

# polypropylene

Polypropylene (PP) piping systems are widely used in industrial processing. Light in weight yet with high impact strength and reliable heat fusion welding, PP also offers good abrasion resistance and is a good thermal and electrical insulator.

PP is suitable for working use at temperatures up to 90°C, and will withstand short term use at a maximum 110°C.

Chemical resistance is excellent: PP is resistant to aqueous solutions of acids, alkalis and salts, and to a large number of organic solvents.

PP systems are assembled using heat fusion welding, either using socket fittings or butt fusion of pipes and/or fittings end to end. Welding equipment is available for sale or hire and is featured in the Installation Tools section.

## application guide

- ☒ Temperature range 0°C to 90°C (Short Term 110°C)
- ☒ High impact strength
- ☒ Abrasion resistant
- ☒ Suitable for handling foodstuffs
- ☒ Ideal for above and below ground use
- ☒ Threading possible
- ☒ Resistant to acids, alkalis, salts and many organic solvents
- ☒ Good insulator
- ☒ Lightweight (density 0.905-0.92)
  
- ☐ Welding equipment required
- ☐ Not resistant to concentrated oxidising acids
- ☐ Thermal expansion is higher than other plastics

## standards and approvals

Pipe	: BS 5556: 1978, DIN 8077/8078
Fittings	: DIN 16962
Threaded fittings	: BS21/DIN 2199/ISO 727

## section guide

Pipe-H Homopolymer - mm Size	230
Pipe - Copolymer - mm Size	231
Socket Fusion Fittings - mm Size	232
Socket Fusion Adaptor Fittings - mm Size	232
Socket Fusion Flanges - mm Size	233
Fusion Spigot Fittings - mm Size	234
Fusion Spigot Adaptor Fittings - mm Size	240
Fusion Spigot Flanges - mm Size	241
Flexible Couplings	244
Flame Retardent Pipe and Fittings	246
Flame Retardent Electrically Conductive Pipe and Fittings	248
Basket Strainer	250
Bag Filter	251
Ball Valve, Double Union	252
Ball Valve, M1 Modular	253
Ball Valve - Safi Compact	254
Diaphragm Valve	256
Needle Valve	257
T and L-Port Ball Valve	258
Butterfly Valve	260
Non-Return Valve, Wafer Check	264
Air Release Valve	266
Foot Valve	266
Non-Return Valve, Check	267
Line Strainer	269
Gauge Guard	269
Ball Valve, Electrically Actuated	270
Ball Valve, Pneumatically Actuated	272
Diaphragm Valve, Actuated	273
Pressure Reducing Valve	274
Pressure Relief Valve	278

# about: polypropylene

Polypropylene (PP) is a thermoplastic from the polyolefin group of materials. It has low density compared to other thermoplastics, and a unique combination of properties including mechanical strength, chemical resistance and thermal stability.

There are two different types of polypropylene that are in common use as piping materials:

- PP-H (Homopolymer)
- PP-R (Random copolymer)

The pipes, sheets and semi-finished products supplied by IPS are manufactured from nucleoid PP-H 100 (Beta ß3 -PP), whilst fittings are produced from PP-R (polypropylene random copolymer).

Polypropylene generally exhibits a good resistance against a variety of chemicals, such as salts, acids, and alkalis. Good chemical resistance is also achieved against contact with solvents, such as alcohols, esters and ketones. Consequently, solvent cement welding of polypropylene pipes and fittings is not possible.

There are a number of welding techniques suitable for pressure piping applications. High quality, reliable joints can be achieved using socket fusion jointing, butt fusion welding, non-contact Infra-Red (IR) butt welding, and electrofusion welding. In addition, polypropylene systems can be joined using flanges, threaded connections and mechanical couplings.

Polypropylene piping systems are available from IPS in metric dimensions according to DIN 8077/8078 and DIN 16962.



## General properties of polypropylene

Polypropylene exhibits thermal stability up to 100°C (short-term 120°C for drainage systems). Polypropylene also shows good impact strength, improving further along with increasing temperature.

Polypropylene is physiologically non-toxic (in accordance with ONORM B5014, Part 1, FDA, BGA, and KTW guidelines) making it ideally suited for a piping material in contact with potable water.

Some important advantages of polypropylene are:

- Low specific weight of 0.91g/cm<sup>3</sup>
- High long term creep resistance
- Excellent chemical resistance
- High resistance to thermal ageing
- Outstanding welding characteristics
- Excellent abrasion resistance
- Smooth internal surfaces

Properties of Polypropylene (Average values)		
Property	PP-H	PP-R
Density	0.91g/cm <sup>3</sup>	0.91g/cm <sup>3</sup>
Tensile Strength	30 MPa	25 MPa
Elongation at Break	>300%	>300%
Notched Impact Strength at 23°C	50 kJ/ m <sup>2</sup>	25 kJ/ m <sup>2</sup>
Notched Impact Strength at -30°C	5 kJ/ m <sup>2</sup>	2 kJ/ m <sup>2</sup>
Modulus of Elasticity	1300MPa	900 MPa
Coefficient of Linear Expansion	0.16mm/m°C	0.16mm/m°C
Maximum Operating Temperature	90°C	90°C
Minimum Operating Temperature	-10°C	-10°C
Crystalline Melting Temperature	160-165°C	150-154°C
Melt Flow Index	0.50 g/10min	0.50g/10min
Surface Resistance	>10 <sup>13</sup> Ω	>10 <sup>13</sup> Ω
Thermal Conductivity	0.22 W/m · K	0.24 W/m · K
Flammability	HB UL94	HB UL94
Colour - Beige Grey	7032 RAL	7032 RAL

## Characteristics

### Chemical resistance

The chemical resistance of polypropylene is considered excellent. It is resistant to dilute (aqueous) solutions of salts, acids and alkalis and to a large number of organic solvents. Polypropylene is resistant to concentrated hydrochloric acid and hydrofluoric acid, however above certain concentration levels diffusion can occur. This does not damage the material itself but it can cause secondary damage to surrounding steel constructions. In this type of application, double containment piping systems have been found ideally suited.

Note: PP-R and Copper:  
Direct contact between PP-R and copper, especially at higher temperatures, can lead to deterioration of the physical properties of PP-R. Heat ageing is faster due to the accelerated thermal oxidation.

### Weathering resistance

Piping systems in beige grey polypropylene are not UV stabilised, and therefore they should be suitably protected against degradation when used outdoors - especially where there are high UV levels. Protection against direct solar radiation can be achieved by the application of a UV absorbent coating such as AGRU Coat, or by adding a layer of insulation. It is also possible to compensate for the surface damage that may arise by increasing the wall thickness of the piping system. In such cases, the additional wall thickness should be not less than 2mm. As polypropylene does not contain light stable colour pigments, it may experience a change of colour (fading) because of long-term weathering.

### Electrical characteristics

Polypropylene is non-conductive, therefore systems will remain free from electrolytic corrosion. Precautions should be taken to avoid static discharge should any part of a Polypropylene piping system pass through an area where explosive gases may be present.

### Physiological characteristics

Polypropylene piping systems from IPS are physiologically non-toxic (in accordance with ONORM B5014, Part 1, FDA, BGA, and KTW guidelines) making them ideally suited as a piping material in contact with potable water.

# about: polypropylene

## Pressure ratings for polypropylene systems

### Maximum continuous pressure ratings

Pipes, fittings and valves are designed to operate continuously for 50 years at their maximum rated pressure at 20°C as follows, unless otherwise stated.

The pressure ratings for Polypropylene pipes according to DIN 8077 & DIN 8078 and Polypropylene fittings according to DIN 16962 are defined by the 'nominal pressure' method, **whereby** pipes, fittings and valves are grouped together according to a single nominal pressure rating. The PN rating is the maximum permitted operational pressure in bars calculated at 20°C, for example PN6 indicates a maximum working pressure of 6 bars. According to this method the pressure ratings of Polypropylene pipes and fittings according to the nominal pressure system is as follows:-

		Size Range	Max. Operating Pressure
Pipe	PN16	10mm to 225mm	16 Bar
	PN10	16mm to 500mm	10 Bar
	PN6	20mm to 710mm	6 Bar
	PN4	40mm to 1000mm	4 Bar
	PN3.2	50mm to 1200mm	3.2 Bar
	PN2.5	63mm to 1400mm	2.5 Bar

		Size Range	Max. Operating Pressure
Fittings			
	Socket Fusion	PN10 20mm to 110mm	10 Bar
	Spigot Fusion	PN10 20mm to 500mm	10 Bar
		PN6 50mm to 1000mm	6 Bar
		PN3.2 110mm to 1000mm	3.2 Bar
	Threaded	PN10 1/4" to 4"	10 Bar

### Standard Dimensional Ratio (SDR)

Standard Dimensional Ratio (SDR) is used to define thermoplastic pipes in a variety of materials including polypropylene, polyethylene, and PVC-U. Taken from ISO 4065, SDR is described as being 'the ratio of the nominal outside diameter of a pipe to its nominal wall thickness'. To calculate the SDR according to ISO 4065 the following equation can be used:

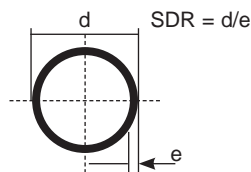
$$SDR = \frac{d}{e}$$

where:

SDR = Value to be calculated

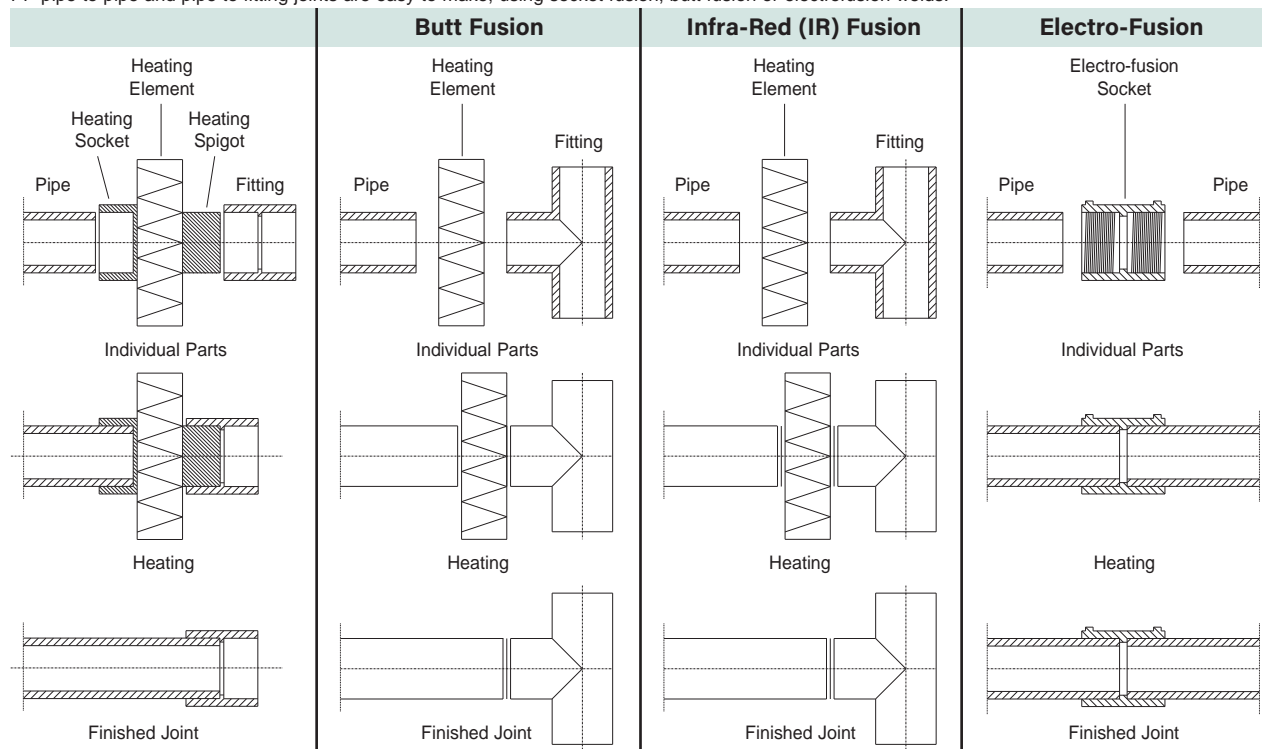
e = Thickness of the pipe wall (mm)

d = Pipe outside diameter (mm)



## Joining Polypropylene Systems

PP pipe to pipe and pipe to fitting joints are easy to make, using socket fusion, butt fusion or electrofusion welds.



Welding equipment is available for sale or hire - see Tools and Installation Equipment.  
Detailed installation instructions, as well as free training, is available on request.

# polypropylene pipe availability - PP-H

## Metric Sizes DIN 8077/8078

Size	Series SDR Working Pressure	Ventilation -	S-20 SDR41 PN2.5	S-16 SDR33 PN3.2	S-12.5 SDR26 PN4	S-8.3 SDR17.6 PN6	S-5 SDR11 PN10	S-3.2 SDR7.4 PN16
10	O.D. (mm) Wall (mm) Weight/m (kg)							
12	O.D. (mm) Wall (mm) Weight/m (kg)							12 2.0 0.06
16	O.D. (mm) Wall (mm) Weight/m (kg)						16 1.8 0.08	
20	O.D. (mm) Wall (mm) Weight/m (kg)						20 1.9 0.14	20 2.8 0.15
25	O.D. (mm) Wall (mm) Weight/m (kg)						25 2.3 0.16	25 3.5 0.23
32	O.D. (mm) Wall (mm) Weight/m (kg)					32 2.0 0.17	32 2.9 0.26	32 4.4 0.37
40	O.D. (mm) Wall (mm) Weight/m (kg)				40 1.8 0.22	40 2.3 0.27	40 3.7 0.41	40 5.5 0.58
50	O.D. (mm) Wall (mm) Weight/m (kg)				50 2.0 0.30	50 2.9 0.42	50 4.6 0.64	50 6.9 0.90
63	O.D. (mm) Wall (mm) Weight/m (kg)				63 2.5 0.47	63 3.6 0.66	63 5.8 1.01	63 8.6 1.41
75	O.D. (mm) Wall (mm) Weight/m (kg)			75 2.3 0.52	75 2.9 0.65	75 4.3 0.93	75 6.8 1.40	75 10.3 2.00
90	O.D. (mm) Wall (mm) Weight/m (kg)			90 2.8 0.76	90 3.5 0.94	90 5.1 1.32	90 8.2 2.02	90 12.3 2.86
110	O.D. (mm) Wall (mm) Weight/m (kg)		110 2.7 0.90	110 3.4 1.11	110 4.2 1.36	110 6.3 1.98	110 10.0 3.01	110 15.1 4.29
125	O.D. (mm) Wall (mm) Weight/m (kg)		125 3.1 1.17	125 3.9 1.45	125 4.8 1.76	125 7.1 2.54	125 11.4 3.89	125 17.1 5.52
140	O.D. (mm) Wall (mm) Weight/m (kg)		140 3.5 1.48	140 4.3 1.78	140 5.4 2.21	140 8.0 3.20	140 12.7 4.87	140 19.2 6.93
160	O.D. (mm) Wall (mm) Weight/m (kg)		160 4.0 1.91	160 4.9 2.32	160 6.2 2.89	160 9.1 4.15	160 14.6 6.38	160 21.9 9.04
180	O.D. (mm) Wall (mm) Weight/m (kg)		180 4.4 2.36	180 5.5 2.94	180 6.9 3.63	180 10.2 5.22	180 16.4 6.05	
200	O.D. (mm) Wall (mm) Weight/m (kg)	200 3.0 1.83	200 4.9 2.92	200 6.2 3.65	200 7.7 4.50	200 11.4 6.47	200 18.2 9.92	
225	O.D. (mm) Wall (mm) Weight/m (kg)		225 5.5 3.70	225 6.9 4.57	225 8.6 5.65	225 12.8 8.19	225 20.5 12.60	
250	O.D. (mm) Wall (mm) Weight/m (kg)	250 3.5 2.66	250 6.2 4.59	250 7.7 5.67	250 9.6 6.99	250 14.2 10.10	250 22.7 15.50	
280	O.D. (mm) Wall (mm) Weight/m (kg)		280 6.9 5.73	280 8.6 7.09	280 10.7 8.72	280 15.9 12.60	280 25.4 19.40	
315	O.D. (mm) Wall (mm) Weight/m (kg)	315 5.0 4.74	315 7.7 7.19	315 9.7 8.97	315 12.1 11.10	315 17.9 16.00	315 28.6 24.60	
355	O.D. (mm) Wall (mm) Weight/m (kg)	355 6.0 6.39	355 8.7 9.14	355 10.9 11.30	355 13.6 14.00	355 20.1 20.20	355 32.2 31.10	
400	O.D. (mm) Wall (mm) Weight/m (kg)	400 6.0 7.20	400 9.8 11.60	400 12.3 14.40	400 15.3 17.70	400 22.7 25.70		
450	O.D. (mm) Wall (mm) Weight/m (kg)	450 6.0 8.10	450 11.0 14.60	450 13.8 18.20	450 17.2 22.40	450 25.5 32.50		
500	O.D. (mm) Wall (mm) Weight/m (kg)	500 8.0 11.90	500 12.3 18.10	500 15.3 22.30	500 19.1 27.60	500 28.3 40.10		
560	O.D. (mm) Wall (mm) Weight/m (kg)	560 8.0 13.41	560 13.7 22.60	560 17.2 28.10	560 21.4 34.60	560 31.7 50.30		
630	O.D. (mm) Wall (mm) Weight/m (kg)	630 10.0 18.80	630 15.4 28.50	630 19.3 35.50	630 24.1 43.90	630 35.7 63.70		
710	O.D. (mm) Wall (mm) Weight/m (kg)	710 12.0 25.30	710 17.4 36.30	710 21.8 45.20	710 27.2 55.80			
800	O.D. (mm) Wall (mm) Weight/m (kg)	800 12.0 28.60	800 19.6 46.10	800 24.5 57.20	800 30.6 70.80			
900	O.D. (mm) Wall (mm) Weight/m (kg)	900 15.0 40.10	900 22.0 58.10	900 27.6 72.50	900 34.4 89.40			
1000	O.D. (mm) Wall (mm) Weight/m (kg)	1000 15.0 44.60	1000 24.5 72.00	1000 30.6 89.20	1000 38.2 110.00			
1200	O.D. (mm) Wall (mm) Weight/m (kg)	1200 18.0 64.10	1200 29.4 103.00	1200 36.7 128.00				
1400	O.D. (mm) Wall (mm) Weight/m (kg)	1400 20.0 83.20	1400 34.3 141.00					

# polypropylene pipe availability - PP-R and special grades

Metric Sizes DIN 8077/8078			PP-R	PPs: Flame Retardent			PPS-ESD-el			
Size	Series SDR Working Pressure	S-5 SDR11 PN10	Ventilation -	S-20 SDR41 PN2.5	S-16 SDR33 PN3.2	S-5 SDR11 PN10	Ventilation -	S-16 SDR33 PN3.2	S-8.3 SDR17.6 PN6	S-5 SDR11 PN10
20	O.D. (mm) Wall (mm) Weight/m (kg)	20 1.9 0.11				20 1.9 0.12				
25	O.D. (mm) Wall (mm) Weight/m (kg)	25 2.3 0.16				25 2.3 0.17				
32	O.D. (mm) Wall (mm) Weight/m (kg)	32 2.9 0.26				32 2.9 0.27				32 2.9 0.32
40	O.D. (mm) Wall (mm) Weight/m (kg)	40 3.7 0.41				40 3.7 0.42				
50	O.D. (mm) Wall (mm) Weight/m (kg)	50 4.6 0.64				50 4.6 0.65				50 4.6 0.79
63	O.D. (mm) Wall (mm) Weight/m (kg)	63 5.8 1.01			63 2.0 0.39	63 5.8 1.03				63 5.8 1.25
75	O.D. (mm) Wall (mm) Weight/m (kg)	75 6.8 1.40		75 1.9 0.45		75 6.8 1.44				75 6.8 1.74
90	O.D. (mm) Wall (mm) Weight/m (kg)	90 8.2 2.02		90 2.2 0.62		90 8.2 2.08		90 2.8 0.93		90 8.2 2.52
110	O.D. (mm) Wall (mm) Weight/m (kg)	110 10.0 3.01		110 2.7 0.92		110 10.0 3.09	110 3.0 1.23		110 6.3 2.47	110 10 3.74
125	O.D. (mm) Wall (mm) Weight/m (kg)	125 11.4 3.89		125 3.1 1.20						
140	O.D. (mm) Wall (mm) Weight/m (kg)	140 12.7 4.87	140 3.0 1.32			140 12.7 4.99				
160	O.D. (mm) Wall (mm) Weight/m (kg)	160 14.6 6.38	160 3.0 1.53			160 14.6 6.55	160 3.0 1.81	160 4.9 2.88	160 9.1 5.18	
180	O.D. (mm) Wall (mm) Weight/m (kg)	180 16.4 8.05	180 3.0 1.71				180 3.0 2.04			
200	O.D. (mm) Wall (mm) Weight/m (kg)	200 18.2 9.92	200 3.0 1.90				200 3.0 2.27	200 6.2 4.57	200 11.4 8.07	
225	O.D. (mm) Wall (mm) Weight/m (kg)	225 20.5 12.60	225 3.5 2.47				225 3.5 2.98	225 6.9 5.68		
250	O.D. (mm) Wall (mm) Weight/m (kg)	250 22.7 15.50	250 3.5 2.75				250 3.5 3.32			
280	O.D. (mm) Wall (mm) Weight/m (kg)	280 25.4 19.40	280 4.0 3.48							
315	O.D. (mm) Wall (mm) Weight/m (kg)	315 28.6 24.60	315 5.0 4.91				315 5.0 5.88	315 9.7 11.14		
355	O.D. (mm) Wall (mm) Weight/m (kg)		355 5.0 5.54				355 5.0 6.60			
400	O.D. (mm) Wall (mm) Weight/m (kg)	400 36.3 39.5	400 6.0 7.39				400 6.0 8.94			
450	O.D. (mm) Wall (mm) Weight/m (kg)	450 40.9 50.10	450 6.0 8.33							
500	O.D. (mm) Wall (mm) Weight/m (kg)	500 45.4 61.8	500 8.0 12.3							
560	O.D. (mm) Wall (mm) Weight/m (kg)		560 8.0 13.8							
630	O.D. (mm) Wall (mm) Weight/m (kg)		630 10.0 19.3							
710	O.D. (mm) Wall (mm) Weight/m (kg)	710* 40.2 80.7	710 12.0 26.0							
800	O.D. (mm) Wall (mm) Weight/m (kg)	800* 45.3 103.0	800 12.0 29.30							
900	O.D. (mm) Wall (mm) Weight/m (kg)		900 15.0 41.2							
1000	O.D. (mm) Wall (mm) Weight/m (kg)		1000 15.0 45.9							
1200	O.D. (mm) Wall (mm) Weight/m (kg)		1200 18.0 65.8							

\* SDR 17



PP-H Homopolymer Pipe

Ventilation				PN2.5/S-20/SDR41		PN3.2/S-16/SDR33		PN4/S-12.5/SDR26	
Size	Wall	Code	Price	Code	Price	Code	Price	Code	Price
40	3.0	-	-	-	-	-	-	12.705.0040.26	4.06
50	3.0	12.705.0050.00	on application	-	-	12.705.0050.33	5.50	12.705.0050.26	5.49
63	3.0	12.705.0063.00	on application	12.705.0063.41	6.62	12.705.0063.33	7.60	12.705.0063.26	8.68
75	3.0	12.705.0075.00	on application	12.705.0075.41	8.29	12.705.0075.33	10.04	12.705.0075.26	11.77
90	3.0	12.705.0090.00	on application	12.705.0090.41	11.55	12.705.0090.33	14.55	12.705.0090.26	17.16
110	3.0	12.705.0110.00	on application	12.705.0110.41	16.40	12.705.0110.33	21.33	12.705.0110.26	24.89
125	3.0	12.705.0125.00	on application	12.705.0125.41	21.97	12.705.0125.33	27.91	12.705.0125.26	32.19
140	3.0	12.705.0140.00	on application	12.705.0140.41	27.44	12.705.0140.33	34.12	12.705.0140.26	40.30
160	3.0	12.705.0160.00	on application	12.705.0160.41	34.59	12.705.0160.33	44.54	12.705.0160.26	52.82
180	3.0	12.705.0180.00	on application	12.705.0180.41	43.86	12.705.0180.33	56.38	12.705.0180.26	66.25
200	3.0	12.705.0200.00	38.18	12.705.0200.41	53.11	12.705.0200.33	69.96	12.705.0200.26	82.05
225	3.5	12.705.0225.00	on application	12.705.0225.41	67.41	12.705.0225.33	87.42	12.705.0225.26	103.00
250	3.5	12.705.0250.00	55.51	12.705.0250.41	94.09	12.705.0250.33	108.68	12.705.0250.26	127.41
280	4.0	12.705.0280.00	on application	12.705.0280.41	112.82	12.705.0280.33	147.29	12.705.0280.26	172.45
315	5.0	12.705.0315.00	98.79	12.705.0315.41	142.64	12.705.0315.33	186.38	12.705.0315.26	219.62
355	6.0	12.705.0355.00	119.68	12.705.0355.41	189.49	12.705.0355.33	247.19	12.705.0355.26	291.54
400	6.0	12.705.0400.00	150.11	12.705.0400.41	241.66	12.705.0400.33	314.85	12.705.0400.26	368.56
450	6.0	12.705.0450.00	199.06	12.705.0450.41	361.05	12.705.0450.33	468.41	12.705.0450.26	548.99
500	8.0	12.705.0500.00	291.54	12.705.0500.41	441.60	12.705.0500.33	573.31	12.705.0500.26	675.86
560	10.0	12.705.0560.00	407.29	12.705.0560.41	553.45	12.705.0560.33	723.70	12.705.0560.26	847.34
630	10.0	12.705.0630.00	461.02	12.705.0630.41	701.12	12.705.0630.33	913.25	12.705.0630.26	1075.59
710	12.0	12.705.0710.00	620.61	12.705.0710.41	892.11	12.705.0710.33	1162.30	12.705.0710.26	1366.51
800	12.0	12.705.0800.00	682.02	12.705.0800.41	1129.34	12.705.0800.33	1470.90	12.705.0800.26	1733.53
900	15.0	12.705.0900.00	1038.35	12.705.0900.41	1503.73	12.705.0900.33	1970.56	12.705.0900.26	2315.35
1000	15.0	12.705.1000.00	1154.70	12.705.1000.41	1855.87	12.705.1000.33	2424.84	12.705.1000.26	2849.39
1200	18.0	12.705.1200.00	1751.39	12.705.1200.41	2819.57	12.705.1200.33	3668.57	-	-
1400	20.0	12.705.1400.00	2380.96	12.705.1400.41	4033.96	-	-	-	-

Standard length 5m

Please note that a transportation surcharge may be applied on pipe diameters 250mm or larger - please enquire for details.

Electrofusion Coupling



Manufactured from PP-H (Homopolymer) material

PN10 (SDR 11)

Size	Code	Voltage	Price
20	11.173.0020.11	18	17.81
25	11.173.0025.11	24	20.23
32	11.173.0032.11	26	21.87
40	11.173.0040.11	28	22.96
50	11.173.0050.11	32	35.60
63	11.173.0063.11	30	37.33
75	11.173.0075.11	30	52.32
90	11.173.0090.11	32	69.99
110	11.173.0110.11	32	85.18
125	11.173.0125.11	32	120.55
140	11.173.0140.11	34	136.25
160	11.173.0160.11	32	156.16
180*	11.173.0180.11	40	229.30
200	11.173.0200.11	38	265.13
225	11.173.0225.11	34	326.50
250	11.173.0250.11	38	859.97
280*	11.173.0280.11	40	1165.75
315	11.173.0315.11	38	1388.80
355	11.173.0355.11	38	1487.51

\* Special order only



Temperature De-Rating Factors

Pressure ratings for Polypropylene pipework systems are always quoted at 20°C. As working temperature increases, the maximum working pressure decreases by the factor indicated.

\* For continuous use at these temperatures, consult our Customer Services Department

Working Temperature (°C)	Pressure De-Rating Factor
20	1.00
30	1.00
40	0.82
50	0.66
60	0.50
70	0.36
80	0.25
90*	0.13
100*	0.05

This data is provided for guidance only. For specific projects please contact our technical department

## PP-H Homopolymer Pipe

## PP-R Copolymer Pipe

PN6/S-8.3/SDR17.6			PN10/S-5/SDR11		PN16/S-3.2/SDR7.4		PN10/S-5/SDR 11		
Size	Code	Price	Code	Price	Code	Price	Size	Code	Price
10	-	-	-	-	-	-	20	11.705.0020.11	
12	-	-	-	-	12.705.0012.07	1.94	25	11.705.0025.11	
16	-	-	12.705.0016.11	1.93	12.705.0016.07	2.88	32	11.705.0032.11	
20	-	-	12.705.0020.11	3.46	12.705.0020.07	3.64	40	11.705.0040.11	
25	-	-	12.705.0025.11	4.55	12.705.0025.07	5.47	50	11.705.0050.11	
32	12.705.0032.17	4.41	12.705.0032.11	6.42	12.705.0032.07	9.10	63	11.705.0063.11	
40	12.705.0040.17	5.19	12.705.0040.11	8.00	12.705.0040.07	11.15	75	11.705.0075.11	
50	12.705.0050.17	8.12	12.705.0050.11	12.43	12.705.0050.07	17.22	90	11.705.0090.11	
63	12.705.0063.17	12.67	12.705.0063.11	19.28	12.705.0063.07	27.08	110	11.705.0110.11	
75	12.705.0075.17	18.03	12.705.0075.11	26.81	12.705.0075.07	38.57	125	11.705.0125.11	on application
90	12.705.0090.17	24.89	12.705.0090.11	38.57	12.705.0090.07	54.85	140	11.705.0140.11	
110	12.705.0110.17	38.57	12.705.0110.11	53.87	12.705.0110.07	82.09	160	11.705.0160.11	
125	12.705.0125.17	49.83	12.705.0125.11	74.91	12.705.0125.07	105.61	180	11.705.0180.11	
140	12.705.0140.17	61.40	12.705.0140.11	93.99	12.705.0140.07	132.84	200	11.705.0200.11	
160	12.705.0160.17	80.52	12.705.0160.11	122.45	12.705.0160.07	172.97	225	11.705.0225.11	
180	12.705.0180.17	99.65	12.705.0180.11	159.72	-	-	250	11.705.0250.11	
200	12.705.0200.17	124.38	12.705.0200.11	189.58	-	-	280	11.705.0280.11	
225	12.705.0225.17	156.98	12.705.0225.11	241.22	12.705.0225.07	425.55	315	11.705.0315.11	
250	12.705.0250.17	193.32	12.705.0250.11	296.69			400	11.705.0400.11	
280	12.705.0280.17	261.90	12.705.0280.11	405.74			450	11.705.0450.11	
315	12.705.0315.17	333.67	12.705.0315.11	512.23			500	11.705.0500.11	
355	12.705.0355.17	444.87	12.705.0355.11	682.97			710*	11.705.0710.11	
400	12.705.0400.17	562.37					800*	11.705.0800.11	
450	12.705.0450.17	836.50					*SDR 17		
500	12.705.0500.17	1030.69							
560	12.705.0560.17	1293.85							
630	12.705.0630.17	1638.46							
710	12.705.0710.17	2139.42							

Standard length 5m

Please note that a transportation surcharge may be applied on pipe diameters 250mm or larger - please enquire for details.



### Polypropylene Material

AGRU Polypropylene pipes and fittings are manufactured in accordance with DIN 8077/8078 using the following materials:

Pipes: Nucleoid PP-H 100 (Beta  $\beta$ -PP)

Fittings: PP-R (polypropylene random copolymer)

Nucleoid PP-H is chosen for pipes because of its exceptional impact strength at cold temperatures, good stress fracture and chemical resistance. PP-R (also optionally available as pipe) provides high long term creep strength at continuous high temperatures. Other types of Polypropylene are also available:

#### PP-H/PP-R industrial piping systems

Plastic pipes and fittings made of PP-H and PP-R have proved their value for decades in every area of industry. Above all, excellent temperature and corrosion resistance ensure durability. PP is characterised by its superior strength, stiffness, hardness, and the temperature and chemical resistance these features ensure. PP can be used between -5°C and +95°C.

#### Electrically conductive: HDPE-ESD-el / PPS / PPS-ESD-el

In plastic piping system building, electrically conductive piping must be used in areas with risk of explosion. Electrically conductive plastics modified by the addition of carbon black guarantee that the known benefits of polyolefins, such as chemical resistance and easy processing and installation, are retained. However, the conductive carbon black does reduce the impact strength and creep strength.

#### High Purity

PP Pure PP-R (High purity grade Polypropylene random copolymer)

Selected and fully traceable raw materials are manufactured under strictly controlled conditions. This materials is ideal for less critical ultra-pure water applications (see High Purity Systems).

Polypure PP-R: Natural (Polypropylene random copolymer, natural coloured)

As natural PP-R contains no colour additives, it is ideally suited for high purity water piping systems. Note that it is not UV stabilised (see High Purity Systems).

## metric sizes

## Tee 90°



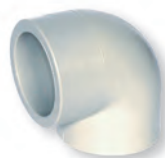
Size	Code	Price
16	11.056.0016.07	4.26
20	11.056.0020.07	4.62
25	11.056.0025.07	5.29
32	11.056.0032.07	6.11
40	11.056.0040.07	7.65
50	11.056.0050.07	12.77
63	11.056.0063.07	18.41
75	11.056.0075.07	45.54
90	11.056.0090.07	67.83
110	11.056.0110.07	84.34

## Reducing Tee 90°



Size	Code	Price
25x20	11.055.2520.07	7.11
32x20	11.055.3220.07	8.75
32x25	11.055.3225.07	8.75
40x20	11.055.4020.07	9.93
40x25	11.055.4025.07	9.93
40x32	11.055.4032.07	9.93
50x20	11.055.5020.07	16.00
50x25	11.055.5025.07	16.00
50x32	11.055.5032.07	16.00
50x40	11.055.5040.07	16.00
63x25	11.055.6325.07	23.40
63x32	11.055.6332.07	23.40
63x40	11.055.6340.07	23.40
63x50	11.055.6350.07	23.40

## Elbow 90°



Size	Code	Price
16	11.051.0016.07	3.21
20	11.051.0020.07	4.01
25	11.051.0025.07	4.88
32	11.051.0032.07	5.90
40	11.051.0040.07	7.41
50	11.051.0050.07	13.66
63	11.051.0063.07	17.77
75	11.051.0075.07	37.54
90	11.051.0090.07	47.30
110	11.051.0110.07	68.55

## Elbow 45°



Size	Code	Price
16	11.050.0016.07	4.62
20	11.050.0020.07	5.14
25	11.050.0025.07	6.11
32	11.050.0032.07	7.03
40	11.050.0040.07	9.03
50	11.050.0050.07	12.40
63	11.050.0063.07	15.90
75	11.050.0075.07	35.02
90	11.050.0090.07	43.81
110	11.050.0110.07	70.07

## Socket



Size	Code	Price
16	11.053.0016.07	2.76
20	11.053.0020.07	2.62
25	11.053.0025.07	2.76
32	11.053.0032.07	3.64
40	11.053.0040.07	4.62
50	11.053.0050.07	7.75
63	11.053.0063.07	12.68
75	11.053.0075.07	20.62
90	11.053.0090.07	26.01
110	11.053.0110.07	40.54

## Reducer

Spigot x Socket



Size	Code	Price
25x16	11.057.2516.07	3.77
20x16	11.057.2016.07	3.17
25x20	11.057.2520.07	4.26
32x20	11.057.3220.07	5.29
32x25	11.057.3225.07	5.29
40x20	11.057.4020.07	6.30
40x25	11.057.4025.07	6.30
40x32	11.057.4032.07	6.30
50x20	11.057.5020.07	7.27
50x25	11.057.5025.07	7.27
50x32	11.057.5032.07	7.27
50x40	11.057.5040.07	7.27
63x25	11.057.6325.07	10.02
63x32	11.057.6332.07	10.02
63x40	11.057.6340.07	10.02
63x50	11.057.6350.07	10.02
75x63	11.057.7563.07	17.54
90x63	11.057.9063.07	24.40
90x75	11.057.9075.07	24.40
110x63	11.057.1163.07	33.29
110x90	11.057.1190.07	33.29

## Female Adaptor

BSP or NPT threaded



Size	Code	Price
20 x 1/2	11.034.2020.07	12.68
25 x 3/4	11.034.2525.07	14.30
32 x 1	11.034.3232.07	18.62
40 x 1 1/4	11.034.4040.07	21.29
50 x 1 1/2	11.034.5050.07	33.54
63 x 2	11.034.6363.07	42.04

Code shown is for BSP.  
Code for NPT on request.

## Male Adaptor

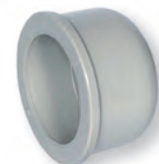
BSP or NPT threaded



Size	Code	Price
20 x 3/4	11.035.2025.07	11.91
25 x 1	11.035.2532.07	14.89
32 x 1 1/4	11.035.3240.07	17.91
40 x 1 1/2	11.035.4050.07	29.53
50 x 2	11.035.5063.07	37.28

Code shown is for BSP  
Code for NPT on request

## Cap



Size	Code	Price
16	11.054.0016.07	3.74
20	11.054.0020.07	4.37
25	11.054.0025.07	4.62
32	11.054.0032.07	5.14
40	11.054.0040.07	6.64
50	11.054.0050.07	8.52
63	11.054.0063.07	11.77
75	11.054.0075.07	19.01
90	11.054.0090.07	26.27
110	11.054.0110.07	35.02

## Union

FPM O-Rings



Size	Code	Price
16	11.024.1116.07	14.84
20	11.024.1120.07	16.89
25	11.024.1125.07	18.41
32	11.024.1132.07	22.03
40	11.024.1140.07	31.32
50	11.024.1150.07	44.05
63	11.024.1163.07	60.06



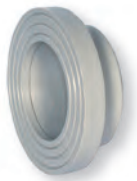
## Pressure Ratings

Maximum working pressures (socket fusion):  
All sizes PN10



## Stub Flange

DIN or ANSI standards



Size	Code	Price
20	11.052.0020.07	3.27
25	11.052.0025.07	3.51
32	11.052.0032.07	3.89
40	11.052.0040.07	4.79
50	11.052.0050.07	5.64
63	11.052.0063.07	7.41
75	11.052.0075.07	16.26
90	11.052.0090.07	22.91
110	11.052.0110.07	32.30

Code shown is for DIN.  
ANSI code on request.

## Blind Flange

Polypropylene with steel  
core drilled to  
BS4504 NP10/16 -  
black



Size	Code	Price
20	14.045.0020.11	81.96
25	14.045.0025.11	83.23
32	14.045.0032.11	85.30
40	14.045.0040.11	91.45
50	14.045.0050.11	103.48
63	14.045.0063.11	112.68
75	14.045.0075.11	131.88
90	14.045.0090.11	145.19
110	14.045.0110.11	198.18

## Blind Flange

Polypropylene with steel  
core drilled to ANSI 150  
- grey



Size	Code	Price
20	11.043.0020.11	102.44
25	11.043.0025.11	103.95
32	11.043.0032.11	106.50
40	11.043.0040.11	114.22
50	11.043.0050.11	129.35
63	11.043.0063.11	140.86
75	11.043.0075.11	160.84
90	11.043.0090.11	181.29
110	11.043.0110.11	247.90

## Gasket

EPDM



Size	Code	Price
20	861-ISO-005	0.77
25	861-ISO-007	0.88
32	861-ISO-010	0.97
40	861-ISO-012	1.20
50	861-ISO-015	1.46
63	861-ISO-020	2.50
75	861-ISO-025	3.07
90	861-ISO-030	3.30
110	861-ISO-040	4.80

Please note above codes are for  
NP10/16. Replace 'ISO' for 'A' for ANSI  
150 or 'E' for Table D/E

## Gasket

FPM



Size	Code	Price
1/2"/20	862-ISO-005	3.55
3/4"/25	862-ISO-007	5.27
1"/32	862-ISO-010	6.97
1 1/4"/40	862-ISO-012	11.20
1 1/2"/50	862-ISO-015	12.22
2"/63	862-ISO-020	16.10
2 1/2"/75	862-ISO-025	23.32
3"/90	862-ISO-030	30.38
4"/110	862-ISO-040	51.86

Please note above codes are for  
NP10/16. Replace 'ISO' for 'A' for ANSI  
150 or 'E' for Table D/E

## Backing Ring Table D/E

Galvanised mild steel



Size	Code	Price
1/2"/20	860-005-11E	11.37
3/4"/25	860-007-11E	12.86
1"/32	860-010-11E	13.49
1 1/4"/40	860-012-11E	13.92
1 1/2"/50	860-015-11E	17.05
2"/63	860-020-11E	24.21
2 1/2"/75	860-025-11E	36.17
3"/90	860-030-11E	36.77
4"/110 D	860-040-11D	47.52
4"/110 E	860-040-11E	47.52

## Backing Ring NP10/16

Galvanised mild steel



Size	Code	Price
1/2"/20	860-005-11NP	12.86
3/4"/25	860-007-11NP	13.60
1"/32	860-010-11NP	16.17
1 1/4"/40	860-012-11NP	17.16
1 1/2"/50	860-015-11NP	18.84
2"/63	860-020-11NP	26.62
2 1/2"/75	860-025-11NP	36.43
3"/90	860-030-11NP	42.12
4"/110	860-040-11NP	53.87

## Backing Ring ASA 150

Galvanised mild steel



Size	Code	Price
1/2"/20	860-005-11A	12.85
3/4"/25	860-007-11A	13.60
1"/32	860-010-11A	16.17
1 1/4"/40	860-012-11A	17.17
1 1/2"/50	860-015-11A	18.84
2"/63	860-020-11A	26.62
2 1/2"/75	860-025-11A	36.43
3"/90	860-030-11A	42.12
4"/110	860-040-11A	53.87

## Backing Ring PN10

Polypropylene with steel  
core



Size	Code	Price
20	11.014.0020.11	11.62
25	11.014.0025.11	12.76
32	11.014.0032.11	16.36
40	11.014.0040.11	20.74
50	11.014.0050.11	24.20
63	11.014.0063.11	28.06
75	11.014.0075.11	31.16
90	11.014.0090.11	36.82
110	11.014.0110.11	43.75

## Backing Ring ASA 150

Polypropylene with steel  
core



Size	Code	Price
20	11.013.0020.11	11.63
25	11.013.0025.11	12.76
32	11.013.0032.11	16.36
40	11.013.0040.11	20.74
50	11.013.0050.11	24.20
63	11.013.0063.11	28.06
75	11.013.0075.11	31.16
90	11.013.0090.11	36.82
110	11.013.0110.11	43.75

**Tee 90°**



**PN3.2 (SDR 33)**

Size	Code	Price
20	-	-
25	-	-
32	-	-
40	-	-
50	-	-
63	-	-
75	-	-
90	-	-
110	11.006.0110.33	49.16
125	11.006.0125.33	59.94
140	11.006.0140.33	66.83
160	11.006.0160.33	111.67
180	11.006.0180.33	132.14
200	11.006.0200.33	163.13
225	11.006.0225.33	306.01
250	11.006.0250.33	473.71
280	11.006.0280.33	601.75
315	11.006.0315.33	760.50
355	11.006.0355.33	1064.00
400	11.006.0400.33	1559.47
450	11.006.0450.33	2107.46
500	11.006.0500.33	2734.82

**PN6 (SDR 17.6)**

Code	Price
-	-
-	-
-	-
-	-
-	-
11.006.0063.17	15.24
11.006.0075.17	31.24
11.006.0090.17	44.54
11.006.0110.17	73.74
11.006.0125.17	102.18
11.006.0140.17	120.39
11.006.0160.17	226.37
11.006.0180.17	279.11
11.006.0200.17	380.27
11.006.0225.17	445.58
11.006.0250.17	591.53
11.006.0280.17	668.33
11.006.0315.17	889.85
11.006.0355.17	1336.73
11.006.0400.17	1828.34
11.006.0450.17	2389.13
11.006.0500.17	3126.51

**PN10 (SDR 11)**

Code	Price
11.006.0020.11	4.24
11.006.0025.11	4.24
11.006.0032.11	5.41
11.006.0040.11	8.45
11.006.0050.11	11.36
11.006.0063.11	17.68
11.006.0075.11	35.59
11.006.0090.11	53.03
11.006.0110.11	78.09
11.006.0125.11	107.31
11.006.0140.11	131.66
11.006.0160.11	228.68
11.006.0180.11	293.23
11.006.0200.11	419.95
11.006.0225.11	499.35
11.006.0250.11	705.47
11.006.0280.11	953.90
11.006.0315.11	1357.18
11.006.0355.11	1585.05
11.006.0400.11	2366.10
11.006.0450.11	3124.03
11.006.0500.11	3992.15

**Tee 90°**

Elongated



**PN3.2 (SDR 33)**

Size	Code	Price
20	-	-
25	-	-
32	-	-
40	-	-
50	-	-
63	-	-
75	-	-
90	-	-
110	-	-
125	-	-
140	-	-
160	-	-
180	-	-
200	-	-
225	-	-
250	-	-
280	-	-
315	-	-

**PN6 (SDR 17.6)**

Code	Price
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

**PN10 (SDR 11)**

Code	Price
11.066.0020.11	9.24
11.066.0025.11	10.54
11.066.0032.11	12.58
11.066.0040.11	15.50
11.066.0050.11	20.51
11.066.0063.11	28.18
11.066.0075.11	46.85
11.066.0090.11	66.57
11.066.0110.11	97.31
11.066.0125.11	133.69
11.066.0140.11	214.58
11.066.0160.11	279.11
11.066.0180.11	366.21
11.066.0200.11	523.67
11.066.0225.11	622.23
11.066.0250.11	804.08
11.066.0280.11	1204.79
11.066.0315.11	1544.11

**Pipe Availability**

We typically hold over  
**200,000 metres of pipe**  
in stock for immediate despatch



## Reducing Tee 90°



### PN3.2 (SDR 33)

Size	Code	Price
90/32	-	-
90/50	-	-
110/32	-	-
110/50	-	-
125/63	-	-
125/90	-	-
140/63	-	-
140/75	-	-
140/90	-	-
140/110	-	-
160/125	-	-
180/63	-	-
180/75	-	-
180/110	-	-
180/125	-	-
225/125	-	-

### PN6 (SDR 17.6)

Code	Price
-	-
-	-
-	-
-	-
-	-
-	-
11.016.1463.17	112.43
11.016.1475.17	112.68
11.016.1490.17	114.45
11.016.1411.17	116.76
11.016.1612.17	217.94
11.016.1863.17	248.66
11.016.1875.17	258.63
11.016.1811.17	232.01
11.016.1812.17	267.63
11.016.2212.17	423.80

### PN10 (SDR 11)

Code	Price
11.016.9032.11	54.78
11.016.9050.11	56.35
11.016.1132.11	80.68
11.016.1150.11	82.48
11.016.1263.11	115.21
-	-
11.016.1463.11	144.41
11.016.1475.11	144.41
11.016.1490.11	146.74
11.016.1411.11	146.74
11.016.1612.11	243.56
11.016.1863.11	303.47
11.016.1875.11	303.47
-	-
11.016.1812.11	312.45
11.016.2212.11	526.26

## Reducing Tee 90°

Elongated



### PN3.2 (SDR 33)

Size	Code	Price
63/32	-	-
63/50	-	-
75/32	-	-
75/50	-	-
75/63	-	-
90/63	-	-
90/75	-	-
110/63	-	-
110/75	-	-
110/90	-	-
125/90	-	-
125/110	-	-
160/63	-	-
160/75	-	-
160/90	-	-
160/110	-	-
180/90	-	-
180/160	-	-
200/63	-	-
200/90	-	-
200/110	-	-
200/125	-	-
200/160	-	-
225/75	-	-
225/90	-	-
225/110	-	-
225/160	-	-
225/180	-	-
315/90	-	-
315/110	-	-
315/160	-	-
315/200	-	-
315/225	-	-
315/250	-	-

### PN6 (SDR 17.6)

Code	Price
-	-
11.065.6350.17	27.43
-	-
11.065.7550.17	41.25
11.065.7563.17	42.01
11.065.9063.17	58.65
11.065.9075.17	59.16
11.065.1163.17	87.05
11.065.1175.17	87.05
11.065.1190.17	89.12
-	-
11.065.1211.17	120.84
11.065.1663.17	239.17
11.065.1675.17	246.62
11.065.1690.17	246.62
11.065.1611.17	248.89
11.065.1890.17	332.89
11.065.1816.17	332.89
11.065.2063.17	446.85
11.065.2090.17	446.85
11.065.2011.17	446.85
11.065.2012.17	446.85
11.065.2016.17	446.85
11.065.2275.17	562.09
11.065.2290.17	562.09
11.065.2211.17	563.35
11.065.2216.17	564.65
11.065.2218.17	567.21
-	-
11.065.3111.17	1562.06
11.065.3116.17	1562.06
-	-
11.065.3122.17	1633.76
11.065.3125.17	1633.76

### PN10 (SDR 11)

Code	Price
11.065.6332.11	29.44
11.065.6350.11	29.44
11.065.7532.11	46.09
11.065.7550.11	46.09
11.065.7563.11	47.11
11.065.9063.11	65.56
11.065.9075.11	66.06
11.065.1163.11	97.31
11.065.1175.11	97.31
11.065.1190.11	98.60
11.065.1290.11	135.19
11.065.1211.11	135.19
11.065.1663.11	266.31
11.065.1675.11	268.88
11.065.1690.11	268.88
11.065.1611.11	275.32
11.065.1890.11	368.72
11.065.1816.11	368.72
11.065.2063.11	485.28
11.065.2090.11	485.28
11.065.2011.11	485.28
11.065.2012.11	485.28
11.065.2016.11	485.28
11.065.2275.11	623.55
11.065.2290.11	623.55
11.065.2211.11	626.14
11.065.2216.11	628.67
11.065.2218.11	629.96
-	-
11.065.3111.11	1697.77
11.065.3116.11	1697.77
-	-
11.065.3122.11	1774.56
11.065.3125.11	1774.56

## Free Training

We can provide free installer training either on site or at our bespoke training facility.

Contact our sales office on:

**0800 975 79 71**

## Bend 90°



Please note:  
Withdrawn, residual  
stocks only

### PN3.2 (SDR 33)

Size	Code	Price
110	11.001.0110.33	37.40
125	11.001.0125.33	42.27
140	11.001.0140.33	54.58
160	11.001.0160.33	71.19
180	11.001.0180.33	86.81
200	11.001.0200.33	107.55
225	11.001.0225.33	132.40
250	11.001.0250.33	162.60
280	11.001.0280.33	201.05
315	11.001.0315.33	285.53
355	11.001.0355.33	763.10
400	11.001.0400.33	1066.53
450	11.001.0450.33	1436.55
500	11.001.0500.33	2002.50

### PN6 (SDR 17.6)

Code	Price
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
11.001.0250.17	354.65
11.001.0280.17	460.92
11.001.0315.17	636.37
11.001.0355.17	1008.93
11.001.0400.17	1405.82
11.001.0450.17	1836.01
11.001.0500.17	2317.45

### PN10 (SDR 11)

Code	Price
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
11.001.0250.11	521.12
11.001.0280.11	678.57
11.001.0315.11	935.97
11.001.0355.11	1370.01
11.001.0400.11	1879.58
11.001.0450.11	2465.95
11.001.0500.11	3180.40

## Multi-Bend 90°

Elongated



### PN3.2 (SDR 33)

Size	Code	Price
20	-	-
25	-	-
32	-	-
40	-	-
50	-	-
63	-	-
75	-	-
90	-	-
110	-	-
125	-	-
140	-	-
160	-	-
180	-	-
200	-	-
225	-	-
250	-	-
280	-	-
315	-	-

### PN6 (SDR 17.6)

Code	Price
-	-
-	-
-	-
-	-
-	-
11.068.0063.17	14.76
11.068.0075.17	21.61
11.068.0090.17	28.19
11.068.0110.17	59.43
11.068.0125.17	75.52
11.068.0140.17	109.71
11.068.0160.17	120.97
11.068.0180.17	149.60
11.068.0200.17	185.30
11.068.0225.17	228.36
11.068.0250.17	411.34
11.068.0280.17	599.39
11.068.0315.17	748.46

### PN10 (SDR 11)

Code	Price
11.068.0020.11	6.41
11.068.0025.11	6.59
11.068.0032.11	6.87
11.068.0040.11	8.92
11.068.0050.11	11.20
11.068.0063.11	16.00
11.068.0075.11	22.09
11.068.0090.11	32.07
11.068.0110.11	61.00
11.068.0125.11	85.94
11.068.0140.11	114.90
11.068.0160.11	139.99
11.068.0180.11	165.76
11.068.0200.11	247.01
11.068.0225.11	294.59
11.068.0250.11	488.02
11.068.0280.11	705.18
11.068.0315.11	876.02

## Elbow 90°

Elongated



### PN3.2 (SDR 33)

Size	Code	Price
250	-	-
280	-	-
315	-	-

### PN6 (SDR 17.6)

Code	Price
-	-
-	-
-	-

### PN10 (SDR 11)

Code	Price
11.061.0250.11	587.04
11.061.0280.11	889.84
11.061.0315.11	1112.42

## Fast Delivery

We deliver using our own dedicated vehicles or next day carrier. Using our standard delivery service you can expect to receive your order within 24 hours - to your warehouse, factory or job-site



## Elbow 45°

Elongated



### PN3.2 (SDR 33)

Size	Code	Price
20	-	-
25	-	-
32	-	-
40	-	-
50	-	-
63	-	-
75	-	-
90	-	-
110	-	-
125	-	-
140	-	-
160	-	-
180	-	-
200	-	-
225	-	-
250	-	-
280	-	-
315	-	-

### PN6 (SDR 17.6)

Code	Price
-	-
-	-
-	-
-	-
-	-
11.060.0063.17	27.63
11.060.0075.17	34.07
11.060.0090.17	43.02
11.060.0110.17	82.23
11.060.0125.17	101.40
11.060.0140.17	129.07
11.060.0160.17	153.67
11.060.0180.17	167.76
11.060.0200.17	229.41
11.060.0225.17	273.99
11.060.0250.17	528.81
11.060.0280.17	800.25
11.060.0315.17	996.10

### PN10 (SDR 11)

Code	Price
11.060.0020.11	9.24
11.060.0025.11	9.88
11.060.0032.11	11.90
11.060.0040.11	14.83
11.060.0050.11	16.78
11.060.0063.11	30.75
11.060.0075.11	38.16
11.060.0090.11	47.68
11.060.0110.11	91.45
11.060.0125.11	112.93
11.060.0140.11	143.40
11.060.0160.11	170.55
11.060.0180.11	186.70
11.060.0200.11	255.06
11.060.0225.11	304.71
11.060.0250.11	588.98
11.060.0280.11	889.85
11.060.0315.11	1112.62

\* Also available pupped - enquire for details

Large diameter, segmented bends upto 1200mm available on request.  
For further information please contact our sales team.



## Pipe Supports

Pipe supports should be free of sharp edges which can damage a pipe wall. Care should also be taken to ensure that supports allow for expansion and contraction of the pipe without restraint.

Polypropylene pipework requires more support than for metallic systems. As working temperature increases, the distance between supports is reduced.

PN10 Pipe Size	Support Centres/m		
	20°C	60°C	100°C
16	0.75	0.65	0.40
20	0.80	0.65	0.45
25	0.85	0.75	0.50
32	1.00	0.85	0.55
40	1.10	0.95	0.60
50	1.25	1.05	0.70
63	1.40	1.20	0.80
75	1.55	1.30	0.85
90	1.65	1.45	0.95
110	1.85	1.60	1.05
125	2.00	1.70	1.10
140	2.10	1.80	1.15
160	2.25	1.90	1.25
180	2.40	2.00	1.30
200	2.50	2.15	1.35
225	2.65	2.30	1.45
250	2.75	2.35	1.50
280	2.90	2.45	1.60
315	3.05	2.60	1.65
355	3.20	2.70	1.75
400	3.40	2.90	1.85
450	3.70	3.15	2.00
500	3.85	3.25	2.05
560	4.10	3.50	2.25
630	4.35	3.70	2.40



### Concentric



**PN10 (SDR 11)**

### Concentric



**PN10 (SDR 11)**

Size	Code	Price	Code	Price	Code	Price
63 x 16	-	-	-	-	11.007.6316.11	11.16
75 x 32	-	-	11.007.7532.17	16.38	11.007.7532.11	17.81
110 x 63	11.007.1163.33	21.27	11.007.1163.17	22.41	11.007.1163.11	23.66
125 x 75	11.007.1275.33	24.32	11.007.1275.17	25.49	11.007.1275.11	26.62
160 x 110	11.007.1611.33	77.08	11.007.1611.17	82.96	11.007.1611.11	88.85
225 x 160	11.007.2216.33	194.89	11.007.2216.17	218.98	11.007.2216.11	240.99
315 x 225	11.007.3122.33	224.83	11.007.3122.17	248.18	11.007.3122.11	266.31
450 x 315	11.007.4531.33	768.22	11.007.4531.17	851.48	11.007.4531.11	946.19
630 x 450	11.007.6345.33	952.58	11.007.6345.17	1285.49	-	-



## Cap

Elongated



### PN3.2 (SDR 33)

Size	Code	Price
20	-	-
25	-	-
32	-	-
40	-	-
50	-	-
63	-	-
75	-	-
90	-	-
110	-	-
125	-	-
140	-	-
160	-	-
180	-	-
200	-	-
225	-	-
250	-	-
280	-	-
315	-	-

### PN6 (SDR 17.6)

Code	Price
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

### PN10 (SDR 11)

Code	Price
11.064.0020.11	7.03
11.064.0025.11	7.83
11.064.0032.11	9.88
11.064.0040.11	12.19
11.064.0050.11	15.89
11.064.0063.11	20.90
11.064.0075.11	32.52
11.064.0090.11	49.16
11.064.0110.11	66.57
11.064.0125.11	71.98
11.064.0140.11	89.88
11.064.0160.11	100.64
11.064.0180.11	130.88
11.064.0200.11	163.13
11.064.0225.11	194.61
11.064.0250.11	291.94
11.064.0280.11	414.85
11.064.0315.11	557.02

## Cap

Short

### PN3.2 (SDR 33)

Size	Code	Price
355	-	-
400	-	-
450	-	-
500	-	-

### PN6 (SDR 17.6)

Code	Price
-	-
-	-
-	-
-	-

### PN10 (SDR 11)

Code	Price
11.004.0355.11	578.74
11.004.0400.11	792.57
11.004.0450.11	1099.84
11.004.0500.11	1380.23

## Union

FPM seals



Size	Code	Price
20	-	-
25	-	-
32	-	-
40	-	-
50	-	-
63	-	-
75	-	-
90	-	-

### PN10 (SDR 11)

Code	Price
11.024.0120.11	28.67
11.024.0125.11	31.24
11.024.0132.11	37.63
11.024.0140.11	53.03
11.024.0150.11	75.03
11.024.0163.11	102.18
11.024.0175.11*	127.90
11.024.0190.11*	132.25

\* Supplied with beige grey PVDF nut

## Male Adaptor

BSP or NPT male thread



Size	Code	Price
20 x 1/2	-	-
25 x 3/4	-	-
32 x 1	-	-
40 x 1 1/4	-	-
50 x 1 1/2	-	-
63 x 2	-	-

### PN10-BSP

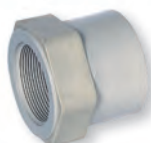
Code	Price
11.033.2020.11	10.16
11.033.2525.11	12.19
11.033.3232.11	15.24
11.033.4040.11	18.33
11.033.5050.11	30.23
11.033.6363.11	38.16

### PN10-NPT

Code	Price
11.033.2021.11	10.16
11.033.2526.11	12.19
11.033.3233.11	15.24
11.033.4041.11	18.33
11.033.5051.11	30.23
11.033.6364.11	38.16

## Female Adaptor

BSP or NPT female thread



Size	Code	Price
20 x 1/2	-	-
25 x 3/4	-	-
32 x 1	-	-
40 x 1 1/4	-	-
50 x 1 1/2	-	-
63 x 2	-	-

### PN10-BSP

Code	Price
11.032.2020.11	12.98
11.032.2525.11	14.64
11.032.3232.11	19.05
11.032.4040.11	21.79
11.032.5050.11	34.33
11.032.6363.11	43.02

### PN10-NPT

Code	Price
11.032.2021.11	12.98
11.032.2526.11	14.64
11.032.3233.11	19.05
11.032.4041.11	21.79
11.032.5051.11	34.33
11.032.6364.11	43.02

## PTFE Tape

BS7786

Size	Code	Price
12x12x0.075mm	767-120	1.33



## Stub Flange

DIN 16962  
Short Spigot



Also available to JIS standards.  
Please enquire for details.  
\*Machined.

### PN3.2 (SDR 33)

Size	Code	Price
20	-	-
25	-	-
32	-	-
40	-	-
50	-	-
63	-	-
75	-	-
90	-	-
110	11.012.0110.33	22.65
125	11.012.0125.33	27.89
140	11.012.0140.33	32.30
160	11.012.0160.33	39.94
180	11.012.0180.33	58.38
200	11.012.0200.33	70.16
225	11.012.0225.33	78.60
250	11.012.0250.33	110.88
280	11.012.0280.33	119.60
315	11.012.0315.33	143.40
355	11.012.0355.33	245.06
400	11.012.0400.33	509.62
450	11.012.0450.33	596.64
500	11.012.0500.33	724.69
560	11.012.0560.33	856.59
630	11.012.0630.33	987.17

### PN6 (SDR 17.6)

Code	Price
-	-
-	-
-	-
-	-
-	-
11.012.0063.17	10.02
11.012.0075.17	11.78
11.012.0090.17	17.14
11.012.0110.17	22.65
11.012.0125.17	27.89
11.012.0140.17	32.30
11.012.0160.17	39.94
11.012.0180.17	58.38
11.012.0200.17	73.00
11.012.0225.17	81.70
11.012.0250.17	116.76
11.012.0280.17	128.31
11.012.0315.17	156.69
11.012.0355.17	268.88
11.012.0400.17	542.88
11.012.0450.17	640.21
11.012.0500.17	788.70
11.012.0560.17	943.62
11.012.0630.17	1093.41

### PN10 (SDR 11)

Code	Price
11.012.0020.11	5.41
11.012.0025.11	5.41
11.012.0032.11	6.26
11.012.0040.11	7.58
11.012.0050.11	9.24
11.012.0063.11	11.55
11.012.0075.11	13.63
11.012.0090.11	19.45
11.012.0110.11	25.09
11.012.0125.11	30.23
11.012.0140.11	35.33
11.012.0160.11	44.54
11.012.0180.11	68.88
11.012.0200.11	76.05
11.012.0225.11	84.53
11.012.0250.11	128.31
11.012.0280.11	140.32
11.012.0315.11	165.20
11.012.0355.11	293.23
11.012.0400.11	577.46
11.012.0450.11	677.33
11.012.0500.11	856.59
-	-
-	-

## Stub Flange

ANSI  
Short Spigot



Also available to JIS standards.  
Please enquire for details.  
\*Machined.

### PN3.2 (SDR 33)

Size	Code	Price
20	-	-
25	-	-
32	-	-
40	-	-
50	-	-
63	-	-
75	-	-
90	-	-
110	-	-
125	-	-
160	-	-
200	-	-
225	-	-
250	-	-
315	-	-
355	-	-
400	-	-
450	-	-

### PN6 (SDR 17.6)

Code	Price
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

### PN10 (SDR 11)

Code	Price
11.012.1020.11	5.78
11.012.1025.11	5.81
11.012.1032.11	6.90
11.012.1040.11	8.20
11.012.1050.11	10.02
11.012.1063.11	12.50
11.012.1075.11	14.80
11.012.1090.11	21.10
11.012.1110.11	27.28
11.012.1125.11	32.93
11.012.1160.11	53.32
11.012.1200.11	106.19
11.012.1225.11	103.73
11.012.1250.11	176.68
11.012.1315.11	248.14
11.012.1355.11	352.41
11.012.1400.11	631.07
11.012.1450.11	813.19

## Stub Flange

Elongated



Also available to ANSI or JIS standards.  
Please enquire for details.

### PN3.2 (SDR 33)

Size	Code	Price
20	-	-
25	-	-
32	-	-
40	-	-
50	-	-
63	-	-
75	-	-
90	-	-
110	-	-
125	-	-
140	-	-
160	-	-
180	-	-
200	-	-
225	-	-
250	-	-
280	-	-
315	-	-

### PN6 (SDR 17.6)

Code	Price
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

### PN10 (SDR 11)

Code	Price
11.062.0020.11	7.44
11.062.0025.11	7.83
11.062.0032.11	9.11
11.062.0040.11	10.77
11.062.0050.11	13.17
11.062.0063.11	16.52
11.062.0075.11	21.38
11.062.0090.11	27.89
11.062.0110.11	35.59
11.062.0125.11	43.30
11.062.0140.11	55.80
11.062.0160.11	63.76
11.062.0180.11	98.34
11.062.0200.11	112.17
11.062.0225.11	120.84
11.062.0250.11	185.67
11.062.0280.11	281.70
11.062.0315.11	357.25

## Chamfered



Code	Price
11.012.9110.11	31.24
11.012.9140.11	44.06
11.012.9160.11	55.61
11.012.9180.11	86.32
11.012.9200.11	95.02
11.012.9225.11	105.78
11.012.9250.11	160.57
11.012.9280.11	175.43
11.012.9315.11	206.37
11.012.9355.11	256.29
11.012.9400.11	458.96

Polypropylene with steel insert - black



Also available to ANSI  
or JIS standards.  
Please enquire for  
details

Code	Price
14.045.0020.11	81.96
14.045.0025.11	83.23
14.045.0032.11	85.30
14.045.0040.11	91.45
14.045.0050.11	103.48
14.045.0063.11	112.68
14.045.0075.11	131.88
14.045.0090.11	145.19
14.045.0110.11	198.18
14.045.0125.11	198.18
14.045.0140.11	243.56
14.045.0160.11	307.26
14.045.0180.11	307.26
14.045.0200.11	341.87
14.045.0225.11	341.87
14.045.0250.11	446.85
14.045.0280.11	446.85
14.045.0315.11	651.70
14.045.0355.11	1272.70
14.045.0400.11	1454.50

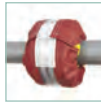
## Flange Guards



FG-PTFE



PTFE



PVC



PE



PP

Technoshield® is the most advanced preventative control system able to minimize the risk involved with spray out of chemicals from flange joints. Technoshield® fabric products use multiple layers of high performance fabrics wrapped around flanges. Fix firmly in place by high endurance tightening cords.

The Technoshield® fabric is scientifically researched and technically tested to be thin, resistant, and outstandingly safe. It resists up to 250°C and has the widest range of resistance to chemicals.

Technoshield® is composed of high endurance fabrics that provide a unique strength against mechanical stresses. These systems are designed to be suitable both for internal and external environments.

Available materials are: FG-PTFE, Pure PTFE, PVC, Polyethylene, and Polypropylene.

For more information on the range available, please contact our sales office.





## Stub Gasket



### EPDM

Size	Code	Price
1/2"/20	861-E-005	0.77
3/4"/25	861-E-007	0.88
1"/32	861-E-010	0.97
1 1/4"/40	861-E-012	1.20
1 1/2"/50	861-E-015	1.46
2"/63	861-E-020	2.50
2 1/2"/75	861-E-075	3.07
3"/90	861-E-031	3.30
4"/110	861-E-041	4.80
4"/110	861-E-040	4.80
140	861-E-051	6.17
6"/160	861-E-061	7.07
6"/160	861-E-180	7.07
8"/200	861-E-080	14.05
225	861-E-082	14.05
250	861-E-100	17.24
10"/280	861-E-101	17.24
12"/315	861-E-121	19.54
335	861-E-141	27.54
400	861-E-161	30.35

### FPM

Code	Price
862-E-005	3.55
862-E-007	5.27
862-E-010	6.97
862-E-012	11.20
862-E-015	12.22
862-E-020	16.10
862-E-075	23.32
862-E-031	30.38
862-E-041	51.88
862-E-040	51.86
862-E-051	86.56
862-E-061	86.56
862-E-180	86.57
862-E-080	103.66
862-E-082	103.66
862-E-100	141.11
862-E-101	141.11
862-E-121	147.32
862-E-141	229.82
862-E-161	264.73

Please note above codes are for Table D/E  
Replace 'E' for 'ISO' for NP10/16 or 'A' for ANSI 150

## Backing Ring

Polypropylene with steel core



Also available in ANSI 150, please enquire for details

### PN10

Size	Code	Price
20	14.014.0020.11*	11.63
25	14.014.0025.11*	12.76
32	14.014.0032.11*	16.36
40	14.014.0040.11*	20.74
50	14.014.0050.11*	24.20
63	14.014.0063.11*	28.06
75	14.014.0075.11*	31.16
90	14.014.0090.11*	36.82
110	14.014.0110.11*	43.76
125	14.014.0125.11*	43.76
140	14.014.0140.11*	67.40
160	14.014.0160.11*	77.19
180	14.014.0180.11*	77.19
200	14.014.0200.11*	109.89
225	14.014.0225.11*	109.89
250	14.014.0250.11*	175.48
280	14.014.0280.11*	175.48
315	14.014.0315.11*	220.50
355	14.014.0355.11*	464.45
400	14.014.0400.11*	526.19
450	14.014.0450.11*	651.01
500	14.014.0500.11*	651.01
560	14.014.0560.11*	882.54
630	14.014.0630.11*	882.54

\*Black

### PN10

Code	Price
11.014.0020.11	11.62
11.014.0025.11	12.76
11.014.0032.11	16.36
11.014.0040.11	20.74
11.014.0050.11	24.20
11.014.0063.11	28.06
11.014.0075.11	31.16
11.014.0090.11	36.82
11.014.0110.11	43.75
11.014.0125.11	43.75
11.014.0140.11	67.40
11.014.0160.11	77.21
11.014.0180.11	77.21
11.014.0200.11	109.89
11.014.0225.11	109.89
11.014.0250.11	175.48
11.014.0280.11	175.48
11.014.0315.11	220.50
11.014.0355.11	464.45
11.014.0400.11	526.19
11.014.0450.11	651.01
11.014.0500.11	651.01
-	-
-	-

### PN16

Code	Price
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
14.014.1200.11	169.83
14.014.1225.11	169.83
14.014.1250.11	252.67
14.014.1280.11	252.68
14.014.1315.11	288.54
14.014.1355.11	574.09
14.014.1400.11	634.46
-	-
-	-
-	-
-	-

## Backing Ring

Galvanised Mild Steel



### PN10

Size	Code	Price
1/2"/20	860-005-12NP	12.86
3/4"/25	860-007-12NP	13.60
1"/32	860-010-12NP	16.61
1 1/4"/40	860-012-12NP	17.66
1 1/2"/50	860-015-12NP	18.84
2"/63	860-020-11NP	26.62
2 1/2"/75	860-025-11NP	36.43
3"/90	860-030-11NP	42.12
4"/110	860-040-11NP	53.87
125	860-125-11NP	75.01
5"/140	860-050-12NP	75.01
6"/160	860-060-14NP	83.96
180	860-180-11NP	98.57
8"/200/225	860-080-14N	123.66
250	860-100-13N	174.92
10"/280	860-280-11N	166.99
12"/315	860-120-15N	227.01
14"/355	860-140-12N	633.07
16"/400	860-160-12N	777.04

Code	Price
860-005-12A	12.86
860-007-12A	13.60
860-010-12A	16.18
860-012-12A	17.16
860-015-12A	18.84
860-020-11A	26.62
860-025-11A	36.43
860-030-11A	42.12
860-040-11A	53.87
860-125-11A	75.01
860-050-12A	75.01
860-060-14A	83.96
860-180-11A	98.56
860-080-14A	123.65
860-100-13A	166.98
860-280-11A	166.98
860-120-15A	227.00
860-140-12A	633.06
860-160-12A	777.04



## The Chemical Resistant Flexible Sealing Solution

Manufactured from FKM synthetic rubber, the new Patent Pending VIPSealChem is the latest addition to the VIPSeal® range for use in low and non-pressurised applications where a high chemical resistance is required and other synthetic rubber materials such as EPDM, SBR and NBR are unsuitable.

VIPSealChem couplings are manufactured to meet the demanding requirements of EN681-1 WB/WD and EN295-4 and provide a flexible and watertight connection on above and below ground drainage systems that require high resistance to a wide range of chemicals. VIPSealChem also operates in a wide range of temperatures.



### Reduced Installation Times

As VIPSealChem's chemical resistant properties lie in the FKM synthetic rubber that is used to manufacture the seal, there is no need for the use of a fluoropolymer (FEP) liner or expanded PTFE seals (which are commonly used on other chemical resistant sealing solutions).

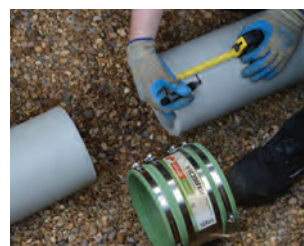
Because of this, they are as simple to install as any other seal within the VIPSeal® range, allowing dramatic time savings to be made on both installation and repairs along with providing a more consistent sealing performance.

### Increased Range of Applications

By not using a fluoropolymer (FEP) liner or expanded PTFE seals, VIPSealChem is able to be manufactured as an adaptor coupling. This application allows pipes with significantly different outside diameters to be joined, ensuring VIPSealChem can be used without the need to make further alterations to existing pipes or prefabricated structures.

### Standard couplings

- a. If repairing an existing section of pipe - Cut section from the pipeline using pipe cutter or disc saw and remove. This should be about 20mm longer than the junction or new section of pipe to be installed.
1. Mark off half a coupling width from each joint on each pipe section.
2. Loosen the tension and shear bands on the coupling and then slide the coupling onto each end of the existing pipe line (lubricant not required).
3. Position the new junction or pipe length and centre a coupling over one joint at a time using the marks previously made then begin to tighten up the worm drives, starting with the tension bands followed by the shear band.
4. Check each tension and shear band with a torque wrench to the recommended torque shown on each coupling. Once completed, carefully tamp bedding under the pipeline if applicable.



### Drain couplings

1. Mark off half a coupling width from each joint on each pipe section.
2. Loosen the tension bands on the coupling and then slide the coupling onto each end of the existing pipe line (lubricant not required).
3. Position the new junction or pipe length and centre a coupling over one joint at a time using the marks previously made then begin to tighten the tension bands.
4. Check each tension band with torque wrench to the recommended torque shown on each coupling. Once completed, carefully tamp bedding under the pipeline if applicable.



### Adaptor couplings

1. Slide the coupling fully onto the larger pipe.
2. Measure the depth of the smaller end of the coupling and mark the length on the smaller pipe.
3. Insert the smaller pipe up to the mark and begin to tighten the tension bands.
4. Check each tension band with a torque wrench to the recommended torque shown on each coupling. Once completed, carefully tamp bedding under the pipeline if applicable.





## Standard Coupling



Size mm to mm	Width mm	Code	Price
100-115	100	VSC115FKM	84.07
120-137	120	VSC137FKM	95.81
140-165	120	VSC165FKM	114.80
175-200	150	VSC200FKM	167.20
240-265	150	VSC265FKM	204.29
265-290	150	VSC290FKM	263.52
295-320	190	VSC320FKM	376.14
355-385	190	VSC385FKM	379.34

## Drain Coupling



Size mm to mm	Width mm	Code	Price
32-40	68	VDC40FKM	46.61
40-50	68	VDC50FKM	47.61
50-65	90	VDC65FKM	62.09
65-75	108	VDC75FKM	91.77
80-95	100	VDC95FKM	106.19
100-115	100	VDC115FKM	118.30
140-165	120	VDC165FKM	129.64
190-215	150	VDC215FKM	224.43



## Adaptor Coupling

Size mm to mm	Width mm	Code	Price
48-56 - 110-122	100	VAC1225FKM	93.45
80-95 - 110-122	100	VAC1221FKM	93.45
110-115 - 110-125	100	VAC5144FKM	82.36
110-121 - 121-136	100	VAC4000FKM	61.35
100-115 - 121-136	100	VAC1362FKM	96.65
110-122 - 144-160	120	VAC1602FKM	110.20
121-136 - 144-160	120	VAC1603FKM	120.11
110-122 - 170-192	120	VAC1922FKM	128.72
121-136 - 170-192	120	VAC1923FKM	150.06
144-160 - 170-192	120	VAC1924FKM	150.06
130-145 - 180-200	150	VAC2000FKM	179.19

## Lubricant (VIN)

Universal Pipe Lubricant from VIPSeal® is a pipe-jointing compound that has been specially formulated for use with water pipes and mains. Based on a vegetable soap lubricant it enables quick and easy repair of sealing joints on nearly all pipe materials including rubber, plastic, clay, cast iron and concrete.



Tub Size	Code	Price
0.5kg	VIN-0.5	8.76
1kg	VIN-1.0	11.41
2.5kg	VIN-2.5	23.19



## Shear & Tension Bands

As per the VIPSeal® range, for general applications, VIPSealChem shear and tension bands are manufactured from 1.4301 (304) austenitic stainless steel.

For higher corrosion or contaminated ground areas and marine environments, grade 1.4401 (316) should be specified to eliminate the need for protective tape.



## Industry Applications

Due to its high resistance to a wide range of chemicals and temperatures, VIPSealChem is suitable for the following applications:



Chemical and Process Industries



Pharmaceutical, Medical and Research Laboratories



Food Processing Plants



Breweries

# pp flame retardant pipe and fittings

Flame  
retardant  
grade



## Pipe PPs

Ventilation				PN3.2/S-16/SDR33		PN10/S-5/SDR11	
Size	Wall	Code	Price	Code	Price	Code	Price
20	-	-	-	-	-	17.705.0020.11	4.16
25	-	-	-	-	-	17.705.0025.11	5.63
32	-	-	-	-	-	17.705.0032.11	8.04
40	-	-	-	-	-	17.705.0040.11	11.36
50	3.0	17.705.0050.00	on application	-	-	17.705.0050.11	17.65
63	3.0	17.705.0063.00	on application	17.705.0063.33	10.61	17.705.0063.11	27.94
75	3.0	17.705.0075.00	on application	-	-	17.705.0075.11	39.13
90	3.0	17.705.0090.00	on application	-	-	17.705.0090.11	56.52
110	3.0	17.705.0110.00	on application	-	-	17.705.0110.11	83.96
125	3.0	17.705.0125.00	on application	-	-	-	-
140	3.0	17.705.0140.00	40.98	-	-	17.705.0140.11	135.56
160	3.0	17.705.0160.00	47.51	-	-	17.705.0160.11	177.94
180	3.0	17.705.0180.00	53.14	-	-	-	-
200	3.0	17.705.0200.00	59.00	-	-	-	-
225	3.5	17.705.0225.00	76.65	-	-	-	-
250	3.5	17.705.0250.00	85.40	-	-	-	-
280	4.0	17.705.0280.00	108.06	-	-	-	-
315	5.0	17.705.0315.00	152.45	-	-	-	-
355	5.0	17.705.0355.00	172.00	-	-	-	-
400	6.0	17.705.0400.00	229.41	-	-	-	-
450	6.0	17.705.0450.00	269.81	-	-	-	-
500	8.0	17.705.0500.00	398.40	-	-	-	-
560	8.0	17.705.0560.00	446.99	-	-	-	-
630	10.0	17.705.0630.00	625.13	-	-	-	-
710	12.0	17.705.0710.00	842.14	-	-	-	-
800	12.0	17.705.0800.00	948.99	-	-	-	-
900	15.0	17.705.0900.00	1448.92	-	-	-	-
1000	15.0	17.705.1000.00	1614.22	-	-	-	-
1200	18.0	17.705.1200.00	2679.78	-	-	-	-

Standard length 5m

Please note that a transportation surcharge may be applied on pipe diameters 250mm or larger - please enquire for details.

## Tee 90°



PN2.5 (SDR 41)				PN3.2 (SDR 33)		PN10 (SDR 11)	
Size	Code	Price		Code	Price	Code	Price
20	-	-		-	-	17.006.0020.11	5.62
25	-	-		-	-	17.006.0025.11	5.62
32	-	-		-	-	17.006.0032.11	7.01
40	-	-		-	-	17.006.0040.11	11.09
50	-	-		-	-	17.006.0050.11	14.97
63	-	-		-	-	17.006.0063.11	23.25
75	-	-		-	-	17.006.0075.11	46.93
90	-	-		-	-	17.006.0090.11	70.01
110	-	-		17.006.0110.33	58.21	17.006.0110.11	102.86
140	-	-		-	-	17.006.0140.11	179.43
160	-	-		17.006.0160.33	132.59	17.006.0160.11	301.86
180	-	-		17.006.0180.33	177.55	-	-
200	-	-		17.006.0200.33	193.99	-	-
225	-	-		17.006.0225.33	363.51	-	-
250	-	-		17.006.0250.33	562.17	-	-
280	-	-		17.006.0280.33	715.75	-	-
315	-	-		17.006.0315.33	905.50	-	-



## Bend 90°



### PN2.5 (SDR 41)

Size	Code	Price
20	-	-
25	-	-
32	-	-
40	-	-
50	-	-
63	-	-
75	-	-
90	-	-
110	-	-
140	-	-
160	-	-
180	-	-
200	-	-
225	-	-
250	-	-
280	-	-
315	-	-
355	-	-
400	-	-

### PN3.2 (SDR 33)

Code	Price
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
17.001.0110.33	44.47
-	-
17.001.0160.33	84.51
17.001.0180.33	102.96
17.001.0200.33	127.71
17.001.0225.33	157.21
17.001.0250.33	193.15
17.001.0280.33	238.94
17.001.0315.33	338.81
17.001.0355.33	905.78
17.001.0400.33	1270.25

### PN10 (SDR 11)

Code	Price
17.001.0020.11	6.98
-	-
17.001.0032.11	7.50
17.001.0040.11	9.74
17.001.0050.11	12.21
17.001.0063.11	17.50
17.001.0075.11	24.11
17.001.0090.11	34.98
17.001.0110.11	66.62
17.001.0140.11	125.50
17.001.0160.11	152.88
-	-
-	-
-	-
-	-
-	-
-	-
-	-

## Reducer

Concentric



### PN2.5 (SDR 41)

Size	Code	Price
63x16	-	-
75x32	-	-
110x63	-	-
125x75	-	-
160x110	-	-
225x160	-	-
315x225	-	-

### PN3.2 (SDR 33)

Code	Price
-	-
-	-
17.007.1163.33	25.27
17.007.1275.33	28.89
17.007.1611.33	91.53
17.007.2216.33	232.13
17.007.3122.33	267.10

### PN10 (SDR 11)

Code	Price
17.007.6316.11	13.22
17.007.7532.11	21.22
17.007.1163.11	28.11
17.007.1275.11	31.71
17.007.1611.11	105.63
-	-
-	-

## Stub Flange



### PN2.5 (SDR 41)

Size	Code	Price
20	-	-
25	-	-
32	-	-
40	-	-
50	-	-
63	-	-
75	-	-
90	-	-
110	-	-
125	-	-
140	-	-
160	-	-
180	-	-
200	-	-
225	-	-
250	-	-
280	-	-
315	-	-
355	-	-
400	-	-
500	-	-

### PN3.2 (SDR 33)

Code	Price
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
17.012.0110.33	26.98
-	-
-	-
17.012.0160.33	47.46
17.012.0180.33	69.36
17.012.0200.33	81.68
17.012.0225.33	93.41
17.012.0250.33	119.84
17.012.0280.33	142.12
17.012.0315.33	170.26
17.012.0355.33	291.27
17.012.0400.33	606.56
17.012.0500.33	862.66

### PN10 (SDR 11)

Code	Price
17.012.0020.11	6.36
17.012.0025.11	6.36
17.012.0032.11	7.46
17.012.0040.11	8.94
17.012.0050.11	10.85
17.012.0063.11	13.64
17.012.0075.11	16.02
17.012.0090.11	23.10
17.012.0110.11	29.70
-	-
17.012.0140.11	41.85
17.012.0160.11	52.77
-	-
-	-
-	-
-	-
-	-
-	-
-	-

Refer to page 243 for backing rings and gaskets



Pipe PPs-el

Ventilation				PN<1.5/S-16/SDR33		PN<3.5/S-8.3/SDR17		PN<6/S-5/SDR11	
Size	Wall	Code	Price	Code	Price	Code	Price	Code	Price
32		-	-	-	-	-	-	19.705.0032.11	34.32
50		-	-	-	-	-	-	19.705.0050.11	88.30
63		-	-	-	-	-	-	19.705.0063.11	139.68
75		-	-	-	-	-	-	19.705.0075.11	194.84
90		-	-	19.705.0090.33	105.05	-	-	19.705.0090.11	281.64
110	3.0	19.705.0110.00	160.12	19.705.0110.33	159.89	19.705.0110.17	274.90	19.705.0110.11	379.18
160	3.0	19.705.0160.00	234.91	19.705.0160.33	327.73	19.705.0160.17	577.84	-	-
180	3.0	19.705.0180.00	264.69	-	-	-	-	-	-
200	3.0	19.705.0200.00	294.36	19.705.0200.33	509.09	19.705.0200.17	897.45	-	-
225	3.5	19.705.0225.00	373.16	19.705.0225.33	630.74	-	-	-	-
250	3.5	19.705.0250.00	446.76	-	-	-	-	-	-
315	5.0	19.705.0315.00	750.35	19 705 0315 33	1159.19	-	-	-	-
355	5.0	19.705.0355.00	846.95	-	-	-	-	-	-
400	6.0	19.705.0400.00	956.49	-	-	-	-	-	-

Standard length 5m

Please note that a transportation surcharge may be applied on pipe diameters 250mm or larger - please enquire for details

Tee 90°



PN<1.5 (SDR 33)

Size	Code	Price
32	-	-
50	-	-
63	-	-
75	-	-
90	-	-
110	19.006.0110.33	92.17
160	19.006.0160.33	209.91
200	19.006.0200.33	307.40
225	19.006.0225.33	575.75
250	19.006.0250.33	890.76
315	19.006.0315.33	1430.58

PN<3.5 (SDR 17.6)

Code	Price
-	-
-	-
-	-
-	-
-	-
19.006.0110.17	138.53
19.006.0160.17	426.15
19.006.0200.17	714.85
-	-
-	-
-	-

PN<6 (SDR 11)

Code	Price
19.006.0032.11	11.06
19.006.0050.11	23.71
19.006.0063.11	36.83
19.006.0075.11	74.38
19.006.0090.11	110.96
19.006.0110.11	164.24
-	-
-	-
-	-
-	-
-	-

## Bend 90°



### PN<1.5 (SDR 33)

Size	Code	Price
32	-	-
50	-	-
63	-	-
75	-	-
90	-	-
110	19.001.0110.33	70.41
160	19.001.0160.33	133.83
200	19.001.0200.33	202.40
225	19.001.0225.33	249.01
250	19.001.0250.33	306.04
315	19.001.0315.33	537.19

### PN<3.5 (SDR 17.6)

Code	Price
-	-
-	-
-	-
-	-
-	-
19.001.0110.17	102.84
19.001.0160.17	209.31
19.001.0200.17	317.69
-	-
-	-
-	-

### PN<6 (SDR 11)

Code	Price
19.001.0032.11	11.96
19.001.0050.11	19.34
19.001.0063.11	27.72
19.001.0075.11	38.28
19.001.0090.11	55.36
19.001.0110.11	106.41
-	-
-	-
-	-
-	-
-	-

## Reducer

Concentric



### PN<1.5 (SDR 33)

Size	Code	Price
63x16	-	-
75x32	-	-
110x63	-	-
160x110	19.007.1611.33	144.95
225x160	19.007.2216.33	366.91
315x225	19.007.3122.33	423.06

### PN<3.5 (SDR 17.6)

Code	Price
-	-
-	-
-	-
19.007.1611.17	147.49
19.007.2216.17	411.93
-	-

### PN<6 (SDR 11)

Code	Price
19.007.6316.11	21.00
19.007.7532.11	33.52
19.007.1163.11	44.45
-	-
-	-
-	-

## Stub Flange



### PN<1.5 (SDR 33)

Size	Code	Price
32	-	-
50	-	-
63	-	-
75	-	-
90	-	-
110	19.012.0110.33	42.69
160	19.012.0160.33	75.20
200	19.012.0200.33	131.99
225	19.012.0225.33	148.05
250	19.012.0250.33	208.75
315	19.012.0315.33	269.67

### PN<3.5 (SDR 17.6)

Code	Price
-	-
-	-
-	-
-	-
-	-
19.012.0110.17	42.69
19.012.0160.17	75.20
19.012.0200.17	137.29
-	-
-	-
-	-

### PN<6 (SDR 11)

Code	Price
19.012.0032.11	11.73
19.012.0050.11	17.25
19.012.0063.11	21.54
19.012.0075.11	25.51
19.012.0090.11	36.57
19.012.0110.11	47.41
-	-
-	-
-	-
-	-

## Backing Ring

BS 4504 EN1072 NP10



### PPs-el

Size	Code	Price
32	19.014.0032.11	33.86
50	19.014.0050.11	50.02
63	19.014.0063.11	57.72
75	19.014.0075.11	64.03
90	19.014.0090.11	76.18
110	19.014.0110.11	121.57
140	-	-
160	19.014.0160.11	177.08
200	-	-
225	-	-
250	-	-
315	-	-



### Gaskets

Refer to page 243 for backing rings and gaskets



## Hayward Simplex Basket Strainer

**Description:** In-line strainer with serviceable basket filter

**Mounting:** Vertical

**Maximum Fluid Pressure at 20°C:** 10 bar

**Fluid Temperature Range:** 0°C-80°C

**Construction:**

**Body:** Polypropylene

**Strainer Basket:** Glass Filled Polypropylene or 316 Stainless Steel

**Strainer Mesh Sizes:** GFPP: 1/32", 1/16", 1/8", 3/16"

Stainless Steel: 20, 40, 60, 80, 100, 150, 200, 325 mesh

**Seals:** FPM

**End Connections:** NPT Threaded or Flanged

**Gauge:** Optional



### Spare GFPP Basket

Size	Code	Price
1"	SB401001/_	on application
1.½", 2"	SB402001/_	

To specify the mesh size, add to part number e.g. 3" basket c/w 1/32" mesh = SB103001/32

### Spare Stainless Steel Basket

Size	Code	Price
1"	BS710(XX)	on application
1.½", 2"	BS720(XX)	

To specify the mesh size, add to part number e.g. 2" basket c/w 60 mesh = BS72060

## Hayward Simplex Platinum Basket Strainer

NEW!

**Description:** In-line strainer with serviceable basket filter

**Mounting:** Vertical

**Maximum Fluid Pressure at 20°C:** 10 bar

**Fluid Temperature Range:** 0°C-80°C

**Construction:**

**Body:** Polypropylene

**Strainer Basket:** Glass Filled Polypropylene or 316 Stainless Steel

**Strainer Mesh Sizes:** GFPP: 1/32", 1/16", 1/8", 3/16"

Stainless Steel: 20, 40, 60, 80, 100, 150, 200, 325 mesh

**Seals:** FPM

**End Connections:** NPT Threaded or Flanged

**Gauge:** Optional



### NPT Female Threaded

GFPP Body GFPP Basket	Size	Code	Price
	½"	SB4P050T	on application
	¾"	SB4P075T	
	1"	SB4P100T	
	1.¼"	SB4P125T	
	1.½"	SB4P150T	
	2"	SB4P200T	
	2.½"	SB4P250T	
	3"	SB4P300T	
	4"	SB4P400T	

### Socket Fusion

GFPP Body GFPP Basket	Size	Code	Price
	½"	SB4P050S	on application
	¾"	SB4P075S	
	1"	SB4P100S	
	1.¼"	SB4P125S	
	1.½"	SB4P150S	
	2"	SB4P200S	
	2.½"	SB4P250S	
	3"	SB4P300S	
	4"	SB4P400S	

### Flanged ASA 150

GFPP Body GFPP Basket	Size	Code	Price
	1"	SB4P100S	on application
	1.¼"	SB4P125S	
	1.½"	SB4P150S	
	2"	SB4P200S	
	2.½"	SB4P250S	
	3"	SB4P300S	
	4"	SB4P400S	



### Drain Kits

Ideal for controlled draining on basket strainers. Includes ball valve with locking lever, drilled ball and nipple piece. Please enquire for details.

## Hayward Bag Filter

**Description:** In-line strainer with replaceable bag filter

**Mounting:** In a horizontal position

**Maximum Fluid Pressure at 20°C:** 15.5 bar

**Fluid Temperature Range:** 0°C-80°C

**Construction:**

**Body:** Glass filled Polypropylene

**Strainer Basket:** Cloth

**Strainer Mesh Sizes:** 5, 10, 25, 50, 100 micron

**Seals:** FPM

**End Connections:** 2" NPT Female Threaded, flanged ASA 150

**Gauge:** Optional



### Single or Double Bag Filter

Length	Connection	Simplex		Duplex	
		Code	Price	Code	Price
Single	2" FPT	FLV4P1520T4VS	on application	-	
Single	2" ASA 150	FLV4P1520F4VS		-	
Double	2" FPT	FLV4P2520T4VS		-	
Double	2" ASA 150	FLV4P2520T4VS		FLT2DUP	on application

### Polypropylene Filter Bags - Welded Construction

Length	Gauge	Code	Price
Single*	1 micron	F31R36590	
Single*	5 micron	F31R36817	
Single*	10 micron	F31R36552	
Single*	25 micron	F31R36596	
Single*	50 micron	F31R36589	
Single*	100 micron	F31R36551	
Single*	200 micron	F3AB00319	on application
Double**	1 micron	F31R36502	
Double**	5 micron	F31R36501	
Double**	10 micron	F31R36503	
Double**	25 micron	F31R36412	
Double**	50 micron	F31R36500	
Double**	100 micron	F31R36505	
Double**	200 micron	F3AB00222	

### Polypropylene Filter Bags - Sewn Construction

Length	Gauge	Code	Price
Single*	1 micron	F3AB00013	
Single*	5 micron	F3AB00157	
Single*	10 micron	F3AB00019	
Single*	25 micron	F3AB00020	
Single*	50 micron	F3AB00014	
Single*	100 micron	F31A37288	
Single*	200 micron	F3AB00103	on application
Double**	1 micron	F31B36372	
Double*	5 micron	F31B37455	
Double*	10 micron	F3AA01434	
Double*	25 micron	F3AB00002	
Double*	50 micron	F3AA00160	
Double*	100 micron	F3AA01128	
Double**	200 micron	F3AB00057	

### Polypropylene Monofilament Filter Bags - Sewn Construction

Length	Gauge	Code	Price
Single*	150 micron	F3AB00170	
Single*	400 micron	F3AB00173	
Single*	600 micron	F3AB00174	
Single*	800 micron	F3AB00175	on application
Double*	150 micron	F3AB00177	
Double*	400 micron	F3AB00180	
Double*	600 micron	F3AB00181	
Double*	800 micron	F3AB00182	

Note: Filter bags are sold in box quantities only

\*Box quantity 50

\*\* Box quantity 30

# Praher S4 Ball Valve



## Praher Type S4 Ball Valve

**Description:** In-line double union ball valve with lockable handle  
**Mounting:** In any position  
**Maximum Fluid Pressure at 20°C:** Sizes 16mm to 75mm - 10bar;  
 Sizes 90mm to 110mm - 6 bar  
**Fluid Temperature Range:** 0°C-80°C  
**Construction:**  
**Body:** Polypropylene (PP-H)  
**Seals:** EPDM or FPM  
**Seats:** PTFE  
**End Connections:** Fusion sockets, fusion spigots,  
 BSP Female Threaded, Flanged BS4504 EN1092 PN10  
**Option:** Silicon-free



Lockable Handle



Tagging Point



Valve Bracket



Actuation

### Materials

Body - Polypropylene  
 Ball Seat - PTFE  
 Seals - EPDM or FPM

### Sizes

3/8" - 4"/16mm - 110mm

### Pressure Rating

3/8"/16mm to 2 1/2"/75mm - 10 bar  
 3" - 4"/90mm - 110mm - 6 bar

### Connections

Fusion Sockets  
 Fusion Spigots  
 BSP Female Threaded  
 Flanged PN10

### Features

- Lockable Handle (Lock not supplied)
- True Union design for easy maintenance
- Full bore design
- Tagging point included
- Matched Valve bracket for panel mounting and retrofit actuation.
- Pneumatically and Electrically actuated versions available
- Silicone free on request



#### MM Fusion Sockets

EPDM Seals  
 PTFE Seats

Size	Code	Price
16	12.1378	90.65
20	12.1379	94.26
25	12.1381	111.03
32	12.1383	125.93
40	12.1385	161.07
50	12.1387	203.11
63	12.1389	261.24
75	12.1391	601.96
90	12.1393	920.17
110	12.2094	1064.06

#### MM Fusion Sockets

FPM Seals  
 PTFE Seats

Size	Code	Price
16	12.1377	105.56
20	12.1412	109.53
25	12.1380	132.70
32	12.1382	151.28
40	12.1384	191.09
50	12.1386	237.39
63	12.1388	302.03
75	12.1390	683.14
90	12.1392	1041.59
110	12.2115	1216.56

#### MM Fusion Spigots

EPDM Seals  
 PTFE Seats

Size	Code	Price
16	12.1430	88.87
20	12.1432	92.42
25	12.1434	111.03
32	12.1436	125.93
40	12.1438	161.07
50	12.1440	203.11
63	12.1442	261.24
75	12.1444	601.96
90	12.1446	920.17
110	12.2508	1064.06

#### MM Fusion Spigots

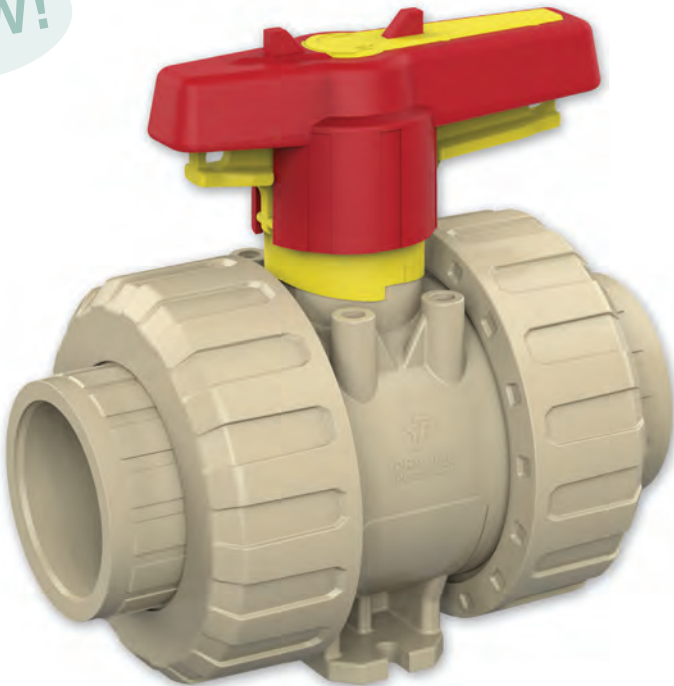
FPM Seals  
 PTFE Seats

Size	Code	Price
16	12.1431	103.49
20	12.1433	107.39
25	12.1435	130.10
32	12.1437	148.32
40	12.1439	187.34
50	12.1441	232.74
63	12.1443	296.10
75	12.1445	669.75
90	12.1447	1041.59
110	12.2509	1216.56



# Praher M1 Modular Ball Valve

NEW!



Lockable Handle



Limit Switch Box



Integrated Bracket



Simple Actuation

### Features

- Lockable Handle (Lock not supplied)
- True Union design for easy maintenance
- Buttress thread on union
- Full bore design
- Integrated fixing points
- Limit switch box for position feedback available
- Modular adaptor set available for actuators or limit switches

### Materials

Body - PP  
Ball Seat - PTFE  
Seals - EPDM or FPM

### Sizes

16mm - 63mm

### Pressure Rating

10 bar

### Connections

Fusion Sockets  
Fusion Spigots

## M1 Ball Valve Manual



### MM Fusion Sockets

EPDM Seals - PTFE Seats

Size	Code	Price
16	12.4084	89.77
20	12.4085	93.36
25	12.4086	112.15
32	12.4087	127.22
40	12.4088	162.71
50	12.4089	205.16
63	12.4090	263.92

## M1 Ball Valve Manual



### MM Fusion Sockets

FPM Seals - PTFE Seats

Size	Code	Price
16	12.4140	104.55
20	12.4141	108.48
25	12.4142	131.43
32	12.4143	149.84
40	12.4144	189.25
50	12.4145	235.10
63	12.4146	299.12

## M1 Ball Valve Manual



### MM Fusion Spigots

EPDM Seals - PTFE Seats

Size	Code	Price
16	12.4098	89.78
20	12.4099	93.36
25	12.4100	112.14
32	12.4101	127.22
40	12.4102	162.71
50	12.4103	205.16
63	12.4104	263.92

## M1 Ball Valve Manual



### MM Fusion Spigots

FPM Seals - PTFE Seats

Size	Code	Price
16	12.4147	104.55
20	12.4148	108.48
25	12.4149	131.43
32	12.4150	149.84
40	12.4151	189.25
50	12.4152	235.10
63	12.4153	299.12

# Safi Manual 2-Way Ball Valve



## Materials

Body - GRP, PVDF, ASPP  
Seals - EPDM, FPM, FFKM, NBR

## Sizes

1/2"/20mm - 6"/160mm

## Pressure Rating

PN10 / PN16

## Connections

Between flanges, universally drilled

## Options

Lockable handle  
Handle extensions  
Actuation: Electric / Pneumatic  
Special regulations (V Ball)

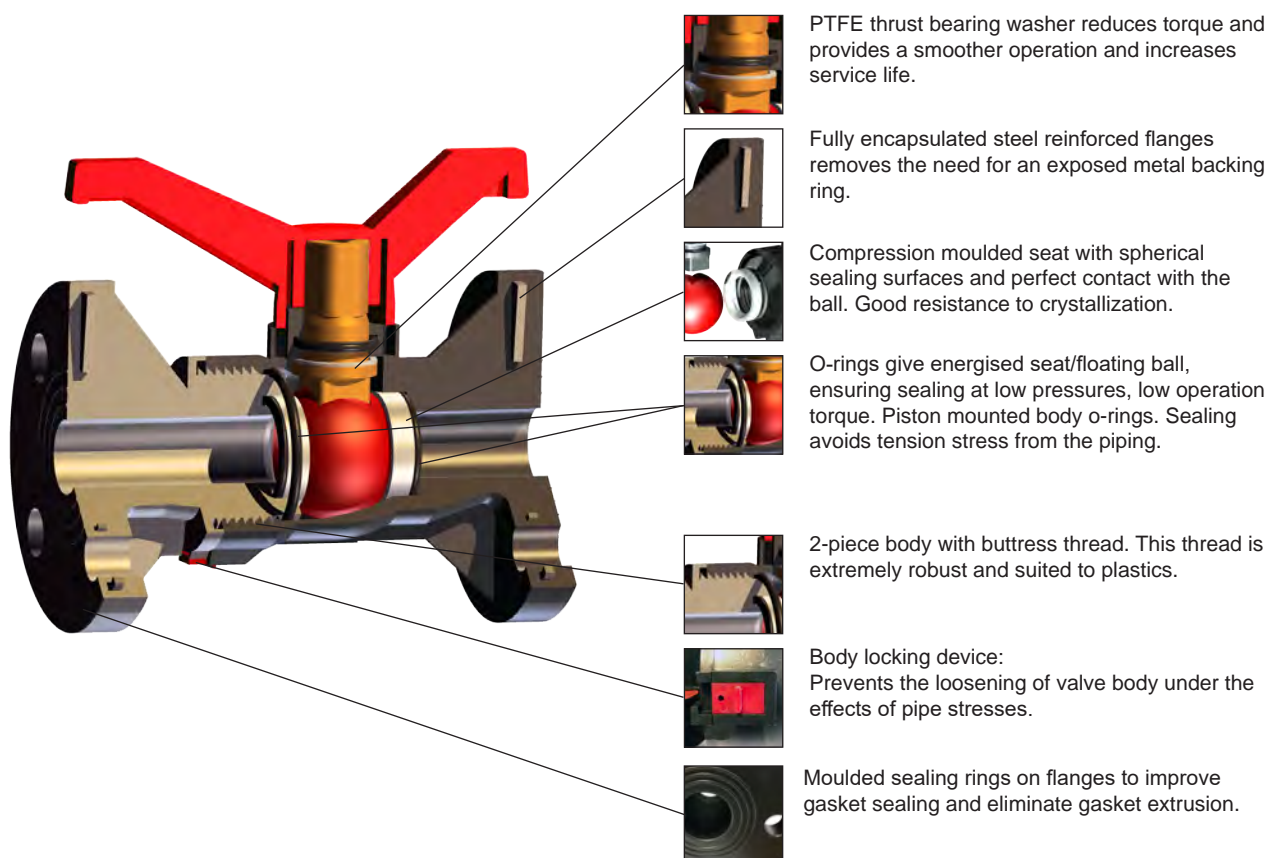
## Features

- Unique designed plastic valve
- Reinforced flanges with encapsulated metal inserts
- A locking key ensures correct flange alignment
- The handle may be removed for safety purposes and can be relocated in one position only
- Built in 1/4 turn handle stops

Standard:

Conforms to the pressure equipment directive 97/23/CE for gas and liquids group 1 and 2

Face to Face: DIN:EN558, ISO 5752 PN10



## Safi GRPP 2-Way Ball Valve

**Description:** In-line flanged compact ball valve

**Mounting:** In any position, between flanges to PN10/16

**Sizes:** 1/2" to 6"

**Construction:**

**Body:** GRPP, PVDF, ASPP (Anti-Static Polypropylene)

**Seals:** EPDM, FPM, FFKM, NBR

**Shaft:** GRRP

**End Connections:** Between flanges, universally drilled



GRPP version shown

5

### Lever Operated

EPDM Seals

Size	Code	Price
1/20	2014-00FFE	108.11
3/425	2014-01FFE	113.48
1/32	2014-02FFE	163.24
1.1/440	2014-03FFE	186.94
1.1/450	2014-04FFE	253.90
2/63	2014-05FFE	288.14
3/90	1003-27FFE	696.93
4/110	1003-28FFE	817.04
6/160	2008-09FFE	1872.75

### Gear Operated

FPM Seals

Size	Code	Price
1/20	2014-00FFV	154.25
3/425	2014-01FFV	113.48
1/32	2014-02FFV	218.86
1.1/440	2014-03FFV	186.94
1.1/450	2014-04FFV	253.90
2/63	2014-05FFV	288.14
3/90	1003-27FFV	824.42
4/110	1003-28FFV	817.04
6/160	2008-09FFV	1855.58

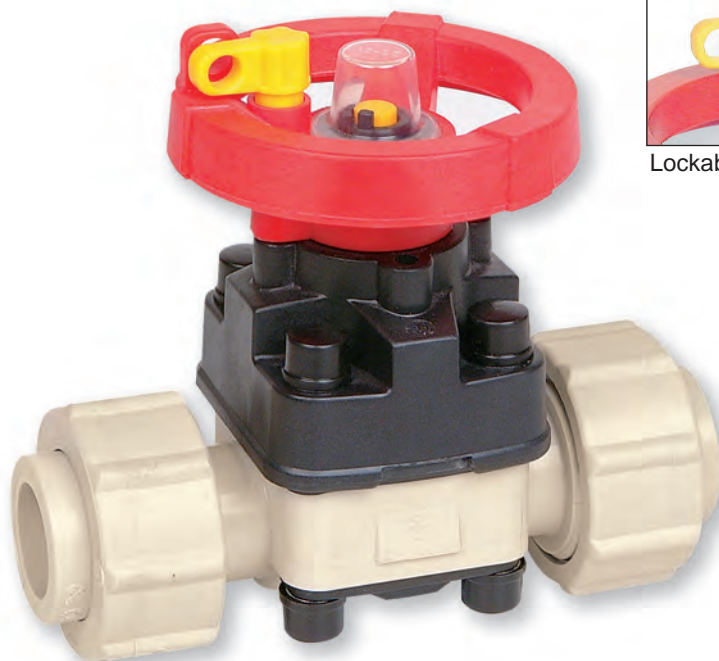
### Don't see what you want?

We have access to a huge range of products that are not featured in our Handbook.

If you don't see what you want, give our team a call.



# Praher T4 Diaphragm Valve



Lockable Handle



Visual Position Indicator



Optional Valve Support Plates

## General

Sealing material: EPDM / EPDM-PTFE / FPM

Body material: Polypropylene (PP-H)

Dimensions: DN 15/d 20 - DN125/d140

## Operating Pressure

DN 15 / 1/2" - DN 125 / 5" 10 bar

## Connections

PP union sockets 20mm-63mm

PP fusion spigots 20mm-110mm

Flanged PN10 20mm-140mm

## Technical Specification

For example:

TYPE PRAHER, DIN 2403

PP Diaphragm valve T4 DN 15 d20

PP mm fusion spigot

Sealing material EPDM-PTFE

Safety gear wheel

Max. Operating pressure 10 bar

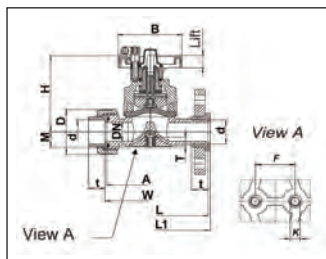


## Features

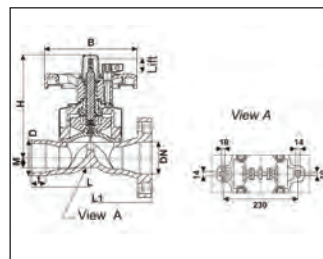
- Safety gear wheel
- Corrosion Resistant
- Maintenance free operation over a long working life
- Suitable for aggressive and dirty media
- Radial installation or removal
- Easy replacement of the diaphragms

## Valve Dimensions

DN 15 - DN 50



DN 65 - DN 80



d	20	25	32	40	50	63	75	90	110	140
DN	15	20	25	32	40	50	65	80	100	125
G	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"
M	16.5	16.5	20.1	31.5	31.5	38.6	25.0	25.0	25.0	25.0
H	100.0	100.0	107.0	144.0	144.0	170.0	260.0	260.0	330.0	330.0
B	86.0	86.0	86.0	136.0	136.0	136.0	234.0	234.0	234.0	234.0
F	24.5	24.5	24.5	43.5	43.5	43.5	-	-	-	-
Lift	9.0	9.0	11.0	22.0	22.0	28.0	35.0	35.0	45.0	45.0
K	M6	M6	M6	M8	M8	M8	-	-	-	-
L	124.0	144.0	154.0	174.0	194.0	224.0	284.0	300.0	340.0	-
L1	130.0	150.0	160.0	180.0	200.0	230.0	-	310.0	350.0	400.0
T	12.0	12.0	12.0	15.0	15.0	15.0	-	-	-	-
t	28.5	36.0	36.0	38.5	46.0	46.0	37.0	37.0	50.0	-
PN	10	10	10	10	10	10	10	10	10	10

Dimensions in mm



## Praher Type T4 Diaphragm Valve

**Description:** In-line diaphragm valve with position indicator

**Mounting:** In any position

**Maximum Fluid Pressure at 20°C:** 10 bar

**Fluid Temperature Range:** 0°C-80°C

**Construction:**

**Body:** Polypropylene (PP-H)

**Diaphragm:** EPDM, FPM or PTFE (EPDM backed)

**End Connections:** Fusion spigots, flanged BS4504 EN1092

**Option:** Silicon-free



EPDM Diaphragm	MM Fusion Spigots		
	Size	Code	Price
	20	12.0150	123.36
	25	12.0154	138.00
	32	12.0155	176.15
	40	12.0156	205.46
	50	12.0157	269.85
	63	12.0158	337.32
	75	12.0159	790.36
	90	12.0160	858.12
	110	12.0902	1450.88

EPDM Diaphragm	MM Union Sockets		
	Size	Code	Price
	20	12.5038	152.75
	25	12.5039	160.04
	32	12.5040	195.34
	40	12.5041	234.30
	50	12.5042	304.84
	63	12.5043	371.20

EPDM Diaphragm	Flanged PN10		
	Size	Code	Price
	20	12.0229	183.48
	25	12.0230	198.18
	32	12.0231	234.88
	40	12.0232	299.21
	50	12.0233	358.51
	63	12.0235	455.87
	75	12.0237	889.18
	90	12.0238	990.77
	110	12.0909	1761.39
	140	12.0910	3291.26

FPM Diaphragm	MM Fusion Spigots		
	Size	Code	Price
	20	12.0161	251.18
	25	12.0163	267.05
	32	12.0164	310.52
	40	12.0165	392.36
	50	12.0166	471.41
	63	12.0170	598.42
	75	12.0171	1251.44
	90	12.0172	1317.28

PTFE Diaphragm	MM Fusion Spigots		
	Size	Code	Price
	20	12.0173	250.94
	25	12.0175	250.94
	32	12.0177	310.52
	40	12.0178	392.36
	50	12.0179	471.41
	63	12.0180	598.42
	75	12.0181	1013.37
	90	12.0182	1184.11
	110	12.0905	1820.63

PTFE Diaphragm	MM Union Sockets		
	Size	Code	Price
	20	12.5050	276.66
	25	12.5051	289.33
	32	12.5052	422.03
	40	12.5053	474.18
	50	12.5054	614.00
	63	12.5055	654.87

PTFE Diaphragm	Flanged PN10		
	Size	Code	Price
	20	12.0250	296.39
	25	12.0251	311.94
	32	12.0252	354.27
	40	12.0253	467.16
	50	12.0255	525.04
	63	12.0257	707.03
	75	12.0258	1058.48
	90	12.0260	1459.29
	110	12.0912	2131.16
	140	12.0913	3765.44

FPM Diaphragm	Flanged PN10		
	Size	Code	Price
	20	12.0239	296.39
	25	12.0240	311.94
	32	12.0241	354.27
	40	12.0242	467.16
	50	12.0243	525.04
	63	12.0246	707.03
	75	12.0248	1210.68
	90	12.0249	1454.90

## Spears Needle Valve

**Description:** Globe or Angle pattern flow control valve

**Mounting:** In any position

**Maximum Fluid Pressure at 20°C:** 10 bar

**Fluid Temperature Range:** 0°C-80°C

**Construction:**

**Body:** Polypropylene

**Seal:** PTFE

**End Connections:** Female NPT Threaded

**Feature:** Built-in panel or bracket mounting nut



### Globe Pattern Valve

Size	Code	Price
1/4	5591-002P	112.01
3/8	5591-003P	112.01

### Angle Pattern Valve

Size	Code	Price
1/4	5691-002P	112.01
3/8	5691-003P	112.01



## Praher Type S4 T & L-Port Ball Valve

**Description:** In-line horizontal T-port or L-port ball valve with lockable handle and union ends

**Mounting:** In any position

**Maximum Fluid Pressure at 20°C:** 10 bar

**Fluid Temperature Range:** 0°C-80°C

**Construction:**

**Body:** Polypropylene (PP-H)

**Seals:** EPDM or FPM

**Seats:** PTFE

**End Connections:** Fusion sockets or fusion spigots



### T-Port Ball Valve

#### MM Fusion Sockets

	Size	Code	Price
EPDM Seals	16	124767	232.35
PTFE Seals	20	124771	232.35
	25	125014	235.45
	32	124775	237.11
	40	125016	351.44
	50	124890	355.65
	63	124894	431.88

#### MM Fusion Sockets

	Size	Code	Price
FPM Seals	16	124898	271.56
PTFE Seals	20	124902	272.69
	25	125022	277.51
	32	124906	280.29
	40	125024	424.83
	50	124910	441.77
	63	124914	554.66

### L-Port Ball Valve

#### MM Fusion Sockets

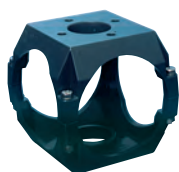
	Size	Code	Price
EPDM Seals	16	124768	232.35
PTFE Seals	20	124772	233.75
	25	125015	235.45
	32	124776	237.11
	40	125017	351.44
	50	124891	355.65
	63	124895	431.88

#### MM Fusion Sockets

	Size	Code	Price
FPM Seals	16	124899	271.56
PTFE Seals	20	124903	272.69
	25	125023	277.51
	32	124907	280.29
	40	125025	424.83
	50	124911	441.77
	63	124915	554.66

Also available with fusion spigot connections. Prices are the same as above.

## Praher Valve Bracket for Type S4 T & L-Port Valve



Size	Code	Price
16/20	17.0511	52.85
25/32	17.0512	59.64
40/50	17.0513	67.49
63	17.0514	67.49

Valve bracket shown in PVC-U

## ASV Stubbe C200 Dos Dosing Ball Valve

**Description:** In-line double union ball valve with flow indicator

**Mounting:** In any position

**Maximum Fluid Pressure at 20°C:** 10 bar

**Fluid Temperature Range:** 0°C-80°C

**Construction:**

**Body:** Polypropylene

**Seals:** EPDM or FPM

**Seats:** PTFE

**End Connections:** Fusion sockets

**Features:** Accurate flow control with 180° visible indicator



#### MM Fusion Sockets

	Size	Code	Price
EPDM Seals	20	145645	156.95
PTFE Seals	25	145646	186.10
	32	145647	222.40

#### MM Fusion Sockets

	Size	Code	Price
FPM Seals	20	145650	176.96
PTFE Seals	25	145651	208.22
	32	145652	249.27

## Praher Type S4 Ball Valve with Actuator Adaptor Kit



Includes:  
Polypropylene Ball  
Valve, Polypropylene  
Valve Bracket, Console,  
Actuator Adaptor, Screw  
Set

### EPDM Seals

Size	Code	Price
16	122.511	180.21
20	122.512	183.51
25	122.513	201.66
32	122.514	216.98
40	122.515	293.39
50	122.516	331.81
63	122.517	383.03
75	122.518	706.70
90	122.519	977.93
110	122.520	1121.16

Prices on request for BSP threaded sockets or PN10 flanged connections



### FPM Seals

Size	Code	Price
16	126.518	208.62
20	on application	
25	on application	
32	120.416	245.42
40	on application	
50	122.700	367.91
63	120.417	425.00
75	on application	
90	120.418	1087.41
110	on application	

## Praher Valve Bracket for Type S4 Ball Valve



Size	Code	Price
16/20	17.0279	49.57
25	17.0280	55.49
32	17.0281	58.88
40	17.0228	62.81
50	17.0230	65.92
63	17.0232	69.85
75	17.0275	97.61
90/110	17.0282	109.10



Valve shown with bracket

## Diaphragm Valve Mounting Plate

Ensures clearance of union nut from mounting surface  
Complete with two fixing screws.

Size	Plate Thickness (mm)	Code	Price
20	16.0	14.0103	9.96
25/32	23.0	14.0102	9.96
40	18.5	14.0123	16.19
50/60	23.5	14.0109	16.19



Mounting plate shown fitted to valve

## Replacement T4 Diaphragm

### EPDM Diaphragm

Size	Code	Price
20/1/2	05.0457	38.21
25/3/4	05.0457	38.21
32/1	05.0458	40.56
40/1.1/4	05.0459	48.15
50/1.1/2	05.0459	48.15
63/2	05.0460	48.15
75/2.1/2	12.0933	99.96
90/3	12.0933	99.96
110/4	12.0934	226.59
5	12.0934	226.59

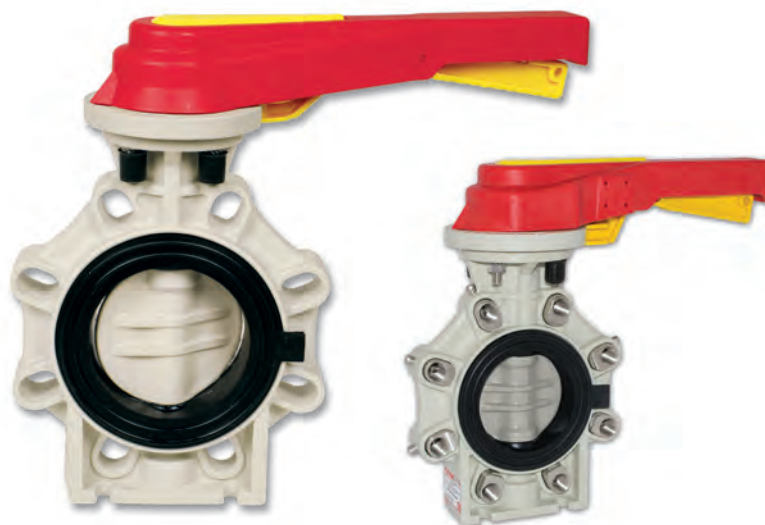
### EPDM/PTFE Diaphragm

Size	Code	Price
20/1/2	05.0473	77.39
5/3/4	05.0473	77.39
32/1	05.0474	86.86
40/1.1/4	05.0475	107.77
50/1.1/2	05.0475	107.77
63/2	05.0476	121.95
75/2.1/2	12.0918	593.91
90/3	12.0918	593.91
110/4	12.0919	680.24
5	12.0919	680.24

### FPM Diaphragm

Size	Code	Price
20/1/2	05.0465	179.25
25/3/4	05.0465	179.25
32/1	05.0466	186.32
40/1.1/4	05.0467	206.17
50/1.1/2	05.0467	206.17
63/2	05.0468	436.95
75/2.1/2	12.0935	502.18
90/3	12.0935	502.18
110/4	12.0936	840.98
5	12.0936	840.98

# Praher K4 Butterfly Valve



Locking Handle



Universal Drilling



PP-GF Body  
PP disc



Support Lugs in  
Base



Lugged Type

## Features

- Only Body Seal and Disc in contact with media
- Double sealed shaft
- Valve support lugs in base
- Direct actuator mounting
- Low torque operation
- Multi-position Lockable Handle
- Manual or Gear operation
- All sizes PN10 rated
- Universal drilling - can be used with DIN, ANSI, BS and JIS flanges
- Available as lugged version



## Materials

Body - PP-GF  
Disc - Polypropylene  
Seals - EPDM or FPM

## Sizes

2 1/2"/75mm - 8"/225mm

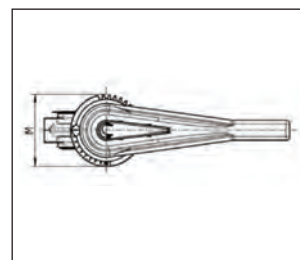
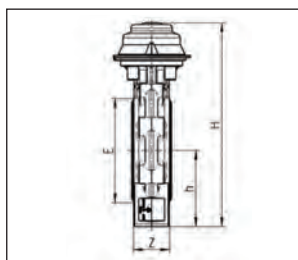
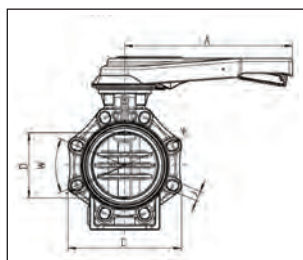
## Pressure Rating

PN10

## Connections

Between flanges, universally drilled

## Valve Dimensions



Size	2 1/2"/75	3"/90	4"/110	6"/160	8"/225
A	230	230	300	386	386
D	65	80	100	150	200
C	133	176	206	261	314
W	90°	45°	45°	45°	45°
J	19	19	19	23	23
K	127-145	146-160	175-190.5	234.5-241.3	290-298.5
H	285	292	322	396	458
h	100	100	115	147.5	175
E	98	116	146	196	251
M	114	114	114	150	150
Z	46	49	56	70	71
PN	10 bar	10 bar	10 bar	10 bar	10 bar

Dimensions in mm

## Praher Type K4 Butterfly Valve

**Description:** Lug style butterfly valve with universal drilling for mounting between flanges. (DIN, ANSI & BS)

**Construction:**

**Body:** PP-GF

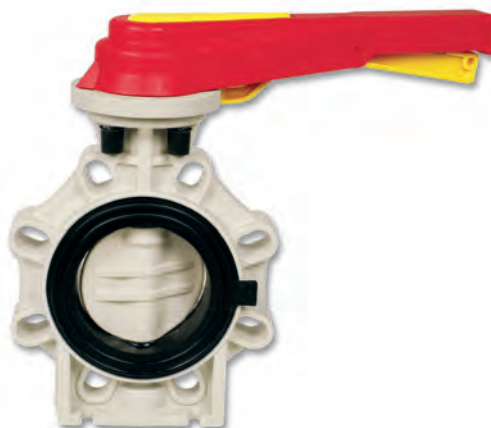
**Disc:** Polypropylene

**Seals:** EPDM or FPM

**Pressure rating:** PN10

**Size:** 2½"/75mm - 8"/225mm

**Options:** - Lug type, gear operated  
- Position feedback



### Lever Operated

EPDM Seals

Size	Code	Price
2½"/75	12.5870	383.25
3"/90	12.5871	449.73
4"/110	12.5872	480.80
5"/140	12.8458	965.78
6"/160	12.5873	801.47
8"/225	12.5874	1123.46

### Lever Operated

FPM Seals

Size	Code	Price
2½"/75	12.5875	533.25
3"/90	12.5876	642.23
4"/110	12.5877	616.14
5"/140	12.8459	915.72
6"/160	12.5878	1035.97
8"/225	12.5879	1403.65



\* Installation in PE100 SDR17 - stub flanges need to be chamfered, please see page 297.

### Lugged DIN

EPDM Seals

Size	Code	Price
2½"/75	12.5870 LD	604.11
3"/90	12.5871 LD	807.76
4"/110	12.5872 LD	851.06
5"/140	12.8458 LD	1283.95
6"/160	12.5873 LD	1597.58
8"/225	12.5874 LD	1952.93

FPM seals available on request

### Lugged ANSI

EPDM Seals

Size	Code	Price
2½"/75	12.5870 LA	604.11
3"/90	12.5871 LA	776.69
4"/110	12.5872 LA	861.41
5"/140	12.8458 LA	1283.95
6"/160	12.5873 LA	1617.02
8"/225	12.5874 LA	1952.93

FPM seals available on request



### Gear Operated

EPDM Seals

Size	Code	Price
2½"/75	12.6020	783.22
3"/90	12.6021	850.53
4"/110	12.6022	873.51
5"/140	12.8762	1006.98
6"/160	12.6023	1196.99
8"/225	12.6024	1523.08

### Gear Operated

FPM Seals

Size	Code	Price
2½"/75	12.6025	924.93
3"/90	12.6026	1045.39
4"/110	12.6027	1080.30
5"/140	12.8764	1223.64
6"/160	12.6028	1434.33
8"/225	12.6029	1809.82

## Praher Type S4 Butterfly Valve

**Description:** Wafer style butterfly valve

**Mounting:** In any position, between flanges to BS 4504 EN1072 PN10

**Maximum Fluid Pressure at 20°C:** Sizes 90mm to 140mm - 10 bar;

Sizes 160mm to 225mm - 6 bar

**Fluid Temperature Range:** 0°C-80°C

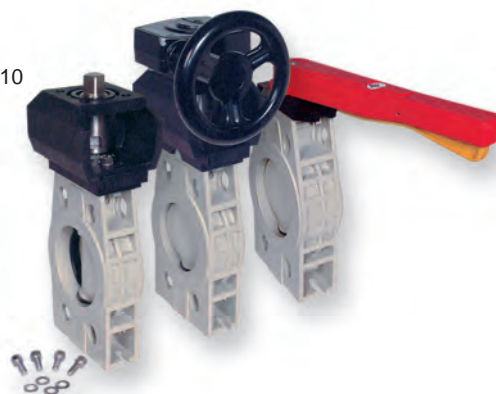
**Construction:**

**Body and Disc:** Polypropylene

**Seals:** EPDM or FPM

**Shaft:** Stainless steel 304

**End Connections:** Flange mounted (flanges not included)



### Lever operated

EPDM Seals	Size	Code	Price
	3"/90	12.1927	688.75
	4"/110	12.1928	827.03
	5"/140	12.2544	1021.82
	6"/160	12.1929	1189.71
	8"/225	12.1930	1521.42

### Gear operated

EPDM Seals	Size	Code	Price
	3"/90	12.2545	1687.95
	4"/110	12.2546	1764.16
	5"/140	12.2547	1922.22
	6"/160	12.2548	1998.47
	8"/225	12.2549	2235.55

### Lever operated

FPM Seals	Size	Code	Price
	3"/90	12.1931	796.00
	4"/110	12.1932	942.79
	5"/140	12.2310	1182.74
	6"/160	12.1933	1329.51
	8"/225	12.1934	1702.07

### Gear operated

FPM Seals	Size	Code	Price
	3"/90	12.2550	1795.22
	4"/110	12.2551	1879.90
	5"/140	12.2552	2083.15
	6"/160	12.2553	2136.75
	8"/225	12.2554	2416.18

## Asahi Type 57 Butterfly Valve

**Description:** Wafer style butterfly valve

**Mounting:** In any position, between flanges to ANSI 150

**Maximum Fluid Pressure at 20°C:** Sizes 1½" to 10" : 10 bar

Sizes 12" to 14" : 6.9 bar; 16" : 5.8 bar; 18" : 5.1 bar;

20" to 24" : 3.4 bar

**Fluid Temperature Range:** 0°C-60°C

**Construction:**

**Body:** Polypropylene

**Disc:** Polypropylene or PVDF

**Seals:** EPDM, FPM or Nitrile

**Shaft:** Stainless Steel 316

**End Connections:** Flange mounted (flanges not included)



### Polypropylene Disc

Lever Operated EPDM Seals	Size	Code	Price
	1½	3752-015	1273.80
	2	3752-020	1335.31
	2½	3752-025	1694.15
	3	3752-030	1894.04
	4	3752-040	2027.31
	6	3752-060	3213.98
	8	3752-080	4790.19

### PVDF Disc

Lever Operated EPDM Seals	Size	Code	Price
	1½	3740-015	1448.10
	2	3740-020	1509.62
	2½	3740-025	1904.29
	3	3740-030	2147.77
	4	3740-040	2311.81
	6	3740-060	3890.59
	8	3740-080	5879.49

Lever Operated FPM Seals	Size	Code	Price
	1½	3753-015	1448.10
	2	3753-020	1504.47
	2½	3753-025	2083.07
	3	3753-030	2099.07
	4	3753-040	2234.93
	6	3753-060	4710.76
	8	3753-080	5443.78

Lever Operated FPM Seals	Size	Code	Price
	1½	3741-015	1622.34
	2	3741-020	1681.33
	2½	3741-025	2237.48
	3	3741-030	2352.83
	4	3741-040	2521.97
	6	3741-060	5387.39
	8	3741-080	6530.49



**Polypropylene Disc**

Plasgear Operated  
EPDM Seals

Size	Code	Price
1½	3726-015	1942.77
2	3726-020	2004.25
2½	3726-025	2365.60
3	3726-030	2562.99
4	3726-040	2698.81
6	3726-060	3880.36
8	3726-080	5374.57
10	3726-100	6148.56
12	3726-120	8570.60
14	3726-140	on application
16	3726-160	on application

Plasgear Operated  
Nitrile Seals

Size	Code	Price
1½	3735-015	1942.77
2	3735-020	2004.25
2½	3735-025	2365.60
3	3735-030	2562.99
4	3735-040	2698.81
6	3735-060	3880.36
8	3735-080	5374.57
10	3735-100	6317.64
12	3735-120	8570.60
14	3735-140	on application
16	3735-160	on application

Metal Gear Operated  
EPDM Seals

Size	Code	Price
12	3801-120	
14	3801-140	
16	3801-160	on application
18	3801-180	
20	3801-200	
24	3801-240	

Metal Gear Operated  
Nitrile Seals

Size	Code	Price
12	3802-120	
14	3802-140	
16	3802-160	on application
18	3802-180	
20	3802-200	
24	3802-240	

Plasgear Operated  
FPM Seals

Size	Code	Price
1½	3727-015	2307.57
2	3727-020	2369.04
2½	3727-025	2941.70
3	3727-030	3017.12
4	3727-040	3167.98
6	3727-060	5863.86
8	3727-080	6525.96
10	3727-100	9001.13
12	3727-120	12574.19
14	3727-140	on application
16	3727-160	on application

Metal Gear Operated  
FPM Seals

Size	Code	Price
12	3803-120	
14	3803-140	
16	3803-160	on application
18	3803-180	
20	3803-200	
24	3803-240	



**PVDF Disc**

Plasgear Operated  
EPDM Seals

Size	Code	Price
1½	3736-015	2307.57
2	3736-020	2377.38
2½	3736-025	2807.60
3	3736-030	3073.00
4	3736-040	3251.80
6	3736-060	4969.89
8	3736-080	7045.60
10	3736-100	9036.23
12	3736-120	12225.02
14	3736-140	on application
16	3736-160	on application

Plasgear Operated  
FPM Seals

Size	Code	Price
1½	3737-015	2500.35
2	3737-020	2558.99
2½	3737-025	3170.78
3	3737-030	3293.72
4	3737-040	3478.09
6	3737-060	6604.19
8	3737-080	7713.26
10	3737-100	11093.57
12	3737-120	15454.45
14	3737-140	on application
16	3737-160	on application

Metal Gear Operated  
EPDM Seals

Size	Code	Price
12	3804-120	
14	3804-140	
16	3804-160	on application
18	3804-180	
20	3804-200	
24	3804-240	

Metal Gear Operated  
FPM Seals

Size	Code	Price
12	3805-120	
14	3805-140	
16	3805-160	on application
18	3805-180	
20	3805-200	
24	3805-240	

# Praher K4 Check Valve

5



Visual Position Indicator



Universal Drilling



85° Max Opening

### Features

- Excellent Flow Rates
- Wide opening (85%)
- Low pressure drop
- Visual open-closed indicator
- Spring return
- All sizes PN10 rated
- Universal drilling - can be used with DIN, ANSI, BS and JIS flanges

### Materials

Body - PP-GF  
Disc - PP-GF  
Seals - EPDM or FPM

### Sizes

2 1/2"/75mm - 10"/250mm

### Pressure Rating

PN10

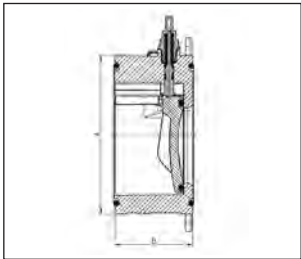
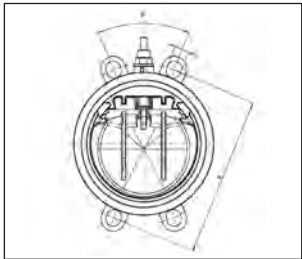
### Connections

Between flanges, universal drilling

Tightening torque for flange connections

DN	65	80	100	150	200	250	300
Nm	15	18	20	40	55	60	65

### Valve Dimensions



DN	A	B	C	K	W
65	115	63	20	139-145	90°
80	128	71	20	150-160	45°
100	155	80	20	175-191	45°
150	212	106	24	234-242	45°
200	264	140	24	290-299	45°
250	325	140	27	350-362	30°

Dimensions in mm

Praher Type K4 Check Valve

**Description:** Lug style check valve with universal drilling for mounting between flanges. (DIN, ANSI & BS)  
**Construction:**  
**Body:** Polypropylene  
**Seals:** EPDM or FPM  
**Pressure rating:** PN10  
**Size:** 2½"/75mm - 10"/250mm



EPDM Seals

Size	Code	Price
2.½"/75	12.5832	571.17
3"/90	12.5833A	630.05
4"/110	12.5834A	756.34
6"/160	12.5835A	1038.72
8"/225	12.5836	1853.56
10"/250	12.5837	3109.55

FPM Seals

Size	Code	Price
2.½"/75	12.5839	653.58
3"/90	12.5840A	742.18
4"/110	12.5841A	873.21
6"/160	12.5842A	1192.84
8"/225	12.5843	2041.09
10"/250	12.5844	3337.57

Kv Value Table		
Pressure Lost	1 bar	0.001 bar
DN 80	2958 l/min	94 l/min
DN 100	5633 l/min	178 l/min
DN 150	12466 l/min	394 l/min
DN 200	21166 l/min	699 l/min

Pressure loss based on maximum opening of 85%

## Praher Type S4 Air Release Valve

**Description:** In-line air release valve

**Mounting:** In a vertical position

**Maximum Fluid Pressure at 20°C:** Sizes 16mm to 75mm - 10 bar;

Sizes 90mm to 110mm - 6 bar

**Fluid Temperature Range:** 0°C-80°C

**Construction:**

**Body:** Polypropylene **Seals:** EPDM or FPM **Cone:** Polypropylene

**End Connections:** Fusion sockets, fusion spigots or female BSP threaded



EPDM Seals	MM Fusion Sockets		
	Size	Code	Price
	16	12.1550	67.49
	20	12.1552	70.87
	25	12.1554	80.46
	32	12.1556	93.44
	40	12.1558	105.56
	50	12.1560	143.97
	63	12.1562	213.38
	75	12.1564	529.25
	90	12.1566	695.78
	110	12.2539	845.40

EPDM Seals	MM Fusion Spigots		
	Size	Code	Price
	16	12.1568	67.49
	20	12.1570	70.87
	25	12.1572	80.46
	32	12.1574	93.44
	40	12.1576	105.56
	50	12.1578	143.97
	63	12.1580	213.38
	75	12.1582	529.25
	90	12.1584	695.78
	110	12.2540	845.40

FPM Seals	MM Fusion Sockets		
	Size	Code	Price
	16	12.1551	80.46
	20	12.1553	83.84
	25	12.1555	96.55
	32	12.1557	112.36
	40	12.1559	127.88
	50	12.1561	169.68
	63	12.1563	242.19
	75	12.1565	587.13
	90	12.1567	783.33
	110	12.2542	932.89

FPM Seals	MM Fusion Spigots		
	Size	Code	Price
	16	12.1569	80.46
	20	12.1571	83.84
	25	12.1573	96.55
	32	12.1575	112.36
	40	12.1577	127.88
	50	12.1579	169.68
	63	12.1581	242.19
	75	12.1583	587.13
	90	12.1585	783.33
	110	12.2543	932.89

## Praher Type S4 Foot Valve

**Description:** In-line foot valve with screen

**Mounting:** In a vertical position

**Maximum Fluid Pressure at 20°C:** Sizes 16mm to 75mm - 10 bar;

Sizes 90mm to 110mm - 6 bar

**Fluid Temperature Range:** 0°C-80°C

**Construction:**

**Body:** Polypropylene **Seals:** EPDM or FPM **Cone:** Polypropylene (weighted)

**End Connections:** Fusion sockets, fusion spigots or female BSP threaded



EPDM Seals	MM Fusion Sockets		
	Size	Code	Price
	16	12.1604	77.33
	20	12.1606	80.46
	25	12.1608	90.08
	32	12.1610	101.64
	40	12.1612	126.78
	50	12.1614	165.15
	63	12.1616	227.48
	75	12.1618	551.86
	90	12.1620	711.33
	110	12.2535	860.91

EPDM Seals	MM Fusion Spigots		
	Size	Code	Price
	16	12.1622	77.33
	20	12.1624	80.46
	25	12.1626	90.08
	32	12.1628	101.64
	40	12.1630	126.78
	50	12.1632	165.15
	63	12.1634	227.48
	75	12.1636	551.86
	90	12.1638	711.33
	110	12.2536	860.91

FPM Seals	MM Fusion Sockets		
	Size	Code	Price
	16	12.1605	90.08
	20	12.1607	93.72
	25	12.1609	106.45
	32	12.1611	121.08
	40	12.1613	149.01
	50	12.1615	190.83
	63	12.1617	256.03
	75	12.1619	608.29
	90	12.1621	797.42
	110	12.2537	947.00

FPM Seals	MM Fusion Spigots		
	Size	Code	Price
	16	12.1623	90.08
	20	12.1625	93.72
	25	12.1627	106.45
	32	12.1629	121.08
	40	12.1631	149.01
	50	12.1633	190.83
	63	12.1635	256.03
	75	12.1637	608.29
	90	12.1639	797.42
	110	12.2538	947.00

## Praher Type S4 Check (Non Return) Valve

**Description:** In-line spring weighted cone check valve

**Mounting:** In any position

**Maximum Fluid Pressure at 20°C:** Sizes 16mm to 75mm - 10 bar;

Sizes 90mm to 110mm - 6 bar

**Fluid Temperature Range:** 0°C-80°C

**Construction:**

**Body:** Polypropylene **Seals:** EPDM or FPM

**Spring:** Stainless Steel sleeved in PTFE

**End Connections:** Fusion sockets, fusion spigots or female BSP threaded



EPDM Seals	MM Fusion Sockets		
	Size	Code	Price
	16	12.1502	80.46
	20	12.1503	83.84
	25	12.1504	96.55
	32	12.1505	112.36
	40	12.1506	136.39
	50	12.1507	170.25
	63	12.1508	231.21
	75	12.1509	556.05
	90	12.1510	718.36
	110	12.2531	843.99

EPDM Seals	BSP Female Threaded		
	Size	Code	Price
	3/8	12.1532	94.27
	1/2	12.1534	97.10
	3/4	12.1536	113.78
	1	12.1538	131.84
	1 1/4	12.1540	159.54
	1 1/2	12.1542	201.02
	2	12.1544	273.79
	2 1/2	12.1546	625.22
	3	12.1548	834.10

EPDM Seals	MM Fusion Spigots		
	Size	Code	Price
	16	12.1513	80.46
	20	12.1515	83.84
	25	12.1517	96.55
	32	12.1519	112.36
	40	12.1522	136.40
	50	12.1524	170.25
	63	12.1526	231.21
	75	12.1528	556.05
	90	12.1530	718.36
	110	12.2532	843.99

FPM Seals	MM Fusion Sockets		
	Size	Code	Price
	16	12.1838	93.72
	20	12.1839	96.55
	25	12.1840	112.36
	32	12.1841	131.84
	40	12.1842	158.96
	50	12.1843	195.92
	63	12.1844	259.98
	75	12.1845	612.53
	90	12.1846	805.88
	110	12.2533	955.46

FPM Seals	BSP Female Threaded		
	Size	Code	Price
	3/8	12.1533	106.98
	1/2	12.1535	110.09
	3/4	12.1537	130.13
	1	12.1539	151.28
	1 1/4	12.1541	181.78
	1 1/2	12.1543	226.69
	2	12.1545	303.50
	2 1/2	12.1547	646.71
	3	12.1549	920.20

FPM Seals	MM Fusion Spigots		
	Size	Code	Price
	16	12.1514	93.72
	20	12.1516	96.55
	25	12.1518	112.36
	32	12.1521	131.84
	40	12.1523	158.96
	50	12.1525	195.92
	63	12.1527	259.98
	75	12.1529	612.53
	90	12.1531	805.88
	110	12.2534	955.46



## Praher Type S4 Wafer Check Valve

**Description:** Wafer style flap check valve

**Mounting:** In any position, between flanges to BS 4504 EN1072, PN10.

Optional spring return for mounting in horizontal position or for pulsating flow.

**Maximum Fluid Pressure at 20°C:** Sizes 40mm to 160mm - 10 bar; sizes 225mm to 500mm - 6 bar

**Fluid Temperature Range:** 0°C-80°C

**Construction:**

**Body:** Polypropylene

**Seals:** EPDM or FPM

**Spring:** Stainless Steel

**End Connections:** Flange mounted (flanges not included)



EPDM Seals	No Spring Return		
	Size	Code	Price
	1.¼"/40	07.0190	163.74
	1.½"/50	07.0200	171.38
	2.½"/75	07.0050	237.39
	2"/63	07.0040	229.22
	3"/90	07.0060	253.77
	4"/110	07.0070	295.01
	5"/140	07.0080	335.88
	6"/160	07.0090	420.62
	8"/225	07.0100	934.33
	10"/280	07.0110	1347.87
	12"/315	07.0120	1730.31
	14"/355	07.0620	3758.90
	16"/450	07.0621	3859.80
	20"/560	07.0622	6314.04

EPDM Seals	Stainless Steel Spring Return		
	Size	Code	Price
	1.¼"/40	07.0192	304.84
	1.½"/50	07.0205	313.36
	2"/63	07.0041	366.95
	2.½"/75	07.0051	381.08
	3"/90	07.0061	406.45
	4"/110	07.0071	471.41
	5"/140	07.0081	537.72
	6"/160	07.0091	592.77
	8"/225	07.0101	1161.55
	10"/280	07.0111	1654.12
	12"/315	07.0121	2145.22

FPM Seals	No Spring Return		
	Size	Code	Price
	1.¼"/40	07.0191	212.02
	1.½"/50	07.0201	219.36
	2"/63	07.0042	260.55
	2.½"/75	07.0052	263.98
	3"/90	07.0062	303.50
	4"/110	07.0072	381.08
	5"/140	07.0082	450.24
	6"/160	07.0092	567.35
	8"/225	07.0102	1042.99
	10"/280	07.0112	1453.69
	12"/315	07.0122	1857.31
	14"/355	07.0623	4385.51
	16"/450	07.0624	5234.03
	20"/560	07.0625	8748.15

FPM Seals	Stainless Steel Spring Return		
	Size	Code	Price
	1.¼"/40	07.0193	365.57
	1.½"/50	07.0203	372.59
	2"/63	07.0043	395.15
	2.½"/75	07.0053	398.00
	3"/90	07.0063	475.62
	4"/110	07.0073	924.61
	5"/140	07.0083	659.15
	6"/160	07.0093	788.91
	8"/225	07.0103	1167.15
	10"/280	07.0113	1724.66
	12"/315	07.0123	2272.26

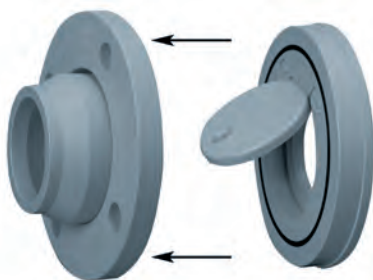
## Installation Adaptor for Wafer Check Valve

**Flange mounting**

**Allows the valve to open fully**

**Will accommodate use with heavy wall pipes**

Size	Code	Price
1.¼"/40	07.0467	40.36
1.½"/50	07.0468	52.45
2"/63	07.0469	70.33
2.½"/75	07.0470	84.08
3"/90	07.0471	142.33
4"/110	07.0472	212.62
5"/140	07.0473	321.40
6"/160	07.0474	581.77
8"/225	07.0475	1414.79
10"/280	07.0476	1868.05
12"/315	07.0477	2535.61



Note: backing ring not included.



### Flange Mounted Wafer Check Valves

Occasionally the flange mounted wafer check valve will have restricted opening if it is mounted in a heavy wall pipe. For all installations in heavy wall pipes we recommend the use of the additional installation adaptor to ensure that the valve will open fully.

## Praher Type S4 Line Strainer

**Description:** In-line strainer with union ends

**Mounting:** In any position

**Maximum Fluid Pressure at 20°C:** Sizes 16mm to 75mm - 10 bar;

Sizes 90mm to 110mm - 6 bar

**Fluid Temperature Range:** 0°C-80°C

**Construction:**

**Body:** Polypropylene

**Seals:** EPDM

**Strainer:** Polypropylene with 1.8mm mesh; Stainless Steel with 0.5mm, 0.75mm or 1mm mesh

**End Connections:** Fusion sockets, fusion spigots



EPDM Seals Polypropylene Screen	MM Fusion Sockets		
	Size	Code	Price
	16	12.1711	73.19
	20	12.1712	73.19
	25	12.1713	88.16
	32	12.1714	102.59
	40	12.1715	124.53
	50	12.1716	155.45
	63	12.1717	211.10
	75	12.1718	556.68
	90	12.1719	690.72
	110	12.1720	856.66

EPDM Seals no screen included	MM Fusion Sockets		
	Size	Code	Price
	16	12.5000	66.99
	20	12.5001	66.99
	25	12.5002	81.97
	32	12.5003	96.38
	40	12.5004	117.00
	50	12.5005	147.40
	63	12.5006	202.35
	75	12.5007	545.12
	90	12.5008	673.98
	110	12.5009	834.53

EPDM Seals Polypropylene Screen	MM Fusion Spigots		
	Size	Code	Price
	16	12.1725	73.19
	20	12.1726	73.19
	25	12.1727	88.16
	32	12.1728	102.59
	40	12.1729	124.53
	50	12.1730	155.45
	63	12.1731	211.10
	75	12.1732	556.68
	90	12.1733	690.72
	110	12.1734	856.66

0.5mm mesh * Note: A filter support is required for the stainless steel screen	Stainless Steel Screens*		
	Size	Code	Price
	16/3/8	50606	22.77
	20/1/2	50606	22.77
	25/3/4	50608	28.56
	32/1	50608	28.56
	40/1.1/4	50609	32.24
	50/1.1/2	50610	39.33
	63/2	50611	45.51
	75/2.1/2	50612	68.95
	90/3	50613	83.95
	110/4	50613	83.95

0.75mm mesh			
	Size	Code	Price
	16/3/8	50614	22.77
	20/1/2	50614	22.77
	25/3/4	50616	28.56
	32/1	50616	28.56
	40/1.1/4	50617	30.76
	50/1.1/2	50618	39.33
	63/2	50619	45.51
	75/2.1/2	50620	68.96
	90/3	50621	83.95
	110/4	50621	83.95

1mm mesh			
	Size	Code	Price
	16/3/8	50622	22.77
	20/1/2	50622	22.77
	25/3/4	50624	28.56
	32/1	50624	28.56
	40/1.1/4	50625	32.24
	50/1.1/2	50626	39.33
	63/2	50627	45.51
	75/2.1/2	50628	68.95
	90/3	50629	83.95
	110/4	50629	83.95

### Filter Support for Stainless Steel Screen

Size	Code	Price
16/3/8	14.1474	47.44
20/1/2	14.1474	34.08
25/3/4	14.1475	49.75
32/1	14.1476	49.75
40/1.1/4	14.1477	60.83
50/1.1/2	14.1478	67.04
63/2	14.1479	72.62
75/2.1/2	14.1480	93.54
90/3	14.1481	122.90
110/4	14.1481	122.90

## ASV Stubbe Gauge Guard MDM 902

**Description:** Pressure gauge connector with isolating diaphragm

**Mounting:** In any position

**Maximum Fluid Pressure at 20°C:** 10 bar

**Fluid Temperature Range:** 0°C-80°C

**Construction:**

**Body:** Polypropylene

**Diaphragm:** PTFE (EPDM backed)

**End Connections:** Fusion Spigots, NPT Female Threaded

Size	Code	Price
1/4	212974	157.79
1/2	212987	157.79



Note: gauge not included.

## Actuated Valves



Note: Valve for illustration purposes only

### Valve Actuation

Almost all the valves we supply can be automated.

From simple air actuation, to complex configurations, we can build a unit to your exact specifications.

Our in house experts can advise you on the options available and suggest the most suitable unit for your application. The valves are normally assembled by our dedicated valve actuation team, who can provide comprehensive after sales service.

Standard valves are shown on the following pages, but please contact Tony Welsh for any special requirements you may have.



Praher Type S4 Electrically Actuated Ball Valve

**Description:** In-line ball valve with electric actuator  
**Mounting:** In any position  
**Maximum Fluid Pressure at 20°C:** Sizes up to 63mm - 10 bar;  
75mm - 6 bar; 90mm - 5 bar; 110mm - 4 bar  
**Fluid Temperature Range:** 0°C-80°C  
**Construction:**  
**Body:** Polypropylene  
**Seals:** EPDM or FPM  
**Seats:** PTFE  
**End Connections:** Fusion Sockets, Fusion Spigots, BSP Threaded,  
Flanged BS4504 EN1072 PN10  
**Actuation:**  
**Housing Material:** Plastic with epoxy coated aluminium base  
**Voltages:** 240v AC; 110v AC; 24v AC; 110v DC; 24v DC; 12v DC  
**Frequency Range:** 50/60 Hz  
**Protection:** IP65  
**Manual Override:** Optional  
**Position Indicator:** Included  
**Contacts:** Open, closed. Additional contacts optional.



MM Fusion Sockets			
110v ac EPDM Seals PTFE Seats	Size	Code	Price
	16	12.1378E2AG	989.62
	20	12.1379E2AG	992.37
	25	12.1381E2AG	1012.58
	32	12.1383E2AG	1029.12
	40	12.1385E2AG	1064.44
	50	12.1387E2AG	1105.48
	63	12.1389E2AG	1160.55
	75	12.1391E2AG	1849.56
	90	12.1393E2AG	2146.10
	110	12.2094E2AG	2276.27

MM Fusion Sockets			
110v ac FPM Seals PTFE Seats	Size	Code	Price
	16	12.1377E2AG	1002.09
	20	12.1412E2AG	1006.39
	25	12.1380E2AG	1029.63
	32	12.1382E2AG	1049.64
	40	12.1384E2AG	1087.99
	50	12.1386E2AG	1131.74
	63	12.1388E2AG	1191.80
	75	12.1390E2AG	1910.83
	90	12.1392E2AG	2237.46
	110	12.2115E2AG	2393.89

Electric Actuated Valve Options		Pneumatic Actuated Valve Options	
Switch Options	Price	Body Material Options	Price
Open/Closed	included	Technopolymer	standard
Open/Closed plus 2 x extra volt free	on application	Hard anodised aluminium	free option
Actuator Options		Stainless steel	on application
Reversible actuator with manual override	standard	Double pack epoxy coated	on application
Uni-directional actuator without manual override	on application	Switchbox Options (with beacon)	
Customer specification actuator	on application	IP65 Technopolymer 2 x mechanical switches	on application
EEXD version actuator	on application	IP65 Technopolymer 2 x proximity switches EEXIA	on application
Power Options		IP67 Polycarbonate 2 x V3 gold plated switches	on application
110v AC	standard	IP67 Polycarbonate 2 x V3 gold plated switches EEXIA	on application
240v AC	free option	IP67 Polycarbonate 2 x proximity switches EEXIA	on application
24v DC	on application	IP67 Aluminium 2 x V3 gold plated switches EEXD	on application
24v AC	on application	Solenoid Valve Options	
Extra Options		240v AC Solenoid	on application
Heater and thermostat	on application	110v AC Solenoid	on applicaiton
4 - 20Ma positioner	on application	24v DC Solenoid	on application
Fail-Safe operation	on application	24v AC Solenoid	on applicaiton

## Praher Type S4 Pneumatically Actuated Ball Valve

**Description:** In-line ball valve with pneumatic operation

**Mounting:** In any position

**Maximum Fluid Pressure at 20°C:** Sizes up to 75mm - 10 bar;  
Sizes 90mm and 110mm - 6 bar

**Fluid Temperature Range:** 0°C-80°C

**Construction:**

**Body:** Polypropylene

**Seals:** EPDM or FPM

**Seats:** PTFE

**End Connections:** Fusion Sockets, Fusion Spigots, BSP Threaded,  
Flanged BS4504 EN1072 PN10

**Actuation:**

**Housing Material:** Plastic (optional aluminium)

**Air Actuators:** Fail-safe close, Fail-safe open, double acting

**Protection:** IP65

**Manual Override:** Optional

**Position Indicator:** Included

**Contacts:** Optional limit switch box with two mechanical switches

**Pilot Valve:** Solenoid, not included



### MM Fusion Sockets

Fail-safe Close  
EPDM Seals  
PTFE Seats

Size	Code	Price
16	12.1378P1A	480.85
20	12.1379P1A	483.85
25	12.1381P1A	501.52
32	12.1383P1A	516.24
40	12.1385P1A	597.00
50	12.1387P1A	634.52
63	12.1389P1A	787.96
75	12.1391P1A	1165.87
90	12.1393P1A	1552.17
110	12.2094P1A	1822.26

### MM Fusion Spigots

Fail-safe Close  
EPDM Seals  
PTFE Seats

Size	Code	Price
16	12.1430P1A	480.85
20	12.1432P1A	483.85
25	12.1434P1A	501.52
32	12.1436P1A	516.24
40	12.1438P1A	597.00
50	12.1440P1A	634.52
63	12.1442P1A	787.96
75	12.1444P1A	1165.87
90	12.1446P1A	1552.17
110	12.2508P1A	1822.26

### MM Fusion Sockets

Double Acting  
EPDM Seals  
PTFE Seats

Size	Code	Price
16	12.1378P3A	445.92
20	12.1379P3A	448.93
25	12.1381P3A	466.62
32	12.1383P3A	481.30
40	12.1385P3A	513.18
50	12.1387P3A	550.70
63	12.1389P3A	640.08
75	12.1391P3A	1012.14
90	12.1393P3A	1510.22
110	12.2094P3A	1535.82

### MM Fusion Spigots

Double Acting  
EPDM Seals  
PTFE Seats

Size	Code	Price
16	12.1430P3A	445.92
20	12.1432P3A	448.93
25	12.1434P3A	466.62
32	12.1436P3A	481.30
40	12.1438P3A	513.18
50	12.1440P3A	550.70
63	12.1442P3A	640.08
75	12.1444P3A	1012.14
90	12.1446P3A	1510.22
110	12.2508P3A	1535.62

### MM Fusion Sockets

Fail-safe Close  
FPM Seals  
PTFE Seats

Size	Code	Price
16	12.1377P1A	458.24
20	12.1412P1A	461.49
25	12.1380P1A	482.70
32	12.1382P1A	500.14
40	12.1384P1A	535.05
50	12.1386P1A	575.61
63	12.1388P1A	668.26
75	12.1390P1A	1222.89
90	12.1392P1A	1637.12
110	12.2115P1A	1930.54

### MM Fusion Spigots

Fail-safe Close  
FPM Seals  
PTFE Seats

Size	Code	Price
16	12.1431P1A	493.17
20	12.1433P1A	496.42
25	12.1435P1A	517.67
32	12.1437P1A	535.05
40	12.1439P1A	619.14
50	12.1441P1A	659.45
63	12.1443P1A	818.39
75	12.1445P1A	1222.89
90	12.1447P1A	1637.12
110	12.2509P1A	1930.54

### MM Fusion Sockets

Double Acting  
FPM Seals  
PTFE Seats

Size	Code	Price
16	12.1377P3A	458.24
20	12.1412P3A	461.49
25	12.1380P3A	482.70
32	12.1382P3A	500.14
40	12.1384P3A	535.05
50	12.1386P3A	575.61
63	12.1388P3A	668.26
75	12.1390P3A	1069.22
90	12.1392P3A	1455.53
110	12.2115P3A	1644.11

### MM Fusion Spigots

Double Acting  
FPM Seals  
PTFE Seats

Size	Code	Price
16	12.1431P3A	458.24
20	12.1433P3A	461.49
25	12.1435P3A	482.70
32	12.1437P3A	500.14
40	12.1439P3A	535.32
50	12.1441P3A	575.61
63	12.1443P3A	668.26
75	12.1445P3A	1069.22
90	12.1447P3A	1455.53
110	12.2509P3A	1644.11

Requires pilot valve - enquire for details.

Also available with BSP female threaded connections, and with fail-safe open actuators. Please enquire for details.



## Praher Type T4 Pneumatically Actuated Diaphragm Valve

**Description:** In-line pneumatically operated diaphragm valve

**Mounting:** In any position

**Maximum Fluid Pressure at 20°C:** 10 bar

**Fluid Temperature Range:** 0°C-80°C

**Construction:**

**Body:** Polypropylene

**Seals:** EPDM, FPM or PTFE (EPDM backed)

**End Connections:** Fusion Spigots, Flanged BS4504 EN1072 PN10, Fusion Socket Unions

**Actuation:**

**Housing Material:** Glass reinforced polypropylene

**Air Actuators:** Fail-safe close, fail-safe open

**Protection:** IP65

**Manual Override:** Included

**Position Indicator:** Included

**Contacts:** Optional

**Pilot Valve:** Solenoid, not included



5

### MM Fusion Spigots

Fail-safe Close  
EPDM Diaphragm

Size	Code	Price
20	12.5679	295.70
25	12.5681	302.72
32	12.5683	429.63
40	12.5685	532.08
50	12.5687	532.08
63	12.5689	662.44

### Flanged PN10

Fail-safe Close  
EPDM Diaphragm

Size	Code	Price
20	12.5722	345.82
25	12.5724	352.74
32	12.5726	449.38
40	12.5728	584.42
50	12.5730	603.09
63	12.5732	733.39

### MM Fusion Spigots

Fail-safe Open  
EPDM Diaphragm

Size	Code	Price
20	12.5679FSO	307.54
25	12.5681FSO	314.83
32	12.5683FSO	429.63
40	12.5685FSO	553.36
50	12.5687FSO	553.36
63	12.5689FSO	662.44

### Flanged PN10

Fail-safe Open  
EPDM Diaphragm

Size	Code	Price
20	12.5722FSO	359.21
25	12.5724FSO	366.85
32	12.5726FSO	467.33
40	12.5728FSO	607.81
50	12.5730FSO	627.20
63	12.5732FSO	640.79

### MM Fusion Spigots

Fail-safe Close  
PTFE Diaphragm

Size	Code	Price
20	12.5680	310.86
25	12.5682	317.85
32	12.5684	449.38
40	12.5686	584.42
50	12.5688	603.09
63	12.5690	742.78

### Flanged PN10

Fail-safe Close  
PTFE Diaphragm

Size	Code	Price
20	12.5723	360.90
25	12.5725	367.89
32	12.5727	479.69
40	12.5729	610.06
50	12.5731	670.60
63	12.5733	816.12

### MM Fusion Spigots

Fail-safe Open  
PTFE Diaphragm

Size	Code	Price
20	12.5680FSO	323.28
25	12.5682FSO	330.56
32	12.5684FSO	449.38
40	12.5686FSO	607.81
50	12.5688FSO	627.20
63	12.5690FSO	772.50

### Flanged PN10

Fail-safe Open  
PTFE Diaphragm

Size	Code	Price
20	12.5723 FSO	375.33
25	12.5725 FSO	382.60
32	12.5727 FSO	498.87
40	12.5729 FSO	634.45
50	12.5731 FSO	697.42
63	12.5733 FSO	848.76

Requires pilot valve - enquire for details.

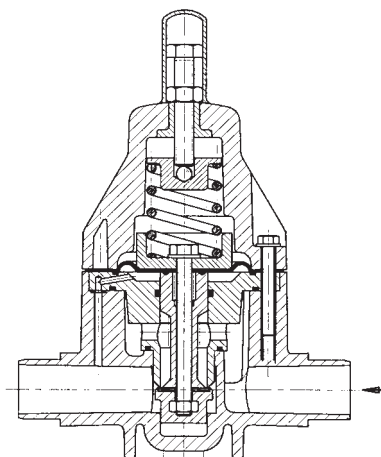
## The function of a pressure reducing valve

A pressure reducing valve is installed in-line. It is responsible for maintaining the downstream line pressure to the pressure set at the valve.

The valve works by responding to changes in the downstream pressure. For example, assume that there are normally two open valves downstream from the pressure regulator. When one is closed, the back pressure will increase. As this happens, the pressure reducing valve would close down to maintain the downstream pressure. When the valve is re-opened the pressure reducing valve would also open up again until the set pressure was reached.

Under operating conditions the pressure reducing valve is always open which means that it is balanced between the inlet pressure (primary side) and the lower outlet/working pressure. At any rise of working pressure at the valve outlet a pressure compensation via the control bore takes place at the area below the diaphragm. The higher working pressure activates the large diaphragm and lifts the piston against the spring force. The flow reduces and the working pressure drops until the balanced condition is reached again. When the working pressure drops this procedure is reversed. The spring force opens the valve seat against the lower pressure force below the diaphragm. The flow rises until the balanced condition is reached again.

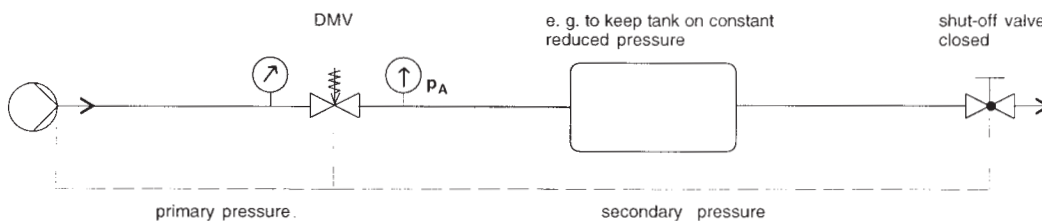
Pre-setting or re-adjustment of the valve set pressure is made by removing the protective cap and by setting the control screw. The counter nut is tightened after final adjustment. When used with neutral fluids, many of the pressure relief valves can be fitted with a pressure gauge if required.



## Applications for Pressure Reducing Valves

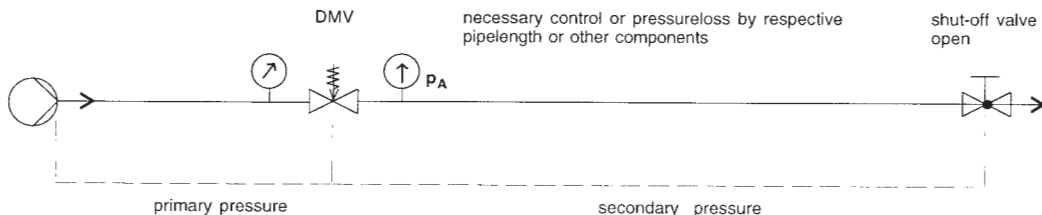
### working condition 1

If shut-off valve opens the working pressure  $p_A$  drops by an opening pressure  $p_O$



### working condition 2

If shut-off valve closes the working pressure  $p_A$  rises by the a closing pressure  $p_S$



## ASV Stubbe DMV 755 Pressure Reducing Valve

**Description:** In-line adjustable valve used to reduce system pressures and to keep the working pressure constant

**Mounting:** In any position

**Maximum Fluid Pressure at 20°C:** 10 bar

**Pressure Setting Range:** 1 to 9 bar

**Hysteresis:** Approx. 0.1 to 0.4 bar

**Fluid Temperature Range:** 0°C-70°C

**Construction:**

**Body:** Polypropylene

**Diaphragm:** EPDM with PTFE liner on fluid side

**Seats and Seals:** EPDM or FPM

**End Connections:** Union fusion sockets or fusion spigots

**Features:** Adjustable at any time, even during use. Constant pressure control to  $\pm 0.2$  bar. Vibration free during operation. Installation is independent of flow direction.

**Options:** Factory fitted pressure gauge available on request.



Setting Range - 1 to 9 bar

### MM Union Fusion Sockets

EPDM Seals

Size	Code	Price
16	148987	633.74
20	148988	637.52
25	148989	835.44
32	148990	842.95
40	148991	993.25
50	148992	1014.52
63	148993	1050.85

### MM Union Fusion Sockets

FPM Seals

Size	Code	Price
16	149001	647.56
20	149002	678.86
25	149003	856.68
32	149004	861.68
40	149005	1029.57
50	149006	1054.57
63	149007	1093.46

### MM Fusion Spigots

EPDM Seals

Size	Code	Price
16	148735	592.49
20	148736	592.49
25	148737	784.43
32	148738	784.43
40	148739	919.89
50	148740	919.89
63	148741	919.89

### MM Fusion Spigots

FPM Seals

Size	Code	Price
16	148742	601.81
20	148743	601.81
25	148744	795.36
32	148745	795.13
40	148746	936.53
50	148747	936.53
63	148748	936.53

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Or from outside of the UK:

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## ASV Stubbe DMV 765 Pressure Reducing Valve

**Description:** In-line adjustable valve used to reduce system pressures and to keep the working pressure constant

**Mounting:** In any position

**Maximum Fluid Pressure at 20°C:** 10 bar

**Pressure Setting Range:** 0.5 to 9 bar

**Hysteresis:** Approx. 0.1 to 0.4 bar

**Fluid Temperature Range:** 0°C-70°C

**Construction:**

**Body:** Polypropylene

**Diaphragm:** EPDM with PTFE liner on fluid side

**Seats and Seals:** EPDM or FPM

**End Connections:** Union fusion sockets or fusion spigots

**Features:** Adjustable at any time, even during use. Constant pressure control to  $\pm 0.2$  bar. Vibration free during operation. Installation is independent of flow direction.

**Options:** Factory fitted pressure gauge available on request.



Setting Range - 0.5 to 9 bar

### MM Union Fusion Sockets

EPDM Seals

Size	Code	Price
16	149426	660.11
20	149427	662.58
25	149428	859.22
32	149429	865.50
40	149430	1010.78
50	149431	1033.36
63	149432	1069.62

### MM Union Fusion Sockets

FPM Seals

Size	Code	Price
16	149440	671.33
20	149441	678.86
25	149442	879.29
32	149443	885.54
40	149444	1045.86
50	149445	1070.89
63	149446	1110.97

### MM Fusion Spigots

EPDM Seals

Size	Code	Price
16	149185	617.27
20	149186	617.27
25	149187	806.89
32	149188	806.89
40	149189	937.53
60	149190	937.53
63	149191	937.53

### MM Fusion Spigots

FPM Seals

Size	Code	Price
16	149192	625.57
20	149193	625.57
25	149194	817.42
32	149195	817.42
40	149196	952.93
50	149197	952.93
63	149198	952.93

## ASV Stubbe DMV 750 Pressure Reducing Valve

**Description:** In-line adjustable valve used to reduce system pressures and to keep the working pressure constant

**Mounting:** In any position

**Maximum Fluid Pressure at 20°C:** 10 bar

**Pressure Setting Range:** 1 to 6 bar

**Hysteresis:** Approx. 0.1 to 0.4 bar

**Fluid Temperature Range:** 0°C-70°C

**Construction:**

**Body:** Polypropylene

**Diaphragm:** EPDM with PTFE liner on fluid side

**Seats and Seals:** EPDM or FPM

**End Connections:** Fusion spigots

**Features:** Adjustable at any time, even during use. Constant pressure control to  $\pm 0.2$  bar. Installation is independent of flow direction.



Setting Range - 1 to 6 bar

### MM Fusion Spigots

EPDM Seals

Size	Code	Price
75	148472	2887.86
90	148473	6854.28

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## The function of a pressure relief valve

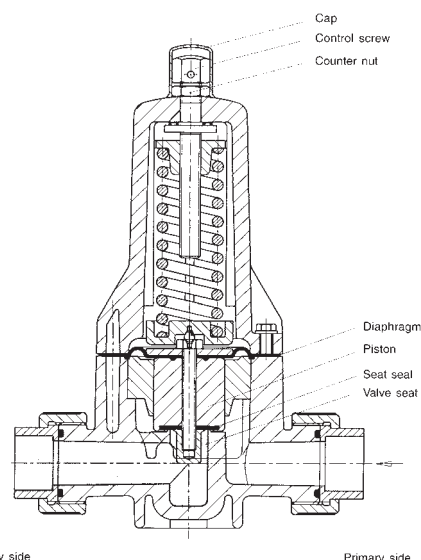
A pressure relief valve is most often used to protect a system from over-pressurisation, but it can also be used to maintain a constant upstream pressure or even as a non-return valve in certain installations.

Not normally installed as an in-line valve, it only opens when the system pressure exceeds the pressure set against the diaphragm of the valve. When this happens, the excess pressure forces the valve piston off its seat, compressing the spring and allowing fluid to flow through the valve body to discharge. Damping at the valve piston suppresses vibration and fluttering.

The pre-formed diaphragm allows full opening of the valve whilst separating the fluid in the lower body from the bonnet and therefore the atmosphere. The seal is additionally secured by crimped seal O-rings at the diaphragm.

When the system pressure falls back to below the set pressure, the spring forces the piston back into the seat, closing the valve.

Pre-setting or re-adjustment of the valve set pressure is made by removing the protective cap and by setting the control screw. The counter nut is tightened after final adjustment. When used with neutral fluids, many of the pressure reducing valves can be fitted with a pressure gauge if required.



**For Pressure Relief Valve Applications See Page 136**

## ASV Stubbe DHV 712-R Pressure Relief and Non-Return Valve

**Description:** Adjustable pressure relief and overflow valve, back-pressure safe

**Mounting:** In any position

**Maximum Fluid Pressure at 20°C:** 10 bar

**Pressure Setting Range:** 0.3 to 10 bar

**Opening Pressure:** Approx. 0.5 bar

**Hysteresis:** Approx. 0.3 bar

**Fluid Temperature Range:** 0°C-70°C

**Construction:**

**Body:** Polypropylene

**Diaphragm:** EPDM with PTFE liner on fluid side

**Seats and Seals:** EPDM or FPM

**End Connections:** Union fusion sockets or fusion spigots

**Features:** Unique design: valve acts as a non-return valve if there is no pressure on the inlet side. Adjustable at any time, even during use. Vibration free during operation. Maintenance free. High reproducibility, low hysteresis.

**Options:** Factory fitted pressure gauge available on request.



Setting Range - 0.3 to 10 bar

### MM Union Fusion Sockets

EPDM Seals

Size	Code	Price
16	146582	336.93
20	146583	341.96
25	146584	473.44
32	146585	481.00
40	146586	608.69
50	146587	646.52
63	146588	668.90

### MM Fusion Spigots

EPDM Seals

Size	Code	Price
16	146626	304.37
20	146627	304.37
25	146628	433.35
32	146629	433.35
40	146630	551.12
50	146631	551.12
63	146632	551.12

### MM Union Fusion Sockets

FPM Seals

Size	Code	Price
16	146590	350.71
20	146591	350.71
25	146592	487.25
32	146593	494.75
40	146594	640.04
50	146595	665.10
63	146596	710.18

### MM Fusion Spigots

FPM Seals

Size	Code	Price
16	146634	308.10
20	146635	308.10
25	146636	439.60
32	146637	439.60
40	146638	590.10
50	146639	590.10
63	146640	590.10

## ASV Stubbe DHV 712 Pressure Relief Valve

**Description:** Adjustable pressure relief valve

**Mounting:** In any position

**Maximum Fluid Pressure at 20°C:** Sizes 75mm & 90mm: 10 bar; 110mm: 6 bar

**Pressure Setting Range:** Choice of 0.3 to 4 bar, 0.5 to 6 bar or 0.5 to 10 bar

**Opening Pressure:** Approx. 0.3 to 0.5 bar

**Hysteresis:** Maximum approx. 1 bar

**Fluid Temperature Range:** 0°C-70°C

**Construction:**

**Body:** Polypropylene

**Diaphragm:** EPDM with PTFE liner on fluid side

**Seats and Seals:** EPDM or FPM

**End Connections:** Fusion spigots

**Features:** Adjustable at any time, even during use. Vibration and flutter free during operation. Maintenance free.



Setting Range  
0.3 to 4 bar

### MM Fusion Spigots

Size	PN	Code	Price
75	10	148300	1964.01
90	10	148301	2990.52
110	6	148302	4531.15

Setting Range  
0.5 to 6 bar

### MM Fusion Spigots

Size	PN	Code	Price
110	6	148325	4712.41

Setting Range  
0.5 to 10 bar

### MM Fusion Spigots

Size	PN	Code	Price
75	10	148315	2673.74
90	10	148316	2990.52

### MM Fusion Spigots

Size	PN	Code	Price
75	10	148303	2161.60
90	10	148304	3420.25
110	6	148305	5183.64

### MM Fusion Spigots

Size	PN	Code	Price
110	6	148326	5183.64

### MM Fusion Spigots

Size	PN	Code	Price
75	10	148317	2161.60
90	10	148318	3420.25

## ASV Stubbe DHV 718 Pressure Relief Valve

**Description:** Adjustable pressure relief valve

**Mounting:** In any position

**Maximum Fluid Pressure at 20°C:** 10 bar

**Pressure Setting Range:** 0.5 to 10 bar

**Opening Pressure:** Approx. 0.5 bar

**Fluid Temperature Range:** 0°C-70°C

**Flow Rate:** Up to 500 l/hr

**Construction:**

**Body:** Polypropylene

**Diaphragm:** EPDM with PTFE liner on fluid side

**Seats and Seals:** EPDM or FPM

**End Connections:** Union fusion sockets

**Features:** Ideal for oscillating pumps. Adjustable at any time, even during use.

Vibration and flutter free during operation. Diaphragm controlled, insensitive to back-pressure. Installation is independent of flow direction.

Ideal for  
Oscillating  
Pumps

Setting Range - 0.5 to 10 bar



Size 12mm

EPDM Seals

### MM Union Fusion Sockets

Size	Code	Price
12	147160	219.47

FPM Seals

### MM Union Fusion Sockets

Size	Code	Price
12	147168	225.20

### MM Fusion Spigots

Size	Code	Price
16	146899	254.10
20	146900	254.10
25	146901	362.62
32	146902	362.62
40	146903	481.94
50	146904	481.94
63	146905	481.94



Sizes 16-63mm