

# Type 561/562 Cone Check Valve

## Standard Features

- **Size**  
3/8"–4"
- **Material**
  - » Body: PVC, CPVC, PROGEF Standard, Polypropylene, SYGEF PVDF, ABS
  - » Spring (562 only): Stainless Steel
  - » Optional: Nimonic C/Hastelloy C, Halar coated Nimonic C
- **Connection**  
Socket, Threaded, Spigot (PVDF and PP only)
- **Seals**  
EPDM or FPM
- **Sealing Pressure**  
Type 561: 2.9 PSI  
Type 562: 1.45 PSI



## General

The Type 561/562 Cone Check Valve family is used to automatically stop flow in the back direction when the fluid in the line reverses. The valve closes when vertically mounted with (561) 2.9 PSI or (562) 1.45 PSI. The new check valve Type 562 (horizontal) closes absolutely leak-tight with the built-in spring, even in the de-energized state — without water column as well as in a horizontal position. The union design (3/8" to 4") allows for easy replacement or repair in the field. The valve is available in PVC, CPVC, Polypropylene, PVDF, and ABS, matching easily with most plastic piping systems.

## New generation check valve types 561, 562

### Technical features

#### Types

All types are available in the dimension DN10 up to DN100.

#### Type 561 (without spring)



#### Type 562 (with spring)



#### FPM (fluoro rubber)

- High temperature resistance
- Better chemical resistance than EPDM, except for bases
- Very good diffusion properties

#### Exploded drawing



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

#### Materials

Additional chapters of the "Georg Fischer Planning Fundamentals" contain the material properties as well as chemical resistances for the different types of materials. Please take this into consideration.

The valve body is available in the following materials:

- PVC, CPVC, ABS
- PROGEF Standard
- SYGEF Standard, SYGEF Plus

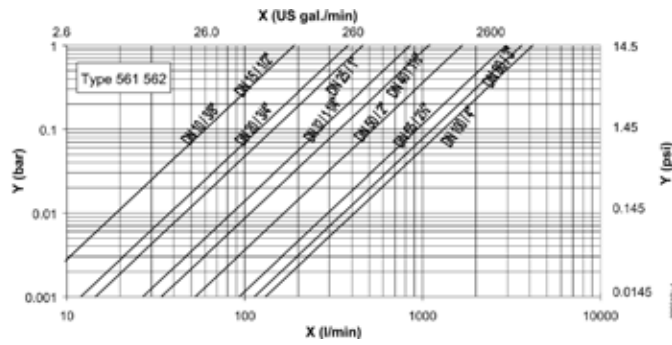
Below are the offered sealing materials and a short explanation of their properties:

#### EPDM (ethylene propylene diene)

- Standard / All-round sealing material
- Good chemical resistance except for oil
- Very good at hot water
- High temperature resistance
- Conform to FDA
- Miscellaneous drinking water approvals

# Technical data

## Pressure loss type 561, 562

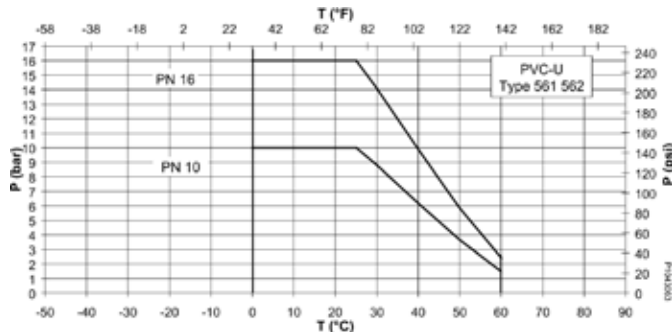


X Flow rate (l/min, US gal./min)

Y Pressure loss  $\Delta p$  (bar, psi)

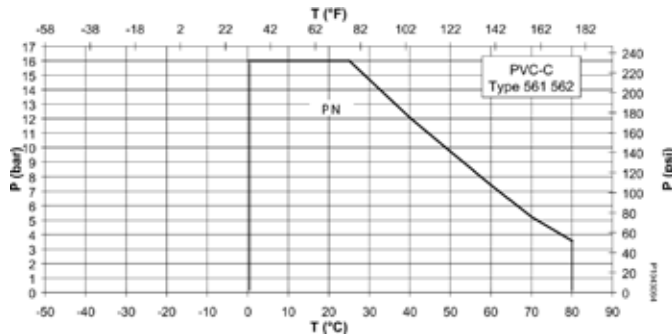
## Pressure-temperature diagrams type 561, 562

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



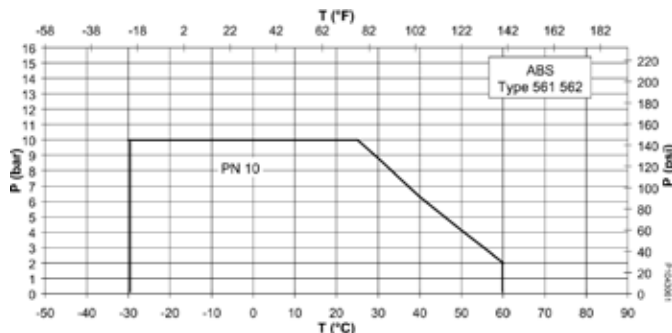
P Permissible pressure in bar, psi

T Temperature in °C, °F



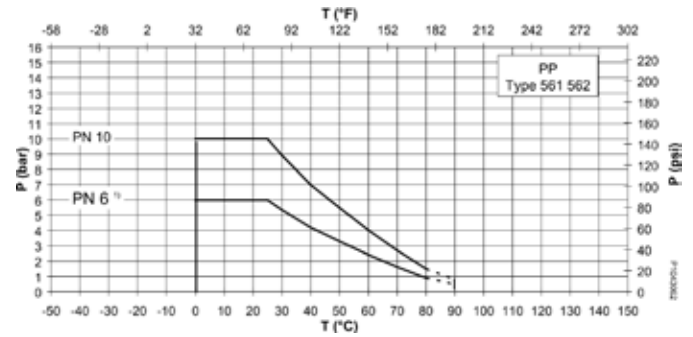
P Permissible pressure in bar, psi

T Temperature in °C, °F



P Permissible pressure in bar, psi

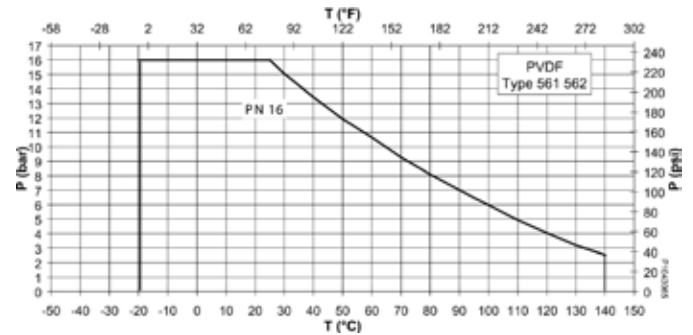
T Temperature in °C, °F



P Permissible pressure in bar, psi

T Temperature in °C, °F

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



P Permissible pressure in bar, psi

T Temperature in °C, °F

## Opening and closing conditions type 561, 562

DN	Open (vertical installation)				Closed*	
Inch	Differential pressure for take-off of cone (psi)	Differential pressure for full stroke of cone (psi)	Min. flow for full stroke of cone (g/min)	Min. flow rate for full stroke (ft/sec)	Tight at (psi) Type 561	Tight at (psi) Type 562
3/8	0.04	0.15	2.11	2.30	2.9	1.45
1/2	0.04	0.15	2.38	2.30	2.9	1.45
3/4	0.04	0.15	3.43	2.30	2.9	1.45
1	0.07	0.15	4.76	2.62	2.9	1.45
1 1/4	0.07	0.15	9.25	2.62	2.9	1.45
1 1/2	0.15	0.15	18.49	2.62	2.9	1.45
2	0.29	0.15	26.42	2.62	2.9	1.45
2 1/2	0.36	0.15	31.70	2.95	2.9	1.45
3	0.44	0.15	44.91	2.95	2.9	1.45
4	0.44	0.16	66.05	2.95	2.9	1.45

\*vertical and horizontal installation

### NOTICE

- The data in the above table are valid for water or water-like media with a density of ca. 1 g/cm<sup>3</sup>. If media with a higher density are used, be aware that depending on the material used, the cone can float, and therefore the closing function is no longer warranted. This depends on the material used.
- The values for the opening conditions apply to vertical installation (→ recommended mounting position). With horizontal installation, the valve opens already at much lower differential pressures.

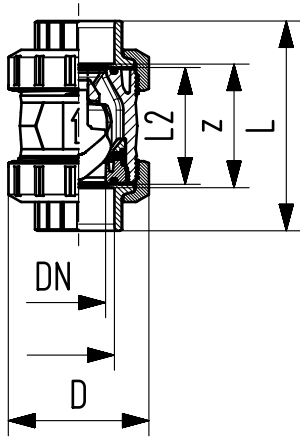
### Cv 100 values type 561, 562

DN mm	Inch	d mm	kv 100 l/min (Δp = 1 bar)	Cv 100 US gal/min (Δp = 1 psi)	kv 100 m <sup>3</sup> /h (Δp = 1 bar)
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

Material	Density
ABS	1.03 g/cm <sup>3</sup>
PP-TV 20 (Cone: PP-talc-filled)	1.05 g/cm <sup>3</sup>
PP-H	0.91 g/cm <sup>3</sup>
PVC	1.38 g/cm <sup>3</sup>
CPVC	1.50 g/cm <sup>3</sup>
PVDF	1.78 g/cm <sup>3</sup>

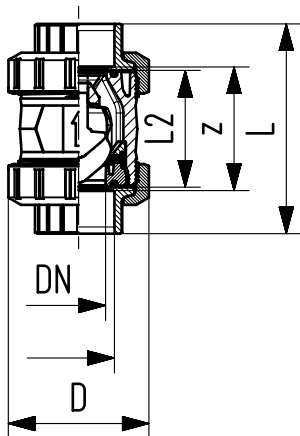
# Dimensions for Type 561/562 Ball Check Valve

## PVC and CPVC



NPT [inch]	D [inch]	L [inch]	L2 [inch]	z [inch]
3/8	1.97	4.13	2.20	2.64
1/2	1.97	4.13	2.20	2.40
3/4	2.28	4.76	2.56	2.76
1	2.68	5.24	2.80	2.99
1¼	3.31	6.06	3.35	3.54
1½	3.82	6.46	3.50	3.70
2	4.88	7.20	3.98	4.21
2½	6.54	9.17	5.35	5.67
3	7.87	10.00	5.55	5.94
4	9.37	11.85	6.46	6.85

## PROGEF PP and SYGEF PVDF

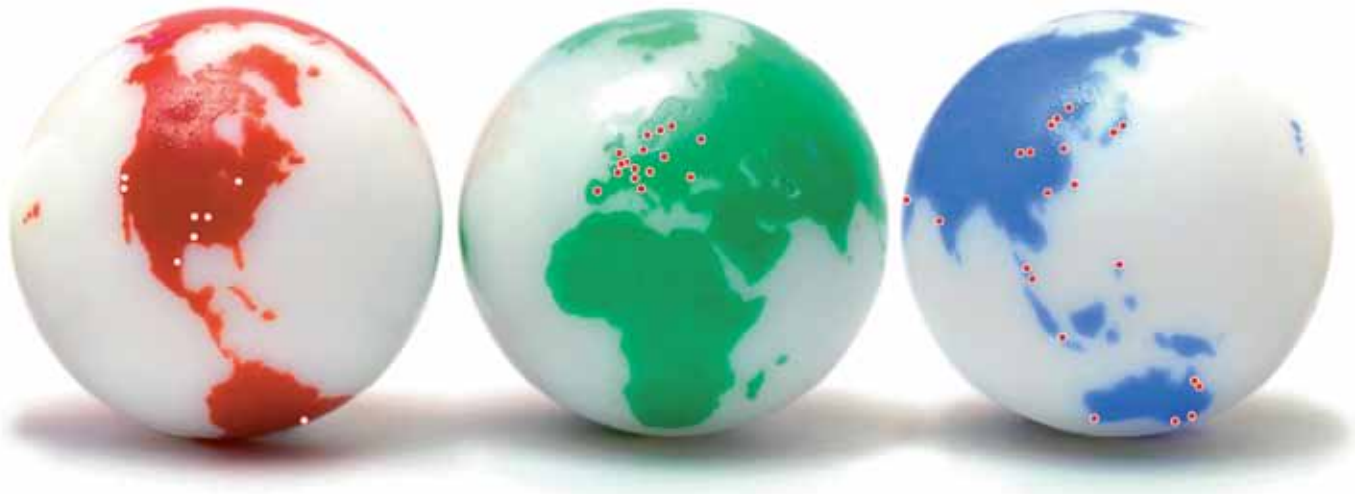


d [mm]	D [inch]	L socket [inch]	L threaded [inch]	L spigot [inch]	L2 [inch]	z [inch]	closest inch
16	1.97	3.66	3.78		2.20	2.64	3/8
20	1.97	3.74	3.90	5.12	2.20	2.60	1/2
25	2.28	4.29	4.37	5.63	2.56	3.03	3/4
32	2.68	4.69	5.00	5.91	2.80	3.27	1
40	3.31	5.31	5.75	6.73	3.35	3.90	1¼
50	3.82	5.79	6.18	7.52	3.50	4.13	1½
63	4.88	6.61	7.20	8.66	3.98	4.61	2
75	6.54	9.17		10.47	5.35	6.57	2½
90	7.87	10.00		10.39	5.55	7.09	3
110	9.37	11.85		11.85	6.46	8.46	4

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