GF_DiaphValve_315_cut_D403

George Fischer Diaphragm Valve Type 315/315 HTR

Diaphragm valves are especially suitable for flow control applications. Also suitable for slurries and abrasive media.

- **"Snap-on" handwheel - easy to remove**
- **Option: lockable handle**
- **Position indicator, improved robustness**
- **Can also be used in vacuum applications**
- **The HTR valve offers improved performance with wide temperature changes**

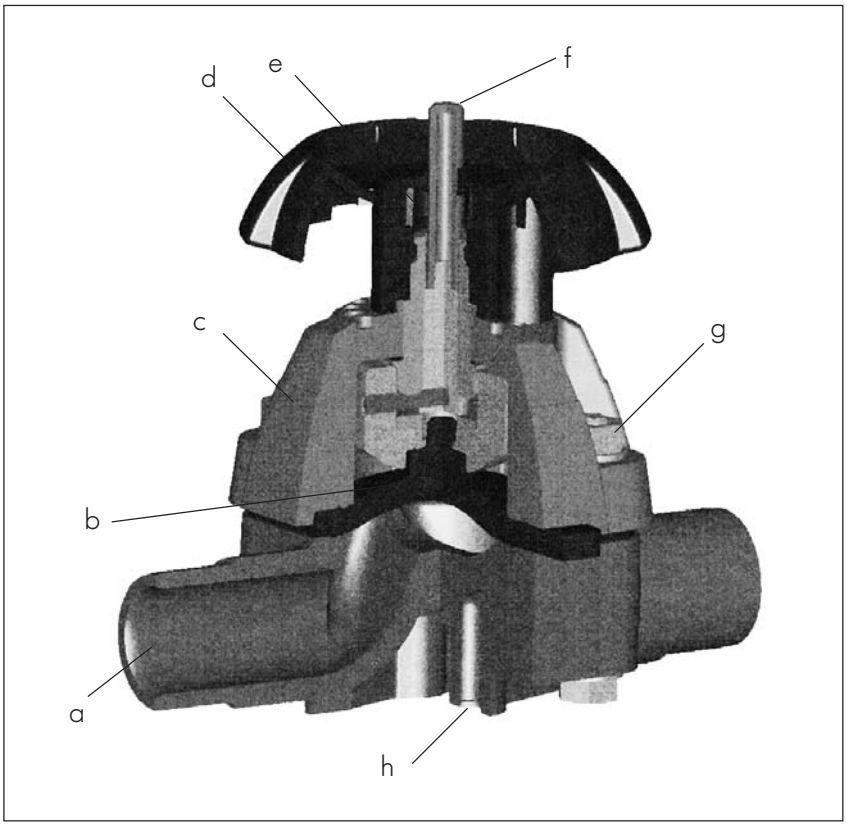
General

Manual, weir type diaphragm valve Type 315 with spigot ends in sizes 1/2" through 2" (20 mm through 63 mm) in CPVC, polypropylene, natural polypropylene, SYGEF-PVDF, and SYGEF-PVDF HP. Special High Temperature Resistant (HTR) valves in SYGEF-PVDF HP with IR/butt fusion ends are also available.

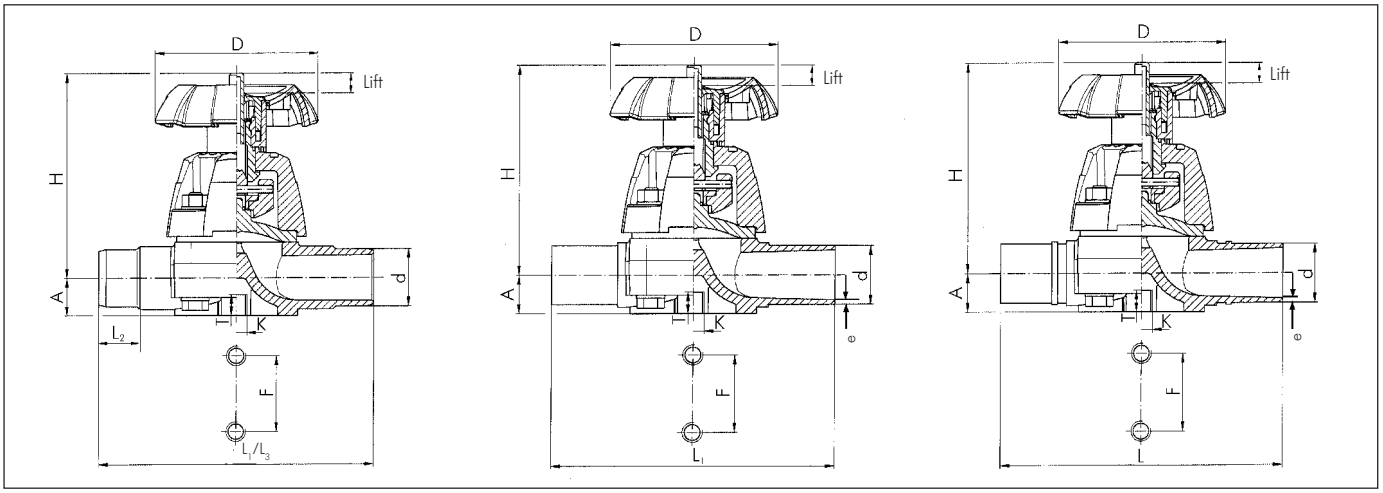
Standard overall length in accordance with DIN 3202.
Flow in either direction irrespective of installation position. Bracketing facility incorporated in the valve.
Also available pneumatically actuated, see +GF+ DIASTAR information.

Technical Features

a) • CPVC: plain spigots for solvent cement joining (inch sizes)
  • Polypropylene, natural polypropylene, SYGEF-PVDF: plain spigots for socket fusion joining (mm sizes)
  • Polypropylene and SYGEF IR: IR/butt fusion ends for IR/butt fusion joining (mm sizes)
  • SYGEF BCF ends for Bead and Crevice free joining
b) EPDM or PTFE diaphragms for valves with CPVC and polypropylene bases. PTFE diaphragms for SYGEF-PVDF valves
c) PP GF 30 (glass-fiber reinforced polypropylene) topworks
d) PP handwheel
e) PE handwheel seal
f) PE position indicator
g) Stainless steel (304) assembly bolts
h) Stainless steel threaded bushing facilitates bracketing of valve



Dimensions for Type 315 Diaphragm Valve



Metric size d mm	e PVDF mm	e PP mm	A inch	D inch	F inch	K inch	H inch	L_1 PP-n, PP, PVDF inch	L_2 inch	L_3 CPVC inch	L BCF inch	T inch	Lift inch	Weight CPVC lbs.	Weight PP/PVDF lbs.	Closest Inch Size
20	1.9	1.9	0.55	3.15	0.98	M6	3.54	4.88	0.75	5.62	5.24	0.47	0.31	0.66	0.64	1/2
25	1.9	2.3	0.69	3.15	0.98	M6	4.02	5.67	0.83	6.30	5.67	0.47	0.43	0.95	0.97	3/4
32	2.4	3.0	0.83	3.70	0.98	M6	4.67	6.06	0.91	6.83	6.06	0.47	0.51	1.63	1.57	1
40	2.4	3.7	1.00	4.61	1.77	M8	4.96	6.85	0.98	7.40	7.83	0.59	0.63	2.05	2.20	1 1/4
50	3.0	4.6	1.28	4.61	1.77	M8	5.47	7.64	1.10	8.07	8.07	0.59	0.83	2.77	2.87	1 1/2
63	3.0	5.8	1.53	5.98	1.77	M8	6.77	8.82	1.26	8.86	8.82	0.59	1.10	5.22	5.07	2

L BCF ends (PVDF valves only)
L_1 spigot end connections for socket fusion and IR/butt fusion ends for IR/butt fusion (also PP-n for BCF and IR/butt fusion)
L_3 for CPVC solvent cement spigot ends

Part Numbers for Type 315 Diaphragm Valve

CPVC

Inch size	solvent cement spigot EPDM	PTFE (Teflon®)
1/2	**163 315 717**	**163 315 732**
3/4	**163 315 718**	**163 315 733**
1	**163 315 719**	**163 315 734**
1-1/4	**163 315 720**	**163 315 735**
1-1/2	**163 315 721**	**163 315 736**
2	**163 315 722**	**163 315 737**

CPVC Silicone Free

Inch size	solvent cement spigot EPDM	PTFE (Teflon®)
1/2	**163 315 817**	**163 315 832**
3/4	**163 315 818**	**163 315 833**
1	**163 315 819**	**163 315 834**
1-1/4	**163 315 820**	**163 315 835**
1-1/2	**163 315 821**	**163 315 836**
2	**163 315 822**	**163 315 837**

Handwheel with built-in locking mechanism

Inch Size	Part Number
1/2	**167 481 943**
3/4	**167 481 943**
1	**167 481 944**
1-1/4	**167 481 945**
1-1/2	**167 481 945**
2	**167 481 946**

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Part Numbers for Type 315 Diaphragm Valve

Polypropylene (PP)

OD d mm	ID DN mm	metric fusion spigots for socket fusion EPDM	metric fusion spigots for socket fusion PTFE (Teflon®)	IR/butt fusion ends EPDM	IR/butt fusion ends PTFE (Teflon®)	Inch size
20	15	**167 315 417**	**167 315 432**	**167 315 517**	**167 315 532**	1/2
25	20	**167 315 418**	**167 315 433**	**167 315 518**	**167 315 533**	3/4
32	25	**167 315 419**	**167 315 434**	**167 315 519**	**167 315 534**	1
40	32	**167 315 420**	**167 315 435**	**167 315 520**	**167 315 535**	1-1/4
50	40	**167 315 421**	**167 315 436**	**167 315 521**	**167 315 536**	1-1/2
63	50	**167 315 422**	**167 315 437**	**167 315 522**	**167 315 537**	2

PP Silicone Free

OD d mm	ID DN mm	metric fusion spigots for socket fusion EPDM	metric fusion spigots for socket fusion PTFE (Teflon®)	IR/butt fusion ends EPDM	IR/butt fusion ends PTFE (Teflon®)	Inch size
20	15	**167 315 477**	**167 315 462**	**167 315 577**	**167 315 562**	1/2
25	20	**167 315 478**	**167 315 463**	**167 315 578**	**167 315 563**	3/4
32	25	**167 315 479**	**167 315 464**	**167 315 579**	**167 315 564**	1
40	32	**167 315 480**	**167 315 465**	**167 315 580**	**167 315 565**	1-1/4
50	40	**167 315 481**	**167 315 466**	**167 315 581**	**167 315 566**	1-1/2
63	50	**167 315 482**	**167 315 467**	**167 315 582**	**167 315 567**	2

SYGEF-PVDF

OD d mm	ID DN mm	metric fusion spigots for socket fusion PTFE (Teflon®)	IR/butt fusion ends PTFE (Teflon®)	Inch size
20	15	**175 315 432**	**175 315 532**	1/2
25	20	**175 315 433**	**175 315 533**	3/4
32	25	**175 315 434**	**175 315 534**	1
40	32	**175 315 435**	**175 315 535**	1-1/4
50	40	**175 315 436**	**175 315 536**	1-1/2
63	50	**175 315 437**	**175 315 537**	2

SYGEF-PVDF HP

OD d mm	ID DN mm	metric fusion spigots for socket fusion PTFE (Teflon®)	IR/butt fusion ends PTFE (Teflon®)	BCF fusion ends PTFE (Teflon®)	HTR* with IR/butt fusion ends PTFE (Teflon®)	Inch size
20	15	**175 315 462**	**175 315 562**	**175 315 362**	**175 315 602**	1/2
25	20	**175 315 463**	**175 315 563**	**175 315 363**	**175 315 603**	3/4
32	25	**175 315 464**	**175 315 564**	**175 315 364**	**175 315 604**	1
40	32	**175 315 465**	**175 315 565**	**175 315 365**	**175 315 605**	1-1/4
50	40	**175 315 466**	**175 315 566**	**175 315 366**	**175 315 606**	1-1/2
63	50	**175 315 467**	**175 315 567**	**175 315 367**	**175 315 607**	2

* HTR = High Temperature Resistant

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Part Numbers for Type 315 Diaphragm Valve

PP-n Natural Polypropylene

OD d mm	ID DN mm	IR-Butt / BCF fusion ends		Inch size
		PTFE (Teflon®)	EPDM	
20	15	**168 315 532**	**168 315 517**	1/2
25	20	**168 315 533**	**168 315 518**	3/4
32	25	**168 315 534**	**168 315 519**	1
40	32	**168 315 535**	**168 315 520**	1-1/4
50	40	**168 315 536**	**168 315 521**	1-1/2
63	50	**168 315 537**	**168 315 522**	2

Product Specifications

Type 315 CPVC Diaphragm Valve

CPVC diaphragm valve 1/2" through 2" shall be of spigot end connection. Upper body shall be of glass-filled polypropylene material connected to lower body with exposed stainless steel bolts. All interior metal parts are to be sealed from outside influence. A position indicator must be present to determine diaphragm position. Diaphragms to be either EPDM or PTFE with EPDM elastomer backing. Metal threaded bushings shall be molded into lower body to facilitate mounting. CPVC body material shall meet or exceed the requirements of Class 23447-B of ASTM D-1784. Valve to be equipped with spigot type connections with dimensions conforming to ASTM F441 (formerly D-1785). The valve Type 315 shall carry a pressure rating of 150 psi at 68°F as supplied by George Fischer, Inc., Tustin, CA 92780.

Type 315 PP Diaphragm Valve

Polypropylene diaphragm valve 1/2" through 2" shall be of spigot end connection. Upper body shall be of glass-filled polypropylene material connected to lower body with exposed stainless steel bolts. All interior metal parts are to be sealed from outside influence. A position indicator must be present to determine diaphragm position. Diaphragms to be either EPDM or PTFE with EPDM elastomer backing. Metal threaded bushings shall be molded into lower body to facilitate mounting. PP body material shall meet or exceed the requirements of ASTM D-4101 as pertains to type I homopolymer compound having a minimum tensile strength of 4350 psi/300 bar at 73°F/20°C when tested in accordance with ASTM D-638 and shall have a melt point which initiates at 316°F/158°C. The melt flow index (at 374°F/190°C/50N) shall be 0.4 - 0.8 grams per 10 minutes in accordance with ASTM D-1238. End connections shall be as outlined in ASTM D-2657 for fusion socket joining, and shall be compatible with metric pipe and fittings as manufactured by George Fischer, Inc. The valve Type 315 shall carry a pressure rating of 150 psi at 68°F as supplied by George Fischer, Inc., Tustin, CA 92780.

Product Specification

Type 315 PVDF Diaphragm Valve

PVDF diaphragm valve 1/2" through 2" shall be of spigot end connection. Upper body shall be of glass-filled polypropylene material connected to lower body with exposed stainless steel bolts. All interior metal parts are to be sealed from outside influence. A position indicator must be present to determine diaphragm position. Diaphragms to be either EPDM or PTFE with EPDM elastomer backing. Metal threaded bushings shall be molded into lower body to facilitate mounting. PVDF body material shall meet or exceed the requirements of ASTM D-3222 as pertains to a natural, unpigmented, virgin, noncompounded polyvinylidene fluoride compound having a minimum tensile strength of 7800 psi/538 bar at 73°F/20°C when tested in accordance with ASTM D-638 and shall have a flexural strength of 10,700 psi/738 bar at 73°F/20°C when tested according to ASTM D-790. End connections shall be as outlined in ASTM D-2657 for fusion socket joining, and shall be compatible with metric pipe and fittings as manufactured by George Fischer, Inc. The valve Type 315 shall carry a pressure rating of 150 psi at 68°F as supplied by George Fischer, Inc., Tustin, CA 92780.

Type 315-HTR SYGEF-PVDF HP IR Diaphragm Valve

High temperature resistant PVDF diaphragm valves in dimensional sizes 20 mm (1/2") through 63 mm (2") shall be IR Type 315-HTR PVDF Diaphragm Valves as manufactured by George Fischer. All IR Type 315-HTR PVDF Diaphragm Valves shall be compatible with the George Fischer IR Plus™ (Infrared) fusion technology and made from virgin, unpigmented PVDF material.

All IR Type 315-HTR PVDF Diaphragm Valves shall be weir style with PTFE diaphragm seals backed with EPDM. All PVDF valves shall be precleaned for ultrapure service and double bagged in Nylon 6/PE packaging.

Type 315 PP-n Natural PP, BCF/IR Diaphragm Valve

Natural Polypropylene diaphragm valves 1/2" through 2" shall be of spigot end connection for IR and BCF joining. Upper body shall be of glass-filled polypropylene material connected to lower body with exposed stainless steel bolts. All interior metal parts are to be sealed from outside influence. A position indicator must be present to determine diaphragm position. Diaphragms to be either EPDM or PTFE with EPDM elastomer backing. Metal threaded bushings shall be molded into lower body to facilitate mounting. PP body material shall meet or exceed the requirements of ASTM D 4101 as pertains to group 02, random copolymer compound having a minimum tensile strength of 3771 psi/260 bar at 73°F/23°C when tested in accordance with ASTM D 638 and shall have a melt point which initiates at 320°F/160°C. The melt flow index (at 230°C and 2.16 kg) shall be 0.3 grams per 10 minutes in accordance with ASTM D 1238. End connections shall be as outlined in ASTM D 2657 for fusion joining, and shall be compatible with metric pipe and fittings as manufactured by George Fischer, Inc. The valve, Type 315, shall carry a pressure rating of 150 psi at 68°F as supplied by George Fischer, Inc., Tustin, CA 92780.

George Fischer Diaphragm Valve Type 317

Diaphragm valves are especially suitable for flow control applications. Also suitable for use with slurries and abrasive media as well as for flanged requirements in a UPW system.

1/2" – 2 1/2" sizes feature an easily removable handwheel
- **option: lockable handle**

General

Manually operated diaphragm valve Type 317 with flanges. Available with PVC, CPVC (through 4"), polypropylene, natural polypropylene, SYGEF-PVDF, or SYGEF-PVDF HP bodies in sizes 1/2" through 6" (20 mm through 160 mm). Flow in either direction irrespective of installation position.

Bracketing facility incorporated in the valve.
Position indicator.
Easy replacement of diaphragm without removal of the body from the pipeline.
Also available pneumatically actuated, see +GF+ DIASTAR information.

Technical Features

a) Flanges drilled to ANSI Class 150 pattern
b) Diaphragm in EPDM or PTFE for PVC, CPVC, and polypropylene valves. PTFE diaphragm for SYGEF-PVDF valves
c) PP GF 30 (glass-fiber reinforced polypropylene) topworks
d) PP handwheel (PVC for 3" and 4", PPTSG for 6"))
e) PE handwheel seal
f) PE position indicator
g) Stainless steel (304) assembly bolts
h) Stainless steel threaded bushing facilitates bracketing of valve