

"Apollo"®

BRONZE BALL VALVES

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BALL VALVES

APOLLO® NUMBERING SYSTEM FORMULA: 70 - 105 - 01

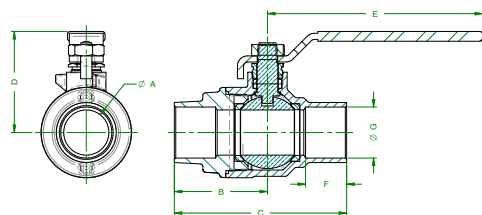
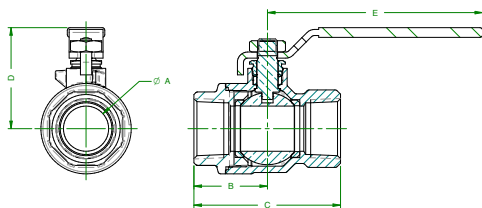
XX	-	X	X	X	- XX
SERIES		CONFIGURATION	VARIATIONS	SIZE*	OPTIONS
32		1 - FNPT	4 - 316 STAINLESS STEEL BALL & STEM	1 - 1/4"	-01 - STANDARD
50		2 - SOLDER		2 - 3/8"	-02 - GROUNDED
51		3 - UNION END NPT	9 - PINNED RETAINER	3 - 1/2"	-04 - 2-1/4" STEM EXTENSION
6PLF		6 - 3-WAY NPT		4 - 3/4"	-07 - TEE HANDLE
		7 - FULL PORT REFRIGERATION VALVE		5 - 1"	-08 - 90° REVERSED STEM
70				6 - 1-1/4"	-10 - STAINLESS STEEL LEVER & NUT
70HC		8 - MALE X FNPT		7 - 1-1/2"	-11 - THERMA-SEAL™ INSULATING HANDLE
70LF		9 - 3-WAY SOLDER		8 - 2"	-12 - STAMPED "I57 SWP" & BAGGED
70LFHC				9 - 2-1/2"	-13 - STAMPED "I57 SWP"
71				0 - 3"	-14 - SIDE VENTED BALL (UNI-DIRECTIONAL)
75				A - 4"	-15 - ROUND HANDLE, STEEL
77					-16 - CHAIN LEVER - VERTICAL
77C-A					-17 - ROUGH CHROME PLATED
77CLF -A					-18 - PLAIN YELLOW GRIP
77C-ULA					-19 - LOCK PLATE
77D					-20 - SLOT VENTED BALL (BI-DIRECTIONAL)
					-21 - UHMWPE TRIM (NON-PTFE)
77F					-24 - GRAPHITE PACKING
77FLF					-27 - STAINLESS STEEL LATCH-LOCK LEVER & NUT
77G-UL					-30 - CAM-LOCK AND GROUNDED
77V					-32 - STAINLESS STEEL TEE HANDLE & NUT
77VLF					-35 - VTFE TRIM (PTFE)
77W					-36 - STAINLESS STEEL HI-RISE ROUND HANDLE, STAINLESS STEEL NUT
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77W -HC					-40 - CYL-LOC AND GROUNDED
77WLF-HC					-41 - AUTOMATIC DRAIN
78					-45 - LESS LEVER AND NUT
79					-46 - LATCH-LOCK LEVER - LOCK IN CLOSED POSITION ONLY
77B					-47 - SS OVAL LATCH-LOCK HANDLE & NUT
7K					-48 - SS OVAL HANDLE (NO LATCH) & NUT
80					-49 - ASSEMBLED DRY
82					-50 - 2-1/4" CARBON STEEL LOCKING STEM EXT.
82LF					-56 - MULTIFILL SEATS & PACKING
New! 89FV					-57 - OXYGEN CLEANED
					-58 - CHAIN LEVER - HORIZONTAL
9A					-59 - SS EXTERNAL TRIM: 3-PC & FLANGED VALVES
90					-60 - GROUNDED BALL & STEM
94A					-62 - BODY CENTER SECTION (82 SERIES)
94ALF-A					-63 - NPT X SOLDER (-100-63-NPT BODY / -200-63-SWEAT BODY)
94MBV					-64 - 250 SWP
94XLF					-65 - MULTIFILL SEATS & GRAPHITE PACKING
94VLF-A					-72 - RTFE PACKING
95ALF					-91 - LOCKING SS TEE (3/4" AND 1")
					-92 - BALANCING STOP
					-94 - -04 & BALANCING STOP
*BODY SIZE WHEN ENDS ARE MIXED Note: Not all variations and features are available on same valve. Consult customer service					-BC - BALL CHECK
**LEAD FREE The wetted surfaces of this product shall contain no more than 0.25% lead by weighted average. Complies with Federal Public Law 111-380. ANSI 3rd party approved and listed.					-HC - HOSE THREAD AND CAP OPTION
					-SV - SAFETY VENT - 77-100/7K-100 SERIES (AUTO DRAIN)
					-SW - LIMIT SWITCH MOUNTED
					-TH - TESTED, HYDROSTATIC
					-TC - TESTED, HYDROSTATIC, W/CERTIFICATION
					-TW - TESTED, HYDROSTATIC, W/WITNESS & CERT.

BALL VALVES



77C-100/200-A SERIES

CONTRACTOR SERIES FULL PORT BRONZE BALL VALVE WITH SOLID BALL



Apollo's solid ball design delivers true full-port performance with 100% American construction. The next generation mod -"A" adds a new beefier lever, simplified packing adjustment, wider seats and stem packing and a 150 SWP body marking.

FEATURES

- ASTM Grade Bronze Castings
- Solid Brass Ball, Plated
- 600 psig CWP, Non-Shock
- 150 SWP Steam Rating
- Generous RPTFE Seats and Stem Packing
- Adjustable Stem Packing
- Blowout-Proof Stem Design
- Vacuum Service to 29 in. Hg
- Full-Port Design Through 2-1/2"
- ANSI B16.18 Solder End Version Available as 77C-200 Series
- CSAB51-CRN OC10908.5C
- MSS SP-110 Compliant
- IAPMO R&T / UPC-IGC Z1157
- **Proudly Made in USA**

OPTIONS*

- (-01) Standard Lever and Trim
- (-04) 2-1/4" Stem Extension
- (-07) CS Tee Handle
- (-10) Stainless Steel Handle and Nut
- (-11) Therma-Seal™ Insulating Tee
- (-27) Locking Handle
- (-50) 2-1/4" Locking Stem Extension
- (-92) Balancing Stop
- (-94) 2-1/4" Stem Extension and Balancing Stop
- Reversible Handle Option
- SS Vented Ball and Stem (77C140 and 77C240 Series)
- **77C-ULA UL258 Fire Protection Trim & Drain Option *NEW!***
- Flammable Gas Listed (CSA & UL) Model 77G-UL (See Page B-26)
- Other Handle Options Available

Also Available in a Lead Free Version as the 77CLF-A Series

Lever option kits for the 77C and 77C-A models differ. Refer to the latest Apollo® kit listing or contact Apollo® Tech Support for assistance.

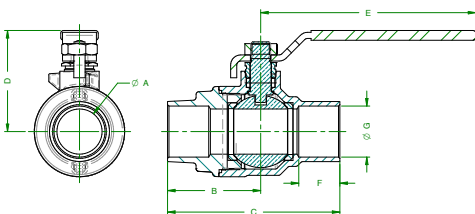
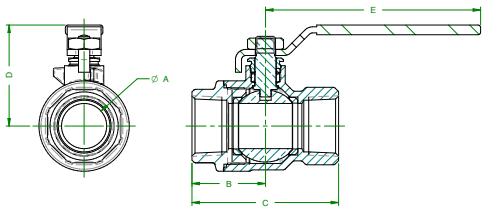
DIMENSIONS

PART NO.	SIZE (IN.)	DIMENSIONS (IN.)							C _v	WT. * (LB.)
		A	B	C	D	E	F	G		
NPT										
77C-101-01A	1/4"	0.37	0.88	1.8	1.65	2.82	-	-	5	0.6
77C-102-01A	3/8"	0.37	0.94	1.86	1.65	2.82	-	-	7	0.6
77C-103-01A	1/2"	0.50	1.15	2.29	1.79	3.82	-	-	16	0.6
77C-104-01A	3/4"	0.75	1.34	2.67	1.91	3.82	-	-	36	1.0
77C-105-01A	1"	1.00	1.63	3.24	2.24	4.72	-	-	68	1.8
77C-106-01A	1-1/4"	1.25	1.9	3.75	2.46	4.72	-	-	125	4.2
77C-107-01A	1-1/2"	1.50	2.06	4.11	2.9	5.37	-	-	177	4.6
77C-108-01A	2"	2.00	2.43	4.85	3.68	7.72	-	-	389	7.9
77C-109-01A	2-1/2"	2.50	3.03	6.02	4.13	7.72	-	-	503	16.4
SOLDER										
77C-202-01A	3/8"	0.37	1.24	2.17	1.65	2.82	0.41	0.50	7	0.6
77C-203-01A	1/2"	0.50	1.36	2.47	1.79	3.82	0.50	0.63	16	0.6
77C-204-01A	3/4"	0.75	1.73	3.20	1.91	3.82	0.75	0.88	36	1.0
77C-205-01A	1"	1.00	2.06	3.81	2.24	4.72	0.91	1.13	68	1.5
77C-206-01A	1-1/4"	1.25	2.22	4.21	2.46	4.72	0.97	1.38	125	3.9
77C-207-01A	1-1/2"	1.50	2.53	4.90	2.9	5.37	1.09	1.63	177	5.9
77C-208-01A	2"	2.00	3.15	6.07	3.68	7.72	1.34	2.13	389	7.5
77C-209-01A	2-1/2"	2.50	3.78	7.17	4.13	7.72	1.48	2.63	503	14.5

**Weights based on Standard Configuration*

BALL VALVES

77CLF-100/200-A SERIES
CONTRACTOR SERIES FULL PORT BRONZE BALL VALVE WITH SOLID BALL



Apollo's solid ball design delivers true full-port performance with 100% American construction. The next generation mod -"A" adds a new beefier lever, simplified packing adjustment, wider seats and stem packing and a 150 SWP body marking.

FEATURES

- ASTM Grade Lead Free Bronze Castings
- Solid Brass Ball, Plated
- 600 psig CWP, Non-Shock
- 150 SWP Steam Rating
- Generous RPTFE Seats and Stem Packing
- Adjustable Stem Packing
- Blowout-Proof Stem Design
- EZ-Solder™ Lead Free Bronze
- Vacuum Service to 29 in. Hg
- Full-Port Design Through 2-1/2"
- ANSI B16.18 Solder End Version Available as 77C-200 Series
- CSAB51-CRN OC10908.5C
- NSF/ANSI 61 Water Quality
- NSF/ANSI 372 Lead Free
- MSS SP-110 Compliant
- IAPMO R&T / UPC-IGC Z1157
- **Proudly Made in USA**

OPTIONS*

- (-01) Standard Lever and Trim
- (-04) 2-1/4" Stem Extension
- (-07) CS Tee Handle
- (-10) Stainless Steel Handle and Nut
- (-11) Therma-Seal™ Insulating Tee
- (-27) Locking Handle
- (-50) 2-1/4" Locking Stem Extension
- (-92) Balancing Stop
- (-94) 2-1/4" Stem Extension and Balancing Stop
- Reversible Handle Option
- SS Vented Ball and Stem (77C140 and 77C240 Series)
- **77C-ULA UL258 Fire Protection Trim & Drain Option NEW!**
- Flammable Gas Listed (CSA & UL) Model 77G-UL (See Page B-26)
- Other Handle Options Available
- Also Available in Standard Bronze as the 77C-A Series

**Lever option kits for the 77C and 77C-A models differ. Refer to the latest Apollo® kit listing or contact Apollo® Tech Support for assistance.*

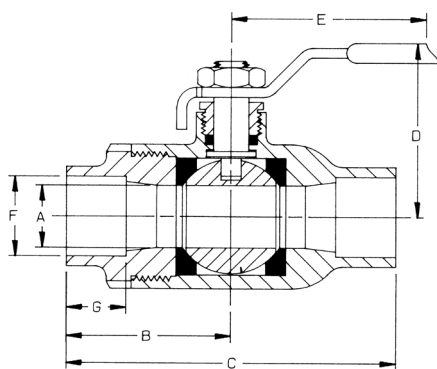
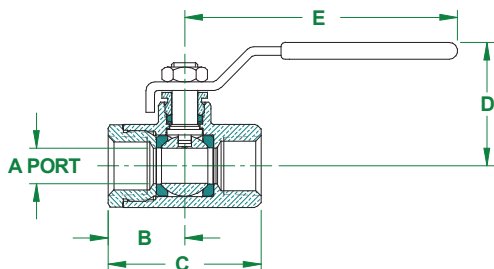
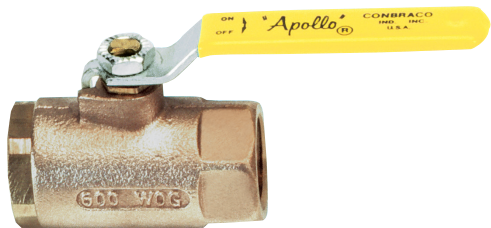
DIMENSIONS

PART NO.	SIZE (IN.)	DIMENSIONS (IN.)							C _v	WT. * (LB.)
		A	B	C	D	E	F	G		
NPT										
77CLF-101-01A	1/4"	0.37	0.88	1.8	1.65	2.82	-	-	5	0.6
77CLF-102-01A	3/8"	0.37	0.94	1.86	1.65	2.82	-	-	7	0.6
77CLF-103-01A	1/2"	0.50	1.15	2.29	1.79	3.82	-	-	16	0.6
77CLF-104-01A	3/4"	0.75	1.34	2.67	1.91	3.82	-	-	36	1.0
77CLF-105-01A	1"	1.00	1.63	3.24	2.24	4.72	-	-	68	1.8
77CLF-106-01A	1-1/4"	1.25	1.9	3.75	2.46	4.72	-	-	125	4.2
77CLF-107-01A	1-1/2"	1.50	2.06	4.11	2.9	5.37	-	-	177	4.6
77CLF-108-01A	2"	2.00	2.43	4.85	3.68	7.72	-	-	389	7.9
77CLF-109-01A	2-1/2"	2.50	3.03	6.02	4.13	7.72	-	-	503	16.4
SOLDER										
77CLF-202-01A	3/8"	0.37	1.24	2.17	1.65	2.82	0.41	0.50	7	0.6
77CLF-203-01A	1/2"	0.50	1.36	2.47	1.79	3.82	0.50	0.63	16	0.6
77CLF-204-01A	3/4"	0.75	1.73	3.20	1.91	3.82	0.75	0.88	36	1.0
77CLF-205-01A	1"	1.00	2.06	3.81	2.24	4.72	0.91	1.13	68	1.5
77CLF-206-01A	1-1/4"	1.25	2.22	4.21	2.46	4.72	0.97	1.38	125	3.9
77CLF-207-01A	1-1/2"	1.50	2.53	4.90	2.9	5.37	1.09	1.63	177	5.9
77CLF-208-01A	2"	2.00	3.15	6.07	3.68	7.72	1.34	2.13	389	7.5
77CLF-209-01A	2-1/2"	2.50	3.78	7.17	4.13	7.72	1.48	2.63	503	14.5

**Weights based on Standard Configuration*



70-100/200 SERIES
BRONZE BALL VALVE



The Apollo® 70 Series is the most widely used and trusted bronze ball valve in the industry. It features blowout-proof stem, RPTFE seats and stuffing box ring and plated brass ball.

FEATURES

- Heavy Pattern Construction
- Rated 600 psig CWP, Non-Shock
- 150 psig for Saturated Steam
- Optional 250 SWP Configuration
- Vacuum Service to 29 in. Hg
- Adjustable Packing Gland
- Multiple Options and Configurations Available
- Lead Free Option (70LF)
- 100% Tested
- **Proudly Made in USA**

DIMENSIONS

PART NUMBER	SIZE (IN.)	DIMENSIONS (IN.)					WT. (LB.)
		A	B	C	D	E	
NPT							
70-101-01	1/4"	0.37	1.03	2.06	1.75	3.87	0.60
70-102-01	3/8"	0.37	1.03	2.06	1.75	3.87	0.56
70-103-01	1/2"	0.50	1.12	2.17	1.75	3.87	0.63
70-104-01	3/4"	0.68	1.50	3.00	2.12	4.87	1.39
70-105-01	1"	0.87	1.68	3.37	2.25	4.87	1.72
70-106-01	1-1/4"	1.00	2.00	4.00	2.62	5.50	3.26
70-107-01	1-1/2"	1.25	2.18	4.37	3.06	8.00	4.61
70-108-01	2"	1.50	2.34	4.68	3.25	8.00	6.06
70-109-01A	2-1/2"	2.00	3.12	6.25	3.72	8.00	17.25
70-100-01	3"	2.50	3.37	6.75	4.12	8.00	18.60
70-10A-01	4"	3.12	3.68	7.37	5.25	10.00	25.50

NOTE: 1/4", 3/8", and 1/2" are full port.

DIMENSIONS

PART NUMBER	SIZE (IN.)	DIMENSIONS (IN.)*						
		A	B	C	D	E	F	G
SOLDER								
70-202-01	3/8"	0.37	1.28	2.56	1.75	3.87	0.505	0.37
70-203-01	1/2"	0.50	1.43	2.87	1.75	3.87	0.63	0.50
70-204-01	3/4"	0.68	1.93	3.87	2.12	4.87	0.88	0.75
70-205-01	1"	0.87	2.25	4.50	2.25	4.87	1.13	0.90
70-206-01	1-1/4"	1.00	2.31	4.62	2.62	5.50	1.38	0.96
70-207-01	1-1/2"	1.25	2.62	5.25	3.06	8.00	1.63	1.09
70-208-01	2"	1.50	3.18	6.37	3.25	8.00	2.13	1.34
70-209-01A	2-1/2"	2.00	3.74	7.51	3.72	8.00	2.63	1.48
70-200-01	3"	2.50	4.12	8.25	4.12	8.00	3.13	1.67
70-20A-01	4"	3.12	4.61	9.22	5.22	9.94	4.13	2.16

*Based on 70-200-01 - Dimensions may vary with options.

NOTE: 1/4", 3/8", and 1/2" are full port.

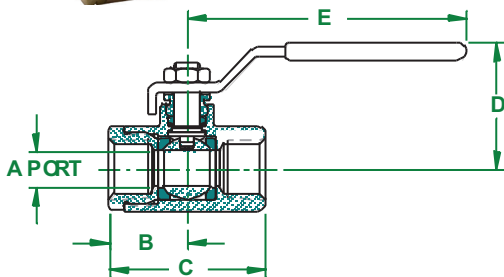
**70-2xx intended for soft solder installation using solders with melting temperature of < 500°F.

BALL VALVES

70LF-100/200 SERIES
BRONZE BALL VALVE



BALL VALVES



The Apollo® 70LF series is the most widely used and trusted lead free bronze ball valve in the industry. It features a blowout-proof stem, RPTFE seats and stuffing box ring and plated brass ball.

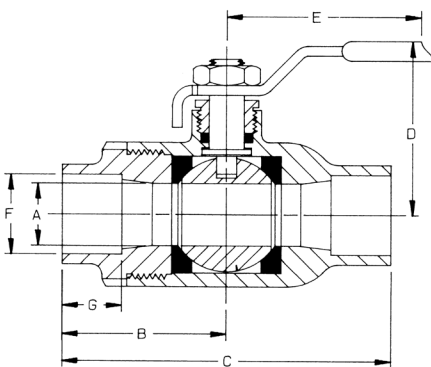
FEATURES

- Heavy Pattern Construction
- EZ-Solder™ Lead free bronze
- Solders Just Like Standard Bronze
- Rated 600 psig CWP, Non-Shock
- 150 psig for Saturated Steam
- 100% Factory Tested
- Vacuum Service to 29 in. Hg
- NSF/ANSI 61 Water Quality
- NSF/ANSI 372 Lead Free
- Adjustable Packing Gland
- Multiple Options and Configurations Available

DIMENSIONS

PART NUMBER	SIZE (IN.)	DIMENSIONS (IN.)					WT. (LB.)
		A	B	C	D	E	
NPT							
70LF-101-01	1/4"	0.37	1.03	2.06	1.75	3.87	0.60
70LF-102-01	3/8"	0.37	1.03	2.06	1.75	3.87	0.56
70LF-103-01	1/2"	0.50	1.12	2.25	1.75	3.87	0.63
70LF-104-01	3/4"	0.68	1.50	3.00	2.12	4.87	1.39
70LF-105-01	1"	0.87	1.68	3.37	2.25	4.87	1.72
70LF-106-01	1-1/4"	1.00	2.00	4.00	2.62	5.50	3.26
70LF-107-01	1-1/2"	1.25	2.18	4.37	3.06	8.00	4.61
70LF-108-01	2"	1.50	2.34	4.68	3.25	8.00	6.06
70LF-109-01	2-1/2"	2.00	3.12	6.25	3.72	8.00	13.96
70LF-100-01	3"	2.50	3.37	6.75	4.12	8.00	18.60
70LF-10A-01	4"	3.12	3.68	7.37	5.25	10.00	25.50

NOTE: 1/4", 3/8", and 1/2" are full port.



DIMENSIONS

PART NUMBER	SIZE (IN.)	DIMENSIONS (IN.)*						
		A	B	C	D	E	F	G
SOLDER								
70LF-202-01	3/8"	0.37	1.28	2.56	1.75	3.87	0.505	0.37
70LF-203-01	1/2"	0.50	1.43	2.87	1.75	3.87	0.63	0.50
70LF-204-01	3/4"	0.68	1.93	3.87	2.12	4.87	0.88	0.75
70LF-205-01	1"	0.87	2.25	4.50	2.25	4.87	1.13	0.90
70LF-206-01	1-1/4"	1.00	2.31	4.62	2.62	5.50	1.38	0.96
70LF-207-01	1-1/2"	1.25	2.62	5.25	3.06	8.00	1.63	1.09
70LF-208-01	2"	1.50	3.18	6.37	3.25	8.00	2.13	1.34
70LF-209-01A	2-1/2"	2.00	3.74	7.51	3.72	8.00	2.63	1.48
70LF-200-01	3"	2.50	4.12	8.25	4.12	8.00	3.13	1.67
70LF-20A-01	4"	3.12	4.61	9.22	5.22	9.94	4.13	2.16

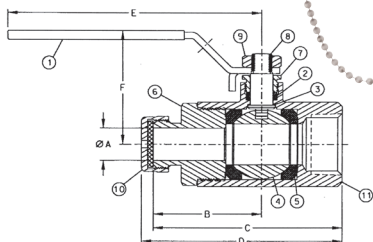
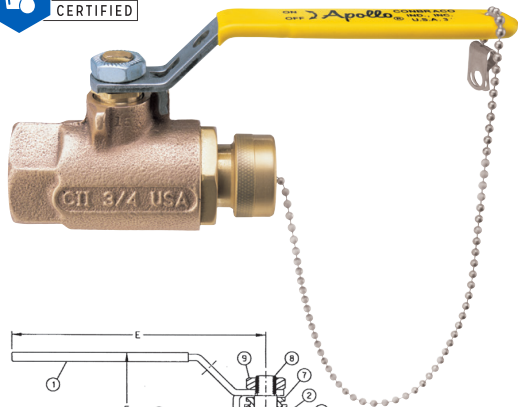
*Based on 70-200-01 - Dimensions may vary with options.

NOTE: 1/4", 3/8", and 1/2" are full port.

**70LF-2xx intended for soft solder installation using solders with melting temperature of < 500°F.



70-HC SERIES
HOSE CAP & CHAIN VALVE



CAP & CHAIN VALVE WITH 3/4" HOSE CONNECTION, HEAVY BRASS CAP AND REVERSE HANDLE

Ideally suited for draining or sampling of HVAC or potable water systems, these valves allow direct connections to hoses. Valve features a securely attached cover (includes chain) which prevents damage to hose threads. -200 model designed for soft soldering into lines without disassembly.

FEATURES

- Heavy Pattern Construction
- Reverse Lever is Standard for Easier Installation
- Stainless Steel Lever & Nut Standard
- NPT and Solder Connections
- EZ-Solder™ Lead free bronze
- ASTM B584 Bronze
- Blowout-Proof Stem Design
- RPTFE Seats and Stuffing Box Ring
- Adjustable Packing Gland
- Vacuum Service to 29 in. Hg
- Maximum Pressure: 600 psi CWP
- Temperature Rating: 200°F
- Full Pressure Rated Brass Hose Cap
- **Stronger Stainless Steel Ball Chain** **NEW!**

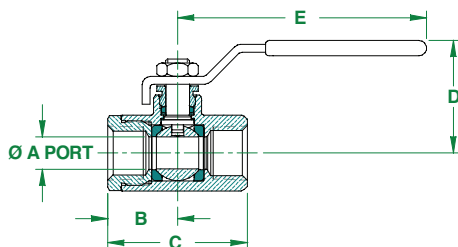
OPTIONS

- (-11) Therma-Seal™ Insulating Tee
- Stainless Steel Ball and Stem (70-24x-HC/70LF-24X-HC)
- 70LF is NSF 61 and NSF 372 Certified Lead Free

DIMENSIONS

MODEL NUMBER	LF MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)					
			A	B	C	D	E	F
70-103-HC	70LF-103-HC	1/2 NPT x 3/4 Hose	0.50	1.68	2.81	2.97	3.87	1.75
70-104-HC	70LF-104-HC	3/4 NPT x 3/4 Hose	0.68	1.96	3.50	3.67	4.87	2.12
70-105-HC	70LF-105-HC	1 NPT x 3/4 Hose	0.87	2.24	3.92	4.16	5.28	2.43
70-203-HC	70LF-203-HC	1/2 Solder x 3/4 Hose	0.50	1.68	3.14	3.28	3.89	1.75
70-204-HC	70LF-204-HC	3/4 Solder x 3/4 Hose	0.68	1.96	3.94	4.09	4.89	2.12
70-205-HC	-	1 Solder x 3/4 Hose	0.87	2.24	4.49	4.73	5.28	2.43

70B-140 SERIES
STEAM BOILER/B31.1 POWER PIPING BRONZE BALL VALVE



The Apollo® 70B series has the same rugged features as the standard 70 series valve but with ASTM B62 bronze shell components. The 70B has trusted performance along with a wide range of options to suit every application.

FEATURES

- Stainless Steel Ball & Stem
- Blowout-Proof Stem Design
- Adjustable Packing Gland
- MPTFE Seats and Stuffing Box Ring
- 100% Factory Tested
- 85-5-5 Retainer & Body

PERFORMANCE RATING

- Maximum Pressure: 600 psi CWP, 250 psi SWP
- Maximum Temperature: 500°F
- Vacuum Service to 29 in. Hg

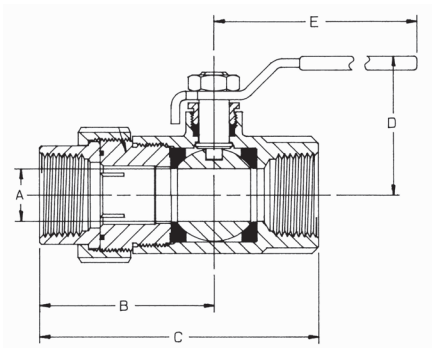
APPROVALS

- MSS SP-110 - Ball Valves
- CRN: OC10908.5C
- ASME B31.1 - Power Piping

DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS					WT. (LB.)
		A	B	C	D	E	
70B-141-64	1/4"	0.37	1.03	2.06	1.75	3.87	0.60
70B-142-64	3/8"	0.37	1.03	2.06	1.75	3.87	0.56
70B-143-64	1/2"	0.50	1.12	2.25	1.75	3.87	0.63
70B-144-64	3/4"	0.68	1.50	3.00	2.12	4.87	1.39
70B-145-64	1"	0.87	1.68	3.37	2.25	4.87	1.72
70B-146-64	1-1/4"	1.00	2.00	4.00	2.62	5.50	3.26
70B-147-64	1-1/2"	1.25	2.18	4.37	3.06	8.00	4.61
70B-148-64	2"	1.50	2.34	4.68	3.25	8.00	6.06

70-300/400 SERIES
BALL VALVE WITH FNPT X UNION END



This valve combines a pipe union with ball valve shut-off; it saves time and labor by eliminating the need for extra connections. Viton O-ring sealed union requires light torque for proper seal.

FEATURES

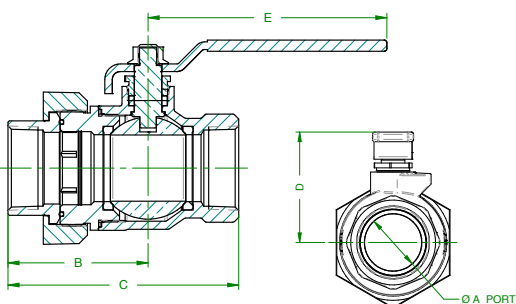
- ASTM B584 Bronze
- Blowout-Proof Stem Design
- Adjustable Packing Gland
- 600 psig CWP, Non-Shock
- NPT and Solder Union Connection
- Vacuum Service to 29 in. Hg
- 70LF-300/400 Feature EZ-Solder™ Lead Free Bronze

DIMENSIONS

MODEL NUMBER	LF MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)				
			A	B	C	D	E
NPT							
70-301-01	-	1/4	0.37	1.90	2.93	1.75	3.87
70-302-01	-	3/8	0.37	1.90	2.93	1.75	3.87
70-303-01	70LF-303-01	1/2	0.50	2.00	3.09	1.75	3.87
70-304-01	70LF-304-01	3/4	0.68	2.46	3.96	2.12	4.87
70-305-01A	70LF-305-01A	1	0.87	2.84	4.52	2.25	4.87
70-306-01	70LF-306-01	1-1/4	1.00	2.68	4.68	2.62	5.50
70-307-01	70LF-307-01	1-1/2	1.25	2.87	5.06	3.05	8.00
70-308-01	70LF-308-01	2	1.50	3.25	5.59	3.24	8.00
SOLDER							
70-403-01	-	1/2	0.50	2.00	3.43	1.75	3.87
70-404-01	70LF-404-01	3/4	0.68	2.62	4.56	2.06	4.78
70-405-01A	70LF-405-01A	1	0.87	2.87	5.66	2.25	4.78
70-406-01	70LF-406-01	1-1/4	1.00	2.87	5.18	2.62	5.50
70-407-01	70LF-407-01	1-1/2	1.25	2.92	5.53	3.10	8.00
70-408-01	70LF-408-01	2	1.50	3.50	6.75	3.24	8.00

NOTE: 1/4", 3/8", and 1/2" are full port.

77CLF-300-A SERIES
FULL PORT BALL VALVE WITH FNPT X UNION END



The Apollo® 77CLF300 Series Union End Ball Valve features dezincification resistant lead free bronze body, generously sized RPTFE seats and stem packing, and a lead free "Solid Ball" design that delivers true full-port flow performance.

FEATURES

- Lead Free Brass & Bronze Materials Easily Identifiable Blue "Lead Free" Hang Tag
- Reinforced RPTFE Seats & Seals
- **Manufactured and 100% Factory Tested in USA**

PERFORMANCE RATING

- Maximum Pressure: 600 psi CWP
- Maximum Temperature: 180°F
- Vacuum Service to 29 in. Hg

APPROVALS

- MSS SP-110 - Ball Valves
- NSF/ANSI 61 Water Quality
- NSF/ANSI 372 Lead Free
- CRN: OC10908.5C

OPTIONS

- (-01) Standard Lever
- (-04) 21/4" Stem Extension
- (-07) Tee Handle
- (-10) S.S. Handle and Nut
- (-11) Thermo-Seal™ Insulating Tee Handle
- (-27) Locking Handle

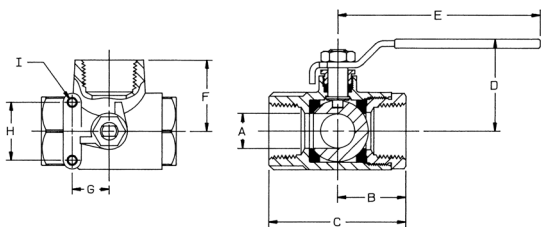
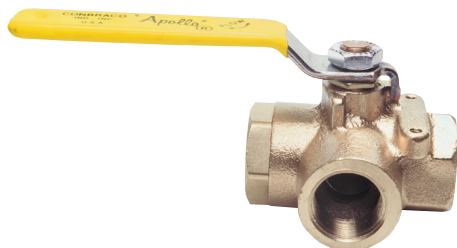
DIMENSIONS

PART NO.	SIZE (IN.)	DIMENSIONS (IN.)					WT (LB.)
		A	B	C	D	E	
70LF30301*	1/2	0.50	2.00	3.09	1.75	3.87	0.99
77CLF30401A	3/4	0.75	2.26	3.59	1.92	3.97	1.34
77CLF30501A	1	1.00	2.55	4.17	2.24	4.76	2.36
77CLF30601A	1-1/4	1.25	2.71	4.55	2.46	4.76	5.07
77CLF30701A	1-1/2	1.50	3.17	5.23	2.90	5.41	4.96
77CLF30801A	2	2.00	3.49	5.91	3.68	7.76	10.06

*1/2" size only is available as model 70LF300, full-port bronze construction.



70-600 SERIES
THREADED 3-WAY DIVERTER BALL VALVE



Ideal for applications requiring flow diversion, this valve combines the features of two valves. Its large ports make tank selection and fluid transfers quicker and easier. Easy quarter-turn operation.

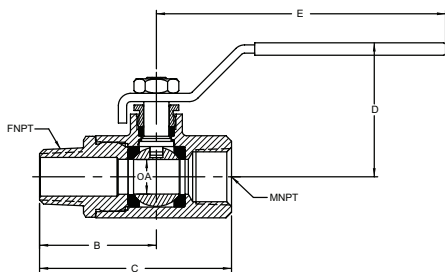
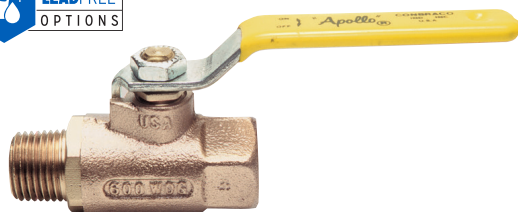
FEATURES

- Simple Quarter-Turn Operation
- ASTM B584 Bronze
- 400 psig CWP, Non-Shock
- Blowout-Proof Stem
- Adjustable Stem Packing
- Vacuum Service to 29 in. Hg
- See 70-900 for Solder Version

DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)								
		A	B	C	D	E	F	G	H	I
70-601-01	1/4	0.37	1.12	2.32	1.80	3.88	1.18	0.875	1.37	10-24
70-602-01	3/8	0.37	1.12	2.32	1.80	3.88	1.18	0.875	1.37	10-24
70-603-01	1/2	0.50	1.09	2.25	1.75	3.87	1.18	0.87	1.37	10-24
70-604-01	3/4	0.68	1.50	3.00	2.12	4.87	1.62	0.87	1.37	10-24
70-605-01	1	0.81	1.59	3.18	2.25	4.87	1.71	0.87	1.37	10-24
70-606-01	1-1/4	1.00	1.97	3.95	2.69	5.50	2.01	0.93	1.50	1/4-20
70-607-01	1-1/2	1.25	2.21	4.40	2.87	5.50	2.38	0.94	1.50	1/4-20
70-608-01	2	1.50	2.34	4.69	3.00	5.50	2.50	0.94	1.50	1/4-20

70-800 SERIES
MALE X FEMALE NPT BALL VALVE



Eliminates need for extra nipple when connecting to female connection to save time and labor. Ruggedly built for lasting performance with chromium-plated ball and blowout-proof stem.

FEATURES

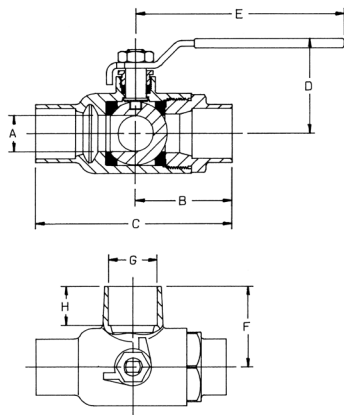
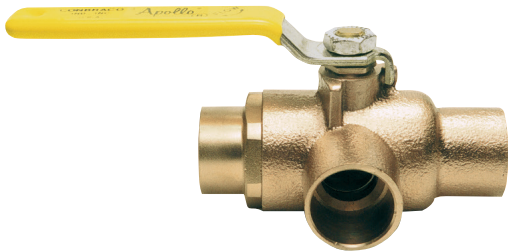
- 600 psig CWP, Non-Shock
- 150 SWP Steam Rating
- RPTFE Seats and Stuffing Box Ring
- Adjustable Stem Packing
- Vacuum Service to 29 in. Hg

DIMENSIONS

MODEL NUMBER	LF MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)				
			A	B	C	D	E
70-801-01	-	1/4	0.37	1.40	2.43	1.75	3.87
70-802-01	-	3/8	0.37	1.46	2.50	1.75	3.87
70-803-01	70LF-803-01	1/2	0.50	1.68	2.81	1.81	3.87
70-804-01	70LF-804-01	3/4	0.68	2.00	3.50	2.12	4.87
70-805-01	70LF-805-01	1	0.87	2.31	4.00	2.25	4.87
70-806-01	70LF-806-01	1-1/4	1.00	2.31	4.31	2.62	5.50
70-807-01	-	1-1/2	1.25	3.00	5.18	3.06	8.00

NOTE: 1/4", 3/8", and 1/2" are full port.

70-900 SERIES
SOLDER 3-WAY DIVERTER BALL VALVE



Tank selection and fluid transfers are easier because of large port diameters. The valve is 100% air tested under water. Designed to be soft soldered without disassembly.

FEATURES

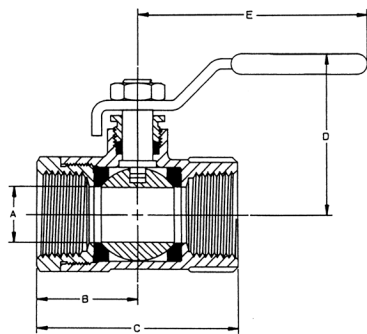
- Simple Quarter-Turn Operation
- ASTM B584 Bronze
- 400 psig CWP, Non-Shock
- Blowout-Proof Stem
- Adjustable Packing
- See 70-600 for NPT Version
- **Made in USA**

DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)							
		A	B	C	D	E	F	G	H
70-903-01	1/2	0.50	1.44	2.87	1.75	3.87	1.34	0.628	0.50
70-904-01	3/4	0.68	1.94	3.87	2.12	4.87	1.69	0.878	0.90
70-905-01	1	0.81	2.19	4.42	2.25	4.87	1.87	1.129	0.90

BALL VALVES

32-100 SERIES
REGULAR PORT, THREADED END, BRONZE BALL VALVE



NPT threaded ball valve rated to 400 psig CWP, non-shock and 125 psig for saturated steam. Blowout-proof stem design with adjustable packing gland.

FEATURES

- ASTM B584 Bronze
- PTFE Seats and MPTFE Stuffing Box Ring
- **Made in USA**

OPTIONS

- (-04) 2-1/4" Stem Extension
- (-07) CS Tee Handle
- (-15) Round Handle
- (-27) Locking Handle

DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)				
		A	B	C	D	E
32-101-01	1/4	0.37	0.80	1.60	1.65	2.87
32-102-01	3/8	0.37	0.80	1.60	1.65	2.87
32-103-01	1/2	0.40	1.00	2.00	1.68	2.87
32-104-01	3/4	0.65	1.20	2.41	1.90	3.87
32-105-01	1	0.75	1.55	3.09	2.18	4.87
32-106-01	1-1/4	1.00	1.72	3.44	2.53	5.50
32-107-01	1-1/2	1.12	1.93	3.87	2.69	5.50
32-108-01	2	1.50	2.17	4.37	2.94	5.50



COMMON BALL VALVE OPTIONS

Apollo® offers these options on the 70 Series as well as many other valve series. Note: Not all options are available on all sizes and models. Review the latest submittal sheet or contact the factory to determine availability. Most available as a factory installed option or as a kit for field installation or retrofit.

SUFFIX NO.



2-1/4"
STEM EX-
TENSION

-04

STANDARD BALL VALVE WITH STEM EXTENSION

A plated steel stem extension to accommodate 2" thick pipe insulation or to relocate handle position.



-07

TEE HANDLE

Plated steel tee handle is ideal when space is limited and where safety is a consideration. Handle still provides visual indication of OPEN or CLOSED position.



-08

90° REVERSED STEM

Used in applications when handle is required to be in a parallel position when closed.



-10

STAINLESS STEEL LEVER AND NUT

Additional corrosion resistance for damp or marine installations.



-11

THERMA-SEAL™ HANDLE (UL 2043 LISTING)

The Thermo-Seal™ thermal insulating tee-handle is designed to be use in applications where vapor barrier piping insulation is required. Manufactured from high strength glass reinforced nylon, these handles are ideally suited for the toughest commercial and industrial applications. Handles are available as a factory installed option (-11 option suffix) or as a retrofit kit. UL 2043 listed for plenum installations.



**-16/
-58**

CHAIN LEVER BALL VALVES

Reliable quarter turn operation in overhead applications. A favorite for use in industrial environments.

- -16 for valve in vertical position
- -58 for valve in horizontal position



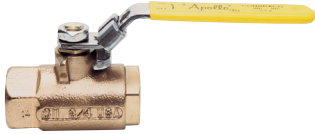
-17

ROUGH CHROME PLATING

Use where a clean, bright finish is required or for matching up with other chrome-plated equipment.

BALL VALVES

COMMON BALL VALVE OPTIONS



-27

STAINLESS STEEL LATCH LOCK - LOCKING LEVER HANDLE

Sliding lock mechanism secures handle in open or closed position. Valve can also be padlocked open or closed.

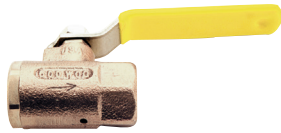


**-32/
-83**

STAINLESS STEEL TEE HANDLE AND NUT

Increased corrosion resistance versus the plated steel -07 option.

- -32 for standard bronze
- -83 for 77B/77BLF



-41

BALL VALVE WITH AUTOMATIC DRAIN

When this valve is closed for maintenance of pneumatic tool, downstream pressure from valve to tool is automatically drained to atmosphere to prevent accidental operation of the tool, causing possible injury.

- Conforms to certain OSHA requirements in pneumatic installations
- Easy, safe maintenance of pneumatic tools
- Cannot be used where drained media could cause damage
- Temperature range: 50°F to 200°F
- Rated 125 psig CWP, non-shock air or water
- Includes directional arrow for correct installation
- Available with latch lock option, specify -27 -41 suffix
- Available for the following series: 70, 71, 75, and 78



-48

STAINLESS STEEL OVAL HANDLE

- Available for the following series: 70, 71, 73A, 76, 76F, 77, 82, 83, 85, 86, 89, 9A, 92 and 96
- Resistant to accidental operation



-57

CLEANED AND BAGGED FOR OXYGEN SERVICE



-64

250 SWP RATING

- Stainless steel stem
- Vented ball
- MPTFE seats and packing
- Yellow handle with red printing
- Available for the following series: 70, 71, 77



-92

MEMORY STOP HANDLE



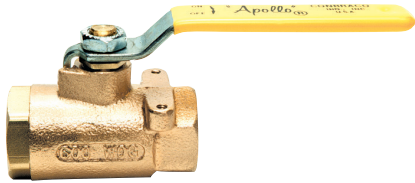
-94

BALL VALVE WITH BALANCING STOP AND STEM EXTENSION

Ideal for HVAC systems. Stop plate and a 2-1/4" stem extension combination to accommodate insulation and handle repositioning. *Contact customer service for exact handle dimensions.*



71-100 SERIES
BALL VALVE WITH MOUNTING PAD

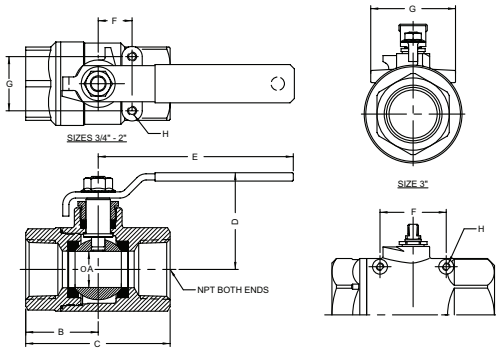


Designed to easily accommodate spring return handle, actuator or simple panel mounting. Threaded end connections with RPTFE seats and stuffing box ring.

FEATURES

- 3/4" to 3" models
(Use 77-100 Series for 1/4", 3/8" & 1/2")
- 600 CWP Non-Shock
- Blowout-Proof Stem
- ASTM B584 Bronze
- Round Handle Option
- Adjustable Packing

DIMENSIONS



MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)							
		A	B	C	D	E	F	G	H
77-101-01	1/4	0.43	1.09	2.18	1.77	3.87	0.50	1.12	10-24 NC
77-102-01	3/8	0.50	1.09	2.18	1.77	3.87	0.50	1.12	10-24 NC
77-103-01	1/2	0.50	1.09	2.18	1.77	3.87	0.50	1.12	10-24 NC
71-104-01	3/4	0.68	1.50	3.00	2.12	4.87	0.87	1.37	10-24 NC
71-105-01	1	0.87	1.68	3.37	2.25	4.87	0.87	1.37	10-24 NC
71-106-01	1-1/4	1.00	2.00	4.00	2.62	5.50	0.93	1.50	1/4-20 NC
71-107-01	1-1/2	1.25	2.18	4.37	2.87	8.00	0.93	1.50	1/4-20 NC
71-108-01	2	1.50	2.34	4.68	3.06	8.00	0.93	1.50	1/4-20 NC
71-100-01	3	2.50	3.37	6.75	4.12	8.00	3.37	2.75	1/4-20 NC

Actuation assistance available in Section D, with the Apollo® Actuator Wizard located at actuatorwizard.conbraco.com or by calling customer support at (704)841-6000.

71-500 SERIES
CAST BRONZE BALL VALVE SPRING RETURN HANDLE

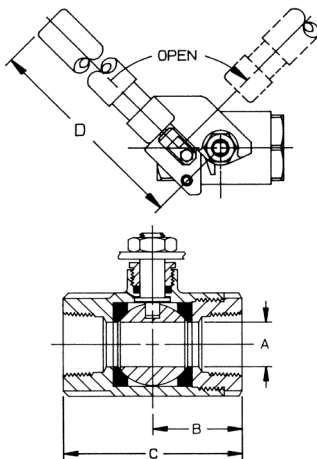


Ideal in applications where the valve must be in OFF position at all times such as sampling and feeding fuel lines. Can be used in reverse with 90° reverse stem option. Basic configuration: spring return to CLOSED. All lever components are stainless steel.

FEATURES

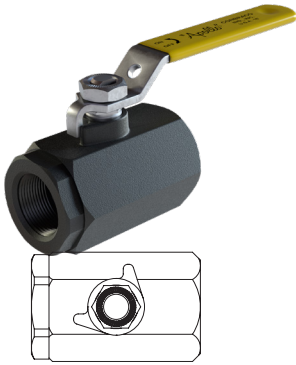
- Rated 600 psig CWP, Non-Shock
- 150 psig for Saturated Steam
- (-08) Spring Return to OPEN

DIMENSIONS



MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)			
		A	B	C	D
71-501-01	1/4	0.43	1.12	2.25	7.00
71-502-01	3/8	0.50	1.12	2.25	7.00
71-503-01	1/2	0.50	1.12	2.25	7.00
71-504-01	3/4	0.68	1.50	3.00	7.00
71-505-01	1	0.87	1.68	3.37	7.00
71-506-01	1-1/4	1.00	2.00	4.00	9.00
71-507-01	1-1/2	1.25	2.18	4.37	9.00
71-508-01	2	1.50	2.34	4.68	9.00

73A-100 SERIES
FORGED CARBON STEEL BALL VALVE



BALL VALVES

Threaded, 2 piece design, 1/4" to 1" 2000 psig CWP, 1-1/4" to 2" 1500 psig CWP Cold Non-Shock. 150 psig Saturated Steam.

FEATURES

- RPTFE Seats & Packing
- Forged Construction
- Raised Handle Stops
- Blowout-Proof Stem Design
- Adjustable Packing Gland
- Zinc Phosphate Corrosion Protection
- (-24) Fire Safe to API 607 4th Edition, Class 600 Burn
- AAR Approval No. E119022
- Vacuum Service to 29 in. Hg

DIMENSIONS

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

76F-100-A SERIES
STAINLESS STEEL FULL PORT BALL VALVE



Threaded, 2 piece design, 1/4"-3" 1000 psig CWP Cold Non-Shock, 150 psig. Saturated Steam, Vacuum Service to 29 inches Hg.

FEATURES

- 316 SS Investment Cast Components
- RPTFE Seats
- Two-Piece Body
- Blowout-Proof Stem Design
- Adjustable Packing Gland
- Meets NACE MR-01-75-2000
- SS Lever and Nut
- (-11) Thermo-Seal™ Insulating Tee
- (-24) Certified to API 607, 6th Ed., Class 600 Burn
- (-27) Locking Handle
- NSF/ANSI 61 Water Quality
- NSF/ANSI 372 Lead Free

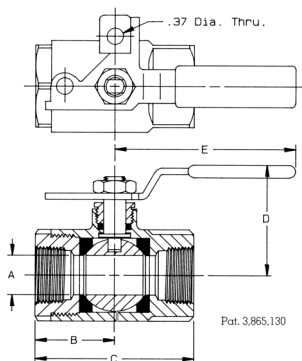
DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)						WT. (LB.)
		A	B	C	D	E	F	
76F-101-01	1/4"	0.37	0.95	1.91	1.12	1.60	3.85	0.47
76F-102-01	3/8"	0.37	0.95	1.91	1.12	1.60	3.85	0.44
76F-103-01A	1/2"	.50	1.21	2.35	1.27	1.73	3.85	0.57
76F-104-01A	3/4"	.75	1.39	2.77	1.62	1.96	3.85	0.91
76F-105-01A	1"	1.00	1.67	3.34	2.00	2.27	4.75	1.38
76F-106-01A	1-1/4"	1.25	1.96	3.92	2.73	3.21	7.77	4.17
76F-107-01A	1-1/2"	1.50	2.05	4.10	2.92	3.31	7.77	4.69
76F-108-01A	2"	2.00	2.37	4.74	3.75	3.69	7.77	6.90
76F-100-01A	3"	3.00	3.70	7.40	5.68	5.23	10.03	22.4



75-100-41 SERIES

PADLOCKING BALL VALVE WITH AUTOMATIC DRAIN



Meets OSHA standards and provides for easy, safe maintenance of pneumatic tools. Valve drains downstream pressure for safety when lever is closed. Valve can be padlocked OPEN or CLOSED with same hardware.

FEATURES

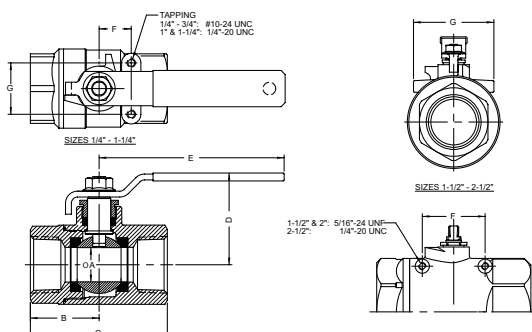
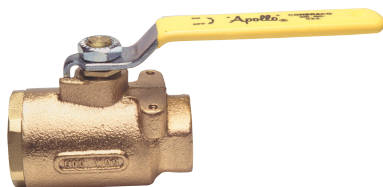
- Blowout-proof Stem Design
- Adjustable Packing Gland
- ASTM B584 Bronze
- RPTFE Seats and Stuffing Box Ring
- Pad Lock Lever
- Rated to 600 psi CWP - 150 SWP
- Temperature Range: 50°F to 200°F
- Valve Without Drain Option (suffix -01)

DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)				
		A	B	C	D	E
75-101-41	1/4	0.43	1.12	2.25	1.81	3.00
75-102-41	3/8	0.50	1.12	2.25	1.81	3.00
75-103-41	1/2	0.50	1.12	2.25	1.81	3.00
75-104-41	3/4	0.87	1.68	3.37	2.25	3.87
75-105-41	1	0.87	1.68	3.37	2.25	3.87
75-106-41	1-1/4	1.00	2.00	4.00	2.62	5.50
75-107-41	1-1/2	1.25	2.16	4.37	2.87	5.50
75-108-41	2	1.50	2.34	4.68	3.06	5.50

77-100 SERIES

HEAVY DUTY FULL PORT NPT PANEL MOUNT BALL VALVE



Designed for easy actuator mounting or panel mounting where highest C_v values are desired. RPTFE seats and stuffing box ring. Also available with 250 lb. steam trim option.

FEATURES

- Mounting Pad
- ASTM B584 Bronze
- Blowout-Proof Stem Design
- Adjustable Packing Gland
- Full Flow, Minimum Pressure Drop
- 600 CWP, Non-Shock Pressure Rating
- 150 SWP Steam Rating
- Chain Lever Kits Available 3/4"- 2-1/2" (-16, -58)

OPTIONS

- (-27) Locking Handle
- (-92) Balance Stop

DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)							CV*
		A	B	C	D	E	F	G	
77-101-01	1/4	0.43	1.12	2.25	1.81	3.87	0.50	1.12	8.1
77-102-01	3/8	0.50	1.12	2.25	1.81	3.87	0.50	1.12	15
77-103-01	1/2	0.50	1.12	2.25	1.81	3.87	0.50	1.12	15
77-104-01	3/4	0.81	1.56	3.12	2.12	4.87	0.87	1.37	51
77-105-01	1	1.00	1.81	3.62	2.62	5.50	0.93	1.50	68
77-106-01	1-1/4	1.25	2.12	4.25	2.87	5.50	0.93	1.50	125
77-107-01	1-1/2	1.50	2.37	4.75	3.34	8.00	2.08	3.06	177
77-108-01	2	2.00	2.65	5.37	3.71	8.00	2.41	3.52	389
77-109-01	2-1/2	2.50	3.25	6.50	4.12	8.00	2.75	3.37	503

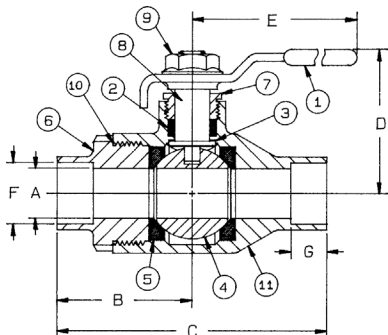
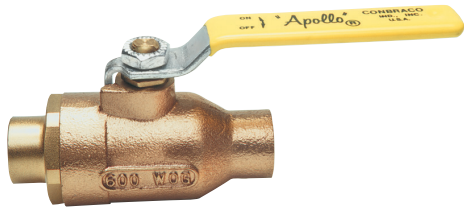
The Cv factor is the gallons of water per minute that the valve will pass with 1 psig pressure drop.

Actuation assistance available in Section D, with the Apollo® Actuator Wizard located at actuatorwizard.conbraco.com or by calling customer support at (704)841-6000.

BALL VALVES

77-200 SERIES

HEAVY DUTY FULL PORT SOLDER END BALL VALVE



Designed to be soldered into lines without disassembly. This allows a factory tested valve to be installed without disturbing the seats and seals. Designed for soft solder with melt points less than 500°F.

FEATURES

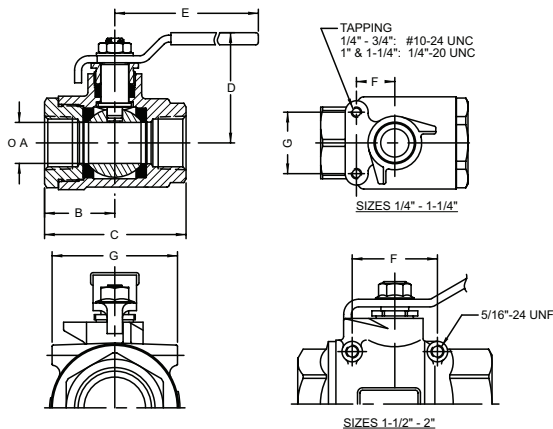
- Heavy Duty Cast Bronze Body
- Chromium Plated Ball
- Blowout-Proof Stem Design
- Adjustable Packing Gland
- Full Flow, Minimum Pressure Drop
- 600 CWP, Non-Shock Pressure Rating
- 150 SWP

DIMENSIONS

PART NUMBER	SIZE (IN.)	DIMENSIONS (IN.)						
		A	B	C	D	E	F	G
77-204-01	3/4	0.81	2.12	4.12	2.12	4.87	0.88	0.75
77-205-01	1	1.00	2.33	4.60	2.62	5.50	1.13	0.90
77-206-01	1-1/4	1.25	2.60	5.15	2.87	5.50	1.38	0.96
77-207-01	1-1/2	1.50	3.00	6.00	3.34	8.00	1.63	1.09
77-208-01	2	2.00	3.62	7.24	3.71	8.00	2.13	1.34
77-209-01	2-1/2	2.50	3.93	7.87	4.12	8.00	2.63	1.48

77-900 SERIES

FULL PORT SAE STRAIGHT-THREAD BALL VALVE



Valve connections are designed for extended leak-free and energy saving performance in a broad range of applications, especially in manufacturing environments.

FEATURES

- Mounting Pad for Easy Actuation
- 600 CWP Non-Shock
- 150 SWP
- ASTM B584 Bronze
- SAE J1926-1 (ISO 11926-1) Connections
- RPTFE Seats & Packing
- Blowout-Proof Stem and Lever Handle Standard
- Adjustable Packing Gland
- Full Port
- Straight Thread with O-Ring Boss Connection

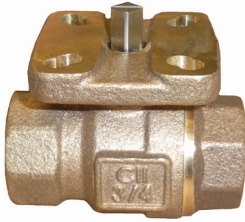
DIMENSIONS

MODEL NUMBER	NOM. TUBE O.D. (IN.)	SIZE (IN.)	DIMENSIONS (IN.)						
			A	B	C	D	E	F	G
77-901-01	1/4	7/16-20	0.43	1.12	2.25	1.81	3.87	0.50	1.12
77-902-01	3/8	9/16-18	0.50	1.12	2.25	1.81	3.87	0.50	1.12
77-903-01	1/2	3/4-16	0.50	1.12	2.25	1.81	3.87	0.50	1.12
77-904-01	3/4	11/16-12	0.81	1.56	3.12	2.12	4.87	0.87	1.37
77-905-01	1	15/16-12	1.00	1.81	3.62	2.62	5.50	0.93	1.50
77-906-01	1-1/4	1-5/8-12	1.25	2.12	4.25	2.87	5.50	0.93	1.50
77-907-01	1-1/2	1-7/8-12	1.50	2.37	4.75	3.34	8.00	2.08	3.06
77-908-01	2	2-1/2-12	2.00	2.65	5.37	3.71	8.00	2.41	3.52

Actuation assistance available in Section D, with the Apollo® Actuator Wizard located at actuatorwizard.conbraco.com or by calling customer support at (704)841-6000.



77D SERIES
BRONZE BALL VALVE W/ DIRECT ISO MOUNTING PAD



Apollo's solid stainless steel ball design in a bronze valve with an integral ISO 5211 mounting pad with 100% American construction.

FEATURES

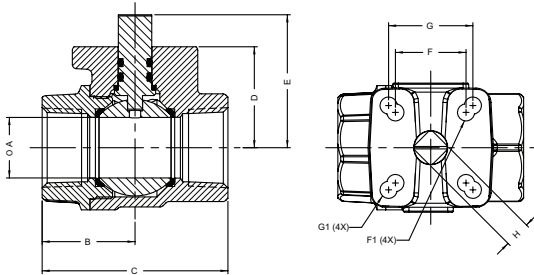
- 600 CWP Pressure Rating
- Multi-Fill Seats and Stem Bearing
- Blowout-Proof Stem Design
- Vacuum Service to 29 in. Hg
- High Cycle Dual O-Ring Stem Seal Design
- EPDM is Standard. Most Liquids and Gases are Compatible with the O-Ring Seals
- Ball is Slot Vented to Equalize Cavity and Line Pressure
- MSS SP-110 Compliant
- Direct Mount Actuator Ready

SEATS

SUFFIX	MATERIAL	TEMP RANGE	STEAM (MAX)
-01E (Standard)	EPDM	-20 to 400°F	150 SWP @ 366°F
-01N	Nitrile	-20 to 250°F	15 SWP @ 250°F
-01V	Viton	-20 to 400°F	50 SWP @ 297°F

DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)									
		A	B	C	D	E	F	ØF1	G	ØG1	H
77D-143-01E	1/2	0.50	1.15	2.25	1.00	1.37	0.997	0.224	1.167	0.281	0.275
77D-144-01E	3/4	0.75	1.33	2.65	1.38	1.79	1.167	0.281	1.392	0.281	0.275
77D-145-01E	1	1.00	1.54	3.07	1.67	2.20	1.167	0.281	1.392	0.281	0.430
77D-147-01E	1-1/2	1.50	2.12	4.23	2.31	3.05	N/A	N/A	1.949	0.344	0.551
77D-148-01E	2	2.00	2.43	4.85	2.68	3.43	N/A	N/A	1.949	0.344	0.551



7K-100 SERIES
SAFETY EXHAUST VALVE W/ 1/4" NPT TAP FOR DRAIN



For use on pneumatic equipment. Furnished with a 1/4" NPT tapped drain to accommodate a muffler or to pipe the exhausted air to a safe location.

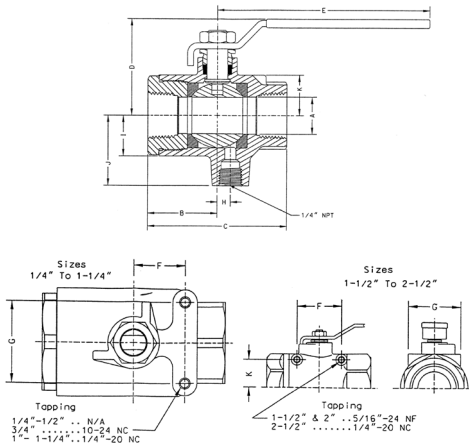
FEATURES

- Safely Vents Compressed Air (or Other Non-Hazardous Gases) From Piping Downstream of the Closed Valve
- Sizes 1/4" - 2-1/2"
- FNPT Threads
- Rated 125 psig-Air or Water, CWP, Non-Shock
- Temperature Range: +50°F to +200°F
- Optional Stainless Steel Latch Lock Handle that Locks in Closed Position Only, Specify Suffix (-46)

DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)										
		A	B	C	D	E	F	G	H	I	J	K
7K-101-01	1/4	0.37	1.03	2.06	1.75	3.87	N/A	N/A	0.09	0.53	1.18	N/A
7K-102-01	3/8	0.37	1.03	2.06	1.75	3.87	N/A	N/A	0.09	0.53	1.18	N/A
7K-103-01	1/2	0.50	1.10	2.19	1.75	3.87	N/A	N/A	0.12	0.59	1.25	N/A
7K-104-01	3/4	0.81	1.56	3.12	2.12	4.78	0.87	1.37	0.29	0.90	1.56	0.90
7K-105-01	1	1.00	1.80	3.61	2.62	5.50	0.93	1.50	0.31	1.12	1.78	1.12
7K-106-01	1-1/4	1.25	2.12	4.25	2.87	5.50	0.93	1.50	0.37	1.37	2.03	1.37
7K-107-01	1-1/2	1.50	2.37	4.74	3.30	7.78	2.08	3.06	0.50	1.56	2.21	1.28
7K-108-01	2	2.00	2.70	5.38	3.71	7.78	2.41	3.52	0.62	2.03	2.68	1.56
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

Also available in 70 & 77 Series as -41 option (without tapped drain)



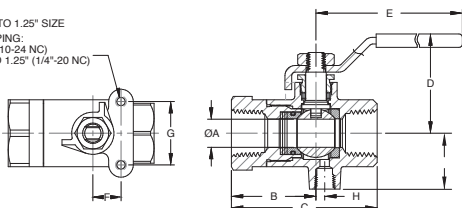
Notes: THIS VIEW NOT TO SCALE

7K-SV SERIES
SECURE-VENT FEATURE (-SV)

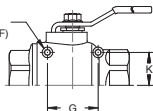


(7K-SV SERIES SHOWN)

3/4" TO 1.25" SIZE
TAPPING:
3/4" (10-24 NC)
1" TO 1.25" (1/4"-20 NC)



1.5" TO 2" SIZE
TAPPING:
1.50" TO 2" (5/16"-24 UNF)



Available on the Apollo® 77 and 7K full port bronze ball valves. Safely vents compressed air (or other non-hazardous gases) from piping downstream of the closed valve.

FEATURES

- Reliable Shut-Off and Venting
- Pressure Rating: 200 psig CWP, Non-Shock
- Temperature Range: -20°F to 200°F
- Economical "No Leakage" Operation
- Belleville Spring Live-Loaded Active Upstream Seating
- Available with a Full Complement of Handles

DIMENSIONS

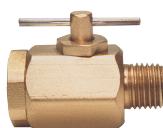
MODEL NUMBER	SIZE	DIMENSIONS (IN.)										WT. (LB.)
		A	B	C	D	E	F	G	H	J	K	
7K-103-SV	1/2"	0.50	1.50	2.59	1.76	3.88	0.50	1.12	0.12	1.25	-	0.73
7K-104-SV	3/4"	0.81	1.82	3.37	2.16	4.78	0.87	1.37	0.29	1.56	0.901	1.93
7K-105-SV	1"	1.00	2.05	3.86	2.69	5.43	0.93	1.50	0.31	1.78	1.121	3.42
7K-106-SV	1.25"	1.25	2.37	4.50	2.91	5.43	0.93	1.50	0.37	2.03	1.371	5.15
7K-107-SV	1.5"	1.50	2.63	5.00	3.31	7.78	1.04	3.06	0.50	2.21	1.282	6.81
7K-108-SV	2"	2.00	3.00	5.69	3.73	7.78	1.20	3.52	0.62	2.68	1.562	11.85

1 To Top of Mounting Pad
2 To Centerline of Mounting Pad

78-260/290 SERIES
INSTRUMENTATION BALL VALVES / TEST COCKS



78LF-290: BRONZE



78-261: BRASS

Brass and bronze instrumentation ball valves and backflow test cocks. Male x female threaded. 400 psig CWP, non-shock. Air and liquid service.

FEATURES

- Micro-Finish Ball
- Blowout-Proof Stem Design
- PTFE Seats
- Nitrile Stem Seal
- Plated Steel Tee Handle
- Compact Design
- Optional Mixed End Fittings Available

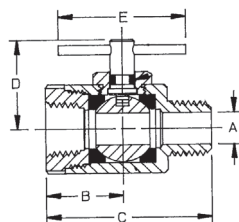
BRASS INSTRUMENTATION BALL VALVE - TEE HANDLE

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)					C _v *	WT. (LB.)
		A	B	C	D	E		
78-261-05	1/4M x 1/4F	0.31	0.43	1.43	0.87	1.25	5.50	0.19

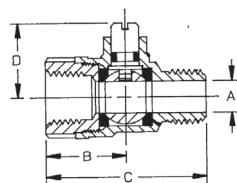
BRONZE INSTRUMENTATION BALL VALVE (INTERNATIONAL) - SCREW SLOT - LEAD FREE

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)					C _v *	WT. (LB.)
		A	B	C	D	E		
78LF-290-01	1/8M x 1/4F	0.21	0.80	1.60	0.72	N/A	4.00	0.19
78LF-291-01	1/4M x 1/4F	0.31	0.80	1.60	0.72	N/A	5.50	0.19
78LF-292-01	1/8 x 1/4 SAE	0.21	0.80	1.60	0.72	N/A	4.00	0.19
78LF-293-01	1/4 x 1/4 SAE	0.31	0.80	1.60	0.72	N/A	5.50	0.19

*The Cv factor is the gallons of water per minute that the valve will pass with a 1 psig pressure drop.
*Also see 94MBV Instrumentation Ball Valve



BRONZE VALVES - TEE

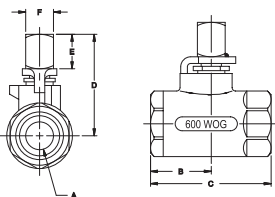


BRONZE VALVES - SLOT



78-130 SERIES

FEMALE END IRRIGATION VALVE (UNDERGROUND SERVICE)



Ideal for underground or below grade applications. This series (3/8"-2" FNPT) features a square head nut welded to the stem to allow operations with a ground key from standard grade.

OPTIONS

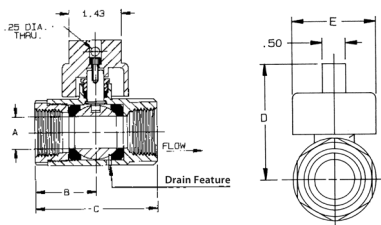
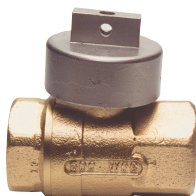
- (-41) Auto-Drain (Directional)

DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)					
		A	B	C	D	E	F
78-132-01	3/8	0.37	1.03	2.06	1.75	0.62	0.50
78-133-01	1/2	0.50	1.09	2.18	1.83	0.62	0.50
78-134-01	3/4	0.68	1.50	3.00	2.12	0.62	0.62
78-135-01	1	0.87	1.68	3.37	2.25	0.62	0.62
78-136-01	1-1/4	1.00	2.00	4.00	2.88	0.75	0.75
78-137-01	1-1/2	1.25	2.18	4.38	3.06	0.75	0.75
78-138-01	2	1.50	2.34	4.68	3.25	0.75	0.75

78-620 SERIES

BRONZE NPT IRRIGATION VALVE WITH AUTO-DRAIN



Ideal for underground use or where drained media will not cause damage. Heavy pattern design features ASTM B584 bronze body.

FEATURES

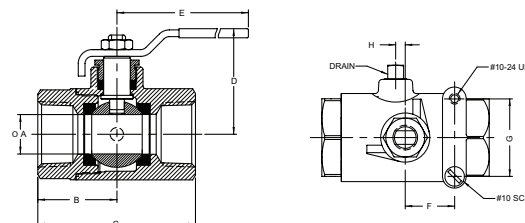
- Auto-Drain Feature (When Valve is in Closed Position) is Standard
- Adjustable Packing Gland
- RPTFE Seats and Seals
- Stainless Steel Cover
- 200 psig Water, CWP, Non-Shock
- Temperature Range +50°F to 200°F

DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)				
		A	B	C	D	E
78-621-01	3/4	0.68	1.47	2.96	2.40	1.81
78-622-01	1	0.87	1.66	3.34	2.53	1.81
78-623-01	1-1/4	1.00	1.98	3.97	3.00	2.50
78-624-01	1-1/2	1.25	2.12	4.28	3.18	2.50
78-625-01	2	1.50	2.35	4.67	3.37	2.50

78-660 & 962 SERIES

BRONZE PURGE & DRAIN BALL VALVE (CENTER DRAIN)



Center tap drain allows for winterization or purge and drain function. Features bronze body with built-in mounting pad for panel mounting or actuation. Ideal for hydronic heating and marine applications, downstream of the closed valve.

FEATURES

- 1/8" NPT Side Tap and Plug
- RPTFE Seats and Stuffing Box Ring
- Stainless Steel Lever and Nut
- Blowout-Proof Stem
- 600 psig CWP, Non-Shock
- Adjustable Packing
- Drainable Ball Cavity to Prevent Freezing

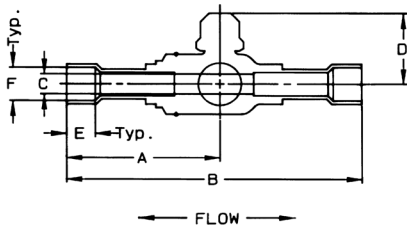
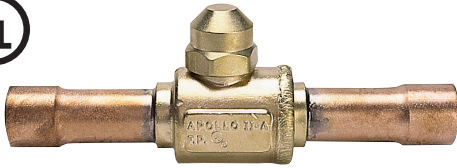
DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)							
		A	B	C	D	E	F	G	H
78-664-01	3/4	0.68	1.50	3.00	2.12	4.87	0.87	1.37	0.17
78-665-01	1	0.87	1.68	3.37	2.25	4.87	0.87	1.37	0.21
78-667-01	1-1/2	1.25	2.18	4.37	3.05	8.00	0.93	1.50	0.40
78-962-01	2	1.50	2.34	4.68	3.24	8.00	0.93	1.50	0.45

Actuation assistance available in Section D, with the Apollo® Actuator Wizard located at actuatorwizard.conbraco.com or by calling customer support at (704)841-6000.

79-700 SERIES

UL LISTED REFRIGERANT BALL VALVE ASSEMBLY



Complete hermetically welded assembly includes copper extensions and forged brass refrigerant ball valve with capped, triple-sealed stem to minimize leaks.

FEATURES

- Chrome Plated Ball
- RPTFE Seats and Seals
- Full Port Through 2-5/8"
- Bi-Directional Flow Design
- Sizes RANGE: 3/8" - 3-1/8" O.D. Tube
- All Sizes UL Listed - SFJQ
- Rated 500 psig CWP, Non-Shock
- For Use With Refrigerant Group 2 Fluids

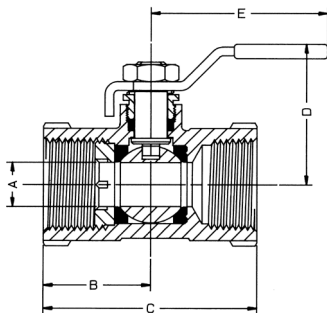
DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)						C _v *
		A	B	C	D	E	F	
79-701-01	3/8	3.38	6.45	0.45	1.56	0.38	0.38	8.5
79-702-01	1/2	3.38	6.45	0.45	1.56	0.38	0.50	8.5
79-703-01	5/8	3.56	6.82	0.50	1.56	0.50	0.62	9.8
79-704-01	7/8	3.91	7.53	0.68	1.79	0.75	0.87	32.0
79-705-01	1-1/8	4.39	8.51	0.87	1.98	0.90	1.12	44.0
79-706-01	1-3/8	4.42	8.94	1.25	2.62	0.96	1.38	66.0
79-707-01	1-5/8	4.55	9.19	1.25	2.62	1.09	1.62	148.0
79-708-01	2-1/8	5.16	10.31	1.50	2.93	1.34	2.12	218.0
79-709-01	2-5/8	6.50	13.00	2.50	3.90	1.48	2.62	440.0
79-600-01	3-1/8	7.00	14.00	2.50	3.90	1.67	3.12	390.0

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

9A-100 SERIES

HEAVY PATTERN UNIBODY THREADED BALL VALVE



One piece bronze valve eliminates leak paths. Features static grounding devices and adjustable packing gland. Lever handle standard.

FEATURES

- Rated 600 psig CWP, Non-Shock
- 50 SWP
- Blowout-Proof Stem Design

OPTIONS

- (-30) Cam Lock
- (-15) Round Handle
- (-27) Latch Lock Handle

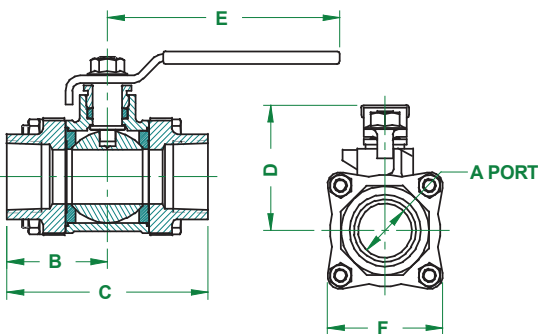
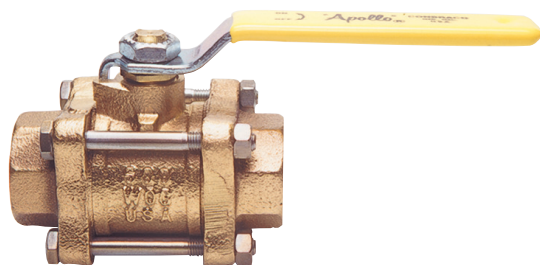
DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)				
		A	B	C	D	E
9A-101-01	1/4	0.37	1.34	2.59	1.68	3.87
9A-102-01	3/8	0.37	1.34	2.59	1.68	3.87
9A-103-01	1/2	0.37	1.34	2.59	1.81	3.87
9A-104-01	3/4	0.50	1.44	2.84	1.84	3.87
9A-105-01	1	0.62	1.72	3.28	2.00	4.87
9A-106-01	1-1/4	0.81	1.94	3.84	2.18	4.87
9A-107-01	1-1/2	1.00	2.06	4.00	2.68	5.50
9A-108-01	2	1.25	2.29	4.56	2.87	5.50



82-100 SERIES

FULL PORT BRONZE THREE-PIECE VALVE



This inline-repairable threaded ball valve offers RPTFE seats and seals and a 600 CWP, non-shock rating.

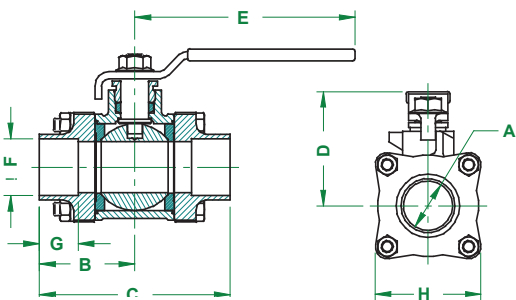
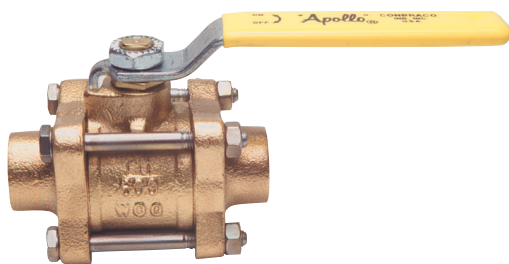
FEATURES

- ASTM B584 Bronze Body and Ends
- SAE Grade 8 Body Bolts
- Adjustable Packing Nut
- Full Port Flow
- 600 CWP, 150 SWP (3"-4" 400 CWP, 150 SWP)
- EZ-Solder™ Lead Free Bronze
- Numerous Options Available
- 82-14x/24x w/ SS Ball and Stem Option
- Lead Free Option (82LF) is NSF/ANSI 61 and NSF/ANSI 372 Lead Free Certified
- Easily Identifiable White Handle Grip and Blue "Lead Free" Hang Tag

DIMENSIONS

MODEL NUMBER	LF MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)						WT. (LB.)
			A	B	C	D	E	F	
NPT									
82-101-01	82LF-101-01	1/4"	0.43	1.28	2.56	1.81	3.87	1.60	1.02
82-102-01	82LF-102-01	3/8"	0.50	1.28	2.56	1.81	3.87	1.60	1.04
82-103-01	82LF-103-01	1/2"	0.62	1.40	2.81	1.93	4.87	1.78	1.55
82-104-01	82LF-104-01	3/4"	0.81	1.71	3.43	2.18	4.87	1.98	2.27
82-105-01	82LF-105-01	1"	1.00	1.93	3.87	2.62	5.50	2.22	3.28
82-106-01	82LF-106-01	1.25"	1.25	2.37	4.75	2.87	5.50	2.70	5.62
82-107-01	82LF-107-01	1.5"	1.50	2.62	5.25	3.37	8.00	3.03	8.07
82-108-01	82LF-108-01	2"	2.00	3.01	6.03	3.68	8.00	3.87	14.42
82-109-01	82LF-109-01	2.5"	2.50	3.62	7.25	5.14	9.75	5.05	26.61
82A-140-01	-	3"	3.00	4.18	8.37	8.10	19.13	5.82	43.00
82A-14A-01	-	4"	4.00	5.43	10.86	8.88	19.13	7.77	106.00

*3" & 4" valves come standard with SS ball and stem (not optional) and adjustable length locking handles.



Designed for soft soldering or brazed* installation. Includes RPTFE seats and seals.

DIMENSIONS

MODEL NUMBER	LF MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)							
			A	B	C	D	E	F	G	H
SOLDER										
82-202-01	82LF-202-01	3/8	0.44	1.28	2.56	1.81	3.87	0.50	0.38	1.60
82-203-01	82LF-203-01	1/2	0.56	1.40	2.81	1.93	4.87	0.63	0.50	1.78
82-204-01	82LF-204-01	3/4	0.83	1.71	3.43	2.18	4.87	0.88	0.75	1.98
82-205-01	82LF-205-01	1	1.00	1.93	3.87	2.62	5.50	1.13	0.90	2.22
82-206-01	82LF-206-01	1-1/4	1.25	2.37	4.75	2.87	5.50	1.38	0.97	2.70
82-207-01	82LF-207-01	1-1/2	1.50	2.62	5.25	3.37	8.00	1.63	1.09	3.03
82-208-01	82LF-208-01	2	2.00	3.01	6.03	3.68	8.00	2.13	1.34	3.87
82-209-01	82LF-209-01	2-1/2	2.50	3.62	7.25	5.14	9.75	2.63	1.47	5.05
82A-240-01	-	3	3.00	4.18	8.37	8.10	19.13	3.13	1.66	5.82
82A-24A-01	-	4	4.00	5.43	10.86	8.88	19.13	4.13	2.16	7.77

*3" & 4" valves come standard with SS ball and stem (not optional) and adjustable length locking handles.

*82LF-2xxA cannot be brazed and is intended for soft solder installation using solders with melting temperature of < 500°F.

82-200/82-240 SERIES

THREE-PIECE FULL PORT VALVE WITH BRAZED TUBE EXTENSIONS

"F1 - 1 GAUGE PORT", "F3 - 2 GAUGE PORTS", & "NO GAUGE PORT" CONFIGURATIONS

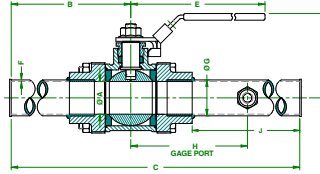
- Bronze Valve Body & End Caps
- RPTFE Seats and Stem Packing
- 600 psig CWP Non-Shock (3" & 4" 400 CWP)
- Vacuum Service to 29" Hg
- Full Port in All Sizes
- Blowout-Proof Stem Design
- Adjustable Packing Nut
- In-Line Repairable
- Latch Lock Handle
- Cleaned and Bagged for Oxygen
- Service per CGA G4.1 & NFPA 99
- Factory Brazed Extensions Allow Solder or Brazed Installation Without Disassembly
- Type K Copper Tubing Brazed Into Both End Caps
- **Made in USA**

OUTSIDE THE ZONE BOX

NFPA 99 requires the valves to be secured in the open position. For medical gas applications that are Outside-the-Zone-Box, Apollo® offers three standard configurations: "F1" (1 gauge port), "F3" (2 gauge ports) & no gauge ports (w/ locking handles).

82-200-F1/82-240-F1 SERIES

MALE EXTENSIONS - 1 GAUGE PORT



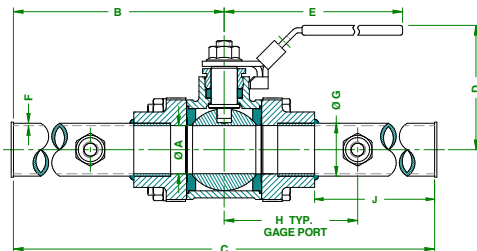
DIMENSIONS

OXYGEN CLEANED					SIZE (IN.)	DIMENSIONS (IN.)										WT. (LB.)
TRIM PLATED PART NUMBER	316SS BALL & STEM PART NUMBER	TRIM PLATED PART NUMBER	316SS BALL & STEM PART NUMBER	316SS BALL, STEM & EXT. TRIM PART NUMBER		A	B	C	D	LOCKING	NON LOCKING	F	G	H	J	
W/ LOCKING HANDLE		W/ NON LOCKING HANDLE								E	E					
82-203-F1	82-243-F1	82-203-F2	82-243-F2	82-243-E9	1/2"	0.62	6.91	17.41	2.23	5.31	4.75	0.049	0.625	7.15	9.10	1.7
82-204-F1	82-244-F1	82-204-F2	82-244-F2	82-244-E9	3/4"	0.81	6.97	17.47	2.41	5.31	4.75	0.065	0.75	7.22	8.78	2.4
82-205-F1	82-245-F1	82-205-F2	82-245-F2	82-245-E9	1"	1.00	7.03	17.62	3.01	6.29	5.56	0.065	1.25	7.28	5.09	3.4
82-206-F1	82-246-F1	82-206-F2	82-246-F2	82-246-E9	1-1/4"	1.25	7.38	22.71	3.22	6.29	5.56	0.065	1.375	7.00	12.97	5.5
82-207-F1	82-247-F1	82-207-F2	82-247-F2	82-247-E9	1-1/2"	1.50	7.50	22.57	4.04	8.93	7.75	0.072	1.625	6.74	12.48	8.5
82-208-F1	82-248-F1	82-208-F2	82-248-F2	82-248-E9	2"	2.00	7.74	22.58	4.15	8.93	7.75	0.083	2.125	6.51	11.76	14.0
82-209-F1	82-249-F1	82-209-F2	82-249-F2	82-249-E9	2-1/2"	2.50	11.75	23.50	5.31	10.06	9.92	0.095	2.50	6.38	8.13	26.8
-	82A-240-F1	-	-	82A-240-E9	3"	3.00	11.94	23.87	8.10	18.00*	18.00*	0.0450	3.00	7.75	7.76	42.2
-	82A-24A-F1	-	-	82A-24A-E9	4"	4.00	12.68	25.37	8.88	18.00*	18.00*	0.0700	4.00	8.00	7.25	106.0

*3" & 4" valves come standard with SS ball and stem (not optional) and adjustable length locking handles.

82-200-F3/82-240-F3 SERIES

MALE EXTENSIONS - 2 GAUGE PORTS

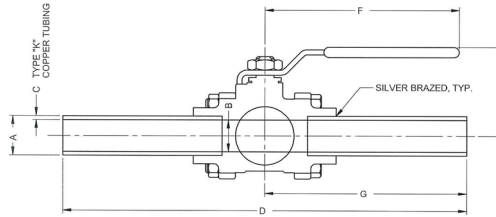
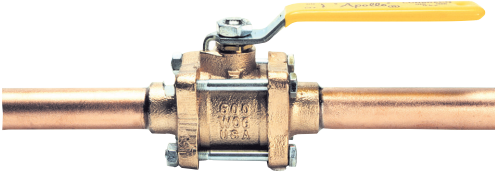


DIMENSIONS

OXYGEN CLEANED W/ LOCKING HANDLE		SIZE (IN.)	DIMENSIONS (IN.)										WT. (LB.)
TRIM PLATED PART NUMBER	316SS BALL & STEM PART NUMBER		A	B	C	D	LOCKING	F	G	H	J		
							E						
82-203-F3	82-243-F3	1/2"	0.62	12.27	24.53	2.23	5.31	0.049	0.625	4.25	10.84	1.66	
82-204-F3	82-244-F3	3/4"	0.81	12.25	24.50	2.41	5.31	0.065	0.75	4.24	10.53	2.37	
82-205-F3	82-245-F3	1"	1.00	12.30	24.60	3.01	6.29	0.065	1.25	4.24	10.32	3.43	
82-206-F3	82-246-F3	1-1/4"	1.25	12.23	24.46	3.22	6.29	0.065	1.375	4.23	9.89	5.50	
82-207-F3	82-247-F3	1-1/2"	1.50	12.25	24.50	4.04	8.93	0.072	1.625	4.25	9.63	8.51	
82-208-F3	82-248-F3	2"	2.00	12.25	24.50	4.15	8.93	0.083	2.125	4.25	9.18	14.0	
82-209-F3	82-249-F3	2-1/2"	2.50	11.75	23.50	5.31	10.06	0.095	2.50	6.38	8.13	26.81	
-	82A-240-F3	3"	3.00	11.94	23.87	8.10	18*	.0450	3.00	7.75	7.78	42.24	
-	82A-24A-F3	4"	4.00	12.68	25.37	8.88	18*	.0700	4.00	8.00	7.25	106.0	

*3" & 4" valves come standard with SS ball and stem (not optional) and adjustable length locking handles.

82-200/82-240 SERIES
MALE EXTENSIONS - NO GAUGE PORTS

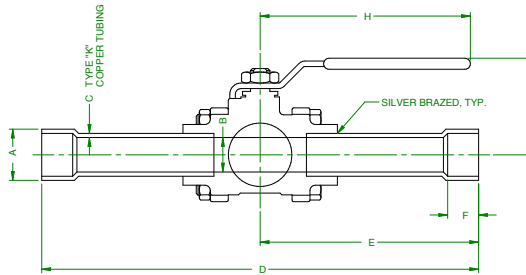
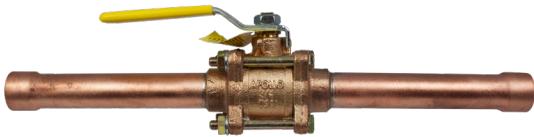


DIMENSIONS

STANDARD		OXYGEN CLEANED					SIZE (IN.)	DIMENSIONS (IN.)								WT. (LB.)	
TRIM PLATED PART NUMBER	316SS BALL & STEM PART NUMBER	TRIM PLATED PART NUMBER	316SS BALL & STEM PART NUMBER	316SS BALL, STEM & EXT. TRIM PART NUMBER	TRIM PLATED PART NUMBER	316SS BALL & STEM PART NUMBER		A	B	C	D	E	LOCKING F	NON LOCKING F	G		H
W/ NON LOCKING HANDLE		W/ NON LOCKING HANDLE			W/ LOCKING HANDLE												
82-203-B8	82-243-A8	82-203-K1	82-243-K1	82-243-C4	82-203-G3	82-243-G3	1/2"	5/8	0.62	0.049	13.81	2.00	4.87	5.28	6.00	5.50	1.7
82-204-A8	82-244-B3	82-204-K1	82-244-K1	82-244-C6	82-204-G3	82-244-G3	3/4"	7/8	0.81	0.065	13.93	2.18	4.87	5.28	6.00	5.25	2.4
82-205-B7	82-245-B1	82-205-K1	82-245-K1	82-245-E3	82-205-G3	82-245-G3	1"	1-1/8	1.00	0.065	14.04	2.62	5.50	6.25	6.00	5.09	3.4
82-206-B7	82-246-B0	82-206-K1	82-246-K1	82-246-C0	82-206-G3	82-246-G3	1-1/4"	1-3/8	1.25	0.065	14.75	2.89	5.50	6.25	6.00	5.03	5.5
82-207-B2	82-247-B2	82-207-K1	82-247-K1	82-247-C6	82-207-G3	82-247-G3	1-1/2"	1-5/8	1.50	0.072	15.07	3.37	8.00	8.92	6.00	4.91	8.5
82-208-B7	82-248-B2	82-208-K1	82-248-K1	82-248-C4	82-208-G3	82-248-G3	2"	2-1/8	2.00	0.083	15.23	3.70	8.00	8.92	6.00	4.66	14.2
82-209-A2	82-249-A2	82-209-K1	82-249-K1	-	82-209-G3	82-249-G3	2-1/2"	2-5/8	2.50	0.095	23.51	5.14	9.38	10.06	9.60	8.13	26.8
-	82A-240-A2	-	82A-240-K1	-	-	-	3"	3-1/8	3.00	0.109	24.00	6.77	18.00*	18.00*	9.40	7.76	42.24
-	82A-24A-A0	-	82A-24A-K1	-	-	-	4"	4-1/8	4.00	0.134	25.50	8.26	18.00*	18.00*	9.41	7.25	106.0

*3" & 4" valves come standard with SS ball and stem (not optional) and adjustable length locking handles.

82-200/82-240 SERIES
FEMALE EXTENSIONS - NO GAUGE PORTS



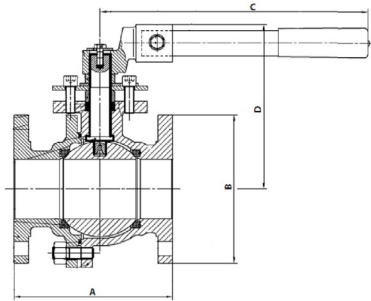
DIMENSIONS

STANDARD		OXYGEN CLEANED					SIZE (IN.)	DIMENSIONS (IN.)										WT. (LB.)
TRIM PLATED PART NUMBER	316SS BALL & STEM PART NUMBER	TRIM PLATED PART NUMBER	316SS BALL & STEM PART NUMBER	TRIM PLATED PART NUMBER	316SS BALL & STEM PART NUMBER	TRIM PLATED PART NUMBER		316SS BALL & STEM PART NUMBER	A	B	C	D	E	F	G	LOCKING H	NON LOCKING H	
W/ NON LOCKING HANDLE		W/ LOCKING HANDLE			W/ NON LOCKING HANDLE		W/ LOCKING HANDLE											
82-203-C2	82-243-B8	-	-	82-203-K2	82-243-K2	82-203-E0	82-243-E0	1/2"	5/8"	0.62	0.049	14.80	7.40	0.50	2.00	4.87	5.28	1.7
82-204-C3	82-244-C1	82-204-F0	-	82-204-K2	82-244-K2	82-204-E0	82-244-C9	3/4"	7/8"	0.81	0.065	15.42	7.71	0.75	2.18	4.87	5.28	2.4
82-205-C2	82-245-C1	82-205-G4	-	82-205-K2	82-245-K2	82-205-E4	82-245-E0	1"	1-1/8"	1.00	0.065	15.84	7.92	0.90	2.62	5.50	6.25	3.5
82-206-C1	82-246-C1	-	-	82-206-K2	82-246-K2	82-206-C7	82-246-C2	1-1/4"	1-3/8"	1.25	0.065	16.69	8.34	0.96	2.87	5.50	6.25	5.6
82-207-B8	82-247-C5	82-207-E9	-	82-207-K2	82-247-K2	82-207-C5	82-247-E3	1-1/2"	1-5/8"	1.50	0.072	16.16	8.58	1.09	3.37	8.00	8.92	8.6
82-208-C1	82-248-C0	82-208-E4	-	82-208-K2	82-248-K2	82-208-C8	82-248-C7	2"	2-1/8"	2.00	0.083	18.12	9.06	1.34	3.70	8.00	8.92	14.3
-	-	-	-	82-209-K2	82-249-K2	82-209-A8	82-249-A8	2-1/2"	2-5/8"	2.50	0.095	23.50	9.62	1.47	5.14	9.38	10.06	26.8
-	-	-	-	-	-	-	82A-240-K2	3"	3-1/8"	3.00	0.109	23.87	10.25	1.66	6.77	18.00*	18.00*	42.25

*3" valves are equipped with adjustable length locking handles.

6PLF SERIES

CAST IRON CLASS 125 FLANGED BALL VALVE - LEAD FREE



The cast iron/epoxy coated, Class 125 Apollo International™ 6PLF series lead free ball valves offer unobstructed turbulence-free flow that gate and butterfly valves can't match. Compact design and low profile handle for easy installation in tight areas. Ideal for both potable water and general HVAC applications.

FEATURES

- A126 Class B Cast Iron Body with FDA Food-Grade Epoxy Powder Coat
- Stainless Steel Ball & Stem
- PTFE Seats
- 200 CWP / 125 SWP
- ISO 5211 Mounting Pad for Easy Actuation
- Adjustable Stem Packing
- Full Port Through 6"
- Vacuum Service to 29in Hg
- Lever Handles 2-6"; Gear Operators 8-10"
- NSF/ANSI 61 Water Quality
- NSF/ANSI 372 Lead Free
- ANSI B16.10 Face-to-Face Dimensions Allow Direct Replacement of Comparable Gate Valves

DIMENSIONS

LF MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)				WT. (LB.)	ACTUATION KIT	DESCRIPTION
		A	B	C	D			
6PLF-208-01	2	7.00	6.00	12.20	6.50	22.70	78253001	KIT, MTG, 6PLF208 TO A0150
6PLF-209-01	2-1/2	7.50	7.00	13.78	7.42	36.73	78253101	KIT, MTG, 6PLF209 TO A0150
6PLF-200-01	3	8.00	7.50	13.78	8.17	46.63	78253201	KIT, MTG, 6PLF200 TO A0150
6PLF-20A-01	4	9.00	9.00	15.75	9.00	71.83	78253301	KIT, MTG, 6PLF20A TO A0350/0600
6PLF-20C-01	6	10.50	11.00	30.00	11.32	111.99	78253401	KIT, MTG, 6PLF20C TO A0950
6PLF-20E-01*	8	11.50	13.50	30.00	11.32	210.54	78253501	KIT, MTG, 6PLF20E/20G TO A01600/A2500
6PLF-20G-01*	10	13.00	16.00	33.00	13.05	294.10	78253501	KIT, MTG, 6PLF20E/20G TO A01600/A2500

*Gear operator is standard

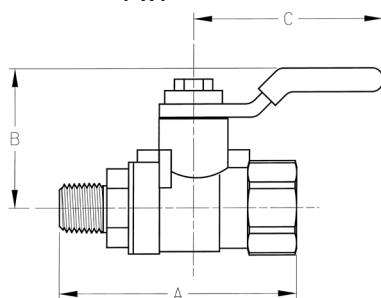
94 MBV SERIES

MINI BALL VALVE GAS RATED - APOLLO INTERNATIONAL™



M X F

F X F



Designed for commercial and light industrial use. Full port, constructed of heavy-duty forged brass, PTFE seats and gland follower with double Viton o-rings to prevent stem leakage.

FEATURES

- Reversible Handle
- Blowout-Proof Stem
- Double Viton O-Ring Stem Seals
- Large Raised Wrench Flats
- Chrome Plated Brass Ball
- Ideal for Use as a Gas or Gauge Cock
- Maximum 600 psig at 100°F, Non-Shock
- Temperature Range: -40°F to 300°F
- ANSI Z21.15-2009 / CSA 9.1-2009 (1/2 psi) - Manually Operated Gas Valves for Appliances
- ASME B16.44-2002 - Manually Operated Metallic Gas Valves for Use in Above Ground Piping Systems (2 and 5 psig)
- MSS SP-110 Compliant

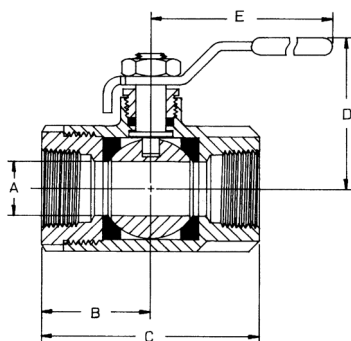
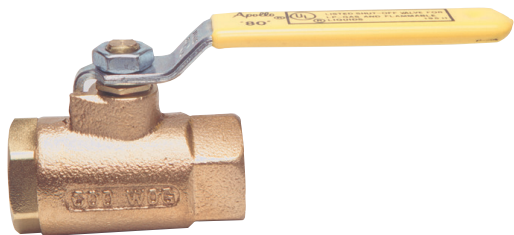
DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)			PORT (DIA.)	WT. (LB.)
		A	B	C		
94-MBV-02	1/4 FNPT x 1/4 MNPT	1.95	1.09	1.71	0.31	0.20
94-MBV-03	1/4 FNPT x 1/4 FNPT	1.68	1.09	1.71	0.31	0.17
94-MBV-04	1/8 FNPT x 1/8 MNPT	1.95	1.09	1.71	0.31	0.16
94-MBV-05	1/8 FNPT x 1/8 FNPT	1.68	1.09	1.71	0.31	0.16



80-100 SERIES

UL LISTED GAS BRONZE SHUT-OFF VALVE



UL listed, heavy pattern, bronze shut-off valve for LP gas, natural gas, flammable liquids and heated oil. Features easy quarter-turn ON/OFF, a large port to reduce pressure drop and NPT connections.

FEATURES

- RPTFE Seats and Seals
- Rated 600 psig CWP, Non-Shock
- 250 psig LP Gas
- (-07) Tee Handle
- (-27) Latch Lock Handle
- (-57) Oxygen Cleaned

UL LISTED

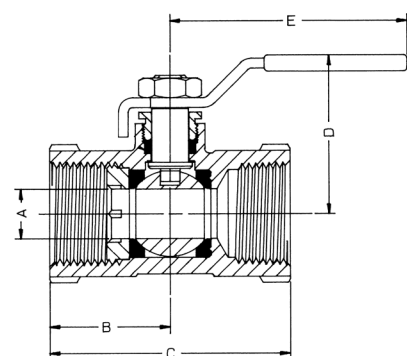
- YQNZ - UL1477
- YRBX - UL842
- YRPV - UL842
- YSDT - UL125
- MHKZ - UL842

DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)				
		A	B	C	D	E
80-101-01	1/4	0.37	1.03	2.06	1.75	3.87
80-102-01	3/8	0.37	1.03	2.06	1.75	3.87
80-103-01	1/2	0.50	1.12	2.25	1.81	3.87
80-104-01	3/4	0.68	1.50	3.00	2.12	4.87
80-105-01	1	0.87	1.68	3.37	2.25	4.87
80-106-01	1-1/4	1.00	2.00	4.00	2.62	5.50
80-107-01	1-1/2	1.25	2.18	4.37	2.87	5.50
80-108-01	2	1.50	2.34	4.68	3.06	5.50
80-109-01	2-1/2	2.50	3.25	6.50	4.12	8.00
80-100-01	3	2.50	3.37	6.75	4.12	8.00

90-100 SERIES

UL LISTED UNIBODY BRONZE THREADED BALL VALVE



A compact 400 psig CWP valve that's UL listed for fuel, inert gases and flammable liquids. Features ASTM Grade Bronze body, RPTFE seats and seals.

FEATURES

- Blowout-Proof Stem Design
- One Piece Bronze Body
- Reduced Port

OPTIONS

- 90-14x with 316 SS Ball & Stem
- (-02) Static Grounded
- (-04) 2-1/4" Stem Extension
- (-05) Plain Ball
- (-07) Steel Tee Handle
- (-15) Steel Wheel Handle
- (-27) Latch Lock Handle
- (-57) Oxygen Cleaned

UL LISTED

- YQNZ - UL1477
- YRBX - UL842
- YRPV - UL842

DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)				
		A	B	C	D	E
90-103-01A	1/2	0.37	1.14	2.15	1.68	3.87
90-104-01A	3/4	0.50	1.36	2.61	1.75	3.87
90-105-01A	1	0.62	1.50	2.90	2.00	4.87
90-106-01A	1-1/4	0.81	1.81	3.50	2.18	4.87
90-107-01A	1-1/2	1.00	2.06	3.79	2.62	5.50
90-108-01A	2	1.25	2.43	4.42	2.81	5.50

77G-UL SERIES
FULL PORT CSA/UL BRONZE GAS SHUT-OFF VALVE



BALL VALVES

UL and CSA listed fuel shut off valve that features a durable bronze body, premium "multi-fill" MPTFE seats and stem packing, and a "Solid Ball" design that delivers true full port flow performance.

FEATURES

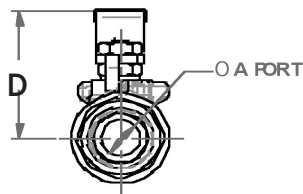
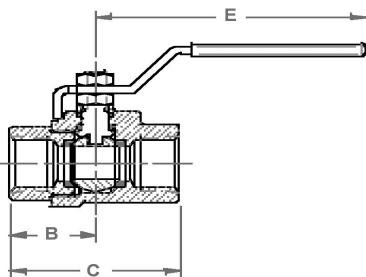
- Blowout-Proof Stem Design
- ASTM B584 Bronze
- Maximum Body Pressure: 600 psig CWP
- CSA Rating: 125 psig
- CSA Rating: -20°F to 150°F
- UL Rating: 250 psig max @ 125°F
- MSS SP-110 Ball Valves
- CSA to ASME B16.33, 125
- CGA 3.16-M88, 125

UL LISTED

- YSDT
- YQNZ
- YRBX
- YRPV
- YRPV7
- YRBX7
- MHKZ7
- YSDT7

DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)					WT. (LB.)
		A	B	C	D	E	
77G-103-UL	1/2	0.50	1.19	2.35	1.80	3.74	0.68
77G-104-UL	3/4	0.75	1.42	2.74	1.98	4.78	1.26
77G-105-UL	1	1.00	1.64	3.18	2.18	4.78	2.08





GB-10 SERIES

CSA GAS SHUT-OFF VALVE - CAST BRONZE



Manual shut-off valves engineered specifically for low pressure gas service. CSA design and capacity certified with American-made quality. High-copper content body, chrome-plated ball, and PTFE seats.

FEATURES

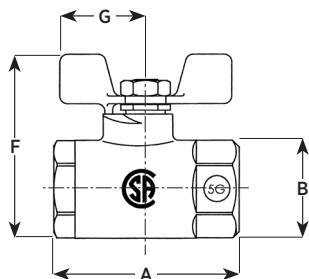
- Complies with ANSI Z21.15, CR91-002, and ASME 16.44
- Use with Natural, Manufactured, Mixed and Liquefied Petroleum Gases, LP Gas-Air Mixtures

- Temperature Range: 32°F to 125°F at Pressures of 1/2 and 5 psig
- (-01) Standard Die-Cast Zinc "Wing" Handle Epoxy Coated
- (-L1) Lever Handle or (-T1) Tee Handle Options
- **Proudly Made in USA**

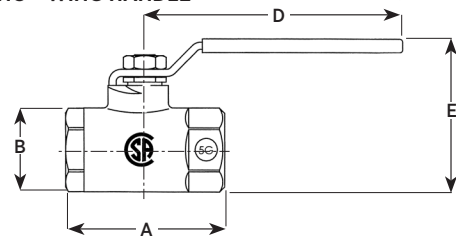
DIMENSIONS

MODEL NUMBER	SIZE (IN.)	CONNECTION	BTU/HR*	DIMENSIONS (IN.)						
				A	B	C	D	E	F	G
51GB-201	3/8	3/8 NPT	318,700	2.04	1.06	0.38	3.85	2.24	2.20	0.81
51GB-301	1/2	1/2 NPT	623,750	2.24	1.18	0.50	3.85	2.30	2.24	0.81
51GB-401	3/4	3/4 NPT	1,265,000	2.97	1.55	0.69	4.75	2.85	2.90	1.00
51GB-501	1	1 NPT	2,037,500	3.33	1.81	0.88	4.75	3.10	3.15	1.00

*Capacity based on a gas having a heating value of 1000 BTU/cubic feet and an S.G. of 0.64 at a P.D. of 1" W.C.



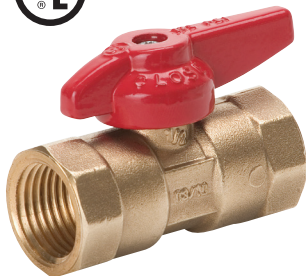
STANDARD - YELLOW DIE-CAST ZINC "WING HANDLE"



OPTIONAL - STAINLESS STEEL "LEVER HANDLE"

GB-15 SERIES

GAS APPLIANCE BALL VALVE



Designed for natural gas, manufactured and mixed gas, liquefied petroleum gases and LP gas-air mixture applications. Apollo International™

FEATURES

- ANSI Z21.15 (Appliance & Hose)/CGA9.1(1/2 psi)
- ASME B16.44 (5 psi)
- UL Guide YRBX (Flammable Liquid Shut-Off)

- UL Guide MHKZ (Manual Valves)
- UL Guide YRPV (Gas Shut-Off -250#)
- UL Guide YSDT (LP Gas)

DIMENSIONS

MODEL NUMBER	PART NUMBER	SIZE & END CONNECTION (IN.)
GB-15	51GF301A	1/2 FNPT x 1/2 FNPT
GB-15	51GF401A	3/4 FNPT x 3/4 FNPT

GB-50/GB-50A SERIES
CSA GAS SHUT-OFF VALVE



Designed for "main burner" applications with cast-in single or dual pilot tap. ASTM B584 bronze body, chrome-plated ball, brass stem, retainer and gland screws for corrosion resistance. Single or double side taps for pilot light or pressure gauge connections.

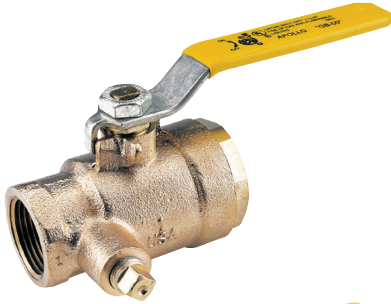
FEATURES

- For Natural Gas, Manufactured and Mixed Gas, Liquefied Petroleum Gases and LP Gas-Air Mixtures
- Rated Pressures of 1/2 and 5 psig
- Standard Connection is FNPT x FNPT
- High BTU Capacity
- Reversible Plated Steel Lever Handle
- (-07) Tee Handle Optional

APPROVALS

- ANSI Z21.15, CGA9.1
- ASME B16.44 (2 and 5 psig)
- MSS SP-110
- UL Guide YRBX
- UL Guide MHKZ
- UL Guide YRPV
- UL Guide YSDT
- UL 125, UL 842

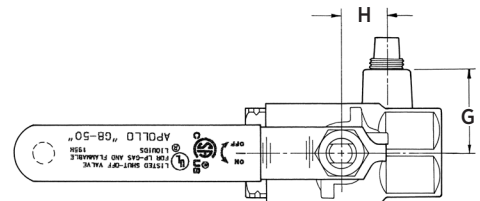
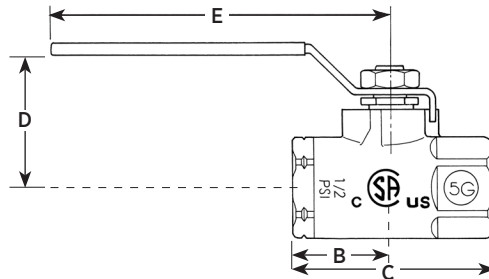
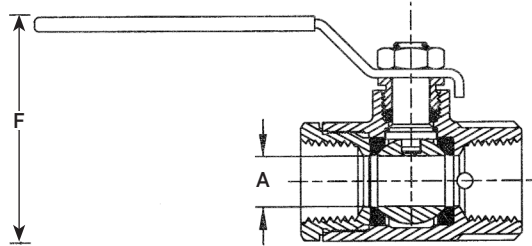
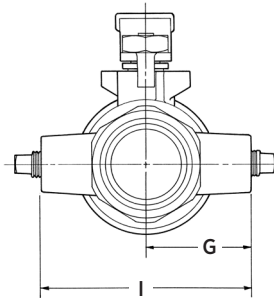
BALL VALVES



GB-50



GB-50A



DIMENSIONS

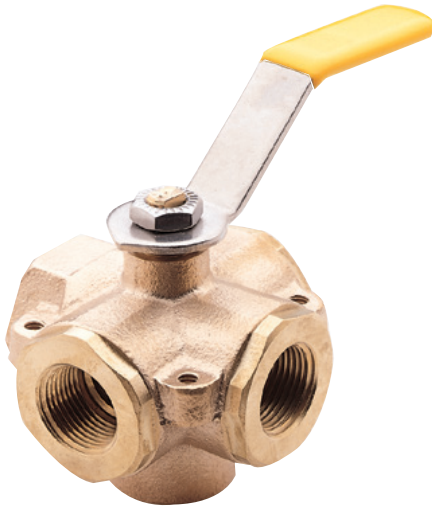
MODEL NO. SINGLE TAPPED	MODEL NO. DUAL TAPPED	SIZE (IN.)	TAPPING	DIMENSIONS (IN.)									CAPACITY BTU/HR.
				A	B	C	D	E	F	G	H	I	
50GB-301	--	1/2	1/8	0.50	1.11	2.25	1.68	3.85	2.27	1.00	0.53	-	693,000
50GB-401	50GB-401A	3/4	1/8	0.75	1.26	2.67	1.93	3.85	2.72	1.12	0.75	2.24	1,258,000
50GB-501	50GB-501A	1	1/8	1.00	1.65	3.42	2.19	4.78	3.18	1.53	0.94	3.06	3,144,000
50GB-601	50GB-601A	1-1/4	1/8	1.25	1.87	3.86	2.37	4.78	3.56	1.62	1.15	3.24	6,441,000
50GB-701	50GB-701A	1-1/2	1/8	1.50	2.05	4.22	2.81	5.40	4.21	1.81	1.31	3.62	7,745,000
50GB-801	50GB-801A	2	1/8	2.00	2.48	5.02	3.18	5.40	4.93	2.18	1.68	4.36	14,741,000
50GB-5A1	50GB-5A1A	1	1/4	1.00	1.65	3.42	2.19	4.78	3.18	1.53	0.94	3.06	3,144,000
50GB-6A1	50GB-6A1A	1-1/4	1/4	1.25	1.87	3.86	2.37	4.78	3.56	1.62	1.15	3.24	6,441,000
50GB-7A1	50GB-7A1A	1-1/2	1/4	1.50	2.05	4.22	2.81	5.40	4.21	1.81	1.31	3.62	7,745,000
50GB-8A1	50GB-8A1A	2	1/4	2.00	2.48	5.02	3.18	5.40	4.93	2.18	1.68	4.36	14,741,000

*Note: Capacities based on 1000 Btu/cubic feet gas at 0.64 specific gravity, at a P.D. of 1" W.C.



78-124/78-125 SERIES
5-PORT TANK SELECTOR

Unique ball design allows for higher flow capacities. Five port construction allows access to four tanks using only one valve.

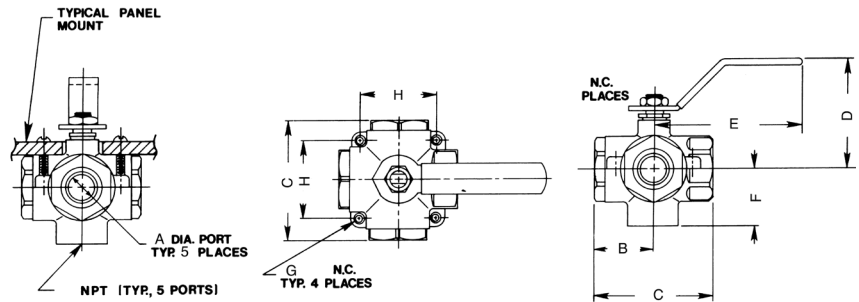


FEATURES

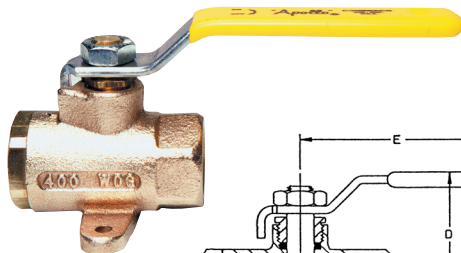
- Five NPT Connections
- Bronze Ball Valve with Stainless Steel Lever and Nut
- PTFE Seats and RPTFE Stem Packing
- Stem Packing Adjustable for Wear
- Non-Lubricated
- 50 psig Pressure Rating
- Operation: Four Selected Inlets Feed One Common Outlet
- Pointer on Handle Indicates the Selected Inlet
- Easy Mounting Design

DIMENSIONS

SERIES NUMBER	SIZE (IN.)	DIMENSIONS (IN.)								WT./100 (LB.)
		A	B	C	D	E	F	G	H	
78-124-01	1/2	0.50	1.26	2.52	2.27	3.53	1.12	10-24	1.40	106
78-125-01A	3/4	0.75	1.56	3.12	2.93	3.87	1.53	1/4-20	1.98	264



78-256 SERIES
MULTI PURPOSE SHUT-OFF VALVE WITH MOUNTING EARS



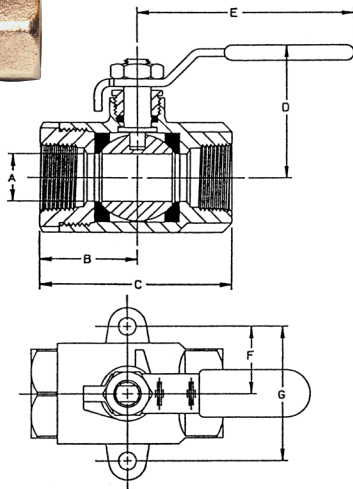
Excellent for use with liquid fuels and often specified as a fuel tank shut-off valve in marine applications. All wetted parts are brass or cast bronze. Mounting ears for easy, positive installation.

FEATURES

- 400 psig CWP, Non-Shock
- Tested to 100 psig Air Under Water
- NPT Threaded, Both Ends
- RPTFE Seats and Seals
- (-07) Tee Handle Optional

DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)						
		A	B	C	D	E	F	G
78-248-01	1/4	0.43	1.12	2.25	1.78	3.87	0.93	1.87
78-250-01	3/8	0.43	1.12	2.25	1.78	3.87	0.93	1.87
78-256-01	1/2	0.50	1.12	2.25	1.78	3.87	0.93	1.87
78-438-01	3/4	0.68	1.50	3.00	2.12	4.87	1.06	2.12



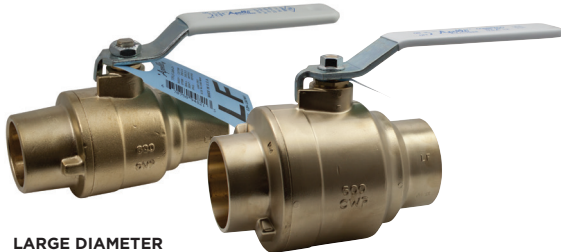
77F/77FLF SERIES
FULL PORT FORGED BRASS BALL VALVE



BALL VALVES



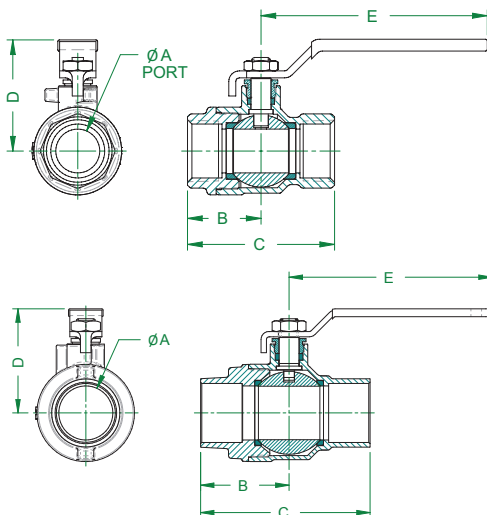
LARGE DIAMETER



LARGE DIAMETER

OPTIONS

- (-01) Standard Lever and Trim
- (-04) 2-1/4" Stem Extension
- (-07) CS Tee Handle
- (-10) Stainless Steel Lever & Nut
- (-11) Therma-Seal™ Insulating Tee
- (-27) Stainless Steel Locking Tee
- (-50) 2-1/4" Locking Stem Extension
- 77Fx-140/240 Stainless Steel Ball & Stem



The Apollo® 77F Series is a full port forged brass ball valve suitable for a wide range of plumbing and heating applications. These NPT threaded or solder, 2-piece valves combine reliable operation with maximum economy. Valves include most pertinent agency approvals. **Proudly Made in the USA.**

FEATURES

- Heavy Pattern Forged Design
- Full Port Flow
- Superior RPTFE Seats and Packing
- Adjustable Stem Packing
- Blowout-Proof Stem
- Corrosion Resistant Materials
- 100% Factory Tested
- Popular Lever Options and Stainless Steel Trim Available
- Silicone Free Assembly
- Made in USA, ARRA compliant
- Rating: 600 CWP (1/4" - 2")
- Rating: 400 CWP (2-1/2" - 4")
- Steam Rating: 150 psi SWP
- Vacuum Service to 29 in. Hg

77FLF FEATURES

- Easily Identifiable White Handle Grip and Blue "Lead Free" Hang Tag
- EZ-Solder™ Lead Free Brass
- Lead Free DZR Brass
- NSF/ANSI 61 Water Quality
- NSF/ANSI 372 Lead Free
- Rating: 600 CWP (1/4" - 2")
- Rating: 400 CWP (2-1/2" - 4")
- Steam Rating: 150 psi SWP
- Vacuum Service to 29 in. Hg

APPROVALS

- MSS SP-110
- IAPMO IGC-157 Ball Valves
- CGA 3.16 (125 PSI)
- CGA CR91-002 (5 PSI)
- ANSI Z21.15/CSA 9.1 (1/2 PSI)
- ASME B16.44 (5 PSI)
- ASME B16.33 (125 PSI) (1/2" - 2")
- FM 1140 (1/4" - 2")
- UL Guides: YSDT, MHKZ, YQNZ, YRBX & YRPV
- UL Guide VQGU (1/4" - 2")

**Gas approvals apply to NPT models only*

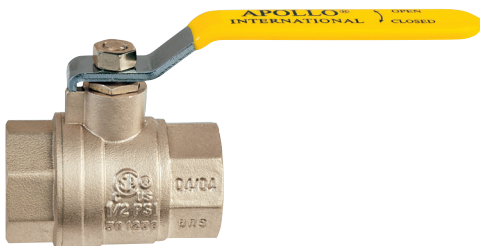
DIMENSIONS

MODEL NUMBER	LF MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)					WT. (LB.)
			A	B	C	D	E	
NPT								
77F-101-01	77FLF-101-01	1/4"	0.38	0.81	1.62	1.61	2.85	0.3
77F-102-01	77FLF-102-01	3/8"	0.38	0.85	1.70	1.61	2.85	0.3
77F-103-01	77FLF-103-01	1/2"	0.50	1.14	2.25	1.66	2.85	0.5
77F-104-01	77FLF-104-01	3/4"	0.75	1.29	2.57	1.91	3.86	0.8
77F-105-01	77FLF-105-01	1"	1.00	1.60	3.20	2.11	3.86	1.3
77F-106-01	77FLF-106-01	1-1/4"	1.25	1.73	3.46	2.44	4.75	2.1
77F-107-01	77FLF-107-01	1-1/2"	1.50	2.00	4.00	2.91	5.42	3.2
77F-108-01	77FLF-108-01	2"	2.00	2.37	4.74	3.69	7.77	5.6
77F-109-01	77FLF-109-01	2-1/2"	2.50	2.99	5.98	4.14	7.77	12.8
77F-100-01	77FLF-100-01	3"	3.00	3.52	7.05	5.03	9.92	19.7
77F-10A-01	77FLF-14A-01	4"	4.00	3.83	7.65	5.70	14.78	25.5
SOLDER								
77F-203-01	77FLF-203-01	1/2"	0.50	1.37	2.37	1.66	2.85	0.4
77F-204-01	77FLF-204-01	3/4"	0.75	1.72	3.13	1.91	3.86	0.9
77F-205-01	77FLF-205-01	1"	1.00	2.01	3.73	2.11	3.86	1.3
77F-206-01	77FLF-206-01	1-1/4"	1.25	2.07	3.97	2.44	4.75	2.0
77F-207-01	77FLF-207-01	1-1/2"	1.50	2.42	4.69	2.91	5.42	3.3
77F-208-01	77FLF-208-01	2"	2.00	2.91	5.82	3.69	7.77	5.6
77F-209-01	77FLF-209-01	2-1/2"	2.50	3.68	7.05	4.14	7.77	11.6
77F-200-01	77FLF-200-01	3"	3.00	4.26	8.15	5.03	9.92	19.3
77F-20A-01	77FLF-24A-01	4"	4.00	4.82	9.57	5.70	14.78	25.6



94A SERIES

ECONOMY FULL PORT BALL VALVE - APOLLO INTERNATIONAL™



These full port ball valves with forged brass body are UL listed and CSA approved. Ideal for general purpose non-potable applications including air, gas, HVAC, irrigation, fire protection, etc.

FEATURES

- Adjustable Stem Packing Nut
- 600 CWP Non-Shock (1/4" - 2")
- 400 CWP Non-Shock (2-1/2" - 4")
- Temperature Range: -0°F to 400°F
- Stem Seal O-Ring (Solder Ver. 1/2" - 2") **NEW!**
- 2-1/4" Stem Ext w/ Memory Stop Kit Option
- 100% Factory Tested
- Lead Free Option (94ALF-A)

APPROVALS

- MSS SP-110 - Ball Valves

CSA LISTED

- (File # 226234) per the following standards:
- ANSI Z21.15 (1/2 psi) (CSA 9.1) (1/4" - 2")
 - ASME B16.44 (5 psi) (CR91-002) (1/4" - 2")
 - ASME B16.33 (125 psi) (CGA 3.16) (1/4" - 2")

UL LISTED

- Guides YQNZ, YRBX, YRPV, YSDT and MHKZ (1/4" - 4" NPT only)
- UL 258 - VQGU Fire Protection Trim & Drain 175psi max (1/4" - 2")

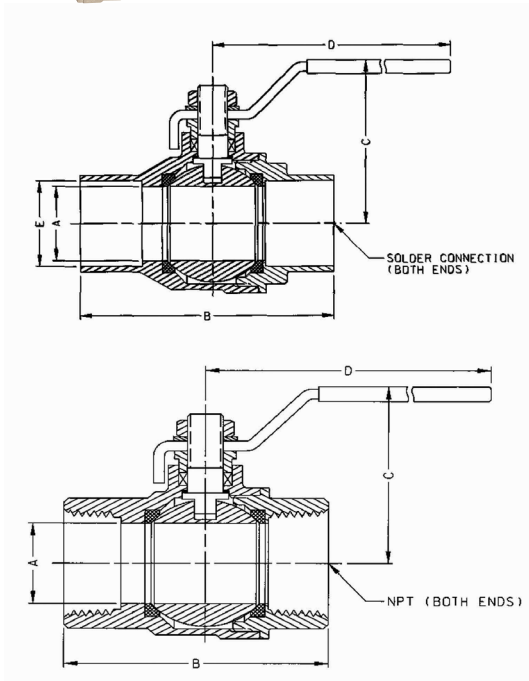
FM LISTED

- FM 1140 Fire Protection Quick Opening Valves

*Gas approvals apply to NPT models only

DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)					WT. (LB.)
		A	B	C	D	E	
NPT							
94A-101-01	1/4"	0.39	1.76	1.73	3.54	-	0.3
94A-102-01	3/8"	0.39	1.76	1.73	3.54	-	0.3
94A-103-01	1/2"	0.58	2.05	2.04	3.54	-	0.4
94A-104-01	3/4"	0.75	2.36	2.26	3.78	-	0.7
94A-105-01	1"	0.95	2.76	2.58	4.53	-	1.1
94A-106-01	1-1/4"	1.26	3.31	3.05	4.53	-	1.6
94A-107-01	1-1/2"	1.58	3.66	3.37	5.51	-	2.4
94A-108-01	2"	1.97	4.18	3.70	6.30	-	3.4
94A-109-01	2-1/2"	2.52	5.38	4.65	8.66	-	7.6
94A-100-01	3"	2.95	6.04	4.97	8.66	-	9.3
94A-10A-01	4"	3.95	7.39	6.13	11.02	-	16.9
SOLDER							
94A-203-01	1/2"	0.58	2.05	1.84	3.54	0.63	0.4
94A-204-01	3/4"	0.75	2.75	2.14	3.78	0.88	0.7
94A-205-01	1"	0.95	3.31	2.45	4.53	1.13	1.1
94A-206-01	1-1/4"	1.26	3.82	3.04	4.53	1.38	1.4
94A-207-01	1-1/2"	1.58	4.43	3.17	5.51	1.63	2.2
94A-208-01	2"	1.97	5.38	3.49	6.30	2.13	3.0
94A-209-01	2-1/2"	2.52	6.28	4.66	8.66	2.63	6.4
94A-200-01	3"	2.95	7.15	4.87	8.66	3.13	8.5
94A-20A-01	4"	3.95	9.28	5.87	11.02	4.13	15.8



94A OPTIONS

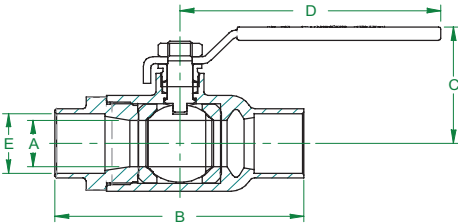
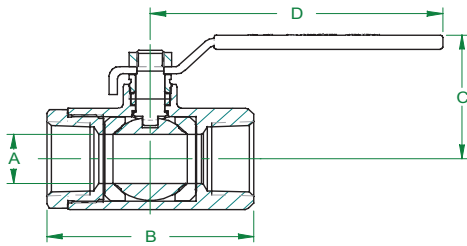
SIZE	REPLACEMENT HANDLES	2-1/4" STEM EXTENSION + MEMORY STOP KIT
1/4"-3/8"	W932400	78217101
1/2"	W932500	78217201
3/4"	W936000	78217301
1"	W932600	78217401
1-1/4"	W932700	78217501
1-1/2"-2"	W932800	78217601
2-1/2"-3"	W932900	78217701
4"	W933000	78217801

- Kits do not include stem nut
- Replacement handles are not UL marked

BALL VALVES

94ALF-A SERIES

ECONOMY FULL PORT BALL VALVE - APOLLO INTERNATIONAL™



These Lead Free ball valves with forged DZR brass body are UL listed and CSA approved. Ideal for plumbing and heating, fuel gas, fire protection and other general purpose applications.

FEATURES

- Lead Free* Materials and Certification
- EZ-Solder™ Lead Free Brass
- Solders Like Standard Brass
- Distinctive White "Lead Free" Handle Grip and Blue "Lead Free" Hang Tag
- 2-Piece, Full-Port Design
- Blowout-Proof Stem
- Adjustable Stem Packing Nut
- Multiple Agency Approvals
- **Stem Seal O-Ring (Solder Ver. 1/2" - 2") NEW!**
- Valve Design Rating: 600 CWP - 1/4 to 2", 400 CWP - 2-1/2" to 4"
- Temperature Range: 0°F to 366°F
- 100% Factory Tested

APPROVALS

- MSS SP-110 - Ball Valves
- NSF/ANSI 61 Water Quality
- NSF/ANSI 372 Lead Free
- IAPMO IGC 157 (cUPC)

CSA LISTED

- (File # 226234) per the following standards:
- ANSI Z21.15 (1/2 psi) (CSA 9.1) (1/4" - 2")
 - ASME B16.44 (5 psi) (CR91-002) (1/4" - 2")
 - ASME B16.33 (125 psi) (CGA 3.16) (1/4" - 2")

UL LISTED

- Guides YQNZ, YRBX, YRPV, YSDT and MHKZ (1/4" - 4" NPT only)
- UL 258 - VQGU Fire Protection Trim & Drain 175psi max (1/4" - 2")

FM LISTED

- FM 1140 Fire Protection Quick Opening Valves

*Gas approvals apply to NPT models only

DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)					WT. (LB.)
		A	B	C	D	E	
NPT							
94ALF-101-01A	1/4"	0.39	1.76	1.73	3.54	-	0.3
94ALF-102-01A	3/8"	0.39	1.76	1.73	3.54	-	0.3
94ALF-103-01A	1/2"	0.58	2.05	2.04	3.54	-	0.4
94ALF-104-01A	3/4"	0.75	2.36	2.26	3.78	-	0.7
94ALF-105-01A	1"	0.95	2.76	2.58	4.53	-	1.1
94ALF-106-01A	1-1/4"	1.26	3.31	3.05	4.53	-	1.6
94ALF-107-01A	1-1/2"	1.58	3.66	3.37	5.51	-	2.4
94ALF-108-01A	2"	1.97	4.18	3.70	6.30	-	3.4
94ALF-109-01A	2-1/2"	2.52	5.38	4.65	8.66	-	7.6
94ALF-100-01A	3"	2.95	6.04	4.97	8.66	-	9.3
94ALF-10A-01A	4"	3.95	7.39	6.13	11.02	-	16.9
SOLDER							
94ALF-203-01A	1/2"	0.58	2.05	1.84	3.54	0.63	0.4
94ALF-204-01A	3/4"	0.75	2.75	2.14	3.78	0.88	0.7
94ALF-205-01A	1"	0.95	3.31	2.45	4.53	1.13	1.1
94ALF-206-01A	1-1/4"	1.26	3.82	3.04	4.53	1.38	1.4
94ALF-207-01A	1-1/2"	1.58	4.43	3.17	5.51	1.63	2.2
94ALF-208-01A	2"	1.97	5.38	3.49	6.30	2.13	3.0
94ALF-209-01A	2-1/2"	2.52	6.28	4.66	8.66	2.63	6.4
94ALF-200-01A	3"	2.95	7.15	4.87	8.66	3.13	8.5
94ALF-20A-01A	4"	3.95	9.28	5.87	11.02	4.13	15.8

**94ALF-2xx-01A intended for soft solder installation using solders with melting temperature of < 500°F.

94ALF-A OPTIONS

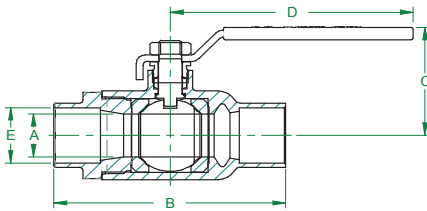
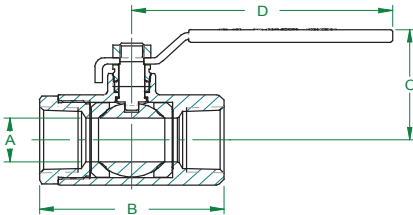
SIZE	REPLACEMENT HANDLES	2-1/4" STEM EXTENSION + MEMORY STOP KIT
1/4"-3/8"	W234700	78217101
1/2"	W234800	78217201
3/4"	W234900	78217301
1"	W235000	78217401
1-1/4"	W235100	78217501
1-1/2"-2"	W235200	78217601
2-1/2"-3"	W235300	78217701
4"	W273800	78217801

- Kits do not include stem nut
- Replacement handles are not UL marked



95ALF SERIES

LEAD FREE FULL PORT STOP & WASTE BALL VALVE



The **Apollo International™** 95ALF Lead Free forged DZR brass ball valves combine reliable operation with maximum economy. Ideal for plumbing or hydronic systems where draining is required. Valves are certified by IAPMO and ANSI 3rd party certified lead free.

FEATURES

- Lead Free Materials and Certification
- Blowout-Proof Stem Design
- Adjustable Stem Packing Nut
- Drain Port with Finger Tight Shut-Off
- Convenient, Quarter-Turn Operation
- EZ-Solder™ Lead Free Brass Alloy
- Solders Like Standard Brass
- Valve Design Rating: 600 CWP
- Temperature Range: 32°F to 250°F
- IAPMO IGC157
- NSF/ANSI 61 Water Quality
- NSF/ANSI 372 Lead Free

DIMENSIONS

LF MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)				
		A	B	C	D	E
NPT						
95ALF-103-01	1/2	0.59	2.24	1.78	3.74	-
95ALF-104-01	3/4	0.79	2.53	2.09	3.94	-
95ALF-105-01	1	0.98	3.15	2.36	4.33	-
SOLDER						
95ALF-203-01	1/2	0.59	2.12	1.78	3.74	0.63
95ALF-204-01	3/4	0.79	2.87	1.94	3.94	0.88
95ALF-205-01	1	0.98	3.53	2.36	4.33	1.13

***95ALF-2xx-01 intended for soft solder installation using solders with melting temperature of < 500°F.*

BALL VALVES

77W SERIES

APOLLOPRESS® BRONZE FULL PORT BALL VALVE

New! Higher Pressure Rating

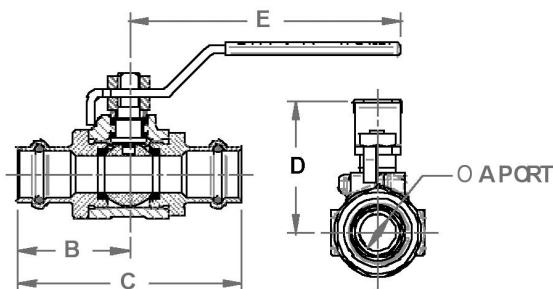


Apollo® 77W Series APOLLOPRESS® ball valves install in seconds, but the valve and the connection are made to last. Ideal for mechanical and heating systems. Not for use with natural gas or potable water.

FEATURES

- Full Port
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- **300 CWP, Non-Shock to 250°F max. NEW!**
- MSS SP-110 Ball Valves
- Adjustable Stem Packing
- Excellent for Hydronic Heating (90% Glycol max)
- Popular Lever Options and Stainless Steel Trim Available
- **Made in the USA**

DIMENSIONS



MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)					WT. (LB.)
		A	B	C	D	E	
77W-103-01	1/2	0.50	1.54	3.08	1.50	3.74	0.6
77W-104-01	3/4	0.75	1.78	3.55	2.01	4.78	1.1
77W-105-01	1	1.00	1.93	3.86	2.20	4.78	1.8
77W-106-01	1-1/4	1.25	2.44	4.87	3.13	7.04	4.3
77W-107-01	1-1/2	1.50	2.91	5.81	3.10	7.04	4.6
77W-108-01	2	2.00	3.74	7.47	3.48	7.04	8.2

77WLF SERIES

APOLLOPRESS® LEAD FREE BRONZE FULL PORT BALL VALVE

LEADFREE CERTIFIED

New! Higher Pressure Rating

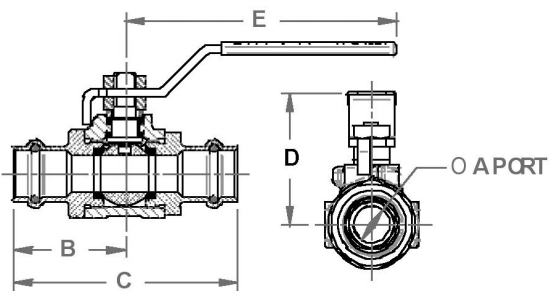


Apollo® 77WLF Series APOLLOPRESS® ball valves install in seconds, but the valve and the connection are made to last. Ideal for mechanical and heating systems. Not for use with natural gas.

FEATURES

- Full Port
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- **300 CWP, Non-Shock to 250°F max. NEW!**
- MSS SP-110 Ball Valves
- NSF/ANSI 61 Water Quality
- NSF/ANSI 372 Lead Free
- Adjustable Stem Packing
- Excellent for Hydronic Heating (90% Glycol max)
- Popular Lever Options and SS Trim Available
- **Made in the USA**

DIMENSIONS



MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)					WT. (LB.)
		A	B	C	D	E	
77WLF-103-01	1/2"	0.50	1.54	3.08	1.50	3.74	0.61
77WLF-104-01	3/4"	0.75	1.78	3.55	2.01	4.78	1.09
77WLF-105-01	1"	1.00	2.12	4.24	2.20	4.78	1.77
77WLF-106-01	1-1/4"	1.25	2.61	5.22	3.13	7.04	4.27
77WLF-107-01	1-1/2"	1.50	2.96	5.92	3.10	7.04	4.63
77WLF-108-01	2"	2.00	3.74	7.47	3.48	7.04	8.21

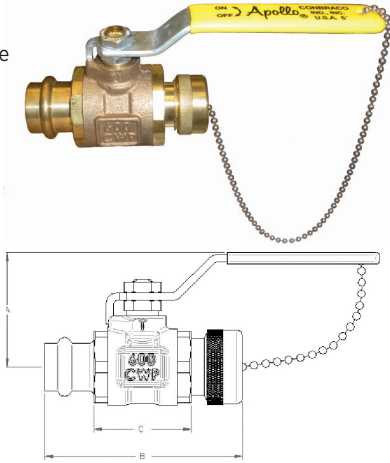


77W-HC SERIES

APOLLOPRESS® BRONZE HOSE CAP & CHAIN BALL VALVE



New! Higher Pressure Rating



Designed for direct mechanical connection to ASTM B88-Type K, L, and M copper tubing in the hard drawn condition for sizes 1/2"-3/4". Valves feature a 3/4" hose thread connection with heavy brass cap to protect the threads and is full pressure rated. Not for use with natural gas.

FEATURES

- Full Port
- Ridgid® "XL" Press Tool Compatible
- Leak Before Press® Technology
- MSS SP-110 Ball Valves
- NSF/ANSI 61 (77WLF-HC)
- Adjustable Stem Packing
- **300 CWP, Non-Shock to 250°F max. NEW!**
- Excellent for Hydronic Heating (90% Glycol max)
- Compatible with Most 77C Series Options
- Heavy Brass Dust Cover is Full Pressure Rated
- Popular Lever and Trim Options Available
- **Now with Stronger Stainless Steel Ball Chain NEW!**
- **Proudly Made in USA**

DIMENSIONS

MODEL NUMBER	LF MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)			WT. (LB.)
			A	B	C	
77W-103-HC	77WLF-103-HC	1/2	1.80	3.12	1.54	0.61
77W-104-HC	77WLF-104-HC	3/4	2.01	3.45	1.72	1.09

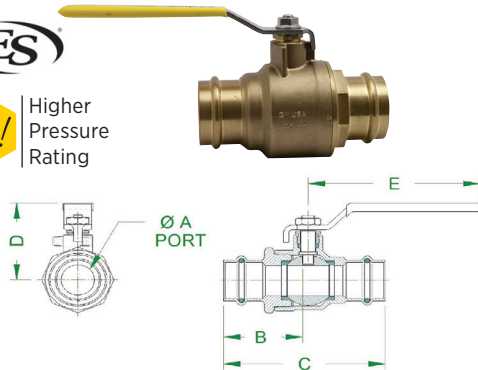
BALL VALVES

77V SERIES

APOLLOPRESS® BRASS BALL VALVE



New! Higher Pressure Rating



The APOLLOPRESS® 77V Series two-piece press ball valve is ideal for installation in most HVAC systems. Features Leak Before Press® technology and 300 psig maximum working pressure. Proudly Made in the USA.

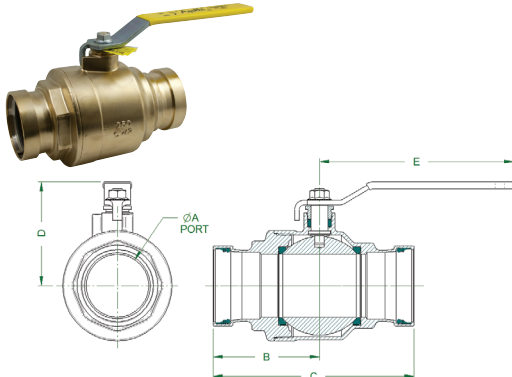
FEATURES

- 2 Piece, Heavy Pattern Forged Design
- Full Port Flow
- **Max. Operating Pressure 300 psi NEW!**
- Temperature Range: 0°F to 250°F
- Superior RPTFE Seats and Packing
- Adjustable Stem packing
- Ridgid® XL Press Tool Compatible
- 2-1/2" - 4" are XLC Compatible
- Blowout-Proof Stem
- Corrosion Resistant Materials
- Silicone Free Assembly
- 100% Factory Tested
- MSS SP-110 Ball Valves
- Directive 2011/65/CE (RoHS)
- Popular Lever Options and SS Trim Available
- **Proudly Made in USA, ARRA Compliant**

DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)					WT. (LB.)
		A	B	C	D	E	
77V-103-01	1/2"	0.50	1.57	2.89	1.66	2.85	0.4
77V-104-01	3/4"	0.75	1.90	3.63	1.91	3.86	0.9
77V-105-01	1"	1.00	2.20	3.88	2.11	3.86	1.2
77V-106-01	1-1/4"	1.25	2.23	4.22	2.44	4.75	2.3
77V-107-01	1-1/2"	1.50	2.84	5.45	2.91	5.42	3.4
77V-108-01	2"	2.00	3.40	6.57	3.69	7.77	6.0

LARGE DIAMETER



77VLF SERIES

APOLLOPRESS® LEAD FREE BRASS BALL VALVE



Higher Pressure Rating

BALL VALVES

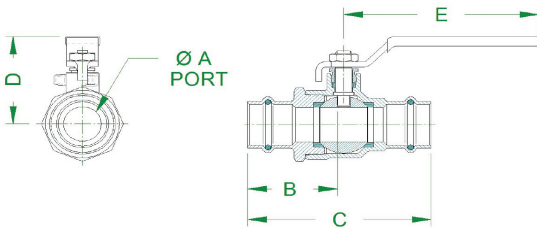


The APOLLOPRESS® 77VLF Series Lead Free two-piece press ball valve is ideal for installation in most plumbing and heating systems, including potable water. Features Leak Before Press® technology and 300 psig maximum working pressure. Proudly Made in the USA.

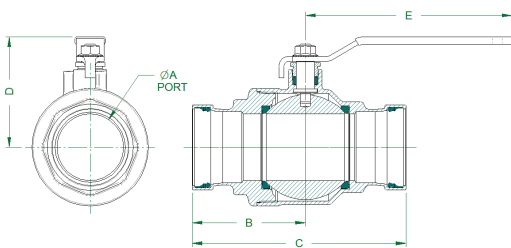
FEATURES

- Lead Free, ANSI 3rd Party Certified
- 2 Piece, Heavy Pattern Forged Design
- Dezincification resistant Materials
- Easily Identifiable White Handle Grip and Blue "Lead Free" Hang Tag
- Full Port flow
- Superior RPTFE Seats and Packing **NEW!**
- Adjustable Stem Packing
- Ridgid® XL Press Tool compatible
- 2-1/2" - 4" are XLC Compatible
- Blowout-Proof Stem
- Silicone Free Assembly
- 100% Factory Tested
- Maximum Operating Pressure: 300 psi **NEW!**
- Temperature Range: 0°F to 250°F
- MSS SP-110 Ball Valves
- NSF/ANSI 61 Water Quality
- NSF/ANSI 372 Lead Free
- IAPMO IGC-157 Ball Valves
- Directive 2011/65/CE (RoHS)
- Popular Lever Options and SS Trim Available
- Proudly Made in USA, ARRA Compliant

DIMENSIONS



LARGE DIAMETER



MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)					WT. (LB.)
		A	B	C	D	E	
77VLF-103-01	1/2"	0.50	1.57	2.89	1.66	2.85	0.4
77VLF-104-01	3/4"	0.75	1.90	3.63	1.91	3.86	0.9
77VLF-105-01	1"	1.00	2.20	3.88	2.11	3.86	1.2
77VLF-106-01	1-1/4"	1.25	2.23	4.22	2.44	4.75	2.3
77VLF-107-01	1-1/2"	1.50	2.84	5.45	2.91	5.42	3.4
77VLF-108-01	2"	2.00	3.40	6.57	3.69	7.77	6.0
77VLF-109-01	2-1/2"	2.50	4.26	8.04	4.13	7.77	12.0
77VLF-100-01	3"	3.00	5.10	9.45	5.03	9.92	19.5
77VLF-14A-01	4"	4.00	5.20	10.35	5.70	14.78	26.0



94VLF-A SERIES
APOLLOPRESS® LEAD FREE BALL VALVE



The CONBRACO™ INTERNATIONAL 94VLF Series Lead Free two-piece press ball valve is ideal for installation in most plumbing and heating systems, including potable water.

FEATURES

- Lead Free, ANSI 3rd Party Certified
- Full Port Flow
- PTFE Seats and Packing
- Adjustable Stem Packing
- Ridgid® XL Press Tool Compatible
- 2-1/2" - 4" are XLC Compatible
- Corrosion Resistant Materials
- 100% Factory Tested
- 2 Year Warranty
- **-A Model with Shorter Lay Length and Leak Before Press® Technology *NEW!***

APPROVALS

- MSS SP-110 Ball Valves
- NSF/ANSI 61 Water Quality
- NSF/ANSI 372 Lead Free
- IAPMO IGC-157-2013 Ball Valves

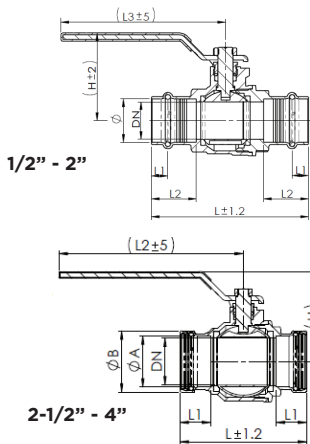
APPROVED APPLICATIONS

- Water (Including Potable Water)
- Hydronic Heating (90% Glycol max)
- Not Suitable for Flammable Gas Service
- Designed for Direct Mechanical Connection to ASTM B88-Type K, L, and M Copper Tubing in the Hard Drawn Condition
- Not Compatible with Soft Annealed Copper Tubing

PERFORMANCE RATING

- Maximum Operating Pressure 250 psig
- Temperature Range: 0°F to 250°F

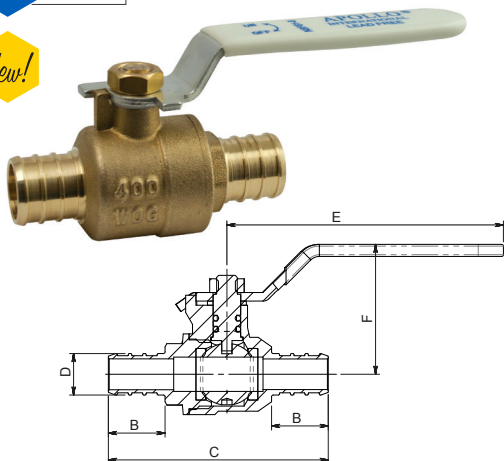
DIMENSIONS



MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.) (MM)									2-1/4" STEM EXTENSION KIT
		DN	Ø	A	B	L	L1	L2	L3	H	
94VLF-103-01A	1/2"	14.5	0.63 (16.1)	-	-	3.41 (86.6)	0.43 (11)	1.1 (28)	3.82 (97)	1.66 (42.2)	78266101
94VLF-104-01A	3/4"	19	0.86 (22.5)	-	-	3.85 (97.9)	0.43 (11)	1.18 (30)	3.82 (97)	1.92 (48.7)	78266201
94VLF-105-01A	1"	25	1.13 (28.8)	-	-	4.13 (105)	0.43 (11)	1.18 (30)	4.41 (112)	2.3 (58.5)	78266301
94VLF-106-01A	1-1/4"	32	1.39 (35.2)	-	-	4.59 (116.5)	0.43 (11)	1.18 (30)	5.2 (132)	2.73 (69.3)	78266401
94VLF-107-01A	1-1/2"	39	1.63 (41.5)	-	-	5.16 (131.1)	0.51 (13)	1.38 (35)	5.2 (132)	2.93 (74.5)	78266501
94VLF-108-01A	2"	50	2.13 (54.2)	-	-	6.00 (152.5)	0.63 (16)	1.57 (40)	6.44 (163.5)	3.46 (88)	78266601
94VLF-109-01A	2-1/2"	61.5	-	2.64 (67)	3.15 (80)	6.5 (165)	1.57 (40)	9.45 (240)	-	4.61 (117)	78266701 (Q2 2018)
94VLF-100-01A	3"	73.5	-	3.13 (79.6)	3.66 (93)	7.38 (187.5)	1.77 (45)	9.45 (240)	-	4.96 (126)	78266801 (Q2 2018)
94VLF-10A-01A	4"	97.5	-	4.14 (105.1)	4.69 (119)	9.21 (234)	2.13 (54)	9.45 (240)	-	5.91 (150)	78266901 (Q2 2018)

* ± tolerances shown apply only to mm, not inches

94XLF SERIES
PEX BALL VALVE



The Apollo International™ 94XLF Lead Free DZR forged brass ball valves combine reliable operation with maximum economy. Ideal for plumbing and heating applications including potable water. Valves are ANSI 3rd party lead free certified and listed to NSF 14, NSF 61 and NSF 372.

FEATURES

- Lead Free DZR Materials and Certification
- ASTM F1807 PEX Design
- Easily Identifiable "Lead Free" White Handle Grip
- Double O-Ring Stem Seal
- Blowout-Proof Stem Design
- Silicone Free Assembly

DIMENSIONS

MODEL NUMBER	SIZE (IN.)	DIMENSIONS (IN.)					WT. (LB.)
		B	C	D	E	F	
94XLF-103-01	1/2	0.65	2.52	.47	3.17	1.49	.25
94XLF-104-01	3/4	0.65	2.62	.67	3.17	1.57	.41
94XLF-105-01	1	0.80	2.91	.86	3.17	1.57	.57



AF-OLLO
S/A USA