



F11 Tilting Disc Check Valve



ITT

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F11 Tilting Disc Check Valve

The Fabri-Valve Figure F11 tilting disc check valve offers an economical alternative to cast alloy check valves. Standard valves have 304, 316 or 317L wetted surfaces. Any weldable alloy can be used. Material can be selected by component to minimize the use of expensive alloys where not essential. For example, interior surfaces and the flange raised faces could be alloy 20, and the flanges and exterior reinforcements could be 304SS or even carbon steel. The Fabri-Valve Figure F11 uses a unique cartridge type design. The valve is made up of two pieces, the cartridge and the spool. Together they equal the ANSI laying length. The cartridge contains the check mechanism while the spool provides the ANSI laying length. While many fabricated swing check valves are made in two pieces, others use a diagonally split body. The standard flange arrangement used on the Figure F11 eliminates misalignment and odd shaped gaskets. It also permits the use of just the cartridge where space is limited. The Fabri-Valve Figure F11 is a "packingless" design, thereby eliminating periodic packing adjustments. This valve is for installation in horizontal pipelines only.

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 F11 Check Valves				
C _v Ratings, Port Diameter and Area				
Standard Port				
Valve Size		C _v	Port I.D. Inches	Port Area Sq. In.
In.	DN			
4	100	420	4.00	12.5
6	150	850	6.13	29.4
8	200	1,650	8.00	50.3
10	250	2,600	9.75	74.7
12	300	3,750	12.25	117.9
14	350	4,850	14.00	153.9
16	400	6,600	16.00	201.1
18	450	8,400	17.50	240.5
20	500	10,600	19.50	298.7
24	600	15,600	23.25	424.6

Specifications

Size Range 4" – 24"

Pressure Rating 150 psi (10.3 bar) CWP

Temperature Rating

Standard "R" series construction to 700°F (371°C)

Standard "S" series construction to 750°F (399°C)

Constructions available for applications to 1500°F (816°C).

Consult factory

Service temperatures above 400°F (204°C) require high temperature fasteners. Specify service temperature on paperwork.

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

Flange Drilling

ANSI 125/150 through hole is standard.

Contact factory for alternate flange drilling.

Testing

Every Fabri-Valve check 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.

Shell test:

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

Seat test:

- Hydro test at 40 psi (2.8 bar) and rated CWP

Metal seat

4" – 24" 40 cc / min / inch of valve size

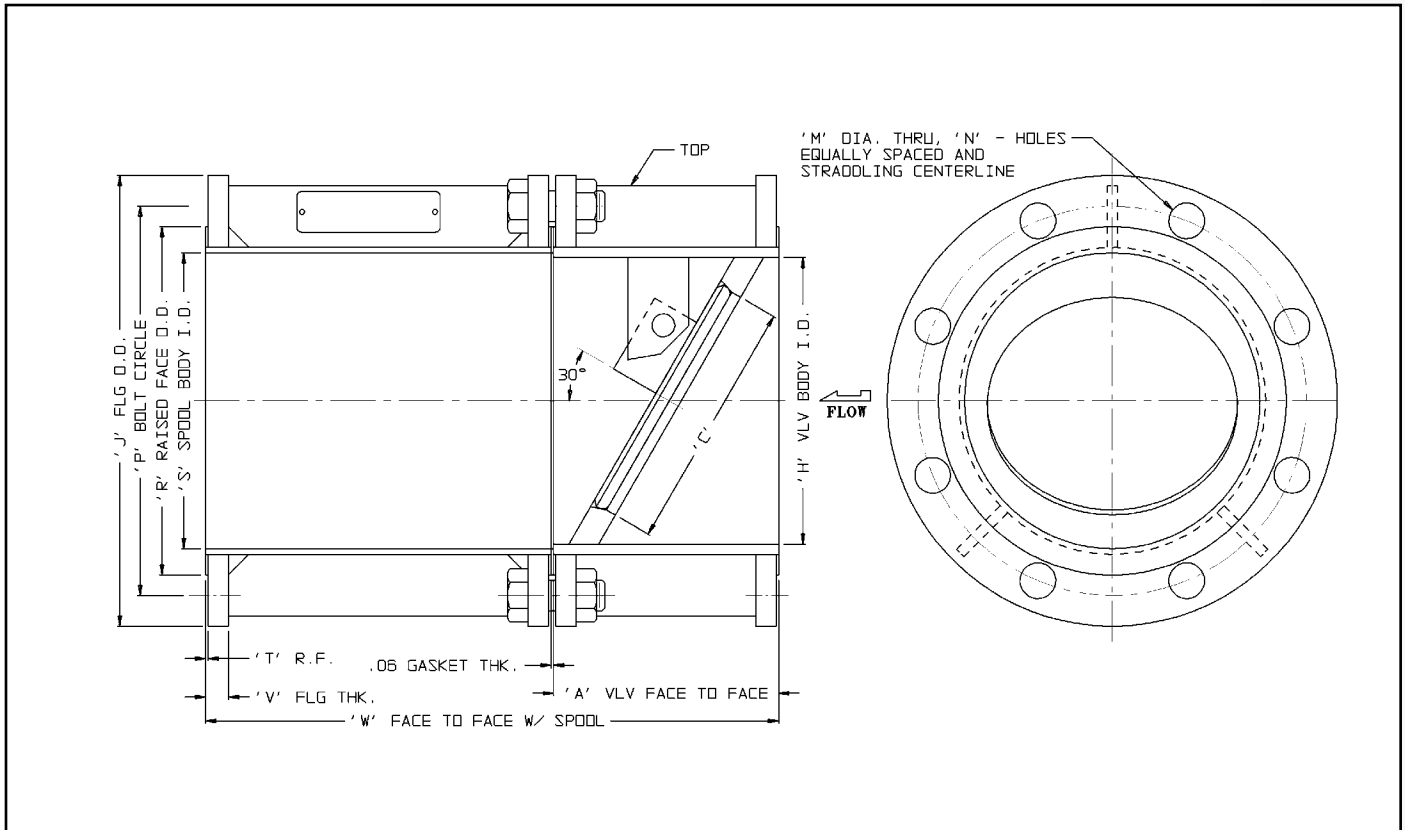
Materials of Construction

Part	Materials	
	F11R	F11S
Wetted Body Components	Stainless steel type 304, 316 or 317L	Stainless steel type 304, 316 or 317 L
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
Body Bolting	Plated steel	Stainless steel
Gasket	Non Asbestos Aramid Fiber	Non Asbestos Aramid Fiber

Dimensions

Valve Size		DIMENSION Inches (mm)											lb	kg	
Inches	DN	A	C	H	J	M	N	P	R	S	T	V			W
4	100	4 (102)	4 (102)	4-3/4 (121)	9 (229)	3/4 (19)	8	7-1/2 (191)	6-3/16 (157)	4-31/32 (126)	1/16 (2)	9/16 (14)	11-1/2 (292)	35	16
6	150	5-1/2 (140)	6-1/8 (156)	7 (178)	11 (279)	7/8 (22)	8	9-1/2 (241)	8-1/2 (216)	7-7/32 (183)	1/16 (2)	9/16 (14)	14 (356)	61	28
8	200	6-5/8 (168)	8 (203)	9 (229)	13-1/2 (343)	7/8 (22)	8	11-3/4 (298)	10-5/8 (270)	9-7/32 (234)	1/16 (2)	13/16 (21)	18 (457)	109	49
10	250	7-7/8 (200)	9-3/4 (248)	10-3/4 (273)	16 (406)	1 (25)	12	14-1/4 (362)	12-3/4 (324)	10-31/32 (278)	1/16 (2)	13/16 (21)	21-3/4 (552)	165	75
12	300	9-1/2 (241)	12-1/4 (311)	13-1/2 (343)	19 (483)	1 (25)	12	17 (432)	15 (381)	13-23/32 (348)	1/16 (2)	7/8 (22)	25-1/2 (648)	220	100
14	350	10-1/2 (267)	14 (356)	15 (381)	21 (533)	1-1/8 (29)	12	18-3/4 (476)	16-1/4 (413)	15-7/32 (387)	1/8 (3)	7/8 (22)	28 (711)	290	132
16	400	12 (305)	16 (406)	17-1/4 (438)	23-1/2 (597)	1-1/8 (29)	16	21-1/4 (540)	18-1/2 (470)	17-15/32 (444)	1/8 (3)	1 (25)	29-1/2 (749)	365	166
18	450	13 (330)	17-1/2 (445)	18-5/8 (473)	25 (635)	1-1/4 (32)	16	22-3/4 (578)	21 (533)	18-27/32 (479)	1/8 (3)	1 (25)	31 (787)	444	201
20	500	14-1/4 (362)	19-1/2 (495)	20-3/4 (527)	27-1/2 (699)	1-1/4 (32)	20	25 (635)	23 (584)	20-31/32 (533)	1/8 (3)	1 (25)	32-1/2 (826)	531	241
24	600	17 (432)	23-1/4 (591)	24-3/4 (629)	32 (813)	1-3/8 (35)	20	29-1/2 (749)	27-1/4 (692)	24-31/32 (634)	1/8 (3)	1 (25)	39-1/2 (1003)	725	329

Reference Dimensions in (parentheses)



Pressure/Temperature Ratings

Figure F11								
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.



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