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<u>MATERIALS OR STYLE</u>		<u>TYPE</u>	<u>VARIATIONS</u>	<u>SIZE</u>
70	Bronze	1 NPT Female/150 Flange	1 One Size Larger	1 1/4"
71	Bronze with pads	2 Solder & Soc. Weld/150 Flange Full Port	2 Male Retainer	2 3/8"
72	Carbon Steel, High Pressure	3 Union End NPT/Reg.Port Soc.Weld	3 Adjustable Stop Lever	3 1/2"
73	Carbon Steel	4 Union End Solder/Reg.Port Soc.Weld	4 Cu-Ni Ball & Stem	4 3/4"
73A	A105 Carbon Steel	5 Spring Return/High Pressure Full Port NPT	5 SS Sall & Stem	5 1"
74	Nickel	6 3-way, NPT/High Pressure Soc.Weld Full Port	6 Original Balancing Stop- Attach to Lever or T-Handle	6 1 1/4"
75	Pad-Locking Bronze	7 Butt Weld/300 Flange	7 One Size Smaller Female Retainer	7 1 1/2"
76	CF8M Stainless Steel	8 Male x Female, NPT/600 Flange	8 (Not Assigned)	8 2"
76F	CF8M Stainless Steel, Full Port	9 3-way Solder/O-Ring Boss/300 Flange Full Port	9 Pinned Retainer	9 2 1/2"
77	Bronze Full Port			0 3"
77C	Bronze Full Port Economy			A 4"
78	Special Valves			C 6"
79	Refrigerant Valves			E 8"
7A	Chlorine Carbon Steel			G 10"
7K	Bronze Full Port Drain			H 12"
80	Bronze, UL Listed			
81	Bronze UL Listed Plain Ball			
82	Bronze 3-Piece Full Port			
83	CS 3-Piece			
83R	CS 3-Piece, Actuator Ready			
85	SS 3-Piece, Reg.Port			
85R	SS 3-Piece, Reg.Port, Actuator Ready			
86	SS 3-Piece, Full Port			
86R	SS 3-Piece, FullPort, Actuator Ready			
87	CF8M SS Flanged			
87A	CF8M SS Flanged			
87A-400	Alloy-20 Flanged			
88	Carbon Steel Flanged			
88A	Carbon Steel Flanged			
89	Cast Carbon Steel w/Pads			
9A	Bronze, Hvy.Patt. Unibody			
90	Bronze, Unibody, UL Listed			
91	Bronze, Unibody			
92	Cast Carbon Steel Unibody			
93	CS Unibody			
95	Bronze Stop & Drain			
96	CF8M SS Unibody			
399	Alloy-20 NPT			
401	Alloy-20, 3-Piece, Full Port			

DESIGN

-01	Standard	-46	SS Latch Lock Lever, Lock in Closed Position Only
-02	Stem Grounded	-47	SS Oval Latch Lock Handle, SS Nut
-03	1-1/4" Carbon Steel Ext.Stem	-48	SS Oval Handle, No Latch, SS Nut
-04	2-1/4" Carbon Steel Ext.Stem	-49	Assembled Dry
-05	Plain Ball	-50	2-1/4" CS Locking Stem Extension
-06	2000 lb. 73-100 Series (1-1/4" to 2")	-51	One Tack Weld (I-7362-05-1X)
-07	Steel Tee Handle	-52	Two Tack Weld (I-7362-05-2X)
-08	90 degree reversed stem	-53	Three Tack Weld (I-7362-05-3X)
-09	SS Lever	-54	Four Tack Weld (I-7362-05-4X)
-10	SS Lever & Nut	-56	MultiFill Seats and Packing
-12	Stamp "157 SWP" & Bagged	-57	Oxygen Cleaned (Bronze and SS Only)
-13	Stamp "157 SWP"	-58	Chain Lever, Horizontal
-14	Side Vented Ball (uni-directional)	-59	SS External Trim - 3-pc Valves
-15	Wheel Handle, Steel	-60	Grounded Ball & Stem
-16	Chain Lever, Vertical	-61	Grounded Ball & Stem, Assembled Dry
-17	Rough Chrome Plate - Bronze Valves	-62	Body Centre Section
-21	UHMWPE Trim (non-PTFE)	-63	NPT x Solder/Socket Weld
-22	Viton Union Seals	-64	250 lb. Steam Trim
-23	Tank Flange (2" 3-pc valves only)	-65	MultiFill Seats & Graphite Packing
-24	Graphite Packing	-66	FNPT x Butt Weld
-25	Graphite Packing, Vented Ball & Tack Welded Ret.	-68	4" Stem Extension (3" & 4" 3-pc. 82 Series
-26	Chevron Pkg Vent Assd.Dry Monel Trim (7A)	-69	Purge Ports Drilled/Tapped @ Bottom & approx. 45" from Top
-27	SS Latch Lock Lever & Nut	-70	4" Extended Bonnet
-28	Actuator Mounting Pad Not Drilled/Tapped	-72	RTFE Packing
-29	Graphite Packing & Seals	-73	TFE Packing - Spiral Wound Body Seals - TFE Fillers - Flange BV
-30	Cam-Lock and Grounded Stem	-74	Graphite Packing - Spiral Wound Body Seals - Graphoil Fillers - Flange BV
-31	7B Series w/Boss not Drilled/Tapped	-75	MPTEF Seats, PTFE Packing, RPTFE Gaskets
-32	SS Hi-Rise Tee Handle & Nut	-76	Live Loaded 87A/88A Series (Lever)
-33	76-300 Series w/Pad Drilled/Tapped	-77	Live Loaded 87A/88A Series (Gear & Actuated)
-34	Nylatron Seats (96 Series)	-78	Delrin Seats
-35	VTFE Trim	-79	Nylon Seats/Graphite Packing 72 Series
-36	SS HiRise Round Handle, SS Nut	-80	Multi-Seal (Super TFE) 87A/88A Series
-38	Peek Seats & Bearing (Graphite packing & seals)	-97	Grnd.Whl.Handle, Pinned or Tack Welded
-39	SS Hi-Rise Locking Wheel Handle, SS Nut	-98	Grnd.Whl. Pinned or Tack Welded & 1-1/4" Stem Ext.
-40	Cyl-loc and Grounded Stem	-SW	Limit Switch Mounted
-41	Auto.Drain (Bronze Valves Only)	-MG	Gear Operated, Std. Hand Wheel
-42	Non-Vented Ball, No Holes in Slot (CS and SS)	-MH	Gear Operated, Std. Hand Wheel, Lockout Device
-43	Cyl-Loc, Grnd B&S, 680 LocTite or 2-Tack Welds	-MJ	Gear Operated, Oversize Hand Wheel
-44	Seal Weld 76-100 & 89-100	-MK	Gear Operated, Oversize Hand Wheel, Lockout Device
-45	Less Lever & Nut	-P01	BSPP (Parallel) Thread Connection
		-BC	Ball Check
		T01	BSPT (Tapered) Thread Connection

Apollo® 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.

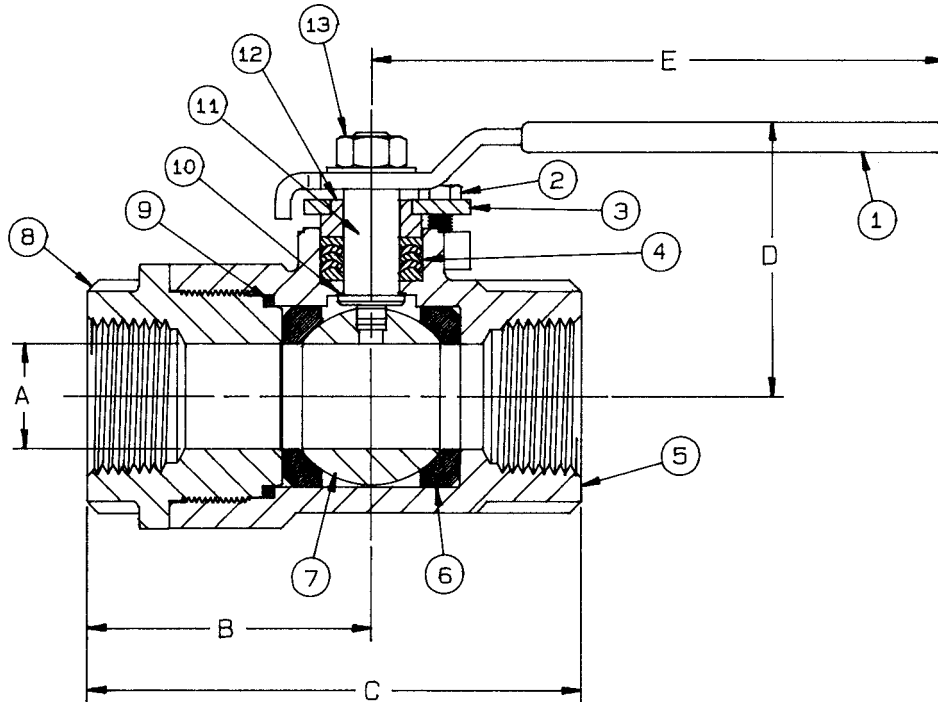
Complies With Recommendations of Chlorine Institute Pamphlet No. 6.

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 N-17, Graph No. 17**

Apollo® 7B-100 Series

Bronze Full Port Hydro Ball Valve

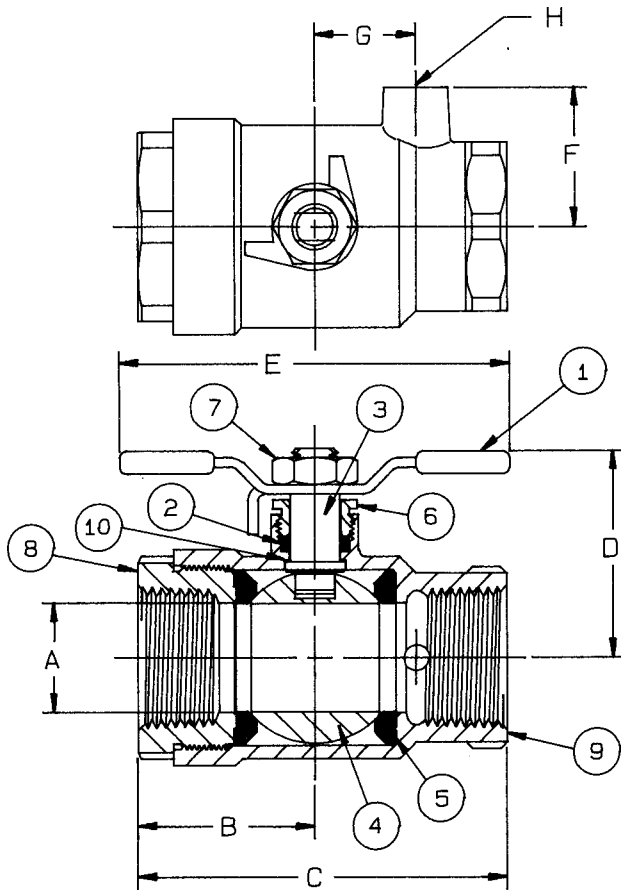
Threaded, 400 psig WOG, Cold Non-Shock. 125 psig Saturated Steam.
 Vacuum Service to 29 inches Hg.
 Federal Specification: WW-V-35C, Type: II, Composition: BZ, Style: 3.

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 -	Side Outlet 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 N-10, Graph No. 3**

Apollo® 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.

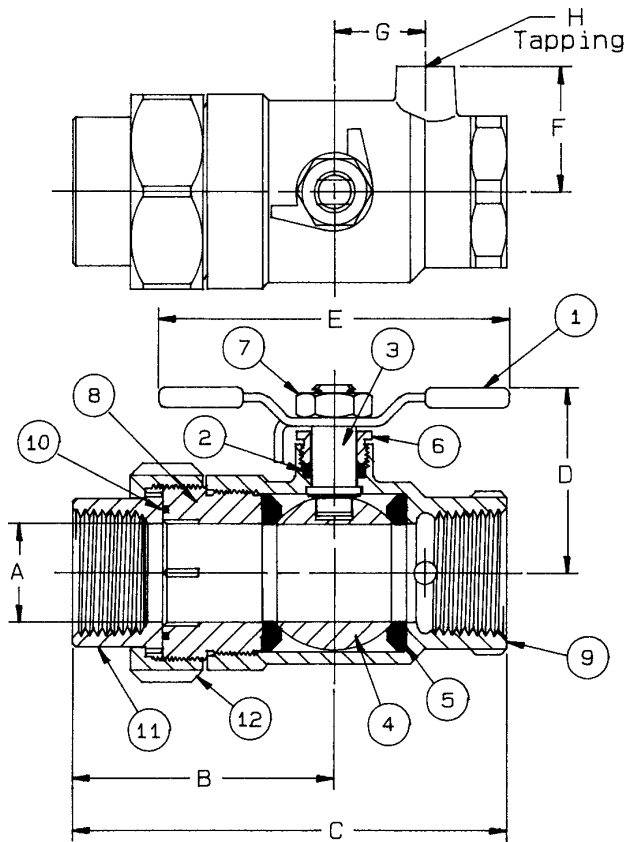
Federal Specification: WW-V-35C, Type: II, Composition: BZ, Style: 3.

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 (1-1/2" & 2")



OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-31 -	Side Outlet Not Drilled & Tapped	1/4" to 2"

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

**For Pressure/Temperature Ratings,
Refer to Page N-10, Graph No. 3**

Apollo® 7B-800 Series

Male x Female Bronze Full Port Hydro Ball Valve

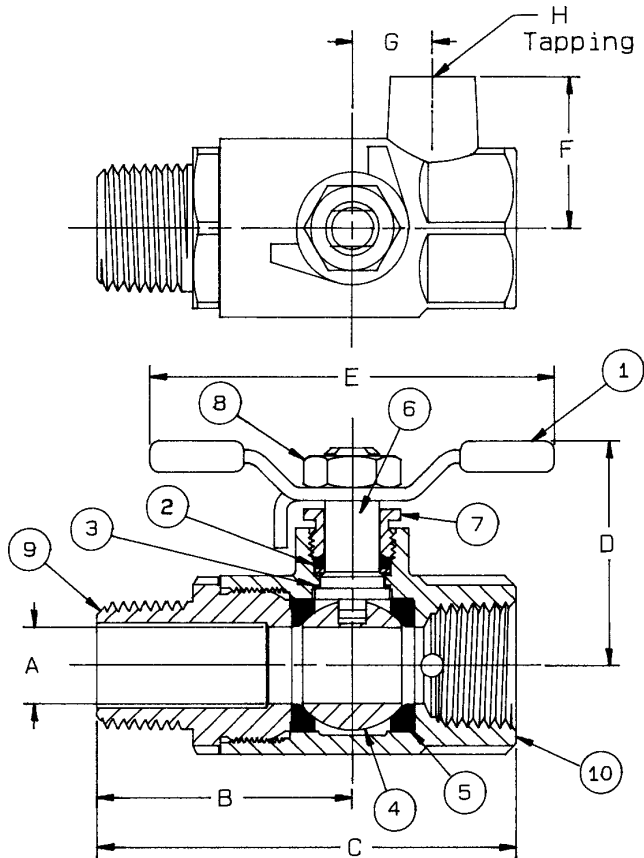
Male x Female Threaded, 400 psig WOG, Cold Non-Shock, 125 psig Saturated Steam.
 Vacuum Service to 29 inches Hg.
 Federal Specification: WW-V-35C, Type: II, Composition: BZ, Style: 3.

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



OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-31 -	Side Outlet Not Drilled & Tapped	1/4" to 2"

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

**For Pressure/Temperature Ratings,
 Refer to Page N-10, Graph No. 3**

Apollo® 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.

FEATURES

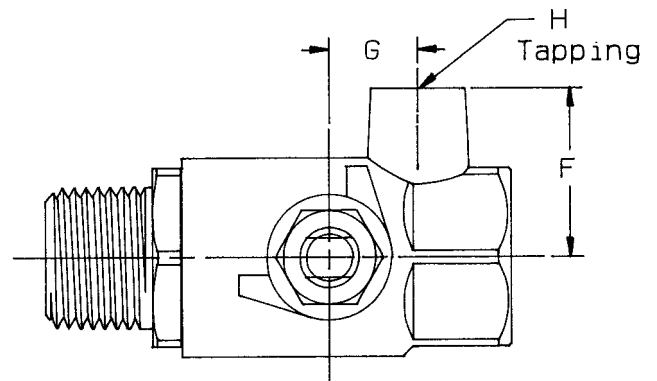
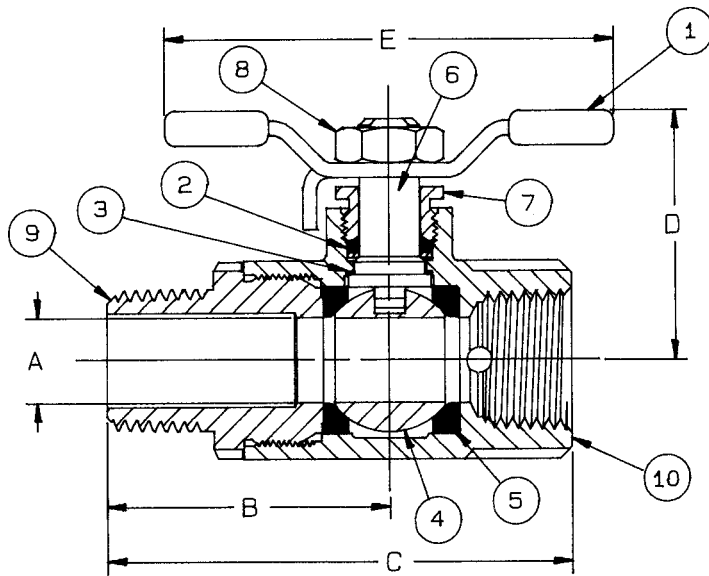
- 316 SS ball & stem
- RPTFE packing
- PTFE seats
- Blow-out-proof stem design
- Adjustable packing gland

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 -	Side Outlet 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 N-19, Graph No. 21**

Apollo® 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

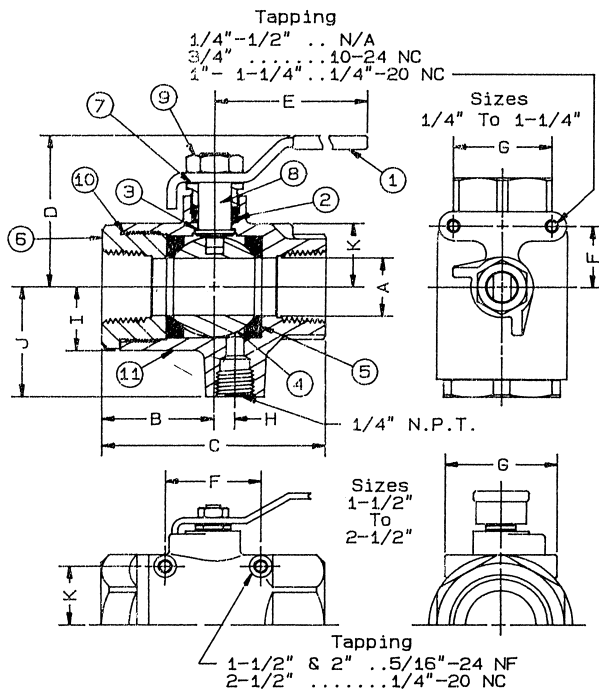
- Chromium plated ball
- RPTFE seats and stuffing box ring
- Mounting pad for easy actuator mounting (3/4" to 2-1/2")
- Blow-out-proof stem design
- Adjustable packing gland
- Full port for full flow & min. pressure drop
- Auto-drain / Auto-vent

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

VARIATIONS AVAILABLE:

7K-150 Series (Original Balancing Stop)
 7K-190 Series (Pinned Retainer)



OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-02 -	Static Grounded	1/4" to 2-1/2"
-03 -	1-1/4" Stem Extension	1/4" to 2-1/2"
-04 -	2-1/4" Stem Extension	1/4" to 2-1/2"
-07 -	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 -	Round Handle	1/4" to 1-1/4"
-16 -	Vertical Chain Lever	3/4" to 2-1/2"
-17 -	Rough Chrome Plating	1/4" to 2-1/2"
-18 -	Plain Yellow Grip	1/4" to 2-1/2"
-24 -	Graphite Stem Packing	1/4" to 2-1/2"
-27 -	Latch Lock Lever	1/4" to 2-1/2"
-30 -	CamLock Handle	1/4" to 1-1/4"
-32 -	SS Tee Handle & Nut	1/4" to 1-1/4"
-35 -	PTFE Trim	1/4" to 2-1/2"
-40 -	Cyl-Loc	1/4" to 1-1/4"
-45 -	Less Lever & Nut	1/4" to 2-1/2"
-46 -	Lock In Closed Position	1/4" to 2-1/2"
-47 -	SS Latch-Lock Oval Handle	1/4" to 3/4"
-48 -	SS Oval Handle	1/4" to 2"
-49 -	Assembled Dry	1/4" to 2-1/2"
-50 -	2-1/4" Locking Stem Extension	1/4" to 2-1/2"
-56 -	Multifill Seats	1/4" to 2-1/2"
-57 -	Cleaned for Gaseous Oxygen	1/4" to 2-1/2"
-58 -	Horizontal Chain Lever	3/4" to 2-1/2"
-60 -	Static 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 Retainer	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

Apollo® 71-500 Series

Bronze Ball Valve with "Deadman" Spring Return Handle

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

Vacuum Service to 29 inches Hg.

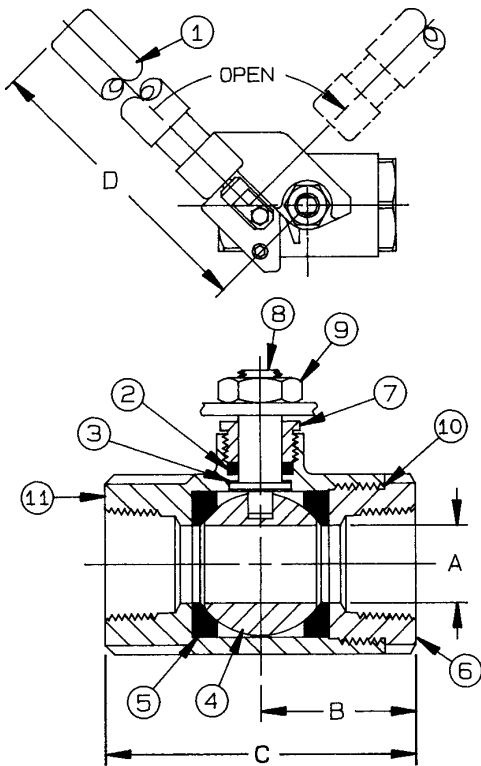
Federal Specification: WW-V-35C, Type: II, Composition: BZ Style: 3.

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. "Deadman" 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 "DEADMAN"
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 (Spring Open)	1/4" to 2"
-14 -	Vented Ball (see page J-2)	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 -	Cleaned for Gaseous Oxygen	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 N-10, Graph No. 4**

Apollo® 74-100 Series

Chemical Resistant Nickel Ball Valve

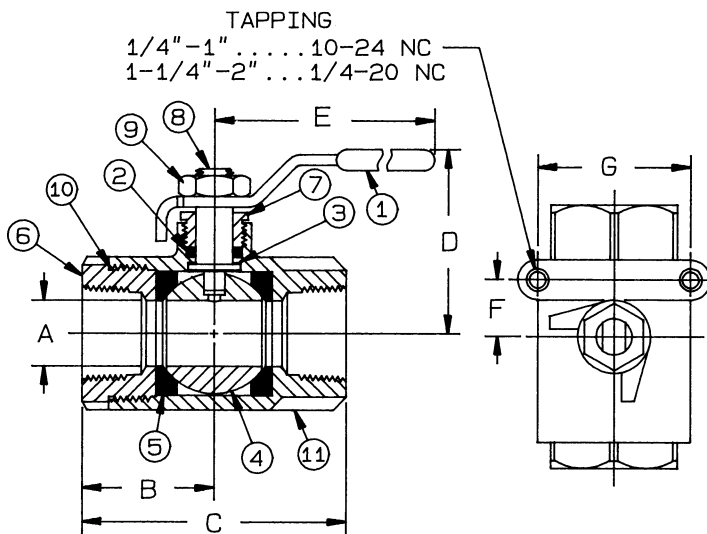
Threaded, 800 psig WOG, Cold Non-Shock. 150 psig Saturated Steam.
Vacuum Service to 29 inches Hg.

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 -	Static Grounded	1/2" to 2"
-03 -	1-1/4" Stem Extension	1/2" to 2"
-04 -	2-1/4" Stem Extension	1/2" to 2"
-07 -	Tee Handle	1/2" to 2"
-14 -	Vented Ball(see page J-2)	1/2" to 2"
-15 -	Round Handle	1/2" to 2"
-16 -	Vertical Chain Lever	3/4" to 2"
-18 -	Plain Yellow Grip	1/2" to 2"
-21 -	UHMWPE Seats (Non-PTFE)	1/2" to 2"
-24 -	Graphite Stem Packing	1/2" to 2"
-27 -	Latch Lock Lever	1/2" to 2"
-30 -	CamLock Handle	1/2" to 2"
-32 -	SS Tee Handle & Nut	1/2" to 2"
-35 -	PTFE 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	1/2" to 2"
-49 -	Assembled Dry	1/2" to 2"
-50 -	2-1/4" Locking Stem Extension	1/2" to 2"
-56 -	Multifill Seats	1/2" to 2"
-58 -	Horizontal Chain Lever	3/4" to 2"
-60 -	Static 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 N-19, Graph No. 22**

Apollo® 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.

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

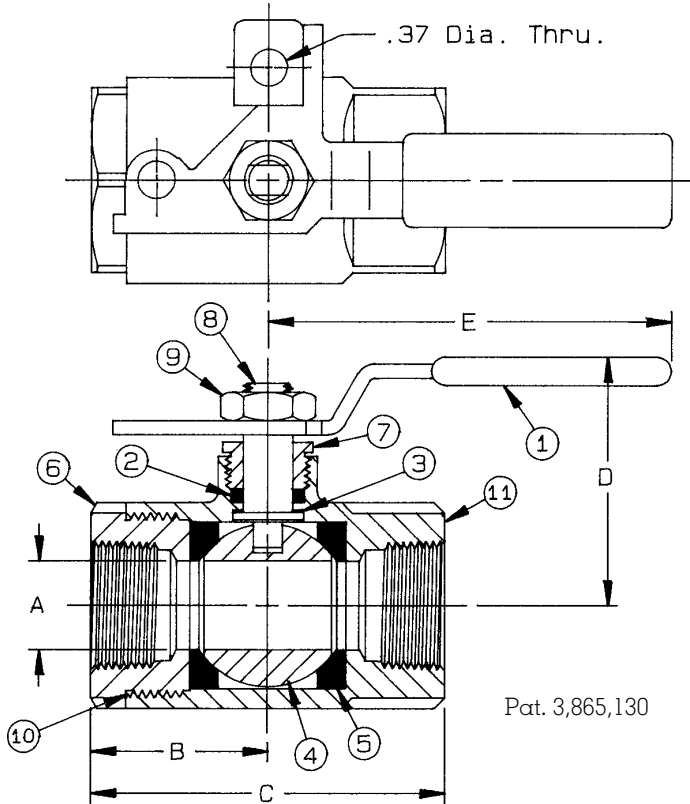
1. Lever and grip	Steel, zinc plated w/vinyl	7. Gland nut	B16
2. Stem packing	RPTFE	8. Stem	B16
3. Stem bearing	RPTFE	9. Lever nut	Steel, zinc plated
4. Ball	B16, chrome plated	10. Body seal	PTFE (1-1/4" & 2")
5. Seat (2)	RPTFE	11. Body	B584-C84400
6. Retainer	B16 (1/4" to 1")		
	B584-C84400 (1-1/4"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

VARIATIONS AVAILABLE:

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

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-02 -	Static 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 -	Vented Ball(see page J-2)	1/4" to 2"
-17 -	Rough Chrome Plating	1/4" to 2"
-18 -	Plain Yellow Grip	1/4" to 2"
-20 -	Slot Vented Ball	1/4" to 2"
-24 -	Graphite Stem Packing	1/4" to 2"
-41 -	Automatic Drain	1/4" to 2"
-49 -	Assembled Dry	1/4" to 2"
-57 -	Cleaned for Gaseous Oxygen	1/4" to 2"
-60 -	Static 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 N-10, Graph No. 4**

Apollo® 76-500 Series

Stainless Steel Ball Valve with "Deadman" Spring Return Handle

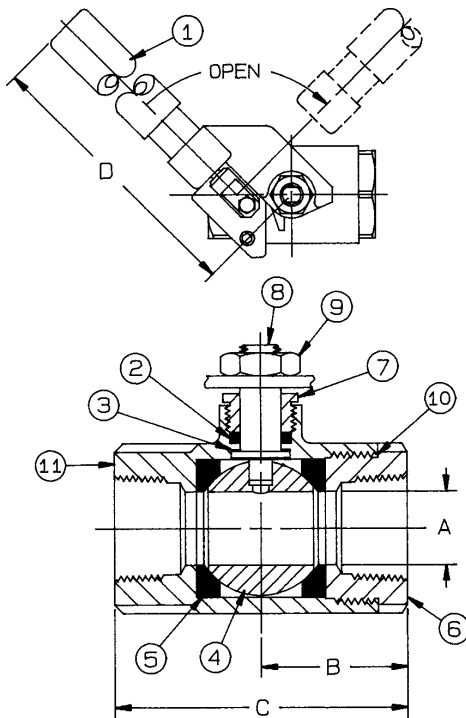
Threaded, 1/4" to 1" 2000 psig WOG, 1-1/4" to 2" 1500 psig WOG
Cold Non-Shock. 150 psig Saturated Steam, Vacuum Service to 29 inches Hg.
Federal Specification: WW-V-35C, Type: II, Composition: SS, Style: 3.

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. "Deadman" handle	SS w/vinyl	6. Retainer	A276-316 (1/4" to 1")
2. Stem packing	Multifill PTFE		A351-CF8M (1-1/4" to
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



OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-08 -	90° Reversed Stem (Spring Open)	1/4" to 2"
-14 -	Vented Ball(see page J-2)	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 -	Cleaned for Gaseous Oxygen	1/4" to 2"
-60 -	Static 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"

STAINLESS STEEL BALL VALVE WITH "DEADMAN" 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

**For Pressure/Temperature Ratings,
Refer to Page N-15, Graph No. 14
(1/4" to 1")
Refer to Page N-14, Graph No. 12
(1-1/4" to 2")**

Apollo® 78-100 Series

Bronze Ball Valve With Dust Cover and Chain

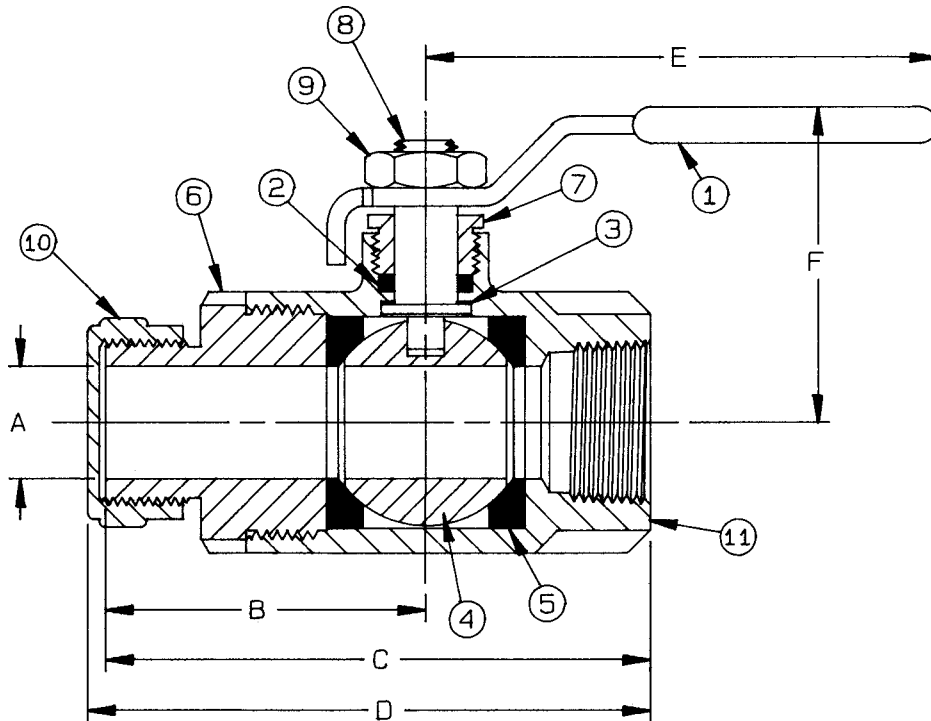
Threaded x 3/4" Hose Connection.

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	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. Dust cover	Diecast
5. Seat (2)	RPTFE	11. Body	B584-C84400
6. Retainer	B16		



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	2.95	3.87	1.75	.63
78-104-01	3/4" NPT x 3/4" HOSE	.68	1.96	3.50	3.65	4.87	2.12	1.39

Apollo® 78-124 & 78-125

Bronze 5-Port Fuel Selector Ball Valve

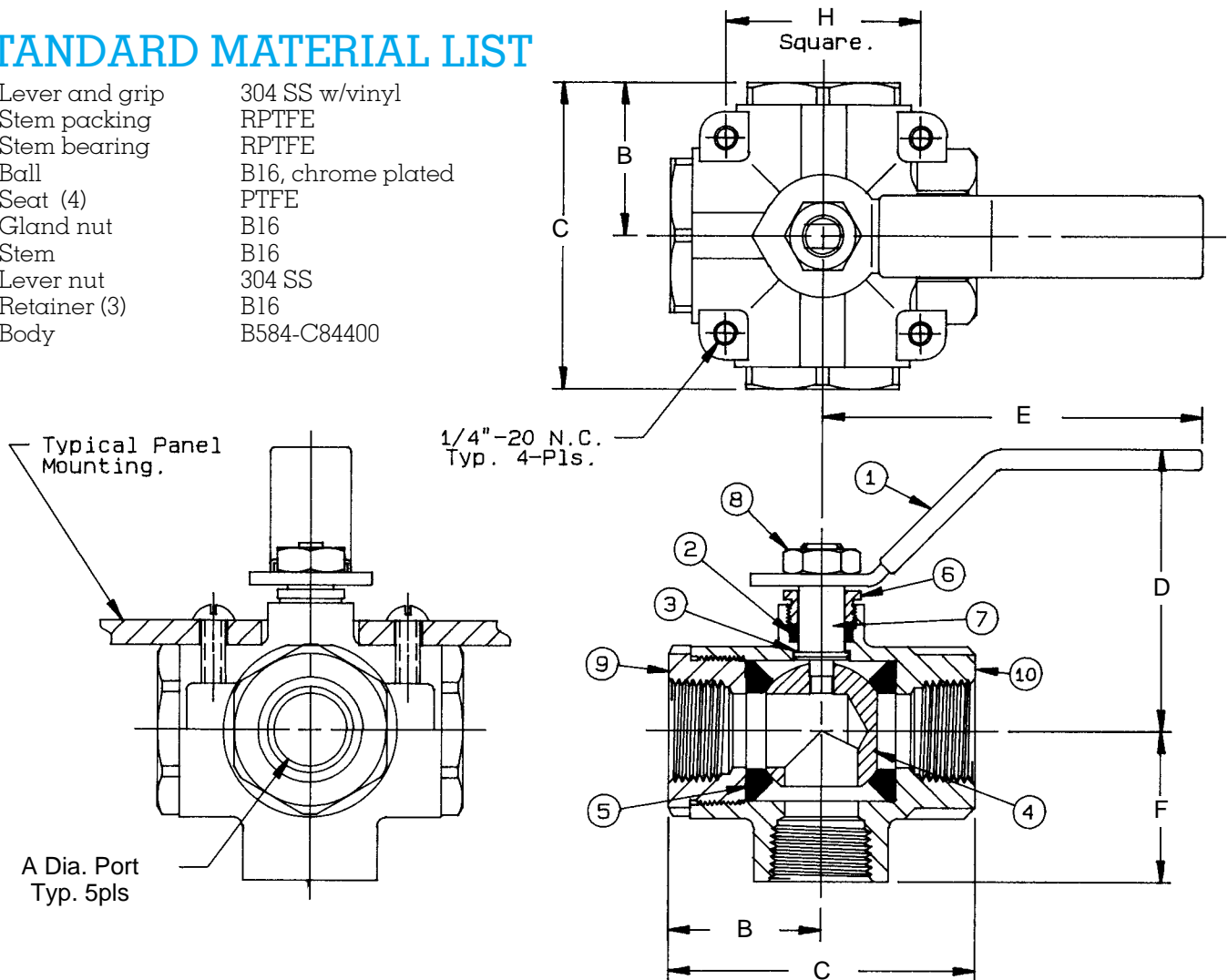
Threaded. 50 psig WOG.

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
78-125-01	3/4"	.75	1.53	3.12	2.87	3.87	1.53	1/4-20	1.98	264

Apollo® 78-200 Series

Bronze Ball Valve With Dust Cover And Chain

Solder End x 3/4" Hose Connection.

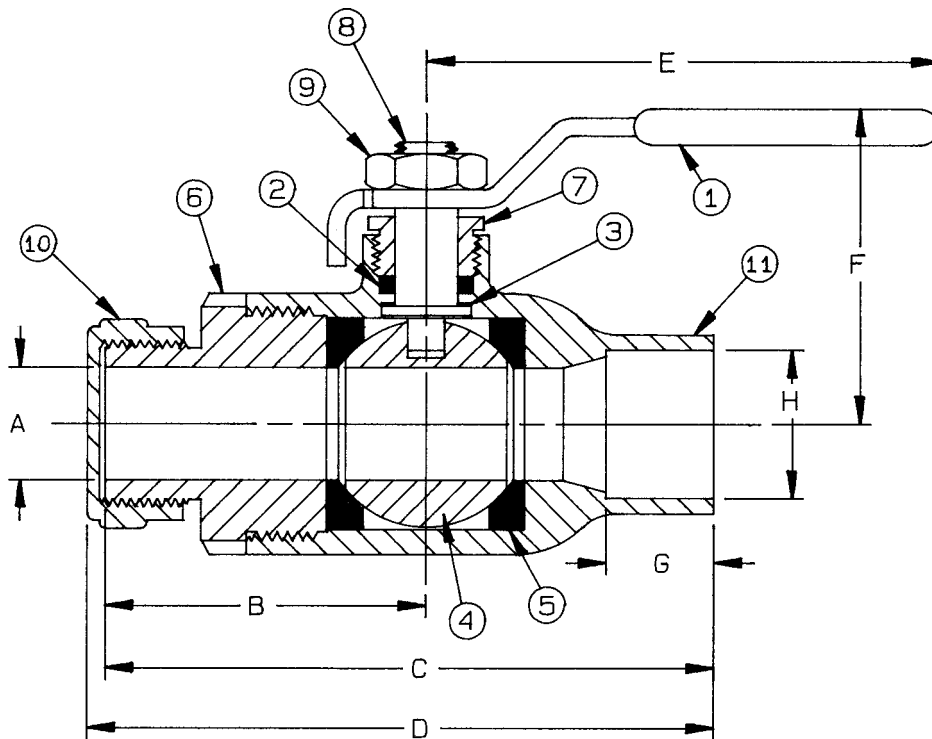
FEATURES

- 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	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. Dust cover	Diecast
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.



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	3.87	1.75	.500	.629	.71
78-204-01	3/4" Solder x 3/4" Hose	.68	1.96	3.94	4.09	4.87	2.12	.750	.879	1.44

Apollo® 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.

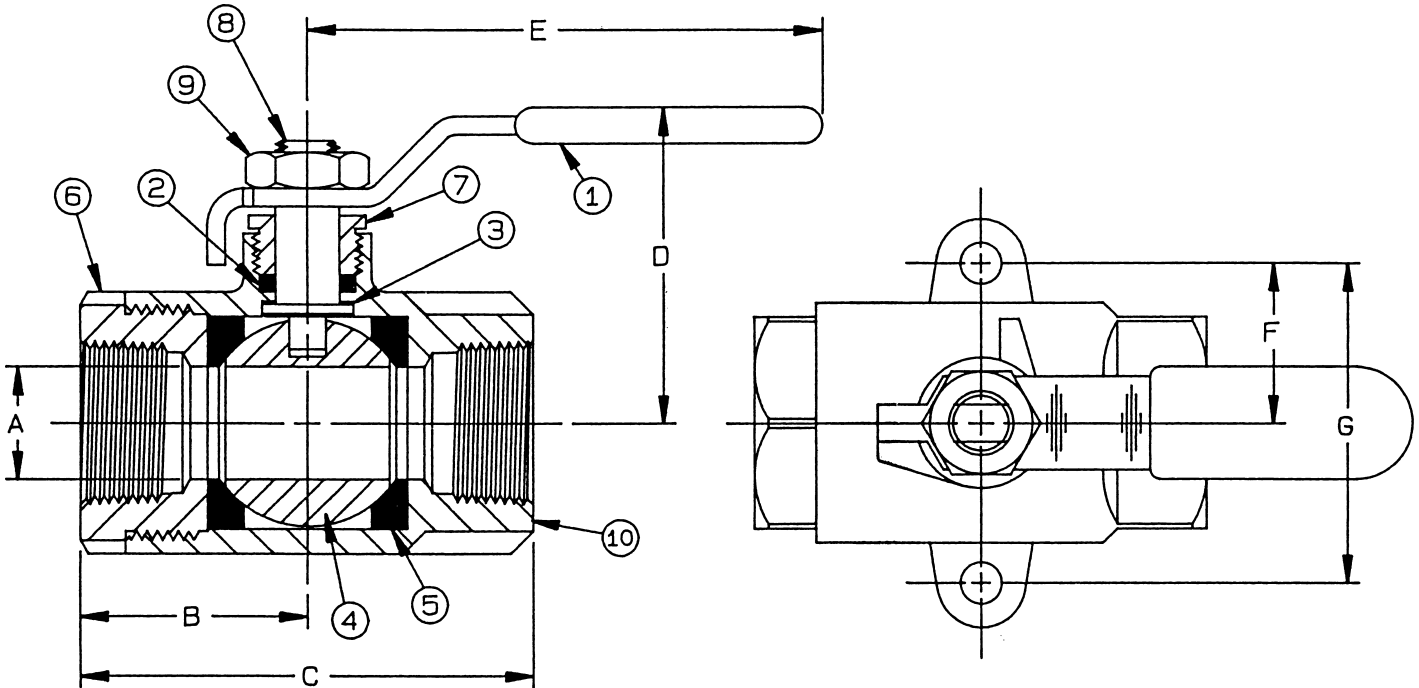
Federal Specification: WW-V-35C, Type: II, Composition: BZ, Style: 3.

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"	.43	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 N-10, Graph No. 4**

CONBRACO® 78-255-01

4" Bronze Ball Valve

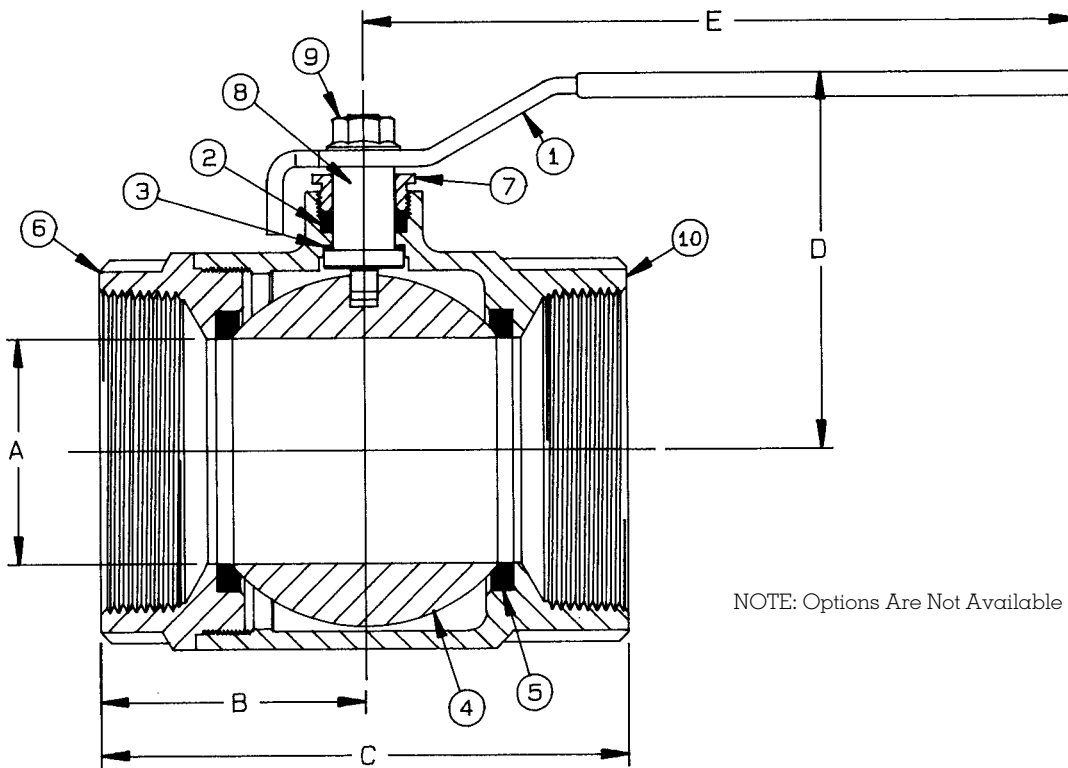
4" Threaded. 150 psig WOG, Cold Non-Shock. 50 psig Saturated Steam.

FEATURES

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

STANDARD MATERIAL LIST

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



NOTE: Options Are Not Available For This Valve.

4" BRONZE BALL VALVE

NUMBER	SIZE	A	B	C	D	E	Wt.
78-255-01	4"	3.12	3.68	7.37	5.25	10.00	25.50

Apollo® 78-257/267 Series

Brass And Bronze Instrumentation Ball Valve

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

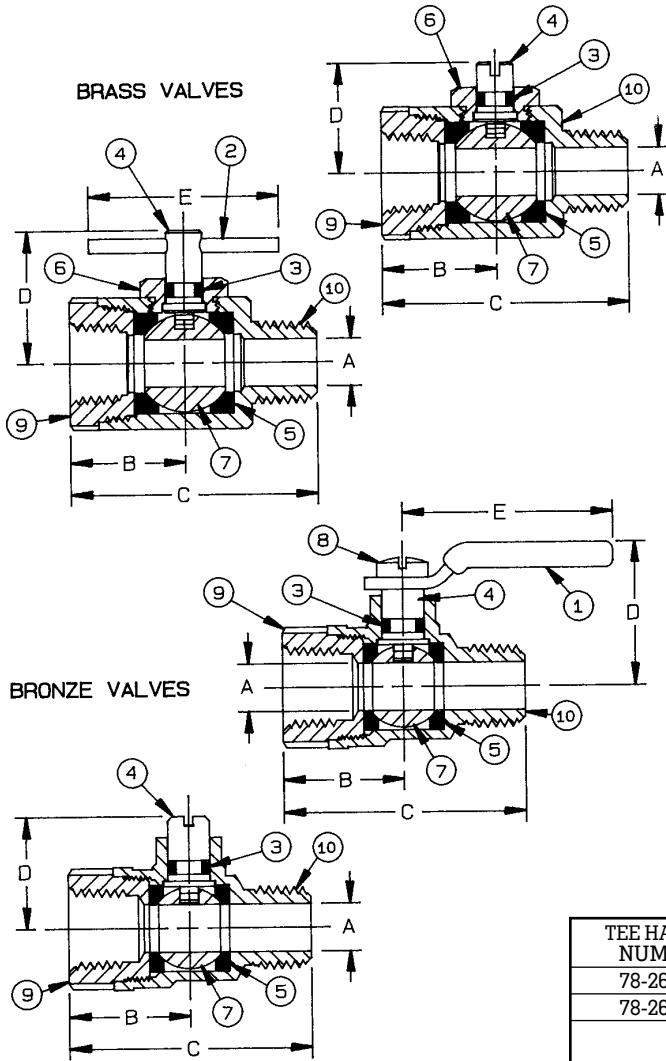
FEATURES

- 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 N-10, 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.

Apollo® 78-621/625 Series

Bronze Irrigation Ball Valve

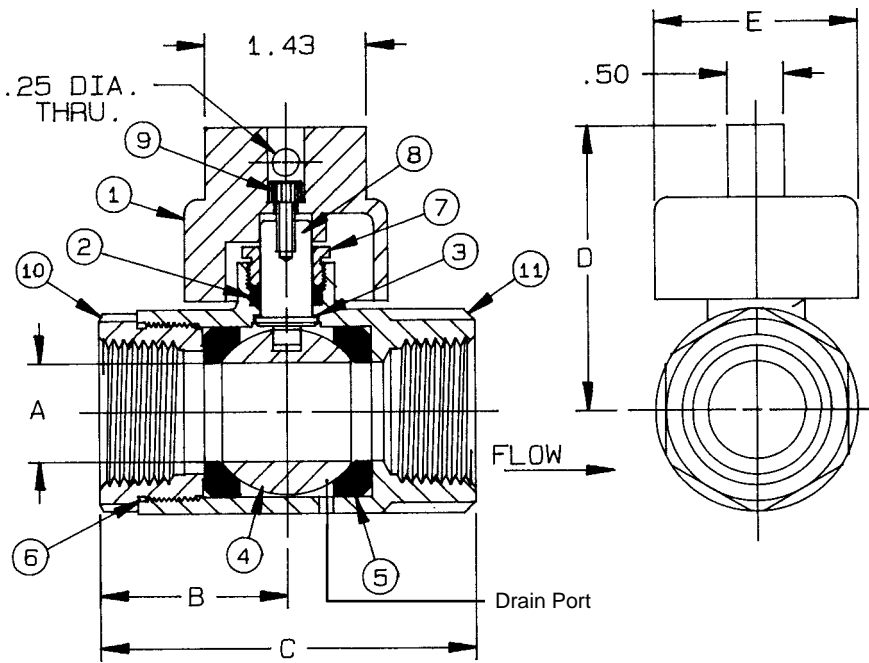
Threaded. 600 psig Water, Cold Non-Shock.

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 J-8**

Apollo® 78-664/78-962 Series

Bronze Ball Valve With Center Drain

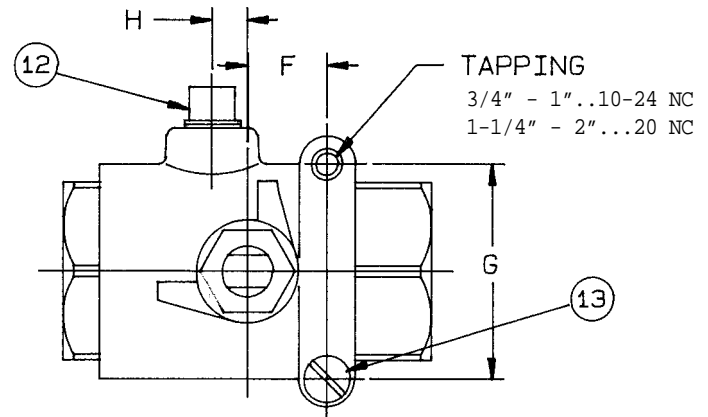
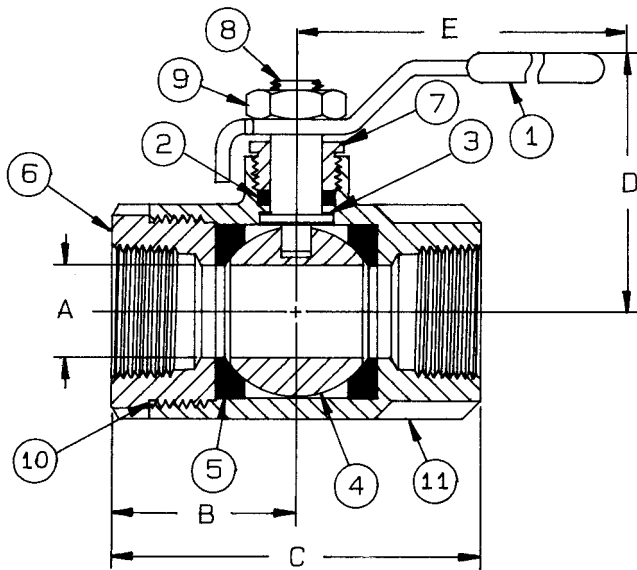
Threaded, 600 psig WOG, Cold Non-Shock.

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 N-10, Graph No. 4**

Apollo® 78-668

Bronze Purge And Drain Ball Valve

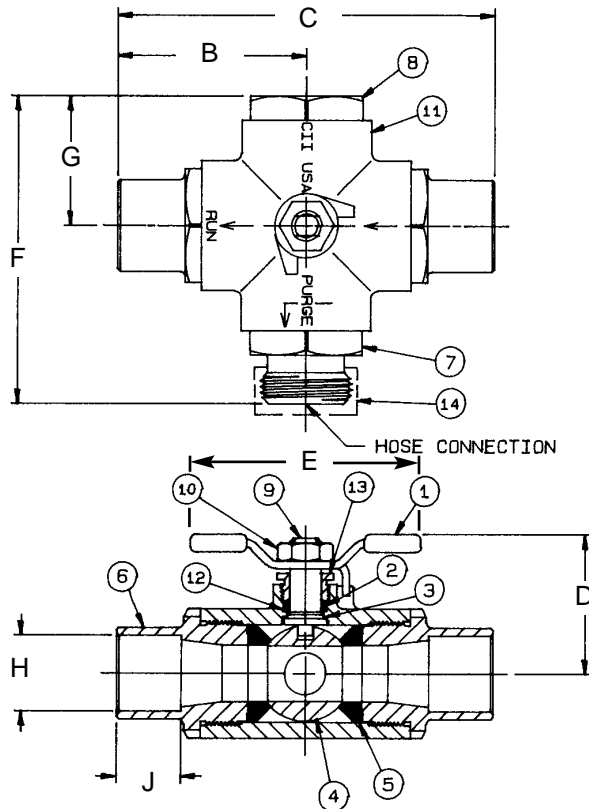
Solder End Flow Port, Hose Connection Drain Port. 600 psig WOG, Cold Non-Shock.

FEATURES

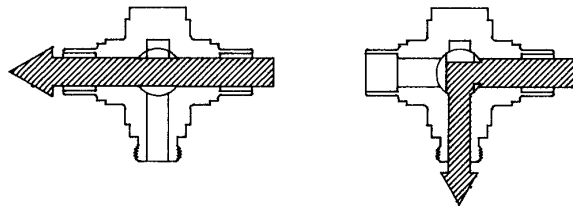
- Chromium plated ball
- RPTFE seats and stuffing box ring
- Hose thread connection for disposal of drained media
- Blow-out-proof stem design
- Adjustable packing gland
- Furnished with dust cover* and chain

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 N-10, Graph No. 4**

Apollo® 89-500 Series

Carbon Steel Ball Valve With "Deadman" Spring Return Handle

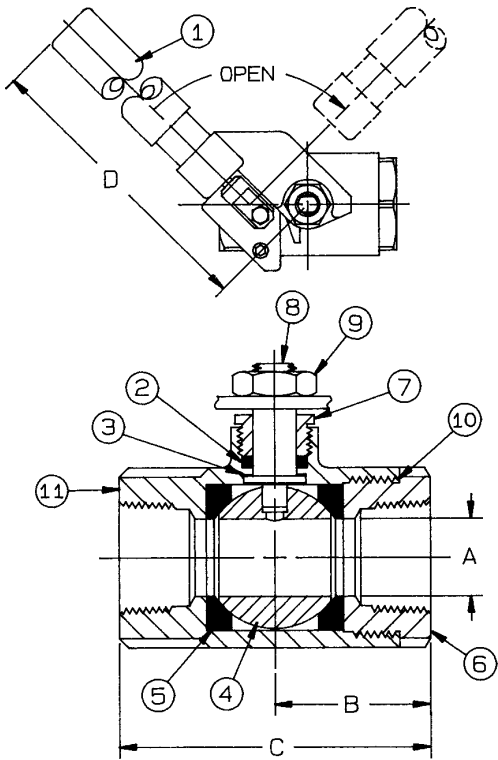
Threaded, 1/4" to 1" 2000 psig WOG, 1-1/4" to 2" 1500 psig WOG.
Cold Non-Shock, 150 psig Saturated Steam, Vacuum Service to 29 inches Hg.
Federal Specification: WW-V-35C, Type: II, Composition: CS, Style: 3.

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. "Deadman" 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	Steel, Zinc Plated
5. Seat (2)	Multifill PTFE	10. Body seal	PTFE (1-1/4" to 2")
		11. Body	A216-WCB



VARIATIONS AVAILABLE:

89-540 Series (316 SS Ball & Stem)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-08 -	90° Reversed Stem (Spring Open)	1/4" to 2"
-14 -	Vented Ball (see page J-2)	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"
-P01-	BSPP (Parallel) Thread Connection	1/4" to 2"
-T01-	BSPT (Tapered) Thread Connection	1/4" to 2"

CARBON STEEL BALL VALVE WITH
"DEADMAN" 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

**For Pressure/Temperature Ratings,
Refer to Page N-15, Graph No. 13
(1/4" to 1")
Refer to Page N-14, Graph No. 11
(1-1/4" to 2")**

Apollo® 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.

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

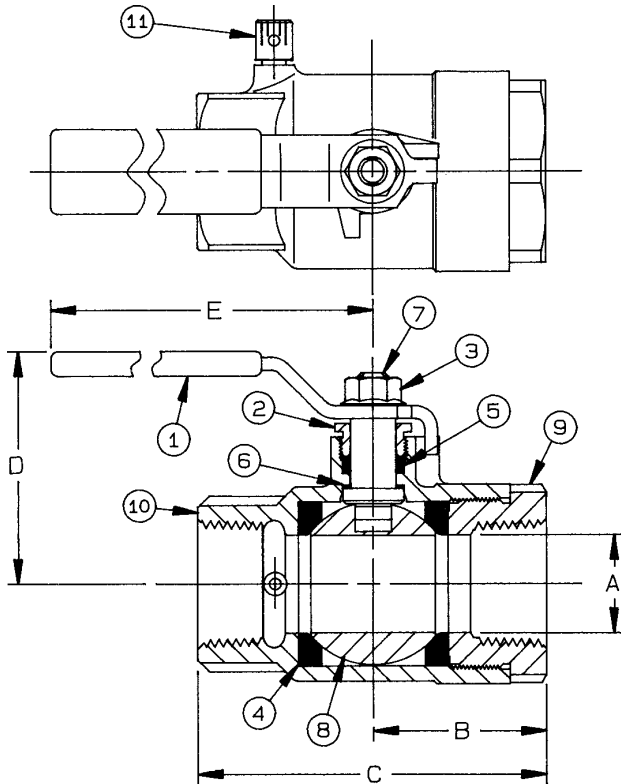
1. Lever and grip	Steel, zinc plated w/vinyl	7. Stem	B16
2. Gland screw	B16	8. Ball	B16, chrome plated
3. Lever nut	Zinc plated steel	9. Retainer	B16
4. Seat (2)	RPTFE	10. Body	B584-C84400
5. Stem packing	RPTFE	11. Cap and seal	B16 and EPR
6. Stem bearing	RPTFE		

VARIATIONS AVAILABLE:

95-120 Series (Adjustable Stop Lever)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-07 -	Tee Handle	1/2" to 1"
-08 -	90° Reversed Stem	1/2" to 1"
-10 -	SS Lever & Nut	1/2" to 1"
-14 -	Vented Ball(see page J-2)	1/2" to 1"
-15 -	Round Handle	1/2" to 1"
-18 -	Plain Yellow Grip	1/2" to 1"
-20 -	Slot Vented Ball	1/2" to 1"
-27 -	Latch Lock Lever	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	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 N-10, Graph No. 3**

Apollo® 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.

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

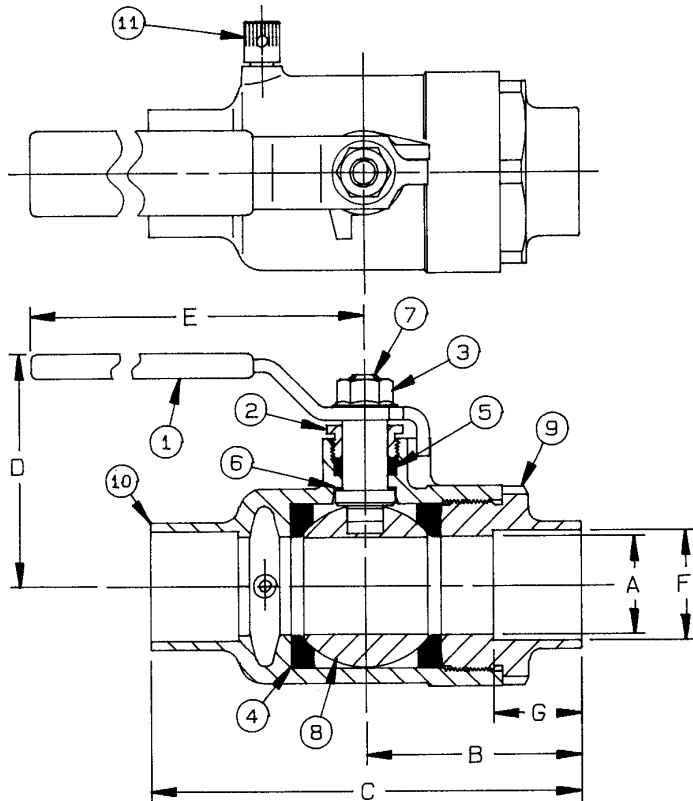
1. Lever and grip	Steel, zinc plated w/vinyl	7. Stem	B16
2. Gland screw	B16	8. Ball	B16, chrome plated
3. Lever nut	Steel, zinc plated	9. Retainer	B16
4. Seat (2)	RPTFE	10. Body	B584-C84400
5. Stem packing	RPTFE	11. Cap and seal	B16 and EPR
6. Stem bearing	RPTFE		

VARIATIONS AVAILABLE:

95-220 Series (Adjustable Stop Lever)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-07 -	Tee Handle	1/2" to 1"
-08 -	90° Reversed Stem	1/2" to 1"
-10 -	SS Lever & Nut	1/2" to 1"
-14 -	Vented Ball(see page J-2)	1/2" to 1"
-15 -	Round Handle	1/2" to 1"
-18 -	Plain Yellow Grip	1/2" to 1"
-20 -	Slot Vented Ball	1/2" to 1"
-24 -	Graphite Stem Packing	1/2" to 1"
-27 -	Latch Lock Lever	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	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 N-10, Graph No. 3**

Apollo® 390-100 Series

Stainless Steel Full Port AAR Ball Valve

390-105-01 AAR Approval #E929027, 390-108-01 AAR Approval #E929028

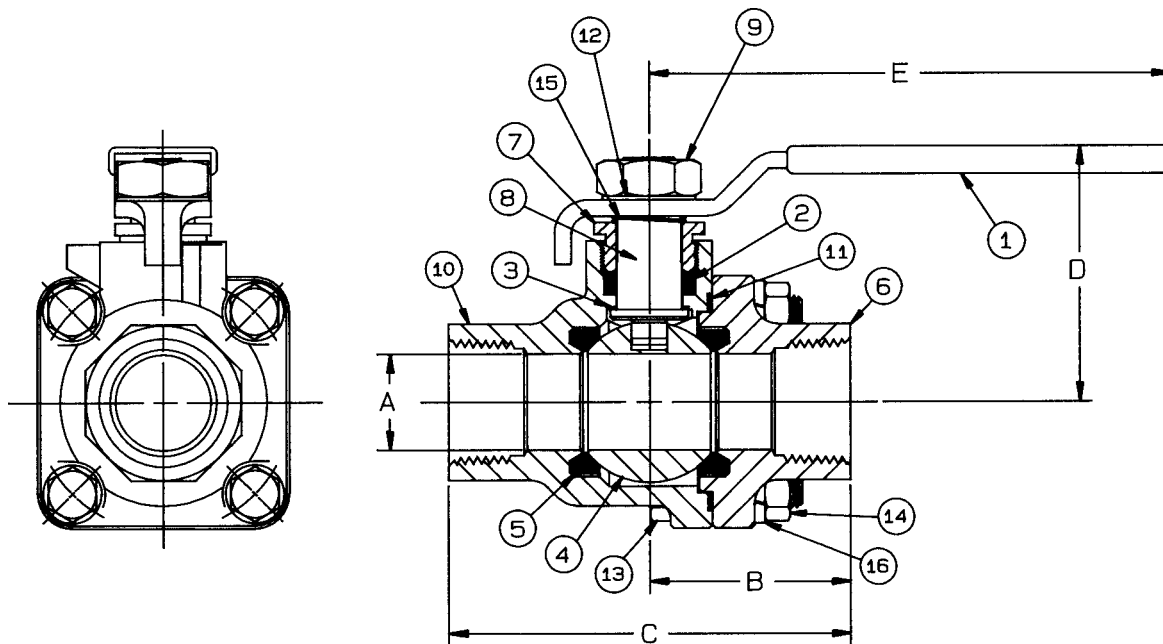
NPT Threaded, 275 psig WOG, Cold Non-Shock, 150 psig Saturated Steam. Vacuum Service to 29 inches Hg.
Federal Specification: WW-V-35C, Type: II, Composition: SS, Style: 3.

FEATURES

- AAR Approved
- Investment cast body and retainer
- Adjustable packing gland
- Graphite body seal and packing
- Meets NACE MR-01-75
- Positive shut-off
- Corrosion resistant
- RPTFE seats
- Blow-out-proof stem design
- Field repairable
- Bolted body design
- Compact design

STANDARD MATERIAL LIST

1. Lever and grip	304 SS w/vinyl	9. Lever lock nut	A194-GD8 SS
2. Stem packing	Graphite	10. Body	A351-CF8M
3. Stem bearing	RPTFE	11. Body seal	Graphite
4. Ball	A276-316	12. Lock washer	410 SS
5. Seat (2)	RPTFE	13. Body bolt	A193-GDB8 SS
6. Retainer	A351-CF8M	14. Body nut	A194-GD8 SS
7. Gland screw	A276-316	15. Ground spring	SS
8. Stem	A276-316	16. Lock washer	304 SS



STAINLESS STEEL FULL PORT AAR BALL VALVE

NUMBER	SIZE	A	B	C	D	E	Wt.
390-105-01	1"	1.00	2.09	4.18	2.62	5.50	4.00
390-108-01	2"	2.00	2.70	5.40	4.08	6.00	13.00

**For Pressure/Temperature Ratings,
Refer to Page N-9, Graph No. 2**

Apollo® 87-205-B6

1" Stainless Steel Full Port Flange x NPT AAR Ball Valve

AAR Approval #E919013

ANSI Class 150 Flange x NPT Threaded Ends, 275 psig WOG, Cold Non-Shock 150 psig Saturated Steam.
Vacuum Service to 29 inches Hg.

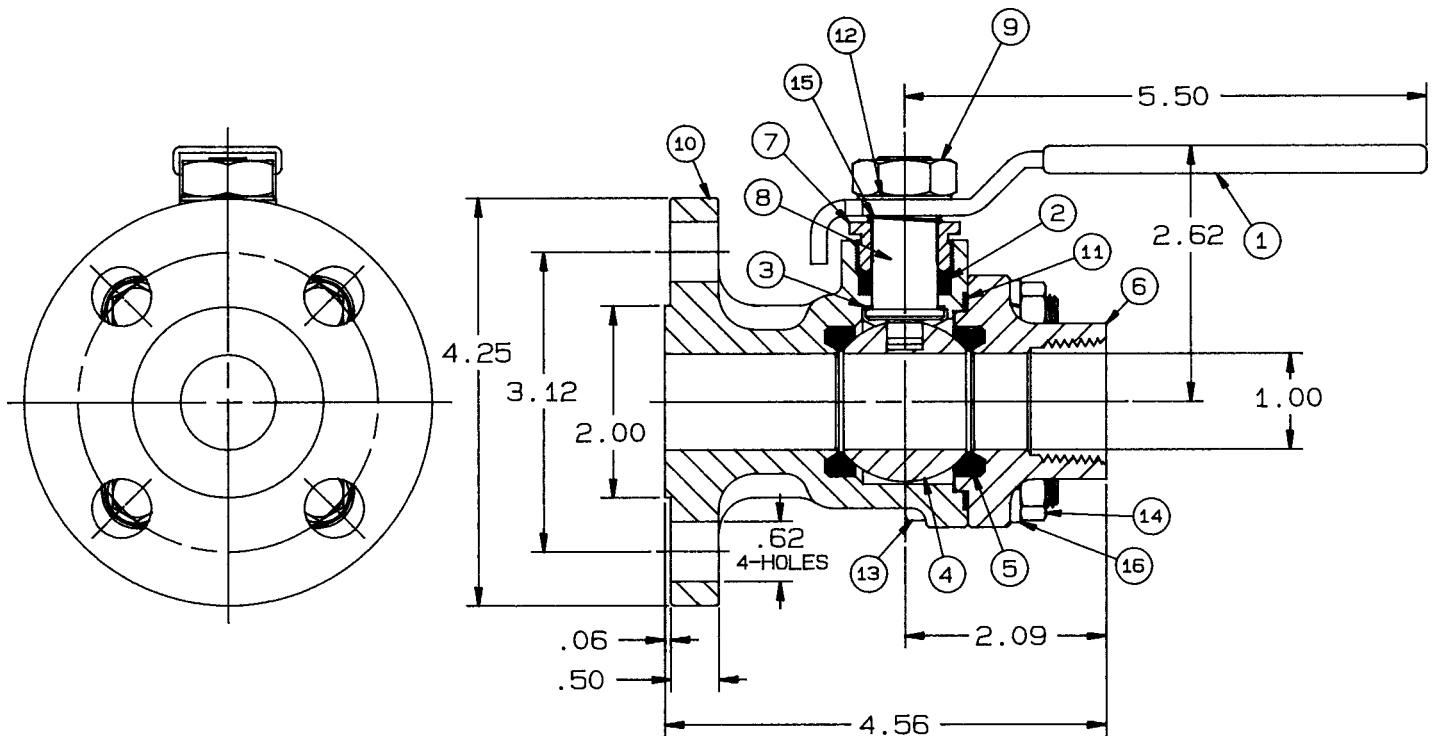
Federal Specification: WW-V-35C, Type: II, Composition: SS, Style: 3.

FEATURES

- AAR Approved
- Investment cast body and retainer
- Adjustable packing gland
- Graphite body seal and packing
- Meets NACE MR-01-75
- Positive shut-off
- Corrosion resistant
- RPTFE seats
- Blow-out-proof stem design
- Field repairable
- Bolted body design
- Compact design

STANDARD MATERIAL LIST

1. Lever and grip	304 SS w/vinyl	9. Lever lock nut	A194-GD8 SS
2. Stem packing	Graphite	10. Body	A351-CF8M
3. Stem bearing	RPTFE	11. Body seal	Graphite
4. Ball	A276-316	12. Lock washer	410 SS
5. Seat (2)	RPTFE	13. Body bolt	A193-GDB8 SS
6. Retainer	A351-CF8M	14. Body nut	A194-GD8 SS
7. Gland screw	A276-316	15. Ground spring	SS
8. Stem	A276-316	16. Lock washer	304 SS



WEIGHT = 5.50 lbs

**For Pressure/Temperature Ratings,
Refer to Page N-9, Graph No. 2**

Apollo® 87-208-A6

2" Stainless Steel Full Port Flange x NPT AAR Ball Valve

AAR Approval #E919013

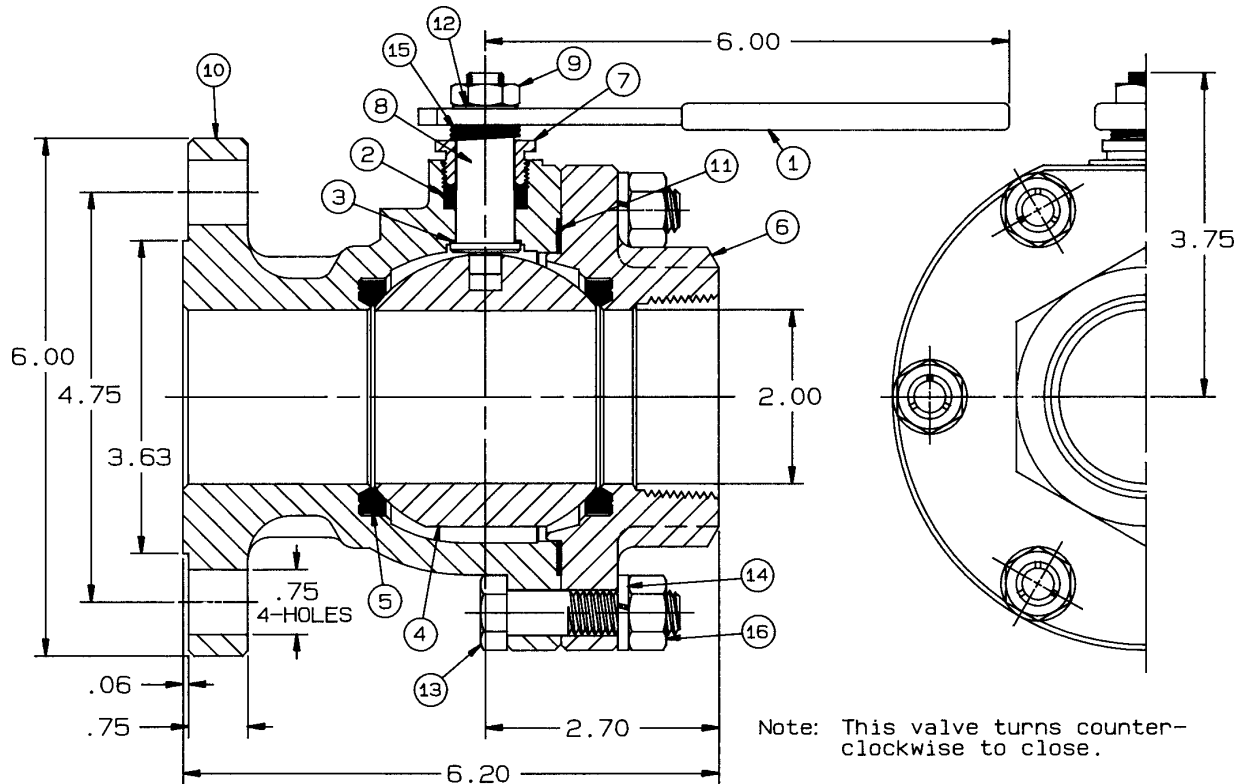
ANSI Class 150 Flange x NPT Threaded Ends, 275 psig WOG, Cold Non-Shock 150 psig Saturated Steam. Vacuum Service to 29 inches Hg.
Federal Specification: WW-V-35C, Type: II, Composition: SS, Style: 3.

FEATURES

- AAR Approved
- Investment cast body and retainer
- Adjustable packing gland
- Graphite body seal and packing
- Meets NACE MR-01-75
- Positive shut-off
- Corrosion resistant
- RPTFE seats
- Blow-out-proof stem design
- Field repairable
- Bolted body design
- Reversed operation

STANDARD MATERIAL LIST

1. Lever and grip	304 SS w/vinyl	9. Lever lock nut	A194-GD8 SS
2. Stem packing	Graphite	10. Body	A351-CF8M
3. Stem bearing	RPTFE	11. Body seal	Graphite
4. Ball	A276-316	12. Lock washer	410 SS
5. Seat (2)	RPTFE	13. Body bolt	A193-GDB8 SS
6. Retainer	A351-CF8M	14. Body nut	A194-GD8 SS
7. Gland screw	A276-316	15. Ground spring	SS
8. Stem	A276-316	16. Lock washer	304 SS



WEIGHT = 20.50 lbs

**For Pressure/Temperature Ratings,
Refer to Page N-9, Graph No. 2**

Apollo® 87-200-A4 Series

3" Stainless Steel Full Port Flange x NPT AAR Ball Valve

AAR Approval #E9190114

ANSI Class 150 Flange x NPT Threaded Ends, 275 psig WOG, Cold Non-Shock 150 psig Saturated Steam. Vacuum Service to 29 inches Hg.

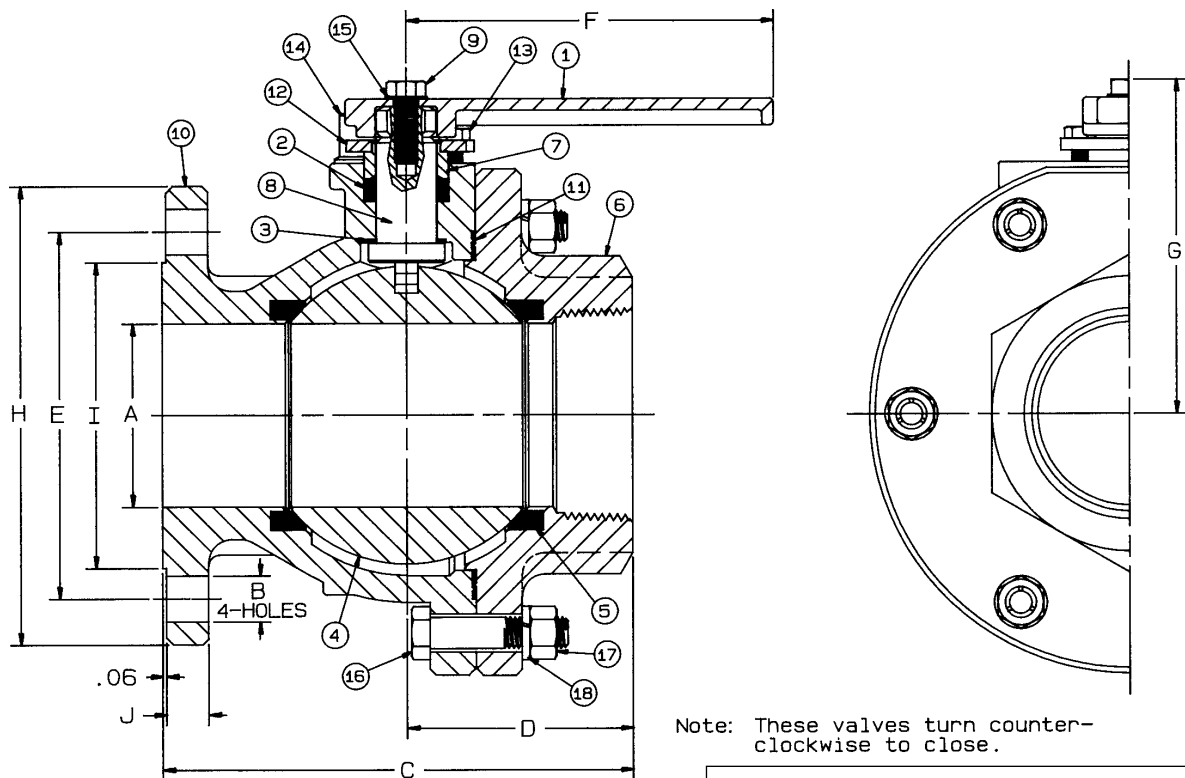
Federal Specification: WW-V-35C, Type: II, Composition: SS, Style: 3.

FEATURES

- AAR Approved
- Graphite body seal and packing
- Adjustable packing gland
- RPTFE seats
- Meets NACE MR-01-75
- Bolted body design
- Corrosion resistant
- Investment cast lever
- Blow-out-proof stem design
- Field repairable
- Positive shut-off

STANDARD MATERIAL LIST

1. Lever	A351-CF8M	10. Body	A351-CF8M
2. Stem packing	Graphite	11. Body seal	Graphite
3. Stem bearing	RPTFE	12. Gland plate	304 SS
4. Ball	A351-CF8M	13. Screw	A193-GDB8 SS
5. Seat (2)	RPTFE	14. Stop	A276-316
6. Retainer	A351-CF8M	15. Lock washer	410 SS
7. Packing gland	A276-316	16. Body bolt	A193-GDB8M SS
8. Stem	A276-316	17. Body lock nut	A194-GD8 SS
9. Lever screw	A193-GDB8M SS	18. Lock washer	304 SS



**For Pressure/Temperature Ratings,
Refer to Page N-9, Graph No. 2**

3" STAINLESS STEEL FULL PORT
FLANGE X NPT AAR BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	H	I	J	Wt.
87-200-A4	3"	3.00	.75	7.68	3.68	6.00	9.00	5.46	7.50	5.00	.75	50.00
87-200-A46*	3"	3.00	.75	7.68	3.68	6.00	6.00	5.46	7.50	5.00	.75	50.00

*With 6" Lever

Apollo® 82-200 Series

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

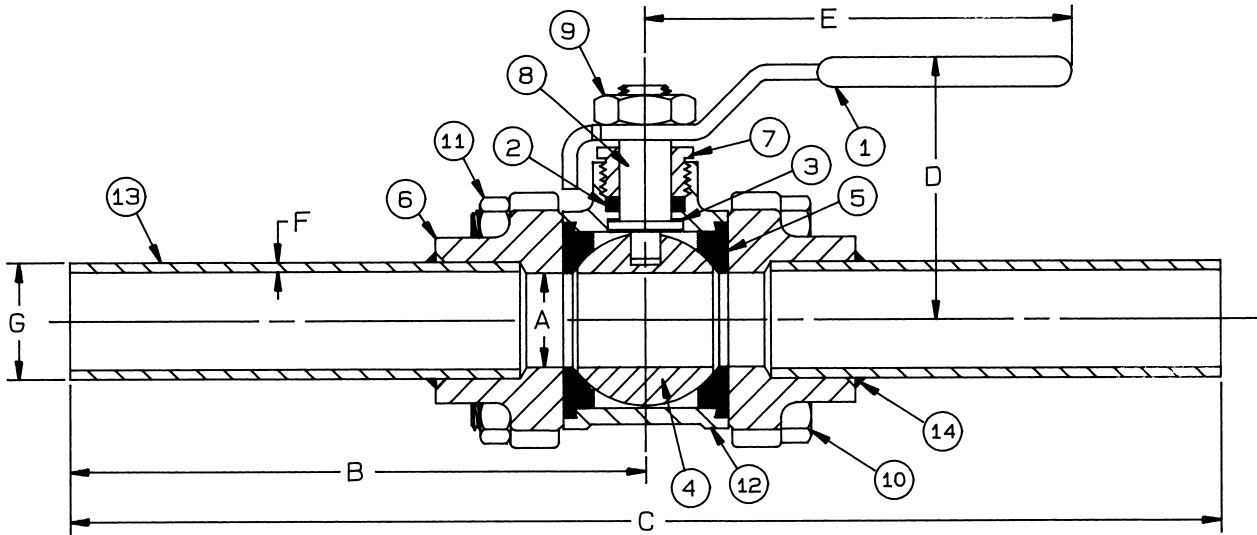
Solder End, 600 psig WOG, Cold Non-Shock. 150 psig Saturated Steam.
 Vacuum Service to 29 inches Hg.
 Federal Specification: WW-V-35B, Type: II, Composition: BZ, Style: 1.
 Designed for soft solder or brazed installation without disassembly.

FEATURES

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

STANDARD MATERIAL LIST

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



**For Pressure/Temperature Ratings,
Refer to Page N-10, 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.

Apollo® 82-200 Series

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

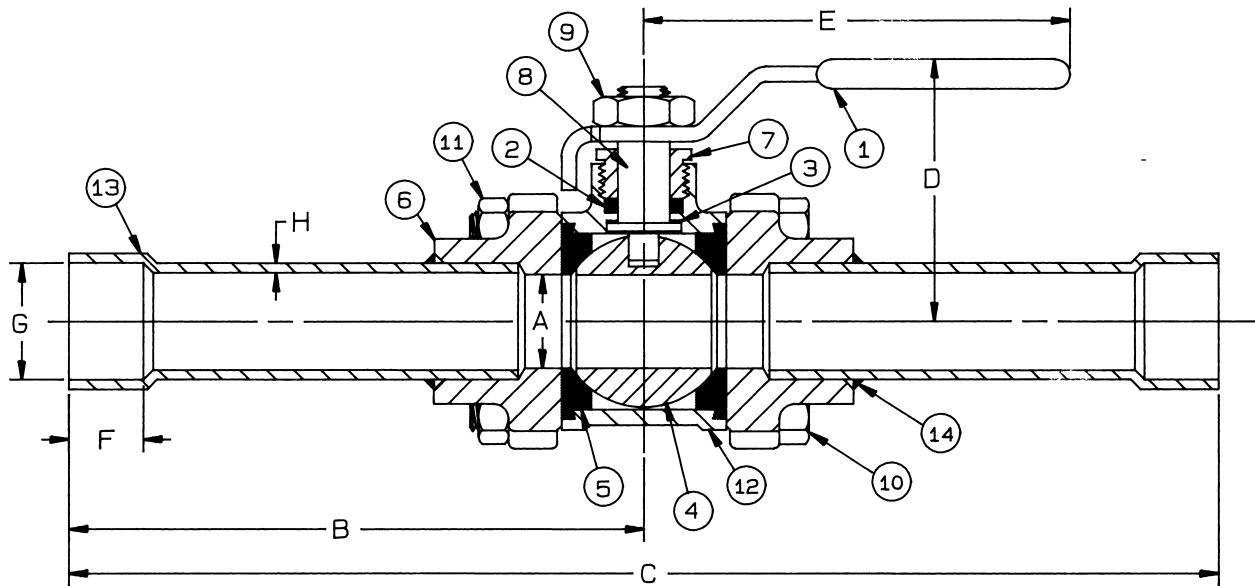
Solder End, 600 psig WOG, Cold Non-Shock. 150 psig Saturated Steam.
 Vacuum Service to 29 inches Hg.
 Federal Specification: WW-V-35B, Type: II, Composition: BZ, Style: 1.
 Designed for soft solder or brazed installation without disassembly.

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



**For Pressure/Temperature Ratings,
 Refer to Page N-10, Graph No. 4**

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

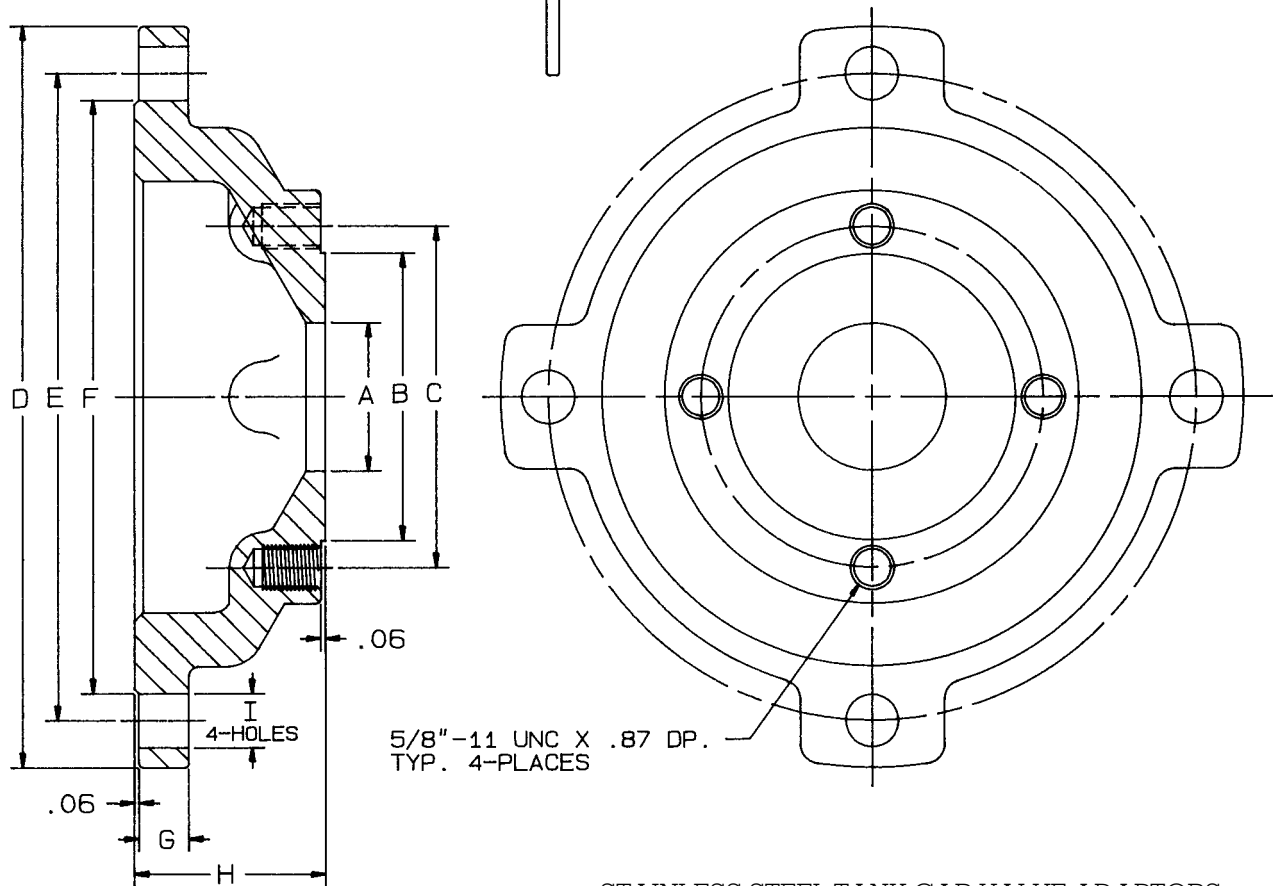
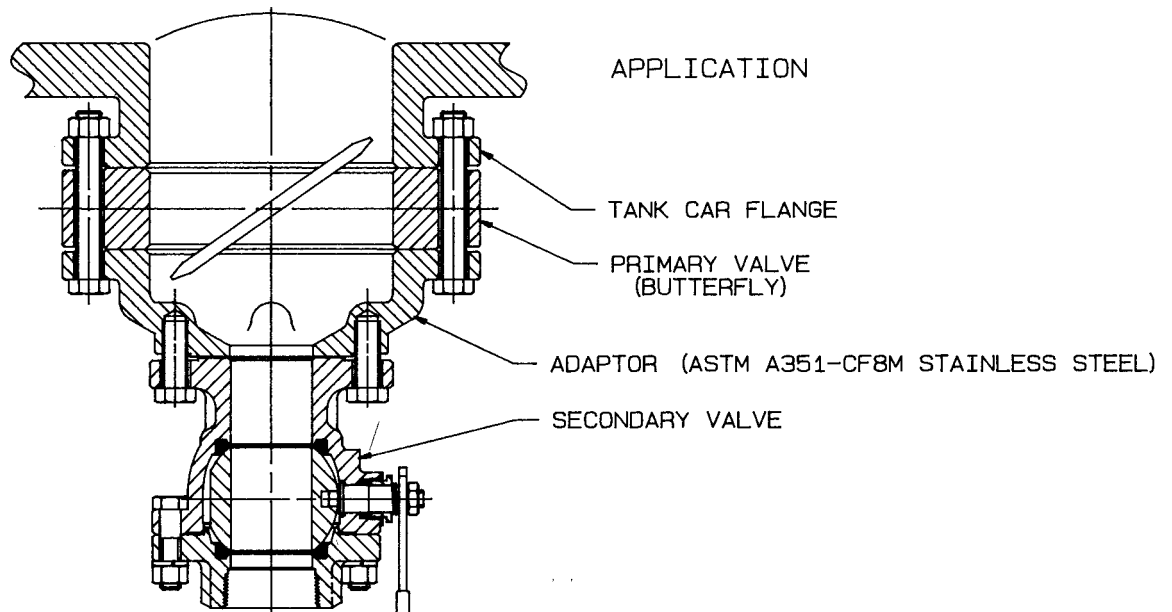
STANDARD NUMBERS	OXYGEN CLEANED	SIZE	A	B	C	D	E	F	G*	H	Wt.
82-203-C2	82-203-C3	1/2"	.62	7.40	14.80	2.00	4.87	.50	5/8"	.049	1.7
82-204-C3	82-204-C4	3/4"	.81	7.71	15.42	2.18	4.87	.75	7/8"	.065	2.4
82-205-C2	82-205-C3	1"	1.00	7.92	15.84	2.62	5.50	.90	1-1/8"	.065	3.5
82-206-C1	82-206-C2	1-1/4"	1.25	8.45	16.90	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.

Apollo® 65-008 Series

Stainless Steel Tank Car Valve Adaptors

AAR Approved #E989075



STAINLESS STEEL TANK CAR VALVE ADAPTORS

NUMBER	SIZE	A	B	C	D	E	F	G	H	I	Wt.
65-008-31	2 x 6	2.06	4.00	4.75	10.31	9.00	8.25	.68	2.65	.75	18.85
65-008-30	3 x 6	3.06	5.25	6.00	10.31	9.00	8.25	.68	2.03	.75	14.40

Apollo® 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.

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		

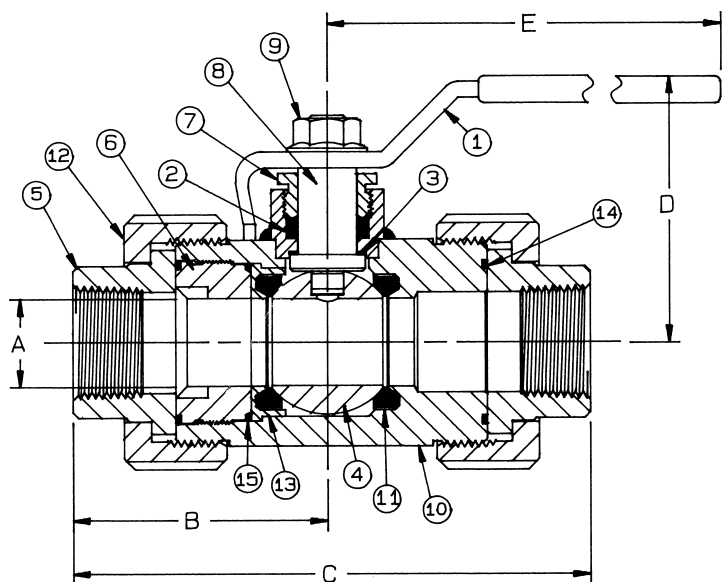
VARIATIONS AVAILABLE:

73-340 Series

(316 SS ball & Stem)

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



**For Pressure/Temperature Ratings,
Refer to Page N-16, Graph No. 15**

Apollo® 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.

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.

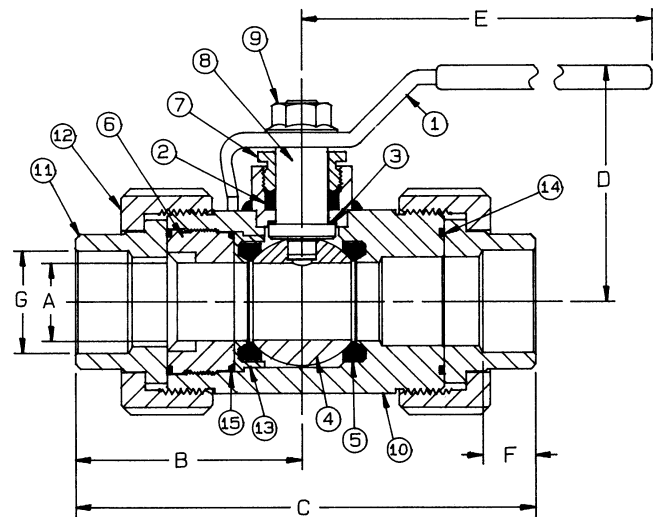
STANDARD MATERIAL LIST

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. 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)



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

**For Pressure/Temperature Ratings,
Refer to Page N-16, Graph No. 15**

Apollo® 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

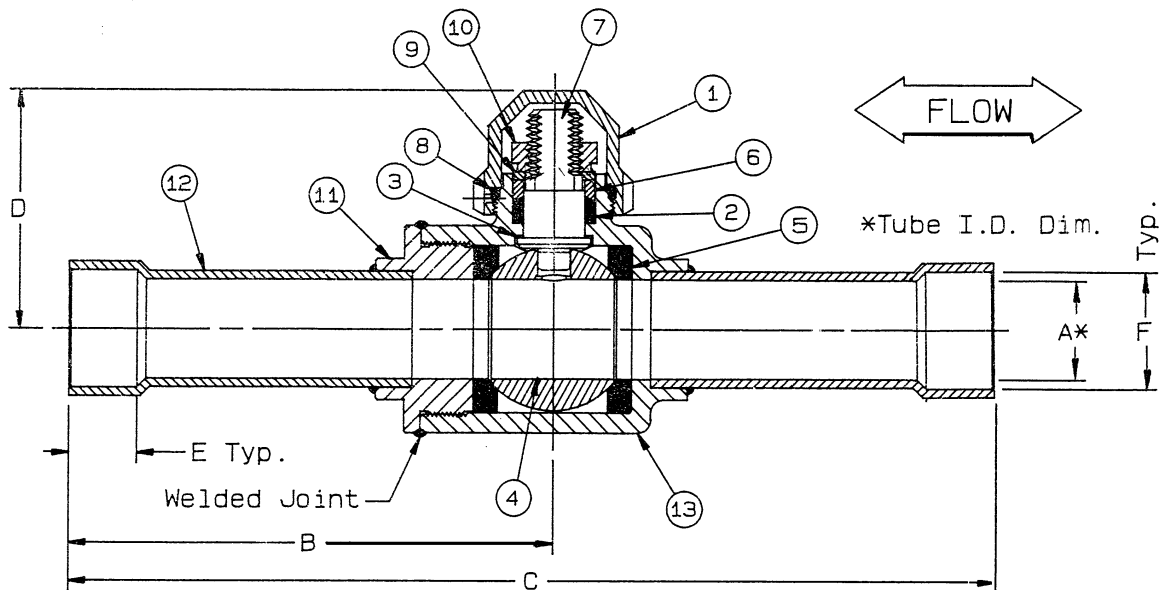


UL LISTINGS

- 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

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

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

Apollo® 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.

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
- Optional tee handle available (-07)
- Quarter turn On-Off
- Adjustable packing gland
- One piece bronze body
- Chromium plated ball

UL LISTINGS

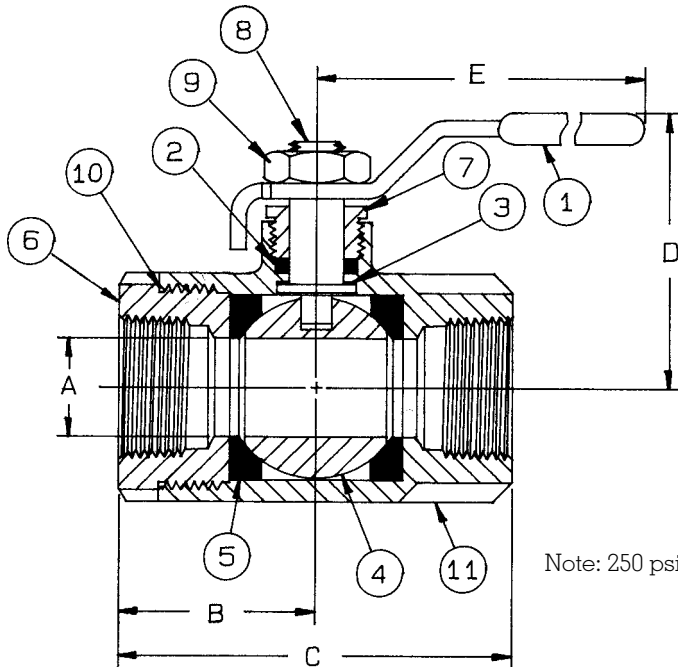


LISTED

- 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, 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 -	Latch Lock Lever	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 N-10, Graph No. 4**

Apollo® 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.

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
- Optional tee handle available (-07)
- Quarter turn On-Off
- Adjustable packing gland
- One piece bronze body
- Plain ball

UL LISTINGS

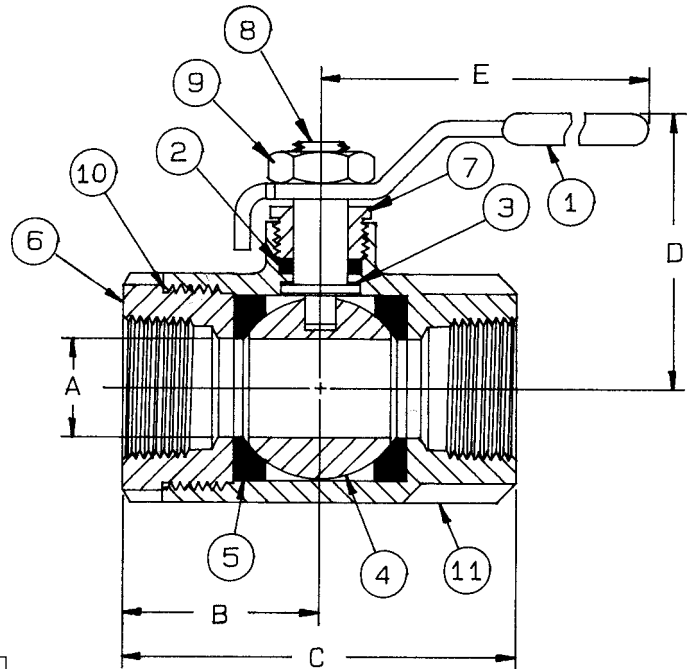


LISTED

- 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 N-10, 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.

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

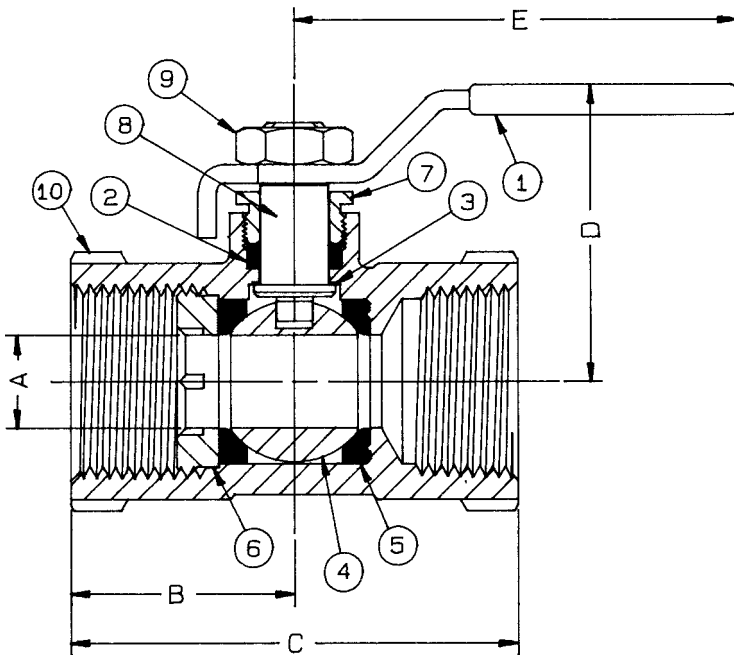


UL LISTINGS

- 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 -	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 10 , Graph No. 3**

Apollo® 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.

FEATURES

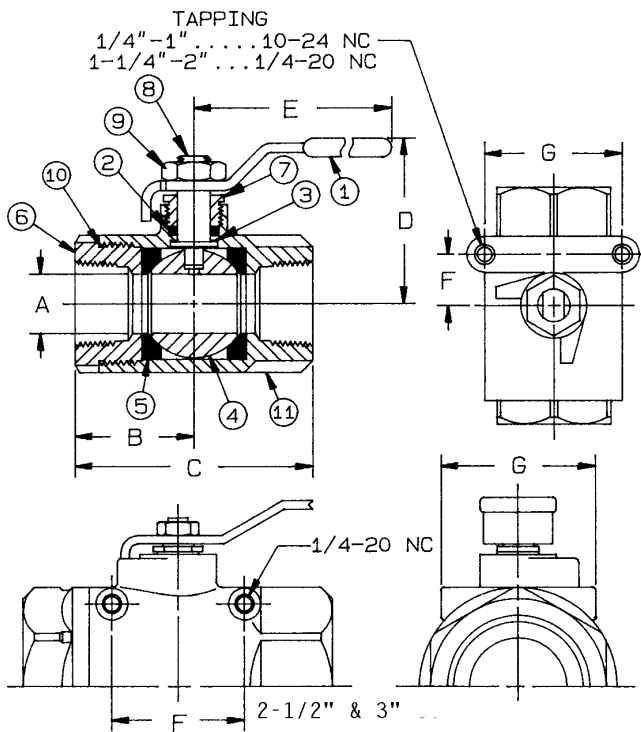
- UL Listed for LP-Gas, natural gas and flammable liquid to 250 psig
- RPTFE seats and stuffing box ring
- Mounting pad for easy actuator mounting
- Investment cast components
- Blow-out-proof stem design
- Adjustable packing gland
- Nitride corrosion protection

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 N-15, Graph No. 13
(1/4" to 1")
Refer to Page N-14, Graph No. 14
(1-1/4" to 2")**

Apollo® 50-GB0 Series

Bronze Full Port Main Burner Gas Ball Valve (GB-50 Series)

FEATURES

- Chromium plated ball
- RPTFE packing
- PTFE seats
- Pilot side tap
- Blow-out-proof stem design
- Adjustable packing gland
- Quarter turn On-Off
- Reversible handle

DESIGN CERTIFICATIONS

UL LISTINGS



- Guide YRBX: LP-Gas shut-off valve.
- Guide MHKZ: Gas shut-off valve for use with natural and manufactured gases.



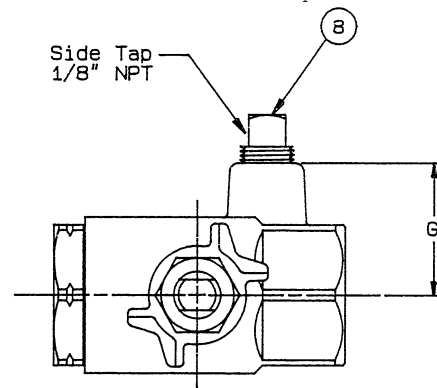
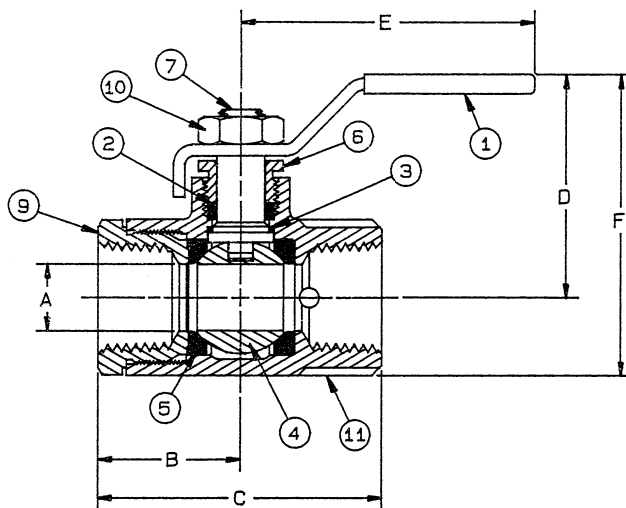
- AGA 3-88
- ANSI Z21.15
- CGA 9.1
- CLIR No. 35 & CR91-002

STANDARD MATERIAL LIST

1. Lever and grip	Steel, zinc plated w/vinyl	8. Plug	PTFE coated brass
2. Stem packing	RPTFE	9. Retainer	Brass ASTM B16
3. Stem bearing	PTFE	10. Hex Nut	Steel ASTM A563
4. Ball	Brass ASTM B16, chrome plated		grade A, zinc plated
5. Seat (2)	PTFE	11. Body	Brass ASTM B584
6. Gland screw	Brass ASTM B16		UNS alloy C84400
7. Stem	Brass ASTM B16		

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-A1 -	1/4" NPT Side Tap	1" to 2"
-A7 -	1/4" NPT Side Tap & Tee Handle	1" to 2"
-07 -	1/8" NPT Side Tap & Tee Handle	1/2" to 2"
-01A-	1/8" NPT Dual Side Tap	3/4" to 2"
-07A-	1/8" NPT Dual Side Tap & Tee Handle	3/4" to 2"
-A1A-	1/4" NPT Dual Side Tap	1" to 2"
-A7A-	1/4" NPT Dual Side Tap & Tee Handle	1" to 2"



BRONZE FULL PORT MAIN BURNER GAS BALL VALVE
w/1/8" NPT SIDE TAP

NUMBER	SIZE	A	B	C	D	E	F	G	Wt.
50-GB3-01	1/2"	.50	1.11	2.25	1.68	2.85	2.27	1.00	.64
50-GB4-01	3/4"	.75	1.26	2.67	1.93	3.85	2.72	1.12	.80
50-GB5-01	1"	1.00	1.65	3.42	2.19	4.78	3.19	1.28	1.61
50-GB6-01	1-1/4"	1.25	1.87	3.86	2.37	4.78	3.56	1.62	2.60
50-GB7-01	1-1/2"	1.50	2.50	4.22	2.78	5.50	4.18	1.81	3.85
50-GB8-01	2"	2.00	2.48	5.02	3.15	5.50	4.90	2.18	6.57

Apollo® 51-GB0 Series

Bronze Main Burner Gas Ball Valve (GB-10 Series)

FEATURES

- Chromium plated ball
- RPTFE packing
- PTFE seats
- Available in three handle configurations
- Blow-out-proof stem design
- Adjustable packing gland
- Quarter turn On-Off

DESIGN CERTIFICATIONS



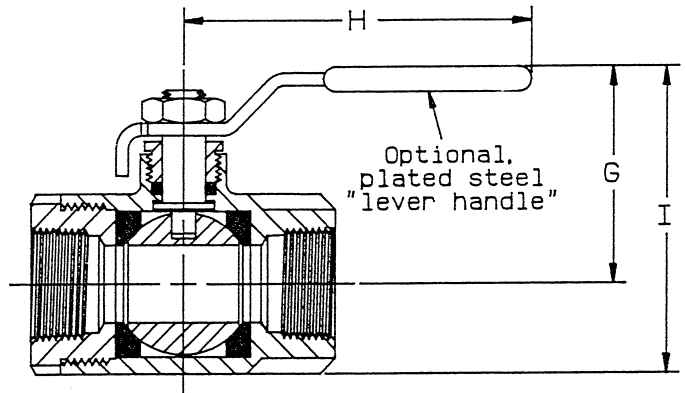
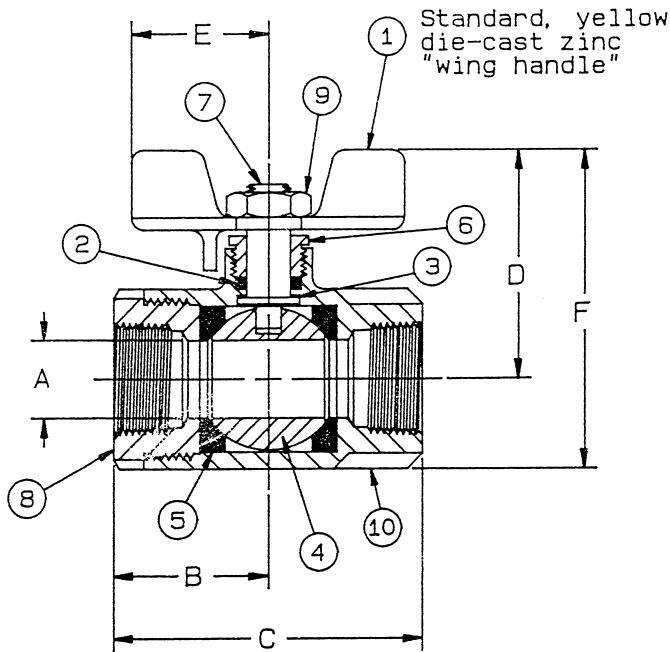
- AGA 3-88
- ANSI Z21.15
- CLIR No. 35 & CR91-002

STANDARD MATERIAL LIST

1. Handle	Yellow die-cast zinc	7. Stem	Brass ASTM B16
2. Stem packing	RPTFE	8. Retainer	Brass ASTM B16
3. Stem bearing	PTFE	9. Hex Nut	Steel ASTM A563
4. Ball	Brass ASTM B16, chrome plated		grade A, zinc plated
5. Seat (2)	PTFE	10. Body	Brass ASTM B584
6. Gland screw	Brass ASTM B16		UNS alloy C84400

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-L1 -	Lever Handle W/Vinyl	3/8" to 1"
-T1 -	Tee Handle	3/8" to 1"



BRONZE FULL PORT MAIN BURNER GAS BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	H	I	Wt.
51-GB2-01	3/8"	.38	1.02	2.04	1.63	.87	2.16	1.70	3.85	2.23	.56
51-GB3-01	1/2"	.50	1.14	2.32	1.63	.87	2.22	1.72	3.85	2.31	.63
51-GB4-01	3/4"	.68	1.47	2.97	2.22	1.37	3.00	2.02	4.75	2.80	1.39
51-GB5-01	1"	.87	1.66	3.33	2.27	1.37	3.18	2.15	4.75	3.05	1.72

Apollo® 51-GB0 Series

Bronze Main Burner Gas Ball Valve (GB-11 Series)

FEATURES

- Chromium plated ball
- RPTFE packing
- PTFE seats
- Available in three handle configurations
- Blow-out-proof stem design
- Adjustable packing gland
- Quarter turn On-Off

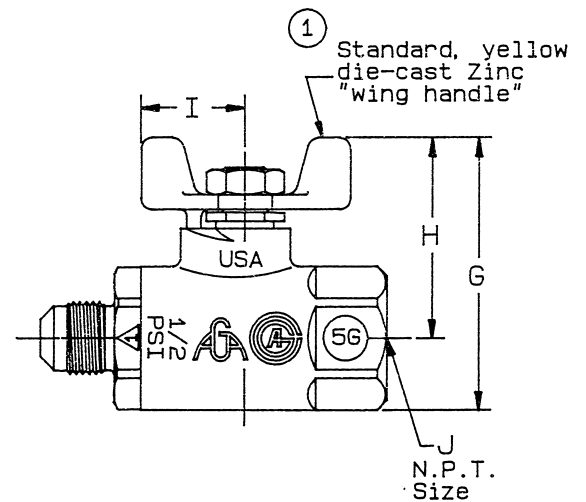
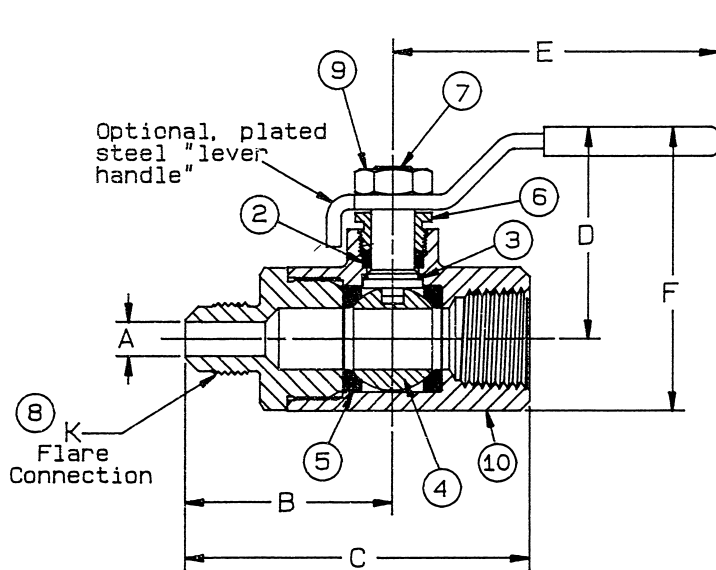
DESIGN CERTIFICATIONS



- AGA 3-88
- ANSI Z21.15
- CLIR No. 35 & CR91-002

STANDARD MATERIAL LIST

1. Handle	Yellow die-cast zinc	7. Stem	Brass ASTM B16
2. Stem packing	RPTFE	8. Retainer	Brass ASTM B16
3. Stem bearing	PTFE	9. Hex Nut	Steel ASTM A563
4. Ball	Brass ASTM B16, chrome plated	10. Body	grade A, zinc plated
5. Seat (2)	PTFE		Brass ASTM B584
6. Gland screw	Brass ASTM B16		UNS alloy C84400



BRONZE MAIN BURNER GAS BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	G	H	I	J	K	Wt.
51-GB30-21	3/8"	.28	1.72	2.86	1.72	3.85	2.31	2.22	1.63	.87	1/2	5/8-18	.72
51-GB30-22	1/2"	.40	1.85	2.99	1.72	3.85	2.31	2.22	1.63	.87	1/2	3/4-16	.78
51-GB30-23	5/8"	.50	2.35	3.84	2.02	4.75	2.80	3.00	2.22	1.37	3/4	7/8-14	1.74

OPTIONAL "LEVER" HANDLE	OPTIONAL "TEE" HANDLE
3/8" GB-11 (51GB3L21)	3/8" GB-11 (51GB3T21)
1/2" GB-11 (51GBL22)	1/2" GB-11 (51GB3T22)
5/8" GB-11 (51GB4L23)	5/8" GB-11 (51GB4T23)