

Building connections that last™



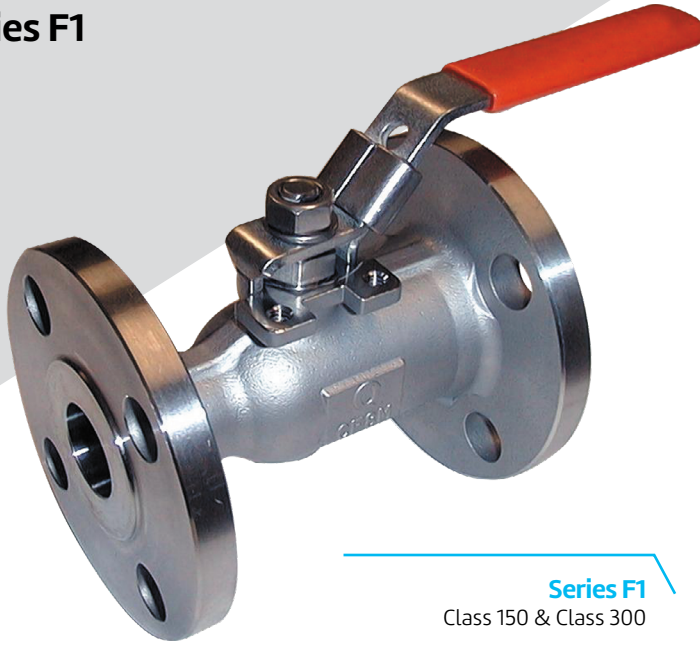
Series F1

Unibody Flanged-End Ball Valves
Class 150 & 300 Datasheet



Unibody Flanged-End Ball Valves Class 150 & 300

Series F1



Series F1
Class 150 & Class 300

Features

- Fully compliant to ASME B16.34 and API 608
- Fire safe to API 607 & ISO 10497
- ISO 5211 actuator mounting pads
- NACE MR0175 compliant
- Standard 304SS latch lock handles
- “Extended” packing nuts for easy access when automated
- Electrically ground ball and stem
- TFM seats provide superior high temperature performance and chemical resistance
- Tailpiece gasket positioned to isolate threads from line fluid
- Tailpiece-to-body connection complies with API 608 and ISO 17292
- API 641 Certified

Ratings

Class 150: WCB rated at 285PSIG @ 100°F

CF8M rated at 275PSIG @ 100°F

Class 300: WCB rated at 740PSIG @ 100°F

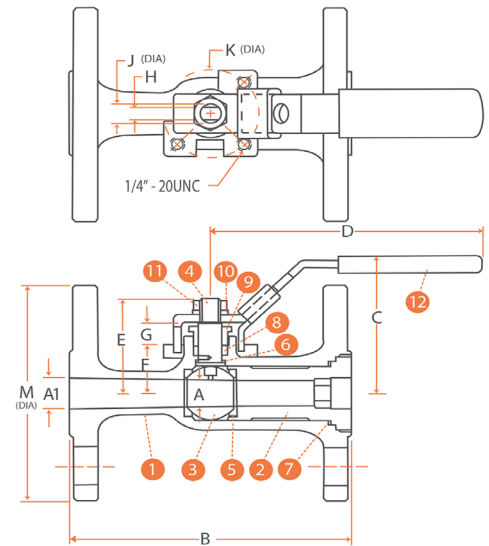
CF8M rated at 720PSIG @ 100°F

250PSIG Saturated Steam

Rating–All TFM Seated Valves

Materials of Construction

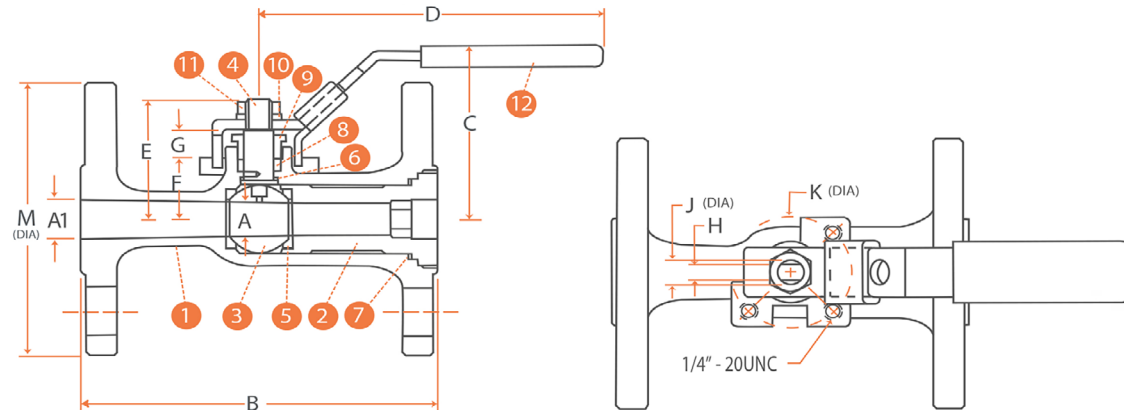
Part	Qty.	Description	Optional Material(s)
1	1	Body	ASTM A216 GR WCB or A351 GR CF8M
2	1	Insert	ASTM A216 GR WCB or A351 GR CF8M
3	1	Ball	ASTM A276 GR 316 SS / A351 GR CF8M
4	1	Stem	ASTM A276 GR 316 SS
5	2	Seat	TFM (R-PTFE)
6	1	Thrust Washer	TFM (R-PTFE)
7	1	Body Seal	Graphite / TFM R-PTFE
8	2	Stem Packing	Graphite / TFM R-PTFE
9	1	Packing Nut	ASTM A276 GR 316 SS
10	1	Lock Washer	304 SS
11	1	Handle Nut	304 SS
12	1	Handle Assy	304 SS - Vinyl Coated
NOT	2	Grounding Spring	304 SS
SHOWN	2	Grounding Ball	304 SS



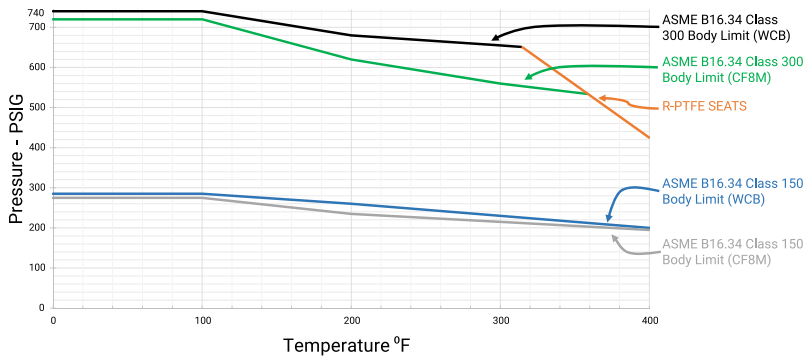
QUADRANT
An ASC Engineered Solution

Unibody Flanged-End Ball Valves Class 150 & 300

Series F1



Pressure/Temperature Curve



Dimensions, Weights, Cv Factors & Maximum Operating Torque

Class 150

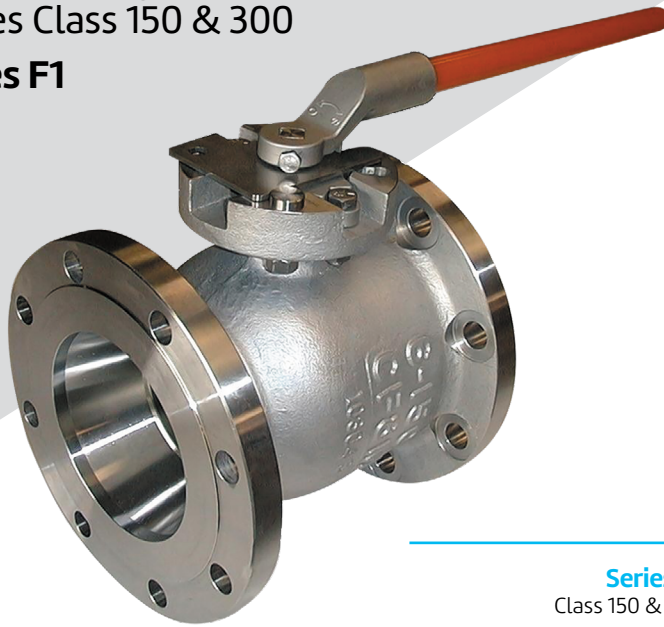
Size	A (Port)	A1 (DIA)	B	C	D	E	F	G	H	J (DIA)	K (DIA)	M (DIA)	ISO PATTERN	Weight Lbs.	CV	Torque TFM SEATS
1/2"	0.43	0.5	4.25	2.22	5.02	1.53	0.78	0.35	0.20	0.31	1.42	3.50	F03	2.7	16	100 (IN-LB)
3/4"	0.59	0.75	4.61	2.72	5.57	2.07	1.03	0.43	0.28	0.44	1.65	3.86	F04	4.3	27	130 (IN-LB)
1"	0.81	1.0	5.00	2.99	5.57	2.32	1.34	0.39	0.28	0.44	1.65	4.25	F04	5.7	42	150 (IN-LB)

Class 300

Size	A (Port)	A1 (DIA)	B	C	D	E	F	G	H	J (DIA)	K (DIA)	M (DIA)	ISO PATTERN	Weight Lbs.	CV	Torque TFM SEATS
1/2"	0.43	0.50	5.50	2.22	5.02	1.53	0.78	0.35	0.20	0.31	1.42	3.75	F03	4.7	16	100 (IN-LB)
3/4"	0.59	0.75	6.00	2.72	5.57	2.07	1.03	0.43	0.28	0.44	1.65	4.63	F04	7.2	27	130 (IN-LB)
1"	0.81	1.0	6.50	2.99	5.57	2.32	1.34	0.39	0.28	0.44	1.65	4.88	F04	8.1	42	150 (IN-LB)

Unibody Flanged-End Ball Valves Class 150 & 300

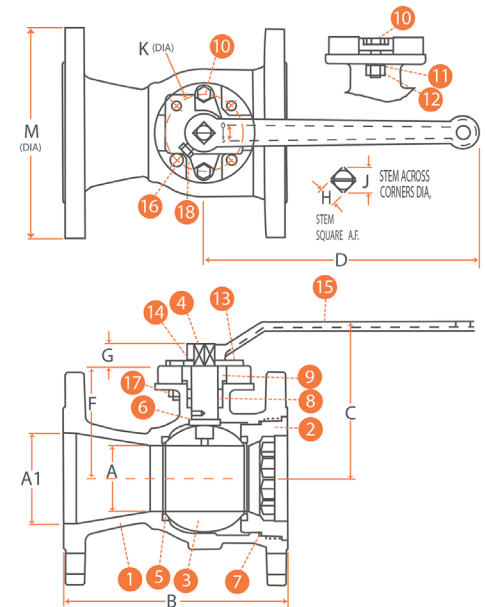
Series F1



Series F1
Class 150 & 300

Features

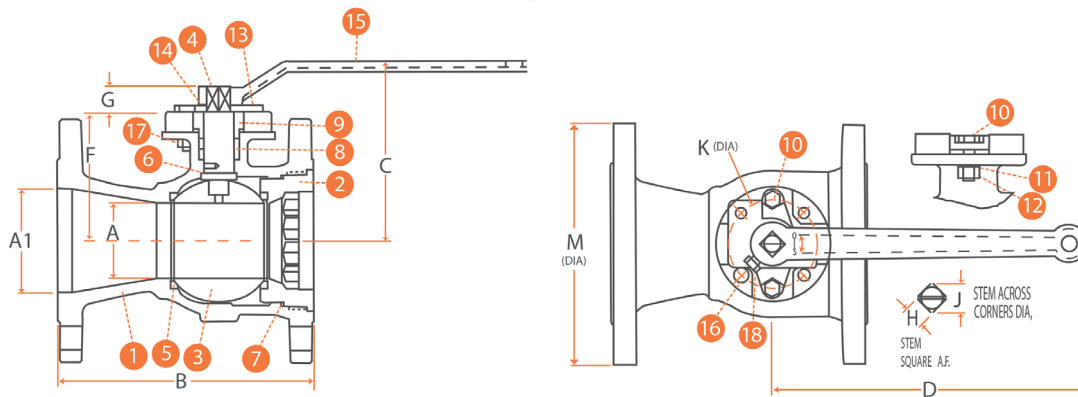
- Fully compliant to ASME B16.34 and API 608
- Fire safe API 607 and ISO 10497
- ISO 5211 actuator mounting pads and patented "Square Drive" stem design allow direct mounting of ISO operators without brackets and/or adaptors
- NACE MR0175 compliant
- Standard stainless locking handles, 1-1/2" to 3", locking handles, 4" and 6"
- "Submerged" packing adjustment allows packing to be adjusted when mounted with ISO-compliant gear operators and actuators
- Electrically grounded ball and stem
- TFM seats provide superior high temp performance and chemical resistance
- Tailpiece gasket positioned to isolate threads from line fluid
- Tailpiece-to-body connection complies with API 608 and ISO 17292
- API 641 Certified



Materials of Construction

Part	Qty.	Description	Optional Material(s)
1	1	Body	ASTM A216 GR WCB or A351 GR CF8M
2	1	Insert	ASTM A216 GR WCB or A351 GR CF8M
3	1	Ball	ASTM A276 GR 316 SS / A351 GR CF8M
4	1	Stem	ASTM A276 GR 316 SS
5	2	Seat	TFM (R-PTFE)
6	1	Thrust Washer	TFM (R-PTFE)
7	1	Body Seal	Graphite / TFM R-PTFE
8	2	Stem Packing	Graphite / TFM R-PTFE
9	1	Packing Nut	ASTM A351 GR CF8M
10	2	Packing Bolt	ASTM A193 GR B8
11	4	Belleville Washer	300 Series SS
12	2	Packing Nut	ASTM A194 GR 8
13	1	Stop Plate	304 SS
14	1	Snap Ring	300 Series SS
15	1	Handle Assy	ASTM A351 GR CF8M (w/CS PIPE-4"/6")
16	1	Stop Pin	304 SS
17	1	Stop Pin Nut	304 SS
18	1	Handle Bolt	304 SS
NOT SHOWN	2	Grounding Spring	304 SS
NOT SHOWN	2	Grounding Ball	304 SS

Series F1



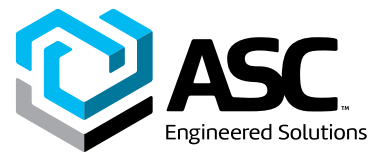
Class 150

Size	A (Port)	A1 (DIA)	B	C	D	F	G	H (SQUARE)	J (DIA)	K (DIA)	M (DIA)	ISO Pattern	Weight Lbs.	CV	Torque TFM SEATS
1- ½"	1.19	1.5	6.5	3.87	9.84	2.51	0.79	14mm	0.74	2.76	5.00	F07	12.5	100	250 (IN-LB)
2"	1.50	2.00	7.00	4.41	9.84	3.07	0.77	14mm	0.74	2.76	6.00	F07	18.5	145	400 (IN-LB)
2-½"	2.00	2.5	7.50	5.15	9.84	3.8	0.8	14mm	0.74	2.76	7.00	F07	29.0	280	475 (IN-LB)
3"	2.31	3.00	8.03	5.53	9.84	4.17	0.81	14mm	0.74	2.76	7.50	F07	33.0	420	550 (IN-LB)
4"	3.00	4.00	9.02	6.14	18.11	4.84	0.91	17mm	0.89	4.02	9.02	F10	61.0	605	1000 (IN-LB)
6"	4.49	6.00	10.51	7.85	18.11	6.50	0.96	17mm	0.89	4.02 & 4.92	10.98	F10 & F12	99.0	900	1600 (IN-LB)

Size	A (Port)	A1 (DIA)	B	C	D	F	G	H (SQUARE)	J (DIA)	K (DIA)	M (DIA)	ISO Pattern	Weight Lbs.	CV	Torque TFM SEATS
1- ½"	1.19	1.50	7.50	3.87	9.84	2.55	0.75	14mm	0.74	2.76	6.12	F07	20.0	100	250 (IN-LB)
2"	1.50	2.00	8.50	4.63	9.84	3.29	0.75	14mm	0.74	2.76	6.50	F07	27.0	145	400 (IN-LB)
3"	2.31	3.00	11.12	5.53	9.84	4.17	0.81	14mm	0.74	2.76	8.27	F07	47.5	420	550 (IN-LB)
4"	3.00	4.00	12.00	6.42	18.11	5.12	0.91	17mm	0.89	4.02	10.00	F10	77.0	605	1000 (IN-LB)
6"	4.49	6.00	15.86	7.85	18.11	6.50	0.96	17mm	0.89	4.02 & 4.92	12.52	F10 & F12	119.0	900	1600 (IN-LB)

Unibody Flanged-End Ball Valves Class 150 & 300

Series F1



Numbering System How to order Series F1

F1	R	C	S	R	G	LH	1F	200
Series	Port Size	Body & Tailpiece Material	Ball/Stem Material	Seat Material	Seal Material	Handle Type	Ends	Size
F1 Unibody Flanged	R Reduced	C WCB Carbon Steel	S 316 Stainless	R R-PTFE	G Graphite	LH Locking Lever (SS to 3")	1F Class 150 RF	050 1/2"
		S CF8M Stainless Steel	A Alloy 20		R TFM (RTFE)	SL Stainless Latch Lock (Std. on 1/2" to 1")	3F Class 300 RF	075 3/4"
		A CN7M Alloy 20				LO Locking Stainless Oval (1/2" to 1")		100 1"
						XH Extended Lever Handle Topworks		150 1 - 1/2"
						XO Extended Oval Handle Topworks (1/2" to 1")		200 2"
						PA Double Acting Pneumatic		250 2 - 1/2"
						SA Spring Return Pneumatic		300 3"
						GO Gear Operated		400 4"
								600 6"

About ASC Engineered Solutions

ASC Engineered Solutions is defined by quality—in its products, services and support. With more than 1,400 employees, the company's portfolio of precision-engineered piping support, valves and connections provides products to more than 4,000 customers across industries, such as mechanical, industrial, fire protection, oil and gas, and commercial and residential construction. Its portfolio of leading brands includes ABZ Valve®, AFCON®, Anvil®, Anvil EPS, Anvil Services, Basic-PSA, Beck®, Catawissa, Cooplet®, FlexHead®, FPPI®, Gruvlok®, J.B. Smith, Merit®, North Alabama Pipe, Quadrant®, SCI®, Sharpe®, SlideLOK®, SPF® and SprinkFLEX®. With headquarters in Commerce, CA, and Exeter, NH, ASC also has ISO 9001:2015 certified production facilities in PA, TN, IL, TX, AL, LA, KS, and RI.



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