

35 Series Ball Valve
Milwaukee Valve Company
35RSS/35RCS AND 35FSS/35FCS



3 Piece Enclosed Bolt Fire-Safe Full & Standard Port Ball Valve

Features and Benefits

- Locking lever for safety lockout
- Live-loaded adjustable stem packing arrangement for longer packing life
- Vent hole in ball slot for cavity venting
- Standard grounded ball and stem
- ISO 5211 mounting pad for easy actuation
- Flexible graphite body seals
- NACE Compliant for sour gas service
- Blow-out proof stem
- Fire-safe to API 607 6th Ed
- Cantilever seat design for low operating torques
- Meets the latest: API, ASTM/ASME standards

Specifications

- Valves Sizes 1/4" through 2"
- Meets MSS-SP-110
- Meets ASME B16.34 design
- Valves meet API 608
- Valves meet API 607 6th Ed for Fire safe testing
- Valves tested to API 598 and MSS SP-72
- Valves meet NACE MRO175

Pressure Ratings:	Class 800
Carbon Steel	2000 psi
Stainless Steel	2000 psi

Valve is rated 150 steam @ 365 degrees F.

Product Range

- Full and Standard port available
- Socket weld and NPT connections
- Size Range 1/4"-2.0"

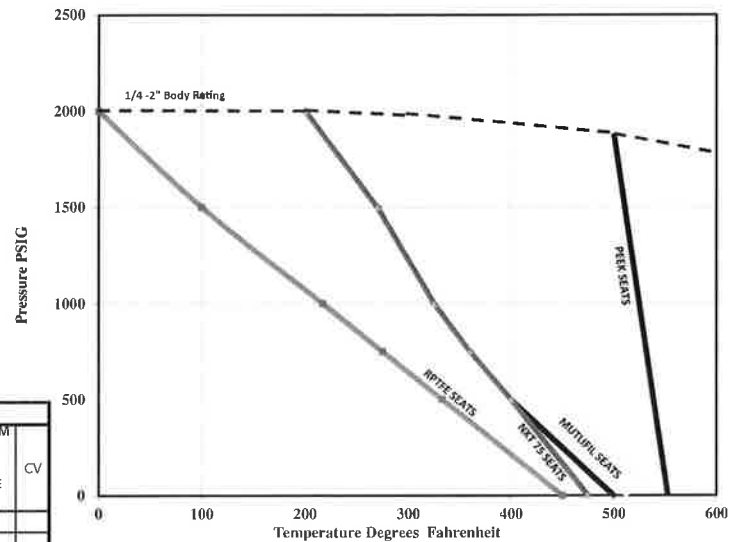
Operators Available

- Locking lever and oval handle
- Pneumatic and Electric Actuation

Materials of Construction

- Carbon Steel or CF8M Stainless Steel
- Ball: 316 Stainless
- Stem: 316 Stainless
- Seats: NXT 75/M-PTFE
- Seat options: Multi-Fill, PEEK
- Packing: Graphite/PTFE

TORQUES AND CV RATINGS					
VALVE SIZE STD PORT	MAXIMUM BREAK AWAY TORQUE (in.lbs.)	CV	VALVE SIZE FULL PORT	MAXIMUM BREAK AWAY TORQUE (in.lbs.)	CV
1/4	50	5			
3/8	50	5			
1/2	50	15	1/2	55	15
3/4	55	25	3/4	135	50
1	135	40	1	200	60
1 1/4	200	50	1 1/4	350	110
1 1/2	340	75	1 1/2	400	130
2	420	120	2	550	360



Rev. 0614

How To Order Milwaukee Valve 35 Series Three Piece Enclosed Bolt Ball Valve

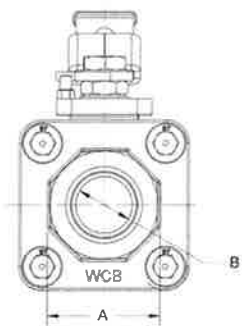
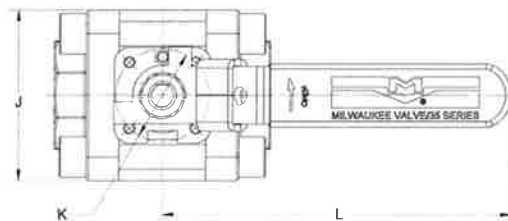
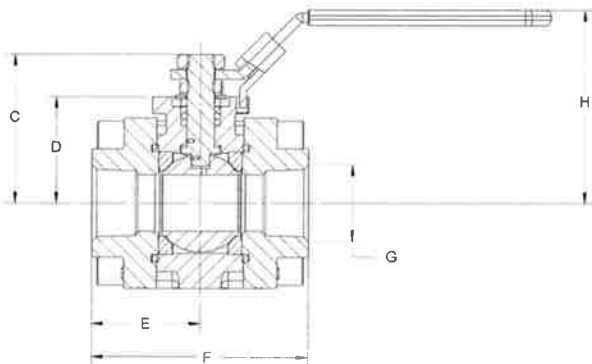
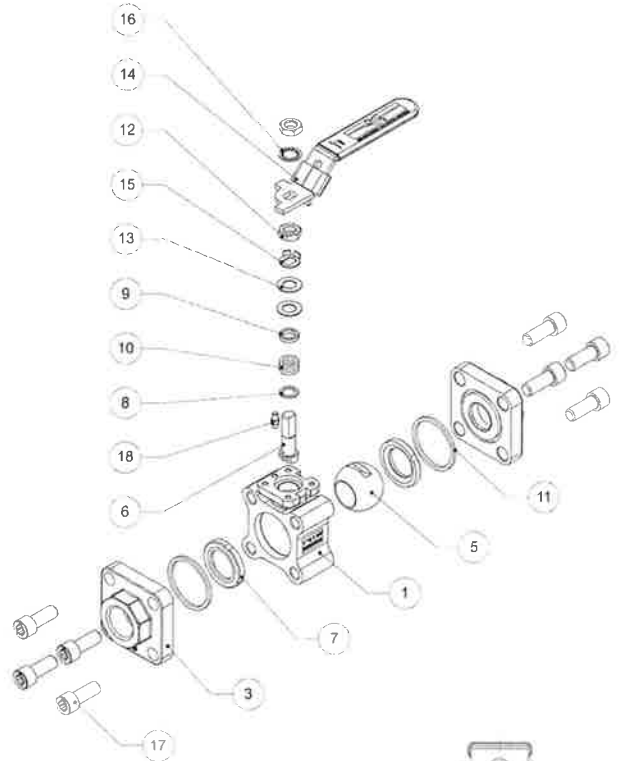
Series	Port Size	Body Material	Ball / Stem Material	End Piece Configuration	Seat Material	External Options	Internal Options	Size
XX	X	X	X	X	X	XX	XX	XXX
35	R-Standard F-Full	C - Carbon Steel (WCB) S - Stainless Steel (CF8M)	S - Stainless Steel (316)	0 - FNPT 1 - Socket Weld 2 - Extended Bolt Weld ** 3 - Extended Socket Weld ** 6 - Socket Weld / FNPT 7 - Extended Socket Weld / FNPT** ** Contact Factory	N - NXT Sid 1 - Virgin PTFE 2 - Reinforced PTFE (15% Gls.) 3 - Multi-Fill PTFE 6 - Peek ** ** Contact Factory	LL - Stainless Latch-Lock Handle LO - Stainless Oval Handle XH - Extended Handle (4")	A - Assemble Dry V - Vented Ball O - Oxygen Clean * C - Chlorine Clean * Stainless only	- 014 - 1/4" - 038 - 3/8" - 012 - 1/2" - 034 - 3/4" - 100 - 1" - 114 - 1-1/4" - 112 - 1-1/2" - 200 - 2"

Example Product Numbers	
35RCS02LL	-034 (3/4" Standard Port Carbon Steel Body, Stainless Trim, Female NPT End Pieces, Gls. Fld Seats, SS Latch-Lock Handle.)
35FSS13LL	-100 (1" Full Port Stainless Steel Body, Stainless Trim, Socket Weld End Pieces, Multi-Fill PTFE Seats, SS Latch-Lock Handle.)
35RSS02LLV	-034 (3/4" Standard Port Stainless Steel Body, Stainless Trim, Female NPT End Pieces, Gls. Fld Seats, SS Latch-Lock Handle, Vented Ball)

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35RSS/35RCS 1/4" to 2" and 35FSS/35FCS 1/2" to 1-1/2"

ITEM	DESCRIPTION	MATERIAL
1	BODY MACHINED	CS ASTM A216 GR WCB SS ASTM A351 GR CF8M
3	END CAP MACHINED	CS ASTM A216 GR WCB SS ASTM A351 GR CF8M
5	BALL	SS ASTM A351 CF8M
6	STEM	ASTM A479 TYPE 316
7	SEAT	NXT 75/M-PTFE
8	THRUST WASHER	NXT 75/M-PTFE
9	FOLLOWER	ASTM A479 TYPR 316
10	STEM PACKING	GRAPHITE
11	BODY SEAL	FLEXIBLE GRAPHITE
12	STEM NUT	ASTM A194 GR8 TYPE 304
13	DISC SPRING	ASTM A276 TYPE 304
14	HANDLE ASSY	304 SS
15	COLLAR, NUT RETAINING	ASTM A276 TYPE 304
16	LOCK WASHER	ASTM A276 TYPE 304
17	BOLT, SHCS	ASTM A193-BB TYPE 304
18	STOP PIN	ASTM A276 TYPE 304

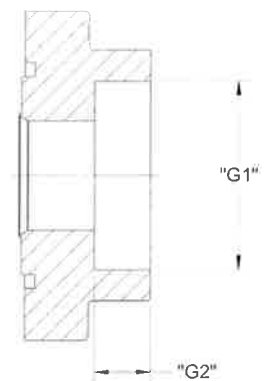


Size	Units	A	B (Port)	C	D	E	F	G (NPT)	G1 (SW)	G2 (SW)	H	J	K	L
1/2	Inches	1.35	.57	1.98	1.44	1.37	2.74	1/4"-18NPT	.87	0.38	2.62	2.15	1.42	4.21
	mm	34.2	14.5	50.2	36.8	34.8	69.6		22.0	9.6	66.6	54.7	36.0	107.0
3/4	Inches	1.88	.81	2.23	1.61	1.59	3.19	3/4"-14NPT	1.07	0.5	3.18	2.59	1.65	5.00
	mm	47.7	20.6	56.7	41.0	40.4	81.0		27.3	12.7	80.7	65.9	42.0	127.0
1	Inches	1.88	.98	2.58	1.84	1.87	3.74	1.0"-11 1/2NPT	1.34	0.5	3.35	2.96	1.61	6.02
	mm	47.7	24.9	65.5	46.8	47.5	95.0		34.0	12.7	85.1	75.1	41.0	152.9
1 1/4	Inches	2.25	1.25	3.23	2.07	2.13	4.26	1 1/4"-11 1/2NPT	1.69	0.5	3.77	3.41	1.97	7.80
	mm	57.0	31.8	82.0	52.6	54.1	108.2		42.9	12.7	95.8	86.6	50.0	198.1
1 1/2	Inches	2.69	1.50	3.51	2.33	2.52	5.04	1 1/2"-11 1/2NPT	1.92	0.5	4.00	4.14	1.97	7.80
	mm	68.2	38.1	89.2	59.1	64.0	128.0		48.9	12.7	101.5	105.1	50.0	198.1

For 2" Full Port dimension see next page

Size	Units	A	B (Port)	C	D	E	F	G (NPT)	G1 (SW)	G2 (SW)	H	J	K	L
1/4	Inches	1.17	.43	1.83	1.28	1.36	2.72	1/4"-18NPT	.57	0.38	2.45	1.91	1.42	4.21
	mm	29.6	11.0	46.4	32.5	34.5	69.0		14.4	9.6	62.1	48.4	36.0	107.0
3/8	Inches	1.17	.43	1.83	1.28	1.36	2.72	3/8"-18NPT	.70	0.38	2.45	1.91	1.42	4.21
	mm	29.6	11.0	46.4	32.5	34.5	69.0		17.8	9.6	62.1	48.4	36.0	107.0
1/2	Inches	1.35	.57	1.98	1.44	1.37	2.74	1/2"-18NPT	.87	0.38	2.59	2.15	1.42	4.21
	mm	34.2	14.5	50.2	36.5	34.8	69.6		22.0	9.6	65.8	54.7	36.0	107.0
3/4	Inches	1.55	.57	1.93	1.44	1.45	2.90	3/4"-14NPT	1.07	0.5	2.59	2.15	1.42	4.21
	mm	39.5	14.5	49.0	36.5	36.9	73.7		27.3	12.7	65.8	54.7	36.0	107.0
1	Inches	1.88	.81	2.25	1.61	1.59	3.19	1.0"-11 1/2NPT	1.34	0.5	3.14	2.59	1.65	5.00
	mm	47.7	20.6	57.0	41.0	40.4	81.0		34.0	12.7	79.7	65.9	42.0	127.0
1 1/4	Inches	2.25	.98	2.58	1.84	1.87	3.74	1 1/4"-11 1/2NPT	1.69	0.5	3.31	2.96	1.61	6.02
	mm	57.0	24.9	65.5	46.8	47.5	95.0		42.8	12.7	84.1	75.1	41.0	152.9
1 1/2	Inches	2.58	1.25	3.23	2.07	2.13	4.26	1 1/2"-11 1/2NPT	1.93	0.5	3.71	3.41	1.97	7.80
	mm	65.5	31.8	82.0	52.6	54.1	108.2		48.9	12.7	94.3	86.6	50.0	187.1
2	Inches	3.18	1.50	3.51	2.33	2.52	5.04	2.0"-11 1/2NPT	2.42	0.6	3.97	4.14	1.97	7.80
	mm	80.8	38.1	89.2	59.1	64.0	128.0		61.5	15.2	100.8	105.1	50.0	198.1

The 1/4, 3/8, 1/2 Valves are full port

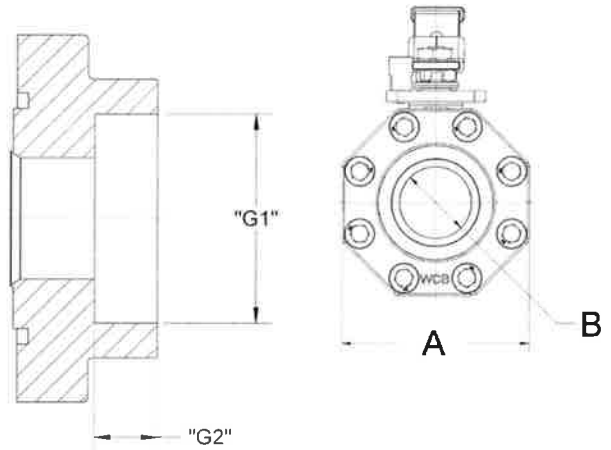
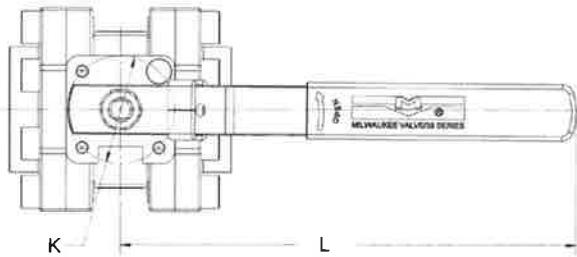
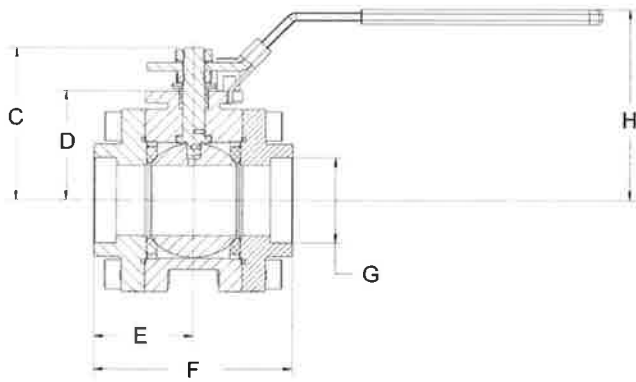
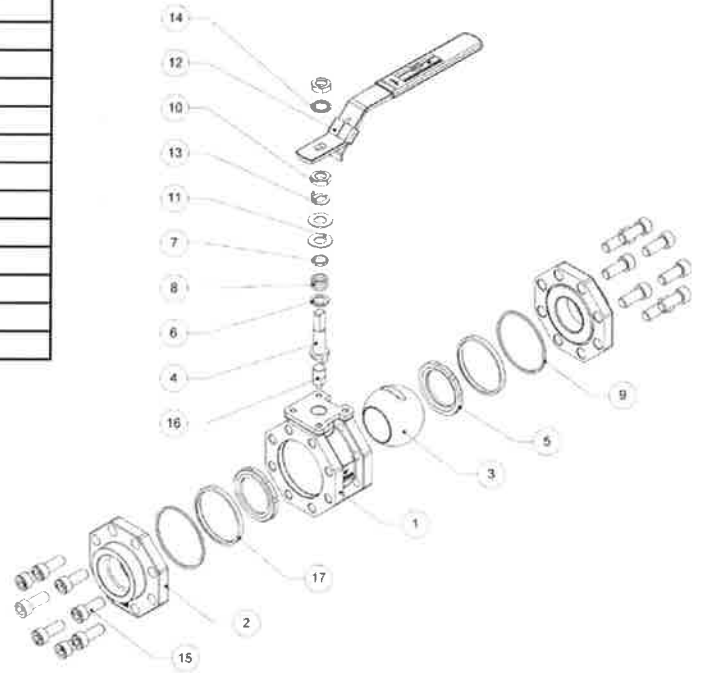


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35FSS/35FCS 2"

ITEM	DESCRIPTION	MATERIAL
1	BODY MACHINED	SS ASTM A351 GR CF8M CS ASTM A216 GR WCB
2	END CAP MACHINED	SS ASTM A351 GR CF8M CS ASTM A216 GR WCB
3	BALL	STAINLESS STEEL ASTM A351 GR CF8M
4	STEM	ASTM A479 TYPE 316
5	SEAT	NXT 75/M-PTFE
6	THRUST WASHER	NXT 75/M-PTFE
7	FOLLOWER	ASTM A479 TYPE 316
8	STEM PACKING	GRAPHITE
9	BODY SEAL	FLEXIBLE GRAPHITE
10	STEM NUT	ASTM A194 GR8 TYPE 304
11	DISC SPRING	ASTM A479 TYPE 304
12	HANDLE ASSY	304 SS
13	LOCK TAB	ASTM A276 TYPE 304
14	LOCK WASHER	ASTM A582 TYPE 303
15	BOLT, SHCS	ASTM A193-B8 TYPE 304
16	STOP PIN	ASTM A276 TYPE 304
17	SEAT SHEATH	ASTM A479 TYPE 316



Full Port													
Size	Units	A	B (Port)	C	D	E	F	G (NPT)	G1 (SW)	G2 (SW)	H	K	L
2	Inches	5.20	2.00	4.34	3.11	2.81	5.63	2.0"-11 1/2NPT	2.42	0.6	5.44	5.20	11.54
	mm	132.0	50.8	110.3	79.0	71.5	143.0		61.5	15.2	138.2	132.0	293.0

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