



Ball Valves

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Gate Valves

Figure #	Description	Page
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Globe Valves

UP502	300 WOG, Threaded End, Bronze Body and Disc, Threaded Bonnet	UP-34
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Check Valves

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UP1548T	250 WOG, Solder End, Bronze Body, PTFE Disc, Spring Check	UP-42
UP967/968	200 WOG, Threaded End, Brass Body and Disc, Swing Check (UP968 Solder End 1/2"-2")	UP-43
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F-2974A26/ F-2974M26	125 SWP – 200 WOG, Flanged Ends, Iron Body, Bolted Cover, Horizontal Swing	UP-45-46

Butterfly Valves

CL Series	200 WOG, Cast Iron Body, Aluminum Bronze Disc, EPDM Liner (2"-12") with Pre-Assembled Actuation	UP-47-49
CL Series	200 WOG, Cast Iron Body, Aluminum Bronze Disc, EPDM Liner (2"-12")	UP-50
CL Series	150 WOG, Cast Iron Body, Aluminum Bronze Disc, EPDM Liner (14"-24")	UP-51
ML Series	200 WOG, Ductile Iron Body, Aluminum Bronze Disc, EPDM Liner (2"-12")	UP-52
ML Series	150 WOG, Ductile Iron Body, Aluminum Bronze Disc, EPDM Liner (14"-24")	UP-53
HP Series	Stainless Steel Body, Class 150 and 300 (2 1/2"-24")	UP-54-59
Grooved Series	300 psi, Grooved Ends	UP-60-61

Butterball® Slo-Close

UPBBTSCSL	175 psi, Bronze Body, Threaded Ends	UP-62
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Bronze Ball Valve For Potable Water

Two Piece

Standard Port (1" - 3") Full Port (1/4" - 3/4")

600 psig WOG

Threaded Ends

Blow-Out Proof Stem

Dimensions and Workmanship Conform to MSS SP-110

UPBA100/100S 1/4"-3"



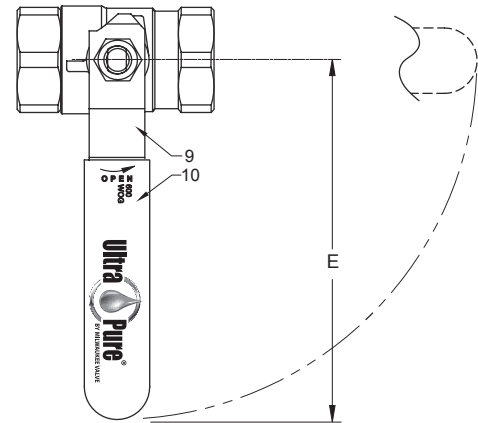
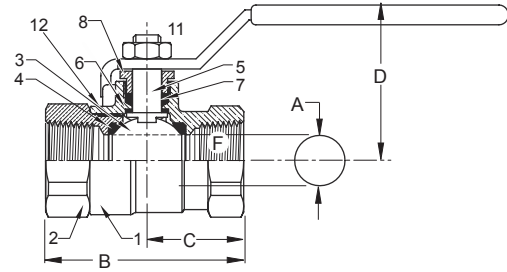
Tested and Certified
by IAPMO R&T to
NSF/ANSI 61 and
NSF/ANSI 372 for
Lead Free Compliance.

MATERIALS LIST

ITEM	PART	MATERIAL	ASTM SPEC
1	Body	Cast Bronze	B584 C89833
2	Tailpiece	Cast Bronze	B584 C89833
3	Ball	Brass w/Hard Chrome Plating	B283 C27450
		316 Stainless Steel ⁽¹⁾	A276 S31600
4	Seat	RPTFE, 15% Glass filled	Commercial
5	Stem	Brass	B21 C46400
		316 Stainless Steel ⁽¹⁾⁽²⁾	A276 S31600
6	Thrust Washer	RPTFE, 25% Glass filled	Commercial
7	Packing	PTFE	Commercial
8	Packing Nut	Brass	B16 C36000
9	Handle	Steel w/Zinc Plating	B633
10	Handle Grip	Vinyl	Commercial
11	Handle Nut	Steel w/Zinc Plating	B633
12	Body Seal	PTFE	Commercial

⁽¹⁾ Ball and stem are stainless for UPBA100S

⁽²⁾ Stem is stainless for 2 1/2" & 3" UPBA100



DIMENSIONS

	UNITS	1/4" DN6	3/8" DN10	1/2" DN15	3/4" DN20	1" DN25	1-1/4" DN32	1-1/2" DN40	2" DN50	2-1/2" DN65	3" DN80
A (DIA)	INCHES	0.38	0.38	0.50	0.76	0.88	1.06	1.31	1.56	2.00	2.31
	mm	10	10	13	19	22	27	33	40	51	59
B	INCHES	1.86	1.86	2.19	2.59	3.17	3.50	3.96	4.30	5.58	6.17
	mm	46	46	54	66	78	86	97	105	142	157
C	INCHES	1.00	1.00	1.10	1.30	1.58	1.74	1.97	2.15	2.79	3.10
	mm	25	25	27	32	39	43	48	53	71	79
D	INCHES	1.78	1.81	1.91	2.08	2.25	2.66	2.84	3.00	3.44	3.84
	mm	44	44	47	51	55	65	70	74	87	98
E	INCHES	3.81	3.81	3.81	4.56	4.56	6.31	6.31	7.19	7.19	7.19
	mm	93	93	93	112	112	155	155	176	176	176
F	THREAD SIZE	1/4" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT	1-1/4" NPT	1-1/2" NPT	2" NPT	2-1/2" NPT	3" NPT
Cv		7	7	13	30	38	61	87	121	228	305

Note: DN (Diameter Nominal) = Metric equivalent size.

* 2-1/2" & 3" Only.

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content ≤0.25%. Source: California Health and Safety Code (116875).

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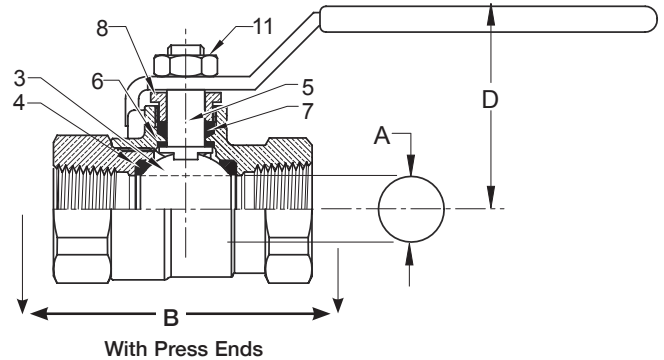
UPBA100/100S* P2 1/2"-3"

Bronze Ball Valve For Potable Water
Two Piece
Standard Port (1" - 3") Full Port (1/2" - 3/4")
200 psig @ 250°F†
Press x Press Ends
Press x Threaded Ends Available (Consult Factory)
Blow-Out Proof Stem
Dimensions and Workmanship Conform to MSS SP-110

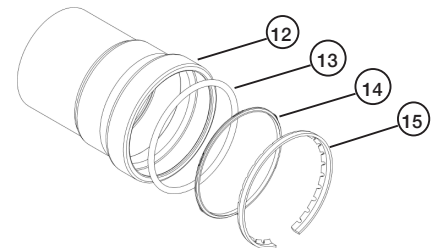
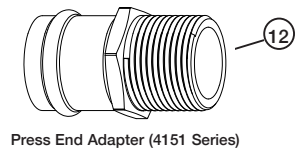
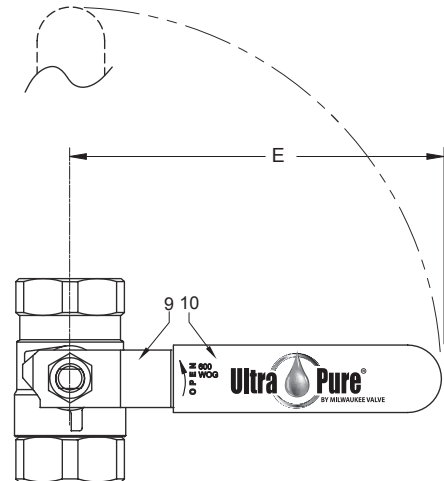
MATERIAL LIST

ITEM	PART	MATERIAL	ASTM SPEC
1	Body	Cast Bronze	B584 C89833
2	Tailpiece	Cast Bronze	B584 C89833
3	Ball	Brass w/Hard Chrome Plating	B283 C27450
		316 Stainless Steel (1)	A276 S31600
4	Seat	RPTFE, 15% Glass filled	
5	Stem	Brass	B21 C46400 H02
		316 Stainless Steel (1)	A276 S31600
6	Thrust Washer	RPTFE, 25% Glass Filled	
7	Packing	PTFE	
8	Packing Nut	Brass	B16 C36000
9	Handle	Steel w/Zinc Plating	Commercial
10	Handle Grip	Vinyl	Commercial
11	Handle Nut	Steel w/Zinc Plating	Commercial
12	Press Adapters	Brass Fitting w/EPDM O-Ring (1/2" - 2")	B283 C27450
		Copper (2 1/2" - 3")	B88
13	O-Ring	EPDM	
14	Backing Seal	Acetal	
15	Backing Ring	304 Stainless Steel	A276

(1) Ball and stem are stainless for BA100S P2



Note: 2 1/2" & 3" are built from UPBA150/150S



DIMENSIONS

	UNITS	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
		DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80
A (DIA)	INCHES	0.50	0.76	0.88	1.07	1.32	1.57	2.00	2.31
	mm	13	19	22	27	33	40	51	59
STD Insertion	INCHES	0.87	0.98	0.98	1.02	1.42	1.58	1.80	2.10
	mm	22	25	25	26	36	40	46	53
B	INCHES	5.19	6.17	7.17	7.57	8.44	10.30	12.02	13.94
	mm	132	157	182	192	214	262	305	354
D	INCHES	1.91	2.32	2.68	2.82	3.00	3.36	3.47	3.88
	mm	47	59	68	72	76	85	88	99
E	INCHES	3.82	4.55	4.56	6.33	6.33	7.19	7.19	7.19
	mm	94	116	116	161	161	183	183	183

Note: DN (Diameter Nominal)=Metric equivalent size.

†Non-Shock

*Both the valve and 4151 series press end adapters are tested and certified by IAPMO R & T to NSF/ANSI 61 and NSF/ANSI 372 for "Lead Free" compliance.

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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UPBA100H/UPBA150H 1/2" & 3/4"

Bronze Ball Valve For Potable Water
Two Piece
Full Port
600 WOG
Threaded x 3/4" Hose End (UPBA100H)
Solder x 3/4" Hose End (UPBA150H)
Dust Cap and Chain
Blow-Out Proof Stem



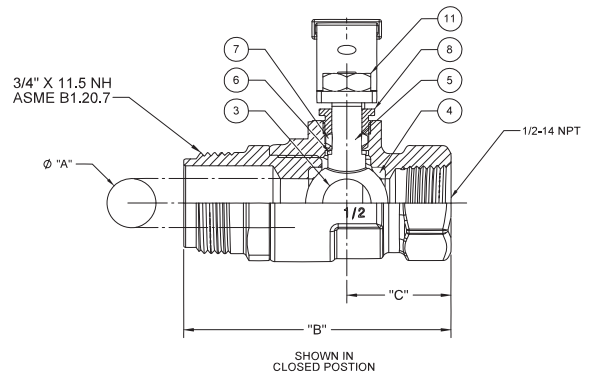
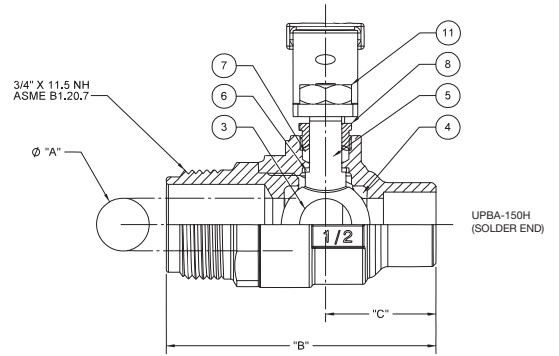
Dimensions and Workmanship Conform to MSS SP-110

MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Cast Bronze	B584 C89833
2	Tailpiece	Brass	B283 C27450
3	Ball	Brass, Chrome Plated	B283 C27450
4	Seat	PTFE (1/2") RPTFE, 25% Glass Filled (3/4")	Commercial
5	Stem	Brass	B21 C6400, H02
6	Thrust Washer	RPTFE, 25% Glass Filled	Commercial
7	Packing	PTFE	Commercial
8	Packing Nut	Brass	B16 C36000
9	Handle	Steel, Zinc Plated	Commercial
10	Handle Grip	Vinyl	Commercial
11	Handle Nut	Steel, Zinc Plated	Commercial
12	Dust Cap	Polypropylene	Commercial
13	Gasket	EDPM	Commercial
14	Chain	Brass Bead	Commercial

Do not pressurize cap.
Pressure not to exceed 40 psi.

Note: Pressure/Temperature rating shown are for VALVE ONLY. Hose side pressure and temperature limit is based on connected hose and is users responsibility



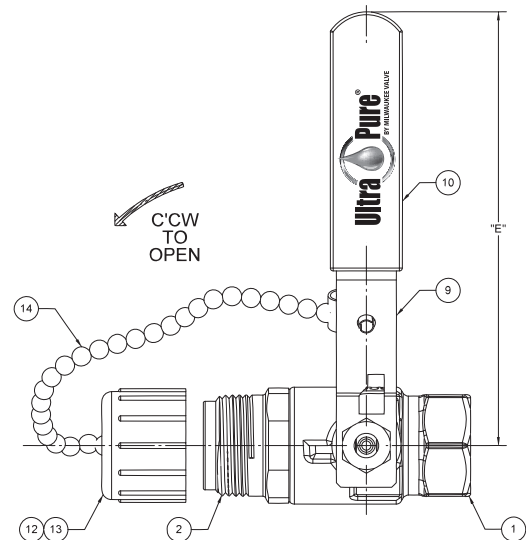
DIMENSIONS

	UNITS	1/2"	3/4"
		DN15	DN20
ØA	INCHES	0.50	0.76
	mm	13	19
B (BA-100)	INCHES	2.70	2.90
	mm	69	74
B' (BA-150)	INCHES	2.55	3.05
	mm	65	78
C (BA-100)	INCHES	1.10	1.30
	mm	28	33
C' (BA-150)	INCHES	1.10	1.45
	mm	28	37
D	INCHES	1.88	2.14
	mm	48	54
E	INCHES	3.81	4.62
	mm	97	117
F	THREADED INLET	NPT	NPT
Cv		13	30

Note: DN (Diameter Nominal) = Metric equivalent size.

Same design as UP8501H/8511H

†Non-Shock



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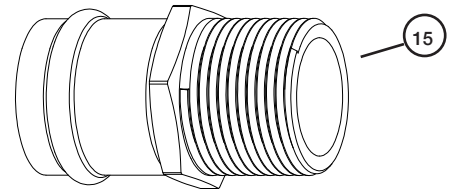
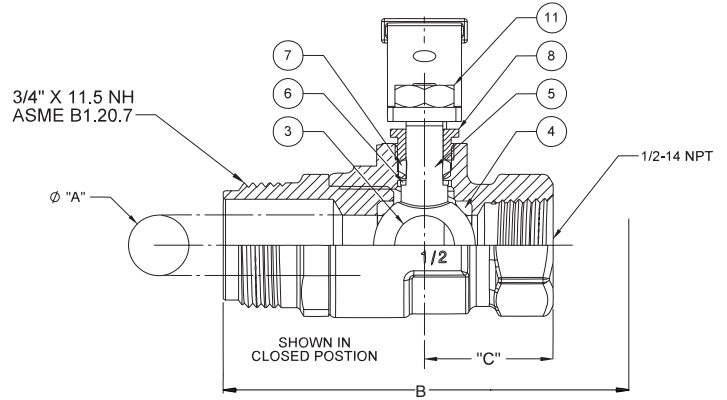


Bronze Ball Valve For Potable Water
Two Piece
Full Port
200 psig @ 250°F†
Press x 3/4" Hose End
Dust Cap and Chain
Blow-Out Proof Stem

Dimensions and Workmanship Conform to MSS SP-110

MATERIAL LIST

ITEM	PART	MATERIAL	ASTM SPEC
1	Body	Cast Bronze	B548 C27450
2	Tailpiece	Brass	B283 C27450
3	Ball	Brass, Chrome Plated	B283 C27450
4	Seat	PRFE (1/2") RPTFE, 15% Glass filled (3/4")	Commercial
5	Stem	Brass	C46400 H02
6	Thrust Washer	RPTFE, 25% Glass Filled	Commercial
7	Packing	PTFE	Commercial
8	Packing Nut	Brass	B16 C36000
9	Handle	Steel, Zinc Plated	Commercial
10	Handle Grip	Vinyl	Commercial
11	Handle Nut	Steel, Zinc Plated	Commercial
12	Dust Cap	Polypropylene	Commercial
13	Gasket	EDPM	Commercial
14	Chain	Brass Bead	Commercial
15	Press Adapter	Brass Fitting w/EPDM O-Ring	B283 C27450



Press End Adapter (4151 Series)

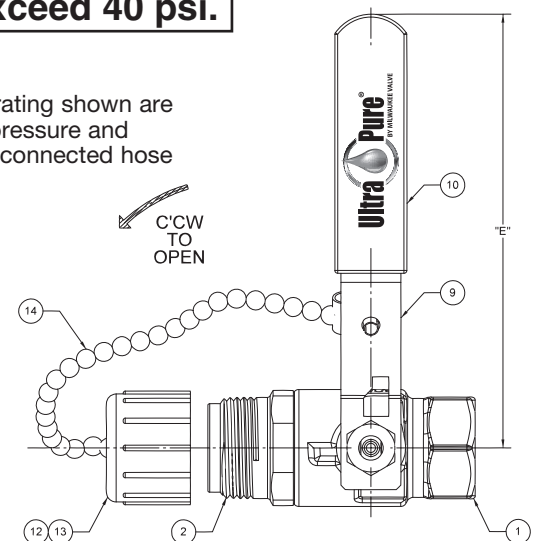
DIMENSIONS

	UNITS	1/2"	3/4"
		DN15	DN20
A	INCHES mm	0.50 13	.76 19
B	INCHES mm	2.70 69	2.90 74
STD INSERTION DEPTH	INCHES mm	.87 22	.98 25
C	INCHES mm	1.10 28	1.30 33
D	INCHES mm	1.88 48	2.14 54
E	INCHES mm	3.81 97	4.62 117
F	THREAD INLET	NPT	NPT
Cv		13	30

Note: DN (Diameter Nominal) = Metric equivalent size.
 †Non-Shock

Do not pressurize cap.
Pressure not to exceed 40 psi.

Note: Pressure/Temperature rating shown are for VALVE ONLY. Hose side pressure and temperature limit is based on connected hose and is users responsibility



*Both the valve and 4151 series press end adapters are tested and certified by IAPMO R & T to NSF/ANSI 61 and NSF/ANSI 372 for "Lead Free" compliance.

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content ≤0.25%. Source: California Health and Safety Code (116875).

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UPBA150/150S 3/8"-3"



Bronze Ball Valve For Potable Water
Two Piece
Standard Port (1" - 3") Full Port (3/8" - 3/4")
600 psig WOG
Solder Ends
Blow-Out Proof Stem

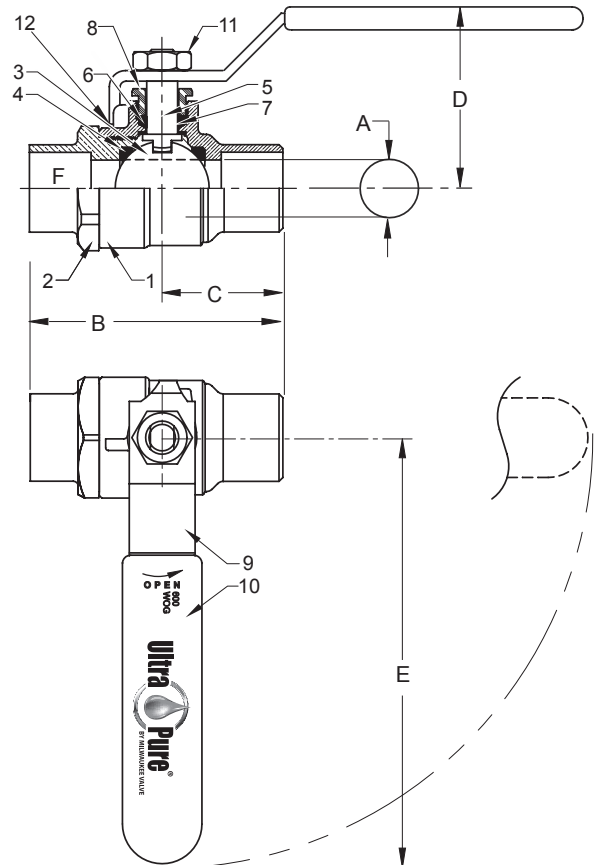
Dimensions and Workmanship Conform to MSS SP-110

MATERIAL LIST

ITEM	PART	MATERIAL	ASTM SPEC
1	Body	Cast Bronze	B584 C89833
2	Tailpiece	Cast Bronze	B584 C89833
3	Ball	Brass w/Hard Chrome Plating	B283 C27450
		316 Stainless Steel (1)	A276 S31600
4	Seat	RPTFE, 15% Glass filled	
5	Stem	Brass	B21 C46400
		316 Stainless Steel (1)(2)	A276 S31600
6	Thrust Washer	RPTFE, 25% Glass Filled	Commercial
7	Packing	PTFE	Commercial
8	Packing Nut	Brass	B16 C36000
9	Handle	Steel w/Zinc Plating	Commercial
10	Handle Grip	Vinyl	Commercial
11	Handle Nut	Steel w/Zinc Plating	Commercial
12*	Body Seal	PTFE	Commercial

(1) Ball and stem are stainless for UPBA150S

(2) Ball and stem are stainless for 2 1/2" & 3" UPBA150



DIMENSIONS

	UNITS	3/8" DN10	1/2" DN15	3/4" DN20	1" DN25	1-1/4" DN32	1-1/2" DN40	2" DN50	2-1/2" DN65	3" DN80
A (DIA)	INCHES	0.38	0.50	0.76	0.88	1.06	1.31	1.56	2.00	2.31
	mm	10	13	19	22	27	33	40	51	59
B	INCHES	2.17	2.39	3.17	3.71	4.54	5.00	6.25	7.34	8.16
	mm	55	61	81	91	111	123	153	180	200
C	INCHES	0.90	1.07	1.50	1.76	2.27	2.50	3.13	3.67	4.07
	mm	22	26	38	43	56	61	77	90	100
D	INCHES	1.81	1.91	2.08	2.25	2.66	2.84	3.00	3.44	3.90
	mm	44	47	51	55	65	70	74	87	99
E	INCHES	3.81	3.81	4.56	4.56	6.31	6.31	7.19	7.19	7.19
	mm	97	97	116	116	160	160	183	183	183
F	TUBE SIZEØ	0.51	0.63	0.88	1.13	1.38	1.63	2.13	2.63	3.13
Cv		7	13	35	38	61	87	121	196	231

Note: DN (Diameter Nominal) = Metric equivalent size.

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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**Bronze Ball Valve For Potable Water
Three Piece
Full Port
600 psig WOG
Threaded Ends
Blow-Out Proof Stem**

UPBA300/300S 1/4"-3"

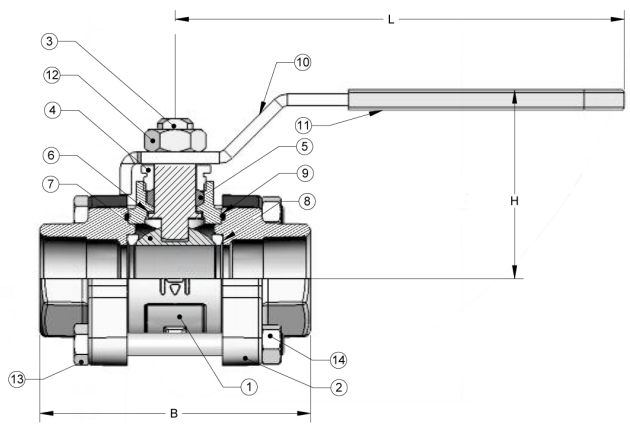
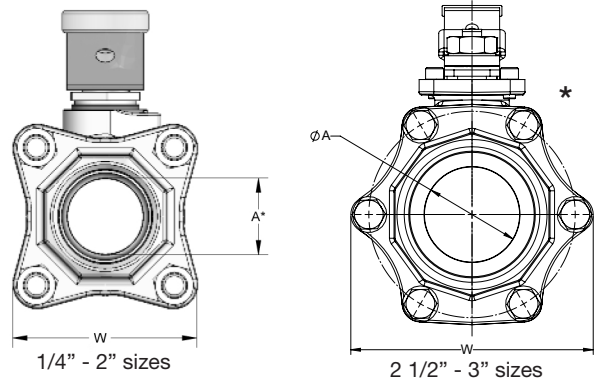
Dimensions and Workmanship Conform to MSS SP-110



MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Cast Bronze	B584 C89833
2	End Cap	Cast Bronze	B584 C89833
3	Stem	Brass	B21 C46400, H02
		316 Stainless Steel (1)	A276
4	Packing Nut	Brass	B16
5	Packing	PTFE	Commercial
6	Thrust Washer	RPTFE, 25% Glass Reinforced	Commercial
7	Ball	Brass w/Hard Chrome Plating	B283 C27450
		316 Stainless Steel (1)	A276
8	Seat	RPTFE, 15% Glass Filled	Commercial
9	O-Ring	Viton	Commercial
10	Handle	Steel w/Zinc Plating	Commercial
11	Handle Grip	Vinyl	Commercial
12	Handle Nut	Steel w/Zinc Plating	Commercial
13	Bolt	Steel w/Zinc Plating	Commercial
14	Nut	Steel w/Zinc Plating	Commercial

(1) Ball and stem are stainless for UPBA300S



DIMENSIONS

	UNITS	1/4" DN6	3/8" DN10	1/2" DN15	3/4" DN20	1" DN25	1-1/4" DN32	1-1/2" DN40	2" DN50	2-1/2" DN 65	3" * DN 80
A	INCHES	0.38	0.45	0.50	0.75	1.00	1.25	1.50	2.00	2.50	2.50
	mm	10	11	13	19	25	32	38	51	64	64
B	INCHES	2.68	2.68	3.03	3.56	3.82	4.86	5.06	5.90	6.84	6.84
	mm	68	68	77	90	97	123	129	150	174	174
H	INCHES	1.85	1.85	1.85	2.20	2.65	2.79	2.97	3.47	5.44	5.44
	mm	47	47	47	56	67	71	75	88	138	138
L	INCHES	4.03	4.03	4.06	4.58	6.30	6.32	7.20	7.20	8.00	8.00
	mm	102	102	103	116	160	161	183	183	203	203
W	INCHES	1.95	1.95	1.95	2.19	2.48	3.00	3.13	3.78	6.25	6.25
	mm	50	50	50	56	63	76	80	96	159	159
F	THREAD SIZE	1/4" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT	1-1/4" NPT	1-1/2" NPT	2" NPT	2-1/2" NPT	3" NPT
Cv		7	7	17	31	60	110	185	360	390	390

Note: DN (Diameter Nominal) = Metric equivalent size.

* 3" is Standard Port.

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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Bronze Ball Valve For Potable Water
Three Piece
Full Port
200 psig @ 250°F†
Press x Press Ends
Blow-Out Proof Stem

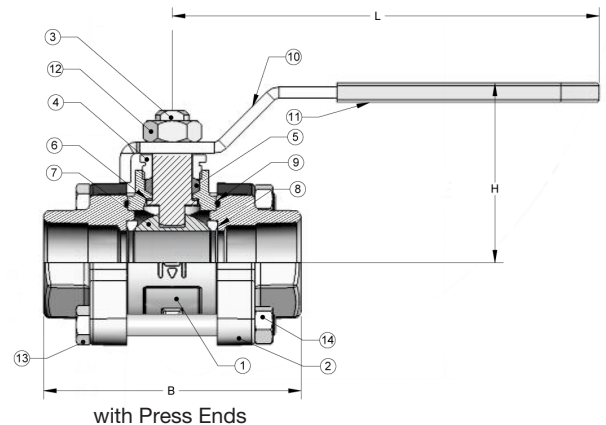
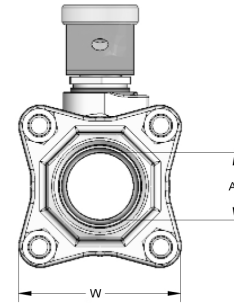
UPBA300/300S P2* 1/2"-2"

Dimensions and Workmanship Conform to MSS SP-110

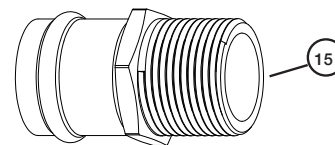
MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Cast Bronze	B584 C89833
2	End Cap	Cast Bronze	B584 C89833
3	Stem	Brass	B21 C46400, H02
		316 Stainless Steel (1)	A276 S31600
4	Packing Nut	Brass	B16 C363000
5	Packing	PTFE	Commercial
6	Thrust Washer	RPTFE, 25% Glass Reinforced	Commercial
7	Ball	Brass w/Hard Chrome Plating	B283 C27450
		316 Stainless Steel (1)	A276 S31600
8	Seat	RPTFE, 15% Glass Filled	Commercial
9	O-Ring	Viton	Commercial
10	Handle	Steel w/Zinc Plating	Commercial
11	Handle Grip	Vinyl	Commercial
12	Handle Nut	Steel w/Zinc Plating	Commercial
13	Bolt	Steel w/Zinc Plating	Commercial
14	Nut	Steel w/Zinc Plating	Commercial
15	Press Adaptor	Brass Fitting w/EPDM O-Ring	B283 C27450

(1) Ball and stem are stainless for UPBA300S



with Press Ends



Press End Adapter.

DIMENSIONS

	UNITS	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
		DN15	DN20	DN25	DN32	DN40	DN50
A	INCHES	0.50	0.75	1.00	1.25	1.50	2.00
	mm	13	19	25	32	38	51
STD INSERTION DEPTH	INCHES	0.87	0.98	0.98	1.02	1.42	1.58
	mm	22	25	25	26	36	40
B	INCHES	6.03	7.14	7.82	8.93	9.54	11.90
	mm	153	181	199	227	242	302
H	INCHES	1.85	2.20	2.65	2.79	2.97	3.47
	mm	47	56	67	71	75	88
L	INCHES	4.06	4.58	6.30	6.32	7.20	7.20
	mm	103	116	160	161	183	183
W	INCHES	1.95	2.19	2.48	3.00	3.13	3.78
	mm	50	56	63	76	80	96
F	THREAD SIZE	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
		NPT	NPT	NPT	NPT	NPT	NPT
Cv	INCHES	17	31	60	110	185	360

Note: DN (Diameter Nominal) = Metric equivalent size.

†Non-Shock

*Both the valve and 4151 series press end adapters are tested and certified by IAPMO R & T to NSF/ANSI 61 and NSF/ANSI 372 for "Lead Free" compliance.

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content ≤0.25%. Source: California Health and Safety Code (116875).

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UPBA350/350S 3/8"-3"



Bronze Ball Valve For Potable Water
Three Piece
Full Port
600 psig WOG
Solder Ends
Blow-Out Proof Stem

Dimensions and Workmanship Conform to MSS SP-110

MATERIALS LIST

ITEM	PART	MODEL/SIZE	MATERIALS	ASTM SPEC.
1	Body	UPBA350 & UPBA350S	Cast Bronze	B584 C89833
2	Tailpiece	UPBA350 & UPBA350S	Cast Bronze	B584 C89833
3	Ball	UPBA350	Brass w/Hard Chrome Plating	B283 C27450
		UPBA350S	316 Stainless Steel	A276 S31630
4	Stem	UPBA350	Brass	B21 C46400, H02
		UPBA350S	316 Stainless Steel	A276 S31630
5	O-Ring	UPBA350 & UPBA350S	Viton	Commercial
6	Seat	UPBA350 & UPBA350S	15 % Glass RPTFE	Commercial
7	Thrust, Washer	UPBA350 & UPBA350S	25% Glass RPTFE	Commercial
8	Packing Male	2- 1/2"-3"	PTFE	Commercial
	Packing	3/8"-2"	PTFE	Commercial
9	Packing, "V"	UPBA350 & UPBA350S	PTFE	Commercial
10	Packing, Female	UPBA350 & UPBA350S	PTFE	Commercial
11	Packing Follower	UPBA350 & UPBA350S	Brass	B16 C36000
12	Hex Jam Nut	UPBA350 & UPBA350S	Stainless Steel	Commercial
13	Nut Locker	UPBA350 & UPBA350S	Stainless Steel TYP. 301/302	Commercial
14	Washer, Internal Tooth	UPBA350 & UPBA350S	Stainless Steel	Commercial
15	Belleville, Washer	UPBA350 & UPBA350S	Stainless Steel 17-7 PH	Commercial
16	Hex Head Cap Screw	UPBA350 & UPBA350S	Steel	SAE, Grade 8
17	Socket Head Cap Screw	2-1/2"-3"	Carbon Steel	Commercial
18	Handle Assy	UPBA350 & UPBA350S		
19	Gland Nut	3/8"-2"	Brass	B16 C36000
20	Hex Nut	3/8"-2"	Steel	SAE 5140

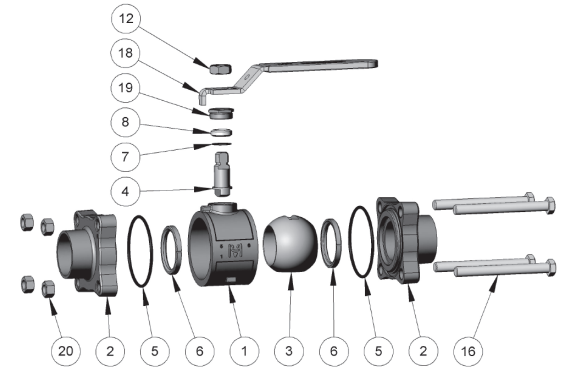
(1) Ball and stem are stainless for UPBA350S

DIMENSIONS

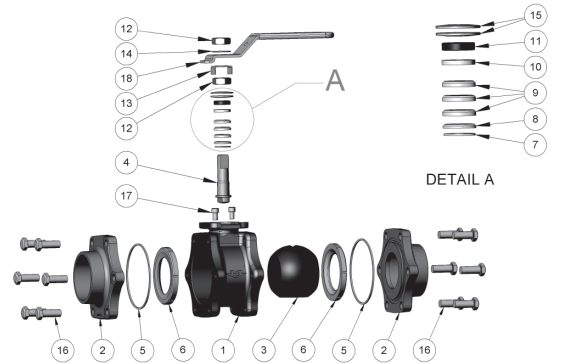
UNITS	3/8" DN10	1/2" DN15	3/4" DN20	1" DN25	1-1/4" DN32	1-1/2" DN40	2" DN50	2-1/2" DN65	3" DN80
A	INCHES	2.68	3.02	3.56	3.81	4.66	5.00	5.70	7.01
	mm	68	77	90	97	118	127	145	178
B	INCHES	0.44	0.51	0.76	0.92	0.98	1.10	1.35	1.48
	mm	11	13	19	23	25	28	34	38
C	INCHES	1.85	1.85	2.20	2.65	2.79	2.97	3.47	5.44
	mm	47	47	56	67	71	75	88	138
D	INCHES	0.45	0.50	0.75	1.00	1.25	1.50	2.00	2.50
	mm	11	13	19	25	32	38	51	64
E	INCHES	1.32	1.32	2.13	2.41	2.94	3.13	3.86	5.74
	mm	34	34	54	61	75	80	98	146
F	INCHES	3.80	3.80	4.55	6.32	6.32	6.32	7.20	8.10
	mm	96	96	116	160	160	160	183	206
G	INCHES	1.92	1.92	2.13	2.41	2.94	3.13	3.86	6.31
	mm	49	49	54	61	75	80	98	160
Cv		7	17	31	60	110	185	360	390

*3" is standard Port.

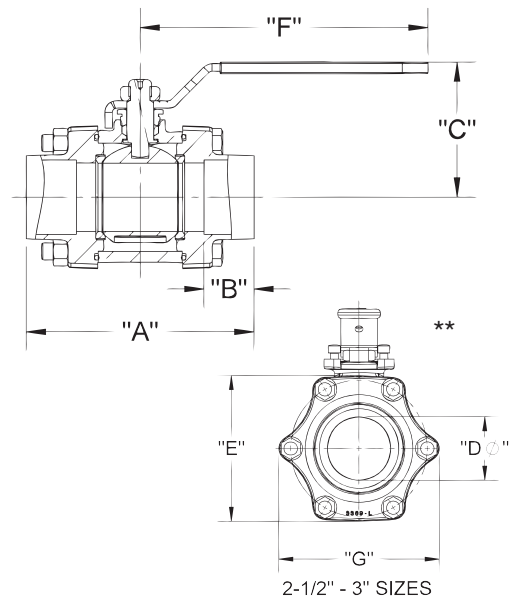
**2-1/2" & 3" Only.



3/8" THRU 2"



2-1/2" THRU 3"



2-1/2" - 3" SIZES

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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Bronze Ball Valve For Potable Water
Two Piece
Full Port
600 psig WOG
Threaded Ends
Blow-Out Proof Stem

UPBA400/400S 1/4"-2"

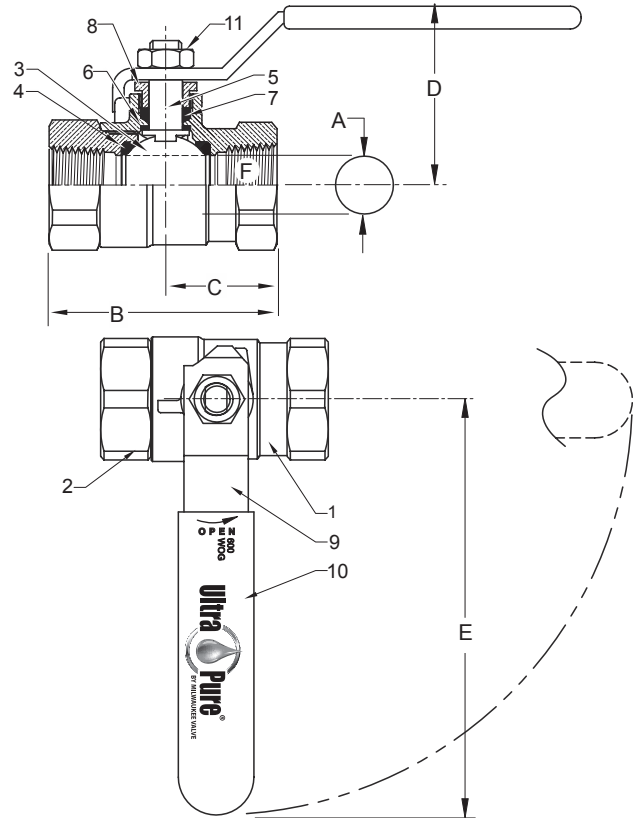
Dimensions and Workmanship Conform to MSS SP-110



MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Cast Bronze	B584 C89833
2	Tailpiece	Cast Bronze	B584 C89833
3	Ball	Brass w/Hard Chrome Plating	B283 C27450
		316 Stainless Steel (1)	A276 S31600
4	Seat	RPTFE, 15% Glass Filled	Commercial
5	Stem	Brass	B21 C46400, H02
		316 Stainless Steel (1)	A276 S31600
6	Thrust Washer	RPTFE, 25% Glass Filled	Commercial
7	Packing	PTFE	Commercial
8	Packing Nut	Brass	B16 C36000
9	Handle	Steel w/Zinc Plating	Commercial
10	Hand Grip	Vinyl	Commercial
11	Handle Nut	Steel w/Zinc Plating	Commercial

(1) Ball and stem are stainless for UPBA400S



DIMENSIONS

	UNITS	1/4" DN10	3/8" DN10	1/2" DN15	3/4" DN20	1" DN25	1-1/4" DN32	1-1/2" DN40	2" DN50
A (DIA)	INCHES	0.38	0.38	0.50	0.76	1.06	1.31	1.56	2.00
	mm	10	10	13	19	27	33	40	51
B	INCHES	1.86	1.86	2.19	2.59	3.32	3.77	4.28	5.10
	mm	46	46	54	66	84	96	109	130
C	INCHES	1.00	1.00	1.10	1.30	1.59	1.81	2.06	2.37
	mm	25	25	27	33	40	46	52	60
D	INCHES	1.78	1.81	1.91	2.32	2.68	2.82	3.00	3.36
	mm	44	44	47	59	68	72	76	85
E	INCHES	3.82	3.82	3.82	4.55	6.33	6.33	6.33	7.19
	mm	94	94	94	116	161	161	161	183
F	THREAD SIZE	1/4" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT	1-1/4" NPT	1-1/2" NPT	2" NPT
Cv		7	7	13	30	61	110	185	360

Note: DN (Diameter Nominal) = Metric equivalent size.

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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Bronze Ball Valve For Potable Water
Two Piece
Full Port
200 psig @ 250°F†
Press x Press Ends
Blow-Out Proof Stem

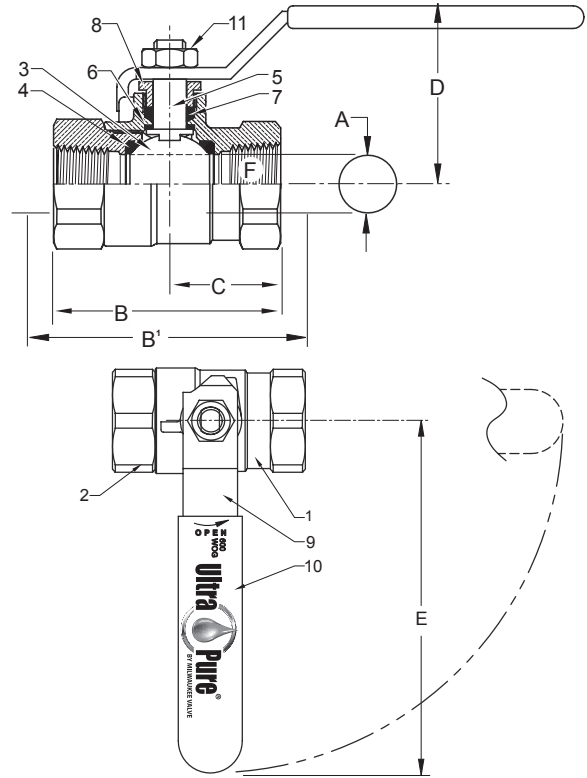
UPBA400/400S* P2 1/2"-2"

Dimensions and Workmanship Conform to MSS SP-110

MATERIAL LIST

ITEM	PART	MATERIAL	ASTM SPEC
1	Body	Cast Bronze	B584 C89833
2	Tailpiece	Cast Bronze	B584 C89833
3	Ball	Brass w/Hard Chrome Plating	B283 C27450
		316 Stainless Steel (1)	A276 S31600
4	Seat	RPTFE, 15% Glass Filled	Commercial
5	Stem	Brass	B21 C46400
		316 Stainless Steel (1)	A276 S31600
6	Thrust Washer	RPTFE, 25% Glass Filled	Commercial
7	Packing	PTFE	Commercial
8	Packing Nut	Brass	B16 C36000
9	Handle	Steel w/Zinc Plating	Commercial
10	Handle Grip	Vinyl	Commercial
11	Handle Nut	Steel w/Zinc Plating	Commercial
12	Press Adapters	Brass Fitting w/EPDM O-Ring	B283 C27450

(1) Ball and stem are stainless for UPBA400S



DIMENSIONS

	UNITS	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
		DN15	DN20	DN25	DN32	DN40	DN50
A (DIA)	INCHES	0.50	0.76	1.06	1.31	1.56	2.00
	mm	13	19	27	33	40	51
STD INSERTION DEPTH	INCHES	0.87	0.98	0.98	1.02	1.42	1.58
	mm	22	25	25	26	36	40
B	INCHES	2.19	2.59	3.32	3.77	4.28	5.10
	mm	54	66	84	96	109	130
B1	INCHES	5.19	6.17	7.32	7.84	8.76	11.10
	mm	132	157	186	199	228	282
C	INCHES	1.10	1.30	1.59	1.81	2.06	2.37
	mm	27	33	40	46	52	60
D	INCHES	1.91	2.32	2.68	2.82	3.00	3.36
	mm	47	59	68	72	76	85
E	INCHES	3.82	4.55	6.33	6.33	6.33	7.19
	mm	94	116	161	161	161	183
F	THREAD SIZE	1/2" NPT	3/4" NPT	1" NPT	1-1/4" NPT	1-1/2" NPT	2" NPT
Cv		13	30	61	110	185	360

Note: DN (Diameter Nominal) = Metric equivalent size.

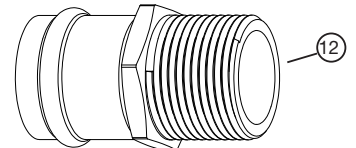
†Non-Shock

*Both the valve and 4151 series press end adapters are tested and certified by IAPMO R & T to NSF/ANSI 61 and NSF/ANSI 372 for "Lead Free" compliance.

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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Press End Adapter.

Available with Press x Threaded Ends (Order UPBA400P1/UPBA400SP1)





Bronze Ball Valve For Potable Water
Two Piece
Full Port
600 psig WOG
Solder Ends

UPBA450/450S 3/8"-2"

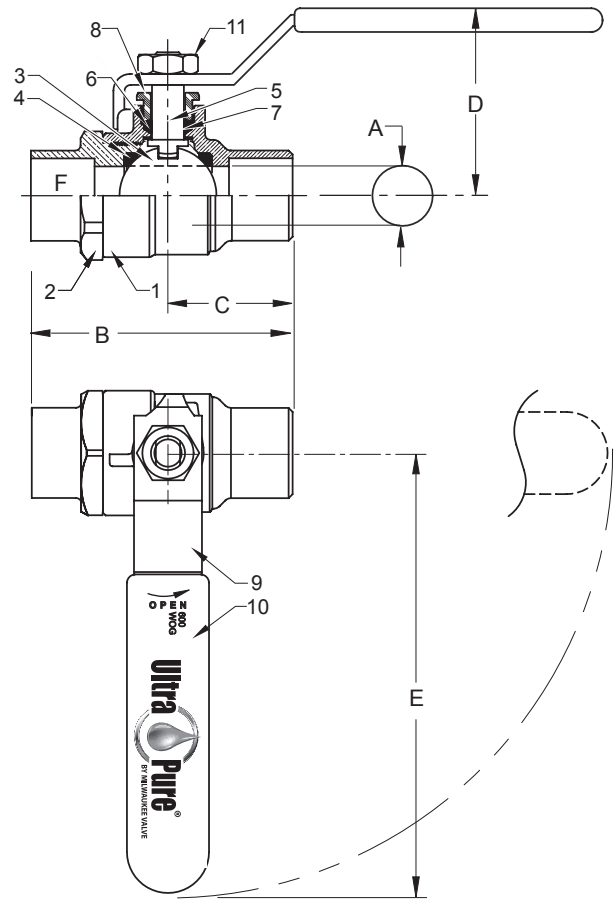


Blow-Out Proof Stem
Dimensions and Workmanship Conform to MSS SP-110

MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Cast Bronze	B584 C89833
2	Tailpiece	Cast Bronze	B584 C89833
3	Ball	Brass w/Hard Chrome Plating	B283 C27450
		316 Stainless Steel (1)	A276 S31600
4	Seat	RPTFE, 15% Glass Filled	Commercial
5	Stem	Brass	B21 C46400
		316 Stainless Steel (1)	A276 S31600
6	Thrust Washer	RPTFE, 25% Glass Filled	Commercial
7	Packing	PTFE	Commercial
8	Packing Nut	Brass	B16 C36000
9	Handle	Steel w/Zinc Plating	Commercial
10	Handle Grip	Vinyl	Commercial
11	Handle Nut	Steel w/Zinc Plating	Commercial

(1) Ball and stem are stainless for UPBA450S



DIMENSIONS

	UNITS	3/8" DN15	1/2" DN15	3/4" DN20	1" DN25	1-1/4" DN32	1-1/2" DN40	2" DN50
A (DIA)	INCHES	0.38	0.50	0.76	1.06	1.31	1.56	2.00
	mm	10	13	19	27	32	40	51
B	INCHES	2.17	2.39	3.17	3.75	5.00	6.00	6.75
	mm	55	61	81	95	127	152	172
C	INCHES	.90	1.07	1.50	1.79	2.49	3.00	3.37
	mm	22	27	38	46	63	76	86
D	INCHES	1.81	1.87	2.19	2.67	2.82	2.99	3.51
	mm	44	46	56	68	72	76	89
E	INCHES	3.81	3.80	4.56	6.31	6.31	6.31	7.19
	mm	97	97	116	160	160	160	183
F	TUBE SIZEØ	0.51	0.63	0.88	1.13	1.38	1.63	2.13
Cv		7	15	35	60	110	185	360

Note: DN (Diameter Nominal) = Metric equivalent size.

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Brass Ball Valve For Potable Water
Two Piece
Full Port
600 psig WOG (1/4" - 2")
400 psig WOG (2 1/2" - 3")
Threaded Ends
Blow-Out Proof Stem

UPBA-475B 1/4"-3"



Dimensions and Workmanship Conform to MSS SP-110,

Also Available UPBA475B-LL
**** Additional body/tailpiece seal for 2 1/2" & 3" sizes only (Not Pictured).**

MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Brass, Forged	B283 C27450
2	Tailpiece	Brass, Forged	B283 C27450
3	Ball	Brass w/Chrome Plating	B283 C27450
4	Ball Seat	PTFE	Commercial
5	Stem	Brass	B124 C27450
6	O-Ring	Buna-N	D2006
7	Thrust Washer	PTFE	Commercial
8	Gland Nut	Brass	B16 C36000
9	Packing	PTFE	Commercial
10	Handle	Zinc Plated Steel	Commercial
11	Handle Nut	Zinc Plated Steel	Commercial
12	Seal	PTFE (2 1/2" & 3")**	Commercial

CSA Listed (1/2" - 2")

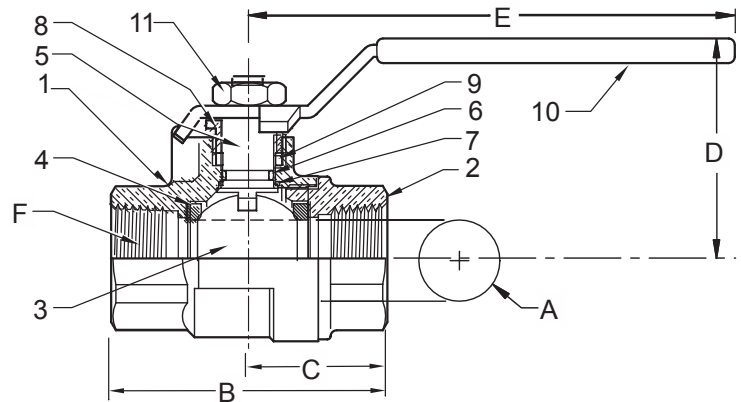
- Class 3371-08: ANSI Z21.15/CSA 9.1, 1/2 psi
- Class 3371-12: CGA CR91-002, 5 psi
- Class 3371-88: ANSI Z21.15/CSA 9.1, 1/2 psi
- Class 3371-92: ASME B16.44, 5 psi

UL Listed (1/4" - 2")

- UL 842 (YRPV) Gas Shutoff
- UL 842 (MHKZ) Manual Valves
- UL 125 (YSDT) LP-Gas Shutoff
- UL 1477 (YQNZ) Compressed Gas Shutoff
- UL 258 (VQGU) Trim and Drain Valves

FM Approved (1/4" - 2")

- FM 1140, 600 psi



DIMENSIONS

	UNITS	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
A	INCHES	0.39	0.39	0.51	0.76	1.00	1.26	1.50	2.00	2.48	2.95
	mm	10	10	13	19	25	32	38	51	63	75
B	INCHES	1.87	1.87	2.25	2.62	3.06	3.50	3.75	4.38	5.16	6.00
	mm	47	47	57	67	78	89	95	111	131	152
C	INCHES	0.95	0.95	1.12	1.31	1.52	1.73	1.87	2.19	2.58	3.00
	mm	24	24	28	33	39	44	47	56	66	76
D	INCHES	1.42	1.42	1.46	1.93	2.10	2.33	2.52	2.96	3.94	4.37
	mm	36	36	37	49	53	59	64	75	100	111
E	INCHES	3.27	3.27	3.27	4.45	4.45	5.24	5.24	7.01	7.87	7.87
	mm	83	83	83	113	113	133	133	178	200	200
F	THREAD SIZE	1/4" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT	1-1/4" NPT	1-1/2" NPT	2" NPT	2-1/2" NPT	3" NPT
Cv		12	12	18	40	72	112	161	287	307	323

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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 ⚠ State of California Prop 65 **WARNING:** Cancer and Reproductive Harm. For more information visit www.p65warnings.ca.gov.





UPBA-480B* 1/2"-4"***



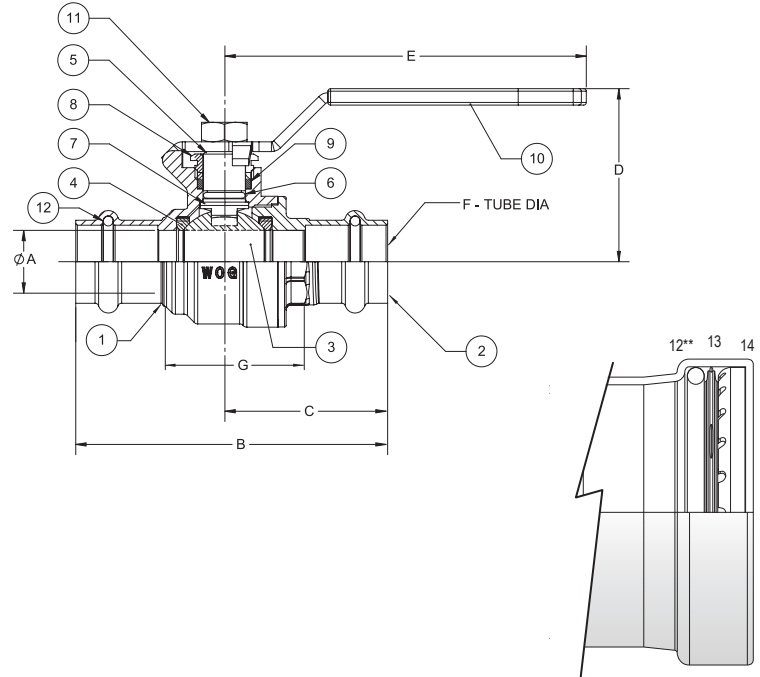
IAPMO R&T: Tested and Certified to NSF/ANSI/CAN Z1157.
 NSF/ANSI/CAN 61
 NSF/ANSI/CAN 372
 NSF/ANSI/CAN Z1157
 1/2" through 3" Only.

Brass Ball Valve For Potable Water
Two Piece Full Port
 250 psig (1/2" - 2") @250°F†
 200 psig (2-1/2" - 4") @250°F†
Press x Press Ends
Blow-Out Proof Stem

† Non-Shock

MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Brass, Forged	B283 C27450
2	Tailpiece	Brass, Forged	B283 C27450
3	Ball	Brass, Chrome Plating	B283 C27450
4	Ball Seat (1/2"-2")	PTFE	Commercial
	Ball Seat (2 1/2"-4")	RPTFE	
5	Stem	Brass, Forged	B283 C27450
6	Stem O-Ring	Buna-N	D2000
7	Thrust Washer	PTFE	Commercial
8	Gland Nut	Brass	B124
9	Packing	PTFE	Commercial
10	Handle	Zinc Plated Steel	Commercial
11	Handle Nut	Zinc Plated Steel	Commercial
12	Backing Ring	EPDM	Commercial
13**	Backing Spacer	PTFE	Commercial
14**	Backing Retainer	Stainless Steel	Commercial



* Ultra Press Valves are designed and qualified for use in copper tubing systems only, Types K, L, & M per ASTM B88

** 2-1/2", 3", & 4" Requires XLC installation jaws.

DIMENSIONS

	UNITS	1/2" DN15	3/4" DN20	1" DN25	1-1/4" DN32	1-1/2" DN40	2" DN50	2-1/2" DN65	3" DN80	4" DN100
A	INCHES	0.51	0.76	0.98	1.26	1.5	2.01	2.48	2.95	3.94
	mm	13	19	25	32	38	51	63	75	100
B	INCHES	3.16	3.71	4.28	5.2	6.31	7.44	8.23	9.13	11.42
	mm	80	94	109	132	160	189	209	232	290
C	INCHES	1.63	1.92	2.18	2.75	3.4	3.96	4.33	4.8	6.06
	mm	41	49	55	70	86	101	110	122	154
D	INCHES	1.62	2.01	2.21	2.46	2.62	3.13	3.86	4.21	6.06
	mm	41	51	56	63	67	80	98	107	154
E	INCHES	3.15	4.33	4.33	5.12	5.12	6.89	7.87	7.87	9.65
	mm	80	110	110	130	130	175	200	200	245
G	INCHES	1.52	1.73	2.31	3.16	3.49	4.28	3.98	4.76	6.14
	mm	39	44	59	80	89	109	101	121	156
Cv		18	40	72	112	161	287	448	645	700

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content ≤0.25%. Source: California Health and Safety Code (116875).

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UPBA-480S* 1/2"-2"



IAPMO R&T: Tested and Certified to NSF/ANSI/CAN Z1157.
NSF/ANSI/CAN 61 and
NSF/ANSI/CAN 372 for
Lead Free Compliance.

Brass Ball Valve For Potable Water

Two Piece

Full Port

250 psig @ 250°F†

Press x Press Ends

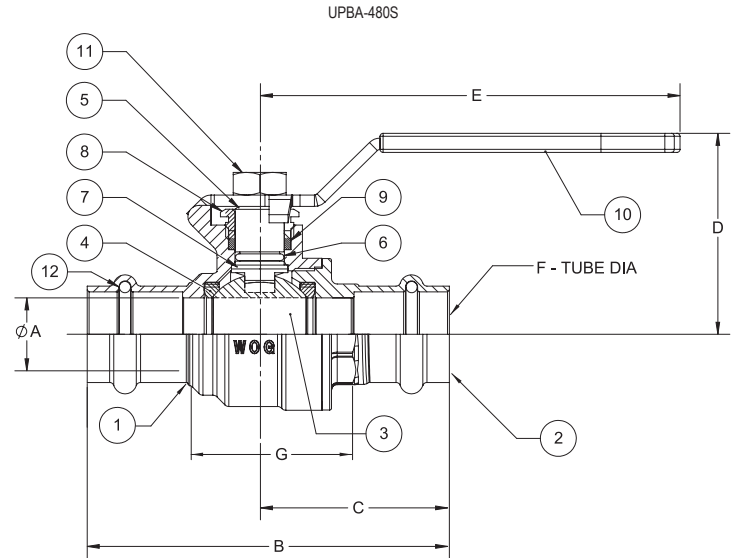
Blow-Out Proof Stem

† Non-Shock

MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Brass, Forged	B283 C27450
2	Tailpiece	Brass, Forged	B283 C27450
3	Ball	316 Stainless Steel	A276 S31600
4	Ball Seat (1/2"-2")	PTFE	Commercial
5	Stem	316 Stainless Steel	A276 S31600
6	Stem O-Ring	Buna-N	D2000
7	Thrust Washer	PTFE	Commercial
8	Gland Nut	Brass	B124
9	Packing	PTFE	Commercial
10	Handle	Zinc Plated Steel	Commercial
11	Handle Nut	Zinc Plated Steel	Commercial
12**	Backing Ring	Plastic	Commercial

* Ultra Press Valves are designed and qualified for use in copper tubing systems only, Types K, L, & M per ASTM B88. For Installation Instructions please see engineering section on website.



DIMENSIONS

	UNITS	1/2" DN15	3/4" DN20	1" DN25	1-1/4" DN32	1-1/2" DN40	2" DN50
A	INCHES	0.51	0.76	0.98	1.26	1.5	2.01
	mm	13	19	25	32	38	51
B	INCHES	3.16	3.71	4.28	5.2	6.31	7.44
	mm	80	94	109	132	160	189
C	INCHES	1.63	1.92	2.18	2.75	3.4	3.96
	mm	41	49	55	70	86	101
D	INCHES	1.62	2.01	2.21	2.46	2.62	3.13
	mm	41	51	56	63	67	80
E	INCHES	3.15	4.33	4.33	5.12	5.12	6.89
	mm	80	110	110	130	130	175
G	INCHES	1.52	1.73	2.31	3.16	3.49	4.28
	mm	39	44	59	80	89	109
Cv			18	40	72	112	161

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content ≤0.25%. Source: California Health and Safety Code (116875).

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Brass Ball Valve For Potable Water

Two Piece

Full Port

250 psig @ 250°F†

Press x 3/4" Hose End

Dust Cap and Chain

Blow-Out Proof Stem

† Non-Shock

UPBA-480BH* 1/2" & 3/4"

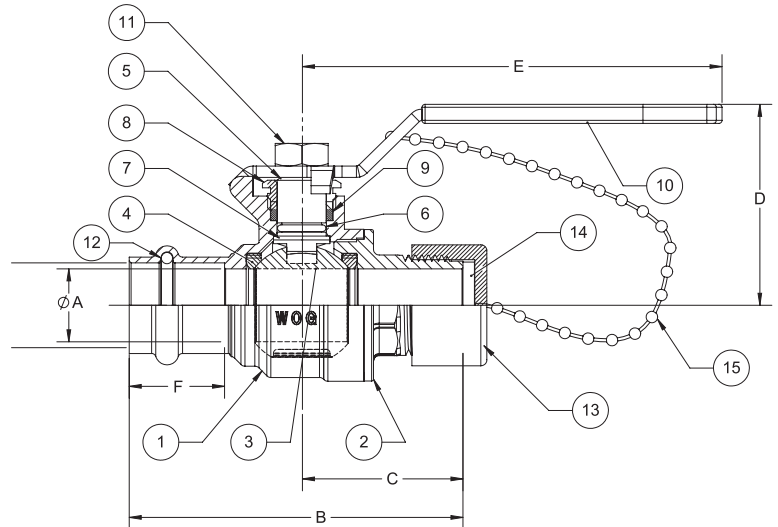


IAPMO R&T: Tested and Certified to NSF/ANSI/CAN Z1157.
NSF/ANSI/CAN 61 and
NSF/ANSI/CAN 372 for
Lead Free Compliance.

MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Brass, Forged	B283 C27450
2	Tailpiece	Brass, Forged	B283 C27450
3	Ball	Brass, Chrome Plating	B283 C27450
4	Ball Seat	PTFE	Commercial
5	Stem	Brass, Forged	B283 C27450
6	Stem O-Ring	Buna-N	D2000
7	Thrust Washer	PTFE	Commercial
8	Gland Nut	Brass	B124
9	Packing	PTFE	Commercial
10	Handle	Zinc Plated Steel	Commercial
11	Handle Nut	Zinc Plated Steel	Commercial
12	Tube O-Ring	EPDM	D2000 NSF61
13	Hose Cap	Polypropylene	Commercial
14	Cap Gasket	EPDM	Commercial
15	Chain	Brass Bead	Commercial

* Ultra Press Valves are designed and qualified for use in copper tubing systems only, Types K, L, & M per ASTM B88.



**Do not pressurize cap.
Pressure not to exceed 40 psi.**

DIMENSIONS

	UNITS	1/2" DN15	3/4" DN20
A	INCHES	0.51	0.76
	mm	13	19
B	INCHES	3.09	3.5
	mm	78	90
C	INCHES	1.55	1.7
	mm	39	43
D	INCHES	1.62	2.01
	mm	41	51
E	INCHES	3.15	4.33
	mm	80	110
F	INCHES	0.82	0.99
	mm	21	25
G	INCHES	0.83	0.98
	mm	21	25
Cv		18	40

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content ≤0.25%. Source: California Health and Safety Code (116875).

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UPBA-480SH* 1/2" & 3/4"



IAPMO R&T: Tested and Certified to NSF/ANSI/CAN Z1157.
 NSF/ANSI/CAN 61
 NSF/ANSI/CAN 372
 NSF/ANSI/CAN Z1157
 1/2" through 3" Only.

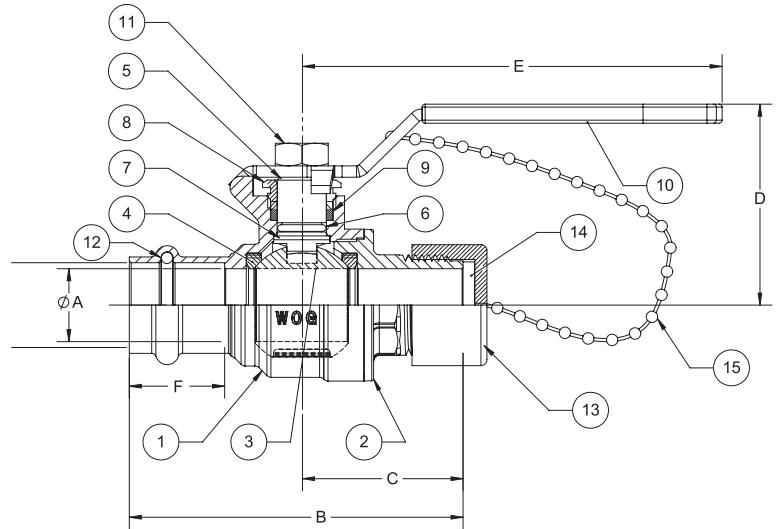
Brass Ball Valve For Potable Water
Two Piece
Full Port
250 psig @ 250°F†
Press x 3/4" Hose End
Dust Cap and Chain
Blow-Out Proof Stem

† Non-Shock

MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Brass, Forged	B283 C27450
2	Tailpiece	Brass, Forged	B283 C27450
3	Ball	316 Stainless Steel	A276 S31600
4	Ball Seat	PTFE	Commercial
5	Stem	316 Stainless Steel	A276 S31600
6	Stem O-Ring	Buna-N	D2000
7	Thrust Washer	PTFE	Commercial
8	Gland Nut	Brass	B124
9	Packing	PTFE	Commercial
10	Handle	Zinc Plated Steel	Commercial
11	Handle Nut	Zinc Plated Steel	Commercial
12	Tube O-Ring	EPDM	D2000
13	Hose Cap	Polypropylene	Commercial
14	Cap Gasket	EPDM	Commercial
15	Chain	Brass Bead	Commercial

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Do not pressurize cap.
Pressure not to exceed 40 psi.

Note: Pressure/Temperature rating shown are for VALVE ONLY. Hose side pressure and temperature limit is based on connected hose and is users responsibility

DIMENSIONS

	UNITS	1/2" DN15	3/4" DN20
A	INCHES	0.51	0.76
	mm	13	19
B	INCHES	3.09	3.5
	mm	78	90
C	INCHES	1.55	1.7
	mm	39	43
D	INCHES	1.62	2.01
	mm	41	51
E	INCHES	3.15	4.33
	mm	80	110
F	INCHES	0.82	0.99
	mm	21	25
G	INCHES	0.83	0.98
	mm	21	25
Cv		18	40

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content ≤0.25%. Source: California Health and Safety Code (116875).

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Brass Ball Valve For Potable Water
Two Piece
Full Port
200 psig @ 250°F†
Press x Press Ends With Extension Stem & Memory Stop
Blow-Out Proof Stem

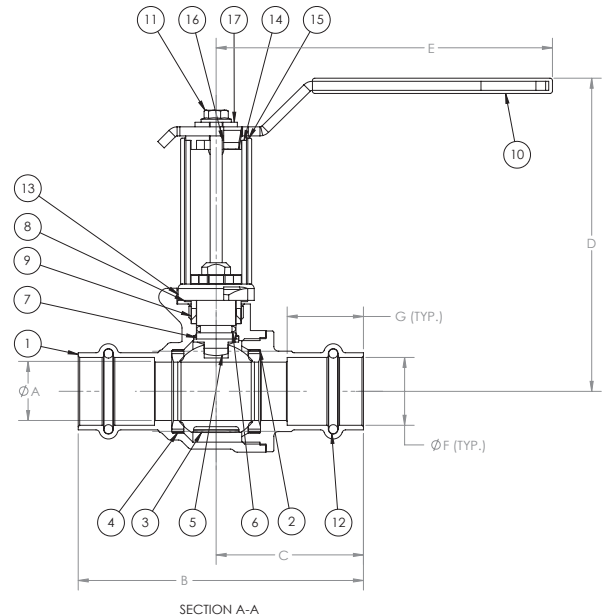
UPBA-481B* 1/2"-3"



MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Brass, Forged	B283 C27450
2	Tailpiece	Brass, Forged	B283 C27450
3	Ball	Brass, Chrome Plated	B283 C27450
4	Ball Seat	PTFE	Commercial
5	Stem	Brass, Forged	B283 C27450
6	Stem O-Ring	Buna-N	D2000
7	Thrust Washer	PTFE	Commercial
8	Gland Nut	Brass	B124
9	Packing	PTFE	Commercial
10	Handle	Zinc Plated Steel	Commercial
11	Handle Bolt	Zinc Plated Steel	Commercial
12	Tube O-Ring	EPDM	D2000
13	Stem Stop Plate	Zinc Plated Steel	Commercial
14	Internal Extension Tube	Zinc Plated Steel	Commercial
15	External Extension Tube	Zinc Plated Steel	Commercial
16	Upper Stem Adaptor	Zinc Plated Steel	Commercial
17	Memory Stop	Zinc Plated Steel	Commercial

*Ultra Press Valves are designed and qualified for use in copper tubing systems only, Types K, L & M per ASTM B88.



DIMENSIONS

	UNITS	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
		DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80
A	INCHES	0.51	0.76	0.98	1.26	1.50	2.01	2.48	2.95
	mm	13	19	25	32	38	51	63	75
B	INCHES	3.16	3.71	4.28	5.20	6.31	7.44	11.92	14.07
	mm	80	94	109	132	160	189	303	357
C	INCHES	1.63	1.92	2.18	2.75	3.40	3.96	5.96	7.04
	mm	41	49	55	70	86	101	151	179
D	INCHES	3.87	4.26	4.46	4.71	4.87	5.38	6.19	6.37
	mm	98	108	113	120	124	137	157	162
E	INCHES	3.15	4.33	4.33	5.12	5.12	6.89	7.87	7.87
	mm	80	110	110	130	130	175	200	200
G	INCHES	1.52	1.73	2.31	3.16	3.49	4.28	8.17	9.86
	mm	39	44	59	80	89	109	208	250
Cv		18	40	72	112	161	287	448	645

†Non-Shock

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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Brass Ball Valve For Potable Water
Two Piece
Full Port
200 psig @ 250°F†
Press x Press Ends With Extension Stem & Memory Stop
Blow-Out Proof Stem

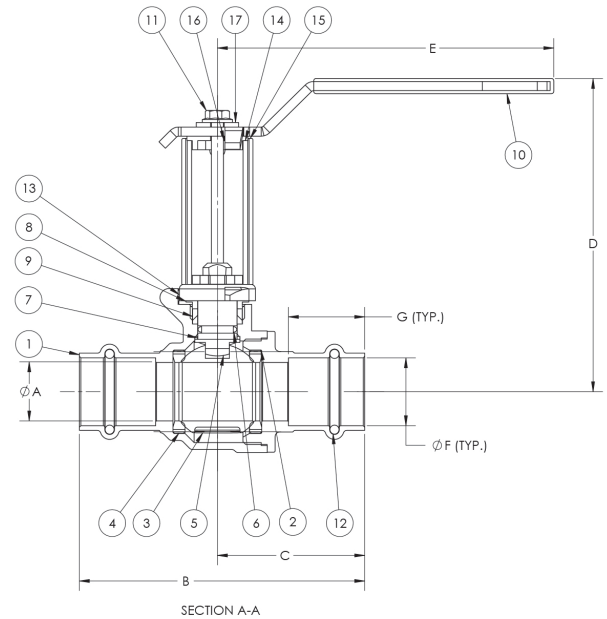
UPBA-481S* 1/2"-2"



MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Brass, Forged	B283 C27450
2	Tailpiece	Brass, Forged	B283 C27450
3	Ball	316 Stainless Steel	A276 S31600
4	Ball Seat	PTFE	Commercial
5	Stem	316 Stainless Steel	A276 S31600
6	Stem O-Ring	Buna-N	D2000
7	Thrust Washer	PTFE	Commercial
8	Gland Nut	Brass	B124
9	Packing	PTFE	Commercial
10	Handle	Zinc Plated Steel	B633
11	Handle Bolt	Zinc Plated Steel	Commercial
12	Tube O-Ring	EPDM	D2000
13	Stem Stop Plate	Zinc Plated Steel	Commercial
14	Internal Extension Tube	Zinc Plated Steel	Commercial
15	External Extension Tube	Zinc Plated Steel	Commercial
16	Upper Stem Adaptor	Zinc Plated Steel	Commercial
17	Memory Stop	Zinc Plated Steel	Commercial

*Ultra Press Valves are designed and qualified for use in copper tubing systems only, Types K, L & M per ASTM B88.



DIMENSIONS

	UNITS	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
		DN15	DN20	DN25	DN32	DN40	DN50
A	INCHES	0.51	0.76	0.98	1.26	1.50	2.01
	mm	13	19	25	32	38	51
B	INCHES	3.16	3.71	4.28	5.20	6.31	7.44
	mm	80	94	109	132	160	189
C	INCHES	1.63	1.92	2.18	2.75	3.40	3.96
	mm	41	49	55	70	86	101
D	INCHES	3.87	4.26	4.46	4.71	4.87	5.38
	mm	98	108	113	120	124	137
E	INCHES	3.15	4.33	4.33	5.12	5.12	6.89
	mm	80	110	110	130	130	175
G	INCHES	1.52	1.73	2.31	3.16	3.49	4.28
	mm	39	44	59	80	89	109
Cv		18	40	72	112	161	287

†Non-Shock

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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Brass Ball Valve For Potable Water
Two Piece
Full Port
600 psig WOG (1/2" - 2") 400 psig WOG (2 1/2" - 3")
Solder Ends

UPBA485B 1/2"-3"

Blow-Out Proof Stem

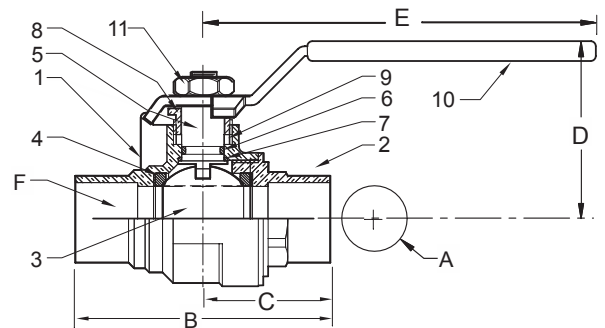
Dimensions and Workmanship Conform to MSS SP-110



Also Available UPBA485B-LL

MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Brass, Forged	B283 C27450
2	Tailpiece	Brass, Forged	B283 C27450
		Brass	B283 C27450
3	Ball	Brass w/Chrome Plating	B283 C27450
4	Ball Seat	PTFE	Commercial
5	Stem	Brass	B283 C27450
6	O-Ring	Buna-N	D2006
7	Thrust Washer	PTFE	Commercial
8	Gland Nut	Brass	B16 C3600
9	Packing	PTFE	Commercial
10	Handle	Zinc Plated Steel	Commercial
11	Handle Nut	Zinc Plated Steel	Commercial



DIMENSIONS

	UNITS	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
	A	INCHES	0.50	0.76	1.00	1.26	1.50	2.00	2.48
	mm	13	19	25	32	38	51	63	75
B	INCHES	2.28	3.10	3.56	4.13	4.64	5.75	7.25	8.25
	mm	58	79	90	105	118	146	184	210
C	INCHES	1.14	1.55	1.78	2.06	2.32	2.87	3.62	4.12
	mm	29	39	45	52	59	73	92	105
D	INCHES	1.46	1.93	2.10	2.33	2.52	2.96	3.94	4.37
	mm	37	49	53	59	64	75	100	111
E	INCHES	3.27	4.45	4.45	5.24	5.24	7.01	7.87	7.87
	mm	83	113	113	133	133	178	200	200
F	TUBE SIZE	0.63	0.88	1.13	1.38	1.63	2.13	2.63	3.13
	Cv	18	40	72	112	161	287	307	323

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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Brass Ball Valve For Potable Water
Two Piece
Full Port
200 psig @ 250°F†
Press x Threaded Ends
Blow-Out Proof Stem

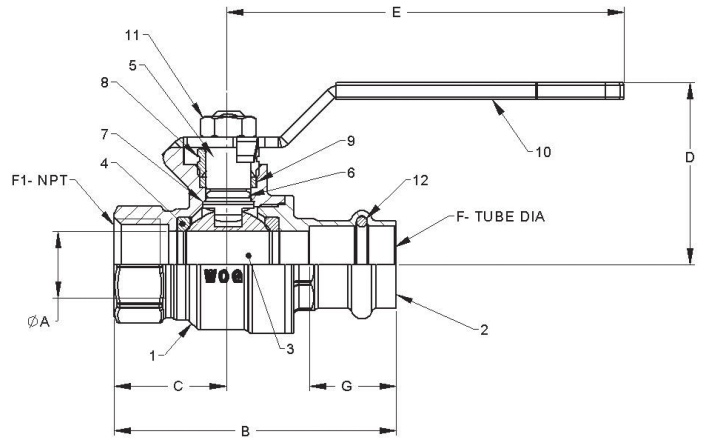
UPBA-490B* 1/2"-2"



MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Brass, Forged	B283 C27450
2	Tailpiece	Brass, Forged	B283 C27450
3	Ball	Brass, Chrome Plating	B283 C27450
4	Ball Seat	PTFE	Commercial
5	Stem	Brass, Forged	B283 C27450
6	Stem O-Ring	Buna-N	D2000
7	Thrust Washer	PTFE	Commercial
8	Gland Nut	Brass	B124
9	Packing	PTFE	Commercial
10	Handle	Zinc Plated Steel	Commercial
11	Handle Nut	Zinc Plated Steel	Commercial
12	Tube O-Ring	EPDM	D2000

*Ultra Press Valves are designed and qualified for use in copper tubing systems only, Types K, L, & M per ASTM B88.



DIMENSIONS

A-PORT DIA	UNITS	1/2" DN15	3/4" DN20	1" DN25	1-1/4" DN32	1-1/2" DN40	2" DN50
	INCHES	0.51	0.76	0.98	1.26	1.50	2.00
mm	13	19	25	32	38	51	
B	INCHES	2.77	3.23	3.71	4.12	4.86	6.14
	mm	70	82	94	105	123	156
C	INCHES	1.14	1.31	1.53	1.71	1.88	2.19
	mm	29	33	39	43	48	56
D	INCHES	1.46	1.93	2.10	2.33	2.52	2.96
	mm	37	49	53	59	64	75
E	INCHES	3.14	4.35	4.35	5.00	5.00	6.90
	mm	80	110	110	127	127	175
F-TUBE DIA	INCHES	0.63	0.88	1.13	1.38	1.63	2.13
	mm	15	20	25	32	40	50
F1 NPT		1/2"-14	3/4"-14	1"-11.5	1 1/4"-11.5	1 1/2"-11.5	2"-11.5
G	INCHES	0.83	1.00	1.00	1.02	1.42	1.57
	mm	21	25	25	26	36	40
Cv		18	40	72	112	161	287

†Non-Shock

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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⚠ State of California Prop 65 **WARNING:** Cancer and Reproductive Harm. For more information visit www.p65warnings.ca.gov.





Brass Ball Valve For Potable Water
Two Piece
Full Port
200 psig @ 250°F†
Press x Threaded Ends
Blow-Out Proof Stem

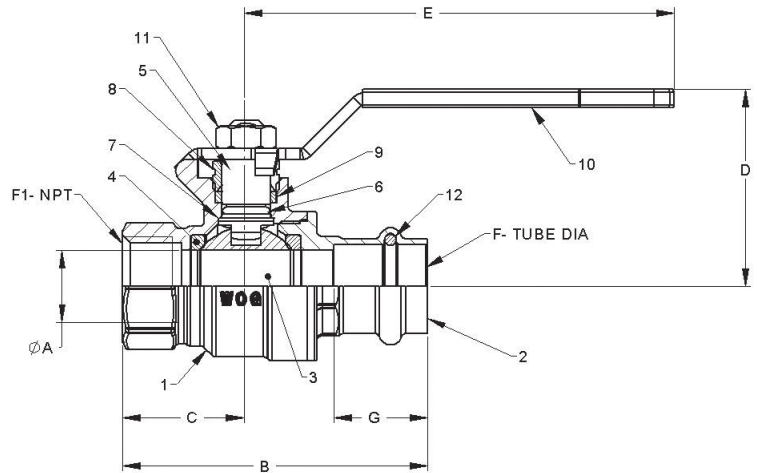
UPBA-490S* 1/2"-2"



MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Brass, Forged	B283 C27450
2	Tailpiece	Brass, Forged	B283 C27450
3	Ball	316 Stainless Steel	A276 S31600
4	Ball Seat	PTFE	Commercial
5	Stem	316 Stainless Steel	A276 S31600
6	Stem O-Ring	Buna-N	D2000
7	Thrust Washer	PTFE	Commercial
8	Gland Nut	Brass	B124
9	Packing	PTFE	Commercial
10	Handle	Zinc Plated Steel	Commercial
11	Handle Nut	Zinc Plated Steel	Commercial
12	Tube O-Ring	EPDM	D2000

*Ultra Press Valves are designed and qualified for use in copper tubing systems only, Types K, L, & M per ASTM B88.



DIMENSIONS

	UNITS	1/2" DN15	3/4" DN20	1" DN25	1-1/4" DN32	1-1/2" DN40	2" DN50
A-PORT DIA	INCHES	0.51	0.76	0.98	1.26	1.50	2.00
	mm	13	19	25	32	38	51
B	INCHES	2.77	3.23	3.71	4.12	4.86	6.14
	mm	70	82	94	105	123	156
C	INCHES	1.14	1.31	1.53	1.71	1.88	2.19
	mm	29	33	39	43	48	56
D	INCHES	1.46	1.93	2.10	2.33	2.52	2.96
	mm	37	49	53	59	64	75
E	INCHES	3.14	4.35	4.35	5.00	5.00	6.90
	mm	80	110	110	127	127	175
F-TUBE DIA	INCHES	0.63	0.88	1.13	1.38	1.63	2.13
	mm	15	20	25	32	40	50
F1 NPT		1/2"-14	3/4"-14	1"-11.5	1 1/4"-11.5	1 1/2"-11.5	2"-11.5
G	INCHES	0.83	1.00	1.00	1.02	1.42	1.57
	mm	21	25	25	26	36	40
Cv		18	40	72	112	161	287

†Non-Shock

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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 ⚠ State of California Prop 65 **WARNING:** Cancer and Reproductive Harm. For more information visit www.p65warnings.ca.gov.





Brass Ball Valve For Potable Water
Two Piece
Full Port
200 psig @ 250°F†
Press x Threaded Ends With
Extension Stem & Memory Stop
Blow-Out Proof Stem

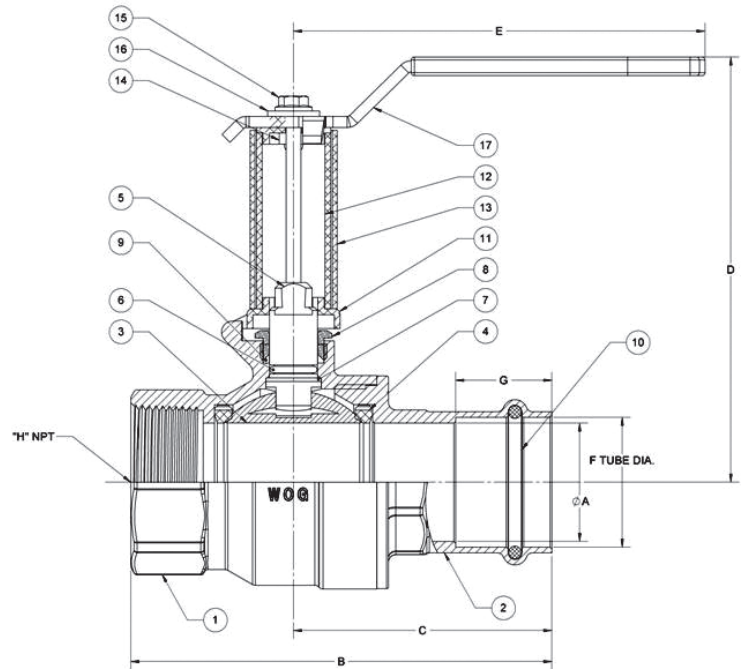
UPBA-491B* 1/2"-2"



MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Brass, Forged	B283 C27450
2	Tailpiece	Brass, Forged	B283 C27450
3	Ball	Brass, Chrome Plating	B283 C27450
4	Ball Seat	PTFE	Commercial
5	Stem	Brass, Forged	B283 C27450
6	Stem O-Ring	Buna-N	D2000
7	Thrust Washer	PTFE	Commercial
8	Gland Nut	Brass	B124
9	Packing	PTFE	Commercial
10	Handle	Zinc Plated Steel	Commercial
11	Handle Bolt	Zinc Plated Steel	Commercial
12	Tube O-Ring	EPDM	D2000
13	Stem Stop Plate	Zinc Plated Steel	Commercial
14	Internal Extension Tube	Zinc Plated Steel	Commercial
15	External Extension Tube	Zinc Plated Steel	Commercial
16	Upper Stem Adapter	Zinc Plated Steel	Commercial
17	Memory Stop	Zinc Plated Steel	Commercial

*Ultra Press Valves are designed and qualified for use in copper tubing systems only, Types K, L, & M per ASTM B88.



DIMENSIONS

	UNITS	1/2" DN15	3/4" DN20	1" DN25	1-1/4" DN32	1-1/2" DN40	2" DN50
A PORT Ø	INCHES	0.51	0.76	0.98	1.26	1.50	2.01
	mm	13	19	25	32	38	51
B	INCHES	2.76	3.58	3.98	4.51	5.50	6.44
	mm	70	91	101	115	140	164
C	INCHES	1.63	1.92	2.18	2.75	3.46	3.46
	mm	41	49	55	70	88	88
D	INCHES	3.55	4.08	4.28	4.53	4.65	5.13
	mm	90	104	109	115	118	130
E	INCHES	3.28	4.38	4.38	4.38	6.97	6.97
	mm	83	111	111	111	177	177
F TUBE Ø	INCHES	0.63	0.88	1.13	1.38	1.64	2.13
	mm	16	22	29	35	42	54
G	INCHES	0.83	0.99	0.99	1.02	1.42	1.58
	mm	21	25	25	26	36	40
H	THIRD SIZE	1/2" NPT	3/4" NPT	1" NPT	1 1/4 NPT	1 1/2" NPT	2" NPT
Cv		18	40	72	112	161	287

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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Brass Ball Valve For Potable Water
Two Piece
Full Port
200 psig @ 250°F†
Press x Threaded Ends With
Extension Stem & Memory Stop
Blow-Out Proof Stem

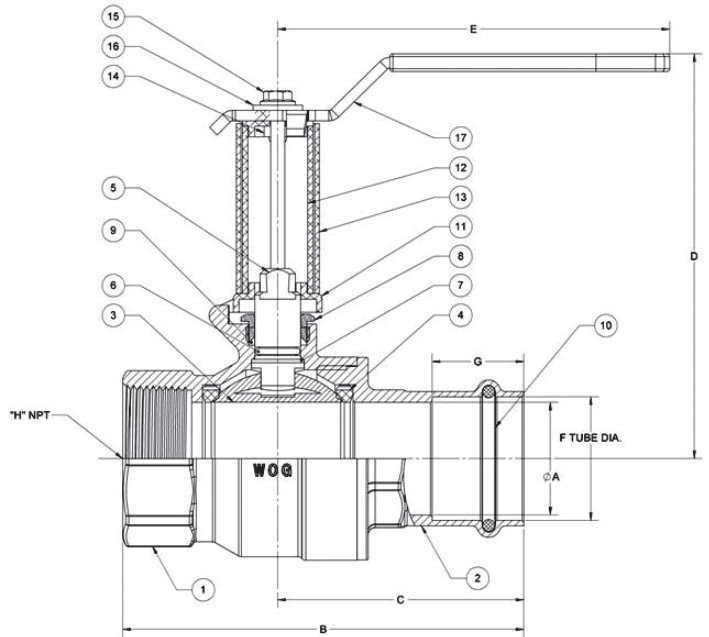
UPBA-491S* 1/2"-2"



MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Brass, Forged	B283 C27450
2	Tailpiece	Brass, Forged	B283 C27450
3	Ball	316 Stainless Steel	A276 S31600
4	Ball Seat	PTFE	Commercial
5	Stem	316 Stainless Steel	A276 S31600
6	Stem O-Ring	Buna-N	D2000
7	Thrust Washer	PTFE	Commercial
8	Gland Nut	Brass	B124
9	Packing	PTFE	Commercial
10	Handle	Zinc Plated Steel	B633
11	Handle Bolt	Zinc Plated Steel	Commercial
12	Tube O-Ring	EPDM	D2000
13	Stem Stop Plate	Zinc Plated Steel	Commercial
14	Internal Extension Tube	Zinc Plated Steel	Commercial
15	External Extension Tube	Zinc Plated Steel	Commercial
16	Upper Stem Adapter	Zinc Plated Steel	Commercial
17	Memory Stop	Zinc Plated Steel	Commercial

*Ultra Press Valves are designed and qualified for use in copper tubing systems only, Types K, L, & M per ASTM B88.



DIMENSIONS

	UNITS	1/2" DN15	3/4" DN20	1" DN25	1-1/4" DN32	1-1/2" DN40	2" DN50
A-PORT Ø	INCHES	0.51	0.76	0.98	1.26	1.50	2.01
	mm	13	19	25	32	38	51
B	INCHES	2.76	3.58	3.98	4.51	5.50	6.44
	mm	70	91	101	115	140	164
C	INCHES	1.63	1.92	2.18	2.75	3.46	3.46
	mm	41	49	55	70	88	88
D	INCHES	3.55	4.08	4.28	4.53	4.65	5.13
	mm	90	104	109	115	118	130
E	INCHES	3.28	4.38	4.38	4.38	6.97	6.97
	mm	83	111	111	111	177	177
F TUBE Ø	INCHES	0.63	0.88	1.13	1.38	1.64	2.13
	mm	16	22	29	35	42	54
G	INCHES	0.83	0.99	0.99	1.02	1.42	1.58
	mm	21	25	25	26	36	40
H		1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT
Cv		18	40	72	112	161	287

†Non-Shock

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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UP105 1/4"-2"

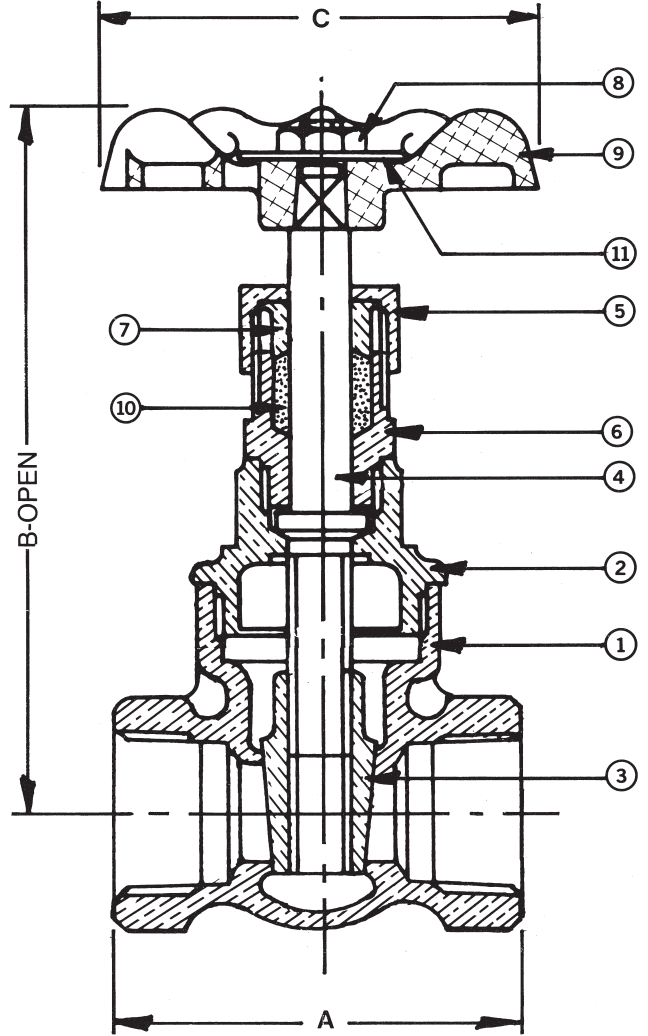


Bronze Gate Valve For Potable Water
300 psig WOG †
Solid Wedge Disc • Non-Rising Stem
Threaded Bonnet • Threaded Ends
Dimensions and Workmanship Conform to MSS SP-80

MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Bronze	B584 C89833
2	Bonnet	Bronze	B584 C89833
3	Wedge	Bronze	B584 C89833
4	Stem	Brass	B21 C46400, H02
5	Stuff Nut	Brass	B283 C37700
6	Check Nut	Brass	B283 C27450
7	Gland ¹	Brass	B283 C37700
8	Wheel Nut	Brass	Commercial
9	Handwheel	Mall. Iron	Commercial
10	Packing	Graphite	Commercial
11	Name Plate	Sh. Alum	Commercial

1 Not used on 1/2" and smaller



DIMENSIONS

Units	Size	A	B	C	Cv
INCHES	1/4	1.75	3.63	2.00	5.6
mm		44	92	51	
INCHES	3/8	1.81	3.63	2.00	10.7
mm		46	92	51	
INCHES	1/2	2.00	3.63	2.00	17.6
mm		51	92	51	
INCHES	3/4	2.18	4.38	2.50	32.0
mm		55	111	64	
INCHES	1	2.56	5.00	2.75	54.0
mm		65	127	70	
INCHES	1 1/4	2.78	5.31	3.44	97.0
mm		71	135	87	
INCHES	1 1/2	2.81	6.34	3.75	135.0
mm		71	161	95	
INCHES	2	3.31	7.44	3.75	230.0
mm		84	189	95	

† Non-Shock

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

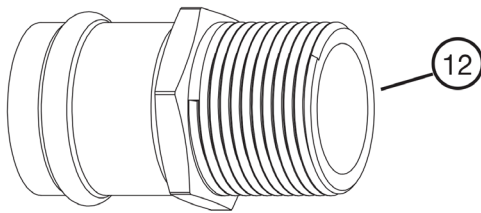
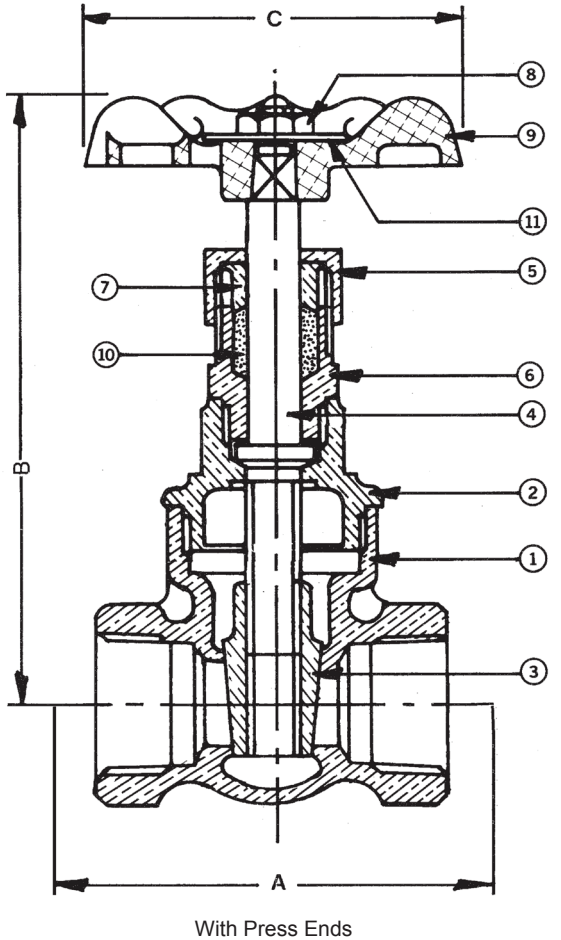
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UP105 P2* 1/2"-2"

Bronze Gate Valve for Potable Water
200 psig @ 250°F†
Solid Wedge Disc • Non-Rising Stem
Threaded Bonnet • Press Ends
Dimensions and Workmanship Conform to MSS SP-80



Press End Adapter (4151 Series)

MATERIAL LIST			
No.	PART	MATERIAL	SPECIFICATION
1	Body	Bronze	B584 C89833
2	Bonnet	Bronze	B584 C89833
3	Wedge	Bronze	B584 C89833
4	Stem	Brass	B21 C46400, H02
5	Stuff Nut	Brass	B283 C37700
6	Check Nut	Brass	B283 C27450
7	Gland ¹	Brass	B283 C37700
8	Wheel Nut	Brass	Commercial
9	Handwheel	Mall. Iron	Commercial
10	Packing	Graphite	Commercial
11	Name Plate	Sh. Alum	Commercial
12	Press Adapters	Brass Fitting W/ EPDM O-Ring	ASTM B283 C27450

¹ Not used on 1/2"

DIMENSIONS - INCHES/MILLIMETERS						
Units	Size	STD Insertion Depth	A	B	C	Cv
Inches mm	1/2	0.87 22	5.00 127	3.63 92	2.00 51	17.6
Inches mm	3/4	0.98 25	5.76 146	4.38 111	2.50 64	32
Inches mm	1	0.98 25	6.56 167	5.00 127	2.75 70	54
Inches mm	1 1/4	1.02 26	6.85 174	5.31 135	3.44 87	97
Inches mm	1 1/2	1.42 36	7.29 185	6.34 161	3.75 95	135
Inches mm	2	1.58 40	9.31 237	7.44 189	3.75 95	230

† Non-Shock

* Both the valve and 4151 series press end adapters are tested and certified by IAPMO R & T to NSF/ANSI 61 and NSF/ANSI 372 for "Lead Free" compliance.

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content ≤0.25%. Source: California Health and Safety Code (116875).

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UP115 3/8"-2"



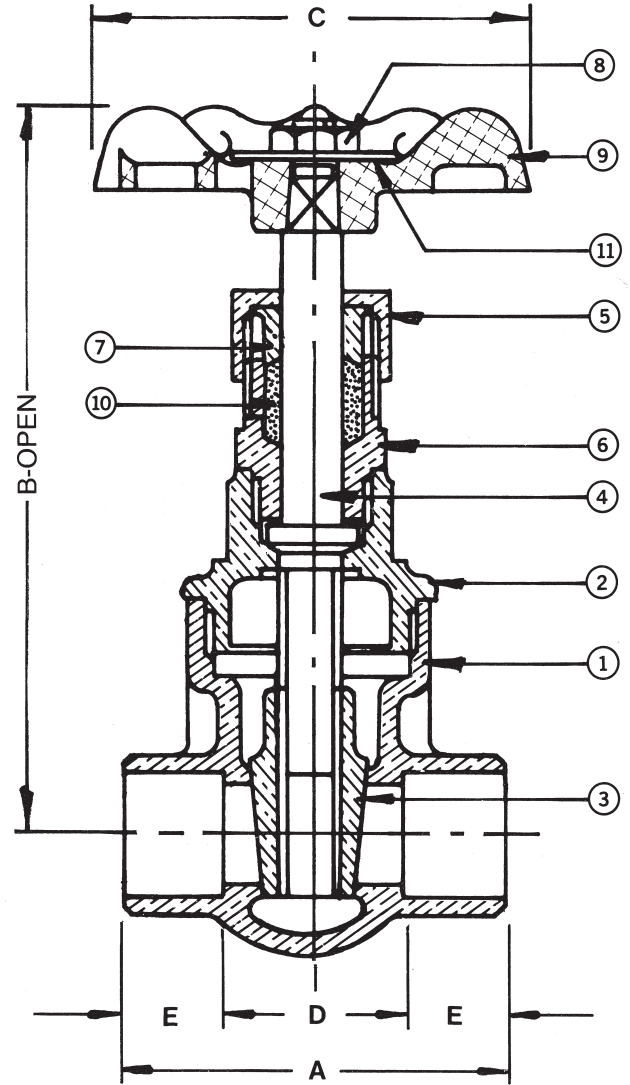
Bronze Gate Valve for Potable Water
300 psig WOG †
Solid Wedge Disc • Non-Rising Stem
Threaded Bonnet • Solder Ends

Dimensions and Workmanship Conform to MSS SP-80

MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Bronze	B584 C89833
2	Bonnet	Bronze	B584 C89833
3	Wedge	Bronze	B584 C89833
4	Stem	Brass	B21 C46400, H02
5	Stuff Nut	Brass	B283 C37700
6	Check Nut	Brass	B283 C27450
7	Gland ¹	Brass	B283 C37700
8	Wheel Nut	Brass	Commercial
9	Handwheel	Mall. Iron	Commercial
10	Packing	Graphite	Commercial
11	Name Plate	Sh. Alum	Commercial

¹ Not used on 1/2" and smaller



DIMENSIONS

Units	Size	A	B	C	D	E	Cv
INCHES	3/8	1.63	3.56	2.00	0.88	0.38	10.7
mm		41	91	51	22	10	
INCHES	1/2	1.88	3.56	2.00	0.88	0.50	17.6
mm		48	91	51	22	13	
INCHES	3/4	2.50	4.75	2.50	1.00	0.75	32.0
mm		64	121	64	25	19	
INCHES	1	3.00	5.00	2.75	1.19	0.91	54.0
mm		76	127	70	30	23	
INCHES	1 1/4	3.25	5.88	3.44	1.31	0.97	97.0
mm		83	149	87	33	25	
INCHES	1 1/2	3.63	6.50	3.75	1.44	1.09	135.0
mm		92	165	95	37	28	
INCHES	2	4.31	7.44	3.75	1.63	1.34	230.0
mm		110	189	95	41	34	

† Non-Shock

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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UP148 1/4"-2"

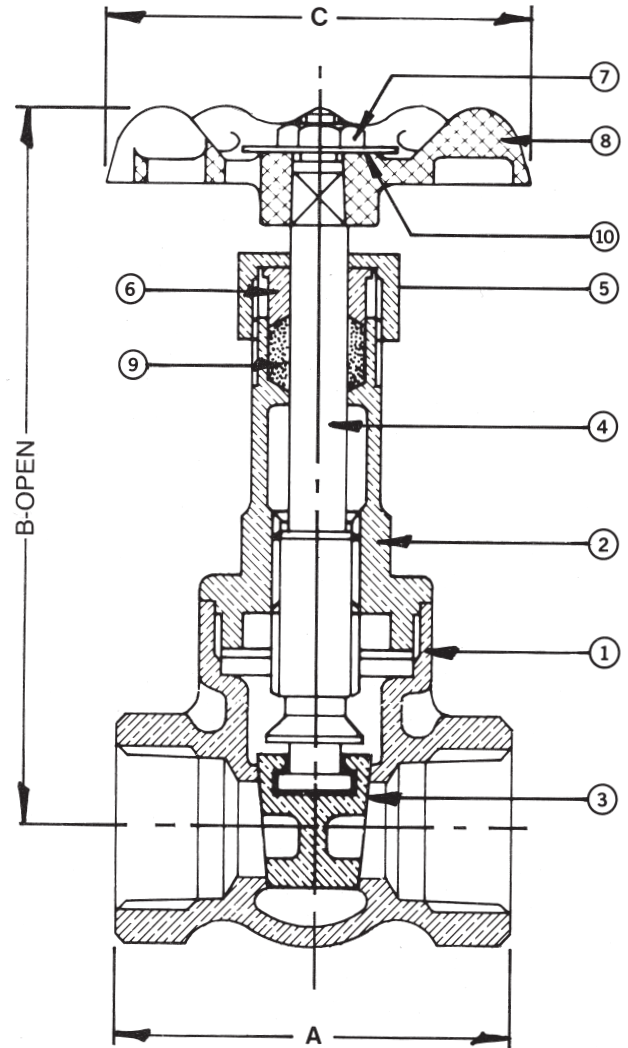

 Tested and Certified
 by IAPMO R&T to
 NSF/ANSI 61 and
 NSF/ANSI 372 for
 Lead Free Compliance.

Bronze Gate Valve for Potable Water
300 psig WOG †
Solid Wedge Disc • Rising Stem
Threaded Bonnet • Threaded Ends
Dimensions and Workmanship Conform to MSS SP-80

MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Bronze	B584 C89833
2	Bonnet	Bronze	B584 C89833
3	Wedge	Bronze	B584 C89833
4	Stem	Brass	B21 C46400, H02
5	Stuff Nut	Brass	B283 C27450
6	Gland 1	Brass	B283 C27450
7	Wheel Nut	Brass	Commercial
8	Handwheel	Mall. Iron	Commercial
9	Packing	Graphite	Commercial
10	Name Plate	Sh. Alum	Commercial

1 Not used on 1/2" and smaller



DIMENSIONS

Units	Size	A	B	C	Cv
INCHES	1/4	1.75	4.38	2.00	5.6
mm		44	111	6	
INCHES	3/8	1.81	4.38	2.00	10.7
mm		46	111	6	
INCHES	1/2	2.00	4.38	2.00	17.6
mm		51	111	6	
INCHES	3/4	2.18	5.84	2.50	32.0
mm		55	148	64	
INCHES	1	2.56	7.06	2.75	54.0
mm		65	179	70	
INCHES	1 1/4	2.78	8.78	3.44	97.0
mm		71	223	87	
INCHES	1 1/2	2.81	9.50	3.75	135.0
mm		71	241	95	
INCHES	2	3.31	11.50	3.75	230.0
mm		84	292	95	

† Non-Shock

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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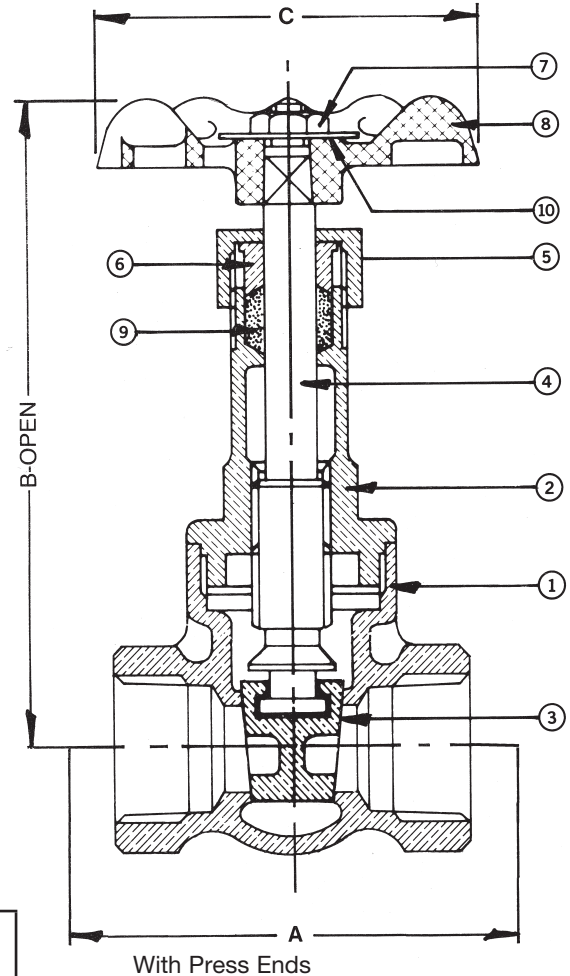
Bronze Gate Valve for Potable Water
200 psig @ 250°F †
Solid Wedge Disc • Rising Stem
Threaded Bonnet • Press Ends
Dimensions and Workmanship Conform to MSS SP-80

UP148 P2* 1/2"-2"

MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Bronze	B584 C89833
2	Bonnet	Bronze	B584 C89833
3	Wedge	Bronze	B584 C89833
4	Stem	Brass	B21 C46400, H02
5	Stuff Nut	Brass	B283 C27450
6 [†]	Gland	Brass	B283 C27450
7	Wheel Nut	Brass	Commercial
8	Handwheel	Mall. Iron	Commercial
9	Packing	Graphite	Commercial
10	Name Plate	Sh. Alum	Commercial
11	Press Adapter	Brass Fitting w/ EPDM O-Ring	ASTM C27450

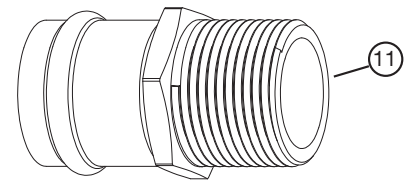
† Not used on 1/2"



DIMENSIONS

Units	Size	STD INSERTION DEPTH	A	B	C	Cv
INCHES	1/2	.87	5.00	4.38	2.00	17.6
mm		22	127	111	51	
INCHES	3/4	.98	5.76	5.84	2.50	32.0
mm		25	146	148	64	
INCHES	1	.98	6.56	7.06	2.75	54.0
mm		25	167	179	70	
INCHES	1 1/4	1.02	6.85	8.78	3.44	97.0
mm		26	174	223	87	
INCHES	1 1/2	1.42	7.29	9.50	3.75	135.0
mm		36	185	241	95	
INCHES	2	1.58	9.31	11.50	3.75	230.0
mm		40	236	292	95	

† Non-Shock



Press End Adapter (4151 Series)

*Both the valve and 4151 series press end adapters are tested and certified by IAPMO R & T to NSF/ANSI 61 and NSF/ANSI 372 for "Lead Free" compliance.

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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UP149 3/8"-2"

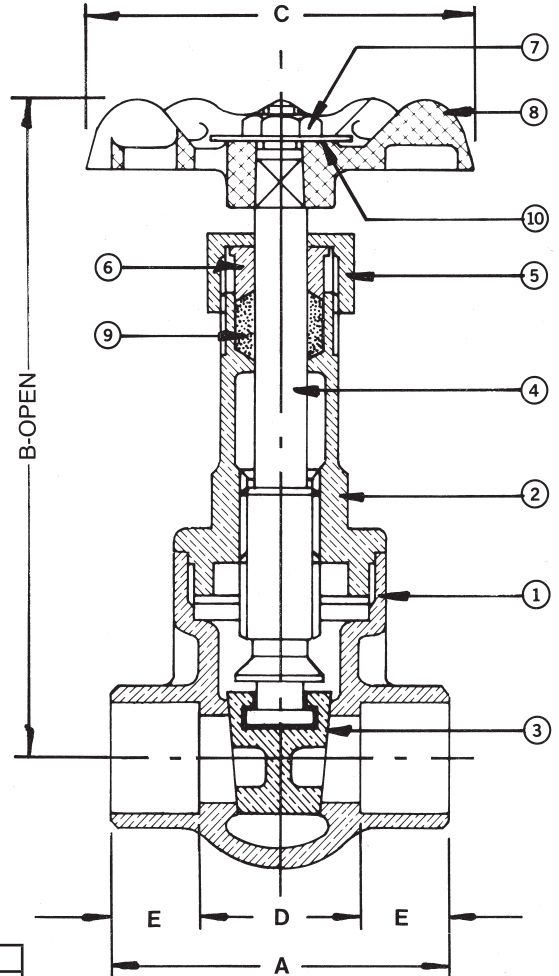


Bronze Gate Valve for Potable Water
300 psig WOG †
Solid Wedge Disc • Rising Stem
Threaded Bonnet • Solder Ends
Dimensions and Workmanship Conform to MSS SP-80

MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Bronze	B584 C89833
2	Bonnet	Bronze	B584 C89833
3	Wedge	Bronze	B584 C89833
4	Stem	Brass	B21 C46400, H02
5	Stuff Nut	Brass	B283 C27450
6	Gland ¹	Brass	B283 C27450
7	Wheel Nut	Brass	Commercial
8	Handwheel	Mall. Iron	Commercial
9	Packing	Graphite	Commercial
10	Name Plate	Sh. Alum	Commercial

1 Not used on 1/2" and smaller



DIMENSIONS

Units	Size	A	B	C	D	E	Cv
INCHES	3/8	1.63	4.31	2.00	0.88	0.38	10.7
mm		41	110	51	22	10	
INCHES	1/2	1.88	4.31	2.00	0.88	0.50	17.6
mm		48	110	51	22	13	
INCHES	3/4	2.50	6.25	2.50	1.00	0.75	32.0
mm		64	159	64	25	19	
INCHES	1	3.00	7.00	2.75	1.19	0.91	54.0
mm		76	178	70	30	23	
INCHES	1 1/4	3.25	8.63	3.44	1.31	0.97	97.0
mm		83	219	87	33	25	
INCHES	1 1/2	3.63	9.50	3.75	1.44	1.09	135.0
mm		92	241	95	37	28	
INCHES	2	4.31	11.50	3.75	1.63	1.34	230.0
mm		110	292	95	41	34	

† Non-Shock

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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 ⚠ State of California Prop 65 **WARNING:** Cancer and Reproductive Harm. For more information visit www.p65warnings.ca.gov.

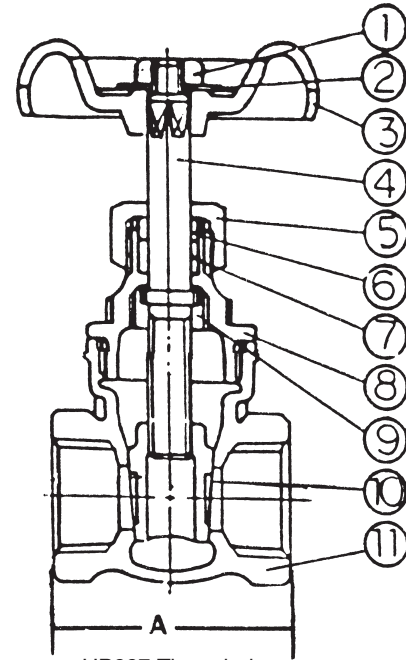


UP667 & UP668 1/4"-2"



MATERIALS LIST

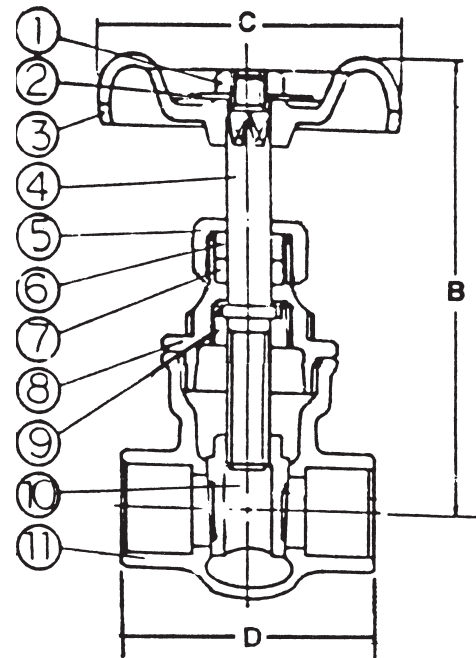
ITEM	PART	MATERIALS	ASTM SPEC.
1	Handwheel Nut	Brass	B16 C36000
2	Nameplate	Aluminum Sheet	Commercial
3	Handwheel	Cast Iron	A48, Class 35
4	Stem	Brass	B283 C27450
5	Packing Nut	Forged Brass	B283 C27450
6	Gland	Brass Rod	B283 C27450
7	Packing Ring	PTFE	Commercial
8	Bonnet	Forged Brass	B283 C27450
9	Locknut	Brass Rod	B283 C27450
10	Wedge	Forged Brass	B283 C27450
11	Body	Forged Brass	B283 C27450



UP667 Threaded

DIMENSIONS

Units	Size	A	B	C	D	Cv
INCHES	1/4	1.63	2.84	2.13	-	5.6
mm		41	72	54		
INCHES	3/8	1.63	2.84	2.13	1.63	10.7
mm		41	72	54	41	
INCHES	1/2	1.69	2.91	2.13	1.78	17.6
mm		43	74	54	45	
INCHES	3/4	1.84	3.31	2.13	2.31	32.0
mm		47	84	54	59	
INCHES	1	2.19	3.94	2.41	2.84	54.0
mm		56	100	61	72	
INCHES	1 1/4	2.42	4.34	2.94	3.00	97.0
mm		61	110	75	76	
INCHES	1 1/2	2.44	4.94	2.94	3.22	135.0
mm		62	125	75	82	
INCHES	2	2.84	6.03	3.19	3.97	230.0
mm		72	153	81	101	



UP668 Solder

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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F-2882-MRW 2"-16" F-2882-MRWSQ 2"-16"

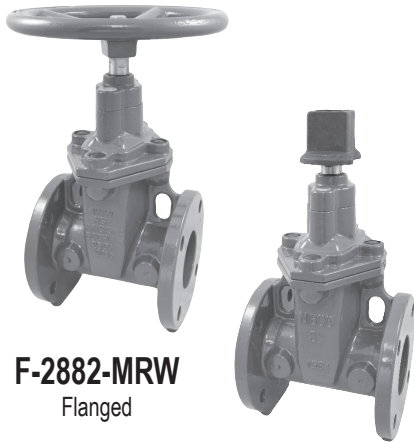


NSF/ANSI 61
NSF/ANSI 372

Iron Gate Valve for Potable Water
300 psi (2" - 12") 250 psi (14" - 16")
Non-Rising Stem • Resilient Wedge
Bolted Bonnet • Flanged Ends

300 PSI/20.6 Bar Non-Shock Cold Working Pressure

CERTIFIED LEAD-FREE* BY TRUESDAIL LABORATORIES TO NSF/ANSI 61 & 372

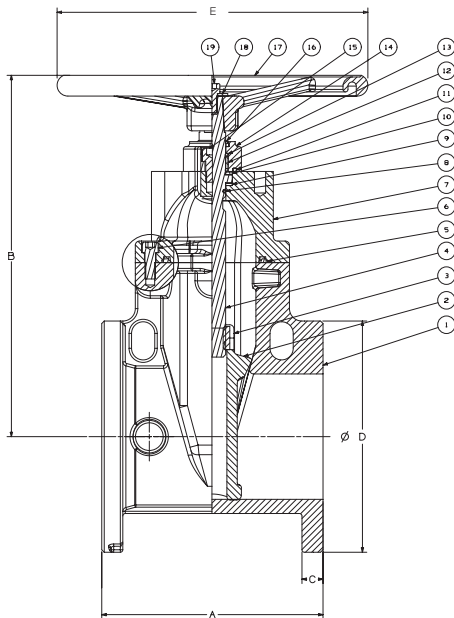


F-2882-MRW
Flanged

F-2882-MRWSQ
Flanged

MATERIAL LIST			
No.	PART	MATERIAL	SPECIFICATION
1	Valve Body	Ductile Iron	ASTM A536 65-45-12
2	Resilient Wedge	Ductile Iron	ASTM A536/EPDM ASTM D2000
3	Wedge Nut	Bronze	ASTM B584 UNS C83600
4	Stem	Stainless Steel 304	Commercial
5	Bonnet Gasket	EPDM	ASTM D2000
6	Bonnet Screw	Corrosion-resistant Steel	Commercial
7	Bonnet	Ductile Iron	ASTM A536
8	Stem Primary O-Ring	EPDM	ASTM D2000
9	Stem Thrust Washer (Lower)	Bronze	ASTM B584 UNS C83600
10	Stem Thrust Washer (Upper)	Stainless Steel	ASTM A276 UNS S41000
11	Gland Seal O-Ring	EPDM	ASTM D2000
12	Stem Seal Bushing	Bronze	ASTM B584 UNS C83600
13	Stem Secondary O-Ring	EPDM	ASTM D2000
14	Gland Flange	Ductile Iron	ASTM A536
15	Stem Ring Wiper	EPDM	ASTM D2000

Coating- Electrostatically applied fusion-bonded epoxy 8-20 mil. inside and outside meets or exceeds performance requirements of AWWA C550. Epoxy coating is not intended to serve as a dielectric barrier internal to the pipe system.



DIMENSIONS - INCHES/MILLIMETERS							
Units	Size	A	B	C	D	E	C _v
Inches	2	7.00	10.00	0.63	6.00	7.90	215
mm		178	255	16	152	200	
Inches	2 1/2	7.50	11.30	0.69	7.00	7.90	335
mm		190	287	18	178	200	
Inches	3	8.00	12.60	0.75	7.50	10.20	510
mm		203	321	19	191	260	
Inches	4	9.00	13.50	0.94	9.00	10.20	945
mm		229	344	24	229	260	
Inches	6	10.50	17.40	1.00	11.00	14.80	2250
mm		267	441	25	279	375	
Inches	8	11.50	20.80	1.13	13.50	14.80	4150
mm		292	529	29	343	375	
Inches	10	13.00	24.20	1.19	16.00	15.70	6700
mm		330	614	30	406	400	
Inches	12	14.00	27.60	1.25	19.00	19.70	9925
mm		356	700	32	483	500	
Inches	14	15.00	31.80	1.38	21.00	19.70	13800
mm		381	807	35	533	500	
Inches	16	16.00	34.41	1.46	23.50	19.70	18375
mm		406	869	37	597	500	

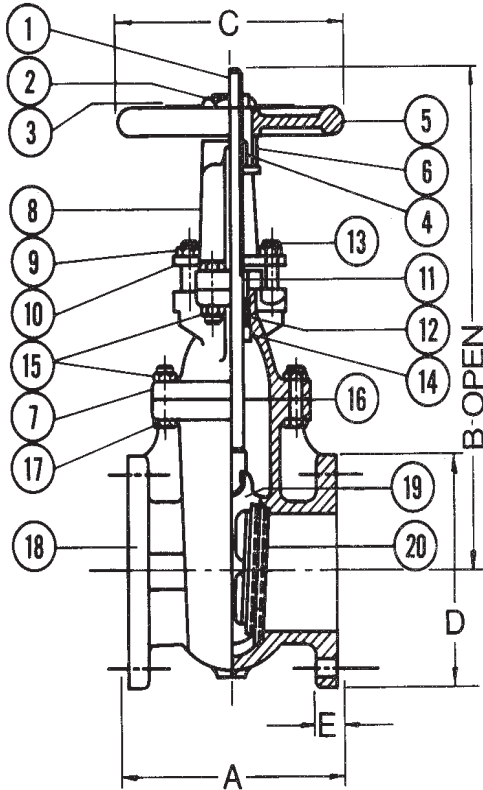
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⚠ State of California Prop 65 **WARNING: Cancer and Reproductive Harm.** For more information visit www.p65warnings.ca.gov.



Iron Gate Valve for Potable Water
125 SWP -200 WOG †
OS & Y • Solid Wedge Disc
Bolted Bonnet • Flanged Ends
Conforms to: MSS SP-70

F-2885-M26 2"-12"

Flange shape and drilling to specification ASME/ANSI B16.1 (125 lb.)



MATERIAL LIST			
No.	PART	MATERIAL	SPECIFICATION
1	Stem	Steel	ASTM A108-Gr.1020
2	Handwheel Nut	Ductile Iron	ASTM A 536
3	Name Plate	Aluminum	
4	Yoke Bushing	Ductile Iron	ASTM A 536
5	Handwheel	Cast Iron	ASTM A126, Class B
6 ²	Yoke Bushing Nut	Cast Iron	ASTM A 126, Class B
7 ¹	Bonnet	Cast Iron	ASTM A 126, Class B
8 ¹	Yoke	Cast Iron	ASTM A 126, Class B
9	Gland Follower Nut	Steel	ASTM A307-B
10	Gland Follower	Ductile Iron	ASTM A 536
11	Packing Gland	Cast Iron	ASTM A 126, Class B
12	Packing	Graphite	
13	Gland Follower Bolt	Steel	ASTM A307-B
14	Backseat Bushing	Ductile Iron	ASTM A 536
15	Nut	Steel	ASTM A307-B
16	Body Gasket	Graphite	
17	Bolt	Steel	ASTM A307-B
18	Body	Cast Iron	ASTM A126, Class B
19	Wedge	Cast Iron	ASTM A126, Class B
20	Seat Ring	Cast Iron	ASTM A126, Class B

¹ Sizes 2" to 3" made with yoke integral with bonnet.
 Sizes 4" through 12" made with separate yoke bolted to bonnet.
² Sizes 2" to 3" only

DIMENSIONS - INCHES/MILLIMETERS							
Units	Size	A	B	C	D	E	C _v
Inches mm	2	7.00 178	15.00 381	7.00 178	6.00 152	0.63 16	215
Inches mm	2 1/2	7.50 191	16.88 429	7.00 178	7.00 178	0.69 17	335
Inches mm	3	8.00 203	18.75 476	8.00 203	7.50 191	0.75 19	510
Inches mm	4	9.00 229	22.75 578	10.00 254	9.00 229	0.94 24	945
Inches mm	5	10.00 254	27.13 689	12.00 305	10.00 254	0.94 24	1525
Inches mm	6	10.50 267	30.13 765	12.00 305	11.00 279	1.00 25	2250
Inches mm	8	11.50 292	40.13 1019	14.00 356	13.50 343	1.13 29	4150
Inches mm	10	13.00 330	48.25 1226	16.00 406	16.00 406	1.81 46	6700
Inches mm	12	14.00 356	56.88 1445	18.00 457	19.00 483	1.25 32	9925

Suffix M – Signifies "MILVACO" Series International Valves.
 † Non-Shock

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Iron Gate Valve for Potable Water
300 psi (2 1/2" - 12") 250 psi (14" - 16")
Rising Stem • Resilient Wedge • OS & Y
Bolted Bonnet • Flanged Ends
Epoxy Coated Interior/Exterior
Drilled Tapped & Plugged at Boss Location A

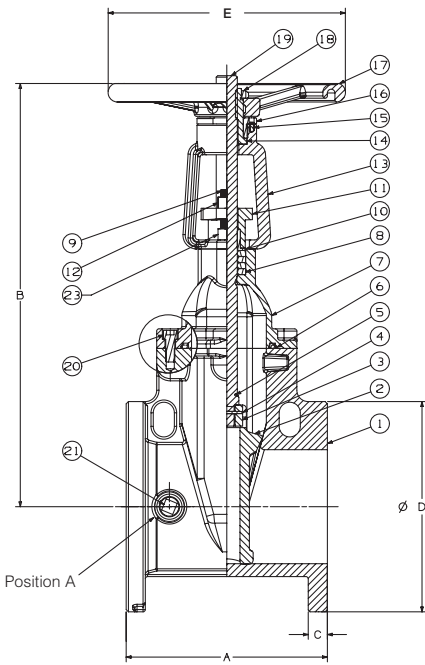
F-2885-MRW 2 1/2"-16"



NSF/ANSI 61
NSF/ANSI 372

300 PSI/20.6 Bar Non-Shock Cold Working Pressure

CERTIFIED LEAD-FREE* BY TRUESDAIL LABORATORIES TO NSF/ANSI 61 & 372



MATERIAL LIST			
No.	PART	MATERIAL	SPECIFICATION
1	Valve Body	Ductile Iron	ASTM A536
2	Resilient Wedge	Ductile Iron	ASTM A536/EPDM ASTM D2000
3	Wedge Nut	Bronze	ASTM B584 UNS C83600
4	Dowel Pin	Stainless Steel	ASTM A276 SS304
5	Stem Back Seat O-Ring	EPDM	ASTM D2000
6	Bonnet Gasket	EPDM	ASTM D2000
7	Bonnet	Ductile Iron	ASTM A536
8	Stem Packing	EPDM	ASTM D2000
9	Threaded Rod	Stainless Steel	ASTM A276 SS304
10	Gland Bushing	Bronze	ASTM B584 UNS C83600
11	Gland	Ductile Iron	ASTM A536
12	Gland Nut	Aluminum Bronze	ASTM B148 C95200
13	Yoke	Ductile Iron	ASTM A536
14	Yoke Bushing	Brass	ASTM B150 C61400
15	Flat Point Set Screw	Steel	ASTM F912M
16	Yoke Bushing Retainer	Cast Iron	ASTM A126 Class B
17	Handwheel	Ductile Iron	ASTM A536
18	Handwheel Nut	Carbon Steel Corrosion Resistant	Commercial
19	Stem	Stainless Steel 304	Commercial
20	Bonnet Screw	Corrosion-Resistant Steel	Commercial
21	NPT Pipe Plug	Steel	ASME B16.14
22	UL/FM Label (Not Shown)	Aluminum	Commercial
23	Yoke Screw	Steel Plated	ASTM A307
24	Drive Screw Label (Not Shown)	Stainless Steel 304	Commercial

Coating- Electrostatically applied fusion-bonded epoxy 8-20 mil. inside and outside meets or exceeds AWWA C550. **Drilled, tapped and plugged at position A with 1/2" sizes 2 1/2" - 4", 3/4" on 6" - 8", 1" on 10" - 12".

Note 1: Flanged valve is consistent with ANSI B16.1 Class 125.

Note 2: Available without grooved stem and tapped side boss. Order 2885-MRWB

DIMENSIONS - INCHES/MILLIMETERS								
Units	Size	A	B Open	B Closed	C	D	E	C _v
Inches	2 1/2	7.50	17.98	14.90	0.69	7.00	7.90	335
mm		190	453	378	19	178	2.00	
Inches	3	8.00	19.70	15.90	0.75	7.50	7.90	510
mm		203	500	405	19	191	2.00	
Inches	4	9.00	21.00	16.60	0.94	9.00	10.20	945
mm		229	534	442	24	229	260	
Inches	6	10.50	29.30	22.90	1.00	11.00	12.40	2250
mm		267	744	581	25	279	315	
Inches	8	11.50	37.00	28.50	1.13	13.50	14.80	4150
mm		292	939	724	29	343	375	
Inches	10	13.00	44.80	34.50	1.19	16.00	16.40	6700
mm		330	1139	877	30	406	406	
Inches	12	14.00	52.20	39.90	1.25	19.00	17.51	9925
mm		356	1326	1014	32	483	445	
Inches	14	15.00	62.20	50.00	1.38	21.00	19.70	13800
mm		381	1580	1270	35	533	500	
Inches	16	16.00	65.90	50.40	1.44	23.50	19.70	18375
mm		406	1674	1280	37	597	500	

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UP502 1/8"-2"



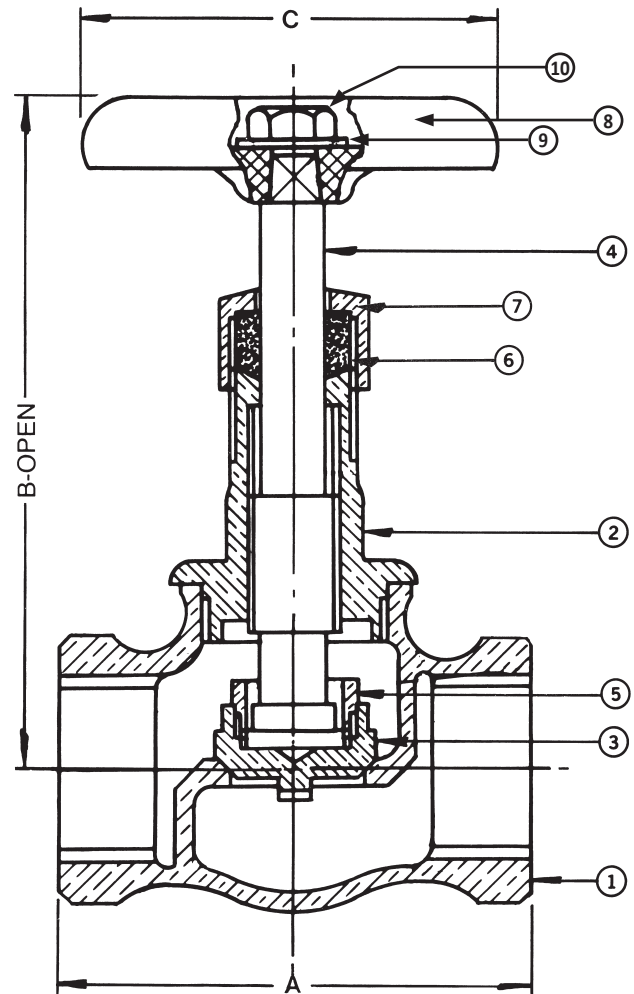
Bronze Globe Valve For Potable Water
300 psig WOG †
Bronze Disc

Threaded Bonnet • Threaded Ends
Dimensions and Workmanship Conform to MSS SP-80

MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Bronze	B584 C89833
2	Bonnet	Bronze	B584 C89833
3	Disc	Bronze	ASTM B584 C89833
		Brass	B21 C46400, H02
4	Stem	Brass	ASTM B21 C46400, H02
5	Disc Ring	Brass	ASTM B21 C46400, H02
6	Packing	Graphite	Commercial
7	Packing Nut	Brass	B16 C36000
8	Handwheel	Mall. Iron	Commercial
9	Identification Plate	Aluminum	Commercial
10	Handwheel Nut	Brass	Commercial

1/8" to 1/2" sizes have the disc integral with the stem and have no disc ring.



DIMENSIONS

Units	Size	A	B	C	Cv
INCHES	1/8	1.63	3.06	2.00	0.6
mm		41	78	51	
INCHES	1/4	1.63	3.06	2.00	1.2
mm		41	78	51	
INCHES	3/8	1.81	3.19	2.00	2.2
mm		46	81	51	
INCHES	1/2	2.31	3.63	2.00	3.6
mm		59	92	51	
INCHES	3/4	2.56	3.94	2.50	6.7
mm		65	100	64	
INCHES	1	2.94	4.38	2.75	11.1
mm		75	111	70	
INCHES	1 1/4	3.38	5.19	3.44	20.0
mm		86	132	87	
INCHES	1 1/2	3.69	5.75	3.75	28.0
mm		94	146	95	
INCHES	2	4.44	6.75	4.25	48.0
mm		113	172	108	

† Non-Shock

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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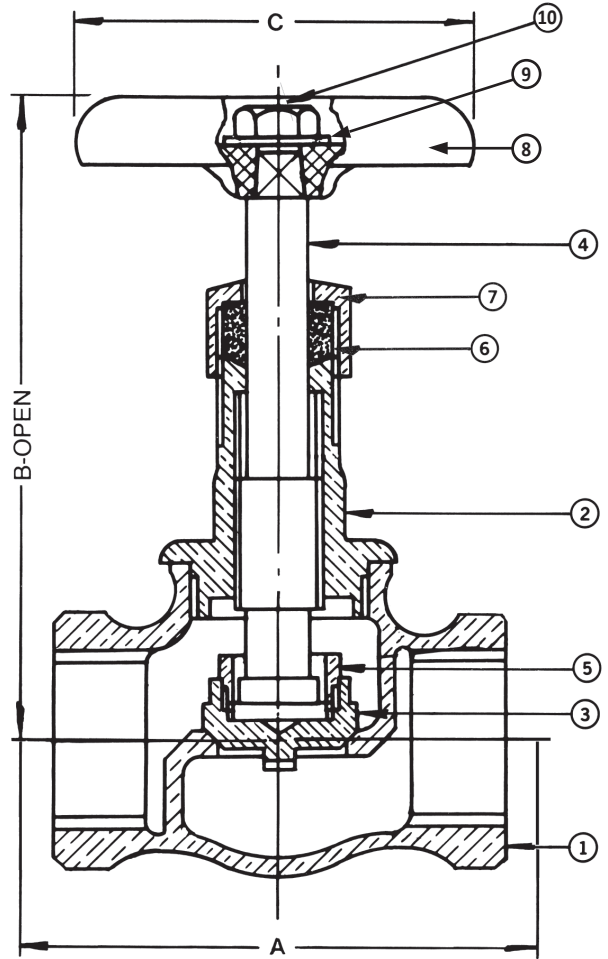


UP502 P2* 1/2"-2"

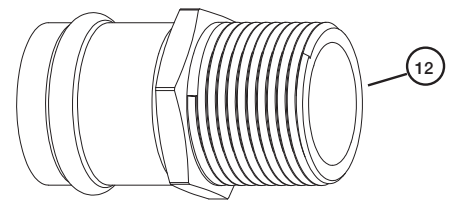
MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Bronze	B584 C89833
2	Bonnet	Bronze	B584 C89833
3	Disc	Bronze	B584 C89833
		Brass	B21 C46400, H02
4	Stem	Brass	B21 C46400, H02
5	Disc Ring	Brass	B21 C46400, H02
6	Packing	Graphite	Commercial
7	Packing Nut	Brass	B16 C36000
8	Handwheel	Mall. Iron	Commercial
9	Identification Plate	Aluminum	Commercial
10	Handwheel Nut	Brass	Commercial
11	Gland (not shown)	Brass	B16 C36000
12	Press Adapter	Brass Fitting w/ EPDM O-Ring	B283 C27450

1/2" size has the disc integral with the stem and has no disc ring.



With Press Ends



Press End Adapter (4151 Series)

DIMENSIONS

Units	Size	STD INSERTION DEPTH	A	B	C	Cv
INCHES	1/2	.87	5.31	3.63	2.00	3.6
mm		22	135	92	51	
INCHES	3/4	.98	6.14	3.94	2.50	6.6
mm		25	156	100	64	
INCHES	1	.98	6.94	4.38	2.75	11.1
mm		25	176	111	70	
INCHES	1 1/4	1.02	7.45	5.19	3.44	20.0
mm		26	189	132	87	
INCHES	1 1/2	1.42	8.17	5.75	3.75	28.0
mm		36	208	146	95	
INCHES	2	1.58	10.44	6.75	4.25	48.0
mm		40	265	172	108	

† Non-Shock

*Both the valve and 4151 series press end adapters are tested and certified by IAPMO R & T to NSF/ANSI 61 and NSF/ANSI 372 for "Lead Free" compliance.

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content ≤0.25%. Source: California Health and Safety Code (116875).

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Bronze Globe Valve For Potable Water
300 psig WOG †
Bronze Disc
Threaded Bonnet • Solder Ends
Dimensions and Workmanship Conform to MSS SP-80

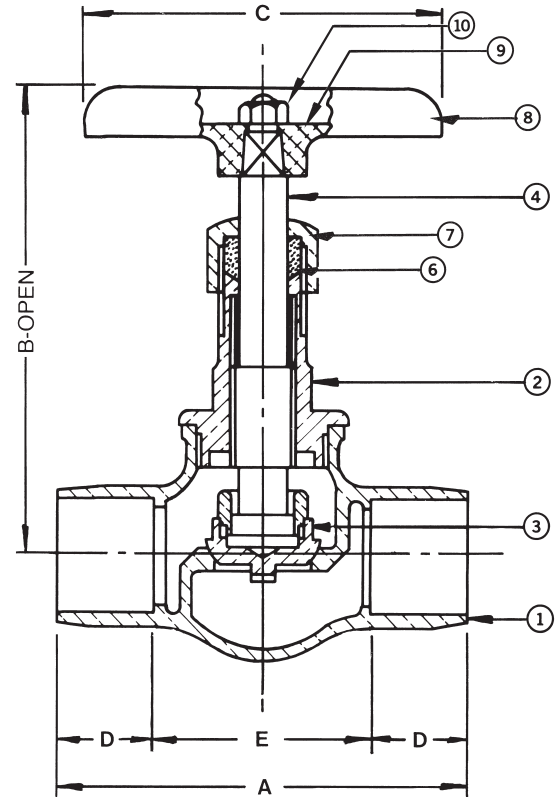
UP1502* 3/8"-2"



MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Bronze	B584 C89833
2	Bonnet	Bronze	B584 C89833
3	Disc	Bronze	B584 C89833, ASTM
		Brass	B21 C46400, H02
4	Stem	Bronze	B21 C46400, H02
5	Disc Ring	Brass	B21 C46400, H02
6	Packing	Graphite	Commercial
7	Packing Nut	Brass	B16 C30000
8	Handwheel	Mall. Iron	Commercial
9	Identification Plate	Aluminum	Commercial
10	Handwheel Nut	Brass	Commercial

*1/2" sizes has the disc integral with the stem and have no disc ring.



DIMENSIONS

Units	Size	A	B	C	D	E	Cv
INCHES	3/8	1.94	3.19	2.00	0.38	1.18	2.2
mm		49	81	51	10	30	
INCHES	1/2	2.44	3.75	2.00	0.50	1.44	3.6
mm		62	95	51	13	37	
INCHES	3/4	3.19	4.00	2.50	0.75	1.69	6.7
mm		81	102	64	19	43	
INCHES	1	3.69	4.38	2.75	0.91	1.88	11.1
mm		94	111	70	23	48	
INCHES	1 1/4	4.19	5.13	3.44	0.97	2.25	20.0
mm		106	130	87	25	57	
INCHES	1 1/2	4.75	5.63	3.75	1.09	2.56	28.0
mm		121	143	95	28	65	
INCHES	2	5.94	6.69	4.25	1.34	3.25	48.0
mm		151	170	121	34	83	

† Non-Shock

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Bronze Check Valve For Potable Water
300 WOG† (1/4" - 2") 200 psig WOG †(2 1/2" -3")
Horizontal Swing • Threaded Ends
Dimensions and Workmanship Conform to MSS SP-80

UP509 1/4"-3"

Tested and Certified by
 @ IAPMO RHT to NSF/ANSI 61
 and NSF/ANSI 372 for lead
 free compliance.

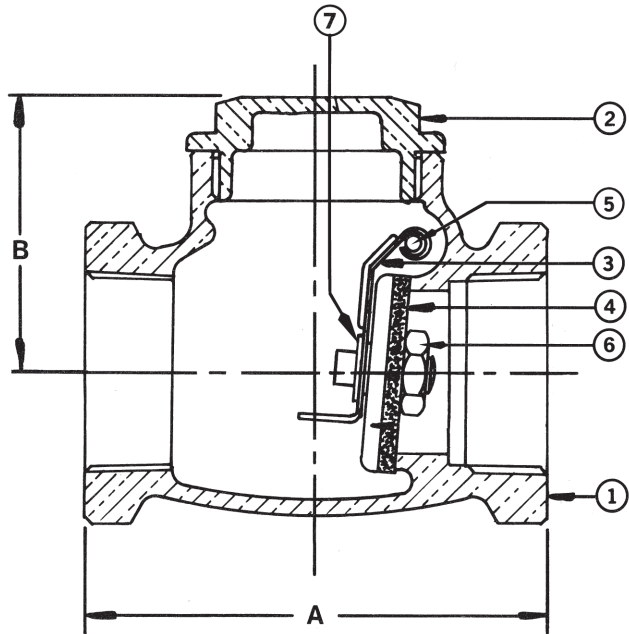
MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Bronze	B584 C89833
2	Cap	Bronze	B584 C89833
3	Lever	Stainless Steel	A276 S30200 (1/4"-2")
		Bronze	B584 C89833 (2 1/2"-3")
4	Disc	Brass	ASTM B21 C46400, H02 (1/4"-1 1/2")
		Bronze	ASTM B584 C89833 (2"-3")
5	Pin	Stainless Steel	A276 S30400 (1"-2")
		Stainless Steel	A582 S30300 (1/4"-3/4") (2 1/2"-3")
6	Disc Nut	Brass	B21 C46400 H02 (2 1/2"-3")
7	Retaining Ring	Stainless Steel	A276 S30400
8	Plug (not shown)	Brass	B21 C46400, H02

DIMENSIONS

Units	Size	A	B	Cv
INCHES	1/4	2.13	1.32	3.3
mm		54	34	
INCHES	3/8	2.13	1.32	6.0
mm		54	34	
INCHES	1/2	2.31	1.32	10.0
mm		59	34	
INCHES	3/4	2.63	1.69	18.0
mm		67	43	
INCHES	1	3.25	2.00	31.0
mm		83	51	
INCHES	1 1/4	3.56	2.13	54.0
mm		91	54	
INCHES	1 1/2	4.00	2.38	76.0
mm		102	60	
INCHES	2	4.75	2.81	131.0
mm		121	71	
INCHES	2 1/2	6.00	3.63	233.8
mm		152	92	
INCHES	3	6.88	4.19	286.4
mm		175	106	

† Non-Shock



Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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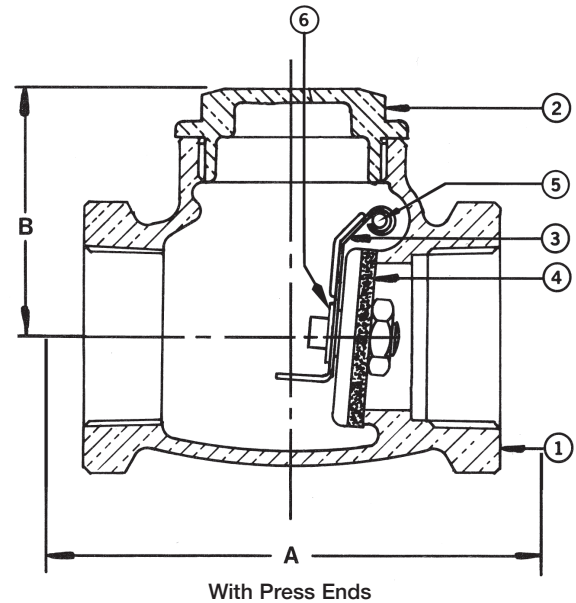


UP509 P2* 1/2"-2"

Dimensions and Workmanship Conform to MSS SP-80

MATERIALS LIST

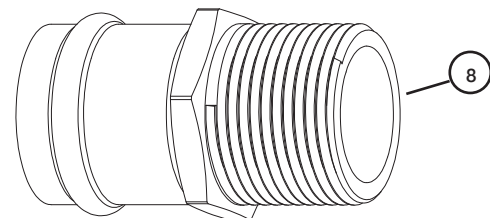
ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Bronze	B584 C89833
2	Cap	Bronze	B584 C89833
3	Lever	Stainless Steel	A276 S30200
4	Disc	Brass	B21 C46400, H02 (1/2"-1 1/2") Incl. ASTM B584 C89833 (2")
5	Pin	Stainless Steel	A276 S30400 (1"-2") A582 S30300 (1/2"-3/4")
6	Retaining Ring	Stainless Steel	Commercial
7	Plug (not shown)	Brass	ASTM B21 C46400, H02
8	Press Adapter	Brass Fitting w/ EPDM O-Ring	ASTM B283 C27450



DIMENSIONS

Units	Size	STD INSERTION DEPTH	A	B	Cv
INCHES	1/2	0.87	5.31	1.32	10.0
mm		22	135	34	
INCHES	3/4	0.98	6.21	1.69	18.0
mm		25	158	43	
INCHES	1	0.98	7.25	2.00	31.0
mm		25	184	51	
INCHES	1 1/4	1.02	7.63	2.13	54.0
mm		26	194	54	
INCHES	1 1/2	1.42	8.48	2.38	76.0
mm		36	215	60	
INCHES	2	1.58	10.75	2.81	131.0
mm		40	273	71	

† Non-Shock



Press End Adapter (4151 Series)

*Both the valve and 4151 series press end adapters are tested and certified by IAPMO R & T to NSF/ANSI 61 and NSF/ANSI 372 for "Lead Free" compliance.

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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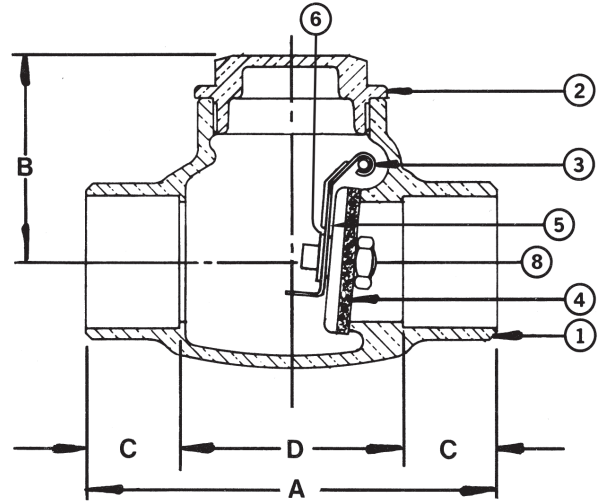
Bronze Check Valve For Potable Water
300 WOG† (3/8" - 2") 200 psig WOG †(2 1/2" - 3")
Bronze Disc
Horizontal Swing • Solder Ends
Dimensions and Workmanship Conform to MSS SP-80

UP1509 3/8" - 3"



MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Bronze	B584 C89833
2	Cap	Bronze	B584 C89833
3	Pin	Stainless Steel	A276 S30400 (3/8"-1") A582 S30300 (1 1/4"-2")
		Brass	B21 C46400, H02
4	Disc	Brass	B21 C46400, H02
		Bronze	B584 C89833 (2"-3")
5	Lever	Stainless Steel	A276 S530200
6	Retaining Ring	Stainless Steel	A276 S530400
7	Plug (not shown)	Brass	B21 C46400, H02
8	Disc Nut	Brass	B21 C46400, H02 (2 1/2"-3")



DIMENSIONS

Units	Size	A	B	C	D	Cv
INCHES	3/8	2.25	1.32	0.38	1.50	6.0
mm		57	34	10	38	
INCHES	1/2	2.75	1.32	0.51	1.73	10.0
mm		70	34	13	44	
INCHES	3/4	3.31	1.69	0.75	1.75	18.0
mm		84	43	19	45	
INCHES	1	4.00	1.97	0.91	2.19	31.0
mm		102	50	23	56	
INCHES	1 1/4	4.25	2.16	0.97	2.31	54.0
mm		108	55	25	59	
INCHES	1 1/2	4.94	2.41	1.09	2.75	76.0
mm		125	61	28	70	
INCHES	2	6.13	2.81	1.34	3.44	131.0
mm		156	72	34	87	
INCHES	2 1/2	7.38	3.63	1.48	4.42	233.8
mm		187	92	38	112	
INCHES	3	8.50	4.19	1.66	5.19	286.4
mm		216	106	42	132	

† Non-Shock

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content ≤0.25%. Source: California Health and Safety Code (116875).

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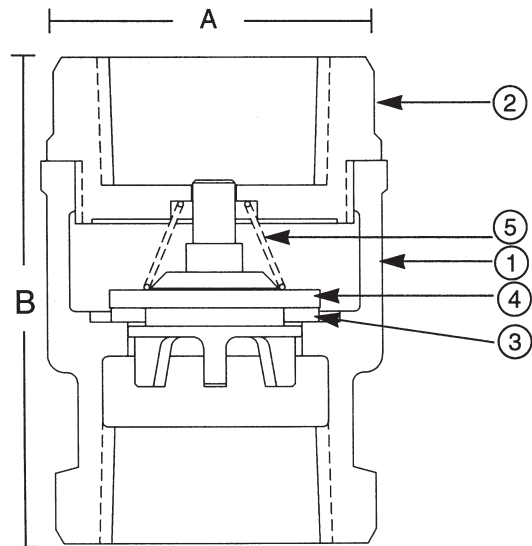
Bronze Lift Check Valve For Potable Water
250 psig WOG †
PTFE Disc
Spring Loaded • Threaded Ends

UP548T 3/8"-2"



MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Cast Bronze	B584 C89833
2	Tail Piece	Cast Bronze	B584 C89833
3	Disc	PTFE	Commercial
4	Disc Holder	Cast Bronze	B584 C89833
5	Spring	Stainless Steel	A276 S30400



Note: Check Valves may be installed in both the horizontal and vertical lines with upward flow or in any intermediate position.

DIMENSIONS

Units	Size	A	B	Cv
INCHES	3/8	1.22	1.97	2.5
mm		31	50	
INCHES	1/2	1.22	2.09	4.1
mm		31	53	
INCHES	3/4	1.50	2.31	7.6
mm		38	59	
INCHES	1	1.91	2.66	13.0
mm		48	67	
INCHES	1 1/4	2.16	3.09	23.0
mm		55	79	
INCHES	1 1/2	2.59	3.31	31.0
mm		66	84	
INCHES	2	3.13	3.78	54.0
mm		79	96	

† Non-Shock

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

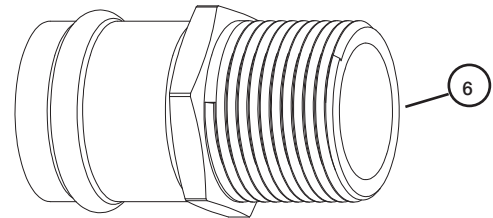
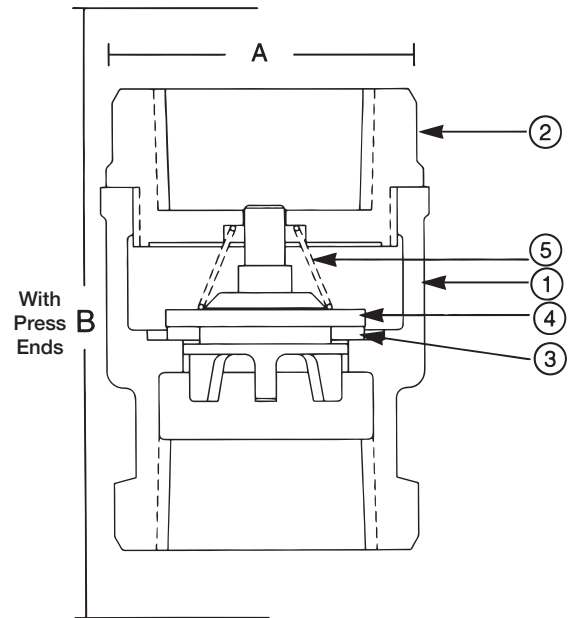
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UP548T P2* 1/2"-2"

MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Cast Bronze	B584 C89833
2	Tail Piece	Cast Bronze	B584 C89833
3	Disc	PTFE	Commercial
4	Disc Holder	Cast Bronze	B584 C89833
5	Spring	Stainless Steel	A276 S30400
6	Press Adapter	Brass Fitting w/ EPDM O-Ring	B283 C27450



Press End Adapter (4151 Series)

DIMENSIONS

Units	Size	STD INSERTION DEPTH	A	B	Cv
INCHES	1/2	.87	1.22	4.22	4.1
mm		22	31	107	
INCHES	3/4	.98	1.50	5.08	7.6
mm		166	38	129	
INCHES	1	.98	1.91	5.91	13.0
mm		166	48	150	
INCHES	1 1/4	1.02	2.16	6.23	23.0
mm		26	55	158	
INCHES	1 1/2	1.42	2.59	7.07	31.0
mm		36	66	180	
INCHES	2	1.58	3.13	9.13	54.0
mm		40	79	232	

† Non-Shock

Do not use for reciprocating air compressor service.

Note 1: Check Valves may be installed in both the horizontal and vertical lines with upward flow or in any intermediate position.

*Both the valve and 4151 series press end adapters are tested and certified by IAPMO R & T to NSF/ANSI 61 and NSF/ANSI 372 for "Lead Free" compliance.

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content ≤0.25%. Source: California Health and Safety Code (116875).

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Bronze Lift Check Valve For Potable Water
250 psig WOG †
PTFE Disc
Spring Loaded • Solder Ends

UP1548T 3/8"-2"



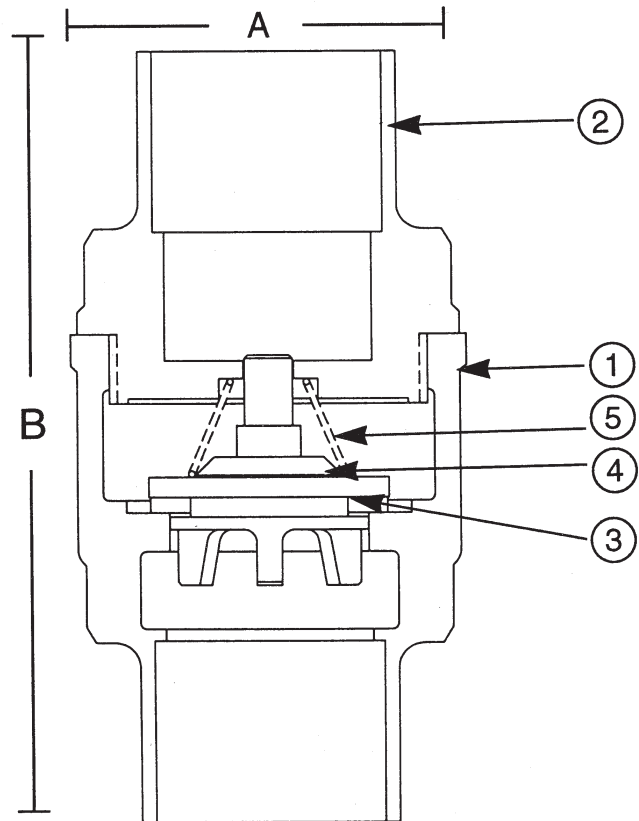
MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Body	Cast Bronze	B584 C89833
2	Tail Piece	Cast Bronze	B584 C89833
3	Disc	PTFE	Commercial
4	Disc Holder	Cast Bronze	B584 C89833
5	Spring	Stainless Steel	A276 S30400

DIMENSIONS

Units	Size	A	B	Cv
INCHES	3/8	1.22	2.16	2.5
mm		31	55	
INCHES	1/2	1.22	2.41	4.1
mm		31	61	
INCHES	3/4	1.50	2.81	7.6
mm		38	71	
INCHES	1	1.91	3.53	13.0
mm		48	90	
INCHES	1 1/4	2.16	4.88	23.0
mm		55	124	
INCHES	1 1/2	2.59	4.22	31.0
mm		66	107	
INCHES	2	3.13	5.09	54.0
mm		79	129	

† Non-Shock



Note: Check Valves may be installed in both the horizontal and vertical lines with upward flow or in any intermediate position.

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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UP967 & UP968 3/8"-3"

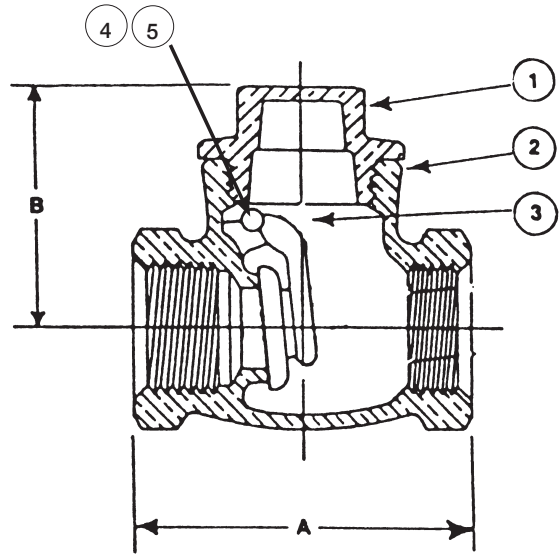


Tested and Certified
by IAPMO R&T to
NSF/ANSI 61 and
NSF/ANSI 372 for
Lead Free Compliance.

Brass Swing Check Valve for Potable Water
200 WOG †
Brass Disc
Threaded Bonnet
Threaded Ends (UP967) • Solder Ends (UP968)

MATERIALS LIST

ITEM	PART	MATERIALS	ASTM SPEC.
1	Cap	Forged Brass	B283, C27450
2	Body	Forged Brass	B283, C27450
3	Disc	Forged Brass	B283, C27450
4	Side Plug	Stainless Steel	A276, S30400
5	Pin	Stainless Steel	A276, S30400



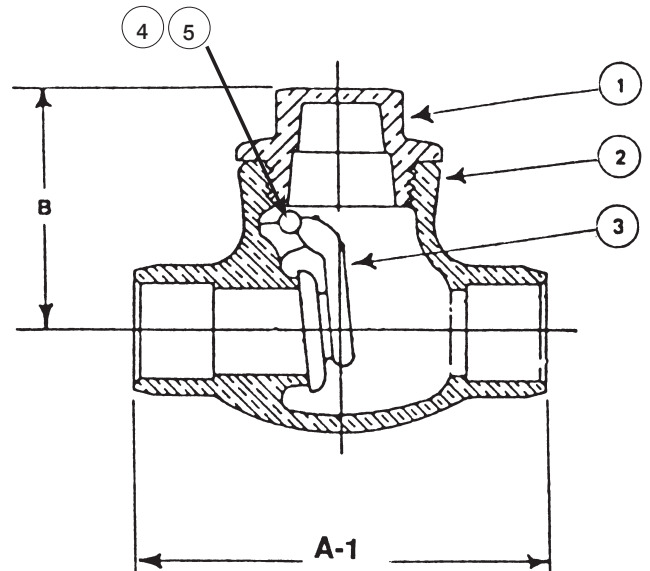
UP967 Threaded

DIMENSIONS

Units	Size	A	A-1	B
INCHES	3/8	1.82	-	1.35
mm		46	-	34
INCHES	1/2	1.86	2.18	1.35
mm		47	55	34
INCHES	3/4	2.11	2.85	1.53
mm		54	72	39
INCHES	1	2.52	3.46	1.74
mm		64	88	44
INCHES	1 1/4	2.72	3.70	1.99
mm		69	94	51
INCHES	1 1/2	3.23	4.33	2.28
mm		82	110	58
INCHES	2	3.70	5.12	2.48
mm		94	130	63
INCHES	2 1/2	5.20	6.73	3.11
mm		132	171	79
INCHES	3	5.83	7.48	3.81
mm		148	190	97

Warning: DO NOT USE for reciprocation
air compressor service.

† Non-Shock



UP968 Solder

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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Brass Swing Check Valve for Potable Water
 200 psig @ 250°F†
 Threaded Bonnet
 Horizontal Swing • Press Ends

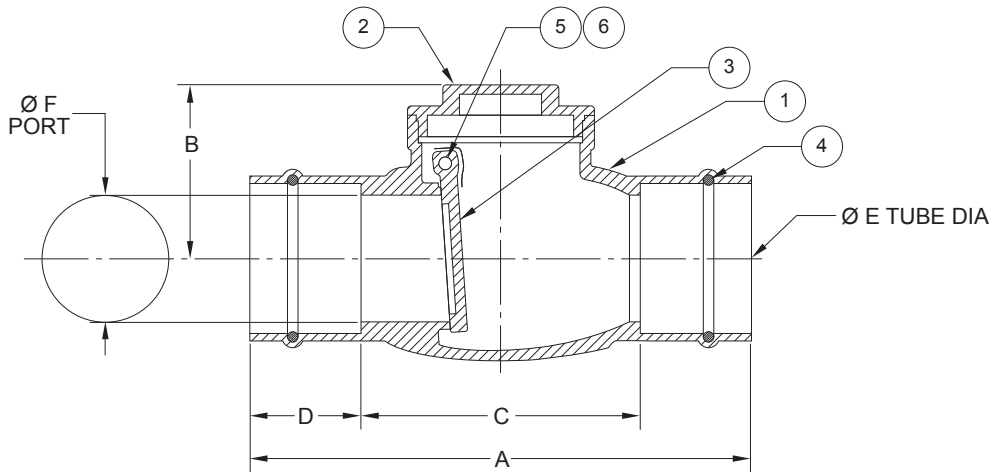
UP969* 1/2"-2"



Tested and Certified by
 IAPMO R&T to NSF/ANSI 61
 and NSF/ANSI 372 for
 lead free compliance.

MATERIAL LIST

ITEM	PART	MATERIAL	SPECIFICATION
1	Body	Brass	B283, C27450
2	Cap	Brass	B283, C27450
3	Disc	Brass	B283, C27450
4	O-Ring	EPDM	Commercial
5	Pin	Stainless Steel	A276, S30400
6	Side Plug	Brass	B124, C27450



DIMENSIONS

Units	Size	A	B	C	D	E	F	CV
INCHES	1/2	3.35	1.38	1.70	0.83	0.63	0.50	10
mm		85	35	43	21	16	13	
INCHES	3/4	3.74	1.43	1.75	0.99	0.88	0.75	18
mm		95	36	45	25	23	19	
INCHES	1	4.36	1.74	2.38	0.99	1.13	0.93	31
mm		111	44	61	25	29	24	
INCHES	1 1/4	4.97	1.99	2.92	1.02	1.38	1.24	54
mm		126	51	74	26	35	32	
INCHES	1 1/2	6.13	2.28	3.30	1.42	1.63	1.38	76
mm		156	58	84	36	42	35	
INCHES	2	7.16	2.48	3.99	1.59	2.13	1.81	131
mm		182	63	101	40	54	46	

* Ultra Press Valves are designed and qualified for use in copper tubing systems only, Types K, L, & M per ASTM B88. For installation instructions please see engineering section on website.

† Non-Shock

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content ≤0.25%. Source: California Health and Safety Code (116875).

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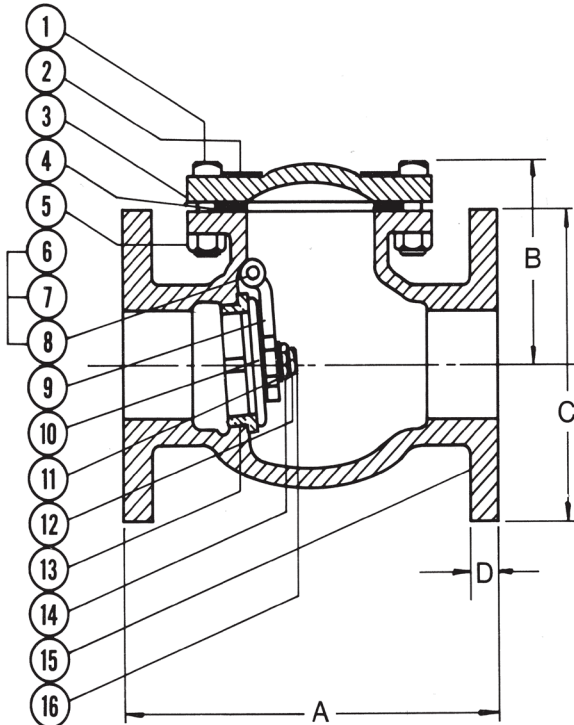
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Iron Check Valve for Potable Water
125 SWP - 200 WOG†
Horizontal Swing • Flanged Ends
Bolted Cover
Conforms to: MSS SP-71

F-2974A26 2"-12"

Flange shape and drilling to specification ASME B 16.1 (125 lb).



MATERIAL LIST			
No.	PART	MATERIAL	SPECIFICATION
1	Bolt	Steel	
2	Name Plate	Aluminum	
3	Cover	Cast Iron	ASTM A126, Class B
4	Cover Gasket	Aramid Fiber/NBR	
5	Nut	Steel	
6	Side Plug	Brass	ASTM B16
7	Side Plug Gasket	Aramid Fiber/NBR	
8	Hanger Pin	SS 304	ASTM B16
9	Hanger	Ductile Iron	ASTM A536
10	Disc	Cast Iron	ASTM A126, Class B
11	Washer	Steel	
12	Cotter Pin	Zinc Plated Steel	
13	Seat Ring	Bronze	ASTM B62
14	Disc Nut	Steel	ASTM A307
15	Body	Cast Iron	ASTM A126, Class B
16	Stud Bolt	Brass	ASTM B16

DIMENSIONS - INCHES/MILLIMETERS						
Units	Size	A	B	C	D	Cv
Inches	2	8.00	4.56	6.00	0.63	143
mm		203	116	152	16	
Inches	2 1/2	8.50	5.38	7.00	0.69	242
mm		216	137	178	17	
Inches	3	9.50	5.56	7.50	0.75	366
mm		241	141	191	19	
Inches	4	11.50	6.69	9.00	0.94	572
mm		292	170	229	24	
Inches	5	13.00	7.75	10.00	0.94	894
mm		330	197	254	24	
Inches	6	14.00	9.50	11.00	1.00	1287
mm		356	241	279	25	
Inches	8	19.50	10.38	13.50	1.13	2288
mm		495	264	343	29	
Inches	10	24.50	12.00	16.00	1.19	3574
mm		622	305	406	30	
Inches	12	27.50	13.50	19.00	1.25	5147
mm		699	343	483	32	

† Non-Shock

Note 1: On pump discharge, the preferred check valve is either an in-line spring loaded valve or a swing design with lever and weight. Install these valves as far as possible from the pump and elbows with a minimum distance of 5 times the pipe diameter.

Note 2: These iron body check valves may be installed in horizontal and vertical lines with upward flow or in intermediate position.

Note 3: The wetted surface of this product contacted by consumable water contains less than one quarter of one percent (.25%) of lead by weight. Meets the requirements of Senate law S.3874.

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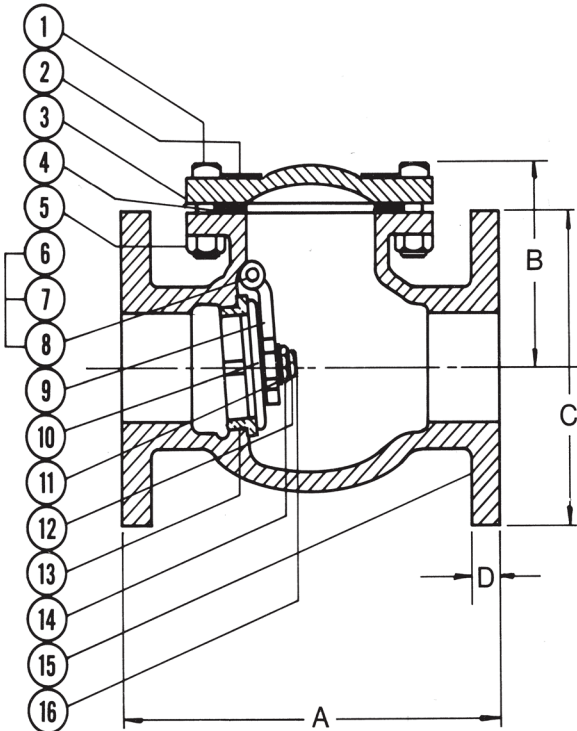
⚠ State of California Prop 65 **WARNING:** Cancer and Reproductive Harm. For more information visit www.p65warnings.ca.gov.



Iron Check Valve for Potable Water
125 SWP - 200 WOG†
Horizontal Swing • Flanged Ends
Bolted Cover
Conforms to: MSS SP-71

F-2974M26 2"-12"

Flange shape and drilling to specification ASME B 16.1 (125 lb).



MATERIAL LIST			
No.	PART	MATERIAL	SPECIFICATION
1	Bolt	Steel	
2	Name Plate	Aluminum	
3	Cover	Cast Iron	ASTM A126, Class B
4	Cover Gasket	Graphite	
5	Nut	Steel	
6	Side Plug	Brass	ASTM B16
7	Side Plug Gasket	PTFE	
8	Hanger Pin	SS 304	ASTM B16
9	Hanger	Ductile Iron	ASTM A536
10	Disc	Cast Iron	ASTM A126, Class B
11	Washer	Steel	
12	Cotter Pin	Zinc Plated Steel	
13	Seat Ring	Bronze	ASTM B62
14	Disc Nut	Steel	ASTM A307
15	Body	Cast Iron	ASTM A126, Class B
16	Stud Bolt	Brass	ASTM B16

DIMENSIONS - INCHES/MILLIMETERS						
Units	Size	A	B	C	D	Cv
Inches mm	2	8.00 203	4.56 116	6.00 152	0.63 16	143
Inches mm	2 1/2	8.50 216	5.38 137	7.00 178	0.69 17	242
Inches mm	3	9.50 241	5.56 141	7.50 191	0.75 19	366
Inches mm	4	11.50 292	6.69 170	9.00 229	0.94 24	572
Inches mm	5	13.00 330	7.75 197	10.00 254	0.94 24	894
Inches mm	6	14.00 356	9.50 241	11.00 279	1.00 25	1287
Inches mm	8	19.50 495	10.38 264	13.50 343	1.13 29	2288
Inches mm	10	24.50 622	12.00 305	16.00 406	1.19 30	3574
Inches mm	12	27.50 699	13.50 343	19.00 483	1.25 32	5147

Note 1: On pump discharge, the preferred check valve is either an in-line spring loaded valve or a swing design with lever and weight. Install these valves as far as possible from the pump and elbows with a minimum distance of 5 times the pipe diameter.

Note 2: These iron body check valves may be installed in horizontal and vertical lines with upward flow or in intermediate position.

Note 3: The wetted surface of this product contacted by consumable water contains less than one quarter of one percent (.25%) of lead by weight. Meets the requirements of Senate law S.3874.

Suffix M - Signifies "MILVACO" Series International Valves.
 † Non-Shock

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Ultra Pure
BY MILWAUKEE VALVE
CLA23E 2"-12"

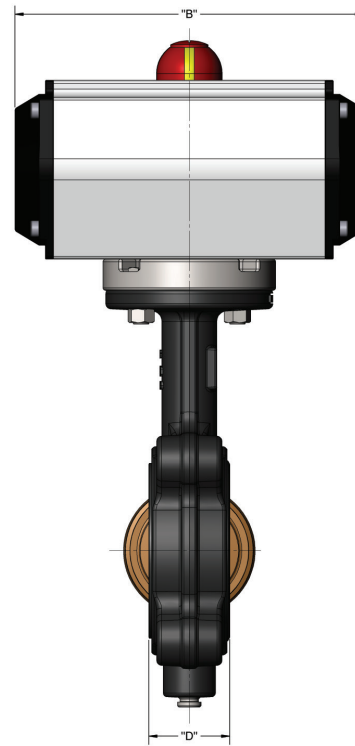
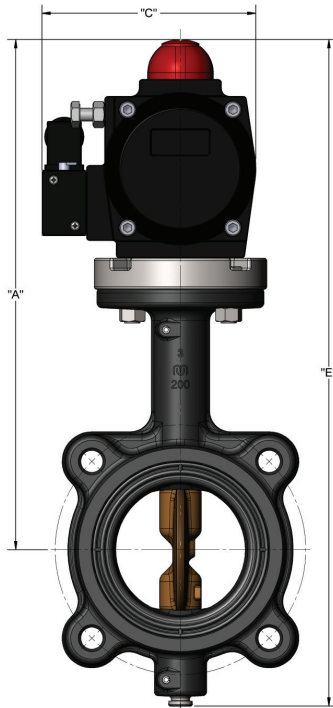


ABS Type Approved;
Cat. A
CFR-46



Tested and Certified by
IAFMR&T to NSF/ANSI 372
and NSF/ANSI 61

Iron Butterfly Valve for Potable Water
Lug Style
200 psi Non-Shock WOG
Bi-Directional Dead End Service to 200 psi Max
Air to Air Pneumatic Actuator
Specifications: API-609 MSS SP-67 Type 1



- Cast Iron
- Lug Pattern
- Aluminum Bronze Disc
- EPDM Liner
- 200 WOG
- Temp Range: 0° to 250° F for HVAC service
- Double-acting actuator sized for 80 psi air supply
- 120V NEMA 4/4x NAMUR mounted solenoid
- For on/off service

DIMENSIONS

AIR TO AIR ACTUATOR ASSEMBLY						
Valve	Model	Dimensions in Inches				
Size	Actuator	A "	B "	C "	D "	E "
2	MC3C	10.48	6.61	2.83	1.69	13.54
2 1/2	MC3C	10.98	6.61	2.83	1.81	14.29
3	MC3C	11.23	6.61	2.83	1.81	14.98
4	MC5C	12.45	7.24	3.19	2.07	16.70
5	MC5C	12.98	7.24	3.19	2.19	17.92
6	MC10C	14.14	10.31	3.86	2.19	19.70
8	MC29C	17.70	11.65	5.02	2.38	23.26
10	MC29C	18.88	11.65	5.02	2.69	26.76
12	MC58C	21.97	18.03	6.22	3.06	31.22

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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Ultra Pure
BY MILWAUKEE VALVE
CLB23E 2"-12"

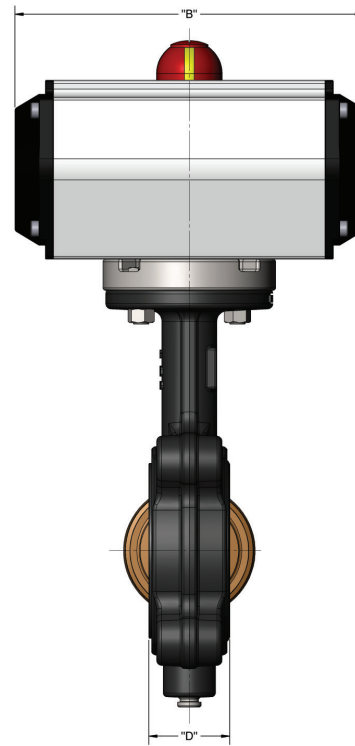
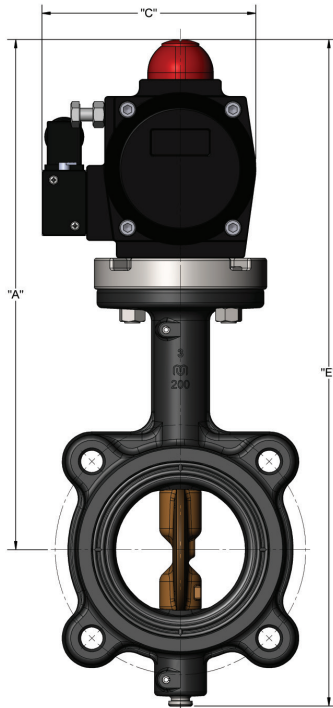


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Iron Butterfly Valve for Potable Water
Lug Style
200 psi Non-Shock WOG
Bi-Directional Dead End Service to 200 psi Max
Spring Return Pneumatic Actuator
Specifications: API-609 MSS SP-67 Type 1



- Cast Iron
- Lug Pattern
- Aluminum Bronze Disc
- EPDM Liner
- 200 WOG
- Temp Range: 0° to 250° F for HVAC service
- Spring return fail closed actuator
- 120V NEMA 4/4x NAMUR mounted solenoid
- For on/off service

DIMENSIONS

SPRING RETURN ACTUATOR ASSEMBLY						
Valve	Model	Dimensions in Inches				
Size	Actuator	A "	B "	C "	D "	E "
2	MC3S4C	10.48	6.61	2.83	1.69	13.54
2 1/2	MC3S4C	10.98	6.61	2.83	1.81	14.29
3	MC5S4C	11.70	7.24	3.19	1.81	15.45
4	MC10S4C	13.14	10.31	3.86	2.07	17.39
5	MC14S4C	15.55	10.55	4.31	2.19	20.49
6	MC29S4C	16.89	11.65	5.02	2.19	22.45
8	MC58S4C	19.35	18.03	6.22	2.38	24.91
10	MC58S4C	20.53	18.03	6.22	2.69	28.41
12	MC121S4C	27.22	22.20	8.27	3.06	36.47

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Ultra Pure
BY MILWAUKEE VALVE
CLC23E 2"-12"

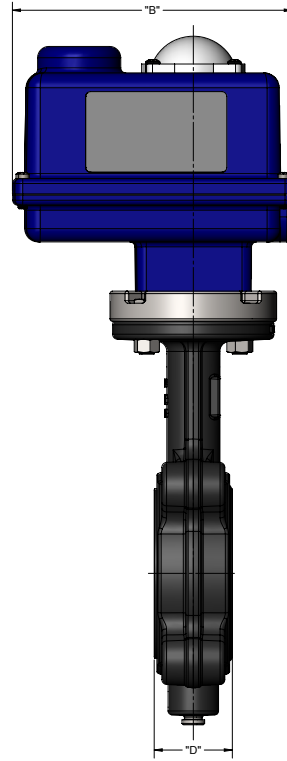
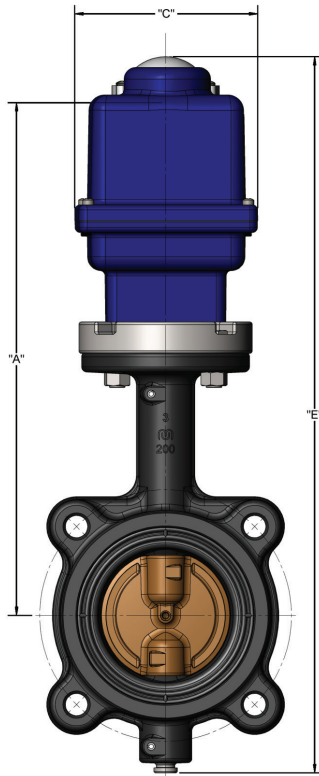


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Iron Butterfly Valve for Potable Water
Lug Style
200 psi Non-Shock WOG
Bi-Directional Dead End Service to 200 psi Max
Electric Actuator
Specifications: API-609 MSS SP-67 Type 1



- Cast Iron
- Lug Pattern
- Aluminum Bronze Disc
- EPDM Liner
- 200 WOG
- Temp Range: 0° to 250° F for HVAC service
- 120VAC NEMA 4 rated electric actuator
- 25% duty cycle
- For on/off service
- Two limit switches
- Manual override
- Visual position indicator

DIMENSIONS

120 VAC ELECTRIC ACTUATOR ASSEMBLY						
Valve	Model	Dimensions in Inches				
Size	Actuator	A "	B "	C "	D "	E "
2	MCRB200I	12.55	6.88	4.25	1.69	15.61
2 1/2	MCRB200I	13.05	6.88	4.25	1.81	16.36
3	MCRB200I	13.30	6.88	4.25	1.81	17.05
4	MCRB675I	18.26	7.00	7.00	2.07	22.51
5	MCRB675I	19.15	7.00	7.00	2.19	24.09
6	MCRB1000I	19.62	7.00	7.00	2.19	25.18
8	MCRB1500I	21.00	7.00	7.00	2.38	26.56
10	AT25-25	18.93	16.25	27.38	2.69	26.81
12	AT50-25	25.30	16.25	28.38	3.06	34.55

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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CL Series-Rev. D 2"-12" Bi-Directional Dead End Service to 200 psi Max

Iron Butterfly Valve for Potable Water
Lug Style

200 psi Non-Shock WOG

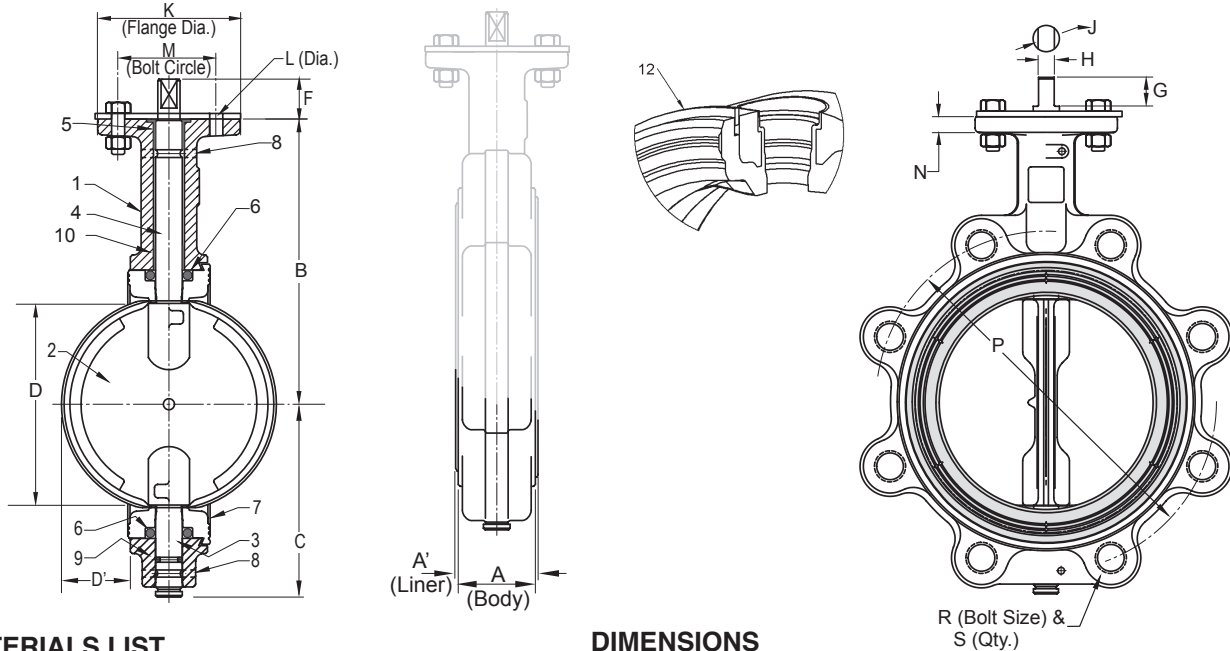
Specifications: API-609 MSS SP-67 Type 1



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and NSF/ANSI 61



MATERIALS LIST

ITEM	PART	MATERIALS
1	BODY	CAST IRON ASTM A126 CL B
2	DISC	ALUMINUM BRONZE ASTM B148
3	BOTTOM STEM	STAINLESS STEEL TYPE 416
4	TOP STEM	STAINLESS STEEL TYPE 416
5	TOP BEARING	REINFORCED NYLON
6	SEAL	EPDM
7	LINER	EPDM
8	ROLL PIN	STAINLESS STEEL
9	STEM SEAL	EPDM
10	LOWER BEARING	REINFORCED NYLON
11	OPERATOR	LEVER HANDLE GEAR OPERATOR
12	RETAINING RING	ST1066 SPRING STEEL (65Mn)

DIMENSIONS

	INCHES DN	VALVE SIZE									
		2	2-1/2	3	4	5	6	8	10	12	
A (Body)	INCHES	1.69	1.81	1.81	2.07	2.19	2.19	2.38	2.69	3.06	
	mm	43	46	46	52	55	55	60	68	78	
A ¹ (Liner)	INCHES	1.82	1.94	1.94	2.20	2.32	2.32	2.51	2.82	3.21	
	mm	46	49	49	55	58	58	63	71	82	
B	INCHES	5.50	6.00	6.25	7.00	7.53	8.00	9.38	10.56	12.06	
	mm	139	152	158	177	191	203	238	268	306	
C	INCHES	3.06	3.31	3.75	4.25	4.94	5.56	5.56	7.88	9.25	
	mm	77	84	95	108	125	141	166	200	235	
D (Chord Dia)	INCHES	1.49	2.01	2.64	3.67	4.71	5.66	7.72	9.70	11.68	
	mm	37	51	67	93	119	143	196	246	296	
D ¹ (Intrusion)	INCHES	0.28	0.44	0.69	1.06	1.50	1.94	2.84	3.69	4.50	
	mm	7	11	17	27	38	49	72	93	114	
F	INCHES	1.13	1.13	1.13	1.13	1.13	1.13	1.50	1.50	1.50	
	mm	28	28	28	28	28	28	38	38	38	
G	INCHES	0.81	0.81	0.81	0.81	0.81	0.81	1.06	1.06	1.06	
	mm	20	20	20	20	20	20	27	27	27	
H	INCHES	0.35	0.35	0.35	0.40	0.40	0.40	0.53	0.71	0.71	
	mm	8	8	8	10	10	11	13	18	18	
J	INCHES	0.50	0.50	0.50	0.56	0.56	0.62	0.75	1.00	1.00	
	mm	12	12	12	14	14	14	19	25	25	
K		4	4	4	4	4	4	6	6	6	
L (Dia)	INCHES	0.44	0.44	0.44	0.44	0.44	0.44	0.56	0.56	0.56	
	mm	11	11	11	11	11	11	14	14	14	
M	INCHES	3.25	3.25	3.25	3.25	3.25	3.25	5.00	5.00	5.00	
	mm	82	82	82	82	82	82	127	127	127	
N	INCHES	0.44	0.44	0.44	0.44	0.44	0.44	0.50	0.50	0.50	
	mm	11	11	11	11	11	11	12	12	12	
P	INCHES	4.75	5.50	6.00	7.50	8.50	9.50	11.75	14.25	17.00	
	mm	120	139	152	190	215	241	298	362	431	
R		5/8-11	5/8-11	5/8-11	5/8-11	3/4-10	3/4-10	3/4-10	7/8-9	7/8-9	
S		4	4	4	8	8	8	8	12	12	

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content ≤ 0.25%. Source: California Health and Safety Code (116875).

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Ultra Pure
BY MILWAUKEE VALVE
CL Series 14"-24"

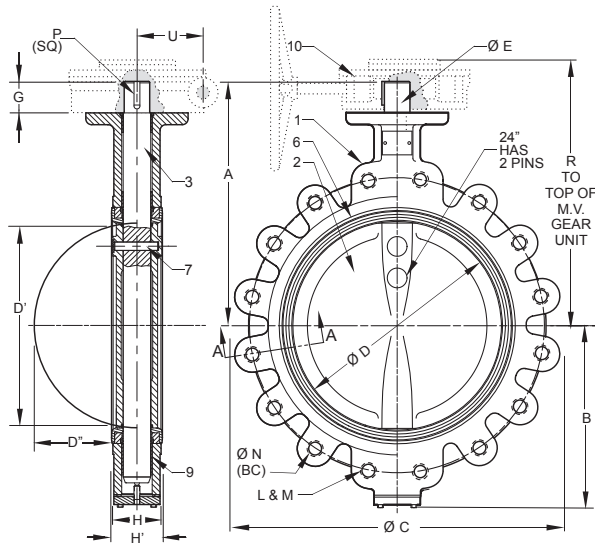
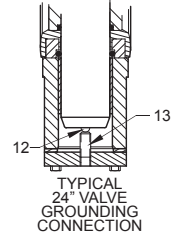
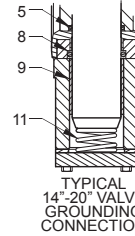
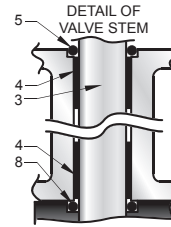
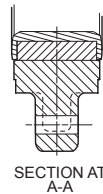
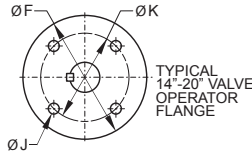
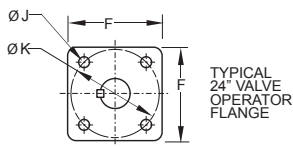


ABS Type Approved;
Cat. A
CFR-46



Tested and Certified by
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and NSF/ANSI 61

Iron Butterfly Valve for Potable Water
Lug Style
150 psi Non-Shock WOG
Dead End Service to 150 psi Max*
Specifications: MSS SP-67 Type 1



DIMENSIONS

	INCHES DN	VALVE SIZE				
		14	16	18	20	24
A	INCHES	15.50	16.75	18.50	19.75	22.43
	mm	398	425	469	501	569
B	INCHES	11.56	12.69	13.63	15.13	18.06
	mm	258	322	346	384	458
C	INCHES	21.00	23.50	25.00	27.50	32.10
	mm	533	596	635	698	815
D	INCHES	13.25	15.25	17.24	19.24	23.25
	mm	336	387	438	489	591
D ¹ (Chord Dia.)	INCHES	12.94	14.77	16.70	18.64	22.49
	mm	329	375	424	474	571
D ¹¹ (Intrusion)	INCHES	5.06	5.59	6.34	7.09	8.55
	mm	128	142	161	180	217
E	INCHES	1.63	1.63	2.13	2.13	2.13
	mm	41	41	54	54	54
F	INCHES	6.50	6.50	9.50	9.50	7.50
	mm	165	165	241	241	190
G	INCHES	2.00	2.00	3.00	3.00	3.06
	mm	50	50	76	76	77
H (Body)	INCHES	3.06	4.00	4.50	5.00	6.06
	mm	77	101	114	127	153
H ¹ (Liner)	INCHES	3.19	4.13	4.63	5.13	6.19
	mm	81	104	117	130	157
J	INCHES	0.69	0.69	0.81	0.81	0.81
	mm	17	17	20	20	20
K	INCHES	5.25	5.25	7.50	7.50	7.50
	mm	133	133	190	190	190
L	No. of Holes	12	16	16	20	20
	Thread Size	1-8	1-8	1 1/8-7	1 1/8-7	1 1/4-7
M	INCHES	18.75	21.25	22.75	25.00	29.50
	mm	476	540	577	635	749
N	INCHES	0.38	0.38	0.50	0.50	0.50
	mm	9	9	12	12	12
P (Key Size)	INCHES	17.25	18.75	19.63	20.88	25.00
	mm	438	476	458	530	635
R	INCHES	3.13	3.13	4.50	4.50	4.63
	mm	79	79	114	114	117

MATERIALS LIST

ITEM	PART	MATERIALS
1	BODY	CAST IRON ASTM A126 CL. B
2	DISC	ALUMINUM BRONZE ASTM B148
3	STEM	STAINLESS STEEL TYPE 416
4	TOP BEARING	REINFORCED NYLON
5	STEM O-RING	EPDM
6	LINER	EPDM
7	STEM PIN	ANSI 4140 OR AISI 6150
8	LINER O-RING	EPDM
9	LOWER BEARING	REINFORCED NYLON
10	OPERATOR	GEAR OPERATOR
11	GROUNDING SPRING	STAINLESS STEEL TYPE 302
14"-20"		
12	GROUNDING BALL	AISI-1022
13	TENSION SCREW	AISI-1020

* Uni-directional

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content ≤ 0.25%. Source: California Health and Safety Code (116875).

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Iron Butterfly Valve for Potable Water Lug Style

200 psi Non-Shock WOG

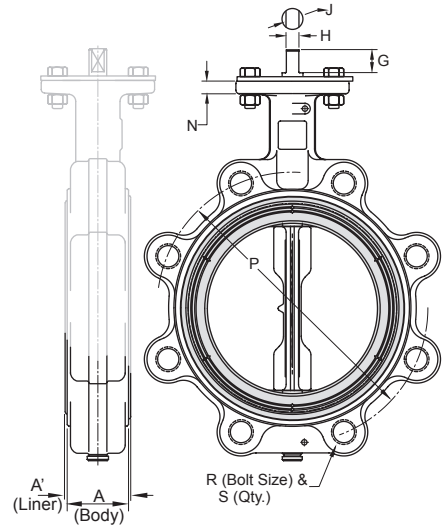
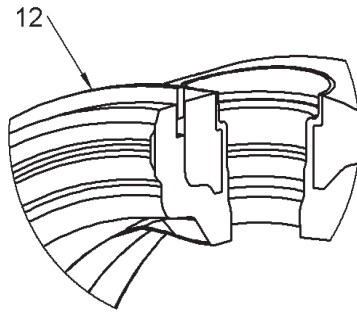
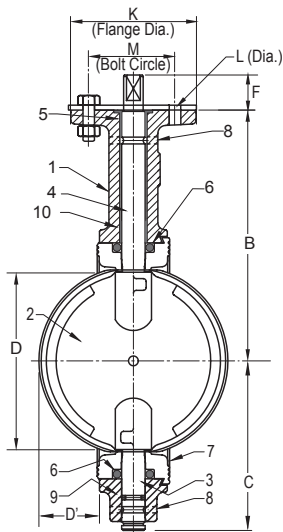
ML133E/ML233E/ML333E 2"-12" Bi-Directional Dead End Service to 200 psi Max Specifications: API-609 MSS SP-67 Type 1



ABS Type Approved;
Cat. A
CFR-46



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IAFMR&T to NSF/ANSI 372
and NSF/ANSI 61



MATERIALS LIST

ITEM	PART	MATERIALS
1	BODY	DUCTILE IRON ASTM A536
2	DISC	ALUMINUM BRONZE ASTM B148
3	BOTTOM STEM	STAINLESS STEEL TYPE 416
4	TOP STEM	STAINLESS STEEL TYPE 416
5	TOP BEARING	REINFORCED NYLON
6	SEAL	EPDM
7	LINER	EPDM
8	ROLL PIN	STAINLESS STEEL
9	STEM SEAL	EPDM
10	LOWER BEARING	REINFORCED NYLON
11	OPERATOR	LEVER HANDLE
		GEAR OPERATOR
		GEAR OPERATOR WITH MEMORY STOP
		GEAR OPERATOR WITH LOCK
		ACTUATOR-AIR/AIR
		ACTUATOR-AIR/SPRING
12	RETAINING RING	1066 SPRING STEEL (65Mn)

DIMENSIONS

	INCHES DN	VALVE SIZE									
		2	2-1/2	3	4	5	6	8	10	12	
A (Body)	INCHES	1.69	1.81	1.81	2.07	2.19	2.19	2.38	2.69	3.06	
	mm	43	46	46	52	55	55	60	68	78	
A ¹ (Body)	INCHES	1.82	1.94	1.94	2.20	2.32	2.32	2.51	2.82	3.21	
	mm	46	49	49	55	58	58	63	71	82	
B	INCHES	5.50	6.00	6.25	7.00	7.53	8.00	9.38	10.56	12.06	
	mm	139	152	158	177	191	203	238	268	306	
C	INCHES	3.06	3.31	3.75	4.25	4.94	5.56	5.56	7.88	9.25	
	mm	77	84	95	108	125	141	166	200	235	
D (Chord Dia)	INCHES	1.49	2.01	2.64	3.67	4.71	5.66	7.72	9.70	11.68	
	mm	37	51	67	93	119	143	196	246	296	
D ¹ (Intrusion)	INCHES	0.28	0.44	0.69	1.06	1.50	1.94	2.84	3.69	4.50	
	mm	7	11	17	27	38	49	72	93	114	
F	INCHES	1.13	1.13	1.13	1.13	1.13	1.13	1.50	1.50	1.50	
	mm	28	28	28	28	28	28	38	38	38	
G	INCHES	0.81	0.81	0.81	0.81	0.81	0.81	1.06	1.06	1.06	
	mm	20	20	20	20	20	20	27	27	27	
H	INCHES	0.35	0.35	0.35	0.40	0.40	0.44	0.53	0.71	0.71	
	mm	8	8	8	10	10	11	13	18	18	
J	INCHES	0.50	0.50	0.50	0.56	0.56	0.62	0.75	1.00	1.00	
	mm	12	12	12	14	14	14	19	25	25	
K	INCHES	4	4	4	4	4	4	6	6	6	
	mm	101.6	101.6	101.6	101.6	101.6	101.6	152.4	152.4	152.4	
L (Dia)	INCHES	0.44	0.44	0.44	0.44	0.44	0.44	0.56	0.56	0.56	
	mm	11	11	11	11	11	11	14	14	14	
M	INCHES	3.25	3.25	3.25	3.25	3.25	3.25	5.00	5.00	5.00	
	mm	82	82	82	82	82	82	127	127	127	
N	INCHES	0.44	0.44	0.44	0.44	0.44	0.44	0.50	0.50	0.50	
	mm	11	11	11	11	11	11	12	12	12	
P	INCHES	4.75	5.50	6.00	7.50	8.50	9.50	11.75	14.25	17.00	
	mm	120	139	152	190	215	241	298	362	431	
R	INCHES	5/8-11	5/8-11	5/8-11	5/8-11	3/4-10	3/4-10	3/4-10	7/8-9	7/8-9	
	mm	15.875	15.875	15.875	15.875	19.05	19.05	19.05	19.05	19.05	
S	INCHES	4	4	4	8	8	8	8	12	12	
	mm	101.6	101.6	101.6	203.2	203.2	203.2	203.2	304.8	304.8	

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ML133E/ML333E 14"-24"

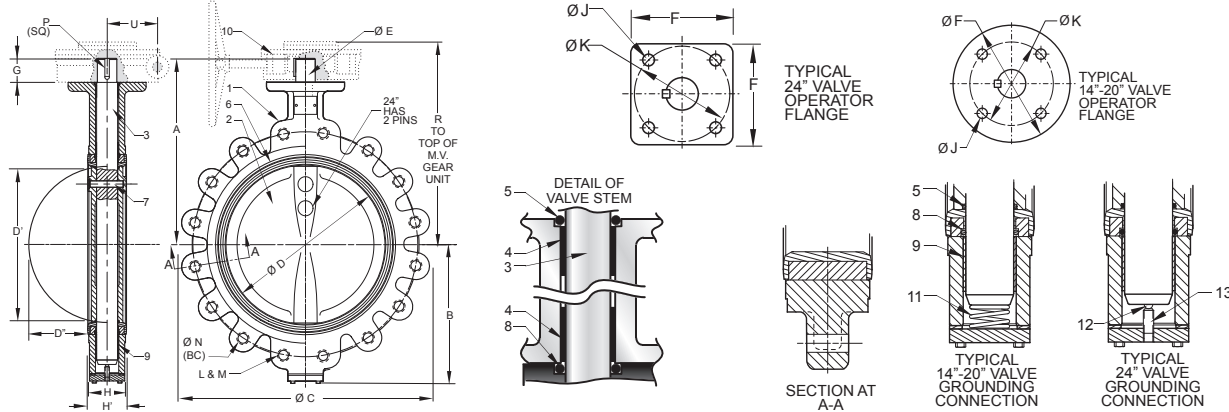
**Iron Butterfly Valve for Potable Water
Lug Style
150 psi Non-Shock WOG
Dead End Service to 150 psi Max*
Specifications: MSS SP-67 Type 1**



ABS Type Approved;
Cat. A
CFR-46



Tested and Certified by
IAPMO R&T to NSF/ANSI 372
and NSF/ANSI 61



MATERIALS LIST

ITEM	PART	MATERIALS
1	BODY	DUCTILE IRON ASTM A536
2	DISC	ALUMINUM BRONZE ASTM B148
3	STEM	STAINLESS STEEL TYPE 416
4	TOP BEARING	REINFORCED NYLON
5	STEM O-RING	EPDM
6	LINER	EPDM
7	STEM PIN	ANSI 4140 OR AISI 6150
8	LINER O-RING	EPDM
9	LOWER BEARING	REINFORCED NYLON
10	OPERATOR	GEAR OPERATOR
		GEAR OPERATOR WITH MEMORY STOP
		GEAR OPERATOR WITH LOCK
		ACTUATOR-AIR/AIR (1)
		ACTUATOR-AIR/SRING (1)
11	GROUNDING SPRING	STAINLESS STEEL TYPE 302
12	GROUNDING BALL	AISI-1022
13	TENSION SCREW	AISI-1020

(1)- Consult Automation Department.

*Uni-directional

DIMENSIONS

	INCHES DN	VALVE SIZE				
		14	16	18	20	24
A	INCHES	15.50	16.75	18.50	19.75	22.43
	mm	398	425	469	501	569
B	INCHES	11.56	12.69	13.63	15.13	18.06
	mm	258	322	346	384	458
C	INCHES	21.00	23.50	25.00	27.50	32.10
	mm	533	596	635	698	815
D	INCHES	13.25	15.25	17.24	19.24	23.25
	mm	336	387	438	489	591
D ¹ (Chord Dia.)	INCHES	12.94	14.77	16.70	18.64	22.49
	mm	329	375	424	474	571
D ¹¹ (Intrusion)	INCHES	5.06	5.59	6.34	7.09	8.55
	mm	128	142	161	180	217
E	INCHES	1.63	1.63	2.13	2.13	2.13
	mm	41	41	54	54	54
F	INCHES	6.50	6.50	9.50	9.50	7.50
	mm	165	165	241	241	190
G	INCHES	2.00	2.00	3.00	3.00	3.06
	mm	50	50	76	76	77
H (Body)	INCHES	3.06	4.00	4.50	5.00	6.06
	mm	77	101	114	127	153
H ¹ (Liner)	INCHES	3.19	4.13	4.63	5.13	6.19
	mm	81	104	117	130	157
J	INCHES	0.69	0.69	0.81	0.81	0.81
	mm	17	17	20	20	20
K	INCHES	5.25	5.25	7.50	7.50	7.50
	mm	133	133	190	190	190
L	No. of Holes	12	16	16	20	20
	Thread Size	1-8	1-8	1 1/8-7	1 1/8-7	1 1/4-7
N	INCHES	18.75	21.25	22.75	25.00	29.50
	mm	476	540	577	635	749
P (Key Size)	INCHES	0.38	0.38	0.50	0.50	0.50
	mm	9	9	12	12	12
R	INCHES	17.25	18.75	19.63	20.88	25.00
	mm	438	475	458	530	635
U	INCHES	3.13	3.13	4.50	4.50	4.63
	mm	79	79	114	114	117

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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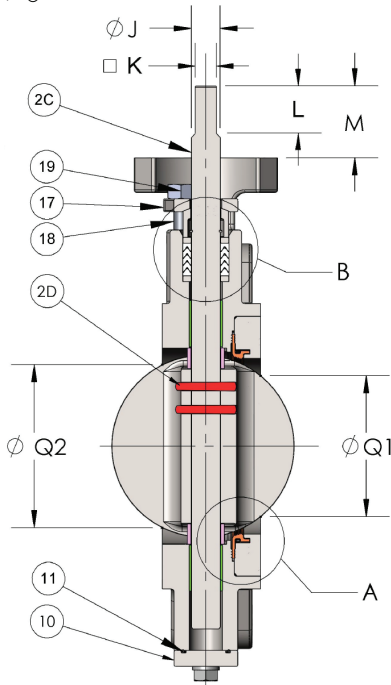
⚠ State of California Prop 65 **WARNING:** Cancer and Reproductive Harm. For more information visit www.p65warnings.ca.gov.



HP1LSS4213 Lug 2 1/2" - 10" with Gear Class 150

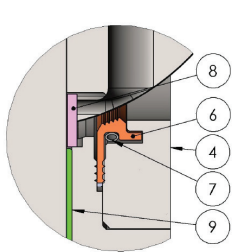


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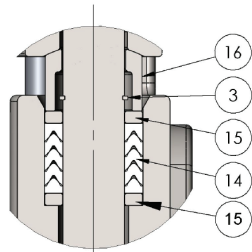


VALVE SHOWN OPEN

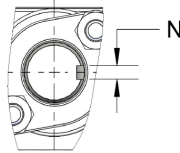
2 1/2" - 10" 150 LB LUG WITH GEAR			
ITEM NO.	PARTS NAME	MATERIAL	SPECIFICATION
1	BODY	STAINLESS STEEL	ASTM A351 GR. CF8M
2	STEM & DISC ASSEMBLY		
	2B. DISC	STAINLESS STEEL	ASTM A351 GR. CF8M
	2C. STEM	STAINLESS STEEL	17-4PH H1150
	2D. TAPER PIN	18-8 STAINLESS STEEL	COMMERCIAL
3	STEM RETAINER	304 STAINLESS STEEL	COMMERCIAL
4	SEAT RETAINER RING	STAINLESS STEEL	ASTM A240 TY.316
5	SOCKET HEAD CAP SCREW	STAINLESS STEEL	ASTM A193 GR. B8M
6	SEAT	15% GLS. FLD PTFE	COMMERCIAL
7	SEAT SPRING	STAINLESS STEEL	COMMERCIAL
8	DISC SPACER	316 STAINLESS STEEL	COMMERCIAL
9	BEARING	STAINLESS STEEL - PTFE COATED	COMMERCIAL
10	BOTTOM CAP	STAINLESS STEEL	ASTM A351 GR. CF8M
11	BOTTOM SEAL	GRAPHITE	COMMERCIAL
12	HEX HEAD CAP SCREW	STAINLESS STEEL	ASTM A193 GR. B8M
13	SPLIT LOCKWASHER	STAINLESS STEEL	COMMERCIAL
14	PACKING V-RING SET	PTFE COMMERCIAL	COMMERCIAL
15	PACKING WASHER	304 STAINLESS STEEL	COMMERCIAL
16	GLAND FOLLOWER	STAINLESS STEEL	ASTM A351 GR. CF8M
17	GLAND RETAINER	STAINLESS STEEL	ASTM A351 GR. CF8M
18	STUD	STAINLESS STEEL	ASTM A193 GR. B8M
19	HEAVY HEX NUT	STAINLESS STEEL	ASTM 194 GR. 8M
20	SOCKET HEAD CAP SCREW	STAINLESS STEEL	ASTM A193 GR. B8M
21	SPLIT LOCKWASHER	STAINLESS STEEL	COMMERCIAL
22	MOUNTING PLATE	STAINLESS STEEL	COMMERCIAL
23	GEAR OPERATOR		



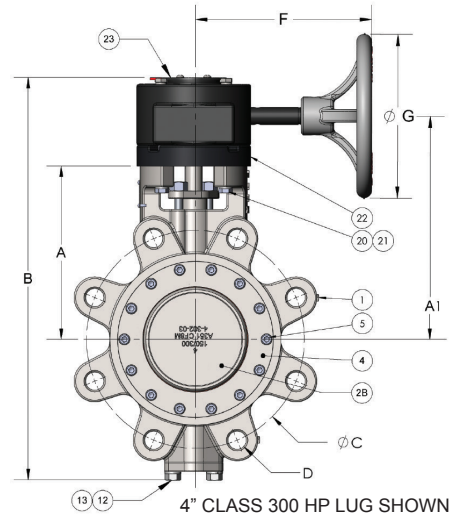
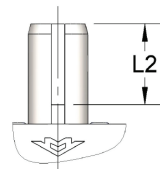
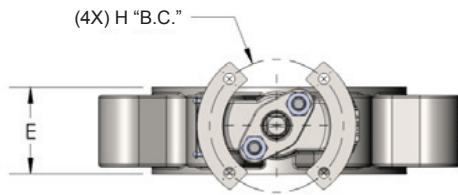
DETAIL A



DETAIL B



8" KEY DETAIL



4" CLASS 300 HP LUG SHOWN

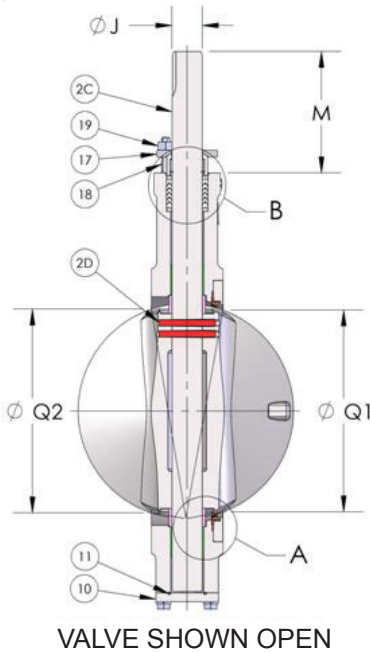
2 1/2" - 10" 150 LB LUG WITH GEAR																			
VALVE SIZE	VALVE DIMENSIONS							HANDWHEEL		TOP WORKS		STEM CONNECTION					CHORD DIMS		BOLT Ø
	"A" HEIGHT	"A1" HEIGHT	"B" HEIGHT	"C" B.C.	"D" TAP	# OF HOLES	"E" FACE	"F"	"G" DIA	"H" B.C.	"J" ØSTEM	"K" SQUARE	"L" LENGTH	"L2"	"M" LENGTH	"N" KEYWAY	ØQ1	ØQ2	
2.5" 150	5.59	7.40	12.72	5.50	5/8-11	4	1.88	6.37	6	3.25	0.62	0.46	1.02	N/A	1.64	N/A	1.72	1.97	0.27
3" 150	5.59	7.40	12.72	6.00	5/8-11	4	1.88	6.37	6	3.25	0.62	0.46	1.02	N/A	1.72	N/A	2.28	2.47	0.27
4" 150	6.25	8.06	14.25	7.50	5/8-11	8	2.13	6.37	6	3.25	0.62	0.46	1.02	N/A	1.56	N/A	3.06	3.53	0.27
5" 150	7.69	10.30	18.70	8.50	3/4-10	8	2.13	6.02	9	4.25	0.87	0.64	1.04	N/A	1.69	N/A	4.35	4.46	0.44
6" 150	7.69	10.30	18.70	9.50	3/4-10	8	2.25	6.02	9	4.25	0.87	0.64	1.04	N/A	1.69	N/A	5.13	5.43	0.44
8" 150	9.51	12.01	21.67	11.75	3/4-10	8	2.63	7.93	12	4.75	1.12	N/A	N/A	1.50	1.86	0.25	7.10	7.37	0.56
10" 150	10.54	13.04	23.15	14.25	7/8-9	12	2.81	7.93	12	4.75	1.12	N/A	N/A	1.50	1.81	0.25	9.30	9.38	0.56

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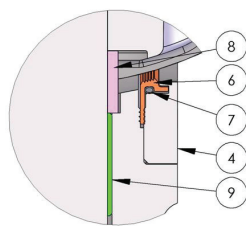
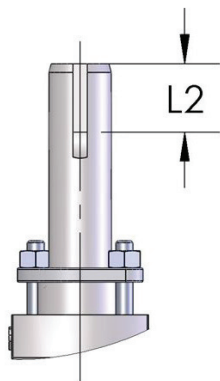
⚠ State of California Prop 65 **WARNING:** Cancer and Reproductive Harm. For more information visit www.p65warnings.ca.gov.



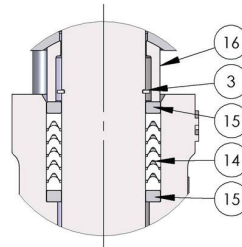
HP1LSS4213 Lug 12"- 24" with Gear Class 150



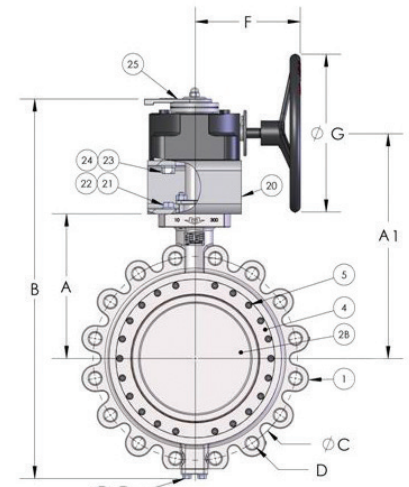
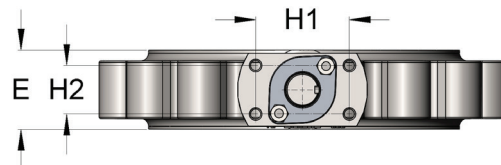
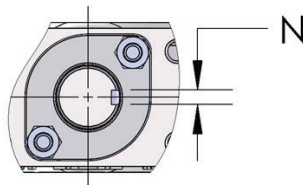
12" - 24" 150 LB LUG WITH GEAR			
ITEM NO.	PARTS NAME	MATERIAL	SPECIFICATION
1	BODY	STAINLESS STEEL	ASTM A351 GR. CF8M
2	STEM & DISC ASSEMBLY		
	2B. DISC	STAINLESS STEEL	ASTM A351 GR. CF8M
	2C. STEM	STAINLESS STEEL	17-4PH H1150
	2D. TAPER PIN	18-8 STAINLESS STEEL	COMMERCIAL
3	STEM RETAINER	304 STAINLESS STEEL	COMMERCIAL
4	SEAT RETAINER RING	A. CARBON STEEL	ASTM A515 GR. 70
		B. STAINLESS STEEL	ASTM A240 TY.316
5	SOCKET HEAD CAP SCREW	STAINLESS STEEL	ASTM A193 GR. B8M
6	SEAT	A. PTFE COMMERCIAL	COMMERCIAL
		B. 15% GLS. FLD PTFE	COMMERCIAL
		C. UHMWPE	COMMERCIAL
7	SEAT SPRING	STAINLESS STEEL	COMMERCIAL
8	DISC SPACER	316 STAINLESS STEEL	COMMERCIAL
9	BEARING	STAINLESS STEEL - PTFE COATED	COMMERCIAL
10	BOTTOM CAP	STAINLESS STEEL	ASTM A351 GR. CF8M
11	BOTTOM SEAL	GRAPHITE	COMMERCIAL
12	HEX HEAD CAP SCREW	STAINLESS STEEL	ASTM A193 GR. B8M
13	SPLIT LOCKWASHER	STAINLESS STEEL	COMMERCIAL
14	PACKING V-RING SET	A. PTFE COMMERCIAL	COMMERCIAL
		B. GRAPHITE	COMMERCIAL
15	PACKING WASHER	304 STAINLESS STEEL	COMMERCIAL
16	GLAND FOLLOWER	STAINLESS STEEL	ASTM A351 GR. CF8M
17	GLAND RETAINER	STAINLESS STEEL	ASTM A351 GR. CF8M
18	STUD	STAINLESS STEEL	ASTM A193 GR. B8M
19	HEAVY HEX NUT	STAINLESS STEEL	ASTM 194 GR. 8M
20	MOUNTING PLATE	STAINLESS STEEL	COMMERCIAL
21	HEX HEAD CAP SCREW	STAINLESS STEEL	ASTM A193 GR. B8M
22	SPLIT LOCKWASHER	STAINLESS STEEL	COMMERCIAL
23	HEX HEAD CAP SCREW	STAINLESS STEEL	ASTM A193 GR. B8M
24	SPLIT LOCKWASHER	STAINLESS STEEL	COMMERCIAL
25	GEAR OPERATOR		



DETAIL A



DETAIL B



10" 300 LUG SHOWN

12" - 24" 150 LB LUG WITH GEAR																		
VALVE SIZE	VALVE DIMENSIONS							HANDWHEEL	TOP WORKS		STEM CONNECTION					CHORD DIMS		BOLT Ø
	"A" HEIGHT	"A1" HEIGHT	"B" HEIGHT	"C" B.C	"D" TAP	# OF HOLES	"E" FACE		"F"	"G" DIA	"H1"	"H2"	"J" ØSTEM	"L2" LENGTH	"M" LENGTH	"N"	ØQ1	
12"	11.62	17.67	30.40	17.00	7/8-9	12	3.19	7.85	12	3.88	2.00	1.37	1.50	5.51	0.31	10.36	10.48	1/2" - 13"
14"	12.00	18.36	31.74	18.75	1-8	12	3.63	8.36	12	4.50	2.00	1.50	1.50	5.50	0.38	11.69	11.76	1/2" - 13"
16"	14.00	20.11	35.96	21.25	1-8	16	4.00	10.96	20	5.75	2.50	2.00	2.38	6.02	0.50	13.65	13.72	1/2" - 13"
18"	15.00	21.09	38.12	22.75	1-1/8-8	16	4.47	11.95	20	5.75	2.50	2.25	2.38	6.02	0.50	15.65	15.72	1/2" - 13"
20"	17.00	24.19	40.03	25.00	1-1/8-8	20	5.00	16.54	16	5.75	2.50	2.50	2.38	6.48	0.63	17.57	17.64	1/2" - 13"
24"	19.50	25.69	49.30	29.50	1-1/4-8	20	6.06	16.54	16	6.00	4.00	3.00	2.50	6.52	0.75	20.38	20.46	3/4" - 10"

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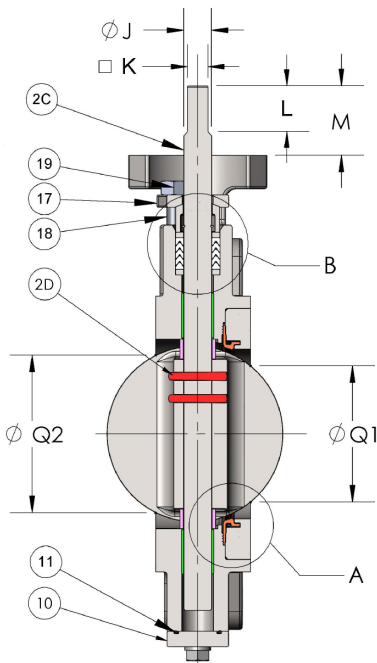
⚠ State of California Prop 65 **WARNING:** Cancer and Reproductive Harm. For more information visit www.p65warnings.ca.gov.



HP1LSS4213 Lug 2 1/2" - 8" with Gear Class 150

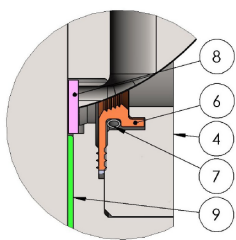


Certified by IAPMO R&T to NSF/ANSI 61 and NSF/ANSI 372 for low lead requirements

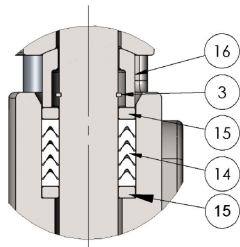


VALVE SHOWN OPEN

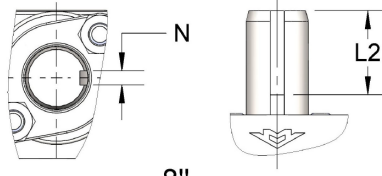
2 1/2" - 8"			
ITEM NO.	PARTS NAME	MATERIAL	SPECIFICATION
1	BODY	STAINLESS STEEL	ASTM A351 GR. CF8M
2	STEM & DISC ASSEMBLY		
	2B. DISC	STAINLESS STEEL	ASTM A351 GR. CF8M
	2C. STEM	STAINLESS STEEL	17-4PH H1150
	2D. TAPER PIN	18-8 STAINLESS STEEL	COMMERCIAL
3	STEM RETAINER	304 STAINLESS STEEL	COMMERCIAL
4	SEAT RETAINER RING	STAINLESS STEEL	ASTM A240 TY.316
5	SOCKET HEAD CAP SCREW	STAINLESS STEEL	ASTM A193 GR. B8M
6	SEAT	15% GLS. FLD PTFE	COMMERCIAL
7	SEAT SPRING	STAINLESS STEEL	COMMERCIAL
8	DISC SPACER	316 STAINLESS STEEL	COMMERCIAL
9	BEARING	STAINLESS STEEL - PTFE COATED	COMMERCIAL
10	BOTTOM CAP	STAINLESS STEEL	ASTM A351 GR. CF8M
11	BOTTOM SEAL	GRAPHITE	COMMERCIAL
12	HEX HEAD CAP SCREW	STAINLESS STEEL	ASTM A193, GR. B8M
13	SPLIT LOCKWASHER	STAINLESS STEEL	COMMERCIAL
14	PACKING V-RING SET	PTFE COMMERCIAL	COMMERCIAL
15	PACKING WASHER	304 STAINLESS STEEL	COMMERCIAL
16	GLAND FOLLOWER	STAINLESS STEEL	ASTM A351 GR. CF8M
17	GLAND RETAINER	STAINLESS STEEL	ASTM A351 GR. CF8M
18	STUD	STAINLESS STEEL	ASTM A193 GR. B8M
19	HEAVY HEX NUT	STAINLESS STEEL	ASTM A194 GR. 8M
20	SOCKET HEAD CAP SCREW	STAINLESS STEEL	ASTM A193 GR. B8M
21	SPLIT LOCKWASHER	STAINLESS STEEL	COMMERCIAL
22	HANDLE ASSY	DUCTILE IRON	COMMERCIAL



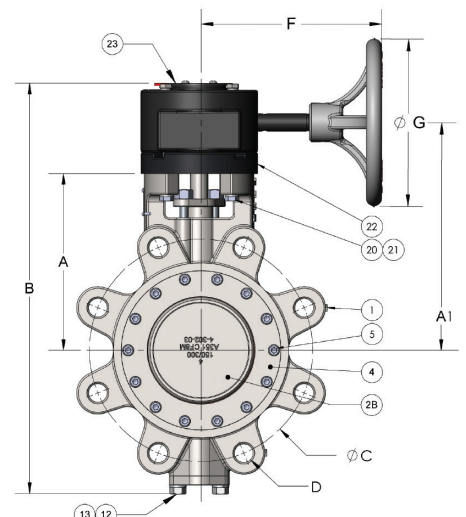
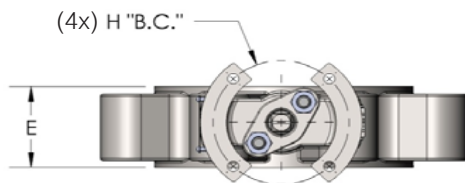
DETAIL A



DETAIL B



8" KEY DETAIL



4" CLASS 300 HP LUG SHOWN

VALVE SIZE	VALVE DIMENSIONS							HANDWHEEL			TOP WORKS				STEM CONNECTION				CORE DIMS		Bolt ϕ
	"A" HEIGHT	"A1" HEIGHT	"B" HEIGHT	"C" B.C.	"D" TAP	# OF HOLES	"E" FACE	"F"	"G" DIA	"H" B.C	"J" ϕ STEM	"K" SQUARE	"L" LENGTH	"L2"	"M" LENGTH	"N" KEYWAY	ϕ Q1	ϕ Q2			
2.5" 150	5.59	7.40	12.72	5.50	5/8-11	4	1.88	6.37	6	3.25	0.62	0.46	1.02	N/A	1.64	N/A	1.72	1.97	0.27		
3" 150	5.59	7.40	12.72	6.00	5/8-11	4	1.88	6.37	6	3.25	0.62	0.46	1.02	N/A	1.72	N/A	2.28	2.47	0.27		
4" 150	6.25	8.06	14.25	7.50	5/8-11	8	2.13	6.37	6	3.25	0.62	0.46	1.02	N/A	1.56	N/A	3.06	3.53	0.27		
5" 150	7.69	10.30	18.70	8.50	3/4-10	8	2.13	6.02	9	4.25	0.87	0.64	1.04	N/A	1.69	N/A	4.35	4.46	0.44		
6" 150	7.69	10.30	18.70	9.50	3/4-10	8	2.25	6.02	9	4.25	0.87	0.64	1.04	N/A	1.69	N/A	5.13	5.43	0.44		
8" 150	9.51	12.01	21.67	11.75	3/4-10	8	2.63	7.93	12	4.75	1.12	N/A	N/A	1.50	1.86	0.25	7.10	7.37	0.56		

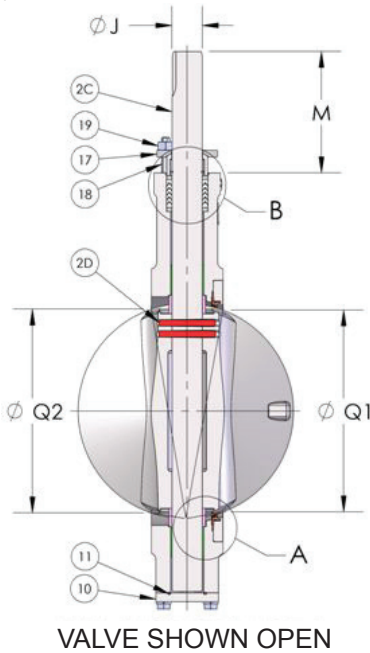
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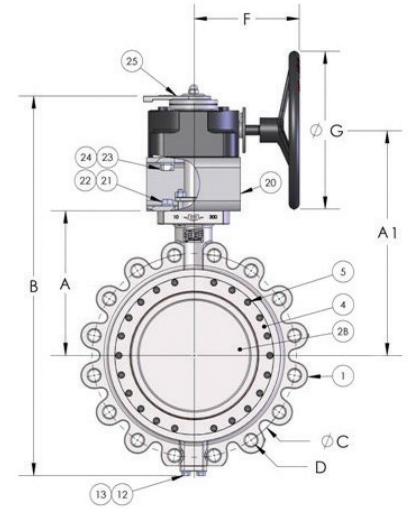
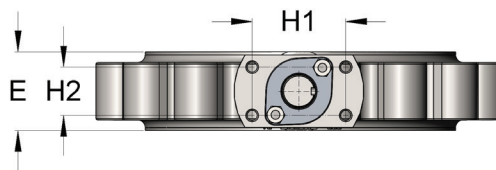
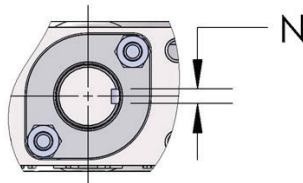
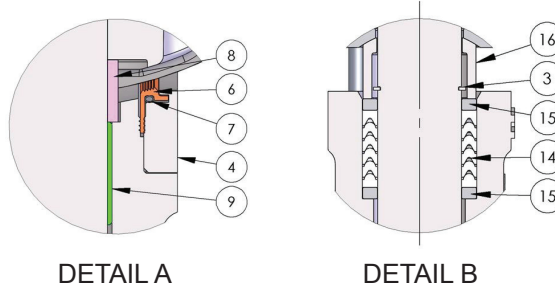
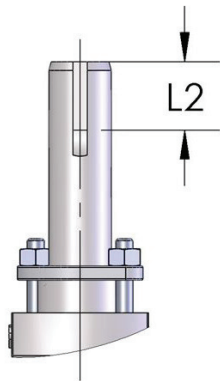
HP3LSS4213 Lug 10" - 16" with Gear Class 300



Certified by IAPMO R&T to NSF/ANSI 61 and NSF/ANSI 372 for low lead requirements



10" - 16" 300 LB LUG WITH GEAR			
ITEM NO.	PARTS NAME	MATERIAL	SPECIFICATION
1	BODY	STAINLESS STEEL	ASTM A351 GR. CF8M
2	STEM & DISC ASSEMBLY		
	2B. DISC	STAINLESS STEEL	ASTM A351 GR. CF8M
	2C. STEM	STAINLESS STEEL	17-4PH H1150
	2D. TAPER PIN	18-8 STAINLESS STEEL	COMMERCIAL
3	STEM RETAINER	304 STAINLESS STEEL	COMMERCIAL
4	SEAT RETAINER RING	A. CARBON STEEL	ASTM A515 GR. 70
		B. STAINLESS STEEL	ASTM A240 TY.316
5	SOCKET HEAD CAP SCREW	STAINLESS STEEL	ASTM A193 GR. B8M
6	SEAT	A. PTFE COMMERCIAL	COMMERCIAL
		B. 15% GLS. FLD PTFE	COMMERCIAL
		C. UHMWPE	COMMERCIAL
7	SEAT SPRING	STAINLESS STEEL	COMMERCIAL
8	DISC SPACER	316 STAINLESS STEEL	COMMERCIAL
9	BEARING	STAINLESS STEEL - PTFE COATED	COMMERCIAL
10	BOTTOM CAP	STAINLESS STEEL	ASTM A351 GR. CF8M
11	BOTTOM SEAL	GRAPHITE	COMMERCIAL
12	HEX HEAD CAP SCREW	STAINLESS STEEL	ASTM A193 GR. B8M
13	SPLIT LOCKWASHER	STAINLESS STEEL	COMMERCIAL
14	PACKING V-RING SET	A. PTFE COMMERCIAL	COMMERCIAL
		B. GRAPHITE	COMMERCIAL
15	PACKING WASHER	304 STAINLESS STEEL	COMMERCIAL
16	GLAND FOLLOWER	STAINLESS STEEL	ASTM A351 GR. CF8M
17	GLAND RETAINER	STAINLESS STEEL	ASTM A351 GR. CF8M
18	STUD	STAINLESS STEEL	ASTM A193 GR. B8M
19	HEAVY HEX NUT	STAINLESS STEEL	ASTM 194 GR. 8M
20	MOUNTING PLATE	STAINLESS STEEL	COMMERCIAL
21	HEX HEAD CAP SCREW	STAINLESS STEEL	ASTM A193 GR. B8M
22	SPLIT LOCKWASHER	STAINLESS STEEL	COMMERCIAL
23	HEX HEAD CAP SCREW	STAINLESS STEEL	ASTM A193 GR. B8M
24	SPLIT LOCKWASHER	STAINLESS STEEL	COMMERCIAL
25	GEAR OPERATOR		



10" CLASS 300 LUG SHOWN

10" - 16" 300 LB LUG WITH GEAR																		
VALVE SIZE	VALVE DIMENSIONS							HANDWHEEL	TOP WORKS		STEM CONNECTION			CHORD DIMS		BOLT Ø		
	"A" HEIGHT	"A1" HEIGHT	"B" HEIGHT	"C" B.C	"D" TAP	# OF HOLES	"E" FACE		"F"	"G" DIA	"H1"	"H2"	"J" ØSTEM	"L2" LENGTH	"M" LENGTH		"N"	ØQ1
10"	10.81	16.86	28.40	15.25	1-8	16	3.25	7.85	12	3.88	2.00	1.37	1.50	5.51	0.31	9.16	9.25	1/2" - 13'
12"	11.62	17.98	31.18	17.75	1-1/8-8	16	3.63	8.63	12	4.50	2.00	1.50	1.50	5.88	0.38	10.25	10.34	1/2" - 13'
14"	13.50	19.61	35.12	20.25	1-1/8-8	20	4.63	10.96	20	5.75	2.50	2.00	2.38	6.02	0.50	11.39	11.49	1/2" - 13'
16"	15.00	21.09	38.12	22.50	1-1/4-8	20	5.25	11.95	20	5.75	2.50	2.25	2.38	6.02	0.50	13.26	13.36	1/2" - 13'

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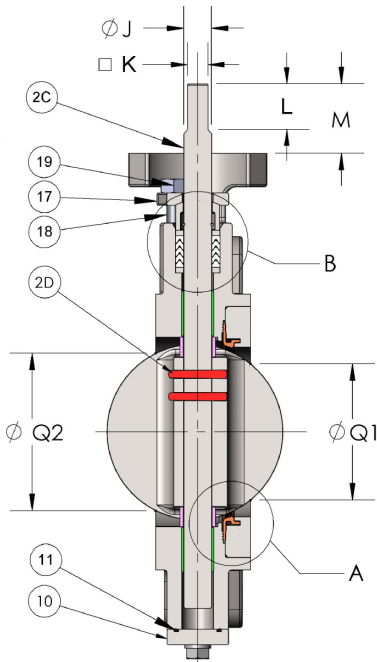
⚠ State of California Prop 65 **WARNING:** Cancer and Reproductive Harm. For more information visit www.p65warnings.ca.gov.



HP3LSS4213 Lug 2 1/2" - 8" with Gear Class 300

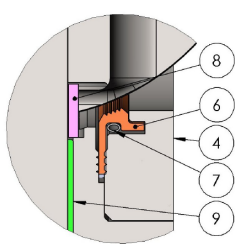


Certified by IAPMO R&T to NSF/ANSI 61 and NSF/ANSI 372 for low lead requirements

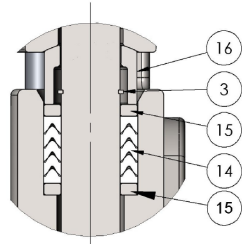


VALVE SHOWN OPEN

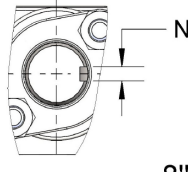
2 1/2" - 8" 300 LB LUG WITH GEAR			
ITEM NO.	PARTS NAME	MATERIAL	SPECIFICATION
1	BODY	STAINLESS STEEL	ASTM A351 GR. CF8M
2	STEM & DISC ASSEMBLY		
	2B. DISC	STAINLESS STEEL	ASTM A351 GR. CF8M
	2C. STEM	STAINLESS STEEL	17-4PH H1150
	2D. TAPER PIN	18-8 STAINLESS STEEL	COMMERCIAL
3	STEM RETAINER	304 STAINLESS STEEL	COMMERCIAL
4	SEAT RETAINER RING		
	A. CARBON STEEL		ASTM A515 GR. 70
	B. STAINLESS STEEL		ASTM A240 TY.316
5	SOCKET HEAD CAP SCREW	STAINLESS STEEL	ASTM A193 GR. B8M
6	SEAT		
	A. PTFE COMMERCIAL		COMMERCIAL
	B. 15% GLS. FLD PTFE		COMMERCIAL
	C. UHMWPE		COMMERCIAL
7	SEAT SPRING	STAINLESS STEEL	COMMERCIAL
8	DISC SPACER	316 STAINLESS STEEL	COMMERCIAL
9	BEARING	STAINLESS STEEL - PTFE COATED	COMMERCIAL
10	BOTTOM CAP	STAINLESS STEEL	ASTM A351 GR. CF8M
11	BOTTOM SEAL	GRAPHITE	COMMERCIAL
12	HEX HEAD CAP SCREW	STAINLESS STEEL	ASTM A193, GR. B8M
13	SPLIT LOCKWASHER	STAINLESS STEEL	COMMERCIAL
14	PACKING V-RING SET		
	A. PTFE COMMERCIAL		COMMERCIAL
	B. GRAPHITE		COMMERCIAL
15	PACKING WASHER	304 STAINLESS STEEL	COMMERCIAL
16	GLAND FOLLOWER	STAINLESS STEEL	ASTM A351 GR. CF8M
17	GLAND RETAINER	STAINLESS STEEL	ASTM A351 GR. CF8M
18	STUD	STAINLESS STEEL	ASTM A193 GR. B8M
19	HEAVY HEX NUT	STAINLESS STEEL	ASTM A194 GR. 8M
20	SOCKET HEAD CAP SCREW	STAINLESS STEEL	ASTM A193 GR. B8M
21	SPLIT LOCKWASHER	STAINLESS STEEL	COMMERCIAL
22	HANDLE ASSY	DUCTILE IRON	COMMERCIAL



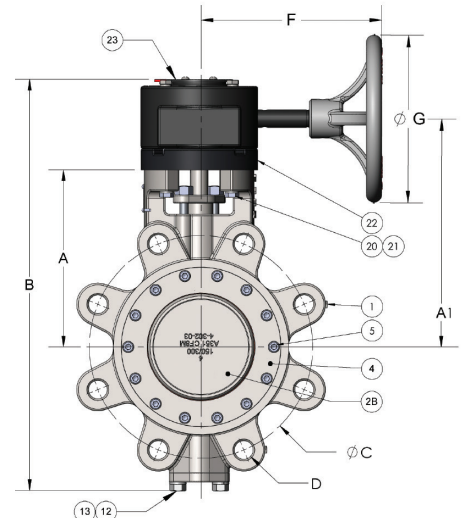
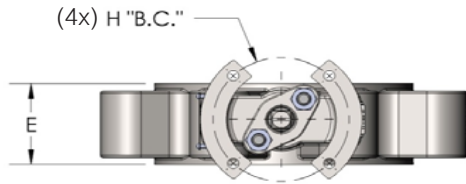
DETAIL A



DETAIL B



8" KEY DETAIL



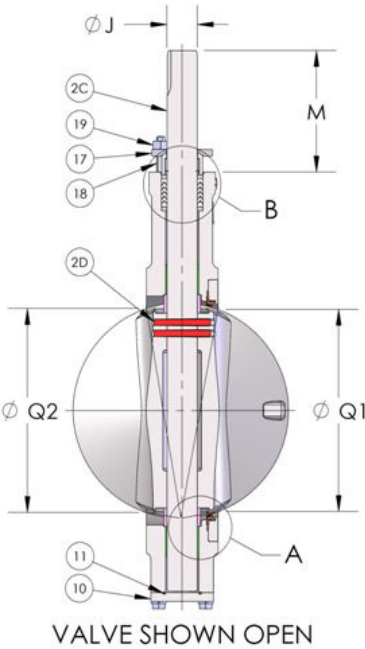
4" CLASS 300 HP LUG SHOWN

2.5" - 8" 300 LB LUG WITH GEAR																					
VALVE SIZE	VALVE DIMENSIONS							HANDWHEEL			TOP WORKS		STEM CONNECTION						CORE DIMS		Bolt ϕ
	"A" HEIGHT	"A1" HEIGHT	"B" HEIGHT	"C" B.C.	"D" TAP	# OF HOLES	"E" FACE	"F"	"G" DIA	"H" B.C.	"J" ØSTEM	"K" SQUARE	"L" LENGTH	"L2"	"M" LENGTH	"N" KEYWAY	ØQ1	ØQ2			
2.5"	5.59	7.40	13.59	5.88	3/4-10	8	1.88	6.37	6	3.25	0.62	0.46	1.02	N/A	1.64	N/A	1.72	1.97	0.27		
3"	5.59	7.40	13.45	6.63	3/4-10	8	1.88	6.37	6	3.25	0.62	0.46	1.02	N/A	1.72	N/A	2.28	2.47	0.27		
4"	6.25	8.06	14.53	7.88	3/4-10	8	2.13	6.37	6	3.25	0.62	0.46	1.02	N/A	1.56	N/A	3.06	3.53	0.27		
5"	7.69	10.30	18.70	9.25	3/4-10	8	2.13	6.02	9	4.25	0.87	0.64	1.04	N/A	1.69	N/A	4.35	4.46	0.44		
6"	7.69	10.30	19.73	10.63	3/4-10	12	2.31	6.02	9	4.25	0.87	0.64	1.04	N/A	1.69	N/A	5.33	5.39	0.44		
8"	9.51	12.01	21.67	13.00	7/8-9	12	2.88	7.93	12	4.75	1.12	N/A	N/A	1.50	1.86	0.25	7.10	7.20	0.56		

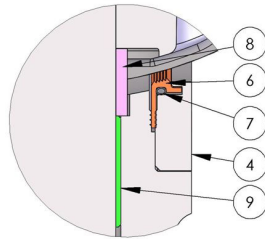
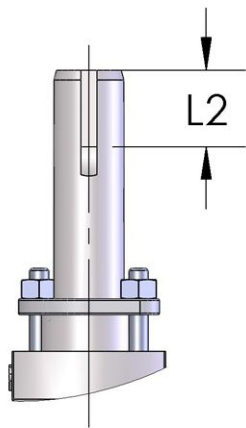
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 ⚠ State of California Prop 65 **WARNING:** Cancer and Reproductive Harm. For more information visit www.p65warnings.ca.gov.



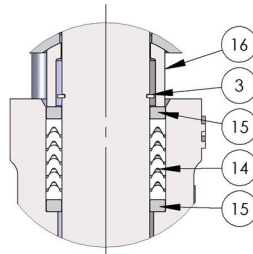
HP3LSS4213 Lug 10"- 16" with Gear Class 300



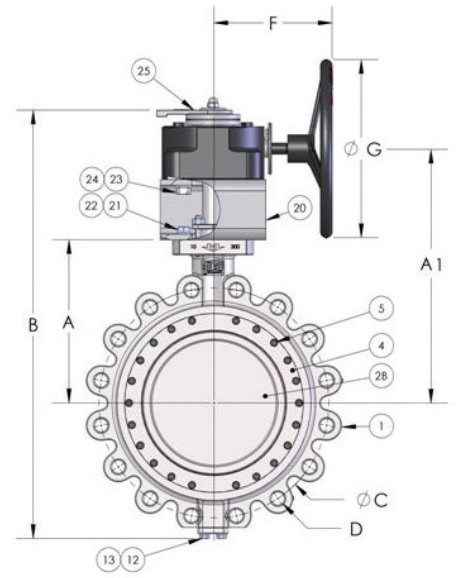
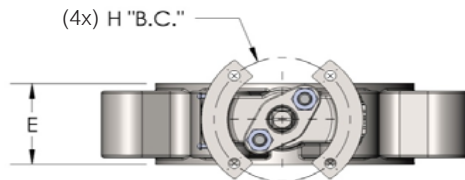
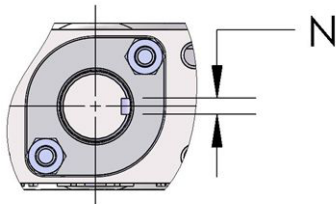
10" - 16" 300 LB LUG WITH GEAR			
ITEM NO.	PARTS NAME	MATERIAL	SPECIFICATION
1	BODY	STAINLESS STEEL	ASTM A351 GR. CF8M
2	STEM & DISC ASSEMBLY		
	2B. DISC	STAINLESS STEEL	ASTM A351 GR. CF8M
	53.3	STAINLESS STEEL	17-4PH H1150
	94.3	18-8 STAINLESS STEEL	COMMERCIAL
3	STEM RETAINER	304 STAINLESS STEEL	COMMERCIAL
4	SEAT RETAINER RING		
	A. CARBON STEEL		ASTM A515 GR. 70
	B. STAINLESS STEEL		ASTM A240 TY.316
5	SOCKET HEAD CAP SCREW	STAINLESS STEEL	ASTM A193 GR. B8M
6	SEAT		
	A. PTFE COMMERCIAL		COMMERCIAL
	B. 15% GLS. FLD PTFE		COMMERCIAL
	C. UHMWPE		COMMERCIAL
7	SEAT SPRING	STAINLESS STEEL	COMMERCIAL
8	DISC SPACER	316 STAINLESS STEEL	COMMERCIAL
9	BEARING	STAINLESS STEEL - PTFE COATED	COMMERCIAL
10	BOTTOM CAP	STAINLESS STEEL	ASTM A351 GR. CF8M
11	BOTTOM SEAL	GRAPHITE	COMMERCIAL
12	HEX HEAD CAP SCREW	STAINLESS STEEL	ASTM A193, GR. B8M
13	SPLIT LOCKWASHER	STAINLESS STEEL	COMMERCIAL
14	PACKING V-RING SET		
	A. PTFE COMMERCIAL		COMMERCIAL
	B. GRAPHITE		COMMERCIAL
15	PACKING WASHER	304 STAINLESS STEEL	COMMERCIAL
16	GLAND FOLLOWER	STAINLESS STEEL	ASTM A351 GR. CF8M
17	GLAND RETAINER	STAINLESS STEEL	ASTM A351 GR. CF8M
18	STUD	STAINLESS STEEL	ASTM A193 GR. B8M
19	HEAVY HEX NUT	STAINLESS STEEL	ASTM A194 GR. 8M
20	MOUNTING PLATE	STAINLESS STEEL	COMMERCIAL
21	HEX HEAD CAP SCREW	STAINLESS STEEL	ASTM A193 GR. B8M
22	SPLIT LOCKWASHER	STAINLESS STEEL	COMMERCIAL
23	HEX HEAD CAP SCREW	STAINLESS STEEL	ASTM A193 GR. B8M
24	SPLIT LOCKWASHER	STAINLESS STEEL	COMMERCIAL
25	GEAR OPERATOR		



DETAIL A



DETAIL B



10" CLASS 300 LUG SHOWN

10" - 16" 300 LB LUG WITH GEAR																	
VALVE SIZE	VALVE DIMENSIONS							HANDWHEEL	TOP WORKS	STEM CONNECTION			CORE DIMS		Bolt ϕ		
	"A" HEIGHT	"A1" HEIGHT	"B" HEIGHT	"C" B.C.	"D" TAP	# OF HOLES	"E" FACE			"F"	"G" DIA	"H" B.C.	"J" ϕ STEM	"L2" LENGTH		"M" LENGTH	"N"
10"	10.81	16.86	28.40	15.25	1-1/8-8	16	3.25	7.85	12	4.37	1.37	1.50	5.51	0.31	9.16	9.25	1/2" - 13"
12"	11.62	17.98	31.18	17.75	1-1/8-8	16	3.63	8.63	12	4.92	1.50	1.50	5.88	0.38	10.25	10.34	1/2" - 13"
14"	13.50	19.61	35.12	20.25	1-1/8-8	20	4.63	10.96	20	6.27	2.00	2.38	6.02	0.50	11.39	11.49	1/2" - 13"
16"	15.00	21.09	38.12	22.50	1-1/4-8	20	5.25	11.95	20	6.27	2.25	2.38	6.02	0.50	13.26	13.36	1/2" - 13"

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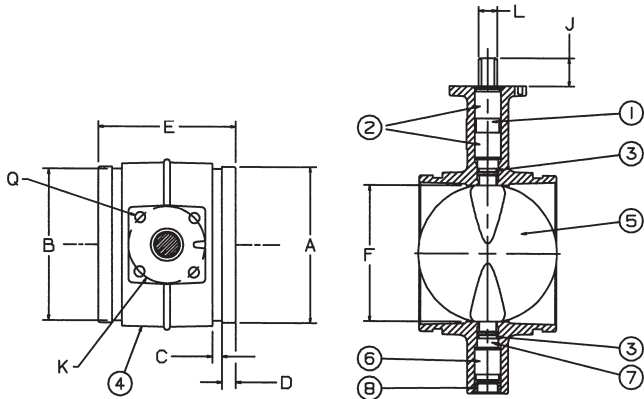


UPGG-245E/345E 2"-10"

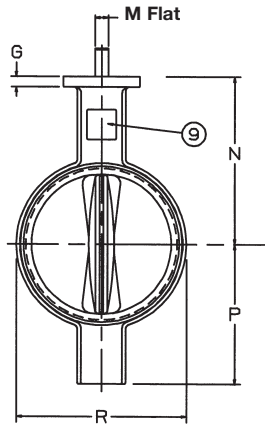


NSF/ANSI 61
NSF/ANSI 372

**Polyamide Coated Ductile Iron Grooved End Butterfly, 300 psi
Grooved Mechanical Style, Maximum Temperature Rating of 200° F
Extended Neck, Elastomer Encapsulated Disc
Grooved End Compatible with IPS Pipe
Specifications: MSS SP-67**



UPGG-245E



NOT RECOMMENDED
FOR STEAM SERVICE

DIMENSIONS

	INCHES DN	VALVE SIZE							
		2	2 1/2	3	4	5	6	8	10
A	INCHES	2.38	2.88	3.50	4.50	5.56	6.63	8.63	10.75
	mm	60	73	89	114	141	168	219	273
B	INCHES	2.32	2.72	3.34	4.33	5.39	6.45	8.44	10.56
	mm	59	69	85	110	137	164	214	268
C	INCHES	.33	.31	.31	.38	.38	.38	.44	.50
	mm	8	8	8	10	10	10	11	13
D	INCHES	.63	.63	.63	.63	.63	.63	.75	.75
	mm	16	16	16	16	16	16	19	19
E	INCHES	3.33	3.85	3.85	4.56	5.86	5.86	5.26	6.29
	mm	85	98	98	116	149	149	134	160
F	INCHES	2.42	2.42	2.86	3.84	4.79	5.73	7.71	9.56
	mm	61	61	73	98	122	146	196	243
J	INCHES	1.31	1.22	1.18	1.24	1.24	1.29	1.32	1.38
	mm	33	31	30	32	32	33	34	35
L	INCHES	.50	.50	.50	.66	.66	.78	.78	1.06
	mm	13	13	13	17	17	20	20	27
M	INCHES	.37	.37	.37	.50	.50	.56	.56	.75
	mm	9	9	9	13	13	14	14	19
N	INCHES	4.00	4.19	4.44	5.33	5.83	7.11	8.05	9.86
	mm	102	106	113	135	148	181	204	250
P	INCHES	3.14	3.25	3.54	4.35	4.84	5.93	6.87	9.17
	mm	80	83	90	111	123	151	175	233
R	INCHES	2.89	3.46	3.97	5.03	6.27	7.25	9.25	11.25
	mm	73	88	101	128	159	184	235	286

UPGG-245E - Lever Operator

UPGG-345E - Gear Operator

MATERIALS LIST

ITEM	PART	MATERIALS	MATERIALS
1	UPPER STEM	STAINLESS STEEL	ASTM A582 TYPE 416
2	UPPER BEARING	SPLIT METAL	-
3	O-RING	EPDM	-
4	BODY	DUCTILE IRON	ASTM A395 W/POLYAMIDE COATING
5	DISC	DUCTILE IRON	ASTM A395 W/EPDM
6	LOWER BEARING	SPLIT METAL	-
7	LOWER STEM	STAINLESS STEEL	ASTM A582 TYPE 416
8	DUST PLUG	PVC	-
9	NAME PLATE	ALUMINUM	-

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

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GG-SCS2 2 1/2"-10"



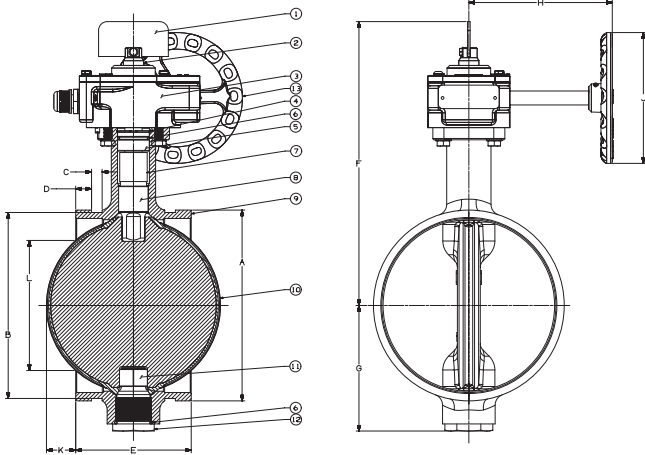
NSF/ANSI 61
NSF/ANSI 372

**Nylon Coated Ductile Iron Grooved End Butterfly, 300 psi
Grooved Mechanical Style
Extended Neck, Elastomer Encapsulated Disc
Accepts Internal Supervisory Switches
Grooved End Compatible with IPS Pipe
UL/FM Rating**



GG-SCS2

Grooved
2 1/2", 3", 4", 6", 8", 10"



DIMENSIONS

	VALVE SIZE						
	INCHES DN	2 1/2	3	4	6	8	10
A	INCHES	2.88	3.50	4.50	6.63	8.63	10.77
	mm	73	89	114	168	219	274
B	INCHES	2.72	3.34	4.33	6.45	8.44	10.55
	mm	69	85	110	164	214	268
C	INCHES	.31	.31	.38	.38	.44	.50
	mm	8	8	10	10	11	13
D	INCHES	.63	.63	.63	.63	.75	.75
	mm	16	16	16	16	19	19
E	INCHES	3.81	3.81	4.56	5.81	5.25	6.25
	mm	97	97	116	148	133	159
F	INCHES	8.95	9.16	10	11.92	12.85	15
	mm	227	233	254	303	326	381
G	INCHES	2.20	2.47	3.00	4.33	5.67	6.77
	mm	56	63	76.2	110	144	172
H	INCHES	4.92	4.92	4.92	6.48	6.48	8.74
	mm	125	125	125	165	165	222
J	INCHES	4.25	4.25	4.25	6	6	6
	mm	108	108	108	152	152	152
K	INCHES	-	-	-	-	1.32	1.74
	mm	-	-	-	-	34	44
L	INCHES	-	-	-	-	5.87	7.44
	mm	-	-	-	-	149	189

MATERIALS LIST

ITEM	PART	MATERIALS	MATERIALS
1	INDICATOR FLAG	PAINTED STEEL	-
2	STEM ADAPTER	STEEL	-
3	GEAR OPERATOR	CAST IRON AND STEEL	-
4	RETAINING RING	CARBON STEEL	-
5	CARTRIDGE SEAL	BRASS	ASTM C36000
6	STEM STEALS	EPDM	-
7	UPPER STEM	STAINLESS STEEL	ASTM A582 TYPE 416
8	UPPER BUSHING	PLATED STEEL WITH PTFE LINING	-
9	BODY	DUCTILE IRON	ASTM A395 WITH POLYAMINDE COATING
10	DISC	DUCTILE IRON	ASTM A536 WITH EPDM ENCAPSULATION
11	LOWER BUSHING	STEEL WITH PTFE LINING	-
12	LOWER STEM	STAINLESS STEEL	ASTM A582 TYPE 416
13	HANDWHEEL	CAST IRON	-

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UPBBTSCSCL/UPBBTSCS02L 1"-2"



Tested and Certified by IAPMO R&T to NSF/ANSI 372 for lead free compliance.



MATERIAL LIST

ITEM	PART	MATERIAL	ASTM SPEC
1	Indicator	Sintered Iron	F0008P
2	Housing	Bronze	ASTM 584
3	Body	Bronze	ASTM 584
4	Handle	Brass	
5	Disc	Stainless Steel	Type 304
6	Disc Seal	EPDM	
7	Cover	Die Cast Aluminum	

ALL DIMENSIONS-INCHES

SIZE	1"	1-1/4"	1-1/2"	2"
A	2.13	2.63	2.88	3.25
B	3.94	4.28	4.5	5
C	1.56	1.94	2.19	2.75
D	1.72	2.11	2.38	3.07
K	0.66	0.73	0.73	0.79
L	0.83	0.9	0.1	1.41
M-40	1.1	1.38	1.61	2.07
M-80	0.96	1.28	1.5	1.94
N-40	2.25	2	2.5	2.25
W	1.13	1.25	1.41	1.69

M-40 ARE DIMENSIONS USING SCHEDULE 40 PIPE

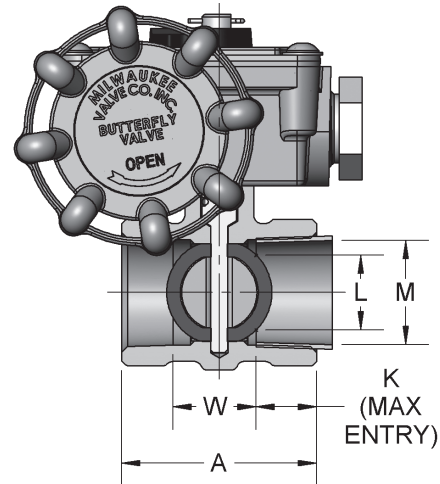
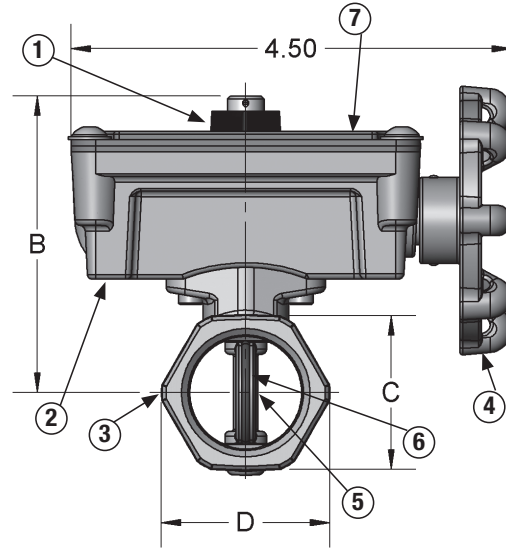
M-80 ARE DIMENSIONS USING SCHEDULE 80 PIPE

N-40 IS FLOW RESISTANCE EXPRESSED IN EQUIVALENT LENGTH OF SCHEDULE 40 PIPE

W IS THE WRENCH MAKE-UP LENGTH

FEATURES

- Slow opening and closing
- Quarter turn operation
- Water Hammer elimination
- Optional internal tamper switch (Indoor/Outdoor use).
 - Signals disc movement
 - Factory or Field installation
 - 10 Amp / 115 VAC-60 Hz
 - 0.5 Amp / 28 VDC



UPBBTSCSCL
SIZES 1", 1-1/4", 1-1/2", 2"

UPBBTSCS02L
(INCLUDES SWITCH)
SIZES 1", 1-1/4", 1-1/2", 2"

Note: Lead free refers to the wetted surface of the pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$. Source: California Health and Safety Code (116875).

The information presented on this sheet is correct at time of publication. Milwaukee Valve reserves the right to change design and/or materials without notice. For our Installation, Operation and Maintenance Manual and the most current product information go to www.milwaukeevalve.com.

⚠ State of California Prop 65 **WARNING:** Cancer and Reproductive Harm. For more information visit www.p65warnings.ca.gov.

