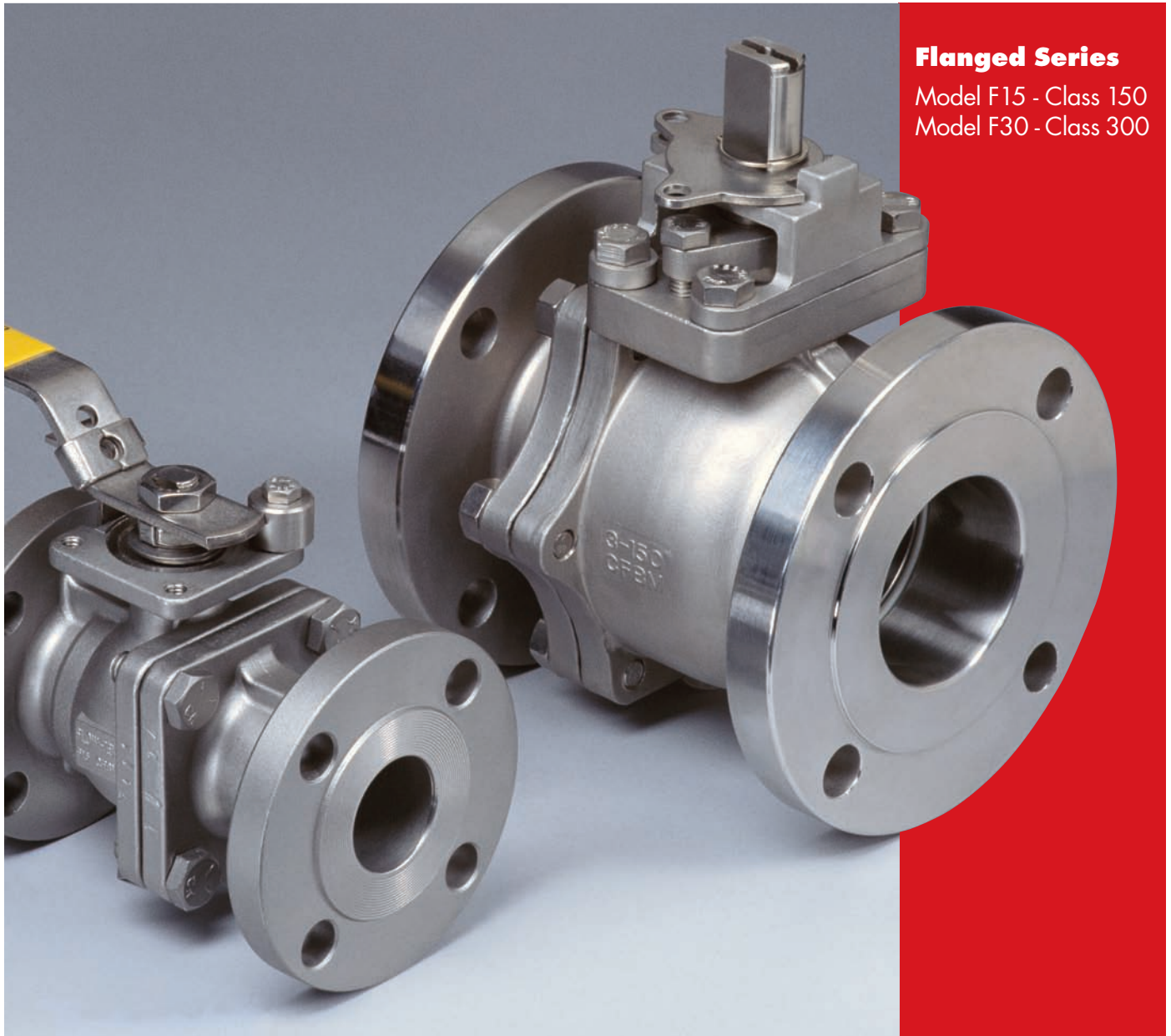


Flow-Tek®

A Subsidiary of BRAY INTERNATIONAL, Inc.

2 Piece Flanged Full Port Ball Valves: 1/2" - 12" ASME Class 150 & Class 300



Flanged Series

Model F15 - Class 150
Model F30 - Class 300

Flow-Tek's F15/F30 Flanged Series ball valves feature a floating ball design for low torque and increased cycle life. As standard, larger sized valves feature trunnion-type ball support. These rugged ball valves are ideal for industrial applications.

Fire Safe - Certified to API 607 4th Edition
Flanged Series valves with graphite stem seals have been thoroughly fire tested and meet these standards.

Secure Mount Flanged Series valves offer ease of automation due to an integrally cast actuator mounting pad which complies with ISO 5211 through 2" valve sizes.

Pressure Ratings

Model F15: ASME Class 150
Model F30: ASME Class 300

Body Materials

Stainless Steel
Carbon Steel
Special Alloys upon request.



Features



Stem Seals Flanged Series 1/2"–2" valves feature live-loaded, self-adjusting primary and secondary sealing. Utilizing Belleville washers, the stem seal automatically adjusts to compensate for changes in temperature and normal wear. 2 1/2"–12" valves utilize an independent packing gland which can be easily adjusted without removing mounting hardware or operator. The packing gland is contoured to more uniformly distribute the load across the packing.

The primary seal is a combination of a thrust washer and a thrust washer protector. An adjustable

stem packing creates a secondary seal between the stem and body. The stem packing is composed of RPTFE V-rings as standard – graphite stem packing is standard on all Fire Safe valves.

Ball Flow-Tek balls are precision machined and mirror finished for bubble-tight shut off and less operating torque. As an added safety feature, a hole in the stem slot of each ball equalizes pressure between the body cavity and the line media flow.

Body 1/2"–4" valve bodies are investment cast and solution annealed/normalized for the highest quality and added strength. All body castings are marked with a foundry heat number for full traceability. Carbon Steel bodies are phosphate coated for increased corrosion resistance.

Seat Flow-Tek's seat design ensures bi-directional, bubble-tight sealing with low operating torque. All resilient seats feature relief slots or seat O.D. clearance to relieve pressure past the upstream seat, and positive preloading to ensure low pressure/vacuum sealing.



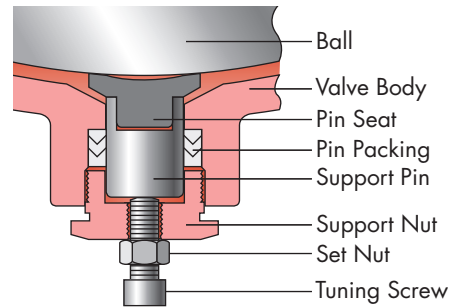
All manually operated valves feature a **Locking Device** to prevent accidental movement of ball position. Valves 1/2"–2" feature a safety trigger that locks the handle in the open or closed position. The handle lock can be bypassed, if needed, with a small bolt through the handle in the release position. On all sizes a **Padlock** can be added to secure the handle in position, preventing unwanted movement of the ball.

Seat Selection

A wide range of seat materials are available to meet most applications. The standard seat is TFM 1600. Options include RPTFE, Stainless Steel/PTFE, UHMWPE, Virgin PTFE, PEEK, Tek-Fil® (carbon/graphite filled TFM), full metal seats and Cavity Fillers. PEEK seats offer high pressure/temperature capability. Tek-Fil® seats offer reduced torque in high temperature, high cycle, and steam service applications. TFM 1600 seats offer the exceptional chemical resistance of PTFE plus lower porosity and permeability, improved temperature range and reduced valve torques.

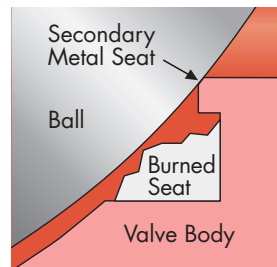
Ball Support

For larger valve sizes, Flow-Tek's unique trunnion-type mounting supports the ball. This support maintains a constant seat profile, preventing seat damage and blow-by. The results are less seat wear, lower torque and a longer service life. The Flow-Tek ball support dramatically improves valve performance at a much lower cost than traditional trunnion mounting. This feature is standard on 10"-12" Model F15 and 6"-12" Model F30 valves.

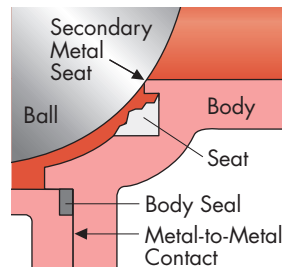


Fire Safe: API 607-4 Certified

Flow-Tek's Flanged Series valves with graphite stem packing meet the highest fire safety standards under extreme conditions. In the event of a fire, after heat destroys the primary resilient seat, the ball makes contact with the secondary metal seat, forming a secure seal. The body seal, composed of



stainless steel and graphite wound into a spiral, prevents external leakage. The graphite stem rings prevent stem leakage.



All valves have anti-static devices as standard – ball and stem are positively grounded.

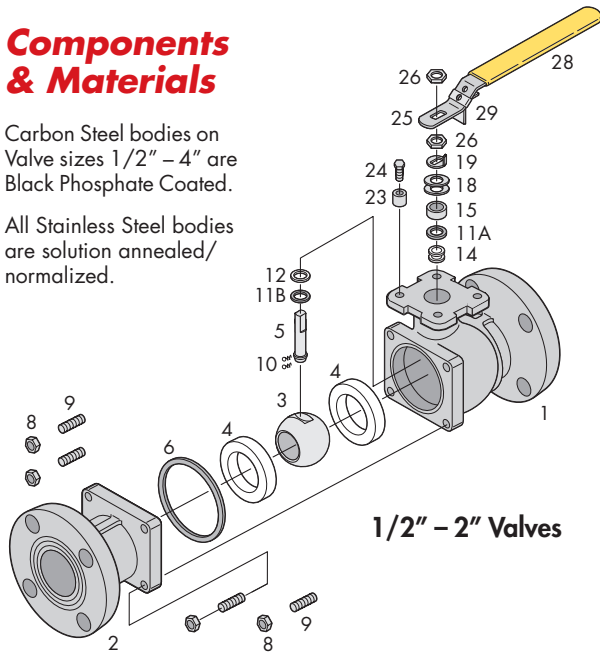
Flow-Tek offers a **Media Containment Unit** as an option. This unit easily mounts to standard valves through 8" and adds an additional stem packing seal for difficult services.

Technical Data

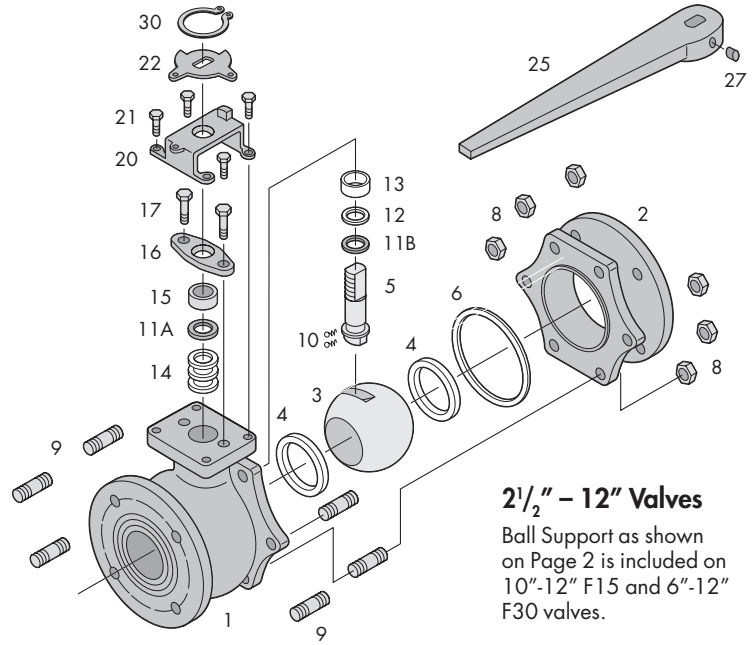
Components & Materials

Carbon Steel bodies on Valve sizes 1/2" – 4" are Black Phosphate Coated.

All Stainless Steel bodies are solution annealed/normalized.



1/2" – 2" Valves



2 1/2" – 12" Valves

Ball Support as shown on Page 2 is included on 10"-12" F15 and 6"-12" F30 valves.

Item	Name	Stainless Steel	Carbon Steel	Qty.
1	Body	ASTM A351 Gr CF8M	ASTM A216 Gr WCB	1
2	End Cap	ASTM A351 Gr CF8M	ASTM A216 Gr WCB	1
3	Ball	ASTM A351 Gr CF8M	ASTM A351 Gr CF8M	1
4	Seat	TFM 1600	TFM 1600	2
5	Stem	ASTM A479 Type 316	ASTM A479 Type 316	1
6	Body Seal	Spiral Wound (316/Graphite)	Spiral Wound (316/Graphite)	1
8	Body Nut	ASTM A194 Gr 8	ASTM A194 2H	*
9	Body Stud	ASTM A193 B8	ASTM A193 B7	*
10	Anti-Static Device	SS304	SS304	2
11 A	Packing Protector	PEEK	PEEK	1
11 B	Thrust Washer Protector	PEEK	PEEK	1
12	Thrust Washer	50% SS316 + 50% PTFE	50% SS316 + 50% PTFE	1
13	Stem Bearing	15% RPTFE	15% RPTFE	1
14	Stem Packing	RPTFE/Graphite	RPTFE/Graphite	3
15	Packing Gland	ASTM A167 Type 304	ASTM A167 Type 304	1
16	Packing Follower	ASTM A564 Gr 630 (17-4ph)	ASTM A216 Gr WCB	1
17	Gland Bolt	SS304	SS304	2
18	Belleville Washer	SS301	SS301	2
19	Tab Lock Washer	SS304	SS304	1
20	Travel Stop Housing	CF8M	WCB	1
21	Housing Bolt	SS304	Alloy Steel	4
22	Travel Stop	SS304	Zinc Plated Carbon Steel	1
23	Travel Stop Sleeve	ASTM A167 Type 304	ASTM A167 Type 304	1
24	Travel Stop Bolt	SS300	SS300	1
25	Handle	SS304/Ductile Iron	SS304/Ductile Iron	1
26	Lock Nut	ASTM A167 Type 304	ASTM A167 Type 304	2
27	Handle Bolt	Carbon Steel	Carbon Steel	1
28	Handle Sleeve	Vinyl through 2"	Vinyl through 2"	1
29	Locking Device	SS304	SS304	1
30	Snap Ring	Nickel Plated Carbon Steel	Nickel Plated Carbon Steel	2

*Quantity depends on valve size.

Flow-Tek offers the seat, body seal, thrust washer and stem packing as recommended spare parts. These parts are available as a packaged repair kit.

Specifications

End Connections meet ASME Class 150/300. Flanges meet ASME B16.5 raised face.

Face to Face Dimensions meet ASME B16.10 long pattern.

All valves meet ASME B16.34 & MSS-SP 72.

Fire Safe Valves are certified to API 607

4th Edition (with Graphite Stem Packing).

NACE MR0175—Consult Factory.

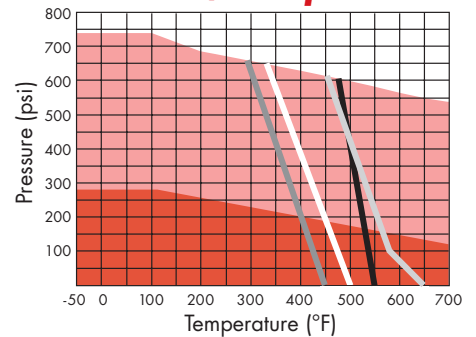
All Valves are Hydrostatically Pressure Tested (Shell) and Air Pressure Tested (Seat) to the following in psi:

Class 150: Shell 450 [CS] 425 [SS] Seat 80

Class 300: Shell 1125 [CS] 1100 [SS] Seat 80

Valves meet or exceed ASME Class VI shutoff.

Pressure / Temperature



- Class 150 Valve Bodies
- Class 300 Valve Bodies
- RPTFE
- PEEK
- Tek-Fil®
- TFM 1600 & 50/50

Note: Carbon Steel valves limited to -20°F.

Steam Service Pressure Ratings: WSP

Valve	TFM Seats		Tek-Fil Seats		PEEK Seats	
	PSI	°F	PSI	°F	PSI	°F
Class 150	150	365	200	450	200	500
Class 300	150	365	425	450	425	500

Vacuum Service to 29 inches Hg. gauge.

MODEL F15 – Class 150

SIZE ins	A	øB	C	C1	D	E	øF	N	øS	øT	C _V	TORQUE * lbs-in	WEIGHT lbs.
1/2	4.25	0.59	2.60	1.54	6.50	1.79	3.50	4	2.38	0.62	32	36	4
3/4	4.62	0.79	2.91	1.67	6.50	2.01	3.88	4	2.75	0.62	60	65	6
1	5.00	0.98	3.43	2.05	7.87	2.13	4.25	4	3.12	0.62	105	95	8
1 1/2	6.50	1.49	4.23	2.60	9.84	2.76	5.00	4	3.88	0.62	275	230	15
2	7.00	1.97	4.53	2.95	10.43	3.07	6.00	4	4.75	0.75	500	390	20
2 1/2	7.50	2.56	6.22	3.39	15.35	3.08	7.00	4	5.50	0.75	780	500	36
3	8.00	2.99	6.54	3.66	15.35	3.74	7.50	4	6.00	0.75	1,150	650	45
4	9.00	3.99	7.20	4.39	15.35	4.47	9.00	8	7.50	0.75	2,100	1,505	75
6	15.50	5.98	11.22	7.17	15.35	7.62	11.00	8	9.50	0.88	5,000	3,250	135
8	18.00	7.87	12.72	7.60	38.98	8.35	13.50	8	11.75	0.88	9,600	4,750	290
10	21.00	9.84	13.70	9.88	38.98	10.47	16.00	12	14.25	1.00	15,000	13,700	500
12	24.00	11.81	15.28	11.46	38.98	12.01	19.00	12	17.00	1.00	21,000	19,700	700

Face to Face dimensions meet ASME B16.10 long pattern.

*Torque at maximum rated pressure, clean water, TFM 1600 seating material. Other seat materials exhibit different torques. Please refer to TB 1005 for specific torques.

MODEL F30 – Class 300

SIZE ins	A	øB	C	C1	D	E	øF	N	øS	øT	C _V	TORQUE * lbs-in	WEIGHT lbs.
1/2	5.50	0.59	2.60	1.57	6.50	2.44	3.75	4	2.62	0.62	32	40	5
3/4	6.00	0.79	2.91	1.67	6.50	2.72	4.62	4	3.25	0.75	60	70	7
1	6.50	0.98	3.43	2.05	7.87	2.91	4.88	4	3.50	0.75	105	108	10
1 1/2	7.50	1.49	4.23	2.60	9.84	3.27	6.12	4	4.50	0.88	275	270	19
2	8.50	1.97	4.53	2.95	10.43	3.94	6.50	8	5.00	0.75	500	445	33
2 1/2	9.50	2.56	6.22	3.39	15.35	4.18	7.50	8	5.88	0.88	780	600	50
3	11.12	2.99	6.54	3.72	15.35	5.57	8.25	8	6.62	0.88	1,150	850	68
4	12.00	3.99	7.20	4.35	15.35	5.96	10.00	8	7.88	0.88	2,100	2,600	96
6	15.88	5.98	11.22	7.19	38.98	7.60	12.50	12	10.62	0.88	5,000	5,300	230
8	19.75	7.87	12.72	8.64	38.98	9.33	15.00	12	13.00	1.00	9,600	7,600	430
10	22.38	9.84	13.70	9.69	38.98	11.18	17.50	16	15.25	1.12	15,000	17,800	610
12	25.50	11.81	15.28	11.26	38.98	12.80	20.50	16	17.75	1.25	21,000	24,800	950

SECURE MOUNT

SIZE ins	H	J	F0	BC DIA.	K	L	M	øP	U UNC
1/2	1.17	1.17	F04	1.65	0.31	0.55	0.25	0.37	#10-24
3/4	1.17	1.17	F04	1.65	0.31	0.55	0.25	0.37	#10-24
1	1.39	1.39	F05	1.97	0.43	0.75	0.31	0.43	1/4-20
1 1/2	1.95	1.95	F07	2.76	0.55	0.91	0.37	0.62	5/16-18
2	1.95	1.95	F07	2.76	0.55	0.91	0.37	0.62	5/16-18
2 1/2-4	3.54	1.87	F10	—	1.75	3.07	0.67	1.10	1/2-13
6	3.37	3.37	F12	4.77	1.61	3.42	1.02	1.71	1/2-13
8 ¹	3.37	3.37	F12	4.77	2.13 ¹	3.86 ¹	1.02	1.71	1/2-13
10-12 ²	4.53	4.53	F16	6.40	2.15	3.74 ²	1.38	1.97 ²	5/8-11

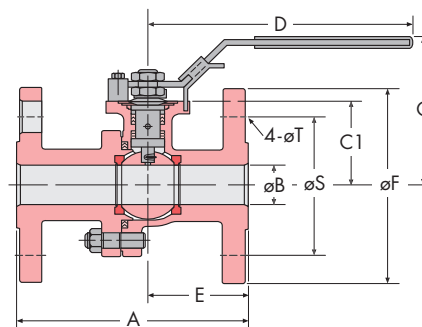
¹ For 8" F30: K=1.614, L=3.858

² For 10" F30: L=3.740, P=2.165

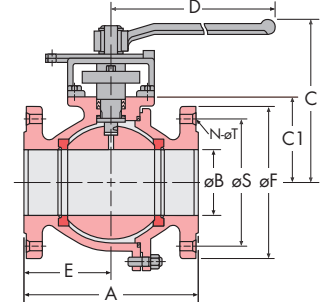
NOTE 1: Ball Support as shown on Page 2 is included on 10"-12" F15 and 6"-12" F30 valves.

NOTE 2: 2 1/2", 3" & 4" valves feature a NAMUR stem slot for ease of limit switch mounting.

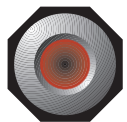
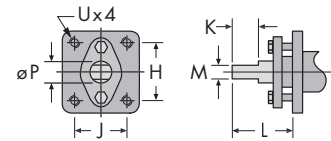
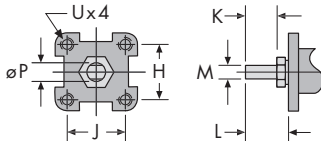
1/2" – 2" Valves



2 1/2" – 12" Valves



NOTE 1



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