ISLIP FLOW CONTROLS Inc.

Our Knowledge Sets us Apart.

FLOATING BALL VALVES

OUR KNOWLEDGE SETS US APART

ISLIP FLOW CONTROLS Inc.

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Notes: The material in this catalogue is for general information. For specific performance data and proper material selection, consult factory or your IFC representative. Although every attempt has been made to ensure that the information contained in this catalogue is correct IFC Inc. reserves the right to change designs, materials and/or specifications without notice.

LIMITED WARRANTY

All products are warranted to be free of defects in material and workmanship for a period of one year from the date of shipment, subject to the limitations below. If the purchaser believes a product defective, the purchaser shall: **(a)** Notify the manufacturer, state the alleged defect and request permission to return the product, **(b)** If permission is given, return the product with transportation prepaid. If the product is accepted for return and found to be defective, the manufacturer will, at its discretion, either repair or replace the product, f.o.b. factory, within 60 days of receipt, or refund the purchase price.

Other than to repair, replace or refund described above, the purchaser agrees that the manufacturer shall not be liable for any loses, costs, expenses or damages of any kind arising out of the product, its use, installation or replacement, labeling, instruction, information or technical data of any kind, description of product use, sample or model, warning, or lack of foregoing. No other warranties, written or oral, expressed or implied, including the warranties of fitness for a particular purpose and merchantability, are made or authorized.

No affirmation of fact, promise, description of product use or sample or model shall create any warranty from the manufacturer, unless signed by the president. These products are not manufactured, sold or intended for personal, family or household purposes.

ISLIP FLOW CONTROLS Inc.

Islip Flow Control Inc. Ball valves are designed and manufactured to meet recognized industry standards in a wide variety of industries including chemical processing, petrochemical, oil and gas, pulp and paper among others. The valves are capable of handling a wide range of liquids, suspended solids and gases and offer the advantages associated with ball valves: quick, quarter turn operation, visual indication of the valve position, straight uninterrupted flow path and compact size and weight. IFC can offer ball valves in compliance with all of the following standards and specifications:

- ASME B16.34
- API 598 and API 607 4th Edition (Fire Safe)
- ASME SECTION VIII, Div.1
- NACE MR0175
- Canadian Registration Number (CRN)

ACTUATION: Valves are supplied with Levers, Oval Handles or Gear Operators.

INTEGRAL MOUNTING PADS: are in accordance with ISO 5211 mounting dimensions for global conformity.

VALVE BODY: Materials of construction include Brass, Steel (WCB, LCB, LCC) and stainless steel (CF8M). Wall thickness and design meet the requirements of ASME B16.34 (see page 30) while certain models conform to the requirements of NACE MR-01-75. Body and end piece castings are marked with heat codes providing traceability to the Material Test Reports performed at the foundry.

BODY SEAL: Graphite or Teflon seals are used on all body connections to ensure positive sealing. Body joints are designed to withstand imposed pipe loads and meet strength requirements as outlined in the ASME Section VIII, Div.1 design code.

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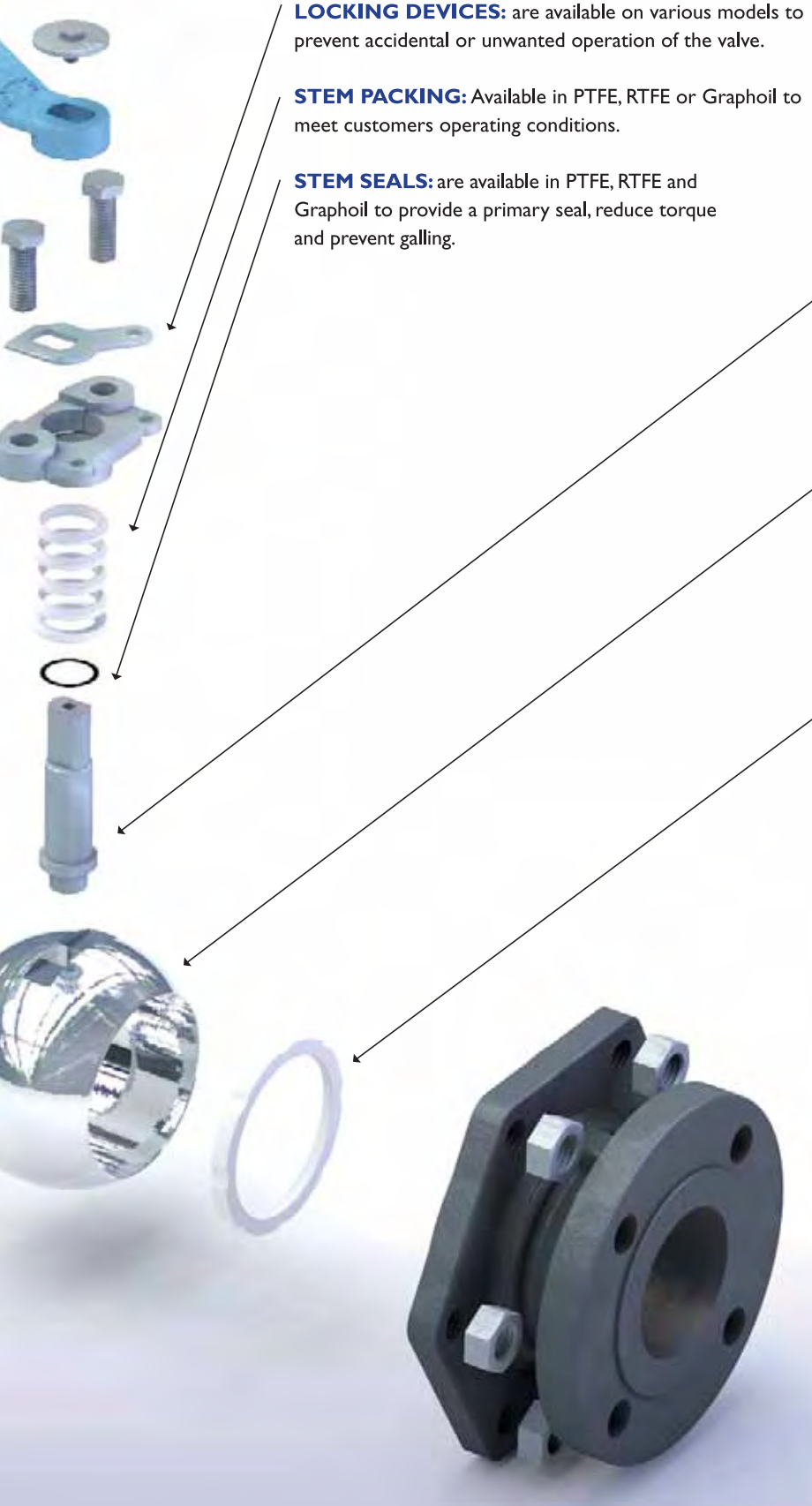
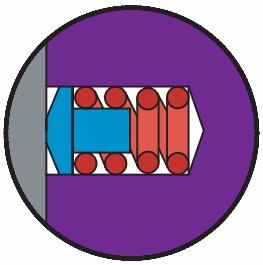
IFC FLOATING BALL VALVE DESIGN FEATURES



LOCKING DEVICES: are available on various models to prevent accidental or unwanted operation of the valve.

STEM PACKING: Available in PTFE, RTFE or Graphoil to meet customers operating conditions.

STEM SEALS: are available in PTFE, RTFE and Graphoil to provide a primary seal, reduce torque and prevent galling.



ANTI-STATIC DEVICE

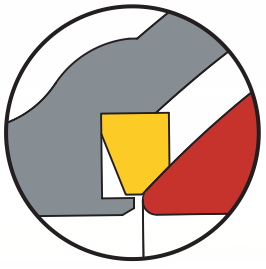
POSITIVE STEM RETENTION: All Islip Flow Control Inc. Ball valves are equipped with a back-seated blow-out proof stem. As a safety measure the stem cannot be removed without disassembly of the valve. Where antistatic operation is required the valves are supplied with a stainless steel spring and plug arrangement between the stem, ball and valve body that permits electrical continuity between all valve components.

FLOATING BALL: IFC balls are precision machined and mirror finished for bubble-tight shut off. Ball edges have machined curvatures to reduce seat wear and provide a high cycle life. Certain models are equipped with a relief hole in the stem slot to prevent build-up of cavity pressure while the valve is in the closed position.

VALVE SEALING: IFC floating ball valves are designed to seal bidirectionally against resilient or polymeric seats. Valve seats are available in a wide choice of materials from RTFE and Polycarbon to materials suitable for high pressure operation such as Peek. When equipped with valve relief slots downstream sealing is assured while minimizing operating torque. During operation the ball is forced to the downstream side under pressure to effect and maintain a seal resulting in bubble-tight shut-off.

PRESSURE RELIEF SEAT

Certain valve models are certified and tested to meet API 607 / latest edition and ISO 10497 fire safe requirements. The secondary metal seats provide fire safety by retaining the softening downstream seat in the event of a fire while forming a metal-to-metal seal with the ball.

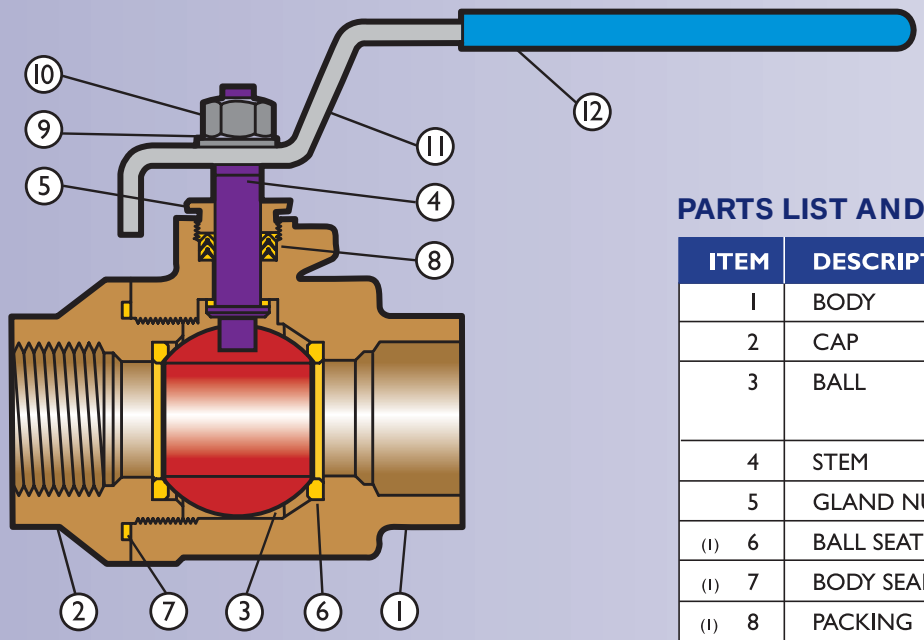


FIRE-TEST LIP

IFC TWO PIECE BALL VALVES
IFC SERIES 2FB6 BRASS BODY – 600 PSIG

DESIGN FEATURES

- FULL PORT
- N.P.T. ENDS TO ASME B1.20.1 OR SOLDER ENDS (CXC) TO ASME B16.22
- TWO PIECE BODY
- BLOWOUT PROOF STEM
- ADJUSTABLE THREADED PACKING GLAND
- MARKINGS TO MSS-SP25
- CAN/CGA APPROVED (SIZES 1/2"- 2")
- 600 PSI W.O.G.



PARTS LIST AND STANDARD MATERIALS

ITEM	DESCRIPTION	SPECIFICATIONS
1	BODY	BRASS B283-C37700
2	CAP	BRASS B283-C37700
3	BALL	CHROME PLATED BRASS ALLOY C37710
4	STEM	BRASS B283-C37700
5	GLAND NUT	BRASS B283-C37700
(1) 6	BALL SEAT	PTFE
(1) 7	BODY SEAL	PTFE
(1) 8	PACKING	PTFE
9	SPRING WASHER	CHROME PLATED STEEL
10	NUT	CHROME PLATED STEEL
11	HANDLE	ZINC PLATED STEEL
12	HANDLE SLEEVE	PVC

NOTES

1. Standard items included in repair kit.

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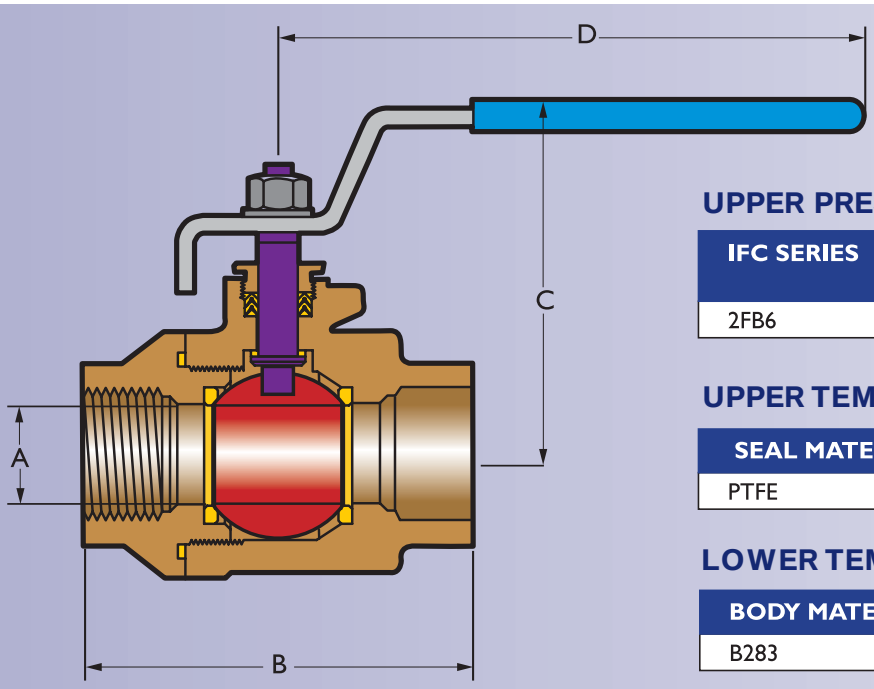


UPPER PRESSURE LIMITS (NON-SHOCK)

IFC SERIES	BODY MATERIAL	M.A.W.P. PSIG (BARS)
2FB6	B283	600 (41.37)

UPPER TEMPERATURE LIMITS

SEAL MATERIAL	UPPER LIMITS °F (°C)
PTFE	400° (204°)

LOWER TEMPERATURE LIMITS

BODY MATERIAL	UPPER LIMITS °F (°C)
B283	-20° (-28.9°)

IFC SERIES 2FB6T (NPT X NPT) AND 2FB6S (C X C)

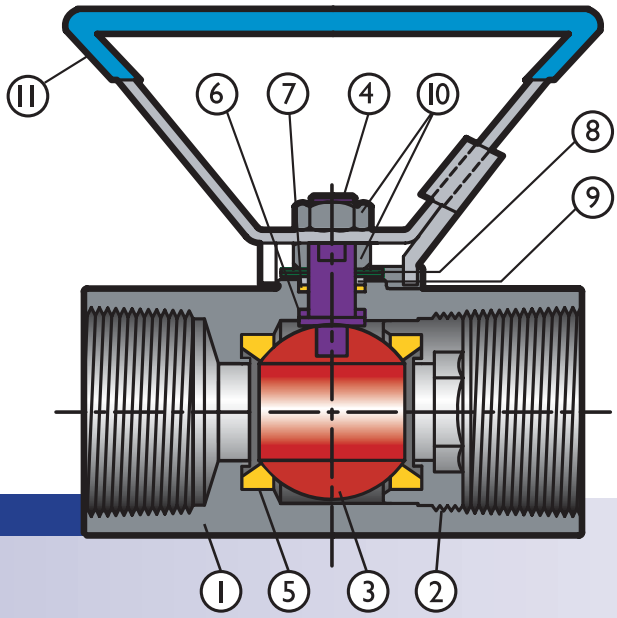
SIZE in/mm	A in/mm	B in/mm		C in/mm		D in/mm		Weight Lb./Kg.		Torque In-Lbs./ N-M	CV
		NPT x NPT	C x C	NPT x NPT	C x C	NPT x NPT	C x C	NPT x NPT	C x C		
1/4 8	0.46 12	1.69 43	N/A	1.61 41	N/A	3.38 86	N/A	0.60 0.27	N/A	36 4.07	10
3/8 10	0.50 10	1.69 43	N/A	1.61 41	N/A	3.38 86	N/A	0.60 0.27	N/A	36 4.07	10
1/2 15	0.59 15	2.06 52	2.25 57	1.88 48	1.88 48	3.38 86	3.38 86	0.66 0.30	0.66 0.30	39 4.41	12
3/4 20	0.79 20	2.38 60	2.81 71	2.13 54	2.13 54	4.38 111	4.38 111	1.25 0.57	1.25 0.57	52 5.88	35
1 25	0.98 25	2.89 73	3.31 84	2.25 57	2.25 57	4.38 111	4.38 111	1.85 0.84	1.85 0.84	65 7.35	60
1 1/4 32	1.26 32	3.25 83	4.13 105	2.75 70	2.75 70	5.50 140	5.50 140	2.80 1.27	2.80 1.27	78 8.82	100
1 1/2 40	1.50 38	3.63 92	4.44 113	3.00 76	3.00 76	5.50 140	5.50 140	4.50 2.04	4.50 2.04	117 13.2	150
2 50	1.97 50	4.06 103	5.38 137	3.25 83	3.25 83	5.50 140	5.50 140	6.90 3.13	6.90 3.13	143 16.2	250
2 1/2 65	2.56 65	5.38 137	6.38 162	4.63 118	4.19 106	9.25 235	7.88 200	13.25 6.01	13.25 6.01	390 44.1	400
3 80	3.15 80	5.81 148	7.19 183	4.91 125	4.91 125	9.25 235	9.88 251	22.25 10.09	22.25 10.09	412 56.6	600
4 100	3.93 100	7.25 184	9.25 235	5.75 146	5.75 146	10.38 264	9.88 251	41.00 18.60	41.00 18.60	453 62.3	1100

NOTES

1. For Pressure-Temperature ratings see page 25.
2. Valve Torque information is provided on page 27.
3. “How to Order” can be found on page 32.

ISLIP FLOW CONTROLS Inc.

IFC UNIBODY BALL VALVES
IFC SERIES 1RB20TC CARBON STEEL BODY – 2000 PSIG
IFC SERIES 1RB20TS STAINLESS STEEL BODY – 2000 PSIG



DESIGN FEATURES

- REDUCED PORT, ECONOMICAL STEAM VALVE
- NPT ENDS TO ASME B1.20.1
- ONE PIECE BODY
- POLYCARBON SEATS STANDARD
- STANDARD 316SS BALL AND STEM
- BLOWOUT-PROOF STEM
- STANDARD OVAL LOCKING LEVER HANDLES
- ASME B16.34, CLASS 800 COMPLIANT
- API 608 COMPLIANT
- FIRE SAFE TO API 607 4TH EDITION
- NACE MR01-75 COMPLIANT

OPTIONS

- LOCKING LEVER HANDLE
- TAPPED MOUNTING PAD
- OPTIONAL SEAT AND SEAL MATERIALS
- ECONOMICAL NON-FIRE SAFE VERSION

PARTS LIST AND STANDARD MATERIALS

ITEM	DESCRIPTION	SPECIFICATIONS	
		IFC SERIES 1RB20TC CARBON STEEL BODY	IFC SERIES 1RB20TS 316 STAINLESS STEEL BODY
1	BODY	A216-WCB	A351-CF8M
2	SPACER	A216-WCB	A351-CF8M
3	BALL	316 STAINLESS STEEL	316 STAINLESS STEEL
4	STEM	316 STAINLESS STEEL	316 STAINLESS STEEL
(1) 5	SEAT	POLYCARBON	POLYCARBON
(1) 6	STEM SEAL	GRAPHOIL	GRAPHOIL
(1) 7	STEM PACKING	GRAPHOIL	GRAPHOIL
8	BELL WASHER	W1-8 CS (SK5)	W1-8 CS (SK5)
9	GLAND	304 STAINLESS STEEL	304 STAINLESS STEEL
10	NUT	A283 CARBON STEEL	304 STAINLESS STEEL
11	HANDLE	A283 CARBON STEEL	304 STAINLESS STEEL

NOTES

1. Standard items included in repair kit
2. Fire safe trim offered as standard whenever possible. Consult IFC sales department for fire safe trim.
3. Valve materials meet the requirements of NACE MR01-75.
4. Other seat and seal materials available. See page 24.

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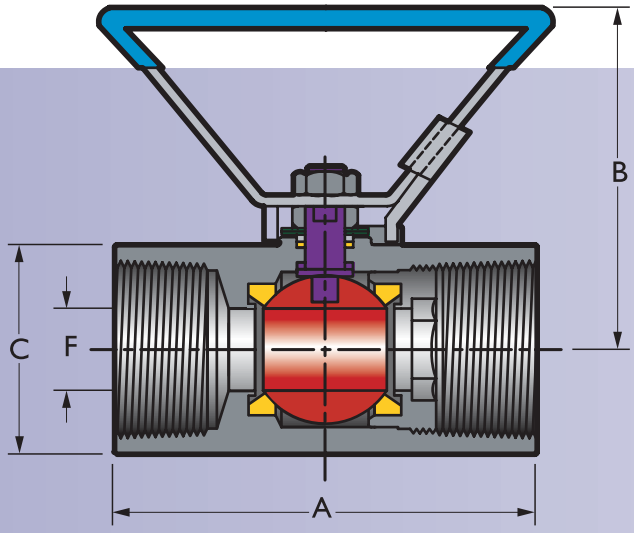
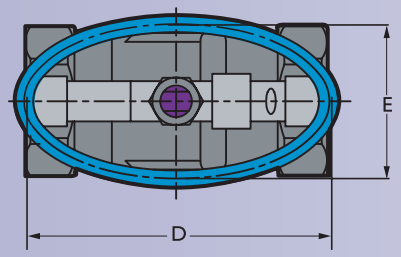
IFC UNIBODY BALL VALVES
IFC SERIES 1RB20TC CARBON STEEL BODY – 2000 PSIG
IFC SERIES 1RB20TS STAINLESS STEEL BODY – 2000 PSIG





UPPER PRESSURE LIMITS (NON-SHOCK)

IFC SERIES	BODY MATERIAL	M.A.W.P. PSIG (BARS)
1RB20TC	A216-WCB	2000 (137.9)
1RB20TS	A351-CF8M	2000 (137.9)

Note: Steam rating for IFC series 1RB20 is 250 psig at 406 F Saturated Steam

UPPER TEMPERATURE LIMITS

SEAL MATERIAL	UPPER LIMITS °F (°C)
RTFE	400° (204°)
PolyCarbon	650° (343°)

LOWER TEMPERATURE LIMITS

BODY MATERIAL	LOWER LIMIT F (°C)
A216-WCB	- 20° (-28.9°)
A351-CF8M	- 20° (-28.9°)

IFC SERIES 1RB20TC (WCB BODY) AND IFC SERIES 1RB20TS (CF8M BODY)

SIZE in/mm	A in/mm	B in/mm	C in/mm	D in/mm	E in/mm	F in/mm	Weight Lb./Kg.	Torque in-Lbs./ N-M	CV
1/4 8	2.28 58	2.84 72	1.00 25	3.35 85	2.00 51	0.35 9	0.66 0.30	50 5.6	1.0
3/8 10	2.28 58	2.84 72	1.00 25	3.35 85	2.00 51	0.35 9	0.68 0.31	50 5.6	2.5
1/2 15	2.63 67	2.84 72	1.00 25	3.35 85	2.00 51	0.35 9	0.75 0.34	100 11.3	5.5
3/4 20	2.88 73	2.86 73	1.31 33	3.35 85	2 51	0.47 12	0.95 0.43	120 13.6	10.0
1 25	3.13 80	3.19 81	1.56 40	4.65 118	2.5 64	0.62 16	2.00 0.91	130 14.7	15.5
1-1/4 35	3.5 89	3.21 82	1.93 49	4.65 118	2.5 64	0.81 21	2.25 1.02	245 27.7	20.0
1-1/2 40	3.88 99	3.71 94	2.25 57	5.04 128	3.03 77	1.00 25	3.50 1.59	365 41.2	37.0
2 50	4.25 108	3.91 99	2.69 68	5.04 128	3.03 77	1.25 32	5.00 2.27	590 66.7	60.0

NOTES

1. See page 18 for actuator and top works dimensions.
2. For Pressure-Temperature ratings see page 25.
3. Valve Torque information is provided on page 27.
4. See page 29 for sample actuator calculations.
5. "How to Order" can be found on page 32.

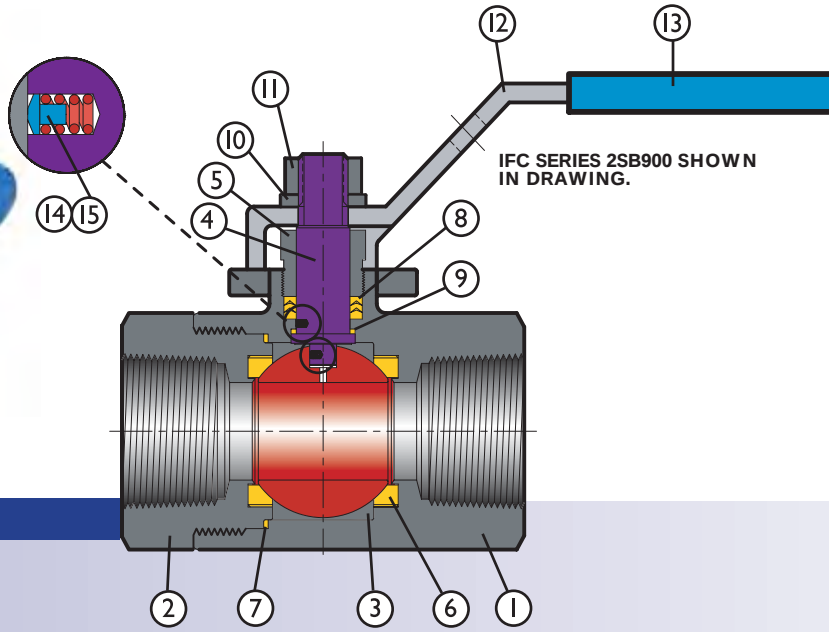
ISLIP FLOW CONTROLS Inc.

IFC TWO PIECE BALL VALVES

IFC SERIES 2FB10 STAINLESS STEEL BODY – 1000 PSIG

IFC SERIES 2SB900 CAST STEEL BODY – ANSI CLASS 900 LB

IFC SERIES 2FB10 SHOWN IN PICTURE.



IFC SERIES 2SB900 SHOWN IN DRAWING.

DESIGN FEATURES

- FULL PORT – IFC SERIES 2FB10 OR REGULAR PORT IFC SERIES 2SB900
- NPT ENDS TO ASME B1.20.1 OR SOCKET WELD ENDS TO ASME B16.11
- TWO PIECE BODY
- RTFE SEATS STANDARD ON IFC SERIES 2FB10, POLYCARBON SEATS STANDARD ON IFC SERIES 2SB900
- STANDARD 316 SS BALL AND STEM
- BLOWOUT-PROOF STEM
- ADJUSTABLE PACKING GLAND
- STANDARD 304 SS LOCKING LEVER HANDLES
- 2 BOLT MOUNTING ON IFC SERIES 2FB10, ISO 5211 4 BOLT MOUNTING ON IFC SERIES 2SB900
- **EXCLUSIVE TO IFC SERIES 2SB900**
  - FULL SEAL WELDED BODY TO ADAPTER CONNECTION
  - ASME B16.34, CLASS 900 COMPLIANT
  - API 608 COMPLIANT
  - FIRE SAFE TO API 607 4TH EDITION AND ISO 10497
  - NACE MR01-75 COMPLIANT
  - BALL INCLUDES PRESSURE EQUALIZATION HOLE TO PREVENT TRAPPED PRESSURE IN BODY CAVITY.
  - ANTI-STATIC DEVICE

PARTS LIST AND STANDARD MATERIALS

ITEM	DESCRIPTION	SPECIFICATIONS		
		IFC SERIES 2FB10	IFC SERIES 2SB900 Carbon Steel Body	IFC SERIES 2SB900 Stainless Steel Body
1	BODY	A351-CF8M	A216-WCB	A351-CF8M
2	CAP	A351-CF8M	A216-WCB	A351-CF8M
3	BALL	A351-CF8M	A351-CF8M	A351-CF8M
4	STEM	A276-316	A276-316	A276-316
5	GLAND	304 Stainless Steel	S45C	316 Stainless Steel
(1) 6	BALL SEAT	RTFE	RTFE	RTFE
(1) 7	BODY SEAL	PTFE	GRAPHITE	GRAPHITE
(1) 8	PACKING	PTFE	GRAPHITE	GRAPHITE
(1) 9	THRUSH WASHER	PTFE	RTFE	RTFE
10	SPRING WASHER	304 Stainless Steel	Carbon Steel	316 Stainless Steel
11	NUT	304 Stainless Steel	A283 CS	304 Stainless Steel
12	HANDLE	304 Stainless Steel	A283 CS ZP	304 Stainless Steel
13	HANDLE SLEEVE	PVC	PVC	PVC
14	SPRING	N/A	304SS	304SS
15	PLUNGER	N/A	304SS	304SS

NOTES

1. Standard items included in repair kit
2. Fire safe trim offered as standard whenever possible for IFC Series 2SB900 valves. Consult IFC sales department for fire safe trim.
3. Valve materials of IFC Series 2SB900 meet the requirements of NACE MR01-75.
4. Other seat and seal materials available. See page 24.

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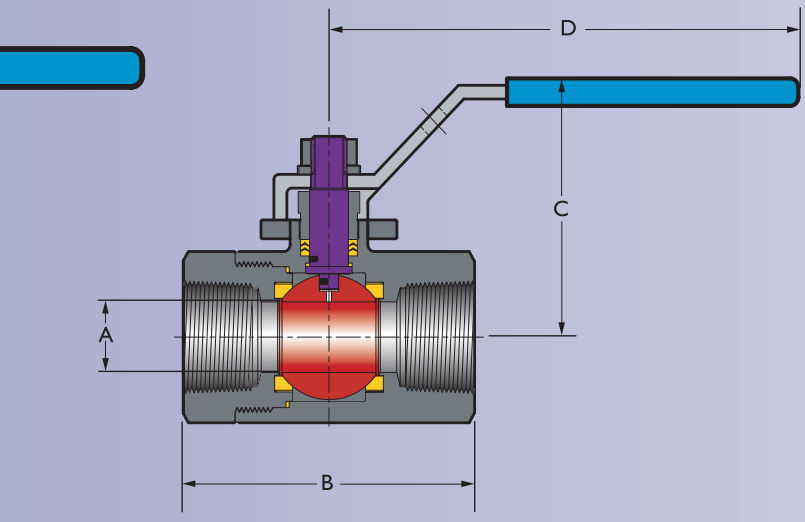
IFC TWO PIECE BALL VALVES

IFC SERIES 2FB10 STAINLESS STEEL BODY – 1000 PSIG
IFC SERIES 2SB900 CAST STEEL BODY – ANSI CLASS 900 LB



UPPER PRESSURE LIMITS (NON-SHOCK)

IFC SERIES	BODY MATERIAL	M.A.W.P. PSIG (BARS)
2FB10	A351-CF8M	1000 (68.95)
2SB900	A216-WCB	2220 (153.06)
2SB900	A351-CF8M	2160 (148.93)

UPPER TEMPERATURE LIMITS

SEAL MATERIAL	UPPER LIMITS °F (°C)
RTFE	400° (204°)
PolyCarbon	650° (343°)

LOWER TEMPERATURE LIMITS

BODY MATERIAL	LOWER LIMITS °F (°C)
A216-WCB	- 20° (-28.9°)
A351-CF8M	- 20° (-28.9°)

IFC SERIES 2FB10 (1000 PSIG) AND IFC SERIES 2SB900 (ANSI 900 LB)

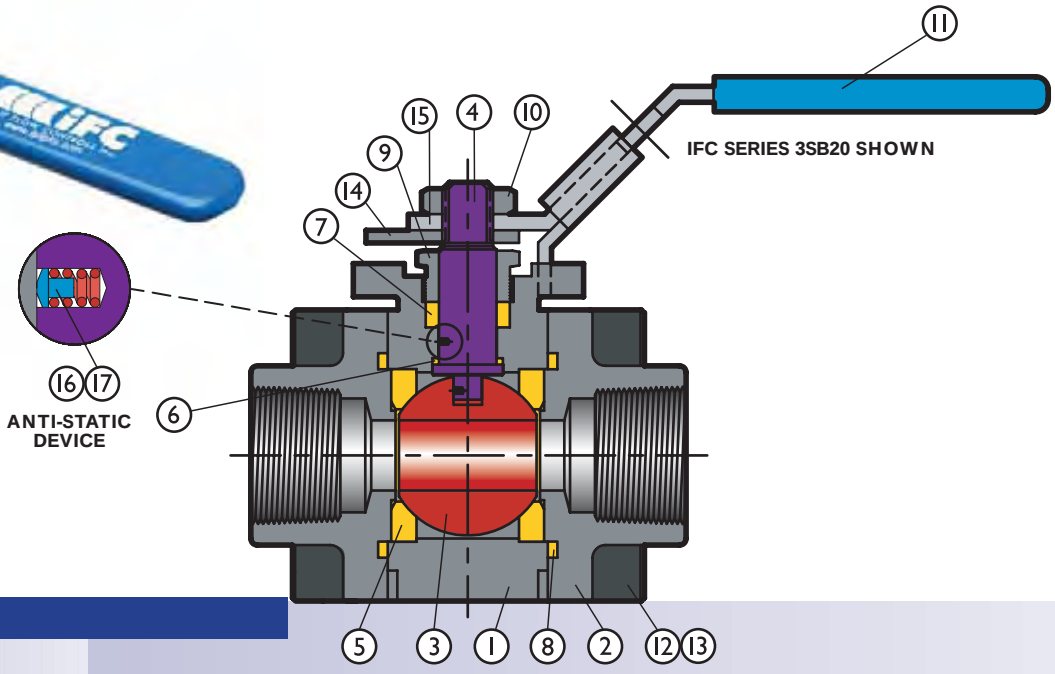
SIZE in/mm	A in/mm		B in/mm		C in/mm		D in/mm		Weight Lb./Kg.		Torque in-Lbs./ N-M		CV	
	2FB10	2SB900	2FB10	2SB900	2FB10	2SB900	2FB10	2SB900	2FB10	2SB900	2FB10	2SB900	2FB10	2SB900
1/4 8	0.46 12	0.43 11	2.36 60	2.64 67	1.97 50	2.23 57	3.94 100	5.04 128	0.53 0.24	0.46 0.21	31 3.5	40 4.5	10	10
3/8 10	0.5 13	0.43 11	2.36 60	2.64 67	1.97 50	2.23 57	3.94 100	5.04 128	0.53 0.24	0.46 0.21	35 4.0	40 4.5	10	10
1/2 15	0.59 15	0.43 11	2.56 65	2.64 67	1.97 50	2.23 57	3.94 100	5.04 128	0.66 0.30	0.41 0.19	48 5.5	75 8.5	16	16
3/4 20	0.79 20	0.59 15	3.07 78	3.08 78	2.36 60	2.72 69	4.92 125	5.75 146	1.04 0.47	0.81 0.37	66 7.5	120 13.0	35	26
1 25	0.98 25	0.81 21	3.54 90	3.54 90	2.76 70	2.87 73	6.3 160	5.75 146	1.68 0.76	1.11 0.50	97 11.0	140 16.0	60	42
1 1/4 32	1.26 32	0.98 25	3.94 100	4 102	3.15 80	3.47 88	6.3 160	7.2 183	2.49 1.13	1.82 0.83	133 15.0	250 28.0	100	52
1 1/2 40	1.5 38	1.25 32	4.72 120	4.25 108	3.54 90	3.69 94	7.48 190	7.76 197	3.86 1.75	2.39 1.09	177 20.0	350 40.0	150	80
2 50	1.97 50	1.5 38	5.43 138	4.94 125	3.54 90	3.93 100	7.48 190	7.76 197	5.93 2.70	3.66 1.66	354 40.0	420 48.0	250	115
2 1/2 65	2.56 65	N/A	6.54 166	N/A	5.71 145	N/A	9.84 250	N/A	12.39 5.63	N/A	531 60.0	N/A	400	N/A
3 80	3.15 80	N/A	7.68 195	N/A	5.71 145	N/A	9.84 250	N/A	16.53 7.51	N/A	752 85.0	N/A	600	N/A

NOTES

1. See page 19 for actuator and top works dimensions.
2. For Pressure-Temperature ratings see page 25.
3. Valve Torque information is provided on page 28.
4. See page 29 for sample actuator calculations.
5. “How to Order” can be found on page 32.

ISLIP FLOW CONTROLS Inc.

IFC THREE PIECE BALL VALVES
IFC SERIES 3FB10 STAINLESS STEEL BODY – 1000 PSIG
IFC SERIES 3SB20 CARBON STEEL BODY – 2000 PSIG



DESIGN FEATURES

- FULL PORT – IFC SERIES 3FB10 OR REGULAR PORT - IFC SERIES 3SB20
- NPT ENDS TO ASME B1.20.1 OR SOCKET WELD ENDS TO ASME B16.11
- THREE PIECE BODY
- EXPOSED BOLTING ON IFC SERIES 3FB10, 8-BOLT NON EXPOSED BOLTING ON IFC SERIES 3SB20
- RTFE SEATS STANDARD ON IFC SERIES 3FB10, POLYCARBON SEATS STANDARD ON IFC SERIES 3SB20
- STANDARD 316SS BALL AND STEM
- BLOWOUT-PROOF STEM
- ADJUSTABLE PACKING GLAND
- STANDARD 304SS LOCKING LEVER HANDLES
- ISO 5211 4 BOLT MOUNTING
- **EXCLUSIVE TO IFC SERIES 3SB20**
  - ASME B16.34, CLASS 800 COMPLIANT
  - API 608 COMPLIANT
  - FIRE SAFE TO API 607 4TH EDITION AND ISO 10497
  - NACE MR01-75 COMPLIANT
  - ANTI-STATIC DEVICE

PARTS LIST AND STANDARD MATERIALS

ITEM	DESCRIPTION	SPECIFICATIONS	
		IFC SERIES 3FB10	IFC SERIES 3SB20
1	BODY	A351-CF8M	A216-WCB
2	BODY CAP	A351-CF8M	A216-WCB
3	BALL	316 STAINLESS STEEL	316 STAINLESS STEEL
4	STEM	316 STAINLESS STEEL	316 STAINLESS STEEL
(1) 5	SEAT	RTFE	POLYCARBON
(1) 6	STEM SEAL	PTFE	GRAPHOIL
(1) 7	STEM PACKING	PTFE	GRAPHOIL
(1) 8	UNION SEAL	PTFE	GRAPHOIL
9	GLAND	316 STAINLESS STEEL	1045 CARBON STEEL
10	NUT	304 STAINLESS STEEL	304 STAINLESS STEEL
11	HANDLE	304 STAINLESS STEEL	A283 CARBON STEEL
12	CAP BOLT	A193-B8-1	A193-B7 STEEL
13	CAP NUT	A194-8	N/A
14	STOP PLATE	304 STAINLESS STEEL	304 STAINLESS STEEL
15	LOCK PIN	304 STAINLESS STEEL	304 STAINLESS STEEL
16	SPRING	N/A	304 STAINLESS STEEL
17	PLUNGER	N/A	304 STAINLESS STEEL

NOTES

1. Standard items included in repair kit
2. Fire safe trim offered as standard whenever possible for IFC Series 3SB20 valves. Consult IFC sales department for fire safe trim.
3. Valve materials of IFC Series 2SB20 meet the requirements of NACE MR01-75.
4. Other seat and seal materials available. See page 24.

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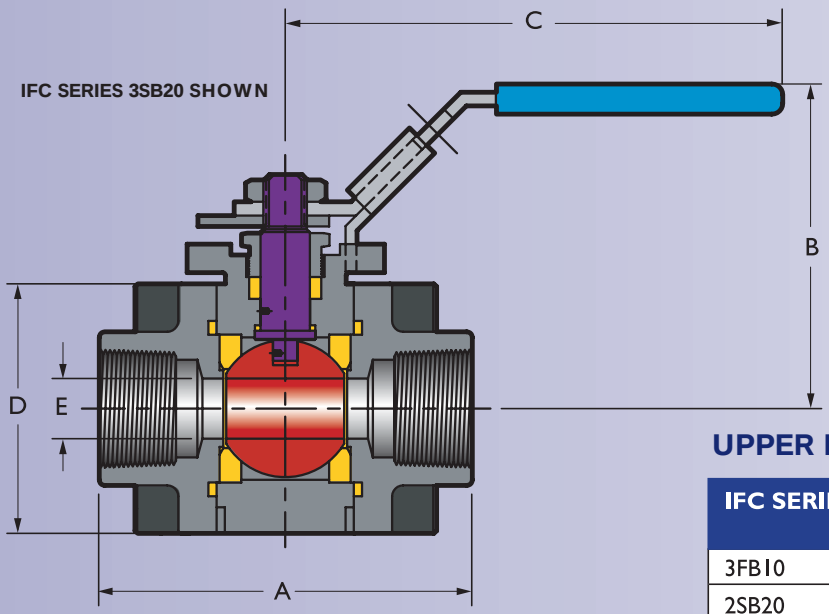
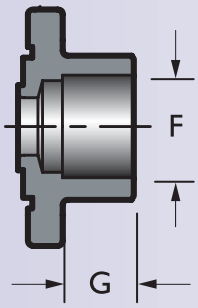
IFC THREE PIECE BALL VALVES
IFC SERIES 3FB10 STAINLESS STEEL BODY – 1000 PSIG
IFC SERIES 3SB20 CARBON STEEL BODY – 2000 PSIG

IFC SERIES 3SB20 SHOWN



DEPTH OF SOCKET WELD ENDS



UPPER PRESSURE LIMITS (NON-SHOCK)

IFC SERIES	BODY MATERIAL	M.A.W.P. PSIG (BARS)
3FB10	A351-CF8M	1000 (68.95)
2SB20	A216-WCB	2000 (137.9)

Note: Steam rating for IFC series 3SB20 is 250 psig at 406 F Saturated Steam

UPPER TEMPERATURE LIMITS

SEAL MATERIAL	UPPER LIMITS °F (°C)
RTFE	400° (204°)
PolyCarbon	650° (343°)

LOWER TEMPERATURE LIMITS

BODY MATERIAL	LOWER LIMIT F (°C)
A216-WCB	- 20° (-28.9°)
A351-CF8M	- 20° (-28.9°)

IFC SERIES 3FB10 (1000 PSIG) AND IFC SERIES 3SB20 (2000 PSIG)

SIZE in/mm	A in/mm		B in/mm		C in/mm		D in/mm		E in/mm		F in/ mm	G in/ mm	Weight Lb./Kg.		Torque in-Lbs./ N-M		CV	
	3FB10	3SB20	3FB10	3SB20	3FB10	3SB20	3FB10	3SB20	3FB10	3SB20			3FB10	3SB20	3FB10	3SB20	3FB10	3SB20
1/2 15	2.56 65	2.75 69	2.44 62	2.47 63	3.94 100	4.92 125	1.57 40	1.57 40	0.59 15	0.43 11	0.86 22	0.38 10	1.54 0.7	1.75 0.8	49	85	10	8
3/4 20	2.95 75	2.88 73	2.44 62	2.70 68	4.92 125	4.92 125	1.77 45	1.77 45	0.79 20	0.55 14	1.07 27	0.5 15	1.98 0.9	2.50 1.14	66	150	25	12
1 25	3.35 85	3.50 89	3.15 80	3.19 81	5.87 149	4.92 125	2.09 53	2.09 53	0.98 25	0.81 21	1.34 34	0.5 15	2.98 1.35	4.00 1.81	98	180	35	32
1-1/4 35	3.98 101	3.88 98.5	3.35 85	3.64 92	5.87 149	6.89 175	2.36 60	2.36 60	0.91 23	0.98 25	1.69 43	0.5 15	4.85 2.20	6.00 2.72	133	210	50	46
1-1/2 40	4.41 112	4.38 111	3.94 100	3.88 98	7.48 190	7.68 195	2.71 69	2.71 69	1.5 38	1.25 32	1.93 49	0.5 15	6.39 2.90	7.50 3.4	177	320	90	82
2 50	5.12 130	5.00 127	4.25 108	4.09 104	7.48 190	7.68 195	3.19 81	3.19 81	1.97 50	1.50 40	2.42 61	0.62 16	10.14 4.61	11.00 4.99	350	440	140	120

NOTES

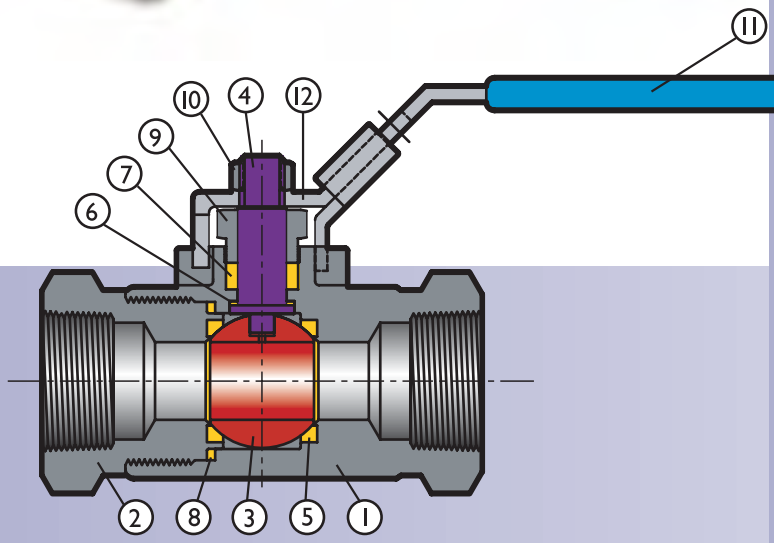
1. See page 20 for actuator and top works dimensions.
2. For Pressure-Temperature ratings see page 25.
3. Valve Torque information is provided on page 28.
4. See page 29 for sample actuator calculations.
5. "How to Order" can be found on page 32.

ISLIP FLOW CONTROLS Inc.

IFC "STRONG-NECK" TWO PIECE BALL VALVES

IFC SERIES 2FB1500/2SB1500 – ANSI CLASS 1500 LB

IFC SERIES 2FB60/2SB60 – 6000 PSIG



DESIGN FEATURES

- FULL PORT – SIZES 1/4", 1/2", 3/4" 1-1/2"
- REGULAR PORT – SIZES 1" AND 2"
- NPT ENDS TO ASME B1.20.1 OR SOCKET WELD ENDS TO ASME B16.11
- TWO PIECE BODY
- DELRIN SEATS STANDARD ON IFC SERIES 2FB1500, PEEK SEATS STANDARD ON IFC SERIES 2FB60
- STANDARD 316SS BALL
- BLOWOUT-PROOF STEM CONSTRUCTED FROM 316SS IN IFC SERIES 2FB1500 AND 17-4PH ON IFC SERIES 2FB60
- ADJUSTABLE PACKING GLAND
- STANDARD 304SS LOCKING LEVER HANDLES
- ISO 5211 4 BOLT MOUNTING
- ASME B16.34, CLASS 1500 COMPLIANT IFC SERIES 2FB1500
- API 608 COMPLIANT
- FIRE SAFE TO API 607 4TH EDITION AND ISO 10497
- NACE MR01-75 COMPLIANT
- BALL INCLUDES PRESSURE EQUALIZATION HOLE TO PREVENT TRAPPED PRESSURE IN BODY CAVITY.

EXCLUSIVE TO IFC SERIES 2FB60

- FULL SEAL WELDED BODY TO ADAPTER CONNECTION.

PARTS LIST AND STANDARD MATERIALS

ITEM	DESCRIPTION	SPECIFICATIONS			
		IFC SERIES 2FB1500TCSDL	IFC SERIES 2FB60TCSPL	IFC SERIES 2FB1500TSSDL	IFC SERIES 2FB60TSSPL
1	BODY	A216-WCB	A216-WCB	A351-CF8M	A351-CF8M
2	BODY CAP	A216-WCB	A216-WCB	A351-CF8M	A351-CF8M
3	BALL	316 STAINLESS STEEL	316 STAINLESS STEEL	316 STAINLESS STEEL	316 STAINLESS STEEL
4	STEM	316 STAINLESS STEEL	17-4 PH	316 STAINLESS STEEL	17-4PH
(1) 5	SEAT	DELRIN	PEEK	DELRIN	PEEK
(1) 6	STEM SEAL	DELRIN	PEEK	DELRIN	PEEK
(1) 7	STEM PACKING	GRAPHOIL	GRAPHOIL	GRAPHOIL	GRAPHOIL
(1) 8	ADAPTER GASKET	GRAPHOIL	GRAPHOIL	GRAPHOIL	GRAPHOIL
9	GLAND	316 STAINLESS STEEL	316 STAINLESS STEEL	316 STAINLESS STEEL	316 STAINLESS STEEL
10	NUT	304 STAINLESS STEEL	304 STAINLESS STEEL	304 STAINLESS STEEL	304 STAINLESS STEEL
11	HANDLE	304 STAINLESS STEEL	304 STAINLESS STEEL	304 STAINLESS STEEL	304 STAINLESS STEEL

NOTES

1. Standard items included in repair kit
2. Fire safe trim offered as standard whenever possible for valves. Consult IFC sales department for fire safe trim.
3. Valve materials of IFC Series meet the requirements of NACE MR01-75.
4. Other seat and seal materials available. See page 24.

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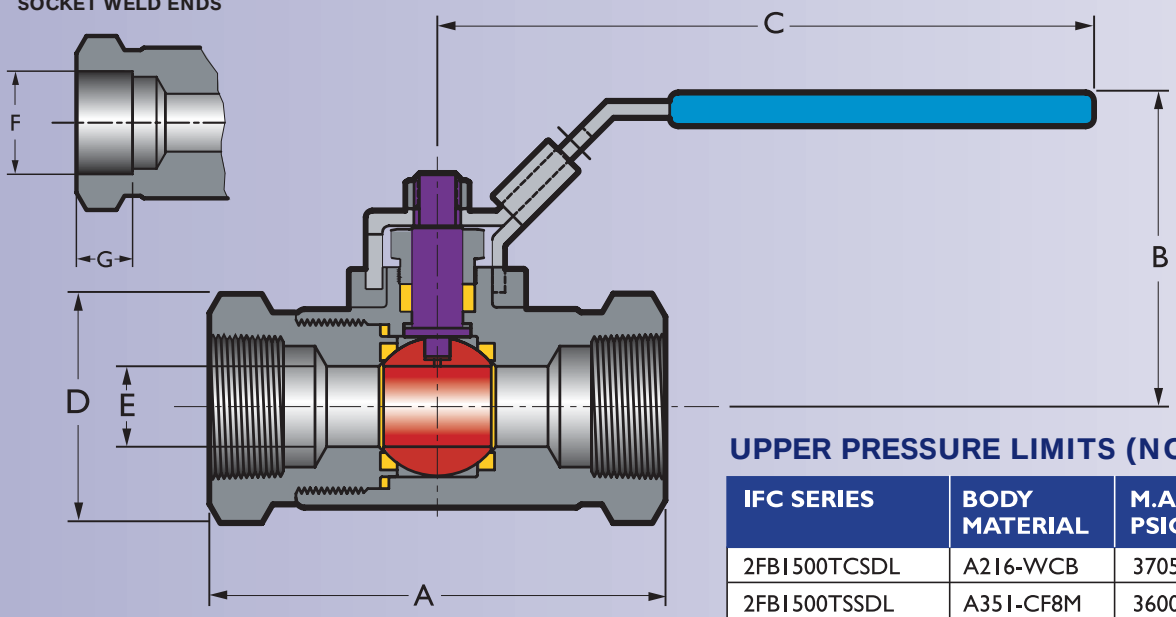
IFC "STRONG-NECK" TWO PIECE BALL VALVES

IFC SERIES 2FB1500/2SB1500 – ANSI CLASS 1500 LB

IFC SERIES 2FB60/2SB60 – 6000 PSIG

SOCKET WELD ENDS



UPPER PRESSURE LIMITS (NON-SHOCK)

IFC SERIES	BODY MATERIAL	M.A.W.P. PSIG (BARS)
2FB1500TCSDL	A216-WCB	3705 (255)
2FB1500TSSDL	A351-CF8M	3600 (248)
2FB60TCSPL	A216-WCB	6000 (414)
2FB60TSSPL	A351-CF8M	6000 (414)

UPPER TEMPERATURE LIMITS

SEAL MATERIAL	UPPER LIMITS °F (°C)
Delrin	180° (82°)
Peek	550° (288°)

LOWER TEMPERATURE LIMITS

BODY MATERIAL	LOWER LIMIT F (°C)
A216-WCB	- 20° (-28.9°)
A351-CF8M	- 20° (-28.9°)

IFC SERIES 2FB1500 (ANSI 1500 LB) AND IFC SERIES 2FB60 (6000 PSIG)

SIZE in/mm	A in/mm		B in/mm	C in/mm	D in/mm		E in/mm	F in/mm	G in/mm	Weight Lb./Kg.		Torque in-Lbs./ N-M		CV	
	2FB1500	2FB60			2FB1500	2FB60				2FB1500	2FB60	2FB1500	2FB60	2FB1500	2FB60
1/4 8	3.00 76	3.00 76	2.39 61	5.04 128	1.77 45	1.77 45	0.25 6.4	0.56 14	0.38 10	1.50 0.68	1.63 0.74	75 6.25	100 8.40	10	10
1/2 15	4.00 102	4.00 102	2.39 61	5.04 128	1.75 45	1.75 45	0.50 12	0.86 22	0.38 10	1.69 0.76	1.96 0.89	90 7.50	140 11.70	16	16
3/4 20	4.25 108	4.25 108	2.96 75	5.59 142	2.19 55	2.38 60	0.75 19	1.07 27	0.5 15	2.97 1.35	3.38 1.54	120 10.00	270 22.50	32	32
1 25	4.25 108	4.25 108	2.96 75	5.59 142	2.19 55	2.50 63.5	0.75 19	1.34 34	0.5 15	3.09 1.40	3.88 1.76	200 16.70	300 25.00	44	44
1-1/2 40	5.29 134	5.29 134	4.58 116	13.90 353	3.91 99	4.41 112	1.50 38	1.93 49	0.5 15	10.75 4.88	13.41 6.13	750 62.50	1200 10.00	120	120
2 50	6.25 159	6.25 159	4.58 116	13.90 353	3.91 99	4.41 112	1.50 38	2.42 61	0.62 16	11.90 5.41	15.90 7.23	750 62.50	1200 100.00	140	140

NOTES

1. See page 21 for actuator and top works dimensions.
2. For Pressure-Temperature ratings see page 26.
3. Valve Torque information is provided on page 28.
4. See page 29 for sample actuator calculations.
5. "How to Order" can be found on page 32.

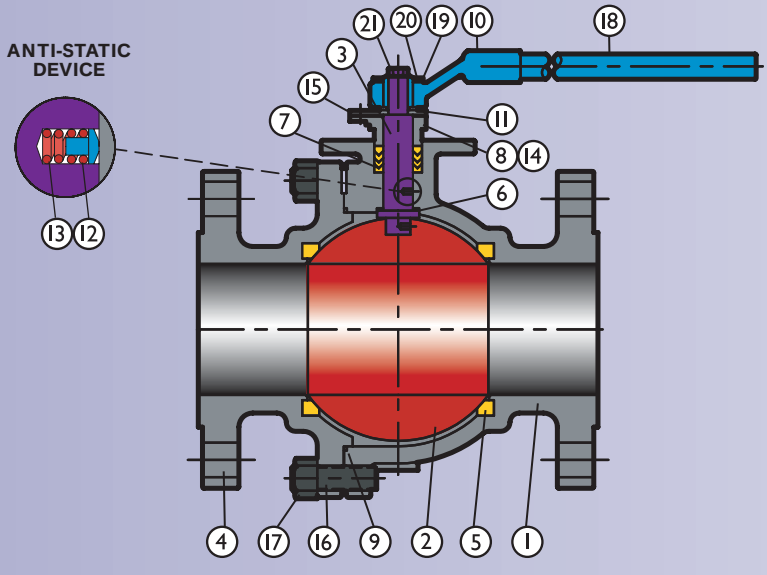
IFC SPLIT BODY FLANGED BALL VALVES

IFC SERIES 2FB150 – ANSI CLASS 150 LB (285 PSIG MAWP)

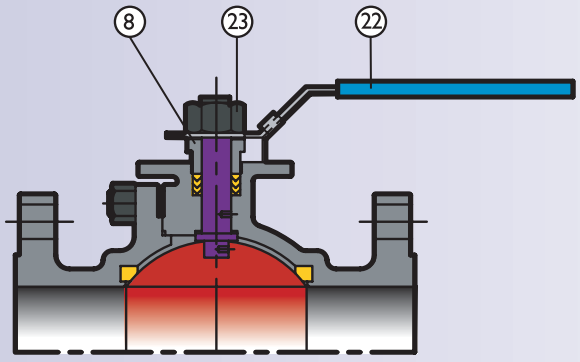
IFC SERIES 2FB300 – ANSI CLASS 300 LB (740 PSIG MAWP)

DESIGN FEATURES

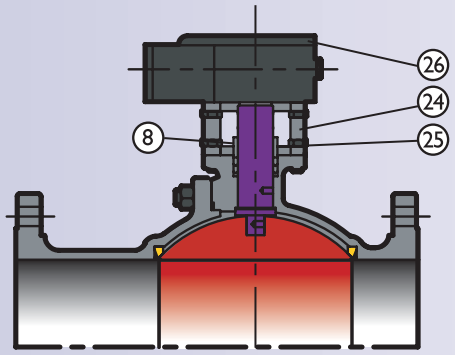
- FULL PORT
- FLANGED ENDS TO ASME B16.5
- SPLIT BODY DESIGN
- POLYCARBON SEATS STANDARD ON CARBON STEEL BODY VALVES, RTFE SEATS STANDARD ON 316 SS BODY VALVES.
- STANDARD 316SS BALL
- BLOWOUT-PROOF STEM CONSTRUCTED FROM 316SS.
- ADJUSTABLE PACKING GLAND
- STANDARD LOCKING LEVER HANDLES
- ISO 5211 4 BOLT MOUNTING
- ASME B16.34 COMPLIANT
- API 608 COMPLIANT
- FIRE SAFE TO API 607 4TH EDITION AND ISO 10497
- NACE MR01-75 COMPLIANT
- BALL INCLUDES PRESSURE EQUALIZATION HOLE TO PREVENT TRAPPED PRESSURE IN BODY CAVITY.
- ANTI-STATIC DEVICE



VALVE SIZES 2 1/2”-6”



VALVE SIZES 1/2”-2”



VALVE SIZES 8”-12”

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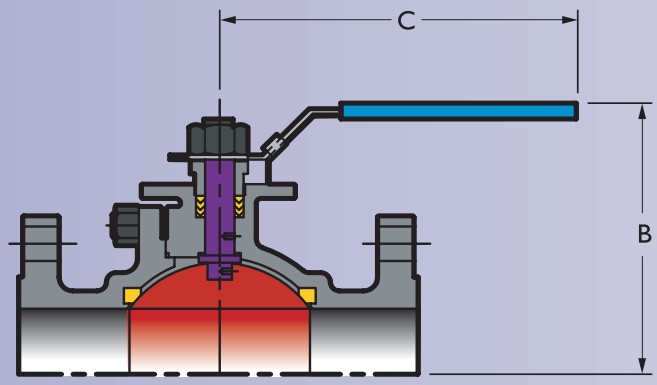
PARTS LIST AND STANDARD MATERIALS

ITEM		DESCRIPTION	SPECIFICATIONS IFC Series 2FB150 & 2FB300		
			FLANGED END CARBON STEEL BODY	FLANGED END LOW TEMP - 50°F (-46°C) BODY	FLANGED END 316SS BODY
	1	BODY	A216-WCB	A352-LCB/A352-LCC	A351-CF8M
	2	BALL	A351-CF8M	A351-CF8M	A351-CF8M
	3	STEM	316 SS	17-4 PH	316 SS
	4	BODY CAP	A216-WCB	A352-LCB/A352-LCC	A351-CF8M
(1)	5	SEAT	POLYCARBON	POLYCARBON	RTFE
(1)	6	STEM SEAL	POLYCARBON	POLYCARBON	RTFE
(1)	7	STEM PACKING	GRAPHITE	GRAPHITE	GRAPHITE
	8	GLAND	A216-WCB	A351-CF8M	A351-CF8M
(1)	9	BODY SEAL	304SS SPIRAL WOUND	304SS SPIRAL WOUND	304SS SPIRAL WOUND
	10A	HANDLE	DUCTILE IRON	DUCTILE IRON	DUCTILE IRON
	10B	HANDLE	304 SS	304 SS	304 SS
	11	SNAP RING	SK7 CS	SK7 CS	SK7 CS
	12	SPRING	304 SS	304 SS	304 SS
	13	PLUNGER	316 SS	316 SS	316 SS
	14	GLAND BOLT	304 SS	304 SS	304 SS
	15	STOPPER	304 SS	304 SS	304 SS
	16	STUDS BOLT	A193-B7	A193-B7M	A193-B8-1
	17	NUT	A194-2H	A194-2HM	A194-8
	18	PIPE	A53	A53	A53
	19	CASTING PIPE	304 SS	304 SS	304 SS
	20	SHAKEPROOF WASHER	304 SS	304 SS	304 SS
	21	BOLT	304 SS	304 SS	304 SS
	22	LOCK NUT	304 SS	304 SS	304 SS
(2)	23	BRACKET	A216-WCB	A351-CF8M	A351-CF8M
(2)	24	BRACKET NUT	304 SS	304 SS	304 SS
(2)	25	GEAR ACTUATOR	DUCTILE IRON	DUCTILE IRON	DUCTILE IRON

NOTES

1. Standard items included in repair kit.
2. Only applies to Gear Operated Valves.
3. Fire safe trim offered as standard whenever possible. Consult IFC sales department for fire safe trim.
4. Valve materials meet the requirements of NACE MR01-75.
5. Other seat and seal materials available. See page 24.

IFC SPLIT BODY FLANGED BALL VALVES
IFC SERIES 2FB150 – ANSI CLASS 150 LB (285 PSIG MAWP)
IFC SERIES 2FB300 – ANSI CLASS 300 LB (740 PSIG MAWP)



VALVE SIZES 1/2”-2”

UPPER PRESSURE LIMITS (NON-SHOCK)

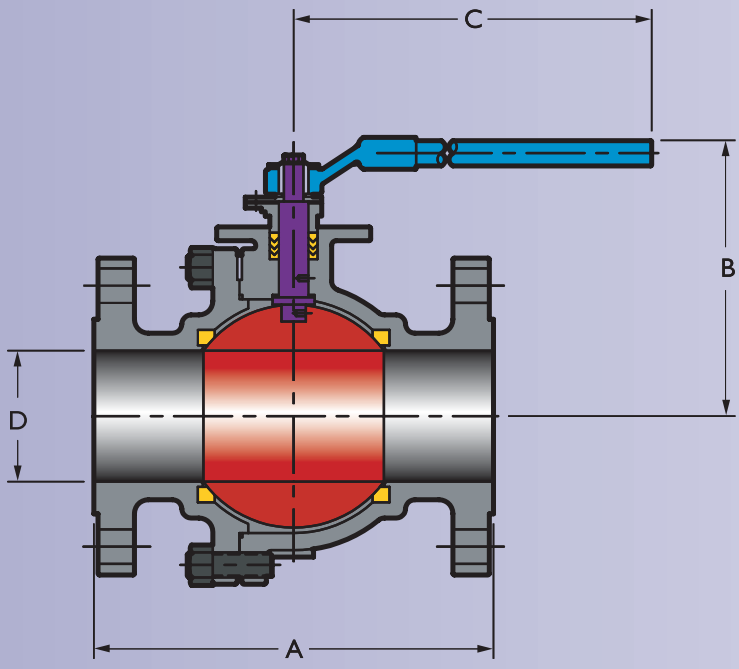
IFC SERIES	BODY MATERIAL	M.A.W.P. PSIG (BARS)
2FB150FCSCL/G	A216-WCB	285 (19.65)
2FB150FSSRL/G	A351-CF8M	275 (18.96)
2FB300FCSCL/G	A216-WCB	740 (51.02)
2FB300FSSRL/G	A351-CF8M	720 (49.64)

UPPER TEMPERATURE LIMITS

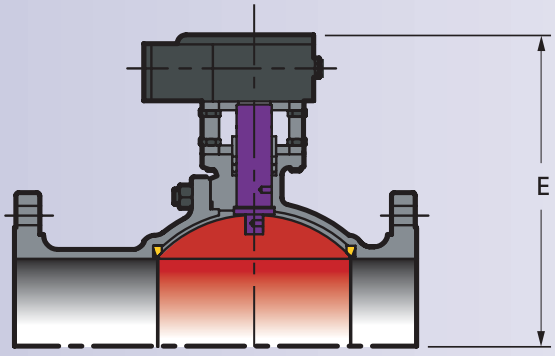
SEAL MATERIAL	UPPER LIMITS °F (°C)
PTFE	450° (232°)
PolyCarbon	500° (260°)

LOWER TEMPERATURE LIMITS

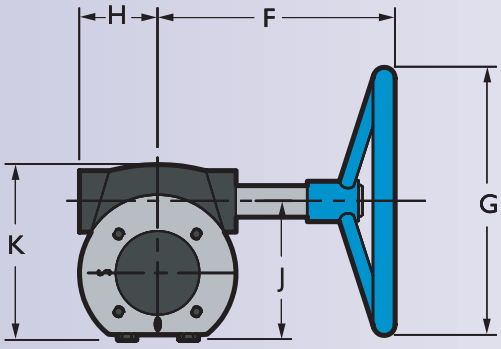
BODY MATERIAL	LOWER LIMIT °F (°C)
A216-WCB	- 20° (-28.9°)
A351-CF8M	- 20° (-28.9°)



VALVE SIZES 2 1/2”-6”



VALVE SIZES 8”-12”



VALVE SIZES 8”-12”

IFC SERIES 2FB150 (285 PSIG) AND IFC SERIES 2FB300 (740 PSIG)

SIZE In/mm	A in/mm		B in/mm		C in/mm	D in/mm	Weight Lb./Kg.		Torque In-Lbs./N-M		CV
Class	150 Lb.	300 Lb.	150 Lb.	300 Lb.			150 Lb.	300 Lb.	150 Lb.	300 Lb.	
1/2 15	4.25 108	5.50 140	2.64 67	2.97 75	5.16 131	0.56 14	3.56 1.62	4.85 2.20	100	100	27
3/4 20	4.63 118	6.00 152	3.15 80	3.01 76	7.00 178	0.81 21	4.83 2.20	7.94 3.61	150	150	50
1 25	5.00 127	6.50 165	3.35 85	3.35 85	7.80 198	0.98 25	6.88 3.13	10.25 4.66	250	250	95
1-1/2 40	6.50 165	7.50 191	4.49 114	4.50 114	10.04 255	1.50 38	13.40 6.09	18.94 8.61	400	400	280
2 50	7.00 178	8.50 216	4.80 122	4.80 122	10.04 255	1.97 50	19.49 8.86	23.99 10.90	500	500	490
2-1/2 65	7.50 191	N/A	6.42 163	N/A	15.75 400	2.56 65	30.58 13.90	N/A	750	750	545
3 80	8.00 203	11.13 283	6.73 171	6.75 171	15.75 400	3.00 76	41.34 18.79	55.41 25.19	1200	1500	1160
4 100	9.00 229	12.00 305	7.95 202	7.95 202	17.10 434	3.94 100	69.02 31.37	89.28 40.58	1600	1900	2200
6 150	15.50 394	15.88 403	10.63 270	10.63 270	24.00 610	6.00 152	153.49 69.77	195.39 88.81	3000	3100	5100
8 200	18.00 457	19.75 502	14.49 368	14.50 368	N/A	7.87 200	250.00 113.64	250.00 113.64	8500	12000	9300
10 250	21.00 533	N/A	17.56 446	N/A	N/A	10.00 254	350.00 159.09	N/A	9600	N/A	16000
12 300	24.00 610	N/A	19.33 491	N/A	N/A	12.00 305	550.00 250.00	N/A	15000	N/A	22300

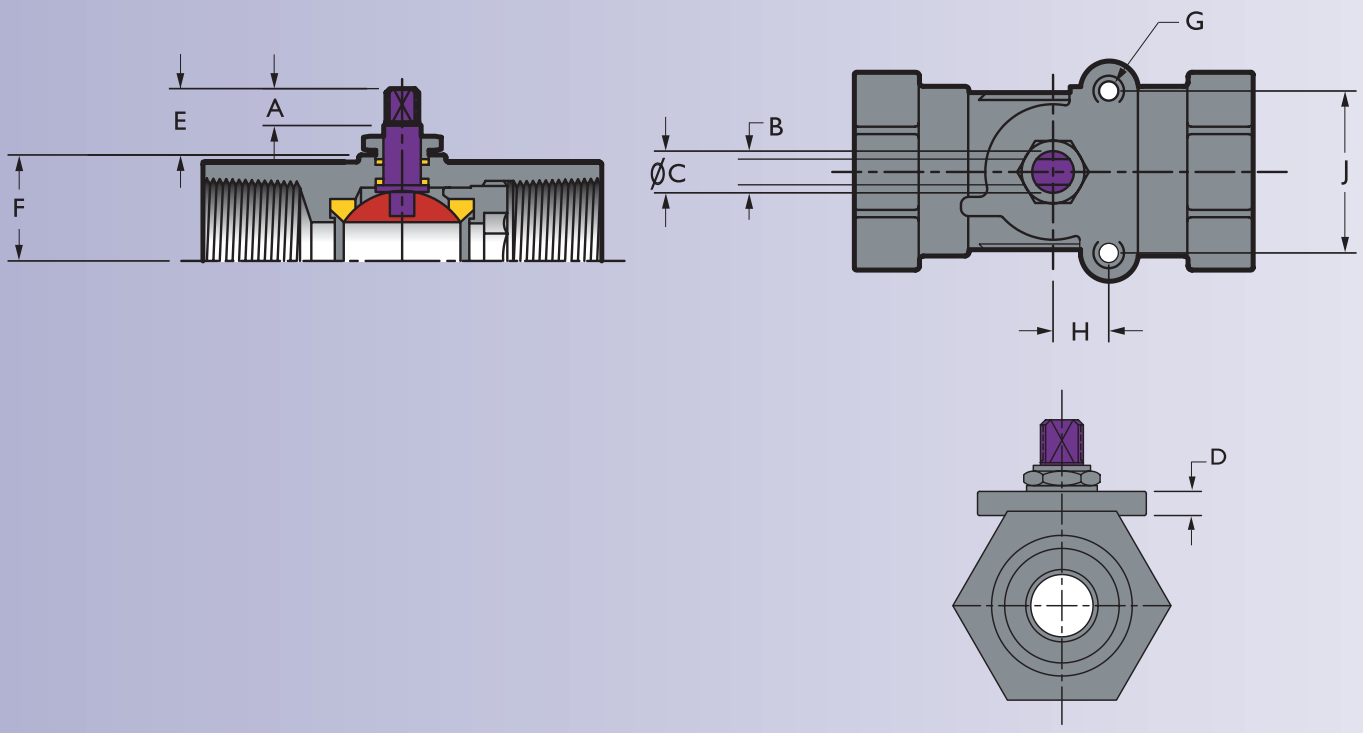
VALVE GEAR OPERATOR DIMENSIONS

SIZE In/mm	E in/mm	F in/mm		G in/mm	H in/mm	J in/mm	K in/mm
		150 Lb.	300 Lb.				
8 200	14.50 368	9.38 238	9.00 229	12.13 308	14.50 368	10.19 259	8.00 203
10 250	19.75 502	13.25 337	13.38 340	19.88 505	19.75 502	14.63 372	11.44 291
12 300	19.75 502	13.25 337	13.38 340	19.88 505	19.75 502	14.63 372	11.44 291

NOTES

1. See page 22 and 23 for actuator and top works dimensions.
2. For Pressure-Temperature ratings see page 26.
3. Valve Torque information is provided on page 28.
4. See page 29 for sample actuator calculations.
5. “How to Order” can be found on page 32.

ACTUATOR MOUNTING DIMENSIONS
IFC SERIES IRB20TC CARBON STEEL BODY – 2000 PSIG
IFC SERIES IRB20TC STAINLESS STEEL BODY – 2000 PSIG



IFC SERIES 1RB20 - UNIBODY BALL VALVES - 2000 PSIG

SIZE in/mm	A in/mm	B in/mm	C	D in/mm	E in/mm	F in/mm	G	H in/mm	J in/mm
1/2 15	0.30 7.7	0.16 4.00	1/4"-28UNF	0.24 6.0	0.36 9.14	0.63 16.0	10#-24UNC	0.41 10.40	1.12 28.50
3/4 20	0.31 7.9	0.2 5.00	5/16"-24UNF	0.34 6.0	0.48 12.19	0.87 22.0	10#-24UNC	0.41 10.40	1.12 28.50
1 25	0.53 13.5	0.28 7.00	7/16"-14UNC	0.26 6.5	0.73 18.54	1.08 27.5	10#-24UNC	0.47 12.00	1.38 35.0
1-1/4 35	0.53 13.5	0.28 7.00	7/16"-14UNC	0.26 6.5	0.71 18.03	1.26 32.0	10#-24UNC	0.47 12.00	1.38 35.0
1-1/2 40	0.65 16.5	0.35 9.00	9/16"-12UNC	0.31 8.0	0.88 22.35	1.59 40.5	1/4"-20UNC	0.65 16.50	1.75 44.50
2 50	0.65 16.5	0.35 9.00	9/16"-12UNC	0.31 8.0	0.88 22.35	1.77 45.0	1/4"-20UNC	0.65 16.50	1.75 44.50

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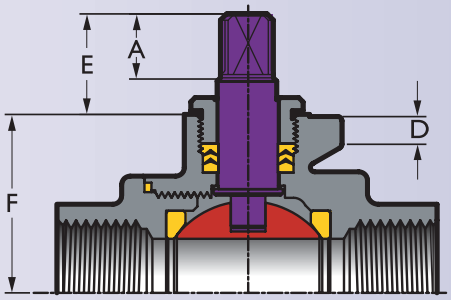
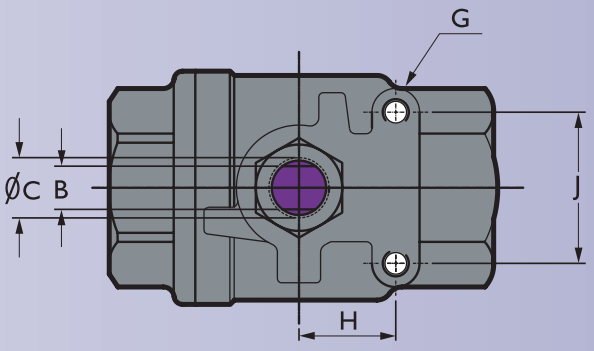
ISLIP FLOW CONTROLS Inc.

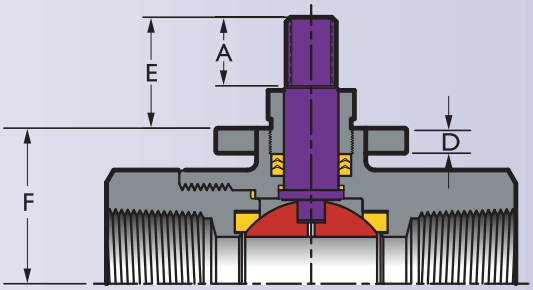
ACTUATOR MOUNTING DIMENSIONS
IFC SERIES 2FB10 STAINLESS STEEL BODY – 1000 PSIG
IFC SERIES 2SB900 CAST STEEL BODY – ANSI CLASS 900 LB



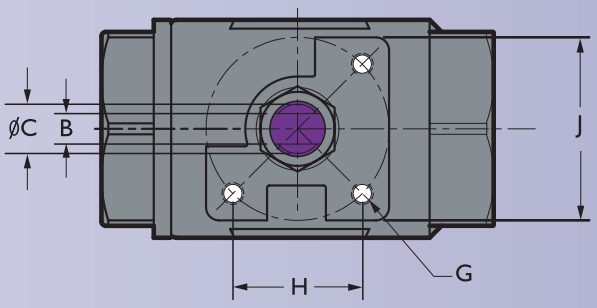
IFC SERIES 2FB10



IFC SERIES 2FB10



IFC SERIES 2SB900

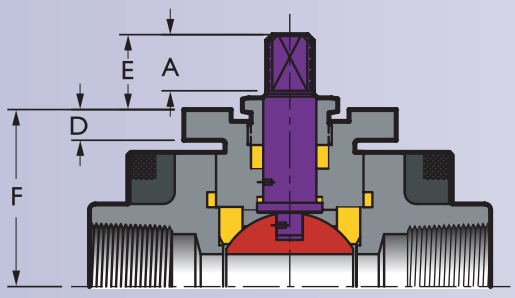


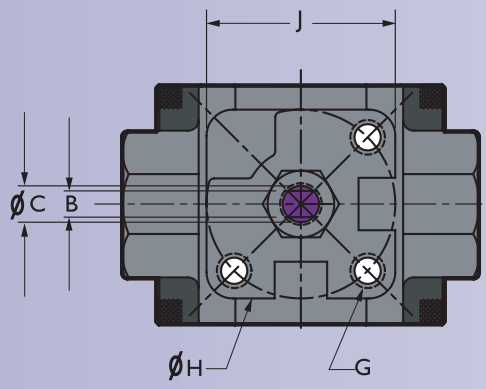
IFC SERIES 2SB900

IFC SERIES 2FB10 AND 2SB900 - TWO PIECE BALL VALVES - 1000 PSIG / ANSI 900 LB

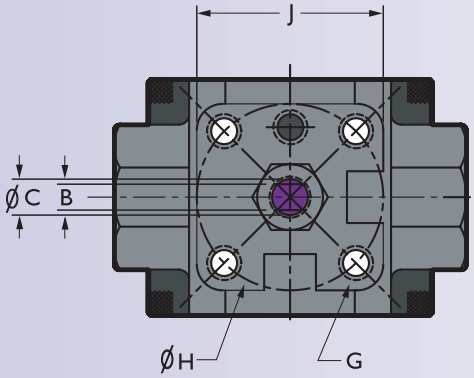
SIZE in/mm	ISO 5211	A in/mm		B in/mm		C		D in/mm		E in/mm		F in/mm		G in/mm		H in/mm		J in/mm	
	2SB900	2FB10	2SB900	2FB10	2SB900	2FB10	2SB900	2FB10	2SB900	2FB10	2SB900	2FB10	2SB900	2FB10	2SB900	2FB10	2SB900	2FB10	2SB900
1/4 8	F03	0.46 11.6	0.39 10.0	0.20 5.0	0.20 5.0	3/8" - 24 UNF	5/16" - 24 UNF	0.20 5.20	0.20 5.20	0.71 18.03	0.61 15.40	0.90 22.80	0.92 23.4	M5 x 0.8 Qty 2	1/4" - 20UNC	0.50 12.70	1.42 36.00	1.12 28.45	1.42 36.00
3/8 10	F03	0.46 11.6	0.39 10.0	0.20 5.0	0.20 5.0	3/8" - 24 UNF	5/16" - 24 UNF	0.24 6.20	0.20 5.20	0.71 18.03	0.61 15.40	0.90 22.80	0.92 23.4	M5 x 0.8 Qty 2	1/4" - 20UNC	0.50 12.70	1.42 36.00	1.12 28.45	1.42 36.00
1/2 15	F03	0.46 11.6	0.39 10.0	0.20 5.0	0.20 5.0	3/8" - 24 UNF	5/16" - 24 UNF	0.20 5.0	0.20 5.2	0.73 18.54	0.61 15.40	0.96 24.40	0.92 23.4	M5 x 0.8 Qty 2	1/4" - 20UNC	0.50 12.70	1.42 36.00	1.12 28.45	1.42 36.00
3/4 20	F04	0.55 14.0	0.60 15.3	0.24 6.0	0.28 7.0	7/16" - 20 UNF	7/16" - 14 UNC	0.12 3.0	0.20 5.2	0.89 22.61	0.89 22.60	1.17 29.60	1.17 29.7	M5 x 0.8 Qty 2	1/4" - 20UNC	0.50 12.70	1.65 42.00	1.12 28.45	1.65 42.00
1 25	F04	0.52 13.1	0.59 15.0	0.38 9.6	0.28 7.0	7/16" - 20 UNF	7/16" - 14 UNC	0.12 3.0	0.20 5.2	0.98 24.89	0.99 25.20	1.50 38.10	1.33 33.9	M5 x 0.8 Qty 2	1/4" - 20UNC	0.88 22.35	1.65 42.00	1.38 35.05	1.65 42.00
1-1/4 35	F05	0.52 13.1	0.71 18.0	0.38 9.6	0.35 9.0	7/16" - 20 UNF	9/16" - 12 UNC	0.12 3.0	0.24 6.2	1.02 25.91	1.15 29.30	1.79 45.50	1.61 40.9	M6 x 1.0 Qty 2	1/4" - 20UNC	0.88 22.35	1.97 50.00	1.38 35.05	1.97 50.00
1-1/2 40	F05	0.65 16.5	0.71 18.0	0.38 9.6	0.35 9.0	1/2" - 20 UNC	9/16" - 12 UNC	0.12 3.0	0.24 6.2	1.18 29.97	1.15 29.30	2.03 51.50	1.83 46.4	M6 x 1.0 Qty 2	1/4" - 20UNC	0.91 23.11	1.97 50.00	1.50 38.10	1.97 50.00
2 50	F05	0.65 16.5	0.71 18.0	0.38 9.6	0.35 9.0	1/2" - 20 UNC	9/16" - 12 UNC	0.12 3.0	0.24 6.2	1.18 29.97	1.18 30.00	2.33 59.10	2.00 50.7	M6 x 1.0 Qty 2	1/4" - 20UNC	0.91 23.11	1.97 50.00	1.50 38.10	1.97 50.00
2-1/2 65	N/A	0.89 22.5	N/A	0.47 12.0	N/A	3/4" - 10 UNC	N/A	0.20 5.20	N/A	1.57 39.88	N/A	2.95 75.00	N/A	M6 x 1.0 Qty 2	N/A	1.14 28.96	N/A	1.97 50.04	N/A
3 80	N/A	0.89 22.5	N/A	0.47 12.0	N/A	3/4" - 10 UNC	N/A	0.20 5.0	N/A	1.57 39.88	N/A	3.30 83.70	N/A	M6 x 1.0 Qty 2	N/A	1.14 28.96	N/A	2.20 55.88	N/A

ACTUATOR MOUNTING DIMENSIONS
IFC SERIES 3FB10 – STAINLESS STEEL BODY – 1000 PSIG
IFC SERIES 3SB20 – CARBON STEEL BODY – 2000 PSIG





IFC SERIES 3FB10



IFC SERIES 3SB20

IFC SERIES 3FB10 AND 3SB20 - THREE PIECE BALL VALVES - 1000 / 2000 PSIG

SIZE in/mm	ISO 5211	A in/mm		B in/mm		C in/mm		D in/mm		E in/mm		F in/mm		G in/mm		H in/mm	J in/mm
		3FB10	3SB20	3FB10	3SB20	3FB10	3SB20	3FB10	3SB20	3FB10	3SB20	3FB10	3SB20	3FB10	3SB20		
1/4 8	F03	0.46 11.68	N/A	0.20 5.08	N/A	3/8" - 24 UNF	N/A	0.14 3.56	N/A	0.68 17.27	N/A	0.95 24.13	N/A	M5 x 0.8 Qty 3	N/A	1.42 36.07	1.42 36.07
3/8 10	F03	0.46 11.68	N/A	0.20 5.08	N/A	3/8" - 24 UNF	N/A	0.14 3.56	N/A	0.68 17.27	N/A	0.95 24.13	N/A	M5 x 0.8 Qty 3	N/A	1.42 36.07	1.42 36.07
1/2 15	F03	0.53 13.46	0.41 10.41	0.20 5.08	0.20 5.08	3/8" - 24 UNF	5/16" - 24 UNF	0.12 3.05	0.20 5.08	0.76 19.30	0.50 12.7	1.02 25.91	1.20 30.48	M5 x 0.8 Qty 3	M5 x 0.8 Qty 4	1.42 36.07	1.42 36.07
3/4 20	F03	0.55 13.97	0.41 10.41	0.24 6.10	0.20 5.08	7/16" - 20 UNF	5/16" - 24 UNF	0.22 5.59	0.22 5.59	0.88 22.35	0.50 12.7	1.17 29.72	1.36 34.54	M5 x 0.8 Qty 3	M5 x 0.8 Qty 4	1.42 36.07	1.42 36.07
1 25	F04	0.52 13.21	0.60 15.24	0.38 9.65	0.28 7.11	7/16" - 20 UNF	7/16" - 20 UNF	0.3 7.62	0.22 5.59	1.00 25.40	0.75 19.05	1.50 38.10	1.59 40.39	M5 x 0.8 Qty 3	M5 x 0.8 Qty 4	1.65 41.91	1.65 41.91
1-1/4 35	F04	0.52 13.21	0.63 16.00	0.38 9.65	0.31 7.87	7/16" - 20 UNF	1/2" - 20 UNF	0.28 7.11	0.22 5.59	1.00 25.40	0.88 22.35	1.70 43.18	1.81 45.97	M5 x 0.8 Qty 3	M5 x 0.8 Qty 4	1.65 41.91	1.65 41.91
1-1/2 40	F05	0.65 16.51	0.69 17.53	0.38 9.65	0.39 9.91	1/2" - 20 UNC	5/8" - 18 UNF	0.28 7.11	0.22 5.59	1.17 29.72	0.96 24.38	1.98 50.29	1.95 49.53	M6 x 1.0 Qty 3	M6 x 1.0 Qty 4	1.97 50.04	1.97 50.04
2 50	F05	0.65 16.51	0.69 17.53	0.38 9.65	0.39 9.91	1/2" - 20 UNC	5/8" - 18 UNF	0.28 7.11	0.28 7.11	1.17 29.72	1.00 25.40	2.27 57.66	2.17 55.12	M6 x 1.0 Qty 3	M6 x 1.0 Qty 4	1.97 50.04	1.97 50.04
2-1/2 65	F07	0.89 22.61	N/A	0.47 11.94	N/A	3/4" - 10 UNC	N/A	0.31 7.87	N/A	1.55 39.37	N/A	2.95 74.93	N/A	M8 x 1.25 Qty 3	N/A	2.75 69.85	2.75 69.85
3 75	F07	0.89 22.61	N/A	0.47 11.94	N/A	3/4" - 10 UNC	N/A	0.31 7.87	N/A	1.55 39.37	N/A	3.30 83.82	N/A	M8 x 1.25 Qty 3	N/A	2.75 69.85	2.75 69.85

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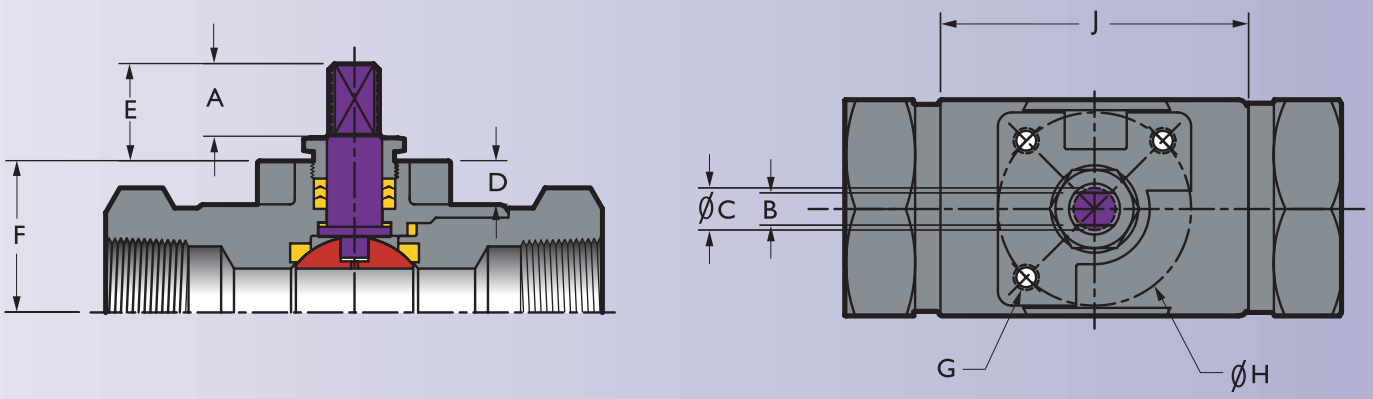
ACTUATOR MOUNTING DIMENSIONS
IFC SERIES 2FB1500/2SB1500 – ANSI CLASS 1500 LB
IFC SERIES 2FB60/2SB60 – 6000 PSIG



IFC STRONG-NECK BALL VALVES - ANSI 1500 LB / 6000 PSIG

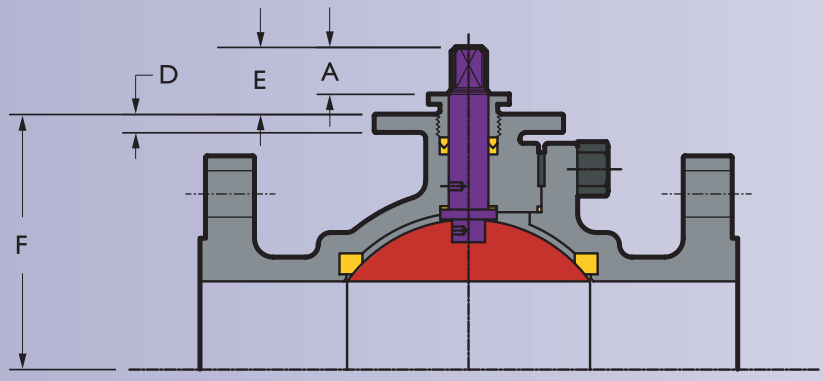
SIZE in/mm	ISO 5211	A in/mm	B in/mm	C	D in/mm	E in/mm	F in/mm	G	H in/mm	J in/mm
1/4 8	F03	0.33 8.5	0.20 5.0	5/16"-24UNF	0.35 9.0	0.61 15.4	0.97 24.7	M5x0.8	1.42 36.0	1.71 43.5
1/2 15	F03	0.33 8.5	0.20 5.0	5/16"-24UNF	0.35 9.0	0.61 15.4	0.97 24.7	M5x0.8	1.42 36.0	1.86 47.3
3/4 20	F04	0.73 18.50	0.28 7.0	7/16"-14UNC	0.22 5.7	0.84 21.4	1.29 32.7	M5x0.8	1.65 42.0	2.64 67.0
1 25	F04	0.73 18.50	0.28 7.0	7/16"-14UNC	0.22 5.7	0.84 21.4	1.29 32.7	M5x0.8	1.65 42.0	2.64 67.0
1-1/2 40	F07	1.02 25.80	0.39 10.0	5/8"-11UNC	0.34 8.7	1.32 33.5	2.51 63.7	M8x1.25	2.76 70.0	3.35 85.0
2 50	F07	1.02 25.80	0.39 10.0	5/8"-11UNC	0.34 8.7	1.32 33.5	2.51 63.7	M8x1.25	2.76 70.0	3.58 91.0

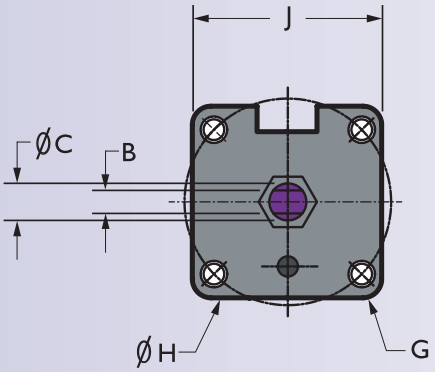
ISLIP FLOW CONTROLS Inc.

ACTUATOR MOUNTING DIMENSIONS

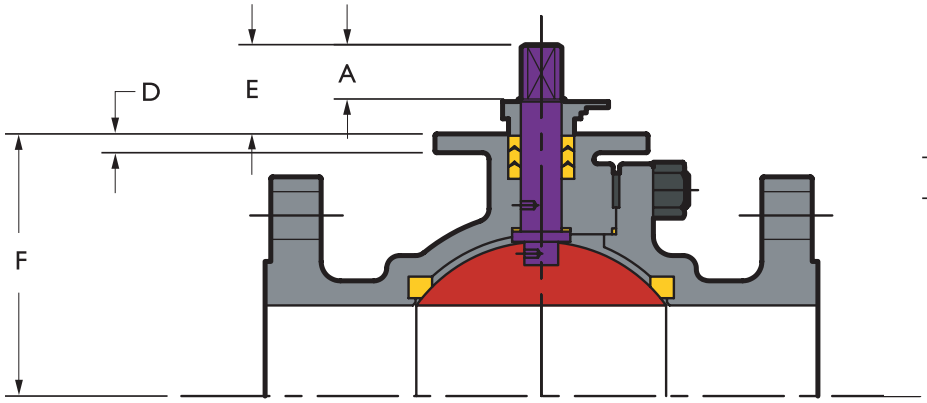
IFC SERIES 2FB150 – ANSI CLASS 150 LB (285 PSIG MAWP)
IFC SERIES 2FB300 – ANSI CLASS 300 LB (740 PSIG MAWP)

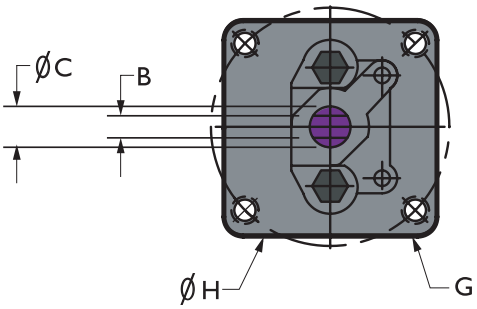
IFC SPLIT BODY FLANGED BALL VALVES - 285 PSIG / 740 PSIG - SIZES 1/2" THRU 2"



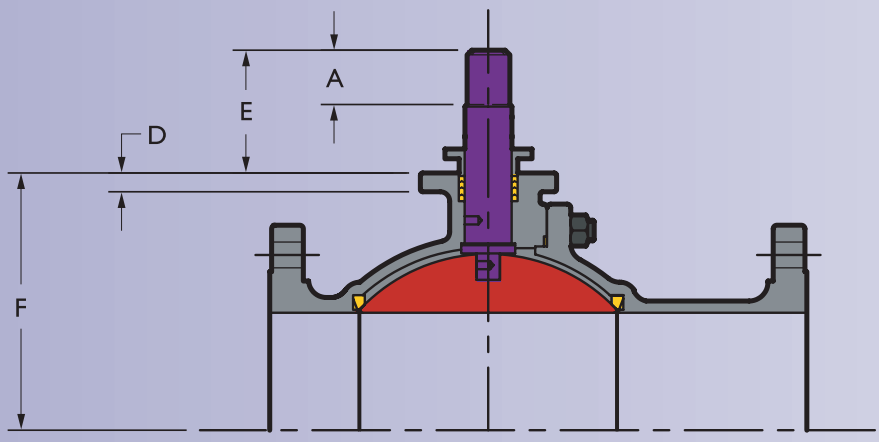


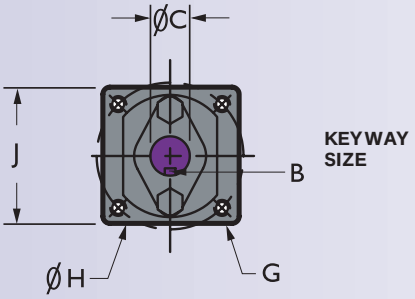
IFC SPLIT BODY FLANGED BALL VALVES - 285 PSIG / 740 PSIG - SIZES 2-1/2" THRU 6"





IFC SPLIT BODY FLANGED BALL VALVES - 285 PSIG / 740 PSIG - SIZES 8" THRU 12"





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ACTUATOR MOUNTING DIMENSIONS
IFC SERIES 2FB150 – ANSI CLASS 150 LB (285 PSIG MAWP)
IFC SERIES 2FB300 – ANSI CLASS 300 LB (740 PSIG MAWP)

IFC SPLIT BODY FLANGED END BALL VALVES - 285 PSIG / 740 PSIG - SIZES 1/2" THRU 2"

SIZE in/mm	ISO 5211	A in/mm	B in/mm	C	D in/mm	E in/mm	F in/mm	G	H in/mm	J in/mm
1/2 15	F04	0.39 10.0	0.20 5.0	5/16"-24UNF	0.20 5.0	0.59 15.0	1.34 34.0	M5x0.8	1.65 42.0	1.65 42.0
3/4 20	F04	0.62 15.8	0.28 7.0	7/16"-14UNC	0.20 5.0	0.83 21.0	1.54 39.0	M5x0.8	1.65 42.0	1.65 42.0
1 25	F05	0.73 18.6	0.35 9.0	9/16"-12UNC	0.24 6.0	0.91 23.1	1.85 47.0	M6x1.0	1.97 50.0	1.97 50.0
1-1/2 40	F07	0.93 23.7	0.39 10.0	5/8"-11UNC	0.31 8.0	1.23 31.2	2.50 63.5	M8x1.25	2.76 70.0	2.76 70.0
2 50	F07	0.93 23.7	0.39 10.0	5/8"-11UNC	0.31 8.0	1.23 31.2	2.81 71.5	M10x1.5	2.76 70.0	2.76 70.0

IFC SPLIT BODY FLANGED END BALL VALVES - 285 PSIG / 740 PSIG - SIZES 2-1/2" THRU 6"

SIZE in/mm	ISO 5211	A in/mm	B in/mm	C	D in/mm		E in/mm		F in/mm	G	H in/mm	J in/mm
					2FB150	2FB300	2FB150	2FB300				
2-1/2 65	F10	1.09 27.7	0.39 10.0	0.81 20.5	0.49 12.4	N/A	1.75 44.4	N/A	3.67 95.5	M10x1.5	4.02 102.0	3.78 96.0
3 80	F10	1.09 27.7	0.55 14.0	0.81 20.5	0.50 12.7	0.43 10.9	1.75 44.4	1.75 44.4	4.09 104.0	M10x1.5	4.02 102.0	3.78 96.0
4 100	F10	1.30 33.0	0.55 14.0	1.03 26.1	0.55 14.0	0.49 12.4	1.98 50.2	1.49 49.2	5.04 128.0	M10x1.5	4.02 102.0	3.78 96.0
6 150	F12	1.51 38.4	0.91 23.0	1.37 34.8	0.47 11.9	0.55 14.0	2.27 57.7	2.47 62.70	6.77 127.0	M12x1.75	4.92 125.0	4.57 116.0

IFC SPLIT BODY FLANGED END BALL VALVES - 285 PSIG / 740 PSIG - SIZES 8" THRU 12"

SIZE in/mm	ISO 5211	A in/mm	B in/mm	C in/mm	D in/mm	E in/mm	F in/mm	G in/mm	H in/mm	J in/mm
8 200	F12	3.86 98	5/16" x 3-3/4"	1.50 38.1	0.57 14.5	5.47 139	8.58 218	M12x1.75	4.92 125	4.57 116
10 250	F14	5.51 140	1/2" x 5-1/2"	1.81 46	0.72 18.3	7.48 190	10.24 260	M16x2	5.51 140	5.20 132
12 300	F14	5.51 140	1/2" x 5-1/2"	1.81 46	0.63 16	7.48 190	11.61 295	M16x2	5.51 140	5.20 132

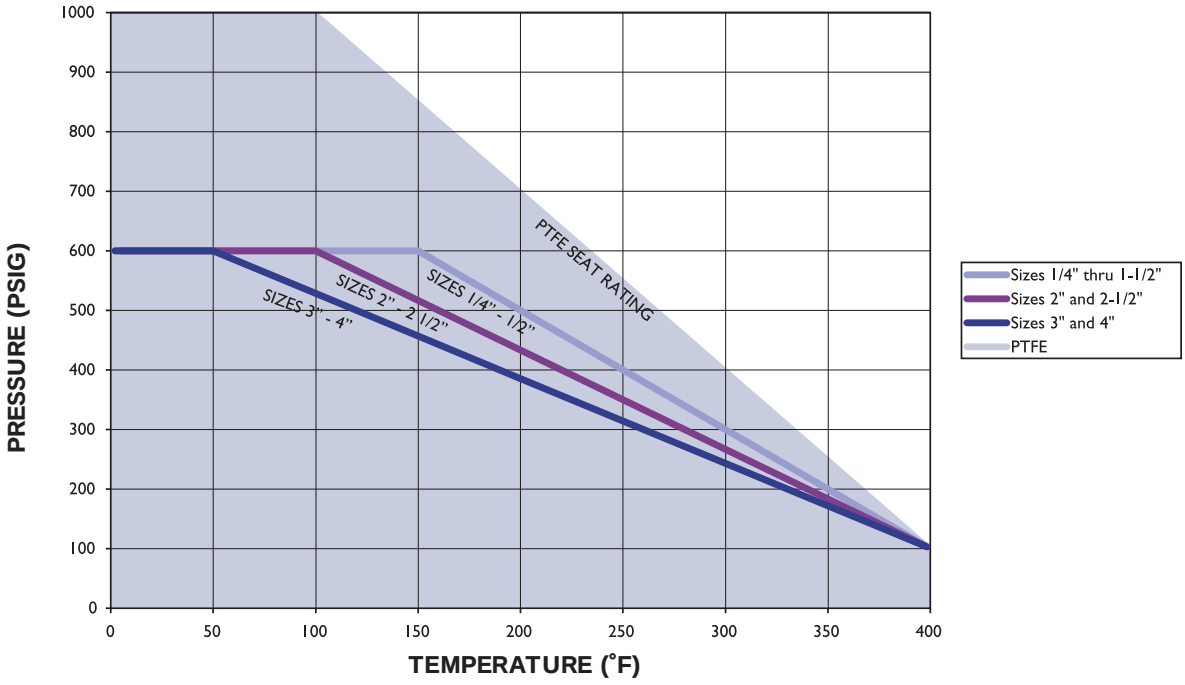
MATERIAL SPECIFICATIONS AND SELECTION

SEAT	SEAT MATERIAL	APPLICATION AND LIMITATIONS			
		TEMP. RANGE F / C	CHEMICAL	SERVICE APPLICATION	COLOUR
T	PTFE: Virgin Polytetrafluoro-ethylene	-100F to +400F - 73C to +204C	All except: • Molted alkali metals • Liquid or gaseous fluorine • Few fluoro-chemicals	Various Chemical Services	WHITE
R	RTFE: Glass reinforced PTFE 15%	-100F to +450F -73C to +232C	Same as PTFE	Used for steam service up to 150 psig and other low and medium pressure service.	MILK WHITE
C	PolyCarbon: PTFE with 20% Glass and 5% Graphite.	-100F to +500F -73C to +260 C	Same as Teflon except ensure compatibilty with carbon.	Used for steam service up to 450 psig and other high temperature and high pressure service.	BLACK
D	Delrin: Dupont's Acetal Homopolymer	-20F to +180F -29C to +82C	Used in applications involving organic solvents, inorganic salt solutions and detergents. It should not be used for acids, strong alkalis, oxidizing agents, 02 or hydraulic service.	This seat is very rigid and does not undergo cold flow. It can withstand pressures of up to 6000 psi.	WHITE
P	Peek	-20F to +550F -29C to +288C	Very resistant to chemical attack and is recommended for most environments other than strong oxidizers.	Used on high pressure applications. Peek has outstanding abrasion resistance and is not sensitive to dynamic fatigue.	BLACK
U	UHMWPE: Ultra High Molecular Weight Polyethelene	-20F to +180F -29C to +82C	Used in low to medium level radiation service and in applications where fluorocarbons cannot be tolerated.	Rated to 1500 psi. Due to its high molecular weight this thermoplastic polymer has exceptionaly high impact properties and outstanding resistance to abrasion.	WHITE
F	Carbon-Filled PTFE	-20F to +500F -29C to +260C	Same as PTFE	Excellent seat material for steam applications.	BLACK
N	Nylon	-20F to +160F -29C to +71C		Predominantly used past the usefull pressure range of PTFE because of its ability to resist permanent deformation and recovery after load.	NATURAL

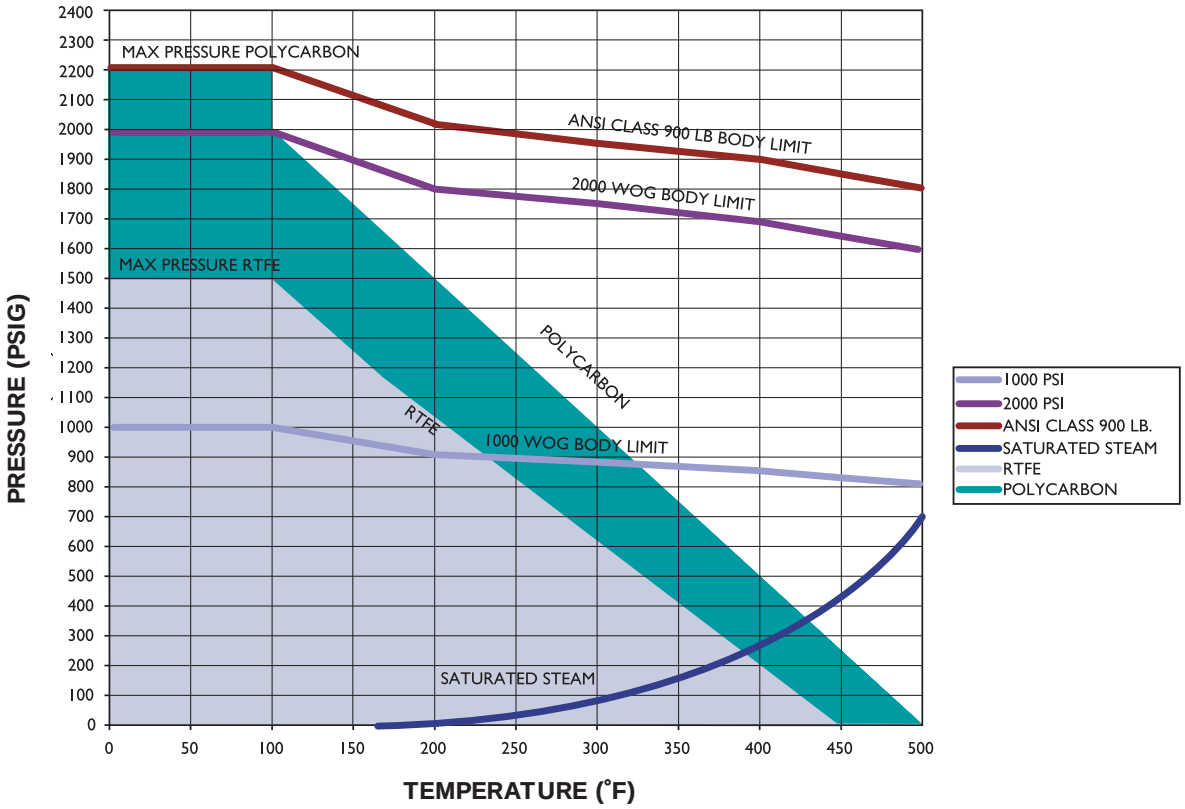
BODY GASKETS, SEALS AND STEM PACKING

TYPE	USE F / C	TEMP RANGE	MAX COMPRESSIVE LOAD, PSI	PH RANGE
PTFE	Acids, Alkalis Solvents, Hydraulics	-120°F to +400°F -85°C to +204°C	4000	0-14
Graphite	Fire Safe Operation	-120°F to + 500°F -85°C to +260°C	4000	0-14

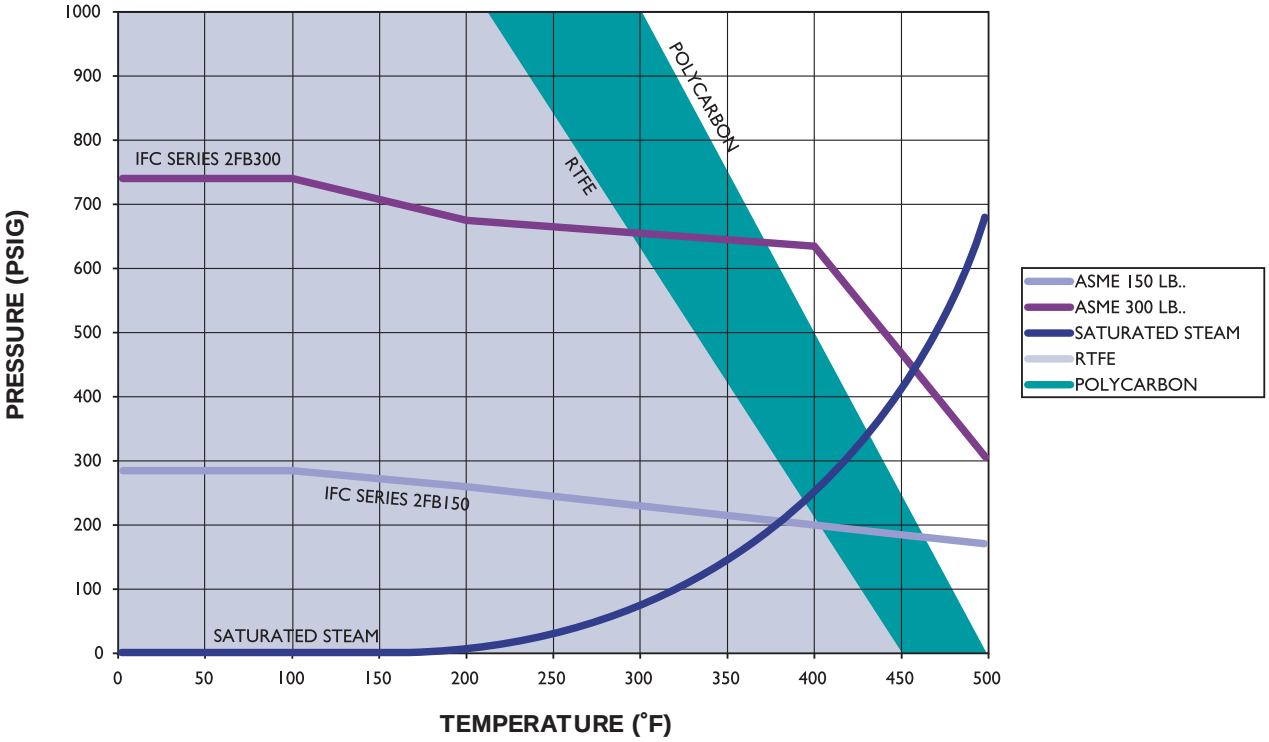
IFC BRASS BODY THREADED AND SWEAT END BALL VALVE PRESSURE TEMPERATURE RATINGS SERIES 2FB6



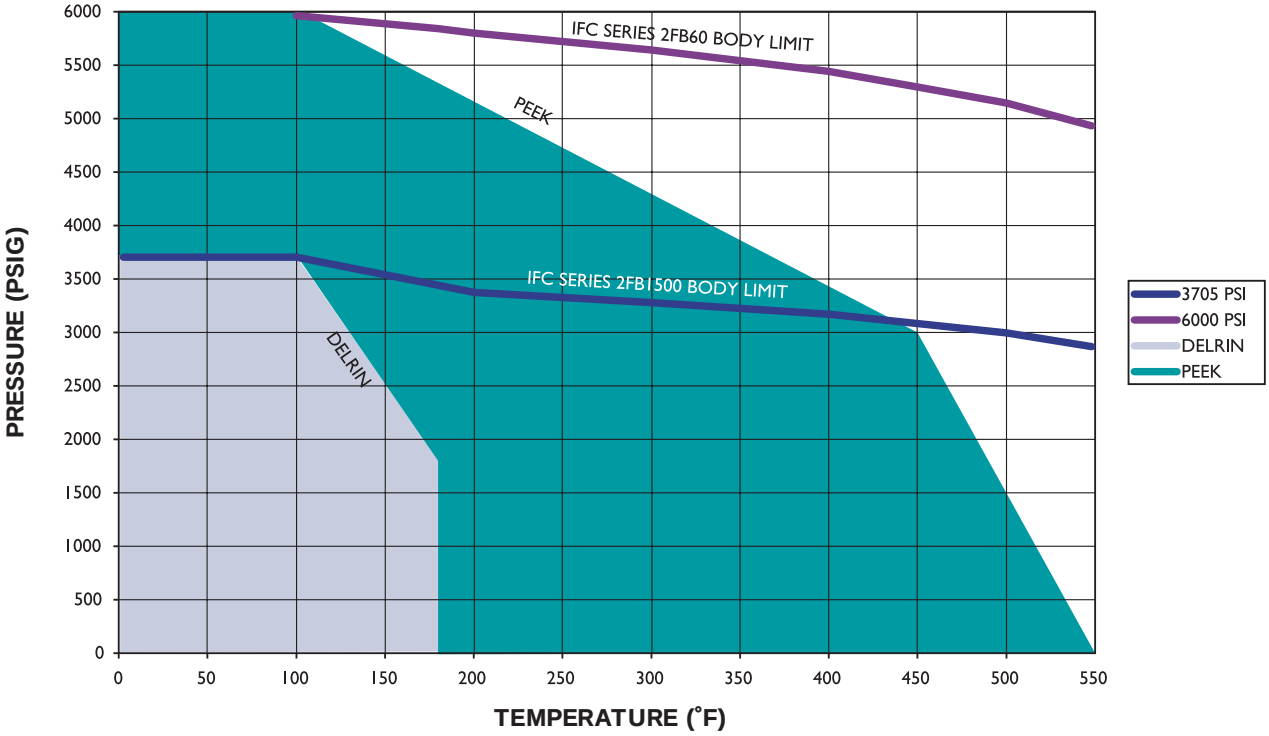
IFC 1000 PSIG/2000 PSIG THREADED END BALL VALVE PRESSURE TEMPERATURE RATINGS SERIES 1RB20, 2FB10, 2SB900, 3FB10 AND 3SB20



IFC SERIES 2FB150 AND 2FB300 FLANGED BALL VALVE PRESSURE TEMPERATURE RATINGS



IFC ANSI 1500 LB/6000 PSIG THREADED END BALL VALVE PRESSURE TEMPERATURE RATINGS IFC SERIES 2FB1500, 2SB1500, 2FB60 AND 2SB60



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SIZING OF ACTUATORS

Valve Torque:
The torque values published are breakaway torques from the closed position. Breakaway torques are caused by minute surface indications in the surface of the ball and the resultant cold flow of the seat material into these indications as a result of valve seat compression forces. Valve breakaway torques are the highest torques expected, without accounting for resultant dynamic forces caused by flow through the valve.

Seat Materials:
The type of seats used in a ball valve significantly influence operating torque. Low friction soft seats such as RTFE will exhibit lower operating torque vs. the harder high friction materials such as Delrin or Peek. This friction force is primarily a result of the seat material.

Floating or Trunion Valves:
With floating ball valves the ball moves to the downstream seat. Higher differential pressures result in higher valve torques. For small valves the effect of the differential pressure is minimal when compared to the assembly stress on the valve seats and stem seal. As a result the torque basically remains constant for the operating differential pressure of the valve body. Trunion ball valves are beneficial for higher operating pressures as the fluid load is carried by the trunion bearings. This in combination with the fact that the upstream seat surface area is much smaller than the ball surface area results in an overall lower torque.

Stem Seal:
The torque that results from the stem seal is a function of the packing chamber depth and the type of packing used. The affect of the packing seal is more dominant in smaller valves where its torque resistance proportion is larger.

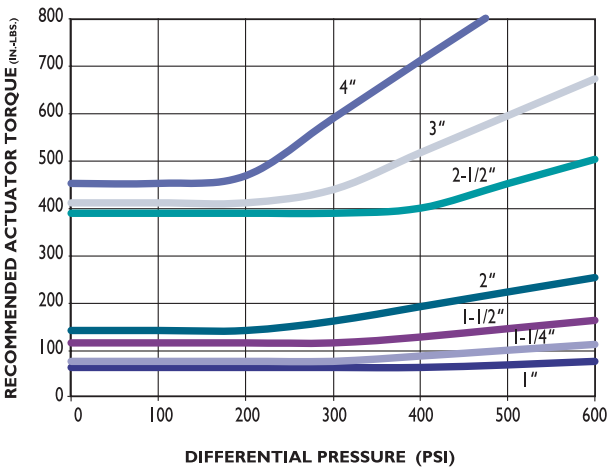
Frequency of Operation:
The frequency of the valve operation affects the resulting valve operating torque. Under low frequency operation the seat may flow into the minute surface roughness of the ball.

Line Media:
The service the valve is installed on can have a significant effect on the valve torque. High viscosity fluids transfer larger opposing forces to the valve ball during opening and closing and thus a higher operating torque results. Lubricating services such as oils tend to reduce the valve torque by minimizing the friction forces between the valve ball and seat, while dry services such as gas do not provide lubrication and as such result in higher operating torques.

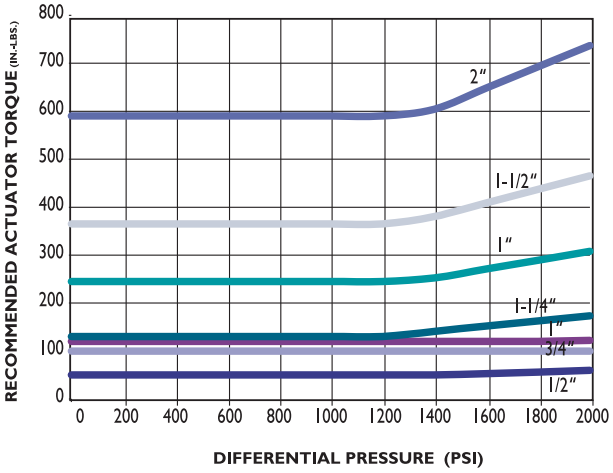
Operation Speed Limitations:
Resilient materials such as RTFE can be damaged by quick rotation of the valve ball. IFC recommends the following speed operation limits:

Valve Size	Max. Actuator Operating Speed Open to Close (Seconds)
1/4" - 2-1/2" (8-65 mm)	0.5 seconds
3" - 6" (80-150 mm)	1 second
8" - 12" (200-300 mm)	5 seconds

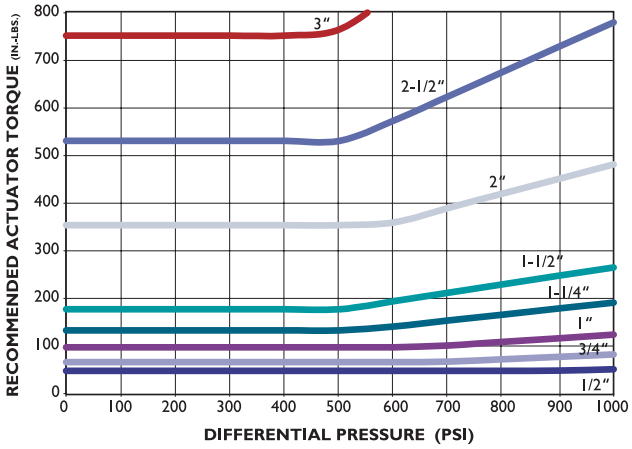
SERIES 2FB6 - SIZES 1" TO 4"



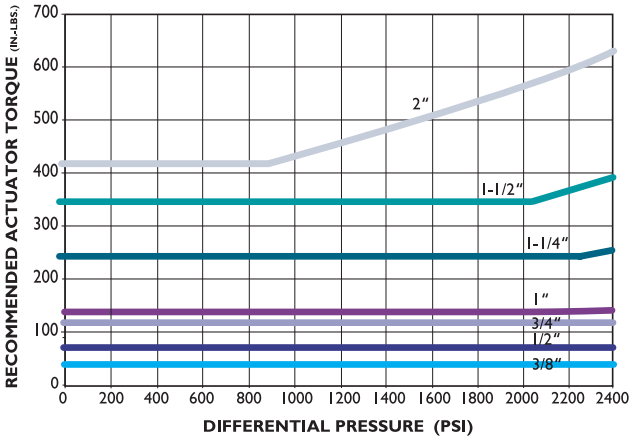
SERIES 1RB20 - SIZES 1/4" TO 2"



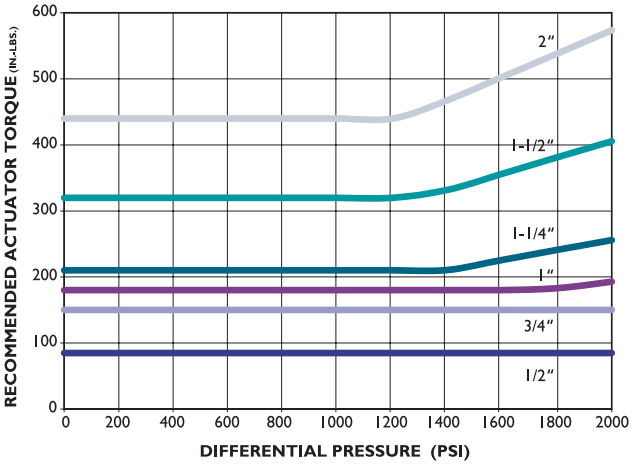
SERIES 2FB10 2PC AND SERIES 3FB10 3PC - SIZES 1/4" TO 3"



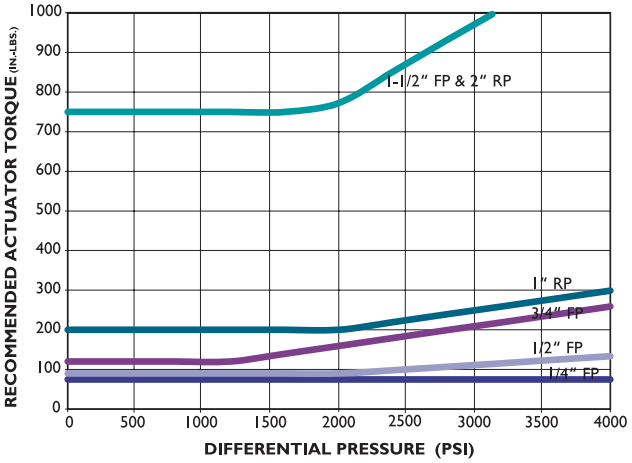
SERIES 2SB900 - SIZES 1/4" TO 2"



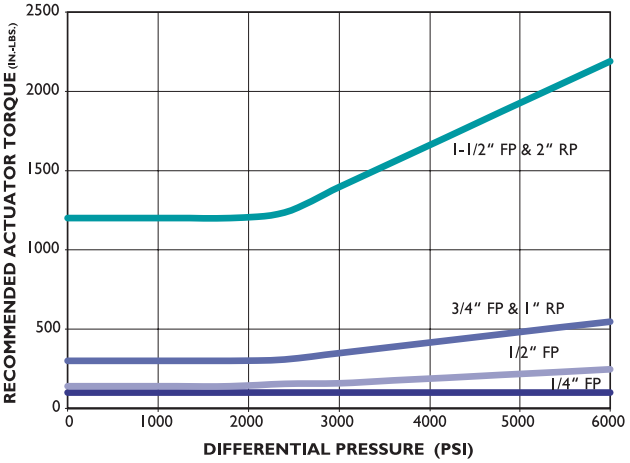
SERIES 3SB20 - SIZES 1/2" TO 2"



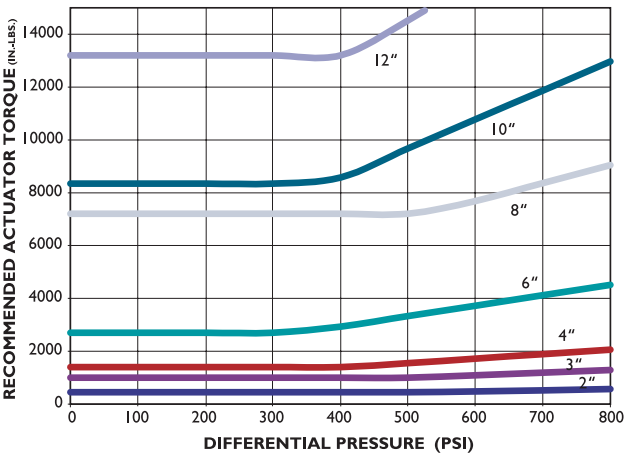
SERIES 2FB1500 AND 2SB1500 - SIZES 1/4" TO 2"



SERIES 2FB60 AND 2SB60 - SIZES 1/4" TO 2"



SERIES 2FB150/300 SPLIT BODY FLANGED BALL VALVES - SIZES 1/2" TO 12"



ACTUATOR CALCULATIONS

The selection of an actuator is usually based on economical considerations. IFC strongly suggests that a valve used in a critical application be equipped with a larger actuator, thus utilizing a larger factor of safety in selection. IFC takes no direct or indirect responsibility for actuator selection. The following actuator selection procedure should be used as a guide only.

FLUID AFFECT	
Liquid	Factor (F1)
Clean particle-free, non-lubricating (e.g. water, alcohol or solvents)	1.0
Clean particle-free, lubricating oil	0.8
Slurry (Liquids carrying solids) or heavy corroded and contaminated system	1.5
Gas or saturated steam, clean and wet	1.0
Gas or superheated steam, clean and dry	1.3
Gas, dirty (I.e. Natural Gas)	1.5

SERVICE FACTORS	
Frequency	Factor (F2)
Once per day or greater	1
Once every couple of days	1.5
Throttling	1.2
Positioner Control	1.5
"Plant Critical" Operation	1.5

To obtain the torque requirements for an actuator follow the following example.

STEP 1: Determine the basic valve torque from the charts on page 27 and 28 for a particular size and maximum operating differential pressure.
Example: 2" Series 2FB10 at 500 psig differential pressure basic valve torque is 350 in.-lbs.

STEP 2: Determine the fluid factor (F1)

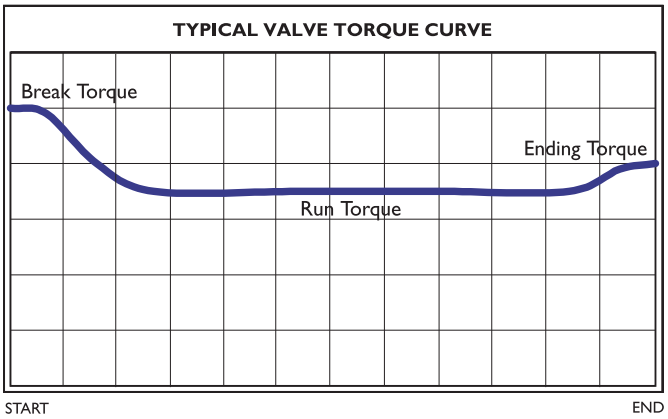
STEP 3: Determine the service factor (F2)
Example: For a valve operating less then once a day on clean particle-free, non-lubricating service F1 = 1.0 and F2 = 1.5

STEP 4: Determine the minimum recommended actuator torque by multiplying the basic valve torque obtained in step 1 by F1 and F2.
Example: 350 x 1.0 x 1.5 = 525 in.-lb.

SELECTION OF ACTUATOR CONSTANT TORQUE ACTUATORS (i.e. Double Acting Pneumatic and Electric)

As determined in the above example the minimum recommended actuator torque or minimum valve break torque is 525 in-lbs. With both the service factor and fluid affect taken into account additional safety factors are usually not required. However, it is good policy to apply a addition safety factor of 1.5 when selecting a pneumatic actuator. This will ensure smooth operation even in the case of occasional reduced actuator air supply pressure.

VARIABLE TORQUE ACTUATORS
(I.E. SINGLE ACTING AND SCOTCH YOKE PNEUMATIC)



With variable torque actuators the required valve torque across the valve stroke must be examined.

At the beginning of each stroke the valve torque is the largest. This is called the break torque, which are the torques outlined on the charts found on pages 27 and 28. As the ball is turned the torque decreases. This torque is known as the run torque. At the end of the stroke as the ball and seats are returned to full contact the torque again increases but to an amount less then the valve breakaway torque. This torque is known as the valve ending torque. Due to the variable operating torque of a ball valve when scotch yoke type or spring return actuators are used IFC recommends factoring the breakaway torque by 0.7 for the running torque and 0.8 for the valve ending torque.

1) ASME Standard B16.34 "Valves-Flanged, Threaded, and Welding End"

This standard applies to new valve construction and covers pressure-temperature ratings, dimensions, tolerances, materials, nondestructive examination, testing and marking of valves. This standard is the most uniformly accepted standard by end-users, engineering contractors, fabricators and valve manufacturer's as the basis for valve design, valve testing and valve performance. ASME B31.1 standard "Power Piping" and ASME B31.3 standard "Process Piping" are the standards used by virtually all power companies, chemical companies and petroleum refiners as the guideline for the selection of material and piping design. Both these standard refer the user to ASME B16.34 for the selection of valves.

All IFC flanged ball valves and threaded/socket weld end ball valves with a maximum operating pressure of 2000 psig and greater comply with the ASME B16.34 standard

Fact: Over 90% of the threaded ball valves currently used in the construction and maintenance of process facilities do not comply with the ASME B16.34 Standard.

Without complete compliance to B16.34, there is no assurance that valves meet with the following code requirements:

- Wall thicknesses of pressure retaining components meet minimum values specified.
- NPT and Socket weld end connections comply with ASME B1.20.1 or ASME B16.11
- Materials of pressure retaining components comply with ASME material standards.
- Stems are internally loaded and blow-out proof.
- Bolting is ASME grade with maximum applied stress controlled as a minimum to values specified.
- Each valve is shell tested at 150% of rated pressure for a specified test time duration.
- Each valve is tested for seat leakage in both directions for a specified test time duration.
- Each valve is permanently tagged with materials of construction, operating limits, and name of manufacturer.

2) API Standard 608 "Metal Ball Valves – Flanged, Threaded, and Welding Ends"

API standard 608 is an additional set of requirements beyond those in ASME B16.34, with ASME B16.34 compliance being a prerequisite. Additional requirements to comply with API 608 include:

- Maximum operating load of handles or handwheels to be limited to 80 lbs.
- Stem torsion strength to be at least twice the maximum operating torque.
- Torsion failure of the stem must be external to pressure-containing envelope and above stem packing.
- PTFE and RTFE seats and seals meet minimum pressure/temperature requirements.
- Full, Regular and reduced port ball valves must meet minimum bore diameter requirements.
- Hollow balls are disallowed.
- Stem must be electrically grounded to body.

Currently, all IFC flanged ball valves and threaded/socket weld end ball valves with a maximum operating pressure of 2000 psig and greater comply with the API 608 Standard.

3) API Standard 607 "Fire Test for Soft-Seated Quarter-Turn Valves"

The API 607 Standard covers the requirements for testing and evaluating the performance of quarter-turn valves when they are exposed to certain fire conditions. IFC offers valves that are designed and CERTIFIED to meet with the API-608 Standard. Beware of valve manufacturer's that state their valves have a fire-safe design. This does NOT mean the valves have successfully passed the testing requirements of API 607. The following valves offered by IFC are available fire-safe CERTIFIED to API 607.

- IFC Series 1RB20 (NPT/SW, Unibody Reduced Port, 2000 WOG)
- IFC Series 2FB20 (NPT/SW, Two Piece Full Port, 2000 WOG)
- IFC Series 3SB20 (NPT/SW, Three Piece, Standard Port, 2000 WOG)
- IFC Series 2F(S)B1500 (NPT/SW, Two Piece, Full and Standard Port, ASME Class 1500)
- IFC Series 2F(S)B60 (NPT/SW, Two Piece, Full and Standard Port, 6000 WOG)
- IFC Series 2FB150 (Flanged, Split Body, ASME Class 150)
- IFC Series 2FB300 (Flanged, Split Body, ASME Class 300)

4) Canadian Registration Number (CRN) in accordance with CSA B51.

In accordance with table 1 "Categories of Fittings" of CSA B51 all line valves are classified as category D fittings. CSA B51 states that the drawings, specifications, and calculations of designs for all fittings shall be submitted to the regulatory authority for review. Though not stated in CSA B51, each fitting must be registered separately with each regulatory authority in each province and territory in Canada that they are to be installed in. Once the design and specification have been accepted and registered by the regulatory authority the provinces shall be added after the digit or letter representing the original registering province. The following identifications are used:

1. British Columbia
2. Alberta
3. Saskatchewan
4. Manitoba
5. Ontario
6. Quebec
7. New Brunswick
8. Nova Scotia
9. Prince Edward Island
0. Newfoundland
T. Northwest Territories
Y. Yukon Territories
N. Nunavut

IFC has compiled a data base of over 400 CRNs in all provinces and territories across Canada meaning we have the expertise to supply ball valves that meet with your local regulatory Authority requirements. Consult the factory for CRN numbers applicable to individual models and provinces of installation.

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INSTALLATION, OPERATION AND MAINTENANCE PROCEDURES FOR IFC FLOATING BALL VALVES

1. Initial Inspection

A) Remove valve from packaging; remove thread/flange protectors and discard, if so equipped.
B) Inspect flange faces or pipe threads for any damage caused in shipment or handling.
C) Confirm valve size is correct for installation.

2. Installation

Threaded Valves - NPT

A) A thread sealant/lubricant is required to establish a bubble-tight seal between piping threads and valve threads.
B) Hand-engage piping to each side of valve,, and hand tighten.
C) Attach a adjustable wrench (NOT a pipe wrench) to the flats provided on the valve body or valve tailpiece having the NPT thread being engaged. Do not hold the body while torquing pipe into tailpiece or vice-versa.
D) CAUTION: Valve will be permanently damaged or destroyed if tailpiece is rotated relative to body, or body is rotated relative to tailpiece.
E) Tighten piping into valve thread using reasonable torque to seal – DO NOT OVER-TORQUE.
F) Use the same method to install piping into alternative NPT port.

Socket Weld Valves

A) Extreme care must be used to insure seats & seals are not damaged.
B) Inspect piping to be welded to valve for correct preparation and any damage.
C) Place handle in full open position.
D) Wrap a rag that has been soaked with water around center of valve body and secure. Do not wet weld ends.
E) Insert piping into one socket weld end (or align pipe to buttweld end) and "tack" weld in two spots.
F) Wait one minute, then insert piping into opposite weld end and "tack" weld in two spots.
G) Before welding, confirm valve location, orientation and clearance is acceptable.
H) Weld pipe to one end of valve using appropriate weld procedure and wire/filler materials.
I) Allow assembly to cool for at least 5 minutes.
J) Confirm rag is still wet – if not, re-soak rag and re-secure to center of valve body
K) Repeat H above for other side of valve.

Flanged End Valves

A) Confirm flanges installed on adjacent piping are correct pressure class and match valve flange pattern.
B) Confirm "lay-length" between piping flanges matches valve "lay-length".
C) Slide valve between piping flanges, then insert first spiral wound flange gasket between one valve flange and piping flange.
D) Insert flange bolts and hand-tighten flange nuts on second side.
E) Insert second spiral wound flange gasket between opposite valve flange and piping flange.
F) Insert flange bolts, and hand tighten flange nuts on second side.
G) With a torque wrench having capacity to apply torque as recommended by the flange gasket manufacturer, start to torque flange bolts using an alternating "across flange" torquing sequence to insure correct gasket compression.

3. Operation

A) After installation, confirm handle has adequate clearance by rotating 90 degrees from open to closed position and back to open.
B) All IFC ball valves are designed for on-off operation only. DO NOT attempt to throttle with IFC ball valves, unless they are specifically designed and tagged for throttling service.
C If application is in STEAM PIPING, be cautious when operating as the valve handle will be hot.

4. Initial Pressurization of System

A) Upon initial pressurization of piping system, check all connections for leaks and correct if required.
B) Once the system reaches steady state conditions of operating pressure and operating temperature, it will be necessary to make initial stem packing adjustment.

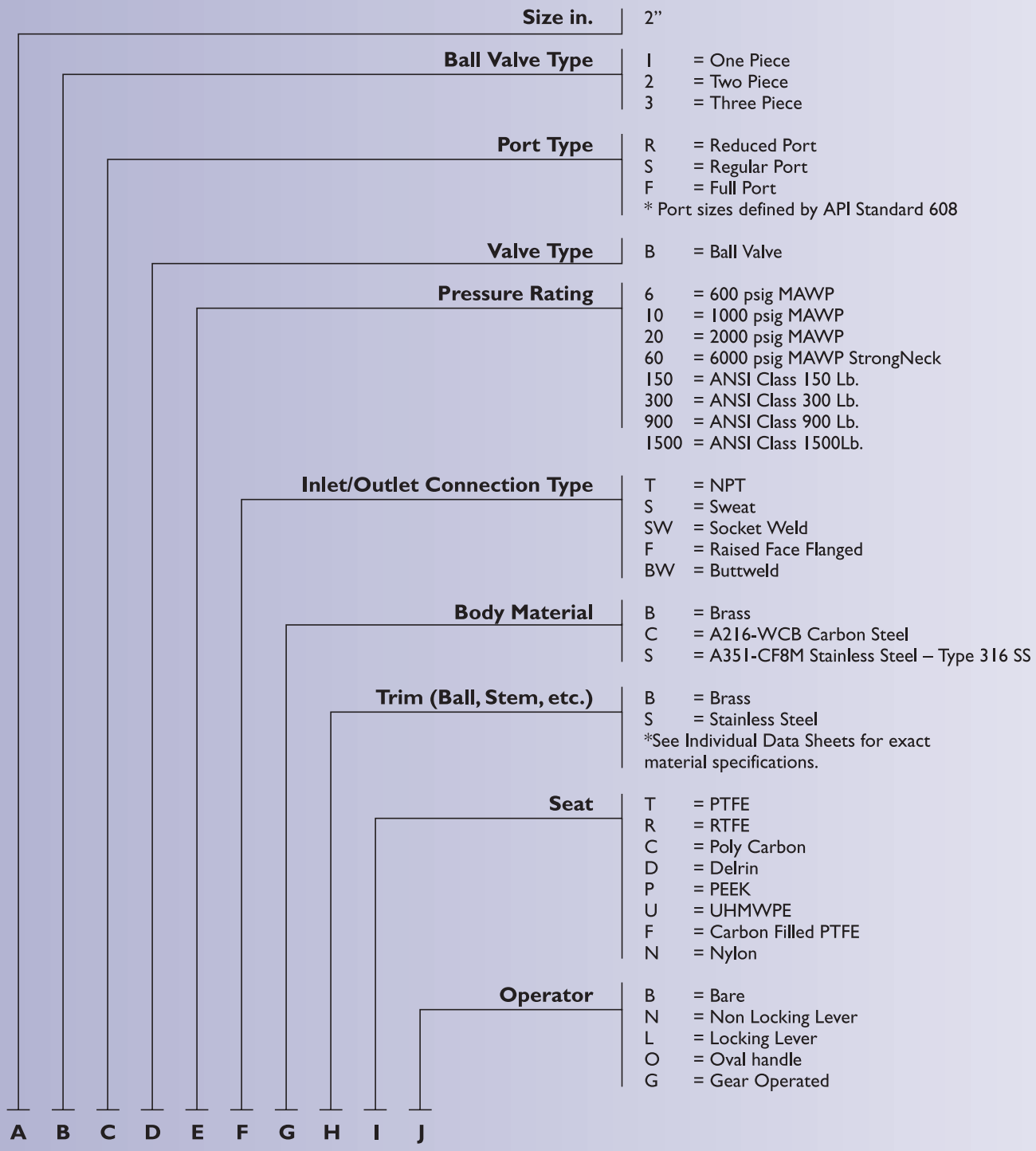
5. Maintenance

A) IFC floating ball valves require no maintenance other than periodic stem packing adjustment in applications where many cycles of on-off operation occur on a weekly basis.
B) In high-cycle applications, check stem packing area regularly to confirm there is no leakage from stem packing.

6. Threaded End Valves - Modifications of Piping Layout

A) Many times, the reason valves are purchased is to allow modifications to the original piping layout in the future. In these cases, the valve is closed, sometimes with full pressure on the "upstream" side of the valve, and pressure/line fluid is drained from the downstream side of the valve.
B) The next step is the removal of piping from the "downstream" side of the valve to allow downstream piping modification:

CAUTION
Always engage an adjustable pipe wrench on the flats at the end of the valve where downstream piping is attached, and carefully remove pipe from valve body, insuring that valve does not rotate and tailpiece does not unthread from body.


Size in.
2”
Ball Valve Type
1 = One Piece
2 = Two Piece
3 = Three Piece
Port Type
R = Reduced Port
S = Regular Port
F = Full Port
* Port sizes defined by API Standard 608
Valve Type
B = Ball Valve
Pressure Rating
6 = 600 psig MAWP
10 = 1000 psig MAWP
20 = 2000 psig MAWP
60 = 6000 psig MAWP StrongNeck
150 = ANSI Class 150 Lb.
300 = ANSI Class 300 Lb.
900 = ANSI Class 900 Lb.
1500 = ANSI Class 1500Lb.
Inlet/Outlet Connection Type
T = NPT
S = Sweat
SW = Socket Weld
F = Raised Face Flanged
BW = Buttweld
Body Material
B = Brass
C = A216-WCB Carbon Steel
S = A351-CF8M Stainless Steel – Type 316 SS
Trim (Ball, Stem, etc.)
B = Brass
S = Stainless Steel
*See Individual Data Sheets for exact material specifications.
Seat
T = PTFE
R = RTFE
C = Poly Carbon
D = Delrin
P = PEEK
U = UHMWPE
F = Carbon Filled PTFE
N = Nylon
Operator
B = Bare
N = Non Locking Lever
L = Locking Lever
O = Oval handle
G = Gear Operated
A B C D E F G H I J

IFC MODEL	2FB6T(S)BBTN	1RB20TCSC0 (NF)	1RB20TCSCO	1RB20TSSRO	2FB10TSSRL	2SB900TCSCL
Size Range	1/4" thru 4"	1/4" thru 2"	1/4" thru 2"	1/4" thru 2"	1/4" thru 3"	1/4" thru 2"
Type	Two Piece	Unibody	Unibody	Unibody	Two-Piece	Two-Piece
MAWP	600 psig	2000 psig	2000 psig	2000 psig	1000 psig	ANSI 900 LB
Port	Full	Reduced	Reduced	Reduced	Full	Regular
Ends	NPT/CxC	NPT	NPT	NPT	NPT	NPT
Body	Brass	WCB	WCB	CF8M	CF8M	WCB
Ball, Trim	Brass	316SS	316SS	316SS	316SS	316SS
Seat	PTFE	Polycarbon	Polycarbon	RTFE	RTFE	Polycarbon
Seals	PTFE	Graphoil	Graphoil	Graphoil	PTFE	Graphoil
Operator	Lever	Oval	Oval	Oval	Locking Lever	Locking Lever
NACE MR01-75						
API 607 Fire Safe						
Anti-Static Device						
Pressure Equalization Hole in Ball						
Tapped Mounting Pad						
Other	CAN/CGA Approved	None Firesafe - Econ. Steam Valve	None	None	None	Seal Welded Body to Adapter
Catalogue Page No.	4, 5	6, 7	6, 7	6, 7	8, 9	8, 9

IFC MODEL	2SB900TSSRL	3FB10TSSRL	3SB20TCSCL	3SB20TSSRL	2FB1500TCSDL	2FB1500TSSDL
Size Range	1/4" thru 2"	1/2" thru 2"	1/2" thru 2"	1/2" thru 2"	1/4" thru 2"	1/4" thru 2"
Type	Two-Piece	Three Piece	Three Piece	Three Piece	Two Piece	Two Piece
MAWP	ANSI 900 LB.	1000 psig	2000 psig	2000 psig	ANSI 1500 Lb.	ANSI 1500 Lb.
Port	Regular	Full	Regular	Regular	Full (Note 1)	Full (Note 1)
Ends	NPT	NPT/SW	NPT/SW	NPT/SW	NPT	NPT
Body	CF8M	CF8M	WCB	CF8M	WCB	CF8M
Ball, Trim	316SS	316SS	316SS	316SS	316SS	316SS
Seat	RTFE	RTFE	Polycarbon	RTFE	Delrin	Delrin
Seals	Graphoil	PTFE	Graphoil	Graphoil	Graphoil	Graphoil
Operator	Locking Lever	Locking Lever	Locking Lever	Locking Lever	Locking Lever	Locking Lever
NACE MR01-75						
API 607 Fire Safe						
Anti-Static Device						
Pressure Equalization Hole in Ball						
Tapped Mounting Pad						
Other	Seal Welded Body to Adapter	Exposed Bolting	Non-Exposed Bolting	Non-Exposed Bolting	None	None
Catalogue Page No.	8, 9	10, 11	10, 11	10, 11	12, 13	12, 13

Note 1: Full Port sizes 1/4", 1/2", 3/4" and 1-1/2", Regular Port Sizes 1" and 2".

IFC MODEL	2FB60TCSPL	2FB60TSSPL	2FB150FCSCL	2FB150FSSRL	2FB300FCSCL	2FB300FSSRL
Size Range	1/4" thru 2"	1/4" thru 2"	1/2" thru 12"	1/2" thru 12"	1/2" thru 10"	1/2" thru 10"
Type	Two Piece	Two Piece	Split Body	Split Body	Split Body	Split Body
MAWP	6000 psig	6000 psig	ANSI 150 Lb.	ANSI 150 Lb.	ANSI 300 LB.	ANSI 300 LB.
Port	Full (Note 1)	Full (Note 1)	Full	Full	Full	Full
Ends	NPT	NPT	RF Flanged	RF Flanged	RF Flanged	RF Flang ed
Body	WCB	CF8M	WCB	CF8M	WCB	CF8M
Ball, Trim	CF8M	CF8M	316SS	316SS	316SS	316SS
Seat	Peek	Peek	Polycarbon	RTFE	Polycarbon	RTFE
Seals	Graphoil	Graphoil	Graphoil	Graphoil	Graphoil	Grap hoil
Operator	Locking Lever	Locking Lever	Lever/Gear	Lever/Gear	Lever/Gear	Lever/Gear
NACE MR01-75						
API 607 Fire Safe						
Anti-Static Device						
Pressure Equalization Hole in Ball						
Tapped Mounting Pad						
Other	Seal Welded Body to Adapter	Seal Welded Body to Adapter				
Catalogue Page No.	12, 13	12, 13	14, 15	14, 15	14, 15	14, 15

Note 1: Full Port sizes 1/4", 1/2", 3/4" and 1-1/2", Regular Port Sizes 1" and 2".

IFC is continuously adding to our stocking and manufacturing program. Please consult factory if valve and trim required is not shown.

ISLIP Flow Control products are designed to exacting specifications, and manufactured to the highest standards, resulting in an extensive range of flow controls that are built for dependability, and years of use. IFC's products are found around the globe. From Arizona to Australia, and Singapore to Saudi Arabia, ISLIP is there. We are the manufacturer of choice for professionals who know that quality, service and dependability equal success.

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