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TWO PIECE BALL VALVES

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70-100 Series Bronze Ball Valve

Threaded, 600 psig WOG, Cold Non-Shock. 150 psig Saturated Steam. (See referenced P/T charts)
Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: BZ, Style: 3.

MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Chromium plated ball
- RPTFE seats and stuffing box ring
- Blow-out-proof stem design
- Adjustable packing gland

STANDARD MATERIAL LIST

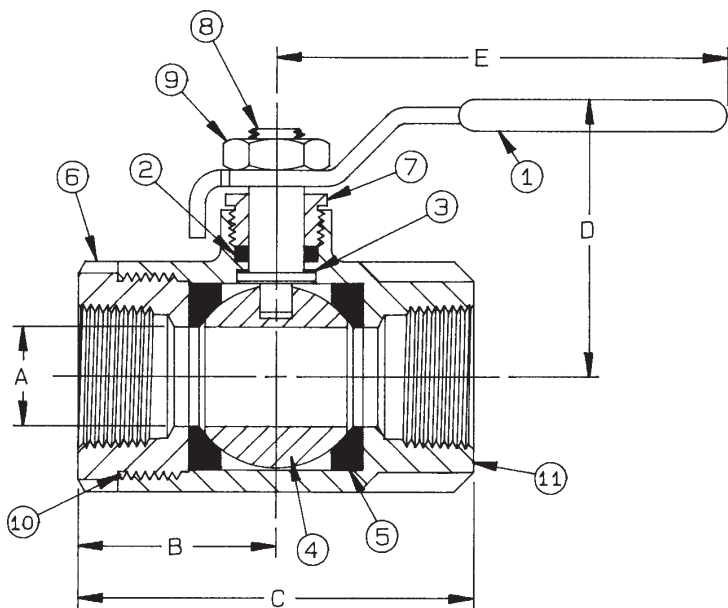
1. Lever and grip	Steel, zinc plated w/vinyl	7. Gland nut	B16
2. Stem packing	RPTFE	8. Stem	B16
3. Stem bearing	RPTFE	9. Lever nut	Steel, zinc plated
4. Ball	B16, chrome plated	10. Body seal	PTFE
5. Seat (2)	RPTFE	(1-1/4" to 3")	
6. Retainer	B16 (1/4" to 1")	11. Body	B584-C84400
	B584-C84400 (1-1/4" to 3")		

VARIATIONS AVAILABLE:

- 70-120 Series (Adjustable Stop Lever)
- 70-140 Series (316 SS Ball & Stem)
- 70-150 Series (Balancing Stop)
- 70-190 Series (Locked Retainer)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-02-	Stem Grounded	1/4" to 3"
-03-	1-1/4" CS Stem Extension	1/4" to 3"
-04-	2-1/4" CS Stem Extension	1/4" to 3"
-05-	Plain Ball	1/4" to 3"
-07-	Steel Tee Handle	1/4" to 2"
-08-	90° Reversed Stem	1/4" to 3"
-10-	SS Lever & Nut	1/4" to 3"
-14-	Side Vented Ball (Uni-Directional)	1/4" to 3"
-15-	Wheel Handle, Steel	1/4" to 2"
-16-	Chain Lever - Vertical	3/4" to 2"
-17-	Rough Chrome Plated - Bronze Valves	1/4" to 3"
-21-	UHMWPE Trim (Non-PTFE)	1/4" to 3"
-24-	Graphite Packing	1/4" to 3"
-27-	SS Latch-Lock Lever & Nut	1/4" to 3"
-30-	Cam-Lock and Grounded	1/4" to 2"
-32-	SS Tee Handle & Nut	1/4" to 2"
-35-	VTFE Trim	1/4" to 3"
-36-	SS Hi-Rise Round Handle, SS Nut	1/4" to 2"
-39-	SS Hi-Rise Locking Wheel Handle, SS Nut	1/4" to 2"
-40-	Cyl-Loc and Grounded	1/4" to 2"
-41-	Automatic Drain (Bronze Valves Only)	1/4" to 2"
	see page J-8	
-45-	Less Lever & Nut	1/4" to 3"
-46-	Latch Lock Lever - Lock in Closed Position Only	1/4" to 3"
-47-	SS Oval Latch-Lock Handle & Nut	1/4" to 1"
-48-	SS Oval Handle (No Latch) & Nut	1/4" to 2"
-49-	Assembled Dry	1/4" to 3"
-50-	2-1/4" CS Locking Stem Extension	1/4" to 3"
-56-	Multifill Seats & Packing	1/4" to 3"
-57-	Oxygen Cleaned	1/4" to 3"
-58-	Chain Lever - Horizontal	3/4" to 2"
-60-	Static Grounded Ball & Stem	1/4" to 3"
-63-	NPT x Solder/Socket Weld	3/8" to 3"
-64-	250# Steam Trim	1/4" to 3"
-P01-	BSPP (Parallel) Thread Connection	1/4" to 3"
-T01-	BSPT (Tapered) Thread Connection	1/4" to 3"



BRONZE BALL VALVE

NUMBER	SIZE	A	B	C	D	E	Wt.
70-101-01	1/4"	.37	1.03	2.06	1.75	3.87	.60
70-102-01	3/8"	.37	1.03	2.06	1.75	3.87	.56
70-103-01	1/2"	.50	1.12	2.25	1.75	3.87	.63
70-104-01	3/4"	.68	1.50	3.00	2.12	4.87	1.39
70-105-01	1"	.87	1.68	3.37	2.25	4.87	1.72
70-106-01	1-1/4"	1.00	2.00	4.00	2.62	5.50	3.26
70-107-01	1-1/2"	1.25	2.18	4.37	3.06	8.00	4.61
70-108-01	2"	1.50	2.34	4.68	3.25	8.00	6.06
70-109-01A	2-1/2"	2.00	3.12	6.25	3.72	8.00	17.25
70-100-01	3"	2.50	3.37	6.75	4.12	8.00	18.60
70-10A-01	4"	3.12	3.68	7.37	5.25	10.00	25.50

**For Pressure/Temperature Ratings,
Refer to Page M-8, Graph No. 4**



70-200 Series Solder End Bronze Ball Valve

Solder End, 600 psig WOG, Cold Non-Shock. 150 psig Saturated Steam. (See referenced P/T charts)
Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: BZ, Style: 3.

MSS SP-110; Ball Valves, Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Chromium plated ball
- RPTFE seats and stuffing box ring
- Blow-out-proof stem design
- Adjustable packing gland

STANDARD MATERIAL LIST

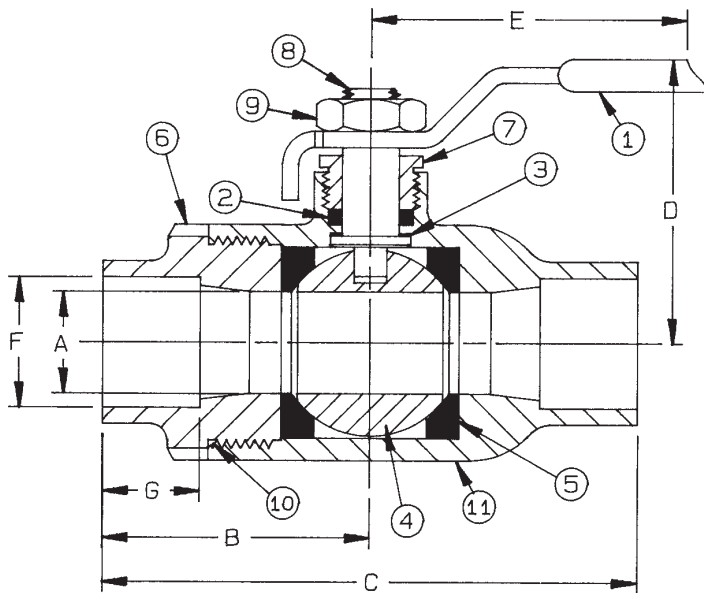
1. Lever and grip	Steel, zinc plated w/vinyl	7. Gland nut	B16
2. Stem packing	RPTFE	8. Stem	B16
3. Stem bearing	RPTFE	9. Lever nut	Steel, zinc plated
4. Ball	B16, chrome plated	10. Body seal	PTFE
5. Seat (2)	RPTFE	(1-1/4" to 3")	
6. Retainer	B16 (3/8" to 1")	11. Body	B584-C84400
	B584-C84400 (1-1/4" to 3")		

VARIATIONS AVAILABLE:

- 70-220 Series (Adjustable Stop Lever)
- 70-240 Series (316 SS Ball & Stem)
- 70-250 Series (Balancing Stop)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-02-	Stem Grounded	3/8" to 3"
-03-	1-1/4" CS Stem Extension	3/8" to 3"
-04-	2-1/4" CS Stem Extension	3/8" to 3"
-05-	Plain Ball	3/8" to 3"
-07-	Steel Tee Handle	3/8" to 2"
-08-	90° Reversed Stem	3/8" to 3"
-10-	SS Lever & Nut	3/8" to 3"
-14-	Side Vented Ball (Uni-Directional)	3/8" to 3"
-15-	Wheel Handle, Steel	3/8" to 2"
-16-	Chain Lever - Vertical	3/4" to 2"
-24-	Graphite Packing	3/8" to 3"
-27-	SS Latch-Lock Lever & Nut	3/8" to 3"
-32-	SS Tee Handle & Nut	3/8" to 2"
-35-	VTPE Trim	3/8" to 3"
-39-	SS Hi-Rise Locking Wheel Handle, SS Nut	3/8" to 2"
-45-	Less Lever & Nut	3/8" to 3"
-46-	Latch Lock Lever - Lock in Closed Position Only	3/8" to 3"
-47-	SS Oval Latch-Lock Handle & Nut	3/8" to 1"
-48-	SS Oval Handle (No Latch) & Nut	3/8" to 2"
-49-	Assembled Dry	3/8" to 3"
-50-	2-1/4" CS Locking Stem Extension	3/8" to 3"
-56-	Multifill Seats & Packing	3/8" to 3"
-57-	Oxygen Cleaned	3/8" to 3"
-58-	Chain Lever - Horizontal	3/4" to 2"
-60-	Static Grounded Ball & Stem	3/8" to 3"
-63-	NPT x Solder/Socket Weld	3/8" to 3"



BRONZE BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	Wt.
70-202-01	3/8"	.37	1.28	2.56	1.75	3.87	.505	.37	.63
70-203-01	1/2"	.50	1.43	2.87	1.75	3.87	.630	.50	.71
70-204-01	3/4"	.68	1.93	3.87	2.12	4.87	.880	.75	1.44
70-205-01	1"	.87	2.25	4.50	2.25	4.87	1.130	.90	1.91
70-206-01	1-1/4"	1.00	2.31	4.62	2.62	5.50	1.380	.96	2.95
70-207-01	1-1/2"	1.25	2.62	5.25	3.06	8.00	1.630	1.09	3.99
70-208-01	2"	1.50	3.18	6.37	3.25	8.00	2.130	1.34	5.71
70-209-01A	2-1/2"	2.00	3.74	7.51	3.72	8.00	2.630	1.48	15.53
70-200-01	3"	2.50	4.12	8.25	4.12	8.00	3.130	1.67	16.74

The 70-200 is designed to be soft soldered into lines without disassembly. This allows a tested valve to be installed without disturbing the seats and seals in any way. Soldering temperature not to exceed 500°F.

**For Pressure/Temperature Ratings,
Refer to Page M-8, Graph No. 4**



70-800 Series

Male x Female Bronze Ball Valve

Male x Female Threaded, 600 psig WOG, Cold Non-Shock. 150 psig Saturated Steam. (See referenced P/T chart)
Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: BZ, Style: 3.

MSS SP-110; Ball Valves, Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Chromium plated ball
- RPTFE seats and stuffing box ring
- Male x Female threaded end connections
- Blow-out-proof stem design
- Adjustable packing gland

STANDARD MATERIAL LIST

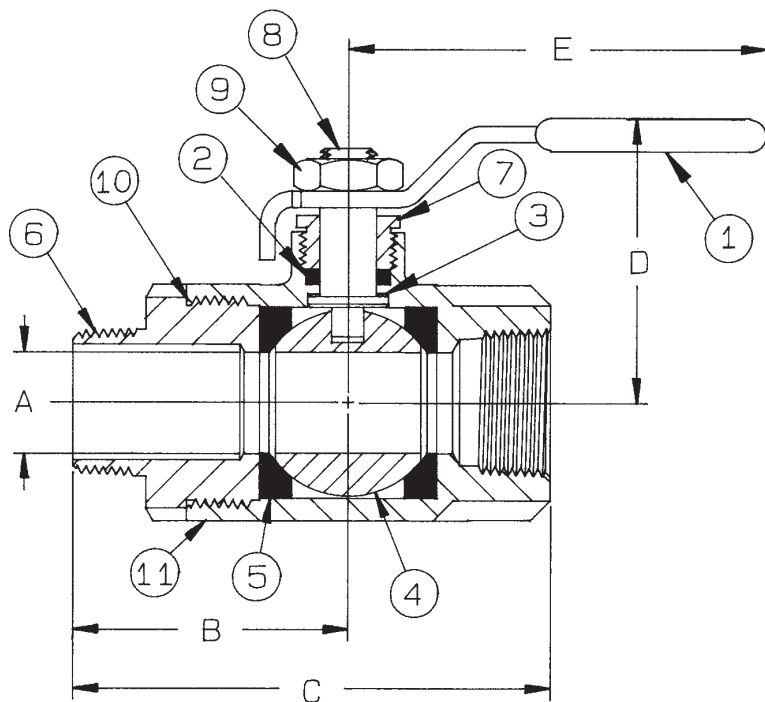
1. Lever and grip	Steel, zinc plated w/vinyl	7. Gland nut	B16
2. Stem packing	RPTFE	8. Stem	B16
3. Stem bearing	RPTFE	9. Lever nut	Steel, zinc plated
4. Ball	B16, chrome plated	10. Body seal	PTFE
5. Seat (2)	RPTFE	(1-1/4" to 1-1/2")	
6. Retainer	B16	11. Body	B584-C84400

VARIATIONS AVAILABLE:

- 70-820 Series (Adjustable Stop Lever)
- 70-840 Series (316 SS Ball & Stem)
- 70-850 Series (Balancing Stop)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-02-	Stem Grounded	1/4" to 1-1/2"
-03-	1-1/4" CS Stem Extension	1/4" to 1-1/2"
-04-	2-1/4" CS Stem Extension	1/4" to 1-1/2"
-05-	Plain Ball	1/4" to 1-1/2"
-07-	Steel Tee Handle	1/4" to 1-1/2"
-08-	90° Reversed Stem	1/4" to 1-1/2"
-10-	SS Lever & Nut	1/4" to 1-1/2"
-14-	Side Vented Ball (Uni-Directional)	1/4" to 1-1/2"
-15-	Wheel Handle, Steel	1/4" to 1-1/2"
-16-	Chain Lever - Vertical	3/4" to 1-1/2"
-21-	UHMWPE Trim (Non-PTFE)	1/4" to 1-1/2"
-24-	Graphite Packing	1/4" to 1-1/2"
-27-	SS Latch-Lock Lever & Nut	1/4" to 1-1/2"
-30-	Cam-Lock and Grounded	1/4" to 1-1/2"
-32-	SS Tee Handle & Nut	1/4" to 1-1/2"
-35-	VITFE Trim	1/4" to 1-1/2"
-39-	SS Hi-Rise Locking Wheel Handle, SS Nut	1/4" to 1-1/2"
-40-	Cyl-Loc and Grounded	1/4" to 1-1/2"
-41-	Automatic Drain (Bronze Valves Only)	1/4" to 1-1/2"
	see page J-8	
-45-	Less Lever & Nut	1/4" to 1-1/2"
-46-	Latch Lock Lever - Lock in Closed Position Only	1/4" to 1-1/2"
-47-	SS Oval Latch-Lock Handle & Nut	1/4" to 1"
-48-	SS Oval Handle (No Latch) & Nut	1/4" to 1-1/2"
-49-	Assembled Dry	1/4" to 1-1/2"
-50-	2-1/4" CS Locking Stem Extension	1/4" to 1-1/2"
-56-	Multifill Seats & Packing	1/4" to 1-1/2"
-57-	Oxygen Cleaned	1/4" to 1-1/2"
-58-	Chain Lever - Horizontal	3/4" to 1-1/2"
-60-	Static Grounded Ball & Stem	1/4" to 1-1/2"
-64-	250# Steam Trim	1/4" to 1-1/2"



MALE X FEMALE BRONZE BALL VALVE

NUMBER	SIZE	A	B	C	D	E	Wt.
70-801-01	1/4"	.37	1.40	2.43	1.75	3.87	.63
70-802-01	3/8"	.37	1.46	2.50	1.75	3.87	.60
70-803-01	1/2"	.50	1.68	2.81	1.81	3.87	.72
70-804-01	3/4"	.68	2.00	3.50	2.12	4.87	1.42
70-805-01	1"	.87	2.31	4.00	2.25	4.87	1.93
70-806-01	1-1/4"	1.00	2.31	4.31	2.62	5.50	3.19
70-807-01	1-1/2"	1.25	3.00	5.18	3.06	8.00	4.60

**For Pressure/Temperature Ratings,
Refer to Page M-8, Graph No. 4**



71-100 Series

Bronze Ball Valve With Mounting Pad

Threaded, 600 psig WOG, Cold Non-Shock. 150 psig Saturated Steam. (See referenced P/T chart)
Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: BZ, Style: 3.

MSS SP-110; Ball Valves, Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends

FEATURES

- Chromium plated ball
- RPTFE seats and stuffing box ring
- Mounting pad for easy actuator mounting
- Blow-out-proof stem design
- Adjustable packing gland

STANDARD MATERIAL LIST

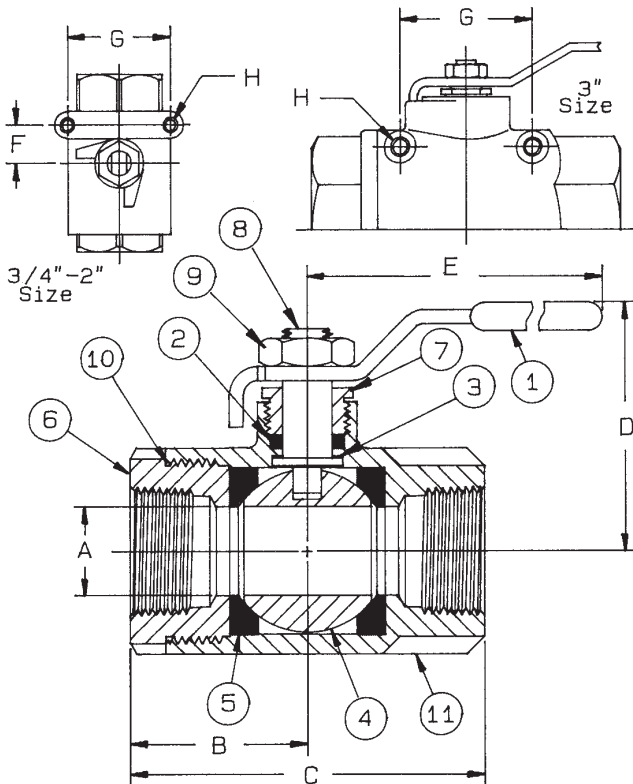
1. Lever and grip	Steel, zinc plated w/vinyl	9. Lever nut	Steel, zinc plated
2. Stem packing	RPTFE	10. Body seal	PTFE
3. Stem bearing	RPTFE	(1-1/4" to 3")	
4. Ball	B16, chrome plated	11. Body	B584-C84400
5. Seat (2)	RPTFE		
6. Retainer	B16 (3/4" to 1")		
	B584-C84400 (1-1/4" to 3")		
7. Gland nut	B16		
8. Stem	B16		

VARIATIONS AVAILABLE:

- 71-120 Series (Adjustable Stop Lever)
- 71-140 Series (316 SS Ball & Stem)
- 71-150 Series (Balancing Stop)
- 71-190 Series (Locked Retainer)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-02-	Stem Grounded	3/4" to 3"
-03-	1-1/4" CS Stem Extension	3/4" to 3"
-04-	2-1/4" CS Stem Extension	3/4" to 3"
-05-	Plain Ball	3/4" to 3"
-07-	Steel Tee Handle	3/4" to 2"
-08-	90° Reversed Stem	3/4" to 3"
-10-	SS Lever & Nut	3/4" to 3"
-14-	Side Vented Ball (Uni-Directional)	3/4" to 3"
-15-	Wheel Handle, Steel	3/4" to 2"
-16-	Chain Lever - Vertical	3/4" to 2"
-21-	UHMWPE Trim (Non-PTFE)	3/4" to 3"
-24-	Graphite Packing	3/4" to 3"
-27-	SS Latch-Lock Lever & Nut	3/4" to 3"
-30-	Cam-Lock and Grounded	3/4" to 2"
-32-	SS Tee Handle & Nut	3/4" to 2"
-35-	VTFE Trim	3/4" to 3"
-39-	SS Hi-Rise Locking Wheel Handle, SS Nut	3/4" to 2"
-40-	Cyl-Loc and Grounded	3/4" to 2"
-41-	Automatic Drain (Bronze Valves Only)	3/4" to 2"
	see page J-8	
-45-	Less Lever & Nut	3/4" to 3"
-46-	Latch Lock Lever - Lock in Closed Position Only	3/4" to 3"
-47-	SS Oval Latch-Lock Handle & Nut	3/4" to 1"
-48-	SS Oval Handle (No Latch) & Nut	3/4" to 2"
-49-	Assembled Dry	3/4" to 3"
-50-	2-1/4" CS Locking Stem Extension	3/4" to 3"
-56-	Multifill Seats & Packing	3/4" to 3"
-57-	Oxygen Cleaned	3/4" to 3"
-58-	Chain Lever - Horizontal	3/4" to 2"
-60-	Static Grounded Ball & Stem	3/4" to 3"
-64-	250# Steam Trim	3/4" to 3"
-P01-	BSPP (Parallel) Thread Connection	3/4" to 3"
-T01-	BSPT (Tapered) Thread Connection	3/4" to 3"



BRONZE BALL VALVE WITH MOUNTING PAD

NUMBER	SIZE	A	B	C	D	E	F	G	H	Wt.
71-104-01	3/4"	.68	1.50	3.00	2.12	4.87	.87	1.37	10-24 NC	1.63
71-105-01	1"	.87	1.68	3.37	2.25	4.87	.87	1.37	10-24 NC	1.86
71-106-01	1-1/4"	1.00	2.00	4.00	2.62	5.50	.93	1.50	1/4-20 NC	3.39
71-107-01	1-1/2"	1.25	2.18	4.37	2.87	8.00	.93	1.50	1/4-20 NC	4.68
71-108-01	2"	1.50	2.34	4.68	3.06	8.00	.93	1.50	1/4-20 NC	5.72
71-100-01	3"	2.50	3.37	6.75	4.12	8.00	N/A	2.75	1/4-20 NC	18.60

*See 77-140 Series Full Port for 1/4", 3/8", 1/2" and 2-1/2" Sizes

**For Pressure/Temperature Ratings,
Refer to Page M-8, Graph No. 4**



71-ARX Series

Bronze Std. Port Ball Valve with Actuator Ready ISO Mounting Pad

Threaded, 600 psig WOG, Cold Non-Shock, 250 psig Saturated Steam. (See referenced P/T chart)
Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: BZ, Style: 3.

MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends

FEATURES

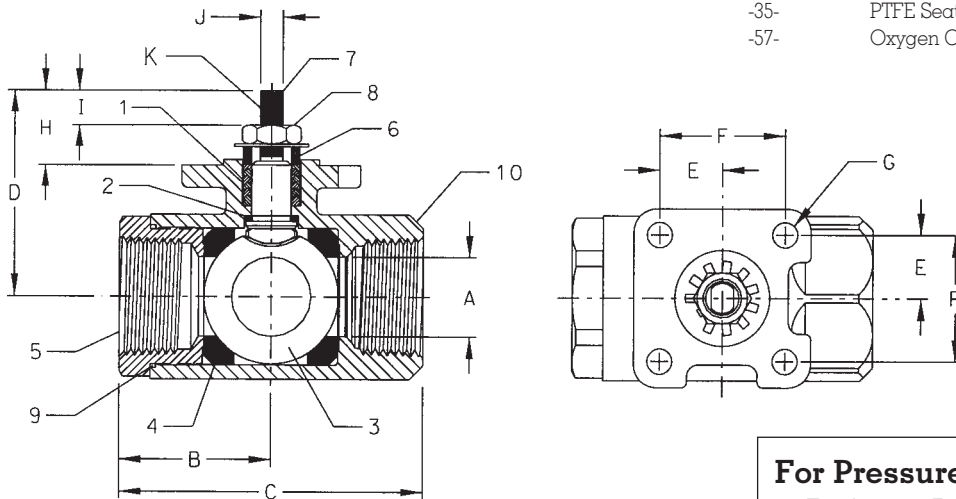
- Multi-piece packing set
- ISO 5211 mounting pad
- Stainless ball & stem
- Blow-out-proof stem design
- Adjustable packing gland
- Live loaded packing

STANDARD MATERIAL LIST

1. Stem packing	MPTFE	6. Gland	B16
2. Stem bearing	RYTON	7. Stem	316 SS
3. Ball	316 SS	8. Jam nut	SS
4. Seat (2)	MPTFE	9. Body seal	PTFE (1-1/4" to 3")
5. Retainer	B16 (3/4" to 1")	10. Body	B584-C84400
	B584-C84400 (1-1/4" to 3")		

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-14-	Vented Ball	3/4" to 3"
-24-	Graphite Packing	3/4" to 2"
-27-	Latch Lock Handle	3/4" to 3"
-35-	PTFE Seats	3/4" to 3"
-57-	Oxygen Cleaned	3/4" to 3"



**For Pressure/Temperature Ratings,
Refer to Page M-8, Graph No. 4**

BRONZE STD. PORT BALL VALVE WITH ISO MOUNTING PAD

NUMBER	SIZE	A	B	C	D	E	F	G	H	I	J (FLATS)	K (THRDS.) UNF	WT.
71-AR4-64	3/4"	.68	1.50	3.00	2.16	.70	1.39	.28	.84	.28	.247/.249	3/8-24	1.38
71-AR5-64	1"	.87	1.68	3.37	2.28	.70	1.39	.28	.84	.28	.247/.249	3/8-24	1.76
71-AR6-64	1-1/4"	1.00	1.98	3.97	3.16	.98	1.95	.34	1.16	.26	.370/.372	5/8-18	3.51
71-AR7-64	1-1/2"	1.25	2.18	4.34	3.16	.98	1.95	.34	1.16	.38	.370/.372	5/8-18	4.40
71-AR8-64	2"	1.50	2.34	4.68	3.37	.98	1.95	.34	1.16	.38	.370/.372	5/8-18	5.89
71-AR9-64	2-1/2"	2.00	3.12	6.25	3.85	.98	1.95	.34	1.16	.41	.370/.372	5/8-18	14.12
71-AR0-64	3"	2.50	3.37	6.75	4.18	.98	1.95	.34	1.16	.55	.370/.372	5/8-18	18.55



72-100 Series

Carbon Steel High Pressure Ball Valve

Threaded, 3000 psig WOG, Cold Non-Shock Body rating. (See referenced P/T chart)
150 psig Saturated Steam.

Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: CS, Style: 3.

MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Barstock design
- RPTFE seats and stuffing box ring
- Fire safe design when ordered with graphite packing
- Nitride corrosion protection
- Adjustable packing gland
- Full port, except 2"
- Blow-out-proof stem design
- Heavy duty lever

STANDARD MATERIAL LIST

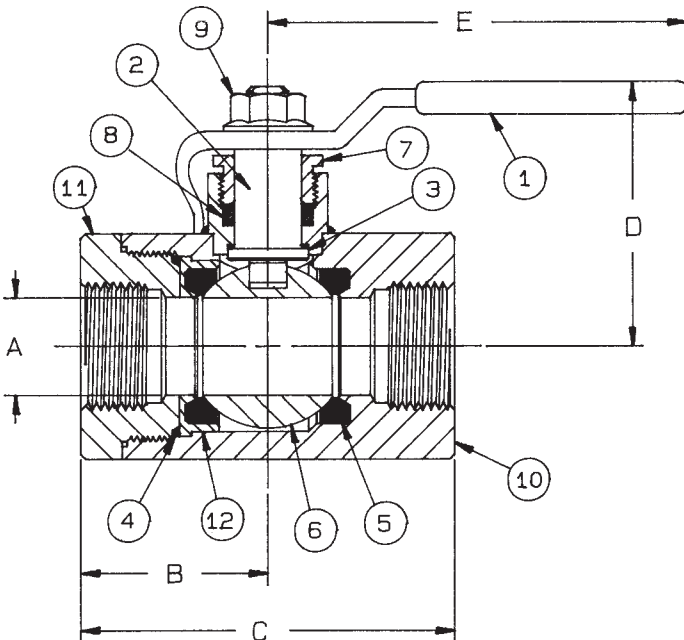
1. Lever and grip	Steel, zinc plated w/vinyl	7. Gland nut	A108-CS
2. Stem	A108-CS chrome plated	8. Stem packing	RPTFE
3. Stem bearing	RPTFE	9. Lever nut	Steel, zinc plated
4. Retainer seal	RPTFE	10. Body	A108-CS
5. Seat (2)	RPTFE	11. Retainer	A108-CS
6. Ball	A108-CS chrome plated	12. Seat holder	A108-CS

VARIATIONS AVAILABLE:

72-140 Series (316 SS Ball & Stem)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-02-	Stem Grounded	1/2" to 2"
-03-	1-1/4" CS Stem Extension	1" to 1-1/2"
-04-	2-1/4" CS Stem Extension	1" to 1-1/2"
-07-	Steel Tee Handle	1/2" to 1-1/2"
-08-	90° Reversed Stem	1/2" to 2"
-10-	SS Lever & Nut	1/2" to 1-1/2"
-14-	Side Vented Ball (Uni-Directional)	1/2" to 2"
-15-	Wheel Handle, Steel	1/2" to 1"
-19-	Lock Plate	1/2" to 2"
-21-	UHMWPE Trim (Non-PTFE)	1/2" to 2"
-24-	Graphite Packing	1/2" to 2"
-45-	Less Lever & Nut	1/2" to 2"
-56-	Multifill Seats & Packing	1/2" to 2"
-60-	Static Grounded Ball & Stem	1/2" to 2"
-64-	250# Steam Trim	1/2" to 2"
-77-	Live Loaded 87A/88A Series (Gear & Actuated)	1/2" to 2"
-78-	Delrin Seats, Graphite Packing	1/2" to 2"
-79-	Nylon Seats, Graphite Packing	1/2" to 2"



CARBON STEEL HIGH PRESSURE BALL VALVE

NUMBER	SIZE	A	B	C	D	E	Wt.
72-103-01	1/2"	.62	1.46	2.87	2.50	5.62	1.98
72-104-01	3/4"	.81	1.87	3.80	2.62	5.62	3.09
72-105-01	1"	1.00	2.12	4.15	3.12	6.62	4.87
72-106-01	1-1/4"	1.25	2.32	4.65	3.43	8.00	7.67
72-107-01	1-1/2"	1.50	2.64	5.23	3.56	8.00	10.50
72-108-01	2"	1.75	3.00	5.84	4.18	9.00	15.26

**For Pressure/Temperature Ratings,
Refer to Page M-13, Graph No. 15**



72-900 Series

Carbon Steel SAE Straight Thread Ball Valve

Threaded, 3000 psig WOG, Cold Non-Shock Body Rating (See P/T Chart referenced below for seat rating).
150 psig Saturated Steam.

Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: CS, Style: 3.

MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Barstock design
- RPTFE seats and stuffing box ring
- Fire safe design when ordered with graphite packing
- Nitride corrosion protection
- Adjustable packing gland
- Full port, except 2"
- Blow-out-proof stem design
- Heavy duty lever
- SAE J512/J514 Straight Thread O-Ring Boss

STANDARD MATERIAL LIST

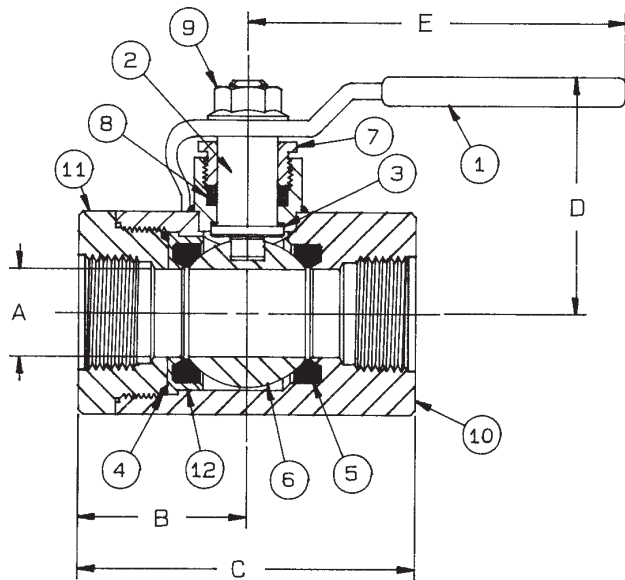
1. Lever and grip	Steel, zinc plated w/vinyl	7. Gland nut	A108-CS
2. Stem	A108-CS chrome plated	8. Stem packing	RPTFE
3. Stem bearing	RPTFE	9. Lever nut	Steel, zinc plated
4. Retainer seal	RPTFE	10. Body	A108-CS
5. Seat (2)	RPTFE	11. Retainer	A108-CS
6. Ball	A108-CS chrome plated	12. Seat holder	A108-CS

VARIATIONS AVAILABLE:

72-940 Series (316 SS Ball & Stem)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-02-	Stem Grounded	1/4" to 2"
-03-	1-1/4" CS Stem Extension	1" to 1-1/2"
-04-	2-1/4" CS Stem Extension	1" to 1-1/2"
-07-	Steel Tee Handle	1/4" to 1-1/2"
-08-	90° Reversed Stem	1/4" to 2"
-10-	SS Lever & Nut	1/4" to 1-1/2"
-14-	Side Vented Ball (Uni-Directional)	1/4" to 2"
-15-	Wheel Handle, Steel	1/4" to 1"
-19-	Lock Plate	1/4" to 2"
-21-	UHMWPE Trim (Non-PTFE)	1/4" to 2"
-24-	Graphite Packing	1/4" to 2"
-45-	Less Lever & Nut	1/4" to 2"
-56-	Multifill Seats & Packing	1/4" to 2"
-60-	Static Grounded Ball & Stem	1/4" to 2"
-64-	250# Steam Trim	1/4" to 2"
-78-	Delrin Seats, Graphite Packing	1/4" to 2"
-79-	Nylon Seats, Graphite Packing	1/4" to 2"



CARBON STEEL SAE STRAIGHT THREAD
O-RING BOSS BALL VALVE

NUMBER	NOM. TUBE O.D.	SIZE	A	B	C	D	E	Wt.
72-901-01	1/4"	7/16"-20	.39	1.46	2.84	2.50	5.62	2.09
72-902-01	3/8"	9/16"-18	.51	1.46	2.84	2.50	5.62	2.06
72-903-01	1/2"	3/4"-16	.62	1.46	2.84	2.50	5.62	2.56
72-904-01	3/4"	1-1/16"-12	.81	1.87	3.71	2.62	5.62	3.07
72-905-01	1"	1-5/16"-12	1.00	2.12	4.15	3.12	6.62	4.91
72-906-01	1-1/4"	1-5/8"-12	1.25	2.32	4.65	3.43	8.00	7.73
72-907-01	1-1/2"	1-7/8"-12	1.50	2.64	5.23	3.56	8.00	10.21
72-908-01	2"	2-1/2"-12	1.75	3.00	5.84	4.18	9.00	14.88

**For Pressure/Temperature Ratings,
Refer to Page M-13, Graph No. 15**



73A-100 Series Carbon Steel Ball Valve

AAR Approved #E999032

Threaded, 1/4" to 1" 2000 psig WOG, 1-1/4" to 2" 1500 psig WOG Cold Non-Shock. 150 psig Saturated Steam.
(See referenced P/T chart)

Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: CS, Style: 3.

MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- RPTFE seats & packing
- Actuator mounting pads
- Forged construction
- Raised handle stops
- Blow-out-proof stem design
- Adjustable packing gland
- Nitride corrosion protection
- (-24) Fire safe to API 607 4th ed. class 600 burn

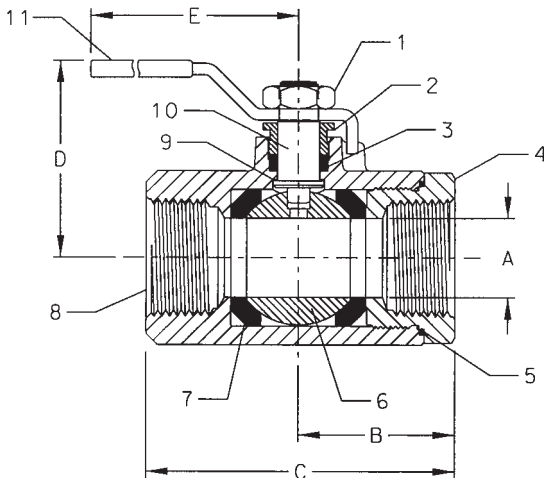
STANDARD MATERIAL LIST

1. Lever nut	Steel, zinc plated	6. Ball	A108-CS chrome plated
2. Gland nut	A108-CS	7. Seat (2)	RPTFE
3. Stem packing	RPTFE	8. Body	A105
4. Retainer	A108-CS	9. Stem bearing	RPTFE
5. Body seal	RPTFE (1/2" to 2")	10. Stem	A108-CS
		11. Lever/grip	Steel, zinc plated, with vinyl

VARIATIONS AVAILABLE: 73A-140- Series (316 SS Ball & Stem NACE compliant)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-02-	Stem Grounded	1/4" to 2"
-03-	1-1/4" CS Stem Extension	1/4" to 2"
-04-	2-1/4" CS Stem Extension	1/4" to 2"
-07-	Steel Tee Handle	1/4" to 1-1/2"
-08-	90° Reversed Stem	1/4" to 2"
-10-	SS Lever & Nut	1/4" to 2"
-14-	Vented ball	1/4" to 2"
-15-	Wheel Handle, Steel	1/4" to 1-1/2"
-16-	Chain Lever - Vertical	1/4" to 2"
-21-	UHMWPE Trim (non TFE)	1/4" to 2"
-24-	Graphite Packing	1/4" to 2"
-27-	SS Latch-Lock Lever & Nut	1/4" to 2"
-30-	Cam-Lock & Grounded	1/4" to 2"
-32-	SS Tee Handle & Nut	1/4" to 2"
-35-	VTFE Trim	1/4" to 2"
-39-	SS Hi-Rise Locking Round Handle, SS Nut	1/4" to 2"
-40-	Cyl-Loc & Grounded	1/4" to 2"
-44-	Seal Welded	1/4" to 2"
-45-	Less Lever & Nut	1/4" to 2"
-47-	SS Oval Latch-Lock Handle & Nut	1/4" to 2"
-48-	SS Oval Handle (No Latch) & Nut (No Latch) & Nut	1/4" to 2"
-50-	2-1/4" CS Locking Stem Extension	1/4" to 2"
-52-	Two Tack Welds	1/4" to 2"
-56-	Multi-fill Seats	1/4" to 2"
-58-	Chain Lever - Horizontal	1/4" to 2"
-60-	Static Grounded Ball & Stem	1/4" to 2"
-64-	250# Steam Trim	1/4" to 2"
-67-	Cleaned for Industrial Gas - CS Valves	1/4" to 2"
-P01-	BSP (Parallel) Thread Conn.	1/4" to 2"
-T01-	BSPT (Tapered) Thread Conn.	1/4" to 2"



CARBON STEEL BALL VALVE

NUMBER	SIZE	A	B	C	D	E
73A-101-01	1/4"	.37	1.02	2.30	1.72	3.85
73A-102-01	3/8"	.37	1.08	2.37	1.72	3.85
73A-103-01	1/2"	.50	1.18	2.31	1.78	3.85
73A-104-01	3/4"	.68	1.57	3.07	2.07	4.75
73A-105-01	1"	.87	1.73	3.40	2.18	4.75
73A-106-01	1-1/4"	1.00	1.98	3.97	2.72	5.50
73A-107-01	1-1/2"	1.25	2.14	4.32	3.12	7.75
73A-108-01	2"	1.50	2.73	5.44	3.27	7.75

**For Pressure/Temperature Ratings,
Refer to Page M-12, Graph No. 13
(1/4" to 1")
Refer to Page M-11, Graph No. 11
(1-1/4" to 2")**

AAR Approval No. E999032 (when -52 is specified)



76-100 Series Stainless Steel Ball Valve

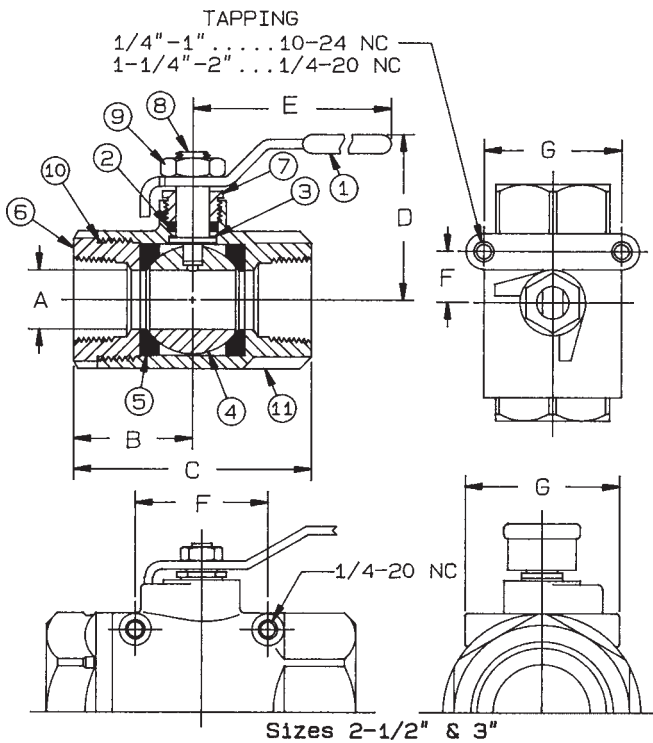
Threaded, 1/4" to 1" 2000 psig WOG, 1-1/4" to 2" 1500 psig WOG, 2-1/2" to 3" 1000 psig WOG. (See referenced P/T chart)
Cold Non-Shock. 150 psig Saturated Steam, Vacuum Service to 29 inches Hg.
Federal Specification: WW-V-35C, Type: II, Composition: SS, Style: 3.
MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Investment cast components
- RPTFE seats and stuffing box ring
- Mounting pad for easy actuator mounting
- Blow-out-proof stem design
- Adjustable packing gland
- Meets NACE MR-01-75
- SS lever and nut
- (-24) 1/4" to 2" Certified to API 607, 4th Edition, Class 600 burn

STANDARD MATERIAL LIST

1. Lever and grip	304 SS w/vinyl	7. Gland nut	A276-316
2. Stem packing	RPTFE	8. Stem	A276-316
3. Stem bearing	RPTFE	9. Lever nut	18-8 SS
4. Ball	A276-316	10. Body seal	PTFE
5. Seat (2)	RPTFE	(1-1/4" to 3")	
6. Retainer	A276-316 (1/4" to 1")	11. Body	A351-CF8M
	A351-CF8M (1-1/4" to 3")		



STAINLESS STEEL BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	Wt.
76-101-01	1/4"	.37	1.03	2.06	1.75	3.87	.50	1.12	.58
76-102-01	3/8"	.37	1.03	2.06	1.75	3.87	.50	1.12	.54
76-103-01	1/2"	.50	1.12	2.25	1.81	3.87	.50	1.12	.63
76-104-01	3/4"	.68	1.50	3.00	2.12	4.87	.87	1.37	1.27
76-105-01	1"	.87	1.68	3.37	2.25	4.87	.87	1.37	1.63
76-106-01	1-1/4"	1.00	2.00	4.00	2.62	5.50	.93	1.50	3.06
76-107-01	1-1/2"	1.25	2.18	4.37	3.05	8.00	.93	1.50	4.04
76-108-01	2"	1.50	2.75	5.50	3.24	8.00	.93	1.50	6.05
76-109-01	2-1/2"	2.50	3.37	6.75	4.12	8.00	2.75	3.37	15.57
76-100-01	3"	2.50	3.37	6.75	4.12	8.00	2.75	3.37	16.79

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-02-	Stem Grounded	1/4" to 3"
-03-	1-1/4" CS Stem Extension	1/4" to 3"
-04-	2-1/4" CS Stem Extension	1/4" to 3"
-07-	Steel Tee Handle	1/4" to 2"
-08-	90° Reversed Stem	1/4" to 3"
-14-	Side Vented Ball (Uni-Directional)	1/4" to 2"
-15-	Wheel Handle, Steel	1/4" to 2"
-16-	Chain Lever - Vertical	3/4" to 2"
-19-	Lock Plate	1/4" to 2"
-21-	UHMWPE Trim (Non-PTFE)	1/4" to 3"
-24-	Graphite Packing	1/4" to 3"
-27-	SS Latch-Lock Lever & Nut	1/4" to 3"
-30-	Cam-Lock and Grounded	1/4" to 2"
-32-	SS Tee Handle & Nut	1/4" to 2"
-35-	VTFE Trim	1/4" to 3"
-39-	SS Hi-Rise Locking Wheel Handle, SS Nut	1/4" to 2"
-40-	Cyl-Loc and Grounded	1/4" to 2"
-44-	Seal Welded	1/4" to 2"
-45-	Less Lever & Nut	1/4" to 3"
-46-	Latch Lock Lever - Lock in Closed Position Only	1/4" to 3"
-47-	SS Latch Lock Oval Handle	1/4" to 1"
-48-	SS Oval Handle (No Latch) & Nut	1/4" to 2"
-49-	Assembled Dry	1/4" to 3"
-50-	2-1/4" CS Locking Stem Extension	1/4" to 3"
-57-	Oxygen Cleaned	1/4" to 3"
-58-	Chain Lever - Horizontal	3/4" to 2"
-60-	Static Grounded Ball & Stem	1/4" to 3"
-64-	250# Steam Trim	1/4" to 3"
-P01-	BSPP (Parallel) Thread Connection	1/4" to 3"
-T01-	BSPT (Tapered) Thread Connection	1/4" to 3"

**For Pressure/Temperature Ratings,
Refer to Page M-12, Graph No. 14
(1/4" to 1")
Refer to Page M-11, Graph No. 12
(1-1/4" to 2")
Refer to Page M-10, Graph No. 8
(2-1/2" to 3")**



76-ARX Series

Stainless Steel Std. Port Ball Valve with Actuator Ready ISO Mounting Pad

Threaded, 1/4"-1" 2000 psig WOG, 1-1/4"-2" 1500 psig WOG, 2-1/2"-3" 1000 psig WOG. (See referenced P/T chart)
Cold Non-Shock. 250 psig Saturated Steam.

Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: SS, Style: 3.

MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

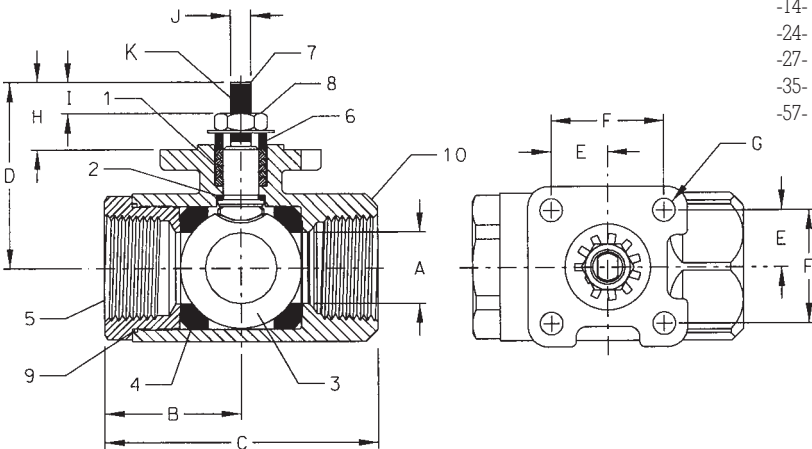
- Multi-piece packing set
- ISO 5211 mounting pad
- Blow-out-proof stem design
- Adjustable packing gland
- Live loaded packing

STANDARD MATERIAL LIST

1. Stem packing	MPTFE	6. Gland	A276-316
2. Stem bearing	RYTON	7. Stem	A276-316
3. Ball	316 SS	8. Jam nut	SS
4. Seat (2)	MPTFE	9. Body seal	PTFE (1-1/4" to 3")
5. Retainer	A276-316 (1/4" to 1") A351-CF8M (1-1/4" to 3")	10. Body	A351-CF8M

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-14-	Vented Ball	1/4" to 3"
-24-	Graphite Packing	1/4" to 3"
-27-	Latch Lock Handle	1/4" to 2"
-35-	PTFE Seats	1/4" to 3"
-57-	Oxygen Cleaned	1/4" to 3"



**For Pressure/Temperature Ratings,
Refer to Page M-12, Graph No. 14
(1/4" to 1")
Refer to Page M-11, Graph No. 12
(1-1/4" to 2")
Refer to Page M-10, Graph No. 8
(2-1/2" to 3")**

STAINLESS STEEL STD. PORT BALL VALVE WITH ISO MOUNTING PAD

NUMBER	SIZE	A	B	C	D	E	F	G	H	I	J (FLATS)	K (THRDS.) UNF	WT.
76-AR1-64	1/4"	.37	1.02	2.04	1.40	.59	1.17	.28	.61	.25	.247/.249	3/8-24	.52
76-AR2-64	3/8"	.37	1.02	2.04	1.40	.59	1.17	.28	.61	.25	.247/.249	3/8-24	.48
76-AR3-64	1/2"	.50	1.12	2.23	1.54	.59	1.17	.28	.61	.22	.247/.249	3/8-24	.58
76-AR4-64	3/4"	.68	1.47	2.96	2.16	.70	1.39	.28	.84	.33	.247/.249	3/8-24	1.26
76-AR5-64	1"	.87	1.66	3.34	2.28	.70	1.39	.28	.84	.32	.247/.249	3/8-24	1.62
76-AR6-64	1-1/4"	1.00	2.00	4.00	2.98	.98	1.95	.34	1.21	.43	.370/.372	5/8-18	3.22
76-AR7-64	1-1/2"	1.25	2.18	4.34	3.16	.98	1.95	.34	1.16	.38	.370/.372	5/8-18	4.06
76-AR8-64	2"	1.50	2.75	5.43	3.37	.98	1.95	.34	1.16	.47	.370/.372	5/8-18	6.18
76-AR9-64	2-1/2"	2.00	3.12	6.25	3.85	.98	1.95	.34	1.16	.41	.370/.372	5/8-18	12.96
76-AR0-64	3"	2.50	3.37	6.75	4.18	.98	1.95	.34	1.16	.55	.370/.372	5/8-18	17.06



76F-100 Series

Stainless Steel Full Port Ball Valve

Threaded, 1/4"-2" 1000 psig CWP Cold Non-Shock, 150 psig. (See referenced P/T chart)
 Saturated Steam, Vacuum Service to 29 inches Hg.
 Federal Specification: WW-V-35C, Type: II, Composition: SS, Style: 3.
 MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

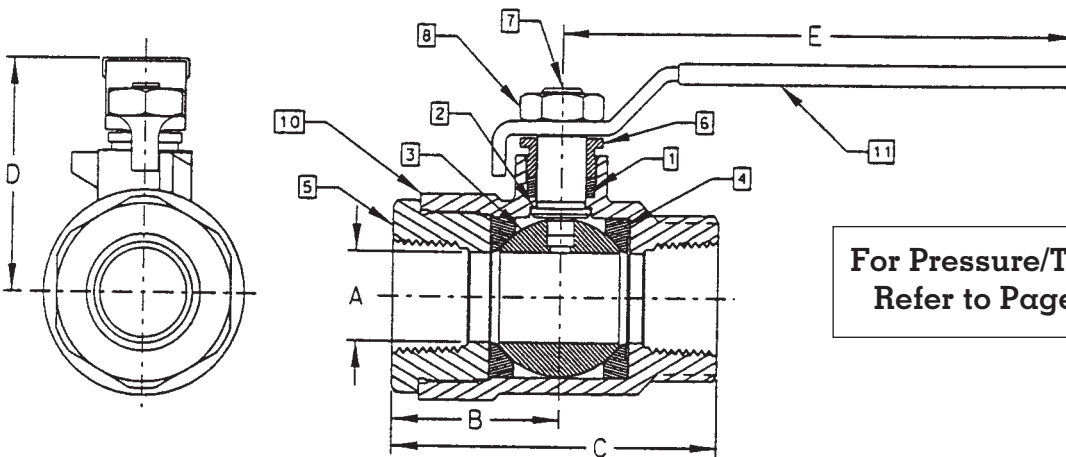
- Investment cast components
- RPTFE seats
- MPTFE stuffing box ring
- Blow-out-proof stem design
- Adjustable packing gland
- Meets NACE MR-01-75
- SS lever and nut
- Available with SS latch lock lever (-27)

STANDARD MATERIAL LIST

1. Stem packing	MPTFE	6. Gland	A276-316 SS
2. Stem bearing	RPTFE	7. Stem	A276-316 SS
3. Ball	A276-316 SS	8. Lever nut	304 SS
4. Seat (2)	RPTFE	9. Washer	304 SS
5. Retainer	A276-316 SS (1/4" to 1") A351-CF8M (1-1/4" to 2")	10. Body	A351-CF8M
		11. Lever and grip	SS w/vinyl

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-27-	SS Latch Lock Lever & Nut	1/4" to 2"



**For Pressure/Temperature Ratings,
Refer to Page M-10, Graph No. 8**

STAINLESS STEEL FULL PORT BALL VALVE

NUMBER	SIZE	A	B	C	D	E	WT.
76F-101-01	1/4"	.37	.95	1.91	1.60	3.85	.47
76F-102-01	3/8"	.37	.95	1.91	1.60	3.85	.44
76F-103-01	1/2"	.50	1.10	2.23	1.73	3.85	.55
76F-104-01	3/4"	.81	1.56	3.06	2.13	4.75	1.54
76F-105-01	1"	1.00	1.71	3.45	2.66	5.40	2.81
76F-106-01	1-1/4"	1.25	2.05	4.10	2.88	5.40	4.12
76F-107-01	1-1/2"	1.50	2.33	4.66	3.30	7.75	5.74
76F-108-01	2"	2.00	2.68	5.37	3.70	7.75	9.73



77C-100 Series

Bronze Full Port Ball Valve (Threaded)

Threaded, 600 psig CWP, 150 psig AQP. (See referenced P/T chart)

Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: BZ, Style: 3.

MSS SP-110 compliant.

FEATURES

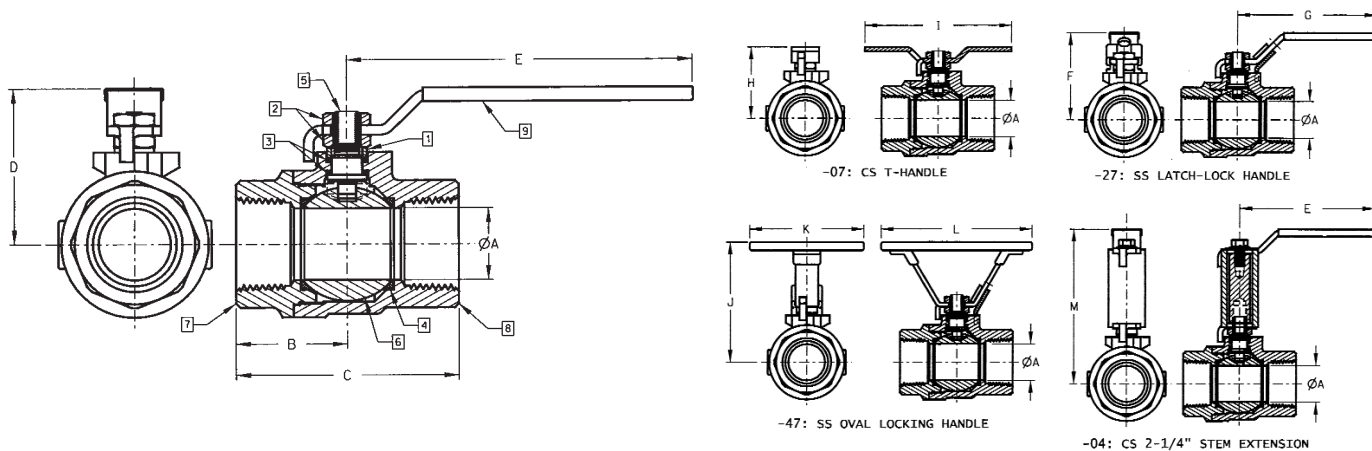
- American Made Bronze Castings
- Machined Solid Chrome-Plated Ball
- Multi-Fill PTFE Seats & Seals
- Available With Stainless Steel Ball and Stem As 77C-140 Series
- Blow-out-proof stem design
- Adjustable packing gland
- Full Port Design Through 2"

STANDARD MATERIAL LIST

1. Gland	B16 Brass	6. Ball	B16 (chromium plated)
2. Nut	Zinc Plated Steel	7. Retainer	B584 Bronze*
3. Packing	MPTFE	8. Body	B584 Bronze
4. Seat	MPTFE	9. Handle	Zinc Plated Steel/Vinyl
5. Stem	B16 Brass		

*1/4" - 1/2" B16 Brass

OPTIONS AVAILABLE:



**For Pressure/Temperature Ratings,
Refer to Page M-8, Graph No. 4**

BRONZE FULL PORT BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	Cv	Wt.**
77C-101	1/4	0.37	0.95	1.97	1.76	3.74	1.86	4.06	1.41	3.50	2.80	3.12	4.12	3.86	4.5	0.6
77C-102	3/8	0.37	1.07	2.09	1.76	3.74	1.86	4.06	1.41	3.50	2.80	3.12	4.12	3.86	7.2	0.6
77C-103	1/2	0.50	1.15	2.25	1.79	3.74	1.89	4.06	1.44	3.50	2.83	3.12	4.12	3.89	15.5	0.6
77C-104	3/4	0.75	1.32	2.65	2.00	4.88	2.20	5.03	1.76	4.00	3.12	3.12	4.12	4.10	35.6	1.1
77C-105	1	1.00	1.53	3.07	2.19	4.88	2.39	5.03	1.96	4.00	3.32	3.12	4.12	4.29	68.1	1.8
77C-106	1-1/4	1.25	2.04	4.08	3.13	7.06	3.76	7.19	2.82	6.00	--	--	--	5.23	125.0	4.4
77C-107	1-1/2	1.50	2.21	4.43	3.29	7.06	3.92	7.19	2.98	6.00	--	--	--	5.39	177.0	5.9
77C-108	2	2.00	2.76	5.29	3.83	7.06	4.46	7.19	3.52	6.00	--	--	--	5.93	389.0	11.4

**Weights are based on standard configuration 77C-10X-01.



77C-200 Series

Bronze Full Port Ball Valve (Solder)

Solder End, 600 psig CWP, 150 psig AQP. (See referenced P/T chart)

Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: BZ, Style: 3.

MSS SP-110 compliant.

FEATURES

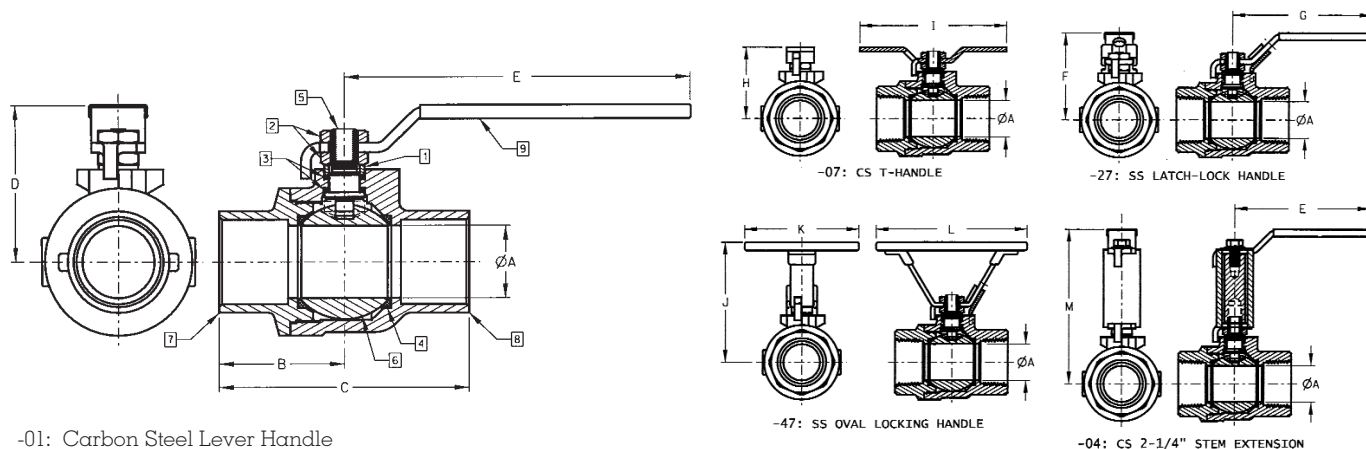
- American Made Bronze Castings
- Machined Solid Chrome-Plated Ball
- Multi-Fill PTFE Seats & Seals
- Available With Stainless Steel Ball and Stem As 77C-240 Series
- Blow-out-proof stem design
- Adjustable packing gland
- Full Port Design Through 2"

STANDARD MATERIAL LIST

1. Gland	B16 Brass	6. Ball	B16 (chromium plated)
2. Nut	Zinc Plated Steel	7. Retainer	B584 Bronze*
3. Packing	MPTFE	8. Body	B584 Bronze
4. Seat	MPTFE	9. Handle	Zinc Plated Steel/Vinyl
5. Stem	B16 Brass		

*1/4" - 1/2" B16 Brass

OPTIONS AVAILABLE:



**For Pressure/Temperature Ratings,
Refer to Page M-8, Graph No. 4**

BRONZE FULL PORT BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	Cv	WT.**
77C-202	3/8	0.37	0.93	1.84	1.76	3.74	1.86	4.06	1.41	3.50	2.80	3.12	4.12	3.86	7.2	0.6
77C-203	1/2	0.50	1.15	2.31	1.79	3.74	1.89	4.06	1.44	3.50	2.83	3.12	4.12	3.89	15.5	0.6
77C-204	3/4	0.75	1.39	2.79	2.00	4.88	2.20	5.03	1.76	4.00	3.12	3.12	4.12	4.10	35.6	1.0
77C-205	1	1.00	1.69	3.38	2.19	4.88	2.39	5.03	1.96	4.00	3.32	3.12	4.12	4.29	68.1	1.6
77C-206	1-1/4	1.25	2.08	4.16	3.13	7.06	3.76	7.19	2.82	6.00	--	--	--	5.23	125.0	3.9
77C-207	1-1/2	1.50	2.33	4.66	3.29	7.06	3.92	7.19	2.98	6.00	--	--	--	5.39	177.0	5.8
77C-208	2	2.00	2.95	5.84	3.83	7.06	4.46	7.19	3.52	6.00	--	--	--	5.93	389.0	10.2

**Weights are based on standard configuration 77C-20X-01.



77-100 Series Bronze Full Port Ball Valve

Threaded, 600 psig WOG, Cold Non-Shock. 150 psig Saturated Steam. (See referenced P/T chart)
Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: BZ, Style: 3.

MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Chromium plated ball
- RPTFE seats and stuffing box ring
- Mounting pad for easy actuator mounting
- Blow-out-proof stem design
- Adjustable packing gland
- Full port for full flow & min. pressure drop

STANDARD MATERIAL LIST

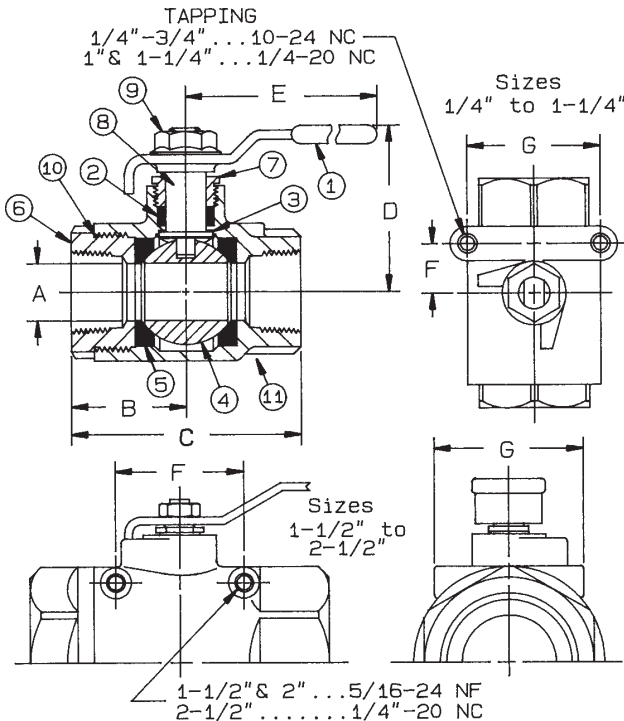
1. Lever and grip	Steel, zinc plated w/vinyl	10. Body seal	PTFE (1-1/4" to 2-1/2")
2. Stem packing	RPTFE	11. Body	B584-C84400
3. Stem bearing	RPTFE		
4. Ball	B16, chrome plated		
5. Seat (2)	RPTFE		
6. Retainer	B16 (1/4" to 1") B584-C84400 (1-1/4" to 2-1/2")		
7. Gland nut	B16		
8. Stem	B16		
9. Lever nut	Steel, zinc plated		

VARIATIONS AVAILABLE:

- 77-140 Series (316 SS Ball & Stem)
- 77-150 Series (Original Balancing Stop)
- 77-190 Series (Locked Retainer)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-02-	Stem Grounded	1/4" to 2-1/2"
-03-	1-1/4" CS Stem Extension	1/4" to 2-1/2"
-04-	2-1/4" CS Stem Extension	1/4" to 2-1/2"
-05-	Plain Ball	1/4" to 2-1/2"
-07-	Steel Tee Handle	1/4" to 1-1/4"
-08-	90° Reversed Stem	1/4" to 2-1/2"
-10-	SS Lever & Nut	1/4" to 2-1/2"
-14-	Side Vented Ball (Uni-Directional)	1/4" to 2-1/2"
-15-	Wheel Handle, Steel	1/4" to 1-1/4"
-16-	Chain Lever - Vertical	3/4" to 2-1/2"
-17-	Rough Chrome Plated - Bronze Valves	1/4" to 2-1/2"
-18-	Plain Yellow Grip	1/4" to 2-1/2"
-20-	Slot Vented Ball	1/4" to 2-1/2"
-21-	UHMWPE Trim (Non-PTFE)	1/4" to 2-1/2"
-24-	Graphite Packing	1/4" to 2-1/2"
-27-	SS Latch-Lock Lever & Nut	1/4" to 2-1/2"
-28-	Mounting Pad Not Drilled & Tapped	1/4" to 2-1/2"
-30-	Cam-Lock and Grounded	1/4" to 1-1/4"
-32-	SS Tee Handle & Nut	1/4" to 1-1/4"
-35-	VTPE Trim	1/4" to 2-1/2"
-36-	SS High-Rise Round Handle & Nut	1/4" to 1-1/4"
-40-	Cyl-Loc and Grounded	1/4" to 1-1/4"
-45-	Less Lever & Nut	1/4" to 2-1/2"
-46-	Latch Lock Lever - Lock in Closed Position Only	1/4" to 2-1/2"
-47-	SS Oval Latch-Lock Handle & Nut	1/4" to 3/4"
-48-	SS Oval Handle (No Latch) & Nut	1/4" to 2"
-49-	Assembled Dry	1/4" to 2-1/2"
-50-	2-1/4" CS Locking Stem Extension	1/4" to 2-1/2"
-56-	Multifill Seats & Packing	1/4" to 2-1/2"
-57-	Oxygen Cleaned	1/4" to 2-1/2"
-58-	Chain Lever - Horizontal	3/4" to 2-1/2"
-60-	Static Grounded Ball & Stem	1/4" to 2-1/2"
-63-	NPT x Solder/Socket Weld	1/4" to 2-1/2"
-64-	250# Steam Trim	1/4" to 2-1/2"
-P01-	BSPP (Parallel) Thread Connection	1/4" to 2-1/2"
-T01-	BSPT (Tapered) Thread Connection	1/4" to 2-1/2"



BRONZE FULL PORT BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	Wt.
77-101-01	1/4"	.43	1.09	2.18	1.77	3.87	.50	1.12	.79
77-102-01	3/8"	.50	1.09	2.18	1.77	3.87	.50	1.12	.75
77-103-01	1/2"	.50	1.09	2.18	1.77	3.87	.50	1.12	.69
77-104-01	3/4"	.81	1.56	3.12	2.17	4.87	.87	1.37	1.83
77-105-01	1"	1.00	1.81	3.62	2.68	5.50	.93	1.50	3.32
77-106-01	1-1/4"	1.25	2.12	4.25	2.90	5.50	.93	1.50	5.05
77-107-01	1-1/2"	1.50	2.37	4.75	3.10	8.00	2.08	3.06	6.71
77-108-01	2"	2.00	2.65	5.37	3.50	8.00	2.41	3.52	11.75
77-109-01	2-1/2"	2.50	3.25	6.50	4.06	8.00	2.75	3.37	17.25

**For Pressure/Temperature Ratings,
Refer to Page M-8, Graph No. 4**



77-ARX Series

Bronze Full Port Ball Valve with Actuator Ready ISO Mounting Pad

Threaded, 600 psig WOG, Cold Non-Shock. 250 psig Saturated Steam. (See referenced P/T chart).
Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: BZ, Style: 3.

MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

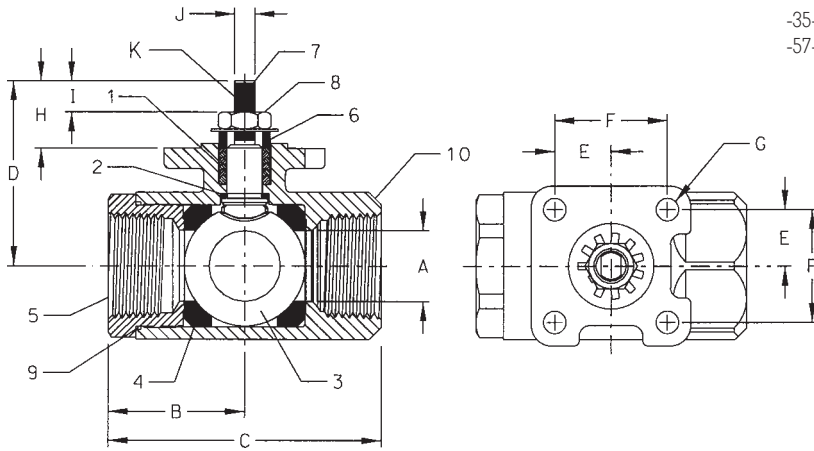
- Multi-piece packing set
- ISO 5211 mounting pad
- Stainless ball & stem
- Blow-out-proof stem design
- Adjustable packing gland
- Live loaded packing

STANDARD MATERIAL LIST

1. Stem packing	MPTFE	6. Gland	B16
2. Stem bearing	RYTON	7. Stem	A276-316
3. Ball	316 SS	8. Jam nut	SS
4. Seat (2)	MPTFE	9. Body seal	PTFE (1-1/4" to 2")
5. Retainer	B16 (1/4" to 1")	10. Body	B584-C84400
	B584-C84400 (1-1/4" to 2")	11. Belleville washer(s)	SS

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-14-	Vented Ball	1/4" to 2"
-24-	Graphite Packing	1/4" to 2"
-27-	Latch Lock Handle	1/4" to 2"
-35-	PTFE Seats	1/4" to 2"
-57-	Oxygen Cleaned	1/4" to 2"



**For Pressure/Temperature Ratings,
Refer to Page M-8, Graph No. 4**

BRONZE FULL PORT BALL VALVE WITH ISO MOUNTING PAD

NUMBER	SIZE	A	B	C	D	E	F	G	H	I	J (FLATS)	K (THRDS.) UNF	WT.
77-AR1-64	1/4"	.37	1.02	2.18	1.40	.61	1.17	.28	.61	.23	.247/.249	3/8-24	.60
77-AR2-64	3/8"	.37	1.02	2.18	1.40	.61	1.17	.28	.61	.23	.247/.249	3/8-24	.57
77-AR3-64	1/2"	.50	1.12	2.20	1.54	.61	1.17	.28	.61	.21	.247/.249	3/8-24	.62
77-AR4-64	3/4"	.86	1.68	3.12	2.28	.70	1.39	.28	.84	.31	.247/.249	3/8-24	1.76
77-AR5-64	1"	1.00	1.81	3.62	2.87	.98	1.95	.34	1.06	.40	.370/.372	5/8-18	3.44
77-AR7-64	1-1/2"	1.50	2.37	4.75	3.37	.98	1.95	.34	1.16	.37	.370/.372	5/8-18	6.25
77-AR8-64	2"	2.00	2.69	5.38	3.86	.98	1.95	.34	1.16	.37	.370/.372	5/8-18	11.72



77-200 Series

Bronze Full Port Solder End Ball Valve

Solder End, 600 psig WOG, Cold Non-Shock. 150 psig Saturated Steam. (See referenced P/T chart)
Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: BZ, Style: 3.

MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Chromium plated ball
- RPTFE seats and stuffing box ring
- Full port for full flow & min. pressure drop
- Blow-out-proof stem design
- Adjustable packing gland

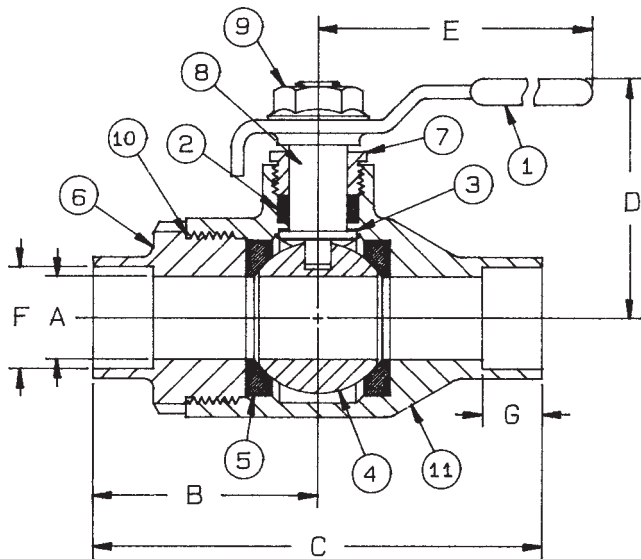
STANDARD MATERIAL LIST

1. Lever and grip	Steel, zinc plated w/vinyl	7. Gland nut	B16
2. Stem packing	RPTFE	8. Stem	B16
3. Stem bearing	RPTFE	9. Lever nut	Steel, zinc plated
4. Ball	B16 chrome plated	10. Body seal	PTFE
5. Seat (2)	RPTFE	(1-1/4" to 2-1/2")	
6. Retainer	B16 (3/4" to 1")	11. Body	B584-C84400
	B584-C84400 (1-1/4" to 2-1/2")		

VARIATIONS AVAILABLE:

77-240 Series (316 SS Ball & Stem)

77-250 Series (Balancing Stop)



The 77-200 is designed to be soft soldered into lines without disassembly. This allows a tested valve to be installed without disturbing the seats and seals in any way. Soldering temperature not to exceed 500°F.

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-02	Stem Grounded	3/4" to 2-1/2"
-03	1-1/4" CS Stem Extension	3/4" to 2-1/2"
-04	2-1/4" CS Stem Extension	3/4" to 2-1/2"
-05	Plain Ball	3/4" to 2-1/2"
-07	Steel Tee Handle	3/4" to 1-1/4"
-08	90° Reversed Stem	3/4" to 2-1/2"
-10	SS Lever & Nut	3/4" to 2-1/2"
-14	Side Vented Ball (Uni-Directional)	3/4" to 2-1/2"
-15	Wheel Handle, Steel	3/4" to 1-1/4"
-16	Chain Lever - Vertical	3/4" to 2-1/2"
-17	Rough Chrome Plated - Bronze Valves	3/4" to 2-1/2"
-20	Slot Vented Ball	3/4" to 2-1/2"
-24	Graphite Packing	3/4" to 2-1/2"
-27	SS Latch-Lock Lever & Nut	3/4" to 2-1/2"
-30	Cam-Lock and Grounded	3/4" to 1-1/4"
-32	SS Tee Handle & Nut	3/4" to 1-1/4"
-35	VTFE Trim	3/4" to 2-1/2"
-40	Cyl-Loc and Grounded	3/4" to 1-1/4"
-45	Less Lever & Nut	3/4" to 2-1/2"
-46	Latch Lock Lever - Lock in Closed Position Only	3/4" to 2-1/2"
-47	SS Oval Latch-Lock Handle & Nut	3/4" ONLY
-48	SS Oval Handle (No Latch) & Nut	3/4" to 2-1/2"
-49	Assembled Dry	3/4" to 2-1/2"
-50	2-1/4" CS Locking Stem Extension	3/4" to 2-1/2"
-56	Multifill Seats & Packing	3/4" to 2-1/2"
-57	Oxygen Cleaned	3/4" to 2-1/2"
-58	Chain Lever - Horizontal	3/4" to 2-1/2"
-60	Static Grounded Ball & Stem	3/4" to 2-1/2"
-63	NPT x Solder/Socket Weld	3/4" to 2-1/2"

BRONZE FULL PORT SOLDER END BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	Wt.
77-204-01	3/4"	.81	2.12	4.12	2.12	4.87	.878	.75	1.65
77-205-01	1"	1.00	2.33	4.64	2.62	5.50	1.129	.90	2.99
77-206-01	1-1/4"	1.25	2.60	5.15	2.87	5.50	1.378	.96	4.55
77-207-01	1-1/2"	1.50	3.00	6.00	3.34	8.00	1.629	1.09	6.04
77-208-01	2"	2.00	3.62	7.24	3.71	8.00	2.129	1.34	10.58
77-209-01	2-1/2"	2.50	3.93	7.87	4.12	8.00	2.630	1.48	15.53

**For Pressure/Temperature Ratings,
Refer to Page M-8, Graph No. 4**



77-900 Series

Bronze Full Port SAE Straight Thread Ball Valve

Straight Threads, 600 psig WOG, Cold Non-Shock. 150 psig Saturated Steam. (See referenced P/T chart)
Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: BZ, Style: 3.

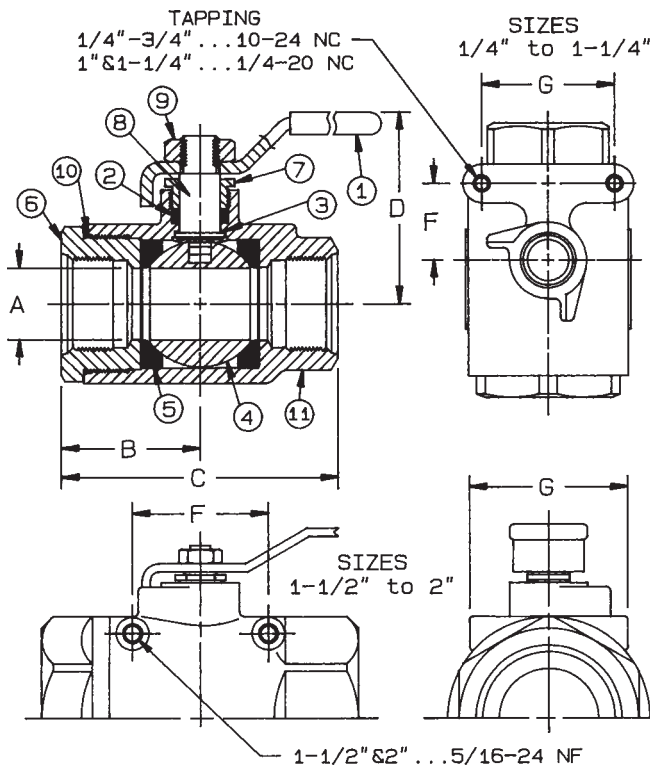
MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Chromium plated ball
- RPTFE seats and stuffing box ring
- Mounting pad for easy actuator mounting
- Straight thread w/O-Ring boss connection
- Blow-out-proof stem design
- Adjustable packing gland
- Full port for full flow & min. pressure drop
- SAE J512/J514 Straight Thread O-Ring Boss

STANDARD MATERIAL LIST

1. Lever and grip	Steel, zinc plated w/vinyl	7. Gland nut	B16
2. Stem packing	RPTFE	8. Stem	B16
3. Stem bearing	RPTFE	9. Lever nut	Steel, zinc plated
4. Ball	Brass, chrome plated	10. Body seal	PTFE (1-1/4" to 2")
5. Seat (2)	RPTFE	11. Body	B584-C84400
6. Retainer	B16 (1/4" to 1") B584-C84400 (1-1/4" to 2")		



OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-02-	Stem Grounded	1/4" to 2"
-03-	1-1/4" CS Stem Extension	1/4" to 2"
-04-	2-1/4" CS Stem Extension	1/4" to 2"
-07-	Steel Tee Handle	1/4" to 2"
-08-	90° Reversed Stem	1/4" to 2"
-10-	SS Lever & Nut	1/4" to 2"
-15-	Wheel Handle, Steel	1/4" to 2"
-17-	Rough Chrome Plated - Bronze Valves	1/4" to 2"
-24-	Graphite Packing	1/4" to 2"
-27-	SS Latch-Lock Lever & Nut	1/4" to 2"
-30-	Cam-Lock and Grounded	1/4" to 2"
-32-	SS Tee Handle & Nut	1/4" to 2"
-35-	VTFE Trim	1/4" to 2"
-46-	Latch Lock Lever - Lock in Closed Position Only	1/4" to 3"
-48-	SS Oval Handle (No Latch) & Nut	1/4" to 2"
-50-	2-1/4" CS Locking Stem Extension	1/4" to 2"

**For Pressure/Temperature Ratings,
Refer to Page M-8, Graph No. 4**

BRONZE FULL PORT SAE O-RING BOSS BALL VALVE

NUMBER	NOM. TUBE O.D.	SIZE	A	B	C	D	E	F	G	Wt.
77-901-01	1/4"	7/16"-20	.43	1.12	2.25	1.81	3.87	.50	1.12	.79
77-902-01	3/8"	9/16"-18	.50	1.12	2.25	1.81	3.87	.50	1.12	.75
77-903-01	1/2"	3/4"-16	.50	1.12	2.25	1.81	3.87	.50	1.12	.69
77-904-01	3/4"	1-1/16"-12	.81	1.56	3.12	2.12	4.87	.87	1.37	1.83
77-905-01	1"	1-5/16"-12	1.00	1.81	3.62	2.62	5.50	.93	1.50	3.32
77-906-01	1-1/4"	1-5/8"-12	1.25	2.12	4.25	2.87	5.50	.93	1.50	5.05
77-907-01	1-1/2"	1-7/8"-12	1.50	2.37	4.75	3.34	8.00	2.09	3.06	6.71
77-908-01	2"	2-1/2"-12	2.00	2.65	5.37	3.71	8.00	2.41	3.52	11.75



89-100 Series

Carbon Steel Ball Valve

NPT Threaded, 1/4" to 1" 2000 psig WOG, 1-1/4" to 2" 1500 psig WOG, 2-1/2" to 3" 1000 psig WOG. (See referenced P/T chart)

Cold Non-Shock. 150 psig Saturated Steam. Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: CS, Style: 3.

MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Investment cast components
- RPTFE seats and stuffing box ring
- Mounting pad for easy actuator mounting
- (-24) Certified to API 607, 4th, Edition, Class 600 burn
- Blow-out-proof stem design
- Adjustable packing gland
- Nitride corrosion protection

STANDARD MATERIAL LIST

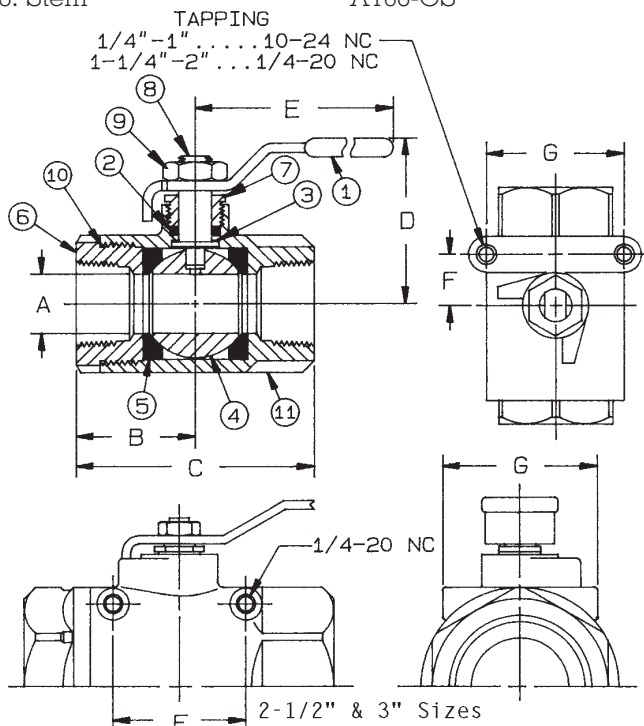
1. Lever and grip	Steel, zinc plated w/vinyl	9. Lever nut	Steel, zinc plated
2. Stem packing	RPTFE	10. Body seal	PTFE (1-1/4" to 3")
3. Stem bearing	RPTFE	11. Body	A216-WCB
4. Ball	A108-CS chrome plated		
5. Seat (2)	RPTFE		
6. Retainer	A108 CS (1/4" to 1")		
	A216-WCB (1-1/4" to 3")		
7. Gland nut	A108-CS		
8. Stem	A108-CS		

VARIATIONS AVAILABLE:

89-140 Series (316 SS Ball & Stem)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-02-	Stem Grounded	1/4" to 3"
-03-	1-1/4" CS Stem Extension	1/4" to 3"
-04-	2-1/4" CS Stem Extension	1/4" to 3"
-07-	Steel Tee Handle	1/4" to 2"
-08-	90° Reversed Stem	1/4" to 3"
-10-	SS Lever & Nut	1/4" to 3"
-14-	Side Vented Ball (Uni-Directional)	1/4" to 3"
-15-	Wheel Handle, Steel	1/4" to 2"
-16-	Chain Lever - Vertical	3/4" to 2"
-18-	Plain Yellow Grip	1/4" to 3"
-19-	Lock Plate	1/4" to 2"
-24-	Graphite Packing	1/4" to 3"
-27-	SS Latch-Lock Lever & Nut	1/4" to 3"
-30-	Cam-Lock and Grounded	1/4" to 2"
-32-	SS Tee Handle & Nut	1/4" to 2"
-35-	VTPE Trim	1/4" to 3"
-39-	SS Hi-Rise Locking Wheel Handle, SS Nut	1/4" to 2"
-40-	Cyl-Loc and Grounded	1/4" to 2"
-44-	Seal Welded	1/4" to 2"
-45-	Less Lever & Nut	1/4" to 3"
-46-	Latch Lock Lever - Lock in Closed Position Only	1/4" to 3"
-47-	SS Oval Latch-Lock Handle & Nut	1/4" to 1"
-48-	SS Oval Handle (No Latch) & Nut	1/4" to 2"
-50-	2-1/4" CS Locking Stem Extension	1/4" to 3"
-56-	Multifill Seats & Packing	1/4" to 3"
-58-	Chain Lever - Horizontal	3/4" to 2"
-60-	Static Grounded Ball & Stem	1/4" to 3"
-64-	250# Steam Trim	1/4" to 3"
-P01-	BSPP (Parallel) Thread Connection	1/4" to 3"
-T01-	BSPT (Tapered) Thread Connection	1/4" to 3"



CARBON STEEL BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	Wt.
89-101-01	1/4"	.37	1.03	2.06	1.75	3.87	.50	1.12	.58
89-102-01	3/8"	.37	1.03	2.06	1.75	3.87	.50	1.12	.54
89-103-01	1/2"	.50	1.12	2.25	1.81	3.87	.50	1.12	.63
89-104-01	3/4"	.68	1.50	3.00	2.12	4.87	.87	1.37	1.27
89-105-01	1"	.87	1.68	3.37	2.25	4.87	.87	1.37	1.63
89-106-01	1-1/4"	1.00	2.00	4.00	2.62	5.50	.93	1.50	3.06
89-107-01	1-1/2"	1.25	2.18	4.37	3.05	8.00	.93	1.50	3.98
89-108-01	2"	1.50	2.75	5.50	3.24	8.00	.93	1.50	5.99
89-109-01	2-1/2"	2.50	3.37	6.75	4.05	8.00	2.75	3.37	15.57
89-100-01	3"	2.50	3.37	6.75	4.12	8.00	2.75	3.37	16.79

**For Pressure/Temperature Ratings,
Refer to Page M-12, Graph No. 13
(1/4" to 1")
Refer to Page M-11, Graph No. 11
(1-1/4" to 2")
Refer to Page M-10, Graph No. 7
(2-1/2" to 3")**



89-ARX Series

Carbon Steel Std. Port Ball Valve with Actuator Ready ISO Mounting Pad

Threaded, 1/4"-1" 2000 psig WOG, 1-1/4"-2" 1500 psig WOG, 2-1/2"-3" 1000 psig WOG. (See referenced P/T chart) 1000 psig WOG, Cold Non-Shock. 250 psig Saturated Steam.

Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: CS, Style: 3.

MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

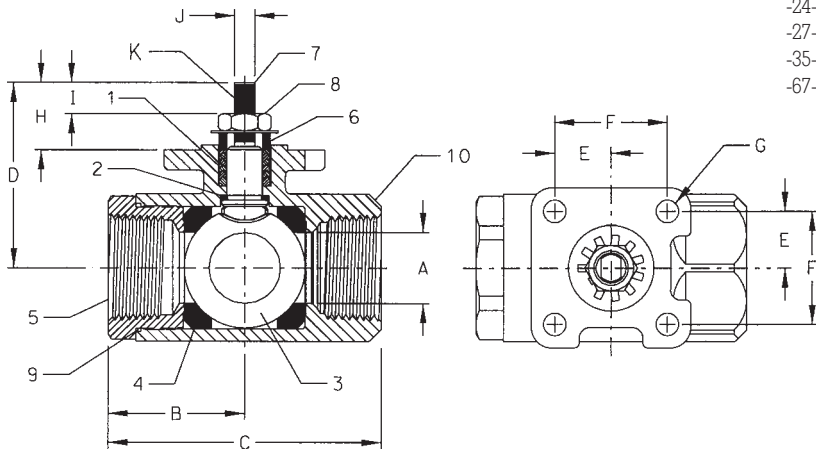
- Multi-piece packing set
- ISO 5211 mounting pad
- Stainless ball & stem
- Blow-out-proof stem design
- Adjustable packing gland
- Live loaded packing

STANDARD MATERIAL LIST

1. Stem packing	MPTFE	6. Gland	A276-316
2. Stem bearing	RYTON	7. Stem	A276-316
3. Ball	316 SS	8. Jam nut	SS
4. Seat (2)	MPTFE	9. Body seal	PTFE (1-1/4" to 3")
5. Retainer	A108-CS (1/4" to 3")	10. Body	A216-WCB
		11. Bellville washer(s)	SS

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-14-	Side Vented Ball (Uni-Directional)	1/4" to 3"
-24-	Graphite Packing	1/4" to 3"
-27-	Latch Lock Handle	1/4" to 2"
-35-	PTFE Seats	1/4" to 3"
-67-	Cleaned for Industrial Gases - CS Valves	1/4" to 3"



**For Pressure/Temperature Ratings,
Refer to Page M-12 Graph No. 13
(1/4" to 1")
Refer to Page M-11, Graph No. 11
(1-1/4" to 2")
Refer to Page M-10, Graph No. 7
(2-1/2" to 3")**

CARBON STEEL STD. PORT BALL VALVE WITH ISO MOUNTING PAD

NUMBER	SIZE	A	B	C	D	E	F	G	H	I	J (FLATS)	K (THRDS.) UNF	WT.
89-AR1-64	1/4"	.37	1.02	2.04	1.40	.59	1.17	.28	.61	.25	.247/.249	3/8-24	.52
89-AR2-64	3/8"	.37	1.02	2.04	1.40	.59	1.17	.28	.61	.25	.247/.249	3/8-24	.49
89-AR3-64	1/2"	.50	1.12	2.23	1.54	.59	1.17	.28	.61	.22	.247/.249	3/8-24	.58
89-AR4-64	3/4"	.68	1.47	2.96	2.16	.70	1.39	.28	.84	.33	.247/.249	3/8-24	1.26
89-AR5-64	1"	.87	1.66	3.34	2.28	.70	1.39	.28	.84	.32	.247/.249	3/8-24	1.62
89-AR6-64	1-1/4"	1.00	2.00	4.00	2.98	.98	1.95	.34	1.16	.43	.370/.372	5/8-18	3.22
89-AR7-64	1-1/2"	1.25	2.18	4.34	3.16	.98	1.95	.34	1.16	.38	.370/.372	5/8-18	4.06
89-AR8-64	2"	1.50	2.75	5.43	3.37	.98	1.95	.34	1.16	.47	.370/.372	5/8-18	6.18
89-AR9-64	2-1/2"	2.00	3.12	6.25	3.85	.98	1.95	.34	1.16	.41	.370/.372	5/8-18	13.06
89-AR0-64	3"	2.50	3.37	6.75	4.18	.98	1.95	.34	1.16	.55	.370/.372	5/8-18	17.06



399-100 Series Alloy-20 Ball Valve

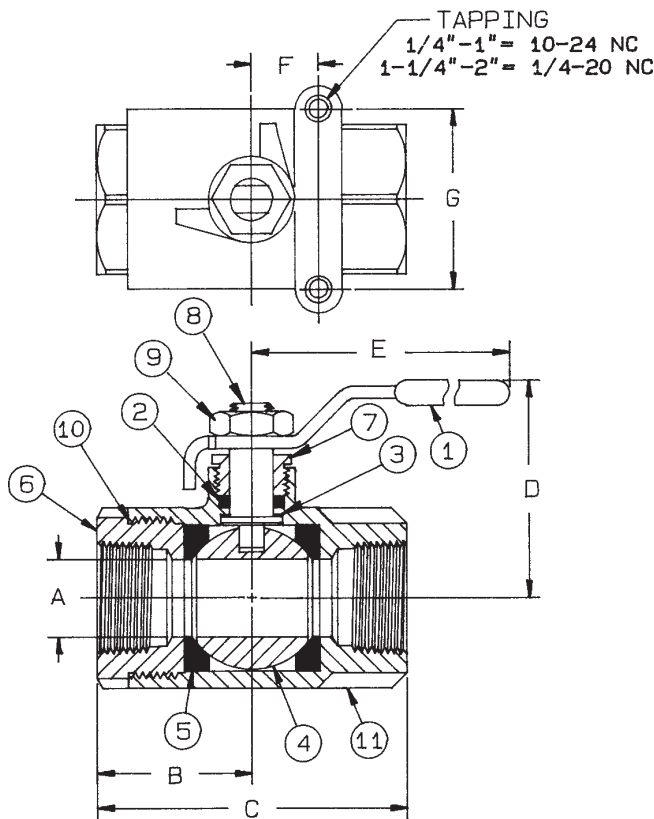
Threaded, 1/4" to 1" 2000 psig WOG, 1-1/4" to 2" 1500 psig WOG. Cold Non-Shock. (See referenced P/T chart)
150 psig Saturated Steam. Vacuum Service to 29 inches Hg.
Federal Specification: WW-V-35C, Type: II, Composition: SS, Style: 3.

FEATURES

- Investment cast components
- RPTFE seats and stuffing box ring
- Mounting pad for easy actuator mounting
- (-24) Certified to API standard 607, 4th Edition, Class 600 burn
- Blow-out-proof stem design
- Adjustable packing gland
- Meets NACE MR-01-75

STANDARD MATERIAL LIST

1. Lever and grip	304 SS w/vinyl	7. Gland nut	316 SS
2. Stem packing	RPTFE	8. Stem	B473-N08020
3. Stem bearing	RPTFE	9. Lever nut	304 SS
4. Ball	B463-2OCB-3	10. Body seal	PTFE (1-1/4" to 2")
5. Seat (2)	RPTFE	11. Body	A351-CN7M
6. Retainer	B473-N08020 (1/4" to 1") A351-CN7M (1-1/4" to 2")		



OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-02-	Stem Grounded	1/4" to 2"
-03-	1-1/4" CS Stem Extension	1/4" to 2"
-04-	2-1/4" CS Stem Extension	1/4" to 2"
-07-	Steel Tee Handle	1/4" to 2"
-08-	90° Reversed Stem	1/4" to 2"
-14-	Side Vented Ball (Uni-Directional)	1/4" to 2"
-15-	Wheel Handle, Steel	1/4" to 2"
-16-	Chain Lever - Vertical	3/4" to 2"
-18-	Plain Yellow Grip	1/4" to 2"
-19-	Lock Plate	1/4" to 2"
-21-	UHMWPE Trim (Non-PTFE)	1/4" to 2"
-24-	Graphite Packing	1/4" to 2"
-27-	SS Latch-Lock Lever & Nut	1/4" to 2"
-28-	Mounting Pad Not Drilled & Tapped	1/4" to 2"
-30-	Cam-Lock and Grounded	1/4" to 2"
-32-	SS Tee Handle & Nut	1/4" to 2"
-35-	VTFE Trim	1/4" to 2"
-40-	Cyl-Loc and Grounded	1/4" to 2"
-45-	Less Lever & Nut	1/4" to 2"
-46-	Latch Lock Lever - Lock in Closed Position Only	1/4" to 2"
-47-	SS Oval Latch-Lock Handle & Nut	1/4" to 1"
-48-	SS Oval Handle (No Latch) & Nut	1/4" to 2"
-49-	Assembled Dry	1/4" to 2"
-50-	2-1/4" CS Locking Stem Extension	1/4" to 2"
-56-	Multifill Seats & Packing	1/4" to 2"
-57-	Oxygen Cleaned	1/4" to 2"
-58-	Chain Lever - Horizontal	3/4" to 2"
-60-	Static Grounded Ball & Stem	1/4" to 2"
-64-	250# Steam Trim	1/4" to 2"
-P01-	BSPP (Parallel) Thread Connection	1/4" to 2"
-T01-	BSPT (Tapered) Thread Connection	1/4" to 2"

ALLOY-20 BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	Wt.
399-101-01	1/4"	.37	1.03	2.06	1.75	3.87	.50	1.12	.58
399-102-01	3/8"	.37	1.03	2.06	1.75	3.87	.50	1.12	.54
399-103-01	1/2"	.50	1.12	2.25	1.81	3.87	.50	1.12	.63
399-104-01	3/4"	.68	1.50	3.00	2.12	4.87	.87	1.37	1.27
399-105-01	1"	.87	1.68	3.37	2.25	4.87	.87	1.37	1.63
399-106-01	1-1/4"	1.00	2.00	4.00	2.62	5.50	.93	1.50	3.06
399-107-01	1-1/2"	1.25	2.18	4.37	2.87	8.00	.93	1.50	4.04
399-108-01	2"	1.50	2.34	4.68	3.06	8.00	.93	1.50	6.05

**For Pressure/Temperature Ratings,
Refer to Page M-15, Graph No. 20
(1/4" to 1")
Refer to Page M-15, Graph No. 19
(1-1/4" to 2")**