

FLOATING BALL VALVES



w w w . j a g v a l v e . c o m





Stafford, Texas USA

• 55,000 square feet • ISO 9001:2008 • API 6D • CE/PED • ISO/TS 29001 • API Q1

Home to the JAG Valve trunnion, JAGflo's Stafford facility is operated under industry-leading quality guidelines to ensure lasting reliability. With extensive stock and a full service facility, JAGflo can deliver complete valve packages including valve automation, stem extensions, pipe pups, coatings and more. By manufacturing, testing and modifying valves in-house, JAGflo can provide reduced delivery and cost while maintaining high quality standards.

JAGflo's wholly owned Dalian, China facility uses state of the art machining and design capabilities to produce world-class valves that have earned a reputation of reliability and value. As an ISO 9001 certified facility, JAGflo's Dalian plant produces reliable and safe valves with a hands-on approach to quality. Our foundries and forge suppliers are carefully screened and routinely audited. JAGflo's commitment to quality can be seen in every step of the design, manufacturing and testing process. Our passion for "Building with Integrity" is passed to the customer through a reliable and value-driven valve.



Since 2005, JAG flocomponents USA, Inc. (JAGflo) has delivered quality valves at exceptional value. JAGflo manufactures JAG trunnion mounted and floating ball valves and specialty valves for the Oil and Gas and related industries. Forged from industry veterans, JAGflo fills the need to supply flow control products with uncompromising quality at globally competitive values. Our commitment to quality drives everything we do to ensure our customers receive a reliable product on time and on budget.

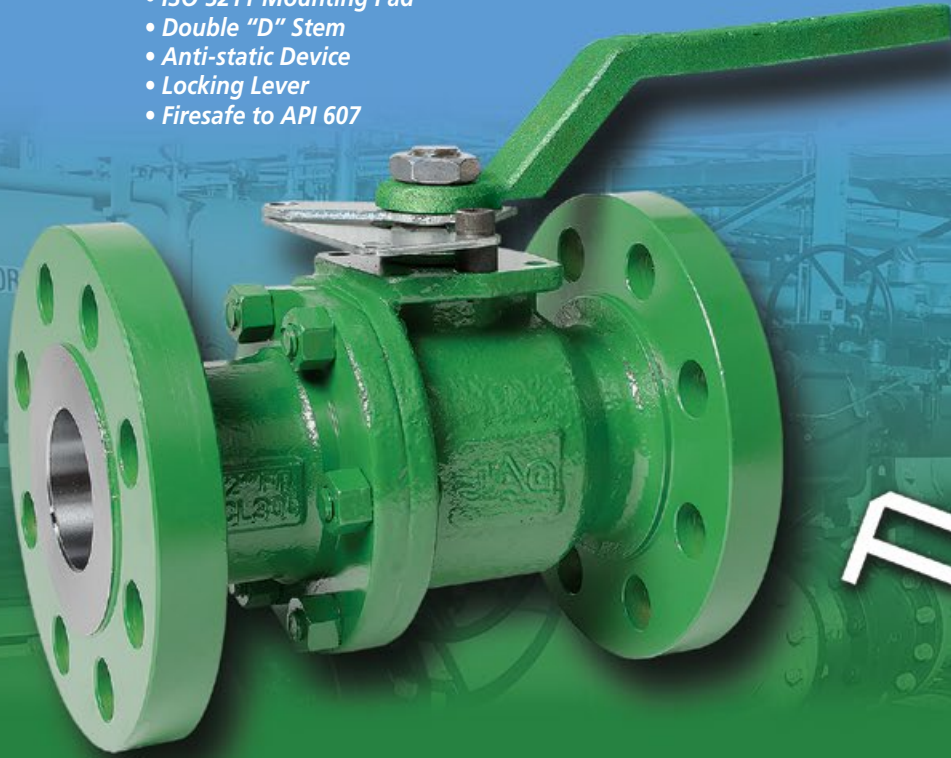
The perfect combination of domestic manufacturing and global materials, JAG valves offer end-users an economical choice with proven reliability and on time delivery. JAGflo is API 6D, CE/PED and ISO 9001 certified with manufacturing facilities in Stafford, Texas and Dalian, China operating under strict quality guidelines. Every valve is carefully machined, assembled and tested before leaving our facility to ensure your project runs smoothly, on time and on budget. With hundreds of thousands of valves installed worldwide, JAGflo has earned a reputation that you can depend on.



- Forged 2"-4" (ASME 150-600)
- Cast 6"-10" (ASME 150-300)
- 2-piece Bolted Body
- Full or Reduced Port
- Flanged End connections
- Blowout Proof Stem
- Dual Stem Seals
- Designed and tested to ASME B16.34
- NACE MR-01-75
- ISO 5211 Mounting Pad
- Double "D" Stem
- Anti-static Device
- Locking Lever
- Firesafe to API 607

API 607

Features & Benefits



FEATURES

- | | |
|---------------------|--|
| Ball | <ul style="list-style-type: none"> • Floating Ball • Stop Plate |
| Body | <ul style="list-style-type: none"> • Bolted 2-piece Construction • 2" - 4" Forged Steel • 6" - 10" Cast Steel |
| Seat | <ul style="list-style-type: none"> • Designed in strict accordance with API 607 |
| Stem | <ul style="list-style-type: none"> • Integral T-style stem internally inserted • Double D stem • Anti-static devices ground contact between stem and ball and body • Finish of stem to Ra0.4 / stuffing box between Ra1.6-Ra3.2 for better functioning of packing ring • Stem O-rings |
| Gland Flange | <ul style="list-style-type: none"> • Live-Loaded Belleville springs on gland studs |
| Packing | <ul style="list-style-type: none"> • Special Low Emissions packing provides heat resistance, less stress relaxation and low creep |
| Mounting Pad | <ul style="list-style-type: none"> • ISO 5211 standardized mounting pads |
| Handle | <ul style="list-style-type: none"> • Locking Handle |
| Traceability | <ul style="list-style-type: none"> • Materials Certification of all pressure containing parts |

BENEFITS

- Seal is created by line pressure
- Ensures ball cannot be over-rotated
- Offers easy maintenance for longer service life
- Rugged design for high pressure applications
- Economical solution for low pressure applications
- Metal-to-metal secondary seal isolates flow if primary soft seals are compromised by fire
- Blow-out proof stem cannot be removed while valve in service
- Guarantees correct handle mount parallel to flow
- Ensures electrical continuity
- Reduces friction for better sealing performance and minimizes fugitive emissions
- Provides dual seal capability
- Provides continuous compression to maintain load on the stem packing at all times
- Maximum sealing performance reducing fugitive emissions to comply with most severe regulations
- Simple and economical automation mounting
- Tamper proof in the Open and Closed positions
- Available for stringent specification requirements

Part number configuration

F B2 - F 40 R 06 N - - S4 02 - J
 1 2 3 4 5 6 7 8 9 10 11

1-Type 2-Construction 3-Port

F - Floating

B2 - Bolted (2 pc) - Forged 2" to 4"
 B2 - Bolted (2 pc) - Cast 6" to 10"

F - Full Port
 R - Reduced Port

4-Nominal Size

05 - 1/2"
 07 - 3/4"
 10 - 1"
 15 - 1.5"
 20 - 2"

30 - 3"
 40 - 4"
 60 - 6"
 80 - 8"
 100 - 10"

5-Connection 6-Pressure 7-Body / Service

A - RF Smooth
 B - BW Sch 40
 C - BW Sch 80
 E - BW Sch XXH
 J - RTJ
 R - Raised Face
 X - Special

01 - ASME 150
 03 - ASME 300
 06 - ASME 600

L - ASTM A350 LF2 / LT / NACE
 N - A105N / NACE
 X - Special

8-Operator 9-Soft Goods 10-Trim 11-Computer Code

* - Handle
 G - Gear
 B - Bare Stem

*S4 - Viton / RPTFE Seats

*02 - 316 SS

J

For additional configurations, please consult JAGflo

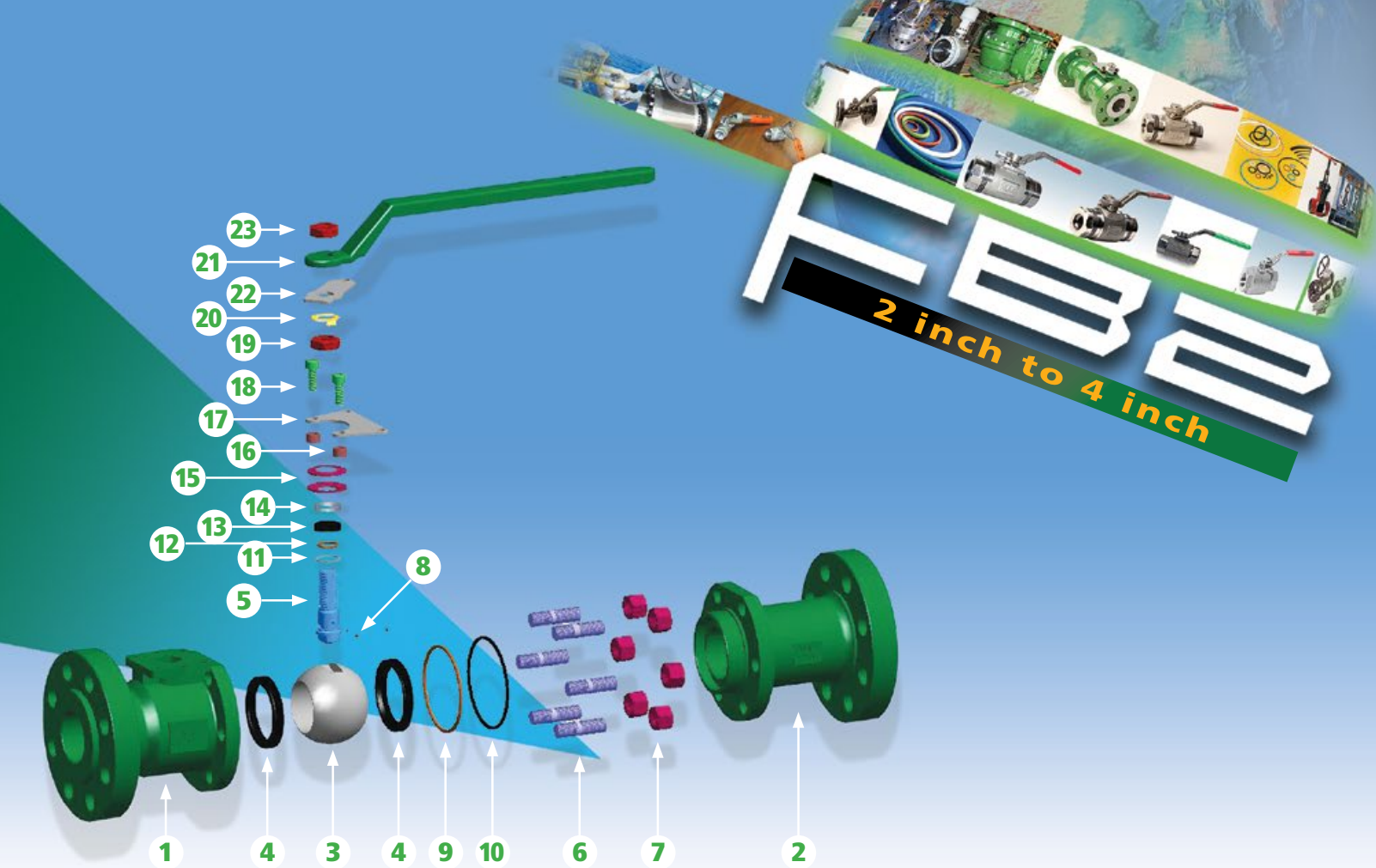
* Our standard



JAGflo's commitment to quality begins with world class engineering and is the driving force behind every step of the process. We audit and certify mills and foundries that supply our raw materials to ensure top quality products. Every component is machined using state of the art equipment in factories that adhere to our strict quality guidelines. Every single valve we build is tested to today's rigorous standards so every valve we ship is guaranteed to deliver lasting reliability, operational safety and uncompromised long-term value. JAGflo's culture is a hands-on approach to quality and a dedication to putting the customers' needs first in manufacturing, sales and service. *Our company and products are...*

BUILT WITH
integrity



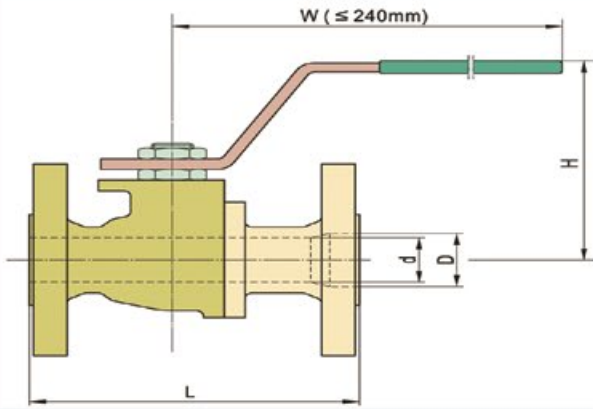


FB2 Two Piece Forged Body Floating Ball Valve – Material Specifications

No.	Part	A105N/316 NACE	Low Temp LF2/316 NACE
1	Body	ASTM A105N	ASTM A350-LF2
2	End Closure	ASTM A105N	ASTM A350-LF2
3	Ball	ASTM A351-CF8M	ASTM A351-CF8M
4	Seat	RTFE	RTFE
5	Stem	ASTM A182-F316	ASTM A182-F316
6	Body Stud	ASTM A193-B7M	ASTM A320-L7M
7	Body Nut	ASTM A194-2HM	ASTM A194-7M
8	Antistatic Device	ASTM F304	ASTM F304
9	O-ring	Viton	Viton
10	Gasket	Graphite	Graphite
11	Thrust Washer	RTFE	RTFE
12	O-ring	Viton	Viton
13	Packing	Graphite	Graphite
14	Packing Ring	ASTM A276-GR304	ASTM A276-GR304
15	Belleville Washer	Spring Steel	Spring Steel
16	Spacer	Carbon Steel - Plated	Carbon Steel - Plated
17	Lock Plate	Carbon Steel - Plated	Carbon Steel - Plated
18	Cap Screw	Carbon Steel	Carbon Steel
19	Gland Nut	Carbon Steel - Plated	Carbon Steel - Plated
20	Lock Washer	Carbon Steel - Plated	Carbon Steel - Plated
21	Lever Handle	Carbon Steel	Carbon Steel
22	Stopper Plate	Carbon Steel - Plated	Carbon Steel - Plated
23	Lever Handle Nut	Carbon Steel - Plated	Carbon Steel - Plated

DIMENSIONS

2 inch to 4 inch



FB2 Forged - CLASS 150 Full Bore

Size		D		L		H		W		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg
2	50	2	50.8	7	178	5.4	136	14	350	22	10
3	80	3	76	8	203	6.8	172.5	16	400	42	19
4	100	4	100	9	228.5	8.6	219	18	450	70	32

FB2 Forged - CLASS 300 Full Bore

Size		D		L		H		W		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg
2	50	2	50.8	8.5	216	5.4	136	14	350	20	9
3	80	3	76	11.12	283	6.8	172.5	16	400	66	30
4	100	4	100	12	305	8.6	219	18	450	70	32

FB2 Forged - ASME 600 Full Bore

Size		D		L		H		W		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg
2	50	2	50.8	11.5	292	5.4	136	14	350	56	25
3	80	3	76	14	356	6.8	172.5	16	400	113	51
4	100	4	100	17	432	8.7	220	18	450	203	92

FB2 Forged - CLASS 150 Reduced Bore

Size		d		D		L		H		W		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg
2x1.5	50x38	1.5	38	2	50.8	7	178	5.04	128	14	350	19	9
3x2	80x50	2	50.8	3	76	8	203	5.35	136	14	350	42	19
4x3	100x80	3	76	4	100	9	228.5	6.7	172.5	16	400	51	23

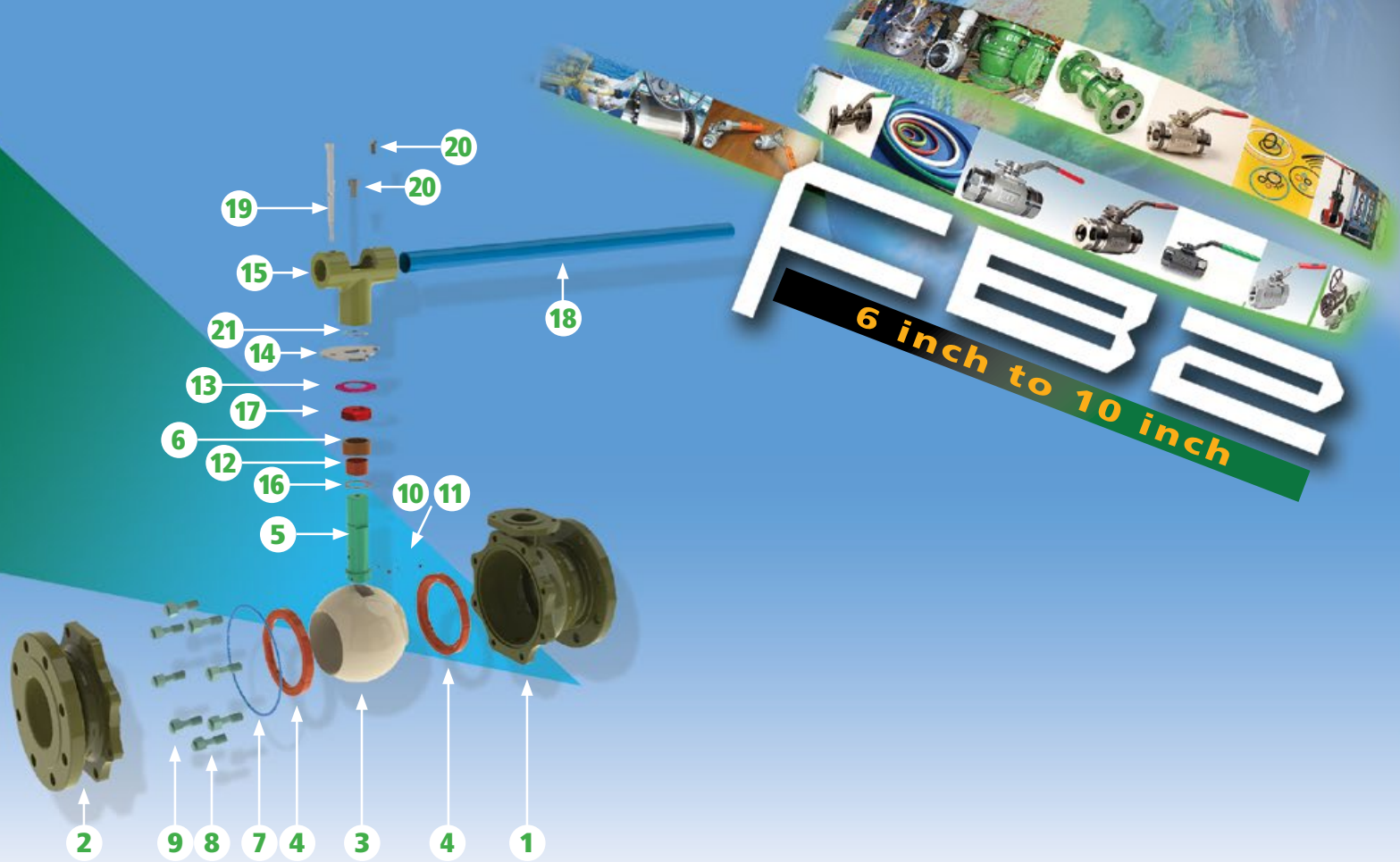
FB2 Forged - CLASS 300 Reduced Bore

Size		d		D		L		H		W		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg
2x1.5	50x38	1.5	38	2	50.8	8.5	216	5.04	128	14	350	26	12
3x2	80x50	2	50.8	3	76	11.12	283	5.35	136	16	350	57	26
4x3	100x80	3	76	4	100	12	305	6.7	172.5	16	400	84	38

FB2 Forged - ASME 600 Reduced Bore

Size		d		D		L		H		W		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg
2x1.5	50x38	1.5	38	2	50.8	11.5	292	5.04	128	14	350	44	20
3x2	80x50	2	50.8	3	76	14	356	5.35	136	14	350	64	29
4x3	100x80	3	76	4	100	17	432	6.7	172	16	400	130	59

* Imperial dimensions are for reference only and have been rounded off to the nearest decimal.

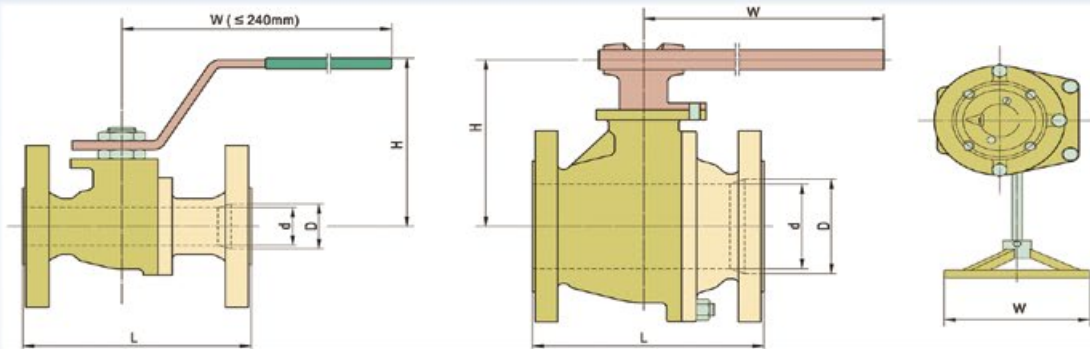


FB2 Two Piece Cast Body Floating Ball Valve – Material Specifications

No.	Part	A216 WCB/316 NACE	A352 GR LCC/316 NACE
1	Body	ASTM A216-WCB	ASTM A352-LCC
2	End Closure	ASTM A216-WCB	ASTM A352-LCC
3	Ball	ASTM A182-F316	ASTM A182-F316
4	Seat	RTFE	RTFE
5	Stem	ASTM A182-F316	ASTM A182-F316
6	Packing Ring	ASTM A276-GR304	ASTM A276-GR304
7	Gasket	Graphite	Graphite
8	Body Stud	ASTM A193-B7M	ASTM A320-L7M
9	Body Nut	ASTM A194-2HM	ASTM A194-7M
10	Steel Ball	Stainless Steel	Stainless Steel
11	Antistatic Spring	Inconel X-750	Inconel X-750
12	Packing	Graphite	Graphite
13	Belleville Washer	Spring Steel	Spring Steel
14	Lock plate	Carbon Steel - Plated	Carbon Steel - Plated
15	Lever Head	Carbon Steel - Zinc Plated	Carbon Steel - Zinc Plated
16	Thrust Washer	PTFE	PTFE
17	Gland Nut	Carbon Steel - Plated	Carbon Steel - Plated
18	Lever Handle	Carbon Steel - Zinc Plated	Carbon Steel - Zinc Plated
19	Position Screw	Carbon Steel	Carbon Steel
20	Screw	Carbon Steel	Carbon Steel
21	Lock Washer	Carbon Steel - Plated	Carbon Steel - Plated

DIMENSIONS

6 inch to 10 inch



FB2 Cast - CLASS 150 Full Bore

Size		d		D		L		H		W		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg
6	150	6	150	6	150	15.5	395	30	760	10.7	272	165	75
8	200	8	200	8	200	18	457	n/a	n/a	13.5	342	254	115
10	250	10	250	10	250	21	533	n/a	n/a	19.5	495	397	180

FB2 Cast - CLASS 150 Reduced Bore

Size		d		D		L		H		W		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg
6x4	150x100	4	100	6	150	15.5	395	20	510	8	203	121	55
8x6	200x150	6	150	8	200	18	457	30	760	10.7	272	183	83
10x8	250x200	8	200	10	250	21	533	n/a	n/a	13.5	342	269	122

FB2 Cast - CLASS 300 Full Bore

Size		d		D		L		H		W		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg
6	150	6	150	6	152	15.9	403	30	760	12	304	275	126
8	200	8	200	8	203	19.75	502	n/a	n/a	15	381	443	200
10	250	10	250	10	254	22.4	568	n/a	n/a	15	381	946	430

FB2 Cast - CLASS 300 Reduced Bore

Size		d		D		L		H		W		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg
6x4	150x100	4	100	6	150	15.87	403	20	510	8	203	165	75
8x6	200x150	6	150	8	200	19.75	502	30	760	10.7	272	287	130
10x8	250x200	8	200	10	250	22.4	568	n/a	n/a	10.7	272	441	200

* Imperial dimensions are for reference only and have been rounded off to the nearest decimal.

FORMULAS

FLOW COEFFICIENT (Cv)

The Flow Coefficient of a valve is the flow rate of water (gallons/minute) through a fully open valve, with a pressure drop of 1 psi across the valve. To find the flow of liquid through a valve from the Cv, the following formulas;

Liquid Flow

QL = Flow rate of liquid (gal./min.)
 ΔP = Differential pressure across the valve (psi)
 G = Specific gravity of liquid (for water, G = 1)

$$Q_L = C_v \sqrt{\frac{\Delta P}{G}}$$

Gas Flow

Qg = Flow rate of gas (CFH at STP)
 P2 = Outlet pressure (psia)
 g = Specific gravity of gas (for air, g = 1.000)

$$Q_g = 61C_v \sqrt{\frac{P_2 \Delta P}{g}}$$

ANSI Class	ASME Group 1.1 (WCB/LCC & A105N/LF2)	ASME Group 2.2 (CF8M/316SS)
150 (PN 20)	285 PSI	275 PSI
300 (PN 50)	740 PSI	720 PSI
600 (PN 100)	1480 PSI	1440 PSI
900 (PN 150)	2220 PSI	2160 PSI
1500 (PN 250)	3705 PSI	3600 PSI
2500 (PN 420)	6170 PSI	6000 PSI

Weight
 Kg. x 2.2 = Lbs.
 Lbs. x 0.45 = Kg.

*Maximum Allowable Pressure at 100 Deg F

Distance

inch x 25.4 = mm
 mm x 0.039 = inch
 ft x 0.305 = meters
 meters x 3.28 = feet

Pressure

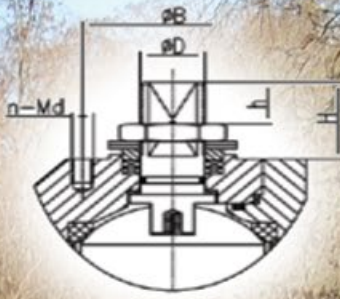
PSI x 6.89 = kPa
 kPa x 0.145 = PSI
 PSI x 0.0689 = bar
 bar x 14.50 = PSI

Temperature

Celsius Fahrenheit
 (Deg F - 32) ÷ 1.8 (Deg C x 1.8) + 32

Torque

N.m. x 0.737 = Ft/Lbs.
 Ft/Lbs. x 1.356 = N.m.



TOP WORKS AND TORQUES

TOP WORK DIMENSIONS (ISO 5211)

Class 150 - Forged

Size	ISO Flange	n-Md (mm)	Double D Flats	B(mm)	D (mm)	H (mm)	h (mm)	Hole Depth
2" 150	F07	4-M8	14	70	18	38	23	12
3" 150	F10	4-M10	22	102	30	58	35	15
4" 150	F10	4-M10	27	102	39	78	48	15

Class 300 - Forged

Size	ISO Flange	n-Md (mm)	Double D Flats	B(mm)	D (mm)	H (mm)	h (mm)	Hole Depth
2" 300	F07	4-M8	14	70	18	38	23	12
3" 300	F10	4-M10	22	102	30	58	35	15
4" 300	F10	4-M10	27	102	39	78	48	15

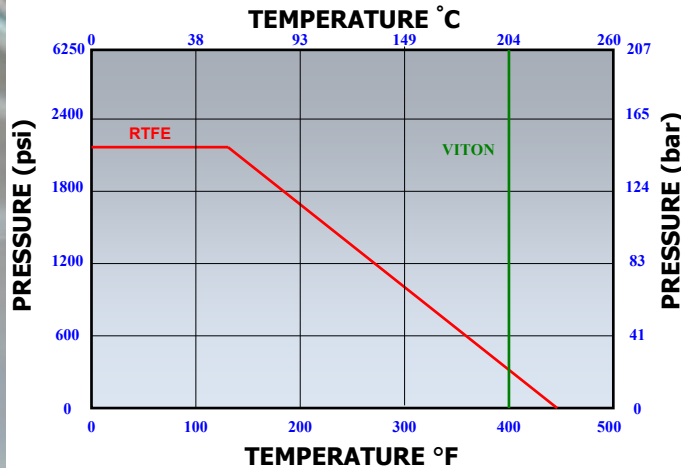
Class 600 - Forged

Size	ISO Flange	n-Md (mm)	Double D Flats	B(mm)	D (mm)	H (mm)	h (mm)	Hole Depth
2" 600	F07	4-M8	14	70	18	38	23	12
3" 600	F10	4-M10	22	102	30	58	35	15
4" 600	F10	4-M10	27	102	39	78	48	15

Operating Torques

Size	150		300		600	
	N/M	Ft/Lbs.	N/M	Ft/Lbs.	N/M	Ft/Lbs.
1 1/2"	40	30	60	44	62	46
2"	50	37	70	52	90	66
3"	100	74	140	103	200	148
4"	180	133	230	170	370	273

PRESSURE TEMPERATURE CHART JAG FLOATING FB2



Consult ASME 16.34 or JAG Engineering for Specific Material Pressure/Temperature Ratings
FOR REFERENCE PURPOSES ONLY

BUILT WITH INTEGRITY



Built with Integrity

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