



ISV Series BF1BU

Industrial Floating Ball Valve Flanged Ends, *Split Body* Adjustable Stem Packing Design

For Oil & Gas Production, Chemical, Petro-Chemical & Industrial applications

Sizes
1/2" through 10"

Pressure Classes
150, 300 & 600

API 608 Design
ASME B16.34
Code Compliant
API 641 Fugitive Emission
Test Compliant

DESIGN FEATURES

2 piece bolted split body design
Full and Reduced ports designs
Adjustable stem packing
WCB, LCC, CF8M & alloy material options
Lockable Lever or Gear operator
Fire safe tested to API 607
Meets NACE MR01-75 / MR0103

The valves described in this brochure are
designed, assembled and tested in Stafford, Texas USA.
Contains domestic and/or internationally produced components.

ISO 9001 Certified By





Series BF1BU: Design, Assembled & Testing in Stafford

ISV ball valves are manufactured in accordance with applicable industry standards. Final assembly & testing of the valves represented in this brochure is performed in Stafford, Texas USA by well trained and qualified personnel, in a safe & ecologically responsible environment.



Specifying ISV Series BF1BU Floating Ball Valves

Example: ISV figure number BF1BU-F015-2436RF-CG-NFL

Describes an ASME class 150, 2 piece bolted split-body design, full port, floating ball valve, raised face flange ends, LCC body with all valve materials suitable for (minus) -50 degrees F. service, 316SS trim, TFM 4215 (R-PTFE) seat inserts, graphite stem packing & gaskets, meets NACE MR01-75 & MR0103, is fire safe tested to API 607, lever operated. Assembled & tested in the USA.

B	F	1	BU	-	F	0	1	5	-	2	4	3	6	R	F	-	C	G	-	N	F	L	-		
1		2	3		4	5				6		7		8			9	10		11		12		13	

1 Valve Type		2 Service / Design style		3 Body Design		4 Bore		5 Pressure Rating		6 Body Material		7 Trim Material	
Code	Type	Code	Design style	Code	Body style	Code	Port	Code	Rating	Code	Material	Code	Material
BF	Ball Valve, Floating	1	Adjustable Stem Packing	AU	1 pc Uni-Body	R	Red.	015	Class 150	12	WCB (-20 Deg. F. Service)	30	* Stainless Steel
		3	O Ring Stem Seals	BU	2 pc Split Body, Bolted	F	Full	030	Class 300	24	LCC (-50 Deg. F. Service)	34	* 304SS / CF8
		4	Metal Seated	EU	3 pc Bolted Body			060	Class 600	34	CF8 Δ	36	* 316SS / CF8M
		7	Cryogenic Service	KU	Tandem			090	Class 900	36	CF8M Δ	51	F51
		9	Severe Service	LU	Double Ball—Single Body			150	Class 1500	11	A105N (-20 Deg.F. Service)	60	Inconel 625
								250	Class 2500	22	LF2 (-50 Deg.F. Service)	61	410SS
				**	"U" indicates USA production							71	Monel

8 End Connections		9 Seat Material		10 Stem Packing & Body Seal		11 Features		12 Operator		13 Modifier Code	
Code	Ends	Code	Material	Code	Material	Code	Description	Code	Description	Code	Description
RF	RF Flanged	R	RPTFE (glass filled PTFE)	G	Graphite	NF	NACE Compliant, Fire Safe Tested	L	Locking Lever	XXX	Special Configurations such as exotic materials, specific seat or sealing compounds. Consult ISV representative for modifier code identification.
RJ	RTJ Flanged	T	PTFE (virgin PTFE)	T	PTFE			B	Bare Stem		
FF	Flat Face Flanged	C	R-TFM 4215 (25% carbon filled modified PTFE)	M	TFM	NW	NACE Compliant, Fire Safe Design	S	Spring Return Lever		
RFT	RF X THD	M	TFM 1600 (modified virgin PTFE)	K	PCTFE			G	Manual Gear		
WW	WE X WE	P	PEEK	R	R-PTFE	WF	Without NACE, Fire Safe	A	Actuated		
WF	WE X RF	K	PCTFE	C	R-TFM			C	Chain Wheel		
WJ	WE X RTJ	1	Tungsten Carbide Coated			WW	Without NACE, Fire Safe Design	O	Oval Hand Wheel		
		2	Chromium Carbide Coated								

* Ball and/or stem may be furnished as duplex SS or XM-19 for improved strength and durability.

Δ Forged equivalent material such as F304SS or F316SS may be furnished on 2" and smaller special order products.

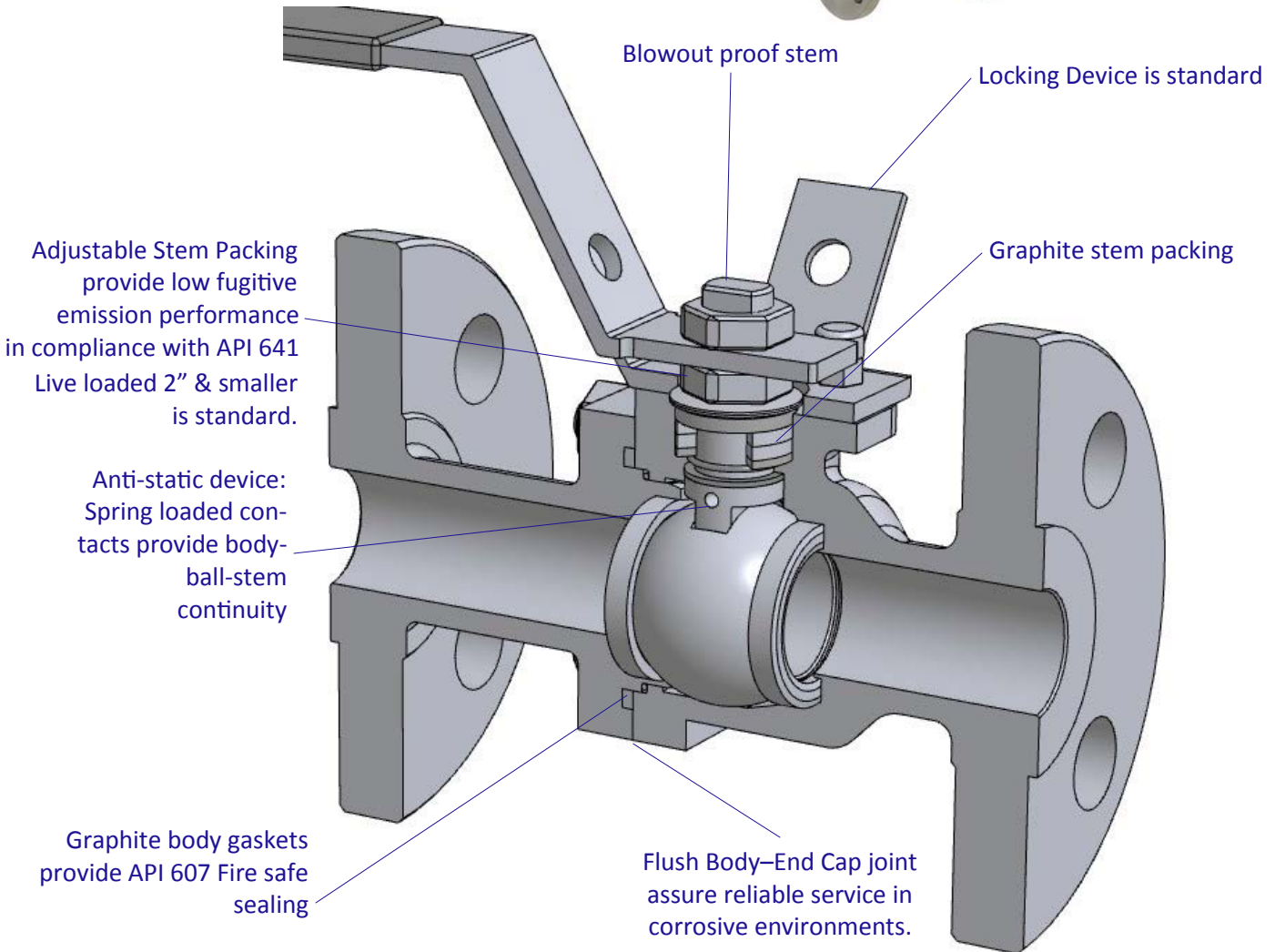


DESIGN & PRODUCTION FEATURES

- API 608 & ASME B16.34 code compliant
- Adjustable stem packing
- Fire safe tested to API 607 6th Edition
- Lockable lever or gear is standard
- Meets NACE MR01-75 / MR0103
- ISO 5211 actuator mounting pad
- Optional lockable oval handles are available
- Tested for Compliance with API 641

DESIGN STANDARDS

Basic Design		ASME B16.34, API 608
Pressure test		API 598
Fugitive Emission Test		API 641
Face to Face Dimension		ASME B16.10
Ends	Flanged	ASME B16.5

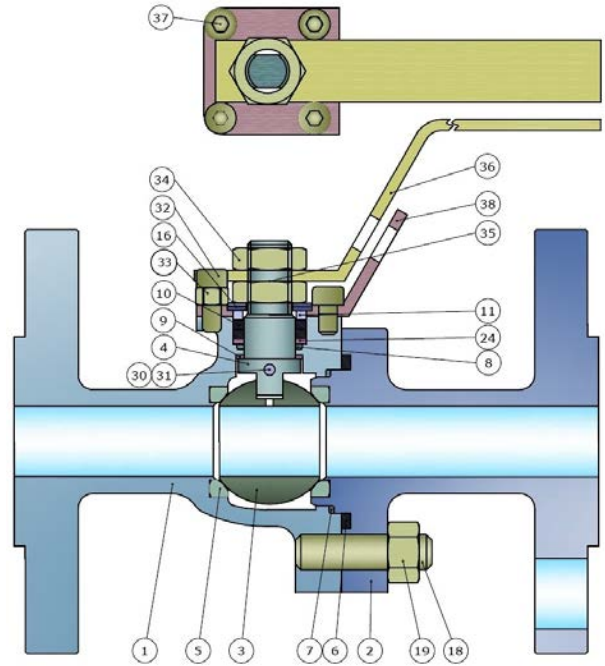
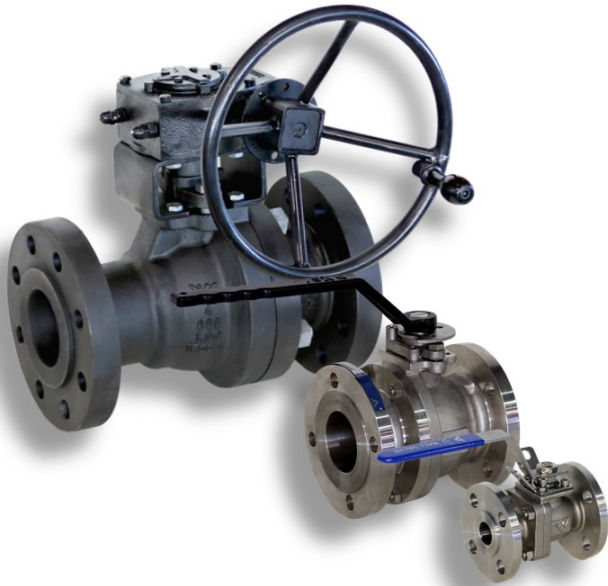


1" valve size is shown

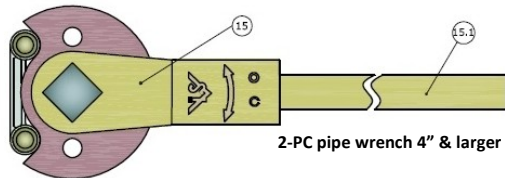




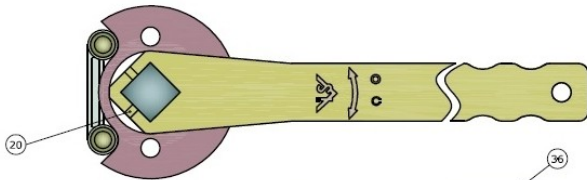
ISV Series BF1BU - Standard Material Options



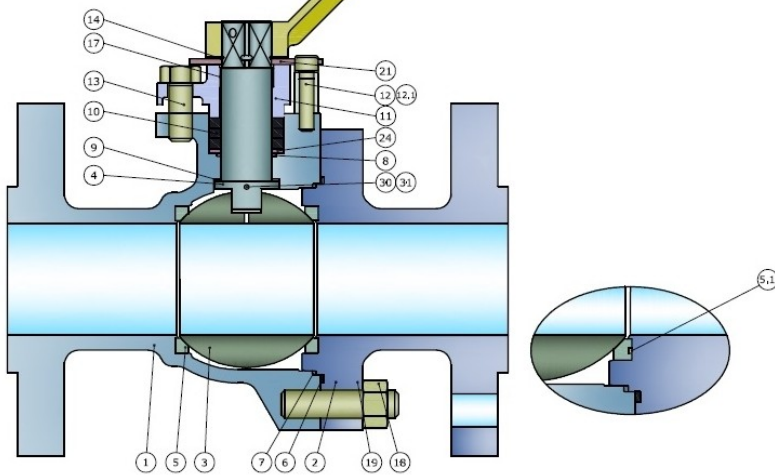
1/2" - 1" body style



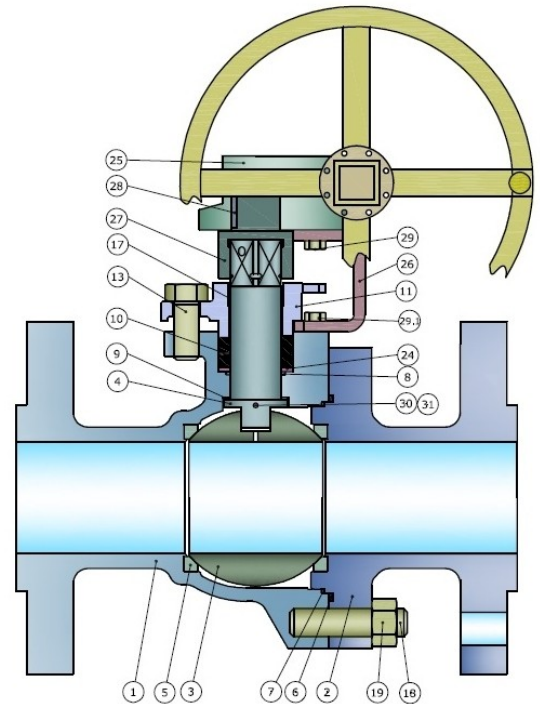
2-PC pipe wrench 4" & larger



1-PC lever 3" & smaller



1-1/2" - 8" body style, lever operated



1-1/2" - 8" body style, gear operated

FULL PORT DESIGNS ARE SHOWN



ISV Series BF1BU - Standard Material Options

No.	PART NAME	-20 DEG. F. SERVICE	-50 DEG. F. SERVICE	CORROSIVE SERVICE
1	BODY	ASTM A216 WCB	ASTM A352 LCC	ASTM A351 CF8M
2	END CAP	ASTM A216 WCB	ASTM A352 LCC	ASTM A351 CF8M
3	BALL	ASTM A182 F316	ASTM A182 F316	ASTM A182 F316
4	STEM	All sizes class 150 & 300	XM-19	XM-19
		.5" - 1" class 600	Inconel 718	Inconel 718
		1.5" - 4" class 600	XM-19	XM-19
5	SEAT	All sizes class 150 & 300	TFM 4215 (25% carbon filled PTFE)	TFM 4215 (25% carbon filled PTFE)
		.5" - 1" class 600	TFM 4215 (25% carbon filled PTFE)	TFM 4215 (25% carbon filled PTFE)
		1.5" - 4" class 600	PEEK	PEEK
5.1	O-RING: PEEK SEAT	PTFE	PTFE	PTFE
6	BODY-END CAP GASKET	GRAPHITE+316 SS	GRAPHITE+316 SS	GRAPHITE+316 SS
7	O-RING: BODY	PTFE	PTFE	PTFE
8	O-RING: STEM	PTFE	PTFE	PTFE
9	STEM THRUST WASHER	PTFE	PTFE	PTFE
10	STEM PACKING	GRAPHITE	GRAPHITE	GRAPHITE
11	GLAND	ASTM A216 WCB	ASTM A352 LCC	ASTM A351 CF8M
12	STOP	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8
12.1	STOP SCREW	ANSI 1035	ANSI 1035	304SS
12.2	CAP SCREW	ANSI 1035	ANSI 1035	304SS
13	CAP SCREW: GLAND	ASTM A193 B7M + zinc	ASTM A320 L7M + zinc	ASTM A193 B8M
14	SNAP RING	ANSI 6150	ANSI 6150	301SS
15	LEVER ADAPTOR	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB
15.1	PIPE HANDLE	AISI 1020	AISI 1020	AISI 1020
16	BELLEVILLE SPRING WASHER	301 SS	301 SS	301 SS
17	BEARING: STEM	PTFE	PTFE	PTFE
18	BODY-END CAP STUD	ASTM A193 B7M + zinc	ASTM A320 L7M + zinc	ASTM A193 B8M
19	BODY-END CAP NUT	ASTM A194 2HM + zinc	ASTM A194 7M + zinc	ASTM A194 8M
20	CAP SCREW: LEVER	304 SS	304 SS	304 SS
21	STOP PLATE	AISI 410 SS	AISI 410 SS	AISI 410 SS
22	NAME PLATE	304 SS	304 SS	304 SS
23	RIVET	304 SS	304 SS	304 SS
24	PACKING WASHER	ASTM A276 316	ASTM A276 316	ASTM A276 316
25	GEAR	CS	CS	CS
26	BRACKET	CS	CS	CS
27	COUPLING SHAFT	AISI 1045	AISI 1045	AISI 1045
28	KEY: COUPLING SHAFT	AISI 1045	AISI 1045	AISI 1045
29	CAP SCREW: BRACKET UPPER	AISI 1035	AISI 1035	304 SS
29.1	CAP SCREW: BRACKET LOWER	AISI 1035	AISI 1035	304 SS
30	ANTI-STATIC SPRING	AISI 316 SS	AISI 316 SS	AISI 316 SS
31	ANTI-STATIC BALL	AISI 316 SS	AISI 316 SS	AISI 316 SS
32	STOP SCREW	304 SS	304 SS	304 SS
33	STOP NUT	304 SS	304 SS	304 SS
34	STEM NUT	304 SS	304 SS	304 SS
35	LOCK WASHER	410 SS	410 SS	410 SS
36	LEVER	410 SS	410 SS	410 SS
37	CAP SCREW	304 SS	304 SS	304 SS
38	LOCK PLATE	410 SS	410 SS	410 SS

Other materials are available upon request.

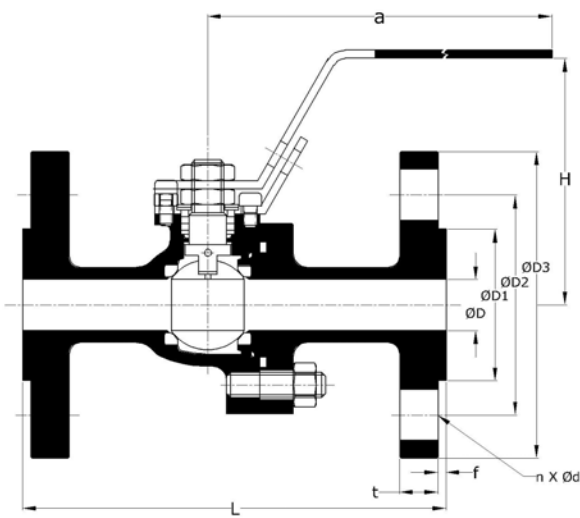
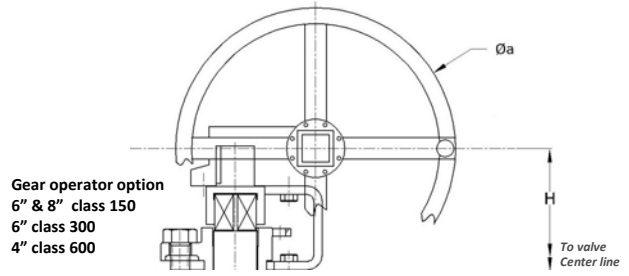
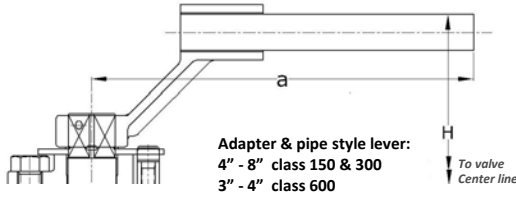


ISV Series BF1BU - Standard Dimensions

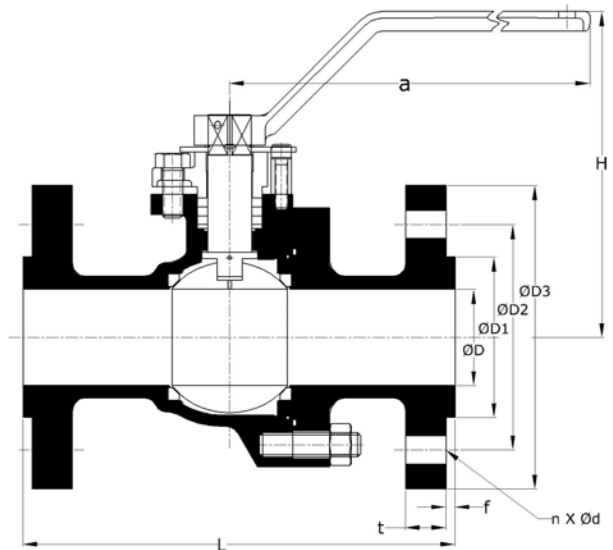
DIMENSIONAL STANDARDS

Valve Design	API 608 /ASME B16.34
Flanged End Connection	ASME B16.5
End to End	ASME B16.10 (Long Pattern)

FULL PORT



Typical 1/2" - 1" body style



Typical 1-1/2" - 8" body style

INCHES

	Valve Size	L	ØD	ØD1	ØD2	ØD3	f	t	a	Øa	H Lever	H Gear	Cv	WT (LBS) [lever/gear]	n= number of bolt holes X Ød
CLASS 150	1/2"	4.29	0.51	1.37	2.37	3.54	0.08	0.31	6.30	-	3.48	-	28	4	4 X Ø0.63
	3/4"	4.61	0.75	1.69	2.75	3.93	0.08	0.35	6.30	-	3.64	-	60	5	4 X Ø0.63
	1"	5.00	1.00	2.00	3.13	4.33	0.08	0.38	7.87	-	4.17	-	105	7	4 X Ø0.63
	1 1/2"	6.50	1.50	2.87	3.87	4.92	0.08	0.50	9.84	-	6.14	-	237	13	4 X Ø0.63
	2"	7.00	2.00	3.63	4.75	5.91	0.08	0.56	11.02	-	7.06	-	422	22	4 X Ø0.75
	3"	8.00	3.00	5.00	6.00	7.50	0.08	0.69	12.60	-	8.28	-	948	45	4 X Ø0.75
	4"	9.00	4.00	6.19	7.50	9.06	0.08	0.88	15.75	-	10.08	-	1686	80	8 X Ø0.75
	6"	15.51	6.00	8.50	9.50	11.02	0.08	0.94	31.50	13.8	11.00	11.50	3794	[175 / 205]	8 X Ø0.87
8"	18.00	8.00	10.63	11.75	13.58	0.08	1.06	53.15	18.0	13.50	14.50	6744	[345 / 375]	8 X Ø0.87	

	Valve Size	L	ØD	ØD1	ØD2	ØD3	f	t	a	Øa	H Lever	H Gear	Cv	WT (LBS) [lever/gear]	n= number of bolt holes X Ød
CLASS 300	1/2"	5.51	0.51	1.37	2.63	3.74	0.08	0.50	6.30	-	3.48	-	28	5	4 X Ø0.63
	3/4"	5.98	0.75	1.69	3.25	4.53	0.08	0.56	6.30	-	3.64	-	60	8	4 X Ø0.75
	1"	6.50	1.00	2.00	3.50	4.92	0.08	0.63	7.87	-	4.17	-	105	10	4 X Ø0.75
	1 1/2"	7.48	1.50	2.87	4.50	6.10	0.08	0.75	9.84	-	6.14	-	237	22	4 X Ø0.87
	2"	8.50	2.00	3.63	5.00	6.50	0.08	0.81	11.00	-	7.06	-	422	29	8 X Ø0.75
	3"	11.10	3.00	5.00	6.63	8.27	0.08	1.06	12.60	-	8.28	-	948	63	8 X Ø0.87
	4"	12.00	4.00	6.19	7.87	10.04	0.08	1.19	23.62	-	9.92	-	1686	110	8 X Ø0.87
6"	15.87	6.00	8.50	10.63	12.60	0.08	1.38	39.37	13.8	11.00	11.50	3794	[232 / 262]	12 X Ø0.87	

	Valve Size	L	ØD	ØD1	ØD2	ØD3	f	t	a	Øa	H Lever	H Gear	Cv	WT (LBS) [lever/gear]	n= number of bolt holes X Ød
CLASS 600	1/2"	6.50	0.51	1.37	2.63	3.74	0.28	0.56	6.30	-	3.48	-	28	6	4 X Ø0.63
	3/4"	7.48	0.75	1.69	3.25	4.53	0.28	0.63	6.30	-	3.64	-	60	9	4 X Ø0.75
	1"	8.50	1.00	2.00	3.50	4.92	0.28	0.69	7.87	-	4.17	-	105	13	4 X Ø0.75
	1 1/2"	9.49	1.50	2.87	5.00	6.10	0.28	0.88	9.84	-	6.18	-	237	29	4 X Ø0.87
	2"	11.50	2.00	3.63	5.00	6.50	0.28	1.00	12.60	-	7.72	-	422	44	8 X Ø0.75
	3"	14.00	3.00	5.00	6.63	8.30	0.28	1.25	27.60	-	9.75	-	948	95	8 X Ø0.88
	4"	17.00	4.00	6.19	8.50	10.83	0.28	1.50	39.37	13.8	9.75	10.50	1686	[180 / 210]	8 X Ø1.0

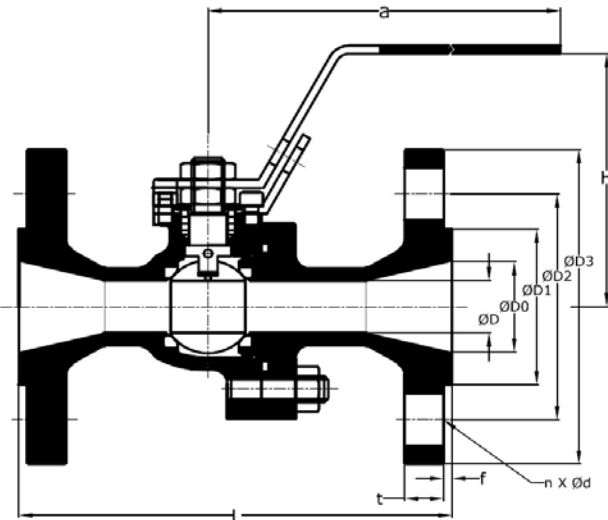
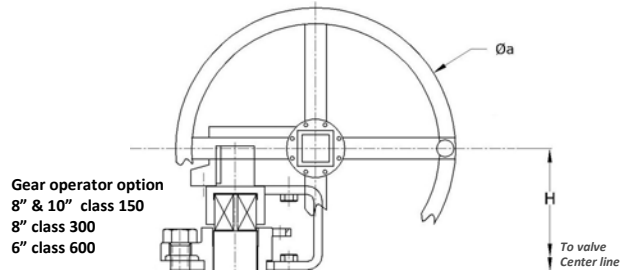
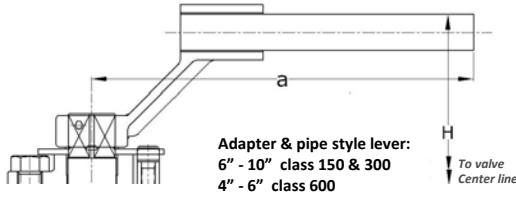


ISV Series BF1BU - Standard Dimensions

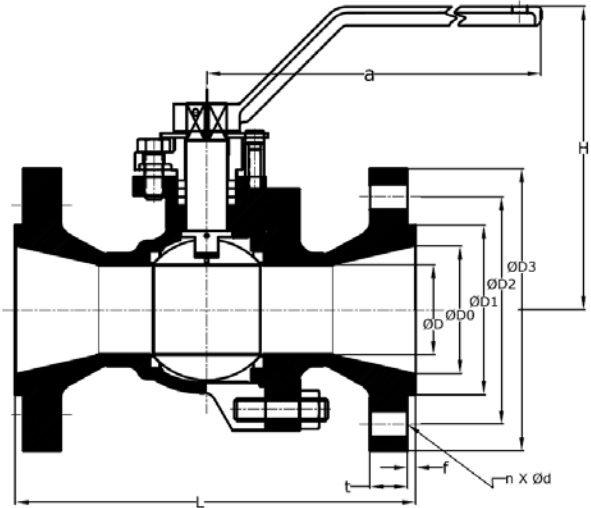
DIMENSIONAL STANDARDS

Valve Design	API 608 /ASME B16.34
Flanged End Connection	ASME B16.5
End to End	ASME B16.10 (Long Pattern)

REDUCED PORT



Typical 3/4" - 1 1/2" body style



Typical 2" - 10" body style

INCHES

	Valve Size	L	ØD	ØD0	ØD1	ØD2	ØD3	f	t	a	Øa	H Lever	H Gear	Cv	WT (LBS) [lever/gear]	n= number of bolt holes X Ød
CLASS 150	3/4"	4.62	0.51	0.75	1.69	2.75	3.88	0.08	0.34	6.30	-	3.48	-	17	4	4 X Ø0.63
	1"	5.00	0.75	1.00	2.00	3.12	4.25	0.08	0.38	6.30	-	3.64	-	38	7	4 X Ø0.63
	1 1/2"	6.50	1.00	1.50	2.88	3.88	5.00	0.08	0.50	7.87	-	4.17	-	66	11	4 X Ø0.63
	2"	7.00	1.50	2.00	3.62	4.75	6.00	0.08	0.56	9.84	-	6.14	-	149	17	4 X Ø0.75
	3"	8.00	2.00	3.00	5.00	6.00	7.50	0.08	0.69	11.02	-	7.06	-	265	30	4 X Ø0.75
	4"	9.00	3.00	4.00	6.19	7.50	9.00	0.08	0.88	12.60	-	8.28	-	596	65	8 X Ø0.75
	6"	15.50	4.00	6.00	8.50	9.50	11.00	0.08	0.94	15.75	-	10.08	-	1060	155	8 X Ø0.88
	8"	18.00	6.00	8.00	10.62	11.75	13.50	0.08	1.06	31.50	13.80	11.00	11.50	2385	[280 / 315]	8 X Ø0.875
	10"	21.00	8.00	10.00	12.75	14.25	16.00	0.08	1.12	53.15	18.00	13.50	14.50	4240	[355 / 395]	12 X Ø1.00

	Valve Size	L	ØD	ØD0	ØD1	ØD2	ØD3	f	t	a	Øa	H Lever	H Gear	Cv	WT (LBS) [lever/gear]	n= number of bolt holes X Ød
CLASS 300	3/4"	6.00	0.51	0.75	1.69	3.25	4.62	0.08	0.56	6.30	-	3.48	-	17	7	4 X Ø0.75
	1"	6.50	0.75	1.00	2.00	3.50	4.88	0.08	0.62	6.30	-	3.64	-	38	9	4 X Ø0.75
	1 1/2"	7.50	1.00	1.50	2.88	4.50	6.12	0.08	0.75	7.87	-	4.17	-	66	20	4 X Ø0.87
	2"	8.50	1.50	2.00	3.62	5.00	6.50	0.08	0.81	9.84	-	6.14	-	149	28	8 X Ø0.75
	3"	11.12	2.00	3.00	5.00	6.62	8.25	0.08	1.06	11.00	-	7.06	-	265	55	8 X Ø0.87
	4"	12.00	3.00	4.00	6.19	7.88	10.00	0.08	1.19	12.60	-	8.28	-	596	92	8 X Ø0.87
	6"	15.88	4.00	6.00	8.50	10.62	12.50	0.08	1.38	23.62	-	9.92	-	1060	195	12 X Ø0.87
	8"	19.75	6.00	8.00	10.63	13.00	15.00	0.08	1.56	39.37	13.80	11.00	11.50	2385	[230 / 255]	12 X Ø1.0

	Valve Size	L	ØD	ØD0	ØD1	ØD2	ØD3	f	t	a	Øa	H Lever	H Gear	Cv	WT (LBS) [lever/gear]	n= number of bolt holes X Ød
CLASS 600	3/4"	7.50	0.51	0.75	1.69	3.25	4.62	0.28	0.62	6.30	-	3.48	-	17	8	4 X Ø0.75
	1"	8.50	0.75	1.00	2.00	3.50	4.88	0.28	0.69	6.30	-	3.64	-	38	12	4 X Ø0.75
	1 1/2"	9.50	1.00	1.50	2.88	4.50	6.12	0.28	0.88	7.87	-	4.17	-	66	26	4 X Ø0.87
	2"	11.50	1.50	2.00	3.62	5.00	6.50	0.28	1.00	9.84	-	6.18	-	149	36	8 X Ø0.75
	3"	14.00	2.00	3.00	5.00	6.62	8.25	0.28	1.25	12.60	-	7.72	-	265	77	8 X Ø0.87
	4"	17.00	3.00	4.00	6.19	8.50	10.75	0.28	1.50	27.60	-	9.75	-	596	155	8 X Ø0.1.0
	6"	22.00	4.00	6.00	8.50	11.50	14.00	0.28	1.88	39.37	13.80	9.75	10.50	1060	[260 / 295]	12 X Ø1.0

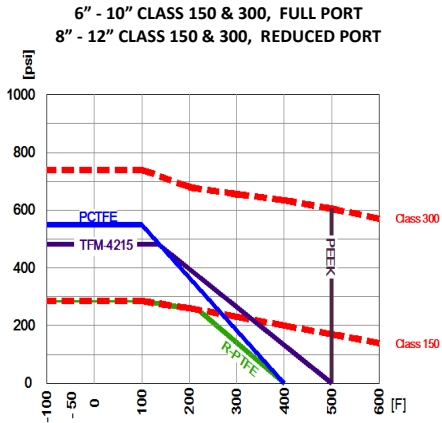
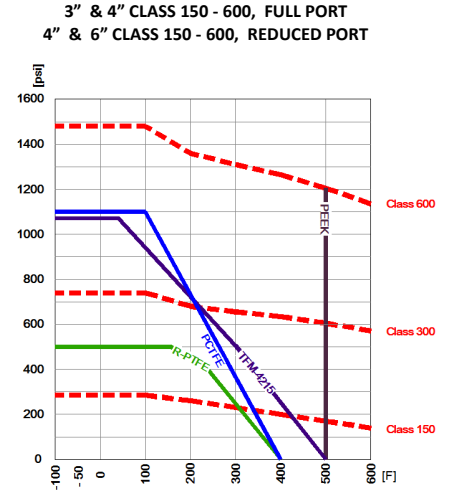
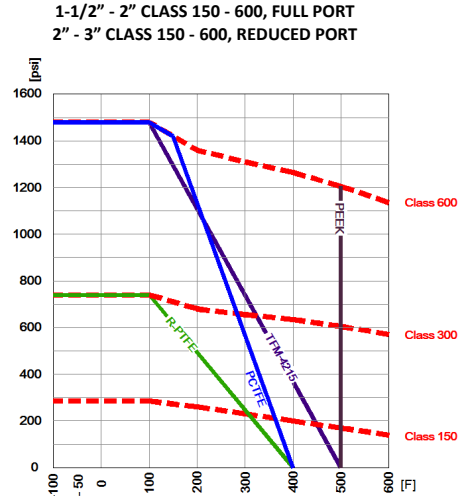
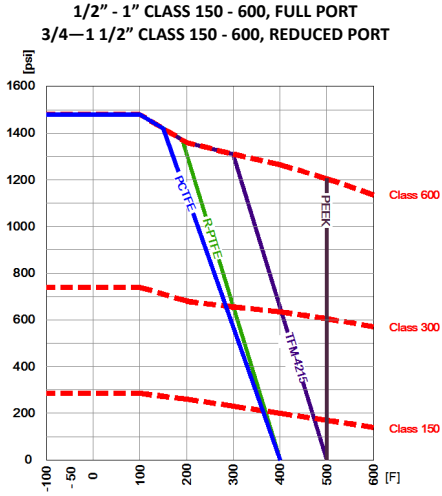


ISV Series BF1BU - Pressure-Temperature Ratings

The pressure temperature ratings for the **BF1BU** Series flanged end floating ball valves are determined by the ASME B16.34 valve pressure class, valve body material grades and the limits of the seat and seals materials.

The following pressure-temperature charts indicate the service range of standard ISV seat & seals material options.

For pressure-temperature ratings of other materials, contact your ISV customer service representative.



--- ASTM A216 Gr. WCB body material characteristic is shown.
(Lower temperature limit of WCB material is -20 degrees F.)

LOW TEMPERATURE LIMITS			
	ASTM GRADE	°F	°C
BODY MATERIAL	WCB	MINUS 20	MINUS 28.89
	LCC	MINUS 50	MINUS 45.56
	CF8M	MINUS 320	MINUS 195.56

Devlon is a registered trademark of James Walker Devol company, PEEK is a trademark of Victrex plc., TFM is a trademark of 3M Company,

Other ISV ball valve types assembled & tested in Stafford, Texas



TRUNNION MOUNTED



METAL SEATED



CRYOGENIC SERVICE



HIGH PRESSURE FLOATING

