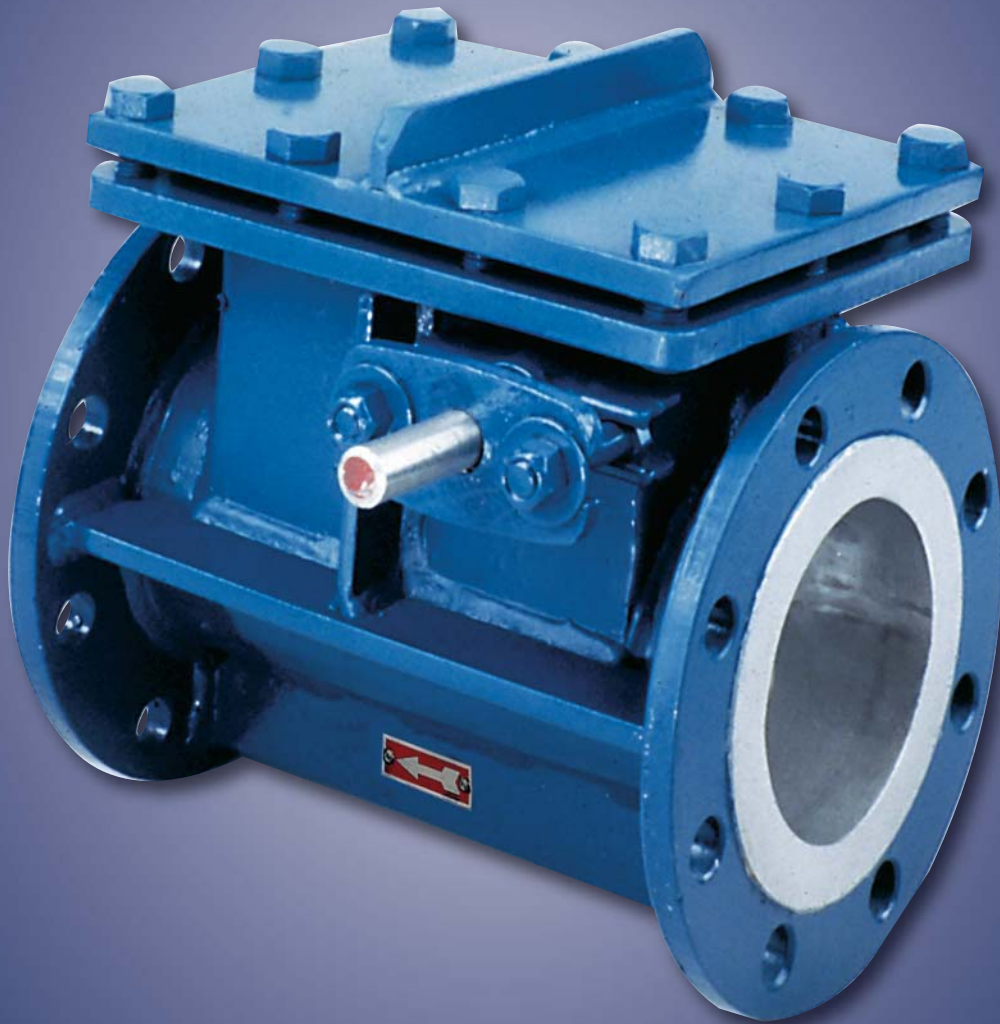




ITT

Fabri-Valve®

Swing Check Valve



Engineered for life

Figure F10

Revision 3

Fabri-Valve® F10 Swing Check Valve

The Fabri-Valve F10 is a swing check valve that can be installed in any orientation. Snubbers (dash pots) are available to control the rate of closing in unusual orientations. When ordered with counterweights, the counterweight hub will normally be furnished unkeyed. If orientation of the valve is specified on the order, the hub will be keyed at the factory. Fabricated construction allows a choice of standard and special materials.

Specifications

Size Range	Pressure Rating
3" – 48"	150 psi (10.3 bar) CWP to 24"
	50 psi (3.5 bar) CWP 30" – 48"

Temperature Rating
500°F (260°C),
Consult factory for applications to 1500°F (816°C)
NOTE: Service temperatures above 400°F (204°C) require high temperature fasteners. Specify service temperature on paperwork.

Flange Drilling
ANSI 125/150 through hole is standard.
Contact factory for alternate flange drilling.

Flow Coefficients

The Cv values below represent U.S. gallons per minute 60°F water through a 100% open valve at a pressure drop of 1 psi. The metric equivalent, Kv, is the flow of water at +16°C through the valve in cubic meters per hour at a pressure drop of 1 kg/cm². To convert Cv to Kv, multiply the Cv by 0.8569.

Figure F10 Check Valves				
Port Diameter, Area and Cv Ratings				
		Standard Port		
Valve Size		Cv	Port I.D. Inches	Port Area Sq. In.
In.	DN			
3	80	340	2.50	4.9
4	100	660	3.50	9.6
6	150	1,950	5.94	27.7
8	200	2,750	7.94	49.5
10	250	4,800	9.94	77.6
12	300	6,400	12.19	116.7
14	350	9,200	12.19	116.7
16	400	12,800	14.31	160.8
18	450	17,000	16.31	208.9
20	500	20,600	18.06	256.2
24	600	31,400	22.06	382.2

Testing

Every Fabri-Valve Figure F10 valve is fully tested prior to shipment. Testing includes a body shell test, a seat test and a cycling test to insure proper functioning of moving parts. Additional testing is also available. Please let us know your requirements.

Standard Shell test:

- Hydro test at 1.5 times the rated CWP (cold working pressure) – Zero allowable leakage.

Standard Seat test:

- Metal Seat: Hydro test at 40 psi (2.8 bar) and at the rated CWP
- Resilient Seat : Hydro test at 15 psi (1 bar) and rated CWP

Shutoff Performance

Metal Seat

3" – 24" 30cc/hour/inch of valve size
Above 24" Consult factory

Resilient Seat

- Single "D" ring
Zero leakage. All sizes.

Available Options

- "D" Ring Seat
- Counterweight
- Snubbers
- Hard Face Disk Sealing Surface
- Live-Loaded Packing
- Epoxy Coating

Materials of Construction

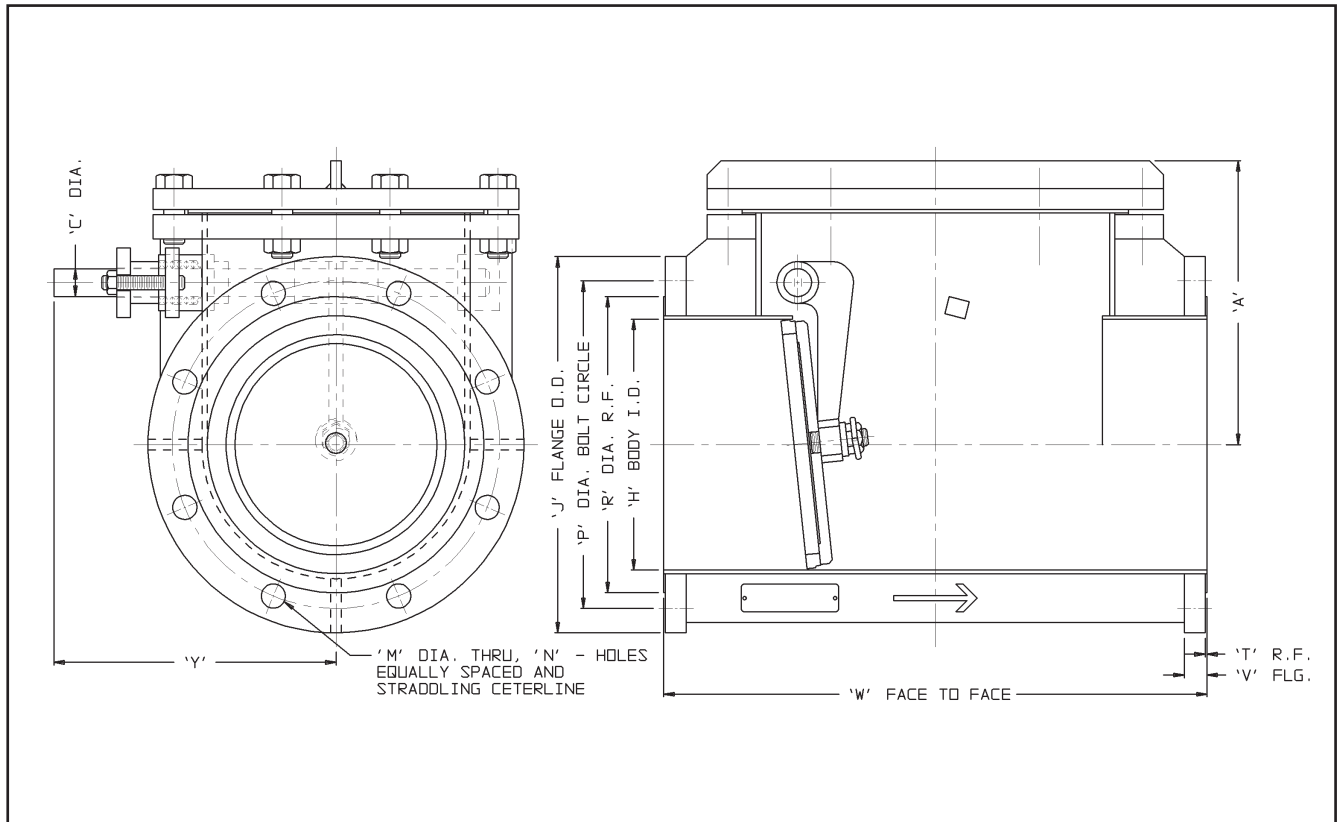
Part	Materials	
	F10R	F10S
Wetted Body Components	Stainless steel type 304, 316 or 317L with carbon steel exterior	Stainless steel type 304, 316 or 317L
External Flanges and Stiffeners	Carbon steel	Same as wetted components
Seat	Same as wetted components	Same as wetted components
Disc	Same as wetted components	Same as wetted components
Packing	PTFE/Graphite	PTFE/Graphite
Packing Follower	Carbon steel / ductile iron	Stainless steel
Follower Bolting	Plated steel	Stainless steel
Cover Bolting	Plated steel	Stainless steel

Other materials are available — Consult factory

Dimensions

Valve Size		DIMENSION Inches (mm)													
Inches	DN	A	C	H	J	M	N	P	R	T	V	W	Y	lb	kg
3	80	6-1/4 (159)	N/A	3-1/2 (89)	7-1/2 (191)	3/4 (19)	4	6 (152)	5 (127)	1/16 (2)	9/16 (14)	9-1/2 (214)	N/A	35	16
4	100	7 (178)	3/4 (19)	4-1/2 (114)	9 (229)	3/4 (19)	8	7-1/2 (191)	6-3/16 (157)	1/16 (2)	9/16 (14)	11-1/2 (292)	7-3/8 (187)	57	26
6	150	8-7/8 (225)	1 (25)	7 (178)	11 (279)	7/8 (22)	8	9-1/2 (241)	8-1/2 (216)	1/16 (2)	11/16 (17)	14 (356)	9-1/8 (232)	95	43
8	200	10-1/8 (257)	1 (25)	9 (229)	13-1/2 (343)	1 (25)	8	11-3/4 (298)	10-5/8 (270)	1/16 (2)	13/16 (21)	19-1/2 (495)	10-1/8 (257)	168	76
10	250	12-1/2 (318)	1-1/4 (32)	11 (279)	16 (406)	1 (25)	12	14-1/4 (362)	12-3/4 (324)	1/16 (2)	13/16 (21)	24-1/2 (622)	12-3/8 (314)	240	109
12	300	14-1/2 (368)	1-1/4 (32)	13-1/2 (343)	19 (483)	1 (25)	12	17 (432)	15 (381)	1/16 (2)	13/16 (21)	27-1/2 (699)	14-3/16 (360)	405	184
14	350	14-1/2 (368)	1-1/4 (32)	13-1/2 (343)	21 (533)	1-1/8 (29)	12	18-3/4 (476)	16-1/4 (413)	1/16 (2)	13/16 (21)	31 (787)	14-3/16 (360)	460	208
16	400	16-3/8 (416)	1-1/2 (38)	15-5/8 (397)	23-1/2 (597)	1-1/8 (29)	16	21-1/4 (540)	18-1/2 (470)	1/8 (3)	1 (25)	34 (864)	15-1/8 (384)	675	306
18	450	17-5/8 (448)	1-1/2 (38)	17-5/8 (448)	25 (635)	1-1/4 (32)	16	22-3/4 (578)	21 (533)	1/8 (3)	1 (25)	38-1/2 (978)	16-3/4 (425)	820	372
20	500	20-1/4 (514)	1-1/2 (38)	19-1/2 (495)	27-1/2 (699)	1-1/4 (32)	20	25 (635)	23 (584)	1/8 (3)	1 (25)	38-1/2 (978)	18 (457)	1010	458
24	600	24-7/8 (632)	1-3/4 (44)	23-1/2 (597)	32 (813)	1-3/8 (35)	20	29-1/2 (749)	27-1/4 (692)	1/8 (3)	1 (25)	51 (1295)	21-1/2 (546)	1300	590

Reference Dimensions in (parentheses)



Pressure/Temperature Ratings

The table to the right is the Maximum Pressure/ Temperature Ratings for the metallic components only. When checking pressure/temperature ratings, check the temperature rating and chemical compatibility of the packing material and, if applicable, the resilient seat material. In a majority of designs, the temperature limit or the chemical compatibility of the seat and/or packing material determines the practical pressure/temperature limitations.

Figure F10								
Pressure/Temperature Rating - psi								
Temp		304	304L	316	316L	317L	A 36	A516Gr70
°F	°C							
150	66	150	133	150	133	150	150	150
200	93	133	114	141	113	135	137	150
250	121	126	108	133	107	128	135	150
300	149	120	102	124	101	121	133	150
350	177	115	98	119	97	116	131	150
400	204	110	93	114	93	112	128	150
450	232	107	90	110	90	108	125	150
500	260	103	87	106	87	105	121	150
600	316	97	82	101	83	100	111	150
700	371	94	80	97	80	96	108	142
800*	427*	89	77	93	77	92		103
900*	482*	87		92				57
1000*	538*	83		90				21
1100*	593*	78		88				
1200*	649*	49		59				
1300*	704*	30		33				
1400*	760*	18		18				
1500*	816*	11		10				

* "R" Series valves have alloy steel wetted parts and a carbon steel exterior. Standard "R" Series valves are limited to 700°F (371°C); however alternate "R" Series constructions are available to 1000°F (538°C)

NOTE: Each valve is identified by Size-Figure-Series-etc. The "How To Order" section explains the Valve Model Codes.

Engineered Valves

For more information contact:

Engineered Valves

1110 Bankhead Avenue

Amory, MS 38821 USA

Phone: (800) 541-1849

(662) 256-7185

Fax: (662) 256-7932

Web site: www.engvalves.com

E-mail: engvalves.custserv@itt.com



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