410 006-014; d3 748 410 248



d	Thread Type	Size	PN	d	Code	SP	Weight
(mm)		(inch)	(bar)	(inch)			(kg)
	Rp	1/2	15	1/2	721 531 306	10	0.120
	Rp	3/4	15	3/4	721 531 307	5	0.190
	Rp	1	15	1	721 531 308	5	0.250
	Rp	1 1/4	15	1 1/4	721 531 309	2	0.400
	Rp	1 1/2	15	1 1/2	721 531 310	2	0.510
	Rp	2	15	2	721 531 311	5	0.780
75	Rp	2 1/2	10	2 1/2	721 530 312	2	1.008
	Rp	3	9	3	721 531 313	2	1.740

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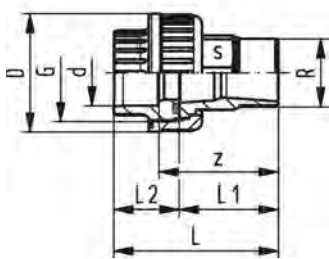
G	L2	s	z1	z2	L1	D	L
(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
1	26	25	9	10	22	43	48
1 1/4	29	31	7	10	22	51	51
1 1/2	33	38	9	10	26	58	58
2	39	48	12	12	31	72	69
2 1/4	46	54	14	14	33	83	78
2 3/4	58	67	11	18	35	100	91
Tr 108x5	62	85	12	18	39	127	101
Tr 128x5	69	96	15	19	45	150	114



### Adaptor union PVC-U BS malleable iron galvanised R

#### Model:

- Union Nut: PVC-U
- Union Bush: Solvent cement socket BS Inch
- Union End: Malleable iron with taper male thread R
- Gasket: O-ring EPDM Code No. 748 410 006-014; d3 748 410 248



d	Thread Type	Size	PN	d	Code	SP	Weight
(mm)		(inch)	(bar)	(inch)			(kg)
	R	1/2	15	1/2	<b>721 531 806</b>	10	0.156
	R	3/4	15	3/4	<b>721 531 807</b>	5	0.230
	R	1	15	1	<b>721 531 808</b>	5	0.330
	R	1 1/4	15	1 1/4	<b>721 531 809</b>	2	0.480
	R	1 1/2	15	1 1/2	<b>721 531 810</b>	2	0.683
	R	2	15	2	<b>721 531 811</b>	8	1.082
75	R	2 1/2	10	2 1/2	<b>721 530 812</b>	2	1.441
	R	3	9	3	<b>721 531 813</b>	1	1.891

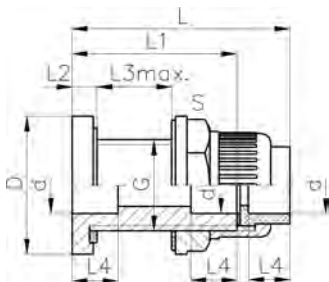
D	L1	L2	L	s	z	G
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(inch)
43	40	26	66	25	50	1
51	43	29	72	31	53	1 1/4
58	48	33	80	38	58	1 1/2
72	57	39	95	48	69	2
83	59	46	104	54	73	2 1/4
100	62	58	118	67	80	2 3/4
127	75	62	137	85	93	Tr 108x5
150	80	69	149	96	99	Tr 128x5



### Tank adaptor PVC-U For fix position stop

#### Model:

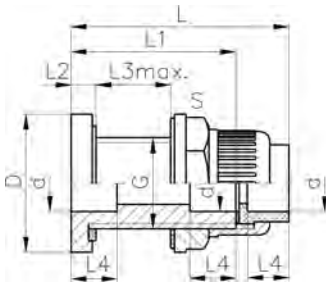
- End connection: union with solvent cement socket BS Inch
- Gasket: flat gasket EPDM
- Gasket: O-ring FKM code no. 749 410 006-011 (to be ordered separately)



Size	d	Code	SP	Weight
(inch)	(inch)			(kg)
1/2	1/2	<b>161 050 226</b>	1	0.122
3/4	3/4	<b>161 050 227</b>	1	0.100
1	1	<b>161 050 228</b>	1	0.231
1 1/4	1 1/4	<b>161 050 229</b>	1	0.240
1 1/2	1 1/2	<b>161 050 230</b>	1	0.463
2	2	<b>161 050 231</b>	1	0.530

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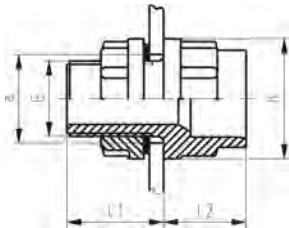
D	L	L1	L2	L3	L4	G	s	Diameter of bore in tank side
(mm)	(mm)	(mm)	(mm)	max (mm)	(mm)	(inch)	(mm)	(mm)
56	89	67	11	30	16	1"	46	35
65	97	72	12	32	19	1 1/4"	50	43
70	103	75	12	33	22	1 1/2"	60	49
95	111	78	12	32	26	2"	80	61
95	119	82	13	32	31	2 1/4"	80	67
115	131	87	13	33	38	2 3/4"	95	83



**Tank adaptor PVC-U**  
For adjustable stop

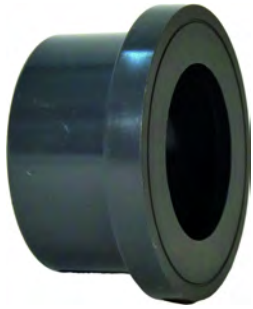
**Model:**

- With solvent cement socket BS Inch and parallel female thread G
- Gasket: flat gasket EPDM
- Gasket: O-ring FKM code no. 749 410 006-007 (to be ordered separately)



Size	d	PN	Code	SP	Weight	h	a	l2	l1	G
(inch)	(inch)	(bar)			(kg)	(mm)	(mm)	(mm)	(mm)	(inch)
1/2	1/2	15	<b>161 108 706</b>	10	0.050	37	23	24	34	1/2
3/4	3/4	15	<b>161 108 707</b>	10	0.048	42	28	29	34	3/4

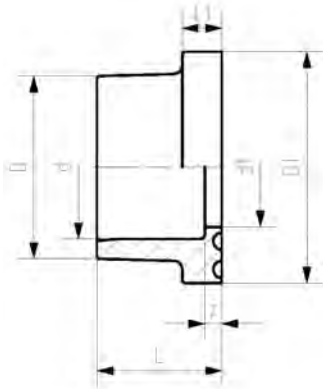
# Flange adaptors and flanges



## Flange adaptor PVC-U Combined jointing face flat and serrated BS

### Model:

- Counterpart: flange adaptor BS Inch code no. 721 791 106-123, flange adaptor metric code no. 721 800 106-125
- Gasket: flat gasket EPDM code no. 748 400 306-323



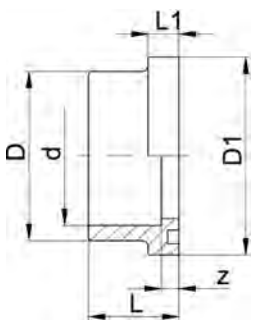
d	Size	DN	PN	Code	SP	Weight	D	D1	d1	L	L1	z
(mm)	(inch)	(mm)	(bar)		(kg)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
	½	15	15	<b>721 791 106</b>	10	0.009	27	34	16.0	21	6	3
	¾	20	15	<b>721 791 107</b>	10	0.014	33	41	21.0	24	7	3
	1	25	15	<b>721 791 108</b>	10	0.023	41	50	28.0	27	7	3
	1 ¼	32	15	<b>721 791 109</b>	10	0.035	50	61	36.0	32	8	3
	1 ½	40	15	<b>721 791 110</b>	10	0.058	61	73	45.0	33	8	3
	2	50	15	<b>721 791 111</b>	5	0.107	77	91	55.5	40	9	3
75	2 ½	65	16	<b>721 790 112</b>	10	0.159	91	106	69.0	47	10	3
	3	80	15	<b>721 791 113</b>	20	0.269	108	125	82.0	56	11	5
	4	100	15	<b>721 791 115</b>	10	0.422	136	155	108.0	69	12	5
140	5	125	16	<b>721 790 116</b>	6	0.725	165	188	132.0	81	14	5
	6	150	15	<b>721 791 117</b>	2	1.172	198	217	160.0	96	16	5
	8	200	9	<b>721 791 120</b>	2	2.028	248	274	210.0	122	20	6
	10	250	9	<b>721 791 122</b>	1	3.677	307	329	260.0	151	23	9
	12	300	6	<b>721 791 123</b>	1	3.418	346	379	302.0	172	27	4



## Flange adaptor PVC-U Jointing face with O-ring groove BS

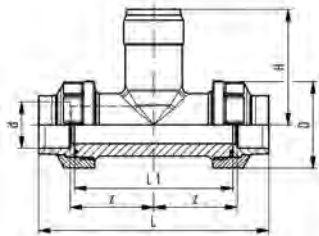
### Model:

- Counterpart: flange adaptor BS 721 791 111-120
- Flange: PVC-U ANSI code no. 721 702 211-220, PP/steel ANSI code no. 727 701 211-319, PP-V ANSI code no. 727 701 411-419
- Gasket: O-ring EPDM code no. 748 410 013-163, FKM code no. 749 410 013-163



d	DN	PN	Code	SP	Weight	D1	z	D	L	L1
(mm)	(mm)	(bar)		(kg)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
	50	15	<b>721 811 111</b>	5	0.125	91	8	77	46	14
75	65	16	<b>721 810 112</b>	10	0.183	106	8	91	52	15
140	125	16	<b>721 810 116</b>	6	0.804	188	11	165	87	20
	200	9	<b>721 811 120</b>	0	2.070	274	12	248	128	26

# Installation fittings



## Installation fitting type 310 PVC-U For socket systems BS

### Model:

- Material: PVC-U
- Threaded outlet 1 ¼" NPSM
- Union end with solvent cement socket PVC-U

### Range of use:

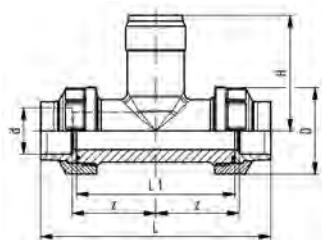
- Compatible Signet flow sensors: type 2551, 2537, 515, 8510, 2536, 8512
- Compatible Signet pH/ORP sensors: type 2724, 2725, 2726, 2734, 2736, 2735

### Attention:

- sensor length depends on installation fitting

DN (mm)	Size (inch)	PN (bar)	Type	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
15	½	15	PVAT005	<b>721 310 306</b>	1	0.181	<b>721 310 336</b>	1	0.181
20	¾	15	PVAT007	<b>721 310 307</b>	1	0.244	<b>721 310 337</b>	1	0.244
25	1	15	PVAT010	<b>721 310 308</b>	1	0.333	<b>721 310 338</b>	1	0.299
32	1 ¼	15	PVAT012	<b>721 310 309</b>	1	0.403	<b>721 310 339</b>	1	0.440
40	1 ½	15	PVAT015	<b>721 310 310</b>	1	0.700	<b>721 310 340</b>	1	0.579
50	2	15	PVAT020	<b>721 310 311</b>	1	1.011	<b>721 310 341</b>	1	1.011

DN (mm)	L (mm)	L1 (mm)	D (mm)	H (mm)	z (mm)	Sensor Type
15	131	90	43	76	48	flow X0, pH XX
20	147	100	51	78	53	flow X0, pH XX
25	164	110	58	81	58	flow X0, pH XX
32	171	110	72	85	58	flow X0, pH XX
40	188	120	83	89	63	flow X0, pH XX
50	211	130	100	95	68	flow X0, pH XX



### Installation fitting type 310 PVC-U for Socket Systems JIS

#### Model:

- Threaded outlet 1 1/4" NPSM
- Union end with solvent cement socket PVC-U

#### Range of use:

- Compatible Signet flow sensors: type 2551, 2537, 515, 8510, 2536, 8512
- Compatible Signet pH/ORP sensors: type 2724, 2725, 2726, 2734, 2736, 2735

#### Attention:

- sensor length depends on installation fitting

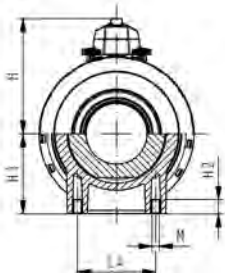
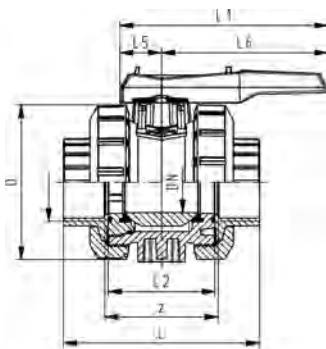
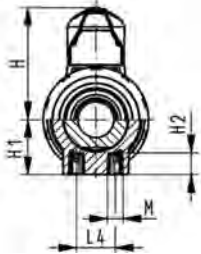
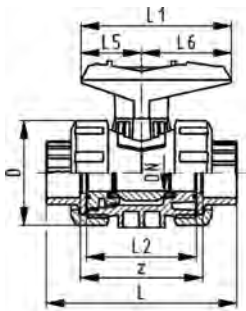
d (mm)	DN (mm)	PN (bar)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
20	15	16	<b>721 310 506</b>	1	0.244	<b>721 310 536</b>	1	0.244
25	20	16	<b>721 310 507</b>	1	0.244	<b>721 310 537</b>	1	0.244
32	25	16	<b>721 310 508</b>	1	0.333	<b>721 310 538</b>	1	0.303
40	32	16	<b>721 310 509</b>	1	0.440	<b>721 310 539</b>	1	0.440
50	40	16	<b>721 310 510</b>	1	0.700	<b>721 310 540</b>	1	0.700
63	50	16	<b>721 310 511</b>	1	1.011	<b>721 310 541</b>	1	1.011

d (mm)	DN (mm)	Sensor Type	L (mm)	z (mm)	D (mm)	H (mm)	L1 (mm)
20	15	X0	144	56	51	78	90
25	20	X0	144	53	51	78	100
32	25	X0	160	58	58	81	110
40	32	X0	168	58	72	85	110
50	40	X0	188	63	83	89	120
63	50	X0	212	68	100	95	130

# Ball valves type 546



DN10/15 - 50



## Ball valve type 546 PVC-U With mounting inserts With solvent cement sockets inch BS

### Model:

- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Valve end and union nut are **not compatible** with type 346 (DN10/15-50) and type 370 (DN65-100)

### Option:

- Individual configuration of the valve
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from GF

d	Size	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(inch)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
	3/8	10	16	71	<b>161 546 241</b>	1	0.150	<b>161 546 251</b>	1	0.150
	1/2	15	16	185	<b>161 546 242</b>	1	0.150	<b>161 546 252</b>	1	0.150
	3/4	20	16	350	<b>161 546 243</b>	1	0.230	<b>161 546 253</b>	1	0.230
	1	25	16	700	<b>161 546 244</b>	1	0.335	<b>161 546 254</b>	1	0.330
	1 1/4	32	16	1000	<b>161 546 245</b>	1	0.585	<b>161 546 255</b>	1	0.585
	1 1/2	40	16	1600	<b>161 546 246</b>	1	0.850	<b>161 546 256</b>	1	0.862
	2	50	16	3100	<b>161 546 247</b>	1	1.567	<b>161 546 257</b>	1	1.582
75	2 1/2	65	16	5000	<b>161 546 068</b>	1	4.343	<b>161 546 078</b>	1	3.563
	3	80	16	7000	<b>161 546 249</b>	1	5.607	<b>161 546 259</b>	1	5.404
	4	100	16	11000	<b>161 546 250</b>	1	8.531	<b>161 546 260</b>	1	8.581

D	H	H1	H2	L	L1	L2	L4	L5	L6	M	z	closest inch
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(inch)
50	57	27	12	92	77	56	25	32	45	6	67	
50	57	27	12	95	77	56	25	32	45	6	61	
58	67	30	12	110	97	65	25	39	58	6	70	
68	73	36	12	123	97	71	25	39	58	6	76	
84	90	44	15	146	128	85	45	54	74	8	90	
97	97	51	15	157	128	89	45	54	74	8	94	
124	116	64	15	183	152	101	45	66	87	8	107	
166	149	85	15	233	270	136	70	64	206	8	144	2 1/2
200	161	105	15	254	270	141	70	64	206	8	151	
238	178	123	22	301	320	164	120	64	256	12	174	



DN10/15 - 50



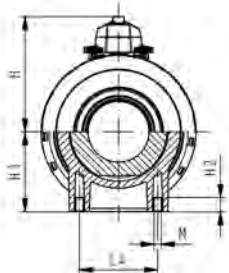
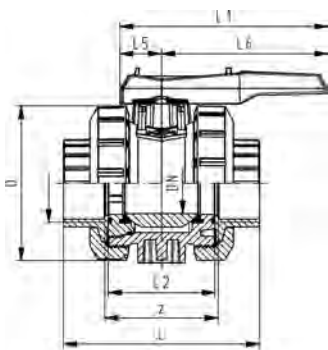
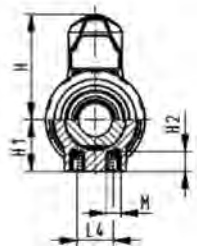
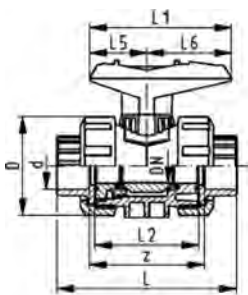
**Ball valve type 546 PVC-U**  
**With mounting inserts**  
**With solvent cement sockets JIS**

**Model:**

- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Valve end and union nut are **not compatible** with type 346 (DN10/15-50) and type 370 (DN65-100)

**Option:**

- Individual configuration of the valve
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from GF

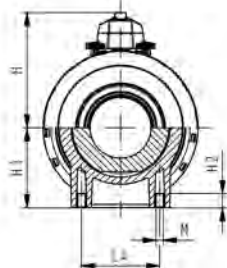
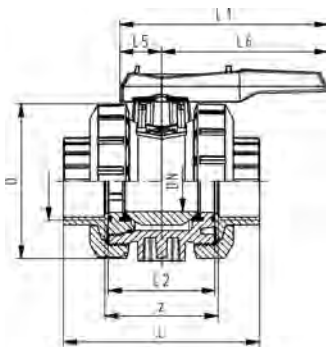
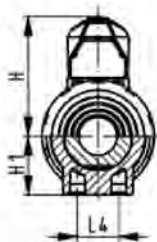
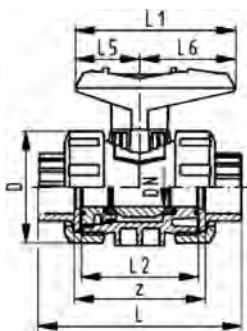


Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
½	15	16	185	161 546 882	1	0.157	161 546 892	1	0.155
¾	20	16	350	161 546 883	1	0.236	161 546 893	1	0.241
1	25	16	700	161 546 884	1	0.346	161 546 894	1	0.349
1 ¼	32	16	1000	161 546 885	1	0.617	161 546 895	1	0.610
1 ½	40	16	1600	161 546 886	1	0.851	161 546 896	1	0.862
2	50	16	3100	161 546 887	1	1.568	161 546 897	1	1.495
2 ½	65	16	5000	161 546 888	1	4.298	161 546 898	1	4.900
3	80	16	7000	161 546 889	1	7.400	161 546 899	1	7.400
4	100	16	11000	161 546 890	1	8.539	161 546 900	1	11.500

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M	z (mm)
½	50	57	27	12	95	77	56	25	32	45	M6	64
¾	58	67	30	12	110	97	65	25	39	58	M6	72
1	68	73	36	12	123	97	71	25	39	58	M6	79
1 ¼	84	90	44	15	146	128	85	45	54	74	M8	94
1 ½	97	97	51	15	157	128	89	45	54	74	M8	95
2	124	116	64	15	183	152	101	45	66	87	M8	107
2 ½	166	149	85	15	233	270	136	70	64	206	M8	144
3	200	161	105	15	254	270	141	70	64	206	M8	151
4	238	178	123	22	301	320	164	70	64	256	M12	174



DN10/15 - 50



**Ball valve type 546 PVC-U**  
**With solvent cement sockets Inch BS**

**Model:**

- For easy installation and removal
- Ball seals PTFE
- Without mounting inserts
- Valve end and union nut are **not compatible** with type 346 (DN10/15-50) and type 370 (DN65-100)

**Option:**

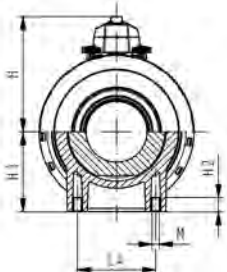
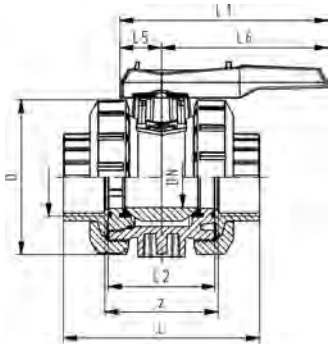
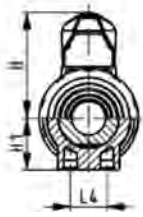
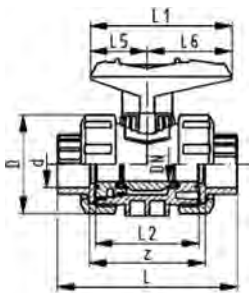
- Individual configuration of the valve
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from GF

d	Size	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(inch)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
				(l/min)						
	3/8	10	16	71	<b>161 546 201</b>	1	0.151	<b>161 546 211</b>	1	0.150
	1/2	15	16	185	<b>161 546 202</b>	1	0.149	<b>161 546 212</b>	1	0.150
	3/4	20	16	350	<b>161 546 203</b>	1	0.229	<b>161 546 213</b>	1	0.230
	1	25	16	700	<b>161 546 204</b>	1	0.334	<b>161 546 214</b>	1	0.336
	1 1/4	32	16	1000	<b>161 546 205</b>	1	0.588	<b>161 546 215</b>	1	0.585
	1 1/2	40	16	1600	<b>161 546 206</b>	1	0.843	<b>161 546 216</b>	1	0.815
	2	50	16	3100	<b>161 546 207</b>	1	1.564	<b>161 546 217</b>	1	1.577
75		65	16	5000	<b>161 546 008</b>	1	3.781	<b>161 546 018</b>	1	3.794
	3	80	16	7000	<b>161 546 209</b>	1	6.189	<b>161 546 219</b>	1	7.400
	4	100	16	11000	<b>161 546 210</b>	1	11.600	<b>161 546 220</b>	1	11.600

D	H	H1	L	L1	L2	L4	L5	L6	z	closest inch
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(inch)
50	57	27	92	77	56	25	32	45	60	
50	57	27	95	77	56	25	32	45	60	
58	67	30	110	97	65	25	39	58	69	
68	73	36	123	97	71	25	39	58	75	
84	90	44	146	128	85	45	54	74	89	
97	97	51	157	128	89	45	54	74	97	
124	116	64	183	152	101	45	66	87	110	
166	149	85	233	270	136	70	64	206	144	2 1/2
200	161	105	254	270	141	70	64	206	151	
238	178	123	301	320	164	120	64	256	174	



DN10/15 - 50



**Ball valve type 546 PVC-U  
With solvent cement sockets JIS**

**Model:**

- For easy installation and removal
- Ball seals PTFE
- Without mounting inserts
- Valve end and union nut are **not compatible** with type 346 (DN10/15-50) and type 370 (DN65-100)

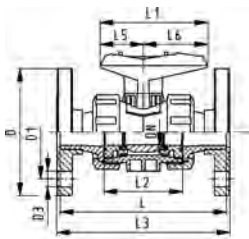
**Option:**

- Individual configuration of the valve
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from GF

Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
½	15	16	185	<b>161 546 402</b>	1	0.150	<b>161 546 412</b>	1	0.150
¾	20	16	350	<b>161 546 403</b>	1	0.232	<b>161 546 413</b>	1	0.232
1	25	16	700	<b>161 546 404</b>	1	0.340	<b>161 546 414</b>	1	0.343
1 ¼	32	16	1000	<b>161 546 405</b>	1	0.611	<b>161 546 415</b>	1	0.610
1 ½	40	16	1600	<b>161 546 406</b>	1	0.844	<b>161 546 416</b>	1	0.855
2	50	16	3100	<b>161 546 407</b>	1	1.563	<b>161 546 417</b>	1	1.576
2 ½	65	16	5000	<b>161 546 408</b>	1	4.900	<b>161 546 418</b>	1	4.900
3	80	16	7000	<b>161 546 409</b>	1	7.400	<b>161 546 419</b>	1	7.400
4	100	16	11000	<b>161 546 410</b>	1	11.500	<b>161 546 420</b>	1	11.500

Size (inch)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	z (mm)
½	50	57	27	95	77	56	25	32	45	64
¾	58	67	30	110	97	65	25	39	58	72
1	68	73	36	123	97	71	25	39	58	79
1 ¼	84	90	44	146	128	85	45	54	74	94
1 ½	97	97	51	157	128	89	45	54	74	95
2	124	116	64	183	152	101	45	66	87	107
2 ½	166	149	85	233	270	136	70	64	206	144
3	200	161	105	254	270	141	70	64	206	151
4	238	178	123	301	320	164	120	64	256	174





**Ball valve type 546 PVC-U  
With fixed flanges PVC-U JIS**

**Model:**

- For easy installation and removal
- Ball seals PTFE
- Without mounting inserts
- z-dimension, valve end and union nut are not compatible with type 346

**Option:**

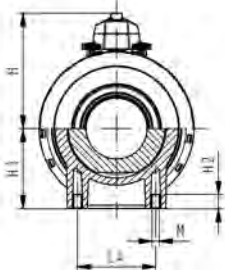
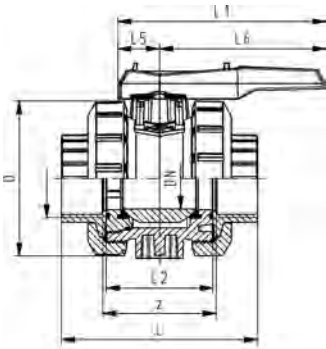
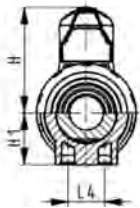
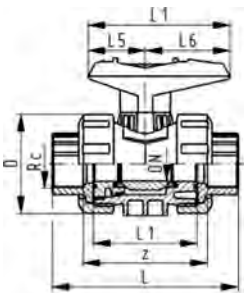
- Individual configuration of the valve
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from GF

Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
½	15	16	185	<b>161 546 482</b>	1 0.411	<b>161 546 492</b>	1 0.412
¾	20	16	350	<b>161 546 483</b>	1 0.534	<b>161 546 493</b>	1 0.535
1	25	16	700	<b>161 546 484</b>	1 0.816	<b>161 546 494</b>	1 0.818
1 ¼	32	16	1000	<b>161 546 485</b>	1 1.385	<b>161 546 495</b>	1 1.385
1 ½	40	16	1600	<b>161 546 486</b>	1 1.561	<b>161 546 496</b>	1 1.569
2	50	16	3100	<b>161 546 487</b>	1 2.546	<b>161 546 497</b>	1 2.572

Size (inch)	D (mm)	D1 (mm)	D3 (mm)	H (mm)	H1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	T (mm)
½	95	70	15	57	27	77	56	143	25	32	45	14
¾	100	75	15	67	30	97	65	172	25	39	58	14
1	125	90	19	73	36	97	71	187	25	39	58	14
1 ¼	135	100	19	90	44	128	85	190	45	54	74	17
1 ½	140	105	19	97	51	128	89	212	45	54	74	18
2	155	120	19	116	64	152	101	234	45	66	87	20



DN10/15 - 50



### Ball valve type 546 PVC-U With threaded sockets Rc

#### Model:

- For easy installation and removal
- Ball seals PTFE
- Without mounting inserts
- Valve end and union nut are **not compatible** with type 346 (DN10/15-50) and type 370 (DN65-100)

#### Option:

- Individual configuration of the valve
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from GF

Rc (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
½	15	10	185	<b>161 546 422</b>	1	0.160	<b>161 546 432</b>	1	0.159
¾	20	10	350	<b>161 546 423</b>	1	0.240	<b>161 546 433</b>	1	0.240
1	25	10	700	<b>161 546 424</b>	1	0.345	<b>161 546 434</b>	1	0.345
1 ¼	32	10	1000	<b>161 546 425</b>	1	0.610	<b>161 546 435</b>	1	0.610
1 ½	40	10	1600	<b>161 546 426</b>	1	0.835	<b>161 546 436</b>	1	0.835
2	50	10	3100	<b>161 546 427</b>	1	1.583	<b>161 546 437</b>	1	1.520
2 ½	65	10	5000	<b>161 546 428</b>	1	5.000	<b>161 546 438</b>	1	5.000
3	80	10	7000	<b>161 546 429</b>	1	7.500	<b>161 546 439</b>	1	7.500
4	100	10	11000	<b>161 546 430</b>	1	11.700	<b>161 546 440</b>	1	11.700

Rc (inch)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	z (mm)
½	50	57	27	100	77	56	25	32	45	66
¾	58	67	30	114	97	65	25	39	58	78
1	68	73	36	127	97	71	25	39	58	85
1 ¼	84	90	44	146	128	85	45	54	74	98
1 ½	97	97	51	152	128	89	45	54	74	104
2	124	116	64	177	152	101	45	66	87	119
2 ½	166	149	85	233	270	136	70	64	206	144
3	200	161	105	254	270	141	70	64	206	151
4	238	178	123	301	320	164	120	64	256	174



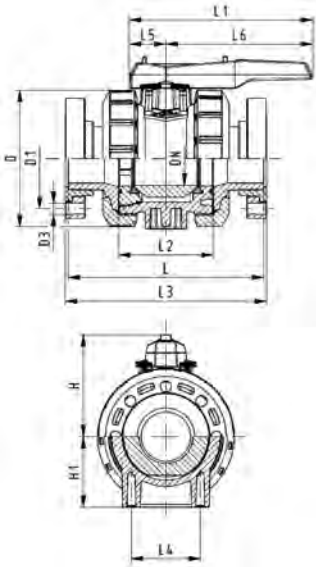
**Ball valve type 546 PVC-U**  
**With backing flanges PVC-U JIS**

**Model:**

- For easy installation and removal
- Ball seals PTFE
- Without mounting inserts
- Valve end and union nut are **not compatible** with type 346 (DN10/15-50) and type 370 (DN65-100)
- Overall length according to EN 558
- Connecting dimensions: JIS B 2220, 10K

**Option:**

- Individual configuration of the valve
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from GF



Size	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(inch)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
			(L/min)						
2 1/2	65	10	5000	<b>161 546 268</b>	1	4.670	<b>161 546 278</b>	1	5.600
3	80	10	7000	<b>161 546 269</b>	1	8.400	<b>161 546 279</b>	1	8.400
4	100	10	11000	<b>161 546 270</b>	1	11.473	<b>161 546 280</b>	1	13.100

Size	D	D1	D3	H	H1	L	L1	L2	L3	L4	L5	L6
(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
2 1/2	166	140	19	149	85	284	270	136	261	70	64	206
3	200	150	19	161	105	300	270	141	304	70	64	206
4	238	175	19	178	123	340	320	164	373	120	64	256



DN10/15 - 50



**Ball valve type 546 PVC-U**  
**With lockable handle**  
**With solvent cement sockets Inch BS**

**Model:**

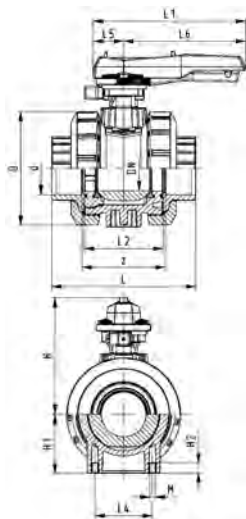
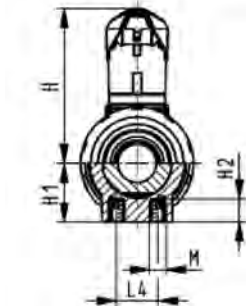
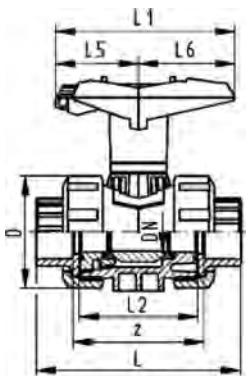
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Valve end and union nut are **not compatible** with type 346 (DN10/15-50) and type 370 (DN65-100)
- Lockable hand lever with ratchet settings

**Option:**

- Individual configuration of the valve
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from GF

Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
3/8	10	16	71	161 546 221	1	0.165	161 546 231	1	0.165
1/2	15	16	185	161 546 222	1	0.164	161 546 232	1	0.165
3/4	20	16	350	161 546 223	1	0.255	161 546 233	1	0.255
1	25	16	700	161 546 224	1	0.358	161 546 234	1	0.355
1 1/4	32	16	1000	161 546 225	1	0.625	161 546 235	1	0.625
1 1/2	40	16	1600	161 546 226	1	0.855	161 546 236	1	0.855
2	50	16	3100	161 546 227	1	1.605	161 546 237	1	1.535
2 1/2	65	16	5000	161 546 088	1	5.200	161 546 098	1	5.200
3	80	16	7000	161 546 229	1	7.700	161 546 239	1	7.700
4	100	16	11000	161 546 230	1	12.000	161 546 240	1	12.000

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M	z (mm)
3/8	50	79	27	12	92	87	56	25	42	45	M6	60
1/2	50	79	27	12	95	87	56	25	42	45	M6	60
3/4	58	88	30	12	110	108	65	25	50	58	M6	69
1	68	94	36	12	123	108	71	25	50	58	M6	75
1 1/4	84	113	44	15	146	140	85	45	66	75	M8	89
1 1/2	97	119	51	15	157	140	89	45	66	75	M8	97
2	124	141	64	15	183	165	101	45	78	87	M8	110
2 1/2	166	224	85	15	233	270	136	70	64	206	M8	144
3	200	235	105	15	254	270	141	70	64	206	M8	151
4	238	245	123	22	301	320	164	120	64	256	M12	174





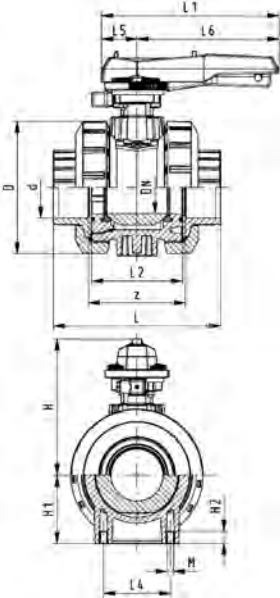
**Ball valve type 546 PVC-U**  
**With lockable handle**  
**With solvent cement sockets JIS**

**Model:**

- For easy installation and removal
- Ball seals PTFE
- Without mounting inserts
- Valve end and union nut are **not compatible** with type 346 (DN10/15-50) and type 370 (DN65-100)
- Lockable hand lever with ratchet settings

**Option:**

- Individual configuration of the valve
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from GF



Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
2 1/2	65	16	5000	<b>161 546 448</b>	1	3.800
3	80	16	7000	<b>161 546 449</b>	1	7.700
4	100	16	11000	<b>161 546 450</b>	1	11.900

Size (inch)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	z (mm)
2 1/2	166	224	85	233	270	136	70	64	206	144
3	200	235	105	254	270	141	70	64	206	151
4	238	245	123	301	320	164	120	64	256	174

# Ball valves electric type 107



DN10/15 - 50

**Ball valve type 107 PVC-U 100-230V**  
**With manual emergency override**  
**With solvent cement sockets Inch BS**

**Model:**

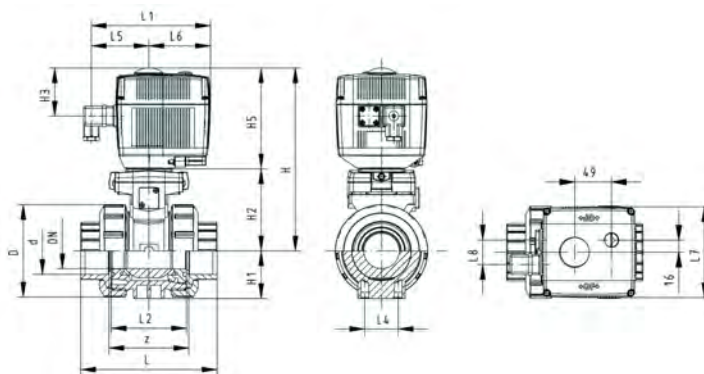
- Built on with electric actuator EA11
- Voltage 100-230V, 50-60Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
3/8	10	10	70	199 107 402	1	2.100	199 107 412	1	2.100
1/2	15	10	185	199 107 403	1	2.137	199 107 413	1	2.100
3/4	20	10	350	199 107 404	1	2.226	199 107 414	1	2.200
1	25	10	700	199 107 405	1	2.300	199 107 415	1	2.334
1 1/4	32	10	1000	199 107 406	1	2.600	199 107 416	1	2.600
1 1/2	40	10	1600	199 107 407	1	3.000	199 107 417	1	3.000
2	50	10	3100	199 107 408	1	3.597	199 107 418	1	3.800

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)
3/8	50	200	27	64	64	137	92	161	56	25	79	1	122	67	60
1/2	50	200	27	64	64	137	95	161	56	25	79	83	122	67	60
3/4	58	209	30	73	64	137	110	161	65	25	79	83	122	67	69
1	68	209	36	73	64	137	123	161	71	25	79	83	122	67	75
1 1/4	84	220	44	84	64	137	146	161	85	45	79	83	122	67	89
1 1/2	97	220	51	84	64	137	157	161	89	45	79	83	122	67	97
2	124	243	64	106	64	137	183	161	101	45	79	83	122	67	110





DN10/15 - 50

**Ball valve type 107 PVC-U 100-230V**  
**With manual emergency override**  
**With solvent cement sockets JIS**

**Model:**

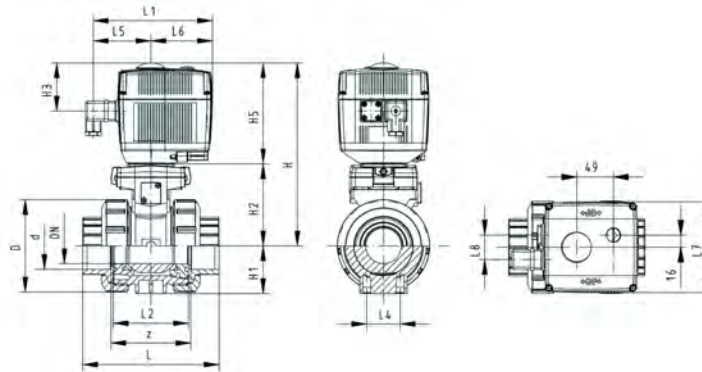
- Built on with electric actuator EA11
- Voltage 100-230V, 50-60Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
½	15	10	185	<b>199 107 483</b>	1	2.100	<b>199 107 493</b>	1	2.100
¾	20	10	350	<b>199 107 484</b>	1	2.200	<b>199 107 494</b>	1	2.200
1	25	10	700	<b>199 107 485</b>	1	2.300	<b>199 107 495</b>	1	2.300
1 ¼	32	10	1000	<b>199 107 486</b>	1	2.600	<b>199 107 496</b>	1	2.600
1 ½	40	10	1600	<b>199 107 487</b>	1	2.902	<b>199 107 497</b>	1	3.000
2	50	10	3100	<b>199 107 488</b>	1	3.660	<b>199 107 498</b>	1	3.800

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)
½	50	200	27	64	64	137	95	161	56	25	79	83	122	67	64
¾	58	209	30	73	64	137	110	161	65	25	79	83	122	67	72
1	68	209	36	73	64	137	123	161	71	25	79	83	122	67	79
1 ¼	84	220	44	84	64	137	146	161	85	45	79	83	122	67	94
1 ½	97	220	51	84	64	137	157	161	89	45	79	83	122	67	95
2	124	243	64	106	64	137	183	161	101	45	79	83	122	67	107





DN10/15 - 50

**Ball valve type 107 PVC-U 24V**  
**With manual emergency override**  
**With solvent cement sockets Inch BS**

**Model:**

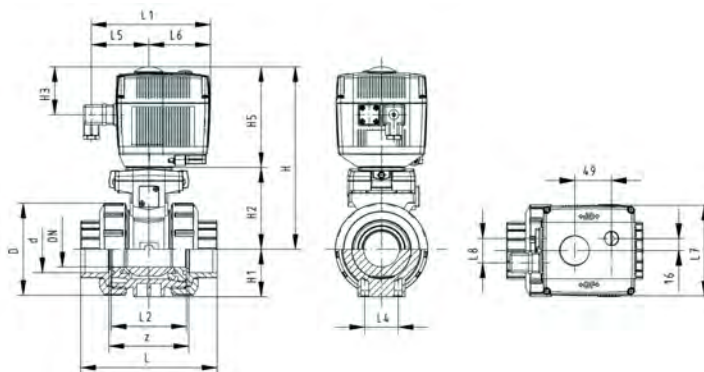
- Built on with electric actuator EA11
- Voltage 24V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
3/8	10	10	70	199 107 442	1	2.100	199 107 452	1	2.100
1/2	15	10	185	199 107 443	1	2.100	199 107 453	1	2.100
3/4	20	10	350	199 107 444	1	2.200	199 107 454	1	2.200
1	25	10	700	199 107 445	1	2.323	199 107 455	1	2.325
1 1/4	32	10	1000	199 107 446	1	2.600	199 107 456	1	2.600
1 1/2	40	10	1600	199 107 447	1	2.832	199 107 457	1	3.000
2	50	10	3100	199 107 448	1	3.800	199 107 458	1	3.800

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)
3/8	50	200	27	64	64	137	92	161	56	25	79	83	122	67	60
1/2	50	200	27	64	64	137	95	161	56	25	79	83	122	67	60
3/4	58	209	30	73	64	137	110	161	65	25	79	83	122	67	69
1	68	209	36	73	64	137	123	161	71	25	79	83	122	67	75
1 1/4	84	220	44	84	64	137	146	161	85	45	79	83	122	67	89
1 1/2	97	220	51	84	64	137	157	161	89	45	79	83	122	67	97
2	124	243	64	106	64	137	183	161	101	45	79	83	122	67	110







DN10/15 - 50

**Ball valve type 107 PVC-U 24V**  
**With manual emergency override**  
**With solvent cement sockets JIS**

**Model:**

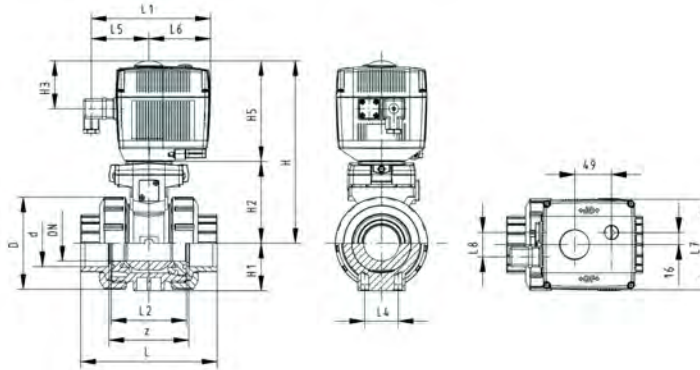
- Built on with electric actuator EA11
- Voltage 24V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
1/2	15	10	185	199 107 863	1	2.100	199 107 873	1	2.100
3/4	20	10	350	199 107 864	1	2.200	199 107 874	1	2.200
1	25	10	700	199 107 865	1	2.300	199 107 875	1	2.300
1 1/4	32	10	1000	199 107 866	1	2.600	199 107 876	1	2.600
1 1/2	40	10	1600	199 107 867	1	3.000	199 107 877	1	3.000
2	50	10	3100	199 107 868	1	3.800	199 107 878	1	3.800

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)
1/2	50	200	27	64	64	137	95	161	56	25	79	83	122	67	64
3/4	58	209	30	73	64	137	110	161	65	25	79	83	122	67	72
1	68	209	36	73	64	137	123	161	71	25	79	83	122	67	79
1 1/4	84	220	44	84	64	137	146	161	85	45	79	83	122	67	94
1 1/2	97	220	51	84	64	137	157	161	89	45	79	83	122	67	95
2	124	243	64	106	64	137	183	161	101	45	79	83	122	67	107



# Ball valves electric type 183



**Ball valve type 183 PVC-U 100-230V**  
**With manual emergency override**  
**With solvent cement sockets Inch BS**

**Model:**

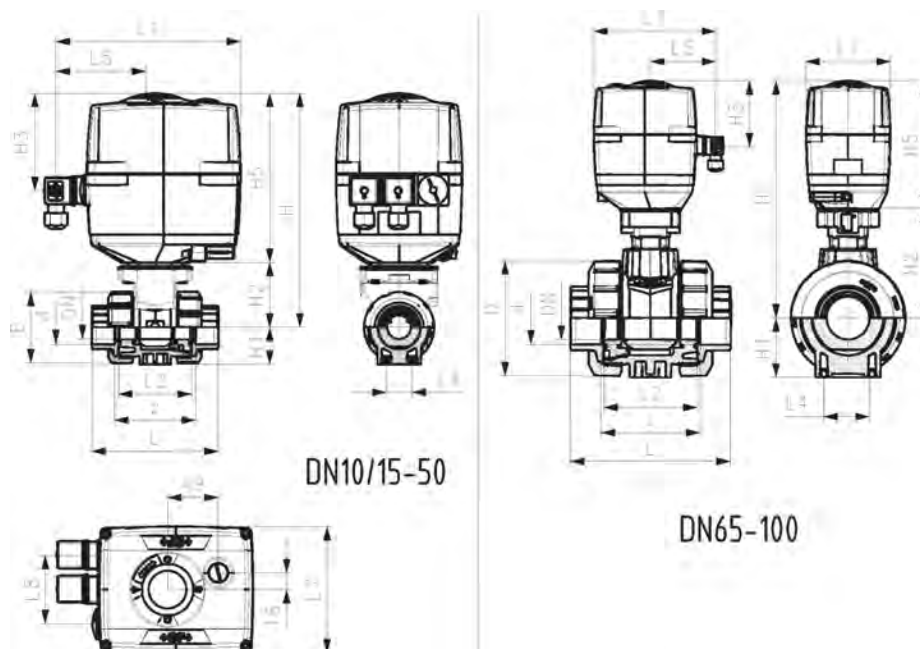
- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

Size	DN	PN	kv-value	EA	EPDM	Weight	FKM	Weight
(inch)	(mm)	(bar)	( $\Delta p=1$ bar)		Code	(kg)	Code	(kg)
			(l/min)					
3/8	10	10	70	EA25	<b>199 183 002</b>	2.100	<b>199 183 012</b>	2.100
1/2	15	10	185	EA25	<b>199 183 003</b>	2.100	<b>199 183 013</b>	2.100
3/4	20	10	350	EA25	<b>199 183 004</b>	2.200	<b>199 183 014</b>	2.200
1	25	10	700	EA25	<b>199 183 005</b>	2.661	<b>199 183 015</b>	2.300
1 1/4	32	10	1000	EA25	<b>199 183 006</b>	2.600	<b>199 183 016</b>	2.600
1 1/2	40	10	1600	EA25	<b>199 183 007</b>	3.000	<b>199 183 017</b>	3.000
2	50	10	3100	EA25	<b>199 183 008</b>	3.800	<b>199 183 018</b>	3.800
2 1/2	65	10	5000	EA45	<b>199 183 009</b>	7.400	<b>199 183 019</b>	7.400
3	80	10	7000	EA120	<b>199 183 010</b>	9.800	<b>199 183 020</b>	9.800
4	100	10	11000	EA120	<b>199 183 011</b>	13.900	<b>199 183 021</b>	13.900

Size	D	H	H1	H2	H3	H5	L	L1	L2	L4	L5	L7	z
(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
3/8	50	231	27	64	94	167	92	180	56	25	97	122	60
1/2	50	231	27	64	94	167	95	180	56	25	97	122	60
3/4	58	240	30	73	94	167	110	180	65	25	97	122	69
1	68	240	36	73	94	167	123	180	71	25	97	122	75
1 1/4	84	251	44	84	94	167	146	180	85	45	97	122	89
1 1/2	97	251	51	84	94	167	157	180	89	45	97	122	97
2	124	273	64	106	94	167	183	180	101	45	97	122	110
2 1/2	166	347	85	156	94	190	233	180	136	70	98	122	144
3	200	358	105	168	94	190	254	180	141	70	98	122	151
4	238	365	123	175	94	190	301	180	164	120	98	122	174





**Ball valve type 183 PVC-U 24V**  
**With manual emergency override**  
**With solvent cement sockets Inch BS**

**Model:**

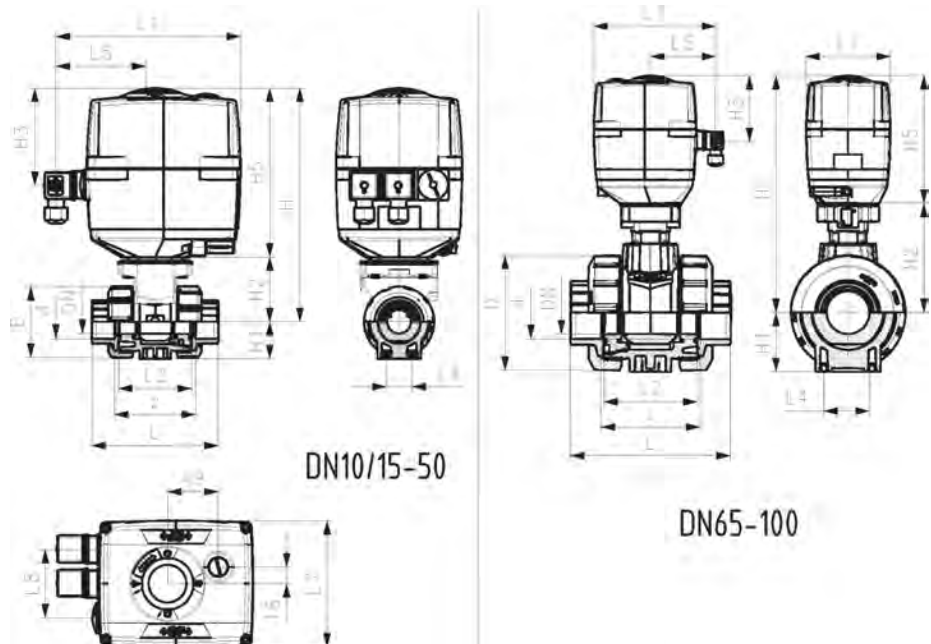
- Voltage 24V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
3/8	10	10	70	EA25	<b>199 183 042</b>	2.100	<b>199 183 052</b>	2.100
1/2	15	10	185	EA25	<b>199 183 043</b>	2.100	<b>199 183 053</b>	2.100
3/4	20	10	350	EA25	<b>199 183 044</b>	2.200	<b>199 183 054</b>	2.200
1	25	10	700	EA25	<b>199 183 045</b>	2.642	<b>199 183 055</b>	2.300
1 1/4	32	10	1000	EA25	<b>199 183 046</b>	2.600	<b>199 183 056</b>	2.899
1 1/2	40	10	1600	EA25	<b>199 183 047</b>	3.000	<b>199 183 057</b>	3.000
2	50	10	3100	EA25	<b>199 183 048</b>	3.800	<b>199 183 058</b>	3.800
2 1/2	65	10	5000	EA45	<b>199 183 049</b>	7.400	<b>199 183 059</b>	7.400
3	80	10	7000	EA120	<b>199 183 050</b>	9.442	<b>199 183 060</b>	9.800
4	100	10	11000	EA120	<b>199 183 051</b>	13.900	<b>199 183 061</b>	13.900

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	z (mm)
3/8	50	231	27	64	94	167	92	180	56	25	97	122	60
1/2	50	231	27	64	94	167	95	180	56	25	97	122	60
3/4	58	240	30	73	94	167	110	180	65	25	97	122	69
1	68	240	36	73	94	167	123	180	71	25	97	122	75
1 1/4	84	251	44	84	94	167	146	180	85	45	97	122	89
1 1/2	97	251	51	84	94	167	157	180	89	45	97	122	97
2	124	273	64	106	94	167	183	180	101	45	97	122	110
2 1/2	166	346	85	156	94	190	233	180	136	70	98	122	144
3	200	358	105	168	94	190	254	180	141	70	98	122	151
4	238	365	123	175	94	190	301	180	164	120	98	122	174



# Ball valves electric type 184



**Ball valve type 184 PVC-U 100-230V**  
**With manual emergency override**  
**With solvent cement sockets JIS**

**Model:**

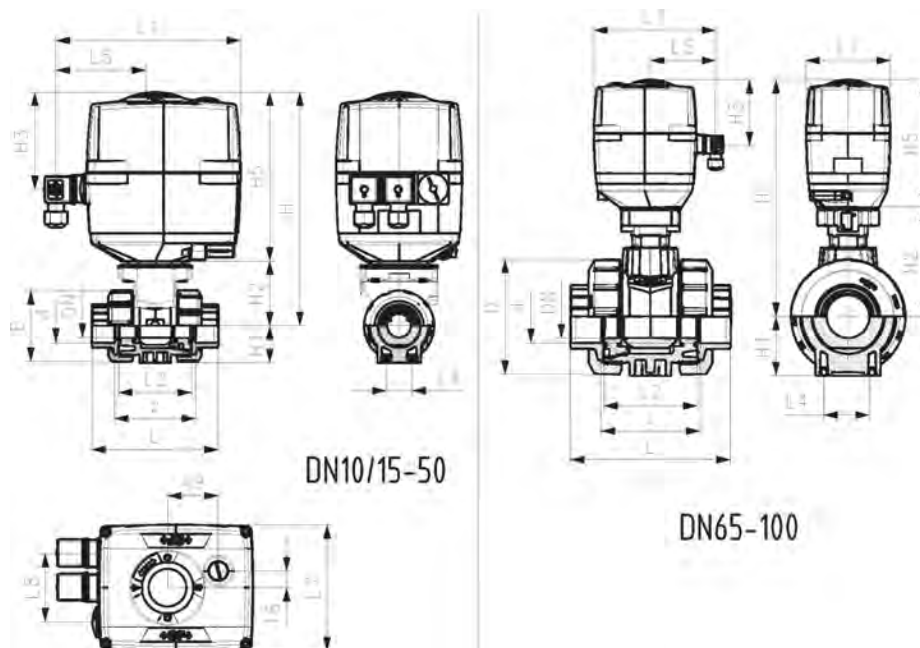
- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

Size	DN	PN	kv-value	EA	EPDM	Weight	FKM	Weight
(inch)	(mm)	(bar)	( $\Delta p=1$ bar)		Code	(kg)	Code	(kg)
			(L/min)					
½	15	10	185	EA25	<b>199 184 003</b>	2.100	<b>199 184 013</b>	2.100
¾	20	10	350	EA25	<b>199 184 004</b>	2.618	<b>199 184 014</b>	2.200
1	25	10	700	EA25	<b>199 184 005</b>	2.737	<b>199 184 015</b>	2.300
1 ¼	32	10	1000	EA25	<b>199 184 006</b>	2.600	<b>199 184 016</b>	2.600
1 ½	40	10	1600	EA25	<b>199 184 007</b>	3.238	<b>199 184 017</b>	3.000
2	50	10	3100	EA25	<b>199 184 008</b>	3.800	<b>199 184 018</b>	3.800
2 ½	65	10	5000	EA45	<b>199 184 009</b>	7.300	<b>199 184 019</b>	7.300
3	80	10	7000	EA120	<b>199 184 010</b>	9.800	<b>199 184 020</b>	9.800
4	100	10	11000	EA120	<b>199 184 011</b>	14.000	<b>199 184 021</b>	14.000

Size	D	H	H1	H2	H3	H5	L	L1	L2	L4	L5	L7	z
(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
½	50	231	27	64	94	167	95	180	56	25	97	122	64
¾	58	240	30	73	94	167	110	180	65	25	97	122	72
1	68	240	36	73	94	167	123	180	71	25	97	122	79
1 ¼	84	251	44	84	94	167	146	180	85	45	97	122	94
1 ½	97	251	51	84	94	167	157	180	89	45	97	122	95
2	124	273	64	106	94	167	183	180	101	45	97	122	107
2 ½	166	347	85	156	94	190	233	180	136	70	98	122	144
3	200	358	105	168	94	190	254	180	141	70	98	122	151
4	238	365	123	175	94	190	301	180	164	120	98	122	174





DN10/15 - 50

**Ball valve type 184 PVC-U 100-230V**  
**With manual emergency override**  
**With fixed flanges JIS**

**Model:**

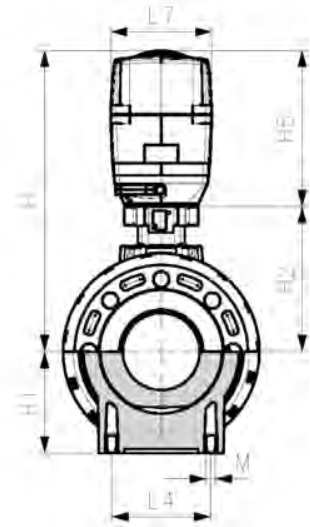
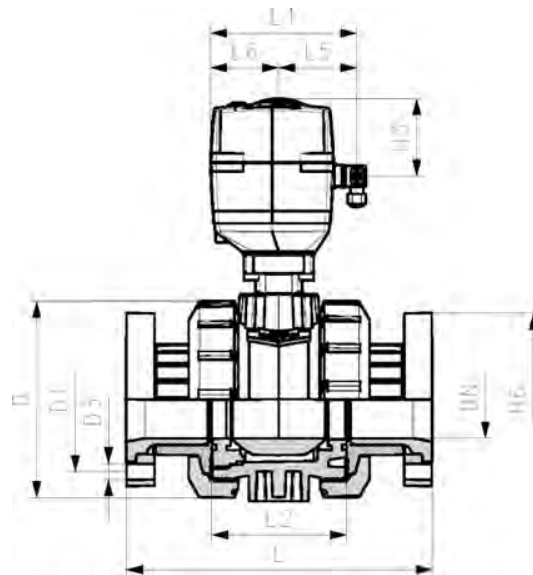
- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
½	15	10	185	EA25	<b>199 184 043</b>	2.300	<b>199 184 053</b>	2.300
¾	20	10	350	EA25	<b>199 184 044</b>	2.500	<b>199 184 054</b>	2.500
1	25	10	700	EA25	<b>199 184 045</b>	2.700	<b>199 184 055</b>	2.700
1 ¼	32	10	1000	EA25	<b>199 184 046</b>	3.200	<b>199 184 056</b>	3.200
1 ½	40	10	1600	EA25	<b>199 184 047</b>	3.700	<b>199 184 057</b>	3.700
2	50	10	3100	EA25	<b>199 184 048</b>	4.800	<b>199 184 058</b>	4.800

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)
½	58	231	30	73	94	167	53	143	180	65	25	97	83	122	66
¾	50	240	27	64	94	167	48	172	180	56	25	97	83	122	66
1	68	240	36	73	94	167	58	187	180	71	25	97	83	122	66
1 ¼	84	251	44	84	94	167	70	190	180	85	45	97	83	122	66
1 ½	97	251	51	84	94	167	75	212	180	89	45	97	83	122	66
2	124	273	64	106	94	167	83	234	180	101	45	97	83	122	66





**Ball valve type 184 PVC-U 100-230V**  
**With manual emergency override**  
**With backing flanges PVC-U JIS**

**Model:**

- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

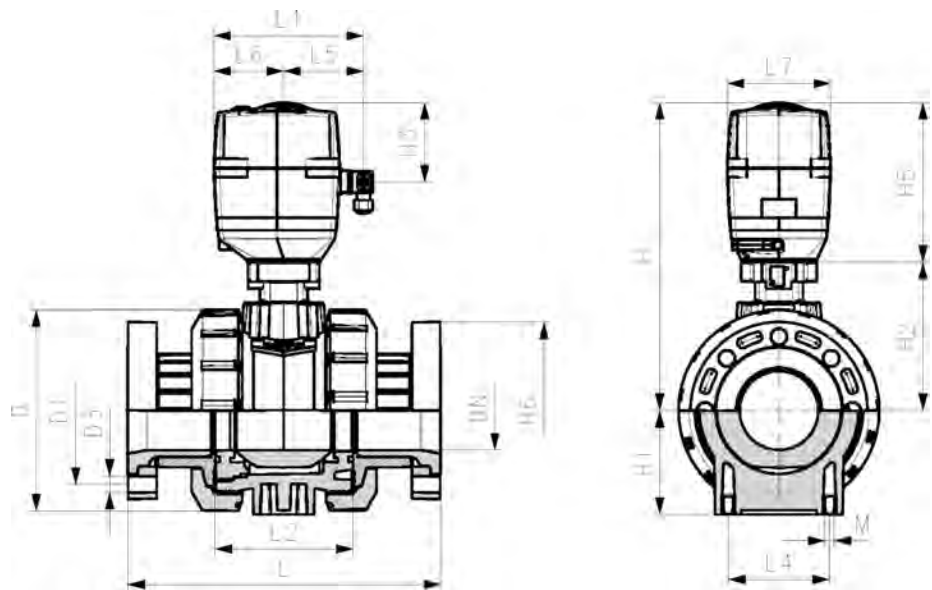
**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

Size	DN	PN	kv-value	EA	EPDM	Weight	FKM	Weight
(inch)	(mm)	(bar)	( $\Delta p=1$ bar)		Code	(kg)	Code	(kg)
			(l/min)					
2 ½	65	10	5000	EA45	<b>199 184 349</b>	9.800	<b>199 184 359</b>	9.800
3	80	10	7000	EA120	<b>199 184 350</b>	13.300	<b>199 184 360</b>	13.300
4	100	10	11000	EA120	<b>199 184 351</b>	18.900	<b>199 184 361</b>	18.900

Size	D	H	H1	H2	H3	H5	H6	L	L1	L2	L3	L4	L5	L6	L7
(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
2 ½	166	346	85	156	94	190	88	284	180	136	290	70	98	83	122
3	200	358	105	168	94	190	93	300	180	141	310	70	98	83	122
4	238	365	123	175	94	190	105	340	180	164	350	120	98	83	122

Size	L8
(inch)	(mm)
2 ½	66
3	66
4	66





**Ball valve type 184 PVC-U 24V**  
**With manual emergency override**  
**With solvent cement sockets JIS**

**Model:**

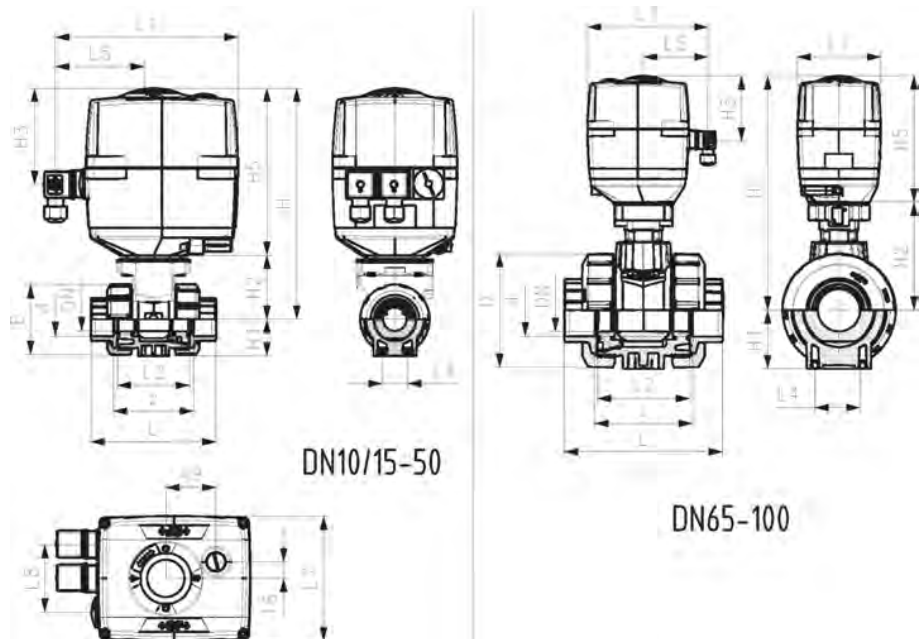
- Voltage 24V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

Size (inch)	DN (mm)	PN (bar)	kv-100- value ( $\Delta p=1$ bar) (L/min)	EA	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
½	15	10	185	EA25	<b>199 184 023</b>	2.100	<b>199 184 033</b>	2.100
¾	20	10	350	EA25	<b>199 184 024</b>	2.200	<b>199 184 034</b>	2.200
1	25	10	700	EA25	<b>199 184 025</b>	2.300	<b>199 184 035</b>	2.300
1 ¼	32	10	1000	EA25	<b>199 184 026</b>	2.600	<b>199 184 036</b>	2.600
1 ½	40	10	1600	EA25	<b>199 184 027</b>	3.000	<b>199 184 037</b>	3.000
2	50	10	3100	EA25	<b>199 184 028</b>	3.800	<b>199 184 038</b>	3.800
2 ½	65	10	5000	EA45	<b>199 184 029</b>	7.300	<b>199 184 039</b>	7.300
3	80	10	7000	EA120	<b>199 184 030</b>	9.800	<b>199 184 040</b>	9.800
4	100	10	11000	EA120	<b>199 184 031</b>	14.000	<b>199 184 041</b>	14.000

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	z (mm)
½	50	231	27	64	94	167	95	180	56	25	97	122	64
¾	58	240	30	73	94	167	110	180	65	25	97	122	72
1	68	240	36	73	94	167	123	180	71	25	97	122	79
1 ¼	84	251	44	84	94	167	146	180	85	45	97	122	94
1 ½	97	251	51	84	94	167	157	180	89	45	97	122	95
2	124	273	64	106	94	167	183	180	101	45	97	122	107
2 ½	166	346	85	156	94	190	233	180	136	70	98	122	144
3	200	358	105	168	94	190	254	180	141	70	98	122	151
4	238	365	123	175	94	190	301	180	164	120	98	122	174



# Ball valves electric type 104



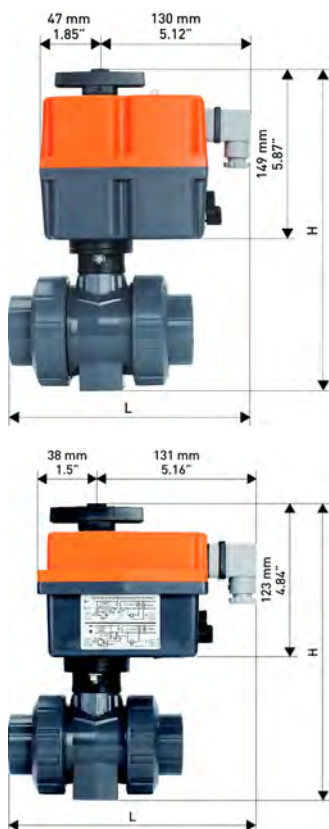
## Ball valve type 104 PVC-U 100-230V With solvent cement sockets Inch BS

### Model:

- Voltage according data sheet
- Control range 90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	Voltage	EPDM Code	SP	Weight (kg)	FKM Code
16	10	3/8	10	70	100-230V	199 104 402	1	0.995	199 104 412
20	15	1/2	10	185	100-230V	199 104 403	1	0.995	199 104 413
25	20	3/4	10	350	100-230V	199 104 404	1	1.050	199 104 414
32	25	1	10	700	100-230V	199 104 405	1	1.120	199 104 415
40	32	1 1/4	10	1000	100-230V	199 104 406	1	1.290	199 104 416
	40		10	1600	24-240V	199 104 447	1	2.010	199 104 457
	50		10	3100	24-240V	199 104 448	1	2.395	199 104 458

H (mm)	L (mm)	Type of actuator	Inch (inch)	B (mm)
194	178.5	10Nm	3/8	50
194	178.5	10Nm	1/2	50
207	186.0	10Nm	3/4	58
217	192.5	10Nm	1	68
236	204.5	10Nm	1 1/4	84
275	208.5	20Nm	1 1/2	97
307	221.5	20Nm	2	124



## Ball valve type 104 PVC-U 100-230V With solvent cement sockets JIS

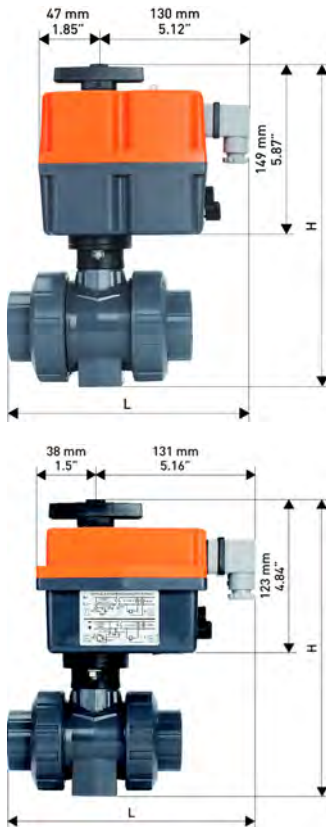
### Model:

- Voltage according data sheet
- Control range 90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	Voltage	EPDM Code	SP	Weight (kg)	FKM Code
20	15	1/2	10	185	100-230V	199 104 483	1	0.995	199 104 493
25	20	3/4	10	350	100-230V	199 104 484	1	1.050	199 104 494
32	25	1	10	700	100-230V	199 104 485	1	1.120	199 104 495
40	32	1 1/4	10	1000	100-230V	199 104 486	1	1.290	199 104 496
	40		10	1600	24-240V	199 104 867	1	2.010	199 104 877
	50		10	3100	24-240V	199 104 868	1	2.395	199 104 878

H (mm)	L (mm)	Type of actuator	Inch (inch)	B (mm)
194	178.5	10Nm	1/2	50
204	186.0	10Nm	3/4	58
217	192.5	10Nm	1	68
236	204.5	10Nm	1 1/4	84
275	208.5	20Nm	1 1/2	97
307	221.5	20Nm	2	124





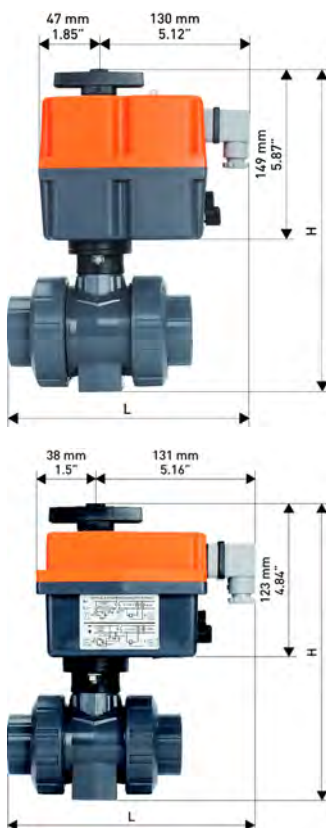
### Ball valve type 104 PVC-U 24V With solvent cement sockets Inch BS

#### Model:

- Voltage according data sheet
- Control range 90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (L/min)	Voltage	EPDM Code	SP	Weight (kg)	FKM Code
16	10	3/8	10	70	24V	199 104 442	1	0.995	199 104 452
20	15	1/2	10	185	24V	199 104 443	1	0.995	199 104 453
25	20	3/4	10	350	24V	199 104 444	1	1.050	199 104 454
32	25	1	10	700	24V	199 104 445	1	1.120	199 104 455
40	32	1 1/4	10	1000	24V	199 104 446	1	1.290	199 104 456
	40		10	1600	24-240V	199 104 447	1	2.010	199 104 457
	50		10	3100	24-240V	199 104 448	1	2.395	199 104 458

H (mm)	L (mm)	Type of actuator	Inch (inch)	B (mm)
194	178.5	10Nm	3/8	50
194	178.5	10Nm	1/2	50
207	186.0	10Nm	3/4	58
217	192.5	10Nm	1	68
236	204.5	10Nm	1 1/4	84
275	208.5	20Nm	1 1/2	97
307	221.5	20Nm	2	124



### Ball valve type 104 PVC-U 24V With solvent cement sockets JIS

#### Model:

- Voltage according data sheet
- Control range 90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (L/min)	Voltage	EPDM Code	SP	Weight (kg)	FKM Code
	15		10	185	24V	199 104 863	1	0.995	199 104 873
25	20	3/4	10	350	24V	199 104 864	1	1.050	199 104 874
32	25	1	10	700	24V	199 104 865	1	1.120	199 104 875
40	32	1 1/4	10	1000	24V	199 104 866	1	1.290	199 104 876
	40		10	1600	24-240V	199 104 867	1	2.010	199 104 877
	50		10	3100	24-240V	199 104 868	1	2.395	199 104 878

H (mm)	L (mm)	Type of actuator	Inch (inch)	B (mm)
194	178.5	10Nm	1/2	50
207	186.0	10Nm	3/4	58
217	192.5	10Nm	1	68
236	204.5	10Nm	1 1/4	84
275	208.5	20Nm	1 1/2	97
307	221.5	20Nm	2	124

# Ball valves pneumatic



DN10/15 - 50

**Ball valve type 234 PVC-U**  
**FC (Fail safe to close)**  
**With manual override**  
**With solvent cement sockets Inch BS**

**Model:**

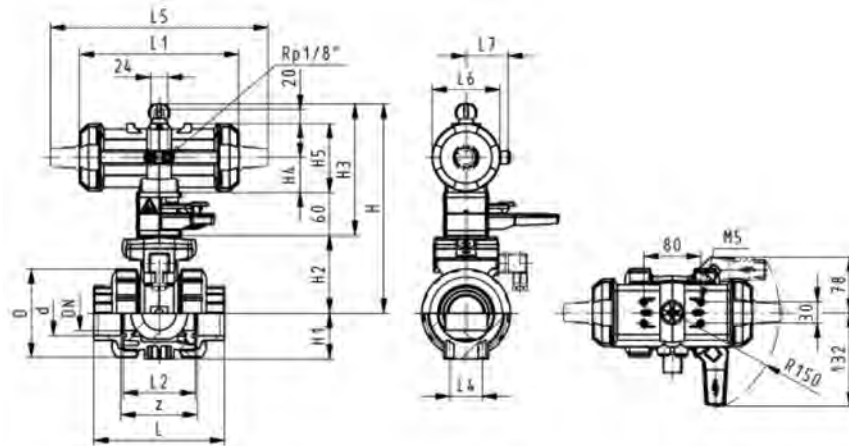
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°<) 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
10	3/8	10	70	199 234 002	1	1.500	199 234 012	1	1.500
15	1/2	10	185	199 234 003	1	1.500	199 234 013	1	1.500
20	3/4	10	350	199 234 004	1	1.362	199 234 014	1	1.600
25	1	10	700	199 234 005	1	1.468	199 234 015	1	1.469
32	1 1/4	10	1000	199 234 006	1	2.800	199 234 016	1	2.800
40	1 1/2	10	1600	199 234 007	1	3.100	199 234 017	1	3.100
50	2	10	3100	199 234 008	1	4.000	199 234 018	1	3.452

D	H	H1	H2	H3	H4	H5	L	L1	L2	L4	L5	L6	L7	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	230	27	62	168	40	77	92	194	56	25	261	76	48	60
50	230	27	62	168	40	77	95	194	56	25	261	76	48	60
58	239	30	71	168	40	77	110	194	65	25	261	76	48	69
68	239	36	71	168	40	77	123	194	71	25	261	76	48	75
84	271	44	84	187	51	99	146	224	85	45	305	95	59	89
97	271	51	84	187	51	99	157	224	89	45	305	95	59	97
124	293	64	106	187	51	99	183	224	101	45	305	95	59	110





DN10/15 - 50

**Ball valve type 234 PVC-U**  
**FO (Fail safe to open)**  
**With manual override**  
**With solvent cement sockets Inch BS**

**Model:**

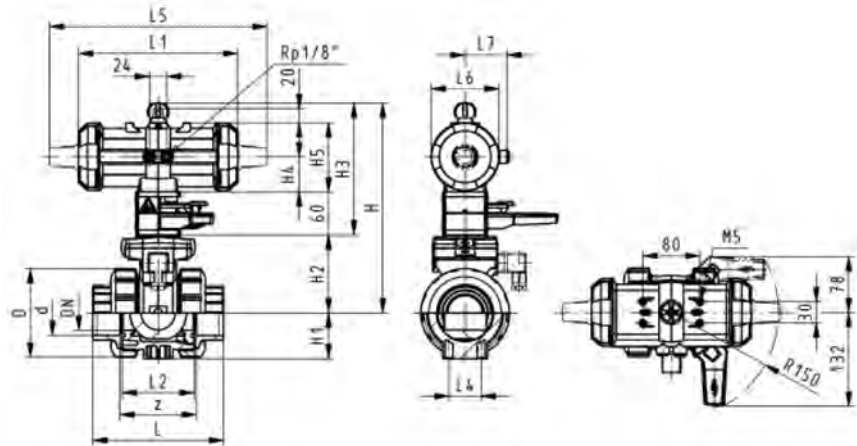
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90° < 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
10	3/8	10	70	199 234 042	1	1.500	199 234 052	1	1.500
15	1/2	10	185	199 234 043	1	1.500	199 234 053	1	1.500
20	3/4	10	350	199 234 044	1	1.600	199 234 054	1	1.600
25	1	10	700	199 234 045	1	1.700	199 234 055	1	1.700
32	1 1/4	10	1000	199 234 046	1	2.800	199 234 056	1	2.800
40	1 1/2	10	1600	199 234 047	1	3.100	199 234 057	1	3.100
50	2	10	3100	199 234 048	1	4.000	199 234 058	1	4.000

D	H	H1	H2	H3	H4	H5	L	L1	L2	L4	L5	L6	L7	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	230	27	62	168	40	77	92	194	56	25	261	76	48	60
50	230	27	62	168	40	77	95	194	56	25	261	76	48	60
58	239	30	71	168	40	77	110	194	65	25	261	76	48	69
68	239	36	71	168	40	77	123	194	71	25	261	76	48	75
84	271	44	84	187	51	99	146	224	85	45	305	95	59	89
97	271	51	84	187	51	99	157	224	89	45	305	95	59	97
124	293	64	106	187	51	99	183	224	101	45	305	95	59	110





DN10/15 - 50

**Ball valve type 234 PVC-U**  
**DA (Double acting)**  
**With manual override**  
**With solvent cement sockets Inch BS**

**Model:**

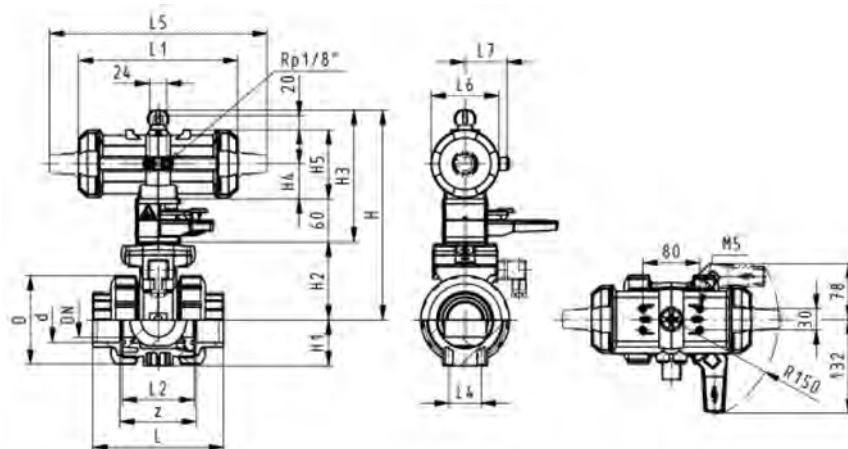
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°< 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
10	3/8	10	70	199 234 082	1	1.500	199 234 092	1	1.500
15	1/2	10	185	199 234 083	1	1.500	199 234 093	1	1.500
20	3/4	10	350	199 234 084	1	1.600	199 234 094	1	1.600
25	1	10	700	199 234 085	1	1.237	199 234 095	1	1.700
32	1 1/4	10	1000	199 234 086	1	2.800	199 234 096	1	2.800
40	1 1/2	10	1600	199 234 087	1	3.100	199 234 097	1	3.100
50	2	10	3100	199 234 088	1	4.000	199 234 098	1	4.000

D	H	H1	H2	H3	H4	H5	L	L1	L2	L4	L5	L6	L7	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	230	27	62	168	40	77	92	194	56	25	261	76	48	60
50	230	27	62	168	40	77	95	194	56	25	261	76	48	60
58	239	30	71	168	40	77	110	194	65	25	261	76	48	69
68	239	36	71	168	40	77	123	194	71	25	261	76	48	75
84	271	44	84	187	51	99	146	224	85	45	305	95	59	89
97	271	51	84	187	51	99	157	224	89	45	305	95	59	97
124	293	64	106	187	51	99	183	224	101	45	305	95	59	110





DN10/15 - 50



**Ball valve type 234 PVC-U  
FC (Fail safe to close)  
Without manual override  
With solvent cement sockets Inch BS**

**Model:**

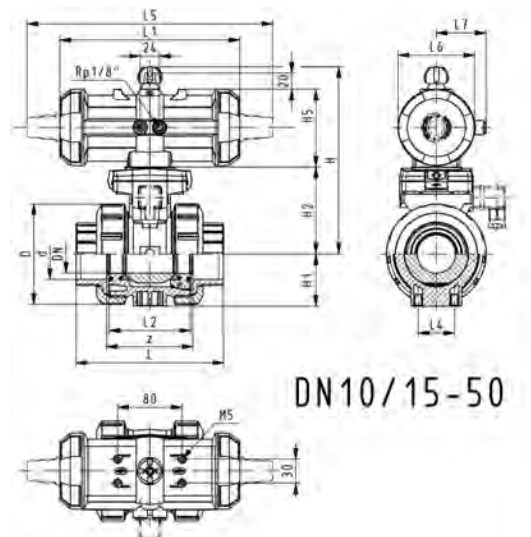
- Control time  $90^\circ <$  1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA40 (DN80), PA40 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

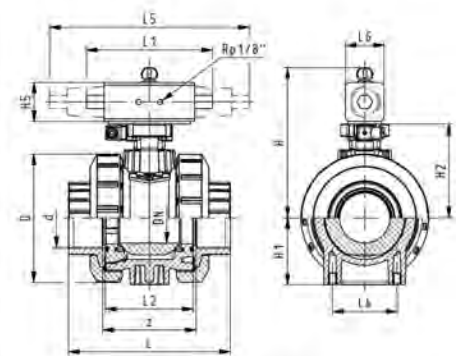
- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
10	3/8	10	70	199 234 122	1	1.200	199 234 132	1	1.200
15	1/2	10	185	199 234 123	1	1.200	199 234 133	1	1.200
20	3/4	10	350	199 234 124	1	1.300	199 234 134	1	1.300
25	1	10	700	199 234 125	1	1.400	199 234 135	1	1.400
32	1 1/4	10	1000	199 234 126	1	2.500	199 234 136	1	2.500
40	1 1/2	10	1600	199 234 127	1	2.800	199 234 137	1	2.800
50	2	10	3100	199 234 128	1	3.700	199 234 138	1	3.700
65	2 1/2	10	5000	199 234 129	1	7.800	199 234 139	1	7.800
80	3	10	7000	199 234 130	1	10.200	199 234 140	1	10.200
100	4	10	11000	199 234 131	1	15.300	199 234 141	1	15.300

D	H	H1	H2	H5	L	L1	L2	L4	L5	L6	L7	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	159	27	62	77	92	194	56	25	261	76	48	60
50	159	27	62	77	95	194	56	25	261	76	48	60
58	168	30	71	77	110	194	65	25	261	76	48	69
68	168	36	71	77	123	194	71	25	261	76	48	75
84	202	44	84	99	146	224	85	45	305	95	59	89
97	202	51	84	99	157	224	89	45	305	95	59	97
124	225	64	106	99	183	224	101	45	305	95	59	110
166	262	85	156	70	233		136	70	276	65		144
200	281	105	168	78	254		141	70	341	72		151
238	292	123	175	86	301		164	120	369	80		174



DN10/15-50



DN65-100



DN10/15 - 50



**Ball valve type 234 PVC-U**  
**FO (Fail safe to open)**  
**Without manual override**  
**With solvent cement sockets Inch BS**

**Model:**

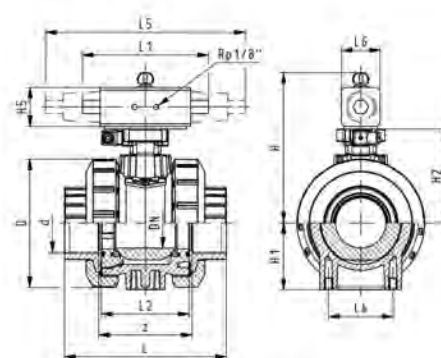
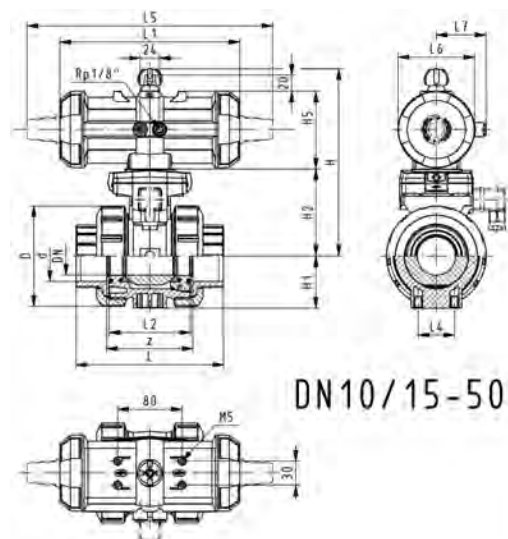
- Control time 90° < 1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA40 (DN80), PA40 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
10	3/8	10	70	199 234 162	1	1.200	199 234 172	1	1.200
15	1/2	10	185	199 234 163	1	1.200	199 234 173	1	1.200
20	3/4	10	350	199 234 164	1	1.300	199 234 174	1	1.300
25	1	10	700	199 234 165	1	1.400	199 234 175	1	1.400
32	1 1/4	10	1000	199 234 166	1	2.500	199 234 176	1	2.500
40	1 1/2	10	1600	199 234 167	1	2.800	199 234 177	1	2.800
50	2	10	3100	199 234 168	1	3.700	199 234 178	1	3.700
65	2 1/2	10	5000	199 234 169	1	7.800	199 234 179	1	7.800
80	3	10	7000	199 234 170	1	10.200	199 234 180	1	10.200
100	4	10	11000	199 234 171	1	15.300	199 234 181	1	15.300

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	z (mm)
50	159	27	62	77	92	194	56	25	261	76	48	60
50	159	27	62	77	95	194	56	25	261	76	48	60
58	168	30	71	77	110	194	65	25	261	76	48	69
68	168	36	71	77	123	194	71	25	261	76	48	75
84	202	44	84	99	146	224	85	45	305	95	59	89
97	202	51	84	99	157	224	89	45	305	95	59	97
124	225	64	106	99	183	224	101	45	305	95	59	110
166	262	85	156	70	233		136	70	276	65		144
200	281	105	168	78	254		141	70	341	72		151
238	292	123	175	86	301		164	120	369	80		174





DN10/15 - 50



**Ball valve type 234 PVC-U  
DA (Double acting)  
Without manual override  
With solvent cement sockets Inch BS**

**Model:**

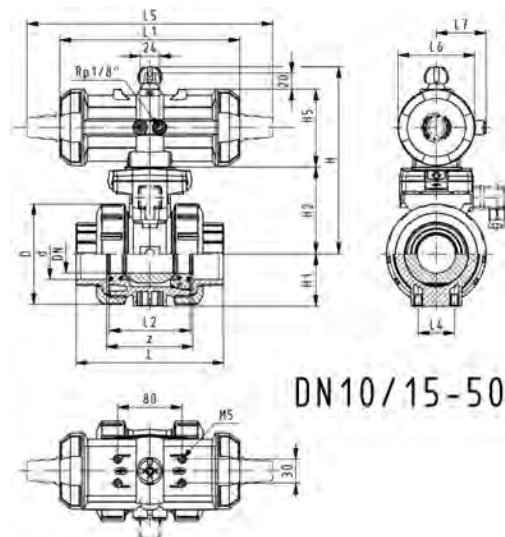
- Control time 90°< 1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

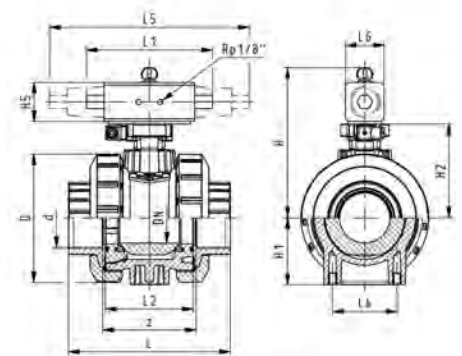
- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
10	3/8	10	70	199 234 202	1	1.200	199 234 212	1	1.200
15	1/2	10	185	199 234 203	1	1.200	199 234 213	1	1.200
20	3/4	10	350	199 234 204	1	1.300	199 234 214	1	1.300
25	1	10	700	199 234 205	1	1.400	199 234 215	1	1.400
32	1 1/4	10	1000	199 234 206	1	2.500	199 234 216	1	2.500
40	1 1/2	10	1600	199 234 207	1	2.800	199 234 217	1	2.800
50	2	10	3100	199 234 208	1	3.700	199 234 218	1	3.700
65	2 1/2	10	5000	199 234 209	1	6.600	199 234 219	1	6.600
80	3	10	7000	199 234 210	1	9.600	199 234 220	1	9.600
100	4	10	11000	199 234 211	1	13.600	199 234 221	1	13.600

D	H	H1	H2	H5	L	L1	L2	L4	L5	L6	L7	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	159	27	62	77	92	194	56	25	261	76	48	60
50	159	27	62	77	95	194	56	25	261	76	48	60
58	168	30	71	77	110	194	65	25	261	76	48	69
68	168	36	71	77	123	194	71	25	261	76	48	75
84	202	44	84	99	146	224	85	45	305	95	59	89
97	202	51	84	99	157	224	89	45	305	95	59	97
124	225	64	106	99	183	224	101	45	305	95	59	110
166	257	85	156	66	233	144	136	70		60		144
200	274	105	168	70	254	152	141	70		65		151
238	273	123	175	78	301	169	164	120		72		174



DN10/15-50



DN65-100



DN10/15 - 50

**Ball valve type 235 PVC-U**  
**FC (Fail safe to close)**  
**With manual override**  
**With solvent cement sockets JIS**

**Model:**

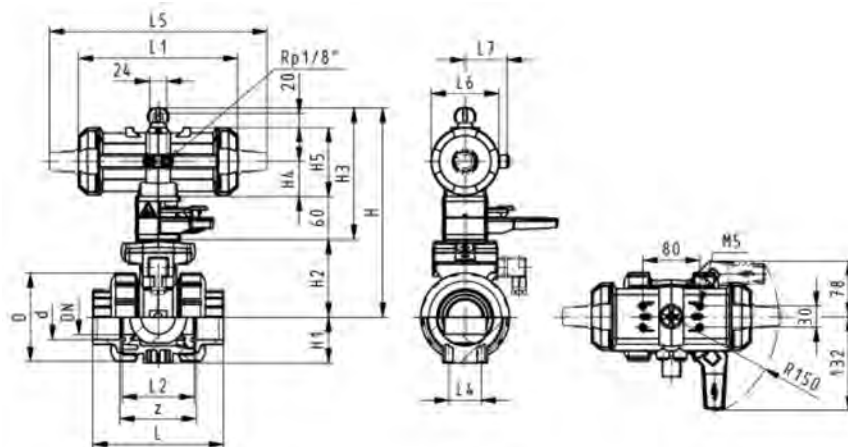
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°<) 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
15	½	10	185	199 235 003	1	1.500	199 235 013
20	¾	10	350	199 235 004	1	1.600	199 235 014
25	1	10	700	199 235 005	1	1.700	199 235 015
32	1 ¼	10	1000	199 235 006	1	2.800	199 235 016
40	1 ½	10	1600	199 235 007	1	3.100	199 235 017
50	2	10	3100	199 235 008	1	4.000	199 235 018

D	H	H1	H2	H3	H4	H5	L	L1	L2	L4	L5	L6	L7	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	230	27	62	168	40	77	95	194	56	25	261	76	48	64
58	239	30	71	168	40	77	110	194	65	25	261	76	48	72
68	239	36	71	168	40	77	123	194	71	25	261	76	48	79
84	271	44	84	187	51	99	146	224	85	45	305	95	59	94
97	271	51	84	187	51	99	157	224	89	45	305	95	59	95
124	293	64	106	187	51	99	183	224	101	45	305	95	59	107







DN10/15 - 50

**Ball valve type 235 PVC-U**  
**FC (Fail safe to close)**  
**With manual override**  
**With threaded sockets Rc**

**Model:**

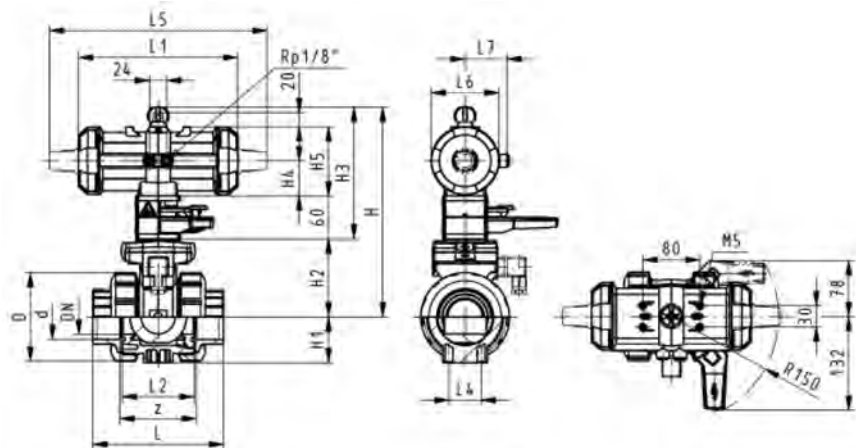
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°<) 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
15	½	10	185	<b>199 235 543</b>	1	1.500	<b>199 235 553</b>	1	1.500
20	¾	10	350	<b>199 235 544</b>	1	1.600	<b>199 235 554</b>	1	1.600
25	1	10	700	<b>199 235 545</b>	1	1.700	<b>199 235 555</b>	1	1.700
32	1 ¼	10	1000	<b>199 235 546</b>	1	2.800	<b>199 235 556</b>	1	2.800
40	1 ½	10	1600	<b>199 235 547</b>	1	3.100	<b>199 235 557</b>	1	3.100
50	2	10	3100	<b>199 235 548</b>	1	4.000	<b>199 235 558</b>	1	4.000

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	z (mm)
50	230	27	62	168	40	77	95	194	56	25	261	76	48	64
58	239	30	71	168	40	77	110	194	65	25	261	76	48	72
68	239	36	71	168	40	77	123	194	71	25	261	76	48	79
84	271	44	84	187	51	99	146	224	85	45	305	95	59	94
97	271	51	84	187	51	99	157	224	89	45	305	95	59	95
124	293	64	106	187	51	99	183	224	101	45	305	95	59	107





DN10/15 - 50



DN10/15 - 50

**Ball valve type 235 PVC-U  
FC (Fail safe to close)  
With manual override  
With fixed flanges JIS**

**Model:**

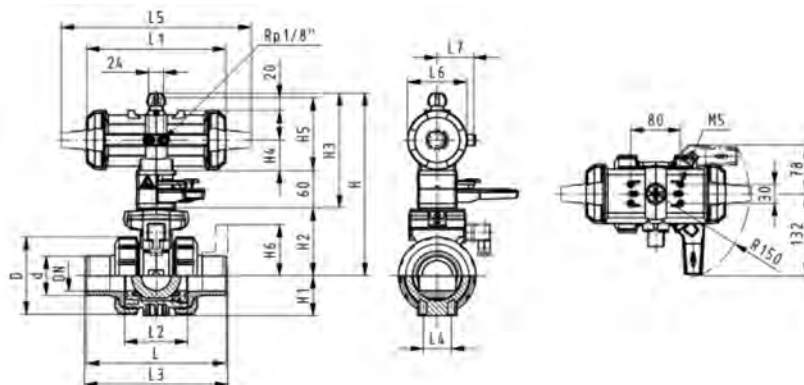
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°<) 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
15	½	10	185	199 235 123	1	1.700	199 235 133
20	¾	10	350	199 235 124	1	1.900	199 235 134
25	1	10	700	199 235 125	1	2.100	199 235 135
32	1 ¼	10	1000	199 235 126	1	3.400	199 235 136
40	1 ½	10	1600	199 235 127	1	3.800	199 235 137
50	2	10	3100	199 235 128	1	4.900	199 235 138

D	H	H1	H2	H3	H4	H5	H6	L	L1	L2	L3	L4	L5	L6	L7
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	230	27	62	168	40	77	48	124	194	56	143	25	261	76	48
58	239	30	71	168	40	77	53	144	194	65	172	25	261	76	48
68	239	36	71	168	40	77	58	154	194	71	187	25	261	76	48
84	271	44	84	187	51	99	70	174	224	85	190	45	305	95	59
97	271	51	84	187	51	99	75	194	224	89	212	45	305	95	59
124	293	64	106	187	51	99	83	224	224	101	234	45	305	95	59





DN10/15 - 50

**Ball valve type 235 PVC-U**  
**FO (Fail safe to open)**  
**With manual override**  
**With solvent cement sockets JIS**

**Model:**

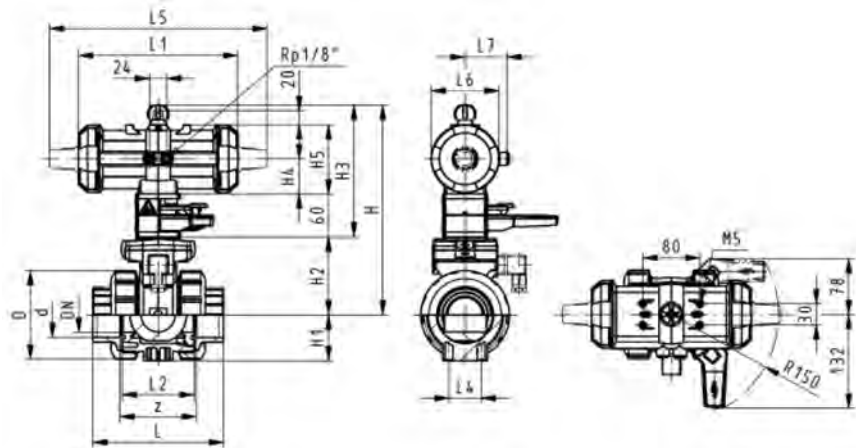
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°<) 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
15	½	10	185	199 235 023	1	1.500	199 235 033	1	1.500
20	¾	10	350	199 235 024	1	1.600	199 235 034	1	1.600
25	1	10	700	199 235 025	1	1.700	199 235 035	1	1.700
32	1 ¼	10	1000	199 235 026	1	2.800	199 235 036	1	2.800
40	1 ½	10	1600	199 235 027	1	3.100	199 235 037	1	3.100
50	2	10	3100	199 235 028	1	4.000	199 235 038	1	4.000

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	z (mm)
50	230	27	62	168	40	77	95	194	56	25	261	76	48	64
58	239	30	71	168	40	77	110	194	65	25	261	76	48	72
68	239	36	71	168	40	77	123	194	71	25	261	76	48	79
84	271	44	84	187	51	99	146	224	85	45	305	95	59	94
97	271	51	84	187	51	99	157	224	89	45	305	95	59	95
124	293	64	106	187	51	99	183	224	101	45	305	95	59	107





DN10/15 - 50

**Ball valve type 235 PVC-U**  
**FO (Fail safe to open)**  
**With manual override**  
**With threaded sockets Rc**

**Model:**

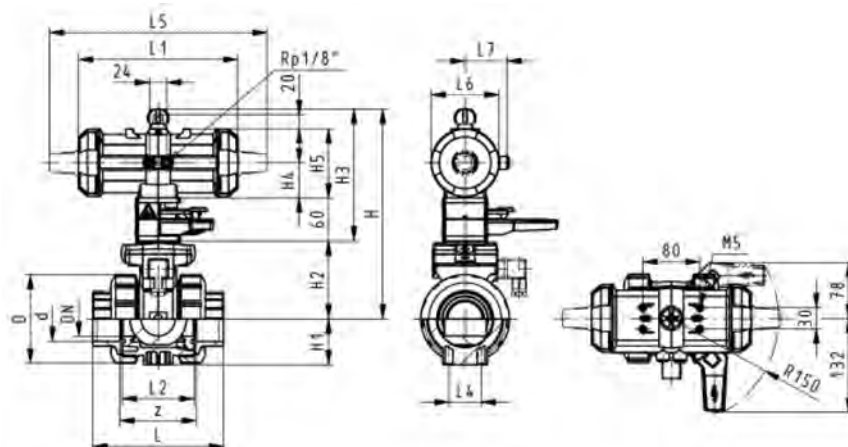
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°<) 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
15	½	10	185	<b>199 235 563</b>	1	1.500	<b>199 235 573</b>	1	1.500
20	¾	10	350	<b>199 235 564</b>	1	1.600	<b>199 235 574</b>	1	1.600
25	1	10	700	<b>199 235 565</b>	1	1.700	<b>199 235 575</b>	1	1.700
32	1 ¼	10	1000	<b>199 235 566</b>	1	2.800	<b>199 235 576</b>	1	2.800
40	1 ½	10	1600	<b>199 235 567</b>	1	3.100	<b>199 235 577</b>	1	3.100
50	2	10	3100	<b>199 235 568</b>	1	4.000	<b>199 235 578</b>	1	4.000

D	H	H1	H2	H3	H4	H5	L	L1	L2	L3	L4	L5	L6	L7
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	230	27	62	168	40	77	95	194	56	130	25	261	76	48
58	239	30	71	168	40	77	110	194	65	150	25	261	76	48
68	239	36	71	168	40	77	123	194	71	160	25	261	76	48
84	271	44	84	187	51	99	146	224	85	180	45	305	95	59
97	271	51	84	187	51	99	157	224	89	200	45	305	95	59
124	293	64	106	187	51	99	183	224	101	230	45	305	95	59





DN10/15 - 50

**Ball valve type 235 PVC-U  
FO (Fail safe to open)  
With manual override  
With fixed flanges JIS**

**Model:**

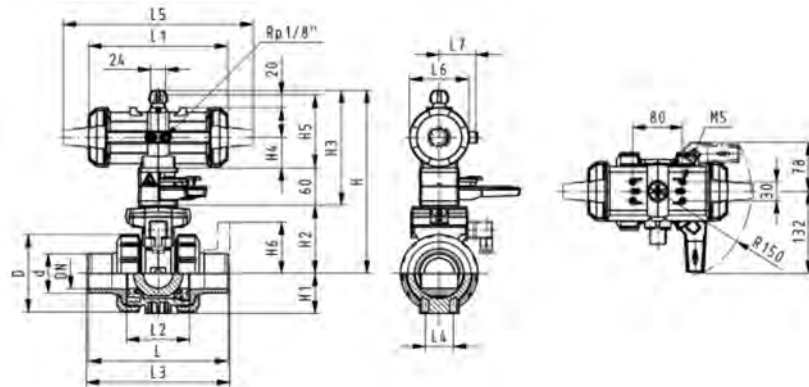
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°< 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
15	½	10	185	199 235 143	1	1.700	199 235 153	1	1.700
20	¾	10	350	199 235 144	1	1.900	199 235 154	1	1.900
25	1	10	700	199 235 145	1	2.100	199 235 155	1	2.100
32	1 ¼	10	1000	199 235 146	1	3.400	199 235 156	1	3.400
40	1 ½	10	1600	199 235 147	1	3.800	199 235 157	1	3.800
50	2	10	3100	199 235 148	1	4.900	199 235 158	1	4.900

D	H	H1	H2	H3	H4	H5	H6	L	L1	L2	L3	L4	L5	L6	L7
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	230	27	62	168	40	77	48	124	194	56	143	25	261	76	48
58	239	30	71	168	40	77	53	144	194	65	171	25	261	76	48
68	239	36	71	168	40	77	58	154	194	71	187	25	261	76	48
84	271	44	84	187	51	99	70	174	224	85	190	45	305	95	59
97	271	51	84	187	51	99	75	194	224	89	212	45	305	95	59
124	293	64	106	187	51	99	83	224	224	101	234	45	305	95	59





DN10/15 - 50

**Ball valve type 235 PVC-U**  
**DA (Double acting)**  
**With manual override**  
**With solvent cement sockets JIS**

**Model:**

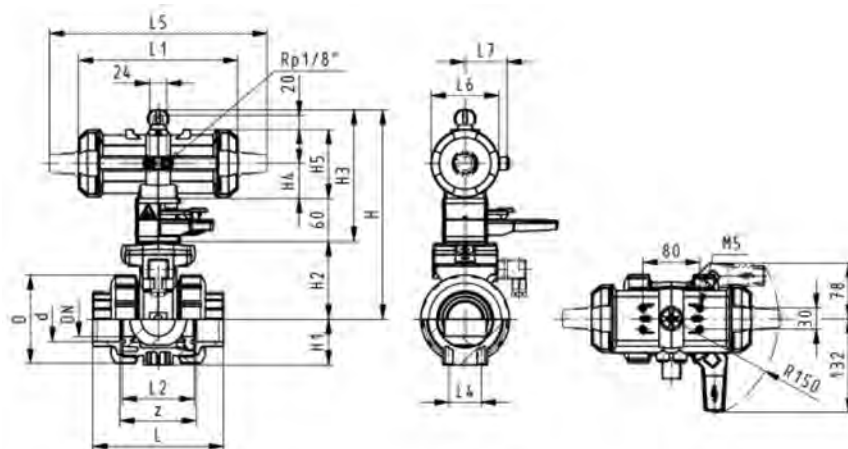
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°< 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
15	½	10	185	199 235 043	1	1.500	199 235 053
20	¾	10	350	199 235 044	1	1.600	199 235 054
25	1	10	700	199 235 045	1	1.700	199 235 055
32	1 ¼	10	1000	199 235 046	1	2.800	199 235 056
40	1 ½	10	1600	199 235 047	1	3.100	199 235 057
50	2	10	3100	199 235 048	1	4.000	199 235 058

D	H	H1	H2	H3	H4	H5	L	L1	L2	L4	L5	L6	L7	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	230	27	62	168	40	77	95	194	56	25	261	76	48	64
58	239	30	71	168	40	77	110	194	65	25	261	76	48	72
68	239	36	71	168	40	77	123	194	71	25	261	76	48	79
84	271	44	84	187	51	99	146	224	85	45	305	95	59	94
97	271	51	84	187	51	99	157	224	89	45	305	95	59	95
124	293	64	106	187	51	99	183	224	101	45	305	95	59	107







DN10/15 - 50

**Ball valve type 235 PVC-U  
DA (Double acting)  
With manual override  
With fixed flanges JIS**

**Model:**

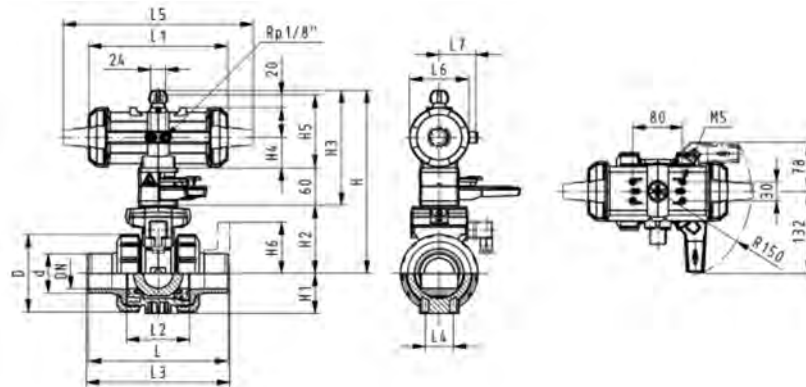
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°< 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
15	½	10	185	199 235 163	1	1.700	199 235 173	1	1.700
20	¾	10	350	199 235 164	1	1.900	199 235 174	1	1.900
25	1	10	700	199 235 165	1	2.100	199 235 175	1	2.100
32	1 ¼	10	1000	199 235 166	1	3.400	199 235 176	1	3.400
40	1 ½	10	1600	199 235 167	1	3.800	199 235 177	1	3.800
50	2	10	3100	199 235 168	1	4.900	199 235 178	1	4.900

D	H	H1	H2	H3	H4	H5	H6	L	L1	L2	L3	L4	L5	L6	L7
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	230	27	62	168	40	77	48	124	194	56	143	25	261	76	48
58	239	30	71	168	40	77	53	144	194	65	171	25	261	76	48
68	239	36	71	168	40	77	58	154	194	71	187	25	261	76	48
84	271	44	84	187	51	99	70	174	224	85	190	45	305	95	59
97	271	51	84	187	51	99	75	194	224	89	212	45	305	95	59
124	293	64	106	187	51	99	83	224	224	101	234	45	305	95	59







DN10/15 - 50



**Ball valve type 235 PVC-U  
FC (Fail safe to close)  
Without manual override  
With solvent cement sockets JIS**

**Model:**

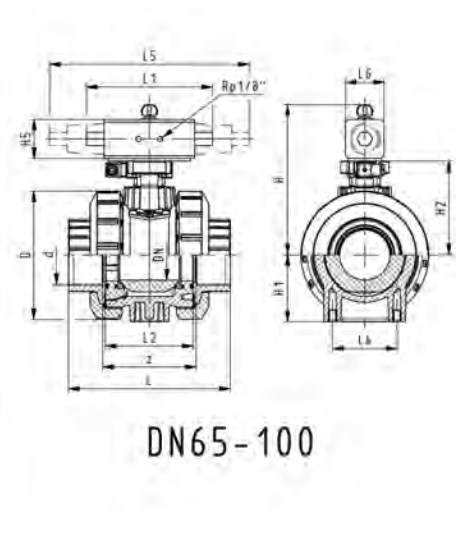
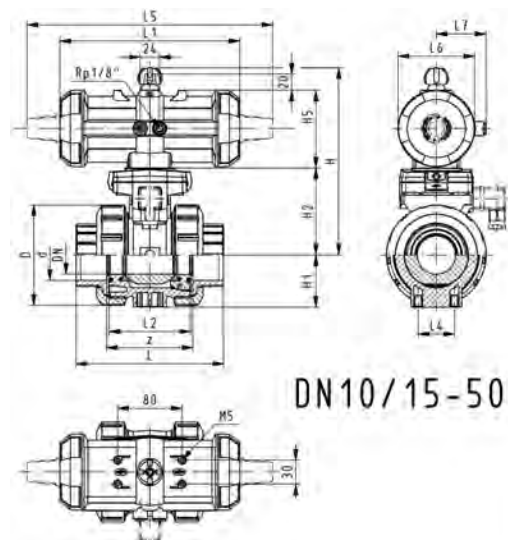
- Control time  $90^\circ <$  1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA40 (DN80), PA40 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
15	½	10	185	199 235 063	1	1.200	199 235 073	1	1.200
20	¾	10	350	199 235 064	1	1.300	199 235 074	1	1.300
25	1	10	700	199 235 065	1	1.400	199 235 075	1	1.400
32	1 ¼	10	1000	199 235 066	1	2.500	199 235 076	1	2.500
40	1 ½	10	1600	199 235 067	1	2.800	199 235 077	1	2.800
50	2	10	3100	199 235 068	1	3.700	199 235 078	1	3.700
65	2 ½	10	5000	199 235 069	1	7.700	199 235 079	1	7.700
80	3	10	7000	199 235 070	1	10.200	199 235 080	1	10.200
100	4	10	11000	199 235 071	1	15.400	199 235 081	1	15.400

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	z (mm)
50	159	27	62	77	95	194	56	25	261	76	48	64
58	168	30	71	77	110	194	65	25	261	76	48	72
68	168	36	71	77	123	194	71	25	261	76	48	79
84	202	44	84	99	146	224	85	45	305	95	59	94
97	202	51	84	99	157	224	89	45	305	95	59	95
124	225	64	106	99	183	224	101	45	305	95	59	107
144	262	85	156	70	233		136	70	276	65		144
151	281	105	168	78	254		141	70	341	72		151
174	292	123	175	86	301		164	120	369	80		174





DN10/15 - 50



**Ball valve type 235 PVC-U  
FC (Fail safe to close)  
Without manual override  
With threaded sockets Rc**

**Model:**

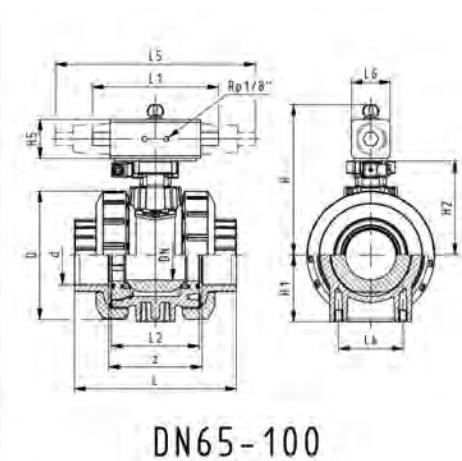
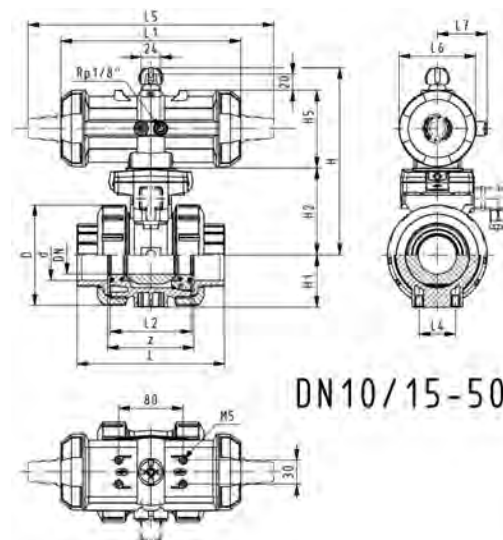
- Control time 90° < 1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA40 (DN80), PA40 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
15	½	10	185	199 235 603	1	1.200	199 235 613	1	1.200
20	¾	10	350	199 235 604	1	1.300	199 235 614	1	1.300
25	1	10	700	199 235 605	1	1.400	199 235 615	1	1.400
32	1 ¼	10	1000	199 235 606	1	2.500	199 235 616	1	2.500
40	1 ½	10	1600	199 235 607	1	2.800	199 235 617	1	2.800
50	2	10	3100	199 235 608	1	3.700	199 235 618	1	3.700
65	2 ½	10	5000	199 235 609	1	7.800	199 235 619	1	7.800
80	3	10	7000	199 235 610	1	10.300	199 235 620	1	10.300
100	4	10	11000	199 235 611	1	15.500	199 235 621	1	15.500

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	z (mm)
50	159	27	62	77	95	194	56	25	261	76	48	64
58	168	30	71	77	110	194	65	25	261	76	48	72
68	168	36	71	77	123	194	71	25	261	76	48	79
84	202	44	84	99	146	224	85	45	305	95	59	94
97	202	51	84	99	157	224	89	45	305	95	59	95
124	225	64	106	99	183	224	101	45	305	95	59	107
166	262	85	156	70	233		136	70	276	65		144
200	281	105	168	78	254		141	70	341	72		151
238	292	123	175	86	301		164	120	369	80		174





DN10/15 - 50

**Ball valve type 235 PVC-U  
FC (Fail safe to close)  
Without manual override  
With fixed flanges JIS**

**Model:**

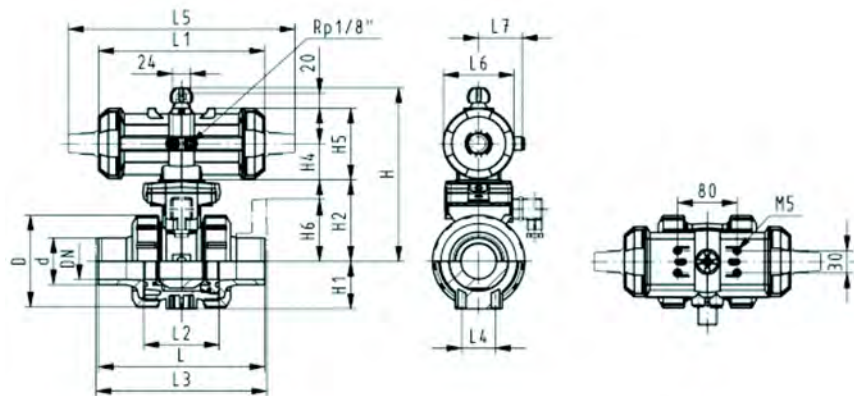
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90° < 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
15	½	10	185	<b>199 235 183</b>	1	1.700	<b>199 235 193</b>	1	1.700
20	¾	10	350	<b>199 235 184</b>	1	1.900	<b>199 235 194</b>	1	1.900
25	1	10	700	<b>199 235 185</b>	1	2.100	<b>199 235 195</b>	1	2.100
32	1 ¼	10	1000	<b>199 235 186</b>	1	3.400	<b>199 235 196</b>	1	3.400
40	1 ½	10	1600	<b>199 235 187</b>	1	3.800	<b>199 235 197</b>	1	3.800
50	2	10	3100	<b>199 235 188</b>	1	4.900	<b>199 235 198</b>	1	4.900

D	H	H1	H2	H4	H5	H6	L	L1	L2	L3	L4	L5	L6	L7
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	159	27	62	40	77	48	124	194	56	143	25	261	76	48
58	168	30	71	40	77	53	144	194	65	172	25	261	76	48
68	168	36	71	40	77	58	154	194	71	187	25	261	76	48
84	202	44	84	51	99	70	174	224	85	190	45	305	95	59
97	202	51	84	51	99	75	194	224	89	212	45	305	95	59
124	225	64	106	51	99	83	224	224	101	234	45	305	95	59





**Ball valve type 235 PVC-U**  
**FC (Fail safe to close)**  
**Without manual override**  
**With backing flanges PVC-U JIS**

**Model:**

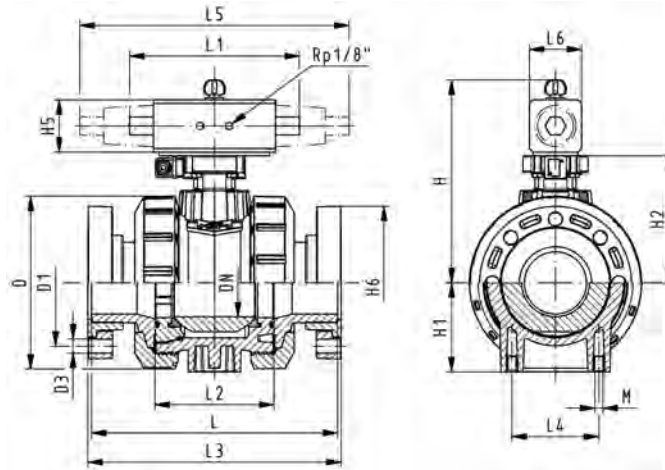
- Control time 90°<) 1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA40 (DN80), PA40 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimensions: JIS B 2220, 10K

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
65	2 ½	10	5000	<b>199 235 769</b>	1	10.200	<b>199 235 779</b>	1	10.200
80	3	10	7000	<b>199 235 770</b>	1	13.700	<b>199 235 780</b>	1	13.700
100	4	10	11000	<b>199 235 771</b>	1	20.300	<b>199 235 781</b>	1	20.300

D	H	H1	H2	H5	H6	L	L2	L3	L4	L5	L6
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
166	262	85	156	70	88	284	136	290	70	276	65
200	281	105	168	78	93	300	141	310	70	341	72
238	292	123	175	86	105	340	164	350	120	369	80





DN10/15 - 50



**Ball valve type 235 PVC-U**  
**FO (Fail safe to open)**  
**Without manual override**  
**With solvent cement sockets JIS**

**Model:**

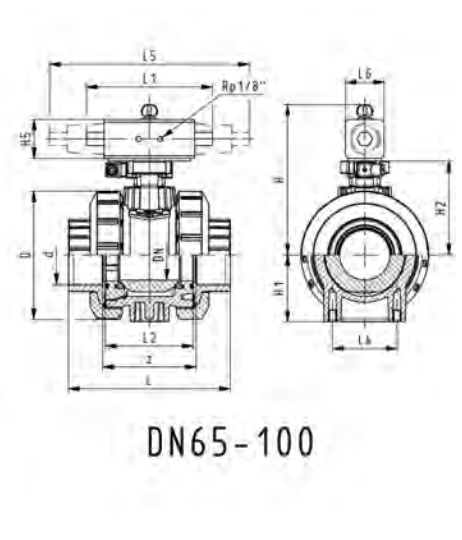
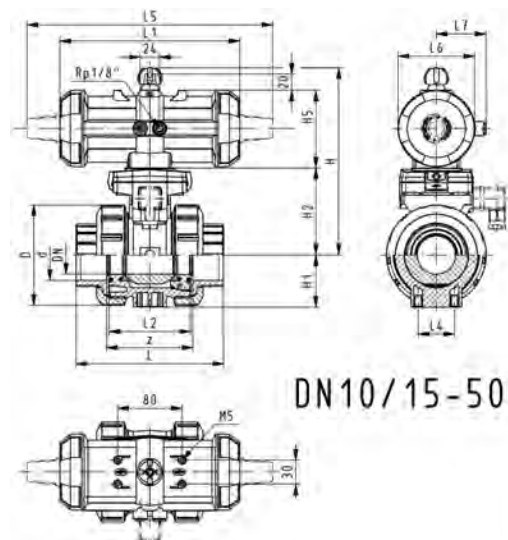
- Control time  $90^\circ <$  1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA40 (DN80), PA40 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN	Size	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(inch)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
			(L/min)						
15	½	10	185	<b>199 235 083</b>	1	1.200	<b>199 235 093</b>	1	1.200
20	¾	10	350	<b>199 235 084</b>	1	1.300	<b>199 235 094</b>	1	1.300
25	1	10	700	<b>199 235 085</b>	1	1.400	<b>199 235 095</b>	1	1.400
32	1 ¼	10	1000	<b>199 235 086</b>	1	2.500	<b>199 235 096</b>	1	2.500
40	1 ½	10	1600	<b>199 235 087</b>	1	2.800	<b>199 235 097</b>	1	2.800
50	2	10	3100	<b>199 235 088</b>	1	3.700	<b>199 235 098</b>	1	3.700
65	2 ½	10	5000	<b>199 235 089</b>	1	7.700	<b>199 235 099</b>	1	7.700
80	3	10	7000	<b>199 235 090</b>	1	10.200	<b>199 235 100</b>	1	10.200
100	4	10	11000	<b>199 235 091</b>	1	15.400	<b>199 235 101</b>	1	15.400

D	H	H1	H2	H5	L	L1	L2	L4	L5	L6	L7	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	159	27	62	77	95	194	56	25	261	76	48	64
58	168	30	71	77	110	194	65	25	261	76	48	72
68	168	36	71	77	123	194	71	25	261	76	48	79
84	202	44	84	99	146	224	85	45	305	95	59	94
97	202	51	84	99	157	224	89	45	305	95	59	95
124	225	64	106	99	183	224	101	45	305	95	59	107
166	262	85	156	70	233		136	70	276	65		144
200	281	105	168	78	254		141	70	341	72		151
238	292	123	175	86	301		164	120	369	80		174





DN10/15 - 50



**Ball valve type 235 PVC-U**  
**FO (Fail safe to open)**  
**Without manual override**  
**With threaded sockets Rc**

**Model:**

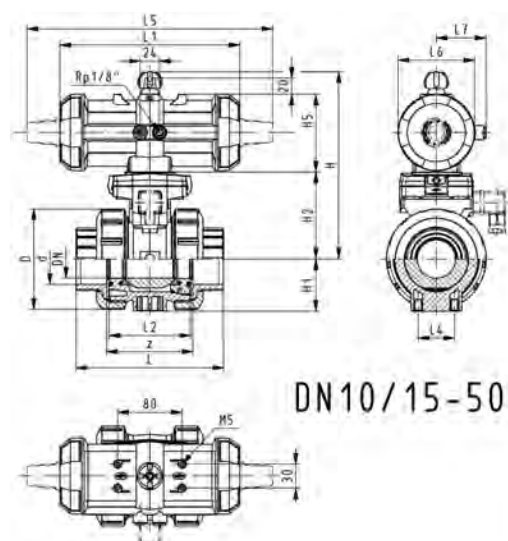
- Control time 90° < 1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA40 (DN80), PA40 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

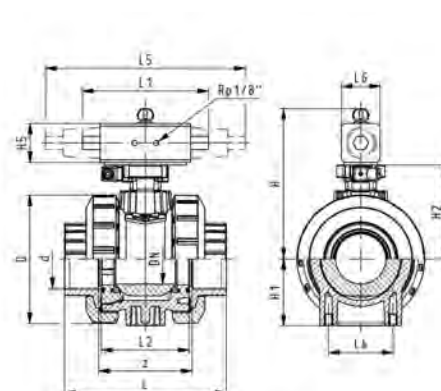
- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
15	½	10	185	199 235 623	1	1.200	199 235 633	1	1.200
20	¾	10	350	199 235 624	1	1.300	199 235 634	1	1.300
25	1	10	700	199 235 625	1	1.400	199 235 635	1	1.400
32	1 ¼	10	1000	199 235 626	1	2.500	199 235 636	1	2.500
40	1 ½	10	1600	199 235 627	1	2.800	199 235 637	1	2.800
50	2	10	3100	199 235 628	1	3.700	199 235 638	1	3.700
65	2 ½	10	5000	199 235 629	1	7.800	199 235 639	1	7.800
80	3	10	7000	199 235 630	1	10.300	199 235 640	1	10.300
100	4	10	11000	199 235 631	1	15.500	199 235 641	1	15.500

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	z (mm)
50	159	27	62	77	95	194	56	25	261	76	48	64
58	168	30	71	77	110	194	65	25	261	76	48	72
68	168	36	71	77	123	194	71	25	261	76	48	79
84	202	44	84	99	146	224	85	45	305	95	59	94
97	202	51	84	99	157	224	89	45	305	95	59	95
124	225	64	106	99	183	224	101	45	305	95	59	107
166	262	85	156	70	233		136	70	276	65		144
200	281	105	168	78	254		141	70	341	72		151
238	292	123	175	86	301		164	120	369	80		174



DN10/15-50



DN65-100



DN10/15 - 50

**Ball valve type 235 PVC-U**  
**FO (Fail safe to open)**  
**Without manual override**  
**With fixed flanges JIS**

**Model:**

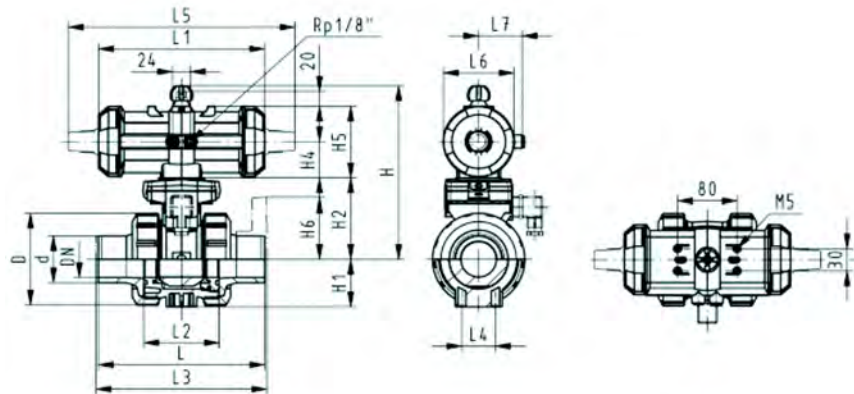
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time  $90^\circ <$  1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
15	½	10	185	199 235 203	1	1.700	199 235 213
20	¾	10	350	199 235 204	1	1.900	199 235 214
25	1	10	700	199 235 205	1	2.100	199 235 215
32	1 ¼	10	1000	199 235 206	1	3.400	199 235 216
40	1 ½	10	1600	199 235 207	1	3.800	199 235 217
50	2	10	3100	199 235 208	1	4.900	199 235 218

D	H	H1	H2	H4	H5	H6	L	L1	L2	L3	L4	L5	L6	L7
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	159	27	62	40	77	48	124	194	56	143	25	261	76	48
58	168	30	71	40	77	53	144	194	65	172	25	261	76	48
68	168	36	71	40	77	58	154	194	71	187	25	261	76	48
84	202	44	84	51	99	70	174	224	85	190	45	305	95	59
97	202	51	84	51	99	75	194	224	89	212	45	305	95	59
124	225	64	106	51	99	83	224	224	101	234	45	305	95	59





**Ball valve type 235 PVC-U**  
**FO (Fail safe to open)**  
**Without manual override**  
**With backing flanges PVC-U JIS**

**Model:**

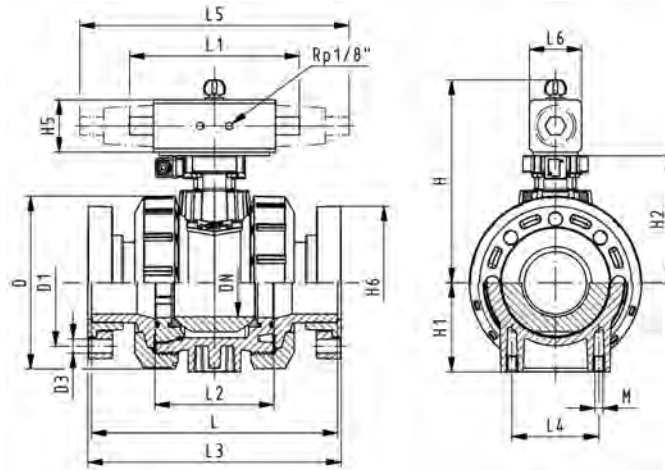
- Control time 90°<) 1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA40 (DN80), PA40 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimensions: JIS B 2220, 10K

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
65	2 ½	10	5000	<b>199 235 789</b>	1	10.200	<b>199 235 799</b>
80	3	10	7000	<b>199 235 790</b>	1	13.700	<b>199 235 800</b>
100	4	10	11000	<b>199 235 791</b>	1	20.300	<b>199 235 801</b>

D	H	H1	H2	H5	H6	L	L2	L3	L4	L5	L6
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
166	262	85	156	70	88	284	136	290	70	276	65
200	281	105	168	78	93	300	141	310	70	341	72
238	292	123	175	86	105	340	164	350	120	369	80







DN10/15 - 50



**Ball valve type 235 PVC-U  
DA (Double acting)  
Without manual override  
With solvent cement sockets JIS**

**Model:**

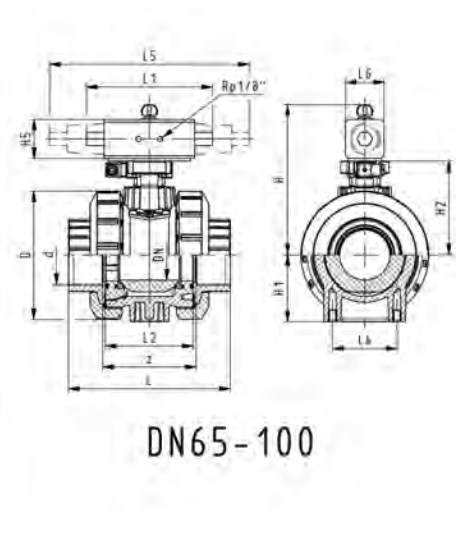
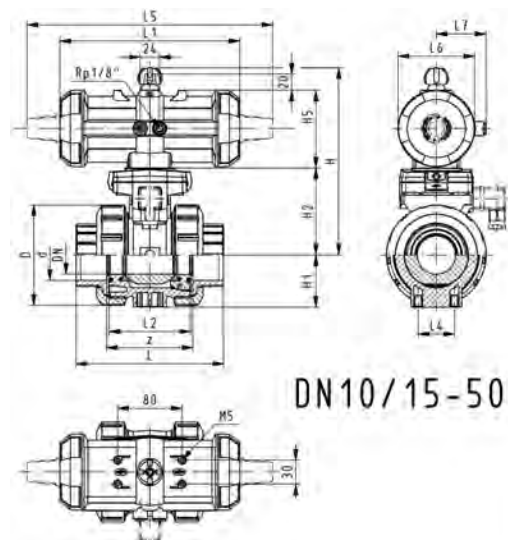
- Control time  $90^\circ <$  1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
15	½	10	185	199 235 103	1	1.200	199 235 113	1	1.200
20	¾	10	350	199 235 104	1	1.300	199 235 114	1	1.300
25	1	10	700	199 235 105	1	1.400	199 235 115	1	1.400
32	1 ¼	10	1000	199 235 106	1	2.500	199 235 116	1	2.500
40	1 ½	10	1600	199 235 107	1	2.800	199 235 117	1	2.800
50	2	10	3100	199 235 108	1	3.700	199 235 118	1	3.700
65	2 ½	10	5000	199 235 109	1	6.600	199 235 119	1	6.600
80	3	10	7000	199 235 110	1	9.600	199 235 120	1	9.600
100	4	10	11000	199 235 111	1	13.600	199 235 121	1	13.600

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	z (mm)
50	159	27	62	77	95	194	56	25	261	76	48	64
58	168	30	71	77	110	194	65	25	261	76	48	72
68	168	36	71	77	123	194	71	25	261	76	48	79
84	202	44	84	99	146	224	85	45	305	95	59	94
97	202	51	84	99	157	224	89	45	305	95	59	95
124	225	64	106	99	183	224	101	45	305	95	59	107
166	257	85	156	66	233	144	136	70		60		144
200	274	105	168	70	254	152	141	70		65		151
238	273	123	175	78	301	169	164	120		72		174





DN10/15 - 50

**Ball valve type 235 PVC-U  
DA (Double acting)  
Without manual override  
With threaded sockets Rc**

**Model:**

- Control time 90° < 1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts

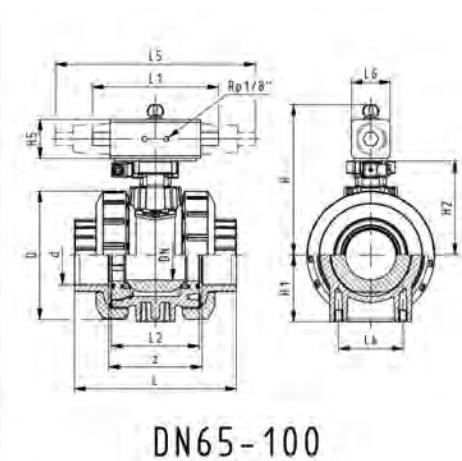
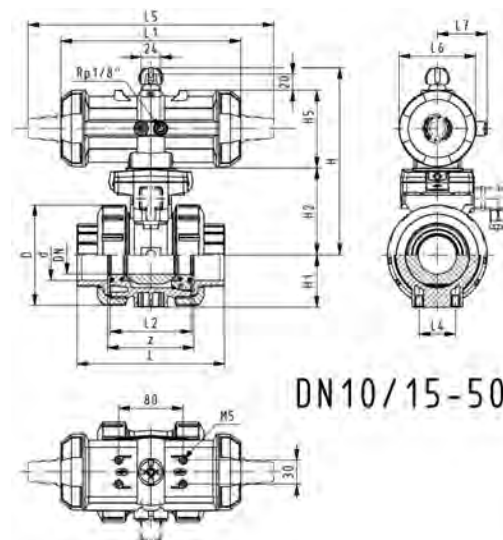
**Option:**

- Individual configuration of the valve



DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
15	½	10	185	199 235 643	1	1.200	199 235 653	1	1.200
20	¾	10	350	199 235 644	1	1.300	199 235 654	1	1.300
25	1	10	700	199 235 645	1	1.400	199 235 655	1	1.400
32	1 ¼	10	1000	199 235 646	1	2.500	199 235 656	1	2.500
40	1 ½	10	1600	199 235 647	1	2.800	199 235 657	1	2.800
50	2	10	3100	199 235 648	1	3.700	199 235 658	1	3.700
65	2 ½	10	5000	199 235 649	1	6.700	199 235 659	1	6.700
80	3	10	7000	199 235 650	1	9.700	199 235 660	1	9.700
100	4	10	11000	199 235 651	1	13.800	199 235 661	1	13.800

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	z (mm)
50	159	27	62	77	95	194	56	25	261	76	48	65
58	168	30	71	77	110	194	65	25	261	76	48	72
68	168	36	71	77	123	194	71	25	261	76	48	79
84	202	44	84	99	146	224	85	45	305	95	59	94
97	202	51	84	99	157	224	89	45	305	95	59	95
124	225	64	106	99	183	224	101	45	305	95	59	107
166	257	85	156	66	233	144	136	70		60		144
200	274	105	168	70	254	152	141	70		65		151
238	273	123	175	78	301	169	164	120		72		174





**Ball valve type 235 PVC-U**  
**DA (Double acting)**  
**Without manual override**  
**With fixed flanges JIS**

**Model:**

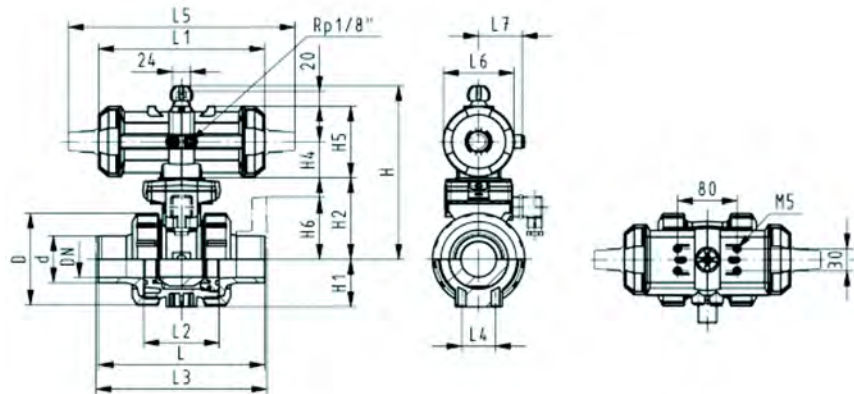
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90° < 1-2s
- For easy installation and removal
- Integrated stainless steel mounting inserts

**Option:**

- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
15	½	10	185	199 235 223	1	1.700	199 235 233	1	1.700
20	¾	10	350	199 235 224	1	1.900	199 235 234	1	1.900
25	1	10	700	199 235 225	1	2.100	199 235 235	1	2.100
32	1 ¼	10	1000	199 235 226	1	3.400	199 235 236	1	3.400
40	1 ½	10	1600	199 235 227	1	3.800	199 235 237	1	3.800
50	2	10	3100	199 235 228	1	4.900	199 235 238	1	4.900

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
50	159	27	62	40	77	48	124	194	56	143	25	261	76	48
58	168	30	71	40	77	53	144	194	65	172	25	261	76	48
68	168	36	71	40	77	58	154	194	71	187	25	261	76	48
84	202	44	84	51	99	70	174	224	85	190	45	305	95	59
97	202	51	84	51	99	75	194	224	89	212	45	305	95	59
124	225	64	106	51	99	83	224	224	101	234	45	305	95	59





**Ball valve type 235 PVC-U**  
**DA (Double acting)**  
**Without manual override**  
**With backing flanges PVC-U JIS**

**Model:**

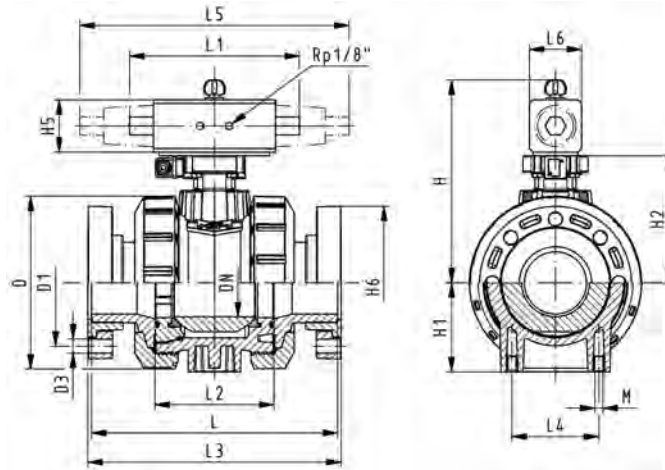
- Control time  $90^\circ <$  1-2s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimensions: JIS B 2220, 10K

**Option:**

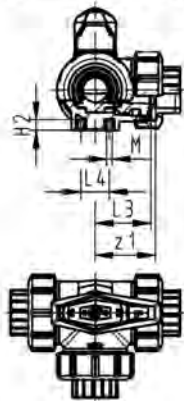
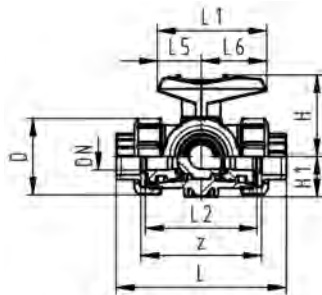
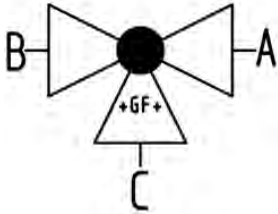
- Individual configuration of the valve

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
65	2 1/2	10	5000	<b>199 235 809</b>	1	9.000	<b>199 235 819</b>	1	9.000
80	3	10	7000	<b>199 235 810</b>	1	13.000	<b>199 235 820</b>	1	13.000
100	4	10	11000	<b>199 235 811</b>	1	18.600	<b>199 235 821</b>	1	18.600

D	H	H1	H2	H5	H6	L	L1	L2	L3	L4	L6
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
166	257	85	156	66	88	284	144	136	290	70	60
200	274	105	168	70	93	300	152	141	310	70	65
238	273	123	175	78	105	340	169	164	350	120	72



# 3-Way ball valves type 543



## 3-Way ball valve type 543 PVC-U Horizontal/L-port With solvent cement sockets BS

### Model:

- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Turn limiter 90° enclosed, in different positions usable as a clip-on ring
- Integrated stainless steel mounting inserts
- Delivery status A-C opened, see flow scheme

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	3/8	10	50	<b>161 543 061</b>	1 0.245	<b>161 543 071</b>	1 0.245
20	15	1/2	10	75	<b>161 543 062</b>	1 0.251	<b>161 543 072</b>	1 0.251
25	20	3/4	10	150	<b>161 543 063</b>	1 0.361	<b>161 543 073</b>	1 0.361
32	25	1	10	280	<b>161 543 064</b>	1 0.551	<b>161 543 074</b>	1 0.551
40	32	1 1/4	10	480	<b>161 543 065</b>	1 0.938	<b>161 543 075</b>	1 0.938
50	40	1 1/2	10	620	<b>161 543 066</b>	1 1.388	<b>161 543 076</b>	1 1.390
63	50	2	10	1230	<b>161 543 067</b>	1 2.728	<b>161 543 077</b>	1 2.705

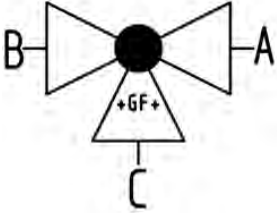
D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M (mm)	z (mm)	z1 (mm)
50	57	28	8	109	77	73	36	25	32	45	6	77	38
50	57	28	8	112	77	73	36	25	32	45	6	77	38
58	67	32	8	131	97	86	43	25	39	58	6	90	45
68	73	36	8	151	97	99	50	25	39	58	6	103	52
84	90	45	9	181	128	120	60	45	54	74	8	124	62
97	97	51	9	205	128	137	69	45	54	74	8	145	73
124	116	65	9	261	152	179	89	45	66	87	8	189	94



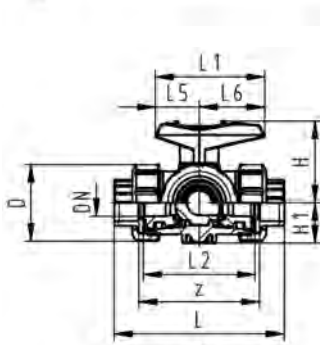
**3-Way ball valve type 543 PVC-U**  
**Horizontal/L-port**  
**With solvent cement sockets JIS**

**Model:**

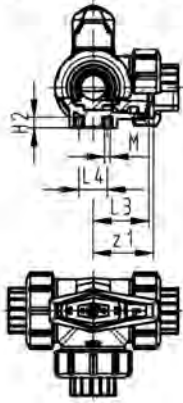
- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Turn limiter 90° enclosed, in different positions usable as a clip-on ring
- Integrated stainless steel mounting inserts
- Delivery status A-C opened, see flow scheme



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
20	15	½	10	75	<b>161 543 122</b>	1 0.226	<b>161 543 132</b>	1 0.251
25	20	¾	10	150	<b>161 543 123</b>	1 0.361	<b>161 543 133</b>	1 0.361
32	25	1	10	280	<b>161 543 124</b>	1 0.551	<b>161 543 134</b>	1 0.551
40	32	1 ¼	10	480	<b>161 543 125</b>	1 0.938	<b>161 543 135</b>	1 0.938
50	40	1 ½	10	620	<b>161 543 126</b>	1 1.390	<b>161 543 136</b>	1 1.390
63	50	2	10	1230	<b>161 543 127</b>	1 2.723	<b>161 543 137</b>	1 2.705



D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M (mm)	z (mm)	z1 (mm)
50	57	28	8	112	77	73	36	25	32	45	6	81	40
58	67	32	8	131	97	86	43	25	39	58	6	94	47
68	73	36	8	151	97	99	50	25	39	58	6	107	54
84	90	45	9	181	128	120	60	45	54	74	8	130	65
97	97	51	9	205	128	137	69	45	54	74	8	143	72
124	116	65	9	261	152	179	89	45	66	87	8	185	92

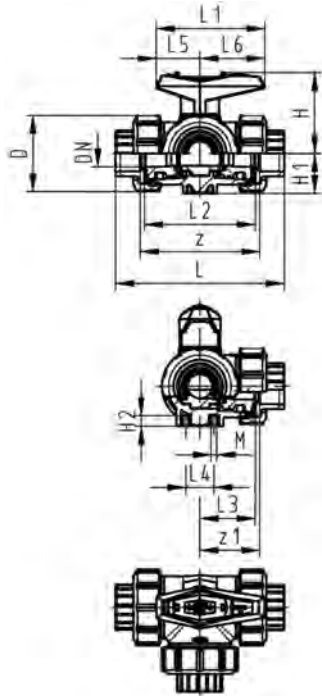




**3-Way ball valve type 543 PVC-U  
Horizontal/T-port  
With solvent cement sockets BS**

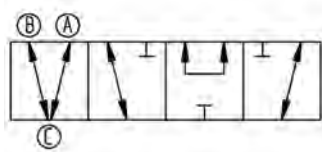
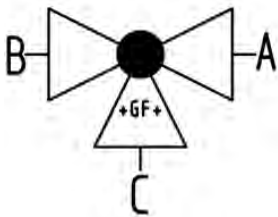
**Model:**

- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Turn limiter 90° enclosed, in different positions usable as a clip-on ring
- Integrated stainless steel mounting inserts
- Delivery status A-B-C opened, see flow scheme



d	Size	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(inch)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
16	3/8	10	10	140	<b>161 543 261</b>	1	0.244	<b>161 543 271</b>	1	0.244
20	1/2	15	10	200	<b>161 543 262</b>	1	0.250	<b>161 543 272</b>	1	0.250
25	3/4	20	10	470	<b>161 543 263</b>	1	0.359	<b>161 543 273</b>	1	0.359
	1	25	10	793	<b>161 543 264</b>	1	0.544	<b>161 543 274</b>	1	0.544
40	1 1/4	32	10	1290	<b>161 543 265</b>	1	0.927	<b>161 543 275</b>	1	0.927
50	1 1/2	40	10	1910	<b>161 543 266</b>	1	1.370	<b>161 543 276</b>	1	1.391
63	2	50	10	3100	<b>161 543 267</b>	1	2.689	<b>161 543 277</b>	1	2.660

D	H	H1	H2	L	L1	L2	L3	L4	L5	L6	M	z	z1
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)
50	57	28	8	109	77	73	36	25	32	45	6	77	38
50	57	28	8	112	77	73	36	25	32	45	6	77	38
58	67	32	8	131	97	86	43	25	39	58	6	90	45
68	73	36	8	151	97	99	50	25	39	58	6	103	52
84	90	45	9	181	128	120	60	45	54	74	8	124	62
97	97	51	9	205	128	137	69	45	54	74	8	145	73
124	116	65	9	261	152	179	89	45	66	87	8	189	94

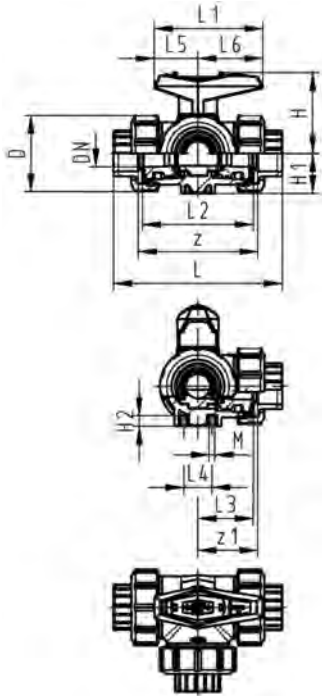




**3-Way ball valve type 543 PVC-U**  
**Horizontal/T-port**  
**With solvent cement sockets JIS**

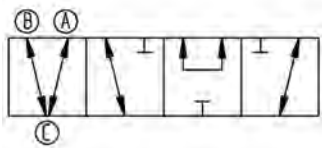
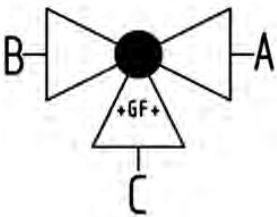
**Model:**

- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Turn limiter 90° enclosed, in different positions usable as a clip-on ring
- Integrated stainless steel mounting inserts
- Delivery status A-B-C opened, see flow scheme



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
20	15	½	10	200	<b>161 543 322</b>	1	0.250	<b>161 543 332</b>	1	0.250
25	20	¾	10	470	<b>161 543 323</b>	1	0.336	<b>161 543 333</b>	1	0.359
	25	1	10	793	<b>161 543 324</b>	1	0.544	<b>161 543 334</b>	1	0.544
40	32	1 ¼	10	1290	<b>161 543 325</b>	1	0.927	<b>161 543 335</b>	1	0.927
50	40	1 ½	10	1910	<b>161 543 326</b>	1	1.369	<b>161 543 336</b>	1	1.394
63	50	2	10	3100	<b>161 543 327</b>	1	2.682	<b>161 543 337</b>	1	2.660

D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M (mm)	z (mm)	z1 (mm)
50	57	28	8	112	77	73	36	25	32	45	6	81	40
58	67	32	8	131	97	86	43	25	39	58	6	94	47
68	73	36	8	151	97	99	50	25	39	58	6	107	54
84	90	45	9	181	128	120	60	45	54	74	8	130	65
97	97	51	9	205	128	137	69	45	54	74	8	143	72
124	116	65	9	261	152	179	89	45	66	87	8	185	92







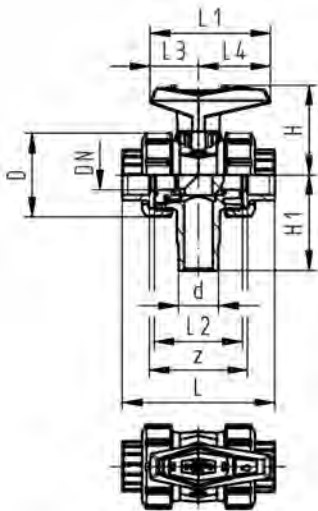
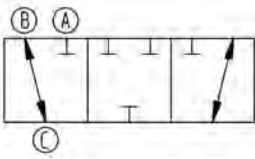
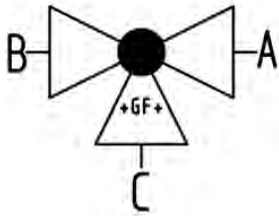
**3-Way ball valve type 543 PVC-U**  
**Vertical/L-port**  
**With solvent cement sockets BS**

**Model:**

- Vertical inlet solvent cement spigot metric
- Easy installation and removal using union on third outlet
- Ball seals PTFE
- Electric actuator available separately
- Angle of operation 360° without turn limiter
- Delivery status B-C opened, see flow scheme

**Mode of action:**

- For interconnection of two inputs



Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
3/8	10	10	49	161 543 601	1	0.162	161 543 611	1	0.162
1/2	15	10	77	161 543 602	1	0.166	161 543 612	1	0.166
3/4	20	10	146	161 543 603	1	0.255	161 543 613	1	0.255
1	25	10	260	161 543 604	1	0.372	161 543 614	1	0.372
1 1/4	32	10	437	161 543 605	1	0.622	161 543 615	1	0.622
1 1/2	40	10	667	161 543 606	1	0.886	161 543 616	1	0.886
2	50	10	1293	161 543 607	1	1.617	161 543 617	1	1.617

Size (inch)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	z (mm)
3/8	50	57	62	92	77	56	32	45	60
1/2	50	57	62	95	77	56	32	45	60
3/4	58	67	72	111	97	66	39	58	69
1	68	73	77	123	97	71	39	58	75
1 1/4	84	90	87	146	128	85	54	74	89
1 1/2	97	97	97	157	128	89	54	74	97
2	124	116	112	183	152	101	66	87	110



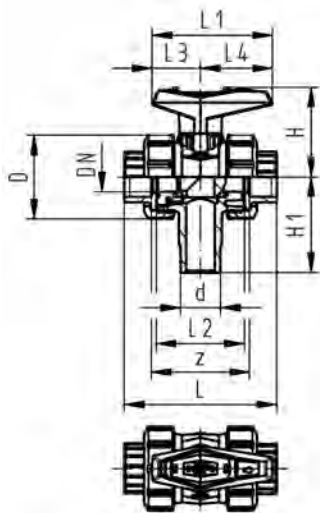
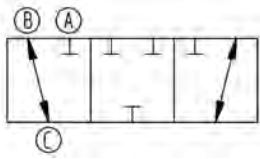
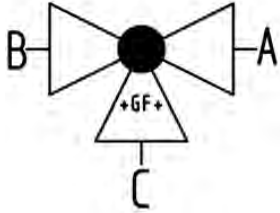
**3-Way ball valve type 543 PVC-U**  
**Vertical/L-port**  
**With solvent cement sockets JIS**

**Model:**

- Vertical inlet solvent cement spigot metric
- Easy installation and removal using union on third outlet
- Ball seals PTFE
- Electric actuator available separately
- Angle of operation 360° without turn limiter
- Delivery status B-C opened, see flow scheme

**Mode of action:**

- For interconnection of two inputs



DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
15	1/2	10	77	161 543 942	1	0.166	161 543 952	1	0.159
20	3/4	10	146	161 543 943	1	0.255	161 543 953	1	0.255
25	1	10	260	161 543 944	1	0.372	161 543 954	1	0.372
32	1 1/4	10	437	161 543 945	1	0.622	161 543 955	1	0.622
40	1 1/2	10	667	161 543 946	1	0.886	161 543 956	1	0.886
50	2	10	1293	161 543 947	1	1.617	161 543 957	1	1.617

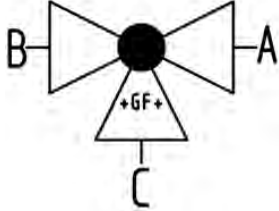
D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	z (mm)
50	57	62	95	77	56	32	45	64
58	67	72	111	97	66	39	58	74
68	73	77	123	97	71	39	58	79
84	90	87	146	128	85	54	74	95
97	97	97	157	128	89	54	74	95
124	116	112	183	152	101	66	87	107



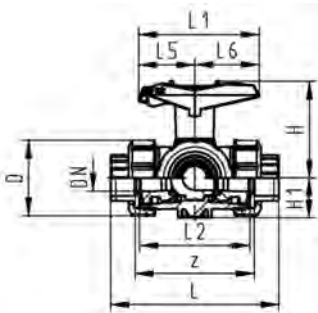
**3-Way ball valve type 543 PVC-U**  
**Horizontal/L-port**  
**With lockable handle**  
**With solvent cement sockets BS**

**Model:**

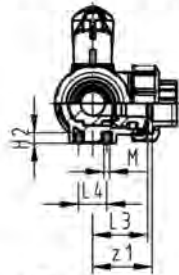
- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Integrated stainless steel mounting inserts
- Multifunctional lever red with ratched setting 45°, lockable
- Delivery status A-C opened, see flow scheme



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	3/8	10	50	<b>161 543 861</b>	1	0.259	<b>161 543 871</b>	1	0.259
20	15	1/2	10	75	<b>161 543 862</b>	1	0.265	<b>161 543 872</b>	1	0.265
25	20	3/4	10	150	<b>161 543 863</b>	1	0.378	<b>161 543 873</b>	1	0.378
32	25	1	10	280	<b>161 543 864</b>	1	0.568	<b>161 543 874</b>	1	0.568
40	32	1 1/4	10	480	<b>161 543 865</b>	1	0.961	<b>161 543 875</b>	1	0.961
50	40	1 1/2	10	620	<b>161 543 866</b>	1	1.413	<b>161 543 876</b>	1	1.413
63	50	2	10	1230	<b>161 543 867</b>	1	2.736	<b>161 543 877</b>	1	2.736



D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M (mm)	z (mm)	z1 (mm)
50	79	28	8	109	87	73	36	25	42	45	6	77	38
50	79	28	8	112	87	73	36	25	42	45	6	77	38
58	88	32	8	131	108	86	43	25	50	58	6	90	45
68	94	36	8	151	108	99	50	25	50	58	6	103	52
84	113	45	9	181	141	120	60	45	66	75	8	124	62
97	119	51	9	205	141	137	69	45	66	75	8	145	73
124	141	65	9	261	165	179	89	45	78	87	8	189	94

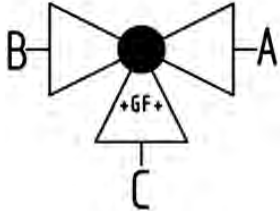




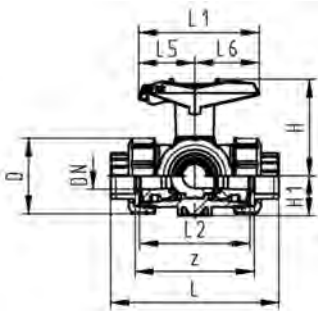
**3-Way ball valve type 543 PVC-U**  
**Horizontal/L-port**  
**With lockable handle**  
**With solvent cement sockets JIS**

**Model:**

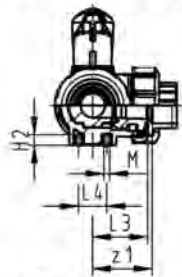
- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Integrated stainless steel mounting inserts
- Multifunctional lever red with ratched setting 45°, lockable
- Delivery status A-C opened, see flow scheme

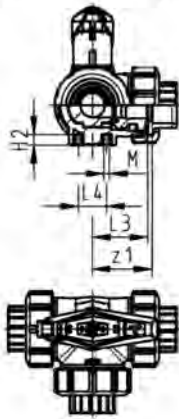
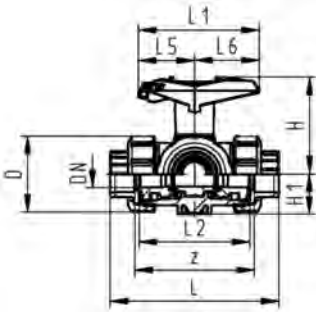
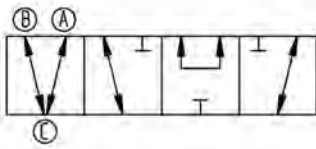
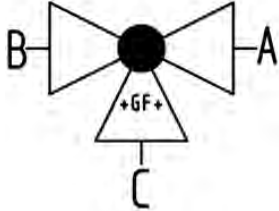


d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
20	15	½	10	75	<b>161 543 522</b>	1 0.265	<b>161 543 532</b>	1 0.265
25	20	¾	10	150	<b>161 543 523</b>	1 0.378	<b>161 543 533</b>	1 0.378
32	25	1	10	280	<b>161 543 524</b>	1 0.568	<b>161 543 534</b>	1 0.568
40	32	1 ¼	10	480	<b>161 543 525</b>	1 0.961	<b>161 543 535</b>	1 0.961
50	40	1 ½	10	620	<b>161 543 526</b>	1 1.413	<b>161 543 536</b>	1 1.413
63	50	2	10	1230	<b>161 543 527</b>	1 2.736	<b>161 543 537</b>	1 2.736



D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M (mm)	z (mm)	z1 (mm)
50	79	28	8	112	87	73	36	25	42	45	6	81	40
58	88	32	8	131	108	86	43	25	50	58	6	94	47
68	94	36	8	151	108	99	50	25	50	58	6	107	54
84	113	45	9	181	141	120	60	45	66	75	8	130	65
97	119	51	9	205	141	137	69	45	66	75	8	143	72
124	141	65	9	261	165	179	89	45	78	87	8	185	92





**3-Way ball valve type 543 PVC-U**  
**Horizontal/T-port**  
**With lockable handle**  
**With solvent cement sockets BS**

**Model:**

- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Turn limiter 90° enclosed, in different positions usable as a clip-on ring
- Integrated stainless steel mounting inserts
- Multifunctional lever red with ratched setting 45°, lockable
- Delivery status A-B-C opened, see flow scheme

d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	¾	10	10	140	161 543 881	1	0.258	161 543 891	1	0.258
20	¾	15	10	200	161 543 882	1	0.264	161 543 892	1	0.264
25	¾	20	10	470	161 543 883	1	0.376	161 543 893	1	0.376
	1	25	10	793	161 543 884	1	0.561	161 543 894	1	0.561
40	1 ¼	32	10	1290	161 543 885	1	0.950	161 543 895	1	0.950
50	1 ½	40	10	1910	161 543 886	1	1.392	161 543 896	1	1.392
63	2	50	10	3100	161 543 887	1	2.691	161 543 897	1	2.691

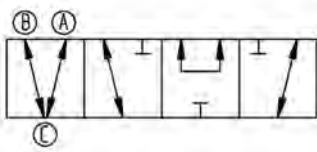
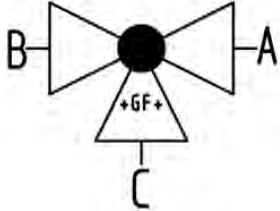
D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M	z (mm)	z1 (mm)
50	79	28	8	109	87	73	36	25	42	45	6	77	38
50	79	28	8	112	87	73	36	25	42	45	6	77	38
58	88	32	8	131	108	86	43	25	50	58	6	90	45
68	94	36	8	151	108	99	50	25	50	58	6	103	52
84	113	45	9	181	141	120	60	45	66	75	8	124	62
97	119	51	9	205	141	137	69	45	66	75	8	145	73
124	141	65	9	261	165	179	89	45	78	87	8	189	94



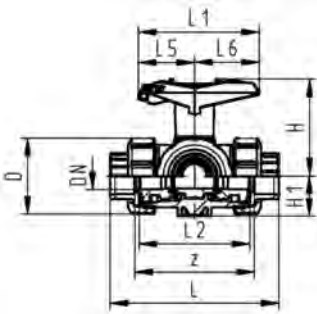
**3-Way ball valve type 543 PVC-U**  
**Horizontal/T-port**  
**With lockable handle**  
**With solvent cement sockets JIS**

**Model:**

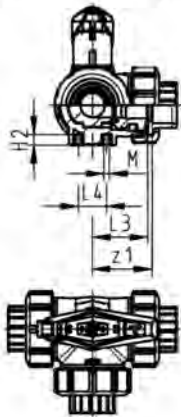
- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Turn limiter 90° enclosed, in different positions usable as a clip-on ring
- Integrated stainless steel mounting inserts
- Multifunctional lever red with ratched setting 45°, lockable
- Delivery status A-B-C opened, see flow scheme



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)		
20	15	½	10	200	<b>161 543 542</b>	1	0.264	<b>161 543 552</b>	1	0.264
25	20	¾	10	470	<b>161 543 543</b>	1	0.376	<b>161 543 553</b>	1	0.376
	25	1	10	793	<b>161 543 544</b>	1	0.561	<b>161 543 554</b>	1	0.561
40	32	1 ¼	10	1290	<b>161 543 545</b>	1	0.950	<b>161 543 555</b>	1	0.950
50	40	1 ½	10	1910	<b>161 543 546</b>	1	1.392	<b>161 543 556</b>	1	1.392
63	50	2	10	3100	<b>161 543 547</b>	1	2.691	<b>161 543 557</b>	1	2.691



D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M (mm)	z (mm)	z1 (mm)
50	79	28	8	112	87	73	36	25	42	45	6	81	40
58	88	32	8	131	108	86	43	25	50	58	6	94	47
68	94	36	8	151	108	99	50	25	50	58	6	107	54
84	113	45	9	181	141	120	60	45	66	75	8	130	65
97	119	51	9	205	141	137	69	45	66	75	8	143	72
124	141	65	9	261	165	179	89	45	78	87	8	185	92



# 3-Way ball valves electric type 167



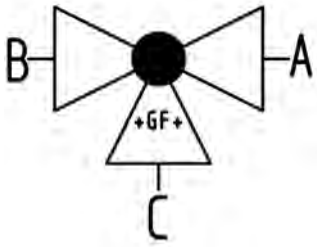
**3-Way ball valve type 167 PVC-U**  
**Horizontal/L-port 100-230V**  
**With manual emergency override**  
**With solvent cement sockets JIS**

**Model:**

- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

**Option:**

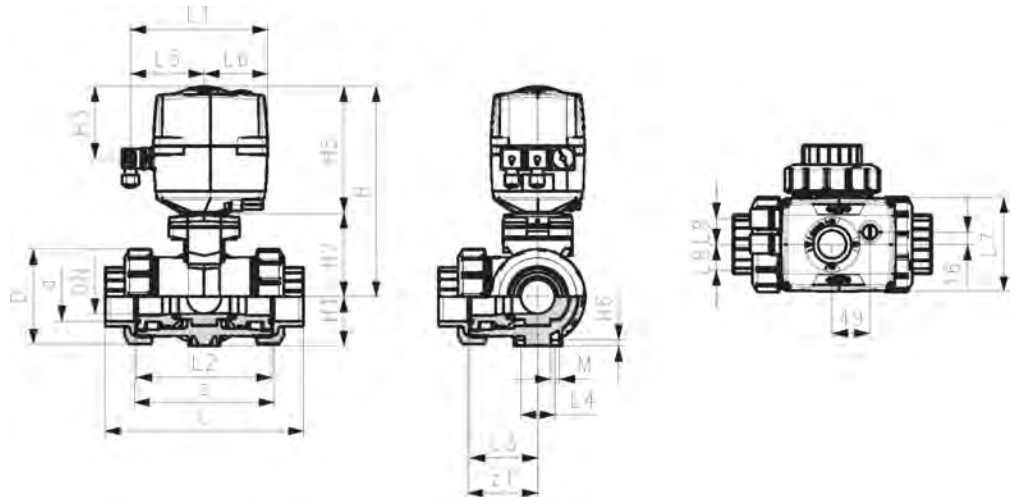
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EA	EPDM Code	Weight (kg)
20	15	½	10	75	EA25	<b>199 167 843</b>	2.122
25	20	¾	10	150	EA25	<b>199 167 844</b>	2.128
32	25	1	10	280	EA25	<b>199 167 845</b>	2.256
40	32	1 ¼	10	480	EA25	<b>199 167 846</b>	2.446
50	40	1 ½	10	620	EA25	<b>199 167 847</b>	2.870
63	50	2	10	1230	EA25	<b>199 167 848</b>	3.322

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)
50	231	28	64	94	167	8	112	180	73	36	25	97	83	122	33
58	240	32	73	94	167	8	131	180	86	43	25	97	83	122	33
68	240	36	73	94	167	8	151	180	99	50	25	97	83	122	33
84	251	45	84	94	167	9	181	180	120	60	45	97	83	122	33
97	251	51	84	94	167	9	205	180	137	69	45	97	83	122	33
124	273	65	106	94	167	9	261	180	179	89	45	97	83	122	33

M (mm)	z (mm)	z1 (mm)
6	81	40
6	94	47
6	107	54
8	130	65
8	143	72
8	185	92



# 3-Way ball valves electric type 170



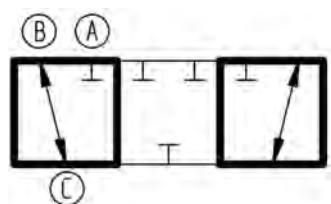
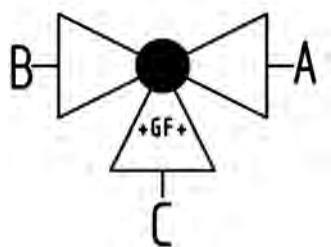
**3-Way ball valve type 170 PVC-U**  
**Vertical/L-port 100-230V**  
**With manual emergency override**  
**With solvent cement sockets JIS**

**Model:**

- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Basic position B-C opened, activated position A-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

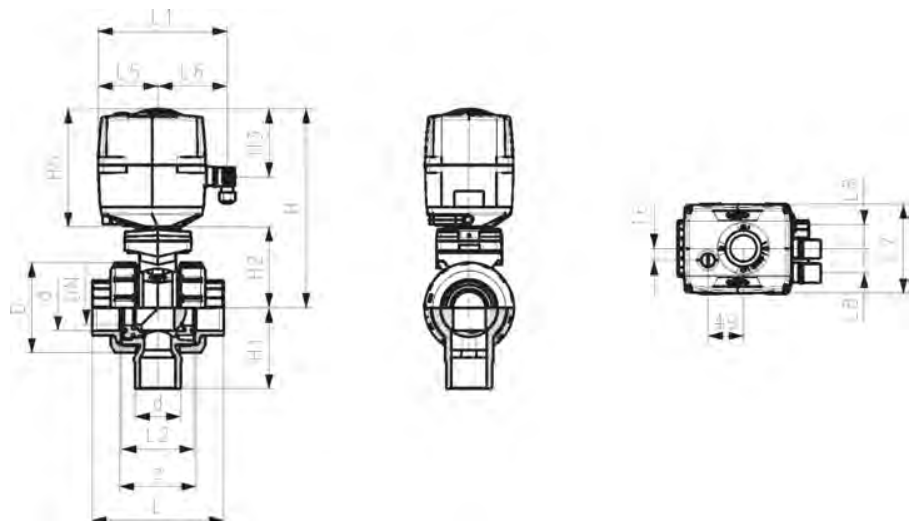
**Option:**

- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EA	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
20	15	½	10	77	EA25	<b>199 170 333</b>	2.043	<b>199 170 343</b>	2.001
25	20	¾	10	146	EA25	<b>199 170 334</b>	2.150	<b>199 170 344</b>	2.004
32	25	1	10	260	EA25	<b>199 170 335</b>	2.267	<b>199 170 345</b>	2.090
40	32	1 ¼	10	437	EA25	<b>199 170 336</b>	2.554	<b>199 170 346</b>	2.179
50	40	1 ½	10	667	EA25	<b>199 170 337</b>	2.818	<b>199 170 347</b>	2.407
63	50	2	10	1293	EA25	<b>199 170 338</b>	3.595	<b>199 170 348</b>	2.609

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)
50	231	62	64	94	167	95	180	56	97	83	122	33	64
58	240	72	73	94	167	111	180	66	97	83	122	33	74
68	240	77	73	94	167	123	180	71	97	83	122	33	79
84	251	87	84	94	167	146	180	85	97	83	122	33	95
97	251	97	84	94	167	157	180	89	97	83	122	33	95
124	273	112	106	94	167	183	180	101	97	83	122	33	107





**3-Way ball valve type 170 PVC-U**  
**Vertical diverter ball 100-230V**  
**With manual emergency override**  
**With solvent cement sockets JIS**

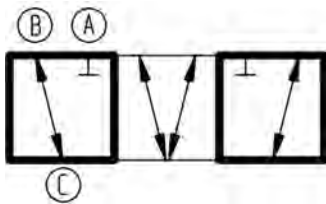
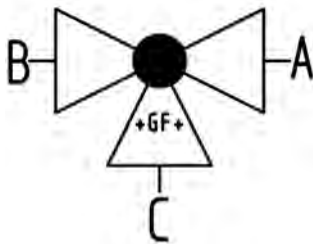


**Model:**

- Voltage 100-230V, 50-60Hz
- Factory set control range 90°<
- Basic position B-C opened, activated position A-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

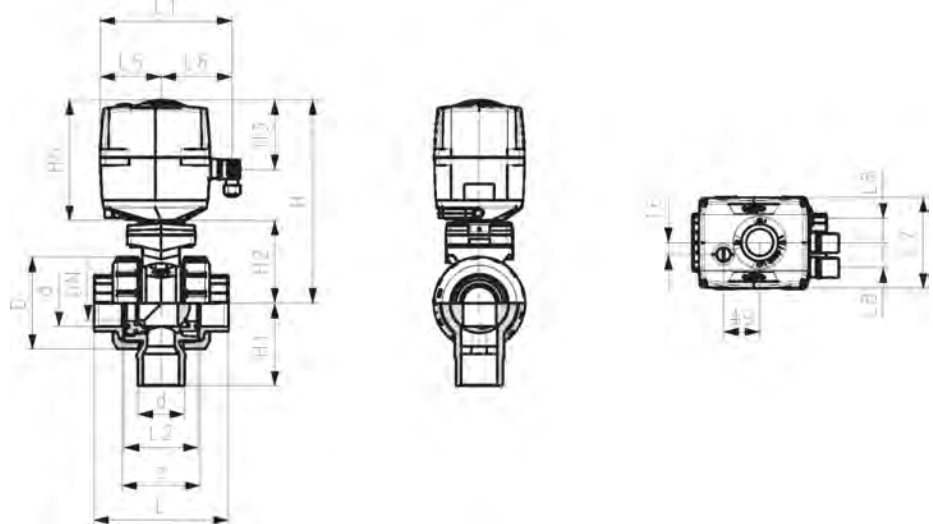
**Option:**

- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FKM Code	Weight (kg)
20	15	½	10	77	EA25	<b>199 170 373</b>	3.595	<b>199 170 383</b>	3.550
25	20	¾	10	146	EA25	<b>199 170 374</b>	2.042	<b>199 170 384</b>	2.042
32	25	1	10	260	EA25	<b>199 170 375</b>	2.148	<b>199 170 385</b>	2.148
40	32	1 ¼	10	437	EA25	<b>199 170 376</b>	2.260	<b>199 170 386</b>	2.260
50	40	1 ½	10	667	EA25	<b>199 170 377</b>	2.543	<b>199 170 387</b>	2.543
63	50	2	10	1293	EA25	<b>199 170 378</b>	2.797	<b>199 170 388</b>	2.797

D	H	H1	H2	H3	H5	L	L1	L2	L5	L6	L7	L8	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	231	62	64	94	167	95	180	56	97	83	122	33	64
58	240	72	73	94	167	111	180	66	97	83	122	33	74
68	240	77	73	94	167	123	180	71	97	83	122	33	79
84	251	87	84	94	167	146	180	85	97	83	122	33	95
97	251	97	84	94	167	157	180	89	97	83	122	33	95
124	273	112	106	94	167	183	180	101	97	83	122	33	107



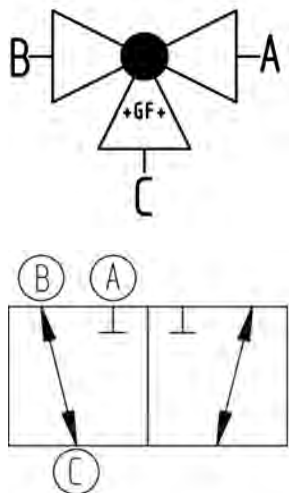
# 3-Way ball valves pneumatic



**3-Way ball valve type 285 PVC-U**  
**Horizontal/L-port**  
**Without manual override**  
**With solvent cement sockets BS**

**Model:**

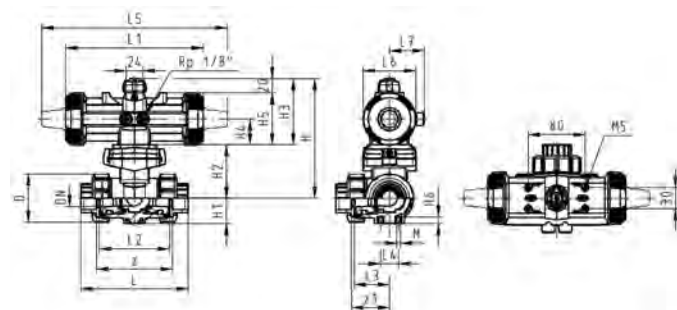
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Actuator fails safe to the closed position FC
- Basic position B-C opened, activated position A-C opened, see flow scheme
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	3/8	10	50	199 285 742	1 1.115	199 285 752	1 1.115
20	15	1/2	10	75	199 285 743	1 1.121	199 285 753	1 1.121
25	20	3/4	10	150	199 285 744	1 1.249	199 285 754	1 1.249
32	25	1	10	280	199 285 745	1 1.439	199 285 755	1 1.439
40	32	1 1/4	10	480	199 285 746	1 2.539	199 285 756	1 2.539
50	40	1 1/2	10	620	199 285 747	1 2.970	199 285 757	1 2.991
63	50	2	10	1230	199 285 748	1 4.352	199 285 758	1 4.352

D	H	H1	H2	H3	H4	H5	H6	L	L1	L2	L3	L4	L5	L6	L7
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	159	28	62	97	40	77	8	109	194	73	36	25	261	76	48
50	159	28	62	97	40	77	8	112	194	73	36	25	261	76	48
58	168	32	71	97	40	77	8	131	194	86	43	25	261	76	48
68	168	36	71	97	40	77	8	151	194	99	50	25	261	76	48
84	203	45	84	119	51	99	9	181	224	120	60	45	305	95	59
97	203	51	84	119	51	99	9	205	224	137	69	45	305	95	59
124	225	65	106	119	51	99	9	261	224	179	89	45	305	95	59

M	z	z1
(mm)	(mm)	(mm)
6	77	38
6	77	38
6	90	45
6	103	52
8	124	62
8	145	73
8	189	94

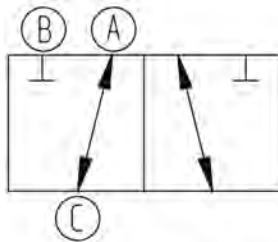
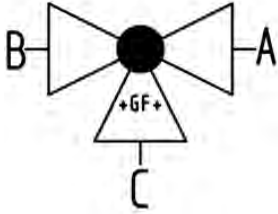




**3-Way ball valve type 285 PVC-U**  
**Horizontal/L-port**  
**DA (Double acting)**  
**Without manual override**  
**With solvent cement sockets BS**

**Model:**

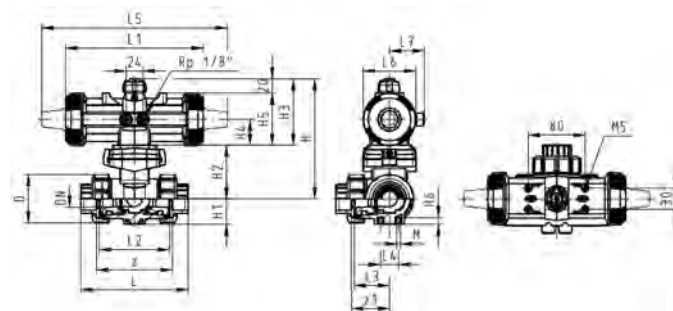
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	3/8	10	50	<b>199 285 762</b>	1	0.925	<b>199 285 772</b>	1	0.925
20	15	1/2	10	75	<b>199 285 763</b>	1	0.931	<b>199 285 773</b>	1	0.931
25	20	3/4	10	150	<b>199 285 764</b>	1	1.059	<b>199 285 774</b>	1	1.059
32	25	1	10	280	<b>199 285 765</b>	1	1.249	<b>199 285 775</b>	1	1.249
40	32	1 1/4	10	480	<b>199 285 766</b>	1	2.115	<b>199 285 776</b>	1	2.115
50	40	1 1/2	10	620	<b>199 285 767</b>	1	2.567	<b>199 285 777</b>	1	2.567
63	50	2	10	1230	<b>199 285 768</b>	1	3.928	<b>199 285 778</b>	1	3.928

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
50	159	28	62	97	40	77	8	109	194	73	36	25	261	76	48
50	159	28	62	97	40	77	8	112	194	73	36	25	261	76	48
58	168	32	71	97	40	77	8	131	194	86	43	25	261	76	48
68	168	36	71	97	40	77	8	151	194	99	50	25	261	76	48
84	203	45	84	119	51	99	9	181	224	120	60	45	305	95	59
97	203	51	84	119	51	99	9	205	224	137	69	45	305	95	59
124	225	65	106	119	51	99	9	261	224	179	89	45	305	95	59

M	z (mm)	z1 (mm)
6	77	38
6	77	38
6	90	45
6	103	52
8	124	62
8	145	73
8	189	94

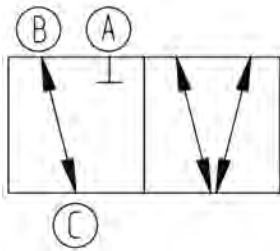
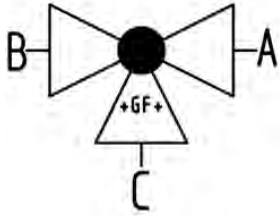




**3-Way ball valve type 285 PVC-U**  
**Horizontal/T-port**  
**Without manual override**  
**With solvent cement sockets BS**

**Model:**

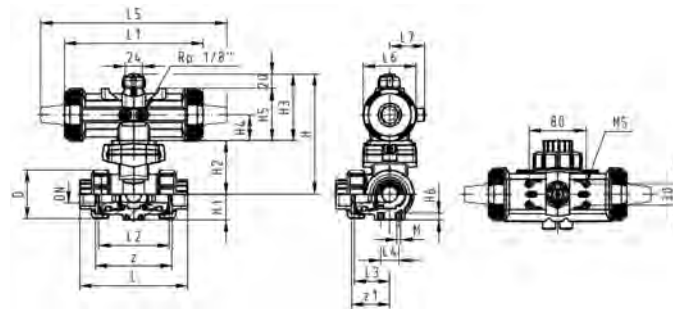
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Actuator fails safe to the closed position FC
- Basic position B-C opened, activated position A-B-C opened, see flow scheme
- Control time 90° < 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	3/8	10	140	<b>199 285 702</b>	1	1.114	<b>199 285 712</b>	1	1.114
20	15	1/2	10	200	<b>199 285 703</b>	1	1.120	<b>199 285 713</b>	1	1.120
25	20	3/4	10	470	<b>199 285 704</b>	1	1.247	<b>199 285 714</b>	1	1.247
32	25	1	10	793	<b>199 285 705</b>	1	1.432	<b>199 285 715</b>	1	1.432
40	32	1 1/4	10	1290	<b>199 285 706</b>	1	2.528	<b>199 285 716</b>	1	2.528
50	40	1 1/2	10	1910	<b>199 285 707</b>	1	2.970	<b>199 285 717</b>	1	2.970
63	50	2	10	3100	<b>199 285 708</b>	1	4.307	<b>199 285 718</b>	1	4.307

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
50	159	28	62	97	40	77	8	109	194	73	36	25	261	76	48
50	159	28	62	97	40	77	8	112	194	73	36	25	261	76	48
58	168	32	71	97	40	77	8	131	194	86	43	25	261	76	48
68	168	36	71	97	40	77	8	151	194	99	50	25	261	76	48
84	203	45	84	119	51	99	9	181	224	120	60	45	305	95	59
97	203	51	84	119	51	99	9	205	224	137	69	45	305	95	59
124	225	65	106	119	51	99	9	261	224	179	89	45	305	95	59

M	z	z1
(mm)	(mm)	(mm)
6	77	38
6	77	38
6	90	45
6	103	52
8	124	62
8	145	73
8	189	94

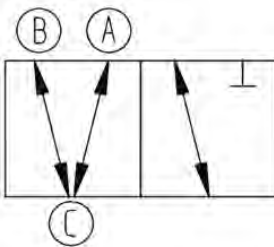
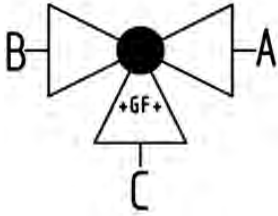




**3-Way ball valve type 285 PVC-U**  
**Horizontal/T-port**  
**DA (Double acting)**  
**Without manual override**  
**With solvent cement sockets BS**

**Model:**

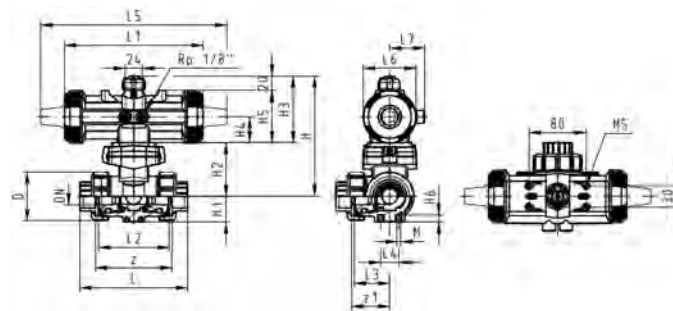
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Basic position A-B-C opened, activated position B-C opened, see flow scheme
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	3/8	10	140	<b>199 285 722</b>	1 0.924	<b>199 285 732</b>	1 0.924
20	15	1/2	10	200	<b>199 285 723</b>	1 0.930	<b>199 285 733</b>	1 0.930
25	20	3/4	10	470	<b>199 285 724</b>	1 1.057	<b>199 285 734</b>	1 1.057
32	25	1	10	793	<b>199 285 725</b>	1 1.242	<b>199 285 735</b>	1 1.242
40	32	1 1/4	10	1290	<b>199 285 726</b>	1 2.104	<b>199 285 736</b>	1 2.104
50	40	1 1/2	10	1910	<b>199 285 727</b>	1 2.546	<b>199 285 737</b>	1 2.546
63	50	2	10	3100	<b>199 285 728</b>	1 3.883	<b>199 285 738</b>	1 3.883

D	H	H1	H2	H3	H4	H5	H6	L	L1	L2	L3	L4	L5	L6	L7
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	159	28	62	97	40	77	8	109	194	73	36	25	261	76	48
50	159	28	62	97	40	77	8	112	194	73	36	25	261	76	48
58	168	32	71	97	40	77	8	131	194	86	43	25	261	76	48
68	168	36	71	97	40	77	8	151	194	99	50	25	261	76	48
84	203	45	84	119	51	99	9	181	224	120	60	45	305	95	59
97	203	51	84	119	51	99	9	205	224	137	69	45	305	95	59
124	225	65	106	119	51	99	9	261	224	179	89	45	305	95	59

M	z	z1
(mm)	(mm)	(mm)
6	77	38
6	77	38
6	90	45
6	103	52
8	124	62
8	145	73
8	189	94

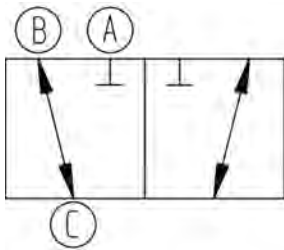
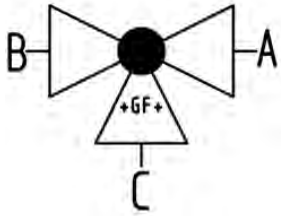




**3-Way ball valve type 285 PVC-U**  
**Horizontal/L-port**  
**Without manual override**  
**With solvent cement sockets JIS**

**Model:**

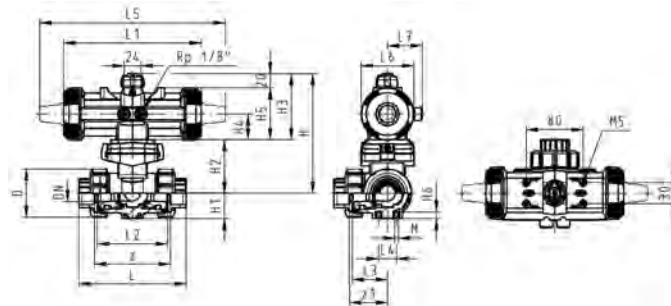
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Actuator fails safe to the closed position FC
- Basic position B-C opened, activated position A-C opened, see flow scheme
- Control time 90° < 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
20	15	½	10	75	<b>199 285 863</b>	1	1.121	<b>199 285 873</b>	1	1.121
25	20	¾	10	150	<b>199 285 864</b>	1	1.249	<b>199 285 874</b>	1	1.249
32	25	1	10	280	<b>199 285 865</b>	1	1.439	<b>199 285 875</b>	1	1.439
40	32	1 ¼	10	480	<b>199 285 866</b>	1	2.539	<b>199 285 876</b>	1	2.539
50	40	1 ½	10	620	<b>199 285 867</b>	1	2.991	<b>199 285 877</b>	1	2.991
63	50	2	10	1230	<b>199 285 868</b>	1	4.352	<b>199 285 878</b>	1	4.352

D	H	H1	H2	H3	H4	H5	H6	L	L1	L2	L3	L4	L5	L6	L7
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	159	28	62	97	40	77	8	112	194	73	36	25	261	76	48
58	168	32	71	97	40	77	8	131	194	86	43	25	261	76	48
68	168	36	71	97	40	77	8	151	194	99	50	25	261	76	48
84	203	45	84	119	51	99	9	181	224	120	60	45	305	95	59
97	203	51	84	119	51	99	9	205	224	137	69	45	305	95	59
124	225	65	106	119	51	99	9	261	224	179	89	45	305	95	59

M	z	z1
(mm)	(mm)	(mm)
6	81	40
6	94	47
6	107	54
8	130	65
8	143	72
8	185	92

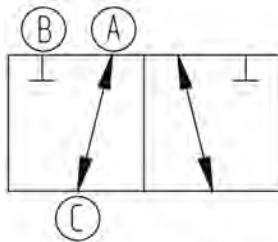
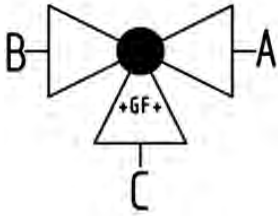




**3-Way ball valve type 285 PVC-U**  
**Horizontal/L-port DA (Double acting)**  
**Without manual override**  
**With solvent cement sockets JIS**

**Model:**

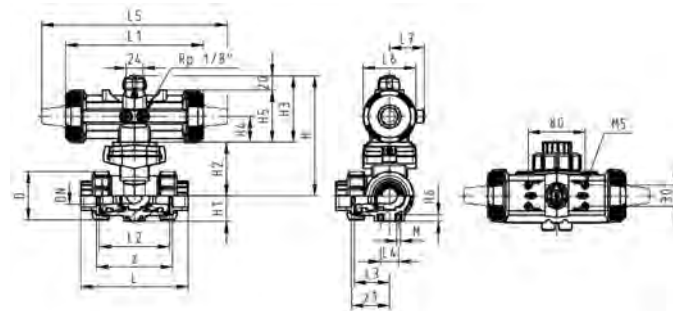
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Control time 90°< 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
20	15	½	10	75	199 285 643	1	0.877	199 285 653	1	0.931
25	20	¾	10	150	199 285 644	1	1.059	199 285 654	1	1.059
32	25	1	10	280	199 285 645	1	1.249	199 285 655	1	1.249
40	32	1 ¼	10	480	199 285 646	1	2.115	199 285 656	1	2.115
50	40	1 ½	10	620	199 285 647	1	2.567	199 285 657	1	2.567
63	50	2	10	1230	199 285 648	1	3.928	199 285 658	1	3.928

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
50	159	28	62	97	40	77	8	112	194	73	36	25	261	76	48
58	168	32	71	97	40	77	8	131	194	86	43	25	261	76	48
68	168	36	71	97	40	77	8	151	194	99	50	25	261	76	48
84	203	45	84	119	51	99	9	181	224	120	60	45	305	95	59
97	203	51	84	119	51	99	9	205	224	137	69	45	305	95	59
124	225	65	106	119	51	99	9	261	224	179	89	45	305	95	59

M (mm)	z (mm)	z1 (mm)
6	81	40
6	94	47
6	107	54
8	130	65
8	143	72
8	185	92

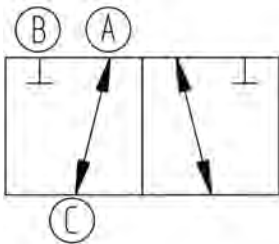
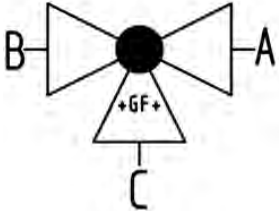




**3-Way ball valve type 288 PVC-U**  
**Vertical diverter ball**  
**Without manual override**  
**With solvent cement sockets JIS**

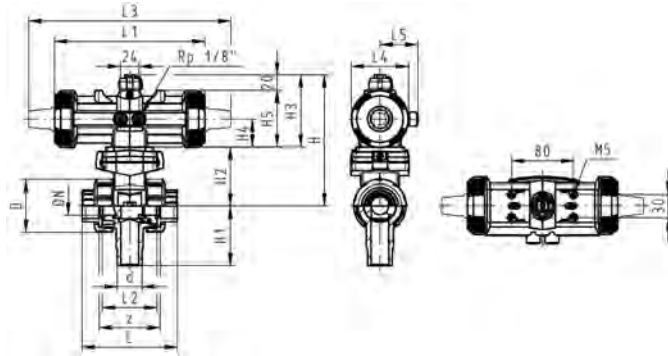
**Model:**

- Vertical inlet solvent cement spigot metric
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Actuator fails safe to the closed position FC
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Control time 90°<) 1-3 s
- Easy installation and removal using union on third outlet



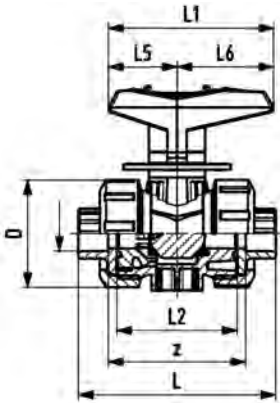
d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
20	15	½	10	77	<b>199 288 123</b>	1	1.035	<b>199 288 133</b>	1	1.035
25	20	¾	10	146	<b>199 288 124</b>	1	1.141	<b>199 288 134</b>	1	1.141
32	25	1	10	260	<b>199 288 125</b>	1	1.253	<b>199 288 135</b>	1	1.253
40	32	1 ¼	10	437	<b>199 288 126</b>	1	2.212	<b>199 288 136</b>	1	2.212
50	40	1 ½	10	667	<b>199 288 127</b>	1	2.466	<b>199 288 137</b>	1	2.466
63	50	2	10	1293	<b>199 288 128</b>	1	3.219	<b>199 288 138</b>	1	3.219

D	H	H1	H2	H3	H4	H5	L	L1	L2	L3	L4	L5	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	159	62	62	97	40	77	95	194	56	261	76	48	64
58	168	72	71	97	40	77	111	194	66	261	76	48	74
68	168	77	71	97	40	77	123	194	71	261	76	48	79
84	203	87	84	119	51	99	146	224	85	305	95	59	95
97	203	97	84	119	51	99	157	224	89	305	95	59	95
124	225	112	106	119	51	99	183	224	101	305	95	59	107





# Metering ball valves type 523



## Metering ball valve type 523 PVC-U With mounting inserts/With solvent cement sockets Inch BS

### Model:

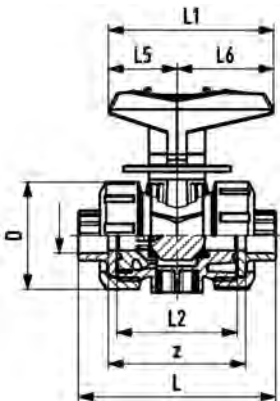
- Micro-doser
- Excellent control characteristics
- Designed for easy installation and removal
- Ball seals PTFE
- Angle of operation 180° with scale
- Integrated stainless steel mounting inserts
- Z-length, end connectors and union nuts **not compatible** to Type 323

### Option:

- Other materials on demand

d (mm)	DN (mm)	PN (bar)	Size (inch)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	10	3/8	11	161 523 501	1	0.170	161 523 511
20	15	10	1/2	20	161 523 502	1	0.170	161 523 512

D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	z (mm)
50	68	27	92	77	56	25	32	45	60
50	68	27	95	77	56	25	32	45	60



## Metering ball valve type 523 PVC-U With mounting inserts/With solvent cement sockets JIS

### Model:

- Micro-doser
- Excellent control characteristics
- Designed for easy installation and removal
- Ball seals PTFE
- Angle of operation 180° with scale
- Integrated stainless steel mounting inserts
- Z-length, end connectors and union nuts **not compatible** to Type 323

### Option:

- Other materials on demand

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
20	15	1/2	10	20	161 523 562	1	0.170	161 523 572

D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	z (mm)
50	68	27	95	77	56	25	32	45	64

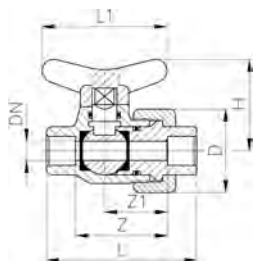
# Laboratory ball valves type 322



## Laboratory ball cock type 322 PVC-U With solvent cement sockets Inch BS/ASTM

### Model:

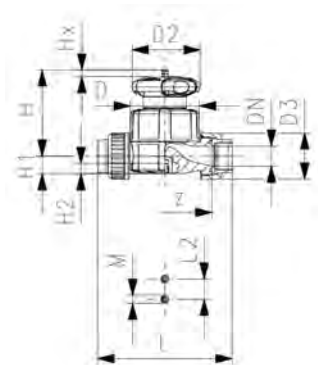
- Disconnection one end only
- Ball seals PTFE
- Angle of operation 90°



DN (mm)	PN (bar)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
6	10	161 324 150	5	0.043	161 324 199	5	0.042
8	10	161 324 200	5	0.044	161 324 249	5	0.045

D	H	L	L1	z	z1	Inch
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(inch)
34	38	52	45	26	15	1/8
34	38	60	45	36	25	1/4

# Diaphragm valves



## Diaphragm valve type 514 PVC-U With solvent cement sockets BS

### Model:

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Handwheel with built-in locking mechanism
- For easy installation and removal
- Short overall length

### Option:

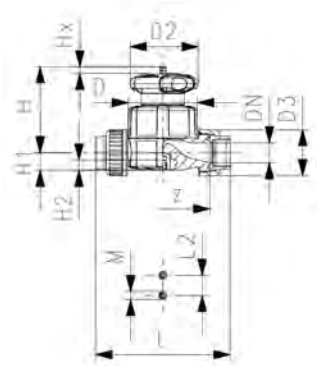
- Individual configuration of the valve
- Self adjusting multifunctional module with integrated limit switches
- PN16 available as a configuration

\* O-Ring material: FKM

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	NBR Code	SP Weight (kg)	EPDM Code	SP Weight (kg)		
20	15	½	10	125	161 514 502	1	0.396	161 514 512	1	0.296
25	20	¾	10	271	161 514 503	1	0.525	161 514 513	1	0.422
32	25	1	10	481	161 514 504	1	1.159	161 514 514	1	0.671
40	32	1 ¼	10	759	161 514 505	1	1.419	161 514 515	1	0.942
50	40	1 ½	10	1263	161 514 506	1	2.528	161 514 516	1	1.636
63	50	2	10	1728	161 514 507	1	3.409	161 514 517	1	2.514

PTFE/ EPDM* Code	SP Weight (kg)	FKM Code	SP Weight (kg)		
161 514 532	1	0.295	161 514 562	1	0.396
161 514 533	1	0.536	161 514 563	1	0.432
161 514 534	1	1.179	161 514 564	1	0.687
161 514 535	1	1.439	161 514 565	1	1.419
161 514 536	1	2.558	161 514 566	1	2.528
161 514 537	1	2.564	161 514 567	1	3.409

D	D2	D3	H	H1	H2	L	L2	M	z	Lift = Hx (mm)
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
65	65	43	73	14	12	128	25	M6	96	7
80	65	51	81	18	12	152	25	M6	114	10
88	87	58	107	22	12	166	25	M6	122	13
101	87	72	115	26	15	192	45	M8	140	15
117	135	83	148	32	15	222	45	M8	160	19
144	135	100	166	39	15	266	45	M8	190	25



### Diaphragm valve type 514 PVC-U With solvent cement sockets JIS

#### Model:

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Handwheel with built-in locking mechanism
- For easy installation and removal
- Short overall length

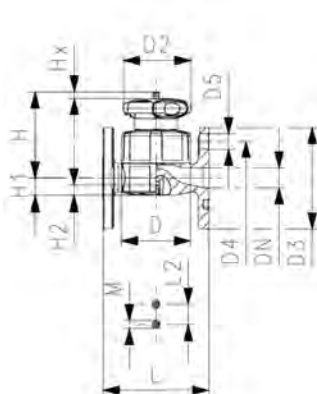
#### Option:

- Individual configuration of the valve
- Self adjusting multifunctional module with integrated limit switches
- PN16 available as a configuration

\* O-Ring material: FKM

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	PTFE/ EPDM* Code	SP	Weight (kg)
20	15	½	10	125	161 514 812	1	0.433	161 514 832	1	0.548
25	20	¾	10	271	161 514 813	1	0.421	161 514 833	1	0.538
32	25	1	10	481	161 514 814	1	1.163	161 514 834	1	1.183
40	32	1 ¼	10	759	161 514 815	1	1.437	161 514 835	1	1.457
50	40	1 ½	10	1263	161 514 816	1	1.640	161 514 836	1	2.588
63	50	2	10	1728	161 514 817	1	2.530	161 514 837	1	3.453

D	D2	D3	H	H1	H2	L	L2	M	z	Lift = Hx (mm)
80	65	51	81	18	12	152	25	M6	120	10
80	65	51	81	18	12	152	25	M6	114	10
88	87	58	107	22	12	166	25	M6	122	13
101	87	72	115	26	15	192	45	M8	140	15
117	135	83	148	32	15	222	45	M8	160	19
144	135	100	166	39	15	266	45	M8	190	25



### Diaphragm valve type 517 PVC-U With fixed flanges PVC-U JIS

#### Model:

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Handwheel with built-in locking mechanism
- Joining faces flat/serrated
- Connecting dimension: JIS B2238/39 10K

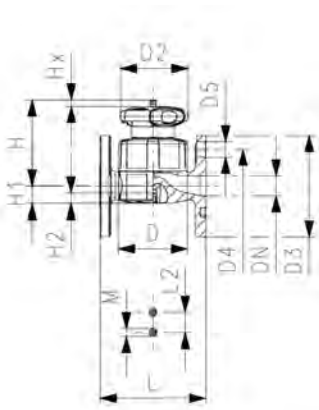
#### Option:

- Individual configuration of the valve
- Self adjusting multifunctional module with integrated limit switches

\* O-Ring material: FKM

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	PTFE/ EPDM* Code	SP	Weight (kg)
20	15	½	10	125	161 517 912	1	0.528	161 517 932	1	0.538
25	20	¾	10	271	161 517 913	1	0.626	161 517 933	1	0.637
32	25	1	10	481	161 517 914	1	1.334	161 517 934	1	1.354
40	32	1 ¼	10	759	161 517 915	1	1.745	161 517 935	1	1.765
50	40	1 ½	10	1263	161 517 916	1	2.814	161 517 936	1	2.844
63	50	2	10	1728	161 517 917	1	3.652	161 517 937	1	3.680

table continued on the next page



D	D2	D3	D4	D5	H	H1	H2	L	L2	M	Lift = Hx
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)
65	65	95	70	15	73	14	12	110	25	M6	7
80	65	100	75	15	81	18	12	120	25	M6	10
88	87	125	90	19	107	22	12	130	25	M6	13
101	87	135	100	19	115	26	15	180	45	M8	15
117	135	140	105	19	148	32	15	180	45	M8	19
144	135	155	120	19	166	39	15	210	45	M8	25



**Diaphragm valve type 317 PVC-U  
With flanges PVC-U JIS**

**Model:**

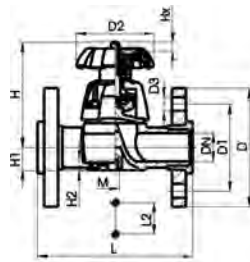
- Flat sealing faces
- Overall length according to EN 558

**Option:**

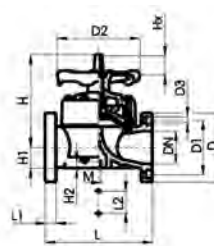
- Handwheel lockable DN15-65 (basic version not lockable)

d	DN	Size	PN	kv-value ( $\Delta p=1$ bar)	EPDM Code	PTFE with EPDM supp. diaphragm Code	Weight (kg)
(mm)	(mm)	(inch)	(bar)	(l/min)			
75	65	2 1/2	10	992	<b>161 317 868</b>	<b>161 317 883</b>	4.300
90	80	3	10	1700	<b>161 317 824</b>	<b>161 317 839</b>	9.700
110	100	4	6	2700	<b>161 317 825</b>	<b>161 317 840</b>	11.500
160	150	6	6	6033	<b>161 317 827</b>		

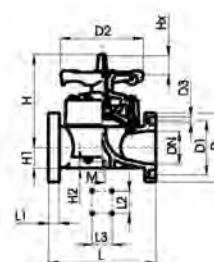
D	D1	D2	D3	H	H1	H2	L	L1	L2	L3	M	Lift = Hx	AL
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	
175	140	152	18	201	46	15	250		70		M8	30	4
185	150	270	18	265	57	23	280	35	120		M12	40	8
210	175	270	18	304	69	23	340	35	120		M12	50	8
230	240	400	22	437	108	23	480	26	100	200	M12	70	8



DN 15-65



DN 80-100



DN 150

# Diaphragm valves pneumatic

## Diaphragm valves pneumatic type 604 / 605



**Diaphragm valve type 604 PVC-U**  
Unions with solvent cement socket BS

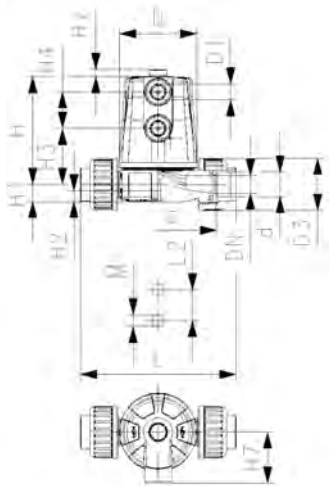
**Model:**

- Compact full plastic design without screws
- High flow rate
- Actuator housing with thread for easy maintenance
- Quick opening & closing times
- For easy installation and removal
- Market standard installation length

**Option:**

- Individual configuration of the valve

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	Actuator	EPDM Code	FKM Code	Weight (kg)
20	15	½	6	125	FC	161 604 512	161 604 562	0.40
20	15	½	6	125	FO	161 604 514	161 604 564	0.37
20	15	½	6	125	DA	161 604 515	161 604 565	0.35

**PTFE/  
EPDM\*  
Code**

161 604 532

161 604 534

161 604 535

D	D1_G	D3	H	H1	H2	H3	H4	H7	L	L2	M	z	Lift = Hx
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
65	¼	43	89	14	12	46	30	42	131	25	M6	98	6
65	¼	43	89	14	12	46	30	42	131	25	M6	98	6
65	¼	43	89	14	12	46	30	42	131	25	M6	98	6



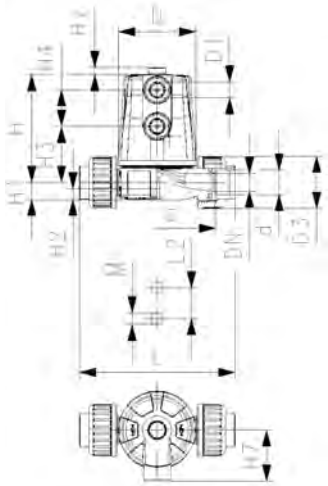
**Diaphragm valve type 604 PVC-U  
Unions with solvent cement socket JIS**

**Model:**

- Compact full plastic design without screws
- High flow rate
- Actuator housing with thread for easy maintenance
- Quick opening & closing times
- For easy installation and removal
- Market standard installation length

**Option:**

- Individual configuration of the valve
- \* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	Actuator	EPDM Code	FKM Code	Weight (kg)
20	15	½	6	125	FC	<b>161 604 812</b>	<b>161 604 862</b>	0.40
20	15	½	6	125	FO	<b>161 604 814</b>	<b>161 604 864</b>	0.37
20	15	½	6	125	DA	<b>161 604 815</b>	<b>161 604 865</b>	0.35

**PTFE/  
EPDM\*  
Code**

**161 604 832**

**161 604 834**

**161 604 835**

D	D1_G	D3	H	H1	H2	H3	H4	H7	L	L2	M	z	Lift = Hx
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
65	¼	43	89	14	12	46	30	42	128	25	M6	102	6
65	¼	43	89	14	12	46	30	42	128	25	M6	102	6
65	¼	43	89	14	12	46	30	42	128	25	M6	102	6

# DIASTAR Six



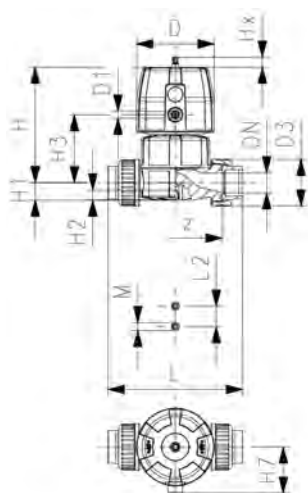
## Diaphragm valve DIASTAR Six PVC-U FC (Fail safe to close) Unions with solvent cement sockets BS

### Model:

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

### Option:

- Individual configuration of the valve
- PN16 available as a configuration



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
20	15	½	6	125	161 614 512	1	0.564
25	20	¾	6	271	161 614 513	1	1.044
32	25	1	6	481	161 614 514	1	1.273
40	32	1 ¼	6	759	161 614 515	1	2.058
50	40	1 ½	6	960	161 614 516	1	2.678
63	50	2	6	1181	161 614 517	1	3.786

D (mm)	D1_G (inch)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)
68	⅝	101	14	12	60	43	128	25	M6	96	7
96	⅝	132	18	12	73	57	152	25	M6	114	10
96	⅝	143	22	12	84	57	166	25	M6	122	13
120	⅝	173	26	15	99	69	192	45	M8	140	14
120	⅝	193	32	15	119	69	222	45	M8	160	16
120	⅝	205	39	15	132	69	266	45	M8	190	16





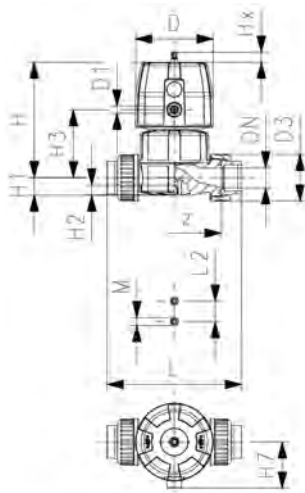
**Diaphragm valve DIASTAR Six PVC-U  
FC (Fail safe to close)  
Unions with solvent cement sockets JIS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

**Option:**

- Individual configuration of the valve
- PN16 available as a configuration



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
25	20	¾	6	271	161 614 813	1	1.010
32	25	1	6	481	161 614 814	1	1.277
40	32	1 ¼	6	759	161 614 815	1	2.076
50	40	1 ½	6	960	161 614 816	1	2.759
63	50	2	6	1181	161 614 817	1	3.802

D	D1_G	H	H1	H2	H3	H7	L	L2	M	z	Lift = Hx (mm)
96	⅝	132	18	12	73	57	152	25	M6	114	10
96	⅝	143	22	12	84	57	166	25	M6	122	13
120	⅝	173	26	15	99	69	192	45	M6	140	14
120	⅝	193	32	15	119	69	222	45	M6	160	16
120	⅝	205	39	15	132	69	266	45	M6	190	16



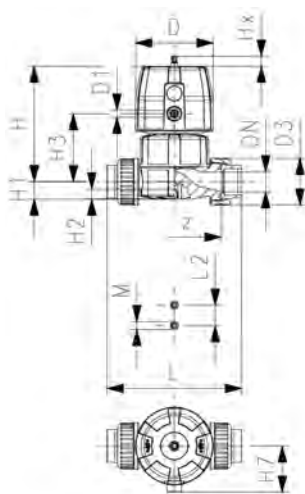
**Diaphragm valve DIASTAR Six PVC-U  
FC (Fail safe to close)  
Unions with threaded sockets Rc**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

**Option:**

- Individual configuration of the valve
- PN16 available as a configuration



d (mm)	DN (mm)	Thread Type	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
25	20	Rc	¾	6	271	161 614 913	1	1.048
32	25	Rc	1	6	481	161 614 914	1	1.279
40	32	Rc	1 ¼	6	759	161 614 915	1	2.072
50	40	Rc	1 ½	6	960	161 614 916	1	2.706
63	50	Rc	2	6	1181	161 614 917	1	3.874

D	D1_G	H	H1	H2	H3	H7	L	L2	M	z	Lift = Hx (mm)
96	⅝	132	18	12	73	57	152	25	M6	114	10
96	⅝	143	22	12	84	57	166	25	M6	122	13
120	⅝	173	26	15	99	69	192	45	M6	140	14
120	⅝	193	32	15	119	69	222	45	M6	160	16
120	⅝	205	39	15	132	69	266	45	M6	190	16



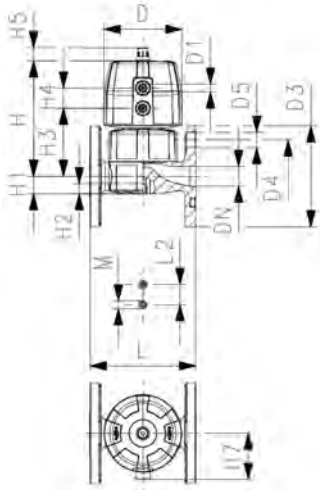
**Diaphragm valve DIASTAR Six PVC-U  
FC (Fail safe to close)  
With fixed flanges PVC-U JIS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Joining faces flat/serrated
- Connecting dimension: JIS B2238/39 10K

**Option:**

- Individual configuration of the valve



Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
3/4	20	6	271	<b>161 617 913</b>	1	1.145
1	25	6	481	<b>161 617 914</b>	1	1.448
1 1/4	32	6	759	<b>161 617 915</b>	1	2.384
1 1/2	40	6	960	<b>161 617 916</b>	1	2.964
2	50	6	1181	<b>161 617 917</b>	1	4.029

Size (inch)	D (mm)	D1_G (inch)	D3 (mm)	D4 (mm)	D5 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	Lift = Hx (mm)
3/4	96	3/8	100	75	15	132	18	12	73	57	120	25	M6	10
1	96	3/8	125	90	15	143	22	12	84	57	130	25	M6	13
1 1/4	120	3/8	135	100	19	173	26	15	99	69	180	45	M6	14
1 1/2	120	3/8	140	105	19	193	32	15	119	69	180	45	M6	16
2	120	3/8	155	120	19	205	39	15	132	69	210	45	M6	16

## DIASTAR Ten



**Diaphragm valve DIASTAR Ten PVC-U  
FC (Fail safe to close)  
Unions with solvent cement sockets BS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

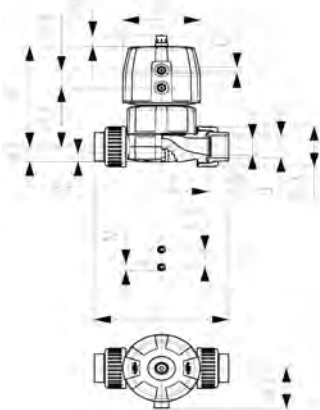
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

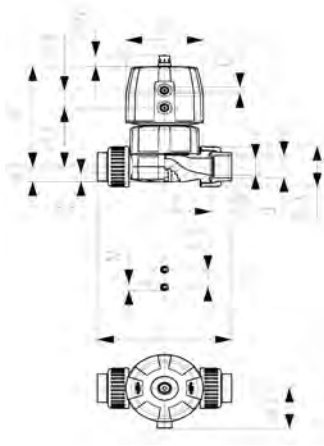
Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
20	15	1/2	10	10*	125	<b>161 624 512</b>	1	0.590
25	20	3/4	10	10*	271	<b>161 624 513</b>	1	1.119
32	25	1	10	10*	481	<b>161 624 514</b>	1	1.345
40	32	1 1/4	10	10*	759	<b>161 624 515</b>	1	2.208
50	40	1 1/2	10	10*	1263	<b>161 624 516</b>	1	3.816
63	50	2	10	6*	1728	<b>161 624 517</b>	1	4.707

table continued on the next page



PTFE/ EPDM* Code	SP	Weight (kg)
161 624 532	1	0.600
161 624 533	1	1.130
161 624 534	1	1.365
161 624 535	1	2.228
161 624 536	1	3.987
161 624 537	1	4.735

D	D1_G	H	H1	H2	H3	H4	H5	H7	L	L2	M	z	Lift = Hx (mm)
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	
68	1/8	101	14	12	60	24	16	43	128	25	M6	96	7
96	1/8	132	18	12	73	25	16	57	152	25	M6	114	10
96	1/8	143	22	12	84	25	16	57	166	25	M6	122	13
120	1/8	173	26	15	99	26	26	69	192	45	M8	140	15
150	1/4	214	32	15	119	36	26	88	222	45	M8	160	19
150	1/4	226	39	15	132	36	26	88	266	45	M8	190	23



**Diaphragm valve DIASTAR Ten PVC-U  
FC (Fail safe to close)  
Unions with solvent cement sockets JIS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

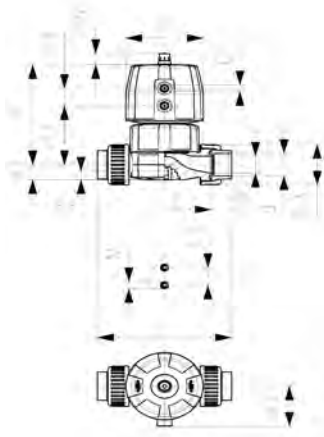
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **one side**

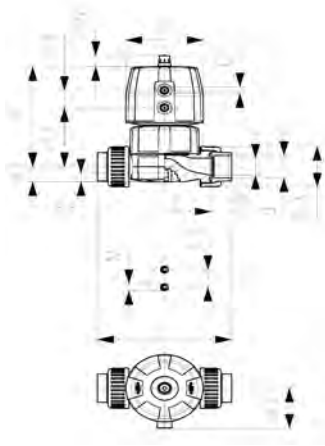
\* O-Ring material: FKM



d	DN	Size	PN	PN*	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)
(mm)	(mm)	(inch)	(bar)	(bar)				
20	15	1/2	10	10*	125	161 624 812	1	1.114
25	20	3/4	10	10*	271	161 624 813	1	1.108
32	25	1	10	10*	481	161 624 814	1	1.341
40	32	1 1/4	10	10*	759	161 624 815	1	2.226
50	40	1 1/2	10	10*	1263	161 624 816	1	3.846
63	50	2	10	6*	1728	161 624 817	1	4.608

PTFE/ EPDM* Code	SP	Weight (kg)
161 624 832	1	1.142
161 624 833	1	1.114
161 624 834	1	1.369
161 624 835	1	2.246
161 624 836	1	3.991
161 624 837	1	4.751

table continued on the next page



D	D1_G	H	H1	H2	H3	H4	H5	H7	L	L2	M	z	Lift = Hx
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)
96	⅜	132	18	12	73	25	16	57	152	25	M6	120	10
96	⅜	132	18	12	73	25	16	57	152	25	M6	144	10
96	⅜	143	22	12	84	25	16	57	166	25	M6	122	13
120	⅜	173	26	15	99	26	26	69	192	45	M8	140	15
150	¼	214	32	15	119	36	26	88	222	45	M8	160	19
150	¼	226	39	15	132	36	26	88	266	45	M8	190	23



**Diaphragm valve DIASTAR Ten PVC-U  
FC (Fail safe to close)  
Unions with threaded sockets Rc**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

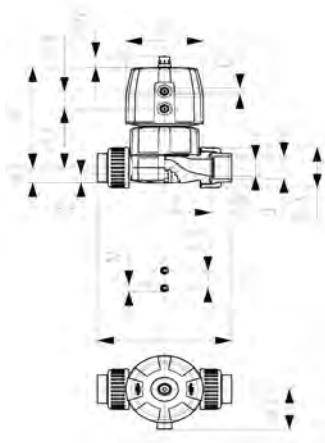
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



Rc	DN	PN*	kv-value	EPDM	SP	PTFE/ EPDM*	SP
(inch)	(mm)	(bar)	(Δp=1 bar)	Code	Weight	Code	Weight
			(L/min)		(kg)		(kg)
½	15	10/10*	125	<b>161 624 912</b>	1	1.131	<b>161 624 932</b>
¾	20	10/10*	271	<b>161 624 913</b>	1	1.123	<b>161 624 933</b>
1	25	10/10*	481	<b>161 624 914</b>	1	1.351	<b>161 624 934</b>
1 ¼	32	10/10*	759	<b>161 624 915</b>	1	2.222	<b>161 624 935</b>
1 ½	40	10/10*	1263	<b>161 624 916</b>	1	3.844	<b>161 624 936</b>
2	50	10/6*	1728	<b>161 624 917</b>	1	4.795	<b>161 624 937</b>

Rc	D	D1_G	H	H1	H2	H3	H4	H5	H7	L	L2	M	z	Lift = Hx
(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)
½	96	⅜	132	18	12	73	25	16	57	152	25	M6	120	10
¾	96	⅜	132	18	12	73	25	16	57	152	25	M6	114	10
1	96	⅜	143	22	12	84	25	16	57	166	25	M6	122	13
1 ¼	120	⅜	173	26	15	99	26	26	69	192	45	M8	140	15
1 ½	120	¼	214	32	15	119	36	26	88	222	45	M8	160	19
2	120	¼	226	39	15	132	36	26	88	266	45	M8	190	23



**Diaphragm valve DIASTAR Ten PVC-U  
FC (Fail safe to close)  
With fixed flanges PVC-U JIS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Joining faces flat/serrated
- Connecting dimension: JIS B2238/39 10K

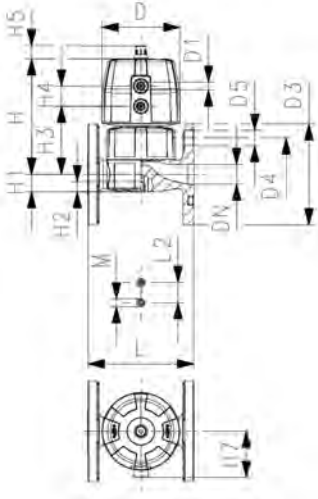
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
20	15	½	10	10*	125	<b>161 627 912</b>	1	0.722
25	20	¾	10	10*	271	<b>161 627 913</b>	1	1.220
32	25	1	10	10*	481	<b>161 627 914</b>	1	1.520
40	32	1 ¼	10	10*	759	<b>161 627 915</b>	1	2.534
50	40	1 ½	10	10*	1263	<b>161 627 916</b>	1	4.102
63	50	2	10	6*	1728	<b>161 627 917</b>	1	4.950

PTFE/ EPDM* Code	SP	Weight (kg)
<b>161 627 932</b>	1	0.732
<b>161 627 933</b>	1	1.231
<b>161 627 934</b>	1	1.540
<b>161 627 935</b>	1	2.554
<b>161 627 936</b>	1	4.132
<b>161 627 937</b>	1	4.978

D	D1_G	D3	D4	D5	H	H1	H2	H3	H4	H5	H7	L	L2	M
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
68	⅝	95	70	15	101	14	12	60	24	16	43	110	25	M6
96	⅝	100	75	15	132	18	12	73	25	16	57	120	25	M6
96	⅝	125	90	19	143	22	12	84	25	16	57	130	25	M6
120	⅝	135	100	19	173	26	15	99	26	26	69	180	45	M8
150	¾	140	105	19	193	32	15	119	36	26	88	180	45	M8
150	¾	155	120	19	205	39	15	132	36	26	88	210	45	M8

**Lift =**

**Hx**

(mm)

7
10
13
15
19
23



**Diaphragm valve DIASTAR Ten PVC-U**  
**FO (Fail safe to open)**  
**Unions with solvent cement sockets BS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

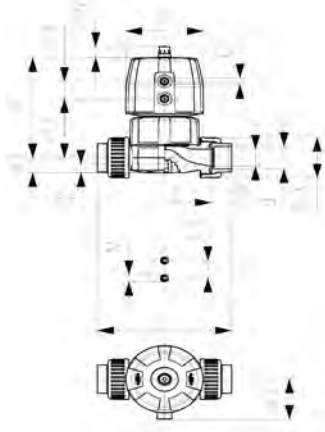
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)
20	15	½	10	10*	125	<b>161 644 512</b>	1	0.504
25	20	¾	10	10*	271	<b>161 644 513</b>	1	0.945
32	25	1	10	10*	481	<b>161 644 514</b>	1	1.165
40	32	1 ¼	10	10*	759	<b>161 644 515</b>	1	1.848
50	40	1 ½	10	10*	1263	<b>161 644 516</b>	1	3.726
63	50	2	10	10*	1728	<b>161 644 517</b>	1	4.617

PTFE/ EPDM* Code	SP	Weight (kg)
<b>161 644 532</b>	1	0.550
<b>161 644 533</b>	1	0.956
<b>161 644 534</b>	1	1.152
<b>161 644 535</b>	1	1.868
<b>161 644 536</b>	1	3.756
<b>161 644 537</b>	1	4.645

D	D1_G	H	H1	H2	H3	H4	H5	H7	L	L2	M	z	Lift = Hx (mm)
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	
68	⅝	101	14	12	60	24	16	43	128	25	M6	96	7
96	⅝	132	18	12	73	25	16	57	152	25	M6	114	10
96	⅝	143	22	12	84	25	16	57	166	25	M6	122	13
120	⅝	173	26	15	99	26	26	69	192	45	M8	140	15
150	⅝	214	32	15	119	36	26	88	222	45	M8	160	19
150	⅝	226	39	15	132	36	26	88	266	45	M8	190	23



**Diaphragm valve DIASTAR Ten PVC-U  
FO (Fail safe to open)  
Unions with solvent cement sockets JIS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

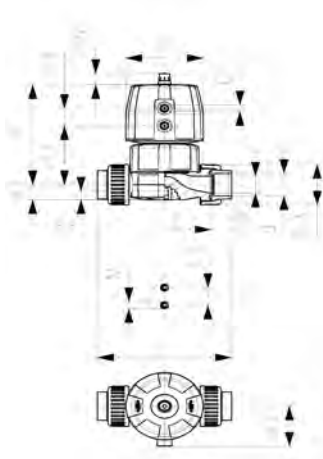
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
20	15	½	10	10*	125	<b>161 644 812</b>	1	0.957
25	20	¾	10	10*	271	<b>161 644 813</b>	1	0.947
32	25	1	10	10*	481	<b>161 644 814</b>	1	1.169
40	32	1 ¼	10	10*	759	<b>161 644 815</b>	1	1.866
50	40	1 ½	10	10*	1263	<b>161 644 816</b>	1	3.756
63	50	2	10	10*	1728	<b>161 644 817</b>	1	4.633

PTFE/ EPDM* Code	SP	Weight (kg)
<b>161 644 832</b>	1	0.968
<b>161 644 833</b>	1	0.958
<b>161 644 834</b>	1	1.189
<b>161 644 835</b>	1	1.886
<b>161 644 836</b>	1	3.786
<b>161 644 837</b>	1	4.661

D	D1_G	H	H1	H2	H3	H4	H5	H7	L	L2	M	z	Lift = Hx (mm)
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	
96	⅝	132	18	12	73	25	16	57	152	25	M6	120	10
96	⅝	132	18	12	73	25	16	57	152	25	M6	114	10
96	⅝	143	22	12	84	25	16	57	166	25	M6	122	13
120	⅝	173	26	15	99	26	26	69	192	45	M8	140	15
150	¾	214	32	15	119	36	26	88	222	45	M8	160	19
150	¾	226	39	15	132	36	26	88	266	45	M8	190	23



**Diaphragm valve DIASTAR Ten PVC-U**  
**FO (Fail safe to open)**  
**Unions with threaded sockets Rc**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

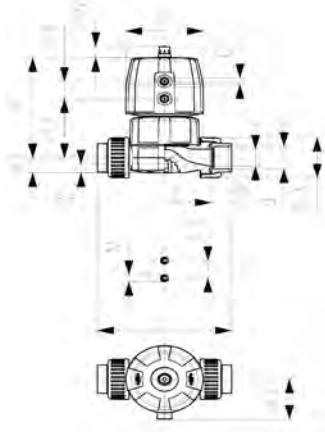
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d	DN	Thread Type	Size	PN	PN*	kv-value	EPDM	SP	Weight
(mm)	(mm)		(inch)	(bar)	(bar)	( $\Delta p=1$ bar)	Code		(kg)
						(l/min)			
20	15	Rc	½	10	10*	125	<b>161 644 912</b>	1	0.957
25	20	Rc	¾	10	10*	271	<b>161 644 913</b>	1	0.948
32	25	Rc	1	10	10*	481	<b>161 644 914</b>	1	1.171
40	32	Rc	1 ¼	10	10*	759	<b>161 644 915</b>	1	1.862
50	40	Rc	1 ½	10	10*	1263	<b>161 644 916</b>	1	3.754
63	50	Rc	2	6	10*	1728	<b>161 644 917</b>	1	4.705

PTFE/ EPDM* Code	SP	Weight
		(kg)
<b>161 644 932</b>	1	0.968
<b>161 644 933</b>	1	0.960
<b>161 644 934</b>	1	1.191
<b>161 644 935</b>	1	1.882
<b>161 644 936</b>	1	3.784
<b>161 644 937</b>	1	4.733

D	D1_G	H	H1	H2	H3	H4	H5	H7	L	L2	M	z	Lift = Hx
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)
96	¾	132	18	12	73	25	16	57	152	25	M6	120	10
96	¾	132	18	12	73	25	16	57	152	25	M6	114	10
96	¾	143	22	12	84	25	16	57	166	25	M6	122	13
120	½	173	26	15	99	26	26	69	192	45	M8	140	15
150	¼	214	32	15	119	36	26	69	222	45	M8	160	19
150	¼	226	39	15	132	36	26	69	266	45	M8	190	23





**Diaphragm valve DIASTAR Ten PVC-U  
FO (Fail safe to open)  
With fixed flanges PVC-U JIS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Joining faces flat/serrated
- Connecting dimension: JIS B2238/39 10K

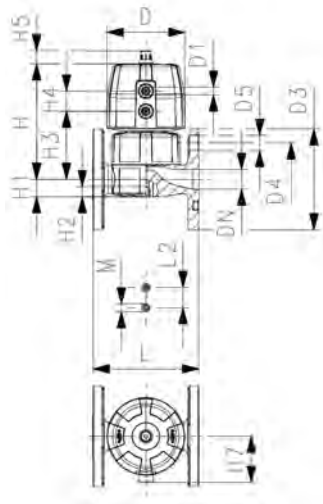
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)
20	15	½	10	10*	125	<b>161 647 912</b>	1	0.672
25	20	¾	10	10*	271	<b>161 647 913</b>	1	1.046
32	25	1	10	10*	481	<b>161 647 914</b>	1	1.340
40	32	1 ¼	10	10*	759	<b>161 647 915</b>	1	2.174
50	40	1 ½	10	10*	1263	<b>161 647 916</b>	1	4.012
63	50	2	10	10*	1728	<b>161 647 917</b>	1	4.860

PTFE/ EPDM* Code	SP	Weight (kg)
<b>161 647 932</b>	1	0.682
<b>161 647 933</b>	1	1.057
<b>161 647 934</b>	1	1.360
<b>161 647 935</b>	1	2.194
<b>161 647 936</b>	1	4.042
<b>161 647 937</b>	1	4.888

D	D1_G	D3	D4	D5	H	H1	H2	H3	H4	H5	H7	L	L2	M
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
68	⅝	95	70	15	101	14	12	60	24	16	43	110	25	M6
96	⅝	100	75	15	132	18	12	73	25	16	57	120	25	M6
96	⅝	125	90	19	143	22	12	84	25	16	57	130	25	M6
120	⅝	135	100	19	173	26	15	99	26	26	69	180	45	M8
150	¾	140	105	19	214	32	15	119	36	26	88	180	45	M8
150	¾	155	120	19	226	39	15	132	36	26	88	210	45	M8

**Lift =**  
**Hx**  
(mm)

7
10
13
15
19
23



**Diaphragm valve DIASTAR Ten PVC-U  
DA (Double acting)  
Unions with solvent cement sockets BS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

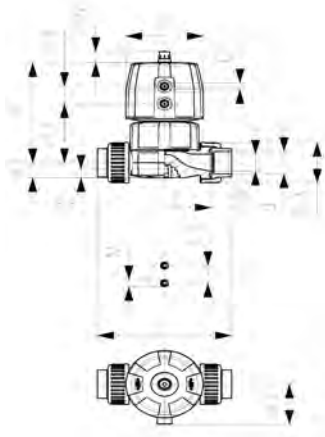
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value (Δp=1 bar) (L/min)	EPDM Code	SP	Weight (kg)
20	15	½	10	10*	125	<b>161 654 512</b>	1	0.508
25	20	¾	10	10*	271	<b>161 654 513</b>	1	0.909
32	25	1	10	10*	481	<b>161 654 514</b>	1	1.135
40	32	1 ¼	10	10*	759	<b>161 654 515</b>	1	1.788
50	40	1 ½	10	10*	1263	<b>161 654 516</b>	1	2.976
63	50	2	10	10*	1728	<b>161 654 517</b>	1	4.762

PTFE/ EPDM* Code	SP	Weight (kg)
<b>161 654 532</b>	1	0.534
<b>161 654 533</b>	1	0.920
<b>161 654 534</b>	1	1.155
<b>161 654 535</b>	1	1.808
<b>161 654 536</b>	1	3.006
<b>161 654 537</b>	1	3.895

D	D1_G	H	H1	H2	H3	H4	H5	H7	L	L2	M	z	Lift = Hx (mm)
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	
68	⅝	101	14	12	60	24	16	43	128	25	M6	96	7
96	⅝	132	18	12	73	25	16	57	152	25	M6	114	10
96	⅝	143	22	12	84	25	16	57	166	25	M6	122	13
120	⅝	173	26	15	99	26	26	69	192	45	M8	140	15
150	⅝	214	32	15	119	36	26	88	222	45	M8	160	19
150	⅝	226	39	15	132	36	26	88	266	45	M8	190	23



**Diaphragm valve DIASTAR Ten PVC-U  
DA (Double acting)  
Unions with solvent cement sockets JIS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

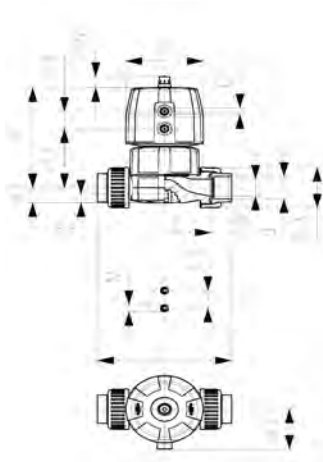
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
20	15	½	10	10*	125	<b>161 654 812</b>	1	0.921
25	20	¾	10	10*	271	<b>161 654 813</b>	1	0.911
32	25	1	10	10*	481	<b>161 654 814</b>	1	1.139
40	32	1 ¼	10	10*	759	<b>161 654 815</b>	1	1.806
50	40	1 ½	10	10*	1263	<b>161 654 816</b>	1	3.006
63	50	2	10	10*	1728	<b>161 654 817</b>	1	3.883

PTFE/ EPDM* Code	SP	Weight (kg)
<b>161 654 832</b>	1	0.932
<b>161 654 833</b>	1	0.922
<b>161 654 834</b>	1	1.159
<b>161 654 835</b>	1	1.826
<b>161 654 836</b>	1	3.036
<b>161 654 837</b>	1	3.911

D	D1_G	H	H1	H2	H3	H4	H5	H7	L	L2	M	z	Lift = Hx (mm)
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	
96	⅜	132	18	12	73	25	16	57	152	25	M6	120	10
96	⅜	132	18	12	73	25	16	57	152	25	M6	114	10
96	⅜	143	22	12	84	25	16	57	166	25	M6	122	13
120	⅜	173	26	15	99	26	26	69	192	45	M8	140	15
150	¼	214	32	15	119	36	26	88	222	45	M8	160	19
150	¼	226	39	15	132	36	26	88	266	45	M8	190	23



**Diaphragm valve DIASTAR Ten PVC-U  
DA (Double acting)  
Unions with threaded sockets Rc**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

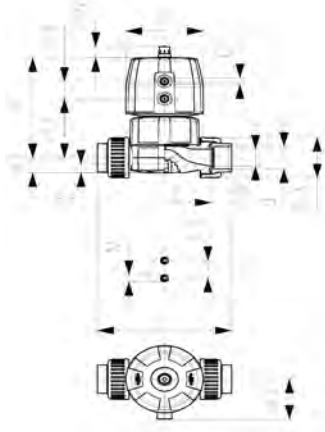
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



Rc (inch)	DN (mm)	PN* (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	PTFE/ EPDM* Code	SP	Weight (kg)
1/2	15	10/10*	125	<b>161 654 912</b>	1	0.921	<b>161 654 932</b>	1	0.932
3/4	20	10/10*	271	<b>161 654 913</b>	1	0.912	<b>161 654 933</b>	1	0.924
1	25	10/10*	481	<b>161 654 914</b>	1	1.141	<b>161 654 934</b>	1	1.161
1 1/4	32	10/10*	759	<b>161 654 915</b>	1	1.802	<b>161 654 935</b>	1	1.822
1 1/2	40	10/10*	1263	<b>161 654 916</b>	1	3.004	<b>161 654 936</b>	1	3.034
2	50	10/10*	1728	<b>161 654 917</b>	1	3.955	<b>161 654 937</b>	1	3.983

Rc (inch)	D (mm)	D1_G (inch)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)
1/2	96	1/8	132	18	12	73	25	16	57	152	25	M6	120	10
3/4	96	1/8	132	18	12	73	25	16	57	152	25	M6	114	10
1	96	1/8	143	22	12	84	25	16	57	166	25	M6	122	13
1 1/4	120	1/8	173	26	15	99	26	26	69	192	45	M8	140	15
1 1/2	150	1/4	214	32	15	119	36	26	69	222	45	M8	160	19
2	150	1/4	226	39	15	132	36	26	69	266	45	M8	190	23



**Diaphragm valve DIASTAR Ten PVC-U  
DA (Double acting)  
With fixed flanges PVC-U JIS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Joining faces flat/serrated
- Connecting dimension: JIS B2238/39 10K

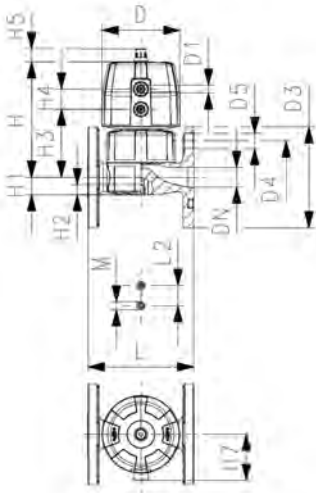
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)
20	15	½	10	10*	125	<b>161 657 912</b>	1	0.656
25	20	¾	10	10*	271	<b>161 657 913</b>	1	1.010
32	25	1	10	10*	481	<b>161 657 914</b>	1	1.310
40	32	1 ¼	10	10*	759	<b>161 657 915</b>	1	2.114
50	40	1 ½	10	10*	1263	<b>161 657 916</b>	1	3.262
63	50	2	10	10*	1728	<b>161 657 917</b>	1	4.110

PTFE/ EPDM* Code	SP	Weight (kg)
<b>161 657 932</b>	1	0.666
<b>161 657 933</b>	1	1.021
<b>161 657 934</b>	1	1.330
<b>161 657 935</b>	1	2.134
<b>161 657 936</b>	1	3.292
<b>161 657 937</b>	1	4.138

D	D1_G	D3	D4	D5	H	H1	H2	H3	H4	H5	H7	L	L2	M
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
68	⅝	95	70	15	101	14	12	60	24	16	43	110	25	M6
96	⅝	100	75	15	132	18	12	73	25	16	57	120	25	M6
96	⅝	125	90	19	143	22	12	84	25	16	57	130	25	M6
120	⅝	135	100	19	173	26	15	99	26	26	69	180	45	M8
150	¾	140	105	19	214	32	15	119	36	26	88	180	45	M8
150	¾	155	120	19	226	39	15	132	36	26	88	210	45	M8

**Lift =**  
**Hx**  
(mm)

7
10
13
15
19
23

# DIASTAR TenPlus



## Diaphragm valve DIASTAR TenPlus PVC-U FC (Fail safe to close) Unions with solvent cement sockets BS

### Model:

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

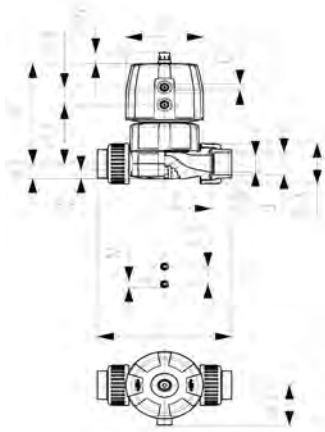
### Option:

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **both sides**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value (Δp=1 bar) (L/min)	EPDM Code	SP	Weight (kg)
20	15	½	10	10*	125	<b>161 684 512</b>	1	0.990
25	20	¾	10	10*	271	<b>161 684 513</b>	1	1.119
32	25	1	10	10*	481	<b>161 684 514</b>	1	2.040
40	32	1 ¼	10	10*	759	<b>161 684 515</b>	1	3.278
50	40	1 ½	10	10*	1263	<b>161 684 516</b>	1	5.224
63	50	2	10	10*	1728	<b>161 684 517</b>	1	6.326

PTFE/ EPDM* Code	SP	Weight (kg)
<b>161 684 532</b>	1	1.000
<b>161 684 533</b>	1	1.130
<b>161 684 534</b>	1	1.959
<b>161 684 535</b>	1	3.298
<b>161 684 536</b>	1	5.254
<b>161 684 537</b>	1	6.142

D	D1_G	H	H1	H2	H3	H4	H5	H7	L	L2	M	z	Lift = Hx (mm)
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	
96	¾	127	14	12	68	25	16	57	128	25	M6	96	7
96	¾	132	18	12	73	25	16	57	152	25	M6	114	10
120	½	167	22	12	93	26	26	69	166	25	M6	122	13
150	¼	196	26	15	101	36	26	88	192	45	M8	140	15
180	¼	239	32	15	124	37	26	103	222	45	M8	160	19
180	¼	251	39	15	137	37	26	103	266	45	M8	190	23



**Diaphragm valve DIASTAR TenPlus PVC-U  
FC (Fail safe to close) low pressure  
Unions with solvent cement sockets JIS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

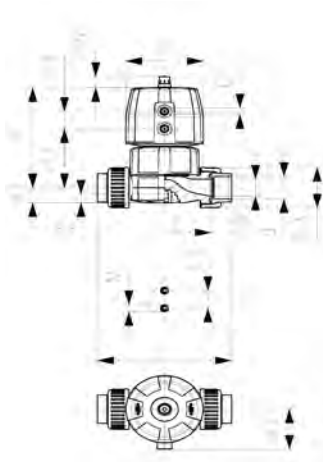
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **both sides**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
20	15	½	10	8*	125	<b>161 684 812</b>	1	1.135
25	20	¾	10	8*	271	<b>161 684 813</b>	1	1.121
32	25	1	10	8*	481	<b>161 684 814</b>	1	1.943
40	32	1 ¼	10	8*	759	<b>161 684 815</b>	1	3.296
50	40	1 ½	10	8*	1263	<b>161 684 816</b>	1	6.336
63	50	2	10	6*	1728	<b>161 684 817</b>	1	6.130

PTFE/ EPDM* Code	SP	Weight (kg)
<b>161 684 832</b>	1	1.142
<b>161 684 833</b>	1	1.132
<b>161 684 834</b>	1	1.963
<b>161 684 835</b>	1	3.316
<b>161 684 836</b>	1	5.284
<b>161 684 837</b>	1	6.158

D	D1_G	H	H1	H2	H3	H4	H5	H7	L	L2	M	z	Lift = Hx (mm)
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	
96	¾	132	18	12	73	25	16	57	152	25	M6	120	10
96	¾	132	18	12	73	25	16	57	152	25	M6	114	10
120	½	167	22	12	93	26	26	69	166	25	M6	122	13
150	¼	196	26	15	101	36	26	88	192	45	M8	140	15
180	¼	239	32	15	124	37	26	103	222	45	M8	160	19
180	¼	251	39	15	137	37	26	103	266	45	M8	190	23



**Diaphragm valve DIASTAR TenPlus PVC-U  
FC (Fail safe to close) low pressure  
Unions with threaded sockets Rc**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Short overall length

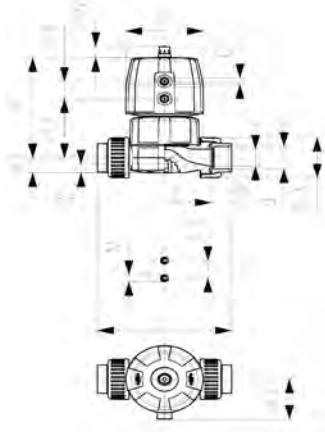
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **both sides**

\* O-Ring material: FKM



Rc (inch)	DN (mm)	PN* (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	PTFE/ EPDM* Code	SP	Weight (kg)
1/2	15	10/8*	125	161 684 912	1	1.131	161 684 932	1	1.142
3/4	20	10/8*	271	161 684 913	1	1.123	161 684 933	1	1.134
1	25	10/8*	481	161 684 914	1	1.945	161 684 934	1	1.965
1 1/4	32	10/8*	759	161 684 915	1	3.292	161 684 935	1	3.312
1 1/2	40	10/8*	1263	161 684 916	1	5.252	161 684 936	1	5.282
2	50	10/6*	1728	161 684 917	1	6.202	161 684 937	1	6.230

Rc (inch)	D (mm)	D1_G (inch)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)
1/2	96	1/8	132	18	12	73	25	16	57	152	25	M6	120	10
3/4	96	1/8	132	18	12	73	25	16	57	152	25	M6	114	10
1	120	1/8	167	22	12	93	26	26	69	166	25	M6	122	13
1 1/4	150	1/4	196	26	15	101	36	26	88	192	45	M8	140	15
1 1/2	180	1/4	239	32	15	124	37	26	103	222	45	M8	160	19
2	180	1/4	251	39	15	137	37	26	103	266	45	M8	190	23





**Diaphragm valve DIASTAR TenPlus PVC-U  
FC (Fail safe to close) low pressure  
With fixed flanges PVC-U JIS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Joining faces flat/serrated
- Connecting dimension: JIS B2238/39 10K

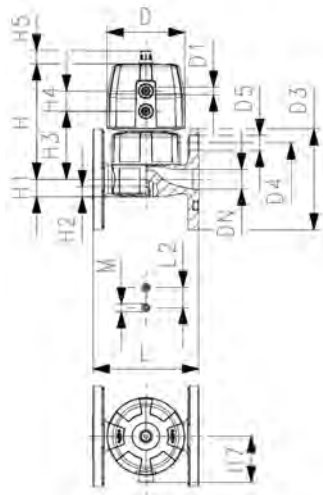
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available

\* PN: PTFE

Working Pressure: **both sides**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
20	15	½	10	8*	125	<b>161 687 912</b>	1	1.122
25	20	¾	10	8*	271	<b>161 687 913</b>	1	1.220
32	25	1	10	8*	481	<b>161 687 914</b>	1	2.114
40	32	1 ¼	10	8*	759	<b>161 687 915</b>	1	3.604
50	40	1 ½	10	8*	1263	<b>161 687 916</b>	1	5.510
63	50	2	10	6*	1728	<b>161 687 917</b>	1	6.357

PTFE/ EPDM* Code	SP	Weight (kg)
<b>161 687 932</b>	1	1.132
<b>161 687 933</b>	1	1.231
<b>161 687 934</b>	1	2.134
<b>161 687 935</b>	1	3.624
<b>161 687 936</b>	1	5.540
<b>161 687 937</b>	1	6.385

D	D1_G	D3	D4	D5	H	H1	H2	H3	H4	H5	H7	L	L2	M
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
96	⅝	95	70	15	127	14	12	68	25	16	57	110	25	M6
96	⅝	100	75	15	132	18	12	73	25	16	57	120	25	M6
120	⅝	125	90	19	167	22	12	93	26	26	69	130	25	M6
150	¾	135	100	19	196	26	15	101	36	26	88	180	45	M8
180	¾	140	105	19	239	32	15	124	37	26	103	180	45	M8
180	¾	155	120	19	251	39	15	137	37	26	103	210	45	M8

**Lift =**  
**Hx**  
(mm)

7
10
13
15
19
23

# Diaphragm valves electric



## e-DIASTAR Type 514 PVC-U 24V With solvent cement sockets BS

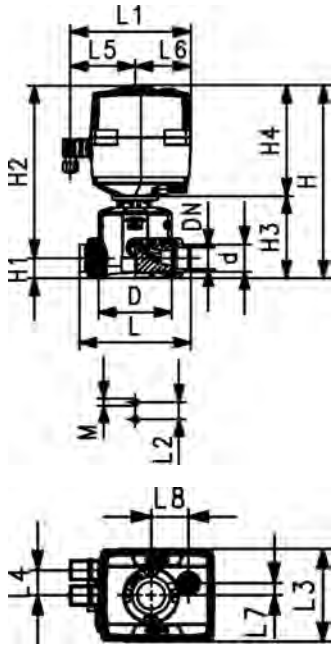
### Model:

- Voltage 24V AC/DC
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

### Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	EPDM Code	Weight (kg)	PTFE/EPDM Code	Weight (kg)
32	25	10	161 704 514	3.728	161 704 534	3.748
63	50	6	161 704 517	6.593	161 704 537	6.621



kv-value ( $\Delta p=1$ bar) (l/min)	D (mm)	D1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)	H (mm)
442	109	58	170	180	25	122	33	97	83	16	49	192	286
1575	168	101	265	180	45	122	33	97	83	16	49		341

H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	z (mm)	M
30	20	256	121	165	122	M6
53	29	289	176	165	122	M8



**e-DIASTAR Type 514 PVC-U 24V**  
**With solvent cement sockets ASTM**

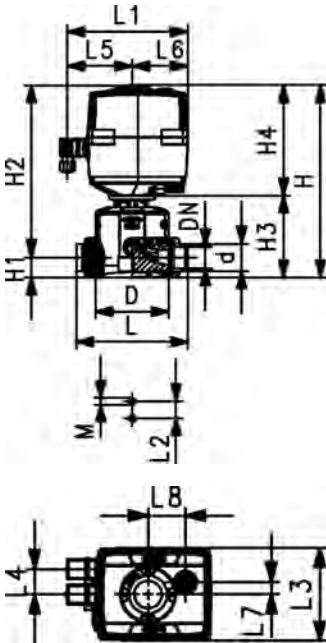
**Model:**

- Voltage 24V AC/DC
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	EPDM Weight Code (kg)	PTFE/EPDM Weight Code (kg)
32	25	10	161 704 614	3.734
63	50	6	161 704 617	6.601
				161 704 634
				6.629



kv-value ( $\Delta p=1$ bar) (l/min)	D (mm)	D1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)	H (mm)
442	109	58	166	180	25	122	33	97	83	16	49	190	286
1575	168	101	266	180	45	122	33	97	83	16	49		341

H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	z (mm)	M
30	20	256	121	165	122	M6
53	29	289	176	165	122	M8



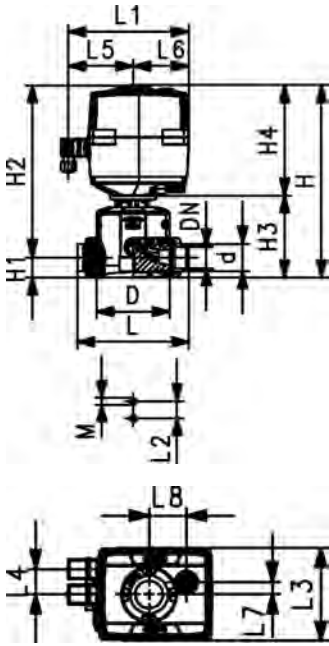
**e-DIASTAR Type 514 PVC-U**  
**24V**  
**With solvent cement sockets JIS**

**Model:**

- Voltage 24V AC/DC
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-100-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	Weight (kg)	PTFE/EPDM Code	Weight (kg)
32	25	1	10	442	<b>161 704 814</b>	3.732	<b>161 704 834</b>	3.752
63	50	2	6	1575	<b>161 704 817</b>	6.609	<b>161 704 837</b>	6.637

kv-value ( $\Delta p=1$ bar) (L/min)	D (mm)	D1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)	H (mm)
442	109	58	166	180	25	122	33	97	83	16	49	190	286
1575	168	101	266	180	45	122	33	97	83	16	49	190	341

H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	z (mm)	M
30	20	256	121	165	122	M6
53	29	289	176	165	122	M8



**e-DIASTAR Type 514 PVC-U 100-230V**  
**With solvent cement sockets BS**

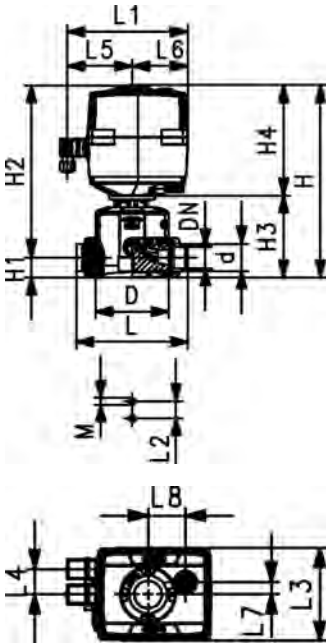
**Model:**

- Voltage 100-230V, 50-60Hz
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	EPDM Weight Code (kg)	PTFE/EPDM Weight Code (kg)
32	25	10	161 714 514	3.728
63	50	6	161 714 517	6.593
				161 714 534
				6.621



kv-value ( $\Delta p=1$ bar) (l/min)	D (mm)	D1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)	H (mm)
442	109	58	166	180	25	122	33	97	83	16	49	190	286
1575	168	101	265	180	45	122	33	97	83	16	49		341

H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	z (mm)	M
30	20	256	121	165	122	M6
53	29	289	176	165	190	M8



**e-DIASTAR Type 514 PVC-U 100-230V**  
**With solvent cement sockets ASTM**

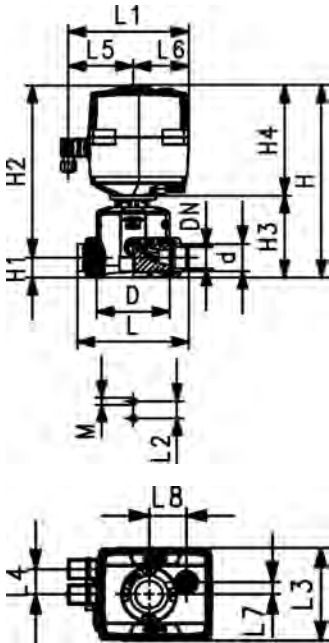
**Model:**

- Voltage 100-230V, 50-60Hz
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	EPDM Code	Weight (kg)	PTFE/EPDM Code	Weight (kg)
32	25	10	161 714 614	3.734	161 714 634	3.754
63	50	6	161 714 617	6.601	161 714 637	6.629



kv-value ( $\Delta p=1$ bar) (l/min)	D (mm)	D1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)	H (mm)
442	109	58	166	180	25	122	33	97	83	16	49	190	286
1575	168	101	265	180	45	122	33	97	83	16	49		341

H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	z (mm)	M
30	20	256	121	165	122	M6
53	29	289	176	165	190	M8



**e-DIASTAR Type 514 PVC-U 100-230V**  
**With solvent cement sockets JIS**

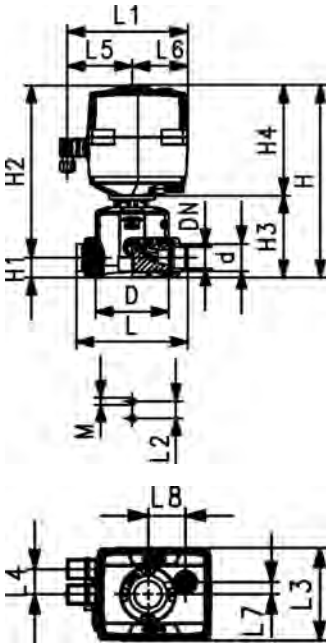
**Model:**

- Voltage 100-230V, 50-60Hz
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	EPDM Weight Code (kg)	PTFE/EPDM Weight Code (kg)
32	25	10	161 714 814	3.732
63	50	6	161 714 817	6.609
				161 714 834
				6.637



kv-value ( $\Delta p=1$ bar) (l/min)	D (mm)	D1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)	H (mm)
442	109	58	166	180	25	122	33	97	83	16	49	190	286
1575	168	101	266	180	45	122	33	97	83	16	49		341

H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	z (mm)	M
30	20	256	121	165	122	M6
53	29	289	176	165	190	M8

# Pressure regulating valves

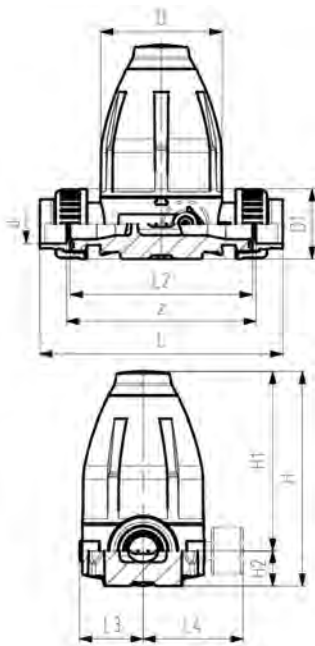
## Pressure reducing valve type 582



**Pressure reducing valve type 582 PVC-U**  
**Unions with solvent cement sockets Inch BS**  
**With manometer**

**Model:**

- Diaphragm PTFE/EPDM
  - Integrated stainless steel mounting inserts
  - 0.5-9.0 bar (7-130 psi)
  - Attention: Manometer with brass connection in direct contact with medium. Check for chemical resistance, otherwise chose the optional manometer adapter for media separation.
- 0.3-3.0 bar (4-44 psi) on request



d (mm)	DN (mm)	Size (inch)	PN (bar)	O-rings EPDM Code	Weight (kg)	SP	GP	O-rings FKM Code
20	15	½	10	<b>161 582 322</b>	0.730	1	76	<b>161 582 332</b>
25	20	¾	10	<b>161 582 323</b>	1.520	1	44	<b>161 582 333</b>
32	25	1	10	<b>161 582 324</b>	1.550	1	44	<b>161 582 334</b>
40	32	1 ¼	10	<b>161 582 325</b>	4.100	1	22	<b>161 582 335</b>
50	40	1 ½	10	<b>161 582 326</b>	4.270	1	22	<b>161 582 336</b>
63	50	2	10	<b>161 582 327</b>	4.500	1	22	<b>161 582 337</b>

D (mm)	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L2 (mm)	L3 (mm)	L4 (mm)	M	z (mm)	Inch (inch)
79	43	132	111	21	12	161	120	42	77	M6	126	1/2
100	51	177	148	29	14	198	150	53	88	M6	156	3/4
100	58	177	148	29	14	204	150	53	88	M6	156	1
147	72	251	207	44	21	266	205	76	111	M8	211	1 1/4
147	83	251	207	44	21	273	205	76	111	M8	211	1 1/2
147	101	251	207	44	21	285	205	76	111	M8	211	2

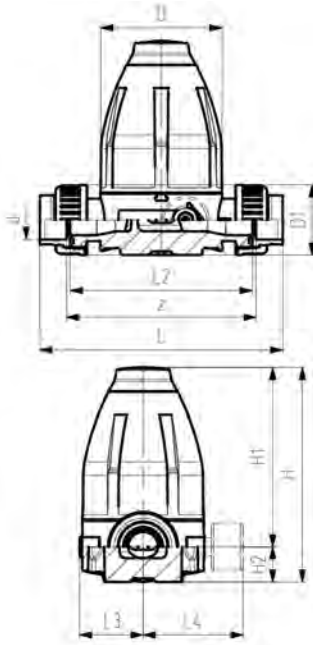




**Pressure reducing valve type 582 PVC-U  
Unions with solvent cement sockets JIS  
With manometer**

**Model:**

- Diaphragm PTFE/EPDM
- Integrated stainless steel mounting inserts
- 0.5-9.0 bar (7-130 psi)
- Attention: Manometer with brass connection in direct contact with medium. Check for chemical resistance, otherwise chose the optional manometer adapter for media separation.  
0.3-3.0 bar (4-44 psi) on request



d (mm)	DN (mm)	Size (inch)	PN (bar)	O-rings EPDM Code	Weight (kg)	SP	O-rings FKM Code
20	15	½	10	<b>161 582 422</b>	1.520	1	<b>161 582 432</b>
25	20	¾	10	<b>161 582 423</b>	1.520	1	<b>161 582 433</b>
32	25	1	10	<b>161 582 424</b>	1.550	1	<b>161 582 434</b>
40	32	1 ¼	10	<b>161 582 425</b>	4.100	1	<b>161 582 435</b>
50	40	1 ½	10	<b>161 582 426</b>	4.270	1	<b>161 582 436</b>
63	50	2	10	<b>161 582 427</b>	4.500	1	<b>161 582 437</b>

D (mm)	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L2 (mm)	L3 (mm)	L4 (mm)	M	z (mm)	Inch (inch)
100	51	177	148	29	14	194	150	53	77	M6	156	1/2
100	51	177	148	29	14	194	150	53	88	M6	156	3/4
100	58	177	148	29	14	200	150	53	88	M6	156	1
147	72	251	207	44	21	263	205	76	111	M8	211	1 1/4
147	83	251	207	44	21	273	205	76	111	M8	211	1 1/2
147	101	251	207	44	21	287	205	76	111	M8	211	2

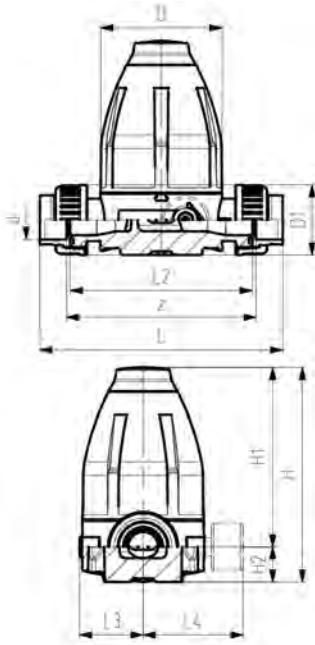


**Pressure reducing valve type 582 PVC-U  
Unions with solvent cement sockets Inch BS  
Without manometer**

**Model:**

- Diaphragm PTFE/EPDM
- Integrated stainless steel mounting inserts
- 0.5-9.0 bar (7-130 psi)

0.3-3.0 bar (4-44 psi) on request  
Manometer on request



d (mm)	DN (mm)	Size (inch)	PN (bar)	O-rings EPDM Code	Weight (kg)	SP	O-rings FKM Code
20	15	½	10	161 582 302	0.700	1	161 582 312
25	20	¾	10	161 582 303	1.490	1	161 582 313
32	25	1	10	161 582 304	1.520	1	161 582 314
40	32	1 ¼	10	161 582 305	4.070	1	161 582 315
50	40	1 ½	10	161 582 306	4.240	1	161 582 316
63	50	2	10	161 582 307	4.470	1	161 582 317

D (mm)	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L2 (mm)	L3 (mm)	M	z (mm)	Inch (inch)
79	43	132	111	21	12	161	120	42	M6	126	1/2
100	51	177	148	29	14	198	150	53	M6	156	3/4
100	58	177	148	29	14	204	150	53	M6	156	1
147	72	251	207	44	21	266	205	76	M8	211	1 1/4
147	83	251	207	44	21	273	205	76	M8	211	1 1/2
147	101	251	207	44	21	285	205	76	M8	211	2

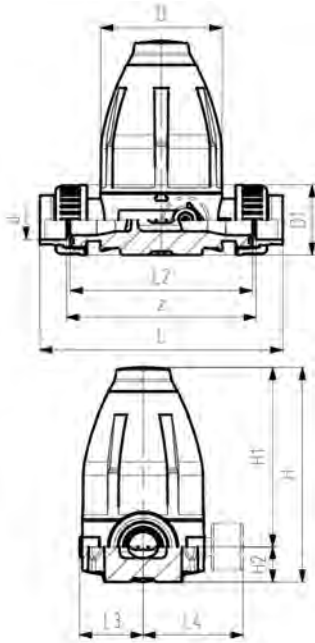


**Pressure reducing valve type 582 PVC-U  
Unions with solvent cement sockets JIS  
Without manometer**

**Model:**

- Diaphragm PTFE/EPDM
- Integrated stainless steel mounting inserts
- 0.5-9.0 bar (7-130 psi)

0.3-3.0 bar (4-44 psi) on request  
Manometer on request



d (mm)	DN (mm)	Size (inch)	PN (bar)	O-rings EPDM Code	Weight (kg)	SP	O-rings FKM Code
20	15	½	10	<b>161 582 402</b>	1.490	1	<b>161 582 412</b>
25	20	¾	10	<b>161 582 403</b>	1.490	1	<b>161 582 413</b>
32	25	1	10	<b>161 582 404</b>	1.520	1	<b>161 582 414</b>
40	32	1 ¼	10	<b>161 582 405</b>	4.070	1	<b>161 582 415</b>
50	40	1 ½	10	<b>161 582 406</b>	4.240	1	<b>161 582 416</b>
63	50	2	10	<b>161 582 407</b>	4.470	1	<b>161 582 417</b>

D (mm)	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L2 (mm)	L3 (mm)	M	z (mm)	Inch (inch)
100	51	177	148	29	14	194	150	53	M6	156	1/2
100	51	177	148	29	14	194	150	53	M6	156	3/4
100	58	177	148	29	14	200	150	53	M6	156	1
147	72	251	207	44	21	263	205	76	M8	211	1 1/4
147	83	251	207	44	21	273	205	76	M8	211	1 1/2
147	101	251	207	44	21	287	205	76	M8	211	2

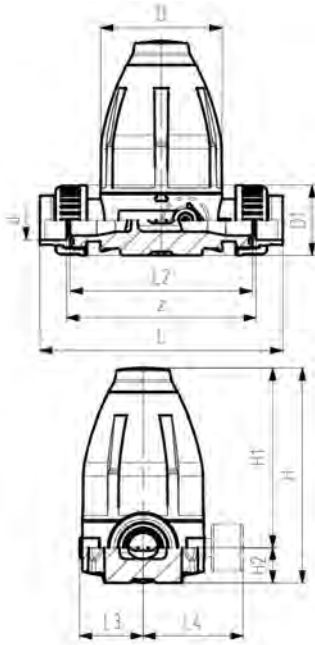
# Pressure retaining valve type 586



**Pressure retaining valve type 586 PVC-U  
Unions with solvent cement sockets Inch BS  
Without manometer**

**Model:**

- Diaphragm PTFE/EPDM
  - Integrated stainless steel mounting inserts
  - 0.5-9.0 bar (7-130 psi)
- 0.3-3.0 bar (4-44 psi) on request  
Manometer on request



d (mm)	DN (mm)	Size (inch)	PN (bar)	O-rings EPDM Code	Weight (kg)	SP	O-rings FKM Code
20	15	½	10	<b>161 586 302</b>	0.690	1	<b>161 586 312</b>
25	20	¾	10	<b>161 586 303</b>	1.510	1	<b>161 586 313</b>
32	25	1	10	<b>161 586 304</b>	1.540	1	<b>161 586 314</b>
40	32	1 ¼	10	<b>161 586 305</b>	4.200	1	<b>161 586 315</b>
50	40	1 ½	10	<b>161 586 306</b>	4.260	1	<b>161 586 316</b>
63	50	2	10	<b>161 586 307</b>	4.500	1	<b>161 586 317</b>

D (mm)	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L2 (mm)	L3 (mm)	M	z (mm)	Inch (inch)
79	43	132	111	21	12	161	120	42	M6	126	1/2
100	51	177	148	29	14	198	150	53	M6	156	3/4
100	58	177	148	29	14	204	150	53	M6	156	1
147	72	251	207	44	21	266	205	76	M8	211	1 1/4
147	83	251	207	44	21	273	205	76	M8	211	1 1/2
147	101	251	207	44	21	285	205	76	M8	211	2

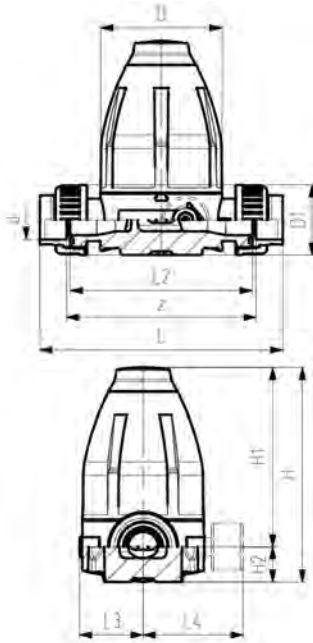


**Pressure retaining valve type 586 PVC-U**  
**Unions with solvent cement sockets JIS**  
**Without manometer**

**Model:**

- Diaphragm PTFE/EPDM
- Integrated stainless steel mounting inserts
- 0.5-9.0 bar (7-130 psi)

0.3-3.0 bar (4-44 psi) on request  
 Manometer on request



d (mm)	DN (mm)	Size (inch)	PN (bar)	O-rings EPDM Code	Weight (kg)	SP	O-rings FKM Code
20	15	½	10	<b>161 586 402</b>	1.510	1	<b>161 586 412</b>
25	20	¾	10	<b>161 586 403</b>	1.510	1	<b>161 586 413</b>
32	25	1	10	<b>161 586 404</b>	1.540	1	<b>161 586 414</b>
40	32	1 ¼	10	<b>161 586 405</b>	4.200	1	<b>161 586 415</b>
50	40	1 ½	10	<b>161 586 406</b>	4.260	1	<b>161 586 416</b>
63	50	2	10	<b>161 586 407</b>	4.500	1	<b>161 586 417</b>

D (mm)	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L2 (mm)	L3 (mm)	M	z (mm)	Inch (inch)
100	51	177	148	29	14	194	150	53	M6	156	1/2
100	51	177	148	29	14	194	150	53	M6	156	3/4
100	58	177	148	29	14	200	150	53	M6	156	1
147	72	251	207	44	21	263	205	76	M8	211	1 1/4
147	83	251	207	44	21	273	205	76	M8	211	1 1/2
147	101	251	207	44	21	287	205	76	M8	211	2

# Process control valves

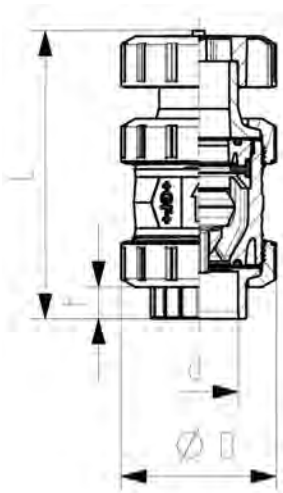
## Ventilating and bleed valve Type 591 PVC-U With solvent cement sockets Inch BS



### Model:

- With protection cap up to DN50 made of PP-GF, DN65-100 made of POM
- Floater made of PP-H
- Designed for easy installation and removal
- Compact installation length

d (mm)	DN (mm)	Size (inch)	PN (bar)	EPDM Code	FKM Code	D (mm)	L (mm)	t (mm)	closest inch (inch)
10	3/8	16	16	161 591 061	161 591 071	50	118	16	
15	1/2	16	16	161 591 062	161 591 072	50	124	18	
20	3/4	16	16	161 591 063	161 591 073	58	142	21	
25	1	16	16	161 591 064	161 591 074	68	157	24	
32	1 1/4	16	16	161 591 065	161 591 075	84	179	29	
40	1 1/2	16	16	161 591 066	161 591 076	97	197	30	
50	2	16	16	161 591 067	161 591 077	124	229	36	
75	65	2 1/2	16	161 591 008	161 591 018	166	258	45	2 1/2
80	3	16	16	161 591 069	161 591 079	200	277	51	
100	4	16	16	161 591 070	161 591 080	238	320	64	

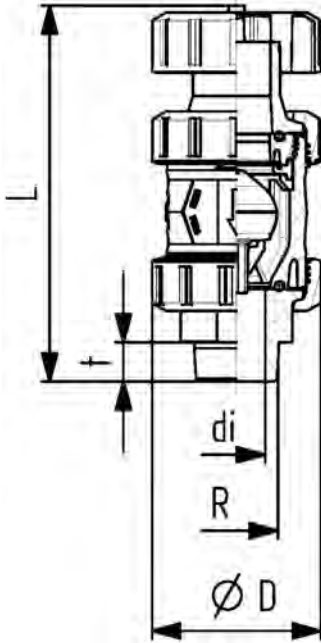




**Ventilating and bleed valve**  
**Type 591 PVC-U**  
**With brass thread BSP**

**Model:**

- With protection cap up to DN50 made of PP-GF, DN65-100 made of POM
- Floater made of PP-H
- Designed for easy installation and removal
- Compact installation length



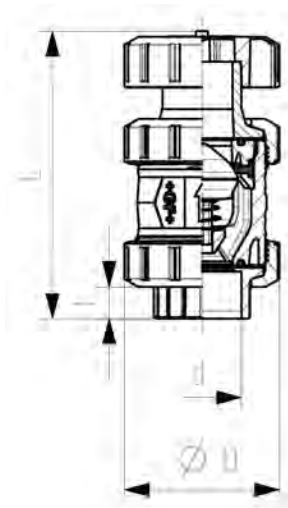
d (mm)	DN (mm)	PN (bar)	EPDM Code	FKM Code	di (mm)	D (mm)	L (mm)	t (mm)	R (inch)
16	10	16	161 591 139	161 591 149	10	50	135	13.0	3/8
20	15	16	161 591 140	161 591 150	13	50	140	14.0	1/2
25	20	16	161 591 141	161 591 151	16	58	156	16.5	3/4
32	25	16	161 591 142	161 591 152	20	68	172	19.0	1
40	32	16	161 591 143	161 591 153	26	84	195	21.5	1 1/4
50	40	16	161 591 144	161 591 154	33	97	216	22.5	1 1/2
63	50	16	161 591 145	161 591 155	40	124	252	27.0	2
75	65	16	161 591 146	161 591 156	58	166	292	38.2	2 1/2
90	80	16	161 591 147	161 591 157	70	200	311	41.3	3
110	100	16	161 591 148	161 591 158	95	238	354	47.3	4



**Ventilating valve type 595 PVC-U**  
**With solvent cement sockets Inch BS**

**Model:**

- With protection cap up to DN50 made of PP-GF, DN65-100 made of POM
- Spring HALAR coated
- Spring available in other materials, see spare parts
- Designed for easy installation and removal
- Compact installation length



d	DN	Size	PN	EPDM	FKM	D	L	t	closest inch
(mm)	(mm)	(inch)	(bar)	Code	Code	(mm)	(mm)	(mm)	(inch)
10	3/8	16	16	161 595 061	161 595 071	50	118	16	
15	1/2	16	16	161 595 062	161 595 072	50	124	18	
20	3/4	16	16	161 595 063	161 595 073	58	142	21	
25	1	16	16	161 595 064	161 595 074	68	157	24	
32	1 1/4	16	16	161 595 065	161 595 075	84	179	29	
40	1 1/2	16	16	161 595 066	161 595 076	97	197	30	
50	2	16	16	161 595 067	161 595 077	124	229	36	
75	65	2 1/2	16	161 595 008	161 595 018	166	258	45	2 1/2
80	3	16	16	161 595 069	161 595 079	200	277	51	
100	4	16	16	161 595 070	161 595 080	238	320	64	



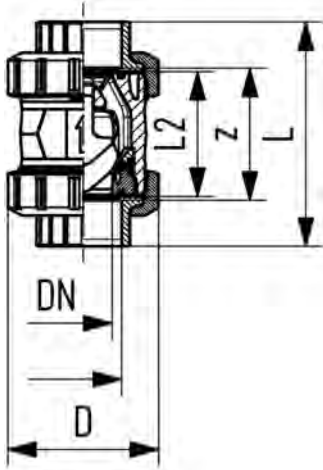
# Cone check valves



## Check valve type 561 PVC-U With solvent cement sockets Inch BS

### Model:

- Sealing at a minimum water column of 2 m
- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- For vertical installation
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360
- New DN65-DN100



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	3/8	16	190	161 561 061	1	0.120	161 561 071	1	0.120
20	15	1/2	16	180	161 561 062	1	0.120	161 561 072	1	0.120
25	20	3/4	16	380	161 561 063	1	0.250	161 561 073	1	0.270
32	25	1	16	460	161 561 064	1	0.276	161 561 074	1	0.280
40	32	1 1/4	16	850	161 561 065	1	0.490	161 561 075	1	0.490
50	40	1 1/2	16	1080	161 561 066	1	0.760	161 561 076	1	0.770
63	50	2	16	1670	161 561 067	1	1.374	161 561 077	1	1.370
75	65	2 1/2	16	2950	161 561 008	1	3.160	161 561 018	1	3.170
90	80	3	16	3600	161 561 069	1	5.070	161 561 079	1	5.090
110	100	4	16	4150	161 561 070	1	8.010	161 561 080	1	8.050

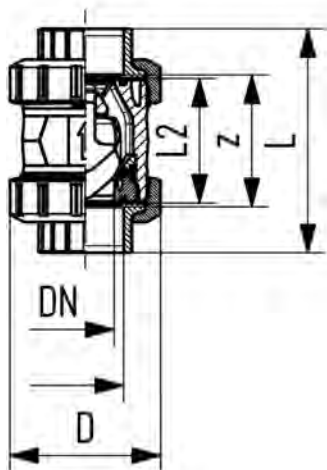
D (mm)	L (mm)	L2 (mm)	z (mm)	closest inch (inch)
50	92	56	60	
50	95	56	60	
58	110	65	69	
68	123	71	75	
84	146	85	89	
97	157	89	97	
124	183	101	110	
166	233	136	144	2 1/2
200	254	141	151	
238	301	164	174	



### Check valve type 561 PVC-U With solvent cement sockets JIS

#### Model:

- Sealing at a minimum water column of 2 m
- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- For vertical installation
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360
- New DN65-DN100

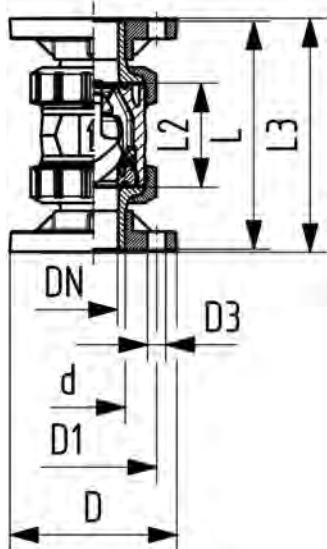


d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	D (mm)	L (mm)	L2 (mm)	z (mm)
20	15	½	16	180	161 561 302	1	0.130	50	95	56	64
25	20	¾	16	380	161 561 303	1	0.250	58	110	65	72
32	25	1	16	460	161 561 304	1	0.290	68	123	71	79
40	32	1 ¼	16	850	161 561 305	1	0.510	84	146	85	94
50	40	1 ½	16	1080	161 561 306	1	0.750	97	157	89	95
63	50	2	16	1670	161 561 307	1	1.330	124	183	101	107
75	65	2 ½	16	2950	161 561 308	1	3.160	166	233	136	144
90	80	3	16	3600	161 561 309	1	5.040	200	254	141	151
110	100	4	16	4150	161 561 310	1	8.130	238	301	164	174

### Check valve type 561 PVC-U With fixed flanges JIS

#### Model:

- Sealing at a minimum water column of 2 m
- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- For vertical installation
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
25	20	¾	16	380	161 561 323	1	0.520
32	25	1	16	460	161 561 324	1	0.670
40	32	1 ¼	16	850	161 561 325	1	1.100
50	40	1 ½	16	1080	161 561 326	1	1.490
63	50	2	16	1670	161 561 327	1	2.430

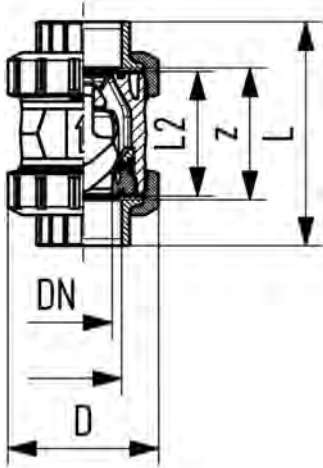
D (mm)	D1 (mm)	D3 (mm)	L (mm)	L2 (mm)	L3 (mm)
100	75	15	170	65	172
130	90	19	190	71	187
140	100	19	190	85	190
140	105	19	210	89	212
160	120	19	240	101	234



**Check valve type 562 PVC-U**  
**With solvent cement sockets Inch BS**

**Model:**

- For horizontal or vertical installation
- Sealing at a minimum water column of 1 m
- Spring loaded, spring made of stainless steel (1.4310)
- Spring available in other materials, see spare parts
- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360
- New DN65-DN100



d	Size	DN	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(inch)	(mm)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
				(l/min)						
	3/8	10	16	190	161 562 061	1	0.120	161 562 071	1	0.120
	1/2	15	16	180	161 562 062	1	0.120	161 562 072	1	0.120
	3/4	20	16	380	161 562 063	1	0.250	161 562 073	1	0.270
	1	25	16	460	161 562 064	1	0.280	161 562 074	1	0.280
	1 1/4	32	16	850	161 562 065	1	0.490	161 562 075	1	0.490
	1 1/2	40	16	1080	161 562 066	1	0.760	161 562 076	1	0.770
	2	50	16	1670	161 562 067	1	1.378	161 562 077	1	1.370
75	2 1/2	65	16	2950	161 562 008	1	3.160	161 562 018	1	3.170
	3	80	16	3600	161 562 069	1	5.070	161 562 079	1	5.090
	4	100	16	4150	161 562 070	1	8.010	161 562 080	1	8.050

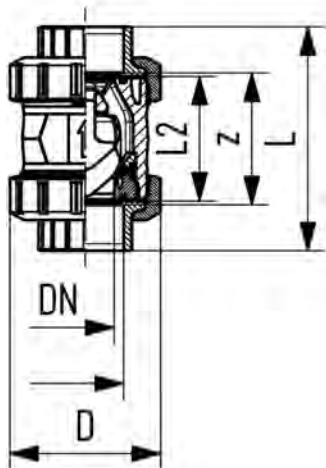
D	L	L2	z	closest inch
(mm)	(mm)	(mm)	(mm)	(inch)
50	92	56	60	
50	95	56	60	
58	110	65	69	
68	123	71	75	
84	146	85	89	
97	157	89	97	
124	183	101	110	
166	233	136	144	2 1/2
200	254	141	151	
238	301	164	174	



### Check valve type 562 PVC-U With solvent cement sockets JIS

#### Model:

- For horizontal or vertical installation
- Sealing at a minimum water column of 1 m
- Spring loaded, spring made of stainless steel (1.4310)
- Spring available in other materials, see spare parts
- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360
- New DN65-DN100



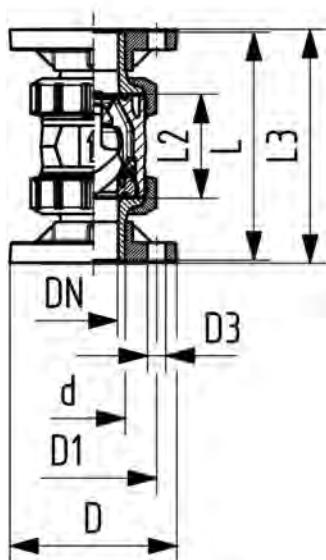
Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	D (mm)	L (mm)	L2 (mm)	z (mm)
½	15	16	180	161 562 302	1	0.130	50	95	56	64
¾	20	16	380	161 562 303	1	0.250	58	110	65	72
1	25	16	460	161 562 304	1	0.290	68	123	71	79
1 ¼	32	16	850	161 562 305	1	0.510	84	146	85	94
1 ½	40	16	1080	161 562 306	1	0.750	97	157	89	95
2	50	16	1670	161 562 307	1	1.330	124	183	101	107
2 ½	65	16	2950	161 562 308	1	3.160	166	233	136	144
3	80	16	3600	161 562 309	1	5.040	200	254	141	151
4	100	16	4150	161 562 310	1	8.130	238	301	164	174



### Check valve type 562 PVC-U With fixed flanges JIS

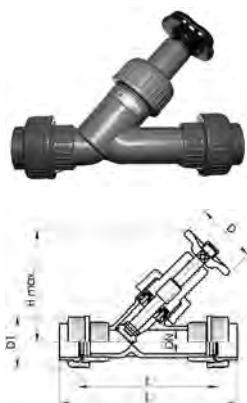
#### Model:

- For horizontal or vertical installation
- Sealing at a minimum water column of 1 m
- Spring loaded, spring made of stainless steel (1.4310)
- Spring available in other materials, see spare parts
- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360



Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	D (mm)	D1 (mm)	D3 (mm)	L (mm)	L2 (mm)	L3 (mm)
¾	20	16	380	161 562 323	1	0.520	100	75	15	170	65	172
1	25	16	460	161 562 324	1	0.670	130	90	19	190	71	187
1 ¼	32	16	850	161 562 325	1	1.100	140	100	19	190	85	190
1 ½	40	16	1080	161 562 326	1	1.490	140	105	19	210	89	212
2	50	16	1670	161 562 327	1	2.430	160	120	19	240	101	234

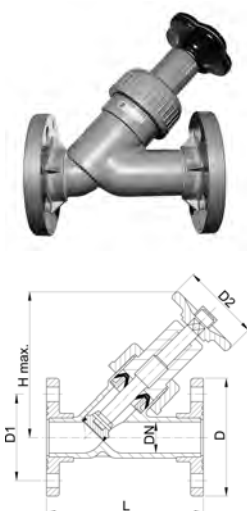
# Angle seat valves



**Angle seat valve type 300 PVC-U  
Unions with solvent cement sockets JIS**

Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	PE Code	SP	Weight (kg)	PTFE Code	SP	Weight (kg)
3/8	15	10	95	161 300 716	2	0.335	161 300 741	2	0.340
3/4	20	10	180	161 300 717	1	0.380	161 300 742	1	0.385
1	25	10	327	161 300 718	1	0.565	161 300 743	1	0.575
1 1/4	32	10	484	161 300 719	1	0.844	161 300 744	1	0.920
1 1/2	40	10	725	161 300 720	1	1.355	161 300 745	1	1.050
2	50	10	1130	161 300 721	1	2.191	161 300 746	1	1.600

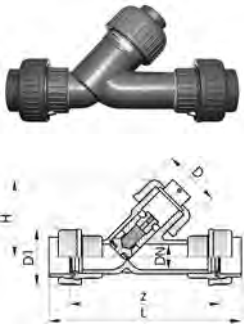
Size (inch)	D (mm)	D2 (mm)	L (mm)	L1 (mm)	H max. (mm)
3/8	53	63	194	162	126
3/4	53	63	208	170	140
1	60	80	224	180	166
1 1/4	74	80	256	204	191
1 1/2	83	100	290	228	233
2	103	100	342	266	264



**Angle seat valve type 300 PVC-U  
With fixed flanges JIS**

Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	PE Code	SP	Weight (kg)	PTFE Code	SP	Weight (kg)
3/8	15	10	95	161 300 766	1	0.390	161 300 791	1	0.385
3/4	20	10	180	161 300 767	1	0.520	161 300 792	1	0.525
1	25	10	327	161 300 768	1	0.810	161 300 793	1	0.810
1 1/4	32	10	484	161 300 769	1	1.220	161 300 794	1	1.240
1 1/2	40	10	725	161 300 770	1	1.740	161 300 795	1	1.770
2	50	10	1130	161 300 771	1	2.515	161 300 796	1	2.387

Size (inch)	D (mm)	D1 (mm)	D2 (mm)	L (mm)	H max. (mm)
3/8	95	70	63	130	126
3/4	100	75	63	150	140
1	125	90	80	160	166
1 1/4	135	100	80	180	191
1 1/2	140	105	100	200	233
2	155	120	100	230	261

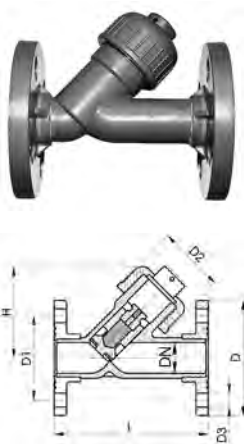


**Angle seat check valve type 303 PVC-U  
Unions with solvent cement sockets JIS**

**Model:**

- For horizontal or vertical installation
- Leakproof even at minimum pressure
- Specific gravity of piston approx. 2 kg/dm<sup>3</sup>

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	D (mm)	D1 (mm)	H (mm)	L (mm)	z (mm)
15	½	10	95	161 303 102	2	0.300	43	53	65	194	162
20	¾	10	180	161 303 103	2	0.286	47	53	75	208	170
25	1	10	327	161 303 104	1	0.457	56	53	90	224	180
32	1 ¼	10	484	161 303 105	2	0.833	64	74	102	256	204
40	1 ½	10	725	161 303 106	1	1.300	82	83	123	290	228
50	2	10	1130	161 303 107	1	2.205	95	103	144	342	266



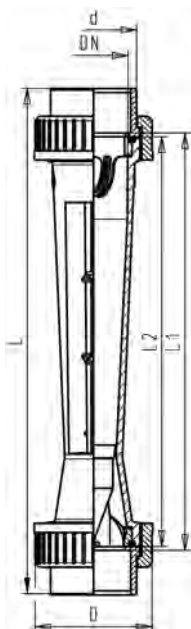
**Angle seat check valve type 303 PVC-U  
With fixed flanges JIS**

**Model:**

- For horizontal or vertical installation
- Leakproof even at minimum pressure
- Specific gravity of piston approx. 2 kg/dm<sup>3</sup>

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	D (mm)	D1 (mm)	D2 (mm)	D3 (mm)	H (mm)	L (mm)
15	½	10	95	161 303 117	1	0.330	95	70	48	15	65	130
20	¾	10	180	161 303 118	1	0.450	100	75	54	15	75	150
25	1	10	327	161 303 119	2	0.780	125	90	62	19	90	160
32	1 ¼	10	484	161 303 120	1	1.140	135	100	71	19	102	180
40	1 ½	10	725	161 303 121	1	1.650	140	105	88	19	123	200
50	2	10	1130	161 303 122	1	2.256	155	120	103	19	144	230
65	2 ½	10	1700	161 303 123	1	3.750	185	140	106	19	186	290
80	3	10	2500	161 303 124	1	5.070	200	150	120	19	204	310

# Variable area flow meters



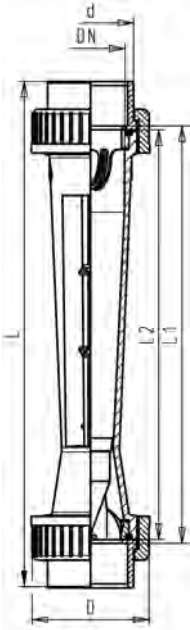
**Variable area flow meters**  
**Float in PVDF without magnet**  
**With solvent cement sockets PVC-U BS Inch**

**Model:**

- Standard guiding rod PVDF with stainless steel core (V4A) for DN50 and DN65 see accessories for variable area flow meters

Scale range (L/h)	d (inch)	DN (mm)	Taper tube in PVC-U transp. O- rings in EPDM Code	Taper tube in Polyamid O-rings in EPDM Code	Taper tube in Polysulfone O-rings in EPDM Code	Weight (kg)
50 - 500	1	25	199 335 400	199 335 420	199 335 440	0.440
100 - 1000	1	25	199 335 401	199 335 421	199 335 441	0.440
150 - 1500	1 ¼	32	199 335 402	199 335 422	199 335 442	0.620
250 - 2500	1 ¼	32	199 335 403	199 335 423	199 335 443	0.620
200 - 2000	1 ½	40	199 335 404	199 335 424	199 335 444	0.900
300 - 3000	1 ½	40	199 335 405	199 335 425	199 335 445	0.900
600 - 6000	1 ½	40	199 335 406	199 335 426	199 335 446	0.900
600 - 6000	2	50	199 335 407	199 335 427	199 335 447	1.225
1000 - 10000	2	50	199 335 408	199 335 428	199 335 448	1.225
1500 - 15000	2	50	199 335 409	199 335 429	199 335 449	1.225
2000 - 20000	2 ½	65	199 335 010	199 335 030	199 335 050	2.639
3000 - 30000	2 ½	65	199 335 011	199 335 031	199 335 051	2.572
8000 - 60000	2 ½	65	199 335 012	199 335 032	199 335 052	2.432

Scale range (L/h)	D (mm)	L (mm)	L1 (mm)	L2 (mm)
50 - 500	58	385	341	335
100 - 1000	58	385	341	335
150 - 1500	72	393	341	335
250 - 2500	72	393	341	335
200 - 2000	83	403	341	335
300 - 3000	83	403	341	335
600 - 6000	83	403	341	335
600 - 6000	101	417	341	335
1000 - 10000	101	417	341	335
1500 - 15000	101	417	341	335
2000 - 20000	135	429	341	335
3000 - 30000	135	429	341	335
8000 - 60000	135	429	341	335



**Variable area flow meters**  
**Float in PVDF with magnet**  
**With solvent cement sockets PVC-U BS Inch**

**Model:**

- Standard guiding rod PVDF with stainless steel core (V4A) for DN50 and DN65 see accessories for variable area flow meters

Scale range (L/h)	d (inch)	DN (mm)	Taper tube in PVC-U transp. O- rings in EPDM Code	Taper tube in Polyamid O-rings in EPDM Code	Taper tube in Polysulfone O-rings in EPDM Code	Weight (kg)
50 - 500	1	25	199 335 500	199 335 520	199 335 540	0.440
100 - 1000	1	25	199 335 501	199 335 521	199 335 541	0.440
150 - 1500	1 ¼	32	199 335 502	199 335 522	199 335 542	0.620
250 - 2500	1 ¼	32	199 335 503	199 335 523	199 335 543	0.620
200 - 2000	1 ½	40	199 335 504	199 335 524	199 335 544	0.900
300 - 3000	1 ½	40	199 335 505	199 335 525	199 335 545	0.900
600 - 6000	1 ½	40	199 335 506	199 335 526	199 335 546	0.900
600 - 6000	2	50	199 335 507	199 335 527	199 335 547	1.225
1000 - 10000	2	50	199 335 508	199 335 528	199 335 548	1.225
1500 - 15000	2	50	199 335 509	199 335 529	199 335 549	1.225
2000 - 20000	2 ½	65	199 335 110	199 335 130	199 335 150	2.441
3000 - 30000	2 ½	65	199 335 511	199 335 131	199 335 151	2.377
8000 - 60000	2 ½	65	199 335 112	199 335 132	199 335 152	2.150

D (mm)	L (mm)	L1 (mm)	L2 (mm)
58	385	341	335
58	385	341	335
72	393	341	335
72	393	341	335
83	403	341	335
83	403	341	335
83	403	341	335
101	417	341	335
101	417	341	335
101	417	341	335
135	429	341	335
135	429	341	335
135	429	341	335

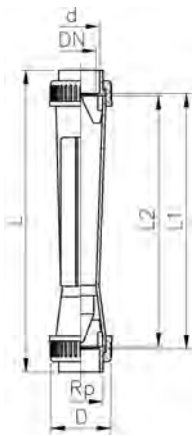


**Short Version**  
**Float in PVDF without magnet**  
**With solvent cement sockets PVC-U BS Inch**

**Model:**

- Union nuts and valve ends in other materials on request

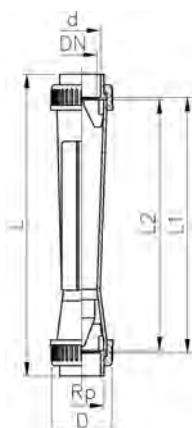
Type	Scale range (l/h)	d (inch)	DN (mm)	Taper tube in Polysulfone O-rings in EPDM Code	Weight (kg)	Messrohr in PVC-U transp. O- Ringe aus EPDM Code	D (mm)	L (mm)	L1 (mm)	L2 (mm)
SK50	2.5 - 25	3/8	10	<b>198 807 000</b>	0.190	<b>20014A290</b>	35	199	171	165
SK51	5 - 50	3/8	10	<b>198 807 001</b>	0.190	<b>20014A291</b>	35	199	171	165
SK52	10 - 100	3/8	10	<b>198 807 002</b>	0.190	<b>20014A292</b>	35	199	171	165
SK60	8 - 80	1/2	15	<b>198 807 003</b>	0.260	<b>20014A293</b>	43	223	191	185
SK61	15 - 150	1/2	15	<b>198 807 004</b>	0.260	<b>20014A294</b>	43	223	191	185
SK62	20 - 200	1/2	15	<b>198 807 005</b>	0.260	<b>20014A295</b>	43	223	191	185
SK70	15 - 150	1	25	<b>198 807 006</b>	0.470	<b>20014A296</b>	60	250	206	200
SK71	30 - 300	1	25	<b>198 807 007</b>	0.470	<b>20014A297</b>	60	250	206	200
SK72	50 - 500	1	25	<b>198 807 008</b>	0.470	<b>20014A298</b>	60	250	206	200
SK73	100 - 1000	1	25	<b>198 807 009</b>	0.470	<b>20014A299</b>	60	250	206	200





**Short Version**  
**Float in PVDF with magnet**  
**With solvent cement sockets PVC-U BS Inch**

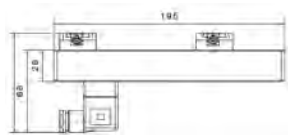
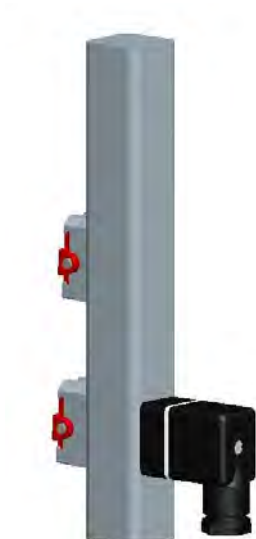
Type	Scale range (l/h)	d (inch)	DN (mm)	Taper tube in Polysulfone O-rings in EPDM Code	Weight (kg)	Taper tube in PVC- U transp. Orings in EPDM Code	D (mm)	L (mm)	L1 (mm)	L2 (mm)
SK500	2.5 - 25	3/8	10	<b>198 807 010</b>	0.180	<b>20014A300</b>	35	199	171	165
SK510	5 - 50	3/8	10	<b>198 807 011</b>	0.180	<b>20014A301</b>	35	199	171	165
SK520	10 - 100	3/8	10	<b>198 807 012</b>	0.180	<b>20014A302</b>	35	199	171	165
SK600	8 - 80	1/2	15	<b>198 807 013</b>	0.180	<b>20014A303</b>	43	223	191	185
SK610	15 - 150	1/2	15	<b>198 807 014</b>	0.250	<b>20014A304</b>	43	223	191	185
SK620	20 - 200	1/2	15	<b>198 807 015</b>	0.170	<b>20014A305</b>	43	223	191	185
SK700	15 - 150	1	25	<b>198 807 016</b>	0.470	<b>20014A306</b>	60	250	206	200
SK710	30 - 300	1	25	<b>198 807 017</b>	0.380	<b>20014A307</b>	60	250	206	200
SK720	50 - 500	1	25	<b>198 807 018</b>	0.370	<b>20014A308</b>	60	250	206	200
SK730	100 - 1000	1	25	<b>198 807 019</b>	0.370	<b>20014A309</b>	60	250	206	200



## Accessories

**Accessories for variable area flow meter**  
**4-20 mA sensor**  
**For type 335 and type 350**

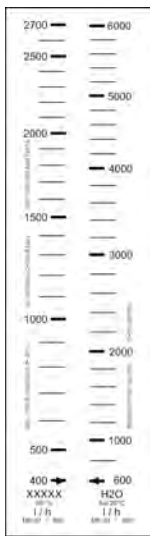
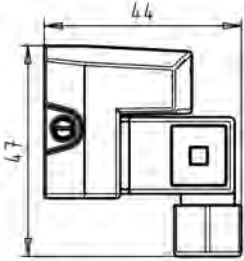
d (mm)	DN (mm)	Size (inch)	Type	Corresponds to water scale (l/h)	Code	Weight (kg)
32	25	1	GK 15	50-500	<b>199 335 962</b>	0.150
32	25	1	GK 15	100-1000	<b>199 335 963</b>	0.150
40	32	1 1/4	GK 15	150-1500	<b>199 335 964</b>	0.150
40	32	1 1/4	GK 15	250-2500	<b>199 335 965</b>	0.150
50	40	1 1/2	GK 15	200-2000	<b>199 335 966</b>	0.150
50	40	1 1/2	GK 15	300-3000	<b>199 335 967</b>	0.150
50	40	1 1/2	GK 15	600-6000	<b>199 335 968</b>	0.150
63	50	2	GK 15	600-6000	<b>199 335 969</b>	0.150
63	50	2	GK 15	1000-10000	<b>199 335 991</b>	0.150
63	50	2	GK 15	1500-15000	<b>199 335 992</b>	0.120
75	65	2 1/2	GK 15	2000-20000	<b>199 335 993</b>	0.150
75	65	2 1/2	GK 15	3000-30000	<b>199 335 994</b>	0.150
75	65	2 1/2	GK 15	8000-60000	<b>199 335 995</b>	0.150





**Accessories for variable area flow meter**  
**Limit contacts GK10/GK11**  
**For type 335/350 and short version**

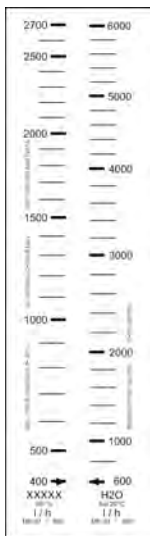
Type	Code	Weight (kg)
GK10 (min.)	<b>198 335 998</b>	0.035
GK11 (max.)	<b>198 335 999</b>	0.034



**Special scale for type 335/350**  
**% for H2O**

d (mm)	DN (mm)	Size (inch)	Scale range (L/h)	Corresponds to water scale (L/h)	Code	Weight (kg)
32	25	1	10-100 %	50-500	<b>199 335 084</b>	0.050
32	25	1	10-100 %	100-1000	<b>199 335 083</b>	0.003
40	32	1 ¼	10-100 %	150-1500	<b>199 335 069</b>	0.050
40	32	1 ¼	10-100 %	250-2500	<b>199 335 068</b>	0.050
50	40	1 ½	10-100 %	200-2000	<b>199 335 054</b>	0.050
50	40	1 ½	10-100 %	300-3000	<b>199 335 053</b>	0.002
50	40	1 ½	10-100 %	600-6000	<b>199 335 039</b>	0.050
63	50	2	10-100 %	600-6000	<b>199 335 038</b>	0.002
63	50	2	10-100 %	1000-10000	<b>199 335 037</b>	0.002
63	50	2	10-100 %	1500-15000	<b>199 335 036</b>	0.050
75	65	2 ½	10-100 %	2000-20000	<b>199 335 035</b>	0.050
75	65	2 ½	10-100 %	3000-30000	<b>199 335 034</b>	0.050
75	65	2 ½	13.3-100 %	8000-60000	<b>199 335 033</b>	0.050

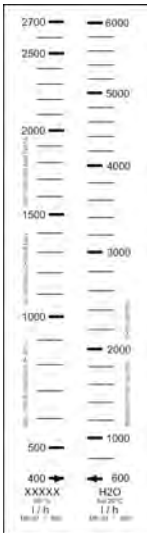
Example of special scale



**Special scale for type 335/350**  
**m³/h**

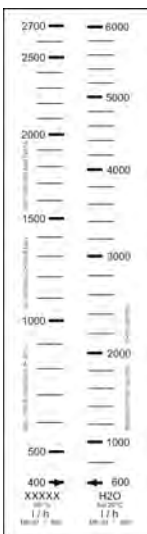
d (mm)	DN (mm)	Size (inch)	Scale range (m³/h)	Corresponds to water scale (L/h)	Code	Weight (kg)
32	25	1	0.05 - 0.50	50 - 500	<b>199 335 655</b>	0.050
32	25	1	0.10 - 1.00	100 - 1000	<b>199 335 656</b>	0.050
40	32	1 ¼	0.15 - 1.50	150 - 1500	<b>199 335 657</b>	0.050
40	32	1 ¼	0.25 - 2.50	250 - 2500	<b>199 335 658</b>	0.050
50	40	1 ½	0.20 - 2.00	200 - 2000	<b>199 335 659</b>	0.050
50	40	1 ½	0.30 - 3.00	300 - 3000	<b>199 335 660</b>	0.050
50	40	1 ½	0.60 - 6.00	600 - 6000	<b>199 335 661</b>	0.050
63	50	2	0.60 - 6.00	600 - 6000	<b>199 335 662</b>	0.050
63	50	2	1.00 - 10.00	1000 - 10000	<b>199 335 663</b>	0.050
63	50	2	1.50 - 15.00	1500 - 15000	<b>199 335 664</b>	0.050
75	65	2 ½	2.00 - 20.00	2000 - 20000	<b>199 335 665</b>	0.050
75	65	2 ½	3.00 - 30.00	3000 - 30000	<b>199 335 666</b>	0.008
75	65	2 ½	8.00 - 60.00	8000 - 60000	<b>199 335 667</b>	0.050

Example of special scale



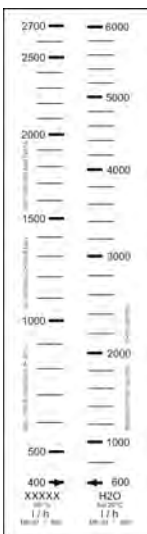
### Special scale for type 335/350 Imp. GPM

d (mm)	DN (mm)	Size (inch)	Scale range (gal/min)	Corresponds to water scale (L/h)	Code	Weight (kg)
32	25	1	0.183 - 1.830	50-500	<b>199 335 670</b>	0.050
32	25	1	0.366 - 3.660	100-1000	<b>199 335 671</b>	0.050
40	32	1 ¼	0.550 - 5.500	150-1500	<b>199 335 672</b>	0.050
40	32	1 ¼	0.916 - 9.160	250-2500	<b>199 335 673</b>	0.050
50	40	1 ½	0.733 - 7.330	200-2000	<b>199 335 674</b>	0.050
50	40	1 ½	1.090 - 10.900	300-3000	<b>199 335 675</b>	0.050
50	40	1 ½	2.190 - 21.900	600-6000	<b>199 335 676</b>	0.050
63	50	2	2.200 - 22.000	600-6000	<b>199 335 677</b>	0.050
63	50	2	3.660 - 36.600	1000-10000	<b>199 335 678</b>	0.050
63	50	2	5.490 - 54.900	1500-15000	<b>199 335 679</b>	0.050
75	65	2 ½	7.320 - 73.200	2000-20000	<b>199 335 680</b>	0.050
75	65	2 ½	10.980 - 109.800	3000-30000	<b>199 335 681</b>	0.050
75	65	2 ½	29.280 - 219.600	8000-60000	<b>199 335 682</b>	0.050



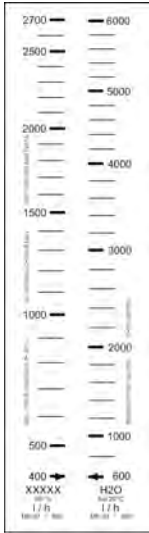
### Special scale for type 335/350 US GPM

d (mm)	DN (mm)	Size (inch)	Scale range (gal/min)	Corresponds to water scale (L/h)	Code	Weight (kg)
32	25	1	0.22 - 2.20	50 - 500	<b>199 335 685</b>	0.050
32	25	1	0.44 - 4.40	100 - 1000	<b>199 335 686</b>	0.050
40	32	1 ¼	0.66 - 6.60	150 - 1500	<b>199 335 687</b>	0.002
40	32	1 ¼	1.10 - 11.00	250 - 2500	<b>199 335 688</b>	0.050
50	40	1 ½	0.88 - 8.80	200 - 2000	<b>199 335 689</b>	0.002
50	40	1 ½	1.32 - 13.20	300 - 3000	<b>199 335 690</b>	0.050
50	40	1 ½	2.64 - 26.40	600 - 6000	<b>199 335 691</b>	0.002
63	50	2	2.64 - 26.40	600 - 6000	<b>199 335 692</b>	0.050
63	50	2	4.40 - 44.02	1000 - 10000	<b>199 335 693</b>	0.002
63	50	2	6.60 - 66.04	1500 - 15000	<b>199 335 694</b>	0.050
75	65	2 ½	8.80 - 88.00	2000 - 20000	<b>199 335 695</b>	0.002
75	65	2 ½	13.20 - 132.00	3000 - 30000	<b>199 335 696</b>	0.002
75	65	2 ½	35.20 - 264.00	8000 - 60000	<b>199 335 697</b>	0.050



### Special scale for type 335/350 l/h

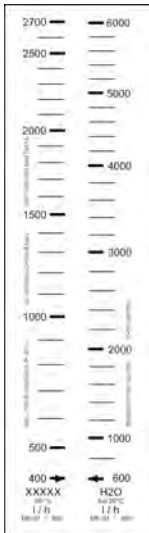
d (mm)	DN (mm)	Size (inch)	Scale range (L/h)	Code	Weight (kg)
32	25	1	50 - 500	<b>199 335 861</b>	0.050
32	25	1	100 - 1000	<b>199 335 862</b>	0.050
40	32	1 ¼	150 - 1500	<b>199 335 863</b>	0.050
40	32	1 ¼	250 - 2500	<b>199 335 864</b>	0.050
50	40	1 ½	200 - 2000	<b>199 335 865</b>	0.050
50	40	1 ½	600 - 6000	<b>199 335 867</b>	0.050
50	40	1 ½	300 - 3000	<b>199 335 866</b>	0.050
63	50	2	600 - 6000	<b>199 335 868</b>	0.050
63	50	2	1000 - 10000	<b>199 335 869</b>	0.050
63	50	2	1500 - 15000	<b>199 335 870</b>	0.050
75	65	2 ½	2000 - 20000	<b>199 335 871</b>	0.050
75	65	2 ½	3000 - 30000	<b>199 335 872</b>	0.050
75	65	2 ½	8000 - 60000	<b>199 335 873</b>	0.050



Example of special scale

### Special scale for type 335/350 Air/Obar/Nm3/h

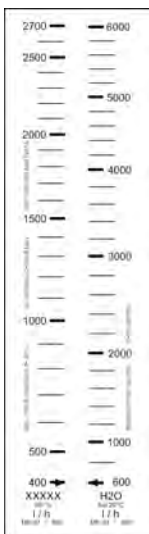
d (mm)	DN (mm)	Size (inch)	Scale range (m <sup>3</sup> /h)	Corresponds to water scale (l/h)	Code	Weight (kg)
32	25	1	2.0 - 15.0	50 - 500	<b>199 350 655</b>	0.002
32	25	1	3.5 - 30.0	100 - 1000	<b>199 350 656</b>	0.050
40	32	1 ¼	5.0 - 45.0	150 - 1500	<b>199 350 657</b>	0.050
40	32	1 ¼	8.0 - 76.0	250 - 2500	<b>199 350 658</b>	0.050
50	40	1 ½	7.0 - 60.0	200 - 2000	<b>199 350 659</b>	0.050
50	40	1 ½	10.0 - 87.0	300 - 3000	<b>199 350 660</b>	0.002
50	40	1 ½	20.0 - 170.0	600 - 6000	<b>199 350 661</b>	0.050
63	50	2	25.0 - 180.0	600 - 6000	<b>199 350 662</b>	0.050
63	50	2	30.0 - 280.0	1000 - 10000	<b>199 350 663</b>	0.050
63	50	2	50.0 - 440.0	1500 - 15000	<b>199 350 664</b>	0.050
75	65	2 ½	70.0 - 580.0	2000 - 20000	<b>199 350 665</b>	0.050
75	65	2 ½	100.0 - 900.0	3000 - 30000	<b>199 350 666</b>	0.050
75	65	2 ½	230.0 - 1650.0	8000 - 60000	<b>199 350 667</b>	0.050



Example of special scale

### Special scale for type 335/350 HCl 30-33% l/h

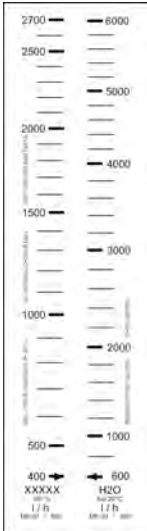
d (mm)	DN (mm)	Size (inch)	Scale range (l/h)	Corresponds to water scale (l/h)	Code	Weight (kg)
32	25	1	40 - 430	50-500	<b>199 350 670</b>	0.050
32	25	1	80 - 860	100-1000	<b>199 350 671</b>	0.002
40	32	1 ¼	150 - 1250	150-1500	<b>199 350 672</b>	0.050
40	32	1 ¼	200 - 2150	250-2500	<b>199 350 673</b>	0.050
50	40	1 ½	200 - 1850	200-2000	<b>199 350 674</b>	0.050
50	40	1 ½	300 - 2500	300-3000	<b>199 350 675</b>	0.050
50	40	1 ½	600 - 4900	600-6000	<b>199 350 676</b>	0.010
63	50	2	600 - 5400	600-6000	<b>199 350 677</b>	0.050
63	50	2	800 - 8400	1000-10000	<b>199 350 678</b>	0.050
63	50	2	1000 - 12750	1500-15000	<b>199 350 679</b>	0.050
75	65	2 ½	2000 - 17500	2000-20000	<b>199 350 680</b>	0.050
75	65	2 ½	3000 - 26500	3000-30000	<b>199 350 681</b>	0.050
75	65	2 ½	6000 - 50000	8000-60000	<b>199 350 682</b>	0.050



Example of special scale

### Special scale for type 335/350 NaOH 30% l/h

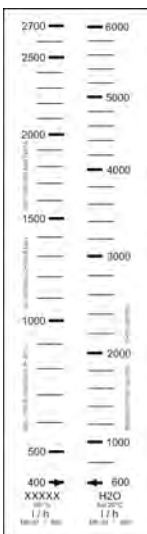
d (mm)	DN (mm)	Size (inch)	Scale range (l/h)	Corresponds to water scale (l/h)	Code	Weight (kg)
32	25	1	30 - 320	50-500	<b>199 350 685</b>	0.050
32	25	1	70 - 660	100-1000	<b>199 350 686</b>	0.050
40	32	1 ¼	100 - 900	150-1500	<b>199 350 687</b>	0.050
40	32	1 ¼	100 - 1600	250-2500	<b>199 350 688</b>	0.050
50	40	1 ½	200 - 1400	200-2000	<b>199 350 689</b>	0.002
50	40	1 ½	300 - 1950	300-3000	<b>199 350 690</b>	0.050
50	40	1 ½	500 - 3800	600-6000	<b>199 350 691</b>	0.050
63	50	2	500 - 4300	600-6000	<b>199 350 692</b>	0.050
63	50	2	600 - 6600	1000-10000	<b>199 350 693</b>	0.050
63	50	2	750 - 9500	1500-15000	<b>199 350 694</b>	0.050
75	65	2 ½	1300 - 13000	2000-20000	<b>199 350 695</b>	0.050
75	65	2 ½	2600 - 20000	3000-30000	<b>199 350 696</b>	0.050
75	65	2 ½	6000 - 40000	8000-60000	<b>199 350 697</b>	0.050



Example of special scale

### Special scale for type 335/350 NaOH 50% l/h

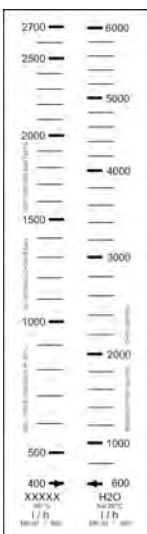
d (mm)	DN (mm)	Size (inch)	Scale range (l/h)	Corresponds to water scale (l/h)	Code	Weight (kg)
32	25	1	10 - 62	50-500	<b>199 350 755</b>	0.050
32	25	1	10 - 195	100-1000	<b>199 350 756</b>	0.050
40	32	1 ¼	20 - 350	150-1500	<b>199 350 757</b>	0.050
40	32	1 ¼	5 - 760	250-2500	<b>199 350 758</b>	0.050
50	40	1 ½	5 - 540	200-2000	<b>199 350 759</b>	0.050
50	40	1 ½	105 - 1200	300-3000	<b>199 350 760</b>	0.050
50	40	1 ½	400 - 2350	600-6000	<b>199 350 761</b>	0.002
63	50	2	100 - 2200	600-6000	<b>199 350 762</b>	0.050
63	50	2	100 - 4000	1000-10000	<b>199 350 763</b>	0.050
63	50	2	300 - 5000	1500-15000	<b>199 350 764</b>	0.050
75	65	2 ½	200 - 7000	2000-20000	<b>199 350 765</b>	0.050
75	65	2 ½	400 - 9800	3000-30000	<b>199 350 766</b>	0.050
75	65	2 ½	2000 - 15000	8000-60000	<b>199 350 767</b>	0.050



Example of special scale

### Special scale for short version Water l/h

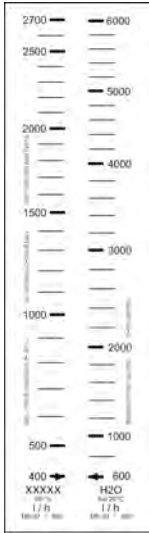
d (mm)	DN (mm)	Size (inch)	Type	Scale range (l/h)	Code
16	10	¾	SK 50 / 500	2.5 - 25.0	<b>198 801 386</b>
16	10	¾	SK 51 / 510	5.0 - 50.0	<b>198 801 387</b>
16	10	¾	SK 52 / 520	10.0 - 100.0	<b>198 801 388</b>
20	15	½	SK 60 / 600	8.0 - 80.0	<b>198 801 389</b>
20	15	½	SK 61 / 610	15.0 - 150.0	<b>198 801 390</b>
20	15	½	SK 62 / 620	20.0 - 200.0	<b>198 801 391</b>
32	25	1	SK 70 / 700	15.0 - 150.0	<b>198 801 392</b>
32	25	1	SK 71 / 710	30.0 - 30.0	<b>198 801 393</b>
32	25	1	SK 72 / 720	50.0 - 500.0	<b>198 801 394</b>
32	25	1	SK 73 / 730	100.0 - 1000.0	<b>198 801 395</b>



Example of special scale

### Special scale for short version US GPM

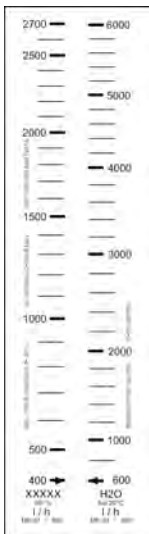
d (mm)	DN (mm)	Size (inch)	Type	Scale range (gal/min)	Code
16	10	¾	SK 50 / 500	0.01 - 0.11	<b>198 801 961</b>
16	10	¾	SK 51 / 510	0.02 - 0.22	<b>198 801 962</b>
16	10	¾	SK 52 / 520	0.04 - 0.44	<b>198 801 963</b>
20	15	½	SK 60 / 600	0.03 - 0.35	<b>198 801 964</b>
20	15	½	SK 61 / 610	0.06 - 0.66	<b>198 801 965</b>
20	15	½	SK 62 / 620	0.08 - 0.88	<b>198 801 966</b>
32	25	1	SK 70 / 700	0.06 - 0.66	<b>198 801 967</b>
32	25	1	SK 71 / 710	0.13 - 1.32	<b>198 801 968</b>
32	25	1	SK 72 / 720	0.22 - 2.20	<b>198 801 969</b>
32	25	1	SK 73 / 730	0.44 - 4.40	<b>198 801 970</b>



Example of special scale

### Special scale for short version Air/Obar/Nm3/h

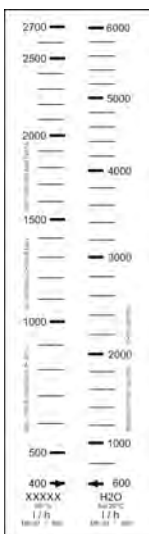
d (mm)	DN (mm)	Size (inch)	Type	Scale range (m <sup>3</sup> /h)	Code
16	10	3/8	SK 50 / 500	0.50 - 0.95	<b>198 801 308</b>
16	10	3/8	SK 51 / 510	0.50 - 1.90	<b>198 801 309</b>
16	10	3/8	SK 52 / 520	0.80 - 3.00	<b>198 801 310</b>
20	15	1/2	SK 60 / 600	0.60 - 2.80	<b>198 801 311</b>
20	15	1/2	SK 61 / 610	1.40 - 5.60	<b>198 801 312</b>
20	15	1/2	SK 62 / 620	1.50 - 7.00	<b>198 801 313</b>
32	25	1	SK 70 / 700	1.00 - 6.50	<b>198 801 314</b>
32	25	1	SK 71 / 710	1.50 - 11.00	<b>198 801 315</b>
32	25	1	SK 72 / 720	3.00 - 18.00	<b>198 801 316</b>
32	25	1	SK 73 / 730	6.00 - 30.00	<b>198 801 317</b>



Example of special scale

### Special scale for short version HCl 30 - 33% l/h

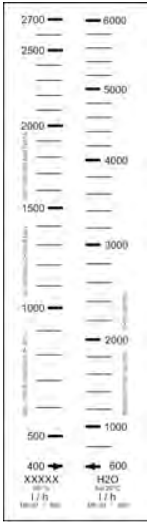
d (mm)	DN (mm)	Size (inch)	Type	Scale range (l/h)	Code
16	10	3/8	SK 50 / 500	2.5 - 20.0	<b>198 806 511</b>
16	10	3/8	SK 51 / 510	5.0 - 40.0	<b>198 806 512</b>
16	10	3/8	SK 52 / 520	10.0 - 85.0	<b>198 806 513</b>
20	15	1/2	SK 60 / 600	8.0 - 70.0	<b>198 806 514</b>
20	15	1/2	SK 61 / 610	15.0 - 125.0	<b>198 806 515</b>
20	15	1/2	SK 62 / 620	20.0 - 170.0	<b>198 806 516</b>
32	20	1	SK 71 / 710	30.0 - 260.0	<b>198 806 518</b>
32	20	1	SK 70 / 700	5.0 - 125.0	<b>198 806 517</b>
32	20	1	SK 72 / 720	50.0 - 425.0	<b>198 806 519</b>
32	20	1	SK 73 / 730	100.0 - 850.0	<b>198 806 520</b>



Example of special scale

### Special scale for short version NaOH 30% l/h

d (mm)	DN (mm)	Size (inch)	Type	Scale range (l/h)	Code
16	10	3/8	SK 50 / 500	0.2 - 5.0	<b>198 806 521</b>
16	10	3/8	SK 51 / 510	1.0 - 14.0	<b>198 806 522</b>
16	10	3/8	SK 52 / 520	3.0 - 35.0	<b>198 806 523</b>
20	15	1/2	SK 60 / 600	2.0 - 23.0	<b>198 806 524</b>
20	15	1/2	SK 61 / 610	3.0 - 55.0	<b>198 806 525</b>
20	15	1/2	SK 62 / 620	5.0 - 80.0	<b>198 806 526</b>
32	25	1	SK 70 / 700	3.0 - 55.0	<b>198 806 527</b>
32	25	1	SK 71 / 710	6.0 - 130.0	<b>198 806 528</b>
32	25	1	SK 72 / 720	10.0 - 250.0	<b>198 806 529</b>
32	25	1	SK 73 / 730	40.0 - 590.0	<b>198 806 530</b>



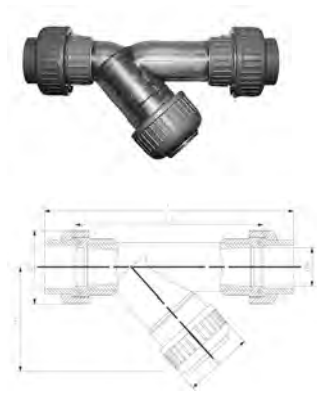
Example of special scale

**Special scale for short version  
NaOH 50% l/h**

d (mm)	DN (mm)	Size (inch)	Type	Scale range (l/h)	Code
20	15	½	SK 60 / 600	0.2 - 3.5	<b>198 806 531</b>
20	15	½	SK 61 / 610	0.5 - 10.0	<b>198 806 532</b>
20	15	½	SK 62 / 620	0.5 - 16.0	<b>198 806 533</b>
32	25	1	SK 70 / 700	0.5 - 11.0	<b>198 806 534</b>
32	25	1	SK 71 / 710	1.0 - 33.0	<b>198 806 535</b>
32	25	1	SK 72 / 720	2.0 - 80.0	<b>198 806 536</b>
32	25	1	SK 73 / 730	10.0 - 220.0	<b>198 806 537</b>



# Strainers



## Line strainer type 305 PVC-U Transparent body with solvent cement unions JIS

### Model:

- Protects valves, pumps, etc. from becoming soiled
- Easy dismantling for cleaning the screens

**Cylindrical screens must be ordered separately**

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	D (mm)	D1 (mm)	H (mm)	L (mm)	L1 (mm)
15	½	10	35	192 305 702	2	0.271	43	53	65	195.4	164
20	¾	10	64	192 305 703	2	0.615	47	53	76	210.1	170
25	1	10	90	192 305 704	1	0.393	56	60	90	228.0	180
32	1 ¼	10	155	192 305 705	2	0.725	71	74	102	261.5	204
40	1 ½	10	225	192 305 706	1	1.000	82	83	123	294.3	228
50	2	10	370	192 305 707	1	1.800	95	103	147	348.3	226



## Line strainer type 305 PVC-U Grey body with fixed flanges JIS

### Model:

- Protects valves, pumps, etc. from becoming soiled
- Easy dismantling for cleaning the screens

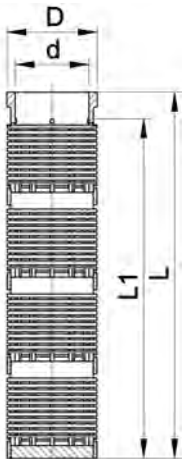
**Cylindrical screens must be ordered separately**

DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	D (mm)	D1 (mm)	D2 (mm)	D3 (mm)	H (mm)	L (mm)
15	½	10	35	192 305 717	2	0.320	95	70	43	15	65	130
20	¾	10	64	192 305 718	1	0.170	100	75	47	15	76	150
25	1	10	90	192 305 719	1	0.255	125	90	56	19	90	160
32	1 ¼	10	154	192 305 720	1	0.380	135	100	64	19	102	180
40	1 ½	10	225	192 305 721	1	1.239	140	105	82	19	123	200
50	2	10	370	192 305 722	1	1.893	155	120	95	19	147	230
65	2 ½	10	575	192 305 723	1	3.140	185	140	106	19	188	290
80	3	10	905	192 305 724	1	4.140	200	150	120	19	205	310

# Screen assemblies



DN65-100



DN 65-100

## Screen assembly type 050 PVC-U With solvent cement sockets BS/ASTM

### Model:

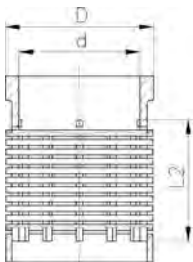
- <sup>2</sup> Screen with 2 extensions and end plate, solvent cemented
- Modular extensions can be lengthened as required

d	Size	DN	kv-value	Code	SP	Weight
(mm)	(inch)	(mm)	( $\Delta p=1$ bar)			(kg)
			(l/min)			
90	3	80	14790	<b>161 050 053</b>	1	0.930

D	L	L1	L2	L3	lamina width
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
110	312	345	90	103	3

## Screen type 050 PVC-U With solvent cement sockets BS/ASTM

- For Screen Assemblies Type 050, PVC-U, DN 65-100



d	Size	DN	Code	SP	Weight	D	L2	lamina width
(mm)	(inch)	(mm)			(kg)	(mm)	(mm)	(mm)
75	2 ½	65	<b>161 090 024</b>	1	0.447	110	90	3.0
90	3	80	<b>161 090 016</b>	1	0.300	110	90	2.5
110	4	100	<b>161 090 017</b>	17	0.440	125	135	2.5

**Screen type 050 PVC-U**  
**With solvent cement sockets metric**

- For Screen Assemblies Type 050, PVC-U, DN 65-100

d (mm)	Size (inch)	DN (mm)	Code	SP	Weight (kg)	D (mm)	L2 (mm)
75	2 1/2	65	<b>161 090 024</b>	1	0.447	110	90
90	3	80	<b>161 090 002</b>		0.303	110	90
110	4	100	<b>161 090 003</b>	30	0.469	125	135



**Extention type 050 PVC-U**

- For Screen Assemblies Type 050, PVC-U, DN 65-100

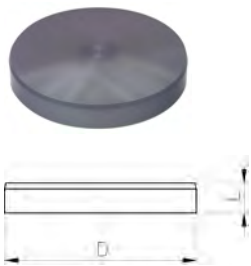
DN-DN (mm)	Code	Weight (kg)	L3 (mm)	Inch (inch)	d-d (mm)
65 - 100	<b>161 090 019</b>	0.249	103	2 1/2 - 4	75 - 110

















**Plate type 050 PVC-U**

- For Screen Assemblies Type 050, PVC-U, DN 65-100

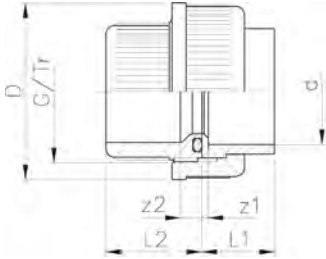
DN-DN (mm)	Code	SP	Weight (kg)	D (mm)	L (mm)	Inch (inch)	d-d (mm)
65 - 100	<b>161 090 018</b>	1	0.155	100	16	2 1/2 - 4	75 - 110



## PVC-U silicon free

	Unions	502
	Seals	503
 DN10/15 - 50	Ball valves type 546	504
	3-Way ball valves type 543	511
	3-Way ball valves electric	518
	3-Way ball valves pneumatic	524
	Metering ball valves type 523	527
	Diaphragm valves	529
	Diaphragm valves pneumatic	536
	Butterfly valves type 567	543
	Lugstyle butterfly valves type 578	545
	Cone check valves	546
	Angle seat valves	550
	Strainers	552

# Unions



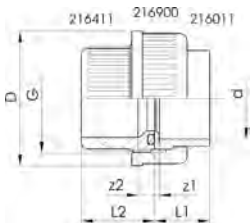
## Union PVC-U metric Silicone free

### Model:

- Silicone free/paint-compatible
- Union End: solvent socket metric
- Union Bush: Solvent socket metric
- Gasket: with O-ring

d (mm)	Size (inch)	PN (bar)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
10		16	<b>721 510 178</b>	1	0.022	<b>721 510 153</b>	1	0.020
12		16	<b>721 510 179</b>	1	0.022	<b>721 510 154</b>	1	0.019
16		16	<b>721 510 180</b>	1	0.026	<b>721 510 155</b>	1	0.031
20		16	<b>721 510 181</b>	1	0.042	<b>721 510 156</b>	1	0.040
25		16	<b>721 510 182</b>	1	0.067	<b>721 510 157</b>	1	0.066
32		16	<b>721 510 183</b>	1	0.100	<b>721 510 158</b>	1	0.090
40		16	<b>721 510 184</b>	1	0.180	<b>721 510 159</b>	1	0.175
50		16	<b>721 510 185</b>	1	0.206	<b>721 510 160</b>	1	0.215
63		16	<b>721 510 186</b>	1	0.357	<b>721 510 161</b>	1	0.380
75	2 ½	10	<b>721 510 187</b>	1	0.615	<b>721 510 162</b>	1	0.615
90		10	<b>721 510 188</b>	1	0.925	<b>721 510 163</b>	1	0.925
110		10	<b>721 510 189</b>	1	1.425	<b>721 510 164</b>	1	1.425

d (mm)	L2 (mm)	z1 (mm)	z2 (mm)	D (mm)	L1 (mm)	G/Tr (inch)
10	22	3	10	31	15	5/8
12	22	3	10	31	15	5/8
16	24	3	10	35	17	3/4
20	26	3	10	43	19	1
25	29	3	10	51	22	1 1/4
32	33	3	10	58	25	1 1/2
40	39	3	12	72	29	2
50	46	3	14	83	34	2 1/4
63	58	3	18	100	41	2 3/4
75	62	3	18	135	47	Tr 108x5
90	69	5	18	158	56	Tr 128x5
110	72	5	11	188	66	Tr 154x6



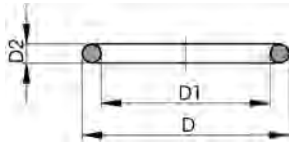
## Union PVC-U JIS Oil-free

### Model:

- Union End: Solvent cement socket JIS
- Union Bush: Solvent cement socket JIS
- Cleaned oil free
- Gasket: O-Ring EPDM code no. 748 410 007-011; FKM: 749 410 007-011

Size (inch)	DN (mm)	PN (bar)	EPDM Code	SP	Weight (kg)	FKM Code	z1 (mm)	z2 (mm)	D (mm)	L1 (mm)	L2 (mm)	G/Tr (inch)
½	15	16	<b>721 515 130</b>	1	0.066	<b>721 515 180</b>	3	13	51	22	29.0	11/4
¾	20	16	<b>721 515 131</b>	1	0.056	<b>721 515 181</b>	3	10	51	22	29.0	11/4
1	25	16	<b>721 515 132</b>	1	0.082	<b>721 515 182</b>	3	10	58	25	33.0	11/2
1 ¼	32	16	<b>721 515 133</b>	1	0.159	<b>721 515 183</b>	3	12	72	29	39.0	2
1 ½	40	16	<b>721 515 134</b>	1	0.222	<b>721 515 184</b>	3	14	83	34	46.3	21/4
2	50	16	<b>721 515 135</b>	1	0.393	<b>721 515 185</b>	3	18	100	41	58.0	23/4

# Seals



## O-Ring gasket silicone free

### Model:

- Silicone free/paint-compatible
- Hardness approx. 65° Shore
- For flange adaptors, jointing face with O-ring groove
- Double bagged, 2 pcs in bag

d (mm)	DN (mm)	EPDM Code	FKM Code	D (mm)	D1 (mm)	D2 (mm)
16	10	748 413 000	749 413 000	26	19	3.53
20	15	748 413 001	749 413 001	30	23	3.53
25	20	748 413 007	749 413 007	35	28	3.53
32	25	748 413 002	749 413 002	43	36	3.53
40	32	748 413 003	749 413 003	55	44	5.34
50	40	748 413 012	749 413 012	64	53	5.34
63	50	748 413 013	749 413 013	80	69	5.34
75	65	748 413 014	749 413 014	93	82	5.34
90	80	748 413 015	749 413 015	112	101	5.34
110	100	748 413 016	749 413 016	134	120	6.99
125	100	748 413 017	749 413 017	149	136	6.99
140	125	748 413 018	749 413 018	166	152	6.99
160	150	748 413 019	749 413 019	191	177	6.99
200	200	748 413 163	749 413 163	136	222	6.99
225	200	748 413 022	749 413 022	255	241	6.99
250	250	748 413 182	749 413 182	280	266	6.99
280	250	748 413 173	749 413 173	305	292	6.99
315	300	748 413 174	749 413 174	356	342	6.99

# Ball valves type 546



DN10/15 - 50



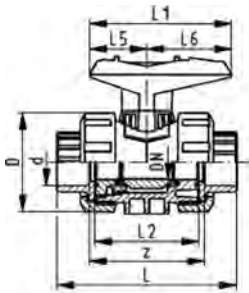
## Ball valve type 546 PVC-U SF With mounting inserts With solvent cement sockets metric

### Model:

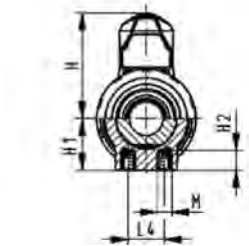
- Silicone free/paint-compatible
- For easy installation and removal
- Ball seal: PVDF
- Integrated stainless steel mounting inserts
- Valve end and union nut are **not compatible** with type 346 (DN10/15-50) and type 370 (DN65-100)

### Option:

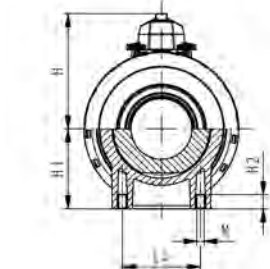
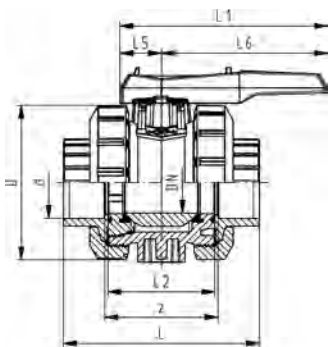
- Individual configuration of the valve
- Multifunctional module with integrated limit switches



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	16	71	800 000 601	1	0.150	800 000 611	1	0.150
20	15	16	185	800 000 602	1	0.150	800 000 612	1	0.150
25	20	16	350	800 000 603	1	0.240	800 000 613	1	0.230
32	25	16	700	800 000 604	1	0.342	800 000 614	1	0.330
40	32	16	1000	800 000 605	1	0.600	800 000 615	1	0.600
50	40	16	1600	800 000 606	1	0.800	800 000 616	1	0.800
63	50	16	3100	800 000 607	1	1.460	800 000 617	1	1.460
75	65	16	5000	800 000 608	1	4.286	800 000 618	1	3.567
90	80	16	7000	800 000 609	1	7.400	800 000 619	1	5.401
110	100	16	11000	800 000 610	1	11.600	800 000 620	1	11.600



d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M	z (mm)	closest inch (inch)
16	50	57	27	12	92	77	56	25	32	45	M6	64	3/8
20	50	57	27	12	95	77	56	25	32	45	M6	64	1/2
25	58	67	30	12	110	97	65	25	39	58	M6	72	3/4
32	68	73	36	12	123	97	71	25	39	58	M6	79	1
40	84	90	44	15	146	128	85	45	54	74	M8	94	1 1/4
50	97	97	51	15	157	128	89	45	54	74	M8	95	1 1/2
63	124	116	64	15	183	152	101	45	66	87	M8	107	2
75	166	149	85	15	233	270	136	70	64	206	M8	144	2 1/2
90	200	161	105	15	254	270	141	70	64	206	M8	151	3
110	238	178	123	22	301	320	164	120	64	256	M12	174	4







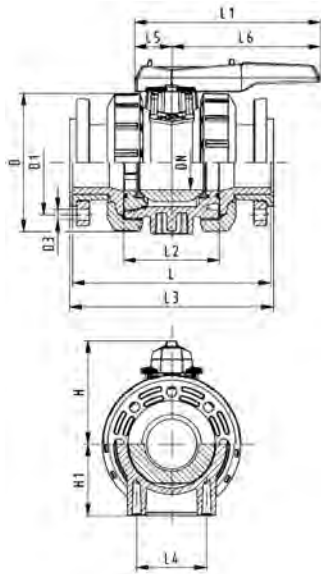
**Ball valve type 546 PVC-U SF**  
**With mounting inserts**  
**With backing flanges PVC-U metric**

**Model:**

- Silicone free/paint-compatible
- For easy installation and removal
- Ball seal: PVDF
- Integrated stainless steel mounting inserts
- z-dimension, valve end and union nut are **not compatible** with type 370 (DN65-100)
- Overall length according to EN 558
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- Hole circle PN10

**Option:**

- Individual configuration of the valve
- Multifunctional module with integrated limit switches

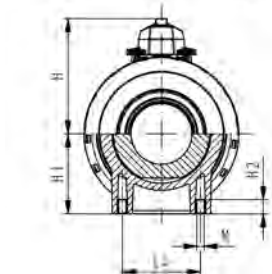
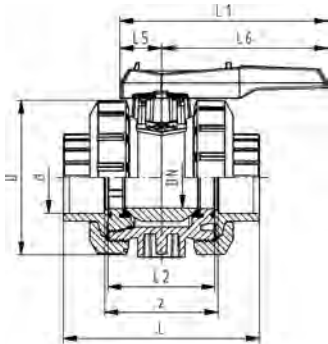
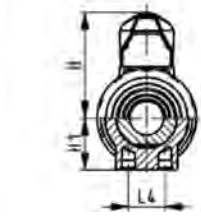
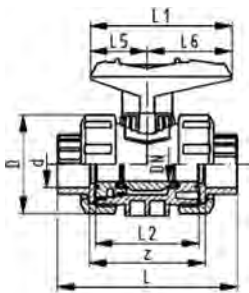


d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
75	65	10	5000	<b>161 546 128</b>	1 7.200	<b>161 546 138</b>	1 7.200
90	80	10	7000	<b>161 546 129</b>	1 10.600	<b>161 546 139</b>	1 10.600
110	100	10	11000	<b>161 546 130</b>	1 16.500	<b>161 546 140</b>	1 16.500

d (mm)	D (mm)	D1 (mm)	D3 (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M	closest inch (inch)
75	166	145	18	149	85	284	270	136	290	70	64	206	8	2 ½
90	200	160	18	161	105	300	270	141	310	70	64	206	8	3
110	238	180	18	178	123	340	320	164	350	120	64	256	12	4



DN10/15 - 50



**Ball valve type 546 PVC-U SF**  
**With solvent cement sockets metric**

**Model:**

- Silicone free/paint-compatible
- For easy installation and removal
- With PVDF ball seal
- Without mounting inserts
- Valve end and union nut are **not compatible** with type 346 (DN10/15-50) and type 370 (DN65-100)

**Option:**

- Individual configuration of the valve
- Multifunctional module with integrated limit switches

d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	16	71	161 546 601	1	0.150	161 546 611	1	0.150
20	15	16	185	161 546 602	1	0.150	161 546 612	1	0.150
25	20	16	350	161 546 603	1	0.230	161 546 613	1	0.230
32	25	16	700	161 546 604	1	0.343	161 546 614	1	0.330
40	32	16	1000	161 546 605	1	0.599	161 546 615	1	0.603
50	40	16	1600	161 546 606	1	0.800	161 546 616	1	0.800
63	50	16	3100	161 546 607	1	1.522	161 546 617	1	1.460
75	65	16	5000	161 546 608	1	3.792	161 546 618	1	4.900
90	80	16	7000	161 546 609	1	7.400	161 546 619	1	7.400
110	100	16	11000	161 546 610	1	11.600	161 546 620	1	11.600

d (mm)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	z (mm)	closest inch (inch)
16	50	57	27	92	77	56	25	32	45	64	3/4
20	50	57	27	95	77	56	25	32	45	64	1/2
25	58	67	30	110	97	65	25	39	58	72	3/4
32	68	73	36	123	97	71	25	39	58	79	1
40	84	90	44	146	128	85	45	54	74	94	1 1/4
50	97	97	51	157	128	89	45	54	74	95	1 1/2
63	124	116	64	183	152	101	45	66	87	107	2
75	166	149	85	233	270	136	70	64	206	144	2 1/2
90	200	161	105	254	270	141	70	64	206	151	3
110	238	178	123	301	320	164	120	64	256	174	4



DN10/15 - 50



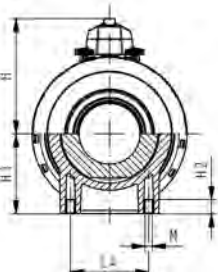
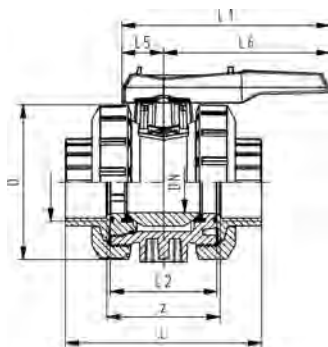
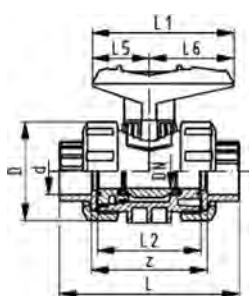
**Ball valve type 546 PVC-U OF**  
**With mounting inserts**  
**With solvent cement sockets JIS**

**Model:**

- Oil free
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Valve end and union nut are **not compatible** with type 346 (DN10/15-50) and type 370 (DN65-100)

**Option:**

- Individual configuration of the valve
- Multifunctional module with integrated limit switches

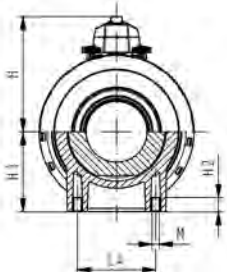
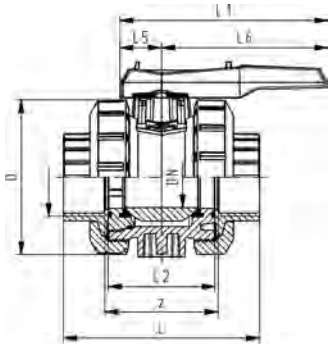
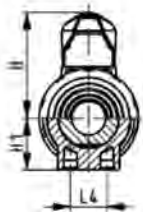
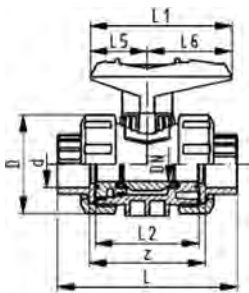


Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
½	15	16	185	161 546 902	1	0.155	161 546 912	1	0.156
¾	20	16	350	161 546 903	1	0.239	161 546 913	1	0.242
1	25	16	700	161 546 904	1	0.345	161 546 914	1	0.330
1 ¼	32	16	1000	161 546 905	1	0.100	161 546 915	1	0.622
1 ½	40	16	1600	161 546 906	1	0.850	161 546 916	1	0.867
2	50	16	3100	161 546 907	1	1.576	161 546 917	1	1.592
2 ½	65	16	5000	161 546 908	1	4.333	161 546 918	1	4.900
3	80	16	7000	161 546 909	1	7.400	161 546 919	1	6.273
4	100	16	11000	161 546 910	1	11.500	161 546 920	1	11.500

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M	z (mm)
½	50	57	27	12	95	77	56	25	32	45	M6	64
¾	58	67	30	12	110	97	65	25	39	58	M6	72
1	68	73	36	12	123	97	71	25	39	58	M6	79
1 ¼	84	90	44	15	146	128	85	45	54	74	M8	94
1 ½	97	97	51	15	157	128	89	45	54	74	M8	95
2	124	116	64	15	183	152	101	45	66	87	M8	107
2 ½	166	149	85	15	233	270	136	70	64	206	M8	144
3	200	161	105	15	254	270	141	70	64	206	M8	151
4	238	178	123	22	301	320	164	120	64	256	M12	174



DN10/15 - 50



**Ball valve type 546 PVC-U OF**  
**With solvent cement sockets JIS**

**Model:**

- Oil free
- For easy installation and removal
- Ball seals PTFE
- Without mounting inserts
- Valve end and union nut are **not compatible** with type 346 (DN10/15-50) and type 370 (DN65-100)

**Option:**

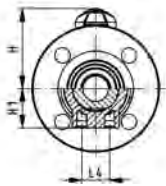
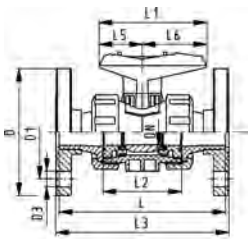
- Individual configuration of the valve
- Multifunctional module with integrated limit switches

Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
½	15	16	185	<b>161 546 502</b>	1	0.149	<b>161 546 512</b>	1	0.150
¾	20	16	350	<b>161 546 503</b>	1	0.233	<b>161 546 513</b>	1	0.235
1	25	16	700	<b>161 546 504</b>	1	0.342	<b>161 546 514</b>	1	0.330
1 ¼	32	16	1000	<b>161 546 505</b>	1	0.610	<b>161 546 515</b>	1	0.610
1 ½	40	16	1600	<b>161 546 506</b>	1	0.846	<b>161 546 516</b>	1	0.815
2	50	16	3100	<b>161 546 507</b>	1	1.495	<b>161 546 517</b>	1	1.578
2 ½	65	16	5000	<b>161 546 508</b>	1	4.900	<b>161 546 518</b>	1	3.559
3	80	16	7000	<b>161 546 509</b>	1	7.400	<b>161 546 519</b>	1	7.400
4	100	16	11000	<b>161 546 510</b>	1	11.500	<b>161 546 520</b>	1	11.500

Size (inch)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	z (mm)
½	50	57	27	95	77	56	25	32	45	64
¾	58	67	30	110	97	65	25	39	58	72
1	68	73	36	123	97	71	25	39	58	79
1 ¼	84	90	44	146	128	85	45	54	74	94
1 ½	97	97	51	157	128	89	45	54	74	95
2	124	116	64	183	152	101	45	66	87	107
2 ½	166	149	85	233	270	136	70	64	206	144
3	200	161	105	254	270	141	70	64	206	151
4	238	178	123	301	320	164	120	64	256	174



DN10/15 - 50



### Ball valve type 546 PVC-U OF With fixed flanges PVC-U JIS

#### Model:

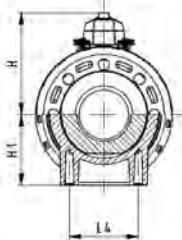
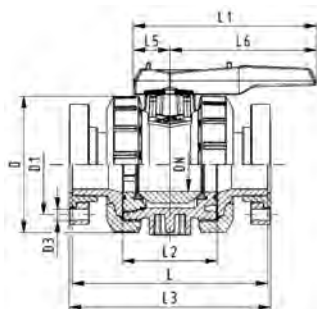
- Oil free
- For easy installation and removal
- Ball seals PTFE
- Without mounting inserts
- z-dimension, valve end and union nut are not compatible with type 346

#### Option:

- Individual configuration of the valve
- Multifunctional module with integrated limit switches

Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
½	15	16	185	161 546 922	1 0.415	161 546 932	1 0.415
¾	20	16	350	161 546 923	1 0.535	161 546 933	1 0.535
1	25	16	700	161 546 924	1 0.825	161 546 934	1 0.825
1 ¼	32	16	1000	161 546 925	1 1.385	161 546 935	1 1.385
1 ½	40	16	1600	161 546 926	1 1.620	161 546 936	1 1.620
2	50	16	3100	161 546 927	1 2.630	161 546 937	1 2.630

Size (inch)	D (mm)	D1 (mm)	D3 (mm)	H (mm)	H1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	T (mm)
½	95	70	15	57	27	77	56	143	25	32	45	14
¾	100	75	15	67	30	97	65	172	25	39	58	14
1	125	90	15	73	36	97	71	187	25	39	58	14
1 ¼	135	100	19	90	44	128	85	190	45	54	74	17
1 ½	140	105	19	97	51	128	89	212	45	54	74	18
2	155	120	19	116	64	152	101	234	45	66	87	20



### Ball valve type 546 PVC-U OF With backing flanges PVC-U JIS

#### Model:

- Oil free
- For easy installation and removal
- Ball seals PTFE
- Without mounting inserts
- Valve end and union nut are **not compatible** with type 346 (DN10/15-50) and type 370 (DN65-100)
- Overall length according to EN 558
- Connecting dimensions: JIS B 2220, 10K

#### Option:

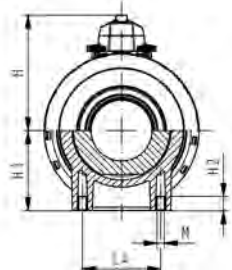
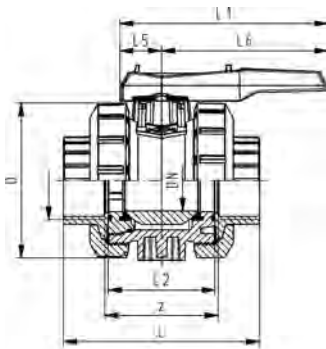
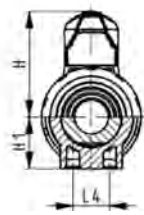
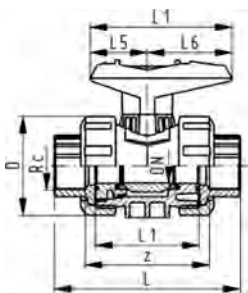
- Individual configuration of the valve
- Multifunctional module with integrated limit switches

Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
2 ½	65	10	5000	161 546 468	1 5.600	161 546 478	1 5.600
3	80	10	7000	161 546 469	1 8.400	161 546 479	1 8.400
4	100	10	11000	161 546 470	1 13.100	161 546 480	1 13.100

Size (inch)	D (mm)	D1 (mm)	D3 (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)
2 ½	166	140	19	149	85	284	270	136	290	70	64	206
3	200	150	19	161	105	300	270	141	310	70	64	206
4	238	175	19	178	123	340	320	164	350	120	64	256



DN10/15 - 50



**Ball valve type 546 PVC-U OF**  
**With threaded sockets Rc**

**Model:**

- Oil free
- For easy installation and removal
- Ball seals PTFE
- Without mounting inserts
- Valve end and union nut are **not compatible** with type 346 (DN10/15-50) and type 370 (DN65-100)

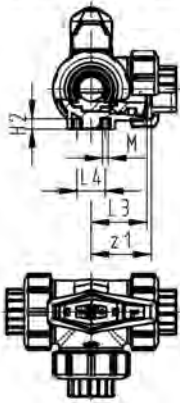
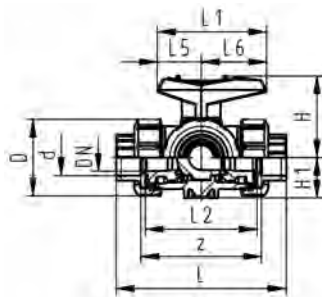
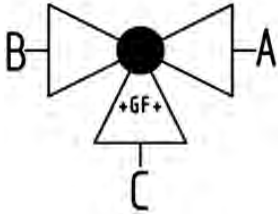
**Option:**

- Individual configuration of the valve
- Multifunctional module with integrated limit switches

Rc (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
½	15	10	185	161 546 522	1	0.155	161 546 532	1	0.160
¾	20	10	350	161 546 523	1	0.240	161 546 533	1	0.240
1	25	10	700	161 546 524	1	0.345	161 546 534	1	0.345
1 ¼	32	10	1000	161 546 525	1	0.610	161 546 535	1	0.610
1 ½	40	10	1600	161 546 526	1	0.835	161 546 536	1	0.835
2	50	10	3100	161 546 527	1	1.520	161 546 537	1	1.520
2 ½	65	10	5000	161 546 528	1	5.000	161 546 538	1	5.000
3	80	10	7000	161 546 529	1	7.500	161 546 539	1	7.500
4	100	10	11000	161 546 530	1	11.700	161 546 540	1	11.700

Rc (inch)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	z (mm)
½	50	57	27	100	77	56	25	32	45	66
¾	58	67	30	114	97	65	25	39	58	78
1	68	73	36	127	97	71	25	39	58	85
1 ¼	84	90	44	146	128	85	45	54	74	98
1 ½	97	97	51	152	128	89	45	54	74	104
2	124	116	64	177	152	101	45	66	87	119
2 ½	166	149	85	233	270	136	70	64	206	144
3	200	161	105	254	270	141	70	64	206	151
4	238	178	123	301	320	164	120	64	256	174

# 3-Way ball valves type 543



**3-Way ball valve type 543 PVC-U silicone free**  
**Horizontal/T-port**  
**With solvent cement sockets metric**

**Model:**

- Silicone free/paint-compatible
- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PVDF
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Turn limiter 90° enclosed, in different positions usable as a clip-on ring
- Integrated stainless steel mounting inserts
- Delivery status A-C opened, see flow scheme

d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	10	50	161 543 141	1	0.245	161 543 151
20	15	10	75	161 543 142	1	0.251	161 543 152
25	20	10	150	161 543 143	1	0.343	161 543 153
32	25	10	280	161 543 144	1	0.524	161 543 154
40	32	10	480	161 543 145	1	0.938	161 543 155
50	40	10	620	161 543 146	1	1.390	161 543 156
63	50	10	1230	161 543 147	1	2.705	161 543 157

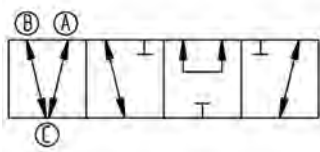
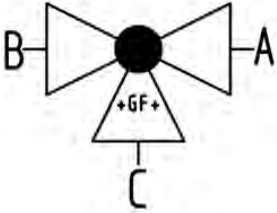
d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M (mm)	z (mm)	z1 (mm)	closest inch (inch)
16	50	57	28	8	109	77	73	36	25	32	45	6	81	40	3/8
20	50	57	28	8	112	77	73	36	25	32	45	6	81	40	1/2
25	58	67	32	8	131	97	86	43	25	39	58	6	94	47	3/4
32	68	73	36	8	151	97	99	50	25	39	58	6	107	54	1
40	84	90	45	9	181	128	120	60	45	54	74	8	130	65	1 1/4
50	97	97	51	9	205	128	137	69	45	54	74	8	143	72	1 1/2
63	124	116	65	9	261	152	179	89	45	66	87	8	185	92	2



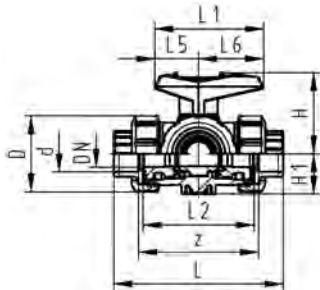
**3-Way ball valve type 543 PVC-U silicone free  
Horizontal/T-port  
With solvent cement sockets metric**

**Model:**

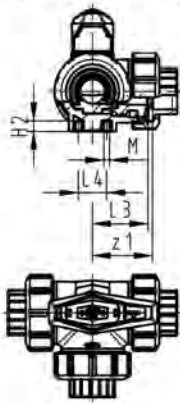
- Silicone free/paint-compatible
- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PVDF
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Turn limiter 90° enclosed, in different positions usable as a clip-on ring
- Integrated stainless steel mounting inserts
- Delivery status A-B-C opened, see flow scheme



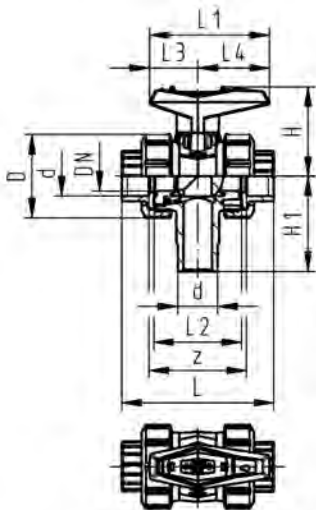
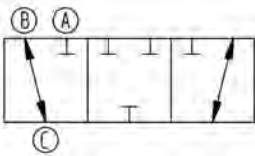
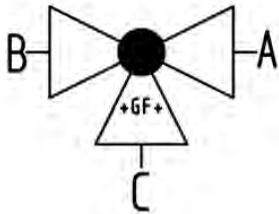
d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	10	140	<b>161 543 341</b>	1	0.244	<b>161 543 351</b>
20	15	10	200	<b>161 543 342</b>	1	0.232	<b>161 543 352</b>
25	20	10	470	<b>161 543 343</b>	1	0.339	<b>161 543 353</b>
32	25	10	793	<b>161 543 344</b>	1	0.544	<b>161 543 354</b>
40	32	10	1290	<b>161 543 345</b>	1	0.891	<b>161 543 355</b>
50	40	10	1910	<b>161 543 346</b>	1	1.369	<b>161 543 356</b>
63	50	10	3100	<b>161 543 347</b>	1	2.660	<b>161 543 357</b>



d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M (mm)	z (mm)	z1 (mm)	closest inch (inch)
16	50	57	28	8	109	77	73	36	25	32	45	6	81	40	3/8
20	50	57	28	8	112	77	73	36	25	32	45	6	81	40	1/2
25	58	67	32	8	131	97	86	43	25	39	58	6	94	47	3/4
32	68	73	36	8	151	97	99	50	25	39	58	6	107	54	1
40	84	90	45	9	181	128	120	60	45	54	74	8	130	65	1 1/4
50	97	97	51	9	205	128	137	69	45	54	74	8	143	72	1 1/2
63	124	116	65	9	261	152	179	89	45	66	87	8	185	92	2







**3-Way ball valve type 543 PVC-U silicone free  
Vertical/L-port  
With solvent cement sockets metric**

**Model:**

- Silicone free/paint-compatible
- Vertical inlet solvent cement spigot metric
- Easy installation and removal using union on third outlet
- Ball seals PVDF
- Electric actuator available separately
- Angle of operation 360° without turn limiter
- Delivery status B-C opened, see flow scheme

**Mode of action:**

- For interconnection of two inputs

d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	10	49	161 543 781	1	0.156	161 543 791	1	0.162
20	15	10	77	161 543 782	1	0.166	161 543 792	1	0.166
25	20	10	146	161 543 783	1	0.255	161 543 793	1	0.255
32	25	10	260	161 543 784	1	0.372	161 543 794	1	0.372
40	32	10	437	161 543 785	1	0.622	161 543 795	1	0.622
50	40	10	667	161 543 786	1	0.886	161 543 796	1	0.886
63	50	10	1293	161 543 787	1	1.617	161 543 797	1	1.617

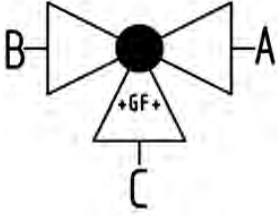
d (mm)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	z (mm)	closest inch (inch)
16	50	57	62	92	77	56	32	45	64	3/8
20	50	57	62	95	77	56	32	45	64	1/2
25	58	67	72	111	97	66	39	58	74	3/4
32	68	73	77	123	97	71	39	58	79	1
40	84	90	87	146	128	85	54	74	95	1 1/4
50	97	97	97	157	128	89	54	74	95	1 1/2
63	124	116	112	183	152	101	66	87	107	2



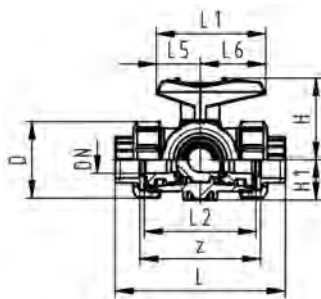
**3-Way ball valve type 543 PVC-U oil free**  
**Horizontal/L-port**  
**With solvent cement sockets JIS**

**Model:**

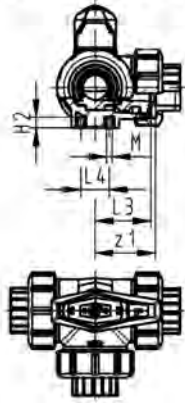
- Oil free
- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Turn limiter 90° enclosed, in different positions usable as a clip-on ring
- Integrated stainless steel mounting inserts
- Delivery status A-C opened, see flow scheme



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
20	15	½	10	75	161 543 842	1 0.228	161 543 852	1 0.231
25	20	¾	10	150	161 543 843	1 0.361	161 543 853	1 0.361
	25	1	10	280	161 543 844	1 0.528	161 543 854	1 0.551
	32	1 ¼	10	480	161 543 845	1 0.938	161 543 855	1 0.938
50	40	1 ½	10	620	161 543 846	1 1.395	161 543 856	1 1.390
63	50	2	10	1230	161 543 847	1 2.703	161 543 857	1 2.705



D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M (mm)	z (mm)	z1 (mm)
50	57	28	8	112	77	73	36	25	32	45	6	81	40
58	67	32	8	131	97	86	43	25	39	58	6	94	47
68	73	36	8	151	97	99	50	25	39	58	6	107	54
84	90	45	9	181	128	120	60	45	54	74	8	130	65
97	97	51	9	205	128	137	69	45	54	74	8	143	72
124	116	65	9	261	152	179	89	45	66	87	8	185	92

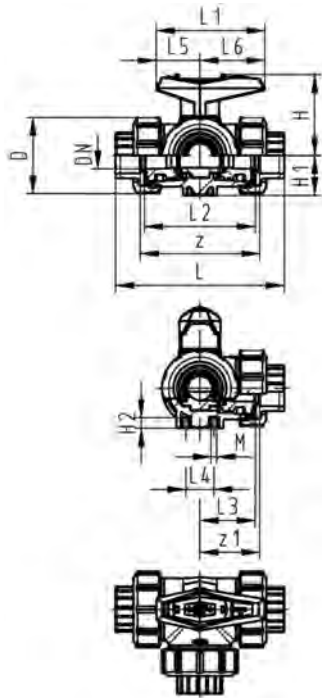




**3-Way ball valve type 543 PVC-U oil free**  
**Horizontal/T-port**  
**With solvent cement sockets JIS**

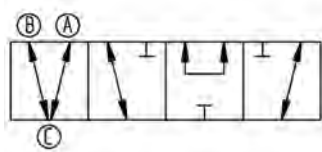
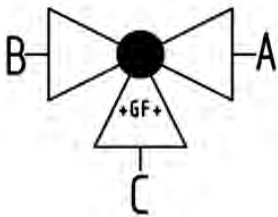
**Model:**

- Oil free
- For easy installation and removal (valve end and union nut are compatible with type 546)
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Turn limiter 90° enclosed, in different positions usable as a clip-on ring
- Integrated stainless steel mounting inserts
- Delivery status A-B-C opened, see flow scheme



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
20	15	½	10	200	<b>161 543 582</b>	1	0.250	<b>161 543 592</b>	1	0.250
25	20	¾	10	470	<b>161 543 583</b>	1	0.359	<b>161 543 593</b>	1	0.359
32	25	1	10	793	<b>161 543 584</b>	1	0.523	<b>161 543 594</b>	1	0.544
	32	1 ¼	10	1290	<b>161 543 585</b>	1	0.927	<b>161 543 595</b>	1	0.927
50	40	1 ½	10	1910	<b>161 543 586</b>	1	1.369	<b>161 543 596</b>	1	1.369
63	50	2	10	3100	<b>161 543 587</b>	1	2.683	<b>161 543 597</b>	1	2.660

D (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M (mm)	z (mm)	z1 (mm)
50	57	28	8	112	77	73	36	25	32	45	6	81	40
58	67	32	8	131	97	86	43	25	39	58	6	94	47
68	73	36	8	151	97	99	50	25	39	58	6	107	54
84	90	45	9	181	128	120	60	45	54	74	8	130	65
97	97	51	9	205	128	137	69	45	54	74	8	143	72
124	116	65	9	261	152	179	89	45	66	87	8	185	92





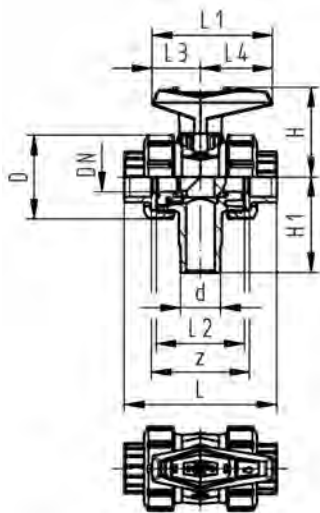
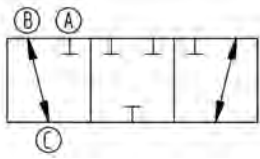
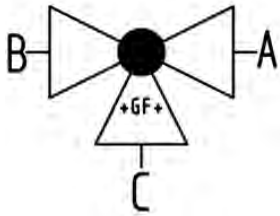
**3-Way ball valve type 543 PVC-U oil free**  
**Vertical/L-port**  
**With solvent cement sockets JIS**

**Model:**

- Oil free
- Vertical inlet solvent cement spigot metric
- Easy installation and removal using union on third outlet
- Ball seals PTFE
- Electric actuator available separately
- Angle of operation 360° without turn limiter
- Delivery status B-C opened, see flow scheme

**Mode of action:**

- For interconnection of two inputs



DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
15	½	10	77	161 543 802	1	0.166	161 543 812	1	0.166
20	¾	10	146	161 543 803	1	0.255	161 543 813	1	0.255
25	1	10	260	161 543 804	1	0.372	161 543 814	1	0.372
32	1 ¼	10	437	161 543 805	1	0.622	161 543 815	1	0.622
40	1 ½	10	667	161 543 806	1	0.886	161 543 816	1	0.886
50	2	10	1293	161 543 807	1	1.617	161 543 817	1	1.617

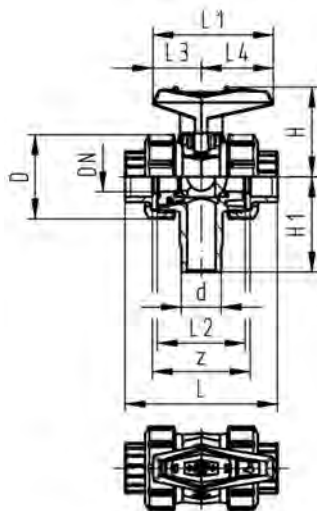
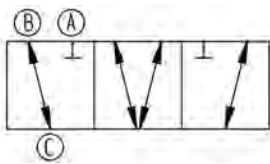
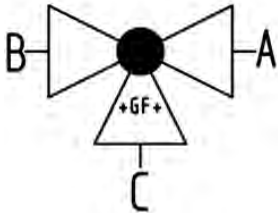
D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	z (mm)
50	57	62	95	77	56	32	45	64
58	67	72	111	97	66	39	58	74
68	73	77	123	97	71	39	58	79
84	90	87	146	128	85	54	74	95
97	97	97	157	128	89	54	74	95
124	116	112	183	152	101	66	87	107



**3-Way ball valve type 543 PVC-U oil free**  
**Vertical diverter ball**  
**With solvent cement sockets JIS**

**Model:**

- Oil free
- Vertical inlet solvent cement spigot metric
- Easy installation and removal using union on third outlet
- Ball seals PTFE
- Electric actuator available separately
- Angle of operation 360° without turn limiter
- Delivery status B-C opened, see flow scheme



DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
15	½	10	77	<b>161 543 982</b>	1	0.165	<b>161 543 992</b>
20	¾	10	146	<b>161 543 983</b>	1	0.243	<b>161 543 993</b>
25	1	10	260	<b>161 543 984</b>	1	0.354	<b>161 543 994</b>
32	1 ¼	10	437	<b>161 543 985</b>	1	0.611	<b>161 543 995</b>
40	1 ½	10	667	<b>161 543 986</b>	1	0.880	<b>161 543 996</b>
50	2	10	1293	<b>161 543 987</b>	1	1.604	<b>161 543 997</b>

D	H	H1	L	L1	L2	L3	L4	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	57	62	95	77	56	32	45	64
58	67	72	111	97	66	39	58	74
68	73	77	123	97	71	39	58	79
84	90	87	146	128	85	54	74	95
97	97	97	157	128	89	54	74	95
124	116	112	183	152	101	66	87	107

# 3-Way ball valves electric



**3-Way ball valve type 170 PVC-U OF**  
**Vertical diverter ball 100-230V**  
**With manual emergency override**  
**With solvent cement sockets JIS**

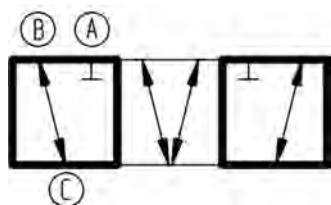
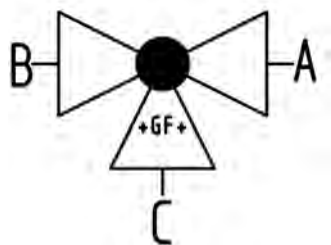
**Model:**

- Voltage 100-230V, 50-60Hz
- Basic position B-C opened, activated position A-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

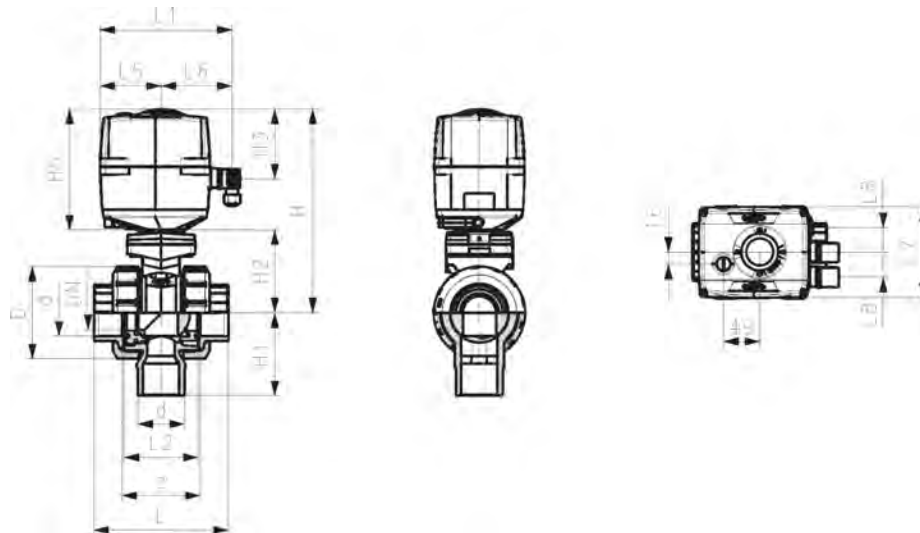
**Option:**

- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)
20	15	½	10	77	EA25	<b>199 170 393</b>	3.550
25	20	¾	10	146	EA25	<b>199 170 394</b>	2.042
32	25	1	10	260	EA25	<b>199 170 395</b>	2.148
40	32	1 ¼	10	437	EA25	<b>199 170 396</b>	2.260
50	40	1 ½	10	667	EA25	<b>199 170 397</b>	2.543
63	50	2	10	1293	EA25	<b>199 170 398</b>	2.797



D	H	H1	H2	H3	H5	L	L1	L2	L5	L6	L7	L8	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	231	62	64	94	167	95	180	56	97	83	122	33	64
58	240	72	73	94	167	111	180	66	97	83	122	33	74
68	240	77	73	94	167	123	180	71	97	83	122	33	79
84	251	87	84	94	167	146	180	85	97	83	122	33	95
97	251	97	84	94	167	157	180	89	97	83	122	33	95
124	273	112	106	94	167	183	180	101	97	83	122	33	107

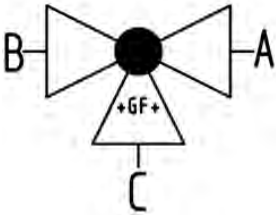




**3-Way ball valve type 185 PVC-U OF**  
**Horizontal/L-port 100-230V**  
**With manual emergency override**  
**With solvent cement sockets JIS**

**Model:**

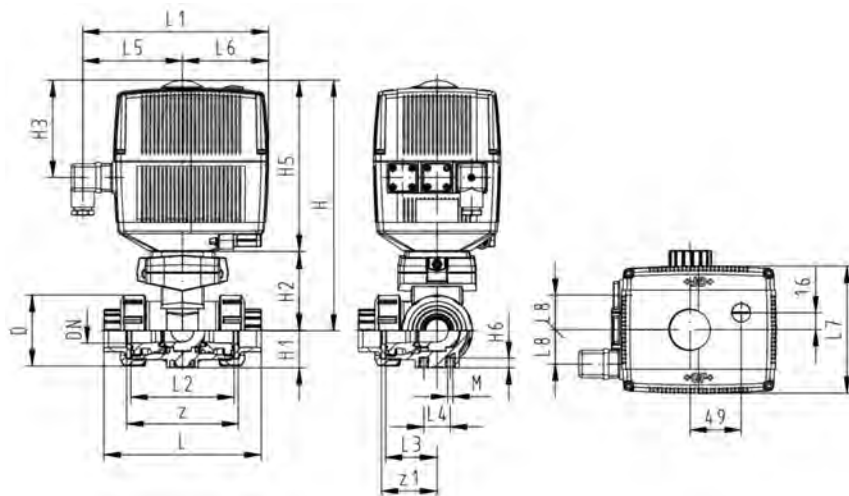
- Built on with electric actuator EA21
- Voltage 100-230V, 50-60Hz
- Control range 90°<
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Oil free



Size (inch)	DN (mm)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
½	15	10	75	199 185 883	1	2.128	199 185 893	1	2.128
¾	20	10	150	199 185 884	1	2.256	199 185 894	1	2.256
1	25	10	280	199 185 885	1	2.446	199 185 895	1	2.446
1 ¼	32	10	480	199 185 886	1	2.870	199 185 896	1	2.870
1 ½	40	10	620	199 185 887	1	3.717	199 185 897	1	3.322
2	50	10	1230	199 185 888	1	4.683	199 185 898	1	4.683

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
½	50	231	28	64	94	167	8	112	180	73	36	25	97	83	122
¾	58	240	32	73	94	167	8	131	180	86	43	25	97	83	122
1	68	240	36	73	94	167	8	151	180	99	50	25	97	83	122
1 ¼	84	251	45	84	94	167	9	181	180	120	60	45	97	83	122
1 ½	97	251	51	84	94	167	9	205	180	137	69	45	97	83	122
2	124	273	65	106	94	167	9	261	180	179	89	45	97	83	122

Size (inch)	L8 (mm)	M (mm)	z (mm)	z1 (mm)
½	33	6	81	40
¾	33	6	94	47
1	33	6	107	54
1 ¼	33	8	130	65
1 ½	33	8	143	72
2	33	8	185	92

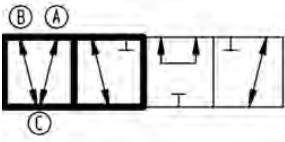
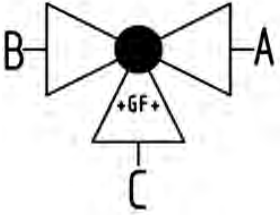




**3-Way ball valve type 185 PVC-U OF**  
**Horizontal/T-port 100-230V**  
**With manual emergency override**  
**With solvent cement sockets JIS**

**Model:**

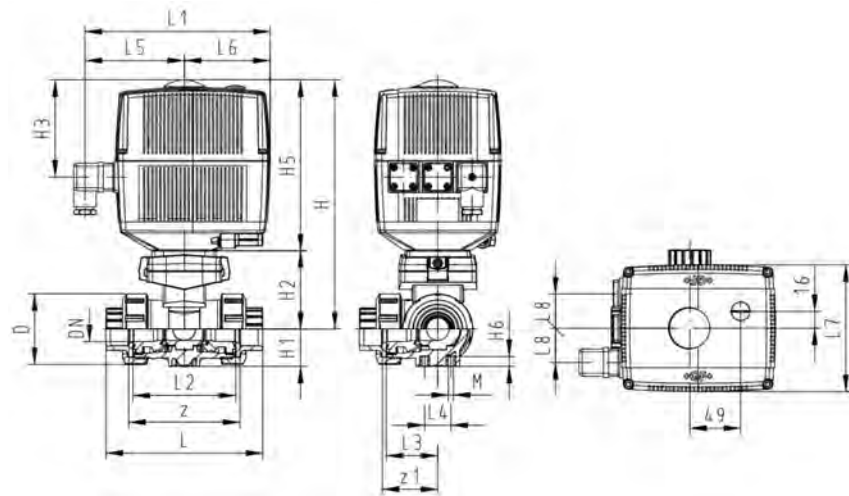
- Built on with electric actuator EA21
- Voltage 100-230V, 50-60Hz
- Control range 90°<
- Basic position A-B-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Oil free



Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
½	15	10	200	<b>199 185 903</b>	1 2.127	<b>199 185 913</b>	1 2.127
¾	20	10	470	<b>199 185 904</b>	1 2.254	<b>199 185 914</b>	1 2.254
1	25	10	793	<b>199 185 905</b>	1 2.439	<b>199 185 915</b>	1 2.439
1 ¼	32	10	1290	<b>199 185 906</b>	1 2.859	<b>199 185 916</b>	1 2.859
1 ½	40	10	1910	<b>199 185 907</b>	1 3.301	<b>199 185 917</b>	1 3.301
2	50	10	3100	<b>199 185 908</b>	1 4.638	<b>199 185 918</b>	1 4.638

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
½	50	231	28	64	94	167	8	112	180	73	36	25	97	83	122
¾	58	240	32	73	94	167	8	131	180	86	43	25	97	83	122
1	68	240	36	73	94	167	8	151	180	99	50	25	97	83	122
1 ¼	84	251	45	84	94	167	9	181	180	120	60	45	97	83	122
1 ½	97	251	51	84	94	167	9	205	180	137	69	45	97	83	122
2	124	273	65	106	94	167	9	261	180	179	89	45	97	83	122

Size (inch)	L8 (mm)	M (mm)	z (mm)	z1 (mm)
½	33	6	81	40
¾	33	6	94	47
1	33	6	107	54
1 ¼	33	8	130	65
1 ½	33	8	143	72
2	33	8	185	92



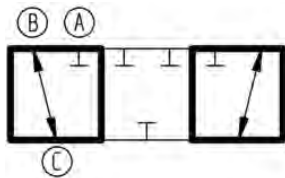
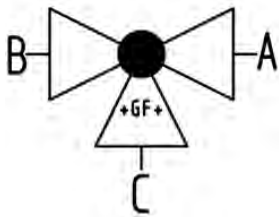




**3-Way ball valve type 188 PVC-U OF**  
**Vertical/L-port 100-230V**  
**With manual emergency override**  
**With solvent cement sockets JIS**

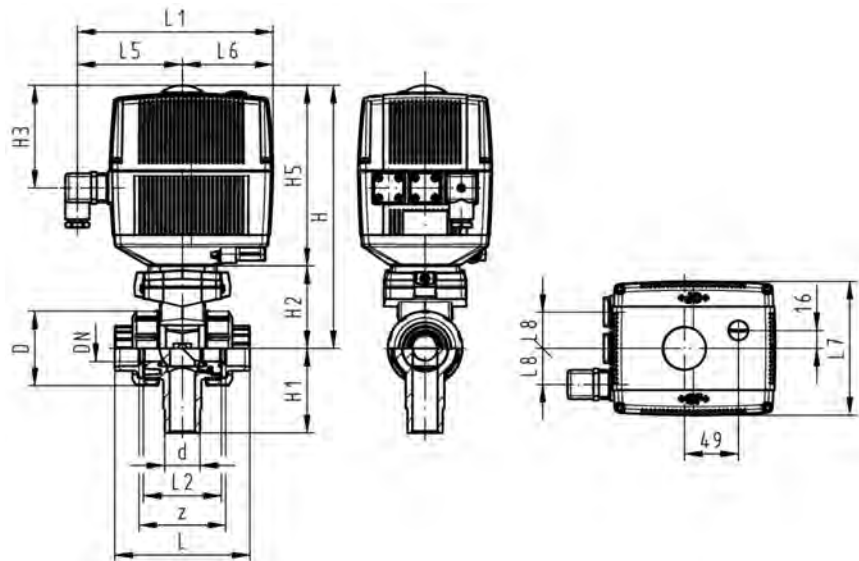
**Model:**

- Vertical inlet solvent cement spigot metric
- Built on with electric actuator EA21
- Voltage 100-230V, 50-60Hz
- Control range 180°<
- Basic position B-C opened, activated position A-C opened, see flow scheme
- Control time 10 s/180°<
- Easy installation and removal using union on third outlet
- Oil free



Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
½	15	10	77	<b>199 188 353</b>	1	3.212	<b>199 188 363</b>	1	3.595
¾	20	10	146	<b>199 188 354</b>	1	2.043	<b>199 188 364</b>	1	2.043
1	25	10	260	<b>199 188 355</b>	1	2.150	<b>199 188 365</b>	1	2.150
1 ¼	32	10	437	<b>199 188 356</b>	1	2.267	<b>199 188 366</b>	1	2.267
1 ½	40	10	667	<b>199 188 357</b>	1	2.554	<b>199 188 367</b>	1	2.554
2	50	10	1293	<b>199 188 358</b>	1	2.818	<b>199 188 368</b>	1	2.818

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)
½	50	231	62	64	94	167	95	180	56	97	83	122	33	64
¾	58	240	72	73	94	167	111	180	66	97	83	122	33	74
1	68	240	77	73	94	167	123	180	71	97	83	122	33	79
1 ¼	84	251	87	84	94	167	146	180	85	97	83	122	33	95
1 ½	97	251	97	84	94	167	157	180	89	97	83	122	33	95
2	124	273	112	106	94	167	183	180	101	97	83	122	33	107

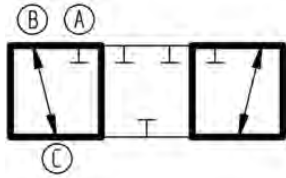
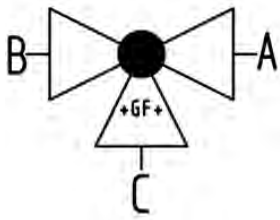




**3-Way ball valve type 188 PVC-U OF**  
**Vertical/L-port 24V**  
**With manual emergency override**  
**With solvent cement sockets JIS**

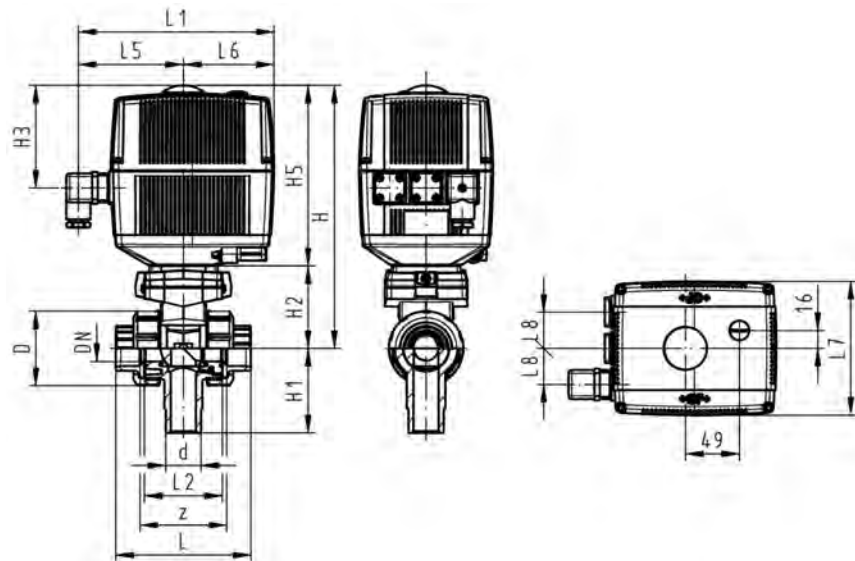
**Model:**

- Vertical inlet solvent cement spigot metric
- Built on with electric actuator EA21
- Voltage 24V AC/DC
- Control range 180°<
- Basic position B-C opened, activated position A-C opened, see flow scheme
- Control time 10 s/180°<
- Easy installation and removal using union on third outlet
- Oil free



Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	FKM Code	SP	Weight (kg)
½	15	10	77	<b>199 188 443</b>	1	3.550
¾	20	10	146	<b>199 188 444</b>	1	2.150
1	25	10	260	<b>199 188 445</b>	1	2.267
1 ¼	32	10	437	<b>199 188 446</b>	1	2.554
1 ½	40	10	667	<b>199 188 447</b>	1	2.818
2	50	10	1293	<b>199 188 448</b>	1	3.595

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)
½	50	231	62	64	94	167	95	180	56	97	83	122	33	64
¾	58	240	72	73	94	167	111	180	66	97	83	122	33	74
1	68	240	77	73	94	167	123	180	71	97	83	122	33	79
1 ¼	84	251	87	84	94	167	146	180	85	97	83	122	33	95
1 ½	97	251	97	84	94	167	157	180	89	97	83	122	33	95
2	124	273	112	106	94	167	183	180	101	97	83	122	33	107

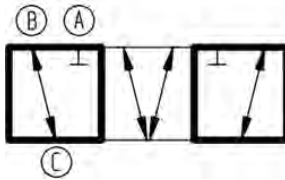
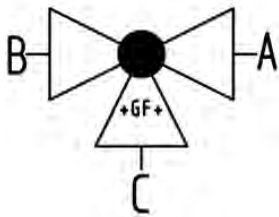




**3-Way ball valve type 188 PVC-U OF**  
**Vertical diverter ball 100-230V**  
**With manual emergency override**  
**With solvent cement sockets JIS**

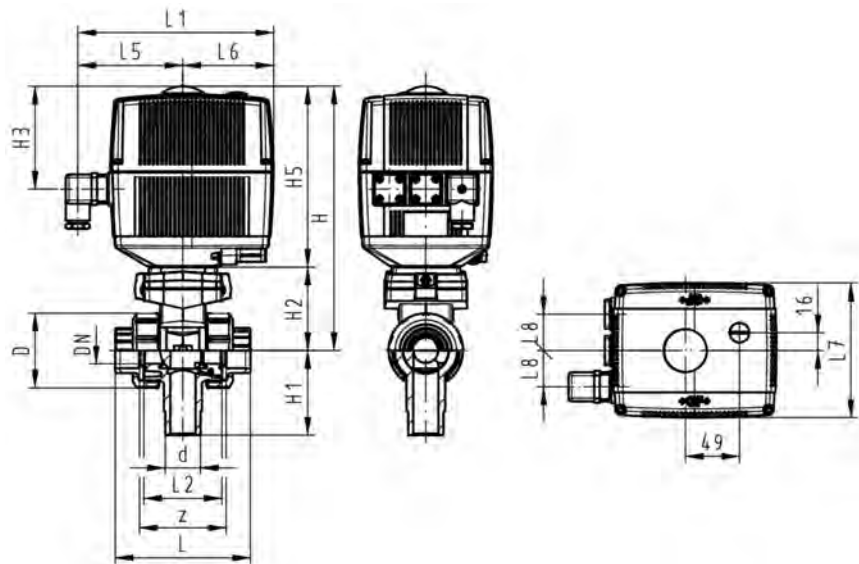
**Model:**

- Vertical inlet solvent cement spigot metric
- Built on with electric actuator EA21
- Voltage 100-230V, 50-60Hz
- Control range 180°<
- Basic position B-C opened, activated position A-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Control time 10 s/180°<
- Easy installation and removal using union on third outlet
- Oil free



Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1 \text{ bar}$ ) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
½	15	10	77	<b>199 188 393</b>	1	3.550	<b>199 188 403</b>	1	3.550
¾	20	10	146	<b>199 188 394</b>	1	2.042	<b>199 188 404</b>	1	2.042
1	25	10	260	<b>199 188 395</b>	1	2.148	<b>199 188 405</b>	1	2.148
1 ¼	32	10	437	<b>199 188 396</b>	1	2.260	<b>199 188 406</b>	1	2.260
1 ½	40	10	667	<b>199 188 397</b>	1	2.543	<b>199 188 407</b>	1	2.543
2	50	10	1293	<b>199 188 398</b>	1	2.797	<b>199 188 408</b>	1	2.797

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)
½	50	231	62	64	94	167	95	180	56	97	83	122	33	64
¾	58	240	72	73	94	167	111	180	66	97	83	122	33	74
1	68	240	77	73	94	167	123	180	71	97	83	122	33	79
1 ¼	84	251	87	84	94	167	146	180	85	97	83	122	33	95
1 ½	97	251	97	84	94	167	157	180	89	97	83	122	33	95
2	124	273	112	106	94	167	183	180	101	97	83	122	33	107



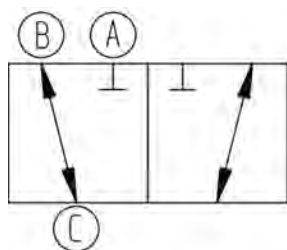
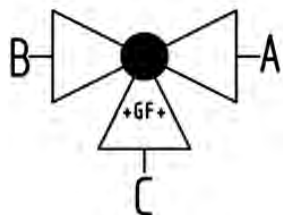
# 3-Way ball valves pneumatic



**3-Way ball valve type 285 PVC-U oil free**  
**Horizontal/L-port**  
**Without manual override**  
**With solvent cement sockets JIS**

**Model:**

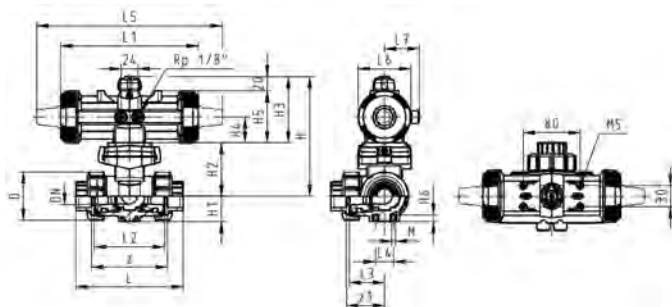
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Actuator fails safe to the closed position FC
- Basic position B-C opened, activated position A-C opened, see flow scheme
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Oil free



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
	15	½	10	75	<b>199 285 883</b>	1	1.121	<b>199 285 893</b>	1	1.121
	20	¾	10	150	<b>199 285 884</b>	1	1.249	<b>199 285 894</b>	1	1.249
32	25	1	10	280	<b>199 285 885</b>	1	1.439	<b>199 285 895</b>	1	1.439
40	32	1 ¼	10	480	<b>199 285 886</b>	1	2.539	<b>199 285 896</b>	1	2.539
50	40	1 ½	10	620	<b>199 285 887</b>	1	2.991	<b>199 285 897</b>	1	2.991
63	50	2	10	1230	<b>199 285 888</b>	1	4.352	<b>199 285 898</b>	1	4.352

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
50	159	28	62	97	40	77	8	112	194	73	36	25	261	76	48
58	168	32	71	97	40	77	8	131	194	86	43	25	261	76	48
68	168	36	71	97	40	77	8	151	194	99	50	25	261	76	48
84	203	45	84	119	51	99	9	181	224	120	60	45	305	95	59
97	203	51	84	119	51	99	9	205	224	137	69	45	305	95	59
124	225	65	106	119	51	99	9	261	224	179	89	45	305	95	59

M	z (mm)	z1 (mm)
6	81	40
6	94	47
6	107	54
8	130	65
8	143	72
8	185	92

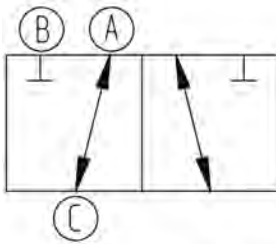
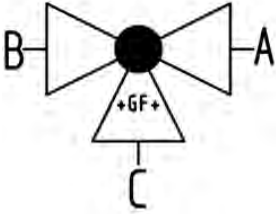




**3-Way ball valve type 285 PVC-U oil free**  
**Horizontal/L-port DA (Double acting)**  
**Without manual override**  
**With solvent cement sockets JIS**

**Model:**

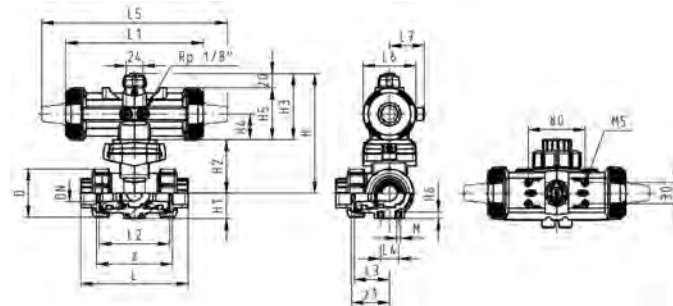
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Oil free



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
15	15	1/2	10	75	199 285 663	1	0.931	199 285 673	1	0.931
20	20	3/4	10	150	199 285 664	1	1.059	199 285 674	1	1.059
32	25	1	10	280	199 285 665	1	1.249	199 285 675	1	1.249
40	32	1 1/4	10	480	199 285 666	1	2.115	199 285 676	1	2.115
50	40	1 1/2	10	620	199 285 667	1	2.567	199 285 677	1	2.567
63	50	2	10	1230	199 285 668	1	3.928	199 285 678	1	3.928

D	H	H1	H2	H3	H4	H5	H6	L	L1	L2	L3	L4	L5	L6	L7
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	159	28	62	97	40	77	8	112	194	73	36	25	261	76	48
58	168	32	71	97	40	77	8	131	194	86	43	25	261	76	48
68	168	36	71	97	40	77	8	151	194	99	50	25	261	76	48
84	203	45	84	119	51	99	9	181	224	120	60	45	305	95	59
97	203	51	84	119	51	99	9	205	224	137	69	45	305	95	59
124	225	65	106	119	51	99	9	261	224	179	89	45	305	95	59

M	z	z1
(mm)	(mm)	(mm)
6	81	40
6	94	47
6	107	54
8	130	65
8	143	72
8	185	92

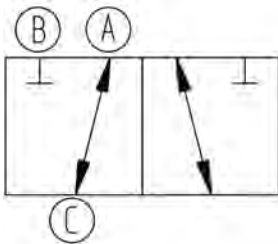
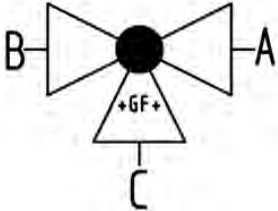




**3-Way ball valve type 288 PVC-U oil free**  
**Vertical diverter ball**  
**Without manual override**  
**With solvent cement sockets JIS**

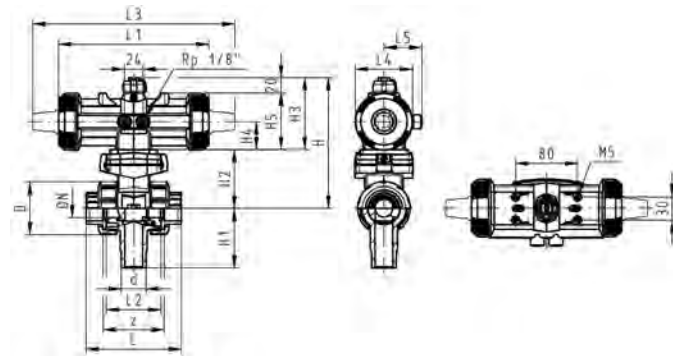
**Model:**

- Vertical inlet solvent cement spigot metric
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Actuator fails safe to the closed position FC
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Control time 90°<) 1-3 s
- Easy installation and removal using union on third outlet
- Oil free

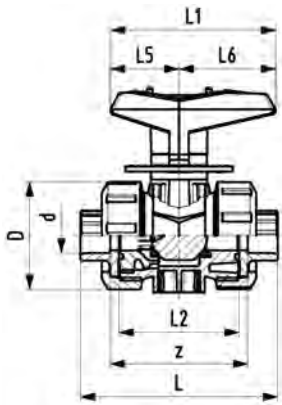


d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
15	15	½	10	77	199 288 143	1	1.035	199 288 153	1	1.035
20	20	¾	10	146	199 288 144	1	1.141	199 288 154	1	1.141
32	25	1	10	260	199 288 145	1	1.253	199 288 155	1	1.253
40	32	1 ¼	10	437	199 288 146	1	2.212	199 288 156	1	2.212
50	40	1 ½	10	667	199 288 147	1	2.466	199 288 157	1	2.466
63	50	2	10	1293	199 288 148	1	3.219	199 288 158	1	3.219

D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	z (mm)
50	159	62	62	97	40	77	95	194	56	261	76	48	64
58	168	72	71	97	40	77	111	194	66	261	76	48	74
68	168	77	71	97	40	77	123	194	71	261	76	48	79
84	203	87	84	119	51	99	146	224	85	305	95	59	95
97	203	97	84	119	51	99	157	224	89	305	95	59	95
124	225	112	106	119	51	99	183	224	101	305	95	59	107



# Metering ball valves type 523



## Metering ball valve type 523 PVC-U silicone free With mounting inserts With solvent cement sockets metric

### Model:

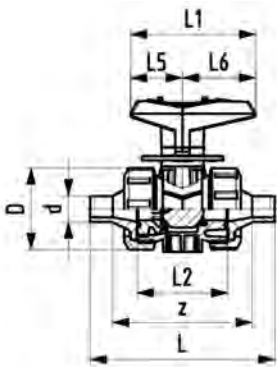
- Silicone free/paint-compatible
- Micro-doser
- Excellent control characteristics
- Designed for easy installation and removal
- Ball seals PVDF
- Angle of operation 180° with scale
- Integrated stainless steel mounting inserts
- Z-length, end connectors and union nuts **not compatible** to Type 323

### Option:

- Other materials on demand

d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	10	11	161 523 001	1	0.170	161 523 011
20	15	10	20	161 523 002	1	0.170	161 523 012

d (mm)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	z (mm)	closest inch (inch)
16	50	68	27	92	77	56	25	32	45	64	3/8
20	50	68	27	95	77	56	25	32	45	64	1/2



## Metering ball valve type 523 PVC-U silicone free With mounting inserts With solvent cement spigots metric

### Model:

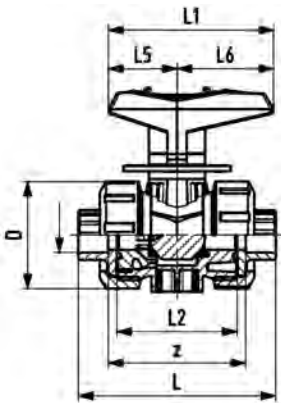
- Silicone free/paint-compatible
- Micro-doser
- Excellent control characteristics
- Designed for easy installation and removal
- Ball seals PVDF
- Angle of operation 180° with scale
- Integrated stainless steel mounting inserts
- Z-length, end connectors and union nuts **not compatible** to Type 323

### Option:

- Other materials on demand

d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	10	11	161 523 041	1	0.170	161 523 051
20	15	10	20	161 523 042	1	0.170	161 523 052

d (mm)	D (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	closest inch (inch)
16	50	68	27	114	77	56		25	32	45	3/8
20	50	68	27	124	77	56	130	25	32	45	1/2



**Metering ball valve type 523 PVC-U oil free**  
**With mounting inserts**  
**With solvent cement sockets JIS**

**Model:**

- Oil free
- Micro-doser
- Excellent control characteristics
- Designed for easy installation and removal
- Ball seals PTFE
- Angle of operation 180° with scale
- Integrated stainless steel mounting inserts
- Z-length, end connectors and union nuts **not compatible** to Type 323

**Option:**

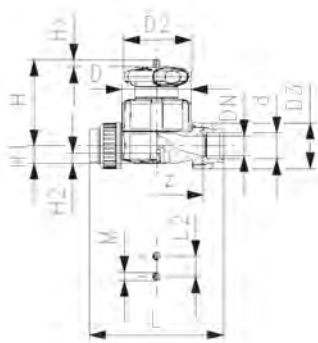
- Other materials on demand

DN	Size	PN	kv-value	EPDM	SP	Weight	FKM	SP	Weight
(mm)	(inch)	(bar)	( $\Delta p=1$ bar)	Code		(kg)	Code		(kg)
15	½	10	20	161 523 582	1	0.170	161 523 592	1	0.170

D	H	H1	L	L1	L2	L4	L5	L6	z
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50	68	27	95	77	56	25	32	45	64



# Diaphragm valves



## Diaphragm valve type 514 PVC-U SF With solvent cement sockets metric

### Model:

- Silicone free/paint-compatible
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Handwheel with built-in locking mechanism
- For easy installation and removal
- Short overall length

### Option:

- Individual configuration of the valve
- Self adjusting multifunctional valve with integrated limit switches
- PN16 available as a configuration

\* O-Ring material: FKM

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	PTFE/ EPDM* Code	SP	Weight (kg)
16	10	3/8	10	125	161 514 021	1	0.319	161 514 071	1	0.335
20	15	1/2	10	125	161 514 022	1	0.323	161 514 072	1	0.339
25	20	3/4	10	271	161 514 023	1	0.472	161 514 073	1	0.506
32	25	1	10	481	161 514 024	1	0.704	161 514 074	1	0.748
40	32	1 1/4	10	759	161 514 025	1	0.973	161 514 075	1	1.105
50	40	1 1/2	10	1263	161 514 026	1	1.618	161 514 076	1	1.679
63	50	2	10	1728	161 514 027	1	2.484	161 514 077	1	2.548

d (mm)	D (mm)	D2 (mm)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)	closest inch (inch)
16	65	65	43	73	14	12	124	25	M6	96	7	3/8
20	65	65	43	73	14	12	128	25	M6	96	7	1/2
25	80	65	51	81	18	12	152	25	M6	114	10	3/4
32	88	87	58	107	22	12	166	25	M6	122	13	1
40	101	87	72	115	26	15	192	45	M8	140	15	1 1/4
50	117	135	83	148	32	15	222	45	M8	160	19	1 1/2
63	144	135	100	166	39	15	266	45	M8	190	25	2



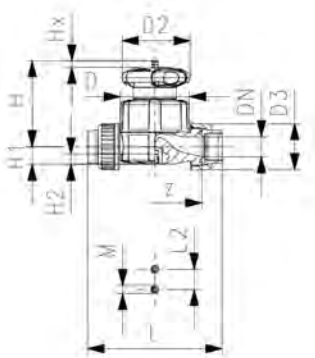
## Diaphragm valve type 514 PVC-U SF With solvent cement sockets BS

### Model:

- Silicone free/paint-compatible
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Handwheel with built-in locking mechanism
- For easy installation and removal
- Short overall length

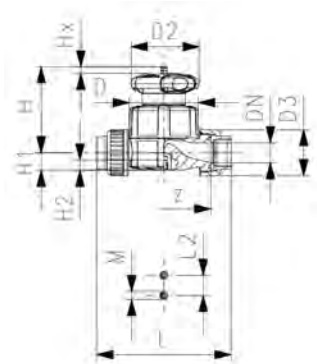
### Option:

- Individual configuration of the valve
- Self adjusting multifunctional module with integrated limit switches
- PN16 available as a configuration



Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	PTFE/EPDM Code	SP Weight (kg)
½	15	10	125	<b>161 514 522</b>	1	0.396	<b>161 514 572</b>
¾	20	10	271	<b>161 514 523</b>	1	0.524	<b>161 514 573</b>
1	25	10	481	<b>161 514 524</b>	1	1.159	<b>161 514 574</b>
1 ¼	32	10	759	<b>161 514 525</b>	1	1.419	<b>161 514 575</b>
1 ½	40	10	1263	<b>161 514 526</b>	1	2.528	<b>161 514 576</b>
2	50	10	1728	<b>161 514 527</b>	1	3.409	<b>161 514 577</b>

Size (inch)	D (mm)	D2 (mm)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)
½	65	65	43	73	14	12	141	25	M6	96	7
¾	80	65	51	81	18	12	165	25	M6	114	10
1	88	87	58	107	22	12	179	25	M6	122	13
1 ¼	101	87	72	115	26	15	204	45	M8	140	15
1 ½	117	135	83	148	32	15	230	45	M8	160	19
2	144	135	100	166	39	15	268	45	M8	190	25



### Diaphragm valve type 514 PVC-U SF With threaded sockets Rp

#### Model:

- Silicone free/paint-compatible
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Handwheel with built-in locking mechanism
- For easy installation and removal
- Short overall length

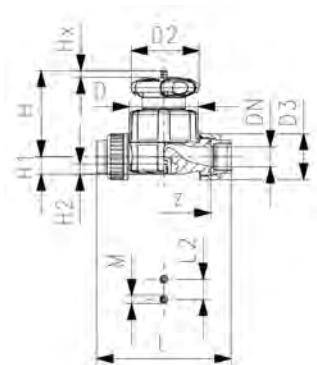
#### Option:

- Individual configuration of the valve
- Self adjusting multifunctional module with integrated limit switches
- PN16 available as a configuration

\* O-Ring material: FKM

d (mm)	DN (mm)	Thread Type	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP Weight (kg)
20	15	Rp	½	10	125	<b>161 514 422</b>	1 0.400
25	20	Rp	¾	10	271	<b>161 514 423</b>	1 0.523
50	40	Rp	1 ½	10	1263	<b>161 514 426</b>	1 2.528
40	32	Rp	1 ¼	10	759	<b>161 514 425</b>	1 1.429
32	25	Rp	1	10	481	<b>161 514 424</b>	1 1.163
63	50	Rp	2	10	1728	<b>161 514 427</b>	1 3.449

PTFE/ EPDM* Code	SP Weight (kg)	D (mm)	D2 (mm)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)
<b>161 514 472</b>	1 0.410	65	65	43	73	14	12	128	25	M6	96	7
<b>161 514 473</b>	1 0.534	80	65	51	81	18	12	152	25	M6	114	10
<b>161 514 476</b>	1 2.558	117	135	83	148	32	15	222	45	M8	160	19
<b>161 514 475</b>	1 1.449	101	87	72	115	26	15	192	45	M8	140	15
<b>161 514 474</b>	1 1.183	88	87	58	107	22	12	166	25	M6	122	13
<b>161 514 477</b>	1 3.477	144	135	100	166	39	15	266	45	M8	190	25



### Diaphragm valve type 514 PVC-U OF With solvent cement sockets JIS

#### Model:

- Oil free
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Handwheel with built-in locking mechanism
- For easy installation and removal
- Short overall length

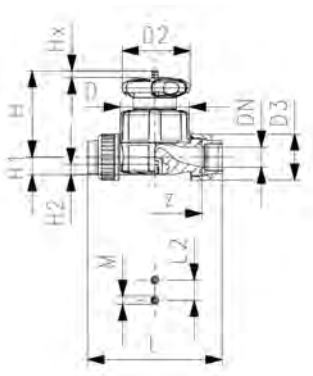
#### Option:

- Individual configuration of the valve
- Self adjusting multifunctional module with integrated limit switches
- PN16 available as a configuration

\* O-Ring material: FKM

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (L/min)	EPDM Code	SP Weight (kg)	PTFE/ EPDM* Code	SP Weight (kg)
20	15	½	10	125	<b>161 514 822</b>	1 0.434	<b>161 514 872</b>	1 0.548
25	20	¾	10	271	<b>161 514 823</b>	1 0.527	<b>161 514 873</b>	1 0.538
32	25	1	10	481	<b>161 514 824</b>	1 0.678	<b>161 514 874</b>	1 1.183
40	32	1 ¼	10	759	<b>161 514 825</b>	1 1.437	<b>161 514 875</b>	1 1.457
50	40	1 ½	10	1263	<b>161 514 826</b>	1 2.558	<b>161 514 876</b>	1 2.588
63	50	2	10	1728	<b>161 514 827</b>	1 3.425	<b>161 514 877</b>	1 3.453

table continued on the next page



D (mm)	D2 (mm)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)
80	65	51	81	18	12	152	25	M6	120	10
80	65	51	81	18	12	152	25	M6	114	10
88	87	58	107	22	12	166	25	M6	122	13
101	87	72	115	26	15	192	45	M8	140	15
117	135	83	148	32	15	222	45	M8	160	19
144	135	100	166	39	15	266	45	M8	190	25



### Diaphragm valve type 514 PVC-U OF With threaded sockets Rc

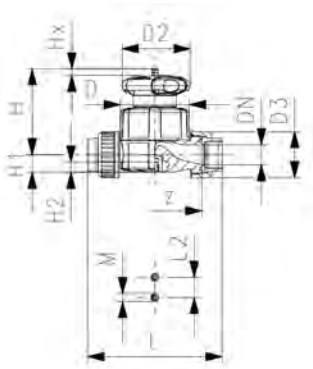
#### Model:

- Oil free
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Handwheel with built-in locking mechanism
- For easy installation and removal
- Short overall length

#### Option:

- Individual configuration of the valve
- Self adjusting multifunctional module with integrated limit switches
- PN16 available as a configuration

\* O-Ring material: FKM



d (mm)	DN (mm)	Thread Type	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)
20	15	Rc	½	10	125	<b>161 514 922</b>	1	0.537
25	20	Rc	¾	10	271	<b>161 514 923</b>	1	0.529
32	25	Rc	1	10	481	<b>161 514 924</b>	1	1.165
40	32	Rc	1 ¼	10	759	<b>161 514 925</b>	1	1.433
50	40	Rc	1 ½	10	1263	<b>161 514 926</b>	1	2.556
63	50	Rc	2	10	1728	<b>161 514 927</b>	1	3.497

PTFE/ EPDM* Code	SP	Weight (kg)	D (mm)	D2 (mm)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)
<b>161 514 972</b>	1	0.548	80	65	51	81	18	12	152	25	M6	120	110
<b>161 514 973</b>	1	0.540	80	65	51	81	18	12	152	25	M6	114	10
<b>161 514 974</b>	1	1.185	88	87	58	107	22	12	166	25	M6	122	13
<b>161 514 975</b>	1	1.453	101	87	72	115	26	15	192	45	M8	140	15
<b>161 514 976</b>	1	2.586	117	135	83	148	32	15	222	45	M8	160	19
<b>161 514 977</b>	1	3.525	144	135	100	166	39	15	266	45	M8	190	25



### Diaphragm valve type 515 PVC-U SF With solvent cement spigots metric

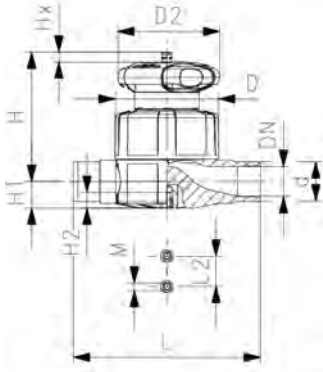
#### Model:

- Silicone free/paint-compatible
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Handwheel with built-in locking mechanism
- Overall length EN 558

#### Option:

- Individual configuration of the valve
- Self adjusting multifunctional module with integrated limit switches
- PN16 available as a configuration

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	PTFE/ EPDM* Code	SP Weight (kg)
20	15	½	10	125	161 515 022	1 0.238	161 515 072	1 0.345
25	20	¾	10	271	161 515 023	1 0.445	161 515 073	1 0.456
32	25	1	10	481	161 515 024	1 1.032	161 515 074	1 1.052
40	32	1 ¼	10	759	161 515 025	1 1.237	161 515 075	1 1.257
50	40	1 ½	10	1263	161 515 026	1 2.262	161 515 076	1 2.292
63	50	2	10	1728	161 515 027	1 2.057	161 515 077	1 2.991

d (mm)	D (mm)	D2 (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L2 (mm)	M	Lift = Hx (mm)	closest inch (inch)
20	65	65	73	14	12	124	25	M6	7	½
25	80	65	81	18	12	144	25	M6	10	¾
32	88	87	107	22	12	154	25	M6	13	1
40	101	87	115	26	15	174	45	M8	15	1 ¼
50	117	135	148	32	15	194	45	M8	19	1 ½
63	144	135	166	39	15	224	45	M8	25	2



### Diaphragm valve type 517 PVC-U SF With backing flanges PVC-U metric

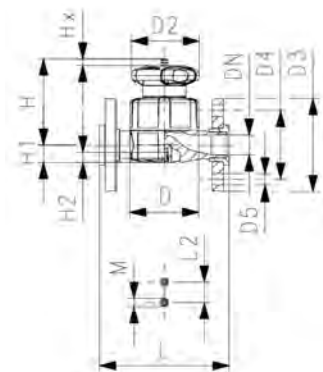
#### Model:

- Silicone free/paint-compatible
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Handwheel with built-in locking mechanism
- Flat sealing faces
- Overall length EN 558
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, BS 4504 PN 10

#### Option:

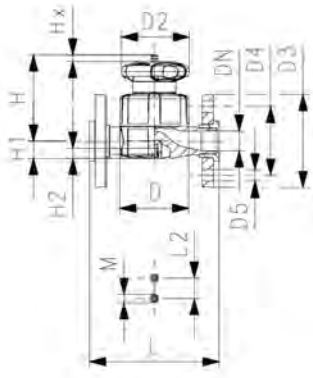
- Individual configuration of the valve
- Self adjusting multifunctional module with integrated limit switches

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	PTFE/ EPDM* Code	SP Weight (kg)
20	15	½	10	125	161 517 022	1 0.493	161 517 072	1 0.503
25	20	¾	10	271	161 517 023	1 0.661	161 517 073	1 0.672
32	25	1	10	481	161 517 024	1 1.344	161 517 074	1 1.364
40	32	1 ¼	10	759	161 517 025	1 1.233	161 517 075	1 1.372
50	40	1 ½	10	1263	161 517 026	1 2.868	161 517 076	1 2.898
63	50	2	10	1728	161 517 027	1 2.904	161 517 077	1 3.817

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d (mm)	D (mm)	D2 (mm)	D3 (mm)	D4 (mm)	D5 (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L2 (mm)	M	Lift = Hx (mm)	closest inch (inch)
20	65	65	95	65	14	73	14	12	130	25	M6	7	½
25	80	65	105	75	14	81	18	12	150	25	M6	10	¾
32	88	87	115	85	14	107	22	12	160	25	M6	13	1
40	101	87	140	100	18	115	26	15	180	45	M8	15	1 ¼
50	117	135	150	110	18	148	32	15	200	45	M8	19	1 ½
63	144	135	165	125	18	166	39	15	230	45	M8	25	2



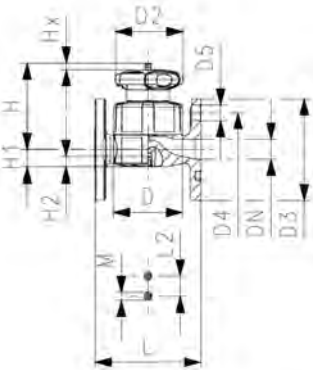
### Diaphragm valve type 517 PVC-U OF With fixed flanges PVC-U JIS

#### Model:

- Oil free
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Handwheel with built-in locking mechanism
- Joining faces flat/serrated
- Overall length EN 558
- Connecting dimension: JIS B2238/39 10K

#### Option:

- Individual configuration of the valve
  - Self adjusting multifunctional module with integrated limit switches
- \* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP Weight (kg)	PTFE/ EPDM* Code	SP Weight (kg)
20	15	½	10	125	161 517 922	1	0.528	161 517 972
25	20	¾	10	271	161 517 923	1	0.626	161 517 973
32	25	1	10	481	161 517 924	1	1.334	161 517 974
40	32	1 ¼	10	759	161 517 925	1	1.745	161 517 975
50	40	1 ½	10	1263	161 517 926	1	2.814	161 517 976
63	50	2	10	1728	161 517 927	1	3.652	161 517 977

D (mm)	D2 (mm)	D3 (mm)	D4 (mm)	D5 (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L2 (mm)	M	Lift = Hx (mm)
65	65	95	70	15	73	14	12	110	25	M6	7
80	65	100	75	15	81	18	12	120	25	M6	10
88	87	125	90	19	107	22	12	130	25	M6	13
101	87	135	100	19	115	26	15	180	45	M8	15
117	135	140	105	19	148	32	15	180	45	M8	19
144	135	155	120	19	166	39	15	210	45	M8	25



\*



**Diaphragm valve type 317 PVC-U SF**  
**With flanges PVC-U metric**

**Model:**

- Silicone free/paint-compatible
- Flat sealing faces
- Overall length according to EN 558
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, BS 4504 PN 10

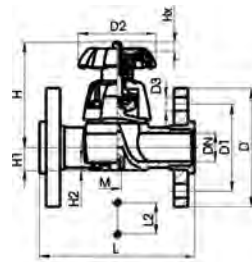
**Option:**

- Handwheel lockable DN65 (basic version not lockable)

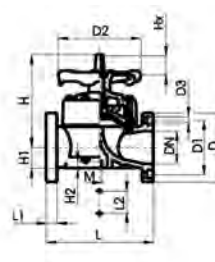
\* **DN80, DN100 and DN150 fixed flanges metric and inch ANSI B16.5**

	d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	PTFE with EPDM supp. diaphragm Code	Weight (kg)
	75	65	2 1/2	10	992	161 317 723	161 317 738	4.420
*	90	80	3	10	1700	161 317 424	161 317 439	9.600
*	110	100	4	6	2700	161 317 425	161 317 440	13.360
*	160	150	6	6	6033	161 317 427	161 317 442	29.250

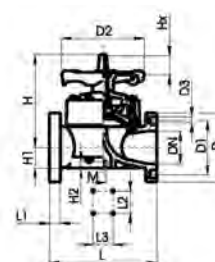
	d (mm)	D (mm)	D1 (mm)	D2 (mm)	D3 (mm)	H (mm)	H1 (mm)	H2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	M	Lift = Hx (mm)	AL
	75	185	145	152	18	201	46	15	290		70		M8	30	4
*	90	200	160	270	18	265	57	23	310	35	120		M12	40	8
*	110	225	180	270	18	304	69	23	350	35	120		M12	50	8
*	160	285	240	400	23	437	108	23	480	26	100	200	M12	70	8



DN 15-65



DN 80-100



DN 150

# Diaphragm valves pneumatic

## DIASTAR Six



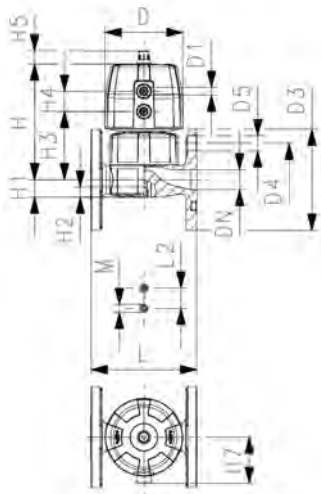
**Diaphragm valve DIASTAR Six PVC-U SF  
FC (Fail safe to close)  
With fixed flanges PVC-U JIS**

**Model:**

- Silicone free/paint-compatible
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Joining faces flat/serrated
- Connecting dimension: JIS B2238/39 10K

**Option:**

- Individual configuration of the valve



Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
3/4	20	6	271	161 617 923	1	1.145
1	25	6	481	161 617 924	1	1.448
1 1/4	32	6	759	161 617 925	1	2.384
1 1/2	40	6	960	161 617 926	1	2.964
2	50	6	1181	161 617 927	1	4.029

Size (inch)	D (mm)	D1_G (inch)	D3 (mm)	D4 (mm)	D5 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	Lift = Hx (mm)
3/4	96	3/8	100	75	15	132	18	12	73	57	120	25	M6	10
1	96	3/8	125	90	15	143	22	12	84	57	130	25	M6	13
1 1/4	120	3/8	135	100	19	173	26	15	99	69	180	45	M6	14
1 1/2	120	3/8	140	105	19	193	32	15	119	69	180	45	M6	16
2	120	3/8	155	120	19	205	39	15	132	69	210	45	M6	16



# DIASTAR Ten



**Diaphragm valve DIASTAR Ten PVC-U SF  
FC (Fail safe to close)  
With fixed flanges PVC-U JIS**

**Model:**

- Silicone free/paint-compatible
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Joining faces flat/serrated
- Connecting dimension: JIS B2238/39 10K

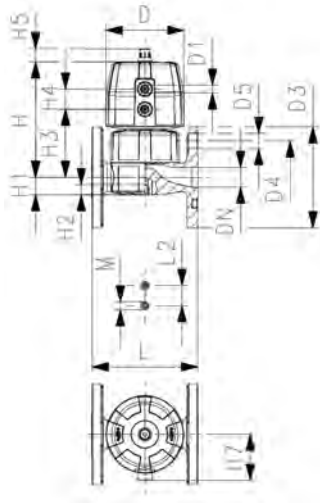
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)
20	15	½	10	10*	125	<b>161 627 922</b>	1	0.722
25	20	¾	10	10*	271	<b>161 627 923</b>	1	1.220
32	25	1	10	10*	481	<b>161 627 924</b>	1	1.520
40	32	1 ¼	10	10*	759	<b>161 627 925</b>	1	2.534
50	40	1 ½	10	10*	1263	<b>161 627 926</b>	1	4.102
63	50	2	10	6*	1728	<b>161 627 927</b>	1	4.950

PTFE/ EPDM* Code	SP	Weight (kg)
<b>161 627 972</b>	1	0.732
<b>161 627 973</b>	1	1.231
<b>161 627 974</b>	1	1.540
<b>161 627 975</b>	1	2.554
<b>161 627 976</b>	1	4.132
<b>161 627 977</b>	1	4.978

D	D1_G	D3	D4	D5	H	H1	H2	H3	H4	H5	H7	L	L2	M
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
68	⅝	95	70	15	101	14	12	60	24	16	43	110	25	M6
96	⅝	100	75	15	132	18	12	73	25	16	57	120	25	M6
96	⅝	125	90	19	143	22	12	84	25	16	57	130	25	M6
120	⅝	135	100	19	173	26	15	99	26	26	69	180	45	M8
150	¾	140	105	19	193	32	15	119	36	26	88	180	45	M8
150	¾	155	120	19	205	39	15	132	36	26	88	210	45	M8

**Lift =  
Hx  
(mm)**

7
10
13
15
19
23



**Diaphragm valve DIASTAR Ten PVC-U SF**  
**FO (Fail safe to open)**  
**With fixed flanges PVC-U JIS**

**Model:**

- Silicone free/paint-compatible
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Joining faces flat/serrated
- Connecting dimension: JIS B2238/39 10K

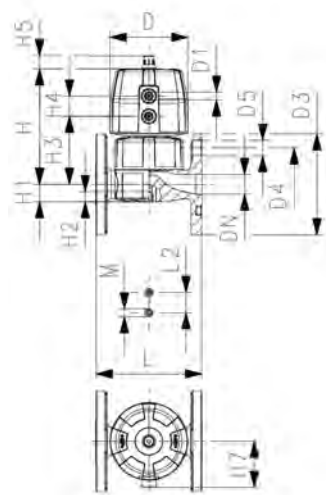
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available

\* PN: PTFE

Working Pressure: **one side**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value (Δp=1 bar) (L/min)	EPDM Code	SP	Weight (kg)
20	15	½	10	10*	125	<b>161 647 922</b>	1	0.672
25	20	¾	10	10*	271	<b>161 647 923</b>	1	1.046
32	25	1	10	10*	481	<b>161 647 924</b>	1	1.340
40	32	1 ¼	10	10*	759	<b>161 647 925</b>	1	2.174
50	40	1 ½	10	10*	1263	<b>161 647 926</b>	1	4.012
63	50	2	10	10*	1728	<b>161 647 927</b>	1	4.860

PTFE/ EPDM* Code	SP	Weight (kg)
<b>161 647 972</b>	1	0.682
<b>161 647 973</b>	1	1.057
<b>161 647 974</b>	1	1.360
<b>161 647 975</b>	1	2.194
<b>161 647 976</b>	1	4.042
<b>161 647 977</b>	1	4.888

D	D1_G	D3	D4	D5	H	H1	H2	H3	H4	H5	H7	L	L2	M
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
68	⅝	95	70	15	101	14	12	60	24	16	43	110	25	M6
96	⅝	100	75	15	132	18	12	73	25	16	57	120	25	M6
96	⅝	125	90	19	143	22	12	84	25	16	57	130	25	M6
120	⅝	135	100	19	173	26	15	99	26	26	69	180	45	M8
150	⅝	140	105	19	214	32	15	119	36	26	88	180	45	M8
150	⅝	155	120	19	226	39	15	132	36	26	88	210	45	M8

**Lift =**  
**Hx**  
**(mm)**

7
10
13
15
19
23



**Diaphragm valve DIASTAR Ten PVC-U SF  
DA (Double acting)  
With fixed flanges PVC-U JIS**

**Model:**

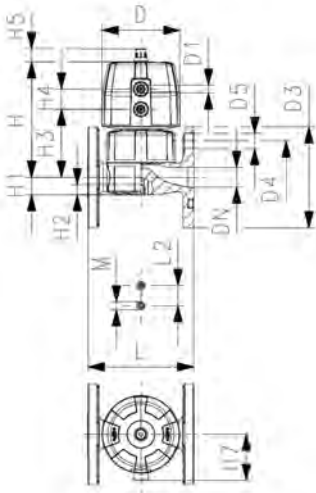
- Silicone free/paint-compatible
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Joining faces flat/serrated
- Connecting dimension: JIS B2238/39 10K

**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available

\* PN: PTFE

Working Pressure: **one side**



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)
20	15	½	10	10*	125	<b>161 657 922</b>	1	0.656
25	20	¾	10	10*	271	<b>161 657 923</b>	1	1.010
32	25	1	10	10*	481	<b>161 657 924</b>	1	1.310
40	32	1 ¼	10	10*	759	<b>161 657 925</b>	1	2.114
50	40	1 ½	10	10*	1263	<b>161 657 926</b>	1	3.262
63	50	2	10	10*	1728	<b>161 657 927</b>	1	4.110

D (mm)	D1_G (inch)	D3 (mm)	D4 (mm)	D5 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H7 (mm)	L (mm)	L2 (mm)	M
68	⅝	95	70	15	101	14	12	60	24	16	43	110	25	M6
96	⅞	100	75	15	132	18	12	73	25	16	57	120	25	M6
96	⅞	125	90	19	143	22	12	84	25	16	57	130	25	M6
120	⅞	135	100	19	173	26	15	99	26	26	69	180	45	M8
150	⅞	140	105	19	214	32	15	119	36	26	88	180	45	M8
150	⅞	155	120	19	226	39	15	132	36	26	88	210	45	M8

**Lift =**

Hx (mm)
7
10
13
15
19
23

# DIASTAR TenPlus



## Diaphragm valve DIASTAR TenPlus PVC-U OF FC (Fail safe to close) low pressure Unions with solvent cement sockets JIS

### Model:

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Oil free
- Short overall length

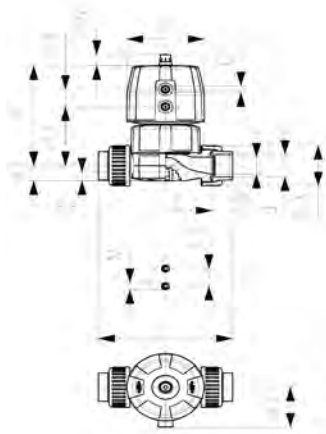
### Option:

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **both sides**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code	SP	Weight (kg)
20	15	½	10	8*	125	<b>161 684 822</b>	1	1.131
25	20	¾	10	8*	271	<b>161 684 823</b>	1	1.121
32	25	1	10	8*	481	<b>161 684 824</b>	1	2.046
40	32	1 ¼	10	8*	759	<b>161 684 825</b>	1	3.296
50	40	1 ½	10	8*	1263	<b>161 684 826</b>	1	5.254
63	50	2	10	6*	1728	<b>161 684 827</b>	1	6.130

PTFE/ EPDM* Code	SP	Weight (kg)
<b>161 684 872</b>	1	1.142
<b>161 684 873</b>	1	1.132
<b>161 684 874</b>	1	1.963
<b>161 684 875</b>	1	3.316
<b>161 684 876</b>	1	5.284
<b>161 684 877</b>	1	6.158

D	D1_G	H	H1	H2	H3	H4	H5	H7	L	L2	M	z	Lift = Hx (mm)
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	
96	⅜	132	18	12	73	25	16	57	152	25	M6	120	10
96	⅜	132	18	12	73	25	16	57	152	25	M6	114	10
120	⅜	167	22	12	93	26	26	69	166	25	M6	122	13
150	¼	196	26	15	101	36	26	88	192	45	M8	140	15
180	¼	239	32	15	124	37	26	103	222	45	M8	160	19
180	¼	251	39	15	137	37	26	103	266	45	M8	190	23



**Diaphragm valve DIASTAR TenPlus PVC-U OF FC (Fail safe to close) low pressure  
Unions with threaded sockets Rc**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- For easy installation and removal
- Oil free
- Short overall length

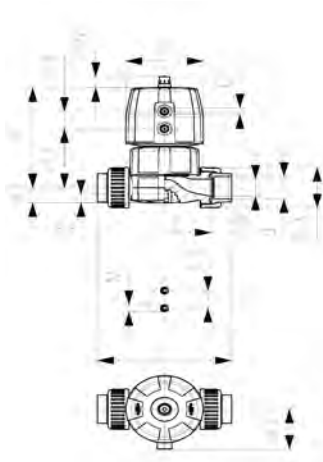
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available
- PN16 available as a configuration

\* PN: PTFE

Working Pressure: **both sides**

\* O-Ring material: FKM



Rc (inch)	DN (mm)	PN* (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	PTFE/ EPDM* Code	SP	Weight (kg)
½	15	10/8*	125	<b>161 684 922</b>	1	1.131	<b>161 684 972</b>	1	1.142
¾	20	10/8*	271	<b>161 684 923</b>	1	1.123	<b>161 684 973</b>	1	1.134
1	25	10/8*	481	<b>161 684 924</b>	1	1.945	<b>161 684 974</b>	1	1.965
1 ¼	32	10/8*	759	<b>161 684 925</b>	1	3.292	<b>161 684 975</b>	1	3.312
1 ½	40	10/8*	1263	<b>161 684 926</b>	1	5.252	<b>161 684 976</b>	1	5.282
2	50	10/6*	1728	<b>161 684 927</b>	1	6.202	<b>161 684 977</b>	1	6.230

Rc (inch)	D (mm)	D1_G (inch)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H7 (mm)	L (mm)	L2 (mm)	M	z (mm)	Lift = Hx (mm)
½	96	⅜	132	18	12	73	25	16	57	152	25	M6	120	10
¾	96	⅜	132	18	12	73	25	16	57	152	25	M6	114	10
1	120	⅜	167	22	12	93	26	26	69	166	25	M6	122	13
1 ¼	150	¼	196	26	15	101	36	26	88	192	45	M8	140	15
1 ½	180	¼	239	32	15	124	37	26	103	222	45	M8	160	19
2	180	¼	251	39	15	137	37	26	103	266	45	M8	190	23



**Diaphragm valve DIASTAR TenPlus PVC-U OF FC (Fail safe to close) low pressure  
With fixed flanges PVC-U JIS**

**Model:**

- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Joining faces flat/serrated
- Oil free
- Connecting dimension: JIS B2238/39 10K

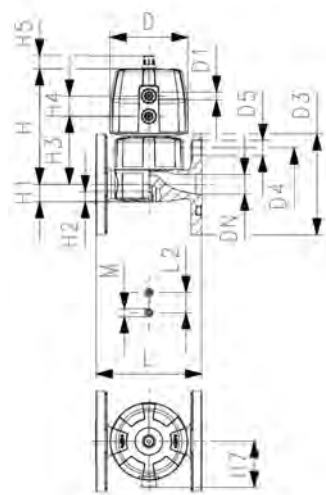
**Option:**

- Individual configuration of the valve
- Comprehensive range of accessories available

\* PN: PTFE

Working Pressure: **both sides**

\* O-Ring material: FKM



d (mm)	DN (mm)	Size (inch)	PN (bar)	PN* (bar)	kv-value (Δp=1 bar) (L/min)	EPDM Code	SP	Weight (kg)
20	15	½	10	8*	125	<b>161 687 922</b>	1	1.122
25	20	¾	10	8*	271	<b>161 687 923</b>	1	1.220
32	25	1	10	8*	481	<b>161 687 924</b>	1	2.114
40	32	1 ¼	10	8*	759	<b>161 687 925</b>	1	3.604
50	40	1 ½	10	8*	1263	<b>161 687 926</b>	1	5.510
63	50	2	10	6*	1728	<b>161 687 927</b>	1	6.357

PTFE/ EPDM* Code	SP	Weight (kg)
<b>161 687 972</b>	1	1.132
<b>161 687 973</b>	1	1.231
<b>161 687 974</b>	1	2.134
<b>161 687 975</b>	1	3.624
<b>161 687 976</b>	1	5.540
<b>161 687 977</b>	1	6.385

D	D1_G	D3	D4	D5	H	H1	H2	H3	H4	H5	H7	L	L2	M
(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
96	¾	95	70	15	127	14	12	68	25	16	57	110	25	M6
96	¾	100	75	15	132	18	12	73	25	16	57	120	25	M6
120	½	125	90	19	167	22	12	93	26	26	69	130	25	M6
150	¼	135	100	19	196	26	15	101	36	26	88	180	45	M8
180	¼	140	105	19	239	32	15	124	37	26	103	180	45	M8
180	¼	155	120	19	251	39	15	137	37	26	103	210	45	M8

**Lift =**  
**Hx**  
**(mm)**

7
10
13
15
19
23

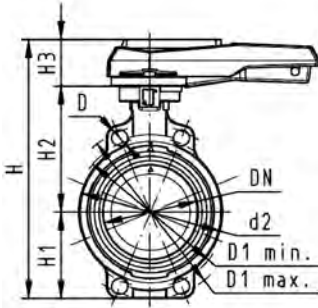
# Butterfly valves type 567



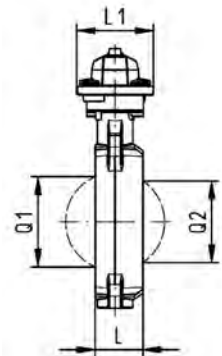
**Wafer-style, intermediate installation butterfly valve type 567 PVC-U silicon free**  
**With hand lever**  
**Flange standard metric/ANSI/BS/JIS**

**Model:**

- Silicone free/paint-compatible
- Overall length according to EN 558, ISO 5752
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220



d	Size	DN	PN	kv-value	EPDM	Weight	FKM	Weight
(mm)	(inch)	(mm)	(bar)	( $\Delta p=1$ bar)	Code	(kg)	Code	(kg)
				(L/min)				
63	2	50	10	740	<b>161 567 402</b>	1.040	<b>161 567 422</b>	1.044
75	2 ½	65	10	1500	<b>161 567 403</b>	1.350	<b>161 567 423</b>	1.148
90	3	80	10	2400	<b>161 567 404</b>	1.517	<b>161 567 424</b>	1.315
110	4	100	10	3800	<b>161 567 405</b>	2.528	<b>161 567 425</b>	1.983
140	5	125	10	8600	<b>161 567 406</b>	2.536	<b>161 567 426</b>	3.339
160	6	150	10	11400	<b>161 567 407</b>	3.541	<b>161 567 427</b>	3.564
225	8	200	10	19900	<b>161 567 408</b>	5.513	<b>161 567 428</b>	5.541



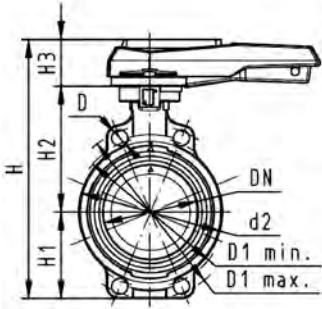
d	d2	D	D1	D1	H	H1	H2	H3	L	L1	L2	Q1	Q2
(mm)	(mm)	(mm)	min.	max.	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
			(mm)	(mm)									
63	104	19	120	125	264	77	134	54	45	106	205	40	
75	115	19	140	145	277	83	140	54	46	106	205	54	35
90	131	19	150	160	289	89	146	54	49	106	205	67	50
110	161	19	175	191	325	104	167	55	56	106	255	88	74
140	187	23	210	216	352	117	181	55	64	106	255	113	97
160	215	24	241	241	373	130	189	55	72	106	255	139	123
225	267	23	290	295	435	158	210	67	73	140	408	178	169



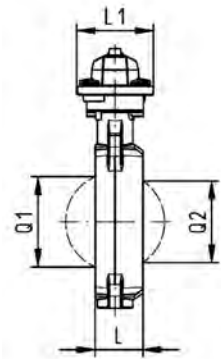
**Wafer-style, intermediate installation butterfly valve type 567 PVC-U oil free  
With hand lever  
Flange standard metric/ANSI/BS/JIS**

**Model:**

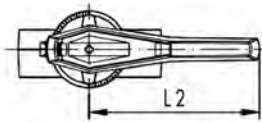
- Oil free
- Overall length according to EN 558, ISO 5752
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
63	2	50	10	740	<b>161 567 502</b>	1.040
75	2 ½	65	10	1500	<b>161 567 503</b>	1.344
90	3	80	10	2400	<b>161 567 504</b>	1.308
110	4	100	10	3800	<b>161 567 505</b>	1.969
140	5	125	10	8600	<b>161 567 506</b>	2.536
160	6	150	10	11400	<b>161 567 507</b>	3.731
225	8	200	10	19900	<b>161 567 508</b>	5.513



d (mm)	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	Q1 (mm)	Q2 (mm)
63	104	19	120	125	264	77	134	54	45	106	205	40	
75	115	19	140	145	277	83	140	54	46	106	205	54	35
90	131	19	150	160	289	89	146	54	49	106	205	67	50
110	161	19	175	191	325	104	167	55	56	106	255	88	74
140	187	23	210	216	352	117	181	55	64	106	255	113	97
160	215	24	241	241	373	130	189	55	72	106	255	139	123
225	267	23	290	295	435	158	210	67	73	140	408	178	169





# Lugstyle butterfly valves type 578



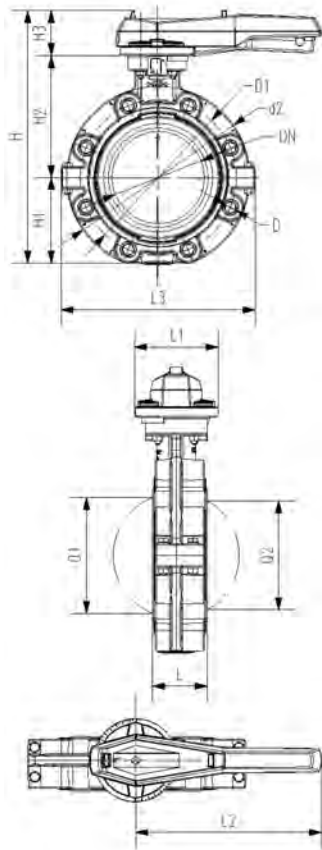
**Lug-style, end installation butterfly valve type 578 PVC-U silicone free  
With hand lever  
Flange standard metric**

**Model:**

- Silicone free/paint-compatible
- Housing material: PP-GF30 with SS316 lug-inserts
- Overall length according to EN 558, ISO 5752 (DN50 - 200 line 25, DN250 - 300 line 10)
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10
- We recommend for the dimensions DN250 and DN300 only 6 bar maximum system pressure for the hand lever version

**Option:**

- Optional accessory: Valve-Integrated position feedback with limit switches (limit switches have to be ordered separately)



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
63	2	50	10	740	<b>161 578 402</b>	1	1.800	<b>161 578 422</b>	1	1.800
75	2 ½	65	10	1500	<b>161 578 403</b>	1	1.895	<b>161 578 423</b>	1	1.895
90	3	80	10	2400	<b>161 578 404</b>	1	2.251	<b>161 578 424</b>	1	2.251
110	4	100	10	3800	<b>161 578 405</b>	1	3.146	<b>161 578 425</b>	1	3.146
140	5	125	10	8600	<b>161 578 406</b>	1	4.660	<b>161 578 426</b>	1	4.660
160	6	150	10	11400	<b>161 578 407</b>	1	6.430	<b>161 578 427</b>	1	6.430
225	8	200	10	19900	<b>161 578 408</b>	1	8.625	<b>161 578 428</b>	1	8.625
280	10	250	10	34000	<b>161 578 409</b>	1	19.528	<b>161 578 429</b>	1	19.528
315	12	300	10	50000	<b>161 578 410</b>	1	26.106	<b>161 578 430</b>	1	26.106

d (mm)	d2 (mm)	D	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	Q1 (mm)	Q2 (mm)
63	160	M16	125	265	77	134	54	45	106	205	165	40	
75	180	M16	145	277	83	140	54	46	106	205	182	54	35
90	195	M16	160	289	89	146	54	49	106	205	210	67	50
110	226	M16	180	328	106	167	55	56	106	255	240	88	74
140	258	M16	210	357	121	181	55	64	106	255	272	113	97
160	284	M20	240	377	133	189	55	72	106	255	300	139	123
225	341	M20	295	436	159	210	67	73	140	408	360	178	169
280	412	M20	350	536	205	264	67	113	140	408	440	210	207
315	482	M20	400	586	234	285	67	113	140	408	510	256	253

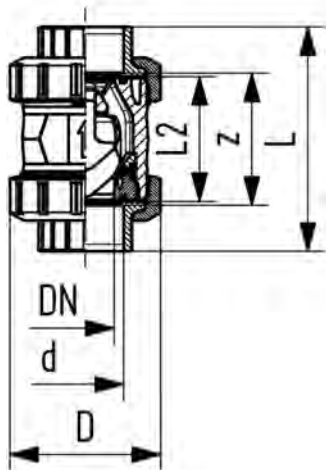
# Cone check valves



**Check valve type 561 PVC-U silicone free**  
**Without spring**  
**With solvent cement sockets metric**

**Model:**

- Sealing at a minimum water column of 2 m
- Silicone free/paint-compatible
- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- For vertical installation
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360
- New DN65-DN100



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	16	190	161 561 201	1	0.120	161 561 211
20	15	16	180	161 561 202	1	0.130	161 561 212
25	20	16	380	161 561 203	1	0.250	161 561 213
32	25	16	460	161 561 204	1	0.290	161 561 214
40	32	16	850	161 561 205	1	0.510	161 561 215
50	40	16	1080	161 561 206	1	0.750	161 561 216
63	50	16	1670	161 561 207	1	1.330	161 561 217
75	65	16	2950	161 561 208	1	3.160	161 561 218
90	80	16	3600	161 561 209	1	5.040	161 561 219
110	100	16	4150	161 561 210	1	8.130	161 561 220

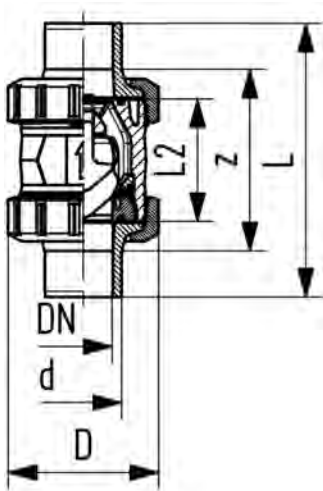
d (mm)	D (mm)	L (mm)	L2 (mm)	z (mm)	closest inch (inch)
16	50	92	56	64	3/8
20	50	95	56	64	1/2
25	58	110	65	72	3/4
32	68	123	71	79	1
40	84	146	85	94	1 1/4
50	97	157	89	95	1 1/2
63	124	183	101	107	2
75	166	233	136	144	2 1/2
90	200	254	141	151	3
110	238	301	164	174	4



**Check valve type 561 PVC-U silicone free**  
**Without spring**  
**With solvent cement spigots metric**

**Model:**

- Sealing at a minimum water column of 2 m
- Silicone free/paint-compatible
- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- For vertical installation
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360
- New DN65-DN100



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	16	190	<b>161 561 221</b>	1	0.130	<b>161 561 231</b>	1	0.130
20	15	16	180	<b>161 561 222</b>	1	0.130	<b>161 561 232</b>	1	0.130
25	20	16	380	<b>161 561 223</b>	1	0.260	<b>161 561 233</b>	1	0.280
32	25	16	460	<b>161 561 224</b>	1	0.300	<b>161 561 234</b>	1	0.310
40	32	16	850	<b>161 561 225</b>	1	0.520	<b>161 561 235</b>	1	0.520
50	40	16	1080	<b>161 561 226</b>	1	0.790	<b>161 561 236</b>	1	0.790
63	50	16	1670	<b>161 561 227</b>	1	1.410	<b>161 561 237</b>	1	1.420
75	65	16	2950	<b>161 561 228</b>	1	3.310	<b>161 561 238</b>	1	3.320
90	80	16	3600	<b>161 561 229</b>	1	5.220	<b>161 561 239</b>	1	5.250
110	100	16	4150	<b>161 561 230</b>	1	8.350	<b>161 561 240</b>	1	8.390

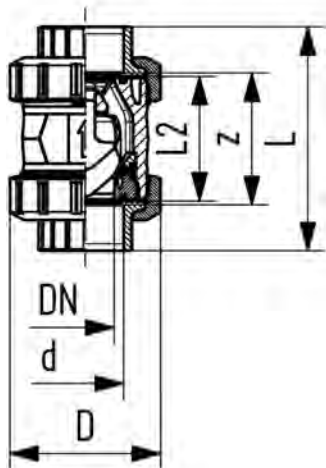
d (mm)	D (mm)	L (mm)	L2 (mm)	closest inch (inch)
16	50	114	56	$\frac{3}{8}$
20	50	124	56	$\frac{1}{2}$
25	58	144	65	$\frac{3}{4}$
32	68	154	71	1
40	84	174	85	$1 \frac{1}{4}$
50	97	194	89	$1 \frac{1}{2}$
63	124	224	101	2
75	166	284	136	$2 \frac{1}{2}$
90	200	300	141	3
110	238	340	164	4



**Check valve type 562 PVC-U SF**  
**With solvent cement sockets metric**

**Model:**

- For horizontal or vertical installation
- Sealing at a minimum water column of 1 m
- Silicone free/paint-compatible
- Spring loaded, spring made of stainless steel (1.4310)
- Spring available in other materials, see spare parts
- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360
- New DN65-DN100



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)		
16	10	16	190	<b>161 562 201</b>	1	0.120	<b>161 562 211</b>	1	0.120
20	15	16	180	<b>161 562 202</b>	1	0.130	<b>161 562 212</b>	1	0.130
25	20	16	380	<b>161 562 203</b>	1	0.250	<b>161 562 213</b>	1	0.270
32	25	16	460	<b>161 562 204</b>	1	0.290	<b>161 562 214</b>	1	0.290
40	32	16	850	<b>161 562 205</b>	1	0.510	<b>161 562 215</b>	1	0.510
50	40	16	1080	<b>161 562 206</b>	1	0.750	<b>161 562 216</b>	1	0.750
63	50	16	1670	<b>161 562 207</b>	1	1.330	<b>161 562 217</b>	1	1.340
75	65	16	2950	<b>161 562 208</b>	1	3.160	<b>161 562 218</b>	1	3.170
90	80	16	3600	<b>161 562 209</b>	1	5.040	<b>161 562 219</b>	1	5.060
110	100	16	4150	<b>161 562 210</b>	1	8.130	<b>161 562 220</b>	1	8.170

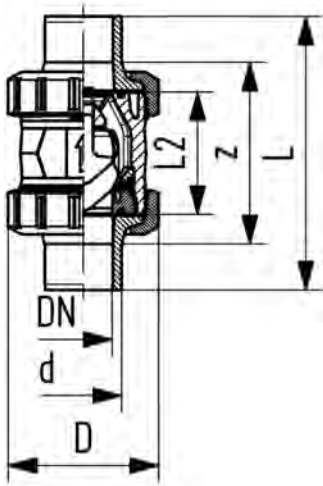
d (mm)	D (mm)	L (mm)	L2 (mm)	z (mm)	closest inch (inch)
16	50	92	56	64	3/8
20	50	95	56	64	1/2
25	58	110	65	72	3/4
32	68	123	71	79	1
40	84	146	85	94	1 1/4
50	97	157	89	95	1 1/2
63	124	183	101	107	2
75	166	233	136	144	2 1/2
90	200	254	141	151	3
110	238	301	164	174	4



**Check valve type 562 PVC-U SF**  
**With solvent cement spigots metric**

**Model:**

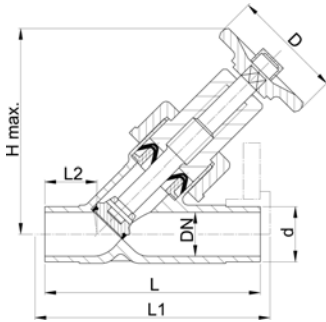
- For horizontal or vertical installation
- Sealing at a minimum water column of 1 m
- Silicone free/paint-compatible
- Spring loaded, spring made of stainless steel (1.4310)
- Spring available in other materials, see spare parts
- Designed for easy installation and removal
- Vibration free even at high flow velocity
- Flow-optimized return cone, double guided
- Compact installation length, same as ball valve type 546
- Z-length, end connectors and union nuts **not** compatible with type 360
- New DN65-DN100



d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
16	10	16	190	161 562 221	1	0.130	161 562 231
20	15	16	180	161 562 222	1	0.130	161 562 232
25	20	16	380	161 562 223	1	0.260	161 562 233
32	25	16	460	161 562 224	1	0.300	161 562 234
40	32	16	850	161 562 225	1	0.520	161 562 235
50	40	16	1080	161 562 226	1	0.790	161 562 236
63	50	16	1670	161 562 227	1	1.410	161 562 237
75	65	16	2950	161 562 228	1	3.310	161 562 238
90	80	16	3600	161 562 229	1	5.220	161 562 239
110	100	16	4150	161 562 230	1	8.350	161 562 240

d (mm)	D (mm)	L (mm)	L2 (mm)	closest inch (inch)
16	50	114	56	3/8
20	50	124	56	1/2
25	58	144	65	3/4
32	68	154	71	1
40	84	174	85	1 1/4
50	97	194	89	1 1/2
63	124	224	101	2
75	166	284	136	2 1/2
90	200	300	141	3
110	238	340	164	4

# Angle seat valves



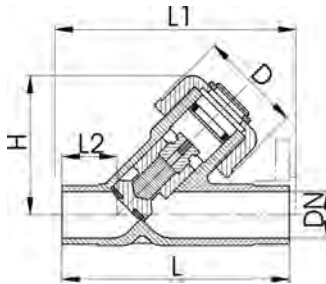
## Angle seat valve type 300 PVC-U SF With solvent cement spigots metric

### Model:

- For horizontal or vertical installation
- Silicone free/paint-compatible
- Overall length EN 558

d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	PE Code	SP	Weight (kg)
16	10	10	41	161 300 800	1	0.125
20	15	10	95	161 300 801	1	0.180
25	20	10	180	161 300 802	1	0.250
32	25	10	327	161 300 803	1	2.600
40	32	10	484	161 300 804	1	0.580
50	40	10	725	161 300 805	1	1.005
63	50	10	1130	161 300 806	1	0.944
75	65	10	1700	161 300 807	1	2.610
90	80	10	2500	161 300 808	1	3.945

d (mm)	D (mm)	L (mm)	L1 (mm)	L2 (mm)	closest inch (inch)	H max. (mm)
16	50	114	120	24	¾	105
20	63	124	130	28	½	126
25	63	144	150	37	¾	140
32	80	154	160	37	1	166
40	80	174	180	44	1 ¼	191
50	100	194	200	48	1 ½	233
63	100	224	230	60	2	264
75	160	284	290	74	2 ½	335
90	200	300	310	85	3	390



**Angle seat check valve type 303 PVC-U silicone free  
With solvent cement spigots metric**

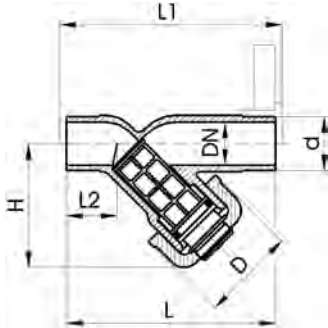
**Model:**

- For horizontal or vertical installation
- Leakproof even at minimum pressure
- Silicone free/paint-compatible
- Overall length EN 558

d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP	Weight (kg)	FKM Code	SP	Weight (kg)
16	10	10	41	161 303 015	1	0.094	161 303 040	1	0.094
20	15	10	95	161 303 016	1	0.139	161 303 041	1	0.132
25	20	10	180	161 303 017	1	0.200	161 303 042	1	0.200
32	25	10	327	161 303 018	1	0.323	161 303 043	1	0.323
40	32	10	484	161 303 019	1	0.498	161 303 044	1	0.498
50	40	10	725	161 303 020	1	0.860	161 303 045	1	0.860
63	50	10	1130	161 303 021	1	1.455	161 303 046	1	1.455
75	65	10	1700	161 303 022	1	2.483	161 303 047	1	2.450
90	80	10	2500	161 303 023	1	3.511	161 303 048	1	3.511

d (mm)	D (mm)	H (mm)	L (mm)	L1 (mm)	L2 (mm)	closest inch (inch)
16	39	58	114	120	24	¾
20	43	65	124	130	28	½
25	47	75	144	150	37	¾
32	56	90	154	160	37	1
40	64	102	174	180	44	1 ¼
50	82	123	194	200	48	1 ½
63	95	144	224	230	60	2
75	92	186	284	290	74	2 ½
90	104	204	300	310	85	3

# Strainers



**Check valve type 561 PVC-U silicone free**  
**Without spring**  
**With solvent cement spigots metric**

**Model:**

- Silicone free/paint-compatible
- Overall length EN 558
- With screen PVC-U, perforation  $\varnothing$  0.8 mm

d (mm)	DN (mm)	PN (bar)	kv-value ( $\Delta p=1$ bar) (l/min)	EPDM Code	SP Weight (kg)	FKM Code	SP Weight (kg)
20	15	10	35	192 305 821	1	0.101	192 305 831
25	20	10	63	192 305 822	1	0.150	192 305 832
32	25	10	85	192 305 823	1	0.255	192 305 833
40	32	10	150	192 305 824	1	0.386	192 305 834
50	40	10	225	192 305 825	1	0.643	192 305 835
63	50	10	346	192 305 826	1	0.979	192 305 836
75	65	10	535	192 305 827	1	1.835	192 305 837
90	80	10	750	192 305 828	1	2.549	192 305 838

d (mm)	D (mm)	H (mm)	L (mm)	L1 (mm)	L2 (mm)	closest inch (inch)
20	43	65	124	130	28	1/2
25	47	76	144	150	37	3/4
32	56	90	154	160	37	1
40	64	104	174	180	44	1 1/4
50	82	124	194	200	48	1 1/2
63	95	148	224	230	60	2
75	106	188	284	290	74	2 1/2
90	120	205	300	310	85	3



# Electric and pneumatic actuators

## Electric actuators



### Electric actuator type EA15/25/45/120/250

#### Model:

- Heating element, position feedback (Open/Close/ Middle)
- All: Adjustable heater and 7-segment error LED included
- EA15: control and position feedback open/close
- EA25 - 250: control open/close/middle; position feedback open/close/middle ready to operate
- cUL E247458

#### Option:

- All: fail-safe return unit; EA25 - 250: monitoring board, positioner, profibus DP board

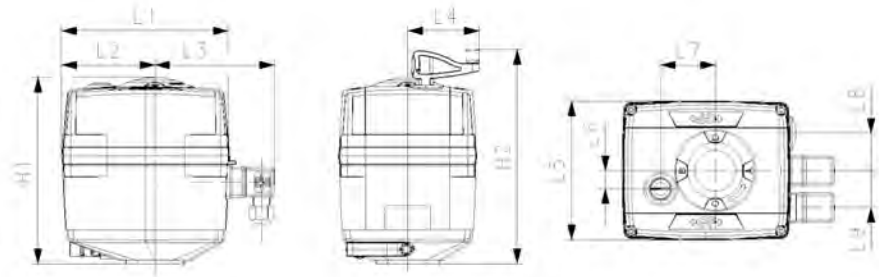
\*with adapter 198 000 587 F05 / WS 11, 198 204 057 F05 / WS 14

Type of actuator	Voltage	Torque nominal	Torque maximal	Interfaces	Code
EA15	100-230V AC	10 Nm	20 Nm	F05* (WS 11/14)	<b>198 153 180</b>
EA15	24V AC/DC	10 Nm	20 Nm	F05* (WS 11/14)	<b>198 153 181</b>
EA25	100-230V AC	10 Nm	25 Nm	F05* (WS 11/14)	<b>198 153 182</b>
EA25	24V AC/DC	10 Nm	25 Nm	F05* (WS 11/14)	<b>198 153 183</b>
EA45	100-230V AC	20 Nm	45 Nm	F05* (WS 11/14)	<b>198 153 184</b>
EA45	24V AC/DC	20 Nm	45 Nm	F05* (WS 11/14)	<b>198 153 185</b>
EA120	100-230V AC	60 Nm	120 Nm	F07 (WS17)	<b>198 153 186</b>
EA120	24V AC/DC	60 Nm	120 Nm	F07 (WS17)	<b>198 153 187</b>
EA250	100-230V AC	100 Nm	250 Nm	F07 (WS17)	<b>198 153 188</b>
EA250	24V AC/DC	100 Nm	250 Nm	F07 (WS17)	<b>198 153 189</b>
EA15 cUL marked	100-230V AC	10 Nm	20 Nm	F05* (WS 11/14)	<b>198153200</b>
EA15 cUL marked	24V AC/DC	10 Nm	20 Nm	F05* (WS 11/14)	<b>198 153 201</b>
EA25 UL marked	100-230V AC	10 Nm	25 Nm	F05* (WS 11/14)	<b>198 153 202</b>
EA25 cUL marked	24V AC/DC	10 Nm	25 Nm	F05* (WS 11/14)	<b>198 153 203</b>
EA45 cUL marked	100-230V AC	20 Nm	45 Nm	F05* (WS 11/14)	<b>198 153 204</b>
EA45 cUL marked	24V AC/DC	20 Nm	45 Nm	F05* (WS 11/14)	<b>198 153 205</b>
EA120 cUL marked	100-230V AC	60 Nm	120 Nm	F07 (WS17)	<b>198 153 206</b>
EA120 cUL marked	24V AC/DC	60 Nm	120 Nm	F07 (WS17)	<b>198 153 207</b>
EA250 cUL marked	100-230V AC	100 Nm	250 Nm	F07 (WS17)	<b>198 153 208</b>
EA250 cUL marked	24V AC/DC	100 Nm	250 Nm	F07 (WS17)	<b>198 153 209</b>

Type of actuator	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)
EA15	137	158	122	83.0	77	64.3	122	16	49		33
EA15	137	158	122	83.0	77	64.3	122	16	49		33
EA25	167	188	150	82.5	107	64.3	122	16	49	33	33
EA25	167	188	150	82.5	107	64.3	122	16	49	33	33
EA45	167	188	150	82.5	107	64.3	122	16	49	33	33
EA45	167	188	150	82.5	107	64.3	122	16	49	33	33
EA120	190	212	150	82.5	107	64.3	122	16	49	33	33
EA120	190	212	150	82.5	107	64.3	122	16	49	33	33
EA250	200	221	150	82.5	107	64.3	122	16	49	33	33
EA250	200	221	150	82.5	107	64.3	122	16	49	33	33
EA15 cUL marked	167	189	150	78.0	108	64.0	122	16	49	33	33
EA15 cUL marked	167	189	150	78.0	108	64.0	122	16	49	33	33
EA25 UL marked	167	189	150	83.0	98	64.0	122	16	49	33	33
EA25 cUL marked	167	189	150	83.0	98	64.0	122	16	49	33	33
EA45 cUL marked	167	189	150	83.0	98	64.0	122	16	49	33	33
EA45 cUL marked	167	189	150	83.0	98	64.0	122	16	49	33	33

table continued on the next page

Type of actuator	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)
EA120 cUL marked	190	212	150	83.0	98	64.0	122	16	49	33	33
EA120 cUL marked	190	212	150	83.0	98	64.0	122	16	49	33	33
EA250 cUL marked	200	221	150	83.0	98	64.0	122	16	49	33	33
EA250 cUL marked	200	221	150	83.0	98	64.0	122	16	49	33	33



# e-Diastar

## e-DIASTAR Type 515



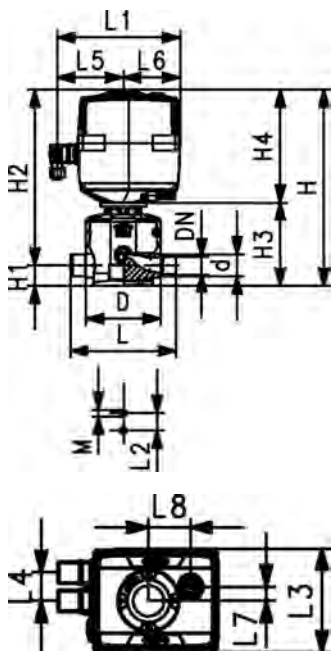
**e-DIASTAR Type 515 PVC-U 24V**  
With solvent cement spigots metric

**Model:**

- Voltage 24V AC/DC
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	DN (mm)	PN (bar)	EPDM Code	Weight (kg)	PTFE/EPDM Code	Weight (kg)
32	25	10	161 705 014	3.601	161 705 034	3.621
63	50	6	161 705 017	6.147	161 705 037	6.175

kv-value ( $\Delta p=1$ bar) (l/min)	D (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)	H (mm)	H1 (mm)
442	109	154	180	25	122	33	97	83	16	49	190	286	30
1575	168	223	180	45	122	33	97	83	16	49		341	53

H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	M
20	256	121	165	M6
29	289	176	165	M8



**e-DIASTAR Type 515 PVC-U 100-230V**  
**With solvent cement spigots metric**

**Model:**

- Voltage 100-230V, 50-60Hz
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

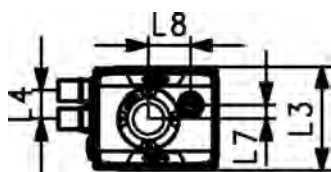
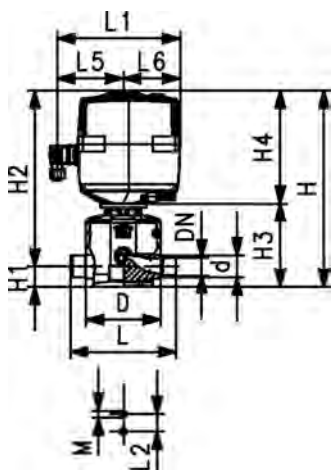
**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d	DN	PN	EPDM Weight	PTFE/EPDM Weight
(mm)	(mm)	(bar)	Code	Code
32	25	10	161 715 014	161 715 034
63	50	6	161 715 017	161 715 037

kv-value	D	L	L1	L2	L3	L4	L5	L6	L7	L8	L9	H	H1
( $\Delta p=1$ bar)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
(l/min)													
442	109	154	180	25	122	33	97	83	16	49	190	286	30
1575	168	223	180	45	122	33	97	83	16	49		341	53

H2	H3	H4	H5	M
(mm)	(mm)	(mm)	(mm)	
20	256	121	165	M6
29	289	176	165	M8



# e-DIASTAR Type 514



## e-DIASTAR Type 514 PVC-U 24V With solvent cement sockets metric

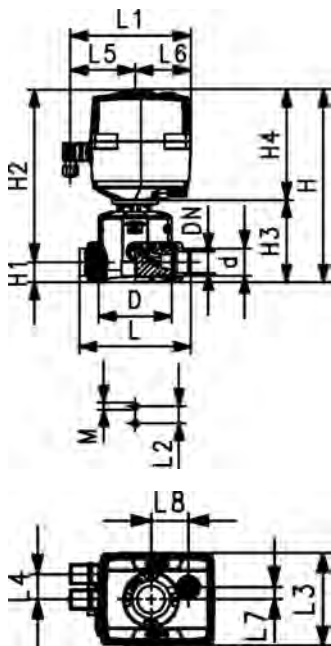
### Model:

- Voltage 24V AC/DC
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

### Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	EPDM Code	Weight (kg)	PTFE/EPDM Code	Weight (kg)
32	25	10	161 704 014	3.730	161 704 034	3.750
63	50	6	161 704 017	6.569	161 704 037	6.597



kv-value ( $\Delta p=1$ bar) (l/min)	D (mm)	D1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)	H (mm)
442	109	58	166	180	25	122	33	97	83	16	49	190	286
1575	168	101	266	180	45	122	33	97	83	16	49		341

H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	z (mm)	M
30	20	256	121	165	122	M6
53	29	289	176	165	122	M8



**e-DIASTAR Type 514 PVC-U 24V**  
**With solvent cement sockets BS**

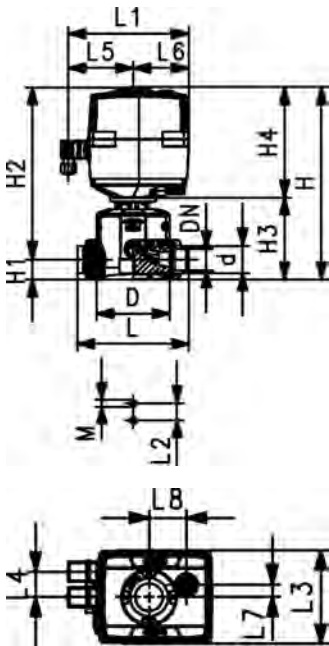
**Model:**

- Voltage 24V AC/DC
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d	DN	PN	EPDM Weight	PTFE/EPDM Weight
(mm)	(mm)	(bar)	Code	Code
32	25	10	161 704 514	161 704 534
63	50	6	161 704 517	161 704 537



kv-value	D	D1	L	L1	L2	L3	L4	L5	L6	L7	L8	L9	H
( $\Delta p=1$ bar)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
442	109	58	170	180	25	122	33	97	83	16	49	192	286
1575	168	101	265	180	45	122	33	97	83	16	49		341

H1	H2	H3	H4	H5	z	M
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
30	20	256	121	165	122	M6
53	29	289	176	165	122	M8



**e-DIASTAR Type 514 PVC-U 24V**  
**With solvent cement sockets ASTM**

**Model:**

- Voltage 24V AC/DC
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

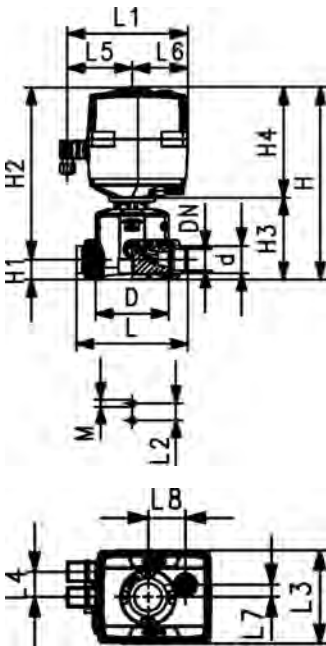
**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d	DN	PN	EPDM Weight	PTFE/EPDM Weight
(mm)	(mm)	(bar)	Code (kg)	Code (kg)
32	25	10	161 704 614 3.734	161 704 634 3.754
63	50	6	161 704 617 6.601	161 704 637 6.629

kv-value ( $\Delta p=1$ bar) (l/min)	D	D1	L	L1	L2	L3	L4	L5	L6	L7	L8	L9	H
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
442	109	58	166	180	25	122	33	97	83	16	49	190	286
1575	168	101	266	180	45	122	33	97	83	16	49		341

H1	H2	H3	H4	H5	z	M
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
30	20	256	121	165	122	M6
53	29	289	176	165	122	M8





**e-DIASTAR Type 514 PVC-U 24V**  
**With solvent cement sockets JIS**

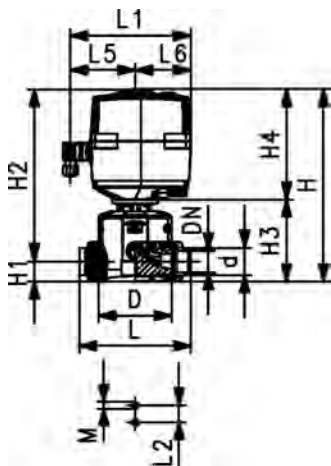
**Model:**

- Voltage 24V AC/DC
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

**Option:**

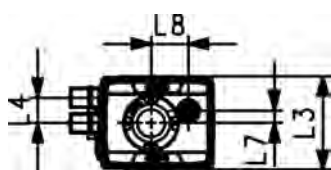
- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d	DN	PN	EPDM Weight	PTFE/EPDM Weight
(mm)	(mm)	(bar)	Code	Code
32	25	10	161 704 814	161 704 834
63	50	6	161 704 817	161 704 837



kv-value	D	D1	L	L1	L2	L3	L4	L5	L6	L7	L8	L9	H
( $\Delta p=1$ bar)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
442	109	58	166	180	25	122	33	97	83	16	49	190	286
1575	168	101	266	180	45	122	33	97	83	16	49	190	341

H1	H2	H3	H4	H5	z	M
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
30	20	256	121	165	122	M6
53	29	289	176	165	122	M8







**e-DIASTAR Type 514 PVC-U 100-230V**  
**With solvent cement sockets metric**

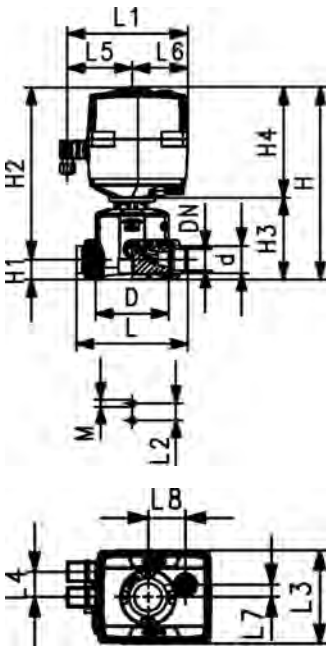
**Model:**

- Voltage 100-230V, 50-60Hz
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d	DN	PN	EPDM	Weight	PTFE/EPDM	Weight
(mm)	(mm)	(bar)	Code	(kg)	Code	(kg)
32	25	10	161 714 014	3.730	161 714 034	6.569
63	50	6	161 714 017	2.488	161 714 037	6.597



kv-value	D	D1	L	L1	L2	L3	L4	L5	L6	L7	L8	L9	H
( $\Delta p=1$ bar)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
(l/min)													
442	109	58	166	180	25	122	33	97	83	16	49	190	286
1575	168	101	266	180	45	122	33	97	83	16	49		341

H1	H2	H3	H4	H5	z	M
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
30	20	256	121	165	122	M6
53	29	289	176	165	190	M8



**e-DIASTAR Type 514 PVC-U 100-230V**  
**With solvent cement sockets BS**

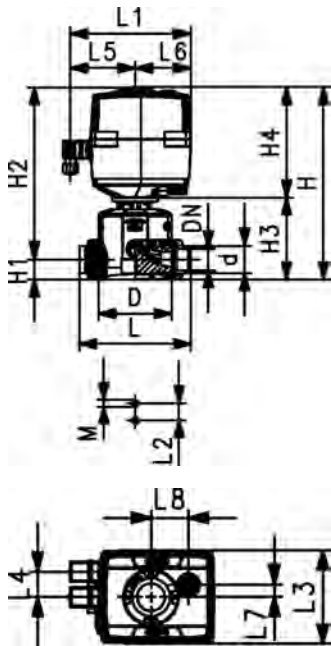
**Model:**

- Voltage 100-230V, 50-60Hz
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d	DN	PN	EPDM Weight	PTFE/EPDM Weight
(mm)	(mm)	(bar)	Code	Code
32	25	10	161 714 514	161 714 534
63	50	6	161 714 517	161 714 537



kv-value ( $\Delta p=1$ bar) (l/min)	D	D1	L	L1	L2	L3	L4	L5	L6	L7	L8	L9	H
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
442	109	58	166	180	25	122	33	97	83	16	49	190	286
1575	168	101	265	180	45	122	33	97	83	16	49		341

H1	H2	H3	H4	H5	z	M
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
30	20	256	121	165	122	M6
53	29	289	176	165	190	M8



**e-DIASTAR Type 514 PVC-U 100-230V**  
**With solvent cement sockets ASTM**

**Model:**

- Voltage 100-230V, 50-60Hz
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

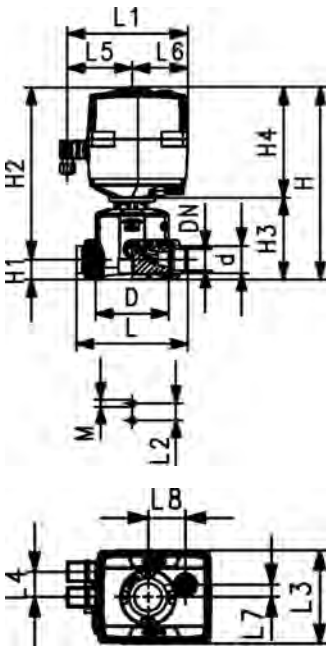
**Option:**

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d	DN	PN	EPDM	Weight	PTFE/EPDM	Weight
(mm)	(mm)	(bar)	Code	(kg)	Code	(kg)
32	25	10	161 714 614	3.734	161 714 634	3.754
63	50	6	161 714 617	6.601	161 714 637	6.629

kv-value	D	D1	L	L1	L2	L3	L4	L5	L6	L7	L8	L9	H
( $\Delta p=1$ bar)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
(l/min)													
442	109	58	166	180	25	122	33	97	83	16	49	190	286
1575	168	101	265	180	45	122	33	97	83	16	49		341

H1	H2	H3	H4	H5	z	M
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
30	20	256	121	165	122	M6
53	29	289	176	165	190	M8





**e-DIASTAR Type 514 PVC-U 100-230V**  
**With solvent cement sockets JIS**

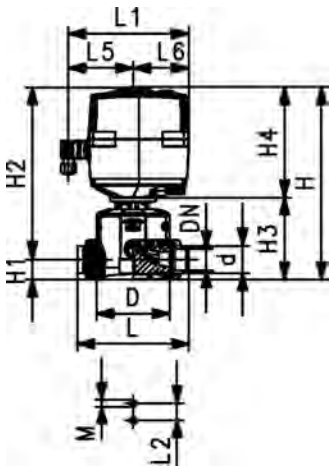
**Model:**

- Voltage 100-230V, 50-60Hz
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- Integrated manual emergency override
- Integrated stainless steel mounting inserts

**Option:**

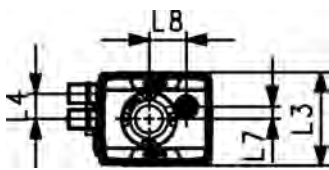
- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d	DN	PN	EPDM Weight	PTFE/EPDM Weight
(mm)	(mm)	(bar)	Code	Code
32	25	10	161 714 814	161 714 834
63	50	6	161 714 817	161 714 837



kv-value	D	D1	L	L1	L2	L3	L4	L5	L6	L7	L8	L9	H
( $\Delta p=1$ bar)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
442	109	58	166	180	25	122	33	97	83	16	49	190	286
1575	168	101	266	180	45	122	33	97	83	16	49		341

H1	H2	H3	H4	H5	z	M
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
30	20	256	121	165	122	M6
53	29	289	176	165	190	M8





## Electric actuator MT's type EAMT

### Model:

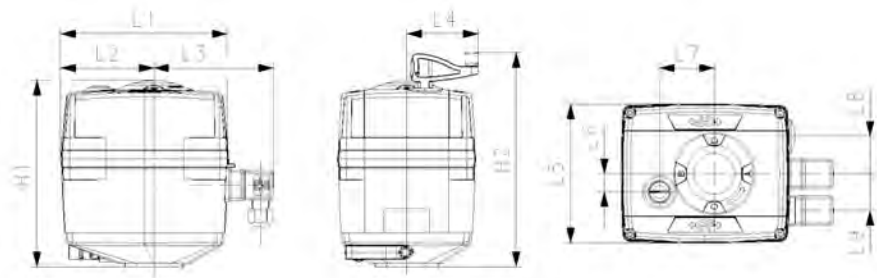
- Multiturn Actuator
- Heating element, position feedback (Open/Close)
- All: Adjustable heater and 7-segment error LED included
- Control open/close; position feedback open/close
- Contains: Retrofit kit with actuator, half shells and screws

### Option:

- All: Fail-safe return unit; monitoring board, positioner, profibus DP board

Type of actuator	Voltage	Torque nominal	Torque maximal	Interfaces	description	Code
EAMT	24V	10 Nm	25 Nm	F05* (WS 11/14)	EA MT DN25	<b>198 153 211</b>
EAMT	24V	20 Nm	45 Nm	F05* (WS 11/14)	EA MT DN50	<b>198 153 213</b>
EAMT	100-230V	10 Nm	25 Nm	F05* (WS 11/14)	EA MT DN25	<b>198 153 210</b>
EAMT	110-230V	20 Nm	45 Nm	F05* (WS 11/14)	EA MT DN50	<b>198 153 212</b>

H1	H2	L1	L2	L3	L4	L5	L6	L7	L8	L9
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
167	188	150	82.5	107	64.3	122	16	49	33	33
167	188	150	82.5	107	64.3	122	16	49	33	33
167	188	150	82.5	107	64.3	122	16	49	33	33
167	188	150	82.5	107	64.3	122	16	49	33	33





### Accessory for electric actuators type 15/25/45/120/250

**Model:**

- All accessory can be retrofitted to installed actuators of the same generation
- Accessory works with 100-230V and 24V version

Material	Description	EA25-250 Code	EA15 Code	EA15-250 Code
Fail-safe return unit integrated	Moves actuator in pre-defined safe position upon power loss, integrated battery pack	199 190 601	199 190 610	
Fail-safe return unit external	Moves actuator in pre-defined safe position upon power loss, voltage supply implemented externally	199 190 604	199 190 611	
Positioner	Continuous actuator control. 4-20mA or 0-10 V Input and 4-20 mA Feedback	199 190 603		
Monitoring	Parameter monitoring. Generates alarm upon reaching its set limitations. Prevents water hammers or indicates maintenance need for valve	199 190 602		
Profibus DP	Enables the actuator to be connected to a Profibus DP-V0 network	199 190 605		
Diagnostic Tool	Enables to read from the actuator main board and check configurations			199 190 600
EA Demobox	Demo Box for electric actuators type EA15/25/45/120/250 as well as for types EA11/21/31/42 Suitable for 24V & 100-230V Control Open/ Close/ Middle; Display for feedback end positions and ready to operate			199 190 607
Modbus RTU via RS485	Modbus RTU Interface Module for EA 25 - 250 to integrate GF actuators into Modbus systems which are based on RS-485.	199 190 617		



### Electric actuator type EA04

Type of actuator	Voltage	Code	SP	Weight (kg)
10Nm	100-230V	198 151 480	1	0.900
10Nm	24V	198 151 481	1	0.900
20Nm	24-240V	198 151 492	1	1.500
20Nm	24-240V	198 151 492	1	1.500



## Electric actuator smart type dEA25/45/120/250

### Model:

- Connectivity via NFC and Wi-Fi Direct ensuring control, identification and visibility without opening the case
- Most relevant asset data visualized in the app
- Connection and control via app possible
- LED stripe for visual open/close 360° feedback
- Heating element, position feedback (Open/Close/ Middle)
- All: Adjustable heater and 7-segment error LED included
- EA25 - 250: control open/close/middle; position feedback open/close/middle ready to operate

### Option:

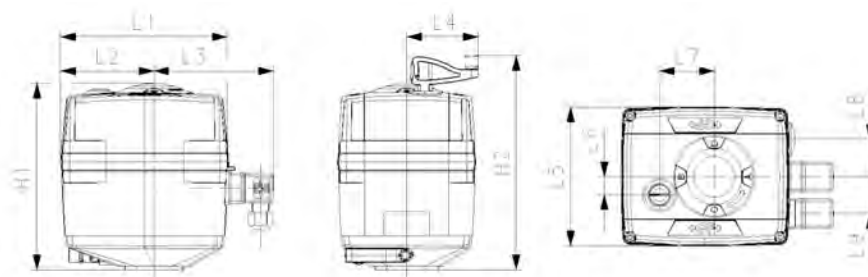
- All: fail-safe return unit

\*with adapter 198 000 587 F05 / WS 11, 198 204 057 F05 / WS 14

**Accessories:** Accessory for electric actuators type 15/25/45/120/250

Type of actuator	Voltage	Torque nominal	Torque maximal	Interfaces	Code
dEA25	100 -230V AC	10 Nm	25 Nm	F05* (WS 11/14)	<b>198 153 192</b>
dEA25	24V AC/DC	10 Nm	25 Nm	F05* (WS 11/14)	<b>198 153 193</b>
dEA45	100 -230V AC	20 Nm	45 Nm	F05* (WS 11/14)	<b>198 153 194</b>
dEA45	24V AC/DC	20 Nm	45 Nm	F05* (WS 11/14)	<b>198 153 195</b>
dEA120	100 -230V AC	60 Nm	120 Nm	F07 (WS17)	<b>198 153 196</b>
dEA120	24V AC/DC	60 Nm	120 Nm	F07 (WS17)	<b>198 153 197</b>
dEA250	100 -230V AC	100 Nm	250 Nm	F07 (WS17)	<b>198 153 198</b>
dEA250	24V AC/DC	100 Nm	250 Nm	F07 (WS17)	<b>198 153 199</b>

Type of actuator	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)
dEA25	167	188	150	82.5	107	64.3	122	16	49	33	33
dEA25	167	188	150	82.5	107	64.3	122	16	49	33	33
dEA45	167	188	150	82.5	107	64.3	122	16	49	33	33
dEA45	167	188	150	82.5	107	64.3	122	16	49	33	33
dEA120	190	212	150	82.5	107	64.3	122	16	49	33	33
dEA120	190	212	150	82.5	107	64.3	122	16	49	33	33
dEA250	200	221	150	82.5	107	64.3	122	16	49	33	33
dEA250	200	221	150	82.5	107	64.3	122	16	49	33	33



# Product Configurator

Create your own actuator

## Electric Actuator

- T01 EA 1124V with Cable Plug
- T02 EA 11 100-230V with Cable Plug
- T07 EA 25 24V with Cable Plug
- T08 EA 25 100-230V with Cable Plug
- T09 EA 120 24V with Cable Plug
- T10 EA 120 100-230V with Cable Plug
- T11 EA 250 24V with Cable Plug
- T12 EA 250 100-230V with Cable Plug



## Angle (Open/ Close)

- W45 45°
- W90 90°
- W180 180°

## Middle Position

- W17 No
- W18 Yes

## Colour Assignment Feedback

- W20 Open = rot
- W21 Open = grün

## Position Feedback

- W23 Open/ Close
- W24 Open/ Close/ Middle
- W25 Middle

## Wiring Feedback

- W26 NC
- W28 NO

## Heating Threshold

- W29 5°
- ... [5°steps]
- W37 45°

## Failsafe Return unit

- W39 Integrated (Battery powered)
- W40 External (no Battery - 24V needed)

## Accessory

- W42 Positioner
- W43 Monitoring
- W44 Profibus

## Setting Positioner

- W46 BCD = 0
- ...
- W55 BCD = 9

## Setting Motor Current

- W56 BCD = 0
- ...
- W65 BCD = 9

## Setting Cycle Time

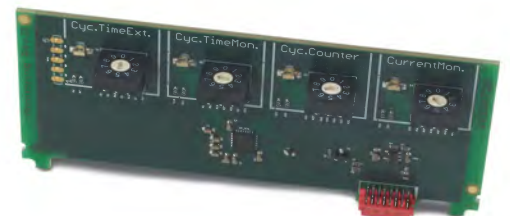
- W66 BCD = 0
- ...
- W75 BCD = 9

## Setting Cycle Time monitoring

- W76 BCD = 0
- ...
- W85 BCD = 9

## Setting Cycle Counter

- W86 BCD = 0
- ...
- W96 BCD = 9



T08 W90 W17 W20 W23 W26 W29 W39 W42 W46 W65 - - - =



# Pneumatic rotary actuators PA

## Type PA11 / PA21



**Pneumatic actuator type PA11/PA21**  
Fail safe to close (FC)

Inch (inch)	Type	DN-DN (mm)	Code	SP	Weight (kg)
3/8 - 1	PA 11 FC	10 - 25	<b>198 150 127</b>	2	0.769
1 1/4 - 2	PA 21 FC	32 - 50	<b>198 150 130</b>	2	1.445



**Pneumatic actuator type PA11/PA21**  
Fail safe to open (FO)

Inch (inch)	Type	DN-DN (mm)	Code	SP	Weight (kg)
3/8 - 1	PA 11 FO	10 - 25	<b>198 150 128</b>	1	0.775
1 1/4 - 2	PA 21 FO	32 - 50	<b>198 150 131</b>	1	1.419



**Pneumatic actuator type PA11/PA21**  
Double action (DA)

Inch (inch)	Type	DN-DN (mm)	Code	SP	Weight (kg)
3/8 - 1	PA 11 DA	10 - 25	<b>198 150 129</b>	1	0.542
1 1/4 - 2	PA 21 DA	32 - 50	<b>198 150 132</b>	1	0.995



**Pneumatic actuator type PA11/PA21**  
Fail safe to close (FC) with stroke limiter

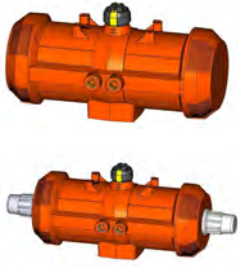
Inch (inch)	Type	DN-DN (mm)	Code	SP	Weight (kg)
3/8 - 1	PA 11 FC	10 - 25	<b>198 150 144</b>	1	0.854
1 1/4 - 2	PA 21 FC	32 - 50	<b>198 150 147</b>	1	1.609



**Pneumatic actuator type PA11/PA21**  
Fail safe to open (FO) with stroke limiter

Inch (inch)	Type	DN-DN (mm)	Code	SP	Weight (kg)
3/8 - 1	PA 11 FO	10 - 25	<b>198 150 145</b>	1	0.837
1 1/4 - 2	PA 21 FO	32 - 50	<b>198 150 148</b>	1	1.609





**Pneumatic actuator type PA11/PA21  
Double action (DA) with stroke limiter**

Type	Inch (inch)	DN-DN (mm)	Code	SP	Weight (kg)
PA 11 DA	3/8 - 1	10 - 25	<b>198 150 146</b>	1	0.647
PA 21 DA	1 1/4 - 2	32 - 50	<b>198 150 149</b>	1	1.185

**Type PA30 / PA90**



**Pneumatic actuator type PA30 - PA90  
Fail safe to close/fail safe to open (FC/FO)**

\* Only valid for butterfly valve type 240, 241, 242 and ball valve type 230 - 235

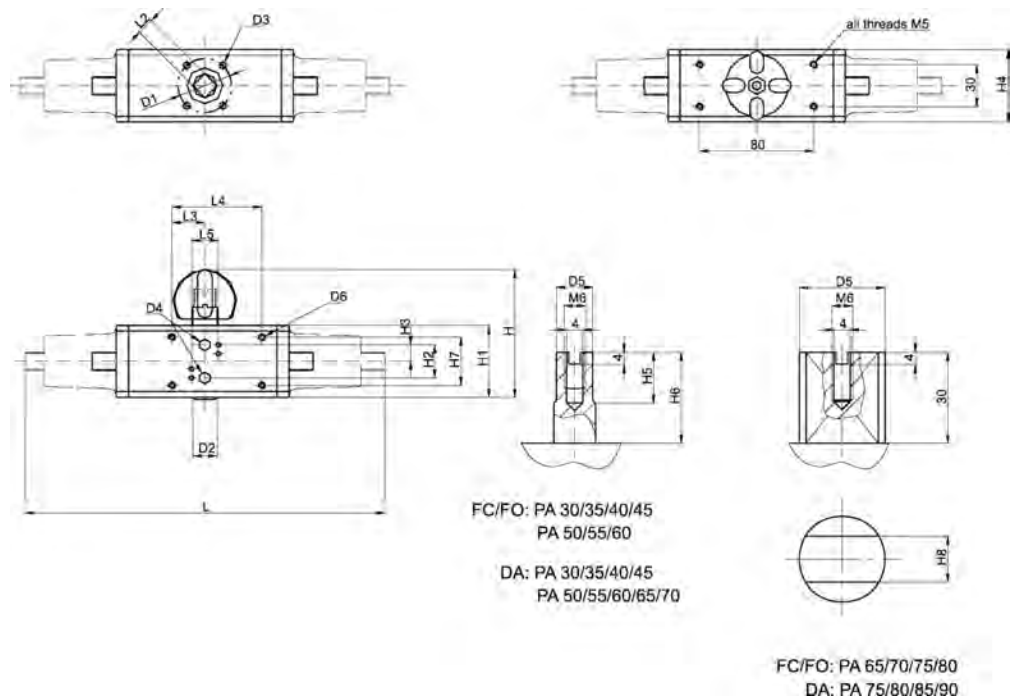
Type	hard anodized Code	SP	Weight (kg)	nickel plated Code	SP	Weight (kg)
PA 30 FC/FO	<b>198 800 757</b>	1	2.022	<b>198 800 034</b>	0	2.400
* PA 30 FO	<b>198 811 025</b>	1	2.020			
PA 35 FC/FO	<b>198 800 037</b>	1	2.673	<b>198 800 052</b>	0	2.400
* PA 35 FO	<b>198 811 026</b>	1	2.675			
PA 40 FC/FO	<b>198 800 728</b>	1	3.602	<b>198 800 004</b>	1	3.598
* PA 40 FO	<b>198 811 027</b>	1	3.623			
PA 45 FC/FO	<b>198 800 039</b>	1	4.962	<b>198 800 054</b>	0	4.600
* PA45 FO	<b>198 811 028</b>	1	4.944			
PA 50 FC/FO	<b>198 800 729</b>	1	6.921	<b>198 800 005</b>	1	6.921
* PA50 FO	<b>198 811 029</b>	1	6.819			
PA 55 FC/FO	<b>198 800 041</b>	1	9.354	<b>198 800 056</b>	0	9.400
* PA 55 FO	<b>198 811 030</b>	0	9.203			
PA 60 FC/FO	<b>198 800 730</b>	1	11.371	<b>198 800 006</b>	0	12.895
PA 65 FC/FO	<b>198 800 043</b>	1	15.900	<b>198 800 058</b>	0	15.900
PA 70 FC/FO	<b>198 800 731</b>	1	18.758	<b>198 800 007</b>	0	19.496
* PA 70 FO	<b>198 811 198</b>	1	18.750			

Type	hard anodized with stroke limiter Code	Weight (kg)	epoxy coated Code	SP	Weight (kg)
PA 30 FC/FO			<b>198 811 194</b>	0	2.400
* PA 30 FO					
PA 35 FC/FO			<b>198 800 029</b>	1	2.400
* PA 35 FO					
PA 40 FC/FO	<b>198 800 017</b>	3.598	<b>198 800 025</b>	1	3.598
* PA 40 FO					
PA 45 FC/FO					
* PA45 FO					
PA 50 FC/FO	<b>198 800 018</b>	6.921	<b>198 800 026</b>	1	6.921
* PA50 FO					
PA 55 FC/FO			<b>198 811 190</b>	1	9.424
* PA 55 FO					
PA 60 FC/FO	<b>198 800 019</b>	12.895			
PA 65 FC/FO					
PA 70 FC/FO	<b>198 800 020</b>	19.496	<b>198 800 028</b>	1	19.496
* PA 70 FO					

table continued on the next page

Type	D1 (mm)	D2 (mm)	D3[M] (mm)	D4 (inch)	D5 (mm)	L (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	H (mm)	
PA 30 FC/FO	F04	42	30	M5x9	10	272	11	35	70	32	102	
* PA 30 FO	F04	42	30	M5x9	1/8	10	272	11	35	70	32	102
PA 35 FC/FO	F05	50	35	M6x11	12	336	14	35	70	32	111	
* PA 35 FO	F05	50	35	M6x11	1/8	12	336	14	35	70	32	111
PA 40 FC/FO	F05	50	35	M6x11	12	364	14	35	70	32	129	
* PA 40 FO	F05	50	35	M6x11	1/8	12	364	14	35	70	32	129
PA 45 FC/FO	F07	70	55	M8x15	1/8	15	403	17	35	70	32	139
* PA45 FO	F07	70	55	M8x15	1/8	15	403	17	35	70	32	139
PA 50 FC/FO	F07	70	55	M8x15	15	418	17	35	70	32	149	
* PA50 FO	F07	70	55	M8x15	1/8	15	418	17	35	70	32	149
PA 55 FC/FO	F10	102	70	M10x17	19	478	22	35	70	32	161	
* PA 55 FO	F10	102	70	M10x17	1/8	19	478	22	35	70	32	161
PA 60 FC/FO	F10	102	70	M10x17	1/8	19	497	22	35	70	32	173
PA 65 FC/FO	F12	125	85	M12x21	1/4	617	27			32	191	
PA 70 FC/FO	F12	125	85	M12x21		652	27			32	196	
* PA 70 FO	F12	125	85	M12x21	1/4	652	27			32	196	

Type	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	H7 (mm)	H8 (mm)
PA 30 FC/FO	70	21	18	65	13	20	36	
* PA 30 FO	70	21	18	65	13	20	36	
PA 35 FC/FO	78	21	18	72	13	20	36	
* PA 35 FO	78	21	18	72	13	20	36	
PA 40 FC/FO	86	25	21	80	13	30	36	
* PA 40 FO	86	25	21	80	13	30	36	
PA 45 FC/FO	96	25	21	90	16	30	36	
* PA45 FO	96	25	21	90	16	30	36	
PA 50 FC/FO	106	25	26	100	17	30	36	
* PA50 FO	106	25	26	100	17	30	36	
PA 55 FC/FO	118	25	25	112	19	30	36	
* PA 55 FO	118	25	25	112	19	30	36	
PA 60 FC/FO	130	25	32	124	19	30	36	
PA 65 FC/FO	148	24	34	137				22
PA 70 FC/FO	153	24	38	145				24
* PA 70 FO	153	24	38	145				24





**Pneumatic actuator type PA30 - PA90**  
**Double acting (DA)**

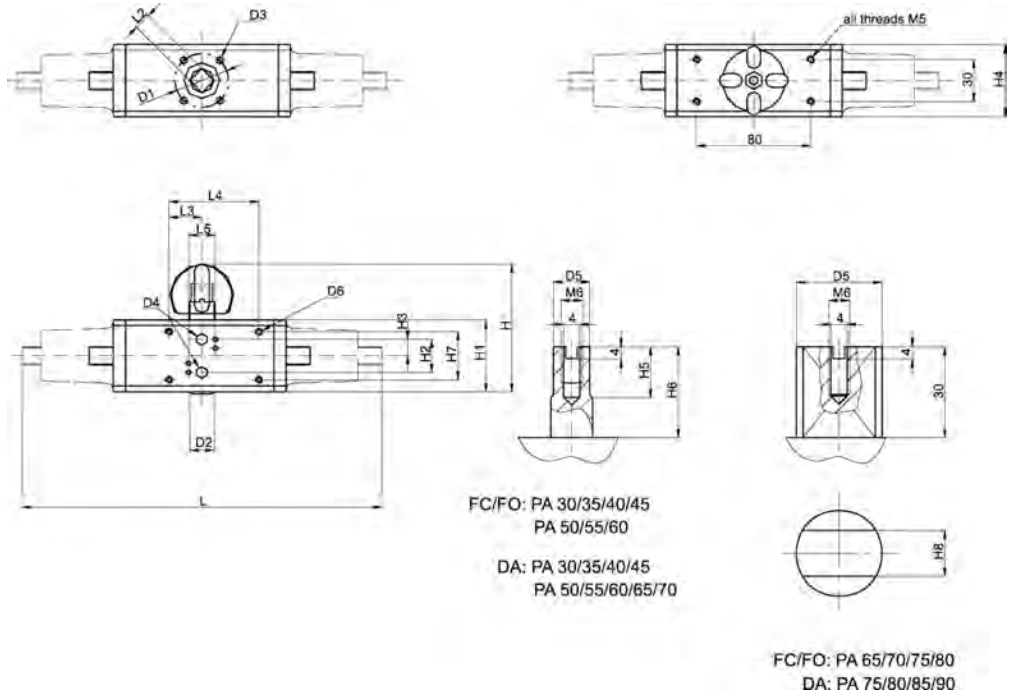
Type	hard anodized Code	SP	Weight (kg)
PA 30 DA	<b>198 800 737</b>	1	1.004
PA 35 DA	<b>198 800 758</b>	1	1.346
PA 40 DA	<b>198 800 759</b>	1	1.731
PA 45 DA	<b>198 800 040</b>	1	2.155
PA 50 DA	<b>198 800 733</b>	0	2.981
PA 55 DA	<b>198 800 042</b>	1	3.892
PA 60 DA	<b>198 800 734</b>	1	5.647
PA 65 DA	<b>198 800 044</b>	1	7.293
PA 70 DA	<b>198 800 735</b>	1	9.008
PA 75 DA	<b>198 800 046</b>	0	12.000
PA 80 DA	<b>198 800 048</b>	0	14.000
PA 85 DA	<b>198 800 050</b>	0	21.527
PA 90 DA	<b>198 800 051</b>	0	25.400

H7	D5	H6	L4	L3	H5	D3[M]		D1	D2	D4	L1	L2	L5	H	H1
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)
36	9	20	70	35	10	M5x9	F03	36	25	1/8	169	9		92	60
36	10	20	70	35	13	M5x9	F03	42	30	1/8	183	11		98	66
36	10	20	70	35	13	M5x9	F05	42	30	1/8	190	11		102	70
36	12	20	70	35	13	M6x11	F05	50	35	1/8	225	14		111	78
36	12	30	70	35	13	M6x11	F05	50	35	1/8	240	14		129	86
36	15	30	70	35	16	M8x15	F07	70	55	1/8	269	17		139	96
36	15	30	70	35	17	M8x15	F07	70	55	1/8	314	17		149	106
36	19	30	70	35	19	M10x17	F10	102	70	1/8	336	22		161	118
36	19	30	70	35	19	M10x17	F10	102	70	1/8	365	22		173	130
						M12x21	F12	125	85	1/8	402	27	32	191	148
						M12x21	F12	125	85	1/8	445	27	32	197	153
						M16x25	F14	140	100	1/8	529	36	32	229	186
						M16x25	F14	140	100	1/8	581	36	32	241	198

H2	H3	H4	H8
(mm)	(mm)	(mm)	(mm)
25	12	55	
25	13	60	
21	18	65	
21	18	72	
25	21	80	
25	21	90	
25	26	100	
25	25	112	
25	32	124	

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H2	H3	H4	H8
(mm)	(mm)	(mm)	(mm)
24	34	137	22
24	38	145	24
24	43	166	27
24	44	180	32



# Solvent cements and tools

## Tangit Rapid solvent free adhesive for PVC-U



### Tangit Rapid cartridges kit

- 2-Component-Adhesive
- For PVC-U and PVC-C
- Tangit Rapid Kit consists of 6 cartridges, 12 mixers and 2 plastic brushes
- Tool needed: Tangit Rapid dispenser and mixers
- Check chemical resistance list ([www.gfps.com](http://www.gfps.com))

Language	description	Code	Weight (kg)
DE, FR	50 ml	<b>799 302 005</b>	0.566
FR, NL	50 ml	<b>799 302 041</b>	0.566
DK, SE	50 ml	<b>799 302 042</b>	0.566
GB, IT	50 ml	<b>799 302 043</b>	0.566
FI, NO	50 ml	<b>799 302 044</b>	0.566
DE, ES, FR, GB, IT, NL, PT	400 ml	<b>799 302 007</b>	3.700
DK, FI, NO, SE	400 ml	<b>799 302 047</b>	3.700



### Tangit Rapid dispenser

- For Tangit Rapid cartridges

d-d (mm)	Code	SP	Weight (kg)	description
16 - 140	<b>799 302 011</b>	1	0.175	50ml
110 - 400	<b>799 302 013</b>	1	1.100	400ml



### Tangit Rapid plastic brush

Dimension	Code	SP	Weight (kg)
3/8"	<b>799 302 021</b>	100	0.006
1"	<b>799 302 022</b>	100	0.008
2"	<b>799 302 023</b>	100	0.010



### Tangit Rapid mixer set

- For Tangit Rapid cartridges
- Bag with 30 pieces for 50ml and 15 pieces for 400ml

description	Code	SP	Weight (kg)
50ml	<b>799 302 032</b>	1	0.160
400ml	<b>799 302 033</b>	1	0.190



### Tangit Ruler with marking for insertion depth

d-d (mm)	Code	SP	Weight (kg)
16 - 400	<b>799 302 036</b>	50	0.044

## Solvent cementing accessories



### Round brush

d-d (mm)		Code	SP	Weight (kg)	Closest inch (inch)
6 - 10	4 mm (for Fittings 6-10mm)	<b>799 299 001</b>	12	0.004	1/8
12 - 32	8 mm (for Fittings 12-32mm)	<b>799 299 002</b>	12	0.006	1/4 - 1



### Flat brush

d-d (mm)		Code	SP	Weight (kg)	Closest inch (inch)
40 - 63	25x3 mm (for Fittings 40-63mm)	<b>799 299 003</b>	12	0.015	1 1/4 - 2
75 - 225	50x5 mm (for Fittings 75-225mm)	<b>799 299 004</b>	12	0.035	2 1/2 - 8
250 - 400	75x6 mm (for Fittings 250-400mm)	<b>799 299 005</b>	12	0.053	9 - 16



### Tangit DTX special solvent cement

- Special solvent cement for critical media (see online tool 'chemical resistance')
- For PVC-U, PVC-C
- Max. PN10/d140
- Use cleaner for PVC-U/C, ABS
- Tin à 0.500 kg

Language	Code	SP	Weight (kg)
DE, FR, GB, NL	<b>799 298 031</b>	6	0.586
DK, FI, NO, SE	<b>200 119 366</b>	0	0.500
NL	<b>200 155 054</b>	0	0.586

## PPC Plastic pipe cutter



### PPC Plastic pipe cutter

For cutting plastic pipes d10 - d160

d-d (mm)	Article	Code	SP	Weight (kg)	Closest inch (inch)
10 - 63	PPC 63, s max. = 7.2mm	<b>790 109 001</b>	1	0.865	1/8 - 2
50 - 110	PPC 110, s max. = 12.7mm	<b>790 109 002</b>	1	1.624	1 1/2 - 4
110 - 160	PPC 160, s max. = 19.0mm	<b>790 109 003</b>	1	2.212	4 - 6

## PPC Wearing parts



### Replacement cutting wheels

For plastic pipe cutter

d-d (mm)	Article	Code	SP	Weight (kg)
10 - 63	SR 63 max. s=7,2 mm	<b>790 109 011</b>	1	0.004
50 - 110	SR 110/160 max. s=12,7 mm	<b>790 109 012</b>	1	0.015
110 - 160	SR 160 max. s=19,0 mm	<b>790 109 013</b>	1	0.023



### Alignment Tool

- To align and position pipes in the dimension range d 110 - 400 mm. The pipes are clamped in the vice, the axial movement takes place by a chain drive. The chain is totated by the ratched (square 19 mm).

Article	Code	Weight (kg)
Alignment Tool	<b>790 109 108</b>	15.000
Ratch	<b>790 109 107</b>	1.220



### Chamfering tool

d-d (mm)	Size (mm)	Code	SP	Weight (kg)	Closest inch (inch)
16 - 75	1	<b>799 495 145</b>	0	0.720	$\frac{3}{8}$ - 2 $\frac{1}{2}$
32 - 200	2	<b>799 495 146</b>	0	0.992	1 - 8



### Spare cutting wheel

- for plastic pipe cutter

d-d (mm)	Article	Code	SP	Weight (kg)
10 - 63	SR 63 max. s=7,2 mm	<b>790 109 011</b>	1	0.004
50 - 110	SR 110/160 max. s=12,7 mm	<b>790 109 012</b>	1	0.015
110 - 160	SR 160 max. s=19,0 mm	<b>790 109 013</b>	1	0.023



### Timer with 2 stop times

Code	SP	Weight (kg)
<b>790 114 028</b>	1	0.088



## Marker



Type	Code	Weight (kg)
silver	<b>799 350 364</b>	0.010

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## Spare parts



Spare parts ball valves

580



Spare parts diaphragm valves

587



Spare parts butterfly valves

595



Spare parts Process control valves

598



Spare parts cone check valves

604



Spare parts wafer check valves

607



Spare parts angle seat valves

609



Spare parts solenoid valves

615



Spare parts variable area flow meters

619

# Spare parts ball valves

## Spare parts ball valve type 546



### Central part

#### Model:

- Every connecting pieces and union nuts are listed on product range industry valves
- Ball seals standard in PTFE
- Central part consisting of: body (1), union bush (2), ball (5), stem (6), ball-, backing-, body-, face- and stem seal (7-11), standard lever (12) and threaded inserts stainless steel (14)

d (mm)	Size (inch)	DN (mm)	PVC-U EPDM Code	PVC-U FKM Code
16	3/8	10	161 486 151	161 486 163
20	1/2	15	161 486 151	161 486 163
25	3/4	20	161 486 152	161 486 164
32	1	25	161 486 153	161 486 165
40	1 1/4	32	161 486 154	161 486 166
50	1 1/2	40	161 486 155	161 486 167
63	2	50	161 486 156	161 486 168
75	2 1/2	65	161 486 157	161 486 169
90	3	80	161 486 158	161 486 170
110	4	100	161 486 159	161 486 171



DN10/15 - 50



DN10/15 - 50



### Lever 546

d (mm)	Size (inch)	DN (mm)	Standard lever red Code	Standard lever black Code	Multifunctional lever Code
16	¾	10	167 484 088	167 484 076	167 484 100
20	½	15	167 484 088	167 484 076	167 484 100
25	¾	20	167 484 089	167 484 077	167 484 101
32	1	25	167 484 090	167 484 078	167 484 102
40	1 ¼	32	167 484 091	167 484 079	167 484 103
50	1 ½	40	167 484 092	167 484 080	167 484 104
63	2	50	167 484 093	167 484 081	167 484 105
75	2 ½	65	167 484 094	167 484 082	161 486 689
90	3	80	167 484 095	167 484 083	161 486 690
110	4	100	167 484 096	167 484 084	161 486 691



### Face seal

#### Model:

- Face seal no. 10

d (mm)	Size (inch)	DN (mm)	EPDM Code	FKM Code
16	¾	10	748 410 059	749 410 059
20	½	15	748 410 059	749 410 059
25	¾	20	748 410 106	749 410 106
32	1	25	748 410 151	749 410 151
40	1 ¼	32	748 410 062	749 410 062
50	1 ½	40	748 410 003	749 410 003
63	2	50	748 410 231	749 410 231
75	2 ½	65	748 410 119	749 410 119
90	3	80	748 410 023	749 410 023
110	4	100	748 410 254	749 410 254



### Seal set for ball valve 546 (Pro)

#### Model:

- Seal set consisting of: backing-, body-, face- and stem seal (8-11)

d (mm)	Size (inch)	DN (mm)	DN (mm)	EPDM Code	FKM Code	KALREZ Code
16 - 20	½	15	10 - 15	161 486 400	161 486 410	161 488 280
25	¾	20	20	161 486 401	161 486 411	161 488 281
32	1	25	25	161 486 402	161 486 412	161 488 282
40	1 ¼	32	32	161 486 403	161 486 413	161 488 283
50	1 ½	40	40	161 486 404	161 486 414	161 488 284
63	2	50	50	161 486 405	161 486 415	161 488 285
75	2 ½	65	65	161 486 406	161 486 416	
90	3	80	80	161 486 407	161 486 417	
110	4	100	100	161 486 408	161 486 418	



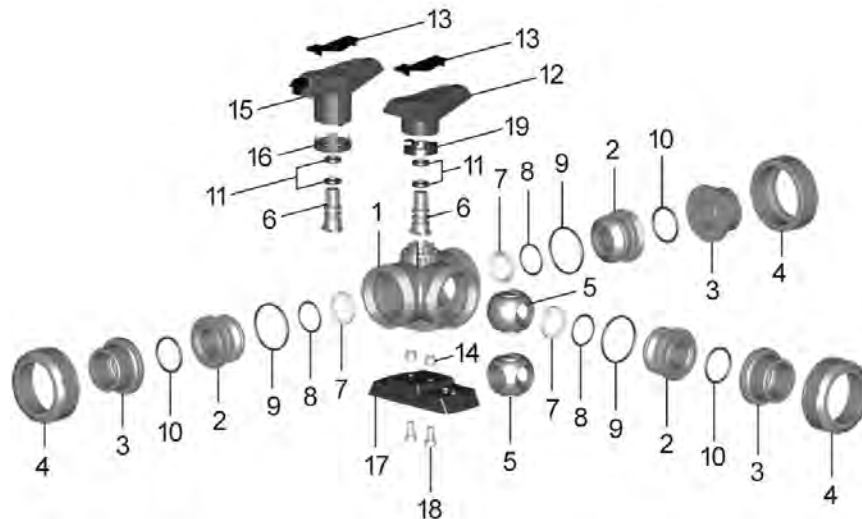
### Ball set

#### Model:

- Ball seals standard in PTFE
- Ball set consisting of: ball (5), stem (6), ball-, backing-, body- and stem seal (7-9,11)

d (mm)	Size (inch)	DN (mm)	PVC-U EPDM Code	PVC-U FKM Code
16	3/8	10	161 486 375	161 486 385
20	1/2	15	161 486 375	161 486 385
25	3/4	20	161 486 376	161 486 386
32	1	25	161 486 377	161 486 387
40	1 1/4	32	161 486 378	161 486 388
50	1 1/2	40	161 486 379	161 486 389
63	2	50	161 486 380	161 486 390
75	2 1/2	65	161 486 381	161 486 391
90	3	80	161 486 382	161 486 392
110	4	100	161 486 383	161 486 393

## Spare parts ball valve type 543 horizontal



### Central part L-port

#### Model:

- Ball seals standard in PTFE
- Central part consisting of: body (1), union bush (2), ball (5), stem (6), ball-, backing-, body-, face- and stem seal (7-11), standard lever (12) and threaded inserts stainless steel (14)
- Every connecting pieces and union nuts are listed on product range industry valves



d (mm)	Size (inch)	DN (mm)	PVC-U EPDM Code	PVC-U FKM Code
16	3/8	10	161 488 002	161 488 012
20	1/2	15	161 488 002	161 488 012
25	3/4	20	161 488 003	161 488 013
32	1	25	161 488 004	161 488 014
40	1 1/4	32	161 488 005	161 488 015
50	1 1/2	40	161 488 006	161 488 016
63	2	50	161 488 007	161 488 017



### Central part T-port

**Model:**

- Ball seals standard in PTFE
- Central part consisting of: body (1), union bush (2), ball (5), stem (6), ball-, backing-, body-, face- and stem seal (7-11), standard lever (12) and threaded inserts stainless steel (14)

d (mm)	Size (inch)	DN (mm)	PVC-U EPDM Code	PVC-U FKM Code
16	¾	10	161 488 022	161 488 032
20	½	15	161 488 022	161 488 032
25	¾	20	161 488 023	161 488 033
32	1	25	161 488 024	161 488 034
40	1 ¼	32	161 488 025	161 488 035
50	1 ½	40	161 488 026	161 488 036
63	2	50	161 488 027	161 488 037



### Assembly kit

**Model:**

- Intermediate element for ball valve type 543 horizontal and electric or pneumatic actuators EA21; PA11/21
- Including screws and position indicator for actuators

d (mm)	Inch (inch)	DN (mm)	Code
16 - 20	¾ - ½	10 - 15	167 484 941
25 - 32	¾ - 1	20 - 25	167 484 942
40 - 50	1 ¼ - 1 ½	32 - 40	167 484 943
63	2	50	167 484 944



### Turn limiter 90°

d (mm)	Size (inch)	DN (mm)	Code
16	¾	10	167 482 479
20	½	15	167 482 479
25	¾	20	167 482 480
32	1	25	167 482 480
40	1 ¼	32	167 482 481
50	1 ½	40	167 482 481
63	2	50	167 482 482



### Face seal

**Model:**

- Face seal no. 10

d (mm)	Size (inch)	DN (mm)	EPDM Code	FKM Code
16	¾	10	748 410 059	749 410 059
20	½	15	748 410 059	749 410 059
25	¾	20	748 410 106	749 410 106
32	1	25	748 410 151	749 410 151
40	1 ¼	32	748 410 062	749 410 062
50	1 ½	40	748 410 003	749 410 003

table continued on the next page

d (mm)	Size (inch)	DN (mm)	EPDM Code	FKM Code
63	2	50	748 410 231	749 410 231
75	2 ½	65	748 410 119	749 410 119
90	3	80	748 410 023	749 410 023
110	4	100	748 410 254	749 410 254



### Lever

d (mm)	Size (inch)	DN (mm)
16	¾	10
20	½	15
25	¾	20
32	1	25
40	1 ¼	32
50	1 ½	40
63	2	50

d (mm)	Standard lever L-port red Code	Standard lever L-port black Code	Standard lever T-port red Code	Standard lever T-port black Code	Multifunctional-lever L-port red Code
16	167 484 488	167 484 376	167 484 588	167 484 576	167 484 442
20	167 484 488	167 484 376	167 484 588	167 484 576	167 484 442
25	167 484 489	167 484 377	167 484 589	167 484 577	167 484 443
32	167 484 490	167 484 378	167 484 590	167 484 578	167 484 444
40	167 484 491	167 484 379	167 484 591	167 484 579	167 484 445
50	167 484 492	167 484 380	167 484 592	167 484 580	167 484 446
63	167 484 493	167 484 381	167 484 593	167 484 581	167 484 447

d (mm)	Multifunctional-lever T-port red Code
16	167 484 542
20	167 484 542
25	167 484 543
32	167 484 544
40	167 484 545
50	167 484 546
63	167 484 547



### Ball set L-port

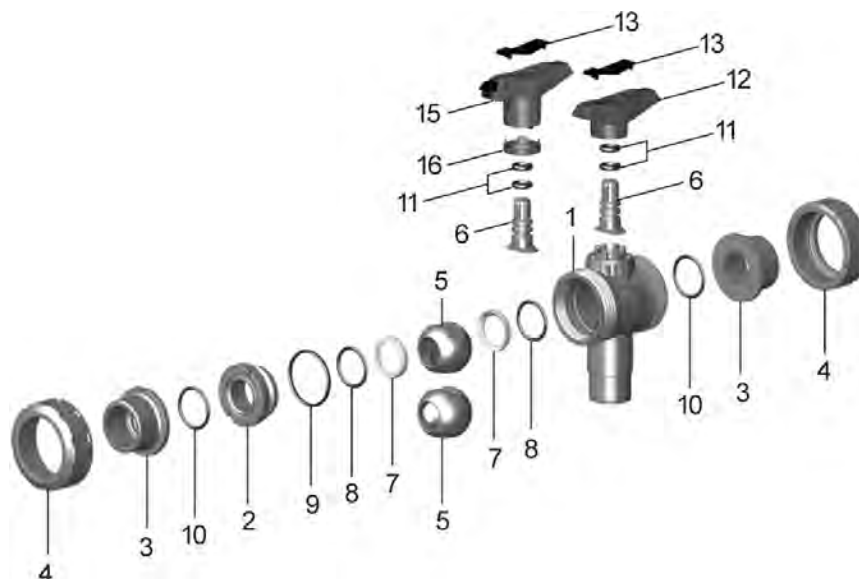
#### Model:

- Ball set consisting of: lever (12), ball (5), stem (6), ball-, backing-, body- and stem seal (7-9,11)
- Ball seals standard in PTFE

d (mm)	Size (inch)	DN (mm)	PVC-U EPDM Code	PVC-U FKM Code
16	¾	10	161 488 162	161 488 172
20	½	15	161 488 162	161 488 172
25	¾	20	161 488 163	161 488 173
32	1	25	161 488 164	161 488 174
40	1 ¼	32	161 488 165	161 488 175
50	1 ½	40	161 488 166	161 488 176
63	2	50	161 488 167	161 488 177



## Spare parts ball valve type 543 vertical



### Central part diverter ball

#### Model:

- Ball seals standard in PTFE
- Central part consisting of: body (1), union bush (2), ball (5), stem (6), ball-, backing-, body-, face- and stem seal (7-11) and standard lever (12)

d (mm)	Size (inch)	DN (mm)	PVC-U EPDM Code	PVC-U FKM Code
16	¾	10	161 488 061	161 488 071
20	½	15	161 488 062	161 488 072
25	¾	20	161 488 063	161 488 073
32	1	25	161 488 064	161 488 074
40	1 ¼	32	161 488 065	161 488 075
50	1 ½	40	161 488 066	161 488 076
63	2	50	161 488 067	161 488 077



### Central part L-port

#### Model:

- Every connecting pieces and union nuts are listed on product range industry valves
- Ball seals standard in PTFE
- Central part consisting of: body (1), union bush (2), ball (5), stem (6), ball-, backing-, body-, face- and stem seal (7-11) and standard lever (12)

d (mm)	Size (inch)	DN (mm)	PVC-U EPDM Code	PVC-U FKM Code
16	¾	10	161 488 041	161 488 051
20	¾	15	161 488 042	161 488 052
25	¾	20	161 488 043	161 488 053
32	1	25	161 488 044	161 488 054
40	1 ¼	32	161 488 045	161 488 055
50	1 ½	40	161 488 046	161 488 056
63	2	50	161 488 047	161 488 057



### Assembly kit

#### Model:

- Intermediate element for ball valve type 543 vertical and electric or pneumatic actuators EA21; PA11/21
- Including screws

d (mm)	Inch (inch)	DN (mm)	Code
16 - 20	¾ - ½	10 - 15	<b>167 484 945</b>
25 - 32	¾ - 1	20 - 25	<b>167 484 946</b>
40 - 50	1 ¼ - 1 ½	32 - 40	<b>167 484 947</b>
63	2	50	<b>167 484 948</b>



### Face seal

#### Model:

- Face seal no. 10

d (mm)	Size (inch)	DN (mm)	EPDM Code	FKM Code
16	¾	10	<b>748 410 059</b>	<b>749 410 059</b>
20	½	15	<b>748 410 059</b>	<b>749 410 059</b>
25	¾	20	<b>748 410 106</b>	<b>749 410 106</b>
32	1	25	<b>748 410 151</b>	<b>749 410 151</b>
40	1 ¼	32	<b>748 410 062</b>	<b>749 410 062</b>
50	1 ½	40	<b>748 410 003</b>	<b>749 410 003</b>
63	2	50	<b>748 410 231</b>	<b>749 410 231</b>



### Lever

d (mm)	Size (inch)	DN (mm)	Standard lever L-port red Code	Standard lever diverter ball red Code	Multifunctional-lever L-port red Code	Multifunctional-lever diverter ball red Code
16	¾	10	<b>167 484 688</b>	<b>167 484 788</b>	<b>167 484 642</b>	<b>167 484 742</b>
20	½	15	<b>167 484 688</b>	<b>167 484 788</b>	<b>167 484 642</b>	<b>167 484 742</b>
25	¾	20	<b>167 484 689</b>	<b>167 484 789</b>	<b>167 484 643</b>	<b>167 484 743</b>
32	1	25	<b>167 484 690</b>	<b>167 484 790</b>	<b>167 484 644</b>	<b>167 484 744</b>
40	1 ¼	32	<b>167 484 691</b>	<b>167 484 791</b>	<b>167 484 645</b>	<b>167 484 745</b>
50	1 ½	40	<b>167 484 692</b>	<b>167 484 792</b>	<b>167 484 646</b>	<b>167 484 746</b>
63	2	50	<b>167 484 693</b>	<b>167 484 793</b>	<b>167 484 647</b>	<b>167 484 747</b>

## Spare parts metering ball valve type 523



### Central part

#### Model:

- Every connecting pieces and union nuts are listed on product range industry valves
- Ball seals standard in PTFE
- Central part consisting of: body, union bush, ball, stem, ball-, backing-, body-, face- and stem seal, standard lever and threaded inserts stainless steel

d (mm)	Size (inch)	DN (mm)	PVC-U EPDM Code	PVC-U FKM Code
16	¾	10	<b>161 485 351</b>	<b>161 485 361</b>
20	½	15	<b>161 485 353</b>	<b>161 485 363</b>

# Spare parts diaphragm valves



**Mounting Tool**  
Type 604/605

**Model:**

- Hook wrench for easy opening & maintenance

Code	Weight (kg)
<b>700 278 354</b>	0.41

## Spare parts for valve body type 514



**O-ring**

d (mm)	Size (inch)	DN (mm)	EPDM Code	FKM Code
20	½	15	<b>748 410 006</b>	<b>749 410 006</b>
25	¾	20	<b>748 410 007</b>	<b>749 410 007</b>
32	1	25	<b>748 410 008</b>	<b>749 410 008</b>
40	1 ¼	32	<b>748 410 009</b>	<b>749 410 009</b>
50	1 ½	40	<b>748 410 010</b>	<b>749 410 010</b>
63	2	50	<b>748 410 011</b>	<b>749 410 011</b>



**Union nut**

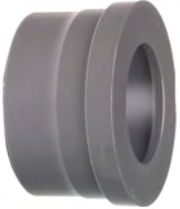
d (mm)	Size (inch)	DN (mm)	PVC-U Code
20	½	15	<b>721 890 006</b>
25	¾	20	<b>721 890 007</b>
32	1	25	<b>721 890 008</b>
40	1 ¼	32	<b>721 890 009</b>
50	1 ½	40	<b>721 890 010</b>
63	2	50	<b>721 890 011</b>



**Valve end with spigot**

	d (mm)	Size (inch)	DN (mm)	PVC-U Code	PVDF Code
*	20	½	15	<b>721 500 406</b>	
*	25	¾	20	<b>721 500 407</b>	
*	32	1	25	<b>721 500 408</b>	
	40	1 ¼	32	<b>721 500 409</b>	
	50	1 ½	40	<b>721 500 410</b>	
	63	2	50	<b>721 500 411</b>	<b>735 608 611</b>

\*



### Union end

d (mm)	Size (inch)	DN (mm)	PVC-U metric Code	PVC-U JIS Code	PVC-U BS Code
20	½	15	721 500 106	721 605 106	721 601 106
25	¾	20	721 500 107	721 605 107	721 601 107
32	1	25	721 500 108	721 605 108	721 601 108
40	1 ¼	32	721 500 109	721 605 109	721 601 109
50	1 ½	40	721 500 110	721 605 110	721 601 110
63	2	50	721 500 111	721 605 111	721 601 111

### Valve body with true union



#### Model:

- Without connection parts

d (mm)	Size (inch)	DN (mm)	PVC-U Code	PVC-C Code	ABS Code
20	½	15	161 492 062		
25	¾	20	161 492 063		169 481 323
32	1	25	161 492 064		
40	1 ¼	32	161 492 065		
50	1 ½	40	161 492 066	163 482 056	169 481 326
63	2	50	161 492 067		169 481 327

## Spare parts for valve body type 515

### Valve body with spigot ends



d (mm)	DN (mm)	Size (inch)	PVC-U solvent cement spigot Code	Weight (kg)
20	15	½	<b>161 492 072</b>	0.115
25	20	¾	<b>161 492 073</b>	0.183
32	25	1	<b>161 492 074</b>	0.246
40	32	1 ¼	<b>161 492 075</b>	0.379
50	40	1 ½	<b>161 492 076</b>	0.602
63	50	2	<b>161 492 077</b>	1.055



### Spare parts for valve body type 517 Flat gasket

d (mm)	Size (inch)	DN (mm)	EPDM Code	FKM Code
20	½	15	<b>748 400 006</b>	<b>749 400 006</b>
25	¾	20	<b>748 400 007</b>	<b>749 400 007</b>
32	1	25	<b>748 400 008</b>	<b>749 400 008</b>
40	1 ¼	32	<b>748 400 009</b>	<b>749 400 009</b>
50	1 ½	40	<b>748 400 010</b>	<b>749 400 010</b>
63	2	50	<b>748 400 011</b>	<b>749 400 011</b>



**Spare parts diaphragm  
For 5 series**

**Model:**

- For type 514, 515, 517, 519 and Diastar

d (mm)	Size (inch)	DN (mm)
20	¾	15
25	⅞	20
32	1	25
40	1 ¼	32
50	1 ½	40
63	2	50

d (mm)	NBR Code	EPDM Code	FKM Code	PTFE/EPDM Code	PTFE/EPDM HP Code	PTFE/FKM Code
20	745 500 012	748 500 012	749 500 012	747 502 012	747 502 032	747 503 012
25	745 500 013	748 500 013	749 500 013	747 502 013	747 502 033	747 503 013
32	745 500 014	748 500 014	749 500 014	747 502 014	747 502 034	747 503 014
40	745 500 015	748 500 015	749 500 015	747 502 015	747 502 035	747 503 015
50	745 500 016	748 500 016	749 500 016	747 502 016	747 502 036	747 503 016
63	745 500 017	748 500 017	749 500 017	747 502 017	747 502 037	747 503 017

## Spare parts for automatic valves Diastar Six/Ten/Sixteen



### Actuators

d (mm)	Size (inch)	DN (mm)	DIASTAR Six FC Code	DIASTAR Ten FC Code
20	½	15	198151762	198151772
25	¾	20	198151763	198151773
32	1	25	198151764	198151774
40	1 ¼	32	198151765	198151775
50	1 ½	40	198151766	198151776
63	2	50	198151767	198151777

d (mm)	Diastar Ten + FC Code	Diastar Sixteen FC Code	Diastar Ten FO Code	Diastar Ten DA Code
20	198 153 062	198 151 782	198 151 792	198 151 802
25	198 153 063	198 151 783	198 151 793	198 151 803
32	198 153 064	198 151 784	198 151 794	198 151 804
40	198 153 065	198 151 785	198 151 795	198 151 805
50	198 153 066	198 151 786	198 151 796	198 151 806
63	198 153 067	198 151 787	198 151 797	198 151 807



### Indicator cap



Size (mm)	Code
1-2	198 806 773
3-5	198 806 774



### Compressor set

**Model:**

- Incl. diaphragm holder

d (mm)	Inch (inch)	DN (mm)	Code
20	1/2	15	<b>198 000 872</b>
25	3/4	20	<b>198 000 873</b>
32	1	25	<b>198 000 874</b>
40	1 1/4	32	<b>198 000 875</b>
50	1 1/2	40	<b>198 000 876</b>
63	2	50	<b>198 000 877</b>



### Seal set for DIASTAR Ten

**Model:**

- Spindle seal and piston seal

DN (mm)	Diastar Ten Code
15	<b>198 000 881</b>
20/25	<b>198 000 882</b>
32	<b>198 000 883</b>
40/50	<b>198 000 884</b>





## Spare parts for hand-operated valves Type 514/515/517/519



### Bonnet complete

#### Model:

- Incl. compressor
- Diaphragm is not included

d (mm)	Size (inch)	DN (mm)	Standard configuration PN10 Code	For pressure tight housing PN10 Code	Standard configuration PN16 Code	For pressure tight housing PN16 Code
20	¾	15	198 151 742	198 151 752	198 151 842	198 151 852
25	1	20	198 151 743	198 151 753	198 151 843	198 151 853
32	1 ¼	25	198 151 744	198 151 754	198 151 844	198 151 854
40	1 ½	32	198 151 745	198 151 755	198 151 845	198 151 855
50	2	40	198 151 746	198 151 756	198 151 846	198 151 856
63	2 ½	50	198 151 747	198 151 757	198 151 847	198 151 857

### Spindle assembly



#### Model:

- Incl. compressor
- Position indicator is not included

DN-DN (mm)	Code
15 - 20	198 204 327
25 - 32	198 204 328
40 - 50	198 204 329



### Position indicator

d (mm)	Size (inch)	DN (mm)	Code
20	½	15	<b>167 484 992</b>
25	¾	20	<b>167 484 993</b>
32	1	25	<b>167 484 994</b>
40	1 ¼	32	<b>167 484 995</b>
50	1 ½	40	<b>167 484 996</b>
63	2	50	<b>167 484 997</b>



### Hand wheel

#### Model:

- Without position indicator

DN (mm)	Code
15 - 20	<b>198 204 162</b>
25 - 32	<b>198 204 164</b>
40 - 50	<b>198 104 166</b>



### Seal set

#### Model:

- For manual valve - pressure tight housing
- Incl. position indicator

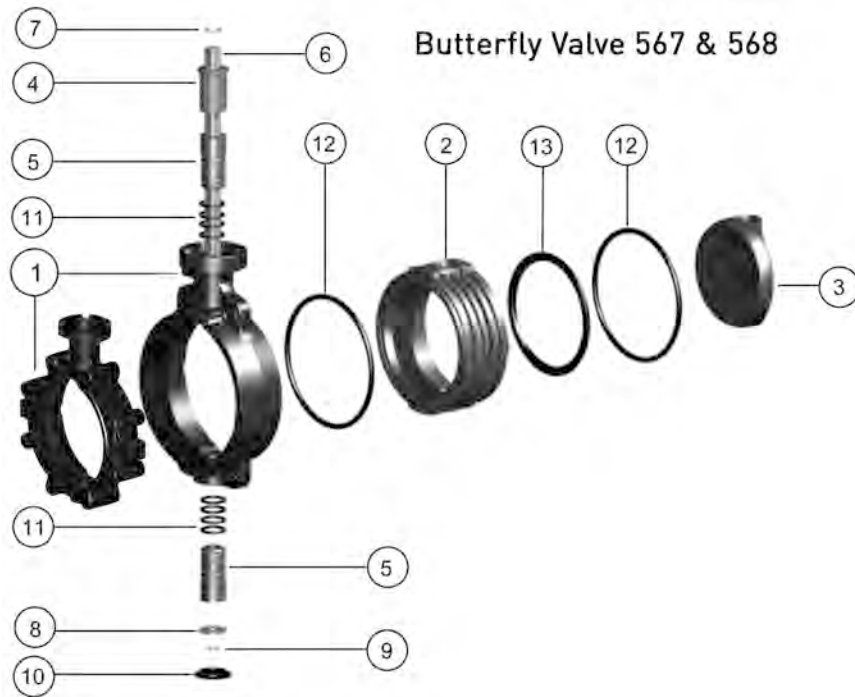
d (mm)	Size (inch)	DN (mm)	EPDM Code
20	½	15	<b>198 000 892</b>
25	¾	20	<b>198 000 893</b>
32	1	25	<b>198 000 894</b>
40	1 ¼	32	<b>198 000 895</b>
50	1 ½	40	<b>198 000 896</b>
63	2	50	<b>198 000 897</b>

### Special wrench for DV

d (mm)	DN (mm)	Code
20	15	<b>198 154 012</b>
25	20	<b>198 154 013</b>
32	25	<b>198 154 014</b>
40	32	<b>198 154 015</b>
50	40	<b>198 154 016</b>
63	50	<b>198 154 017</b>

# Spare parts butterfly valves

## Spare parts butterfly valve type 567/578



### Inner body

#### Model:

- Inner body consisting of: inner body (2) and profile seal (13)



d (mm)	Size (inch)	DN (mm)	PVC-U EPDM Code	PVC-U FKM Code
63	2	50	161 486 861	161 486 873
75	2 ½	65	161 486 862	161 486 874
90	3	80	161 486 863	161 486 875
110	4	100	161 486 864	161 486 876
140	5	125	161 486 865	161 486 877
160	6	150	161 486 866	161 486 878
225	8	200	161 486 867	161 486 879
280	10	250	161 486 868	161 486 880
315	12	300	161 486 869	161 486 881

### Disc (3)



d (mm)	Size (inch)	DN (mm)	PVC-U Code
63	2	50	161 490 889
75	2 ½	65	161 490 890
90	3	80	161 490 891
110	4	100	161 490 892
140	5	125	161 490 893
160	6	150	161 490 894
225	8	200	161 490 895
280	10	250	161 490 896
315	12	300	161 490 897



### Bearing bush (5, 11)

#### Model:

- Included in delivery 2 pcs.
- With o-ring
- Bearing bushes in PP-H are used in PP-H and ABS butterfly valves

d (mm)	Size (inch)	DN (mm)	PVC-U EPDM Code	PVC-U FKM Code
63, 75, 90	2, 2½, 3	50, 65, 80	<b>161 486 886</b>	<b>161 486 892</b>
110, 140	4, 5	100, 125	<b>161 486 887</b>	<b>161 486 893</b>
160, 225	6, 8	150, 200	<b>161 486 888</b>	<b>161 486 894</b>
280, 315	10, 12	250, 300	<b>161 486 889</b>	<b>161 486 895</b>



### Shaft set

#### Model:

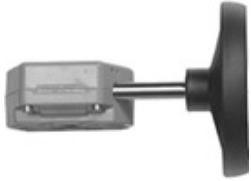
- Shaft set consisting of: shaft chrom steel 1.4301 AISI 304 (6), retention ring (7, 9) and washer (8)

d (mm)	Size (inch)	DN (mm)	Code
63	2	50	<b>161 486 899</b>
75	2 ½	65	<b>161 486 900</b>
90	3	80	<b>161 486 901</b>
110	4	100	<b>161 486 902</b>
140	5	125	<b>161 486 903</b>
160	6	150	<b>161 486 904</b>
225	8	200	<b>161 486 905</b>
280	10	250	<b>161 486 906</b>
315	12	300	<b>161 486 907</b>
355	14	350	<b>161 486 908</b>
400	16	400	<b>161 486 909</b>
450	18	450	<b>161 486 926</b>
500	20	500	<b>161 486 927</b>
630	24	600	<b>161 486 928</b>



### Hand lever

d (mm)	Size (inch)	DN (mm)	with index plate Code	with fine adjustment Code
63	2	50	<b>161 486 690</b>	<b>161 486 325</b>
75	2 ½	65	<b>161 486 690</b>	<b>161 486 325</b>
90	3	80	<b>161 486 690</b>	<b>161 486 325</b>
110	4	100	<b>161 486 691</b>	<b>161 486 326</b>
140	5	125	<b>161 486 691</b>	<b>161 486 326</b>
160	6	150	<b>161 486 694</b>	<b>161 486 327</b>
225	8	200	<b>161 486 695</b>	<b>161 486 328</b>
280	10	250	<b>161 486 697</b>	
315	12	300	<b>161 486 697</b>	



### Reduction gear with handwheel

d (mm)	DN (mm)	Inch (inch)	Code
63 - 225	50 - 200	2 - 8	<b>161 483 471</b>
280 - 315	250 - 300	10 - 12	<b>161 483 472</b>

### Profile seal (13) DN350-600

d (mm)	Size (inch)	DN (mm)	EPDM Code	FKM Code
355	14	350	<b>748 440 018</b>	<b>749 440 028</b>
400	16	400	<b>748 440 019</b>	<b>749 440 029</b>
450	18	450	<b>748 440 020</b>	<b>749 440 030</b>
500	20	500	<b>748 440 021</b>	<b>749 440 031</b>
630	24	600	<b>748 440 022</b>	<b>749 440 032</b>



### Intermediate element Gear operated with handwheel 567/568

d (mm)	DN (mm)	Code
63	50	<b>198 000 621</b>
75	65	<b>198 000 621</b>
90	80	<b>198 000 621</b>
110	100	<b>198 000 622</b>
140	125	<b>198 000 622</b>
140	125	<b>198 000 600</b>
140	125	<b>198 000 600</b>
280	250	<b>198 000 732</b>
280	250	<b>198 000 732</b>

# Spare parts Process control valves

## Pressure regulating valve type 582/586



### Cartridge type 582

DN (mm)	PVC-U EPDM Code	PVC-U FKM Code
10-15	161 489 131	161 489 231
20-25	161 489 133	161 489 233
32-50	161 489 136	161 489 236



### Cartridge type 586

DN (mm)	PVC-U EPDM Code	PVC-U FKM Code
10-15	161 489 161	161 489 261
20-25	161 489 163	161 489 263
32-50	161 489 166	161 489 266

### Cover cap

DN (mm)	Type	Code
10-15	582/586	198 806 391
20-25	582/586	198 806 393
32-50	582/586	198 806 396



### SYGEF Standard Manometer Adapter

#### Model:

- Material: PVDF
- For media separation from pressure gauge to process medium
- PTFE/EPDM Manometer diaphragm
- \*EPDM and FKM O-Ring included in Set

DN (mm)	EPDM/FKM Code	FKM white (HP) Code
10-50	198 806 650	198 806 654

## Manometer

### Model:

- Display with double scale: 0-4 bar / 0-58 psi, size: ø 40mm
- Display with double scale: 0-10bar / 0-150psi, size: ø 40mm
- Connection G 1/4 center back mount

DN (mm)	Material	EPDM/FKM 0-10bar Code	FKM white (HP) 0-10bar Code	EPDM/FKM 0-4bar Code
10-50	Brass	198 806 651	198 806 655	198 806 963
10-50	Stainless Steel	198 806 652	198 806 656	198 806 962

## Manometer plug

- For maintenance

DN (mm)	Code
10-50	198 806 653

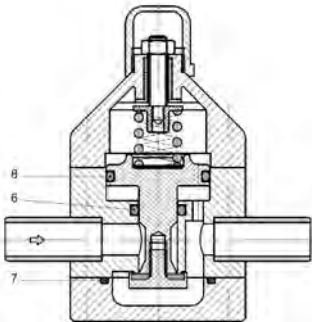
## Hook wrench

DN (mm)	Type	Code
10-15	582/586	198 806 451
20-25	582/586	198 806 452
32-50	582/586	198 806 453

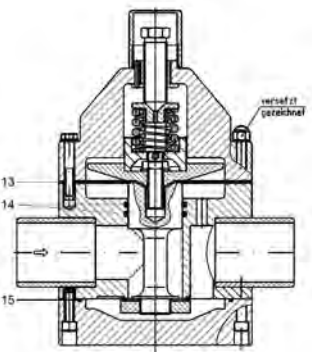
## Pressure reducing valve type V182/82

### Model:

- Spare part kit contains: diaphragm and o-rings



Type	DN-DN (mm)	EPDM Code	PTFE Code
V82	65	700 254 404	700 254 308
V82	80	700 254 405	700 254 309
V82	100	700 254 406	700 254 310



### Pressure relief valve type V85

**Model:**

- Spare part kit contains: diaphragm

Type	DN-DN (mm)	EPDM Code	PTFE Code
V85	65	700 254 336	700 254 342
V85	80	700 254 337	700 254 343
V85	100	700 254 338	700 254 344

---

### Pressure retaining valve type V186/86

**Model:**

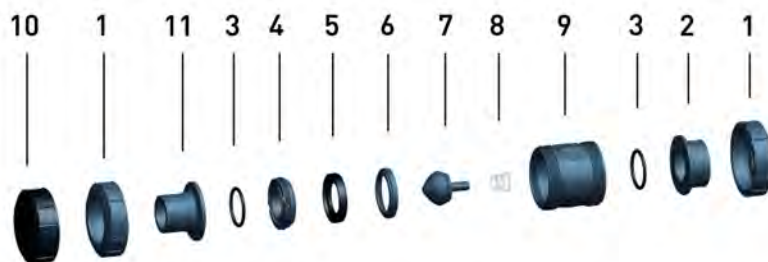
- Spare part kit contains: diaphragm

Type	DN-DN (mm)	EPDM Code	PTFE Code
V86	65	700 254 376	700 254 379
V86	80	700 254 377	700 254 380
V86	100	700 254 378	700 254 381

---



## Spare parts ventilating- and bleed valve type 591/595



### Central part with spring

#### Model:

- Central body consisting of: housing (9), union bush (4), support ring (6), floater (7), spring Ni-monic 90 Halar coated (8), profile seal ring (5) and face seal (3)

d (mm)	Size (inch)	DN (mm)	PVC-U EPDM Code	PVC-U FKM Code
16	¾	10	161 485 281	161 485 291
20	½	15	161 485 281	161 485 291
25	¾	20	161 485 282	161 485 292
32	1	25	161 485 283	161 485 293
40	1 ¼	32	161 485 284	161 485 294
50	1 ½	40	161 485 285	161 485 295
63	2	50	161 485 286	161 485 296
75	2 ½	65	161 485 287	161 485 297
90	3	80	161 485 288	161 485 298
110	4	100	161 485 289	161 485 299



### Central part without spring

#### Model:

- Central body consisting of: housing (9), union bush (4), support ring (6), floater PP-H/PVDF (7), profile seal ring (5) and face seal (3)

d (mm)	Size (inch)	DN (mm)	PVC-U EPDM Code	PVC-U FKM Code
16	¾	10	161 485 261	161 485 271
20	½	15	161 485 261	161 485 271
25	¾	20	161 485 262	161 485 272
32	1	25	161 485 263	161 485 273
40	1 ¼	32	161 485 264	161 485 274
50	1 ½	40	161 485 265	161 485 275
63	2	50	161 485 266	161 485 276
75	2 ½	65	161 485 267	161 485 277
90	3	80	161 485 268	161 485 278
110	4	100	161 485 269	161 485 279



### Cone (7)

**Model:**

- For type 595

d (mm)	Size (inch)	DN (mm)	PVC-U Code
16	3/8	10	161 491 151
25	3/4	20	161 491 152
32	1	25	161 491 153
40	1 1/4	32	161 491 154
50	1 1/2	40	161 491 155
63	2	50	161 491 156
75	2 1/2	65	161 491 157
90	3	80	161 491 158
110	4	100	161 491 159



### Floater (7)

**Model:**

- For type 591

d (mm)	Size (inch)	DN (mm)	PP-H Code	PVDF Code
16	3/8	10	167 485 151	175 484 161
20	1/2	15	167 485 151	175 484 161
25	3/4	20	167 485 152	175 484 162
32	1	25	167 485 153	175 484 163
40	1 1/4	32	167 485 154	175 484 164
50	1 1/2	40	167 485 155	175 484 165
63	2	50	167 485 156	175 484 166
75	2 1/2	65	167 485 157	175 484 167
90	3	80	167 485 158	175 484 168
110	4	100	167 485 159	175 484 169



### Protective cap (10)

**Model:**

- Protects the piping system from dirt particles out of the ambient air  
Can also be used as tool for opening and closing the valve union bushing

d (mm)	Size (inch)	DN (mm)	PP-GF Code
16	3/8	10	167 485 361
20	1/2	15	167 485 361
25	3/4	20	167 485 362
32	1	25	167 485 363
40	1 1/4	32	167 485 364
50	1 1/2	40	167 485 365
63	2	50	167 485 366
75	2 1/2	65	167 485 367
90	3	80	167 485 368
110	4	100	167 485 369



### Seal set

#### Model:

- Seal set consisting of: profile seal ring (5) and face seal (3)

d (mm)	Size (inch)	DN (mm)	EPDM Code	FKM Code
16	¾	10	161 485 241	161 485 251
20	½	15	161 485 241	161 485 251
25	¾	20	161 485 242	161 485 252
32	1	25	161 485 243	161 485 253
40	1 ¼	32	161 485 244	161 485 254
50	1 ½	40	161 485 245	161 485 255
63	2	50	161 485 246	161 485 256
75	2 ½	65	161 485 247	161 485 257
90	3	80	161 485 248	161 485 258
110	4	100	161 485 249	161 485 259



DN10/15 - 50

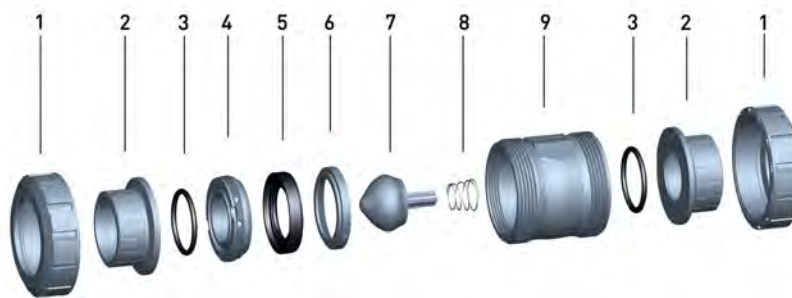


### Handle for dismantling

d (mm)	Size (inch)	DN (mm)	red Code	black Code
16	¾	10	167 484 088	167 484 076
20	½	15	167 484 088	167 484 076
25	¾	20	167 484 089	167 484 077
32	1	25	167 484 090	167 484 078
40	1 ¼	32	167 484 091	167 484 079
50	1 ½	40	167 484 092	167 484 080
63	2	50	167 484 093	167 484 081
75	2 ½	65	167 484 094	167 484 082
90	3	80	167 484 095	167 484 083
110	4	100	167 484 096	167 484 084

# Spare parts cone check valves

## Spare parts cone check valve type 561/562



### Central part without spring

#### Model:

- Central body consisting of: housing (9), union bush (4), support ring (6), cone (7), profile seal ring (5) and face seal (3)

d (mm)	Size (inch)	DN (mm)	PVC-U EPDM Code	PVC-U FKM Code
16	3/8	10	161 485 201	161 485 211
20	1/2	15	161 485 201	161 485 211
25	3/4	20	161 485 202	161 485 212
32	1	25	161 485 203	161 485 213
40	1 1/4	32	161 485 204	161 485 214
50	1 1/2	40	161 485 205	161 485 215
63	2	50	161 485 206	161 485 216
75	2 1/2	65	161 485 207	161 485 217
90	3	80	161 485 208	161 485 218
110	4	100	161 485 209	161 485 219



DN10/15 - 50



### Handle for dismantling

d (mm)	Size (inch)	DN (mm)	red Code	black Code
16	3/8	10	167 484 088	167 484 076
20	1/2	15	167 484 088	167 484 076
25	3/4	20	167 484 089	167 484 077
32	1	25	167 484 090	167 484 078
40	1 1/4	32	167 484 091	167 484 079
50	1 1/2	40	167 484 092	167 484 080
63	2	50	167 484 093	167 484 081
75	2 1/2	65	167 484 094	167 484 082
90	3	80	167 484 095	167 484 083
110	4	100	167 484 096	167 484 084



### Face seal (3)

d (mm)	Size (inch)	DN (mm)	EPDM Code	FKM Code
16	3/8	10	748 410 059	749 410 059
20	1/2	15	748 410 059	749 410 059
25	3/4	20	748 410 106	749 410 106

table continued on the next page

d (mm)	Size (inch)	DN (mm)	EPDM Code	FKM Code
32	1	25	748 410 151	749 410 151
40	1 ¼	32	748 410 062	749 410 062
50	1 ½	40	748 410 003	749 410 003
63	2	50	748 410 231	749 410 231
75	2 ½	65	748 410 119	749 410 119
90	3	80	748 410 023	749 410 023
110	4	100	748 410 254	749 410 254



### Seal set

#### Model:

- Seal set consisting of: profile seal ring (5) and face seal (3)

d (mm)	Size (inch)	DN (mm)	EPDM Code	FKM Code
16	¾	10	161 485 241	161 485 251
20	½	15	161 485 241	161 485 251
25	¾	20	161 485 242	161 485 252
32	1	25	161 485 243	161 485 253
40	1 ¼	32	161 485 244	161 485 254
50	1 ½	40	161 485 245	161 485 255
63	2	50	161 485 246	161 485 256
75	2 ½	65	161 485 247	161 485 257
90	3	80	161 485 248	161 485 258
110	4	100	161 485 249	161 485 259



### Profile seal ring (5)

d (mm)	Size (inch)	DN (mm)	EPDM Code	FKM Code
16	¾	10	748 436 001	749 436 001
20	½	15	748 436 001	749 436 001
25	¾	20	748 436 002	749 436 002
32	1	25	748 436 003	749 436 003
40	1 ¼	32	748 436 004	749 436 004
50	1 ½	40	748 436 005	749 436 005
63	2	50	748 436 006	749 436 006
75	2 ½	65	748 436 007	749 436 007
90	3	80	748 436 008	749 436 008
110	4	100	748 436 009	749 436 009



### Cone (7)

d (mm)	Size (inch)	DN (mm)	PVC-U Code
16	¾	10	161 491 151
20	½	15	161 491 151
25	¾	20	161 491 152
32	1	25	161 491 153
40	1 ¼	32	161 491 154
50	1 ½	40	161 491 155
63	2	50	161 491 156
75	2 ½	65	161 491 157
90	3	80	161 491 158
110	4	100	161 491 159



### Spring (8)

**Model:**

- Material: NIMONIC 90, code: 2.4632
- Material: V2A, code: 1.4310, HALAR® coated
- Material: V2A, code: 1.4310

d (mm)	Size (inch)	DN (mm)	Stainless steel V2A Code	V2A HALAR coated Code	NIMONIC 90 Code
16	⅝	10	161 485 132	161 485 142	161 485 152
20	½	15	161 485 132	161 485 142	161 485 152
25	¾	20	161 485 132	161 485 142	161 485 152
32	1	25	161 485 133	161 485 143	161 485 153
40	1 ¼	32	161 485 134	161 485 144	161 485 154
50	1 ½	40	161 485 135	161 485 145	161 485 155
63	2	50	161 485 136	161 485 146	161 485 156
75	2 ½	65	161 485 137	161 485 147	161 485 157
90	3	80	161 485 138	161 485 148	161 485 158
110	4	100	161 485 139	161 485 149	161 485 159



### Central part with spring

**Model:**

- Central body consisting of: housing (9), union bush (4), support ring (6), cone (7), spring V2A (8), profile seal ring (5) and face seal (3)

d (mm)	Size (inch)	DN (mm)	PVC-U EPDM Code	PVC-U FKM Code
16	⅝	10	161 485 221	161 485 231
20	½	15	161 485 221	161 485 231
25	¾	20	161 485 222	161 485 232
32	1	25	161 485 223	161 485 233
40	1 ¼	32	161 485 224	161 485 234
50	1 ½	40	161 485 225	161 485 235
63	2	50	161 485 226	161 485 236
75	2 ½	65	161 485 227	161 485 237
90	3	80	161 485 228	161 485 238
110	4	100	161 485 229	161 485 239

# Spare parts wafer check valves

## Spare parts wafer check valve type 369



Seal set (1)

d (mm)	Size (inch)	DN (mm)	EPDM Code	FKM Code
40	1 ¼	32		161 484 887
50	1 ½	40	161 484 876	161 484 888
63	2	50	161 484 877	161 484 889
75	2 ½	65	161 484 878	161 484 890
90	3	80	161 484 879	161 484 891
110	4	100	161 484 880	161 484 892
140	5	125	161 484 881	161 484 893
160	6	150	161 484 882	161 484 894
225	8	200	161 484 883	161 484 895
280	10	250	161 484 884	161 484 896
315	12	300	161 484 885	161 484 897



Disc set (2)

d (mm)	Size (inch)	DN (mm)	PVC-U EPDM Code	PVC-U FKM Code
40	1 ¼	32	161 369 122	161 369 142
50	1 ½	40	161 369 123	161 369 143
63	2	50	161 369 124	161 369 144
75	2 ½	65	161 369 125	161 369 145
90	3	80	161 369 126	161 369 146
110	4	100	161 369 127	161 369 147
140	5	125	161 369 128	161 369 148
160	6	150	161 369 129	161 369 149
225	8	200	161 369 130	161 369 150
280	10	250	161 369 131	161 369 151
315	12	300	161 369 132	161 369 152



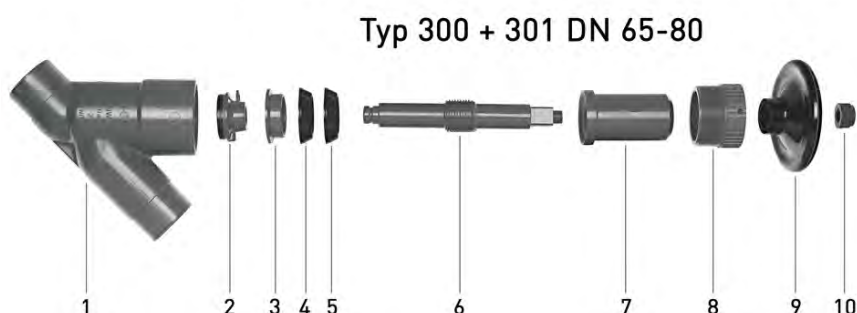
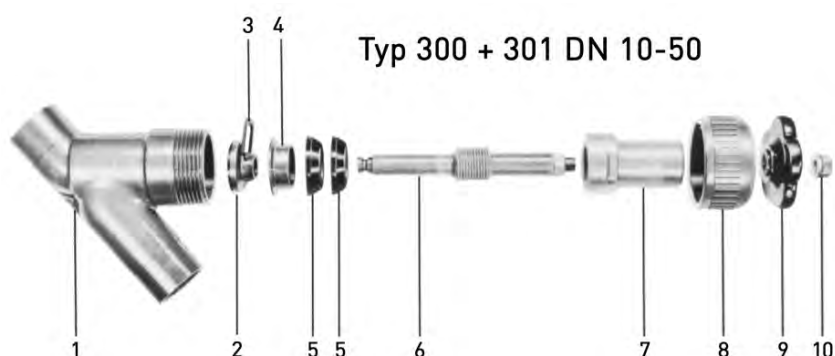
### Spring (3)

<b>d</b>	<b>Size</b>	<b>DN</b>	<b>V4A</b>	<b>Hastelloy C</b>
(mm)	(inch)	(mm)	<b>Code</b>	<b>Code</b>
40	1 ¼	32	<b>161 484 900</b>	<b>161 484 912</b>
50	1 ½	40	<b>161 484 901</b>	<b>161 484 913</b>
63	2	50	<b>161 484 902</b>	<b>161 484 914</b>
75	2 ½	65	<b>161 484 903</b>	<b>161 484 915</b>
90	3	80	<b>161 484 904</b>	<b>161 484 916</b>
110	4	100	<b>161 484 905</b>	<b>161 484 917</b>
140	5	125	<b>161 484 905</b>	<b>161 484 917</b>
160	6	150	<b>161 484 907</b>	<b>161 484 919</b>
225	8	200	<b>161 484 908</b>	<b>161 484 920</b>
280	10	250	<b>161 484 909</b>	<b>161 484 921</b>
315	12	300	<b>161 484 910</b>	<b>161 484 922</b>



# Spare parts angle seat valves

## Spare parts angel seat valves type 300/301



### Bonnet complete

#### Model:

- Bonnet complete consisting of: seal element PVC-U and seating PE, retaining pin, seal support ring, stem, threaded bush, union nut and handwheel nut in PVC-U, cup seal and handwheel in PE (2 -10)

d (mm)	Size (inch)	DN (mm)	PVC-U/PE Code
16	3/8	10	161 482 250
20	1/2	15	161 482 251
25	3/4	20	161 482 252
32	1	25	161 482 253
40	1 1/4	32	161 482 254
50	1 1/2	40	161 482 255
63	2	50	161 482 256
75	2 1/2	65	161 482 257
90	3	80	161 482 258



### Body (1)

d (mm)	Size (inch)	DN (mm)	PVC-U Code	PVC-U transparent Code
16	3/8	10	161 300 251	
20	1/2	15	161 300 301	192 480 001
25	3/4	20	161 300 351	192 480 002
32	1	25	161 300 401	192 301 401
40	1 1/4	32	161 300 451	192 301 451
50	1 1/2	40	161 300 501	192 301 501
63	2	50	161 300 551	192 301 551
75	2 1/2	65	161 300 601	
90	3	80	161 300 651	192 301 651



### Plug

#### Model:

- DN65-DN80 (8)

d (mm)	Size (inch)	DN (mm)	PVC-U Code
75	2 ½	65	161 300 608
90	3	80	161 300 658



### Handwheel (9)

d (mm)	Size (inch)	DN (mm)	Code
16	¾	10	161 300 259
20	½	15	161 300 309
25	¾	20	161 300 309
32	1	25	161 300 409
40	1 ¼	32	161 300 459
50	1 ½	40	161 300 509
63	2	50	161 300 559
75	2 ½	65	161 300 609
90	3	80	161 300 659



### Handwheel nut (10)

d (mm)	Size (inch)	DN (mm)	PVC-U Code
16	¾	10	161 300 260
20	½	15	721 960 603
25	¾	20	721 960 603
32	1	25	721 960 603
40	1 ¼	32	721 960 604
50	1 ½	40	721 960 604
63	2	50	721 960 605
75	2 ½	65	721 960 606
90	3	80	721 960 607



### Stem set

#### Model:

- Stem set consisting of: stem and threaded bush (6, 7)

d (mm)	Size (inch)	DN (mm)	PVC-U Code
16	¾	10	161 483 062
20	½	15	161 483 063
25	¾	20	161 483 064
32	1	25	161 483 065
40	1 ¼	32	161 483 066
50	1 ½	40	161 483 067
63	2	50	161 483 068
75	2 ½	65	161 483 069
90	3	80	161 483 070



### Union nut

**Model:**

- DN10-DN50 (8)

d (mm)	Size (inch)	DN (mm)	PVC-U Code
16	¾	10	161 300 258
20	½	15	161 300 308
25	¾	20	161 300 358
32	1	25	161 300 408
40	1 ¼	32	161 300 458
50	1 ½	40	161 300 508
63	2	50	161 300 558



### Disc retaining pin set

**Model:**

- Disc retaining pin set consisting of: seal element and seating, retaining pin, screen support and cup seal (2-5)

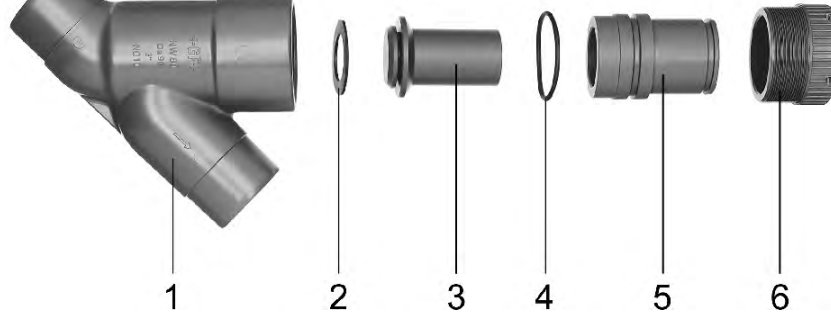
d (mm)	Size (inch)	DN (mm)	PE Code	PTFE Code
16	¾	10	161 483 076	161 483 089
20	½	15	161 483 077	161 483 090
25	¾	20	161 483 078	161 483 091
32	1	25	161 483 079	161 483 092
40	1 ¼	32	161 483 080	161 483 093
50	1 ½	40	161 483 081	161 483 094
63	2	50	161 483 082	161 483 095
75	2 ½	65	161 483 083	161 483 096
90	3	80	161 483 084	161 483 097

## Spare parts angle seat valve type 303/304

### DN 10-50



### DN 65-80



**Body (1)**

d (mm)	Size (inch)	DN (mm)	PVC-U Code	PVC-U transparent Code
16	3/8	10	161 480 699	
20	1/2	15	161 480 700	192 480 001
25	3/4	20	161 480 701	192 480 002
32	1	25	161 300 401	192 301 401
40	1 1/4	32	161 300 451	192 301 451
50	1 1/2	40	161 300 501	192 301 501
63	2	50	161 300 551	192 301 551
75	2 1/2	65	161 300 601	
90	3	80	161 300 651	192 301 651



**Closure plug (5)**

d (mm)	Size (inch)	DN (mm)	PVC-U Code
16	3/8	10	161 480 648
20	1/2	15	161 480 649
25	3/4	20	161 480 650
32	1	25	161 480 651
40	1 1/4	32	161 480 652
50	1 1/2	40	161 480 653
63	2	50	161 480 654
75	2 1/2	65	161 490 412
90	3	80	161 490 413



### Plug

#### Model:

- DN65-DN80 (6)

d (mm)	Size (inch)	DN (mm)	PVC-U Code
75	2 ½	65	161 305 604
90	3	80	161 305 654



### Flat gasket (2)

d (mm)	Size (inch)	DN (mm)	EPDM Code	FKM Code
16	¾	10	161 480 664	161 480 673
20	½	15	161 480 665	161 480 674
25	¾	20	161 480 666	161 480 675
32	1	25	161 480 667	161 480 676
40	1 ¼	32	161 480 668	161 480 677
50	1 ½	40	161 480 669	161 480 678
63	2	50	161 480 670	161 480 679
75	2 ½	65	161 480 671	161 480 680
90	3	80	161 480 672	161 480 681



### Circlip (7)

d (mm)	Size (inch)	DN (mm)	PVC-U Code
16	¾	10	161 482 076
20	½	15	161 482 017
25	¾	20	161 482 018
32	1	25	161 482 019
40	1 ¼	32	161 482 020
50	1 ½	40	161 482 021
63	2	50	161 482 022



### Union nut

#### Model:

- DN10-DN50 (6)

d (mm)	Size (inch)	DN (mm)	PVC-U Code
16	¾	10	161 300 258
20	½	15	161 300 308
25	¾	20	161 300 358
32	1	25	161 300 408
40	1 ¼	32	161 300 458
50	1 ½	40	161 300 508
63	2	50	161 300 558



### O-ring (4)

d (mm)	Size (inch)	DN (mm)	EPDM Code	FKM Code
16	¾	10	748 410 059	749 410 059
20	½	15	748 410 106	749 410 106
25	¾	20	748 410 001	749 410 001

table continued on the next page

<b>d</b> (mm)	<b>Size</b> (inch)	<b>DN</b> (mm)	<b>EPDM</b> <b>Code</b>	<b>FKM</b> <b>Code</b>
32	1	25	<b>748 410 007</b>	<b>749 410 007</b>
40	1 ¼	32	<b>748 410 002</b>	<b>749 410 002</b>
50	1 ½	40	<b>748 410 102</b>	<b>749 410 102</b>
63	2	50	<b>748 410 101</b>	<b>749 410 101</b>
75	2 ½	65	<b>748 410 119</b>	<b>749 410 119</b>
90	3	80	<b>748 410 014</b>	<b>749 410 014</b>

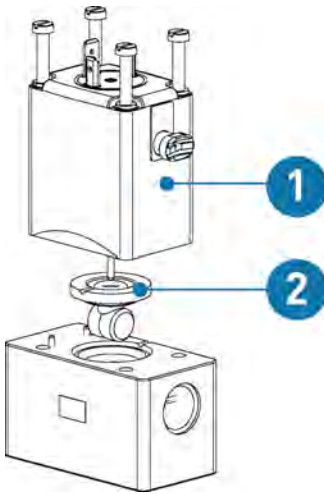


### Piston (3)

<b>d</b> (mm)	<b>Size</b> (inch)	<b>DN</b> (mm)	<b>PVC-U</b> <b>Code</b>
16	¾	10	<b>161 480 682</b>
20	½	15	<b>161 480 683</b>
25	¾	20	<b>161 480 684</b>
32	1	25	<b>161 480 685</b>
40	1 ¼	32	<b>161 480 686</b>
50	1 ½	40	<b>161 480 687</b>
63	2	50	<b>161 480 688</b>
75	2 ½	65	<b>161 480 689</b>
90	3	80	<b>161 480 690</b>

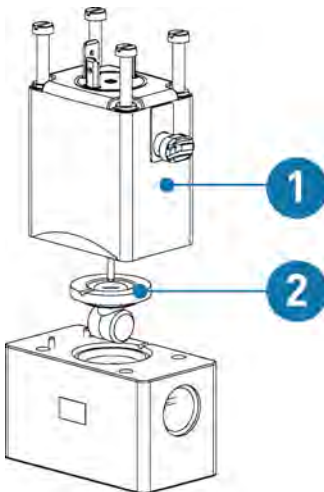
# Spare parts solenoid valves

## Spare parts solenoid valve type 157



**Coil set (1)**  
For solenoid valve type 157

Voltage	Function	EPDM Code	FKM Code
24V DC	A		<b>198 808 006</b>
24V UC	A	<b>198 808 002</b>	
230V AC	A	<b>198 808 004</b>	



**Wear part set (2)**  
For solenoid valve type 157

e.g. diaphragm

EPDM Code	FKM Code
<b>198 808 012</b>	<b>198 808 013</b>

## Spare parts solenoid valve type 160/161



**Coil set (1)**  
For solenoid valve type 160/161

24V UC Code	230 V UC Code	230 V/ 50Hz Code
<b>198 808 014</b>	<b>198 808 015</b>	<b>198 808 016</b>



**Actuator Set (2)**  
For solenoid valve type 160/161

**Model:**

- Including core and pressure spring

Function	UC Code	50Hz Code
A	198 808 017	198 808 021
B	198 808 018	
E	198 808 019	
F	198 808 020	198 808 022



**Wear part set (3)**  
For solenoid valve type 160/161

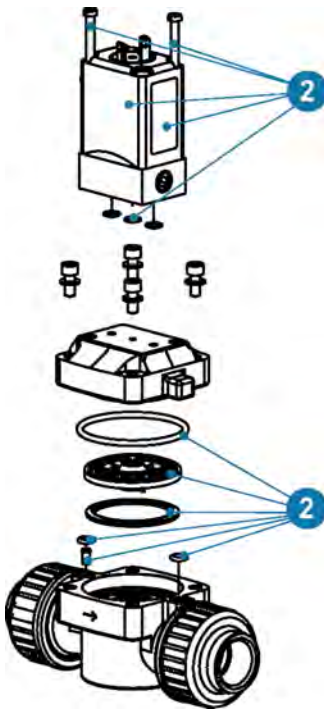
**Model:**

- Pre-assembled set with angle flange
- Set already pre-lubricated
- Manual override included

d (mm)	DN (mm)	EPDM Code	FKM Code
16	10	198 808 023	198 808 026
20	15	198 808 024	198 808 027
25	20	198 808 025	198 808 028

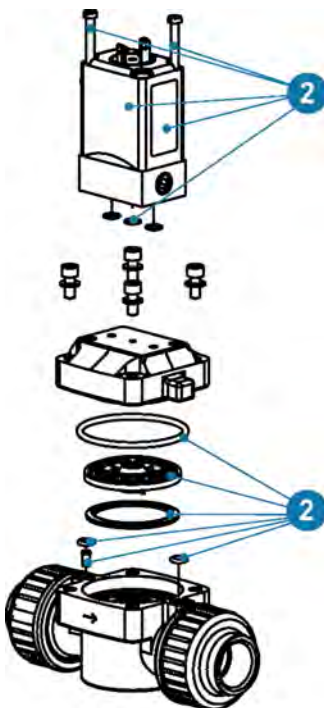


## Spare parts solenoid valve type 165



**Coil set (1)**  
For solenoid valve type 165

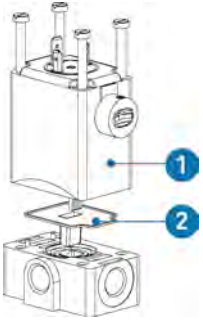
Voltage	EPDM Code	FKM Code
24V DC	198 808 029	198 808 032
230V AC	198 808 030	198 808 033
110V AC	198 808 031	198 808 034



**Wear part set (2)**  
For solenoid valve type 165

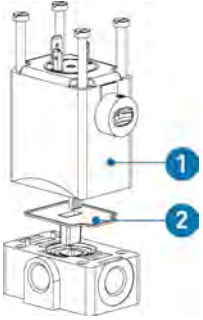
d-d (mm)	DN-DN (mm)	EPDM Code	FKM Code
20 - 25	15 - 20	198 808 035	198 808 038
32 - 40	25 - 32	198 808 036	198 808 039
50 - 63	40 - 50	198 808 037	198 808 040

## Spare parts solenoid valve type 166



**Coil set (1)**  
**For solenoid valve type 166**

Function	Voltage	FKM Code
C	24V UC	<b>198 808 049</b>



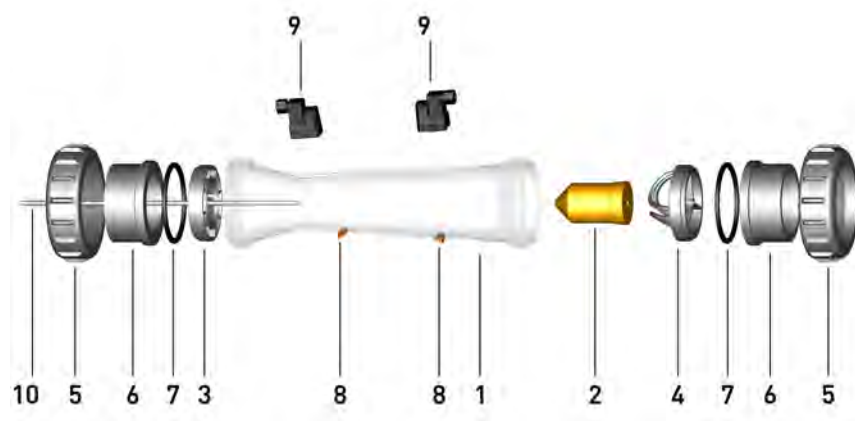
**Wear part set (2)**  
**For solenoid valve type 166**

e.g. diaphragm

EPDM Code	FKM Code
<b>198 808 053</b>	<b>198 808 054</b>

# Spare parts variable area flow meters

## Variable area flow meter type 335



### Taper tube with water scale (1)

- PVC-U transparent

d (mm)	Size (inch)	DN (mm)	Scale range (l/h)	PVC-U transparent Code	Polyamid Code	Polysulfon Code
32	1	25	50 - 500	198 335 055	198 335 070	198 335 085
32	1	25	100 - 1000	198 335 056	198 335 071	198 335 086
40	1 ¼	32	150 - 1500	198 335 057	198 335 072	198 335 087
40	1 ¼	32	250 - 2500	198 335 058	198 335 073	198 335 088
50	1 ½	40	200 - 2000	198 335 059	198 335 074	198 335 089
50	1 ½	40	300 - 3000	198 335 060	198 335 075	198 335 090
50	1 ½	40	600 - 6000	198 335 061	198 335 076	198 335 091
63	2	50	600 - 6000	198 335 062	198 335 077	198 335 092
63	2	50	1000 - 10000	198 335 063	198 335 078	198 335 093
63	2	50	1500 - 15000	198 335 064	198 335 079	198 335 094
75	2 ½	65	2000 - 20000	198 335 065	198 335 080	198 335 095
75	2 ½	65	3000 - 30000	198 335 066	198 335 081	198 335 096
75	2 ½	65	8000 - 60000	198 335 067	198 335 082	198 335 097



### Taper tube without scale (1)

Scale range (l/h)	d (mm)	Size (inch)	DN (mm)	PVC-U transparent Code	Polyamid Code	Polysulfon Code
50 - 500	32	1	25	198 335 255	198 335 270	198 335 285
100 - 1000	32	1	25	198 335 256	198 335 271	198 335 286
150 - 1500	40	1 ¼	32	198 335 257	198 335 272	198 335 287
250 - 2500	40	1 ¼	32	198 335 258	198 335 273	198 335 288
200 - 2000	50	1 ½	40	198 335 259	198 335 274	198 335 289
300 - 3000	50	1 ½	40	198 335 260	198 335 275	198 335 290
600 - 6000	50	1 ½	40	198 335 261	198 335 276	198 335 291
600 - 6000	63	2	50	198 335 262	198 335 277	198 335 292
1000 - 10000	63	2	50	198 335 263	198 335 278	198 335 293
1500 - 15000	63	2	50	198 335 264	198 335 279	198 335 294
2000 - 20000	75	2 ½	65	198 335 265	198 335 280	198 335 295
3000 - 30000	75	2 ½	65	198 335 266	198 335 281	198 335 296
8000 - 60000	75	2 ½	65	198 335 267	198 335 282	198 335 297



top



bottom

DN25 - DN40

### Insert PVDF (3,4)

d (mm)	Size (inch)	DN (mm)	Scale range (l/h)	top (4) Code	bottom (3) Code
32	1	25	50 - 500	<b>198 335 970</b>	<b>198 335 977</b>
40	1 ¼	32	150 - 1500, 250 - 2500	<b>198 335 971</b>	<b>198 335 978</b>
50	1 ½	40	200 - 2000, 300 - 3000, 600 - 6000	<b>198 335 972</b>	<b>198 335 979</b>
63	2	50	600-6000, 1000-10000, 1500-15000	<b>199 335 974</b>	<b>198 335 893</b>
75	2 ½	65	2000-20000, 3000-30000, 8000-60000	<b>199 335 975</b>	<b>198 335 894</b>

### Float PVDF (2)



DN50



DN40



DN65

d (mm)	Size (inch)	DN (mm)	Scale range (l/h)	Without magnet Code	With magnet (bistabil) Code
32	1	25	50 - 500	<b>198 335 455</b>	<b>198 335 470</b>
32	1	25	100 - 1000	<b>198 335 455</b>	<b>198 335 470</b>
40	1 ¼	32	150 - 1500	<b>198 335 455</b>	<b>198 335 470</b>
40	1 ¼	32	250 - 2500	<b>198 335 455</b>	<b>198 335 470</b>
50	1 ½	40	200 - 2000 / 300 - 3000 / 600 - 6000	<b>198 335 457</b>	<b>198 335 471</b>
63	2	50	600 - 6000 / 1000 - 10000 / 1500 - 15000	<b>198 335 458</b>	<b>198 335 472</b>
75	2 ½	65	2000 - 20000	<b>198 335 459</b>	<b>198 335 473</b>
75	2 ½	65	3000 - 30000	<b>198 335 459</b>	<b>198 335 473</b>
75	2 ½	65	8000 - 60000	<b>199 335 460</b>	<b>199 335 474</b>

### Guiding rod (10)

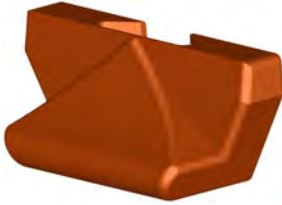


d (mm)	Size (inch)	Scale range (l/h)	PVDF Code
63	2	600-6000, 1000-10000, 1500-15000	<b>198 335 984</b>
75	2 ½	2000-20000, 3000-30000, 8000-60000	<b>198 335 984</b>



### Insert guiding rod PVDF (for 10)

d (mm)	Size (inch)	DN (mm)	Scale range (l/h)	Code
63	2	50	600-6000, 1000-10000, 1500-15000	<b>198 335 953</b>
75	2 ½	65	2000-20000, 3000-30000, 8000-60000	<b>198 335 954</b>



### Flow value indicator PS (8)

**Model:**

- For all dimensions type 335/350

d (mm)	Size (inch)	DN (mm)	Flow value indicator Code
32	1	25	<b>198 335 990</b>
40	1 ¼	32	<b>198 335 990</b>
50	1 ½	40	<b>198 335 990</b>
63	2	50	<b>198 335 990</b>
75	2 ½	65	<b>198 335 990</b>



### O-rings (7)

d (mm)	Size (inch)	DN (mm)	EPDM Code	FKM Code
32	1	25	<b>748 410 008</b>	<b>749 410 008</b>
40	1 ¼	32	<b>748 410 009</b>	<b>749 410 009</b>
50	1 ½	40	<b>748 410 010</b>	<b>749 410 010</b>
63	2	50	<b>748 410 011</b>	<b>749 410 011</b>
75	2 ½	65	<b>748 410 014</b>	<b>749 410 014</b>



### Union nut (5)

Union nut not useable for the special version with taper tube in PVDF

d (mm)	Size (inch)	DN (mm)	PVC-U Code
32	1	25	<b>721 690 008</b>
40	1 ¼	32	<b>721 690 009</b>
50	1 ½	40	<b>721 690 010</b>
63	2	50	<b>721 690 011</b>
75	2 ½	65	<b>198 806 429</b>



### Union end / Socket (6)

For DN65 PVDF only spigot

d (mm)	Size (inch)	DN (mm)	PVC-U Code	PVC-C Code	ABS Code	PP-H Code
32	1	25	<b>721 500 108</b>	<b>723 800 108</b>	<b>729 800 108</b>	<b>727 500 108</b>
40	1 ¼	32	<b>721 500 109</b>	<b>723 800 109</b>	<b>729 800 109</b>	<b>727 500 109</b>
50	1 ½	40	<b>721 500 110</b>	<b>723 800 110</b>	<b>729 800 110</b>	<b>727 500 110</b>
63	2	50	<b>721 500 111</b>	<b>723 800 111</b>	<b>729 800 111</b>	<b>727 500 111</b>
75	2 ½	65	<b>721 600 112</b>			



### Exchange kit

#### Model:

- Exchange kit consisting of: guiding rod (PVDF/V4A), insert guiding rod and insert bottom
- Only for DN50 (1'500 - 15'000 l/h) and DN65 (all scale ranges)

d (mm)	Size (inch)	DN (mm)	Scale range (l/h)	Code PVDF Code
63	2	50	1500 - 15000	<b>198 335 895</b>
75	2 ½	65	2000 - 20000	<b>198 335 896</b>
75	2 ½	65	3000 - 30000	<b>198 335 896</b>
75	2 ½	65	8000 - 80000	<b>198 335 896</b>

## Spare part for variable area flow meter SK50-SK73/SK500-SK730

### Short version taper tube Polysulfone



d (mm)	DN (mm)	Type	Code
16	10	SK 50 / 500	<b>198 801 341</b>
16	10	SK 51 / 510	<b>198 801 342</b>
16	10	SK 52 / 520	<b>198 801 343</b>
20	15	SK 60 / 600	<b>198 801 449</b>
20	15	SK 61 / 610	<b>198 801 450</b>
20	15	SK 62 / 620	<b>198 801 451</b>
32	25	SK 70 / 700	<b>198 801 445</b>
32	25	SK 71 / 710	<b>198 801 338</b>
32	25	SK 72 / 720	<b>198 801 339</b>
32	25	SK 73 / 730	<b>198 801 340</b>

### Short version taper tube PVC-U transparent



d (mm)	DN (mm)	Type	Code
16	10	SK 50 / 500	<b>198 803 790</b>
16	10	SK 51 / 510	<b>198 803 791</b>
16	10	SK 52 / 520	<b>198 803 792</b>
20	15	SK 60 / 600	<b>198 803 793</b>
20	15	SK 61 / 610	<b>198 803 794</b>
20	15	SK 62 / 620	<b>198 803 795</b>
32	25	SK 70 / 700	<b>198 803 796</b>
32	25	SK 71 / 710	<b>198 803 797</b>
32	25	SK 72 / 720	<b>198 803 798</b>
32	25	SK 73 / 730	<b>198 803 799</b>

**Short version float PVDF  
Without magnet**



d (mm)	DN (mm)	Type	Code
16	10	SK 50 / 51 / 52	<b>198 806 219</b>
20	15	SK 60 / 61 / 62	<b>198 806 220</b>
32	25	SK 70 / 71 / 72 / 73	<b>198 806 221</b>

**Short version float PVDF  
With magnet bistable**



d (mm)	DN (mm)	Type	Code
16	10	SK 500 / 510 / 520	<b>198 806 222</b>
20	15	SK 600 / 610 / 620	<b>198 806 223</b>
32	25	SK 700 / 710 / 720 / 730	<b>198 806 224</b>

**Short version float PTFE  
Without magnet**



d (mm)	DN (mm)	Type	Code
32	25	SK 73	<b>198 807 166</b>

### Short version top insert PVDF



<b>d</b> (mm)	<b>DN</b> (mm)	<b>Type</b>	<b>Code</b>
16	10	SK 50 / 500; 51 / 510; 52 / 520	<b>198 807 188</b>
20	15	SK 60 / 600; 61 / 610; 62 / 620	<b>198 807 187</b>
32	25	SK 70 / 700; 71 / 710; 72 / 720; 73 / 730	<b>198 807 182</b>



# Index

Code	Page	Code	Page	Code	Page	Code	Page
20014A291	489	161 017 108	16	161 050 211	54	161 111 097	73
20014A292	489	161 017 109	16	161 050 212	54	161 111 116	73
20014A293	489	161 017 110	16	161 050 213	54	161 111 117	73
20014A294	489	161 017 111	16	161 050 214	54	161 114 409	74
20014A295	489	161 017 112	16, 351	161 050 226	368	161 114 415	74
20014A296	489	161 017 113	16	161 050 227	368	161 114 422	74
20014A297	489	161 017 114	16	161 050 228	368	161 114 430	74
20014A298	489	161 017 115	16	161 050 229	368	161 114 433	74
20014A299	489	161 017 116	16, 351	161 050 230	368	161 114 454	74
20014A306	490	161 017 117	16	161 050 231	368	161 114 457	74
20014A307	490	161 017 126	16	161 050 245	54	161 114 470	74
20014A308	490	161 017 127	16	161 050 246	54	161 114 473	74
160 100 300	346	161 017 128	16	161 050 247	54	161 117 057	75
160 100 350	346	161 017 129	16	161 050 248	54	161 117 067	75
161 017 037	20	161 017 130	16	161 050 249	54	161 117 097	75
161 017 038	20	161 017 131	16	161 050 250	54	161 123 250	317
161 017 039	20	161 017 132	16	161 050 251	54	161 123 300	317
161 017 040	20	161 017 133	16	161 050 345	53	161 123 350	317
161 017 041	20	161 017 134	16	161 050 346	53	161 123 400	317
161 017 042	20	161 017 135	16	161 050 347	53	161 123 450	317
161 017 043	20	161 017 136	17	161 050 348	53	161 137 055	75
161 017 044	20	161 017 137	17	161 050 349	53	161 137 056	75
161 017 045	20	161 017 138	17	161 050 350	53	161 137 065	75
161 017 046	20	161 017 139	17	161 050 351	53	161 137 066	75
161 017 047	20	161 018 036	351	161 050 385	53	161 137 095	75
161 017 048	20	161 018 038	351	161 050 386	53	161 159 157	479
161 017 060	20	161 018 039	351	161 050 387	53	161 159 158	479
161 017 061	20	161 018 042	351	161 050 388	53	161 300 250	317
161 017 062	20	161 018 045	351	161 050 389	53	161 300 251	609
161 017 063	20	161 018 059	351	161 050 390	53	161 300 258	611, 613
161 017 064	20	161 018 060	351	161 050 391	53	161 300 259	610
161 017 065	20	161 018 061	351	161 050 445	52	161 300 260	610
161 017 066	20	161 018 063	351	161 050 446	52	161 300 299	317
161 017 067	20	161 018 064	351	161 050 447	52	161 300 300	317
161 017 068	20	161 018 080	351	161 050 448	52	161 300 301	609
161 017 069	20	161 018 082	351	161 050 449	52	161 300 308	611, 613
161 017 070	20	161 018 083	351	161 050 450	52	161 300 309	610, 610
161 017 071	20	161 018 084	351	161 050 451	52	161 300 349	317
161 017 072	20	161 018 085	351	161 090 002	499	161 300 350	317
161 017 073	20	161 018 086	351	161 090 003	499	161 300 351	609
161 017 074	20	161 018 087	351	161 090 016	498	161 300 358	611, 613
161 017 082	17	161 018 088	351	161 090 017	498	161 300 399	317
161 017 083	17	161 018 089	351	161 090 018	499	161 300 400	317
161 017 084	17	161 018 255	352	161 090 019	499	161 300 401	609, 612
161 017 085	17	161 018 256	352	161 090 024	498, 499	161 300 408	611, 613
161 017 086	17	161 018 257	352	161 108 706	369	161 300 409	610
161 017 087	17	161 018 258	352	161 108 707	369	161 300 449	317
161 017 088	17	161 018 259	352	161 110 230	73	161 300 450	317
161 017 089	17	161 018 260	352	161 110 250	73	161 300 451	609, 612
161 017 090	17	161 018 261	352	161 110 260	73	161 300 458	611, 613
161 017 091	17	161 050 026	343	161 110 290	73	161 300 459	610
161 017 092	17	161 050 027	343	161 110 310	73	161 300 499	317
161 017 093	17	161 050 028	343	161 111 035	73	161 300 500	317
161 017 094	17	161 050 029	343	161 111 036	73	161 300 501	609, 612
161 017 095	17	161 050 030	343	161 111 046	73	161 300 508	611, 613
161 017 096	17	161 050 031	343	161 111 055	73	161 300 509	610
161 017 097	17	161 050 053	498	161 111 056	73	161 300 549	317
161 017 098	17	161 050 206	54	161 111 065	73	161 300 550	317
161 017 104	16	161 050 207	54	161 111 066	73	161 300 551	609, 612
161 017 105	16	161 050 208	54	161 111 067	73	161 300 558	611, 613
161 017 106	16	161 050 209	54	161 111 095	73	161 300 559	610
161 017 107	16	161 050 210	54	161 111 096	73	161 300 599	317

# Index

Code	Page	Code	Page	Code	Page	Code	Page
161 300 600	317	161 303 031	318	161 305 586	341	161 369 005	314
161 300 601	609, 612	161 303 032	318	161 305 587	342	161 369 006	314
161 300 608	610	161 303 033	318	161 305 588	342	161 369 007	314
161 300 609	610	161 303 034	318	161 305 589	342	161 369 009	314
161 300 649	317	161 303 035	318	161 305 599	340	161 369 010	314
161 300 650	317	161 303 036	318	161 305 600	340	161 369 011	314
161 300 651	609, 612	161 303 037	318	161 305 604	613	161 369 012	314
161 300 658	610	161 303 038	318	161 305 636	341	161 369 013	314
161 300 659	610	161 303 040	551	161 305 637	342	161 369 022	314
161 300 699	317	161 303 041	551	161 305 638	342	161 369 023	314
161 300 716	485	161 303 042	551	161 305 639	342	161 369 024	314
161 300 717	485	161 303 043	551	161 305 649	340	161 369 025	314
161 300 718	485	161 303 044	551	161 305 650	340	161 369 026	314
161 300 719	485	161 303 045	551	161 305 654	613	161 369 027	314
161 300 720	485	161 303 046	551	161 305 686	341	161 369 029	314
161 300 721	485	161 303 047	551	161 305 687	342	161 369 030	314
161 300 741	485	161 303 048	551	161 305 688	342	161 369 031	314
161 300 742	485	161 303 102	486	161 305 689	342	161 369 032	314
161 300 743	485	161 303 103	486	161 305 699	340	161 369 033	314
161 300 744	485	161 303 104	486	161 317 009	241	161 369 042	316
161 300 745	485	161 303 105	486	161 317 010	241	161 369 043	316
161 300 746	485	161 303 106	486	161 317 012	241	161 369 044	316
161 300 766	485	161 303 107	486	161 317 024	241	161 369 045	316
161 300 767	485	161 303 117	486	161 317 025	241	161 369 046	316
161 300 768	485	161 303 118	486	161 317 027	241	161 369 047	316
161 300 769	485	161 303 119	486	161 317 039	241	161 369 049	316
161 300 770	485	161 303 120	486	161 317 040	241	161 369 050	316
161 300 771	485	161 303 121	486	161 317 042	241	161 369 051	316
161 300 791	485	161 303 122	486	161 317 069	241	161 369 052	316
161 300 792	485	161 303 123	486	161 317 070	241	161 369 053	316
161 300 793	485	161 303 124	486	161 317 072	241	161 369 062	316
161 300 794	485	161 305 300	340	161 317 424	535	161 369 063	316
161 300 795	485	161 305 336	341	161 317 425	535	161 369 064	316
161 300 796	485	161 305 337	342	161 317 427	535	161 369 065	316
161 300 800	550	161 305 338	342	161 317 439	535	161 369 066	316
161 300 801	550	161 305 339	342	161 317 440	535	161 369 067	316
161 300 802	550	161 305 349	340	161 317 442	535	161 369 069	316
161 300 803	550	161 305 350	340	161 317 508	241	161 369 070	316
161 300 804	550	161 305 386	341	161 317 523	241	161 369 071	316
161 300 805	550	161 305 387	342	161 317 538	241	161 369 072	316
161 300 806	550	161 305 388	342	161 317 568	241	161 369 073	316
161 300 807	550	161 305 389	342	161 317 723	535	161 369 082	315
161 300 808	550	161 305 399	340	161 317 738	535	161 369 083	315
161 303 005	318	161 305 400	340	161 317 824	445	161 369 084	315
161 303 006	318	161 305 436	341	161 317 825	445	161 369 085	315
161 303 007	318	161 305 437	342	161 317 827	445	161 369 086	315
161 303 008	318	161 305 438	342	161 317 839	445	161 369 087	315
161 303 009	318	161 305 439	342	161 317 840	445	161 369 089	315
161 303 010	318	161 305 449	340	161 317 868	445	161 369 090	315
161 303 011	318	161 305 450	340	161 317 883	445	161 369 091	315
161 303 012	318	161 305 486	341	161 322 251	220	161 369 092	315
161 303 013	318	161 305 487	342	161 322 252	220	161 369 093	315
161 303 015	551	161 305 488	342	161 322 256	220	161 369 102	315
161 303 016	551	161 305 489	342	161 322 257	220	161 369 103	315
161 303 017	551	161 305 499	340	161 324 150	442	161 369 104	315
161 303 018	551	161 305 500	340	161 324 199	442	161 369 105	315
161 303 019	551	161 305 536	341	161 324 200	442	161 369 106	315
161 303 020	551	161 305 537	342	161 324 249	442	161 369 107	315
161 303 021	551	161 305 538	342	161 324 454	219	161 369 109	315
161 303 022	551	161 305 539	342	161 369 002	314	161 369 110	315
161 303 023	551	161 305 549	340	161 369 003	314	161 369 111	315
161 303 030	318	161 305 550	340	161 369 004	314	161 369 112	315

# Index

Code	Page	Code	Page	Code	Page	Code	Page
161 369 113	315	161 482 019	613	161 484 896	607	161 485 215	604
161 369 122	607	161 482 020	613	161 484 897	607	161 485 216	604
161 369 123	607	161 482 021	613	161 484 900	608	161 485 217	604
161 369 124	607	161 482 022	613	161 484 901	608	161 485 218	604
161 369 125	607	161 482 076	613	161 484 902	608	161 485 219	604
161 369 126	607	161 482 250	609	161 484 903	608	161 485 221	606, 606
161 369 127	607	161 482 251	609	161 484 904	608	161 485 222	606
161 369 128	607	161 482 252	609	161 484 905	608, 608	161 485 223	606
161 369 129	607	161 482 253	609	161 484 907	608	161 485 224	606
161 369 130	607	161 482 254	609	161 484 908	608	161 485 225	606
161 369 131	607	161 482 255	609	161 484 909	608	161 485 226	606
161 369 132	607	161 482 256	609	161 484 910	608	161 485 227	606
161 369 142	607	161 482 257	609	161 484 912	608	161 485 228	606
161 369 143	607	161 482 258	609	161 484 913	608	161 485 229	606
161 369 144	607	161 483 062	610	161 484 914	608	161 485 231	606, 606
161 369 145	607	161 483 063	610	161 484 915	608	161 485 232	606
161 369 146	607	161 483 064	610	161 484 916	608	161 485 233	606
161 369 147	607	161 483 065	610	161 484 917	608, 608	161 485 234	606
161 369 148	607	161 483 066	610	161 484 919	608	161 485 235	606
161 369 149	607	161 483 067	610	161 484 920	608	161 485 236	606
161 369 150	607	161 483 068	610	161 484 921	608	161 485 237	606
161 369 151	607	161 483 069	610	161 484 922	608	161 485 238	606
161 369 152	607	161 483 070	610	161 485 132	606, 606,	161 485 239	606
161 480 648	612	161 483 076	611		606		603, 603,
161 480 649	612	161 483 077	611	161 485 133	606		605, 605
161 480 650	612	161 483 078	611	161 485 134	606	161 485 241	603, 605
161 480 651	612	161 483 079	611	161 485 135	606	161 485 242	603, 605
161 480 652	612	161 483 080	611	161 485 136	606	161 485 243	603, 605
161 480 653	612	161 483 081	611	161 485 137	606	161 485 244	603, 605
161 480 654	612	161 483 082	611	161 485 138	606	161 485 245	603, 605
161 480 664	613	161 483 083	611	161 485 139	606	161 485 246	603, 605
161 480 665	613	161 483 084	611	161 485 142	606, 606,	161 485 247	603, 605
161 480 666	613	161 483 089	611		606	161 485 248	603, 605
161 480 667	613	161 483 090	611	161 485 143	606	161 485 249	603, 605
161 480 668	613	161 483 091	611	161 485 144	606	161 485 251	603, 603,
161 480 669	613	161 483 092	611	161 485 145	606		605, 605
161 480 670	613	161 483 093	611	161 485 146	606	161 485 252	603, 605
161 480 671	613	161 483 094	611	161 485 147	606	161 485 253	603, 605
161 480 672	613	161 483 095	611	161 485 148	606	161 485 254	603, 605
161 480 673	613	161 483 096	611	161 485 149	606	161 485 255	603, 605
161 480 674	613	161 483 097	611	161 485 152	606, 606,	161 485 256	603, 605
161 480 675	613	161 483 471	597		606	161 485 257	603, 605
161 480 676	613	161 483 472	597	161 485 153	606	161 485 258	603, 605
161 480 677	613	161 484 876	607	161 485 154	606	161 485 259	603, 605
161 480 678	613	161 484 877	607	161 485 155	606	161 485 261	601, 601
161 480 679	613	161 484 878	607	161 485 156	606	161 485 262	601
161 480 680	613	161 484 879	607	161 485 157	606	161 485 263	601
161 480 681	613	161 484 880	607	161 485 158	606	161 485 264	601
161 480 682	614	161 484 881	607	161 485 159	606	161 485 265	601
161 480 683	614	161 484 882	607	161 485 201	604, 604	161 485 266	601
161 480 684	614	161 484 883	607	161 485 202	604	161 485 267	601
161 480 685	614	161 484 884	607	161 485 203	604	161 485 268	601
161 480 686	614	161 484 885	607	161 485 204	604	161 485 269	601
161 480 687	614	161 484 887	607	161 485 205	604	161 485 271	601, 601
161 480 688	614	161 484 888	607	161 485 206	604	161 485 272	601
161 480 689	614	161 484 889	607	161 485 207	604	161 485 273	601
161 480 690	614	161 484 890	607	161 485 208	604	161 485 274	601
161 480 699	612	161 484 891	607	161 485 209	604	161 485 275	601
161 480 700	612	161 484 892	607	161 485 211	604, 604	161 485 276	601
161 480 701	612	161 484 893	607	161 485 212	604	161 485 277	601
161 482 017	613	161 484 894	607	161 485 213	604	161 485 278	601
161 482 018	613	161 484 895	607	161 485 214	604	161 485 279	601
						161 485 281	601, 601

# Index

Code	Page	Code	Page	Code	Page	Code	Page
161 485 282	601	161 486 400	581	161 486 909	596	161 488 172	584, 584
161 485 283	601	161 486 401	581	161 486 926	596	161 488 173	584
161 485 284	601	161 486 402	581	161 486 927	596	161 488 174	584
161 485 285	601	161 486 403	581	161 486 928	596	161 488 175	584
161 485 286	601	161 486 404	581	161 488 002	582, 582	161 488 176	584
161 485 287	601	161 486 405	581	161 488 003	582	161 488 177	584
161 485 288	601	161 486 406	581	161 488 004	582	161 488 280	581
161 485 289	601	161 486 407	581	161 488 005	582	161 488 281	581
161 485 291	601, 601	161 486 408	581	161 488 006	582	161 488 282	581
161 485 292	601	161 486 410	581	161 488 007	582	161 488 283	581
161 485 293	601	161 486 411	581	161 488 012	582, 582	161 488 284	581
161 485 294	601	161 486 412	581	161 488 013	582	161 488 285	581
161 485 295	601	161 486 413	581	161 488 014	582	161 489 131	598
161 485 296	601	161 486 414	581	161 488 015	582	161 489 133	598
161 485 297	601	161 486 415	581	161 488 016	582	161 489 136	598
161 485 298	601	161 486 416	581	161 488 017	582	161 489 161	598
161 485 299	601	161 486 417	581	161 488 022	583, 583	161 489 163	598
161 485 351	586	161 486 418	581	161 488 023	583	161 489 166	598
161 485 353	586	161 486 689	581	161 488 024	583	161 489 231	598
161 485 361	586	161 486 690	581, 596,	161 488 025	583	161 489 233	598
161 485 363	586		596, 596	161 488 026	583	161 489 236	598
161 486 151	580, 580	161 486 691	581, 596,	161 488 027	583	161 489 261	598
161 486 152	580		596	161 488 032	583, 583	161 489 263	598
161 486 153	580	161 486 694	596	161 488 033	583	161 489 266	598
161 486 154	580	161 486 695	596	161 488 034	583	161 490 412	612
161 486 155	580	161 486 697	596, 596	161 488 035	583	161 490 413	612
161 486 156	580	161 486 861	595	161 488 036	583	161 490 630	55, 57
161 486 157	580	161 486 862	595	161 488 037	583	161 490 632	55, 57
161 486 158	580	161 486 863	595	161 488 041	585	161 490 634	55, 57
161 486 159	580	161 486 864	595	161 488 042	585	161 490 635	55, 57
161 486 163	580, 580	161 486 865	595	161 488 043	585	161 490 636	55, 57
161 486 164	580	161 486 866	595	161 488 044	585	161 490 637	55, 57
161 486 165	580	161 486 867	595	161 488 045	585	161 490 638	55, 57
161 486 166	580	161 486 868	595	161 488 046	585	161 490 639	55, 58
161 486 167	580	161 486 869	595	161 488 047	585	161 490 640	55, 58
161 486 168	580	161 486 873	595	161 488 051	585	161 490 641	55, 58
161 486 169	580	161 486 874	595	161 488 052	585	161 490 644	55, 58
161 486 170	580	161 486 875	595	161 488 053	585	161 490 889	595
161 486 171	580	161 486 876	595	161 488 054	585	161 490 890	595
161 486 325	596, 596,	161 486 877	595	161 488 055	585	161 490 891	595
	596	161 486 878	595	161 488 056	585	161 490 892	595
161 486 326	596, 596	161 486 879	595	161 488 057	585	161 490 893	595
161 486 327	596	161 486 880	595	161 488 061	585	161 490 894	595
161 486 328	596	161 486 881	595	161 488 062	585	161 490 895	595
161 486 375	582, 582	161 486 886	596	161 488 063	585	161 490 896	595
161 486 376	582	161 486 887	596	161 488 064	585	161 490 897	595
161 486 377	582	161 486 888	596	161 488 065	585	161 491 151	602, 605,
161 486 378	582	161 486 889	596	161 488 066	585		605
161 486 379	582	161 486 892	596	161 488 067	585	161 491 152	602, 605
161 486 380	582	161 486 893	596	161 488 071	585	161 491 153	602, 605
161 486 381	582	161 486 894	596	161 488 072	585	161 491 154	602, 605
161 486 382	582	161 486 895	596	161 488 073	585	161 491 155	602, 605
161 486 383	582	161 486 899	596	161 488 074	585	161 491 156	602, 605
161 486 385	582, 582	161 486 900	596	161 488 075	585	161 491 157	602, 605
161 486 386	582	161 486 901	596	161 488 076	585	161 491 158	602, 605
161 486 387	582	161 486 902	596	161 488 077	585	161 491 159	602, 605
161 486 388	582	161 486 903	596	161 488 162	584, 584	161 492 062	588
161 486 389	582	161 486 904	596	161 488 163	584	161 492 063	588
161 486 390	582	161 486 905	596	161 488 164	584	161 492 064	588
161 486 391	582	161 486 906	596	161 488 165	584	161 492 065	588
161 486 392	582	161 486 907	596	161 488 166	584	161 492 066	588
161 486 393	582	161 486 908	596	161 488 167	584	161 492 067	588







# Index

Code	Page	Code	Page	Code	Page	Code	Page
161 543 784	513	161 543 897	429	161 546 202	375	161 546 405	376
161 543 785	513	161 543 942	426	161 546 203	375	161 546 406	376
161 543 786	513	161 543 943	426	161 546 204	375	161 546 407	376
161 543 787	513	161 543 944	426	161 546 205	375	161 546 408	376
161 543 791	513	161 543 945	426	161 546 206	375	161 546 409	376
161 543 792	513	161 543 946	426	161 546 207	375	161 546 410	376
161 543 793	513	161 543 947	426	161 546 209	375	161 546 412	376
161 543 794	513	161 543 952	426	161 546 210	375	161 546 413	376
161 543 795	513	161 543 953	426	161 546 211	375	161 546 414	376
161 543 796	513	161 543 954	426	161 546 212	375	161 546 415	376
161 543 797	513	161 543 955	426	161 546 213	375	161 546 416	376
161 543 802	516	161 543 956	426	161 546 214	375	161 546 417	376
161 543 803	516	161 543 957	426	161 546 215	375	161 546 418	376
161 543 804	516	161 543 982	517	161 546 216	375	161 546 419	376
161 543 805	516	161 543 983	517	161 546 217	375	161 546 420	376
161 543 806	516	161 543 984	517	161 546 219	375	161 546 422	378
161 543 807	516	161 543 985	517	161 546 220	375	161 546 423	378
161 543 812	516	161 543 986	517	161 546 221	380	161 546 424	378
161 543 813	516	161 543 987	517	161 546 222	380	161 546 425	378
161 543 814	516	161 543 992	517	161 546 223	380	161 546 426	378
161 543 815	516	161 543 993	517	161 546 224	380	161 546 427	378
161 543 816	516	161 543 994	517	161 546 225	380	161 546 428	378
161 543 817	516	161 543 995	517	161 546 226	380	161 546 429	378
161 543 842	514	161 543 996	517	161 546 227	380	161 546 430	378
161 543 843	514	161 543 997	517	161 546 229	380	161 546 432	378
161 543 844	514	161 546 008	375	161 546 230	380	161 546 433	378
161 543 845	514	161 546 018	375	161 546 231	380	161 546 434	378
161 543 846	514	161 546 061	115	161 546 232	380	161 546 435	378
161 543 847	514	161 546 062	115	161 546 233	380	161 546 436	378
161 543 852	514	161 546 063	115	161 546 234	380	161 546 437	378
161 543 853	514	161 546 064	115	161 546 235	380	161 546 438	378
161 543 854	514	161 546 065	115	161 546 236	380	161 546 439	378
161 543 855	514	161 546 066	115	161 546 237	380	161 546 440	378
161 543 856	514	161 546 067	115	161 546 239	380	161 546 448	381
161 543 857	514	161 546 068	115, 373	161 546 240	380	161 546 449	381
161 543 861	427	161 546 069	115	161 546 241	373	161 546 450	381
161 543 862	427	161 546 070	115	161 546 242	373	161 546 468	509
161 543 863	427	161 546 071	115	161 546 243	373	161 546 469	509
161 543 864	427	161 546 072	115	161 546 244	373	161 546 470	509
161 543 865	427	161 546 073	115	161 546 245	373	161 546 478	509
161 543 866	427	161 546 074	115	161 546 246	373	161 546 479	509
161 543 867	427	161 546 075	115	161 546 247	373	161 546 480	509
161 543 871	427	161 546 076	115	161 546 249	373	161 546 482	377
161 543 872	427	161 546 077	115	161 546 250	373	161 546 483	377
161 543 873	427	161 546 078	115, 373	161 546 251	373	161 546 484	377
161 543 874	427	161 546 079	115	161 546 252	373	161 546 485	377
161 543 875	427	161 546 080	115	161 546 253	373	161 546 486	377
161 543 876	427	161 546 088	380	161 546 254	373	161 546 487	377
161 543 877	427	161 546 098	380	161 546 255	373	161 546 492	377
161 543 881	429	161 546 108	118	161 546 256	373	161 546 493	377
161 543 882	429	161 546 109	118	161 546 257	373	161 546 494	377
161 543 883	429	161 546 110	118	161 546 259	373	161 546 495	377
161 543 884	429	161 546 118	118	161 546 260	373	161 546 496	377
161 543 885	429	161 546 119	118	161 546 268	379	161 546 497	377
161 543 886	429	161 546 120	118	161 546 269	379	161 546 502	508
161 543 887	429	161 546 128	505	161 546 270	379	161 546 503	508
161 543 891	429	161 546 129	505	161 546 278	379	161 546 504	508
161 543 892	429	161 546 130	505	161 546 279	379	161 546 505	508
161 543 893	429	161 546 138	505	161 546 280	379	161 546 506	508
161 543 894	429	161 546 139	505	161 546 402	376	161 546 507	508
161 543 895	429	161 546 140	505	161 546 403	376	161 546 508	508
161 543 896	429	161 546 201	375	161 546 404	376	161 546 509	508





# Index

Code	Page	Code	Page	Code	Page	Code	Page
161 561 235	547	161 562 024	311	161 562 093	312	161 562 418	312
161 561 236	547	161 562 025	311	161 562 094	312	161 562 419	312
161 561 237	547	161 562 026	311	161 562 095	312	161 562 420	312
161 561 238	547	161 562 027	311	161 562 096	312	161 562 428	313
161 561 239	547	161 562 028	311	161 562 097	312	161 562 429	313
161 561 240	547	161 562 029	311	161 562 201	548	161 562 430	313
161 561 302	482	161 562 030	311	161 562 202	548	161 562 438	313
161 561 303	482	161 562 031	311	161 562 203	548	161 562 439	313
161 561 304	482	161 562 032	311	161 562 204	548	161 562 440	313
161 561 305	482	161 562 033	311	161 562 205	548	161 567 002	269
161 561 306	482	161 562 034	311	161 562 206	548	161 567 003	269
161 561 307	482	161 562 035	311	161 562 207	548	161 567 004	269
161 561 308	482	161 562 036	311	161 562 208	548	161 567 005	269
161 561 309	482	161 562 037	311	161 562 209	548	161 567 006	269
161 561 310	482	161 562 038	311	161 562 210	548	161 567 007	269
161 561 323	482	161 562 039	311	161 562 211	548	161 567 008	269
161 561 324	482	161 562 040	311	161 562 212	548	161 567 009	269
161 561 325	482	161 562 041	310	161 562 213	548	161 567 010	269
161 561 326	482	161 562 042	310	161 562 214	548	161 567 022	269
161 561 327	482	161 562 043	310	161 562 215	548	161 567 023	269
161 561 408	306	161 562 044	310	161 562 216	548	161 567 024	269
161 561 409	306	161 562 045	310	161 562 217	548	161 567 025	269
161 561 410	306	161 562 046	310	161 562 218	548	161 567 026	269
161 561 418	306	161 562 047	310	161 562 219	548	161 567 027	269
161 561 419	306	161 562 048	310	161 562 220	548	161 567 028	269
161 561 420	306	161 562 049	310	161 562 221	549	161 567 029	269
161 561 428	307	161 562 050	310	161 562 222	549	161 567 030	269
161 561 429	307	161 562 051	310	161 562 223	549	161 567 042	272
161 561 430	307	161 562 052	310	161 562 224	549	161 567 043	272
161 561 438	307	161 562 053	310	161 562 225	549	161 567 044	272
161 561 439	307	161 562 054	310	161 562 226	549	161 567 045	272
161 561 440	307	161 562 055	310	161 562 227	549	161 567 046	272
161 561 901	308	161 562 056	310	161 562 228	549	161 567 047	272
161 561 902	308	161 562 057	310	161 562 229	549	161 567 048	272
161 561 903	308	161 562 058	310	161 562 230	549	161 567 049	272
161 561 904	308	161 562 059	310	161 562 231	549	161 567 050	272
161 561 905	308	161 562 060	310	161 562 232	549	161 567 062	272
161 561 906	308	161 562 061	483	161 562 233	549	161 567 063	272
161 561 907	308	161 562 062	483	161 562 234	549	161 567 064	272
161 562 001	309	161 562 063	483	161 562 235	549	161 567 065	272
161 562 002	309	161 562 064	483	161 562 236	549	161 567 066	272
161 562 003	309	161 562 065	483	161 562 237	549	161 567 067	272
161 562 004	309	161 562 066	483	161 562 238	549	161 567 068	272
161 562 005	309	161 562 067	483	161 562 239	549	161 567 069	272
161 562 006	309	161 562 069	483	161 562 240	549	161 567 070	272
161 562 007	309	161 562 070	483	161 562 302	484	161 567 402	271, 543
161 562 008	309, 483	161 562 071	483	161 562 303	484	161 567 403	271, 543
161 562 009	309	161 562 072	483	161 562 304	484	161 567 404	271, 543
161 562 010	309	161 562 073	483	161 562 305	484	161 567 405	271, 543
161 562 011	309	161 562 074	483	161 562 306	484	161 567 406	271, 543
161 562 012	309	161 562 075	483	161 562 307	484	161 567 407	271, 543
161 562 013	309	161 562 076	483	161 562 308	484	161 567 408	271, 543
161 562 014	309	161 562 077	483	161 562 309	484	161 567 422	271, 543
161 562 015	309	161 562 079	483	161 562 310	484	161 567 423	271, 543
161 562 016	309	161 562 080	483	161 562 323	484	161 567 424	271, 543
161 562 017	309	161 562 082	312	161 562 324	484	161 567 425	271, 543
161 562 018	309, 483	161 562 083	312	161 562 325	484	161 567 426	271, 543
161 562 019	309	161 562 084	312	161 562 326	484	161 567 427	271, 543
161 562 020	309	161 562 085	312	161 562 327	484	161 567 428	271, 543
161 562 021	311	161 562 086	312	161 562 408	312	161 567 502	270, 544
161 562 022	311	161 562 087	312	161 562 409	312	161 567 503	270, 544
161 562 023	311	161 562 092	312	161 562 410	312	161 567 504	270, 544



# Index

Code	Page	Code	Page	Code	Page	Code	Page
161 586 416	477	161 591 141	479	161 595 067	480	161 614 017	246
161 586 417	477	161 591 142	479	161 595 069	480	161 614 413	247
161 591 001	298	161 591 143	479	161 595 070	480	161 614 414	247
161 591 002	298	161 591 144	479	161 595 071	480	161 614 415	247
161 591 003	298	161 591 145	479	161 595 072	480	161 614 416	247
161 591 004	298	161 591 146	479	161 595 073	480	161 614 417	247
161 591 005	298	161 591 147	479	161 595 074	480	161 614 512	448
161 591 006	298	161 591 148	479	161 595 075	480	161 614 513	448
161 591 007	298	161 591 149	479	161 595 076	480	161 614 514	448
161 591 008	298, 478	161 591 150	479	161 595 077	480	161 614 515	448
161 591 009	298	161 591 151	479	161 595 079	480	161 614 516	448
161 591 010	298	161 591 152	479	161 595 080	480	161 614 517	448
161 591 011	298	161 591 153	479	161 604 012	243	161 614 813	449
161 591 012	298	161 591 154	479	161 604 014	243	161 614 814	449
161 591 013	298	161 591 155	479	161 604 015	243	161 614 815	449
161 591 014	298	161 591 156	479	161 604 032	243	161 614 816	449
161 591 015	298	161 595 001	299	161 604 034	243	161 614 817	449
161 591 016	298	161 595 002	299	161 604 035	243	161 614 913	449
161 591 017	298	161 595 003	299	161 604 062	243	161 614 914	449
161 591 018	298, 478	161 595 004	299	161 604 064	243	161 614 915	449
161 591 019	298	161 595 005	299	161 604 065	243	161 614 916	449
161 591 020	298	161 595 006	299	161 604 412	244	161 614 917	449
161 591 041	299	161 595 007	299	161 604 414	244	161 615 013	246
161 591 042	299	161 595 008	299, 480	161 604 415	244	161 615 014	246
161 591 043	299	161 595 009	299	161 604 432	244	161 615 015	246
161 591 044	299	161 595 010	299	161 604 434	244	161 615 016	246
161 591 045	299	161 595 011	299	161 604 435	244	161 615 017	246
161 591 046	299	161 595 012	299	161 604 462	244	161 617 012	248
161 591 047	299	161 595 013	299	161 604 464	244	161 617 013	248
161 591 048	299	161 595 014	299	161 604 465	244	161 617 014	248
161 591 049	299	161 595 015	299	161 604 512	446	161 617 015	248
161 591 050	299	161 595 016	299	161 604 514	446	161 617 016	248
161 591 051	299	161 595 017	299	161 604 515	446	161 617 017	248
161 591 052	299	161 595 018	299, 480	161 604 532	446	161 617 913	450
161 591 053	299	161 595 019	299	161 604 534	446	161 617 914	450
161 591 054	299	161 595 020	299	161 604 535	446	161 617 915	450
161 591 055	299	161 595 041	300	161 604 562	446	161 617 916	450
161 591 056	299	161 595 042	300	161 604 564	446	161 617 917	450
161 591 057	299	161 595 043	300	161 604 565	446	161 617 923	536
161 591 058	299	161 595 044	300	161 604 812	447	161 617 924	536
161 591 059	299	161 595 045	300	161 604 814	447	161 617 925	536
161 591 060	299	161 595 046	300	161 604 815	447	161 617 926	536
161 591 061	478	161 595 047	300	161 604 832	447	161 617 927	536
161 591 062	478	161 595 048	300	161 604 834	447	161 624 011	249
161 591 063	478	161 595 049	300	161 604 835	447	161 624 012	249
161 591 064	478	161 595 050	300	161 604 862	447	161 624 013	249
161 591 065	478	161 595 051	300	161 604 864	447	161 624 014	249
161 591 066	478	161 595 052	300	161 604 865	447	161 624 015	249
161 591 067	478	161 595 053	300	161 605 012	244	161 624 016	249
161 591 069	478	161 595 054	300	161 605 014	244	161 624 017	249
161 591 070	478	161 595 055	300	161 605 015	244	161 624 031	249
161 591 071	478	161 595 056	300	161 605 032	244	161 624 032	249
161 591 072	478	161 595 057	300	161 605 034	244	161 624 033	249
161 591 073	478	161 595 058	300	161 605 035	244	161 624 034	249
161 591 074	478	161 595 059	300	161 605 062	244	161 624 035	249
161 591 075	478	161 595 060	300	161 605 064	244	161 624 036	249
161 591 076	478	161 595 061	480	161 605 065	244	161 624 037	249
161 591 077	478	161 595 062	480	161 614 011	246	161 624 052	249
161 591 079	478	161 595 063	480	161 614 013	246	161 624 053	249
161 591 080	478	161 595 064	480	161 614 014	246	161 624 054	249
161 591 139	479	161 595 065	480	161 614 015	246	161 624 055	249
161 591 140	479	161 595 066	480	161 614 016	246	161 624 056	249



# Index

Code	Page	Code	Page	Code	Page	Code	Page
161 654 934	460	161 684 054	258	161 684 935	464	161 687 937	465
161 654 935	460	161 684 055	258	161 684 936	464	161 687 972	542
161 654 936	460	161 684 056	258	161 684 937	464	161 687 973	542
161 654 937	460	161 684 057	258	161 684 972	541	161 687 974	542
161 655 012	256	161 684 061	258	161 684 973	541	161 687 975	542
161 655 013	256	161 684 062	258	161 684 974	541	161 687 976	542
161 655 014	256	161 684 063	258	161 684 975	541	161 687 977	542
161 655 015	256	161 684 064	258	161 684 976	541	161 704 014	266
161 655 016	256	161 684 065	258	161 684 977	541	161 704 017	266
161 655 017	256	161 684 066	258	161 685 012	259	161 704 034	266
161 655 032	256	161 684 067	258	161 685 013	259	161 704 037	266
161 655 033	256	161 684 512	462	161 685 014	259	161 704 514	466
161 655 034	256	161 684 513	462	161 685 015	259	161 704 517	466
161 655 035	256	161 684 514	462	161 685 016	259	161 704 534	466
161 655 036	256	161 684 515	462	161 685 017	259	161 704 537	466
161 655 037	256	161 684 516	462	161 685 032	259	161 704 614	467
161 657 012	257	161 684 517	462	161 685 033	259	161 704 617	467
161 657 013	257	161 684 532	462	161 685 034	259	161 704 634	467
161 657 014	257	161 684 533	462	161 685 035	259	161 704 637	467
161 657 015	257	161 684 534	462	161 685 036	259	161 704 814	468
161 657 016	257	161 684 535	462	161 685 037	259	161 704 817	468
161 657 017	257	161 684 536	462	161 687 012	260	161 704 834	468
161 657 032	257	161 684 537	462	161 687 013	260	161 704 837	468
161 657 033	257	161 684 812	463	161 687 014	260	161 705 014	264
161 657 034	257	161 684 813	463	161 687 015	260	161 705 017	264
161 657 035	257	161 684 814	463	161 687 016	260	161 705 034	264
161 657 036	257	161 684 815	463	161 687 017	260	161 705 037	264
161 657 037	257	161 684 816	463	161 687 032	260	161 714 014	267
161 657 912	461	161 684 817	463	161 687 033	260	161 714 017	267
161 657 913	461	161 684 822	540	161 687 034	260	161 714 034	267
161 657 914	461	161 684 823	540	161 687 035	260	161 714 037	267
161 657 915	461	161 684 824	540	161 687 036	260	161 714 514	469
161 657 916	461	161 684 825	540	161 687 037	260	161 714 517	469
161 657 917	461	161 684 826	540	161 687 052	260	161 714 534	469
161 657 922	539	161 684 827	540	161 687 053	260	161 714 537	469
161 657 923	539	161 684 832	463	161 687 054	260	161 714 614	470
161 657 924	539	161 684 833	463	161 687 055	260	161 714 617	470
161 657 925	539	161 684 834	463	161 687 056	260	161 714 634	470
161 657 926	539	161 684 835	463	161 687 057	260	161 714 637	470
161 657 927	539	161 684 836	463	161 687 062	260	161 714 814	471
161 657 932	461	161 684 837	463	161 687 063	260	161 714 817	471
161 657 933	461	161 684 872	540	161 687 064	260	161 714 834	471
161 657 934	461	161 684 873	540	161 687 065	260	161 714 837	471
161 657 935	461	161 684 874	540	161 687 066	260	161 715 014	265
161 657 936	461	161 684 875	540	161 687 067	260	161 715 017	265
161 657 937	461	161 684 876	540	161 687 912	465	161 715 034	265
161 684 011	258	161 684 877	540	161 687 913	465	161 715 037	265
161 684 012	258	161 684 912	464	161 687 914	465	163 482 056	588
161 684 013	258	161 684 913	464	161 687 915	465	167 060 019	346
161 684 014	258	161 684 914	464	161 687 916	465	167 060 020	346
161 684 015	258	161 684 915	464	161 687 917	465	167 060 021	346
161 684 016	258	161 684 916	464	161 687 922	542	167 060 022	346
161 684 017	258	161 684 917	464	161 687 923	542	167 060 023	346
161 684 031	258	161 684 922	541	161 687 924	542	167 060 024	346
161 684 032	258	161 684 923	541	161 687 925	542	167 060 025	346
161 684 033	258	161 684 924	541	161 687 926	542	167 060 038	346
161 684 034	258	161 684 925	541	161 687 927	542	167 060 039	346
161 684 035	258	161 684 926	541	161 687 932	465	167 060 040	346
161 684 036	258	161 684 927	541	161 687 933	465	167 060 041	346
161 684 037	258	161 684 932	464	161 687 934	465	167 060 042	346
161 684 052	258	161 684 933	464	161 687 935	465	167 060 043	346
161 684 053	258	161 684 934	464	161 687 936	465	167 061 003	344

# Index

Code	Page	Code	Page	Code	Page	Code	Page
167 061 004	344			167 484 742	586, 586	173 061 153	345
167 061 012	344	167 484 093	581, 603, 604	167 484 743	586	173 061 155	345
167 061 013	344			167 484 744	586	173 061 156	345
167 061 014	344	167 484 094	581, 603, 604	167 484 745	586	173 061 157	345
167 061 015	344			167 484 746	586	173 061 158	345
167 061 016	344	167 484 095	581, 603, 604	167 484 747	586	173 061 159	345
167 061 017	344			167 484 788	586, 586	173 061 160	345
167 061 035	344	167 484 096	581, 603, 604	167 484 789	586	173 061 161	345
167 061 036	344	167 484 100	581, 581	167 484 790	586	173 061 162	345
167 061 037	344	167 484 101	581	167 484 791	586	173 061 163	345
167 061 038	344	167 484 102	581	167 484 792	586	173 061 164	345
167 061 039	344	167 484 103	581	167 484 793	586	173 061 165	345
167 061 040	344	167 484 104	581	167 484 941	583	173 061 166	345
167 061 041	344	167 484 105	581	167 484 942	583	173 061 167	345
167 061 153	344	167 484 376	584, 584	167 484 943	583	175 484 161	602, 602
167 061 155	344	167 484 377	584	167 484 944	583	175 484 162	602
167 061 156	344	167 484 378	584	167 484 945	586	175 484 163	602
167 061 157	344	167 484 379	584	167 484 946	586	175 484 164	602
167 061 158	344	167 484 380	584	167 484 947	586	175 484 165	602
167 061 159	344	167 484 381	584	167 484 948	586	175 484 166	602
167 061 160	344	167 484 442	584, 584	167 484 992	594	175 484 167	602
167 061 161	344	167 484 443	584	167 484 993	594	175 484 168	602
167 061 162	345	167 484 444	584	167 484 994	594	175 484 169	602
167 061 163	345	167 484 445	584	167 484 995	594	192 017 036	18
167 061 164	345	167 484 446	584	167 484 996	594	192 017 037	18
167 061 165	345	167 484 447	584	167 484 997	594	192 017 038	18
167 061 166	345	167 484 488	584, 584	167 485 151	602, 602	192 017 039	18
167 061 167	345	167 484 489	584	167 485 152	602	192 017 040	18
167 482 479	583, 583	167 484 490	584	167 485 153	602	192 017 041	18
167 482 480	583, 583	167 484 491	584	167 485 154	602	192 017 042	18
167 482 481	583, 583	167 484 492	584	167 485 155	602	192 017 044	18
167 482 482	583	167 484 493	584	167 485 156	602	192 017 045	18
	581, 581,	167 484 542	584, 584	167 485 157	602	192 017 046	18
167 484 076	603, 603, 604, 604	167 484 543	584	167 485 158	602	192 017 047	18
		167 484 544	584	167 485 159	602	192 017 060	18
167 484 077	581, 603, 604	167 484 545	584	167 485 361	602, 602	192 017 080	18
		167 484 546	584	167 485 362	602	192 017 082	19
167 484 078	581, 603, 604	167 484 547	584	167 485 363	602	192 017 083	19
		167 484 576	584, 584	167 485 364	602	192 017 084	19
167 484 079	581, 603, 604	167 484 577	584	167 485 365	602	192 017 085	19
		167 484 578	584	167 485 366	602	192 017 086	19
167 484 080	581, 603, 604	167 484 579	584	167 485 367	602	192 017 087	19
		167 484 580	584	167 485 368	602	192 017 088	19
167 484 081	581, 603, 604	167 484 581	584	167 485 369	602	192 017 089	19
		167 484 588	584, 584	169 481 323	588	192 017 104	19
167 484 082	581, 603, 604	167 484 589	584	169 481 326	588	192 017 105	19
		167 484 590	584	169 481 327	588	192 017 106	19
167 484 083	581, 603, 604	167 484 591	584	173 061 003	345	192 017 107	19
		167 484 592	584	173 061 004	345	192 017 108	19
167 484 084	581, 603, 604	167 484 593	584	173 061 005	345	192 017 109	19
		167 484 642	586, 586	173 061 006	345	192 017 110	19
167 484 088	581, 581, 603, 603, 604, 604	167 484 643	586	173 061 007	345	192 017 111	19
		167 484 644	586	173 061 008	345	192 301 401	609, 612
167 484 089	581, 603, 604	167 484 645	586	173 061 009	345	192 301 451	609, 612
		167 484 646	586	173 061 010	345	192 301 501	609, 612
167 484 090	581, 603, 604	167 484 647	586	173 061 011	345	192 301 551	609, 612
		167 484 688	586, 586	173 061 012	345	192 301 651	609, 612
167 484 091	581, 603, 604	167 484 689	586	173 061 013	345	192 305 300	341
		167 484 690	586	173 061 014	345	192 305 349	341
167 484 092	581, 603, 604	167 484 691	586	173 061 015	345	192 305 350	341
		167 484 692	586	173 061 016	345	192 305 399	341
		167 484 693	586	173 061 017	345	192 305 400	341

# Index

Code	Page	Code	Page	Code	Page	Code	Page
192 305 449	341	198 000 894	594	198 151 853	593	198 335 064	619
192 305 450	341	198 000 895	594	198 151 854	593	198 335 065	619
192 305 499	341	198 000 896	594	198 151 855	593	198 335 066	619
192 305 500	341	198 000 897	594	198 151 856	593	198 335 067	619
192 305 549	341	198 104 166	594	198 151 857	593	198 335 070	619
192 305 550	341	198 150 127	569	198 153 062	591	198 335 071	619
192 305 599	341	198 150 128	569	198 153 063	591	198 335 072	619
192 305 600	341	198 150 129	569	198 153 064	591	198 335 073	619
192 305 649	341	198 150 130	569	198 153 065	591	198 335 074	619
192 305 650	341	198 150 131	569	198 153 066	591	198 335 075	619
192 305 699	341	198 150 132	569	198 153 067	591	198 335 076	619
192 305 702	497	198 150 144	569	198 153 180	553	198 335 077	619
192 305 703	497	198 150 145	569	198 153 181	553	198 335 078	619
192 305 704	497	198 150 146	570	198 153 182	553	198 335 079	619
192 305 705	497	198 150 147	569	198 153 183	553	198 335 080	619
192 305 706	497	198 150 148	569	198 153 184	553	198 335 081	619
192 305 707	497	198 150 149	570	198 153 185	553	198 335 082	619
192 305 717	497	198 150 538	77	198 153 186	553	198 335 085	619
192 305 718	497	198 150 539	77	198 153 187	553	198 335 086	619
192 305 719	497	198 150 540	77	198 153 188	553	198 335 087	619
192 305 720	497	198 150 543	77	198 153 189	553	198 335 088	619
192 305 721	497	198 150 545	77	198 153 192	567	198 335 089	619
192 305 722	497	198 151 480	566	198 153 193	567	198 335 090	619
192 305 723	497	198 151 481	566	198 153 194	567	198 335 091	619
192 305 724	497	198 151 492	566, 566	198 153 195	567	198 335 092	619
192 305 821	552	198 151 742	593	198 153 196	567	198 335 093	619
192 305 822	552	198 151 743	593	198 153 197	567	198 335 094	619
192 305 823	552	198 151 744	593	198 153 198	567	198 335 095	619
192 305 824	552	198 151 745	593	198 153 199	567	198 335 096	619
192 305 825	552	198 151 746	593	198 153 201	553	198 335 097	619
192 305 826	552	198 151 747	593	198 153 202	553	198 335 255	619
192 305 827	552	198 151 752	593	198 153 203	553	198 335 256	619
192 305 828	552	198 151 753	593	198 153 204	553	198 335 257	619
192 305 831	552	198 151 754	593	198 153 205	553	198 335 258	619
192 305 832	552	198 151 755	593	198 153 206	553	198 335 259	619
192 305 833	552	198 151 756	593	198 153 207	553	198 335 260	619
192 305 834	552	198 151 757	593	198 153 208	553	198 335 261	619
192 305 835	552	198 151 782	591	198 153 209	553	198 335 262	619
192 305 836	552	198 151 783	591	198 153 210	267	198 335 263	619
192 305 837	552	198 151 784	591	198 153 211	267	198 335 264	619
192 305 838	552	198 151 785	591	198 153 212	267	198 335 265	619
192 480 001	609, 612	198 151 786	591	198 153 213	267	198 335 266	619
192 480 002	609, 612	198 151 787	591	198 154 012	594	198 335 267	619
192 561 004	303	198 151 792	591	198 154 013	594	198 335 270	619
192 561 007	303	198 151 793	591	198 154 014	594	198 335 271	619
198 000 600	597, 597	198 151 794	591	198 154 015	594	198 335 272	619
198 000 621	597, 597, 597	198 151 795	591	198 154 016	594	198 335 273	619
198 000 622	597, 597	198 151 796	591	198 154 017	594	198 335 274	619
198 000 732	597, 597	198 151 797	591	198 204 162	594	198 335 275	619
198 000 872	592	198 151 802	591	198 204 164	594	198 335 276	619
198 000 873	592	198 151 803	591	198 204 327	593	198 335 277	619
198 000 874	592	198 151 804	591	198 204 328	593	198 335 278	619
198 000 875	592	198 151 805	591	198 204 329	593	198 335 279	619
198 000 876	592	198 151 806	591	198 335 055	619	198 335 280	619
198 000 877	592	198 151 807	591	198 335 056	619	198 335 281	619
198 000 881	592	198 151 842	593	198 335 057	619	198 335 282	619
198 000 882	592	198 151 843	593	198 335 058	619	198 335 285	619
198 000 883	592	198 151 844	593	198 335 059	619	198 335 286	619
198 000 884	592	198 151 845	593	198 335 060	619	198 335 287	619
198 000 884	592	198 151 846	593	198 335 061	619	198 335 288	619
198 000 892	594	198 151 847	593	198 335 062	619	198 335 289	619
198 000 893	594	198 151 852	593	198 335 063	619	198 335 290	619



# Index

Code	Page	Code	Page	Code	Page	Code	Page
198 335 291	619	198 546 124	123	198 801 310	338, 495	198 803 314	330
198 335 292	619	198 546 125	123	198 801 311	338, 495	198 803 315	330
198 335 293	619	198 546 126	123	198 801 312	338, 495	198 803 316	330
198 335 294	619	198 546 127	123	198 801 313	338, 495	198 803 317	330
198 335 295	619	198 546 132	123	198 801 314	338, 495	198 803 318	330
198 335 296	619	198 546 133	123	198 801 315	338, 495	198 803 319	330
198 335 297	619	198 546 134	123	198 801 316	338, 495	198 803 320	331
198 335 455	620, 620, 620, 620	198 546 135	123	198 801 317	338, 495	198 803 321	331
198 335 457	620	198 546 136	123	198 801 338	622	198 803 322	331
198 335 458	620	198 546 137	123	198 801 339	622	198 803 323	331
198 335 459	620, 620	198 546 142	123	198 801 340	622	198 803 324	331
198 335 470	620, 620, 620, 620	198 546 143	123	198 801 341	622	198 803 325	331
198 335 471	620	198 546 144	123	198 801 342	622	198 803 326	331
198 335 472	620	198 546 145	123	198 801 343	622	198 803 327	331
198 335 473	620, 620	198 546 146	123	198 801 386	338, 494	198 803 328	331
198 335 893	620	198 546 147	123	198 801 387	338, 494	198 803 329	331
198 335 894	620	198 546 147	123	198 801 388	338, 494	198 803 790	622
198 335 895	622	198 546 150	124	198 801 389	338, 494	198 803 791	622
198 335 896	622, 622, 622	198 546 151	124	198 801 389	338, 494	198 803 792	622
198 335 953	621	198 546 152	124	198 801 390	338, 494	198 803 792	622
198 335 954	621	198 546 153	124	198 801 391	338, 494	198 803 793	622
198 335 960	334	198 546 154	124	198 801 392	338, 494	198 803 794	622
198 335 961	334	198 800 004	570	198 801 393	338, 494	198 803 795	622
198 335 962	334	198 800 005	570	198 801 394	338, 494	198 803 796	622
198 335 963	334	198 800 006	570	198 801 395	338, 494	198 803 797	622
198 335 964	334	198 800 007	570	198 801 445	622	198 803 798	622
198 335 965	334	198 800 017	570	198 801 449	622	198 803 799	622
198 335 966	334	198 800 018	570	198 801 450	622	198 806 219	623
198 335 967	334	198 800 019	570	198 801 451	622	198 806 220	623
198 335 968	334	198 800 020	570	198 801 880	330	198 806 221	623
198 335 969	334	198 800 025	570	198 801 881	330	198 806 222	623
198 335 970	620	198 800 026	570	198 801 882	330	198 806 223	623
198 335 971	620	198 800 026	570	198 801 883	330	198 806 224	623
198 335 972	620	198 800 028	570	198 801 884	330	198 806 391	598
198 335 977	620	198 800 029	570	198 801 885	330	198 806 393	598
198 335 978	620	198 800 034	570	198 801 886	330	198 806 396	598
198 335 979	620	198 800 037	570	198 801 887	330	198 806 429	621
198 335 984	620, 620	198 800 039	570	198 801 888	330	198 806 451	599
198 335 990	621, 621, 621	198 800 040	572	198 801 889	330	198 806 452	599
198 335 991	334	198 800 041	570	198 801 890	331	198 806 453	599
198 335 992	334	198 800 042	572	198 801 891	331	198 806 511	339, 495
198 335 993	334	198 800 043	570	198 801 892	331	198 806 512	339, 495
198 335 994	334	198 800 044	572	198 801 893	331	198 806 513	339, 495
198 335 995	334	198 800 046	572	198 801 894	331	198 806 514	339, 495
198 335 998	491	198 800 048	572	198 801 895	331	198 806 515	339, 495
198 335 999	491	198 800 048	572	198 801 896	331	198 806 516	339, 495
198 546 001	122	198 800 050	572	198 801 897	331	198 806 517	339, 495
198 546 002	122	198 800 051	572	198 801 898	331	198 806 518	339, 495
198 546 082	121	198 800 052	570	198 801 899	331	198 806 519	339, 495
198 546 083	121	198 800 054	570	198 801 961	338, 494	198 806 520	339, 495
198 546 099	124	198 800 056	570	198 801 962	338, 494	198 806 521	339, 495
198 546 102	122	198 800 058	570	198 801 963	338, 494	198 806 522	339, 495
198 546 103	122	198 800 728	570	198 801 964	338, 494	198 806 523	339, 495
198 546 105	122	198 800 729	570	198 801 965	338, 494	198 806 524	339, 495
198 546 107	122	198 800 730	570	198 801 966	338, 494	198 806 525	339, 495
198 546 122	123	198 800 731	570	198 801 967	338, 494	198 806 526	339, 495
198 546 123	123	198 800 733	572	198 801 968	338, 494	198 806 527	339, 495
		198 800 734	572	198 801 969	338, 494	198 806 528	339, 495
		198 800 735	572	198 801 970	338, 494	198 806 529	339, 495
		198 800 737	572	198 803 310	330	198 806 530	339, 495
		198 800 757	570	198 803 311	330	198 806 531	339, 496
		198 800 758	572	198 803 312	330	198 806 532	339, 496
		198 800 759	572	198 803 313	330	198 806 533	339, 496
		198 801 308	338, 495				
		198 801 309	338, 495				

# Index

Code	Page	Code	Page	Code	Page	Code	Page
198 806 534	339, 496	198 808 019	616	199 025 169	262	199 104 005	156
198 806 535	339, 496	198 808 020	616	199 025 170	262	199 104 006	156
198 806 536	339, 496	198 808 021	616	199 025 177	263	199 104 012	156
198 806 537	339, 496	198 808 022	616	199 025 178	263	199 104 013	156
198 806 650	598	198 808 023	616	199 025 179	263	199 104 014	156
198 806 651	599	198 808 024	616	199 025 180	263	199 104 015	156
198 806 652	599	198 808 025	616	199 041 019	294	199 104 016	156
198 806 653	599	198 808 026	616	199 041 020	294	199 104 042	156
198 806 654	598	198 808 027	616	199 041 021	294	199 104 043	156
198 806 655	599	198 808 028	616	199 041 029	294	199 104 044	156
198 806 656	599	198 808 029	617	199 041 030	294	199 104 045	156
198 806 773	591	198 808 030	617	199 041 031	294	199 104 046	156
198 806 774	591	198 808 031	617	199 041 120	300	199 104 047	156, 156
198 806 962	599	198 808 032	617	199 041 121	300	199 104 048	156, 156
198 806 963	599	198 808 033	617	199 041 122	300	199 104 052	156
198 807 000	489	198 808 034	617	199 041 123	300	199 104 053	156
198 807 001	489	198 808 035	617	199 041 124	300	199 104 054	156
198 807 002	489	198 808 036	617	199 041 125	300	199 104 055	156
198 807 003	489	198 808 037	617	199 041 126	300	199 104 056	156
198 807 004	489	198 808 038	617	199 041 127	300	199 104 057	156, 156
198 807 005	489	198 808 039	617	199 041 128	300	199 104 058	156, 156
198 807 006	489	198 808 040	617	199 041 147	301	199 104 402	392
198 807 007	489	198 808 049	618	199 041 148	301	199 104 403	392
198 807 008	489	198 808 053	618	199 041 149	301	199 104 404	392
198 807 009	489	198 808 054	618	199 041 150	301	199 104 405	392
198 807 010	490	198 811 025	570	199 041 151	301	199 104 406	392
198 807 011	490	198 811 026	570	199 041 152	301	199 104 412	392
198 807 012	490	198 811 027	570	199 041 153	301	199 104 413	392
198 807 013	490	198 811 028	570	199 041 154	301	199 104 414	392
198 807 014	490	198 811 029	570	199 041 155	301	199 104 415	392
198 807 015	490	198 811 030	570	199 041 156	301	199 104 416	392
198 807 016	490	198 811 190	570	199 041 157	301	199 104 442	393
198 807 017	490	198 811 194	570	199 041 158	301	199 104 443	393
198 807 018	490	198 811 198	570	199 041 159	301	199 104 444	393
198 807 019	490	198153200	553	199 041 160	301	199 104 445	393
198 807 166	623	199 001 240	343	199 041 161	301	199 104 446	393
198 807 182	624	199 025 068	261	199 041 162	301	199 104 447	392, 393
198 807 187	624	199 025 069	261	199 041 163	301	199 104 448	392, 393
198 807 188	624	199 025 070	261	199 041 164	301	199 104 452	393
198 807 221	124	199 025 078	262	199 041 203	301	199 104 453	393
198 807 222	124	199 025 079	262	199 041 204	301	199 104 454	393
198 807 223	124	199 025 080	262	199 041 205	301	199 104 455	393
198 807 224	124	199 025 088	263	199 041 206	301	199 104 456	393
198 807 230	125	199 025 089	263	199 041 207	301	199 104 457	392, 393
198 807 231	125	199 025 090	263	199 041 208	301	199 104 458	392, 393
198 807 232	125	199 025 127	261	199 041 209	301	199 104 483	392
198 807 233	125	199 025 128	261	199 041 210	301	199 104 484	392
198 807 234	125	199 025 129	261	199 041 211	301	199 104 485	392
198 807 241	125	199 025 130	261	199 041 212	301	199 104 486	392
198 807 242	125	199 025 137	262	199 041 213	301	199 104 493	392
198 807 243	125	199 025 138	262	199 041 214	301	199 104 494	392
198 807 244	125	199 025 139	262	199 041 215	301	199 104 495	392
198 808 002	615	199 025 140	262	199 041 216	301	199 104 496	392
198 808 004	615	199 025 147	263	199 041 945	297	199 104 863	393
198 808 006	615	199 025 148	263	199 041 950	297	199 104 864	393
198 808 012	615	199 025 149	263	199 041 953	297	199 104 865	393
198 808 013	615	199 025 150	263	199 041 988	297	199 104 866	393
198 808 014	615	199 025 157	261	199 041 990	297	199 104 867	392, 393
198 808 015	615	199 025 158	261	199 041 991	297	199 104 868	392, 393
198 808 016	615	199 025 159	261	199 104 002	156	199 104 873	393
198 808 017	616	199 025 167	262	199 104 003	156	199 104 874	393
198 808 018	616	199 025 168	262	199 104 004	156	199 104 875	393







# Index

Code	Page	Code	Page	Code	Page	Code	Page
199 185 897	519	199 190 360	324	199 190 601	566	199 230 076	163
199 185 898	519	199 190 361	324	199 190 602	566	199 230 077	163
199 185 903	520		327, 327,	199 190 603	566	199 230 078	163
199 185 904	520		327, 327,	199 190 604	566	199 230 082	166
199 185 905	520		327, 327,	199 190 605	566	199 230 083	166
199 185 906	520		327, 327,	199 190 607	566	199 230 084	166
199 185 907	520	199 190 378	327, 327,	199 190 610	566	199 230 085	166
199 185 908	520		327, 327,	199 190 611	566	199 230 086	166
199 185 913	520		327, 327,	199 190 617	566	199 230 087	166
199 185 914	520		327, 327,	199 230 002	158	199 230 088	166
199 185 915	520		327	199 230 003	158	199 230 092	166
199 185 916	520		327, 327,	199 230 004	158	199 230 093	166
199 185 917	520		327, 327,	199 230 005	158	199 230 094	166
199 185 918	520	199 190 379	327, 327,	199 230 006	158	199 230 095	166
199 188 353	521		327	199 230 007	158	199 230 096	166
199 188 354	521	199 190 424	327	199 230 008	158	199 230 097	166
199 188 355	521	199 190 425	326	199 230 012	158	199 230 098	166
199 188 356	521	199 190 426	327	199 230 013	158	199 230 102	167
199 188 357	521	199 190 430	326	199 230 014	158	199 230 103	167
199 188 358	521	199 190 435	325	199 230 015	158	199 230 104	167
199 188 363	521	199 190 436	325	199 230 016	158	199 230 105	167
199 188 364	521	199 190 498	323	199 230 017	158	199 230 106	167
199 188 365	521	199 190 499	323	199 230 018	158	199 230 107	167
199 188 366	521	199 190 500	323	199 230 022	159	199 230 108	167
199 188 367	521	199 190 501	323	199 230 023	159	199 230 112	167
199 188 368	521	199 190 510	323	199 230 024	159	199 230 113	167
199 188 393	523	199 190 511	323	199 230 025	159	199 230 114	167
199 188 394	523	199 190 512	323	199 230 026	159	199 230 115	167
199 188 395	523	199 190 513	323	199 230 027	159	199 230 116	167
199 188 396	523	199 190 518	326	199 230 028	159	199 230 117	167
199 188 397	523	199 190 519	326	199 230 032	159	199 230 118	167
199 188 398	523	199 190 520	326	199 230 033	159	199 230 122	170
199 188 403	523	199 190 521	326	199 230 034	159	199 230 123	170
199 188 404	523	199 190 522	326	199 230 035	159	199 230 124	170
199 188 405	523	199 190 523	326	199 230 036	159	199 230 125	170
199 188 406	523	199 190 532	324	199 230 037	159	199 230 126	170
199 188 407	523	199 190 533	324	199 230 038	159	199 230 127	170
199 188 408	523	199 190 534	324	199 230 042	162	199 230 128	170
199 188 443	522	199 190 535	324	199 230 043	162	199 230 129	170
199 188 444	522	199 190 540	326	199 230 044	162	199 230 130	170
199 188 445	522	199 190 541	326	199 230 045	162	199 230 131	170
199 188 446	522	199 190 542	326	199 230 046	162	199 230 132	170
199 188 447	522	199 190 543	326	199 230 047	162	199 230 133	170
199 188 448	522	199 190 544	326	199 230 048	162	199 230 134	170
199 189 008	207	199 190 545	326	199 230 052	162	199 230 135	170
199 189 009	207	199 190 546	323	199 230 053	162	199 230 136	170
199 189 010	207	199 190 547	323	199 230 054	162	199 230 137	170
199 189 018	207	199 190 554	324	199 230 055	162	199 230 138	170
199 189 019	207	199 190 555	324	199 230 056	162	199 230 139	170
199 189 020	207	199 190 561	323	199 230 057	162	199 230 140	170
199 189 068	208	199 190 571	323	199 230 058	162	199 230 141	170
199 189 069	208	199 190 572	323	199 230 062	163	199 230 142	171
199 189 070	208	199 190 573	323	199 230 063	163	199 230 143	171
199 189 078	208	199 190 574	323	199 230 064	163	199 230 144	171
199 189 079	208	199 190 578	326	199 230 065	163	199 230 145	171
199 189 080	208	199 190 579	326	199 230 066	163	199 230 146	171
	327, 327,	199 190 580	326	199 230 067	163	199 230 147	171
199 190 275	327, 327,	199 190 581	326	199 230 068	163	199 230 148	171
	327, 327	199 190 582	325	199 230 072	163	199 230 149	171
199 190 357	324	199 190 583	325	199 230 073	163	199 230 150	171
199 190 358	324	199 190 584	325	199 230 074	163	199 230 151	171
199 190 359	324	199 190 600	566	199 230 075	163	199 230 152	171











# Index

Code	Page	Code	Page	Code	Page	Code	Page
199 288 146	526	199 335 101	329	199 335 444	487	199 335 680	335, 492
199 288 147	526	199 335 102	329	199 335 445	487	199 335 681	335, 492
199 288 148	526	199 335 103	329	199 335 446	487	199 335 682	335, 492
199 288 153	526	199 335 104	329	199 335 447	487	199 335 685	336, 492
199 288 154	526	199 335 105	329	199 335 448	487	199 335 686	336, 492
199 288 155	526	199 335 106	329	199 335 449	487	199 335 687	336, 492
199 288 156	526	199 335 107	329	199 335 460	620	199 335 688	336, 492
199 288 157	526	199 335 108	329	199 335 474	620	199 335 689	336, 492
199 288 158	526	199 335 109	329	199 335 500	488	199 335 690	336, 492
199 335 000	328	199 335 110	329, 488	199 335 501	488	199 335 691	336, 492
199 335 001	328	199 335 111	329	199 335 502	488	199 335 692	336, 492
199 335 002	328	199 335 112	329, 488	199 335 503	488	199 335 693	336, 492
199 335 003	328	199 335 120	329	199 335 504	488	199 335 694	336, 492
199 335 004	328	199 335 121	329	199 335 505	488	199 335 695	336, 492
199 335 005	328	199 335 122	329	199 335 506	488	199 335 696	336, 492
199 335 006	328	199 335 123	329	199 335 507	488	199 335 697	336, 492
199 335 007	328	199 335 124	329	199 335 508	488	199 335 861	336, 492
199 335 008	328	199 335 125	329	199 335 509	488	199 335 862	336, 492
199 335 009	328	199 335 126	329	199 335 511	488	199 335 863	336, 492
199 335 010	328, 487	199 335 127	329	199 335 520	488	199 335 864	336, 492
199 335 011	328, 487	199 335 128	329	199 335 521	488	199 335 865	336, 492
199 335 012	328, 487	199 335 129	329	199 335 522	488	199 335 866	336, 492
199 335 020	328	199 335 130	329, 488	199 335 523	488	199 335 867	336, 492
199 335 021	328	199 335 131	329, 488	199 335 524	488	199 335 868	336, 492
199 335 022	328	199 335 132	329, 488	199 335 525	488	199 335 869	336, 492
199 335 023	328	199 335 140	329	199 335 526	488	199 335 870	336, 492
199 335 024	328	199 335 141	329	199 335 527	488	199 335 871	336, 492
199 335 025	328	199 335 142	329	199 335 528	488	199 335 872	336, 492
199 335 026	328	199 335 143	329	199 335 529	488	199 335 873	336, 492
199 335 027	328	199 335 144	329	199 335 540	488	199 335 962	490
199 335 028	328	199 335 145	329	199 335 541	488	199 335 963	490
199 335 029	328	199 335 146	329	199 335 542	488	199 335 964	490
199 335 030	328, 487	199 335 147	329	199 335 543	488	199 335 965	490
199 335 031	328, 487	199 335 148	329	199 335 544	488	199 335 966	490
199 335 032	328, 487	199 335 149	329	199 335 545	488	199 335 967	490
199 335 033	335, 491	199 335 150	329, 488	199 335 546	488	199 335 968	490
199 335 034	335, 491	199 335 151	329, 488	199 335 547	488	199 335 969	490
199 335 035	335, 491	199 335 152	329, 488	199 335 548	488	199 335 974	620
199 335 036	335, 491	199 335 400	487	199 335 549	488	199 335 975	620
199 335 037	335, 491	199 335 401	487	199 335 655	335, 491	199 335 991	490
199 335 038	335, 491	199 335 402	487	199 335 656	335, 491	199 335 992	490
199 335 039	335, 491	199 335 403	487	199 335 657	335, 491	199 335 993	490
199 335 040	328	199 335 404	487	199 335 658	335, 491	199 335 994	490
199 335 041	328	199 335 405	487	199 335 659	335, 491	199 335 995	490
199 335 042	328	199 335 406	487	199 335 660	335, 491	199 350 655	336, 493
199 335 043	328	199 335 407	487	199 335 661	335, 491	199 350 656	336, 493
199 335 044	328	199 335 408	487	199 335 662	335, 491	199 350 657	336, 493
199 335 045	328	199 335 409	487	199 335 663	335, 491	199 350 658	336, 493
199 335 046	328	199 335 420	487	199 335 664	335, 491	199 350 659	336, 493
199 335 047	328	199 335 421	487	199 335 665	335, 491	199 350 660	336, 493
199 335 048	328	199 335 422	487	199 335 666	335, 491	199 350 661	336, 493
199 335 049	328	199 335 423	487	199 335 667	335, 491	199 350 662	336, 493
199 335 050	328, 487	199 335 424	487	199 335 670	335, 492	199 350 663	336, 493
199 335 051	328, 487	199 335 425	487	199 335 671	335, 492	199 350 664	336, 493
199 335 052	328, 487	199 335 426	487	199 335 672	335, 492	199 350 665	336, 493
199 335 053	335, 491	199 335 427	487	199 335 673	335, 492	199 350 666	336, 493
199 335 054	335, 491	199 335 428	487	199 335 674	335, 492	199 350 667	336, 493
199 335 068	335, 491	199 335 429	487	199 335 675	335, 492	199 350 670	337, 493
199 335 069	335, 491	199 335 440	487	199 335 676	335, 492	199 350 671	337, 493
199 335 083	335, 491	199 335 441	487	199 335 677	335, 492	199 350 672	337, 493
199 335 084	335, 491	199 335 442	487	199 335 678	335, 492	199 350 673	337, 493
199 335 100	329	199 335 443	487	199 335 679	335, 492	199 350 674	337, 493

# Index

Code	Page	Code	Page	Code	Page	Code	Page
199 350 675	337, 493	700 276 563	332	721 010 122	21	721 150 109	22
199 350 676	337, 493	700 276 564	332	721 010 123	21	721 150 110	22
199 350 677	337, 493	700 276 565	332	721 010 125	21	721 150 111	22
199 350 678	337, 493	700 276 566	333	721 011 120	353	721 150 112	22, 354
199 350 679	337, 493	700 276 567	333	721 100 101	22	721 150 113	22
199 350 680	337, 493	700 276 568	333	721 100 102	22	721 150 114	22
199 350 681	337, 493	700 278 354	587	721 100 103	22	721 150 115	22
199 350 682	337, 493	720 600 236	61	721 100 104	22	721 150 116	22, 354
199 350 685	337, 493	720 600 237	61	721 100 105	22	721 150 117	22
199 350 686	337, 493	720 600 238	61	721 100 106	22	721 150 119	22
199 350 687	337, 493	720 600 239	61	721 100 107	22	721 150 120	22
199 350 688	337, 493	720 600 240	61	721 100 108	22	721 150 121	22
199 350 689	337, 493	720 600 241	61	721 100 109	22	721 150 122	22
199 350 690	337, 493	720 600 242	61	721 100 110	22	721 150 123	22
199 350 691	337, 493	720 600 243	61	721 100 111	22	721 150 125	22
199 350 692	337, 493	720 600 246	61	721 100 112	22, 354	721 150 306	23
199 350 693	337, 493	720 600 247	61	721 100 113	22	721 150 307	23
199 350 694	337, 493	720 600 248	61	721 100 114	22	721 150 308	23
199 350 695	337, 493	720 600 249	62	721 100 115	22	721 150 309	23
199 350 696	337, 493	720 600 250	62	721 100 116	22, 354	721 150 310	23
199 350 697	337, 493	720 600 251	62	721 100 117	22	721 150 311	23
199 350 755	337, 494	720 600 252	62	721 100 119	22	721 151 105	354
199 350 756	337, 494	720 600 253	62	721 100 120	22	721 151 106	354
199 350 757	337, 494	720 600 257	61	721 100 121	22	721 151 107	354
199 350 758	337, 494	720 600 258	61	721 100 204	32	721 151 108	354
199 350 759	337, 494	720 600 268	61	721 100 205	32	721 151 109	354
199 350 760	337, 494	720 690 005	62	721 100 206	32	721 151 110	354
199 350 761	337, 494	720 690 006	62	721 100 207	32	721 151 111	354
199 350 762	337, 494	720 690 007	62	721 100 208	32	721 151 113	354
199 350 763	337, 494	720 690 008	62	721 100 209	32	721 151 115	354
199 350 764	337, 494	720 690 009	62	721 100 210	32	721 151 117	354
199 350 765	337, 494	720 690 010	62	721 100 211	32	721 151 120	354
199 350 766	337, 494	720 690 011	62	721 100 306	23	721 200 009	25
199 350 767	337, 494	720 690 012	62	721 100 307	23	721 200 010	25
200 119 366	575	720 690 405	62	721 100 308	23	721 200 011	25
200 155 054	575	720 910 209	36	721 100 309	23	721 200 101	24
20014A290	489	720 910 210	36	721 100 310	23	721 200 102	24
20014A300	490	720 910 211	36	721 100 311	23	721 200 103	24
20014A301	490	720 910 709	35	721 101 105	354	721 200 104	24
20014A302	490	720 910 710	35	721 101 106	354	721 200 105	24
20014A303	490	720 910 711	35	721 101 107	354	721 200 106	24
20014A304	490	721 000 106	21	721 101 108	354	721 200 107	24
20014A305	490	721 000 107	21	721 101 109	354	721 200 108	24
20014A309	490	721 000 108	21	721 101 110	354	721 200 109	24
700 254 308	599	721 000 109	21	721 101 111	354	721 200 110	24
700 254 309	599	721 000 110	21	721 101 113	354	721 200 111	24
700 254 310	599	721 000 111	21	721 101 115	354	721 200 112	24, 355
700 254 336	600	721 000 112	21, 353	721 101 117	354	721 200 113	24
700 254 337	600	721 000 113	21	721 101 206	359	721 200 114	24
700 254 338	600	721 000 114	21	721 101 207	359	721 200 115	24
700 254 342	600	721 000 116	21, 353	721 101 208	359	721 200 116	24, 355
700 254 343	600	721 000 117	21	721 101 605	41	721 200 117	24
700 254 344	600	721 001 106	353	721 101 606	41	721 200 119	24
700 254 376	600	721 001 107	353	721 101 607	41	721 200 120	24
700 254 377	600	721 001 108	353	721 101 608	41	721 200 121	24
700 254 378	600	721 001 109	353	721 101 609	41	721 200 122	24
700 254 379	600	721 001 110	353	721 101 610	41	721 200 123	24
700 254 380	600	721 001 111	353	721 101 611	41	721 200 125	24
700 254 381	600	721 001 113	353	721 150 105	22	721 200 132	25
700 254 404	599	721 001 115	353	721 150 106	22	721 200 133	25
700 254 405	599	721 001 117	353	721 150 107	22	721 200 134	25
700 254 406	599	721 010 120	21	721 150 108	22	721 200 135	25

# Index

Code	Page	Code	Page	Code	Page	Code	Page
721 200 136	25	721 201 113	355	721 301 107	355	721 500 109	55, 588, 621
721 200 137	25	721 201 115	355	721 301 108	355	721 500 110	55, 588, 621
721 200 138	25	721 201 117	355	721 301 109	355	721 500 111	55, 588, 621
721 200 139	25	721 201 120	355	721 301 110	355	721 500 162	55, 364
721 200 140	25	721 201 134	358	721 301 111	355	721 500 163	55
721 200 141	25	721 201 137	358	721 310 006	76	721 500 164	55
721 200 142	25	721 201 138	358	721 310 007	76	721 500 405	56
721 200 144	25	721 201 141	358	721 310 008	76	721 500 406	56, 587
721 200 145	25	721 201 147	358	721 310 009	76	721 500 407	56, 587
721 200 146	25	721 201 151	358	721 310 010	76	721 500 408	56, 587
721 200 147	25	721 201 164	358	721 310 011	76	721 500 409	56, 587
721 200 148	25	721 201 170	358	721 310 036	76	721 500 410	56, 587
721 200 149	25, 358	721 201 178	358	721 310 037	76	721 500 411	56, 587
721 200 150	25	721 201 205	360	721 310 038	76	721 510 003	46
721 200 151	25	721 201 206	360	721 310 039	76	721 510 004	46
721 200 152	25	721 201 207	360	721 310 040	76	721 510 005	46
721 200 153	25	721 201 208	360	721 310 041	76	721 510 006	46
721 200 154	25	721 201 605	41	721 310 306	371	721 510 007	46
721 200 155	25	721 201 606	41	721 310 307	371	721 510 008	46
721 200 156	25	721 201 607	41	721 310 308	371	721 510 009	46
721 200 157	25	721 201 608	41	721 310 309	371	721 510 010	46
721 200 159	25	721 201 609	41	721 310 310	371	721 510 011	46
721 200 161	25	721 201 610	41	721 310 311	371	721 510 012	46
721 200 162	25	721 201 611	41	721 310 336	371	721 510 014	46
721 200 164	25	721 250 103	26	721 310 337	371	721 510 028	46
721 200 165	25	721 250 104	26	721 310 338	371	721 510 029	46
721 200 167	25	721 250 105	26	721 310 339	371	721 510 030	46
721 200 169	25	721 250 106	26	721 310 340	371	721 510 031	46
721 200 170	25	721 250 107	26	721 310 341	371	721 510 032	46
721 200 172	25	721 250 108	26	721 310 506	372	721 510 033	46
721 200 174	25	721 250 109	26	721 310 507	372	721 510 034	46
721 200 176	25	721 250 110	26	721 310 508	372	721 510 035	46
721 200 178	25	721 250 111	26	721 310 509	372	721 510 036	46
721 200 180	25	721 250 112	26, 356	721 310 510	372	721 510 037	46
721 200 181	25	721 250 113	26	721 310 511	372	721 510 039	46
721 200 182	25	721 250 114	26	721 310 536	372	721 510 103	44
721 200 183	25	721 250 115	26	721 310 537	372	721 510 104	44
721 200 184	25	721 250 116	26, 356	721 310 538	372	721 510 105	44
721 200 204	32	721 250 117	26	721 310 539	372	721 510 106	44
721 200 205	32	721 250 119	26	721 310 540	372	721 510 107	44
721 200 206	32	721 250 120	26	721 310 541	372	721 510 108	44
721 200 207	32	721 250 121	26	721 312 012	77	721 510 109	44
721 200 208	32	721 251 106	356	721 312 013	77	721 510 110	44
721 200 209	32	721 251 107	356	721 312 014	77	721 510 111	44
721 200 210	32	721 251 108	356	721 312 015	77	721 510 112	44, 363
721 200 211	32	721 251 109	356	721 312 016	77	721 510 114	44
721 200 306	24	721 251 110	356	721 312 017	77	721 510 128	44
721 200 307	24	721 251 111	356	721 312 019	77	721 510 129	44
721 200 308	24	721 251 113	356	721 312 020	77	721 510 130	44
721 200 309	24	721 251 115	356	721 312 021	77	721 510 131	44
721 200 310	24	721 300 103	26	721 312 023	77	721 510 132	44
721 200 311	24	721 300 104	26	721 314 000	78	721 510 133	44
721 201 009	358	721 300 105	26	721 314 001	78	721 510 134	44
721 201 010	358	721 300 106	26	721 314 002	78	721 510 135	44
721 201 011	358	721 300 107	26	721 500 103	55	721 510 136	44
721 201 105	355	721 300 108	26	721 500 104	55	721 510 137	44, 363
721 201 106	355	721 300 109	26	721 500 105	55	721 510 139	44
721 201 107	355	721 300 110	26	721 500 106	55, 588	721 510 153	502
721 201 108	355	721 300 111	26	721 500 107	55, 588	721 510 154	502
721 201 109	355	721 300 112	26, 355	721 500 108	55, 588, 621		
721 201 110	355	721 300 113	26				
721 201 111	355	721 300 114	26				

# Index

Code	Page	Code	Page	Code	Page	Code	Page
721 510 155	502	721 510 611	52	721 515 181	502	721 540 730	48
721 510 156	502	721 511 105	363	721 515 182	502	721 540 731	48
721 510 157	502	721 511 106	363	721 515 183	502	721 540 732	48
721 510 158	502	721 511 107	363	721 515 184	502	721 540 733	48
721 510 159	502	721 511 108	363	721 515 185	502	721 540 734	48
721 510 160	502	721 511 109	363	721 515 606	364	721 540 735	48
721 510 161	502	721 511 110	363	721 515 607	364	721 540 736	48
721 510 162	502	721 511 111	363	721 515 608	364	721 545 505	49
721 510 163	502	721 511 130	363	721 515 609	364	721 545 506	49
721 510 164	502	721 511 131	363	721 515 610	364	721 545 507	49
721 510 178	502	721 511 132	363	721 515 611	364	721 545 508	49
721 510 179	502	721 511 133	363	721 530 306	51	721 545 509	49
721 510 180	502	721 511 134	363	721 530 307	51	721 545 510	49
721 510 181	502	721 511 135	363	721 530 308	51	721 545 511	49
721 510 182	502	721 511 136	363	721 530 309	51	721 545 530	49
721 510 183	502	721 511 205	364	721 530 310	51	721 545 531	49
721 510 184	502	721 511 206	364	721 530 311	51	721 545 532	49
721 510 185	502	721 511 207	364	721 530 312	51, 367	721 545 533	49
721 510 186	502	721 511 208	364	721 530 313	51	721 545 534	49
721 510 187	502	721 511 209	364	721 530 806	51	721 545 535	49
721 510 188	502	721 511 210	364	721 530 807	51	721 545 536	49
721 510 189	502	721 511 211	364	721 530 808	51	721 550 305	49
721 510 204	46	721 513 105	45	721 530 809	51	721 550 306	49
721 510 205	46	721 513 106	45	721 530 810	51	721 550 307	49
721 510 206	46	721 513 107	45	721 530 811	51	721 550 506	49
721 510 207	46	721 513 108	45	721 530 812	51, 368	721 550 507	49
721 510 208	46	721 513 109	45	721 530 813	51	721 550 508	49
721 510 209	46	721 513 110	45	721 531 306	367	721 550 509	49
721 510 210	46	721 513 111	45	721 531 307	367	721 550 510	50
721 510 211	46	721 514 105	45	721 531 308	367	721 550 511	50
721 510 213	46	721 514 106	45	721 531 309	367	721 550 512	50, 366
721 510 238	46	721 514 107	45	721 531 310	367	721 550 513	50
721 510 305	44	721 514 108	45	721 531 311	367	721 550 906	50
721 510 306	44	721 514 109	45	721 531 313	367	721 550 907	50
721 510 307	44	721 514 110	45	721 531 806	368	721 550 908	50
721 510 308	44	721 514 111	45	721 531 807	368	721 550 909	50
721 510 309	44	721 514 205	47	721 531 808	368	721 550 910	50
721 510 310	44	721 514 206	47	721 531 809	368	721 550 911	50
721 510 311	44	721 514 207	47	721 531 810	368	721 550 912	50, 367
721 510 313	44	721 514 208	47	721 531 811	368	721 550 913	50
721 510 330	44	721 514 209	47	721 531 813	368	721 550 957	50
721 510 331	44	721 514 210	47	721 540 205	48	721 550 958	50
721 510 332	44	721 514 211	47	721 540 206	48	721 550 967	50
721 510 333	44	721 515 106	363	721 540 207	48	721 550 968	50
721 510 334	44	721 515 107	363	721 540 208	48	721 551 405	359
721 510 335	44	721 515 108	363	721 540 209	48	721 551 406	359
721 510 336	44	721 515 109	363	721 540 210	48	721 551 506	366
721 510 338	44	721 515 110	363	721 540 211	48	721 551 507	366
721 510 405	47	721 515 111	363	721 540 230	48	721 551 508	366
721 510 406	47	721 515 130	502	721 540 231	48	721 551 509	366
721 510 407	47	721 515 131	502	721 540 232	48	721 551 510	366
721 510 408	47	721 515 132	502	721 540 233	48	721 551 511	366
721 510 409	47	721 515 133	502	721 540 234	48	721 551 513	366
721 510 410	47	721 515 134	502	721 540 235	48	721 551 906	367
721 510 411	47	721 515 135	502	721 540 236	48	721 551 907	367
721 510 604	52	721 515 156	363	721 540 705	48	721 551 908	367
721 510 605	52	721 515 157	363	721 540 706	48	721 551 909	367
721 510 606	52	721 515 158	363	721 540 707	48	721 551 910	367
721 510 607	52	721 515 159	363	721 540 708	48	721 551 911	367
721 510 608	52	721 515 160	363	721 540 709	48	721 551 913	367
721 510 609	52	721 515 161	363	721 540 710	48	721 600 004	57
721 510 610	52	721 515 180	502	721 540 711	48	721 600 005	57

# Index

Code	Page	Code	Page	Code	Page	Code	Page
721 600 006	57	721 700 006	68	721 740 108	71	721 840 104	60
721 600 007	57	721 700 007	68	721 740 109	71	721 840 105	60
721 600 008	57	721 700 008	68	721 740 110	71	721 840 106	60
721 600 009	57	721 700 009	68	721 740 111	71	721 840 107	60
721 600 010	57	721 700 010	68	721 740 112	71	721 840 108	60
721 600 011	57	721 700 011	68	721 740 113	71	721 840 109	60
721 600 012	57	721 700 012	68	721 740 114	71	721 840 110	60
721 600 013	57	721 700 013	68	721 740 116	71	721 840 111	61
721 600 014	57	721 700 014	68	721 740 117	71	721 840 112	61
721 600 112	55, 621	721 700 015	68	721 790 111	67	721 840 114	61
721 600 113	55	721 700 016	68	721 790 112	67, 370	721 840 123	61
721 600 305	56	721 700 017	68, 69	721 790 113	67	721 840 604	61
721 600 306	56	721 700 019	68	721 790 114	67	721 840 605	61
721 600 307	56	721 700 020	68	721 790 115	67	721 840 606	61
721 600 654	56	721 700 021	69	721 790 116	67, 370	721 840 607	61
721 600 655	56	721 700 136	69	721 790 117	67	721 840 608	61
721 600 656	56	721 700 137	69	721 790 119	67	721 840 609	61
721 600 657	56	721 700 138	69	721 790 120	67	721 840 610	61
721 600 658	56	721 700 139	69	721 790 121	67	721 840 611	61
721 600 659	56	721 700 140	69	721 790 122	67	721 841 105	366
721 600 660	56	721 700 506	72	721 790 123	67	721 841 106	366
721 600 661	56	721 700 507	72	721 790 124	67	721 841 107	366
721 601 105	364	721 700 508	72	721 790 125	67	721 841 108	366
721 601 106	364, 365, 588	721 700 509	72	721 791 106	370	721 841 109	366
721 601 107	364, 365, 588	721 700 510	72	721 791 107	370	721 841 110	366
721 601 108	364, 365, 588	721 700 511	72	721 791 108	370	721 841 111	366
721 601 109	364, 365, 588	721 700 512	72	721 791 109	370	721 890 004	57
721 601 110	364, 365, 588	721 700 513	72	721 791 110	370	721 890 005	57
721 601 111	364, 365, 588	721 700 514	72	721 791 111	370	721 890 006	57, 587
721 601 113	364	721 700 516	72	721 791 113	370	721 890 007	57, 587
721 605 106	365, 588	721 700 517	72	721 791 115	370	721 890 008	57, 587
721 605 107	365, 588	721 700 520	72	721 791 117	370	721 890 009	57, 587
721 605 108	365, 588	721 700 521	72	721 791 120	370	721 890 010	57, 587
721 605 109	365, 588	721 700 522	72	721 791 122	370	721 890 011	57, 587
721 605 110	365, 588	721 700 523	72	721 791 123	370	721 890 012	57
721 605 111	365, 588	721 700 524	72	721 800 105	67	721 890 013	57
721 605 112	365	721 700 525	72	721 800 106	67	721 890 014	57
721 605 113	365	721 702 206	69	721 800 107	67	721 890 023	57
721 605 114	365	721 702 207	69	721 800 108	67	721 900 181	30
721 605 606	365	721 702 208	69	721 800 109	67	721 900 300	30
721 605 607	365	721 702 209	69	721 800 110	67	721 900 301	30
721 605 608	365	721 702 210	69	721 810 105	68	721 900 302	30
721 605 609	365	721 702 211	69	721 810 106	68	721 900 303	30
721 605 610	365	721 702 212	69	721 810 107	68	721 900 304	30
721 640 102	366	721 702 213	69	721 810 108	68	721 900 305	30
721 641 123	366	721 702 214	69	721 810 109	68	721 900 306	30
721 645 107	366	721 702 216	69	721 810 110	68	721 900 307	30
721 645 108	366	721 702 217	69	721 810 111	68	721 900 308	30
721 645 109	366	721 702 220	69	721 810 112	68, 370	721 900 309	30
721 645 110	366	721 730 206	70	721 810 113	68	721 900 310	30
721 645 111	366	721 730 207	70	721 810 114	68	721 900 311	30
721 690 008	621	721 730 208	70	721 810 115	68	721 900 312	30
721 690 009	621	721 730 209	70	721 810 116	68, 370	721 900 313	30
721 690 010	621	721 730 210	70	721 810 117	68	721 900 315	30
721 690 011	621	721 730 211	70	721 810 119	68	721 900 319	31
721 700 005	68	721 730 212	70	721 810 120	68	721 900 320	31
		721 730 213	70	721 810 121	68	721 900 321	31
		721 730 214	70	721 810 122	68	721 900 322	31
		721 730 216	70	721 810 123	68	721 900 325	30
		721 730 217	70	721 811 111	370	721 900 326	30
		721 740 106	71	721 811 120	370	721 900 329	30
		721 740 107	71	721 840 103	60	721 900 331	30

# Index

Code	Page	Code	Page	Code	Page	Code	Page
721 900 334	30	721 901 341	357	721 910 117	27	721 910 841	42
721 900 337	30	721 901 342	357	721 910 119	27	721 910 842	42
721 900 341	30	721 901 343	357	721 910 120	27	721 910 846	42
721 900 342	30	721 901 346	357	721 910 121	27	721 910 852	42
721 900 346	30	721 901 347	357	721 910 122	27	721 910 858	42
721 900 347	30	721 901 348	357	721 910 123	27	721 910 903	29
721 900 348	30	721 901 349	357	721 910 124	27	721 910 905	29
721 900 352	30	721 901 352	357	721 910 125	27	721 910 906	29
721 900 353	30	721 901 353	357	721 910 204	32	721 910 908	29
721 900 354	30	721 901 354	357	721 910 205	32	721 910 909	29
721 900 355	30	721 901 355	357	721 910 206	32	721 910 910	29
721 900 358	30	721 901 358	357	721 910 207	32	721 910 911	29
721 900 359	30	721 901 359	357	721 910 208	33	721 910 912	29
721 900 360	30	721 901 360	357	721 910 209	33	721 910 913	29
721 900 364	30	721 901 361	357	721 910 210	33	721 910 914	29
721 900 365	30	721 901 364	357	721 910 211	33	721 910 915	29
721 900 370	30	721 901 370	357	721 910 323	29	721 910 916	29
721 900 371	30	721 901 371	357	721 910 325	29	721 910 917	29
721 900 372	30	721 901 372	357	721 910 326	29	721 910 918	29
721 900 376	30	721 901 374	357	721 910 334	29	721 910 919	29
721 900 377	30	721 901 381	357	721 910 337	29	721 910 920	29
721 900 378	30	721 901 384	357	721 910 341	29	721 910 921	29
721 900 379	30	721 901 388	357	721 910 346	29	721 910 922	29
721 900 380	30	721 901 396	357	721 910 352	29	721 910 923	29
721 900 381	30	721 901 406	361	721 910 358	29	721 910 924	29
721 900 384	30	721 901 407	361	721 910 364	29	721 910 925	29
721 900 385	30	721 901 408	361	721 910 370	29	721 910 926	29
721 900 386	30	721 901 409	361	721 910 385	29	721 910 927	29
721 900 388	30	721 901 410	361	721 910 404	34	721 910 928	29
721 900 390	30	721 901 411	361	721 910 434	34	721 910 929	29
721 900 391	30	721 901 534	359	721 910 437	34	721 911 005	360
721 900 392	30	721 901 537	359	721 910 441	34	721 911 006	360
721 900 393	30	721 901 541	359	721 910 446	34	721 911 007	360
721 900 394	30	721 901 542	359	721 910 452	34	721 911 008	360
721 900 396	30	721 901 905	358	721 910 458	34	721 911 009	360
721 900 397	30	721 901 906	358	721 910 555	34	721 911 010	360
721 900 398	30	721 901 907	358	721 910 556	34	721 911 011	360
721 900 399	30	721 901 908	358	721 910 557	34	721 911 105	356
721 900 406	34	721 901 909	358	721 910 558	34	721 911 106	356
721 900 407	34	721 901 910	358	721 910 559	34	721 911 107	356
721 900 408	34	721 901 911	358	721 910 560	34	721 911 108	356
721 900 409	34	721 901 913	358	721 910 561	34	721 911 109	356
721 900 410	34	721 901 914	358	721 910 604	41	721 911 110	356
721 900 411	34	721 910 090	38	721 910 605	41	721 911 111	356
721 900 905	28	721 910 091	38	721 910 606	41	721 911 113	356
721 900 906	28	721 910 092	38	721 910 607	41	721 911 115	356
721 900 907	28	721 910 101	26	721 910 608	42	721 911 117	356
721 900 908	28	721 910 102	26	721 910 609	42	721 911 120	356
721 900 909	28	721 910 103	26	721 910 610	42	721 911 386	357
721 900 910	28	721 910 104	26	721 910 611	42	721 911 389	357
721 900 911	28	721 910 105	26	721 910 705	35	721 911 555	360
721 900 912	28, 358	721 910 106	26	721 910 706	35	721 911 556	360
721 900 913	28	721 910 107	26	721 910 707	35	721 911 557	360
721 900 914	28	721 910 108	26	721 910 708	35	721 911 558	360
721 900 915	28	721 910 109	26	721 910 709	35	721 911 705	361
721 900 916	28, 358	721 910 110	27	721 910 710	35	721 911 706	361
721 900 917	28	721 910 111	27	721 910 711	35	721 911 707	361
721 900 919	28	721 910 112	27, 356	721 910 712	35, 361	721 911 708	361
721 900 920	28	721 910 113	27	721 910 713	35	721 911 709	361
721 901 334	357	721 910 114	27	721 910 714	35	721 911 710	361
721 901 337	357	721 910 115	27	721 910 834	42	721 911 711	361
721 901 338	357	721 910 116	27, 356	721 910 837	42	721 911 737	361



# Index

Code	Page	Code	Page	Code	Page	Code	Page
721 911 741	361	721 950 106	40	721 960 707	37	724 600 812	62
721 911 746	361	721 950 107	40	721 960 708	37	724 600 813	62
721 911 752	361	721 950 108	40	721 960 709	37	724 605 505	60
721 911 758	361	721 950 131	39	721 960 905	43	724 605 506	60
721 911 905	42	721 950 132	39	721 960 906	43	724 605 507	60
721 911 906	42	721 950 133	39	721 960 907	43	724 605 508	60
721 911 907	42	721 950 134	39	721 960 908	43	724 605 509	60
721 911 908	42	721 950 135	39	721 960 909	43	724 605 510	60
721 911 909	42	721 950 136	39	721 960 910	43	724 605 511	60
721 911 910	42	721 950 606	40	721 960 911	43	724 630 606	63
721 911 911	42	721 950 607	40	721 961 105	358	724 630 607	63
721 913 105	27	721 950 608	40	721 961 106	358	724 630 608	63
721 913 106	27	721 950 631	40	721 961 107	358	724 630 609	63
721 913 107	27	721 950 632	40	721 961 108	358	724 630 610	63
721 913 108	27	721 950 633	40	721 961 109	358	724 630 611	63
721 913 109	27	721 950 634	40	721 961 110	358	724 630 612	63
721 913 110	27	721 950 635	40	721 961 111	358	724 630 613	63
721 913 111	27	721 950 636	40	721 961 113	358	724 690 105	60
721 913 113	27	721 960 104	28	721 961 404	362	724 690 106	60
721 913 115	27	721 960 105	28	721 961 706	37	724 690 107	60
721 913 505	35	721 960 106	28	721 961 707	37	724 690 108	60
721 913 506	35	721 960 107	28	721 961 708	37	724 690 109	60
721 913 507	35	721 960 108	28	721 961 905	43	724 690 110	60
721 913 508	35	721 960 109	28	721 961 906	43	724 690 111	60
721 913 905	362	721 960 110	28	721 961 907	43	727 490 005	66
721 913 906	362	721 960 111	28	721 961 908	43	727 490 006	66
721 913 907	362	721 960 112	28, 358	721 961 909	43	727 490 007	66
721 913 908	362	721 960 113	28	721 961 910	43	727 490 008	66
721 913 909	362	721 960 114	28	721 961 911	43	727 490 009	66
721 913 910	362	721 960 116	28, 358	721 962 115	358	727 490 010	66
721 913 911	362	721 960 117	28	723 800 108	621	727 490 011	66
721 913 913	362	721 960 119	28	723 800 109	621	727 490 012	66
721 913 915	362	721 960 120	28	723 800 110	621	727 490 013	66
721 914 206	33	721 960 122	28	723 800 111	621	727 490 014	66
721 914 207	33	721 960 123	28	724 600 206	62	727 500 108	621
721 914 208	33	721 960 303	36	724 600 207	62	727 500 109	621
721 914 209	33	721 960 304	36	724 600 208	62	727 500 110	621
721 914 210	33	721 960 305	36	724 600 209	62	727 500 111	621
721 914 211	33	721 960 306	36	724 600 210	62	727 700 406	70
721 916 012	33	721 960 403	37	724 600 211	62	727 700 407	70
721 916 013	33	721 960 404	37	724 600 212	62	727 700 408	70
721 916 014	33	721 960 405	37	724 600 213	62	727 700 409	70
721 916 204	36	721 960 406	37	724 600 655	59	727 700 410	70
721 916 206	36	721 960 407	37	724 600 656	59	727 700 411	70
721 940 106	39	721 960 408	37	724 600 657	59	727 700 412	70
721 940 107	39	721 960 409	37	724 600 658	59	727 700 413	70
721 940 108	39	721 960 410	37	724 600 659	59	727 700 414	70
721 940 131	38	721 960 411	37	724 600 660	59	727 700 416	70
721 940 132	38	721 960 508	37	724 600 661	59	727 700 417	70
721 940 133	38	721 960 603	610, 610, 610	724 600 705	59	727 700 419	70
721 940 134	38			724 600 706	59	727 700 420	70
721 940 135	38	721 960 604	610, 610	724 600 707	59	727 700 421	70
721 940 136	38	721 960 605	43, 610	724 600 708	60	727 700 422	70
721 940 606	39	721 960 606	43, 610	724 600 709	60	727 700 423	70
721 940 607	39	721 960 607	43, 610	724 600 710	60	727 700 424	70
721 940 608	39	721 960 608	43	724 600 711	60	727 700 425	70
721 940 631	38	721 960 609	43	724 600 806	62	729 800 108	621
721 940 632	38	721 960 610	43	724 600 807	62	729 800 109	621
721 940 633	38	721 960 611	43	724 600 808	62	729 800 110	621
721 940 634	38	721 960 704	37	724 600 809	62	729 800 111	621
721 940 635	38	721 960 705	37	724 600 810	62	734 600 106	58
721 940 636	38	721 960 706	37	724 600 811	62	734 600 107	58

# Index

Code	Page	Code	Page	Code	Page	Code	Page
734 600 108	58	748 410 011	64, 587, 621	748 500 013	590	749 410 254	581, 584, 605
734 600 109	58	748 410 014	64, 614, 621	748 500 014	590	749 413 000	503
734 600 110	58	748 410 015	64	748 500 015	590	749 413 001	503
734 600 111	58	748 410 016	64	748 500 016	590	749 413 002	503
735 608 611	587	748 410 023	581, 584, 605	749 400 005	64, 65	749 413 003	503
745 500 012	590	748 410 059	581, 581, 583, 583, 586, 586, 604, 604, 613	749 400 006	64, 65, 589	749 413 007	503
745 500 013	590	748 410 062	581, 583, 586, 605	749 400 007	64, 65, 589	749 413 012	503
745 500 014	590	748 410 101	614	749 400 008	64, 65, 589	749 413 013	503
745 500 015	590	748 410 102	614	749 400 009	64, 65, 65, 589	749 413 014	503
745 500 016	590	748 410 106	581, 583, 586, 604, 613	749 400 010	65, 65, 589	749 413 015	503
745 500 017	590	748 410 119	581, 584, 605, 614	749 400 011	65, 65, 65, 589	749 413 016	503
747 502 012	590	748 410 151	581, 583, 586, 605	749 400 012	65	749 413 017	503
747 502 013	590	748 410 231	581, 584, 586, 605	749 400 013	65	749 413 018	503
747 502 014	590	748 410 248	64	749 400 013	65	749 413 019	503
747 502 015	590	748 410 254	581, 584, 605	749 400 042	65	749 413 022	503
747 502 016	590	748 413 000	503	749 400 043	65	749 413 163	503
747 502 017	590	748 413 001	503	749 400 044	65	749 413 173	503
747 502 032	590	748 413 002	503	749 400 045	65	749 413 174	503
747 502 033	590	748 413 003	503	749 410 001	613	749 413 182	503
747 502 034	590	748 413 007	503	749 410 002	614	749 436 001	605, 605
747 502 035	590	748 413 012	503	749 410 003	581, 583, 586, 605	749 436 002	605
747 502 036	590	748 413 013	503	749 410 004	64	749 436 003	605
747 502 037	590	748 413 014	503	749 410 005	64	749 436 004	605
747 503 012	590	748 413 015	503	749 410 006	64, 587	749 436 005	605
747 503 013	590	748 413 016	503	749 410 007	64, 587, 614	749 436 006	605
747 503 014	590	748 413 017	503	749 410 008	64, 587, 621	749 440 028	597
747 503 015	590	748 413 018	503	749 410 009	64, 587, 621	749 440 029	597
747 503 016	590	748 413 019	503	749 410 010	64, 587, 621	749 440 030	597
747 503 017	590	748 413 022	503	749 410 011	64, 587, 621	749 440 031	597
748 400 001	347	748 413 163	503	749 410 014	64, 614, 621	749 440 032	597
748 400 004	64	748 413 173	503	749 410 015	64	749 500 012	590
748 400 005	64, 65, 65	748 413 174	503	749 410 016	64	749 500 013	590
748 400 006	64, 65, 65, 589	748 413 182	503	749 410 023	581, 584, 605	749 500 014	590
748 400 007	64, 65, 589	748 436 001	605, 605	749 410 023	581, 581, 583, 583, 586, 586, 604, 604, 613	749 500 015	590
748 400 008	64, 65, 589	748 436 002	605	749 410 059	586, 586, 604, 604, 613	749 500 016	590
748 400 009	64, 65, 589	748 436 003	605	749 410 062	581, 583, 586, 605	749 500 017	590
748 400 010	65, 65, 589	748 436 004	605	749 410 101	614	752 910 105	27
748 400 011	65, 65, 589	748 436 005	605	749 410 102	614	752 910 106	27
748 400 012	65	748 436 006	605	749 410 106	581, 583, 586, 604, 613	752 910 107	27
748 400 013	65	748 436 007	605	749 410 119	581, 584, 605, 614	752 910 108	27
748 400 030	65	748 436 008	605	749 410 151	581, 583, 586, 605	752 910 109	27
748 400 042	65	748 436 009	605	749 410 231	581, 584, 586, 605	752 910 110	27
748 400 043	65	748 440 018	597	749 410 248	64	752 910 111	27
748 400 044	65	748 440 019	597			753 508 606	58
748 400 045	65	748 440 020	597			753 508 607	58
748 410 001	613	748 440 021	597			753 508 608	58
748 410 002	614	748 440 022	597			753 508 609	58
748 410 003	581, 583, 586, 605	748 500 012	590			753 508 610	58
748 410 004	64					753 508 611	58
748 410 005	64					753 508 616	59
748 410 006	64, 587, 614					753 508 617	59
748 410 007	64, 587, 621					753 508 618	59
748 410 008	64, 587, 621					753 508 619	59
748 410 009	64, 587, 621					753 508 620	59
748 410 010	64, 587, 621					753 508 621	59
						753 608 412	59
						753 608 413	59
						753 608 414	59

# Index

Code	Page	Code	Page
753 608 612	58	800 011 076	119
753 608 613	58	800 011 080	119
753 608 614	58	800 011 171	119
790 109 001	575	800 011 174	119
790 109 002	575	800 026 579	119
790 109 003	575	800 042 709	119
790 109 011	576, 576	800 042 713	119
790 109 012	576, 576	800 047 160	238
790 109 013	576, 576	800 047 161	238
790 109 107	576	800 047 162	238
790 109 108	576	800 047 163	238
790 114 028	576	800 047 164	238
799 150 003	347	800 047 165	238
799 298 031	575	800 047 166	238
799 299 001	575	800 047 167	238
799 299 002	575	800 047 168	238
799 299 003	575	800 047 169	238
799 299 004	575	800 047 170	238
799 299 005	575	800 047 171	238
799 302 005	574	800 047 300	237
799 302 007	574	800 047 301	237
799 302 011	574	800 047 303	237
799 302 013	574	800 047 304	237
799 302 021	574	800 047 306	237
799 302 022	574	800 047 308	237
799 302 023	574	800 047 309	237
799 302 032	574	800 047 328	246
799 302 033	574	800 047 329	246
799 302 036	575	800 047 330	246
799 302 041	574	800 047 331	246
799 302 042	574	800 047 332	246
799 302 043	574	800 052 602	120
799 302 044	574	800 052 603	120
799 302 047	574	800 052 604	120
799 350 364	577	800 052 605	120
799 495 145	576	800 052 606	120
799 495 146	576	800 052 607	120
800 000 182	119	800 059 080	245
800 000 193	119	800 059 987	245
800 000 195	119	800 060 429	245
800 000 601	504		
800 000 602	504		
800 000 603	504		
800 000 604	504		
800 000 605	504		
800 000 606	504		
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800 000 608	504		
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800 000 612	504		
800 000 613	504		
800 000 614	504		
800 000 615	504		
800 000 616	504		
800 000 617	504		
800 000 618	504		
800 000 619	504		
800 000 620	504		
800 011 039	119		
800 011 040	119		

# General Condition of Supply of Georg Fischer Piping Systems Limited, Schaffhausen

## 1 General

- 1.1 These General Conditions shall apply to all Products supplied by Georg Fischer Piping Systems Limited («Georg Fischer») to the Purchaser.  
They shall also apply to all future business even when no express reference is made to them.
- 1.2 Any deviating or supplementary conditions especially Purchaser's general conditions of purchase and verbal agreements shall only be applicable if accepted in writing by Georg Fischer.
- 1.3 The written form shall be deemed to be fulfilled by all forms of transmission, evidenced in the form of text, such as telefax, e-mail, etc.

## 2 Tenders

- Tenders shall only be binding if they contain a specifically stated period for acceptance.

## 3 Scope of Delivery

- 3.1 Georg Fischer's product range is subject to change.  
3.2 The confirmation of order shall govern the scope and execution of the contract.

## 4 Data and Documents

- 4.1 Technical documents such as drawings, descriptions, illustrations and data on dimensions, performance and weight as well as the reference to standards are for information purposes only. They are not warranted characteristics and are subject to change.  
4.2 All technical documents shall remain the exclusive property of Georg Fischer and may only be used for the agreed purposes or as Georg Fischer may consent.

## 5 Confidentiality, Protection of Personal Data

- 5.1 Each party shall keep in strict confidence all commercial or technical information relating to the business of the other party, of which it has gained knowledge in the course of its dealing with the other party. Such information shall neither be disclosed to third parties nor used for other purposes than those for which the information has been supplied.  
5.2 In the context of the contractual relation with the Purchaser personal data may be processed. The Purchaser agrees to the disclosure of said data to third parties such as foreign subcontractors and suppliers etc.

## 6 Local Laws and Regulations, Export Controls

- 6.1 The Purchaser shall bring to the attention of Georg Fischer all local laws and regulations at the place of destination which bear connection with the execution of the contract and the adherence to relevant safety regulations and approval procedures.  
6.2 In case of re-exports, Purchaser shall be responsible for compliance with pertinent export control regulations.

## 7 Price

- 7.1 Unless agreed otherwise, the prices shall be deemed quoted net ex works (according to Incoterms 2010 of the ICC, or latest version) including standard packing. All supplementary costs such as the cost of carriage, insurance, export-, transit- and import- licences etc. shall be borne by the Purchaser. The Purchaser shall also bear the costs of all taxes, fees, duties etc. connected with the contract.  
7.2 If the costs of packing, carriage, insurance, fees and other supplementary costs are included in the tender price or contract price or are referred to specifically in the tender or confirmation of order, Georg Fischer reserve the right to revise their prices accordingly should any change occur in the relevant tariffs.

## 8 Terms of Payment

- 8.1 The Purchaser shall make payment in the manner agreed by the parties without any deductions such as discounts, costs, taxes or dues.  
8.2 The Purchaser may only withhold or off-set payments due against counter claims which are either expressly acknowledged by Georg Fischer or finally awarded to the Purchaser. In particular, payment shall still be made when unessential items are still outstanding provided that the Products already delivered are not rendered unusable as a result.

## 9 Retention of Title

- 9.1 The Products shall remain the property of Georg Fischer until the Purchaser shall have settled all claims, present and future, which Georg Fischer may have against him.  
9.2 Should the Purchaser resell Products to which title is reserved, in the ordinary course of business, he shall hereby be deemed to have tacitly assigned to Georg Fischer the proceeds deriving from their sale together with all collateral rights, securities and reservations of title until all claims held by Georg Fischer shall have been settled. Until revoked by Georg Fischer, this assignment shall not preclude Purchaser's right to collect the assigned receivables.  
9.3 To the extent the value of the Products to which title is reserved together with collateral securities exceeds Georg Fischer's claims against the Purchaser by more than 20%, Georg Fischer shall re-assign the above proceeds to Purchaser at his request.

## 10 Delivery

- 10.1 The term of delivery shall commence as soon as the contract has been entered into, all official formalities such as import and payment permits have been obtained and all essential technical issues have been settled. The term of delivery shall be deemed duly observed when, upon its expiry, the Products are ready for despatch.  
10.2 Delivery is subject to the following conditions, i.e. the term of delivery shall be reasonably extended:  
a) if Georg Fischer are not supplied in time with the information necessary for the execution of the contract or if subsequent changes causing delays are made by the Purchaser.  
b) if Georg Fischer are prevented from performing the contract by force majeure. Force majeure shall equally be deemed to be any unforeseeable event beyond Georg Fischer's control which renders Georg Fischer's performance commercially impractical or impossible, such as delayed or defective supplies from sub contractors labour disputes, governmental orders or regulations, shortages in materials or energy, serious disturbances in Georg Fischer's works, such as the total or partial destruction of plant and equipment or the breakdown of essential facilities, serious disruptions in transport facilities, e.g. impassable roads.  
Should the effect of force majeure exceed a period of six (6) months, either party may cancel the contract forthwith.  
Georg Fischer shall not be liable for any damage or loss of any kind whatsoever resulting from the reform, any suspension or cancellation being without prejudice to Georg Fischer's right to recover all sums due in respect of consignments delivered and costs incurred to date.  
c) if the Purchaser is in delay with the fulfilment of his obligations under the contract, in particular, if he does not adhere to the agreed conditions of payment or if he has failed to timely provide the agreed securities.  
10.3 If for reasons attributable to Georg Fischer the agreed term of delivery or a reasonable extension thereof is exceeded, Georg Fischer shall not be deemed in default until the Purchaser has granted to Georg Fischer in writing a reasonable extension thereof of not less than one (1) month which equally is not met.  
The Purchaser shall then be entitled to the remedies provided at law, it being however understood that, subject to limitations of Art. 16, damage claims shall be limited to max. 10% of the price of the delayed delivery.  
10.4 Part shipments shall be allowed and Georg Fischer shall be entitled to invoice for such partial deliveries.  
10.5 If the Purchaser fails to take delivery within a reasonable time of Products notified as ready for despatch, Georg Fischer shall be entitled to store the Products at the Purchaser's expense and risk and to invoice them as delivered. If Purchaser fails to effect payment, Georg Fischer shall be entitled to dispose of the Products.  
10.6 Should Purchaser cancel an order without justification and should Georg Fischer not insist on the performance of the contract, Georg Fischer shall be entitled to a penalty amounting to 10% of the contract price, Georg Fischer's right to prove and claim higher damages remaining reserved.

Purchaser shall be entitled to prove, that Georg Fischer has suffered no or a considerably lower damage than the penalty forfeited.

## 11 Packing

- If the Products are provided with additional packing over and above the standard packing, such packing shall be charged additionally.

## 12 Passing of Risk

- 12.1 The risk in the Products shall pass to the Purchaser as soon as they have left Georg Fischer's works [EX WORKS, Incoterms 2010 ICC, or latest version], even if delivery is made carriage-paid, under similar clauses or including installation or when carriage is organized and managed by Georg Fischer.  
12.2 If delivery is delayed for reasons beyond Georg Fischer's control, the risk shall pass to the Purchaser when he is notified that the Products are ready for despatch.

## 13 Carriage and Insurance

- 13.1 Unless agreed otherwise, the Purchaser shall bear the cost of carriage.  
13.2 The Purchaser shall be responsible for transport insurance against damage of whatever kind. Even when such insurance is arranged by Georg Fischer it shall be deemed taken out by the order of and for the account of the Purchaser and at his risk.  
13.3 Special requests regarding carriage and insurance shall be communicated to Georg Fischer in due time. Otherwise carriage shall be arranged by Georg Fischer at their discretion, but without responsibility, by the quickest and cheapest method possible.  
In case of carriage-paid delivery transport arrangements shall be made by Georg Fischer. If the Purchaser specifies particular requirements, any extra costs involved shall be borne by him.  
13.4 In the event of damage or loss of the Products during carriage the Purchaser shall mark the delivery documents accordingly and immediately have the damage ascertained by the carrier. Not readily ascertainable damages sustained during carriage shall be notified to the carrier within six (6) days after receipt of the Products.

## 14 Inspection, Notification of Defects and Damages

- 14.1 The Products will be subject to normal inspection by Georg Fischer during manufacture. Additional tests required by the Purchaser shall be agreed upon in writing and shall be charged to the Purchaser.  
14.2 It shall be a condition of Georg Fischer's obligation under the warranties stated hereinafter that Georg Fischer be notified in writing by the Purchaser of any purported defect immediately upon discovery. Notice concerning weight, numbers or apparent defects is to be given latest within 30 days from receipt of the Products, notice of other defects immediately latest within seven (7) working days after discovery, in any event within the agreed warranty period.  
14.3 Purchaser shall not dispose of allegedly defective Products until all warranty and/or damage claims are finally settled. At its request, defective Products are to be placed at Georg Fischer's disposal.  
14.4 At its request, Georg Fischer shall be given the opportunity to inspect the defect and/or damage, prior to commencement of remedial work, either itself or by third party experts.

## 15 Warranty

- 15.1 At the written request of the Purchaser, Georg Fischer undertakes to repair or replace at its discretion, as quickly as possible and free of charge, all Products supplied which demonstrably suffer from faulty design, materials or workmanship, from faulty operating or installation instructions or which become defective or unusable due to faulty advice.  
In order to protect employees from toxic or radioactive substances which may have been transported through defective parts returned to Georg Fischer's sales organisation, said parts must be accompanied by a Material Safety Disclosure Form. The form may be obtained from Georg Fischer's local sales company or via www.piping.georgfischer.com.  
Replaced parts shall become property of Georg Fischer, unless Georg Fischer waives such claim.  
15.2 For Products which are manufactured to specifications, drawings or patterns supplied by the Purchaser, Georg Fischer's warranty shall be restricted to proper materials and workmanship.  
15.3 The Purchaser shall be entitled to rescind the contract or to demand a reduction of the contract price if  
- the repair or replacement of the defective Product is impossible  
- the defective Product is not repaired or replaced within a reasonable period  
- Georg Fischer refuses the repair or replacement or if for reasons attributable to Georg Fischer the repair or replacement is delayed.  
15.4 For Products or essential components manufactured by a third party and supplied by Georg Fischer under this contract, Georg Fischer's warranty is limited to the warranty provided by said third party.  
15.5 This warranty shall not apply to damage resulting from normal wear and tear, improper storage and maintenance, failure to observe the operating instructions, overstressing or overloading, unsuitable operating media, unsuitable construction work or unsuitable building ground, improper repairs or alterations by the Purchaser or third parties, the use of other than original spare parts and other reasons beyond Georg Fischer's control.  
15.6 No action or claim may be brought by the Purchaser on account of any alleged breach of warranty or any other obligation of Georg Fischer after the expiration of twelve (12) months from receipt of the Products by the end user or at the latest within eighteen (18) months of the Products being despatched by Georg Fischer.  
15.7 In case of Products for use in domestic installations or in utilities  
- Georg Fischer will assume the costs of dismantling the defective Product and restoring the damaged object up to CHF 1'000'000 per occurrence.  
- warranty or damage claims - contrary to Section 15.6 - are time-barred five (5) years from the date of installation or seven (7) years from the production date, whichever is earlier.

## 16 Limitation of Liability

- The rights and remedies of the customer shall be exclusively governed by these General Conditions of Supply and shall be in lieu of any remedies at law. All further claims for damages, reduction of the purchase price, termination of or rescission of the contract are excluded. In no case whatsoever shall the customer be entitled to claim damages other than compensation for costs of remedying defects in the supplies. This in particular refers, but shall not be limited, to loss of production, loss of use, loss of orders, loss of profit, third party recovery claims and other direct or indirect or consequential damages.  
This limitation of liability equally applies to the extent Georg Fischer is liable for acts or omissions of its employees or third parties engaged for the performance of its obligations. It does not apply in case of unlawful intent or gross negligence on the part of Georg Fischer's management and in case of Georg Fischer's statutory liability, in particular under applicable product liability laws.

## 17 Severability

- Should any term or clause of these General Conditions in whole or in part be found to be unenforceable or void, all other provisions shall remain in full force and effect and the unenforceable or void provision shall be replaced by a valid provision, which comes closest to the original intention of the unenforceable or invalid provision.

## 18 Place of Performance and Jurisdiction

- 18.1 Place of performance for the Products shall be the Georg Fischer works from which the Products are despatched.  
18.2 The contract shall be governed by Swiss law without regard to conflict of law provisions that would require the application of another law.  
18.3 Any civil action based upon any alleged breach of this contract shall be filed and prosecuted exclusively in the courts of Schaffhausen, Switzerland.  
Georg Fischer however reserves the right to file actions in any court having jurisdiction over controversies arising out of or in connection with the present contract.







# Worldwide at home

Our sales companies and representatives ensure local customer support in more than 100 countries.

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GFDO\_9182\_4d (08.21)

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