



Quadrant[®]

VALVE & ACTUATOR, LLC

SERIES F2-CS & F2-SS

2-Piece, Full Port, Flanged-End Ball Valves
Class 150, 300 and 600

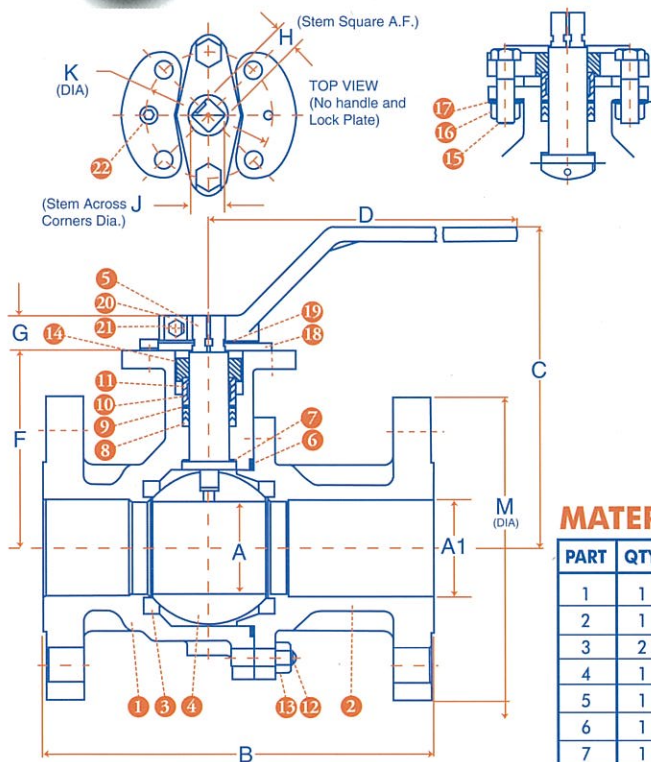
Quadrant
ASME B16.34
BALL/STEM
MATERIAL: TFM
CLASS 150
150PSIG
195PSIG



**Series F2-CS & F2-SS ASME B16.34
API 6D & API 608 Class 150 & 300
2-Piece Full Port Flanged-End
Ball Valves 1" to 10" Sizes**

FEATURES

- Fully compliant to ASME B16.34 and API 608
- Fire safe to API 607 4th Edition & ISO 10497
- ISO 5211 mounting pads & patented "Square Drive" stem design allow direct mounting of ISO operators without brackets or adapters
- NACE MR01-75 Revision 2003 compliant
- Standard locking handles
- "Submerged" packing adjustment allows packing adjustment with operators and actuators mounted
- Electrically grounded ball and stem
- TFM seats (2nd generation PTFE) provide superior high temp performance and chemical resistance
- "Closed" body joint allows sandblasting and coating of complete valve
- Investment cast body and tailpiece through 6" size
- Standard 316 stainless steel ball, stem and packing system



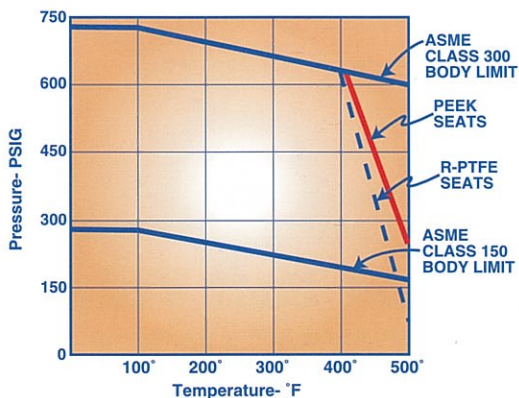
RATINGS

**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**

**200PSIG Saturated Steam Rating - TFM Seat Class 150
250PSIG Saturated Steam Rating - TFM Seat Class 300**

MATERIALS OF CONSTRUCTION - CLASS 150, 300 & 600

PART	QTY.	DESCRIPTION	STD. MAT'L - WCB CONSTRUCTION	STD. MAT'L - CF8M CONSTRUCTION
1	1	BODY	ASTM A216 GR. WCB	ASTM A351 GR. CF8M
2	1	ADAPTER	ASTM A216 GR. WCB	ASTM A351 GR. CF8M
3	2	SEAT	TFM (R-PTFE)	TFM (R-PTFE)
4	1	BALL	ASTM A351 GR. CF8M / 316SS	ASTM A351 GR. CF8M / 316SS
5	1	STEM	ASTM A351 GR. CF8M / 316SS	ASTM A351 GR. CF8M / 316SS
6	1	BODY SEAL	SPIRAL-WOUND SS/GRAPHITE	SPIRAL-WOUND SS/GRAPHITE
7	1	THRUST WASHER	R-PTFE	R-PTFE
8	1	PACKING SET	PTFE	PTFE
9	1	PACKING WASHER	GRAPHITE	GRAPHITE
10	1	STEM BUSHING	PTFE	PTFE
11	1	GLAND	ASTM A351 GR. CF8M	ASTM A351 GR. CF8M
12	VARIES	STUD BOLT	ASTM A193 GR. B7	ASTM A193 GR. B8
13	VARIES	NUT	ASTM A194 GR. 2H	ASTM A194 GR. 8
14	1	GLAND FLANGE	ASTM A351 GR. CF8M	ASTM A351 GR. CF8M
15	2	PACKING BOLT	ASTM A193 GR. B8	ASTM A193 GR. B8
16	2	PACKING NUT	ASTM A194 GR. 8	ASTM A194 GR. 8
17	4	BELLEVILLE WASHER	STAINLESS STEEL	STAINLESS STEEL
18	1	LOCK PLATE	304SS	304SS
19	1	RETAINING RING	STAINLESS STEEL	STAINLESS STEEL
20	1	HANDLE	DUCTILE IRON	DUCTILE IRON
21	1	LOCK BOLT	304SS	304SS
22	1	STOP BOLT	304SS	304SS
Not Shown	1	GROUND PIN ASSY.	300 SERIES STAINLESS STEEL	300 SERIES STAINLESS STEEL



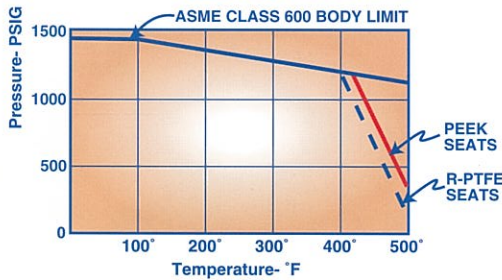


**Series F2-CS & F2-SS ASME B16.34
API 6D & API 608 Class 600
2-Piece Full Port & Reduced Port
Flanged-End Ball Valves - 1" to 6" Sizes**



FEATURES

- Fully compliant to ASME B16.34, API 6D and API 608
- Fire safe to API 607 4th Edition & ISO 10497
- ISO 5211 mounting pads & patented "Square Drive" stem design allow direct mounting of ISO operators without brackets or adapters
- NACE MR01-75 Revision 2003 compliant
- Standard locking handles
- "Submerged" packing adjustment allows packing adjustment with operators and actuators mounted
- Electrically grounded ball and stem
- TFM seats (2nd generation PTFE) provide superior high temp performance and chemical resistance
- "Closed" body joint allows sandblasting and coating of complete valve
- Standard 316 stainless steel ball, stem and packing system



RATINGS

WCB Construction: 1480 PSIG @ 100°F
CF8M Construction: 1440 PSIG @ 100°F
250PSIG Saturated Steam Rating on TFM Seated Valves

**DIMENSIONS, WEIGHTS, CV FACTORS & MAXIMUM OPERATING TORQUES
CLASS 150**

SIZE	A (PORT)	A1 (DIA)	B	C	D	F	G	H (SQUARE)	J (DIA)	K (DIA)	M (DIA)	ISO (PATTERN)	WT. LBS.	CV	TORQUE IN-LBS.
1"	1.00	1.00	5.00	4.2	7.0	2.33	.76	14MM	.72	1.96	4.25	F05	9.0	95	160
1-1/2"	1.50	1.50	6.50	6.2	9.5	3.45	.76	14MM	.72	2.76	5.00	F07	17.5	280	300
2"	2.00	2.06	7.00	6.6	9.5	3.80	.76	14MM	.72	2.76	6.00	F07	25.5	490	450
2-1/2"	2.50	2.50	7.50	6.7	14.0	4.19	.76	17MM	.87	2.76	7.00	F07	35.5	545	600
3"	3.00	3.13	8.00	7.5	14.0	5.03	.76	17MM	.87	4.02 & 4.92	7.50	F10 & F12	50.0	1275	1000
4"	4.00	4.07	9.00	8.5	14.0	5.98	.76	17MM	.87	4.02 & 4.92	9.00	F10 & F12	83.0	2500	1600
6"	6.00	6.00	15.50	10.6	24.0	8.00	1.14	27MM	1.43	4.92	11.00	F12	185	5200	5000
8"	8.00	8.00	18.00	12.7	32.0	10.04	1.14	27MM	1.43	5.51	13.50	F14	428	10,100	11,000
10"	10.00	10.00	21.00	N/A	N/A	12.17	3.15	2.375" Dia w/ (2) 1/2" Keys	N/A	6.50	16.00	F16	580	17,500	25,000

CLASS 300

SIZE	A (PORT)	A1 (DIA)	B	C	D	F	G	H (SQUARE)	J (DIA)	K (DIA)	M (DIA)	ISO (PATTERN)	WT. LBS.	CV	TORQUE IN-LBS.
1"	1.00	1.00	6.50	4.2	7.0	2.51	.76	14MM	.72	1.96	4.88	F05	11.0	95	160
1-1/2"	1.50	1.50	7.50	6.2	9.5	3.46	.76	14MM	.72	2.76	6.12	F07	23.0	280	300
2"	2.00	2.06	8.50	6.9	9.5	4.25	.76	14MM	.72	2.76	6.50	F07	34.0	490	450
3"	3.00	3.13	11.12	8.2	14.0	5.63	.75	17MM	.88	4.02 & 4.92	8.25	F10 & F12	77.0	1275	1000
4"	4.00	4.07	12.00	9.7	21.7	6.53	.95	22MM	1.12	4.02 & 4.92	10.00	F10 & F12	117	2500	2250
6"	6.00	6.00	15.88	10.6	24.0	8.00	1.14	27MM	1.43	4.92	12.50	F12	233	5200	7500
8"	8.00	8.00	19.75	12.7	32.0	10.10	3.15	2.375" Dia w/ (2) 1/2" Keys	N/A	6.50	15.00	F16	540	10,100	20,000

CLASS 600

SIZE	A (PORT)	A1 (DIA)	B (RF)	B (RTJ)	C	D	F	G	H	J (DIA)	K (DIA)	M (DIA)	ISO (PATTERN)	WT. LBS.	CV	TORQUE IN-LBS.
1"	1.00	1.00	8.5	8.50	4.2	7.0	2.51	.76	14MM	.72	1.96	4.88	F05	15.0	95	160
1-1/2"	1.50	1.50	9.5	9.50	6.2	9.5	3.46	.76	14MM	.72	2.76	6.12	F07	28.0	280	450
2"	2.00	2.06	11.5	11.63	6.9	9.5	4.25	.76	14MM	.72	2.76	6.50	F07	41.0	490	750
3"	3.00	3.13	14.0	14.13	8.8	17.7	5.63	.95	22MM	1.12	4.02 & 4.92	8.25	F10 & F12	92.0	1275	1500
4"	4.00	4.07	17.0	17.13	9.7	21.7	6.53	.95	22MM	1.12	4.02 & 4.92	10.75	F10 & F12	162	2500	3500
6 x 4"	4.00	6.00	22.0	22.13	10.3	21.7	7.13	.95	22MM	1.12	4.02 & 4.92	14.00	F10 & F12	270	1050	3500

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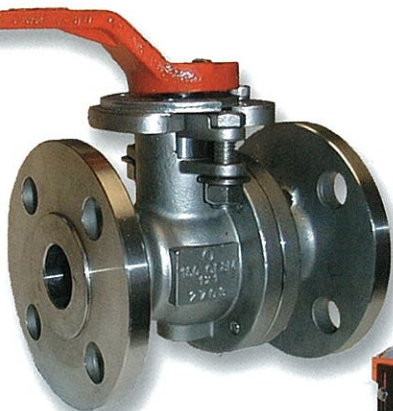
SERIES F2-CS & F2-SS

NUMBERING SYSTEM ... HOW TO ORDER:

F2 F C S R G LH 1F 200

SERIES	PORT SIZE	BODY & TAILPIECE MATERIAL	BALL/STEM MAT'L	SEAT MAT'L	SEAL MAT'L	HANDLE TYPE	ENDS	SIZE
R = REDUCED F = FULL F2 = SPLIT BODY FLANGED		C = WCB CARBON STEEL S = CF8M STAINLESS STEEL A = CN7M ALLOY 20 M = MONEL I = INCONEL H = HASTELLOY	S = 316 SS A = ALLOY 20 H = HASTELLOY M = MONEL I = NICKEL	R = TFM (RTFE) P = PEEK U = UHMW V = VIRGIN PTFE	G = GRAPHITE R = TFM (RTFE) V = VIRGIN PTFE U = UHMW	LH = LOCKING LEVER PA = DOUBLE ACTING PNEUMATIC SA = SPRING RETURN PNEUMATIC GO = GEAR OPERATED BS = BARE SHAFT	1F = CLASS 150 RF 3F = CLASS 300 RF FF = CLASS 150 FLAT FACE 6F = CLASS 600 RF 6J = CLASS 600 RTJ	100 = 1" 150 = 1-1/2" 200 = 2" 250 = 2-1/2" 300 = 3" 400 = 4" 600 = 6" 800 = 8" A00 = 10" B00 = 12"

1" F2 Class 150



2" F2 with C-Series Pneumatic Actuator

6" F2 with Quadrant Gear Operator & Limit Switch

