

Product Range  
International  
2008

PP/PE  
Plastic Piping  
Systems



**+GF+**

**GEORG FISCHER**  
PIPING SYSTEMS

Rtf-Prime.ru

# Over 50 years of Application Know How



Our long experience in plastic piping systems applications is also for your security. Approvals and third party controls are guarantee for continuously high

quality. Many of our products have the necessary approvals of the relevant institutes and thanks to the batch identification they are traceable.

## Fields of applications

Our specialists are proving their wide material knowledge and their application experience day by day in various industries:

- Water treatment
- Waste water treatment
- Galvanics
- Chemical industry
- Automotive industry
- Electronic industry
- Energy
- Swimming pools
- Cellulose and paper industry
- Photo industry
- Textile industry
- Shipbuilding

- Beverage industry
- Exhaust gas cleaning
- Chlorine industry
- Cooling and air conditioning
- Refrigeration plants
- Food
- Mining

Do you miss your application in the above list? No problem.

Please call us, and we will find a solution according to your specifications.

### PP-H Approvals



PP-H Valves, Z40.23-265  
PP-H Fittings, Z40.23-264  
PP-H Pipes  
Z40.23-4

### PE 100 Approvals

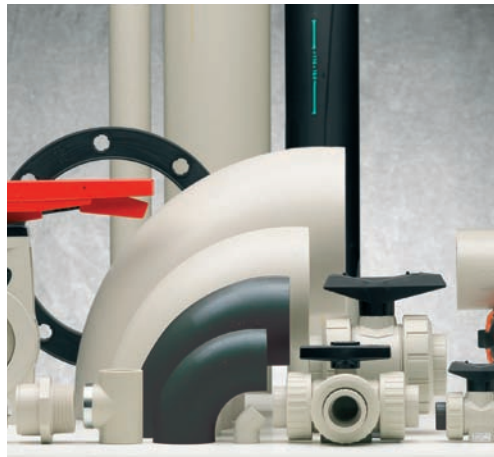


PE-HD Fittings, Z40.23-282

### PROGEF®



# Quality Products with Advantages



## Advantage of Wide Product Ranges

- Fittings
- Hand Operated Valves
- Pipes
- Joining Systems
- Actuated Valves
- Measure and Control Technology
- Machines and Tools



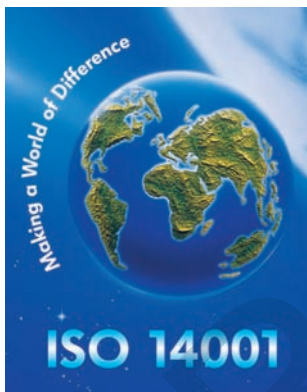
Quality management system certified according to ISO 9001/EN 29001 and ISO 4001



## Advantage of Quality

**Compound**  
Our own compound and strict quality controls for each raw material delivery form the basis for GF Piping Systems high quality products.

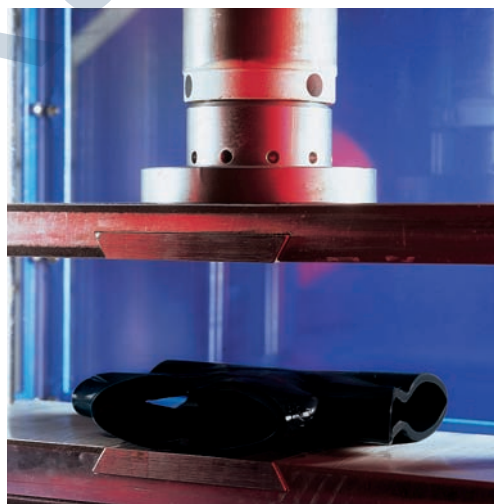
**Production Know-How**  
Due to know-how gathered over 50 years we are able to produce our products to exceptionally high tolerances.



Quelle: ICI  
Energy required for 100 m pressurised pipe

## Advantage for the Environment

- In addition to the economical advantage of PP and PE there are also ecological advantages:
- Preserving diminishing natural resources
- Less energy required
- Possibility of recycling
- Very long life span



## Advantage of Production Quality Control Tests

- Pressure Pulsation Testing 1000 h Test
- Chemical Resistance Functions
- Temperature Cycling Test
- Cyclic Bending Test

Independently accredited test laboratory for components of plastic piping systems according to SN EN ISO 45001



# for Professional Users

## Advantage in Planning

### One-stop-shopping for complete systems

Many customers prefer to purchase the complete piping system from one supplier. Because only systems that are designed to complement each other guarantee easy planning, installing and efficient functioning of the piping system.

### CAD Product Library

For drawing and providing a list of orders GF Piping Systems CAD Product Library is an optimal solution. Can be used with AutoCAD and other CAD systems.



## Advantage of Choosing the Right Material

For maximum safety and optimal durability of a piping system the choice of raw material and pressure class of the pipe parts is highly important. The raw material's suitability to the medium can be checked with the help of our chemical resistance list.



## Advantage of Installation Technique

Cement jointing is simple, fast, economical and very reliable.

Over 100 million homogenous joints have been made over the total life time of piping systems, achieving the highest quality requirements.



## Advantage of Support

### Training

GF Piping Systems offers training possibilities at our regional sales companies, in our own training center in Schaffhausen or at your premises. For cement jointing we can also provide you with a training video.

### Worldwide Distribution

Sales companies, representatives and dealers from GF Piping Systems can supply you with complete technical advice, punctual distribution and fast service in almost every corner of the world.



# GF Piping Systems quality is no coincidence!

GF Piping Systems has not only taken a pioneering role in the past for the range of PVC fittings and equipment, but also in the sector of fusible plastics.

GF Piping Systems developed the socket fusion jointing process 30 years ago and

later also the electrofusion system for domestic installations and distribution.

The development and introduction of infrared fusion technology is more evidence of GF Piping Systems focus on developing new technologies for the customer's benefit.

## GF Piping Systems product range in the field of fusible plastics

Jointing method	PROGEF Standard/Plus	PROGEF Natural	PE 100
Heating element socket fusion (HM)	X	X	X <sup>1</sup>
Heating element butt fusion (HS)	X	X	X
Infrared (IR-Plus®) fusion	X	X	X <sup>2</sup>
Bead and crevice free (BCF) fusion		X	
Electrofusion with integral heating	X	X	X

<sup>1</sup> Socket fusion programme available in PE 80 <sup>2</sup> in preparation for SDR 11

## Selection and calculation basis

The use of PN to specify the pipe dimension, a practice commonly applied throughout the world, poses considerable danger of confusion for butt fusion.

We therefore recommend that dimension and wall thickness, in addition to ISO series or SDR, are always indicated.

	Formula	Example
SDR – Standard Dimension Ratio	$SDR = d/e$	$SDR = 110/10 = 11$
Pipe series (S)	$SDR = 2S + 1$	$SDR = 2 \times 5 + 1 = 11$

d = Outside pipe diameter in mm

e = Wall thickness in mm

S = Pipe series

Pipes classified as SDR 7.25 can be fused trouble-free with pipes of the classification SDR 7.4. The same applies to the fusing

compatibility of pipes and fittings SDR 17 and SDR 17.6. The deviations are within the admissible tolerances.

## Design factors and derived operating pressures

In various standards for PROGEF and PE we find design factors (formerly called safety factors) stated, these are for water.

They are lower than the design factors recommended by GF Piping Systems for industrial applications. In order to protect human beings and the environment, those

safety factors can not be applied for industrial applications. We therefore recommend to use safety factors for PROGEF and PE 100 published in the following graphs, for the calculations of piping system pressures for industrial applications.

## List of abbreviations

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

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## PROGEF Standard



- Pipes
- Socket Fusion System
- Butt Fusion System

Rtf-Primo

# PROGEF® Standard

## Pressure/temperature diagram for PP

### PP-H

The following pressure/temperature diagrams for PP-H pipes and fittings are valid for a lifetime of 25 years.

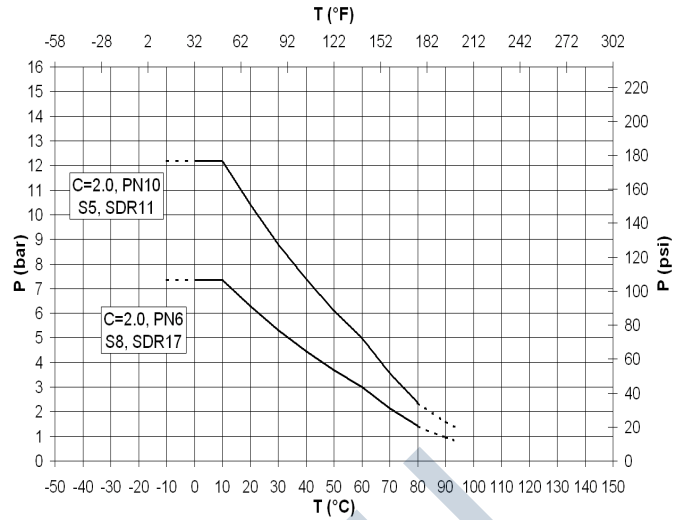
The design factor of 2.0 recommended by GF is incorporated.

They can be used for water or media resembling water, in other words, media which have no derating factor regarding the chemical resistance.

**Remark:** Please take into account the pressure/temperature diagrams for valves and special fittings. Because of the construction and/or sealing material used, differences are possible when compared with pipes and fittings. This information can be found in the planning fundamentals of the relevant types of valves, respectively special fittings.

According to the 10 °C line in the hydrostatic strength curve for PP-H, a permissible pressure of 12.2 bar / 7.4 bar in the temperature range of -10° to +10° C for the PN10 / PN6 system can be applied.

In case of applications with temperatures in the range of the dotted lines please contact your GF representative.



P Permissible pressure in bar, psi  
T Temperature in °C, °F

# PROGEF Standard – System Specification











<b>Material</b>	Beta PP-H 100 (Beta Polypropylene Homopolymer) d16 – d225	State-of-the-art PP (Polypropylene) d250 – d500
Colour	RAL 7032 pebble grey	RAL 7032 pebble grey
Density	~0.90g/cm <sup>3</sup> (ISO 1183/ASTM D792)	~0.90g/cm <sup>3</sup> (ISO 1183 / ASTM D792)
Surface tension	31 mJ/m <sup>2</sup>	24 mJ/m <sup>2</sup>
Linear expansion coefficient	0.16 mm/mK (DIN 53752)	0.16-0.18 mm/mK (DIN 53752)
E-modulus	1300 N/mm <sup>2</sup> (ISO 527/ASTM D790)	900 N/mm <sup>2</sup> (ISO 527/ASTM D790)
Thermal conductivity	0.23 W/mK (EN 12664)	0.23 W/mK (EN 12664)
Surface resistivity	> 10 <sup>16</sup> Ω (IEC 60093)	> 10 <sup>16</sup> Ω (IEC 60093)
<b>Dimension</b>	d16 – d500 in accordance to EN ISO 15494	
<b>Pressure Rating</b>	Pipes/Fittings/Diaphragm and ball valves: d16 – d225 SDR11, PN10, c=2.0 d50 – d225 SDR17.6, PN6, c=2.0 Butterfly valves: d63–d225, PN10 / d280, PN8 / d315, PN8	Pipes/Fittings: d250 – d500 SDR11, PN10, c=2.0 d250 – d500 SDR17.6, PN6, c=2.0
<b>Temperature Rating</b>	From 0°C to 80°C (32°F – 176°F)	
<b>Production</b>	Fittings: injection moulded or segment welded Pipes: extruded Valves: injection moulded	
<b>Marking</b>	All components are embossed with a permanent identification during the production process to ensure full traceability: Lot No Material Dimension Pressure Rating	
<b>Testing and Inspection (EN ISO 15494)</b>	Visual inspection Surface finish Dimension tolerance Pressure testing Full product range passed the Initial Type Test (ITT)	
<b>Material- and Product Approvals/Conformance<sup>(1)</sup></b>	FDA CFR 21 177.1520 USP 25 class VI (physiological non-toxic) DIBt (Z-40.23-4, Z-40.23-264, Z – 40.23-265) DNV (K-2630, K – 2636) Lloyd's Register (01/ 20030(E1))	
<b>Welding Technology</b>	Socket fusion (DVS 2207 - 11): d16 – d110 IR Plus, infrared fusion (DVS 2207 - 6): d20 – d225 Butt fusion (DVS 2207-11): d20 – d500	
<b>Documentation<sup>(2)</sup></b>	EN 10204 2.2 / EN 10204 3.1	
<b>Packing</b>	Pipes and fittings bulk bagged	
<b>Labeling</b>	Brand Name Product Description Code Number Material Dimension CE-labeling <sup>(3)</sup> Approvals	
<b>Main Applications</b>	PROGEF has been relied to be highly resistant to impact, abrasion and many chemicals. Suitable for industrial applications in chemical production, chemical distribution, galvanisation and power stations.	

<sup>(1)</sup> For thermoplastic material only

<sup>(2)</sup> On request

<sup>(3)</sup> From 2008 on

# PROGEF Standard Pipes, Fittings, Unions, Flanges and Flange Adaptors

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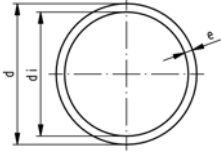
# PP-H Pipes

67 48 07

## PROGEF Standard, Pipes, S5/SDR11 (PN10)

### Model:

- Material: PP-H
- Dimension: DIN 8077
- Colour: RAL 7032 gravel grey
- Length: Lengths of 5 m



\* In these two sizes, stiffeners Code No. 727 900 006 (20 x 1,9) ad 727 900 007 (25 x 2,3) must be used with socket fusion joints.

<sup>1</sup>Traded product, not +GF+ labelled

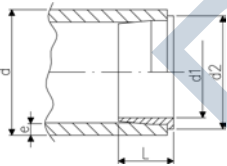
d [mm]	PN	Code	kg/m	e [mm]	di [mm]
16	10	167 480 710	0.080	1,8	12.4
*20	10	167 480 711	0.107	1,9	16.2
*25	10	167 480 712	0.164	2,3	20.4
32	10	167 480 713	0.261	2,9	26.2
40	10	167 480 714	0.412	3,7	32.6
50	10	167 480 715	0.638	4,6	40.8
63	10	167 480 716	1.010	5,8	51.4
75	10	167 480 717	1.410	6,8	61.4
90	10	167 480 718	2.030	8,2	73.6
110	10	167 480 719	3.010	10,0	90.0
125	10	167 480 720	3.910	11,4	102.2
140	10	167 480 721	4.870	12,7	114.6
160	10	167 480 722	6.380	14,6	130.8
180	10	167 480 723	8.070	16,4	147.2
200	10	167 480 724	9.950	18,2	163.6
225	10	167 480 725	12.600	20,5	184.0
250	10	167 480 726	15.500	22,7	224.6
280	10	167 480 727	19.400	25,4	229.2
315	10	167 480 728	24.600	28,6	257.8
355	10	167 480 729	31.200	32,2	290.6
400	10	167 480 730	39.600	36,3	327.4
1450	10	167 480 731	32.500	40,9	368.2
1500	10	167 480 732	40.200	45,4	409.2

27 90 00

## PROGEF Standard, Stiffeners

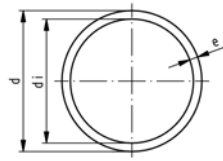
### Model:

- Material: PP-H
- Used as support during d20 and d25 socket fusion jointing to prevent the pipe from collapsing during the heating and jointing process.



d [mm]	e [mm]	Code	kg	L [mm]	d1 [mm]	d2 [mm]
20	1,9	727 900 006	0.002	10	14	18
25	2,3	727 900 007	0.003	11	18	23

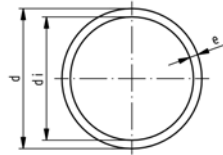
67 48 10

**PROGEF Standard, Pipes S3,2/SDR7,4 (PN16)****Model:**

- Material: Polypropylene (PP-H) DIN 8078
- Dimension: DIN 8077
- Colour: RAL 7032 gravel grey
- Length: Lengths of 5 m
- for socket fusion without stiffeners



d [mm]	PN	Code	kg/m	e [mm]	di [mm]
20	16	<b>167 481 028</b>	0.148	2,8	14.4
25	16	<b>167 481 029</b>	0.230	3,5	18.0

67 48 06

**PROGEF Standard, Pipes, S8,3/SDR17,6 (PN6)****Model:**

- Material: PP-H
- Dimension: DIN 8077
- Colour: RAL 7032 gravel grey
- Length: Lengths of 5 m

<sup>1</sup>Traded product, not +GF+ labelled

d [mm]	Code	kg/m	e [mm]	di [mm]
50	<b>167 480 680</b>	0.422	2,9	44.2
63	<b>167 480 681</b>	0.659	3,6	55.8
75	<b>167 480 682</b>	0.935	4,3	66.4
90	<b>167 480 683</b>	1.330	5,1	79.8
110	<b>167 480 684</b>	1.990	6,3	97.4
125	<b>167 480 685</b>	2.550	7,1	110.8
140	<b>167 480 686</b>	3.200	8,0	124.0
160	<b>167 480 687</b>	4.170	9,1	141.8
180	<b>167 480 688</b>	5.250	10,2	159.6
200	<b>167 480 689</b>	6.500	11,4	187.2
225	<b>167 480 690</b>	8.190	13	199.0
250	<b>167 480 691</b>	10.100	14,2	221.6
280	<b>167 480 692</b>	12.600	15,9	248.2
315	<b>167 480 693</b>	16.000	17,9	279.2
355	<b>167 480 694</b>	20.300	20,1	314.8
400	<b>167 480 695</b>	25.700	22,7	354.6
 1450	<b>167 480 696</b>	32.500	25,5	399.0
 1500	<b>167 480 697</b>	40.200	28,4	443.2

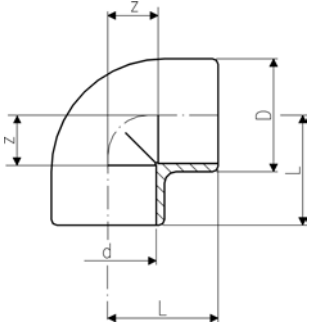
# Fittings for Socket Fusion

## PROGEF Standard, Elbows 90°

27 10 01

Model:

- Material: PP-H



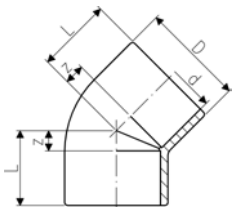
d [mm]	PN	Code	kg	D [mm]	L [mm]	z [mm]
16	10	<b>727 100 105</b>	0.015	26	25	12
20	10	<b>727 100 106</b>	0.020	31	28	14
25	10	<b>727 100 107</b>	0.029	36	32	16
32	10	<b>727 100 108</b>	0.044	44	38	20
40	10	<b>727 100 109</b>	0.074	54	44	24
50	10	<b>727 100 110</b>	0.128	66	51	28
63	10	<b>727 100 111</b>	0.230	82	62	35
75	10	<b>727 100 112</b>	0.317	93	76	45
90	10	<b>727 100 113</b>	0.512	110	88	53
110	10	<b>727 100 114</b>	0.874	134	106	65

27 15 01

## PROGEF Standard, Elbows 45°

Model:

- Material: PP-H

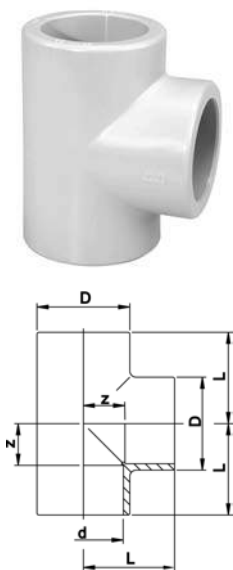


d [mm]	PN	Code	kg	D [mm]	L [mm]	z [mm]
16	10	<b>727 150 105</b>	0.008	23	20	7
20	10	<b>727 150 106</b>	0.016	31	21	7
25	10	<b>727 150 107</b>	0.024	36	24	8
32	10	<b>727 150 108</b>	0.036	44	28	10
40	10	<b>727 150 109</b>	0.059	53	33	13
50	10	<b>727 150 110</b>	0.084	64	36	13
63	10	<b>727 150 111</b>	0.185	82	43	16
75	10	<b>727 150 112</b>	0.234	93	51	20
90	10	<b>727 150 113</b>	0.405	114	58	23
110	10	<b>727 150 114</b>	0.657	134	68	27

27 20 01

**PROGEF Standard, Tees 90° equal****Model:**

- Material: PP-H

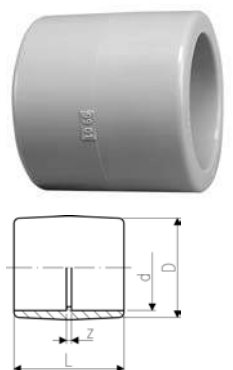


d [mm]	PN	Code	kg	D [mm]	L [mm]	z [mm]
16	10	727 200 105	0.019	26	25	12
20	10	727 200 106	0.027	31	28	14
25	10	727 200 107	0.038	36	32	16
32	10	727 200 108	0.058	44	38	20
40	10	727 200 109	0.094	54	44	24
50	10	727 200 110	0.158	66	51	28
63	10	727 200 111	0.288	82	62	35
75	10	727 200 112	0.380	93	76	45
90	10	727 200 113	0.739	114	88	53
110	10	727 200 114	1.070	134	106	65

27 91 01

**PROGEF Standard, Sockets equal****Model:**

- Material: PP-H

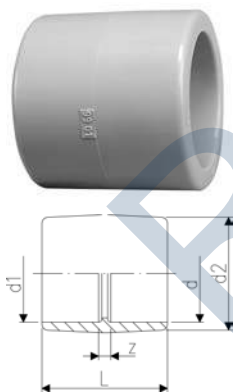


d [mm]	PN	Code	kg	D [mm]	L [mm]	z [mm]
16	10	727 910 105	0.010	26	33	7
20	10	727 910 106	0.013	31	35	7
25	10	727 910 107	0.019	36	39	7
32	10	727 910 108	0.026	44	43	7
40	10	727 910 109	0.042	54	48	8
50	10	727 910 110	0.075	66	54	8
63	10	727 910 111	0.129	82	62	8
75	10	727 910 112	0.144	93	70	8
90	10	727 910 113	0.257	112	81	11
110	10	727 910 114	0.405	134	96	14

27 91 30

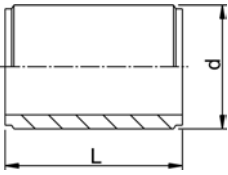
**Adaptor Sockets, PP-H  
metric - Inch BS****Model:**

- Material: PP-H
- With fusion socket metric and BS Inch (ASTM)



d [mm]	d1 [inch]	PN	Code	kg	d2 [mm]	L [mm]	z [mm]
20	1/2	10	727 913 006	0.013	31	35	7
25	3/4	10	727 913 007	0.010	36	39	7
32	1	10	727 913 008	0.025	44	43	7
40	1 1/4	10	727 913 009	0.040	54	48	8
50	1 1/2	10	727 913 010	0.100	66	54	8
63	2	10	727 913 011	0.130	82	62	8
90	3	10	727 913 013	0.260	112	81	10
110	4	10	727 913 014	0.389	134	96	12

27 91 09

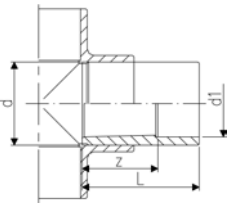
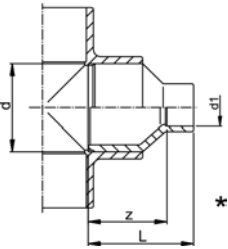
**PROGEF Standard, Barrel Nipples****Model:**

- Material: PP-H
- With fusion sockets on both sides
- For the shortest possible distance between fittings
- Overall length  $L = 2 \times$  fusion length

\* In these two sizes, stiffeners Code No. 727 900 006 (20 x 1,9) ad 727 900 007 (25 x 2,3) must be used with socket fusion joints.

d [mm]	PN	Code	kg	L [mm]	e [mm]
*20	10	<b>727 910 906</b>	0.005	37	1.9
*25	10	<b>727 910 907</b>	0.006	41	2.3
32	10	<b>727 910 908</b>	0.010	45	2.9
40	10	<b>727 910 909</b>	0.017	50	3.7
50	10	<b>727 910 910</b>	0.029	55	4.6
63	10	<b>727 910 911</b>	0.058	64	5.8
75	10	<b>727 910 912</b>	0.096	76	6.8
90	10	<b>727 910 913</b>	0.167	90	8.2
110	10	<b>727 910 914</b>	0.305	108	10.0

27 91 03

**PROGEF Standard, Reducers****Model:**

- Material: PP-H

**Note:**

- \* Fusion spigot and socket

d [mm]	d1 [mm]	PN	Code	kg	L [mm]	z [mm]
20	16	10	<b>727 910 334</b>	0.009	35	22
25	16	10	<b>727 910 338</b>	0.010	38	25
25	20	10	<b>727 910 337</b>	0.014	37	23
32	20	10	<b>727 910 342</b>	0.016	43	29
32	25	10	<b>727 910 341</b>	0.020	43	27
*40	20	10	<b>727 910 348</b>	0.022	48	34
*40	25	10	<b>727 910 347</b>	0.026	48	32
40	32	10	<b>727 910 346</b>	0.031	48	30
*50	20	10	<b>727 910 355</b>	0.034	54	40
*50	25	10	<b>727 910 354</b>	0.035	54	38
*50	32	10	<b>727 910 353</b>	0.040	54	36
50	40	10	<b>727 910 352</b>	0.047	54	34
*63	25	10	<b>727 910 361</b>	0.058	64	48
*63	32	10	<b>727 910 360</b>	0.061	64	46
*63	40	10	<b>727 910 359</b>	0.068	64	44
63	50	10	<b>727 910 358</b>	0.082	64	41
75	63	10	<b>727 910 364</b>	0.098	62	35
*90	63	10	<b>727 910 371</b>	0.181	88	61
90	75	10	<b>727 910 370</b>	0.134	70	39
110	90	10	<b>727 910 376</b>	0.247	81	46

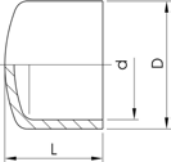


27 96 01

## PROGEF Standard, End Caps

Model:

- Material: PP-H



d [mm]	PN	Code	kg	D [mm]	L [mm]
16	10	<b>727 960 105</b>	0.006	25	20
20	10	<b>727 960 106</b>	0.010	30	27
25	10	<b>727 960 107</b>	0.015	36	30
32	10	<b>727 960 108</b>	0.024	44	34
40	10	<b>727 960 109</b>	0.036	53	38
50	10	<b>727 960 110</b>	0.061	65	44
63	10	<b>727 960 111</b>	0.098	80	51
75	10	<b>727 960 112</b>	0.146	91	65
90	10	<b>727 960 113</b>	0.273	111	77
110	10	<b>727 960 114</b>	0.417	137	93

Rtf-Prime.ru

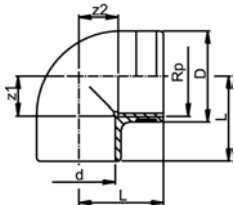
# Adaptor Fittings for Socket Fusion

27 10 02

## PROGEF Standard, Elbows 90°, metric - Rp

### Model:

- Material: PP-H
- With fusion socket metric and parallel female thread Rp, reinforced
- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PP



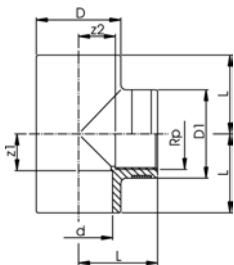
d [mm]	Rp [inch]	PN	Code	kg	D [mm]	L [mm]	z1 [mm]	z2 [mm]
20	1/2	10	<b>727 100 206</b>	0.022	30	28	14	14
25	3/4	10	<b>727 100 207</b>	0.029	35	32	16	16
32	1	10	<b>727 100 208</b>	0.054	44	38	20	20
40	1 1/4	10	<b>727 100 209</b>	0.087	54	44	24	24

27 20 02

## PROGEF Standard, Tees 90°, metric - Rp

### Model:

- Material: PP-H
- Line, with fusion socket metric
- Branch, with BSP parallel female thread Rp, reinforced
- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PP



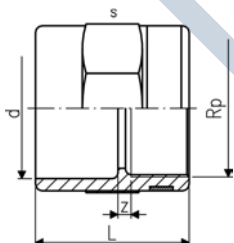
d [mm]	Rp [inch]	PN	Code	kg	D [mm]	L [mm]	z1 [mm]	z2 [mm]
20	1/2	10	<b>727 200 206</b>	0.030	31	28	14	14
25	3/4	10	<b>727 200 207</b>	0.042	36	32	16	16
32	1	10	<b>727 200 208</b>	0.069	44	38	20	20
40	1 1/4	10	<b>727 200 209</b>	0.107	54	44	24	24

27 91 02

## PROGEF Standard, Adaptor Sockets, metric - Rp

### Model:

- Material: PP-H
- With fusion socket metric and parallel female thread Rp, reinforced
- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PP



d [mm]	Rp [inch]	PN	Code	kg	L [mm]	s [mm]	z [mm]
20	3/8	10	<b>727 910 205</b>	0.017	35	32	7
20	1/2	10	<b>727 910 206</b>	0.017	40	32	7
25	3/4	10	<b>727 910 207</b>	0.023	42	36	7
32	1	10	<b>727 910 208</b>	0.038	48	46	7
40	1 1/4	10	<b>727 910 209</b>	0.056	53	55	7
50	1 1/2	10	<b>727 910 210</b>	0.089	54	65	9
63	2	10	<b>727 910 211</b>	0.137	62	80	9

27 91 42

### Adaptor Sockets, PP-H metric - NPT

**Model:**

- Material: PP-H
- With fusion socket metric and NPT tapered female thread, reinforced
- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PP



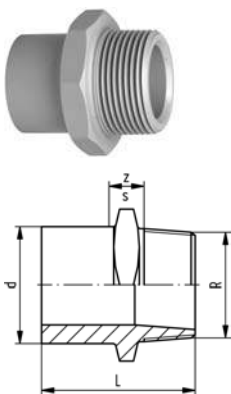
d [mm]	NPT [inch]	PN	Code	kg	L [mm]	s [mm]	z [mm]
20	1/2	10	<b>727 914 266</b>	0.017	40	32	7
25	3/4	10	<b>727 914 267</b>	0.023	42	36	7
32	1	10	<b>727 914 268</b>	0.038	48	46	7
40	1 1/4	10	<b>727 914 269</b>	0.056	53	55	7
50	1 1/2	10	<b>727 914 270</b>	0.092	54	65	9
63	2	10	<b>727 914 271</b>	0.146	62	80	9

27 91 05

### PROGEF Standard, Adaptor Nipples, metric - R

**Model:**

- Material: PP-H
- With fusion spigot metric and BSP tapered male thread
- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PP



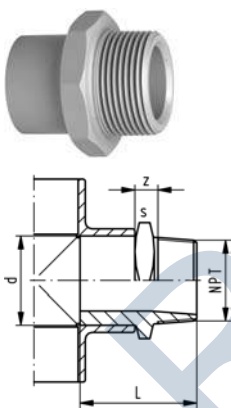
d [mm]	R [inch]	PN	Code	kg	L [mm]	s [mm]	z [mm]
16	3/8	10	<b>727 910 505</b>	0.008	37	27	13
20	1/2	10	<b>727 910 506</b>	0.012	42	32	13
25	3/4	10	<b>727 910 507</b>	0.016	46	36	13
32	1	10	<b>727 910 508</b>	0.027	52	46	12
40	1 1/4	10	<b>727 910 509</b>	0.041	56	55	14
50	1 1/2	10	<b>727 910 510</b>	0.062	60	65	15
63	2	10	<b>727 910 511</b>	0.100	69	80	16

27 91 45

### PROGEF Standard, Adaptor Nipples metric - NPT

**Model:**

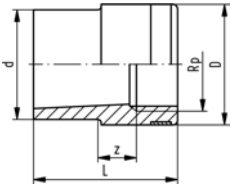
- Material: PP-H
- With fusion spigot metric and NPT tapered male thread
- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PP



d [mm]	NPT [inch]	PN	Code	kg	s [mm]	L [mm]	z [mm]
16	3/8	10	<b>727 914 555</b>	0.008	27	37	13
20	1/2	10	<b>727 914 556</b>	0.012	32	42	13
25	3/4	10	<b>727 914 557</b>	0.016	36	46	13
32	1	10	<b>727 914 558</b>	0.027	46	52	12
40	1 1/4	10	<b>727 914 559</b>	0.041	55	56	14
50	1 1/2	10	<b>727 914 560</b>	0.100	65	60	15
63	2	10	<b>727 914 561</b>	0.185	80	69	16

27 91 04

## PROGEF Standard, Reducing Bushes metric - Rp



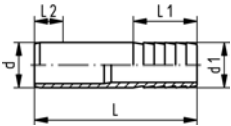
### Model:

- Material: PP-H
- With fusion spigot metric and BSP parallel female thread, reinforced
- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PP

d [mm]	Rp [inch]	PN	Code	kg	L [mm]	z [mm]
20	¼	10	<b>727 910 433</b>	0.008	36	7
20	⅜	10	<b>727 910 434</b>	0.011	36	7
25	½	10	<b>727 910 437</b>	0.015	45	6
32	¾	10	<b>727 910 441</b>	0.023	47	8
40	1	10	<b>727 910 446</b>	0.039	53	9
50	1 ¼	10	<b>727 910 452</b>	0.061	55	10

27 96 04

## PROGEF Standard, Hose Connectors metric



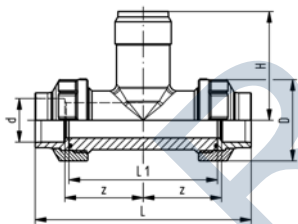
### Model:

- Material: PP-H
- With socket fusion spigot metric and parallel hose connection

d [mm]	d1 [mm]	PN	Code	kg	L [mm]	L1 [mm]	L2 [mm]
20	20	10	<b>727 960 406</b>	0.009	78	27	14
25	25	10	<b>727 960 407</b>	0.015	91	36	16
32	32	10	<b>727 960 408</b>	0.026	100	36	18
40	40	10	<b>727 960 409</b>	0.040	104	42	20
50	50	10	<b>727 960 410</b>	0.061	90	48	23
63	60	10	<b>727 960 411</b>	0.096	100	50	27

33 31 00

## Installation Fitting Type 310, PE80 for Socket Systems metric



### Model:

- For Signet Paddlewheel Sensors Type -X0 (104 mm)
- Body and union nut PP-H
- Union end with fusion socket PE80

d [mm]	DN [mm]	PN	EPDM Code	FPM Code	kg
20	15	10	<b>733 310 006</b>	<b>733 310 036</b>	0.136
25	20	10	<b>733 310 007</b>	<b>733 310 037</b>	0.190
32	25	10	<b>733 310 008</b>	<b>733 310 038</b>	0.250
40	32	10	<b>733 310 009</b>	<b>733 310 039</b>	0.356
50	40	10	<b>733 310 010</b>	<b>733 310 040</b>	0.510
63	50	10	<b>733 310 011</b>	<b>733 310 041</b>	0.800

d [mm]	DN [mm]	D [mm]	z [mm]	L [mm]	L1 [mm]	H [mm]	Sensor Type
20	15	48	50	128	90	76	X0
25	20	58	55	142	100	78	X0
32	25	65	60	156	110	81	X0
40	32	79	60	160	110	85	X0
50	40	91	65	176	120	89	X0
63	50	105	70	194	130	95	X0

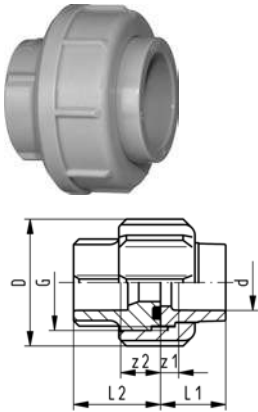
# Unions for Socket Fusion

EPDM 27 51 01  
FPM 27 52 01

## PROGEF Standard, Unions, metric

### Model:

- Material: PP-H
- With fusion sockets metric
- D75-110 with new thread geometry, now rated PN10 up to d110
- Jointing face: with O-ring groove
- **For the dimensions d75-110 please see instructions for the installation**



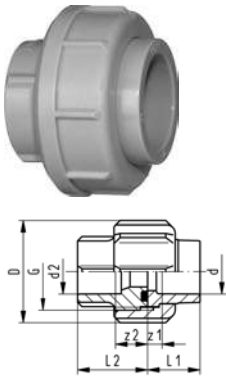
d [mm]	PN	EPDM Code	FPM Code	kg	D [mm]	G [inch]	L1 [mm]	L2 [mm]	z [mm]	z1 [mm]
16	10	727 510 155	727 520 155	0.020	35	3/4	18	24	5	11
20	10	727 510 156	727 520 156	0.038	48	1	19	26	5	12
25	10	727 510 157	727 520 157	0.062	58	1 1/4	21	28	5	12
32	10	727 510 158	727 520 158	0.079	65	1 1/2	23	30	5	12
40	10	727 510 159	727 520 159	0.137	79	2	25	34	5	14
50	10	727 510 160	727 520 160	0.180	91	2 1/4	28	39	5	16
63	10	727 510 161	727 520 161	0.312	111	2 3/4	32	47	5	20
75	10	727 510 172	727 520 172	0.450	135	S107,5x3,6	36	51	5	20
90	10	727 510 173	727 520 173	0.645	158	S127,5x3,6	42	55	7	20
110	10	727 510 174	727 520 174	1.020	188	S152,5x3,6	49	54	7	12

27 51 30

## PROGEF Standard, Adapter Unions, metric - Inch BS (ASTM)

### Model:

- Material: PP-H
- With fusion sockets metric
- Jointing face: with O-ring groove



d [mm]	d2	PN	Code	kg	D [mm]	G [inch]	L1 [mm]	L2 [mm]	z1 [mm]	z2 [mm]
20	1/2	10	727 513 006	0.036	48	1	19	26	5	12
25	3/4	10	727 513 007	0.060	58	1 1/4	21	28	5	12
32	1	10	727 513 008	0.079	65	1 1/2	23	30	5	12
40	1 1/4	10	727 513 009	0.112	79	2	25	34	5	14
50	1 1/2	10	727 513 010	0.182	91	2 1/4	28	39	5	16
63	2	10	727 513 011	0.315	111	2 3/4	32	47	5	20



# Instructions for the installation of unions in PP, PE d 75, d 90 and d 110

The newest generation of plastic unions in the above materials and dimensions has been fitted with a state-of-the-art, plastics-oriented buttress thread. You therefore have a product in which the nominal pressure and the safety reserve have been dramatically increased. Also new are the butt fusion versions. In this connection, there are a few points which you must be aware of.

## Caution

- ① The threads of the union nut and bush have been reworked for PP, PVDF and PE! When using individual parts, please check prior to installation if the threads of the union bush and the union nut coincide.



Union bush with trapezoid thread on union nut with trapezoid thread  
or  
Union bush with buttress thread on union nut with buttress thread

## Tip

To make installation of the union easier, wet the union nut.

- ② For the dimensions d 90 and d 110 we advise fusing the complete union, if possible (or slide the union nut to the collar of the union end) because after fusion the union nut cannot be slid over the fusion bead. (Fig. 1)
- ③ For design reasons, it is theoretically possible to combine different nominal diameters of union ends and nuts. To make sure combinations are technically correct, you can find the code numbers of the single parts and spare parts for each union in the Tables 1-3.

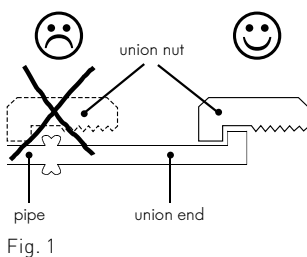


Fig. 1

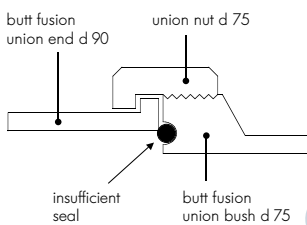


Fig. 2

## Caution

**Only use union bushes and union ends with the same nominal diameter!**

A butt fusion union bush d 75 may not be combined with a butt fusion union end d 90 to form a reducer because this can cause leakage, as illustrated to the left. (Fig. 2)

Markings on the union nuts

SF/MS = socket fusion, BF/ST = butt fusion

SF/MS 75                      specified for socket fusion d 75  
BF/ST 75-90                specified for butt fusion d 75-75 and d 90-90

SF/MS 90                    specified socket fusion d 90  
BF/ST 110                 specified butt fusion d 110

110                          specified for socket fusion d 110

## Tip

We recommend changing materials only for the union end for installation reasons.

# Selection tables for single parts and spare parts

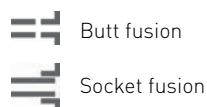


Table 1

Single parts for **PP-H** unions d 75, d 90 and d 110

d	BF/ST	SF/MS	SDR	PN	Code union end	Code union bush	Code union nut*
75	≡≡		11	10	727 608 512	727 648 512	727 690 422
			17.6	6	727 608 412	727 648 412	727 690 422
			—	10	727 600 112	727 640 172	727 690 422
90	≡≡		11	10	727 608 513	727 648 513	727 690 422
			17.6	6	727 608 413	727 648 413	727 690 422
			—	10	727 600 113	727 640 173	727 690 423
110	≡≡		11	10	727 608 514	727 648 514	727 690 423
			17.6	6	727 608 414	727 648 414	727 690 423
			—	10	727 600 114	727 640 174	727 690 424

Table 2

Single parts for **PE 100** unions d 75, d 90 and d 110

d	BF/ST	SF/MS	SDR	PN	Code union end	Code union bush	Code union nut*
75	≡≡		11	10	753 608 612	753 648 612	727 690 442
			17.6	10	753 608 412	753 648 412	727 690 442
90	≡≡		11	10	753 608 613	753 648 613	727 690 442
			17.6	10	753 608 413	753 648 413	727 690 442
110	≡≡		11	10	753 608 614	753 648 614	727 690 443
			17.6	10	753 608 414	753 648 414	727 690 443

Table 3

O-Rings for PP-H, PE 100

d	BF/ST	SF/MS	SDR	PN	Code O-Ring EPDM <sup>1</sup>	Code O-Ring FPM <sup>1</sup>
75	≡≡			16	748 410 013	749 410 013
				16	748 410 014	749 410 014
90	≡≡			16	748 410 014	749 410 014
				16	748 410 015	749 410 015
110	≡≡			16	748 410 015	749 410 015
				16	748 410 016	749 410 016

\* Union nuts overlap several dimensions

<sup>1</sup> Flange adaptor O-rings, one size smaller in nominal dimensions, are used for the d 75–110 butt-fusion unions

# Adaptor Unions for Socket Fusion

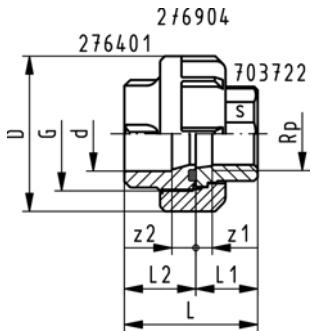
27 53 03

## Adaptor Unions, PP-H / malleable iron metric - Rp



### Model:

- Union Nut: PP-H
- Union Bush: fusion socket PP-H metric
- Union End: malleable iron with parallel female thread Rp
- Gasket: O-Ring EPDM No. 48 41 00



d [mm]	Rp [inch]	Code	kg	D [mm]	L [mm]	L1 [mm]	L2 [mm]	z1 [mm]	z2 [mm]	G [inch]	s [mm]
20	1/2	727 530 306	0.073	43	48	22	26	9	10	1	25
25	3/4	727 530 307	0.118	51	50	22	28	7	10	1 1/4	31
32	1	727 530 308	0.199	58	56	26	30	9	10	1 1/2	38
40	1 1/4	727 530 309	0.276	72	65	31	34	12	12	2	48
50	1 1/2	727 530 310	0.357	83	72	33	39	14	14	2 1/4	54
63	2	727 530 311	0.579	100	82	35	47	11	18	2 3/4	67

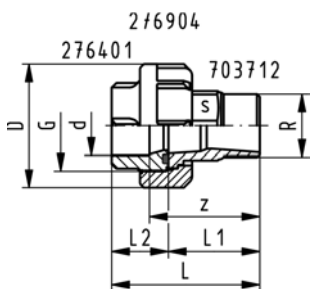
27 53 08

## Adaptor Unions, PP-H / malleable iron metric - R



### Model:

- Union Nut: PP-H
- Union Bush: fusion socket PP-H metric
- Union End: malleable iron with taper male thread R
- Gasket: O-Ring EPDM No. 48 41 00



d [mm]	R [inch]	Code	D [mm]	L [mm]	L1 [mm]	L2 [mm]	z [mm]	G [inch]	s [mm]
20	1/2	727 530 806	43	66	40	26	50	1	25
25	3/4	727 530 807	51	71	43	28	53	1 1/4	31
32	1	727 530 808	58	78	48	30	58	1 1/2	38
40	1 1/4	727 530 809	72	91	57	34	69	2	48
50	1 1/2	727 530 810	83	98	59	39	73	2 1/4	54
63	2	727 530 811	100	109	62	47	80	2 3/4	67

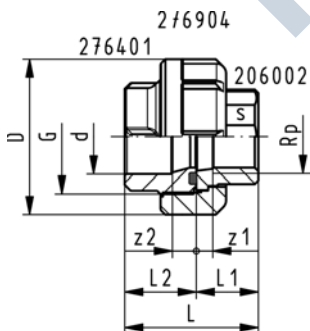
27 55 03

## Adaptor Unions, PP-H / Brass metric - Rp



### Model:

- Union Nut: PP-H
- Union Bush: fusion socket PP-H metric
- Union End: brass with parallel female thread Rp
- Gasket: O-Ring EPDM No. 48 41 00



d [mm]	Rp [inch]	PN	Code	D [mm]	L [mm]	L1 [mm]	L2 [mm]	z1 [mm]	z2 [mm]	G [inch]	s [mm]
20	1/2	10	727 550 306	48	48	22	26	10	10	1	25
25	3/4	10	727 550 307	58	50	22	28	6	10	1 1/4	31
32	1	10	727 550 308	65	57	27	30	8	10	1 1/2	38
40	1 1/4	10	727 550 309	79	65	31	34	10	12	2	48
50	1 1/2	10	727 550 310	91	69	30	39	9	14	2 1/4	54
63	2	10	727 550 311	105	81	34	47	8	18	2 3/4	67

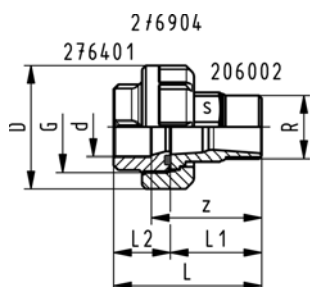
27 55 08

## Adaptor Unions, PP-H / Brass metric - R



### Model:

- Union Nut: PP-H
- Union Bush: fusion socket PP-H metric
- Union End: brass with taper male thread R
- Gasket: O-Ring EPDM No. 48 41 00



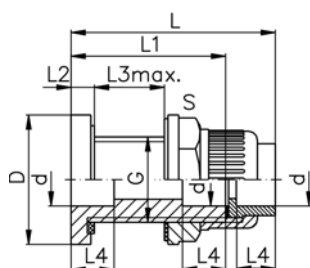
d [mm]	R [inch]	PN	Code	D [mm]	L [mm]	L1 [mm]	L2 [mm]	z [mm]	G [inch]	s [mm]
20	1/2	10	<b>727 550 806</b>	48	63	37	26	47	1	25
25	3/4	10	<b>727 550 807</b>	58	68	40	28	50	1 1/4	31
32	1	10	<b>727 550 808</b>	65	73	43	30	53	1 1/2	38
40	1 1/4	10	<b>727 550 809</b>	79	82	48	34	60	2	48
50	1 1/2	10	<b>727 550 810</b>	91	89	50	39	64	2 1/4	54
63	2	10	<b>727 550 811</b>	105	104	57	47	75	2 3/4	67

67 05 02

## Tank Adaptors, PP

### Model:

- Material: PP-H
- End connection: Union with fusion socket metric
- Gasket: flat gasket EPDM



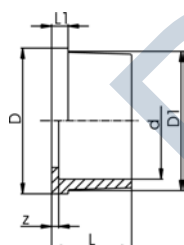
d [mm]	Code	kg	G [inch]	D [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 max [mm]	L4 [mm]	s [mm]	Diameter of bore in tank side [mm]
20	<b>167 050 226</b>	0.083	1	56	89	67	11	30	16	38	35
25	<b>167 050 227</b>	0.135	1 1/4	65	96	72	12	32	18	47	43
32	<b>167 050 228</b>	0.158	1 1/2	70	100	75	12	33	20	53	49
40	<b>167 050 229</b>	0.305	2	95	106	78	12	32	22	75	61
50	<b>167 050 230</b>	0.325	2 1/4	95	112	82	13	32	25	75	67
63	<b>167 050 231</b>	0.325	2 3/4	115	112	87	13	33	29	101	83

27 60 01

## Union Ends, PP-H

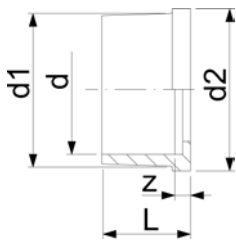
### Model:

- Material: PP-H
- With fusion sockets metric
- Suitable for unions, diaphragm valves Type 314, tank adaptors and Vortex sensors



d [mm]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]
16	10	<b>727 600 105</b>	0.004	24	22	18	4	3
20	10	<b>727 600 106</b>	0.006	30	28	19	5	3
25	10	<b>727 600 107</b>	0.011	39	36	21	5	3
32	10	<b>727 600 108</b>	0.014	45	42	23	6	3
40	10	<b>727 600 109</b>	0.025	57	53	25	6	3
50	10	<b>727 600 110</b>	0.024	63	59	28	7	3
63	10	<b>727 600 111</b>	0.042	79	74	32	8	3
75	10	<b>727 600 112</b>	0.085	101	91	36	10	3
90	10	<b>727 600 113</b>	0.130	121	108	42	11	5
110	10	<b>727 600 114</b>	0.220	146	131	49	12	6

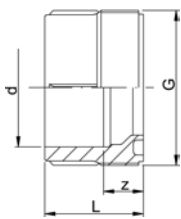
34 60 01

**Union Ends, PE80****Model:**

- With fusion socket metric
- Suitable for unions, tank connectors and diaphragm valves Type 314

d [mm]	PN	Code	kg	d1 [mm]	d2 [mm]	L [mm]	L1 [mm]	z [mm]
20	10	<b>734 600 106</b>	0.006	28	30	19	5	5
25	10	<b>734 600 107</b>	0.012	36	39	21	5	5
32	10	<b>734 600 108</b>	0.015	42	45	23	6	5
40	10	<b>734 600 109</b>	0.026	53	57	25	6	5
50	10	<b>734 600 110</b>	0.027	59	63	28	7	5
63	10	<b>734 600 111</b>	0.045	74	79	32	8	5

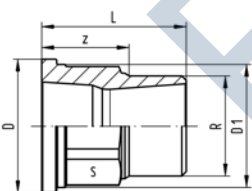
27 64 01

**Union Bushes, PP-H****Model:**

- Material: PP-H
- With fusion sockets metric
- D75-110 with new thread geometry, now rated PN10 up to d110
- Jointing face: with O-ring groove
- **For the dimensions d75-110 please see instructions for the installation**

d [mm]	PN	Code	kg	G [inch]	L [mm]	z [mm]
16	10	<b>727 640 155</b>	0.006	3/4	24	11
20	10	<b>727 640 156</b>	0.011	1	26	12
25	10	<b>727 640 157</b>	0.018	1 1/4	28	12
32	10	<b>727 640 158</b>	0.024	1 1/2	30	12
40	10	<b>727 640 159</b>	0.040	2	34	14
50	10	<b>727 640 160</b>	0.052	2 1/4	39	16
63	10	<b>727 640 161</b>	0.096	2 3/4	47	20
75	10	<b>727 640 172</b>	0.080	S107,5x3,6	51	18
90	10	<b>727 640 173</b>	0.220	S127,5x3,6	55	18
110	10	<b>727 640 174</b>	0.289	S152,5x3,6	54	22

70 37 12

**Union Ends, Malleable Iron Galvanized R****Model:**

- Union End: malleable iron with taper male thread R

d [mm]	R [inch]	Code	kg	D [mm]	D1 [mm]	L [mm]	z [mm]	s [mm]
20	1/2	<b>724 600 806</b>	0.085	30	27	40	25	23
25	3/4	<b>724 600 807</b>	0.147	39	36	43	27	30
32	1	<b>724 600 808</b>	0.210	44	41	48	29	36
40	1 1/4	<b>724 600 809</b>	0.315	56	52	57	36	48
50	1 1/2	<b>724 600 810</b>	0.411	62	58	59	37	54
63	2	<b>724 600 811</b>	0.665	78	73	62	36	66

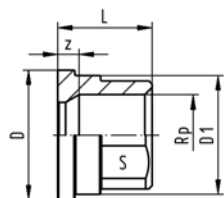
70 37 22

## Union Ends, Malleable Iron Galvanized Rp



### Model:

- Union End: malleable iron with parallel female thread Rp



d [mm]	Rp [inch]	Code	kg	D [mm]	D1 [mm]	L [mm]	z [mm]	s [mm]
20	1/2	<b>724 600 206</b>	0.058	30	27	22	9	25
25	3/4	<b>724 600 207</b>	0.096	39	36	22	7	31
32	1	<b>724 600 208</b>	0.127	44	41	26	9	38
32	1 1/4	<b>724 600 209</b>	0.204	56	52	31	12	48
50	1 1/2	<b>724 600 210</b>	0.268	62	58	33	14	54
63	2	<b>724 600 211</b>	0.443	78	73	35	11	67

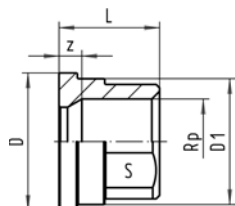
20 60 02

## Union Ends, Brass Rp



### Model:

- Union End: brass with parallel female thread Rp



d [mm]	Rp [inch]	Code	kg	D [mm]	D1 [mm]	z [mm]	L [mm]
20	1/2	<b>720 600 206</b>	0.059	30	28	7	22
25	3/4	<b>720 600 207</b>	0.094	39	36	6	22
32	1	<b>720 600 208</b>	0.138	45	42	8	27
40	1 1/4	<b>720 600 209</b>	0.250	56	53	10	31
50	1 1/2	<b>720 600 210</b>	0.282	62	59	10	30
63	2	<b>720 600 211</b>	0.480	78	74	8	34
75	2 1/2	<b>720 600 212</b>	0.796	100	91	8	38
90	3	<b>720 600 213</b>	1.238	121	110	7	40

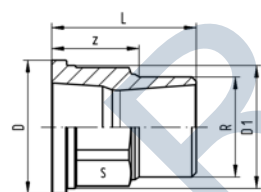
20 60 02

## Union Ends, Brass R



### Model:

- Union End: brass with taper male thread R



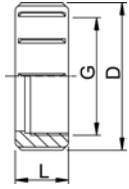
d [mm]	R [inch]	Code	kg	D [mm]	D1 [mm]	L [mm]	z [mm]	s [mm]
20	1/2	<b>720 600 226</b>	0.097	30	27	37	24	25
25	3/4	<b>720 600 227</b>	0.148	39	36	40	26	31
32	1	<b>720 600 228</b>	0.224	45	42	43	26	38
32	1 1/4	<b>720 600 229</b>	0.384	56	53	48	29	48
50	1 1/2	<b>720 600 230</b>	0.468	62	59	50	31	54
63	2	<b>720 600 231</b>	0.746	78	74	57	34	67
75	2 1/2	<b>720 600 232</b>	1.285	100	92	70	43	83
90	3	<b>720 600 233</b>	1.809	121	110	72	42	96

27 69 04

## Union Nut, PP-GF

### Model:

- PP glass-fibre reinforced



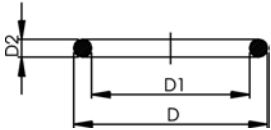
Socket Fusion d [mm]	Butt Fusion d [mm]	PN	G [inch]	Code	kg	D [mm]	L [mm]
16	16	10	3/4	<b>727 690 405</b>	0.008	35	21
20	20	10	1	<b>727 690 406</b>	0.021	48	24
25	25	10	1 1/4	<b>727 690 407</b>	0.034	58	26
32	32	10	1 1/2	<b>727 690 408</b>	0.042	65	28
40	40	10	2	<b>727 690 409</b>	0.045	79	31
50	50	10	2 1/4	<b>727 690 410</b>	0.060	91	35
63	63	10	2 3/4	<b>727 690 411</b>	0.168	111	39
75	75 - 90	10	S107,5x3,6	<b>727 690 422</b>	0.205	135	40
90	110	10	S127,5x3,6	<b>727 690 423</b>	0.288	158	43
110	-	10	S152,5x3,6	<b>727 690 424</b>	0.460	188	48

EPDM 48 41 00  
FPM 49 41 00

## O-Ring Gaskets

### Model:

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



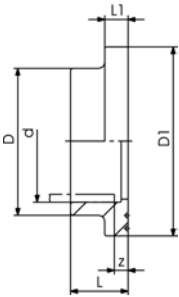
d [mm]	DN [mm]	EPDM Code	FPM Code	kg	D [mm]	D1 [mm]	D2 [mm]
16	10	<b>748 410 005</b>	<b>749 410 005</b>	0.002	21	16	3
20	15	<b>748 410 006</b>	<b>749 410 006</b>	0.002	27	20	4
25	20	<b>748 410 007</b>	<b>749 410 007</b>	0.002	35	28	
32	25	<b>748 410 008</b>	<b>749 410 008</b>	0.002	40	33	4
40	32	<b>748 410 009</b>	<b>749 410 009</b>	0.006	51	41	5
50	40	<b>748 410 010</b>	<b>749 410 010</b>	0.007	58	47	5
63	50	<b>748 410 011</b>	<b>749 410 011</b>	0.010	70	60	5
75	65	<b>748 410 014</b>	<b>749 410 014</b>	0.012	93	82	
90	80	<b>748 410 015</b>	<b>749 410 015</b>	0.015	112	101	
110	100	<b>748 410 016</b>	<b>749 410 016</b>	0.031	134	120	



# Flange Adaptors, Flanges and Gaskets for Socket Fusion

27 79 02

## PROGEF Standard, Flange Adaptor Jointing face flat/serrated



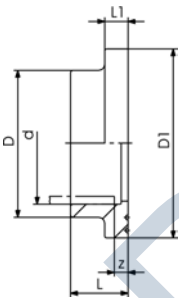
### Model:

- Material: PP-H
- Counterpart: Flange Adaptor flat/serrated or with O-ring groove
- Connection: according to EN ISO 15494-1
- Gasket: Profile flange gasket EPDM No. 48 44 07, FPM No. 49 44 07
- Flanges: PP with steel core, No. 27 70 02, PP-V, No. 27 70 04

d [mm]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]
20	10	<b>727 790 206</b>	0.011	27	45	19	7	5
25	10	<b>727 790 207</b>	0.022	33	58	21	9	5
32	10	<b>727 790 208</b>	0.033	41	68	23	10	5
40	10	<b>727 790 209</b>	0.046	50	78	25	11	5
50	10	<b>727 790 210</b>	0.062	61	88	28	12	5
63	10	<b>727 790 211</b>	0.090	76	102	32	14	5
75	10	<b>727 790 212</b>	0.163	90	122	36	16	5
90	10	<b>727 790 213</b>	0.233	108	138	42	17	7
110	10	<b>727 790 214</b>	0.319	131	158	48	18	7

27 79 02

## PROGEF Standard, Flange Adaptor Jointing face serrated ANSI



### Model:

- Material: PP-H
- Counterpart: Flange adaptor serrated
- Gasket: Profile flange gasket EPDM No. 48 44 05, FPM No. 49 44 05
- Flanges: PP with steel core, No. 27 70 02, PP-V, No 27 70 04

d [mm]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]
25	10	<b>727 790 257</b>	0.019	33	54	21	7	5
32	10	<b>727 790 258</b>	0.028	41	63	23	7	5
40	10	<b>727 790 259</b>	0.040	50	73	25	8	5
50	10	<b>727 790 260</b>	0.053	61	82	28	8	5
90	10	<b>727 790 263</b>	0.233	108	133	36	16	5

27 70 04  
27 70 05

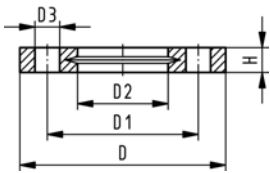
## Backing Flanges, PP-V for Socket Systems metric

### Model:

- Modern full-plastic flange PP-GF (30 % glass-fibre reinforced)
- With V-groove which applies force evenly on collar
- With integrated bolt retainers as an assembly aid
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- **Bolt circle PN 10**

<sup>1)</sup> Suitable for socket- and butt fusion systems (no pictograph on flange)

AL: number of holes



d [mm]	Inch	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC
20		15	16	<b>727 700 406</b>	0.080	95	65	28	14	16	4	M12
25		20	16	<b>727 700 407</b>	0.100	105	75	34	14	17	4	M12
32		25	16	<b>727 700 408</b>	0.140	115	85	42	14	18	4	M12
40		32	16	<b>727 700 409</b>	0.220	140	100	51	18	20	4	M16
50		40	16	<b>727 700 410</b>	0.210	150	110	62	18	22	4	M16
63		50	16	<b>727 700 411</b>	0.380	165	125	78	18	24	4	M16
75		65	16	<b>727 700 412</b>	0.480	185	145	92	18	26	4	M16
90		80	16	<b>727 700 413</b>	0.520	200	160	110	18	27	8	M16
110		100	16	<b>727 700 414</b>	0.680	220	180	133	18	28	8	M16

27 70 14  
27 70 15

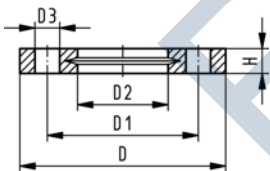
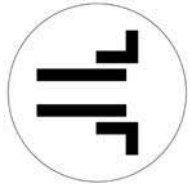
## Backing Flanges, PP-V for Socket Systems Inch/ANSI

### Model:

- Modern full-plastic flange PP-GF (30 % glass-fibre reinforced)
- With V-groove which applies force evenly on collar
- With integrated bolt-fixing as an assembly aid
- Connecting dimension: ANSI/ASME B 16.5 class 150, ASTM D 4024, BS 1560, BS EN 1759
- **Bolt circle class 150**

<sup>1)</sup> Suitable for socket- and butt fusion systems (no pictograph on flange)

AL: number of holes



Inch	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC
1/2	15	16	<b>727 701 406</b>	0.080	95	60	28	16	16	4	M12
3/4	20	16	<b>727 701 407</b>	0.100	105	70	34	16	17	4	M12
1	25	16	<b>727 701 408</b>	0.140	115	79	42	16	18	4	M12
1 1/4	32	16	<b>727 701 409</b>	0.220	140	89	51	16	20	4	M16
1 1/2	40	16	<b>727 701 410</b>	0.210	150	98	62	16	22	4	M16
2	50	16	<b>727 701 411</b>	0.380	165	121	78	19	24	4	M16
2 1/2	65	16	<b>727 701 412</b>	0.480	185	140	92	19	26	4	M16
3	80	16	<b>727 701 413</b>	0.520	200	152	110	19	27	4	M16
4	100	16	<b>727 701 414</b>	0.680	229	190	133	19	28	8	M16

27 70 02

## Backing Flanges, PP/Steel for Socket Systems metric

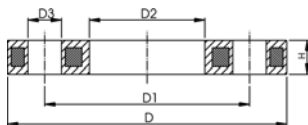
**Model:**

- PP-GF (30% glass-fibre reinforced) with steel ring
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- **Bolt circle PN 10**

<sup>1</sup> Connecting dimension: ISO 2536 DN125

\* Connecting dimension: ISO 2536

AL: number of holes



d [mm]	d [inch]	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC
20		15	16	<b>727 700 206</b>	0.220	95	65	28	14	12	4	M12
25		20	16	<b>727 700 207</b>	0.260	105	75	34	14	12	4	M12
32		25	16	<b>727 700 208</b>	0.430	115	85	42	14	16	4	M12
40		32	16	<b>727 700 209</b>	0.650	140	100	51	18	16	4	M16
50		40	16	<b>727 700 210</b>	0.820	150	110	62	18	18	4	M16
63		50	16	<b>727 700 211</b>	0.940	165	125	78	18	18	4	M16
75		65	16	<b>727 700 212</b>	1.300	185	145	92	18	18	4	M16
90		80	16	<b>727 700 213</b>	1.400	200	160	110	18	20	8	M16
110		100	16	<b>727 700 214</b>	1.560	220	180	133	18	20	8	M16

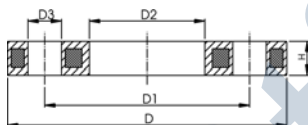
27 70 12

## Backing Flanges, PP/Steel for Socket Systems Inch/ANSI

**Model:**

- For Flange Adaptors BS/ANSI
- Material: PP (30 % glass-fibre reinforced) with steel ring
- Connecting dimension: ANSI/ASME B 16.5 class 150, ASTM D 4024, BS 1560, BS EN 1759
- **Bolt circle class 150**
- DN100 and DN150: only for use with original metric flange adaptors

AL: number of holes



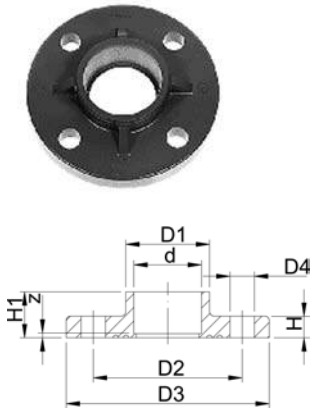
d [inch]	DN [mm]	d [mm]	PN	Code	kg	D1 [mm]	D2 [mm]	D3 [mm]	D [mm]	H [mm]	AL
1/2	15	20	16	<b>727 701 206</b>	0.210	60	28	16	95	12	4
3/4	20	25	16	<b>727 701 207</b>	0.250	70	34	16	105	12	4
1	25	32	16	<b>727 701 208</b>	0.420	79	42	16	115	16	4
1 1/4	32	40	16	<b>727 701 209</b>	0.670	89	51	16	140	16	4
1 1/2	40	50	16	<b>727 701 210</b>	0.860	98	62	16	150	18	4
2	50	63	16	<b>727 701 211</b>	0.930	121	78	19	165	18	4
2 1/2	65	75	16	<b>727 701 212</b>	1.340	140	92	19	185	18	4
3	80	90	16	<b>727 701 213</b>	1.550	152	110	19	200	20	4
4	100	110	16	<b>727 701 214</b>	1.810	190	133	19	229	20	8

27 30 10  
27 40 10

## Fixed Flanges, PP-H metric Jointing Face flat

### Model:

- With fusion socket metric
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, BS 4504 PN 10



AL: number of holes

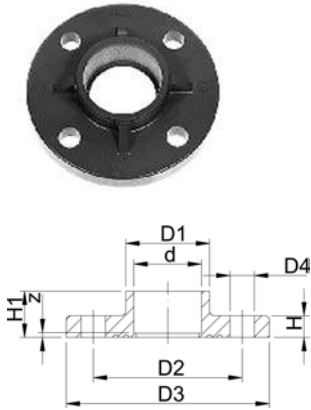
d [mm]	DN [mm]	Inch	PN	Code	kg	D1 [mm]	D2 [mm]	D3 [mm]	D4 [mm]	H [mm]	H1 [mm]	AL	z [mm]
20	15	1/2	10	727 730 106	0.069	27	65	94	14	12	19	4	5
25	20	3/4	10	727 730 107	0.094	33	75	103	14	13	21	4	5
32	25	1	10	727 730 108	0.129	40	85	115	14	14	23	4	5
40	32	1 1/4	10	727 730 109	0.203	50	100	138	18	15	25	4	5
50	40	1 1/2	10	727 730 110	0.246	61	110	148	18	16	27	4	5
63	50	2	10	727 730 111	0.330	76	125	163	18	18	31	4	5

27 30 10  
27 40 10

## Fixed Flanges, PP-H metric Combined jointing face: flat and serrated

### Model:

- With fusion socket metric
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, BS 4504 PN 10



AL: number of holes

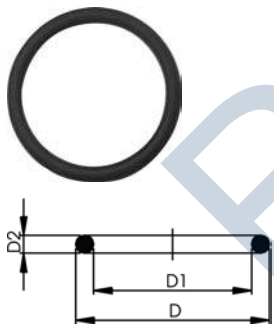
d [mm]	DN [mm]	Inch	PN	Code	kg	D1 [mm]	D2 [mm]	D3 [mm]	D4 [mm]	H [mm]	H1 [mm]	AL	z [mm]
20	15	1/2	10	727 740 106	0.065	27	65	94	14	12	19	4	5
25	20	3/4	10	727 740 107	0.083	33	75	103	14	13	21	4	5
32	25	1	10	727 740 108	0.117	40	85	115	14	14	23	4	5
40	32	1 1/4	10	727 740 109	0.175	50	100	138	18	15	25	4	5
50	40	1 1/2	10	727 740 110	0.212	61	110	148	18	16	27	4	5
63	50	2	10	727 740 111	0.330	76	125	163	18	18	31	4	5

EPDM 48 41 01  
FPM 49 41 01

## O-Ring Gaskets

### Model:

- For Flange Adaptors
- Hardness approx. 65° Shore



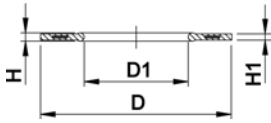
d [mm]	DN [mm]	EPDM Code	FPM Code	kg	D [mm]	D1 [mm]	D2 [mm]
20	15	748 410 001	749 410 001	0.002	31	23	3.53
25	20	748 410 007	749 410 007	0.002	35	28	3.53
32	25	748 410 002	749 410 002	0.003	43	36	3.53
40	32	748 410 003	749 410 003	0.007	55	44	5.34
50	40	748 410 012	749 410 012	0.008	64	53	5.34
63	50	748 410 013	749 410 013	0.011	80	69	5.34
75	65	748 410 014	749 410 014	0.012	93	82	5.34
90	80	748 410 015	749 410 015	0.015	112	101	5.34
110	100	748 410 016	749 410 016	0.031	134	120	6.99



## Flange Gaskets metric

### Model:

- Profile Gasket with steel insert (type G-ST-P/K)
- Hardness: 70° Shore **EPDM**, 75° Shore **FPM**
- For Flange Adaptors
- For flange adaptors only in combination with butterfly valves



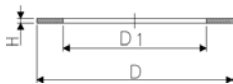
d [mm]	EPDM Code	FPM Code	kg	D [mm]	D1 [mm]	H [mm]	H1 [mm]
20	748 440 101	749 440 101	0.008	51	20	4	3
25	748 440 102	749 440 102	0.011	61	25	4	3
32	748 440 103	749 440 103	0.014	71	32	4	3
40	748 440 104	749 440 104	0.020	82	40	4	3
50	748 440 105	749 440 105	0.021	92	50	4	3
63	748 440 106	749 440 106	0.040	107	63	5	4
75	748 440 107	749 440 107	0.054	127	75	5	4
90	748 440 108	749 440 108	0.060	142	90	5	4
110	748 440 109	749 440 109	0.083	162	110	6	5

EPDM 48 40 00  
FPM 49 40 00

## Flat Gaskets

### Model:

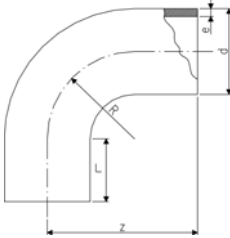
- For Flange Adaptors 21 79 01/21 80 01
- Hardness: 70° Shore **EPDM**, 75° Shore **FPM**



d [mm]	DN [mm]	Inch	PN	EPDM Code	FPM Code	kg	D [mm]	D1 [mm]	H [mm]
20	15	1/2	10	748 400 015	749 400 015	0.003	32	20	2
25	20	3/4	10	748 400 016	749 400 016	0.003	39	25	2
32	25	1	10	748 400 017	749 400 017	0.004	48	32	2
40	32	1 1/4	10	748 400 018	749 400 018	0.008	59	40	3
50	40	1 1/2	10	748 400 019	749 400 019	0.012	71	50	3
63	50	2	10	748 400 020	749 400 020	0.017	88	63	3
75	65	2 1/2	10	748 400 021	749 400 021	0.024	104	75	3
90	80	3	10	748 400 022	749 400 022	0.032	123	90	3
110	100	4	10	748 400 023	749 400 023	0.062	148	110	4

# Fittings for Butt Fusion

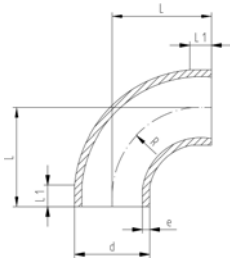
## Bends 90°, PP-H S5/SDR11 - 0.75d



### Model:

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H

d [mm]	FM	Code	kg	z [mm]	L [mm]	R [mm]	e [mm]
20	IR	727 018 606	0.007	38	23	15	1.9
25	IR	727 018 607	0.012	42	23	19	2.3
32	IR	727 018 608	0.021	46	22	24	2.9
40	IR	727 018 609	0.072	51	21	30	3.7
50	IR	727 018 610	0.063	58	21	37	4.6
63	IR	727 018 611	0.113	66	21	45	5.8



## PROGEF Standard, Bends 90°, S5/SDR11 - Type B

### Model:

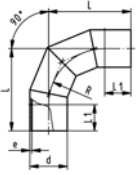
- Material: PP-H
- Bends with new geometry
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H

<sup>1</sup> Material: PP-R

d [mm]	FM	Code	kg	L [mm]	L1 [mm]	R [mm]	e [mm]
20	IR	727 018 481	0.005	28	5	22	1,9
25	IR	727 018 482	0.009	33	7	27	2,3
32	IR	727 018 483	0.017	41	7	35	2,9
40	IR	727 018 484	0.036	52	10	44	3,7
50	IR	727 018 485	0.066	63	10	55	4,6
63	IR	727 018 486	0.126	77	10	69	5,8
75	IR	727 018 612	0.229	100	20	90	6,8
90	IR	727 018 613	0.335	100	20	90	8,2
110	IR	727 018 614	0.607	141	25	130	10,0
125	IR	727 018 490	0.790	140	15	125	11,4
140	IR	727 018 491	1.080	155	15	140	12,7
160	IR	727 018 492	1.600	175	15	160	14,6
180	IR	727 018 493	2.600	195	15	180	16,4
200	IR	727 018 494	3.130	215	15	200	18,2
225	IR	727 018 495	4.230	245	20	225	20,5
250	--	727 018 521	6.450	256	48	232	22,7
280	--	727 018 522	9.500	286	48	262	25,4
315	--	727 018 523	12.800	321	48	297	28,6
355	--	727 018 574	19.400	380	15	355	32,2
400	--	727 018 575	28.500	435	25	400	36,3



## PROGEF Standard, Bends 90°, S5/SDR11



### Model:

- Production process: segment welded
- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- Segment welded fittings have a pressure reduction factor of 0.8

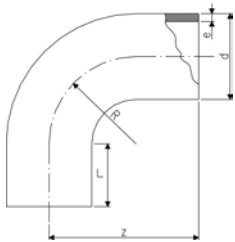
d [mm]	Code	kg	L [mm]	L1 [mm]	R [mm]	e [mm]
450	<b>727 018 576</b>	55.400	975	300	675	40,9
500	<b>727 018 577</b>	77.400	1100	350	750	45,4



## Bends 90°, PP-H S8,3/SDR17,6 - 0.75d

### Model:

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H



d [mm]	FM	Code	kg	z [mm]	L [mm]	R [mm]	e [mm]
50	IR	<b>727 018 635</b>	0.050	58	21	37	2.9
63		<b>727 018 636</b>	0.081	66	21	45	3.6

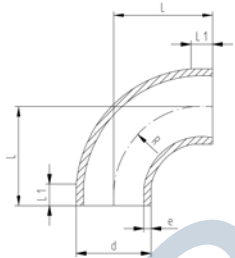


## PROGEF Standard, Bend 90°, S8,3/SDR17,6 - Type B

### Model:

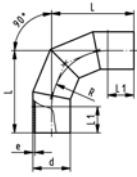
- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Bends with new geometry

<sup>1</sup> Material: PP-R



d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
50	--	<b>727 018 435</b>	0.047	63	10	2.9
63	IR	<b>727 018 436</b>	0.089	77	10	3.6
75	IR	<b>727 018 637</b>	0.161	100	20	4.3
90	IR	<b>727 018 638</b>	0.229	100	20	5.1
110	IR	<b>727 018 639</b>	0.486	141	25	6.3
125	IR	<b>727 018 440</b>	0.590	140	15	7.1
140	IR	<b>727 018 441</b>	0.820	155	15	8.0
160	IR	<b>727 018 442</b>	1.200	175	15	9.1
180	IR	<b>727 018 443</b>	1.690	195	15	10.2
200	IR	<b>727 018 444</b>	2.300	215	15	11.4
225	IR	<b>727 018 445</b>	3.200	245	20	12.8
250	--	<b>727 018 421</b>	4.400	256	48	14.2
280	--	<b>727 018 422</b>	6.200	286	48	15.9
315	--	<b>727 018 423</b>	8.800	321	48	17.9
<sup>1</sup> 355	--	<b>727 018 549</b>	13.300	355	15	20.1
<sup>1</sup> 400	--	<b>727 018 550</b>	18.600	400	25	22.7





## PROGEF Standard, Bend 90°, S8,3/SDR17,6



### Model:

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- Production process: segment welded
- Segment welded fittings have a pressure reduction factor of 0.8

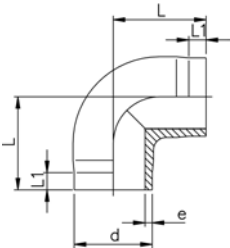
d [mm]	Code	kg	L [mm]	L1 [mm]	e [mm]	R [mm]
450	<b>727 018 551</b>	55.400	975	300	25,5	675
500	<b>727 018 552</b>	77.400	1100	350	28,4	750

27 10 85

## PROGEF Standard, Elbows 90°, S5/SDR11

### Model:

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H



d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
20	IR	<b>727 108 506</b>	0.007	38	25	1,9
25	IR	<b>727 108 507</b>	0.012	42	26	2,3
32	IR	<b>727 108 508</b>	0.022	46	27	2,9
40	IR	<b>727 108 509</b>	0.044	51	22	3,7
50	IR	<b>727 108 510</b>	0.077	58	23	4,6
63	IR	<b>727 108 511</b>	0.138	66	21	5,8

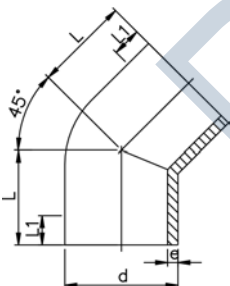
27 15 85

## PROGEF Standard, Elbows 45°, S5/SDR11

### Model:

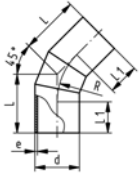
- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H

<sup>1</sup> Material: PP-R



d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
20	IR	<b>727 158 506</b>	0.006	32	24	1,9
25	IR	<b>727 158 507</b>	0.010	34	25	2,3
32	IR	<b>727 158 508</b>	0.020	36	25	2,9
40	IR	<b>727 158 509</b>	0.037	39	25	3,7
50	IR	<b>727 158 510</b>	0.054	42	26	4,6
63	IR	<b>727 158 511</b>	0.097	47	29	5,8
75	IR	<b>727 158 512</b>	0.135	49	29	6,8
90	IR	<b>727 158 513</b>	0.224	57	34	8,2
110	IR	<b>727 158 514</b>	0.415	70	43	10,0
125	IR	<b>727 158 515</b>	0.607	79	48	11,4
140	IR	<b>727 158 516</b>	0.860	88	55	12,7
160	IR	<b>727 158 517</b>	1.260	100	60	14,6
200	IR	<b>727 158 519</b>	2.460	124	75	18,2
225	IR	<b>727 158 520</b>	3.400	140	85	20,5
1250		<b>727 158 521</b>	7.890	225	133	22,7
1280		<b>727 158 522</b>	10.170	235	143	25,4
1315		<b>727 158 523</b>	11.690	255	154	28,6

27 15 85

**PROGEF Standard, Bend 45°, S5/SDR11****Model:**

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- Production process: segment welded
- Segment welded fittings have a pressure reduction factor of 0.8

d [mm]	Code	kg	L [mm]	L1 [mm]	e [mm]	R [mm]
355	<b>727 158 524</b>	32.300	520	300	32,2	532.5
400	<b>727 158 525</b>	43.200	548	300	36,3	600.0
450	<b>727 158 526</b>	57.700	580	300	40,9	675.0
500	<b>727 158 527</b>	87.200	665	350	45,4	750.0

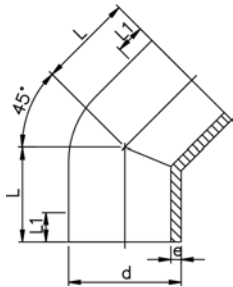
27 15 85

**PROGEF Standard, Elbows 45°, S8,3/SDR17,6****Model:**

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H

<sup>1</sup> Material: PP-R

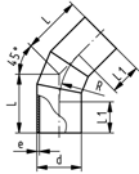
\*Machined from S5/SDR11



d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
*50	--	<b>727 158 535</b>	0.042	42	26	2,9
*63	IR	<b>727 158 536</b>	0.083	47	29	3,6
75	IR	<b>727 158 412</b>	0.099	49	29	4,3
90	IR	<b>727 158 413</b>	0.164	57	34	5,1
110	IR	<b>727 158 414</b>	0.296	70	43	6,3
*125	IR	<b>727 158 540</b>	0.570	79	48	7,1
*140	IR	<b>727 158 541</b>	0.825	88	55	8,0
*160	IR	<b>727 158 542</b>	1.190	100	60	9,1
*200	IR	<b>727 158 544</b>	2.300	124	75	11,4
*225	IR	<b>727 158 545</b>	3.200	140	85	12,8
1250		<b>727 158 546</b>	4.970	225	133	14,2
1280		<b>727 158 547</b>	7.130	235	143	15,9
1315		<b>727 158 548</b>	9.600	255	154	17,9

27 15 85

## PROGEF Standard, Bend 45°, S8,3/SDR17,6



### Model:

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- Production process: segment welded
- Segment welded fittings have a pressure reduction factor of 0.8

d [mm]	Code	kg	L [mm]	L1 [mm]	e [mm]	R [mm]
355	<b>727 158 549</b>	21.000	520	300	20,1	532.5
400	<b>727 158 550</b>	28.100	548	300	22,7	600.0
450	<b>727 158 551</b>	37.400	580	300	25,5	675.0
500	<b>727 158 552</b>	52.600	665	350	28,4	750.0

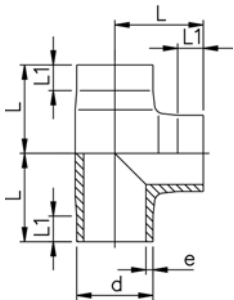
27 20 85

## PROGEF Standard, Tee 90° equal, S5/SDR11

### Model:

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H

<sup>1</sup> Material: PP-R



d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
20	IR	<b>727 208 506</b>	0.011	38	24	1,9
25	IR	<b>727 208 507</b>	0.018	42	26	2,3
32	IR	<b>727 208 508</b>	0.030	46	26	2,9
40	IR	<b>727 208 509</b>	0.059	51	22	3,7
50	IR	<b>727 208 510</b>	0.103	58	22	4,6
63	IR	<b>727 208 511</b>	0.200	66	21	5,8
75	IR	<b>727 208 512</b>	0.300	75	20	6,8
90	IR	<b>727 208 513</b>	0.530	90	20	8,2
110	IR	<b>727 208 514</b>	0.950	110	20	10,0
125	IR	<b>727 208 515</b>	1.400	125	25	11,4
140	IR	<b>727 208 516</b>	1.980	140	28	12,7
160	IR	<b>727 208 517</b>	2.900	160	28	14,6
180	IR	<b>727 208 568</b>	4.430	194	74	16,4
200	IR	<b>727 208 519</b>	5.570	200	35	18,2
225	IR	<b>727 208 520</b>	7.820	220	35	20,5
250	--	<b>727 208 571</b>	12.480	276	92	22,7
280	--	<b>727 208 572</b>	17.250	318	110	25,4
315	--	<b>727 208 573</b>	24.060	353	118	28,6
355	--	<b>727 208 574</b>	31.100	345	103	32,2
400	--	<b>727 208 575</b>	38.000	360	105	36,3

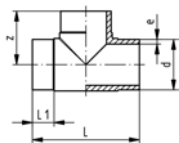
27 20 85

## PROGEF Standard, Tee 90° equal, S5/SDR11



### Model:

- Injection moulded
- Material: PP-R
- Conventional butt-welding according to DVS 2207 part 11



d [mm]	Code	kg	L [mm]	L1 [mm]	z [mm]	e [mm]
450	<b>727 208 576</b>	58.000	970	195	485	40,9
500	<b>727 208 577</b>	73.000	1060	215	530	45,4

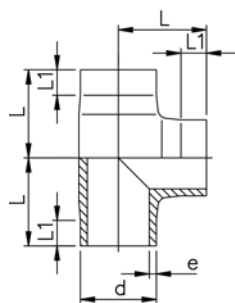
27 20 85

## PROGEF Standard, Tee 90° equal, S8,3/SDR17,6

### Model:

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H

<sup>1</sup> Material: PP-R



d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
50	--	<b>727 208 535</b>	0.090	59	26	2,9
63	IR	<b>727 208 536</b>	0.160	73	31	3,6
75	IR	<b>727 208 412</b>	0.230	75	20	4,3
90	IR	<b>727 208 413</b>	2.200	90	20	5,1
110	IR	<b>727 208 414</b>	0.723	110	20	6,3
125	IR	<b>727 208 540</b>	1.066	125	30	7,1
140	IR	<b>727 208 541</b>	1.449	140	35	8,0
160	IR	<b>727 208 542</b>	2.240	160	43	9,1
180	IR	<b>727 208 543</b>	3.090	194	70	10,2
200	IR	<b>727 208 544</b>	4.360	210	70	11,4
225	IR	<b>727 208 545</b>	6.030	235	82	12,8
250	--	<b>727 208 546</b>	8.610	276	92	14,2
280	--	<b>727 208 547</b>	11.660	318	110	15,9
315	--	<b>727 208 548</b>	16.230	353	118	17,9
<sup>1</sup> 355	--	<b>727 208 549</b>	21.000	345	103	20,1
<sup>1</sup> 400	--	<b>727 208 550</b>	26.000	360	105	22,7

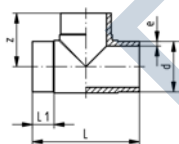
27 20 85

## PROGEF Standard, Tee 90° equal, S8,3/SDR17,6



### Model:

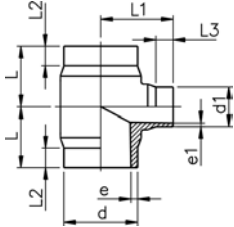
- Injection moulded
- Material: PP-R
- Conventional butt-welding according to DVS 2207 part 11



d [mm]	Code	kg	L [mm]	L1 [mm]	z [mm]	e [mm]
450	<b>727 208 551</b>	58.000	525	1050	525	25,5
500	<b>727 208 552</b>	73.000	600	1200	600	28,4

**PROGEF Standard, Tee 90° reduced, S5/SDR11****Model:**

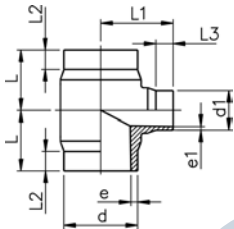
- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H



d	d1	FM	Code	kg	L	L1	L2	L3	e	e1
[mm]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
63	32	IR	<b>727 208 351</b>	0.160	65	70	25	25	5,8	2,9
63	50	IR	<b>727 208 352</b>	0.170	65	70	25	25	5,8	4,6
75	32	IR	<b>727 208 353</b>	0.240	70	75	25	25	6,8	2,9
75	50	IR	<b>727 208 354</b>	0.250	70	75	25	25	6,8	4,6
75	63	IR	<b>727 208 355</b>	0.260	70	75	25	25	6,8	5,8
90	50	IR	<b>727 208 357</b>	0.410	80	85	25	25	8,2	4,6
90	63	IR	<b>727 208 358</b>	0.420	80	85	25	25	8,2	5,8
90	75	IR	<b>727 208 359</b>	0.440	80	85	25	25	8,2	6,8
110	32	IR	<b>727 208 360</b>	0.650	90	95	30	25	10	2,9
110	50	IR	<b>727 208 361</b>	0.670	90	95	30	25	10,0	4,6
110	63	IR	<b>727 208 362</b>	0.680	90	95	30	25	10,0	5,8
110	75	IR	<b>727 208 363</b>	0.690	90	95	30	25	10,0	6,8
110	90	IR	<b>727 208 364</b>	0.700	90	95	30	25	10,0	8,2
160	63	IR	<b>727 208 371</b>	2.125	142	135	50	30	14,6	5,8
160	75	IR	<b>727 208 372</b>	2.140	142	135	50	30	14,6	6,8
160	90	IR	<b>727 208 373</b>	2.160	142	135	50	30	14,6	8,2
160	110	IR	<b>727 208 374</b>	2.200	142	135	50	30	14,6	10,0
225	90	IR	<b>727 208 388</b>	4.530	155	165	40	30	20,5	8,2
225	110	IR	<b>727 208 389</b>	4.520	155	165	40	30	20,5	10,0
225	160	IR	<b>727 208 391</b>	4.530	155	165	40	30	20,5	14,6

**PROGEF Standard, Tee 90° reduced, S8,3/SDR17,6****Model:**

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H

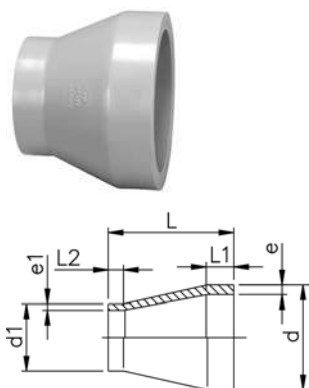


\* Branch SDR11

d	d1	FM	Code	kg	L	L1	L2	L3	e	e1
[mm]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
*63	32	IR	<b>727 208 301</b>	0.120	65	70	25	25	3,6	2,9
63	50	IR	<b>727 208 302</b>	0.125	65	70	25	25	3,6	2,9
*75	32	IR	<b>727 208 303</b>	0.180	70	75	25	25	4,3	2,9
75	50	IR	<b>727 208 304</b>	0.180	70	75	25	25	4,3	2,9
75	63	IR	<b>727 208 305</b>	0.190	70	75	25	25	4,3	3,6
90	50	IR	<b>727 208 307</b>	0.310	80	85	25	25	5,1	2,9
90	63	IR	<b>727 208 308</b>	0.310	80	85	25	25	5,1	3,6
90	75	IR	<b>727 208 309</b>	0.320	80	85	25	25	5,1	4,3
*110	32	IR	<b>727 208 310</b>	0.490	90	95	30	25	6,3	2,9
110	50	IR	<b>727 208 311</b>	0.490	90	95	30	25	6,3	2,9
110	63	IR	<b>727 208 312</b>	0.500	90	95	30	25	6,3	3,6
110	75	IR	<b>727 208 313</b>	0.500	90	95	30	25	6,3	4,3
110	90	IR	<b>727 208 314</b>	0.510	90	95	30	25	6,3	5,1
160	63	IR	<b>727 208 321</b>	1.560	142	135	50	30	9,1	3,6
160	75	IR	<b>727 208 322</b>	1.570	142	135	50	30	9,1	4,3
160	90	IR	<b>727 208 323</b>	1.580	142	135	50	30	9,1	5,1
160	110	IR	<b>727 208 324</b>	1.600	142	135	50	30	9,1	6,3
225	90	IR	<b>727 208 338</b>	3.330	155	165	40	30	12,8	5,1
225	110	IR	<b>727 208 339</b>	3.310	155	165	40	30	12,8	6,3
225	160	IR	<b>727 208 341</b>	3.330	155	165	40	30	12,8	9,1

## Model:

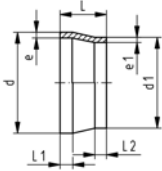
- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H

<sup>1</sup> Material: PP-R

d	d1	FM	Code	kg	L	L1	L2	e	e1
[mm]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]
25	20	IR	727 908 537	0.007	50	20	20	2,3	1,9
32	20	IR	727 908 542	0.010	50	20	20	2,9	1,9
32	25	IR	727 908 541	0.011	50	20	20	2,9	2,3
40	20	IR	727 908 548	0.015	58	20	23	3,7	1,9
40	25	IR	727 908 547	0.016	55	20	20	3,7	2,3
40	32	IR	727 908 546	0.019	55	20	20	3,7	2,9
50	25	IR	727 908 554	0.025	60	20	20	4,6	2,3
50	32	IR	727 908 553	0.027	60	20	20	4,6	2,9
50	40	IR	727 908 552	0.030	60	20	20	4,6	3,7
63	32	IR	727 908 560	0.043	65	20	20	5,8	2,9
63	40	IR	727 908 559	0.047	65	20	20	5,8	3,7
63	50	IR	727 908 558	0.052	65	20	20	5,8	4,6
75	40	IR	727 908 566	0.058	68	20	20	6,8	3,7
75	50	IR	727 908 565	0.065	65	20	20	6,8	4,6
75	63	IR	727 908 564	0.074	65	20	20	6,8	5,8
90	63	IR	727 908 571	0.107	75	22	19	8,2	5,8
90	75	IR	727 908 570	0.117	75	22	19	8,2	6,8
110	75	IR	727 908 577	0.193	90	28	18	10,0	6,8
110	90	IR	727 908 576	0.216	90	28	30	10,0	8,2
125	110	IR	727 908 580	0.325	100	32	30	11,4	10,0
140	110	IR	727 908 585	0.405	110	33	29	12,7	10,0
140	125	IR	727 908 584	0.447	110	34	30	12,7	11,4
160	110	IR	727 908 590	0.550	120	39	27	14,6	10,0
160	140	IR	727 908 588	0.625	120	40	35	14,6	12,7
180	90	IR	727 908 978	0.670	157	45	22	16,4	8,2
180	110	IR	727 908 977	0.550	157	45	28	16,4	10,0
180	125	IR	727 908 976	0.520	136	45	32	16,4	11,4
180	140	IR	727 908 975	0.520	136	45	35	16,4	12,7
180	160	IR	727 908 974	0.530	136	45	35	16,4	14,6
200	160	IR	727 908 592	1.120	145	50	40	18,2	14,6
200	180	IR	727 908 979	0.710	151	50	45	18,2	16,4
225	110	IR	727 908 595	1.330	160	55	35	20,5	10,0
225	160	IR	727 908 596	1.470	160	55	40	20,5	14,6
225	180	IR	727 908 983	0.941	171	55	45	20,5	16,4
225	200	IR	727 908 597	1.650	160	55	50	20,5	18,2
250	160	--	727 908 990	1.483	194	60	55	22,7	14,6
250	225	--	727 908 987	1.041	182	60	55	22,7	20,5
280	225	--	727 908 992	1.804	105	30	20	25,4	20,5
280	250	--	727 908 991	1.311	70	30	18	25,4	22,7
315	225	--	727 908 997	2.615	130	30	20	28,6	20,5
315	250	--	727 908 996	2.204	100	30	20	28,6	22,7
315	280	--	727 908 995	1.590	63	30	18	28,6	25,4
355	250	--	727 908 963	4.400	245	90	60	32,3	22,7
355	280	--	727 908 962	4.100	245	90	70	32,2	25,4
355	315	--	727 908 961	3.700	245	90	80	32,2	28,6
400	315	--	727 908 966	5.300	260	95	80	36,3	28,6
400	355	--	727 908 965	4.800	260	95	90	36,3	32,2



## PROGEF Standard, Reducers, S5/SDR11

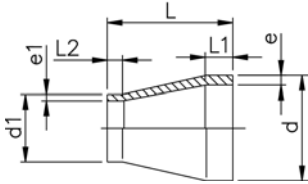


### Model:

- Machined
- Material: PP-R
- Conventional butt-welding according to DVS 2207 part 11

d	d1	Code	kg	L	L1	L2	e	e1
[mm]	[mm]			[mm]	[mm]	[mm]	[mm]	[mm]
450	280	<b>727 908 960</b>	5.000	230	60	70	40,9	25,4
450	315	<b>727 908 948</b>	5.000	230	60	80	40,9	28,6
450	355	<b>727 908 950</b>	5.000	230	60	90	40,9	32,2
450	400	<b>727 908 951</b>	5.000	230	60	95	40,9	36,3
500	315	<b>727 908 953</b>	5.000	230	60	80	45,4	28,6
500	355	<b>727 908 954</b>	5.000	230	60	90	45,4	32,2
500	400	<b>727 908 956</b>	5.000	230	60	95	45,4	36,3
500	450	<b>727 908 964</b>	5.000	230	60	60	45,4	40,9

## PROGEF Standard, Reducers, S8,3/SDR17,6



### Model:

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H

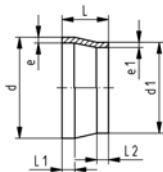
<sup>1</sup> Material: PP-R

d	d1	FM	Code	kg	L	L1	L2	e	e1
[mm]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]
50	40	--	<b>727 908 949</b>	0.010	55	12	12	2,9	2,3
63	40	--	<b>727 908 901</b>	0.020	65	16	12	3,6	2,3
63	50	--	<b>727 908 900</b>	0.020	65	16	12	3,6	2,9
75	40	--	<b>727 908 904</b>	0.041	65	20	20	4,3	2,3
75	50	--	<b>727 908 465</b>	0.054	65	20	20	4,3	2,9
75	63	IR	<b>727 908 464</b>	0.064	65	20	20	4,3	3,6
90	63	IR	<b>727 908 471</b>	0.092	75	22	19	5,1	3,6
90	75	IR	<b>727 908 470</b>	0.089	75	21	19	5,1	4,3
110	75	IR	<b>727 908 477</b>	0.144	90	28	18	6,3	4,3
110	90	IR	<b>727 908 476</b>	0.158	90	28	20	6,3	5,1
125	110	IR	<b>727 908 912</b>	0.151	108	32	28	7,1	6,3
140	110	IR	<b>727 908 917</b>	0.144	115	35	28	8,0	6,3
140	125	IR	<b>727 908 916</b>	0.150	115	35	32	8,0	7,1
160	110	IR	<b>727 908 922</b>	0.287	124	40	28	9,1	6,3
160	140	IR	<b>727 908 920</b>	0.245	124	40	35	9,1	8,0
180	90	IR	<b>727 908 928</b>	0.440	157	45	22	10,2	5,1
180	110	IR	<b>727 908 927</b>	0.360	157	45	28	10,2	6,3
180	125	IR	<b>727 908 926</b>	0.340	136	45	32	10,2	7,1
180	140	IR	<b>727 908 925</b>	0.340	136	45	35	10,2	8,0
180	160	IR	<b>727 908 924</b>	0.350	136	45	40	10,2	9,1
200	160	IR	<b>727 908 930</b>	0.461	151	50	40	11,4	9,1
200	180	IR	<b>727 908 929</b>	0.600	151	50	45	11,4	10,2
225	110	IR	<b>727 908 936</b>	0.960	171	55	40	12,8	6,3
225	160	IR	<b>727 908 934</b>	0.620	171	55	45	12,8	9,1
225	180	IR	<b>727 908 933</b>	0.600	171	55	45	12,8	10,2
225	200	IR	<b>727 908 932</b>	0.614	184	60	40	12,8	11,4
250	160	IR	<b>727 908 940</b>	0.975	194	60	40	14,2	9,1
250	225	IR	<b>727 908 937</b>	0.681	182	60	55	14,2	12,8
280	225	--	<b>727 908 942</b>	1.180	105	30	20	15,9	12,8
280	250	--	<b>727 908 941</b>	0.858	70	30	18	15,9	14,2
315	225	--	<b>727 908 947</b>	1.715	130	30	20	17,9	12,8
315	250	--	<b>727 908 946</b>	1.446	100	30	20	17,9	14,2
315	280	--	<b>727 908 945</b>	1.040	63	30	18	17,9	15,9
355	250	--	<b>727 908 959</b>	3.000	245	90	60	20,1	14,2
355	280	--	<b>727 908 958</b>	2.700	245	90	70	20,1	15,9
355	315	--	<b>727 908 957</b>	2.400	245	90	80	20,1	17,9
400	315	--	<b>727 908 972</b>	3.600	260	95	80	22,7	17,9
400	355	--	<b>727 908 971</b>	3.100	260	95	90	22,7	20,1



27 90 89

## PROGEF Standard, Reducers, S8,3/SDR17,6



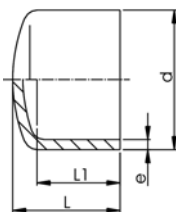
### Model:

- Machined
- Material: PP-R
- Conventional butt-welding according to DVS 2207 part 11

d [mm]	d1 [mm]	Code	kg	L [mm]	L1 [mm]	L2 [mm]	e [mm]	e1 [mm]
450	280	<b>727 908 967</b>	5.000	230	60	70	25,5	15,9
450	315	<b>727 908 984</b>	5.000	230	60	80	25,5	17,9
450	355	<b>727 908 988</b>	5.000	230	60	90	25,5	20,1
450	400	<b>727 908 989</b>	5.000	230	60	95	25,5	22,7
500	315	<b>727 908 993</b>	5.000	230	60	80	28,4	17,9
500	355	<b>727 908 994</b>	5.000	230	60	95	28,4	20,1
500	400	<b>727 908 998</b>	5.000	230	60	95	28,4	22,7
500	450	<b>727 908 999</b>	5.000	230	60	60	28,4	25,5

27 96 89

## PROGEF Standard, End Caps, S5/SDR11



### Model:

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H

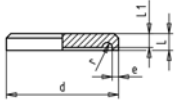
<sup>1</sup> Material: PP-R

d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
20	IR	<b>727 968 931</b>	0.004	42	30	1,9
25	IR	<b>727 968 932</b>	0.005	50	35	2,3
32	IR	<b>727 968 933</b>	0.010	55	40	2,9
40	IR	<b>727 968 934</b>	0.018	65	45	3,7
50	IR	<b>727 968 935</b>	0.029	70	50	4,6
63	IR	<b>727 968 936</b>	0.049	80	55	5,8
75	IR	<b>727 968 937</b>	0.065	90	60	6,8
90	IR	<b>727 968 938</b>	0.107	105	70	8,2
110	IR	<b>727 968 939</b>	0.174	120	80	10,0
125	IR	<b>727 968 940</b>	0.210	50	25	11,4
140	IR	<b>727 968 941</b>	0.323	60	30	12,7
160	IR	<b>727 968 942</b>	0.570	76	40	14,6
180	IR	<b>727 968 943</b>	1.580	125	88	16,4
200	IR	<b>727 968 944</b>	1.060	100	50	18,2
225	IR	<b>727 968 945</b>	1.710	103	60	20,5
<sup>1</sup> 250	--	<b>727 968 946</b>	2.700	220	140	22,7
<sup>1</sup> 280	--	<b>727 968 947</b>	3.100	238	151	25,4
<sup>1</sup> 315	--	<b>727 968 948</b>	6.600	258	158	28,6
<sup>1</sup> 355	--	<b>727 968 949</b>	9.000	291	175	32,2
<sup>1</sup> 400	--	<b>727 968 950</b>	12.500	318	195	36,3

27 96 89

**PROGEF Standard, End Caps, S5/SDR11****Model:**

- Machined
- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11

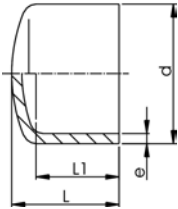


d [mm]	Code	kg	L [mm]	L1 [mm]	e [mm]
450	<b>727 968 951</b>	10.000	80	66	40,9
500	<b>727 968 952</b>	10.000	85	74	74,5

27 96 89

**PROGEF Standard, End Caps, S8,3/SDR17,6****Model:**

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H

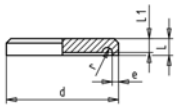
<sup>1</sup> Material: PP-R

d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
50	--	<b>727 968 910</b>	0.030	75	53	2,9
63	IR	<b>727 968 911</b>	0.050	85	58	3,6
75	IR	<b>727 968 912</b>	0.045	90	60	4,3
90	IR	<b>727 968 913</b>	0.073	105	70	5,1
110	IR	<b>727 968 914</b>	0.118	120	80	6,3
125	IR	<b>727 968 915</b>	0.176	50	25	7,1
140	IR	<b>727 968 916</b>	0.194	60	30	8,0
160	IR	<b>727 968 917</b>	0.408	76	40	9,1
180	IR	<b>727 968 918</b>	1.580	125	88	10,2
200	IR	<b>727 968 919</b>	0.730	100	50	11,4
225	IR	<b>727 968 920</b>	0.965	103	60	12,8
250	--	<b>727 968 921</b>	2.300	220	140	14,2
280	--	<b>727 968 922</b>	3.000	238	152	15,9
315	--	<b>727 968 923</b>	4.500	258	158	17,9
355	--	<b>727 968 924</b>	6.100	291	175	20,1
400	--	<b>727 968 925</b>	8.700	318	195	22,7

27 96 89

**PROGEF Standard, End Caps, S8,3/SDR17,6****Model:**

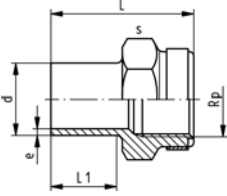
- Machined
- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11



d [mm]	Code	kg	L [mm]	L1 [mm]	e [mm]
450	<b>727 968 926</b>	10.000	70	56	25,5
500	<b>727 968 927</b>	10.000	75	62	28,4

# Adaptor Fittings for Butt Fusion

## PROGEF Standard, Adaptor Sockets, metric - Rp



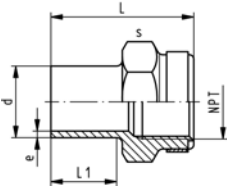
### Model:

- Material: PP-H
- With butt fusion spigot **SDR11** and BSP parallel female thread Rp, reinforced
- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PP
- Install with low mechanical stress and avoid large cyclic temperature changes

d [mm]	Rp [inch]	PN	FM	Code	kg	L [mm]	L1 [mm]	s [mm]	e [mm]
20	½	10	IR	<b>727 910 266</b>	0.017	48	23	32	1,9
25	¾	10	IR	<b>727 910 267</b>	0.022	50	23	36	2,3
32	1	10	IR	<b>727 910 268</b>	0.038	54	23	46	2,9
40	1 ¼	10	IR	<b>727 910 269</b>	0.066	56	23	55	3,7
50	1 ½	10	IR	<b>727 910 270</b>	0.090	60	23	65	4,6
63	2	10	IR	<b>727 910 271</b>	0.140	62	23	80	5,8

27 91 43

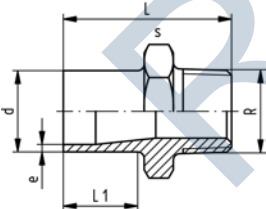
## Adaptor Sockets, PP-H metric - NPT



### Model:

- Material: PP-H
- With butt fusion spigot **SDR11** and NPT tapered female thread, reinforced
- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PP
- Install with low mechanical stress and avoid large cyclic temperature changes

d [mm]	NPT [inch]	PN	FM	Code	kg	L [mm]	L1 [mm]	s [mm]	e [mm]
20	½	10	IR	<b>727 914 356</b>	0.017	49	23	32	1,9
25	¾	10	IR	<b>727 914 357</b>	0.022	51	23	36	2,3
32	1	10	IR	<b>727 914 358</b>	0.039	54	23	46	2,9
40	1 ¼	10	IR	<b>727 914 359</b>	0.066	56	23	55	3,7
50	1 ½	10	IR	<b>727 914 360</b>	0.085	60	23	65	4,6
63	2	10	IR	<b>727 914 361</b>	0.122	62	23	80	5,8



## PROGEF Standard, Adaptor Nipples, metric - R

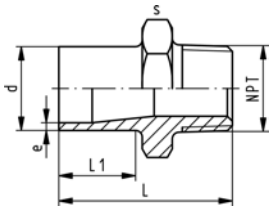
### Model:

- Material: PP-H
- With butt fusion spigot and BSP tapered male thread
- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PP
- Install with low mechanical stress and avoid large cyclic temperature changes

d [mm]	R [inch]	PN	FM	Code	kg	L [mm]	L1 [mm]	s [mm]	e [mm]
20	½	10	IR	<b>727 910 556</b>	0.013	51	23	32	1,9
25	¾	10	IR	<b>727 910 557</b>	0.026	52	23	36	2,3
32	1	10	IR	<b>727 910 558</b>	0.028	55	23	46	2,9
40	1 ¼	10	IR	<b>727 910 559</b>	0.041	58	23	55	3,7
50	1 ½	10	IR	<b>727 910 560</b>	0.062	60	23	65	4,6
63	2	10	IR	<b>727 910 561</b>	0.096	67	26	80	5,8

27 91 46

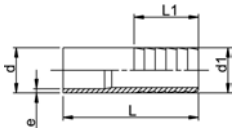
## PROGEF Standard, Adaptor Nipples, metric - NPT



**Model:**

- Material: PP-H
- With butt fusion spigot **SDR11** and NPT tapered male thread
- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PP
- Install with low mechanical stress and avoid large cyclic temperature changes

d [mm]	NPT [inch]	PN	FM	Code	kg	L [mm]	L1 [mm]	s [mm]	e [mm]
20	½	10	IR	<b>727 914 656</b>	0.013	51	23	32	1,9
25	¾	10	IR	<b>727 914 657</b>	0.026	52	23	36	2,3
32	1	10	IR	<b>727 914 658</b>	0.028	55	23	46	2,9
40	1 ¼	10	IR	<b>727 914 659</b>	0.041	58	24	55	3,7
50	1 ½	10	IR	<b>727 914 660</b>	0.062	60	23	65	4,6
63	2	10	IR	<b>727 914 661</b>	0.096	67	26	80	5,8



## PROGEF Standard, Hose connectors, metric

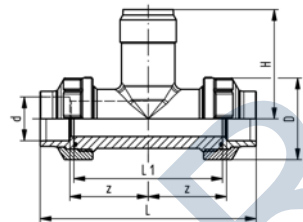
**Model:**

- Material: PP-H
- With butt fusion spigot **SDR11** and parallel hose connection

d [mm]	d1 [mm]	PN	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
20	20	10	IR	<b>727 968 606</b>	0.008	64	27	1,9
25	25	10	IR	<b>727 968 607</b>	0.012	75	36	2,3
32	32	10	IR	<b>727 968 608</b>	0.022	82	36	2,9
40	40	10	IR	<b>727 968 609</b>	0.030	84	42	3,7
50	50	10	IR	<b>727 968 610</b>	0.060	90	48	4,6
63	60	10	IR	<b>727 968 611</b>	0.095	100	50	5,8

27 31 00

## Installation Fitting Type 310 PROGEF Standard, S5/SDR11 for Socket Systems metric



**Model:**

- For Signet Paddlewheel Sensors Type -X0 (104 mm)
- Union end with fusion socket PP-H

d [mm]	DN [mm]	PN	EPDM Code	FPM Code	kg
20	15	10	<b>727 310 006</b>	<b>727 310 036</b>	0.136
25	20	10	<b>727 310 007</b>	<b>727 310 037</b>	0.190
32	25	10	<b>727 310 008</b>	<b>727 310 038</b>	0.250
40	32	10	<b>727 310 009</b>	<b>727 310 039</b>	0.356
50	40	10	<b>727 310 010</b>	<b>727 310 040</b>	0.510
63	50	10	<b>727 310 011</b>	<b>727 310 041</b>	0.800

d [mm]	D [mm]	z [mm]	L [mm]	L1 [mm]	H [mm]	Sensor Type
20	48	50	128	90	76	X0
25	58	55	142	100	78	X0
32	65	60	156	110	81	X0
40	79	60	160	110	85	X0
50	91	65	176	120	89	X0
63	105	70	194	130	95	X0

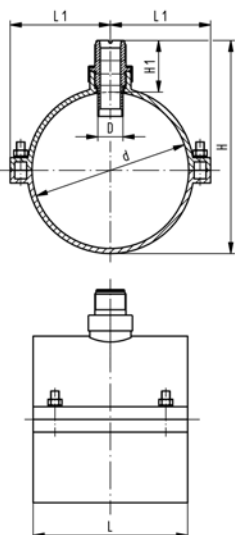
27 31 20

### Installation Fitting Type 312 PP-H metric



**Model:**

- For Signet paddlewheel sensors Type -X1 (137 mm) and Type -X2 (213 mm)
- Top saddle with EPDM gasket
- Stainless steel bolts and nuts



d [mm]	DN [mm]	PN	Code	kg	D [mm]	L [mm]	L1 [mm]	H [mm]	H1 [mm]	Sensor Type
75	65	8	727 312 072	0.458	34	78	62	172	88	X1
90	80	8	727 312 073	0.514	34	86	69	186	87	X1
110	100	8	727 312 074	0.598	34	98	79	206	86	X1
125	100	8	727 312 075	0.667	34	101	85	212	78	X1
140	125	6	727 312 076	0.911	34	114	104	227	75	X1
160	150	6	727 312 077	0.985	34	114	114	243	72	X1
180	150	6	727 312 078	2.085	34	168	134	348	144	X2
200	200	6	727 312 079	2.045	34	168	132	357	142	X2
225	200	5	727 312 080	2.142	34	174	146	375	136	X2
250	250	5	727 312 081	2.566	34	179	159	397	131	X2
280	250	5	727 312 082	3.594	34	179	167	426	127	X2
315	300	5	727 312 083	4.250	34	248	202	450	120	X2

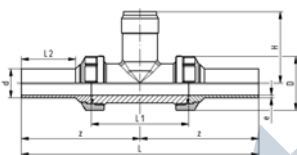
27 31 80

### Installation Fitting Type 318 PROGEF Standard, S5/SDR11 for Butt Fusion Systems metric



**Model:**

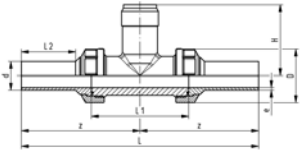
- For Signet Paddlewheel Sensors Type -X0 (104 mm)
- Union end with butt fusion spigot PP-H



d [mm]	DN [mm]	PN	FM	EPDM Code	FPM Code	kg
20	15	10	IR	727 318 006	727 318 036	0.136
25	20	10	IR	727 318 007	727 318 037	0.190
32	25	10	IR	727 318 008	727 318 038	0.250
40	32	10	IR	727 318 009	727 318 039	0.356
50	40	10	IR	727 318 010	727 318 040	0.510
63	50	10	IR	727 318 011	727 318 041	0.800

d [mm]	D [mm]	z [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	e [mm]	Sensor Type
20	48	112	224	90	52	76	1.9	X0
25	58	121	242	100	53	78	2.3	X0
32	65	128	256	110	55	81	2.9	X0
40	79	136	272	110	60	85	3.7	X0
50	91	147	294	120	66	89	4.6	X0
63	105	158	316	130	70	95	5.8	X0

## Installation Fitting Type 318, PE100 for Butt Fusion Systems metric



### Model:

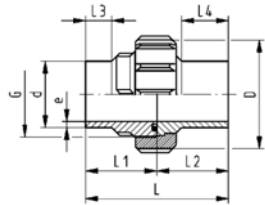
- For Signet Paddlewheel Sensors Type -X0 (104 mm)
- Body and union nut PP-H
- Union end with butt fusion spigot PE100

d [mm]	DN [mm]	PN	FM	EPDM Code	FPM Code	kg	
20	15	10	IR	<b>753 318 006</b>	<b>753 318 036</b>	0.136	
25	20	10	IR	<b>753 318 007</b>	<b>753 318 037</b>	0.190	
32	25	10	IR	<b>753 318 008</b>	<b>753 318 038</b>	0.250	
40	32	10	IR	<b>753 318 009</b>	<b>753 318 039</b>	0.356	
50	40	10	IR	<b>753 318 010</b>	<b>753 318 040</b>	0.510	
63	50	10	IR	<b>753 318 011</b>	<b>753 318 041</b>	0.800	

d [mm]	D [mm]	z [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	e [mm]	Sensor Type
20	48	112	224	90	52	76	1.9	X0
25	58	121	242	100	53	78	2.3	X0
32	65	128	256	110	55	81	2.9	X0
40	79	136	272	110	60	85	3.7	X0
50	91	147	294	120	66	89	4.6	X0
63	105	158	316	130	70	95	5.8	X0

# Unions for Butt Fusion

EPDM 27 51 85  
FPM 27 52 85



## PROGEF Standard, Unions, S5/SDR11

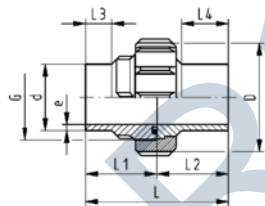
### Model:

- Material: PP-H
- With butt fusion ends
- Conventional butt fusion and (IR Plus®) compatible
- Gasket: O-Ring EPDM No. 48 41 00, FPM No. 49 41 00
- **For the dimensions d75-110 please see instructions for the installation**

d [mm]	PN	FM	EPDM Code	FPM Code	kg
20	10	IR	727 518 506	727 528 506	0.046
25	10	IR	727 518 507	727 528 507	0.074
32	10	IR	727 518 508	727 528 508	0.102
40	10	IR	727 518 509	727 528 509	0.169
50	10	IR	727 518 510	727 528 510	0.227
63	10	IR	727 518 511	727 528 511	0.382
75	10	IR	727 518 512	727 528 512	0.560
90	10	IR	727 518 513	727 528 513	0.588
110	10	IR	727 518 514	727 528 514	0.828

d [mm]	D [mm]	G [inch]	L [mm]	L1 [mm]	L2 [mm]	e [mm]
20	48	1	107	54.0	53.0	1,9
25	58	1 1/4	113	57.0	56.0	2,3
32	65	1 1/2	119	60.0	59.0	2,9
40	79	2	126	63.0	63.0	3,7
50	91	2 1/4	131	65.5	65.5	4,6
63	111	2 3/4	137	69.0	68.0	5,8
75	135	S107,5x3,6	131	66.0	65.5	6,8
90	135	S107,5x3,6	131	65.5	65.5	8,2
110	158	S127,5x3,6	131	65.5	65.5	10,0

EPDM 27 51 84  
FPM 27 52 84



## PROGEF Standard, Unions, S8,3/SDR17,6

### Model:

- Material: PP-H
- With butt fusion ends
- Conventional butt fusion and (IR Plus®) compatible
- Gasket: O-Ring EPDM No. 48 41 00, FPM No. 49 41 00
- **For the dimensions d75-110 please see instructions for the installation**

d [mm]	PN	FM	EPDM Code	FPM Code	kg
75	6	IR	727 518 412	727 528 412	0.476
90	6	IR	727 518 413	727 528 413	0.483
110	6	IR	727 518 414	727 528 414	0.663

d [mm]	D [mm]	G [inch]	L [mm]	L1 [mm]	L2 [mm]	e [mm]
75	135	S107,5x3,6	132	66	24	4,3
90	135	S107,5x3,6	131	66	24	5,1
110	158	S127,5x3,6	131	66	25	6,3



# Instructions for the installation of unions in PP, PE d 75, d 90 and d 110

The newest generation of plastic unions in the above materials and dimensions has been fitted with a state-of-the-art, plastics-oriented buttress thread. You therefore have a product in which the nominal pressure and the safety reserve have been dramatically increased. Also new are the butt fusion versions. In this connection, there are a few points which you must be aware of.

## Caution

- ① The threads of the union nut and bush have been reworked for PP, PVDF and PE! When using individual parts, please check prior to installation if the threads of the union bush and the union nut coincide.



Union bush with trapezoid thread on union nut with trapezoid thread  
or  
Union bush with buttress thread on union nut with buttress thread

## Tip

To make installation of the union easier, wet the union nut.

- ② For the dimensions d 90 and d 110 we advise fusing the complete union, if possible (or slide the union nut to the collar of the union end) because after fusion the union nut cannot be slid over the fusion bead. (Fig. 1)
- ③ For design reasons, it is theoretically possible to combine different nominal diameters of union ends and nuts. To make sure combinations are technically correct, you can find the code numbers of the single parts and spare parts for each union in the Tables 1-3.

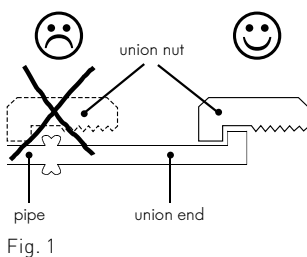


Fig. 1

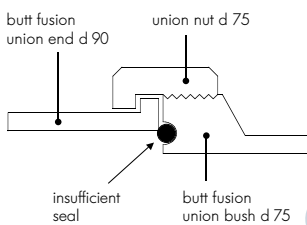


Fig. 2

## Caution

**Only use union bushes and union ends with the same nominal diameter!**

A butt fusion union bush d 75 may not be combined with a butt fusion union end d 90 to form a reducer because this can cause leakage, as illustrated to the left. (Fig. 2)

Markings on the union nuts

SF/MS = socket fusion, BF/ST = butt fusion

SF/MS 75            specified for socket fusion d 75  
BF/ST 75-90        specified for butt fusion d 75-75 and d 90-90

SF/MS 90            specified socket fusion d 90  
BF/ST 110           specified butt fusion d 110

110                  specified for socket fusion d 110

## Tip

We recommend changing materials only for the union end for installation reasons.

# Selection tables for single parts and spare parts

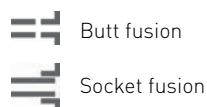


Table 1

Single parts for **PP-H** unions d 75, d 90 and d 110

d	BF/ST	SF/MS	SDR	PN	Code union end	Code union bush	Code union nut*
75	≡≡		11	10	727 608 512	727 648 512	727 690 422
			17.6	6	727 608 412	727 648 412	727 690 422
			—	10	727 600 112	727 640 172	727 690 422
90	≡≡		11	10	727 608 513	727 648 513	727 690 422
			17.6	6	727 608 413	727 648 413	727 690 422
			—	10	727 600 113	727 640 173	727 690 423
110	≡≡		11	10	727 608 514	727 648 514	727 690 423
			17.6	6	727 608 414	727 648 414	727 690 423
			—	10	727 600 114	727 640 174	727 690 424

Table 2

Single parts for **PE 100** unions d 75, d 90 and d 110

d	BF/ST	SF/MS	SDR	PN	Code union end	Code union bush	Code union nut*
75	≡≡		11	10	753 608 612	753 648 612	727 690 442
			17.6	10	753 608 412	753 648 412	727 690 442
90	≡≡		11	10	753 608 613	753 648 613	727 690 442
			17.6	10	753 608 413	753 648 413	727 690 442
110	≡≡		11	10	753 608 614	753 648 614	727 690 443
			17.6	10	753 608 414	753 648 414	727 690 443

Table 3

O-Rings for PP-H, PE 100

d	BF/ST	SF/MS	SDR	PN	Code O-Ring EPDM <sup>1</sup>	Code O-Ring FPM <sup>1</sup>
75	≡≡			16	748 410 013	749 410 013
				16	748 410 014	749 410 014
90	≡≡			16	748 410 014	749 410 014
				16	748 410 015	749 410 015
110	≡≡			16	748 410 015	749 410 015
				16	748 410 016	749 410 016

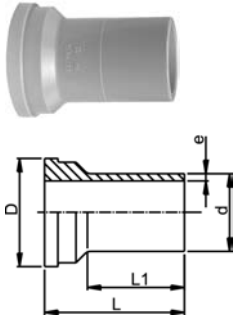
\* Union nuts overlap several dimensions

<sup>1</sup> Flange adaptor O-rings, one size smaller in nominal dimensions, are used for the d 75–110 butt-fusion unions

27 60 85

**PROGEF Standard, Union Ends IR Plus, SDR11****Model:**

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Suitable for unions, diaphragm valves Type 314, tank adaptors and Vortex sensors
- **For the dimensions d75-110 please see instructions for the installation**

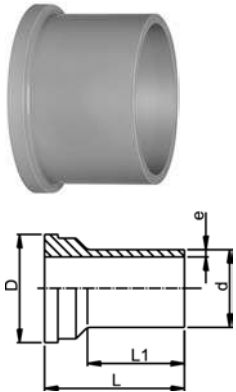


d [mm]	PN	FM	Code	kg	D [mm]	L [mm]	L1 [mm]	e [mm]
20	10	IR	<b>727 608 506</b>	0.010	30	54	38	1,9
25	10	IR	<b>727 608 507</b>	0.017	39	57	42	2,3
32	10	IR	<b>727 608 508</b>	0.024	45	60	41	2,9
40	10	IR	<b>727 608 509</b>	0.041	57	63	42	3,7
50	10	IR	<b>727 608 510</b>	0.054	63	66	44	4,6
63	10	IR	<b>727 608 511</b>	0.092	78	69	45	5,8
75	10	IR	<b>727 608 512</b>	0.146	101	66	34	6,8
90	10	IR	<b>727 608 513</b>	0.158	101	66	45	8,2
110	10	IR	<b>727 608 514</b>	0.233	121	66	40	10,0

27 60 84

**PROGEF Standard, Union Ends IR Plus, SDR17,6****Model:**

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Suitable for unions
- **For the dimensions d75-110 please see instructions for the installation**

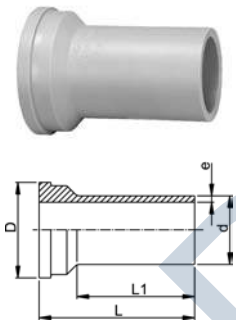


d [mm]	PN	FM	Code	kg	D [mm]	L [mm]	L1 [mm]	e [mm]
75	6	IR	<b>727 608 412</b>	0.114	101	66	34	4,3
90	6	IR	<b>727 608 413</b>	0.116	101	66	45	5,1
110	6	IR	<b>727 608 414</b>	0.165	121	66	40	6,3

27 60 85

**PROGEF Standard, Union ends long, SDR11****Model:**

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Spigot for electro fusion
- Suitable for unions, diaphragm valves Type 314 and Vortex sensors



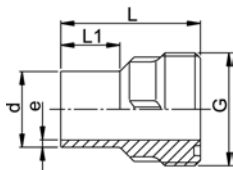
d [mm]	PN	FM	Code	kg	D [mm]	L [mm]	L1 [mm]	e [mm]
20	10	IR	<b>727 608 516</b>	0.010	30	67	52	1,9
25	10	IR	<b>727 608 517</b>	0.017	39	71	53	2,3
32	10	IR	<b>727 608 518</b>	0.024	45	73	55	2,9
40	10	IR	<b>727 608 519</b>	0.041	57	81	60	3,7
50	10	IR	<b>727 608 520</b>	0.054	63	87	66	4,6
63	10	IR	<b>727 608 521</b>	0.092	78	93	70	5,8

27 64 85

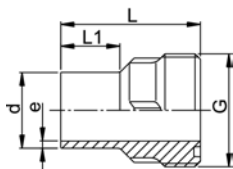
## PROGEF Standard, Union Bushes, SDR11

**Model:**

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Spigot for electro fusion
- Suitable for unions, diaphragm valves Type 314, tank adaptors and Vortex sensors



d [mm]	PN	FM	Code	kg	G [inch]	L [mm]	L1 [mm]	e [mm]
20	10	IR	<b>727 648 506</b>	0.012	1	54	26	1,9
25	10	IR	<b>727 648 507</b>	0.020	1 1/4	57	26	2,3
32	10	IR	<b>727 648 508</b>	0.029	1 1/2	60	25	2,9
40	10	IR	<b>727 648 509</b>	0.047	2	63	25	3,7
50	10	IR	<b>727 648 510</b>	0.064	2 1/4	66	25	4,6
63	10	IR	<b>727 648 511</b>	0.104	2 3/4	69	25	5,8
75	10	IR	<b>727 648 512</b>	0.172	S107.5x3.6	66	24	6,8
90	10	IR	<b>727 648 513</b>	0.182	S107.5x3.6	66	24	8,2
110	10	IR	<b>727 648 514</b>	0.258	S127.5x3.6	66	25	10,0



## Union Bushes, PP-H SDR17,6

**Model:**

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Gasket: O-Ring EPDM No. 48 41 00, FPM No. 49 41 00
- **For the dimensions d75-110 please see instructions for the installation**

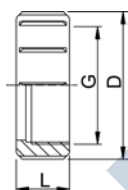
d [mm]	PN	FM	Code	kg	G [inch]	L [mm]	L1 [mm]	e [mm]
75	6	IR	<b>727 648 412</b>	0.152	S127.5x3.6	65.5	24	4.3
90	6	IR	<b>727 648 413</b>	0.154	S107.5x3.6	66.0	24	5.1
110	6	IR	<b>727 648 414</b>	0.207	S127.5x3.6	66.0	24	6.3

27 69 04

## Union Nut, PP-GF

**Model:**

- PP glass-fibre reinforced



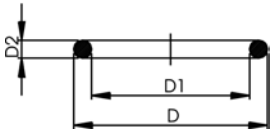
Socket Fusion d [mm]	Butt Fusion d [mm]	PN	G [inch]	Code	kg	D [mm]	L [mm]
16	16	10	3/4	<b>727 690 405</b>	0.008	35	21
20	20	10	1	<b>727 690 406</b>	0.021	48	24
25	25	10	1 1/4	<b>727 690 407</b>	0.034	58	26
32	32	10	1 1/2	<b>727 690 408</b>	0.042	65	28
40	40	10	2	<b>727 690 409</b>	0.045	79	31
50	50	10	2 1/4	<b>727 690 410</b>	0.060	91	35
63	63	10	2 3/4	<b>727 690 411</b>	0.168	111	39
75	75 - 90	10	S107,5x3,6	<b>727 690 422</b>	0.205	135	40
90	110	10	S127,5x3,6	<b>727 690 423</b>	0.288	158	43
110	-	10	S152,5x3,6	<b>727 690 424</b>	0.460	188	48

EPDM 48 41 00  
FPM 49 41 00

## O-Ring Gaskets

### Model:

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

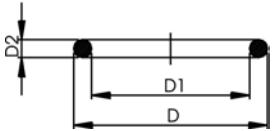


d [mm]	DN [mm]	EPDM Code	FPM Code	kg	D [mm]	D1 [mm]	D2 [mm]
20	15	748 410 006	749 410 006	0.002	27	20	4
25	20	748 410 007	749 410 007	0.002	35	28	
32	25	748 410 008	749 410 008	0.002	40	33	4
40	32	748 410 009	749 410 009	0.006	51	41	5
50	40	748 410 010	749 410 010	0.007	58	47	5
63	50	748 410 011	749 410 011	0.010	70	60	5

## O-Ring Gasket

### Model:

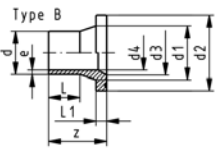
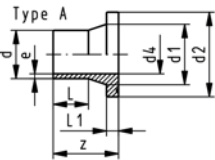
- for unions PP-H, PE100 and PVDF butt fusion
- d75 748 410 013 (EPDM), 749 410 013 (FPM)
- d90 748 410 014 (EPDM), 749 410 014 (FPM)
- d110 748 410 015 (EPDM), 749 410 015 (FPM)



EPDM Code	FPM Code	kg	D [mm]	D1 [mm]	D2 [mm]
748 410 013	749 410 013	0.011	80		
748 410 014	749 410 014	0.012	93		
748 410 015	749 410 015	0.015	112		

# Flange Adaptors, Flanges and Gaskets for Butt Fusion

## PROGEF Standard, Flange Adaptor, S5/SDR11 Combined Jointing Face: Flat and Serrated



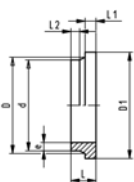
### Model:

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Suitable for flange connections to metric (from d110 also to ANSI/ASME B16.5)
- Up to d315, suitable for butterfly valve type 567, 568 and 037
- Gasket: Profile flange gasket EPDM No. 48 44 07, FPM No. 49 44 07

\* Type B with chamfer

d [mm]	DN [mm]	FM	Code	kg	z [mm]	d1 [mm]	d2 [mm]	d3 [mm]	d4 [mm]	L [mm]	L1 [mm]	e [mm]
20	15	IR	727 798 706	0.015	50	26	45		16	29	7	1.9
25	20	IR	727 798 707	0.028	52	32	58		20	27	9	2.3
32	25	IR	727 798 708	0.042	54	40	68		26	28	10	3.0
40	32	IR	727 798 709	0.064	56	49	78		32	25	11	3.7
50	40	IR	727 798 710	0.088	62	60	88		40	32	12	4.6
63	50	IR	727 798 711	0.144	68	75	102		51	38	14	5.8
*75	65	IR	727 798 712	0.243	80	89	122	66	61	43	16	6.9
*90	80	IR	727 798 713	0.326	80	105	138	78	73	41	17	8.2
*110	100	IR	727 798 714	0.441	80	125	158	100	90	40	18	10.0
*125	100	IR	727 798 715	0.520	82	132	158	114	102	35	25	11.4
*140	125	IR	727 798 716	0.800	89	155	188	127	114	39	25	12.8
*160	150	IR	727 798 717	0.920	92	175	212	151	131	45	25	14.6
*180	150	IR	727 798 718	0.900	80	180	212	154	147	45	30	16.4
*200	200	IR	727 798 719	1.670	100	232	268	203	163	30	32	18.2
*225	200	IR	727 798 720	1.700	100	235	268	210	184	35	32	20.5
*250	250		727 798 721	2.790	100	285	320	250	204	25	35	22.7
*280	250		727 798 722	2.610	100	291	320	265	229	35	35	25.4
*315	300		727 798 723	3.410	100	335	370	300	257	25	35	28.6
*355	350		727 798 724	5.600	180	373	430	340	290	20	40	32.3
*400	400		727 798 725	8.300	187	427	482	385	327	29	46	36.6

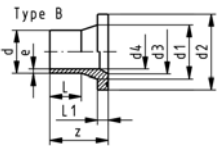
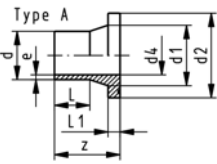
## PROGEF Standard, Flange Adaptors, S5/SDR11 Jointing Face serrated, metric



### Model:

- Injection moulded
- Material: PP-R
- Conventional butt-welding according to DVS 2207 part 11

d [mm]	DN [mm]	FM	Code	kg	z [mm]	d1 [mm]	d2 [mm]	d3 [mm]	d4 [mm]	L [mm]	L1 [mm]	e [mm]
*450	400		727 798 726	13.000	138	514	585	400	368	44	60	40.9
*500	450		727 798 727	13.000	138	530	585	440	409	44	60	45.4



# PROGEF Standard, Flange Adaptor, PP-H S5/SDR11 Combined Jointing Face: Flat and Serrated



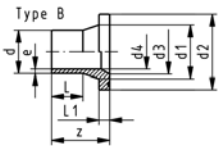
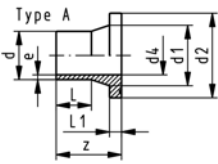
### Model:

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Suitable for flange connections to **ANSI/ASME B 16.5**
- Up to d315, suitable for butterfly valve type 567, 568 and 037
- Gasket: Profile flange gasket EPDM No. 48 44 07, FPM No. 49 44 07

\* Type B with chamfer

d	DN	FM	Code	kg	z	d1	d2	d3	d4	L	L1	e
[mm]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
20	15	IR	<b>727 798 706</b>	0.015	50	26	45		16	29	7	1.9
25	20	IR	<b>727 798 757</b>	0.025	85	33	54		20	41	9	2.3
32	20	IR	<b>727 798 758</b>	0.039	85	40	63		26	44	10	3.0
40	20	IR	<b>727 798 759</b>	0.058	85	50	73		32	49	11	3.7
50	20	IR	<b>727 798 760</b>	0.082	85	61	82		40	55	12	4.6
63	50	IR	<b>727 798 711</b>	0.144	68	75	102		51	38	14	5.8
*75	65	IR	<b>727 798 712</b>	0.243	80	89	122	66	61	43	16	6.9
*90	20	IR	<b>727 798 763</b>	0.297	140	105	133	78	73	85	17	8.2
*110	100	IR	<b>727 798 714</b>	0.441	80	125	158	100	90	40	18	10.0
*125	100	IR	<b>727 798 715</b>	0.520	82	132	158	114	102	35	25	11.4
*140	125	IR	<b>727 798 716</b>	0.800	89	155	188	127	114	39	25	12.8
*160	150	IR	<b>727 798 717</b>	0.920	92	175	212	151	131	45	25	14.6
*180	150	IR	<b>727 798 718</b>	0.900	80	180	212	154	147	45	30	16.4
*200	200	IR	<b>727 798 719</b>	1.670	100	232	268	203	163	30	32	18.2
*225	200	IR	<b>727 798 720</b>	1.700	100	235	268	210	184	35	32	20.5
*250	250		<b>727 798 721</b>	2.790	100	285	320	250	204	25	35	22.7
*280	250		<b>727 798 722</b>	2.610	100	291	320	265	229	35	35	25.4
*315	300		<b>727 798 723</b>	3.410	100	335	370	300	257	25	35	28.6
*355	350		<b>727 798 724</b>	5.600	180	373	430	340	290	20	40	32.3
*400	400		<b>727 798 725</b>	8.300	187	427	482	385	327	29	46	36.6





## PROGEF Standard, Flange Adaptor, S8.3/SDR17.6 Combined Jointing Face: Flat and Serrated

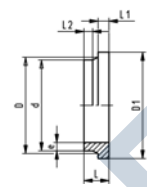


### Model:

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Suitable for flange connections to metric (from d110 also to ANSI/ASME B16.5)
- Up to d315, suitable for butterfly valve type 567, 568 and 037
- Gasket: Profile flange gasket EPDM No. 48 44 07, FPM No. 49 44 07

\* Type B with chamfer

d [mm]	DN [mm]	FM	Code	kg	z [mm]	d1 [mm]	d2 [mm]	d3 [mm]	d4 [mm]	L [mm]	L1 [mm]	e [mm]
50	40	IR	727 798 785	0.070	50	61	88		42	21	12	3.0
63	50	IR	727 798 786	0.100	50	75	102		53	16	14	3.8
75	65	IR	727 798 787	0.203	80	89	122		65	43	16	4.5
90	80	IR	727 798 788	0.273	80	105	138		78	41	17	5.4
110	100	IR	727 798 789	0.363	80	125	158		96	40	18	6.6
*125	100	IR	727 798 790	0.335	80	132	158	114	107	42	18	7.4
*140	125	IR	727 798 791	0.499	80	155	188	127	120	34	18	8.3
*160	150	IR	727 798 792	0.770	92	175	212	158	142	45	25	9.1
180	150	IR	727 798 793	0.630	80	180	212		156	30	20	10.2
*200	200	IR	727 798 794	1.380	100	232	268	203	177	30	32	11.4
*225	200	IR	727 798 795	1.350	100	235	268	210	199	35	32	12.8
*250	250		727 798 796	1.800	100	285	320	250	216	25	25	14.8
*280	250		727 798 797	2.030	100	291	320	265	243	45	25	16.6
*315	300		727 798 798	2.200	100	335	370	300	274	35	25	18.7
*355	350		727 798 799	5.800	182	374	431	340	314	100	30	21.4
*400	400		727 798 800	7.700	199	428	484	385	353	110	33	23.2



## PROGEF Standard, Flange Adaptors, S8.3/SDR17,6 Jointing Face serrated, metric



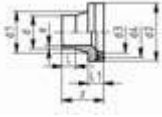
### Model:

- Injection moulded
- Material: PP-R
- Conventional butt-welding according to DVS 2207 part 11

d [mm]	DN [mm]	Code	kg	z [mm]	d1 [mm]	d2 [mm]	d3 [mm]	d4 [mm]	L [mm]	L1 [mm]	e [mm]
*450	400	727 798 801	13.000	140	514	585		396	60	46	25.5
*500	450	727 798 802	13.000	140	530	585		440	60	46	28.4

27 79 88

## PROGEF Standard, Flange Adaptors, S5/SDR11 Jointing Face, combination serrated / flat metric for Butterfly Valves



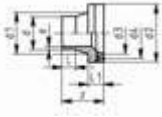
### Model:

- Conventional butt-welding according to DVS 2207 part 11
- Suitable for most common butterfly valves
- Chamfered and ready for use
- Including spacer and O-Ring EPDM

d [mm]	DN [mm]	Code	kg	d1 [mm]	d2 [mm]	d3 [mm]	z [mm]	L [mm]	L1 [mm]	e [mm]
355	350	<b>727 798 824</b>	7.500	373	430	346	118	40	75	32.2
400	400	<b>727 798 825</b>	10.300	427	482	404	140	55	82	36.3

27 79 88

## PROGEF Standard, Flange Adaptor, S8,3/SDR17,6 Jointing face, combination serrated / flat metric



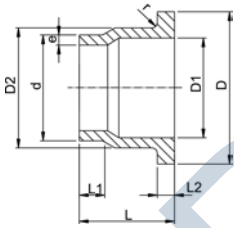
### Model:

- Conventional butt-welding according to DVS 2207 part 11
- Suitable for most common butterfly valves
- Chamfered and ready for use
- Including spacer and O-Ring EPDM

d [mm]	DN [mm]	Code	kg	d1 [mm]	d2 [mm]	d3 [mm]	L [mm]	L1 [mm]	z [mm]	e [mm]
355	350	<b>727 798 849</b>	5.800	373	430	346	156	66	118	20.1
400	400	<b>727 798 850</b>	7.700	427	482	404	176	69	140	22.7

27 80 80

## PROGEF Standard, Outlet Flange Adaptors, S5/SDR11



### Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- To wafer check valves Type 369

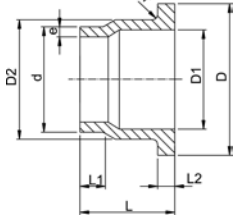
### Attention:

- In conjunction with outlet flange adaptors, **flange rings for socket systems** must be used.

d [mm]	DN [mm]	Code	kg	D [mm]	D1 [mm]	D2 [mm]	L [mm]	L1 [mm]	L2 [mm]	e [mm]	r [mm]
40	32	<b>727 808 034</b>	0.064	80	37	50	64	30	11	3,7	3
50	40	<b>727 808 035</b>	0.088	90	43	61	67	30	12	4,6	3
63	50	<b>727 808 036</b>	0.126	105	54	76	74	30	14	5,8	4
75	65	<b>727 808 037</b>	0.187	125	70	90	78	30	16	6,8	4
90	80	<b>727 808 038</b>	0.346	140	82	108	87	35	17	8,2	4
110	100	<b>727 808 039</b>	0.500	160	105	131	102	41	18	10,0	4
140	125	<b>727 808 041</b>	0.710	190	130	165	124	47	25	12,7	4
160	150	<b>727 808 042</b>	0.910	215	158	188	149	52	25	14,6	4
225	200	<b>727 808 045</b>	1.830	270	206	248	180	55	32	20,5	4
280	250	<b>727 808 047</b>	3.550	325	259	308	240	63	35	25,4	4
315	300	<b>727 808 048</b>	4.960	375	308	346	272	66	35	28,6	4

27 80 80

## PROGEF Standard, Outlet Flange Adaptors, S8,3/SDR17,6



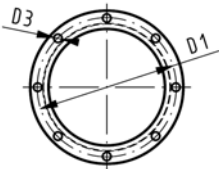
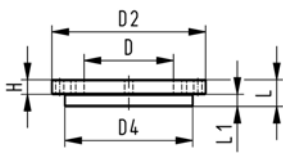
### Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- To wafer check valves Type 369

### Attention:

- In conjunction with outlet flange adaptors, **flange rings for socket systems** must be used.

d [mm]	DN [mm]	Code	kg	D [mm]	D1 [mm]	D2 [mm]	L [mm]	L1 [mm]	L2 [mm]	e [mm]	r [mm]	
40	32	<b>727 808 009</b>	0.048	80	37	50	64	30	11	2,3	3	
50	40	<b>727 808 010</b>	0.067	90	43	61	67	30	12	2,9	3	
63	50	<b>727 808 011</b>	0.096	105	54	76	74	30	14	3,6	4	
75	65	<b>727 808 012</b>	0.170	125	70	90	78	30	16	4,3	4	
90	80	<b>727 808 013</b>	0.260	140	82	108	87	35	17	5,1	4	
110	100	<b>727 808 014</b>	0.355	160	105	131	102	41	18	6,3	4	
140	125	<b>727 808 016</b>	0.500	190	130	165	124	47	18	8,0	4	
160	150	<b>727 808 017</b>	0.630	215	158	188	149	52	18	9,1	4	
225	200	<b>727 808 020</b>	1.225	270	206	248	180	55	24	12,7	4	
280	250	<b>727 808 022</b>	2.230	325	259	308	240	63	25	15,9	4	
315	300	<b>727 808 023</b>	2.450	375	308	346	272	66	25	17,9	4	



## Blanking Flange Set, PP-H Combined Jointing face flat and serrated metric



### Model:

- d63 - d315: Backing Flange PP-V with End Blank PP-H
- d355 - d630: Backing Flange PP/Steel with End Blank PP-H
- Connecting dimensions: ISO 7005, EN 1092, DIN 2501
- **Bolt circle PN 10**

AL: number of holes

L: length of the End Blank

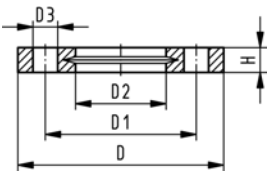
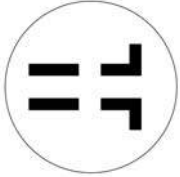
d [mm]	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	D4 [mm]	H [mm]	L [mm]	L1 [mm]	AL
63	50	10	<b>727 700 611</b>	0.668	75	125	165	18	102	24	30	14	4
75	65	10	<b>727 700 612</b>	0.901	89	145	185	18	122	26	30	16	4
90	80	10	<b>727 700 613</b>	1.054	105	160	200	18	138	27	30	17	8
110	100	10	<b>727 700 614</b>	1.199	125	180	220	18	158	28	30	18	8
125	100	10	<b>727 700 615</b>	1.658	132	180	220	18	158	28	35	25	8
140	125	10	<b>727 700 616</b>	1.883	155	210	250	18	188	30	40	25	8
160	150	10	<b>727 700 617</b>	2.312	175	240	285	22	212	32	40	25	8
180	150	10	<b>727 700 618</b>	2.386	180	240	285	22	212	32	45	30	8
200	200	10	<b>727 700 619</b>	3.419	232	295	340	22	268	34	50	32	8
225	200	10	<b>727 700 620</b>	3.658	235	295	340	22	268	34	50	32	8
250	250	10	<b>727 700 621</b>	5.425	285	350	395	22	320	38	55	35	12
280	250	10	<b>727 700 622</b>	19.781	291	350	395	22	320	38	60	35	12
315	300	10	<b>727 700 623</b>	24.348	335	400	445	22	370	42	65	35	12
355	350	10	<b>727 700 624</b>	22.874	373	460	515	22	430	40	70	40	16
400	400	10	<b>727 700 625</b>	30.304	427	515	574	26	482	40	75	46	16
450	500	10	<b>727 700 626</b>	43.485	510	620	684	26	585	49	80	60	20
500	500	10	<b>727 700 627</b>	46.203	530	620	684	26	585	49	90	60	20
560	600	10	<b>727 700 628</b>	65.823	615	725	796	30	685	58	100	60	20
630	600	10	<b>727 700 629</b>	67.056	642	725	796	30	685	58	110	60	20

27 70 04  
27 70 05

## Backing Flanges, PP-V for Butt Fusion Systems metric

### Model:

- Modern full-plastic flange PP-GF (30 % glass-fibre reinforced)
- With V-groove which applies force evenly on collar
- With integrated bolt retainers as an assembly aid
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- **Bolt circle PN 10**



<sup>1)</sup> Suitable for socket- and butt fusion systems (no pictograph on flange)  
AL: number of holes

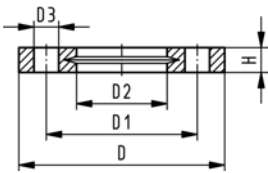
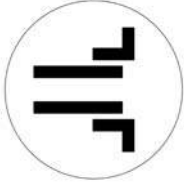
d [mm]	Inch	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC
20		15	16	<b>727 700 406</b>	0.080	95	65	28	14	16	4	M12
25		20	16	<b>727 700 407</b>	0.100	105	75	34	14	17	4	M12
32		25	16	<b>727 700 408</b>	0.140	115	85	42	14	18	4	M12
40		32	16	<b>727 700 409</b>	0.220	140	100	51	18	20	4	M16
50		40	16	<b>727 700 410</b>	0.210	150	110	62	18	22	4	M16
63		50	16	<b>727 700 411</b>	0.380	165	125	78	18	24	4	M16
75		65	16	<b>727 700 412</b>	0.480	185	145	92	18	26	4	M16
90		80	16	<b>727 700 513</b>	0.520	200	160	108	18	27	8	M16
110		100	16	<b>727 700 514</b>	0.680	220	180	128	18	28	8	M16
125		100	16	<b>727 700 515</b>	0.760	220	180	135	18	28	8	M16
140		125	16	<b>727 700 516</b>	0.800	250	210	158	18	30	8	M16
160	6	150	16	<b>727 700 517</b>	1.200	285	241	178	22	32	8	M20
180		150	16	<b>727 700 518</b>	1.200	285	240	188	22	32	8	M20
200	8	200	16	<b>727 700 519</b>	1.400	340	295	235	22	34	8	M20
225	9	200	16	<b>727 700 520</b>	1.400	340	295	238	22	34	8	M20
250		250	16	<b>727 700 521</b>	1.700	395	350	288	22	38	12	M20
280		250	16	<b>727 700 522</b>	1.700	395	350	294	22	38	12	M20
315		300	16	<b>727 700 523</b>	2.400	445	400	338	22	42	12	M20
355		350	10	<b>727 700 524</b>	3.000	515	460	376	22	46	16	M20
400		400	10	<b>727 700 525</b>	3.500	574	515	442	26	50	16	M24

27 70 04  
27 70 05

## Backing Flanges, PP-V for Socket Systems metric

### Model:

- Modern full-plastic flange PP-GF (30 % glass-fibre reinforced)
- With V-groove which applies force evenly on collar
- With integrated bolt retainers as an assembly aid
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- **Bolt circle PN 10**



<sup>1)</sup> Suitable for socket- and butt fusion systems (no pictograph on flange)

AL: number of holes

d [mm]	Inch	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC
20		15	16	<b>727 700 406</b>	0.080	95	65	28	14	16	4	M12
25		20	16	<b>727 700 407</b>	0.100	105	75	34	14	17	4	M12
32		25	16	<b>727 700 408</b>	0.140	115	85	42	14	18	4	M12
40		32	16	<b>727 700 409</b>	0.220	140	100	51	18	20	4	M16
50		40	16	<b>727 700 410</b>	0.210	150	110	62	18	22	4	M16
63		50	16	<b>727 700 411</b>	0.380	165	125	78	18	24	4	M16
75		65	16	<b>727 700 412</b>	0.480	185	145	92	18	26	4	M16
90		80	16	<b>727 700 413</b>	0.520	200	160	110	18	27	8	M16
110		100	16	<b>727 700 414</b>	0.680	220	180	133	18	28	8	M16
140		125	16	<b>727 700 416</b>	0.800	250	210	167	18	30	8	M16
160	6	150	16	<b>727 700 417</b>	1.200	285	241	190	22	32	8	M20
200		200	16	<b>727 700 419</b>	1.500	340	296	226	22	34	8	M20
225	8	200	16	<b>727 700 420</b>	1.400	340	295	250	22	34	8	M20
250		250	16	<b>727 700 421</b>	1.700	395	350	277	22	38	12	M20
280		250	16	<b>727 700 422</b>	1.700	395	350	310	22	38	12	M20
315		300	16	<b>727 700 423</b>	2.400	445	400	348	22	42	12	M20
355		350	10	<b>727 700 424</b>	3.000	515	460	388	22	46	16	M20
400		400	10	<b>727 700 425</b>	3.500	574	515	442	26	50	16	M24

27 70 14  
27 70 15

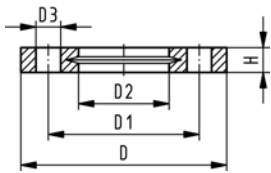
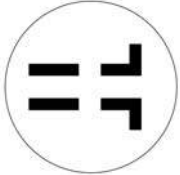
## Backing Flanges, PP-V for Butt Fusion Systems Inch/ANSI

### Model:

- Modern full-plastic flange PP-GF (30 % glass-fibre reinforced)
- With V-groove which applies force evenly on collar
- With integrated bolt-fixing as an assembly aid
- Connecting dimension: ANSI/ASME B 16.5 class 150, ASTM D 4024, BS 1560, BS EN 1759
- **Bolt circle class 150**

1) Suitable for socket- and butt fusion systems (no pictograph on flange)

AL: number of holes



Inch	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC
1/2	15	16	727 701 406	0.080	95	60	28	16	16	4	M12
3/4	20	16	727 701 407	0.100	105	70	34	16	17	4	M12
1	25	16	727 701 408	0.140	115	79	42	16	18	4	M12
1 1/4	32	16	727 701 409	0.220	140	89	51	16	20	4	M16
1 1/2	40	16	727 701 410	0.210	150	98	62	16	22	4	M16
2	50	16	727 701 411	0.380	165	121	78	19	24	4	M16
2 1/2	65	16	727 701 412	0.480	185	140	92	19	26	4	M16
3	80	16	727 701 513	0.520	200	152	108	19	27	4	M16
4	100	16	727 701 514	0.680	229	190	128	19	28	8	M16
6	150	16	727 700 517	1.200	285	241	178	22	32	8	M20
8	200	16	727 700 519	1.400	340	295	235	22	34	8	M20
9	200	16	727 700 520	1.400	340	295	238	22	34	8	M20
10	250	16	727 701 521	1.800	406	362	288	26	38	12	M20
10	250	16	727 701 522	1.700	406	362	294	26	38	12	M20
12	300	16	727 701 523	2.400	483	432	338	26	42	12	M20

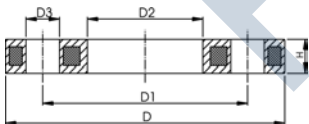
27 70 02  
27 70 03

## Backing Flanges, PP/Steel for Butt Fusion Systems metric

### Model:

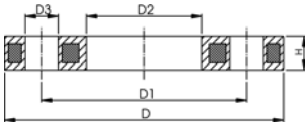
- Material: PP (30 % glass-fibre reinforced) with steel ring
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- **Bolt circle PN 10**

AL: number of holes



d [mm]	d [inch]	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC
20		15	16	727 700 206	0.220	95	65	28	14	12	4	M12
25		20	16	727 700 207	0.260	105	75	34	14	12	4	M12
32		25	16	727 700 208	0.430	115	85	42	14	16	4	M12
40		32	16	727 700 209	0.650	140	100	51	18	16	4	M16
50		40	16	727 700 210	0.820	150	110	62	18	18	4	M16
63		50	16	727 700 211	0.940	165	125	78	18	18	4	M16
75		65	16	727 700 212	1.300	185	145	92	18	18	4	M16
90		80	16	727 700 313	1.400	200	160	108	18	20	8	M16
110		100	16	727 700 314	1.580	220	180	128	18	20	8	M16
125		100	16	727 700 315	1.550	220	180	135	18	20	8	M16
140		125	16	727 700 316	2.360	250	210	158	18	24	8	M16
160	6	150	16	727 700 317	3.890	285	240	178	22	24	8	M20
180		150	16	727 700 318	3.410	285	240	188	22	24	8	M20
200		200	16	727 700 319	5.180	340	295	235	22	27	8	M20
225		200	16	727 700 320	5.150	340	295	238	22	27	8	M20





d	d	DN	PN	Code	kg	D	D1	D2	D3	H	AL	SC
[mm]	[inch]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]		
250		250	16	<b>727 700 321</b>	6.680	395	350	288	22	30	12	M20
280		250	16	<b>727 700 322</b>	6.580	395	350	294	22	30	12	M20
315		300	16	<b>727 700 323</b>	8.420	445	400	338	22	34	12	M20
355		350	16	<b>727 700 324</b>	15.790	515	460	376	22	40	16	M20
400		400	16	<b>727 700 325</b>	19.320	574	515	430	26	40	16	M24

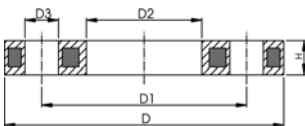
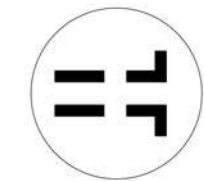
27 70 12

## Backing Flanges, PP/Steel for Butt Fusion Systems Inch/ANSI

**Model:**

- Material: PP (30 % glass-fibre reinforced) with steel ring
- Connecting dimension: ANSI/ASME B 16.5 class 150, ASTM D 4024, BS 1560, BS EN 1759
- **Bolt circle class 150**

AL: number of holes



d	DN	d	PN	Code	kg	D1	D2	D3	D	H	AL
[inch]	[mm]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]	
½	15	20	16	<b>727 701 206</b>	0.210	60	28	16	95	12	4
¾	20	25	16	<b>727 701 207</b>	0.250	70	34	16	105	12	4
1	25	32	16	<b>727 701 208</b>	0.420	79	42	16	115	16	4
1 ¼	32	40	16	<b>727 701 209</b>	0.670	89	51	16	140	16	4
1 ½	40	50	16	<b>727 701 210</b>	0.860	98	62	16	150	18	4
2	50	63	16	<b>727 701 211</b>	0.930	121	78	19	165	18	4
2 ½	65	75	16	<b>727 701 212</b>	1.340	140	92	19	185	18	4
3	80	90	16	<b>727 701 313</b>	1.550	152	108	19	200	20	4
4	100	110	16	<b>727 701 314</b>	1.840	190	128	19	229	20	8
6	150	160	16	<b>727 700 317</b>	3.890	240	178	22	285	24	8
8	200	200	16	<b>727 701 319</b>	5.180	298	235	22	340	27	8
8	200	225	16	<b>727 701 320</b>	5.150	298	238	22	340	27	8

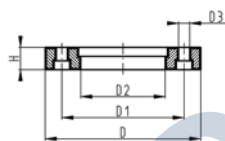
24 70 04

## Profiled Backing Flanges, PP/Steel for Butt Fusion Systems metric

**Model:**

- PP with glass-fibre reinforcement and GGG 50 insert
- Connecting dimensions: ISO 7005, EN 1092, DIN 2501
- **Bolt circle PN 10**

AL: number of holes

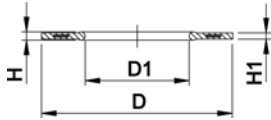


d	DN	PN	Code	kg	D	D1	D2	D3	H	AL	SC
[mm]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]		
355	350	10	<b>724 700 424</b>	15.570	521	460	376	22	48	16	M20
400	400	10	<b>724 700 425</b>	19.800	582	515	430	26	51	16	M24
450	500	10	<b>724 700 426</b>	25.600	684	620	517	26	49	20	M24
500	500	10	<b>724 700 427</b>	24.300	684	620	533	26	49	20	M24
560	600	10	<b>724 700 428</b>	35.700	796	725	618	30	58	20	M27
630	600	10	<b>724 700 429</b>	32.500	796	725	645	30	68	20	M27



EPDM 48 44 07  
FPM 49 44 07

## Profile Flange Gaskets metric EPDM / FPM



### Model:

- For all GF Flange Adaptors
- Profile Gasket with steel insert (type G-ST-P/K)
- Hardness: 70° Shore **EPDM**, 75° Shore **FPM**
- Centering on the inner diameter of the screw crown

di FA are the suitable inner diameters of flange adaptors

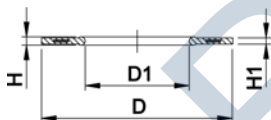
d [mm]	DN [mm]	PN	EPDM Code	FPM Code	kg	D [mm]	D1 [mm]	H [mm]	H1 [mm]	di FA [mm]
20	15	16	748 440 706	749 440 706	0.008	51	20	4	3	10 - 20
25	20	16	748 440 707	749 440 707	0.011	61	22	4	3	12 - 22
32	25	16	748 440 708	749 440 708	0.014	71	28	4	3	18 - 28
40	32	16	748 440 709	749 440 709	0.021	82	40	4	3	30 - 40
50	40	16	748 440 710	749 440 710	0.022	92	46	4	3	36 - 46
63	50	16	748 440 711	749 440 711	0.041	107	58	5	4	48 - 58
75	65	16	748 440 712	749 440 712	0.055	127	69	5	4	59 - 69
90	80	16	748 440 713	749 440 713	0.062	142	84	5	4	73 - 84
110	100	16	748 440 714	749 440 714	0.085	162	104	6	5	94 - 104
125	100	16	748 440 715	749 440 715	0.158	162	123	6	5	113 - 123
140	125	16	748 440 716	749 440 716	0.118	192	137	6	5	127 - 137
160 / 180	150	16	748 440 717	749 440 717	0.153	218	160	8	6	150 - 160
200	200	16	748 440 719	749 440 719	0.263	273	203	8	6	192 - 203
225	200	16	748 440 720	749 440 720	0.181	273	220	8	6	207 - 220
250	250	16	748 440 721	749 440 721	0.410	328	252	8	6	238 - 252
280	250	16	748 440 722	749 440 722	0.226	328	274	8	6	264 - 274
315	300	16	748 440 723	749 440 723	0.334	378	306	8	6	296 - 306
355	350	16	748 440 724	749 440 724	0.410	438	355	10	7	340 - 355
400	400	16	748 440 725	749 440 725	0.513	489	400	10	7	385 - 400
450	500	16	748 440 726	749 440 726	0.718	594	403	10	7	393 - 403
500	500	16	748 440 727	749 440 727	0.718	594	447	10	7	437 - 447
560	600	16	748 440 728	749 440 728	0.923	695	494	10	7	484 - 494
630	600	16	748 440 729	749 440 729	0.923	695	555	10	7	545 - 555

EPDM 48 44 03  
FPM 49 44 03

## Profile flange gaskets for Flange connections, metric






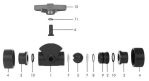

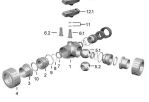





### Model:

- Hardness: 70° Shore **EPDM**, 75° Shore **FPM**
- suitable for flange adaptors










d [mm]	EPDM Code	FPM Code	kg	D [mm]	D1 [mm]	H [mm]	H1 [mm]
110	748 440 309	749 440 309	0.112	162	83 - 93	6	5
125	748 440 310	749 440 310	0.110	162	95 - 105	6	5
140	748 440 311	749 440 311	0.146	192	107 - 117	6	5
160	748 440 312	749 440 312	0.207	218	125 - 135	8	6
180	748 440 313	749 440 313	0.260	218	141 - 151	8	6
200	748 440 314	749 440 314	0.430	273	158 - 168	8	6
225	748 440 315	749 440 315	0.365	273	178 - 188	8	6
250	748 440 316	749 440 316	0.520	328	298 - 208	8	6
280	748 440 317	749 440 317	0.496	328	223 - 233	8	6
315	748 440 318	749 440 318	0.600	378	252 - 262	8	6
355	748 440 319	749 440 319	0.750	438	284 - 294	8	6
400	748 440 320	749 440 320	0.750	489	321 - 331	8	6

# PROGEF Standard Hand-Operated and Actuated Valves

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# Hand-Operated Valves

## General Information

### Material

The material PP-H conforms with the corresponding recommendations of the German Federal board of Health.

### Standards

All the main dimensions, such as nominal bore, z dimensions, socket depth and diameter, are in accordance with ISO Recommendations, ISO Draft Resolutions for millimetre pipes and DIN 3442.

Fusion joints
EN 558-1 DIN 3442

Thread joint	Flange joint	
ISO 7/1 DIN 2999 BSI 21	DIN 2501/8063	on request ANSI B 16.5 JIS

### Joining

**Fusion jointing:**  
Pipes with outside diameter tolerances in accordance with DIN 8077 can be readily jointed with GF Piping Systems Valves.

### Threaded joint:

BSP parallel female threads are in accordance with ISO 7/1 or DIN 2999. Threaded plastic Valves should be jointed to plastics pipe or to other plastics parts. Jointing to metal pipe or fittings is permissible only where there is little stress, and should be carried out with great care.

### Nominal Pressure

see column PN

### Marking

GF Piping Systems valves are marked as follows:

- +GF+
- pipe o.d.
- pipe nominal bore
- material
- pressure rating: PN ...

### Overall length

When used with flange adaptors or union ends from GF Piping Systems, the lengths of valves correspond to EN 558-1 (org. DIN 3202) or VSM standard 19431 and NF.E 29492.

### Dimensions

All dimensions are given in mm.

### Information Service

For detailed information see our Catalogue "Plastic Piping Systems".

### Quality control conforming to DIN 3442, Part 1

The function and tightness of every valve are factory-tested. Testing is carried out with air under water.

### Orders

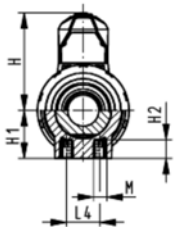
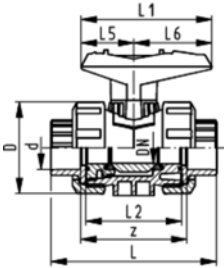
Always quote the GF Piping Systems code number when placing orders.

### Ordering example

8 ball valves 167 346 005

# Ball Valves 546

## Ball valve type 546 PP-H With mounting inserts With fusion sockets metric



### Model:

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- z-dimension, valve end and union nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)

### Option:

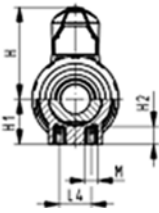
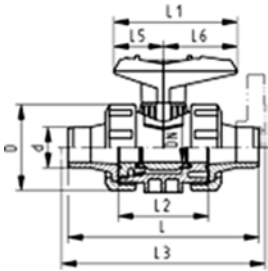
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	71	<b>167 546 401</b>	<b>167 546 411</b>	0.115
20	15	10	185	<b>167 546 402</b>	<b>167 546 412</b>	0.115
25	20	10	350	<b>167 546 403</b>	<b>167 546 413</b>	0.180
32	25	10	700	<b>167 546 404</b>	<b>167 546 414</b>	0.255
40	32	10	1000	<b>167 546 405</b>	<b>167 546 415</b>	0.440
50	40	10	1600	<b>167 546 406</b>	<b>167 546 416</b>	0.610
63	50	10	3100	<b>167 546 407</b>	<b>167 546 417</b>	1.145
75	65	10	5000	<b>167 546 408</b>	<b>167 546 418</b>	3.700
90	80	10	7000	<b>167 546 409</b>	<b>167 546 419</b>	5.500
110	100	10	11000	<b>167 546 410</b>	<b>167 546 420</b>	8.700

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]
16	50	57	27	12	93	77	56	25	32	45	M6	67
20	50	57	27	12	95	77	56	25	32	45	M6	66
25	58	67	30	12	109	97	65	25	39	58	M6	77
32	68	73	36	12	119	97	71	25	39	58	M6	83
40	84	90	44	15	135	128	85	45	54	74	M8	99
50	97	97	51	15	147	128	89	45	54	74	M8	105
63	124	116	64	15	168	152	101	45	66	87	M8	117
75	166	149	85	15	233	270	136	70	64	206	M8	167
90	200	161	105	15	254	270	141	70	64	206	M8	180
110	238	178	123	22	301	320	164	120	64	256	M12	215



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## Ball valve type 546 PP-H With mounting inserts With socket fusion spigots metric

### Model:

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- z-dimension, valve end and union nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)

### Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

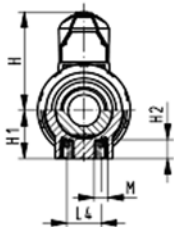
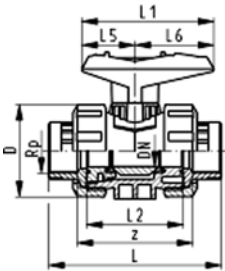
d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	71	<b>167 546 041</b>	<b>167 546 051</b>	0.120
20	15	10	185	<b>167 546 042</b>	<b>167 546 052</b>	0.120
25	20	10	350	<b>167 546 043</b>	<b>167 546 053</b>	0.180
32	25	10	700	<b>167 546 044</b>	<b>167 546 054</b>	0.260
40	32	10	1000	<b>167 546 045</b>	<b>167 546 055</b>	0.450
50	40	10	1600	<b>167 546 046</b>	<b>167 546 056</b>	0.640
63	50	10	3100	<b>167 546 047</b>	<b>167 546 057</b>	1.210
75	65	10	5000	<b>167 546 048</b>	<b>167 546 058</b>	3.800
90	80	10	7000	<b>167 546 049</b>	<b>167 546 059</b>	5.600
110	100	10	11000	<b>167 546 050</b>	<b>167 546 060</b>	8.800

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M
16	50	57	27	12	110	77	56		25	32	45	M6
20	50	57	27	12	120	77	56	130	25	32	45	M6
25	58	67	30	12	139	97	65	150	25	39	58	M6
32	68	73	36	12	150	97	71	160	25	39	58	M6
40	84	90	44	15	170	128	85	180	45	54	74	M8
50	97	97	51	15	190	128	89	200	45	54	74	M8
63	124	116	64	15	220	152	101	230	45	66	87	M8
75	166	149	85	15	280	270	136	290	70	64	206	M8
90	200	161	105	15	296	270	141	310	70	64	206	M8
110	238	178	123	22	336	320	164	350	120	64	256	M12





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## Ball valve type 546 PP-H With mounting inserts With threaded sockets Rp

### Model:

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- z-dimension, valve end and union nut are not compatible with type 346

### Option:

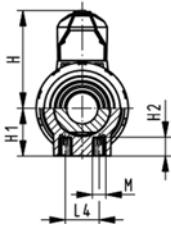
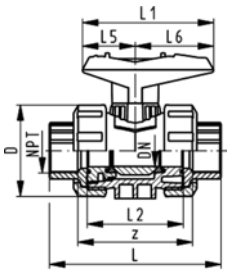
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Rp [inch]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
3/8	10	10	71	<b>167 546 021</b>	<b>167 546 031</b>	0.120
1/2	15	10	185	<b>167 546 022</b>	<b>167 546 032</b>	0.120
3/4	20	10	350	<b>167 546 023</b>	<b>167 546 033</b>	0.180
1	25	10	700	<b>167 546 024</b>	<b>167 546 034</b>	0.270
1 1/4	32	10	1000	<b>167 546 025</b>	<b>167 546 035</b>	0.460
1 1/2	40	10	1600	<b>167 546 026</b>	<b>167 546 036</b>	0.635
2	50	10	3100	<b>167 546 027</b>	<b>167 546 037</b>	1.190

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]
3/8	50	57	27	12	96	77	56	25	32	45	M6	69
1/2	50	57	27	12	99	77	56	25	32	45	M6	67
3/4	58	67	30	12	111	97	65	25	39	58	M6	78
1	68	73	36	12	127	97	71	25	39	58	M6	85
1 1/4	84	90	44	15	146	128	85	45	54	74	M8	100
1 1/2	97	97	51	15	157	128	89	45	54	74	M8	106
2	124	116	64	15	183	152	101	45	66	87	M8	121



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## Ball valve type 546 PP-H With mounting inserts With threaded sockets NPT

### Model:

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- z-dimension, valve end and union nut are not compatible with type 346

### Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

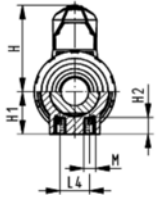
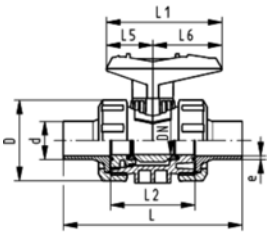
NPT [inch]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg						
3/8	10	10	71	<b>167 546 321</b>	<b>167 546 331</b>	0.120						
1/2	15	10	185	<b>167 546 322</b>	<b>167 546 332</b>	0.120						
3/4	20	10	350	<b>167 546 323</b>	<b>167 546 333</b>	0.180						
1	25	10	700	<b>167 546 324</b>	<b>167 546 334</b>	0.270						
1 1/4	32	10	1000	<b>167 546 325</b>	<b>167 546 335</b>	0.460						
1 1/2	40	10	1600	<b>167 546 326</b>	<b>167 546 336</b>	0.635						
2	50	10	3100	<b>167 546 327</b>	<b>167 546 337</b>	1.190						

NPT [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]
3/8	50	57	27	12	96	77	56	25	32	45	M6	71
1/2	50	57	27	12	99	77	56	25	32	45	M6	64
3/4	58	67	30	12	111	97	65	25	39	58	M6	76
1	68	73	36	12	127	97	71	25	39	58	M6	83
1 1/4	84	90	44	15	146	128	85	45	54	74	M8	100
1 1/2	97	97	51	15	157	128	89	45	54	74	M8	111
2	124	116	64	15	183	152	101	45	66	87	M8	134



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## Ball valve type 546 PP-H With mounting inserts With butt fusion spigots IR-Plus SDR11 metric

### Model:

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- z-dimension, valve end and union nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)

### Option:

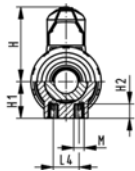
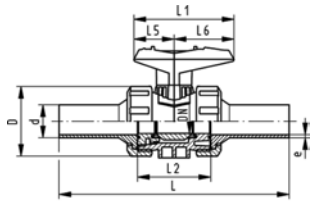
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	10	185	<b>167 546 442</b>	<b>167 546 452</b>	0.120
25	20	10	350	<b>167 546 443</b>	<b>167 546 453</b>	0.180
32	25	10	700	<b>167 546 444</b>	<b>167 546 454</b>	0.255
40	32	10	1000	<b>167 546 445</b>	<b>167 546 455</b>	0.440
50	40	10	1600	<b>167 546 446</b>	<b>167 546 456</b>	0.620
63	50	10	3100	<b>167 546 447</b>	<b>167 546 457</b>	1.200
75	65	10	5000	<b>167 546 448</b>	<b>167 546 458</b>	3.800
90	80	10	7000	<b>167 546 449</b>	<b>167 546 459</b>	5.500
110	100	10	11000	<b>167 546 450</b>	<b>167 546 460</b>	8.700

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]
20	50	57	27	12	130	77	56	25	32	45	M6	1,9
25	58	67	30	12	143	97	65	25	39	58	M6	2,3
32	68	73	36	12	150	97	71	25	39	58	M6	3
40	84	90	44	15	171	128	85	45	54	74	M8	3,7
50	97	97	51	15	191	128	89	45	54	74	M8	4,6
63	124	116	64	15	220	152	101	45	66	87	M8	5,8
75	166	149	85	15	266	270	136	70	64	206	M8	8.2
90	200	161	105	15	264	270	141	70	64	206	M8	9.9
110	238	178	123	22	301	320	164	120	64	256	M12	12



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## Ball valve type 546 PP-H With mounting inserts With butt fusion spigots long SDR11 metric

### Model:

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- z-dimension, valve end and union nut are not compatible with type 346

### Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

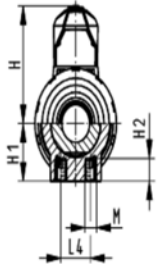
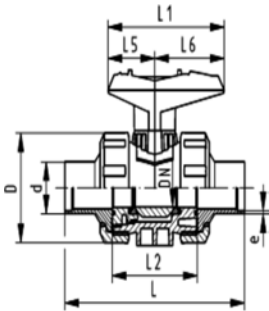
d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg						
20	15	10	185	<b>167 546 262</b>	<b>167 546 272</b>	0.130						
25	20	10	350	<b>167 546 263</b>	<b>167 546 273</b>	0.195						
32	25	10	700	<b>167 546 264</b>	<b>167 546 274</b>	0.280						
40	32	10	1000	<b>167 546 265</b>	<b>167 546 275</b>	0.480						
50	40	10	1600	<b>167 546 266</b>	<b>167 546 276</b>	0.700						
63	50	10	3100	<b>167 546 267</b>	<b>167 546 277</b>	1.320						

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]		
20	50	57	27	12	193	77	56	25	32	45	M6	2,3		
25	58	67	30	12	216	97	65	25	39	58	M6	2,3		
32	68	73	36	12	223	97	71	25	39	58	M6	3		
40	84	90	44	15	249	128	85	45	54	74	M8	3,7		
50	97	97	51	15	271	128	89	45	54	74	M8	4,6		
63	124	116	64	15	321	152	101	45	66	87	M8	5,8		



DN10/15 - 50



## Ball valve type 546 PP-H With mounting inserts With butt fusion spigots SDR17.6 metric

### Model:

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- z-dimension, valve end and union nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)

### Option:

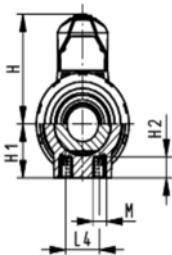
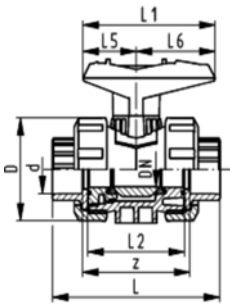
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
50	40	6	1600	<b>167 546 066</b>	<b>167 546 076</b>	0.635
63	50	6	3100	<b>167 546 067</b>	<b>167 546 077</b>	1.200
75	65	6	5000	<b>167 546 068</b>	<b>167 546 078</b>	3.800
90	80	6	7000	<b>167 546 069</b>	<b>167 546 079</b>	5.500
110	100	6	11000	<b>167 546 070</b>	<b>167 546 080</b>	8.600

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]
50	97	97	51	15	191	128	89	45	54	74	M8	2,9
63	124	116	64	15	220	152	101	45	66	87	M8	3,6
75	166	149	85	15	266	270	136	70	64	206	M8	4,7
90	200	161	105	15	264	270	141	70	64	206	M8	5,5
110	238	178	123	22	301	320	164	120	64	256	M12	6,8



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## Ball valve type 546 PP-H With mounting inserts With fusion sockets PE100 metric

### Model:

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- z-dimension, valve end and union nut are not compatible with type 346

### Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

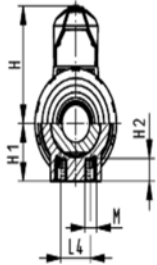
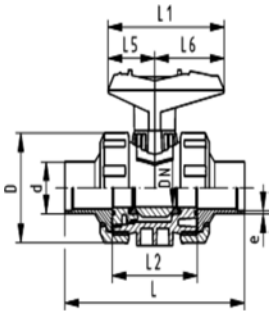
d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg						
16	10	10	71	<b>167 546 161</b>	<b>167 546 171</b>	0.120						
20	15	10	185	<b>167 546 162</b>	<b>167 546 172</b>	0.120						
25	20	10	350	<b>167 546 163</b>	<b>167 546 173</b>	0.180						
32	25	10	700	<b>167 546 164</b>	<b>167 546 174</b>	0.260						
40	32	10	1000	<b>167 546 165</b>	<b>167 546 175</b>	0.450						
50	40	10	1600	<b>167 546 166</b>	<b>167 546 176</b>	0.630						
63	50	10	3100	<b>167 546 167</b>	<b>167 546 177</b>	1.195						

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]
16	50	57	27	12	93	77	56	25	32	45	M6	67
20	50	57	27	12	95	77	56	25	32	45	M6	67
25	58	67	30	12	109	97	65	25	39	58	M6	77
32	68	73	36	12	119	97	71	25	39	58	M6	83
40	84	90	44	15	135	128	85	45	54	74	M8	99
50	97	97	51	15	147	128	89	45	54	74	M8	105
63	124	116	64	15	168	152	101	45	66	87	M8	113



DN10/15 - 50



## Ball valve type 546 PP-H With mounting inserts With butt fusion spigots PE100 SDR11 metric

### Model:

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- z-dimension, valve end and union nut are not compatible with type 346

### Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg								M	e [mm]
20	15	10	185	<b>167 546 142</b>	<b>167 546 152</b>	0.120								M6	1,9
25	20	10	350	<b>167 546 143</b>	<b>167 546 153</b>	0.180								M6	2,3
32	25	10	700	<b>167 546 144</b>	<b>167 546 154</b>	0.255								M6	3
40	32	10	1000	<b>167 546 145</b>	<b>167 546 155</b>	0.440								M8	3,7
50	40	10	1600	<b>167 546 146</b>	<b>167 546 156</b>	0.620								M8	4,6
63	50	10	3100	<b>167 546 147</b>	<b>167 546 157</b>	1.200								M8	5,8

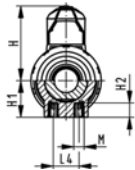
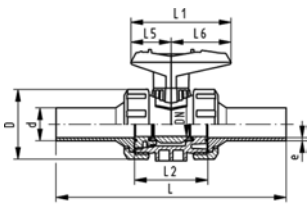
  

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]
20	50	57	27	12	130	77	56	130	25	32	45	M6	1,9
25	58	67	30	12	143	97	65	150	25	39	58	M6	2,3
32	68	73	36	12	150	97	71	160	25	39	58	M6	3
40	84	90	44	15	171	128	85	180	45	54	74	M8	3,7
50	97	97	51	15	191	128	89	200	45	54	74	M8	4,6
63	124	116	64	15	220	152	101	230	45	66	87	M8	5,8





DN10/15 - 50



## Ball valve type 546 PP-H With mounting inserts With butt fusion spigots long PE100 SDR11 metric

### Model:

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- z-dimension, valve end and union nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)

### Option:

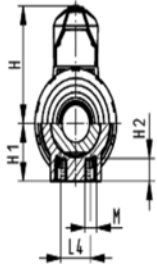
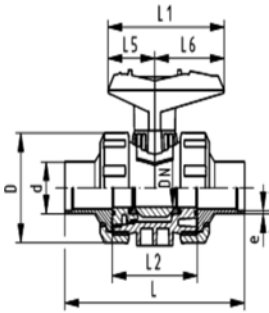
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	10	185	<b>167 546 282</b>	<b>167 546 292</b>	0.130
25	20	10	350	<b>167 546 283</b>	<b>167 546 293</b>	0.195
32	25	10	700	<b>167 546 284</b>	<b>167 546 294</b>	0.280
40	32	10	1000	<b>167 546 285</b>	<b>167 546 295</b>	0.485
50	40	10	1600	<b>167 546 286</b>	<b>167 546 296</b>	0.695
63	50	10	3100	<b>167 546 287</b>	<b>167 546 297</b>	1.320
75	65	10	5000	<b>167 546 288</b>	<b>167 546 298</b>	3.900
90	80	10	7000	<b>167 546 289</b>	<b>167 546 299</b>	5.900
110	100	10	11000	<b>167 546 290</b>	<b>167 546 300</b>	9.300

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]
20	50	57	27	12	193	77	56	25	32	45	M6	2,3
25	58	67	30	12	216	97	65	25	39	58	M6	2,3
32	68	73	36	12	223	97	71	25	39	58	M6	3
40	84	90	44	15	249	128	85	45	54	74	M8	3,7
50	97	97	51	15	271	128	89	45	54	74	M8	4,6
63	124	116	64	15	321	152	101	45	66	87	M8	5,8
75	166	149	85	15	386	270	136	70	64	206	M8	6,8
90	200	161	105	15	421	270	141	70	64	206	M8	8,2
110	238	178	123	22	484	320	164	120	64	256	M12	10



DN10/15 - 50



## Ball valve type 546 PP-H With mounting inserts With butt fusion spigots PE100 SDR17.6 metric

### Model:

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- z-dimension, valve end and union nut are not compatible with type 346

### Option:

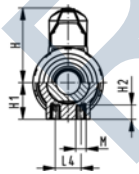
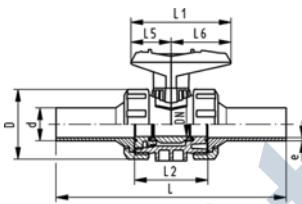
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
50	40	6	1600	<b>167 546 126</b>	<b>167 546 136</b>	0.620
63	50	6	3100	<b>167 546 127</b>	<b>167 546 137</b>	1.200

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]
50	97	97	51	15	191	128	89	45	54	74	M8	2,9
63	124	116	64	15	220	152	101	45	66	87	M8	3,6



DN10/15 - 50



## PROGEF Standard Ball valve type 546 With mounting inserts With butt fusion spigots long PE100 SDR17,6 metric

### Model:

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Image and drawing DN65-100 please see "New product ball valve DN65-100"
- z-dimension, valve end and union nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)

### Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	10	5000	<b>167 546 308</b>	<b>167 546 318</b>	3.900
90	80	10	7000	<b>167 546 309</b>	<b>167 546 319</b>	5.800
110	100	10	11000	<b>167 546 310</b>	<b>167 546 320</b>	9.200

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]
75	166	149	85	15	386	270	136	70	64	206	8	4.3
90	200	161	105	15	421	270	141	70	64	206	8	5.1
110	238	178	123	22	484	320	164	120	64	256	12	6.3



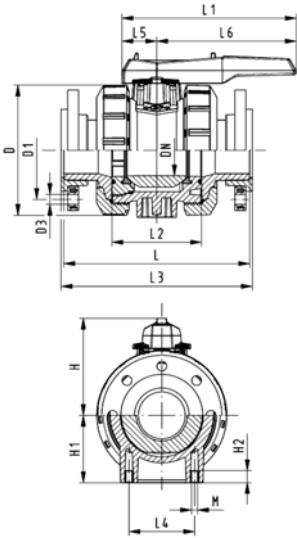
**PROGEF Standard  
Ball valve type 546  
With mounting inserts  
With backing flanges PP-st metric**

**Model:**

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- z-dimension, valve end and union nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Overall length according to EN 558
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501

**Option:**

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

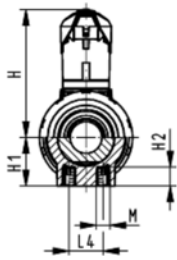
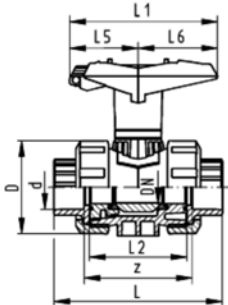


d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	10	5000	<b>167 546 808</b>	<b>167 546 818</b>	4.300
90	80	10	7000	<b>167 546 809</b>	<b>167 546 819</b>	6.400
110	100	10	11000	<b>167 546 810</b>	<b>167 546 820</b>	10.000

d [mm]	D [mm]	D1 [mm]	D3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	H [mm]	H1 [mm]	M
75	166	145	18	280	270	136	290	70	64	206	149	85	8
90	200	160	18	296	270	141	310	70	64	206	161	105	8
110	238	180	18	336	320	164	350	120	64	256	178	123	12



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## Ball valve type 546 PP-H With lockable handle With fusion sockets metric

### Model:

- Material: PP-H
- Image and drawing DN65-100 please see "**New product ball valve DN65-100**"
- For easy installation and removal
- z-dimension, valve end and union nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Lockable hand lever with ratchet settings

### Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	71	<b>167 546 421</b>	<b>167 546 431</b>	0.125
20	15	10	185	<b>167 546 422</b>	<b>167 546 432</b>	0.125
25	20	10	350	<b>167 546 423</b>	<b>167 546 433</b>	0.195
32	25	10	700	<b>167 546 424</b>	<b>167 546 434</b>	0.270
40	32	10	1000	<b>167 546 425</b>	<b>167 546 435</b>	0.465
50	40	10	1600	<b>167 546 426</b>	<b>167 546 436</b>	0.635
63	50	10	3100	<b>167 546 427</b>	<b>167 546 437</b>	1.175
75	65	10	5000	<b>167 546 428</b>	<b>167 546 438</b>	4.000
90	80	10	7000	<b>167 546 429</b>	<b>167 546 439</b>	5.900
110	100	10	11000	<b>167 546 430</b>	<b>167 546 440</b>	9.100

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]
16	50	79	27	12	93	77	56	25	32	45	M6	67
20	50	79	27	12	95	77	56	25	32	45	M6	66
25	58	88	30	12	109	97	65	25	39	58	M6	77
32	68	94	36	12	119	97	71	25	39	58	M6	83
40	84	113	44	15	135	128	85	45	54	74	M8	99
50	97	119	51	15	147	128	89	45	54	74	M8	105
63	124	141	64	15	168	152	101	45	66	87	M8	117
75	166	224	85	15	233	270	136	70	64	206	M8	167
90	200	235	105	15	254	270	141	70	64	206	M8	180
110	238	245	123	22	301	320	164	120	64	256	M12	215



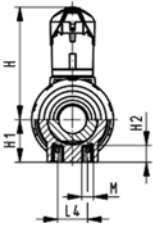
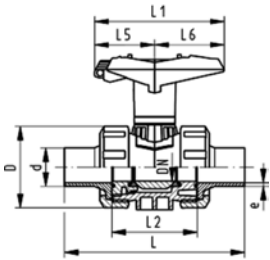
## Ball valve type 546 PP-H With lockable handle With butt fusion spigots IR-Plus SDR11 metric

### Model:

- Material: PP-H
- Image and drawing DN65-100 please see "New product ball valve DN65-100"
- For easy installation and removal
- z-dimension, valve end and union nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Lockable hand lever with ratchet settings

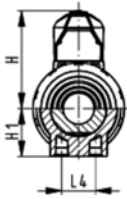
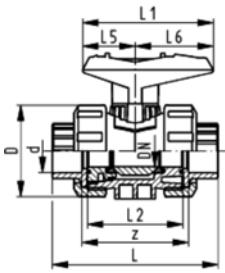
### Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+



d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	10	185	<b>167 546 462</b>	<b>167 546 472</b>	0.130
25	20	10	350	<b>167 546 463</b>	<b>167 546 473</b>	0.195
32	25	10	700	<b>167 546 464</b>	<b>167 546 474</b>	0.270
40	32	10	1000	<b>167 546 465</b>	<b>167 546 475</b>	0.465
50	40	10	1600	<b>167 546 466</b>	<b>167 546 476</b>	0.645
63	50	10	3100	<b>167 546 467</b>	<b>167 546 477</b>	1.230
75	65	10	5000	<b>167 546 468</b>	<b>167 546 478</b>	4.100
90	80	10	7000	<b>167 546 469</b>	<b>167 546 479</b>	5.900
110	100	10	11000	<b>167 546 470</b>	<b>167 546 480</b>	9.000

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]
20	50	79	27	12	130	87	56	25	42	45	M6	1,9
25	58	88	30	12	143	108	65	25	50	58	M6	2,3
32	68	94	36	12	150	108	71	25	50	58	M6	3
40	84	113	44	15	171	140	85	45	66	75	M8	3,7
50	97	119	51	15	191	140	89	45	66	75	M8	4,6
63	124	141	64	15	220	165	101	45	78	87	M8	5,8
75	166	149	85	15	266	270	136	70	64	206	M8	8.2
90	200	161	105	15	264	270	141	70	64	206	M8	9.9
110	238	178	123	22	301	320	164	120	64	256	M12	12



## Ball valve type 546 PP-H With fusion sockets metric

### Model:

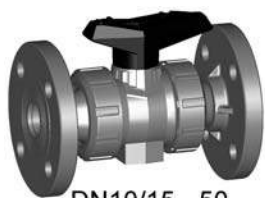
- Material: PP-H
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- For easy installation and removal
- z-dimension, valve end and union nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts

### Option:

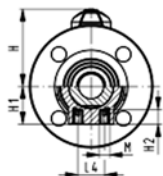
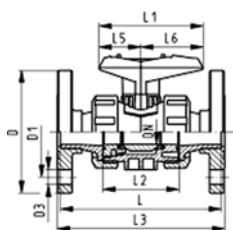
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	71	<b>167 546 001</b>	<b>167 546 011</b>	0.115
20	15	10	185	<b>167 546 002</b>	<b>167 546 012</b>	0.115
25	20	10	350	<b>167 546 003</b>	<b>167 546 013</b>	0.180
32	25	10	700	<b>167 546 004</b>	<b>167 546 014</b>	0.255
40	32	10	1000	<b>167 546 005</b>	<b>167 546 015</b>	0.440
50	40	10	1600	<b>167 546 006</b>	<b>167 546 016</b>	0.610
63	50	10	3100	<b>167 546 007</b>	<b>167 546 017</b>	1.145
75	65	10	5000	<b>167 546 008</b>	<b>167 546 018</b>	3.700
90	80	10	7000	<b>167 546 009</b>	<b>167 546 019</b>	5.500
110	100	10	11000	<b>167 546 010</b>	<b>167 546 020</b>	8.700

d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	z [mm]
16	50	57	27	93	77	56	25	32	45	67
20	50	57	27	95	77	56	25	32	45	66
25	58	67	30	109	97	65	25	39	58	77
32	68	73	36	119	97	71	25	39	58	83
40	84	90	44	135	128	85	45	54	74	99
50	97	97	51	147	128	89	45	54	74	105
63	124	116	64	168	152	101	45	66	87	117
75	166	149	85	233	270	136	70	64	206	167
90	200	161	105	254	270	141	70	64	206	180
110	238	178	123	301	320	164	120	64	256	215



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## PROGEF Standard Ball valve type 546 With mounting inserts With fixed flanges PP-H serrated metric

### Model:

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- z-dimension, valve end and union nut are not compatible with type 346
- Overall length EN 558
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

### Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	½	10	185	<b>167 546 182</b>	<b>167 546 192</b>	0.245
25	20	¾	10	350	<b>167 546 183</b>	<b>167 546 193</b>	0.345
32	25	1	10	700	<b>167 546 184</b>	<b>167 546 194</b>	0.495
40	32	1 ¼	10	1000	<b>167 546 185</b>	<b>167 546 195</b>	0.830
50	40	1 ½	10	1600	<b>167 546 186</b>	<b>167 546 196</b>	1.100
63	50	2	10	3100	<b>167 546 187</b>	<b>167 546 197</b>	1.830

d [mm]	D [mm]	D1 [mm]	D3 [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M
20	95	65	14	57	27	12	120	77	56	130	25	32	45	M6
25	105	75	14	67	30	12	140	97	65	150	25	39	58	M6
32	115	85	14	73	36	12	150	97	71	160	25	39	58	M6
40	140	100	18	90	44	15	170	128	85	180	45	54	74	M8
50	150	110	18	97	51	15	190	128	89	200	45	54	74	M8
63	165	125	18	116	64	15	220	152	101	230	45	66	87	M8



# Component Parts for Flange Assembly Ball Valves Type 546

27 79 02

## PROGEF Standard, Flange Adaptor Jointing face flat/serrated

d [mm]	PN	Code	kg
20	10	<b>727 790 206</b>	0.011
25	10	<b>727 790 207</b>	0.022
32	10	<b>727 790 208</b>	0.033
40	10	<b>727 790 209</b>	0.046
50	10	<b>727 790 210</b>	0.062
63	10	<b>727 790 211</b>	0.090
75	10	<b>727 790 212</b>	0.163
90	10	<b>727 790 213</b>	0.233
110	10	<b>727 790 214</b>	0.319

## PROGEF Standard, Special Flange Adaptors, PP-H S5/SDR11

### Jointing Face, combination serrated / flat metric

d [mm]	DN [mm]	FM	Code	kg
75	65	IR	<b>727 798 512</b>	0.243
90	80	IR	<b>727 798 513</b>	0.326
90	80	IR	<b>727 798 663</b>	0.346
110	100	IR	<b>727 798 514</b>	0.441
125	100	IR	<b>727 798 515</b>	0.520
140	125	IR	<b>727 798 516</b>	0.800
160	150	IR	<b>727 798 517</b>	0.920
180	150	IR	<b>727 798 568</b>	0.900
200	200	IR	<b>727 798 519</b>	1.670
225	200	IR	<b>727 798 520</b>	1.700
250	250	--	<b>727 798 571</b>	2.790
280	250	--	<b>727 798 572</b>	2.610
315	300	--	<b>727 798 573</b>	3.410
355	350	--	<b>727 798 574</b>	5.600
400	400	--	<b>727 798 575</b>	8.300

EPDM 48 44 07  
FPM 49 44 07

**Profile Flange Gaskets metric  
EPDM / FPM**



d [mm]	DN [mm]	PN	EPDM Code	FPM Code	kg
16	10	16	748 440 705	749 440 705	0.007
20	15	16	748 440 706	749 440 706	0.008
25	20	16	748 440 707	749 440 707	0.011
32	25	16	748 440 708	749 440 708	0.014
40	32	16	748 440 709	749 440 709	0.021
50	40	16	748 440 710	749 440 710	0.022
63	50	16	748 440 711	749 440 711	0.041
75	65	16	748 440 712	749 440 712	0.055
90	80	16	748 440 713	749 440 713	0.062
110	100	16	748 440 714	749 440 714	0.085
125	100	16	748 440 715	749 440 715	0.158
140	125	16	748 440 716	749 440 716	0.118
160 / 180	150	16	748 440 717	749 440 717	0.153
200	200	16	748 440 719	749 440 719	0.263
225	200	16	748 440 720	749 440 720	0.181
250	250	16	748 440 721	749 440 721	0.410
280	250	16	748 440 722	749 440 722	0.226
315	300	16	748 440 723	749 440 723	0.334
355	350	16	748 440 724	749 440 724	0.410
400	400	16	748 440 725	749 440 725	0.513

27 70 04  
27 70 05

**Backing Flanges, PP-V  
for Socket Systems metric**

d [mm]	Inch	DN [mm]	PN	Code	kg
20		15	16	727 700 406	0.080
25		20	16	727 700 407	0.100
32		25	16	727 700 408	0.140
40		32	16	727 700 409	0.220
50		40	16	727 700 410	0.210
63		50	16	727 700 411	0.380
75		65	16	727 700 412	0.480
90		80	16	727 700 413	0.520
110		100	16	727 700 414	0.680

27 30 10  
27 40 10

**Fixed Flanges, PP-H metric  
Jointing Face flat**

d [mm]	DN [mm]	Inch	PN	Code	kg
20	15	1/2	10	727 730 106	0.069
25	20	3/4	10	727 730 107	0.094
32	25	1	10	727 730 108	0.129
40	32	1 1/4	10	727 730 109	0.203
50	40	1 1/2	10	727 730 110	0.246
63	50	2	10	727 730 111	0.330

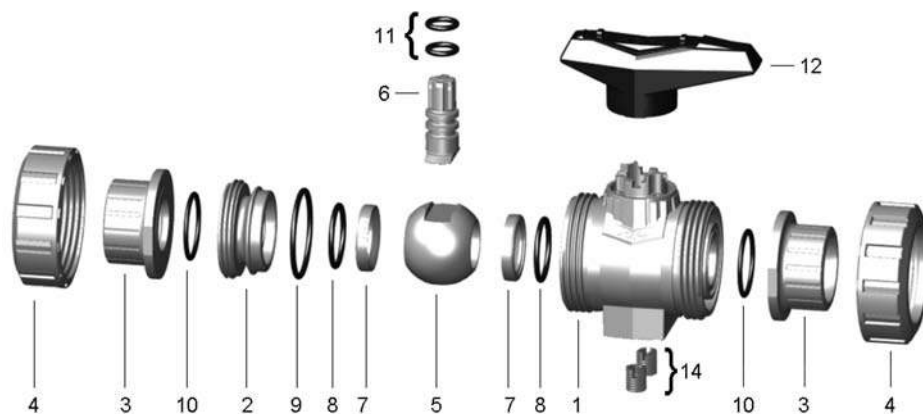
27 30 10  
27 40 10

**Fixed Flanges, PP-H metric**  
**Combined jointing face: flat and serrated**

d [mm]	DN [mm]	Inch	PN	Code	kg	
20	15	1/2	10	<b>727 740 106</b>	0.065	
25	20	3/4	10	<b>727 740 107</b>	0.083	
32	25	1	10	<b>727 740 108</b>	0.117	
40	32	1 1/4	10	<b>727 740 109</b>	0.175	
50	40	1 1/2	10	<b>727 740 110</b>	0.212	
63	50	2	10	<b>727 740 111</b>	0.330	

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## Spare parts for ball valve type 546 PP-H (DN10/15-50)



No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	d63 DN50
	Central part		167 482 876	167 482 876	167 482 877	167 482 878	167 482 879	167 482 880	167 482 881
1	Body PP	1							
2	PP	1							
5	Ball PP	1							
6	Stem PP	1							
7	Ball seal PTFE	2							
8	Backing seal EPDM	1							
9	Body seal EPDM	1							
10	Face seal EPDM	2							
11	Stem seal EPDM	2							
12	Lever PP black	1							
14	Threaded bush Stainless steel	3							
	Central part		167 482 888	167 482 888	167 482 889	167 482 890	167 482 891	167 482 892	167 482 893
1	Body PP	1							
2	PP	1							
5	Ball PP	1							
6	Stem PP	1							
7	Ball seal PTFE	2							
8	Backing seal FPM	1							
9	Body seal FPM	1							
10	Face seal FPM	2							
11	Stem seal FPM	2							
12	Lever PP black	1							
14	Threaded bush Stainless steel	3							
	Ball set		167 484 125	167 484 125	167 484 126	167 484 127	167 484 128	167 484 129	167 484 130
5	Ball PP	1							
6	Stem PP	1							
7	Ball seal PTFE	2							
8	Backing seal EPDM	2							
9	Body seal EPDM	1							
11	Stem seal EPDM	2							

No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	d63 DN50
5	Ball set		167 484 135	167 484 135	167 484 136	167 484 137	167 484 138	167 484 139	167 484 140
6	Ball PP	1							
7	Stem PP	1							
8	Ball seal PTFE	2							
8	Backing seal FPM	2							
9	Body seal FPM	1							
11	Stem seal FPM	2							
8	Seal set		161 486 400	161 486 400	161 486 401	161 486 402	161 486 403	161 486 404	161 486 405
9	Backing seal EPDM	2							
9	Body seal EPDM	1							
10	Face seal EPDM	2							
11	Stem seal EPDM	2							
8	Seal set		161 486 410	161 486 410	161 486 411	161 486 412	161 486 413	161 486 414	161 486 415
9	Backing seal FPM	2							
9	Body seal FPM	1							
10	Face seal FPM	2							
11	Stem seal FPM	2							
3	Connecting piece 546 PP-H (G30) with fusion socket metric	1	167 482 900	167 482 901	167 482 902	167 482 903	167 482 904	167 482 905	167 482 906
3	Connecting piece 546 PP-H (G32) with socket fusion spigot metric	1	167 482 922	167 482 923	167 482 924	167 482 925	167 482 926	167 482 927	167 482 928
3	Connecting piece 546 PP-H (G33) with threaded socket Rp fortified	1	167 482 911	167 482 912	167 482 913	167 482 914	167 482 915	167 482 916	167 482 917
3	Connecting piece 546 PP-H (G34) with threaded socket NPT fortified	1	167 482 966	167 482 967	167 482 968	167 482 969	167 482 970	167 482 971	167 482 972
3	Connecting piece 546 PP-H (G63) subassembly with fixed flange serrated PP-H metric	1	-	167 484 160	167 484 161	167 484 162	167 484 163	167 484 164	167 484 165
3	Connecting piece 546 PP-H (G73) subassembly with backing flange PP-ST ANSI	1	-	167 482 956	167 482 957	167 482 958	167 482 959	-	-
3	Connecting piece 546 PP-H (G35) with butt fusion spigot IR Plus® SDR11 metric	1	-	167 482 945	167 482 946	167 482 947	167 482 948	167 482 949	167 482 950
3	Connecting piece 546 PP-H (G36) with butt fusion spigot SDR17,6 metric	1	-	-	-	-	167 482 937	167 482 938	167 482 939

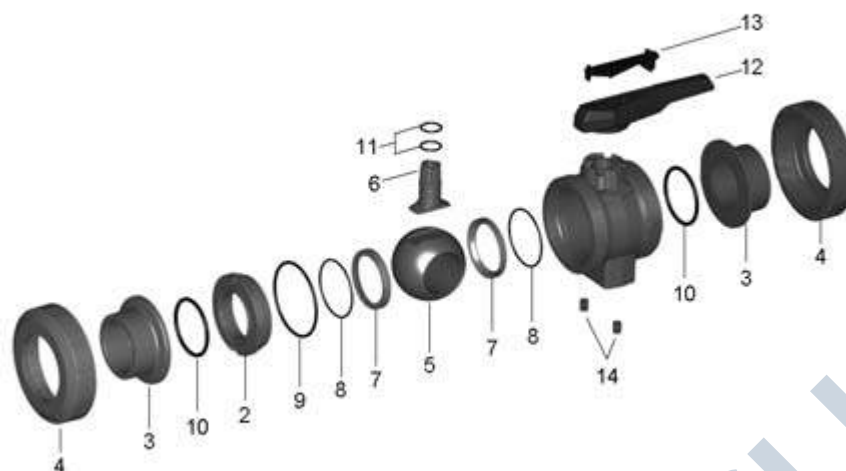
No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	d63 DN50
3	Connecting piece 546 PP-H (G37) with butt fusion spigot long SDR11 metric	1	-	167 482 956	167 482 957	167 482 958	167 482 959	167 482 960	167 482 961
3	Connecting piece 546 PE 100 (G43) with butt fusion spigot long SDR11 metric	1	-	193 480 152	193 480 153	193 480 154	193 480 155	193 480 156	193 480 157
3	Connecting piece 546 PE 100 (G40) with fusion socket metric	1	193 480 175	193 480 176	193 480 177	193 480 178	193 480 179	193 480 180	193 480 181
3	Connecting piece 546 PE 100 (G41) with butt fusion spigot SDR11 metric	1	-	193 480 102	193 480 103	193 480 104	193 480 105	193 480 106	193 480 107
3	Connecting piece 546 PE 100 (G42) with butt fusion spigot SDR17,6 metric	1	-	-	-	-	193 480 086	193 480 087	193 480 088
3	Connecting piece 546 PVC-C (G15) with threaded socket Rp	1	163 481 286	163 481 287	163 481 288	163 481 289	163 481 290	163 481 291	163 481 292
3	Connecting piece 546 PVC-C (G16) with threaded socket Rp fortified	1	163 481 400	163 481 401	163 481 402	163 481 403	163 481 404	163 481 405	163 481 406
3	Connecting piece 546 PVC-C (G17) with threaded socket NPT	1	163 481 322	163 481 323	163 481 324	163 481 325	163 481 326	163 481 327	163 481 328
3	Connecting piece 546 PVC-C (G13) with solvent cement socket Inch ASTM	1	163 481 311	163 481 312	163 481 313	163 481 314	163 481 315	163 481 316	163 481 317
3	Connecting piece 546 PVC-C (G11) with solvent cement socket metric	1	163 481 275	163 481 276	163 481 277	163 481 278	163 481 279	163 481 280	163 481 281
3	Connecting piece 546 PVC-C (G14) with solvent cement spigot metric	1	163 481 300	163 481 301	163 481 302	163 481 303	163 481 304	163 481 305	163 481 306
4	Union nut 546 PP-H	1	167 482 712	167 482 712	167 482 713	167 482 714	167 482 715	167 482 716	167 482 717
12	Standard handle 546 black (K02)	1	167 484 076	167 484 076	167 484 077	167 484 078	167 484 079	167 484 080	167 484 081

No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	d63 DN50
12	Standard handle 546 red (K01)	1	167 484 088	167 484 088	167 484 089	167 484 090	167 484 091	167 484 092	167 484 093
22	Multifunction handle 546 red (K11) with ratchet settings lockable	1	167 484 100	167 484 100	167 484 101	167 484 102	167 484 103	167 484 104	167 484 105
10	Face seal EPDM	1	748 410 059	748 410 059	748 410 106	748 410 151	748 410 062	748 410 003	748 410 231
10	Face seal FPM	1	749 410 059	749 410 059	749 410 106	749 410 151	749 410 062	749 410 003	749 410 231

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## Spare parts for ball valve type 546 PP-H (DN65-100)



No.	Article / Material	Pieces	d75 DN65	d90 DN80	d110 DN100
	Central part		167 482 882	167 482 883	167 482 884
1	Body PP	1			
2	PP	1			
5	Ball PP	1			
6	Stem PP	1			
7	Ball seal PTFE	2			
8	Backing seal EPDM	1			
9	Body seal EPDM	1			
10	Face seal EPDM	2			
11	Stem seal EPDM	2			
12	Lever PP black	1			
13	handle clip	1			
14	Threaded bush Stainless steel	3			
	Central part		167 482 894	167 482 895	167 482 896
1	Body PP	1			
2	PP	1			
5	Ball PP	1			
6	Stem PP	1			
7	Ball seal PTFE	2			
8	Backing seal FPM	1			
9	Body seal FPM	1			
10	Face seal FPM	2			
11	Stem seal FPM	2			
12	Lever PP black	1			
13	handle clip	1			
14	Threaded bush Stainless steel	3			

No.	Article / Material	Pieces	d75 DN65	d90 DN80	d110 DN100
	Ball set		167 484 131	167 484 132	167 484 133
5	Ball PP	1			
6	Stem PP	1			
7	Ball seal PTFE	2			
8	Backing seal EPDM	2			
9	Body seal EPDM	1			
11	Stem seal EPDM	2			
	Ball set		167 484 141	167 484 142	167 484 143
5	Ball PP	1			
6	Stem PP	1			
7	Ball seal PTFE	2			
8	Backing seal FPM	2			
9	Body seal FPM	1			
11	Stem seal FPM	2			
	Seal set		161 486 406	161 486 407	161 486 408
8	Backing seal EPDM	2			
9	Body seal EPDM	1			
10	Face seal EPDM	2			
11	Stem seal EPDM	2			
	Seal set		161 486 416	161 486 417	161 486 418
8	Backing seal FPM	2			
9	Body seal FPM	1			
10	Face seal FPM	2			
11	Stem seal FPM	2			
3	Connecting piece 546 PP-H (G30) with fusion socket metric	1	167 482 907	167 482 908	167 482 909
3	Connecting piece 546 PP-H (G32) with socket fusion spigot metric	1	167 482 929	167 482 930	167 482 931
3	Connecting piece 546 PP-H (G35) with butt fusion spigot IR Plus® SDR11 metric	1	167 482 951	167 482 952	167 482 953
3	Connecting piece 546 PP-H (G36) with butt fusion spigot SDR17,6 metric	1	167 482 940	167 482 941	167 482 942
3	Connecting piece 546 (G73) subassembly with backing flange PP-ST ANSI	1	167 484 071	167 484 072	167 484 073
3	Connecting piece 546 (G77) subassembly with backing flange PP-GF JIS	1	167 484 481	167 484 482	167 484 483

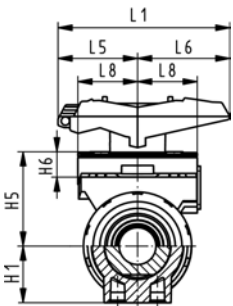
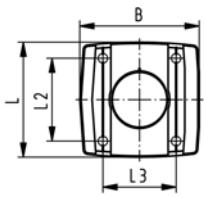
No.	Article / Material	Pieces	d75 DN65	d90 DN80	d110 DN100
3	Connecting piece 546 (G72) subassembly with backing flange PP-ST ISO BS	1	167 484 418	167 484 419	167 484 420
3	Connecting piece 546 PE 100 (G43) with butt fusion spigot long SDR11 metric	1	193 480 158	193 480 159	193 480 160
3	Connecting piece 546 PE 100 (G44) with butt fusion spigot long SDR17,6 metric	1	193 480 168	193 480 169	193 480 170
4	Union nut 546 PP-H	1	167 482 718	167 482 719	167 482 720
12	Standard handle 546 red (K01)	1	167 484 094	167 484 095	167 484 096
12	Standard handle 546 black (K02)	1	167 484 082	167 484 083	167 484 084
10	Face seal EPDM	1	748 410 119	748 410 023	748 410 254
10	Face seal FPM	1	749 410 119	749 410 023	749 410 254

# Accessories for Ball Valve 546

## Multifunctional module (I02) PP-GF Module empty



DN10/15 - 50



### Model:

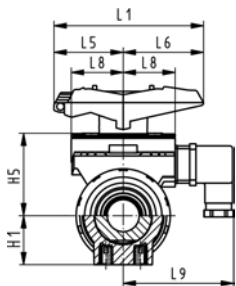
- Accessory to Ball Valve Type 546
- Multifunctional module acts as an intermediate element for actuators
- Including screws to mount the module and stainless steel coupling piece (V2A) for dimension DN65-100
- The multifunctional module from d75 - d110 has a master gauge F07 according to EN ISO 5211.

d-d [mm]	DN-DN [mm]	Code	kg
16 - 20	10 - 15	<b>167 482 680</b>	0.055
25 - 32	20 - 25	<b>167 482 681</b>	0.070
40 - 50	32 - 40	<b>167 482 682</b>	0.080
- 63	- 50	<b>167 482 683</b>	0.120
75 - 90	65 - 80	<b>167 482 684</b>	0.135
- 110	- 100	<b>167 482 685</b>	0.175

d-d [mm]	B [mm]	H1 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L5 [mm]	L6 [mm]	L8 [mm]
16 - 20	67	27	50	17	72	87	54	40	42	45	34
25 - 32	75	30	53	16	72	108	52	46	50	58	38
40 - 50	81	44	72	16	80	140	60	50	66	75	41
- 63	91	64	94	19	93	165	68	65	78	87	46
75 - 90	90	85	157	23	85	270			64	206	
- 110	106	123	175	23	97	320			64	256	



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## Multifunctional module (I03) PP-GF With mechanical limit switches Ag Ni

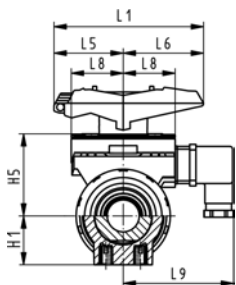
### Model:

- Accessory to Ball Valve Type 546
- Multifunctional module acts as an intermediate element for actuators
- Including Plug 3P+E / Protection: IP65
- Including screws to mount the module and stainless steel coupling piece (V2A) for dimension DN65-100

d-d [mm]	DN-DN [mm]	Code	kg	H1 [mm]	H5 [mm]	L1 [mm]	L5 [mm]	L6 [mm]	L8 [mm]	L9 [mm]
16 - 20	10 - 15	<b>167 482 626</b>	0.110	27	50	87	42	45	34	73
25 - 32	20 - 25	<b>167 482 627</b>	0.120	30	53	108	50	58	38	77
40 - 50	32 - 40	<b>167 482 628</b>	0.135	44	72	140	66	75	41	80
- 63	- 50	<b>167 482 629</b>	0.175	64	94	165	78	87	46	85
75 - 90	65 - 80	<b>167 482 630</b>	0.460	85	157	270	64	206		
- 110	- 100	<b>167 482 631</b>	0.480	123	175	320	64	256		



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## Multifunctional module (I04) PP-GF With mechanical limit switches Au

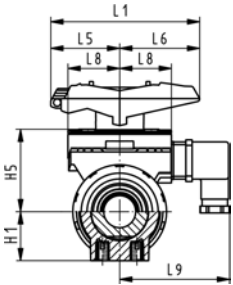
### Model:

- Accessory to Ball Valve Type 546
- Multifunctional module acts as an intermediate element for actuators
- Including Plug 3P+E / Protection: IP65
- Including screws to mount the module and stainless steel coupling piece (V2A) for dimension DN65-100

d-d [mm]	DN-DN [mm]	Code	kg	H1 [mm]	H5 [mm]	L1 [mm]	L5 [mm]	L6 [mm]	L8 [mm]	L9 [mm]
16 - 20	10 - 15	<b>167 482 635</b>	0.110	27	50	87	42	45	34	73
25 - 32	20 - 25	<b>167 482 636</b>	0.120	30	53	108	50	58	38	77
40 - 50	32 - 40	<b>167 482 637</b>	0.135	44	72	140	66	75	41	80
- 63	- 50	<b>167 482 638</b>	0.175	64	94	165	78	87	46	85
75 - 90	65 - 80	<b>167 482 639</b>	0.460	85	157	270	64	206		
- 110	- 100	<b>167 482 640</b>	0.480	123	175	320	64	256		



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## Multifunctional module (I05) PP-GF With inductive limit switches Namur

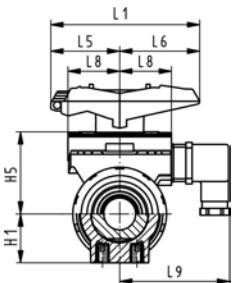
### Model:

- Accessory to Ball Valve Type 546
- Multifunctional module acts as an intermediate element for actuators
- Including Plug 3P+E / Protection: IP65
- Including screws to mount the module and stainless steel coupling piece (V2A) for dimension DN65-100

d-d [mm]	DN-DN [mm]	Code	kg	H1 [mm]	H5 [mm]	L1 [mm]	L5 [mm]	L6 [mm]	L8 [mm]	L9 [mm]
16 - 20	10 - 15	<b>167 482 671</b>	0.110	27	50	87	42	45	34	73
25 - 32	20 - 25	<b>167 482 672</b>	0.120	30	53	108	50	58	38	77
40 - 50	32 - 40	<b>167 482 673</b>	0.135	44	72	140	66	75	41	80
- 63	- 50	<b>167 482 674</b>	0.175	64	94	165	78	87	46	85
75 - 90	65 - 80	<b>167 482 675</b>	0.460	85	157	270	64	206		
- 110	- 100	<b>167 482 676</b>	0.480	123	175	320	64	256		



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## Multifunctional module (I06) PP-GF With inductive limit switches PNP

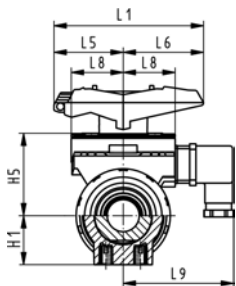
### Model:

- Accessory to Ball Valve Type 546
- Multifunctional module acts as an intermediate element for actuators
- Including Plug 3P+E / Protection: IP65
- Including screws to mount the module and stainless steel coupling piece (V2A) for dimension DN65-100

d-d [mm]	DN-DN [mm]	Code	kg	H1 [mm]	H5 [mm]	L1 [mm]	L5 [mm]	L6 [mm]	L8 [mm]	L9 [mm]
16 - 20	10 - 15	<b>167 482 662</b>	0.110	27	50	87	42	45	34	73
25 - 32	20 - 25	<b>167 482 663</b>	0.120	30	53	108	50	58	38	77
40 - 50	32 - 40	<b>167 482 664</b>	0.135	44	72	140	66	75	41	80
- 63	- 50	<b>167 482 665</b>	0.175	64	94	165	78	87	46	85
75 - 90	65 - 80	<b>167 482 666</b>	0.460	85	157	270	64	206		
- 110	- 100	<b>167 482 667</b>	0.480	123	175	320	64	256		



DN10/15 - 50

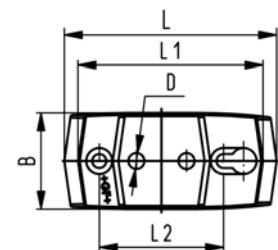
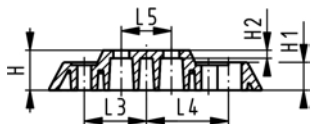


## Multifunctional module (I07) PP-GF With inductive limit switches NPN

### Model:

- Accessory to Ball Valve Type 546
- Multifunctional module acts as an intermediate element for actuators
- Including Plug 3P+E / Protection: IP65
- Including screws to mount the module and stainless steel coupling piece (V2A) for dimension DN65-100

d-d [mm]	DN-DN [mm]	Code	kg	H1 [mm]	H5 [mm]	L1 [mm]	L5 [mm]	L6 [mm]	L8 [mm]	L9 [mm]
16 - 20	10 - 15	<b>167 482 653</b>	0.110	27	50	87	42	45	34	73
25 - 32	20 - 25	<b>167 482 654</b>	0.120	30	53	108	50	58	38	77
40 - 50	32 - 40	<b>167 482 655</b>	0.135	44	72	140	66	75	41	80
- 63	- 50	<b>167 482 656</b>	0.175	64	94	165	78	87	46	85
75 - 90	65 - 80	<b>167 482 657</b>	0.460	85	157	270	64	206		
- 110	- 100	<b>167 482 658</b>	0.480	123	175	320	64	256		



## Mounting plate 546 PP-GF (L02)

- 2 mounting screws inclusive

d-d [mm]	DN-DN [mm]	Code	kg
16 - 32	10 - 25	<b>167 484 110</b>	0.055
40 - 63	32 - 50	<b>167 484 111</b>	0.086

d-d [mm]	B [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]
16 - 32	48	8	20	14	4	106	92	62	31	41	25
40 - 63	54	9	20	14	4	149	134	104	52	62	45



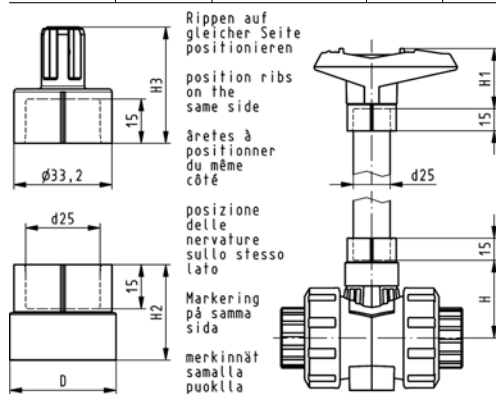


## Handle extension 546 PVC-U metric

### Model:

- For Ball Valve Type 546
- Composed of adapter sockets for handle connection and stem connection
- PVC-U pipe in suitable length has to be obtained on site

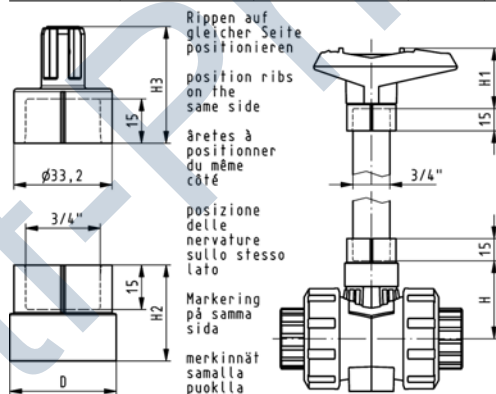
d-d [mm]	DN-DN [mm]	Code	kg	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	D [mm]
16 - 20	10 - 15	<b>161 486 435</b>	0.032	41	52	29	36	26
25 - 32	20 - 25	<b>161 486 436</b>	0.037	50	62	32	39	36
40 - 50	32 - 40	<b>161 486 437</b>	0.047	65	76	34	44	40
- 63	- 50	<b>161 486 438</b>	0.058	84	87	37	48	44



## Handle extension 546 PVC-U inch BS/ASTM

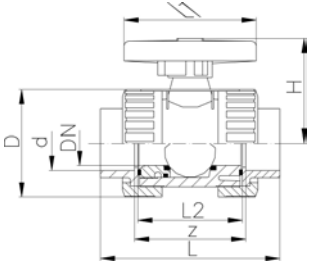
- For Ball Valve Type 546

DN-DN [mm]	Inch	Code	kg	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	D [mm]
10 - 15	3/8-1/2	<b>161 486 443</b>	0.032	41	52	29	36	26
20 - 25	3/4-1	<b>161 486 444</b>	0.037	50	62	32	39	36
32 - 40	1 1/4-1 1/2	<b>161 486 445</b>	0.047	65	76	34	44	40
50 -	2	<b>161 486 446</b>	0.058	84	87	37	48	44



## Ball Valves 323

### PROGEF Standard Metering ball valve type 323 With fusion sockets



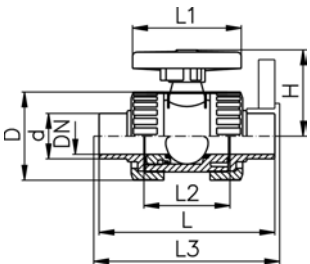
**Model:**

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Angle of operation 180° with scale

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	11	167 323 401	167 323 411	0.103
20	15	10	20	167 323 402	167 323 412	0.104

d [mm]	D [mm]	H [mm]	L [mm]	L1 [mm]	L2 [mm]	z [mm]
16	46	50	98	78	62	72
20	46	50	101	78	62	73

### PROGEF Standard Metering ball valve type 323 With socket fusion spigots

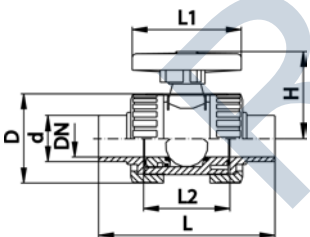


**Model:**

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Angle of operation 180° with scale

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	D [mm]	H [mm]	L [mm]	L1 [mm]	L2 [mm]
16	10	10	11	167 323 441	167 323 451	0.100	46	50	109	78	62
20	15	10	20	167 323 442	167 323 452	0.100	46	50	124	78	62

### PROGEF Standard Metering ball valve type 323 With butt fusion spigots SDR11



**Model:**

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Angle of operation 180° with scale

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	D [mm]	H [mm]	L [mm]	L1 [mm]	L2 [mm]
20	15	10	20	167 323 482	167 323 492	0.106	46	50	130	78	62



## Key PBTP black

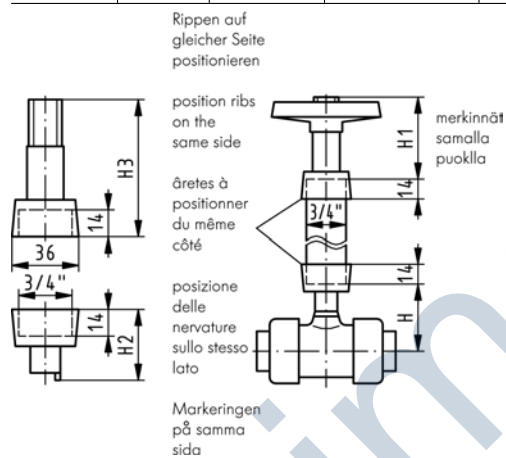
- For assembly and disassembly of the union bush of ball valves type 323, 343, 346 and ball check valves 360

d-d [mm]	DN-DN [mm]	Inch	Code	kg	
16 - 63	10 - 50	3/8-2	<b>160 480 106</b>	0.038	

## Handle extension type 615 PVC-U

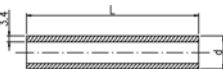
- For Ball Valves Type 323, 343 and 346

d [mm]	DN [mm]	Inch [inch]	Code	kg	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	
16 - 20	10 - 15	3/8 - 1/2	<b>161 483 561</b>	0.160	102	102	37	59	
25	20	3/4	<b>161 483 562</b>	0.170	114	114	40	62	
32	25	1	<b>161 483 563</b>	0.280	127	127	42	65	
40	32	1 1/4	<b>161 483 564</b>	0.400	137	137	43	67	
50	40	1 1/2	<b>161 483 565</b>	0.055	152	152	46	69	
63	50	2	<b>161 483 566</b>	0.056	175	175	51	71	



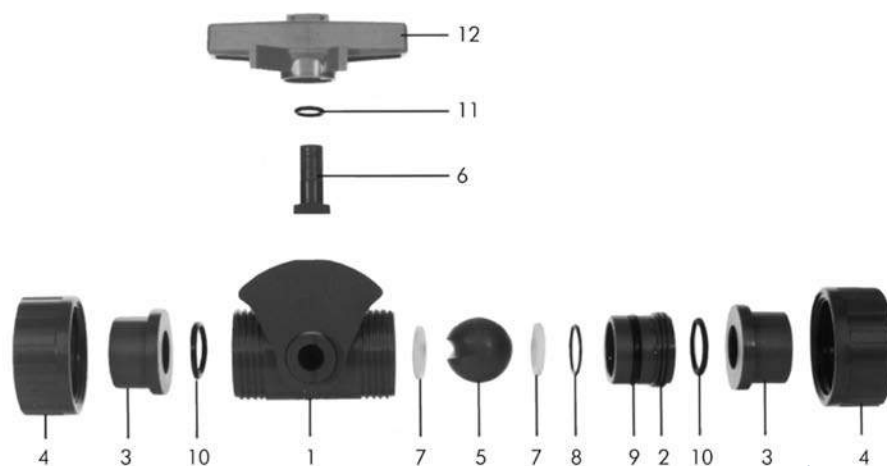
## Pipe PVC-U

- For Handle Extension Type 615



d [inch]	Code	kg	l [mm]	l [mm]	
3/4	<b>161 483 570</b>	0.075	200	200	
3/4	<b>161 483 571</b>	0.200	1000	1000	

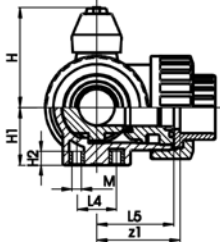
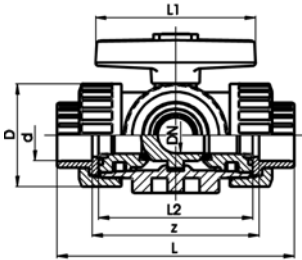
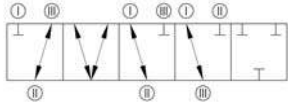
## Spare parts for metering ball valve type 323 PP-H



No.	Article / Material	Pieces	d16 DN10	d20 DN15
	Ball set		167 480 901	167 480 902
5	Ball PP	1		
7	Ball seal PTFE	2		
6	Stem PP	1		
11	Stem seal EPDM	1		
12	Lever ASA	1		
	Ball set		167 480 904	197 480 905
5	Ball PP	1		
7	Ball seal PTFE	2		
6	Stem PP	1		
11	Stem seal FPM	1		
12	Lever ASA	1		
	Seal set		161 482 883	161 482 883
8	Backing seal EPDM	2	No. 11, 1 Piece	No. 11, 1 Piece
9	Body seal EPDM	1		
10	Face seal EPDM	1		
11	Stem seal EPDM	2		
	Seal set		161 482 892	161 482 892
8	Backing seal FPM	2	No. 11, 1 Piece	No. 11, 1 Piece
9	Body seal FPM	1		
10	Face seal FPM	1		
11	Stem seal FPM	2		
2	PP-H	1	167 480 519	167 480 519
10	Face seal EPDM	2	748 410 042	748 410 042
10	Face seal FPM	2	749 410 042	749 410 042
3	Fusion socket PP-H	1	167 480 159	167 480 160
3	Socket fusion spigot PP-H	1	167 480 527	167 480 528
3	Butt fusion spigot PP-H SDR11	1	-	167 480 546
3	Fusion socket PE 80	1	173 480 000	173 480 001
4	Union nut PP-H	1	167 480 786	167 480 786
12	Lever ASA	1	160 480 130	160 480 130

# Ball Valves 343

## PROGEF Standard 3-Way ball valve type 343 Horizontal/L-port With fusion sockets metric



### Model:

- Material: PP-H
- L-port ball
- For easy installation and removal
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	49	<b>167 343 001</b>	<b>167 343 011</b>	0.141
20	15	10	77	<b>167 343 002</b>	<b>167 343 012</b>	0.141
25	20	10	146	<b>167 343 003</b>	<b>167 343 013</b>	0.254
32	25	10	260	<b>167 343 004</b>	<b>167 343 014</b>	0.346
40	32	10	437	<b>167 343 005</b>	<b>167 343 015</b>	0.568
50	40	10	667	<b>167 343 006</b>	<b>167 343 016</b>	0.919
63	50	10	1293	<b>167 343 007</b>	<b>167 343 017</b>	1.758

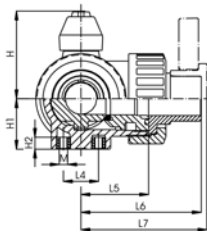
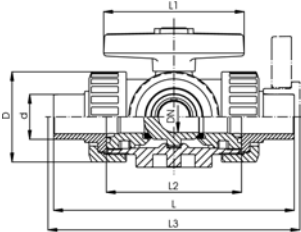
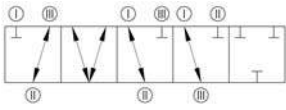
d [mm]	z [mm]	z1 [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	M
16	78	39	46	50	27	8	108	78	70	25	36	6
20	79	40	46	50	27	8	111	78	70	25	36	6
25	95	48	56	60	33	8	131	92	86	25	43	6
32	108	54	67	68	36	8	148	100	96	25	48	6
40	133	67	82	79	44	9	177	110	114	45	58	8
50	155	78	98	90	49	9	205	120	137	45	69	8
63	203	102	121	109	61	9	261	146	179	45	90	8



## PROGEF Standard 3-Way ball valve type 343 Horizontal/L-port With socket fusion spigots metric

### Model:

- Material: PP-H
- L-port ball
- For easy installation and removal
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter



d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	49	<b>167 343 021</b>	<b>167 343 031</b>	0.141
20	15	10	77	<b>167 343 022</b>	<b>167 343 032</b>	0.141
25	20	10	146	<b>167 343 023</b>	<b>167 343 033</b>	0.254
32	25	10	260	<b>167 343 024</b>	<b>167 343 034</b>	0.346
40	32	10	437	<b>167 343 025</b>	<b>167 343 035</b>	0.568
50	40	10	667	<b>167 343 026</b>	<b>167 343 036</b>	0.919
63	50	10	1293	<b>167 343 027</b>	<b>167 343 037</b>	1.758

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	M
16	46	50	27	8	119	78	70		25	36	60		6
20	46	50	27	8	133	78	70	143	25	36	67	72	6
25	56	60	33	8	155	92	86	165	25	43	78	83	6
32	67	68	36	8	170	100	96	180	25	48	85	90	6
40	82	79	44	9	201	110	114	211	45	58	101	106	8
50	98	90	49	9	236	120	137	246	45	69	118	123	8
63	121	109	61	9	286	146	179	296	45	90	143	148	8

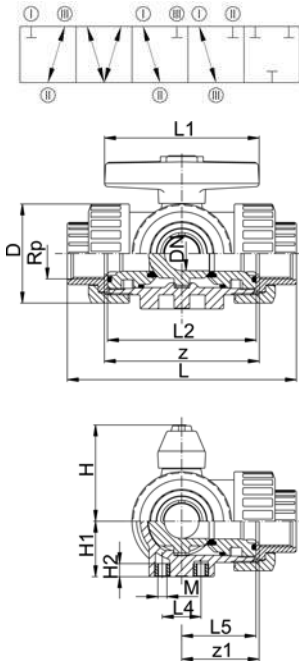


## PROGEF Standard 3-Way ball valve type 343 Horizontal/L-port With threaded sockets Rp

### Model:

- Material: PP-H
- L-port ball
- For easy installation and removal
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter

- Parallel female thread Rp



Rp [inch]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg						
3/8	10	10	49	<b>167 343 081</b>	<b>167 343 091</b>	0.199						
1/2	15	10	77	<b>167 343 082</b>	<b>167 343 092</b>	0.199						
3/4	20	10	146	<b>167 343 083</b>	<b>167 343 093</b>	0.370						
1	25	10	260	<b>167 343 084</b>	<b>167 343 094</b>	0.504						
1 1/4	32	10	437	<b>167 343 085</b>	<b>167 343 095</b>	0.838						
1 1/2	40	10	667	<b>167 343 086</b>	<b>167 343 096</b>	1.359						
2	50	10	1293	<b>167 343 087</b>	<b>167 343 097</b>	2.622						

Rp [inch]	z [mm]	z1 [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	M
3/8	76	38	46	50	27	8	108	78	70	25	36	6
1/2	76	38	46	50	27	8	111	78	70	25	36	6
3/4	90	45	56	60	33	8	131	92	86	25	43	6
1	100	50	67	68	36	8	148	100	96	25	48	6
1 1/4	122	61	82	79	44	9	176	110	114	45	58	8
1 1/2	152	76	98	90	49	9	206	120	137	45	69	8
2	200	100	121	109	61	9	262	146	179	45	90	8

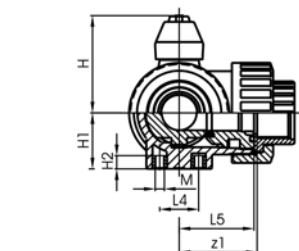
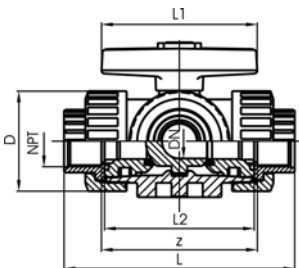
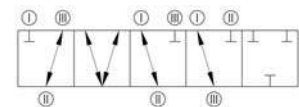




## PROGEF Standard 3-Way ball valve type 343 Horizontal/L-port With threaded sockets NPT

### Model:

- Material: PP-H
- L-port ball
- For easy installation and removal
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter
- Tapered female thread NPT

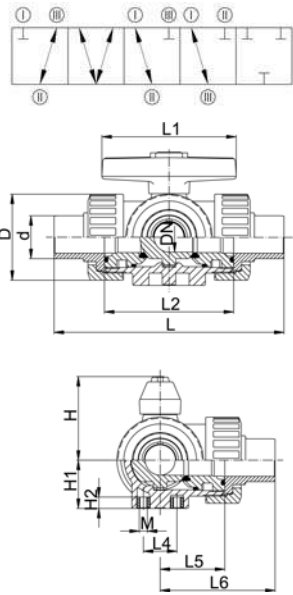


NPT [inch]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
3/8	10	10	49	<b>167 343 161</b>	<b>167 343 171</b>	0.199
1/2	15	10	77	<b>167 343 162</b>	<b>167 343 172</b>	0.199
3/4	20	10	146	<b>167 343 163</b>	<b>167 343 173</b>	0.370
1	25	10	260	<b>167 343 164</b>	<b>167 343 174</b>	0.504
1 1/4	32	10	437	<b>167 343 165</b>	<b>167 343 175</b>	0.838
1 1/2	40	10	667	<b>167 343 166</b>	<b>167 343 176</b>	1.359
2	50	10	1293	<b>167 343 167</b>	<b>167 343 177</b>	2.622

NPT [inch]	z [mm]	z1 [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	M
3/8	76	38	46	50	27	8	108	78	70	25	36	6
1/2	76	38	46	50	27	8	111	78	70	25	36	6
3/4	90	45	56	60	33	8	131	92	86	25	43	6
1	100	50	67	68	36	8	148	100	96	25	48	6
1 1/4	122	61	82	79	44	9	176	110	114	45	58	8
1 1/2	152	76	98	90	49	9	206	120	137	45	69	8
2	200	100	121	109	61	9	262	146	179	45	90	8



**PROGEF Standard**  
**3-Way ball valve type 343**  
**Horizontal/L-port**  
**With butt fusion spigots SDR11**



**Model:**

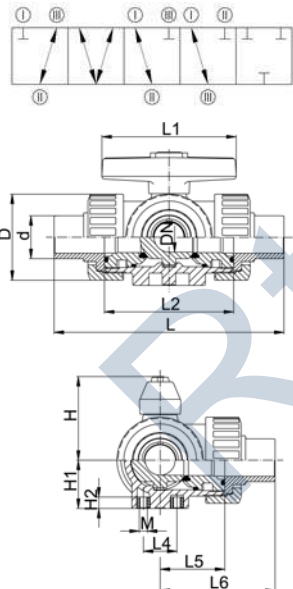
- Material: PP-H
- L-port ball
- For easy installation and removal
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	10	77	<b>167 343 062</b>	<b>167 343 072</b>	0.141
25	20	10	146	<b>167 343 063</b>	<b>167 343 073</b>	0.254
32	25	10	260	<b>167 343 064</b>	<b>167 343 074</b>	0.346
40	32	10	437	<b>167 343 065</b>	<b>167 343 075</b>	0.568
50	40	10	667	<b>167 343 066</b>	<b>167 343 076</b>	0.919
63	50	10	1293	<b>167 343 067</b>	<b>167 343 077</b>	1.758

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M
20	46	50	27	8	140	78	70	25	36	70	6
25	56	60	33	8	156	92	86	25	43	78	6
32	67	68	36	8	168	100	96	25	48	84	6
40	82	79	44	9	198	110	114	45	58	99	8
50	98	90	49	9	233	120	137	45	69	117	8
63	121	109	61	9	284	146	179	45	90	142	8



**PROGEF Standard**  
**3-Way ball valve type 343**  
**Horizontal/L-port**  
**With butt fusion spigots SDR17**



**Model:**

- Material: PP-H
- L-port ball
- For easy installation and removal
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 360° without turn limiter

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	6	77	<b>167 343 042</b>	<b>167 343 052</b>	0.141
25	20	6	146	<b>167 343 043</b>	<b>167 343 053</b>	0.254
32	25	6	260	<b>167 343 044</b>	<b>167 343 054</b>	0.346
40	32	6	437	<b>167 343 045</b>	<b>167 343 055</b>	0.568
50	40	6	667	<b>167 343 046</b>	<b>167 343 056</b>	0.919
63	50	6	1293	<b>167 343 047</b>	<b>167 343 057</b>	1.758

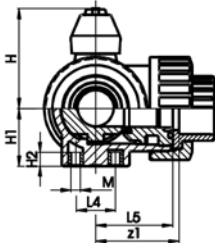
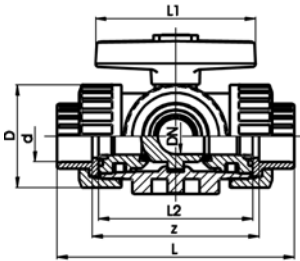
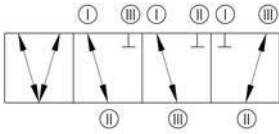
d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M
20	46	50	27	8	140	78	70	25	36	70	6
25	56	60	33	8	156	92	86	25	43	78	6
32	67	68	36	8	168	100	96	25	48	84	6
40	82	79	44	9	198	110	114	45	58	99	8
50	98	90	49	9	233	120	137	45	69	117	8
63	121	109	61	9	284	146	179	45	90	142	8



## PROGEF Standard 3-Way ball valve type 343 Horizontal/T-port With fusion sockets metric

### Model:

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 90°, without turn limiter



d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	140	<b>167 343 201</b>	<b>167 343 211</b>	0.141
20	15	10	200	<b>167 343 202</b>	<b>167 343 212</b>	0.141
25	20	10	470	<b>167 343 203</b>	<b>167 343 213</b>	0.254
32	25	10	793	<b>167 343 204</b>	<b>167 343 214</b>	0.346
40	32	10	1290	<b>167 343 205</b>	<b>167 343 215</b>	0.568
50	40	10	1910	<b>167 343 206</b>	<b>167 343 216</b>	0.919
63	50	10	3100	<b>167 343 207</b>	<b>167 343 217</b>	1.758

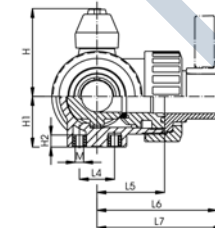
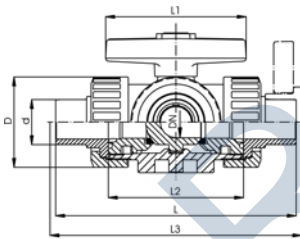
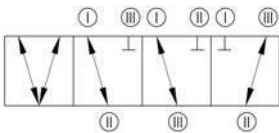
d [mm]	z [mm]	z1 [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	M
16	78	39	46	50	27	8	108	78	70	25	36	6
20	79	40	46	50	27	8	111	78	70	25	36	6
25	95	48	56	60	33	8	131	92	86	25	43	6
32	108	54	67	68	36	8	148	100	96	25	48	6
40	133	67	82	79	44	9	177	110	114	45	58	8
50	155	78	98	90	49	9	205	120	137	45	69	8
63	203	102	121	109	61	9	261	146	179	45	90	8



## PROGEF Standard 3-Way ball valve type 343 Horizontal/T-port With socket fusion spigots metric

### Model:

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 90°, without turn limiter



d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	140	<b>167 343 221</b>	<b>167 343 231</b>	0.141
20	15	10	200	<b>167 343 222</b>	<b>167 343 232</b>	0.141
25	20	10	470	<b>167 343 223</b>	<b>167 343 233</b>	0.254
32	25	10	793	<b>167 343 224</b>	<b>167 343 234</b>	0.346
40	32	10	1290	<b>167 343 225</b>	<b>167 343 235</b>	0.568
50	40	10	1910	<b>167 343 226</b>	<b>167 343 236</b>	0.919
63	50	10	3100	<b>167 343 227</b>	<b>167 343 237</b>	1.758

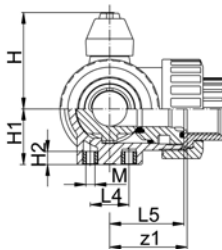
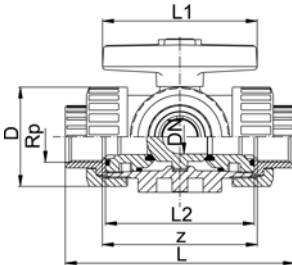
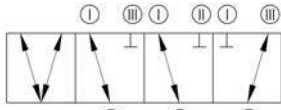
d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	M
16	46	50	27	8	119	78	70		25	36	60		6
20	46	50	27	8	133	78	70	143	25	36	67	72	6
25	56	60	33	8	155	92	86	165	25	43	78	83	6
32	67	68	36	8	170	100	96	180	25	48	85	90	6
40	82	79	44	9	201	110	114	211	45	58	101	106	8
50	98	90	49	9	236	120	137	246	45	69	118	123	8
63	121	109	61	9	286	146	179	296	45	90	143	148	8



## PROGEF Standard 3-Way ball valve type 343 Horizontal/T-port With threaded sockets Rp

### Model:

- Material: PP-H
  - For easy installation and removal
  - Ball seals PTFE
  - Pneumatic or electric actuator available separately
  - Angle of operation 90°, without turn limiter
- Parallel female thread Rp



Rp [inch]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
3/8	10	10	140	<b>167 343 281</b>	<b>167 343 291</b>	0.199
1/2	15	10	200	<b>167 343 282</b>	<b>167 343 292</b>	0.199
3/4	20	10	470	<b>167 343 283</b>	<b>167 343 293</b>	0.370
1	25	10	793	<b>167 343 284</b>	<b>167 343 294</b>	0.504
1 1/4	32	10	1290	<b>167 343 285</b>	<b>167 343 295</b>	0.838
1 1/2	40	10	1910	<b>167 343 286</b>	<b>167 343 296</b>	1.359
2	50	10	3100	<b>167 343 287</b>	<b>167 343 297</b>	2.622

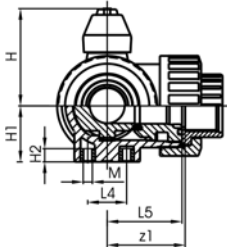
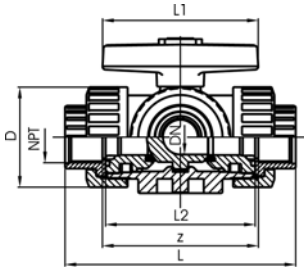
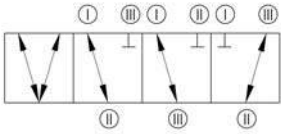
Rp [inch]	z [mm]	z1 [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	M
3/8	76	38	46	50	27	8	108	78	70	25	36	6
1/2	76	38	46	50	27	8	111	78	70	25	36	6
3/4	90	45	56	60	33	8	131	92	86	25	43	6
1	100	50	67	68	36	8	148	100	96	25	48	6
1 1/4	122	61	82	79	44	9	176	110	114	45	58	8
1 1/2	152	76	98	90	49	9	206	120	137	45	69	8
2	200	100	121	109	61	9	262	146	179	45	90	8



## PROGEF Standard 3-Way ball valve type 343 Horizontal/T-port With threaded sockets NPT

### Model:

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 90°, without turn limiter
- Tapered female thread NPT



NPT [inch]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
3/8	10	10	140	<b>167 343 361</b>	<b>167 343 371</b>	0.199
1/2	15	10	200	<b>167 343 362</b>	<b>167 343 372</b>	0.199
3/4	20	10	470	<b>167 343 363</b>	<b>167 343 373</b>	0.370
1	25	10	793	<b>167 343 364</b>	<b>167 343 374</b>	0.504
1 1/4	32	10	1290	<b>167 343 365</b>	<b>167 343 375</b>	0.838
1 1/2	40	10	1910	<b>167 343 366</b>	<b>167 343 376</b>	1.359
2	50	10	3100	<b>167 343 367</b>	<b>167 343 377</b>	2.622

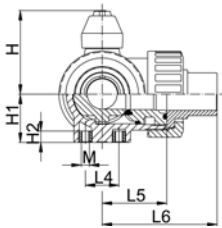
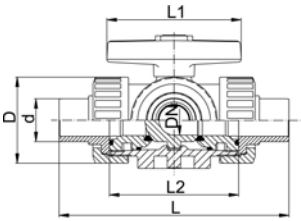
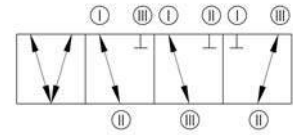
NPT [inch]	z [mm]	z1 [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	M
3/8	76	38	46	50	27	8	108	78	70	25	36	6
1/2	76	38	46	50	27	8	111	78	70	25	36	6
3/4	90	45	56	60	33	8	131	92	86	25	43	6
1	100	50	67	68	36	8	148	100	96	25	48	6
1 1/4	122	61	82	79	44	9	176	110	114	45	58	8
1 1/2	152	76	98	90	49	9	206	120	137	45	69	8
2	200	100	121	109	61	9	262	146	179	45	90	8



## PROGEF Standard 3-Way ball valve type 343 Horizontal/T-port With butt fusion spigots SDR11

### Model:

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 90°, without turn limiter



d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	10	200	<b>167 343 262</b>	<b>167 343 272</b>	0.141
25	20	10	470	<b>167 343 263</b>	<b>167 343 273</b>	0.254
32	25	10	793	<b>167 343 264</b>	<b>167 343 274</b>	0.346
40	32	10	1290	<b>167 343 265</b>	<b>167 343 275</b>	0.568
50	40	10	1910	<b>167 343 266</b>	<b>167 343 276</b>	0.919
63	50	10	3100	<b>167 343 267</b>	<b>167 343 277</b>	1.758

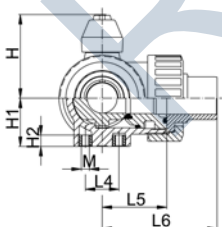
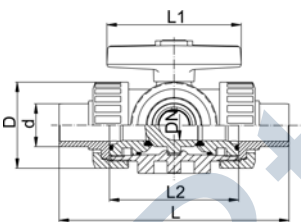
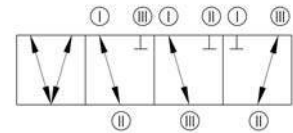
d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M
20	46	50	27	8	140	78	70	25	36	70	6
25	56	60	33	8	156	92	86	25	43	78	6
32	67	68	36	8	168	100	96	25	48	84	6
40	82	79	44	9	198	110	114	45	58	99	8
50	98	90	49	9	233	120	137	45	69	117	8
63	121	109	61	9	284	146	179	45	90	142	8



## PROGEF Standard 3-Way ball valve type 343 Horizontal/T-port With butt fusion spigots SDR17

### Model:

- Material: PP-H
- For easy installation and removal
- Ball seals PTFE
- Pneumatic or electric actuator available separately
- Angle of operation 90°, without turn limiter



d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	6	200	<b>167 343 242</b>	<b>167 343 252</b>	0.141
25	20	6	470	<b>167 343 243</b>	<b>167 343 253</b>	0.254
32	25	6	793	<b>167 343 244</b>	<b>167 343 254</b>	0.346
40	32	6	1290	<b>167 343 245</b>	<b>167 343 255</b>	0.568
50	40	6	1910	<b>167 343 246</b>	<b>167 343 256</b>	0.919
63	50	6	3100	<b>167 343 247</b>	<b>167 343 257</b>	1.758

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M
20	46	50	27	8	140	78	70	25	36	70	6
25	56	60	33	8	156	92	86	25	43	78	6
32	67	68	36	8	168	100	96	25	48	84	6
40	82	79	44	9	198	110	114	45	58	99	8
50	98	90	49	9	233	120	137	45	69	117	8
63	121	109	61	9	284	146	179	45	90	142	8



## Key PBTP black

- For assembly and disassembly of the union bush of ball valves type 323, 343, 346 and ball check valves 360

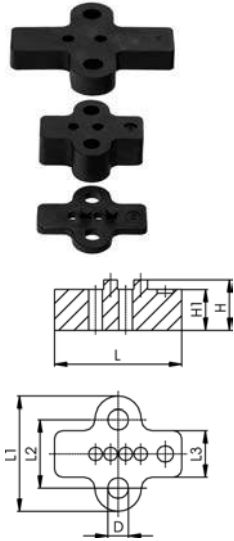
d-d [mm]	DN-DN [mm]	Inch	Code	kg
16 - 63	10 - 50	3/8-2	<b>160 480 106</b>	0.038

## Mounting block PP

- For diaphragm valve to be compatible with pipe clips type 061 and one spacer type 061
- For 3-way ball valve type 343 to be compatible with pipe clips type 061 and one spacer type 061
- For dimensions DN 10-15, the two mounting blocks (No 2+6) have to be ordered separately. They are to be assembled together.**

d-d [mm]	DN-DN [mm]	Inch	Block no.	Code	kg
16 - 20	10 - 15	3/8-1/2	2	<b>167 480 423</b>	0.003
25 - 32	20 - 25	3/4-1	6	<b>167 482 238</b>	0.017
40 - 63	32 - 50	1 1/4-2	7	<b>167 482 239</b>	0.030

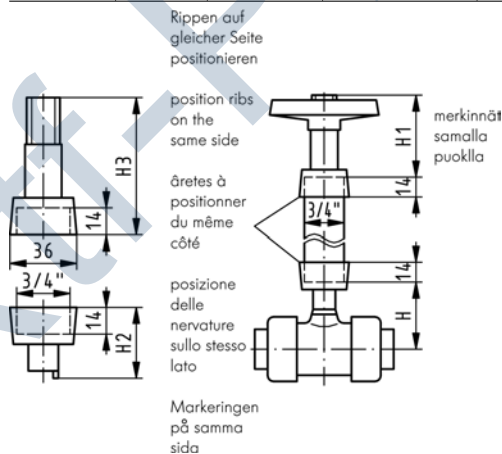
d-d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]
16 - 20	8	7	4	47	42	25	17
25 - 32	8	15	15	47	42	25	17
40 - 63	10	11	11	80	67	45	22



## Handle extension type 615 PVC-U

- For Ball Valves Type 323, 343 and 346

d [mm]	DN [mm]	Inch [inch]	Code	kg	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]
16 - 20	10 - 15	3/8 - 1/2	<b>161 483 561</b>	0.160	102	102	37	59
25	20	3/4	<b>161 483 562</b>	0.170	114	114	40	62
32	25	1	<b>161 483 563</b>	0.280	127	127	42	65
40	32	1 1/4	<b>161 483 564</b>	0.400	137	137	43	67
50	40	1 1/2	<b>161 483 565</b>	0.055	152	152	46	69
63	50	2	<b>161 483 566</b>	0.056	175	175	51	71







## Pipe PVC-U

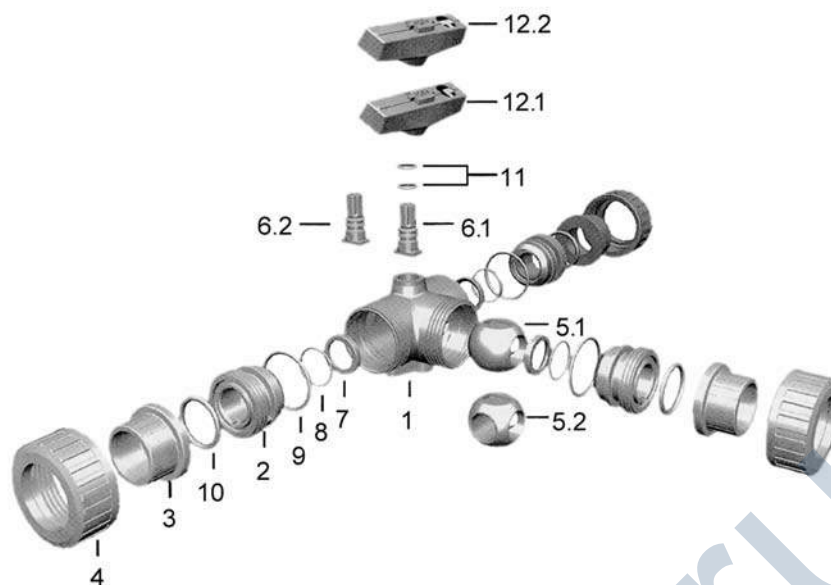
- For Handle Extension Type 615

d [inch]	Code	kg	l [mm]	l [mm]
3/4	<b>161 483 570</b>	0.075	200	200
3/4	<b>161 483 571</b>	0.200	1000	1000

Rtf-Prime.ru



## Spare parts for ball valve type 343 PP-H



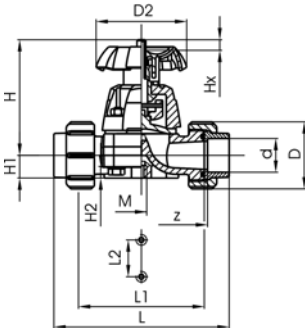
No.	Article / Material	Pieces	d16 DN 10	d20 DN 15	d25 DN 20	d32 DN 25	d40 DN 32	d50 DN 40	d63 DN 50
8	Seal set		161 484 941	161 484 941	161 484 942	161 484 943	161 484 944	161 484 945	161 484 946
9	Backing seal EPDM	3							
10	Body seal EPDM	3							
11	Face seal EPDM	3							
11	Stem seal EPDM	2							
8	Seal set		161 484 951	161 484 951	161 484 952	161 484 953	161 484 954	161 484 955	161 484 956
9	Backing seal FPM	3							
10	Body seal FPM	3							
11	Face seal FPM	3							
11	Stem seal FPM	2							
5.1	Ball set L-port		167 482 190	167 482 190	167 482 191	167 482 192	167 482 193	167 482 194	167 482 195
7	L-port ball PP	1							
6.1	Ball seal PTFE	3							
11	Stem PP	1							
12.1	Stem seal EPDM	2							
12.1	Lever ASA	1							
5.1	Ball set L-port		167 482 202	167 482 202	167 482 203	167 482 204	167 482 205	167 482 206	167 482 207
7	L-port ball PP	1							
6.1	Ball seal PTFE	3							
11	Stem PP	1							
12.1	Stem seal FPM	2							
12.1	Lever ASA	1							
5.2	Ball set T-port		167 482 214	167 482 214	167 482 215	167 482 216	167 482 217	167 482 218	167 482 219
7	T-port ball PP	1							
6.2	Ball seal PTFE	3							
11	Stem PP	1							
12.2	Stem seal EPDM	2							
12.2	Lever ASA	1							

No.	Article / Material	Pieces	d16 DN 10	d20 DN 15	d25 DN 20	d32 DN 25	d40 DN 32	d50 DN 40	d63 DN 50
	Ball set T-port		167 482 226	167 482 226	167 482 227	167 482 228	167 482 229	167 482 230	167 482 231
5.2	T-port ball PP	1							
7	Ball seal PTFE	3							
6.2	Stem PP	1							
11	Stem seal FPM	2							
12.2	Lever ASA	1							
	Central part L-port		167 482 137	167 482 137	167 482 138	167 482 139	167 482 140	167 482 141	167 482 142
1	Body PP	1							
5.1	L-port ball PP	1							
7	Ball seal PTFE	3							
8	Backing seal EPDM	3							
9	Body seal EPDM	3							
2	PP	3							
6.1	Stem PP	1							
11	Stem seal EPDM	2							
12.1	Lever ASA	1							
	Central part L-port		167 482 148	167 482 148	167 482 149	167 482 150	167 482 151	167 482 152	167 482 153
1	Body PP	1							
5.1	L-port ball PP	1							
7	Ball seal PTFE	3							
8	Backing seal FPM	3							
9	Body seal FPM	3							
2	PP	3							
6.1	Stem PP	1							
11	Stem seal FPM	2							
12.1	Lever ASA	1							
	Central part T-port		167 482 159	167 482 159	167 482 160	167 482 161	167 482 162	167 482 163	167 482 164
1	Body PP	1							
5.2	T-port ball PP	1							
7	Ball seal PTFE	3							
8	Backing seal EPDM	3							
9	Body seal EPDM	3							
2	PP	3							
6.2	Stem PP	1							
11	Stem seal EPDM	2							
12.2	Lever ASA	1							
	Central part T-port		167 482 170	167 482 170	167 482 171	167 482 172	167 482 173	167 482 174	167 482 175
1	Body PP	1							
5.2	T-port ball PP	1							
7	Ball seal PTFE	3							
8	Backing seal FPM	3							
9	Body seal FPM	3							
2	PP	3							
6.2	Stem PP	1							
11	Stem seal FPM	2							
12.2	Lever ASA	1							

No.	Article / Material	Pieces	d16 DN 10	d20 DN 15	d25 DN 20	d32 DN 25	d40 DN 32	d50 DN 40	d63 DN 50
3	Fusion socket PP-H	1	167 480 159	167 480 160	167 480 161	167 480 162	167 480 163	167 480 164	167 480 165
3	Socket fusion spigot PP-H	1	167 480 527	167 480 528	167 480 529	167 480 530	167 480 531	167 480 532	167 480 533
3	Threaded socket PP-H	1	167 480 166	167 480 167	167 480 168	167 480 169	167 480 170	167 480 171	167 480 172
3	Threaded socket PP-H	1	167 480 452	167 480 453	167 480 454	167 480 455	167 480 456	167 480 457	167 480 458
3	Butt fusion spigot long PP-H SDR11	1	-	167 482 546	167 482 547	167 482 548	167 482 549	167 482 550	167 482 551
3	Butt fusion spigot PP-H	1	-	167 480 546	167 480 547	167 480 548	167 480 549	167 480 550	167 480 551
3	Butt fusion spigot PP-H	1	-	167 480 537	167 480 538	167 480 539	167 480 540	167 480 541	167 480 542
3	Fusion socket PE 80	1	173 480 000	173 480 001	173 480 002	173 480 003	173 480 004	173 480 005	173 480 006
3	Butt fusion spigot long PE 100 SDR11	1	-	193 480 127	193 480 128	193 480 129	193 480 130	193 480 131	193 480 132
3	Butt fusion spigot PE 100	1	193 480 026	193 480 027	193 480 028	193 480 029	193 480 030	193 480 031	193 480 032
3	Butt fusion spigot PE 100	1	-	-	193 480 014	193 480 015	193 480 016	193 480 017	193 480 018
10	Face seal EPDM		748 410 042	748 410 042	748 410 116	748 410 103	748 410 027	748 410 010	748 410 011
10	Face seal FPM		749 410 042	749 410 042	749 410 116	749 410 103	749 410 027	749 410 010	749 410 011
4	Union nut PP-H	1	167 480 786	167 480 786	167 480 787	167 480 788	167 480 789	167 480 790	167 480 791
12	Lever ASA	1	160 480 115	160 480 115	160 480 116	160 480 117	160 480 118	160 480 119	160 480 120

# Diaphragm Valves 314

## PROGEF Standard Diaphragm valve type 314 With fusion sockets metric



### Model:

- Material: PP-H
- For easy installation and removal
- Short overall length

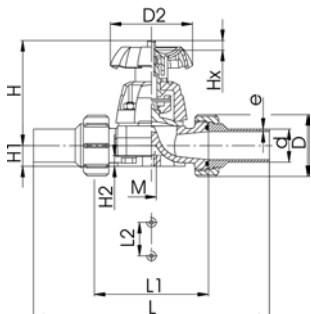
### Option:

- Handwheel with built in locking mechanism

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	NBR Code	EPDM Code	CSM Code	PTFE with EPDM supporting diaphragm Code
20	15	10	72	<b>167 314 402</b>	<b>167 314 417</b>	<b>167 314 447</b>	<b>167 314 432</b>
25	20	10	137	<b>167 314 403</b>	<b>167 314 418</b>	<b>167 314 448</b>	<b>167 314 433</b>
32	25	10	207	<b>167 314 404</b>	<b>167 314 419</b>	<b>167 314 449</b>	<b>167 314 434</b>
40	32	10	354	<b>167 314 405</b>	<b>167 314 420</b>	<b>167 314 450</b>	<b>167 314 435</b>
50	40	10	517	<b>167 314 406</b>	<b>167 314 421</b>	<b>167 314 451</b>	<b>167 314 436</b>
63	50	10	713	<b>167 314 407</b>	<b>167 314 422</b>	<b>167 314 452</b>	<b>167 314 437</b>

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	FPM Code	kg
20	15	10	72	<b>167 314 462</b>	0.380
25	20	10	137	<b>167 314 463</b>	0.560
32	25	10	207	<b>167 314 464</b>	0.760
40	32	10	354	<b>167 314 465</b>	1.220
50	40	10	517	<b>167 314 466</b>	1.600
63	50	10	713	<b>167 314 467</b>	2.780

d [mm]	z [mm]	D [mm]	D2 [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	M	Lift = Hx [mm]
20	100	47	80	128	90	25	90	14	12	M6	8
25	118	57	80	150	108	25	101	18	12	M6	11
32	126	64	94	162	116	25	117	21	12	M6	13
40	144	78	117	184	134	45	127	26	15	M8	16
50	164	89	117	210	154	45	139	33	15	M8	21
63	194	109	152	248	184	45	172	39	15	M8	28



## PROGEF Standard Diaphragm valve type 314 With butt fusion spigots SDR11

### Model:

- Material: PP-H
- For easy installation and removal
- Short overall length

### Option:

- Handwheel with built in locking mechanism

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	NBR Code	EPDM Code	CSM Code	PTFE with EPDM supporting diaphragm Code
20	15	10	72	<b>167 314 502</b>	<b>167 314 517</b>	<b>167 314 547</b>	<b>167 314 532</b>
25	20	10	137	<b>167 314 503</b>	<b>167 314 518</b>	<b>167 314 548</b>	<b>167 314 533</b>
32	25	10	207	<b>167 314 504</b>	<b>167 314 519</b>	<b>167 314 549</b>	<b>167 314 534</b>
40	32	10	354	<b>167 314 505</b>	<b>167 314 520</b>	<b>167 314 550</b>	<b>167 314 535</b>
50	40	10	517	<b>167 314 506</b>	<b>167 314 521</b>	<b>167 314 551</b>	<b>167 314 536</b>
63	50	10	713	<b>167 314 507</b>	<b>167 314 522</b>	<b>167 314 552</b>	<b>167 314 537</b>

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	FPM Code	kg
20	15	10	72	<b>167 314 562</b>	0.395
25	20	10	137	<b>167 314 563</b>	0.590
32	25	10	207	<b>167 314 564</b>	0.800
40	32	10	354	<b>167 314 565</b>	1.270
50	40	10	517	<b>167 314 566</b>	1.670
63	50	10	713	<b>167 314 567</b>	2.890

d [mm]	D [mm]	D2 [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	M	Lift = Hx [mm]	e [mm]
20	47	80	196	90	25	90	14	12	M6	8	1,9
25	57	80	221	108	25	102	18	12	M6	11	2,3
32	64	94	234	116	25	119	21	12	M6	13	3
40	78	117	260	134	45	126	26	15	M8	16	3,7
50	89	117	284	154	45	139	33	15	M8	21	4,6
63	109	152	321	184	45	172	39	15	M8	28	5,8



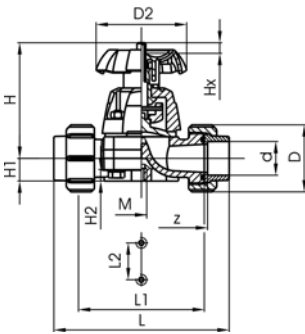
## PROGEF Standard Diaphragm valve type 314 With fusion sockets PE80 metric

### Model:

- Material: PP-H
- For easy installation and removal
- Short overall length

### Option:

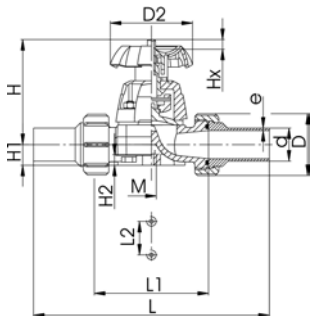
- Handwheel with built in locking mechanism



d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	NBR Code	EPDM Code	CSM Code	PTFE with EPDM supporting diaphragm Code
20	15	10	72	<b>167 314 602</b>	<b>167 314 617</b>	<b>167 314 647</b>	<b>167 314 632</b>
25	20	10	137	<b>167 314 603</b>	<b>167 314 618</b>	<b>167 314 648</b>	<b>167 314 633</b>
32	25	10	207	<b>167 314 604</b>	<b>167 314 619</b>	<b>167 314 649</b>	<b>167 314 634</b>
40	32	10	354	<b>167 314 605</b>	<b>167 314 620</b>	<b>167 314 650</b>	<b>167 314 635</b>
50	40	10	517	<b>167 314 606</b>	<b>167 314 621</b>	<b>167 314 651</b>	<b>167 314 636</b>
63	50	10	713	<b>167 314 607</b>	<b>167 314 622</b>	<b>167 314 652</b>	<b>167 314 637</b>

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	FPM Code	kg
20	15	10	72	<b>167 314 662</b>	0.380
25	20	10	137	<b>167 314 663</b>	0.560
32	25	10	207	<b>167 314 664</b>	0.760
40	32	10	354	<b>167 314 665</b>	1.220
50	40	10	517	<b>167 314 666</b>	1.600
63	50	10	713	<b>167 314 667</b>	2.780

d [mm]	z [mm]	D [mm]	D2 [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	M	Lift = Hx [mm]
20	100	47	80	128	90	25	90	14	12	M6	8
25	118	57	80	150	108	25	101	18	12	M6	11
32	126	64	94	162	116	25	117	21	12	M6	13
40	144	78	117	184	134	45	127	26	15	M8	16
50	164	89	117	210	154	45	139	33	15	M8	21
63	194	109	152	248	184	45	172	39	15	M8	28



## PROGEF Standard Diaphragm valve type 314 With butt fusion spigots PE100 SDR11

### Model:

- Material: PP-H
- For easy installation and removal
- Short overall length

### Option:

- Handwheel with built in locking mechanism

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	NBR Code	EPDM Code	CSM Code	PTFE with EPDM supporting diaphragm Code
20	15	10	72	<b>167 314 702</b>	<b>167 314 717</b>	<b>167 314 747</b>	<b>167 314 732</b>
25	20	10	137	<b>167 314 703</b>	<b>167 314 718</b>	<b>167 314 748</b>	<b>167 314 733</b>
32	25	10	207	<b>167 314 704</b>	<b>167 314 719</b>	<b>167 314 749</b>	<b>167 314 734</b>
40	32	10	354	<b>167 314 705</b>	<b>167 314 720</b>	<b>167 314 750</b>	<b>167 314 735</b>
50	40	10	517	<b>167 314 706</b>	<b>167 314 721</b>	<b>167 314 751</b>	<b>167 314 736</b>
63	50	10	713	<b>167 314 707</b>	<b>167 314 722</b>	<b>167 314 752</b>	<b>167 314 737</b>

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	FPM Code	kg
20	15	10	72	<b>167 314 762</b>	0.395
25	20	10	137	<b>167 314 763</b>	0.590
32	25	10	207	<b>167 314 764</b>	0.800
40	32	10	354	<b>167 314 765</b>	1.270
50	40	10	517	<b>167 314 766</b>	1.270
63	50	10	713	<b>167 314 767</b>	2.890

d [mm]	D [mm]	D2 [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	M	Lift = Hx [mm]	e [mm]
20	47	80	196	90	25	90	14	12	M6	8	1,9
25	57	80	221	108	25	102	18	12	M6	11	2,3
32	64	94	234	116	25	119	21	12	M6	13	3
40	78	117	260	134	45	126	26	15	M8	16	3,7
50	89	117	284	154	45	139	33	15	M8	21	4,6
63	109	152	321	184	45	172	39	15	M8	28	5,8

## Spare parts for diaphragm valve type 314 PP-H

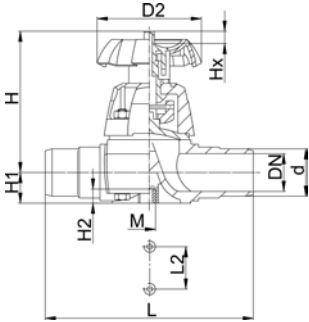


No.	Article / Material	Pieces	d20 DN 15	d25 DN 20	d32 DN 25	d40 DN 32	d50 DN 40	d63 DN 50
1	Bonnet complete (without diaphragm) elastomer diaphragm	1	161 484 625	161 484 626	161 484 627	161 484 628	161 484 629	161 484 630
1	Bonnet complete (without diaphragm) PTFE diaphragm	1	161 484 632	161 484 633	161 484 634	161 484 635	161 484 636	161 484 637
2	Diaphragm NBR	1	161 311 710	161 311 711	161 311 712	161 311 713	161 311 714	161 311 715
2	Diaphragm EPDM	1	161 481 022	161 481 023	161 481 024	161 481 025	161 481 026	161 481 027
2	Diaphragm FPM	1	161 481 092	161 481 093	161 481 094	161 481 095	161 481 096	161 481 097
2	Diaphragm PTFE/EPDM	1	161 311 698	161 311 699	161 311 700	161 311 701	161 311 702	161 311 703
2	Diaphragm PTFE/FPM	1	161 481 926	161 481 927	161 481 928	161 481 929	161 481 930	161 481 931
2	Diaphragm CSM	1	161 311 728	161 311 729	161 311 730	161 311 731	161 311 732	161 311 733
3	Pressure spindel PTFE diaphragm	1	161 484 696	161 484 697	161 484 698	161 484 699	161 484 700	161 484 701
3	Pressure spindel elastomer diaphragm	1	161 484 688	161 484 689	161 484 690	161 484 691	161 484 692	161 484 693
4	Fastening set Stainless steel	1	161 484 704	161 484 705	161 484 706	161 484 707	161 484 708	161 484 709
5	Valve body PP-H	1	167 481 977	167 481 978	167 481 979	167 481 980	167 481 981	167 481 982
6	Union nut PP	1	727 690 406	727 690 407	727 690 408	727 690 409	727 690 410	727 690 411
3	Fusion socket PP-H	1	727 600 106	727 600 107	727 600 108	727 600 109	727 600 110	727 600 111
7	Butt fusion spigot PE 100 SDR11	1	753 608 606	753 608 607	753 608 608	753 608 609	753 608 610	753 608 611
7	Butt fusion spigot PP-H SDR11 (IR-Plus®) compatible	1	727 608 506	727 608 507	727 608 508	727 608 509	727 608 510	727 608 511
7	Fusion socket PE 80	1	734 600 106	734 600 107	734 600 108	734 600 109	734 600 110	734 600 111
7	Butt fusion spigot long PE 100 SDR11	1	753 608 616	753 608 617	753 608 618	753 608 619	753 608 620	753 608 621
8	O-ring seal EPDM	1	748 410 006	748 410 007	748 410 008	748 410 009	748 410 010	748 410 011
8	O-ring seal FPM	1	749 410 006	749 410 007	749 410 008	749 410 009	749 410 010	749 410 011



# Diaphragm Valves 315

## PROGEF Standard Diaphragm valve type 315 With socket fusion spigots



### Model:

- Material: PP-H
- Overall length EN 558

### Option:

- Handwheel with built in locking mechanism

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	NBR Code	EPDM Code	CSM Code	PTFE with EPDM supporting diaphragm Code
20	15	10	72	<b>167 315 402</b>	<b>167 315 417</b>	<b>167 315 447</b>	<b>167 315 432</b>
25	20	10	137	<b>167 315 403</b>	<b>167 315 418</b>	<b>167 315 448</b>	<b>167 315 433</b>
32	25	10	207	<b>167 315 404</b>	<b>167 315 419</b>	<b>167 315 449</b>	<b>167 315 434</b>
40	32	10	354	<b>167 315 405</b>	<b>167 315 420</b>	<b>167 315 450</b>	<b>167 315 435</b>
50	40	10	517	<b>167 315 406</b>	<b>167 315 421</b>	<b>167 315 451</b>	<b>167 315 436</b>
63	50	10	713	<b>167 315 407</b>	<b>167 315 422</b>	<b>167 315 452</b>	<b>167 315 437</b>

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	FPM Code	kg
20	15	10	72	<b>167 315 492</b>	0.267
25	20	10	137	<b>167 315 493</b>	0.370
32	25	10	207	<b>167 315 494</b>	0.673
40	32	10	354	<b>167 315 495</b>	0.795
50	40	10	517	<b>167 315 496</b>	1.168
63	50	10	713	<b>167 315 497</b>	2.088

d [mm]	D2 [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L2 [mm]	M	Lift = Hx [mm]
20	80	90	14	12	124	25	M6	7
25	80	101	18	12	144	25	M6	10
32	94	117	22	12	154	25	M6	12
40	117	127	26	15	174	45	M8	16
50	117	139	32	15	194	45	M8	19
63	152	172	39	15	223	45	M8	27



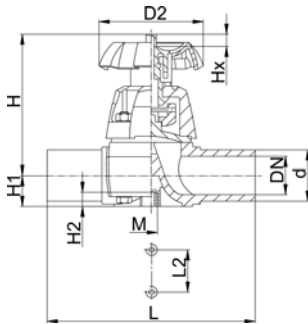
## PROGEF Standard Diaphragm valve type 315 With butt fusion spigots SDR11

### Model:

- Material: PP-H

### Option:

- Handwheel with built in locking mechanism

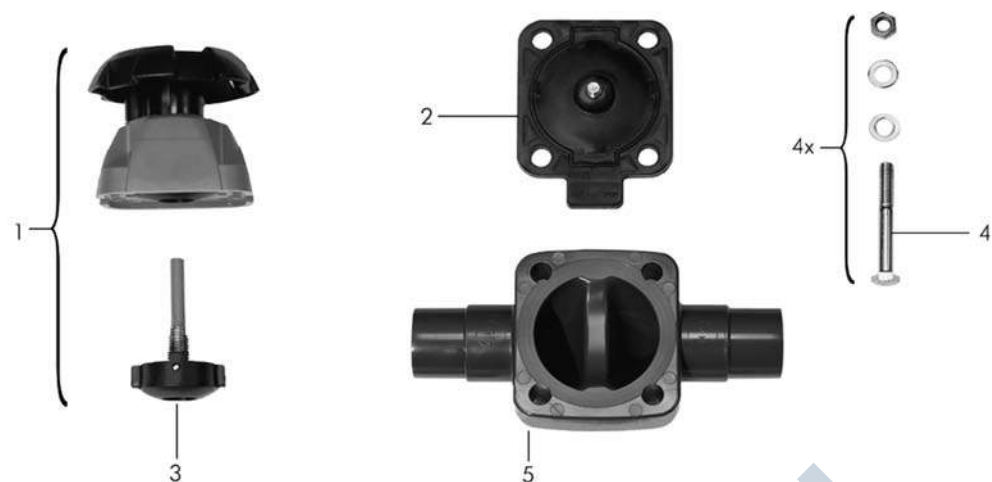


d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	NBR Code	EPDM Code	CSM Code	PTFE with EPDM supporting diaphragm Code
20	15	10	72	<b>167 315 502</b>	<b>167 315 517</b>	<b>167 315 547</b>	<b>167 315 532</b>
25	20	10	137	<b>167 315 503</b>	<b>167 315 518</b>	<b>167 315 548</b>	<b>167 315 533</b>
32	25	10	207	<b>167 315 504</b>	<b>167 315 519</b>	<b>167 315 549</b>	<b>167 315 534</b>
40	32	10	354	<b>167 315 505</b>	<b>167 315 520</b>	<b>167 315 550</b>	<b>167 315 535</b>
50	40	10	517	<b>167 315 506</b>	<b>167 315 521</b>	<b>167 315 551</b>	<b>167 315 536</b>
63	50	10	713	<b>167 315 507</b>	<b>167 315 522</b>	<b>167 315 552</b>	<b>167 315 537</b>

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	FPM Code	kg
20	15	10	72	<b>167 315 592</b>	0.260
25	20	10	137	<b>167 315 593</b>	0.382
32	25	10	207	<b>167 315 594</b>	0.660
40	32	10	354	<b>167 315 595</b>	0.779
50	40	10	517	<b>167 315 596</b>	1.137
63	50	10	713	<b>167 315 597</b>	2.061

d [mm]	D2 [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L2 [mm]	M	Lift = Hx [mm]
20	80	90	14	12	124	25	M6	7
25	80	101	18	12	144	25	M6	10
32	94	117	22	12	154	25	M6	12
40	117	127	26	15	174	45	M8	16
50	117	139	32	15	194	45	M8	19
63	152	172	39	15	223	45	M8	27

## Spare parts for diaphragm valve type 315 PP-H



No.	Article / Material	Pieces	d20 DN 15	d25 DN 20	d32 DN 25	d40 DN 32	d50 DN 40	d63 DN 50
1	Bonnet complete (without diaphragm) elastomer diaphragm	1	161 484 625	161 484 626	161 484 627	161 484 628	161 484 629	161 484 630
1	Bonnet complete (without diaphragm) PTFE diaphragm	1	161 484 632	161 484 633	161 484 634	161 484 635	161 484 636	161 484 637
2	Diaphragm NBR	1	161 311 710	161 311 711	161 311 712	161 311 713	161 311 714	161 311 715
2	Diaphragm EPDM	1	161 481 022	161 481 023	161 481 024	161 481 025	161 481 026	161 481 027
2	Diaphragm FPM	1	161 481 092	161 481 093	161 481 094	161 481 095	161 481 096	161 481 097
2	Diaphragm PTFE/EPDM	1	161 311 698	161 311 699	161 311 700	161 311 701	161 311 702	161 311 703
2	Diaphragm PTFE/FPM	1	161 481 926	161 481 927	161 481 928	161 481 929	161 481 930	161 481 931
2	Diaphragm CSM	1	161 311 728	161 311 729	161 311 730	161 311 731	161 311 732	1613117233
3	Pressure spindel elastomer diaphragm	1	161 484 688	161 484 689	161 484 690	161 484 691	161 484 692	161 484 693
3	Pressure spindel PTFE diaphragm	1	161 484 696	161 484 697	161 484 698	161 484 699	161 484 700	161 484 701
4	Fastening set Stainless steel	1	161 484 704	161 484 705	161 484 706	161 484 707	161 484 708	161 484 709
4	Fastening set Stainless steel PROGEF Natural	1	198 000 504	198 000 505	198 000 506	198 000 507	198 000 508	198 000 509
5	Valve body with socket fusion spigot PP-H	1	167 480 328	167 480 329	167 480 330	167 480 331	167 480 332	167 480 333
5	Valve body with butt fusion spigot PP-natur	1	168 480 125	168 480 126	168 480 127	168 480 128	168 480 129	168 480 130
5	Valve body with butt fusion spigot PP-H	1	167 481 175	167 481 176	167 481 177	167 481 178	167 481 179	167 481 180

# Diaphragm Valves 317

## PROGEF Standard Diaphragm valve type 317 With backing flanges PP-V metric



### Model:

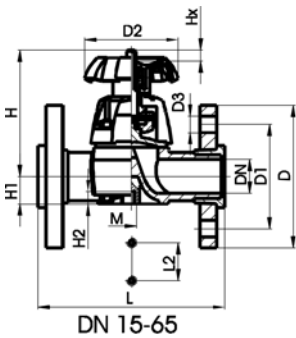
- Material: PP-H
- Jointing faces flat/serrated
- Overall length according to EN 558
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504
- DN 15-65 with backing flange
- DN 80-150 with fixed flange

### Option:

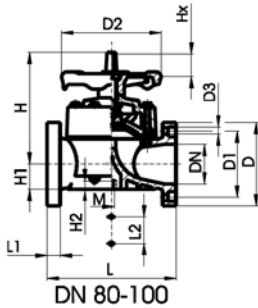
- Handwheel lockable DN15-65 (basic version not lockable)

\* With PP fixed flanges, jointing faces flat

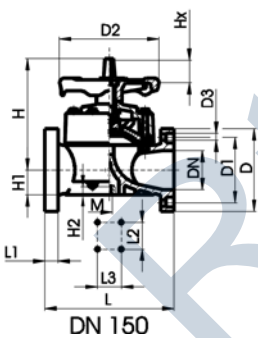
\* DN80 and DN150 fixed flanges metric and Inch ANSI B16.5



DN 15-65



DN 80-100



DN 150

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	NBR Code	EPDM Code	CSM Code
20	15	½	10	72	167 317 152	167 317 167	167 317 197
25	20	¾	10	137	167 317 153	167 317 168	167 317 198
32	25	1	10	207	167 317 154	167 317 169	167 317 199
40	32	1 ¼	10	354	167 317 155	167 317 170	167 317 200
50	40	1 ½	10	517	167 317 156	167 317 171	167 317 201
63	50	2	10	713	167 317 157	167 317 172	167 317 202
75	65	2 ½	10	992	167 317 158	167 317 173	167 317 203
*90	80	3	10	1700	167 317 009	-	167 317 054
*110	100	4	10	2700	167 317 010	167 317 025	167 317 055

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	PTFE with EPDM supporting diaphragm Code	kg
20	15	½	10	72	167 317 182	0.532
25	20	¾	10	137	167 317 183	0.844
32	25	1	10	207	167 317 184	1.236
40	32	1 ¼	10	354	167 317 185	1.446
50	40	1 ½	10	517	167 317 186	2.456
63	50	2	10	713	167 317 187	3.664
75	65	2 ½	10	992	167 317 188	5.480
*90	80	3	10	1700	167 317 039	8.600
*110	100	4	10	2700	167 317 040	11.360

d [mm]	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	H [mm]	H1 [mm]	H2 [mm]	M	AL	Lift = Hx [mm]
20	95	65	80	14	130		25		90	14	12	M6	4	7
25	105	75	80	14	150		25		101	18	12	M6	4	10
32	115	85	94	14	160		25		117	22	12	M6	4	12
40	140	100	117	18	180		45		127	26	15	M8	4	16
50	150	110	117	18	200		45		139	32	15	M8	4	19
63	165	125	152	18	230		45		172	39	15	M8	4	27
75	185	145	152	18	290		70		210	46	15	M8	4	35
*90	200	160	270	18	310	35	120		265	57	23	M12	8	40
*110	225	180	270	18	350	38	120		304	69	23	M12	8	50



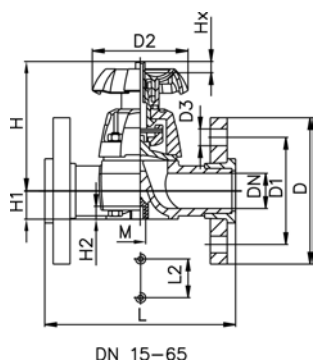
## PROGEF Standard Diaphragm valve type 317 With backing flanges PP-st metric

### Model:

- Material: PP-H
- Jointing faces flat/serrated
- Overall length according to EN 558
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

### Option:

- Handwheel lockable DN15-65 (basic version not lockable)



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	PTFE with EPDM supporting diaphragm Code	kg
20	15	½	10	72	<b>167 317 272</b>	0.810
25	20	¾	10	137	<b>167 317 273</b>	1.200
32	25	1	10	207	<b>167 317 274</b>	1.850
40	32	1 ¼	10	354	<b>167 317 275</b>	2.410
50	40	1 ½	10	517	<b>167 317 276</b>	3.500
63	50	2	10	713	<b>167 317 277</b>	5.000
75	65	2 ½	10	992	<b>167 317 278</b>	7.040

d [mm]	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	L [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	M	AL	Lift = Hx [mm]
20	95	65	80	14	130	25	90	14	12	M6	4	7
25	105	75	80	14	150	25	101	18	12	M6	4	10
32	115	85	94	14	160	25	117	22	12	M8	4	12
40	140	100	117	18	180	45	127	26	15	M8	4	16
50	150	110	117	18	200	45	139	32	15	M10	4	19
63	165	125	152	18	230	45	172	39	15	M8	4	27
75	185	145	152	18	290	70	210	46	15	M8	4	35

27 79 02

## Component Parts for Flange Assembly Diaphragm Valves Type 317

### PROGEF Standard, Flange Adaptor Jointing face flat/serrated

d [mm]	PN	Code	kg
20	10	<b>727 790 206</b>	0.011
25	10	<b>727 790 207</b>	0.022
32	10	<b>727 790 208</b>	0.033
40	10	<b>727 790 209</b>	0.046
50	10	<b>727 790 210</b>	0.062
63	10	<b>727 790 211</b>	0.090
75	10	<b>727 790 212</b>	0.163
90	10	<b>727 790 213</b>	0.233
110	10	<b>727 790 214</b>	0.319

### PROGEF Standard, Special Flange Adaptors, PP-H S5/SDR11

#### Jointing Face, combination serrated / flat metric

d [mm]	DN [mm]	FM	Code	kg
75	65	IR	<b>727 798 512</b>	0.243
90	80	IR	<b>727 798 513</b>	0.326
90	80	IR	<b>727 798 663</b>	0.346
110	100	IR	<b>727 798 514</b>	0.441
125	100	IR	<b>727 798 515</b>	0.520
140	125	IR	<b>727 798 516</b>	0.800
160	150	IR	<b>727 798 517</b>	0.920
180	150	IR	<b>727 798 568</b>	0.900
200	200	IR	<b>727 798 519</b>	1.670
225	200	IR	<b>727 798 520</b>	1.700
250	250	--	<b>727 798 571</b>	2.790
280	250	--	<b>727 798 572</b>	2.610
315	300	--	<b>727 798 573</b>	3.410
355	350	--	<b>727 798 574</b>	5.600
400	400	--	<b>727 798 575</b>	8.300

EPDM 48 44 07  
FPM 49 44 07

**Profile Flange Gaskets metric  
EPDM / FPM**



d [mm]	DN [mm]	PN	EPDM Code	FPM Code	kg
16	10	16	748 440 705	749 440 705	0.007
20	15	16	748 440 706	749 440 706	0.008
25	20	16	748 440 707	749 440 707	0.011
32	25	16	748 440 708	749 440 708	0.014
40	32	16	748 440 709	749 440 709	0.021
50	40	16	748 440 710	749 440 710	0.022
63	50	16	748 440 711	749 440 711	0.041
75	65	16	748 440 712	749 440 712	0.055
90	80	16	748 440 713	749 440 713	0.062
110	100	16	748 440 714	749 440 714	0.085
125	100	16	748 440 715	749 440 715	0.158
140	125	16	748 440 716	749 440 716	0.118
160 / 180	150	16	748 440 717	749 440 717	0.153
200	200	16	748 440 719	749 440 719	0.263
225	200	16	748 440 720	749 440 720	0.181
250	250	16	748 440 721	749 440 721	0.410
280	250	16	748 440 722	749 440 722	0.226
315	300	16	748 440 723	749 440 723	0.334
355	350	16	748 440 724	749 440 724	0.410
400	400	16	748 440 725	749 440 725	0.513

27 70 04  
27 70 05

**Backing Flanges, PP-V  
for Butt Fusion Systems metric**

d [mm]	Inch	DN [mm]	PN	Code	kg
20		15	16	727 700 406	0.080
25		20	16	727 700 407	0.100
32		25	16	727 700 408	0.140
40		32	16	727 700 409	0.220
50		40	16	727 700 410	0.210
63		50	16	727 700 411	0.380
75		65	16	727 700 412	0.480
90		80	16	727 700 513	0.520
110		100	16	727 700 514	0.680

27 70 04  
27 70 05

**Backing Flanges, PP-V  
for Socket Systems metric**

d [mm]	Inch	DN [mm]	PN	Code	kg
20		15	16	727 700 406	0.080
25		20	16	727 700 407	0.100
32		25	16	727 700 408	0.140
40		32	16	727 700 409	0.220
50		40	16	727 700 410	0.210
63		50	16	727 700 411	0.380
75		65	16	727 700 412	0.480
90		80	16	727 700 413	0.520
110		100	16	727 700 414	0.680

27 70 14  
27 70 15

### Backing Flanges, PP-V for Butt Fusion Systems Inch/ANSI

Inch	DN [mm]	PN	Code	kg	
1/2	15	16	<b>727 701 406</b>	0.080	
3/4	20	16	<b>727 701 407</b>	0.100	
1	25	16	<b>727 701 408</b>	0.140	
1 1/4	32	16	<b>727 701 409</b>	0.220	
1 1/2	40	16	<b>727 701 410</b>	0.210	
2	50	16	<b>727 701 411</b>	0.380	
2 1/2	65	16	<b>727 701 412</b>	0.480	
3	80	16	<b>727 701 513</b>	0.520	
4	100	16	<b>727 701 514</b>	0.680	

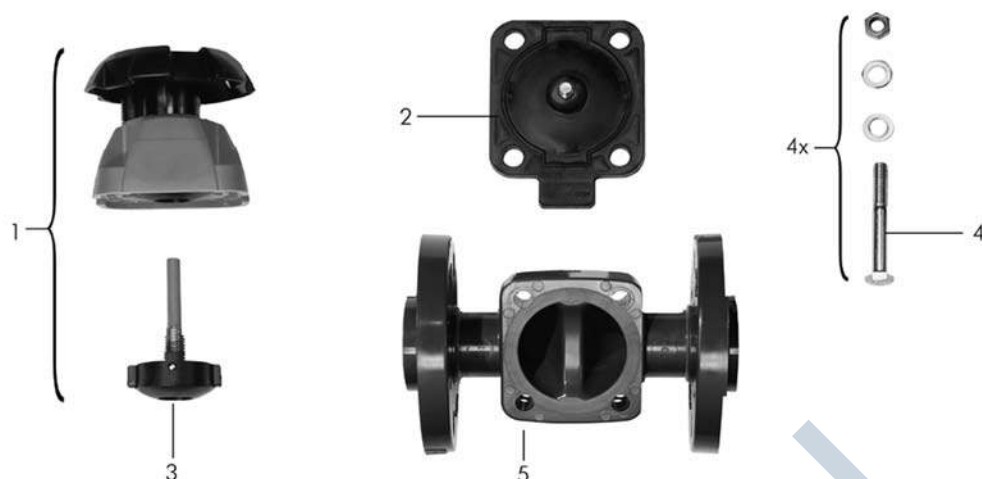
27 70 14  
27 70 15

### Backing Flanges, PP-V for Socket Systems Inch/ANSI

Inch	DN [mm]	PN	Code	kg	
1/2	15	16	<b>727 701 406</b>	0.080	
3/4	20	16	<b>727 701 407</b>	0.100	
1	25	16	<b>727 701 408</b>	0.140	
1 1/4	32	16	<b>727 701 409</b>	0.220	
1 1/2	40	16	<b>727 701 410</b>	0.210	
2	50	16	<b>727 701 411</b>	0.380	
2 1/2	65	16	<b>727 701 412</b>	0.480	
3	80	16	<b>727 701 413</b>	0.520	
4	100	16	<b>727 701 414</b>	0.680	

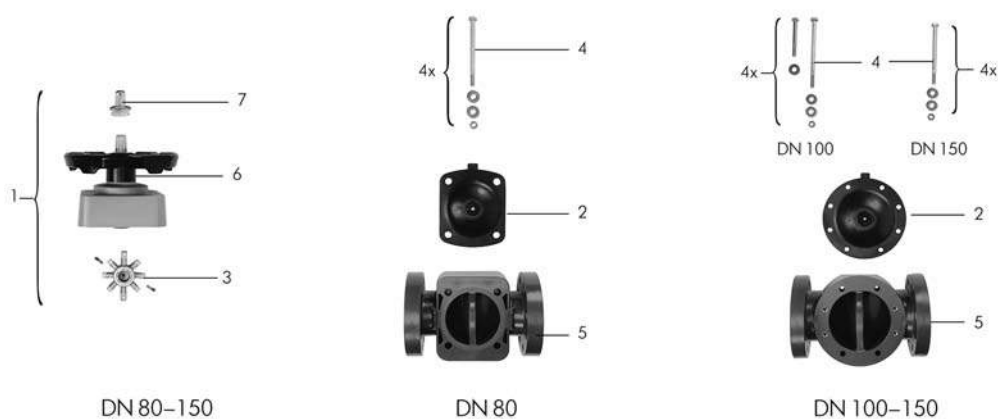


## Spare parts for diaphragm valve type 317 (DN15-65) PP-H



No.	Article / Material	Pieces	d20 DN 15	d25 DN 20	d32 DN 25	d40 DN 32	d50 DN 40	d63 DN 50	d75 DN 65
1	Bonnet complete (without diaphragm) elastomer diaphragm	1	161 484 625	161 484 626	161 484 627	161 484 628	161 484 629	161 484 630	161 484 631
1	Bonnet complete (without diaphragm) PTFE diaphragm	1	161 484 632	161 484 633	161 484 634	161 484 635	161 484 636	161 484 637	161 484 638
2	Diaphragm NBR	1	161 311 710	161 311 711	161 311 712	161 311 713	161 311 714	161 311 715	161 480 241
2	Diaphragm EPDM	1	161 481 022	161 481 023	161 481 024	161 481 025	161 481 026	161 481 027	161 481 028
2	Diaphragm FPM	1	161 481 092	161 481 093	161 481 094	161 481 095	161 481 096	161 481 097	161 481 098
2	Diaphragm PTFE/EPDM	1	161 311 698	161 311 699	161 311 700	161 311 701	161 311 702	161 311 703	161 480 240
2	Diaphragm PTFE/FPM	1	161 481 926	161 481 927	161 481 928	161 481 929	161 481 930	161 481 931	161 481 932
2	Diaphragm CSM	1	161 311 728	161 311 729	161 311 730	161 311 731	161 311 732	161 311 733	161 480 237
3	Pressure spindle PTFE diaphragm	1	161 484 696	161 484 697	161 484 698	161 484 699	161 484 700	161 484 701	161 484 702
3	Pressure spindle elastomer diaphragm	1	161 484 688	161 484 689	161 484 690	161 484 691	161 484 692	161 484 693	161 484 694
4	Fastening set Stainless steel	1	161 484 704	161 484 705	161 484 706	161 484 707	161 484 708	161 484 709	161 483 032
5	Valve body PP-H backing flange Inch ANSI	1	167 484 035	167 484 036	167 484 037	167 484 038	167 484 039	167 484 040	167 484 041
5	Valve body PP-H backing flange PP-GF JIS	1	167 481 552	167 481 553	167 481 554	167 481 555	167 481 556	167 481 557	-
5	Valve body PP-H backing flange metric	1	167 484 025	167 484 026	167 484 027	167 484 028	167 484 029	167 484 030	167 484 031

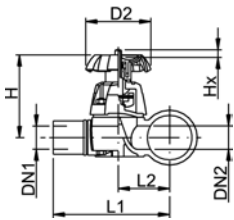
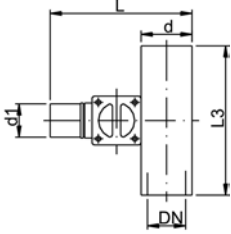
## Spare parts for diaphragm valve type 317 (DN80-150) PP-H



No.	Article / Material	Pieces	d90 DN 80	d110 DN 100	DN 150
1	Bonnet complete (without diaphragm) elastomer diaphragm	1	161 482 514	161 482 515	161 482 901
1	Bonnet complete (without diaphragm) PTFE diaphragm	1	161 482 516	161 482 517	161 482 906
2	Diaphragm NBR	1	161 480 232	161 480 233	161 482 751
2	Diaphragm EPDM	1	161 481 029	161 481 030	161 482 754
2	Diaphragm FPM	1	161 481 099	161 481 100	161 481 102
2	Diaphragm PTFE/EPDM	1	161 480 241	161 480 242	161 482 760
2	Diaphragm CSM	1	161 480 238	161 480 239	161 482 757
3	Pressure spindel elastomer diaphragm	1	161 483 008	161 483 009	161 483 011
3	Pressure spindel PTFE diaphragm	1	161 483 020	161 483 021	161 483 023
4	Fastening set Stainless steel	1	161 483 033	161 483 034	161 483 037
5	Valve body with PP-fixed flange metric PP-H	1	167 480 427	167 480 428	167 480 577
5	Valve body with PP-fixed flange ANSI PP-H	1	167 480 427	167 480 478	167 480 577
5	Valve body with PP-fixed flange JIS PP-H	1	-	167 480 476	167 480 577
6	O-ring seal NBR	1	745 410 107	745 410 107	-
6	O-ring seal EPDM	1	-	-	748 410 121
7	Covering cap PVC-U SAN	1	161 481 759	161 481 760	161 482 744

# Diaphragm Valves 319

## PROGEF Standard Diaphragm valve type 319 With butt fusion spigots



### Model:

- Material: PP-H
- Valve body injection molded, compact design
- Minimized static zone (dead leg)
- d20-d63 SDR11, d90-d110 SDR17,6

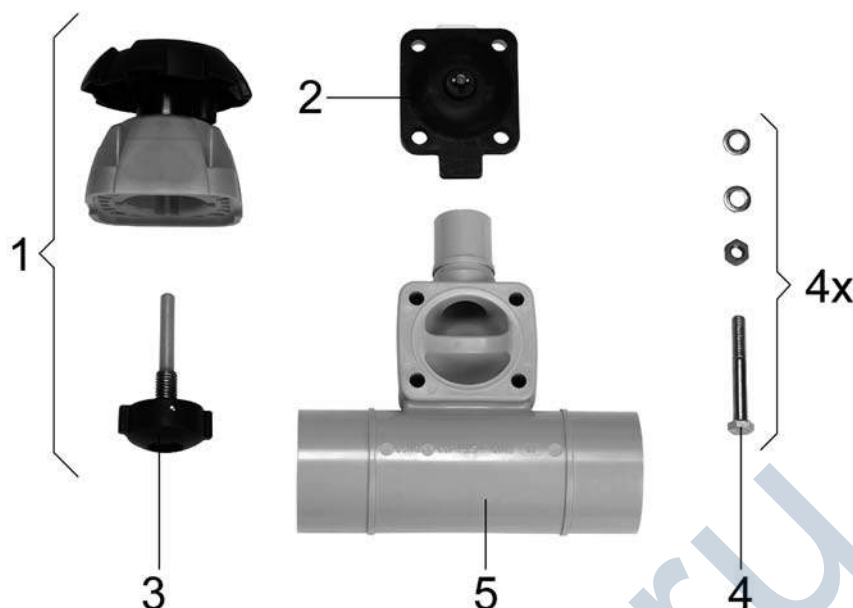
### Option:

- Handwheel with built in locking mechanism

d [mm]	d1 [mm]	DN [mm]	DN1 [mm]	DN2 [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	PTFE with EPDM supporting diaphragm Code	EPDM Code	kg
20	20	15	15	15	10	47	167 319 301	167 319 401	0.329
25	20	20	15	20	10	69	167 319 303	167 319 403	0.361
25	25	20	20	20	10	91	167 319 304	167 319 404	0.361
32	20	25	15	25	10	86	167 319 307	167 319 407	0.619
32	25	25	20	25	10	126	167 319 308	167 319 408	0.618
32	32	25	25	25	10	156	167 319 309	167 319 409	0.618
40	20	32	15	25	10	84	167 319 312	167 319 412	0.634
50	20	40	15	25	10	82	167 319 318	167 319 418	0.701
50	25	40	20	25	10	124	167 319 319	167 319 419	0.701
50	32	40	25	25	10	159	167 319 320	167 319 420	0.700
63	20	50	15	25	10	81	167 319 325	167 319 425	0.750
63	25	50	20	25	10	115	167 319 326	167 319 426	0.749
63	32	50	25	25	10	156	167 319 327	167 319 427	0.746
90	20	80	15	20	6	88	167 319 341	167 319 441	0.871
90	25	80	20	25	6	133	167 319 342	167 319 442	1.062
90	32	80	25	25	6	162	167 319 343	167 319 443	0.907
90	50	80	40	50	6	504	167 319 345	167 319 445	2.285
90	63	80	50	50	6	530	167 319 346	167 319 446	2.285
110	20	100	15	25	6	89	167 319 351	167 319 451	0.888
110	25	100	20	25	6	123	167 319 352	167 319 452	0.887
110	32	100	25	25	6	159	167 319 353	167 319 453	0.886
110	50	100	40	50	6	503	167 319 355	167 319 455	2.400
110	63	100	50	50	6	543	167 319 356	167 319 456	2.426

d [mm]	D2 [mm]	H [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]
20	80	83	106	96	30	140
25	80	91	121	108	36	150
25	80	91	121	108	36	150
32	94	105	137	120	43	160
32	94	105	137	120	43	160
32	94	105	137	120	43	160
40	94	105	149	128	51	180
50	94	105	159	134	57	180
50	94	105	159	134	57	180
50	94	105	159	134	57	180
63	94	105	175	144	67	180
63	94	105	175	144	67	180
63	94	105	175	144	67	180
90	94	105	204	159	82	160
90	94	105	204	159	82	160
90	94	105	204	159	82	160
90	152	151	252	207	95	220
90	152	151	252	207	95	220
110	94	105	226	171	94	160
110	94	105	226	171	94	160
110	94	105	226	171	94	160
110	152	151	274	219	107	220
110	152	151	274	219	107	220

## Spare parts for diaphragm valve type 319 PP-H



No.	Article / Material	Pieces	20x20	25x20	25x25	32x20	32x25	32x32	40x20
1	Bonnet complete (without diaphragm) PTFE diaphragm	1	161 484 632	161 484 633	161 484 633	161 484 634	161 484 634	161 484 634	161 484 634
1	Bonnet complete (without diaphragm) elastomer diaphragm	1	161 484 625	161 484 626	161 484 626	161 484 627	161 484 627	161 484 627	161 484 627
2	Diaphragm NBR	1	161 311 710	161 311 711	161 311 711	161 311 712	161 311 712	161 311 712	161 311 712
2	Diaphragm EPDM	1	161 481 022	161 481 023	161 481 023	161 481 024	161 481 024	161 481 024	161 481 024
2	Diaphragm FPM	1	161 481 092	161 481 093	161 481 093	161 481 094	161 481 094	161 481 094	161 481 094
2	Diaphragm PTFE/EPDM	1	161 311 698	161 311 699	161 311 699	161 311 700	161 311 700	161 311 700	161 311 700
2	Diaphragm PTFE/FPM	1	161 481 926	161 481 927	161 481 927	161 481 928	161 481 928	161 481 928	161 481 928
2	Diaphragm CSM	1	161 311 728	161 311 729	161 311 729	161 311 730	161 311 730	161 311 730	161 311 730
3	Pressure spindle PTFE diaphragm	1	161 484 696	161 484 697	161 484 697	161 484 698	161 484 698	161 484 698	161 484 698
3	Pressure spindle elastomer diaphragm	1	161 484 688	161 484 689	161 484 689	161 484 690	161 484 690	161 484 690	161 484 690
4	Fastening set Stainless steel	1	161 484 704	161 484 705	161 484 705	161 484 706	161 484 706	161 484 706	161 484 706
4	Fastening set Stainless steel PROGEF Natural	1	198 000 516	198 000 517	198 000 517	198 000 518	198 000 518	198 000 518	198 000 519
5	Valve body with butt fusion spigot PP-H	1	167 482 252	167 482 254	167 482 255	167 482 257	167 482 258	167 482 259	167 482 261
5	Valve body with butt fusion spigot PP-natur	1	168 480 177	168 480 179	168 480 180	168 480 182	168 480 183	168 480 184	168 480 186

No.	Article / Material	Pieces	50x20	50x25	50x32	63x20	63x25	63x32	90x20
1	Bonnet complete (without diaphragm) PTFE diaphragm	1	161 484 634	161 484 634	161 484 634	161 484 634	161 484 634	161 484 634	161 484 634

No.	Article / Material	Pieces	50x20	50x25	50x32	63x20	63x25	63x32	90x20
1	Bonnet complete (without diaphragm) elastomer diaphragm	1	161 484 627	161 484 627	161 484 627	161 484 627	161 484 627	161 484 627	161 484 627
2	Diaphragm NBR	1	161 311 712	161 311 712	161 311 712	161 311 712	161 311 712	161 311 712	161 311 712
2	Diaphragm EPDM	1	161 481 024	161 481 024	161 481 024	161 481 024	161 481 024	161 481 024	161 481 024
2	Diaphragm FPM	1	161 481 094	161 481 094	161 481 094	161 481 094	161 481 094	161 481 094	161 481 094
2	Diaphragm PTFE/EPDM	1	161 311 700	161 311 700	161 311 700	161 311 700	161 311 700	161 311 700	161 311 700
2	Diaphragm PTFE/FPM	1	161 481 928	161 481 928	161 481 928	161 481 928	161 481 928	161 481 928	161 481 928
2	Diaphragm CSM	1	161 311 730	161 311 730	161 311 730	161 311 730	161 311 730	161 311 730	161 311 730
3	Pressure spindel PTFE diaphragm	1	161 484 698	161 484 698	161 484 698	161 484 698	161 484 698	161 484 698	161 484 698
3	Pressure spindel elastomer diaphragm	1	161 484 690	161 484 690	161 484 690	161 484 690	161 484 690	161 484 690	161 484 690
4	Fastening set Stainless steel	1	161 484 706	161 484 706	161 484 706	161 484 706	161 484 706	161 484 706	161 484 706
4	Fastening set Stainless steel PROGEF Natural	1	198 000 520	198 000 520	198 000 520	198 000 521	198 000 521	198 000 521	198 000 522
5	Valve body with butt fusion spigot PP-H	1	167 482 266	167 482 267	167 482 268	167 482 272	167 482 273	167 482 274	167 482 287
5	Valve body with butt fusion spigot PP-natur	1	168 480 191	168 480 192	168 480 193	168 480 197	168 480 198	168 480 199	168 480 212

No.	Article / Material	Pieces	90x25	90x32	90x50	90x63	110x20	110x25	110x32
1	Bonnet complete (without diaphragm) PTFE diaphragm	1	161 484 634	161 484 634	161 484 636	161 484 636	161 484 634	161 484 634	161 484 634
1	Bonnet complete (without diaphragm) elastomer diaphragm	1	161 484 627	161 484 627	161 484 630	161 484 630	161 484 627	161 484 627	161 484 627
2	Diaphragm NBR	1	161 311 712	161 311 712	161 311 715	161 311 715	161 311 712	161 311 712	161 311 712
2	Diaphragm EPDM	1	161 481 024	161 481 024	161 481 027	161 481 027	161 481 024	161 481 024	161 481 024
2	Diaphragm FPM	1	161 481 094	161 481 094	161 481 097	161 481 097	161 481 094	161 481 094	161 481 094
2	Diaphragm PTFE/EPDM	1	161 311 700	161 311 700	161 311 703	161 311 703	161 311 700	161 311 700	161 311 700
2	Diaphragm PTFE/FPM	1	161 481 928	161 481 928	161 481 931	161 481 931	161 481 928	161 481 928	161 481 928
2	Diaphragm CSM	1	161 311 730	161 311 730	161 311 733	161 311 733	161 311 730	161 311 730	161 311 730
3	Pressure spindel PTFE diaphragm	1	161 484 698	161 484 698	161 484 701	161 484 701	161 484 698	161 484 698	161 484 698
3	Pressure spindel elastomer diaphragm	1	161 484 690	161 484 690	161 484 693	161 484 693	161 484 690	161 484 690	161 484 690
4	Fastening set Stainless steel	1	161 484 706	161 484 706	161 484 709	161 484 709	161 484 706	161 484 706	161 484 706
4	Fastening set Stainless steel PROGEF Natural	1	198 000 522	198 000 522	198 000 523	198 000 523	198 000 524	198 000 524	198 000 524
5	Valve body with butt fusion spigot PP-H	1	167 482 288	167 482 289	167 482 291	167 482 292	167 482 296	167 482 297	167 482 298

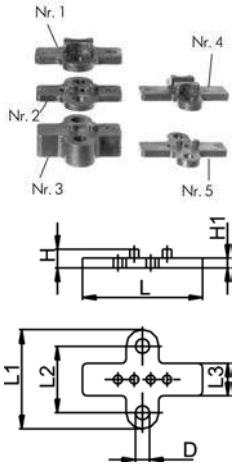
No.	Article / Material	Pieces	90x25	90x32	90x50	90x63	110x20	110x25	110x32
5	Valve body with butt fusion spigot PP-natur	1	168 480 213	168 480 214	168 480 216	168 480 217	168 480 221	168 480 222	168 480 223

No.	Article / Material	Pieces	110x50	110x63
1	Bonnet complete (without diaphragm) PTFE diaphragm	1	161 484 636	161 484 636
1	Bonnet complete (without diaphragm) elastomer diaphragm	1	161 484 630	161 484 630
2	Diaphragm NBR	1	161 311 715	161 311 715
2	Diaphragm EPDM	1	161 481 027	161 481 027
2	Diaphragm FPM	1	161 481 097	161 481 097
2	Diaphragm PTFE/EPDM	1	161 311 703	161 311 703
2	Diaphragm PTFE/FPM	1	161 481 931	1614819231
2	Diaphragm CSM	1	161 311 733	161 311 733
3	Pressure spindel PTFE diaphragm	1	161 484 701	161 484 701
3	Pressure spindel elastomer diaphragm	1	161 484 693	161 484 693
4	Fastening set Stainless steel	1	161 484 709	161 484 709
4	Fastening set Stainless steel PROGEF Natural	1	198 000 525	198 000 525
5	Valve body with butt fusion spigot PP-H	1	167 482 300	167 482 301
5	Valve body with butt fusion spigot PP-natur	1	168 480 225	168 480 226

# Accessories for Diaphragm Valves

## Mounting block PP

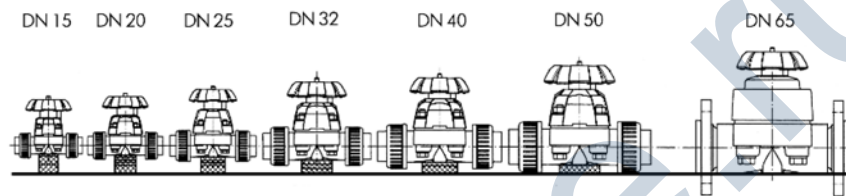
- For Diaphragm Valves 314, 315 and 317 (DN 15-50)



d-d [mm]	DN-DN [mm]	Inch	Block no.	Code	kg
20 - 32	15 - 20	1/2 - 1	1	<b>167 480 422</b>	0.005
16 - 20	10 - 15	3/8-1/2	2	<b>167 480 423</b>	0.003
-	-	-	3	<b>167 480 424</b>	0.012
40 - 63	32 - 50	1 1/4 - 2 1/2	4	<b>167 480 425</b>	0.017
-	-	-	5	<b>167 480 426</b>	0.015

d-d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]
20 - 32	8	11	5	47	42	25	17
16 - 20	8	7	4	47	42	25	17
-	8	17	14	47	42	25	17
40 - 63	10	18	7	81	67	45	22
-	10	13	7	81	67	45	22

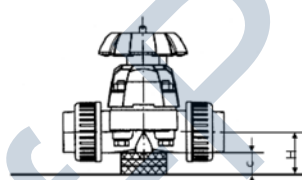
### Equalizing the Assembly Height over all Sizes



### Quantity required x block number

... to DN	d 20 DN 15	d 25 DN 20	d 32 DN 25	d 40 DN 32	d 50 DN 40	d 63 DN 50	d 75 DN 65
from DN ...							
15		1 x 2	2 x 2	1 x 1 + 2 x 2	1 x 1 + 1 x 3	1 x 1 + 2 x 2 + 1 x 3	1 x 1 + 2 x 3
20			1 x 2	1 x 1 + 1 x 2	1 x 1 + 3 x 2	1 x 1 + 1 x 2 + 1 x 3	1 x 1 + 3 x 2 + 1 x 3
25				1 x 1	1 x 1 + 2 x 2	1 x 1 + 1 x 3	1 x 1 + 2 x 2 + 1 x 3
32					1 x 4	1 x 4 + 1 x 5	1 x 4 + 2 x 5
40						1 x 4	1 x 4 + 1 x 5
50							1 x 4

### Equalizing the Union Height for Type 314



DN mm	Quantity required x block number	C mm	H mm
15			22.5
20	1 x 1 + 2 x 2	11.5	29
25			32.5
32			39
40	1 x 4 + 1 x 5	13.5	46
50			52.5

## Handwheel with built-in locking mechanism For diaphragm valve type 314 / 315 / 317 / 319



d-d [mm]	DN-DN [mm]	d-d [inch]	Code	kg
20 - 25	15 - 20	1/2 - 3/4	<b>167 481 943</b>	0.032
32 -	25 -	1 -	<b>167 481 944</b>	0.043
40 - 50	32 - 40	1 1/4 - 1 1/2	<b>167 481 945</b>	0.071
63 - 75	50 - 65	2 - 2 1/2	<b>167 481 946</b>	0.217

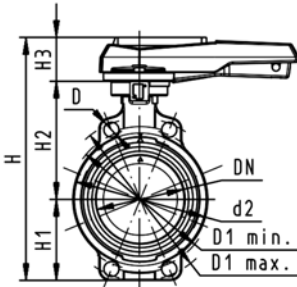
# Butterfly valves

## PROGEF Standard Butterfly valve type 567 Hand lever with ratchet settings

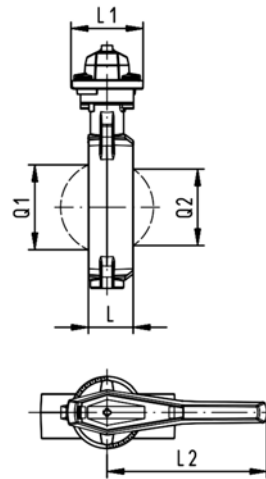


### Model:

- Material: PP-H
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220
- Overall length according to EN 558, ISO 5752
- We recommend for the dimensions DN250 and DN300 only 6 bar maximum system pressure for the hand lever version



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>167 567 002</b>	<b>167 567 022</b>	0.969
75	65	2 ½	10	2200	<b>167 567 003</b>	<b>167 567 023</b>	1.061
90	80	3	10	3000	<b>167 567 004</b>	<b>167 567 024</b>	1.191
110	100	4	10	6500	<b>167 567 005</b>	<b>167 567 025</b>	1.751
140	125	5	10	11500	<b>167 567 006</b>	<b>167 567 026</b>	2.199
160	150	6	10	16600	<b>167 567 007</b>	<b>167 567 027</b>	2.989
225	200	8	10	39600	<b>167 567 008</b>	<b>167 567 028</b>	4.706
280	250	10	8	55200	<b>167 567 009</b>	<b>167 567 029</b>	11.841
315	300	12	8	80000	<b>167 567 010</b>	<b>167 567 030</b>	14.816



d [mm]	D [mm]	D1 min. [mm]	D1 max. [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	L1 [mm]	L2 [mm]	Q1 [mm]	Q2 [mm]
63	19	120.0	125.0	104	264	77	134	54	45	106	205	40	
75	19	139.7	145.0	115	277	83	140	54	46	106	205	54	35
90	19	150.0	160.0	131	289	89	146	54	49	106	205	67	50
110	19	175.0	190.5	161	325	104	167	55	56	106	255	88	74
140	23	210.0	215.9	187	352	117	181	55	64	106	255	113	97
160	24	241.3	241.3	215	373	130	189	55	72	106	255	139	123
225	23	290.0	295.0	267	435	158	210	67	73	140	408	178	169
280	25	353.0	362.0	329	554	205	264	85	113	149	408	210	207
315	25	400.0	432.0	379	598	228	285	85	113	149	408	256	253

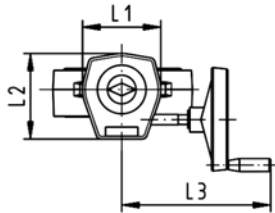
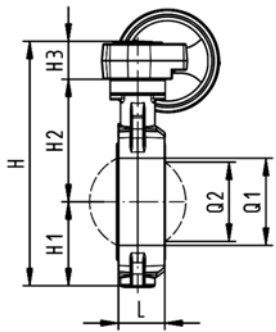
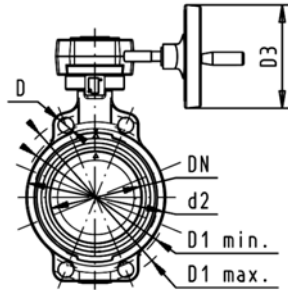




## PROGEF Standard Butterfly valve type 567 Reduction gear with handwheel

### Model:

- Material: PP-H
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220
- Overall length according to EN 558, ISO 5752



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>167 567 042</b>	<b>167 567 062</b>	3.007
75	65	2 ½	10	2200	<b>167 567 043</b>	<b>167 567 063</b>	3.099
90	80	3	10	3000	<b>167 567 044</b>	<b>167 567 064</b>	3.229
110	100	4	10	6500	<b>167 567 045</b>	<b>167 567 065</b>	3.741
140	125	5	10	11500	<b>167 567 046</b>	<b>167 567 066</b>	4.189
160	150	6	10	16600	<b>167 567 047</b>	<b>167 567 067</b>	4.979
225	200	8	10	39600	<b>167 567 048</b>	<b>167 567 068</b>	6.159
280	250	10	8	55200	<b>167 567 049</b>	<b>167 567 069</b>	13.091
315	300	12	8	80000	<b>167 567 050</b>	<b>167 567 070</b>	16.066

d [mm]	D [mm]	D1 min. [mm]	D1 max. [mm]	d2 [mm]	D3 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	Q1 [mm]
63	19	120.0	125.0	104	160	278	77	134	60	45	120	132	236	40
75	19	139.7	145.0	115	160	291	83	140	60	46	120	132	236	54
90	19	150.0	160.0	131	160	303	89	146	60	49	120	132	236	67
110	19	175.0	190.5	160	160	339	104	167	60	56	120	132	236	88
140	23	210.0	215.9	187	160	365	117	181	60	64	120	132	236	113
160	24	241.3	241.3	215	160	387	130	189	60	72	120	132	236	139
225	23	290.0	295.0	267	160	436	158	210	60	73	120	132	236	178
280	25	353.0	362.0	329	160	529	205	264	60	113	134	151	261	210
315	25	400.0	432.0	379	160	573	228	285	60	113	134	151	261	256

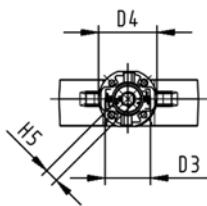
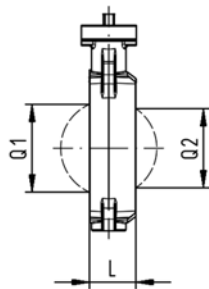
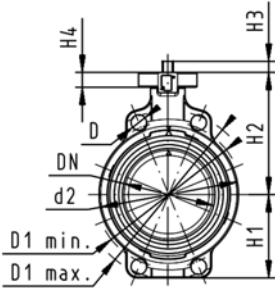
d [mm]	Q2 [mm]
63	
75	35
90	50
110	74
140	97
160	123
225	169
280	207
315	253



## Butterfly valve type 567 PP-H Bare shaft

### Model:

- Material: PP-H
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220
- Overall length according to EN 558, ISO 5752
- Interface F07 for the dimensions DN50-200 according to DIN/ISO 5211
- Interface F10 for the dimensions DN250-300 according to DIN/ISO 5211



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>167 567 802</b>	<b>167 567 822</b>	0.747
75	65	2 ½	10	2200	<b>167 567 803</b>	<b>167 567 823</b>	0.839
90	80	3	10	3000	<b>167 567 804</b>	<b>167 567 824</b>	0.969
110	100	4	10	6500	<b>167 567 805</b>	<b>167 567 825</b>	1.481
140	125	5	10	11500	<b>167 567 806</b>	<b>167 567 826</b>	1.929
160	150	6	10	16600	<b>167 567 807</b>	<b>167 567 827</b>	2.719
225	200	8	10	39600	<b>167 567 808</b>	<b>167 567 828</b>	3.899
280	250	10	8	55200	<b>167 567 809</b>	<b>167 567 829</b>	10.251
315	300	12	8	80000	<b>167 567 810</b>	<b>167 567 830</b>	13.226

d [mm]	D [mm]	D1 min. [mm]	D1 max. [mm]	d2 [mm]	D3 [mm]	D4 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	Q1 [mm]
63	19	120.0	125.0	104	70	90	222	77	134	27	23	11	45	40
75	19	139.7	145.0	115	70	90	235	83	140	27	23	11	46	54
90	19	150.0	160.0	131	70	90	247	89	146	27	23	11	49	67
110	19	175.0	190.5	161	70	90	287	104	167	16	23	14	56	88
140	23	210.0	215.9	187	70	90	313	117	181	16	23	14	64	113
160	24	241.3	241.3	215	70	90	335	130	189	19	23	17	72	139
225	23	290.0	295.0	267	70	90	387	158	210	19	23	17	73	178
280	25	353.0	362.0	329	102	125	509	205	264	40	23	22	113	210
315	25	400.0	432.0	379	102	125	553	228	285	40	23	22	113	256

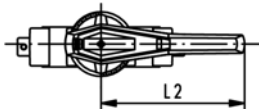
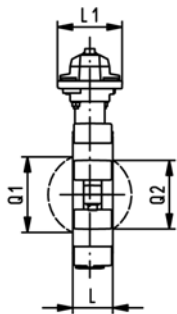
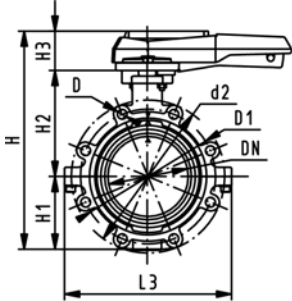
d [mm]	Q2 [mm]
63	
75	35
90	50
110	74
140	97
160	123
225	169
280	207
315	253



## PROGEF Standard Lugstyle butterfly valve type 568 Hand lever with ratchet settings

### Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10
- Overall length according to EN 558, ISO 5752



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>167 568 002</b>	<b>167 568 022</b>	3.055
75	65	2 ½	10	2200	<b>167 568 003</b>	<b>167 568 023</b>	3.397
90	80	3	10	3000	<b>167 568 004</b>	<b>167 568 024</b>	4.402
110	100	4	10	6500	<b>167 568 005</b>	<b>167 568 025</b>	5.835
140	125	5	10	11500	<b>167 568 006</b>	<b>167 568 026</b>	7.665
160	150	6	10	16600	<b>167 568 007</b>	<b>167 568 027</b>	9.449
225	200	8	10	39600	<b>167 568 008</b>	<b>167 568 028</b>	14.654

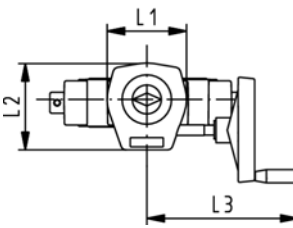
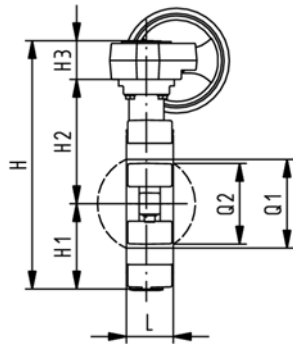
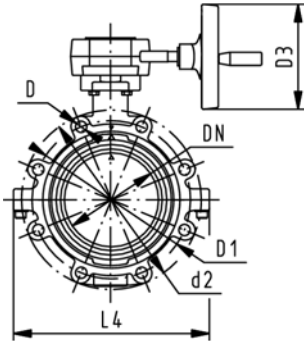
d [mm]	d2 [mm]	D	D1 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	Q1 [mm]	Q2 [mm]
63	150	M16	125	265	77	134	54	45	106	205	150	40	
75	170	M16	145	277	83	140	54	46	106	205	160	54	35
90	184	M16	160	289	89	146	54	49	106	205	205	67	50
110	216	M16	180	326	104	167	55	56	106	255	244	88	74
140	246	M16	210	353	117	181	55	64	106	255	272	113	97
160	273	M20	240	374	130	189	55	72	106	255	297	139	123
225	334	M20	295	435	158	210	67	73	140	408	360	178	169



## PROGEF Standard Lugstyle butterfly valve type 568 Reduction gear with handwheel

### Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10
- Overall length according to EN 558, ISO 5752



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>167 568 042</b>	<b>167 568 062</b>	5.093
75	65	2 ½	10	2200	<b>167 568 043</b>	<b>167 568 063</b>	5.435
90	80	3	10	3000	<b>167 568 044</b>	<b>167 568 064</b>	6.440
110	100	4	10	6500	<b>167 568 045</b>	<b>167 568 065</b>	7.825
140	125	5	10	11500	<b>167 568 046</b>	<b>167 568 066</b>	9.655
160	150	6	10	16600	<b>167 568 047</b>	<b>167 568 067</b>	11.439
225	200	8	10	39600	<b>167 568 048</b>	<b>167 568 068</b>	16.107

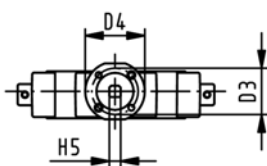
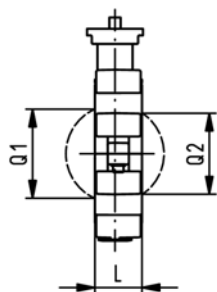
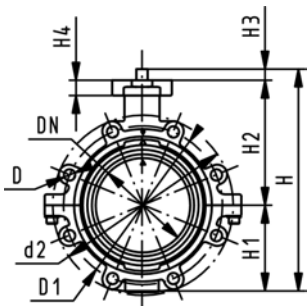
d [mm]	d2 [mm]	D	D1 [mm]	D3 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	Q1 [mm]	Q2 [mm]
63	150	M16	125	160	279	77	134	60	45	120	132	236	150	40	
75	170	M16	145	160	291	83	140	60	46	120	132	236	160	54	35
90	184	M16	160	160	303	89	146	60	49	120	132	236	205	67	50
110	216	M16	180	160	339	104	167	60	56	120	132	236	244	88	74
140	246	M16	210	160	366	117	181	60	64	120	132	236	272	113	97
160	273	M20	240	160	387	130	189	60	72	120	132	236	297	139	123
225	334	M20	295	160	436	158	210	60	73	120	132	236	360	178	169



## PROGEF Standard Lugstyle butterfly valve type 568 Bare shaft

### Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10
- Overall length according to EN 558, ISO 5752
- Interface F07 according to DIN/ISO 5211



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>167 568 802</b>	<b>167 568 822</b>	2.833
75	65	2 1/2	10	2200	<b>167 568 803</b>	<b>167 568 823</b>	3.175
90	80	3	10	3000	<b>167 568 804</b>	<b>167 568 824</b>	4.180
110	100	4	10	6500	<b>167 568 805</b>	<b>167 568 825</b>	5.565
140	125	5	10	11500	<b>167 568 806</b>	<b>167 568 826</b>	7.395
160	150	6	10	16600	<b>167 568 807</b>	<b>167 568 827</b>	9.179
225	200	8	10	39600	<b>167 568 808</b>	<b>167 568 828</b>	13.847

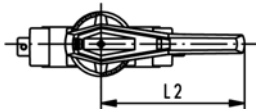
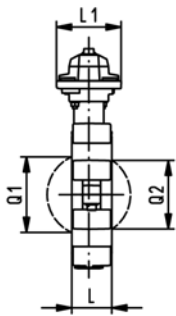
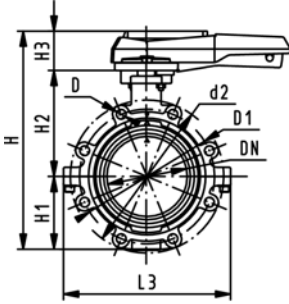
d [mm]	d2 [mm]	D	D1 [mm]	D3 [mm]	D4 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	L [mm]	Q1 [mm]	Q2 [mm]
63	150	M16	125	70	90	222	77	134	27	23	45	40	
75	170	M16	145	70	90	235	83	140	27	23	46	54	35
90	184	M16	160	70	90	247	89	146	27	23	49	67	50
110	216	M16	180	70	90	287	104	167	16	23	56	88	74
140	246	M16	210	70	90	313	117	181	16	23	64	113	97
160	273	M20	240	70	90	335	130	189	19	23	72	139	123
225	334	M20	295	70	90	387	158	210	19	23	73	178	169



## PROGEF Standard Lugstyle butterfly valve type 568 Hand lever with ratchet settings

### Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension ANSI/ASME B 16.5 Class 150
- Overall length according to EN 558, ISO 5752



Inch	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
2	50	10	1470	<b>167 568 102</b>	<b>167 568 122</b>	3.055
2 ½	65	10	2200	<b>167 568 103</b>	<b>167 568 123</b>	3.397
3	80	10	3000	<b>167 568 104</b>	<b>167 568 124</b>	3.773
4	100	10	6500	<b>167 568 105</b>	<b>167 568 125</b>	5.835
5	125	10	11500	<b>167 568 106</b>	<b>167 568 126</b>	7.665
6	150	10	16600	<b>167 568 107</b>	<b>167 568 127</b>	9.449
8	200	10	39600	<b>167 568 108</b>	<b>167 568 128</b>	14.654

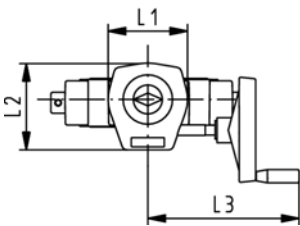
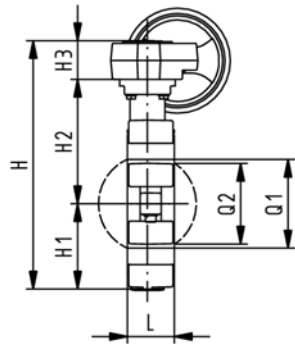
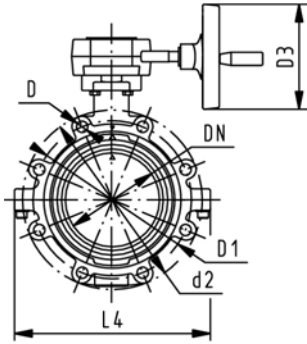
Inch	d2 [mm]	D	D1 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	Q1 [mm]	Q2 [mm]
2	150	UNC 5/8	121	265	77	134	54	45	106	205	150	40	
2 ½	170	UNC 5/8	138	277	83	140	54	46	106	205	160	54	35
3	177	UNC 5/8	152	289	89	146	54	49	106	205	175	67	50
4	216	UNC 5/8	191	326	104	167	55	56	106	255	244	88	74
5	246	UNC 3/4	216	353	117	181	55	64	106	255	272	113	97
6	273	UNC 3/4	241	374	130	189	55	72	106	255	297	139	123
8	334	UNC 3/4	298	435	158	210	67	73	140	408	360	178	169



## PROGEF Standard Lugstyle butterfly valve type 568 Reduction gear with handwheel

### Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension ANSI/ASME B 16.5 Class 150
- Overall length according to EN 558, ISO 5752



Inch	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
2	50	10	1470	<b>167 568 142</b>	<b>167 568 162</b>	5.093
2 ½	65	10	2200	<b>167 568 143</b>	<b>167 568 163</b>	5.435
3	80	10	3000	<b>167 568 144</b>	<b>167 568 164</b>	5.811
4	100	10	6500	<b>167 568 145</b>	<b>167 568 165</b>	7.825
5	125	10	11500	<b>167 568 146</b>	<b>167 568 166</b>	9.655
6	150	10	16600	<b>167 568 147</b>	<b>167 568 167</b>	11.439
8	200	10	39600	<b>167 568 148</b>	<b>167 568 168</b>	16.107

Inch	d2 [mm]	D	D1 [mm]	D3 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	Q1 [mm]
2	150	UNC 5/8	121	160	279	77	134	60	45	120	132	236	150	40
2 ½	170	UNC 5/8	138	160	291	83	140	60	46	120	132	236	160	54
3	177	UNC 5/8	152	160	303	89	146	60	49	120	132	236	175	67
4	216	UNC 5/8	191	160	339	104	167	60	56	120	132	236	244	88
5	246	UNC 3/4	216	160	366	117	181	60	64	120	132	236	272	113
6	273	UNC 3/4	241	160	387	130	189	60	72	120	132	236	297	139
8	334	UNC 3/4	298	160	436	158	210	60	73	120	132	236	360	178

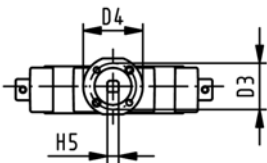
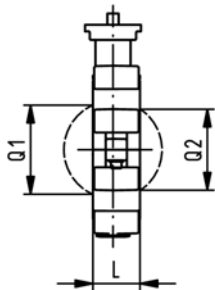
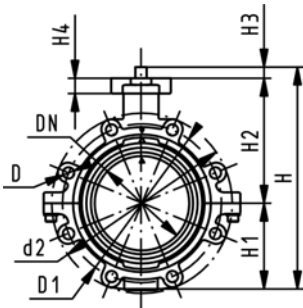
Inch	Q2 [mm]
2	
2 ½	35
3	50
4	74
5	97
6	123
8	169



## PROGEF Standard Lugstyle butterfly valve type 568 Bare shaft

### Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension ANSI/ASME B 16.5 Class 150
- Overall length according to EN 558, ISO 5752
- Interface F07 according to DIN/ISO 5211

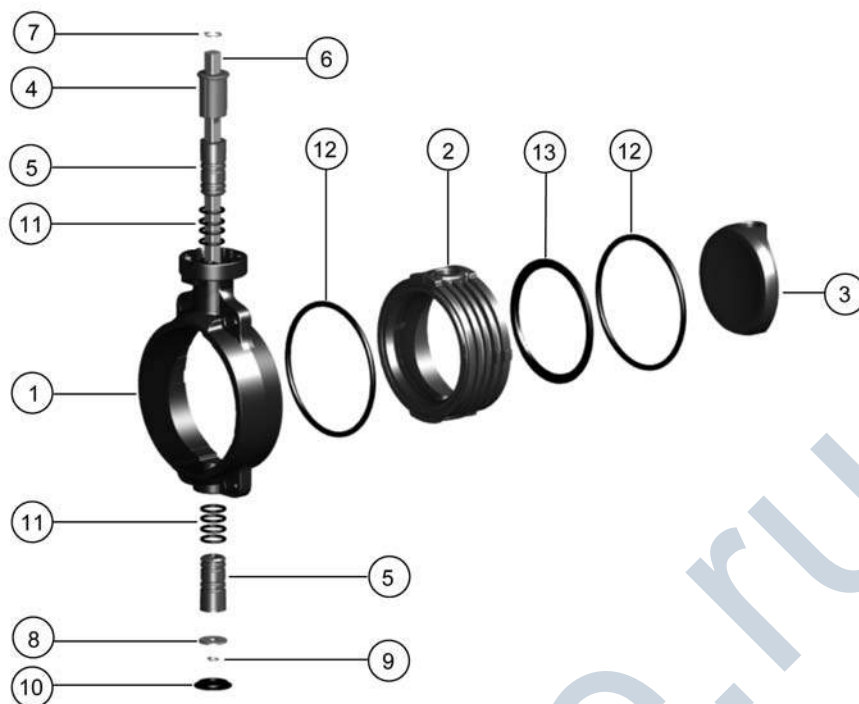


Inch	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
2	50	10	1470	<b>167 568 902</b>	<b>167 568 922</b>	2.833
2 ½	65	10	2200	<b>167 568 903</b>	<b>167 568 923</b>	3.175
3	80	10	3000	<b>167 568 904</b>	<b>167 568 924</b>	3.551
4	100	10	6500	<b>167 568 905</b>	<b>167 568 925</b>	5.565
5	125	10	11500	<b>167 568 906</b>	<b>167 568 926</b>	7.395
6	150	10	16600	<b>167 568 907</b>	<b>167 568 927</b>	9.179
8	200	10	39600	<b>167 568 908</b>	<b>167 568 928</b>	13.847

Inch	d2 [mm]	D	D1 [mm]	D3 [mm]	D4 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	L [mm]	Q1 [mm]	Q2 [mm]
2	150	UNC 5/8	121	70	90	222	77	134	27	23	45	40	
2 ½	170	UNC 5/8	138	70	90	235	83	140	27	23	46	54	35
3	177	UNC 5/8	152	70	90	247	89	146	27	23	49	67	50
4	216	UNC 5/8	191	70	90	287	104	167	16	23	56	88	74
5	246	UNC 3/4	216	70	90	313	117	181	16	23	64	113	97
6	273	UNC 3/4	241	70	90	335	130	189	19	23	72	139	123
8	334	UNC 3/4	298	70	90	387	158	210	19	23	73	178	169



## Spare parts for butterfly valve type 567 PP-H Hand lever with index plate

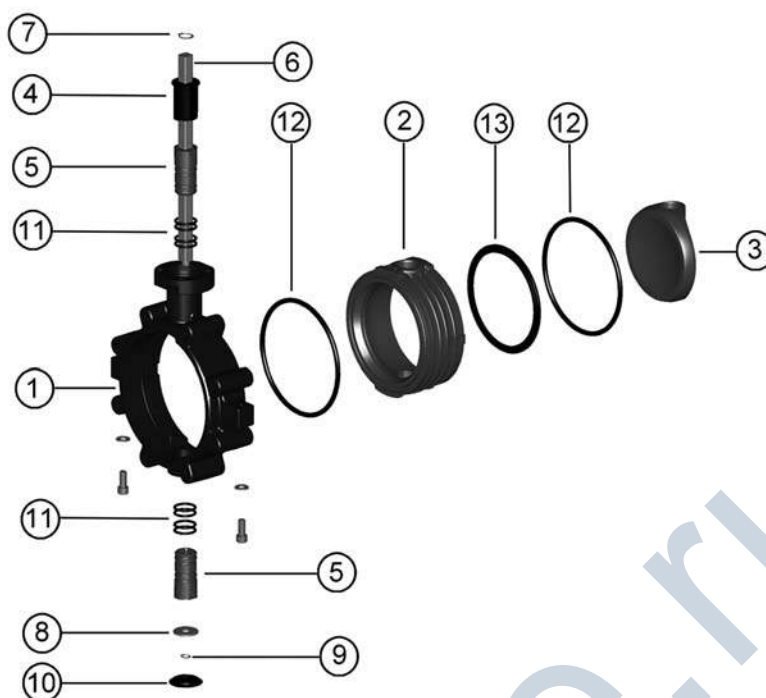


No.	Article / Material	Pieces	d63 DN50	d75 DN65	d90 DN80	d110 DN100	d140 DN125	d160 DN150	d225 DN200
3	Disc PP-H	1	167 483 226	167 483 227	167 483 228	167 483 229	167 483 230	167 483 231	167 483 232
5	Bearing bush Bush PP-H	2	167 484 259	167 484 259	167 484 259	167 484 260	167 484 260	167 484 261	167 484 261
11	O-ring EPDM								
5	Bearing bush Bush PP-H	2	167 484 265	167 484 265	167 484 265	167 484 266	167 484 266	167 484 267	167 484 267
11	O-ring FPM								
2	Inner body Body PP-H	1	167 484 271	167 484 272	167 484 273	167 484 274	167 484 275	167 484 276	167 484 277
13	Profile seal EPDM	1							
2	Inner body Body PP-H	1	167 484 286	167 484 287	167 484 288	167 484 289	167 484 290	167 484 291	167 484 292
13	Profile seal FPM	1							
12	Flange gasket EPDM	2	161 486 959	161 486 960	161 486 961	161 486 962	161 486 963	161 486 964	161 486 965
12	Flange gasket FPM	2	161 486 979	161 486 980	161 486 981	161 486 982	161 486 983	161 486 984	161 486 985
4	End stop PP Glasfiber Reinforced	1	167 483 251	167 483 251	167 483 251	167 483 252	167 483 252	167 483 253	167 483 253
6	Shaft set Shaft Chrom Steel 1.4301 AISI 304	1	161 486 899	161 486 900	161 486 901	161 486 902	161 486 903	161 486 904	161 486 905
7+9	Retention ring	2							
8	Washer	1							
	Lever with index plate	1	161 486 690	161 486 690	161 486 690	161 486 691	161 486 691	161 486 694	161 486 695

No.	Article / Material	Pieces	d280 DN250	d315 DN300
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No.	Article / Material	Pieces	d280 DN250	d315 DN300
3	Disc PP-H	1	167 483 233	167 483 234
5	Bearing bush	2	167 484 262	167 484 262
11	Bush PP-H			
	O-ring EPDM			
5	Bearing bush	2	167 484 268	167 484 268
11	Bush PP-H			
	O-ring FPM			
2	Inner body	1	167 484 278	167 484 279
13	Body PP-H			
	Profile seal EPDM	1		
2	Inner body	1	167 484 293	167 484 294
13	Body PP-H			
	Profile seal FPM	1		
12	Flange gasket EPDM	2	161 486 966	161 486 967
12	Flange gasket FPM	2	161 486 986	161 486 987
4	End stop PP Glasfiber Reinforced	1	167 483 254	167 483 254
6	Shaft set	1	161 486 906	161 486 907
7+9	Shaft Chrom Steel 1.4301 AISI 304			
	Retention ring	2		
8	Washer	1		
	Lever with index plate	1	161 486 697	161 486 697

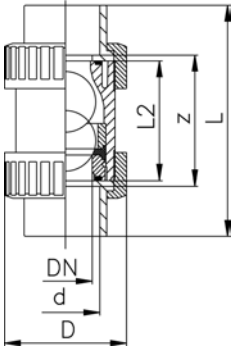
## Spare parts for butterfly valve type 568 PP-H Hand lever with index plate



No.	Article / Material	Pieces	d63 DN50	d75 DN65	d90 DN80	d110 DN100	d140 DN125	d160 DN150	d225 DN200
3	Disc PP-H	1	167 483 226	167 483 227	167 483 228	167 483 229	167 483 230	167 483 231	167 483 232
5	Bearing bush	2	167 484 259	167 484 259	167 484 259	167 484 260	167 484 260	167 484 261	167 484 261
11	O-ring EPDM								
5	Bearing bush	2	167 484 265	167 484 265	167 484 265	167 484 266	167 484 266	167 484 267	167 484 267
11	O-ring FPM								
2	Inner body	1	167 484 271	167 484 272	167 484 273	167 484 274	167 484 275	167 484 276	167 484 277
13	Profile seal EPDM								
2	Inner body	1	167 484 286	167 484 287	167 484 288	167 484 289	167 484 290	167 484 291	167 484 292
13	Profile seal FPM								
12	Flange gasket EPDM	2	161 486 959	161 486 960	161 486 961	161 486 962	161 486 963	161 486 964	161 486 965
12	Flange gasket FPM	2	161 486 979	161 486 980	161 486 981	161 486 982	161 486 983	161 486 984	161 486 985
4	End stop PP Glasfiber Reinforced	1	167 486 251	167 486 251	167 486 251	167 483 252	167 483 252	167 483 253	167 483 253
	Lever with index plate	1	161 486 690	161 486 690	161 486 690	161 486 691	161 486 691	161 486 694	161 486 695
6	Shaft set	1	161 486 899	161 486 900	161 486 901	161 486 902	161 486 903	161 486 904	161 486 905
7+9	Shaft Chrom Steel 1.4301 AISI 304								
	Retention ring	2							
8	Washer	1							

# Ball Check Valves 360

## PROGEF Standard Ball check valve type 360 With fusion sockets metric

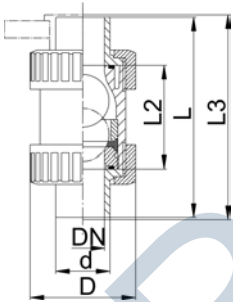


### Model:

- Material: PP-H
- For easy installation and removal
- The ball seals at a minimum water column of 2 m
- Vibration free even at high flow velocity

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	D [mm]	L [mm]	L2 [mm]	z [mm]
16	10	10	170	167 360 401	167 360 411	0.079	46	98	62	72
20	15	10	150	167 360 402	167 360 412	0.079	46	101	62	73
25	20	10	330	167 360 403	167 360 413	0.134	56	119	74	87
32	25	10	390	167 360 404	167 360 414	0.203	67	130	78	94
40	32	10	710	167 360 405	167 360 415	0.380	82	149	88	109
50	40	10	900	167 360 406	167 360 416	0.612	98	162	94	118
63	50	10	1390	167 360 407	167 360 417	1.116	120	195	113	143

## PROGEF Standard Ball check valve type 360 With socket fusion spigots metric



### Model:

- Material: PP-H
- For easy installation and removal
- The ball seals at a minimum water column of 2 m
- Vibration free even at high flow velocity

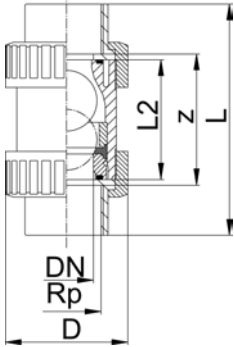
d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	D [mm]	L [mm]	L2 [mm]
16	10	10	170	167 360 441	167 360 451	0.080	46	109	62
20	15	10	150	167 360 442	167 360 452	0.080	46	119	62
25	20	10	330	167 360 443	167 360 453	0.136	56	140	74
32	25	10	390	167 360 444	167 360 454	0.208	67	150	78
40	32	10	710	167 360 445	167 360 455	0.386	82	171	88
50	40	10	900	167 360 446	167 360 456	0.631	97	191	94
63	50	10	1390	167 360 447	167 360 457	1.149	119	220	113



## PROGEF Standard Ball check valve type 360 With threaded sockets Rp

### Model:

- Material: PP-H
- For easy installation and removal
- The ball seals at a minimum water column of 2 m
- Vibration free even at high flow velocity



- Parallel female thread Rp

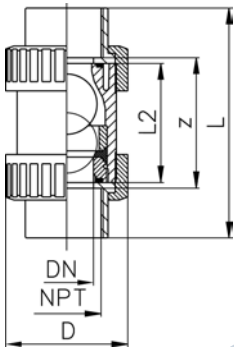
Rp [inch]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	z [mm]	D [mm]	L [mm]	L2 [mm]
3/8	10	10	170	<b>167 360 421</b>	<b>167 360 431</b>	0.078	66	46	98	62
1/2	15	10	150	<b>167 360 422</b>	<b>167 360 432</b>	0.078	66	46	101	62
3/4	20	10	330	<b>167 360 423</b>	<b>167 360 433</b>	0.131	78	56	119	74
1	25	10	390	<b>167 360 424</b>	<b>167 360 434</b>	0.199	82	67	130	78
1 1/4	32	10	710	<b>167 360 425</b>	<b>167 360 435</b>	0.372	95	82	149	88
1 1/2	40	10	900	<b>167 360 426</b>	<b>167 360 436</b>	0.618	108	98	162	94
2	50	10	1390	<b>167 360 427</b>	<b>167 360 437</b>	1.129	134	120	195	113



## PROGEF Standard Ball check valve type 360 With threaded sockets NPT

### Model:

- Material: PP-H
- For easy installation and removal
- The ball seals at a minimum water column of 2 m
- Vibration free even at high flow velocity
- With tapered female thread NPT\*



\* Not available from stock

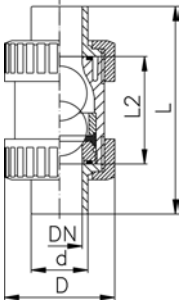
NPT [inch]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	z [mm]	D [mm]	L [mm]	L2 [mm]
3/8	10	10	170	<b>167 360 581</b>	<b>167 360 591</b>	0.078	75	46	111	62
1/2	15	10	150	<b>167 360 582</b>	<b>167 360 592</b>	0.078	68	46	111	62
3/4	20	10	330	<b>167 360 583</b>	<b>167 360 593</b>	0.131	89	56	130	74
1	25	10	330	<b>167 360 584</b>	<b>167 360 594</b>	0.199	88	67	140	78
1 1/4	32	10	710	<b>167 360 585</b>	<b>167 360 595</b>	0.372	111	82	165	88
1 1/2	40	10	900	<b>167 360 586</b>	<b>167 360 596</b>	0.618	109	98	169	94
2	50	10	1390	<b>167 360 587</b>	<b>167 360 597</b>	1.129	136	120	199	113



## Ball check valve type 360 PP-H With butt fusion spigots SDR11

### Model:

- Material: PP-H
- For easy installation and removal
- The ball seals at a minimum water column of 2 m
- Vibration free even at high flow velocity



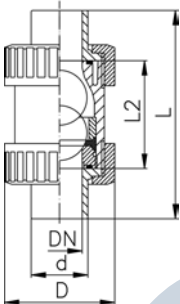
d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	D [mm]	L [mm]	L2 [mm]
20	15	10	150	<b>167 360 482</b>	<b>167 360 492</b>	0.080	46	130	62
25	20	10	330	<b>167 360 483</b>	<b>167 360 493</b>	0.136	56	144	74
32	25	10	390	<b>167 360 484</b>	<b>167 360 494</b>	0.208	67	150	78
40	32	10	710	<b>167 360 485</b>	<b>167 360 495</b>	0.386	82	171	88
50	40	10	900	<b>167 360 486</b>	<b>167 360 496</b>	0.631	97	191	94
63	50	10	1390	<b>167 360 487</b>	<b>167 360 497</b>	1.149	119	220	113



## PROGEF Standard Ball check valve type 360 With butt fusion spigots SDR17

### Model:

- Material: PP-H
- For easy installation and removal
- The ball seals at a minimum water column of 2 m
- Vibration free even at high flow velocity



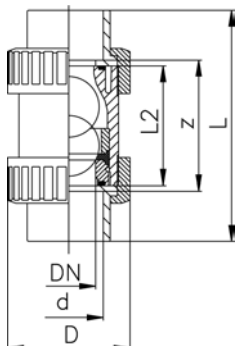
d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	D [mm]	L [mm]	L2 [mm]
25	20	6	330	<b>167 360 463</b>	<b>167 360 473</b>	0.136	56	144	74
32	25	6	390	<b>167 360 464</b>	<b>167 360 474</b>	0.208	67	150	78
40	32	6	710	<b>167 360 465</b>	<b>167 360 475</b>	0.386	82	171	88
50	40	6	900	<b>167 360 466</b>	<b>167 360 476</b>	0.631	97	191	94
63	50	6	1390	<b>167 360 467</b>	<b>167 360 477</b>	1.149	119	220	113



## Ball check valve type 360 PP-H With fusion sockets PE80 metric

### Model:

- Material: PP-H
- For easy installation and removal
- The ball seals at a minimum water column of 2 m
- Vibration free even at high flow velocity



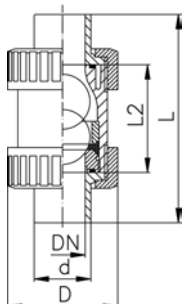
d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	D [mm]	L [mm]	L2 [mm]	z [mm]
16	10	10	170	<b>167 360 721</b>	<b>167 360 731</b>	0.079	46	98	62	72
20	15	10	150	<b>167 360 722</b>	<b>167 360 732</b>	0.079	46	101	62	73
25	20	10	330	<b>167 360 723</b>	<b>167 360 733</b>	0.134	56	119	74	87
32	25	10	390	<b>167 360 724</b>	<b>167 360 734</b>	0.203	67	130	78	94
40	32	10	710	<b>167 360 725</b>	<b>167 360 735</b>	0.380	82	149	88	109
50	40	10	900	<b>167 360 726</b>	<b>167 360 736</b>	0.612	98	162	94	118
63	50	10	1390	<b>167 360 727</b>	<b>167 360 737</b>	1.116	120	195	113	143



## Ball check valve type 360 PP-H With spigots for electro fusion PE100 SDR11

### Model:

- Material: PP-H
- For easy installation and removal
- The ball seals at a minimum water column of 2 m
- Vibration free even at high flow velocity



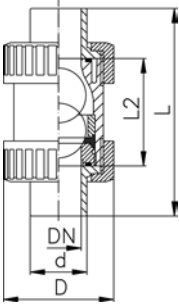
d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	D [mm]	L [mm]	L2 [mm]
20	15	10	150	<b>167 360 682</b>	<b>167 360 692</b>	0.080	46	196	62
25	20	10	330	<b>167 360 683</b>	<b>167 360 693</b>	0.136	56	216	74
32	25	10	390	<b>167 360 684</b>	<b>167 360 694</b>	0.208	67	224	78
40	32	10	710	<b>167 360 685</b>	<b>167 360 695</b>	0.386	82	250	88
50	40	10	900	<b>167 360 686</b>	<b>167 360 696</b>	0.631	97	268	94
63	50	10	1390	<b>167 360 687</b>	<b>167 360 697</b>	1.149	119	299	113



## Ball check valve type 360 PP-H With butt fusion spigots PE100 SDR17

### Model:

- Material: PP-H
- For easy installation and removal
- The ball seals at a minimum water column of 2 m
- Vibration free even at high flow velocity



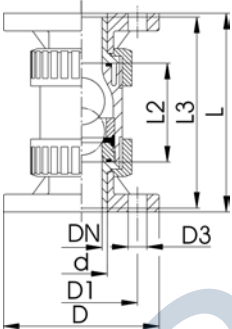
d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	D [mm]	L [mm]	L2 [mm]
40	32	6	710	<b>167 360 665</b>	<b>167 360 675</b>	0.386	82	171	88
50	40	6	900	<b>167 360 666</b>	<b>167 360 676</b>	0.631	97	191	94
63	50	6	1390	<b>167 360 667</b>	<b>167 360 677</b>	1.149	119	220	113



## PROGEF Standard Ball check valve type 360 With fixed flanges serrated metric

### Model:

- Material: PP-H
- For easy installation and removal
- The ball seals at a minimum water column of 2 m
- Vibration free even at high flow velocity
- Overall length EN 558
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	½	10	150	<b>167 360 502</b>	<b>167 360 512</b>	0.206
25	20	¾	10	330	<b>167 360 503</b>	<b>167 360 513</b>	0.299
32	25	1	10	390	<b>167 360 504</b>	<b>167 360 514</b>	0.437
40	32	1 ¼	10	710	<b>167 360 505</b>	<b>167 360 515</b>	0.731
50	40	1 ½	10	900	<b>167 360 506</b>	<b>167 360 516</b>	1.044
63	50	2	10	1390	<b>167 360 507</b>	<b>167 360 517</b>	1.711

d [mm]	D [mm]	D1 [mm]	D3 [mm]	L [mm]	L2 [mm]	L3 [mm]
20	95	65	14	130	62	119
25	105	75	14	150	74	140
32	115	85	14	160	78	150
40	140	100	18	180	88	171
50	150	110	18	200	94	191
63	165	125	18	230	113	220



# Component Parts for Flange Assembly Ball Check Valves Type 360

27 79 02

## PROGEF Standard, Flange Adaptor Jointing face flat/serrated

d [mm]	PN	Code	kg
20	10	<b>727 790 206</b>	0.011
25	10	<b>727 790 207</b>	0.022
32	10	<b>727 790 208</b>	0.033
40	10	<b>727 790 209</b>	0.046
50	10	<b>727 790 210</b>	0.062
63	10	<b>727 790 211</b>	0.090
75	10	<b>727 790 212</b>	0.163
90	10	<b>727 790 213</b>	0.233
110	10	<b>727 790 214</b>	0.319

## PROGEF Standard, Special Flange Adaptors, PP-H S5/SDR11 Jointing Face, combination serrated / flat metric

d [mm]	DN [mm]	FM	Code	kg
75	65	IR	<b>727 798 512</b>	0.243
90	80	IR	<b>727 798 513</b>	0.326
90	80	IR	<b>727 798 663</b>	0.346
110	100	IR	<b>727 798 514</b>	0.441
125	100	IR	<b>727 798 515</b>	0.520
140	125	IR	<b>727 798 516</b>	0.800
160	150	IR	<b>727 798 517</b>	0.920
180	150	IR	<b>727 798 568</b>	0.900
200	200	IR	<b>727 798 519</b>	1.670
225	200	IR	<b>727 798 520</b>	1.700
250	250	--	<b>727 798 571</b>	2.790
280	250	--	<b>727 798 572</b>	2.610
315	300	--	<b>727 798 573</b>	3.410
355	350	--	<b>727 798 574</b>	5.600
400	400	--	<b>727 798 575</b>	8.300

EPDM 48 44 07  
FPM 49 44 07

**Profile Flange Gaskets metric  
EPDM / FPM**



d [mm]	DN [mm]	PN	EPDM Code	FPM Code	kg
16	10	16	748 440 705	749 440 705	0.007
20	15	16	748 440 706	749 440 706	0.008
25	20	16	748 440 707	749 440 707	0.011
32	25	16	748 440 708	749 440 708	0.014
40	32	16	748 440 709	749 440 709	0.021
50	40	16	748 440 710	749 440 710	0.022
63	50	16	748 440 711	749 440 711	0.041
75	65	16	748 440 712	749 440 712	0.055
90	80	16	748 440 713	749 440 713	0.062
110	100	16	748 440 714	749 440 714	0.085
125	100	16	748 440 715	749 440 715	0.158
140	125	16	748 440 716	749 440 716	0.118
160 / 180	150	16	748 440 717	749 440 717	0.153
200	200	16	748 440 719	749 440 719	0.263
225	200	16	748 440 720	749 440 720	0.181
250	250	16	748 440 721	749 440 721	0.410
280	250	16	748 440 722	749 440 722	0.226
315	300	16	748 440 723	749 440 723	0.334
355	350	16	748 440 724	749 440 724	0.410
400	400	16	748 440 725	749 440 725	0.513

27 70 04  
27 70 05

**Backing Flanges, PP-V  
for Butt Fusion Systems metric**

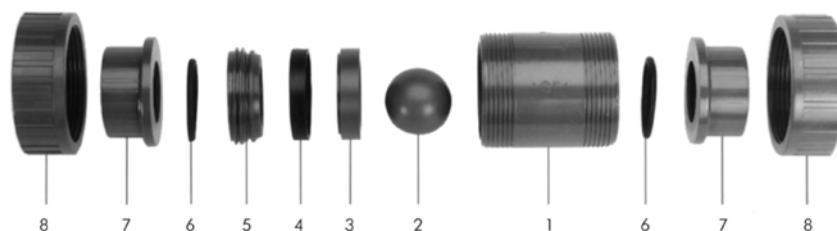
d [mm]	Inch	DN [mm]	PN	Code	kg
20		15	16	727 700 406	0.080
25		20	16	727 700 407	0.100
32		25	16	727 700 408	0.140
40		32	16	727 700 409	0.220
50		40	16	727 700 410	0.210
63		50	16	727 700 411	0.380

27 70 04  
27 70 05

**Backing Flanges, PP-V  
for Socket Systems metric**

d [mm]	Inch	DN [mm]	PN	Code	kg
20		15	16	727 700 406	0.080
25		20	16	727 700 407	0.100
32		25	16	727 700 408	0.140
40		32	16	727 700 409	0.220
50		40	16	727 700 410	0.210
63		50	16	727 700 411	0.380

## Spare parts for ball check valve type 360 PP-H



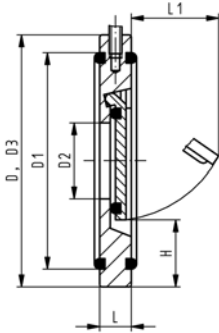
No.	Article / Material	Pieces	d16 DN 10	d20 DN 15	d25 DN 20	d32 DN 25	d40 DN 32	d50 DN 40	d63 DN 50
1	Central part Body PP	1	167 481 125	167 481 126	167 481 127	167 481 128	167 481 129	167 481 130	167 481 131
2	Ball PP	1							
3	Support ring PP	1							
4	Sealing ring EPDM	1							
5	Union bush PP	1							
1	Central part Body PP	1	167 481 135	167 481 136	167 481 137	167 481 138	167 481 139	167 481 140	167 481 141
2	Ball PP	1							
3	Support ring PP	1							
4	Sealing ring FPM	1							
5	Union bush PP	1							
8	Union nut PP-H	1	167 480 786	167 480 786	167 480 787	167 480 788	167 480 789	167 480 790	167 480 791
7	Fusion socket PP-H	1	167 480 159	167 480 160	167 480 161	167 480 162	167 480 163	167 480 164	167 480 165
7	Socket fusion spigot PP-H	1	167 480 527	167 480 528	167 480 529	167 480 530	167 480 531	167 480 532	167 480 533
7	Butt fusion spigot long PP-H SDR11	1	-	167 482 546	167 482 547	167 482 548	167 482 549	167 482 550	167 482 551
7	Butt fusion spigot PP-H SDR11 (IR-Plus®) compatible	1	-	167 480 546	167 480 547	167 480 548	167 480 549	167 480 550	167 480 551
7	Butt fusion spigot PP-H SDR 17	1	-	167 480 537	167 480 538	167 480 539	167 480 540	167 480 541	167 480 542
7	Threaded socket PP-H	1	167 480 166	167 480 167	167 480 168	167 480 169	167 480 170	167 480 171	167 480 172
7	Threaded socket PP-H	1	167 480 452	167 480 453	167 480 454	167 480 455	167 480 456	167 480 457	167 480 458
7	Valve end with fusion socket PE 80	1	173 480 000	173 480 001	173 480 002	173 480 003	173 480 004	173 480 005	173 480 006
7	Butt fusion spigot long PE 100 SDR11	1	-	193 480 127	193 480 128	193 480 129	193 480 130	193 480 131	193 480 132
7	Butt fusion spigot PE 100	1	193 480 026	193 480 027	193 480 028	193 480 029	193 480 030	193 480 031	193 480 032
7	Butt fusion spigot PE 100	1	-	-	193 480 014	193 480 015	193 480 016	193 480 017	193 480 018
7	Fixed flange PP-H serrated	1	-	727 740 106	727 740 107	727 740 108	727 740 109	727 740 110	727 740 111
2	Ball PP-H 100% y 0.9	1	167 480 024	167 480 024	167 480 025	167 480 026	167 480 027	167 480 028	167 480 029
2	Ball PP-H filled with talc y 1.24	1	167 481 165	167 481 165	167 481 166	167 481 167	167 481 168	167 481 169	167 481 170

No.	Article / Material	Pieces	d16 DN 10	d20 DN 15	d25 DN 20	d32 DN 25	d40 DN 32	d50 DN 40	d63 DN 50
4	Sealing ring EPDM	1	161 483 259	161 483 259	161 483 260	161 483 261	161 483 262	161 483 263	161 483 264
4	Sealing ring FPM	1	161 483 265	161 483 265	161 483 266	161 483 267	161 483 268	161 483 269	161 483 270
6	Union end seal EPDM	1	748 410 042	748 410 042	748 410 116	748 410 103	748 410 027	748 410 010	748 410 011
6	Union end seal FPM	1	749 410 042	749 410 042	749 410 116	749 410 103	749 410 027	749 410 010	749 410 011

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# Wafer Check Valves 369

## PROGEF Standard Wafer check valve type 369 Without spring



### Model:

- Material: PP-H
- Supporting eyelets for simple fitting
- Suitable for vertical and horizontal mounting

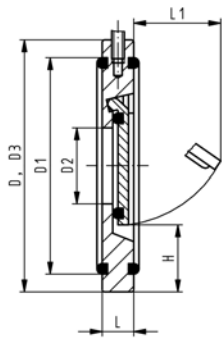
### Installation instruction:

- Installation between metric flange adaptors
- It is necessary to use a special outlet flange adaptor PP or PE on the outgoing side of the wafer check valve
- Centering by body diameter
- Sealing with special flange gasket (except DN32, o-ring)
- A stabilizing zone of at least 5 times nominal diameter (DN) should be provided before and after the wafer check valve (10 times DN is recommended)
- No direct installation on pump flange or following bend allowed
- Wafer check valves without reset spring are not recommended for pulsating flows (production of noise)

Available with flange gasket from Q4 2008 on

d [mm]	DN [mm]	PN	EPDM Code	FPM Code	kg
40	32	6	167 369 002	167 369 022	0.090
50	40	6	167 369 003	167 369 023	0.100
63	50	6	167 369 004	167 369 024	0.170
75	65	6	167 369 005	167 369 025	0.220
90	80	6	167 369 006	167 369 026	0.260
110	100	6	167 369 007	167 369 027	0.370
140	125	6	167 369 009	167 369 029	0.500
160	150	6	167 369 010	167 369 030	0.740
225	200	6	167 369 011	167 369 031	1.400
280	250	6	167 369 012	167 369 032	2.400
315	300	6	167 369 013	167 369 033	3.520

d [mm]	D [mm]	D1 [mm]	D2 [mm]	H [mm]	L [mm]	L1 [mm]	Opening pressure vertical [mbar]	Opening pressure horizontal [mbar]	Minimum water column for sealing [m]
40	85	59	18	25	15	22	10	1	3.0
50	95	72	22	28	16	27	10	1	3.0
63	109	86	32	29	18	40	10	1	3.0
75	129	105	40	31	20	55	10	1	3.0
90	144	119	54	32	20	67	10	1	3.0
110	164	146	70	31	23	67	10	1	3.0
140	195	173	92	35	23	94	10	1	3.0
160	220	197	105	42	26	100	10	1	3.0
225	275	255	154	38	35	152	18	1	3.0
280	330	312	192	41	40	180	18	1	3.0
315	380	363	227	41	45	215	18	1	3.0



## PROGEF Standard Wafer check valve type 369 With V4A spring (stainless steel 316)

### Model:

- Material: PP-H
- Supporting eyelets for simple fitting
- Suitable for vertical and horizontal mounting

### Installation instruction:

- Installation between metric flange adaptors
- It is necessary to use a special outlet flange adaptor PP or PE on the outgoing side of the wafer check valve
- Centering by body diameter
- Sealing with special flange gasket (except DN32, o-ring)
- A stabilizing zone of at least 5 times nominal diameter (DN) should be provided before and after the wafer check valve (10 times DN is recommended)
- No direct installation on pump flange or following bend allowed

Available with flange gasket from Q4 2008 on

d [mm]	DN [mm]	PN	EPDM Code	FPM Code	kg
40	32	6	167 369 042	167 369 062	0.090
50	40	6	167 369 043	167 369 063	0.100
63	50	6	167 369 044	167 369 064	0.170
75	65	6	167 369 045	167 369 065	0.220
90	80	6	167 369 046	167 369 066	0.260
110	100	6	167 369 047	167 369 067	0.370
140	125	6	167 369 049	167 369 069	0.500
160	150	6	167 369 050	167 369 070	0.740
225	200	6	167 369 051	167 369 071	1.400
280	250	6	167 369 052	167 369 072	2.400
315	300	6	167 369 053	167 369 073	3.520

d [mm]	D [mm]	D1 [mm]	D2 [mm]	H [mm]	L [mm]	L1 [mm]	Opening pressure vertical [mbar]	Opening pressure horizontal [mbar]	Minimum water column for sealing [m]	
40	85	59	18	25	15	22		30	20	3.0
50	95	72	22	28	16	27		30	20	3.0
63	109	86	32	29	18	40		30	20	3.0
75	129	105	40	31	20	55		30	20	3.0
90	144	119	54	32	20	67		30	20	3.0
110	164	146	70	31	23	67		30	20	3.0
140	195	173	92	35	23	94		30	20	3.0
160	220	197	105	42	26	100		30	20	3.0
225	275	255	154	38	35	152		38	20	3.0
280	330	312	192	41	40	180		38	20	3.0
315	380	363	227	41	45	215		38	20	3.0



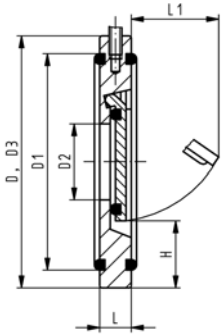
## PROGEF Standard Wafer check valve type 369 With Hastelloy C spring

### Model:

- Material: PP-H
- Supporting eyelets for simple fitting
- Suitable for vertical and horizontal mounting

### Installation instruction:

- Installation between metric flange adaptors
- It is necessary to use a special outlet flange adaptor PP or PE on the outgoing side of the wafer check valve
- Centering by body diameter
- Sealing with special flange gasket (except DN32, o-ring)
- A stabilizing zone of at least 5 times nominal diameter (DN) should be provided before and after the wafer check valve (10 times DN is recommended)
- No direct installation on pump flange or following bend allowed

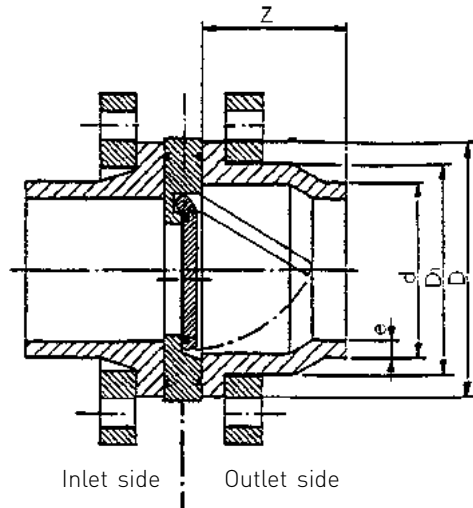


Available with flange gasket from Q4 2008 on

d [mm]	DN [mm]	PN	EPDM Code	FPM Code	kg
40	32	6	167 369 082	167 369 102	0.090
50	40	6	167 369 083	167 369 103	0.100
63	50	6	167 369 084	167 369 104	0.170
75	65	6	167 369 085	167 369 105	0.220
90	80	6	167 369 086	167 369 106	0.260
110	100	6	167 369 087	167 369 107	0.370
140	125	6	167 369 089	167 369 109	0.500
160	150	6	167 369 090	167 369 110	0.740
225	200	6	167 369 091	167 369 111	1.400
280	250	6	167 369 092	167 369 112	2.400
315	300	6	167 369 093	167 369 113	3.520

d [mm]	D [mm]	D1 [mm]	D2 [mm]	H [mm]	L [mm]	L1 [mm]	Opening pressure vertical [mbar]	Opening pressure horizontal [mbar]	Minimum water column for sealing [m]	
40	85	59	18	25	15	22		30	20	3.0
50	95	72	22	28	16	27		30	20	3.0
63	109	86	32	29	18	40		30	20	3.0
75	129	105	40	31	20	55		30	20	3.0
90	144	119	54	32	20	67		30	20	3.0
110	164	146	70	31	23	67		30	20	3.0
140	195	173	92	35	23	94		30	20	3.0
160	220	197	105	42	26	100		30	20	3.0
225	275	255	154	38	35	152		38	20	3.0
280	330	312	192	41	40	180		38	20	3.0
315	380	363	227	41	45	215		38	20	3.0

## Component Parts for Flange Assembly, Type 369 PP



**Warning:** This outlet flange adaptor has to be installed on the outlet side!

### Socket Fusion System PP/PE Inlet side

d	DN	Inch	PP Code	PE Code				
40	32	1 <sup>1</sup> / <sub>4</sub>	727 790 209	753 790 209				
50	40	1 <sup>1</sup> / <sub>2</sub>	727 790 210	753 790 210				
63	50	2	727 790 211	753 790 211				
75	65	2 <sup>1</sup> / <sub>2</sub>	727 790 212	753 790 212				
90	80	3	727 790 213	753 790 213				
110	100	4	727 790 214	753 790 214				

PP/PE  
Flange adaptor  
metric

d	DN	Inch	for flange adaptor metric PP-V black	for flange adaptor metric PP with steel ring				
40	32	1 <sup>1</sup> / <sub>4</sub>	727 700 409	727 700 209				
50	40	1 <sup>1</sup> / <sub>2</sub>	727 700 410	727 700 210				
63	50	2	727 700 411	727 700 211				
75	65	2 <sup>1</sup> / <sub>2</sub>	727 700 412	727 700 212				
90	80	3	727 700 413	727 700 213				
110	100	4	727 700 414	727 700 214				

Backing flange metric  
for socket fusion systems  
Connecting dimension  
DIN 2501 PN 10

### Outlet side

d	DN	Inch	Jointing face flat PP Code	Jointing face flat PE Code	D	D <sub>1</sub>	Z	
40	32	1 <sup>1</sup> / <sub>4</sub>	727 800 009	733 800 009	61	50	35	
50	40	1 <sup>1</sup> / <sub>2</sub>	727 800 010	733 800 010	73	61	38	
63	50	2	727 800 011	733 800 011	90	76	41	
75	65	2 <sup>1</sup> / <sub>2</sub>	727 800 012	733 800 012	106	90	49	
90	80	3	727 800 013	733 800 013	125	108	65	
110	100	4	727 800 014	733 800 014	150	130	62	

PP/PE  
Outlet flange adaptor  
with fusion socket  
metric

d	DN	Inch	for outlet flange adaptor PP-V black	for outlet flange adaptor PP with steel ring				
40	32	1 <sup>1</sup> / <sub>4</sub>	727 700 409	727 700 209				
50	40	1 <sup>1</sup> / <sub>2</sub>	727 700 410	727 700 210				
63	50	2	727 700 411	727 700 211				
75	65	2 <sup>1</sup> / <sub>2</sub>	727 700 412	727 700 212				
90	80	3	727 700 413	727 700 213				
110	100	4	727 700 414	727 700 214				

Backing flange metric  
for socket fusion systems  
Connecting dimension  
DIN 2501 PN 10



# Component Parts for Flange Assembly, Type 369 PP

## Butt Fusion System PP/PE Inlet side

	d	DN	Inch	PP Code	PE Code				
PP/PE Flange Adapter metric SDR 11	40	32	1¼	727 798 509	753 798 609				
	50	40	1½	727 798 510	753 798 610				
	63	50	2	727 798 511	753 798 611				
	75	65	2½	727 798 512	753 798 612				
	90	80	3	727 798 513	753 798 613				
	110	100	4	727 798 514	753 798 614				
	140	125	5	727 798 516	753 798 616				
	160	150	6	727 798 517	753 798 617				
	225	200	8	727 798 520	753 798 620				
	280	250	10	727 798 572	753 798 672				
	315	300	12	727 798 573	753 798 673				

	d	DN	Inch	PP Code	PE Code				
PP/PE Flange Adapter metric SDR 17,6	40	32	1¼	--	--				
	50	40	1½	727 798 535	753 798 535				
	63	50	2	727 798 536	753 798 536				
	75	65	2½	727 798 412	753 798 512				
	90	80	3	727 798 413	753 798 513				
				727 798 414	753 798 514				
	110	100	4						
	140	125	5	727 798 541	753 798 541				
	160	150	6	727 798 542	753 798 542				
	225	200	8	727 798 545	753 798 545				
	280	250	10	727 798 547	753 798 547				
	315	300	12	727 798 548	753 798 548				

	d	DN	Inch	for Flange Adapter PP-V black	for Flange Adapter PP with steel ring				
Backing flange metric for butt fusion systems Connecting dimension DIN 2501 PN 10	40	32	1¼	727 700 409	727 700 209				
	50	40	1½	727 700 410	727 700 210				
	63	50	2	727 700 411	727 700 211				
	75	65	2½	727 700 412	727 700 212				
	90	80	3	727 700 513	727 700 313				
	110	100	4	727 700 514	727 700 314				
	140	125	5	727 700 516	727 700 316				
	160	150	6	727 700 517	727 700 317				
	225	200	8	727 700 520	727 700 320				
	280	250	10	727 700 522	727 700 322				
	315	300	12	727 700 523	727 700 323				

## Spare parts for wafer check valve type 369 PP-H



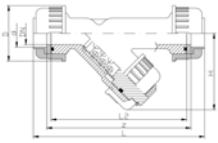
No.	Article / Material	Pieces	d40 DN 32	d50 DN 40	d63 DN 50	d75 DN 65	d90 DN 80	d110 DN 100	d140 DN 125
1	Flange gasket EPDM Available for PP-H from 4. quarter 2008	2	161 484 875	161 486 959	161 486 960	161 486 961	161 486 962	161 486 962	161 486 964
1	Flange gasket FPM Available for PP-H from 4. quarter 2008	2	161 484 887	161 486 979	161 486 980	161 486 981	161 486 982	161 486 982	161 486 984
2	Disc set		167 369 122	167 369 123	167 369 124	167 369 125	167 369 126	167 369 127	167 369 128
2	Disc PP-H	1							
2	Seal EPDM	1							
2	Disc set		167 369 142	167 369 143	167 369 144	167 369 145	167 369 146	167 369 147	167 369 148
2	Disc PP-H	1							
2	Seal FPM	1							
3	Spring V4A	1	161 484 900	161 484 901	161 484 902	161 484 903	161 484 904	161 484 905	161 484 905
3	Spring Hastelloy C	1	161 484 912	161 484 913	161 484 914	161 484 915	161 484 916	161 484 917	161 484 917

No.	Article / Material	Pieces	d160 DN 150	d225 DN 200	d280 DN 250	d315 DN 300
1	Flange gasket EPDM Available for PP-H from 4. quarter 2008	2	161 486 964	161 486 974	161 486 966	161 486 967
1	Flange gasket FPM Available for PP-H from 4. quarter 2008	2	161 486 984	161 486 993	161 486 986	161 486 987
2	Disc set		167 369 129	167 369 130	167 369 131	167 369 132
2	Disc PP-H	1				
2	Seal EPDM	1				
2	Disc set		167 369 149	167 369 150	167 369 151	167 369 152
2	Disc PP-H	1				
2	Seal FPM	1				
3	Spring V4A	1	161 484 907	161 484 908	161 484 909	161 484 910

No.	Article / Material	Pieces	d160 DN 150	d225 DN 200	d280 DN 250	d315 DN 300
3	Spring Hastelloy C	1	161 484 919	161 484 920	161 484 921	161 484 922

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## Strainers 305

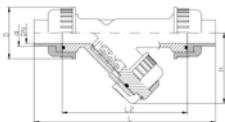


### PROGEF Standard Line strainer type 305 With fusion sockets metric

**Model:**

- Material: PP-H
- For easy installation and removal
- Protects valves, pumps, etc. from becoming soiled
- Screen perforation 0.5 mm
- Overall length according to EN 558

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	D [mm]	L [mm]	L2 [mm]	H [mm]	z [mm]
20	15	10	35	167 305 000	167 305 049	0.245	52	168	130	75	140
25	20	10	65	167 305 050	167 305 099	0.295	62	192	150	80	160
32	25	10	90	167 305 100	167 305 149	0.360	68	206	160	90	170
40	32	10	155	167 305 150	167 305 199	0.660	85	230	180	110	190
50	40	10	225	167 305 200	167 305 249	0.810	85	256	200	125	210
63	50	10	370	167 305 250	167 305 299	1.330	102	294	230	150	240



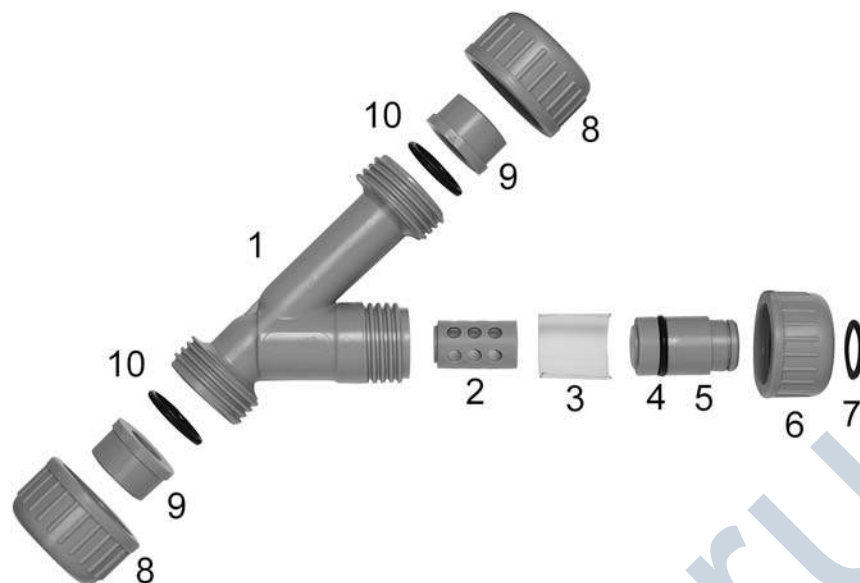
### PROGEF Standard Line strainer type 305 With butt fusion spigots SDR11 metric

**Model:**

- Material: PP-H
- For easy installation and removal
- Protects valves, pumps, etc. from becoming soiled
- Screen perforation 0.5 mm
- Overall length according to EN 558

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	D [mm]	L [mm]	L2 [mm]	H [mm]
20	15	10	35	167 305 300	167 305 349	0.245	52	238	130	75
25	20	10	65	167 305 350	167 305 399	0.295	62	264	150	80
32	25	10	90	167 305 400	167 305 449	0.360	68	280	160	90
40	32	10	155	167 305 450	167 305 499	0.660	85	306	180	110
50	40	10	225	167 305 500	167 305 549	0.810	85	332	200	125
63	50	10	370	167 305 550	167 305 599	1.330	102	368	230	150

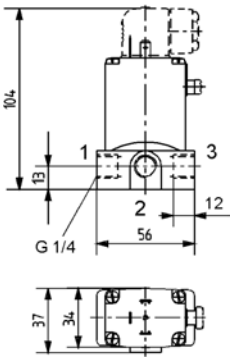
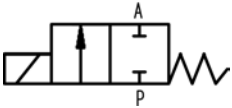
## Spare parts for line strainer type 305 (DN15-50) PP-H



No.	Article / Material	Pieces	d20 DN 15	d25 DN 20	d32 DN 25	d40 DN 32	d50 DN 40	d63 DN 50
	Screen basket compl. without screen		167 305 001	167 305 002	167 305 003	167 305 004	167 305 005	167 305 006
2	Screen cage	1						
7	Circlip	1						
1	Body PP-H	1	167 305 010	167 305 011	167 305 012	167 305 013	167 305 014	167 305 015
3	Screen perforation PP-H	1	167 305 030	167 305 031	167 305 032	167 305 033	167 305 034	167 305 035
2	Screen cage	1	167 305 020	167 305 021	167 305 022	167 305 023	167 305 024	167 305 025
5	Screen cage bracket	1	167 305 040	167 305 041	167 305 042	167 305 043	167 305 044	167 305 045
6	Valve nut PP-H	1	167 305 060	167 305 061	167 305 062	167 305 063	167 305 064	167 305 065
7	Circlip PP-H	1	161 482 017	161 482 018	161 482 019	161 482 020	161 482 021	161 482 022
4	Body seal EPDM	1	748 410 001	748 410 001	748 410 007	748 410 002	748 410 172	748 410 012
4	Body seal FPM	1	749 410 001	749 410 001	749 410 007	749 410 002	749 410 172	749 410 012
8	Union nut PP-H	2	167 305 070	167 305 071	167 305 072	167 305 073	167 305 074	167 305 075
9	Union end PP-H	2	727 608 506	727 608 507	727 608 508	727 608 509	727 608 510	727 608 511
9	Union end PP-H	2	727 600 106	727 600 107	727 600 108	727 600 109	727 600 110	727 600 111
10	O-ring EPDM	2	748 410 006	748 410 103	748 410 002	748 410 009	748 410 010	748 410 011

# Solenoid valves

**PROGEF Standard**  
**Solenoid valve type 166**  
**Function A straight-through valve 2/2 ways**  
**Nominal voltage 24V DC**  
**With G 1/4 line connection**



**Model:**

- Material: PP-H
- With manual override
- Electrical connection: cable plug
- Protection class IP 65

DN [mm]	D1_G [inch]	Function	PN [bar]	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
3	1/4	A	0.0 - 8.0	4	199 166 000	199 166 005	0.400
4	1/4	A	0.0 - 4.0	5	199 166 001	199 166 006	0.400
5	1/4	A	0.0 - 3.0	6	199 166 002	199 166 007	0.400

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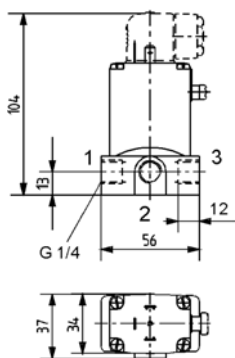
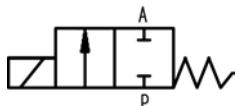


**PROGEF Standard**  
**Solenoid valve type 166**  
**Function A straight-through valve 2/2 ways**  
**Nominal voltage 230V 50Hz ±10%**  
**With G 1/4 line connection**



**Model:**

- Material: PP-H
- With manual override
- Electrical connection: cable plug
- Protection class IP 65



DN [mm]	D1_G [inch]	Function	PN [bar]	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
3	¼	A	0.0 - 10.0	4	<b>199 166 010</b>	<b>199 166 015</b>	0.400
4	¼	A	0.0 - 5.0	5	<b>199 166 011</b>	<b>199 166 016</b>	0.400
5	¼	A	0.0 - 4.5	6	<b>199 166 012</b>	<b>199 166 017</b>	0.400

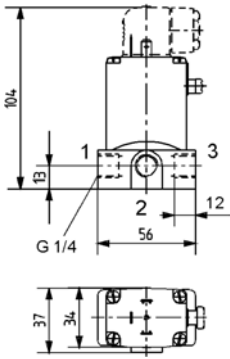
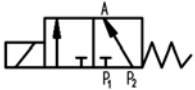


**PROGEF Standard  
Solenoid valve type 166  
Function E mixing valve 3/2 ways  
Nominal voltage 24V DC  
With G 1/4 line connection**



**Model:**

- Material: PP-H
- With manual override
- Electrical connection: cable plug
- Protection class IP 65



DN [mm]	D1_G [inch]	Function	PN [bar]	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
3	1/4	E	0.0 - 4.0	4	<b>199 166 150</b>	<b>199 166 155</b>	0.400
4	1/4	E	0.0 - 2.0	5	<b>199 166 151</b>	<b>199 166 156</b>	0.400

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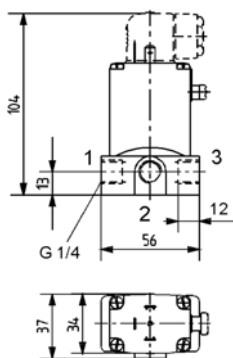


**PROGEF Standard**  
**Solenoid valve type 166**  
**Function E mixing valve 3/2 ways**  
**Nominal voltage 230V 50Hz ±10%**  
**With G 1/4 line connection**



**Model:**

- Material: PP-H
- With manual override
- Electrical connection: cable plug
- Protection class IP 65



DN [mm]	D1_G [inch]	Function	PN [bar]	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
3	1/4	E	0.0 - 6.0	4	<b>199 166 160</b>	<b>199 166 165</b>	0.400
4	1/4	E	0.0 - 3.0	5	<b>199 166 161</b>	<b>199 166 166</b>	0.400

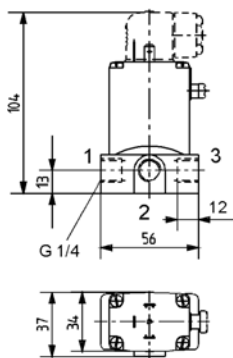
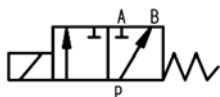


**PROGEF Standard  
Solenoid valve type 166  
Function F distribution valve 3/2 ways  
Nominal voltage 24V DC  
With G 1/4 line connection**



**Model:**

- Material: PP-H
- With manual override
- Electrical connection: cable plug
- Protection class IP 65



DN [mm]	D1_G [inch]	Function	PN [bar]	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
4	1/4	F	0.0 - 4.0	5	199 166 201	199 166 206	0.400

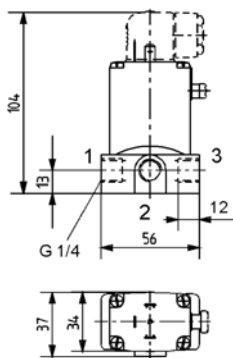
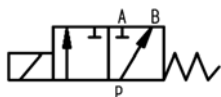


**PROGEF Standard**  
**Solenoid valve type 166**  
**Function F distribution valve 3/2 ways**  
**Nominal voltage 230V 50Hz ±10%**  
**With G 1/4 line connection**



**Model:**

- Material: PP-H
- With manual override
- Electrical connection: cable plug
- Protection class IP 65



DN [mm]	D1_G [inch]	Function	PN [bar]	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
4	¼	F	0.0 - 5.0	5	199 166 211	199 166 216	0.400

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# Copiable

## Configurator GF ball valve type 546 PROGEF Standard

### Ball Valve

- A01 Ball Valve 546
- A02 Linear Ball Valve

### Material

- B05 PP-H

### Dimension

- C05 d 16 DN 10 3/8"
- C06 d 20 DN 15 1/2"
- C07 d 25 DN 20 3/4"
- C08 d 32 DN 25 1"
- C09 d 40 DN 32 1 1/4"
- C10 d 50 DN 40 1 1/2"
- C11 d 63 DN 50 2"
- C12 DN 65 2 1/2"
- C13 DN 80 3"
- C14 DN 100 4"
- C15 DN 150 6"

### Version

- D01 Standard, PTFE ball seal
- D02 oilfree, PTFE ball seal (only with specific connecting parts)
- D03 silicon-free, PTFE ball seal (only with specific connecting parts)
- D04 silicon-free, PVDF ball seal for metric (only with specific connecting parts)

### Seals

- E01 EPDM seals
- E02 FPM seals
- E03 FFPM/KALREZ® seals

### Threaded inserts

- F01 without threaded inserts
- F02 with threaded inserts

### Connecting parts

- G30 PP-H Fusion socket metric
- G32 PP-H Socket fusion spigot metric
- G33 PP-H Threaded socket Rp reinforced
- G34 PP-H Threaded socket NPT reinforced
- G35 PP-H Butt fusion spigot SDR 11 metric IR-PLUS®
- G36 PP-H Butt fusion spigot SDR 17.6 metric with this valve end the maximum nominal pressure is reduced to PN 6
- G37 PP-H Butt fusion spigot long SDR11 metric
- G43 PE-100 Butt fusion spigot long SDR11 metric
- G44 PE-100 Butt fusion spigot long SDR17.6 metric
- G63 Fixed flange PP-H serrated metric
- G72 Backing flange PP-steel metric
- G73 Backing flange PP-steel inch ANSI
- G77 Backing flange PP JIS with connecting parts
- G78 Backing flange PP-GF JIS
- G83 PP-H Valve end blank
- G40 PE-100 Fusion socket metric
- G41 PE-100 Butt fusion spigot SDR11 metric
- G42 PE-100 Butt fusion spigot SDR17.6 metric
- G43 PE-100 Butt fusion spigot long SDR11 metric
- G11 PVC-C Cement socket metric
- G13 PVC-C Cement socket inch ASTM
- G14 PVC-C Cement spigot metric
- G15 PVC-C Threaded socket Rp
- G16 PVC-C Threaded socket Rp reinforced
- G17 PVC-C Threaded socket NPT

### Multi-functional module

- I01 No multi-functional module
- I02 Empty module
- I03 Module with 2 end switches Ag, Ni
- I04 Module with 2 end switches Au
- I05 Module with 2 inductive switches Namur
- I06 Module with 2 inductive switches PNP
- I07 Module with 2 inductive switches NPN

### Lever

- K01 Standard lever red
- K02 Standard lever black
- K11 Multi-functional lever red

### Mounting plate

- L01 without mounting plate
- L02 with mounting plate

<b>A01</b>	<b>B05</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>G</b>	<b>I</b>	<b>K</b>	<b>L</b>
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left                      right

You will find a large selection of different versions in our range of products. New system elements also provide you with new opportunities for use. In order for us to supply exactly the ball valve you need for you application, we have created a selection menu for you. (Der maximal zulässige Betriebsdruck des Kugelhahns ist PN 10).

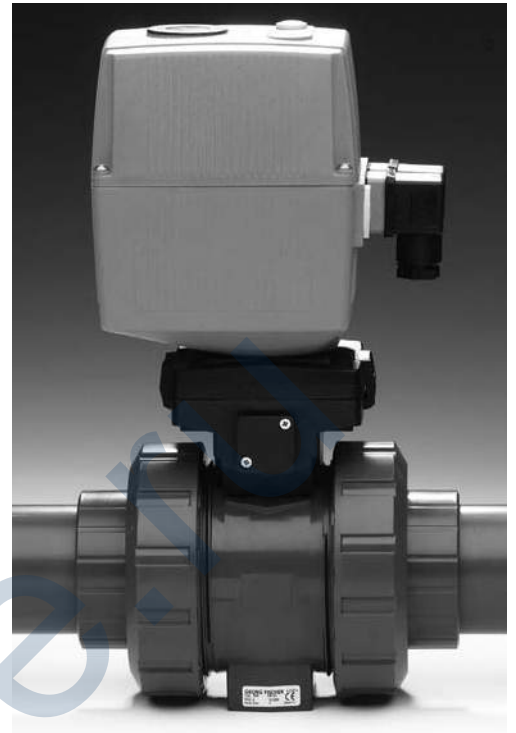
**We supply what you put together.**

# Copiable GF ball valve type 546 with electric Actuator

## It's so easy to actuate the type 546:

With the configurator, you have a choice of new electric actuators, the EA11 for standard applications and the EA21 with modular design and accessories, for practically and type of operation.

**We supply what you put together.**



### Electric Actuator EA11

- T01 EA11 24 V
- T02 EA11 100-230 V

### Accessories EA11

- U01 No accessories
- U02 2 limit switches Ag, Ni
- U03 Heating element
- U04 Fail-safe return
- U05 2 limit switches Ag, Ni normally open

### Electric Actuator EA21/31

- T03 EA21/31 24 V
- T04 EA21/31 100-230 V

### Accessories EA21

- W01 No accessories
- W02 Heating element
- W03 Cycle time module
- W04 Cycle time monitoring
- W05 Cycles monitoring
- W06 Motor current monitoring
- W07 2 limit switches Ag, Ni
- W08 2 limit switches Gold
- W09 2 limit switches NPN
- W10 2 limit switches PNP
- W11 Positioner
- W12 Electric position indicator
- W14 Fail-safe return unit
- W15 Switch intermediate position
- W27 2 limit switches Ag, Ni normally open with connector
- W31 Positioner PE25 with galv. separation

<b>T</b>	<b>U</b>	<b>T</b>	<b>W</b>	<b>W</b>	<b>W</b>	<b>W</b>	<b>W</b>	<b>W</b>

# Ball Valves Electric

## PROGEF Standard Ball valve type 107 100-230V With manual emergency override With fusion sockets metric



### Model:

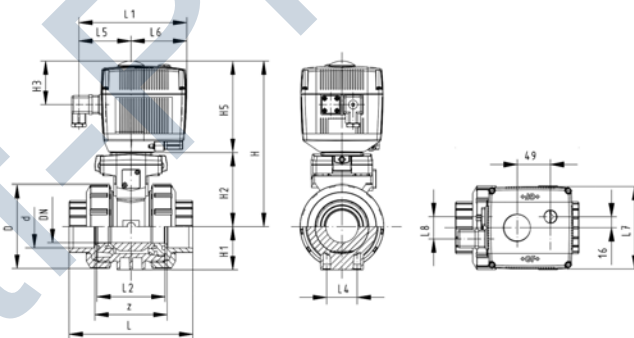
- Material: PP-H
- Built on with electric actuator EA11
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	<b>199 107 502</b>	<b>199 107 512</b>	2.100
20	15	10	185	<b>199 107 503</b>	<b>199 107 513</b>	2.100
25	20	10	350	<b>199 107 504</b>	<b>199 107 514</b>	2.200
32	25	10	700	<b>199 107 505</b>	<b>199 107 515</b>	2.300
40	32	10	1000	<b>199 107 506</b>	<b>199 107 516</b>	2.600
50	40	10	1600	<b>199 107 507</b>	<b>199 107 517</b>	3.000
63	50	10	3100	<b>199 107 508</b>	<b>199 107 518</b>	3.800

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
16	50	200	27	64	64	137	93	161	56	25	77	83	122	33	67
20	50	200	27	64	64	137	95	161	56	25	77	83	122	33	66
25	58	209	30	73	64	137	108	161	65	25	77	83	122	33	77
32	68	209	36	73	64	137	118	161	71	25	77	83	122	33	83
40	84	220	44	84	64	137	137	161	85	45	77	83	122	33	99
50	97	220	51	84	64	137	147	161	89	45	77	83	122	33	105
63	124	243	64	106	64	137	168	161	101	45	77	83	122	33	117





## PROGEF Standard Ball valve type 107 100-230V With manual emergency override With fusion spigots metric

### Model:

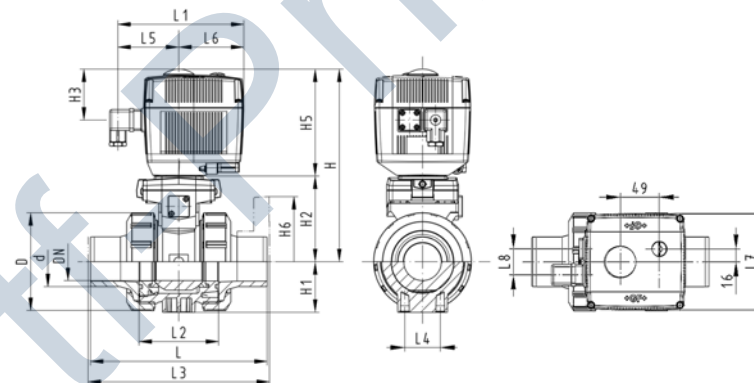
- Material: PP-H
- Built on with electric actuator EA11
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	199 107 522	199 107 532	2.100
20	15	10	185	199 107 523	199 107 533	2.100
25	20	10	350	199 107 524	199 107 534	2.200
32	25	10	700	199 107 525	199 107 535	2.300
40	32	10	1000	199 107 526	199 107 536	2.600
50	40	10	1600	199 107 527	199 107 537	3.000
63	50	10	3100	199 107 528	199 107 538	3.800

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]
16	50	200	27	64	64	137	110	161	56	130	25	77	83	122	33
20	50	200	27	64	64	137	120	161	56	130	25	77	83	122	33
25	58	209	30	73	64	137	139	161	65	150	25	77	83	122	33
32	68	209	36	73	64	137	150	161	71	160	25	77	83	122	33
40	84	220	44	84	64	137	170	161	85	180	45	77	83	122	33
50	97	220	51	84	64	137	190	161	89	200	45	77	83	122	33
63	124	243	64	106	64	137	220	161	101	230	45	77	83	122	33





**PROGEF Standard**  
**Ball valve type 107 100-230V**  
**With manual emergency override**  
**With fixed flanges PP-H serrated metric**

**Model:**

- Material: PP-H
- Built on with electric actuator EA11
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

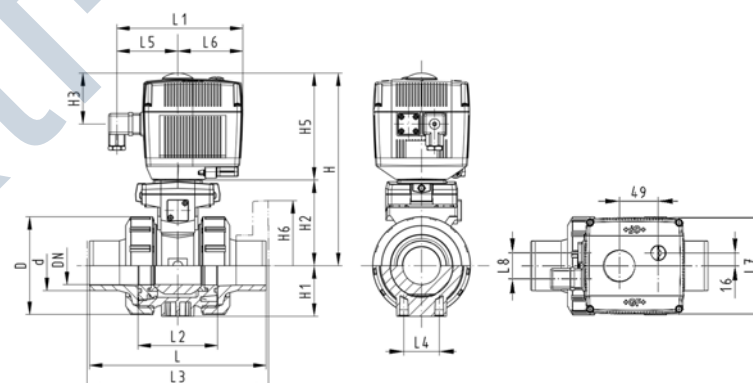
**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	½	10	185	<b>199 107 583</b>	<b>199 107 593</b>	2.300
25	20	¾	10	350	<b>199 107 584</b>	<b>199 107 594</b>	2.500
32	25	1	10	700	<b>199 107 585</b>	<b>199 107 595</b>	2.700
40	32	1 ¼	10	1000	<b>199 107 586</b>	<b>199 107 596</b>	3.200
50	40	1 ½	10	1600	<b>199 107 587</b>	<b>199 107 597</b>	3.700
63	50	2	10	3100	<b>199 107 588</b>	<b>199 107 598</b>	4.800

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	200	27	64	64	137	48	120	161	56	130	25	77	83	122
25	58	209	30	73	64	137	53	140	161	65	150	25	77	83	122
32	68	209	36	73	64	137	58	150	161	71	160	25	77	83	122
40	84	220	44	84	64	137	70	170	161	85	180	45	77	83	122
50	97	220	51	84	64	137	75	190	161	89	200	45	77	83	122
63	124	243	64	106	64	137	165	220	161	101	230	45	77	83	122

d [mm]	L8 [mm]
20	33
25	33
32	33
40	33
50	33
63	33







## PROGEF Standard Ball valve type 107 24V With manual emergency override With fusion sockets metric

### Model:

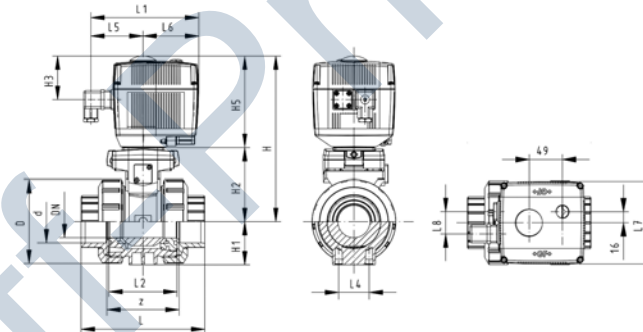
- Material: PP-H
- Built on with electric actuator EA11
- Voltage 24 V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	199 107 542	199 107 552	2.100
20	15	10	185	199 107 543	199 107 553	2.100
25	20	10	350	199 107 544	199 107 554	2.200
32	25	10	700	199 107 545	199 107 555	2.300
40	32	10	1000	199 107 546	199 107 556	2.600
50	40	10	1600	199 107 547	199 107 557	3.000
63	50	10	3100	199 107 548	199 107 558	3.800

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
16	50	200	27	64	64	137	93	161	56	25	77	83	122	33	67
20	50	200	27	64	64	137	95	161	56	25	77	83	122	33	66
25	58	209	30	73	64	137	108	161	65	25	77	83	122	33	77
32	68	209	36	73	64	137	118	161	71	25	77	83	122	33	83
40	84	220	44	84	64	137	137	161	85	45	77	83	122	33	99
50	97	220	51	84	64	137	147	161	89	45	77	83	122	33	105
63	124	243	64	106	64	137	168	161	101	45	77	83	122	33	117





## PROGEF Standard Ball valve type 107 24V With manual emergency override With fusion spigots metric

### Model:

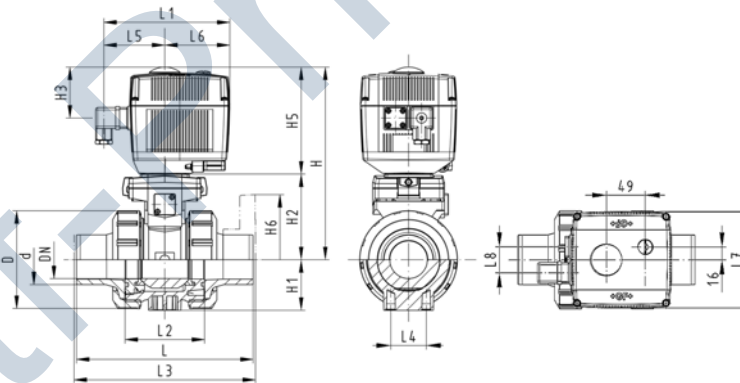
- Material: PP-H
- Built on with electric actuator EA11
- Voltage 24 V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	199 107 562	199 107 572	2.100
20	15	10	185	199 107 563	199 107 573	2.100
25	20	10	350	199 107 564	199 107 574	2.200
32	25	10	700	199 107 565	199 107 575	2.300
40	32	10	1000	199 107 566	199 107 576	2.600
50	40	10	1600	199 107 567	199 107 577	3.000
63	50	10	3100	199 107 568	199 107 578	3.800

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]
16	50	200	27	64	64	137	110	161	56	130	25	77	83	122	33
20	50	200	27	64	64	137	120	161	56	130	25	77	83	122	33
25	58	209	30	73	64	137	139	161	65	150	25	77	83	122	33
32	68	209	36	73	64	137	156	161	71	160	25	77	83	122	33
40	84	220	44	84	64	137	170	161	85	180	45	77	83	122	33
50	97	220	51	84	64	137	190	161	89	200	45	77	83	122	33
63	124	243	64	106	64	137	220	161	101	230	45	77	83	122	33





## PROGEF Standard Ball valve type 107 24V With manual emergency override With fixed flanges PP-H serrated metric

### Model:

- Material: PP-H
- Built on with electric actuator EA11
- Voltage 24 V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

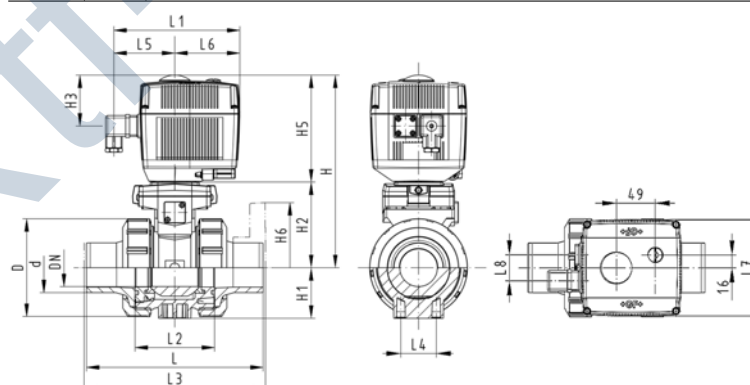
### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	½	10	185	<b>199 107 783</b>	<b>199 107 793</b>	2.300
25	20	¾	10	350	<b>199 107 784</b>	<b>199 107 794</b>	2.500
32	25	1	10	700	<b>199 107 785</b>	<b>199 107 795</b>	2.700
40	32	1 ¼	10	1000	<b>199 107 786</b>	<b>199 107 796</b>	3.200
50	40	1 ½	10	1600	<b>199 107 787</b>	<b>199 107 797</b>	3.700
63	50	2	10	3100	<b>199 107 788</b>	<b>199 107 798</b>	4.800

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	200	27	64	64	137	48	120	161	56	130	25	77	83	122
25	58	209	30	73	64	137	53	140	161	65	150	25	77	83	122
32	68	209	36	73	64	137	58	150	161	71	160	25	77	83	122
40	84	220	44	84	64	137	70	170	161	85	180	45	77	83	122
50	97	220	51	84	64	137	75	190	161	89	200	45	77	83	122
63	124	243	64	106	64	137	165	220	161	101	230	45	77	83	122

d [mm]	L8 [mm]
20	33
25	33
32	33
40	33
50	33
63	33





## PROGEF Standard Ball valve type 131 100-230V With manual emergency override With fusion sockets metric

### Model:

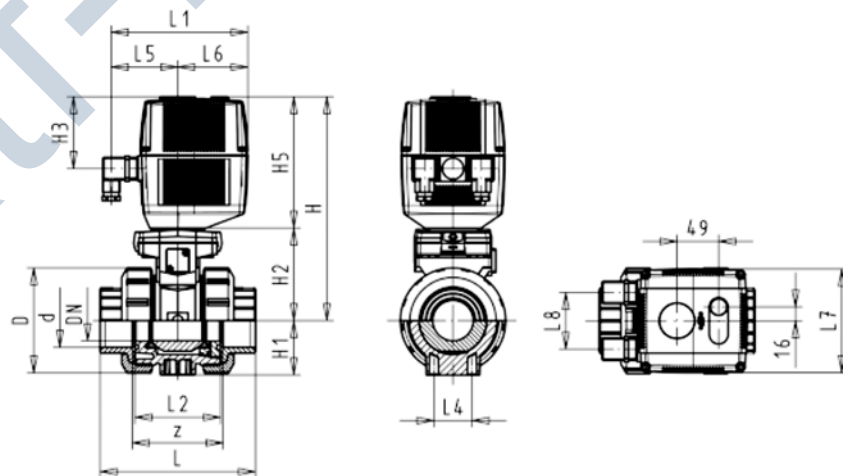
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see "**New product ball valve DN65-100**"
- Control time: EA21: 5s/90°<, EA31: 15s/90°<

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	<b>199 131 002</b>	<b>199 131 012</b>	2.100
20	15	10	185	<b>199 131 003</b>	<b>199 131 013</b>	2.100
25	20	10	350	<b>199 131 004</b>	<b>199 131 014</b>	2.200
32	25	10	700	<b>199 131 005</b>	<b>199 131 015</b>	2.300
40	32	10	1000	<b>199 131 006</b>	<b>199 131 016</b>	2.600
50	40	10	1600	<b>199 131 007</b>	<b>199 131 017</b>	3.000
63	50	10	3100	<b>199 131 008</b>	<b>199 131 018</b>	3.800
75	65	10	5000	<b>199 131 009</b>	<b>199 131 019</b>	3.600
90	80	10	7000	<b>199 131 010</b>	<b>199 131 020</b>	4.300
110	100	10	11000	<b>199 131 011</b>	<b>199 131 021</b>	5.500

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	231	27	64	94	167	93	180	56	25	97	83	122	67
20	50	231	27	64	94	167	95	180	56	25	97	83	122	66
25	58	240	30	73	94	167	108	180	65	25	97	83	122	77
32	68	240	36	73	94	167	118	180	71	25	97	83	122	83
40	84	251	44	84	94	167	137	180	85	45	97	83	122	99
50	97	251	51	84	94	167	147	180	89	45	97	83	122	105
63	124	273	64	106	94	167	168	180	101	45	97	83	122	117
75	166	346	85	156	94	190	233	180	136	70	98	83	122	167
90	200	358	105	168	94	190	254	180	141	70	98	83	122	180
110	238	365	123	175	94	190	301	180	164	120	98	83	122	215





## PROGEF Standard Ball valve type 131 100-230V With manual emergency override With socket fusion spigots metric

### Model:

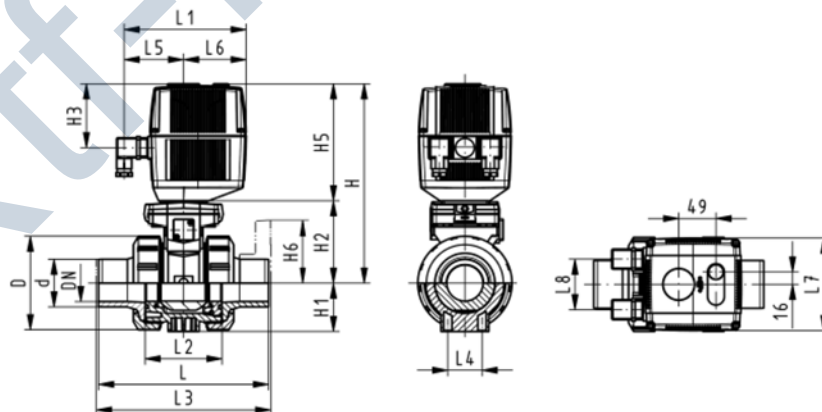
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- Control time: EA21: 5s/90°<, EA31: 15s/90°<

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	199 131 022	199 131 032	2.100
20	15	10	185	199 131 023	199 131 033	2.100
25	20	10	350	199 131 024	199 131 034	2.200
32	25	10	700	199 131 025	199 131 035	2.300
40	32	10	1000	199 131 026	199 131 036	2.600
50	40	10	1600	199 131 027	199 131 037	3.000
63	50	10	3100	199 131 028	199 131 038	3.800
75	65	10	5000	199 131 029	199 131 039	3.600
90	80	10	7000	199 131 030	199 131 040	4.400
110	100	10	11000	199 131 031	199 131 041	5.500

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	231	27	64	94	167	110	180	56	130	25	97	83	122
20	50	231	27	64	94	167	120	180	56	130	25	97	83	122
25	58	240	30	73	94	167	139	180	65	150	25	97	83	122
32	68	240	36	73	94	167	150	180	71	160	25	97	83	122
40	84	251	44	84	94	167	170	180	85	180	45	97	83	122
50	97	251	51	84	94	167	190	180	89	200	45	97	83	122
63	124	273	64	106	94	167	220	180	101	230	45	97	83	122
75	166	346	85	156	94	190	280	180	136	290	70	98	83	122
90	200	358	105	168	94	190	296	180	141	310	70	98	83	122
110	238	365	123	175	94	190	336	180	164	350	120	98	83	122





**PROGEF Standard**  
**Ball valve type 131 100-230V**  
**With manual emergency override**  
**With fixed flanges PP-H serrated metric**

**Model:**

- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Built on with electric actuator EA21
- Control time 5 s/90°<
- Overall length according to EN 558
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

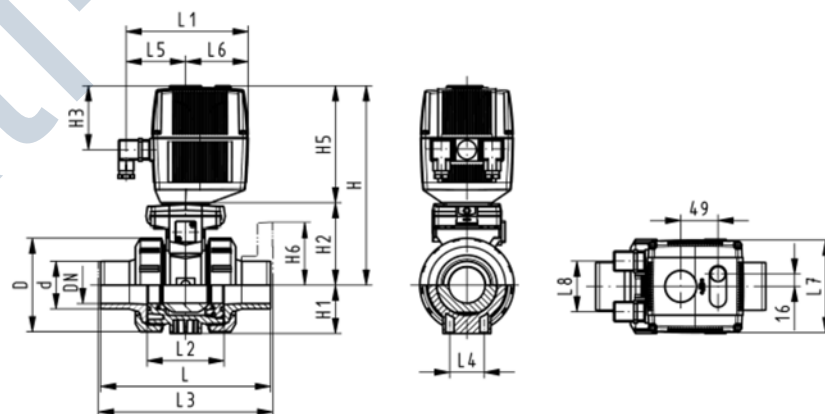
**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	1/2	10	185	<b>199 131 083</b>	<b>199 131 093</b>	2.300
25	20	3/4	10	350	<b>199 131 084</b>	<b>199 131 094</b>	2.500
32	25	1	10	700	<b>199 131 085</b>	<b>199 131 095</b>	2.700
40	32	1 1/4	10	1000	<b>199 131 086</b>	<b>199 131 096</b>	3.200
50	40	1 1/2	10	1600	<b>199 131 087</b>	<b>199 131 097</b>	3.700
63	50	2	10	3100	<b>199 131 088</b>	<b>199 131 098</b>	4.800

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	231	27	64	94	167	48	120	180	56	130	25	97	83	122
25	58	240	30	73	94	167	53	140	180	65	150	25	97	83	122
32	68	240	36	73	94	167	58	150	180	71	160	25	97	83	122
40	84	251	44	84	94	167	70	170	180	85	180	45	97	83	122
50	97	251	51	84	94	167	75	190	180	89	200	45	97	83	122
63	124	273	64	106	94	167	165	220	180	101	230	45	97	83	122

d [mm]	L8 [mm]
20	66
25	66
32	66
40	66
50	66
63	66





## PROGEF Standard Ball valve type 131 100-230V With manual emergency override With backing flanges PP-st metric

### Model:

- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- Control time: EA21: 5s/90°<, EA31: 15s/90°<
- Overall length according to EN 558
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501

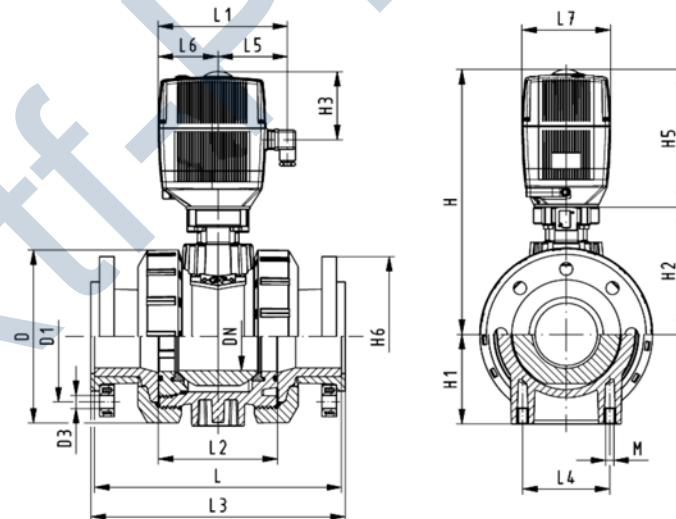
### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	2 ½	10	5000	<b>199 131 129</b>	<b>199 131 139</b>	7.900
90	80	3	10	7000	<b>199 131 130</b>	<b>199 131 140</b>	9.600
110	100	4	10	11000	<b>199 131 131</b>	<b>199 131 141</b>	12.700

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
75	166	346	85	156	94	190	93	280	180	136	290	70	98	83
90	200	358	105	168	94	190	100	296	180	141	310	70	98	83
110	238	365	123	175	94	190	110	336	180	164	350	120	98	83

d [mm]	L7 [mm]	L8 [mm]
75	122	66
90	122	66
110	122	66







**PROGEF Standard**  
**Ball valve type 131 100-230V**  
**With manual emergency override**  
**With butt fusion spigots IR-Plus SDR11 metric**

**Model:**

- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- Control time: EA21: 5s/90°<, EA31: 15s/90°<

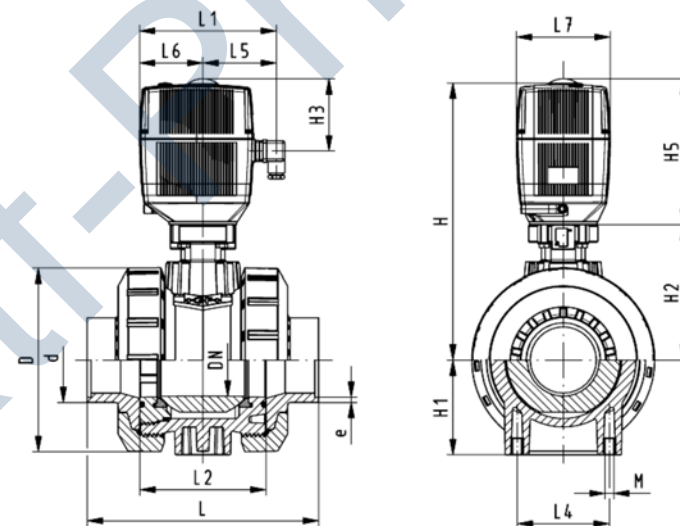
**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	10	5000	<b>199 131 329</b>	<b>199 131 339</b>	3.600
90	80	10	7000	<b>199 131 330</b>	<b>199 131 340</b>	4.400
110	100	10	11000	<b>199 131 331</b>	<b>199 131 341</b>	5.500

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
75	166	346	85	156	94	190	266	180	136	290	70	98	83	122
90	200	358	105	168	94	190	264	180	141	310	70	98	83	122
110	238	365	123	175	94	190	301	180	164	350	120	98	83	122

d [mm]	e [mm]
75	8.2
90	9.9
110	12.0







**PROGEF Standard**  
**Ball valve type 131 100-230V**  
**With manual emergency override**  
**With butt fusion spigots SDR17.6 metric**

**Model:**

- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- Control time: EA21: 5s/90°<, EA31: 15s/90°<

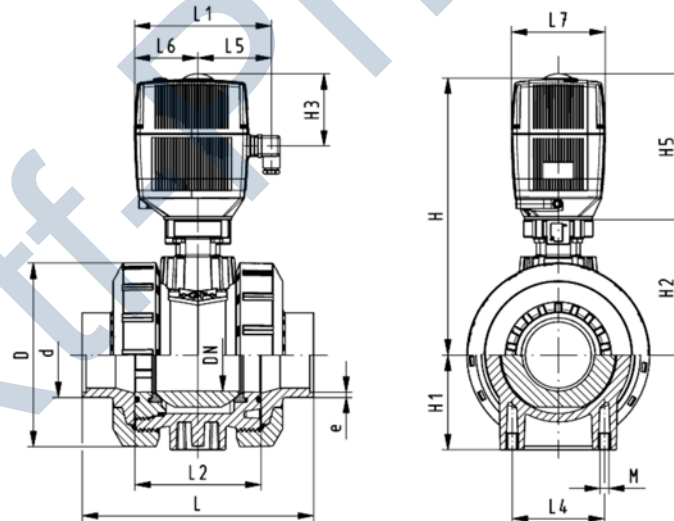
**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	10	5000	<b>199 131 729</b>	<b>199 131 739</b>	3.600
90	80	10	7000	<b>199 131 730</b>	<b>199 131 740</b>	4.400
110	100	10	11000	<b>199 131 731</b>	<b>199 131 741</b>	5.500

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
75	166	346	85	156	94	190	266	180	136	290	70	98	83	122
90	200	358	105	168	94	190	264	180	141	310	70	98	83	122
110	238	365	123	175	94	190	301	180	164	350	120	98	83	122

d [mm]	e [mm]
75	4.6
90	5.5
110	6.7





## PROGEF Standard Ball valve type 131 24V With manual emergency override With fusion sockets metric

### Model:

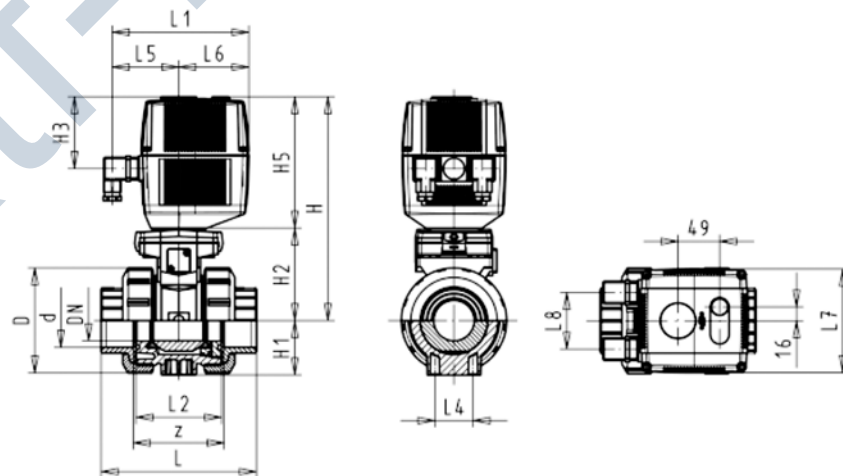
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see "**New product ball valve DN65-100**"
- Control time: EA21: 5s/90°<, EA31: 15s/90°<

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	<b>199 131 042</b>	<b>199 131 052</b>	2.100
20	15	10	185	<b>199 131 043</b>	<b>199 131 053</b>	2.100
25	20	10	350	<b>199 131 044</b>	<b>199 131 054</b>	2.200
32	25	10	700	<b>199 131 045</b>	<b>199 131 055</b>	2.300
40	32	10	1000	<b>199 131 046</b>	<b>199 131 056</b>	2.600
50	40	10	1600	<b>199 131 047</b>	<b>199 131 057</b>	3.000
63	50	10	3100	<b>199 131 048</b>	<b>199 131 058</b>	3.800
75	65	10	5000	<b>199 131 049</b>	<b>199 131 059</b>	3.600
90	80	10	7000	<b>199 131 050</b>	<b>199 131 060</b>	4.300
110	100	10	11000	<b>199 131 051</b>	<b>199 131 061</b>	5.500

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	231	27	64	94	167	93	180	56	25	97	83	122	67
20	50	231	27	64	94	167	95	180	56	25	97	83	122	66
25	58	240	30	73	94	167	108	180	65	25	97	83	122	77
32	68	240	36	73	94	167	118	180	71	25	97	83	122	83
40	84	251	44	84	94	167	137	180	85	45	97	83	122	99
50	97	251	51	84	94	167	147	180	89	45	97	83	122	105
63	124	273	64	106	94	167	168	180	101	45	97	83	122	117
75	166	346	85	156	94	190	233	180	136	70	98	83	122	167
90	200	358	105	168	94	190	254	180	141	70	98	83	122	180
110	238	365	123	175	94	190	301	180	164	120	98	83	122	215





## PROGEF Standard Ball valve type 131 24V With manual emergency override With socket fusion spigots metric

### Model:

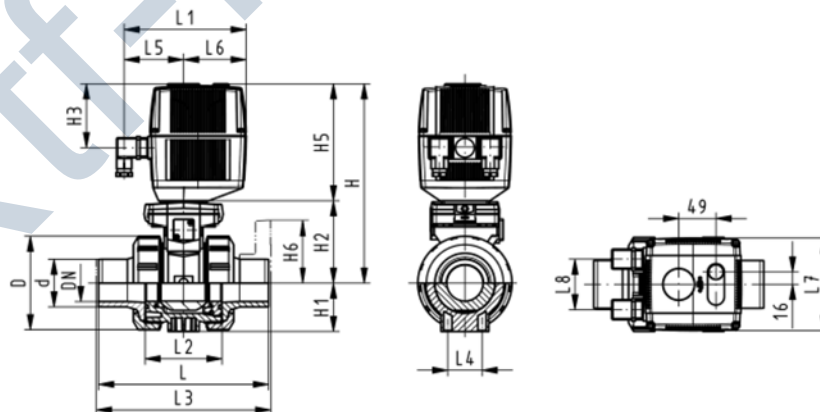
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- Control time: EA21: 5s/90°<, EA31: 15s/90°<

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	199 131 062	199 131 072	2.100
20	15	10	185	199 131 063	199 131 073	2.100
25	20	10	350	199 131 064	199 131 074	2.200
32	25	10	700	199 131 065	199 131 075	2.300
40	32	10	1000	199 131 066	199 131 076	2.600
50	40	10	1600	199 131 067	199 131 077	3.000
63	50	10	3100	199 131 068	199 131 078	3.800
75	65	10	5000	199 131 069	199 131 079	3.600
90	80	10	7000	199 131 070	199 131 080	4.400
110	100	10	11000	199 131 071	199 131 081	5.500

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	231	27	64	94	167	110	180	56	130	25	97	83	122
20	50	231	27	64	94	167	120	180	56	130	25	97	83	122
25	58	240	30	73	94	167	139	180	65	150	25	97	83	122
32	68	240	36	73	94	167	150	180	71	160	25	97	83	122
40	84	251	44	84	94	167	170	180	85	180	45	97	83	122
50	97	251	51	84	94	167	190	180	89	200	45	97	83	122
63	124	273	64	106	94	167	220	180	101	230	45	97	83	122
75	166	346	85	156	94	190	280	180	136	290	70	98	83	122
90	200	358	105	168	94	190	296	180	141	310	70	98	83	122
110	238	365	123	175	94	190	336	180	164	350	120	98	83	122





**PROGEF Standard**  
**Ball valve type 131 24V**  
**With manual emergency override**  
**With fixed flanges PP-H serrated metric**

**Model:**

- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<
- Built on with electric actuator EA21
- Control time 5 s/90°<
- Overall length according to EN 558
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

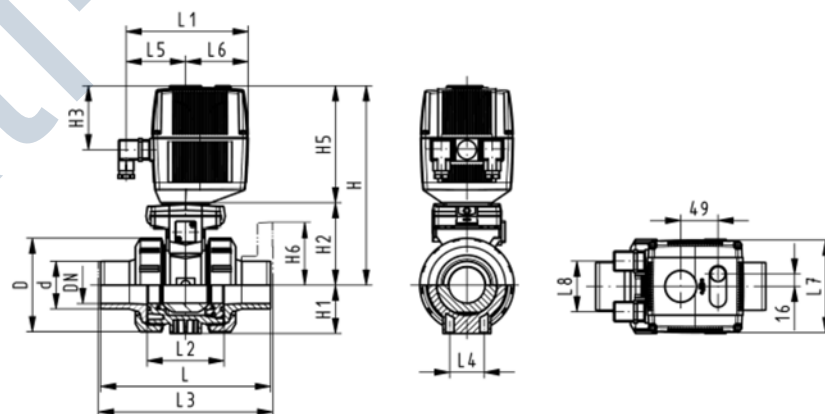
**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	½	10	185	<b>199 131 103</b>	<b>199 131 113</b>	2.300
25	20	¾	10	350	<b>199 131 104</b>	<b>199 131 114</b>	2.500
32	25	1	10	700	<b>199 131 105</b>	<b>199 131 115</b>	2.700
40	32	1 ¼	10	1000	<b>199 131 106</b>	<b>199 131 116</b>	3.200
50	40	1 ½	10	1600	<b>199 131 107</b>	<b>199 131 117</b>	3.700
63	50	2	10	3100	<b>199 131 108</b>	<b>199 131 118</b>	4.800

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	231	27	64	94	167	48	120	180	56	130	25	97	83	122
25	58	240	30	73	94	167	53	140	180	65	150	25	97	83	122
32	68	240	36	73	94	167	58	150	180	71	160	25	97	83	122
40	84	251	44	84	94	167	70	170	180	85	180	45	97	83	122
50	97	251	51	84	94	167	75	190	180	89	200	45	97	83	122
63	124	273	64	106	94	167	165	220	180	101	230	45	97	83	122

d [mm]	L8 [mm]
20	66
25	66
32	66
40	66
50	66
63	66





## PROGEF Standard Ball valve type 131 24V With manual emergency override With backing flanges PP-st metric

### Model:

- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see "**New product ball valve DN65-100**"
- Control time: EA21: 5s/90°<, EA31: 15s/90°<
- Overall length according to EN 558
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501

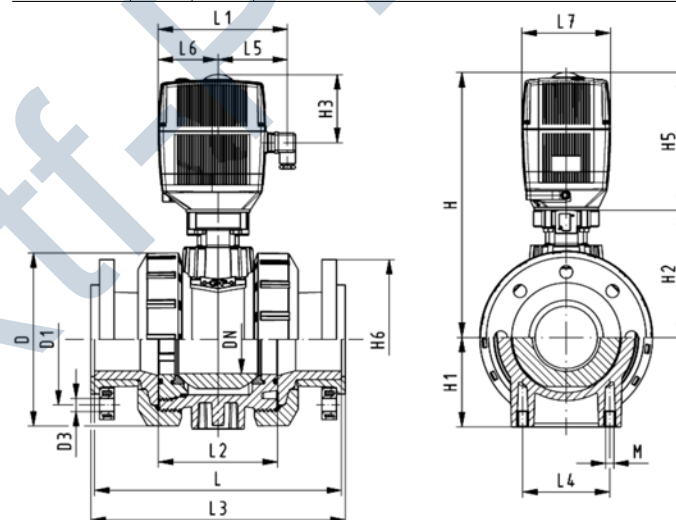
### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	2 ½	10	5000	<b>199 131 149</b>	<b>199 131 159</b>	7.900
90	80	3	10	7000	<b>199 131 150</b>	<b>199 131 160</b>	9.600
110	100	4	10	11000	<b>199 131 151</b>	<b>199 131 161</b>	12.700

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
75	166	346	85	156	94	190	93	280	180	136	290	70	98	83
90	200	358	105	168	94	190	100	296	180	141	310	70	98	83
110	238	365	123	175	94	190	110	336	180	164	350	120	98	83

d [mm]	L7 [mm]	L8 [mm]
75	122	66
90	122	66
110	122	66





**PROGEF Standard**  
**Ball valve type 131 24V**  
**With manual emergency override**  
**With butt fusion spigots IR-Plus SDR11 metric**

**Model:**

- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- Control time: EA21: 5s/90°<, EA31: 15s/90°<

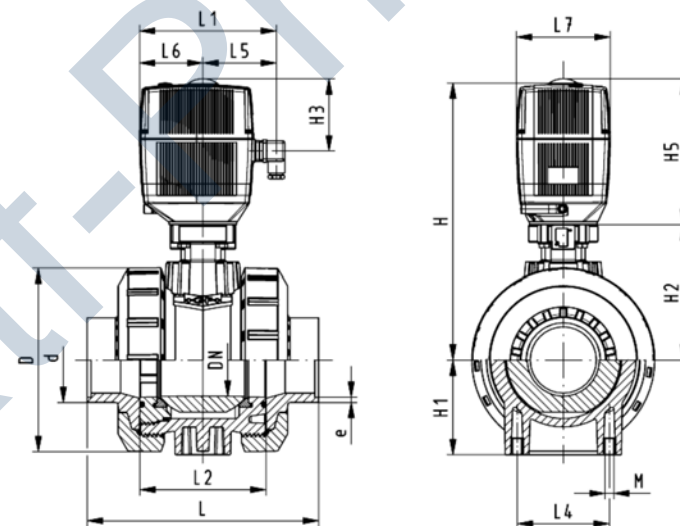
**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	10	5000	<b>199 131 369</b>	<b>199 131 379</b>	3.600
90	80	10	7000	<b>199 131 370</b>	<b>199 131 380</b>	4.400
110	100	10	11000	<b>199 131 371</b>	<b>199 131 381</b>	5.500

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
75	166	346	85	156	94	190	266	180	136	290	70	98	83	122
90	200	358	105	168	94	190	264	180	141	310	70	98	83	122
110	238	365	123	175	94	190	301	180	164	350	120	98	83	122

d [mm]	e [mm]
75	8.2
90	9.9
110	12.0





**PROGEF Standard**  
**Ball valve type 131 24V**  
**With manual emergency override**  
**With butt fusion spigots SDR17.6 metric**

**Model:**

- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- Control time: EA21: 5s/90°<, EA31: 15s/90°<

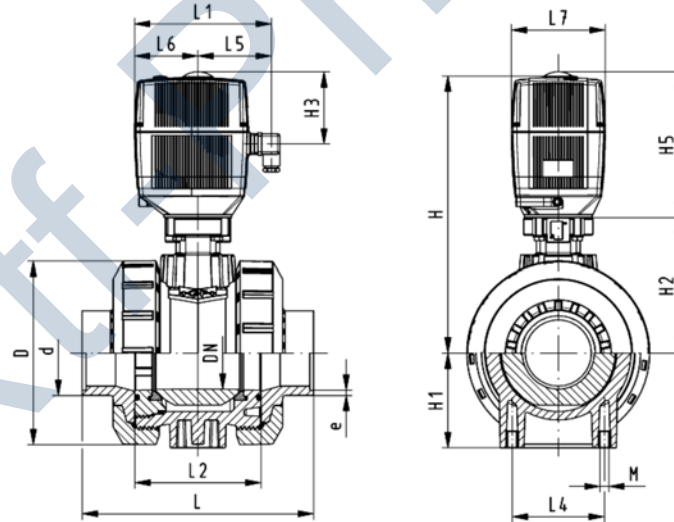
**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	10	5000	<b>199 131 769</b>	<b>199 131 779</b>	3.600
90	80	10	7000	<b>199 131 770</b>	<b>199 131 780</b>	4.400
110	100	10	11000	<b>199 131 771</b>	<b>199 131 781</b>	5.500

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
75	166	346	85	156	94	190	266	180	136	290	70	98	83	122
90	200	358	105	168	94	190	264	180	141	310	70	98	83	122
110	238	365	123	175	94	190	301	180	164	350	120	98	83	122

d [mm]	e [mm]
75	4.6
90	5.5
110	6.7







## PROGEF Standard Ball valve type 131 100-230V With manual emergency override With backing flanges PP-st ASTM

### Model:

- Material: PP-H
- For easy installation and removal
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Integrated stainless steel mounting inserts
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- Control time: EA21: 5s/90°<, EA31: 15s/90°<
- Overall length according to EN 558
- Connecting dimension ANSI/ASME B 16.5 / ASTM D 4024

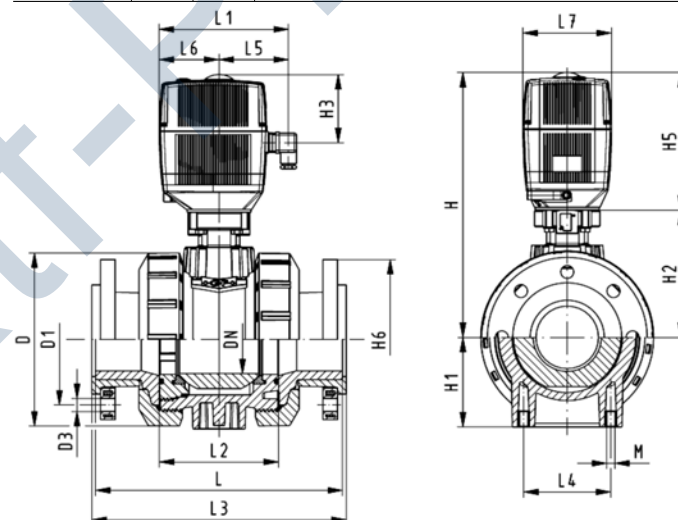
### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	2 ½	10	5000	<b>199 131 529</b>	<b>199 131 539</b>	10.500
90	80	3	10	7000	<b>199 131 530</b>	<b>199 131 540</b>	13.200
110	100	4	10	11000	<b>199 131 531</b>	<b>199 131 541</b>	18.400

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
75	166	346	85	156	94	190	93	280	180	136	290	70	98	83
90	200	358	105	168	94	190	100	296	180	141	310	70	98	83
110	238	365	123	175	94	190	110	336	180	164	350	120	98	83

d [mm]	L7 [mm]	L8 [mm]
75	122	66
90	122	66
110	122	66







**PROGEF Standard**  
**Ball valve type 131 100-230V**  
**With manual emergency override**  
**With threaded sockets NPT**

**Model:**

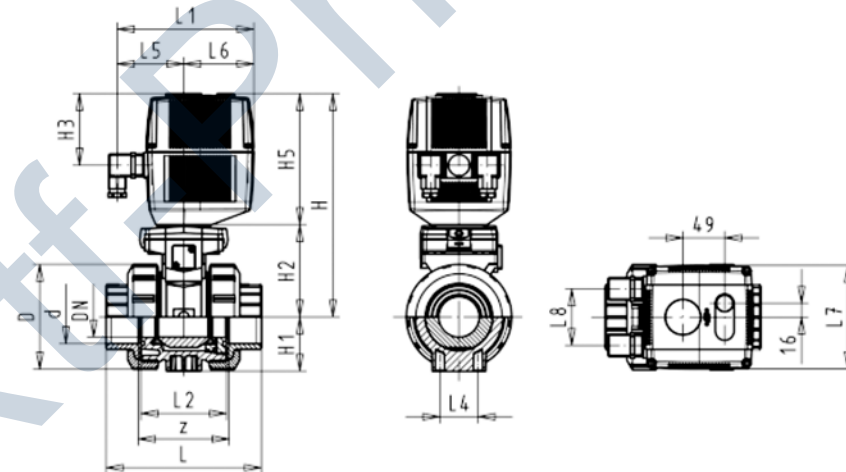
- Material: PP-H
- For easy installation and removal
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Integrated stainless steel mounting inserts
- Built on with electric actuator EA21
- Control time 5 s/90°<

**Option:**

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code
3/8	10	10	70	<b>199 131 402</b>	<b>199 131 412</b>
1/2	15	10	185	<b>199 131 403</b>	<b>199 131 413</b>
3/4	20	10	350	<b>199 131 404</b>	<b>199 131 414</b>
1	25	10	700	<b>199 131 405</b>	<b>199 131 415</b>
1 1/4	32	10	1000	<b>199 131 406</b>	<b>199 131 416</b>
1 1/2	40	10	1600	<b>199 131 407</b>	<b>199 131 417</b>
2	50	10	3100	<b>199 131 408</b>	<b>199 131 418</b>

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	231	27	64	94	167	96	180	56	25	97	83	122	71
1/2	50	231	27	64	94	167	99	180	56	25	97	83	122	64
3/4	58	240	30	73	94	167	111	180	65	25	97	83	122	76
1	68	240	36	73	94	167	127	180	71	25	97	83	122	83
1 1/4	84	251	44	84	94	167	146	180	85	45	97	83	122	100
1 1/2	97	251	51	84	94	167	157	180	89	45	97	83	122	111
2	124	273	64	106	94	167	183	180	101	45	97	83	122	134





## PROGEF Standard Ball valve type 131 24V With manual emergency override With backing flanges PP-st ASTM

### Model:

- Material: PP-H
- Voltage 24 V AC/DC
- Control range 90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- Control time: EA21: 5s/90°<, EA31: 15s/90°<
- Overall length according to EN 558
- Connecting dimension ANSI/ASME B 16.5 / ASTM D 4024

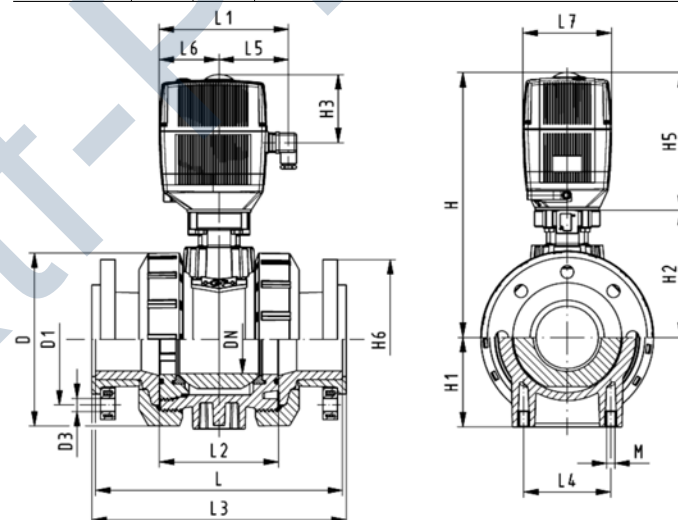
### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	2 ½	10	5000	<b>199 131 549</b>	<b>199 131 559</b>	10.500
90	80	3	10	7000	<b>199 131 550</b>	<b>199 131 560</b>	13.200
110	100	4	10	11000	<b>199 131 551</b>	<b>199 131 561</b>	18.400

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
75	166	346	85	156	94	190	93	280	180	136	290	70	98	83
90	200	358	105	168	94	190	100	296	180	141	310	70	98	83
110	238	365	123	175	94	190	110	336	180	164	350	120	98	83

d [mm]	L7 [mm]	L8 [mm]
75	122	66
90	122	66
110	122	66





**PROGEF Standard**  
**Ball valve type 131 24V**  
**With manual emergency override**  
**With threaded sockets NPT**

**Model:**

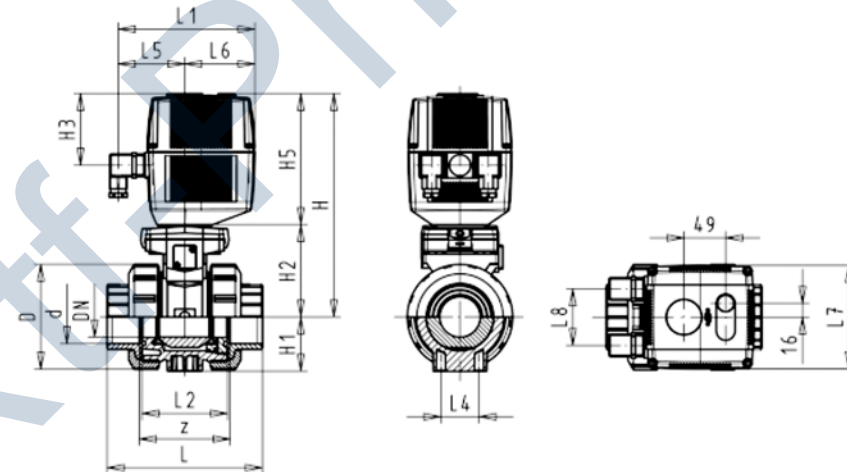
- Material: PP-H
- Voltage 24 V AC/DC
- Control range 90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Built on with electric actuator EA21
- Control time 5 s/90°<

**Option:**

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code
3/8	10	10	70	199 131 422	199 131 432
1/2	15	10	185	199 131 423	199 131 433
3/4	20	10	350	199 131 424	199 131 434
1	25	10	700	199 131 425	199 131 435
1 1/4	32	10	1000	199 131 426	199 131 436
1 1/2	40	10	1600	199 131 427	199 131 437
2	50	10	3100	199 131 428	199 131 438

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	231	27	64	94	167	96	180	56	25	97	83	122	71
1/2	50	231	27	64	94	167	99	180	56	25	97	83	122	64
3/4	58	240	30	73	94	167	111	180	65	25	97	83	122	76
1	68	240	36	73	94	167	127	180	71	25	97	83	122	83
1 1/4	84	251	44	84	94	167	146	180	85	45	97	83	122	100
1 1/2	97	251	51	84	94	167	157	180	89	45	97	83	122	111
2	124	273	64	106	94	167	183	180	101	45	97	83	122	134





**PROGEF Standard**  
**3-Way ball valve type 176**  
**Horizontal/L-port 100-230V**  
**With manual emergency override**  
**With fusion sockets metric**

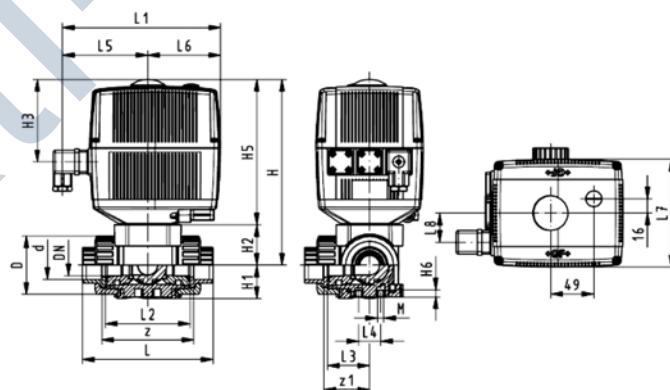
**Model:**

- Material: PP-H
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	50	<b>199 176 022</b>	<b>199 176 032</b>	2.051
20	15	10	75	<b>199 176 023</b>	<b>199 176 033</b>	2.051
25	20	10	150	<b>199 176 024</b>	<b>199 176 034</b>	2.174
32	25	10	280	<b>199 176 025</b>	<b>199 176 035</b>	2.297
40	32	10	480	<b>199 176 026</b>	<b>199 176 036</b>	2.522
50	40	10	620	<b>199 176 027</b>	<b>199 176 037</b>	2.886
63	50	10	1230	<b>199 176 028</b>	<b>199 176 038</b>	3.818

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	46	197	29	31	93	166	8	108	182	70	36	25	99	83	122
20	46	197	29	31	93	166	8	111	182	70	36	25	99	83	122
25	56	205	33	39	93	166	8	131	182	86	43	25	99	83	122
32	67	210	38	44	93	166	8	148	182	96	48	25	99	83	122
40	82	216	44	50	93	166	9	177	182	114	58	45	99	83	122
50	98	229	50	63	93	166	9	205	182	137	69	45	99	83	122
63	121	242	61	76	93	166	9	261	182	179	90	45	99	83	122

d [mm]	L8 [mm]	M	z [mm]	z1 [mm]
16	33	6	78	39
20	33	6	79	40
25	33	6	95	48
32	33	6	108	54
40	33	8	133	67
50	33	8	155	78
63	33	8	203	102





**PROGEF Standard**  
**3-Way ball valve type 176**  
**Horizontal/L-port 100-230V**  
**With manual emergency override**  
**With socket fusion spigots**

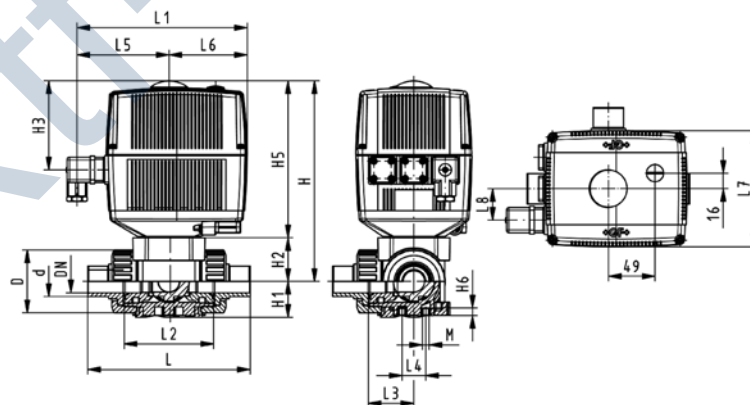
**Model:**

- Material: PP-H
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	75	199 176 002	199 176 012	2.051
20	15	10	75	199 176 003	199 176 013	2.051
25	20	10	150	199 176 004	199 176 014	2.174
32	25	10	280	199 176 005	199 176 015	2.297
40	32	10	480	199 176 006	199 176 016	2.522
50	40	10	620	199 176 007	199 176 017	2.886
63	50	10	1230	199 176 008	199 176 018	3.818

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	46	197	29	31	93	166	8	119	182	70	36	25	99	83	122
20	46	197	29	31	93	166	8	133	182	70	36	25	99	83	122
25	56	205	33	39	93	166	8	155	182	86	43	25	99	83	122
32	67	210	38	44	93	166	8	170	182	96	48	25	99	83	122
40	82	216	44	50	93	166	9	201	182	114	58	45	99	83	122
50	98	229	50	63	93	166	9	236	182	137	69	45	99	83	122
63	121	242	61	76	93	166	9	286	182	179	90	45	99	83	122

d [mm]	L8 [mm]	M
16	33	6
20	33	6
25	33	6
32	33	6
40	33	8
50	33	8
63	33	8





**PROGEF Standard**  
**3-Way ball valve type 176**  
**Horizontal/L-port 100-230V**  
**With manual emergency override**  
**With threaded sockets Rp**

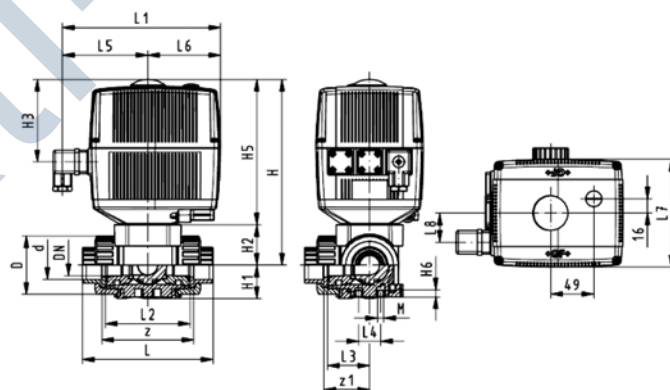
**Model:**

- Material: PP-H
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

Inch	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
3/8	10	10	50	<b>199 176 122</b>	<b>199 176 132</b>	2.051
1/2	15	10	75	<b>199 176 123</b>	<b>199 176 133</b>	2.051
3/4	20	10	150	<b>199 176 124</b>	<b>199 176 134</b>	2.174
1	25	10	280	<b>199 176 125</b>	<b>199 176 135</b>	2.297
1 1/4	32	10	480	<b>199 176 126</b>	<b>199 176 136</b>	2.522
1 1/2	40	10	620	<b>199 176 127</b>	<b>199 176 137</b>	2.886
2	50	10	1230	<b>199 176 128</b>	<b>199 176 138</b>	3.818

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
3/8	46	197	29	31	93	166	8	108	182	70	36	25	99	83	122
1/2	46	197	29	31	93	166	8	111	182	70	36	25	99	83	122
3/4	56	205	33	39	93	166	8	131	182	86	43	25	99	83	122
1	67	210	38	44	93	166	8	148	182	96	48	25	99	83	122
1 1/4	82	216	44	50	93	166	9	177	182	114	58	45	99	83	122
1 1/2	98	229	50	63	93	166	9	205	182	137	69	45	99	83	122
2	121	242	61	76	93	166	9	261	182	179	90	45	99	83	122

Inch	L8 [mm]	M [mm]	z [mm]	z1 [mm]
3/8	33	6	78	39
1/2	33	6	79	40
3/4	33	6	95	48
1	33	6	108	54
1 1/4	33	8	133	67
1 1/2	33	8	155	78
2	33	8	203	102





**PROGEF Standard**  
**3-Way ball valve type 176**  
**Horizontal/L-port 100-230V**  
**With manual emergency override**  
**With butt fusion spigots metric**

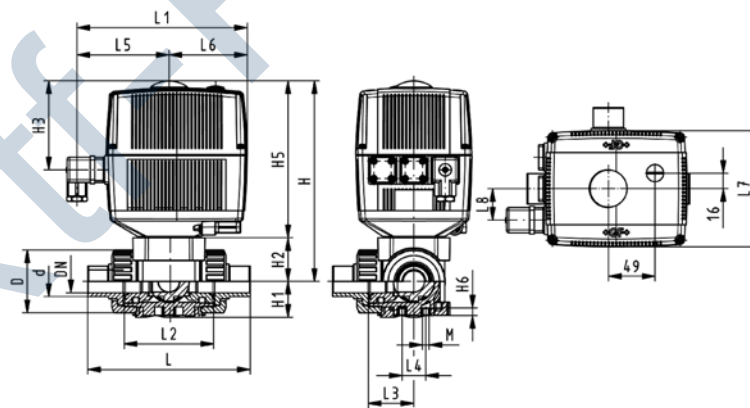
**Model:**

- Material: PP-H
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	10	75	<b>199 176 083</b>	<b>199 176 093</b>	2.051
25	20	10	150	<b>199 176 084</b>	<b>199 176 094</b>	2.174
32	25	10	280	<b>199 176 085</b>	<b>199 176 095</b>	2.297
40	32	10	480	<b>199 176 086</b>	<b>199 176 096</b>	2.522
50	40	10	620	<b>199 176 087</b>	<b>199 176 097</b>	2.886
63	50	10	1230	<b>199 176 088</b>	<b>199 176 098</b>	3.818

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	46	197	29	31	93	166	8	133	182	70	36	25	99	83	122
25	56	205	33	39	93	166	8	155	182	86	43	25	99	83	122
32	67	210	38	44	93	166	8	170	182	96	48	25	99	83	122
40	82	216	44	50	93	166	9	201	182	114	58	45	99	83	122
50	98	229	50	63	93	166	9	236	182	137	69	45	99	83	122
63	121	242	61	76	93	166	9	286	182	179	90	45	99	83	122

d [mm]	L8 [mm]	M
20	33	6
25	33	6
32	33	6
40	33	8
50	33	8
63	33	8







**PROGEF Standard**  
**3-Way ball valve type 176**  
**Horizontal/L-port 24V**  
**With manual emergency override**  
**With fusion sockets metric**

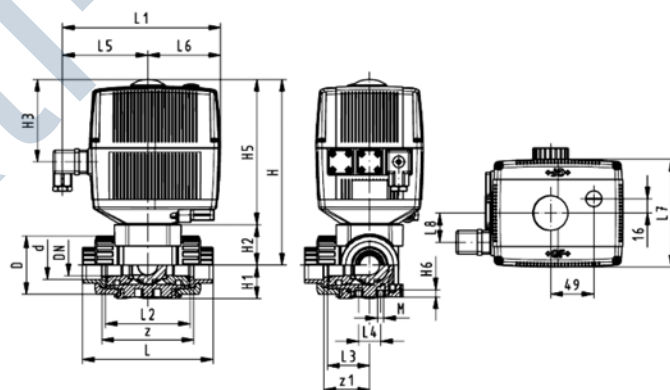
**Model:**

- Material: PP-H
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 24 V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	50	<b>199 176 182</b>	<b>199 176 192</b>	2.051
20	15	10	75	<b>199 176 183</b>	<b>199 176 193</b>	2.051
25	20	10	150	<b>199 176 184</b>	<b>199 176 194</b>	2.174
32	25	10	280	<b>199 176 185</b>	<b>199 176 195</b>	2.297
40	32	10	480	<b>199 176 186</b>	<b>199 176 196</b>	2.522
50	40	10	620	<b>199 176 187</b>	<b>199 176 197</b>	2.886
63	50	10	1230	<b>199 176 188</b>	<b>199 176 198</b>	3.818

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	46	197	29	31	93	166	8	108	182	70	36	25	99	83	122
20	46	197	29	31	93	166	8	111	182	70	36	25	99	83	122
25	56	205	33	39	93	166	8	131	182	86	43	25	99	83	122
32	67	210	38	44	93	166	8	148	182	96	48	25	99	83	122
40	82	216	44	50	93	166	9	177	182	114	58	45	99	83	122
50	98	229	50	63	93	166	9	205	182	137	69	45	99	83	122
63	121	242	61	76	93	166	9	261	182	179	90	45	99	83	122

d [mm]	L8 [mm]	M	z [mm]	z1 [mm]
16	33	6	78	39
20	33	6	79	40
25	33	6	95	48
32	33	6	108	54
40	33	8	133	67
50	33	8	155	78
63	33	8	203	102







**PROGEF Standard**  
**3-Way ball valve type 176**  
**Horizontal/L-port 24V**  
**With manual emergency override**  
**With socket fusion spigots**

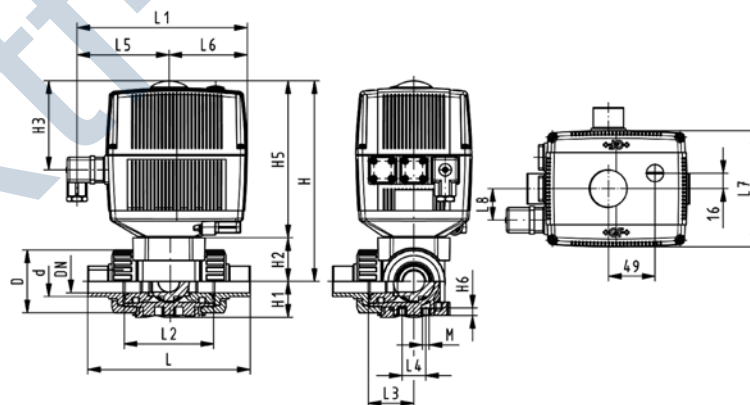
**Model:**

- Material: PP-H
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 24 V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	75	<b>199 176 162</b>	<b>199 176 172</b>	2.051
20	15	10	75	<b>199 176 163</b>	<b>199 176 173</b>	2.051
25	20	10	150	<b>199 176 164</b>	<b>199 176 174</b>	2.174
32	25	10	280	<b>199 176 165</b>	<b>199 176 175</b>	2.297
40	32	10	480	<b>199 176 166</b>	<b>199 176 176</b>	2.522
50	40	10	620	<b>199 176 167</b>	<b>199 176 177</b>	2.886
63	50	10	1230	<b>199 176 168</b>	<b>199 176 178</b>	3.818

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	46	197	29	31	93	166	8	119	182	70	36	25	99	83	122
20	46	197	29	31	93	166	8	133	182	70	36	25	99	83	122
25	56	205	33	39	93	166	8	155	182	86	43	25	99	83	122
32	67	210	38	44	93	166	8	170	182	96	48	25	99	83	122
40	82	216	44	50	93	166	9	201	182	114	58	45	99	83	122
50	98	229	50	63	93	166	9	236	182	137	69	45	99	83	122
63	121	242	61	76	93	166	9	286	182	179	90	45	99	83	122

d [mm]	L8 [mm]	M
16	33	6
20	33	6
25	33	6
32	33	6
40	33	8
50	33	8
63	33	8





## PROGEF Standard 3-Way ball valve type 176 Horizontal/L-port 24V With manual emergency override With threaded sockets Rp

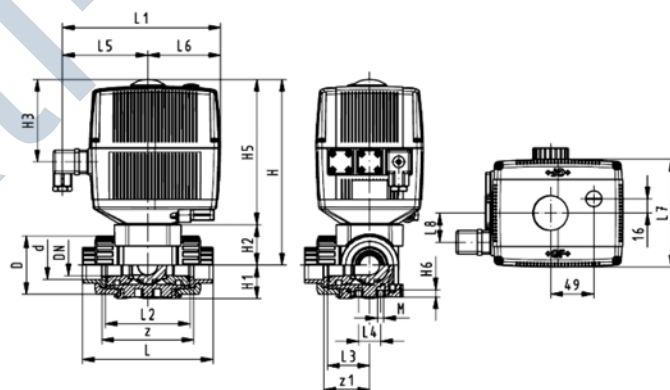
### Model:

- Material: PP-H
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 24 V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

Inch	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
3/8	10	10	50	199 176 282	199 176 292	2.051
1/2	15	10	75	199 176 283	199 176 293	2.051
3/4	20	10	150	199 176 284	199 176 294	2.174
1	25	10	280	199 176 285	199 176 295	2.297
1 1/4	32	10	480	199 176 286	199 176 296	2.522
1 1/2	40	10	620	199 176 287	199 176 297	2.886
2	50	10	1230	199 176 288	199 176 298	3.818

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
3/8	46	197	29	31	93	166	8	108	182	70	36	25	99	83	122
1/2	46	197	29	31	93	166	8	111	182	70	36	25	99	83	122
3/4	56	205	33	39	93	166	8	131	182	86	43	25	99	83	122
1	67	210	38	44	93	166	8	148	182	96	48	25	99	83	122
1 1/4	82	216	44	50	93	166	9	177	182	114	58	45	99	83	122
1 1/2	98	229	50	63	93	166	9	205	182	137	69	45	99	83	122
2	121	242	61	76	93	166	9	261	182	179	90	45	99	83	122

Inch	L8 [mm]	M [mm]	z [mm]	z1 [mm]
3/8	33	6	78	39
1/2	33	6	79	40
3/4	33	6	95	48
1	33	6	108	54
1 1/4	33	8	133	67
1 1/2	33	8	155	78
2	33	8	203	102





**PROGEF Standard**  
**3-Way ball valve type 176**  
**Horizontal/L-port 24V**  
**With manual emergency override**  
**With butt fusion spigots metric**

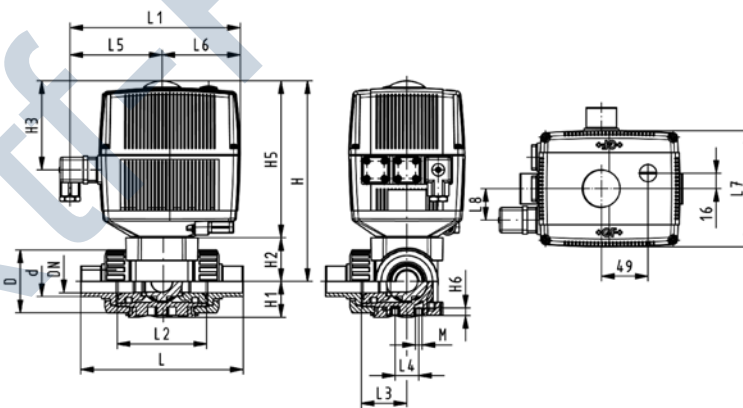
**Model:**

- Material: PP-H
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 24 V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	10	75	<b>199 176 243</b>	<b>199 176 253</b>	2.051
25	20	10	150	<b>199 176 244</b>	<b>199 176 254</b>	2.174
32	25	10	280	<b>199 176 245</b>	<b>199 176 255</b>	2.297
40	32	10	480	<b>199 176 246</b>	<b>199 176 256</b>	2.522
50	40	10	620	<b>199 176 247</b>	<b>199 176 257</b>	2.886
63	50	10	1230	<b>199 176 248</b>	<b>199 176 258</b>	3.818

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	46	197	29	31	93	166	8	133	182	70	36	25	99	83	122
25	56	205	33	39	93	166	8	155	182	86	43	25	99	83	122
32	67	210	38	44	93	166	8	170	182	96	48	25	99	83	122
40	82	216	44	50	93	166	9	201	182	114	58	45	99	83	122
50	98	229	50	63	93	166	9	236	182	137	69	45	99	83	122
63	121	242	61	76	93	166	9	286	182	179	90	45	99	83	122

d [mm]	L8 [mm]	M
20	33	6
25	33	6
32	33	6
40	33	8
50	33	8
63	33	8





**PROGEF Standard**  
**3-Way ball valve type 176**  
**Horizontal/T-port 100-230V**  
**With manual emergency override**  
**With fusion sockets metric**

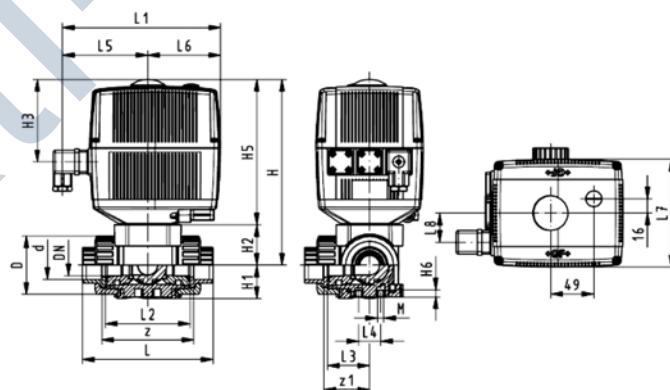
**Model:**

- Material: PP-H
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	140	<b>199 176 062</b>	<b>199 176 072</b>	2.051
20	15	10	200	<b>199 176 063</b>	<b>199 176 073</b>	2.051
25	20	10	470	<b>199 176 064</b>	<b>199 176 074</b>	2.174
32	25	10	793	<b>199 176 065</b>	<b>199 176 075</b>	2.297
40	32	10	1290	<b>199 176 066</b>	<b>199 176 076</b>	2.522
50	40	10	1910	<b>199 176 067</b>	<b>199 176 077</b>	2.886
63	50	10	3100	<b>199 176 068</b>	<b>199 176 078</b>	3.818

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	46	197	29	31	93	166	8	108	182	70	36	25	99	83	122
20	46	197	29	31	93	166	8	111	182	70	36	25	99	83	122
25	56	205	33	39	93	166	8	131	182	86	43	25	99	83	122
32	67	210	38	44	93	166	8	148	182	96	48	25	99	83	122
40	82	216	44	50	93	166	9	177	182	114	58	45	99	83	122
50	98	229	50	63	93	166	9	205	182	137	69	45	99	83	122
63	121	242	61	76	93	166	9	261	182	179	90	45	99	83	122

d [mm]	L8 [mm]	M	z [mm]	z1 [mm]
16	33	6	78	39
20	33	6	79	40
25	33	6	95	48
32	33	6	108	54
40	33	8	133	67
50	33	8	155	78
63	33	8	203	102





**PROGEF Standard**  
**3-Way ball valve type 176**  
**Horizontal/T-port 100-230V**  
**With manual emergency override**  
**With socket fusion spigots**

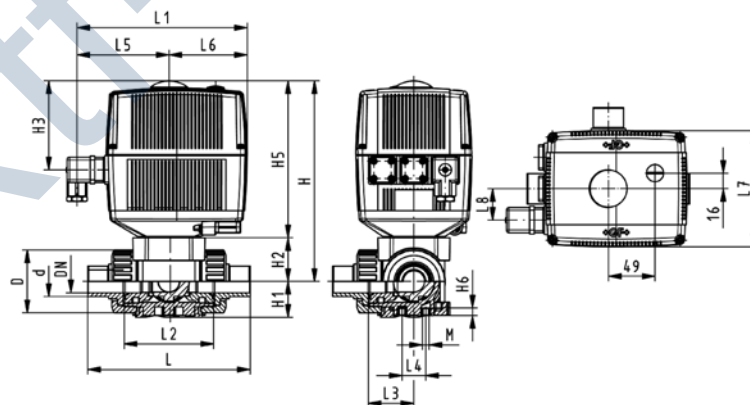
**Model:**

- Material: PP-H
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	200	<b>199 176 042</b>	<b>199 176 052</b>	2.051
20	15	10	200	<b>199 176 043</b>	<b>199 176 053</b>	2.051
25	20	10	470	<b>199 176 044</b>	<b>199 176 054</b>	2.174
32	25	10	793	<b>199 176 045</b>	<b>199 176 055</b>	2.297
40	32	10	1290	<b>199 176 046</b>	<b>199 176 056</b>	2.522
50	40	10	1910	<b>199 176 047</b>	<b>199 176 057</b>	2.886
63	50	10	3100	<b>199 176 048</b>	<b>199 176 058</b>	3.818

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	46	197	29	31	93	166	8	119	182	70	36	25	99	83	122
20	46	197	29	31	93	166	8	133	182	70	36	25	99	83	122
25	56	205	33	39	93	166	8	155	182	86	43	25	99	83	122
32	67	210	38	44	93	166	8	170	182	96	48	25	99	83	122
40	82	216	44	50	93	166	9	201	182	114	58	45	99	83	122
50	98	229	50	63	93	166	9	236	182	137	69	45	99	83	122
63	121	242	61	76	93	166	9	286	182	179	90	45	99	83	122

d [mm]	L8 [mm]	M
16	33	6
20	33	6
25	33	6
32	33	6
40	33	8
50	33	8
63	33	8





**PROGEF Standard**  
**3-Way ball valve type 176**  
**Horizontal/T-port 100-230V**  
**With manual emergency override**  
**With threaded sockets Rp**

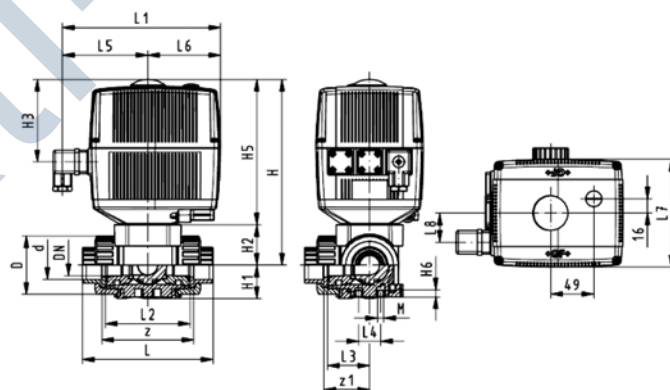
**Model:**

- Material: PP-H
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

Inch	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
3/8	10	10	140	<b>199 176 142</b>	<b>199 176 152</b>	2.051
1/2	15	10	200	<b>199 176 143</b>	<b>199 176 153</b>	2.051
3/4	20	10	470	<b>199 176 144</b>	<b>199 176 154</b>	2.174
1	25	10	793	<b>199 176 145</b>	<b>199 176 155</b>	2.297
1 1/4	32	10	1290	<b>199 176 146</b>	<b>199 176 156</b>	2.522
1 1/2	40	10	1910	<b>199 176 147</b>	<b>199 176 157</b>	2.886
2	50	10	3100	<b>199 176 148</b>	<b>199 176 158</b>	3.818

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
3/8	46	197	29	31	93	166	8	108	182	70	36	25	99	83	122
1/2	46	197	29	31	93	166	8	111	182	70	36	25	99	83	122
3/4	56	205	33	39	93	166	8	131	182	86	43	25	99	83	122
1	67	210	38	44	93	166	8	148	182	96	48	25	99	83	122
1 1/4	82	216	44	50	93	166	9	177	182	114	58	45	99	83	122
1 1/2	98	229	50	63	93	166	9	205	182	137	69	45	99	83	122
2	121	242	61	76	93	166	9	261	182	179	90	45	99	83	122

Inch	L8 [mm]	M [mm]	z [mm]	z1 [mm]
3/8	33	6	78	39
1/2	33	6	79	40
3/4	33	6	95	48
1	33	6	108	54
1 1/4	33	8	133	67
1 1/2	33	8	155	78
2	33	8	203	102





**PROGEF Standard**  
**3-Way ball valve type 176**  
**Horizontal/T-port 100-230V**  
**With manual emergency override**  
**With butt fusion spigots metric**

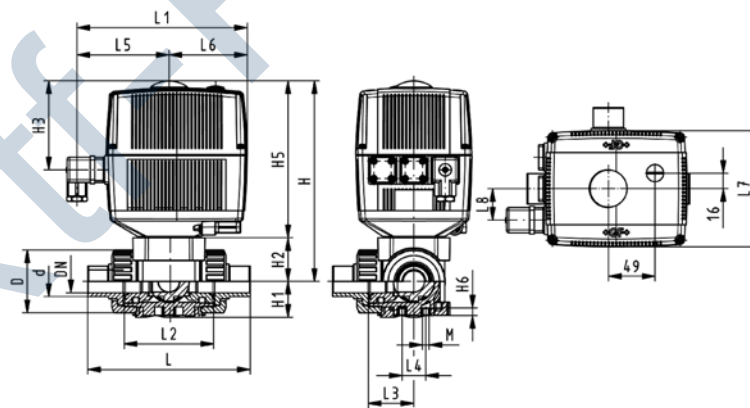
**Model:**

- Material: PP-H
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	10	200	<b>199 176 103</b>	<b>199 176 113</b>	2.051
25	20	10	470	<b>199 176 104</b>	<b>199 176 114</b>	2.174
32	25	10	793	<b>199 176 105</b>	<b>199 176 115</b>	2.297
40	32	10	1290	<b>199 176 106</b>	<b>199 176 116</b>	2.522
50	40	10	1910	<b>199 176 107</b>	<b>199 176 117</b>	2.886
63	50	10	3100	<b>199 176 108</b>	<b>199 176 118</b>	3.818

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	46	197	29	31	93	166	8	133	182	70	36	25	99	83	122
25	56	205	33	39	93	166	8	155	182	86	43	25	99	83	122
32	67	210	38	44	93	166	8	170	182	96	48	25	99	83	122
40	82	216	44	50	93	166	9	201	182	114	58	45	99	83	122
50	98	229	50	63	93	166	9	236	182	137	69	45	99	83	122
63	121	242	61	76	93	166	9	286	182	179	90	45	99	83	122

d [mm]	L8 [mm]	M
20	33	6
25	33	6
32	33	6
40	33	8
50	33	8
63	33	8







**PROGEF Standard**  
**3-Way ball valve type 176**  
**Horizontal/T-port 24V**  
**With manual emergency override**  
**With fusion sockets metric**

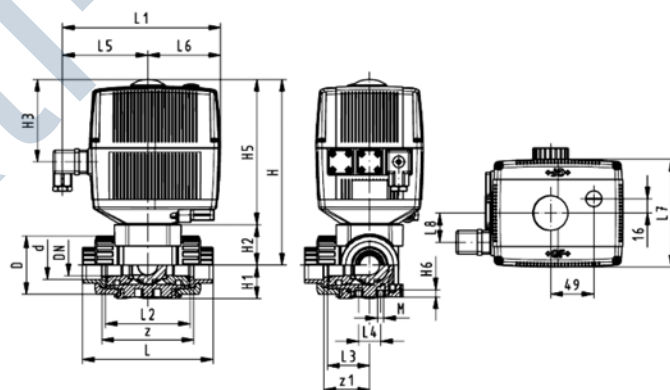
**Model:**

- Material: PP-H
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 24 V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	140	<b>199 176 222</b>	<b>199 176 232</b>	2.051
20	15	10	200	<b>199 176 223</b>	<b>199 176 233</b>	2.051
25	20	10	470	<b>199 176 224</b>	<b>199 176 234</b>	2.174
32	25	10	793	<b>199 176 225</b>	<b>199 176 235</b>	2.297
40	32	10	1290	<b>199 176 226</b>	<b>199 176 236</b>	2.522
50	40	10	1910	<b>199 176 227</b>	<b>199 176 237</b>	2.886
63	50	10	3100	<b>199 176 228</b>	<b>199 176 238</b>	3.818

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	46	197	29	31	93	166	8	108	182	70	36	25	99	83	122
20	46	197	29	31	93	166	8	111	182	70	36	25	99	83	122
25	56	205	33	39	93	166	8	131	182	86	43	25	99	83	122
32	67	210	38	44	93	166	8	148	182	96	48	25	99	83	122
40	82	216	44	50	93	166	9	177	182	114	58	45	99	83	122
50	98	229	50	63	93	166	9	205	182	137	69	45	99	83	122
63	121	242	61	76	93	166	9	261	182	179	90	45	99	83	122

d [mm]	L8 [mm]	M	z [mm]	z1 [mm]
16	33	6	78	39
20	33	6	79	40
25	33	6	95	48
32	33	6	108	54
40	33	8	133	67
50	33	8	155	78
63	33	8	203	102







**PROGEF Standard**  
**3-Way ball valve type 176**  
**Horizontal/T-port 24V**  
**With manual emergency override**  
**With socket fusion spigots**

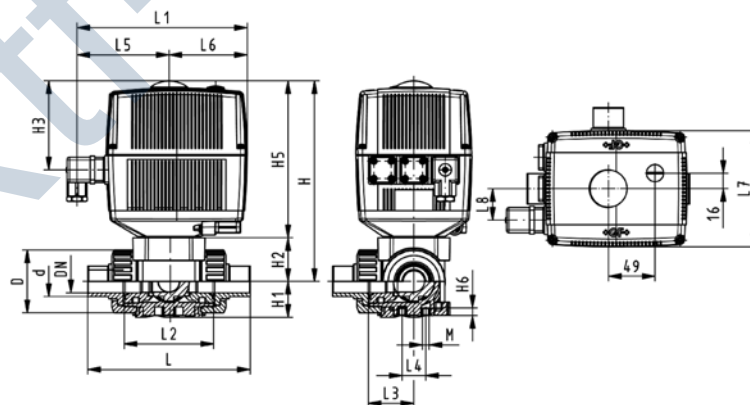
**Model:**

- Material: PP-H
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 24 V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	200	<b>199 176 202</b>	<b>199 176 212</b>	2.051
20	15	10	200	<b>199 176 203</b>	<b>199 176 213</b>	2.051
25	20	10	470	<b>199 176 204</b>	<b>199 176 214</b>	2.174
32	25	10	793	<b>199 176 205</b>	<b>199 176 215</b>	2.297
40	32	10	1290	<b>199 176 206</b>	<b>199 176 216</b>	2.522
50	40	10	1910	<b>199 176 207</b>	<b>199 176 217</b>	2.886
63	50	10	3100	<b>199 176 208</b>	<b>199 176 218</b>	3.818

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	46	197	29	31	93	166	8	119	182	70	36	25	99	83	122
20	46	197	29	31	93	166	8	133	182	70	36	25	99	83	122
25	56	205	33	39	93	166	8	155	182	86	43	25	99	83	122
32	67	210	38	44	93	166	8	170	182	96	48	25	99	83	122
40	82	216	44	50	93	166	9	201	182	114	58	45	99	83	122
50	98	229	50	63	93	166	9	236	182	137	69	45	99	83	122
63	121	242	61	76	93	166	9	286	182	179	90	45	99	83	122

d [mm]	L8 [mm]	M
16	33	6
20	33	6
25	33	6
32	33	6
40	33	8
50	33	8
63	33	8





## PROGEF Standard 3-Way ball valve type 176 Horizontal/T-port 24V With manual emergency override With threaded sockets Rp

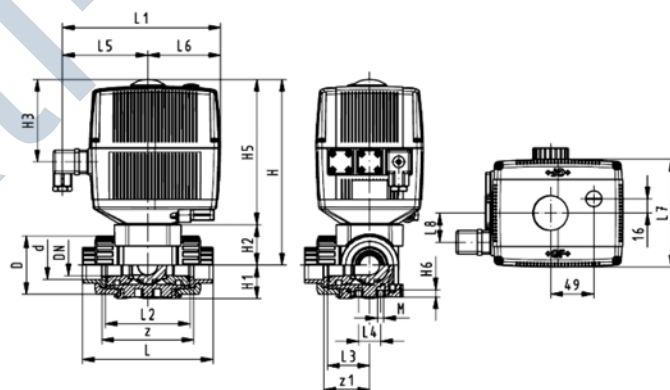
### Model:

- Material: PP-H
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 24 V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

Inch	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
3/8	10	10	140	199 176 302	199 176 312	2.051
1/2	15	10	200	199 176 303	199 176 313	2.051
3/4	20	10	470	199 176 304	199 176 314	2.174
1	25	10	793	199 176 305	199 176 315	2.297
1 1/4	32	10	1290	199 176 306	199 176 316	2.522
1 1/2	40	10	1910	199 176 307	199 176 317	2.886
2	50	10	3100	199 176 308	199 176 318	3.818

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
3/8	46	197	29	31	93	166	8	108	182	70	36	25	99	83	122
1/2	46	197	29	31	93	166	8	111	182	70	36	25	99	83	122
3/4	56	205	33	39	93	166	8	131	182	86	43	25	99	83	122
1	67	210	38	44	93	166	8	148	182	96	48	25	99	83	122
1 1/4	82	216	44	50	93	166	9	177	182	114	58	45	99	83	122
1 1/2	98	229	50	63	93	166	9	205	182	137	69	45	99	83	122
2	121	242	61	76	93	166	9	261	182	179	90	45	99	83	122

Inch	L8 [mm]	M [mm]	z [mm]	z1 [mm]
3/8	33	6	78	39
1/2	33	6	79	40
3/4	33	6	95	48
1	33	6	108	54
1 1/4	33	8	133	67
1 1/2	33	8	155	78
2	33	8	203	102





**PROGEF Standard**  
**3-Way ball valve type 176**  
**Horizontal/T-port 24V**  
**With manual emergency override**  
**With butt fusion spigots metric**

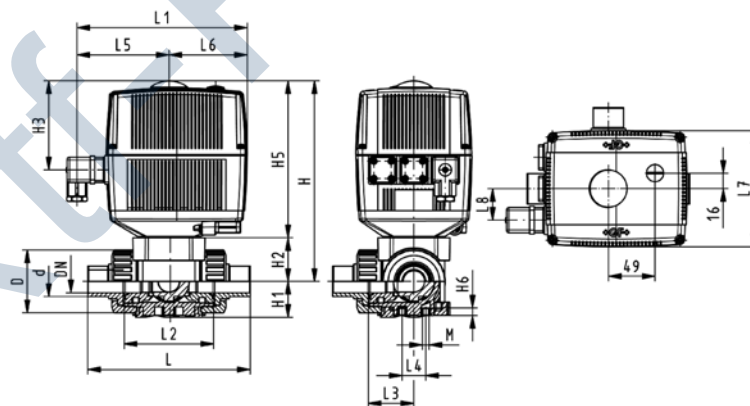
**Model:**

- Material: PP-H
- Assignment of actuators: EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 24 V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	10	200	<b>199 176 263</b>	<b>199 176 273</b>	2.051
25	20	10	470	<b>199 176 264</b>	<b>199 176 274</b>	2.174
32	25	10	793	<b>199 176 265</b>	<b>199 176 275</b>	2.297
40	32	10	1290	<b>199 176 266</b>	<b>199 176 276</b>	2.522
50	40	10	1910	<b>199 176 267</b>	<b>199 176 277</b>	2.886
63	50	10	3100	<b>199 176 268</b>	<b>199 176 278</b>	3.818

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	46	197	29	31	93	166	8	133	182	70	36	25	99	83	122
25	56	205	33	39	93	166	8	155	182	86	43	25	99	83	122
32	67	210	38	44	93	166	8	170	182	96	48	25	99	83	122
40	82	216	44	50	93	166	9	201	182	114	58	45	99	83	122
50	98	229	50	63	93	166	9	236	182	137	69	45	99	83	122
63	121	242	61	76	93	166	9	286	182	179	90	45	99	83	122

d [mm]	L8 [mm]	M
20	33	6
25	33	6
32	33	6
40	33	8
50	33	8
63	33	8



# Copiable

## Configurator GF ball valve type 546 PROGEF Standard

### Ball Valve

- A01 Ball Valve 546
- A02 Linear Ball Valve

### Material

- B05 PP-H

### Dimension

- C05 d 16 DN 10 3/8"
- C06 d 20 DN 15 1/2"
- C07 d 25 DN 20 3/4"
- C08 d 32 DN 25 1"
- C09 d 40 DN 32 1 1/4"
- C10 d 50 DN 40 1 1/2"
- C11 d 63 DN 50 2"
- C12 DN 65 2 1/2"
- C13 DN 80 3"
- C14 DN 100 4"
- C15 DN 150 6"

### Version

- D01 Standard, PTFE ball seal
- D02 oilfree, PTFE ball seal (only with specific connecting parts)
- D03 silicon-free, PTFE ball seal (only with specific connecting parts)
- D04 silicon-free, PVDF ball seal for metric (only with specific connecting parts)

### Seals

- E01 EPDM seals
- E02 FPM seals
- E03 FFPM/KALREZ® seals

### Threaded inserts

- F01 without threaded inserts
- F02 with threaded inserts

### Connecting parts

- G30 PP-H Fusion socket metric
- G32 PP-H Socket fusion spigot metric
- G33 PP-H Threaded socket Rp reinforced
- G34 PP-H Threaded socket NPT reinforced
- G35 PP-H Butt fusion spigot SDR 11 metric IR-PLUS®
- G36 PP-H Butt fusion spigot SDR 17.6 metric with this valve end the maximum nominal pressure is reduced to PN 6
- G37 PP-H Butt fusion spigot long SDR11 metric
- G43 PE-100 Butt fusion spigot long SDR11 metric
- G44 PE-100 Butt fusion spigot long SDR17.6 metric
- G63 Fixed flange PP-H serrated metric
- G72 Backing flange PP-steel metric
- G73 Backing flange PP-steel inch ANSI
- G77 Backing flange PP JIS with connecting parts
- G78 Backing flange PP-GF JIS
- G83 PP-H Valve end blank
- G40 PE-100 Fusion socket metric
- G41 PE-100 Butt fusion spigot SDR11 metric
- G42 PE-100 Butt fusion spigot SDR17.6 metric
- G43 PE-100 Butt fusion spigot long SDR11 metric
- G11 PVC-C Cement socket metric
- G13 PVC-C Cement socket inch ASTM
- G14 PVC-C Cement spigot metric
- G15 PVC-C Threaded socket Rp
- G16 PVC-C Threaded socket Rp reinforced
- G17 PVC-C Threaded socket NPT

### Multi-functional module

- I01 No multi-functional module
- I02 Empty module
- I03 Module with 2 end switches Ag, Ni
- I04 Module with 2 end switches Au
- I05 Module with 2 inductive switches Namur
- I06 Module with 2 inductive switches PNP
- I07 Module with 2 inductive switches NPN

### Lever

- K01 Standard lever red
- K02 Standard lever black
- K11 Multi-functional lever red

### Mounting plate

- L01 without mounting plate
- L02 with mounting plate

A01

B05

C

D

E

F

G

G

I

K

L

left right

You will find a large selection of different versions in our range of products. New system elements also provide you with new opportunities for use. In order for us to supply exactly the ball valve you need for you application, we have created a selection menu for you. (Der maximal zulässige Betriebsdruck des Kugelhahns ist PN 10).

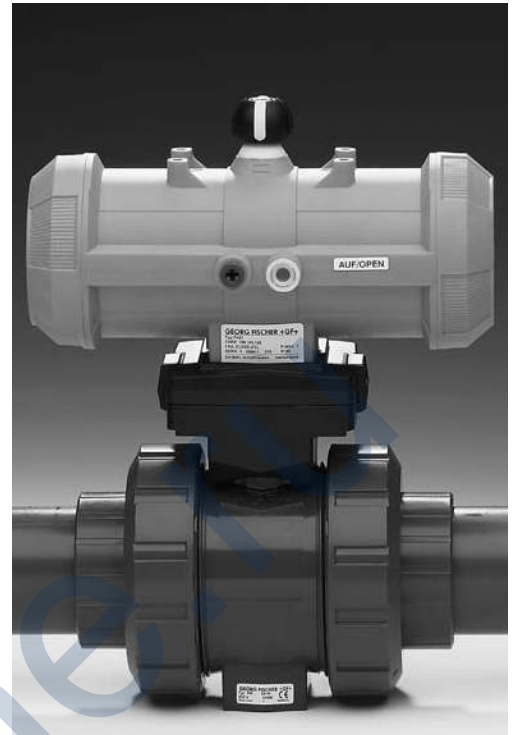
**We supply what you put together.**

# Copiable GF ball valve type 546 with pneumatic actuator

## It's so easy to configurate the type 546:

With the configurator, you have a choice of new pneumatic actuators PA11 and PA21 in 2 optimized sizes including a large range of accessories.

**We supply what you put together.**



### Pneumatic actuators PA11/PA21

- P01 Fail safe to close PA11/PA21
- P02 Fail safe to open PA11/21
- P03 Double acting PA11/21
- P30 Fail safe to close PA30/90
- P31 Fail safe to open PA30/90
- P32 Double acting PA30/90

### Manual override

- Q01 without manual override
- Q02 with manual override

### Stroke limiter

- R01 without stroke limiter
- R02 with stroke limiter

<b>P</b>	<b>Q</b>	<b>R</b>	
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# Ball Valves Pneumatic



## PROGEF Standard Ball valve type 231 FC (Fail safe to close) With manual override With fusion sockets metric

### Model:

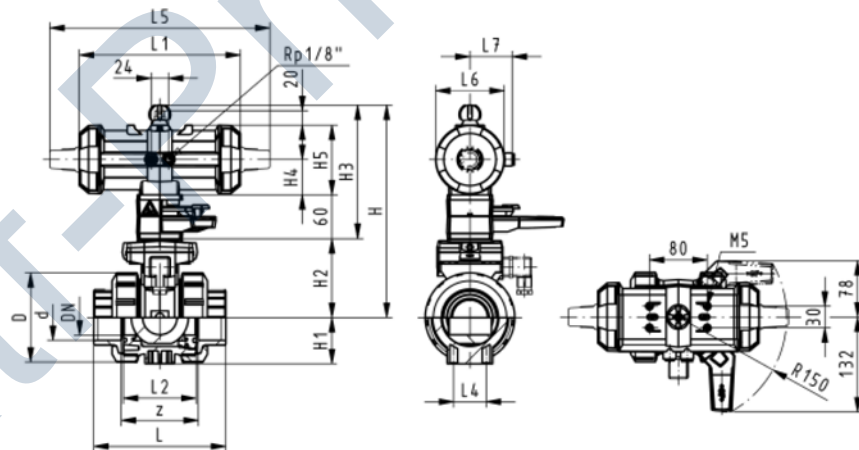
- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time  $90^\circ <$  1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	199 231 002	199 231 012	1.500
20	15	10	185	199 231 003	199 231 013	1.500
25	20	10	350	199 231 004	199 231 014	1.600
32	25	10	700	199 231 005	199 231 015	1.700
40	32	10	1000	199 231 006	199 231 016	2.800
50	40	10	1600	199 231 007	199 231 017	3.100
63	50	10	3100	199 231 008	199 231 018	4.000

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	230	27	62	168	40	97	93	194	56	25	261	76	48	67
20	50	230	27	62	168	40	97	95	194	56	25	261	76	48	66
25	58	239	30	71	168	40	97	108	194	65	25	261	76	48	77
32	68	239	36	71	168	40	97	118	194	71	25	261	76	48	83
40	84	271	44	84	187	51	115	137	224	85	45	305	95	59	99
50	97	271	51	84	187	51	115	147	224	89	45	305	95	59	105
63	124	293	64	106	187	51	115	168	224	101	45	305	95	59	117





## PROGEF Standard Ball valve type 231 FC (Fail safe to close) With manual override With fusion spigots metric

### Model:

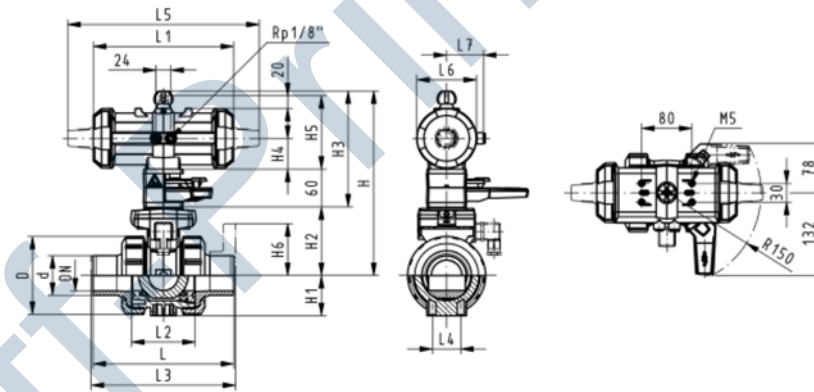
- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time  $90^\circ <$  1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	<b>199 231 022</b>	<b>199 231 032</b>	1.500
20	15	10	185	<b>199 231 023</b>	<b>199 231 033</b>	1.500
25	20	10	350	<b>199 231 024</b>	<b>199 231 034</b>	1.600
32	25	10	700	<b>199 231 025</b>	<b>199 231 035</b>	1.700
40	32	10	1000	<b>199 231 026</b>	<b>199 231 036</b>	2.800
50	40	10	1600	<b>199 231 027</b>	<b>199 231 037</b>	3.100
63	50	10	3100	<b>199 231 028</b>	<b>199 231 038</b>	4.000

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	230	27	62	168	40	97	110	194	56		25	261	76	48
20	50	230	27	62	168	40	97	120	194	56	130	25	261	76	48
25	58	239	30	71	168	40	97	139	194	65	150	25	261	76	48
32	68	239	36	71	168	40	97	150	194	71	160	25	261	76	48
40	84	271	44	84	187	51	115	170	224	85	180	45	305	95	59
50	97	271	51	84	187	51	115	190	224	89	200	45	305	95	59
63	124	293	64	106	187	51	115	220	224	101	230	45	305	95	59





**PROGEF Standard**  
**Ball valve type 231 FC (Fail safe to close)**  
**With manual override**  
**With fixed flanges PP-H serrated metric**

**Model:**

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

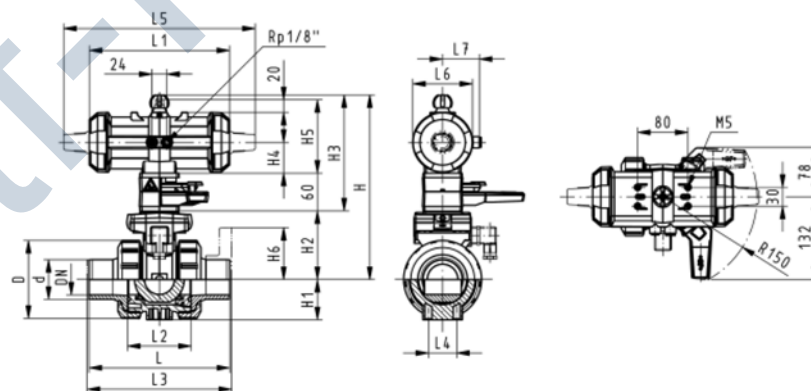
**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	½	10	185	<b>199 231 243</b>	<b>199 231 253</b>	1.700
25	20	¾	10	350	<b>199 231 244</b>	<b>199 231 254</b>	1.900
32	25	1	10	700	<b>199 231 245</b>	<b>199 231 255</b>	2.100
40	32	1 ¼	10	1000	<b>199 231 246</b>	<b>199 231 256</b>	3.400
50	40	1 ½	10	1600	<b>199 231 247</b>	<b>199 231 257</b>	3.900
63	50	2	10	3100	<b>199 231 248</b>	<b>199 231 258</b>	4.900

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
20	50	230	27	62	168	40	97	48	120	194	56	130	25	261	76
25	58	239	30	71	168	40	97	53	139	194	65	150	25	261	76
32	68	239	36	71	168	40	97	58	150	194	71	160	25	261	76
40	84	271	44	84	187	51	115	70	170	224	85	180	45	305	95
50	97	271	51	84	187	51	115	75	190	224	89	200	45	305	95
63	124	293	64	106	187	51	115	83	220	224	101	230	45	305	95

d [mm]	L7 [mm]
20	48
25	48
32	48
40	59
50	59
63	59







## PROGEF Standard Ball valve type 231 FO (Fail safe to open) With manual override With fusion sockets metric

### Model:

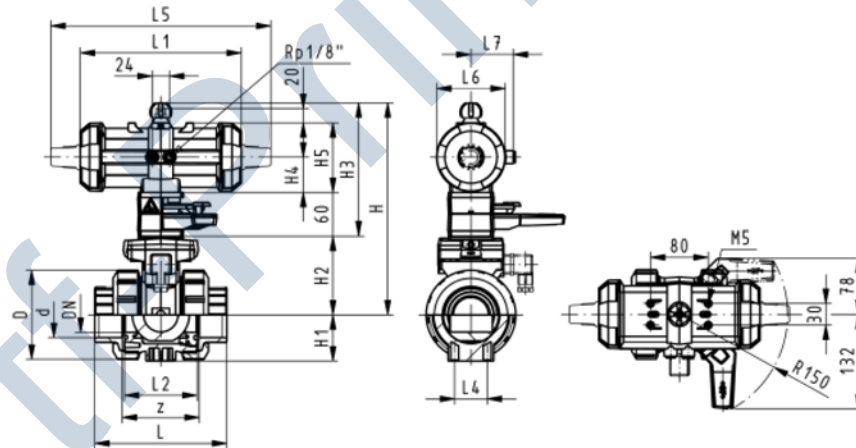
- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time  $90^\circ <$  1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	<b>199 231 042</b>	<b>199 231 052</b>	1.500
20	15	10	185	<b>199 231 043</b>	<b>199 231 053</b>	1.500
25	20	10	350	<b>199 231 044</b>	<b>199 231 054</b>	1.600
32	25	10	700	<b>199 231 045</b>	<b>199 231 055</b>	1.700
40	32	10	1000	<b>199 231 046</b>	<b>199 231 056</b>	2.800
50	40	10	1600	<b>199 231 047</b>	<b>199 231 057</b>	3.100
63	50	10	3100	<b>199 231 048</b>	<b>199 231 058</b>	4.000

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	230	27	62	168	40	97	93	194	56	25	261	76	48	67
20	50	230	27	62	168	40	97	95	194	56	25	261	76	48	66
25	58	239	30	71	168	40	97	108	194	65	25	261	76	48	77
32	68	239	36	71	168	40	97	118	194	71	25	261	76	48	83
40	84	271	44	84	187	51	115	137	224	85	45	305	95	59	99
50	97	271	51	84	187	51	115	147	224	89	45	305	95	59	105
63	124	293	64	106	187	51	115	168	224	101	45	305	95	59	117





## PROGEF Standard Ball valve type 231 FO (Fail safe to open) With manual override With fusion spigots metric

### Model:

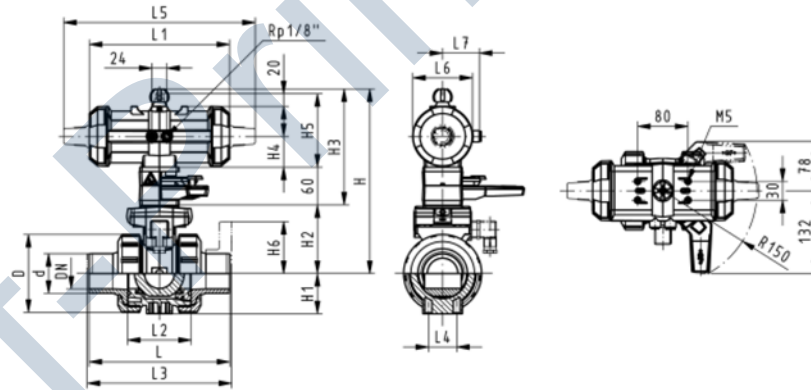
- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time  $90^\circ <$  1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	199 231 062	199 231 072	1.500
20	15	10	185	199 231 063	199 231 073	1.500
25	20	10	350	199 231 064	199 231 074	1.600
32	25	10	700	199 231 065	199 231 075	1.700
40	32	10	1000	199 231 066	199 231 076	2.800
50	40	10	1600	199 231 067	199 231 077	3.100
63	50	10	3100	199 231 068	199 231 078	4.000

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	230	27	62	168	40	97	110	194	56	130	25	261	76	48
20	50	230	27	62	168	40	97	120	194	56	130	25	261	76	48
25	58	239	30	71	168	40	97	139	194	65	150	25	261	76	48
32	68	239	36	71	168	40	97	150	194	71	160	25	261	76	48
40	84	271	44	84	187	51	115	170	224	85	180	45	305	95	59
50	97	271	51	84	187	51	115	190	224	89	200	45	305	95	59
63	124	293	64	106	187	51	115	220	224	101	230	45	305	95	59





**PROGEF Standard**  
**Ball valve type 231 FO (Fail safe to open)**  
**With manual override**  
**With fixed flanges PP-H serrated metric**

**Model:**

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

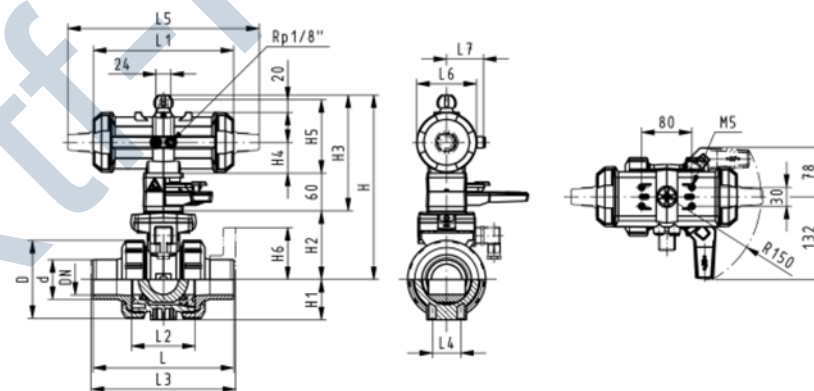
**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	½	10	185	<b>199 231 263</b>	<b>199 231 273</b>	1.700
25	20	¾	10	350	<b>199 231 264</b>	<b>199 231 274</b>	1.900
32	25	1	10	700	<b>199 231 265</b>	<b>199 231 275</b>	2.100
40	32	1 ¼	10	1000	<b>199 231 266</b>	<b>199 231 276</b>	3.400
50	40	1 ½	10	1600	<b>199 231 267</b>	<b>199 231 277</b>	3.900
63	50	2	10	3100	<b>199 231 268</b>	<b>199 231 278</b>	4.900

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
20	58	230	27	62	168	40	97	48	120	194	56	130	25	261	76
25	58	239	30	71	168	40	97	53	139	194	65	150	25	261	76
32	68	239	36	71	168	40	97	58	150	194	71	160	25	261	76
40	84	271	44	84	187	51	115	70	170	224	85	180	45	305	95
50	97	271	51	84	187	51	115	75	190	224	89	200	45	305	95
63	124	293	64	106	187	51	115	83	220	224	101	230	45	305	95

d [mm]	L7 [mm]
20	48
25	48
32	48
40	59
50	59
63	59





## PROGEF Standard Ball valve type 231 DA (Double acting) With manual override With fusion sockets metric

### Model:

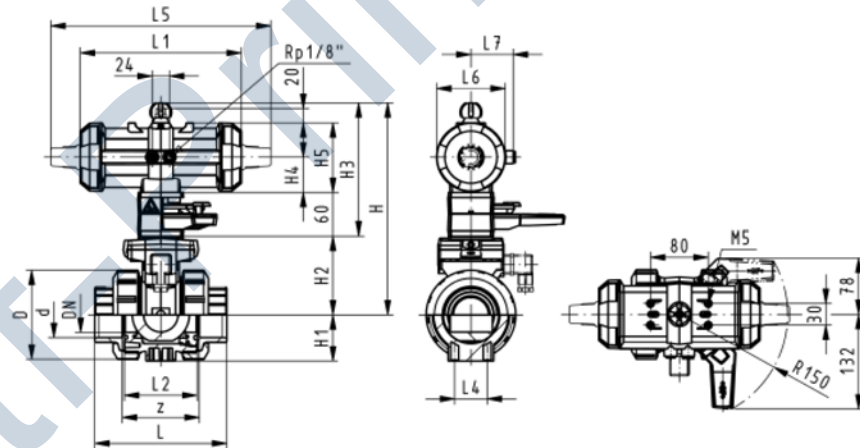
- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time  $90^\circ <$  1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	199 231 082	199 231 092	1.500
20	15	10	185	199 231 083	199 231 093	1.500
25	20	10	350	199 231 084	199 231 094	1.600
32	25	10	700	199 231 085	199 231 095	1.700
40	32	10	1000	199 231 086	199 231 096	2.800
50	40	10	1600	199 231 087	199 231 097	3.100
63	50	10	3100	199 231 088	199 231 098	4.000

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	230	27	62	168	40	97	93	194	56	25	261	76	48	67
20	50	230	27	62	168	40	97	95	194	56	25	261	76	48	66
25	58	239	30	71	168	40	97	108	194	65	25	261	76	48	77
32	68	239	36	71	168	40	97	118	194	71	25	261	76	48	83
40	84	271	44	84	187	51	115	137	224	85	45	305	95	59	99
50	97	271	51	84	187	51	115	147	224	89	45	305	95	59	105
63	124	293	64	106	187	51	115	168	224	101	45	305	95	59	117





## PROGEF Standard Ball valve type 231 DA (Double acting) With manual override With fusion spigots metric

### Model:

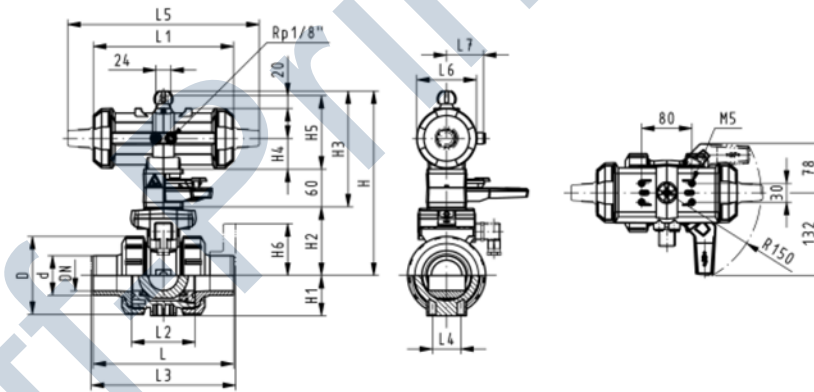
- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time  $90^\circ <$  1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	<b>199 231 102</b>	<b>199 231 112</b>	1.500
20	15	10	185	<b>199 231 103</b>	<b>199 231 113</b>	1.500
25	20	10	350	<b>199 231 104</b>	<b>199 231 114</b>	1.600
32	25	10	700	<b>199 231 105</b>	<b>199 231 115</b>	1.700
40	32	10	1000	<b>199 231 106</b>	<b>199 231 116</b>	2.800
50	40	10	1600	<b>199 231 107</b>	<b>199 231 117</b>	3.100
63	50	10	3100	<b>199 231 108</b>	<b>199 231 118</b>	4.000

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	230	27	62	168	40	97	110	194	56		25	261	76	48
20	50	230	27	62	168	40	97	120	194	56	130	25	261	76	48
25	58	239	30	71	168	40	97	139	194	65	150	25	261	76	48
32	68	239	36	71	168	40	97	150	194	71	160	25	261	76	48
40	84	271	44	84	187	51	115	170	224	85	180	45	305	95	59
50	97	271	51	84	187	51	115	190	224	89	200	45	305	95	59
63	124	293	64	106	187	51	115	220	224	101	230	45	305	95	59





## PROGEF Standard Ball valve type 231 DA (Double acting) With manual override With fixed flanges PP-H serrated metric

### Model:

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time  $90^\circ <$  1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

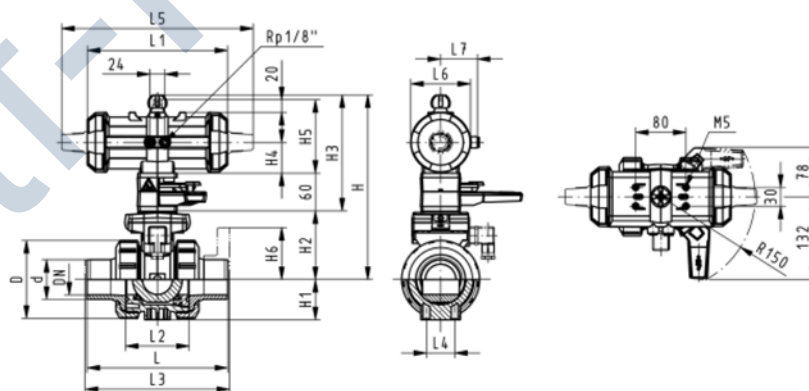
### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	½	10	185	<b>199 231 283</b>	<b>199 231 293</b>	1.700
25	20	¾	10	350	<b>199 231 284</b>	<b>199 231 294</b>	1.900
32	25	1	10	700	<b>199 231 285</b>	<b>199 231 295</b>	2.100
40	32	1 ¼	10	1000	<b>199 231 286</b>	<b>199 231 296</b>	3.400
50	40	1 ½	10	1600	<b>199 231 287</b>	<b>199 231 297</b>	3.900
63	50	2	10	3100	<b>199 231 288</b>	<b>199 231 298</b>	4.900

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
20	50	230	27	62	168	40	97	48	120	194	56	130	25	261	76
25	58	239	30	71	168	40	97	53	139	194	65	150	25	261	76
32	68	239	36	71	168	40	97	58	150	194	71	160	25	261	76
40	84	271	44	84	187	51	115	70	170	224	85	180	45	305	95
50	97	271	51	84	187	51	115	75	190	224	89	200	45	305	95
63	124	293	64	106	187	51	115	83	220	224	101	230	45	305	95

d [mm]	L7 [mm]
20	48
25	48
32	48
40	59
50	59
63	59





## PROGEF Standard Ball valve type 231 FC (Fail safe to close) Without manual override With fusion sockets metric

### Model:

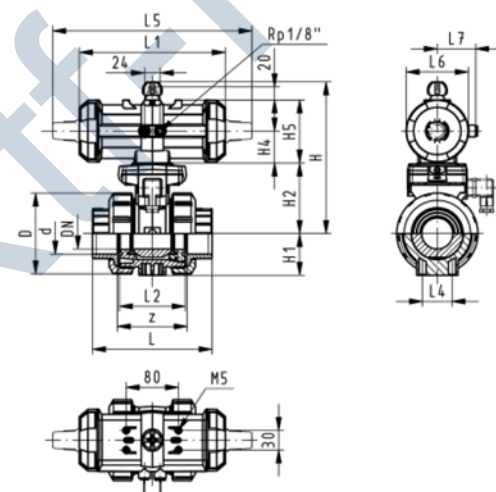
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time  $90^\circ <$  1-2 s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	<b>199 231 122</b>	<b>199 231 132</b>	1.200
20	15	10	185	<b>199 231 123</b>	<b>199 231 133</b>	1.200
25	20	10	350	<b>199 231 124</b>	<b>199 231 134</b>	1.300
32	25	10	700	<b>199 231 125</b>	<b>199 231 135</b>	1.400
40	32	10	1000	<b>199 231 126</b>	<b>199 231 136</b>	2.500
50	40	10	1600	<b>199 231 127</b>	<b>199 231 137</b>	2.800
63	50	10	3100	<b>199 231 128</b>	<b>199 231 138</b>	3.700
75	65	10	5000	<b>199 231 129</b>	<b>199 231 139</b>	4.000
90	80	10	7000	<b>199 231 130</b>	<b>199 231 140</b>	4.700
110	100	10	11000	<b>199 231 131</b>	<b>199 231 141</b>	6.900

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	167	27	62	40	97	93	194	56	25	261	76	48	67
20	50	167	27	62	40	97	95	194	56	25	261	76	48	66
25	58	176	30	71	40	97	108	194	65	25	261	76	48	77
32	68	176	36	71	40	97	118	194	71	25	261	76	48	83
40	84	210	44	84	51	115	137	224	85	45	305	95	59	99
50	97	210	51	84	51	115	147	224	89	45	305	95	59	105
63	124	232	64	106	51	115	168	224	101	45	305	95	59	117
75	166	262	85	156		70	233	218	136	70	276	65		167
90	200	281	105	168		78	254	259	141	70	341	72		180
110	238	292	123	175		86	301	287	164	120	369	80		215







**PROGEF Standard**  
**Ball valve type 231 FC (Fail safe to close)**  
**Without manual override**  
**With socket fusion spigots metric**

**Model:**

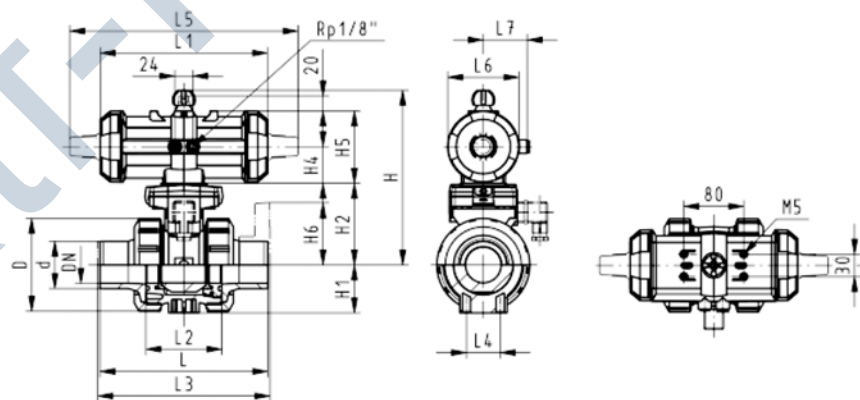
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time  $90^\circ <$  1-2 s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**

**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	<b>199 231 142</b>	<b>199 231 152</b>	1.200
20	15	10	185	<b>199 231 143</b>	<b>199 231 153</b>	1.200
25	20	10	350	<b>199 231 144</b>	<b>199 231 154</b>	1.300
32	25	10	700	<b>199 231 145</b>	<b>199 231 155</b>	1.400
40	32	10	1000	<b>199 231 146</b>	<b>199 231 156</b>	2.500
50	40	10	1600	<b>199 231 147</b>	<b>199 231 157</b>	2.800
63	50	10	3100	<b>199 231 148</b>	<b>199 231 158</b>	3.700
75	65	10	5000	<b>199 231 149</b>	<b>199 231 159</b>	4.000
90	80	10	7000	<b>199 231 150</b>	<b>199 231 160</b>	4.800
110	100	10	11000	<b>199 231 151</b>	<b>199 231 161</b>	6.900

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	167	27	62	40	97	110	194	56	130	25	261	76	48
20	50	167	27	62	40	97	120	194	56	130	25	261	76	48
25	58	176	30	71	40	97	139	194	65	150	25	261	76	48
32	68	176	36	71	40	97	150	194	71	160	25	261	76	48
40	84	210	44	84	51	115	170	224	85	180	45	305	95	59
50	97	210	51	84	51	115	190	224	89	200	45	305	95	59
63	124	232	64	106	51	115	220	224	101	230	45	305	95	59
75	166	262	85	156		70	280	218	136	290	70	276	65	
90	200	281	105	168		78	296	259	141	310	70	341	72	
110	238	292	123	175		86	336	287	164	350	120	369	80	







**PROGEF Standard**  
**Ball valve type 231 FC (Fail safe to close)**  
**Without manual override**  
**With fixed flanges PP-H serrated metric**

**Model:**

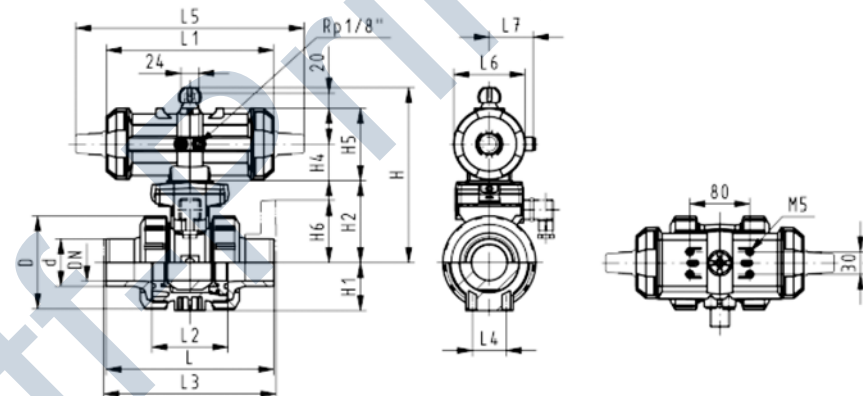
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Overall length according to EN 558
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	½	10	185	<b>199 231 423</b>	<b>199 231 433</b>	1.400
25	20	¾	10	350	<b>199 231 424</b>	<b>199 231 434</b>	1.600
32	25	1	10	700	<b>199 231 425</b>	<b>199 231 435</b>	1.800
40	32	1 ¼	10	1000	<b>199 231 426</b>	<b>199 231 436</b>	3.100
50	40	1 ½	10	1600	<b>199 231 427</b>	<b>199 231 437</b>	3.600
63	50	2	10	3100	<b>199 231 428</b>	<b>199 231 438</b>	4.700

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	167	27	62	40	97	48	120	194	56	130	25	261	76	48
25	58	176	30	71	40	97	53	140	194	65	150	25	261	76	48
32	68	176	36	71	40	97	58	150	194	71	160	25	261	76	48
40	84	210	44	84	51	115	70	170	224	85	180	45	305	95	59
50	97	210	51	84	51	115	75	190	224	89	200	45	305	95	59
63	124	232	64	106	51	115	83	220	224	101	230	45	305	95	59





## PROGEF Standard Ball valve type 231 FC (Fail safe to close) Without manual override With backing flanges PP-st metric

### Model:

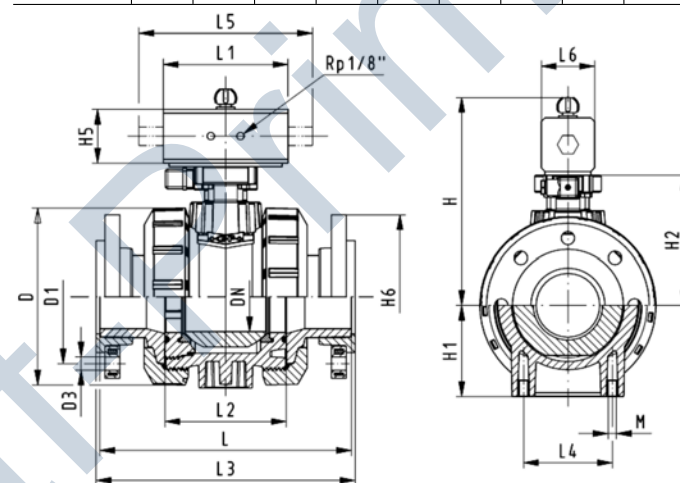
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90° < 1-2 s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- Overall length according to EN 558
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	2 1/2	10	5000	<b>199 231 329</b>	<b>199 231 339</b>	8.300
90	80	3	10	7000	<b>199 231 330</b>	<b>199 231 340</b>	10.000
110	100	4	10	11000	<b>199 231 331</b>	<b>199 231 341</b>	14.100

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
75	166	262	85	156	70	93	280	218	136	290	70	276	65
90	200	281	105	168	78	100	296	259	141	310	70	341	72
110	238	292	123	175	86	110	336	287	164	350	120	369	80





**PROGEF Standard**  
**Ball valve type 231 FC (Fail safe to close)**  
**Without manual override**  
**With butt fusion spigots IR-Plus SDR11 metric**

**Model:**

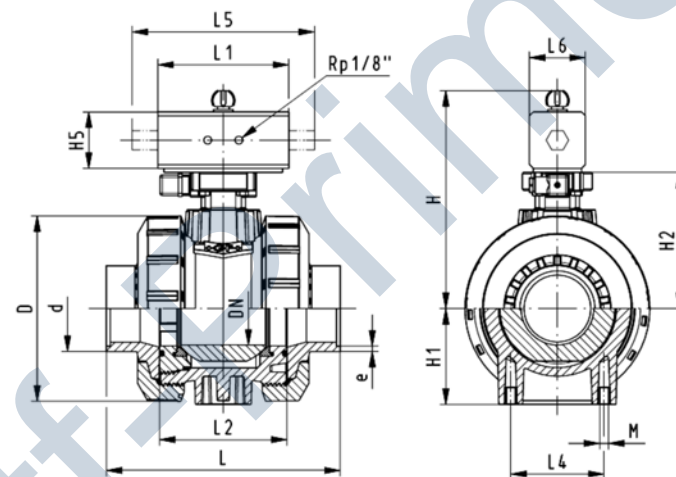
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time  $90^\circ <$  1-2 s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**

**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	10	5000	<b>199 231 839</b>	<b>199 231 849</b>	4.000
90	80	10	7000	<b>199 231 840</b>	<b>199 231 850</b>	4.800
110	100	10	11000	<b>199 231 841</b>	<b>199 231 851</b>	6.900

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	e [mm]
75	166	262	85	156	70	266	218	136	290	70	276	65	8.2
90	200	281	105	168	78	264	259	141	310	70	341	72	9.9
110	238	292	123	175	86	301	287	164	350	120	369	80	12.0





**PROGEF Standard**  
**Ball valve type 231 FC (Fail safe to close)**  
**Without manual override**  
**With butt fusion spigots SDR17.6 metric**

**Model:**

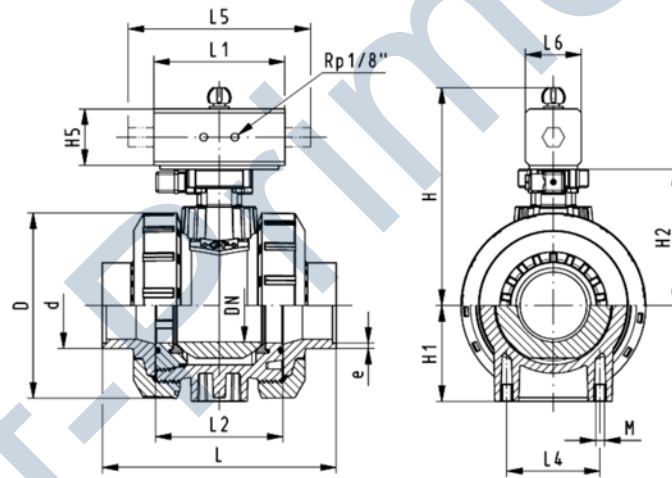
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time  $90^\circ <$  1-2 s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**

**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	10	5000	<b>199 231 939</b>	<b>199 231 949</b>	4.000
90	80	10	7000	<b>199 231 940</b>	<b>199 231 950</b>	4.800
110	100	10	11000	<b>199 231 941</b>	<b>199 231 951</b>	6.900

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	e [mm]
75	166	262	85	156	70	266	218	136	290	70	276	65	4.6
90	200	281	105	168	78	264	259	141	310	70	341	72	5.5
110	238	292	123	175	86	301	287	164	350	120	369	80	6.7





## PROGEF Standard Ball valve type 231 FO (Fail safe to open) Without manual override With fusion sockets metric

### Model:

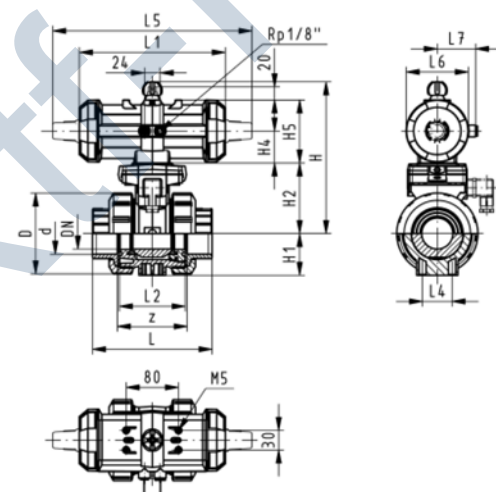
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time  $90^\circ <$  1-2 s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	<b>199 231 162</b>	<b>199 231 172</b>	1.200
20	15	10	185	<b>199 231 163</b>	<b>199 231 173</b>	1.200
25	20	10	350	<b>199 231 164</b>	<b>199 231 174</b>	1.300
32	25	10	700	<b>199 231 165</b>	<b>199 231 175</b>	1.400
40	32	10	1000	<b>199 231 166</b>	<b>199 231 176</b>	2.500
50	40	10	1600	<b>199 231 167</b>	<b>199 231 177</b>	2.800
63	50	10	3100	<b>199 231 168</b>	<b>199 231 178</b>	3.700
75	65	10	5000	<b>199 231 169</b>	<b>199 231 179</b>	4.000
90	80	10	7000	<b>199 231 170</b>	<b>199 231 180</b>	4.700
110	100	10	11000	<b>199 231 171</b>	<b>199 231 181</b>	6.900

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	167	27	62	40	97	93	194	56	25	261	76	48	66
20	50	167	27	62	40	97	95	194	56	25	261	76	48	67
25	58	176	30	71	40	97	108	194	65	25	261	76	48	77
32	68	176	36	71	40	97	118	194	71	25	261	76	48	83
40	84	210	44	84	51	115	137	224	85	45	305	95	59	99
50	97	210	51	84	51	115	147	224	89	45	305	95	59	105
63	124	232	64	106	51	115	168	224	101	45	305	95	59	117
75	166	262	85	156		70	233	218	136	70	276	65		167
90	200	281	105	168		78	254	259	141	70	341	72		180
110	238	292	123	175		86	301	287	164	120	369	80		215





## PROGEF Standard Ball valve type 231 FO (Fail safe to open) Without manual override With socket fusion spigots metric

### Model:

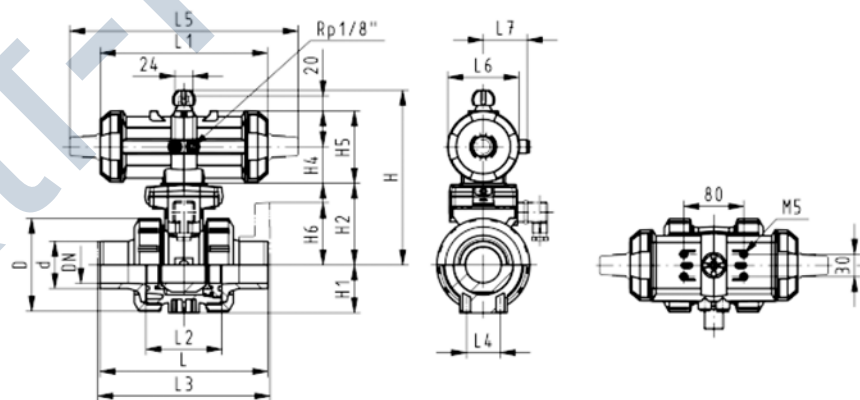
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time  $90^\circ <$  1-2 s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	<b>199 231 182</b>	<b>199 231 192</b>	1.200
20	15	10	185	<b>199 231 183</b>	<b>199 231 193</b>	1.200
25	20	10	350	<b>199 231 184</b>	<b>199 231 194</b>	1.300
32	25	10	700	<b>199 231 185</b>	<b>199 231 195</b>	1.400
40	32	10	1000	<b>199 231 186</b>	<b>199 231 196</b>	2.500
50	40	10	1600	<b>199 231 187</b>	<b>199 231 197</b>	2.800
63	50	10	3100	<b>199 231 188</b>	<b>199 231 198</b>	3.700
75	65	10	5000	<b>199 231 189</b>	<b>199 231 199</b>	4.000
90	80	10	7000	<b>199 231 190</b>	<b>199 231 200</b>	4.800
110	100	10	11000	<b>199 231 191</b>	<b>199 231 201</b>	6.900

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	167	27	62	40	97	110	194	56	130	25	261	76	48
20	50	167	27	62	40	97	120	194	56	130	25	261	76	48
25	58	176	30	71	40	97	139	194	65	150	25	261	76	48
32	68	176	36	71	40	97	150	194	71	160	25	261	76	48
40	84	210	44	84	51	115	170	224	85	180	45	305	95	59
50	97	210	51	84	51	115	190	224	89	200	45	305	95	59
63	124	232	64	106	51	115	220	224	101	230	45	305	95	59
75	166	262	85	156		70	280	218	136	290	70	276	65	
90	200	281	105	168		78	296	259	141	310	70	341	72	
110	238	292	123	175		86	336	287	164	350	120	369	80	





**PROGEF Standard**  
**Ball valve type 231 FO (Fail safe to open)**  
**Without manual override**  
**With fixed flanges PP-H serrated metric**

**Model:**

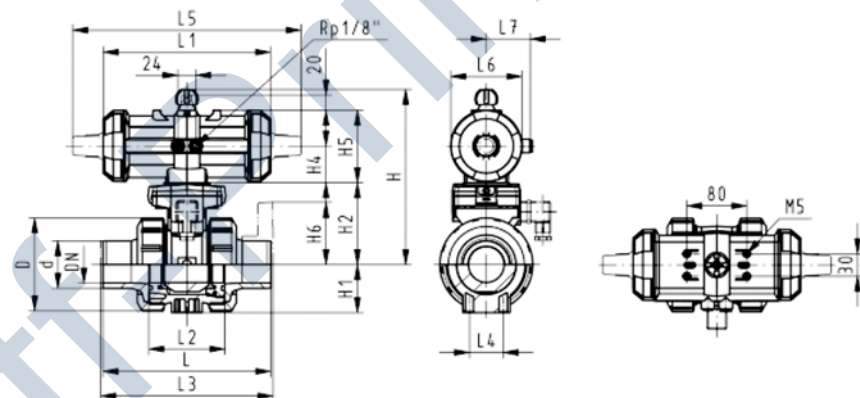
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Overall length according to EN 558
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	½	10	185	<b>199 231 443</b>	<b>199 231 453</b>	1.400
25	20	¾	10	350	<b>199 231 444</b>	<b>199 231 454</b>	1.600
32	25	1	10	700	<b>199 231 445</b>	<b>199 231 455</b>	1.800
40	32	1 ¼	10	1000	<b>199 231 446</b>	<b>199 231 456</b>	3.100
50	40	1 ½	10	1600	<b>199 231 447</b>	<b>199 231 457</b>	3.600
63	50	2	10	3100	<b>199 231 448</b>	<b>199 231 458</b>	4.700

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	167	27	62	40	97	48	120	194	56	130	25	261	76	48
25	58	176	30	71	40	97	53	140	194	65	150	25	261	76	48
32	68	176	36	71	40	97	58	150	194	71	160	25	261	76	48
40	84	210	44	84	51	115	70	170	224	85	180	45	305	95	59
50	97	210	51	84	51	115	75	190	224	89	200	45	305	95	59
63	124	232	64	106	51	115	83	220	224	101	230	45	305	95	59







**PROGEF Standard  
Ball valve type 231 FO (Fail safe to open)  
Without manual override  
With backing flanges PP-st metric**

**Model:**

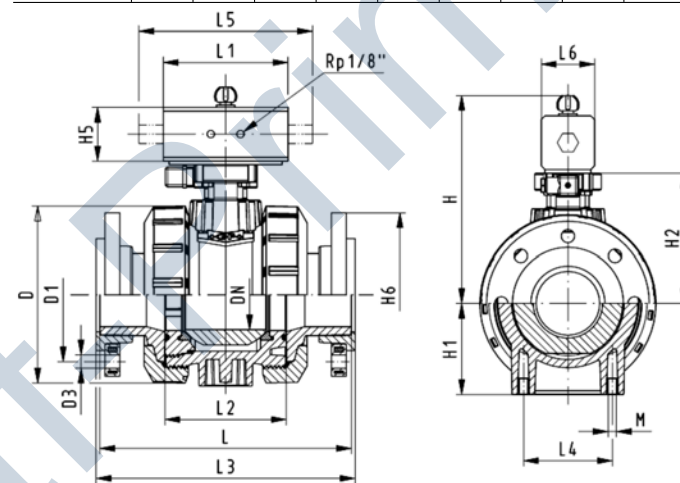
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°< 1-2 s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- Overall length according to EN 558
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501

**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	2 1/2	10	5000	<b>199 231 349</b>	<b>199 231 359</b>	8.300
90	80	3	10	7000	<b>199 231 350</b>	<b>199 231 360</b>	10.000
110	100	4	10	11000	<b>199 231 351</b>	<b>199 231 361</b>	14.100

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
75	166	262	85	156	70	93	280	218	136	290	70	276	65
90	200	281	105	168	78	100	296	259	141	310	70	341	72
110	238	292	123	175	86	110	336	287	164	350	120	369	80







**PROGEF Standard**  
**Ball valve type 231 FO (Fail safe to open)**  
**Without manual override**  
**With butt fusion spigots IR-Plus SDR11 metric**

**Model:**

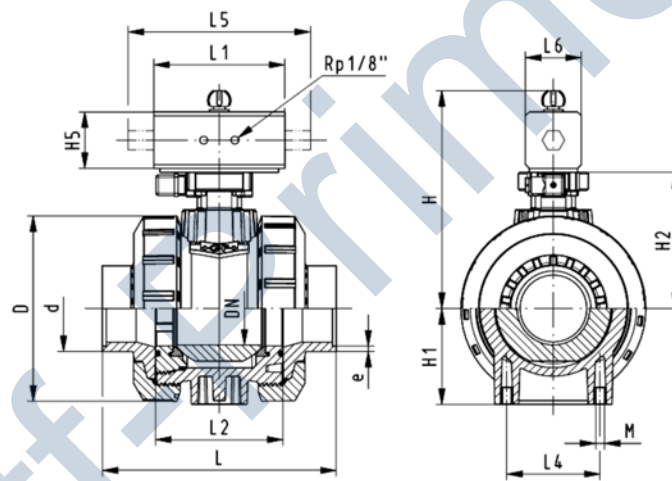
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time  $90^\circ <$  1-2 s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**

**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	10	5000	<b>199 231 859</b>	<b>199 231 869</b>	4.000
90	80	10	7000	<b>199 231 860</b>	<b>199 231 870</b>	4.800
110	100	10	11000	<b>199 231 861</b>	<b>199 231 871</b>	6.900

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	e [mm]
75	166	262	85	156	70	266	218	136	290	70	276	65	8.2
90	200	281	105	168	78	264	259	141	310	70	341	72	9.9
110	238	292	123	175	86	301	287	164	350	120	369	80	12.0





**PROGEF Standard**  
**Ball valve type 231 FO (Fail safe to open)**  
**Without manual override**  
**With butt fusion spigots SDR17.6 metric**

**Model:**

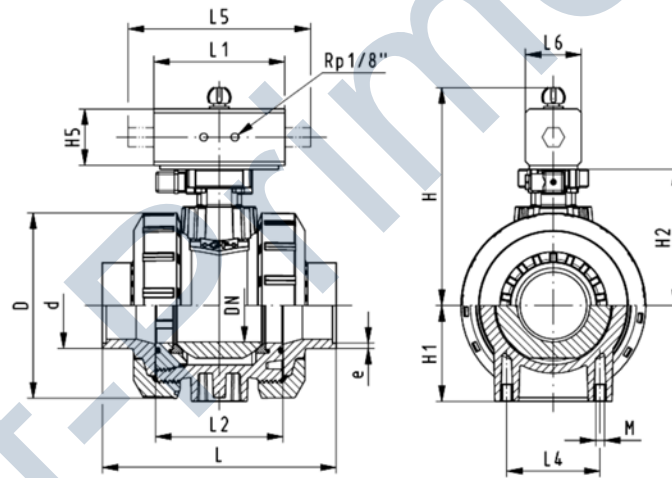
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time  $90^\circ <$  1-2 s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**

**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	10	5000	<b>199 231 959</b>	<b>199 231 969</b>	4.000
90	80	10	7000	<b>199 231 960</b>	<b>199 231 970</b>	4.800
110	100	10	11000	<b>199 231 961</b>	<b>199 231 971</b>	6.900

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	e [mm]
75	166	262	85	156	70	266	218	136	290	70	276	65	4.6
90	200	281	105	168	78	264	259	141	310	70	341	72	5.5
110	238	292	123	175	86	301	287	164	350	120	369	80	6.7





## PROGEF Standard Ball valve type 231 DA (Double acting) Without manual override With fusion sockets metric

### Model:

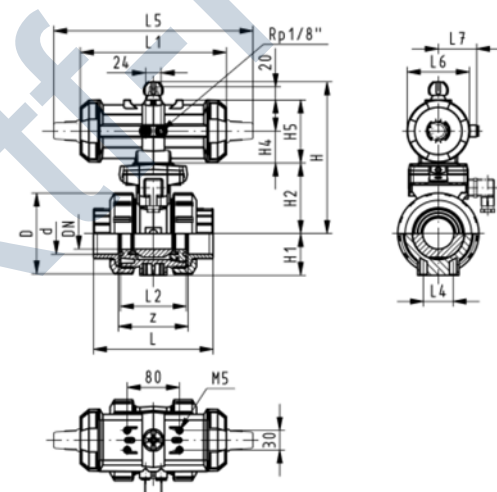
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time  $90^\circ <$  1-2 s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	<b>199 231 202</b>	<b>199 231 212</b>	1.200
20	15	10	185	<b>199 231 203</b>	<b>199 231 213</b>	1.200
25	20	10	350	<b>199 231 204</b>	<b>199 231 214</b>	1.300
32	25	10	700	<b>199 231 205</b>	<b>199 231 215</b>	1.400
40	32	10	1000	<b>199 231 206</b>	<b>199 231 216</b>	2.500
50	40	10	1600	<b>199 231 207</b>	<b>199 231 217</b>	2.800
63	50	10	3100	<b>199 231 208</b>	<b>199 231 218</b>	3.700
75	65	10	5000	<b>199 231 209</b>	<b>199 231 219</b>	2.800
90	80	10	7000	<b>199 231 210</b>	<b>199 231 220</b>	4.000
110	100	10	11000	<b>199 231 211</b>	<b>199 231 221</b>	5.100

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	167	27	62	40	97	93	194	56	25	261	76	48	66
20	50	167	27	62	40	97	95	194	56	25	261	76	48	67
25	58	176	30	71	40	97	108	194	65	25	261	76	48	77
32	68	176	36	71	40	97	118	194	71	25	261	76	48	83
40	84	210	44	84	51	115	137	224	85	45	305	95	59	99
50	97	210	51	84	51	115	147	224	89	45	305	95	59	105
63	124	232	64	106	51	115	168	224	101	45	305	95	59	117
75	166	257	85	156		66	233	144	136	70	190	60		167
90	200	274	105	168		70	254	152	141	70	198	65		180
110	238	273	123	175		78	301	169	164	120	235	72		215





## PROGEF Standard Ball valve type 231 DA (Double acting) Without manual override With socket fusion spigots metric

### Model:

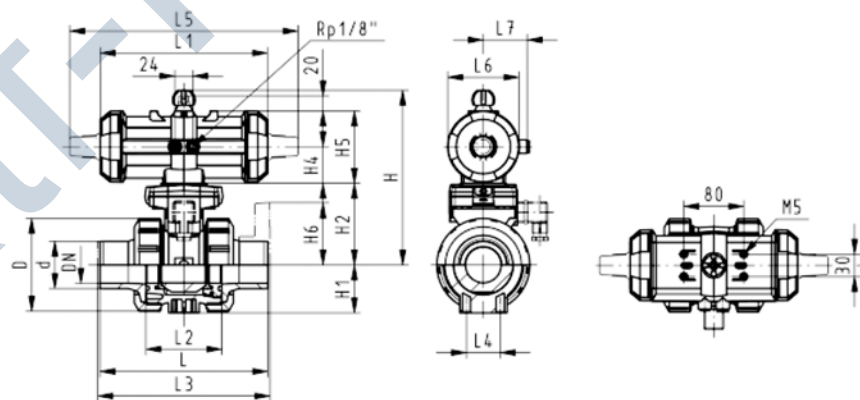
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time  $90^\circ <$  1-2 s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	199 231 222	199 231 232	1.200
20	15	10	185	199 231 223	199 231 233	1.200
25	20	10	350	199 231 224	199 231 234	1.300
32	25	10	700	199 231 225	199 231 235	1.400
40	32	10	1000	199 231 226	199 231 236	2.500
50	40	10	1600	199 231 227	199 231 237	2.800
63	50	10	3100	199 231 228	199 231 238	3.700
75	65	10	5000	199 231 229	199 231 239	2.900
90	80	10	7000	199 231 230	199 231 240	4.100
110	100	10	11000	199 231 231	199 231 241	5.200

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	167	27	62	40	97	110	194	56	130	25	261	76	48
20	50	167	27	62	40	97	120	194	56	130	25	261	76	48
25	58	176	30	71	40	97	139	194	65	150	25	261	76	48
32	68	176	36	71	40	97	150	194	71	160	25	261	76	48
40	84	210	44	84	51	115	170	224	85	180	45	305	95	59
50	97	210	51	84	51	115	190	224	89	200	45	305	95	59
63	124	232	64	106	51	115	220	224	101	230	45	305	95	59
75	166	257	85	156		66	280	144	136	290	70	190	60	
90	200	274	105	168		70	296	152	141	310	70	198	65	
110	238	273	123	175		78	336	169	164	350	120	235	72	





**PROGEF Standard**  
**Ball valve type 231 DA (Double acting)**  
**Without manual override**  
**With fixed flanges PP-H serrated metric**

**Model:**

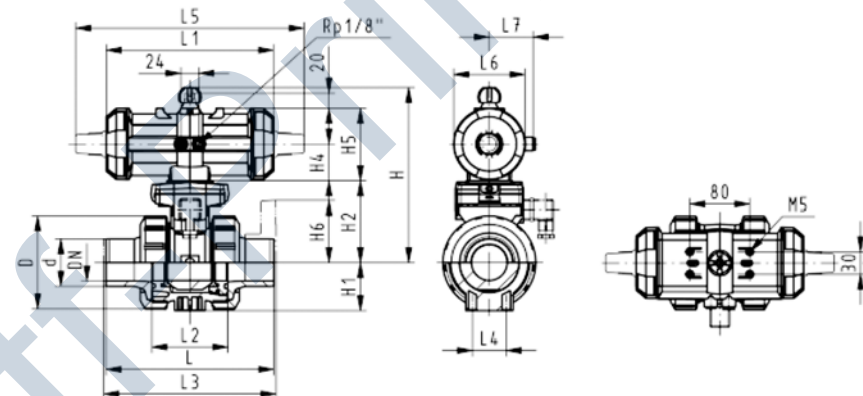
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time  $90^\circ <$  1-2 s
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Overall length according to EN 558
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	½	10	185	<b>199 231 463</b>	<b>199 231 473</b>	1.400
25	20	¾	10	350	<b>199 231 464</b>	<b>199 231 474</b>	1.600
32	25	1	10	700	<b>199 231 465</b>	<b>199 231 475</b>	1.800
40	32	1 ¼	10	1000	<b>199 231 466</b>	<b>199 231 476</b>	3.100
50	40	1 ½	10	1600	<b>199 231 467</b>	<b>199 231 477</b>	3.600
63	50	2	10	3100	<b>199 231 468</b>	<b>199 231 478</b>	4.700

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	167	27	62	40	97	48	120	194	56	130	25	261	76	48
25	58	176	30	71	40	97	53	140	194	65	150	25	261	76	48
32	68	176	36	71	40	97	58	150	194	71	160	25	261	76	48
40	84	210	44	84	51	115	70	170	224	85	180	45	305	95	59
50	97	210	51	84	51	115	75	190	224	89	200	45	305	95	59
63	124	232	64	106	51	115	83	220	224	101	230	45	305	95	59





## PROGEF Standard Ball valve type 231 DA (Double acting) Without manual override With backing flanges PP-st metric

### Model:

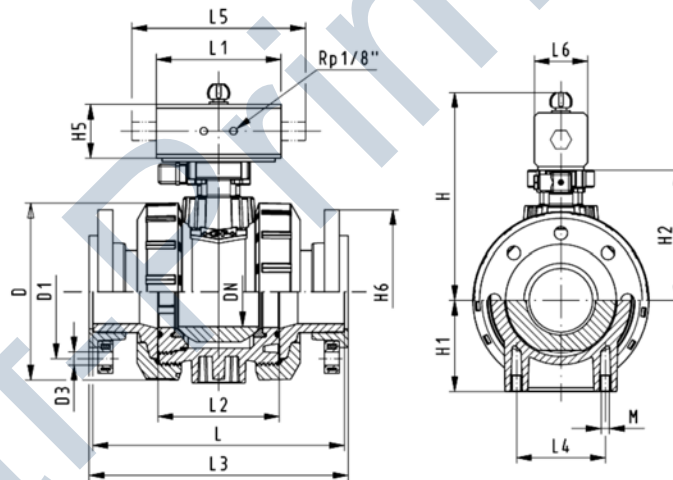
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time  $90^\circ <$  1-2 s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**
- Overall length according to EN 558
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501

### Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	2 1/2	10	5000	<b>199 231 369</b>	<b>199 231 379</b>	7.100
90	80	3	10	7000	<b>199 231 370</b>	<b>199 231 380</b>	9.300
110	100	4	10	11000	<b>199 231 371</b>	<b>199 231 381</b>	12.300

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
75	166	257	85	156	66	93	280	144	136	290	70	190	60
90	200	274	105	168	70	100	296	152	141	310	70	198	65
110	238	273	123	175	78	110	336	169	164	350	120	235	72





**PROGEF Standard**  
**Ball valve type 231 DA (Double acting)**  
**Without manual override**  
**With butt fusion spigots IR-Plus SDR11 metric**

**Model:**

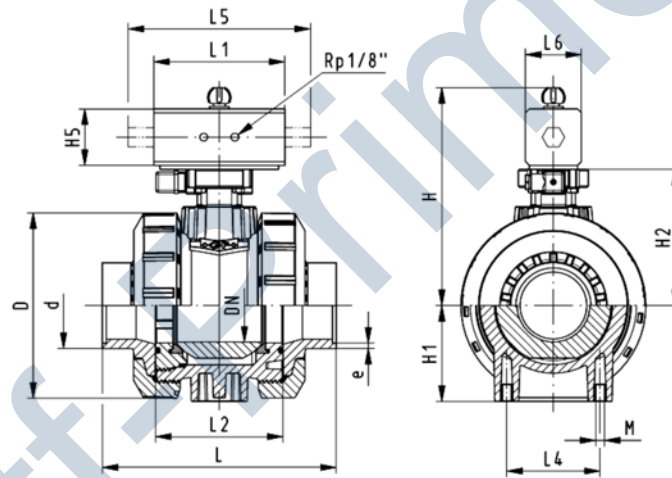
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time  $90^\circ <$  1-2 s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**

**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	10	5000	<b>199 231 879</b>	<b>199 231 889</b>	2.900
90	80	10	7000	<b>199 231 880</b>	<b>199 231 890</b>	4.100
110	100	10	11000	<b>199 231 881</b>	<b>199 231 891</b>	5.200

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	e [mm]
75	166	257	85	156	66	266	144	136	290	70	190	60	8.2
90	200	274	105	168	70	264	152	141	310	70	198	65	9.9
110	238	273	123	175	78	301	169	164	350	120	235	72	12.0







**PROGEF Standard**  
**Ball valve type 231 DA (Double acting)**  
**Without manual override**  
**With butt fusion spigots SDR17.6 metric**

**Model:**

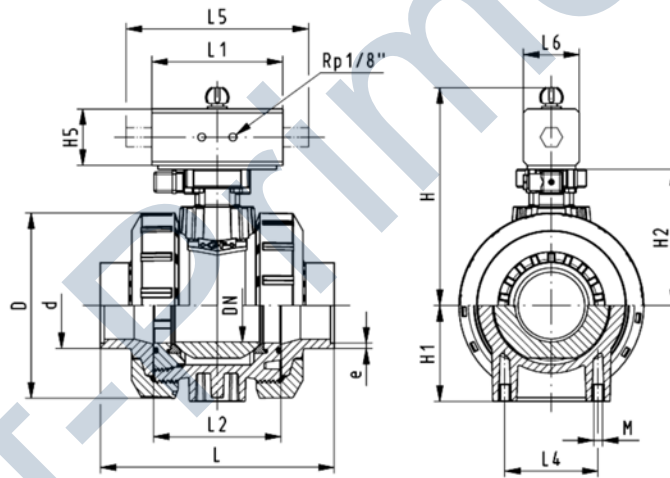
- Material: PP-H
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time  $90^\circ <$  1-2 s
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **"New product ball valve DN65-100"**

**Option:**

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
75	65	10	5000	<b>199 231 979</b>	<b>199 231 989</b>	2.900
90	80	10	7000	<b>199 231 980</b>	<b>199 231 990</b>	4.100
110	100	10	11000	<b>199 231 981</b>	<b>199 231 991</b>	5.200

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	e [mm]
75	166	257	85	156	66	266	144	136	290	70	190	60	4.6
90	200	274	105	168	70	264	152	141	310	70	198	65	5.5
110	238	273	123	175	78	301	169	164	350	120	235	72	6.7







**PROGEF Standard**  
**3-Way ball valve type 276**  
**Horizontal/L-port**  
**Without manual override**  
**With fusion sockets metric**

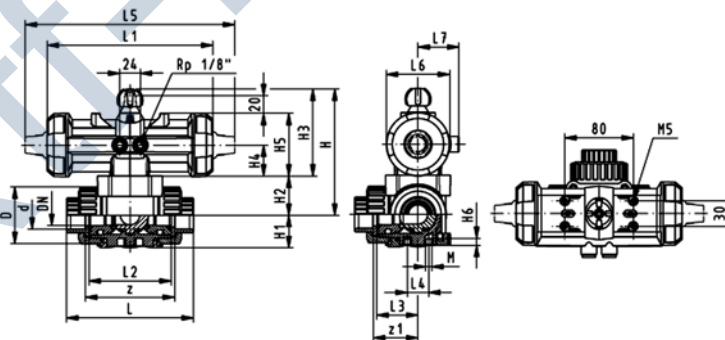
**Model:**

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Actuator fails safe to the closed position FC
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	50	<b>199 276 022</b>	<b>199 276 032</b>	1.044
20	15	10	75	<b>199 276 023</b>	<b>199 276 033</b>	1.044
25	20	10	150	<b>199 276 024</b>	<b>199 276 034</b>	1.167
32	25	10	280	<b>199 276 025</b>	<b>199 276 035</b>	1.290
40	32	10	480	<b>199 276 026</b>	<b>199 276 036</b>	2.191
50	40	10	620	<b>199 276 027</b>	<b>199 276 037</b>	2.555
63	50	10	1230	<b>199 276 028</b>	<b>199 276 038</b>	3.487

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
16	46	136	29	31	105	40	77	8	108	194	70	36	25	261	73
20	46	136	29	31	105	40	77	8	111	194	70	36	25	261	73
25	56	144	33	39	105	40	77	8	131	194	86	43	25	261	73
32	67	149	38	44	105	40	77	8	148	194	96	48	25	261	73
40	82	177	44	50	127	51	99	9	177	224	114	58	45	305	94
50	98	190	50	63	127	51	99	9	205	224	137	69	45	305	94
63	121	203	61	76	127	51	99	9	261	224	179	90	45	305	94

d [mm]	L7 [mm]	M	z [mm]	z1 [mm]
16	48	6	78	39
20	48	6	79	40
25	48	6	95	48
32	48	6	108	54
40	59	8	133	67
50	59	8	155	78
63	59	8	203	102





**PROGEF Standard**  
**3-Way ball valve type 276**  
**Horizontal/L-port**  
**Without manual override**  
**With socket fusion spigots**

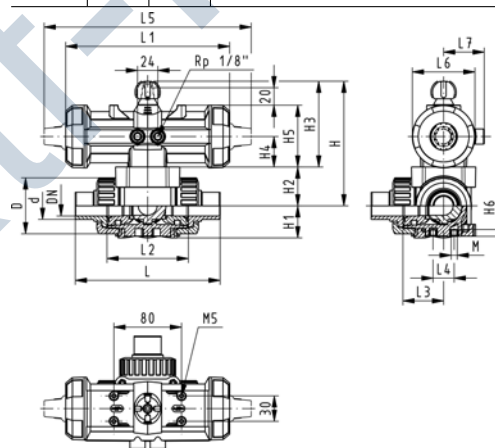
**Model:**

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Actuator fails safe to the closed position FC
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	75	199 276 002	199 276 012	1.044
20	15	10	75	199 276 003	199 276 013	0.854
25	20	10	150	199 276 004	199 276 014	1.167
32	25	10	280	199 276 005	199 276 015	1.290
40	32	10	480	199 276 006	199 276 016	2.191
50	40	10	620	199 276 007	199 276 017	2.555
63	50	10	1230	199 276 008	199 276 018	3.487

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
16	46	136	29	31	105	40	77	8	108	194	70	36	25	261	73
20	46	136	29	31	105	40	77	8	133	194	70	36	25	261	73
25	56	144	33	39	105	40	77	8	155	194	86	43	25	261	73
32	67	149	38	44	105	40	77	8	170	194	96	48	25	261	73
40	82	177	44	50	127	51	99	9	201	224	114	58	45	305	94
50	98	190	50	63	127	51	99	9	236	224	137	69	45	305	94
63	121	203	61	76	127	51	99	9	286	224	179	90	45	305	94

d [mm]	L7 [mm]	M
16	48	6
20	48	6
25	48	6
32	48	6
40	59	8
50	59	8
63	59	8





**PROGEF Standard**  
**3-Way ball valve type 276**  
**Horizontal/L-port**  
**Without manual override**  
**With threaded sockets Rp**

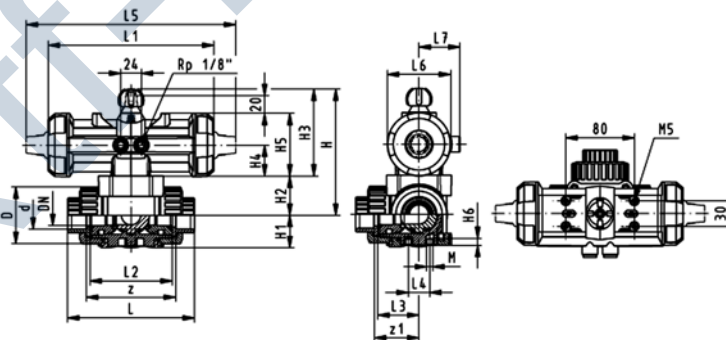
**Model:**

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Actuator fails safe to the closed position FC
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

Inch	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
3/8	10	10	50	<b>199 276 122</b>	<b>199 276 132</b>	1.044
1/2	15	10	75	<b>199 276 123</b>	<b>199 276 133</b>	1.044
3/4	20	10	150	<b>199 276 124</b>	<b>199 276 134</b>	1.167
1	25	10	280	<b>199 276 125</b>	<b>199 276 135</b>	1.677
1 1/4	32	10	480	<b>199 276 126</b>	<b>199 276 136</b>	2.191
1 1/2	40	10	620	<b>199 276 127</b>	<b>199 276 137</b>	2.555
2	50	10	1230	<b>199 276 128</b>	<b>199 276 138</b>	3.487

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
3/8	46	136	29	31	105	40	77	8	108	194	70	36	25	261	73
1/2	46	136	29	31	105	40	77	8	111	194	70	36	25	261	73
3/4	56	144	33	39	105	40	77	8	131	194	86	43	25	261	73
1	67	149	38	44	105	40	77	8	148	194	96	48	25	261	73
1 1/4	82	177	44	50	127	51	99	9	177	224	114	58	45	305	94
1 1/2	98	190	50	63	127	51	99	9	205	224	137	69	45	305	94
2	121	203	61	76	127	51	99	9	261	224	179	90	45	305	94

Inch	L7 [mm]	M	z [mm]	z1 [mm]
3/8	48	6	78	39
1/2	48	6	79	40
3/4	48	6	95	48
1	48	6	108	54
1 1/4	59	8	133	67
1 1/2	59	8	155	78
2	59	8	203	102





**PROGEF Standard**  
**3-Way ball valve type 276**  
**Horizontal/L-port**  
**Without manual override**  
**With butt fusion spigots metric**

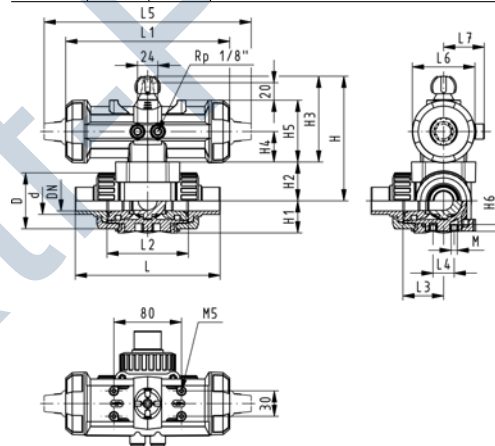
**Model:**

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Actuator fails safe to the closed position FC
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	10	75	<b>199 276 083</b>	<b>199 276 093</b>	1.044
25	20	10	150	<b>199 276 084</b>	<b>199 276 094</b>	1.167
32	25	10	280	<b>199 276 085</b>	<b>199 276 095</b>	1.290
40	32	10	480	<b>199 276 086</b>	<b>199 276 096</b>	2.191
50	40	10	620	<b>199 276 087</b>	<b>199 276 097</b>	2.555
63	50	10	1230	<b>199 276 088</b>	<b>199 276 098</b>	3.487

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
20	46	136	29	31	105	40	77	8	133	194	70	36	25	261	73
25	56	144	33	39	105	40	77	8	155	194	86	43	25	261	73
32	67	149	38	44	105	40	77	8	170	194	96	48	25	261	73
40	82	177	44	50	127	51	99	9	201	224	114	58	45	305	94
50	98	190	50	63	127	51	99	9	236	224	137	69	45	305	94
63	121	203	61	76	127	51	99	9	286	224	179	90	45	305	94

d [mm]	L7 [mm]	M
20	48	6
25	48	6
32	48	6
40	59	8
50	59	8
63	59	8





**PROGEF Standard**  
**3-Way ball valve type 276**  
**Horizontal/L-port DA (Double acting)**  
**Without manual override**  
**With fusion sockets metric**

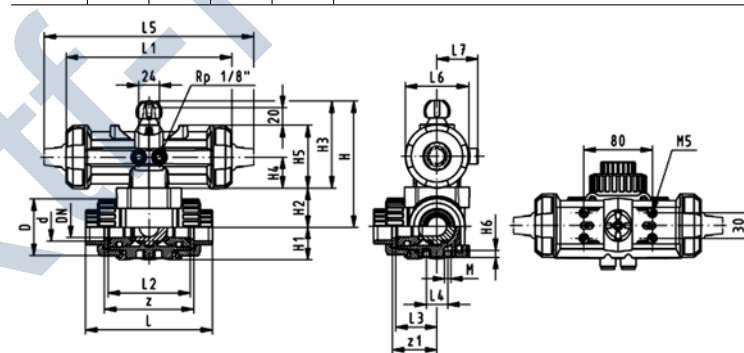
**Model:**

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°< 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	50	<b>199 276 182</b>	<b>199 276 192</b>	0.854
20	15	10	75	<b>199 276 183</b>	<b>199 276 193</b>	0.854
25	20	10	150	<b>199 276 184</b>	<b>199 276 194</b>	0.977
32	25	10	280	<b>199 276 185</b>	<b>199 276 195</b>	1.100
40	32	10	480	<b>199 276 186</b>	<b>199 276 196</b>	1.767
50	40	10	620	<b>199 276 187</b>	<b>199 276 197</b>	2.131
63	50	10	1230	<b>199 276 188</b>	<b>199 276 198</b>	3.297

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
16	46	136	29	31	105	40	77	8	108	194	70	36	25	261	73
20	46	136	29	31	105	40	77	8	111	194	70	36	25	261	73
25	56	144	33	39	105	40	77	8	131	194	86	43	25	261	73
32	67	149	38	44	105	40	77	8	148	194	96	48	25	261	73
40	82	177	44	50	127	51	99	9	177	224	114	58	45	305	94
50	98	190	50	63	127	51	99	9	205	224	137	69	45	305	94
63	121	203	61	76	127	51	99	9	261	224	179	90	45	305	94

d [mm]	L7 [mm]	M	z [mm]	z1 [mm]
16	48	6	78	39
20	48	6	79	40
25	48	6	95	48
32	48	6	108	54
40	59	8	133	67
50	59	8	155	78
63	59	8	203	102





**PROGEF Standard**  
**3-Way ball valve type 276**  
**Horizontal/L-port DA (Double acting)**  
**Without manual override**  
**With socket fusion spigots**

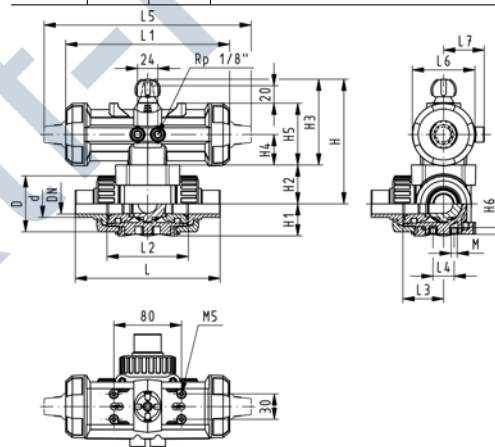
**Model:**

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90° < 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	75	<b>199 276 162</b>	<b>199 276 172</b>	0.854
20	15	10	75	<b>199 276 163</b>	<b>199 276 173</b>	0.854
25	20	10	150	<b>199 276 164</b>	<b>199 276 174</b>	0.977
32	25	10	280	<b>199 276 165</b>	<b>199 276 175</b>	1.100
40	32	10	480	<b>199 276 166</b>	<b>199 276 176</b>	1.767
50	40	10	620	<b>199 276 167</b>	<b>199 276 177</b>	2.131
63	50	10	1230	<b>199 276 168</b>	<b>199 276 178</b>	3.487

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
16	46	136	29	31	105	40	77	8	108	194	70	36	25	261	73
20	46	136	29	31	105	40	77	8	133	194	70	36	25	261	73
25	56	144	33	39	105	40	77	8	155	194	86	43	25	261	73
32	67	149	38	44	105	40	77	8	170	194	96	48	25	261	73
40	82	177	44	50	127	51	99	9	201	224	114	58	45	305	94
50	98	190	50	63	127	51	99	9	236	224	137	69	45	305	94
63	121	203	61	76	127	51	99	9	286	224	179	90	45	305	94

d [mm]	L7 [mm]	M
16	48	6
20	48	6
25	48	6
32	48	6
40	59	8
50	59	8
63	59	8





**PROGEF Standard**  
**3-Way ball valve type 276**  
**Horizontal/L-port DA (Double acting)**  
**Without manual override**  
**With threaded sockets Rp**

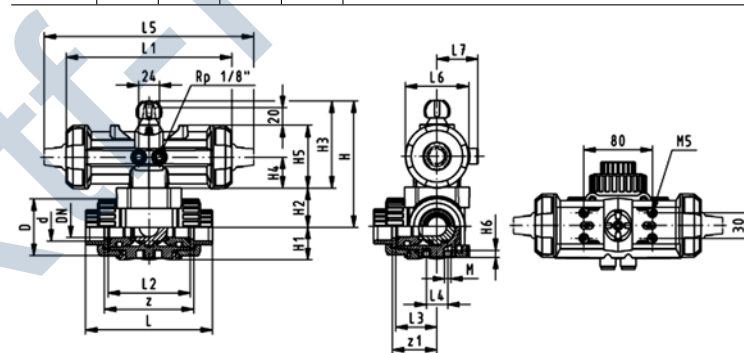
**Model:**

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°< 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

Inch	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
3/8	10	10	50	<b>199 276 282</b>	<b>199 276 292</b>	0.854
1/2	15	10	75	<b>199 276 283</b>	<b>199 276 293</b>	0.854
3/4	20	10	150	<b>199 276 284</b>	<b>199 276 294</b>	0.977
1	25	10	280	<b>199 276 285</b>	<b>199 276 295</b>	1.100
1 1/4	32	10	480	<b>199 276 286</b>	<b>199 276 296</b>	1.767
1 1/2	40	10	620	<b>199 276 287</b>	<b>199 276 297</b>	2.131
2	50	10	1230	<b>199 276 288</b>	<b>199 276 298</b>	3.063

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
3/8	46	136	29	31	105	40	77	8	108	194	70	36	25	261	73
1/2	46	136	29	31	105	40	77	8	111	194	70	36	25	261	73
3/4	56	144	33	39	105	40	77	8	131	194	86	43	25	261	73
1	67	149	38	44	105	40	77	8	148	194	96	48	25	261	73
1 1/4	82	177	44	50	127	51	99	9	177	224	114	58	45	305	94
1 1/2	98	190	50	63	127	51	99	9	205	224	137	69	45	305	94
2	121	203	61	76	127	51	99	9	261	224	179	90	45	305	94

Inch	L7 [mm]	M	z [mm]	z1 [mm]
3/8	48	6	78	39
1/2	48	6	79	40
3/4	48	6	95	48
1	48	6	108	54
1 1/4	59	8	133	67
1 1/2	59	8	155	78
2	59	8	203	102







**PROGEF Standard**  
**3-Way ball valve type 276**  
**Horizontal/L-port DA (Double acting)**  
**Without manual override**  
**With butt fusion spigots metric**

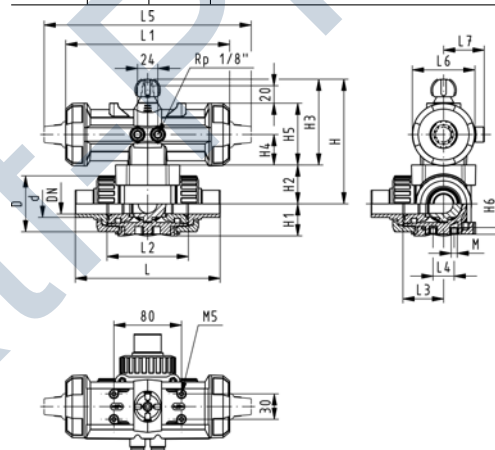
**Model:**

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	10	75	<b>199 276 243</b>	<b>199 276 253</b>	0.854
25	20	10	150	<b>199 276 244</b>	<b>199 276 254</b>	0.977
32	25	10	280	<b>199 276 245</b>	<b>199 276 255</b>	1.100
40	32	10	480	<b>199 276 246</b>	<b>199 276 256</b>	1.767
50	40	10	620	<b>199 276 247</b>	<b>199 276 257</b>	2.131
63	50	10	1230	<b>199 276 248</b>	<b>199 276 258</b>	3.063

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
20	46	136	29	31	105	40	77	8	133	194	70	36	25	261	73
25	56	144	33	39	105	40	77	8	155	194	86	43	25	261	73
32	67	149	38	44	105	40	77	8	170	194	96	48	25	261	73
40	82	177	44	50	127	51	99	9	201	224	114	58	45	305	94
50	98	190	50	63	127	51	99	9	236	224	137	69	45	305	94
63	121	203	61	76	127	51	99	9	286	224	179	90	45	305	94

d [mm]	L7 [mm]	M
20	48	6
25	48	6
32	48	6
40	59	8
50	59	8
63	59	8







**PROGEF Standard**  
**3-Way ball valve type 276**  
**Horizontal/T-port**  
**Without manual override**  
**With fusion sockets metric**

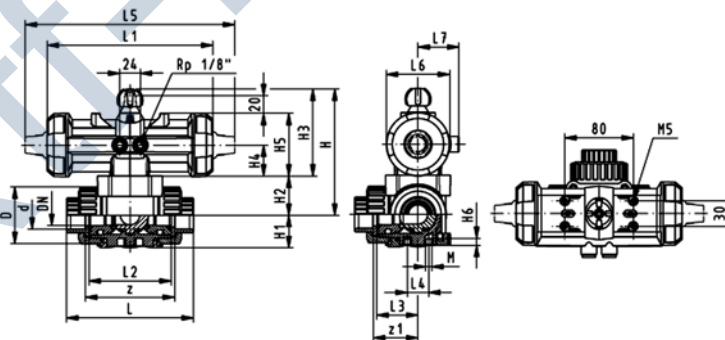
**Model:**

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Actuator fails safe to the closed position FC
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	140	<b>199 276 062</b>	<b>199 276 072</b>	1.044
20	15	10	200	<b>199 276 063</b>	<b>199 276 073</b>	1.044
25	20	10	470	<b>199 276 064</b>	<b>199 276 074</b>	1.167
32	25	10	793	<b>199 276 065</b>	<b>199 276 075</b>	1.290
40	32	10	1290	<b>199 276 066</b>	<b>199 276 076</b>	2.191
50	40	10	1910	<b>199 276 067</b>	<b>199 276 077</b>	2.555
63	50	10	3100	<b>199 276 068</b>	<b>199 276 078</b>	3.487

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
16	46	136	29	31	105	40	77	8	108	194	70	36	25	261	73
20	46	136	29	31	105	40	77	8	111	194	70	36	25	261	73
25	56	144	33	39	105	40	77	8	131	194	86	43	25	261	73
32	67	149	38	44	105	40	77	8	148	194	96	48	25	261	73
40	82	177	44	50	127	51	99	9	177	224	114	58	45	305	94
50	98	190	50	63	127	51	99	9	205	224	137	69	45	305	94
63	121	203	61	76	127	51	99	9	261	224	179	90	45	305	94

d [mm]	L7 [mm]	M	z [mm]	z1 [mm]
16	48	6	78	39
20	48	6	79	40
25	48	6	95	48
32	48	6	108	54
40	59	8	133	67
50	59	8	155	78
63	59	8	203	102





**PROGEF Standard**  
**3-Way ball valve type 276**  
**Horizontal/T-port**  
**Without manual override**  
**With threaded sockets Rp**

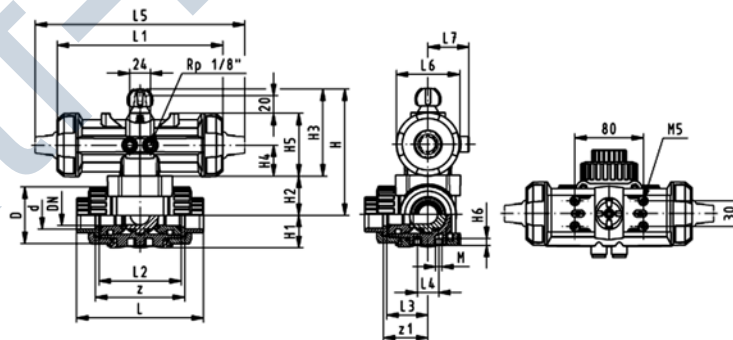
**Model:**

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Actuator fails safe to the closed position FC
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

Inch	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
3/8	10	10	140	<b>199 276 142</b>	<b>199 276 152</b>	1.044
1/2	15	10	200	<b>199 276 143</b>	<b>199 276 153</b>	1.044
3/4	20	10	470	<b>199 276 144</b>	<b>199 276 154</b>	1.167
1	25	10	793	<b>199 276 145</b>	<b>199 276 155</b>	1.290
1 1/4	32	10	1290	<b>199 276 146</b>	<b>199 276 156</b>	2.191
1 1/2	40	10	1910	<b>199 276 147</b>	<b>199 276 157</b>	2.555
2	50	10	3100	<b>199 276 148</b>	<b>199 276 158</b>	3.487

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
3/8	46	136	29	31	105	40	77	8	108	194	70	36	25	261	73
1/2	46	136	29	31	105	40	77	8	111	194	70	36	25	261	73
3/4	56	144	33	39	105	40	77	8	131	194	86	43	25	261	73
1	67	149	38	44	105	40	77	8	148	194	96	48	25	261	73
1 1/4	82	177	44	50	127	51	99	9	177	224	114	58	45	305	94
1 1/2	98	190	50	63	127	51	99	9	205	224	137	69	45	305	94
2	121	203	61	76	127	51	99	9	261	224	179	90	45	305	94

Inch	L7 [mm]	M	z [mm]	z1 [mm]
3/8	48	6	78	39
1/2	48	6	79	40
3/4	48	6	95	48
1	48	6	108	54
1 1/4	59	8	133	67
1 1/2	59	8	155	78
2	59	8	203	102





**PROGEF Standard**  
**3-Way ball valve type 276**  
**Horizontal/T-port**  
**Without manual override**  
**With socket fusion spigots**

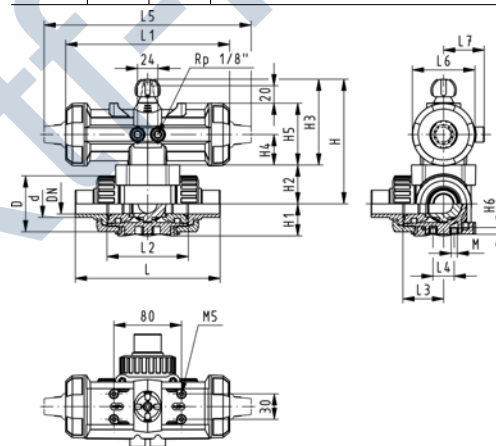
**Model:**

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Actuator fails safe to the closed position FC
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	200	<b>199 276 042</b>	<b>199 276 052</b>	1.044
20	15	10	200	<b>199 276 043</b>	<b>199 276 053</b>	1.044
25	20	10	470	<b>199 276 044</b>	<b>199 276 054</b>	1.167
32	25	10	793	<b>199 276 045</b>	<b>199 276 055</b>	1.290
40	32	10	1290	<b>199 276 046</b>	<b>199 276 056</b>	2.191
50	40	10	1910	<b>199 276 047</b>	<b>199 276 057</b>	2.555
63	50	10	3100	<b>199 276 048</b>	<b>199 276 058</b>	3.487

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
16	46	136	29	31	105	40	77	8	108	194	70	36	25	261	73
20	46	136	29	31	105	40	77	8	133	194	70	36	25	261	73
25	56	144	33	39	105	40	77	8	155	194	86	43	25	261	73
32	67	149	38	44	105	40	77	8	170	194	96	48	25	261	73
40	82	177	44	50	127	51	99	9	201	224	114	58	45	305	94
50	98	190	50	63	127	51	99	9	236	224	137	69	45	305	94
63	121	203	61	76	127	51	99	9	286	224	179	90	45	305	94

d [mm]	L7 [mm]	M
16	48	6
20	48	6
25	48	6
32	48	6
40	59	8
50	59	8
63	59	8





**PROGEF Standard**  
**3-Way ball valve type 276**  
**Horizontal/T-port**  
**Without manual override**  
**With butt fusion spigots metric**

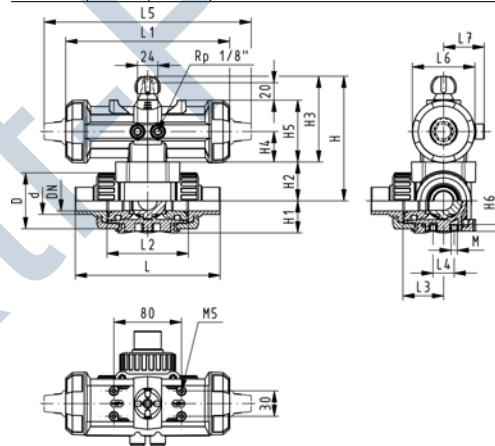
**Model:**

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Actuator fails safe to the closed position FC
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	10	200	<b>199 276 103</b>	<b>199 276 113</b>	1.044
25	20	10	470	<b>199 276 104</b>	<b>199 276 114</b>	1.167
32	25	10	793	<b>199 276 105</b>	<b>199 276 115</b>	1.290
40	32	10	1290	<b>199 276 106</b>	<b>199 276 116</b>	2.191
50	40	10	1910	<b>199 276 107</b>	<b>199 276 117</b>	2.555
63	50	10	3100	<b>199 276 108</b>	<b>199 276 118</b>	3.487

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
20	46	136	29	31	105	40	77	8	133	194	70	36	25	261	73
25	56	144	33	39	105	40	77	8	155	194	86	43	25	261	73
32	67	149	38	44	105	40	77	8	170	194	96	48	25	261	73
40	82	177	44	50	127	51	99	9	201	224	114	58	45	305	94
50	98	190	50	63	127	51	99	9	236	224	137	69	45	305	94
63	121	203	61	76	127	51	99	9	286	224	179	90	45	305	94

d [mm]	L7 [mm]	M
20	48	6
25	48	6
32	48	6
40	59	8
50	59	8
63	59	8





**PROGEF Standard**  
**3-Way ball valve type 276**  
**Horizontal/T-port DA (Double acting)**  
**Without manual override**  
**With fusion sockets metric**

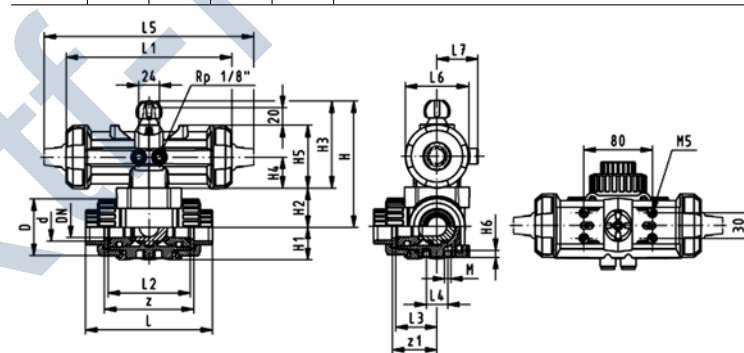
**Model:**

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°< 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	140	<b>199 276 222</b>	<b>199 276 232</b>	0.854
20	15	10	200	<b>199 276 223</b>	<b>199 276 233</b>	0.854
25	20	10	470	<b>199 276 224</b>	<b>199 276 234</b>	0.977
32	25	10	793	<b>199 276 225</b>	<b>199 276 235</b>	1.100
40	32	10	1290	<b>199 276 226</b>	<b>199 276 236</b>	1.767
50	40	10	1910	<b>199 276 227</b>	<b>199 276 237</b>	2.131
63	50	10	3100	<b>199 276 228</b>	<b>199 276 238</b>	3.297

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
16	46	136	29	31	105	40	77	8	108	194	70	36	25	261	73
20	46	136	29	31	105	40	77	8	111	194	70	36	25	261	73
25	56	144	33	39	105	40	77	8	131	194	86	43	25	261	73
32	67	149	38	44	105	40	77	8	148	194	96	48	25	261	73
40	82	177	44	50	127	51	99	9	177	224	114	58	45	305	94
50	98	190	50	63	127	51	99	9	205	224	137	69	45	305	94
63	121	203	61	76	127	51	99	9	261	224	179	90	45	305	94

d [mm]	L7 [mm]	M	z [mm]	z1 [mm]
16	48	6	78	39
20	48	6	79	40
25	48	6	95	48
32	48	6	108	54
40	59	8	133	67
50	59	8	155	78
63	59	8	203	102





**PROGEF Standard**  
**3-Way ball valve type 276**  
**Horizontal/T-port DA (Double acting)**  
**Without manual override**  
**With socket fusion spigots**

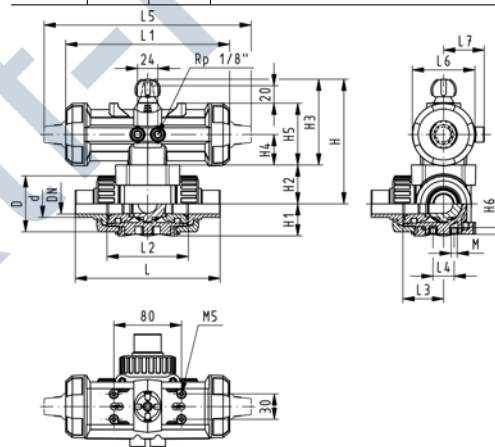
**Model:**

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90° < 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	200	<b>199 276 202</b>	<b>199 276 212</b>	0.854
20	15	10	200	<b>199 276 203</b>	<b>199 276 213</b>	0.854
25	20	10	470	<b>199 276 204</b>	<b>199 276 214</b>	0.977
32	25	10	793	<b>199 276 205</b>	<b>199 276 215</b>	1.100
40	32	10	1290	<b>199 276 206</b>	<b>199 276 216</b>	1.767
50	40	10	1910	<b>199 276 207</b>	<b>199 276 217</b>	2.131
63	50	10	3100	<b>199 276 208</b>	<b>199 276 218</b>	2.131

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
16	46	136	29	31	105	40	77	8	108	194	70	36	25	261	73
20	46	136	29	31	105	40	77	8	133	194	70	36	25	261	73
25	56	144	33	39	105	40	77	8	155	194	86	43	25	261	73
32	67	149	38	44	105	40	77	8	170	194	96	48	25	261	73
40	82	177	44	50	127	51	99	9	201	224	114	58	45	305	94
50	98	190	50	63	127	51	99	9	236	224	137	69	45	305	94
63	121	203	61	76	127	51	99	9	286	224	179	90	45	305	94

d [mm]	L7 [mm]	M
16	48	6
20	48	6
25	48	6
32	48	6
40	59	8
50	59	8
63	59	8





**PROGEF Standard**  
**3-Way ball valve type 276**  
**Horizontal/T-port DA (Double acting)**  
**Without manual override**  
**With threaded sockets Rp**

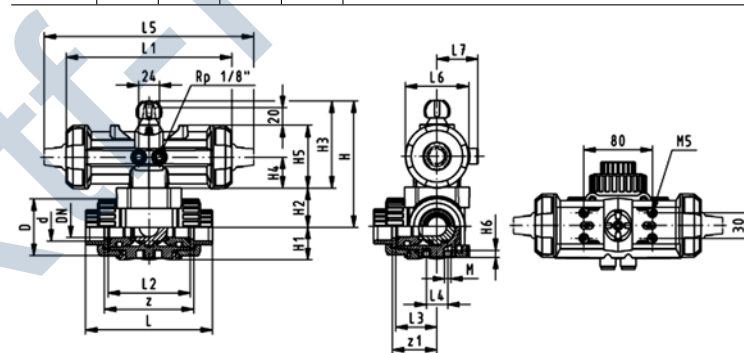
**Model:**

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°< 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

Inch	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
3/8	10	10	140	<b>199 276 302</b>	<b>199 276 312</b>	0.854
1/2	15	10	200	<b>199 276 303</b>	<b>199 276 313</b>	0.854
3/4	20	10	470	<b>199 276 304</b>	<b>199 276 314</b>	0.977
1	25	10	793	<b>199 276 305</b>	<b>199 276 315</b>	1.100
1 1/4	32	10	1290	<b>199 276 306</b>	<b>199 276 316</b>	1.767
1 1/2	40	10	1910	<b>199 276 307</b>	<b>199 276 317</b>	2.131
2	50	10	3100	<b>199 276 308</b>	<b>199 276 318</b>	3.063

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
3/8	46	136	29	31	105	40	77	8	108	194	70	36	25	261	73
1/2	46	136	29	31	105	40	77	8	111	194	70	36	25	261	73
3/4	56	144	33	39	105	40	77	8	131	194	86	43	25	261	73
1	67	149	38	44	105	40	77	8	148	194	96	48	25	261	73
1 1/4	82	177	44	50	127	51	99	9	177	224	114	58	45	305	94
1 1/2	98	190	50	63	127	51	99	9	205	224	137	69	45	305	94
2	121	203	61	76	127	51	99	9	261	224	179	90	45	305	94

Inch	L7 [mm]	M	z [mm]	z1 [mm]
3/8	48	6	78	39
1/2	48	6	79	40
3/4	48	6	95	48
1	48	6	108	54
1 1/4	59	8	133	67
1 1/2	59	8	155	78
2	59	8	203	102







**PROGEF Standard**  
**3-Way ball valve type 276**  
**Horizontal/T-port DA (Double acting)**  
**Without manual override**  
**With butt fusion spigots metric**

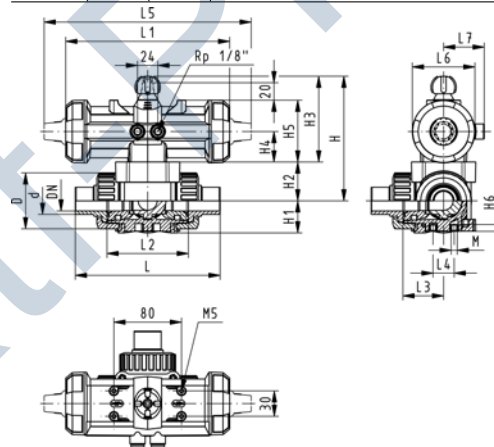
**Model:**

- Material: PP-H
- Built on with pneumatic actuator PA11 (DN10/15-25), PA21 (DN32-50)
- Control time 90°<) 1-3 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	10	200	<b>199 276 263</b>	<b>199 276 273</b>	0.854
25	20	10	470	<b>199 276 264</b>	<b>199 276 274</b>	0.977
32	25	10	793	<b>199 276 265</b>	<b>199 276 275</b>	1.100
40	32	10	1290	<b>199 276 266</b>	<b>199 276 276</b>	1.767
50	40	10	1910	<b>199 276 267</b>	<b>199 276 277</b>	2.131
63	50	10	3100	<b>199 276 268</b>	<b>199 276 278</b>	3.297

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
20	46	136	29	31	105	40	77	8	133	194	70	36	25	261	73
25	56	144	33	39	105	40	77	8	155	194	86	43	25	261	73
32	67	149	38	44	105	40	77	8	170	194	96	48	25	261	73
40	82	177	44	50	127	51	99	9	201	224	114	58	45	305	94
50	98	190	50	63	127	51	99	9	236	224	137	69	45	305	94
63	121	203	61	76	127	51	99	9	286	224	179	90	45	305	94

d [mm]	L7 [mm]	M
20	48	6
25	48	6
32	48	6
40	59	8
50	59	8
63	59	8





# Diaphragm Valves Pneumatic

## PROGEF Standard Diaphragm valve type DIASTAR Series 025 FC (Fail safe to close) Unions with fusion sockets metric



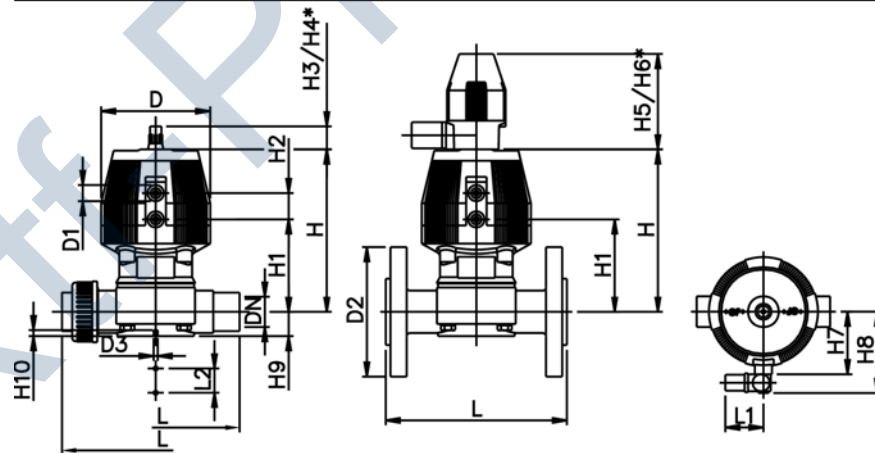
### Model:

- Material: PP-H
- With position indicator / Working pressure: both sides

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10	72	199 027 201	199 027 231	0.836
25	20	10	120	199 027 202	199 027 232	0.836
32	25	10	238	199 027 203	199 027 233	2.300
40	32	10	341	199 027 204	199 027 234	3.200
50	40	10	460	199 027 205	199 027 235	2.604
63	50	10	685	199 027 206	199 027 236	2.604

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	96	1/8	6	128	60	25	128	69	25	23	44	100	155	56
25	96	1/8	6	150	60	25	130	71	25	23	44	100	155	56
32	120	1/8	6	162	60	25	166	93	26	36	64	100	155	68
40	150	1/4	8	184	60	45	201	106	36	36	64	100	160	85
50	180	1/4	8	210	60	45	233	119	37	36	64	100	170	101
63	180	1/4	8	248	60	45	247	133	37	36	64	100	170	101

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	86	14	12	8
25	88	18	12	10
32	100	21	12	12
40	117	26	15	14
50	133	33	15	18
63	133	39	15	22





**PROGEF Standard**  
**Diaphragm valve type DIASTAR**  
**Series 025 FC (Fail safe to close)**  
**Unions with butt fusion spigots metric**

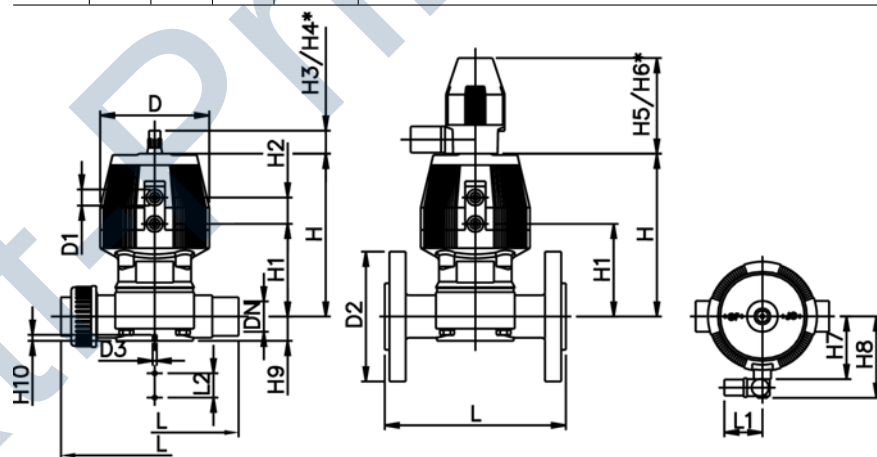
**Model:**

- Material: PP-H
- With position indicator / Working pressure: **both sides**

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10	72	<b>199 027 431</b>	<b>199 027 461</b>	0.836
25	20	10	120	<b>199 027 432</b>	<b>199 027 462</b>	0.836
32	25	10	238	<b>199 027 433</b>	<b>199 027 463</b>	2.300
40	32	10	341	<b>199 027 434</b>	<b>199 027 464</b>	2.604
50	40	10	460	<b>199 027 435</b>	<b>199 027 465</b>	2.604
63	50	10	685	<b>199 027 436</b>	<b>199 027 466</b>	6.400

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	96	1/8	6	196	60	25	128	69	25	23	44	100	155	56
25	96	1/8	6	221	60	25	130	71	25	23	44	100	155	56
32	120	1/8	6	234	60	25	166	93	26	36	64	100	155	68
40	150	1/4	8	260	60	45	201	106	36	36	64	100	160	85
50	180	1/4	8	284	60	45	233	119	37	36	64	100	170	101
63	180	1/4	8	321	60	45	247	133	37	36	64	100	170	101

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	86	14	12	8
25	88	18	12	10
32	100	21	12	12
40	117	26	15	14
50	133	33	15	18
63	133	39	15	22





## PROGEF Standard Diaphragm valve type DIASTAR Series 025 FC (Fail safe to close) With fusion spigots metric

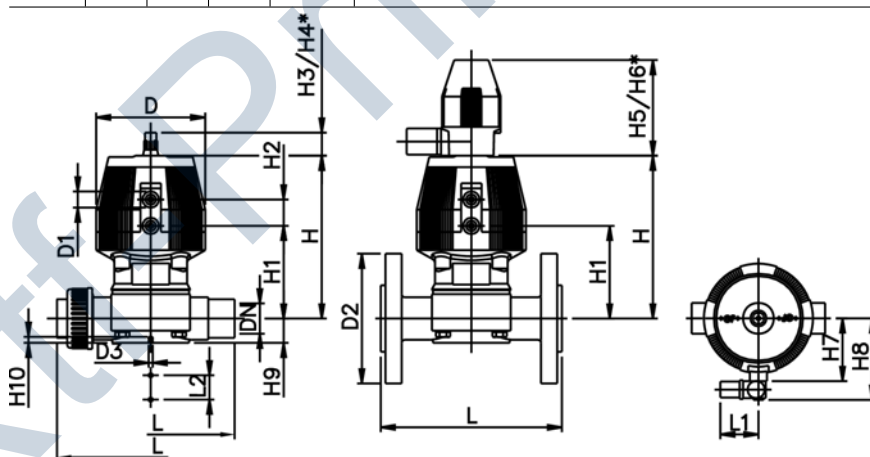
**Model:**

- Material: PP-H
- With position indicator / Working pressure: **both sides**

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10	72	<b>199 025 201</b>	<b>199 025 231</b>	1.200
25	20	10	120	<b>199 025 202</b>	<b>199 025 232</b>	0.916
32	25	10	238	<b>199 025 203</b>	<b>199 025 233</b>	2.200
40	32	10	341	<b>199 025 204</b>	<b>199 025 234</b>	2.604
50	40	10	460	<b>199 025 205</b>	<b>199 025 235</b>	4.165
63	50	10	685	<b>199 025 206</b>	<b>199 025 236</b>	5.900

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	96	1/8	6	124	60	25	128	69	25	23	44	100	155	56
25	96	1/8	6	144	60	25	130	71	25	23	44	100	155	56
32	120	1/8	6	154	60	25	166	93	26	36	64	100	155	68
40	150	1/4	8	174	60	45	201	106	36	36	64	100	160	85
50	180	1/4	8	194	60	45	233	119	37	36	64	100	170	101
63	180	1/4	8	224	60	45	247	133	37	36	64	100	170	101

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	86	14	12	8
25	88	18	12	10
32	100	21	12	12
40	117	26	15	14
50	133	33	15	18
63	133	39	15	22





**PROGEF Standard**  
**Diaphragm valve type DIASTAR**  
**Series 025 FC (Fail safe to close)**  
**With butt fusion spigots metric**

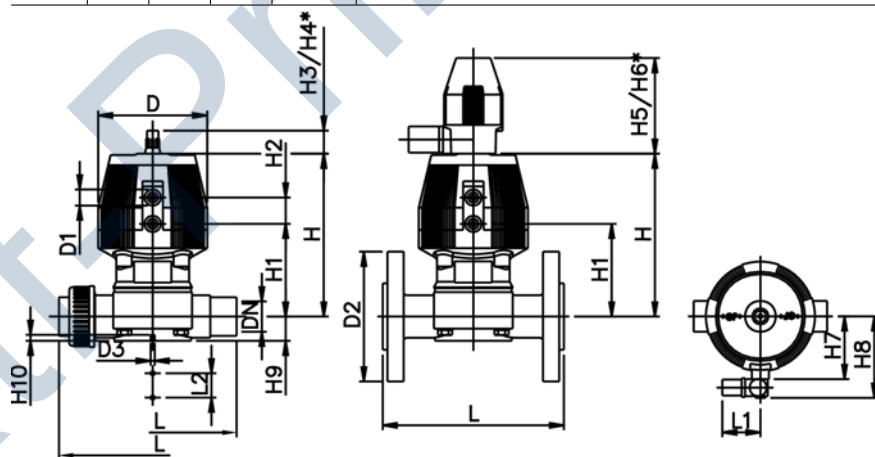
**Model:**

- Material: PP-H
- With position indicator / Working pressure: **both sides**

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10	72	<b>199 025 881</b>	<b>199 025 901</b>	0.739
25	20	10	120	<b>199 025 882</b>	<b>199 025 902</b>	0.836
32	25	10	238	<b>199 025 883</b>	<b>199 025 903</b>	1.505
40	32	10	341	<b>199 025 884</b>	<b>199 025 904</b>	0.238
50	40	10	460	<b>199 025 885</b>	<b>199 025 905</b>	4.165
63	50	10	685	<b>199 025 886</b>	<b>199 025 906</b>	5.600

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	96	1/8	6	124	60	25	125	69	25	23	44	100	155	56
25	96	1/8	6	144	60	25	127	71	25	23	44	100	155	56
32	120	1/8	6	154	60	25	163	93	26	36	64	100	155	68
40	150	1/4	8	174	60	45	196	106	36	36	64	100	160	85
50	180	1/4	8	194	60	45	227	119	37	36	64	100	170	101
63	180	1/4	8	224	60	45	241	133	37	36	64	100	170	101

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	86	14	12	8
25	88	18	12	10
32	100	21	12	12
40	117	26	15	14
50	133	33	15	18
63	133	39	15	22





## PROGEF Standard Diaphragm valve type DIASTAR Series 025 FC (Fail safe to close) With backing flanges PP-V metric

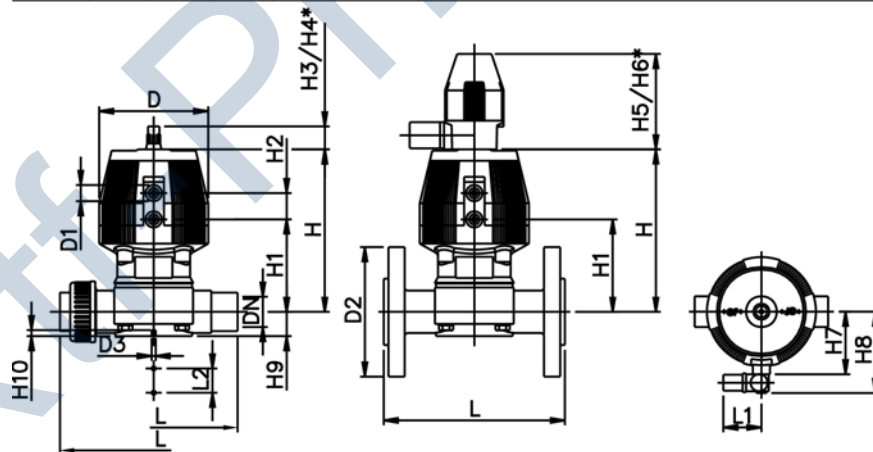
### Model:

- Material: PP-H
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504
- With position indicator / Working pressure: **both sides**

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	½	10	72	<b>199 025 261</b>	<b>199 025 291</b>	0.739
25	20	¾	10	120	<b>199 025 262</b>	<b>199 025 292</b>	0.836
32	25	1	10	238	<b>199 025 263</b>	<b>199 025 293</b>	1.505
40	32	1 ¼	10	341	<b>199 025 264</b>	<b>199 025 294</b>	2.604
50	40	1 ½	10	460	<b>199 025 265</b>	<b>199 025 295</b>	4.165
63	50	2	10	685	<b>199 025 266</b>	<b>199 025 296</b>	6.900

d [mm]	D [mm]	D1_G [inch]	D2 [mm]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]
20	96	¾	95	6	130	60	25	128	69	25	23	44	100	155
25	96	¾	105	6	150	60	25	130	71	25	23	44	100	155
32	120	¾	115	6	160	60	25	166	93	26	36	64	100	155
40	150	¾	140	8	180	60	45	201	106	36	36	64	100	160
50	180	¾	150	8	200	60	45	233	119	37	36	64	100	170
63	180	¾	165	8	230	60	45	247	133	37	36	64	100	170

d [mm]	H7 [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	56	86	14	12	8
25	56	88	18	12	10
32	68	100	21	12	12
40	85	117	26	15	14
50	101	133	33	15	18
63	101	133	39	15	22





## PROGEF Standard Diaphragm valve type DIASTAR Series 025 FC (Fail safe to close) With fixed flanges PP metric

### Model:

- Material: PP-H
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504
- With position indicator / Working pressure: **one side**

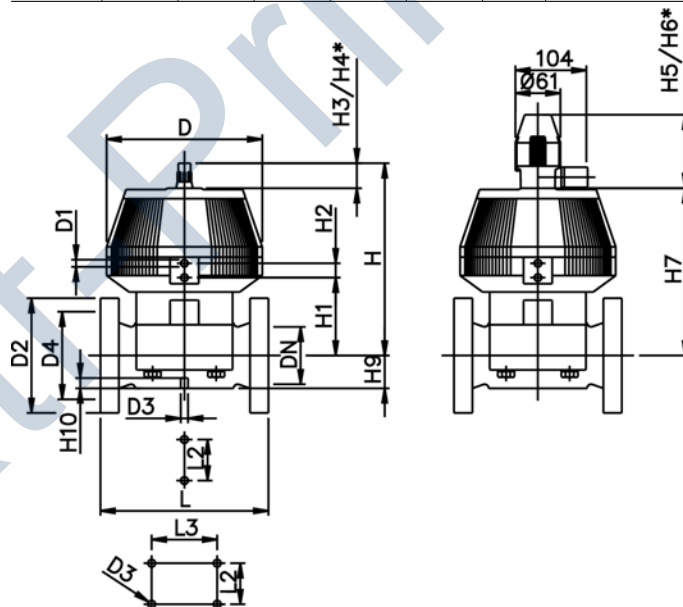
\* With backing flanges PP-V

\*\* Connecting dimensions DN80 and DN150 metric and Inch ANSI B16.5

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
*75	65	2 ½	10	992	<b>199 025 267</b>	<b>199 025 297</b>	13.600
**90	80	3	10	1700	<b>199 025 268</b>	<b>199 025 298</b>	17.400
110	100	4	8	2700	<b>199 025 269</b>	<b>199 025 299</b>	24.700
**160	150	6	6	6033	<b>199 025 270</b>	-	35.000

d [mm]	D [mm]	D1_G [inch]	D2 [mm]	D3[M] [mm]	D4 [mm]	L [mm]	L2 [mm]	L3 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]
*75	280	¼	185	8	145	290	70		344	148	24	46
**90	280	¼	200	12	160	310	120		348	150	24	46
110	335	¼	225	12	180	350	120		395	176	24	46
**160	335	¼	285	12	240	480	100	200	455	237	24	46

d [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]	H9 [mm]	H10 [mm]
*75	100	129	195	298	46	15
**90	100	129	195	302	57	15
110	100	129	195	349	69	20
**160	100	129	195	409	108	20





# PROGEF Standard

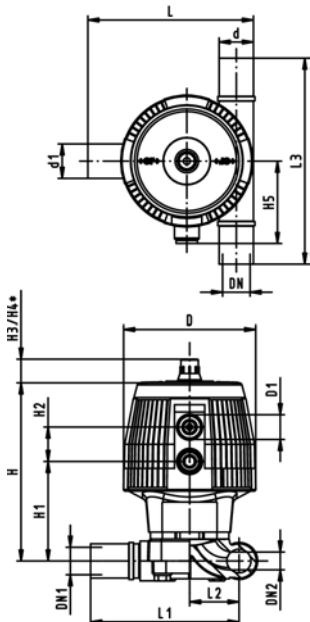
## Diaphragm valve type DIASTAR

### Series 025 FC (Fail safe to close)

### ZERO STATIC with butt fusion spigots metric

Model:

- Material: PP-H
- With position indicator
- DN2: for coordination of accessoires



d [mm]	d1 [mm]	DN [mm]	DN1 [mm]	DN2 [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE Code	kg
20	20	15	15	15	10	47	199 029 461	199 029 301	1.510
25	20	20	15	20	10	69	199 029 462	199 029 302	2.013
25	25	20	20	20	10	91	199 029 463	199 029 303	2.013
32	20	25	15	25	10	86	199 029 464	199 029 304	2.564
32	25	25	20	25	10	126	199 029 465	199 029 305	2.564
32	32	25	25	25	10	156	199 029 466	199 029 306	2.564
40	20	32	15	25	10	84	199 029 467	199 029 307	2.604
50	20	40	15	25	10	82	199 029 471	199 029 311	2.647
50	25	40	20	25	10	124	199 029 472	199 029 312	2.647
50	32	40	25	25	10	159	199 029 473	199 029 313	2.646
63	20	50	15	25	10	81	199 029 476	199 029 316	2.715
63	25	50	20	25	10	115	199 029 477	199 029 317	2.717
63	32	50	25	25	10	156	199 029 478	199 029 318	2.714
90	20	80	15	25	10	88	199 029 485	199 029 325	2.742
90	25	80	20	25	6	133	199 029 486	199 029 326	2.756
90	32	80	25	25	6	162	199 029 487	199 029 327	2.737
90	50	80	40	50	6	504	199 029 488	199 029 328	5.679
90	63	80	50	50	6	530	199 029 489	199 029 329	5.679
110	20	100	15	25	6	89	199 029 490	199 029 330	2.837
110	25	100	20	25	6	123	199 029 491	199 029 331	2.835
110	50	100	25	25	6	159	199 029 492	199 029 332	2.834
110	63	100	40	50	6	503	199 029 493	199 029 333	5.869
110	63	100	50	50	10	543	199 029 494	199 029 334	5.822

d [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	D [mm]	D1 [inch]	Lift = Hx [mm]
20	106	96	30	140	128	69	25	23	44	56	96	1/8	8
25	121	108	36	150	130	71	25	23	44	56	96	1/8	10
25	121	108	36	150	130	71	25	23	44	56	96	1/8	10
32	137	120	43	160	166	93	26	36	64	68	120	1/8	12
32	137	120	43	160	166	93	26	36	64	68	120	1/8	12
32	137	120	43	160	166	93	26	36	64	68	120	1/8	12
40	149	128	51	180	166	93	26	36	64	68	120	1/8	12
50	159	134	57	180	166	93	26	36	64	68	120	1/8	12
50	159	134	57	180	166	93	26	36	64	68	120	1/8	12
50	159	134	57	180	166	93	26	36	64	68	120	1/8	12
63	175	144	67	180	166	93	26	36	64	68	120	1/8	12
63	175	144	67	180	166	93	26	36	64	68	120	1/8	12
63	175	144	67	180	166	93	26	36	64	68	120	1/8	12
90	204	159	82	160	166	93	26	36	64	68	120	1/8	12
90	204	159	82	160	166	93	26	36	64	68	120	1/8	12
90	204	159	82	160	166	93	26	36	64	68	120	1/8	12
90	252	207	95	220	247	133	37	36	64	101	180	1/4	22
90	252	207	95	220	247	133	37	36	64	101	180	1/4	22
110	226	171	94	160	166	93	26	36	64	68	120	1/8	12
110	226	171	94	160	166	93	26	36	64	68	120	1/8	12
110	226	171	94	160	166	93	26	36	64	68	120	1/8	12
110	274	219	107	220	247	133	37	36	64	101	180	1/4	22
110	274	219	107	220	247	133	37	36	64	101	180	1/4	22



**PROGEF Standard**  
**Diaphragm valve type DIASTAR**  
**Series 025 FO (Fail safe to open)**  
**Unions with fusion sockets metric**

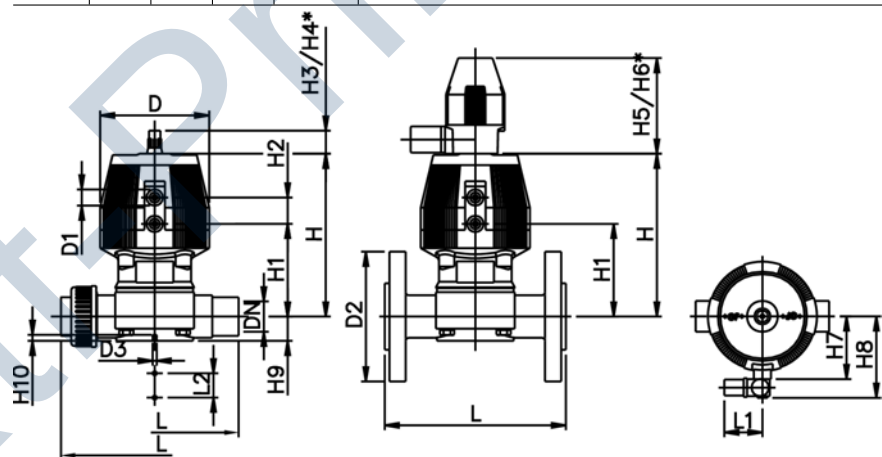
**Model:**

- Material: PP-H
- With position indicator / Working pressure: **both sides**

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10	72	<b>199 027 211</b>	<b>199 027 241</b>	0.504
25	20	10	120	<b>199 027 212</b>	<b>199 027 242</b>	0.790
32	25	10	238	<b>199 027 213</b>	<b>199 027 243</b>	1.110
40	32	10	341	<b>199 027 214</b>	<b>199 027 244</b>	1.300
50	40	10	460	<b>199 027 215</b>	<b>199 027 245</b>	2.310
63	50	10	685	<b>199 027 216</b>	<b>199 027 246</b>	2.710

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	68	1/8	6	128	60	25	99	59	24	23	44	100	155	44
25	96	1/8	6	150	60	25	130	71	25	23	44	100	155	56
32	96	1/8	6	162	60	25	143	85	25	23	44	100	155	56
40	120	1/8	8	184	60	45	170	97	26	36	64	100	160	68
50	150	1/4	8	210	60	45	203	108	36	36	64	100	170	85
63	150	1/4	8	248	60	45	220	126	36	36	64	100	170	85

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	76	14	12	8
25	88	18	12	10
32	88	21	12	12
40	100	26	15	14
50	117	33	15	18
63	117	39	15	22







## PROGEF Standard Diaphragm valve type DIASTAR Series 025 FO (Fail safe to open) Unions with butt fusion spigots metric

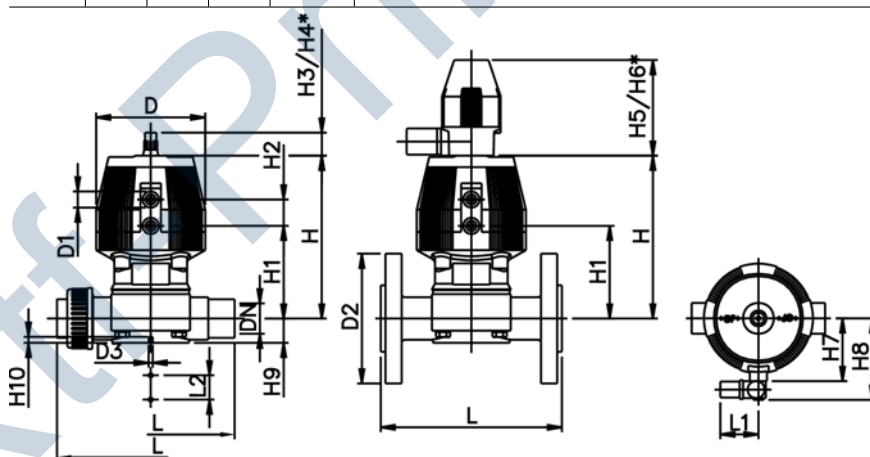
### Model:

- Material: PP-H
- With position indicator / Working pressure: **both sides**

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10	72	<b>199 027 441</b>	<b>199 027 471</b>	0.504
25	20	10	120	<b>199 027 442</b>	<b>199 027 472</b>	0.790
32	25	10	238	<b>199 027 443</b>	<b>199 027 473</b>	1.110
40	32	10	341	<b>199 027 444</b>	<b>199 027 474</b>	1.300
50	40	10	460	<b>199 027 445</b>	<b>199 027 475</b>	2.310
63	50	10	685	<b>199 027 446</b>	<b>199 027 476</b>	2.710

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	68	1/8	6	196	60	25	99	59	24	23	44	100	155	44
25	96	1/8	6	221	60	25	130	71	25	23	44	100	155	56
32	96	1/8	6	234	60	25	143	85	25	23	44	100	155	56
40	120	1/8	8	260	60	45	170	97	26	36	64	100	160	68
50	150	1/4	8	284	60	45	203	108	36	36	64	100	170	85
63	150	1/4	8	321	60	45	220	126	36	36	64	100	170	85

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	76	14	12	8
25	88	18	12	10
32	88	21	12	12
40	100	26	15	14
50	117	33	15	18
63	117	39	15	22





**PROGEF Standard**  
**Diaphragm valve type DIASTAR**  
**Series 025 FO (Fail safe to open)**  
**With fusion spigots metric**

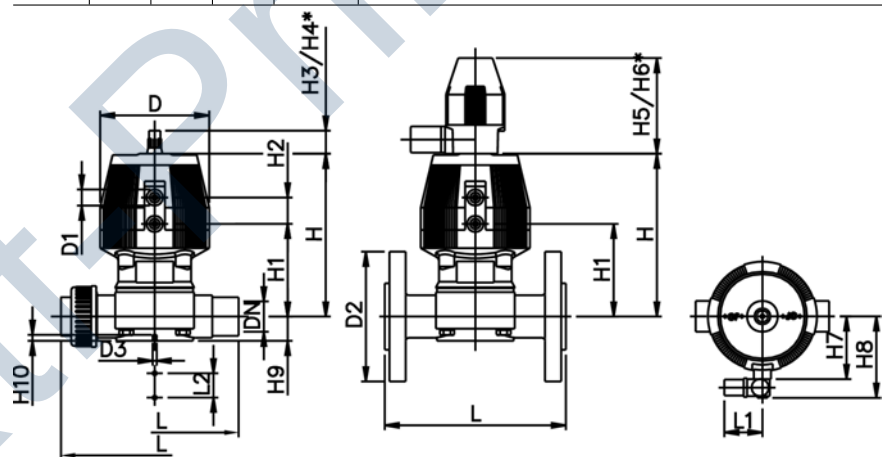
**Model:**

- Material: PP-H
- With position indicator / Working pressure: **both sides**

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10	72	<b>199 025 211</b>	<b>199 025 241</b>	0.374
25	20	10	120	<b>199 025 212</b>	<b>199 025 242</b>	0.660
32	25	10	238	<b>199 025 213</b>	<b>199 025 243</b>	0.910
40	32	10	341	<b>199 025 214</b>	<b>199 025 244</b>	1.150
50	40	10	460	<b>199 025 215</b>	<b>199 025 245</b>	1.410
63	50	10	685	<b>199 025 216</b>	<b>199 025 246</b>	2.660

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	68	1/8	6	124	60	25	99	59	24	23	44	100	155	44
25	96	1/8	6	144	60	25	130	71	25	23	44	100	155	56
32	96	1/8	6	154	60	25	143	85	25	23	44	100	155	56
40	120	1/8	8	174	60	45	170	97	26	36	64	100	160	68
50	150	1/4	8	194	60	45	203	108	36	36	64	100	170	85
63	150	1/4	8	224	60	45	220	126	36	36	64	100	170	85

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	76	14	12	8
25	88	18	12	10
32	88	21	12	12
40	100	26	15	14
50	117	33	15	18
63	117	39	15	22





## PROGEF Standard Diaphragm valve type DIASTAR Series 025 FO (Fail safe to open) With butt fusion spigots metric

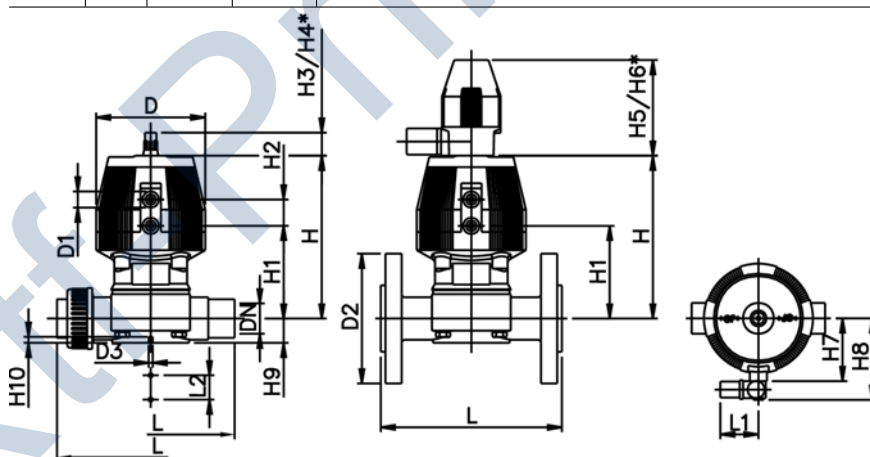
Model:

- Material: PP-H
- With position indicator / Working pressure: **both sides**

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10	72	<b>199 025 887</b>	<b>199 025 907</b>	0.374
25	20	10	120	<b>199 025 888</b>	<b>199 025 908</b>	0.660
32	25	10	238	<b>199 025 889</b>	<b>199 025 909</b>	0.910
40	32	10	341	<b>199 025 890</b>	<b>199 025 910</b>	1.150
50	40	10	460	<b>199 025 891</b>	<b>199 025 911</b>	1.410
63	50	10	685	<b>199 025 892</b>	<b>199 025 912</b>	2.660

d [mm]	D [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]	H8 [mm]	H9 [mm]	D1_G [inch]
20	68	124	60	25	99	59	24	23	44	100	155	44	76	14	1/8
25	96	144	60	25	130	71	25	23	44	100	155	56	88	18	1/8
32	96	154	60	25	143	85	25	23	44	100	155	56	88	21	1/8
40	120	174	60	45	170	97	26	36	64	100	160	68	100	26	1/8
50	150	194	60	45	203	108	36	36	64	100	170	85	117	33	1/4
63	150	224	60	45	220	126	36	36	64	100	170	85	117	39	1/4

d [mm]	H10 [mm]	D3[M] [mm]	Lift = Hx [mm]
20	12	6	8
25	12	6	10
32	12	6	12
40	15	8	14
50	15	8	18
63	15	8	22





## PROGEF Standard Diaphragm valve type DIASTAR Series 025 FO (Fail safe to open) With backing flanges PP-V metric

### Model:

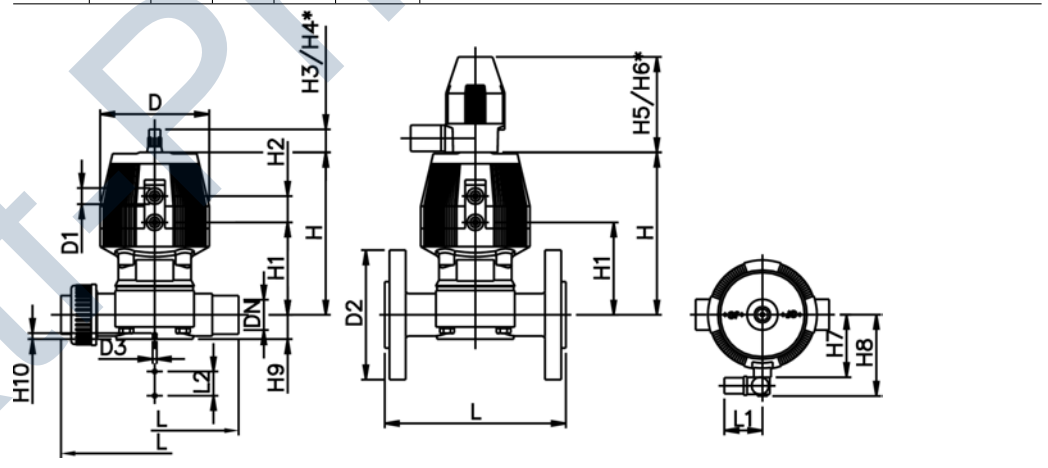
- Material: PP-H
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

- With position indicator / Working pressure: **both sides**

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	½	10	72	<b>199 025 271</b>	<b>199 025 301</b>	0.654
25	20	¾	10	120	<b>199 025 272</b>	<b>199 025 302</b>	0.890
32	25	1	10	238	<b>199 025 273</b>	<b>199 025 303</b>	1.310
40	32	1 ¼	10	341	<b>199 025 274</b>	<b>199 025 304</b>	1.650
50	40	1 ½	10	460	<b>199 025 275</b>	<b>199 025 305</b>	2.310
63	50	2	10	685	<b>199 025 276</b>	<b>199 025 306</b>	3.710

d [mm]	D [mm]	D1_G [inch]	D2 [mm]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]
20	68	⅝	95	6	130	60	25	99	59	24	23	44	100	155
25	96	⅝	105	6	150	60	25	130	71	25	23	44	100	155
32	96	⅝	115	6	160	60	25	143	85	25	23	44	100	155
40	120	⅝	140	8	180	60	45	170	97	26	36	64	100	160
50	150	¾	150	8	200	60	45	203	108	36	36	64	100	170
63	150	¾	165	8	230	60	45	220	126	36	36	64	100	170

d [mm]	H7 [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	44	76	14	12	8
25	56	88	18	12	10
32	56	88	21	12	12
40	68	100	26	15	14
50	85	117	33	15	18
63	85	117	39	15	22





## PROGEF Standard Diaphragm valve type DIASTAR Series 025 FO (Fail safe to open) With fixed flanges PP metric

### Model:

- Material: PP-H
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504
- With position indicator / Working pressure: **one side**

\*\* Connecting dimensions DN80 and DN150 metric and Inch ANSI B16.5

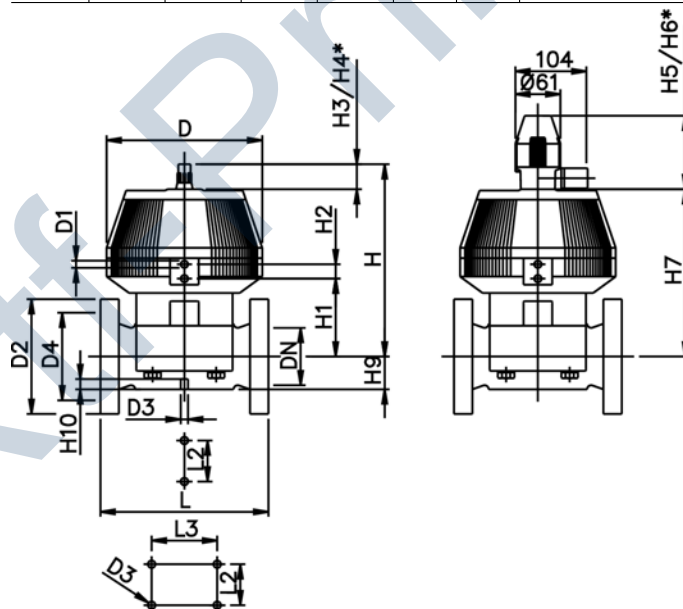
\* With backing flanges PP-V

\*\* with fixed flanges PP metric and Inch ANSI

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
*75	65	2 ½	10	992	<b>199 025 277</b>	<b>199 025 307</b>	13.600
**90	80	3	10	1700	<b>199 025 278</b>	<b>199 025 308</b>	17.400
110	100	4	8	2700	<b>199 025 279</b>	<b>199 025 309</b>	24.700
160	150	6	6	6033	<b>199 025 280</b>	<b>199 025 310</b>	35.000

d [mm]	D [mm]	D1_G [inch]	D2 [mm]	D3[M] [mm]	D4 [mm]	L [mm]	L2 [mm]	L3 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]
*75	280	¼	185	8	145	290	70		344	148	24	46
**90	280	¼	200	12	160	310	120		348	150	24	46
110	335	¼	225	12	180	350	120		395	176	24	46
160	335	¼	285	12	240	480	100	200	455	237	24	46

d [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]	H9 [mm]	H10 [mm]
*75	100	129	195	298	46	15
**90	100	129	195	302	57	15
110	100	129	195	349	69	20
160	100	129	195	409	108	20





## PROGEF Standard Diaphragm valve type DIASTAR Series 025 DA (Double acting) Unions with fusion sockets metric

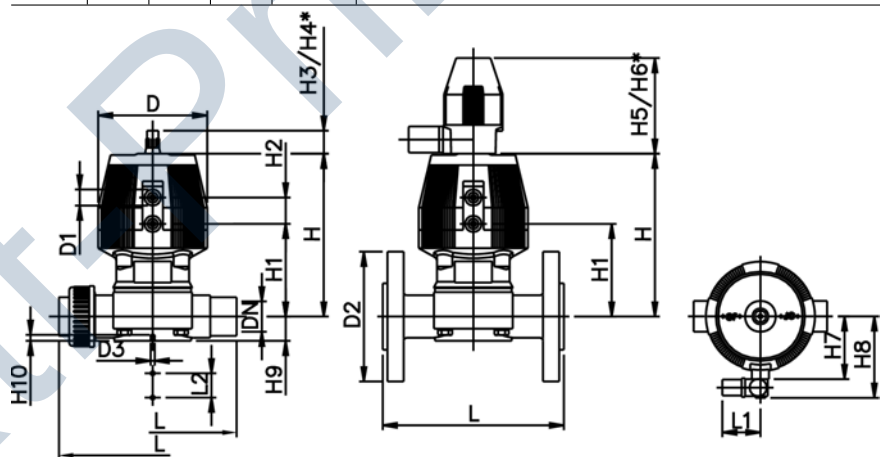
Model:

- Material: PP-H
- With position indicator / Working pressure: **both sides**

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10	72	<b>199 027 221</b>	<b>199 027 251</b>	0.504
25	20	10	120	<b>199 027 222</b>	<b>199 027 252</b>	0.790
32	25	10	238	<b>199 027 223</b>	<b>199 027 253</b>	1.110
40	32	10	341	<b>199 027 224</b>	<b>199 027 254</b>	1.300
50	40	10	460	<b>199 027 225</b>	<b>199 027 255</b>	2.310
63	50	10	685	<b>199 027 226</b>	<b>199 027 256</b>	2.710

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	68	1/8	6	128	60	25	98	59	24	23	44	100	155	44
25	96	1/8	6	150	60	25	127	71	25	23	44	100	155	56
32	96	1/8	6	162	60	25	141	85	25	23	44	100	155	56
40	120	1/8	8	184	60	45	167	97	26	36	64	100	160	68
50	150	1/4	8	210	60	45	198	108	36	36	64	100	170	85
63	150	1/4	8	248	60	45	216	126	36	36	64	100	170	85

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	76	14	12	8
25	88	18	12	10
32	88	21	12	12
40	100	26	15	14
50	117	33	15	18
63	117	39	15	22





## PROGEF Standard Diaphragm valve type DIASTAR Series 025 DA (Double acting) Unions with butt fusion spigots metric

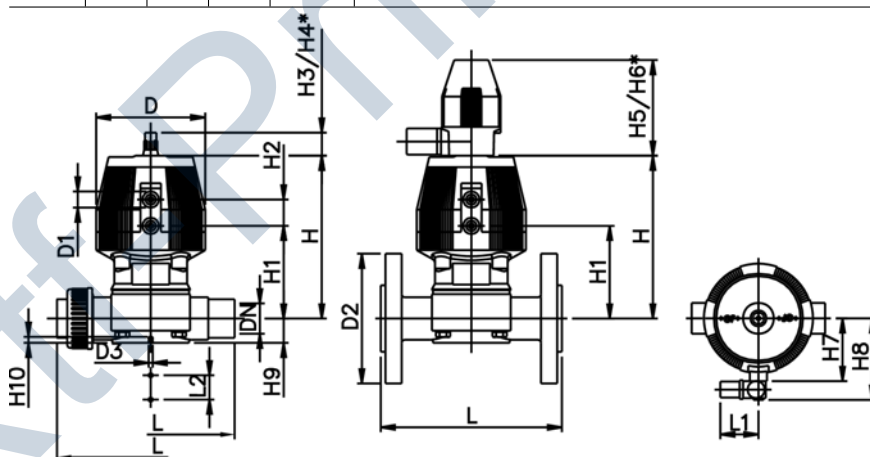
Model:

- Material: PP-H
- With position indicator / Working pressure: **both sides**

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10	72	<b>199 027 451</b>	<b>199 027 481</b>	0.504
25	20	10	120	<b>199 027 452</b>	<b>199 027 482</b>	0.790
32	25	10	238	<b>199 027 453</b>	<b>199 027 483</b>	1.110
40	32	10	341	<b>199 027 454</b>	<b>199 027 484</b>	1.300
50	40	10	460	<b>199 027 455</b>	<b>199 027 485</b>	2.310
63	50	10	685	<b>199 027 456</b>	<b>199 027 486</b>	2.710

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	68	1/8	6	196	60	25	99	59	24	23	44	100	155	44
25	96	1/8	6	221	60	25	130	71	25	23	44	100	155	56
32	96	1/8	6	234	60	25	143	85	25	23	44	100	155	56
40	120	1/8	8	260	60	45	170	97	26	36	64	100	160	68
50	150	1/4	8	284	60	45	203	108	36	36	64	100	170	85
63	150	1/4	8	321	60	45	220	126	36	36	64	100	170	85

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	76	14	12	8
25	88	18	12	10
32	88	21	12	12
40	100	26	15	14
50	117	33	15	18
63	117	39	15	22





# PROGEF Standard Diaphragm valve type DIASTAR Series 025 DA (Double acting) With fusion spigots metric

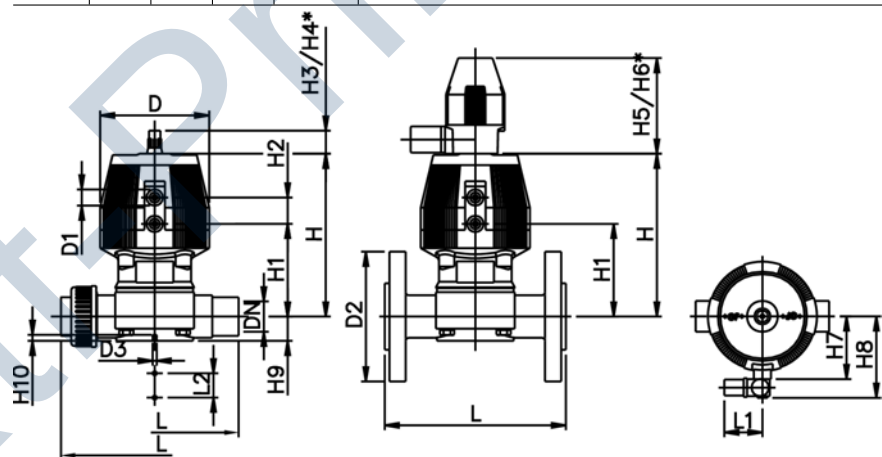
Model:

- Material: PP-H
- With position indicator / Working pressure: **both sides**

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10	72	<b>199 025 221</b>	<b>199 025 251</b>	0.374
25	20	10	120	<b>199 025 222</b>	<b>199 025 252</b>	0.660
32	25	10	238	<b>199 025 223</b>	<b>199 025 253</b>	0.910
40	32	10	341	<b>199 025 224</b>	<b>199 025 254</b>	1.150
50	40	10	460	<b>199 025 225</b>	<b>199 025 255</b>	1.410
63	50	10	685	<b>199 025 226</b>	<b>199 025 256</b>	2.660

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	68	1/8	6	124	60	25	99	59	24	23	44	100	155	44
25	96	1/8	6	144	60	25	130	71	25	23	44	100	155	56
32	96	1/8	6	154	60	25	143	85	25	23	44	100	155	56
40	120	1/8	8	174	60	45	170	97	26	36	64	100	160	68
50	150	1/4	8	194	60	45	203	108	36	36	64	100	170	85
63	150	1/4	8	224	60	45	220	126	36	36	64	100	170	85

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	76	14	12	8
25	88	18	12	10
32	88	21	12	12
40	100	26	15	14
50	117	33	15	18
63	117	39	15	22







## PROGEF Standard Diaphragm valve type DIASTAR Series 025 DA (Double acting) With butt fusion spigots metric

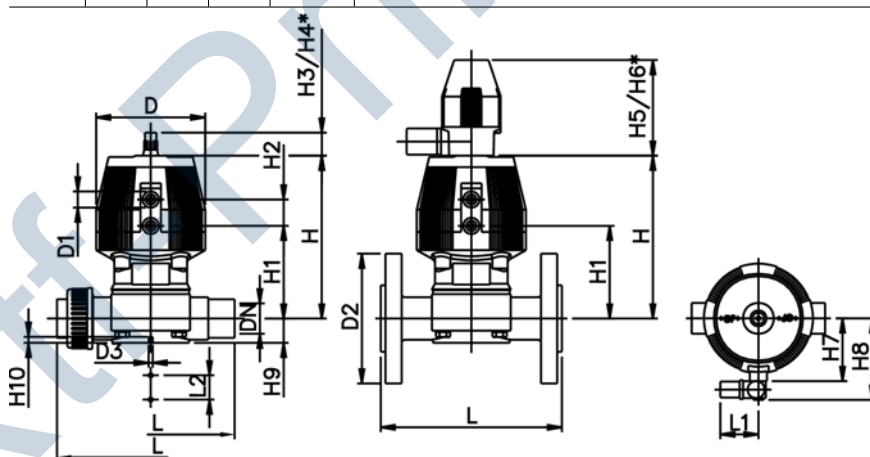
Model:

- Material: PP-H
- With position indicator / Working pressure: **both sides**

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10	72	<b>199 025 893</b>	<b>199 025 913</b>	0.374
25	20	10	120	<b>199 025 894</b>	<b>199 025 914</b>	0.660
32	25	10	238	<b>199 025 895</b>	<b>199 025 915</b>	0.910
40	32	10	341	<b>199 025 896</b>	<b>199 025 916</b>	1.150
50	40	10	460	<b>199 025 897</b>	<b>199 025 917</b>	1.410
63	50	10	685	<b>199 025 898</b>	<b>199 025 918</b>	3.031

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	68	1/8	6	124	60	25	99	59	24	23	44	100	155	44
25	96	1/8	6	144	60	25	130	71	25	23	44	100	155	56
32	96	1/8	6	154	60	25	143	85	25	23	44	100	155	56
40	120	1/8	8	174	60	45	170	97	26	36	64	100	160	68
50	150	1/4	8	194	60	45	203	108	36	36	64	100	170	85
63	150	1/4	8	224	60	45	220	126	36	36	64	100	170	85

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	76	14	12	8
25	88	18	12	10
32	88	21	12	12
40	100	26	15	14
50	117	33	15	18
63	117	39	15	22





## PROGEF Standard Diaphragm valve type DIASTAR Series 025 DA (Double acting) With backing flanges PP-V metric

### Model:

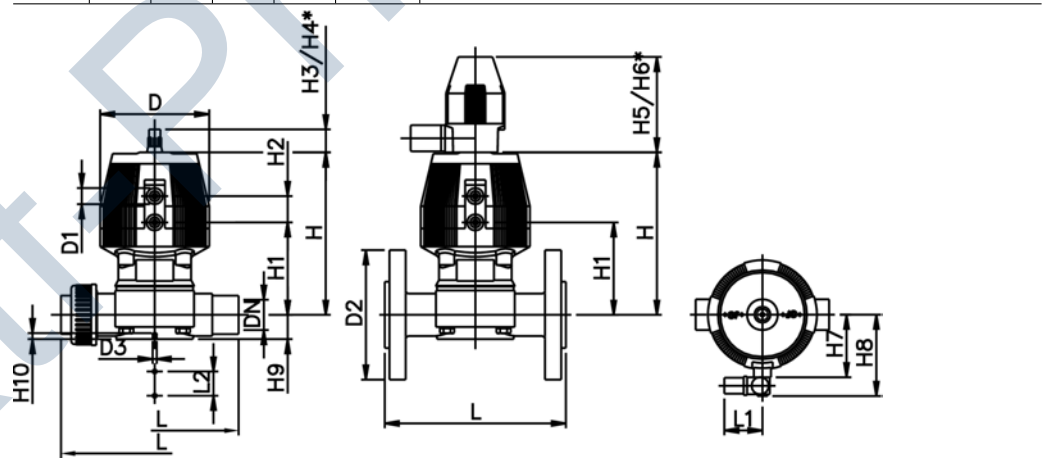
- Material: PP-H
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

- With position indicator / Working pressure: **both sides**

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	½	10	72	<b>199 025 281</b>	<b>199 025 311</b>	0.654
25	20	¾	10	120	<b>199 025 282</b>	<b>199 025 312</b>	0.890
32	25	1	10	238	<b>199 025 283</b>	<b>199 025 313</b>	1.310
40	32	1 ¼	10	341	<b>199 025 284</b>	<b>199 025 314</b>	1.650
50	40	1 ½	10	460	<b>199 025 285</b>	<b>199 025 315</b>	2.310
63	50	2	10	685	<b>199 025 286</b>	<b>199 025 316</b>	3.710

d [mm]	D [mm]	D1_G [inch]	D2 [mm]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]
20	68	⅝	95	6	130	60	25	99	59	24	23	44	100	155
25	96	⅝	105	6	150	60	25	130	71	25	23	44	100	155
32	96	⅝	115	6	160	60	25	143	85	25	23	44	100	155
40	120	⅝	140	8	180	60	45	170	97	26	36	64	100	160
50	150	¾	150	8	200	60	45	203	108	36	36	64	100	170
63	150	¾	165	8	230	60	45	220	126	36	36	64	100	170

d [mm]	H7 [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	44	76	14	12	8
25	56	88	18	12	10
32	56	88	21	12	12
40	68	100	26	15	14
50	85	117	33	15	18
63	85	117	39	15	22





# PROGEF Standard Diaphragm valve type DIASTAR Series 025 DA (Double acting) With fixed flanges PP metric

## Model:

- Material: PP-H
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504
- With position indicator / Working pressure: **one side**

\*\* Connecting dimensions DN80 and DN150 metric and Inch ANSI B16.5

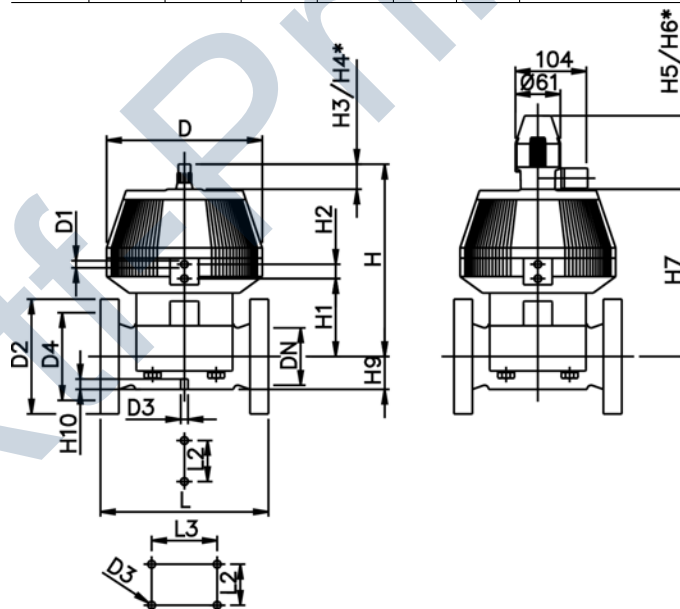
\* With backing flanges PP-V

\*\* with fixed flanges PP metric and Inch ANSI

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
*75	65	2 ½	10	992	<b>199 025 287</b>	<b>199 025 317</b>	13.600
**90	80	3	10	1700	<b>199 025 288</b>	<b>199 025 318</b>	17.400
110	100	4	8	2700	<b>199 025 289</b>	<b>199 025 319</b>	24.700
160	150	6	6	6033	<b>199 025 290</b>	<b>199 025 320</b>	35.000

d [mm]	D [mm]	D1_G [inch]	D2 [mm]	D3[M] [mm]	D4 [mm]	L [mm]	L2 [mm]	L3 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]
*75	280	¼	185	8	145	290	70		344	148	24	46
**90	280	¼	200	12	160	310	120		348	150	24	46
110	335	¼	225	12	180	350	120		395	176	24	46
160	335	¼	285	12	240	480	100	200	455	237	24	46

d [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]	H9 [mm]	H10 [mm]
*75	100	129	195	298	46	15
**90	100	129	195	302	57	15
110	100	129	195	349	69	20
160	100	129	195	409	108	20





## Diaphragm valve type DIASTAR PP-H Series 028 FC (Fail safe to close) Unions with butt fusion spigots metric

### Model:

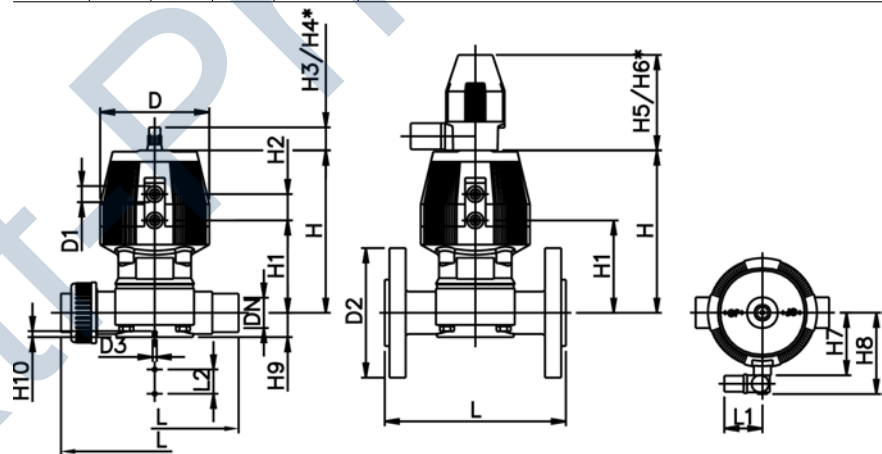
- Material: PP-H
- With position indicator / Working pressure: **one side**

\*PN: EPDM/PTFE

d [mm]	DN [mm]	PN [bar]		kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10 / 5	*	72	199 028 431	199 028 461	0.836
25	20	10 / 7	*	120	199 028 432	199 028 462	0.870
32	25	10 / 7	*	238	199 028 433	199 028 463	1.505
40	32	10 / 7	*	341	199 028 434	199 028 464	2.604
50	40	10 / 7	*	460	199 028 435	199 028 465	2.250
63	50	10 / 7	*	685	199 028 436	199 028 466	3.500

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	68	1/8	6	196	60	25	99	59	24	23	44	100	155	44
25	96	1/8	6	221	60	25	130	71	25	23	44	100	155	56
32	96	1/8	6	234	60	25	143	85	25	23	44	100	155	56
40	120	1/8	8	260	60	45	170	97	26	36	64	100	160	68
50	150	1/4	8	284	60	45	203	108	36	36	64	100	170	85
63	150	1/4	8	321	60	45	220	126	36	36	64	100	170	85

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	76	14	12	8
25	88	18	12	10
32	88	21	12	12
40	100	26	15	14
50	117	33	15	18
63	117	39	15	22





## Diaphragm valve type DIASTAR PP-H Series 028 FC (Fail safe to close) With fusion spigots metric

### Model:

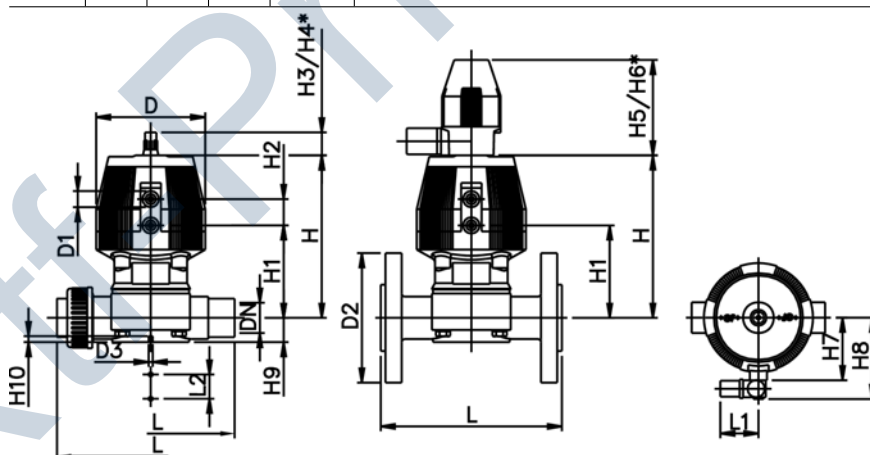
- Material: PP-H
- With position indicator / Working pressure: **one side**

\*PN: EPDM/PTFE

d [mm]	DN [mm]	PN [bar]		kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10 / 5	*	72	<b>199 028 201</b>	<b>199 028 231</b>	0.440
25	20	10 / 7	*	120	<b>199 028 202</b>	<b>199 028 232</b>	0.870
32	25	10 / 7	*	238	<b>199 028 203</b>	<b>199 028 233</b>	1.120
40	32	10 / 7	*	341	<b>199 028 204</b>	<b>199 028 234</b>	1.570
50	40	10 / 7	*	460	<b>199 028 205</b>	<b>199 028 235</b>	2.250
63	50	10 / 7	*	685	<b>199 028 206</b>	<b>199 028 236</b>	3.500

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	68	1/8	6	124	60	25	99	59	24	23	44	100	155	44
25	96	1/8	6	144	60	25	130	71	25	23	44	100	155	56
32	96	1/8	6	154	60	25	143	85	25	23	44	100	155	56
40	120	1/8	8	174	60	45	170	97	26	36	64	100	160	68
50	150	1/4	8	194	60	45	203	108	36	36	64	100	170	85
63	150	1/4	8	224	60	45	220	126	36	36	64	100	170	85

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	76	14	12	8
25	88	18	12	10
32	88	21	12	12
40	100	26	15	14
50	117	33	15	18
63	117	39	15	22





## Diaphragm valve type DIASTAR PP-H Series 028 FC (Fail safe to close) With butt fusion spigots metric

### Model:

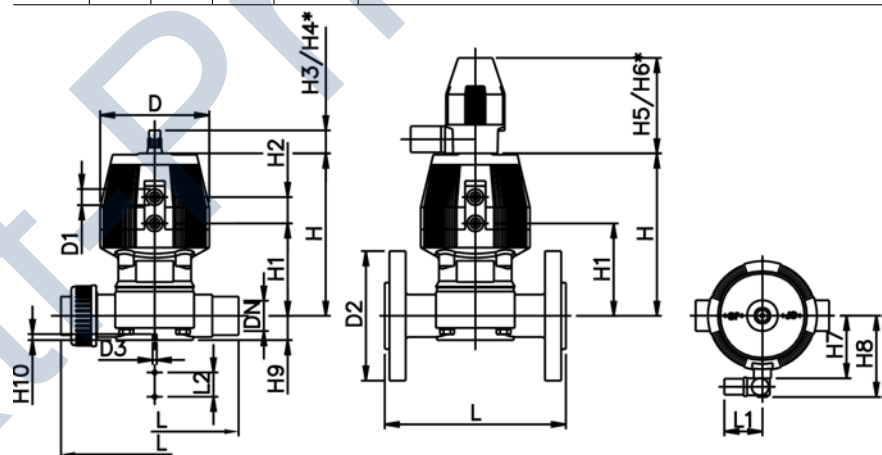
- Material: PP-H
- With position indicator / Working pressure: **one side**

\*PN: EPDM/PTFE

d [mm]	DN [mm]	PN [bar]		kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10 / 5	*	72	<b>199 028 881</b>	<b>199 028 901</b>	0.440
25	20	10 / 7	*	120	<b>199 028 882</b>	<b>199 028 902</b>	0.870
32	25	10 / 7	*	238	<b>199 028 883</b>	<b>199 028 903</b>	1.120
40	32	10 / 7	*	341	<b>199 028 884</b>	<b>199 028 904</b>	1.570
50	40	10 / 7	*	460	<b>199 028 885</b>	<b>199 028 905</b>	2.250
63	50	10 / 7	*	685	<b>199 028 886</b>	<b>199 028 906</b>	3.500

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	68	1/8	6	124	60	25	99	59	24	23	44	100	155	44
25	96	1/8	6	144	60	25	130	71	25	23	44	100	155	56
32	96	1/8	6	154	60	25	143	85	25	23	44	100	155	56
40	120	1/8	8	174	60	45	170	97	26	36	64	100	160	68
50	150	1/4	8	194	60	45	203	108	36	36	64	100	170	85
63	150	1/4	8	224	60	45	220	126	36	36	64	100	170	85

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	76	14	12	8
25	88	18	12	10
32	88	21	12	12
40	100	26	15	14
50	117	33	15	18
63	117	39	15	22





## Diaphragm valve type DIASTAR PP-H Series 028 FC (Fail safe to close) With backing flanges PP-V metric

### Model:

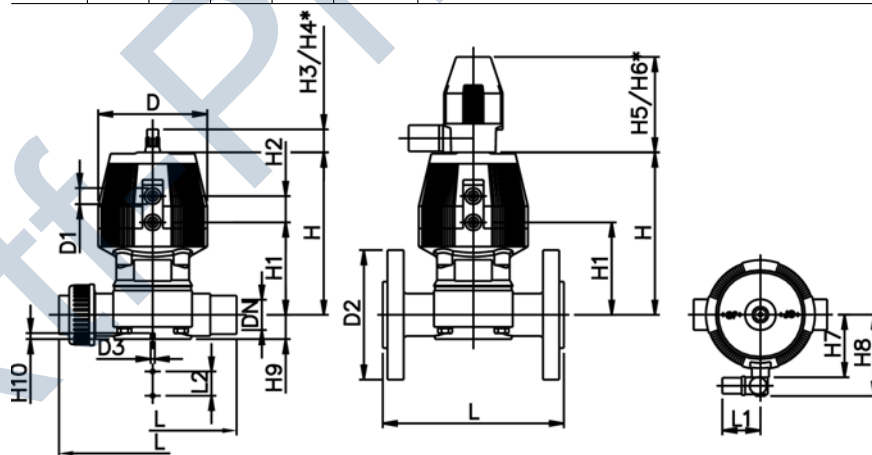
- Material: PP-H
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504
- With position indicator / Working pressure: **one side**

\*PN: EPDM/PTFE

d [mm]	DN [mm]	Inch	PN [bar]		kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg	
20	15	½	10 / 5	*	72	199 028 261	199 028 291	0.440	
25	20	¾	10 / 7	*	120	199 028 262	199 028 292	0.870	
32	25	1	10 / 7	*	238	199 028 263	199 028 293	1.120	
40	32	1 ¼	10 / 7	*	341	199 028 264	199 028 294	1.570	
50	40	1 ½	10 / 7	*	460	199 028 265	199 028 295	2.250	
63	50	2	10 / 7	*	685	199 028 266	199 028 296	3.500	

d [mm]	D [mm]	D1_G [inch]	D2 [mm]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]
20	68	⅞	95	6	130	60	25	98	59	24	23	44	100	155
25	96	⅞	105	6	150	60	25	127	71	25	23	44	100	155
32	96	⅞	115	6	160	60	25	141	85	25	23	44	100	155
40	120	⅞	140	6	180	60	45	167	97	26	36	64	100	160
50	150	⅞	150	6	200	60	45	198	108	36	36	64	100	170
63	150	⅞	165	6	230	60	45	216	126	36	36	64	100	170

d [mm]	H7 [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	44	76	14	12	8
25	56	88	18	12	10
32	56	88	21	12	12
40	68	100	26	15	14
50	85	117	33	15	18
63	85	117	39	15	22





## Diaphragm valve type DIASTAR PP-H Series 028 FC (Fail safe to close) Unions with fusion sockets metric

### Model:

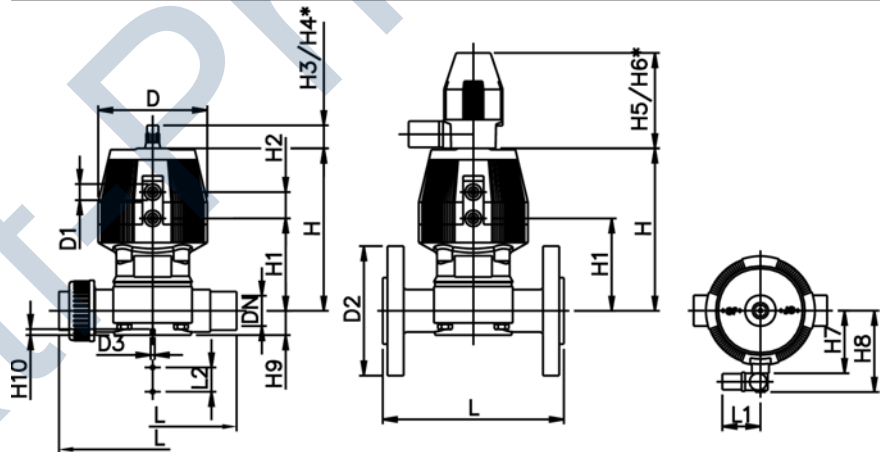
- Material: PP-H
- With position indicator / Working pressure: **one side**

\*PN: EPDM/PTFE

d [mm]	DN [mm]	PN [bar]		kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10 / 5	*	72	<b>199 028 181</b>	<b>199 028 187</b>	0.836
25	20	10 / 7	*	120	<b>199 028 182</b>	<b>199 028 188</b>	0.870
32	25	10 / 7	*	238	<b>199 028 183</b>	<b>199 028 189</b>	1.505
40	32	10 / 7	*	341	<b>199 028 184</b>	<b>199 028 190</b>	2.400
50	40	10 / 7	*	460	<b>199 028 185</b>	<b>199 028 191</b>	2.250
63	50	10 / 7	*	685	<b>199 028 186</b>	<b>199 028 192</b>	3.500

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	68	1/8	6	128	60	25	99	59	24	23	44	100	155	44
25	96	1/8	6	150	60	25	130	71	25	23	44	100	155	56
32	96	1/8	6	162	60	25	143	85	25	23	44	100	155	56
40	120	1/8	8	184	60	45	170	97	26	36	64	100	160	68
50	150	1/4	8	210	60	45	203	108	36	36	64	100	170	85
63	150	1/4	8	248	60	45	220	126	36	36	64	100	170	85

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	76	14	12	8
25	88	18	12	10
32	88	21	12	12
40	100	26	15	14
50	117	33	15	18
63	117	39	15	22





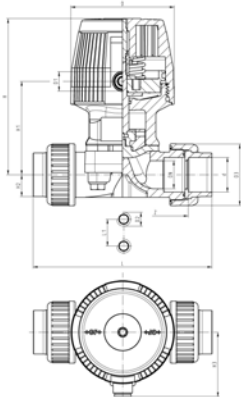


## Diaphragm valve type DIASTAR Eco PP-H FC (Fail safe to close) Unions with fusion sockets metric



### Model:

- Material: PP-H
- Working pressure 6 bar one side



d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	kg
20	15	6	72	<b>199 024 311</b>	0.548
25	20	6	120	<b>199 024 312</b>	1.086
32	25	6	238	<b>199 024 313</b>	1.326
40	32	6	341	<b>199 024 314</b>	1.991
50	40	6	460	<b>199 024 315</b>	2.574
63	50	6	685	<b>199 024 316</b>	3.285

d [mm]	D [mm]	D1_G [inch]	D2 (M)	D3 [mm]	L [mm]	L1 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	Lift = Hx [mm]	z [mm]
20	68	1/8	M6	47	128	25	99	59	14	44	8	100
25	96	1/8	M6	57	150	25	130	71	18	56	10	118
32	96	1/8	M6	64	162	25	143	85	21	56	12	126
40	120	1/8	M8	78	184	45	170	97	26	68	14	144
50	120	1/8	M8	89	221	45	182	109	33	68	16	164
63	120	1/8	M8	109	248	45	199	126	39	68	16	194

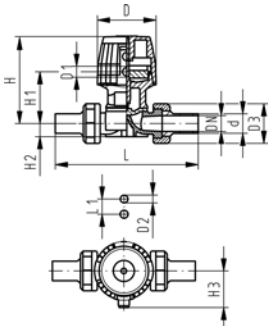


## Diaphragm valve type DIASTAR Eco PP-H FC (Fail safe to close) Unions with butt fusion spigots metric



### Model:

- Material: PP-H
- Working pressure 6 bar one side



d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	kg
20	15	6	72	<b>199 024 341</b>	0.556
25	20	6	120	<b>199 024 342</b>	1.098
32	25	6	238	<b>199 024 343</b>	1.346
40	32	6	341	<b>199 024 344</b>	2.023
50	40	6	460	<b>199 024 345</b>	2.634
63	50	6	685	<b>199 024 346</b>	3.385

d [mm]	D [mm]	D1_G [inch]	D2 (M)	D3 [mm]	L [mm]	L1 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	Lift = Hx [mm]
20	68	1/8	M6	47	196	25	99	59	14	44	8
25	96	1/8	M6	57	221	25	130	71	18	56	10
32	96	1/8	M6	64	234	25	143	85	21	56	12
40	120	1/8	M8	78	260	45	170	97	26	68	14
50	120	1/8	M8	89	284	45	182	109	33	68	16
63	120	1/8	M8	109	321	45	199	126	39	68	16

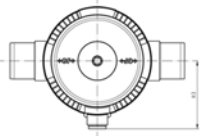
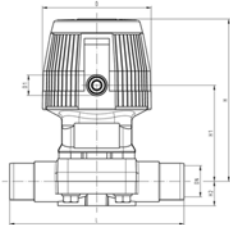


## Diaphragm valve type DIASTAR Eco PP-H FC (Fail safe to close) With socket fusion spigots metric



### Model:

- Material: PP-H
- Working pressure 6 bar **one side**



d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	kg
20	15	6	72	<b>199 024 251</b>	0.486
25	20	6	120	<b>199 024 252</b>	0.988
32	25	6	238	<b>199 024 253</b>	1.202
40	32	6	341	<b>199 024 254</b>	1.781
50	40	6	460	<b>199 024 255</b>	2.296
63	50	6	685	<b>199 024 256</b>	2.826

d [mm]	D [mm]	D1_G [inch]	D2 (M)	L [mm]	L1 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	Lift = Hx [mm]
20	68	1/8	M6	124	25	99	59	14	44	8
25	96	1/8	M6	144	25	130	71	18	56	10
32	96	1/8	M6	154	25	143	85	21	56	12
40	120	1/8	M8	174	45	170	97	26	68	14
50	120	1/8	M8	194	45	182	109	33	68	16
63	120	1/8	M8	224	45	199	126	39	68	16

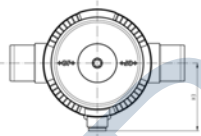
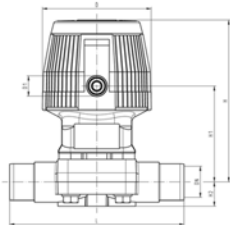


## Diaphragm valve type DIASTAR Eco PP-H FC (Fail safe to close) With butt fusion spigots IR metric



### Model:

- Material: PP-H
- Working pressure 6 bar **one side**



d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	kg
20	15	6	72	<b>199 024 281</b>	0.481
25	20	6	120	<b>199 024 282</b>	0.981
32	25	6	238	<b>199 024 283</b>	1.195
40	32	6	341	<b>199 024 284</b>	1.773
50	40	6	460	<b>199 024 285</b>	2.272
63	50	6	685	<b>199 024 286</b>	2.790

d [mm]	D [mm]	D1_G [inch]	D2 (M)	L [mm]	L1 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	Lift = Hx [mm]
20	68	1/8	M6	124	25	99	59	14	44	8
25	96	1/8	M6	144	25	130	71	18	56	10
32	96	1/8	M6	154	25	143	85	21	56	12
40	120	1/8	M8	174	45	170	97	26	68	14
50	120	1/8	M8	194	45	182	109	33	68	16
63	120	1/8	M8	224	45	199	126	39	68	16

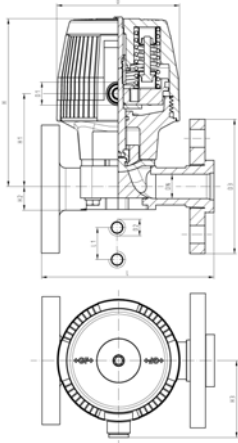


## Diaphragm valve type DIASTAR Eco PP-H FC (Fail safe to close) With backing flanges PP-V metric



### Model:

- Material: PP-H
- Working pressure 6 bar **one side**
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	kg
20	15	1/2	6	72	<b>199 024 371</b>	0.633
25	20	3/4	6	120	<b>199 024 372</b>	1.150
32	25	1	6	238	<b>199 024 373</b>	1.396
40	32	1 1/4	6	341	<b>199 024 374</b>	2.185
50	40	1 1/2	6	460	<b>199 024 375</b>	2.983
63	50	2	6	685	<b>199 024 376</b>	3.708

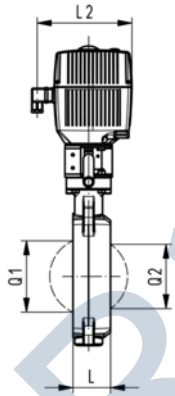
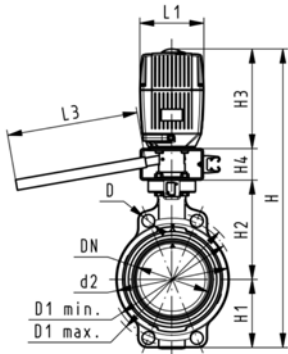
d [mm]	D [mm]	D1_G [inch]	D2 (M)	D3 [mm]	L [mm]	L1 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	Lift = Hx [mm]
20	68	1/8	M6	95	130	25	99	59	14	44	8
25	96	1/8	M6	105	150	25	130	71	18	56	10
32	96	1/8	M6	115	160	25	143	85	21	56	12
40	120	1/8	M8	140	180	45	170	97	26	68	14
50	120	1/8	M8	150	200	45	182	109	33	68	16
63	120	1/8	M8	165	230	45	199	126	39	68	16

# Butterfly Valves Electric

## Butterfly valve type 140 PP-H 100-230V With manual override

### Model:

- Material: PP-H
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220
- Overall length according to EN 558, ISO 5752
- Voltage 100-230 V, 50-60 Hz
- Control time 15 s/90°<) EA31
- Control time 25s/90°<) EA42
- Control range 90°<)
- Actuator with integrated emergency manual override standard



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>199 140 322</b>	<b>199 140 342</b>	5.607
75	65	2 1/2	10	2200	<b>199 140 323</b>	<b>199 140 343</b>	5.699
90	80	3	10	3000	<b>199 140 324</b>	<b>199 140 344</b>	5.829
110	100	4	10	6500	<b>199 140 325</b>	<b>199 140 345</b>	6.341
140	125	5	10	11500	<b>199 140 326</b>	<b>199 140 346</b>	6.789
160	150	6	10	16600	<b>199 140 327</b>	<b>199 140 347</b>	7.579
225	200	8	10	39600	<b>199 140 328</b>	<b>199 140 348</b>	13.299

d [mm]	Actuator unit type	D [mm]	D1 min. [mm]	D1 max. [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	L [mm]	L1 [mm]	L2 [mm]
63	EA-31	19	120.0	125.0	104	460	77	134	188	60	45	122	180
75	EA-31	19	139.7	145.0	115	473	83	140	188	60	46	122	180
90	EA-31	19	150.0	160.0	131	488	89	146	188	60	49	122	180
110	EA-31	19	175.0	190.5	161	520	104	167	188	60	56	122	180
140	EA-31	23	210.0	215.9	187	547	117	181	188	60	64	122	180
160	EA-31	24	241.3	241.3	215	568	130	189	188	60	72	122	180
225	EA-42	23	290.0	295.0	267	635	158	210	208	60	73	122	180

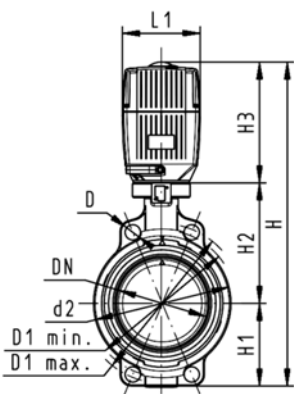
d [mm]	L3 [mm]	Q1 [mm]	Q2 [mm]
63	250	40	
75	250	54	35
90	250	67	50
110	250	88	74
140	250	113	97
160	250	139	123
225	250	178	169



## Butterfly valve type 140 PP-H 100-230V Without manual override

### Model:

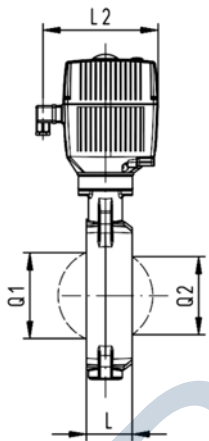
- Material: PP-H
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220
- Overall length according to EN 558, ISO 5752
- Voltage 100-230 V, 50-60 Hz
- Control time 15 s/90°<) EA31
- Control time 25s/90°<) EA42
- Control range 90°<)
- Actuator with integrated emergency manual override standard
- The dimension DN300 on request



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>199 140 362</b>	<b>199 140 382</b>	4.107
75	65	2 1/2	10	2200	<b>199 140 363</b>	<b>199 140 383</b>	4.199
90	80	3	10	3000	<b>199 140 364</b>	<b>199 140 384</b>	4.329
110	100	4	10	6500	<b>199 140 365</b>	<b>199 140 385</b>	4.841
140	125	5	10	11500	<b>199 140 366</b>	<b>199 140 386</b>	5.289
160	150	6	10	16600	<b>199 140 367</b>	<b>199 140 387</b>	6.079
225	200	8	10	39600	<b>199 140 368</b>	<b>199 140 388</b>	11.799

d [mm]	Actuator unit type	D [mm]	D1 min. [mm]	D1 max. [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	L1 [mm]	L2 [mm]	Q1 [mm]
63	EA-31	19	120.0	125.0	104	400	77	134	188	45	122	180	40
75	EA-31	19	139.7	145.0	115	413	83	140	188	46	122	180	54
90	EA-31	19	150.0	160.0	131	428	89	146	188	49	122	180	67
110	EA-31	19	175.0	190.5	161	460	104	167	188	56	122	180	88
140	EA-31	23	210.0	215.9	187	487	117	181	188	64	122	180	113
160	EA-31	24	241.3	241.3	215	508	130	189	188	72	122	180	139
225	EA-42	23	290.0	295.0	267	575	158	210	208	73	122	180	178

d [mm]	Q2 [mm]
63	
75	35
90	50
110	74
140	97
160	123
225	169

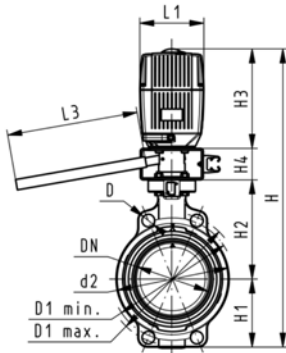




## Butterfly valve type 140 PP-H 24V With manual override

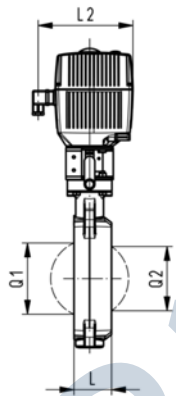
### Model:

- Material: PP-H
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220
- Overall length according to EN 558, ISO 5752
- Voltage 24 V AC/DC
- Control time 15 s/90°<) EA31
- Control time 25s/90°<) EA42
- Control range 90°<)
- Actuator with integrated emergency manual override standard



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>199 140 402</b>	<b>199 140 422</b>	5.607
75	65	2 ½	10	2200	<b>199 140 403</b>	<b>199 140 423</b>	5.699
90	80	3	10	3000	<b>199 140 404</b>	<b>199 140 424</b>	5.829
110	100	4	10	6500	<b>199 140 405</b>	<b>199 140 425</b>	6.341
140	125	5	10	11500	<b>199 140 406</b>	<b>199 140 426</b>	6.789
160	150	6	10	16600	<b>199 140 407</b>	<b>199 140 427</b>	7.579
225	200	8	10	39600	<b>199 140 408</b>	<b>199 140 428</b>	13.299

d [mm]	Actuator unit type	D [mm]	D1 min. [mm]	D1 max. [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	L [mm]	L1 [mm]	L2 [mm]
63	EA-31	19	120.0	125.0	104	460	77	134	188	60	45	122	180
75	EA-31	19	139.7	145.0	115	473	83	140	188	60	46	122	180
90	EA-31	19	150.0	160.0	131	488	89	146	188	60	49	122	180
110	EA-31	19	175.0	190.5	161	520	104	167	188	60	56	122	180
140	EA-31	23	210.0	215.9	187	547	117	181	188	60	64	122	180
160	EA-31	24	241.3	241.3	215	568	130	189	188	60	72	122	180
225	EA-42	23	290.0	295.0	267	635	158	210	208	60	73	122	180



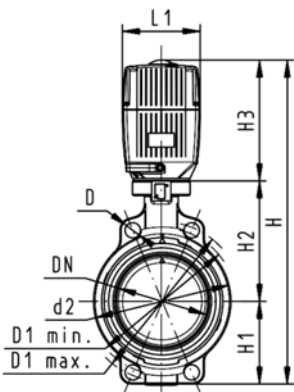
d [mm]	L3 [mm]	Q1 [mm]	Q2 [mm]
63	250	40	
75	250	54	35
90	250	67	50
110	250	88	74
140	250	113	97
160	250	139	123
225	250	178	169



## Butterfly valve type 140 PP-H 24V Without manual override

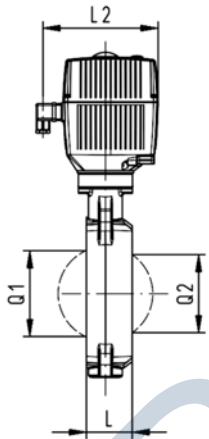
### Model:

- Material: PP-H
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220
- Overall length according to EN 558, ISO 5752
- Voltage 24 V AC/DC
- Control time 15 s/90°<) EA31
- Control time 25s/90°<) EA42
- Control range 90°<)
- Actuator with integrated emergency manual override standard
- The dimension DN300 on request



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>199 140 442</b>	<b>199 140 462</b>	4.107
75	65	2 ½	10	2200	<b>199 140 443</b>	<b>199 140 463</b>	4.199
90	80	3	10	3000	<b>199 140 444</b>	<b>199 140 464</b>	4.329
110	100	4	10	6500	<b>199 140 445</b>	<b>199 140 465</b>	4.841
140	125	5	10	11500	<b>199 140 446</b>	<b>199 140 466</b>	5.289
160	150	6	10	16600	<b>199 140 447</b>	<b>199 140 467</b>	6.079
225	200	8	10	39600	<b>199 140 448</b>	<b>199 140 468</b>	11.799

d [mm]	Actuator unit type	D [mm]	D1 min. [mm]	D1 max. [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	L1 [mm]	L2 [mm]	Q1 [mm]
63	EA-31	19	120.0	125.0	104	400	77	134	188	45	122	180	40
75	EA-31	19	139.7	145.0	115	413	83	140	188	46	122	180	54
90	EA-31	19	150.0	160.0	131	428	89	146	188	49	122	180	67
110	EA-31	19	175.0	190.5	161	460	104	167	188	56	122	180	88
140	EA-31	23	210.0	215.9	187	487	117	181	188	64	122	180	113
160	EA-31	24	241.3	241.3	215	508	130	189	188	72	122	180	139
225	EA-42	23	290.0	295.0	267	575	158	210	208	73	122	180	178



d [mm]	Q2 [mm]
63	
75	35
90	50
110	74
140	97
160	123
225	169

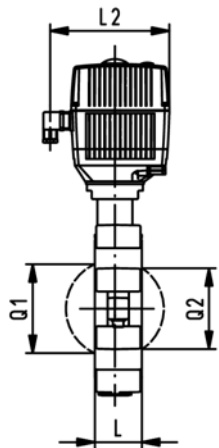
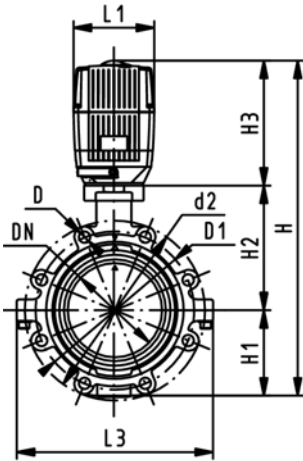




## PROGEF Standard Lugstyle butterfly valve type 141 100-230V Without manual override

### Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10
- Overall length according to EN 558, ISO 5752
- Voltage 100-230 V, 50-60 Hz
- Control time 15 s/90°<) EA31
- Control time 25s/90°<) EA42
- Control range 90°<)
- Actuator with integrated emergency manual override standard



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>199 141 362</b>	<b>199 141 382</b>	6.193
75	65	2 ½	10	2200	<b>199 141 363</b>	<b>199 141 383</b>	6.535
90	80	3	10	3000	<b>199 141 364</b>	<b>199 141 384</b>	7.540
110	100	4	10	6500	<b>199 141 365</b>	<b>199 141 385</b>	8.925
140	125	5	10	11500	<b>199 141 366</b>	<b>199 141 386</b>	10.755
160	150	6	10	16600	<b>199 141 367</b>	<b>199 141 387</b>	12.539
225	200	8	10	39600	<b>199 141 368</b>	<b>199 141 388</b>	21.747

d [mm]	Actuator unit type	D	D1 [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	Q1 [mm]	Q2 [mm]
63	EA-31	M16	125	150	399	77	134	188	45	122	180	150	40	
75	EA-31	M16	145	170	411	83	140	188	46	122	180	160	54	35
90	EA-31	M16	160	184	423	89	146	188	49	122	180	205	67	50
110	EA-31	M16	180	216	459	104	167	188	56	122	180	244	88	74
140	EA-31	M16	210	246	486	117	181	188	64	122	180	272	113	97
160	EA-31	M20	240	273	507	130	189	188	72	122	180	297	139	123
225	EA-42	M20	295	334	576	158	210	208	73	122	180	360	178	169

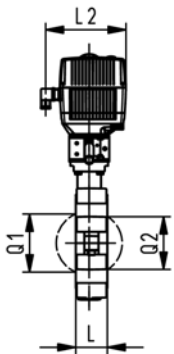
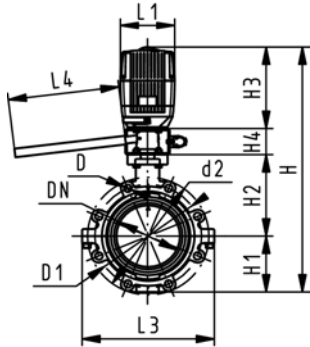




## PROGEF Standard Lugstyle butterfly valve type 141 100-230V With manual override

### Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10
- Overall length according to EN 558, ISO 5752
- Voltage 100-230 V, 50-60 Hz
- Control time 15 s/90°<) EA31
- Control time 25s/90°<) EA42
- Control range 90°<)
- Actuator with integrated emergency manual override standard



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>199 141 322</b>	<b>199 141 342</b>	7.693
75	65	2 ½	10	2200	<b>199 141 323</b>	<b>199 141 343</b>	8.035
90	80	3	10	3000	<b>199 141 324</b>	<b>199 141 344</b>	9.040
110	100	4	10	6500	<b>199 141 325</b>	<b>199 141 345</b>	10.425
140	125	5	10	11500	<b>199 141 326</b>	<b>199 141 346</b>	12.255
160	150	6	10	16600	<b>199 141 327</b>	<b>199 141 347</b>	14.039
225	200	8	10	39600	<b>199 141 328</b>	<b>199 141 348</b>	23.247

d [mm]	Actuator unit type	D	D1 [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]
63	EA-31	M16	125	150	459	77	134	188	60	45	122	180	150	200
75	EA-31	M16	145	170	471	83	140	188	60	46	122	180	160	200
90	EA-31	M16	160	184	483	89	146	188	60	49	122	180	205	200
110	EA-31	M16	180	216	519	104	167	188	60	56	122	180	244	250
140	EA-31	M16	210	246	546	117	181	188	60	64	122	180	272	250
160	EA-31	M20	240	273	567	130	189	188	60	72	122	180	297	250
225	EA-42	M20	295	334	636	158	210	208	60	73	122	180	360	250

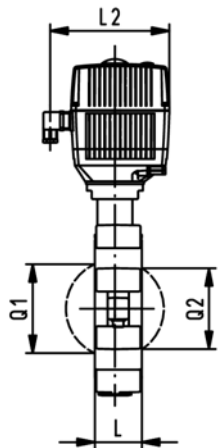
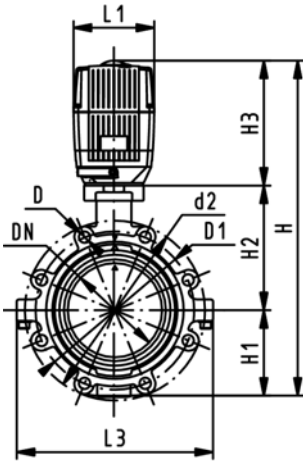
d [mm]	Q1 [mm]	Q2 [mm]
63	40	
75	54	35
90	67	50
110	88	74
140	113	97
160	139	123
225	178	169



## PROGEF Standard Lugstyle butterfly valve type 141 24V Without manual override

### Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10
- Overall length according to EN 558, ISO 5752
- Voltage 24 V AC/DC
- Control time 15 s/90°<) EA31
- Control time 25s/90°<) EA42
- Control range 90°<)
- Actuator with integrated emergency manual override standard



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>199 141 442</b>	<b>199 141 462</b>	6.193
75	65	2 ½	10	2200	<b>199 141 443</b>	<b>199 141 463</b>	6.535
90	80	3	10	3000	<b>199 141 444</b>	<b>199 141 464</b>	7.540
110	100	4	10	6500	<b>199 141 445</b>	<b>199 141 465</b>	8.925
140	125	5	10	11500	<b>199 141 446</b>	<b>199 141 466</b>	10.755
160	150	6	10	16600	<b>199 141 447</b>	<b>199 141 467</b>	12.539
225	200	8	10	39600	<b>199 141 448</b>	<b>199 141 468</b>	21.747

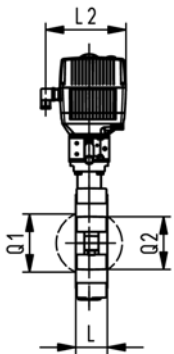
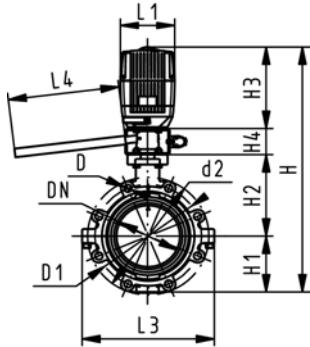
d [mm]	Actuator unit type	D	D1 [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	Q1 [mm]	Q2 [mm]
63	EA-31	M16	125	150	399	77	134	188	45	122	180	150	40	
75	EA-31	M16	145	170	411	83	140	188	46	122	180	160	54	35
90	EA-31	M16	160	184	423	89	146	188	49	122	180	205	67	50
110	EA-31	M16	180	216	459	104	167	188	56	122	180	244	88	74
140	EA-31	M16	210	246	486	117	181	188	64	122	180	272	113	97
160	EA-31	M20	240	273	507	130	189	188	72	122	180	297	139	123
225	EA-42	M20	295	334	576	158	210	208	73	122	180	360	178	169



## PROGEF Standard Lugstyle butterfly valve type 141 24V With manual override

### Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10
- Overall length according to EN 558, ISO 5752
- Voltage 24 V AC/DC
- Control time 15 s/90°<) EA31
- Control time 25s/90°<) EA42
- Control range 90°<)
- Actuator with integrated emergency manual override standard



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>199 141 402</b>	<b>199 141 422</b>	7.693
75	65	2 ½	10	2200	<b>199 141 403</b>	<b>199 141 423</b>	8.035
90	80	3	10	3000	<b>199 141 404</b>	<b>199 141 424</b>	9.040
110	100	4	10	6500	<b>199 141 405</b>	<b>199 141 425</b>	10.425
140	125	5	10	11500	<b>199 141 406</b>	<b>199 141 426</b>	12.255
160	150	6	10	16600	<b>199 141 407</b>	<b>199 141 427</b>	14.039
225	200	8	10	39600	<b>199 141 408</b>	<b>199 141 428</b>	23.247

d [mm]	Actuator unit type	D	D1 [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]
63	EA-31	M16	125	150	459	77	134	188	60	45	122	180	150	200
75	EA-31	M16	145	170	471	83	140	188	60	46	122	180	160	200
90	EA-31	M16	160	184	483	89	146	188	60	49	122	180	205	200
110	EA-31	M16	180	216	519	104	167	188	60	56	122	180	244	250
140	EA-31	M16	210	246	546	117	181	188	60	64	122	180	272	250
160	EA-31	M20	240	273	567	130	189	188	60	72	122	180	297	250
225	EA-42	M20	295	334	636	158	210	208	60	73	122	180	360	250

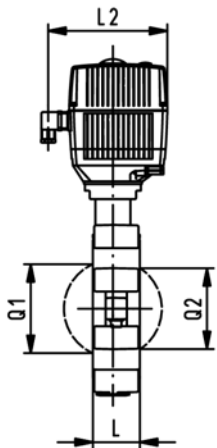
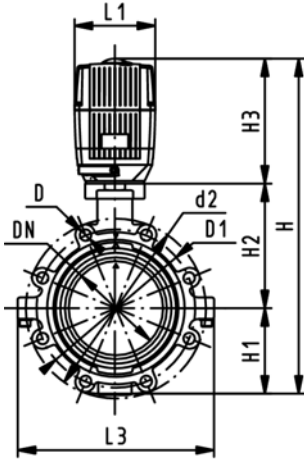
d [mm]	Q1 [mm]	Q2 [mm]
63	40	
75	54	35
90	67	50
110	88	74
140	113	97
160	139	123
225	178	169



## PROGEF Standard Lugstyle butterfly valve type 142 100-230V Without manual override

### Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension ANSI/ASME B 16.5 Class 150
- Overall length according to EN 558, ISO 5752
- Voltage 100-230 V, 50-60 Hz
- Control time 15 s/90°<) EA31
- Control time 25s/90°<) EA42
- Control range 90°<)
- Actuator with integrated emergency manual override standard



Inch	DN [mm]	d [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
2	50	63	10	1470	<b>199 142 362</b>	<b>199 142 382</b>	6.193
2 ½	65	75	10	2200	<b>199 142 363</b>	<b>199 142 383</b>	6.535
3	80	90	10	3000	<b>199 142 364</b>	<b>199 142 384</b>	6.911
4	100	110	10	6500	<b>199 142 365</b>	<b>199 142 385</b>	8.925
5	125	140	10	11500	<b>199 142 366</b>	<b>199 142 386</b>	10.755
6	150	160	10	16600	<b>199 142 367</b>	<b>199 142 387</b>	12.539
8	200	225	10	39600	<b>199 142 368</b>	<b>199 142 388</b>	21.747

Inch	Actuator unit type	D	D1 [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	Q1 [mm]
2	EA-31	UNC 5/8	121	150	399	77	134	188	45	122	180	150	40
2 ½	EA-31	UNC 5/8	140	170	411	83	140	188	46	122	180	160	54
3	EA-31	UNC 5/8	153	177	423	89	146	188	49	122	180	175	67
4	EA-31	UNC 5/8	191	216	459	104	167	188	56	122	180	244	88
5	EA-31	UNC 3/4	216	246	486	117	181	188	64	122	180	272	113
6	EA-31	UNC 3/4	242	273	507	130	189	188	72	122	180	297	139
8	EA-42	UNC 3/4	299	334	576	158	210	208	73	122	180	360	178

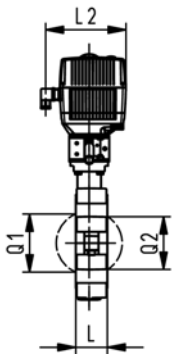
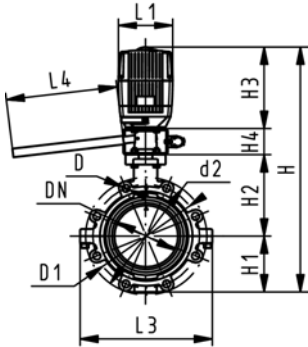
Inch	Q2 [mm]
2	
2 ½	35
3	50
4	74
5	97
6	123
8	169



## PROGEF Standard Lugstyle butterfly valve type 142 100-230V With manual override

### Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension ANSI/ASME B 16.5 Class 150
- Overall length according to EN 558, ISO 5752
- Voltage 100-230 V, 50-60 Hz
- Control time 15 s/90°<) EA31
- Control time 25s/90°<) EA42
- Control range 90°<)
- Actuator with integrated emergency manual override standard



Inch	DN [mm]	d [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
2	50	63	10	1470	<b>199 142 322</b>	<b>199 142 342</b>	6.193
2 ½	65	75	10	2200	<b>199 142 323</b>	<b>199 142 343</b>	6.535
3	80	90	10	3000	<b>199 142 324</b>	<b>199 142 344</b>	6.911
4	100	110	10	6500	<b>199 142 325</b>	<b>199 142 345</b>	8.925
5	125	140	10	11500	<b>199 142 326</b>	<b>199 142 346</b>	10.755
6	150	160	10	16600	<b>199 142 327</b>	<b>199 142 347</b>	12.539
8	200	225	10	39600	<b>199 142 328</b>	<b>199 142 348</b>	21.747

Inch	Actuator unit type	D	D1 [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]
2	EA-31	UNC 5/8	121	150	459	77	134	188	60	45	122	180	150
2 ½	EA-31	UNC 5/8	140	170	471	83	140	188	60	46	122	180	160
3	EA-31	UNC 5/8	153	177	483	89	146	188	60	49	122	180	175
4	EA-31	UNC 5/8	191	216	519	104	167	188	60	56	122	180	244
5	EA-31	UNC 3/4	216	246	546	117	181	188	60	64	122	180	272
6	EA-31	UNC 3/4	242	273	567	130	189	188	60	72	122	180	297
8	EA-42	UNC 3/4	299	334	636	158	210	208	60	73	122	180	360

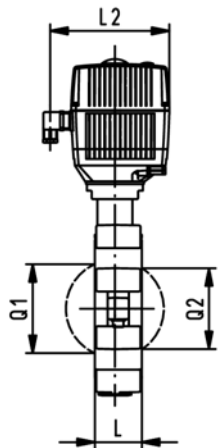
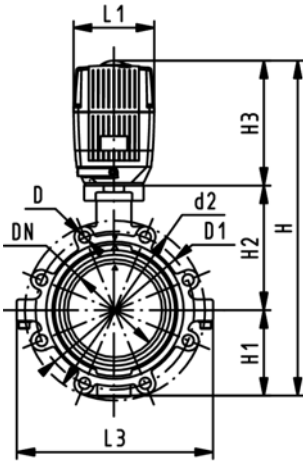
Inch	L4 [mm]	Q1 [mm]	Q2 [mm]
2	200	40	
2 ½	200	54	35
3	200	67	50
4	250	88	74
5	250	113	97
6	250	139	123
8	250	178	169



## PROGEF Standard Lugstyle butterfly valve type 142 24V Without manual override

### Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension ANSI/ASME B 16.5 Class 150
- Overall length according to EN 558, ISO 5752
- Voltage 24 V AC/DC
- Control time 15 s/90°<) EA31
- Control time 25s/90°<) EA42
- Control range 90°<)
- Actuator with integrated emergency manual override standard



Inch	DN [mm]	d [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
2	50	63	10	1470	<b>199 142 442</b>	<b>199 142 462</b>	6.193
2 ½	65	75	10	2200	<b>199 142 443</b>	<b>199 142 463</b>	6.535
3	80	90	10	3000	<b>199 142 444</b>	<b>199 142 464</b>	6.911
4	100	110	10	6500	<b>199 142 445</b>	<b>199 142 465</b>	8.925
5	125	140	10	11500	<b>199 142 446</b>	<b>199 142 466</b>	10.755
6	150	160	10	16600	<b>199 142 447</b>	<b>199 142 467</b>	12.539
8	200	225	10	39600	<b>199 142 448</b>	<b>199 142 468</b>	21.747

Inch	Actuator unit type	D	D1 [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	Q1 [mm]
2	EA-31	UNC 5/8	121	150	399	77	134	188	45	122	180	150	40
2 ½	EA-31	UNC 5/8	140	170	411	83	140	188	46	122	180	160	54
3	EA-31	UNC 5/8	153	177	423	89	146	188	49	122	180	175	67
4	EA-31	UNC 5/8	191	216	459	104	167	188	56	122	180	244	88
5	EA-31	UNC 3/4	216	246	486	117	181	188	64	122	180	272	113
6	EA-31	UNC 3/4	242	273	507	130	189	188	72	122	180	297	139
8	EA-42	UNC 3/4	299	334	576	158	210	208	73	122	180	360	178

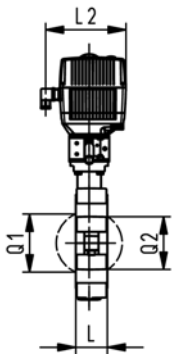
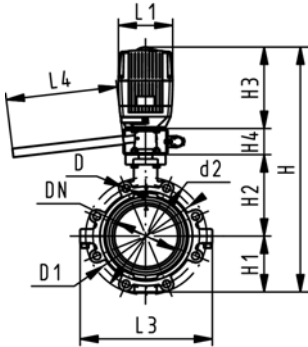
Inch	Q2 [mm]
2	
2 ½	35
3	50
4	74
5	97
6	123
8	169



# PROGEF Standard Lugstyle butterfly valve type 142 24V With manual override

## Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension ANSI/ASME B 16.5 Class 150
- Overall length according to EN 558, ISO 5752
- Voltage 24 V AC/DC
- Control time 15 s/90°<) EA31
- Control time 25s/90°<) EA42
- Control range 90°<)
- Actuator with integrated emergency manual override standard



Inch	DN [mm]	d [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
2	50	63	10	1470	<b>199 142 402</b>	<b>199 142 422</b>	6.193
2 ½	65	75	10	2200	<b>199 142 403</b>	<b>199 142 423</b>	6.535
3	80	90	10	3000	<b>199 142 404</b>	<b>199 142 424</b>	6.911
4	100	110	10	6500	<b>199 142 405</b>	<b>199 142 425</b>	8.925
5	125	140	10	11500	<b>199 142 406</b>	<b>199 142 426</b>	10.755
6	150	160	10	16600	<b>199 142 407</b>	<b>199 142 427</b>	12.539
8	200	225	10	39600	<b>199 142 408</b>	<b>199 142 428</b>	21.747

Inch	Actuator unit type	D	D1 [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]
2	EA-31	UNC 5/8	121	150	459	77	134	188	60	45	122	180	150
2 ½	EA-31	UNC 5/8	140	170	471	83	140	188	60	46	122	180	160
3	EA-31	UNC 5/8	153	177	483	89	146	188	60	49	122	180	175
4	EA-31	UNC 5/8	191	216	519	104	167	188	60	56	122	180	244
5	EA-31	UNC 3/4	216	246	546	117	181	188	60	64	122	180	272
6	EA-31	UNC 3/4	242	273	567	130	189	188	60	72	122	180	297
8	EA-42	UNC 3/4	299	334	636	158	210	208	60	73	122	180	360

Inch	L4 [mm]	Q1 [mm]	Q2 [mm]
2	200	40	
2 ½	200	54	35
3	200	67	50
4	250	88	74
5	250	113	97
6	250	139	123
8	250	178	169

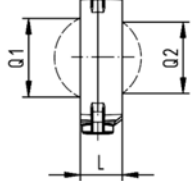
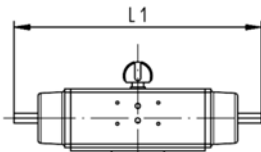
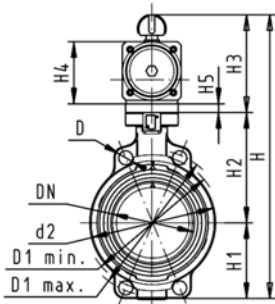


# Butterfly Valves Pneumatic

## Butterfly valve type 240 PP-H FC (Fail safe to close) Without manual override

### Model:

- Material: PP-H
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220
- Overall length according to EN 558, ISO 5752
- Control range 90°<



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	199 240 282	199 240 302	3.147
75	65	2 ½	10	2200	199 240 283	199 240 303	3.239
90	80	3	10	3000	199 240 284	199 240 304	3.369
110	100	4	10	6500	199 240 285	199 240 305	5.079
140	125	5	10	11500	199 240 286	199 240 306	6.529
160	150	6	10	16600	199 240 287	199 240 307	9.640
225	200	8	10	39600	199 240 288	199 240 308	13.299
280	250	10	8	55200	199 240 289	199 240 309	26.888
315	300	12	8	80000	199 240 290	199 240 310	33.459

d [mm]	Actuator unit type	D [mm]	D1 min. [mm]	D1 max. [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]
63	PA-30 FC	19	120.0	125.0	104	327	77	134	117	70	15	45	276
75	PA-30 FC	19	139.7	145.0	115	340	83	140	117	70	15	46	276
90	PA-35 FC	19	150.0	160.0	131	361	89	146	126	78	15	49	326
110	PA-40 FC	19	175.0	190.5	161	400	104	167	129	86		56	370
140	PA-45 FC	23	210.0	215.9	187	436	117	181	139	96		64	411
160	PA-50 FC	24	241.3	241.3	215	468	130	189	149	106		72	423
225	PA-55 FC	23	290.0	295.0	267	529	158	210	161	118		73	452
280	PA-65 FC	25	353.0	362.0	329	808	205	264	191	148		113	648
315	PA-70 FC	25	400.0	432.0	379	866	228	285	196	157		113	663

d [mm]	L2 [mm]	Q1 [mm]	Q2 [mm]
63	65	40	
75	65	54	35
90	72	67	50
110	80	88	74
140	90	113	97
160	100	139	123
225	112	178	169
280	137	210	207
315	145	256	253



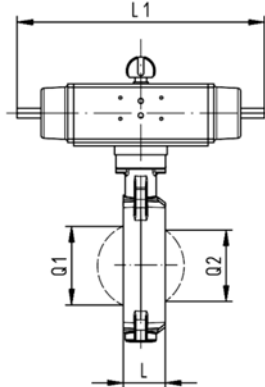
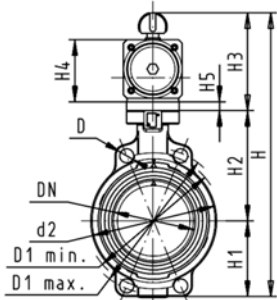


## Butterfly valve type 240 PP-H FO (Fail safe to open) Without manual override

### Model:

- Material: PP-H
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220
- Overall length according to EN 558, ISO 5752
- Control range 90°<

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>199 240 322</b>	<b>199 240 342</b>	3.147
75	65	2 ½	10	2200	<b>199 240 323</b>	<b>199 240 343</b>	3.239
90	80	3	10	3000	<b>199 240 324</b>	<b>199 240 344</b>	3.369
110	100	4	10	6500	<b>199 240 325</b>	<b>199 240 345</b>	5.079
140	125	5	10	11500	<b>199 240 326</b>	<b>199 240 346</b>	6.529
160	150	6	10	16600	<b>199 240 327</b>	<b>199 240 347</b>	9.640
225	200	8	10	39600	<b>199 240 328</b>	<b>199 240 348</b>	13.299
280	250	10	8	55200	<b>199 240 329</b>	<b>199 240 349</b>	30.484
315	300	12	8	80000	<b>199 240 330</b>	<b>199 240 350</b>	33.459



d [mm]	Actuator unit type	D [mm]	D1 min. [mm]	D1 max. [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]
63	PA-30 FO	19	120.0	125.0	104	327	77	134	117	70	15	45	276
75	PA-30 FO	19	139.7	145.0	115	340	83	140	117	70	15	46	276
90	PA-35 FO	19	150.0	160.0	131	361	89	146	126	78	15	49	326
110	PA-40 FO	19	175.0	190.5	161	400	104	167	129	86		56	370
140	PA-45 FO	23	210.0	215.9	187	436	117	181	139	96		64	411
160	PA-50 FO	24	241.3	241.3	215	468	130	189	149	106		72	423
225	PA-55 FO	23	290.0	295.0	267	529	158	210	161	118		73	452
280	PA-65 FO	25	353.0	362.0	329	808	205	264	191	148		113	648
315	PA-70 FO	25	400.0	432.0	379	866	228	285	196	157		113	663

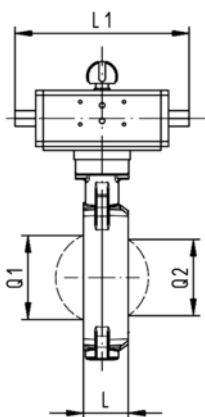
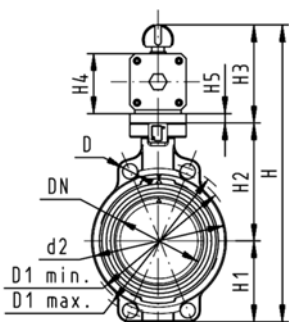
d [mm]	L2 [mm]	Q1 [mm]	Q2 [mm]
63	65	40	
75	65	54	35
90	72	67	50
110	80	88	74
140	90	113	97
160	100	139	123
225	112	178	169
280	137	210	207
315	145	256	253



## Butterfly valve type 240 PP-H DA (Double acting) Without manual override

### Model:

- Material: PP-H
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220
- Overall length according to EN 558, ISO 5752
- Control range 90°<



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>199 240 362</b>	<b>199 240 382</b>	1.997
75	65	2 ½	10	2200	<b>199 240 363</b>	<b>199 240 383</b>	2.089
90	80	3	10	3000	<b>199 240 364</b>	<b>199 240 384</b>	2.700
110	100	4	10	6500	<b>199 240 365</b>	<b>199 240 385</b>	3.331
140	125	5	10	11500	<b>199 240 366</b>	<b>199 240 386</b>	3.779
160	150	6	10	16600	<b>199 240 367</b>	<b>199 240 387</b>	6.119
225	200	8	10	39600	<b>199 240 368</b>	<b>199 240 388</b>	7.299
280	250	10	8	55200	<b>199 240 369</b>	<b>199 240 389</b>	18.188
315	300	12	8	80000	<b>199 240 370</b>	<b>199 240 390</b>	24.263

d [mm]	Actuator unit type	D [mm]	D1 min. [mm]	D1 max. [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]
63	PA-35 DA	19	120.0	125.0	104	317	77	134	107	60	15	45	177
75	PA-35 DA	19	139.7	145.0	115	330	83	140	107	60	15	46	177
90	PA-40 DA	19	150.0	160.0	131	348	89	146	113	66	15	49	190
110	PA-45 DA	19	175.0	190.5	161	372	104	167	102	71		56	235
140	PA-45 DA	23	210.0	215.9	187	408	117	181	111	78		64	235
160	PA-55 DA	24	241.3	241.3	215	448	130	189	129	86		72	279
225	PA-55 DA	23	290.0	295.0	267	507	158	210	139	96		73	279
280	PA-65 DA	25	353.0	362.0	329	748	205	264	161	118		113	350
315	PA-70 DA	25	400.0	432.0	379	816	228	285	173	130		113	381

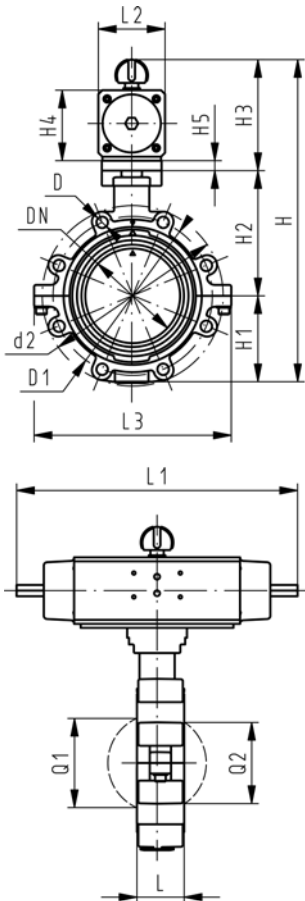
d [mm]	L2 [mm]	Q1 [mm]	Q2 [mm]
63	55	40	
75	55	54	35
90	60	67	50
110	65	88	74
140	72	113	97
160	80	139	123
225	90	178	169
280	112	210	207
315	125	256	253



# PROGEF Standard Lugstyle butterfly valve type 241 FC (Fail safe to close) Without manual override

## Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10
- Overall length according to EN 558, ISO 5752
- Control range 90°<



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>199 241 282</b>	<b>199 241 302</b>	5.233
75	65	2 ½	10	2200	<b>199 241 283</b>	<b>199 241 303</b>	5.575
90	80	3	10	3000	<b>199 241 284</b>	<b>199 241 304</b>	6.580
110	100	4	10	6500	<b>199 241 285</b>	<b>199 241 305</b>	9.163
140	125	5	10	11500	<b>199 241 286</b>	<b>199 241 306</b>	11.995
160	150	6	10	16600	<b>199 241 287</b>	<b>199 241 307</b>	16.100
225	200	8	10	39600	<b>199 241 288</b>	<b>199 241 308</b>	23.247

d [mm]	Actuator unit type	D	D1 [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]
63	PA-30 FC	M16	125	150	328	77	134	117	70	15	45	276	65	150
75	PA-30 FC	M16	145	170	340	83	140	117	70	15	46	276	65	160
90	PA-35 FC	M16	160	184	361	89	146	126	78	15	49	326	72	205
110	PA-40 FC	M16	180	216	400	104	167	129	86	15	56	370	80	244
140	PA-45 FC	M16	210	246	437	117	181	139	96	15	64	411	90	272
160	PA-50 FC	M20	240	273	468	130	189	149	106	15	72	423	100	297
225	PA-55 FC	M20	295	334	529	158	210	161	118	15	73	452	112	360

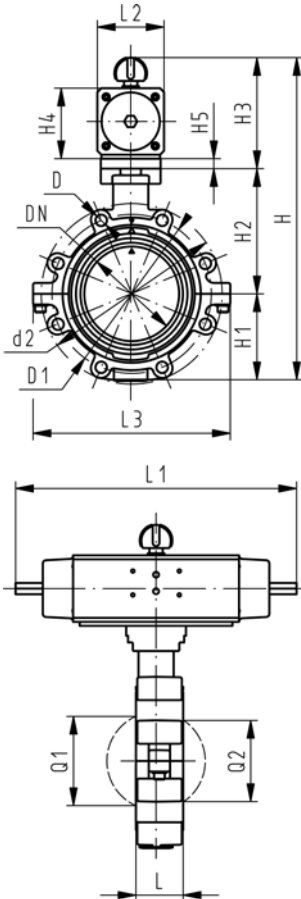
d [mm]	Q1 [mm]	Q2 [mm]
63	40	
75	54	35
90	67	50
110	88	74
140	113	97
160	139	123
225	178	169



# PROGEF Standard Lugstyle butterfly valve type 241 FO (Fail safe to open) Without manual override

## Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10
- Overall length according to EN 558, ISO 5752
- Control range 90°<



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>199 241 322</b>	<b>199 241 342</b>	5.233
75	65	2 ½	10	2200	<b>199 241 323</b>	<b>199 241 343</b>	5.575
90	80	3	10	3000	<b>199 241 324</b>	<b>199 241 344</b>	6.580
110	100	4	10	6500	<b>199 241 325</b>	<b>199 241 345</b>	9.163
140	125	5	10	11500	<b>199 241 326</b>	<b>199 241 346</b>	11.995
160	150	6	10	16600	<b>199 241 327</b>	<b>199 241 347</b>	16.100
225	200	8	10	39600	<b>199 241 328</b>	<b>199 241 348</b>	23.247

d [mm]	Actuator unit type	D	D1 [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]
63	PA-30 FO	M16	125	150	328	77	134	117	70	15	45	276	65	150
75	PA-30 FO	M16	145	170	340	83	140	117	70	15	46	276	65	160
90	PA-35 FO	M16	160	184	361	89	146	126	78	15	49	326	72	205
110	PA-40 FO	M16	180	216	400	104	167	129	86		56	370	80	244
140	PA-45 FO	M16	210	246	437	117	181	139	96		64	411	90	272
160	PA-50 FO	M20	240	273	468	130	189	149	106		72	423	100	297
225	PA-55 FO	M20	295	334	529	158	210	161	118		73	452	112	360

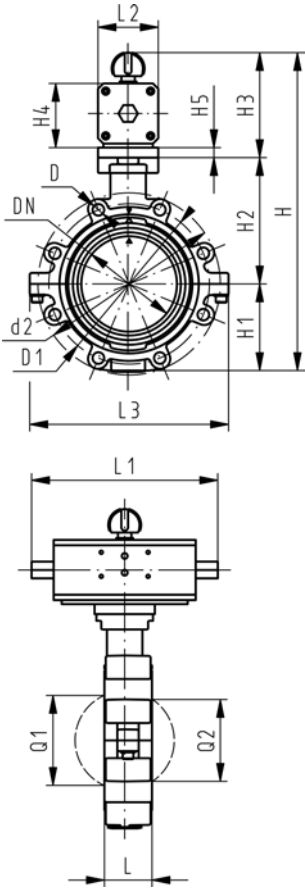
d [mm]	Q1 [mm]	Q2 [mm]
63	40	
75	54	35
90	67	50
110	88	74
140	113	97
160	139	123
225	178	169



## PROGEF Standard Lugstyle butterfly valve type 241 DA (Double acting) Without manual override

### Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10
- Overall length according to EN 558, ISO 5752
- Control range 90°<



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>199 241 362</b>	<b>199 241 382</b>	4.083
75	65	2 ½	10	2200	<b>199 241 363</b>	<b>199 241 383</b>	4.425
90	80	3	10	3000	<b>199 241 364</b>	<b>199 241 384</b>	5.911
110	100	4	10	6500	<b>199 241 365</b>	<b>199 241 385</b>	7.415
140	125	5	10	11500	<b>199 241 366</b>	<b>199 241 386</b>	9.245
160	150	6	10	16600	<b>199 241 367</b>	<b>199 241 387</b>	12.579
225	200	8	10	39600	<b>199 241 368</b>	<b>199 241 388</b>	17.247

d [mm]	Actuator unit type	D	D1 [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]
63	PA-35 DA	M16	125	150	318	77	134	107	60	15	45	177	55	150
75	PA-35 DA	M16	145	170	330	83	140	107	60	15	46	177	55	160
90	PA-40 DA	M16	160	184	348	89	146	113	66	15	49	190	60	205
110	PA-45 DA	M16	180	216	373	104	167	102	71	15	56	235	65	244
140	PA-45 DA	M16	210	246	409	117	181	111	78	15	64	235	72	272
160	PA-55 DA	M20	240	273	448	130	189	129	86	15	72	279	80	297
225	PA-55 DA	M20	295	334	507	158	210	139	96	15	73	279	90	360

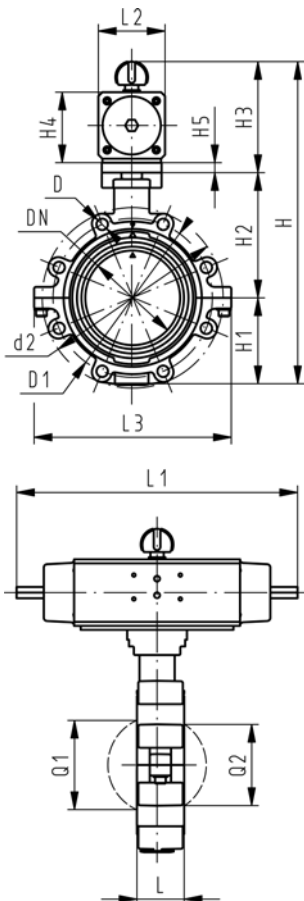
d [mm]	Q1 [mm]	Q2 [mm]
63	40	
75	54	35
90	67	50
110	88	74
140	113	97
160	139	123
225	178	169



## PROGEF Standard Lugstyle butterfly valve type 242 FC (Fail safe to close) Without manual override

### Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension ANSI/ASME B 16.5 Class 150
- Overall length according to EN 558, ISO 5752
- Control range 90°<



Inch	DN [mm]	d [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
2	50	63	10	1470	<b>199 242 282</b>	<b>199 242 302</b>	5.233
2 ½	65	75	10	2200	<b>199 242 283</b>	<b>199 242 303</b>	5.575
3	80	90	10	3000	<b>199 242 284</b>	<b>199 242 304</b>	5.951
4	100	110	10	6500	<b>199 242 285</b>	<b>199 242 305</b>	9.163
5	125	140	10	11500	<b>199 242 286</b>	<b>199 242 306</b>	11.995
6	150	160	10	16600	<b>199 242 287</b>	<b>199 242 307</b>	16.100
8	200	225	10	39600	<b>199 242 288</b>	<b>199 242 308</b>	23.247

Inch	Actuator unit type	D	D1 [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]
2	PA-30 FC	UNC 5/8	121	150	328	77	134	117	70	15	45	276	65
2 ½	PA-30 FC	UNC 5/8	140	170	340	83	140	117	70	15	46	276	65
3	PA-35 FC	UNC 5/8	153	177	361	89	146	126	78	15	49	326	72
4	PA-40 FC	UNC 5/8	191	216	400	104	167	129	86		56	370	80
5	PA-45 FC	UNC 3/4	216	246	437	117	181	139	96		64	411	90
6	PA-50 FC	UNC 3/4	242	273	468	130	189	149	106		72	423	100
8	PA-55 FC	UNC 3/4	299	334	529	158	210	161	118		73	452	112

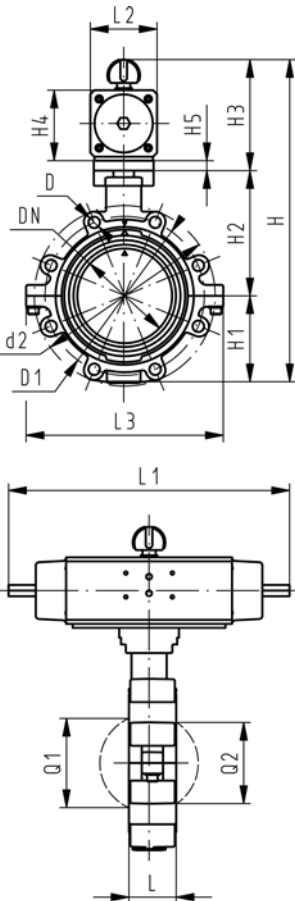
Inch	L3 [mm]	Q1 [mm]	Q2 [mm]
2	150	40	
2 ½	160	54	35
3	175	67	50
4	244	88	74
5	272	113	97
6	297	139	123
8	360	178	169



# PROGEF Standard Lugstyle butterfly valve type 242 FO (Fail safe to open) Without manual override

## Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension ANSI/ASME B 16.5 Class 150
- Overall length according to EN 558, ISO 5752
- Control range 90°<



Inch	DN [mm]	d [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
2	50	63	10	1470	<b>199 242 322</b>	<b>199 242 342</b>	5.233
2 ½	65	75	10	2200	<b>199 242 323</b>	<b>199 242 343</b>	5.575
3	80	90	10	3000	<b>199 242 324</b>	<b>199 242 344</b>	5.951
4	100	110	10	6500	<b>199 242 325</b>	<b>199 242 345</b>	9.163
5	125	140	10	11500	<b>199 242 326</b>	<b>199 242 346</b>	11.995
6	150	160	10	16600	<b>199 242 327</b>	<b>199 242 347</b>	16.100
8	200	225	10	39600	<b>199 242 328</b>	<b>199 242 348</b>	23.247

Inch	Actuator unit type	D	D1 [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]
2	PA-30 FO	UNC 5/8	121	150	328	77	134	117	70	15	45	276	65
2 ½	PA-30 FO	UNC 5/8	140	170	340	83	140	117	70	15	46	276	65
3	PA-35 FO	UNC 5/8	153	177	361	89	146	126	78	15	49	326	72
4	PA-40 FO	UNC 5/8	191	216	400	104	167	129	86		56	370	80
5	PA-45 FO	UNC 3/4	216	246	437	117	181	139	96		64	411	90
6	PA-50 FO	UNC 3/4	242	273	468	130	189	149	106		72	423	100
8	PA-55 FO	UNC 3/4	299	334	529	158	210	161	118		73	452	112

Inch	L3 [mm]	Q1 [mm]	Q2 [mm]
2	150	40	
2 ½	160	54	35
3	175	67	50
4	244	88	74
5	272	113	97
6	297	139	123
8	360	178	169

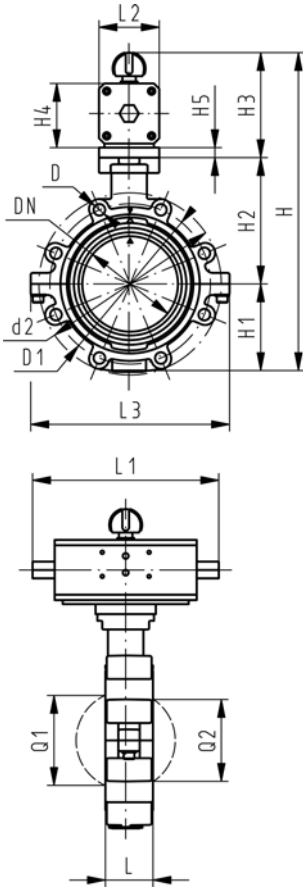




# PROGEF Standard Lugstyle butterfly valve type 242 DA (Double acting) Without manual override

## Model:

- Material: PP-H
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension ANSI/ASME B 16.5 Class 150
- Overall length according to EN 558, ISO 5752
- Control range 90°<



Inch	DN [mm]	d [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
2	50	63	10	1470	<b>199 242 362</b>	<b>199 242 382</b>	4.083
2 ½	65	75	10	2200	<b>199 242 363</b>	<b>199 242 383</b>	4.425
3	80	90	10	3000	<b>199 242 364</b>	<b>199 242 384</b>	5.282
4	100	110	10	6500	<b>199 242 365</b>	<b>199 242 385</b>	7.415
5	125	140	10	11500	<b>199 242 366</b>	<b>199 242 386</b>	9.245
6	150	160	10	16600	<b>199 242 367</b>	<b>199 242 387</b>	12.579
8	200	225	10	39600	<b>199 242 368</b>	<b>199 242 388</b>	17.247

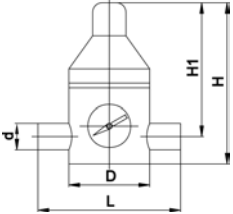
Inch	Actuator unit type	D	D1 [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]
2	PA-35 DA	UNC 5/8	121	150	318	77	134	107	60	15	45	177	55
2 ½	PA-35 DA	UNC 5/8	140	170	330	83	140	107	60	15	46	177	55
3	PA-40 DA	UNC 5/8	153	177	348	89	146	113	66	15	49	190	60
4	PA-45 DA	UNC 5/8	191	216	373	104	167	102	71		56	235	65
5	PA-45 DA	UNC 3/4	216	246	409	117	181	111	78		64	235	72
6	PA-55 DA	UNC 3/4	242	273	448	130	189	129	86		72	279	80
8	PA-55 DA	UNC 3/4	299	334	507	158	210	139	96		73	279	90

Inch	L3 [mm]	Q1 [mm]	Q2 [mm]
2	150	40	
2 ½	160	54	35
3	175	67	50
4	244	88	74
5	272	113	97
6	297	139	123
8	360	178	169



# Process Control Valves

## PROGEF Standard Pressure reducing valve type V182 With fusion spigots metric

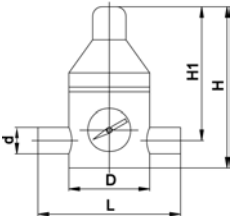


Model:

- Material: PP-H

d [mm]	DN [mm]	Pressure range [bar]	EPDM Code	FPM Code	kg	D [mm]	L [mm]	H [mm]	H1 [mm]
16	10	0.5 - 10	<b>199 041 621</b>	<b>199 041 631</b>	0.540	70	134	130	100
20	15	0.5 - 10	<b>199 041 622</b>	<b>199 041 632</b>	0.540	70	134	130	100
25	20	0.5 - 10	<b>199 041 623</b>	<b>199 041 633</b>	1.020	100	174	180	134
32	25	0.5 - 10	<b>199 041 624</b>	<b>199 041 634</b>	1.300	100	174	180	134
40	32	0.5 - 10	<b>199 041 625</b>	<b>199 041 635</b>	2.240	130	224	230	175
50	40	0.5 - 10	<b>199 041 626</b>	<b>199 041 636</b>	2.240	130	224	230	175

## Pressure reducing valve type V 82 PP-H With fusion spigots metric



Model:

- Material: PP-H

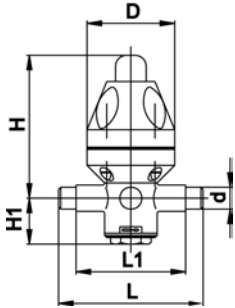
d [mm]	DN [mm]	Pressure range [bar]	EPDM Code	PTFE Code	kg	D [mm]	L [mm]	H [mm]	H1 [mm]
16	10	0.5 - 10	<b>199 041 032</b>	<b>199 041 042</b>	0.550	70	134	130	100
20	15	0.5 - 10	<b>199 041 033</b>	<b>199 041 043</b>	0.550	70	134	130	100
25	20	0.5 - 10	<b>199 041 034</b>	<b>199 041 044</b>	1.030	100	174	180	134
32	25	0.5 - 10	<b>199 041 035</b>	<b>199 041 045</b>	1.300	100	174	180	134
40	32	0.5 - 10	<b>199 041 036</b>	<b>199 041 046</b>	2.240	130	224	230	175
50	40	0.5 - 10	<b>199 041 037</b>	<b>199 041 047</b>	2.240	130	224	230	175



## PROGEF Standard Pressure reducing valve type V782 With fusion spigots metric

Model:

- Material: PP-H



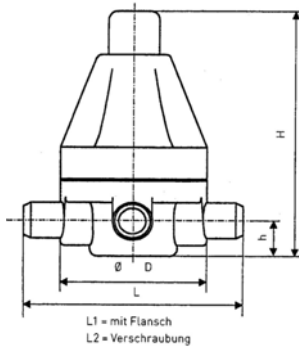
d [mm]	DN [mm]	Pressure range [bar]	EPDM Code	PTFE Code	kg	D [mm]	L [mm]	L1 [mm]	H [mm]	H1 [mm]
16	10	0.5 - 10	199 041 072	199 041 078	0.450	83	134	102	138	48
20	15	0.5 - 10	199 041 073	199 041 079	0.460	83	134	102	138	48
25	20	0.5 - 10	199 041 074	199 041 080	1.240	113	154	110	205	65
32	25	0.5 - 10	199 041 075	199 041 081	1.250	113	154	110	205	65
40	32	0.5 - 10	199 041 076	199 041 082	3.910	165	224	162	248	95
50	40	0.5 - 10	199 041 077	199 041 083	3.930	165	224	162	248	95



## PROGEF Standard Pressure relief valve type V185 With fusion spigots metric

Model:

- Material: PP-H



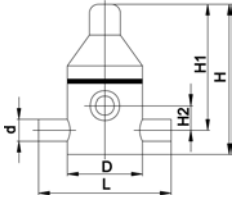
d [mm]	DN [mm]	Pressure range [bar]	EPDM Code	PTFE Code	kg	D [mm]	L [mm]	H [mm]	H1 [mm]
16	10	0.5 - 10	199 041 367	199 041 337	0.300	83	134	137	20
20	15	0.5 - 10	199 041 368	199 041 338	0.300	83	134	137	20
25	20	0.5 - 10	199 041 369	199 041 339	0.300	83	134	137	20
32	25	0.5 - 10	199 041 370	199 041 340	0.900	112	174	199	27
40	32	0.5 - 10	199 041 371	199 041 341	0.900	112	174	199	43
50	40	0.5 - 10	199 041 372	199 041 342	4.400	165	224	290	43
63	50	0.5 - 10	199 041 373	199 041 343	4.500	165	244	290	43



## PROGEF Standard Pressure relief valve type V85 With fusion spigots metric

Model:

- Material: PP-H



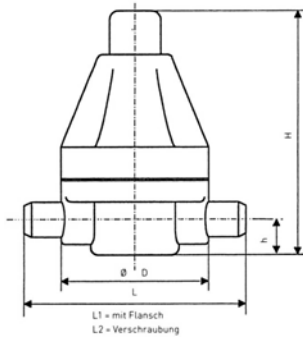
d [mm]	DN [mm]	Pressure range [bar]	EPDM Code	PTFE Code	kg	D [mm]	L [mm]	H [mm]	H1 [mm]	H2 [mm]
75	65	1.0 - 6	199 041 926	199 041 895	6.300	180	284	295	250	70
90	80	1.0 - 6	199 041 893	199 041 896	9.500	200	300	400	340	95
110	100	1.0 - 4	199 041 894	199 041 897	19.900	250	380	475	405	110



## PROGEF Standard Pressure retaining valve type V186 With fusion spigots metric

Model:

- Material: PP-H



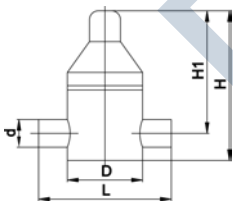
d [mm]	DN [mm]	Pressure range [bar]	EPDM Code	PTFE Code	kg	D [mm]	L [mm]	H [mm]	H1 [mm]
16	10	0.5 - 10	199 041 386	199 041 316	0.300	83	134	137	20
20	15	0.5 - 10	199 041 387	199 041 317	0.300	83	134	137	20
25	20	0.5 - 10	199 041 388	199 041 318	0.300	83	134	137	20
32	25	0.5 - 10	199 041 389	199 041 319	0.900	112	174	199	27
40	32	0.5 - 10	199 041 390	199 041 320	0.900	112	174	199	43
50	40	0.5 - 10	199 041 391	199 041 321	4.400	165	224	290	43
63	50	0.5 - 10	199 041 392	199 041 322	4.500	165	244	290	43



## PROGEF Standard Pressure retaining valve type V86 With fusion spigots metric

Model:

- Material: PP-H



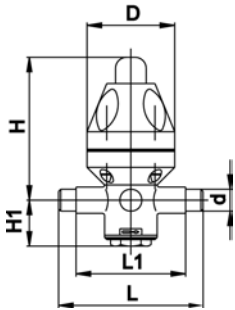
d [mm]	DN [mm]	Pressure range [bar]	EPDM Code	PTFE Code	kg	D [mm]	L [mm]	H [mm]	H1 [mm]
75	65	0.2 - 4	199 041 882	199 041 887	5.900	180	284	275	230
75	65	1.0 - 6	199 041 883	199 041 888	5.900	180	284	275	230
90	80	0.2 - 4	199 041 884	199 041 889	12.900	250	360	410	320
90	80	1.0 - 6	199 041 885	199 041 890	12.900	250	360	410	320
110	100	1.0 - 4	199 041 886	199 041 891	14.500	250	380	485	415



## PROGEF Standard Pressure retaining valve type V786 With fusion spigots metric

Model:

- Material: PP-H



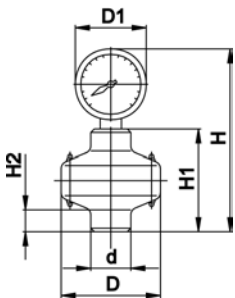
d [mm]	DN [mm]	Pressure range [bar]	EPDM Code	PTFE Code	kg	D [mm]	L [mm]	L1 [mm]	H [mm]	H1 [mm]
16	10	0.5 - 10	199 041 102	199 041 108	0.450	83	134	102	138	38
20	15	0.5 - 10	199 041 103	199 041 109	0.450	83	134	102	138	38
25	20	0.5 - 10	199 041 104	199 041 110	1.280	112	154	110	205	55
32	25	0.5 - 10	199 041 105	199 041 111	1.280	112	154	110	205	55
40	32	0.5 - 4	199 041 106	199 041 112	3.480	165	224	162	248	85
50	40	0.5 - 4	199 041 107	199 041 113	3.480	165	224	162	248	85



## PROGEF Standard Gauge guard type Z700 With manometer 0-10 bar

Model:

- Material: PP-H



d [mm]	PTFE Code	kg	G_R	D [mm]	D1 [mm]	H [mm]	H1 [mm]	H2 [mm]
25	199 041 002	0.250	¼	72	63	129	71	15
32	199 041 003	0.540	½	100	100	210	90	22

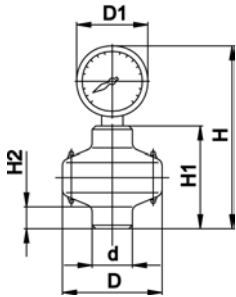


## PROGEF Standard Gauge guard type Z700 With manometer 0-6 bar

Model:

- Material: PP-H

d [mm]	PTFE Code	kg	G_R	D [mm]	D1 [mm]	H [mm]	H1 [mm]	H2 [mm]
25	199 041 294	0.250	¼	72	63	129	71	15
32	199 041 295	0.540	½	100	100	210	90	22

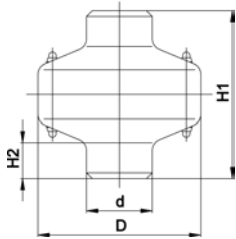


## PROGEF Standard Gauge guard type Z701 Without manometer

Model:

- Material: PP-H

d [mm]	PTFE Code	kg	G_R	D [mm]	H1 [mm]	H2 [mm]
25	199 041 008	0.100	¼	72	71	15
32	199 041 009	0.170	½	100	90	22



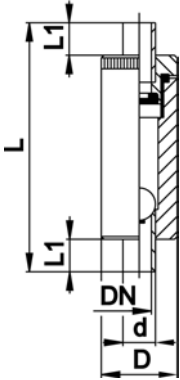


## PROGEF Standard Ventilating and bleed valve type V91 With fusion spigots metric

Model:

- Material: PP-H

d [mm]	DN [mm]	PN	FPM Code	kg	D [mm]	L [mm]	L1 [mm]
16	10	10	<b>199 041 247</b>	0.070	35	114	14
20	15	10	<b>199 041 248</b>	0.100	40	124	16
25	20	10	<b>199 041 249</b>	0.140	45	144	19
32	25	10	<b>199 041 250</b>	0.200	55	154	22
40	32	10	<b>199 041 251</b>	0.390	70	174	26
50	40	10	<b>199 041 252</b>	0.500	80	194	31
63	50	10	<b>199 041 253</b>	0.910	95	224	38
75	65	10	<b>199 041 254</b>	1.360	115	284	44
90	80	10	<b>199 041 255</b>	2.300	150	300	51

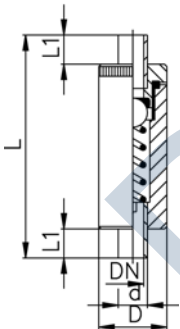


## PROGEF Standard Ventilating valve type V95 With fusion spigots metric

Model:

- Material: PP-H

d [mm]	DN [mm]	PN	FPM Code	kg	D [mm]	L [mm]	L1 [mm]
16	10	10	<b>199 041 274</b>	0.070	35	114	14
20	15	10	<b>199 041 275</b>	0.100	40	124	16
25	20	10	<b>199 041 276</b>	0.140	45	144	19
32	25	10	<b>199 041 277</b>	0.200	55	154	22
40	32	10	<b>199 041 278</b>	0.390	70	174	26
50	40	10	<b>199 041 279</b>	0.500	80	194	31
63	50	10	<b>199 041 280</b>	0.910	95	224	38
75	65	10	<b>199 041 281</b>	1.360	115	284	44
90	80	10	<b>199 041 282</b>	2.300	150	300	51



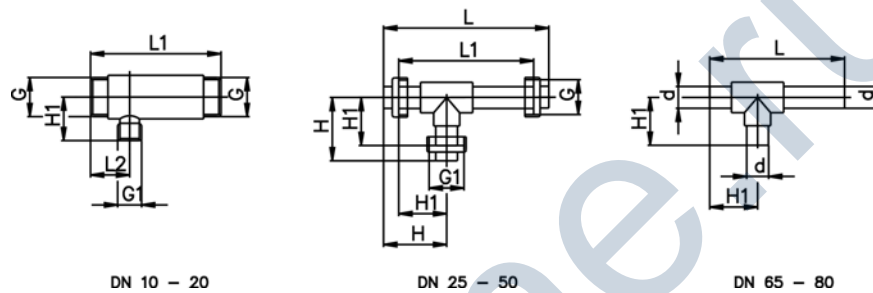


## PROGEF Standard Water jet suction pump type P20

Model:

- Material: PP-H
- DN 10-20: BSP parallel female thread
- DN 25-50: Fusion socket metric
- DN 65-80: Fusion spigot metric

d [mm]	DN [mm]	PN	EPDM Code	kg	G [inch]	G1 [inch]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]
16	10	10	199 041 129	0.100	R 3/4	R 3/4		110	40		35
20	15	10	199 041 130	0.170	R 1	R 3/4		125	40		35
25	20	10	199 041 131	0.270	R 1 1/4	R 3/4		145	45		45
32	25	10	199 041 132	0.400	R 1 1/2	R 1 1/2	245	195		96	71
40	32	10	199 041 133	0.690	R 2	R 2	297	239		116	87
50	40	10	199 041 134	1.090	R 2 1/4	R 2 1/4	369	301		139	105
63	50	10	199 041 135	1.930	R 2 3/4	R 2 3/4	433	351		169	128
75	65	10	199 041 136	1.510	R 1	-	388				115
90	80	10	199 041 137	2.570	R 2 3/4	-	465				149



DN 10 - 20

DN 25 - 50

DN 65 - 80

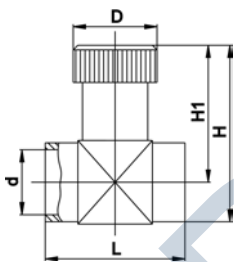


## PROGEF Standard Throttle valve type V251 With fusion sockets metric

Model:

- Material: PP-H

d [mm]	DN [mm]	PN	EPDM Code	FPM Code	kg	D [mm]	L [mm]	H [mm]	H1 [mm]
16	10	10	199 041 217	199 041 224	0.100	29	47	57	45
20	15	10	199 041 218	199 041 225	0.124	35	55	66	51
25	20	10	199 041 219	199 041 226	0.080	40	66	80	63
32	25	10	199 041 220	199 041 227	0.150	47	80	96	75
40	32	10	199 041 221	199 041 228	0.001	56	100	111	86
50	40	10	199 041 222	199 041 229	0.419	70	120	133	101
63	50	10	199 041 223	199 041 230	0.600	88	146	158	118



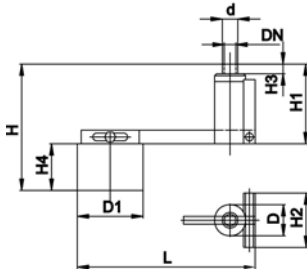


## PROGEF Standard Float valve type V140 With fusion spigots metric

### Model:

- Material: PP-H

- Lever 1:10

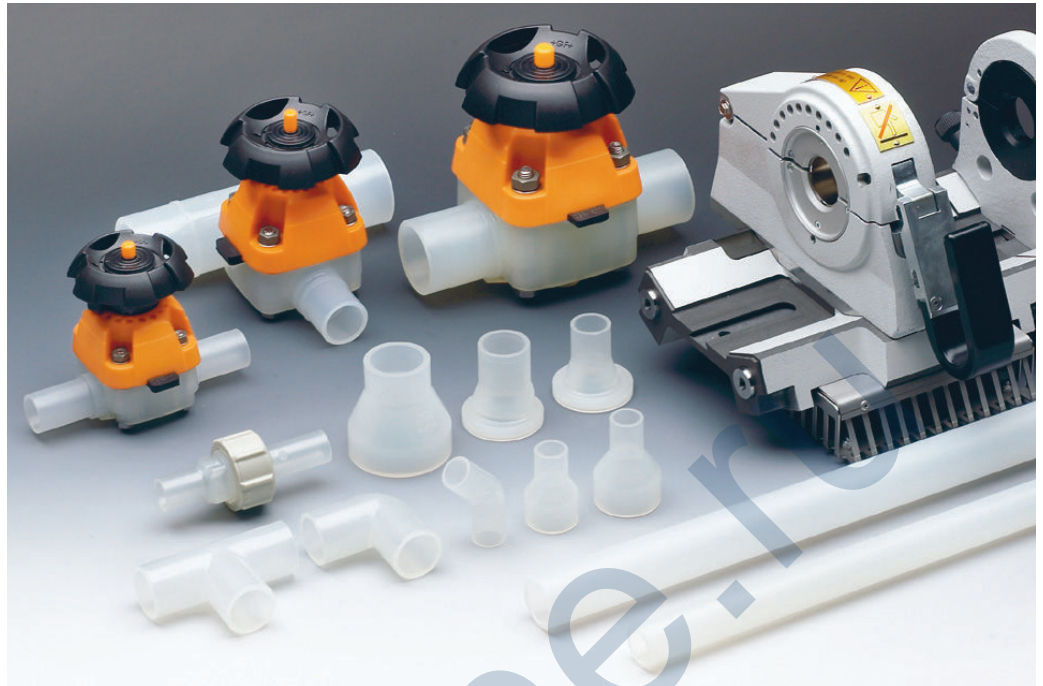


d [mm]	DN [mm]	PN	EPDM Code	FPM Code	kg
16	10	6	199 041 165	199 041 174	0.460
20	15	6	199 041 166	199 041 175	0.500
25	20	6	199 041 167	199 041 176	1.382
32	25	6	199 041 168	199 041 177	2.140
40	32	6	199 041 169	199 041 178	3.250
50	40	6	199 041 170	199 041 179	4.400
63	50	6	199 041 171	199 041 180	5.800
75	65	6	199 041 172	199 041 181	7.400
90	80	6	199 041 173	199 041 182	8.200

d [mm]	D [mm]	D1 [mm]	L [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]
16	45	125	380	270	120	80	14	130
20	45	125	380	270	120	80	16	130
25	65	160	530	340	160	110	19	170
32	65	160	530	345	165	110	22	170
40	90	225	720	440	210	130	26	210
50	90	225	720	445	215	130	31	210
63	130	315	975	595	255	160	38	290
75	130	315	975	600	260	160	44	290
90	150	355	1140	640	290	180	51	340



## PROGEF® Natural



- Pipes
- Butt Fusion System

Rtt-Prime

# PROGEF® Natural (natural)

## Pressure/temperature diagram for PP

### PROGEF® Natural

The following pressure/temperature diagram for PROGEF® Natural pipes and fittings is valid for a lifetime of 25 years.

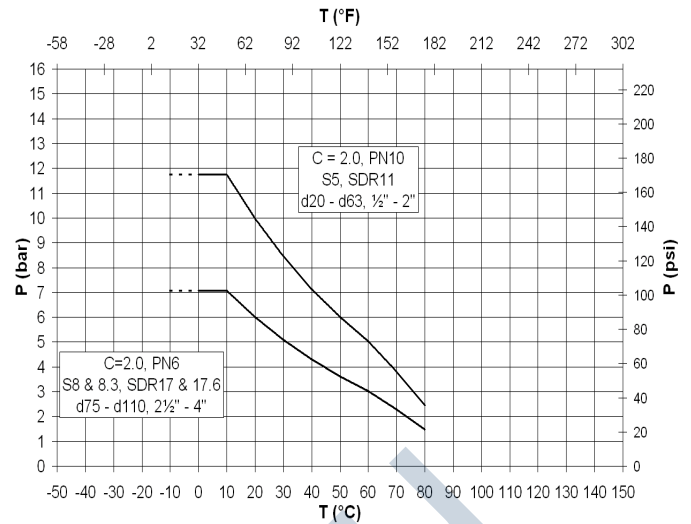
The design factor of 2.0 recommended by GF is incorporated.

It can be used for water or media resembling water, in other words, media which have no derating factor regarding the chemical resistance.

**Remark:** Please take into account the pressure/temperature diagrams for valves and special fittings. Because of the construction and/or sealing material used, differences are possible when compared with pipes and fittings. This information can be found in the planning fundamentals of the relevant types of valves, respectively special fittings.

**Remark:** Using PROGEF® Natural at higher temperatures can lead to a discoloration of the material.

In case of applications with temperatures in the range of the dotted lines please contact your GF representative.



P Permissible pressure in bar, psi  
T Temperature in °C, °F

# PROGEF Natural – System Specification






<b>Material</b>	Polypropylene Random Copolymer
Colour	Unpigmented, translucent
Density	~0.90g/cm <sup>3</sup> (ISO 1183 / ASTM D 792)
Surface tension	30–35mJ/m <sup>2</sup>
Linear expansion coefficient	0.15mm/m °K (DIN 53752)
E-modulus	900N/mm <sup>2</sup> (ISO 527/ASTM D 790)
Thermal conductivity	0.23W/mK (EN 12664)
Surface resistivity	>10 <sup>16</sup> Ω (IEC 60093)
<b>Dimension</b>	d20–d110 in accordance with EN ISO 15494
<b>Pressure Rating</b>	Pipes/Fittings/Diaphragm valves: d20–d63 SDR11, PN10, c=2.0 d75–d110 SDR17.6, PN6, c=2.0
<b>Temperature Rating</b>	from 0 °C to 80 °C [<60 °C for valves] (32 °F–176 °F)
<b>Production</b>	Fittings/valves: injection moulded Pipes: extruded
<b>Surface Finish</b>	Inner surface Ra ≤ 1 µm (39 µin)
<b>Marking</b>	Fittings, pipes and valves are embossed with a permanent identification during the production process to ensure full traceability: Lot No Material Dimension Pressure Rating
<b>Testing and Inspection</b> (EN ISO 15494)	Inclusions Visual inspection Surface finish Dimension tolerance Pressure testing Full product range passed the Initial Type Test (ITT)
<b>Approvals/Conformance</b> <sup>(1)</sup>	FDA CFR 21 177.1520 USP 25 class VI (physiological non-toxic)
<b>Welding Technology</b>	BCF Plus, bead and crevice free fusion IR Plus, infrared fusion (DVS 2207-6) Butt fusion (DVS 2207-11)
<b>Documentation</b> <sup>(2)</sup>	Certificate of Conformance with FDA, USP EN 10204 2.2 EN 10204 3.1 ASME BPE
<b>Packing</b>	Pipes: Capped & single bagged Fittings/valves: Multiple components single bagged in specified bag
<b>Labeling</b>	Brand Name Product Description Code Number Material Dimension CE-labeling <sup>(3)</sup> Approvals
<b>Main Applications</b>	Uses include cost effective, pure distribution of DI-water and critical biological fluids where chemical sanitisation is needed. <b>B</b> ead and <b>C</b> revice <b>F</b> ree jointing and minimal metallic leachout ensure the highest product quality. Highly resistant to impact, abrasion and many chemicals make it ideal for slurries transportation in the semiconductor industry.

<sup>(1)</sup> For thermoplastic material only

<sup>(2)</sup> On request

<sup>(3)</sup> From 2008 on

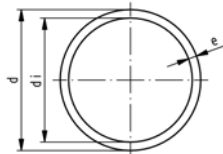
# PROGEF Natural Pipes, Fittings, Unions, Flanges and Flange Adaptors

		Page
	Pipes	320
	Fittings for Butt Fusion	321
	Adaptor Fittings for Butt Fusion	324
	Unions and Sanitary Adaptors	327
	Flange Adaptors, Flanges and Gaskets for Butt Fusion	331

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# Pipes

68 48 01



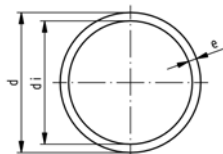
## PROGEF Natural, S5/SDR11 (PN10)

### Model:

- Material: PP-R unpigmented
- Colour: natural
- Length: Lengths of 5 m
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11

d [mm]	Code	kg/m	e [mm]	di [mm]
20	<b>168 480 151</b>	0.107	1,9	16.2
25	<b>168 480 152</b>	0.164	2,3	20.4
32	<b>168 480 153</b>	0.261	2,9	26.2
40	<b>168 480 154</b>	0.412	3,7	32.6
50	<b>168 480 155</b>	0.638	4,6	40.8
63	<b>168 480 156</b>	1.010	5,8	51.4

68 48 02



## PROGEF Natural, S8,3/SDR17,6 (PN6)

### Model:

- Material: PP-R unpigmented
- Colour: natural
- Length: Lengths of 5 m

d [mm]	Code	kg/m	e [mm]	di [mm]
75	<b>168 480 282</b>	0.935	4,3	66.4
90	<b>168 480 283</b>	1.330	5,1	79.8
110	<b>168 480 284</b>	1.990	6,3	97.4

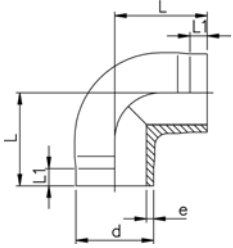
# Fittings for Butt Fusion

## PROGEF Natural, Elbow 90°, S5/SDR11



### Model:

- Material: PP-R unpigmented
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11



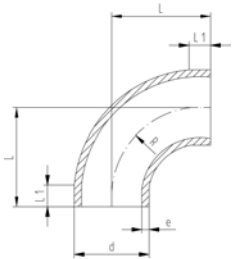
d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]	
20	BCF, IR	<b>728 108 506</b>	0.008	38	25	1,9	
25	BCF, IR	<b>728 108 507</b>	0.013	42	26	2,3	
32	BCF, IR	<b>728 108 508</b>	0.022	46	27	2,9	
40	BCF, IR	<b>728 108 509</b>	0.044	51	22	3,7	
50	BCF, IR	<b>728 108 510</b>	0.077	58	23	4,6	
63	BCF, IR	<b>728 108 511</b>	0.138	66	21	5,8	

## PROGEF Natural, Bend 90°, S8,3/SDR17,6



### Model:

- Material: PP-R unpigmented
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11



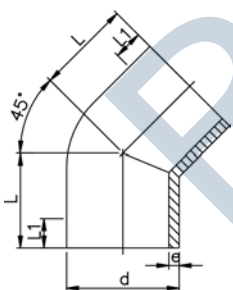
d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]	R [mm]
75	BCF, IR	<b>728 018 412</b>	0.156	100	20	4,3	90
90	BCF, IR	<b>728 018 413</b>	0.221	100	20	5,1	90
110	BCF, IR	<b>728 018 414</b>	0.474	141	25	6,3	130

## PROGEF Natural, Elbow 45°, S5/SDR11



### Model:

- Material: PP-R unpigmented
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11



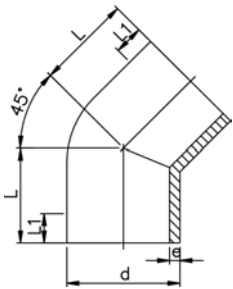
d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]	
20	BCF, IR	<b>728 158 506</b>	0.008	32	24	1,9	
25	BCF, IR	<b>728 158 507</b>	0.012	34	25	2,3	
32	BCF, IR	<b>728 158 508</b>	0.022	36	25	2,9	
40	BCF, IR	<b>728 158 509</b>	0.037	39	25	3,7	
50	BCF, IR	<b>728 158 510</b>	0.054	42	26	4,6	
63	BCF, IR	<b>728 158 511</b>	0.097	47	29	5,8	



## PROGEF Natural, Elbow 45°, S8,3/SDR17,6

### Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)



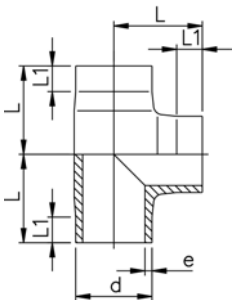
d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
75	BCF, IR	<b>728 158 412</b>	0.099	49	33	4,3
90	BCF, IR	<b>728 158 413</b>	0.164	57	48	5,7
110	BCF, IR	<b>728 158 414</b>	0.296	70	38	6,9



## PROGEF Natural, Tee 90° equal, S5/SDR11

### Model:

- Material: PP-R unpigmented
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11



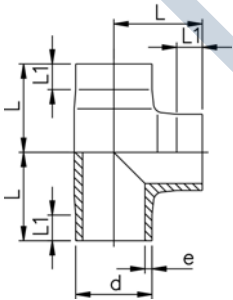
d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
20	BCF, IR	<b>728 208 506</b>	0.011	38	24	1,9
25	BCF, IR	<b>728 208 507</b>	0.019	42	26	2,3
32	BCF, IR	<b>728 208 508</b>	0.032	46	26	2,9
40	BCF, IR	<b>728 208 509</b>	0.059	51	23	3,7
50	BCF, IR	<b>728 208 510</b>	0.103	58	22	4,6
63	BCF, IR	<b>728 208 511</b>	0.184	66	20	5,8



## PROGEF Natural, Tee 90° equal, S8,3/SDR17,6

### Model:

- Material: PP-R unpigmented
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11



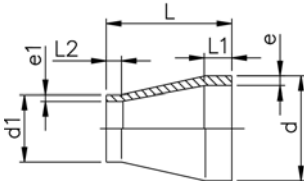
d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
75	BCF, IR	<b>728 208 412</b>	0.230	75	20	4,3
90	BCF, IR	<b>728 208 413</b>	0.401	90	20	5,7
110	BCF, IR	<b>728 208 414</b>	0.723	110	20	6,9



## PROGEF Natural, Reducer, S5/SDR11

### Model:

- Material: PP-R unpigmented
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11



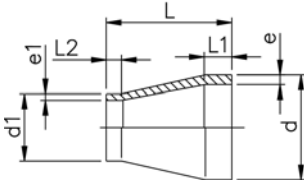
d	d1	FM	Code	kg	L	L1	L2	e	e1
[mm]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]
25	20	BCF, IR	<b>728 908 537</b>	0.007	50	20	20	2,3	1,9
32	20	BCF, IR	<b>728 908 542</b>	0.010	50	20	20	3,0	1,9
32	25	BCF, IR	<b>728 908 541</b>	0.011	50	20	20	3,0	2,3
40	20	BCF, IR	<b>728 908 548</b>	0.015	58	20	23	3,7	1,9
40	25	BCF, IR	<b>728 908 547</b>	0.016	55	20	20	3,7	2,3
40	32	BCF, IR	<b>728 908 546</b>	0.019	55	20	20	3,7	2,9
50	25	BCF, IR	<b>728 908 554</b>	0.025	60	20	20	4,6	2,3
50	32	BCF, IR	<b>728 908 553</b>	0.027	60	20	20	4,6	2,9
50	40	BCF, IR	<b>728 908 552</b>	0.030	60	20	20	4,6	3,7
63	32	BCF, IR	<b>728 908 560</b>	0.043	65	20	20	5,8	2,9
63	40	BCF, IR	<b>728 908 559</b>	0.047	65	20	20	5,8	3,7
63	50	BCF, IR	<b>728 908 558</b>	0.052	65	20	20	5,8	4,6



## PROGEF Natural, Reducer, S8,3/SDR17,6

### Model:

- Material: PP-R unpigmented
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11



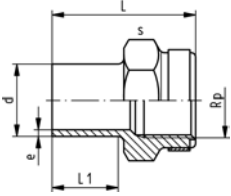
\* SDR17,6 - SDR11

d	d1	FM	Code	kg	L	L1	L2	e	e1
[mm]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]
*75	40	BCF, IR	<b>728 908 466</b>	0.048	68	20	23	4,3	3,7
*75	50	BCF, IR	<b>728 908 465</b>	0.051	65	20	20	4,3	4,6
*75	63	BCF, IR	<b>728 908 464</b>	0.060	65	20	20	4,3	5,8
*90	63	BCF, IR	<b>728 908 471</b>	0.086	75	22	19	5,7	5,8
90	75	BCF, IR	<b>728 908 470</b>	0.086	75	21	19	5,7	4,3
110	75	BCF, IR	<b>728 908 477</b>	0.135	90	26	20	6,9	4,3
110	90	BCF, IR	<b>728 908 476</b>	0.154	90	25	22	6,9	5,7



# Adaptor Fittings for Butt Fusion

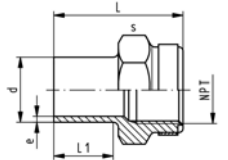
## PROGEF Natural, Adaptor Socket, metric - Rp



### Model:

- Material: PP-R unpigmented
- With butt fusion spigot **SDR11** and BSP parallel female thread Rp, reinforced
- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PP

d [mm]	FM	Rp [inch]	PN	Code	kg	L [mm]	L1 [mm]	s [mm]	e [mm]
20	BCF, IR	½	10	<b>728 918 056</b>	0.017	49	28	32	1,9
25	BCF, IR	¾	10	<b>728 918 057</b>	0.022	51	28	36	2,3
32	BCF, IR	1	10	<b>728 918 058</b>	0.039	54	28	46	2,9
40	BCF, IR	1 ¼	10	<b>728 918 059</b>	0.057	56	28	55	3,7
50	BCF, IR	1 ½	10	<b>728 918 060</b>	0.085	60	28	64	4,6
63	BCF, IR	2	10	<b>728 918 061</b>	0.140	62	28	80	5,8

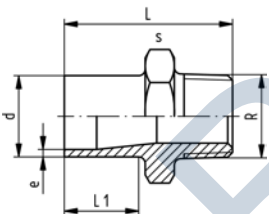


## PROGEF Natural, Adaptor Sockets, metric - NPT

### Model:

- Material: PP-R unpigmented
- With butt fusion spigot **SDR11** and NPT tapered female thread, reinforced
- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PP

d [mm]	FM	NPT [inch]	PN	Code	kg	L [mm]	L1 [mm]	s [mm]	e [mm]
20	BCF, IR	½	10	<b>728 914 056</b>	0.017	49	28	32	1,9
25	BCF, IR	¾	10	<b>728 914 057</b>	0.022	51	28	36	2,3
32	BCF, IR	1	10	<b>728 914 058</b>	0.039	54	28	46	2,9
40	BCF, IR	1 ¼	10	<b>728 914 059</b>	0.057	56	28	55	3,7
50	BCF, IR	1 ½	10	<b>728 914 060</b>	0.085	60	28	64	4,6
63	BCF, IR	2	10	<b>728 914 061</b>	0.140	62	28	80	5,8

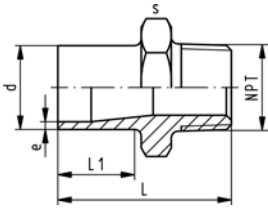


## PROGEF Natural, Adaptor Nipple, metric - R

### Model:

- Material: PP-R unpigmented
- With butt fusion spigot and BSP tapered male thread
- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PP

d [mm]	FM	R [inch]	PN	Code	kg	L [mm]	L1 [mm]	s [mm]	e [mm]
20	BCF, IR	½	10	<b>728 918 106</b>	0.013	51	28	32	1,9
25	BCF, IR	¾	10	<b>728 918 107</b>	0.017	52	28	36	2,3
32	BCF, IR	1	10	<b>728 918 108</b>	0.027	55	28	46	2,9
40	BCF, IR	1 ¼	10	<b>728 918 109</b>	0.041	58	28	55	3,7
50	BCF, IR	1 ½	10	<b>728 918 110</b>	0.060	60	28	65	4,6
63	BCF, IR	2	10	<b>728 918 111</b>	0.098	67	28	80	5,8



## PROGEF Natural, Adaptor Nipple, metric - NPT

### Model:

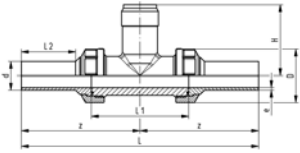
- Material: PP-R unpigmented
- With butt fusion spigot **SDR11** and NPT tapered male thread
- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PP

d [mm]	NPT [inch]	PN	FM	Code	kg	L [mm]	L1 [mm]	s [mm]	e [mm]
20	½	10	BCF, IR	<b>728 914 106</b>	0.013	51	28	32	1,9
25	¾	10	BCF, IR	<b>728 914 107</b>	0.017	52	28	36	2,3
32	1	10	BCF, IR	<b>728 914 108</b>	0.027	55	28	46	2,9
40	1 ¼	10	BCF, IR	<b>728 914 109</b>	0.041	58	28	55	3,7
50	1 ½	10	BCF, IR	<b>728 914 110</b>	0.060	60	28	65	4,6
63	2	10	BCF, IR	<b>728 914 111</b>	0.098	67	28	80	5,8

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28 31 81

## Installation Fitting Type 318, PP-R for Butt Fusion Systems metric



**Model:**

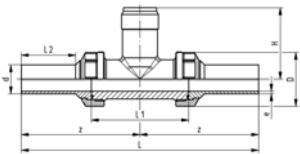
- For Signet Paddlewheel Sensors Type -X0 (104 mm)
- Body and union nut PP-H
- Union end with butt fusion spigot PP-R

d [mm]	DN [mm]	PN	FM	EPDM Code	FPM Code	kg
20	15	10	BCF, IR	<b>728 318 106</b>	<b>728 318 136</b>	0.250
25	20	10	BCF, IR	<b>728 318 107</b>	<b>728 318 137</b>	0.190
32	25	10	BCF, IR	<b>728 318 108</b>	<b>728 318 138</b>	0.250
40	32	10	BCF, IR	<b>728 318 109</b>	<b>728 318 139</b>	0.356
50	40	10	BCF, IR	<b>728 318 110</b>	<b>728 318 140</b>	0.510
63	50	10	BCF, IR	<b>728 318 111</b>	<b>728 318 141</b>	0.800

d [mm]	D [mm]	z [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	e [mm]	Sensor Type
20	45	99	198	90	38	76	1.9	X0
25	55	107	214	100	42	78	2.3	X0
32	62	115	230	110	41	81	2.9	X0
40	75	118	236	110	42	85	3.7	X0
50	84	126	252	120	44	89	4.6	X0
63	101	134	268	130	45	95	5.8	X0

27 31 80

## Installation Fitting Type 318, PP-R for Butt Fusion Systems metric



**Model:**

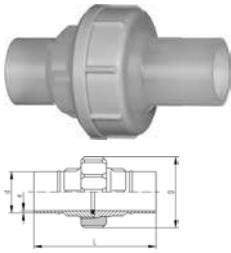
- For Signet Paddlewheel Sensors Type -X0 (104 mm)
- Body and union nut PVDF
- Union end with butt fusion spigot PP-R

d [mm]	DN [mm]	PN	FM	EPDM Code	FPM Code	kg
20	15	10	BCF, IR	<b>728 318 006</b>	<b>728 318 036</b>	0.250
25	20	10	BCF, IR	<b>728 318 007</b>	<b>728 318 037</b>	0.355
32	25	10	BCF, IR	<b>728 318 008</b>	<b>728 318 038</b>	0.427
40	32	10	BCF, IR	<b>728 318 009</b>	<b>728 318 039</b>	0.700
50	40	10	BCF, IR	<b>728 318 010</b>	<b>728 318 040</b>	0.850
63	50	10	BCF, IR	<b>728 318 011</b>	<b>728 318 041</b>	1.182

d [mm]	D [mm]	z [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	e [mm]	Sensor Type
20	45	99	198	90	38	76	1.9	X0
25	55	107	214	100	42	78	2.3	X0
32	62	115	230	110	41	81	2.9	X0
40	75	118	236	110	42	85	3.7	X0
50	84	126	252	120	44	89	4.6	X0
63	101	134	268	130	45	95	5.8	X0

# Unions and Sanitary Adaptors

## Sanitary Union, SDR11

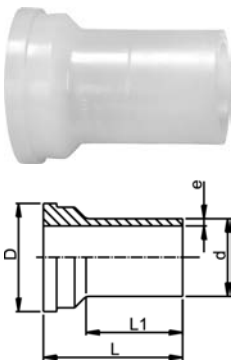


### Model:

- Material: PP-R unpigmented
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11
- FDA compliant

d [mm]	FM	EPDM Code	FPM Code	kg	D [mm]	L [mm]	L1 [mm]	L2 [mm]	e [mm]
20	BCF, IR	<b>728 518 526</b>	<b>728 528 526</b>	0.046	48	107	53	25	1,9
25	BCF, IR	<b>728 518 527</b>	<b>728 528 527</b>	0.074	58	113	56	25	2,3
32	BCF, IR	<b>728 518 528</b>	<b>728 528 528</b>	0.102	65	119	59	25	2,9
40	BCF, IR	<b>728 518 529</b>	<b>728 528 529</b>	0.169	79	126	63	25	3,7
50	BCF, IR	<b>728 518 530</b>	<b>728 528 530</b>	0.023	91	131	65	25	4,6
63	BCF, IR	<b>728 518 531</b>	<b>728 528 531</b>	0.382	111	137	68	25	5,8

## PROGEF® Natural Union Ends IR, PP-N

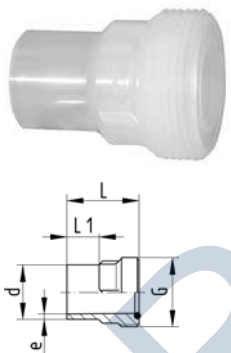


### Model:

- Material: PP-R unpigmented
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11

d [mm]	PN	FM	Code	kg	D [mm]	L [mm]	L1 [mm]	e [mm]
20	10	BCF, IR	<b>728 608 506</b>	0.009	30	53	35	1,9
25	10	BCF, IR	<b>728 608 507</b>	0.013	39	56	36	2,3
32	10	BCF, IR	<b>728 608 508</b>	0.016	45	59	38	2,9
40	10	BCF, IR	<b>728 608 509</b>	0.035	57	63	39	3,7
50	10	BCF, IR	<b>728 608 510</b>	0.054	63	65	41	4,6
63	10	BCF, IR	<b>728 608 511</b>	0.092	78	69	43	5,8

## PROGEF® Natural Union Bushes IR, PP-N SDR11



### Model:

- Material: PP-R unpigmented
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11

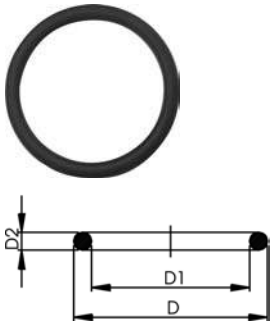
d [mm]	PN	FM	Code	kg	G [inch]	L [mm]	L1 [mm]	e [mm]
20	10	BCF, IR	<b>728 648 526</b>	0.012	1	54	26	1,9
25	10	BCF, IR	<b>728 648 527</b>	0.020	1 1/4	57	26	2,3
32	10	BCF, IR	<b>728 648 528</b>	0.029	1 1/2	60	25	2,9
40	10	BCF, IR	<b>728 648 529</b>	0.047	2	63	25	3,7
50	10	BCF, IR	<b>728 648 530</b>	0.064	2 1/4	66	25	4,6
63	10	BCF, IR	<b>728 648 531</b>	0.104	2 3/4	69	25	5,8

EPDM 48 41 00  
FPM 49 41 00

## O-Ring Gaskets

### Model:

- Hardness approx. 65° Shore
- Suitable for unions 28 51 52, 28 51 53, 28 52 52, 28 52



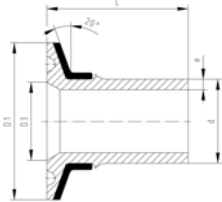
d [mm]	DN [mm]	EPDM Code	FPM Code	kg	D [mm]	D1 [mm]	D2 [mm]
20	15	748 410 140	749 410 140	0.003	20	15	3
20	15	748 410 006	749 410 006	0.002	27		
32	25	748 410 025	749 410 025	0.002	32	25	4
40	32	748 410 152	749 410 152	0.006	42	31	5
40	32	748 410 009	749 410 009	0.006	51		
63	50	748 410 171	749 410 171	0.010	61	50	5



## Sanitary Adaptor Connection to ISO 1127

### Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Stainless steel reinforcement ring



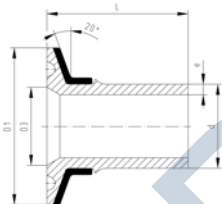
d [mm]	FM	DN [mm]	PN	Code	kg	D1 [mm]	D3 [mm]	L [mm]	e [mm]
20	BCF, IR	15	10	728 598 006	0.031	50	18	49.0	1,9
25	BCF, IR	20	10	728 598 008	0.032	50	23	49.5	2,3
25	BCF, IR	25	10	728 598 009	0.031	50	29	49.5	2,3
32	BCF, IR	25	10	728 598 010	0.033	50	29	53.0	2,9
40	BCF, IR	32	10	728 598 014	0.054	64	38	54.0	3,7
50	BCF, IR	40	10	728 598 016	0.062	64	44	61.0	4,6
63	BCF, IR	50	10	728 598 018	0.093	77	56	67.0	5,8



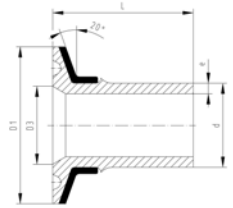
## Sanitary Adaptor Connection to DIN 32676

### Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Stainless steel reinforcement ring



d [mm]	FM	DN [mm]	PN	Code	kg	D1 [mm]	D3 [mm]	L [mm]	e [mm]
20	BCF, IR	15	10	728 598 056	0.014	34	16	49.0	1,9
20	BCF, IR	20	10	728 598 057	0.014	34	20	49.0	1,9
25	BCF, IR	25	10	728 598 059	0.031	50	26	49.5	2,3
32	BCF, IR	32	10	728 598 062	0.031	50	32	53.0	2,9
40	BCF, IR	40	10	728 598 065	0.032	50	38	54.0	3,7
50	BCF, IR	50	10	728 598 067	0.061	64	50	61.0	4,6

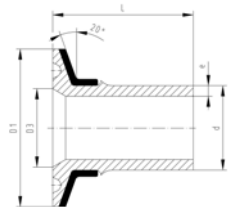


## Sanitary Adaptor Connection to DIN 3017

### Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Stainless steel reinforcement ring

d [mm]	FM	DN [mm]	PN	Code	kg	D1 [mm]	D3 [mm]	L [mm]	e [mm]
25	BCF, IR	25	10	<b>728 598 259</b>	0.031	50	22	49.5	2,3
32	BCF, IR	32	10	<b>728 598 262</b>	0.031	50	32	53.0	2,9
40	BCF, IR	40	10	<b>728 598 265</b>	0.033	50	35	54.0	3,7
50	BCF, IR	50	10	<b>728 598 267</b>	0.061	64	49	61.0	4,6
63	BCF, IR	65	10	<b>728 598 269</b>	0.093	78	60	67.0	5,8

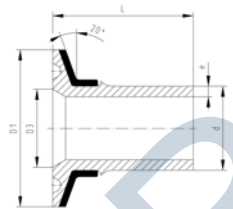


## Sanitary Adaptor Connection to ISO 2852

### Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Stainless steel reinforcement ring

d [mm]	FM	DN [mm]	PN	Code	kg	D1 [mm]	D3 [mm]	L [mm]	e [mm]
25	BCF, IR	25	10	<b>728 598 309</b>	0.031	51	22	50	2,3
32	BCF, IR	32	10	<b>728 598 312</b>	0.031	51	32	53	2,9
40	BCF, IR	40	10	<b>728 598 315</b>	0.033	51	35	54	3,7
50	BCF, IR	50	10	<b>728 598 317</b>	0.061	64	49	61	4,6
63	BCF, IR	65	10	<b>728 598 319</b>	0.093	78	60	67	5,8



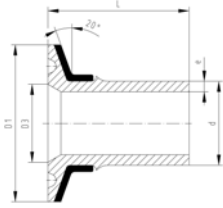
## Sanitary Adaptor Connection to ASME BPE

### Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Stainless steel reinforcement ring

\* Without stainless steel reinforcement ring

d [mm]	FM	Inch	PN	Code	kg	D1 [mm]	D3 [mm]	L [mm]	e [mm]
*20	BCF, IR	3/4	10	<b>728 598 357</b>	0.006	25	16	49	1,9
25	BCF, IR	1	10	<b>728 598 359</b>	0.031	51	22	50	2,3
40	BCF, IR	1 1/2	10	<b>728 598 365</b>	0.032	51	35	54	3,7
50	BCF, IR	2	10	<b>728 598 367</b>	0.061	64	48	61	4,6
63	BCF, IR	2 1/2	10	<b>728 598 369</b>	0.093	78	60	67	5,8

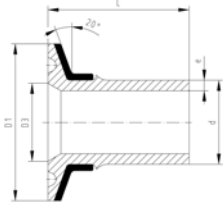


## Sanitary Adaptor Connection to JIS G3447

### Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Stainless steel reinforcement ring

d [mm]	FM	DN [mm]	PN	Code	kg	D1 [mm]	D3 [mm]	L [mm]	e [mm]
20	BCF, IR	15	10	<b>728 598 406</b>	0.014	34	18	49.0	1,9
25	BCF, IR	20	10	<b>728 598 408</b>	0.032	50	23	49.5	2,3
32	BCF, IR	25	10	<b>728 598 410</b>	0.033	50	30	53.0	2,9
40	BCF, IR	32	10	<b>728 598 414</b>	0.033	50	35	54.0	3,7
50	BCF, IR	40	10	<b>728 598 416</b>	0.061	64	48	61.0	4,6
63	BCF, IR	50	10	<b>728 598 418</b>	0.093	78	60	67.0	5,8



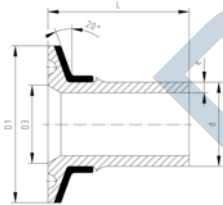
## Sanitary Adaptor Connection to 3A Standard

### Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Stainless steel reinforcement ring

\* Without stainless steel reinforcement ring

d [mm]	FM	Inch	PN	Code	kg	D1 [mm]	D3 [mm]	L [mm]	e [mm]
*20	BCF, IR	3/4	10	<b>728 598 207</b>	0.006	25	16	49.0	1,9
25	BCF, IR	1	10	<b>728 598 209</b>	0.032	50	22	49.5	2,3
32	BCF, IR	1 1/2	10	<b>728 598 213</b>	0.032	50	35	53.0	2,9
40	BCF, IR	1 1/2	10	<b>728 598 215</b>	0.033	50	35	54.0	3,7
50	BCF, IR	2	10	<b>728 598 217</b>	0.061	64	48	61.0	4,6
63	BCF, IR	2 1/2	10	<b>728 598 219</b>	0.093	78	60	67.0	5,8



## Sanitary Adaptor Connection to Membrane Manometer

### Model:

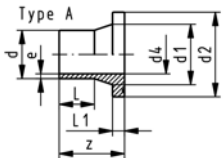
- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Stainless steel reinforcement ring

d [mm]	FM	DN [mm]	PN	Code	kg	e [mm]	D1 [mm]	D3 [mm]	L [mm]
20	BCF, IR	15	10	<b>728 598 516</b>	0.029	1,9	50	34	49
25	BCF, IR	20	10	<b>728 598 518</b>	0.031	2,3	50	34	50
32	BCF, IR	25	10	<b>728 598 520</b>	0.032	2,9	50	34	53



# Flange Adaptors, Flanges and Gaskets for Butt Fusion

## PROGEF Natural, Flange Adaptor, S5/SDR11<sup>4</sup> Combined Jointing Face: Flat and Serrated

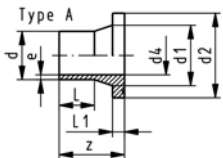


### Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Bead and Crevice Free weldable with the new BCF<sup>®</sup> Plus fusion machine
- Infrared-(IR Plus<sup>®</sup>) compatible. Please choose fusion parameters: PP-n (PP-R)
- Gasket: Profile flange gasket EPDM No. 48 44 07, FPM No. 49 44 07

d [mm]	DN [mm]	FM	Code	kg	z [mm]	d1 [mm]	d2 [mm]	d4 [mm]	L [mm]	L1 [mm]	e [mm]
20	15	IR	<b>728 798 706</b>	0.015	85	27	45	16	41	7	1.9
25	20	IR	<b>728 798 707</b>	0.028	85	33	58	20	41	9	2.3
32	25	IR	<b>728 798 708</b>	0.042	85	40	68	26	44	10	3.0
40	32	IR	<b>728 798 709</b>	0.064	85	50	78	32	49	11	3.7
50	40	IR	<b>728 798 710</b>	0.091	85	61	88	40	55	12	4.6
63	50	IR	<b>728 798 711</b>	0.146	95	75	102	51	65	14	5.8

## PROGEF Natural, Flange Adaptor, S8.3/SDR17.6 Combined Jointing Face: Flat and Serrated



### Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Bead and Crevice Free weldable with the new BCF<sup>®</sup> Plus fusion machine
- Infrared-(IR Plus<sup>®</sup>) compatible. Please choose fusion parameters: PP-n (PP-R)
- Gasket: Profile flange gasket EPDM No. 48 44 07, FPM No. 49 44 07

d [mm]	DN [mm]	FM	Code	kg	z [mm]	d1 [mm]	d2 [mm]	d4 [mm]	L [mm]	L1 [mm]	e [mm]
75	65	IR	<b>728 798 787</b>	0.202	80	89	122	66	70	16	4.5
90	80	IR	<b>728 798 788</b>	0.271	80	105	138	79	79	17	5.4
110	100	IR	<b>728 798 789</b>	0.354	80	125	158	96	82	18	6.6



27 70 04  
27 70 05

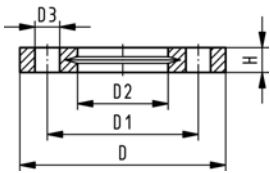
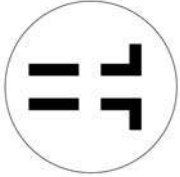
## Backing Flanges, PP-V for Butt Fusion Systems metric

### Model:

- Modern full-plastic flange PP-GF (30 % glass-fibre reinforced)
- With V-groove which applies force evenly on collar
- With integrated bolt retainers as an assembly aid
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- **Bolt circle PN 10**

<sup>1)</sup> Suitable for socket- and butt fusion systems (no pictograph on flange)

AL: number of holes



d [mm]	Inch	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC
20		15	16	<b>727 700 406</b>	0.080	95	65	28	14	16	4	M12
25		20	16	<b>727 700 407</b>	0.100	105	75	34	14	17	4	M12
32		25	16	<b>727 700 408</b>	0.140	115	85	42	14	18	4	M12
40		32	16	<b>727 700 409</b>	0.220	140	100	51	18	20	4	M16
50		40	16	<b>727 700 410</b>	0.210	150	110	62	18	22	4	M16
63		50	16	<b>727 700 411</b>	0.380	165	125	78	18	24	4	M16
75		65	16	<b>727 700 412</b>	0.480	185	145	92	18	26	4	M16
90		80	16	<b>727 700 513</b>	0.520	200	160	108	18	27	8	M16
110		100	16	<b>727 700 514</b>	0.680	220	180	128	18	28	8	M16

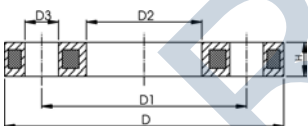
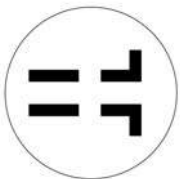
27 70 02  
27 70 03

## Backing Flanges, PP/Steel for Butt Fusion Systems metric

### Model:

- Material: PP (30 % glass-fibre reinforced) with steel ring
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- **Bolt circle PN 10**

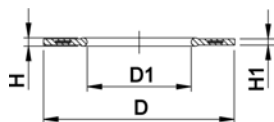
AL: number of holes



d [mm]	d [inch]	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC
20		15	16	<b>727 700 206</b>	0.220	95	65	28	14	12	4	M12
25		20	16	<b>727 700 207</b>	0.260	105	75	34	14	12	4	M12
32		25	16	<b>727 700 208</b>	0.430	115	85	42	14	16	4	M12
40		32	16	<b>727 700 209</b>	0.650	140	100	51	18	16	4	M16
50		40	16	<b>727 700 210</b>	0.820	150	110	62	18	18	4	M16
63		50	16	<b>727 700 211</b>	0.940	165	125	78	18	18	4	M16
75		65	16	<b>727 700 212</b>	1.300	185	145	92	18	18	4	M16
90		80	16	<b>727 700 313</b>	1.400	200	160	108	18	20	8	M16
110		100	16	<b>727 700 314</b>	1.580	220	180	128	18	20	8	M16

EPDM 48 44 07  
FPM 49 44 07

## Profile Flange Gaskets metric EPDM / FPM



### Model:

- For all GF Flange Adaptors
- Profile Gasket with steel insert (type G-ST-P/K)
- Hardness: 70° Shore **EPDM**, 75° Shore **FPM**
- Centering on the inner diameter of the screw crown




di FA are the suitable inner diameters of flange adaptors

d [mm]	DN [mm]	PN	EPDM Code	FPM Code	kg	D [mm]	D1 [mm]	H [mm]	H1 [mm]	di FA [mm]
20	15	16	<b>748 440 706</b>	<b>749 440 706</b>	0.008	51	20	4	3	10 - 20
25	20	16	<b>748 440 707</b>	<b>749 440 707</b>	0.011	61	22	4	3	12 - 22
32	25	16	<b>748 440 708</b>	<b>749 440 708</b>	0.014	71	28	4	3	18 - 28
40	32	16	<b>748 440 709</b>	<b>749 440 709</b>	0.021	82	40	4	3	30 - 40
50	40	16	<b>748 440 710</b>	<b>749 440 710</b>	0.022	92	46	4	3	36 - 46
63	50	16	<b>748 440 711</b>	<b>749 440 711</b>	0.041	107	58	5	4	48 - 58
75	65	16	<b>748 440 712</b>	<b>749 440 712</b>	0.055	127	69	5	4	59 - 69
90	80	16	<b>748 440 713</b>	<b>749 440 713</b>	0.062	142	84	5	4	73 - 84
110	100	16	<b>748 440 714</b>	<b>749 440 714</b>	0.085	162	104	6	5	94 - 104

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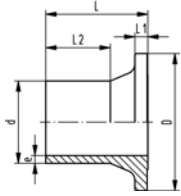
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# PROGEF Natural Hand-Operated and Actuated Valves

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# Valve End 546



## PROGEF Natural, Valve end 546, SDR11



### Model:

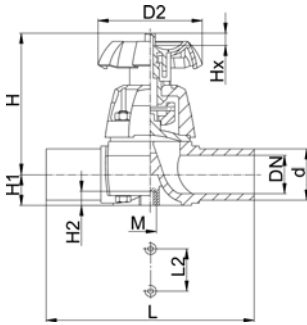
- Material: PP-R unpigmented
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11

d [mm]	FM	Code	kg	D [mm]	L [mm]	L1 [mm]	L2 [mm]	e [mm]
20	BCF, IR	<b>168 480 260</b>	0.007	38	37	4	25	1,9
25	BCF, IR	<b>168 480 261</b>	0.011	44	39	5	25	2,3
32	BCF, IR	<b>168 480 262</b>	0.017	53	40	5	25	2,9
40	BCF, IR	<b>168 480 263</b>	0.030	65	43	5	25	3,7
50	BCF, IR	<b>168 480 264</b>	0.053	77	51	6	25	4,6
63	BCF, IR	<b>168 480 265</b>	0.093	99	60	7	28	5,8

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# Diaphragm Valves

## PROGEF® Natural Diaphragm valve type 315 With butt fusion spigots



### Model:

- Material: PP-R unpigmented
- Bead and Crevice Free weldable with the new BCF fusion machine
- Conventional butt fusion and (IR Plus®) compatible
- PTFE with EPDM supporting diaphragm: FDA conform
- d20-d63 SDR11, d90-d110 SDR17,6

### Option:

- Handwheel with built in locking mechanism

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE with EPDM supporting diaphragm Code	kg
20	15	10	72	<b>168 315 517</b>	<b>168 315 532</b>	0.312
25	20	10	137	<b>168 315 518</b>	<b>168 315 533</b>	0.494
32	25	10	207	<b>168 315 519</b>	<b>168 315 534</b>	0.660
40	32	10	354	<b>168 315 520</b>	<b>168 315 535</b>	0.857
50	40	10	517	<b>168 315 521</b>	<b>168 315 536</b>	1.155
63	50	10	713	<b>168 315 522</b>	<b>168 315 537</b>	2.018

d [mm]	D2 [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L2 [mm]	M
20	80	90	14	12	124	25	M6
25	80	101	18	12	144	25	M6
32	94	117	22	12	154	25	M6
40	117	127	26	15	174	45	M8
50	117	139	32	15	194	45	M8
63	152	172	39	15	223	45	M8



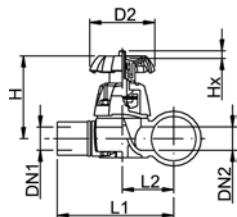
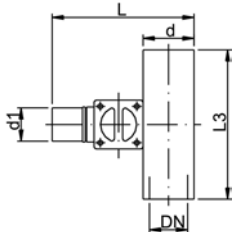
## PROGEF® Natural Diaphragm valve type 319 With butt fusion spigots

### Model:

- Material: PP-R unpigmented
- Valve body injection molded
- Minimized static zone (dead leg)
- Compact design
- Bead and Crevice Free weldable with the new BCF fusion machine
- Conventional butt fusion and (IR Plus®) compatible
- d20-d63 SDR11, d90-d110 SDR17,6

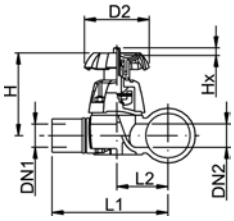
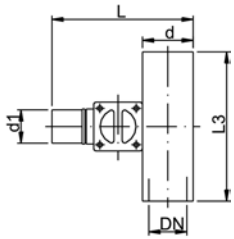
### Option:

- Handwheel with built in locking mechanism



d [mm]	d1 [mm]	DN [mm]	DN1 [mm]	DN2 [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	kg
20	20	15	15	15	10	47	<b>168 319 401</b>	0.274
25	20	20	15	20	10	69	<b>168 319 403</b>	0.361
25	25	20	20	20	10	91	<b>168 319 404</b>	0.361
32	20	25	15	25	10	86	<b>168 319 407</b>	0.602
32	25	25	20	25	10	126	<b>168 319 408</b>	0.601
32	32	25	25	25	10	156	<b>168 319 409</b>	0.596
40	20	32	15	25	10	84	<b>168 319 412</b>	0.634
50	20	40	15	25	10	82	<b>168 319 418</b>	0.677
50	25	40	20	25	10	124	<b>168 319 419</b>	0.676
50	32	40	25	25	10	159	<b>168 319 420</b>	0.676
63	20	50	15	25	10	81	<b>168 319 425</b>	0.750
63	25	50	20	25	10	115	<b>168 319 426</b>	0.749
63	32	50	25	25	10	156	<b>168 319 427</b>	0.746
90	20	80	15	25	6	88	<b>168 319 441</b>	0.871
90	25	80	20	25	6	133	<b>168 319 442</b>	1.062
90	32	80	25	25	6	162	<b>168 319 443</b>	0.907
90	50	80	40	50	6	504	<b>168 319 445</b>	2.285
90	63	80	50	50	6	530	<b>168 319 446</b>	2.285
110	20	100	15	25	6	89	<b>168 319 451</b>	0.888
110	25	100	20	25	6	123	<b>168 319 452</b>	0.887
110	32	100	25	25	6	159	<b>168 319 453</b>	0.886
110	50	100	40	50	6	503	<b>168 319 455</b>	2.400
110	63	100	50	50	6	543	<b>168 319 456</b>	2.426

d [mm]	D2 [mm]	H [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]
20	80	83	106	96	30	140
25	80	91	121	108	36	150
25	80	91	121	108	36	150
32	94	105	137	120	43	160
32	94	105	137	120	43	160
32	94	105	137	120	43	160
40	94	105	149	128	51	180
50	94	105	159	134	57	180
50	94	105	159	134	57	180
50	94	105	159	134	57	180
63	94	105	175	144	67	180
63	94	105	175	144	67	180
63	94	105	175	144	67	180
90	94	105	204	159	82	160
90	94	105	204	159	82	160
90	94	105	204	159	82	160
90	152	151	252	207	95	220
90	152	151	252	207	95	220



<b>d</b> [mm]	<b>D2</b> [mm]	<b>H</b> [mm]	<b>L</b> [mm]	<b>L1</b> [mm]	<b>L2</b> [mm]	<b>L3</b> [mm]
110	94	105	226	171	94	160
110	94	105	226	171	94	160
110	94	105	226	171	94	160
110	152	151	274	219	107	220
110	152	151	274	219	107	220

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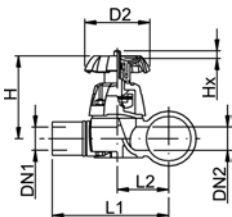
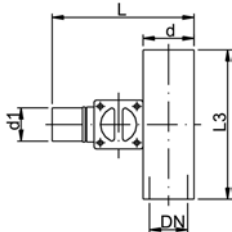
## PROGEF® Natural Diaphragm valve type 319 With butt fusion spigots

### Model:

- Material: PP-R unpigmented
- Valve body injection molded
- Minimized static zone (dead leg)
- Compact design
- Bead and Crevice Free weldable with the new BCF fusion machine
- Conventional butt fusion and (IR Plus®) compatible
- d20-d63 SDR11, d90-d110 SDR17,6

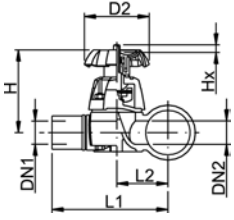
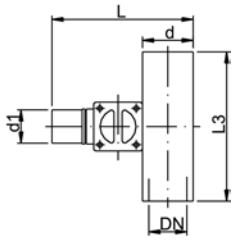
### Option:

- Handwheel with built in locking mechanism



d [mm]	d1 [mm]	DN1 [mm]	DN [mm]	DN2 [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	PTFE with EPDM supporting diaphragm Code	kg
20	20	15	15	15	10	47	<b>168 319 501</b>	0.312
25	20	15	20	20	10	69	<b>168 319 503</b>	0.462
25	25	20	20	20	10	91	<b>168 319 504</b>	0.465
32	20	25	25	25	10	86	<b>168 319 507</b>	0.602
32	25	20	25	25	10	126	<b>168 319 508</b>	0.624
32	32	25	25	25	10	156	<b>168 319 509</b>	0.619
40	20	15	32	25	10	84	<b>168 319 512</b>	0.304
50	20	15	40	25	10	82	<b>168 319 518</b>	0.702
50	25	20	40	25	10	124	<b>168 319 519</b>	0.701
50	32	25	40	25	10	159	<b>168 319 520</b>	0.701
63	20	15	50	25	10	81	<b>168 319 525</b>	0.750
63	25	20	50	25	10	115	<b>168 319 526</b>	0.775
63	32	25	50	25	10	156	<b>168 319 527</b>	0.771
90	20	15	80	25	6	88	<b>168 319 541</b>	0.878
90	25	20	80	25	6	133	<b>168 319 542</b>	1.277
90	32	25	80	25	6	162	<b>168 319 543</b>	0.876
90	50	40	80	50	6	504	<b>168 319 545</b>	2.300
90	63	50	80	50	6	530	<b>168 319 546</b>	2.300
110	20	15	100	25	6	89	<b>168 319 551</b>	0.897
110	25	20	100	25	6	123	<b>168 319 552</b>	0.897
110	32	25	100	25	6	159	<b>168 319 553</b>	0.891
110	50	40	100	50	6	503	<b>168 319 555</b>	2.488
110	63	50	100	50	6	543	<b>168 319 556</b>	2.433

d [mm]	D2 [mm]	H [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]
20	80	83	106	96	30	140
25	80	91	121	108	36	150
25	80	91	121	108	36	150
32	94	105	137	120	43	160
32	94	105	137	120	43	160
32	94	105	137	120	43	160
40	94	105	149	128	51	180
50	94	105	159	134	57	180
50	94	105	159	134	57	180
50	94	105	159	134	57	180
63	94	105	175	144	67	180
63	94	105	175	144	67	180
63	94	105	175	144	67	180
90	94	105	204	159	82	160
90	94	105	204	159	82	160
90	94	105	204	159	82	160



<b>d</b> [mm]	<b>D2</b> [mm]	<b>H</b> [mm]	<b>L</b> [mm]	<b>L1</b> [mm]	<b>L2</b> [mm]	<b>L3</b> [mm]
90	152	151	252	207	95	220
90	152	151	252	207	95	220
110	94	105	226	171	94	160
110	94	105	226	171	94	160
110	94	105	226	171	94	160
110	152	151	274	219	107	220
110	152	151	274	219	107	220

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# Diaphragm Valves Pneumatic

## PROGEF Natural Diaphragm valve type DIASTAR 025 Function FC (Fail safe to close) With butt fusion spigots metric



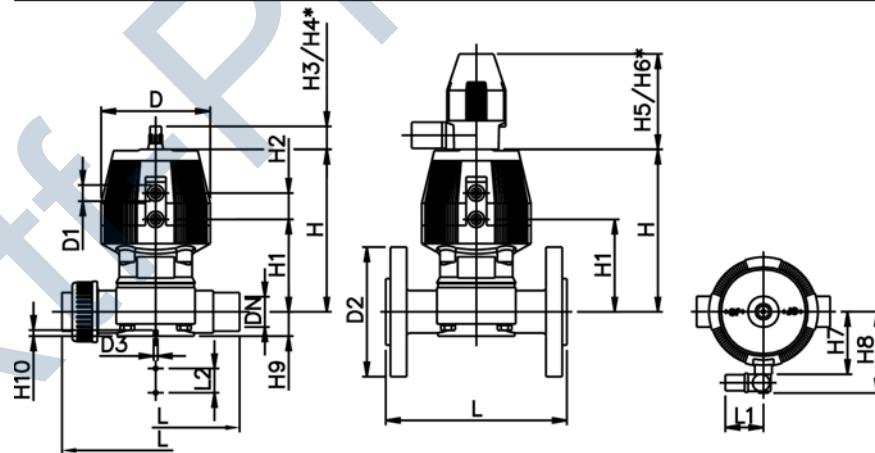
### Model:

- Material: PP-R unpigmented
- With position indicator / Working pressure: both sides

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10	72	199 027 521	199 027 551	0.839
25	20	10	120	199 027 522	199 027 552	0.936
32	25	10	238	199 027 523	199 027 553	1.705
40	32	10	341	199 027 524	199 027 554	0.238
50	40	10	460	199 027 525	199 027 555	4.665
63	50	10	685	199 027 526	199 027 556	5.353

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	96	1/8	6	124	60	25	125	69	25	23	44	100	155	56
25	96	1/8	6	144	60	25	127	71	25	23	44	100	155	56
32	120	1/8	6	154	60	25	163	93	26	36	64	100	155	68
40	150	1/4	8	174	60	45	196	106	36	36	64	100	160	85
50	180	1/4	8	194	60	45	227	119	37	36	64	100	170	101
63	180	1/4	8	224	60	45	241	133	37	36	64	100	170	101

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	86	14	12	8
25	88	18	12	10
32	100	21	12	12
40	117	26	15	14
50	133	33	15	18
63	133	39	15	22

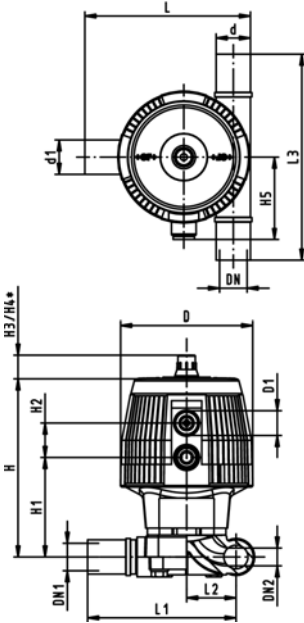




**PROGEF Natural**  
**Diaphragm valve type DIASTAR 025**  
**Function FC (Fail safe to close)**  
**ZERO STATIC with butt fusion spigots metric**

**Model:**

- Material: PP-R unpigmented
- d20-d63 SDR11, d90-d110 SDR17,6
- With position indicator
- DN2: for coordination of accessoires



d	d1	DN	DN1	DN2	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE Code	kg
20	20	15	15	15	10	47	199 029 421	199 029 381	1.510
25	20	20	15	20	10	69	199 029 422	199 029 382	2.013
25	25	20	20	20	10	91	199 029 423	199 029 383	2.013
32	20	25	15	25	10	86	199 029 424	199 029 384	2.567
32	25	25	20	25	10	126	199 029 425	199 029 385	2.566
32	32	25	25	25	10	156	199 029 426	199 029 386	2.561
40	20	32	15	25	10	84	199 029 427	199 029 387	2.599
50	20	40	15	25	10	82	199 029 431	199 029 391	2.642
50	25	40	20	25	10	124	199 029 432	199 029 392	2.641
50	32	40	25	25	10	159	199 029 433	199 029 393	2.641
63	20	50	15	25	10	81	199 029 436	199 029 396	2.715
63	25	50	20	25	10	115	199 029 437	199 029 397	2.714
63	32	50	25	25	10	156	199 029 438	199 029 398	2.711
90	20	80	15	25	6	88	199 029 445	199 029 405	2.742
90	25	80	20	25	6	133	199 029 446	199 029 406	2.756
90	32	80	25	25	6	162	199 029 447	199 029 407	2.737
90	50	80	40	50	6	504	199 029 448	199 029 408	5.679
90	63	80	50	50	6	530	199 029 449	199 029 409	5.679
110	20	100	15	25	6	89	199 029 450	199 029 410	2.837
110	25	100	20	25	6	123	199 029 451	199 029 411	2.835
110	32	100	25	25	6	159	199 029 452	199 029 412	2.834
110	50	100	40	50	6	503	199 029 453	199 029 413	5.869
110	63	100	50	40	6	543	199 029 454	199 029 414	5.822

d	L	L1	L2	L3	H	H1	H2	H3	H4	H5	D	D1	Lift = Hx
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[inch]	[mm]
20	106	96	30	140	128	69	25	23	44	56	96	1/8	8
25	121	108	36	150	130	71	25	23	44	56	96	1/8	10
25	121	108	36	150	130	71	25	23	44	56	96	1/8	10
32	137	120	43	160	166	93	26	36	64	68	120	1/8	12
32	137	120	43	160	166	93	26	36	64	68	120	1/8	12
32	137	120	43	160	166	93	26	36	64	68	120	1/8	12
40	149	128	51	180	166	93	26	36	64	68	120	1/8	12
50	159	134	57	180	166	93	26	36	64	68	120	1/8	12
50	159	134	57	180	166	93	26	36	64	68	120	1/8	12
50	159	134	57	180	166	93	26	36	64	68	120	1/8	12
63	175	144	67	180	166	93	26	36	64	68	120	1/8	12
63	175	144	67	180	166	93	26	36	64	68	120	1/8	12
63	175	144	67	180	166	93	26	36	64	68	120	1/8	12
90	204	159	82	160	166	93	26	36	64	68	120	1/8	12
90	204	159	82	160	166	93	26	36	64	68	120	1/8	12
90	204	159	82	160	166	93	26	36	64	68	120	1/8	12
90	252	207	95	220	247	133	37	36	64	101	180	1/4	22
90	252	207	95	220	247	133	37	36	64	101	180	1/4	22
110	226	171	94	160	166	93	26	36	64	68	120	1/8	12
110	226	171	94	160	166	93	26	36	64	68	120	1/8	12
110	226	171	94	160	166	93	26	36	64	68	120	1/8	12
110	274	219	107	220	247	133	37	36	64	101	180	1/4	22
110	274	219	107	220	247	133	37	36	64	101	180	1/4	22



**PROGEF® Natural**  
**Diaphragm valve type DIASTAR 025**  
**Function FO (Fail safe to open)**  
**With butt fusion spigots metric**

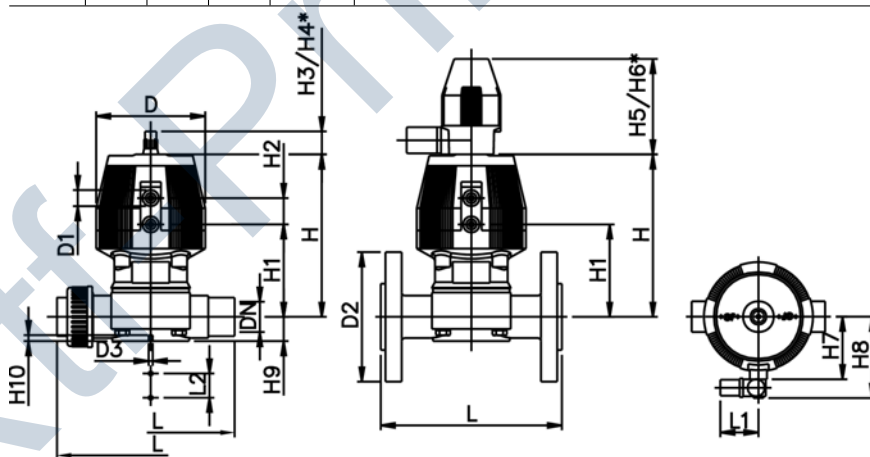
**Model:**

- Material: PP-R unpigmented
- With position indicator / Working pressure: **both sides**

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10	72	<b>199 027 531</b>	<b>199 027 561</b>	0.454
25	20	10	120	<b>199 027 532</b>	<b>199 027 562</b>	0.740
32	25	10	238	<b>199 027 533</b>	<b>199 027 563</b>	1.160
40	32	10	341	<b>199 027 534</b>	<b>199 027 564</b>	1.390
50	40	10	460	<b>199 027 535</b>	<b>199 027 565</b>	2.510
63	50	10	685	<b>199 027 536</b>	<b>199 027 566</b>	5.430

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	68	1/8	6	124	60	25	98	59	24	23	44	100	155	44
25	96	1/8	6	144	60	25	127	71	25	23	44	100	155	56
32	96	1/8	6	154	60	25	141	85	25	23	44	100	155	56
40	120	1/8	8	174	60	45	167	97	26	36	64	100	160	68
50	150	1/4	8	194	60	45	198	108	36	36	64	100	170	85
63	150	1/4	8	224	60	45	216	126	36	36	64	100	170	85

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	76	14	12	8
25	88	18	12	10
32	88	21	12	12
40	100	26	15	14
50	117	33	15	18
63	117	39	15	22





**PROGEF Natural**  
**Diaphragm valve type DIASTAR 025**  
**Function DA (Double acting)**  
**With butt fusion spigots metric**

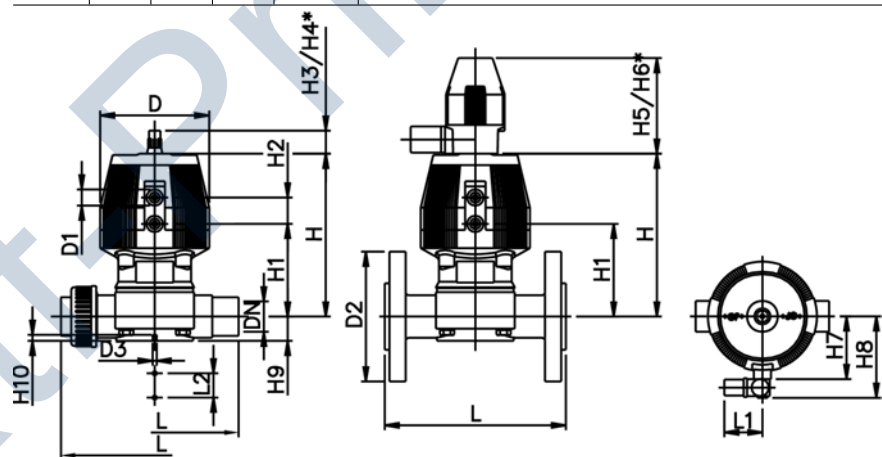
**Model:**

- Material: PP-R unpigmented
- With position indicator / Working pressure: **both sides**

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code	kg
20	15	10	72	<b>199 027 541</b>	<b>199 027 571</b>	0.454
25	20	10	120	<b>199 027 542</b>	<b>199 027 572</b>	0.740
32	25	10	238	<b>199 027 543</b>	<b>199 027 573</b>	1.160
40	32	10	341	<b>199 027 544</b>	<b>199 027 574</b>	1.390
50	40	10	460	<b>199 027 545</b>	<b>199 027 575</b>	2.510
63	50	10	685	<b>199 027 546</b>	<b>199 027 576</b>	5.430

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	68	1/8	6	124	60	25	98	59	24	23	44	100	155	44
25	96	1/8	6	144	60	25	127	71	25	23	44	100	155	56
32	96	1/8	6	154	60	25	141	85	25	23	44	100	155	56
40	120	1/8	8	174	60	45	167	97	26	36	64	100	160	68
50	150	1/4	8	194	60	45	198	108	36	36	64	100	170	85
63	150	1/4	8	224	60	45	216	126	36	36	64	100	170	85

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	76	14	12	8
25	88	18	12	10
32	88	21	12	12
40	100	26	15	14
50	117	33	15	18
63	117	39	15	22





**PROGEF Natural**  
**Diaphragm valve type DIASTAR 028**  
**Function FC (Fail safe to close)**  
**With butt fusion spigots metric**

**Model:**

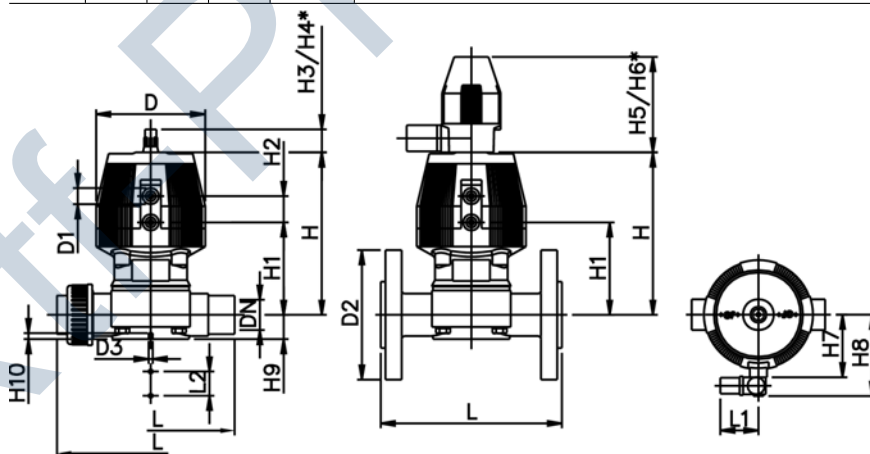
- Material: PP-R unpigmented
- With position indicator / Working pressure: **one side**

\*PN: EPDM/PTFE

d [mm]	DN [mm]	PN [bar]		kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE/EPDM Code
20	15	10 / 5	*	72	<b>199 028 521</b>	<b>199 028 551</b>
25	20	10 / 7	*	120	<b>199 028 522</b>	<b>199 028 552</b>
32	25	10 / 7	*	238	<b>199 028 523</b>	<b>199 028 553</b>
40	32	10 / 7	*	341	<b>199 028 524</b>	<b>199 028 554</b>
50	40	10 / 7	*	460	<b>199 028 525</b>	<b>199 028 555</b>
63	50	10 / 7	*	685	<b>199 028 526</b>	<b>199 028 556</b>

d [mm]	D [mm]	D1_G [inch]	D3[M] [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]
20	68	1/8	6	124	60	25	98	59	24	23	44	100	155	44
25	96	1/8	6	144	60	25	127	71	25	23	44	100	155	56
32	96	1/8	6	154	60	25	141	85	25	23	44	100	155	56
40	120	1/8	8	174	60	45	167	97	26	36	64	100	160	68
50	150	1/4	8	194	60	45	198	108	36	36	64	100	170	85
63	150	1/4	8	224	60	45	216	126	36	36	64	100	170	85

d [mm]	H8 [mm]	H9 [mm]	H10 [mm]	Lift = Hx [mm]
20	76	14	12	8
25	88	18	12	10
32	88	21	12	12
40	100	26	15	14
50	117	33	15	18
63	117	39	15	22



## PROGEF® Plus General Information



- Pipes
- Butt Fusion System

Rtf-Prime



# PROGEF Plus – System Specification






<b>Material</b>	Beta PP-H 100 (Beta Polypropylene Homopolymer) d20–d225	State-of-the-art PP (Polypropylene) d250–d315
Colour	RAL 7032 pebble grey	RAL 7032 pebble grey
Density	~0.90g/cm <sup>3</sup> (ISO 1183/ASTM D792)	~0.90g/cm <sup>3</sup> (ISO 1183 / ASTM D792)
Surface tension	31 mJ/m <sup>2</sup>	24 mJ/m <sup>2</sup>
Linear expansion coefficient	0.16 mm/mK (DIN 53752)	0.16-0.18 mm/mK (DIN 53752)
E-modulus	1300N/mm <sup>2</sup> (ISO 527/ASTM D790)	900N/mm <sup>2</sup> (ISO 527/ASTM D790)
Thermal conductivity	0.23W/mK (EN 12664)	0.23W/mK (EN 12664)
Surface resistivity	> 10 <sup>16</sup> Ω (IEC 60093)	> 10 <sup>16</sup> Ω (IEC 60093)
<b>Dimension</b>	d20–d315 in accordance to EN ISO 15494	
<b>Pressure Rating</b>	Pipes/Fittings/Diaphragm and ball valves: d20–d225 SDR11, PN10, c=2.0 d50–d225 SDR17.6, PN6, c=2.0 Butterfly valves: d63–d225, PN10	Pipes/Fittings: d250–d315 SDR11, PN10, c=2.0 d250–d315 SDR17.6, PN6, c=2.0
<b>Temperature Rating</b>	From 0°C to 80°C (32°F – 176°F)	
<b>Production</b>	Fittings/valves: injection moulded Pipes: extruded Treatment: Every component is specially cleaned according to a process defined by +GF+. Pipes and fittings are silicon-, oil- and dustfree. Additional specifications for valves. Products especially suitable for the paint and microelectronics industry.	
<b>Surface Finish</b>	Inner surface Ra ≤ 1.0 µm (39 µin) for components d20–d110 Inner surface Ra ≤ 1.5 µm (59 µin) for components d125–d315	
<b>Marking</b>	All components are embossed with a permanent identification during the production process to ensure full traceability: Lot No Material Dimension Pressure Rating	
<b>Testing and Inspection</b> (EN ISO 15494)	Visual inspection Surface finish Dimension tolerance Pressure testing Full product range passed the Initial Type Test (ITT)	
<b>Approvals/Conformance<sup>(1)</sup></b>	FDA CFR 21 177.1520 USP 25 class VI (physiological non-toxic)	
<b>Welding Technology</b>	IR Plus, infrared fusion (DVS 2207-6): d20–d225 Butt fusion (DVS 2207-11): d20–d315	
<b>Documentation<sup>(2)</sup></b>	EN 10204 2.2 / EN 10204 3.1	
<b>Packing</b>	Pipes: Capped and double bagged in specified bag Fittings/valves: Each component double bagged in specified bag	
<b>Labeling</b>	Brand Name Product Description Code Number Material Dimension CE-labeling <sup>(3)</sup> Approvals	
<b>Main Applications</b>	Due to the special treatment, PROGEF Plus piping systems are suitable for economical delivery of ultrapure water in semiconductor and TFT/FPD applications and ensure high quality in the paint industry. Highly resistant to impact, abrasion and many chemicals.	

<sup>(1)</sup> For thermoplastic material only

<sup>(2)</sup> On request

<sup>(3)</sup> From 2008 on

# PROGEF Plus Pipes, Fittings, Unions, Flanges and Flange Adaptors

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	Flange Adaptors, Flanges and Gaskets for Butt Fusion	357
	Unions for Socket Fusion	361

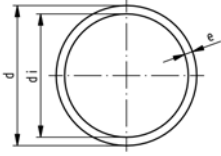
Rtf-Prime.ru

# Pipes

## PROGEF Plus, S5/SDR11 (PN10)

### Model:

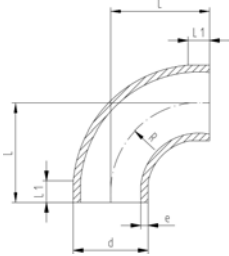
- Material: PP-H
- DIN 8077 / 8078 - DIBT Z-40.23-4
- Closed with caps and double bagged (LDPE-foil)
- Colour: RAL 7032 gravel grey
- Length: Lengths of 5 m



d [mm]	PN	Code	kg/m	e [mm]	di [mm]
20	10	<b>167 481 711</b>	0.107	1,9	16.2
25	10	<b>167 481 712</b>	0.164	2,3	20.4
32	10	<b>167 481 713</b>	0.261	2,9	24.2
40	10	<b>167 481 714</b>	0.412	3,7	32.6
50	10	<b>167 481 715</b>	0.638	4,6	40.8
63	10	<b>167 481 716</b>	1.010	5,8	51.4
75	10	<b>167 481 717</b>	1.410	6,8	61.4
90	10	<b>167 481 718</b>	2.030	8,2	73.6
110	10	<b>167 481 719</b>	3.010	10,0	90.0
125	10	<b>167 481 720</b>	3.910	11,4	102.2
140	10	<b>167 481 721</b>	4.870	12,7	114.6
160	10	<b>167 481 722</b>	6.380	14,6	130.8
180	10	<b>167 481 723</b>	8.070	16,4	147.2
200	10	<b>167 481 724</b>	9.950	18,2	163.6
225	10	<b>167 481 725</b>	12.600	20,5	184.0
250	10	<b>167 481 726</b>	15.500	22,7	184.6
280	10	<b>167 481 727</b>	19.400	25,4	229.2
315	10	<b>167 481 728</b>	24.600	28,6	257.0

# Fittings for Butt Fusion

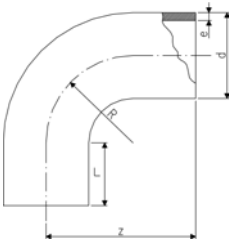
## PROGEF Plus, Bend 90°- Type B, S5/SDR11



### Model:

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Cleaned and double bagged

d [mm]	FM	Code	L [mm]	L1 [mm]	R [mm]	e [mm]
20	IR	727 018 466	27	5	22	1,9
25	IR	727 018 467	32	7	27	2,3
32	IR	727 018 468	40	7	35	2,9
40	IR	727 018 469	51	10	44	3,7
50	IR	727 018 470	62	10	55	4,6
63	IR	727 018 471	77	10	69	5,8
75	IR	727 018 662	100	20	90	6,8
90	IR	727 018 663	100	20	90	8,2
110	IR	727 018 664	141	25	130	10,0
125	IR	727 018 475	140	15	125	11,4
140	IR	727 018 476	155	15	140	12,7
160	IR	727 018 477	175	15	160	14,6
180	IR	727 018 478	195	15	180	16,4
200	IR	727 018 479	215	15	200	18,2
225	IR	727 018 480	245	20	225	20,5
250	--	727 018 450	256	49	232	22,7
280	--	727 018 451	286	44	262	25,4
315	--	727 018 452	321	51	297	28,6



## Bends 90°, S5/SDR11 - 0.75d

### Model:

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Cleaned and double bagged

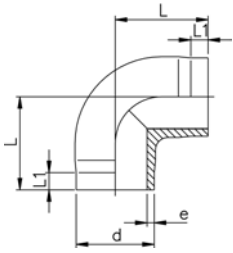
d [mm]	FM	Code	z [mm]	L [mm]	R [mm]	e [mm]
20	IR	727 018 681	38	23	15	1.9
25	IR	727 018 682	42	23	19	2.3
32	IR	727 018 683	46	22	24	2.9
40	IR	727 018 684	51	21	30	3.7
50	IR	727 018 685	58	21	37	4.6
63	IR	727 018 686	66	21	45	5.8



## PROGEF Plus, Elbow 90°, S5/SDR11

### Model:

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Cleaned and double bagged



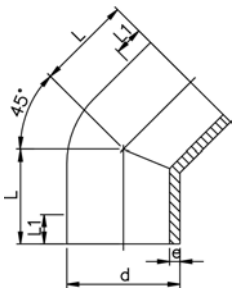
d [mm]	FM	Code	L [mm]	L1 [mm]	e [mm]
20	IR	<b>727 108 581</b>	38	25	1,9
25	IR	<b>727 108 582</b>	42	26	2,3
32	IR	<b>727 108 583</b>	46	27	2,9
40	IR	<b>727 108 584</b>	51	22	3,7
50	IR	<b>727 108 585</b>	58	23	4,6
63	IR	<b>727 108 586</b>	66	21	5,8



## PROGEF Plus, Elbow 45°, S5/SDR11

### Model:

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Cleaned and double bagged



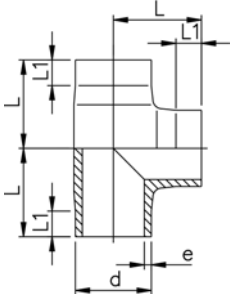
d [mm]	FM	Code	L [mm]	L1 [mm]	e [mm]
20	IR	<b>727 158 581</b>	32	24	1,9
25	IR	<b>727 158 582</b>	34	25	2,3
32	IR	<b>727 158 583</b>	36	25	2,9
40	IR	<b>727 158 584</b>	39	25	3,7
50	IR	<b>727 158 585</b>	42	26	4,6
63	IR	<b>727 158 586</b>	47	29	5,8
75	IR	<b>727 158 587</b>	49	29	6,8
90	IR	<b>727 158 588</b>	57	34	8,2
110	IR	<b>727 158 589</b>	70	43	10,0
125	IR	<b>727 158 590</b>	79	48	11,4
140	IR	<b>727 158 591</b>	88	55	12,7
160	IR	<b>727 158 592</b>	100	60	14,6
200	IR	<b>727 158 594</b>	124	75	18,2
225	IR	<b>727 158 595</b>	140	85	20,5



## PROGEF Plus, Tee 90° equal, S5/SDR11

### Model:

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Cleaned and double bagged



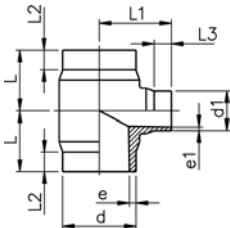
d [mm]	FM	Code	L [mm]	L1 [mm]	e [mm]
20	IR	727 208 581	38	24	1,9
25	IR	727 208 582	42	26	2,3
32	IR	727 208 583	46	26	2,9
40	IR	727 208 584	51	23	3,7
50	IR	727 208 585	58	22	4,6
63	IR	727 208 586	66	20	5,8
75	IR	727 208 587	75	20	6,8
90	IR	727 208 588	90	20	8,2
110	IR	727 208 589	110	20	10,0
125	IR	727 208 590	125	25	11,4
140	IR	727 208 591	140	28	12,7
160	IR	727 208 592	160	28	14,6
180	IR	727 208 593	195	73	16,4
200	IR	727 208 594	200	35	18,2
225	IR	727 208 595	220	35	20,5
250	--	727 208 596	275	86	22,7
280	--	727 208 597	310	105	25,4
315	--	727 208 598	350	111	28,6



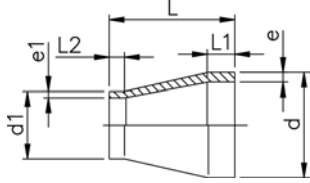
## Tee 90° reducing, S5/SDR11

### Model:

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Cleaned and double bagged



d [mm]	d1 [mm]	FM	Code	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	e [mm]	e1 [mm]
63	32	IR	727 208 251	65	70	25	25	5,8	2,9
63	50	IR	727 208 252	65	70	25	25	5,8	4,6
75	32	IR	727 208 253	70	75	25	25	6,8	2,9
75	50	IR	727 208 254	70	75	25	25	6,8	4,6
75	63	IR	727 208 255	70	75	25	25	6,8	5,8
90	50	IR	727 208 257	80	85	25	25	8,2	4,6
90	63	IR	727 208 258	80	85	25	25	8,2	5,8
90	75	IR	727 208 259	80	85	25	25	8,2	6,8
110	32	IR	727 208 260	90	95	30	25	10,0	2,9
110	50	IR	727 208 261	90	95	30	25	10,0	4,6
110	63	IR	727 208 262	90	95	30	25	10,0	5,8
110	75	IR	727 208 263	90	95	30	25	10,0	6,8
110	90	IR	727 208 264	90	95	30	25	10,0	8,2
160	63	IR	727 208 271	142	135	50	30	14,6	5,8
160	75	IR	727 208 272	142	135	50	30	14,6	6,8
160	90	IR	727 208 273	142	135	50	30	14,6	8,2
160	110	IR	727 208 274	142	135	50	30	14,6	10,0
225	90	IR	727 208 288	155	165	40	30	20,5	8,2
225	110	IR	727 208 289	155	165	40	30	20,5	10,0
225	160	IR	727 208 291	155	165	40	30	20,5	14,6



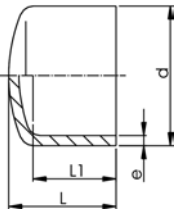
## Reducers, S5/SDR11

### Model:

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Cleaned and double bagged

<sup>1</sup> Material: PP-R

d	d1	FM	Code	L	L1	L2	e	e1
[mm]	[mm]			[mm]	[mm]	[mm]	[mm]	[mm]
25	20	IR	727 908 637	50	20	20	2,3	1,9
32	20	IR	727 908 642	50	20	20	2,9	1,9
32	25	IR	727 908 641	50	20	20	2,9	2,3
40	20	IR	727 908 648	58	20	23	3,7	1,9
40	25	IR	727 908 647	55	20	20	3,7	2,3
40	32	IR	727 908 646	55	20	20	3,7	2,9
50	25	IR	727 908 654	60	20	20	4,6	2,3
50	32	IR	727 908 653	60	20	20	4,6	2,9
50	40	IR	727 908 652	60	20	20	4,6	3,7
63	32	IR	727 908 660	65	20	20	5,8	2,9
63	40	IR	727 908 659	65	20	20	5,8	3,7
63	50	IR	727 908 658	65	20	20	5,8	4,6
75	40	IR	727 908 666	68	20	20	6,8	3,7
75	50	IR	727 908 665	65	20	20	6,8	4,6
75	63	IR	727 908 664	65	20	20	6,8	5,8
90	63	IR	727 908 671	75	22	19	8,2	5,8
90	75	IR	727 908 670	75	21	19	8,2	6,8
110	75	IR	727 908 677	90	28	18	10,0	6,8
110	90	IR	727 908 676	90	28	20	10,0	8,2
125	110	IR	727 908 680	100	31	30	11,4	10,0
140	110	IR	727 908 685	110	33	29	12,7	10,0
140	125	IR	727 908 684	110	34	30	12,7	11,4
160	110	IR	727 908 690	120	38	27	14,6	10,0
160	140	IR	727 908 688	120	40	35	14,6	12,7
180	90	IR	727 908 691	157	45	22	16,4	8,2
180	110	IR	727 908 955	157	45	28	16,4	10,0
180	125	IR	727 908 698	136	45	32	16,4	11,4
180	140	IR	727 908 699	136	45	35	16,4	12,7
180	160	IR	727 908 952	136	45	40	16,4	14,6
200	160	IR	727 908 692	145	50	40	18,2	14,6
200	180	IR	727 908 693	151	50	45	18,2	16,4
225	110	IR	727 908 695	160	55	35	20,5	10,0
225	160	IR	727 908 696	160	55	40	20,5	14,6
225	180	IR	727 908 694	171	55	45	20,5	16,4
225	200	IR	727 908 697	160	55	50	20,5	18,2
250	160	--	727 908 700	194	60	40	22,7	14,6
250	225	--	727 908 701	182	60	55	22,7	20,5
280	225	--	727 908 702	200	85	80	25,4	20,5
280	250	--	727 908 703	200	85	90	25,4	22,7
315	225	--	727 908 704	230	95	88	28,6	20,5
315	250	--	727 908 705	230	95	95	28,6	22,7
315	280	--	727 908 706	230	95	107	28,6	25,4



## End Caps, S5/SDR11

### Model:

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Cleaned and double bagged

<sup>1</sup> Material: PP-R

d [mm]	FM	Code	L [mm]	L1 [mm]	e [mm]
20	IR	<b>727 968 981</b>	45	35	1,9
25	IR	<b>727 968 982</b>	52	40	2,3
32	IR	<b>727 968 983</b>	58	44	2,9
40	IR	<b>727 968 984</b>	67	50	3,7
50	IR	<b>727 968 985</b>	75	55	4,6
63	IR	<b>727 968 986</b>	85	62	5,8
75	IR	<b>727 968 987</b>	95	63	6,8
90	IR	<b>727 968 988</b>	110	79	8,2
110	IR	<b>727 968 989</b>	127	88	10,0
125	IR	<b>727 968 990</b>	138	102	11,4
140	IR	<b>727 968 991</b>	144	106	12,7
160	IR	<b>727 968 992</b>	154	109	14,6
180	IR	<b>727 968 993</b>	191	141	16,4
200	IR	<b>727 968 994</b>	181	127	18,2
225	IR	<b>727 968 995</b>	211	141	20,5
<sup>1</sup> 250	--	<b>727 968 996</b>	205	130	22,7
<sup>1</sup> 280	--	<b>727 968 997</b>	235	139	25,4
<sup>1</sup> 315	--	<b>727 968 998</b>	255	150	28,6



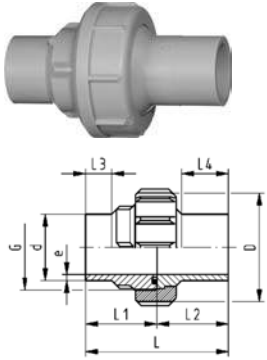
# Unions for Butt Fusion

EPDM 27 51 86  
FPM 27 52 86

## PROGEF Plus, Union, S5/SDR11

Model:

- Material: PP-H
- With butt fusion ends
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Cleaned and double bagged

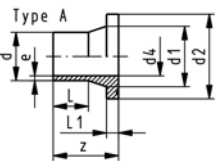
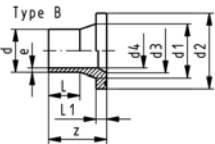


d [mm]	D [mm]	FM	EPDM Code	FPM Code
20	48	IR	727 518 606	727 528 606
25	58	IR	727 518 607	727 528 607
32	65	IR	727 518 608	727 528 608
40	79	IR	727 518 609	727 528 609
50	91	IR	727 518 610	727 528 610
63	111	IR	727 518 611	727 528 611
75	135	IR	727 518 612	727 528 612
90	135	IR	727 518 613	727 528 613
110	158	IR	727 518 614	727 528 614

d [mm]	G [inch]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	e [mm]	O-Ring EPDM	O-Ring FPM	Size
20	1	107	54	53	26	1,9	748.413.006	749.413.006	20,22 x 3,53
25	1 1/4	113	57	56	26	2,3	748.413.007	749.413.007	28,17 x 3,53
32	1 1/2	119	60	59	26	2,9	748.413.008	749.413.008	32,93 x 3,53
40	2	126	63	63	26	3,7	748.413.009	749.413.009	40,65 x 5,34
50	2 1/4	131	66	66	26	4,6	748.413.010	749.413.010	47,00 x 5,34
63	2 3/4	137	69	68	26	5,8	748.413.011	749.413.011	59,69 x 5,34
75	S107,5x3,6	132	66	66	24	6,8	748.413.013	749.413.013	69,22 x 5,34
90	S107,5x3,6	131	66	66	24	8,2	748.413.014	749.413.014	81,92 x 5,34
110	S127,5x3,6	131	66	66	25	10,0	748.413.015	749.413.015	101,00 x 5,34

# Flange Adaptors, Flanges and Gaskets for Butt Fusion

## PROGEF Plus, Flange Adaptor, S5/SDR11 Combined Jointing Face: Flat and Serrated

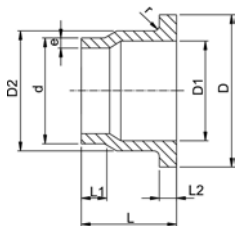


### Model:

- Material: PP-H
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PP-H
- Suitable for flange connections to metric (**from d110 also to ANSI/ASME B16.5**)
- Suitable for butterfly valve type 567, 568 and 037
- Gasket: Profile flange gasket EPDM No. 48 44 17, FPM No. 49 44 17
- Cleaned and double bagged

\* Type B with chamfer

d	DN	FM	Code	z	d1	d2	d3	d4	L	L1	e
[mm]	[mm]			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
20	15	IR	<b>727 798 731</b>	85	27	45		16	41	7	1.9
25	20	IR	<b>727 798 732</b>	85	33	58		20	41	9	2.3
32	25	IR	<b>727 798 733</b>	85	40	68		26	44	10	3.0
40	32	IR	<b>727 798 734</b>	85	50	78		32	49	11	3.7
50	40	IR	<b>727 798 735</b>	85	61	88		40	55	12	4.6
63	50	IR	<b>727 798 736</b>	95	75	102		51	65	14	5.8
*75	65	IR	<b>727 798 737</b>	125	89	122	66	61	75	16	6.8
*90	80	IR	<b>727 798 738</b>	140	105	138	78	73	85	17	8.2
*110	100	IR	<b>727 798 739</b>	160	125	158	100	90	90	18	10.0
*125	100	IR	<b>727 798 740</b>	170	132	158	114	102	95	25	11.4
*140	125	IR	<b>727 798 741</b>	200	155	188	127	114	92	25	12.7
*160	150	IR	<b>727 798 742</b>	200	175	212	158	130	110	25	14.6
*180	150	IR	<b>727 798 743</b>	200	180	212	158	147	115	30	16.4
*200	200	IR	<b>727 798 744</b>	200	232	268	203	163	120	32	18.2
*225	200	IR	<b>727 798 745</b>	200	235	268	210	184	130	32	20.5
*250	250		<b>727 798 746</b>	220	285	320	245	204	130	35	22.7
*280	250		<b>727 798 747</b>	220	291	320	265	229	139	35	25.4
*315	300		<b>727 798 748</b>	230	335	370	300	257	150	35	28.6



## PROGEF Plus, Outlet Flange Adaptor, S5/SDR11 Jointing face, combination serrated / flat

### Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- To wafer check valves Type 369
- Cleaned and double bagged

### Attention:

- In conjunction with outlet flange adaptors, **flange rings for socket systems** must be used.

d [mm]	DN [mm]	Code	D [mm]	D1 [mm]	D2 [mm]	L [mm]	L1 [mm]	L2 [mm]	e [mm]	r [mm]
40	32	<b>727 808 134</b>	80	37	50	64	30	11	3,7	3
50	40	<b>727 808 135</b>	90	43	61	67	30	12	4,6	3
63	50	<b>727 808 136</b>	105	54	76	74	30	14	5,8	4
75	65	<b>727 808 137</b>	125	70	90	78	30	16	6,8	4
90	80	<b>727 808 138</b>	140	82	108	87	35	17	8,2	4
110	100	<b>727 808 139</b>	160	105	131	102	41	18	10,0	4
140	125	<b>727 808 141</b>	190	130	165	124	47	25	12,7	4
160	150	<b>727 808 142</b>	215	158	188	149	52	25	14,6	4
225	200	<b>727 808 145</b>	270	206	248	180	55	32	20,5	4
280	250	<b>727 808 147</b>	325	259	308	240	63	35	25,4	4
315	300	<b>727 808 148</b>	375	308	346	272	66	35	28,6	4

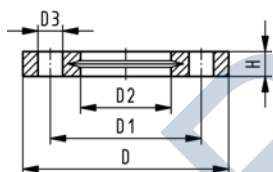
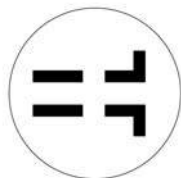
27 70 04  
27 70 05

## Backing Flanges, PP-V for Butt Fusion Systems metric

### Model:

- Modern full-plastic flange PP-GF (30 % glass-fibre reinforced)
- With V-groove which applies force evenly on collar
- With integrated bolt retainers as an assembly aid
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- **Bolt circle PN 10**

<sup>1)</sup> Suitable for socket- and butt fusion systems (no pictograph on flange)  
AL: number of holes



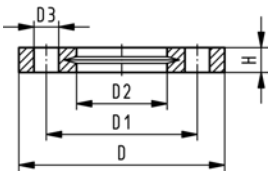
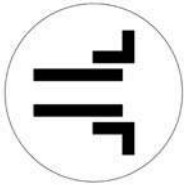
d [mm]	Inch	DN [mm]	PN	Code	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC
20		15	16	<b>727 700 406</b>	95	65	28	14	16	4	M12
25		20	16	<b>727 700 407</b>	105	75	34	14	17	4	M12
32		25	16	<b>727 700 408</b>	115	85	42	14	18	4	M12
40		32	16	<b>727 700 409</b>	140	100	51	18	20	4	M16
50		40	16	<b>727 700 410</b>	150	110	62	18	22	4	M16
63		50	16	<b>727 700 411</b>	165	125	78	18	24	4	M16
75		65	16	<b>727 700 412</b>	185	145	92	18	26	4	M16
90		80	16	<b>727 700 513</b>	200	160	108	18	27	8	M16
110		100	16	<b>727 700 514</b>	220	180	128	18	28	8	M16
125		100	16	<b>727 700 515</b>	220	180	135	18	28	8	M16
140		125	16	<b>727 700 516</b>	250	210	158	18	30	8	M16
160	6	150	16	<b>727 700 517</b>	285	241	178	22	32	8	M20
180		150	16	<b>727 700 518</b>	285	240	188	22	32	8	M20
200	8	200	16	<b>727 700 519</b>	340	295	235	22	34	8	M20
225	9	200	16	<b>727 700 520</b>	340	295	238	22	34	8	M20
250		250	16	<b>727 700 521</b>	395	350	288	22	38	12	M20
280		250	16	<b>727 700 522</b>	395	350	294	22	38	12	M20
315		300	16	<b>727 700 523</b>	445	400	338	22	42	12	M20

27 70 04  
27 70 05

## Backing Flanges, PP-V for Socket Systems metric

### Model:

- Modern full-plastic flange PP-GF (30 % glass-fibre reinforced)
- With V-groove which applies force evenly on collar
- With integrated bolt retainers as an assembly aid
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- **Bolt circle PN 10**



<sup>1)</sup> Suitable for socket- and butt fusion systems (no pictograph on flange)

AL: number of holes

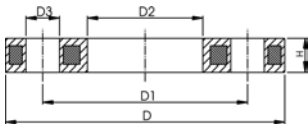
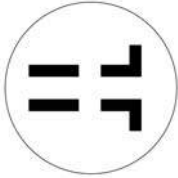
d [mm]	Inch	DN [mm]	PN	Code	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC
20		15	16	<b>727 700 406</b>	95	65	28	14	16	4	M12
25		20	16	<b>727 700 407</b>	105	75	34	14	17	4	M12
32		25	16	<b>727 700 408</b>	115	85	42	14	18	4	M12
40		32	16	<b>727 700 409</b>	140	100	51	18	20	4	M16
50		40	16	<b>727 700 410</b>	150	110	62	18	22	4	M16
63		50	16	<b>727 700 411</b>	165	125	78	18	24	4	M16
75		65	16	<b>727 700 412</b>	185	145	92	18	26	4	M16
90		80	16	<b>727 700 413</b>	200	160	110	18	27	8	M16
110		100	16	<b>727 700 414</b>	220	180	133	18	28	8	M16
140		125	16	<b>727 700 416</b>	250	210	167	18	30	8	M16
160	6	150	16	<b>727 700 417</b>	285	241	190	22	32	8	M20
200		200	16	<b>727 700 419</b>	340	296	226	22	34	8	M20
225	8	200	16	<b>727 700 420</b>	340	295	250	22	34	8	M20
250		250	16	<b>727 700 421</b>	395	350	277	22	38	12	M20
280		250	16	<b>727 700 422</b>	395	350	310	22	38	12	M20
315		300	16	<b>727 700 423</b>	445	400	348	22	42	12	M20
355		350	10	<b>727 700 424</b>	515	460	388	22	46	16	M20
400		400	10	<b>727 700 425</b>	574	515	442	26	50	16	M24

27 70 02  
27 70 03

## Backing Flanges, PP/Steel for Butt Fusion Systems metric

Model:

- Material: PP (30 % glass-fibre reinforced) with steel ring
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- Bolt circle PN 10



AL: number of holes

d [mm]	d [inch]	DN [mm]	PN	Code	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC
20		15	16	<b>727 700 206</b>	95	65	28	14	12	4	M12
25		20	16	<b>727 700 207</b>	105	75	34	14	12	4	M12
32		25	16	<b>727 700 208</b>	115	85	42	14	16	4	M12
40		32	16	<b>727 700 209</b>	140	100	51	18	16	4	M16
50		40	16	<b>727 700 210</b>	150	110	62	18	18	4	M16
63		50	16	<b>727 700 211</b>	165	125	78	18	18	4	M16
75		65	16	<b>727 700 212</b>	185	145	92	18	18	4	M16
90		80	16	<b>727 700 313</b>	200	160	108	18	20	8	M16
110		100	16	<b>727 700 314</b>	220	180	128	18	20	8	M16
125		100	16	<b>727 700 315</b>	220	180	135	18	20	8	M16
140		125	16	<b>727 700 316</b>	250	210	158	18	24	8	M16
160	6	150	16	<b>727 700 317</b>	285	240	178	22	24	8	M20
180		150	16	<b>727 700 318</b>	285	240	188	22	24	8	M20
200		200	16	<b>727 700 319</b>	340	295	235	22	27	8	M20
225		200	16	<b>727 700 320</b>	340	295	238	22	27	8	M20
250		250	16	<b>727 700 321</b>	395	350	288	22	30	12	M20
280		250	16	<b>727 700 322</b>	395	350	294	22	30	12	M20
315		300	16	<b>727 700 323</b>	445	400	338	22	34	12	M20

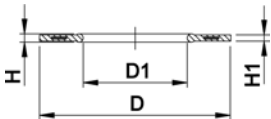
EPDM 48 44 17  
FPM 49 44 17

## Flange Gaskets SF EPDM / FPM



Model:

- Silicone free / paint-compatible
- For all GF Flange Adaptors
- Profile Gasket with steel insert (type G-ST-P/K)
- Hardness: 70° Shore **EPDM**, 75° Shore **FPM**



di FA are the suitable inner diameters of flange adaptors

d [mm]	DN [mm]	PN	EPDM Code	FPM Code	D [mm]	D1 [mm]	H [mm]	H1 [mm]	di FA [mm]
20	15	16	<b>748 441 706</b>	<b>749 441 706</b>	51	20	4	3	10 - 20
25	20	16	<b>748 441 707</b>	<b>749 441 707</b>	61	22	4	3	12 - 22
32	25	16	<b>748 441 708</b>	<b>749 441 708</b>	71	28	4	3	18 - 28
40	32	16	<b>748 441 709</b>	<b>749 441 709</b>	82	40	4	3	30 - 40
50	40	16	<b>748 441 710</b>	<b>749 441 710</b>	92	46	4	3	36 - 46
63	50	16	<b>748 441 711</b>	<b>749 441 711</b>	107	58	5	4	48 - 58
75	65	16	<b>748 441 712</b>	<b>749 441 712</b>	127	69	5	4	59 - 69
90	80	16	<b>748 441 713</b>	<b>749 441 713</b>	142	84	5	4	73 - 84
110	100	16	<b>748 441 714</b>	<b>749 441 714</b>	162	104	6	5	94 - 104
125	100	16	<b>748 441 715</b>	<b>749 441 715</b>	162	123	6	5	113 - 123
140	125	16	<b>748 441 716</b>	<b>749 441 716</b>	192	137	6	5	127 - 137
160 / 180	150	16	<b>748 441 717</b>	<b>749 441 717</b>	218	160	8	6	150 - 160
200	200	16	<b>748 441 719</b>	<b>749 441 719</b>	273	203	8	6	192 - 203
225	200	16	<b>748 441 720</b>	<b>749 441 720</b>	273	220	8	6	207 - 207
250	250	16	<b>748 441 721</b>	<b>749 441 721</b>	328	252	8	6	238 - 250
280	250	16	<b>748 441 722</b>	<b>749 441 722</b>	328	274	8	6	264 - 274
315	300	16	<b>748 441 723</b>	<b>749 441 723</b>	378	306	8	6	296 - 296

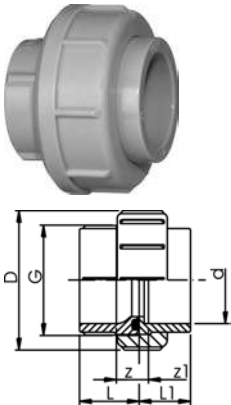
# Unions for Socket Fusion

EPDM 27 51 02  
FPM 27 52 02

## PROGEF Plus, Union

### Model:

- Material: PP-H
- With fusion sockets metric
- D75-110 with new thread geometry, now rated PN10 up to d110
- Jointing face: with O-Ring
- Cleaned and double bagged



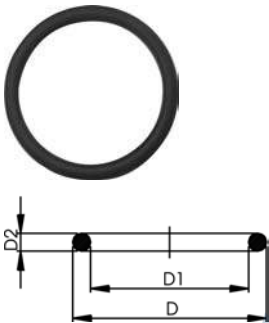
d [mm]	PN	EPDM Code	FPM Code
16	10	727 510 255	727 520 255
20	10	727 510 256	727 520 256
25	10	727 510 257	727 520 257
32	10	727 510 258	727 520 258
40	10	727 510 259	727 520 259
50	10	727 510 260	727 520 260
63	10	727 510 261	727 520 261
75	10	727 510 272	727 520 272
90	10	727 510 273	727 520 273
110	10	727 510 274	727 520 274

d [mm]	D [mm]	G [inch]	L [mm]	L1 [mm]	z [mm]	z1 [mm]	O-Ring EPDM	O-Ring FPM	Size
16	35	3/4	24	18	5	11	748.413.005	749.413.005	15,54 x 2,62
20	48	1	26	19	5	12	748.413.006	749.413.006	20,22 x 3,53
25	58	1 1/4	28	21	5	12	748.413.007	749.413.007	28,17 x 3,53
32	65	1 1/2	30	23	5	12	748.413.008	749.413.008	32,93 x 3,53
40	79	2	34	25	5	14	748.413.009	749.413.009	40,65 x 5,54
50	91	2 1/4	39	28	5	16	748.413.010	749.413.010	47,00 x 5,34
63	111	2 3/4	47	32	5	20	748.413.011	749.413.011	59,69 x 5,34
75	135	S107,5x3,6	51	36	5	20	748.413.014	749.413.014	81,92 x 5,34
90	158	S127,5x3,6	55	42	7	20	748.413.015	749.413.015	101,00 x 5,34
110	188	S152,5x3,6	54	49	7	12	748.413.016	748.413.016	120,00 x 6,99

## O-Ring

### Model:





- Hardness approx. 65° Shore
- Suitable for unions
- Cleaned and double bagged



EPDM Code	FPM Code	D [mm]	D1 [mm]	D2 [mm]
748 413 005	749 413 005	21	16	2.62
748 413 006	749 413 006	27	20	3.53
748 413 007	749 413 007	35	28	3.53
748 413 008	749 413 008	40	33	3.53
748 413 009	749 413 009	51	41	5.34
748 413 010	749 413 010	58	47	5.34
748 413 011	749 413 011	70	60	5.34
748 413 013	749 413 013	80	69	5.34
748 413 014	749 413 014	93	82	5.34
748 413 015	749 413 015	112	101	5.34
748 413 016	749 413 016	134	120	6.99

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# PROGEF Plus Hand-Operated and Actuated Valves

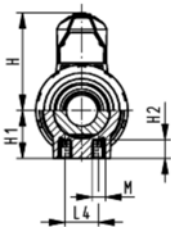
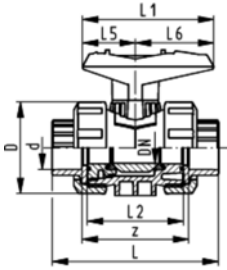
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	Ball Valve	364
	Diaphragm Valves	369
	Butterfly Valves	374
	Ball Check Valves	377

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# Ball Valve

## Ball Valve Type 546, PP-H SF with mounting inserts With fusion sockets metric



### Model:

- Material: PP-H / silicone free cleaned
- Image and drawing DN65-100 please see "New product ball valve DN65-100"
- For easy installation and removal
- z-dimension, valve end and union nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Integrated stainless steel mounting inserts
- Double bagged
- Ball seals PVDF

### Option:

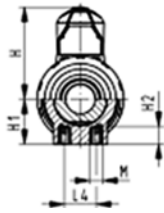
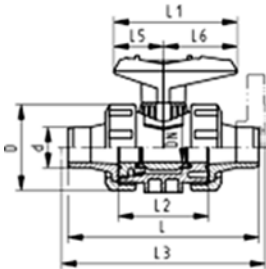
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	71	<b>167 546 601</b>	<b>167 546 611</b>	0.115
20	15	10	185	<b>167 546 602</b>	<b>167 546 612</b>	0.115
25	20	10	350	<b>167 546 603</b>	<b>167 546 613</b>	0.180
32	25	10	700	<b>167 546 604</b>	<b>167 546 614</b>	0.255
40	32	10	1000	<b>167 546 605</b>	<b>167 546 615</b>	0.440
50	40	10	1600	<b>167 546 606</b>	<b>167 546 616</b>	0.610
63	50	10	3100	<b>167 546 607</b>	<b>167 546 617</b>	1.145
75	65	10	5000	<b>167 546 608</b>	<b>167 546 618</b>	3.700
90	80	10	7000	<b>167 546 609</b>	<b>167 546 619</b>	5.500
110	100	10	11000	<b>167 546 610</b>	<b>167 546 620</b>	8.700

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]
16	50	57	27	12	93	77	56	25	32	45	M6	67
20	50	57	27	12	95	77	56	25	32	45	M6	66
25	58	67	30	12	108	97	65	25	39	58	M6	77
32	68	73	36	12	118	97	71	25	39	58	M6	83
40	84	90	44	15	137	128	85	45	54	74	M8	99
50	97	97	51	15	147	128	89	45	54	74	M8	105
63	124	116	64	15	168	152	101	45	66	87	M8	117
75	166	149	85	15	233	270	136	70	64	206	M8	167
90	200	161	105	15	254	270	141	70	64	206	M8	180
110	238	178	123	22	301	320	164	120	64	256	M12	215



DN10/15 - 50



## Ball Valve Type 546, PP-H SF with mounting inserts With socket fusion spigots metric

### Model:

- Material: PP-H / silicone free cleaned
- Image and drawing DN65-100 please see "New product ball valve DN65-100"
- For easy installation and removal
- z-dimension, valve end and union nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Integrated stainless steel mounting inserts
- Double bagged
- Ball seals PVDF

### Option:

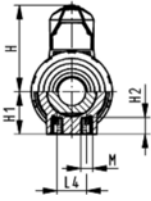
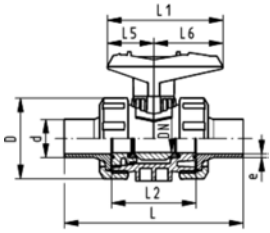
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	71	<b>167 546 621</b>	<b>167 546 631</b>	0.120
20	15	10	185	<b>167 546 622</b>	<b>167 546 632</b>	0.120
25	20	10	350	<b>167 546 623</b>	<b>167 546 633</b>	0.180
32	25	10	700	<b>167 546 624</b>	<b>167 546 634</b>	0.260
40	32	10	1000	<b>167 546 625</b>	<b>167 546 635</b>	0.450
50	40	10	1600	<b>167 546 626</b>	<b>167 546 636</b>	0.640
63	50	10	3100	<b>167 546 627</b>	<b>167 546 637</b>	1.210
75	65	10	5000	<b>167 546 628</b>	<b>167 546 638</b>	3.800
90	80	10	7000	<b>167 546 629</b>	<b>167 546 639</b>	5.600
110	100	10	11000	<b>167 546 630</b>	<b>167 546 640</b>	8.800

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M
16	50	57	27	12	110	77	56		25	32	45	M6
20	50	57	27	12	120	77	56	130	25	32	45	M6
25	58	67	30	12	139	97	65	150	25	39	58	M6
32	68	73	36	12	150	97	71	160	25	39	58	M6
40	84	90	44	15	170	128	85	180	45	54	74	M8
50	97	97	51	15	190	128	89	200	45	54	74	M8
63	124	116	64	15	220	152	101	230	45	66	87	M8
75	166	149	85	15	280	270	136	290	70	64	206	M8
90	200	161	105	15	296	270	141	310	70	64	206	M8
110	238	178	123	22	336	320	164	350	120	64	256	M12



DN10/15 - 50






## Ball Valve Type 546, PP-H SF with mounting inserts With butt fusion spigots IR-Plus SDR11 metric




### Model:

- Material: PP-H / silicone free cleaned
- Image and drawing DN65-100 please see "New product ball valve DN65-100"
- For easy installation and removal
- z-dimension, valve end and union nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Integrated stainless steel mounting inserts
- Double bagged
- Ball seals PVDF

### Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	10	185	<b>167 546 662</b>	<b>167 546 672</b>	0.120
25	20	10	350	<b>167 546 663</b>	<b>167 546 673</b>	0.180
32	25	10	700	<b>167 546 664</b>	<b>167 546 674</b>	0.255
40	32	10	1000	<b>167 546 665</b>	<b>167 546 675</b>	0.440
50	40	10	1600	<b>167 546 666</b>	<b>167 546 676</b>	0.620
63	50	10	3100	<b>167 546 667</b>	<b>167 546 677</b>	1.200
 75	65	10	5000	<b>167 546 668</b>	<b>167 546 678</b>	3.800
 90	80	10	7000	<b>167 546 669</b>	<b>167 546 679</b>	5.500
 110	100	10	11000	<b>167 546 670</b>	<b>167 546 680</b>	8.700

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]
20	50	57	27	12	130	77	56	25	32	45	M6	1,9
25	58	67	30	12	143	97	65	25	39	58	M6	2,3
32	68	73	36	12	150	97	71	25	39	58	M6	3
40	84	90	44	15	171	128	85	45	54	74	M8	3,7
50	97	97	51	15	191	128	89	45	54	74	M8	4,6
63	124	116	64	15	220	152	101	45	66	87	M8	5,8
 75	166	149	85	15	266	270	136	70	64	206	M8	8.2
 90	200	161	105	15	264	270	141	70	64	206	M8	9.9
 110	238	178	123	22	301	320	164	120	64	256	M12	12



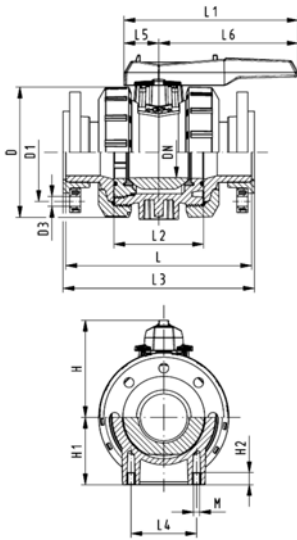
## Ball Valve Type 546, PP-H SF with mounting inserts With backing flanges PP-st metric

### Model:

- Material: PP-H / silicone free cleaned
- Image and drawing DN65-100 please see "**New product ball valve DN65-100**"
- For easy installation and removal
- z-dimension, valve end and union nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Integrated stainless steel mounting inserts
- Double bagged
- Ball seals PVDF
- Overall length according to EN 558
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501

### Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches



d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg								
75	65	10	5000	<b>167 546 828</b>	<b>167 546 838</b>	4.300								
90	80	10	7000	<b>167 546 829</b>	<b>167 546 839</b>	6.400								
110	100	10	11000	<b>167 546 830</b>	<b>167 546 840</b>	10.000								
d [mm]	D [mm]	D1 [mm]	D3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	H [mm]	H1 [mm]	M	
75	166	145	18	280	270	136	290	70	64	206	149	85	8	
90	200	160	18	296	270	141	310	70	64	206	161	105	8	
110	238	180	18	336	320	164	350	120	64	256	178	123	12	



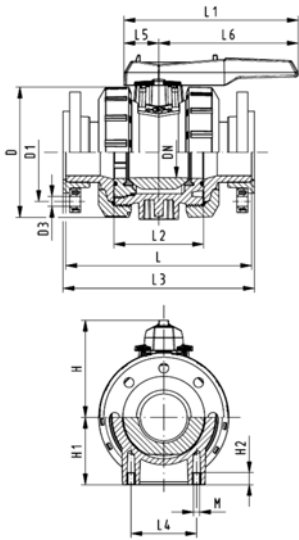
## Ball Valve Type 546, PP-H SF with mounting inserts With backing flanges PP-st ANSI

### Model:

- Material: PP-H / silicone free cleaned
- Image and drawing DN65-100 please see "New product ball valve DN65-100"
- For easy installation and removal
- z-dimension, valve end and union nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Integrated stainless steel mounting inserts
- Double bagged
- Ball seals PTFE
- Overall length according to EN 558
- Connecting dimension ANSI/ASME B 16.5 / ASTM D 4024

### Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches



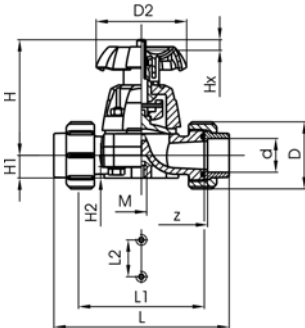
d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg								
75	65	10	5000	<b>167 546 888</b>	<b>167 546 898</b>	4.300								
90	80	10	7000	<b>167 546 889</b>	<b>167 546 899</b>	6.400								
110	100	10	11000	<b>167 546 890</b>	<b>167 546 900</b>	10.000								

d [mm]	D [mm]	D1 [mm]	D3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	H [mm]	H1 [mm]	M	
75	166	140	19	280	270	136	290	70	64	206	149	85	8	
90	200	152	19	296	270	141	310	70	64	206	161	105	8	
110	238	191	19	336	320	164	350	120	64	256	178	123	12	

# Diaphragm Valves

## PROGEF® PLUS silicon free Diaphragm valve type 314 PP-H SF With fusion sockets



### Model:

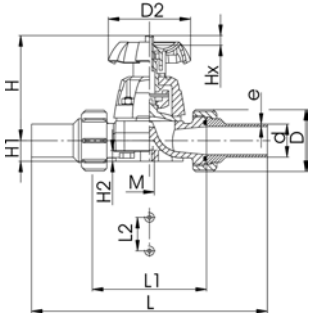
- Material: PP-H / silicone free cleaned
- Double bagged

### Option:

- Handwheel with built in locking mechanism

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE with EPDM Supporting Diaphragm Code	kg
20	15	10	72	<b>167 314 477</b>	<b>167 314 492</b>	0.390
25	20	10	137	<b>167 314 478</b>	<b>167 314 493</b>	0.570
32	25	10	207	<b>167 314 479</b>	<b>167 314 494</b>	0.770
40	32	10	354	<b>167 314 480</b>	<b>167 314 495</b>	1.230
50	40	10	517	<b>167 314 481</b>	<b>167 314 496</b>	1.610
63	50	10	713	<b>167 314 482</b>	<b>167 314 497</b>	2.780

d [mm]	z [mm]	D [mm]	D2 [mm]	L [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	M	Lift = Hx [mm]
20	100	47	80	128	25	90	14	12	M6	8
25	118	57	80	150	25	101	18	12	M6	11
32	126	64	94	162	25	117	21	12	M6	13
40	144	78	117	184	45	127	26	15	M8	16
50	164	89	117	210	45	139	33	15	M8	21
63	194	109	152	248	45	172	39	15	M8	28



## PROGEF® PLUS silicon free Diaphragm valve type 314 PP-H SF With butt fusion ends SDR11

### Model:

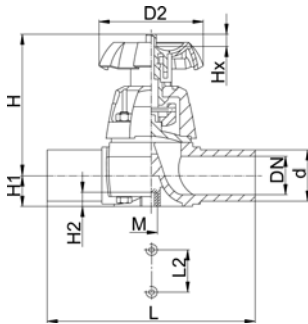
- Material: PP-H / silicone free cleaned
- Double bagged

### Option:

- Handwheel with built in locking mechanism

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE with EPDM Supporting Diaphragm Code	kg
20	15	10	72	<b>167 314 577</b>	<b>167 314 592</b>	0.395
25	20	10	137	<b>167 314 578</b>	<b>167 314 593</b>	0.590
32	25	10	207	<b>167 314 579</b>	<b>167 314 594</b>	0.800
40	32	10	354	<b>167 314 580</b>	<b>167 314 595</b>	1.270
50	40	10	517	<b>167 314 581</b>	<b>167 314 596</b>	1.670
63	50	10	713	<b>167 314 582</b>	<b>167 314 597</b>	2.890

d [mm]	D [mm]	D2 [mm]	L [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	M	Lift = Hx [mm]	e [mm]
20	47	80	196	25	90	14	12	M6	8	1,9
25	57	80	221	25	102	18	12	M6	11	2,3
32	64	94	234	25	119	21	12	M6	13	3
40	78	117	260	45	126	26	15	M8	16	3,7
50	89	117	284	45	139	33	15	M8	21	4,6
63	109	152	321	45	172	39	15	M8	28	5,8



**PROGEF® PLUS silicon free  
Diaphragm valve type 315 PP-H SF  
With butt fusion spigots SDR11**

**Model:**

- Material: PP-H / silicone free cleaned
- Double bagged

**Option:**

- Handwheel with built in locking mechanism

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE with EPDM supporting diaphragm Code	kg
20	15	10	72	<b>167 315 577</b>	<b>167 315 562</b>	0.260
25	20	10	137	<b>167 315 578</b>	<b>167 315 563</b>	0.382
32	25	10	207	<b>167 315 579</b>	<b>167 315 564</b>	0.660
40	32	10	354	<b>167 315 580</b>	<b>167 315 565</b>	0.779
50	40	10	517	<b>167 315 581</b>	<b>167 315 566</b>	1.137
63	50	10	713	<b>167 315 582</b>	<b>167 315 567</b>	2.061

d [mm]	D2 [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L2 [mm]	M
20	80	90	14	12	124	25	M6
25	80	101	18	12	144	25	M6
32	94	117	22	12	154	25	M6
40	117	127	26	15	174	45	M8
50	117	139	32	15	194	45	M8
63	152	172	39	15	223	45	M8





## PROGEF® PLUS silicone free Diaphragm valve type 317 PP-H SF With flanges

### Model:

- Material: PP-H / silicone free cleaned
- Double bagged
- Jointing surfaces: serrated or flat
- DN 15-65 with backing flange
- DN 80-150 with fixed flange
- Overall length according to EN 558
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

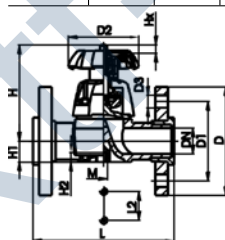
### Option:

- Handwheel lockable DN15-65 (basic version not lockable)

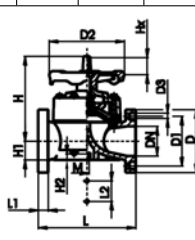
### \* DN80 and DN150 fixed flanges metric and Inch ANSI B16.5

d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	PTFE with EPDM supporting diaphragm Code	kg
20	15	½	10	72	167 317 212	167 317 227	0.532
25	20	¾	10	137	167 317 213	167 317 228	0.844
32	25	1	10	207	167 317 214	167 317 229	1.236
40	32	1 ¼	10	354	167 317 215	167 317 230	1.446
50	40	1 ½	10	517	167 317 216	167 317 231	2.456
63	50	2	10	713	167 317 217	167 317 232	3.664
75	65	2 ½	10	992	167 317 218	167 317 233	5.480
*90	80	3	10	1700	167 317 129	167 317 144	8.600
110	100	4	10	2700	167 317 130	167 317 145	11.360
*160	150	6	7	6033	167 317 132	167 317 147	25.000

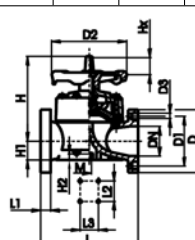
d [mm]	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	H [mm]	H1 [mm]	H2 [mm]	M	AL	Lift = Hx [mm]
20	95	65	80	14	130		25		90	14	12	M6	4	7
25	105	75	80	14	150		25		101	18	12	M6	4	10
32	115	85	94	14	160		25		117	22	12	M6	4	12
40	140	100	117	18	180		45		127	26	15	M8	4	16
50	150	110	117	18	200		45		139	32	15	M8	4	19
63	165	125	152	18	230		45		172	39	15	M8	4	27
75	185	145	152	18	290		70		210	46	15	M8	4	35
*90	200	160	270	18	310	35	120		265	57	23	M12	8	40
110	225	180	270	18	350	38	120		304	69	23	M12	8	50
*160	282	241	400	23	480	29	100	200	437	108	23	M12	8	70



DN 15-65



DN 80-100



DN 150



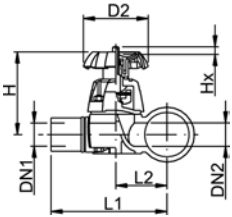
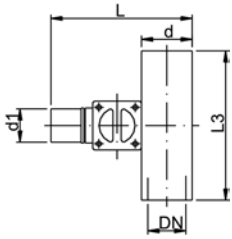
## PROGEF® PLUS silicone free Diaphragm valve type 319 PP-H SF With butt fusion spigots SDR11

### Model:

- Material: PP-H / silicone free cleaned
- Double bagged
- Compact design
- Minimized static zone (dead leg)

### Option:

- Handwheel with built-in locking mechanism (standard version is nonlockable)



d [mm]	d1 [mm]	DN1 [mm]	DN [mm]	DN2 [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	PTFE with EPDM supporting diaphragm Code	kg
20	20	15	15	15	10	47	167 319 601	0.329
25	20	15	20	20	10	69	167 319 603	0.457
25	25	20	20	20	10	91	167 319 604	0.390
32	20	15	25	25	10	86	167 319 607	0.626
32	25	20	25	25	10	126	167 319 608	0.390
32	32	25	25	25	10	156	167 319 609	0.618
40	20	15	32	25	10	84	167 319 612	0.658
50	20	15	40	25	10	82	167 319 618	0.701
50	25	20	40	25	10	124	167 319 619	0.701
50	32	25	40	25	10	159	167 319 620	0.700
63	20	15	50	25	10	81	167 319 625	0.769
63	25	20	50	25	10	115	167 319 626	0.771
63	32	25	50	25	10	156	167 319 627	0.768
90	20	15	80	20	6	88	167 319 641	0.871
90	25	20	80	25	6	133	167 319 642	1.062
90	32	25	80	25	6	162	167 319 643	0.907
90	50	40	80	50	6	504	167 319 645	2.285
90	63	50	80	50	6	530	167 319 646	2.285
110	20	15	100	25	6	89	167 319 651	0.880
110	25	20	100	25	6	123	167 319 652	0.887
110	32	25	100	25	6	159	167 319 653	0.886
110	50	40	100	50	6	503	167 319 655	2.400
110	63	50	100	50	6	543	167 319 656	2.426

d [mm]	D2 [mm]	H [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]
20	80	83	106	96	30	140
25	80	91	121	108	36	150
25	80	91	121	108	36	150
32	94	105	137	120	43	160
32	94	105	137	120	43	160
32	94	105	137	120	43	160
40	94	105	149	128	51	180
50	94	105	159	134	57	180
50	94	105	159	134	57	180
50	94	105	159	134	57	180
63	94	105	175	144	67	180
63	94	105	175	144	67	180
63	94	105	175	144	67	180
90	94	105	204	159	82	160
90	94	105	204	159	82	160
90	94	105	204	159	82	160
90	152	151	252	207	95	220
90	152	151	252	207	95	220
110	94	105	226	171	94	160
110	94	105	226	171	94	160
110	94	105	226	171	94	160
110	152	151	274	219	107	220
110	152	151	274	219	107	220

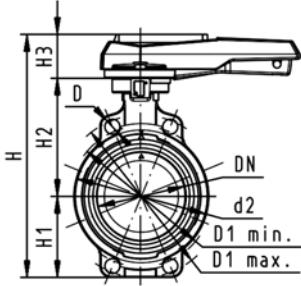
# Butterfly Valves

## PROGEF® Plus silicone free Butterfly valve type 567 PP-H SF Hand lever with ratchet settings

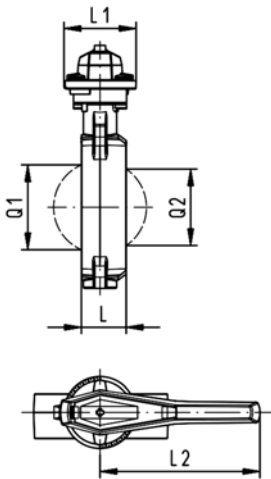


### Model:

- Material: PP-H / silicone free cleaned
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220
- Overall length according to EN 558, ISO 5752



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>167 567 402</b>	<b>167 567 422</b>	0.969
75	65	2 ½	10	2200	<b>167 567 403</b>	<b>167 567 423</b>	1.061
90	80	3	10	3000	<b>167 567 404</b>	<b>167 567 424</b>	1.191
110	100	4	10	6500	<b>167 567 405</b>	<b>167 567 425</b>	1.751
140	125	5	10	11500	<b>167 567 406</b>	<b>167 567 426</b>	2.199
160	150	6	10	16600	<b>167 567 407</b>	<b>167 567 427</b>	2.989
225	200	8	10	39600	<b>167 567 408</b>	<b>167 567 428</b>	4.706



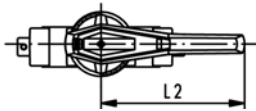
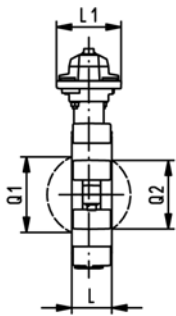
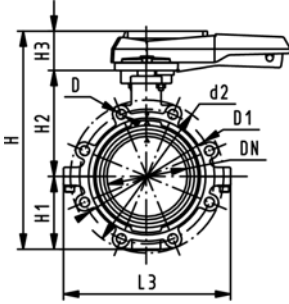
d [mm]	D [mm]	D1 min. [mm]	D1 max. [mm]	d2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	L1 [mm]	L2 [mm]	Q1 [mm]	Q2 [mm]
63	19	120.0	125.0	104	264	77	134	54	45	106	205	40	
75	19	139.7	145.0	115	277	83	140	54	46	106	205	54	35
90	19	150.0	160.0	131	289	89	146	54	49	106	205	67	50
110	19	175.0	190.5	161	325	104	167	55	56	106	255	88	74
140	23	210.0	215.9	187	352	117	181	55	64	106	255	113	97
160	24	241.3	241.3	215	373	130	189	55	72	106	255	139	123
225	23	290.0	295.0	267	435	158	210	67	73	140	408	178	169



## PROGEF Plus silicone free Lugstyle butterfly valve type 568 Hand lever with ratchet settings

### Model:

- Material: PP-H / silicone free cleaned
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10
- Overall length according to EN 558, ISO 5752



d [mm]	DN [mm]	Inch	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
63	50	2	10	1470	<b>167 568 402</b>	<b>167 568 422</b>	3.055
75	65	2 ½	10	2200	<b>167 568 403</b>	<b>167 568 423</b>	3.397
90	80	3	10	3000	<b>167 568 404</b>	<b>167 568 424</b>	4.402
110	100	4	10	6500	<b>167 568 405</b>	<b>167 568 425</b>	5.835
140	125	5	10	11500	<b>167 568 406</b>	<b>167 568 426</b>	7.665
160	150	6	10	16600	<b>167 568 407</b>	<b>167 568 427</b>	9.449
225	200	8	10	39600	<b>167 568 408</b>	<b>167 568 428</b>	14.654

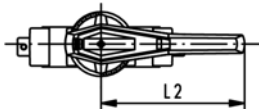
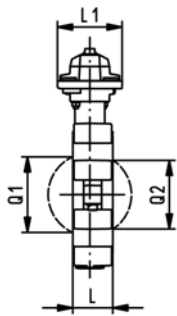
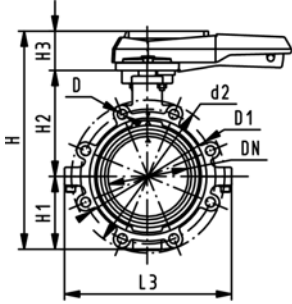
d [mm]	d2 [mm]	D	D1 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	Q1 [mm]	Q2 [mm]
63	150	M16	125	265	77	134	54	45	106	205	150	40	
75	170	M16	145	277	83	140	54	46	106	205	160	54	35
90	184	M16	160	289	89	146	54	49	106	205	205	67	50
110	216	M16	180	326	104	167	55	56	106	255	244	88	74
140	246	M16	210	353	117	181	55	64	106	255	272	113	97
160	273	M20	240	374	130	189	55	72	106	255	297	139	123
225	334	M20	295	435	158	210	67	73	140	408	360	178	169



## PROGEF® PLUS silicone free Butterfly valve type 568 PP-H SF ANSI Hand lever with ratchet settings

### Model:

- Material: PP-H / silicone free cleaned
- Outer body in GGG-40.3 epoxy-coated
- Connecting dimension ANSI/ASME B 16.5 Class 150
- Overall length according to EN 558, ISO 5752

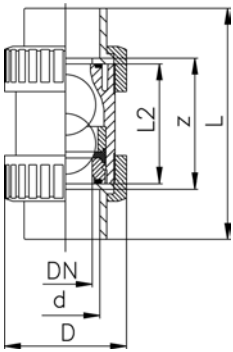


Inch	d [mm]	DN	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
2	63	50	10	1470	<b>167 568 502</b>	<b>167 568 522</b>	3.055
2 ½	75	65	10	2200	<b>167 568 503</b>	<b>167 568 523</b>	3.397
3	90	80	10	3000	<b>167 568 504</b>	<b>167 568 524</b>	3.773
4	110	100	10	6500	<b>167 568 505</b>	<b>167 568 525</b>	5.835
5	140	125	10	11500	<b>167 568 506</b>	<b>167 568 526</b>	7.665
6	160	150	10	16600	<b>167 568 507</b>	<b>167 568 527</b>	9.449
8	225	200	10	39600	<b>167 568 508</b>	<b>167 568 528</b>	14.654

Inch	d2 [mm]	D	D1 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	Q1 [mm]	Q2 [mm]
2	150	UNC 5/8	121	265	77	134	54	45	106	205	150	40	
2 ½	170	UNC 5/8	138	277	83	140	54	46	106	205	160	54	35
3	177	UNC 5/8	152	289	89	146	54	49	106	205	175	67	50
4	216	UNC 5/8	191	326	104	167	55	56	106	255	244	88	74
5	246	UNC 3/4	216	353	117	181	55	64	106	255	272	113	97
6	273	UNC 3/4	241	374	130	189	55	72	106	255	297	139	123
8	334	UNC 3/4	298	435	158	210	67	73	140	408	360	178	169

# Ball Check Valves

## PROGEF® PLUS silicone free Ball check valve type 360 PP-H SF With fusion sockets

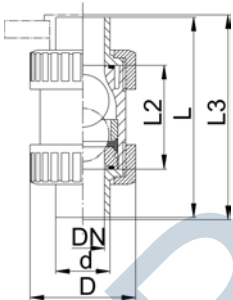


### Model:

- Material: PP-H / silicone free cleaned
- Double bagged
- For easy installation and removal

d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	D [mm]	L [mm]	L2 [mm]	z [mm]
16	10	10	170	167 360 601	167 360 611	0.079	46	98	62	72
20	15	10	150	167 360 602	167 360 612	0.079	46	101	62	73
25	20	10	330	167 360 603	167 360 613	0.134	56	119	74	87
32	25	10	390	167 360 604	167 360 614	0.203	67	130	78	94
40	32	10	710	167 360 605	167 360 615	0.380	82	149	88	109
50	40	10	900	167 360 606	167 360 616	0.612	98	162	94	118
63	50	10	1390	167 360 607	167 360 617	1.116	120	195	113	143

## PROGEF® PLUS silicone free Ball check valve type 360 PP-H SF With socket fusion spigots



### Model:

- Material: PP-H / silicone free cleaned
- Double bagged
- For easy installation and removal
- Overall length EN 558

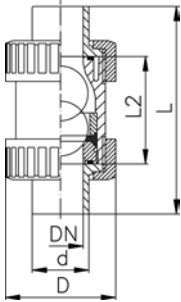
d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	D [mm]	L [mm]	L2 [mm]
16	10	10	170	167 360 621	167 360 631	0.080	46	109	62
20	15	10	150	167 360 622	167 360 632	0.080	46	119	62
25	20	10	330	167 360 623	167 360 633	0.136	56	140	74
32	25	10	390	167 360 624	167 360 634	0.208	67	150	78
40	32	10	710	167 360 625	167 360 635	0.386	82	171	88
50	40	10	900	167 360 626	167 360 636	0.631	97	191	94
63	50	10	1390	167 360 627	167 360 637	1.149	119	220	113



**PROGEF® PLUS silicone free  
Ball check valve type 360 PP-H SF  
With butt fusion ends SDR11**

**Model:**

- Material: PP-H / silicone free cleaned
- Double bagged
- For easy installation and removal



d [mm]	DN [mm]	PN	kv-value ( $\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	D [mm]	L [mm]	L2 [mm]
20	15	10	150	<b>167 360 642</b>	<b>167 360 652</b>	0.080	46	119	62
25	20	10	330	<b>167 360 643</b>	<b>167 360 653</b>	0.136	56	140	74
32	25	10	390	<b>167 360 644</b>	<b>167 360 654</b>	0.208	67	150	78
40	32	10	710	<b>167 360 645</b>	<b>167 360 655</b>	0.386	82	171	88
50	40	10	900	<b>167 360 646</b>	<b>167 360 656</b>	0.631	97	191	94
63	50	10	1390	<b>167 360 647</b>	<b>167 360 657</b>	1.149	119	220	113

# PE 100



- Pipes
- Socket Fusion Fittings
- Butt Fusion Fittings
- Electrofusion Fittings

## Pressure Ratings for PE-Fittings and PE-Pipes

	SDR11	SDR17.6
PE 80 C = 1.25	PN12.5	PN7.5
PE 80 C = 1.6	PN10	PN6
PE 100 C = 1.25	PN16	PN10
PE 100 C = 1.6	PN12.5	PN7.5



# Polyethylene PE 100 – the third Generation of polyethylene

## Pressure/temperature diagram for PE PE 100

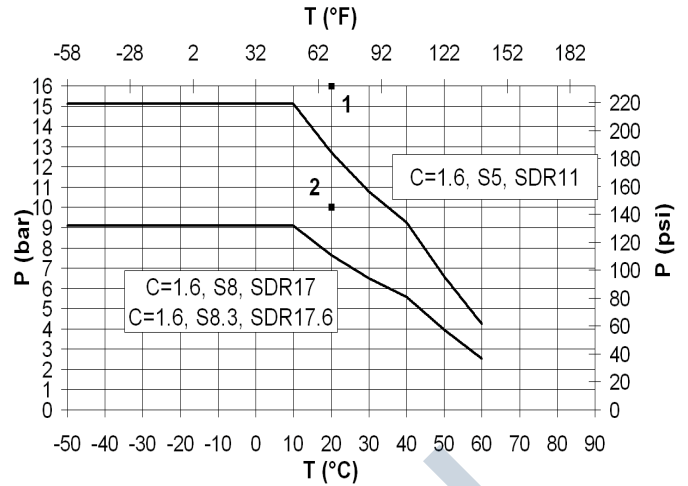
The following pressure/temperature diagram for PE100 pipes and fittings is valid for a lifetime of 25 years.

The design factor of 1.6 (respective 1.25) recommended by GF is incorporated.

It can be used for water or media resembling water, in other words, media which have no derating factor regarding the chemical resistance.

**Remark:** Please take into account the pressure/temperature diagrams for valves and special fittings. Because of the construction and/or sealing material used, differences are possible when compared with pipes and fittings. This information can be found in the planning fundamentals of the relevant types of valves, respectively special fittings.

In case of long-term applications at continuous pressure with temperatures above 40 °C, please contact your GF representative.



- 1 Design Factor C = 1.25, S5, SDR11 for 20 °C water, 50 years
- 2 Design Factor C=1.25, S8.3, SDR17.6 and S8, SDR17 for 20 °C water, 50 years
- P Permissible pressure in bar, psi
- T Temperature in °C, °F

## Pressure/temperature diagram for PE PE 80

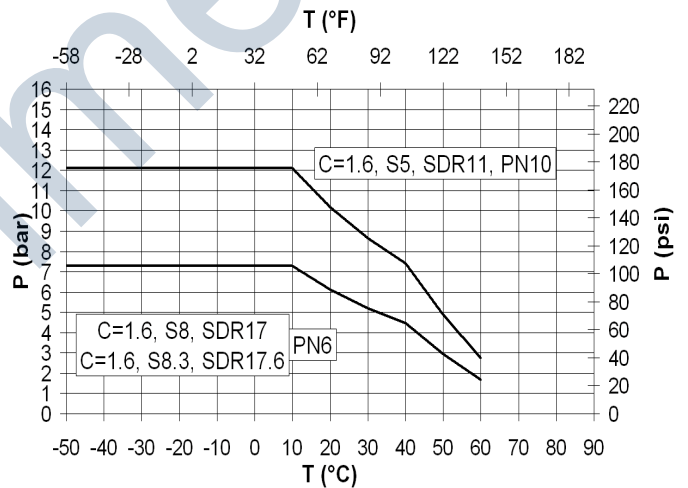
The following pressure/temperature diagram for PE80 pipes and fittings is valid for a lifetime of 25 years.

The design factor of 1.6 recommended by GF is incorporated.

It can be used for water or media resembling water, in other words, media which have no derating factor regarding the chemical resistance.

**Remark:** Please take into account the pressure/temperature diagrams for valves and special fittings. Because of the construction and/or sealing material used, differences are possible when compared with pipes and fittings. This information can be found in the planning fundamentals of the relevant types of valves, respectively special fittings.

In case of long-term applications at continuous pressure with temperatures above 40 °C please contact your GF representative.



- P Permissible pressure in bar, psi
- T Temperature in °C, °F

# Comparison of nominal pressure for SDR17 and SDR17.6

## Ascertaining the nominal pressure (PN)

According to the standard, the nominal pressure is a numeric measure of the size of a pipeline part, which refers to the mechanical properties of that pipeline part. Besides the geometric sizes such as SDR, the creep strength/dimensioning tension and the minimum design factor are also taken into consideration.

For plastic piping systems intended to carry water, the nominal pressure value indicates the maximum permitted operating pressure in bar, at a temperature of 20°C, and 50 years in water, referenced to the minimum value of the total (calculation) coefficients. It is calculated using the following equation:

$$[PN] = 10 \cdot \sigma_S / [S] = 20 \cdot \sigma_S / (SDR - 1) \quad (\sigma_S \text{ in MPa, PN in bar})$$

## Minimum required strength (MRS):

The value of  $\sigma_{LCL}$  at 20°C and 50 years in water, rounded down to the next value in the R10 standard series of numbers.

$\sigma_{LCL}$  is understood to mean the equivalent stress ascertained for a given period and a given temperature from the time-dependent creep diagram. LCL stands for Lower Confidence Limit. The R10 standard series of numbers is a Renard standard series of numbers as per ISO 3 and ISO 497.

## Design stress ( $\sigma_S$ ):

The permitted stress for a particular application or operating conditions stated in megapascal. It is derived by dividing the MRS by coefficient C and is calculated as shown in the equation below:

$$\sigma_S = MRS / C$$

The calculated value is rounded down to the next value in the R10 standard series of numbers.

## Total operating (calculation) coefficient (C):

A total coefficient having a value greater than one, which takes into account both the operating conditions and also the characteristics of the pipeline component that have not yet been entered into the lower confidence limit  $\sigma_{LCL}$ .

If we use the above definition to calculate the relevant nominal pressure for both SDR classes, the result for a PE 100 pipe is as follows:

SDR17	SDR17.6
MRS = 10 MPa	MRS = 10 MPa
C = 1.25 (minimum factor)	C = 1.25 (minimum factor)
$\sigma = 8.0$ MPa	$\sigma = 8.0$ MPa
PN = 10 bar	PN = 9.6 bar

The above definitions thus produce a difference of 0.4 bar in PN, but in actual practice this does not matter, as shown below:

1.) Industrial pipelines are normally designed for a service life of 25 years. If from the time-dependent creep diagrams we ascertain for ELTEX TUB 121 or CRP 100 an equivalent stress of  $\sigma_{LCL}$  for the operating point of 25 years and 20°C, we obtain a tension of 10.6 MPa (minimum value of both PE100 materials as per manufacturer's data).

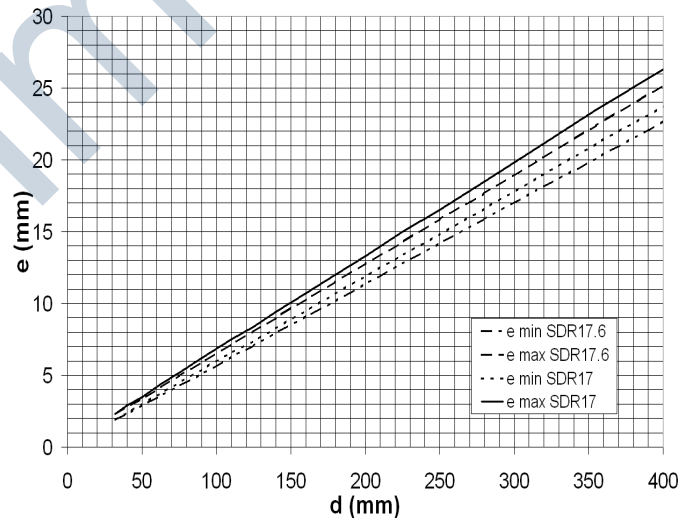
2.) If we use this tension to ascertain the dimensioning tension  $\sigma_S$ , and do not round it down, we obtain the value of 8.48 MPa.

3.) Thus the actual nominal pressure in practice is:  
for SDR 17 => PN = 10.6 bar and for  
SDR 17.6 => PN = 10.2 bar.

**To summarise: Both SDR classes comply with requirements for industrial applications mentioning a PN10 system.**

## Comparison of geometric dimensions

The two SDR classes differ only slightly in wall thickness, as can be seen from the diagram below. This shows that there is an area where the wall thickness complies with both requirements of both SDR classes.



d Outside pipe diameter  
e Wall thickness

For butt fusion the wall thickness gap may not exceed 10%. Looking at the differences of the wall thicknesses of SDR17 and SDR17.6 the resulting gap is much lower, that means butt fusion of both SDR's is no problem.

Rtf-Prime.ru

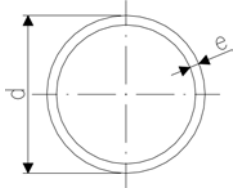
# PE Industrial Systems Pipes, Fittings, Unions, Flanges and Flange Adaptors

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# PE100 Pipes

93 01 71

## Pipes, PE100 S5/SDR11



### Model:

- Material: PE 100, Polyethylene
- Colour: RAL 9011 graphite black
- Dimension: DIN 8074
- Pipe length: 5m, with plain ends

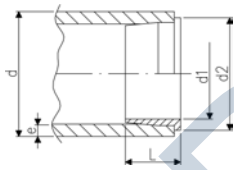
\* In these two sizes, stiffeners Code No. 733 900 006 (20 x 1,9) and 733 900 007 (25 x 2.3) must be used with socket fusion joints.

d [mm]	PN	Code	kg/m	e [mm]	di [mm]
*20	16	<b>193 017 156</b>	0.113	1,9	16.2
*25	16	<b>193 017 157</b>	0.172	2,3	20.4
32	16	<b>193 017 158</b>	0.274	2,9	26.2
40	16	<b>193 017 159</b>	0.434	3,7	32.6
50	16	<b>193 017 160</b>	0.672	4,6	40.8
63	16	<b>193 017 161</b>	1.060	5,8	51.4
75	16	<b>193 017 162</b>	1.480	6,8	61.4
90	16	<b>193 017 163</b>	2.140	8,2	63.6
110	16	<b>193 017 164</b>	3.190	10,0	90.0
125	16	<b>193 017 165</b>	-	11,4	102.8
140	16	<b>193 017 166</b>	5.130	12,7	114.6
160	16	<b>193 017 167</b>	-	14,6	130.8
180	16	<b>193 017 168</b>	8.500	16,4	147.2
200	16	<b>193 017 169</b>	-	18,2	163.6
225	16	<b>193 017 170</b>	-	20,5	184.0
250	16	<b>193 017 171</b>	-	22,7	204.6
280	16	<b>193 017 172</b>	-	25,4	229.2
315	16	<b>193 017 173</b>	-	28,6	257.8
355	16	<b>193 017 174</b>	32.800	32,2	290.6
400	16	<b>193 017 175</b>	41.700	36,3	327.4

33 90 00

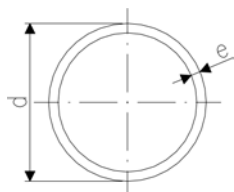
## Stiffernes, PE100

- Used as support during d20 and d25 socket fusion jointing to prevent the pipe from collapsing during the heating and jointing process.



d [mm]	Code	d1 [mm]	D2 [mm]	d2 [mm]	L [mm]	e [mm]
20	<b>733 900 006</b>	14	18	18	10	1,9
25	<b>733 900 007</b>	18	22	23	11	2,3

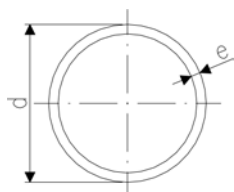
93 01 71

**Pipes, PE100 S8,3/SDR17,6****Model:**

- Material: PE 100, Polyethylene
- Colour: RAL 9011 graphite black
- Dimension: DIN 8074
- Pipe length: 5m, with plain ends

d [mm]	PN	Code	kg/m	e [mm]	di [mm]
50	10	<b>193 017 110</b>	-	2,9	44.2
63	10	<b>193 017 111</b>	-	3,6	55.8
75	10	<b>193 017 112</b>	-	4,3	66.4
90	10	<b>193 017 113</b>	-	5,1	79.8
110	10	<b>193 017 114</b>	-	6,3	97.4
125	10	<b>193 017 115</b>	2.690	7,1	110.8
140	10	<b>193 017 116</b>	-	8,0	124.0
160	10	<b>193 017 117</b>	4.390	9,1	141.8
180	10	<b>193 017 118</b>	5.530	10,2	159.6
200	10	<b>193 017 119</b>	-	11,4	177.2
225	10	<b>193 017 120</b>	-	12,8	199.4
250	10	<b>193 017 121</b>	-	14,2	221.6
280	10	<b>193 017 122</b>	-	15,9	248.2
315	10	<b>193 017 123</b>	-	17,9	279.2
355	10	<b>193 017 124</b>	21.400	20,1	290.6
400	10	<b>193 017 125</b>	27.100	22,7	354.6

93 01 72

**Pipes, PE100 S3,2/SDR7,4****Model:**

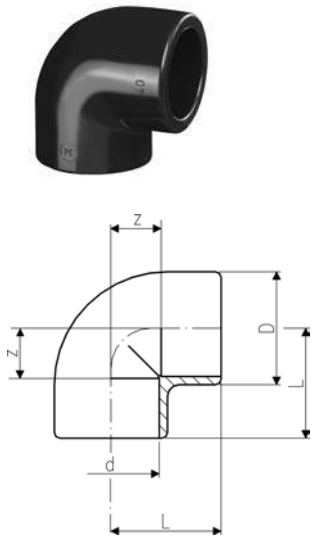
- Dimension: DIN 8074
- Colour: RAL 9011 graphite black
- Length: Lengths of 5 m
- for socket fusion without stiffeners
- Not suitable for butt fusion

d [mm]	Code	kg/m	e [mm]	di [mm]
20	<b>193 017 206</b>	0.156	2,8	14.4
25	<b>193 017 207</b>	0.243	3,5	18.0

# Fittings for Socket Fusion

33 10 01

## Elbow 90°, PE80



d [mm]	PN	Code	kg	kg/m	D [mm]	L [mm]	z [mm]
20	10	<b>733 100 106</b>	0.022	0.022	31	28	14
25	10	<b>733 100 107</b>	0.032	0.032	36	32	16
32	10	<b>733 100 108</b>	0.048	0.048	44	38	20
40	10	<b>733 100 109</b>	0.080	0.080	54	44	24
50	10	<b>733 100 110</b>	0.130	0.130	66	51	28
63	10	<b>733 100 111</b>	0.229	0.229	82	62	35
75	10	<b>733 100 112</b>	0.320	0.320	93	76	45
90	10	<b>733 100 113</b>	0.502	0.502	110	88	53
110	10	<b>733 100 114</b>	0.864	0.864	134	106	65

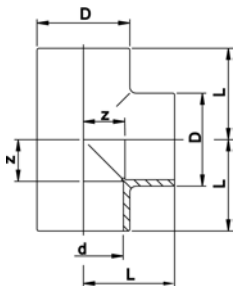
33 15 01

## Elbow 45°, PE80



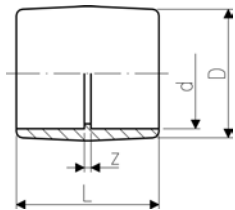
d [mm]	PN	Code	kg	kg/m	D [mm]	L [mm]	z [mm]
20	10	<b>733 150 106</b>	0.018	0.018	31	21	7
25	10	<b>733 150 107</b>	0.026	0.026	36	24	8
32	10	<b>733 150 108</b>	0.038	0.038	44	28	10
40	10	<b>733 150 109</b>	0.061	0.061	53	33	13
50	10	<b>733 150 110</b>	0.088	0.088	64	36	13
63	10	<b>733 150 111</b>	0.184	0.184	82	43	16
75	10	<b>733 150 112</b>	0.232	0.232	93	51	20
90	10	<b>733 150 113</b>	0.415	0.415	114	58	23
110	10	<b>733 150 114</b>	0.658	0.658	134	68	27

33 20 01

**Tee 90° equal, PE80**

d [mm]	PN	Code	kg	kg/m	D [mm]	L [mm]	z [mm]
20	10	<b>733 200 106</b>	0.028	0.028	31	28	14
25	10	<b>733 200 107</b>	0.041	0.041	36	32	16
32	10	<b>733 200 108</b>	0.060	0.060	44	38	20
40	10	<b>733 200 109</b>	0.101	0.101	54	44	24
50	10	<b>733 200 110</b>	0.163	0.163	66	51	28
63	10	<b>733 200 111</b>	0.300	0.300	82	62	35
75	10	<b>733 200 112</b>	0.408	0.408	93	76	45
90	10	<b>733 200 113</b>	0.747	0.747	114	88	53
110	10	<b>733 200 114</b>	1.113	1.113	134	106	65

33 91 01

**Sockets equal, PE80**

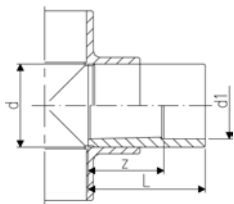
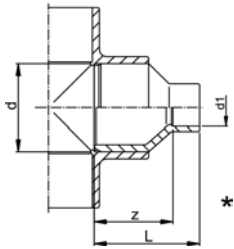
d [mm]	PN	Code	kg	kg/m	D [mm]	L [mm]	z [mm]
20	10	<b>733 910 106</b>	0.014	0.014	31	35	7
25	10	<b>733 910 107</b>	0.019	0.019	36	39	7
32	10	<b>733 910 108</b>	0.027	0.027	44	43	7
40	10	<b>733 910 109</b>	0.043	0.043	54	48	8
50	10	<b>733 910 110</b>	0.077	0.077	66	54	8
63	10	<b>733 910 111</b>	0.126	0.126	82	62	8
75	10	<b>733 910 112</b>	0.154	0.154	93	70	8
90	10	<b>733 910 113</b>	0.234	0.234	112	81	11
110	10	<b>733 910 114</b>	0.428	0.428	134	96	14



33 91 03

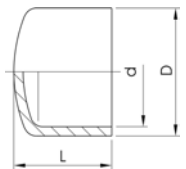
**Reducers, PE80**

- With socket fusion spigot and fusion socket metric



d [mm]	d1 [mm]	PN	Code	kg	kg/m	L [mm]	z [mm]
25	20	10	<b>733 910 337</b>	0.013	0.013	39	23
32	25	10	<b>733 910 341</b>	0.021	0.021	43	27
*40	20	10	<b>733 910 348</b>	0.023	0.023	48	34
*40	25	10	<b>733 910 347</b>	0.027	0.027	48	32
40	32	10	<b>733 910 346</b>	0.032	0.032	48	30
*50	32	10	<b>733 910 353</b>	0.042	0.042	54	36
50	40	10	<b>733 910 352</b>	0.049	0.049	54	34
*63	20	10	<b>733 910 362</b>	0.057	0.057	64	50
*63	25	10	<b>733 910 361</b>	0.060	0.060	64	48
*63	32	10	<b>733 910 360</b>	0.065	0.065	64	46
*63	40	10	<b>733 910 359</b>	0.070	0.070	64	44
63	50	10	<b>733 910 358</b>	0.086	0.086	64	41
75	63	10	<b>733 910 364</b>	0.103	0.103	62	35
*90	63	10	<b>733 910 371</b>	0.192	0.192	88	62
90	75	10	<b>733 910 370</b>	0.146	0.146	70	39
110	90	10	<b>733 910 376</b>	0.253	0.253	81	45

33 96 01

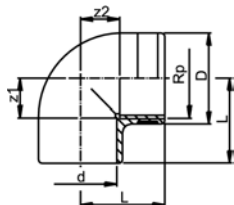
**End Caps, PE80**

d [mm]	PN	Code	kg	kg/m	D [mm]	L [mm]
20	10	<b>733 960 106</b>	0.010	0.010	30	27
25	10	<b>733 960 107</b>	0.016	0.016	36	30
32	10	<b>733 960 108</b>	0.025	0.025	44	34
40	10	<b>733 960 109</b>	0.038	0.038	53	38
50	10	<b>733 960 110</b>	0.061	0.061	65	44
63	10	<b>733 960 111</b>	0.096	0.096	80	51
75	10	<b>733 960 112</b>	0.157	0.157	91	66
90	10	<b>733 960 113</b>	0.272	0.272	111	77
110	10	<b>733 960 114</b>	0.414	0.414	137	93

# Adaptor Fittings for Socket Fusion

33 10 02

## Elbow 90°, PE80 metric - Rp



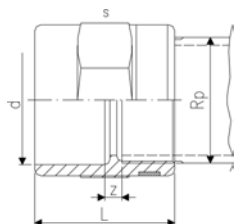
### Model:

- With fusion socket metric and parallel female thread Rp, reinforced
- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PE

d [mm]	Rp [inch]	PN	Code	kg	kg/m	D [mm]	L [mm]	z1 [mm]	z2 [mm]
20	½	10	<b>733 100 206</b>	0.024	0.024	30	28	14	14
25	¾	10	<b>733 100 207</b>	0.033	0.033	35	32	16	16
32	1	10	<b>733 100 208</b>	0.061	0.061	44	38	20	20
40	1 ¼	10	<b>733 100 209</b>	0.094	0.094	54	44	24	24

33 91 02

## Adaptor Sockets, PE80 metric - Rp



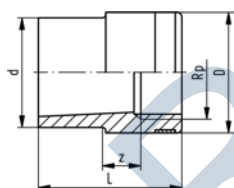
### Model:

- With fusion socket metric and parallel female thread Rp, reinforced
- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PE

d [mm]	Rp [inch]	PN	Code	kg	kg/m	L [mm]	s [mm]	z [mm]
20	½	10	<b>733 910 206</b>	0.020	0.020	35	32	7
25	¾	10	<b>733 910 207</b>	0.026	0.026	39	36	7
32	1	10	<b>733 910 208</b>	0.043	0.043	45	46	7
40	1 ¼	10	<b>733 910 209</b>	0.070	0.070	53	55	7
50	1 ½	10	<b>733 910 210</b>	0.099	0.099	54	65	9
63	2	10	<b>733 910 211</b>	0.159	0.159	62	80	9

33 91 04

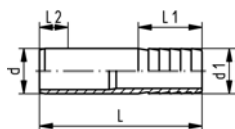
## Reducing Bushes, PE80 metric - Rp



### Model:

- With fusion socket metric and parallel female thread Rp, reinforced
- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PE

d [mm]	Rp [inch]	PN	Code	kg	kg/m	L [mm]	z [mm]
20	¾	10	<b>733 910 434</b>	0.012	0.012	33	7
25	½	10	<b>733 910 437</b>	0.017	0.017	37	6
32	¾	10	<b>733 910 441</b>	0.027	0.027	43	8
40	1	10	<b>733 910 446</b>	0.046	0.046	49	9
50	1 ¼	10	<b>733 910 452</b>	0.071	0.071	55	10



## Hose Connectors, PE100 metric

### Model:

- With socket fusion spigot metric and parallel hose connection

d [mm]	d1 [mm]	PN	Code	kg	kg/m	L [mm]	L1 [mm]	L2 [mm]
20	20	10	<b>753 960 406</b>	0.007	0.007	55	27	14
25	25	10	<b>753 960 407</b>	0.015	0.015	68	36	16
32	32	10	<b>753 960 408</b>	0.021	0.021	77	36	18
40	40	10	<b>753 960 409</b>	0.030	0.030	80	42	20
50	50	10	<b>753 960 410</b>	0.064	0.064	90	48	23
63	60	10	<b>753 960 411</b>	0.092	0.092	100	50	27

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# Unions for Socket Fusion

33 58 01

## Unions, PE80 metric

### Model:

- Union ends: Fusion sockets, PE80 metric
- Union bush: brass
- Union Nut: brass
- Gasket: O-ring NBR (Nitril-rubber)



d [mm]	d1 [mm]	PN	Code	kg	kg/m	G [inch]	L [mm]	z1 [mm]	D2 [mm]	d2 [mm]	z2 [mm]
20	20	10	<b>733 580 106</b>	0.163	0.163	1 1/4	46	6	46	46	3
25	25	10	<b>733 580 107</b>	0.214	0.214	1 1/2	49	6	52	52	3
32	32	10	<b>733 580 108</b>	0.294	0.294	2	51	6	64	64	3
40	40	10	<b>733 580 109</b>	0.473	0.473	2 1/2	56	8	79	79	3
50	50	10	<b>733 580 110</b>	0.491	0.491	2 2/3	61	8	85	85	3
63	63	10	<b>733 580 111</b>	0.730	0.730	3 1/2	69	8	104	104	3

33 58 02

## Adaptor unions, PE80 - brass metrisch - Rp

### Model:

- Union ends: Fusion sockets, PE80 metric
- Union bush: nickel-plated, parallel female thread Rp
- Union Nut: brass
- Gasket: O-ring NBR (Nitril-rubber)



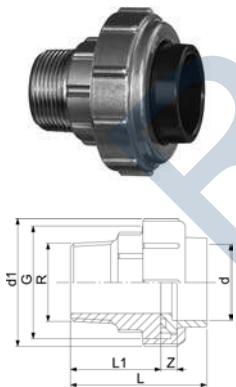
d [mm]	Rp [inch]	PN	Code	kg	kg/m	G [inch]	L [mm]	d1 [mm]	z1 [mm]	z2 [mm]
20	1/2	10	<b>733 580 206</b>	0.209	0.209	1 1/4	46	46	6	10
25	3/4	10	<b>733 580 207</b>	0.269	0.269	1 1/2	48	52	6	9
32	1	10	<b>733 580 208</b>	0.371	0.371	2	51	64	6	8
40	1 1/4	10	<b>733 580 209</b>	0.596	0.596	2 1/2	56	79	8	7
50	1 1/2	10	<b>733 580 210</b>	0.666	0.666	2 3/4	59	85	8	7
63	2	10	<b>733 580 211</b>	0.960	0.960	3 1/2	65	104	8	5

33 58 07

## Adaptor unions, PE80 - brass metric - R

### Model:

- Union ends: Fusion sockets, PE80 metric
- Union bush: nickel-plated, taper male thread R
- Union Nut: brass
- Gasket: O-ring NBR (Nitril-rubber)

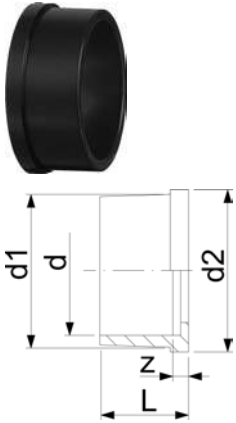


d [mm]	R [inch]	PN	Code	kg	kg/m	d1 [mm]	G [inch]	L [mm]	L1 [mm]	z [mm]
20	1/2	10	<b>733 580 706</b>	0.260	0.260	46	1 1/4	62	40	6
25	3/4	10	<b>733 580 707</b>	0.324	0.324	52	1 1/2	65	41	6
32	1	10	<b>733 580 708</b>	0.470	0.470	64	2	71	45	6
40	1 1/4	10	<b>733 580 709</b>	0.754	0.754	79	2 1/2	78	48	8
50	1 1/2	10	<b>733 580 710</b>	0.781	0.781	85	2 3/4	81	43	8
63	2	10	<b>733 580 711</b>	1.166	1.166	104	3 1/2	91	54	8

34 60 01

**Union Ends, PE80****Model:**

- With fusion socket metric
- Suitable for unions, tank connectors and diaphragm valves Type 314

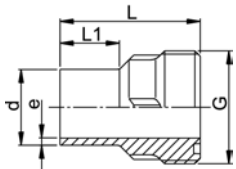


d [mm]	PN	Code	kg	kg/m	d1 [mm]	d2 [mm]	L [mm]	L1 [mm]	z [mm]
20	10	<b>734 600 106</b>	0.006	0.006	28	30	19	5	5
25	10	<b>734 600 107</b>	0.012	0.012	36	39	21	5	5
32	10	<b>734 600 108</b>	0.015	0.015	42	45	23	6	5
40	10	<b>734 600 109</b>	0.026	0.026	53	57	25	6	5
50	10	<b>734 600 110</b>	0.027	0.027	59	63	28	7	5
63	10	<b>734 600 111</b>	0.045	0.045	74	79	32	8	5

53 64 86

**Union Bushes, PE100 SDR11****Model:**

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared- (IR Plus®) compatible.
- Gasket: O-Ring EPDM No. 48 41 00, FPM No. 49 41 00
- D75-110 with new thread geometry, now rated PN10 up to d110
- **For the dimensions d75-110 please see instructions for the installation**



d [mm]	PN	FM	Code	kg	kg/m	G [inch]	L [mm]	L1 [mm]	e [mm]
20	16	IR	<b>753 648 606</b>	0.016	0.016	1	54	26	1,9
25	16	IR	<b>753 648 607</b>	0.025	0.025	1 1/4	57	26	2,3
32	16	IR	<b>753 648 608</b>	0.035	0.035	1 1/2	60	25	2,9
40	16	IR	<b>753 648 609</b>	0.056	0.056	2	63	25	3,7
50	16	IR	<b>753 648 610</b>	0.078	0.078	2 1/4	66	25	4,6
63	16	IR	<b>753 648 611</b>	0.120	0.120	2 3/4	69	25	5,8

33 69 04

**Union Nuts, PE-GF****Model:**

- PE glass-fibre reinforced
- For the dimensions d75-110 please see instructions for the installation

\* PP glass fibre reinforced



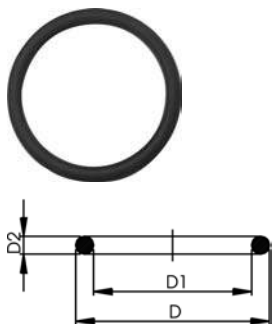
d-d [mm]	Code	kg	kg/m	G [inch]	D [mm]	L [mm]
20 -	<b>733 690 406</b>	0.029	0.029	1	48	24
25 -	<b>733 690 407</b>	0.032	0.032	1 1/4	58	26
32 -	<b>733 690 408</b>	0.042	0.042	1 1/2	65	28
40 -	<b>733 690 409</b>	0.068	0.068	2	79	31
50 -	<b>733 690 410</b>	0.097	0.097	2 1/4	91	35
63 -	<b>733 690 411</b>	0.166	0.166	2 3/4	111	39

EPDM 48 41 00  
FPM 49 41 00

## O-Ring Gaskets

### Model:

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



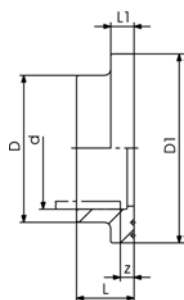
d [mm]	DN [mm]	EPDM Code	FPM Code	kg	kg/m	D [mm]	D1 [mm]	D2 [mm]	
20	15	<b>748 410 006</b>	<b>749 410 006</b>	0.002	0.002	27	20	4	
25	20	<b>748 410 007</b>	<b>749 410 007</b>	0.002	0.002	35	28		
32	25	<b>748 410 008</b>	<b>749 410 008</b>	0.002	0.002	40	33	4	
40	32	<b>748 410 009</b>	<b>749 410 009</b>	0.006	0.006	51	41	5	
50	40	<b>748 410 010</b>	<b>749 410 010</b>	0.007	0.007	58	47	5	
63	50	<b>748 410 011</b>	<b>749 410 011</b>	0.010	0.010	70	60	5	

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# Flange Adaptors, Flanges and Gaskets for Socket Fusion

53 79 02

## Flange Adaptors, PE100 Jointing face flat/serrated



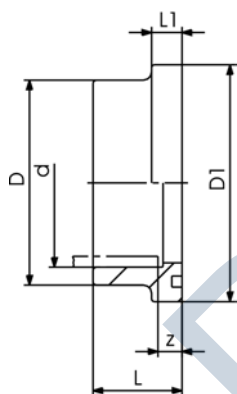
### Model:

- Counterpart: Flange Adaptor flat/serrated or with O-ring groove
- Connection: according to EN ISO 15494-, DIN 16963-11
- Gasket: Profile flange gasket EPDM No. 48 44 07, FPM No. 49 44 07
- Flanges: PP with steel core, No. 27 70 02, PP-V, No 27 70 04

d [mm]	PN	Code	kg	kg/m	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]
20	10	<b>753 790 206</b>	0.013	0.013	27	45	19	7	5
25	10	<b>753 790 207</b>	0.025	0.025	33	58	21	9	5
32	10	<b>753 790 208</b>	0.037	0.037	41	68	23	10	5
40	10	<b>753 790 209</b>	0.052	0.052	50	78	25	11	5
50	10	<b>753 790 210</b>	0.069	0.069	61	88	28	12	5
63	10	<b>753 790 211</b>	0.102	0.102	76	102	32	14	5
75	10	<b>753 790 212</b>	0.163	0.163	90	122	36	16	5
90	10	<b>753 790 213</b>	0.233	0.233	108	138	42	17	7
110	10	<b>753 790 214</b>	0.319	0.319	131	158	48	18	7

33 81 01

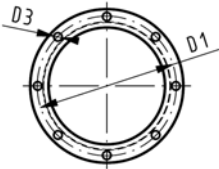
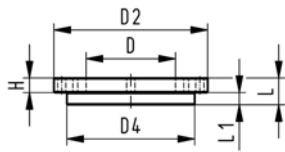
## Flange Adaptors, PE80 Jointing Face with O-ring Groove



### Model:

- Counterpart: Flange adaptor flat/serrated 53 79 02
- Gasket: O-ring No. 48 41 01 or 49 41 01
- Flanges: PP with steel core, No. 27 70 02, PP-V, No 27 70 04

d [mm]	PN	Code	kg	kg/m	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]
20	10	<b>733 810 106</b>	0.008	0.008	27	34	22	9	8
25	10	<b>733 810 107</b>	0.012	0.012	33	41	24	10	8
32	10	<b>733 810 108</b>	0.019	0.019	41	50	26	10	8
40	10	<b>733 810 109</b>	0.031	0.031	50	61	30	13	10
50	10	<b>733 810 110</b>	0.044	0.044	61	73	33	13	10
63	10	<b>733 810 111</b>	0.072	0.072	76	90	37	14	10
75	10	<b>733 810 112</b>	0.112	0.112	90	106	40	15	10
90	10	<b>733 810 113</b>	0.185	0.185	108	125	47	16	12
110	10	<b>733 810 114</b>	0.283	0.283	131	150	55	18	13



## Blanking Flange Set, PE Combined Jointing face flat and serrated metric



### Model:

- d63 - d315: Backing Flange PP-V with End Blank PE
- d355 - d630: Backing Flange PP/Steel with End Blank PE
- Connecting dimensions: ISO 7005, EN 1092, DIN 2501
- **Bolt circle PN 10**

AL: number of holes

L: length of the End Blank

d [mm]	DN [mm]	PN	Code Code	kg	kg/m
63	50	16	<b>753 700 611</b>	0.674	0.674
75	65	16	<b>753 700 612</b>	0.910	0.910
90	80	16	<b>753 700 613</b>	1.067	1.067
110	100	16	<b>753 700 614</b>	1.216	1.216
125	100	16	<b>753 700 615</b>	1.678	1.678
140	125	16	<b>753 700 616</b>	1.913	1.913
160	150	16	<b>753 700 617</b>	2.352	2.352
180	150	16	<b>753 700 618</b>	2.430	2.430
200	200	16	<b>753 700 619</b>	3.495	3.495
225	200	16	<b>753 700 620</b>	3.744	3.744
250	250	16	<b>753 700 621</b>	5.558	5.558
280	250	16	<b>753 700 622</b>	19.957	19.957
315	300	16	<b>753 700 623</b>	24.569	24.569
355	350	16	<b>753 700 624</b>	23.198	23.198
400	400	16	<b>753 700 625</b>	30.766	30.766
450	500	10	<b>753 700 626</b>	44.271	44.271
500	500	10	<b>753 700 627</b>	47.165	47.165
560	600	10	<b>753 700 628</b>	67.147	67.147
630	600	10	<b>753 700 629</b>	68.574	68.574

d [mm]	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	D4 [mm]	H [mm]	L [mm]	L1 [mm]	AL
63	75	125	165	18	102	24	30	14	4
75	89	145	185	18	122	26	30	16	4
90	105	160	200	18	138	27	30	17	8
110	125	180	220	18	158	28	30	18	8
125	132	180	220	18	158	28	35	25	8
140	155	210	250	18	188	30	40	25	8
160	175	240	285	22	212	32	40	25	8
180	180	240	285	22	212	32	45	30	8
200	232	295	340	22	268	34	50	32	8
225	235	295	340	22	268	34	50	32	8
250	285	350	395	22	320	38	55	35	12
280	291	350	395	22	320	38	60	35	12
315	335	400	445	22	370	42	65	35	12
355	373	460	515	22	430	40	70	40	16
400	427	515	574	26	482	40	75	46	16
450	510	620	684	26	585	49	80	60	20
500	530	620	684	26	585	49	90	60	20
560	615	725	796	30	685	58	100	60	20
630	642	725	796	30	685	68	110	60	20

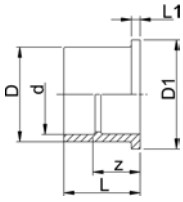




## Outlet Flange Adaptor, PE80 Joining Face flat

### Model:

- With fusion socket metric
- Suitable for wafer check valves Type 369
- To be installed on the outlet side of the valve



d [mm]	DN [mm]	PN	Code	kg	kg/m	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]
40	32	6	<b>733 800 009</b>	0.060	0.060	50	78	55	11	35
50	40	6	<b>733 800 010</b>	0.080	0.080	61	88	61	12	38
63	50	6	<b>733 800 011</b>	0.130	0.130	76	102	69	14	41
75	65	6	<b>733 800 012</b>	0.160	0.160	90	122	79	16	49
90	80	6	<b>733 800 013</b>	0.270	0.270	107	138	100	17	65
110	100	6	<b>733 800 014</b>	0.480	0.480	130	158	105	18	62

27 70 04  
27 70 05

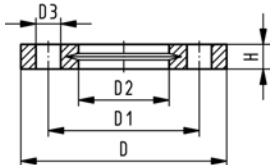
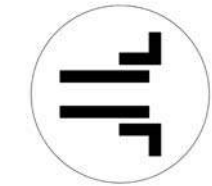
## Backing Flanges, PP-V for Socket Systems metric

### Model:

- Modern full-plastic flange PP-GF (30 % glass-fibre reinforced)
- With V-groove which applies force evenly on collar
- With integrated bolt retainers as an assembly aid
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- **Bolt circle PN 10**

1) Suitable for socket- and butt fusion systems (no pictograph on flange)

AL: number of holes



d [mm]	Inch	DN [mm]	PN	Code	kg	kg/m	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC
20		15	16	<b>727 700 406</b>	0.080	0.080	95	65	28	14	16	4	M12
25		20	16	<b>727 700 407</b>	0.100	0.100	105	75	34	14	17	4	M12
32		25	16	<b>727 700 408</b>	0.140	0.140	115	85	42	14	18	4	M12
40		32	16	<b>727 700 409</b>	0.220	0.220	140	100	51	18	20	4	M16
50		40	16	<b>727 700 410</b>	0.210	0.210	150	110	62	18	22	4	M16
63		50	16	<b>727 700 411</b>	0.380	0.380	165	125	78	18	24	4	M16
75		65	16	<b>727 700 412</b>	0.480	0.480	185	145	92	18	26	4	M16
90		80	16	<b>727 700 413</b>	0.520	0.520	200	160	110	18	27	8	M16
110		100	16	<b>727 700 414</b>	0.680	0.680	220	180	133	18	28	8	M16

27 70 14  
27 70 15

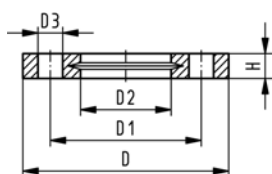
## Backing Flanges, PP-V for Socket Systems Inch/ANSI

### Model:

- Modern full-plastic flange PP-GF (30 % glass-fibre reinforced)
- With V-groove which applies force evenly on collar
- With integrated bolt-fixing as an assembly aid
- Connecting dimension: ANSI/ASME B 16.5 class 150, ASTM D 4024, BS 1560, BS EN 1759
- **Bolt circle class 150**

<sup>1)</sup> Suitable for socket- and butt fusion systems (no pictograph on flange)

AL: number of holes



Inch	DN [mm]	PN	Code	kg	kg/m	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC
1/2	15	16	<b>727 701 406</b>	0.080	0.080	95	60	28	16	16	4	M12
3/4	20	16	<b>727 701 407</b>	0.100	0.100	105	70	34	16	17	4	M12
1	25	16	<b>727 701 408</b>	0.140	0.140	115	79	42	16	18	4	M12
1 1/4	32	16	<b>727 701 409</b>	0.220	0.220	140	89	51	16	20	4	M16
1 1/2	40	16	<b>727 701 410</b>	0.210	0.210	150	98	62	16	22	4	M16
2	50	16	<b>727 701 411</b>	0.380	0.380	165	121	78	19	24	4	M16
2 1/2	65	16	<b>727 701 412</b>	0.480	0.480	185	140	92	19	26	4	M16
3	80	16	<b>727 701 413</b>	0.520	0.520	200	152	110	19	27	4	M16
4	100	16	<b>727 701 414</b>	0.680	0.680	229	190	133	19	28	8	M16

27 70 02

## Backing Flanges, PP/Steel for Socket Systems metric

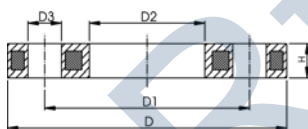
### Model:

- PP-GF (30% glass-fibre reinforced) with steel ring
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- **Bolt circle PN 10**

<sup>1</sup> Connecting dimension: ISO 2536 DN125

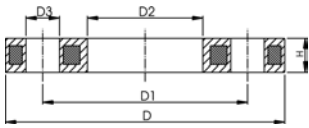
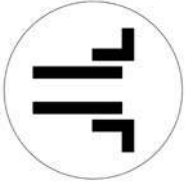
\* Connecting dimension: ISO 2536

AL: number of holes



d [mm]	d [inch]	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC
20		15	16	<b>727 700 206</b>	0.220	95	65	28	14	12	4	M12
25		20	16	<b>727 700 207</b>	0.260	105	75	34	14	12	4	M12
32		25	16	<b>727 700 208</b>	0.430	115	85	42	14	16	4	M12
40		32	16	<b>727 700 209</b>	0.650	140	100	51	18	16	4	M16
50		40	16	<b>727 700 210</b>	0.820	150	110	62	18	18	4	M16
63		50	16	<b>727 700 211</b>	0.940	165	125	78	18	18	4	M16
75		65	16	<b>727 700 212</b>	1.300	185	145	92	18	18	4	M16
90		80	16	<b>727 700 213</b>	1.400	200	160	110	18	20	8	M16
110		100	16	<b>727 700 214</b>	1.560	220	180	133	18	20	8	M16

## Backing Flanges, PP/Steel for Socket Systems Inch/ANSI



### Model:

- For Flange Adaptors BS/ANSI
- Material: PP (30 % glass-fibre reinforced) with steel ring
- Connecting dimension: ANSI/ASME B 16.5 class 150, ASTM D 4024, BS 1560, BS EN 1759
- **Bolt circle class 150**
- DN100 and DN150: only for use with original metric flange adaptors

AL: number of holes

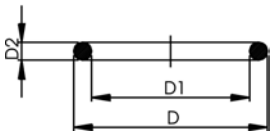
d [inch]	DN [mm]	d [mm]	PN	Code	kg	kg/m	D1 [mm]	D2 [mm]	D3 [mm]	D [mm]	H [mm]	AL
½	15	20	16	<b>727 701 206</b>	0.210	0.210	60	28	16	95	12	4
¾	20	25	16	<b>727 701 207</b>	0.250	0.250	70	34	16	105	12	4
1	25	32	16	<b>727 701 208</b>	0.420	0.420	79	42	16	115	16	4
1 ¼	32	40	16	<b>727 701 209</b>	0.670	0.670	89	51	16	140	16	4
1 ½	40	50	16	<b>727 701 210</b>	0.860	0.860	98	62	16	150	18	4
2	50	63	16	<b>727 701 211</b>	0.930	0.930	121	78	19	165	18	4
2 ½	65	75	16	<b>727 701 212</b>	1.340	1.340	140	92	19	185	18	4
3	80	90	16	<b>727 701 213</b>	1.550	1.550	152	110	19	200	20	4
4	100	110	16	<b>727 701 214</b>	1.810	1.810	190	133	19	229	20	8

EPDM 48 41 01  
FPM 49 41 01

## O-Ring Gaskets

### Model:

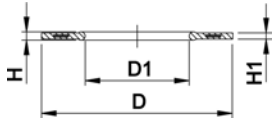
- For Flange Adaptors
- Hardness approx. 65° Shore



d [mm]	DN [mm]	EPDM Code	FPM Code	kg	kg/m	D [mm]	D1 [mm]	D2 [mm]
20	15	<b>748 410 001</b>	<b>749 410 001</b>	0.002	0.002	31	23	3.53
25	20	<b>748 410 007</b>	<b>749 410 007</b>	0.002	0.002	35	28	3.53
32	25	<b>748 410 002</b>	<b>749 410 002</b>	0.003	0.003	43	36	3.53
40	32	<b>748 410 003</b>	<b>749 410 003</b>	0.007	0.007	55	44	5.34
50	40	<b>748 410 012</b>	<b>749 410 012</b>	0.008	0.008	64	53	5.34
63	50	<b>748 410 013</b>	<b>749 410 013</b>	0.011	0.011	80	69	5.34
75	65	<b>748 410 014</b>	<b>749 410 014</b>	0.012	0.012	93	82	5.34
90	80	<b>748 410 015</b>	<b>749 410 015</b>	0.015	0.015	112	101	5.34
110	100	<b>748 410 016</b>	<b>749 410 016</b>	0.031	0.031	134	120	6.99

EPDM 48 44 07  
FPM 49 44 07

## Profile Flange Gaskets metric EPDM / FPM



### Model:

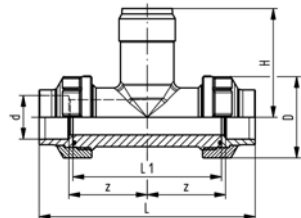
- For all GF Flange Adaptors
- Profile Gasket with steel insert (type G-ST-P/K)
- Hardness: 70° Shore **EPDM**, 75° Shore **FPM**
- Centering on the inner diameter of the screw crown

di FA are the suitable inner diameters of flange adaptors

d [mm]	DN [mm]	PN	EPDM Code	FPM Code	kg	D [mm]	D1 [mm]	H [mm]	H1 [mm]	di FA [mm]
16	10	16	748 440 705	749 440 705	0.007	46	16	4	3	6 - 16
20	15	16	748 440 706	749 440 706	0.008	51	20	4	3	10 - 20
25	20	16	748 440 707	749 440 707	0.011	61	22	4	3	12 - 22
32	25	16	748 440 708	749 440 708	0.014	71	28	4	3	18 - 28
40	32	16	748 440 709	749 440 709	0.021	82	40	4	3	30 - 40
50	40	16	748 440 710	749 440 710	0.022	92	46	4	3	36 - 46
63	50	16	748 440 711	749 440 711	0.041	107	58	5	4	48 - 58
75	65	16	748 440 712	749 440 712	0.055	127	69	5	4	59 - 69
90	80	16	748 440 713	749 440 713	0.062	142	84	5	4	73 - 84
110	100	16	748 440 714	749 440 714	0.085	162	104	6	5	94 - 104

33 31 00

## Installation Fitting Type 310, PE80 for Socket Systems metric



### Model:

- For Signet Paddlewheel Sensors Type -X0 (104 mm)
- Body and union nut PP-H
- Union end with fusion socket PE80

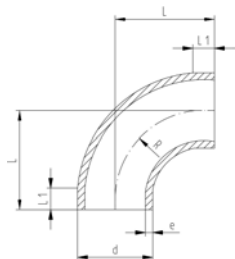
d [mm]	DN [mm]	PN	EPDM Code	FPM Code	kg
20	15	10	733 310 006	733 310 036	0.136
25	20	10	733 310 007	733 310 037	0.190
32	25	10	733 310 008	733 310 038	0.250
40	32	10	733 310 009	733 310 039	0.356
50	40	10	733 310 010	733 310 040	0.510
63	50	10	733 310 011	733 310 041	0.800

d [mm]	DN [mm]	D [mm]	z [mm]	L [mm]	L1 [mm]	H [mm]	Sensor Type
20	15	48	50	128	90	76	X0
25	20	58	55	142	100	78	X0
32	25	65	60	156	110	81	X0
40	32	79	60	160	110	85	X0
50	40	91	65	176	120	89	X0
63	50	105	70	194	130	95	X0

# Fittings for Butt Fusion

## Bends 90°, PE100 S5/SDR11 - Type B

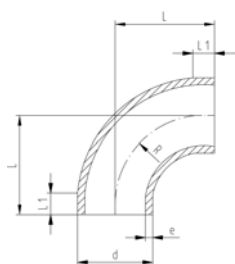


### Model:

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PE100
- Bends with new geometry
- Injection moulding process optimised for PE100

d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
20	--	<b>753 018 681</b>	0.005	28	5	1,9
25	--	<b>753 018 682</b>	0.010	33	7	2,3
32	--	<b>753 018 683</b>	0.019	41	7	2,9
40	--	<b>753 018 684</b>	0.038	52	10	3,7
50	--	<b>753 018 685</b>	0.069	63	10	4,6
63	--	<b>753 018 686</b>	0.138	77	10	5,8
75	IR	<b>753 018 712</b>	0.241	100	20	6,8
90	IR	<b>753 018 713</b>	0.358	100	20	8,2
110	IR	<b>753 018 714</b>	0.755	141	25	10,0
125	IR	<b>753 018 690</b>	0.850	140	15	11,4
140	IR	<b>753 018 691</b>	1.180	155	15	12,7
160	IR	<b>753 018 692</b>	1.750	175	15	14,6
180	IR	<b>753 018 693</b>	2.670	195	15	16,4
200	IR	<b>753 018 694</b>	3.440	215	15	18,2
225	IR	<b>753 018 695</b>	4.790	245	20	20,5
250	--	<b>753 018 621</b>	6.800	256	48	22,7
280	--	<b>753 018 622</b>	9.900	286	48	25,4
315	--	<b>753 018 623</b>	13.500	321	48	28,6
355	--	<b>753 018 674</b>	20.700	380	15	32,2
400	--	<b>753 018 675</b>	30.500	435	25	36,3

## Bends 90°, PE100 S8,3/SDR17,6 - Type B



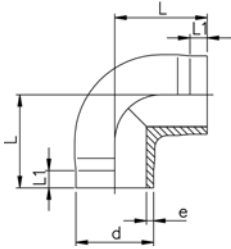
### Model:

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PE100
- Bends with new geometry
- Injection moulding process optimised for PE100

d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
75	IR	<b>753 018 737</b>	0.172	100	20	4,3
90	IR	<b>753 018 738</b>	0.243	100	20	5,1
110	IR	<b>753 018 739</b>	0.522	141	20	6,3
125	IR	<b>753 018 590</b>	0.590	140	15	7,1
140	IR	<b>753 018 591</b>	1.180	155	15	8,0
160	IR	<b>753 018 592</b>	1.750	175	15	9,1
180	IR	<b>753 018 593</b>	2.670	195	15	10,2
200	IR	<b>753 018 594</b>	3.440	215	15	11,4
225	IR	<b>753 018 595</b>	4.790	245	15	12,8
250	--	<b>753 018 521</b>	4.700	256	48	14,2
280	--	<b>753 018 522</b>	6.500	286	48	15,9
315	--	<b>753 018 523</b>	9.200	321	48	17,9
355	--	<b>753 018 549</b>	13.000	380	15	20,1
400	--	<b>753 018 550</b>	19.700	435	25	22,7

**Elbows 90°, PE100 S5/SDR11****Model:**

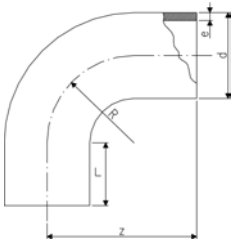
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PE100



d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
20	IR	<b>753 108 606</b>	0.009	38	25	1,9
25	IR	<b>753 108 607</b>	0.014	42	26	2,3
32	IR	<b>753 108 608</b>	0.025	46	27	2,9
40	IR	<b>753 108 609</b>	0.049	51	22	3,7
50	IR	<b>753 108 610</b>	0.087	58	23	4,6
63	IR	<b>753 108 611</b>	0.152	66	21	5,8

**Bends 90°, PE100 S5/SDR11 - 0.75d****Model:**

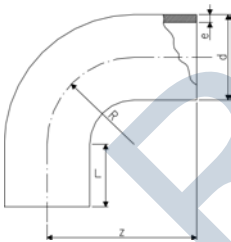
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PE100



d [mm]	FM	Code	kg	z [mm]	L [mm]	R [mm]	e [mm]
20	IR	<b>753 018 706</b>	0.007	38	23	15	1.9
25	IR	<b>753 018 707</b>	0.012	42	23	19	2.3
32	IR	<b>753 018 708</b>	0.022	46	22	24	2.9
40	IR	<b>753 018 709</b>	0.038	51	21	30	3.7
50	IR	<b>753 018 710</b>	0.066	58	21	37	4.6
63	IR	<b>753 018 711</b>	0.118	66	21	45	5.8

**Bends 90°, PE100 S8,3/SDR17,6 - 0.75d****Model:**

- Conventional butt-welding according to DVS 2207 part 11

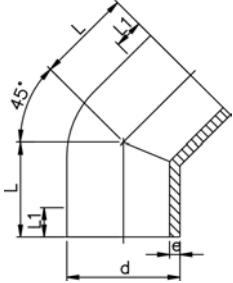


d [mm]	Code	kg	z [mm]	L [mm]	R [mm]	e [mm]
50	<b>753 018 635</b>	0.052	58	21	37	2.9
63	<b>753 018 636</b>	0.084	66	21	45	3.6

53 15 86

**Elbows 45°, PE100 S5/SDR11****Model:**

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PE100

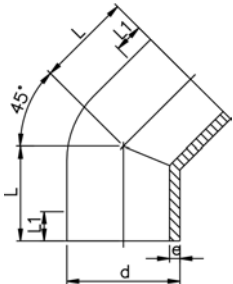


d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
20	IR	<b>753 158 606</b>	0.008	32	24	1,9
25	IR	<b>753 158 607</b>	0.013	34	25	2,3
32	IR	<b>753 158 608</b>	0.021	36	25	2,9
40	IR	<b>753 158 609</b>	0.037	39	25	3,7
50	IR	<b>753 158 610</b>	0.059	42	26	4,6
63	IR	<b>753 158 611</b>	0.104	47	29	5,8
75	IR	<b>753 158 612</b>	0.147	49	29	6,8
90	IR	<b>753 158 613</b>	0.243	57	34	8,2
110	IR	<b>753 158 614</b>	0.445	70	43	10,0
125	IR	<b>753 158 615</b>	0.653	79	48	11,4
140	IR	<b>753 158 616</b>	0.905	88	55	12,7
160	IR	<b>753 158 617</b>	1.344	100	60	14,6
200	IR	<b>753 158 619</b>	2.625	124	75	18,2
225	IR	<b>753 158 620</b>	3.738	140	85	20,5

53 15 85

**Elbows 45°, PE100 S8,3/SDR17,6****Model:**

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PE100
- Machined from S5/SDR11



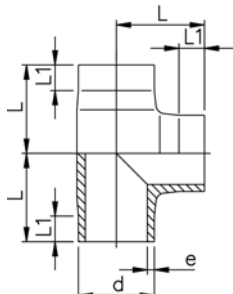
d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
50	--	<b>753 158 535</b>	0.045	42	26	2,9
63	--	<b>753 158 536</b>	0.091	47	29	3,6
75	--	<b>753 158 537</b>	0.128	49	29	4,3
90	--	<b>753 158 538</b>	0.208	57	34	5,1
110	IR	<b>753 158 539</b>	0.398	70	43	6,3
125	IR	<b>753 158 540</b>	0.570	79	48	7,1
140	IR	<b>753 158 541</b>	0.825	88	55	8,0
160	IR	<b>753 158 542</b>	1.190	100	60	9,1
200	IR	<b>753 158 544</b>	2.300	124	75	11,4
225	IR	<b>753 158 545</b>	3.200	140	85	12,8



53 20 86

**Tees 90° equal, PE100 S5/SDR11****Model:**

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PE100

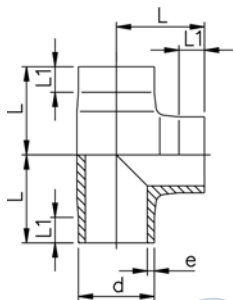


d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
20	IR	<b>753 208 606</b>	0.013	38	24	1,9
25	IR	<b>753 208 607</b>	0.021	42	26	2,3
32	IR	<b>753 208 608</b>	0.042	46	26	2,9
40	IR	<b>753 208 609</b>	0.067	51	22	3,7
50	IR	<b>753 208 610</b>	0.114	58	22	4,6
63	IR	<b>753 208 611</b>	0.203	66	21	5,8
75	IR	<b>753 208 612</b>	0.310	75	20	6,8
90	IR	<b>753 208 613</b>	0.564	90	20	8,2
110	IR	<b>753 208 614</b>	1.020	110	20	10,0
125	IR	<b>753 208 615</b>	1.514	125	25	11,4
140	IR	<b>753 208 616</b>	2.111	140	28	12,7
160	IR	<b>753 208 617</b>	3.095	160	28	14,6
180	IR	<b>753 208 668</b>	4.560	190	70	16,4
200	IR	<b>753 208 619</b>	6.037	200	35	18,2
225	IR	<b>753 208 620</b>	8.090	220	35	20,5
250	--	<b>753 208 671</b>	12.208	272	90	22,7
280	--	<b>753 208 672</b>	17.831	313	108	25,4
315	--	<b>753 208 673</b>	25.742	348	114	28,6
355	--	<b>753 208 674</b>	31.900	345	100	32,2
400	--	<b>753 208 675</b>	39.200	360	102	36,3

53 20 85

**Tees 90° equal, PE100 S8,3/SDR17,6****Model:**

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PE100



d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
50	--	<b>753 208 535</b>	0.090	59	26	2,9
63	--	<b>753 208 536</b>	0.160	71	25	3,6
75	--	<b>753 208 537</b>	0.263	85	28	4,3
90	--	<b>753 208 538</b>	0.438	100	23	5,1
110	IR	<b>753 208 539</b>	0.763	120	43	6,3
125	IR	<b>753 208 540</b>	1.066	124	27	7,1
140	IR	<b>753 208 541</b>	1.449	141	33	8,0
160	IR	<b>753 208 542</b>	2.240	160	40	9,1
180	IR	<b>753 208 543</b>	3.176	190	70	10,2
200	IR	<b>753 208 544</b>	4.360	210	70	11,4
225	IR	<b>753 208 545</b>	6.030	238	80	12,8
250	--	<b>753 208 546</b>	8.610	272	90	14,2
280	--	<b>753 208 547</b>	11.660	313	108	15,9
315	--	<b>753 208 548</b>	16.230	348	114	17,9
355	--	<b>753 208 549</b>	21.900	345	100	20,1
400	--	<b>753 208 550</b>	27.700	360	102	22,7

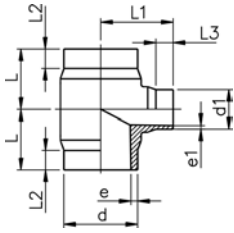




## Tees 90°, reduced, PE100 S5/SDR11

### Model:

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PE100



d [mm]	d1 [mm]	FM	Code	kg	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	e [mm]	e1 [mm]
63	32	IR	<b>753 208 351</b>	0.170	65	70	25	25	5,8	2,9
63	50	IR	<b>753 208 352</b>	0.180	65	70	25	25	5,8	4,6
75	32	IR	<b>753 208 353</b>	0.250	70	75	25	25	6,8	2,9
75	50	IR	<b>753 208 354</b>	0.263	70	75	25	25	6,8	4,6
75	63	IR	<b>753 208 355</b>	0.278	70	75	25	25	6,8	5,8
90	50	IR	<b>753 208 357</b>	0.445	80	85	25	25	8,2	4,6
90	63	IR	<b>753 208 358</b>	0.455	80	85	25	25	8,2	5,8
90	75	IR	<b>753 208 359</b>	0.470	80	85	25	25	8,2	6,8
110	32	IR	<b>753 208 360</b>	0.705	90	95	30	25	10,0	2,9
110	50	IR	<b>753 208 361</b>	0.700	90	95	30	25	10,0	4,6
110	63	IR	<b>753 208 362</b>	0.710	90	95	30	25	10,0	5,8
110	75	IR	<b>753 208 363</b>	0.723	90	95	30	25	10,0	6,8
110	90	IR	<b>753 208 364</b>	0.735	90	95	30	25	10,0	8,2
160	63	IR	<b>753 208 371</b>	2.270	142	135	50	30	14,6	5,8
160	75	IR	<b>753 208 372</b>	2.295	142	135	50	30	14,6	6,8
160	90	IR	<b>753 208 373</b>	2.315	142	135	50	30	14,6	8,2
160	110	IR	<b>753 208 374</b>	2.355	142	135	50	30	14,6	10,0
225	90	IR	<b>753 208 388</b>	4.760	155	165	40	30	20,5	8,2
225	110	IR	<b>753 208 389</b>	4.720	155	165	40	30	20,5	10,0
225	160	IR	<b>753 208 391</b>	4.780	155	165	40	30	20,5	14,6

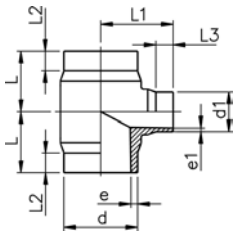


## Tees 90°, reduced, PE100 S8,3/SDR17,6

### Model:

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PE100

\* Branch SDR11

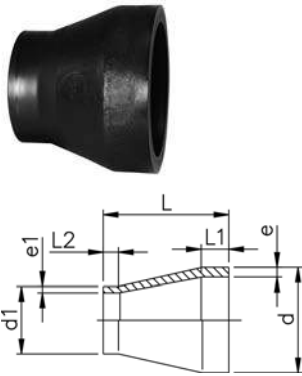


d [mm]	d1 [mm]	FM	Code	kg	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	e [mm]	e1 [mm]
*63	32	--	<b>753 208 301</b>	0.157	65	70	25	25	3,6	2,9
63	50	--	<b>753 208 302</b>	0.158	65	70	25	25	3,6	2,9
*75	32	--	<b>753 208 303</b>	0.240	70	75	25	25	4,3	2,9
75	50	--	<b>753 208 304</b>	0.250	70	75	25	25	4,3	2,9
75	63	--	<b>753 208 305</b>	0.257	70	75	25	25	4,3	3,6
90	50	--	<b>753 208 307</b>	0.410	80	85	25	25	5,1	2,9
90	63	--	<b>753 208 308</b>	0.330	80	85	25	25	5,1	3,6
90	75	--	<b>753 208 309</b>	0.340	80	85	25	25	5,1	4,3
*110	32	IR	<b>753 208 310</b>	0.640	90	95	30	25	6,3	2,9
110	50	IR	<b>753 208 311</b>	0.650	90	95	30	25	6,3	2,9
110	63	IR	<b>753 208 312</b>	0.520	90	95	30	25	6,3	3,6
110	75	IR	<b>753 208 313</b>	0.524	90	95	30	25	6,3	4,3
110	90	IR	<b>753 208 314</b>	0.530	90	95	30	25	6,3	5,1
160	63	IR	<b>753 208 321</b>	2.150	142	135	50	30	9,1	3,6
160	75	IR	<b>753 208 322</b>	2.130	142	135	50	30	9,1	4,3
160	90	IR	<b>753 208 323</b>	1.590	142	135	50	30	9,1	5,1
160	110	IR	<b>753 208 324</b>	1.695	142	135	50	30	9,1	6,3
225	90	IR	<b>753 208 338</b>	3.430	155	165	40	30	12,8	5,1
225	110	IR	<b>753 208 339</b>	3.410	155	165	40	30	12,8	6,3
225	160	IR	<b>753 208 341</b>	3.440	155	165	40	30	12,8	9,1

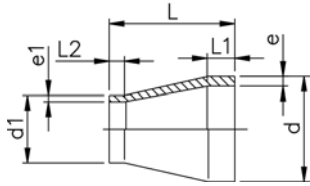
## Reducers, PE100 S5/SDR11

### Model:

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PE100



d	d1	FM	Code	kg	L	L1	L2	e	e1
[mm]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]
25	20	IR	<b>753 908 637</b>	0.007	50	20	18	2,3	1,9
32	20	IR	<b>753 908 642</b>	0.010	50	20	18	2,9	1,9
32	25	IR	<b>753 908 641</b>	0.011	50	20	18	2,9	2,3
40	20	IR	<b>753 908 648</b>	0.016	58	20	20	3,7	1,9
40	25	IR	<b>753 908 647</b>	0.017	55	20	18	3,7	2,3
40	32	IR	<b>753 908 646</b>	0.019	55	20	18	3,7	2,9
50	25	IR	<b>753 908 654</b>	0.025	60	20	18	4,6	2,3
50	32	IR	<b>753 908 653</b>	0.028	60	20	18	4,6	2,9
50	40	IR	<b>753 908 652</b>	0.032	60	20	18	4,6	3,7
63	32	IR	<b>753 908 660</b>	0.046	65	20	18	5,8	2,9
63	40	IR	<b>753 908 659</b>	0.051	65	20	18	5,8	3,7
63	50	IR	<b>753 908 658</b>	0.056	65	20	18	5,8	4,6
75	40	IR	<b>753 908 666</b>	0.070	68	20	20	6,8	3,7
75	50	IR	<b>753 908 665</b>	0.074	65	20	18	6,8	4,6
75	63	IR	<b>753 908 664</b>	0.083	65	20	18	6,8	5,8
90	63	IR	<b>753 908 671</b>	0.127	75	21	17	8,2	5,8
90	75	IR	<b>753 908 670</b>	0.132	75	22	17	8,2	6,8
110	75	IR	<b>753 908 677</b>	0.226	90	28	17	10,0	6,8
110	90	IR	<b>753 908 676</b>	0.239	90	28	20	10,0	8,2
125	110	IR	<b>753 908 680</b>	0.345	100	32	26	11,4	10,0
140	110	IR	<b>753 908 685</b>	0.436	110	35	28	12,7	10,0
140	125	IR	<b>753 908 684</b>	0.478	110	35	28	12,7	11,4
160	110	IR	<b>753 908 690</b>	0.608	120	40	25	14,6	10,0
160	140	IR	<b>753 908 688</b>	0.671	120	40	33	14,6	12,7
180	90	IR	<b>753 908 877</b>	0.678	157	45	22	16,4	8,2
180	110	IR	<b>753 908 878</b>	0.556	157	45	28	16,4	10,0
180	125	IR	<b>753 908 879</b>	0.528	136	45	32	16,4	11,4
180	140	IR	<b>753 908 880</b>	0.524	136	45	35	16,4	12,7
180	160	IR	<b>753 908 881</b>	0.537	136	45	40	16,4	14,6
200	160	IR	<b>753 908 692</b>	1.266	150	50	35	18,2	14,6
200	180	IR	<b>753 908 883</b>	0.715	151	50	45	18,2	16,4
225	110	IR	<b>753 908 695</b>	1.447	171	55	45	20,5	10,0
225	160	IR	<b>753 908 696</b>	1.546	160	55	37	20,5	14,6
225	180	IR	<b>753 908 885</b>	1.970	171	55	45	20,5	16,4
225	200	--	<b>753 908 697</b>	1.737	160	55	48	20,5	18,2
250	160	--	<b>753 908 890</b>	2.314	194	60	40	22,7	14,6
250	225	--	<b>753 908 887</b>	2.595	182	60	55	22,7	20,5
280	225	--	<b>753 908 892</b>	1.908	105	30	20	25,4	20,5
280	250	--	<b>753 908 891</b>	1.390	70	30	18	25,4	22,7
315	225	--	<b>753 908 897</b>	2.797	130	30	30	28,6	20,5
315	250	--	<b>753 908 896</b>	2.370	100	30	20	28,6	22,7
315	280	--	<b>753 908 895</b>	1.590	63	30	18	28,6	25,4
355	250	--	<b>753 908 863</b>	4.400	130	54	40	32,3	22,7
355	280	--	<b>753 908 862</b>	4.100	120	53	40	32,2	25,4
355	315	--	<b>753 908 861</b>	3.700	110	53	40	32,2	28,6
400	315	--	<b>753 908 866</b>	5.300	120	50	40	36,3	28,6
400	355	--	<b>753 908 865</b>	10.000	110	51	40	36,3	32,2



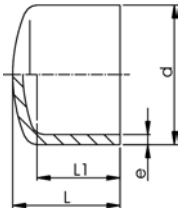
## Reducers, PE100 S8,3/SDR17,6

### Model:

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PE100

d	d1	FM	Code	kg	L	L1	L2	e	e1
[mm]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]
50	40	--	<b>753 908 926</b>	0.010	55	12	12	2,9	2,3
63	40	--	<b>753 908 927</b>	0.020	65	16	12	3,6	2,3
63	50	--	<b>753 908 928</b>	0.020	65	16	12	3,6	2,9
75	40	--	<b>753 908 904</b>	0.041	71	19	12	4,3	2,3
75	50	--	<b>753 908 903</b>	0.042	71	19	12	4,3	2,9
75	63	--	<b>753 908 902</b>	0.039	71	19	16	4,3	3,6
90	63	--	<b>753 908 906</b>	0.074	80	22	16	5,1	3,6
90	75	--	<b>753 908 905</b>	0.062	80	22	19	5,1	4,3
110	75	--	<b>753 908 909</b>	0.108	97	28	19	6,3	4,3
110	90	--	<b>753 908 908</b>	0.097	97	28	22	6,3	5,1
125	110	IR	<b>753 908 912</b>	0.151	108	32	28	7,1	6,3
140	110	IR	<b>753 908 917</b>	0.144	115	35	28	8,0	6,3
140	125	IR	<b>753 908 916</b>	0.150	115	35	32	8,0	7,1
160	110	IR	<b>753 908 922</b>	0.287	124	40	28	9,1	6,3
160	140	IR	<b>753 908 920</b>	0.245	124	40	35	9,1	8,0
180	90	IR	<b>753 908 975</b>	0.445	157	45	22	10,2	5,1
180	110	IR	<b>753 908 976</b>	0.367	157	45	28	10,2	6,3
180	125	IR	<b>753 908 977</b>	0.347	136	45	32	10,2	7,1
180	140	IR	<b>753 908 978</b>	0.344	136	45	35	10,2	8,0
180	160	IR	<b>753 908 979</b>	0.351	136	45	40	10,2	9,1
200	160	IR	<b>753 908 931</b>	0.835	151	50	40	11,4	9,1
200	180	IR	<b>753 908 981</b>	0.467	151	50	45	11,4	10,2
225	110	IR	<b>753 908 938</b>	1.295	160	55	35	12,8	6,3
225	160	IR	<b>753 908 933</b>	0.620	171	55	40	12,8	9,1
225	180	IR	<b>753 908 985</b>	0.601	171	55	45	12,8	10,2
225	200	IR	<b>753 908 932</b>	0.614	171	55	50	12,8	11,4
250	160	--	<b>753 908 939</b>	0.975	194	60	40	14,2	9,1
250	225	--	<b>753 908 937</b>	0.681	182	60	55	14,2	12,8
280	225	--	<b>753 908 944</b>	1.180	105	30	20	15,9	12,8
280	250	--	<b>753 908 943</b>	0.858	70	30	18	15,9	14,2
315	225	--	<b>753 908 950</b>	1.715	130	30	20	17,9	12,8
315	250	--	<b>753 908 949</b>	1.446	100	30	20	17,9	14,2
315	280	--	<b>753 908 999</b>	1.047	63	30	18	17,9	15,9
355	250	--	<b>753 908 859</b>	3.000	130	54	40	20,1	14,2
355	280	--	<b>753 908 858</b>	2.700	120	53	40	20,1	15,9
355	315	--	<b>753 908 857</b>	2.400	110	53	40	20,1	17,9
400	315	--	<b>753 908 872</b>	3.600	120	50	40	22,7	17,9
400	355	--	<b>753 908 871</b>	3.100	110	51	40	22,7	20,1

## End Caps, PE100 S5/SDR11

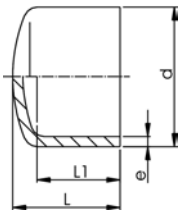


### Model:

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PE100

d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
20	IR	753 968 931	0.004	42	30	1,9
25	IR	753 968 932	0.005	50	35	2,3
32	IR	753 968 933	0.010	55	40	2,9
40	IR	753 968 934	0.018	65	45	3,7
50	IR	753 968 935	0.029	70	50	4,6
63	IR	753 968 936	0.049	80	55	5,8
75	IR	753 968 937	0.065	90	60	6,8
90	IR	753 968 938	0.107	105	70	8,2
110	IR	753 968 939	0.174	120	80	10,0
125	IR	753 968 940	0.210	50	25	11,4
140	IR	753 968 941	0.323	60	30	12,7
160	IR	753 968 942	0.570	76	40	14,6
180	IR	753 968 943	0.730	125	88	16,4
200	IR	753 968 944	1.060	100	50	18,2
225	IR	753 968 945	1.365	103	60	20,5
250	--	753 968 946	3.600	205	130	22,7
280	--	753 968 947	5.000	230	139	25,4
315	--	753 968 948	6.600	255	150	28,6
355	--	753 968 949	9.800	280	165	32,2
400	--	753 968 950	13.700	310	180	36,3

## End Caps, PE100 S8,3/SDR17,6

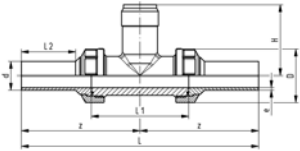


### Model:

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared-(IR Plus®) compatible. Please choose fusion parameters: PE100

d [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
50	--	753 968 910	0.040	75	53	2,9
63	--	753 968 911	0.070	85	58	3,6
75	--	753 968 912	0.045	90	60	4,3
90	--	753 968 913	0.073	105	70	5,1
110	IR	753 968 914	0.118	120	80	6,3
125	IR	753 968 915	0.176	50	25	7,1
140	IR	753 968 916	0.194	60	30	8,0
160	IR	753 968 917	0.408	76	40	9,1
180	IR	753 968 918	0.500	125	88	10,2
200	IR	753 968 919	0.730	100	50	11,4
225	IR	753 968 920	0.965	103	60	12,8
250	--	753 968 921	2.400	205	130	14,2
280	--	753 968 922	3.400	230	139	15,9
315	--	753 968 923	4.500	255	150	17,9
355	--	753 968 924	6.500	280	165	20,1
400	--	753 968 925	9.300	310	180	22,7

## Installation Fitting Type 318, PE100 for Butt Fusion Systems metric



### Model:

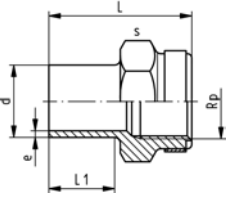
- For Signet Paddlewheel Sensors Type -X0 (104 mm)
- Body and union nut PP-H
- Union end with butt fusion spigot PE100

d [mm]	DN [mm]	PN	FM	EPDM Code	FPM Code	kg	
20	15	10	IR	<b>753 318 006</b>	<b>753 318 036</b>	0.136	
25	20	10	IR	<b>753 318 007</b>	<b>753 318 037</b>	0.190	
32	25	10	IR	<b>753 318 008</b>	<b>753 318 038</b>	0.250	
40	32	10	IR	<b>753 318 009</b>	<b>753 318 039</b>	0.356	
50	40	10	IR	<b>753 318 010</b>	<b>753 318 040</b>	0.510	
63	50	10	IR	<b>753 318 011</b>	<b>753 318 041</b>	0.800	

d [mm]	D [mm]	z [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	e [mm]	Sensor Type
20	48	112	224	90	52	76	1.9	X0
25	58	121	242	100	53	78	2.3	X0
32	65	128	256	110	55	81	2.9	X0
40	79	136	272	110	60	85	3.7	X0
50	91	147	294	120	66	89	4.6	X0
63	105	158	316	130	70	95	5.8	X0

# Adaptor Fittings for Butt Fusion

## Adaptor Sockets, PE100 metric - Rp

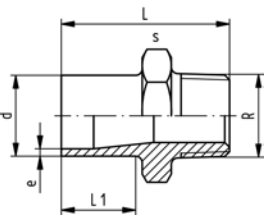


### Model:

- With butt fusion spigot **SDR11** and BSP parallel female thread Rp, reinforced
- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PE

d [mm]	Rp [inch]	FM	Code	kg	L [mm]	L1 [mm]	s [mm]	e [mm]
20	¾	IR	<b>753 910 266</b>	0.018	48	23	32	1,9
25	¾	IR	<b>753 910 267</b>	0.022	50	23	36	2,3
32	1	IR	<b>753 910 268</b>	0.039	54	23	46	2,9
40	1 ¼	IR	<b>753 910 269</b>	0.068	56	23	55	3,7
50	1 ½	IR	<b>753 910 270</b>	0.087	60	23	65	4,6
63	2	IR	<b>753 910 271</b>	0.140	62	23	80	5,8

## Adaptor Nipples, PE100 metric - R

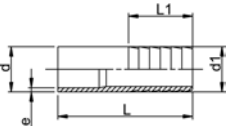


### Model:

- With butt fusion spigot and BSP tapered male thread
- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PE

d [mm]	R [inch]	Code	kg	L [mm]	L1 [mm]	s [mm]	e [mm]
20	¾	<b>753 910 556</b>	0.014	51	23	32	1,9
25	¾	<b>753 910 557</b>	0.026	52	23	36	2,3
32	1	<b>753 910 558</b>	0.029	55	23	46	3,0
40	1 ¼	<b>753 910 559</b>	0.043	58	23	55	3,7
50	1 ½	<b>753 910 560</b>	0.064	60	23	65	4,6
63	2	<b>753 910 561</b>	0.140	67	26	80	5,8

## Hose Connector, PE100 metric

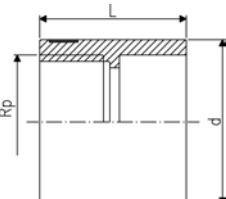


### Model:

- With butt fusion spigot **SDR11** and parallel hose connection

d [mm]	d1 [mm]	FM	Code	kg	L [mm]	L1 [mm]	e [mm]
20	20	IR	<b>753 968 606</b>	0.008	64	27	1,9
25	25	IR	<b>753 968 607</b>	0.013	75	36	2,3
32	32	IR	<b>753 968 608</b>	0.021	82	36	2,9
40	40	IR	<b>753 968 609</b>	0.034	84	42	3,7
50	50	IR	<b>753 968 610</b>	0.056	90	48	4,6
63	60	IR	<b>753 968 611</b>	0.095	100	50	5,8

## PE Adaptor Female thread



- PE 80 SDR 11 (ISO S5)
- 5 bar Gas / 12,5 bar Water
- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- For ELGEF® Plus Branch Saddle (53 131 000) d 63 - 400 mm, pipe SDR 11, d 75 - 400 mm, pipe SDR 17
- Parallel female thread

d [mm]	Rp [inch]	Code	kg	L [mm]
63	1 ½	<b>173 281 925</b>	0.096	54

# Unions for Butt Fusion

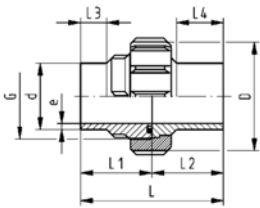


## Unions, PE100 S5/SDR11



### Model:

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared- (IR Plus®) compatible.
- Gasket: O-Ring EPDM No. 48 41 00, FPM No. 49 41 00
- **For the dimensions d75-110 please see instructions for the installation**



d [mm]	PN	FM	EPDM Code	FPM Code	kg
20	16	IR	753 518 606	753 528 606	0.042
25	16	IR	753 518 607	753 528 607	0.052
32	16	IR	753 518 608	753 528 608	0.083
40	16	IR	753 518 609	753 528 609	0.151
50	16	IR	753 518 610	753 528 610	0.196
63	16	IR	753 518 611	753 528 611	0.364
75	10	IR	753 518 612	753 528 612	0.520
90	10	IR	753 518 613	753 528 613	0.540
110	10	IR	753 518 614	753 528 614	0.760

d [mm]	D [mm]	G [inch]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	e [mm]
20	48	1	107	54.0	53.0	26	38	1,9
25	58	1 1/4	113	57.0	56.0	26	42	2,3
32	65	1 1/2	119	60.0	59.0	25	41	3,0
40	79	2	126	63.0	63.0	25	42	3,7
50	91	2 1/4	131	65.5	65.5	25	44	4,6
63	111	2 3/4	137	69.0	68.0	25	45	5,8
75	135	S107,5x3,6	132	66.0	65.5	24	34	6,8
90	135	S107,5x3,6	131	65.5	65.5	24	45	8,2
110	158	S127,5x3,6	131	65.5	65.5	25	40	10,0

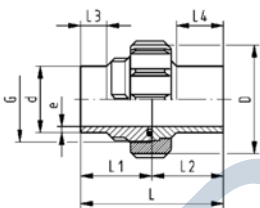


## Unions, PE100 S8,3/SDR17,6



### Model:

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared- (IR Plus®) compatible.
- Gasket: O-Ring EPDM No. 48 41 00, FPM No. 49 41 00
- **For the dimensions d75-110 please see instructions for the installation**



d [mm]	PN	FM	EPDM Code	FPM Code	kg
75	10	--	753 518 412	753 528 412	0.476
90	10	--	753 518 413	753 528 413	0.483
110	10	IR	753 518 414	753 528 414	0.663

d [mm]	D [mm]	G [inch]	L [mm]	L1 [mm]	L2 [mm]	e [mm]
75	135	S107,5x3,6	132	66	24	4,3
90	135	S107,5x3,6	131	66	24	5,1
110	158	S127,5x3,6	131	66	5	6,3



# Instructions for the installation of unions in PP, PE d 75, d 90 and d 110

The newest generation of plastic unions in the above materials and dimensions has been fitted with a state-of-the-art, plastics-oriented buttress thread. You therefore have a product in which the nominal pressure and the safety reserve have been dramatically increased. Also new are the butt fusion versions. In this connection, there are a few points which you must be aware of.

## Caution

- ① The threads of the union nut and bush have been reworked for PP, PVDF and PE! When using individual parts, please check prior to installation if the threads of the union bush and the union nut coincide.



Union bush with trapezoid thread on union nut with trapezoid thread  
or  
Union bush with buttress thread on union nut with buttress thread

## Tip

To make installation of the union easier, wet the union nut.

- ② For the dimensions d 90 and d 110 we advise fusing the complete union, if possible (or slide the union nut to the collar of the union end) because after fusion the union nut cannot be slid over the fusion bead. (Fig. 1)
- ③ For design reasons, it is theoretically possible to combine different nominal diameters of union ends and nuts. To make sure combinations are technically correct, you can find the code numbers of the single parts and spare parts for each union in the Tables 1-3.

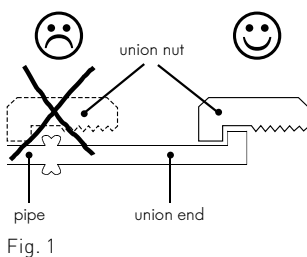


Fig. 1

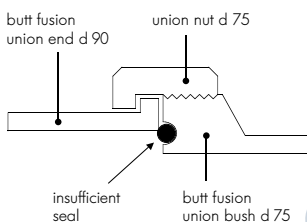


Fig. 2

## Caution

**Only use union bushes and union ends with the same nominal diameter!**

A butt fusion union bush d 75 may not be combined with a butt fusion union end d 90 to form a reducer because this can cause leakage, as illustrated to the left. (Fig. 2)

Markings on the union nuts

SF/MS = socket fusion, BF/ST = butt fusion

SF/MS 75            specified for socket fusion d 75  
BF/ST 75-90      specified for butt fusion d 75-75 and d 90-90

SF/MS 90            specified socket fusion d 90  
BF/ST 110          specified butt fusion d 110

110                  specified for socket fusion d 110

## Tip

We recommend changing materials only for the union end for installation reasons.



# Selection tables for single parts and spare parts



Butt fusion

Socket fusion

Table 1

Single parts for **PP-H** unions d 75, d 90 and d 110

d	BF/ST	SF/MS	SDR	PN	Code union end	Code union bush	Code union nut*
75	==		11	10	727 608 512	727 648 512	727 690 422
			17.6	6	727 608 412	727 648 412	727 690 422
		JL	—	10	727 600 112	727 640 172	727 690 422
90	==		11	10	727 608 513	727 648 513	727 690 422
			17.6	6	727 608 413	727 648 413	727 690 422
		JL	—	10	727 600 113	727 640 173	727 690 423
110	==		11	10	727 608 514	727 648 514	727 690 423
			17.6	6	727 608 414	727 648 414	727 690 423
		JL	—	10	727 600 114	727 640 174	727 690 424

Table 2

Single parts for **PE 100** unions d 75, d 90 and d 110

d	BF/ST	SF/MS	SDR	PN	Code union end	Code union bush	Code union nut*
75	==		11	10	753 608 612	753 648 612	727 690 442
			17.6	10	753 608 412	753 648 412	727 690 442
90	==		11	10	753 608 613	753 648 613	727 690 442
			17.6	10	753 608 413	753 648 413	727 690 442
110	==		11	10	753 608 614	753 648 614	727 690 443
			17.6	10	753 608 414	753 648 414	727 690 443

Table 3

O-Rings for PP-H, PE 100

d	BF/ST	SF/MS	SDR	PN	Code O-Ring EPDM <sup>1</sup>	Code O-Ring FPM <sup>1</sup>
75	==			16	748 410 013	749 410 013
				16	748 410 014	749 410 014
90	==			16	748 410 014	749 410 014
				16	748 410 015	749 410 015
110	==			16	748 410 015	749 410 015
				16	748 410 016	749 410 016

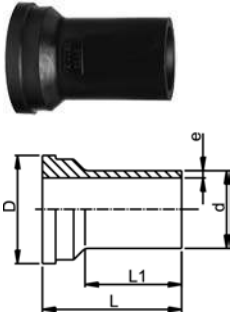
\* Union nuts overlap several dimensions

<sup>1</sup> Flange adaptor O-rings, one size smaller in nominal dimensions, are used for the d 75–110 butt-fusion unions

53 60 86

**Union Ends, PE100 SDR11****Model:**

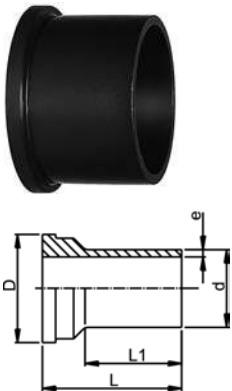
- Suitable for unions, tank connectors and diaphragm valves Type 314
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared- (IR Plus®) compatible.
- **For the dimensions d75-110 please see instructions for the installation**



d [mm]	PN	FM	Code	kg	D [mm]	L [mm]	L1 [mm]	e [mm]
20	16	IR	<b>753 608 606</b>	0.011	30	54	38	1,9
25	16	IR	<b>753 608 607</b>	0.018	39	57	42	2,3
32	16	IR	<b>753 608 608</b>	0.027	45	60	41	2,9
40	16	IR	<b>753 608 609</b>	0.045	57	63	42	3,7
50	16	IR	<b>753 608 610</b>	0.062	63	66	44	4,6
63	16	IR	<b>753 608 611</b>	0.100	78	69	45	5,8
75	10	IR	<b>753 608 612</b>	0.147	101	66	34	6,8
90	10	IR	<b>753 608 613</b>	0.156	101	66	45	8,2
110	10	IR	<b>753 608 614</b>	0.226	121	66	40	10,0

**Union Ends, PE100 SDR17,6****Model:**

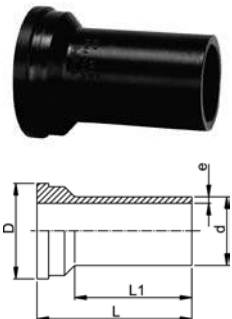
- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared- (IR Plus®) compatible.
- **For the dimensions d75-110 please see instructions for the installation**



d [mm]	PN	FM	Code	kg	D [mm]	L [mm]	L1 [mm]	e [mm]
75	10	-	<b>753 608 412</b>	0.125	101	66	34	4,3
90	10	-	<b>753 608 413</b>	0.128	101	66	45	5,1
110	10	IR	<b>753 608 414</b>	0.178	121	66	40	6,3

**Union Ends long, PE100****Model:**

- For butt-, IR Plus® and electro fusion
- Suitable for unions, tank connectors and diaphragm valves Type 314



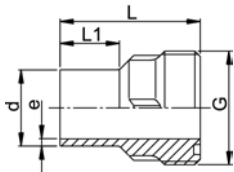
d [mm]	PN	FM	Code	kg	D [mm]	L [mm]	L1 [mm]	e [mm]
20	16	IR	<b>753 608 616</b>	0.011	30	67	52	1,9
25	16	IR	<b>753 608 617</b>	0.018	39	71	53	2,3
32	16	IR	<b>753 608 618</b>	0.027	45	73	55	2,9
40	16	IR	<b>753 608 619</b>	0.045	57	81	60	3,7
50	16	IR	<b>753 608 620</b>	0.062	63	87	66	4,6
63	16	IR	<b>753 608 621</b>	0.100	78	93	70	5,8

53 64 86

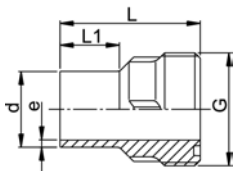
## Union Bushes, PE100 SDR11

### Model:

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared- (IR Plus®) compatible.
- Gasket: O-Ring EPDM No. 48 41 00, FPM No. 49 41 00
- D75-110 with new thread geometry, now rated PN10 up to d110
- **For the dimensions d75-110 please see instructions for the installation**



d [mm]	PN	FM	Code	kg	G [inch]	L [mm]	L1 [mm]	e [mm]
20	16	IR	<b>753 648 606</b>	0.016	1	54	26	1,9
25	16	IR	<b>753 648 607</b>	0.025	1 1/4	57	26	2,3
32	16	IR	<b>753 648 608</b>	0.035	1 1/2	60	25	2,9
40	16	IR	<b>753 648 609</b>	0.056	2	63	25	3,7
50	16	IR	<b>753 648 610</b>	0.078	2 1/4	66	25	4,6
63	16	IR	<b>753 648 611</b>	0.120	2 3/4	69	25	5,8
75	10	IR	<b>753 648 612</b>	0.183	S107,5x3,6	66	24	6,8
90	10	IR	<b>753 648 613</b>	0.195	S107,5x3,6	66	24	8,2
110	10	IR	<b>753 648 614</b>	0.275	S127,5x3,6	66	25	10



## Union Bushes, PE100 SDR17,6

### Model:

- Conventional butt-welding according to DVS 2207 part 11
- IR = Infrared- (IR Plus®) compatible.
- Gasket: O-Ring EPDM No. 48 41 00, FPM No. 49 41 00
- D75-110 with new thread geometry, now rated PN10 up to d110
- **For the dimensions d75-110 please see instructions for the installation**

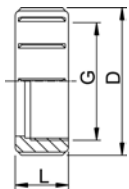
d [mm]	PN	FM	Code	kg	G [inch]	L [mm]	L1 [mm]	e [mm]
75	10	--	<b>753 648 412</b>	0.161	S107.5x3.6	66	24	4,3
90	10	--	<b>753 648 413</b>	0.164	S107.5x3.6	66	24	5,1
110	10	IR	<b>753 648 414</b>	0.221	S127.5x3.6	66	25	6,3

33 69 04

## Union Nuts, PE-GF

### Model:

- PE glass-fibre reinforced
- For the dimensions d75-110 please see instructions for the installation



\* PP glass fibre reinforced

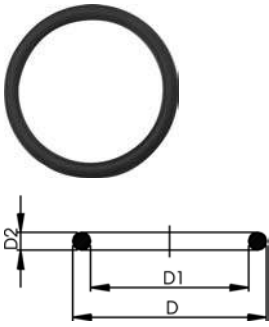
d-d [mm]	Code	kg	G [inch]	D [mm]	L [mm]
20 -	<b>733 690 406</b>	0.029	1	48	24
25 -	<b>733 690 407</b>	0.032	1 1/4	58	26
32 -	<b>733 690 408</b>	0.042	1 1/2	65	28
40 -	<b>733 690 409</b>	0.068	2	79	31
50 -	<b>733 690 410</b>	0.097	2 1/4	91	35
63 -	<b>733 690 411</b>	0.166	2 3/4	111	39
*75 - 90	<b>727 690 442</b>	0.202	S107,5x3,6	135	40
*90 - 110	<b>727 690 443</b>	0.289	S127,5x3,6	158	43

EPDM 48 41 00  
FPM 49 41 00

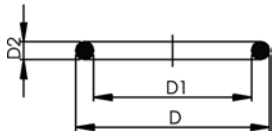
## O-Ring Gaskets

### Model:

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



d [mm]	DN [mm]	EPDM Code	FPM Code	kg	D [mm]	D1 [mm]	D2 [mm]
20	15	748 410 006	749 410 006	0.002	27	20	4
25	20	748 410 007	749 410 007	0.002	35	28	
32	25	748 410 008	749 410 008	0.002	40	33	4
40	32	748 410 009	749 410 009	0.006	51	41	5
50	40	748 410 010	749 410 010	0.007	58	47	5
63	50	748 410 011	749 410 011	0.010	70	60	5



## O-Ring Gasket, FPM black

### Model:

- for unions PP-H, PE100 and PVDF butt fusion
- d75 748 410 013 (EPDM), 749 410 013 (FPM)
- d90 748 410 014 (EPDM), 749 410 014 (FPM)
- d110 748 410 015 (EPDM), 749 410 015 (FPM)

EPDM Code	FPM Code	kg	D [mm]	D1 [mm]	D2 [mm]
748 410 013	749 410 013	0.011	80		
748 410 014	749 410 014	0.012	93		
748 410 015	749 410 015	0.015	112		

# Flange Adaptors, Flanges and Gaskets for Butt Fusion

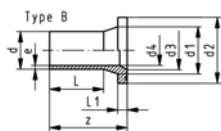
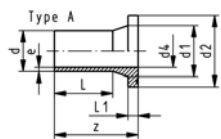
## Flange Adaptor LS, PE100 SDR11 Combined Jointing Face: Flat and serrated



### Model:

- For butt-, IR Plus® and electro fusion
- Suitable for flange connections to metric (from d110 also to ANSI/ASME B16.5)
- Up to d315, suitable for butterfly valve type 567, 568 and 037
- Gasket: Profile flange gasket NBR No. 45 44 07, EPDM No. 48 44 07
- 10 bar Gas / 16 bar Water

\* Type B with chamfer



d	DN	FM	Code	kg	z	d1	d2	d3	d4	L	L1	e
[mm]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
20	15	IR	<b>753 800 006</b>	0.022	85	27	45		16	41	7	1.9
25	20	IR	<b>753 800 007</b>	0.034	85	33	58		20	41	9	2.3
32	25	IR	<b>753 800 008</b>	0.051	85	40	68		26	44	10	3.0
40	32	IR	<b>753 800 009</b>	0.076	85	50	78		32	49	11	3.7
50	40	IR	<b>753 800 010</b>	0.107	104	61	88		40	55	12	4.6
63	50	IR	<b>753 800 011</b>	0.174	98	75	102		51	65	14	5.8
*75	65	IR	<b>753 800 012</b>	0.301	125	89	122	66	61	75	16	6.8
*90	80	IR	<b>753 800 013</b>	0.441	140	105	138	78	73	85	17	8.2
*110	100	IR	<b>753 800 014</b>	0.685	160	125	158	100	90	90	18	10.0
*125	100	IR	<b>753 800 015</b>	0.836	170	132	158	114	102	95	25	11.4
*140	125	IR	<b>753 800 016</b>	1.295	200	155	188	127	114	92	25	12.7
*160	150	IR	<b>753 800 017</b>	1.644	200	175	212	151	130	110	25	14.6
*180	150	IR	<b>753 800 018</b>	1.873	200	180	212	158	147	115	30	16.4
*200	200	IR	<b>753 800 019</b>	2.758	200	232	268	203	163	120	32	18.2
*225	200	IR	<b>753 800 020</b>	2.972	200	235	268	210	184	130	32	20.5
*250	250		<b>753 800 021</b>	4.535	220	285	320	245	204	130	35	22.7
*280	250		<b>753 800 022</b>	4.925	220	291	320	265	229	139	35	25.4
*315	300		<b>753 800 023</b>	6.393	230	335	370	300	257	150	35	28.6
*355	350		<b>753 800 024</b>	10.400	250	373	430	340	290	165	40	32.3
*400	400		<b>753 800 025</b>	14.600	280	427	482	385	327	180	46	36.4
*450	500		<b>753 800 026</b>	24.800	333	514	585	400	368	195	60	40.9
*500	500		<b>753 800 027</b>	27.400	350	530	585	440	409	212	60	45.5
*560	600		<b>753 800 028</b>	38.000	365	615	685	490	458	230	60	50.9
*630	600		<b>753 800 029</b>	42.300	385	642	685	545	515	250	60	57.3



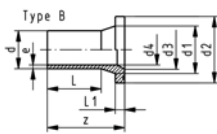
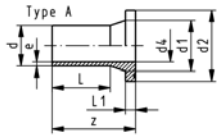
## Flange Adaptor LS, PE100 SDR11 Combined Jointing Face: Flat and serrated



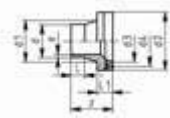
### Model:

- For butt-, IR Plus® and electro fusion
- Suitable for flange connections to **ANSI/ASME B 16.5**
- Suitable for butterfly valve type 567, 568 and 037
- Gasket: Profile flange gasket NBR No. 45 44 07, EPDM No. 48 44 07
- 10 bar Gas / 16 bar Water

\* Type B with chamfer



d [mm]	DN [mm]	FM	Code	kg	z [mm]	d1 [mm]	d2 [mm]	d3 [mm]	d4 [mm]	L [mm]	L1 [mm]	e [mm]
25	20	IR	<b>753 800 057</b>	0.031	85	33	54		20	41	9	2.3
32	20	IR	<b>753 800 058</b>	0.046	85	40	63		26	44	10	3.0
40	20	IR	<b>753 800 059</b>	0.070	85	50	73		32	49	11	3.7
50	20	IR	<b>753 800 060</b>	0.098	85	61	82		40	55	12	4.6
90	20	IR	<b>753 800 063</b>	0.423	140	105	133		73	85	17	8.2



## Flange Adaptors, PE100, S5/SDR11 Jointing Face, combination serrated / flat metric for Butterfly Valves

### Model:

- Conventional butt-welding according to DVS 2207 part 1
- Suitable for most common butterfly valves
- Chamfered and ready for use
- Including spacer and O-Ring EPDM



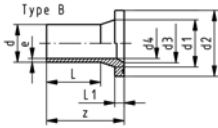
d [mm]	DN [mm]	Code	kg	d1 [mm]	d2 [mm]	d3 [mm]	z [mm]	L [mm]	L1 [mm]	e [mm]
355	350	<b>753 798 824</b>	7.800	373	430	346	156	40	75	32.2
400	400	<b>753 798 825</b>	10.700	427	482	404	176	50	82	36.3



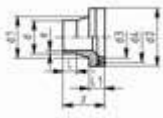
## Flange Adaptors, PE100 S5/SDR11 Jointing Face, combination serrated / flat metric

### Model:

- Conventional butt-welding according to DVS 2207 part 1
- Up to d315, suitable for butterfly valve type 567, 568 and 037
- Gasket: Profile flange gasket NBR No. 45 44 07, EPDM No. 48 44 07
- 10 bar Gas / 16 bar Water



d [mm]	DN [mm]	Code	kg	z [mm]	d1 [mm]	d2 [mm]	d3 [mm]	d4 [mm]	L [mm]	L1 [mm]	e [mm]
250	250	<b>753 798 826</b>	2.420	120	285	320	245	204	45	35	22,7
280	250	<b>753 798 827</b>	2.800	115	291	320	265	229	70	35	25,4
315	300	<b>753 798 828</b>	3.350	120	335	370	300	257	55	35	28,6
355	350	<b>753 798 829</b>	7.800	118	373	430	340	290	40	40	32,2
400	400	<b>753 798 830</b>	10.700	140	427	482	385	327	55	46	36,3
450	500	<b>753 798 831</b>	12.550	138	514	585	400	368	44	60	40,9
500	500	<b>753 798 832</b>	11.780	138	530	585	440	409	48	60	45,4
560	600	<b>753 798 833</b>	-	135	615	684	490	458	20	60	50,8
630	600	<b>753 798 834</b>	-	135	642	684	545	516	40	60	57,2



## Flange Adaptor, PE100, S8.3/SDR17/17.6 Jointing face, combination serrated / flat metric

### Model:

- Conventional butt-welding according to DVS 2207 part 1
- Suitable for most common butterfly valves
- Chamfered and ready for use
- Including spacer and O-Ring EPDM



d [mm]	DN [mm]	Code	kg	d1 [mm]	d2 [mm]	d3 [mm]	z [mm]	L [mm]	L1 [mm]	e [mm]
355	350	<b>753 798 849</b>	6.000	373	430	346	120	30	30	20.1
400	400	<b>753 798 850</b>	8.100	427	482	404	120	42	33	22.7

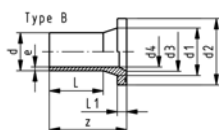
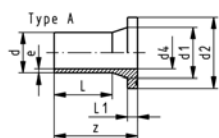


## Flange Adaptors, PE100 S8,3/SDR 17/17.6 Jointing Face, combination serrated / flat metric

### Model:

- Conventional butt-welding according to DVS 2207 part 1
- Up to d315, suitable for butterfly valve type 567, 568 and 037
- Gasket: Profile flange gasket NBR No. 45 44 07, EPDM No. 48 44 07
- 5 bar Gas / 10 bar Water

\* Type B with chamfer



d [mm]	DN [mm]	Code	kg	z	d1 [mm]	d2 [mm]	d3 [mm]	d4 [mm]	L [mm]	L1 [mm]	e [mm]
*250	250	<b>753 798 851</b>	1.830	120	285	320	245	220	56	25	14,8
*280	250	<b>753 798 852</b>	1.830	120	291	320	265	246	68	25	16,6
*315	300	<b>753 798 853</b>	1.830	120	335	370	300	277	60	25	18,7
*355	350	<b>753 798 854</b>	6.000	120	373	430	340	312	55	30	21,1
*400	400	<b>753 798 855</b>	8.100	140	427	482	385	352	67	33	23,7
450	500	<b>753 798 856</b>	9.070	140	514	585		396	60	46	26,7
500	500	<b>753 798 857</b>	7.870	140	530	585		440	45	46	29,7
560	600	<b>753 798 858</b>	12.310	140	615	685		493	46	50	33,2
630	600	<b>753 798 859</b>	10.520	140	642	685		555	60	50	37,4





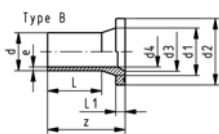
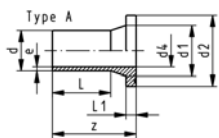
## Flange Adaptor LS, PE100 SDR17/17.6 Combined Jointing Face: Flat and serrated



### Model:

- For butt-, IR Plus® and electro fusion
- Suitable for flange connections to metric and ANSI B16.5
- Up to d315, suitable for butterfly valve type 567, 568 and 037
- Gasket: Profile flange gasket NBR No. 45 44 07, EPDM No. 48 44 07
- 5 bar Gas / 10 bar Water

\* Type B with chamfer



d	DN	FM	Code	kg	z	d1	d2	d3	d4	L	L1	e
[mm]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
50	40	IR	<b>753 800 085</b>	0.110	104	61	88		44	55	12	3.0
63	50	IR	<b>753 800 086</b>	0.143	120	75	102		55	65	14	3.8
75	65	IR	<b>753 800 087</b>	0.246	130	89	122		66	75	16	4.5
90	80	IR	<b>753 800 088</b>	0.351	140	105	138		79	85	17	5.4
110	100	IR	<b>753 800 089</b>	0.531	160	125	158		96	90	18	6.6
*125	100	IR	<b>753 800 090</b>	0.629	170	132	158	114	110	95	25	7.4
*140	125	IR	<b>753 800 091</b>	0.973	200	155	188	127	123	92	25	8.3
*160	150	IR	<b>753 800 092</b>	1.257	200	175	212	158	141	110	25	9.5
180	150	IR	<b>753 800 093</b>	1.364	200	180	212		158	115	30	10.7
*200	200	IR	<b>753 800 094</b>	2.212	200	232	268	203	176	120	32	11.9
*225	200	IR	<b>753 800 095</b>	2.233	200	235	268	210	198	130	32	13.4
*250	250		<b>753 800 096</b>	3.595	220	285	320	245	220	130	35	14.8
*280	250		<b>753 800 097</b>	3.355	220	291	320	265	246	139	35	16.6
*315	300		<b>753 800 098</b>	5.320	230	335	370	308	277	150	35	18.7
*355	350		<b>753 800 099</b>	7.300	250	373	430	340	312	165	40	21.1
*400	400		<b>753 800 100</b>	10.300	280	427	482	385	352	180	46	23.7
450	500		<b>753 800 101</b>	15.800	333	514	585		396	195	60	26.7
500	500		<b>753 800 102</b>	19.100	350	530	585		440	212	60	29.7
560	600		<b>753 800 103</b>	27.500	365	615	685		493	230	60	33.2
630	600		<b>753 800 104</b>	30.000	385	642	685		555	250	60	37.4



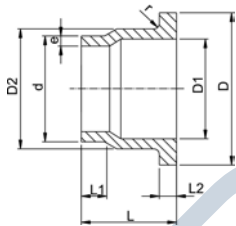
## Outlet Flange Adaptors, PE80 S5/SDR11

### Model:

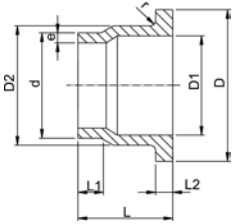
- Conventional butt-welding according to DVS 2207 part 11
- Suitable for wafer check valves Type 369

### Attention:

- In conjunction with outlet flange adaptors, **flange rings for socket systems** must be used.



d	DN	Code	kg	D	D1	D2	L	L1	L2	e	r
[mm]	[mm]			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
40	32	<b>733 808 034</b>	0.064	80	37	50	64	30	11	3,7	3
50	40	<b>733 808 035</b>	0.088	90	43	61	67	30	12	4,6	3
63	50	<b>733 808 036</b>	0.126	105	54	76	74	30	14	5,8	4
75	65	<b>733 808 037</b>	0.187	125	70	90	78	30	16	6,8	4
90	80	<b>733 808 038</b>	0.346	140	82	108	87	35	17	8,2	4
110	100	<b>733 808 039</b>	0.500	160	105	131	102	41	18	10,0	4
140	125	<b>733 808 041</b>	0.710	190	130	165	124	47	25	12,7	4
160	150	<b>733 808 042</b>	0.910	215	158	188	149	52	25	14,6	4
225	200	<b>733 808 045</b>	1.830	270	206	248	180	55	32	20,5	4
280	250	<b>733 808 047</b>	3.550	325	259	308	240	63	35	25,4	4
315	300	<b>733 808 048</b>	4.960	375	308	346	272	66	35	28,6	4



## Outlet Flange Adaptors, PE80 S8,3/SDR17,6

### Model:

- Conventional butt-welding according to DVS 2207 part 11
- Suitable for wafer check valves Type 369

### Attention:

- In conjunction with outlet flange adaptors, **flange rings for socket systems** must be used.

d [mm]	DN [mm]	Code	kg	D [mm]	D1 [mm]	D2 [mm]	L [mm]	L1 [mm]	L2 [mm]	e [mm]	r [mm]	
40	32	<b>733 808 009</b>	0.060	80	37	50	64	30	11	2,3	3	
50	40	<b>733 808 010</b>	0.067	90	43	61	67	30	12	2,9	3	
63	50	<b>733 808 011</b>	0.096	105	54	76	74	30	14	3,6	4	
75	65	<b>733 808 012</b>	0.170	125	70	90	78	30	16	4,3	4	
90	80	<b>733 808 013</b>	0.260	140	82	108	87	35	17	5,1	4	
110	100	<b>733 808 014</b>	0.355	160	105	131	102	41	18	6,3	4	
140	125	<b>733 808 016</b>	0.500	190	130	165	124	47	18	8,0	4	
160	150	<b>733 808 017</b>	0.630	215	158	188	149	52	18	9,1	4	
225	200	<b>733 808 020</b>	1.225	270	206	248	180	55	24	12,8	4	
280	250	<b>733 808 022</b>	2.230	325	259	308	240	63	25	15,9	4	
315	300	<b>733 808 023</b>	2.450	375	308	346	272	66	25	17,9	4	

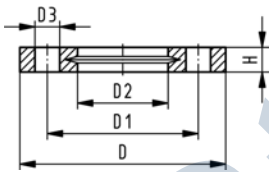
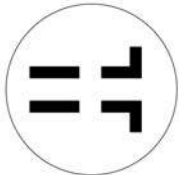
27 70 04  
27 70 05

## Backing Flanges, PP-V for Butt Fusion Systems metric

### Model:

- Modern full-plastic flange PP-GF (30 % glass-fibre reinforced)
- With V-groove which applies force evenly on collar
- With integrated bolt retainers as an assembly aid
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- **Bolt circle PN 10**

<sup>1)</sup> Suitable for socket- and butt fusion systems (no pictograph on flange)  
AL: number of holes



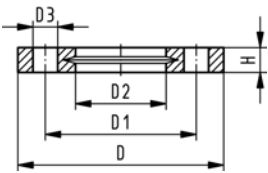
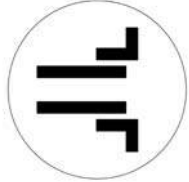
d [mm]	Inch	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC	
20		15	16	<b>727 700 406</b>	0.080	95	65	28	14	16	4	M12	
25		20	16	<b>727 700 407</b>	0.100	105	75	34	14	17	4	M12	
32		25	16	<b>727 700 408</b>	0.140	115	85	42	14	18	4	M12	
40		32	16	<b>727 700 409</b>	0.220	140	100	51	18	20	4	M16	
50		40	16	<b>727 700 410</b>	0.210	150	110	62	18	22	4	M16	
63		50	16	<b>727 700 411</b>	0.380	165	125	78	18	24	4	M16	
75		65	16	<b>727 700 412</b>	0.480	185	145	92	18	26	4	M16	
90		80	16	<b>727 700 513</b>	0.520	200	160	108	18	27	8	M16	
110		100	16	<b>727 700 514</b>	0.680	220	180	128	18	28	8	M16	
125		100	16	<b>727 700 515</b>	0.760	220	180	135	18	28	8	M16	
140		125	16	<b>727 700 516</b>	0.800	250	210	158	18	30	8	M16	
160	6	150	16	<b>727 700 517</b>	1.200	285	241	178	22	32	8	M20	
180		150	16	<b>727 700 518</b>	1.200	285	240	188	22	32	8	M20	
200	8	200	16	<b>727 700 519</b>	1.400	340	295	235	22	34	8	M20	
225	9	200	16	<b>727 700 520</b>	1.400	340	295	238	22	34	8	M20	
250		250	16	<b>727 700 521</b>	1.700	395	350	288	22	38	12	M20	
280		250	16	<b>727 700 522</b>	1.700	395	350	294	22	38	12	M20	
315		300	16	<b>727 700 523</b>	2.400	445	400	338	22	42	12	M20	

27 70 04  
27 70 05

## Backing Flanges, PP-V for Socket Systems metric

### Model:

- Modern full-plastic flange PP-GF (30 % glass-fibre reinforced)
- With V-groove which applies force evenly on collar
- With integrated bolt retainers as an assembly aid
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- **Bolt circle PN 10**



<sup>1)</sup> Suitable for socket- and butt fusion systems (no pictograph on flange)  
AL: number of holes

d [mm]	Inch	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC
20		15	16	<b>727 700 406</b>	0.080	95	65	28	14	16	4	M12
25		20	16	<b>727 700 407</b>	0.100	105	75	34	14	17	4	M12
32		25	16	<b>727 700 408</b>	0.140	115	85	42	14	18	4	M12
40		32	16	<b>727 700 409</b>	0.220	140	100	51	18	20	4	M16
50		40	16	<b>727 700 410</b>	0.210	150	110	62	18	22	4	M16
63		50	16	<b>727 700 411</b>	0.380	165	125	78	18	24	4	M16
75		65	16	<b>727 700 412</b>	0.480	185	145	92	18	26	4	M16
90		80	16	<b>727 700 413</b>	0.520	200	160	110	18	27	8	M16
110		100	16	<b>727 700 414</b>	0.680	220	180	133	18	28	8	M16
140		125	16	<b>727 700 416</b>	0.800	250	210	167	18	30	8	M16
160	6	150	16	<b>727 700 417</b>	1.200	285	241	190	22	32	8	M20
200		200	16	<b>727 700 419</b>	1.500	340	296	226	22	34	8	M20
225	8	200	16	<b>727 700 420</b>	1.400	340	295	250	22	34	8	M20
250		250	16	<b>727 700 421</b>	1.700	395	350	277	22	38	12	M20
280		250	16	<b>727 700 422</b>	1.700	395	350	310	22	38	12	M20
315		300	16	<b>727 700 423</b>	2.400	445	400	348	22	42	12	M20
355		350	10	<b>727 700 424</b>	3.000	515	460	388	22	46	16	M20
400		400	10	<b>727 700 425</b>	3.500	574	515	442	26	50	16	M24

27 70 14  
27 70 15

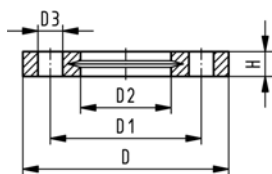
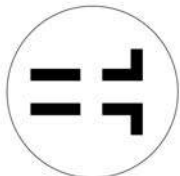
## Backing Flanges, PP-V for Butt Fusion Systems Inch/ANSI

### Model:

- Modern full-plastic flange PP-GF (30 % glass-fibre reinforced)
- With V-groove which applies force evenly on collar
- With integrated bolt-fixing as an assembly aid
- Connecting dimension: ANSI/ASME B 16.5 class 150, ASTM D 4024, BS 1560, BS EN 1759
- **Bolt circle class 150**

<sup>1)</sup> Suitable for socket- and butt fusion systems (no pictograph on flange)

AL: number of holes



Inch	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC
1/2	15	16	<b>727 701 406</b>	0.080	95	60	28	16	16	4	M12
3/4	20	16	<b>727 701 407</b>	0.100	105	70	34	16	17	4	M12
1	25	16	<b>727 701 408</b>	0.140	115	79	42	16	18	4	M12
1 1/4	32	16	<b>727 701 409</b>	0.220	140	89	51	16	20	4	M16
1 1/2	40	16	<b>727 701 410</b>	0.210	150	98	62	16	22	4	M16
2	50	16	<b>727 701 411</b>	0.380	165	121	78	19	24	4	M16
2 1/2	65	16	<b>727 701 412</b>	0.480	185	140	92	19	26	4	M16
3	80	16	<b>727 701 513</b>	0.520	200	152	108	19	27	4	M16
4	100	16	<b>727 701 514</b>	0.680	229	190	128	19	28	8	M16
6	150	16	<b>727 700 517</b>	1.200	285	241	178	22	32	8	M20
8	200	16	<b>727 700 519</b>	1.400	340	295	235	22	34	8	M20
9	200	16	<b>727 700 520</b>	1.400	340	295	238	22	34	8	M20
10	250	16	<b>727 701 521</b>	1.800	406	362	288	26	38	12	M20
10	250	16	<b>727 701 522</b>	1.700	406	362	294	26	38	12	M20
12	300	16	<b>727 701 523</b>	2.400	483	432	338	26	42	12	M20

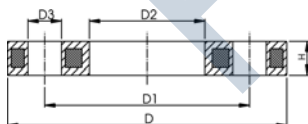
27 70 02  
27 70 03

## Backing Flanges, PP/Steel for Butt Fusion Systems metric

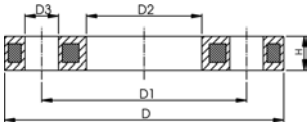
### Model:

- Material: PP (30 % glass-fibre reinforced) with steel ring
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- **Bolt circle PN 10**

AL: number of holes



d [mm]	d [inch]	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	H [mm]	AL	SC
20		15	16	<b>727 700 206</b>	0.220	95	65	28	14	12	4	M12
25		20	16	<b>727 700 207</b>	0.260	105	75	34	14	12	4	M12
32		25	16	<b>727 700 208</b>	0.430	115	85	42	14	16	4	M12
40		32	16	<b>727 700 209</b>	0.650	140	100	51	18	16	4	M16
50		40	16	<b>727 700 210</b>	0.820	150	110	62	18	18	4	M16
63		50	16	<b>727 700 211</b>	0.940	165	125	78	18	18	4	M16
75		65	16	<b>727 700 212</b>	1.300	185	145	92	18	18	4	M16
90		80	16	<b>727 700 313</b>	1.400	200	160	108	18	20	8	M16
110		100	16	<b>727 700 314</b>	1.580	220	180	128	18	20	8	M16
125		100	16	<b>727 700 315</b>	1.550	220	180	135	18	20	8	M16
140		125	16	<b>727 700 316</b>	2.360	250	210	158	18	24	8	M16
160		150	16	<b>727 700 317</b>	3.890	285	240	178	22	24	8	M20
180		150	16	<b>727 700 318</b>	3.410	285	240	188	22	24	8	M20
200		200	16	<b>727 700 319</b>	5.180	340	295	235	22	27	8	M20
225		200	16	<b>727 700 320</b>	5.150	340	295	238	22	27	8	M20



d	d	DN	PN	Code	kg	D	D1	D2	D3	H	AL	SC
[mm]	[inch]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]		
250		250	16	<b>727 700 321</b>	6.680	395	350	288	22	30	12	M20
280		250	16	<b>727 700 322</b>	6.580	395	350	294	22	30	12	M20
315		300	16	<b>727 700 323</b>	8.420	445	400	338	22	34	12	M20
355		350	16	<b>727 700 324</b>	15.790	515	460	376	22	40	16	M20
400		400	16	<b>727 700 325</b>	19.320	574	515	430	26	40	16	M24

27 70 12

## Backing Flanges, PP/Steel for Butt Fusion Systems Inch/ANSI

**Model:**

- Material: PP (30 % glass-fibre reinforced) with steel ring
- Connecting dimension: ANSI/ASME B 16.5 class 150, ASTM D 4024, BS 1560, BS EN 1759
- **Bolt circle class 150**

AL: number of holes

d	DN	d	PN	Code	kg	D1	D2	D3	D	H	AL
[inch]	[mm]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]	
½	15	20	16	<b>727 701 206</b>	0.210	60	28	16	95	12	4
¾	20	25	16	<b>727 701 207</b>	0.250	70	34	16	105	12	4
1	25	32	16	<b>727 701 208</b>	0.420	79	42	16	115	16	4
1 ¼	32	40	16	<b>727 701 209</b>	0.670	89	51	16	140	16	4
1 ½	40	50	16	<b>727 701 210</b>	0.860	98	62	16	150	18	4
2	50	63	16	<b>727 701 211</b>	0.930	121	78	19	165	18	4
2 ½	65	75	16	<b>727 701 212</b>	1.340	140	92	19	185	18	4
3	80	90	16	<b>727 701 313</b>	1.550	152	108	19	200	20	4
4	100	110	16	<b>727 701 314</b>	1.840	190	128	19	229	20	8
6	150	160	16	<b>727 700 317</b>	3.890	240	178	22	285	24	8
8	200	200	16	<b>727 701 319</b>	5.180	298	235	22	340	27	8
8	200	225	16	<b>727 701 320</b>	5.150	298	238	22	340	27	8

27 70 12

## Backing Flanges, PP/Steel for Socket Systems Inch/ANSI

**Model:**

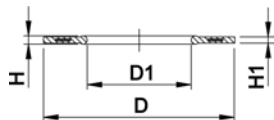
- For Flange Adaptors BS/ANSI
- Material: PP (30 % glass-fibre reinforced) with steel ring
- Connecting dimension: ANSI/ASME B 16.5 class 150, ASTM D 4024, BS 1560, BS EN 1759
- **Bolt circle class 150**
- DN100 and DN150: only for use with original metric flange adaptors

AL: number of holes

d	DN	d	PN	Code	kg	D1	D2	D3	D	H	AL
[inch]	[mm]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]	
½	15	20	16	<b>727 701 206</b>	0.210	60	28	16	95	12	4
¾	20	25	16	<b>727 701 207</b>	0.250	70	34	16	105	12	4
1	25	32	16	<b>727 701 208</b>	0.420	79	42	16	115	16	4
1 ¼	32	40	16	<b>727 701 209</b>	0.670	89	51	16	140	16	4
1 ½	40	50	16	<b>727 701 210</b>	0.860	98	62	16	150	18	4
2	50	63	16	<b>727 701 211</b>	0.930	121	78	19	165	18	4
2 ½	65	75	16	<b>727 701 212</b>	1.340	140	92	19	185	18	4
3	80	90	16	<b>727 701 213</b>	1.550	152	110	19	200	20	4
4	100	110	16	<b>727 701 214</b>	1.810	190	133	19	229	20	8
6	150	160	16	<b>727 700 217</b>	3.390	240	190	22	285	24	8

EPDM 48 44 07  
FPM 49 44 07

## Profile Flange Gaskets metric EPDM / FPM



### Model:

- For all GF Flange Adaptors
- Profile Gasket with steel insert (type G-ST-P/K)
- Hardness: 70° Shore **EPDM**, 75° Shore **FPM**
- Centering on the inner diameter of the screw crown

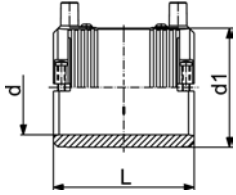
di FA are the suitable inner diameters of flange adaptors

d [mm]	DN [mm]	PN	EPDM Code	FPM Code	kg	D [mm]	D1 [mm]	H [mm]	H1 [mm]	di FA [mm]
20	15	16	748 440 706	749 440 706	0.008	51	20	4	3	10 - 20
25	20	16	748 440 707	749 440 707	0.011	61	22	4	3	12 - 22
32	25	16	748 440 708	749 440 708	0.014	71	28	4	3	18 - 28
40	32	16	748 440 709	749 440 709	0.021	82	40	4	3	30 - 40
50	40	16	748 440 710	749 440 710	0.022	92	46	4	3	36 - 46
63	50	16	748 440 711	749 440 711	0.041	107	58	5	4	48 - 58
75	65	16	748 440 712	749 440 712	0.055	127	69	5	4	59 - 69
90	80	16	748 440 713	749 440 713	0.062	142	84	5	4	73 - 84
110	100	16	748 440 714	749 440 714	0.085	162	104	6	5	94 - 104
125	100	16	748 440 715	749 440 715	0.158	162	123	6	5	113 - 123
140	125	16	748 440 716	749 440 716	0.118	192	137	6	5	127 - 137
160 / 180	150	16	748 440 717	749 440 717	0.153	218	160	8	6	150 - 160
200	200	16	748 440 719	749 440 719	0.263	273	203	8	6	192 - 203
225	200	16	748 440 720	749 440 720	0.181	273	220	8	6	207 - 220
250	250	16	748 440 721	749 440 721	0.410	328	252	8	6	238 - 252
280	250	16	748 440 722	749 440 722	0.226	328	274	8	6	264 - 274
315	300	16	748 440 723	749 440 723	0.334	378	306	8	6	296 - 306
355	350	16	748 440 724	749 440 724	0.410	438	355	10	7	340 - 355
400	400	16	748 440 725	749 440 725	0.513	489	400	10	7	385 - 400
450	500	16	748 440 726	749 440 726	0.718	594	403	10	7	393 - 403
500	500	16	748 440 727	749 440 727	0.718	594	447	10	7	437 - 447
560	600	16	748 440 728	749 440 728	0.923	695	494	10	7	484 - 494
630	600	16	748 440 729	749 440 729	0.923	695	555	10	7	545 - 555



# Electrofusion Fittings

53 91 16

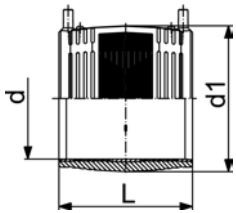


## Coupler with integral clamp

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Limited path fusion indicators
- Removable centre stop

d [mm]	Code	kg	d1 [mm]	L [mm]	z [mm]
20	<b>753 911 606</b>	0.054	31	68	2
25	<b>753 911 607</b>	0.060	36	68	2
32	<b>753 911 608</b>	0.072	44	72	2
40	<b>753 911 609</b>	0.100	54	80	2
50	<b>753 911 610</b>	0.136	66	88	2
63	<b>753 911 611</b>	0.194	81	96	2

53 91 16

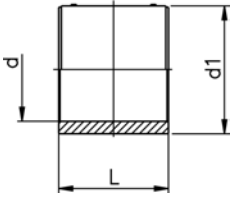


## Coupler

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Limited path fusion indicators
- Removable centre stop up to d160

d [mm]	Code	kg	d1 [mm]	L [mm]	z [mm]
75	<b>753 911 612</b>	0.287	96	110	2
90	<b>753 911 613</b>	0.421	113	125	2
110	<b>753 911 614</b>	0.697	138	145	2
125	<b>753 911 615</b>	0.738	154	158	3
140	<b>753 911 616</b>	0.968	172	168	3
160	<b>753 911 617</b>	1.390	196	180	3
180	<b>753 911 618</b>	1.750	219	194	
200	<b>753 911 619</b>	2.350	244	208	
225	<b>753 911 620</b>	3.193	273	224	
250	<b>753 911 621</b>	4.210	304	244	
280	<b>753 911 622</b>	5.675	340	252	
315	<b>753 911 623</b>	8.000	382	268	
355	<b>753 911 624</b>	12.110	432	246	
400	<b>753 911 625</b>	15.993	487	246	

53 91 18

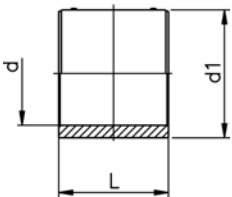


## Coupler

- PE 100 SDR 17 (ISO S8)
- 5 bar Gas / 10 bar Water
- 4 mm pin connectors
- Limited path fusion indicators
- d160 with removable centre stop

d [mm]	Code	kg	d1 [mm]	L [mm]
160	<b>753 911 817</b>	1.050	186	180
180	<b>753 911 818</b>	1.450	213	194
200	<b>753 911 819</b>	1.800	233	208
225	<b>753 911 820</b>	2.385	261	224
250	<b>753 911 821</b>	4.345	304	244
280	<b>753 911 822</b>	5.675	340	252
315	<b>753 911 823</b>	8.000	382	268
355	<b>753 911 824</b>	8.200	414	246
400	<b>753 911 825</b>	15.993	487	246
450	<b>753 911 826</b>	15.500	522	290
500	<b>753 911 827</b>	19.000	579	290

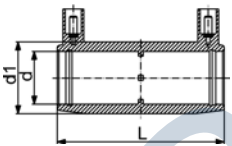
53 91 18



## Coupler

- PE 100 SDR 17 (ISO S8)
- 5 bar Gas / 10 bar Water
- 4 mm pin connectors
- Limited path fusion indicators
- 2 separate welding zones
- **Installation only with pressure pad kit (799 301 561)**
- Standard welding units required with steady output power of 2500 W
- For generator use: output power of min. 5 kW recommended

d [mm]	Code	kg	d1 [mm]	L [mm]
560	<b>753 911 828</b>	25.500	638	392
630	<b>753 911 829</b>	35.000	716	442



## Coupler long

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Removable centre stop

d [mm]	Code	kg	d1 [mm]	L [mm]	z [mm]
32	<b>753 911 208</b>	0.084	44	104	2
40	<b>753 911 209</b>	0.135	56	121	2
50	<b>753 911 210</b>	0.215	68	139	2
63	<b>753 911 211</b>	0.318	82	166	2

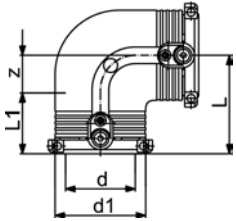


53 10 16

## Elbow 90° with integral pipe fixation



- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Limited path fusion indicators



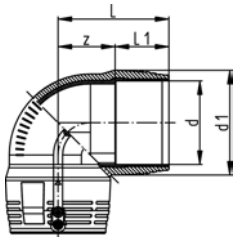
d [mm]	Code	kg	d1 [mm]	L [mm]	L1 [mm]	z [mm]
20	<b>753 101 606</b>	0.093	35	54	34	20
25	<b>753 101 607</b>	0.078	35	54	34	20
32	<b>753 101 608</b>	0.098	44	53	36	17
40	<b>753 101 609</b>	0.142	54	62	39	23
50	<b>753 101 610</b>	0.215	66	71	43	28
63	<b>753 101 611</b>	0.280	81	81	48	32

53 10 18

## Elbow 90°



- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Limited path fusion indicators



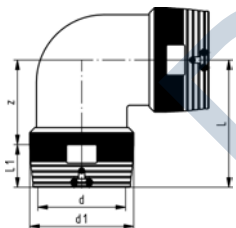
d [mm]	Code	kg	d1 [mm]	L [mm]	L1 [mm]	z [mm]
75	<b>753 101 812</b>	0.530	97	101	61	40
90	<b>753 101 813</b>	0.676	115	122	62	60
110	<b>753 101 814</b>	1.190	140	147	72	76
125	<b>753 101 815</b>	1.740	151	142	74	68
160	<b>753 101 817</b>	3.433	196	178	92	86
180	<b>753 101 818</b>	4.286	219	195	95	100

53 10 18

## Elbow 90°



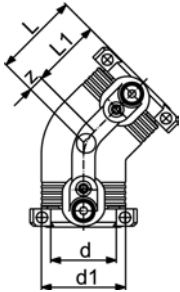
- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Limited path fusion indicators
- Two separate fusion zones



d [mm]	Code	kg	d1 [mm]	L [mm]	L1 [mm]	z [mm]
200	<b>753 101 819</b>	8.173	245	265	104	161
225	<b>753 101 820</b>	12.440	274	305	112	193
250	<b>753 101 821</b>	15.800	305	335	123	212

53 15 16

## Elbow 45° with integral pipe fixation

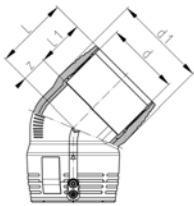


- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Limited path fusion indicators

d [mm]	Code	kg	d1 [mm]	L [mm]	L1 [mm]	z [mm]
32	<b>753 151 608</b>	0.087	44	44	36	8
40	<b>753 151 609</b>	0.121	54	50	39	11
50	<b>753 151 610</b>	0.140	66	56	43	13
63	<b>753 151 611</b>	0.274	81	63	48	15

53 15 18

## Elbow 45°

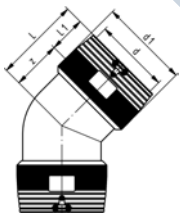


- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Limited path fusion indicators

d [mm]	Code	kg	d1 [mm]	L [mm]	L1 [mm]	z [mm]
75	<b>753 151 812</b>	0.437	97	79	62	17
90	<b>753 151 813</b>	0.537	115	91	62	29
110	<b>753 151 814</b>	0.974	140	112	72	40
125	<b>753 151 815</b>	1.420	160	127	78	49
160	<b>753 151 817</b>	1.800	196	134	92	42
180	<b>753 151 818</b>	3.200	217	142	95	47

53 15 18

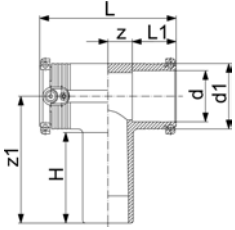
## Elbow 45°



- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Limited path fusion indicators
- Two separate fusion zones

d [mm]	Code	kg	d1 [mm]	L [mm]	L1 [mm]	z [mm]
200	<b>753 151 819</b>	6.810	245	215	104	111
225	<b>753 151 820</b>	10.590	274	235	112	123
250	<b>753 151 821</b>	12.740	305	263	123	140

53 21 16

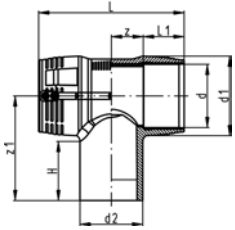


### Tee 90°, equal with Integral Clamp

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Limited path fusion indicators

d [mm]	Code	kg	d1 [mm]	L [mm]	L1 [mm]	z [mm]	z1 [mm]	H [mm]
20	<b>753 211 606</b>	0.100	35	90	34	11	92	67
25	<b>753 211 607</b>	0.088	35	90	34	11	92	70
32	<b>753 211 608</b>	0.115	44	102	36	15	100	74
40	<b>753 211 609</b>	0.176	54	120	39	21	114	82
50	<b>753 211 610</b>	0.268	66	135	43	24	126	90
63	<b>753 211 611</b>	0.429	81	152	48	28	150	102

53 20 18

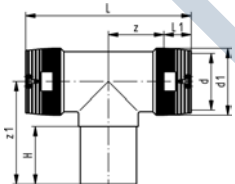


### Tee 90° equal

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Limited path fusion indicators

d [mm]	Code	kg	d1 [mm]	L [mm]	L1 [mm]	z [mm]	z1 [mm]	H [mm]
75	<b>753 201 812</b>	0.597	97	187	61	33	126	78
90	<b>753 201 813</b>	0.910	115	205	62	41	161	94
110	<b>753 201 814</b>	1.420	140	255	72	56	184	104
125	<b>753 201 815</b>	1.980	151	256	75	53	174	92
160	<b>753 201 817</b>	4.893	196	325	92	71	206	103
180	<b>753 201 818</b>	6.770	225	344	90	82	250	110

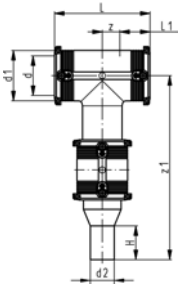
53 20 18



### Tee 90°, equal

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Limited path fusion indicators
- Two separate fusion zones

d [mm]	Code	kg	d1 [mm]	L [mm]	L1 [mm]	z [mm]	z1 [mm]	H [mm]
200	<b>753 201 819</b>	10.100	245	560	104	176	250	117
225	<b>753 201 820</b>	15.145	274	610	112	193	270	122
250	<b>753 201 821</b>	18.100	305	667	123	211	288	127



## Tee 90°, reduced (Kit)

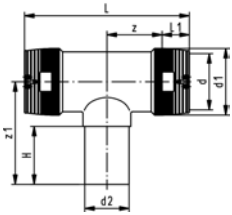
- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- Integral pipe fixation (up to d63)
- 4 mm pin connectors
- Limited path fusion indicators
- Supplied as kit including ELGEF® Plus Coupler and Spigot Reducer

d [mm]	d2 [mm]	Code	kg	d1 [mm]	L [mm]	L1 [mm]	z [mm]	z1 [mm]	H [mm]
40	20	<b>193 281 004</b>	0.314	54	120	39	21	244	212
40	25	<b>193 281 005</b>	0.319	54	120	39	21	244	212
75	40	<b>193 280 998</b>	1.060	97	187	61	33	296	248
90	50	<b>193 280 999</b>	1.620	112	202	61	41	336	274
110	63	<b>193 280 961</b>	2.670	136	242	65	56	366	293
125	63	<b>193 280 963</b>	3.690	151	256	75	53	361	279
125	110	<b>193 280 965</b>	3.920	151	256	75	53	389	307
160	125	<b>193 280 969</b>	8.250	196	325	92	71	451	348
180	90	<b>193 281 032</b>	10.056	225	344	90	82	487	347
180	110	<b>193 281 033</b>	10.246	225	344	90	82	495	355

53 21 10

## Tee 90°, reduced

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Limited path fusion indicators
- Two separate fusion zones
- \*Two connected fusion zones

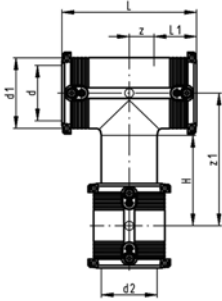


d [mm]	d2 [mm]	Code	kg	d1 [mm]	L [mm]	L1 [mm]	z [mm]	z1 [mm]	H [mm]
160	63	<b>753 211 037</b>	4.940	196	405	90	113	176	65
160	90	<b>753 211 039</b>	5.040	196	405	90	113	188	79
160	110	<b>753 211 040</b>	5.160	196	405	90	113	195	85
200	90	<b>753 211 059</b>	11.260	245	557	104	175	215	81
200	110	<b>753 211 060</b>	11.260	245	557	104	175	218	84
200	160	<b>753 211 063</b>	11.260	245	557	104	175	236	101
225	90	<b>753 211 069</b>	12.700	274	615	112	196	226	80
225	110	<b>753 211 070</b>	12.750	274	615	112	196	235	85
225	160	<b>753 211 073</b>	13.200	274	615	112	196	255	105
250	110	<b>753 211 080</b>	11.260	305	668	123	211	245	85
250	160	<b>753 211 083</b>	11.260	305	668	123	211	264	101

53 20 16

**Tee 90° with weldable outlet (Kit)**

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- Integral pipe fixation (up to d63)
- 4 mm pin connectors
- Limited path fusion indicators
- Supplied as kit including ELGEF® Plus Coupler or ELGEF® Plus Reducer

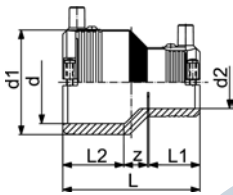


d [mm]	d2 [mm]	Code	kg	d1 [mm]	L [mm]	L1 [mm]	z [mm]	z1 [mm]	H [mm]
20	20	<b>753 201 606</b>	0.170	35	90	34	11	92	67
25	25	<b>753 201 607</b>	0.170	35	90	34	11	92	70
32	32	<b>753 201 608</b>	0.213	44	102	36	15	100	74
40	32	<b>193 281 006</b>	0.248	54	120	39	21	127	95
40	40	<b>753 201 609</b>	0.295	54	120	39	21	114	82
50	32	<b>193 281 007</b>	0.364	66	135	43	24	144	108
50	40	<b>193 281 008</b>	0.404	66	135	43	24	140	104
50	50	<b>753 201 610</b>	0.419	66	135	43	24	126	90
63	32	<b>193 280 997</b>	0.550	81	152	48	28	173	125
63	40	<b>193 281 009</b>	0.605	81	152	48	28	169	121
63	50	<b>193 281 010</b>	0.618	81	152	48	28	165	117
63	63	<b>753 201 611</b>	0.641	81	152	48	28	150	102
90	63	<b>193 281 011</b>	1.300	112	202	61	41	182	120
90	90	<b>753 201 613</b>	1.450	112	202	61	41	146	84
110	90	<b>193 281 012</b>	2.294	136	242	65	56	200	127
110	110	<b>753 201 614</b>	2.400	136	242	65	56	161	88
125	90	<b>193 281 013</b>	2.850	151	256	75	53	214	132
125	125	<b>753 201 615</b>	2.930	151	256	75	53	174	92
160	110	<b>193 281 030</b>	6.093	196	325	92	71	271	168
160	160	<b>753 201 617</b>	6.664	196	325	92	71	206	103
180	125	<b>193 281 031</b>	8.770	225	344	90	82	330	190
180	180	<b>753 201 618</b>	9.600	225	344	90	82	250	110

53 90 16

**Reducer with Integral Clamp**

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Limited path fusion indicators



d [mm]	d2 [mm]	Code	kg	d1 [mm]	L [mm]	L1 [mm]	L2 [mm]	z [mm]
25	20	<b>753 901 639</b>	0.059	35	74	34	34	6
32	20	<b>753 901 640</b>	0.071	44	79	33	36	10
32	25	<b>753 901 641</b>	0.060	44	79	33	36	10
40	20	<b>753 901 644</b>	0.069	54	88	33	39	15
40	25	<b>753 901 645</b>	0.071	54	88	33	39	15
40	32	<b>753 901 646</b>	0.072	54	88	33	39	13
50	32	<b>753 901 651</b>	0.096	66	96	35	43	18
50	40	<b>753 901 652</b>	0.136	66	96	39	43	14
63	32	<b>753 901 656</b>	0.171	81	106	35	48	23
63	40	<b>753 901 657</b>	0.176	81	106	39	48	19
63	50	<b>753 901 658</b>	0.189	81	106	43	48	15

53 90 18

**Reducer**

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Limited path fusion indicators

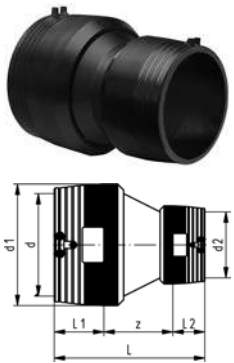


d [mm]	d2 [mm]	Code	kg	d1 [mm]	L [mm]	L1 [mm]	L2 [mm]	z [mm]
90	63	<b>753 901 831</b>	0.360	113	146	63	47	36
110	90	<b>753 901 833</b>	0.657	138	173	73	63	38
125	90	<b>753 901 836</b>	0.870	152	180	79	61	40
160	110	<b>753 901 834</b>	1.200	196	226	91	70	65
180	125	<b>753 901 835</b>	2.000	220	247	97	70	80

53 90 18

**Reducer**

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Limited path fusion indicators
- Two separate fusion zones



d [mm]	d2 [mm]	Code	kg	d1 [mm]	L [mm]	L1 [mm]	L2 [mm]	z [mm]
200	160	<b>753 901 837</b>	4.150	245	311	104	90	117
225	160	<b>753 901 838</b>	5.240	274	331	112	90	129
250	160	<b>753 901 840</b>	7.100	305	362	123	90	149
250	200	<b>753 901 841</b>	7.680	305	380	123	104	153

93 28 09

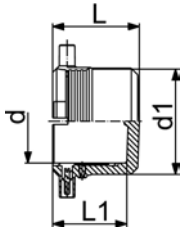
**Reducer (Kit)**

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- Integral pipe fixation (up to d63)
- 4 mm pin connectors
- Limited path fusion indicators
- Supplied as kit including ELGEF® Plus Coupler and Spigot Reducer



d [mm]	d2 [mm]	Code	kg	d1 [mm]	L [mm]	L1 [mm]	L2 [mm]	z [mm]
75	40	<b>193 280 992</b>	0.567	96	265	55	40	170

53 96 16

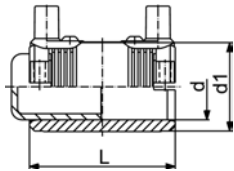


## End Cap with integral pipe fixation

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Limited path fusion indicators

d [mm]	Code	kg	d1 [mm]	L [mm]	L1 [mm]
20	<b>753 961 606</b>	0.038	35	52	44
25	<b>753 961 607</b>	0.030	35	52	44
32	<b>753 961 608</b>	0.080	44	52	44
40	<b>753 961 609</b>	0.074	54	56	47
50	<b>753 961 610</b>	0.086	66	60	49
63	<b>753 961 611</b>	0.154	81	66	54

53 96 17

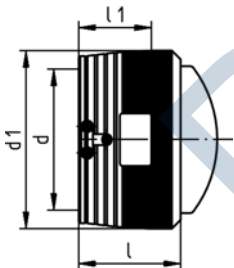


## End cap (Kit)

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Limited path fusion indicators
- Supplied as kit including ELGEF® Plus Coupler
- \* Article to be discontinued, replaced by 53 96 16

d [mm]	Code	kg	d1 [mm]	L [mm]
75	<b>753 961 712</b>	0.446	96	110
90	<b>753 961 713</b>	0.680	113	125
110	<b>753 961 714</b>	1.126	133	145
125	<b>753 961 715</b>	1.594	155	158
140	<b>753 961 716</b>	2.250	175	170
*160	<b>753 961 717</b>	2.712	197	180
180	<b>753 961 718</b>	4.136	220	194
*200	<b>753 961 719</b>	4.906	245	208
*225	<b>753 961 720</b>	6.500	296	224

53 96 16



## End Cap

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- 4 mm pin connectors
- Limited path fusion indicators

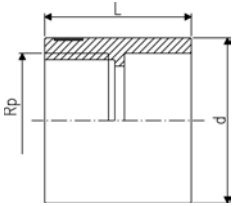
d [mm]	Code	kg	d1 [mm]	L [mm]	L1 [mm]
160	<b>753 961 617</b>	1.840	196	129	90
200	<b>753 961 619</b>	3.040	245	147	104
225	<b>753 961 620</b>	4.140	274	157	112
250	<b>753 961 621</b>	5.860	305	173	123





## PE Adaptor Female thread

- PE 80 SDR 11 (ISO S5)
- 5 bar Gas / 12,5 bar Water
- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- For ELGEF® Plus Branch Saddle (53 131 000) d 63 - 400 mm, pipe SDR 11, d 75 - 400 mm, pipe SDR 17
- Parallel female thread

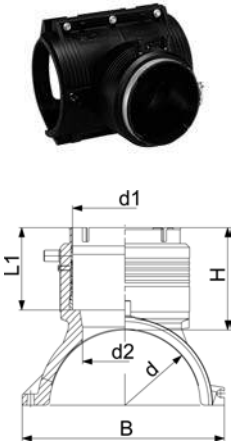


d [mm]	Rp [inch]	Code	kg	L [mm]
63	1 ½	<b>173 281 925</b>	0.096	54

51 336 001

## Branch Fitting

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- Branch Fitting complete, incl. lower part and 3 screws
- Additional fixing with snatch hinge
- Electrofusion outlet with integrated pipe fixation
- Protected wire without medium contact
- 4 mm pin connectors
- Limited path fusion indicators
- \* Delivered without lower part. Pipe fixation with multiple use assembly tool no. 193 281 027



d [mm]	d1 [mm]	Code	kg	H [mm]	L [mm]	L1 [mm]	B [mm]	d2 [mm]
110	90	<b>193 135 009</b>	1.074	101	220	82	164	65
110	110	<b>193 135 010</b>	1.152	107	220	88	164	65
125	90	<b>193 135 019</b>	1.134	101	220	82	179	65
125	110	<b>193 135 020</b>	1.258	107	220	88	179	65
*140	90	<b>193 135 029</b>	1.134	101	220	81	195	65
*140	110	<b>193 135 030</b>	1.258	107	220	87	195	65
160	90	<b>193 135 039</b>	1.444	102	240	82	215	65
160	110	<b>193 135 040</b>	1.523	108	240	88	215	86
160	125	<b>193 135 041</b>	1.738	129	240	99	215	86
180	90	<b>193 135 049</b>	1.714	102	260	82	237	65
180	110	<b>193 135 050</b>	1.782	108	260	88	237	86
180	125	<b>193 135 051</b>	1.972	129	260	99	237	86
200	90	<b>193 135 059</b>	1.811	102	260	82	253	65
200	110	<b>193 135 060</b>	1.879	108	260	88	253	86
200	125	<b>193 135 061</b>	2.069	129	260	99	253	86
225	90	<b>193 135 069</b>	1.959	102	260	82	287	65
225	110	<b>193 135 070</b>	2.027	108	260	88	287	86
225	125	<b>193 135 071</b>	2.217	129	260	99	287	86
250	90	<b>193 135 079</b>	2.116	102	260	82	312	65
250	110	<b>193 135 080</b>	2.184	108	260	88	312	86
250	125	<b>193 135 081</b>	2.374	129	260	99	312	86



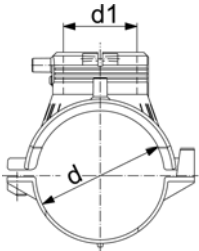
53 131 000

**Electrofusion Saddle**

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- Complete with lower part
- 4 mm pin connectors
- Limited path fusion indicators

\* = not suitable for all tapping-tee, tapping-valve and spigot with cutter of the modular systems

\*\* = not suitable for all tapping-tee, tapping-valve and spigot with cutter of the modular systems / delivery without lower part for assembling as Top load with tool 799.350.475



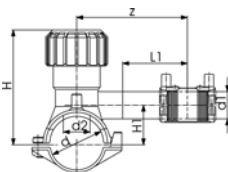
L = length / Länge

d [mm]	d1 [mm]	Code	kg	L [mm]
63	63	<b>193 131 037</b>	0.335	165
75	63	<b>193 131 047</b>	0.465	165
90	63	<b>193 131 057</b>	0.425	165
110	63	<b>193 131 067</b>	0.493	165
125	63	<b>193 131 077</b>	0.523	165
140	63	<b>193 131 087</b>	0.523	165
160	63	<b>193 131 097</b>	0.526	165
180	63	<b>193 131 107</b>	0.632	165
200	63	<b>193 131 117</b>	0.651	165
225	63	<b>193 131 127</b>	0.653	165
*250	63	<b>193 131 137</b>	0.665	165
**280	63	<b>193 131 147</b>	0.370	165
**315 - 400	63	<b>193 131 157</b>	0.370	165

53 132 400

**Tapping Saddle (Kit)  
Monobloc version**

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- With integrated cutter to tap live mains under pressure
- Complete with lower part
- 4 mm pin connectors
- Limited path fusion indicators
- Long fusion outlet
- O-ring sealed screw-cap
- Supplied as Kit with enclosed service line fitting (ELGEF® Plus Coupler or Reducer)

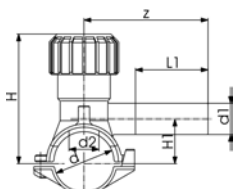


L = length / Länge

d [mm]	d1 [mm]	Code	kg	d2 [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	z [mm]
40	20	<b>193 132 412</b>	0.324	16	99	33	103	70	102
40	25	<b>193 132 413</b>	0.331	16	99	33	103	70	102
40	32	<b>193 132 414</b>	0.353	16	99	33	103	70	120
50	20	<b>193 132 422</b>	0.325	16	105	38	103	70	102
50	25	<b>193 132 423</b>	0.323	16	105	38	103	70	102
50	32	<b>193 132 424</b>	0.342	16	105	38	103	70	120
63	20	<b>193 132 432</b>	0.486	25	134	44	126	70	115
63	25	<b>193 132 433</b>	0.492	25	134	44	126	70	115
63	32	<b>193 132 434</b>	0.507	25	134	44	126	70	130
63	40	<b>193 132 435</b>	0.534	25	134	44	126	70	130

53 131 400

## Tapping Saddle Monobloc version

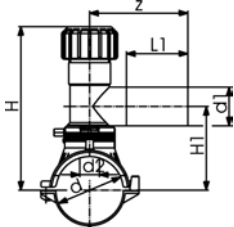


L = length / Länge

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- With integrated cutter to tap live mains under pressure
- Complete with lower part
- 4 mm pin connectors
- Limited path fusion indicators
- Long fusion outlet
- O-ring sealed screw-cap

d [mm]	d1 [mm]	Code	kg	d2 [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	z [mm]
40	20	<b>193 131 412</b>	0.270	16	99	33	103	70	102
40	25	<b>193 131 413</b>	0.272	16	99	33	103	70	102
40	32	<b>193 131 414</b>	0.277	16	99	33	103	70	120
50	20	<b>193 131 422</b>	0.260	16	104	38	103	70	102
50	25	<b>193 131 423</b>	0.262	16	104	38	103	70	102
50	32	<b>193 131 424</b>	0.270	16	104	38	103	70	120
63	20	<b>193 131 432</b>	0.428	25	134	44	126	70	115
63	25	<b>193 131 433</b>	0.431	25	134	44	126	70	115
63	32	<b>193 131 434</b>	0.433	25	134	44	126	70	130

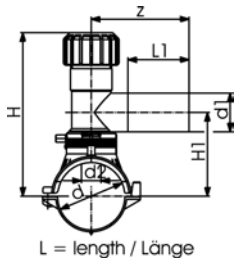
## Tapping Saddle with 360° rotatable outlet



L = length / Länge

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- With integrated cutter to tap live mains under pressure
- Complete with lower part
- 4 mm pin connectors
- Limited path fusion indicators
- Long fusion outlet
- O-ring sealed screw-cap
- D 315 - 400 mm: application is limited on pipes d 355 and d 400 mm. Not suitable for pipes with an SDR value higher than 17.
- \*Delivery without lower part for assembling as Top Load with tool no. 799.350.475

d [mm]	d1 [mm]	Code	kg	d2 [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	z [mm]
63	20	<b>193 131 402</b>	0.695	32	186	108	165	71	130
63	25	<b>193 131 403</b>	0.713	32	186	108	165	71	130
63	32	<b>193 131 404</b>	0.715	32	186	108	165	76	130
63	40	<b>193 131 405</b>	0.731	32	186	108	165	81	137
63	63	<b>193 131 437</b>	1.455	32	134	112	165	100	160
75	20	<b>193 131 442</b>	0.825	32	191	113	165	71	130
75	25	<b>193 131 443</b>	0.839	32	191	113	165	71	130
75	32	<b>193 131 444</b>	0.841	32	191	113	165	76	130
75	40	<b>193 131 445</b>	0.858	32	191	113	165	81	137
75	63	<b>193 131 447</b>	1.579	32	240	118	165	100	160
90	20	<b>193 131 452</b>	0.791	32	199	121	165	71	130
90	25	<b>193 131 453</b>	0.802	32	199	121	165	71	130
90	32	<b>193 131 454</b>	0.801	32	199	121	165	76	130
90	40	<b>193 131 455</b>	0.819	32	199	121	165	81	137
90	63	<b>193 131 457</b>	1.541	32	248	126	165	100	160
110	20	<b>193 131 462</b>	0.853	32	209	131	165	71	130
110	25	<b>193 131 463</b>	0.860	32	209	131	165	71	130
110	32	<b>193 131 464</b>	0.860	32	209	131	165	76	130
110	40	<b>193 131 465</b>	0.877	32	209	131	165	81	137
110	63	<b>193 131 467</b>	1.590	35	258	136	165	100	160
125	20	<b>193 131 472</b>	0.879	32	216	138	165	71	130
125	25	<b>193 131 473</b>	0.883	32	216	138	165	71	130
125	32	<b>193 131 474</b>	0.889	32	216	138	165	76	130
125	40	<b>193 131 475</b>	0.906	32	216	138	165	81	137
125	63	<b>193 131 477</b>	1.623	35	265	143	165	100	160
140	20	<b>193 131 482</b>	0.887	32	233	146	165	71	130
140	25	<b>193 131 483</b>	0.884	32	233	146	165	71	130
140	32	<b>193 131 484</b>	0.900	32	233	146	165	76	130
140	40	<b>193 131 485</b>	0.920	32	233	146	165	81	137
140	63	<b>193 131 487</b>	1.639	35	273	151	165	100	160
160	20	<b>193 131 492</b>	0.886	32	243	156	165	71	130
160	25	<b>193 131 493</b>	0.896	32	243	156	165	71	130
160	32	<b>193 131 494</b>	0.896	32	243	156	165	76	130
160	40	<b>193 131 495</b>	0.920	32	243	156	165	81	137
160	63	<b>193 131 497</b>	1.636	35	283	161	165	100	160
180	20	<b>193 131 502</b>	1.002	32	244	166	165	71	130
180	25	<b>193 131 503</b>	1.002	32	244	166	165	71	130
180	32	<b>193 131 504</b>	1.002	32	244	166	165	76	130
180	40	<b>193 131 505</b>	1.022	32	244	166	165	81	137
180	63	<b>193 131 507</b>	1.742	35	293	171	165	100	160
200	20	<b>193 131 512</b>	1.011	32	254	176	165	71	137
200	25	<b>193 131 513</b>	1.011	32	254	176	165	71	130
200	32	<b>193 131 514</b>	1.021	32	254	176	165	76	130
200	40	<b>193 131 515</b>	1.041	32	254	176	165	81	137
200	63	<b>193 131 517</b>	1.761	35	303	181	165	100	160
225	20	<b>193 131 522</b>	1.014	32	266	188	165	71	130
225	25	<b>193 131 523</b>	1.014	32	266	188	165	71	130
225	32	<b>193 131 524</b>	1.014	32	266	188	165	76	130

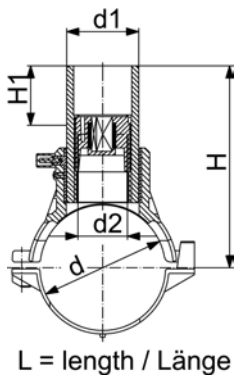


d [mm]	d1 [mm]	Code	kg	d2 [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	z [mm]
225	40	<b>193 131 525</b>	1.043	32	266	188	165	81	137
225	63	<b>193 131 527</b>	1.763	35	315	193	165	100	160
250	20	<b>193 131 532</b>	1.025	32	279	201	165	76	130
250	25	<b>193 131 533</b>	1.035	32	279	201	165	76	130
250	32	<b>193 131 534</b>	1.035	32	279	201	165	76	130
250	40	<b>193 131 535</b>	1.055	32	279	201	165	81	137
250	63	<b>193 131 537</b>	1.775	35	328	206	165	100	160
*280	63	<b>193 131 547</b>	1.240	35	328	206	165	100	160
*315-400	63	<b>193 131 557</b>	1.513	35	328	206	165	100	160

53 131 200

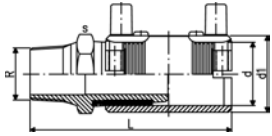
## Spigot Saddle with Cutter

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- Complete with lower part
- 4 mm pin connectors
- Limited path fusion indicators
- D 315 - 400 mm: application is limited on pipes d 355 and d 400 mm. Not suitable for pipes with an SDR value higher than 17.
- \*Delivery without lower part for assembling as Top Load with tool no. 799.350.475



d [mm]	d1 [mm]	Code	kg	d2 [mm]	H [mm]	H1 [mm]	L [mm]	SW [mm]
63	32	<b>193 131 234</b>	0.538	19	145	50	165	13
63	63	<b>193 131 237</b>	1.036	32	152	50	165	17
75	32	<b>193 131 244</b>	0.668	19	151	50	165	13
75	63	<b>193 131 247</b>	1.166	32	158	50	165	17
90	32	<b>193 131 254</b>	0.628	19	158	50	165	13
90	63	<b>193 131 257</b>	1.126	32	165	50	165	17
110	32	<b>193 131 264</b>	0.696	19	168	50	165	13
110	63	<b>193 131 267</b>	1.194	32	175	50	165	17
125	32	<b>193 131 274</b>	0.726	19	176	50	165	13
125	63	<b>193 131 277</b>	1.224	32	183	50	165	17
140	32	<b>193 131 284</b>	0.726	19	183	50	165	13
140	63	<b>193 131 287</b>	1.224	32	190	50	165	17
160	32	<b>193 131 294</b>	0.729	19	193	50	165	13
160	63	<b>193 131 297</b>	1.227	32	200	50	165	17
180	32	<b>193 131 304</b>	0.835	19	203	50	165	13
180	63	<b>193 131 307</b>	1.333	32	210	50	165	17
200	32	<b>193 131 314</b>	0.854	19	213	50	165	13
200	63	<b>193 131 317</b>	1.352	32	220	50	165	17
225	32	<b>193 131 324</b>	0.856	19	226	50	165	13
225	63	<b>193 131 327</b>	1.354	32	233	50	165	17
250	32	<b>193 131 334</b>	0.868	19	238	50	165	13
250	63	<b>193 131 337</b>	1.366	32	245	50	165	17
*280	63	<b>193 131 347</b>	0.830	35	245	50	165	17
*315 - 400	63	<b>193 131 357</b>	0.830	35	245	50	165	17

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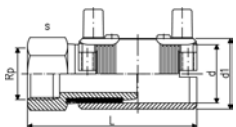


## Transition Coupler PE/brass (Ms 58) Male Thread

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- With integral pipe fixation
- 4 mm pin connectors
- Limited path fusion indicators
- Supplied as kit

d [mm]	R [inch]	Code	kg	d1 [mm]	L [mm]	s [mm]
20	½	<b>720 920 756</b>	0.217	31	110	30
20	1	<b>720 920 754</b>	0.344	44	124	40
25	¾	<b>720 920 757</b>	0.280	36	111	35
25	1	<b>720 920 763</b>	0.364	44	124	40
32	½	<b>720 920 764</b>	0.235	44	121	30
32	¾	<b>720 920 765</b>	0.287	44	122	35
32	1	<b>720 920 758</b>	0.355	44	117	40
32	1 ¼	<b>720 920 766</b>	0.543	54	135	50
32	1 ½	<b>720 920 767</b>	0.685	60	143	60
32	2	<b>720 920 768</b>	1.000	81	157	70
40	1	<b>720 920 771</b>	0.387	54	133	40
40	1 ¼	<b>720 920 759</b>	0.541	54	127	50
40	1 ½	<b>720 920 772</b>	0.694	66	143	60
40	2	<b>720 920 773</b>	0.992	81	157	70
50	1	<b>720 920 776</b>	0.416	66	141	40
50	1 ¼	<b>720 920 777</b>	0.578	66	143	50
50	1 ½	<b>720 920 760</b>	0.670	66	135	60
50	2	<b>720 920 778</b>	0.994	81	157	70
63	1	<b>720 920 781</b>	0.460	81	151	40
63	1 ¼	<b>720 920 782</b>	0.626	81	153	40
63	1 ½	<b>720 920 783</b>	0.741	81	153	60
63	2	<b>720 920 761</b>	1.005	81	147	70

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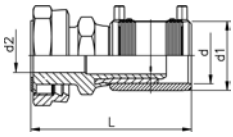
## Transition Coupler PE/brass (Ms 58) Female Thread

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- With integral pipe fixation
- 4 mm pin connectors
- Limited path fusion indicators
- Supplied as kit

d [mm]	Rp [inch]	Code	kg	d1 [mm]	L [mm]	s [mm]
32	1	<b>720 920 258</b>	0.338	44	108	40
40	1 ¼	<b>720 920 259</b>	0.511	54	118	50
50	1 ½	<b>720 920 260</b>	0.744	66	126	60
63	1	<b>720 920 281</b>	1.280	81	138	70
63	1 ¼	<b>720 920 282</b>	1.230	81	138	70
63	1 ½	<b>720 920 283</b>	1.115	81	138	70
63	2	<b>720 920 261</b>	1.016	81	138	70

20 91 00

## Transition Coupler PE/brass (Ms 58) with loose Nut

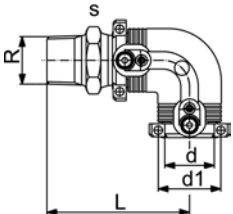


- PE 100 SDR 11 (ISO S5)
- Gas on request / 16 bar Water
- With integral pipe fixation
- 4 mm pin connectors
- Limited path fusion indicators
- Delivered as a kit. Further combinations modular system with threaded adapter and reductions
- Incl. flat gasket for water applications (KTW / WRC approved)

d [mm]	Rp [inch]	Code	kg	d1 [mm]	d2 [mm]	L [mm]
25	¾	<b>720 910 007</b>	0.240	36	15	104
25	1	<b>720 910 017</b>	0.315	36	16	106
32	1	<b>720 910 008</b>	0.342	44	20	110
32	1 ¼	<b>720 910 018</b>	0.460	44	22	114
32	1 ½	<b>720 910 028</b>	0.480	44	22	114
40	1	<b>720 910 009</b>	0.465	54	21	119
40	1 ¼	<b>720 910 019</b>	0.520	54	25	123
40	1 ½	<b>720 910 029</b>	0.595	54	28	123
50	1	<b>720 910 020</b>	0.685	66	20	128
50	1 ¼	<b>720 910 030</b>	0.730	66	25	133
50	1 ½	<b>720 910 010</b>	0.774	66	29	133
50	2	<b>720 910 040</b>	0.980	66	36	137
63	1	<b>720 910 021</b>	1.025	81	20	137
63	1 ¼	<b>720 910 031</b>	1.060	81	25	141
63	1 ½	<b>720 910 041</b>	1.070	81	29	141
63	2	<b>720 910 011</b>	1.235	81	36	145
63	2 ½	<b>720 910 051</b>	1.495	81	46	148

20 10 07

## Transition Elbow 90° PE/brass (Ms 58) Male Thread

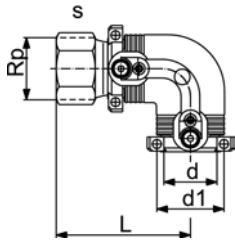


- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- With integral pipe fixation
- 4 mm pin connectors
- Limited path fusion indicators
- Supplied as kit

d [mm]	R [inch]	Code	kg	d1 [mm]	L [mm]	s [mm]
20	½	<b>720 100 756</b>	0.240	31	96	30
25	¾	<b>720 100 757</b>	0.260	36	97	35
32	1	<b>720 100 758</b>	0.383	44	98	40
32	1 ¼	<b>720 100 766</b>	0.500	44	100	50
32	1 ½	<b>720 100 767</b>	0.562	44	100	60
40	1	<b>720 100 771</b>	0.528	54	107	50
40	1 ¼	<b>720 100 759</b>	0.584	54	109	50
40	1 ½	<b>720 100 772</b>	0.642	54	109	60
50	1	<b>720 100 776</b>	0.710	66	116	60
50	1 ¼	<b>720 100 777</b>	0.771	66	118	60
50	1 ½	<b>720 100 760</b>	0.757	66	118	60
63	1 ¼	<b>720 100 782</b>	1.040	81	128	70
63	1 ½	<b>720 100 783</b>	1.045	81	128	70
63	2	<b>720 100 761</b>	1.115	81	132	70

20 10 02

## Transition Elbow 90° PE/brass (Ms 58) Female Thread

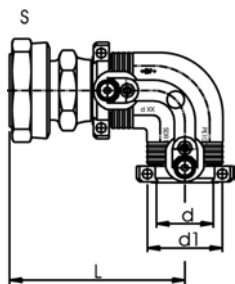


- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- With integral pipe fixation
- 4 mm pin connectors
- Limited path fusion indicators
- Supplied as kit

d [mm]	Rp [inch]	Code	kg	d1 [mm]	L [mm]	s [mm]
32	1	<b>720 100 258</b>	0.365	44	89	40
40	1 ¼	<b>720 100 259</b>	0.556	54	100	50
50	1 ½	<b>720 100 260</b>	0.819	66	109	60
63	1	<b>720 100 281</b>	1.420	81	123	70
63	1 ¼	<b>720 100 282</b>	1.380	81	123	70
63	1 ½	<b>720 100 283</b>	1.305	81	123	70
63	2	<b>720 100 261</b>	1.165	81	123	70

20 10 00

## Transition Elbow 90° PE/brass (Ms 58) with loose Nut



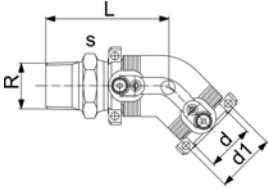
- PE 100 SDR 11 (ISO S5)
- Gas on request / 16 bar Water
- With integral pipe fixation
- 4 mm pin connectors
- Limited path fusion indicators
- Supplied as kit
- Incl. flat gasket for water applications (KTW / WRC approved)

Rp [inch]	d [mm]	Code	kg	d1 [mm]	L [mm]
¾	25	<b>720 100 007</b>	0.260	36	90
1	25	<b>720 100 017</b>	0.335	36	92
1	32	<b>720 100 008</b>	0.370	44	91
1 ¼	32	<b>720 100 018</b>	0.490	44	95
1 ½	32	<b>720 100 028</b>	0.505	44	95
1	40	<b>720 100 009</b>	0.505	54	101
1 ¼	40	<b>720 100 019</b>	0.565	54	105
1 ½	40	<b>720 100 029</b>	0.635	54	105
1	50	<b>720 100 020</b>	0.760	66	111
1 ¼	50	<b>720 100 030</b>	0.805	66	116
1 ½	50	<b>720 100 010</b>	0.850	66	116
2	50	<b>720 100 040</b>	1.060	66	120
1	63	<b>720 100 021</b>	1.171	81	121
1 ¼	63	<b>720 100 031</b>	1.200	81	125
1 ½	63	<b>720 100 041</b>	1.210	81	125
2	63	<b>720 100 011</b>	1.375	81	129
2 ½	63	<b>720 100 051</b>	1.635	81	132



20 15 07

### Transition Elbow 45° PE/brass (Ms 58) Male Thread

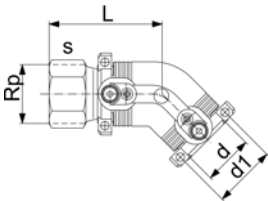


- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- With integral pipe fixation
- 4 mm pin connectors
- Limited path fusion indicators
- Supplied as kit

d [mm]	R [inch]	Code	kg	d1 [mm]	L [mm]	s [mm]
32	1	<b>720 150 758</b>	0.374	44	89	40
32	1 ¼	<b>720 150 766</b>	0.380	44	91	50
32	1 ½	<b>720 150 767</b>	0.560	44	91	60
40	1	<b>720 150 771</b>	0.510	54	95	50
40	1 ¼	<b>720 150 759</b>	0.560	54	97	50
40	1 ½	<b>720 150 772</b>	0.630	54	97	60
50	1	<b>720 150 776</b>	0.670	66	101	60
50	1 ¼	<b>720 150 777</b>	0.740	66	103	60
50	1 ½	<b>720 150 760</b>	0.720	66	103	60
63	1 ¼	<b>720 150 782</b>	0.990	81	110	70
63	1 ½	<b>720 150 783</b>	0.990	81	110	70
63	2	<b>720 150 761</b>	1.069	81	114	70

20 15 02

### Transition Elbow 45° PE/brass (Ms 58) Female Thread



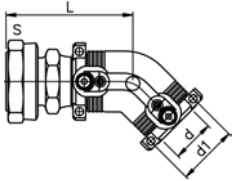
- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- With integral pipe fixation
- 4 mm pin connectors
- Limited path fusion indicators
- Supplied as kit

d [mm]	Rp [inch]	Code	kg	d1 [mm]	L [mm]	s [mm]
32	1	<b>720 150 258</b>	0.354	44	80	40
40	1 ¼	<b>720 150 259</b>	0.530	54	88	50
50	1 ½	<b>720 150 260</b>	0.780	66	94	60
63	1	<b>720 150 281</b>	1.360	81	105	70
63	1 ¼	<b>720 150 282</b>	1.320	81	105	70
63	1 ½	<b>720 150 283</b>	1.240	81	105	70
63	2	<b>720 150 261</b>	1.090	81	105	70



20 15 00

## Transition Elbow 45° PE/brass (Ms 58) with loose Nut

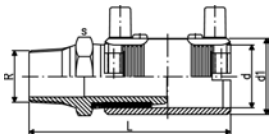


- PE 100 SDR 11 (ISO S5)
- Gas on request / 16 bar Water
- With integral pipe fixation
- 4 mm pin connectors
- Limited path fusion indicators
- Supplied as kit
- Incl. flat gasket for water applications (KTW / WRC approved)

d [mm]	Rp [inch]	Code	kg	d1 [mm]	L [mm]
32	1	<b>720 150 008</b>	0.355	44	82
32	1 ¼	<b>720 150 018</b>	0.475	44	86
32	1 ½	<b>720 150 028</b>	0.495	44	86
40	1	<b>720 150 009</b>	0.485	54	89
40	1 ¼	<b>720 150 019</b>	0.540	54	93
40	1 ½	<b>720 150 029</b>	0.615	54	93
50	1	<b>720 150 020</b>	0.725	66	96
50	1 ¼	<b>720 150 030</b>	0.770	66	101
50	1 ½	<b>720 150 010</b>	0.815	66	101
50	2	<b>720 150 040</b>	1.024	66	105
63	1	<b>720 150 021</b>	1.105	81	104
63	1 ¼	<b>720 150 031</b>	1.140	81	108
63	1 ½	<b>720 150 041</b>	1.150	81	108
63	2	<b>720 150 011</b>	1.315	81	112
63	2 ½	<b>720 150 051</b>	1.575	81	115

24 92 07

## Transition Coupler PE/steel (stainless 1.4305) Male Thread

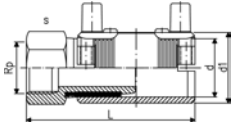


- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- With integral pipe fixation
- 4 mm pin connectors
- Limited path fusion indicators
- Delivered as a kit. Further combinations modular system with threaded adapter and reductions

d [mm]	R [inch]	Code	kg	d1 [mm]	L [mm]	s [mm]
20	½	<b>724 920 756</b>	0.210	31	110	30
25	¾	<b>724 920 757</b>	0.260	36	111	35
32	1	<b>724 920 758</b>	0.347	44	117	40
32	1 ½	<b>724 920 767</b>	0.330	44	125	60
40	1 ¼	<b>724 920 759</b>	0.519	54	127	50
40	1 ½	<b>724 920 772</b>	0.690	66	143	60
50	1 ½	<b>724 920 760</b>	0.657	66	135	60
63	1 ½	<b>724 920 771</b>	0.904	81	147	70
63	2	<b>724 920 761</b>	0.963	81	147	70

24 92 02

### Transition Coupler PE/steel (stainless 1.4305) Female Thread

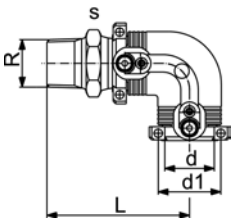


- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- With integral pipe fixation
- 4 mm pin connectors
- Limited path fusion indicators
- Supplied as kit

d [mm]	Rp [inch]	Code	kg	d1 [mm]	L [mm]	s [mm]
20	½	<b>724 920 256</b>	0.197	31	100	30
25	¾	<b>724 920 257</b>	0.253	36	101	35
32	1	<b>724 920 258</b>	0.340	44	108	40
40	1 ¼	<b>724 920 259</b>	0.505	54	118	50
50	1 ½	<b>724 920 260</b>	0.725	66	126	60
63	2	<b>724 920 261</b>	0.995	81	138	70

24 10 07

### Transition Elbow 90° PE/steel (stainless 1.4305) Male Thread

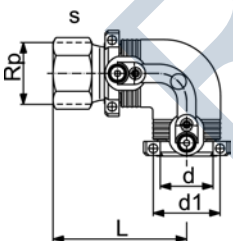


- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- With integral pipe fixation
- 4 mm pin connectors
- Limited path fusion indicators
- Supplied as kit

d [mm]	R [inch]	Code	kg	d1 [mm]	L [mm]	s [mm]
20	½	<b>724 100 756</b>	0.211	31	96	30
25	¾	<b>724 100 757</b>	0.230	36	97	35
32	1	<b>724 100 758</b>	0.370	44	98	40
40	1 ¼	<b>724 100 759</b>	0.560	54	109	50
40	1 ½	<b>724 100 772</b>	0.730	54	109	60
50	1 ½	<b>724 100 760</b>	0.730	66	118	60
63	1 ½	<b>724 100 771</b>	1.040	81	132	70
63	2	<b>724 100 761</b>	1.105	81	132	70

24 10 02

### Transition Elbow 90° PE/steel (stainless 1.4305) Female Thread



- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- With integral pipe fixation
- 4 mm pin connectors
- Limited path fusion indicators
- Supplied as kit

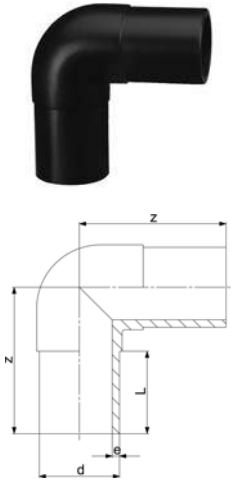
d [mm]	Rp [inch]	Code	kg	d1 [mm]	L [mm]	s [mm]
20	½	<b>724 100 256</b>	0.211	31	86	30
25	¾	<b>724 100 257</b>	0.237	36	87	35
32	1	<b>724 100 258</b>	0.360	44	89	40
40	1 ¼	<b>724 100 259</b>	0.545	54	100	50
50	1 ½	<b>724 100 260</b>	0.805	66	109	60
63	2	<b>724 100 261</b>	1.135	81	123	70

# Spigot Fittings for Electrofusion

53 10 10

## Elbow 90° Type L

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water

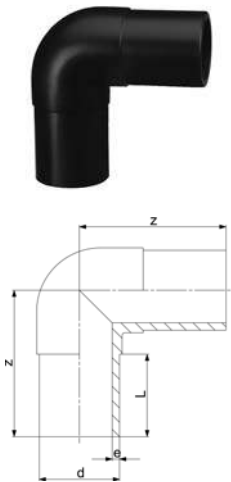


d [mm]	Code	kg	z [mm]	L [mm]	e [mm]
20	753 101 006	0.027	75	52	3.0
25	753 101 007	0.037	80	52	3.0
32	753 101 008	0.053	85	54	3.0
40	753 101 009	0.093	95	57	3.7
50	753 101 010	0.159	105	63	4.6
63	753 101 011	0.275	115	65	5.8
75	753 101 012	0.413	130	72	6.8
90	753 101 013	0.704	150	81	8.2
110	753 101 014	1.145	165	86	10.0
125	753 101 015	1.609	180	93	11.4
140	753 101 016	1.920	202	92	12.7
160	753 101 017	3.100	210	103	14.6
180	753 101 018	4.319	232	107	16.4
200	753 101 019	5.733	253	117	18.2
225	753 101 020	7.780	270	122	20.5
250	753 101 001	11.091	292	130	22.7
280	753 100 922	15.286	320	140	25.4
315	753 100 923	21.960	370	150	28.6

53 10 08

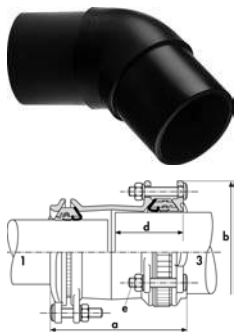
## Elbow 90° Type L

- PE 100 SDR 17 / 17,6 (ISO S8 / S8,3)
- 5 bar Gas / 10 bar Water



d [mm]	Code	kg	z [mm]	L [mm]	e [mm]
90	753 100 813	0.544	150	81	5,4
110	753 100 814	0.625	165	86	6,6
125	753 100 815	0.927	180	93	7,4
140	753 100 816	1.430	202	92	8,3
160	753 100 817	3.040	210	102	9,5
180	753 100 818	3.750	232	107	10,7
200	753 100 819	4.980	253	115	11,9
225	753 100 820	6.850	270	120	13,4
250	753 100 821	8.274	292	130	14,8
280	753 100 822	11.423	320	140	16,6
315	753 100 823	16.050	370	150	18,7

53 15 10

**Elbow 45° Type L**

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water

d [mm]	Code	kg	z [mm]	L [mm]	e [mm]
20	<b>753 151 006</b>	0.026	70	52	3,0
25	<b>753 151 007</b>	0.035	75	52	3,0
32	<b>753 151 008</b>	0.051	80	54	3,0
40	<b>753 151 009</b>	0.082	85	57	3,7
50	<b>753 151 010</b>	0.137	90	63	4,6
63	<b>753 151 011</b>	0.300	95	65	5,8
75	<b>753 151 012</b>	0.346	105	72	6,8
90	<b>753 151 013</b>	0.578	120	81	8,2
110	<b>753 151 014</b>	0.931	130	86	10,0
125	<b>753 151 015</b>	1.286	140	92	11,4
140	<b>753 151 016</b>	1.600	164	120	12,7
160	<b>753 151 017</b>	2.461	162	102	14,6
180	<b>753 151 018</b>	3.283	170	107	16,4
200	<b>753 151 019</b>	4.371	186	116	18,2
225	<b>753 151 020</b>	6.013	200	123	20,5
250	<b>753 151 021</b>	8.541	220	130	22,7
280	<b>753 150 922</b>	10.924	230	140	25,4
315	<b>753 150 923</b>	14.818	250	150	28,6

53 15 08

**Elbow 45° Type L**

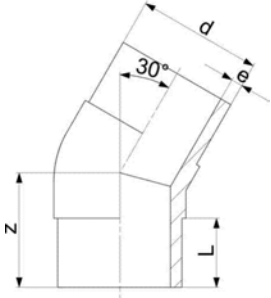
- PE 100 SDR 17 / 17,6 (ISO S8 / S8,3)
- 5 bar Gas / 10 bar Water

d [mm]	Code	kg	z [mm]	L [mm]	e [mm]
90	<b>753 150 813</b>	0.450	120	81	5,4
110	<b>753 150 814</b>	0.900	130	86	6,6
125	<b>753 150 815</b>	1.250	140	92	7,4
140	<b>753 150 816</b>	1.100	164	120	8,3
160	<b>753 150 817</b>	2.390	162	102	9,5
180	<b>753 150 818</b>	3.060	170	107	10,7
200	<b>753 150 819</b>	4.100	186	116	11,9
225	<b>753 150 820</b>	5.610	205	123	13,4
250	<b>753 150 821</b>	6.227	220	130	14,8
280	<b>753 150 822</b>	7.819	230	140	16,6
315	<b>753 150 823</b>	10.596	250	150	18,7

53 12 09

**Elbow 30° Type L**

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- Welded design

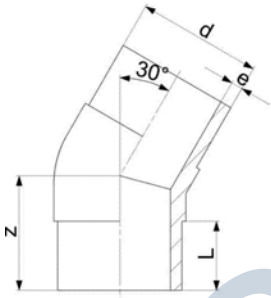


d [mm]	Code	kg	z [mm]	L [mm]	e [mm]
32	<b>753 120 908</b>	0.050	70	54	3,0
40	<b>753 120 909</b>	0.530	80	57	3,7
50	<b>753 120 910</b>	0.530	80	63	4,6
63	<b>753 120 911</b>	0.207	80	65	5,8
75	<b>753 120 912</b>	0.530	90	72	6,8
90	<b>753 120 913</b>	0.540	100	81	8,2
110	<b>753 120 914</b>	0.840	105	86	10,0
125	<b>753 120 915</b>	1.240	115	92	11,4
140	<b>753 120 916</b>	1.760	135	92	12,7
160	<b>753 120 917</b>	2.050	130	102	14,6
180	<b>753 120 918</b>	2.907	140	107	16,4
200	<b>753 120 919</b>	8.600	150	116	18,2
225	<b>753 120 920</b>	5.360	165	123	20,5
250	<b>753 120 921</b>	7.300	190	130	22,7
280	<b>753 120 922</b>	10.600	200	139	25,4
315	<b>753 120 923</b>	10.100	200	150	28,6

53 12 08

**Elbow 30° Type L**

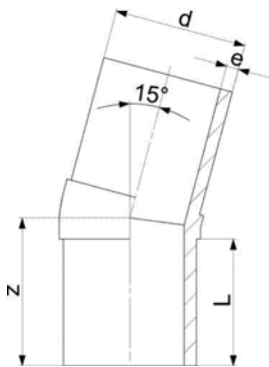
- PE 100 SDR 17 / 17,6 (ISO S8 / S8,3)
- 5 bar Gas / 10 bar Water
- Welded design



d [mm]	Code	kg	z [mm]	L [mm]	e [mm]
90	<b>753 120 813</b>	0.430	110	81	5,4
110	<b>753 120 814</b>	0.620	115	86	6,6
125	<b>753 120 815</b>	1.070	125	92	7,4
140	<b>753 120 816</b>	1.490	150	92	8,3
160	<b>753 120 817</b>	1.600	140	102	9,5
180	<b>753 120 818</b>	2.040	150	107	10,7
200	<b>753 120 819</b>	2.780	160	116	11,9
225	<b>753 120 820</b>	3.880	180	123	13,4
250	<b>753 120 821</b>	5.830	200	130	14,8
280	<b>753 120 822</b>	8.100	200	139	16,6
315	<b>753 120 823</b>	11.200	220	150	18,7

## Elbow 15° Type L

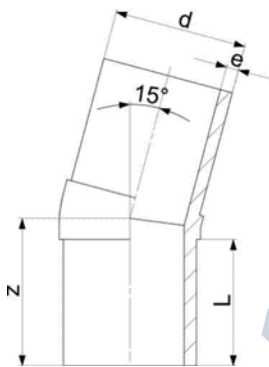
- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- Welded design



d [mm]	Code	kg	z [mm]	L [mm]	e [mm]
32	<b>753 141 008</b>	0.051	70	54	3.0
40	<b>753 141 009</b>	0.082	80	57	3.7
50	<b>753 141 010</b>	0.137	80	63	4.6
63	<b>753 141 011</b>	0.200	80	65	5.8
75	<b>753 141 012</b>	0.250	90	72	6.8
90	<b>753 141 013</b>	0.487	100	81	8.2
110	<b>753 141 014</b>	0.785	105	86	10.0
125	<b>753 141 015</b>	1.070	115	92	11.4
140	<b>753 141 016</b>	1.600	135	92	12.7
160	<b>753 141 017</b>	2.050	130	102	14.6
180	<b>753 141 018</b>	2.669	140	107	16.4
200	<b>753 141 019</b>	3.440	150	116	18.2
225	<b>753 141 020</b>	4.900	165	123	20.5
250	<b>753 141 021</b>	8.300	190	130	22.7
280	<b>753 141 022</b>	9.500	200	139	25.4
315	<b>753 141 023</b>	13.100	200	150	28.6

## Elbow 15° Type L

- PE 100 SDR 17 / 17,6 (ISO S8 / S8,3)
- 5 bar Gas / 10 bar Water
- Welded design



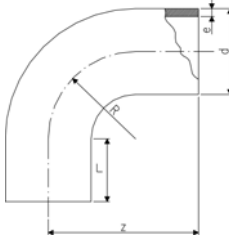
d [mm]	Code	kg	z [mm]	L [mm]	e [mm]
90	<b>753 140 813</b>	0.370	100	81	5.4
110	<b>753 140 814</b>	0.620	105	86	6.6
125	<b>753 140 815</b>	0.990	115	92	7.4
140	<b>753 140 816</b>	0.370	135	92	8.3
160	<b>753 140 817</b>	1.600	130	102	9.5
180	<b>753 140 818</b>	2.040	140	107	10.7
200	<b>753 140 819</b>	2.780	150	116	11.9
225	<b>753 140 820</b>	4.820	165	123	13.4
250	<b>753 140 821</b>	5.830	190	130	14.8
280	<b>753 140 822</b>	8.100	195	139	16.6
315	<b>753 140 823</b>	11.200	200	150	18.7

53 00 09

**Bend 90° Type L**

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water

\* made out of seamless pipe



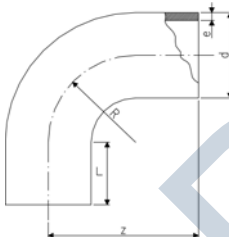
d [mm]	Code	kg	z [mm]	L [mm]	R [mm]	e [mm]
20	<b>753 001 006</b>	0.020	63	41	20	1,9
25	<b>753 001 007</b>	0.030	68	41	25	2,3
32	<b>753 001 008</b>	0.050	78	46	32	2,9
40	<b>753 001 009</b>	0.090	91	49	40	3,7
50	<b>753 001 010</b>	0.160	107	55	50	4,6
63	<b>753 001 011</b>	0.290	130	63	63	5,8
75	<b>753 001 012</b>	0.300	152	70	75	6,8
90	<b>753 001 013</b>	0.530	168	79	90	8,2
110	<b>753 001 014</b>	0.890	193	82	110	10,0
125	<b>753 001 015</b>	1.290	216	87	125	11,4
140	<b>753 001 016</b>	2.230	232	92	140	12,7
160	<b>753 001 017</b>	2.460	258	98	160	14,6
180	<b>753 001 018</b>	5.000	290	105	180	16,4
200	<b>753 001 019</b>	4.480	317	112	200	18,2
225	<b>753 001 020</b>	9.770	350	120	225	20,5
250	<b>753 001 021</b>	9.230	375	130	250	22,7
280	<b>753 001 022</b>	17.410	430	150	280	25,4
315	<b>753 001 023</b>	23.950	470	150	315	28,6
*355	<b>753 001 024</b>	53.300	900	250	533	32,3
*400	<b>753 001 025</b>	71.900	980	250	600	36,4
*450	<b>753 001 026</b>	97.300	1070	250	675	40,9
*500	<b>753 001 027</b>	134.000	1200	280	750	45,5
*560	<b>753 001 028</b>	179.300	1290	280	840	50,9
*630	<b>753 001 029</b>	243.200	1400	280	945	57,3

53 00 08

**Bend 90° Type L**

- PE 100 SDR 17 / 17,6 (ISO S8 / S8,3)
- 5 bar Gas / 10 bar Water

\* made out of seamless pipe

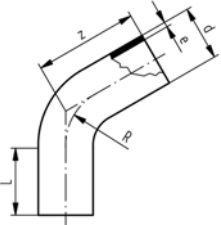


d [mm]	Code	kg	z [mm]	L [mm]	R [mm]	e [mm]
90	<b>753 000 813</b>	0.600	168	79	90	5,4
110	<b>753 000 814</b>	1.000	193	82	110	6,6
125	<b>753 000 815</b>	1.300	216	87	125	7,4
140	<b>753 000 816</b>	2.500	232	92	140	8,3
160	<b>753 000 817</b>	2.500	258	98	160	9,5
180	<b>753 000 818</b>	4.000	290	105	180	10,7
200	<b>753 000 819</b>	6.500	317	112	200	11,9
225	<b>753 000 820</b>	8.500	350	120	225	13,4
250	<b>753 000 821</b>	8.500	375	130	250	14,8
280	<b>753 000 822</b>	15.000	430	150	280	16,6
315	<b>753 000 823</b>	24.000	470	150	315	18,7
*355	<b>753 000 824</b>	36.700	900	250	533	21,1
*400	<b>753 000 825</b>	49.700	980	250	600	23,7
*450	<b>753 000 826</b>	66.600	1070	250	675	26,7
*500	<b>753 000 827</b>	87.400	1200	280	750	29,7
*560	<b>753 000 828</b>	116.000	1290	280	840	33,2
*630	<b>753 000 829</b>	159.600	1400	280	945	37,4

53 07 10

**Bend 60° Type L**

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- made out of seamless pipe

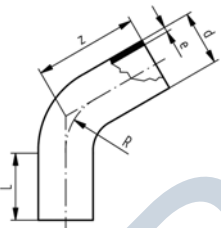


d [mm]	Code	kg	z [mm]	L [mm]	R [mm]	e [mm]
32	<b>753 071 008</b>	0.070	128	80	48	2,9
40	<b>753 071 009</b>	0.120	135	80	60	3,7
50	<b>753 071 010</b>	0.240	158	100	75	4,6
63	<b>753 071 011</b>	0.420	173	100	95	5,8
75	<b>753 071 012</b>	0.600	182	100	113	6,8
90	<b>753 071 013</b>	0.900	193	100	135	8,2
110	<b>753 071 014</b>	1.780	270	150	165	10,0
125	<b>753 071 015</b>	2.500	283	150	188	11,4
140	<b>753 071 016</b>	2.700	296	150	210	12,7
160	<b>753 071 017</b>	4.500	313	150	240	14,6
180	<b>753 071 018</b>	4.900	330	150	270	16,4
200	<b>753 071 019</b>	6.400	348	150	300	18,2
225	<b>753 071 020</b>	8.600	370	150	338	20,5
250	<b>753 071 021</b>	14.500	500	250	375	22,7
280	<b>753 071 022</b>	19.100	530	250	420	25,4
315	<b>753 071 023</b>	25.600	612	250	473	28,6
355	<b>753 071 024</b>	41.700	690	300	533	32,3
400	<b>753 071 025</b>	55.800	730	300	600	36,4
450	<b>753 071 026</b>	76.000	780	300	675	40,9
500	<b>753 071 027</b>	104.600	880	350	750	45,5
560	<b>753 071 028</b>	139.500	930	350	840	50,9
630	<b>753 071 029</b>	188.500	1000	350	945	57,3

53 07 08

**Bend 60° Type L**

- PE 100 SDR 17 / 17,6 (ISO S8 / S8,3)
- 5 bar Gas / 10 bar Water
- made out of seamless pipe



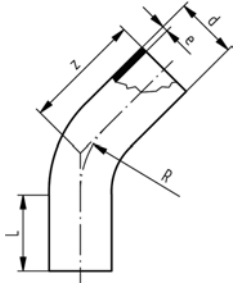
d [mm]	Code	kg	z [mm]	L [mm]	R [mm]	e [mm]
90	<b>753 070 813</b>	0.600	193	100	135	5,4
110	<b>753 070 814</b>	1.280	270	150	165	6,6
125	<b>753 070 815</b>	1.300	283	150	187	7,4
140	<b>753 070 816</b>	1.800	296	150	210	8,3
160	<b>753 070 817</b>	3.160	313	150	240	9,5
180	<b>753 070 818</b>	3.190	330	150	270	10,7
200	<b>753 070 819</b>	4.200	348	150	300	11,9
225	<b>753 070 820</b>	5.600	370	150	337	13,4
250	<b>753 070 821</b>	9.250	500	250	375	14,8
280	<b>753 070 822</b>	15.000	530	250	420	16,6
315	<b>753 070 823</b>	19.500	612	250	472	18,7
355	<b>753 070 824</b>	30.100	690	300	532	21,1
400	<b>753 070 825</b>	38.200	730	300	600	23,7
450	<b>753 070 826</b>	53.700	780	300	675	26,7
500	<b>753 070 827</b>	73.900	880	350	750	29,7
560	<b>753 070 828</b>	98.200	930	350	840	33,2
630	<b>753 070 829</b>	132.300	1000	350	945	37,4



53 05 10

**Bend 45° Type L**

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- made out of seamless pipe

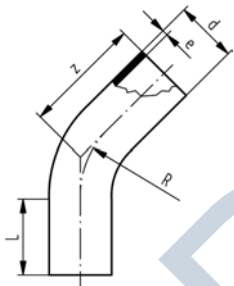


d [mm]	Code	kg	z [mm]	L [mm]	R [mm]	e [mm]
32	<b>753 051 008</b>	0.077	120	80	48	2,9
40	<b>753 051 009</b>	0.120	120	80	60	3,7
50	<b>753 051 010</b>	0.240	149	100	75	4,6
63	<b>753 051 011</b>	0.360	161	100	95	5,8
75	<b>753 051 012</b>	0.560	168	100	113	6,8
90	<b>753 051 013</b>	0.760	177	100	135	8,2
110	<b>753 051 014</b>	1.700	243	150	165	10,0
125	<b>753 051 015</b>	2.300	253	150	188	11,4
140	<b>753 051 016</b>	2.800	262	150	210	12,7
160	<b>753 051 017</b>	3.800	274	160	240	14,6
180	<b>753 051 018</b>	5.140	287	150	270	16,4
200	<b>753 051 019</b>	5.600	299	150	300	18,2
225	<b>753 051 020</b>	7.400	315	150	338	20,5
250	<b>753 051 021</b>	13.000	440	250	375	22,7
280	<b>753 051 022</b>	15.000	460	250	420	25,4
315	<b>753 051 023</b>	24.930	535	250	473	28,6
355	<b>753 051 024</b>	39.500	620	300	533	32,3
400	<b>753 051 025</b>	48.500	650	300	600	36,4
450	<b>753 051 026</b>	69.800	680	300	675	40,9
500	<b>753 051 027</b>	96.300	760	350	750	45,5
560	<b>753 051 028</b>	129.800	800	350	840	50,9
630	<b>753 051 029</b>	174.000	870	350	945	57,3

53 05 08

**Bend 45° Type L**

- PE 100 SDR 17 / 17,6 (ISO S8 / S8,3)
- 5 bar Gas / 10 bar Water
- made out of seamless pipe

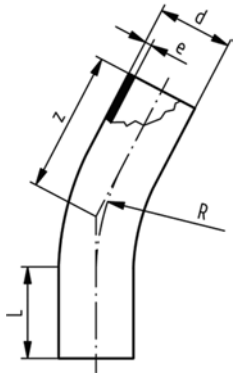


d [mm]	Code	kg	z [mm]	L [mm]	R [mm]	e [mm]
90	<b>753 050 813</b>	0.600	177	100	135	5,4
110	<b>753 050 814</b>	1.100	243	150	165	6,6
125	<b>753 050 815</b>	1.200	253	150	188	7,4
140	<b>753 050 816</b>	1.720	262	150	210	8,3
160	<b>753 050 817</b>	2.200	274	150	240	9,5
180	<b>753 050 818</b>	3.000	287	150	270	10,7
200	<b>753 050 819</b>	3.700	299	150	300	11,9
225	<b>753 050 820</b>	5.000	315	150	338	13,4
250	<b>753 050 821</b>	10.000	440	250	375	14,8
280	<b>753 050 822</b>	15.000	460	250	420	16,6
315	<b>753 050 823</b>	17.800	535	250	473	18,7
355	<b>753 050 824</b>	25.600	620	300	533	21,1
400	<b>753 050 825</b>	36.600	650	300	600	23,7
450	<b>753 050 826</b>	45.300	680	300	675	26,7
500	<b>753 050 827</b>	62.400	760	350	750	29,7
560	<b>753 050 828</b>	81.900	800	350	840	33,2
630	<b>753 050 829</b>	62.400	870	350	945	37,4

53 06 10

**Bend 30° LS**

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- made out of seamless pipe



d [mm]	Code	kg	z [mm]	L [mm]	R [mm]	e [mm]
32	753 061 008	0.077	113	80	48	2,9
40	753 061 009	0.120	116	80	60	3,7
50	753 061 010	0.200	140	100	75	4,6
63	753 061 011	0.400	150	100	95	5,8
75	753 061 012	0.520	155	100	113	6,8
90	753 061 013	0.760	160	100	135	8,2
110	753 061 014	1.500	219	150	165	10,0
125	753 061 015	2.000	225	150	188	11,4
140	753 061 016	2.200	231	150	210	12,7
160	753 061 017	3.300	239	150	240	14,6
180	753 061 018	3.700	247	150	270	16,4
200	753 061 019	4.750	255	150	300	18,2
225	753 061 020	6.300	266	150	338	20,5
250	753 061 021	13.100	385	250	375	22,7
280	753 061 022	16.300	400	250	420	25,4
315	753 061 023	21.850	460	250	473	28,6
355	753 061 024	34.900	540	300	533	32,3
400	753 061 025	45.900	560	300	600	36,4
450	753 061 026	60.200	580	300	675	40,9
500	753 061 027	83.300	630	350	750	45,5
560	753 061 028	108.600	680	350	840	50,9
630	753 061 029	148.300	730	350	945	57,3

53 06 08

**Bend 30° LS**

- PE 100 SDR 17 (ISO S8)
- 5 bar Gas / 10 bar Water
- made out of seamless pipe

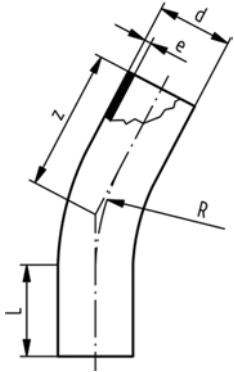


d [mm]	Code	kg	z [mm]	L [mm]	R [mm]	e [mm]
90	753 060 813	0.500	160	100	135	5,4
110	753 060 814	1.060	219	150	165	6,6
125	753 060 815	1.100	225	150	188	7,4
140	753 060 816	1.720	231	150	210	8,3
160	753 060 817	1.900	239	150	240	9,5
180	753 060 818	2.500	247	150	270	10,7
200	753 060 819	3.200	255	150	300	11,9
225	753 060 820	7.540	266	150	338	13,4
250	753 060 821	11.600	385	250	375	14,8
280	753 060 822	12.800	400	250	420	16,6
315	753 060 823	25.000	460	250	473	18,7
355	753 060 824	22.700	540	300	533	21,1
400	753 060 825	29.800	560	300	600	23,7
450	753 060 826	39.100	580	300	675	26,7
500	753 060 827	54.000	650	350	750	29,7
560	753 060 828	70.300	680	350	840	33,2
630	753 060 829	95.800	730	350	945	37,4



## Bend 22° LS

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- made out of seamless pipe

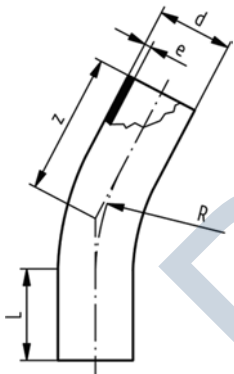


d [mm]	Code	kg	z [mm]	L [mm]	R [mm]	e [mm]
32	753 081 008	0.077	113	80	48	2,9
40	753 081 009	0.120	116	80	60	3,7
50	753 081 010	0.200	140	100	75	4,6
63	753 081 011	0.400	150	100	95	5,8
75	753 081 012	0.520	155	100	113	6,8
90	753 081 013	0.760	160	100	135	8,2
110	753 081 014	1.500	219	150	165	10,0
125	753 081 015	2.000	225	150	188	11,4
140	753 081 016	2.200	231	150	210	12,7
160	753 081 017	3.300	239	150	240	14,6
180	753 081 018	3.700	247	150	270	16,4
200	753 081 019	4.750	255	150	300	18,2
225	753 081 020	6.300	266	150	338	20,5
250	753 081 021	13.100	385	250	375	22,7
280	753 081 022	16.300	400	250	420	25,4
315	753 081 023	21.845	460	250	473	28,6
355	753 081 024	34.900	540	300	533	32,3
400	753 081 025	45.900	560	300	600	36,4
450	753 081 026	60.200	580	300	675	40,9
500	753 081 027	83.300	650	350	750	45,5
560	753 081 028	108.600	680	350	840	50,9
630	753 081 029	148.300	730	350	945	57,3



## Bend 22° LS

- PE 100 SDR 17 / 17,6 (ISO S8 / S8,3)
- 5 bar Gas / 10 bar Water
- made out of seamless pipe

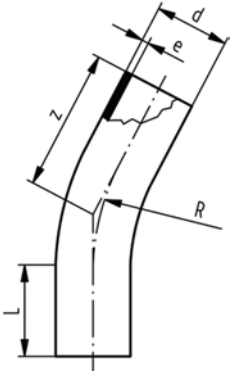


d [mm]	Code	kg	z [mm]	L [mm]	R [mm]	e [mm]
90	753 080 813	0.500	160	100	135	5,4
110	753 080 814	1.060	219	150	165	6,6
125	753 080 815	1.100	225	150	188	7,4
140	753 080 816	1.720	231	150	210	8,3
160	753 080 817	1.900	239	150	240	9,5
180	753 080 818	2.500	247	150	270	10,7
200	753 080 819	3.200	255	150	300	11,9
225	753 080 820	7.540	266	150	338	13,4
250	753 080 821	11.600	385	250	375	14,8
280	753 080 822	12.800	400	250	420	16,6
315	753 080 823	25.000	460	250	473	18,7
355	753 080 824	22.700	540	300	533	21,1
400	753 080 825	29.800	560	300	600	23,7
450	753 080 826	39.100	580	300	675	26,7
500	753 080 827	54.000	650	350	750	29,7
560	753 080 828	70.300	680	350	840	33,2
630	753 080 829	95.800	730	350	945	37,4



## Bend 11° LS

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- made out of seamless pipe

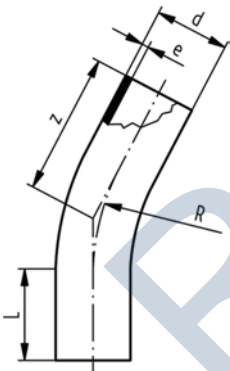


d [mm]	Code	kg	z [mm]	L [mm]	R [mm]	e [mm]
32	753 091 008	0.077	113	80	48	2.9
40	753 091 009	0.120	116	80	60	3.7
50	753 091 010	0.200	140	100	75	4.6
63	753 091 011	0.400	150	100	95	5.8
75	753 091 012	0.520	155	100	113	6.8
90	753 091 013	0.760	160	100	135	8.2
110	753 091 014	1.500	219	150	165	10.0
125	753 091 015	2.000	225	150	188	11.4
140	753 091 016	2.200	231	150	210	12.7
160	753 091 017	3.300	239	150	240	14.6
180	753 091 018	3.700	247	150	270	16.4
200	753 091 019	4.750	255	150	300	18.2
225	753 091 020	6.300	266	150	338	20.5
250	753 091 021	13.100	385	250	375	22.7
280	753 091 022	16.300	400	250	420	25.4
315	753 091 023	21.845	460	250	473	28.6
355	753 091 024	34.900	540	300	533	32.3
400	753 091 025	45.900	560	300	600	36.4
450	753 091 026	60.200	580	300	675	40.9
500	753 091 027	83.300	650	350	750	45.5
560	753 091 028	108.600	680	350	840	50.9
630	753 091 029	148.300	730	350	945	57.3



## Bend 11° LS

- PE 100 SDR 17 / 17,6 (ISO S8 / S8,3)
- 5 bar Gas / 10 bar Water
- made out of seamless pipe



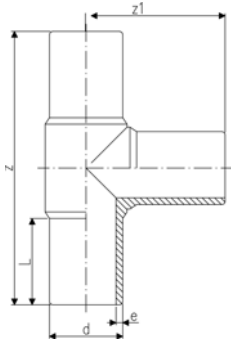
d [mm]	Code	kg	z [mm]	L [mm]	R [mm]	e [mm]
90	753 090 813	0.500	160	100	135	5.4
110	753 090 814	1.060	219	150	165	6.6
125	753 090 815	1.100	225	150	188	7.4
140	753 090 816	1.720	231	150	210	8.3
160	753 090 817	1.900	239	150	240	9.5
180	753 090 818	2.500	247	150	270	10.7
200	753 090 819	3.200	255	150	300	11.9
225	753 090 820	7.540	266	150	338	13.4
250	753 090 821	11.600	385	250	375	14.8
280	753 090 822	12.800	400	250	420	16.6
315	753 090 823	25.000	460	250	473	18.7
355	753 090 824	22.700	540	300	533	21.1
400	753 090 825	29.800	560	300	600	23.7
450	753 090 826	39.100	580	300	675	26.7
500	753 090 827	54.000	650	350	750	29.7
560	753 090 828	70.300	680	350	840	33.2
630	753 090 829	95.800	730	350	945	37.4

53 20 10

**Tee 90°, equal Type L**

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water

- \* With welded pipes
- \* Segment welded and reinforced
- \* No pressure reduction factor



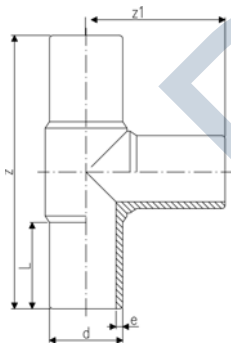
d [mm]	Code	kg	z [mm]	z1 [mm]	L [mm]	e [mm]
20	<b>753 201 006</b>	0.038	150	75	52	3,0
25	<b>753 201 007</b>	0.054	160	80	52	3,0
32	<b>753 201 008</b>	0.074	170	85	54	3,0
40	<b>753 201 009</b>	0.127	190	95	57	3,7
50	<b>753 201 010</b>	0.217	210	105	63	4,6
63	<b>753 201 011</b>	0.375	230	115	65	5,8
75	<b>753 201 012</b>	0.616	264	132	72	6,8
90	<b>753 201 013</b>	1.031	300	150	81	8,2
110	<b>753 201 014</b>	1.660	330	165	86	10,0
125	<b>753 201 015</b>	2.215	366	183	92	11,4
140	<b>753 201 016</b>	3.200	396	196	92	12,7
160	<b>753 201 017</b>	4.320	420	210	102	14,6
180	<b>753 201 018</b>	5.980	460	230	107	16,4
200	<b>753 201 019</b>	7.760	500	250	117	18,2
225	<b>753 201 020</b>	10.485	540	270	122	20,5
250	<b>753 201 001</b>	14.708	575	288	130	22,7
280	<b>753 200 902</b>	18.670	615	308	139	25,4
315	<b>753 200 903</b>	26.150	695	346	150	28,6
355	<b>753 200 904</b>	39.800	818	410	165	32,3
400	<b>753 200 905</b>	42.495	910	455	180	36,4
450	<b>753 200 906</b>	77.300	970	485	195	40,9
500	<b>753 200 907</b>	101.000	1060	530	215	45,5
*560	<b>753 200 908</b>	153.300	1510			50,9
*630	<b>753 200 909</b>	205.500				57,3

53 20 08

**Tee 90°, equal Type L**

- PE 100 SDR 17 / 17,6 (ISO S8 / S8,3)
- 5 bar Gas / 10 bar Water

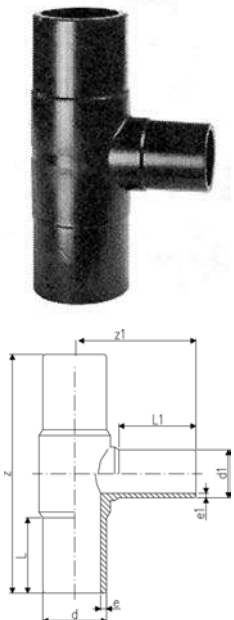
- \* Segment welded and reinforced
- \* With welded pipes
- \* No pressure reduction factor



d [mm]	Code	kg	z [mm]	z1 [mm]	L [mm]	e [mm]
90	<b>753 200 813</b>	0.780	300	150	80	5,4
110	<b>753 200 814</b>	1.440	330	165	86	6,6
125	<b>753 200 815</b>	1.646	366	183	92	7,4
140	<b>753 200 816</b>	2.120	396	196	92	8,3
160	<b>753 200 817</b>	3.970	428	214	104	9,5
180	<b>753 200 818</b>	5.450	460	230	105	10,7
200	<b>753 200 819</b>	5.910	500	250	115	11,9
225	<b>753 200 820</b>	8.240	540	270	122	13,4
250	<b>753 200 821</b>	10.793	575	288	130	14,8
280	<b>753 200 802</b>	13.810	615	308	139	16,6
315	<b>753 200 803</b>	18.155	695	346	150	18,7
355	<b>753 200 804</b>	25.850	818	410	165	21,1
400	<b>753 200 805</b>	35.015	910	455	180	23,7
450	<b>753 200 806</b>	56.000	970	485	195	26,7
500	<b>753 200 807</b>	71.000	1060	530	215	29,7
*560	<b>753 200 808</b>	99.200	1510	755	230	33,2
*630	<b>753 200 809</b>	132.700	1630	815	250	37,4

## Tee 90°, reduced LS moulded

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water

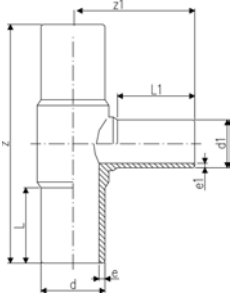


d	d1	Code	kg	z	z1	L	L1	e	e1
[mm]	[mm]			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
63	50	<b>753 201 044</b>	0.300	215	103	63	56	5.8	4.6
75	32	<b>753 201 045</b>	0.490	256	108	70	46	6.8	2.9
75	50	<b>753 201 046</b>	0.530	253	113	70	56	6.8	4.6
75	63	<b>753 201 047</b>	0.560	255	117	70	63	6.8	5.8
90	50	<b>753 201 027</b>	0.820	280	117	79	55	8.2	4.6
90	63	<b>753 201 029</b>	0.775	280	123	79	63	8.2	5.8
90	75	<b>753 201 030</b>	0.793	272	138	73	68	8.2	6.8
110	63	<b>753 201 028</b>	1.267	320	147	87	63	10.0	5.8
110	75	<b>753 201 031</b>	1.244	309	151	82	70	10.0	6.8
110	90	<b>753 201 032</b>	1.275	320	158	86	79	10.0	8.2
125	90	<b>753 201 048</b>	2.389	340	170	112	92	11.4	8.2
125	110	<b>753 201 033</b>	1.860	341	170	90	83	11.4	10.0
160	63	<b>753 201 034</b>	2.680	343	176	98	65	14.6	5.8
160	75	<b>753 201 035</b>	2.726	343	180	98	74	14.6	6.8
160	90	<b>753 201 036</b>	2.775	412	188	101	79	14.6	8.2
160	110	<b>753 201 037</b>	3.300	412	195	101	82	14.6	10.0
180	90	<b>753 201 049</b>	4.100	418	200	136	97	16.4	8.2
180	110	<b>753 201 050</b>	4.379	430	206	130	101	16.4	10.0
180	160	<b>753 201 038</b>	4.379	411	205	105	94	16.4	14.6
200	63	<b>753 201 073</b>	7.300	500	190	122	63	18.2	5.8
200	90	<b>753 201 074</b>	9.730	500	207	122	79	18.2	8.2
200	110	<b>753 201 075</b>	9.730	500	215	122	82	18.2	10.0
200	160	<b>753 201 076</b>	9.730	500	234	122	98	18.2	14.6
225	75	<b>753 201 039</b>	6.500	555	215	120	70	20.5	6.8
225	90	<b>753 201 040</b>	6.633	558	226	120	80	20.5	8.2
225	110	<b>753 201 041</b>	6.600	558	235	120	82	20.5	10.0
225	160	<b>753 201 042</b>	8.095	560	253	120	98	20.5	14.6
225	180	<b>753 201 043</b>	9.375	560	280	120	105	20.5	16.4
250	110	<b>753 201 078</b>	9.730	575	242	130	82	22.7	10.0
250	160	<b>753 201 079</b>	9.730	575	261	127	98	22.7	14.6
315	110	<b>753 201 051</b>	15.300	695	277	150	82	28.6	10.0
315	160	<b>753 201 052</b>	16.600	695	296	150	102	28.6	14.6
315	225	<b>753 201 053</b>	20.500	650	335	170	145	28.6	20.5
315	250	<b>753 201 054</b>	22.000	695	325	150	130	28.6	22.7



**Tee 90°, reduced LS moulded**

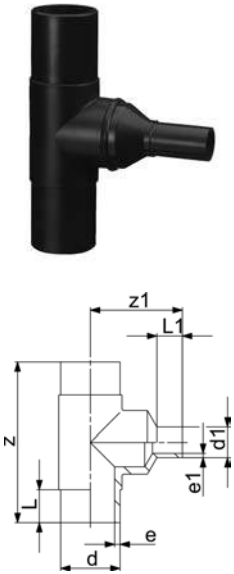
- PE 100 SDR 17 / 17,6 (ISO S8 / S8,3)
- 5 bar Gas / 10 bar Water



d	d1	Code	kg	z	z1	L	L1	e	e1	e1	
[mm]	[mm]			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
90	50	<b>753 201 827</b>	0.630	275	117	79	55	5.4	3,0	3.0	
90	63	<b>753 200 829</b>	0.560	275	123	79	63	5.4	3,8	3.8	
90	75	<b>753 200 830</b>	0.593	272	139	74	71	5.4	4,5	4.5	
110	63	<b>753 200 828</b>	0.900	318	147	82	63	6.6	3,8	3.8	
110	75	<b>753 200 831</b>	0.882	315	152	84	70	6.6	4,5	4.5	
110	90	<b>753 200 832</b>	0.941	318	158	82	79	6.6	5,4	5.4	
125	110	<b>753 200 833</b>	1.282	334	168	84	83	7.4	6,6	6.6	
160	63	<b>753 200 834</b>	1.950	330	130	86	63	9.5	3,8	3.8	
160	75	<b>753 200 835</b>	1.960	343	180	98	74	9.5	4,5	4.5	
160	90	<b>753 200 836</b>	1.972	410	188	98	79	9.5	5,4	5.4	
160	110	<b>753 200 837</b>	2.414	410	195	98	82	9.5	6,6	6.6	
180	90	<b>753 200 844</b>	3.218	422	204	134	97	10.7	5,4	5.4	
180	160	<b>753 200 838</b>	5.890	411	205	105	94	10.7	9,5	9.5	
200	63	<b>753 201 873</b>	6.800	500	190	122	63	11.9	3,8	3.8	
200	90	<b>753 201 874</b>	6.900	500	207	122	79	11.9	5,4	5.4	
200	110	<b>753 201 875</b>	7.200	500	215	122	82	11.9	6,6	6.6	
200	160	<b>753 201 876</b>	7.400	500	234	122	98	11.9	9,5	9.5	
225	75	<b>753 200 839</b>	4.600	555	277	120	70	13.4	4,5	4.5	
225	90	<b>753 200 840</b>	4.732	555	226	127	80	13.4	5,4	5.4	
225	110	<b>753 200 841</b>	4.700	555	235	127	82	13.4	6,6	6.6	
225	160	<b>753 200 842</b>	5.922	555	253	127	98	13.4	9,5	9.5	
225	180	<b>753 200 843</b>	7.211	550	280	120	105	13.4	10,7	10.7	
250	110	<b>753 201 878</b>	9.400	575	242	130	82	14.8	6,6	6.6	
250	160	<b>753 201 879</b>	9.800	575	261	130	98	14.8	9,5	9.5	
315	110	<b>753 200 851</b>	10.800	695	277	150	82	18.7	6,6	6.6	
315	160	<b>753 200 852</b>	12.200	695	296	150	102	18.7	9,5	9.5	
315	225	<b>753 200 853</b>	14.500	650	335	170	145	18.7	13,4	13.4	
315	250	<b>753 200 854</b>	15.500	695	325	150	130	18.7	14,8	14.8	

**Tee 90°, reduced Type L with welded reducer**

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water
- With welded reducer

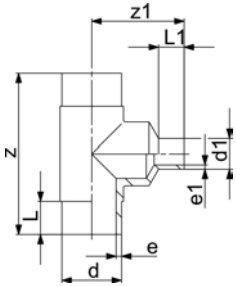


d [mm]	d1 [mm]	Code	kg	z [mm]	z1 [mm]	L [mm]	L1 [mm]	e [mm]	e1 [mm]
25	20	<b>753 201 002</b>	0.053	160		52	52	3,0	3,0
32	20	<b>753 201 003</b>	0.094	170	105	54	52	3,0	3,0
32	25	<b>753 201 004</b>	0.098	170	110	54	52	3,0	3,0
40	20	<b>753 201 005</b>	0.155	190	120	57	52	3,7	3,0
40	25	<b>753 201 069</b>	0.160	190	120	57	52	3,7	3,0
40	32	<b>753 201 070</b>	0.160	190	120	57	52	3,7	3,0
50	20	<b>753 201 072</b>	0.252	210	140	63	52	4,6	3,0
50	25	<b>753 201 077</b>	0.260	210	130	63	52	4,6	3,0
50	32	<b>753 201 080</b>	0.267	210	130	63	53	4,6	3,0
50	40	<b>753 201 081</b>	0.276	210	130	63	57	4,6	3,7
63	32	<b>753 201 082</b>	0.460	230	140	65	53	5,8	3,0
63	40	<b>753 201 116</b>	0.480	230	145	65	57	5,8	3,7
75	40	<b>753 201 084</b>	0.755	264	180	72	57	6,8	3,7
125	63	<b>753 201 085</b>	2.850	366	225	92	61	11,4	5,8
125	75	<b>753 201 086</b>	2.880	366	235	92	72	11,4	6,8
140	75	<b>753 201 087</b>	4.050	396	230	92	70	12,7	6,8
140	90	<b>753 201 089</b>	4.095	396	235	92	79	12,7	8,2
140	110	<b>753 201 090</b>	3.600	396	240	92	82	12,7	10,0
140	125	<b>753 201 091</b>	4.170	396	240	92	90	12,7	11,4
160	125	<b>753 201 092</b>	5.715	420	265	102	92	14,6	11,4
160	140	<b>753 201 093</b>	5.895	420	270	102	96	14,6	12,7
180	125	<b>753 201 094</b>	8.930	460	285	107	92	16,4	11,4
180	140	<b>753 201 095</b>	9.070	460	295	107	110	16,4	12,7
200	125	<b>753 201 096</b>	10.460	500	295	117	92	18,2	11,4
200	140	<b>753 201 097</b>	10.570	500	310	117	110	18,2	12,7
200	180	<b>753 201 098</b>	9.500	500	310	117	110	18,2	16,4
225	125	<b>753 201 099</b>	14.470	540	320	122	92	20,5	11,4
225	140	<b>753 201 100</b>	14.574	540	335	122	110	20,5	12,7
225	200	<b>753 201 101</b>	14.925	540	340	122	117	20,5	18,2
250	180	<b>753 201 102</b>	18.890	576	350	130	105	22,7	16,4
250	200	<b>753 201 103</b>	19.220	576	360	130	112	22,7	18,2
250	225	<b>753 201 104</b>	19.690	576	390	130	120	22,7	20,5
280	200	<b>753 201 105</b>	24.520	616	410	139	112	25,4	18,2
280	225	<b>753 201 106</b>	24.755	616	420	139	120	25,4	20,5
280	250	<b>753 201 107</b>	25.210	616	420	139	130	25,4	22,7
315	200	<b>753 201 108</b>	33.950	690	470	150	134	28,6	18,2
315	280	<b>753 201 109</b>	34.950	690	480	150	139	28,6	25,4
355	250	<b>753 201 110</b>	48.900	818	530	165	130	32,3	22,7
355	280	<b>753 201 111</b>	49.300	818	480	165	139	32,3	25,4
355	315	<b>753 201 112</b>	49.690	818	480	165	150	32,3	28,6
400	280	<b>753 201 113</b>	52.915	910	530	180	139	36,4	25,4
400	315	<b>753 201 114</b>	53.625	910	580	180	150	36,4	28,6
400	355	<b>753 201 115</b>	54.075	910	675	180	165	36,4	32,3



## Tee 90°, reduced LS with welded reducer

- PE 100 SDR 17 / 17,6 (ISO S8 / S8,3)
- 5 bar Gas / 10 bar Water

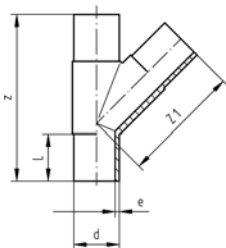


d	d1	Code	kg	z	z1	L	L1	e	e1
[mm]	[mm]			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
125	63	<b>753 200 801</b>	2.115	366	215	92	61	7.4	3.8
125	75	<b>753 200 810</b>	2.140	366	235	92	72	7.4	4.5
125	90	<b>753 200 811</b>	2.180	366	235	92	80	7.4	5.4
140	75	<b>753 200 812</b>	2.820	396	240	92	70	8.3	4.5
140	90	<b>753 200 822</b>	2.855	396	240	92	78	8.3	5.4
140	110	<b>753 200 823</b>	2.910	396	235	92	82	8.3	6.6
140	125	<b>753 200 824</b>	2.955	396	240	92	87	8.3	7.4
160	125	<b>753 200 825</b>	3.970	428	265	104	90	9.5	5.4
160	140	<b>753 200 826</b>	4.070	428	280	104	96	9.5	8.3
180	110	<b>753 200 827</b>	5.250	460	285	105	92	10.7	6.6
180	125	<b>753 200 845</b>	5.070	460	285	105	90	10.7	7.4
180	140	<b>753 200 846</b>	5.290	460	305	105	110	10.7	8.3
200	125	<b>753 200 847</b>	7.100	500	310	115	92	11.9	7.4
200	140	<b>753 200 848</b>	7.200	500	315	115	110	11.9	8.3
200	180	<b>753 200 849</b>	6.900	500	315	115	110	11.9	10.7
225	125	<b>753 200 850</b>	8.620	540	320	122	92	13.4	7.4
225	140	<b>753 200 855</b>	8.780	540	345	122	110	13.4	8.3
225	200	<b>753 200 856</b>	9.300	540	335	122	115	13.4	11.9
250	180	<b>753 200 857</b>	15.000	576	340	130	105	14.8	10.7
250	200	<b>753 200 858</b>	15.440	576	350	130	112	14.8	11.9
250	225	<b>753 200 859</b>	15.620	576	370	130	120	14.8	13.4
280	200	<b>753 200 860</b>	19.200	616	400	139	112	16.6	11.9
280	225	<b>753 200 861</b>	19.500	616	400	139	120	16.6	13.4
280	250	<b>753 200 862</b>	20.120	616	400	139	130	16.6	14.8
315	200	<b>753 200 863</b>	18.700	690	480	150	134	18.7	11.9
315	280	<b>753 200 864</b>	26.940	690	480	150	139	18.7	16.6
355	250	<b>753 200 865</b>	35.770	818	480	165	130	21.1	14.8
355	280	<b>753 200 866</b>	36.330	818	480	165	139	21.1	16.6
355	315	<b>753 200 867</b>	37.740	818	490	165	150	21.1	18.7
400	280	<b>753 200 868</b>	48.330	910	540	180	139	23.7	16.6
400	315	<b>753 200 869</b>	48.880	910	580	180	150	23.7	18.7
400	355	<b>753 200 870</b>	50.020	910	675	180	165	23.7	21.1

53 25 10

**Tee 45°, equal Type L**

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water

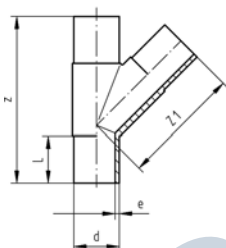


d [mm]	Code	kg	z [mm]	z1 [mm]	L [mm]	e [mm]
63	<b>753 251 011</b>	0.500	255	158	63	5,8
75	<b>753 251 012</b>	0.800	301	190	70	6,8
90	<b>753 251 013</b>	1.300	368	234	79	8,2
110	<b>753 251 014</b>	1.800	395	260	82	10,0

53 25 10

**Tee 45°, equal Type L**

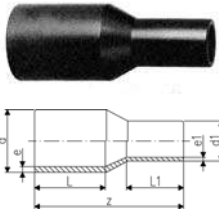
- PE 100 SDR 17 / 17,6 (ISO S8 / S8,3)
- 5 bar Gas / 10 bar Water



d [mm]	Code	kg	z [mm]	z1 [mm]	L [mm]	e [mm]
90	<b>753 251 063</b>	0.800	368	234	79	5,4
110	<b>753 251 064</b>	1.400	395	260	82	6,6

## Reducer LS

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water

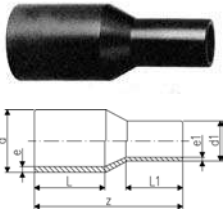


d	d1	Code	kg	z	L	L1	e	e1
[mm]	[mm]			[mm]	[mm]	[mm]	[mm]	[mm]
25	20	753 901 038	0.022	115	52	52	3,0	3,0
32	20	753 901 042	0.028	120	54	52	3,0	3,0
32	25	753 901 041	0.031	120	54	52	3,0	3,0
40	20	753 901 048	0.040	130	57	52	3,7	3,0
40	25	753 901 047	0.043	130	57	52	3,7	3,0
40	32	753 901 046	0.047	130	57	53	3,7	3,0
50	20	753 901 055	0.064	150	63	52	4,6	3,0
50	25	753 901 054	0.066	140	63	52	4,6	3,0
50	32	753 901 053	0.067	140	63	53	4,6	3,0
50	40	753 901 052	0.079	140	63	57	4,6	3,7
63	32	753 901 060	0.109	150	65	53	5,8	3,0
63	40	753 901 059	0.119	150	65	57	5,8	3,7
63	50	753 901 058	0.130	150	65	63	5,8	4,6
75	40	753 901 063	0.178	170	72	57	6,8	3,7
75	50	753 901 064	0.191	170	72	63	6,8	4,6
75	63	753 901 065	0.216	170	72	65	6,8	5,8
90	50	753 901 072	0.291	190	81	63	8,2	4,6
90	63	753 901 071	0.317	190	81	65	8,2	5,8
90	75	753 901 070	0.361	190	81	70	8,2	6,8
110	63	753 901 078	0.469	205	86	65	10,0	5,8
110	75	753 901 077	0.497	205	86	70	10,0	6,8
110	90	753 901 076	0.557	205	86	81	10,0	8,2
125	63	753 901 083	0.579	214	87	63	11,4	5,8
125	75	753 901 082	0.660	210	92	72	11,4	6,8
125	90	753 901 081	0.735	212	92	81	11,4	8,2
125	110	753 901 080	0.819	212	92	86	11,4	10,0
140	75	753 901 086	0.560	230	110	70	12,7	6,8
140	90	753 901 087	0.690	230	110	79	12,7	8,2
140	110	753 901 084	0.820	230	110	88	12,7	10,0
140	125	753 901 085	0.988	235	110	90	12,7	11,4
160	90	753 901 088	1.060	244	120	79	14,6	8,2
160	110	753 901 090	1.240	244	102	86	14,6	10,0
160	125	753 901 089	1.403	245	102	92	14,6	11,4
160	140	753 901 032	1.350	260	120	110	14,6	12,7
180	90	753 901 073	1.530	245	105	79	16,4	8,2
180	110	753 901 074	1.720	270	105	82	16,4	10,0
180	125	753 901 091	1.753	258	107	92	16,4	11,4
180	140	753 901 075	1.980	270	120	110	16,4	12,7
180	160	753 901 033	2.044	255	107	102	16,4	14,6
200	140	753 901 066	2.310	275	120	110	18,2	12,7
200	160	753 901 092	2.472	265	117	102	18,2	14,6
200	180	753 901 034	2.580	265	117	107	18,2	16,4
225	140	753 901 067	2.900	295	130	110	20,5	12,7
225	160	753 901 096	3.118	279	122	102	20,5	14,6
225	180	753 901 095	3.277	280	122	107	20,5	16,4
225	200	753 901 094	3.538	280	122	117	20,5	18,2
250	160	753 901 000	2.385	300	130	100	22,7	14,6
250	180	753 901 068	4.050	295	130	105	22,7	16,4
250	200	753 901 001	2.385	315	130	112	22,7	18,2
250	225	753 901 002	2.385	332	130	120	22,7	20,5
280	200	753 901 098	6.850	333	140	112	25,4	18,2
280	225	753 901 099	6.090	335	140	120	25,4	20,5
280	250	753 901 003	2.385	340	140	130	25,4	22,7
315	200	753 901 004	2.385	380	180	134	28,6	18,2
315	225	753 901 097	7.790	365	150	120	28,6	20,5
315	250	753 901 005	2.385	365	150	130	28,6	22,7
315	280	753 901 012	8.800	365	150	139	28,6	25,4
355	250	753 901 013	9.100	390	165	130	32,3	22,7
355	280	753 901 014	9.500	390	165	139	32,3	25,4
355	315	753 901 015	9.900	390	165	150	32,3	28,6
400	280	753 901 016	10.420	415	180	139	36,4	25,4
400	315	753 901 017	11.130	415	180	150	36,4	28,6
400	355	753 901 018	11.600	420	180	165	36,4	32,3

53 90 08

**Reducer LS**

- PE 100 SDR 17 / 17,6 (ISO S8 / S8,3)
- 5 bar Gas / 10 bar Water



d	d1	Code	kg	z	L	L1	e	e1	
[mm]	[mm]			[mm]	[mm]	[mm]	[mm]	[mm]	
90	63	<b>753 900 872</b>	0.216	182	79	70	5,4	3,8	
90	75	<b>753 900 870</b>	0.202	185	79	70	5,4	4,5	
110	63	<b>753 900 877</b>	0.326	185	82	63	6,6	3,8	
110	90	<b>753 900 876</b>	0.650	205	85	80	6,6	5,4	
125	90	<b>753 900 881</b>	0.700	215	90	80	7,4	5,4	
125	110	<b>753 900 880</b>	0.810	215	90	85	7,4	6,6	
140	75	<b>753 900 886</b>	0.560	230	112	70	8,3	4,5	
140	90	<b>753 900 887</b>	0.610	230	112	79	8,3	5,4	
140	110	<b>753 900 884</b>	0.660	230	112	82	8,3	6,6	
140	125	<b>753 900 885</b>	0.712	235	115	87	8,3	7,4	
160	90	<b>753 900 888</b>	0.752	248	120	85	9,5	5,4	
160	110	<b>753 900 890</b>	9.970	245	100	85	9,5	6,6	
160	125	<b>753 900 889</b>	1.380	245	100	90	9,5	7,4	
160	140	<b>753 900 831</b>	1.380	260	120	110	9,5	8,3	
180	90	<b>753 900 873</b>	1.010	237	105	79	10,7	5,4	
180	110	<b>753 900 874</b>	1.600	270	120	92	10,7	6,6	
180	125	<b>753 900 891</b>	1.710	255	105	90	10,7	7,4	
180	140	<b>753 900 875</b>	1.720	270	120	110	10,7	8,3	
180	160	<b>753 900 832</b>	2.100	255	105	100	10,7	9,5	
200	140	<b>753 900 866</b>	1.800	275	120	110	11,9	8,3	
200	160	<b>753 900 892</b>	2.370	265	115	100	11,9	9,5	
200	180	<b>753 900 893</b>	2.580	265	115	105	11,9	10,7	
225	140	<b>753 900 867</b>	1.450	280	120	100	13,4	8,3	
225	160	<b>753 900 896</b>	2.980	280	120	100	13,4	9,5	
225	180	<b>753 900 895</b>	3.160	280	120	105	13,4	10,7	
225	200	<b>753 900 894</b>	3.750	280	120	115	13,4	11,9	
250	160	<b>753 900 800</b>	2.850	290	130	100	14,8	9,5	
250	180	<b>753 900 868</b>	3.100	295	130	105	14,8	10,7	
250	200	<b>753 900 801</b>	3.210	302	130	112	14,8	11,9	
250	225	<b>753 900 802</b>	2.385	332	162	120	14,8	13,4	
280	200	<b>753 900 898</b>	3.800	333	140	112	16,6	11,9	
280	225	<b>753 900 899</b>	4.100	335	140	120	16,6	13,4	
280	250	<b>753 900 803</b>	2.385	340	140	130	16,6	14,8	
315	200	<b>753 900 804</b>	6.200	380	180	134	18,7	11,9	
315	225	<b>753 900 807</b>	6.200	365	150	120	18,7	13,4	
315	250	<b>753 900 805</b>	6.420	365	150	130	18,7	14,8	
315	280	<b>753 900 806</b>	5.940	365	150	140	18,7	16,6	
355	250	<b>753 900 808</b>	5.270	390	165	130	21,1	14,8	
355	280	<b>753 900 809</b>	5.830	390	165	140	21,1	16,6	
355	315	<b>753 900 810</b>	7.240	390	165	150	21,1	18,7	
400	280	<b>753 900 811</b>	7.930	415	180	140	23,7	16,6	
400	315	<b>753 900 812</b>	8.480	415	180	150	23,7	18,7	
400	355	<b>753 900 813</b>	9.620	420	180	165	23,7	21,1	

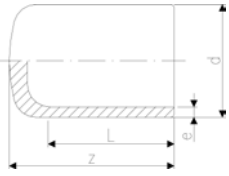
53 96 10

**Cap Type L**

- PE 100 SDR 11 (ISO S5)
- 10 bar Gas / 16 bar Water

**Note:**

- \* Fabricated part using pipe



d [mm]	Code	kg	z [mm]	L [mm]	e [mm]
20	<b>753 961 006</b>	0.009	52	52	3,0
25	<b>753 961 007</b>	0.013	52	52	3,0
32	<b>753 961 008</b>	0.017	54	54	3,0
40	<b>753 961 009</b>	0.031	57	57	3,7
50	<b>753 961 010</b>	0.050	63	63	4,6
63	<b>753 961 011</b>	0.085	65	65	5,8
75	<b>753 961 012</b>	0.145	80	72	6,8
90	<b>753 961 013</b>	0.240	90	81	8,2
110	<b>753 961 014</b>	0.387	98	86	10,0
125	<b>753 961 015</b>	0.546	105	92	11,4
140	<b>753 961 016</b>	0.835	136	92	12,7
160	<b>753 961 017</b>	1.026	120	102	14,6
180	<b>753 961 018</b>	1.369	128	107	16,4
200	<b>753 961 019</b>	1.839	138	115	18,2
225	<b>753 961 020</b>	2.500	148	122	20,5
250	<b>753 961 021</b>	3.927	205	130	22,7
280	<b>753 960 922</b>	5.344	235	139	25,4
315	<b>753 960 923</b>	7.176	255	150	28,6
355	<b>753 960 924</b>	9.780	280	165	32,3
400	<b>753 960 925</b>	13.370	310	180	36,4
*450	<b>753 960 926</b>	20.800	275	195	40,9
*500	<b>753 960 927</b>	28.400	297	212	45,5
*560	<b>753 960 928</b>	39.100	325	230	50,9
*630	<b>753 960 929</b>	59.700	355	250	57,3

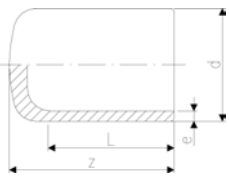
53 96 08

**Cap Type L**

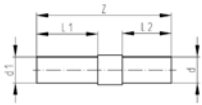
- PE 100 SDR 17 / 17,6 (ISO S8 / S8,3)
- 5 bar Gas / 10 bar Water

**Note:**

- \* Fabricated part using pipe



d [mm]	Code	kg	z [mm]	L [mm]	e [mm]
50	<b>753 960 810</b>	0.036	70	55	3,0
63	<b>753 960 811</b>	0.066	82	63	3,8
75	<b>753 960 812</b>	0.105	92	70	4,5
90	<b>753 960 813</b>	0.220	90	81	5,4
110	<b>753 960 814</b>	0.350	98	86	6,6
125	<b>753 960 815</b>	0.520	105	92	7,4
140	<b>753 960 816</b>	0.522	136	92	8,3
160	<b>753 960 817</b>	0.990	120	102	9,5
180	<b>753 960 818</b>	1.360	128	107	10,7
200	<b>753 960 819</b>	1.880	138	115	11,9
225	<b>753 960 820</b>	2.420	148	122	13,4
250	<b>753 960 821</b>	2.547	205	130	14,8
280	<b>753 960 822</b>	3.523	235	139	16,6
315	<b>753 960 823</b>	4.758	255	150	18,7
355	<b>753 960 824</b>	6.510	280	165	21,1
400	<b>753 960 825</b>	9.330	310	180	23,7
*450	<b>753 960 826</b>	15.800	265	195	26,7
*500	<b>753 960 827</b>	21.400	287	212	29,7
*560	<b>753 960 828</b>	29.400	310	230	33,2
*630	<b>753 960 829</b>	41.400	340	250	37,4



## Transition Fittings PE / steel

- PE 100 SDR 11 (ISO S5)
- 6 bar Gas / 16 bar Water
- Electrofusion weldable
- Steel pipe acc. to EN 10208-1, PE coated for corrosion resistance

\* Steel pipe without plastic shroud

d	d1	Code	kg	d1	z	L1	L2
[mm]	[inch]			[mm]	[mm]	[mm]	[mm]
*20	½	<b>775 641 502</b>	0.500	21	450	310	85
25	¾	<b>775 641 507</b>	0.640	27	460	310	100
32	1	<b>775 641 510</b>	0.940	34	460	310	100
40	1 ¼	<b>775 641 514</b>	1.200	42	460	310	100
50	1 ½	<b>775 641 518</b>	1.440	48	460	310	100
63	2	<b>775 641 524</b>	1.930	60	460	310	100
75	2 ½	<b>775 641 632</b>	2.800	76	510	310	100
90	3	<b>775 641 636</b>	3.700	89	520	310	100
110	3	<b>775 641 640</b>	3.800	89	520	310	100
110	4	<b>775 641 641</b>	6.600	114	520	310	100
125	4	<b>775 641 645</b>	6.700	114	520	310	100
160	6	<b>775 641 655</b>	11.300	168	580	310	120
180	6	<b>775 641 659</b>	11.800	168	580	310	130
200	8	<b>775 642 664</b>	19.100	219	600	310	130
225	8	<b>775 642 669</b>	19.500	219	600	310	130
250	8	<b>775 642 665</b>	20.500	219	620	310	160
250	10	<b>775 642 666</b>	30.000	273	620	310	160
280	10	<b>775 642 673</b>	31.000	273	620	310	160
315	12	<b>775 642 672</b>	47.000	324	630	310	220
355	12	<b>775 642 675</b>	49.000	324	630	310	220
400	16	<b>775 642 678</b>	94.000	406	640	310	220

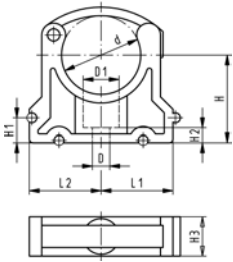
# Pipe Clips

## KLIP-IT Pipe Clips Type 061H, PP metric

### Model:

- For mm-pipes d16-d63
- Material: PP black, UV resistant
- **Minimum order quantity: standard packagings SP**

- d16 - d63: height designed for Ball Valve Type 546
- \* d16 to d32 without bracket

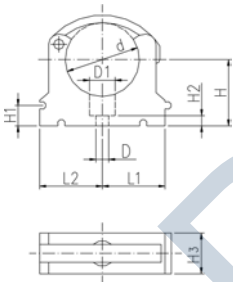


d [mm]	Code	kg	D [mm]	D1 [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	SC
*16	<b>167 061 035</b>	0.006	6	11	14	17	27	10	6	16	M5
*20	<b>167 061 036</b>	0.008	6	11	17	19	27	10	6	16	M5
*25	<b>167 061 037</b>	0.009	6	11	19	22	30	10	6	16	M5
*32	<b>167 061 038</b>	0.012	6	11	24	27	36	10	6	16	M5
40	<b>167 061 039</b>	0.027	7	14	34	34	44	10	7	22	M6
50	<b>167 061 040</b>	0.031	7	14	37	37	51	10	7	22	M6
63	<b>167 061 041</b>	0.054	9	17	45	45	64	10	10	25	M8

## KLIP-IT Pipe Clips Type 061, PP metric

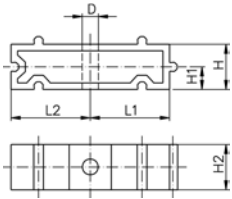
### Model:

- For mm pipes
- Material: Clip and safety clip PP black, UV resistant
- d16 - d63: Height designed for Ball Valve Type 546
- **Minimum order quantity: standard packagings SP**



d [mm]	d [inch]	Code	D [mm]	D1 [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	SC
*10		<b>167 061 003</b>	5	8	11	14	20	10	6	12	M4
*12		<b>167 061 004</b>	5	8	11	14	21	10	6	12	M5
*16		<b>167 061 035</b>	6	11	14	17	27	10	6	16	M5
*20		<b>167 061 036</b>	6	11	17	19	27	10	6	16	M5
*25		<b>167 061 037</b>	6	11	19	22	30	10	6	16	M5
*32		<b>167 061 038</b>	6	11	24	27	36	10	6	16	M5
40		<b>167 061 039</b>	7	14	34	34	44	10	7	22	M6
50		<b>167 061 040</b>	7	14	37	37	51	10	7	22	M6
63		<b>167 061 041</b>	9	17	45	45	64	10	10	25	M8
75	2 1/2	<b>167 061 012</b>	9	17	52	52	58	10	10	25	M8
90	3	<b>167 061 013</b>	9	17	65	65	65	10	10	28	M8
110	4	<b>167 061 014</b>	9	17	79	79	75	10	10	28	M8
125		<b>167 061 015</b>	9	17	88	88	90	10	10	32	M8
140	5	<b>167 061 016</b>	9	17	98	98	110	10	10	32	M8
160		<b>167 061 017</b>	9	17	109	109	108	10	10	32	M8



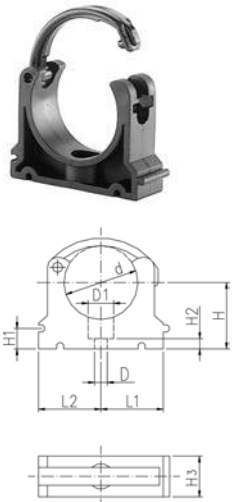


## KLIP-IT Spacer Type 061, PP

### Model:

- For pipe clips Type 061/061H, PP black, UV resistant
- **Minimum order quantity: standard packaging SP**

d	Inch	Code	kg	D	L1	L2	H	H1	H2	SC
[mm]	[inch]			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
10 - 12	1/8 - 1/4	<b>167 061 153</b>	0.003	5	11	14	20	10	12	M4
16	3/8	<b>167 061 155</b>	0.006	6	14	17	20	10	16	M5
20	1/2	<b>167 061 156</b>	0.006	6	17	19	20	10	16	M5
25	3/4	<b>167 061 157</b>	0.007	6	19	22	20	10	16	M5
32	1	<b>167 061 158</b>	0.008	6	24	27	20	10	16	M5
40	1 1/4	<b>167 061 159</b>	0.016	7	34	34	20	10	22	M6
50	1 1/2	<b>167 061 160</b>	0.017	7	37	37	20	10	22	M6
63	2	<b>167 061 161</b>	0.024	9	45	45	20	10	25	M8
75	2 1/2	<b>167 061 162</b>	0.027	9	52	52	20	10	25	M8
90	3	<b>167 061 163</b>	0.040	9	65	65	20	10	28	M8
110	4	<b>167 061 164</b>	0.048	9	79	79	20	10	28	M8
125	4 1/2	<b>167 061 165</b>	0.059	9	88	88	20	10	32	M8
140	5	<b>167 061 166</b>	0.065	9	98	98	20	10	32	M8
160	6	<b>167 061 167</b>	0.074	9	109	109	20	10	32	M8



## KLIP-IT Pipe Clips Type 061, PE metric

### Model:

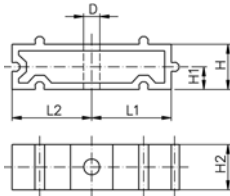
- For mm pipes
- Material: Clip PE and safety clip PP black
- **Minimum order quantity: standard packaging SP**

- Height not designed for ball valve 546. Please use spacer 73 06 11.

d	Code	kg	D	D1	L1	L2	H	H1	H2	H3	SC
[mm]			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
*10	<b>173 061 003</b>	0.003	5	8	11	14	20	10	6	12	M4
*12	<b>173 061 004</b>	0.006	5	8	11	14	21	10	6	12	M5
*16	<b>173 061 005</b>	0.007	6	11	14	17	23	10	6	16	M5
*20	<b>173 061 006</b>	0.008	6	11	17	19	25	10	6	16	M5
*25	<b>173 061 007</b>	0.009	6	11	19	22	28	10	6	16	M5
*32	<b>173 061 008</b>	0.012	6	11	24	27	31	10	6	16	M5
40	<b>173 061 009</b>	0.022	7	14	34	34	35	10	7	22	M6
50	<b>173 061 010</b>	0.030	7	14	37	37	40	10	7	22	M6
63	<b>173 061 011</b>	0.044	9	17	45	45	52	10	10	25	M8
75	<b>173 061 012</b>	0.062	9	17	52	52	58	10	10	25	M8
90	<b>173 061 013</b>	0.090	9	17	65	65	65	10	10	28	M8
110	<b>173 061 014</b>	0.114	9	17	79	79	75	10	10	28	M8
125	<b>173 061 015</b>	0.174	9	17	88	88	90	10	10	32	M8
140	<b>173 061 016</b>	0.217	9	17	98	98	110	10	10	32	M8
160	<b>173 061 017</b>	0.237	9	17	109	109	108	10	10	32	M8



## KLIP-IT Spacer Type 061, PE



### Model:

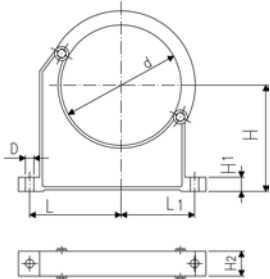
- For pipe clips Type 061, PE black, UV resistant
- **Minimum order quantity: standard packaging SP**

d [mm]	Inch	Code	kg	D [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	SC
16	1/8-1/4	<b>173 061 153</b>	0.003	5	11	14	20	10	12	M4
16	3/8	<b>173 061 155</b>	0.005	6	14	17	20	10	16	M5
20	1/2	<b>173 061 156</b>	0.006	6	17	19	20	10	16	M5
25	3/4	<b>173 061 157</b>	0.007	6	19	22	20	10	16	M5
32	1	<b>173 061 158</b>	0.008	6	24	27	20	10	16	M5
40	1 1/4	<b>173 061 159</b>	0.016	7	34	34	20	10	22	M6
50	1 1/2	<b>173 061 160</b>	0.017	7	37	37	20	10	22	M6
63	2	<b>173 061 161</b>	0.025	9	45	45	20	10	25	M8
75	2 1/2	<b>173 061 162</b>	0.027	9	52	52	20	10	25	M8
90	3	<b>173 061 163</b>	0.040	9	65	65	20	10	28	M8
110	4	<b>173 061 164</b>	0.048	9	79	79	20	10	28	M8
125	4 1/2	<b>173 061 165</b>	0.059	9	88	88	20	10	32	M8
140	5	<b>173 061 166</b>	0.065	9	98	98	20	10	32	M8
160	6	<b>173 061 167</b>	0.074	9	109	109	20	10	32	M8

## Pipe Clips Type 060, PP metric










### Model:

- For mm pipes d90-400
- Material: Clip and safety clip PP black, UV resistant
- Accidental opening of the safety clip is not possible
- **Minimum order quantity: standard packaging SP or gross packaging GP**
- Clip and safety clip are not assembled in the packaging.
- Pipes with flanges can be installed directly



d [mm]	d [inch]	Code	kg	D [mm]	L [mm]	L1 [mm]	H [mm]	H1 [mm]	H2 [mm]	SC
90	3	<b>167 060 038</b>	0.163	9	89	71	105	15	33	M 8
110		<b>167 060 039</b>	0.179	9	94	80	115	15	33	M 8
125		<b>167 060 040</b>	0.300	11	116	91	130	20	35	M10
140	5	<b>167 060 041</b>	0.309	11	121	98	130	20	35	M10
160		<b>167 060 042</b>	0.348	11	131	107	148	20	35	M10
180		<b>167 060 043</b>	0.378	11	143	115	163	20	35	M10
200		<b>167 060 019</b>	0.582	13	152	120	175	25	39	M12
225		<b>167 060 020</b>	0.612	13	165	132	175	25	39	M12
250		<b>167 060 021</b>	0.698	13	183	143	200	25	39	M12
280		<b>167 060 022</b>	0.722	13	198	156	200	25	39	M12
315		<b>167 060 023</b>	0.842	13	219	172	225	25	39	M12
355		<b>167 060 024</b>	1.250	17	275	209	258	30	50	M16
400		<b>167 060 025</b>	1.450	17	300	228	288	30	50	M16

# Fusion Jointing Machines

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# Manual Butt and Socket Fusion Tools

## SSE Butt fusion tool



- All devices are equipped with on/off switch, mains control and control lamp for heating intervals
- Choice of electronic or thermostatic temperature control
- Heating element diameter 120 mm, 200 mm and 300 mm
- Pick up for floor stand or table clamp
- High-quality, non-stick PTFE-coating with long service life
- Monitoring and setting of heating element temperature
- High temperature accuracy over the entire heating surface
- T = thermostatic temperature control
- E = electronic temperature control

d [mm]	Type	Performance	Code	kg
110	SSE 120	115 V/400 W T	<b>790 105 136</b>	2.300
110	SSE 120	115 V/400 W E	<b>790 105 141</b>	2.400
180	SSE 200	230 V/800 W T	<b>790 105 052</b>	3.000
180	SSE 200	230 V/800 W E	<b>790 105 059</b>	3.000
180	SSE 200	115 V/800 W T	<b>790 105 137</b>	3.000
180	SSE 200	115 V/800 W E	<b>790 105 142</b>	3.000
280	SSE 300	230 V/1500 W T	<b>790 105 053</b>	5.540
280	SSE 300	230 V/1500 W E	<b>790 105 060</b>	5.640
280	SSE 300	115 V/1500 W T	<b>790 105 138</b>	5.540
280	SSE 300	115 V/1500 W E	<b>790 105 143</b>	5.640

## SSE 200 -Set- Butt fusion tool



- All devices are equipped with on/off switch, mains control and control lamp for heating intervals
- Choice of electronic or thermostatic temperature control
- Pick up for floor stand or table clamp
- High-quality, non-stick PTFE-coating with long service life
- Monitoring and setting of heating element temperature
- High temperature accuracy over the entire heating surface
- Available as a complete set in a practical metal case
- Heating element-diameter 200 mm
- Table clamp
- T = thermostatic temperature control
- E = electronic temperature control

d [mm]	Performance	Code	kg
180	230 V/800 W T	<b>790 105 054</b>	7.815
180	230 V/800 W E	<b>790 105 061</b>	8.800
180	115 V/800 W T	<b>790 105 139</b>	7.400
180	115 V/800 W E	<b>790 105 144</b>	7.400



## SSE 300 -Set- Butt fusion tool

- All devices are equipped with on/off switch, mains control and control lamp for heating intervals
- Choice of electronic or thermostatic temperature control
- Pick up for floor stand or table clamp
- High-quality, non-stick PTFE-coating with long service life
- Monitoring and setting of heating element temperature
- High temperature accuracy over the entire heating surface
- Available as a complete set in a practical metal case
- Heating element-diameter 300 mm
- Table clamp
- T = thermostatic temperature control
- E = electronic temperature control

d [mm]	Performance	Code	kg
280	230 V/1500 W T	<b>790 105 055</b>	11.725
280	230 V/1500 W E	<b>790 105 062</b>	11.000
280	115 V/1500 W T	<b>790 105 140</b>	11.000
280	115 V/1500 W E	<b>790 105 145</b>	11.000



## MSE 63/MSE 110 Socket fusion tools

- For fusion jointing of PP, PE and PVDF pipes and fittings
- Size range d 16-110 mm
- Choice of electronic or thermostatic temperature control
- Support for heating bushes and spigots of d 16 to 63 mm (110 mm)
- Pick up for floor stand or table clamp
- High-quality, non-stick PTFE-coating with long service life
- Monitoring and setting of heating element temperature
- High temperature accuracy over the entire heating surface
- T = thermostatic temperature control
- E = electronic temperature control



d-d [mm]	Type	Performance	Code	kg
16 - 63	MSE 63	230 V/800 W T	<b>790 105 081</b>	1.760
16 - 63	MSE 63	230 V/800 W E	<b>790 105 082</b>	2.000
16 - 63	MSE 63	115 V/800 W T	<b>790 105 096</b>	2.075
16 - 63	MSE 63	115 V/800 W E	<b>790 105 097</b>	2.145
16 - 110	MSE 110	230 V/1500 W T	<b>790 105 083</b>	3.550
16 - 110	MSE 110	230 V/1500 W E	<b>790 105 084</b>	3.200
16 - 110	MSE 110	115 V/1500 W T	<b>790 105 126</b>	3.200
16 - 110	MSE 110	115 V/1500 W E	<b>790 105 127</b>	3.200



## MSE 63/MSE 110 - Set - Socket fusion tools

- For fusion jointing of PP, PE and PVDF pipes and fittings
- Size range d 16-110 mm
- All devices are equipped with on/off switch, mains control and control lamp for heating intervals
- Choice of electronic or thermostatic temperature control
- Support for heating bushes and spigots of d 16 to 63 mm (110 mm)
- Pick up for floor stand or table clamp
- High-quality, non-stick PTFE-coating with long service life
- Monitoring and setting of heating element temperature
- High temperature accuracy over the entire heating surface
- Heating bushes and spigots
- Available as a complete set in a practical metal case
- Table clamp
- Floor stand for MSE 63
- Allen screws and key
- T = thermostatic temperature control
- E = electronic temperature control

d-d [mm]	Type	Performance	Code	kg
16 - 63	MSE 63	230 V/800 T	<b>790 105 085</b>	8.600
16 - 63	MSE 63	230 V/800 E	<b>790 105 086</b>	10.180
16 - 63	MSE 63	115 V/800 T	<b>790 105 098</b>	8.600
16 - 63	MSE 63	115 V/800 E	<b>790 105 099</b>	8.600
16 - 110	MSE 110	230 V/1500 T	<b>790 105 087</b>	17.700
16 - 110	MSE 110	230 V/1500 E	<b>790 105 088</b>	17.680
16 - 110	MSE 110	115 V/1500 T	<b>790 105 128</b>	14.880
16 - 110	MSE 110	115 V/1500 E	<b>790 105 129</b>	15.600

# SG 110 Socket Fusion Machine



## For fusion jointing of PP, PE, PB and PVDF pipes and fittings

- Portable heating element - socket fusion machine for use in the workshop and on job sites.
- Dimension d 20 - 110 mm
- **Base machine**
- Compact, sturdy design, distortion-free machine bed
- Handwheel with torque locking mechanism for the slide movement
- **Heater**
- With electronic temperature control
- High temperature accuracy over the entire heating surface
- **Additional standard equipment on the basic model**
- Universal, left and right prismatic clamping devices, complete, for clamping pipe and fittings. Additional set of prismatic clamping devices for outer clamping of pipes available as an option.
- Depth stop
- V-shaped pipe support d 20 - 110 mm
- Back stop
- Machine specific tool set
- Timer to clock fusion times

d-d [mm]	Performance	Code	kg	
20 - 110	230 V/1200 W	<b>790 310 001</b>	65.000	
20 - 110	115 V/1200 W	<b>790 310 003</b>	64.000	

# SG 160 Combined Butt and Socket Fusion Machine



## for fusion jointing PP, PE and PVDF pipes and fittings size range for butt fusion d 32 - 160

Mobile, very compact and universal plastic fusion machine for use in the workshop and on job sites.

Butt fusion d 32 - 160 mm, all pressure ratings up to PE/PP SDR 11; PVDF SDR 21.

Socket fusion d 16 - 110 mm

### Basic machine

- high precision, distortion-free and robust machine base
- handwheel for easy moving of machine carriage
- exact pressure adjustment via direct load transfer
- hardened, hard-chrome plated guide shafts for extreme loads
- handle for safe transport of machine
- All clamping possibilities for base clamping plates, pipe supports, back stop and prismatic clamping devices.

### Planer

- planing device made of light cast aluminium
- optimised cutting geometry for even and chatter-free planing
- powerful parallel planer, swivels in and out for single or double-sided facing of pipe ends 620 W
- integrated pick up for easy mounting of calibration tools for machining of pipe ends in socket fusion

### Heater

- high-performance and precision heater with electronic temperature control 1500 W
- high accuracy of +/- 4°C over the entire heating surface
- heater temperature can be set exactly with digital LCD
- high quality, non-stick, easy to change PTFE fabric (Teflon)

### Additional standard equipment on the basic model

- V-shaped pipe supports d 16 - 160 mm for fittings
- timer to clock fusion times
- tool set specified to machine

d-d [mm]	Performance	Code	kg	
16 - 160	230 V	<b>790 103 031</b>	44.900	
16 - 160	115 V	<b>790 103 033</b>	45.000	



## Special transport crate

- Compact and sturdy for proper transportation and safe storage
- Multifunctional, can be used as a workbench for ergonomic working position
- Two integrated drawers to store all accessories
- Dimensions 1 m height x 1,2 m length x 0.8 m width

Code	kg
790 103 099	108.000



## Base clamping plates

- In order to improve the quality of the fusion joint, and for reliable clamping of long pipes, we recommend using the maximum number of clamping devices.
- For welding of long pipes we recommend to use the outer left and outer right base clamping plates as well.
- L = left
- R = right

d [mm]	Type	Code	kg
160	L	790 103 010	2.503
160	R	790 103 011	2.510



## Inserts, left/right

- For base clamping plate
- Left or right

d [mm]	Code	kg
32	790 103 019	0.315
40	790 103 020	0.310
50	790 103 021	0.302
63	790 103 022	0.277
75	790 103 023	0.250
90	790 103 024	0.224
110	790 103 025	0.178
125	790 103 026	0.132
140	790 103 027	0.079





## Clamping bracket, left/right

- For base clamping plate
- L = left
- R = right

\* Threaded clamping bracket, for mounting inserts d 32 - 140 mm. An additional insert must be used instead of clamping brackets d 32 - 140 mm, i.e. twice the number of inserts listed must be ordered.

d [mm]	Type	Code	kg
32	L	<b>790 103 039</b>	0.530
40	L	<b>790 103 040</b>	0.530
50	L	<b>790 103 041</b>	0.530
63	L	<b>790 103 042</b>	0.530
75	L	<b>790 103 043</b>	0.530
90	L	<b>790 103 044</b>	0.580
110	L	<b>790 103 045</b>	0.580
125	L	<b>790 103 046</b>	0.606
140	L	<b>790 103 047</b>	0.650
*160	L	<b>790 103 048</b>	0.669
32	R	<b>790 103 059</b>	0.530
40	R	<b>790 103 060</b>	0.530
50	R	<b>790 103 061</b>	0.530
63	R	<b>790 103 062</b>	0.530
75	R	<b>790 103 063</b>	0.530
90	R	<b>790 103 064</b>	0.580
110	R	<b>790 103 065</b>	0.590
125	R	<b>790 103 066</b>	0.605
140	R	<b>790 103 067</b>	0.530
*160	R	<b>790 103 068</b>	0.650



## Prismatic clamping device

- Prismatic clamping device for pick up of clamping jaws for exact alignment of fusion components
- L = left
- R = right

\*Horizontal adjustable

Type	Code	kg
L	<b>790 103 080</b>	6.112
*R	<b>790 103 081</b>	6.118



## Clamping jaws

- For prismatic base units, left/right
- Each code number defines 1 piece prismatic clamping device. For socket fusion 4 pieces are needed.

**	Code	kg
16-32 / 90-110	<b>790 103 085</b>	0.310
30-50 / 50-90	<b>790 103 086</b>	0.330



## Depth stop, complete

- Warrants the correct insertion depth of the pipe in the fittings socket
- Built-in spring for easier removal of fusion components from the heater. Damage to the plastified fusion surfaces is prevented.

Code	kg
<b>790 103 090</b>	0.610



## Heating spigots and bushes

- Aluminium, PTFE coated
- 1 pair is always delivered

d [mm]	Code	kg
16	<b>790 101 086</b>	0.310
20	<b>790 101 087</b>	0.315
25	<b>790 101 088</b>	0.313
32	<b>790 101 089</b>	0.316
40	<b>790 101 090</b>	0.329
50	<b>790 101 091</b>	0.475
63	<b>790 101 092</b>	0.858
75	<b>790 101 093</b>	1.157
90	<b>790 101 094</b>	1.697
110	<b>790 101 095</b>	2.090



## Stiffener plate

- For heating bush d 110 mm
- Warrants consistent heat transfer from heater plate to heating bush 110 mm
- Is recommended for socket fusion in the dimension 110 mm

d [mm]	Code	kg
110	<b>790 101 098</b>	0.264



## Calibration tool

- For mechanical, standardised calibration of pipe ends in PE, PP and PVDF (to be used with planer)
- easy and time-saving removal of oxide film
- Consistent peeling quality over the entire pipe circumference

d [mm]	Code	kg
20	<b>790 103 160</b>	0.950
25	<b>790 103 161</b>	0.950
32	<b>790 103 162</b>	0.950
40	<b>790 103 163</b>	0.930
50	<b>790 103 164</b>	0.950
63	<b>790 103 165</b>	1.000
75	<b>790 103 166</b>	1.150
90	<b>790 103 167</b>	1.250
110	<b>790 103 168</b>	1.344

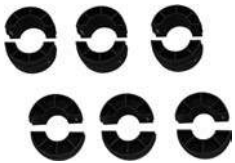
# MC 110 Butt Fusion Machine



## Machine MC 110, complete with electric planer

- Portable butt fusion machine for use in the workshop and on job sites. For fusion jointing of PP and PE pipes and fittings as well as prefabrication of segments in the size range d 20 - 110 mm and up to PN 10.
- Machine MC 110 complete includes: machine mounting, basic machine, 2 base clamping plates (wide), base clamping plate (left narrow), planer, heater thermostatic controlled, table clamp and transport crate.
- Including transport packaging, without accessories

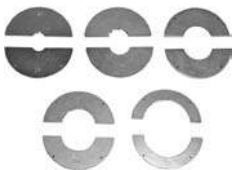
d-d [mm]	Performance	Code	kg
20 - 110	230 V/ 800 W	<b>790 109 303</b>	31.000
20 - 110	115 V/ 800 W	<b>790 109 321</b>	31.000



## Reduction clamping inserts, wide

- 20 - 90 mm
- Each code number defines 1 half shell. Per wide base clamping plate 2 reduction half -shells are needed.

d [mm]	Code	kg
25	<b>790 109 327</b>	0.150
32	<b>790 109 328</b>	0.150
40	<b>790 109 329</b>	0.145
50	<b>790 109 330</b>	0.129
56	<b>790 109 342</b>	0.150
63	<b>790 109 331</b>	0.125
75	<b>790 109 332</b>	0.113
90	<b>790 109 333</b>	0.105



## Reduction clamping inserts, narrow

- Each code number defines 1 half shell. Per wide base clamping plate 2 reduction half -shells are needed.

d [mm]	Code	kg
25	<b>790 109 335</b>	0.075
32	<b>790 109 336</b>	0.070
40	<b>790 109 337</b>	0.125
50	<b>790 109 338</b>	0.124
56	<b>790 109 343</b>	0.114
63	<b>790 109 339</b>	0.110
75	<b>790 109 340</b>	0.100
90	<b>790 109 341</b>	0.100

## PSO 701 Butt Fusion Machine

For fusion jointing of PP and PE pipes and fittings, size range d 40 - 160mm



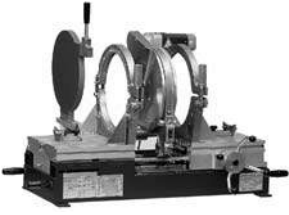
- Professional butt fusion machine capable to weld pipes d 160mm up to PN10. The wooden box is usable as working bench as well as for transportation.
- Pressure adjustment via direct load transfer (max. force 100kp)
- Planer and heating element could be swivelled in and out
- High performance heating element thermostatic controlled (PTFE coated)
- The heating element can be used as manual fusion tool
- **V-shaped pipe support** d 40 - 140 mm
- **Reduction clamping inserts** d 40 - 140 mm
- **Base clamping plates** right and left, d 160 mm
- Machine specific tool set

d-d [mm]	Performance	Code	kg	
40 - 160	230 V/800 W	<b>790 301 000</b>	90.000	

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# SG 315 Butt Fusion Machine

## SG 315 for butt fusion jointing of PP, PE and PVDF pipes and fittings



The industrial butt fusion machine for pressure piping systems. Extremely sturdy design use in the workshop and on job sites.

Sizes d 90-315 mm, all pressure ratings up to max. PE d 280 SDR 11; PP d 280 SDR 7.25 and PVDF d 315 SDR 21.

### Basic machine

- high precision, distortion-free and robust machine base
- handwheel for easy moving of machine carriage
- fusion pressure is maintained with a user friendly torque limiter
- exact pressure adjustment via direct load transfer
- hardened, hard-chrome plated guide shafts for extreme loads
- handle for safe transport of machine
- optional outer, horizontally removeable clamping devices available

### Planer

- optimised cutting geometry for even and chatter-free planing
- powerful parallel planer, swivels in and out for single or double-sided facing of pipe ends, 1100 W
- for your personal safety, a safety switch has been integrated to prevent unintentional start-up in the working position

### Heater

- high-performance and precision heater with electronic temperature control 1700 W
- high accuracy of +/- 4°C over the entire heating surface
- heater temperature can be set exactly with digital LCD
- high quality, non-stick, easy to change PTFE coating
- with digital temperature indicator

### Additional standard equipment included in the base model

- inner left and right clamping plates, d 315 mm, for pick up of reduction clamping inserts d 90 - 280 mm
- pipe supports d 315 mm for support of fittings
- timer to clock fusion times
- tool set specified to machine

d-d [mm]	Performance	Code	kg	
90 - 315	115 V	790 130 002	128.000	



## SG 315 for butt fusion jointing of PP, PE and PVDF pipes and fittings

The industrial butt fusion machine for pressure piping systems. The S-version (S = segment) additionally allows prefabrication of segments. Sizes d 90-315 mm, all pressure ratings up to max. PE d 280 SDR 11; PP d 280 SDR 7.25 and PVDF d 315 SDR 21.

### Basic machine

- integrated swivel tables for equalization of wall offset transverse to axial direction, for segment fusion up to 30°
- optional outer, horizontally removeable clamping devices available
- high precision, distortion-free and robust machine base
- handwheel for easy moving of machine carriage
- fusion pressure is maintained with a user friendly torque limiter
- exact pressure adjustment via direct load transfer
- hardened, hard-chrome plated guide shafts for extreme loads
- handle for safe transport of machine

### Planer

- optimised cutting geometry for even and chatter-free planing
- powerful parallel planer, swivels in and out for single or double-sided facing of pipe ends, 1100 W
- for your personal safety, a safety switch has been integrated to prevent unintentional start-up in the working position

### Heater

- high-performance and precision heater with electronic temperature control 1700 W
- high accuracy of +/- 4°C over the entire heating surface
- heater temperature can be set exactly with digital LCD
- high quality, non-stick, easy to change PTFE coating
- with digital temperature indicator

### Additional standard equipment included in the base model

- inner left and right clamping plates, d 315 mm, for pick up of reduction clamping inserts d 90 - 280 mm
- pipe supports d 315 mm for support of fittings
- timer to clock fusion times
- tool set specified to machine

d-d [mm]	Performance	Code	kg
90 - 315	230 V	<b>790 130 003</b>	150.000
90 - 315	115 V	<b>790 130 004</b>	143.000



## SG 315 for butt fusion jointing of PP, PE and PVDF pipes and fittings

The industrial butt fusion machine for pressure piping systems. Extremely sturdy design use in the workshop and on job sites.

Equipped with a load cell and a digital display of the fusion force.

Sizes d 90-315 mm, all pressure ratings up to max. PE d 280 SDR 11;

PP d 280 SDR 7.25 and PVDF d 315 SDR 21.

### Basic machine

- high precision, distortion-free and robust machine base
- handwheel for easy moving of machine carriage
- fusion pressure is maintained with a user friendly torque limiter
- exact pressure adjustment via direct load transfer
- hardened, hard-chrome plated guide shafts for extreme loads
- handle for safe transport of machine
- digital display
- optional outer, horizontally removeable clamping devices available

### Planer

- optimised cutting geometry for even and chatter-free planing
- powerful parallel planer, swivels in and out for single or double-sided facing of pipe ends, 1100 W
- for your personal safety, a safety switch has been integrated to prevent unintentional start-up in the working position

### Heater

- high-performance and precision heater with electronic temperature control 1700 W
- high accuracy of +/- 4°C over the entire heating surface
- heater temperature can be set exactly with digital LCD
- high quality, non-stick, easy to change PTFE coating
- with digital temperature indicator

### Additional standard equipment included in the base model

- inner left and right clamping plates, d 315 mm, for pick up of reduction clamping inserts d 90 - 280 mm
- pipe supports d 315 mm for support of fittings
- timer to clock fusion times
- tool set specified to machine

d-d [mm]	Performance	Code	kg	
90 - 315	230 V	<b>790 130 031</b>	150.000	
90 - 315	115 V	<b>790 130 032</b>	128.000	



## SG 315 for butt fusion jointing of PP, PE and PVDF pipes and fittings

The industrial butt fusion machine for pressure piping systems.

The S-version (S = segment) additionally allows prefabrication of segments. Sizes d 90-315 mm, all pressure ratings up to max. PE d 280 SDR 11; PP d 280 SDR 7.25 and PVDF d 315 SDR 21.

### Basic machine

- integrated swivel tables for equalization of wall offset transverse to axial direction, for segment fusion up to 30°
- optional outer, horizontally removeable clamping devices available
- high precision, distortion-free and robust machine base
- handwheel for easy moving of machine carriage
- fusion pressure is maintained with a user friendly torque limiter
- exact pressure adjustment via direct load transfer
- hardened, hard-chrome plated guide shafts for extreme loads
- handle for safe transport of machine
- load cell
- digital display

### Planer

- optimised cutting geometry for even and chatter-free planing
- powerful parallel planer, swivels in and out for single or double-sided facing of pipe ends, 1100 W
- for your personal safety, a safety switch has been integrated to prevent unintentional start-up in the working position

### Heater

- high-performance and precision heater with electronic temperature control 1700 W
- high accuracy of +/- 4°C over the entire heating surface
- heater temperature can be set exactly with digital LCD
- high quality, non-stick, easy to change PTFE coating
- with digital temperature indicator

### Additional standard equipment included in the base model

- inner left and right clamping plates, d 315 mm, for pick up of reduction clamping inserts d 90 - 280 mm
- pipe supports d 315 mm for support of fittings
- timer to clock fusion times
- tool set specified to machine

d-d [mm]	Performance	Code	kg	
90 - 315	230 V	<b>790 130 033</b>	143.000	
90 - 315	115 V	<b>790 130 034</b>	145.000	





## Reduction clamping inserts, narrow

- d 90 - 280 mm
- Each code number defines 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

d [mm]	Code	kg	
90	<b>790 112 098</b>	0.995	
110	<b>790 112 099</b>	1.285	
125	<b>790 112 100</b>	1.245	
140	<b>790 112 101</b>	1.205	
160	<b>790 112 102</b>	1.135	
180	<b>790 112 103</b>	1.010	
200	<b>790 112 104</b>	0.950	
225	<b>790 112 105</b>	0.865	
250	<b>790 112 106</b>	0.770	
280	<b>790 112 107</b>	0.560	

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# IR-63 Plus<sup>®</sup> and IR-225 Plus<sup>®</sup> Fusion Jointing Machines



## IR-63 Plus<sup>®</sup> Fully-Equipped Machine

Fully-equipped fusion jointing machine for welding SYGEF<sup>®</sup> Standard, SYGEF<sup>®</sup> Plus, PROGEF<sup>®</sup> Standard, PROGEF<sup>®</sup> Natural, PROGEF<sup>®</sup> Plus, PE 100 in dimensions d 20-63 mm with integrated remote welding unit, 2 USB interfaces, monochrome display with icons and 12 languages.

### Supply:

1-phase AC (50/60 Hz) 230 V L/N/PE

### Delivery includes:

- Machine housing complete (1 pcs.)
- Heater assembly (1 pcs.)
- Remote weld device (1 pcs.)
- Facing tool (1 pcs.)
- Transport box (1 pcs.)
- Pipe stop (1 pcs.)
- Clamping inserts d 20-63 mm (8 pcs. per dimension)
- End caps PE d 20-63 mm (4 pcs. per dimension)
- Power supply cable 230 V (1 pcs.)
- Extension cable for remote weld device (1 pcs.)
- Extension cable for heater (1 pcs.)
- Extension cable for facing tool (1 pcs.)
- Cleaning brush No. 8 (1 pcs.)
- Hexagon key 3 mm (1 pcs.)
- Hexagon key 4 mm (1 pcs.)
- Heater protection shield (1 pcs.)
- Clamping unit extension (8 pcs.)
- Socket wrench (facing blades) (1 pcs.)
- Screw driver, Size 0 (1 pcs.)
- HP-Accessory Tray (1 pcs.)
- Manual (1 pcs.)

d-d [mm]	Code	kg	
20 - 63	<b>790 131 005</b>	52.000	



## IR-225 Plus<sup>®</sup> Fully-Equipped Machine with HP Working Table (HP = High Purity)

Fully-equipped fusion jointing machine for welding SYGEF<sup>®</sup> Standard, SYGEF<sup>®</sup> Plus, PROGEF<sup>®</sup> Standard, PROGEF<sup>®</sup> Natural, PROGEF<sup>®</sup> Plus, PE 100 in dimensions d 63-225 mm, 2 USB interfaces, monochrome display with icons and 12 languages.

### Supply:

1-phase AC (50/60 Hz) 230 V L/N/PE or 3-phase AC (50/60 Hz) 400 V/230 V L1/L2/L3/N/PE

### Delivery includes:

- Machine base (1 pcs.)
- Heater assembly (1 pcs.)
- Facing tool (1 pcs.)
- Working table, HP (1 pcs.)
- Movable clamping units (1 pcs.)
- Clamping inserts d 63-225 mm (8 pcs. per dimension)
- End caps PE d 63-225 mm (4 pcs. per dimension)
- Transportation lock (1 pcs.)
- Pipe stop (1 pcs.)
- Hexagon key 5 mm (1 pcs.)
- Hexagon key 6 mm (1 pcs.)
- Combination ring /open-jaw wrench 13 mm (1 pcs.)
- Cleaning brush (1 pcs.)
- Connecting cable 400 V - 230 V (1 pcs.)
- Ball for lever (1 pcs.)
- Manual (1 pcs.)

d-d [mm]	Code	kg	
63 - 225	790 133 009	453.000	

# BCF<sup>®</sup> Plus Plastic Fusion Jointing Machine

## BCF<sup>®</sup> Plus fully equipped machine d 20 - 63 mm



Fully-equipped machine for bead and crevice free jointing of SYGEF<sup>®</sup> Standard, SYGEF<sup>®</sup> Plus, PROGEF<sup>®</sup> Natural of the dimensions d 20-63 mm with integrated remote welding unit, 2 USB interfaces, monochrome display with icons and 12 languages.

### Supply:

1-phase AC (50/60 Hz) 115 / 230 V L/N/PE

### Delivery includes:

- Machine housing (1 pcs.) incl. remote welding unit (1 pcs.)
- Transport box (1 pcs.)
- HP working table (1 pcs.)
- Heating stations d 20-63 mm (6 pcs.)
- Clamping units small (2 pcs.) with clamping inserts d 20-63 mm (24 pcs.)
- Facing tool small (1 pcs.) with facing inserts d 20-63 mm (6 pcs.)
- Facing tool support (1 pcs.)
- Hose box (1 pcs.) incl. air hose (1 pcs.)
- Supporting tools small d 20-63 mm (2 pcs.)
- BReT (1 pcs.)
- Hose cutter (1 pcs.)
- Air hose reducer (6-4 mm) (1 pcs.), air hose socket (4-4 mm) (1 pcs.)
- Extension cable (1 pcs.)
- Manual (1 pcs.)

d-d [mm]	Code	kg	
20 - 63	790 121 002	153.000	



## BCF<sup>®</sup> Plus Bladder

- Only suitable for welding PROGEF<sup>®</sup> Natural). **Blue bladder head** (except d 75 -110mm)!

d [mm]	Code	kg	Pieces	
20	<b>790 122 091</b>	0.038	1	
25	<b>790 122 092</b>	0.044	1	
32	<b>790 122 093</b>	0.062	1	
40	<b>790 122 094</b>	0.082	1	
50	<b>790 122 095</b>	0.131	1	
63	<b>790 122 096</b>	0.168	1	

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# Electrofusion Units and Accessories



## MSA Plus 400 Traceability Electrofusion Unit with USB interfaces



**NEW, environmental friendly manufactured electrofusion unit according EU directive 2002/95/EU (RoHS).**

Professional electrofusion unit for traceability of piping system components from raw material to completed electrofusion joint (to ISO 12176). The MSA units with the unique inverter technology and the active cooling system for trouble-free operation from generator or mains supply. Suitable for jointing in series. The unit is equipped with compact flash memory card (exchangeable data carrier), barcode reader pen or optional barcode scanner. The unit is robust, light and easy to use. The menu has up to 27 different languages. Inclusive 1 transport case, 1 USB memory stick, 1 pair of angle adapter clips 4.0 mm, operating instructions, configuration card and Software MSA WIN-WELD.

For printer or PC communication the USB cable (799350619) is required.

### Technical Data

Ambient temperature	-10 °C - +45 °C
Mains voltage	180 V - 264 V AC
Mains frequency	45Hz - 65 Hz
Fusion voltage	8 - 42 (48) V AC
Fusion current	max. 80 A
Power	max. 3500 W
Protection	1 / IP 65
Interfaces	USB (type A) for printer communication and to load software updates USB (type B) for PC communication
Mains cable	3 m
Fusion cable	3 m
Dimensions (WxHxD)	284 x 440 x 195 mm
Weight incl. cables	ca. 11,5 kg, light-weight aluminium housing
Display	LCD graphic, background light, contrast adjustment
Size display (WxH)	132 x 39 mm
Type size	8 mm
Languages	Brasilian, Bulgarian, Chinese, Croatian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Hungarian, Italian, Latvian, Lithuanian, Malaysian, Norwegian, Polish, Portuguese, Rumanian, Russian, Slovakian, Slovenian, Spanish, Swedish, Turkish
Warranty	24 months

Type	Code	kg	Description
MSA Plus 400	<b>799 350 580</b>	16.800	barcode reader pen, transport case
MSA Plus 400	<b>799 350 581</b>	16.800	barcode scanner, transport case
MSA Plus 400	<b>799 350 585</b>	16.800	CH power plug with barcode reader pen, transport case



## MSA Plus 350 Record Electrofusion Unit with USB interfaces



**NEW, environmental friendly manufactured electrofusion unit according EU directive 2002/95/EU (RoHS).**

Professional electrofusion unit for recording jointing data of electrofusion components as a basis for electronic joint recording. The MSA units with the unique inverter technology and the active cooling system for trouble-free operation from generator or mains supply. Suitable for jointing in series. The unit is equipped with barcode reader pen, optional with barcode scanner. The unit is robust, light and easy to use. The menu has up to 27 different languages. Inclusive transport box, 1 USB memory stick, 1 pair of angle adapter clips 4.0 mm, operating instructions, configuration card and Software MSA WIN-WELD.

To read out the fusion protocols the USB cable (799 350 619) or the USB memory stick (799 350 622) required.

### Technical Data

Ambient temperature	-10 °C - +45 °C
Mains voltage	180 V - 264 V AC
Mains frequency	45Hz - 65 Hz
Fusion voltage	8 - 42 (48) V AC
Fusion current	max. 80 A
Power	max. 3500 W
Protection	1 / IP 65
Interface	USB (type A) for printer communication and to load software updates USB (type B) for PC communication
Mains cable	3 m
Fusion cable	3 m
Dimensions (WxHxD)	284 x 440 x 195 mm
Weight incl. cables	ca. 11,5 kg, light-weight aluminium housing
Display	LCD graphic, background light, contrast adjustment
Size display (WxH)	132 x 39 mm
Type size	8 mm
Languages	Brasilian, Bulgarian, Chinese, Croatian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Hungarian, Italian, Latvian, Lithuanian, Malaysian, Norwegian, Polish, Portuguese, Rumanian, Russian, Slovakian, Slovenian, Spanish, Swedish, Turkish
Warranty	24 months

Type	Code	kg	Description
MSA Plus 350	<b>799 350 570</b>	16.800	barcode reader pen, transport case
MSA Plus 350	<b>799 350 571</b>	16.800	barcode scanner, transport case
MSA Plus 350	<b>799 350 575</b>	16.800	CH Power plug, with barcode reader, transport case



## MSA Plus 300 Automatic Electrofusion Unit with USB interfaces



**NEW, environmental friendly manufactured electrofusion unit according EU directive 2002/95/EU (RoHS).**

Automatic electrofusion unit with barcode reader pen, optional with barcode scanner. The MSA units with the unique inverter technology and the active cooling system for trouble-free operation from generator or mains supply. Suitable for jointing in series. The unit is robust, light and easy to use. The menu has up to 27 different languages. Inclusive transport box, 1 pair of angle adapter clips 4.0 mm, operating instructions and configuration card.

To load software updates the USB memory stick (799 350 622) is required.

### Technical Data

Ambient temperature	-10 °C - +45 °C
Mains voltage	180 V - 264 V AC
Mains frequency	45Hz - 65 Hz
Fusion voltage	8 - 42 (48) V AC
Fusion current	max. 80 A
Power	max. 3500 W
Protection	1 / IP 65
Interfaces	USB (type A) to load software updates USB (type B) for PC communication
Mains cable	3 m
Fusion cable	3 m
Dimensions (WxHxD)	284 x 440 x 195 mm
Weight incl. cables	ca. 11,5 kg, light-weight aluminium housing
Display	LCD graphic, background light, contrast adjustment
Size display (WxH)	132 x 39 mm
Type size	8 mm
Languages	Brasilian, Bulgarian, Chinese, Croatian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Hungarian, Italian, Latvian, Lithuanian, Malaysian, Norwegian, Polish, Portuguese, Rumanian, Russian, Slovakian, Slovenian, Spanish, Swedish, Turkish
Warranty	24 months

Type	Code	kg	Description
MSA Plus 300	<b>799 350 560</b>	16.800	barcode reader pen, transport case
MSA Plus 300	<b>799 350 561</b>	16.800	barcode scanner, transport case
MSA Plus 300	<b>799 350 565</b>	16.800	CH Power plug, with barcode reader pen, transport case





## Adapter

- Adapters for electrofusion units with 4 mm connectors.
- Compatible with electrofusion units MSA 210, MSA 250-400 and MSA Plus 250-400.

Type	Code	kg	Description
4,0 mm	<b>799 350 340</b>	0.055	Angle adapter, black
4,7 mm	<b>799 350 341</b>	0.055	Angle adapter, grey
4,0 mm	<b>799 350 461</b>	0.055	Adapter, black
4,7 mm	<b>799 350 462</b>	0.055	Adapter, white



## Rotary Peeler RS

This innovative Rotary Peeler RS is designed to use for universal peeling at the pipe end for electrofusion couplings, tees and elbows and as well as for electrofusion saddles. Suitable for peeling of pipes made out of PE80, PE100, PEX, PP.

### Feature and your advantage:

**Spring loaded peeling blade:**Independent peeling quality of pipe ovality or tolerances

**Pivoted mounted peeling blade:**To compensate the shape of coiled pipe

**Optimized cutting geometry:**Defined chip thickness with cutting width overlap

**One tool per dimension:**Minimized swivel radius for peeling in narrow locations

**Divisible tool:**Peeling for saddles with the same tool

**Peeling length:**No limitation of peeling length

**Guidance rolls:**3 point support for dimensional optimized cutting feed, time saving

**Time saving:**Tool is always ready to use, it can be used for the next peeling without setting the peeling blade back in its origin position

**Your advantage:**Time saving and highest repeatable peeling quality at smallest rotation radius. No operator errors possible for change of dimension

**Included:**1 x Rotary Peeler RS, Transport case, Operating manual, Spare parts list

Article	d [mm]	Code	kg
RS 40	40	<b>790 136 001</b>	2.096
RS 50	50	<b>790 136 002</b>	1.250
RS 63	63	<b>790 136 003</b>	2.038
RS 75	75	<b>790 136 004</b>	1.450
RS 90	90	<b>790 136 005</b>	1.450
RS 110	110	<b>790 136 006</b>	1.450
RS 125	125	<b>790 136 007</b>	1.650
RS 140	140	<b>790 136 008</b>	1.650
RS 160	160	<b>790 136 009</b>	1.650
RS 180	180	<b>790 136 010</b>	1.850
RS 200	200	<b>790 136 011</b>	1.850
RS 225	225	<b>790 136 012</b>	1.850
RS 250	250	<b>790 136 013</b>	2.150
RS 280	280	<b>790 136 014</b>	2.150
RS 315	315	<b>790 136 015</b>	2.150

9 300 725



### Peeling Tool PT 1 E

- The rotating Peeling Tool PT 1 E is suitable for preparing pipe ends with diameters d 20 - 90 mm (when installing electrofusion couplers and fittings). The tool ensures a constant peeling quality on the complete peeling surface and is suitable for PE80, PE100 and PEX.
- Scope of delivery: 1 basic tool in a plastic carrying case, without pipe inserts. The case has sufficient space for approximately 6 pipe inserts.

d-d [mm]	Code	kg	Description
20 - 90	<b>799 150 382</b>	3.400	Basic Tool PT 1 E

9 300 725



### Pipe Inserts for Peeling Tool PT 1 E

d [mm]	e [mm]	Code	kg	Description
20	1.9	<b>799 300 739</b>	0.220	Pipe Insert SDR 11
20	3.0	<b>799 300 741</b>	0.220	Pipe Insert SDR 7
25	2.3	<b>799 300 740</b>	0.230	Pipe Insert SDR 11
25	3.0	<b>799 300 742</b>	0.230	Pipe Insert SDR 9
32	3.0	<b>799 300 743</b>	0.230	Pipe Insert SDR 11
40	3.7	<b>799 300 744</b>	0.230	Pipe Insert SDR 11
50	4.6	<b>799 300 745</b>	0.350	Pipe Insert SDR 11
63	3.8	<b>799 300 725</b>	0.475	Pipe Insert SDR 17
63	5.8	<b>799 300 746</b>	0.475	Pipe Insert SDR 11
75	4.5	<b>799 300 727</b>	0.601	Pipe Insert SDR 17
75	6.9	<b>799 300 747</b>	0.601	Pipe Insert SDR 11
90	5.4	<b>799 300 748</b>	0.834	Pipe Insert SDR 17
90	8.2	<b>799 300 749</b>	0.220	Pipe Insert SDR 11

9 300 750



### Peeling Tool PT 2

- The rotating Peeling Tools PT 2 are suitable for preparing pipe ends (when installing electrofusion couplers and fittings). The tool ensures a constant peeling quality on the complete peeling surface and is suitable for PE80, PE100 and PEX pipes.
- Scope of delivery: 1 tool (size 1, 2 or 3) in a case (size 1 in aluminium, size 2 and 3 in plastic).

d-d [mm]	Code	kg	Description
90 - 250	<b>799 300 753</b>	5.100	Size 1, peeling length 140 mm
110 - 400	<b>799 300 755</b>	7.320	Size 2, peeling length 150 mm
110 - 500	<b>799 300 756</b>	11.000	Size 3, peeling length 175 mm

9 300 700



### Peeling Tool PT 4

- The easy-to-use peeling tools PT 4 are suitable for preparing pipe ends (when installing electrofusion couplers and fittings). The tools ensure a constant peeling quality on the whole peeled area and are suitable for PE80 and PE100 pipes. There is no tool service arrangement for the PT 4.
- Scope of delivery: 1 tool with exchangeable blade (4 cutting surfaces).

e [mm]	d [mm]	Code	kg	Description
1.9	20	<b>799 300 704</b>	0.271	Pipe Insert SDR 11
3.0	20	<b>799 300 705</b>	0.255	Pipe Insert SDR 7
2.3	25	<b>799 300 706</b>	0.308	Pipe Insert SDR 11
3.0	25	<b>799 300 707</b>	0.290	Pipe Insert SDR 9
3.0	32	<b>799 300 708</b>	0.340	Pipe Insert SDR 11
3.7	40	<b>799 300 709</b>	0.380	Pipe Insert SDR 11
4.6	50	<b>799 300 710</b>	0.436	Pipe Insert SDR 11
5.8	63	<b>799 300 711</b>	0.540	Pipe Insert SDR 11

9 301 475

## Double Clamp



- The user-friendly Double Clamps are suitable for coupler connections. They are quickly and easily put into position and prevent pullout and pipe movements during the fusion time and cooling time.
- Scope of delivery: 1 tool consisting of 1 beam (compact), 2 vee-clamps complete with ratchet and belt.

d-d [mm]	Code	kg	
63 - 125	<b>799 301 484</b>	2.795	
110 - 225	<b>799 301 486</b>	10.000	
225 - 500	<b>799 301 488</b>	15.000	



9 301 450

## Quadruple Clamp



- The professional Quadruple Clamps are suitable for coupler connections. They are quickly and easily put into position and ensure a stress-free fusion. They prevent pullout and pipe movements during the fusion and cooling times.
- Recommended for difficult site conditions with large installation-induced stresses.
- Scope of delivery: 1 tool consisting of 1 beam (long), 4 vee-clamps complete with ratchet and belt.

d-d [mm]	Code	kg	
63 - 125	<b>799 301 459</b>	6.900	
110 - 225	<b>799 301 461</b>	19.000	
225 - 500	<b>799 301 463</b>	28.500	



9 301 525

## Twin Clamp



- The easy-to-use Twin Clamp is suitable for coupler connections on straight or coiled pipe. The clamps prevent pullout and pipe movements during the fusion and cooling time.
- Scope of delivery: 1 complete tool.

d [mm]	Code	kg	
20	<b>799 301 536</b>	0.498	
25	<b>799 301 537</b>	0.471	
32	<b>799 301 538</b>	0.756	
40	<b>799 301 539</b>	0.876	
50	<b>799 301 540</b>	1.167	
63	<b>799 301 541</b>	1.438	

9 301 575



## Multi Clamp

- This tool is quick and easy to use and is suitable for straight forward connections to straight lengths of pipe or saddle branch outlets with electrofusion couplers.
- Scope of delivery: 1 tool without accessories.

d-d [mm]	Code	kg	
20 - 63	<b>799 301 575</b>	1.409	

9 301 575



## Inserts for Multi Clamp

- The inserts are easily and quickly exchanged. A set consists of 4 inserts, each insert with 2 different dimensions.

d-d [mm]	Code	kg	Description
25 - 20	<b>799 150 385</b>	0.806	Inserts, Sets
32 - 20	<b>799 150 386</b>	0.520	Inserts, Sets
32 - 25	<b>799 150 387</b>	0.520	Inserts, Sets
40 - 32	<b>799 150 388</b>	0.520	Inserts, Sets
50 - 40	<b>799 150 389</b>	0.520	Inserts, Sets
63 - 32	<b>799 150 390</b>	0.520	Inserts, Sets
63 - 40	<b>799 150 391</b>	0.520	Inserts, Sets
63 - 50	<b>799 150 392</b>	0.520	Inserts, Sets

9 370 000



## Clamp for coiled pipe

- These clamps are easily mounted on coiled pipes. They hold the pipes in position during the fusion time and cooling phase.
- Scope of delivery: 1 tool with clamp and belt.

d-d [mm]	Code	kg	
25 - 63	<b>799 370 007</b>	4.000	
63 - 125	<b>799 370 011</b>	10.000	



## Clamping device Topload 315

- This clamp and mounting tool is used to top-load Saddles onto pipes of dimensions d 280 - 400 mm.
- Scope of delivery: 1 basis mounting clamp, 1 bracket, 2 clamping screws, 2 ratchet scraps, 1 transport-box

d-d [mm]	Code	kg	
280 - 400	<b>799 350 475</b>	25.000	

9 150 090



## Spring Clamp for ELGEF® 24 V Reinforcing Saddles

- The Spring Clamp is used to install ELGEF® 24 V reinforcing saddles d 40 - 225 mm. The tool ensures a constant jointing pressure during the entire fusion cycle.

d-d [mm]	Code	kg	
40 - 225	<b>799 150 090</b>	1.289	



## Assembly and Tapping Key for ELGEF® Plus Saddles

- Combination tool for tapping and tightening of fixation screws.

Type	Code	kg	Description
8/10/17	<b>799 198 047</b>	0.803	For all saddles



## Tapping Key for ELGEF® Plus Saddles

- With adjustable tapping depth.

Type	Code	kg	Description
10	<b>799 198 080</b>	0.120	for Monobloc d 40 mm and d 50 mm
17	<b>799 198 079</b>	0.555	for Monobloc d 63 mm and all Duobloc saddles
12.7	<b>799 198 091</b>	0.600	for socket with cutter



## Hexagon Key for ELGEF® Plus Saddles and Branch Fittings

- For tightening fixation screws.

Type	Code	kg	Description
SW8	<b>799 150 378</b>	0.152	For all saddles and branch fittings



## Tapping Adapter for ELGEF® Plus Saddles

- The Adapter is used for gas-free tapping under pressure. Type S 54 for tapping saddles with rotatable outlet d 20 - 40 mm (Tapping Tee d 32 mm). Type S 67 for tapping saddles with rotatable outlet d 50 - 63 mm (Tapping Tee d 63 mm).

Type	Code	kg	Description
S 54	<b>799 100 061</b>	0.813	for Tapping Tee d 32 mm
S 67	<b>799 100 062</b>	1.011	for Tapping Tee d 63 mm



## Pressure Test Cap for ELGEF® Plus Tapping Saddles

- "The cap has a Rp 3/8"" connection thread and is made from galvanised steel."
- **Overview of Tapping Adapter types and Pressure Test Cap**
- Typ Bezeichnung description
- M For Monobloc d 40 and 50 mm (outlets d 20 - 32 mm)
- S 54 For Monobloc d 63 (outlets d 20 - 32 mm) and all saddles with rotatable outlet (outlets d 20 - 40 mm) i.e. Tapping Tee d 32 mm.
- S 67 For all Saddles with rotatable outlet (outlets d 50 and 63 mm) i.e. Tapping Tee d 63 mm.

Type	Code	kg	Description
M	<b>799 199 282</b>	0.119	for Monobloc d 40 mm and d 50 mm
S 54	<b>799 199 283</b>	0.283	for Monobloc d 63 mm and Tapping Tee d 32 mm
S 67	<b>799 199 286</b>	0.461	for Tapping Tee d 63 mm



## Cutter for PE Pipes

- This cutter is suitable for PE pipes and can be used on pipes of up to d 225 mm with a wall thickness of up to 21 mm.

d [mm]	Code	kg	Description
30	<b>799 198 013</b>	0.131	accessories Basic Tool Box
39	<b>799 198 012</b>	0.215	accessories Basic Tool Box
50	<b>799 198 057</b>	0.278	accessories Basic Tool Box



## PE Repair Plug

- PE Repair Plugs are suitable for use with ELGEF® 24 V PE Reinforcement Saddles 53 127 000.

d [mm]	Code	kg
30	<b>799 199 088</b>	0.012
39	<b>799 199 089</b>	0.019



## Hexagon Key for PVC Saddles

- The Hexagon Key is suitable for tapping water and gas mains under pressure.
- Scope of delivery: 1 hexagon key, protective cover, without rotating pin.

d-d [mm]	Code	kg	s [mm]	G [inch]
16 - 25	<b>799 150 007</b>	0.345	19	30
32 - 40	<b>799 150 008</b>	0.496	27	38
50 - 63	<b>799 150 009</b>	0.690	27	47

## Rotating pin for Hexagon Key

description	Code	kg
10x350 mm	<b>799 150 011</b>	0.220

# Accessories and Tools for Welding Machines

## Heating Spigots and Bushes



- Aluminium, PTFE coated
- Type B
- Always delivered in pairs (also usable for SG 110, not for SG 160)

d [mm]	Code	kg	kg/m
16	<b>799 300 155</b>	0.070	0.070
25	<b>799 300 157</b>	0.110	0.110
32	<b>799 300 158</b>	0.140	0.140
40	<b>799 300 159</b>	0.230	0.230
50	<b>799 300 160</b>	0.335	0.335
63	<b>799 300 161</b>	0.565	0.565
75	<b>799 300 162</b>	0.965	0.965
90	<b>799 300 163</b>	1.440	1.440
110	<b>799 300 164</b>	2.210	2.210



## Manual Pipe Peeling Tool for Socket Fusion

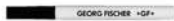
d [mm]	Code	kg	kg/m
20	<b>799 300 260</b>	0.067	0.067
25	<b>799 300 270</b>	0.081	0.081
32	<b>799 300 280</b>	0.102	0.102
40	<b>799 300 290</b>	0.244	0.244
50	<b>799 300 300</b>	0.294	0.294
63	<b>799 300 310</b>	0.505	0.505
75	<b>799 300 320</b>	0.780	0.780
90	<b>799 300 330</b>	0.987	0.987
110	<b>799 300 340</b>	1.360	1.360



## KS Tangit Cleaner

- Special cleaning agent for plastic fusion connections with PP, PE, PVDF and PB.

Code	kg	kg/m
<b>799 298 023</b>	0.890	0.890



## Marker

Type	Code	kg	kg/m
silver	<b>799 350 364</b>	0.012	0.012



# General Condition of Supply of Georg Fischer Piping Systems Limited, Schaffhausen

## 1 General

- 1.1 These General Conditions shall apply to all Products supplied by Georg Fischer to the Purchaser. They shall also apply to all future business even when no express reference is made to them.
- 1.2 Any deviating or supplementary conditions especially Purchaser's general conditions of purchase and verbal agreements shall only be applicable if accepted in writing by Georg Fischer.
- 1.3 The written form shall be deemed to be fulfilled by all forms of transmission, evidenced in the form of text, such as telefax, e-mail, etc.

## 2 Tenders

- 2.1 Tenders shall only be binding if they contain a specifically stated period for acceptance.

## 3 Scope of Delivery

- 3.1 Georg Fischer's product range is subject to change.
- 3.2 The confirmation of order shall govern the scope and execution of the contract.

## 4 Data and Documents

- 4.1 Technical documents such as drawings, descriptions, illustrations and data on dimensions, performance and weight as well as the reference to standards are for information purposes only. They are not warranted characteristics and are subject to change.
- 4.2 All technical documents shall remain the exclusive property of Georg Fischer and may only be used for the agreed purposes or as Georg Fischer may consent.

## 5 Confidentiality, Protection of Personal Data

- 5.1 Each party shall keep in strict confidence all commercial or technical information relating to the business of the other party, of which it has gained knowledge in the course of its dealing with the other party. Such information shall neither be disclosed to third parties nor used for other purposes than those for which the information has been supplied.
- 5.2 In the context of the contractual relation with the Purchaser personal data may be processed. The Purchaser agrees to the disclosure of said data to third parties such as foreign subcontractors and suppliers etc.

## 6 Local Laws and Regulations, Export Controls

- 6.1 The Purchaser shall bring to the attention of Georg Fischer all local laws and regulations at the place of destination which bear connection with the execution of the contract and the adherence to relevant safety regulations and approval procedures.
- 6.2 In case of re-exports, Purchaser shall be responsible for compliance with pertinent export control regulations.

## 7 Price

- 7.1 Unless agreed otherwise, the prices shall be deemed quoted net ex works (according to Incoterms of the ICC, latest version) including standard packing. All supplementary costs such as the cost of carriage, insurance, export-, transit- and import duties etc. shall be borne by the Purchaser. The Purchaser shall also bear the costs of all taxes, fees, duties etc. connected with the contract.
- 7.2 If the costs of packing, carriage, insurance, fees and other supplementary costs are included in the tender price or contract price or are referred to specifically in the tender or confirmation of order, Georg Fischer reserve the right to revise their prices accordingly should any change occur in the relevant tariffs.

## 8 Terms of Payment

- 8.1 The Purchaser shall make payment in the manner agreed by the parties without any deductions such as discounts, costs, taxes or dues.
- 8.2 The Purchaser may only withhold or off-set payments due against counter claims which are either expressly acknowledged by Georg Fischer or finally awarded to the Purchaser. In particular, payment shall still be made when unessential items are still out-standing provided that the Products already delivered are not rendered unusable as a result.

## 9 Retention of Title

- 9.1 The Products shall remain the property of Georg Fischer until the Purchaser shall have settled all claims, present and future, which Georg Fischer may have against him.
- 9.2 Should the Purchaser resell Products to which title is reserved, in the ordinary course of business, he shall hereby be deemed to have tacitly assigned to Georg Fischer the proceeds deriving from their sale together with all collateral rights, securities and reservations of title until all claims held by Georg Fischer shall have been settled. Until revoked by Georg Fischer, this assignment shall not preclude Purchaser's right to collect the assigned receivables.
- 9.3 To the extent the value of the Products to which title is reserved together with collateral securities exceeds Georg Fischer's claims against the Purchaser by more than 20%, Georg Fischer shall re-assign the above proceeds to Purchaser at his request.

## 10 Delivery

- 10.1 The term of delivery shall commence as soon as the contract has been entered into, all official formalities such as import and payment permits have been obtained and all essential technical issues have been settled. The term of delivery shall be deemed duly observed when, upon its expiry, the Products are ready for despatch.
- 10.2 Delivery is subject to the following conditions, i.e. the term of delivery shall be reasonably extended:
  - a) if Georg Fischer are not supplied in time with the information necessary for the execution of the contract or if subsequent changes causing delays are made by the Purchaser.
  - b) if Georg Fischer are prevented from performing the contract by force majeure. Force majeure shall equally be deemed to be any unforeseeable event beyond Georg Fischer's control which renders Georg Fischer's performance commercially unpractical or impossible, such as delayed or defective supplies from sub contractors labour disputes, governmental orders or regulations, shortages in materials or energy, serious disturbances in Georg Fischer's works, such as the total or partial destruction of plant and equipment or the breakdown of essential facilities, serious disruptions in transport facilities, e.g. impassable roads.  
Should the effect of force majeure exceed a period of six months, either party may cancel the contract forthwith.  
Georg Fischer shall not be liable for any damage or loss of any kind whatsoever resulting therefrom, any suspension or cancellation being without prejudice to Georg Fischer's right to recover all sums due in respect of consignments delivered and costs incurred to date.
  - c) if the Purchaser is in delay with the fulfilment of his obligations under the contract, in particular, if he does not adhere to the agreed conditions of payment or if he has failed to timely provide the agreed securities.
- 10.3 If for reasons attributable to Georg Fischer the agreed term of delivery or a reasonable extension thereof is exceeded, Georg Fischer shall not be deemed in default until the Purchaser has granted to Georg Fischer in writing a reasonable extension thereof of not less than one month which equally is not met.  
The Purchaser shall then be entitled to the remedies provided at law, it being however understood that, subject to limitations of Art. 16, damage claims shall be limited to max. 10% of the price of the delayed delivery.
- 10.4 Part shipments shall be allowed and Georg Fischer shall be entitled to invoice for such partial deliveries.
- 10.5 If the Purchaser fails to take delivery within a reasonable time of Products notified as ready for despatch, Georg Fischer shall be entitled to store the Products at the Purchaser's expense and risk and to invoice them as delivered. If Purchaser fails to effect payment, Georg Fischer shall be entitled to dispose of the Products.
- 10.6 Should Purchaser cancel an order without justification and should Georg Fischer not insist on the performance of the contract, Georg Fischer shall be entitled to liquidated damages in the amount of 10% of the contract price, Georg Fischer's right to prove and claim higher damages remaining reserved. Purchaser shall be entitled to prove, that Georg Fischer has suffered no or a considerably lower damage.

## 11 Packing

- 11.1 If the Products are provided with additional packing over and above the standard packing, such packing shall be charged additionally.

## 12 Passing of Risk

- 12.1 The risk in the Products shall pass to the Purchaser as soon as they have left Georg Fischer's works (EX WORKS, Incoterms ICC, latest version), even if delivery is made carriage-paid, under similar clauses or including installation or when carriage is organized and managed by Georg Fischer.
- 12.2 If delivery is delayed for reasons beyond Georg Fischer's control, the risk shall pass to the Purchaser when he is notified that the Products are ready for despatch.

## 13 Carriage and Insurance

- 13.1 Unless agreed otherwise, the Purchaser shall bear the cost of carriage.
  - 13.2 The Purchaser shall be responsible for transport insurance against damage of whatever kind. Even when such insurance is arranged by Georg Fischer it shall be deemed taken out by the order of and for the account of the Purchaser and at his risk.
  - 13.3 Special requests regarding carriage and insurance shall be communicated to Georg Fischer in due time. Otherwise carriage shall be arranged by Georg Fischer at their discretion, but without responsibility, by the quickest and cheapest method possible.  
In case of carriage-paid delivery transport arrangements shall be made by Georg Fischer. If the Purchaser specifies particular requirements, any extra costs involved shall be borne by him.
  - 13.4 In the event of damage or loss of the Products during carriage the Purchaser shall mark the delivery documents accordingly and immediately have the damage ascertained by the carrier. Not readily ascertainable damages sustained during carriage shall be notified to the carrier within six days after receipt of the Products.
- ## 14 Inspection, Notification of Defects and Damages
- 14.1 The Products will be subject to normal inspection by Georg Fischer during manufacture. Additional tests required by the Purchaser shall be agreed upon in writing and shall be charged to the Purchaser.
  - 14.2 It shall be a condition of Georg Fischer's obligation under the warranties stated hereinafter that Georg Fischer be notified in writing by the Purchaser of any purported defect immediately upon discovery. Notice concerning weight, numbers or apparent defects is to be given latest within 30 days from receipt of the Products, notice of other defects immediately latest within 7 working days after discovery, in any event within the agreed warranty period.
  - 14.3 Purchaser shall not dispose of allegedly defective Products until all warranty and/or damage claims are finally settled. At its request, defective Products are to be placed at Georg Fischer's disposal.
  - 14.4 At its request, Georg Fischer shall be given the opportunity to inspect the defect and/or damage, prior to commencement of remedial work, either itself or by third party experts.

## 15 Warranty

- 15.1 At the written request of the Purchaser, Georg Fischer undertake to repair or replace at their discretion, as quickly as possible and free of charge all Products supplied which demonstrably suffer from faulty design, materials or workman-ship or from faulty operating or installation instructions.  
In order to protect employees from toxic or radioactive substances which may have been transported through defective parts returned to Georg Fischer's sales organisation, said parts must be accompanied by a Material Safety Disclosure Form. The form may be obtained from Georg Fischer's local sales company or via [www.piping.georgfischer.com](http://www.piping.georgfischer.com).  
Replaced parts shall become property of Georg Fischer.
- 15.2 For Products which are manufactured to specifications, drawings or patterns supplied by the Purchaser, Georg Fischer's warranty shall be restricted to proper materials and workmanship.
- 15.3 The Purchaser shall be entitled to cancel the contract or to demand a reduction in the contract price if also a second attempt to repair or replace the Products has failed.
- 15.4 For Products or essential components manufactured by a third party and supplied by Georg Fischer under this contract, Georg Fischer's warranty is limited to the warranty provided by said third party.
- 15.5 This warranty shall not apply to damage resulting from normal wear and tear, improper storage and maintenance, failure to observe the operating instructions, overstressing or overloading, unsuitable operating media, unsuitable construction work or unsuitable building ground, improper repairs or alterations by the Purchaser or third parties, the use of other than original spare parts and other reasons beyond Georg Fischer's control.
- 15.6 No action or claim may be brought by the Purchaser on account of any alleged breach of warranty or any other obligation of Georg Fischer after the expiration of twelve (12) months from receipt of the Products by the end user or at the latest within eighteen (18) months of the Products being despatched by Georg Fischer.
- 15.7 In case of Products for use in domestic installations or in utilities
  - Georg Fischer will assume the costs of dismantling the defective Product and restoring the damaged object as well as, in case of negligence, all other direct damages caused by the defective Product (damage to property and injury to or death of persons) up to CHF 1 000 000 per occurrence.
  - the statute of limitations for warranty or damage claims - contrary to Section 15.6 - will be 5 years from the date of installation.

## 16 Limitation of Liability

- 16.1 All cases of breach of contract and the relevant consequences as well as all rights and claims on the part of the customer, irrespective of what ground they are based, are exhaustively covered by these general conditions of supply. In particular, any claims not expressly mentioned for damages, reduction of price, termination of or withdrawal from the contract are excluded. In no case whatsoever shall the customer be entitled to claim damages other than compensation for costs of remedying defects in the supplies. This in particular refers, but shall not be limited, to loss of production, loss of use, loss of orders, loss of profit and other direct or indirect or consequential damage. This exclusion of liability, however, does not apply to unlawful intent or gross negligence on the part of Georg Fischer and in case of strict liability under applicable product liability statutes, but does apply to unlawful intent or gross negligence of persons employed or appointed by Georg Fischer to perform any of its obligations.

## 17 Severability

- 17.1 Should any term or clause of these General Conditions in whole or in part be found to be unenforceable or void, all other provisions shall remain in full force and effect and the unenforceable or void provision shall be replaced by a valid provision, which comes closest to the original intention of the unenforceable or invalid provision.

## 18 Place of Performance and Jurisdiction

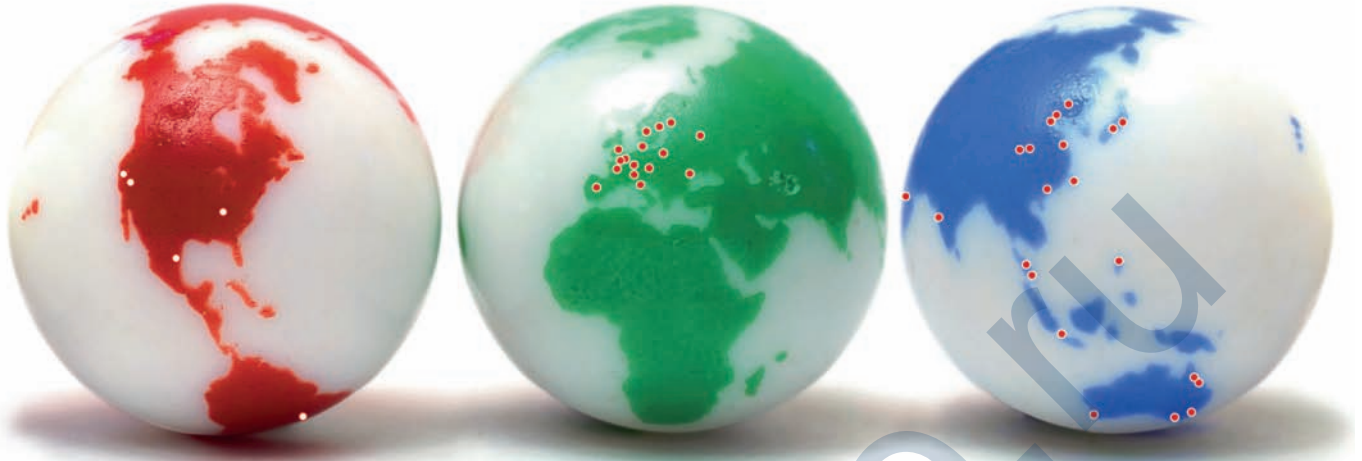
- 18.1 Place of performance for the Products shall be the Georg Fischer works from which the Products are despatched.
- 18.2 Any civil action based upon any alleged breach of this contract shall be filed and prosecuted exclusively in the courts of Schaffhausen, Switzerland.  
Georg Fischer however reserves the right to file actions in any court having jurisdiction over controversies arising out of or in connection with the present contract.
- 18.3 The contract shall be governed by Swiss law without regard to conflict of law provisions that would require the application of another law.



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Adding Quality to People's Lives

#### Australia

George Fischer Pty Ltd  
Riverwood NSW 2210 Australia  
Phone +61(0)2 9502 8000  
[australia.ps@georgfischer.com](mailto:australia.ps@georgfischer.com)  
[www.georgfischer.com.au](http://www.georgfischer.com.au)

#### Austria

George Fischer  
Rohrleitungssysteme GmbH  
3130 Herzogenburg  
Phone +43(0)2782 856 43-0  
[austria.ps@georgfischer.com](mailto:austria.ps@georgfischer.com)  
[www.georgfischer.at](http://www.georgfischer.at)

#### Belgium/Luxembourg

George Fischer NV/SA  
1070 Bruxelles/Brüssel  
Phone +32(0)2 556 40 20  
[be.ps@georgfischer.com](mailto:be.ps@georgfischer.com)  
[www.georgfischer.be](http://www.georgfischer.be)

#### Brazil

George Fischer Ltda  
04795-100 São Paulo  
Phone +55(0)11 5687 1311  
[br.ps@georgfischer.com](mailto:br.ps@georgfischer.com)

#### China

George Fischer  
Piping Systems Ltd Shanghai  
Pudong, Shanghai 201319  
Phone +86(0)21 58 13 33 33  
[china.ps@georgfischer.com](mailto:china.ps@georgfischer.com)  
[www.cn.piping.georgfischer.com](http://www.cn.piping.georgfischer.com)

#### Denmark/Iceland

George Fischer A/S  
2630 Taastrup  
Phone +45 (0)70 22 19 75  
[info.dk.ps@georgfischer.com](mailto:info.dk.ps@georgfischer.com)  
[www.georgfischer.dk](http://www.georgfischer.dk)

#### France

Georg Fischer SAS  
95932 Roissy Charles de Gaulle Cedex  
Phone +33(0)1 41 84 68 84  
[fr.ps@georgfischer.com](mailto:fr.ps@georgfischer.com)  
[www.georgfischer.fr](http://www.georgfischer.fr)

#### Germany

Georg Fischer GmbH  
73095 Albershausen  
Phone +49(0)7161 302-0  
[info.de.ps@georgfischer.com](mailto:info.de.ps@georgfischer.com)  
[www.georgfischer.de](http://www.georgfischer.de)

#### India

Georg Fischer Piping Systems Ltd  
400 076 Mumbai  
Phone +91 224007 2001  
[in.ps@georgfischer.com](mailto:in.ps@georgfischer.com)  
[www.georgfischer.in](http://www.georgfischer.in)

#### Italy

Georg Fischer S.p.A.  
20063 Cernusco S/N (MI)  
Phone +3902 921 861  
[it.ps@georgfischer.com](mailto:it.ps@georgfischer.com)  
[www.georgfischer.it](http://www.georgfischer.it)

#### Japan

George Fischer Ltd  
556-0011 Osaka,  
Phone +81(0)6 6635 2691  
[jp.ps@georgfischer.com](mailto:jp.ps@georgfischer.com)  
[www.georgfischer.jp](http://www.georgfischer.jp)

#### Korea

Georg Fischer Piping Systems  
Guro-3 dong, Guro-gu, Seoul, Korea  
Phone +82(0)2 2081 1450  
Fax +82(0)2 2081 1453  
[kor.ps@georgfischer.com](mailto:kor.ps@georgfischer.com)

#### Malaysia

Georg Fischer (M) Sdn. Bhd.  
40460 Shah Alam, Selangor  
Phone +60 (0)3 5122 5585  
[conne.kong@georgfischer.com](mailto:conne.kong@georgfischer.com)

#### Mexico

Georg Fischer S.A. de C.V.  
Apodaca, Nuevo Leon  
CP66636 Mexico  
Phone +52 (81)11340 8586  
Fax +52 (81)1522 8906

#### Middle East

George Fischer Piping Systems  
Dubai, United Arab Emirates  
Phone +971 4 289 49 60  
[info.export@georgfischer.com](mailto:info.export@georgfischer.com)  
[www.export.georgfischer.com](http://www.export.georgfischer.com)

#### Netherlands

Georg Fischer N.V.  
8161 PA Epe  
Phone +31(0)578 678 222  
[nl.ps@georgfischer.com](mailto:nl.ps@georgfischer.com)  
[www.georgfischer.nl](http://www.georgfischer.nl)

#### Norway

Georg Fischer AS  
1351 Rud  
Phone +47(0)67 18 29 00  
[no.ps@georgfischer.com](mailto:no.ps@georgfischer.com)  
[www.georgfischer.no](http://www.georgfischer.no)

#### Poland

Georg Fischer Sp. z o.o.  
02-226 Warszawa  
Phone +48(0)22 313 10 50  
[poland.ps@georgfischer.com](mailto:poland.ps@georgfischer.com)  
[www.georgfischer.pl](http://www.georgfischer.pl)

#### Romania

Georg Fischer  
Piping Systems Ltd  
020257 Bucharest - Sector 2  
Phone +40(0)21 230 53 80  
[ro.ps@georgfischer.com](mailto:ro.ps@georgfischer.com)  
[www.export.georgfischer.com](http://www.export.georgfischer.com)

#### Russia

Georg Fischer Piping Systems  
Moscow 125047  
Tel. +7 495 258 60 80  
[ru.ps@georgfischer.com](mailto:ru.ps@georgfischer.com)  
[www.georgfischer.ru](http://www.georgfischer.ru)

#### Singapore

George Fischer Pte Ltd  
528 872 Singapore  
Phone +65(0)67 47 06 11  
[sgp.ps@georgfischer.com](mailto:sgp.ps@georgfischer.com)  
[www.georgfischer.com.sg](http://www.georgfischer.com.sg)

#### Spain/Portugal

Georg Fischer S.A.  
28046 Madrid  
Phone +34(0)91 781 98 90  
[es.ps@georgfischer.com](mailto:es.ps@georgfischer.com)  
[www.georgfischer.es](http://www.georgfischer.es)

#### Sweden/Finland

Georg Fischer AB  
12523 Älvsjö-Stockholm  
Phone +46(0)8 506 775 00  
[info.se.ps@georgfischer.com](mailto:info.se.ps@georgfischer.com)  
[www.georgfischer.se](http://www.georgfischer.se)

#### Switzerland

Georg Fischer  
Rohrleitungssysteme [Schweiz] AG  
8201 Schaffhausen  
Phone +41(0)52 631 30 26  
[ch.ps@georgfischer.com](mailto:ch.ps@georgfischer.com)  
[www.piping.georgfischer.ch](http://www.piping.georgfischer.ch)

#### Taiwan

Georg Fischer Piping Systems  
San Chung City, Taipei Hsien  
Phone +886 2 8512 2822  
Fax +886 2 8512 2823

#### United Kingdom/Ireland

George Fischer Sales Limited  
Coventry, CV2 2ST  
Phone +44(0)2476 535 535  
[uk.ps@georgfischer.com](mailto:uk.ps@georgfischer.com)  
[www.georgfischer.co.uk](http://www.georgfischer.co.uk)

#### USA/Canada/Latin America/Caribbean

George Fischer LLC  
Tustin, CA 92780-7258  
Phone +1(714) 731 88 00  
Toll Free 800 854 40 90  
[us.ps@georgfischer.com](mailto:us.ps@georgfischer.com)  
[www.us.piping.georgfischer.com](http://www.us.piping.georgfischer.com)

#### International

Georg Fischer  
Piping Systems [Switzerland] Ltd.  
8201 Schaffhausen  
Phone +41(0)52 631 30 03  
Fax +41(0)52 631 28 93  
[info.export@georgfischer.com](mailto:info.export@georgfischer.com)  
[www.export.georgfischer.com](http://www.export.georgfischer.com)

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