

SECTION H CONTENTS

SPECIALTY BALL VALVES

DESCRIPTION	PAGE
7A-130-26 Series, Threaded Dry Chlorine Carbon Steel with Ni-Cu Ball & Stem	H-1
7B-100 Series, Threaded Full Port Bronze	H-2
7B-300 Series, Threaded Full Port Bronze	H-3
7B-800 Series, M x F Threaded Full Port Bronze	H-4
7H-800 Series, M x F Threaded Full Port Stainless Steel	H-5
7K-100 Series, Threaded Full Port Bronze with Drain	H-6
71-500 Series, Threaded Bronze Spring Return Handle	H-7
74-100 Series, Threaded Chemical Resistant Nickel	H-8
75-100 Series, Threaded Bronze Pad Locking Valve	H-9
76-500 Series, Threaded Stainless Steel Spring Return Handle	H-10
78-100 Series, Threaded Bronze with Dust Cover and Chain	H-11
78-124 & -125, Threaded Bronze 5-Port Fuel Selector	H-12
78-200 Series, Solder End Bronze with Dust Cover and Chain	H-13
78-200 Series, Threaded Bronze Surface Mount	H-14
78-257/267 Series, M x F Threaded Brass and Bronze Instrumentation	H-15
78-621/625 Series, Threaded Bronze Irrigation	H-16
78-664/962 Series, Threaded Bronze with Center Drain	H-17
78-668, 3/4" Solder End Bronze Purge and Drain	H-18
89-500 Series, Threaded Carbon Steel Spring Return Handle	H-19
95-100 Series, Threaded Full Port Bronze Stop and Drain	H-20
95-200 Series, Solder End Full Port Bronze Stop and Drain	H-21
82-200 Series, Male Brazed Extensions	H-22
82-200 Series, Female Brazed Extensions	H-23
70-200 Series, Bronze Standard Port with 6" Brazed Extensions	H-24
77-200 Series, Bronze Full Port with 6" Brazed Extensions	H-25

UL Listed Ball Valves

DESCRIPTION	PAGE
73-300 Series, Carbon Steel Double Union End Ball Valve	H-26
73-400 Series, Socket Weld, Carbon Steel, Double Union End	H-27
79-700 Series, Solder End Brass Full Port Refrigerant	H-28
80-100 Series, Threaded Bronze Gas Shut-Off	H-29
81-100 Series, Threaded Bronze Gas Shut-Off	H-30
90-100 Series, Threaded Bronze Unibody, Saturn	H-31
489-100 Series, Threaded Cast Carbon Steel	H-32
87A/88A Series, ANSI 150 & 300 Flanged	D-A



7A-130-26 Series

Carbon Steel Dry Chlorine Ball Valve With Ni-Cu Ball and Stem

Threaded. 400 psig WOG, Cold Non-Shock.

For Use With Dry Chlorine Gas and Dry Liquid.

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

Complies With Recommendations of Chlorine Institute Pamphlet No. 6.

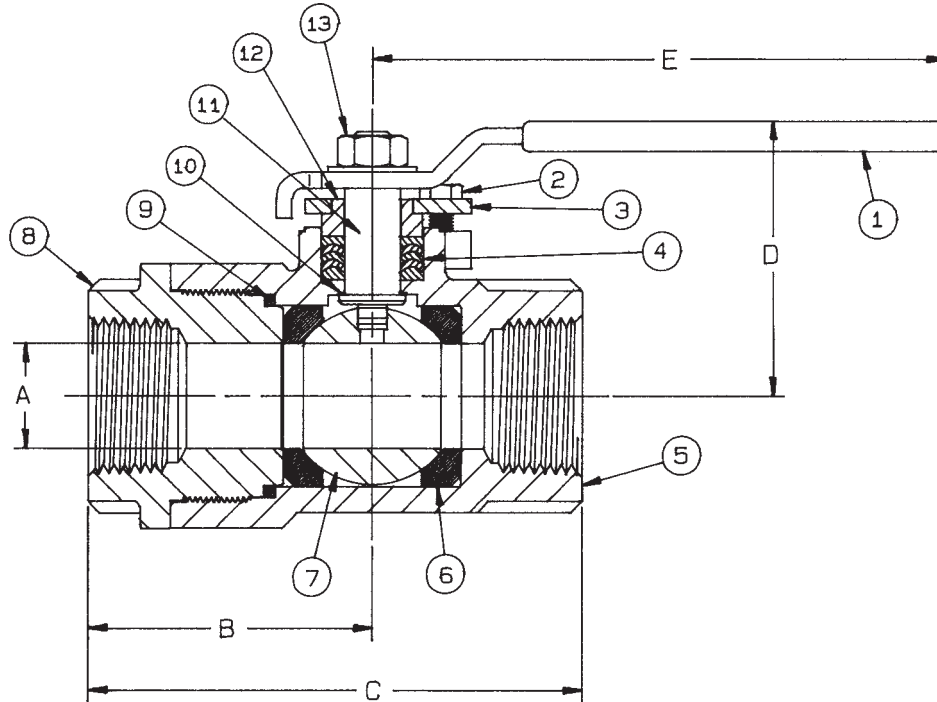
MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Chevron style stem packing
- Ni-Cu ball and stem
- Investment Cast Parts
- Nitride corrosion protection
- Blow-out-proof stem design
- Bolted, adjustable packing gland
- Vented ball

STANDARD MATERIAL LIST

1. Lever and grip	304 SS w/vinyl	8. Retainer	A216-WCB
2. Bolt (2)	18-8 SS	9. Body seal	RPTFE
3. Gland plate	304 SS	10. Stem bearing	RPTFE
4. Packing set	PTFE, Chevron style	11. Stem	B164
5. Body	A216-WCB	12. Packing gland	A276-316
6. Seats (2)	RPTFE	13. Lever nut	18-8 SS
7. Ball	B164		



CARBON STEEL DRY CHLORINE BALL VALVE
WITH Ni-Cu BALL AND STEM

NUMBER	SIZE	A	B	C	D	E	Wt.
7A-131-26	1/4"	.43	1.56	2.75	1.93	3.87	1.25
7A-132-26	3/8"	.50	1.56	2.75	1.93	3.87	1.21
7A-133-26	1/2"	.50	1.56	2.75	1.93	3.87	1.14
7A-134-26	3/4"	.68	2.00	3.50	2.31	4.87	2.11
7A-135-26	1"	.87	2.37	4.12	2.43	4.87	2.94
7A-136-26	1-1/4"	1.00	2.24	4.24	3.00	5.50	4.40
7A-137-26	1-1/2"	1.25	2.65	5.13	3.38	8.00	7.04
7A-138-26	2"	1.50	3.25	6.00	3.67	8.00	10.86

**For Pressure/Temperature Ratings,
Refer to Page M-14, Graph No. 17**



7B-100 Series

Bronze Full Port Hydro Ball Valve

Threaded, 400 psig WOG, Cold Non-Shock. 125 psig Saturated Steam.

Vacuum Service to 29 inches Hg.

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

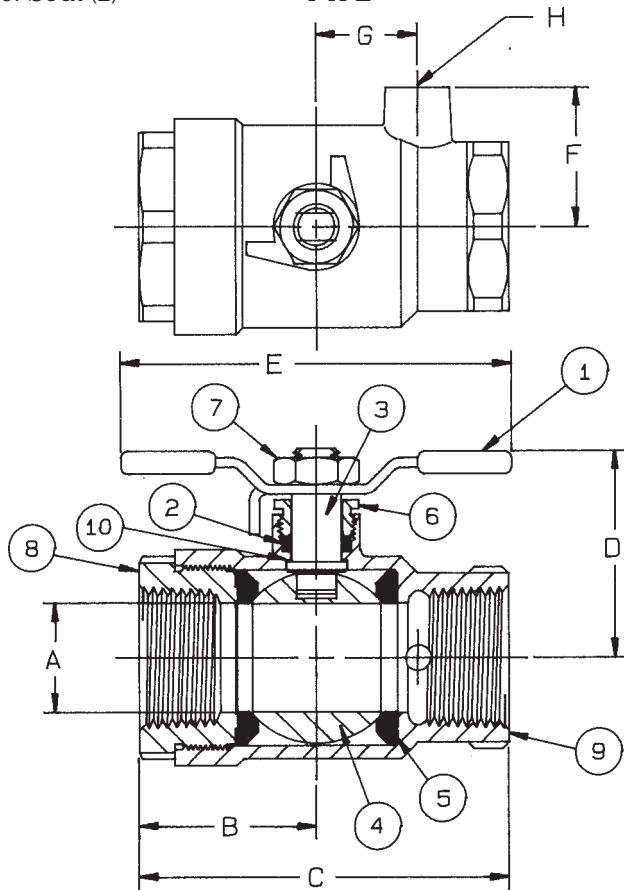
MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Chromium plated ball
- RPTFE packing
- PTFE seats
- Blow-out-proof stem design
- Adjustable packing gland

STANDARD MATERIAL LIST

1. T-handle & grip	SS w/vinyl	6. Gland nut	B16
2. Stem packing	RPTFE	7. Lever nut	304 SS
3. Stem	B16	8. Retainer	B16
4. Ball	B16, Chrome plated	9. Body	B584-C84400
5. Seat (2)	PTFE	10. Bearing	RPTFE
			1/4" to 1/2"



OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-31-	7B Series w/Boss NOT Drilled & Tapped	1/4" to 2"

BRONZE FULL PORT HYDRO BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	H	Wt.
7B-101-01	1/4"	.37	1.03	2.06	1.37	2.68	.93	.53	1/8 NPT	.61
7B-102-01	3/8"	.37	1.03	2.06	1.37	2.68	.93	.53	1/8 NPT	.57
7B-103-01	1/2"	.50	1.09	2.18	1.43	2.68	1.00	.53	1/8 NPT	.64
7B-104-01	3/4"	.75	1.28	2.68	1.62	3.00	1.12	.75	1/8 NPT	.80
7B-105-01	1"	1.00	1.66	3.43	1.90	4.00	1.31	.94	1/8 NPT	1.61
7B-106-01	1-1/4"	1.25	1.87	3.87	2.18	4.00	1.62	1.15	1/4 NPT	2.60
7B-107-01	1-1/2"	1.50	2.05	4.22	2.60	5.62	1.81	1.31	1/4 NPT	3.85
7B-108-01	2"	2.00	2.47	5.02	2.95	5.62	2.18	1.68	1/4 NPT	6.57

**For Pressure/Temperature Ratings,
Refer to Page M-8, Graph No. 3**



7B-300 Series

Single Union End Bronze Full Port Hydro Ball Valve

NPT Threaded, 400 psig WOG, Cold Non-Shock. 125 psig Saturated Steam.

Vacuum Service to 29 inches Hg.

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

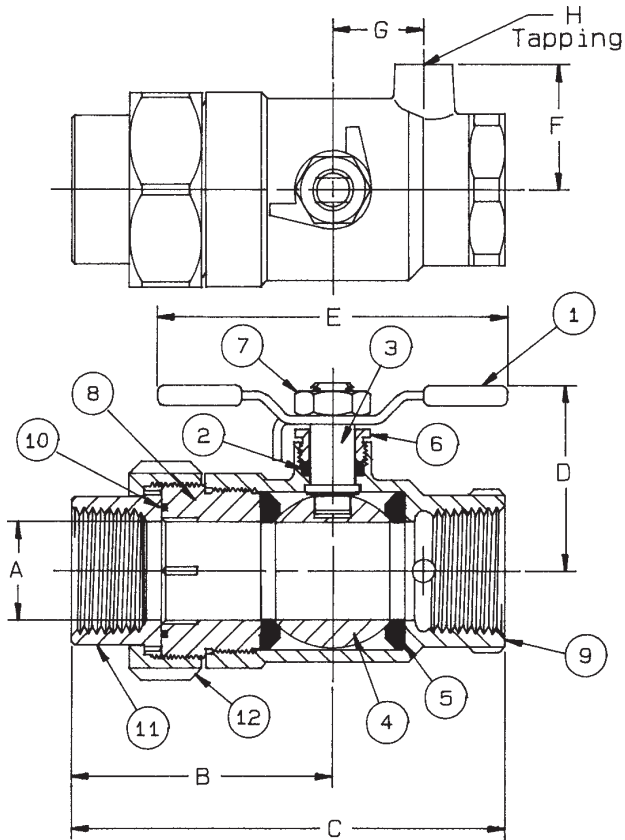
MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Chromium plated ball
- RPTFE packing
- PTFE seats
- Blow-out-proof stem design
- Adjustable packing gland

STANDARD MATERIAL LIST

1. T-handle & grip	SS w/vinyl	7. Lever nut	304 SS
2. Stem packing	RPTFE	8. Retainer	B16
3. Stem	B16	9. Body	B584-C84400
4. Ball	B16, chrome plated	10. O-Ring	Fluorocarbon
5. Seat (2)	PTFE	11. Tailpiece	B16
6. Gland nut	B16	12. Union nut	B16 (1/4" to 1") B584-C84400 (1-1/4" & 2")



OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-31-	7B Series w/Boss NOT Drilled & Tapped	1/4" to 2"

**For Pressure/Temperature Ratings,
Refer to Page M-8, Graph No. 3**

SINGLE UNION END BRONZE
FULL PORT HYDRO BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	H	Wt.
7B-301-01	1/4"	.37	2.13	2.92	1.37	2.68	.93	.53	1/8 NPT	.89
7B-303-01	1/2"	.50	2.21	3.08	1.43	2.68	.93	.53	1/8 NPT	1.00
7B-304-01	3/4"	.75	2.25	3.67	1.62	3.00	1.12	.75	1/8 NPT	1.32
7B-305-01	1"	1.00	2.71	4.50	1.90	4.00	1.31	.94	1/8 NPT	2.31
7B-306-01	1-1/4"	1.25	3.00	5.00	2.18	4.00	1.62	1.15	1/4 NPT	3.68
7B-307-01	1-1/2"	1.50	3.43	5.62	2.60	5.62	1.81	1.31	1/4 NPT	5.50
7B-308-01	2"	2.00	4.00	6.56	2.95	5.62	2.18	1.68	1/4 NPT	9.30



7B-800 Series

Male x Female Bronze Full Port Hydro Ball Valve

Male x Female Threaded, 400 psig WOG, Cold Non-Shock, 125 psig Saturated Steam.
Vacuum Service to 29 inches Hg.

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

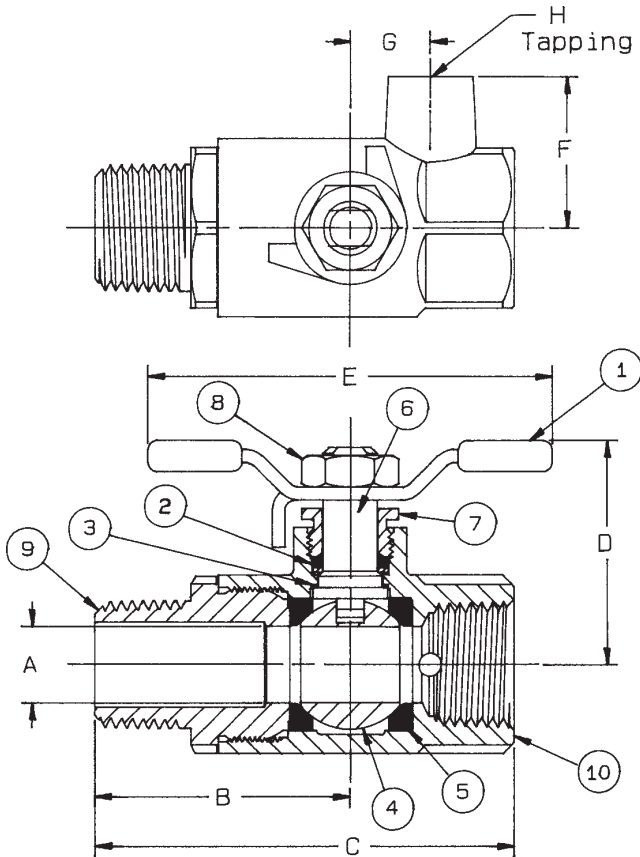
MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Chromium plated ball
- RPTFE packing
- PTFE seats
- Blow-out-proof stem design
- Adjustable packing gland

STANDARD MATERIAL LIST

1. T-handle & grip	SS	6. Stem	B16
2. Stem packing	RPTFE	7. Gland screw	B16
3. Stem bearing	RPTFE	8. Lever nut	304 SS
4. Ball	B16, chrome plated	9. Retainer	B16
5. Seat (2)	PTFE	10. Body	B584-C84400



MALE x FEMALE BRONZE
FULL PORT HYDRO BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	H	Wt.
7B-801-01	1/4"	.37	1.40	2.43	1.37	2.56	.93	.53	1/8 NPT	.73
7B-802-01	3/8"	.37	1.46	2.50	1.37	2.56	.93	.53	1/8 NPT	.70
7B-803-01	1/2"	.50	1.68	2.78	1.43	2.56	1.00	.53	1/8 NPT	.82
7B-804-01	3/4"	.75	1.88	3.28	1.70	2.68	1.12	.75	1/8 NPT	.80
7B-805-01	1"	1.00	2.39	4.17	1.93	3.62	1.31	.94	1/8 NPT	1.61
7B-806-01	1-1/4"	1.25	2.66	4.66	2.13	3.62	1.62	1.15	1/4 NPT	2.60
7B-807-01	1-1/2"	1.50	2.86	5.03	2.71	5.12	1.81	1.31	1/4 NPT	3.85
7B-808-01	2"	2.00	3.34	5.89	3.06	5.12	2.18	1.68	1/4 NPT	6.57

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-31-	7B Series w/Boss NOT Drilled & Tapped	1/4" to 2"

**For Pressure/Temperature Ratings,
Refer to Page M-8, Graph No. 3**



7H-800 Series

M x F Stainless Steel Full Port Hydro Ball Valve

Male x Female Threaded, 800 psig WOG, Cold Non-Shock, 125 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

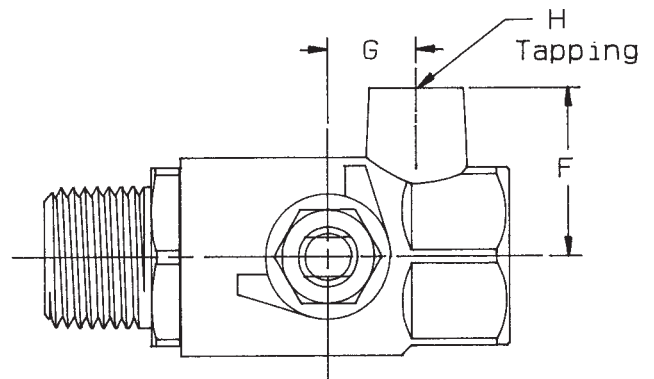
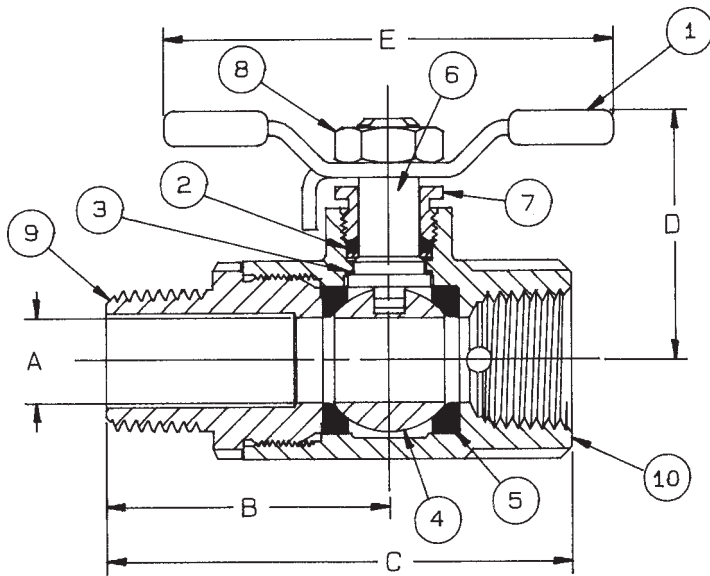
- 316 SS ball & stem
- RPTFE packing
- PTFE seats
- Blow-out-proof stem design
- Adjustable packing gland

STANDARD MATERIAL LIST

1. T-handle & grip	SS	6. Stem	A276-316
2. Stem packing	RPTFE	7. Gland screw	A276-316
3. Stem bearing	RPTFE	8. Lever nut	304 SS
4. Ball	A276-316	9. Retainer	A276-316
5. Seat (2)	PTFE	10. Body	A351-CF8M

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-31-	7B Series w/Boss NOT Drilled & Tapped	1/4" to 1"



MALE X FEMALE STAINLESS STEEL
 FULL PORT HYDRO BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	H	Wt.
7H-801-01	1/4"	.37	1.47	2.46	1.39	2.56	.93	.53	1/8 NPT	.65
7H-802-01	3/8"	.37	1.55	2.54	1.39	2.56	.93	.53	1/8 NPT	.62
7H-803-01	1/2"	.50	1.79	2.83	1.45	2.56	1.00	.53	1/8 NPT	.73
7H-804-01	3/4"	.75	2.01	3.42	2.08	3.25	1.01	.75	1/8 NPT	.86
7H-805-01	1"	1.00	2.39	4.17	2.38	3.93	1.12	.94	1/8 NPT	1.65

**For Pressure/Temperature Ratings,
 Refer to Page M-16, Graph No. 21**



7K-100 Series

Bronze Full Port Ball Valve with Drain

NPT Threaded with NPT threaded drain port.
 Recommended for water or air services.
 Rated +50°F to 200°F, 0-125 psig.

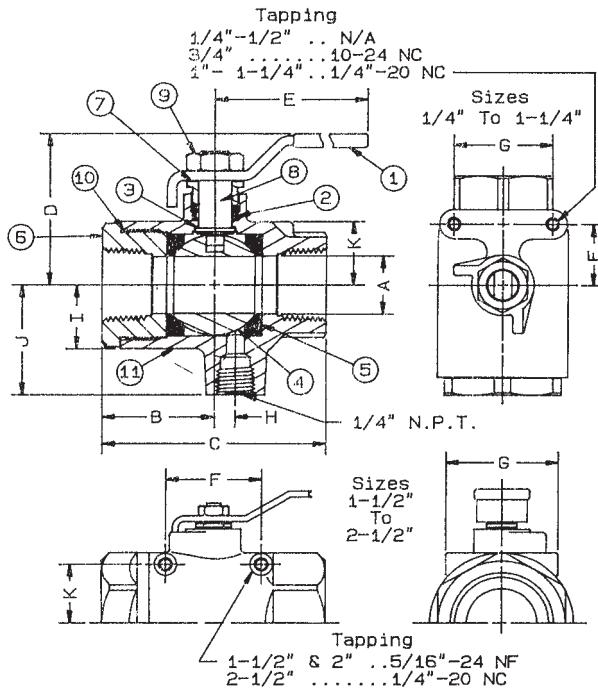
FEATURES

- Chromium plated ball
- RPTFE seats and stuffing box ring
- Mounting pad for easy actuator mounting (3/4" to 2-1/2")
- Blow-out-proof stem design
- Adjustable packing gland
- Full port for full flow & min. pressure drop
- Auto-drain / Auto-vent

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
5. Seat (2)	RPTFE		(1-1/4" to 2-1/2")
6. Retainer	B16 (1/4" to 1")	11. Body	B584-C84400
	B584-C84400 (1-1/4" to 2-1/2")		

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"
-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"
-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"
-24-	Graphite Packing	1/4" to 2-1/2"
-27-	SS Latch-Lock Lever & Nut	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-	VIFE Trim	1/4" to 2-1/2"
-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 Latch-Lock Oval 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-	Grounded Ball & Stem	1/4" to 2-1/2"
-61-	Grounded Ball & Stem, Assembled Dry	1/4" to 2-1/2"
-63-	NPT x Solder/Socket Weld	1/4" to 2-1/2"

BRONZE FULL PORT BALL VALVE WITH DRAIN

NUMBER	SIZE	A	B	C	D	E	F	G	H	I	J	K	Wt.
7K-101-01	1/4"	.37	1.03	2.06	1.75	3.87	N/A	N/A	.09	.53	1.18	N/A	.70
7K-102-01	3/8"	.37	1.03	2.06	1.75	3.87	N/A	N/A	.09	.53	1.18	N/A	.66
7K-103-01	1/2"	.50	1.10	2.19	1.75	3.87	N/A	N/A	.12	.59	1.25	N/A	.73
7K-104-01	3/4"	.81	1.56	3.12	2.12	4.78	.87	1.37	.29	.90	1.56	.90	1.93
7K-105-01	1"	1.00	1.80	3.61	2.62	5.50	.93	1.50	.31	1.12	1.78	1.12	3.42
7K-106-01	1-1/4"	1.25	2.12	4.25	2.87	5.50	.93	1.50	.37	1.37	2.03	1.37	5.15
7K-107-01	1-1/2"	1.50	2.37	4.74	3.30	7.78	2.08	3.06	.50	1.56	2.21	1.28	6.81
7K-108-01	2"	2.00	2.70	5.38	3.71	7.78	2.41	3.52	.62	2.03	2.68	1.56	11.85
7K-109-01	2-1/2"	2.50	3.25	6.50	4.05	7.78	2.75	3.37	1.09	2.34	3.00	2.00	17.35



71-500 Series

Bronze Ball Valve with Spring Return Handle

Threaded, 600 psig WOG, Cold Non-Shock. 150 psig Saturated Steam.

Vacuum Service to 29 inches Hg.

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

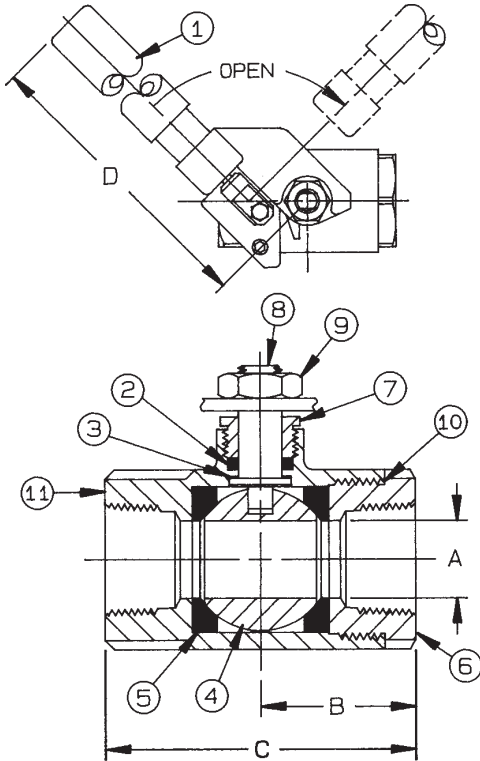
MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Spring return to close (-01)
- Spring return to open (-08)
- All components of lever are SS
- Operating torque is approximately three times standard valve torque
- RPTFE seats and stuffing box ring
- Blow-out-proof stem design
- Adjustable packing gland
- Chromium plated ball

STANDARD MATERIAL LIST

1. Handle	SS w/vinyl	6. Retainer	B16 (1/4" to 1")
2. Stem packing	Multifill PTFE	7. Gland nut	B584-C84400 (1-1/4" to 2")
3. Stem bearing	RPTFE	8. Stem	B16
4. Ball	B16, chrome plated	9. Lever nut	A276-316
5. Seat (2)	Multifill PTFE	10. Body seal	Steel, zinc plated
		11. Body	PTFE (1-1/4" to 2")
			B584-C84400



BRONZE BALL VALVE WITH
SPRING RETURN HANDLE

NUMBER	SIZE	A	B	C	D	Wt.
71-501-01	1/4"	.43	1.12	2.25	7.00	1.47
71-502-01	3/8"	.50	1.12	2.25	7.00	1.45
71-503-01	1/2"	.50	1.12	2.25	7.00	1.35
71-504-01	3/4"	.68	1.50	3.00	7.00	2.33
71-505-01	1"	.87	1.68	3.37	7.00	2.59
71-506-01	1-1/4"	1.00	2.00	4.00	9.00	4.18
71-507-01	1-1/2"	1.25	2.18	4.37	9.00	5.31
71-508-01	2"	1.50	2.34	4.68	9.00	6.41

VARIATIONS AVAILABLE:

71-540 Series (316 SS Ball & Stem)

71-590 Series (Pinned Retainer)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-08-	90° Reversed Stem	1/4" to 2"
-14-	Side Vented Ball (Uni-Directional)	1/4" to 2"
-20-	Slot Vented Ball	1/4" to 2"
-21-	UHMWPE Seats (Non-PTFE)	1/4" to 2"
-24-	Graphite Stem Packing	1/4" to 2"
-35-	PTFE Trim	1/4" to 2"
-49-	Assembled Dry	1/4" to 2"
-57-	Oxygen Cleaned	1/4" to 2"
-P01-	BSPP (Parallel) Thread Connection	1/4" to 2"
-T01-	BSPT (Tapered) Thread Connection	1/4" to 2"

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



74-100 Series

Chemical Resistant Nickel Ball Valve

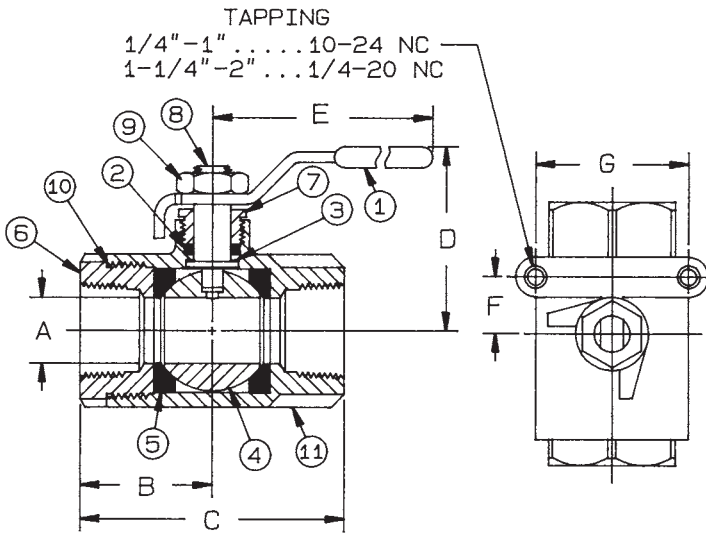
Threaded, 800 psig WOG, Cold Non-Shock. 150 psig Saturated Steam.
Vacuum Service to 29 inches Hg.

FEATURES

- Investment cast components
- RPTFE seats and stuffing box ring
- SS lever and nut
- Blow-out-proof stem design
- Adjustable packing gland
- (-24) Certified to API 607 4th Edition

STANDARD MATERIAL LIST

1. Lever and grip	304 SS w/vinyl	7. Gland nut	A276-316
2. Stem packing	RPTFE	8. Stem	Nickel 200, ASTM-B160
3. Stem bearing	RPTFE	9. Lever nut	18-8 SS
4. Ball	Nickel 200, ASTM-B162	10. Body seal	PTFE (1-1/2" & 2")
5. Seat (2)	RPTFE	11. Body	Nickel CZ100, ASTM-A494
6. Retainer	Nickel 200, ASTM-B160 (1/2" to 1") Nickel CZ100, ASTM-A494 (1-1/2" to 2")		



OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-02-	Stem Grounded	1/2" to 2"
-03-	1-1/4" CS Stem Extension	1/2" to 2"
-04-	2-1/4" CS Stem Extension	1/2" to 2"
-07-	Steel Tee Handle	1/2" to 2"
-14-	Side Vented Ball (Uni-Directional)	1/2" to 2"
-15-	Wheel Handle, Steel	1/2" to 2"
-16-	Chain Lever - Vertical	3/4" to 2"
-18-	Plain Yellow Grip	1/2" to 2"
-21-	UHMWPE Seats (Non-PTFE)	1/2" to 2"
-24-	Graphite Packing	1/2" to 2"
-27-	SS Latch-Lock Lever & Nut	1/2" to 2"
-30-	Cam-Lock and Grounded	1/2" to 2"
-32-	SS Tee Handle & Nut	1/2" to 2"
-35-	VTFE Trim	1/2" to 2"
-45-	Less Lever & Nut	1/2" to 2"
-46-	Latch Lock Lever - Lock Close Only	1/2" to 2"
-48-	SS Oval Handle (No Latch) & Nut	1/2" to 2"
-49-	Assembled Dry	1/2" to 2"
-50-	2-1/4" CS Locking Stem Extension	1/2" to 2"
-56-	Multifill Seats & Packing	1/2" to 2"
-58-	Chain Lever - Horizontal	3/4" to 2"
-60-	Grounded Ball & Stem	1/2" to 2"
-P01-	BSPP (Parallel) Thread Connection	1/2" to 2"
-T01-	BSPT (Tapered) Thread Connection	1/2" to 2"

CHEMICAL RESISTANT NICKEL BALL VALVE

NUMBER	SIZE	A	B	C	D	E	Wt.
74-103-01	1/2"	.50	1.12	2.25	1.75	3.87	.58
74-104-01	3/4"	.68	1.50	3.00	2.12	4.87	1.18
74-105-01	1"	.87	1.68	3.37	2.25	4.87	1.57
74-107-01	1-1/2"	1.25	2.18	4.37	3.06	8.00	4.11
74-108-01	2"	1.50	2.34	4.68	3.25	8.00	6.02

**For Pressure/Temperature Ratings,
Refer to Page M-16, Graph No. 22**



75-100 Series

Bronze Pad Locking Ball Valve

Threaded, 600 psig WOG, Cold Non-Shock. 150 psig Saturated Steam.

Vacuum Service to 29 inches Hg.

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

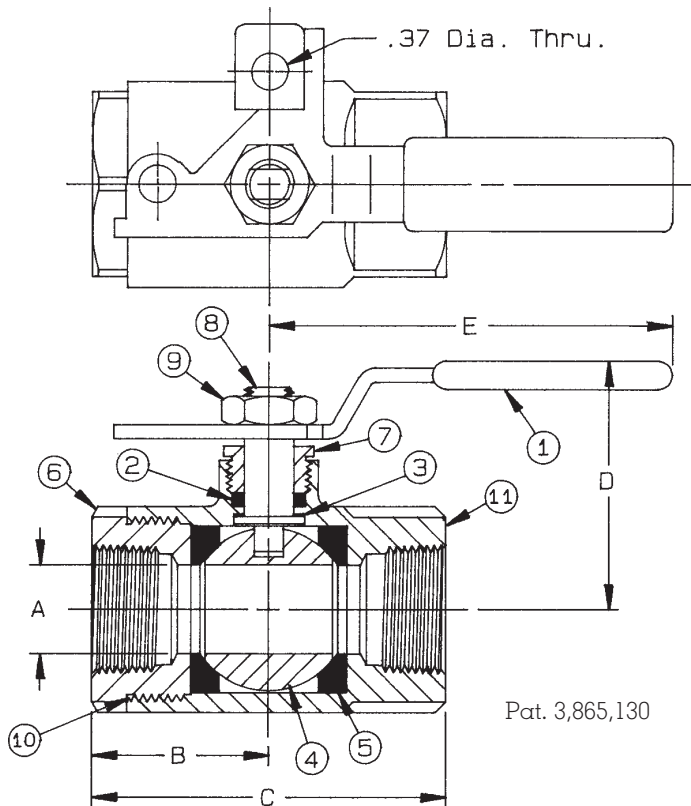
MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Chromium plated ball
- RPTFE seats and stuffing box ring
- May be padlocked in open or closed position with no change of hardware
- 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 (1-1/4" & 2")
5. Seat (2)	RPTFE	11. Body	B584-C84400
6. Retainer	B16 (1/4" to 1")		
	B584-C84400 (1-1/4" to 2")		



VARIATIONS AVAILABLE:

- 75-140 Series (316 SS Ball & Stem)
- 75-190 Series (Pinned Retainer)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-02-	Stem Grounded	1/4" to 2"
-05-	Plain Ball	1/4" to 2"
-08-	90° Reversed Stem	1/4" to 2"
-10-	SS Lever & Nut	1/4" to 2"
-14-	Side Vented Ball (Uni-Directional)	1/4" to 2"
-17-	Rough Chrome Plated - Bronze Valves	1/4" to 2"
-18-	Plain Yellow Grip	1/4" to 2"
-20-	Slot Vented Ball	1/4" to 2"
-24-	Graphite Packing	1/4" to 2"
-41-	Automatic Drain	1/4" to 2"
	see page J-8	
-49-	Assembled Dry	1/4" to 2"
-57-	Oxygen Cleaned	1/4" to 2"
-60-	Grounded Ball & Stem	1/4" to 2"
-P01-	BSPP (Parallel) Thread Connection	1/4" to 2"
-T01-	BSPT (Tapered) Thread Connection	1/4" to 2"

BRONZE PAD LOCKING BALL VALVE

NUMBER	SIZE	A	B	C	D	E	Wt.
75-101-01	1/4"	.43	1.12	2.25	1.81	3.00	.80
75-102-01	3/8"	.50	1.12	2.25	1.81	3.00	.77
75-103-01	1/2"	.50	1.12	2.25	1.81	3.00	.70
75-104-01	3/4"	.87	1.68	3.37	2.25	3.87	2.03
75-105-01	1"	.87	1.68	3.37	2.25	3.87	1.83
75-106-01	1-1/4"	1.00	2.00	4.00	2.62	5.50	3.48
75-107-01	1-1/2"	1.25	2.18	4.37	2.87	5.50	4.23
75-108-01	2"	1.50	2.34	4.68	3.06	5.50	5.69

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



76-500 Series

Stainless Steel Ball Valve with Spring Return Handle

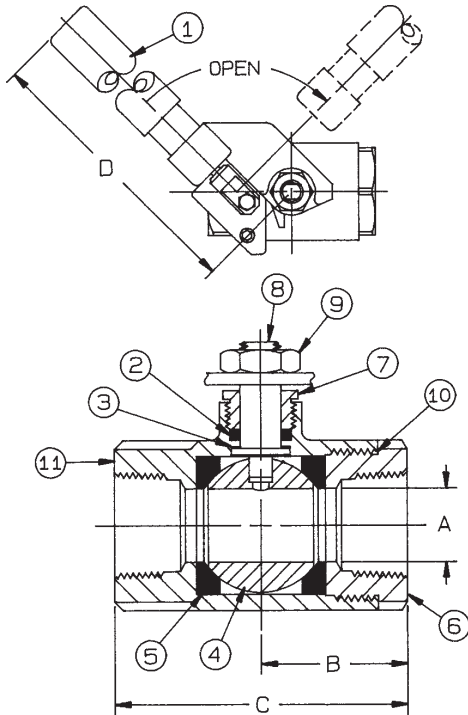
Threaded, 1/4" to 1" 2000 psig WOG, 1-1/4" to 2" 1500 psig WOG
 Cold Non-Shock. 150 psig Saturated Steam, Vacuum Service to 29 inches Hg.
 Federal Specification: WW-V-35C, Type: II, Composition: SS, Style: 3.
 MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Spring return to close (-01)
- Spring return to open (-08)
- RPTFE seats and stuffing box ring
- All components of lever are stainless steel
- Operating torque is approximately three times standard valve torque
- Blow-out-proof stem design
- Adjustable packing gland
- Meets NACE MR-01-75
- Investment cast components

STANDARD MATERIAL LIST

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



STAINLESS STEEL BALL VALVE WITH SPRING RETURN HANDLE

NUMBER	SIZE	A	B	C	D	Wt.
76-501-01	1/4"	.37	1.03	2.06	7.00	1.26
76-502-01	3/8"	.37	1.03	2.06	7.00	1.25
76-503-01	1/2"	.50	1.12	2.25	7.00	1.31
76-504-01	3/4"	.68	1.50	3.00	7.00	1.98
76-505-01	1"	.87	1.68	3.37	7.00	2.35
76-506-01	1-1/4"	1.00	2.00	4.00	9.00	3.96
76-507-01	1-1/2"	1.25	2.18	4.37	9.00	4.78
76-508-01	2"	1.50	2.75	5.50	9.00	6.66

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-08-	90° Reversed Stem	1/4" to 2"
-14-	Side Vented Ball (Uni-Directional)	1/4" to 2"
-21-	UHMWPE Seats (Non-PTFE)	1/4" to 2"
-24-	Graphite Packing	1/4" to 2"
-35-	VTFE Trim	1/4" to 2"
-49-	Assembled Dry	1/4" to 2"
-57-	Oxygen Cleaned	1/4" to 2"
-60-	Grounded Ball & Stem	1/4" to 2"
-P01-	BSPP (Parallel) Thread Connection	1/4" to 2"
-T01-	BSPT (Tapered) Thread Connection	1/4" to 2"

**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")**



78-100 Series

Bronze Ball Valve With Dust Cover and Chain

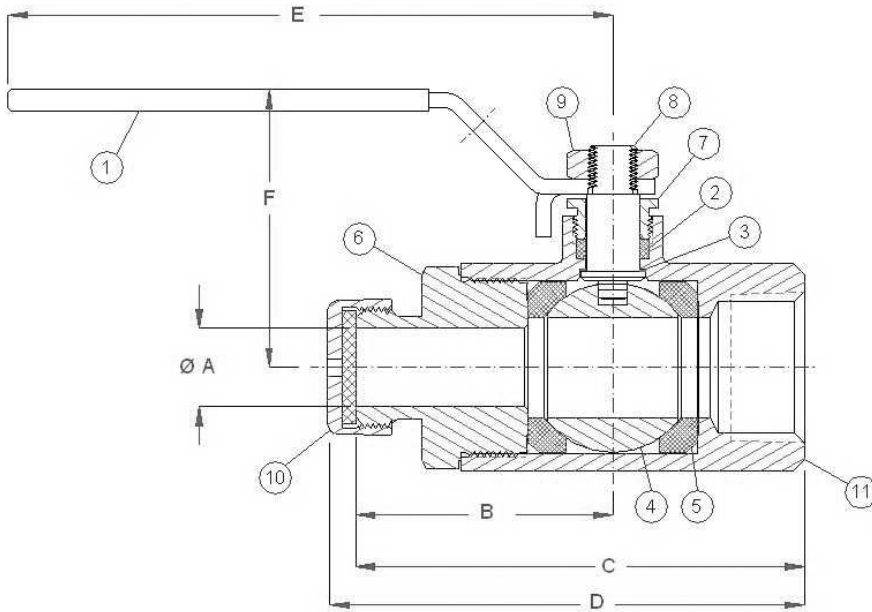
Threaded x 3/4" Hose Connection.

FEATURES

- Chromium plated ball
- RPTFE seats and stuffing box ring
- Securely attached dust cover with chain. **(Dust cover cannot be used to contain pressure)**
- Blow-out-proof stem design
- Adjustable packing gland

STANDARD MATERIAL LIST

1. Lever and grip	SS/vinyl	7. Gland nut	B16
2. Stem packing	RPTFE	8. Stem	B16
3. Stem bearing	RPTFE	9. Lever nut	SS
4. Ball	B16, chrome plated	10. Dust cover	B16
5. Seat (2)	RPTFE	11. Body	B584-C84400
6. Retainer	B16		



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

BRONZE BALL VALVE WITH CAP AND CHAIN

NUMBER	SIZE	A	B	C	D	E	F	Wt.
78-103-01	1/2" NPT x 3/4" HOSE	.50	1.68	2.81	2.97	3.87	1.75	.63
78-104-01	3/4" NPT x 3/4" HOSE	.68	1.96	3.50	3.67	4.87	2.12	1.39
78-165-01	1" NPT x 3/4" Hose	.87	2.24	3.92	4.16	5.28	2.43	2.11



78-124 & 78-125

Bronze 5-Port Fuel Selector Ball Valve

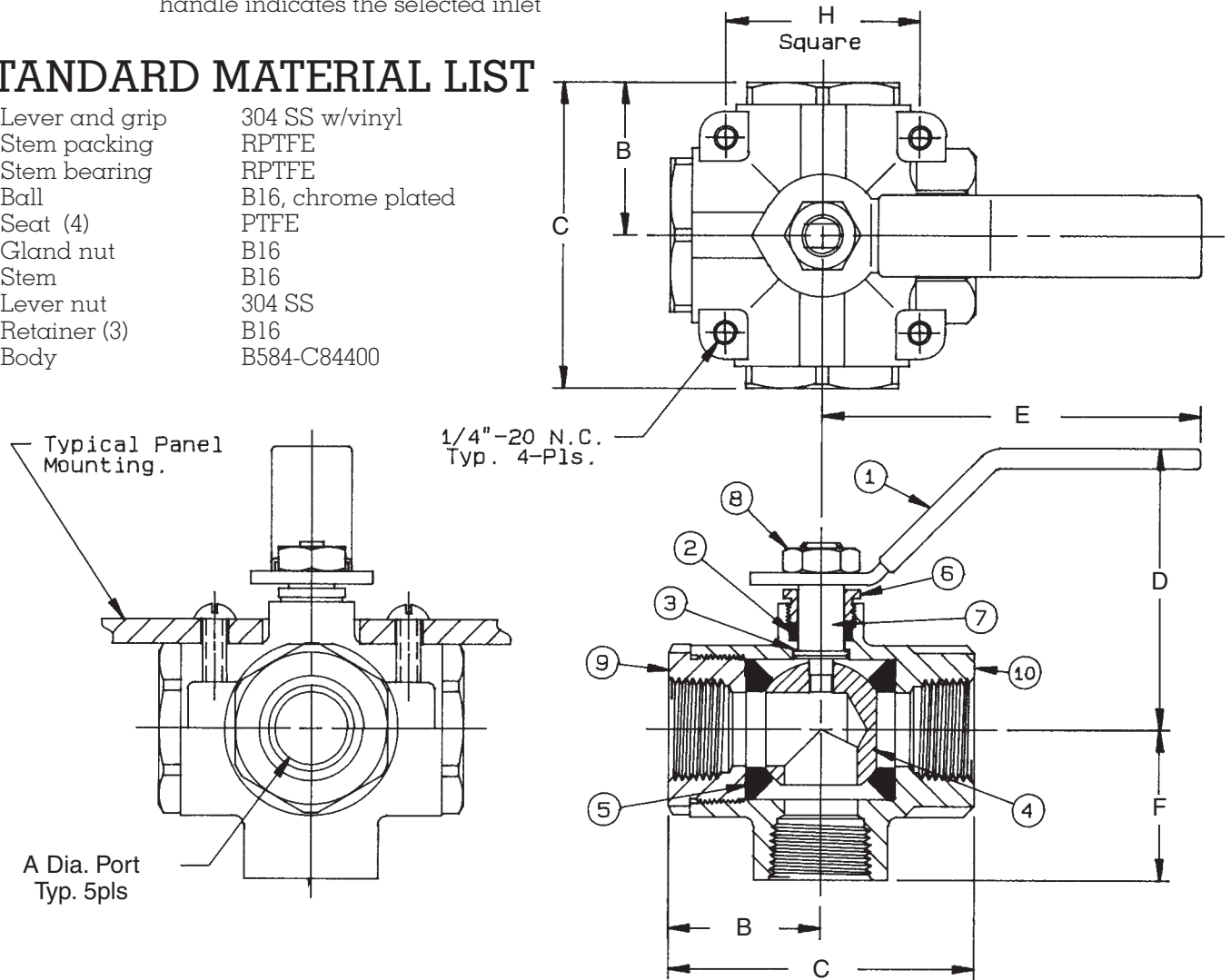
Threaded. 50 psig WOG.

FEATURES

- SS lever and nut
- RPTFE bearing and packing
- Non-lubricated design
- Operation: Four selected inlets feed on common outlet - pointer on handle indicates the selected inlet
- Blow-out-proof stem design
- Adjustable packing gland
- PTFE seats

STANDARD MATERIAL LIST

1. Lever and grip	304 SS w/vinyl
2. Stem packing	RPTFE
3. Stem bearing	RPTFE
4. Ball	B16, chrome plated
5. Seat (4)	PTFE
6. Gland nut	B16
7. Stem	B16
8. Lever nut	304 SS
9. Retainer (3)	B16
10. Body	B584-C84400



BRONZE 5-PORT FUEL SELECTOR BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	H	Wt./100
78-124-01	1/2"	.50	1.26	2.52	2.27	3.53	1.12	10-24	1.40	106
78-125-01A	3/4"	.75	1.53	3.12	2.87	3.87	1.53	1/4-20	1.98	264



78-200 Series

Bronze Ball Valve With Dust Cover And Chain

Solder End x 3/4" Hose Connection.

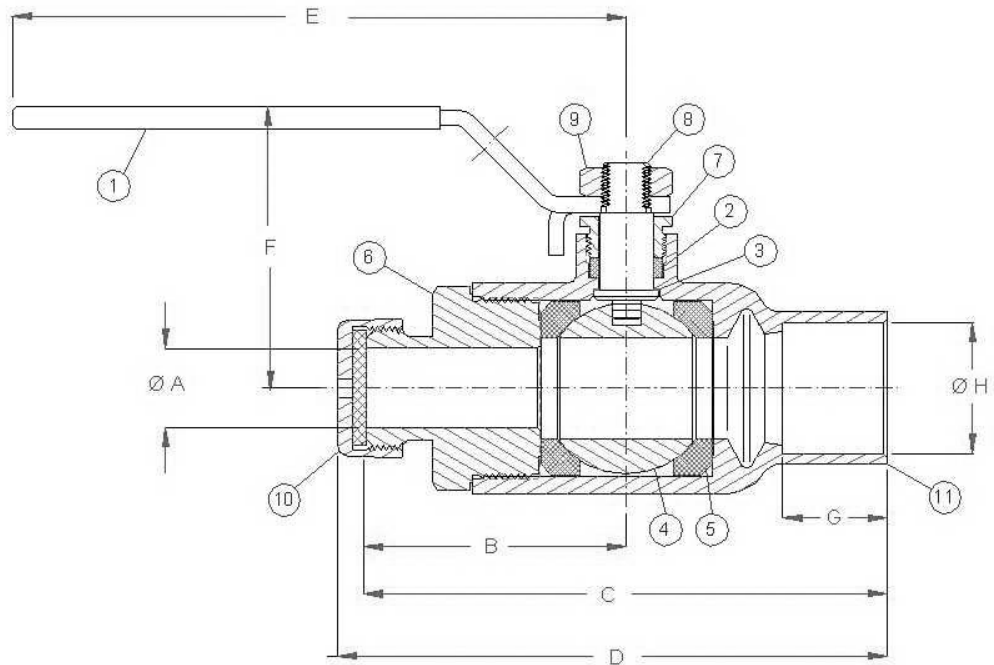
FEATURES

- Chromium plated ball
- RPTFE seats and stuffing box ring
- Securely attached dust cover with chain. **(Dust cover cannot be used to contain pressure)**
- Blow-out-proof stem design
- Adjustable packing gland

STANDARD MATERIAL LIST

1. Lever and grip	SS/vinyl	7. Gland nut	B16
2. Stem packing	RPTFE	8. Stem	B16
3. Stem bearing	RPTFE	9. Lever nut	SS
4. Ball	B16, chrome plated	10. Dust cover	B16
5. Seat (2)	RPTFE	11. Body	B584-C84400
6. Retainer	B16		

The 78-200 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

BRONZE BALL VALVE WITH CAP AND CHAIN

NUMBER	SIZE	A	B	C	D	E	F	G	H	Wt.
78-203-01	1/2" Solder x 3/4" Hose	.50	1.68	3.14	3.28	3.89	1.75	.500	.629	.71
78-204-01	3/4" Solder x 3/4" Hose	.68	1.96	3.94	4.09	4.89	2.12	.750	.879	1.44
78-195-01	1" Solder x 3/4" Hose	0.87	2.24	4.49	4.73	5.28	2.43	.900	1.129	2.13



78-200 Series

Bronze Threaded Surface Mount Ball Valve

NPT Threaded, 600 psig WOG, Cold Non-Shock. 150 psig Saturated Steam.

Vacuum Service to 29 inches Hg.

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

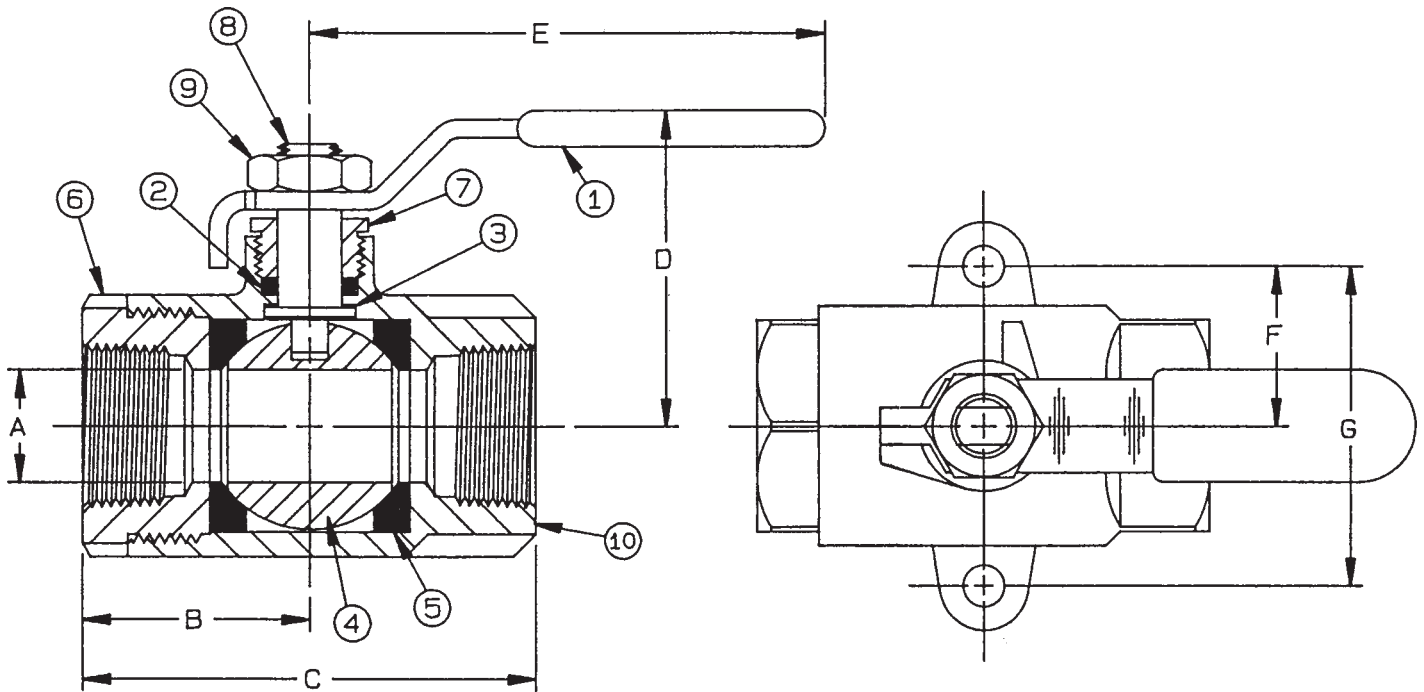
MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

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	6. Retainer	B16
2. Stem packing	RPTFE	7. Gland nut	B16
3. Stem bearing	RPTFE	8. Stem	B16
4. Ball	B16, chrome plated	9. Lever nut	Steel, zinc plated
5. Seat (2)	RPTFE	10. Body	B584-C84400



BRONZE THREADED SURFACE MOUNT BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	Wt.
78-248-01	1/4"	.43	1.12	2.25	1.78	3.87	.93	1.87	.68
78-250-01	3/8"	.50	1.12	2.25	1.78	3.87	.93	1.87	.68
78-256-01	1/2"	.50	1.12	2.25	1.78	3.87	.93	1.87	.65
78-438-01	3/4"	.68	1.50	3.00	2.12	4.87	1.06	2.12	1.40

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



78-257/267 Series

Brass And Bronze Instrumentation Ball Valve

Male x Female Threaded. 400 psig WOG, Cold Non-Shock. Air & Liquid Service Rating.

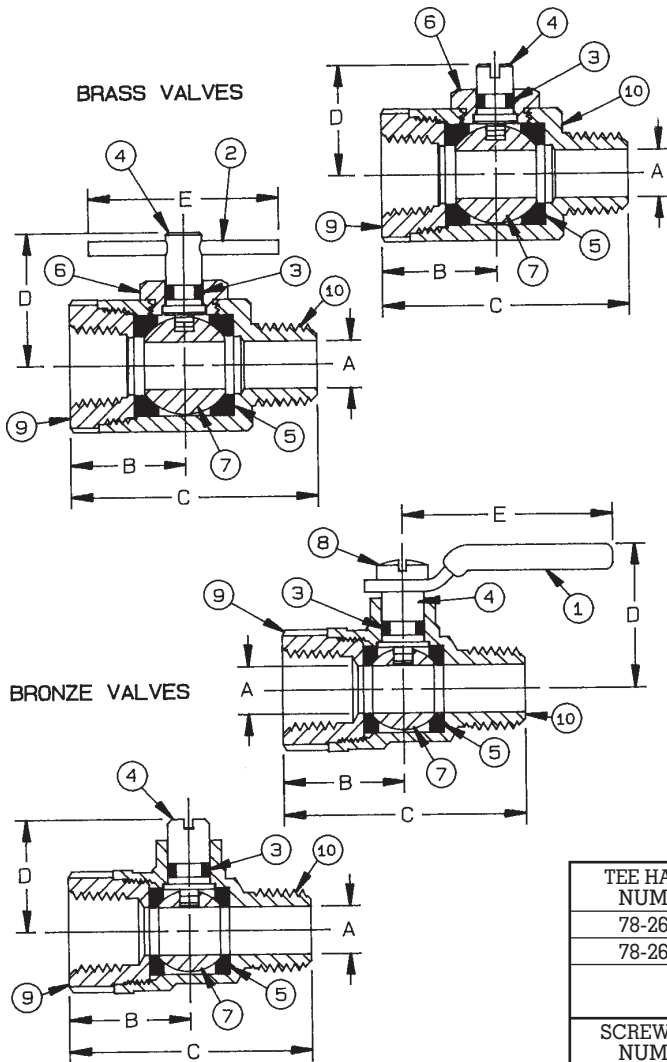
FEATURES

- Micro-finish ball
- Nitrile stem seal
- Optional mixed end fittings available
- Blow-out-proof stem design
- Plated steel tee handle
- PTFE seats
- Compact design

STANDARD MATERIAL LIST

- | | |
|-------------------|----------------------------|
| 1. Lever and grip | Steel, zinc plated w/vinyl |
| 2. Drive pin | Steel, zinc plated |
| 3. O-Ring | Nitrile |
| 4. Stem | B16 |
| 5. Seat (2) | PTFE |
| 6. Stem boss | B16 |
| 7. Ball* | B16 |
| 8. Stem screw | Steel, zinc plated |
| 9. Retainer | B16 |
| 10. Body | B16 or B584-C84400 |

* Chrome Plated Ball In Bronze Valves.



**For Pressure/Temperature Ratings,
Refer to Page M-8, Graph No. 3**

BRASS INSTRUMENTATION BALL VALVE

TEE HANDLE NUMBER	SIZE	A	B	C	D	E	Cv*	Wt.
78-260-05	1/8" M x 1/8" F	.21	.37	1.43	.87	1.25	4.0	.20
78-261-05	1/4" M x 1/4" F	.31	.43	1.43	.87	1.25	5.5	.19

BRASS INSTRUMENTATION BALL VALVE

SCREW SLOT NUMBER	SIZE	A	B	C	D	E	Cv*	Wt.
78-262-05	1/8" M X 1/8" F	.21	.37	1.43	.75	N/A	4.0	.20
78-263-05	1/4" M X 1/4" F	.31	.43	1.43	.75	N/A	5.5	.19

BRONZE INSTRUMENTATION BALL VALVE

SCREW SLOT NUMBER	SIZE	A	B	C	D	E	Cv*	Wt.
78-257-01	1/8" M x 1/4" F	.21	.80	1.60	.72	N/A	4.0	.19
78-258-01	1/4" M x 1/4" F	.31	.80	1.60	.72	N/A	5.5	.19

BRONZE INSTRUMENTATION BALL VALVE

LEVER HANDLE NUMBER	SIZE	A	B	C	D	E	Cv*	Wt.
78-267-01	1/4" M X 1/4" F	.25	.65	1.45	.93	1.37	5.5	.20

*The Cv factor is the gallons of water per minute that the valve will pass with a 1 psig pressure drop.



78-621/625 Series

Bronze Irrigation Ball Valve

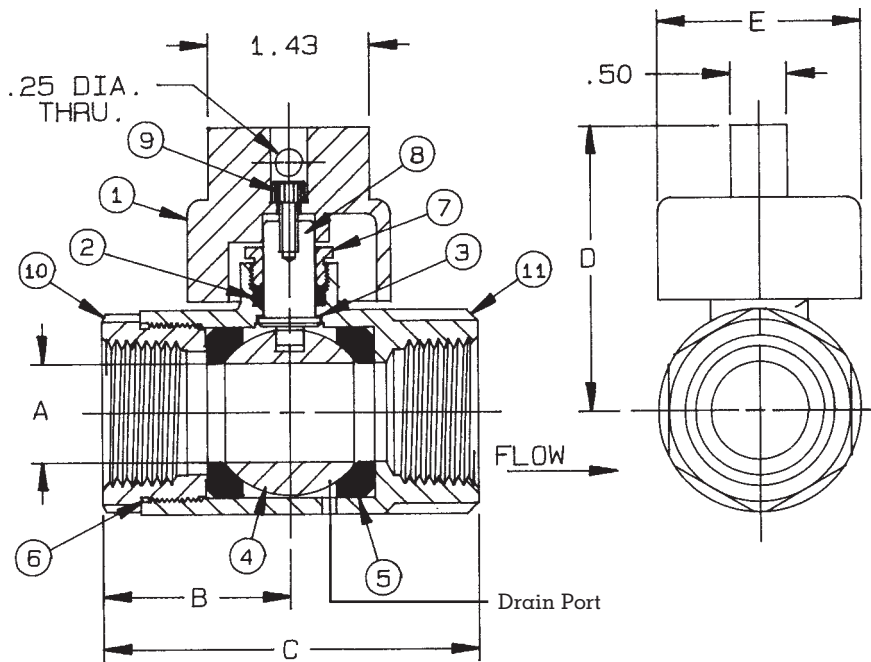
Threaded. 600 psig Water, Cold Non-Shock.

FEATURES

- Chromium plated ball
- RPTFE seats and stuffing box ring
- Temperature range: +50°F to +400°F
- Blow-out-proof stem design
- Adjustable packing gland

STANDARD MATERIAL LIST

1. Head adapter	A351-CF8M	7. Gland nut	B16
2. Stem packing	RPTFE	8. Stem	B16
3. Stem bearing	RPTFE	9. Screw	SS
4. Ball	B16, chrome plated	10. Retainer	B16 (3/4" to 1") B584-C84400 (1-1/4" to 2")
5. Seat (2)	RPTFE	11. Body	B584-C84400
6. Body seal	PTFE (1-1/4" to 2")		



FEATURES:

- Automatic Draining in the Off Position
- SS Underground Curb Stop Handle

Caution: Do not use where drained media could cause damage. See options section (option -41) for description of Auto-Drain feature.

BRONZE IRRIGATION BALL VALVE

NUMBER	SIZE	A	B	C	D	E	Wt.
78-621-01	3/4"	.68	1.47	2.96	2.40	1.81	1.59
78-622-01	1"	.87	1.66	3.34	2.53	1.81	1.92
78-623-01	1-1/4"	1.00	1.98	3.97	3.00	2.50	3.57
78-624-01	1-1/2"	1.25	2.12	4.28	3.18	2.50	4.68
78-625-01	2"	1.50	2.35	4.67	3.37	2.50	6.11

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



78-664/78-962 Series

Bronze Ball Valve With Center Drain

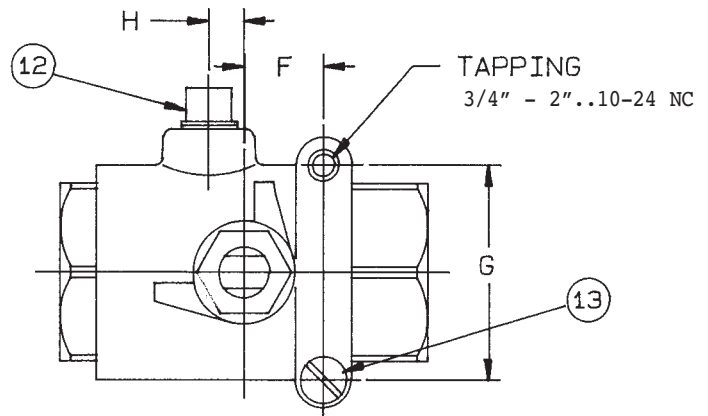
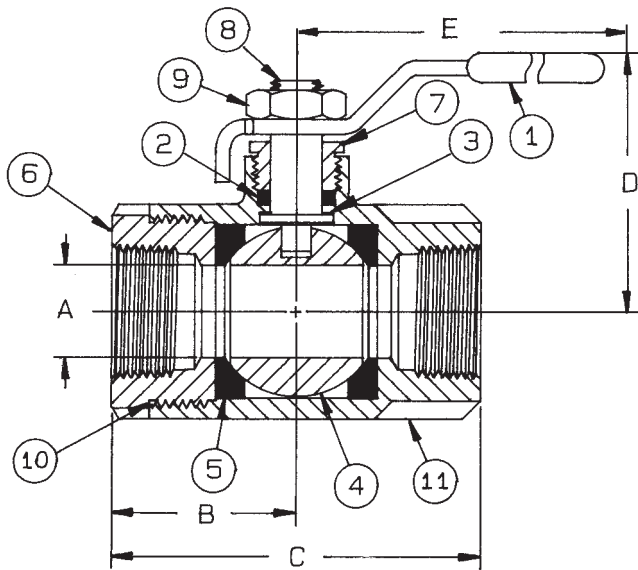
Threaded, 600 psig WOG, Cold Non-Shock.

FEATURES

- Chromium plated ball
- RPTFE seats and stuffing box ring
- Mounting pad with bonding screw
- Blow-out-proof stem design
- Adjustable packing gland
- Drainable ball cavity to prevent freeze damage

STANDARD MATERIAL LIST

1. Lever and grip	304 SS w/vinyl	7. Gland nut	B16
2. Stem packing	RPTFE	8. Stem	B16
3. Stem bearing	RPTFE	9. Lever nut	SS
4. Ball	B16, chrome plated	10. Body seal	PTFE (1-1/4" to 2")
5. Seat (2)	RPTFE	11. Body	B584-C84400
6. Retainer	B16 (3/4" & 1")	12. Drain plug	B16
	B584-C84400 (1-1/4" to 2")	13. Screw	Brass



BRONZE BALL VALVE WITH CENTER DRAIN

NUMBER	SIZE	A	B	C	D	E	F	G	H	Wt.
78-664-01	3/4"	.68	1.50	3.00	2.12	4.87	.87	1.37	.17	1.53
78-665-01	1"	.87	1.68	3.37	2.25	4.87	.87	1.37	.21	1.86
78-666-01	1-1/4"	1.00	2.00	4.00	2.62	5.50	.93	1.50	.28	3.39
78-667-01	1-1/2"	1.25	2.18	4.37	3.05	8.00	.93	1.50	.40	4.68
78-962-01	2"	1.50	2.34	4.68	3.24	8.00	.93	1.50	.45	5.72

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



78-668 Series

Bronze Purge And Drain Ball Valve

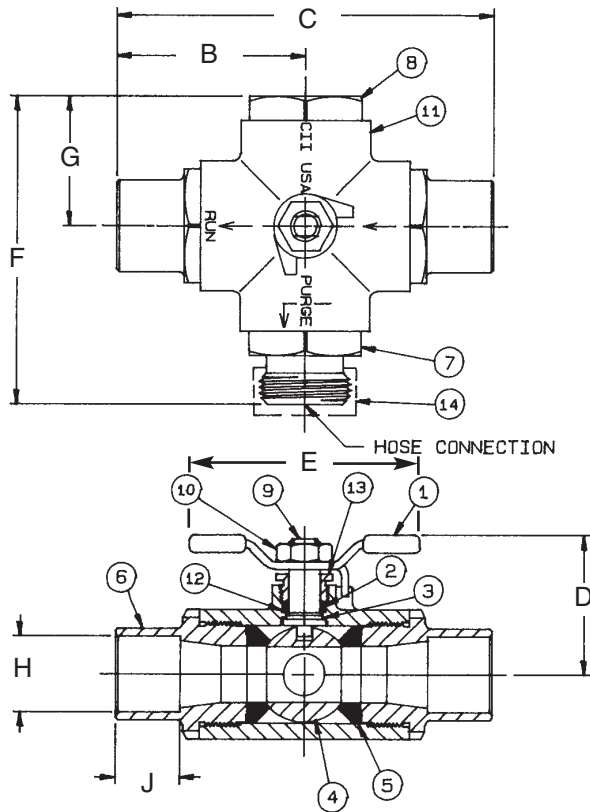
Solder End Flow Port, Hose Connection Drain Port. 600 psig WOG, Cold Non-Shock.

FEATURES

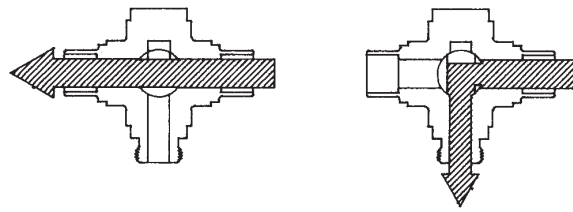
- Chromium plated ball
- RPTFE seats and stuffing box ring
- Hose thread connection for disposal of drained media
- Blow-out-proof stem design
- Adjustable packing gland
- Furnished with dust cover* and chain

STANDARD MATERIAL LIST

1. Lever and grip	Steel, zinc plated w/vinyl	8. Port Cap	B16
2. Stem packing	RPTFE	9. Stem	B16
3. Stem bearing	RPTFE	10. Lever nut	Steel, zinc plated
4. Ball	B16, chrome plated	11. Body	B584-C84400
5. Seat (2)	RPTFE	12. Washer	316 SS
6. Solder Retainer (2)	B16	13. Gland screw	B16
7. Hose Retainer	B16	14. Dust cover	B16



FLOW PATTERN



BRONZE PURGE & DRAIN BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	H	J	Wt.
78-668-01	3/4"	.64	2.19	4.37	1.62	2.59	3.56	1.50	.88	.75	2.66
78-668-02	1"	.75	2.41	4.82	1.91	3.56	5.33	1.91	1.13	.90	2.75

The 78-668 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.

* Dust cover cannot be used to contain pressure.

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



89-500 Series

Carbon Steel Ball Valve With Spring Return Handle

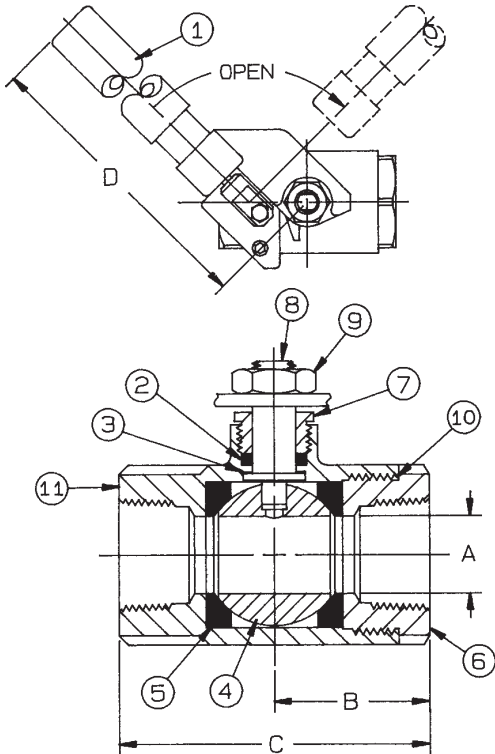
Threaded, 1/4" to 1" 2000 psig WOG, 1-1/4" to 2" 1500 psig WOG.
 Cold Non-Shock, 150 psig Saturated Steam, Vacuum Service to 29 inches Hg.
 Federal Specification: WW-V-35C, Type: II, Composition: CS, Style: 3.
 MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Spring return to close (-01)
- Spring return to open (-08)
- RPTFE stuffing box ring
- All components of lever are stainless steel
- Nitride corrosion protection
- Operating torque is approximately three times standard valve torque
- Blow-out-proof stem design
- Adjustable packing gland
- Investment cast components
- Multifill seats

STANDARD MATERIAL LIST

1. Handle	SS	6. Retainer	A108-CS (1/4" to 1")
2. Stem packing	Multifill PTFE	7. Gland nut	A216-WCB (1-1/4" to 2")
3. Stem bearing	RPTFE	8. Stem	A108-CS
4. Ball	A108-CS chrome plated	9. Lever nut	A276-316
5. Seat (2)	Multifill PTFE	10. Body seal	Steel, Zinc Plated
		11. Body	PTFE (1-1/4" to 2")
			A216-WCB



CARBON STEEL BALL VALVE WITH SPRING RETURN HANDLE

NUMBER	SIZE	A	B	C	D	Wt.
89-501-01	1/4"	.37	1.03	2.06	7.00	1.26
89-502-01	3/8"	.37	1.03	2.06	7.00	1.25
89-503-01	1/2"	.50	1.12	2.25	7.00	1.31
89-504-01	3/4"	.68	1.50	3.00	7.00	1.98
89-505-01	1"	.87	1.68	3.37	7.00	2.35
89-506-01	1-1/4"	1.00	2.00	4.00	9.00	3.96
89-507-01	1-1/2"	1.25	2.18	4.37	9.00	4.78
89-508-01	2"	1.50	2.75	5.50	9.00	6.66

VARIATIONS AVAILABLE:

89-540 Series (316 SS Ball & Stem)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-08-	90° Reversed Stem	1/4" to 2"
-14-	Side Vented Ball (Uni-Directional)	1/4" to 2"
-21-	UHMWPE Seats (Non-PTFE)	1/4" to 2"
-24-	Graphite Packing	1/4" to 2"
-35-	VTFE Trim	1/4" to 2"
-P01-	BSPP (Parallel) Thread Connection	1/4" to 2"
-T01-	BSPT (Tapered) Thread Connection	1/4" to 2"

**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")**



95-100 Series

Bronze Full Port Stop and Drain Ball Valve

Threaded, 400 psig WOG, Cold Non-Shock.

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
- Drain cap designed to prevent loss
- Blow-out-proof stem design
- Adjustable packing gland
- Rugged construction

STANDARD MATERIAL LIST

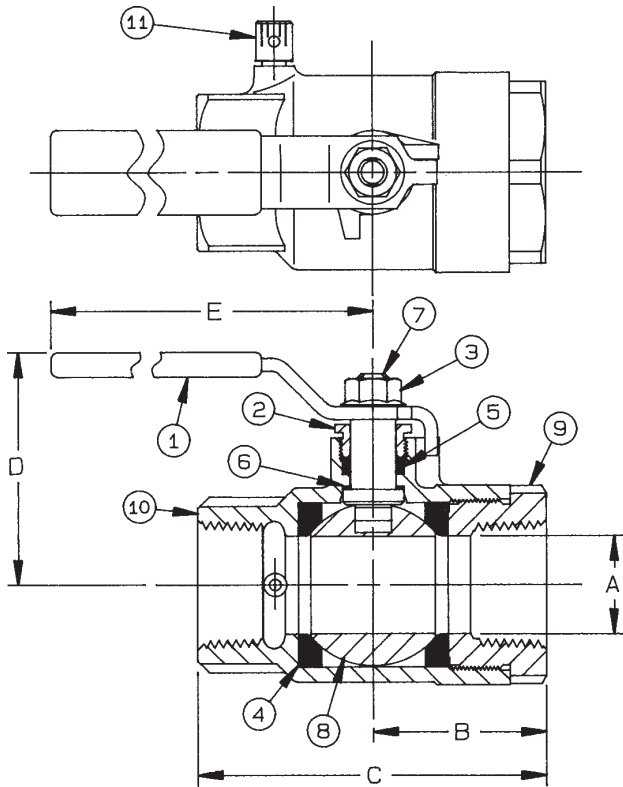
1. Lever and grip	Steel, zinc plated w/vinyl	7. Stem	B16
2. Gland screw	B16	8. Ball	B16, chrome plated
3. Lever nut	Zinc plated steel	9. Retainer	B16
4. Seat (2)	RPTFE	10. Body	B584-C84400
5. Stem packing	RPTFE	11. Cap and seal	B16 and EPR
6. Stem bearing	RPTFE		

VARIATIONS AVAILABLE:

95-120 Series (Adjustable Stop Lever)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-07-	Steel Tee Handle	1/2" to 1"
-08-	90° Reversed Stem	1/2" to 1"
-10-	SS Lever & Nut	1/2" to 1"
-14-	Side Vented Ball (Uni-Directional)	1/2" to 1"
-15-	Wheel Handle, Steel	1/2" to 1"
-18-	Plain Yellow Grip	1/2" to 1"
-20-	Slot Vented Ball	1/2" to 1"
-27-	SS Latch-Lock Lever & Nut	1/2" to 1"
-32-	SS Tee Handle & Nut	1/2" to 1"
-45-	Less Lever & Nut	1/2" to 1"
-46-	Latch Lock Lever - Lock Close Only	1/2" to 1"
-48-	SS Oval Handle (No Latch) & Nut	1/2" to 1"
-49-	Assembled Dry	1/2" to 1"
-63-	Threaded x Solder Retainer	1/2" to 1"



BRONZE FULL PORT STOP AND DRAIN BALL VALVE

NUMBER	SIZE	A	B	C	D	E	Wt.
95-103-01	1/2"	.50	1.09	2.18	1.75	3.87	.63
95-104-01	3/4"	.81	1.56	3.12	2.15	4.87	1.39
95-105-01	1"	1.00	1.81	3.62	2.43	4.87	1.70

**For Pressure/Temperature Ratings,
Refer to Page M-8, Graph No. 3**



95-200 Series

Bronze Solder End Full Port Stop and Drain Ball Valve

Solder End, 400 psig WOG, Cold Non-Shock.

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
- Drain cap designed to prevent loss
- Blow-out-proof stem design
- Adjustable packing gland
- Rugged construction

STANDARD MATERIAL LIST

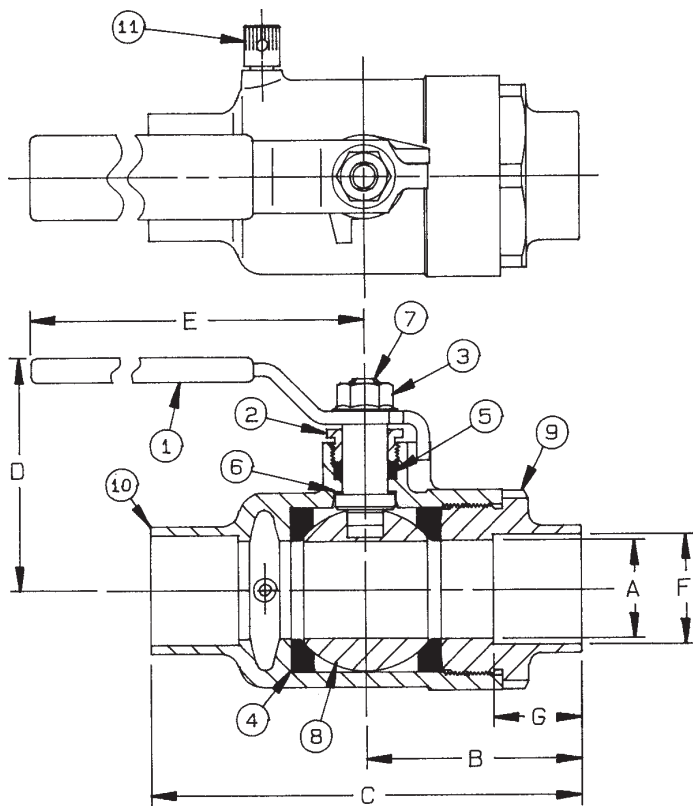
1. Lever and grip	Steel, zinc plated w/vinyl	7. Stem	B16
2. Gland screw	B16	8. Ball	B16, chrome plated
3. Lever nut	Steel, zinc plated	9. Retainer	B16
4. Seat (2)	RPTFE	10. Body	B584-C84400
5. Stem packing	RPTFE	11. Cap and seal	B16 and EPR
6. Stem bearing	RPTFE		

VARIATIONS AVAILABLE:

95-220 Series (Adjustable Stop Lever)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-07-	Steel Tee Handle	1/2" to 1"
-08-	90° Reversed Stem	1/2" to 1"
-10-	SS Lever & Nut	1/2" to 1"
-14-	Side Vented Ball (Uni-Directional)	1/2" to 1"
-15-	Wheel Handle, Steel	1/2" to 1"
-18-	Plain Yellow Grip	1/2" to 1"
-20-	Slot Vented Ball	1/2" to 1"
-24-	Graphite Packing	1/2" to 1"
-27-	SS Latch-Lock Lever & Nut	1/2" to 1"
-32-	SS Tee Handle & Nut	1/2" to 1"
-45-	Less Lever & Nut	1/2" to 1"
-46-	Latch Lock Lever - Lock Close Only	1/2" to 1"
-48-	SS Oval Handle (No Latch) & Nut	1/2" to 1"
-49-	Assembled Dry	1/2" to 1"



The 95-200 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 temperatures not to exceed 500°F.

BRONZE SOLDER END STOP AND DRAIN FULL PORT BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	Wt.
95-203-01	1/2"	.50	1.43	2.87	1.75	3.87	.628	.50	.70
95-204-01	3/4"	.81	2.12	4.12	2.15	4.87	.878	.75	1.23
95-205-01	1"	1.00	2.21	4.43	2.43	4.87	1.128	.90	1.90

For Pressure/Temperature Ratings, Refer to Page M-8, Graph No. 3



82-200 Series

Bronze 3-Piece Full Port Ball Valve With Male Brazed Extensions

Solder End, 600 psig WOG, Cold Non-Shock. 150 psig Saturated Steam.

Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: BZ, Style: 1.

Designed for soft solder or brazed installation without disassembly.

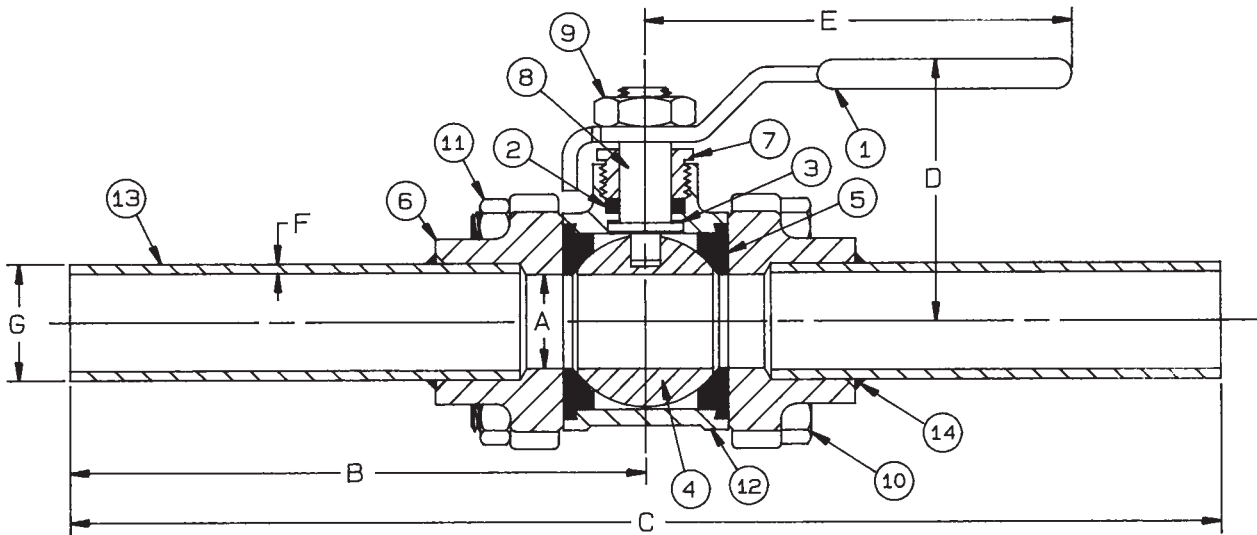
MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Full port configuration
- RPTFE seats and seals
- In-line repairable
- Blow-out-proof stem design
- Adjustable packing gland
- Latch lock handle optional

STANDARD MATERIAL LIST

1. Lever and grip	Steel, zinc plated w/vinyl	9. Lever nut	Steel, zinc plated
2. Stem packing	RPTFE	10. Body bolt	Steel, zinc plated
3. Stem bearing	RPTFE	11. Hex nut	Steel, zinc plated
4. Ball	B16, chrome plated	12. Body	B584-C84400
5. Seat (2)	RPTFE	13. Extension	Type K copper tubing
6. End cap (2)	B584-C84400	14. Brazing alloy	Sil-Fos 5
7. Gland	B16	15. Cap plugs	(not shown)
8. Stem	B16		



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

BRONZE 3-PIECE FULL PORT BALL VALVE WITH MALE BRAZED EXTENSIONS

STANDARD		OXYGEN CLEANED		SIZE	A	B	C	D	E	F	G*	Wt.
PART NUMBERS	PART NO. W/316 SS BALL & STEM	PART NUMBERS	PART NO. W/316 SS BALL & STEM									
82-203-B8	82-243-A8	82-203-A1	82-243-A7	1/2"	.62	6.90	13.81	2.00	4.87	.049	5/8"	1.66
82-204-A8	82-244-B3	82-204-A2	82-244-B2	3/4"	.81	6.96	13.93	2.18	4.87	.065	7/8"	2.37
82-205-B7	82-245-B1	82-205-A1	82-245-B0	1"	1.00	6.97	13.95	2.62	5.50	.065	1-1/8"	3.43
82-206-B7	82-246-B0	82-206-A1	82-246-A9	1-1/4"	1.25	7.40	14.75	2.89	5.50	.065	1-3/8"	5.52
82-207-B2	82-247-B2	82-207-A1	82-247-B0	1-1/2"	1.50	7.53	15.07	3.37	8.00	.072	1-5/8"	8.51
82-208-B7	82-248-B2	82-208-A1	82-248-B1	2"	2.00	7.61	15.23	3.70	8.00	.083	2-1/8"	14.20

*NOMINAL TUBING O.D.



82-200 Series

Bronze 3-Piece Full Port Ball Valve With 6" Female Brazed Extensions

Solder End, 600 psig WOG, Cold Non-Shock. 150 psig Saturated Steam.

Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: BZ, Style: 1.

Designed for soft solder or brazed installation without disassembly.

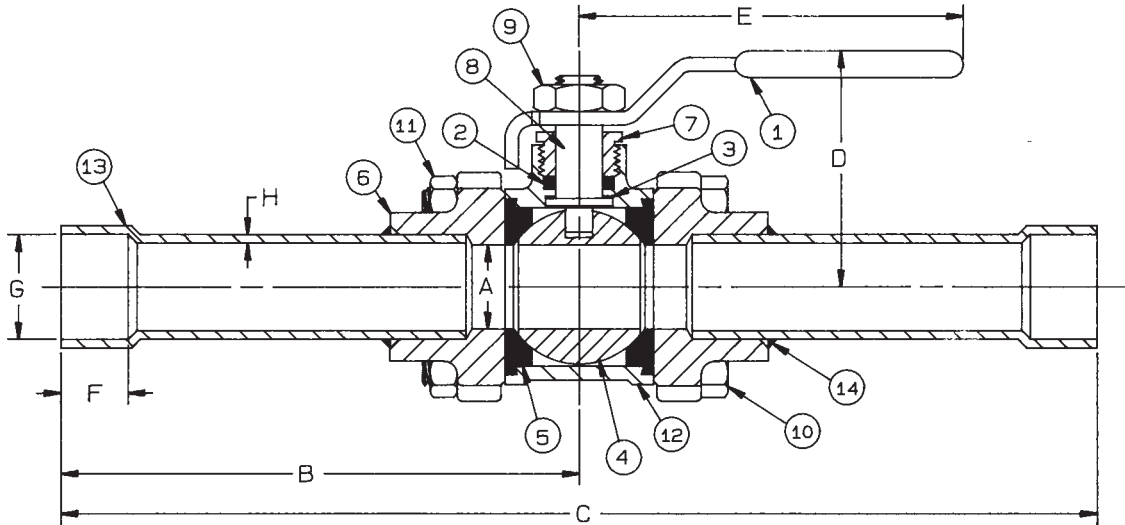
MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- Full port configuration
- RPTFE seats & seals
- In-line repairable
- Blow-out-proof stem design
- Adjustable packing gland
- Latch lock handle optional

STANDARD MATERIAL LIST

- | | | | |
|-------------------|----------------------------|-------------------|----------------------|
| 1. Lever and grip | Steel, zinc plated w/vinyl | 9. Lever nut | Steel, zinc plated |
| 2. Stem packing | RPTFE | 10. Body bolt | Steel, zinc plated |
| 3. Stem bearing | RPTFE | 11. Hex nut | Steel, zinc plated |
| 4. Ball | B16, chrome plated | 12. Body | B584-C84400 |
| 5. Seat (2) | RPTFE | 13. Extension | Type K copper tubing |
| 6. End cap (2) | B584-C84400 | 14. Brazing alloy | Sil-Fos 5 |
| 7. Gland | B16 | 15. Cap plugs | (not shown) |
| 8. Stem | B16 | | |



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

BRONZE 3-PIECE FULL PORT BALL VALVE WITH FEMALE BRAZED EXTENSIONS

STANDARD NUMBERS	OXYGEN CLEANED	SIZE	A	B	C	D	E	F	G*	H	Wt.
82-203-C2	82-203-C3	1/2"	.62	7.40	14.80	2.00	4.87	.50	5/8"	.049	1.7
82-204-C3	82-204-C4	3/4"	.81	7.71	15.42	2.18	4.87	.75	7/8"	.065	2.4
82-205-C2	82-205-C3	1"	1.00	7.92	15.84	2.62	5.50	.90	1-1/8"	.065	3.5
82-206-C1	82-206-C2	1-1/4"	1.25	8.45	16.90	2.89	5.50	.96	1-3/8"	.065	5.6
82-207-B8	82-207-B9	1-1/2"	1.50	8.58	17.16	3.37	8.00	1.09	1-5/8"	.072	8.6
82-208-C1	82-208-C2	2"	2.00	9.06	18.12	3.70	8.00	1.34	2-1/8"	.083	14.3

*NOMINAL TUBING O.D.



70-200-C8 Series

Bronze Standard Port Ball Valve With 6" Female Brazed Extensions

Solder end, 600 psig WOG, Cold Non-shock. 150 psig Saturated Steam.
 Vacuum Service to 29 inches Hg.
 MSS SP-110; Ball Valves Threaded, SW, Solder Joint, Grooved and Flared Ends.

FEATURES

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

STANDARD MATERIAL LIST

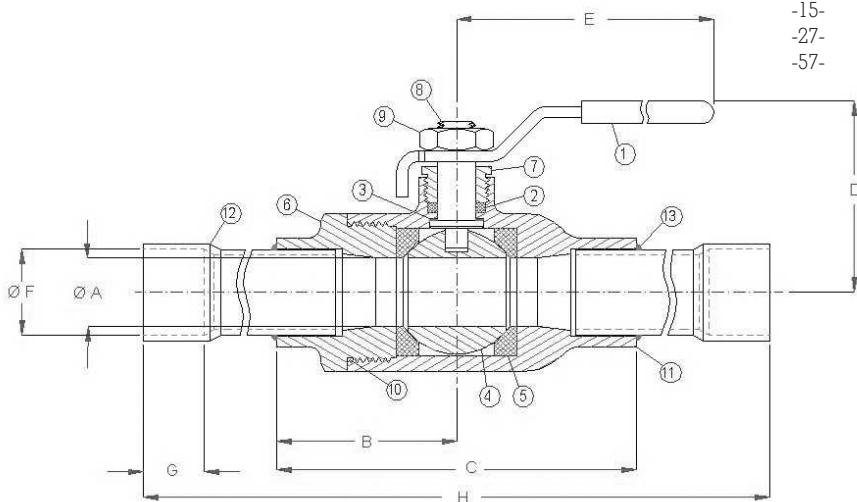
1. Lever & grip	Steel, zinc plated, w/vinyl	7. Gland nut	B16
2. Stem packing	MPTFE	8. Stem	B16
3. Stem bearing	RPTFE	9. Lever nut	Steel, zinc plated
4. Ball	B16, chrome plated	10. Body Seal	PTFE (1-1/4" to 3")
5. Seat (2)	RPTFE	11. Body	B584 C84400
6. Retainer	B16 (1/2" to 1") B584 C84400 (1-1/4" to 3")	12. Extension	Type K copper tubing Sil-Fos 5
		13. Brazing alloy	

VARIATIONS AVAILABLE:

70-240-C8 Series (316 SS Ball & Stem)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-04-	2-1/4" CS Stem Extension	1/2" to 3"
-07-	Steel Tee Handle	1/2" to 2"
-15-	Wheel Handle, Steel	1/2" to 2"
-27-	SS Latch Lock Lever & Nut	1/2" to 3"
-57-	Oxygen Cleaned	1/2" to 3"



BRONZE STANDARD PORT BALL VALVE WITH 6" FEMALE BRAZED EXTENTIONS

SIZE	PART #	A	B	C	D	E	F	G	H.
1/2"	70-203-C8	.50	1.43	2.87	1.75	3.87	.630	.50	14.87
3/4"	70-204-C8	.68	1.93	3.87	2.12	4.87	.880	.75	15.87
1"	70-205-C8	.87	2.25	4.50	2.25	4.87	1.130	.90	16.50
1-1/4"	70-206-C8	1.00	2.31	4.62	2.62	5.50	1.380	.96	16.62
1-1/2"	70-207-C8	1.25	2.62	5.25	3.06	8.00	1.630	1.09	17.25
2"	70-208-C8	1.50	3.18	6.37	3.25	8.00	2.130	1.34	18.37
2-1/2"	70-209-C8A	2.00	3.74	7.51	3.75	8.00	2.630	1.48	19.51
3"	70-200-C8	2.50	4.12	8.25	4.12	8.00	3.130	1.67	20.25

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



77-200-C8 Series

Bronze Full Port Ball Valve With 6" Female Brazed Extensions

Solder end, 600 psig WOG, Cold Non-shock. 150 psig Saturated Steam.

Vacuum Service to 29 inches Hg.

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

FEATURES

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

STANDARD MATERIAL LIST

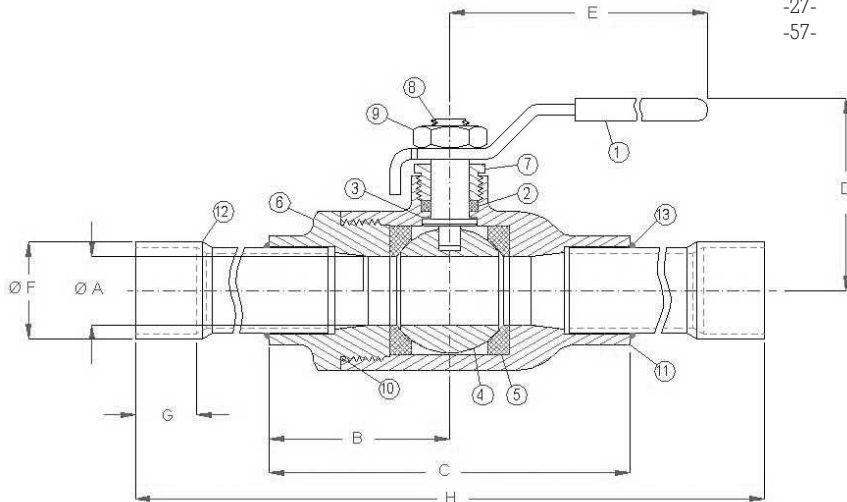
1. Lever & grip	Steel, zinc plated, w/vinyl	7. Gland nut	B16
2. Stem packing	MPTFE	8. Stem	B16
3. Stem bearing	RPTFE	9. Lever nut	Steel, zinc plated
4. Ball	B16, chrome plated	10. Body Seal	PTFE (1-1/4" to 3")
5. Seat (2)	RPTFE	11. Body	B584 C84400
6. Retainer	B16 (1/2" to 1")	12. Extension	Type K copper tubing
	B584 C84400 (1-1/4" to 3")	13. Brazing alloy	Sil-Fos 5

VARIATIONS AVAILABLE:

77-240-C8 Series (316 SS Ball & Stem)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-04-	2-1/4" CS Stem Extension	3/4" to 2-1/2"
-07-	Steel Tee Handle	3/4" to 1-1/4"
-15-	Wheel Handle, Steel	3/4" to 1-1/4"
-27-	SS Latch Lock Lever & Nut	3/4" to 2-1/2"
-57-	Oxygen Cleaned	3/4" to 2-1/2"



BRONZE FULL PORT BALL VALVE WITH 6" FEMALE BRAZED EXTENTIONS

SIZE	PART #	A	B	C	D	E	F	G	H.
3/4"	77-204-C8	.81	2.12	4.12	2.12	4.87	.880	.75	16.12
1"	77-205-C8	1.00	2.33	4.64	2.62	5.50	1.130	.90	16.64
1-1/4"	77-206-C8	1.25	2.60	5.15	2.87	5.50	1.380	.96	17.15
1-1/2"	77-207-C8	1.50	3.00	6.00	3.34	8.00	1.630	1.09	18.00
2"	77-208-C8	2.00	3.62	7.24	3.71	8.00	2.130	1.34	19.24
2-1/2"	77-209-C8	2.50	3.93	7.87	4.12	8.00	2.630	1.48	19.87

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



73-300 Series

Carbon Steel Double Union End Ball Valve

Threaded, 3000 psig WOG, Cold Non-Shock, 150 psig Saturated Steam.

Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: CS, Style: 1.

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

FEATURES

- Heavy duty quarter turn lever
- RPTFE seats and seals
- Steel barstock design
- Easy installation and maintenance
- Blow-out-proof stem design
- Adjustable packing gland
- Chromium plated ball
- Nitride corrosion protection



UL LISTING @ 250 PSIG MAX

- Guide YRPV: Gas shutoff valve for use with natural and manufactured gases.
- Guide YSDT: LP gas shutoff valve.
- Guide YRBX: Flammable liquid shutoff valve.

Note: Listings apply ONLY to the standard -01 valves.

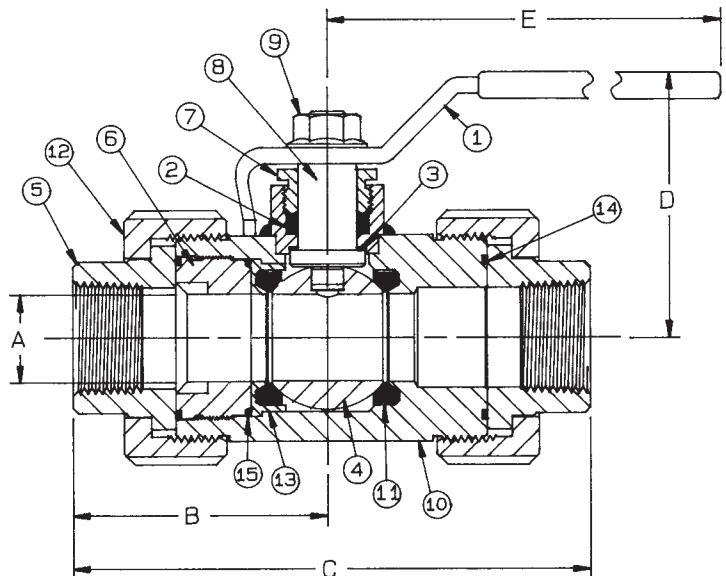
STANDARD MATERIAL LIST

1. Lever and grip	Steel, zinc plated w/vinyl	9. Lever nut	Steel, zinc plated
2. Stem packing	RPTFE	10. Body	A108-CS
3. Stem bearing	RPTFE	11. Seat (2)	RPTFE
4. Ball	A108-CS chrome plated	12. Union nut (2)	A108-CS
5. Tailpiece (2)	A108-CS	13. Seat holder	A108-CS
6. Retainer	A108-CS	14. Union seal (2)	RPTFE
7. Gland nut	A108-CS	15. Retainer seal	RPTFE
8. Stem	A108-CS chrome plated		

VARIATIONS AVAILABLE:

73-340 Series (316 SS ball & Stem)

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



CARBON STEEL DOUBLE UNION END BALL VALVE

NUMBER	SIZE	A	B	C	D	E	Wt.
73-301-01	1/4"	.43	2.50	5.00	2.50	5.62	3.51
73-302-01	3/8"	.57	2.50	5.00	2.50	5.62	3.45
73-303-01	1/2"	.62	2.50	5.00	2.50	5.62	3.35
73-304-01	3/4"	.81	2.71	5.31	2.62	5.62	4.48
73-305-01	1"	1.00	2.96	6.06	3.12	6.62	7.04
73-306-01	1-1/4"	1.25	2.87	6.12	3.43	8.00	9.96
73-307-01	1-1/2"	1.50	3.46	7.12	3.56	8.00	14.83
73-308-01	2"	1.75	3.75	7.50	4.18	9.00	20.50



73-400 Series

Carbon Steel Double Union End Socket Weld Ball Valve

Socket Weld End, 3000 psig WOG, Cold Non-Shock, 150 psig Saturated Steam.
Vacuum Service to 29 inches Hg.

Federal Specification: WW-V-35C, Type: II, Composition: CS, Style: 1.

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

FEATURES

- Heavy duty quarter turn lever
- RPTFE seats and seals
- Steel barstock design
- Easy installation and maintenance
- Blow-out-proof stem design
- Adjustable packing gland
- Chromium plated ball
- Nitride corrosion protection



LISTED

UL LISTING @ 250 PSIG MAX

- Guide YRPV: Gas shutoff valve for use with natural and manufactured gases.
- Guide YSDT: LP gas shutoff valve.
- Guide YRBX: Flammable liquid shutoff valve.

Note: Listings apply ONLY to the standard -01 valves.

STANDARD MATERIAL LIST

1. Lever and grip	Steel, zinc plated w/vinyl	9. Lever nut	Steel, zinc plated
2. Stem packing	RPTFE	10. Body	A108-CS
3. Stem bearing	RPTFE	11. Tail Piece (2)	A108-1018
4. Ball	A108-CS chrome plated	12. Union nut (2)	A108-CS
5. Seat (2)	RPTFE	13. Seat holder	A108-CS
6. Retainer	A108-CS	14. Union seal (2)	RPTFE
7. Gland nut	A108-CS	15. Retainer seal	RPTFE
8. Stem	A108-CS chrome plated		

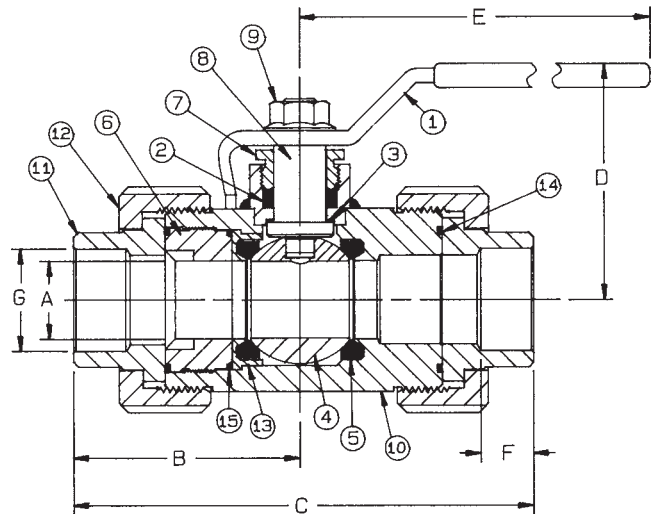
VARIATIONS AVAILABLE:

73-440 Series (316 SS Ball & Stem)

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

CARBON STEEL DOUBLE UNION END
SOCKET WELD BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	Wt.
73-403-01	1/2"	.62	2.50	5.00	2.50	5.62	.43	.855	3.35
73-404-01	3/4"	.81	2.71	5.31	2.62	5.62	.56	1.065	4.48
73-405-01	1"	1.00	2.93	6.06	3.12	6.62	.68	1.330	7.04
73-406-01	1-1/4"	1.25	2.87	6.12	3.43	8.00	.81	1.675	9.96
73-407-01	1-1/2"	1.50	3.46	7.12	3.56	8.00	.81	1.915	14.83
73-408-01	2"	1.75	3.75	7.50	4.18	9.00	1.06	2.406	20.50





79-700 Series

Full Port Forged Brass Refrigerant Ball Valve

FEATURES

- Bi-directional flow design
- RPTFE seats and seals
- Chromium plated pressure equalizing ball
- Exclusive design rotation stops
- Copper extensions silver brazed to body allows use of Sil-Fos
- Capped, triple sealed stem with metal back up reduces leaks
- Blow-out-proof stem design
- Adjustable packing gland
- Hermetic welded assembly
- Full Port Design

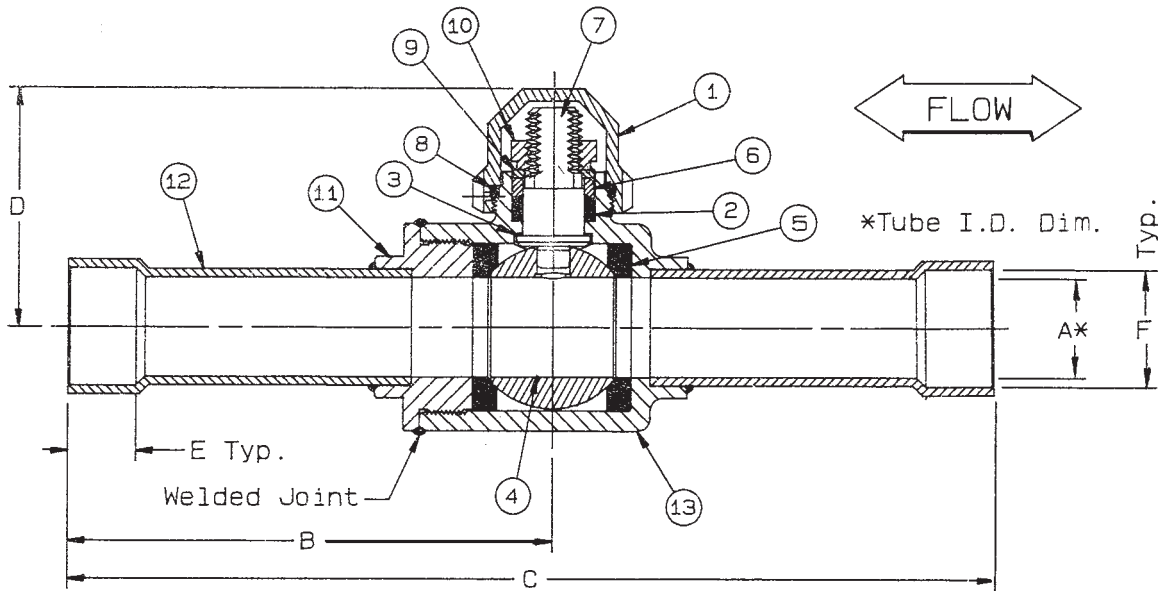


UL LISTINGS

- Guide SFJQ: Valves, Refrigerant

STANDARD MATERIAL LIST

- | | | | |
|------------------|--------------------|--------------------|---------------|
| 1. Cap | B16 | 8. O-Ring | Neoprene |
| 2. Stem packing | RPTFE | 9. Stop Plate | Steel, Plated |
| 3. Stem bearing | RPTFE | 10. Hex nut | B16 |
| 4. Ball | B16, Chrome plated | 11. Retainer | B16 |
| 5. Seat (2) | RPTFE | 12. Tube extension | Copper tubing |
| 6. Packing gland | B16 | 13. Body | Forged brass |
| 7. Stem | B16 | | |



FULL PORT
FORGED BRASS REFRIGERANT BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	Wt.	Cv	Equivalent Length of tube
79-701-01	3/8"	.32	3.18	6.09	1.55	.38	.38	.94	2.9	10.8
79-702-01	1/2"	.45	3.18	6.09	1.55	.38	.50	.94	5.6	13.3
79-703-01	5/8"	.50	3.43	6.59	1.55	.50	.62	.94	13.1	10.4
79-704-01	7/8"	.75	3.69	7.07	1.83	.75	.87	1.31	31.9	11.2
79-705-01	1-1/8"	1.00	4.20	8.00	2.01	.90	1.12	2.06	68.0	10.7
79-706-01	1-3/8"	1.25	4.54	8.63	2.61	.96	1.38	4.00	109	11.6
79-707-01	1-5/8"	1.50	4.47	8.85	2.79	1.09	1.62	4.25	152	13.2
79-708-01	2-1/8"	2.00	4.84	9.59	3.17	1.34	2.12	6.00	275	15.1
79-709-01	2-5/8"	2.43	5.00	10.00	3.90	1.48	2.62	17.50	349	21.1
79-600-01*	3-1/8"	2.50	7.00	14.00	3.90	1.67	3.13	17.60	391	30.1

* Note: 3-1/8" size is not full port

**For Pressure/Temperature Ratings,
Refer to Page M-13, Graph No. 16**



80-100 Series Bronze LP-Gas Ball Valve

Threaded, 600 psig WOG, Cold Non-Shock. 250 psig LP-Gas.
150 psig Saturated Steam. 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

- UL Listed for LP-Gas, natural gas, flammable liquid and heated oil
- Large ports to reduce pressure drop
- RPTFE seats and seals
- Blow-out-proof stem design
- Quarter turn On-Off
- Adjustable packing gland
- One piece bronze body
- Chromium plated ball



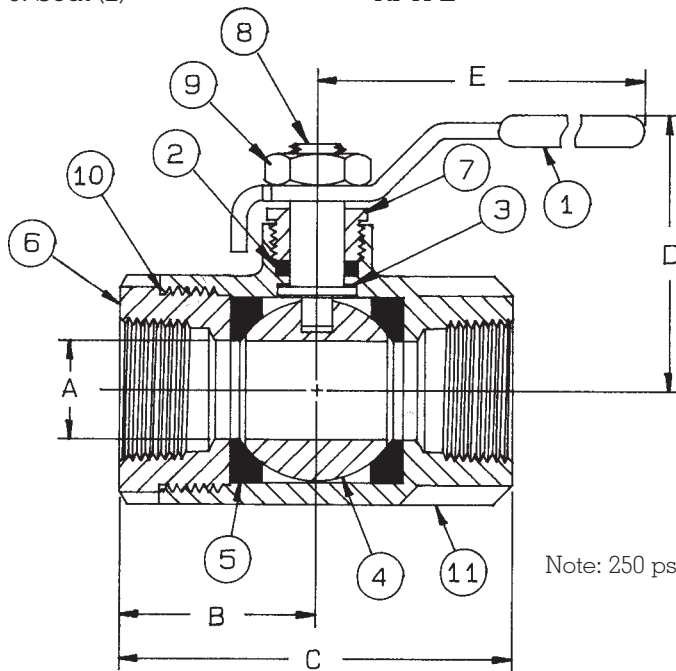
LISTED

UL LISTINGS

- Guide YSDT: LP-Gas shut-off valve.
- Guide YRPV: Gas shut-off valve for use with natural and manufactured gases.
- Guide YRBX: Flammable liquid shutoff valve.
- Guide MHKZ: No. 6 oil at 250°F.

STANDARD MATERIAL LIST

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



Note: 250 psig Max. UL Listing.

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-27-	SS Latch-Lock Lever & Nut	1/4" to 3"

BRONZE LP-GAS BALL VALVE

NUMBER	SIZE	A	B	C	D	E	Wt.
80-101-01	1/4"	.37	1.03	2.06	1.75	3.87	.60
80-102-01	3/8"	.37	1.03	2.06	1.75	3.87	.56
80-103-01	1/2"	.50	1.12	2.25	1.81	3.87	.63
80-104-01	3/4"	.68	1.50	3.00	2.12	4.87	1.39
80-105-01	1"	.87	1.68	3.37	2.25	4.87	1.72
80-106-01	1-1/4"	1.00	2.00	4.00	2.62	5.50	3.26
80-107-01	1-1/2"	1.25	2.18	4.37	2.87	5.50	4.57
80-108-01	2"	1.50	2.34	4.68	3.06	5.50	5.56
80-109-01	2-1/2"	2.50	3.25	6.50	4.12	8.00	17.25
80-100-01	3"	2.50	3.37	6.75	4.12	8.00	18.60

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



81-100 Series

Bronze LP-Gas Ball Valve With Plain Ball

Threaded, 600 psig WOG, Cold Non-Shock. 250 psig LP-Gas.

150 psig Saturated Steam. 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

- UL Listed for LP-Gas, natural gas, flammable liquid and heated oil
- Large ports to reduce pressure drop
- RPTFE seats and seals
- Blow-out-proof stem design
- Quarter turn On-Off
- Adjustable packing gland
- One piece bronze body
- Plain ball

UL LISTINGS

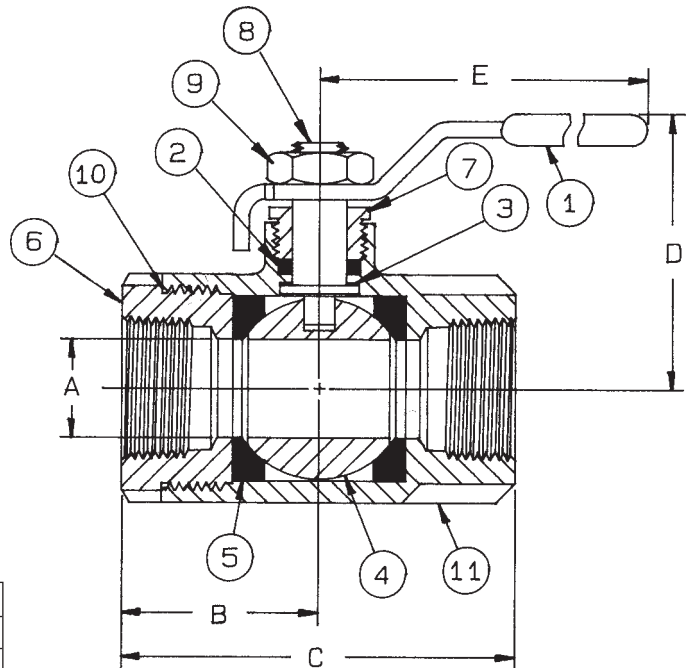


LISTED

- Guide YSDT: LP-Gas shut-off valve.
- Guide YRPV: Gas shut-off valve for use with natural and manufactured gases.
- Guide YRBX: Flammable liquid shutoff valve.
- Guide MHKZ: No. 6 oil at 250°F.

STANDARD MATERIAL LIST

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



Note: 250 psig Max. UL Listing.

BRONZE LP-GAS BALL VALVE

NUMBER	SIZE	A	B	C	D	E	Wt.
81-101-05	1/4"	.37	1.03	2.06	1.75	3.87	.60
81-102-05	3/8"	.37	1.03	2.06	1.75	3.87	.56
81-103-05	1/2"	.50	1.12	2.25	1.81	3.87	.63
81-104-05	3/4"	.68	1.50	3.00	2.12	4.87	1.39
81-105-05	1"	.87	1.68	3.37	2.25	4.87	1.72
81-106-05	1-1/4"	1.00	2.00	4.00	2.62	5.50	3.26
81-107-05	1-1/2"	1.25	2.18	4.37	2.87	5.50	4.57
81-108-05	2"	1.50	2.34	4.68	3.06	5.50	5.56
81-109-05	2-1/2"	2.50	3.25	6.50	4.12	8.00	17.25
81-100-05	3"	2.50	3.37	6.75	4.12	8.00	18.60

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

Saturn® 90-100 Series

Bronze Uni-Body Saturn® Ball Valve

Threaded, 300 psig WOG, Cold Non-Shock. 150 psig Saturated Steam.
 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

- UL Listed at 300 psig for fuel, inert gas and flammable liquids
- Valves with tee handles UL listed
- RPTFE seats and seals
- Blow-out-proof stem design
- Adjustable packing gland
- One piece bronze body
- Chromium plated ball
- Compact

UL LISTINGS

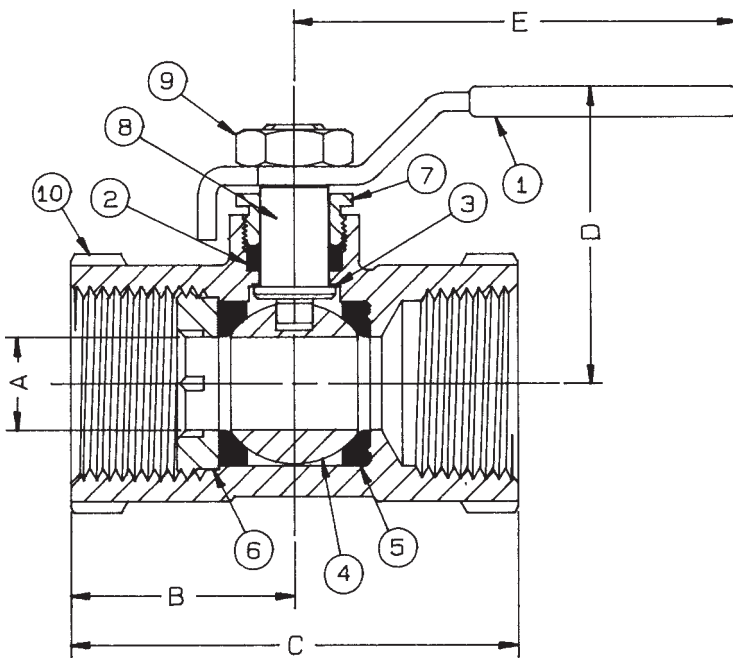


LISTED

- Guide YRPV: Gas shutoff valve for use with natural and manufactured gases.
- Guide YQNZ: Compressed gas shutoff valve for use with air, inert gases, hydrogen, oxygen and common refrigerants except ammonia.
- Guide YRBX: Flammable liquid shutoff valve.

STANDARD MATERIAL LIST

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



OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-05-	Plain Ball	1/2" to 2"
-07-	Steel Tee Handle	1/2" to 2"

BRONZE UNI-BODY SATURN® BALL VALVE

NUMBER	SIZE	A	B	C	D	E	Wt.
90-103-01	1/2"	.37	1.14	2.15	1.68	3.87	.53
90-104-01	3/4"	.50	1.36	2.61	1.75	3.87	.82
90-105-01	1"	.62	1.50	2.90	2.00	4.87	1.25
90-106-01	1-1/4"	.81	1.81	3.50	2.18	4.87	1.98
90-107-01	1-1/2"	1.00	2.06	3.79	2.62	5.50	2.99
90-108-01	2"	1.25	2.43	4.42	2.81	5.50	4.64

**For Pressure/Temperature Ratings,
Refer to Page M-8, Graph No. 3**



489-100 Series

Carbon Steel LP-Gas 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.
 Cold Non-Shock. 250 psig LP-Gas. 150 psig Saturated Steam. Vacuum Service to 29 in. 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

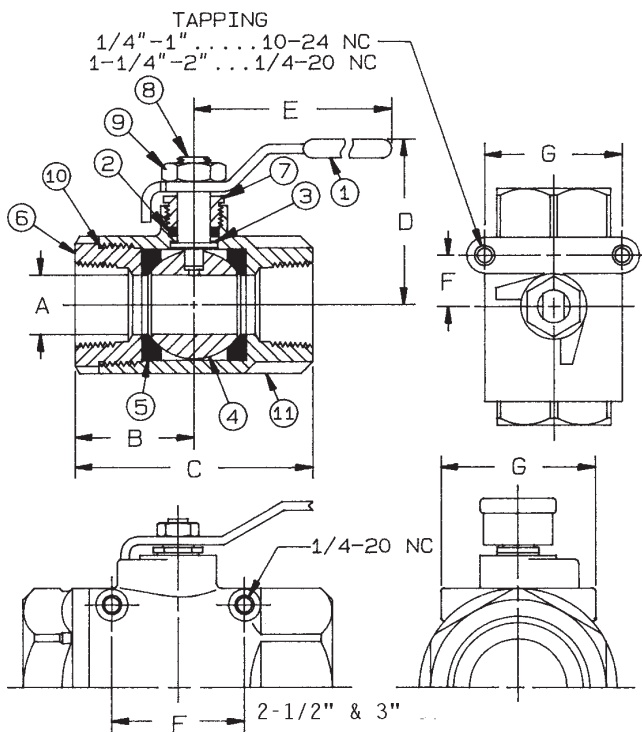
- UL Listed for LP-Gas, natural gas and flammable liquid to 250 psig
- RPTFE seats and stuffing box ring
- Mounting pad for easy actuator mounting
- Investment cast components
- Blow-out-proof stem design
- Adjustable packing gland
- Nitride corrosion protection

UL LISTINGS



- Guide YSDT: LP-Gas shut-off valve.
- Guide YRPV: Gas shut-off valve for use with natural and manufactured gases.
- Guide YRBX: Flammable liquid shutoff valve.
- Guide MHKZ: No. 6 oil at 250°F.

STANDARD MATERIAL LIST



- | | |
|-------------------|--|
| 1. Lever and grip | Steel, zinc plated w/vinyl |
| 2. Stem packing | RPTFE |
| 3. Stem bearing | RPTFE |
| 4. Ball | A108-12L14, chrome plated |
| 5. Seat (2) | RPTFE |
| 6. Retainer | A108-12L14 (1/4" to 1")
A216-WCB (1-1/4" to 3") |
| 7. Gland nut | A108-12L14 |
| 8. Stem | A108-12L14 |
| 9. Lever nut | Steel, zinc plated |
| 10. Body seal | PTFE (1-1/4" to 3") |
| 11. Body | A216-WCB |

VARIATIONS AVAILABLE:

489-140-01 Series with 316 SS Ball and Stem,
 UL Listed as noted above.

Note: 250 psig Max. UL Listing.

CARBON STEEL BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	Wt.
489-101-01	1/4"	.37	1.03	2.06	1.75	3.87	.50	1.12	.58
489-102-01	3/8"	.37	1.03	2.06	1.75	3.87	.50	1.12	.54
489-103-01	1/2"	.50	1.12	2.25	1.81	3.87	.50	1.12	.63
489-104-01	3/4"	.68	1.50	3.00	2.12	4.87	.87	1.37	1.27
489-105-01	1"	.87	1.68	3.37	2.25	4.87	.87	1.37	1.63
489-106-01	1-1/4"	1.00	2.00	4.00	2.62	5.50	.93	1.50	3.06
489-107-01	1-1/2"	1.25	2.18	4.37	3.05	8.00	.93	1.50	3.98
489-108-01	2"	1.50	2.75	5.50	3.24	8.00	.93	1.50	5.99
489-109-01	2-1/2"	2.50	3.37	6.75	4.12	8.00	2.75	3.37	15.57
489-100-01	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")**