

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)



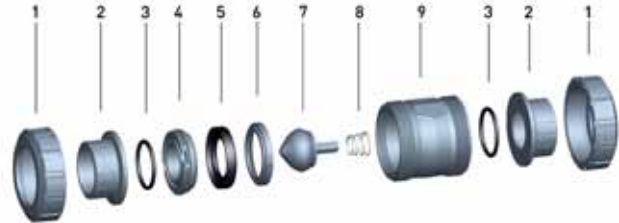
Type 562 (with spring)



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

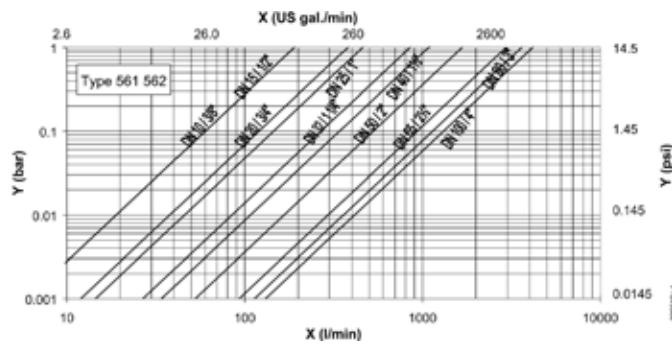
Below are the offered sealing materials and a short explanation of their properties:

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

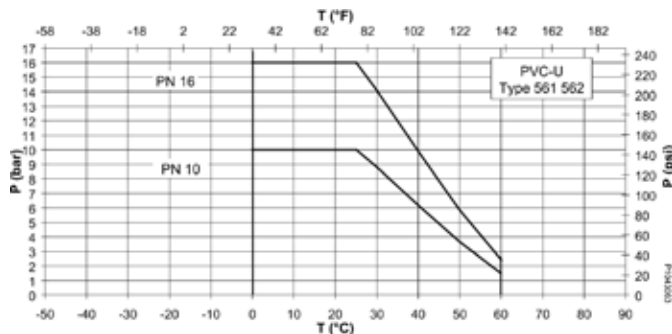


X Flow rate (l/min, US gal./min)

Y Pressure loss Δp (bar, psi)

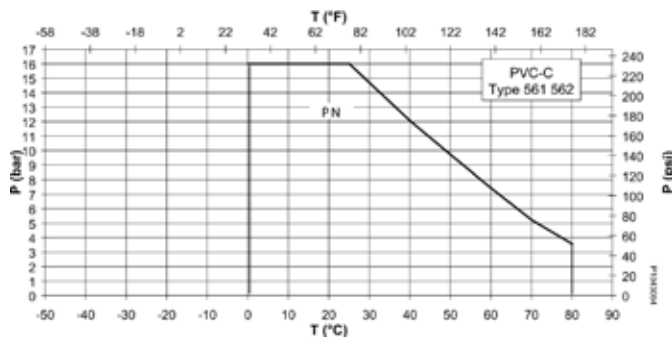
Pressure-temperature diagrams type 561, 562

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



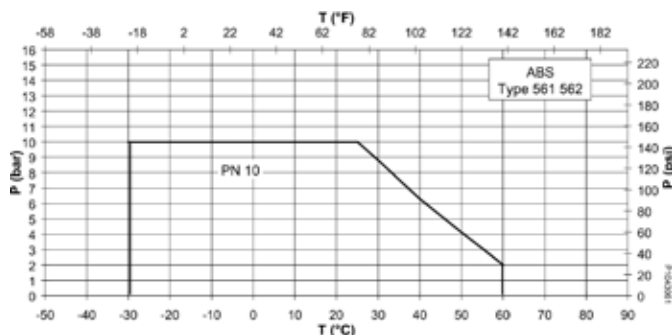
P Permissible pressure in bar, psi

T Temperature in °C, °F



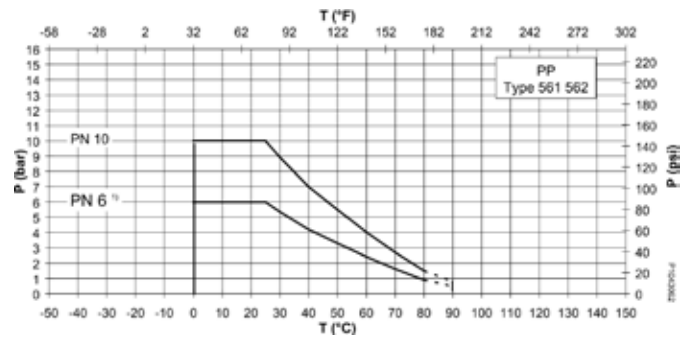
P Permissible pressure in bar, psi

T Temperature in °C, °F



P Permissible pressure in bar, psi

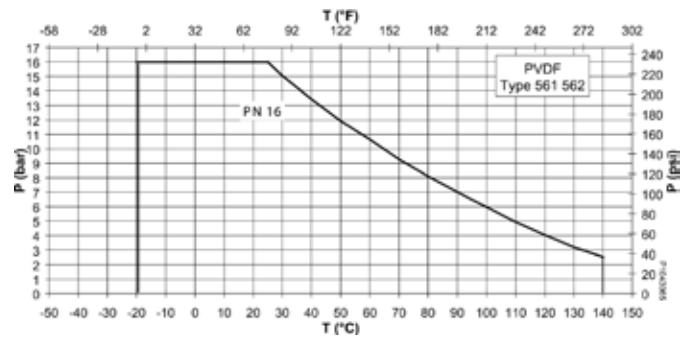
T Temperature in °C, °F



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/cm³. 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.

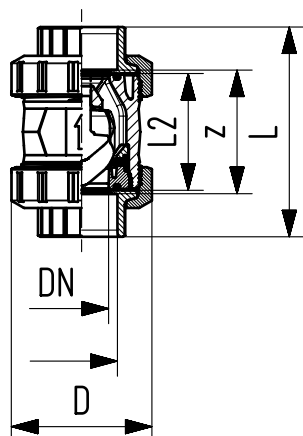
Cv 100 values type 561, 562

DN mm	Inch	d mm	kv 100 l/min (Δp = 1 bar)	Cv 100 US gal/min (Δp = 1 psi)	kv 100 m ³ /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 ³
PP-TV 20 (Cone: PP-talc-filled)	1.05 g/cm ³
PP-H	0.91 g/cm ³
PVC	1.38 g/cm ³
CPVC	1.50 g/cm ³
PVDF	1.78 g/cm ³

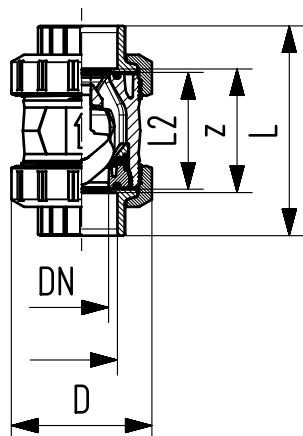
Dimensions for Type 561/562 Ball Check Valve

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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Argentina / Southern South America

Georg Fischer Central Plastics
Sudamérica S.R.L.
Buenos Aires, Argentina
Phone +5411 4512 02 90
gfccentral.ps.ar@georgfischer.com

Australia

Georg Fischer Pty Ltd
Riverwood NSW 2210 Australia
Phone +61(0)2 9502 8000
australia.ps@georgfischer.com
www.georgfischer.com.au

Austria

Georg Fischer
Rohrleitungssysteme GmbH
3130 Herzogenburg
Phone +43(0)2782 856 43-0
austria.ps@georgfischer.com
www.georgfischer.at

Belgium / Luxembourg

Georg Fischer NV/SA
1070 Bruxelles/Brüssel
Phone +32(0)2 556 40 20
be.ps@georgfischer.com
www.georgfischer.be

Brazil

Georg Fischer Ltda.
04795-100 São Paulo
Phone +55(0)11 5525 1311
br.ps@georgfischer.com
www.georgfischer.com.br

Canada

Georg Fischer Piping Systems Ltd
Brampton, ON L6T 4E3
Phone +1(905)792 8005
Fax +1(905)792 6667
ca.ps@georgfischer.com
www.georgfischer.ca

China

Georg Fischer
Piping Systems Ltd Shanghai
Pudong, Shanghai 201319
Phone +86(0)21 58 13 33 33
china.ps@georgfischer.com
www.georgfischer.cn

Denmark / Iceland

Georg Fischer A/S
2630 Taastrup
Phone +45 (0)70 22 19 75
info.dk.ps@georgfischer.com
www.georgfischer.dk

Finland

Georg Fischer AB
01510 VANTAA
Phone +358 (0)9 586 58 25
Fax +358 (0)9 586 58 29
www.georgfischer.fi
info.fi.ps@georgfischer.com

France

Georg Fischer SAS
95932 Roissy Charles de Gaulle Cedex
Phone +33(0)1 41 84 68 84
fr.ps@georgfischer.com
www.georgfischer.fr

Germany

Georg Fischer GmbH
73095 Albershausen
Phone +49(0)7161 302-0
info.de.ps@georgfischer.com
www.georgfischer.de

India

Georg Fischer Piping Systems Ltd
400 076 Mumbai
Phone +91 224007 2001
in.ps@georgfischer.com
www.georgfischer.in

Italy

Georg Fischer S.p.A.
20063 Cernusco S/N (MI)
Phone +3902 921 861
it.ps@georgfischer.com
www.georgfischer.it

Japan

Georg Fischer Ltd
556-0011 Osaka,
Phone +81(0)6 6635 2691
jp.ps@georgfischer.com
www.georgfischer.jp

Korea

Georg Fischer Piping Systems
271-3 Seoheon-dong Bundang-gu
Seongnam-si, Gyeonggi-do
Seoul 463-824
Phone +82 31 8017 1450 3
Fax +82 31 8017 1454
kor.ps@georgfischer.com
www.georgfischer.kr

Malaysia

George Fischer [M] Sdn. Bhd.
40460 Shah Alam, Selangor Darul Ehsan
Phone +60 (0)3 5122 5585
my.ps@georgfischer.com
www.georgfischer.my

Mexico / Northern Latin America

Georg Fischer S.A. de C.V.
Apodaca, Nuevo Leon
CP66636 Mexico
Phone +52 (81)1340 8586
Fax +52 (81)1522 8906
mx.ps@georgfischer.com
www.georgfischer.mx

Middle East

Georg Fischer Piping Systems
Dubai, United Arab Emirates
Phone +971 4 289 49 60
info.export@georgfischer.com
www.export.georgfischer.com

Netherlands

Georg Fischer N.V.
8161 PA Epe
Phone +31(0)578 678 222
nl.ps@georgfischer.com
www.georgfischer.nl

Norway

Georg Fischer AS
1351 Rud
Phone +47(0)67 18 29 00
no.ps@georgfischer.com
www.georgfischer.no

Poland

Georg Fischer Sp. z o.o.
05-090 Sekocin Nowy
Phone +48(0)22 31 31 0 50
poland.ps@georgfischer.com
www.georgfischer.pl

Romania

Georg Fischer
Piping Systems Ltd
020257 Bucharest - Sector 2
Phone +40(0)21 230 53 80
ro.ps@georgfischer.com
www.export.georgfischer.com

Russia

Georg Fischer Piping Systems
Moscow 125047
Tel. +7 495 258 60 80
ru.ps@georgfischer.com
www.georgfischer.ru

Singapore

Georg Fischer Pte Ltd
528 872 Singapore
Phone +65(0)67 47 06 11
sgp.ps@georgfischer.com
www.georgfischer.sg

Spain / Portugal

Georg Fischer S.A.
28046 Madrid
Phone +34(0)91 781 98 90
es.ps@georgfischer.com
www.georgfischer.es

Sweden

Georg Fischer AB
117 43 Stockholm
Phone +46(0)8 506 775 00
info.se.ps@georgfischer.com
www.georgfischer.se
www.georgfischer.fi

Switzerland

Georg Fischer
Rohrleitungssysteme (Schweiz) AG
8201 Schaffhausen
Phone +41(0)52 631 30 26
ch.ps@georgfischer.com
www.piping.georgfischer.ch

Taiwan

Georg Fischer Piping Systems
San Chung City, Taipei Hsien
Phone +886 2 8512 2822
Fax +886 2 8512 2823
www.georgfischer.tw

United Kingdom / Ireland

Georg Fischer Sales Limited
Coventry, CV2 2ST
Phone +44(0)2476 535 535
uk.ps@georgfischer.com
www.georgfischer.co.uk

USA / Caribbean

Georg Fischer LLC
Tustin, CA 92780-7258
Phone +1(714) 731 88 00
Toll Free 800 854 40 90
us.ps@georgfischer.com
www.gf piping.com

Vietnam

Georg Fischer Pte Ltd
136E Tran Vu, Ba Dinh District, Hanoi
Phone +84 4 3715 3290
Fax +84 4 3715 3285

International

Georg Fischer
Piping Systems (Switzerland) Ltd.
8201 Schaffhausen/Schweiz
Phone +41(0)52 631 30 03
Fax +41(0)52 631 28 93
info.export@georgfischer.com
www.export.georgfischer.com