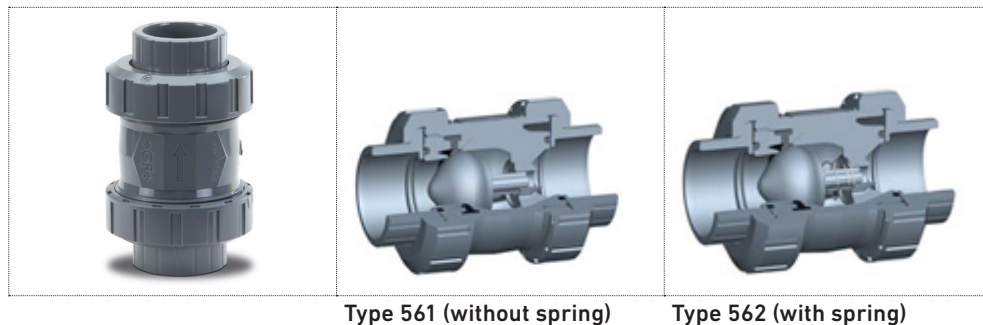


Check Valve Type 561/562



Product description

The innovative check valve design combines increased safety and efficiency with easy handling. The two check valves of Type 561 and Type 562 easily fit in all piping systems worldwide thanks to our comprehensive product range. The self-closing function and the silent operation of the valve support safety and comfort.

Function

The check valve is a component that allows the flow of the medium in one direction only.

Applications

- Microelectronics
- Chemical process industry
- Food and beverages
- Ship building
- Water treatment
- Cooling processes

Flow media

Media that are free of foreign particles, viscous, thick and gaseous media.

Benefits/features

Security

- Type 561 (no spring) is already 100 % leak-proof at a water column of 2 m
- The spring within the valve (Type 562) guarantees 100 % leak-tightness when the valve is in idle mode, even without a water column and when installed horizontally
- The gasket is always fixed in the same position. This prevents the gasket from slipping, bending or being washed out
- Corrosion-resistant
- Autonomous self-closing mechanism without an additional energy source
- Self-cleaning design – minimizes cleaning and maintenance
- Optimized flow design
- Corrosion-resistant and high pressure rating
- Wide range of materials for optimum chemical resistance
- High degree of safety and efficiency

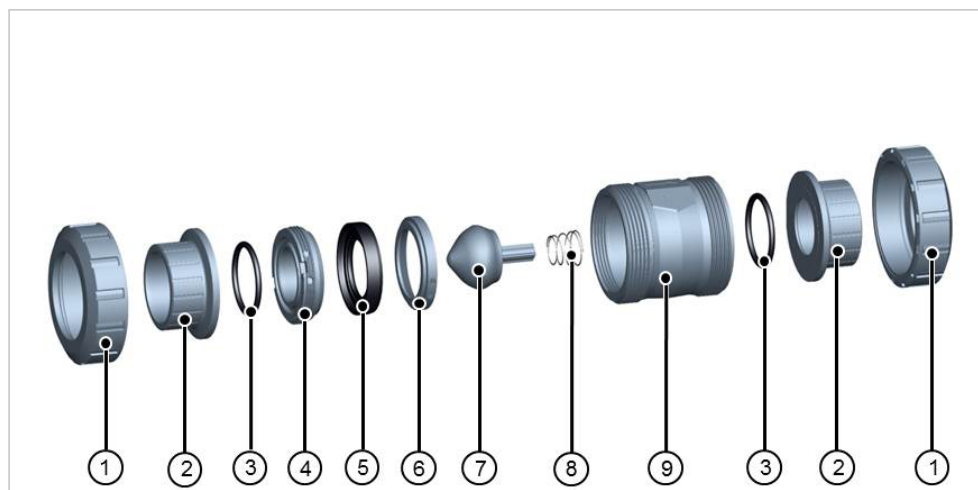
Simplicity

The check valves of Type 561 and 562 are self-closing. This means that no other energy source is needed than the pressure in the pipe.

Efficiency

Thanks to the aerodynamic design of the check cone, the valve permits a far higher flow rate than standard check valves with a ball.

Technical data



- ① Coupling nut
- ② Connecting part
- ③ O-ring
- ④ Screw-in ring
- ⑤ Sealing ring
- ⑥ Back-up ring
- ⑦ Cone
- ⑧ Spring (Type 562)
- ⑨ Housing

Specification		
Dimensions	d16/DN10 - d110/DN100, 3/8" - 4"	
Materials	Valve body	PVC-U, PVC-C, ABS, PP-H, PVDF
	Spring Type 562	Standard: V2A Optional: Nimonic 90 Halar (ECTFE) coated
Gasket materials and O-rings	EPDM, FKM, FFKM, FEP coated	
Pressure levels	PVC-U, PVC-C, PVDF	PN16
	PP-H, ABS	PN10
Connections	Solvent cement sockets ISO, BS, ASTM/ANSI, JIS	
	Solvent cement spigots ISO	
	Threaded sockets ISO, BS, ASTM/ANSI	
	Fixed flange ISO, BS	
Approvals	Butt fusion spigots, long, PE100 SDR17 ISO	
	ACS, FDA, DIBt, TA-Luft, NAMSA	

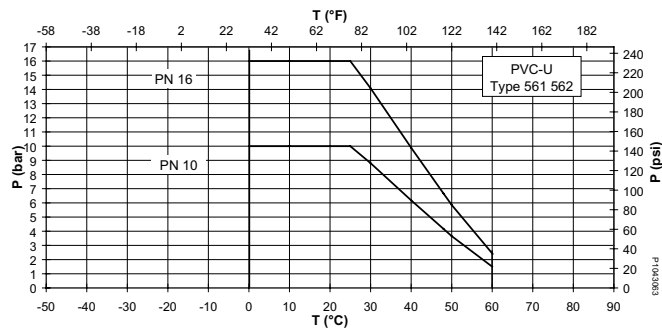
Kv 100 values

DN (mm)	Inch (inch)	d (mm)	Kv 100 (l/min)	Cv 100 (gal/min)	Kv 100 (m ³ /h)
10	3/8	16	190	13	11
15	1/2	20	190	13	11
20	3/4	25	380	26	23
25	1	32	460	32	28
32	1 1/4	40	850	59	51
40	1 1/2	50	1080	75	65
50	2	63	1670	115	100
65	2 1/2	75	2950	204	177
80	3	90	3600	248	216
100	4	110	4150	286	249

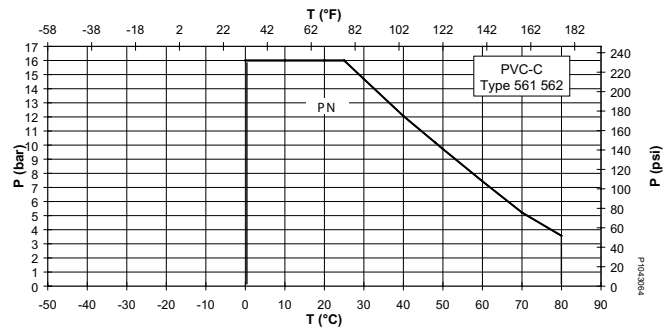
Pressure-temperature diagrams

The following pressure-temperature diagrams are based on a lifetime of 25 years and water or similar media.

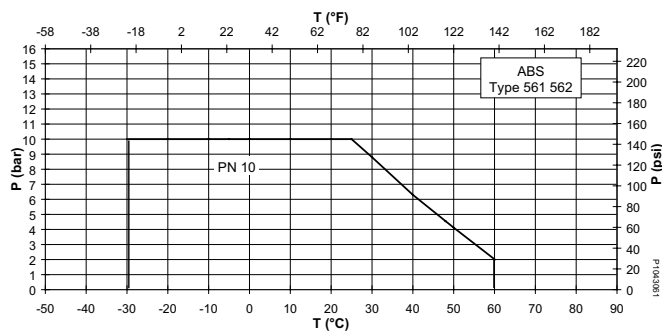
PVC-U



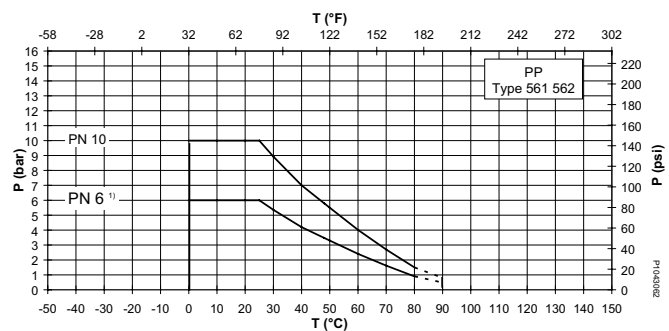
PVC-C



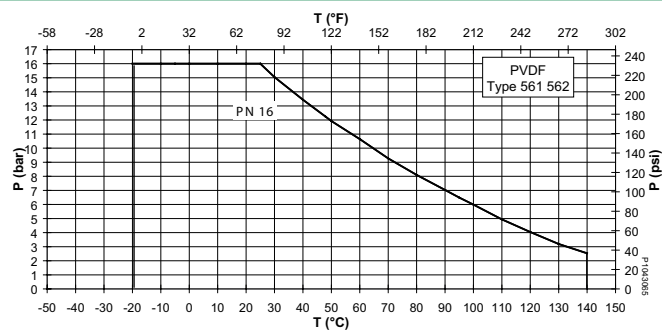
ABS



PP



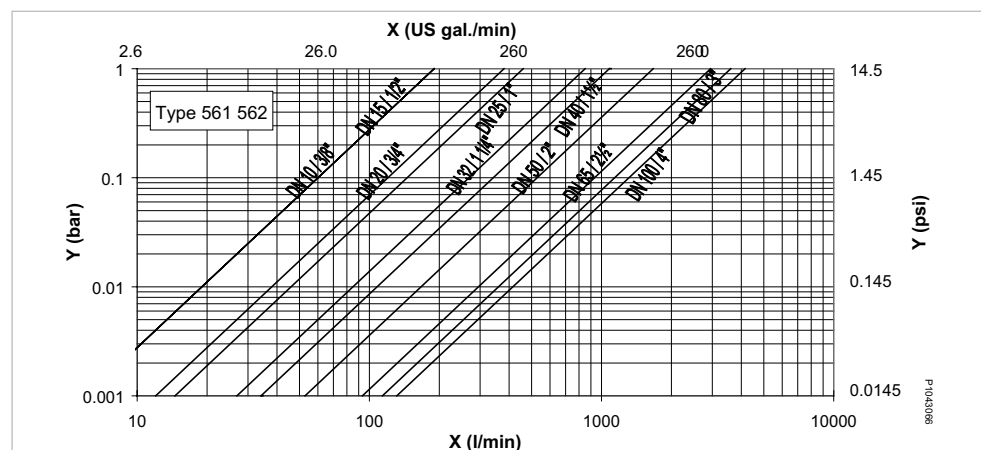
PVDF



T Temperature (°C, °F)

P Permissible pressure (bar, psi)

Pressure losses



X Flow rate
(l/min, US gal/min)
Y Pressure loss Δp (bar, psi)

DN (mm)	Open (vertical installation)				Close ¹⁾	
	Differential pressure for lifting the cone (bar)	Differential pressure for full stroke of the cone (bar)	Flow for full stroke of the cone (l/min)	Min. flow rate for full stroke (m/sec)	Leak-tight starting at (bar)	Type 562 leak-tight starting at (bar)
10	0.003	0.01	8	0.7	0.2	0.1
15	0.003	0.01	9	0.7	0.2	0.1
20	0.003	0.01	13	0.7	0.2	0.1
25	0.005	0.01	18	0.8	0.2	0.1
32	0.005	0.01	35	0.8	0.2	0.1
40	0.01	0.01	70	0.8	0.2	0.1
50	0.02	0.01	100	0.8	0.2	0.1
65	0.025	0.01	120	0.9	0.2	0.1
80	0.03	0.01	170	0.9	0.2	0.1
100	0.03	0.08	250	1.0	0.2	0.1

¹⁾ Vertical and horizontal installation.

The information in the table apply to water or water-like media with a density of approximately 1g/cm^3 . If media with a higher density are used, please note that, depending on the material used, the cone may float and the closing function of the cone is no longer guaranteed. This is dependent on the material used. The values for the opening conditions apply to vertical installation (recommended installation location). In the case of horizontal installation, the valve opens at much lower differential pressures.

Material	Density (g/cm^3)
ABS	1.03
PP-TV 20 (cone: PP-talk)	1.05
PP-H	0.91
PVC-U	1.38
PVC-C	1.50
PVDF	1.78

Pressure for raising cone Type 562

DN (mm)	Differential pressure for raising the cone (bar)
10	0.028
15	0.028
20	0.030
25	0.030
32	0.035
40	0.040
50	0.050
65	0.060
80	0.060
100	0.060

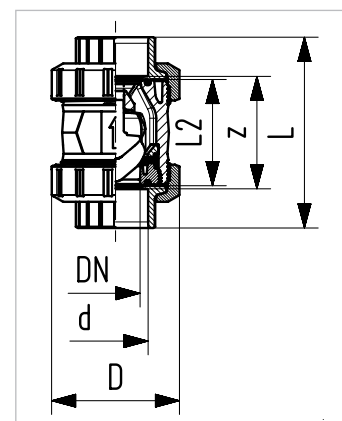
Reference values for tightening torque of screws

d (mm)	DN (mm)	inch (inch)	Total number of screws	Torque flat gasket		Torque profile flat gasket	
				(Nm)	(lb-ft)	(Nm)	(lb-ft)
20	15	½	4 x M12 x 50	10	7.4	10	7.4
25	20	¾	4 x M12 x 55	10	7.4	10	7.4
32	25	1	4 x M12 x 60	15	11	10	7.4
40	32	1¼	4 x M16 x 65	20	15	15	11
50	40	1½	4 x M16 x 70	25	18	15	11
63	50	2	4 x M16 x 75	35	26	20	15
75	65	2½	4 x M16 x 90	50	37	25	18
90	80	3	8 x M16 x 100	30	22	15	11
110	100	4	8 x M16 x 130	35	26	20	15

Dimensions

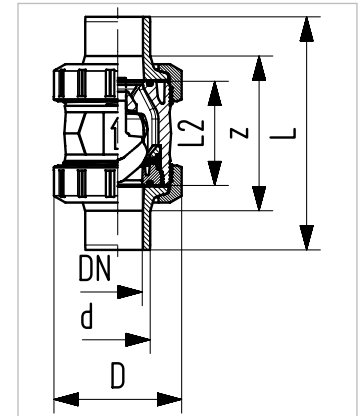
Type 561/562 with solvent cement sockets, metric

d (mm)	DN (mm)	D (mm)	L (mm)	l2 (mm)	z (mm)	closest (inch)
16	10	50	92	56	64	¾
20	15	50	95	56	64	½
25	20	58	110	65	72	¾
32	25	68	123	71	79	1
40	32	84	146	85	94	1 ¼
50	40	97	157	89	95	1 ½
63	50	124	183	101	107	2
75	65	166	233	136	144	2 ½
90	80	200	254	141	151	3
110	100	238	301	164	174	4



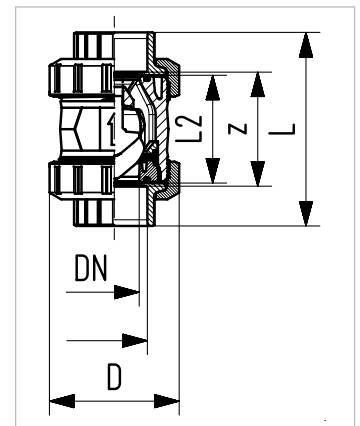
Type 561/562 with solvent cement spigots, metric

d (mm)	DN (mm)	D (mm)	L (mm)	l2 (mm)	z (mm)	closest (inch)
16	10	50	114	56	56	3/8
20	15	50	124	56	56	1/2
25	20	58	144	65	65	3/4
32	25	68	154	71	71	1
40	32	84	174	85	85	1 1/4
50	40	97	194	89	89	1 1/2
63	50	124	224	101	101	2
75	65	166	284	136	136	2 1/2
90	80	200	300	141	141	3
110	100	238	340	164	164	4



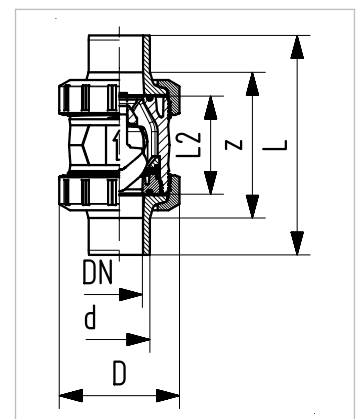
Type 561/562 with threaded socket, Rp

DN (mm)	D (mm)	L (mm)	l2 (mm)	z (mm)	Rp (inch)
10	50	95	56	69	3/8
15	50	100	56	67	1/2
20	58	114	65	78	3/4
25	68	127	71	85	1
32	84	146	85	100	1 1/4
40	97	152	89	106	1 1/2
50	124	177	101	121	2
65	166	233	136	144	2 1/2
80	200	254	141	151	3
100	238	301	164	174	4



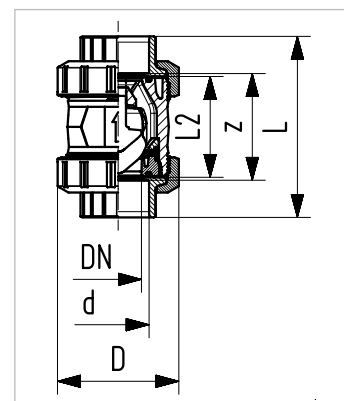
Type 561/562 with socket fusion spigot, metric

d (mm)	DN (mm)	D (mm)	L (mm)	l2 (mm)	closest (inch)
16	10	50	110	56	3/8
20	15	50	120	56	1/2
25	20	58	139	65	3/4
32	25	68	150	71	1
40	32	84	170	85	1 1/4
50	40	97	190	89	1 1/2
63	50	124	220	101	2
75	65	166	280	136	2 1/2
90	80	200	296	141	3
110	100	238	336	164	4



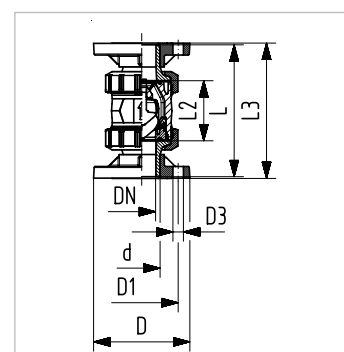
Type 561/562 with solvent cement sockets, metric

d (mm)	DN (mm)	D (mm)	L (mm)	l2 (mm)	z (mm)	closest (inch)
16	10	50	93	56	67	3/8
20	15	50	95	56	66	1/2
25	20	58	109	65	77	3/4
32	25	68	119	71	83	1
40	32	84	135	85	99	1 1/4
50	40	97	147	89	105	1 1/2
63	50	124	168	101	117	2
75	65	166	233	136	167	2 1/2
90	80	200	254	141	180	3
110	100	238	301	164	215	4



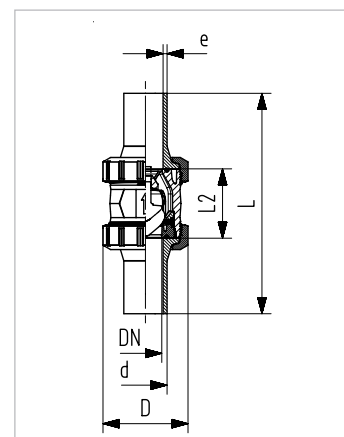
Type 561/562 with fixed flange, metric

d (mm)	DN (mm)	D (mm)	D1 (mm)	D3 (mm)	L (mm)	l2 (mm)	l3 (mm)	closest (inch)
20	15	95	65	14	124	56	130	1/2
25	20	105	75	14	144	65	150	3/4
32	25	115	85	14	154	71	160	1
40	32	140	100	18	174	85	180	1 1/4
50	40	150	110	18	194	89	200	1 1/2
63	50	165	125	18	224	101	230	2



Type 561/562 with butt fusion spigot, long, metric

d (mm)	DN (mm)	D (mm)	L (mm)	l2 (mm)	e (mm)	closest (inch)
20	15	50	193	56	2.3	1/2
25	20	58	216	65	2.3	3/4
32	25	68	223	71	3	1
40	32	84	249	85	3.7	1 1/4
50	40	97	271	89	4.6	1 1/2
63	50	124	321	101	5.8	2



Accessories

- Foot valve with suction basket as protection against contamination

i For further information on accessories, refer to the online product catalogue at www.gfps.com.

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