A
Bray
High
Performance
Company

Flow-Tek

A Subsidiary of BRAY INTERNATIONAL, Inc.

2 Piece Flanged Full Port Ball Valves: ½”-12”

ASME/ANSI 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: ANSI Class 150
Model F30: ANSI 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 bearing and a thrust washer. 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 when the valve is in the open position.
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.
Seat Flow-Tek's seat design ensures bi-directional, bubble-tight sealing with low operating torque. All resilient seats feature relief slots to relieve pressure past the upstream seat, and positive preloading to ensure low pressure / vacuum sealing.

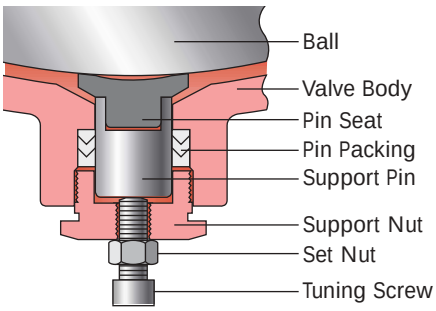
Flow-Tek 1/2"– 2" manually operated valves feature a Safety Trigger to prevent accidental movement of ball position. The trigger locks the handle in the open or closed position. The handle lock can be bypassed, if needed, with a small bolt through the handle in the release position.
A **Padlock** can be added to secure the handle in position, preventing unwanted access on all valve sizes.

Seat Selection

A wide range of seat materials are available to meet most applications. The standard seat is RPTFE. Options include Stainless Steel / PTFE, UHMWPE, Virgin PTFE, Delrin, 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.

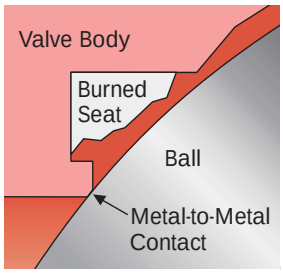
Ball Support

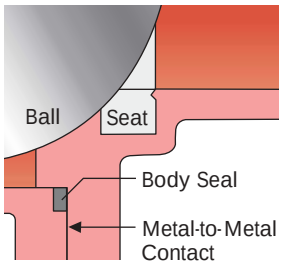
For larger valve sizes, Flow-Tek's unique trunnion–type mounting supports the ball. This support maintains a constant seat profile, preventing seat damage and blow-by. The results are less seat wear, lower torque and a longer service life. The Flow-Tek ball support dramatically improves valve performance 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.

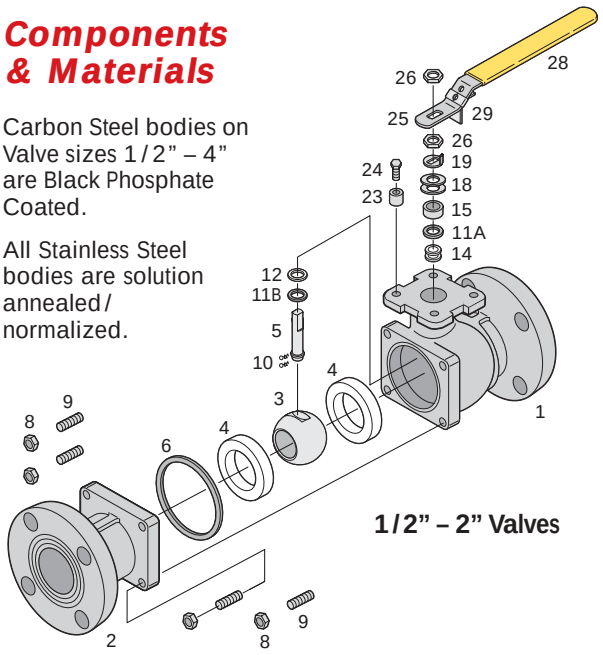
Flow-Tek offers a **Media Containment Unit** as an option. This unit easily mounts to standard valves through 8" and adds an additional stem packing seal for difficult services.

Technical Data

Components & Materials

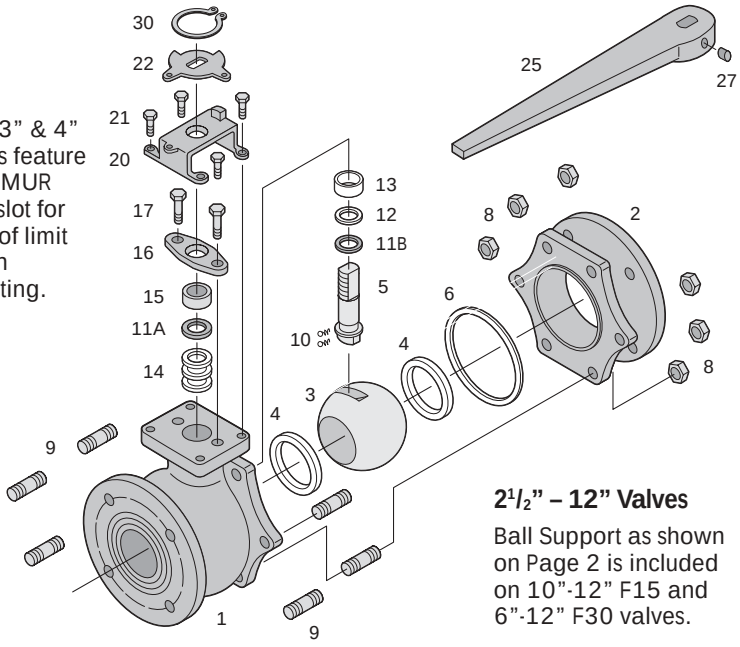
Carbon Steel bodies on Valve sizes 1/2" – 4" are Black Phosphate Coated.

All Stainless Steel bodies are solution annealed/ normalized.



1/2" – 2" Valves

$2^1/_2$", 3" & 4" valves feature a NAMUR stem slot for ease of limit switch mounting.



$2^1/_2$" – 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	15% RPTFE	15% RPTFE	2
5	Stem	ASTM A479 Type316	ASTM A479 Type316	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/B	Thrust Bearing	PEEK	PEEK	2
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	SS300	SS300	1
20	Travel Stop Housing	CF8	WCB	1
21	Housing Bolt	SS300	SS300	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

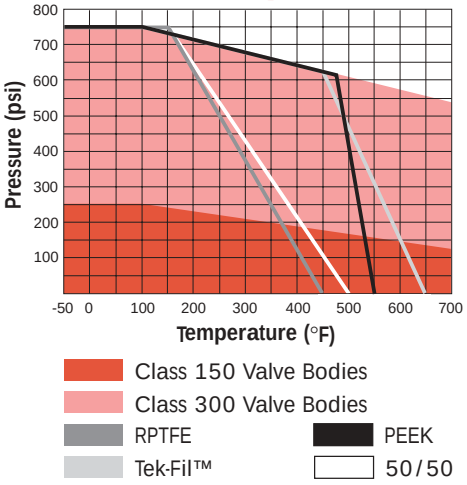
Flanged End Connections meet ASME/ANSI Class 150/300.
Flanges meet ASME/ANSI B16.5.
Face to Face Dimensions meet ASME/ANSI B16.10.
All valves meet ASME/ANSI B16.34.
MSS–SP 72.

Fire Safe Valves are certified to API 607 4th Edition (with Graphite Stem Packing).

NACE MR0175–Consult Factory.

All Valves Hydrostatically Pressure Tested and Seat Tested.
Class 150: Shell 425 psi, Seat (Air) 80 psi
Class 300: Shell 1100 psi, Seat (Air) 80 psi

Pressure / Temperature



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

Dimensions

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	0.591	2.60	1.54	6.50	1.79	3.50	4	2.38	0.62	15	51	4
3/4	4.62	0.787	2.91	1.67	6.50	2.01	3.88	4	2.75	0.62	40	80	6
1	5.00	0.984	3.43	2.05	7.87	2.13	4.25	4	3.12	0.62	70	110	8
1 1/2	6.50	1.496	4.13	2.60	9.84	2.76	5.00	4	3.88	0.62	240	260	15
2	7.00	1.969	4.53	2.95	10.43	3.07	6.00	4	4.75	0.75	400	400	20
2 1/2	7.50	2.559	6.22	3.39	15.35	3.08	7.00	4	5.50	0.75	700	490	36
3	8.00	2.992	6.54	3.66	15.35	3.74	7.50	4	6.00	0.75	980	650	45
4	9.00	3.996	7.20	4.39	15.35	4.47	9.00	8	7.50	0.75	1,700	1,750	75
6	15.50	5.984	11.22	7.17	38.98	7.62	11.00	8	9.50	0.88	5,000	3,600	135
8	18.00	7.874	11.58	7.60	38.98	8.35	13.50	8	11.75	0.88	10,000	5,800	290
10	21.00	9.843		9.88		10.47	16.00	12	14.25	1.00	15,000	13,500	500
12	24.00	11.81		11.46		12.01	19.00	12	17.00	1.00	21,000	20,000	700

*__Torque__ at maximum rated pressure, clean water, RPTFE seating material.

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	0.591	2.60	1.57	6.50	2.44	3.75	4	2.62	0.62	15	52	5
3/4	6.00	0.787	2.91	1.67	6.50	2.72	4.62	4	3.25	0.75	40	90	7
1	6.50	0.984	3.43	2.05	7.87	2.91	4.88	4	3.50	0.75	70	130	10
1 1/2	7.50	1.496	4.23	2.60	9.84	3.27	6.12	4	4.50	0.88	230	295	19
2	8.50	1.969	4.53	2.95	10.43	3.94	6.50	8	5.00	0.75	390	465	33
2 1/2	9.50	2.559	6.22	3.39	15.35	4.18	7.50	8	5.88	0.88	690	625	50
3	11.12	2.992	6.54	3.72	15.35	5.57	8.25	8	6.62	0.88	970	900	68
4	12.00	3.996	7.20	4.35	15.35	5.96	10.00	8	7.88	0.88	1,680	2,900	96
6	15.88	5.984	11.22	7.19	38.98	7.60	12.50	12	10.62	0.88	4,950	5,500	230
8	19.75	7.874	12.72	8.64	38.98	9.33	15.00	12	13.00	1.00	9,950	7,600	430
10	22.38	9.843		9.69		11.18	17.50	16	15.25	1.12	13,500	19,000	610
12	25.50	11.81		11.26		12.80	20.50	16	17.75	1.25	19,000	28,000	950

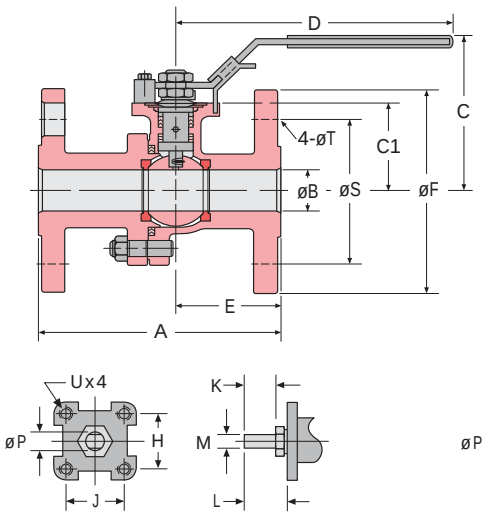
SECURE MOUNT

SIZE ins	H	J	K	L	M	øP	U UNC
1/2	1.654	1.169	0.315	0.551	0.250	0.366	#10–24
3/4	1.654	1.169	0.315	0.551	0.250	0.366	#10–24
1	1.394	1.394	0.433	0.748	0.315	0.429	1/4 –20
1 1/2	1.949	1.949	0.551	0.906	0.374	0.618	5/16 –18
2	1.949	1.949	0.551	0.906	0.374	0.618	5/16 –18
2 1/2 – 4	3.543	1.874	1.752	3.071	0.669	1.102	1/2 –13
6	3.375	3.375	1.614	3.425	1.024	1.713	1/2 –13
8[1]	3.375	3.375	2.126[1]	3.858[1]	1.024	1.713	5/8 –11
10 – 12[2]	4.528	4.528	2.146	3.740[2]	1.378	1.969[2]	5/8 –11

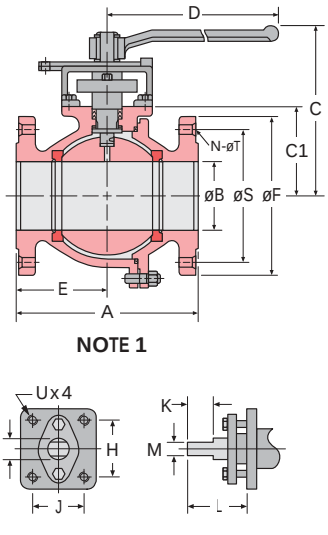
[1] For 8" F30: K=1.614, L=3.858
[2] For 10" F30: L=3.740, P=2.165

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

1/2" – 2" Valves



2 1/2 – 12" Valves



NOTE 1

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