

 LEAD FREE PRODUCTS

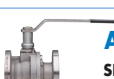
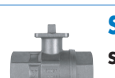
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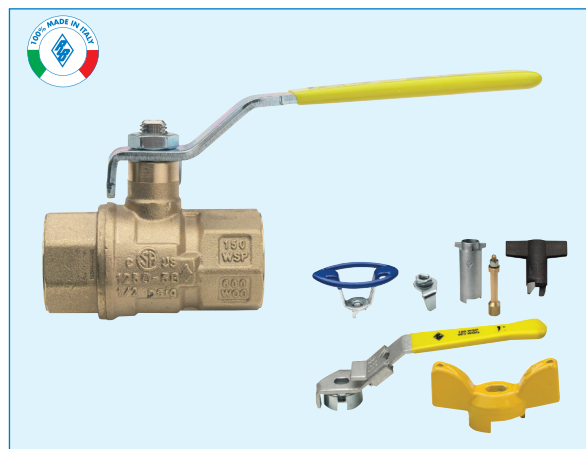
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SERIES 161N - 162N COMPACT STYLE

Brass ball valve, FNPT threaded, full port.

- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, chrome plated brass ball.
- PTFE seats and double O-ring stem packing.
- 100% electronically tested in the open and closed position at 80 psi.
- Not to be used for drinking water.
- Valve to be used in fully open or fully closed position.

161N: LEVER HANDLE - size 1/2" to 4".

162N: T-HANDLE - size 1/2" to 1".

For sizes 1/4", 3/8" see 171N.

MEETS THE DESIGN CRITERIA OF MSS SP-110.



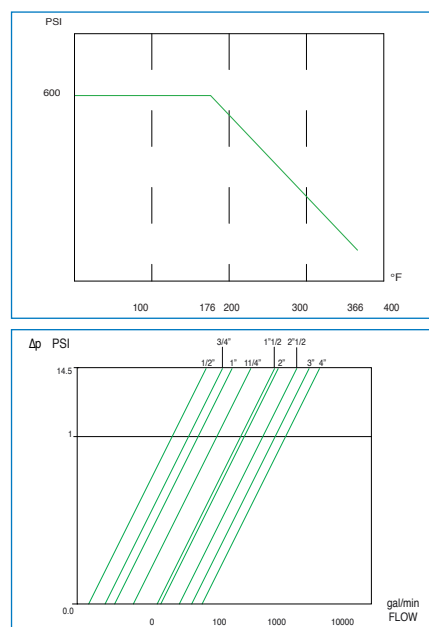
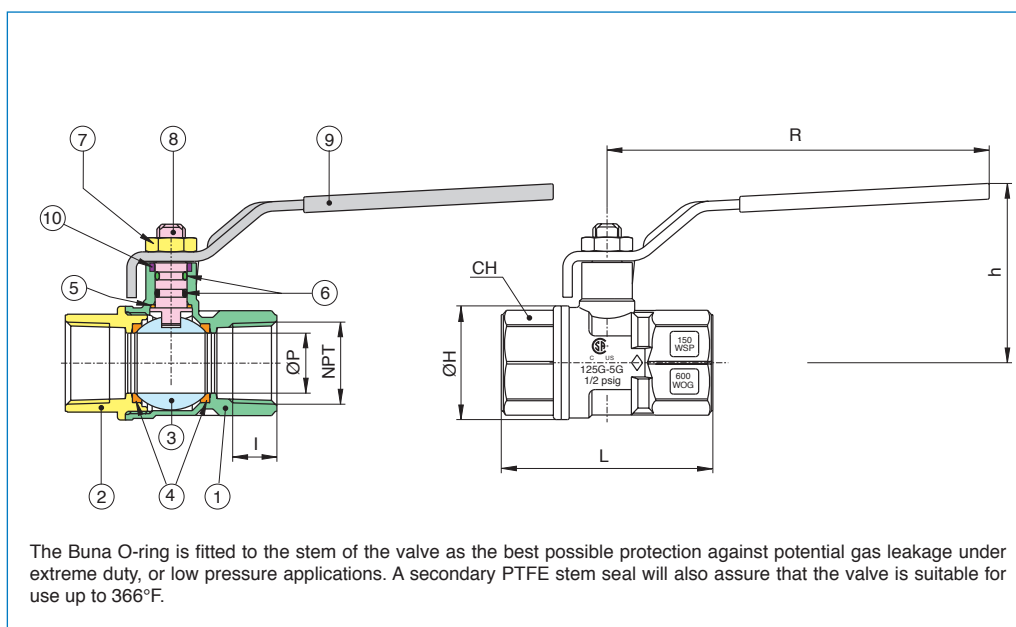
400 WOG
up to 2"



C US
up to 2"

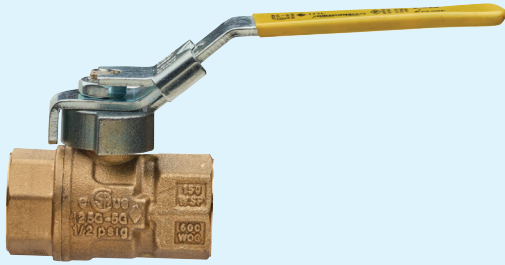


up to 2"



N POS	PART NAME	MATERIAL	N PCS	SIZE	ØP	I	L	ØH	CH	R	h	Cv	psi	Weight (Lbs)
1	BODY	BRASS C37700	1	1/2"	0.55	0.54	2.22	1.18	0.98	3.78	1.77	18.15	600	0.40
2	END CONNECTION	BRASS C37700	1	3/4"	0.75	0.55	2.46	1.42	1.22	4.76	2.22	32.37	600	0.68
3	BALL	BRASS C37700	1	1"	0.94	0.66	3.01	1.71	1.50	4.76	2.32	47.98	600	0.98
4	BALL SEAT	PTFE	2	1 1/4"	1.19	0.68	3.37	2.09	1.89	5.94	2.85	97.80	600	1.66
5	THRUST WASHER	PTFE	1	1 1/2"	1.50	0.68	3.70	2.56	2.13	5.94	3.09	252.60	600	2.16
6	O-RING	FKM (Viton)	1	2"	1.95	0.70	4.31	3.39	2.64	6.30	3.70	290.75	600	3.52
		NBR	1	2 1/2"	2.44	0.93	5.16	4.09	3.27	8.07	4.59	593.06	600	6.67
7	NUT	STEEL CL04	1	3"	2.99	1.02	5.94	4.96	3.86	8.07	4.98	958.84	600	9.82
8	STEM	BRASS C38500	1	4"	2.99	1.09	6.50	4.96	4.92	8.07	4.98	1526.59	600	12.57
9	HANDLE	STEEL DD11	1											
10	PACKING RING	PTFE	1											

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



SERIES 161L COMPACT STYLE

Brass ball valve, FNPT threaded, full port, with latch lock handle.

- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to 366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, chrome plated brass ball.
- PTFE seats and double O-ring stem packing.
- 100% electronically tested in the open and closed position at 80 psi.
- Not to be used for drinking water.
- Valve to be used in fully open or fully closed position.

161L: LOCK HANDLE - size 1/2" to 4".

For sizes 1/4", 3/8" see 171L.



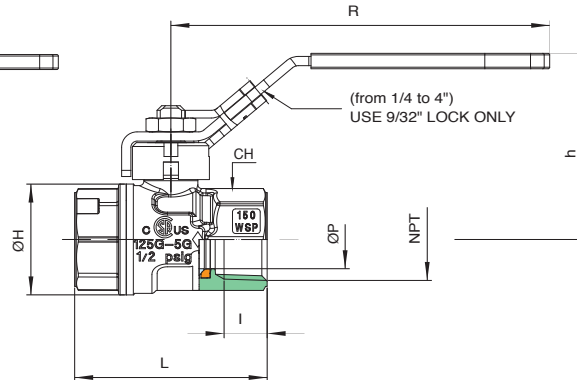
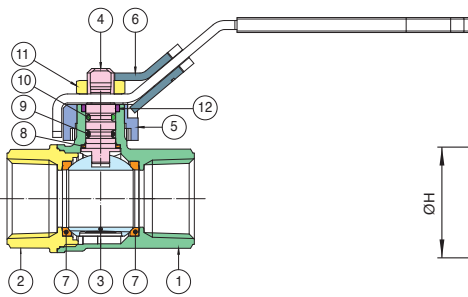
400 WOG
up to 2"



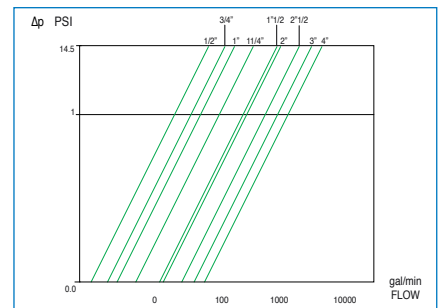
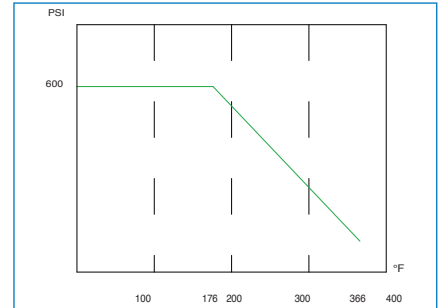
C US
up to 2"



up to 2"



The Buna O-ring is fitted to the stem of the valve as the best possible protection against potential gas leakage under extreme duty, or low pressure applications. A secondary PTFE stem seal will also assure that the valve is suitable for use up to 366°F.



N POS	PART NAME	MATERIAL	N PCS	SIZE	ØP	I	L	ØH	CH	R	h	Cv	psi	Weight (Lbs)
1	BODY	BRASS C37700	1	1/2"	0.55	0.54	2.22	1.18	0.98	3.78	1.91	18.15	600	0.48
2	END CONNECTION	BRASS C37700	1	3/4"	0.75	0.55	2.46	1.42	1.22	4.84	2.38	32.37	600	0.78
3	BALL	BRASS C37700	1	1"	0.94	0.66	3.01	1.71	1.50	4.84	2.48	47.98	600	1.13
4	STEM	BRASS C38500	1	1 1/4"	1.19	0.68	3.37	2.09	1.89	5.94	3.01	97.80	600	1.87
5	BUSH	G Zn Al4	1	1 1/2"	1.50	0.68	3.70	2.56	2.13	5.94	3.23	252.60	600	2.43
6	HANDLE	STEEL DD11	1	2"	1.95	0.70	4.31	3.39	2.64	6.30	3.78	290.75	600	4.40
7	BALL SEAT	PTFE	2	2 1/2"	2.44	0.93	5.16	4.09	3.27	8.07	4.59	593.06	600	7.27
8	THRUST WASHER	PTFE	1	3"	2.99	1.02	5.94	4.96	3.86	8.07	4.98	958.84	600	10.42
9	O-RING	NBR	1	4"	2.99	1.09	6.50	4.96	4.92	8.07	4.98	1526.59	600	13.17
10	O-RING	FKM (Viton)	1											
11	NUT	STEEL CL04	1											
12	PACKING RING	PTFE	1											

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



SERIES 171N - 172N COMMERCIAL STYLE

Brass ball valve, FNPT threaded, full port.

- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, chrome plated brass ball.
- PTFE seats, seals, and thrust washer.
- Adjustable stem packing.
- 100% electronically tested in the open and closed position at 80 psi.
- Not to be used for drinking water.
- Valve to be used in fully open or fully closed position.

171N: LEVER HANDLE - size 1/4" to 4".

172N: T HANDLE - size 1/4" to 1".

171S: BALL AND STEM IN STAINLESS STEEL AISI 316 - size 1/4" to 4".

171NCR: CHROME PLATED - size 1/4" to 4".



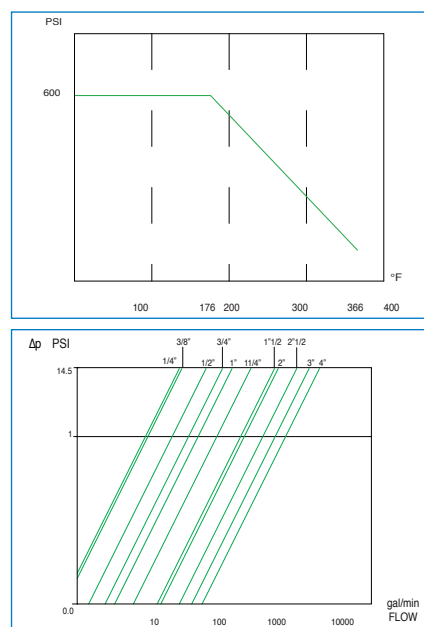
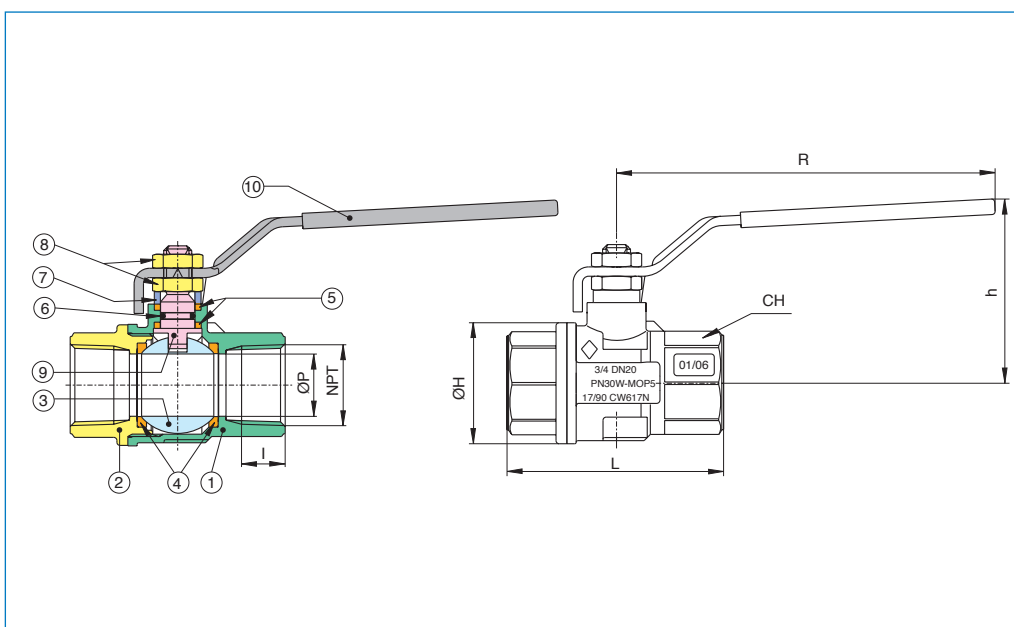
up to 2"



up to 2"

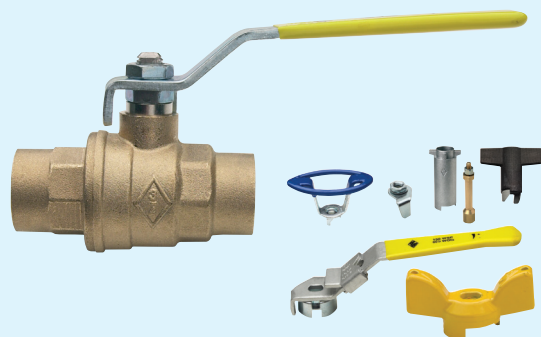


MEETS THE DESIGN CRITERIA OF MSS SP-110.



N POS	PART NAME	MATERIAL	N PCS	SIZE	ØP	I	L	ØH	CH	R	h	Cv	psi	Weight (Lbs)
1	BODY	BRASS C37700	1	1/4"	0.39	0.39	2.02	0.90	0.78	3.78	1.65	6.24	600	0.34
2	END CONNECTION	BRASS C37700	1	3/8"	0.39	0.40	2.02	0.90	0.78	3.78	1.65	6.94	600	0.30
3	BALL	BRASS C37700	1	1/2"	0.59	0.53	2.44	1.25	0.98	3.78	1.81	18.84	600	0.46
4	BALL SEAT	PTFE	2	3/4"	0.78	0.55	2.71	1.53	1.22	4.76	2.28	34.10	600	0.79
5	THRUST WASHER/STEM SEAT	PTFE	2	1"	0.98	0.66	3.07	1.92	1.49	4.76	2.44	49.71	600	1.15
6	O-RING	NBR	1	1 1/4"	1.25	0.68	3.42	2.32	1.88	5.94	3.00	102.89	600	1.99
7	PACKING GLAND	BRASS C38500	1	1 1/2"	1.57	0.68	3.89	2.87	2.12	5.94	3.23	265.90	600	2.74
8	NUT	STEEL CL 04	2	2"	1.94	0.69	4.33	3.38	2.63	6.30	3.74	306.36	600	4.23
9	STEM	BRASS C38500	1	2 1/2"	2.56	0.93	5.59	4.37	3.54	8.07	4.84	624.28	600	8.36
10	HANDLE	Fe DD11 UNI EN 10111	1	3"	3.15	1.02	6.46	5.35	4.13	8.07	5.24	1009.25	600	12.96
				4"	3.94	1.09	7.60	6.54	5.12	10.24	6.50	1606.94	600	21.81

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



MEETS THE DESIGN CRITERIA OF MSS SP-110.

SERIES 1715 - 1725 COMMERCIAL STYLE

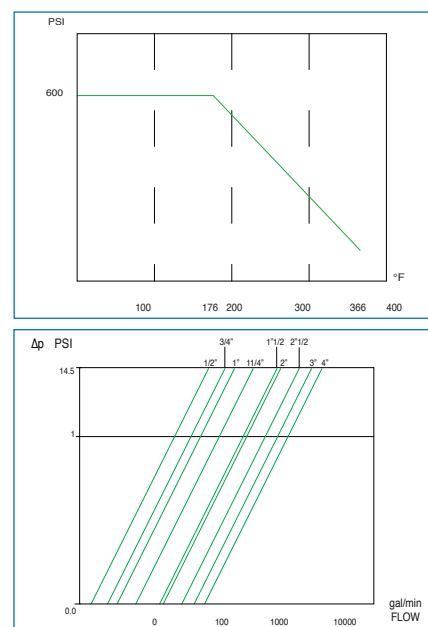
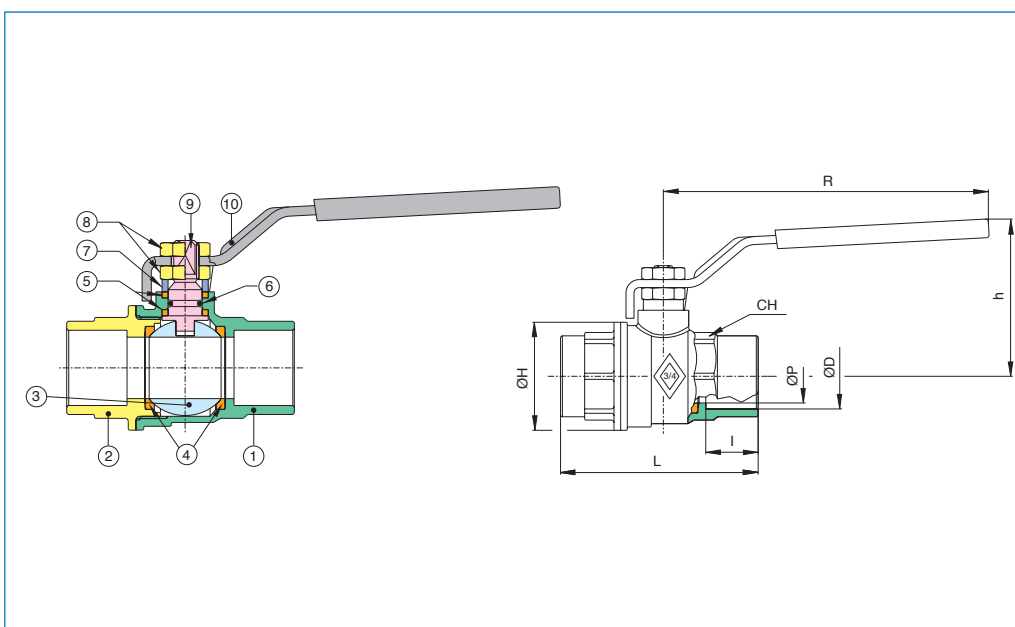


Brass ball valve with solder ends, full port.

- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to +366°F.
- ANSI B16.18 connections.
- Blow-out proof stem, chrome plated brass ball.
- PTFE seats, seals, and thrust washer.
- Adjustable stem packing.
- 100% electronically tested in the open and closed position at 80 psi.
- Not to be used for drinking water.
- Valve to be used in fully open or fully closed position.

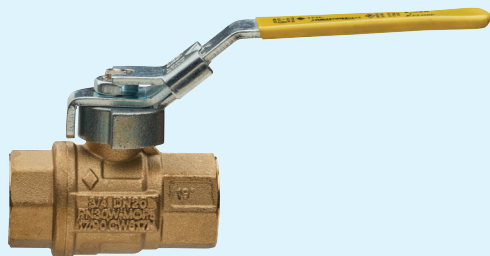
1715: LEVER HANDLE - size 1/2" to 4".

1725: T-HANDLE - size 1/2" to 1".



N POS	PART NAME	MATERIAL	N PCS	SIZE	ØP	L	I	h	R	ØD	ØH	CH	Cv	psi	Weight (Lbs)
1	BODY	BRASS C37700	1	1/2"	0.57	2.58	0.50	1.81	3.78	0.63	1.30	0.98	18.84	600	0.49
2	END CONNECTION	BRASS C37700	1	3/4"	0.76	3.00	0.75	2.28	4.76	0.88	1.53	1.22	34.10	600	0.80
3	BALL	BRASS C37700	1	1"	0.98	3.56	0.91	2.44	4.76	1.13	1.93	1.49	49.71	600	1.17
4	BALL SEAT	PTFE	2	1 1/4"	1.26	4.09	0.96	3.00	5.94	1.38	2.32	1.89	102.89	600	1.97
5	THRUST WASHER/STEM SEAT	PTFE	2	1 1/2"	1.57	4.56	1.10	3.23	5.94	1.63	2.87	2.12	265.90	600	2.72
6	O-RING	NBR	1	2"	1.95	5.45	1.34	3.74	6.30	2.13	3.38	2.64	306.36	600	4.25
7	PACKING GLAND	BRASS C38500	1	2 1/2"	2.56	6.90	1.47	4.84	8.11	2.63	4.37	3.54	624.28	600	9.44
8	NUT	STEEL 6/S	2	3"	3.05	8.05	1.67	5.23	8.11	3.13	5.35	4.13	1009.25	600	14.51
9	STEM	BRASS C38500	1	4"	3.94	10.25	2.16	6.49	10.27	4.13	6.53	5.12	1606.94	600	24.80
10	HANDLE	Fe DD11 UNI EN 10111	1												

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



SERIES 171L COMMERCIAL STYLE

- Brass ball valve, FNPT threaded, full port, with latch lock handle.
- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, chrome plated brass ball.
- PTFE seats, seals, and thrust washer.
- Adjustable stem packing.
- 100% electronically tested in the open and closed position at 80 psi.
- Not to be used for drinking water.
- Valve to be used in fully open or fully closed position.

171L: LOCK HANDLE - size 1/4" to 4".

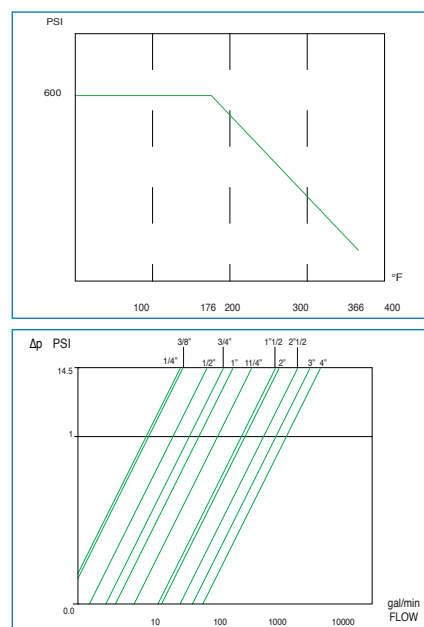
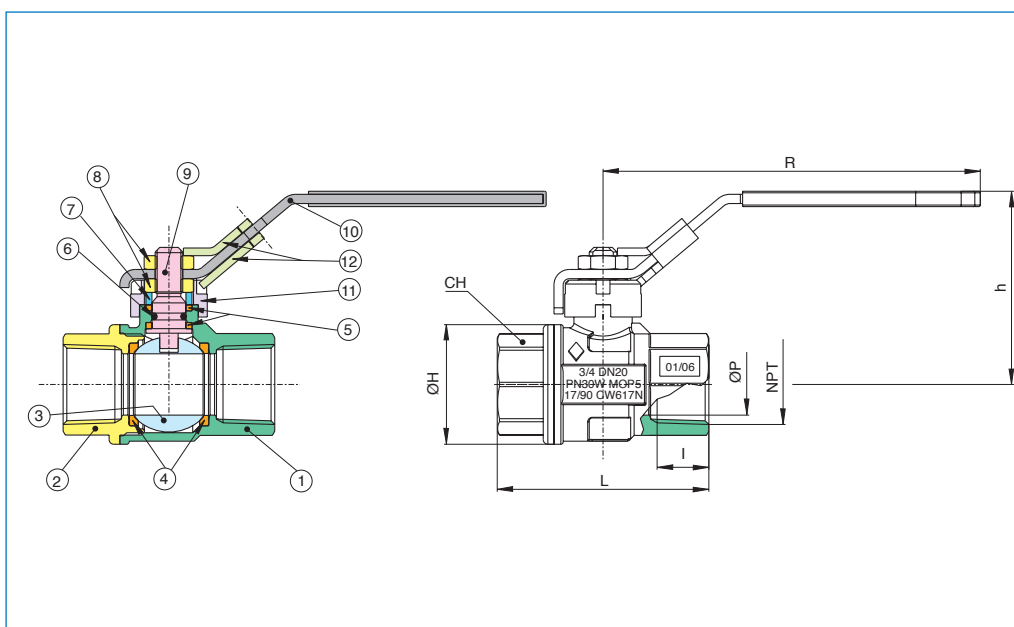
171LCR: CHROME PLATED - size 1/4" to 4".



up to 2"



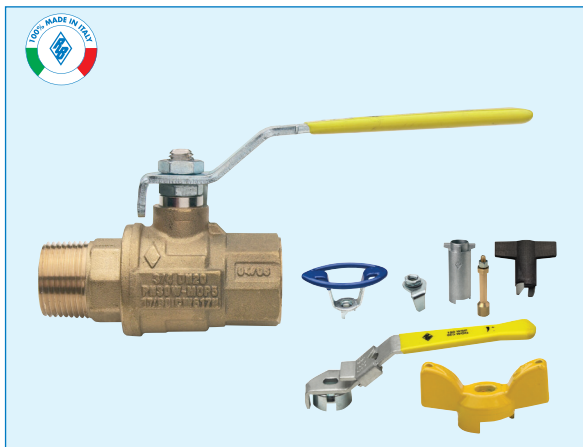
MEETS THE DESIGN CRITERIA OF MSS SP-110.



N POS	PART NAME	MATERIAL	N PCS
1	BODY	BRASS C37700	1
2	END CONNECTION	BRASS C37700	1
3	BALL	BRASS C37700	1
4	BALL SEAT	PTFE	2
5	THRUST WASHER/STEM SEAL	PTFE	2
6	O-RING	NBR	1
7	PACKING GLAND	BRASS C38500	1
8	NUT	STEEL CL 04	2
9	STEM	BRASS C38500	1
10	HANDLE	Fe DD11 UNI EN 10111	1
11	BUSH	ZAMA G Zn Al4 UNI EN 1774	1
12	LOCKING DEVICE	Fe DD11 UNI EN 10111	1

SIZE	ØP	I	L	ØH	CH	R	h	Cv	psi	Weight (Lbs)
1/4"	0.39	0.39	2.03	0.91	0.79	3.78	1.83	6.24	600	0.40
3/8"	0.39	0.41	2.03	0.91	0.79	3.78	1.83	6.94	600	0.39
1/2"	0.59	0.54	2.44	1.30	0.98	3.78	1.99	18.84	600	0.57
3/4"	0.79	0.55	2.72	1.54	1.22	4.84	2.48	34.10	600	0.93
1"	0.98	0.66	3.07	1.93	1.50	4.84	2.64	49.71	600	1.32
1 1/4"	1.26	0.68	3.43	2.32	1.89	5.94	3.15	102.89	600	2.13
1 1/2"	1.57	0.68	3.90	2.87	2.13	5.94	3.39	265.90	600	2.95
2"	1.95	0.70	4.31	3.39	2.64	6.30	3.82	306.36	600	4.57
2 1/2"	2.56	0.93	5.59	4.37	3.54	8.11	5.02	624.28	600	9.29
3"	3.15	1.02	6.46	5.35	4.13	8.11	5.45	1009.25	600	12.01
4"	3.94	1.09	7.60	6.54	5.12	10.28	6.56	1606.94	600	22.72

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



MEETS THE DESIGN CRITERIA OF MSS SP-110.

SERIES 171M - 172M COMMERCIAL STYLE

Brass ball valve, MNPT X FNPT threaded, full port.

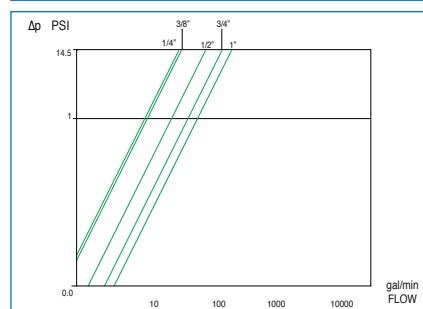
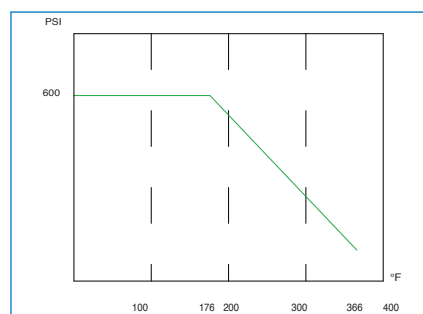
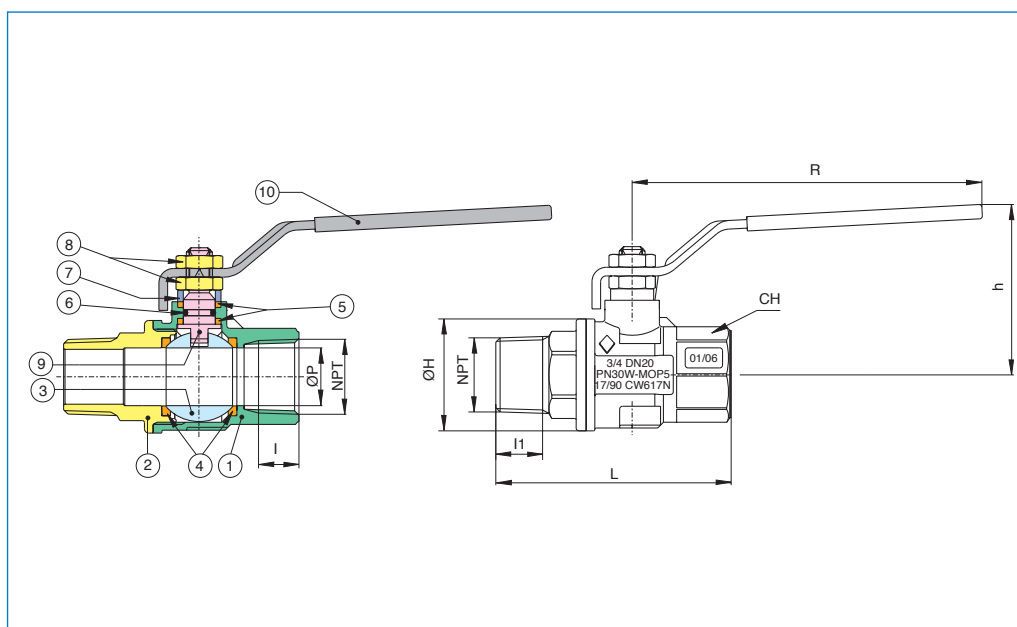
- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, chrome plated brass ball.
- PTFE seats, seals, and thrust washer.
- Adjustable stem packing.
- 100% electronically tested in the open and closed position at 80 psi.
- Not to be used for drinking water.
- Valve to be used in fully open or fully closed position.

171M: LEVER HANDLE - size 1/4" to 1".

172M: T-HANDLE - size 1/4" to 1".

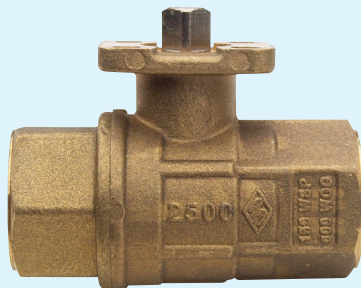
171MCR: CHROME PLATED - size 1/4" to 1".

171MCRCL: CHROME PLATED WITH LOCKING HANDLE - sizes 1/4" to 1".



N POS	PART NAME	MATERIAL	N PCS	SIZE	ØP	I	I1	L	ØH	CH	R	h	Cv	psi	Weight (Lbs)
1	BODY	BRASS C37700	1	1/4"	0.39	0.39	0.40	2.30	0.91	0.79	3.78	1.69	6.24	600	0.29
2	END CONNECTION	BRASS C37700	1	3/8"	0.39	0.41	0.41	2.32	0.91	0.79	3.78	1.69	6.94	600	0.34
3	BALL	BRASS C37700	1	1/2"	0.59	0.54	0.53	2.85	1.30	0.98	3.78	1.85	18.84	600	0.52
4	BALL SEAT	PTFE	2	3/4"	0.79	0.55	0.55	3.21	1.54	1.22	4.76	2.32	34.10	600	0.84
5	THRUST WASHER/STEM SEAL	PTFE	2	1"	0.98	0.66	0.68	3.62	1.93	1.50	4.76	2.48	49.71	600	1.27
6	O-RING	NBR	1												
7	PACKING GLAND	BRASS C38500	1												
8	NUT	Steel 6S	2												
9	STEM	BRASS C38500	1												
10	HANDLE	Fe DD11 UNI EN 10111	1												

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



SERIES 250N - 253N DIRECT MOUNT 2-WAY BALL VALVE

Brass ball valve, FNPT threaded, full port with ISO 5211 pad for actuator.

- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, chrome plated brass ball and and double O-ring stem packing.
- PTFE seats with O-ring backing for low operating torque.
- 100% electronically tested in the open and closed position at 80 psi.
- Not to be used for drinking water.
- Valve to be used in fully open or fully closed position.

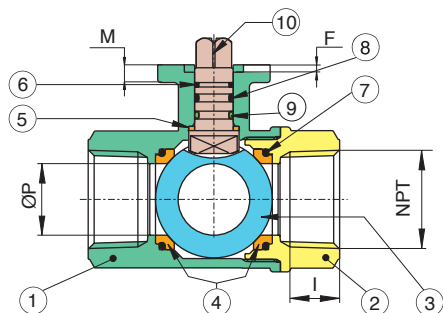
250N: WITH BRASS BALL AND STEM - size 1/4" to 4".

253N: WITH STAINLESS STEEL BALL AND STEM - size 1/4" to 2".

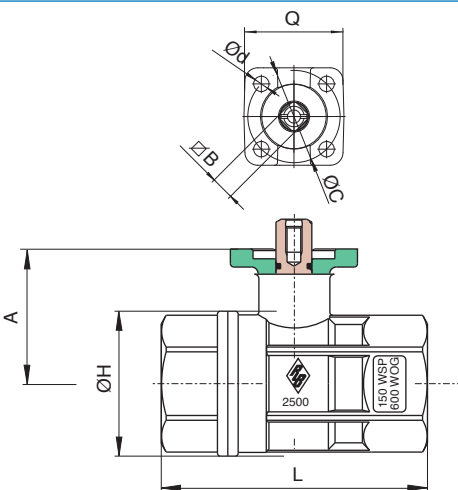


MEETS THE DESIGN CRITERIA OF MSS SP-110.

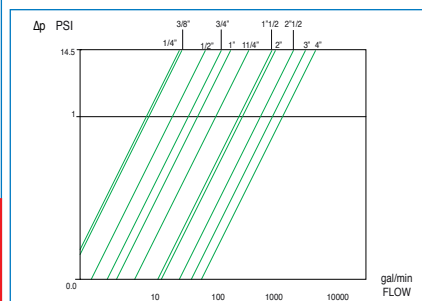
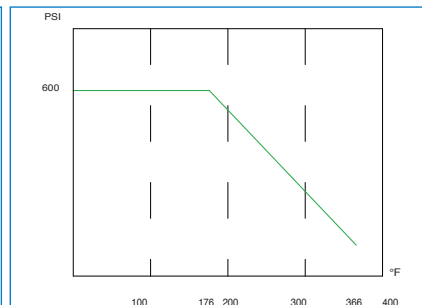
O-RING BACKING PTFE SEATS



The Buna O-ring is fitted to the stem of the valve as the best possible protection against potential gas leakage under extreme duty or low pressure applications.
A secondary PTFE stem seal will also assure that the valve is suitable for use up to 366°F.

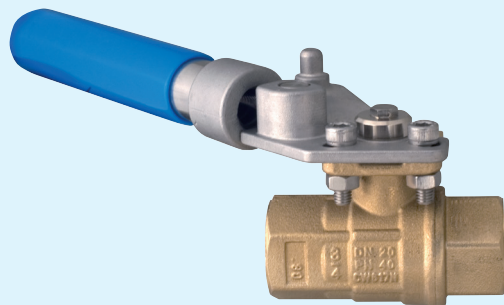


* Torque values in the table are measured in laboratory tests under the following conditions:
TEMPERATURE: 68°F
PRESSURE: 0 psi
FLUID: purified water



N POS	PART NAME	MATERIAL	N PCS	SIZE	Q	A	ØC ISO 5211	F	ØB	Ød	ØH	I	L	CH	M	ØP	Cv	psi	Weight (Lbs)	Break * Torque 250N (in/Lbs)	Break * Torque 253N (in/Lbs)
1	BODY	BRASS C37700	1	1/4"	1.42	1.28	1.42 F03	0.08	0.35	0.24	1.32	0.39	2.64	1.06	0.22	0.39	6.24	600	0.74	26.55	26.55
2	END CONNECTION	BRASS C37700	1	3/8"	1.42	1.28	1.42 F03	0.08	0.35	0.24	1.32	0.41	2.64	1.06	0.22	0.39	6.94	600	0.78	26.55	26.55
3	BALL	BRASS C37700	1	1/2"	1.42	1.28	1.42 F03	0.08	0.35	0.24	1.32	0.54	2.64	1.06	0.22	0.55	18.84	600	0.68	26.55	26.55
4	BALL SEAT	PTFE	2	3/4"	1.42	1.36	1.42 F03	0.12	0.35	0.24	1.57	0.55	2.99	1.26	0.20	0.75	34.10	600	0.89	35.40	53.10
5	THRUST WASHER	PTFE	1	1"	1.42	1.79	1.42 F03	0.12	0.35	0.24	1.93	0.66	3.35	1.61	0.24	0.95	49.71	600	1.59	44.25	70.81
6	STEM SEAL	PTFE	1	1 1/4"	1.42	1.93	1.42 F03	0.12	0.35	0.24	2.30	0.68	3.66	1.97	0.24	1.18	102.89	600	2.23	53.10	141.61
7	O-RING	FKM (Viton)	2	1 1/2"	1.97	2.52	1.97 F05	0.12	0.43	0.28	2.87	0.68	4.13	2.17	0.31	1.50	265.90	600	3.70	79.66	177.02
8	O-RING	EPDM	1	2"	1.97	2.88	1.97 F05	0.12	0.43	0.28	3.60	0.70	4.80	2.76	0.31	1.98	306.36	600	6.15	88.51	300.93
9	O-RING	FKM (Viton)	1	2 1/2"	2.68	3.48	2.76 F07	0.12	0.55	0.35	4.51	0.93	6.10	3.54	0.35	2.52	624.28	600	9.57	238.97	-
10	STEM	BRASS C38500	1	3"	2.68	3.86	2.76 F07	0.12	0.55	0.35	5.35	1.02	6.89	4.13	0.35	2.99	1009.25	600	13.39	256.67	-
				4"	2.68	4.59	2.76 F07	0.12	0.67	0.35	6.54	1.09	8.03	5.12	0.33	3.74	1606.94	600	21.14	486.79	-

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



SERIES 250N SRL DEADMAN SPRING RETURN

Deadman spring ball valve, full port, FNPT threaded.

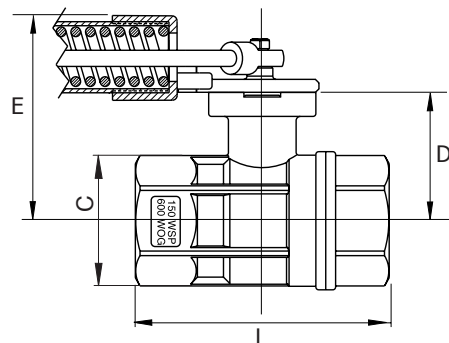
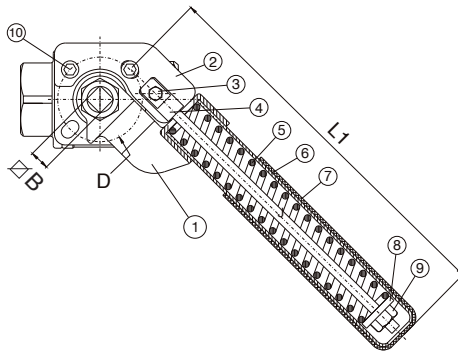
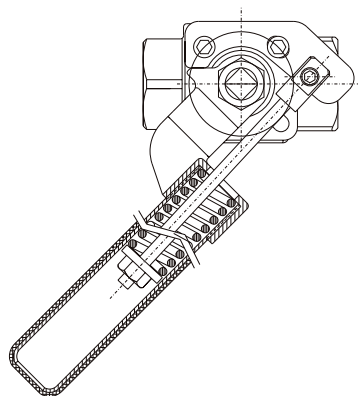
- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, chrome plated brass ball and double O-ring stem packing.
- PTFE seats with O-ring backing for low operating torque.
- Adjustable spring return lever.
- 100% electronically tested in the open and closed position at 80 psi.
- Not to be used for drinking water.

250N SRL: size 1/4" to 3".



OPEN CONDITION

CLOSE CONDITION



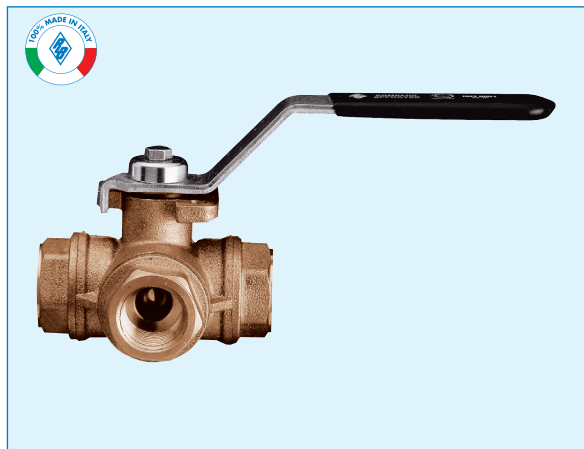
The Buna O-ring is fitted to the stem of the valve as the best possible protection against potential gas leakage under extreme duty or low pressure applications.
A secondary PTFE stem seal will also assure that the valve is suitable for use up to 366°F.

N POS	PART NAME	MATERIAL	SIZE	L1	ØB	D ISO 5211	HANDLE TORQUE (In/Lbs)	E	D	L	Weight (Lbs)
1	HANDLE HEAD	ASTM A351 - CF8M	1/4"	6.70	0.35	F03	132	1.78	1.28	2.64	3.06
2	ANCHOR	ASTM A351 - CF8M	3/8"	6.70	0.35	F03	132	1.78	1.28	2.64	3.04
3	ANCHOR SCREW	AISI 316	1/2"	6.70	0.35	F03	132	1.78	1.28	2.64	2.93
4	SPRING ROD	AISI 316	3/4"	6.70	0.35	F03	132	1.86	1.36	3.00	3.13
5	SPRING	AISI 301	1"	6.70	0.35	F03	132	2.29	1.79	3.35	3.84
6	HANDLE EXTENSION	AISI 304	1 1/4"	6.70	0.35	F03	132	2.43	1.93	3.66	4.48
7	SLEEVE	VINYL	1 1/2"	8.65	0.43	F05	177	3.02	2.52	4.13	6.70
8	WASHER	AISI 304	2"	8.65	0.43	F05	177	3.38	2.88	4.80	6.95
9	HEX NUT	AISI 304	2 1/2"	11.00	0.55	F07	487	3.99	3.49	6.10	15.27
10	SOCKET HEAD SCREW	AISI 304	3"	11.00	0.55	F07	487	4.35	3.85	6.89	19.08

Valve materials and size: see table page 15 art. 250N.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.





SERIES 355N (T) - 365N (L) DIRECT MOUNT 3-WAY BALL VALVE

3-way brass ball valve with ISO 5211 pad for actuator, standard port, FNPT.

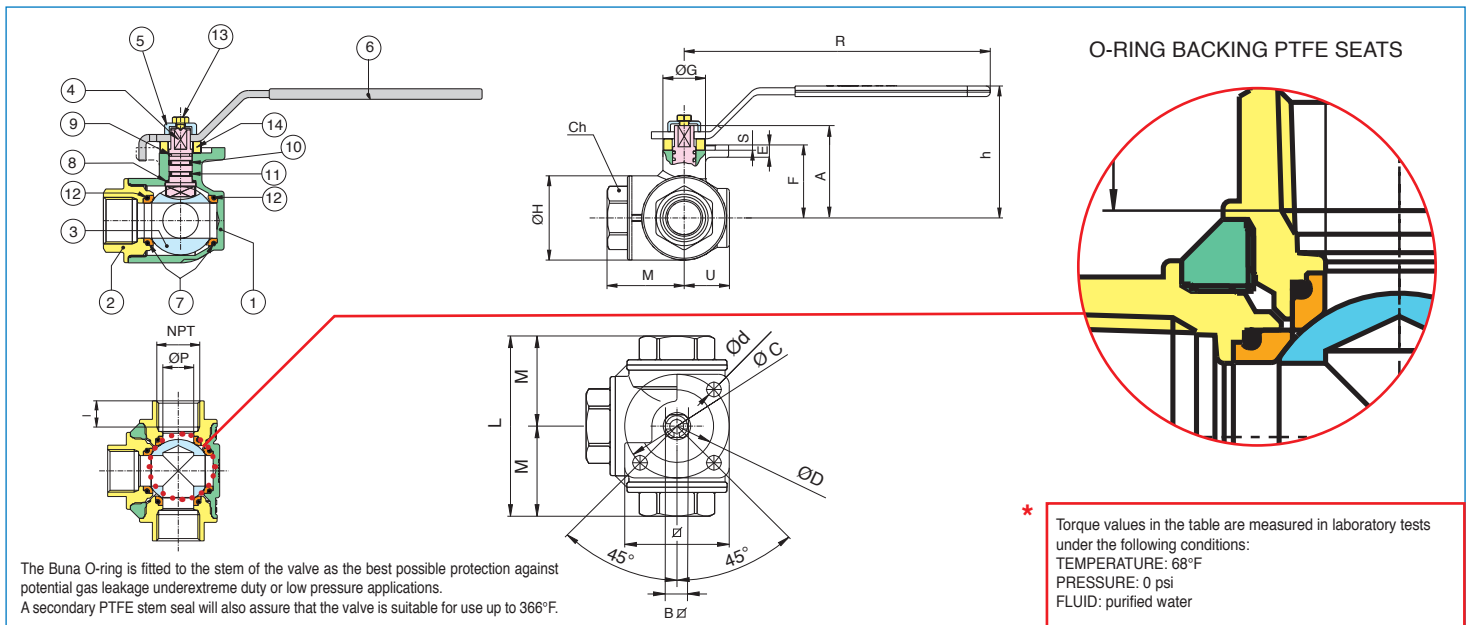
- Pressure rating 400 WOG-100 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, chrome plated brass ball and double O-ring stem packing.
- PTFE seats with O-ring backing for low operating torque.
- 100% electronically tested in the open and closed position at 80 psi.
- Not to be used for drinking water.
- Four seat design for sealing between pressurized ports.

355N: LEVER HANDLE - size 1/4" to 3", "T" flow pattern.

365N: LEVER HANDLE - size 1/4" to 3", "L" flow pattern.

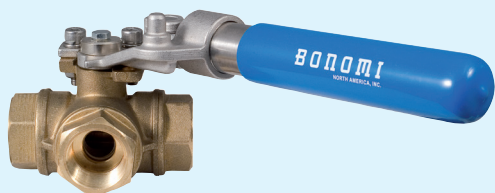


MEETS THE DESIGN CRITERIA OF MSS SP-110.



N POS	PART NAME	MATERIAL	N POS	SIZE	ØP	ØH	I	L	M	CH	R	h	ØG	Ød	∠	ØC	U	E	F	A	∠B	Cv 355N-365N	psi	Weight (Lbs)	* Break Torque (in/Lbs)
1	BODY	BRASS C37700	1	1/4"	0.39	1.34	0.39	2.64	1.32	0.87	4.72	2.44	0.87	0.24	1.50	1.42 F03	0.77	0.20	1.20	0.35	0.35	3.24	400	1.23	35.40
2	END CONNECTION	BRASS C37700	3	3/8"	0.43	1.34	0.41	2.64	1.32	0.87	4.72	2.44	0.87	0.24	1.50	1.42 F03	0.77	0.20	1.20	0.35	0.35	3.47	400	1.16	35.40
3	BALL	BRASS C37700	1	1/2"	0.43	1.34	0.54	2.87	1.44	1.06	4.72	2.44	0.87	0.24	1.50	1.42 F03	0.77	0.20	1.20	0.35	0.35	4.16	400	1.21	35.40
4	STEM	BRASS C38500	1	3/4"	0.55	1.54	0.55	3.19	1.59	1.26	4.72	2.52	0.87	0.24	1.50	1.42 F03	0.87	0.20	1.29	0.35	0.35	7.05	400	1.48	35.40
5	BUSH	BRASS C38500	1	1"	0.75	1.89	0.66	3.74	1.87	1.61	6.79	2.95	0.94	0.28	1.97	1.97 F05	1.00	0.28	1.63	0.43	0.43	12.83	400	2.70	70.81
6	HANDLE	Fe DD 11 UNI EN 10111	1	1 1/4"	0.95	2.36	0.68	4.39	2.19	1.97	6.79	3.17	0.94	0.28	1.97	1.97 F03	1.22	0.28	1.85	0.43	0.43	18.73	400	4.15	88.51
7	BALL SEAT	PTFE	4	1 1/2"	1.18	2.83	0.68	4.86	2.43	2.17	6.79	3.66	1.26	0.28	1.97	1.97 F03	1.49	0.28	2.34	0.43	0.43	29.71	400	6.22	106.21
8	THRUST WASHER	PTFE	1	2"	1.50	3.39	0.70	5.73	2.86	2.76	9.06	4.37	1.46	0.35	2.76	2.76 F07	1.75	0.31	2.91	0.59	0.55	43.81	400	11.07	177.02
9	THRUST WASHER	PTFE	1	2 1/2"	1.95	4.37	0.93	6.93	3.46	3.35	9.06	4.80	1.46	0.35	2.76	2.76 F07	2.20	0.31	3.35	0.59	0.55	70.05	400	19.78	265.52
10	O-RING	EPDM	1	3"	1.95	4.45	1.02	7.09	3.54	4.13	9.06	4.80	1.46	0.35	2.76	2.76 F07	2.20	0.31	3.35	0.59	0.55	70.05	400	19.63	265.52
11	O-RING	FKM (Viton)	1																						
12	O-RINGS BODY	FKM (Viton)	4																						
13	SCREW	STEEL CL 8.8	1																						
14	WASHER	NYLON (PA6)	1																						

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



SERIES 355NSRL (T) - 365NSRL (L) DEADMAN SPRING RETURN

3-way brass ball valve, FNPT, threaded standard port, with deadman spring return handle.

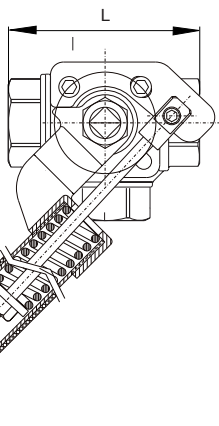
- Pressure rating 400 WOG-100 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, chrome plated brass ball and double O-ring stem packing.
- PTFE seats with O-ring backing for low operating torque.
- 100% electronically tested in the open and closed position at 80 psi.
- Not to be used for drinking water.
- Four seat design for sealing between pressurized ports.

355N SRL: DEADMAN LEVER - size 1/4" to 2".

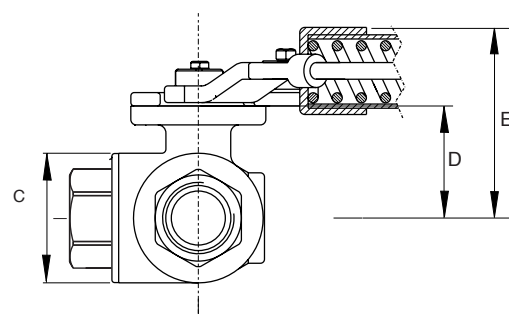
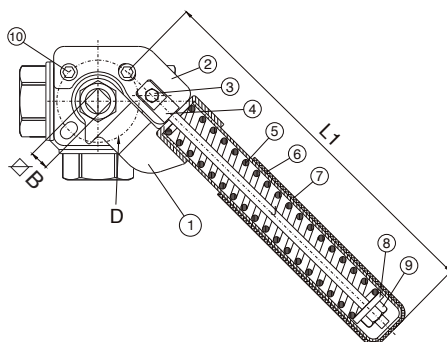
365N SRL: DEADMAN LEVER - size 1/4" to 2".



OPEN CONDITION



CLOSE CONDITION



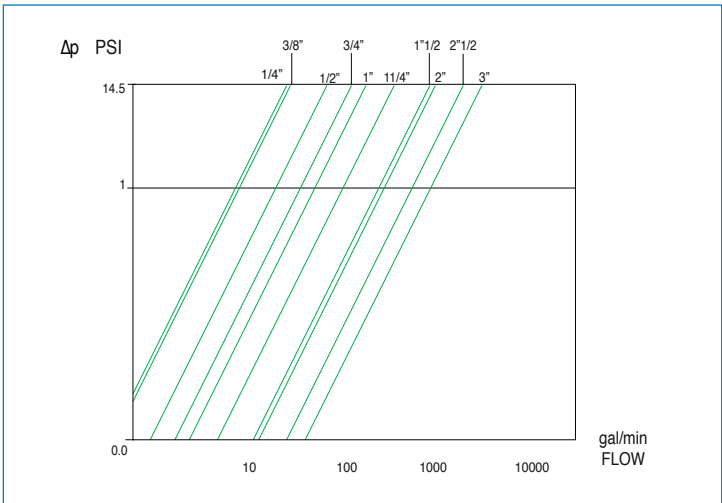
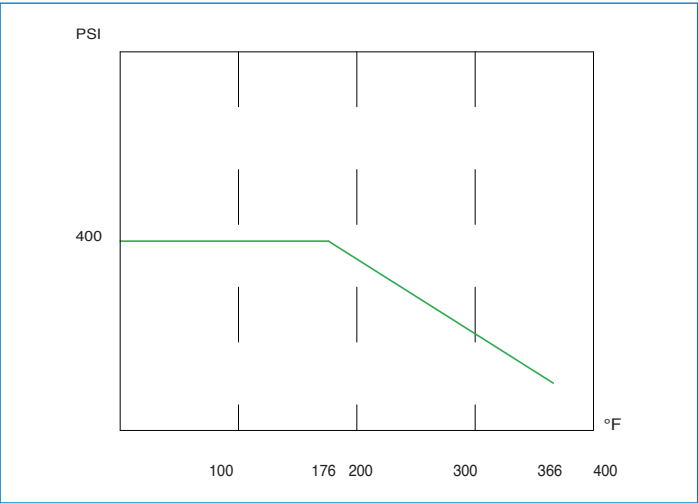
The Buna O-ring is fitted to the stem of the valve as the best possible protection against potential gas leakage under extreme duty or low pressure applications.

A secondary PTFE stem seal will also assure that the valve is suitable for use up to 366°F.

N POS	PART NAME	MATERIAL	SIZE	L1	Ø B	D ISO 5211	HANDLE TORQUE (In/Lbs)	E	L	D	C	F	G	Weight (Lbs) 355N SRL	Weight (Lbs) 355N SRL
1	HANDLE HEAD	ASTM A351 - CF8M	1/4"	6.70	0.35	F03	132	1.70	2.64	1.20	1.34	1.32	0.77	3.48	3.48
2	ANCHOR	ASTM A351 - CF8M	3/8"	6.70	0.35	F03	132	1.70	2.64	1.20	1.34	1.32	0.77	3.39	3.39
3	ANCHOR SCREW	AISI 316													
4	SPRING ROD	AISI 316	1/2"	6.70	0.35	F03	132	1.70	2.87	1.20	1.34	1.44	0.77	3.46	3.46
5	SPRING	AISI 301	3/4"	6.70	0.35	F03	132	1.79	3.19	1.29	1.53	1.60	0.87	3.73	3.73
6	HANDLE EXTENSION	AISI 304	1"	8.65	0.35	F05	177	2.79	3.74	1.63	1.89	1.87	1.00	4.94	4.94
7	SLEEVE	VINYL	1 1/4"	8.65	0.35	F05	177	2.93	4.39	1.85	2.36	2.20	1.22	6.39	6.39
8	WASHER	AISI 304													
9	HEX NUT	AISI 304	1 1/2"	8.65	0.43	F05	177	3.52	4.86	2.34	2.83	2.43	1.79	9.46	9.46
10	SOCKET HEAD SCREW	AISI 304	2"	11	0.55	F07	487	3.82	5.73	2.90	3.38	2.87	1.75	14.07	14.07

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.





FLOW PATH VARIATIONS

	355N				365N		
	A	B	C	D	A	B	C
Lever Assembly							
Position 1							
Position 2							
Note	To achieve other flow paths, simply remove the handle and reorient the valve stem to the desired flow path. Refer to the markings on top of the ball valve stem for proper position. When finished, re-attach the handle.						



SERIES 383N - 383M MINI BALL VALVE



Nickel plated brass ball valve mini series, standard port.

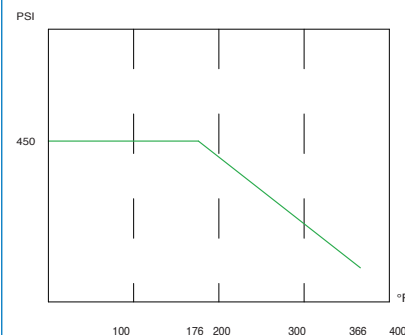
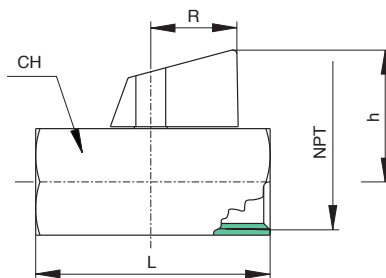
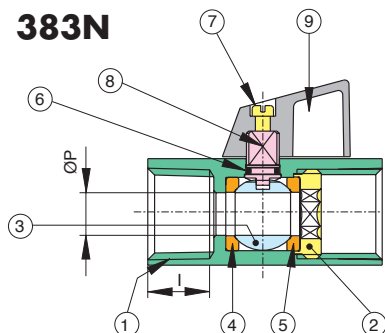
- Pressure rating 450 psi.
- Temperature range -4°F to +330°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, chrome plated brass ball.
- PTFE seats and FKM (Viton) seal.
- 100% electronically tested in the open and closed position at 80 psi.
- Not to be used for drinking water.
- Valve to be used in fully open or fully closed position.

383N: FNPT THREADED - size 1/8" to 3/4".

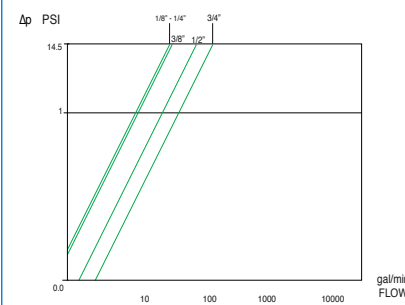
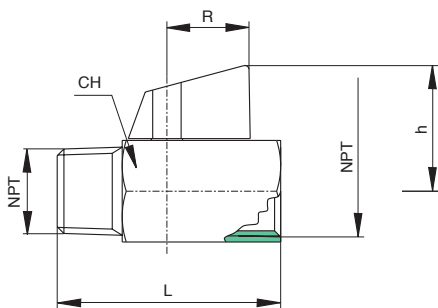
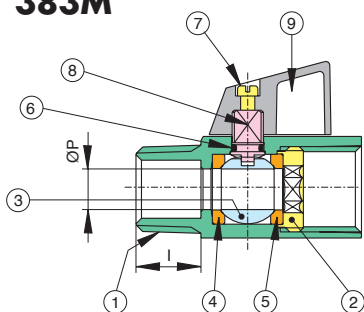
383M: MNPT X FNPT THREADED - size 1/8" to 3/4".

MEETS THE DESIGN CRITERIA OF MSS SP-110.

383N



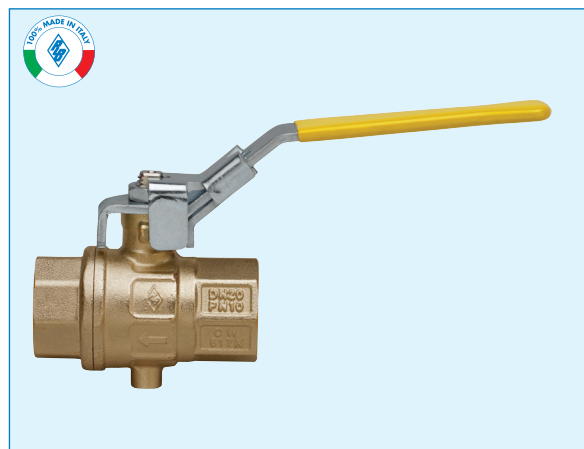
383M



N POS	PART NAME	MATERIAL	N PCS	SIZE	ØP	CH	I	h	L	R	Cv	psi	Weight (Lbs) 383N	Weight (Lbs) 383M
1	BODY	BRASS C37700	1	1/8"	0.31	0.83	0.27	1.16	1.61	0.81	4.97	450	0.23	0.19
2	RETAINING BUSH	BRASS C38500	1	1/4"	0.31	0.83	0.39	1.16	1.69	0.81	4.97	450	0.22	0.18
3	BALL	BRASS C38500	1	3/8"	0.31	0.83	0.41	1.16	1.69	0.81	3.12	450	0.20	0.17
4	BALL SEAT	PTFE	1	1/2"	0.39	0.98	0.54	1.24	2.17	0.81	6.24	450	0.33	0.31
5	BALL SEAT	PTFE	1	3/4"	0.47	1.18	0.56	1.32	2.36	0.81	8.44	450	0.49	0.47
6	O-RING	FKM (Viton)	1											
7	SCREW	STEEL DD11	1											
8	STEM	BRASS C38500	1											
9	HANDLE	GLASS REINFORCED NYLON	1											

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



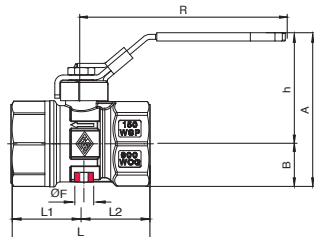
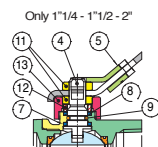
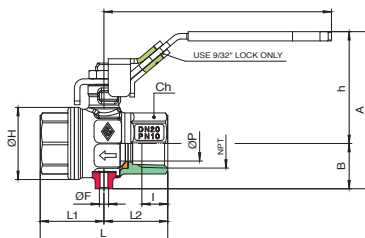
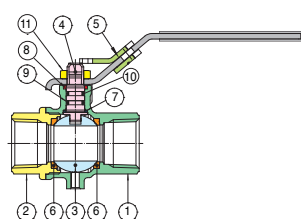


SERIES 511L SAFETY EXHAUST

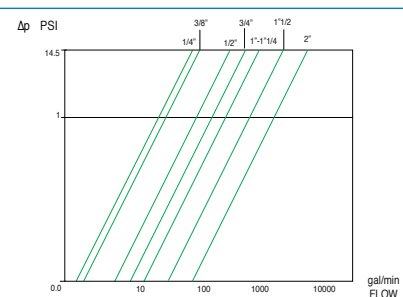
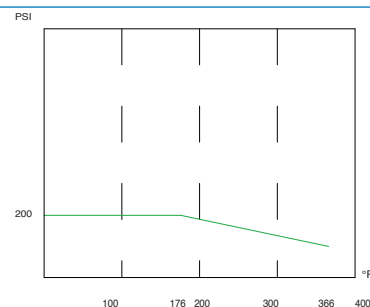
Exhaust brass ball valve, full port with bleed hole, FNPT threaded, with latch lock handle.

- Pressure rating 200 psi.
- Temperature range -4°F to +350°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, chrome plated brass ball.
- RPTFE seats, PTFE seals and thrust washer.
- Adjustable stem packing.
- 100% electronically tested in the open position 80 psi.
- Valve to be used in fully open or fully closed position.
- With reference to OSHA requirement.

511L: LOCK HANDLE - size 1/4" to 2".

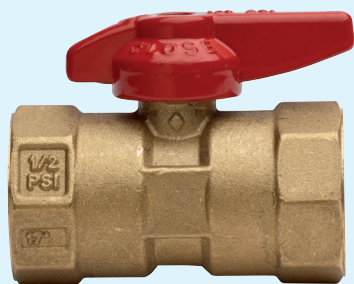


The Buna O-ring is fitted to the stem of the valve as the best possible protection against potential gas leakage under extreme duty, or low pressure applications. A secondary PTFE stem seal will also assure that the valve is suitable for use up to 366°F.



N POS	PART NAME	MATERIAL	N PCS	SIZE	ØP	ØF	A	B	h	ØH	i	L	L1	L2	R	CH	Cv	psi	Weight (Lbs)
1	BODY	BRASS C37700	1	1/4"	0.39	10-32 UNF	2.42	0.61	1.81	0.91	0.39	2.03	1.08	0.94	3.78	0.79	6.24	200	0.40
2	END CONNECTION	BRASS C37700	1	3/8"	0.39	10-32 UNF	2.42	0.61	1.81	0.91	0.41	2.03	1.08	0.94	3.78	0.79	6.94	200	0.36
3	BALL	BRASS C38500	1	1/2"	0.55	10-32 UNF	2.74	0.79	1.96	1.30	0.54	2.44	1.22	1.22	3.78	0.98	18.15	200	0.54
4	STEM	BRASS C38500	1	3/4"	0.75	10-32 UNF	3.35	0.96	2.38	1.54	0.55	2.72	1.36	1.36	4.84	1.22	32.37	200	0.89
5	HANDLE	Fe DD 11 UNI EN 10111	1	1"	0.94	10-32 UNF	3.71	1.14	2.57	1.93	0.66	3.07	1.54	1.54	4.84	1.50	47.97	200	1.28
6	SEAT BALL	RPTFE	2	1 1/4"	0.94	0.18	3.66	1.02	2.64	2.05	0.68	3.31	1.67	1.63	4.84	1.89	41.27	200	1.65
7	THRUST WASHER/STEM SEAL	PTFE	2	1 1/2"	1.25	0.24	4.27	1.12	3.15	2.32	0.68	3.54	1.77	1.77	5.94	2.13	81.50	200	1.92
8	PACKING GLAND	BRASS C38500	1	2"	1.56	0.28	4.76	1.36	3.40	2.87	0.70	4.07	2.03	2.05	5.94	2.64	124.28	200	2.69
9	O-RING	NBR	1																
10	O-RING	FKM	1																
11	NUT	STEEL CL 04	2																
12	PACKING GLAND	BRASS C38500	1																
13	LOCKING DEVICE	Fe DD11 UNI EN 10111	1																

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



MEETS THE DESIGN CRITERIA OF MSS SP-110.

SERIES 9280 FIP-FIP GAS BALL VALVE



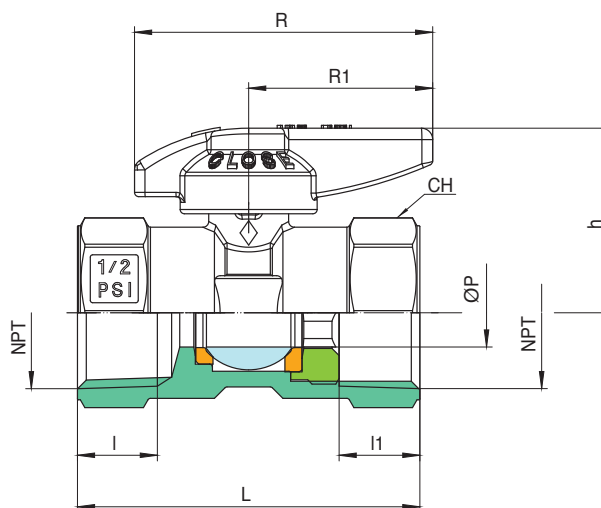
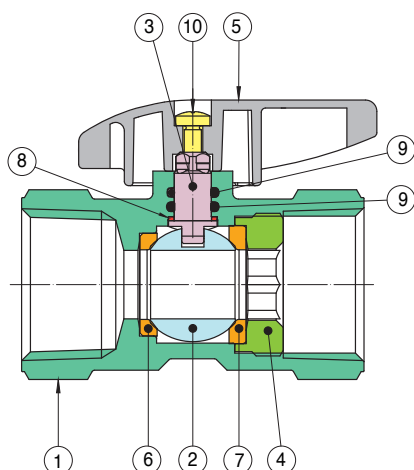
Gas ball valve unibody design, standard port, FIP x FIP threaded.

According to:

- CAN 1-9.1 - US REQUIREMENTS 3-88.
- CGA CR 91-002 - ANSI Z21.15.
- UL 125 "LP GAS" - UL 842 - SUBJECT 258.
- ANSI B1.20.1 connections.
- Blow-out proof stem, chrome plated brass ball.
- PTFE seats.
- 100% electronically tested in the open and closed position at 80 psi.
- Valve to be used in fully open or fully closed position.

9280: size 3/8" to 3/4".

ONE PIECE BODY

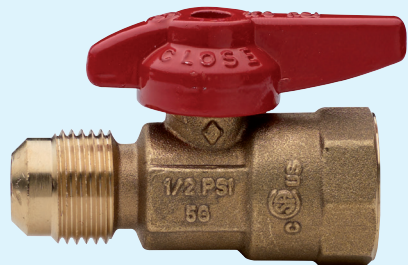


N POS	PART NAME	MATERIAL	N PCS
1	BODY	BRASS C37700	1
2	BALL	BRASS C38500	1
3	STEM	BRASS C38500	1
4	RING NUT	BRASS C38500	1
5	HANDLE	G Zn Al4 UNI 3717 ALLOY	1
6	BALL SEAT	PTFE	1
7	BALL SEAT	PTFE	1
8	THRUST WASHER	PE	1
9	O-RING	NBR	2
10	SCREW	STEEL	1

SIZE	ØP	I	I1	L	R	R1	CH	h	Weight (Lbs)
3/8" FIP X 3/8" FIP	0.31	0.41	0.41	1.69	2.06	1.27	0.79	1.06	0.17
1/2" FIP X 1/2" FIP	0.39	0.54	0.54	2.17	2.06	1.27	0.98	1.14	0.29
3/4" FIP X 3/4" FIP	0.47	0.55	0.56	2.36	2.06	1.27	1.22	1.28	0.46

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.





SERIES 9281 FIP-FLARE GAS BALL VALVE



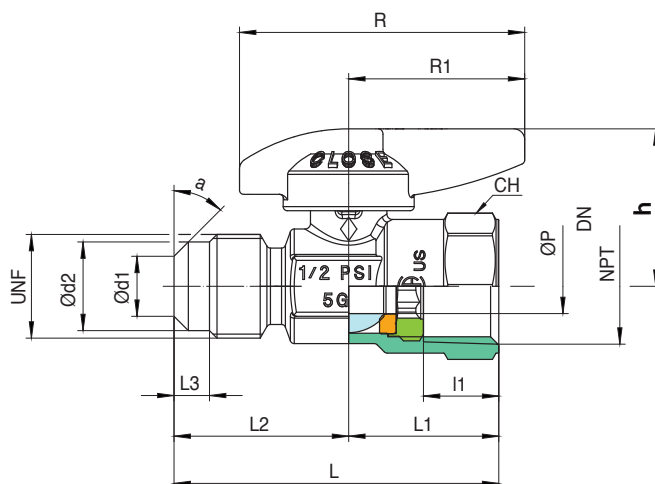
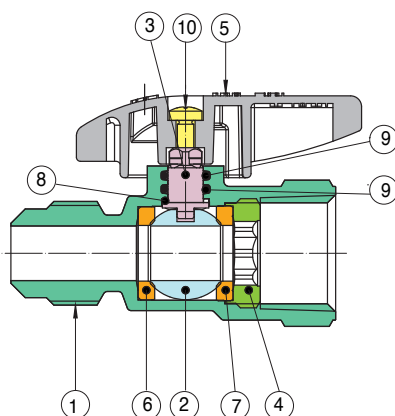
Gas ball valve unibody design, standard port, FIP x FLARE threaded.
According to:

- CAN 1-9.1 - US REQUIREMENTS 3-88.
- CGA CR 91-002 - ANSI Z21.15.
- UL 125 "LP GAS" - UL 842 - SUBJECT 258.
- ANSI B1.20.1 connections.
- Blow-out proof stem, chrome plated brass ball.
- PTFE seats.
- 100% electronically tested in the open and closed position at 80 psi.
- Valve to be used in fully open or fully closed position.

9281: size 3/8" up to 1/2".

ONE PIECE BODY

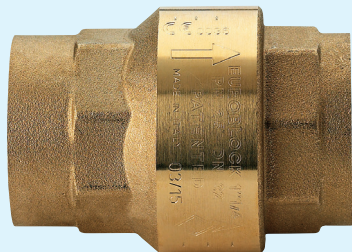
MEETS THE DESIGN CRITERIA OF MSS SP-110.



N POS	PART NAME	MATERIAL	N PCS	SIZE	UNF	NPT	ØP	I1	L	L1	L2	L3	Ød1	Ød2	R	R1	a	CH	h	Weight (Lbs)
1	BODY	BRASS C37700	1	3/8" FIP X 3/8" FLARE	5/8" X18	3/8" X18	0.28	0.41	1.93	0.85	1.08	0.22	0.31	0.53	2.06	1.27	45°	0.79	1.06	0.20
2	BALL	BRASS C38500	1																	
3	STEM	BRASS C38500	1	1/2" FIP X 3/8" FLARE	5/8" X18	1/2" X14	0.28	0.54	2.24	1.08	1.16	0.22	0.31	0.53	2.06	1.27	45°	0.98	1.14	0.25
4	RING NUT	BRASS C38500	1																	
5	HANDLE	G Zn Al4 UNI 3717 ALLOY	1	1/2" FIP X 1/2" FLARE	3/4" X16	1/2" X14	0.39	0.54	2.34	1.08	1.26	0.26	0.43	0.64	2.06	1.27	45°	0.98	1.14	0.26
6	BALL SEAT	PTFE	1																	
7	BALL SEAT	PTFE	1	1/2" FIP X 1/2" FLARE	3/4" X16	1/2" X14	0.39	0.54	2.34	1.08	1.26	0.26	0.43	0.64	2.06	1.27	45°	0.98	1.14	0.26
8	THRUST WASHER	PE	1																	
9	O-RING	NBR	2	1/2" FIP X 1/2" FLARE	3/4" X16	1/2" X14	0.39	0.54	2.34	1.08	1.26	0.26	0.43	0.64	2.06	1.27	45°	0.98	1.14	0.26
10	SCREW	STEEL	1																	

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.





SERIES 100002 - 100003 CHECK VALVE

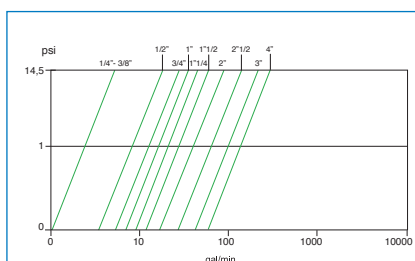
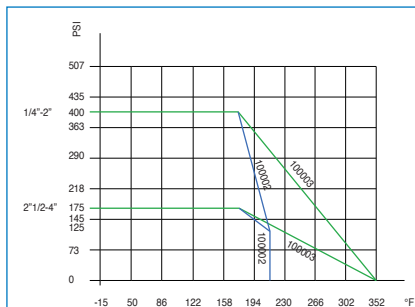
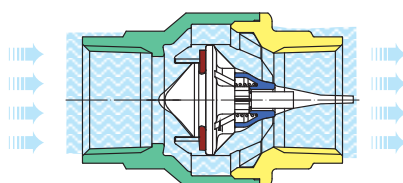
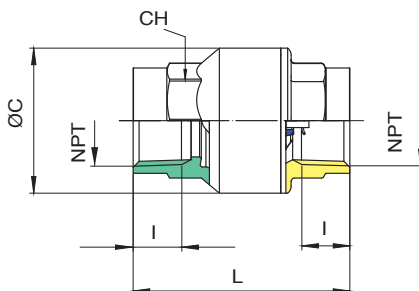
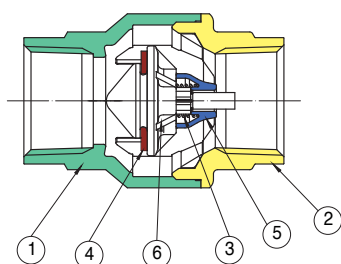
High flow rate brass, FNPT threaded, in-line spring loaded check valve.

- Pressure rating: size 1/4"-2" 400 WOG / 2 1/2"-4" 175 WOG.
- Soft seat for bubble tight shutoff, spring loaded for fast seating action.
- Low cracking pressure 1/2 psi.
- Wide temperature range: -4°F to 210°F.
- ANSI B1.20.1 connections.
- Flow pattern to minimize head loss.
- Perfect sealing both at high and low pressure.
- High technology materials to ensure best resistance in any condition.
- Not to be used for drinking water.

100002: NBR for water, oils and general purpose - size 3/8" to 4".

100003: with FKM Viton seal for fuels and hydrocarbons.

Max working temperature 366°F/125 psi steam - size 3/8" to 4".



N POS	PART NAME	MATERIAL	N PCS
1	BODY	BRASS C37700	1
2	END CONNECTION	BRASS C37700	1
3	SPRING	AISI 302	1
4	SEAT	100002 NBR	1
		100003 FKM (Viton)	1
5	SUPPORT	POM	1
6	DISC	POLYPHENYLENE SULFIDE	1

SIZE	I	L	ØC	CH	psi	Cv	Weight (Lbs)
1/4" *	0.39	1.73	1.06	0.79	400	2.1	0.21
3/8"	0.41	1.73	1.06	0.79	400	2.1	0.19
1/2"	0.54	2.22	1.36	0.98	400	9.2	0.30
3/4"	0.55	2.48	1.65	1.22	400	15.1	0.50
1"	0.66	2.85	1.93	1.50	400	22.1	0.73
1 1/4"	0.68	3.13	2.40	1.89	400	34.3	1.14
1 1/2"	0.68	3.31	2.87	2.13	400	51.9	1.56
2"	0.70	3.62	3.44	2.64	400	71.3	2.27
2 1/2"	0.93	4.37	4.39	3.27	175	90.1	4.69
3"	1.02	4.86	5.24	3.86	175	141.7	6.83
4"	1.09	5.45	6.42	5.04	175	220.7	11.61

* Art. 100003 not available in 1/4" size.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



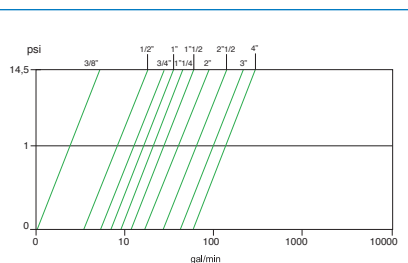
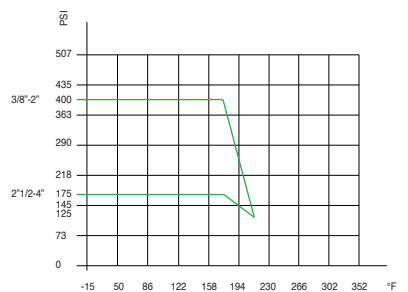
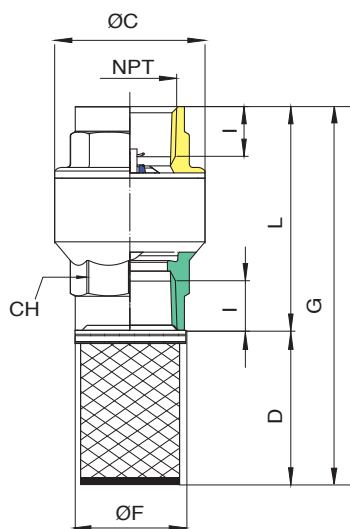
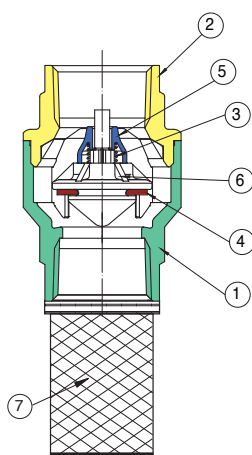


SERIES 100102 FOOT VALVE

High flow rate, brass FNPT threaded, spring loaded foot valve.

- Pressure rating: sizes 3/8"-2" 400 WOG - 2 1/2"-4" 175 WOG.
- Low cracking pressure 1/2 psi.
- Wide temperature range: -4°F to 210°F.
- ANSI B1.20.1 connections.
- Soft seat for bubble tight shutoff, spring loaded for fast seating action.
- Flow pattern to minimize head loss.
- Perfect sealing both at high and low pressure.
- High technology materials to ensure best resistance in any condition.
- Stainless steel 1000 micron strainer.
- Not to be used for drinking water.

100102: size 3/8" to 4".



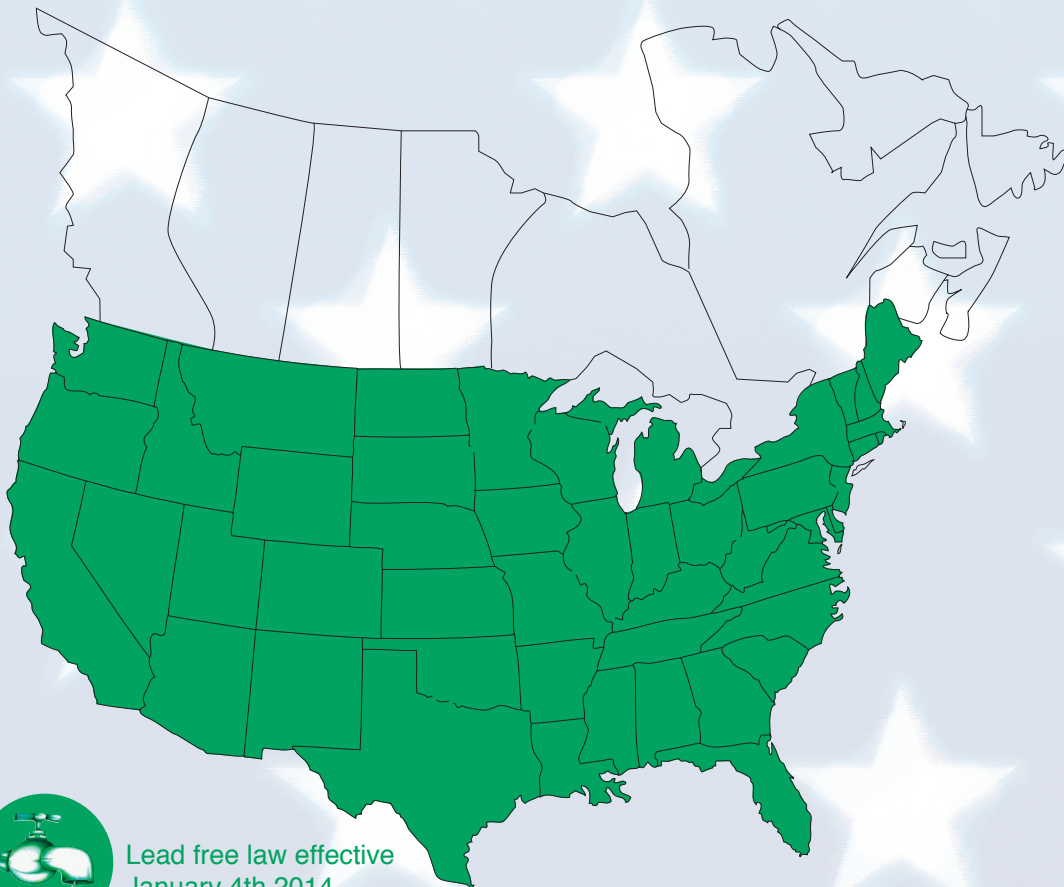
N POS	PART NAME	MATERIAL	N PCS
1	BODY	BRASS C37700	1
2	END CONNECTION	BRASS C37700	1
3	SPRING	STAINLESS STEEL	1
4	SEAT	NBR	1
5	SUPPORT	POM	1
6	DISC	POLYPHENYLENE SULFIDE	1
7	SCREEN	STAINLESS STEEL NYLON 1000 MICRON	1

SIZE	I	L	ØC	D	ØF	G	CH	psi	Cv	Weight (Lbs)
3/8"	0.41	1.73	1.06	1.67	0.91	3.41	0.79	400	2.1	0.23
1/2"	0.54	2.32	1.36	1.69	1.02	4.02	0.98	400	9.2	0.33
3/4"	0.55	2.56	1.65	1.89	1.26	4.45	1.22	400	15.1	0.53
1"	0.66	2.76	1.93	1.89	1.61	4.65	1.50	400	22.1	0.78
1 1/4"	0.68	2.93	2.40	2.24	1.93	5.18	1.89	400	34.3	1.32
1 1/2"	0.68	3.17	2.87	2.68	2.17	5.85	2.13	400	51.9	1.71
2"	0.70	3.37	3.46	3.27	2.64	6.63	2.64	400	71.3	2.38
2 1/2"	0.93	4.37	4.39	3.29	3.39	7.66	3.27	175	90.1	4.98
3"	1.02	4.86	5.24	3.90	3.90	8.76	3.86	175	141.7	7.26
4"	1.09	5.41	6.42	4.53	4.80	9.94	5.04	175	220.7	12.25

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.

BONOMI

NORTH AMERICA



Lead free law effective
January 4th 2014

LEAD FREE VALVES AND FORGINGS

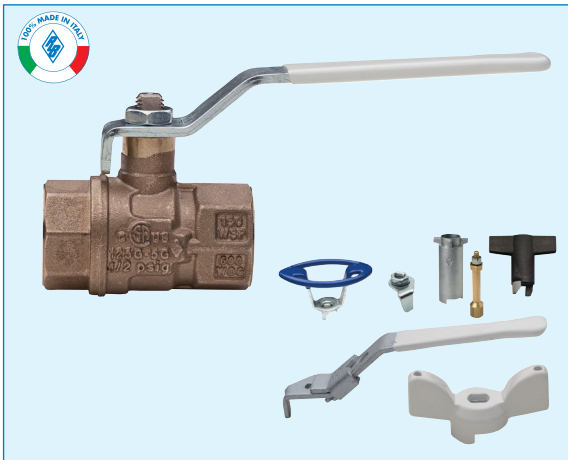
At Bonomi North America, we are dedicated to providing the best possible lead free brass material in the industry today.

Our lead free brass is the same material we have always used, less the lead. No new element has been added, only more of the existing elements. There is no bismuth nor silicon lead replacement filler present in our material, therefore no worry about having to use higher temperature fluxes and special solders. Our valves are soldered just like a leaded valve... no change.

We have had many years of experience with our lead free material in different parts of the world, and our acceptance in North America has been very positive. There is no good reason to switch to valves requiring either high temperature solders-fluxes, nor need to worry about potential long term material brittleness, when Bonomi lead free valves are available. Brass forgings vs. bronze sand castings.

Another advantage Bonomi valves have over other lead free valves is that Bonomi lead free brass valves are forged and not sand cast. Brass forged valve bodies are far superior to bronze sand cast bodies, offering higher tensile strength, lighter weight, and zero porosity, unlike bronze sand cast parts.

At Bonomi North America, we are dedicated to providing only the safest, highest performing valves that eliminate problems for specifiers and installers.



MEETS THE DESIGN CRITERIA OF MSS SP-110.

SERIES B11N LF



Forged bronze ball valve, FNPT threaded, full port.

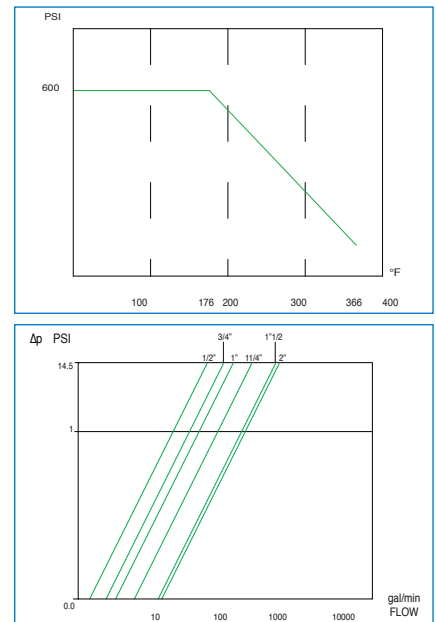
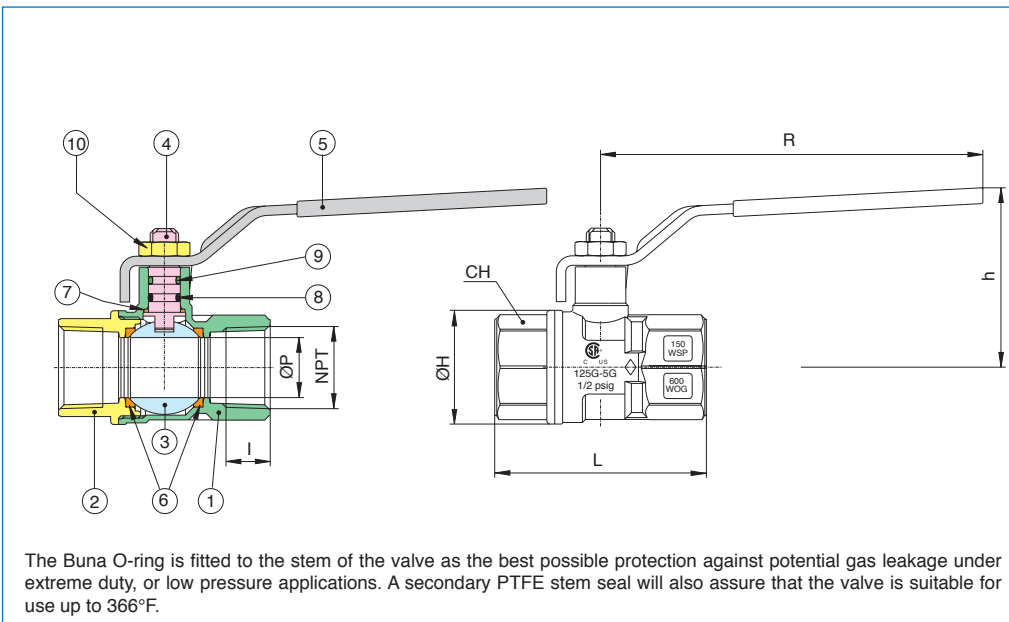
- Pressure rating 600 WOG - 150 WSP.
- Temperature range -4°F to 366°F.
- ANSI B1.20.1 connections.
- Made in specially formulated dezincification-resistant silicon bronze.
- SLT coated LF brass ball.
- Blow-out proof stem.
- PTFE seats and double O-ring packing.
- 100% electronically tested in the open and closed position at 80 psi.
- Valve to be used in fully open or fully closed position.

B11N LF: LEVER HANDLE - size 1/2" to 2".

B12N LF: T- HANDLE - size 1/2" to 1".

HEALTH
EFFECTS US-CA
NSF 372
NSF 61

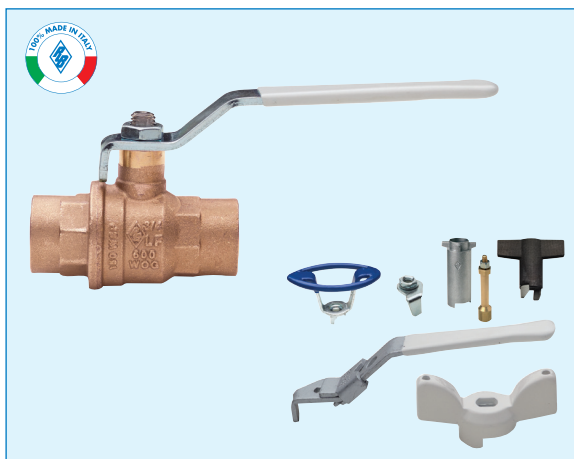
400 WOG

Max. 250 psig
up to 2"

N POS	PART NAME	MATERIAL	N POS	SIZE	ØP	I	L	ØH	CH	R	h	Cv	psi	Weight Lbs
1	BODY	LF BRONZE*	1	1/2"	0.55	0.41	2.22	1.18	0.98	3.78	1.69	19.00	600	0.42
2	END CONNECTION	LF BRONZE*	1	3/4"	0.75	0.54	2.46	1.42	1.22	4.76	2.22	34.50	600	0.65
3	BALL	LF BRASS CW 510L*	1	1"	0.94	0.55	3.01	1.71	1.50	4.76	2.32	50.18	600	1.00
4	STEM	LF BRASS CW 510L*	1	1 1/4"	1.19	0.68	3.37	2.09	1.89	5.94	2.85	103.70	600	1.62
5	HANDLE	STEEL DD11	1	1 1/2"	1.50	0.68	3.70	2.56	2.13	5.94	3.09	268.40	600	2.30
6	BALL SEAT	PTFE	2	2"	1.95	0.70	4.33	3.39	2.64	6.30	3.70	309.20	600	3.93
7	THRUST WASHER	PTFE	1											
8	O-RING	NBR	1											
9	O-RING	FKM (Viton)	1											
10	NUT	STEEL CL04	1											

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



SERIES B115 LF

LF superBRonze

Forged bronze ball valve with solder ends, full port.

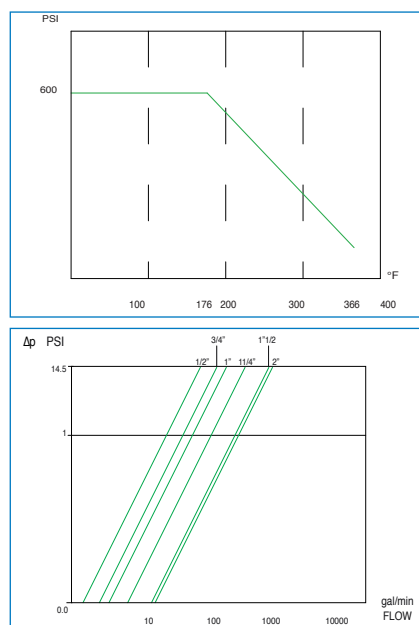
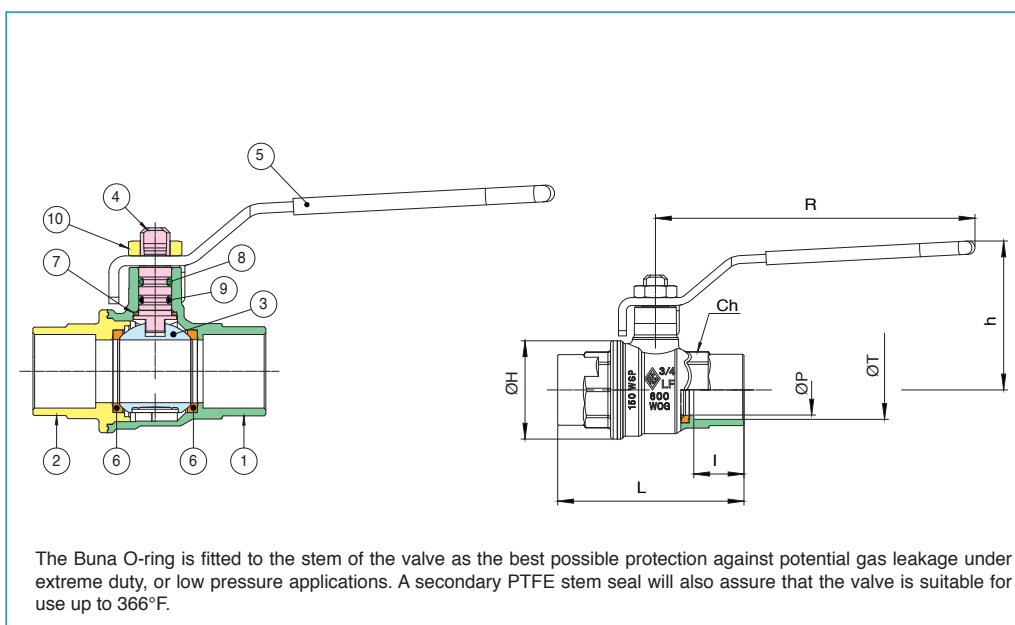
- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to 366°F.
- ANSI B16.18 connections.
- Made in specially formulated dezincification-resistant silicon bronze.
- SLT coated LF brass ball.
- Blow-out proof stem.
- PTFE seats and double O-ring packing.
- 100% electronically tested in the open and closed position at 80 psi.
- Valve to be used in fully open or fully closed position.

B115 LF: LEVER HANDLE - size 1/2" to 2".

B125 LF: T- HANDLE - size 1/2" to 1".



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N POS	PART NAME	MATERIAL	N POS
1	BODY	LF BRONZE*	1
2	END CONNECTION	LF BRONZE*	1
3	BALL	LF BRASS CW 510L*	1
4	STEM	LF BRASS CW 510L*	1
5	HANDLE	STEEL DD11	1
6	BALL SEAT	PTFE	2
7	THRUST WASHER	PTFE	1
8	O-RING	FKM (Viton)	1
9	O-RING	NBR	1
10	NUT	STEEL CL04	1

SIZE	ØP	I	ØT	L	ØH	Ch	R	h	Cv	psi	Weight Lbs
1/2"	0.55	0.50	0.63	2.19	1.22	0.87	3.78	1.77	18.15	600	0.40
3/4"	0.75	0.75	0.88	2.78	1.46	1.06	4.76	2.22	32.37	600	0.63
1"	0.94	0.91	1.13	3.37	1.76	1.34	4.76	2.32	47.98	600	0.95
1 1/4"	1.19	0.97	1.38	3.86	2.11	1.69	5.94	2.85	97.80	600	1.64
1 1/2"	1.50	1.10	1.63	4.48	2.64	1.97	5.94	3.09	252.60	600	2.33
2"	1.95	1.34	2.13	5.33	3.39	2.44	6.30	3.70	290.75	600	3.80

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



MEETS THE DESIGN CRITERIA OF MSS SP-110.

SERIES 161N LF - 162N LF COMPACT STYLE

Lead free brass ball valve, FNPT threaded, full port.

- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to 366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, SLT coated LF brass ball.
- PTFE seats and double O-ring stem packing.
- 100% electronically tested in the open and closed position at 80 psi.
- Valve to be used in fully open or fully closed position.

161N LF: LEVER HANDLE - size 1/2" to 4".**162N LF:** T- HANDLE - size 1/2" to 1".

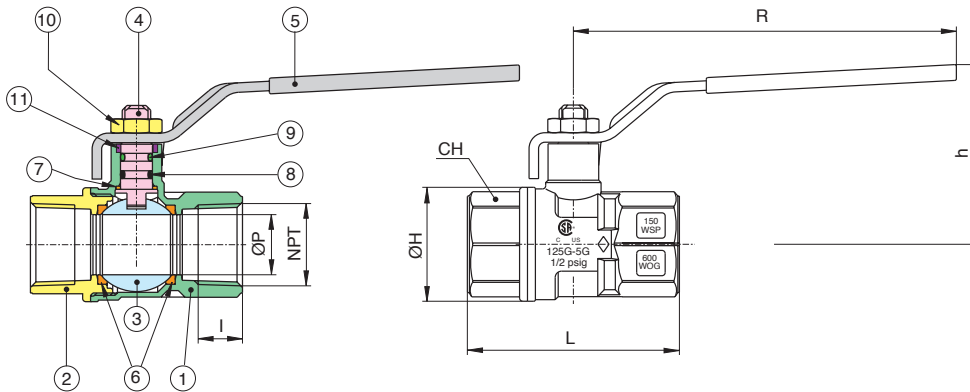
Sizes 1/4" and 3/8" see 171N LF.

HEALTH
EFFECTS US-CA
NSF 372
NSF 61400 WOG
up to 2"

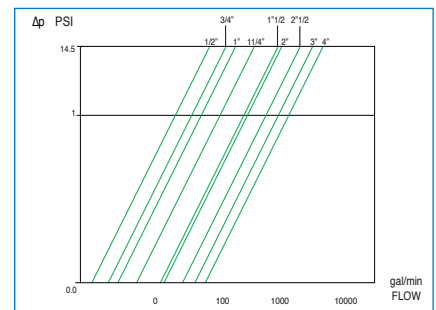
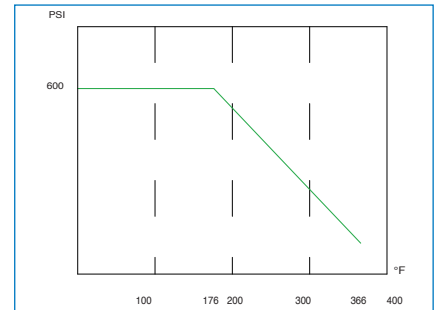
up to 2"



up to 2"



The Buna O-ring is fitted to the stem of the valve as the best possible protection against potential gas leakage under extreme duty, or low pressure applications. A secondary PTFE stem seal will also assure that the valve is suitable for use up to 366°F.



N POS	PART NAME	MATERIAL	N POS	SIZE	ØP	I	L	ØH	CH	R	h	Cv	psi	Weight Lbs
1	BODY	LF BRASS C28500 *	1	1/2"	0.55	0.54	2.22	1.22	0.98	3.78	1.77	18.15	600	0.40
2	END CONNECTION	LF BRASS C28500 *	1	3/4"	0.75	0.55	2.46	1.46	1.22	4.76	2.22	32.37	600	0.67
3	BALL BALL (2 1/2" to 4")	LF BRASS C28500 * AISI 316 (CF8M)	1 1	1"	0.94	0.66	3.01	1.76	1.50	4.76	2.32	47.98	600	1.02
4	STEM	LF BRASS C28500 *	1	1 1/4"	1.19	0.68	3.37	2.11	1.89	5.94	2.85	97.80	600	1.63
5	HANDLE	STEEL DD11	1	1 1/2"	1.50	0.68	3.70	2.64	2.13	5.94	3.09	252.60	600	2.19
6	BALL SEAT	PTFE	2	2"	1.95	0.70	4.31	3.39	2.64	6.30	3.70	290.75	600	4.08
7	THRUST WASHER	PTFE	1	2 1/2"	2.44	0.93	5.16	4.09	3.27	8.07	4.59	593.06	600	8.18
8	O-RING	NBR	1	3"	2.99	1.02	5.94	4.96	3.86	8.07	4.98	958.84	600	12.56
9	O-RING	FKM (Viton)	1	4"	3.94	1.09	7.60	6.54	4.92	10.31	6.56	1526.59	600	24.69
10	NUT	STEEL CL04	1											
11	PACKING RING	PTFE	1											

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.

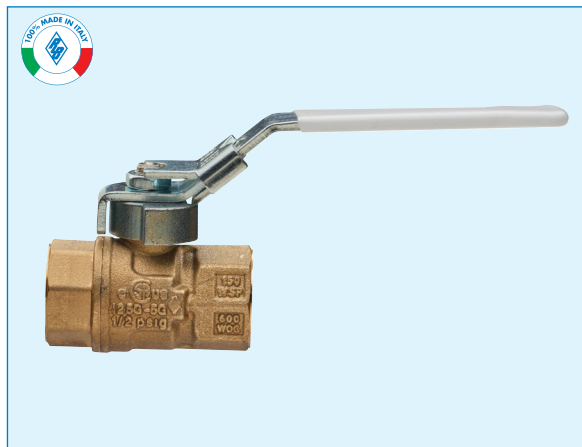


SERIES 161L LF COMPACT STYLE

Lead free brass ball valve, FNPT threaded, full port, with latch lock handle.

- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to 366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, SLT coated LF brass ball.
- PTFE seats, seals, and thrust washer.
- 100% electronically tested in the open and closed position at 80 psi.
- Valve to be used in fully open or fully closed position.

161L LF: LOCK HANDLE - size 1/2" to 4".



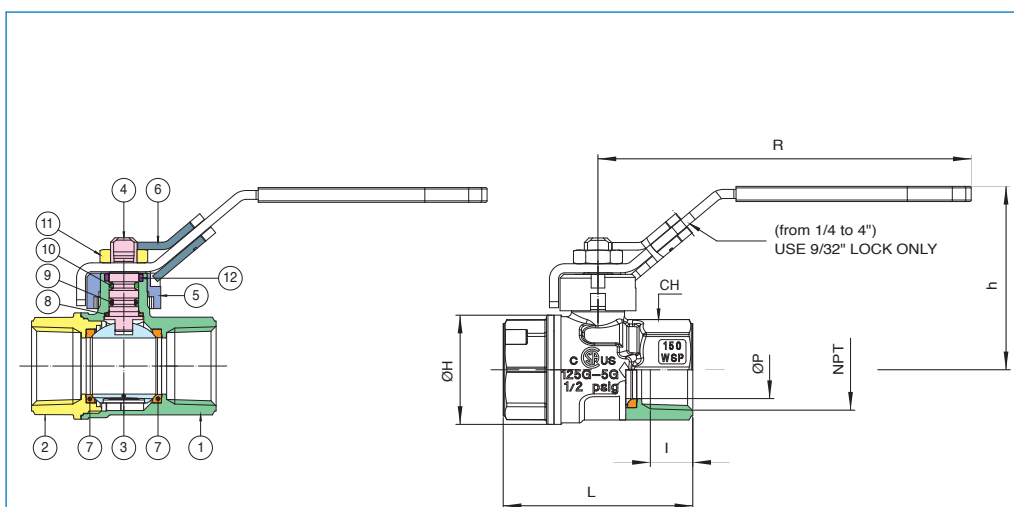
MEETS THE DESIGN CRITERIA OF MSS SP-110.



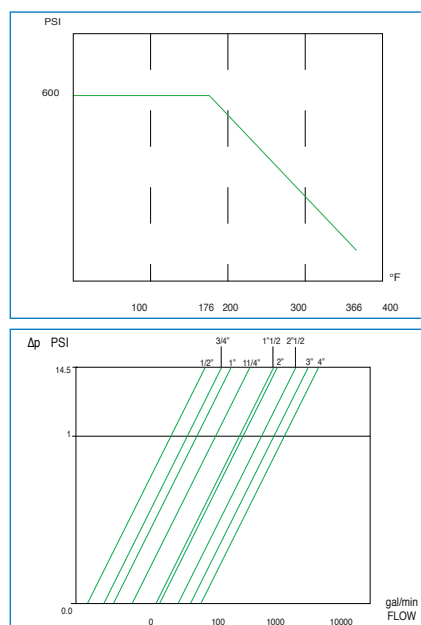
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NSF 372
NSF 61



400 WOG
up to 2"



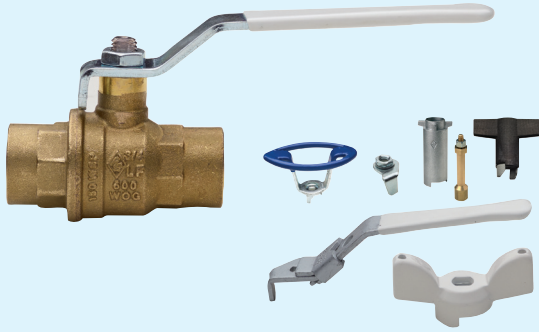
The Buna O-ring is fitted to the stem of the valve as the best possible protection against potential gas leakage under extreme duty, or low pressure applications. A secondary PTFE stem seal will also assure that the valve is suitable for use up to 366°F.



N POS	PART NAME	MATERIAL	N PCS	SIZE	ØP	I	L	ØH	CH	R	h	Cv	psi	Weight (Lbs)
1	BODY	LF BRASS C28500 *	1	1/2"	0.55	0.54	2.22	1.22	0.98	3.78	1.91	18.15	600	0.48
2	END CONNECTION	LF BRASS C28500 *	1	3/4"	0.75	0.55	2.46	1.46	1.22	4.84	2.38	32.37	600	0.81
3	BALL BALL 2 1/2" to 4")	LF BRASS C28500 * AISI 316 (CF8M)	1	1"	0.94	0.66	3.01	1.76	1.50	4.84	2.48	47.98	600	1.14
4	STEM	LF BRASS C28500 *	1	1 1/4"	1.19	0.68	3.37	2.11	1.89	5.94	2.99	97.80	600	1.86
5	BUSH	G Zn Al4	1	1 1/2"	1.50	0.68	3.70	2.64	2.13	5.94	2.05	252.60	600	2.51
6	HANDLE	STEEL DD11	1	2"	1.95	0.70	4.31	3.39	2.64	6.30	3.76	290.75	600	4.39
7	BALL SEAT	PTFE	2	2 1/2"	2.44	0.93	5.16	4.09	3.27	8.11	4.78	593.06	600	8.67
8	THRUST WASHER	PTFE	1	3"	2.99	1.02	5.94	4.96	3.86	8.11	5.20	958.84	600	13.24
9	O-RING	NBR	1	4"	3.94	1.09	7.60	6.54	4.92	10.28	6.56	1526.59	600	27.66
10	O-RING	FKM (Viton)	1											
11	NUT	STEEL CL04	1											
12	PACKING RING	PTFE	1											

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



SERIES 1615 LF - 1625 LF COMPACT STYLE

Lead free brass ball valve with solder ends, full port.

- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to 366°F.
- ANSI B16.18 connections.
- Blow-out proof stem, SLT coated LF brass ball.
- PTFE seats and double O-ring stem packing.
- 100% electronically tested in the open and closed position at 80 psi.
- Valve to be used in fully open or fully closed position.

1615 LF: LEVER HANDLE - size 1/2" to 4".

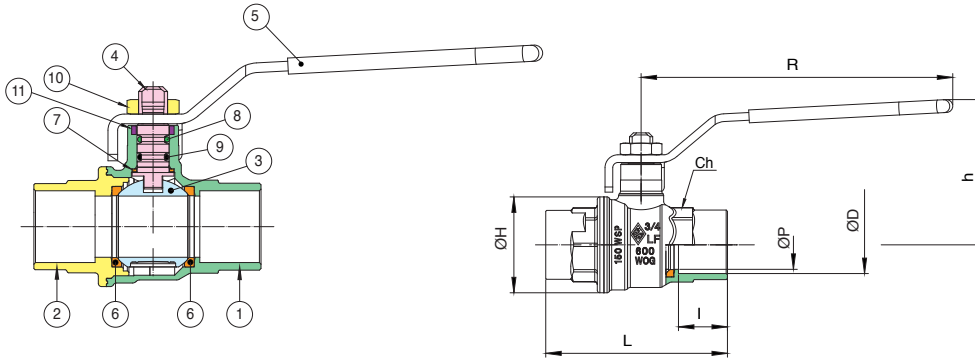
1625 LF: T-HANDLE - size 1/2" to 1".



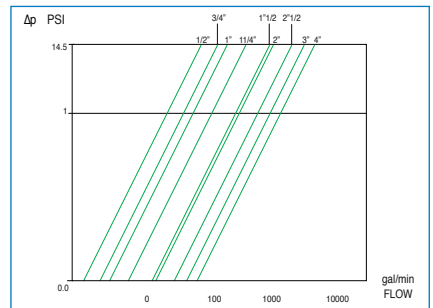
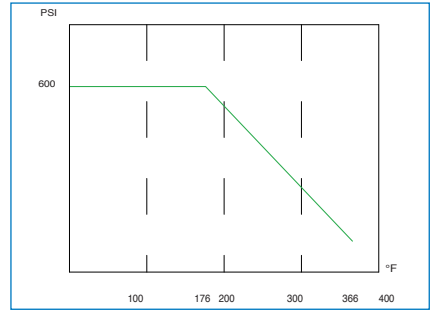
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NSF 61



MEETS THE DESIGN CRITERIA OF MSS SP-110.



The Buna O-ring is fitted to the stem of the valve as the best possible protection against potential gas leakage under extreme duty, or low pressure applications. A secondary PTFE stem seal will also assure that the valve is suitable for use up to 366°F.



N POS	PART NAME	MATERIAL	N POS	SIZE	ØP	I	ØD	L	ØH	CH	R	h	Cv	psi	Weight (Lbs)
1	BODY	LF BRASS C28500 *	1	1/2"	0.55	0.50	0.63	2.19	1.22	0.87	3.78	1.77	18.15	600	0.40
2	END CONNECTION	LF BRASS C28500 *	1	3/4"	0.75	0.75	0.88	2.78	1.46	1.06	4.76	2.22	32.37	600	0.63
3	BALL	LF BRASS C28500 * AISI 316 (CF8M) (2 1/2" to 4")	1	1"	0.94	0.91	1.13	3.37	1.76	1.34	4.76	2.32	47.98	600	0.95
4	STEM	LF BRASS C28500 *	1	1 1/4"	1.19	0.97	1.38	3.86	2.11	1.69	5.94	2.85	97.80	600	1.64
5	HANDLE	STEEL DD11	1	1 1/2"	1.50	1.10	1.63	4.48	2.64	1.97	5.94	3.09	252.60	600	2.36
6	BALL SEAT	PTFE	2	2"	1.95	1.34	2.13	5.33	3.39	2.44	6.30	3.70	290.75	600	4.17
7	THRUST WASHER	PTFE	1	2 1/2"	2.44	1.48	2.63	6.14	4.09	3.27	8.07	4.59	593.06	600	7.85
8	O-RING	FKM (Viton)	1	3"	2.99	1.67	3.13	7.17	4.96	3.54	8.07	4.98	958.84	600	11.73
9	O-RING	NBR	1	4"	3.94	2.17	4.13	10.08	6.54	4.92	10.24	6.54	1526.59	600	30.65
10	NUT	STEEL CL 04	1												
11	PACKING RING	PTFE	1												

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

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SERIES 161N LFPT COMPACT STYLE

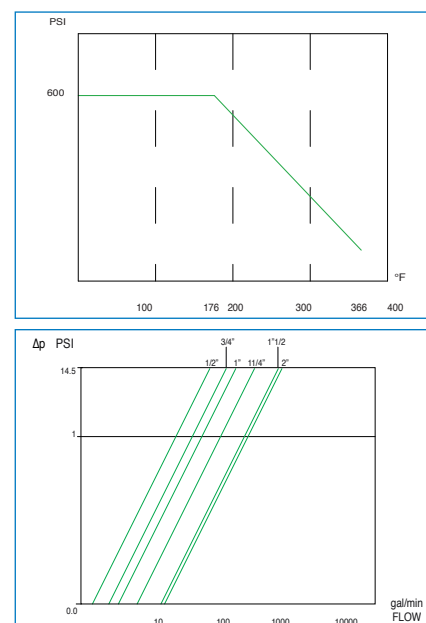
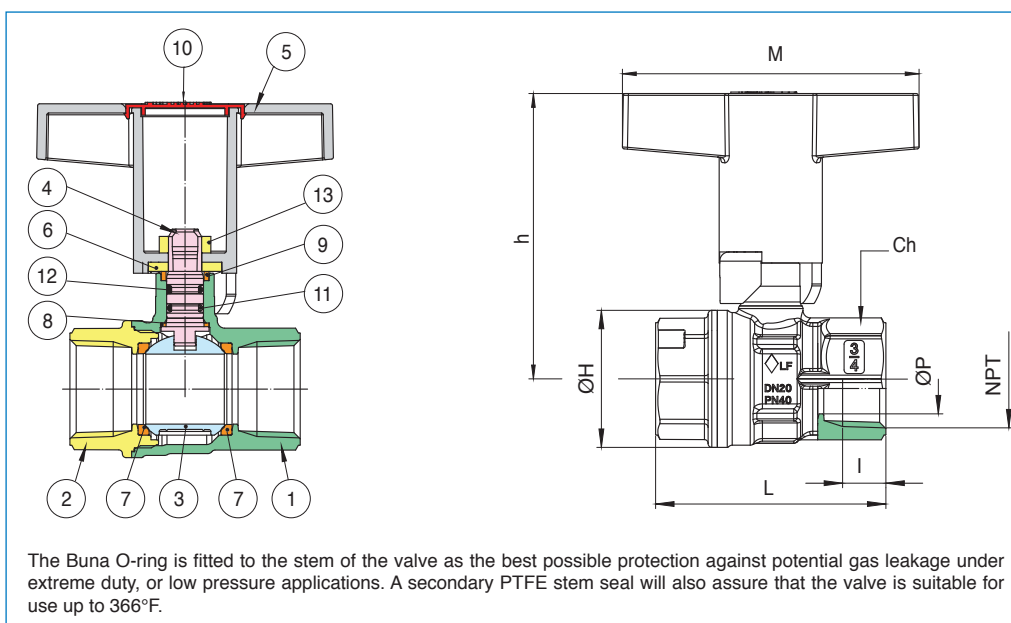
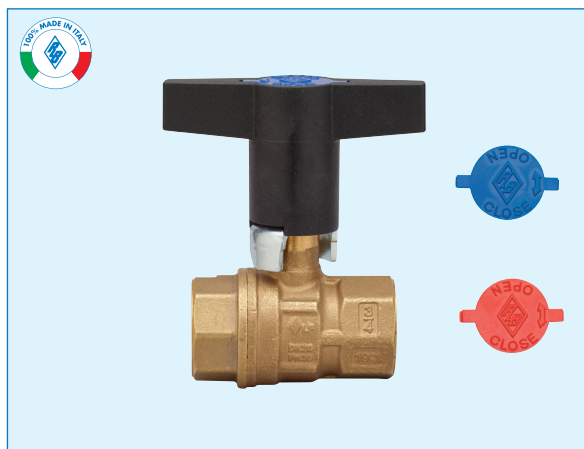
Lead free brass ball valve, FNPT threaded, full port.

- Pressure rating 600 WOG-150WSP.
- Temperature range -4°F to 366°F.
- ANSI B1.20.1 thread depths.
- High tensile strength forged lead-free brass.
- Blow-out proof stem, coated LF brass ball.
- 100% electronically tested in the open and closed position at 80 psi.
- Valve to be used in fully open or fully closed position.
- Ultimate bubble tight dual O-ring stem seals.
- Handle-polyamide thermal plastic T style.
- Vapor barrier design, ideal for all insulated heating/chilled water piping.

161N LFPT: size 1/2" to 2".



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N POS	PART NAME	MATERIAL	N PCS	SIZE	ØP	I	L	ØH	Ch	M	h	Cv	psi	Weight (Lbs)
1	BODY	LF BRASS C28500*	1	1/2"	0.55	0.54	2.22	1.22	0.98	3.15	2.80	18.15	600	0.48
2	END CONNECTION	LF BRASS C28500*	1	3/4"	0.75	0.55	2.46	1.46	1.22	3.15	3.05	32.37	600	0.75
3	BALL	LF BRASS C28500*	1	1"	0.94	0.66	3.01	1.76	1.50	3.15	3.15	47.98	600	1.08
4	STEM	LF BRASS C28500*	1	1 1/4"	1.19	0.68	3.37	2.11	1.89	4.72	4.34	97.80	600	1.82
5	T-HANDLE	PA6.6	1	1 1/2"	1.50	0.68	3.70	2.64	2.13	4.72	4.57	252.60	600	2.41
6	90° STOP	STEEL DD11	1	2"	1.95	0.70	4.31	3.39	2.64	4.72	4.96	290.75	600	4.19
7	BALL SEAT	PTFE	2											
8	THRUST WASHER	PTFE	1											
9	PACKING RING	PTFE	1											
10	CAP	ABS	1											
11	O-RING	NBR	1											
12	O-RING	FKM (Viton)	1											
13	NUT	STEEL CL04	1											

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.





MEETS THE DESIGN CRITERIA OF MSS SP-110.

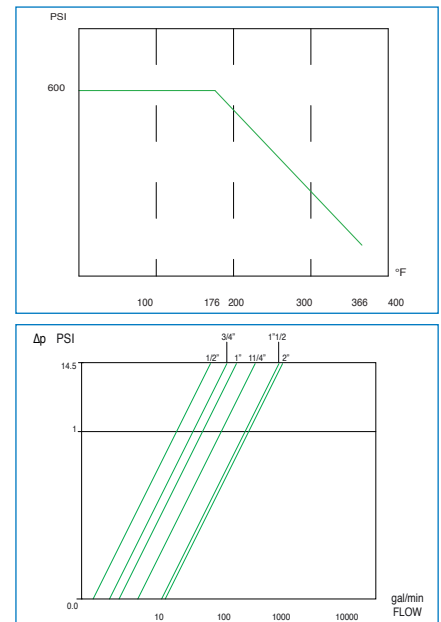
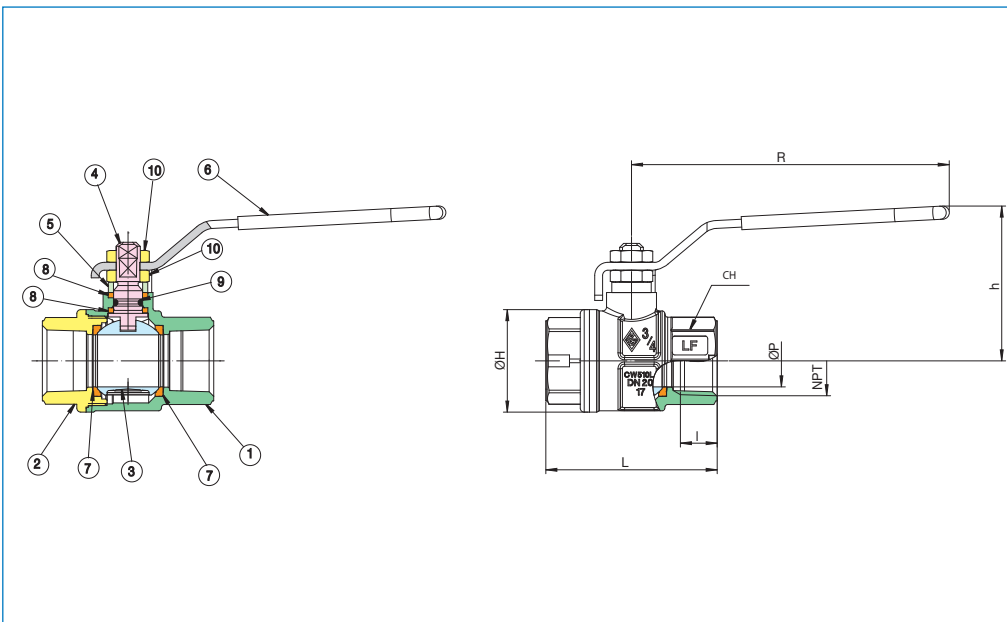
SERIES 171N LF - 172N LF COMMERCIAL STYLE

Lead free brass ball valve, FNPT threaded, full port.

- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to 366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, STL coated LF brass ball.
- PTFE seats, seals, and thrust washer.
- Adjustable stem packing.
- 100% electronically tested in the open and closed position at 80 psi.
- Valve to be used in fully open or fully closed position.

171N LF: LEVER HANDLE - size 1/4" to 2".**171L LF:** LOCKING HANDLE - size 1/4" to 2".**172N LF:** T-HANDLE - size 1/4" to 1".**171S LF:** BALL AND STEM IN STAINLESS STEEL AISI 316 - size 1/4" to 2".
For sizes 2 1/2", 3" and 4" see 161N LF.HEALTH
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Max. 250 psig



N POS	PART NAME	MATERIAL	N PCS	SIZE	ØP	I	L	ØH	CH	R	h	Cv	psi	Weight (Lbs)
1	BODY	LF BRASS C28500*	1	1/4"	0.39	0.39	1.91	0.91	0.79	3.78	1.69	6.24	600	0.31
2	END CONNECTION	LF BRASS C28500*	1	3/8"	0.39	0.41	1.91	0.91	0.79	3.78	1.69	6.94	600	0.28
3	BALL	LF BRASS C28500*	1	1/2"	0.59	0.54	2.34	1.30	0.98	3.78	1.83	18.84	600	0.46
4	STEM	LF BRASS C28500*	1	3/4"	0.79	0.55	2.56	1.54	1.22	4.76	2.32	34.10	600	0.81
5	PACKING GLAND	BRASS C38500	1	1"	0.98	0.66	3.07	1.93	1.50	4.76	2.48	49.71	600	1.15
6	HANDLE	STEEL DD11	1	1 1/4"	1.26	0.68	3.43	2.32	1.89	5.94	2.99	102.89	600	2.03
7	BALL SEAT	PTFE	2	1 1/2"	1.57	0.68	3.90	2.87	2.13	5.94	3.25	265.90	600	3.01
8	THRUST WASHER/STEM SEAT	PTFE	2	2"	1.95	0.70	4.37	3.43	2.64	6.30	3.76	306.36	600	4.95
9	O-RING	NBR	1											
10	NUT	STEEL CL04	2											

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



SERIES 1715 LF - 1725 LF COMMERCIAL STYLE

Lead free brass ball valve with solder ends, full port.

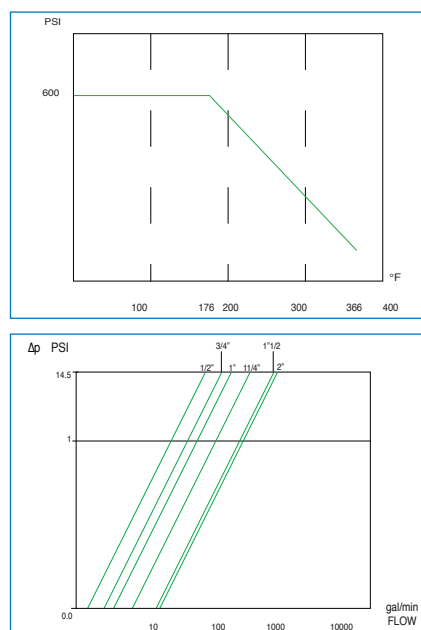
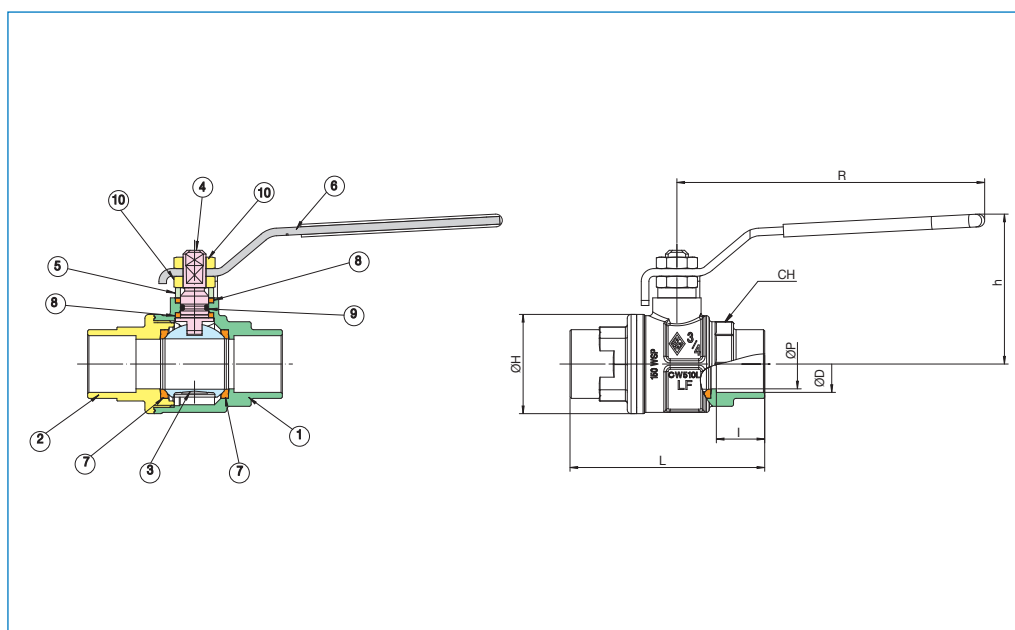
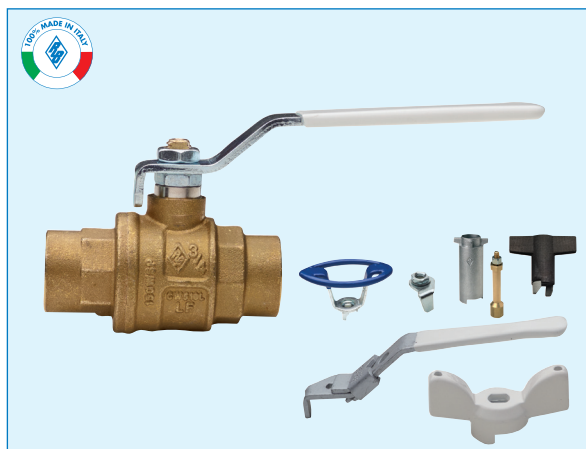
- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to 366°F.
- ANSI B16.18 connections.
- Blow-out proof stem, STL coated LF brass ball.
- PTFE seats, seals, and thrust washer.
- Adjustable stem packing.
- 100% electronically tested in the open and closed position at 80 psi.
- Valve to be used in fully open or fully closed position.

1715 LF: LEVER HANDLE - size 1/2" to 2".

1725 LF: T-HANDLE - size 1/2" to 1".



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N POS	PART NAME	MATERIAL	N PCS	SIZE	ØP	I	CH	ØD	ØH	L	h	R	Cv	psi	Weight (Lbs)
1	BODY	LF BRASS C28500 *	1	1/2"	0.59	0.50	0.98	0.63	1.30	2.58	1.85	3.78	18.84	600	0.49
2	END CONNECTION	LF BRASS C28500 *	1	3/4"	0.79	0.75	1.22	0.88	1.54	3.01	2.32	4.76	34.10	600	0.79
3	BALL	LF BRASS C28500 *	1	1"	0.98	0.91	1.50	1.13	1.93	3.56	2.48	4.76	49.71	600	1.17
4	STEM	LF BRASS C28500 *	2	1 1/4"	1.26	0.97	1.89	1.38	2.32	4.09	2.99	5.94	102.89	600	2.14
5	PACKING GLAND	BRASS C38500	2	1 1/2"	1.57	1.10	2.13	1.63	2.87	4.57	3.25	5.94	265.90	600	3.19
6	HANDLE	STEEL DD11	1	2"	1.95	1.34	2.64	2.13	3.43	5.47	3.78	6.30	306.36	600	5.18
7	BALL SEAT	PTFE	1												
8	THRUST WASHER/STEM SEAT	PTFE	2												
9	O-RING	NBR	1												
10	NUT	STEEL CL04	1												

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



SERIES 171N LFPT COMMERCIAL STYLE

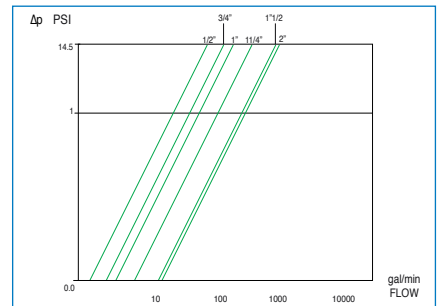
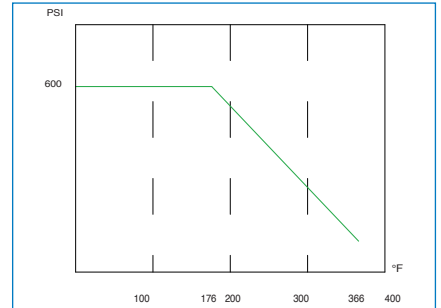
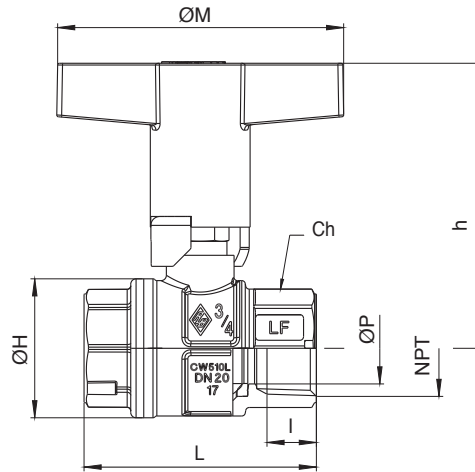
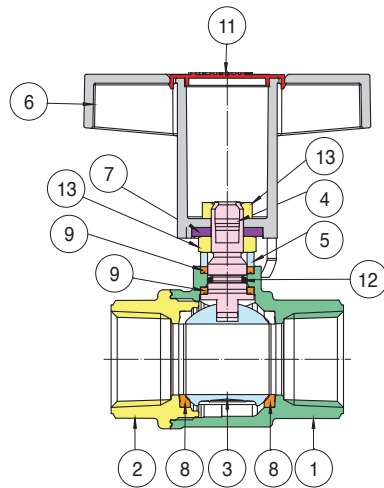
Lead free brass ball valve, FNPT threaded, full port.

- Pressure rating 600 WOG-150WSP.
- Temperature range -4°F to 366°F.
- ANSI B1.20.1 thread Depths.
- High tensile strength forged lead-free brass.
- Blow-out proof stem, STL coated LF brass ball.
- 100% electronically tested in the open and closed position at 80 psi.
- Valve to be used in fully open or fully closed position.
- Adjustable packing-stem seals-two PTFE, and one O-ring.
- Handle-polyamide thermal plastic T style.
- Vapor barrier design, ideal for all insulated heating/chilled water piping.

171N LFPT: size 1/2" to 2".



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N POS	PART NAME	MATERIAL	N PCS	SIZE	ØP	I	L	ØH	Ch	M	h	Cv	psi	Weight (Lbs)
1	BODY	LF BRASS C28500*	1	1/2"	0.59	0.54	2.34	1.30	0.98	3.15	2.87	18.84	600	0.54
2	END CONNECTION	LF BRASS C28500*	1	3/4"	0.79	0.55	2.56	1.54	1.22	3.15	3.15	34.10	600	0.91
3	BALL	LF BRASS C28500*	1	1"	0.98	0.66	3.07	1.93	1.50	3.15	3.31	49.71	600	1.24
4	STEM	LF BRASS C28500*	1	1 1/4"	1.26	0.68	3.43	2.32	1.89	4.72	4.49	102.89	600	2.25
5	PACKING GLAND	BRASS C38500	1	1 1/2"	1.57	0.68	3.90	2.87	2.13	4.72	4.72	265.90	600	3.24
6	T-HANDLE	PA6.6	1	2"	1.95	0.70	4.37	3.43	2.64	4.72	5.12	306.36	600	5.18
7	90° STOP	STEEL DD11	1											
8	BALL SEAT	PTFE	2											
9	THRUST WASHER	PTFE	2											
10	CAP	ABS	1											
11	O-RING	NBR	1											
12	NUT	STEEL CL04	2											

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.





SERIES 1570 LF PRESS VALVE

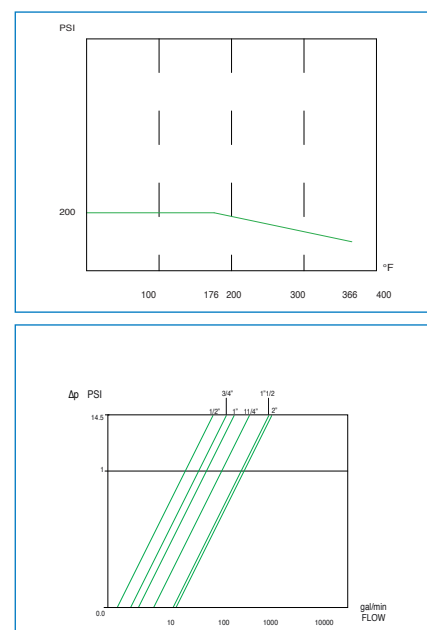
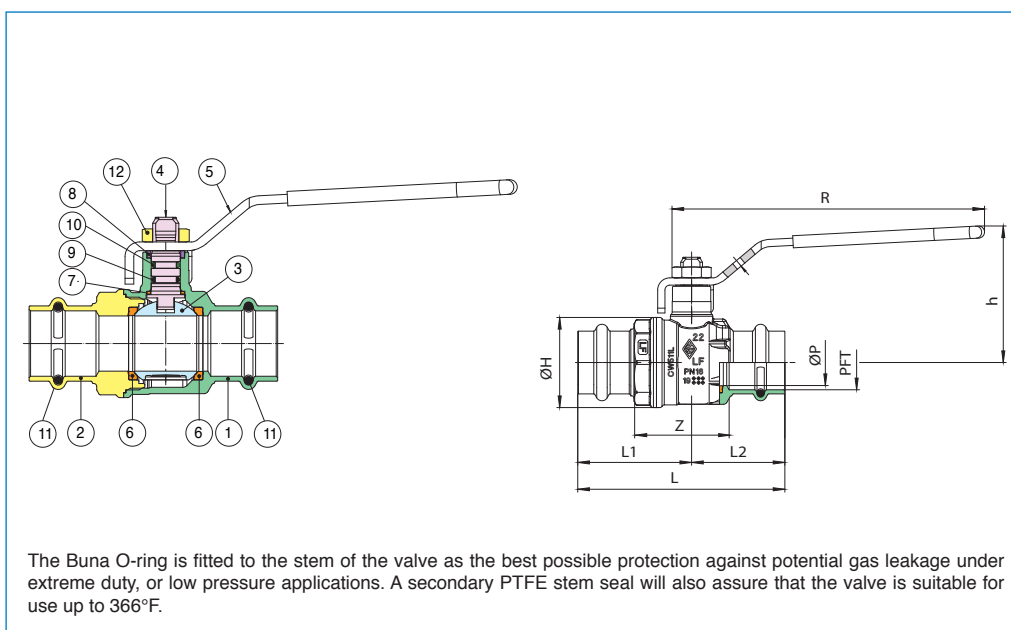
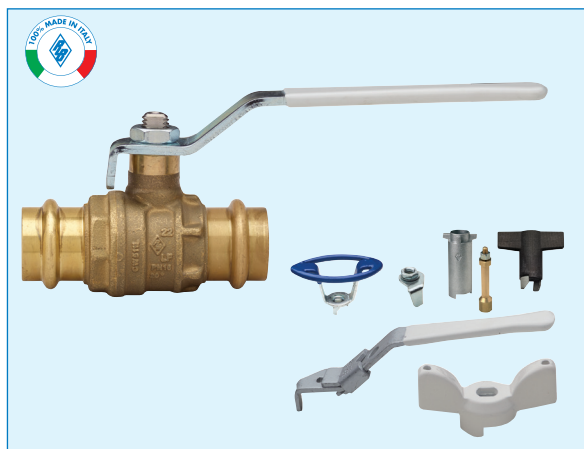
Lead free brass ball valve with EURO-PRESS connections full port.

- Working pressure 200 psi.
- Made in lead free dezincification resistant brass (LF-DZR).
- Temperature range -4°F to 250°F.
- Drip fit O-rings.
- No soldered-in end pieces.
- Blow-out proof stem, SLT coated LF brass.
- PTFE seats and double O-ring stem, adjustable packing.
- 100% electronically tested in the open and closed position at 80 psi.
- Valve to be used in fully open or fully closed position.

1570 LF: size 1/2" to 2".



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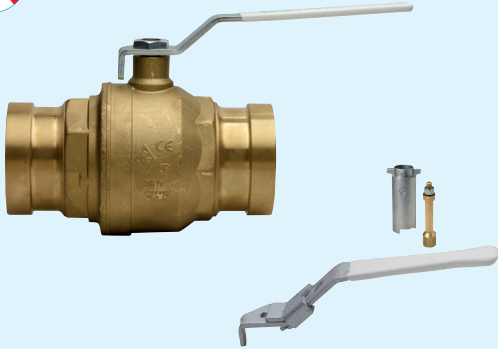


N POS	PART NAME	MATERIAL	N PCS
1	BODY	LF DZR BRASS C27453*	1
2	END CONNECTION	LF DZR BRASS C27453*	1
3	BALL	LF BRASS C28500*	1
4	STEM	LF BRASS C28500*	2
5	HANDLE	STEEL DD11	2
6	BALL SEAT	PTFE	1
7	THRUST WASHER	PTFE	1
8	PACKING RING	PTFE	1
9	O-RING	NBR	1
10	O-RING	FKM (Viton)	1
11	O-RING	EPDM PEROX	1
12	NUT	STEEL CL 04	1

SIZE	ØP	Z	ØH	L	L1	L2	h	R	Cv	psi	Weight (Lbs)
1/2"	0.55	1.52	1.22	2.93	1.62	1.31	1.77	3.78	18.15	200	0.41
3/4"	0.75	1.56	1.46	3.37	1.85	1.52	2.22	4.84	32.37	200	0.73
1"	0.94	1.92	1.76	3.81	2.11	1.70	2.32	4.84	47.98	200	1.07
1 1/4"	1.19	2.13	2.11	4.17	2.24	1.93	2.85	5.94	97.80	200	1.57
1 1/2"	1.50	2.39	2.64	5.23	2.78	2.45	3.09	5.94	252.60	200	2.53
2"	1.95	3.12	3.39	6.27	3.29	2.98	3.70	6.30	290.75	200	4.40

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



SERIES 1670XLC LF XLC PRESS VALVE

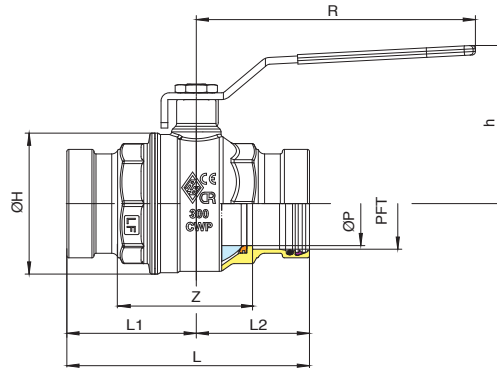
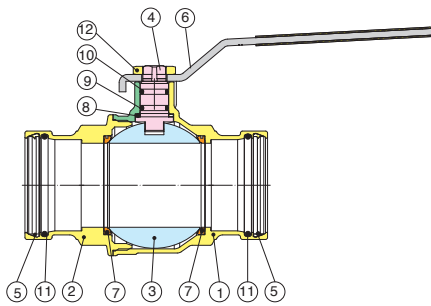
Lead free brass ball valve with XLC EURO-PRESS connections full port.

- Test pressure rating 300 psi up to 3" and 200 psi for the 4", working pressure 200 psi for all sizes.
- Temperature range -4°F to 250°F.
- Made in lead free dezincification resistant brass (LF-DZR).
- Blow-out proof stem, stainless steel ball.
- PTFE seats and double O-ring stem packing.
- 100% electronically tested in the open and closed position at 80 psi.
- Valve to be used in fully open or fully closed position.

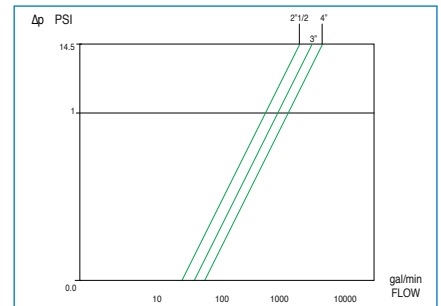
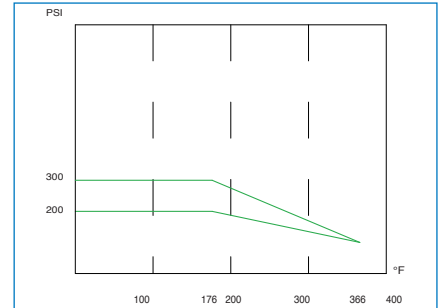
1670XLC LF: size 2 1/2" to 4".



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The Buna O-ring is fitted to the stem of the valve as the best possible protection against potential gas leakage under extreme duty, or low pressure applications. A secondary PTFE stem seal will also assure that the valve is suitable for use up to 366°F.



N POS	PART NAME	MATERIAL	N PCS
1	BODY	LF BRASS C27453*	1
2	END CONNECTION	LF BRASS C27453*	1
3	BALL	STEEL 1.4408	1
4	STEM	LF BRASS C28500*	1
5	COMPRESSION RING	STEEL 38NiCrMo4	2
6	HANDLE	STEEL DD11	1
7	BALL SEAT	PTFE	1
8	THRUST WASHER	PTFE	1
9	O-RING	NBR	1
10	O-RING	FKM (Viton)	1
11	O-RING	EPDM PEROX	2
12	NUT	STEEL CL04	1

SIZE	ØP	Z	ØH	L	L1	L2	h	R	Cv	MAX WORK PRESS (psi)	MAX TEST PRESS (psi)	Weight (Lbs)
2 1/2"	2.44	3.74	4.09	7.05	3.76	3.29	4.57	8.07	593.06	200	300	8.70
3"	2.99	4.45	4.96	8.27	4.45	3.82	4.98	8.07	958.84	200	300	13.60
4"	3.94	5.41	6.54	10.26	5.28	4.98	6.54	10.31	1526.59	200	200	28.19

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



SERIES 1570 LFPT PRESS VALVE

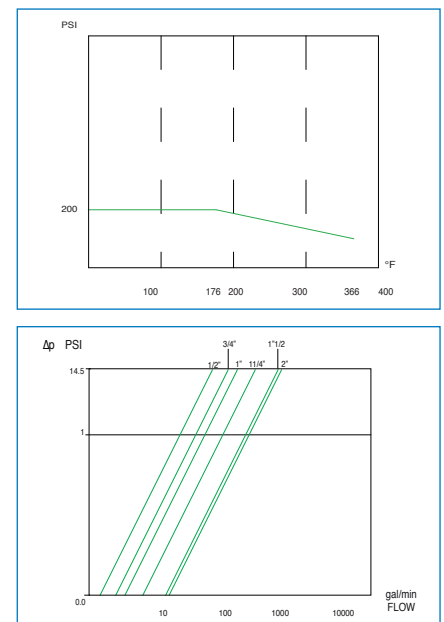
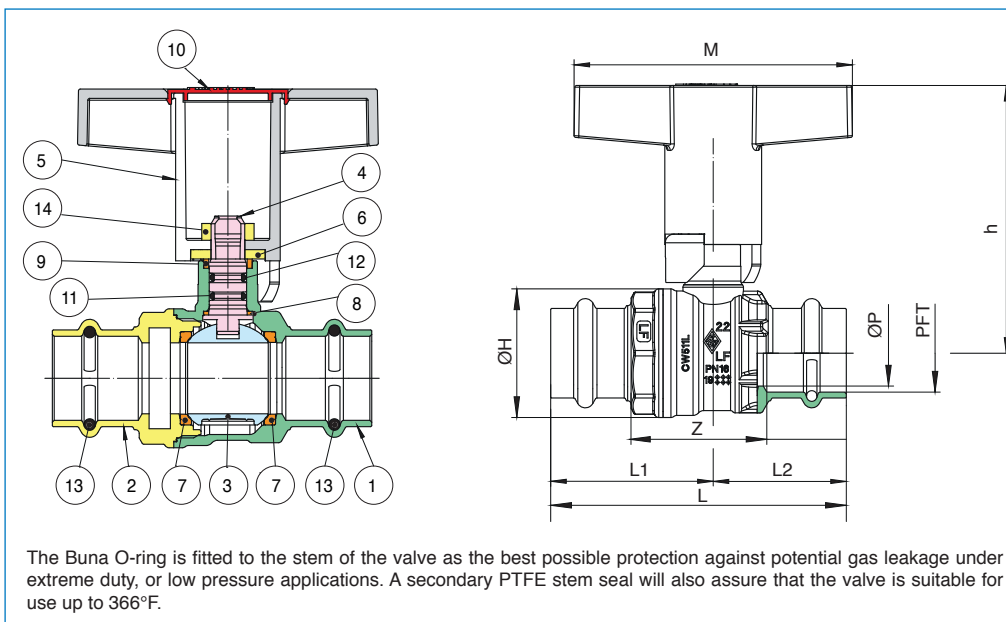
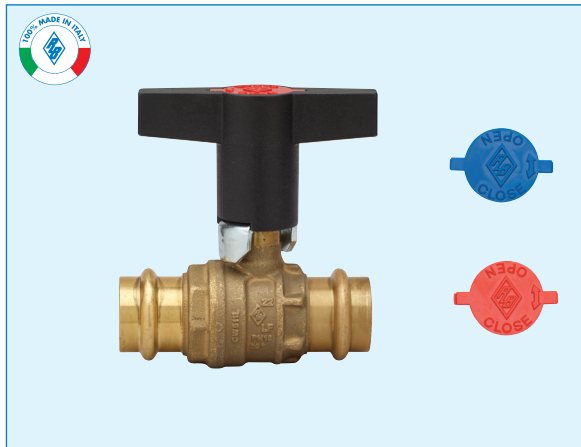
Lead free brass ball valve with EURO-PRESS connections, full port.

- Working pressure 200 psi.
- Temperature range -4°F to 250°F.
- High tensile strength forged lead-free brass.
- Blow-out proof stem, STL coated LF brass ball.
- PTFE seats and double O-ring stem packing.
- 100% electronically tested in the open and closed position at 80 psi.
- Valve to be used in fully open or fully closed position.
- Handle-polyamide thermal plastic T style.
- Vapor barrier design, ideal for all insulated heating/chilled water piping.

1570 LFPT: size 1/2" to 2".



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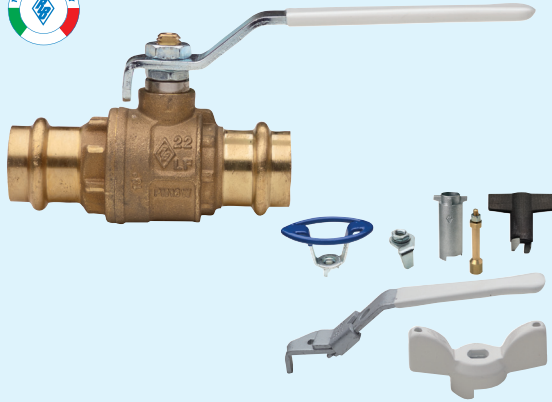
N POS	PART NAME	MATERIAL	N PCS
1	BODY	LF DZR BRASS C27453*	1
2	END CONNECTION	LF DZR BRASS C27453*	1
3	BALL	LF BRASS C28500*	1
4	STEM	LF BRASS C28500*	1
5	T-HANDLE	PA6.6	1
6	90° STOP	STEEL DD11	1
7	BALL SEAT	PTFE	2
8	THRUST WASHER	PTFE	1
9	PACKING RING	PTFE	1
10	CAP	ABS	1
11	O-RING	NBR	1
12	O-RING	FKM	1
13	O-RING	EPDM PEROX	2
14	NUT	STEEL CL 04	1

SIZE	ØP	Z	ØH	L	L1	L2	h	M	Cv	psi	Weight (Lbs)
1/2"	0.55	1.52	1.22	2.93	1.62	1.31	2.80	3.15	18.15	200	0.52
3/4"	0.75	1.56	1.46	3.37	1.85	1.52	3.05	3.15	32.37	200	0.81
1"	0.94	1.92	1.76	3.81	2.11	1.70	3.15	3.15	47.98	200	1.21
1 1/4"	1.19	2.13	2.11	4.17	2.24	1.93	4.34	4.72	97.80	200	1.77
1 1/2"	1.50	2.39	2.64	5.23	2.78	2.45	4.57	4.72	252.60	200	2.73
2"	1.95	3.12	3.39	6.27	3.29	2.98	4.96	4.72	290.75	200	4.70

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.





SERIES 1970 LF PRESS VALVE

Lead free brass ball valve with EURO-PRESS connections, full port.

- Test pressure rating 600 psi, working pressure 200 psi.
- Temperature range -4°F to 250°F.
- Made in lead free dezincification resistant brass (LF-DZR).
- Blow-out proof stem, SLT coated LF brass ball.
- PTFE seats, seals, and thrust washer.
- Adjustable stem packing.
- 100% electronically tested in the open and closed position at 80 psi.
- Valve to be used in fully open or fully closed position.
- Press alert O-rings.

1970 LF: size 1/2" to 2".

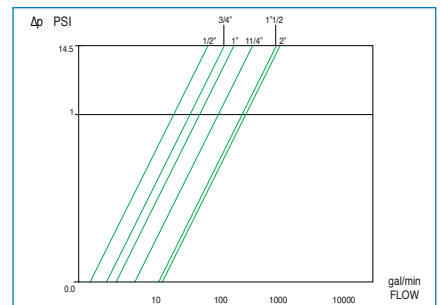
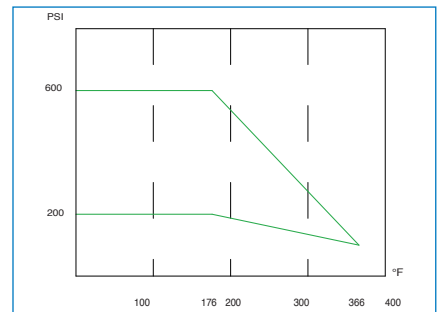
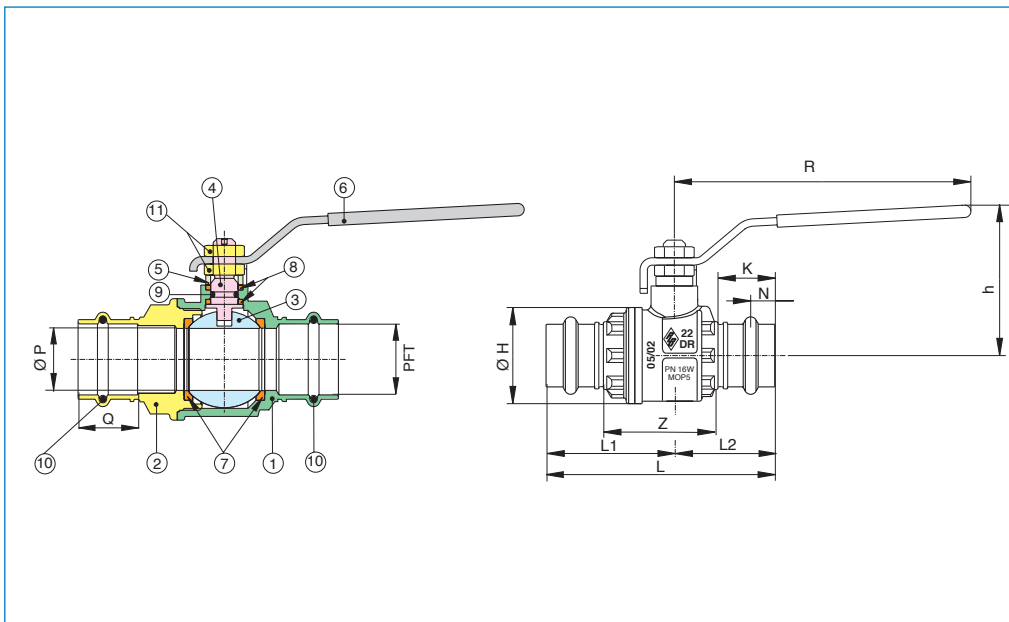
For size 2 1/2", 3" and 4" see 1670XLC LF.



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200 WOG



N POS	PART NAME	MATERIAL	N PCS
1	BODY	LF DZR BRASS C27453*	1
2	END CONNECTION	LF DZR BRASS C27453*	1
3	BALL	LF BRASS C28500*	1
4	STEM	LF BRASS C28500*	1
5	PACKING GLAND	BRASS C38500	1
6	HANDLE	STEEL DD11	1
7	BALL SEAT	PTFE	2
8	STEM SEAL/THRUST WASHER	PTFE	2
9	O-RING	NBR	1
10	O-RING	EPDM PEROX	2
11	NUT	STEEL CL 04	2

PFT	ØP	Z	K	N	ØH	L	L1	L2	h	R	Cv	MAX WORK PRESS (psi)	MAX TEST PRESS (psi)	Weight (Lbs)
1/2"	0.59	1.61	0.67	0.31	1.30	2.99	1.71	1.30	1.89	3.78	18.84	200	600	0.45
3/4"	0.79	1.69	0.83	0.39	1.57	3.50	1.93	1.57	2.32	4.76	34.10	200	600	0.85
1"	0.98	2.03	0.83	0.39	1.93	3.92	2.19	1.73	2.48	4.76	49.71	200	600	1.24
1 1/4"	1.26	2.19	0.83	0.39	2.32	4.23	2.30	1.93	2.99	5.94	102.89	200	600	2.01
1 1/2"	1.57	2.50	1.02	0.49	2.87	5.33	2.78	2.56	3.25	5.94	265.90	200	600	3.24
2"	1.95	3.13	1.26	0.59	3.43	6.28	3.30	2.98	3.78	6.30	306.36	200	600	5.43

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



**RUBINETTERIE
BRESCIANE**





SERIES 250N LF - 253N LF DIRECT MOUNT 2-WAY BALL VALVE

Lead free brass ball valve, FNPT threaded, with ISO 5211 pad for actuator, full port.

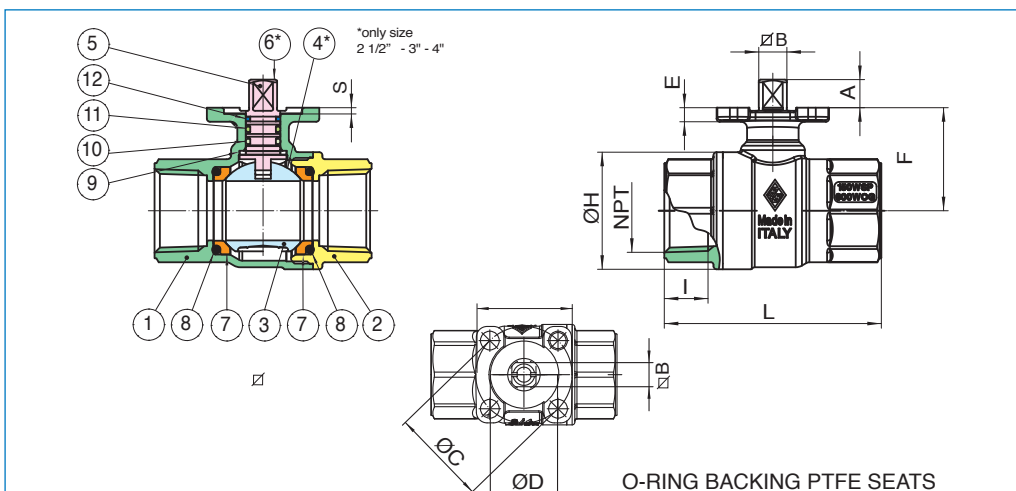
- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to 366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, SLT. coated LF brass ball and double O-ring stem packing.
- PTFE seats with O-ring backing for low operating torque.
- 100% electronically tested in the open and closed position at 80 psi.
- Valve to be used in fully open or fully closed position.

250N LF: size 1/4" to 4".

253N LF: WITH STAINLESS STEEL BALL AND STEM - size 1/4" to 4".



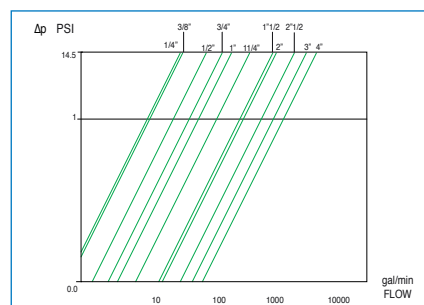
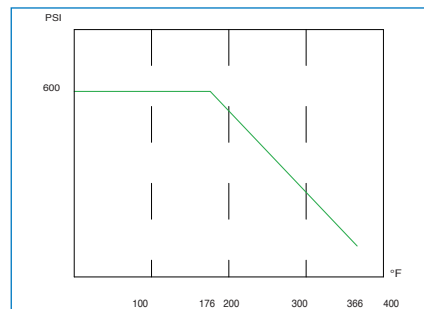
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O-RING BACKING PTFE SEATS

The Buna O-ring is fitted to the stem of the valve as the best possible protection against potential gas leakage under extreme duty, or low pressure applications. A secondary PTFE stem seal will also assure that the valve is suitable for use up to 366°F.

* Torque values in the table are measured in laboratory tests under the following conditions:
TEMPERATURE: 68°F
PRESSURE: 0 psi
FLUID: purified water



POS	PART NAME	MATERIAL	N PCS	SIZE	Ø	I	CH	ØH	L	A	B	ØC ISO 5211	ØD	S	E	F	ØB	Cv	psi	Weight (Lbs)	*Break Torque (in/Lbs)
1	BODY	LF BRASS C28500*	1	1/4"	1.42	0.39	0.79	1.18	2.24	0.35	0.24	F03	0.98	0.08	0.18	1.22	0.35	6.24	600	0.46	26.55
2	END CONNECTION	LF BRASS C28500*	1	3/8"	1.42	0.41	0.79	1.18	2.24	0.35	0.24	F03	0.98	0.08	0.18	1.22	0.35	3.94	600	0.44	26.55
3	BALL	250N LF LF BRASS C28500*	1	1/2"	1.42	0.54	0.98	1.18	2.52	0.35	0.24	F03	0.98	0.08	0.18	1.22	0.35	18.84	600	0.50	26.55
4	BALL	253N LF AISI 316 (CF8M)	1	3/4"	1.42	0.55	1.22	1.48	2.74	0.35	0.24	F03	0.98	0.12	0.18	1.30	0.35	34.10	600	0.74	35.40
5	STEM	250N LF LF BRASS C28500*	1	1"	1.42	0.66	1.50	1.83	3.23	0.35	0.24	F03	0.98	0.12	0.18	1.56	0.35	49.71	600	1.22	44.25
6	STEM	253N LF AISI 304	1	1 1/4"	1.42	0.68	1.89	2.21	3.54	0.35	0.24	F03	0.98	0.12	0.18	1.69	0.35	102.88	600	1.84	53.10
7	BALL SEAT	PTFE	2	1 1/2"	1.97	0.68	2.12	2.74	4.00	0.43	0.28	F05	1.38	0.12	0.28	2.21	0.43	265.88	600	3.49	79.66
8	O-RING	FKM (Viton)	2	2"	1.97	0.70	2.64	3.47	4.69	0.43	0.28	F05	1.38	0.12	0.28	2.57	0.43	306.34	600	5.35	88.51
9	THRUST WASHER	PTFE	1	2 1/2"	2.68	0.93	3.39	4.41	5.95	0.59	0.35	F07	2.17	0.12	0.34	3.23	0.55	624.24	600	10.82	238.97
10	O-RING	FKM (Viton)	1	3"	2.68	1.02	4.02	5.20	6.69	0.59	0.35	F07	2.17	0.12	0.34	3.60	0.55	1009.19	600	16.27	256.67
11	O-RING	EPDM	1	4"	2.68	1.09	4.92	6.46	7.84	0.69	0.35	F07	2.17	0.12	0.34	4.43	0.67	1606.84	600	27.54	486.79
12	THRUST WASHER	PTFE	1																		

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

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SERIES 250N LF SRL DEADMAN SPRING RETURN

Deadman spring lever lead free brass 2-way 2-piece, full port, FNPT threaded.

- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, SLT. coated LF brass ball and double O-ring stem packing.
- PTFE seats with O-ring backing for low operating torque.
- 100% electronically tested in the open and closed position at 80 psi.

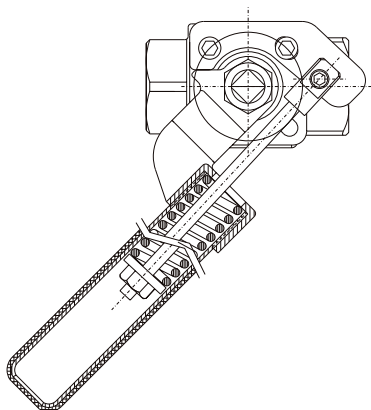
250N LF SRL: size 1/4" to 3".



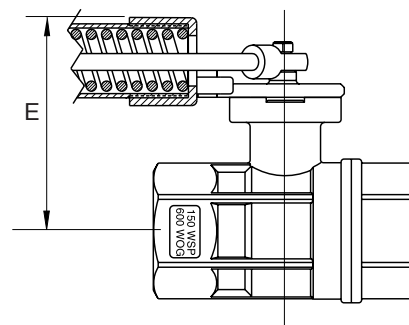
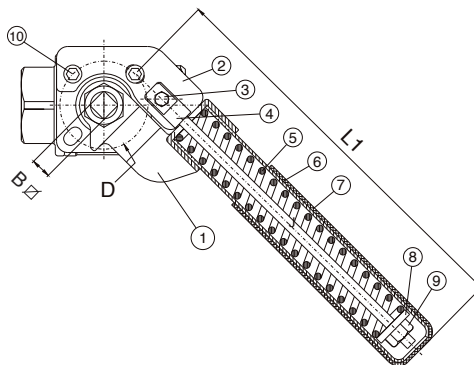
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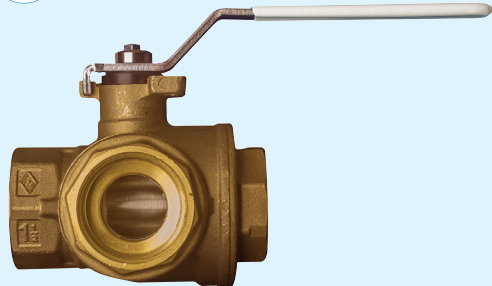
The Buna O-ring is fitted to the stem of the valve as the best possible protection against potential gas leakage under extreme duty, or low pressure applications. A secondary PTFE stem seal will also assure that the valve is suitable for use up to 366°F.

N POS	PART NAME	MATERIAL	SIZE	L1	∅B	D ISO 5211	E	Weight (Lbs)
1	HANDLE HEAD	ASTM A351-CF8M	1/4"	6.70	0.35	F03	1.78	2.71
2	ANCHOR	ASTM A351-CF8M	3/8"	6.70	0.35	F03	1.78	2.68
3	ANCHOR SCREW	AISI 316	1/2"	6.70	0.35	F03	1.78	2.75
4	SPRING ROD	AISI 316	3/4"	6.70	0.35	F03	1.86	2.99
5	SPRING	AISI 301	1"	6.70	0.35	F03	2.29	3.46
6	HANDLE EXTENSION	AISI L 304	1 1/4"	6.70	0.35	F03	2.43	4.09
7	SLEEVE	VINYL	1 1/2"	8.65	0.43	F05	3.02	6.20
8	WASHER	AISI 304	2"	8.65	0.43	F05	3.38	8.49
9	HEX NUT	AISI 304	2 1/2"	11.00	0.55	F07	3.99	16.52
10	SOCKET HEAD SCREW	AISI 304	3"	11.00	0.55	F07	3.99	21.95

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.





SERIES 355N LF (T) - 365N LF (L) DIRECT MOUNT 3-WAY BALL VALVE

3-way lead free brass valve, FNPT threaded, with ISO 5211 pad for actuator, standard port.

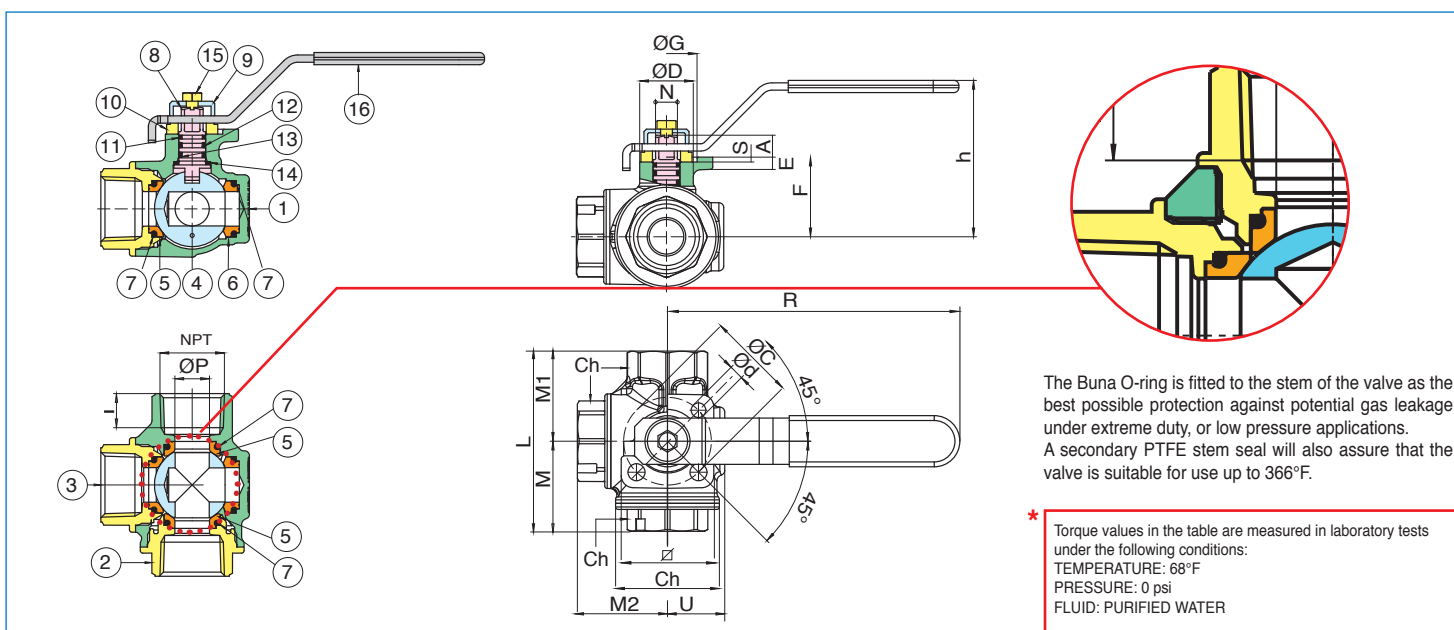
- Pressure rating 400 WOG-100 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, T.E.A. coated LF brass ball and double O-ring stem packing.
- PTFE seats with O-ring backing for low operating torque.
- 100% electronically tested in the open and closed position at 80 psi.
- Four seat design for sealing between pressurized ports.

355N LF: LEVER HANDLE - size 1/4" to 3", "T" flow pattern.

365N LF: LEVER HANDLE - size 1/4" to 3", "L" flow pattern.



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The Buna O-ring is fitted to the stem of the valve as the best possible protection against potential gas leakage under extreme duty, or low pressure applications. A secondary PTFE stem seal will also assure that the valve is suitable for use up to 366°F.

* Torque values in the table are measured in laboratory tests under the following conditions:
TEMPERATURE: 68°F
PRESSURE: 0 psi
FLUID: PURIFIED WATER

N POS	PART NAME	MATERIAL	N PCS	SIZE	ØP	ØH	I	L	Ch	A	Ød	ØC	ØD	E	F	ØG	M	M1	M2	ØB	S	U	h	R	Cv 355NLF	Cv 365NLF	PSI	Weight (Lbs) 355NLF	Weight (Lbs) 365NLF	* Break Torque (in/Lbs)	
1	BODY	LF BRASS C28500 *	1	1/4"	0.39	1.42	0.39	2.36	0.79	0.35	0.24	1.42	0.99	0.20	1.20	1.50	0.87	1.18	1.18	1.18	0.35	0.08	0.79	2.44	4.72	3.26	3.50	400	1.00	1.01	35.40
2	END CONNECTION	LF BRASS C28500 *	1	3/8"	0.43	1.42	0.41	2.44	0.79	0.35	0.24	1.42	0.99	0.20	1.20	1.50	0.87	1.22	1.22	1.22	0.35	0.08	0.79	2.44	4.72	3.50	4.08	400	0.96	0.97	35.40
3	END CONNECTION	LF BRASS C28500 *	1	1/2"	0.43	1.42	0.54	2.78	0.98	0.35	0.24	1.42	0.99	0.20	1.20	1.50	0.87	1.39	1.39	1.40	0.35	0.08	0.79	2.44	4.72	4.20	5.02	400	1.05	1.06	35.40
4	BALL	LF BRASS C28500 *	1	3/4"	0.55	1.67	0.55	2.95	1.22	0.35	0.24	1.42	0.99	0.20	1.29	1.50	0.87	1.48	1.48	1.48	0.35	0.08	0.93	2.52	4.72	7.00	7.70	400	1.37	1.39	35.40
5	BALL SEAT	PTFE	3	1"	0.75	2.01	0.66	3.50	1.50	0.43	0.28	1.97	1.38	0.24	1.73	1.97	0.94	1.75	1.75	1.75	0.43	0.12	1.07	3.05	6.79	12.83	14.24	400	2.35	2.41	70.81
6	BALL SEAT	PTFE	1	1 1/4"	0.95	2.62	0.68	4.04	1.89	0.43	0.28	1.97	1.38	0.24	1.95	1.97	0.94	2.05	1.99	1.99	0.43	0.12	1.31	3.27	6.79	18.67	19.72	400	3.74	3.82	88.51
7	O-RING	FKM (Viton)	4	1 1/2"	1.18	3.07	0.68	4.66	2.13	0.43	0.28	1.97	1.38	0.28	2.34	1.97	1.26	2.43	2.22	2.43	0.43	0.12	1.57	3.66	6.79	29.75	30.69	400	5.53	5.82	106.21
8	STEM	LF BRASS C28500 *	1	2"	1.50	3.70	0.70	5.41	2.64	0.59	0.35	2.76	2.17	0.31	2.91	2.76	1.46	2.89	2.52	2.89	0.55	0.12	1.82	4.37	9.06	43.76	48.58	400	9.65	9.92	177.02
9	BUSH	BRASS C38500	1	2 1/2"	1.95	4.37	0.93	6.93	3.35	0.59	0.35	2.76	2.17	0.31	3.35	2.76	1.46	3.46	3.46	3.46	0.55	0.12	2.20	4.80	9.06	62.42	64.74	400	19.54	20.17	265.52
10	WASHER	NYLON (PA6)	1	3"	1.95	4.45	1.02	7.09	4.13	0.59	0.35	2.76	2.17	0.31	3.35	2.76	1.46	3.54	3.54	3.54	0.55	0.12	2.20	4.80	9.06	62.42	64.74	400	19.53	20.16	265.52
11	THRUST WASHER	PTFE	1																												
12	O-RING	EPDM	1																												
13	O-RING	FKM (Viton)	1																												
14	THRUST WASHER	PTFE	1																												
15	SCREW	STEEL CL 8.8	1																												
16	HANDLE	STEEL DD11	1																												

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



SERIES 355N LF SRL (T) - 365N LF SRL (L) DEADMAN SPRING RETURN

3-way lead free brass ball valve, FNPT threaded, standard port, with deadman spring return handle.

- Pressure rating 400 WOG-100 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, SLT, coated LF brass ball and double O-ring stem packing.
- PTFE seats with O-ring backing for low operating torque.
- 100% electronically tested in the open and closed position at 80 psi.
- Four seat design for sealing between pressurized ports.

355N LF SRL: size 1/4" to 2".

365N LF SRL: size 1/4" to 2".

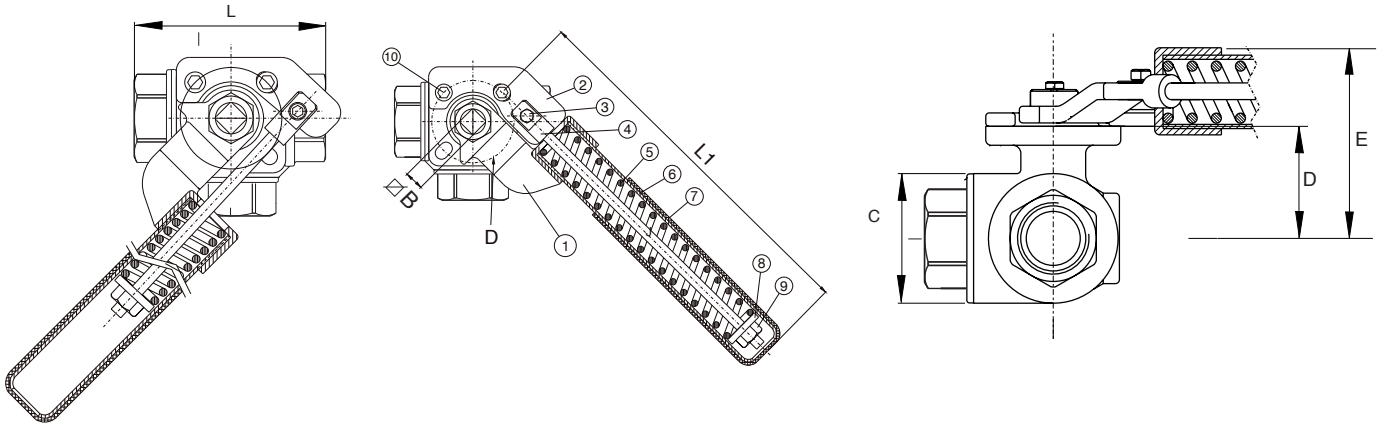


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CLOSE CONDITION



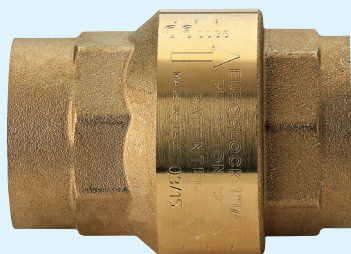
The Buna O-ring is fitted to the stem of the valve as the best possible protection against potential gas leakage under extreme duty, or low pressure applications. A secondary PTFE stem seal will also assure that the valve is suitable for use up to 366°F.

N POS	PART NAME	MATERIAL	SIZE	L	∅ B	D ISO 5211	HANDLE TORQUE (In/Lbs)	E	D	C	Weight (Lbs) 355NLF SRL	Weight (Lbs) 365NLF SRL
1	HANDLE HEAD	ASTM A351-CF8M	1/4"	6.70	0.35	F03	1.70	1.20	1.34	1.20	3.48	3.48
2	ANCHOR	ASTM A351-CF8M	3/8"	6.70	0.35	F03	1.70	1.20	1.34	1.20	3.39	3.39
3	ANCHOR SCREW	AISI 316	1/2"	6.70	0.35	F03	1.70	1.20	1.34	1.20	3.46	3.46
4	SPRING ROD	AISI 316	3/4"	6.70	0.35	F03	1.79	1.29	1.53	1.29	3.73	3.73
5	SPRING	AISI 301	1"	8.65	0.43	F05	2.79	1.63	1.89	1.63	4.94	4.94
6	HANDLE EXTENSION	AISI 304	1 1/4"	8.65	0.43	F05	2.93	1.85	2.36	1.85	6.39	6.39
7	SLEEVE	VINYL	1 1/2"	8.65	0.43	F05	3.52	2.34	2.83	2.34	9.46	9.46
8	WASHER	AISI 304	2"	11.00	0.55	F07	3.82	2.90	3.38	2.91	14.07	14.07
9	HEX NUT	AISI 304										
10	SOCKET HEAD SCREW	AISI 304										

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.





SERIES 100012 LF CHECK VALVE

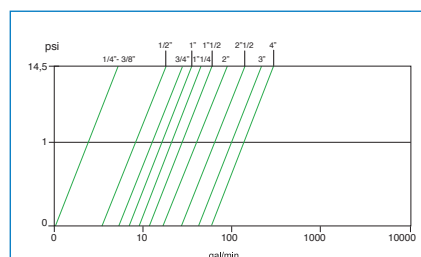
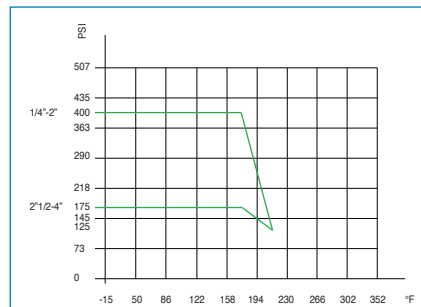
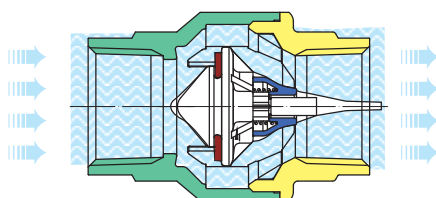
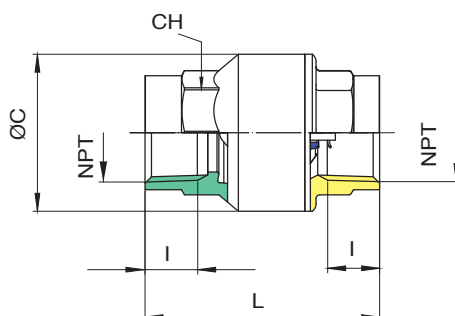
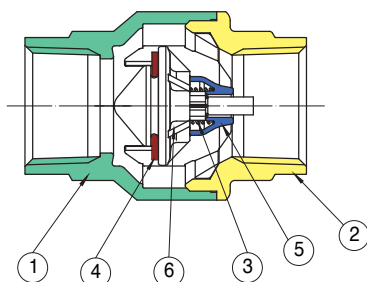
High flow rate, lead free brass, FNPT threaded, in-line spring loaded check valve.

- Pressure rating size 1/4" up to 2" 400 WOG, 2 1/2" - 4" 175 WOG.
- Low cracking pressure 1/2 psi.
- Wide temperature range: -4°F to 210°F.
- ANSI B1.20.1 connections.
- Soft seat for bubble tight shutoff, spring loaded for fast seating action.
- Flow pattern to minimize head loss.
- Perfect sealing both at high and low pressure.
- High technology materials to ensure best resistance in any condition.

100012 LF: size 1/4" to 4".



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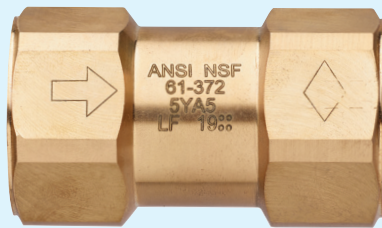


N POS	PART NAME	MATERIAL	N PCS
1	BODY	LF BRASS C28500*	1
2	END CONNECTION	LF BRASS C28500*	1
3	SPRING	AISI 302	1
4	SEAT	NBR	1
5	SUPPORT	POM	1
6	DISC	POLYPHENYLENE SULFIDE	1

SIZE	I	L	ØC	CH	psi	Cv	Weight (Lbs)
1/4"	0.39	1.73	1.06	0.79	400	2.1	0.22
3/8"	0.41	1.73	1.06	0.79	400	2.1	0.19
1/2"	0.54	2.22	1.36	0.98	400	9.2	0.29
3/4"	0.55	2.48	1.65	1.22	400	15.1	0.46
1"	0.66	2.85	1.93	1.50	400	22.1	0.69
1 1/4"	0.68	3.13	2.40	1.89	400	34.3	1.13
1 1/2"	0.68	3.31	2.87	2.13	400	51.9	1.55
2"	0.70	3.62	3.44	2.64	400	71.3	2.26
2 1/2"	0.93	4.37	4.39	3.27	175	90.1	4.74
3"	1.02	4.86	5.24	3.86	175	141.7	6.90
4"	1.09	5.45	6.42	5.04	175	220.7	11.79

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



SERIES 100022 LF CHECK VALVE

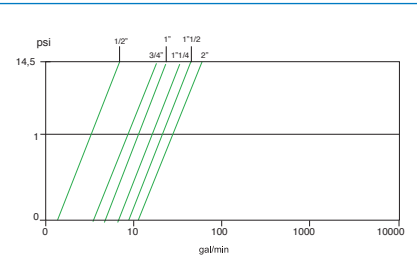
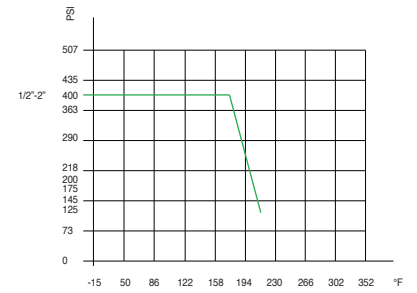
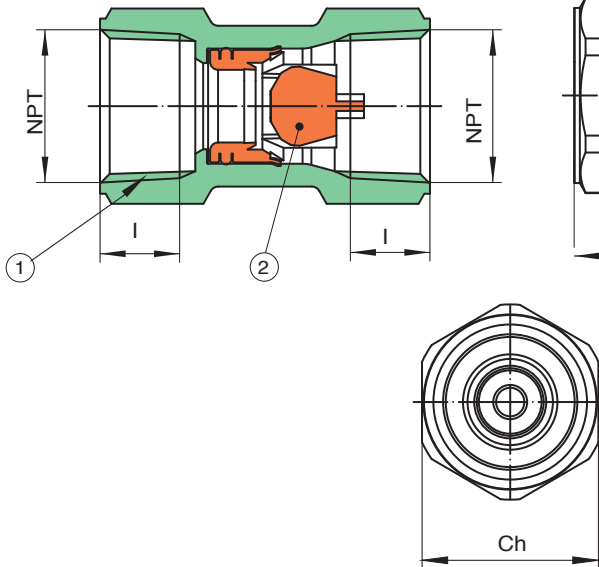
Unibody check valve, high flow rate, lead free brass, FNPT threaded, in-line spring loaded check valve.

- Pressure rating size 400 WOG.
- Low cracking pressure 1/2 psi.
- Wide temperature range: -4°F to 210°F.
- ANSI B1.20.1 connections.
- Soft seat for bubble tight shutoff, spring loaded for fast seating action.
- Flow pattern to minimize head loss.
- Perfect sealing both at high and low pressure.
- High technology materials to ensure best resistance in any condition.

100022 LF: size 1/2" to 2".



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N POS	PART NAME	MATERIAL	N POS	SIZE	I	L	Ch	psi	Cv	Weight (Lbs)
1	BODY	LF BRASS C28500*	1	1/2"	0.71	2.22	0.96	400	5.32	0.24
				3/4"	0.91	2.87	1.24	400	10.17	0.38
				1"	0.94	3.17	1.5	400	17.34	0.69
				1 1/4"	1.02	3.33	1.75	400	25.43	0.82
2	CHECK VALVE	POM	1	1 1/2"	1.42	4.41	2.13	400	36.99	1.12
				2"	1.57	5.24	2.6	400	63.58	1.80

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



SERIES 100112 LF FOOT VALVE

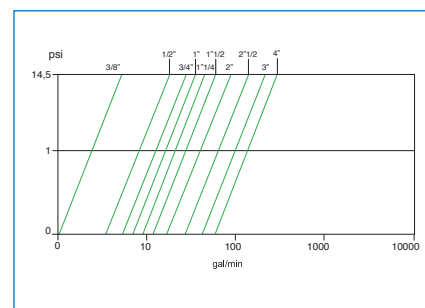
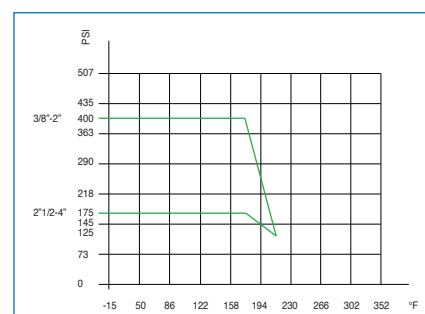
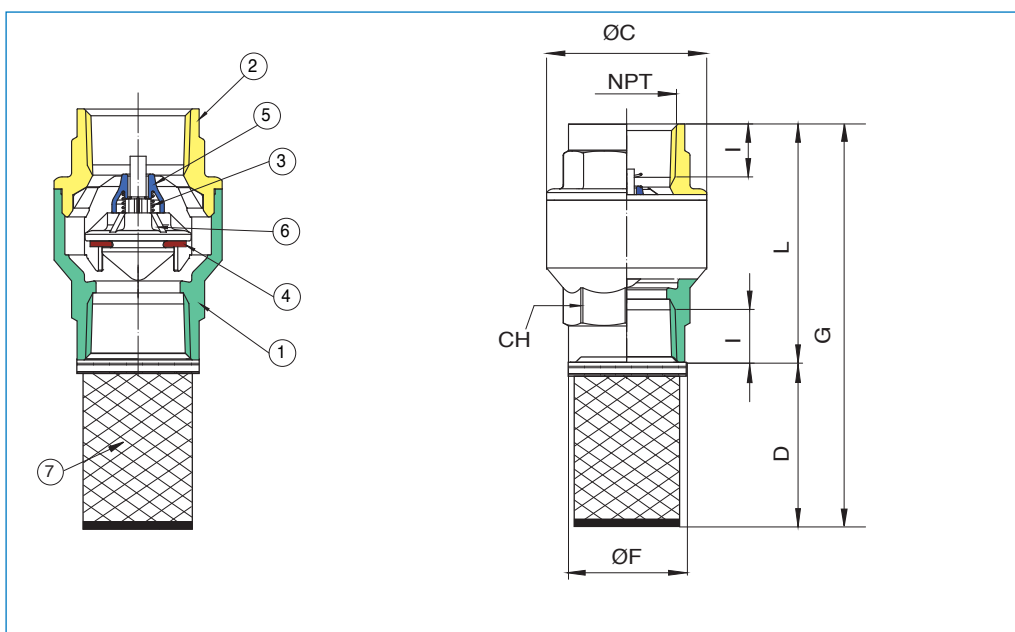
High flow rate, lead free brass, FNPT threaded, in-line spring loaded check valve.

- Pressure rating sizes 3/8"-2" 400 WOG - 2 1/2"-4" 175 WOG.
- Low cracking pressure 1/2 psi.
- Wide temperature range: -4°F to 210°F.
- ANSI B1.20.1 connections.
- Soft seat for bubble tight shutoff, spring loaded for fast seating action.
- Flow pattern to minimize head loss.
- Perfect sealing both at high and low pressure.
- High technology materials to ensure best resistance in any condition.
- Stainless steel 1000 micron strainer.

100112 LF: size 3/8" to 4".



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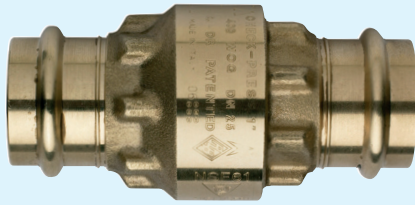


N POS	PART NAME	MATERIAL	N PCS
1	BODY	LF BRASS C28500*	1
2	END CONNECTION	LF BRASS C28500*	1
3	SPRING	AISI 302	1
4	SEAT	NBR	1
5	SUPPORT	POM	1
6	DISC	POLYPHENYLENE SULFIDE	1
7	STRAINER	STAINLESS STEEL NYLON 1000 MICRON	1

SIZE	I	L	ØC	D	ØF	G	CH	psi	Cv	Weight (Lbs)
3/8"	0.41	1.73	1.06	1.67	0.91	3.41	0.79	400	2.1	0.21
1/2"	0.54	2.32	1.36	1.69	1.02	4.02	0.98	400	9.2	0.36
3/4"	0.55	2.56	1.65	1.89	1.26	4.45	1.22	400	15.1	0.52
1"	0.66	2.76	1.93	1.89	1.61	4.65	1.50	400	22.1	0.80
1 1/4"	0.68	2.93	2.40	2.24	1.93	5.18	1.89	400	34.3	1.26
1 1/2"	0.68	3.17	2.87	2.68	2.17	5.85	2.13	400	51.9	1.76
2"	0.70	3.37	3.46	3.27	2.64	6.63	2.64	400	71.3	2.39
2 1/2"	0.93	4.37	4.39	3.29	3.39	7.66	3.27	175	90.1	4.98
3"	1.02	4.86	5.24	3.90	3.90	8.76	3.86	175	141.7	7.27
4"	1.09	5.41	6.42	4.53	4.80	9.94	5.04	175	220.7	12.22

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.

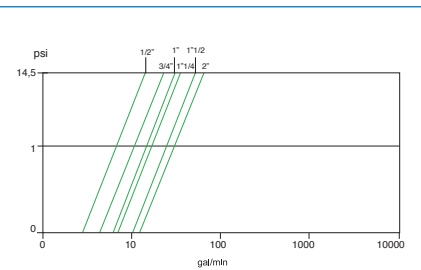
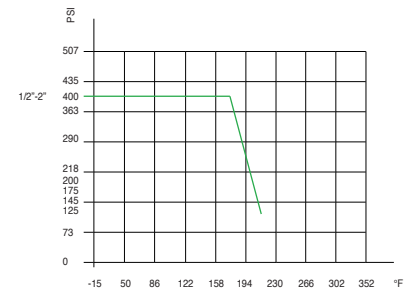
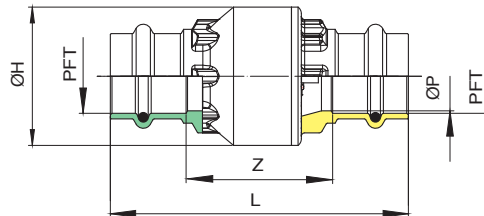
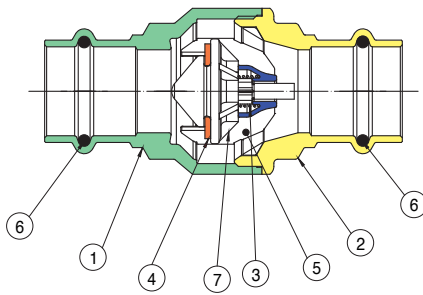


SERIES 100612 LF PRESS CHECK VALVE

High flow rate, lead free brass, EURO-PRESS connections, in-line spring loaded check valve.

- Pressure rating size 1/2" - 2" 400 WOG.
- Low cracking pressure 1/2 psi.
- Wide temperature range: -4°F to 210°F.
- Soft seat for bubble tight shutoff, spring loaded for fast seating action.
- Flow profile designed to minimize head loss.
- Perfect sealing both at high and low pressure.
- High technology materials to ensure the best corrosion resistance for any water application.
- Press alert O-rings.

100612 LF: size 1/2" to 2".



N POS	PART NAME	MATERIAL	N PCS	SIZE	ØP	Z	L	ØH	Cv	MAX WORK PRESS (psi)	MAX TEST PRESS (psi)	Weight (Lbs)
1	BODY	LF DZR BRASS C27453*	1	1/2"	0.59	1.50	2.99	1.36	9.36	200	400	0.31
2	END CONNECTION	LF DZR BRASS C27453*	1	3/4"	0.79	1.67	3.56	1.65	16.30	200	400	0.52
3	SPRING	AISI 302	1	1"	0.98	1.93	3.94	1.93	24.16	200	400	0.80
4	SEAT	NBR	1	1 1/4"	1.26	1.95	4.09	2.40	35.84	200	400	1.16
5	SUPPORT	POM	1	1 1/2"	1.57	1.95	4.96	2.87	51.90	200	400	1.77
6	O-RING	EPDM PEROX	2	2"	1.97	2.38	5.57	3.44	82.19	200	400	2.77
7	DISC	POLYPHENYLENE SULFIDE	1									

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.





SERIES 100622 LF PRESS CHECK VALVE

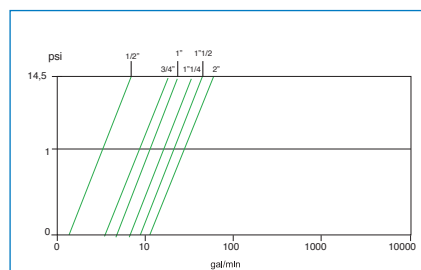
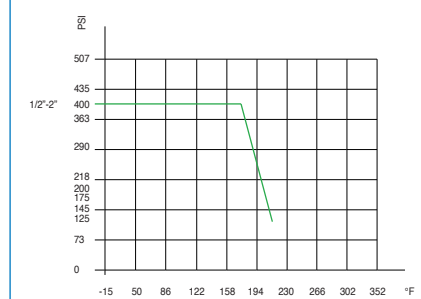
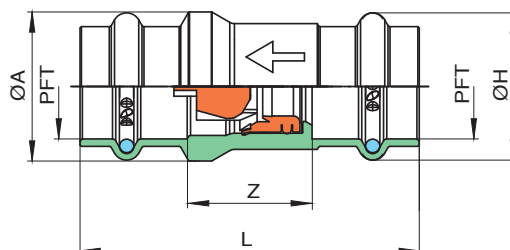
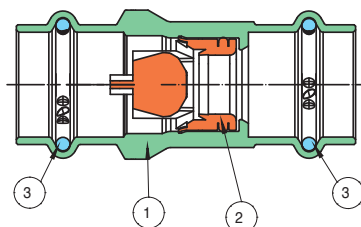
Unibody check valve, high flow rate, lead free brass, EUROPRESS connections, in-line spring loaded check valve.

- Pressure rating size 200 WOG.
- Low cracking pressure 1/2 psi.
- Wide temperature range: -4°F to 210°F.
- Soft seat for bubble tight shutoff, spring loaded for fast seating action.
- Flow pattern to minimize head loss.
- Perfect sealing both at high and low pressure.
- High technology materials to ensure best resistance in any condition.

100622 LF: size 1/2" to 2".



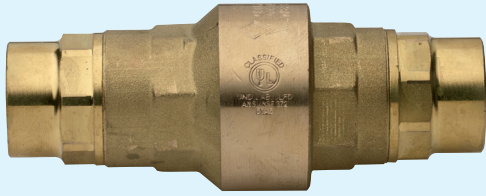
HEALTH
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NSF 372
NSF 61



N POS	PART NAME	MATERIAL	N PCS	SIZE	Z	L	ØH	Ch	Cv	psi	Weight (Lbs)
1	BODY	LF DZR BRASS C27453*	1	1/2"	0.81	2.22	0.96	-	5.32	200	0.17
				3/4"	1.06	2.87	1.24	-	10.17	200	0.31
2	CHECK VALVE	POM	1	1"	1.28	3.17	1.50	-	17.34	200	0.49
				1 1/4"	1.59	3.64	-	1.89	25.43	200	0.71
3	O-RING	EPDM	2	1 1/2"	1.59	4.43	-	2.13	36.99	200	1.25
				2"	2.20	5.35	-	2.64	63.58	200	1.95

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

 **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.



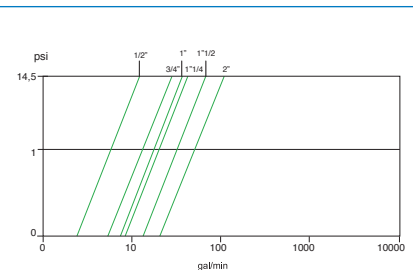
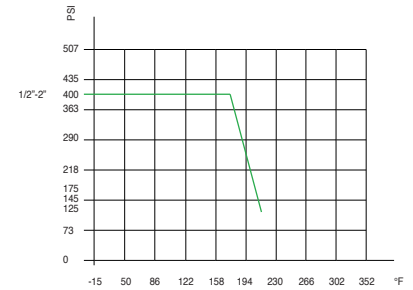
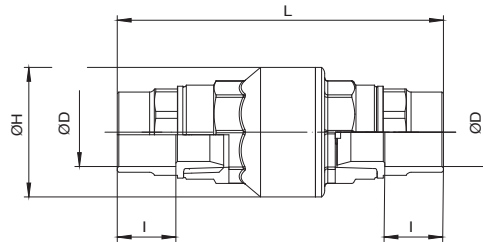
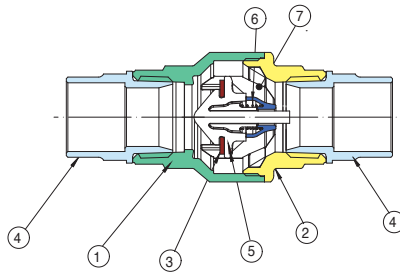
SERIES 100712 LF

IN-LINE SWEAT ENDS CHECK VALVE

High flow rate, lead free brass, solder ends, in-line spring loaded check valve.

- Pressure rating size 1/2" - 2" 400 WOG.
- Low cracking pressure 1/2 psi.
- Wide temperature range: -4°F to 210°F.
- ANSI B16.18 connections.
- Soft seat for bubble tight shutoff, spring loaded for fast seating action.
- Flow profile designed to minimize head loss.
- Perfect sealing both at high and low pressure.
- High technology materials to ensure the best resistance in any condition.
- Traditional sweating procedures recommended.

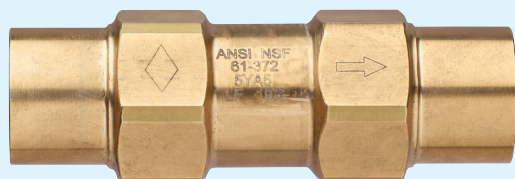
100712 LF: size 1/2" to 2".



N POS	PART NAME	MATERIAL	N PCS	SIZE	ØD	I	L	ØH	Cv	psi	Weight (Lbs)
1	BODY	LF BRASS C28500*	1	1/2"	0.63	0.50	3.43	1.36	8.1	400	0.44
2	END CONNECTION	LF BRASS C28500*	1	3/4"	0.88	0.75	4.17	1.65	14.1	400	0.73
3	SEAT	NBR	1	1"	1.13	0.91	4.88	1.93	20.9	400	1.14
4	CONNECTION	LF BRASS C28500	1	1 1/4"	1.38	0.97	5.26	2.40	35.84	400	1.92
5	DISC	POLYPHENYLENE SULFIDE	1	1 1/2"	1.63	1.10	5.79	2.87	51.90	400	2.49
6	SPRING	AISI 302	2	2"	2.13	1.34	6.56	3.44	82.19	400	3.71
7	SUPPORT	POM	1								

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

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SERIES 100722 LF CHECK VALVE

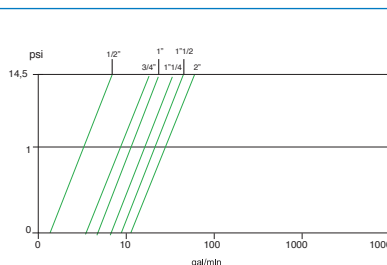
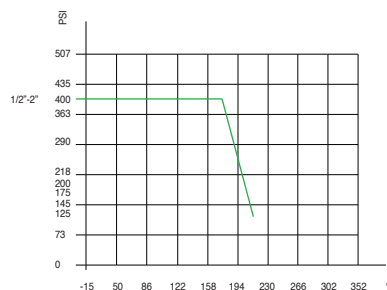
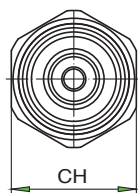
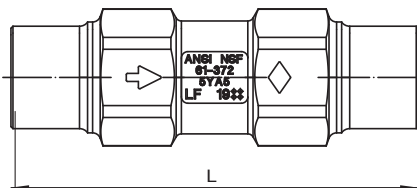
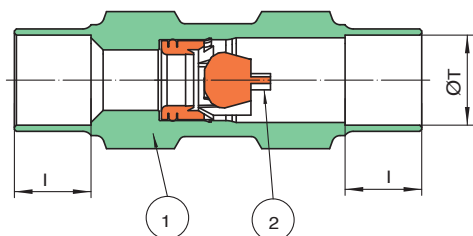
Unibody check valve, high flow rate, lead free brass, solder ends, in-line spring loaded check valve.

- Pressure rating 400 WOG.
- Low cracking pressure 1/2 psi.
- Wide temperature range: -4°F to 210°F.
- ANSI B16.18 connections.
- Soft seat for bubble tight shutoff, spring loaded for fast seating action.
- Flow pattern to minimize head loss.
- Perfect sealing both at high and low pressure.
- High technology materials to ensure best resistance in any condition.

100722 LF: size 1/2" to 2".



HEALTH
EFFECTS US-CA
NSF 372
NSF 61



N POS	PART NAME	MATERIAL	N PCS	SIZE	S	L	ØH	I	Ch	psi	Cv	Weight (Lbs)
1	BODY	LF BRASS C28500*	1	1/2"	0.71	3.13	0.63	0.50	1.18	400	5.32	0.43
				3/4"	0.91	3.98	0.88	0.75	1.22	400	10.17	0.60
				1"	0.94	4.67	1.13	0.91	1.50	400	17.34	0.95
2	CHECK VALVE	POM	1	1 1/4"	1.22	4.55	1.38	0.97	1.89	400	25.43	1.50
				1 1/2"	1.50	5.47	1.63	1.10	2.13	400	36.99	2.08
				2"	1.69	6.24	2.13	1.34	2.64	400	63.58	3.33

* Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content not more than 0.25%. Source: California health & Safety code (116875). Vermont Act 193.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.

FORGED BRONZE/BRASS VALVES INSTALLATION, OPERATION AND MAINTENANCE GUIDE

INTRODUCTION

Considerations for media, pressure, flow, and temperature should be made prior to valve installation, as well as the conditions for pipe line expansion and contraction. When choosing valves, proper sizing, seat, stem, and body materials will greatly increase performance and reduce the chance of failure. Properly installed in piping systems, Bonomi ball valves are suitable for applications including potable water (Lead Free valves), hot water, gas, steam, oil, and vacuum.

OVERALL WARNING

Before installation and before performing any maintenance, to avoid personal injury to yourself, fellow workers, or damage to property from release of process fluid, please take the following steps:

- a. Shut off all operating lines to the valve site.
- b. Isolate the valve site from the line fluid.
- c. Release process pressure.
- d. Drain the process fluid from the valve site.

PRELIMINARY CHECKS

1. Before installing the valve, check the body valve and associated equipment for any damage that may have occurred because of the shipping or storage.
2. Prior to installation, inspect the pipeline and the mating pipe making sure both are free of foreign material. In addition, inspect these piping components ensuring they are clean, and there are zero burrs or pits that could cause leakage.
3. The pipe/valve assembly must be free of tension before and after installation. Neither valve nor copper tubing is to be used as a means of support.
4. The valve should be manually cycled a couple of times prior to installation.
5. Make sure the valve is installed in the OPEN position.
6. Brass ball valves are NOT to be installed at or BELOW GROUND LEVEL.
7. Bronze ball valves can be installed at or below ground level, but NOT BURIED.
8. Under no circumstances the valve should be used as a grounding electrode for electrical systems
9. Inspection, testing, insulation and purging of the installation shall be performed using applicable local codes
10. Please remember to separate the product and packaging materials (e.g. paper, metal, plastic, non-ferrous metals) and dispose in accordance with all national, state and regional requirements.

THREADED ENDS

Unless otherwise specified, ball valve pipe threads are American National Standard Taper Pipe Threads [NPT] to ANSI/ASME B1.20.1.

All pipe and valve connections should be free of dirt, grease, and metal. Unclean pipe/valve connections are the number one cause of connection leakage.

Proper connection and thread seal is generally made by the use of any Teflon™ products, including PTFE formulated pipe compound. Teflon pipe compound is recommended on all pipe installations that are not Teflon-restricted applications because of the excellent sealing capabilities at all temperatures and pressures of threaded brass ball valves. Do not use Teflon in applications restricting its use (oxygen, tobacco, etc.). All pipe-joint tape and compounds must be non-toxic, NSF/UPC listed to maintain certifications (UL157). Be sure to apply enough sealant to fill the first 3 to 4 threads, as the screwing action will move the sealant up and around the threads.

Brass and bronze are soft metals. When using a bench vice to hold the valve, be aware that excessive pressure can deform and damage the valve body.

SOLDER ENDS

After cutting tubing square, use 100-180 grit emery cloth to burnish the end of the tube. Clean and prepare the pipe and valve with a clean rag.

For drinking water systems (Lead Free valves), apply a non-toxic, water-based solder/flux compliant with NSF 61 to maintain certification throughout the piping system. Never use lead-based, acid flux on drinking water systems. Apply to the pipe and valve, and make connection.

Always open the valve before heating the joint. Use only solders with melt points below 500°F.

During soldering, the mid-portion of the valve should not exceed 300°F. Heat absorbing techniques are recommended to protect the valve components and seats. Excessive heat input will damage the valves seals and seats.

Apply heat directly to, and away from the valve end and the pipe. Continue heating from the bottom of the valve while placing non-toxic solder to the top of the connection.

Move the torch up and around both sides of the joint while maintaining pressure on the solder at the top.

When the solder melts rapidly and is sucked into the joint, continuing applying solder until it drips from the bottom of the connection.

Remove heat and wipe excess flux/solder from connection for a clean, professional connection. Once the first joint is evenly soldered, allow it to cool down before beginning the second joint.

Maintaining copper pipe systems is less critical of valve required unions than with ordinary, steel piping systems. Cramped or difficult to maintain areas are generally fitted with 2 unions between the longest span incorporating the valves. If a failure exists, or maintenance is required, the entire section can be removed to make the necessary adjustments. Always leak test the system before using.

PRESS ENDS

Press end ball and check valves are intended for water in the liquid state, not steam. Temperatures should not exceed 250°F, pressures should not exceed 200 psi.

Press end ball and check valves for water service are designed to install on copper pipe in accordance with ASTM B88 type K, L, or M. Soft copper are limited to nominal sizes 1/2" to 1 1/4", hard copper may be used with nominal sizes 1/2" to 4".

Press end in-line check valves are designed to flow in one direction only. The body is marked with an arrow indicating direction of flow. Be sure to install the valve with the arrow pointing in the direction of flow.

Main installation steps for a press ends valve:

- Cut the copper pipe perpendicular to the axis, using a pipe cutter or a fine-toothed saw approved by the producer.
- Deburr tubing on the inside and outside to prevent cutting of the valve's o-ring seals.
- Check the correct o-ring position and its integrity and cleanliness. Only for ball valves > 2" check also the grip-ring inside the valve.
- Mark the full insertion depth of the pipe and mark it.
- Insert the tube by applying a slight rotation.
- Press the valve using a proper tool and following the instruction given by the tool supplier.

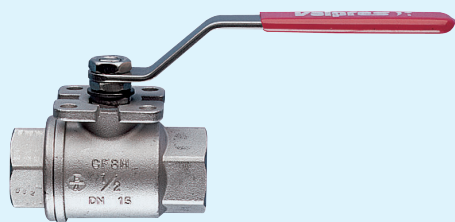
MAINTENANCE

1. Brass and bronze body ball valves are not designed for rebuilding, nor is it economical to do so. If over time, the valve leaks, complete replacement is recommended.

2. Ball valves, if properly used, do not require internal lubrication or maintenance. However, a visual inspection should be part of a regular maintenance program. A higher frequency of inspection is recommended for valves operating under extreme conditions. Also, for proper operation it is recommended that the valve be opened and closed at least twice a year.

3. Before any maintenance, open and close the valve at least once to release the pressure completely from the valve body.

4. For stem leaks, use a wrench to turn the packing nut/gland clockwise at quarter-turn intervals until the leak stops. If the packing nut/gland cannot be turned clockwise any further, or if the valve continues to leak, the valve will have to be replaced.



SERIES 700001 STAINLESS STEEL BALL VALVE

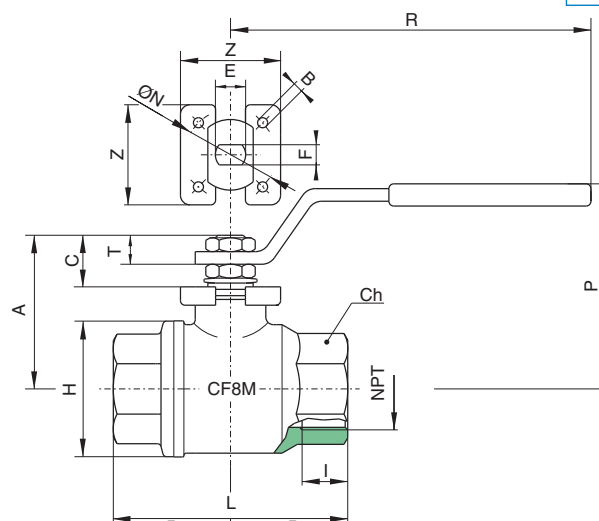
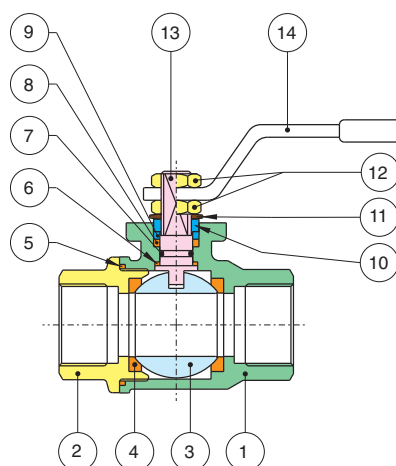
2-piece stainless steel FNPT threaded ball valve, full port.

- Pressure rating 2000 psi 1/2", 1500 psi 3/4" to 1", 1000 psi 1 1/4" to 2", 350 psi 2 1/2" to 4", 150 psi steam.
- Temperature range -4°F to +366°F.
- Blow-out proof stem, adjustable stem packing.
- PTFE seats, packing, and thrust washer.
- ISO 5211 mounting pad and double "D" stem.
- 100% electronically tested in the open and closed position at 80 psi.
- TUV T.A. Luft approved.
- ANSI B1.20.1 connections.

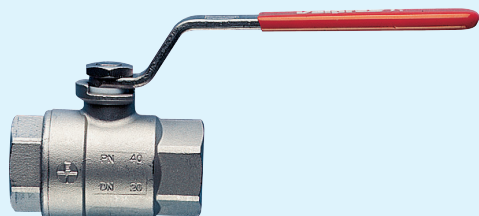
700001: size 1/8" to 4".

700001LL: WITH LOCKING HANDLE - size 1/8" to 4".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.



N POS	PART NAME	MATERIAL	N PCS	SIZE	I	L	H	CH	R	P	A	C	T	E	F	ØN ISO 5211	B	Z	Cv	psi	Weight Lbs
1	BODY	CF8M	1	1/8"	0.29	2.18	1.18	0.86	4.35	1.96	1.37	0.53	0.35	0.31	0.19	F03	0.21	1.41	5.80	2000	0.67
2	END CONNECTION	CF8M	1	1/4"	0.43	2.18	1.18	0.86	4.35	1.96	1.37	0.53	0.35	0.31	0.19	F03	0.21	1.41	6.36	2000	0.63
3	BALL	AISI 316 (CF8M)	1	3/8"	0.44	2.18	1.18	0.86	4.35	1.96	1.37	0.53	0.35	0.31	0.19	F03	0.21	1.41	9.83	2000	0.60
4	BALL SEAT	PTFE	2	1/2"	0.59	2.59	1.41	1.06	4.35	2.08	1.49	0.53	0.35	0.31	0.19	F03	0.21	1.41	22.21	2000	0.80
5	SEAT	PTFE	1	3/4"	0.64	3.11	1.77	1.25	5.17	2.67	2.00	0.59	0.39	0.39	0.27	F04	0.21	1.65	40.50	1500	1.46
6	THRUST WASHER	PTFE	1	1"	0.77	3.66	2.12	1.61	6.88	3.11	2.36	0.76	0.49	0.47	0.31	F04	0.21	1.65	74.63	1500	2.25
7	O-RING	FKM (Viton)	1	1 1/4"	0.84	3.93	2.51	1.96	6.88	3.28	2.53	0.76	0.49	0.47	0.31	F04	0.21	1.65	120.10	1000	3.09
8	STEM SEAL	PTFE	1	1 1/2"	0.84	4.33	3.14	2.16	9.84	3.93	3.11	0.94	0.64	0.62	0.39	F05	0.25	1.96	201.32	1000	5.29
9	PACKING GLAND	AISI 303 (1/8" - 2") STEEL (2 1/2" - 4")	1	2"	1.01	5.15	3.74	2.75	9.84	4.21	3.38	0.94	0.64	0.62	0.39	F05	0.25	1.96	348.60	1000	7.91
10	END STOP	AISI 430 (1/8" - 2") STEEL (2 1/2" - 4")	2	2 1/2"	1.18	6.25	4.80	3.54	12.65	5.00	4.09	1.12	0.72	0.78	0.55	F07	M8	2.51	631.37	350	15.45
11	SPRING WASHER	STEEL (2 1/2" - 4")	1	3"	1.31	7.28	5.66	4.13	12.65	5.41	4.48	1.10	0.70	0.78	0.55	F07	M8	2.51	1009.48	350	23.34
12	NUT	AISI 304 (1/8" - 2") STEEL (2 1/2" - 4")	2	4"	1.54	8.74	6.96	5.11	15.01	6.16	5.39	1.35	0.86	0.94	0.70	F10	M10	3.62	1577.34	350	41.41
13	STEM	AISI 316	1																		
14	HANDLE	AISI 430 (1/8" - 2") STEEL (2 1/2" - 4")	1																		



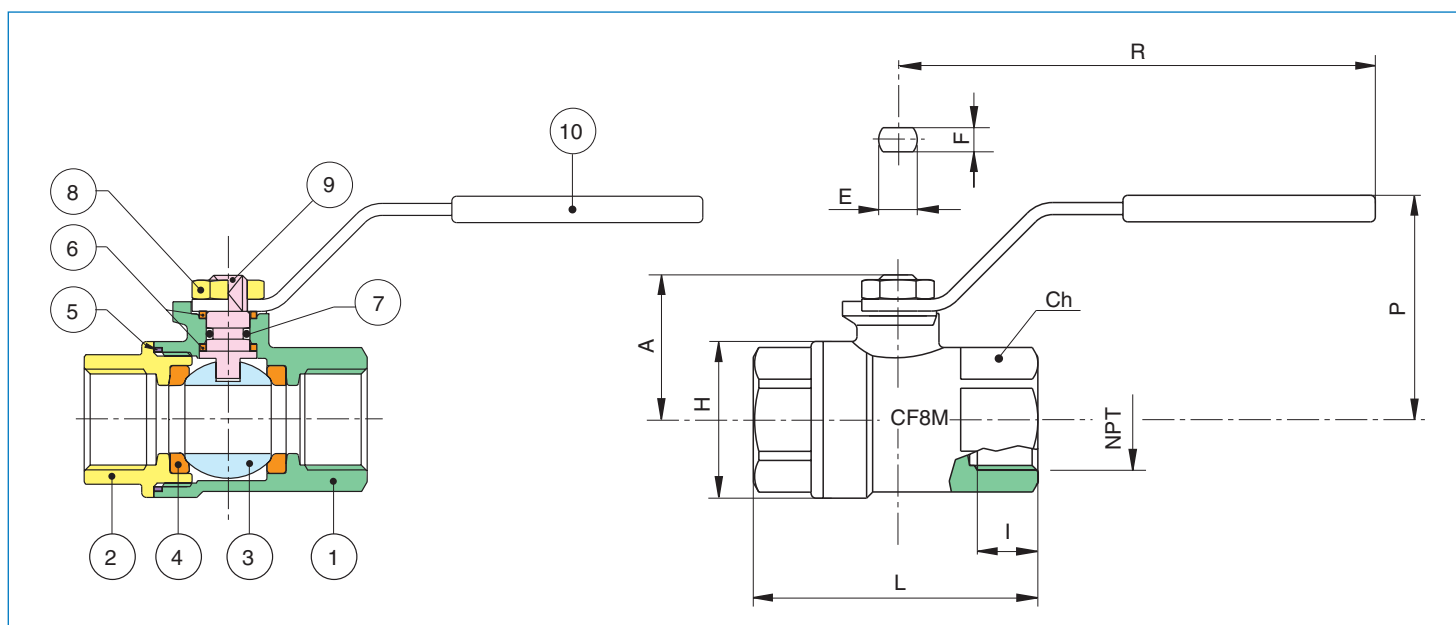
SERIES 700023 STAINLESS STEEL BALL VALVE

2-piece stainless steel FNPT threaded ball valve, full port.

- Pressure rating 1000 psi - 150 psi steam.
- Temperature range -4°F to +366°F.
- Blow-out proof stem.
- PTFE seats, packing, and thrust washer.
- 100% electronically tested in the open and closed position at 80 psi.
- ANSI B1.20.1 connections.

700023: size 1/4" to 2".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.



N POS	PART NAME	MATERIAL	N POS
1	BODY	CF8M	1
2	END CONNECTION	CF8M	1
3	BALL	AISI 316 - CF8M	1
4	BALL SEAT	PTFE	2
5	SEAL	PTFE	1
6	STEM SEAL	PTFE	2
7	O-RING	FKM (Viton)	1
8	NUT	AISI 304	1
9	STEM	AISI 316	1
10	HANDLE	AISI 430	1

SIZE	A	H	L	R	CH	I	E	F	P	Cv	psi	Weight Lbs
1/4"	1.10	1.18	2.10	4.35	0.86	0.39	0.31	0.19	1.75	6.36	1000	0.48
3/8"	1.10	1.18	2.10	4.35	0.86	0.39	0.31	0.19	1.75	9.83	1000	0.44
1/2"	1.20	1.27	2.36	4.35	1.06	0.51	0.31	0.19	1.85	22.21	1000	0.55
3/4"	1.45	1.57	2.75	5.17	1.25	0.55	0.39	0.27	2.14	40.50	600	1.00
1"	1.61	1.92	3.11	5.17	1.61	0.66	0.39	0.27	2.30	74.63	600	1.88
1 1/4"	1.96	2.44	3.58	6.87	1.96	0.74	0.47	0.31	2.70	120.10	350	2.66
1 1/2"	2.24	2.95	4.05	6.87	2.16	0.76	0.47	0.31	3.01	201.32	350	4.00
2"	2.59	3.74	4.88	6.87	2.75	0.88	0.47	0.31	3.38	348.60	350	6.00

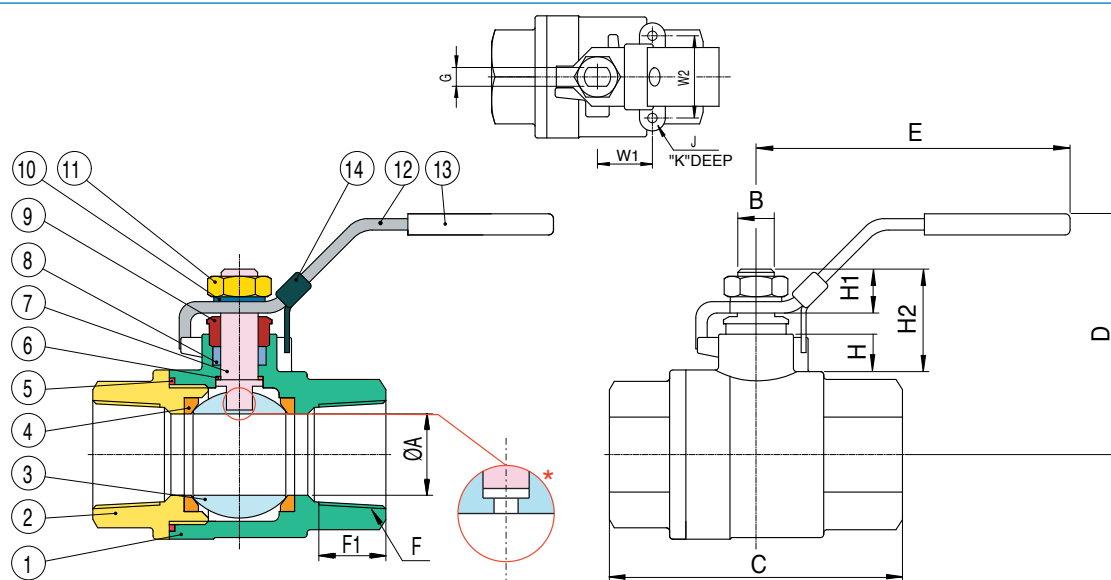


SERIES 700 LL STAINLESS STEEL BALL VALVE

2-piece stainless steel, FNPT threaded ball valve with locking handle, full port vented ball.

- Working pressure is 2000 psi (1/4" to 1"), 1500 psi (1 1/4" to 2") - 150 psi steam.
- Temperature range -40°F to 450°F.
- Self adjusting stem packing.
- Blow-out proof stem design.
- 100% air tested under water at 80 psi.
- Mounting pad for actuator.
- ANSI B1.20.1 connections.
- NACE MR 0175.

700LL: size 1/4" to 2".



* THERMAL RELIEF HOLE IN THE STEM SLOT.

N POS	PART NAME	MATERIAL	N POS	SIZE	ØA	B	C	D	E	F1	J	K	G	H	H1	H2	W1	W2	Cv	Weight Lbs
1	BODY	CF8M	1	1/4"	0.45	0.31	2.16	1.96	3.93	0.59	10-24UNC	0.23	0.20	0.31	0.38	0.87	0.50	1.12	8	0.51
2	END CAP	CF8M	1	3/8"	0.49	0.31	2.16	1.96	3.93	0.59	10-24UNC	0.23	0.20	0.31	0.38	0.87	0.50	1.12	10	0.51
3	BALL	AISI 316	1	1/2"	0.59	0.37	2.55	2.36	5.11	0.62	10-24UNC	0.19	0.26	0.41	0.43	1.00	0.50	1.12	15	0.83
4	SEAT	RTFE.	2	3/4"	0.78	0.37	2.93	2.51	5.11	0.66	10-24UNC	0.27	0.26	0.41	0.43	1.00	0.88	1.37	34	1.14
5	JOINT GASKET	PTFE	1	1"	0.98	0.43	3.46	2.79	6.49	0.94	10-24UNC	0.27	0.31	0.45	0.53	1.24	0.92	1.37	56	2.02
6	THRUST WASHER	PTFE	1	1 1/4"	1.25	0.43	4.01	3.07	6.49	0.86	1/4-20UNC	0.27	0.31	0.45	0.53	1.24	1.00	1.50	85	2.70
7	STEM	AISI 316	1	1 1/2"	1.49	0.55	4.33	3.38	7.48	0.88	1/4-20UNC	0.27	0.38	0.47	0.61	1.38	1.00	1.50	125	4.18
8	V RING PACKING	PTFE	1	2"	1.96	0.55	4.92	3.74	7.48	1.02	1/4-20UNC	0.27	0.38	0.37	0.61	1.02	1.00	1.50	250	6.86
9	GLAND BUSH	AISI 304	1																	
10	STEM WASHER	AISI 304	1																	
11	STEM NUT	AISI 304	1																	
12	HANDLE	AISI 304	1																	
13	HANDLE SLEEVE	VINYL	1																	
14	LOCKING DEVICE	AISI 304	1																	

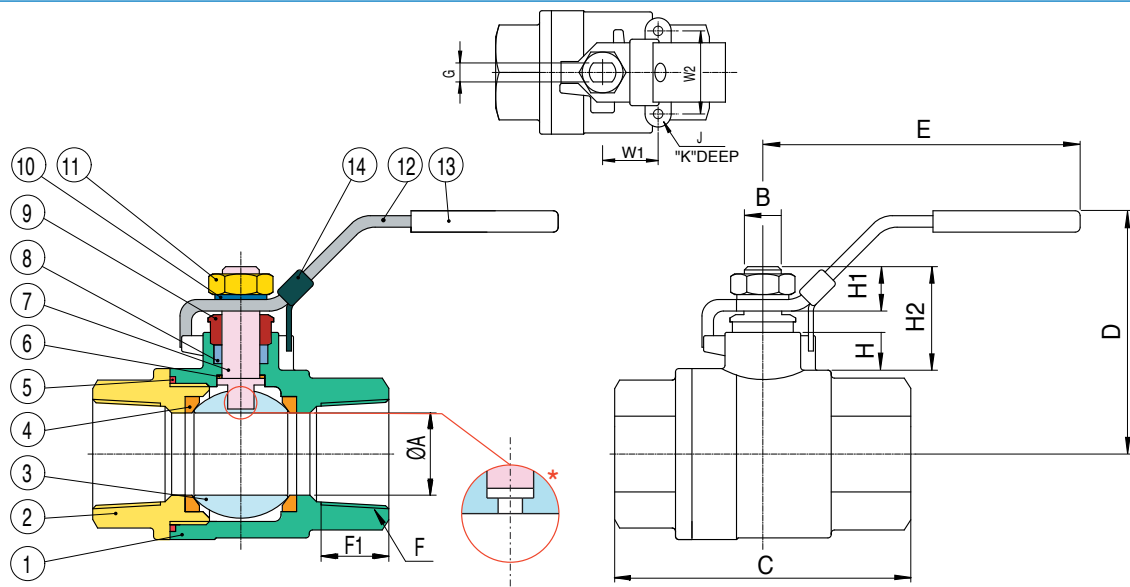


SERIES 600 LL CARBON STEEL BALL VALVE

2-piece carbon steel FNPT threaded ball valve with locking handle, full port vented ball.

- Working pressure is 2000 psi (1/4" to 1"), 1500 psi (1 1/4" to 2") - 150 psi steam.
- Temperature range -40°F to 450°F.
- Self adjusting stem packing.
- Blow-out proof stem design.
- 100% air tested under water at 80 psi.
- Mounting pad for actuator.
- ANSI B1.20.1 connections.
- NACE MR 0175.

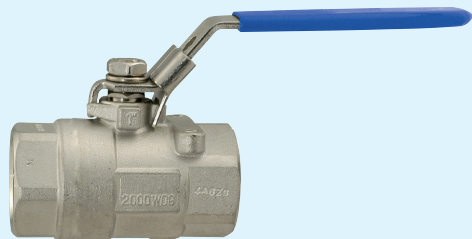
600LL: size 1/4" to 2".



* THERMAL RELIEF HOLE IN THE STEM SLOT.

N POS	PART NAME	MATERIAL	N POS
1	BODY	WCB	1
2	END CAP	WCB	1
3	BALL	AISI 316	1
4	SEAT	RTFE	2
5	JOINT GASKET	PTFE	1
6	THRUST WASHER	PTFE	1
7	STEM	AISI 316	1
8	V RING PACKING	PTFE	1
9	GLAND BUSH	STEEL	1
10	STEM WASHER	STEEL	1
11	STEM NUT	STEEL	1
12	HANDLE	STEEL	1
13	HANDLE SLEEVE	VINYL	1
14	LOCKING DEVICE	AISI 304	1

SIZE	ØA	B	C	D	E	F1	J	K	G	H	H1	H2	W1	W2	Cv	Weight Lbs
1/4"	0.45	0.31	2.16	1.96	3.93	0.59	10-24UNC	0.23	0.019	0.31	0.38	0.87	0.50	1.12	8	0.51
3/8"	0.49	0.31	2.16	1.96	3.93	0.59	10-24UNC	0.23	0.19	0.31	0.38	0.87	0.50	1.12	10	0.51
1/2"	0.59	0.37	2.55	2.36	5.11	0.62	10-24UNC	0.19	0.25	0.41	0.43	1.00	0.50	1.12	15	0.83
3/4"	0.78	0.37	2.93	2.51	5.11	0.66	10-24UNC	0.27	0.25	0.41	0.43	1.00	0.88	1.37	34	1.14
1"	0.98	0.43	3.46	2.79	6.49	0.94	10-24UNC	0.27	0.31	0.45	0.53	1.24	0.92	1.37	56	2.02
1 1/4"	1.25	0.43	4.01	3.07	6.49	0.86	1/4-20UNC	0.27	0.31	0.45	0.53	1.24	1.00	1.50	85	2.70
1 1/2"	1.49	0.55	4.33	3.38	7.48	0.88	1/4-20UNC	0.27	0.38	0.47	0.61	1.38	1.00	1.50	125	4.18
2"	1.96	0.55	4.92	3.74	7.48	1.02	1/4-20UNC	0.27	0.38	0.37	0.61	1.02	1.00	1.50	250	6.86

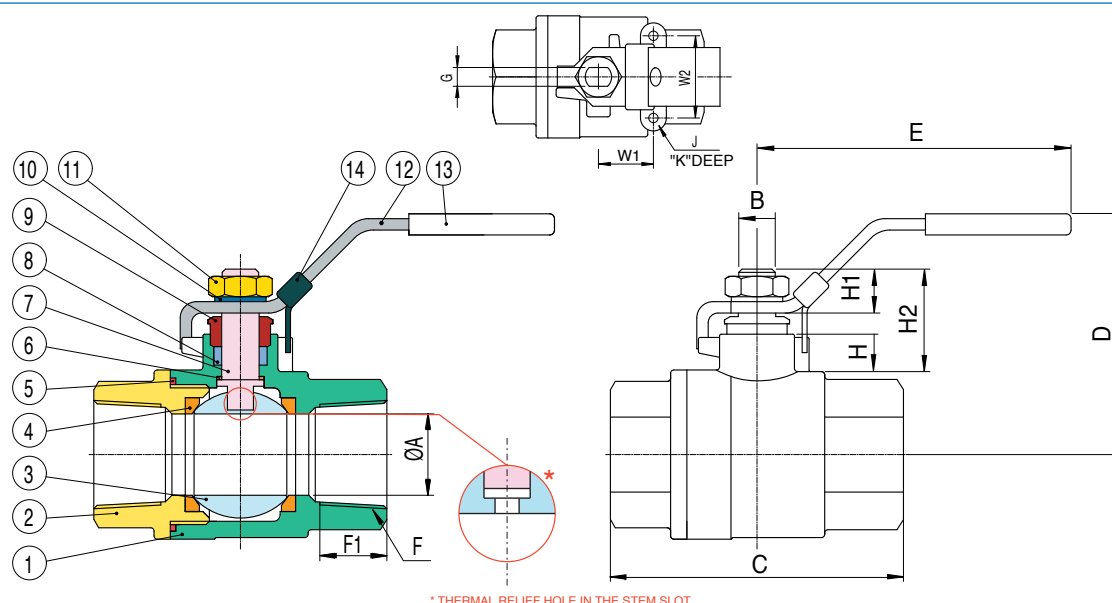


SERIES 7700 LL STAINLESS STEEL SEAL WELD BALL VALVE

Unibody stainless steel FNPT, seal welded threaded ball valve with locking handle, full port.

- Working pressure is 2000 psi (1/4" to 2") - 200 psi steam.
- Temperature range -40°F to 450°F.
- Self-adjusting stem packing.
- Blow-out proof stem design.
- 100% air tested under water at 80 psi.
- Mounting pad for actuator.
- 25% carbon filled TFE seats.
- Graphite stem packing.
- API 607 certified.
- NACE MR 0175.

7700LL: size 1/4" to 2".



N POS	PART NAME	MATERIAL	N PCS
1	BODY	CF8M	1
2	END CAP	CF8M	1
3	BALL	SS316	1
4	SEAT	RTFE.	2
5	JOINT GASKET	PTFE	1
6	THRUST WASHER	PTFE	1
7	STEM	AISI 316	1
8	V RING PACKING	PTFE	1
9	GLAND BUSH	AISI 304	1
10	STEM WASHER	AISI 304	1
11	STEM NUT	AISI 304	1
12	HANDLE	AISI 304	1
13	HANDLE SLEEVE	VINYL	1
14	LOCKING DEVICE	AISI 304	1

SIZE	ØA	B	C	D	E	F1	J	K	G	H	H1	H2	W1	W2	Cv	Weight Lbs
1/4"	0.45	0.31	2.16	1.96	3.93	0.59	10-24UNC	0.23	0.20	0.31	0.38	0.87	0.50	1.12	8	0.51
3/8"	0.49	0.31	2.16	1.96	3.93	0.59	10-24UNC	0.23	0.20	0.31	0.38	0.87	0.50	1.12	10	0.51
1/2"	0.59	0.37	2.55	2.36	5.11	0.62	10-24UNC	0.19	0.26	0.41	0.43	1.00	0.50	1.12	15	0.83
3/4"	0.78	0.37	2.93	2.51	5.11	0.66	10-24UNC	0.27	0.26	0.41	0.43	1.00	0.88	1.37	34	1.14
1"	0.98	0.43	3.46	2.79	6.49	0.94	10-24UNC	0.27	0.31	0.45	0.53	1.24	0.92	1.37	56	2.02
1 1/4"	1.25	0.43	4.01	3.07	6.49	0.86	1/4-20UNC	0.27	0.31	0.45	0.53	1.24	1.00	1.50	85	2.70
1 1/2"	1.49	0.55	4.33	3.38	7.48	0.88	1/4-20UNC	0.27	0.38	0.47	0.61	1.38	1.00	1.50	125	4.18
2"	1.96	0.55	4.92	3.74	7.48	1.02	1/4-20UNC	0.27	0.38	0.37	0.61	1.02	1.00	1.50	250	6.86

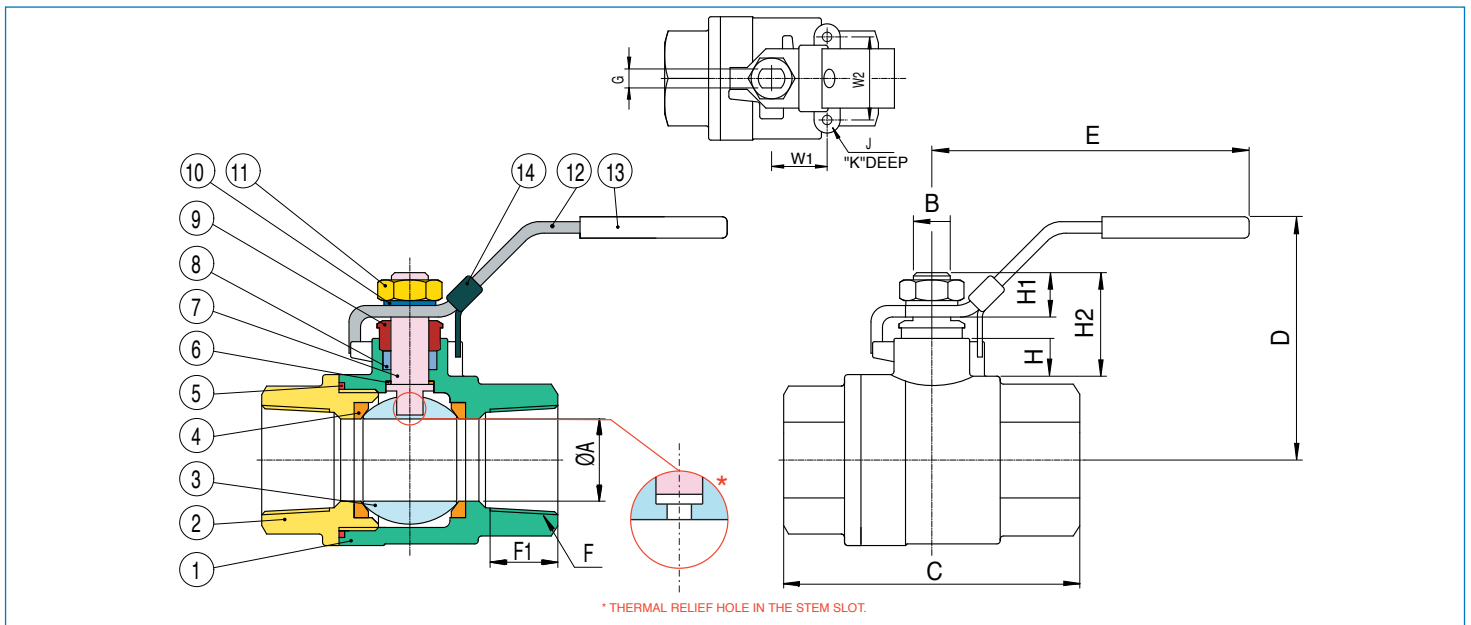


SERIES 6600 LL CARBON STEEL SEAL WELD BALL VALVE

Unibody carbon steel FNPT, seal welded threaded ball valve with locking handle, full port.

- Working pressure is 2000 psi (1/4" to 2") - 200 psi steam.
- Temperature range -40°F to 450°F.
- Self-adjusting stem packing.
- Blow-out proof stem design.
- 100% air tested under water at 80 psi.
- Mounting pad for actuator.
- 25% carbon filled TFE seats.
- Graphite stem packing.
- Fire Safe design.
- NACE MR 0175.

6600LL: size 1/4" to 2".



N POS	PART NAME	MATERIAL	N POS
1	BODY	WCB	1
2	END CAP	WCB	1
3	BALL	AISI 316	1
4	SEAT	RTFE.	2
5	JOINT GASKET	PTFE	1
6	THRUST WASHER	PTFE	1
7	STEM	AISI 316	1
8	V RING PACKING	PTFE	1
9	GLAND BUSH	STEEL	1
10	STEM WASHER	STEEL	1
11	STEM NUT	STEEL	1
12	HANDLE	STEEL	1
13	HANDLE SLEEVE	VINYL	1
14	LOCKING DEVICE	AISI 304	1

SIZE	ØA	B	C	D	E	F1	J	K	G	H	H1	H2	W1	W2	Cv	Weight Lbs
1/4"	0.45	0.31	2.16	1.96	3.93	0.59	10-24UNC	0.23	0.019	0.31	0.38	0.87	0.50	1.12	8	0.51
3/8"	0.49	0.31	2.16	1.96	3.93	0.59	10-24UNC	0.23	0.19	0.31	0.38	0.87	0.50	1.12	10	0.51
1/2"	0.59	0.37	2.55	2.36	5.11	0.62	10-24UNC	0.19	0.25	0.41	0.43	1.00	0.50	1.12	15	0.83
3/4"	0.78	0.37	2.93	2.51	5.11	0.66	10-24UNC	0.27	0.25	0.41	0.43	1.00	0.88	1.37	34	1.14
1"	0.98	0.43	3.46	2.79	6.49	0.94	10-24UNC	0.27	0.31	0.45	0.53	1.24	0.92	1.37	56	2.02
1 1/4"	1.25	0.43	4.01	3.07	6.49	0.86	1/4-20UNC	0.27	0.31	0.45	0.53	1.24	1.00	1.50	85	2.70
1 1/2"	1.49	0.55	4.33	3.38	7.48	0.88	1/4-20UNC	0.27	0.38	0.47	0.61	1.38	1.00	1.50	125	4.18
2"	1.96	0.55	4.92	3.74	7.48	1.02	1/4-20UNC	0.27	0.38	0.37	0.61	1.02	1.00	1.50	250	6.86

SERIES 3000 - 3100

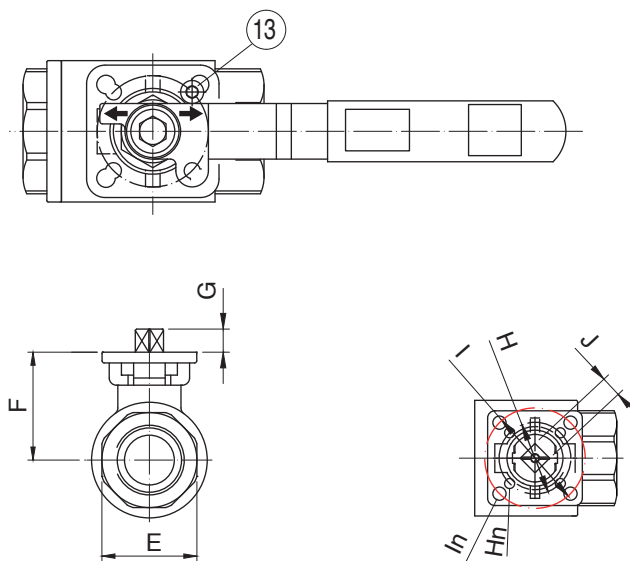
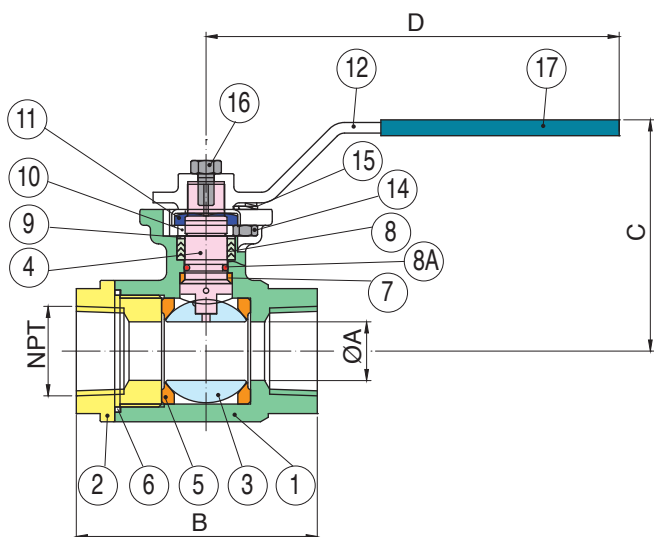
CARBON STEEL STAINLESS STEEL

2-piece, FNPT threaded, direct mount ball valve full port.

- Pressure rating 3000 psi (100°F.)
- Temperature range -20°F to 185°F.
- Blow-out proof stem/Antistatic design.
- ISO 5211 mounting pad.
- NACE MR-0175.

3000: size 1/4" to 1 1/2", 2" reduced port.

3100: size 1/4" to 1 1/2", 2" reduced port.



N POS	PART NAME	MATERIAL	N PCS
1	BODY	CF8M/WCB	1
2	END CAP	CF8M/WCB	1
3	BALL	CF8M	1
4	ANTI-STATIC STEM	AISI 316	1
5	BALL SEAT	DELFIN	2
6	BODY SEAL	PTFE	1
7	THRUST WASHER	PTFE	1
8	STEM PACKING	PTFE	1
8A	O-RING	FKM (Viton)	1
9	THRUST WASHER	50% SS - 50% PTFE	1
10	STEM NUT	AISI 304	1
11	LOCK SADDLE	AISI 304	1
12	HANDLE	AISI 304	1
13	STOP BOLT	AISI 304	1
14	STOP NUT	AISI 304	1
15	STOP WASHER	AISI 304	1
16	HANDLE BOLD	AISI 304	1
17	HANDLE SLEEVE	VINYL	1

SIZE	ØA	B	C	D	E	F	G	ISO 5211 I	Hn	In	J mm	Cv	Torque in-Lbs	Weight Lbs
1/4"	0.38	2.95	2.31	6.30	1.02	1.61	0.31	F03-F04 1.42"-1.65"	0.22	0.22	9	5.3	101	1.4
3/8"	0.38	2.95	2.31	6.30	1.02	1.61	0.31	F03-F04 1.42"-1.65"	0.22	0.22	9	8	104	1.4
1/2"	0.50	2.95	2.31	6.30	1.28	1.61	0.31	F03-F04 1.42"-1.65"	0.22	0.22	9	19	130	1.5
3/4"	0.69	3.19	2.60	6.30	1.51	1.72	0.31	F03-F04 1.42"-1.65"	0.22	0.22	9	35	156	2.0
1"	0.87	3.58	3.02	6.30	1.86	2.11	0.39	F04-F05 1.65"-1.97"	0.28	0.24	11	50	208	3.1
1 1/4"	1.14	4.33	3.19	6.30	2.32	2.32	0.39	F04-F05 1.65"-1.97"	0.28	0.24	11	110	390	4.8
1 1/2"	1.37	4.76	3.84	8.27	2.96	2.96	0.51	F05-F07 1.97"-2.76"	0.36	0.28	14	180	468	8.1
2"	1.37	5.71	4.14	8.27	2.96	2.96	0.51	F05-F07 1.97"-2.76"	0.36	0.28	14	210	468	10.5

* Varies with size.



SERIES 700056 CARBON STEEL BALL VALVE

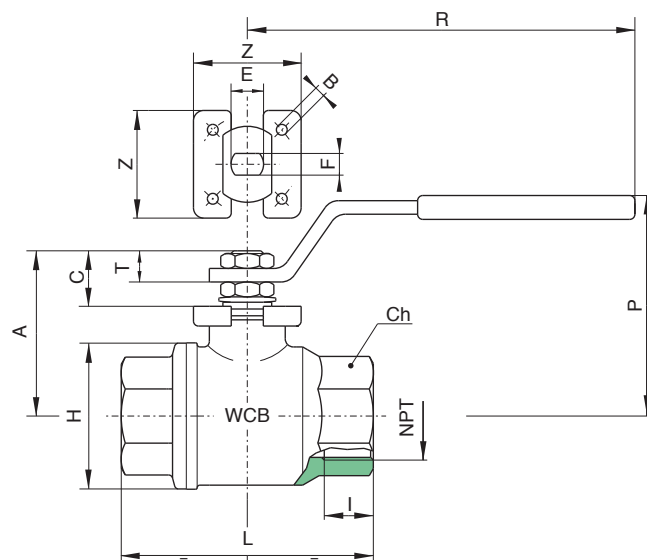
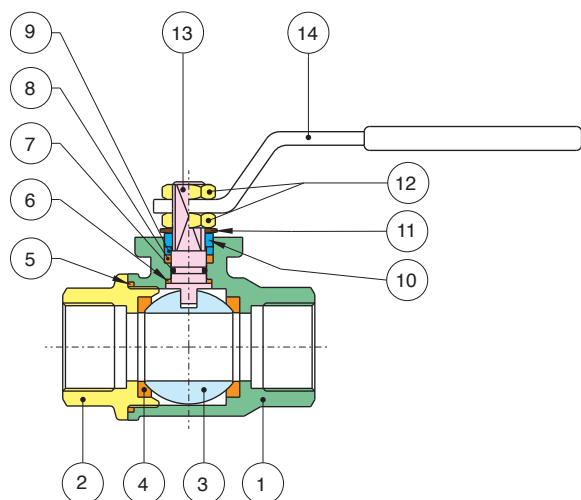
2-piece carbon steel, FNPT threaded ball valve, stainless steel ball and stem, full port.

- Pressure rating 1000 psi -150 psi steam.
- Temperature -4°F to +366°F.
- Blow-out proof stem, adjustable stem packing.
- PTFE seats, packing and thrust washer.
- 100% electronically tested in the open and closed position at 80 psi.
- TUV T.A. Luft approved.
- ISO 5211 pad with double "D" stem.
- ANSI B1.20.1 connections.

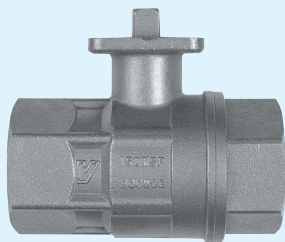
700056: size 1/4" to 2".

700056LL: WITH LOCKING HANDLE - size 1/4" to 2".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.



N POS	PART NAME	MATERIAL	N PCS	SIZE	I	L	H	Ch	R	P	A	C	T	E	F	ISO 5211	B	Z	Cv	psi	Weight Lbs
1	BODY	ASTM A105-WCB	1	1/4"	0.43	2.17	1.18	0.87	4.33	1.97	1.38	0.53	0.31	0.31	0.20	F03	0.22	1.42	6.36	1000	0.63
2	END CONNECTION	ASTM A105-WCB	1	3/8"	0.45	2.17	1.18	0.87	4.33	1.97	1.38	0.53	0.31	0.31	0.20	F03	0.22	1.42	9.83	1000	0.60
3	BALL	AISI 304 - CF8	1	1/2"	0.59	2.60	1.42	1.06	4.33	2.09	1.50	0.53	0.31	0.31	0.20	F03	0.22	1.42	22.21	1000	0.80
4	BALL SEAT	PTFE	2	3/4"	0.64	3.11	1.77	1.26	5.16	2.68	2.01	0.59	0.39	0.39	0.28	F04	0.22	1.65	40.50	1000	1.46
5	SEAL	PTFE	1	1"	0.75	3.66	2.13	1.61	6.85	3.11	2.36	0.77	0.49	0.47	0.31	F04	0.22	1.65	74.63	1000	2.25
6	THRUST WASHER	PTFE	1	1 1/4"	0.84	3.86	2.52	1.97	6.85	3.27	2.52	0.77	0.49	0.47	0.31	F04	0.22	1.65	120.10	1000	3.09
7	O-RING	FKM (Viton)	1	1 1/2"	0.84	4.33	3.15	2.17	9.84	3.94	3.11	0.94	0.65	0.63	0.39	F05	0.26	1.97	201.32	1000	5.29
8	STEM SEAL	PTFE	1	2"	1.01	5.12	3.74	2.76	9.84	4.21	3.39	0.94	0.65	0.63	0.39	F05	0.26	1.97	348.60	1000	7.91
9	PACKING GLAND	STEEL	1																		
10	END STOP	AISI 430	2																		
11	NUT	STEEL	2																		
12	STEM	AISI 304	1																		
13	HANDLE	STEEL	1																		



SERIES 700076

STAINLESS STEEL DIRECT MOUNT BALL VALVE

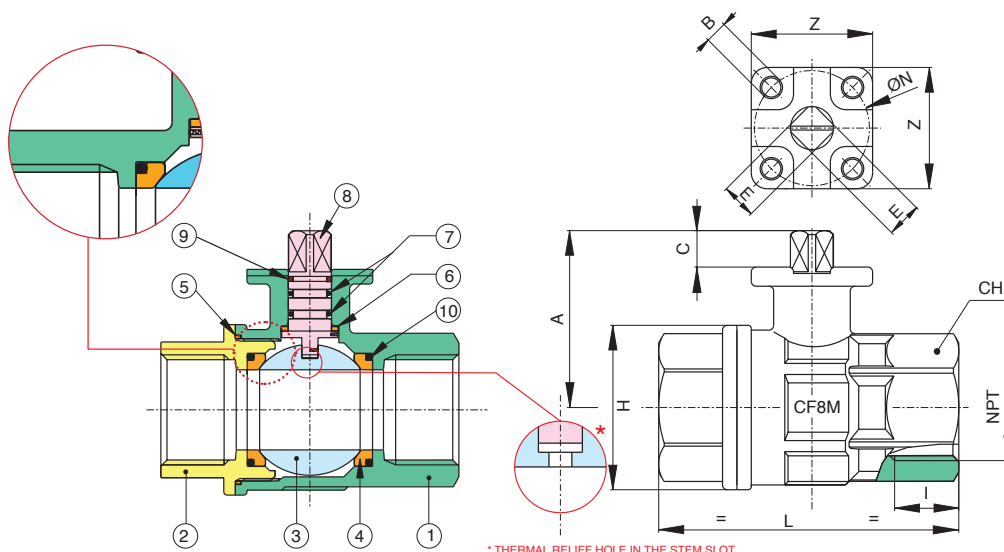
- 2-piece stainless steel FNPT threaded, direct mount ball valve, full port.
- Pressure rating: 1000 psi 1/4" to 2", 800 psi 2 1/2" to 3", 150 psi steam.
- Temperature -4°F to +366°F.
- NSF 61, 372 certified.
- Blow-out proof stem.
- PTFE seats with O-ring backing for low operating torque.
- PTFE seals and double O-ring stem packing.
- 100% electronically tested in the open and closed position at 80 psi.
- ISO 5211 mounting pad.
- ANSI B1.20.1 connections

700076: size 1/4" to 3".



HEALTH
EFFECTS US-CA
NSF 372
NSF 61

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.



* Torque values in the table are measured in laboratory tests under the following conditions:
TEMPERATURE: 68°F
PRESSURE: 0 psi
FLUID: PURIFIED WATER

N POS	PART NAME	MATERIAL	N POS
1	BODY	CF8M	1
2	END CONNECTION	CF8M	1
3	BALL	AISI316-CF8M	1
4	BALL SEAT	PTFE	2
5	SEAL	PTFE	1
6	STEM SEAL	PTFE	1
7	O-RING	FKM (Viton)	2
8	STEM	AISI 316	1
9	STEM SEAL	PTFE	1
10	O-RING	FKM (Viton)	2

SIZE	I	L	H	CH	A	C	E mm	ISO 5211	B	Z	Cv	psi	Weight Lbs	* Torque in-Lbs
1/4"	0.59	2.56	1.44	1.02	1.78	0.26	9	F03/F04 1.42-1.65	0.24	1.65	7.91	1000	0.95	60
3/8"	0.59	2.56	1.44	1.02	1.78	0.26	9	F03/F04 1.42-1.65	0.24	1.65	10.22	1000	0.89	60
1/2"	0.59	2.63	1.35	1.06	1.63	0.35	9	1.42 (ISO F03)	0.23	1.49	22.21	1000	0.68	53.10
3/4"	0.64	3.07	1.65	1.25	1.71	0.35	9	1.42 (ISO F03)	0.23	1.49	40.50	1000	0.91	53.10
1"	0.75	3.54	2.02	1.61	2.10	0.35	9	1.42 (ISO F03)	0.23	1.49	74.63	1000	1.35	53.10
1 1/4"	0.84	3.93	2.53	1.96	2.24	0.35	9	1.42 (ISO F03)	0.23	1.49	120.10	1000	2.22	53.10
1 1/2"	0.84	4.40	3.03	2.16	2.91	0.43	11	1.97 (ISO F05)	0.27	1.96	201.32	1000	3.69	150.46
2"	1.01	5.31	3.81	2.75	3.27	0.43	11	1.97 (ISO F05)	0.27	1.96	348.60	1000	6.49	150.46
2 1/2"	1.19	6.30	4.88	3.43	4.37	0.55	14	2.76 (ISO F07)	0.35	2.52	633.00	800	13.36	274
3"	1.31	7.09	5.71	4.13	4.72	0.55	14	2.76 (ISO F07)	0.35	2.52	1012.18	800	20.94	354

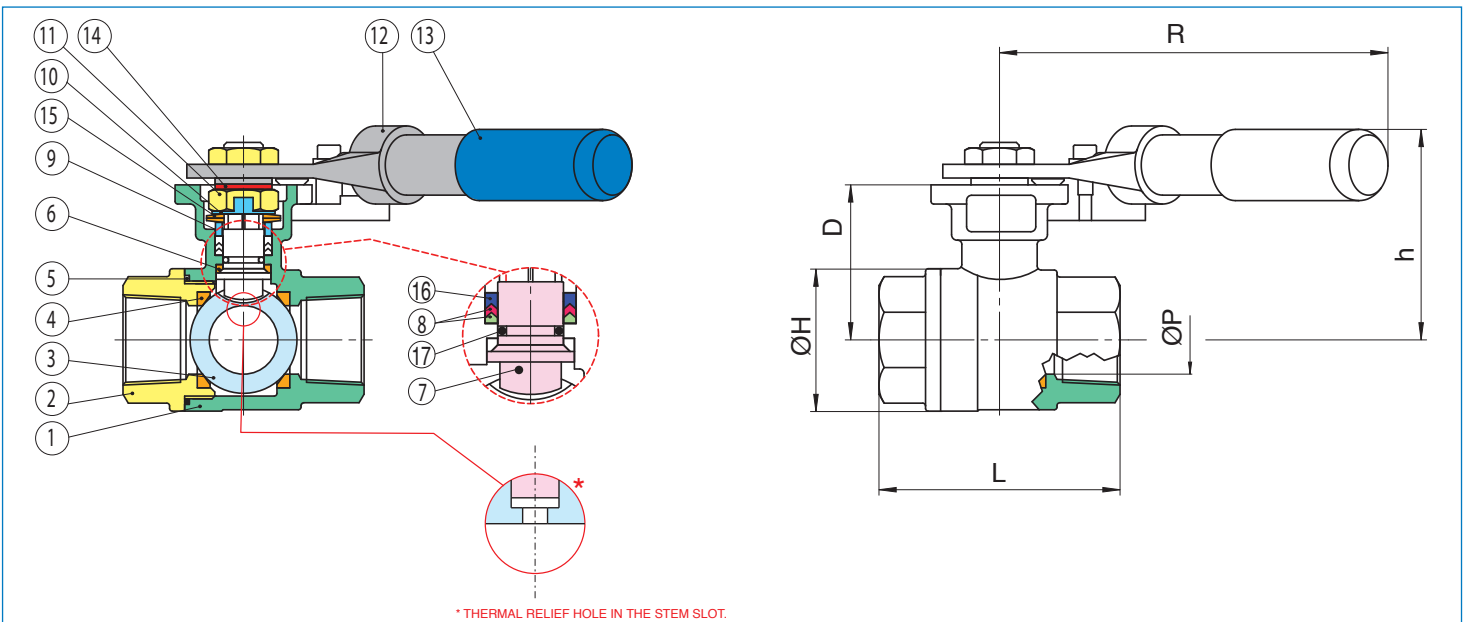


SERIES 2200 SRL STAINLESS STEEL BALL VALVE

Deadman spring return lever, stainless steel, FNPT threaded ball valve, full port.

- Temperature range -40°F to 450°F.
- Working pressure to 1000 psi 1/4" - 2".
- Blow-out proof stem.
- Adjustable spring return lever.
- Antistatic design.
- ANSI B1.20.1 connections.

2200 SRL: size 1/4" to 2".



N POS	PART NAME	MATERIAL	N POS
1	BODY	CF8M	1
2	END CAP	CF8M	1
3	BALL	AISI 316	1
4	SEAT	PTFE	2
5	JOINT GASKET	PTFE	1
6	STEM SEAL	RTFE	1
7	STEM	AISI 316	1
8	STEM PACKING	PTFE	2
9	GLAND	AISI 304	1
10	LOCK SADDLE	AISI 304	1
11	STEM NUT	AISI 304	2
12	HANDLE	AISI 304	1
13	HANDLE SLEEVE	VINYL	1
14	STEM WASHER	AISI 304	1
15	BELLEVILLE WASHER	AISI 301	1
16	STEM PACKING	25% GLASS FIBER FILLED+PTFE	1
17	O-RING	VITON	1

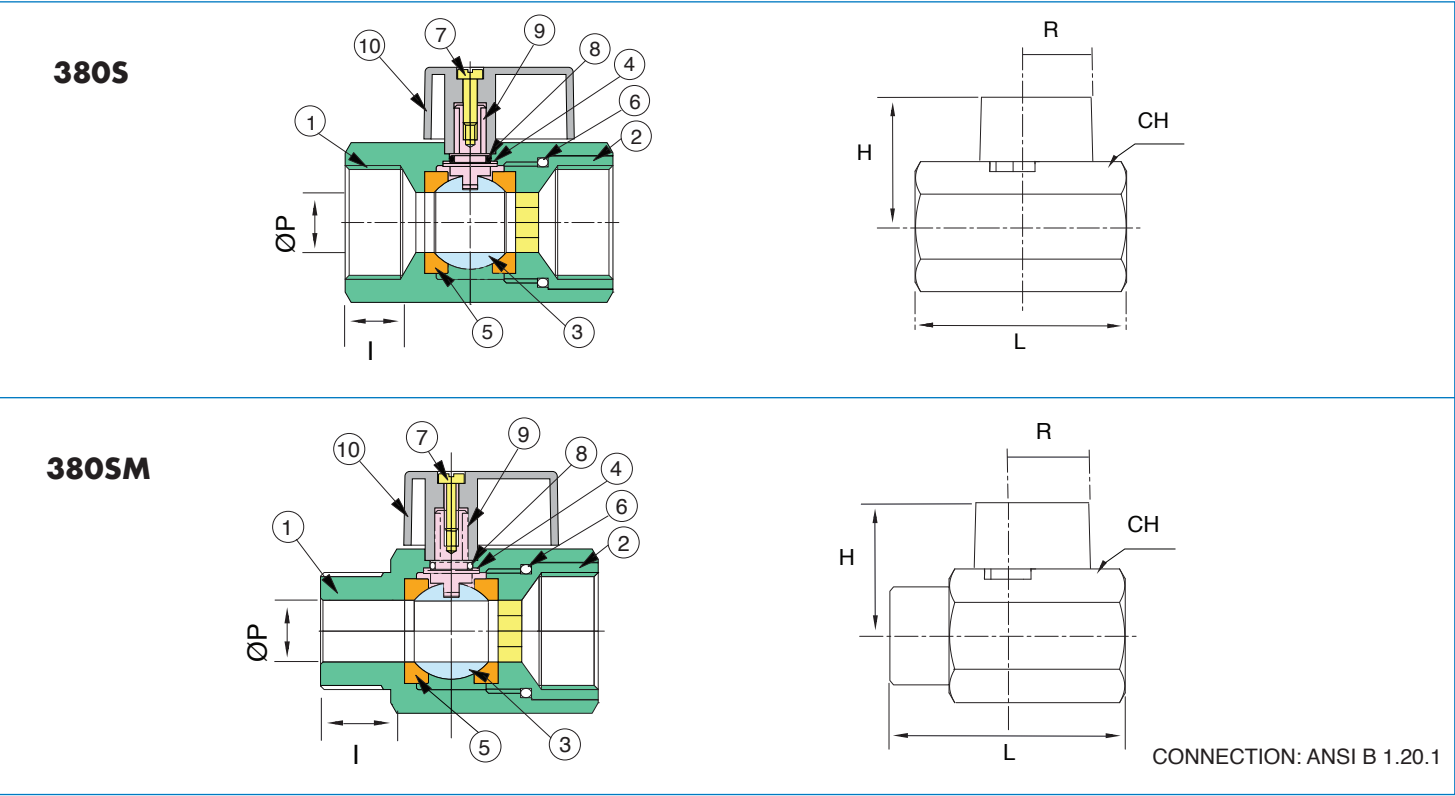
SIZE	ØA	R	D	ØH	h	L	ISO 5211	Cv	psi	Weight Lbs
1/4"	0.45	6.30	1.52	1.46	2.31	2.56	F03/F04	8	1000	1.80
3/8"	0.49	6.30	1.52	1.46	2.31	2.56	F03/F04	10	1000	1.80
1/2"	0.59	6.30	1.52	1.46	2.31	2.56	F03/F04	15	1000	1.70
3/4"	0.79	6.30	1.82	1.69	2.60	2.94	F03/F04	34	1000	2.00
1"	0.98	6.30	2.23	2.05	3.02	3.47	F04/F05	56	1000	2.80
1 1/4"	1.26	6.30	2.40	2.48	3.19	4.02	F04/F05	85	1000	3.80
1 1/2"	1.50	8.27	3.05	2.87	3.84	4.33	F05/F07	125	1000	6.60
2"	1.97	8.27	3.35	3.54	4.14	4.92	F05/F07	250	1000	8.80



SERIES **380S - 380SM**
MINI BALL VALVE

- Stainless steel ball valve mini series, standard port.
- Pressure rating 800 psi WOG.
 - Temperature -4°F to +350°F.
 - Stem O-ring, seal PTFE.
 - PTFE seats.
 - Stainless steel body, ball and stem.
 - Wedge lever handle.
 - ANSI B1.20.1 connections.

380S: FNPT THREADED - size 1/4" to 1/2".
380SM: MNPT x FNPT THREADED - size 1/4" to 1/2".



N POS	PART NAME	MATERIAL	N POS
1	BODY	AISI 316	1
2	RETAINING BUSH	AISI 316	1
3	BALL	AISI 316	1
4	BALL SEAT	PTFE	1
5	BALL SEAT	PTFE	1
6	O-RING	FKM (Viton)	1
7	SCREW	AISI 304	1
8	O-RING	FKM (Viton)	1
9	STEM	AISI 316	1
10	HANDLE	ABS	1

SIZE	ØP	CH	I	h	L	R	Cv	psi	Weight Lbs 380S	Weight Lbs 380SM
1/4"	0.31	0.82	0.39	1.16	1.69	0.80	5.00	800	0.42	0.36
3/8"	0.31	0.82	0.40	1.16	1.69	0.80	3.13	800	0.37	0.35
1/2"	0.39	0.98	0.53	1.24	2.16	0.80	6.26	800	0.37	0.35



SERIES 511SL

STAINLESS STEEL SAFETY EXHAUST BALL VALVE

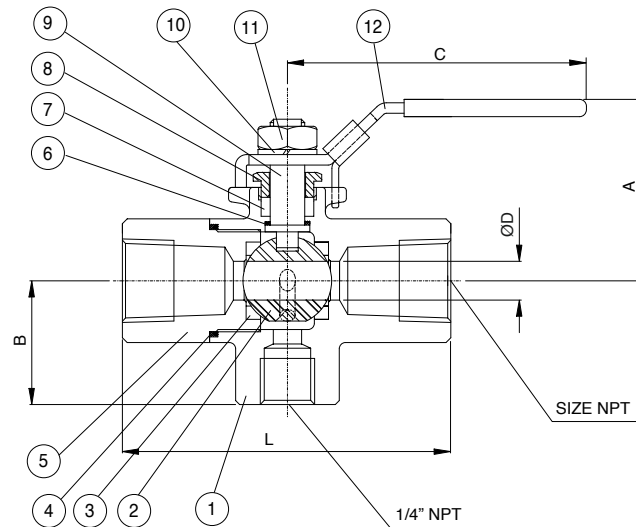
Stainless steel safety exhaust ball valve.

- Full port, sizes 1/2" to 3/4".
- Working pressure-400 psi air service.
- Temperature range: -20°F to 450°F.
- CF8M body.
- Blow-out proof stem design.
- Locking lever standard (optional oval handle).
- TFM 4215 seats.
- 100% air tested under water at 80 psi.

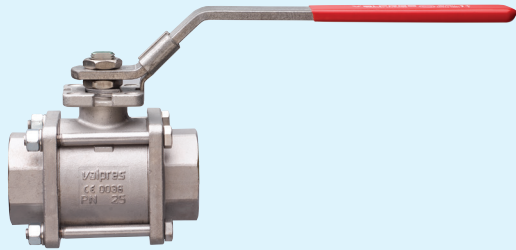
511SL-SSBM: 511SL with stainless steel sintered muffler.

511SOHL: 511SL with oval handle.

NEW



N POS	PART NAME	MATERIAL	N POS	SIZE	A	B	C	D	E	F	L	d	Weight Lbs
1	BODY	CF8M	1	1/2"	1.77	1.22	4.80	0.37	1.10	0.50	2.78	0.15	1.15
2	BALL	SS 316	1										
3	SEAT	TFM 4215	2										
4	GASKET	GRAPHITE	1										
5	END CAP	CF8M	1										
6	THRUST WASHER	TFM 4215	1	3/4"	1.93	1.32	4.80	0.57	1.10	0.50	2.93	0.15	1.30
7	STEM PACKING	GRAPHITE	1										
8	GLAND	SS 304	1										
9	STEM	SS 316	1										
9	DISC WASHER	SS 301	1										
10	HANDLE NUT	SS 304	1										
12	HANDLE	SS 304	1										
13	SLEEVE	PLASTIC	1										



250 PSI STEAM

SERIES 710190 - 710061 - 710062 STAINLESS STEEL 3-PC BALL VALVE FOR STEAM

3-piece stainless steel ball valve for steam, full port.

- Steam pressure to 250 psi.
- Working pressure is 1000 psi (1/4" to 1/2"), 600 psi (3/4" to 1"), 365 psi (1 1/4" to 2"), 250 psi (2 1/2" to 4").
- Temperature range: -4°F to 406°F.
- Blow-out proof stem, adjustable stem packing.
- ISO 5211 mounting pad with double "D" stem.
- 100% electronically tested in the open and closed position at 80 psi.
- TUV T.A. Luft approved.
- 25% carbon filled PTFE ball seats.
- Standard Latch Lock Handle.

710190: NPT THREADED - ANSI B1.20.1 CONNECTIONS - size 1/4" to 4".

710061: SOCKET WELD - size 3/8" to 4".

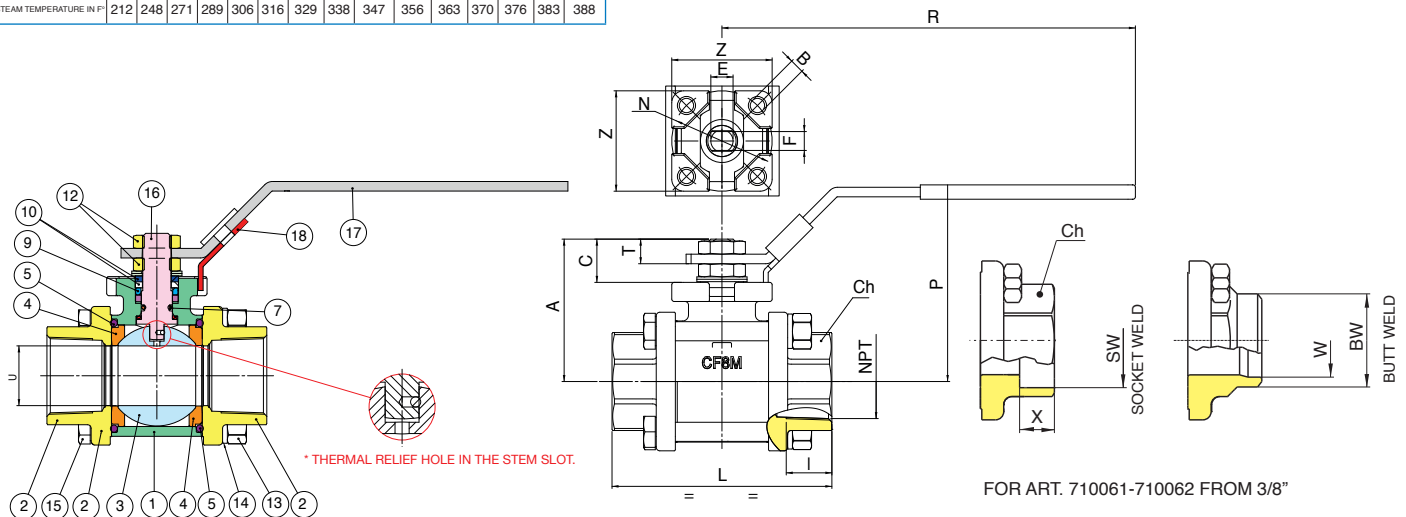
710062: BUTT WELD - size 3/8" to 4".

* On request available with gas Antistatic Device.

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.

MAXIMUM WORKING PRESSURE 250 psi

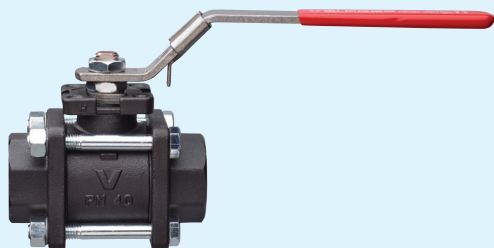
STEAM PRESSURE IN psi	15	29	44	58	73	87	102	116	131	145	160	174	189	203	220
STEAM TEMPERATURE IN °F	212	248	271	289	306	316	329	338	347	356	363	370	376	383	388



N POS	PART NAME	MATERIAL	N POS
1	BODY	A351/CF8M	1
2	END CONNECTION	A351/CF8M	2
3	BALL	A479-Tp316/ A351-CF8M	1
4	BALL SEAT	RPTFE	2
5	O-RING	FKM-PEROX	2
6	STEM SEAL	RPTFE	1
7	O-RING	FKM (Viton)	1
8	STEM SEAL	RPTFE	1
9	PACKING GLAND	AISI 316 (1/4" - 2") STEEL (2 1/2" - 4")	1
10	END STOP	AISI 304 (1/4" - 2") STEEL (2 1/2" - 4")	2
11	SPRING WASHER	STEEL (2 1/2" - 4")	2
12	NUT	AISI 304 (1/4" - 2") STEEL (2 1/2" - 4")	2
13	BOLT	AISI 304 (1/4" - 2") STEEL (2 1/2" - 4")	4
14	WASHER	AISI 304 (1/4" - 2") STEEL (2 1/2" - 4")	4
15	NUT	AISI 304 (1/4" - 2") STEEL (2 1/2" - 4")	4
16	STEM	A479-Tp316	1
17	HANDLE	AISI 430	1
18	LOCKING HANDLE	AISI 430	1

SIZE	U	I	SW	X	BW	W	L	CH	R	P	A	C	T	E	F	ISO 5211	B	Cv	WOG	Weight Lbs
1/4"*	0.39	0.43	-	-	-	-	2.24	0.87	4.33	1.97	1.38	0.53	0.35	0.31	0.20	-	-	6.40	1000	0.65
3/8"	0.39	0.45	0.72	0.37	0.67	0.49	2.24	0.87	4.33	1.97	1.38	0.53	0.35	0.31	0.20	-	-	9.88	1000	0.63
1/2"	0.59	0.59	0.88	0.37	0.84	0.62	2.56	1.06	5.16	2.52	1.85	0.59	0.39	0.39	0.28	F03	0.24	22.33	1000	1.13
3/4"	0.79	0.64	1.09	0.44	1.05	0.83	2.99	1.26	5.16	2.68	2.05	0.63	0.39	0.39	0.28	F04	0.22	40.70	600	1.57
1"	0.98	0.75	1.36	0.50	1.31	1.05	3.62	1.61	6.85	3.11	2.36	0.77	0.49	0.47	0.31	F04	0.24	75.00	600	2.64
1 1/4"	1.26	0.84	1.70	0.56	1.66	1.38	4.17	1.97	6.85	3.27	2.52	0.77	0.49	0.47	0.31	F04	0.22	120.70	365	3.75
1 1/2"	1.57	0.84	1.95	0.63	1.90	1.61	4.57	2.17	9.84	3.94	3.11	0.94	0.65	0.63	0.39	F05	0.26	202.33	365	5.62
2"	1.97	1.01	2.44	0.69	2.37	2.07	5.35	2.76	9.84	4.21	3.39	0.94	0.65	0.63	0.39	F05	0.26	350.35	365	8.71
2 1/2"	2.56	1.19	3.01	0.79	2.87	2.47	6.02	3.54	12.64	4.96	4.06	1.10	0.71	0.79	0.55	F07	M8	634.53	365	18.09
3"	3.15	1.31	3.52	0.79	3.50	3.07	7.09	4.13	12.64	5.39	4.49	1.10	0.71	0.79	0.55	F07	M8	1014.53	250	28.34
4"	3.94	1.55	4.53	0.79	4.50	4.03	8.54	5.11	15.00	6.14	5.39	1.36	0.87	0.94	0.71	F10	M10	1585.23	250	47.58

* 1/4 available in art. 710190 only.



250 PSI STEAM

SERIES 710085 - 710064 - 710065 CARBON STEEL 3-PC BALL VALVE FOR STEAM

3-piece carbon steel ball valve for steam, full port.

- Steam pressure to 250 psi.
- Working pressure is 1000 psi (1/4" to 1/2"), 600 psi (3/4" to 1"), 365 psi (1-1/4" to 2"), 250 psi (2-1/2" to 4").
- Temperature range: -4°F to 406°F.
- Blow-out proof stem, adjustable stem packing.
- ISO 5211 mounting pad with double "D" stem.
- 100% electronically tested in the open and closed position at 80 psi.
- TUV T.A. Luft approved.
- 25% carbon filled PTFE ball seats.
- Standard Latch Lock Handle.

710085: NPT THREADED - ANSI B1.20.1 CONNECTIONS - size 1/4" to 4".

710064: SOCKET WELD - size 3/8" to 4".

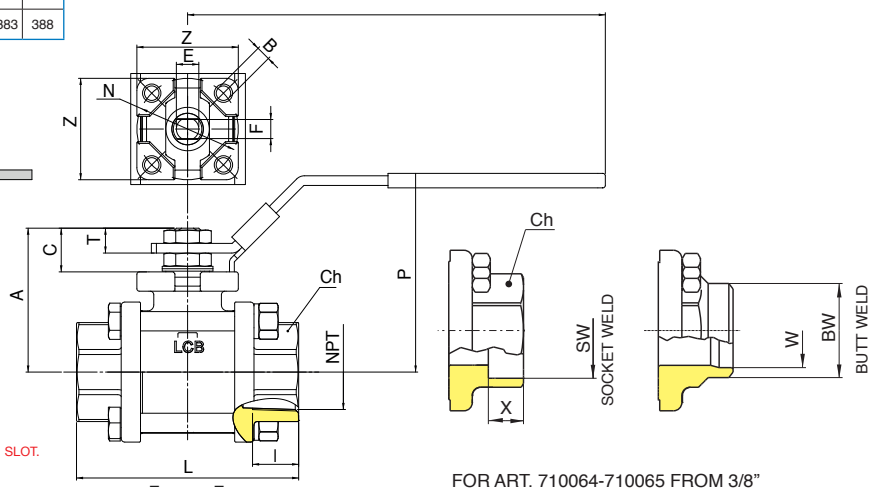
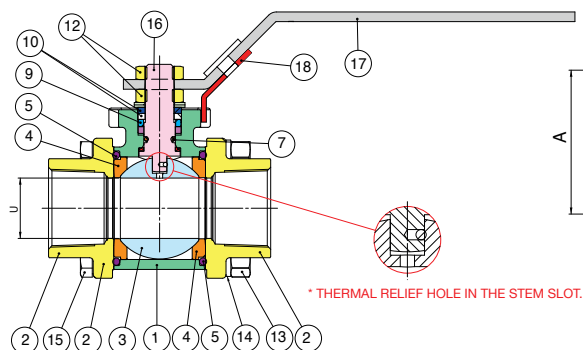
710065: BUTT WELD - size 3/8" to 4".

* On request available with gas Antistatic Device.

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.

MAXIMUM WORKING PRESSURE 250 psi

STEM PRESSURE IN psi	15	29	44	58	73	87	102	116	131	145	160	174	189	203	220
STEM TEMPERATURE IN °F	212	248	271	289	306	316	329	338	347	356	363	370	376	383	388



N POS	PART NAME	MATERIAL	N POS
1	BODY	A352/LCB	1
2	END CONNECTION	A352/LCB	2
3	BALL	A479-Tp316/ A351-CF8	1
4	BALL SEAT	RPTFE	2
5	O-RING	FKM-PEROX	2
6	STEM SEAL	RPTFE	1
7	O-RING	FKM-PEROX	1
8	STEM SEAL	PTFE	1
9	PACKING GLAND	STEEL	1
10	END STOP	AISI 430 (1/8" - 2") STEEL (2 1/2" - 4")	2 1
11	SPRING WASHER	CARBON STEEL	2
12	NUT	STEEL	2
13	BOLT	STEEL (1/4" - 2") STEEL (2 1/2" - 4")	4 6
14	WASHER	STEEL (1/4" - 2") STEEL (2 1/2" - 4")	4 6
15	NUT	STEEL (1/4" - 2") STEEL (2 1/2" - 4")	4 6
16	STEM	A479-Tp304	1
17	HANDLE	AISI 430	1
18	LOCKING HANDLE	AISI 430	1

SIZE	U	I	SW	X	BW	W	L	CH	R	P	A	C	T	E	F	ISO 5211	B	Cv	WOG	Weight Lbs
1/4"*	0.39	0.43	-	-	-	-	2.24	0.87	4.33	1.97	1.38	0.53	0.35	0.31	0.20	-	-	6.40	1000	0.65
3/8"	0.39	0.45	0.72	0.37	0.67	0.49	2.24	0.87	4.33	1.97	1.38	0.53	0.35	0.31	0.20	-	-	9.88	1000	0.63
1/2"	0.59	0.59	0.88	0.37	0.84	0.62	2.56	1.06	5.16	2.52	1.85	0.59	0.39	0.39	0.28	F03	0.24	22.33	1000	1.13
3/4"	0.79	0.64	1.09	0.44	1.05	0.83	2.99	1.26	5.16	2.68	2.05	0.63	0.39	0.39	0.28	F04	0.22	40.70	600	1.57
1"	0.98	0.75	1.36	0.50	1.31	1.05	3.62	1.61	6.85	3.11	2.36	0.77	0.49	0.47	0.31	F04	0.24	75.00	600	2.64
1 1/4"	1.26	0.84	1.70	0.56	1.66	1.38	4.17	1.97	6.85	3.27	2.52	0.77	0.49	0.47	0.31	F04	0.22	120.70	365	3.75
1 1/2"	1.57	0.84	1.95	0.63	1.90	1.61	4.57	2.17	9.84	3.94	3.11	0.94	0.65	0.63	0.39	F05	0.26	202.33	365	5.62
2"	1.97	1.01	2.44	0.69	2.37	2.07	5.35	2.76	9.84	4.21	3.39	0.94	0.65	0.63	0.39	F05	0.26	350.35	365	8.71
2 1/2"	2.56	1.19	3.01	0.79	2.87	2.47	6.02	3.54	12.64	4.96	4.06	1.10	0.71	0.79	0.55	F07	M8	634.53	250	18.09
3"	3.15	1.31	3.52	0.79	3.50	3.07	7.09	4.13	12.64	5.39	4.49	1.10	0.71	0.79	0.55	F07	M8	1014.53	250	28.34
4"	3.94	1.55	4.53	0.79	4.50	4.03	8.54	5.11	15.00	6.14	5.39	1.36	0.87	0.94	0.71	F10	M10	1585.23	250	47.58

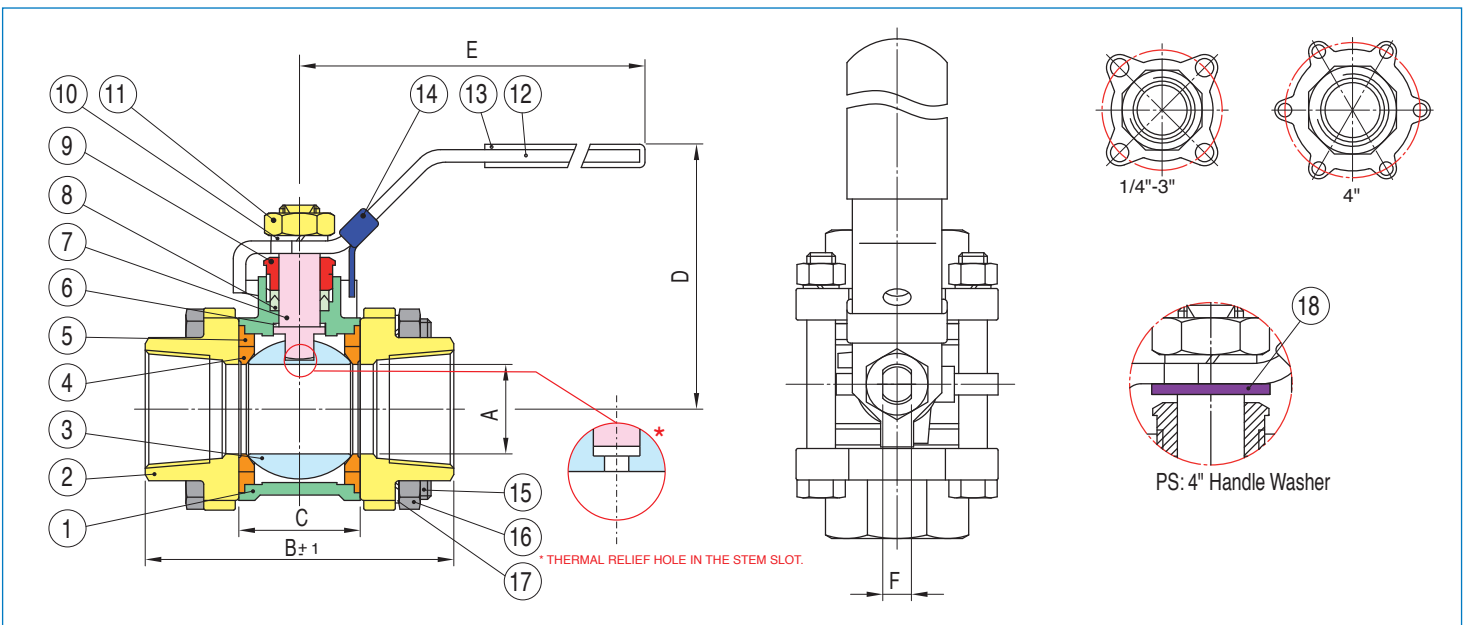
* 1/4 available in art. 710085 only.



SERIES 610 LL FNPT - 710 LL FNPT
SERIES 611 LL SW - 711 LL SW
SERIES 612 LL BW - 712 LL BW

CARBON STEEL STAINLESS STEEL

- 3-piece ball valve, with latch locking lever, full port.
 • Pressure rating 1/4" to 2" 1000 psi, 2 1/2" to 4" 800 psi - 150 psi steam.
 • Temperature range -40°F + 440°F.
 • Blow-out proof stem, adjustable multi-layer V-ring stem packaging.
 • TFM 1600 seats, PTFE packing and thrust washer.
 610 LL - 710 LL: FNPT THREADED - size 1/4" to 4".
 611 LL - 711 LL: SOCKET WELD - size 1/4" to 4".
 612 LL - 712 LL: BUTT WELD - size 1/4" to 4".



N POS	PART NAME	MATERIAL	N POS
1	BODY	WCB/CF8M	1
2	END CAP	WCB/CF8M	2
3	BALL	AISI 316	1
4	SEAT	TFM1600	2
5	JOIN GASKET	PTFE	2
6	STEM SEAL	PTFE	1
7	STEM	AISI 316	1
8	STEM PACKING	PTFE	*
9	GLAND NUT	AISI 304	1
10	STEM WASHER	AISI 304	1
11	STEM NUT	AISI 304	1
12	HANDLE	AISI 304	1
13	HANDLE SLEEVE	VINYL	1
14	LOCKING DEVICE	AISI 304	1
15	BOLT	AISI 304	*
16	BOLT NUT	AISI 304	*
17	BOLT WASHER	AISI 304	*
18	HANDLE WASHER	AISI 304	1

SIZE	A	B	C	D	E	F	Cv	Weight Lbs
1/4"	0.46	2.23	0.73	2.13	4.02	0.20	8	0.77
3/8"	0.50	2.23	0.73	2.13	4.02	0.20	10	0.77
1/2"	0.59	2.59	0.93	2.52	5.20	0.26	15	1.23
3/4"	0.79	3.00	1.10	2.64	5.20	0.26	34	1.65
1"	0.98	3.39	1.34	2.95	6.58	0.32	56	2.29
1 1/4"	1.26	4.05	1.67	3.15	6.58	0.32	85	3.84
1 1/2"	1.50	4.70	2.09	3.54	7.56	0.38	125	5.31
2"	1.97	5.17	2.54	3.86	7.56	0.38	250	8.07
2 1/2"	2.56	6.46	3.43	5.39	9.92	0.47	320	15.65
3"	3.15	7.19	3.90	5.79	9.92	0.47	580	23.15
4"	3.94	9.28	5.00	6.89	11.10	0.59	1020	45.78

* Depending on size.



SERIES 620 LL FNPT - 720 LL FNPT SERIES 621 LL SW - 721 LL SW SERIES 622 LL BW - 722 LL BW

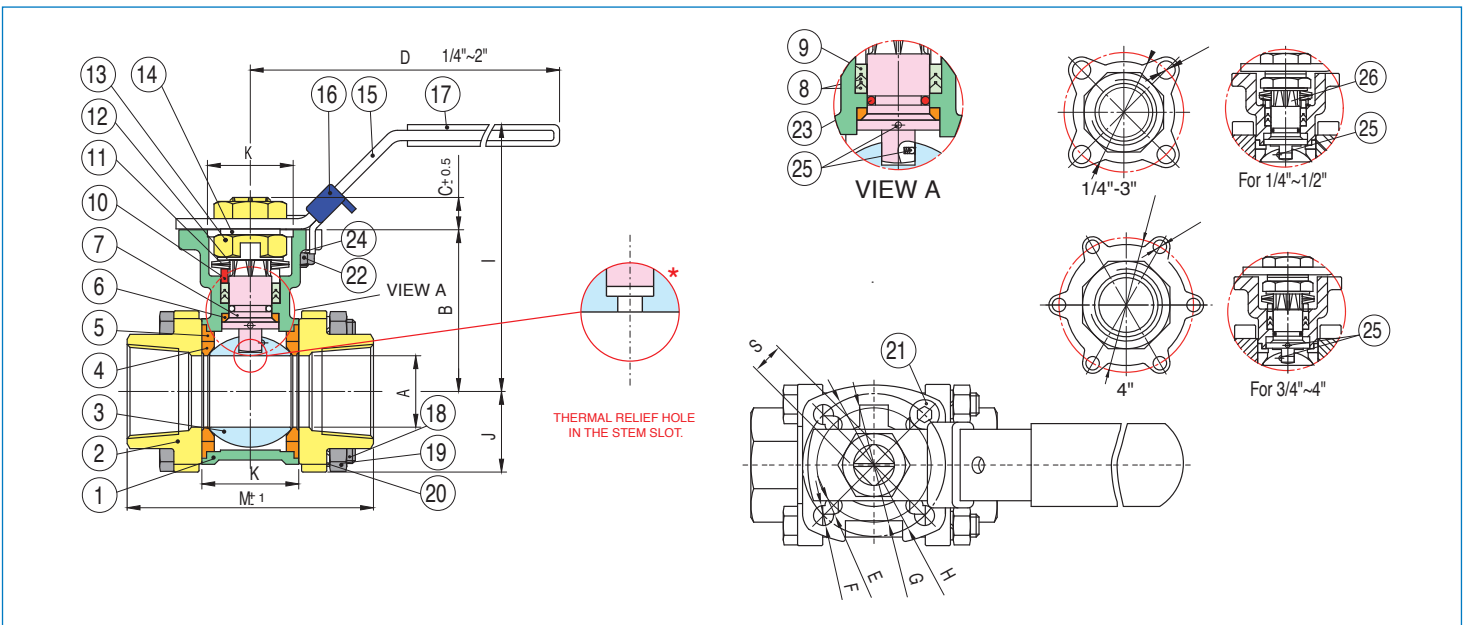
CARBON STEEL STAINLESS STEEL

- 3-piece direct mount ball valve with latch locking handle, full port.
- ISO 5211 mounting pad/square stem.
 - Blow-out proof stem, multi-layer V-ring adjustable stem packing.
 - Pressure rating 1/4" to 2" 1000 psi, 2 1/2" to 4" 800 psi - 150 psi steam.
 - Temperature range -40°F to +440°F.
 - TFM 1600 seats, PTFE packing and thrust washer.
 - Live loaded stem packing design.

620 LL - 720 LL: FNPT THREADED - size 1/4" to 4".

621 LL - 721 LL: SOCKET WELD - size 1/4" to 4".

622 LL - 722 LL: BUTT WELD - size 1/4" to 4".



N POS	PART NAME	MATERIAL	N POS
1	BODY	CF8M/WCB	1
2	END CAP	CF8M/WCB	2
3	BALL	AISI 316	1
4	SEAT	TFM1600	2
5	JOIN GASKET	PTFE	2
6	STEM SEAL	RTFE	1
7	STEM	SS316	1
8	STEM PACKING	PTFE	1
9	STEM PACKING	TFM	*
10	GLAND	AISI 304	1
11	BELLEVILLE WASHER	AISI 304	2
12	LOCK SADDLE	AISI 304	1
13	STEM NUT	AISI 304	2
14	STEM WASHER	AISI 304	1
15	HANDLE	AISI 304	1
16	LOCKING DEVICE	AISI 304	1
17	HANDLE SLEEVE	VINYL	1
18	BOLT	AISI 304	*
19	BOLT NUT	AISI 304	*
20	BOLT WASHER	AISI 304	*
21	STOP PIN	AISI 304	1
22	PIN NUT	AISI 304	1
23	O-RING	FKM (Viton)	1
24	WASHER	AISI 304	1
25	ANTI-STATIC DEVICE	AISI 316	1
26	SPRING	AISI 316	1

SIZE	ØA	B	C	D	ØE	ØF	ØG	ØH	I	J	K	L	M	ØN	ØO	S in	S mm	Cv	Torque in-Lbs	ISO 5211	Weight Lbs
1/4"	0.46	1.66	0.25	5.47	0.24	0.24	1.42	1.65	3.03	0.92	0.93	0.98	2.51	1.81	0.34	0.35	9	8	55	F03/F04	1.4
3/8"	0.50	1.66	0.25	5.47	0.24	0.24	1.42	1.65	3.03	0.92	0.93	0.98	2.51	1.81	0.34	0.35	9	10	55	F03/F04	1.4
1/2"	0.59	1.66	0.25	5.47	0.24	0.24	1.42	1.65	3.03	0.92	0.93	0.98	2.59	1.81	0.34	0.35	9	15	55	F03/F04	1.6
3/4"	0.79	1.89	0.27	5.47	0.24	0.24	1.42	1.65	3.27	1.00	1.10	0.98	3.00	2.05	0.34	0.35	9	34	69	F03/F04	1.8
1"	0.98	2.23	0.44	6.45	0.24	0.28	1.65	1.97	3.78	1.11	1.34	1.18	3.39	2.36	0.34	0.43	11	56	127	F04/F05	3.0
1 1/4"	1.26	2.34	0.44	6.45	0.24	0.28	1.65	1.97	3.94	1.36	1.67	1.18	4.05	2.89	0.43	0.43	11	85	173	F04/F05	6.0
1 1/2"	1.50	3.05	0.56	8.47	0.30	0.35	1.97	2.76	5.00	1.55	2.10	1.38	4.70	3.37	0.47	0.55	14	125	243	F05/F07	6.5
2"	1.97	3.35	0.56	8.47	0.30	0.35	1.97	2.76	5.28	1.86	2.54	1.38	5.17	4.09	0.52	0.55	14	250	346	F05/F07	9.8
2 1/2"	2.56	4.28	0.67	11.81	0.39	0.47	2.76	4.02	6.58	2.30	3.43	2.17	6.46	5.12	0.60	0.67	17	320	518	F07/F10	21.0
3"	3.15	4.63	0.67	14.57	0.39	0.47	2.76	4.02	6.93	2.72	3.90	2.17	7.19	6.12	0.68	0.67	17	580	806	F07/F10	28.0
4"	3.94	5.22	0.67	14.57	0.39	0.47	2.76	4.02	7.56	3.76	5.00	2.17	9.28	7.40	0.68	0.67	17	1020	1094	F07/F10	47.9

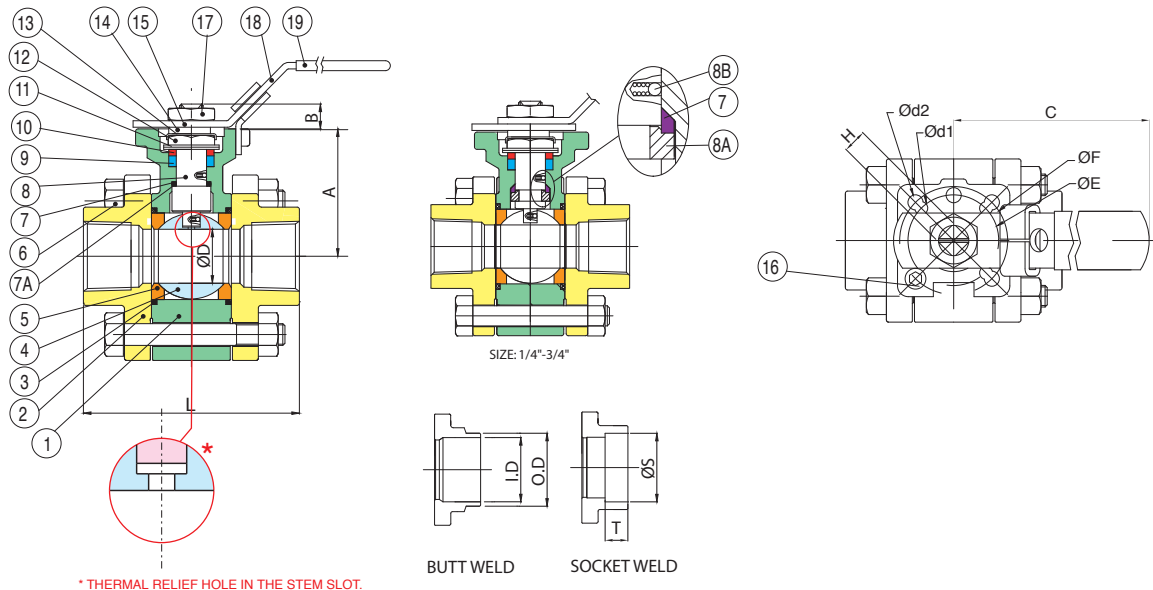


SERIES 630 LL FNPT - 730 LL FNPT SERIES 631 LL SW - 731 LL SW SERIES 632 LL BW - 732 LL BW (SCHEDULE 80#)

CARBON STEEL STAINLESS STEEL

- Direct mount high performance 3-piece full port ball valves with locking lever.
- Class 900 sizes 1/4" to 2", class 600 sizes 2 1/2" - 4".
 - Carbon steel-2220 psi, stainless steel-2160 psi (1/4" - 2"), carbon steel-1480 psi, stainless steel-1440 psi (2 1/2" - 4").
 - Working steam pressure to 250 psi.
 - Temperature range: -50°F to 550°F.
 - ISO 5211 mounting pad/square stem.
 - TFM-4215 ball seats.
 - Standard latch locking handle.
 - Conforms to ANSI 16.34, ANSI B1.20.1 thread depths, NACE MR0175.
 - Fire Safe to API 607.
 - Grounded ball and stem.
 - Standard 316 stainless steel ball and stem in carbon steel models.
- 640LL (NPT) - 641LL (SW) - 642LL (BW): CARBON STEEL VALVE WITH PEEK SEATS - size 1/4" to 4".
740LL (NPT) - 741LL (SW) - 742LL (BW): STAINLESS STEEL VALVE WITH PEEK SEATS - size 1/4" to 4".

Available options: oval handle, stem extension or fugitive emissions bonnet.



N POS	PART NAME	MATERIAL	N POS	SIZE	A	B	ØD	Ød1	Ød2	ISO 5211	H	L	SW	BW(80#)	Torque	Cv	Weight
										OE	OF		OS	T	in-Lbs		Lbs
1	BODY	CF8M/WCB	1	1/4"	1.81	0.37	0.43	0.24	0.24	F03	F04	9	0.56	0.44	71	8.5	1.5
2	END CAP	CF8M/WCB	2	3/8"	1.81	0.37	0.49	0.24	0.24	F03	F04	9	0.69	0.44	71	8.5	1.5
3	GASKET (BODY)	TFM	2	1/2"	1.89	0.37	0.59	0.24	0.24	F03	F04	9	0.86	0.50	107	21	2.2
4	BALL	AISI 316	1	3/4"	2.08	0.47	0.79	0.24	0.24	F04	F05	11	1.07	0.56	133	50	3.8
5	BALL SEATS	TFM 4215	2	1"	2.32	0.47	0.98	0.24	0.27	F04	F05	11	1.33	0.63	160	90	5.6
6	BOLTS	AISI 304	*	1 1/4"	2.44	0.57	1.26	0.27	0.36	F05	F07	14	1.67	0.69	222	110	7.0
7	THRUST WASHER	TFM	1	1 1/2"	2.75	0.57	1.49	0.27	0.36	F05	F07	14	1.92	0.72	416	240	11
7A	THRUST WASHER	PEEK	1	2"	3.54	0.75	1.97	0.36	0.45	F07	F10	17	2.41	0.84	736	400	22
8	STEM	AISI 316	1	2 1/2"	4.13	0.71	2.50	0.36	0.45	F07	F10	17	2.91	0.87	1461	700	32
8A	HALF SPLIT RING	AISI 316	1	3"	4.68	0.98	3.07	0.45	0.53	F10	F12	22	3.54	1.00	2213	980	44
8B	ANTI-STATIC	AISI 316	1	4"	5.67	0.98	3.89	0.45	0.53	F10	F12	22	4.54	1.26	3368	1700	87
9	STEM PACKING	TFM	1														
10	GLAND WASHER	AISI 304	1														
11	DISK WASHER	AISI 301	1														
12	STEM NUT	AISI 304	1														
13	NUT STOP	AISI 304	1														
14	SPACE WASHER	AISI 304	1														
15	PLATER	AISI 304	1														
16	STOP IN	AISI 304	1														
17	HANDLE NUT	AISI 304	1														
18	HANDLE	AISI 304	1														
19	HANDLE COVER	PLASTISOL	1														

* Depending on the size.



SERIES 740H - 741H - 742H

NPT

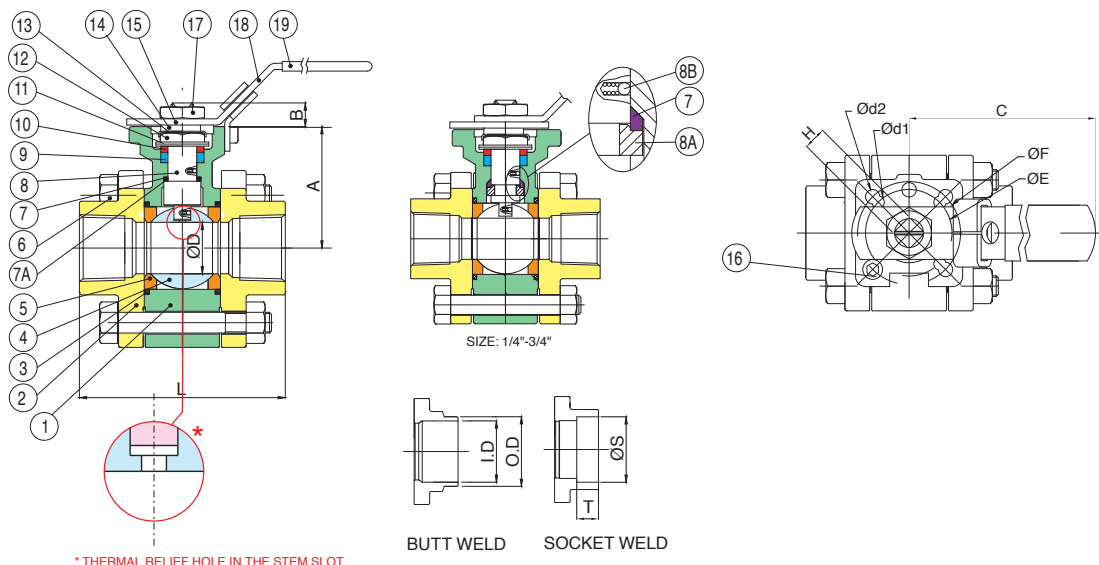
SW

BW

Stainless steel direct mount high pressure, high temperature 3-piece full port ball valve with locking lever.

- High pressure to 3600 psi.
- Temperature range: +150°F to 500°F.
- High temperature to 500°F max.
- Direct mounting to ISO 5211/square stem.
- PEEK seats.
- Standard latch locking handle.
- Conforms to ANSI B16.34, ANSI B1.20.1 thread depths, NACE MR0175.

740H (NPT) - 741LL (SW) - 742LL (BW): size 1/4" to 1".



N POS	PART NAME	MATERIAL	N POS
1	BODY	CF8M	1
2	END CAP	CF8M	2
3	GASKET (BODY)	TFM	2
4	BALL	AISI 316	1
5	BALL SEATS	PEEK	2
6	BOLTS	AISI 304	*
7	THRUST WASHER	TFM	1
7A	THRUST WASHER	PEEK	1
8	STEM	AISI 316	1
8A	HALF SPLIT RING	AISI 316	1
8B	ANTI-STATIC	AISI 316	1
9	STEM PACKING	TFM	1
10	GLAND WASHER	AISI 304	1
11	DISK WASHER	AISI 301	1
12	STEM NUT	AISI 304	1
13	NUT STOP	AISI 304	1
14	SPACE WASHER	AISI 304	1
15	PLATER	AISI 304	1
16	STOP IN	AISI 304	1
17	HANDLE NUT	AISI 304	1
18	HANDLE	AISI 304	1
19	HANDLE COVER	PLASTISOL	1

SIZE	A	B	ØD	Ød1	Ød2	ISO 5211		H mm	L	SW		BW (80#)		Torque in-Lbs	Cv	Weight Lbs
						ØE	ØF			ØS	T	O.D	I.D			
1/4"	1.81	0.37	0.43	0.24	0.24	F03	F04	9	2.61	0.56	0.44	0.55	0.30	71	8.5	1.5
3/8"	1.81	0.37	0.49	0.24	0.24	F03	F04	9	2.61	0.69	0.44	0.67	0.43	71	8.5	1.5
1/2"	1.89	0.37	0.59	0.24	0.24	F03	F04	9	2.76	0.86	0.50	0.84	0.54	107	21	2.2
3/4"	2.08	0.47	0.79	0.24	0.24	F04	F05	11	3.62	1.07	0.56	1.05	0.74	133	50	3.8
1"	2.32	0.47	0.98	0.24	0.27	F04	F05	11	4.13	1.33	0.63	1.31	0.96	160	90	5.6

* Depending on the size.



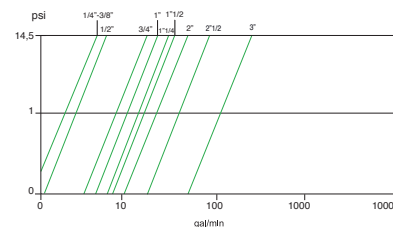
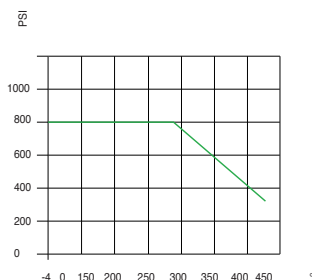
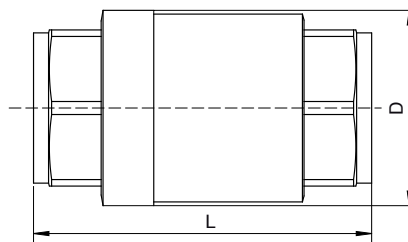
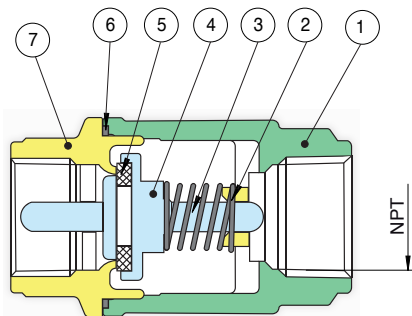
SERIES S800 CHECK VALVE

High capacity, in-line spring loaded stainless steel check valve, FNPT threaded.

- Pressure rating: size 1/4" to 2" 800 WOG - 2 1/2" to 3" 600 WOG.
- 125 WSP saturated steam.
- Wide temperature range: -4°F to 210°F.
- ANSI B1.20.1 connections.
- Soft PTFE seat for bubble tight shutoff, spring loaded for fast seating action.
- Low cracking pressure 1/2 psi.
- Flow profile designed to minimize head loss.
- Perfect sealing both at high and low pressure.
- Corrosion resistant-excellent for use on chemicals.
- Dual guided stem and disc.

S800: size 1/4" to 3".

S800FV: STAINLESS STEEL FOOT VALVE - size 1/4" to 3".



N POS	PART NAME	MATERIAL	N PCS
1	BODY	ASTM A351-CF8M	1
2	SPRING	AISI 316	1
3	CENTER GUIDE	ASTM A351-CF8M	1
4	DISC	ASTM A351-CF8M	1
5	SEAT	PTFE	1
6	GASKET	PTFE	1
7	END CAP	ASTM A351-CF8M	1

SIZE	D	L	Cv	psi	Weight (Lbs)
1/4"	1.35	2.31	3.50	800	0.42
3/8"	1.35	2.31	3.50	800	0.42
1/2"	1.35	2.31	5.20	800	0.40
3/4"	1.81	2.87	10.00	800	0.85
1"	2.13	3.50	15.00	800	1.30
1 1/4"	2.46	4.18	24.50	800	2.50
1 1/2"	2.88	4.93	35.20	800	3.40
2"	3.56	6.00	52.00	800	6.00
2 1/2"	4.53	7.12	73.80	600	12.00
3"	5.56	8.13	113.10	600	18.00



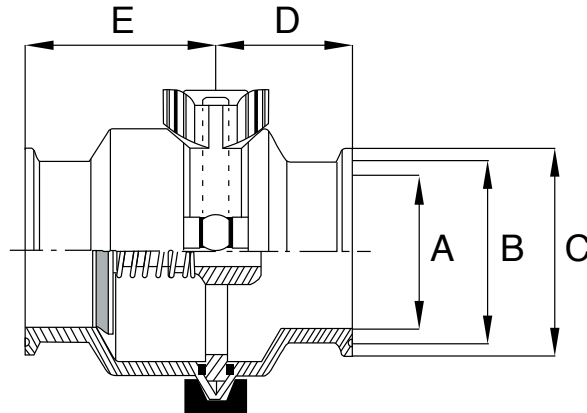
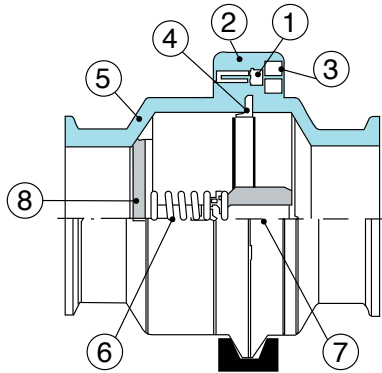
SERIES S350-STC

INLINE CHECK VALVE WITH SANITARY ENDS

Stainless steel inline check valve with sanitary triclamp end.

- Sizes 1/2" to 4".
- 1/2 psi cracking pressure.
- Precision machined 316L body, stem and disc.
- 25 Ra polished body and internals.
- Stainless steel spring standard VITON seal ring, EPDM available option.
- 150 PSI @ 250°F (Approx. 121°C).

NEW



N POS	PART NAME	MATERIAL	N POS	SIZE	A	B	C	D	E	Cv	psi	Weight Lbs
1	SHORT BODY	SS 316L	1	1/4"	0.37	0.69	1.00	1.10	1.54	2.3	235	2.20
2	LONG BODY	SS 316L	1	3/8"	0.63	0.69	1.00	1.10	1.54	6.2	235	2.20
3	SCREW	SS 316	1	1/2"	0.87	1.71	1.99	1.65	2.32	13.0	235	3.50
4	BODY O-RING	FKM (Viton)	1	3/4"	1.37	1.71	1.99	1.65	2.32	29.0	235	3.50
5	SEAT RING	FKM (Viton)	1	1"	1.87	2.22	2.52	1.65	2.32	51.0	235	5.40
6	SPRING	SS 316	1	1 1/4"	2.37	2.78	3.05	1.65	2.32	72.0	150	6.00
7	FLOW SUPPORT PLATE	SS 316	1	1 1/2"	2.87	3.29	3.58	1.65	2.32	95.0	150	6.25
8	DISC	SS 316L	1	3"	3.82	4.43	4.69	2.32	2.60	170.0	100	16.00

SERIES S250 CHECK VALVE

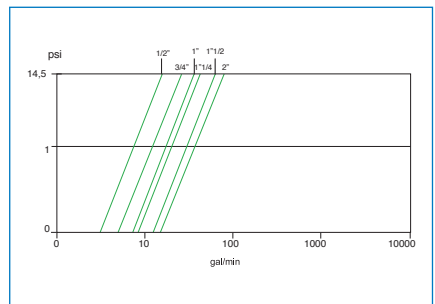
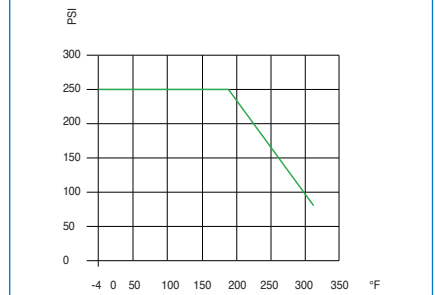
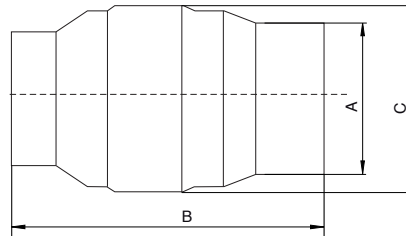
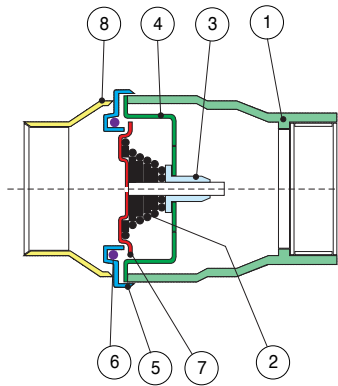


High capacity, in-line spring loaded, stainless check valve, FNPT threaded.

- Pressure rating 250 WOG.
- Low cracking pressure at 1/2 psi.
- Temperature range: -4°F to +302°F.
- ANSI B1.20.1 connections.
- FKM (Viton) seat for bubble tight shutoff, spring loaded for fast seating action.
- Flow profile designed to minimize head loss.
- AISI 316 cold formed stainless steel, high corrosion resistant.

S250: size 1/2" to 2".

S250FV: STAINLESS STEEL FOOT VALVE - size 1/2" to 2".



N POS	PART NAME	MATERIAL	N PCS	SIZE	A	B	C	Cv	psi	Weight Lbs
1	BODY	AISI 316	1	1/2"	0.98	2.17	1.26	9.13	250	0.21
2	SPRING	AISI 316	1	3/4"	1.18	2.63	1.73	15.95	250	0.28
3	GUIDE BUSH	PTFE	1	1"	1.41	3.27	2.09	21.62	250	0.42
4	DISC GUIDE	AISI 316	1	1 1/4"	1.77	3.82	2.44	35.84	250	0.62
5	SEAL RING HOUSING	AISI 316	1	1 1/2"	2.00	4.53	3.07	47.40	250	0.86
6	GASKET	FKM (Viton)	1	2"	2.48	4.74	3.50	64.74	250	1.55
7	FLOW CONTROL DISC	AISI 316	1							
8	END CAP	AISI 316	1							



SERIES 770 NON-CAVITY FILLED

SERIES 771 CAVITY FILLED

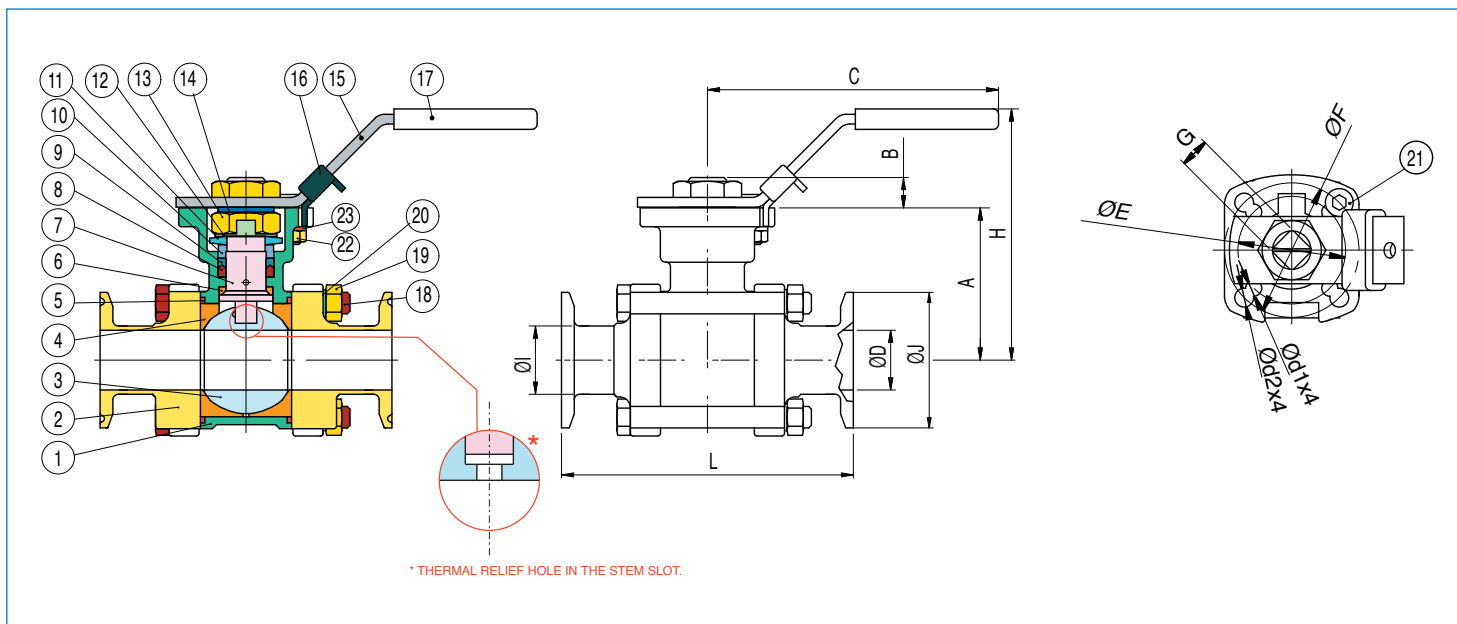
STAINLESS STEEL SANITARY BALL VALVE

Stainless steel, 3-piece direct mount, sanitary full port ball valves with latch locking lever.

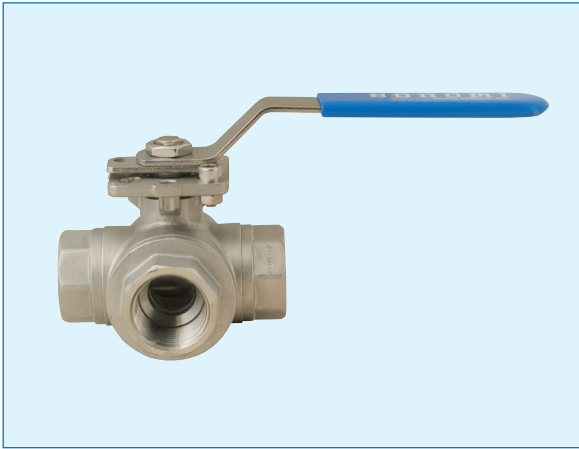
- ISO 5211 direct mount pad/square stem.
- Working pressure 1000 psi WOG (1/2" to 2") 800 psi WOG (2 1/2" to 4").
- Temperature range -20°F to 450°F.
- Blow-out proof stem.
- Antistatic Device.
- International polishing to Ra 15 micron.
- Tri-clamp style end connections.
- Ball valves comply with standards: ISO 5211, ANSI B 16.11, MSS SP-25, MSS SP-55.
- Maintenance free live loaded double sealing stem.
- Live loaded stem packing design.

770: NON-CAVITY FILLED - size 1/2" to 4".

771: CAVITY FILLED - size 1/2" to 4".



N POS	PART NAME	MATERIAL	N POS	SIZE	ØD	ØI	ØJ	A	B	C	ØE	ØF	G mm	L	H	Ød1	Ød2	CV	psi	ISO 5211	Weight Lbs
1	BODY	CF3M	1	1/2"	0.37	0.50	0.99	1.65	0.25	5.47	1.41	1.65	9	3.50	3.03	0.23	0.23	14	1000	F03/F04	1.67
2	END CONNECTION	CF3M	2	3/4"	0.62	0.74	0.99	1.88	0.27	5.47	1.41	1.65	9	4.00	3.26	0.23	0.23	45	1000	F03/F04	1.91
3	BALL	AISI 316L	1	1"	0.87	1.00	1.98	2.22	0.44	6.49	1.65	1.96	11	4.50	3.77	0.23	0.27	81	1000	F04/F05	3.17
4	SEATS	PTFE	2	1 1/2"	1.37	1.5	1.98	3.05	0.55	8.46	1.96	2.75	14	5.51	5.00	0.29	0.35	215	1000	F05/F07	7.24
5	JOINT GASKET	PTFE	2	2"	1.87	2.00	2.51	3.35	0.55	8.46	1.96	2.75	14	6.25	5.27	0.29	0.35	410	1000	F05/F07	10.10
6	STEM SEAL	RTFE	1	2 1/2"	2.37	2.50	3.04	4.27	0.67	11.81	2.75	4.01	17	6.85	6.57	0.39	0.47	618	800	F05/F07	21.80
7	STEM	AISI 316L	1	3"	2.87	3.00	3.57	4.63	0.71	14.56	2.75	4.01	17	7.60	6.92	0.39	0.47	940	800	F05/F07	29.00
8	GLAND PACKING	PTFE	2	4"	3.83	4.00	4.68	5.21	0.67	14.56	2.75	4.01	17	8.89	7.55	0.39	0.47	1840	800	F05/F07	46.50
9	GLAND PACKING	PTFE+GLASS	1	6"	3.83	5.12	6.57	12.85	4.37	13.78	4.02	4.92	22	12.93	6.89	0.53	0.44	C/F	600	F10/F12	155
10	GLAND BUSH	AISI 304	1																		
11	BELLEVILLE WASHER	AISI 301	2																		
12	STOP WASHER	AISI 304	1																		
13	STEM NUT	AISI 304	2																		
14	STEM WASHER	AISI 304	1																		
15	HANDLE	AISI 304	1																		
16	LOCKING DEVICE	AISI 304	1																		
17	HANDLE SLEEVE	VINYL	1																		
18	BOLT	AISI 304	4																		
19	BOLT NUT	AISI 304	4																		
20	BOLT WASHER	AISI 304	4																		
21	STOP PIN	AISI 304	1																		
22	PIN NUT	AISI 304	1																		
23	WASHER	AISI 304	1																		



SERIES 955N (T) - 965N (L) • STANDARD PORT

SERIES 956N (T) - 966N (L) • FULL PORT

STAINLESS STEEL DIRECT MOUNT 3-WAY BALL VALVE

Direct mount stainless steel three way ball valve FNPT threaded, full and reduced port.

• Working pressure is 1000 psi (1/4" to 1"), 800 psi (1 1/4" - 3").

• Temperature range -20°F to 450°F.

• Self adjusting stem packing.

• Blow-out proof stem design.

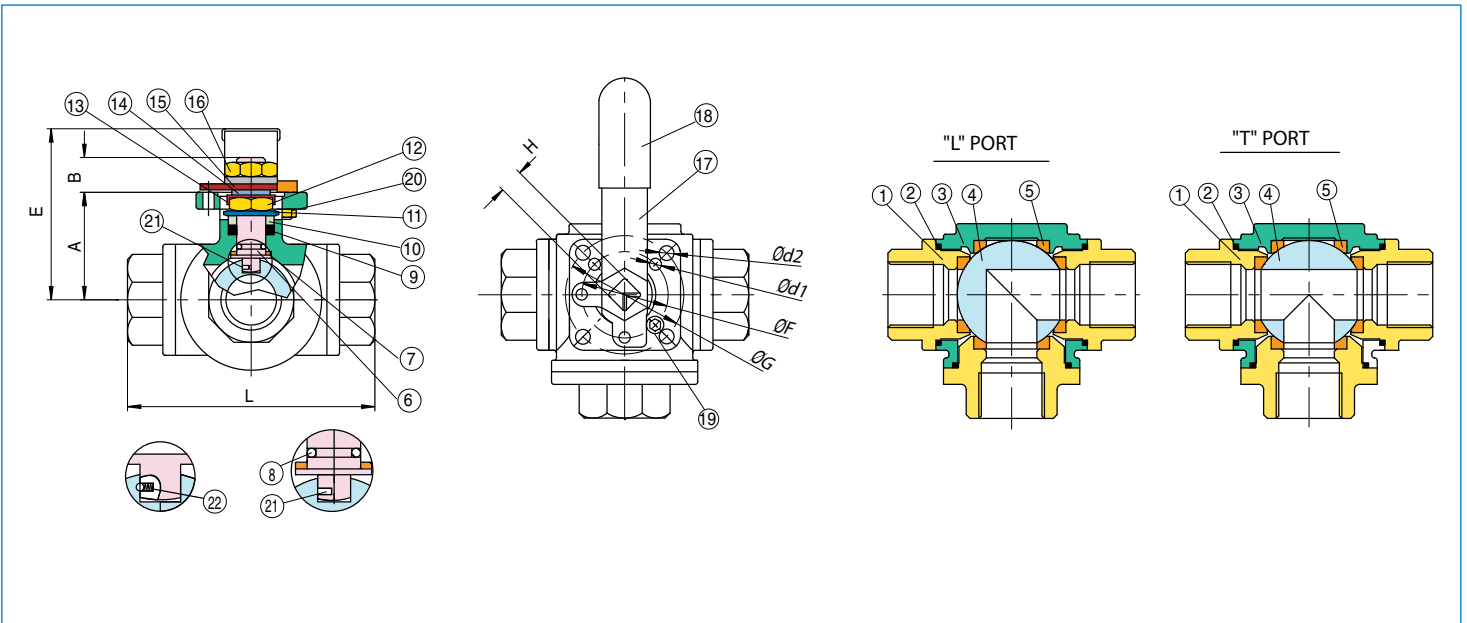
• 100% air tested under water at 80 psi.

• ISO 5211 mounting pad/square stem.

• Locking handle.

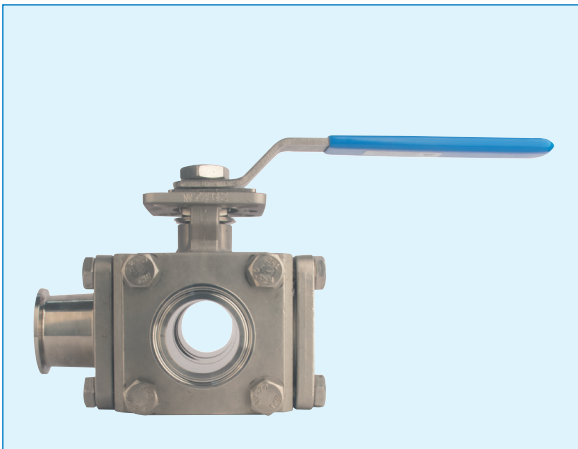
955N - 965N: STANDARD PORT - size 1/2" to 3".

956N - 966N: FULL PORT - size 1/4" to 2".



N POS	PART NAME	MATERIAL	N PCS
1	END CAP	A351 CF8M	3
2	GASKET	PTFE	3
3	BODY	A351 CF8M	1
4	BALL	AISI 316	1
5	SEATS	RPTFE	4
6	STEM	AISI 316	1
7	STEM SEAL	RPTFE	1
8	O-RING	FKM (Viton)	1
9	STEM PACKING	PTFE	1
10	GLAND	AISI 304	1
11	DISK WASHER	AISI 301	2
12	STEM NUT	AISI 304	1
13	NUT STOP	AISI 304	1
14	SPACE WASHER	AISI 304	1
15	PLATE STOP	AISI 304	1
16	HANDLE NUT	AISI 304	1
17	HANDLE	AISI 304	1
18	HANDLE SLEEVE	VINYL	1
19	STOPPER	AISI 304	1
20	PIN NUT	AISI 304	1
21	INSERT PIN	AISI 316	1
22	ANTISTATIC DEVICE	AISI 316	1

SIZE		A	B	Ød1	Ød2	E	ØF	ØG	H mm	L	Port	psi	ISO 5211	CV		CV 965N 966N	Weight Lbs 956-966	Weight Lbs 955-965	Torque in-Lbs
FULL PORT	STANDARD PORT													955N-956N T-Port through	965N T-Port branch				
1/4"	-	1.45	0.40	0.23	0.23	2.44	1.41	1.65	9	2.83	0.43	1000	F03/F04	8	6	7	1.45	-	105
3/8"	1/2"	1.45	0.40	0.23	0.23	2.44	1.41	1.65	9	2.83	0.47	1000	F03/F04	8	6	7	1.45	1.45	105
1/2"	3/4"	1.65	0.45	0.23	0.23	2.51	1.41	1.65	9	3.26	0.59	1000	F03/F04	13	8	11	1.90	1.90	138
3/4"	1"	1.65	0.59	0.23	0.27	3.22	1.65	1.96	11	3.89	0.78	1000	F04/F05	25	17	20	3.25	3.35	184
1"	1 1/4"	2.18	0.55	0.23	0.27	3.50	1.65	1.96	11	4.40	0.98	1000	F04/F05	34	22	30	4.90	4.80	323
1 1/4"	1 1/2"	2.48	0.64	0.27	0.36	3.85	1.96	2.75	14	4.92	1.25	800	F05/F07	54	41	47	7.10	7.45	461
1 1/2"	2"	2.88	0.62	0.27	0.36	4.25	1.96	2.75	14	5.86	1.49	800	F05/F07	84	54	70	11.80	11.60	633
2"	2 1/2"	3.63	0.96	-	0.36	5.19	-	2.75	14	6.64	1.97	800	F07	216	120	156	21.40	23.25	1037
-	3"	4.63	1.14	-	0.44	5.19	-	4.01	17	7.68	2.56	800	F10	365	205	266	-	23.23	1381

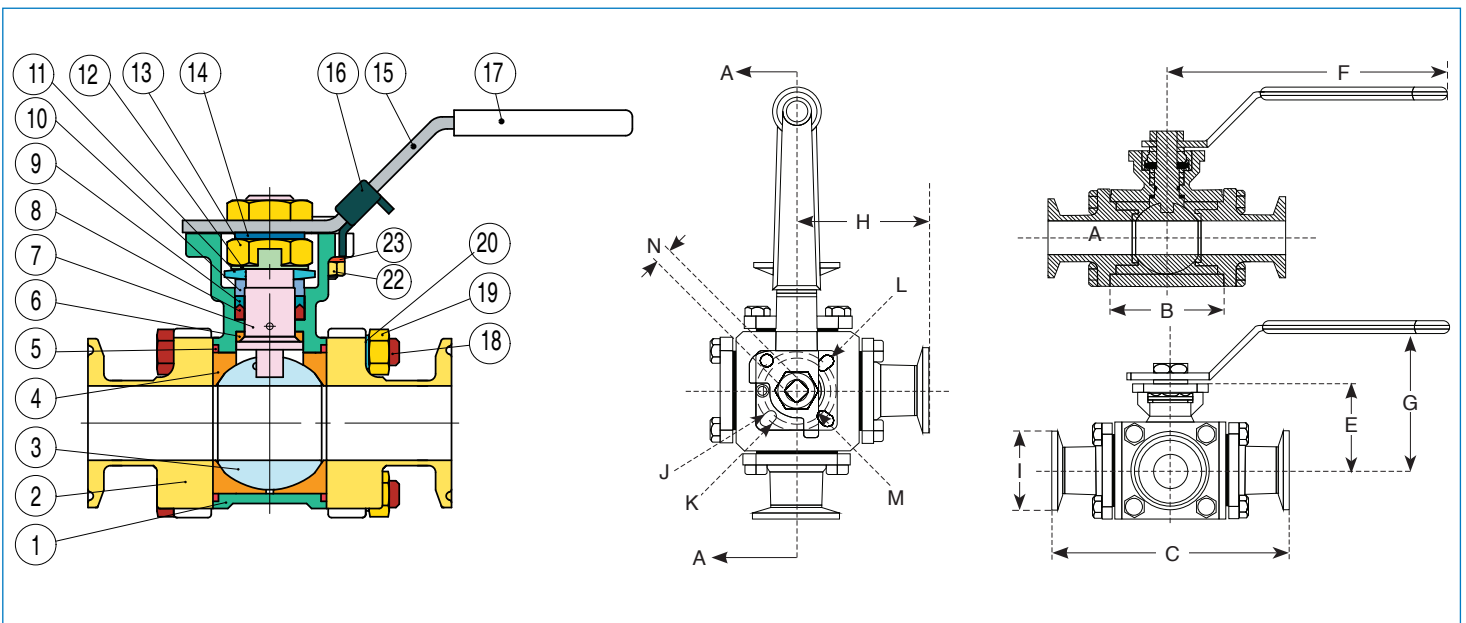


SERIES 97L-STC (L) - 97T-STC (T)

3-WAY CAVITY-FILLED, DIRECT MOUNT SS BALL SANITARY TRI-CLAMP ENDS

- Direct mount, Stainless steel ANSI class 150 wafer-style flanged full port ball valve.
- Cavity-filled, stainless steel with sanitary tri-clamp ends.
 - Pressure rating 1/2" to 1"-1000 psi, 1 1/2" to 2"-800 psi, 2 1/2" to 3"- 600psi, 4"-300 psi.
 - Temperature range -20°F to 366°F.
 - Live loaded stem packing.
 - RPTFE seats & seals.
 - All stainless steel external components.
 - ISO 5211 mounting pad with square stem.
 - Live loaded stem packing design.
- 97L-STC - 97T-STC: size 1/2" to 4".

NEW



N POS	PART NAME	MATERIAL	N PCS
1	BODY	CF3M	1
2	END CONNECTION	CF3M	3
3	BALL	AISI 316L	1
4	SEATS	RTFE	3
5	JOINT GASKET	PTFE	3
6	STEM SEAL	RTFE	1
7	STEM	AISI 316L	1
8	GLAND PACKING	PTFE	2
9	GLAND PACKING	PTFE + GLASS	1
10	GLAND BUSH	AISI 304	1
11	BELLEVILLE WASHER	AISI 301	2
12	STOP WASHER	AISI 304	1
13	STEM UNIT	AISI 304	1
14	STEM WASHER	AISI 304	1
15	HANDLE	AISI 304	1
16	LOCKING DEVICE	AISI 304	1
17	HANDLE SLEEVE	VINYL	1
18	BOLT	AISI 304	6
19	BOLT NUT	AISI 304	6
20	BOLT WASHER	AISI 304	6
21	STOP PIN	AISI 304	1
22	PIN NUT	AISI 304	1
23	WASHER	AISI 304	1

SIZE	A	B	C	E	F	G	H	I	J	K	L	M	N	ISO 5211	Torque in-Lbs	Cv	Weight Lbs
1/2"	0.37	1.05	4.33	1.54	5.19	2.36	2.16	1.00	1.95	1.40	6	3	9	F03/F04	71	6	3.50
3/4"	0.62	1.30	4.69	1.77	5.19	2.54	2.34	1.00	1.95	1.40	6	3	9	F03/F04	151	16	4.20
1"	0.87	2.88	6.00	2.27	7.28	3.61	3.00	1.80	1.97	1.65	7	6	11	F04/F05	257	31	6.80
1 1/2"	1.37	3.84	7.50	3.02	8.66	4.34	3.75	1.80	2.76	1.97	9	7	14	F05/F07	523	75	12.60
2"	1.87	4.74	8.50	3.41	8.66	4.74	4.25	2.50	2.76	1.97	9	11	14	F05/F07	638	140	19.70
2 1/2"	2.37	3.34	8.98	3.84	9.92	5.00	6.50	3.00	4.00	2.76	11	9	17	F07/F10	815	210	30.00
3"	2.88	6.77	12.00	4.86	13.78	6.63	6.00	3.57	4.00	2.76	11	9	17	F07/F10	1754	375	44.30
4"	3.83	8.28	13.00	5.51	13.78	7.28	6.50	4.68	4.00	2.76	11	9	17	F07/F10	2215	670	120.00

SERIES 97L(L) - 97T - 97X

L-PORT

T-PORT

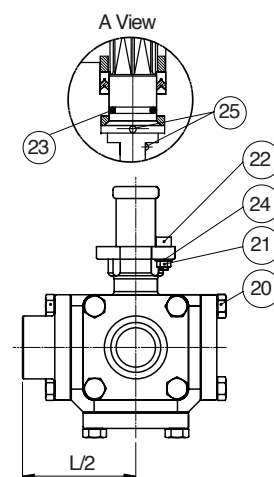
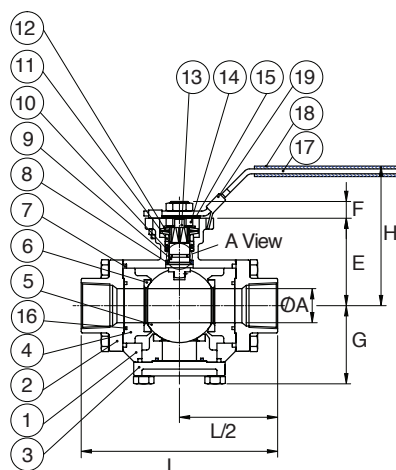
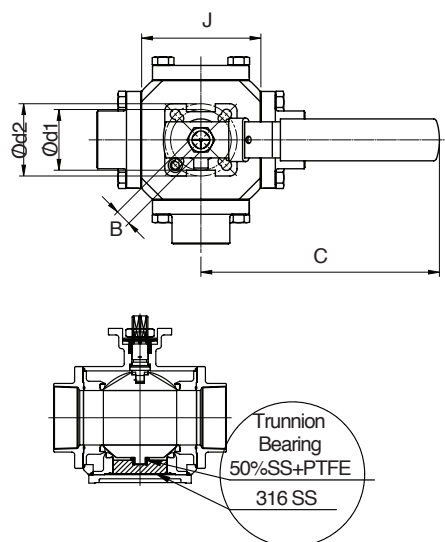
DOUBLE L-PORT



3-way direct mount stainless steel, block body, full port ball valve.

- 1000 PSI WOG.
- ISO 5211 mounting pad.
- Live load stem packing.
- Investment cast and sand cast body construction.
- Meets International standards.
- T, L, and double L port designs.
- Live loaded stem packing design.

97L - 97T - 97X: size 1/4" to 4".



POS N	PART NAME	MATERIAL	POS N
1	BODY	CF8M	1
2	END CAP A	CF8M	4
3	END CAP B	CF8M	1
4	SEAT RETAINER	CF8M	5
5	BALL	AISI 316	1
6	SEAT	PTFE/RTFE	5
7	JOINT GASKET	PTFE	5
8	STEM SEAL	RPTFE	1
9	STEM	AISI 316	1
10	STEM PACKING	25% GLASS FILLED PTFE	1 SET
11	GLAND	AISI 304	1
12	BELLEVILLE WASHER	AISI 301	2
13	LOCK SADDLE	AISI 304	1
14	STEM NUT	AISI 304	2
15	STEM WASHER	AISI 304	1
16	RETAINER SEAL	PTFE	5
17	HANDLE	AISI 304	1
18	HANDLE SLEEVE	VINYL	1
19	LOCKING DEVICE	AISI 304	1
20	BOLT NUT	ASTM A194 8	20
21	PIN NUT	AISI 304	1
22	STOP PIN	AISI 304	1
23	O-RING	FKM (Viton)	2
24	WASHER	AISI 304	1
25	ANTISTATIC DEVICE	AISI 316	2

SIZE	ØA	B mm	C	E	F	G	H	J	L	psi	Ød1	Ød2	ISO 5211	Break Torque in-Lbs	Cv	Weight Lbs
1/4"	0.45	9	5.90	1.72	0.35	1.38	3.34	1.99	3.62	1000	1.41	1.65	F03/F04/F05	71	4	1.4
3/8"	0.49	9	5.90	1.72	0.35	1.38	3.34	1.99	3.62	1000	1.41	1.65	F03/F04/F05	71	5	1.4
1/2"	0.59	9	5.90	1.72	0.35	1.38	3.34	1.99	3.62	1000	1.41	1.65	F03/F04/F05	71	6	1.3
3/4"	0.78	11	6.49	2.13	0.41	1.78	3.66	2.63	4.33	1000	1.65	1.96	F04/F05	151	16	2.8
1"	0.98	11	7.08	2.52	0.41	2.23	4.25	3.26	5.66	1000	1.65	1.96	F04/F05/F07	257	31	4.8
1 1/4"	1.25	14	8.46	3.09	0.51	2.35	4.99	3.50	5.78	800	1.96	2.75	F05/F07	310	32	5.9
1 1/2"	1.49	17/19	10.35	3.73	0.70	2.84	5.98	4.29	6.45	800	2.75	4.01	F07/F10	523	75	10.9
2"	1.96	17/19	12.32	3.99	0.70	3.16	6.25	4.76	7.24	800	2.75	4.01	F07/F10	638	140	13.8
2 1/2"	2.55	17/19	13.54	4.72	0.70	3.81	6.96	5.74	8.97	600	2.75	4.01	F07/F10	815	210	22.5
3"	2.99	22	14.56	5.23	0.90	4.13	7.67	6.22	10.43	600	4.01	4.92	F10/F12	1754	375	28.9
4"	3.93	22	20.07	6.45	0.90	5.17	8.89	8.22	12.48	300	4.01	4.92	F10/F12	2215	670	57.7



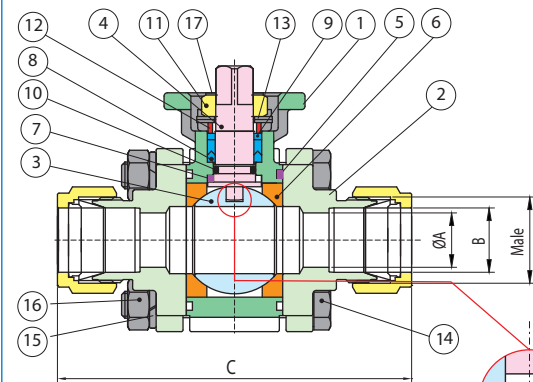
SERIES 1300

STAINLESS STEEL INSTRUMENTATION BALL

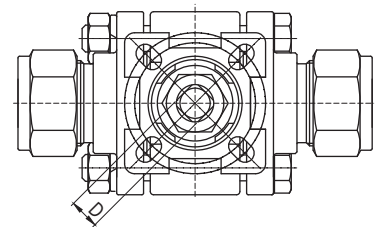
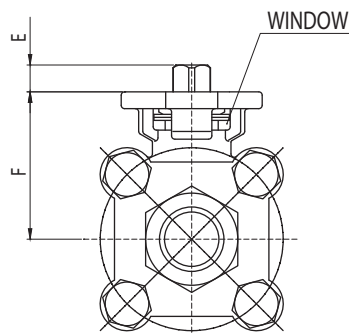
3-piece stainless steel standard port instrumentation ball, with locking lever valve.

- Working pressure to 2000 psi.
- Temperature range -15°F to 400°F.
- ISO 5211 mounting pad.
- Extremely high cycle life.
- Compression ends with heat treated ferrules.
- Latch locking handle.

1300: size 1/4" to 3/4".



* THERMAL RELIEF HOLE IN THE STEM SLOT.



N POS	PART NAME	MATERIAL	N PCS
1	BODY	CF8M	1
2	END CAP	CF8M	2
3	BALL	AISI 316	1
4	STEM	AISI 316	1
5	PACKING	PTFE	2
6	SEAT	TFM1600	2
7	STEM SEAL	PTFE	1
8	V-RING PACKING	PTFE	1 SET
9	BUSHING	50%SS-50%PTFE	1
10	O-RING	FKM (Viton)	1
11	STEM NUT	AISI 304	1
12	GLAND	AISI 304	1
13	BELLEVILLE WASHER	AISI 304	2
14	BOLT	AISI 304	4
15	WASHER	AISI 304	4
16	BOLT NUT	AISI 304	4
17	LOCK SADDLE	AISI 304	1

SIZE	ØA	B	C	D mm	E	F	ISO 5211	Cv	Torque in-Lbs	Weight Lbs
1/4"	0.18	0.26	3.74	9	0.35	1.60	F03/F04	5.3	46	0.8
3/8"	0.25	0.38	3.79	9	0.35	1.60	F03/F04	8	46	0.9
1/2"	0.37	0.51	4.02	9	0.35	1.60	F03/F04	19	46	0.9
3/4"	0.63	0.75	4.02	9	0.35	1.60	F03/F04	35	58	1.2

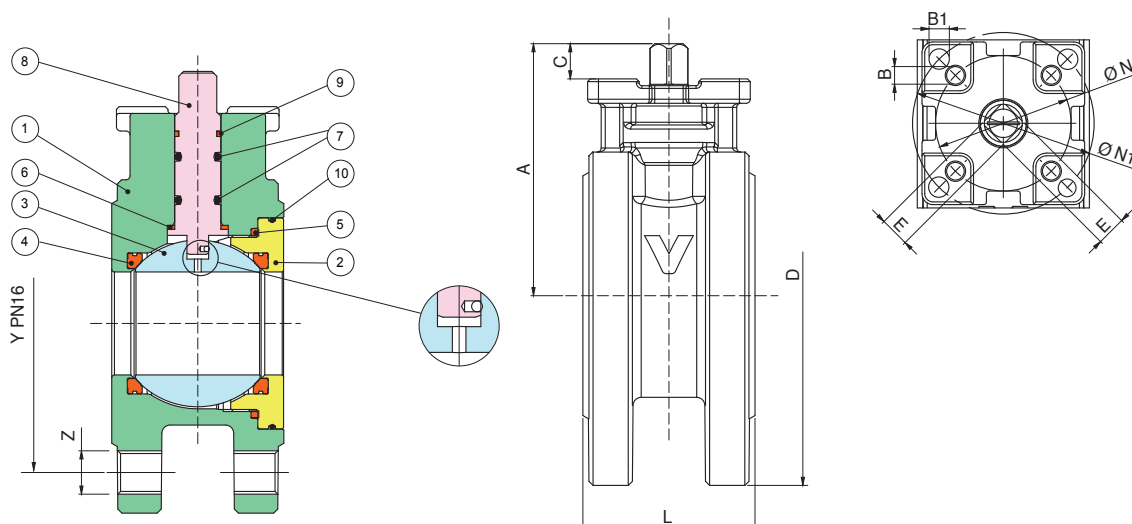


SERIES 723101 DIRECT MOUNT STAINLESS STEEL WAFER BALL VALVE

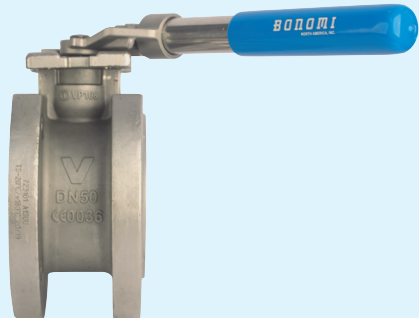
Direct mount, stainless steel ANSI class 150 wafer-style flanged ball valve, full port.

- Temperature range -4°F to +366°F.
- Antistatic stem device.
- TFM-MPTFE ball seats and thrust washer standard.
- Triple stem seals-two Viton (FKM) O-rings and one PTFE seat.
- ISO 5211 mounting pad.
- Low torque design.

723101: size 1" to 4".



N POS	PART NAME	MATERIAL	N POS	SIZE	D	Y	Z	L	A	C	E	ISO 5211 ØN	B	B1	Break Torque in-Lbs	Cv	Weight Lbs
1	BODY	A351-CF8M	1	1"	4.33	3.35	4x5/8"	1.89	2.76	0.43	9	F03/F05	0.22	0.28	89	74.63	5.29
2	END CONNECTION	A479-Tp316/A182-F316	1	1 1/4"	5.12	3.94	4x5/8"	2.13	3.23	0.39	9	F03/F05	0.22	0.28	116	120.10	7.72
3	BALL	A351-CF8M	1	1 1/2"	5.51	4.33	4x3/4"	2.50	3.66	0.51	11	F05	0.26	-	151	201.32	9.92
4	BALL SEAT	TFM-MPTFE	2	2"	6.10	4.92	8x5/8"	3.23	4.00	0.53	11	F05/F07	0.26	0.35	177	348.60	14.77
5	BODY SEAT	PTFE	1	2 1/2"	7.09	5.71	8x3/4"	4.06	5.06	0.73	14	F07	0.35	-	284	596.66	24.03
6	THRUST WASHER	TFM-MPTFE	1	3"	7.48	6.30	8x3/4"	4.80	5.43	0.71	14	F07	0.35	-	390	1009.48	30.87
7	O-RING	FKM (Viton)	2	4"	8.66	7.09	8x3/4"	5.98	6.02	0.73	17	F07	0.35	-	531	1577.34	46.08
8	STEM	A564-Tp630 H1150D (17-4-PH)	1														
9	STEM SEAT	PTFE	1														
10	O-RING	FKM (Viton)	1														

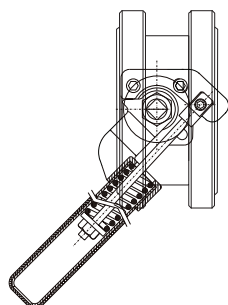


SERIES 723101 SRL DEADMAN SPRING RETURN

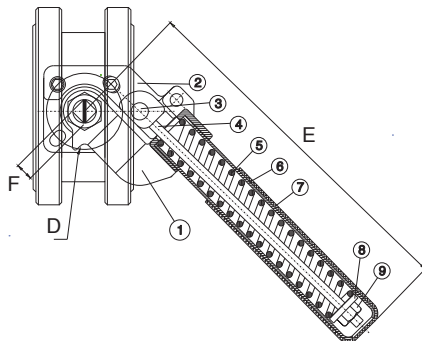
Stainless steel direct mount, ASME/ANSI class 150 Wafer-style flanged ball valve, full port with deadman spring return handle.

- Temperature range -4°F to +366°F.
- Anti-static stem device.
- TFM-MPTFE ball seats and thrust washer standard.
- Triple stem seals-two Viton (FKM) O-rings and one PTFE seat.
- ISO 5211 mounting pad/square stem.
- 17-4 PH stem.
- Lockable spring return handle.

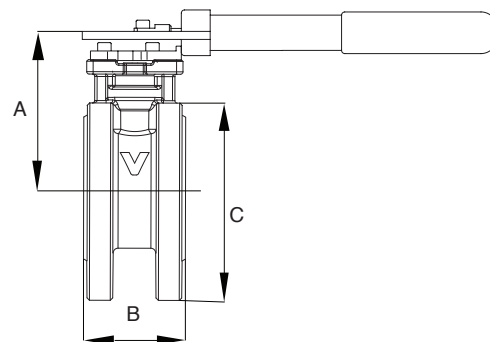
723101 SRL: size 1" to 3".



OPEN POSITION



CLOSED POSITION



N POS	PART NAME	MATERIAL	N PCS
1	HANDLE HEAD	ASTM A351-CF8M	1
2	ANCHOR	ASTM A351-CF8M	1
3	ANCHOR SCREW	AISI 316	1
4	SPRING ROD	AISI 316	1
5	SPRING	AISI 301	1
6	HANDLE EXTENSION	AISI 304	1
7	SLEEVE	VINYL	1
8	WASHER	AISI 304	1
9	HEX NUT	AISI 304	1
10	SOCKET HEAD SCREW	AISI 304	1

SIZE	A	B	C	D ISO 5211	E	F mm	Valve Torque in-Lbs	Handle Torque in-Lbs
1"	2.76	1.89	4.33	F05	8.75	11	85	195
1-1/4"	3.23	2.13	5.12	F05	8.75	11	112	195
1-1/2"	3.66	2.50	5.51	F05	11.50	11	142	195
2"	4.00	3.23	6.10	F05	11.50	11	169	195
2-1/2"	5.06	4.06	7.09	F07	17.72	14	275	487
3"	5.43	4.80	7.48	F07	17.72	14	381	487

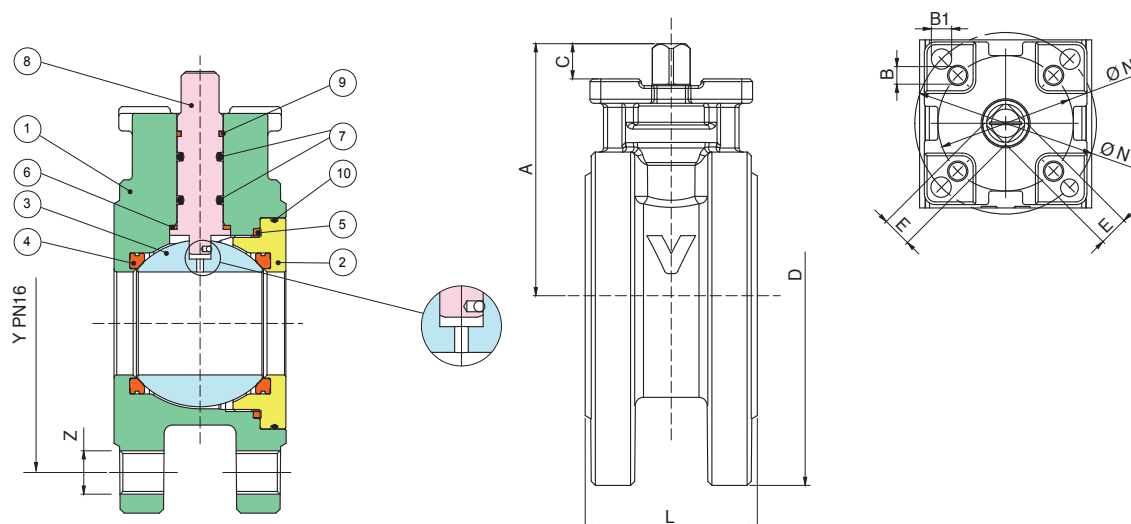


SERIES 724101 DIRECT MOUNT CARBON STEEL WAFER BALL VALVE

Direct mount, carbon steel ANSI class 150 wafer-style flanged ball valve, full port.

- Temperature range -4°F to +366°F.
- Antistatic stem device.
- TFM-MPTFE ball seats and thrust washer standard.
- Triple stem seals-two Viton (FKM) O-rings and one PTFE seat.
- ISO 5211 mounting pad.
- Low torque design.

724101: size 1" to 4".



N POS	PART NAME	MATERIAL	N POS
1	BODY	A352-LCB	1
2	END CONNEC-TION	ASTM A105	1
3	BALL	A351-CF8/A182-F304	1
4	BALL SEAT	TFM-MPTFE	2
5	BODY SEAT	PTFE	1
6	THRUST WASHER	TFM-MPTFE	1
7	O-RING	FKM (Viton)	2
8	STEM	A564-Tp630 H1150D (17-4-PH)	1
9	STEM SEAT	PTFE	1
10	O-RING	FKM (Viton)	1

SIZE	D	Y	Z	L	A	C	E	ISO 5211 ØN	B	B1	Break Torque in-Lbs	Cv	Weight Lbs
1"	4.33	3.35	4x5/8"	1.89	2.76	0.43	9	F03/F05	0.22	0.28	89	74.63	5.29
1 1/4"	5.12	3.94	4x5/8"	2.13	3.23	0.39	9	F03/F05	0.22	0.28	116	120.10	7.72
1 1/2"	5.51	4.33	4x3/4"	2.50	3.66	0.51	11	F05	0.26	-	151	201.32	9.92
2"	6.10	4.92	8x5/8"	3.23	4.00	0.53	11	F05/F07	0.26	0.35	177	348.60	14.77
2 1/2"	7.09	5.71	8x3/4"	4.06	5.06	0.73	17	F07	0.35	-	284	596.66	24.03
3"	7.48	6.30	8x3/4"	4.80	5.43	0.71	17	F07	0.35	-	390	1009.48	30.87
4"	8.66	7.09	8x3/4"	5.98	6.02	0.73	17	F07	0.35	-	531	1577.34	46.08

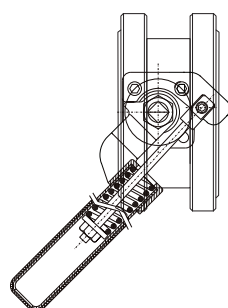


SERIES 724101 SRL DEADMAN SPRING RETURN

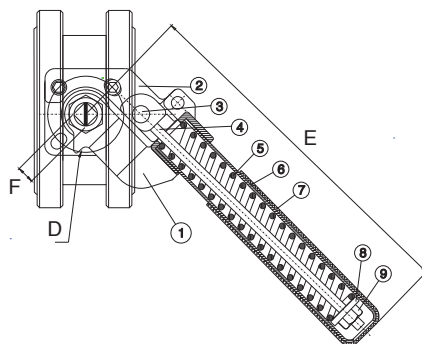
Carbon steel direct mount, ASME/ANSI class 150 Wafer-style flanged ball valve, full port with deadman spring return handle.

- Temperature range -4°F to +366°F.
- Anti-static stem device.
- TFM-MPTFE ball seats and thrust washer standard.
- Triple stem seals-two Viton (FKM) O-rings and one PTFE seat.
- ISO 5211 mounting pad/square stem.
- 17-4 PH stem.
- Lockable spring return handle.

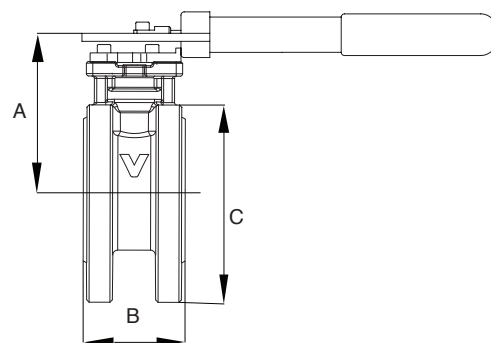
724101 SRL: size 1" to 3".



OPEN POSITION



CLOSED POSITION



N POS	PART NAME	MATERIAL	N POS
1	HANDLE HEAD	ASTM A351-CF8M	1
2	ANCHOR	ASTM A351-CF8M	1
3	ANCHOR SCREW	AISI 316	1
4	SPRING ROD	AISI 316	1
5	SPRING	AISI 301	1
6	HANDLE EXTENSION	AISI 304	1
7	SLEEVE	VINYL	1
8	WASHER	AISI 304	1
9	HEX NUT	AISI 304	1
10	SOCKET HEAD SCREW	AISI 304	1

SIZE	A	B	C	D ISO 5211	E	F mm	Valve Torque in-Lbs	Handle Torque in-Lbs
1"	2.76	1.89	4.33	F05	8.75	11	85	195
1 1/4"	3.23	2.13	5.12	F05	8.75	11	112	195
1 1/2"	3.66	2.50	5.51	F05	11.50	11	142	195
2"	4.00	3.23	6.10	F05	11.50	11	169	195
2 1/2"	5.06	4.06	7.09	F07	17.72	14	275	487
3"	5.43	4.80	7.48	F07	17.72	14	381	487

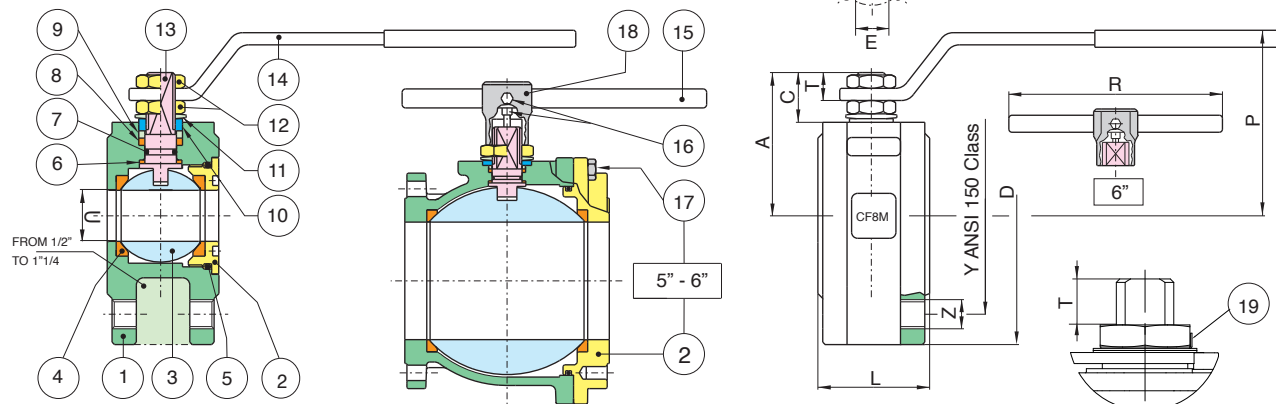
SERIES 720016 STAINLESS STEEL WAFER BALL VALVE

Stainless steel ANSI class 150 flanged ball valve, full port.

- Temperature range -4°F to 366°F.
- Blow-out proof stem.
- RPTFE seats, packing and thrust washer.
- Space saving design.
- 100% tested.
- TUV T.A. Luft approved.
- ANSI B16.34 design.
- ISO 5211 mounting pad with double "D" stem.
- Locking handles available.

720016: size 1/2" to 6".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.



- BODY FROM 1/2" TO 1 1/4" MADE FROM BAR STOCK
- BODY FROM 1 1/2" TO 6" MADE FROM CASTING

N POS	PART NAME	MATERIAL	QTY
1	BODY	A479-316 / A351 CF8M	1
2	END CONNECTION	A479-316 / A351 CF8M	1
3	BALL	A479-316 / A351 CF8M	1
4	BALL SEATS	RPTFE	2
5	RING	FKM (Viton)	1
6	THRUST WASHER	PTFE	1
7	RING	FKM (Viton)	1
8	STEM SEAL	PTFE	1
9	PACKING GLAND	STEEL	1
10	END STOP	ALSI 430 (1/2"-2") STEEL (2 1/2"-6")	2 1
11	SPRING WASHER	STEEL	2
12	NUT	STEEL	2
13	STEM	A479-316	1
14	HANDLE	STEEL	1
15	HANDLE DN 150-200	STEEL	1
16	SCREW	STEEL	2
17	SCREW	STEEL	8
18	BODY HANDLE DN150-200	CAST IRON	1
19	UNSCREWING GROWER	A182-F316	1

SIZE	D	Y	Z UNC	L	R	P	A	C	T	E	F	ISO 5211 ØN	B	Break Torque in-Lbs	Cv	Weight Lbs
1/2"	3.50	2.38	4x1/2"	1.37	5.17	2.53	1.85	0.61	0.35	M10	0.27	1.26	4xM5	35	22.21	2.86
3/4"	3.88	2.75	4x1/2"	1.57	5.17	2.71	2.02	0.61	0.35	M10	0.27	1.26	4xM5	115	40.50	3.96
1"	4.25	3.12	4x1/2"	1.81	6.87	3.16	2.40	0.76	0.45	M12	0.31	1.65 (F04)	4xM5	124	74.63	5.95
1 1/4"	4.62	3.50	4x1/2"	2.12	6.87	3.32	2.53	0.64	0.45	M12	0.31	1.65 (F04)	4xM5	150	120.10	9.47
1 1/2"	5.00	3.88	4x1/2"	2.50	9.86	4.03	3.07	0.96	0.51	M16	0.39	1.97 (F05)	4xM6	195	201.32	7.27
2"	6.00	4.75	4x5/8"	3.22	9.86	4.37	3.42	0.98	0.53	M16	0.39	1.97 (F05)	4xM6	292	348.60	12.12
2 1/2"	7.00	5.50	4x5/8"	4.05	12.65	5.03	4.11	1.10	0.70	M20	0.55	2.76 (F07)	4xM8	540	631.37	21.16
3"	7.50	6.00	4x5/8"	4.80	12.65	5.45	4.52	1.12	0.70	M20	0.55	2.76 (F07)	4xM8	637	1009.48	28.21
4"	9.00	7.50	8x5/8"	5.98	15.01	6.16	5.39	1.35	0.86	M24	0.70	4.02 (F10)	4xM10	956	1577.34	46.07
5"	10.00	8.50	8x3/4"	7.71	15.01	7.02	6.25	1.33	0.86	M24	0.70	4.02 (F10)	4xM10	1018	2730.87	82.67
6"	11.00	9.50	8x3/4"	9.13	27.55	9.33	7.93	2.02	1.18	M42	1.18	4.92 (F12)	4xM12	2903	4247.46	101.63

V-PACK

This type of shaft seal utilizes polymers in substitution of elastomers.

The stem is sealed by applying an axial compression setting to a series of PTFE rings positioned between the stem and the valve body.

The advantage of this seal is that the polymer (virgin PTFE) is not altered in contact with the fluids and can be used in many industrial applications including highly corrosive chemical ones.



Valve section with V-pack stem seal.

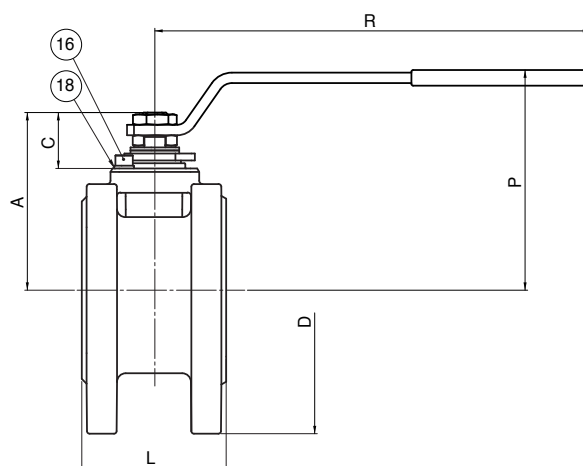
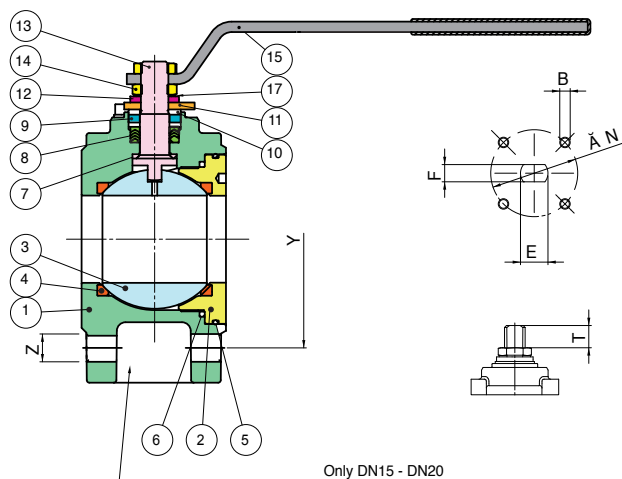
SERIES 721V16 STAINLESS STEEL WAFER BALL VALVE

Stainless steel ANSI class 150 flanged ball valve, full port.

- Temperature range -40°F to 366°F.
- Blow-out proof stem.
- TFM-MPTFE ball seats PTFE V-pack stem packing graphoil stem seat.
- Space saving design.
- 100% tested.
- Fugitive emission 15848 tested.
- ANSI B16.34 design.
- ISO 5211 mounting pad with double "D" stem.
- Locking handles available.
- Fire safe certified to EN ISO 10497 and API 607.

721V16: size 1/2" to 4".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.



N POS	PART NAME	MATERIAL	N POS	SIZE	D	Y	L	R	P	A	C	T	E	F	ISO5211 ØN	B	Break Torque in-Lbs	Cv	Weight Lbs
1	BODY	A351-CF8M	1	1/2"	3.74	2.37	1.42	5.16	2.76	2.05	0.71	0.31	M10	0.28	F03	4xM5	35	19.20	1.64
2	END CONNECTION	A479-Tp316 / A182-F316	1	3/4"	4.13	2.75	1.54	5.16	2.95	2.20	0.69	0.30	M10	0.28	F03	4xM5	115	35.00	2.15
3	BALL	A351-CF8M	1	1"	4.53	3.13	1.73	6.85	3.66	2.85	1.02	0.41	M12	0.31	F04	4xM5	124	64.50	2.56
4	BALL SEATS	TFM-MPTFE	2	1 1/4"	5.51	3.50	2.05	6.85	3.82	2.97	0.98	0.37	M12	0.31	F04	4xM5	150	103.80	3.86
5	O-RING	FKM (Viton)	1	1 1/2"	5.91	3.87	2.52	9.84	4.65	3.66	1.22	0.51	M16	0.39	F05	4xM6	195	174.00	5.35
6	BODY SEAT	PTFE	1	2"	6.50	4.75	3.27	9.84	5.00	4.02	1.26	0.51	M16	0.39	F05	4xM6	292	301.30	7.50
7	ANTIFRICTION RING	TFM-MPTFE	1	2 1/2"	7.28	5.50	4.13	12.64	5.63	4.76	1.52	0.75	M20	0.55	F07	4xM8	540	545.70	12.30
8	V-PACK	PTFE	1	3"	7.87	6.00	4.76	12.64	6.06	5.20	1.71	0.79	M20	0.71	F07	4xM8	637	872.50	16.83
9	STEM SEAT	GRAPHOIL	1	4"	8.66	7.50	5.98	15.00	6.61	5.75	1.65	0.75	M24	0.71	F10	4xM10	956	1363.30	24.30
10	PACKING GLAND	A479-Tp316	2																
11	END STOP	AISI 316	1																
12	SPRING WASHER	AISI 304	2																
13	STEM	A479-Tp316	1																
14	NUT	A2-70	2																
15	HANDLE	AISI 316	1																
16	SCREW	A2-70	2																
17	ENSCREWING WASHER	AISI 316	1																
18	WASHER	AISI 316	2																



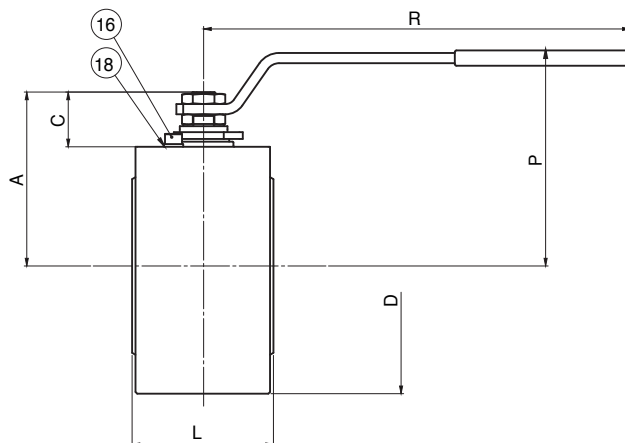
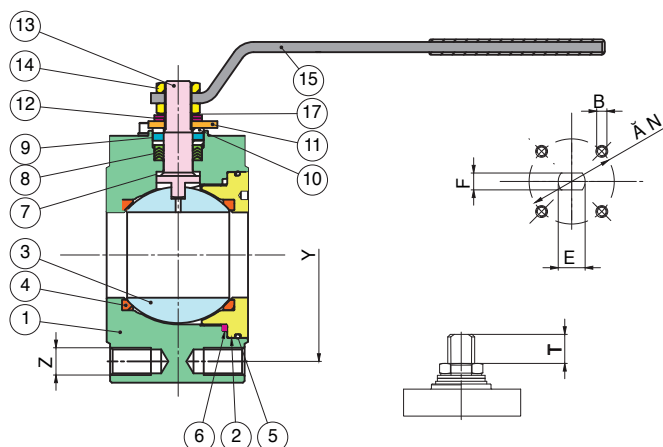
SERIES 722V17 CARBON STEEL WAFER BALL VALVE

Carbon steel ANSI class 150 flanged ball valve, full port.

- Temperature range -4°F to 366°F.
- Blow-out proof stem.
- TFM-MPTFE ball seats PTFE V-pack stem packing graphoil stem seat.
- Space saving design.
- 100% tested.
- Fugitive emission 15848 tested.
- ANSI B16.34 design.
- ISO 5211 mounting pad with double "D" stem.
- Locking handles available.
- Fire safe certified to EN ISO 10497 and API 607.

722V17: size 1/2" to 4".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.



N POS	PART NAME	MATERIAL	N POS	SIZE	D	Y	L	R	P	A	C	T	E	F	ISO5211 ØN	B	Break Torque in-Lbs	Cv	Weight Lbs
1	BODY	ASTM -A105	1	1/2"	3.74	2.37	1.42	5.16	2.76	2.05	0.71	0.31	M10	0.28	F03	4xM5	35	19.20	1.64
2	END CONNECTION	ASTM -A105	1	3/4"	4.13	2.75	1.54	5.16	2.95	2.20	0.69	0.30	M10	0.28	F03	4xM5	115	35.00	2.15
3	BALL	A351-CF8	1	1"	4.53	3.13	1.73	6.85	3.66	2.85	1.02	0.41	M12	0.31	F04	4xM5	124	64.50	2.56
4	BALL SEATS	TFM-MPTFE	2	1 1/4"	5.51	3.50	2.05	6.85	3.82	2.97	0.98	0.37	M12	0.31	F04	4xM5	150	103.80	3.86
5	O-RING	FKM (Viton)	1	1 1/2"	5.91	3.87	2.52	9.84	4.65	3.66	1.22	0.51	M16	0.39	F05	4xM6	195	174.00	5.35
6	BODY SEAT	PTFE	1	2"	6.50	4.75	3.27	9.84	5.00	4.02	1.26	0.51	M16	0.39	F05	4xM6	292	301.30	7.50
7	ANTIFRICTION RING	TFM-MPTFE	1	2 1/2"	7.28	5.50	4.13	12.64	5.63	4.76	1.52	0.75	M20	0.55	F07	4xM8	540	545.70	12.30
8	V-PACK	PTFE	1	3"	7.87	6.00	4.76	12.64	6.06	5.20	1.71	0.79	M20	0.71	F07	4xM8	637	872.50	16.83
9	STEM SEAT	GRAPHOIL	1	4"	8.66	7.50	5.98	15.00	6.61	5.75	1.65	0.75	M24	0.71	F10	4xM10	956	1363.30	24.30
10	PACKING GLAND	A479-Tp316	2																
11	END STOP	A37 ENP CS	1																
12	SPRING WASHER	50CrV4	2																
13	STEM	A479-Tp316	1																
14	NUT	6S ENP CS	2																
15	HANDLE	A37 ENP CS	1																
16	SCREW	A2-70	2																
17	ENSCREWING WASHER	AISI 316	1																
18	WASHER	AISI 304	2																

SERIES 720017 CARBON STEEL WAFER BALL VALVE

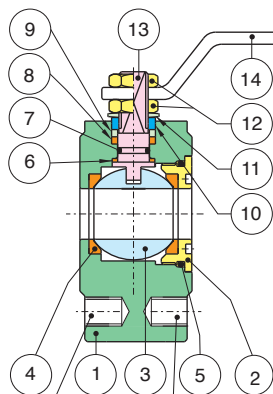
Carbon steel ANSI class 150 flanged ball valve, full port.

- Temperature range -4°F to 366°F.
- Blow-out proof stem.
- RPTFE seats, packing and thrust washer.
- Space saving design.
- 100% tested.
- TUV T.A. Luft approved.
- ANSI B16.34 design.
- ISO 5211 mounting pad with double "D" stem.
- Locking handles available.

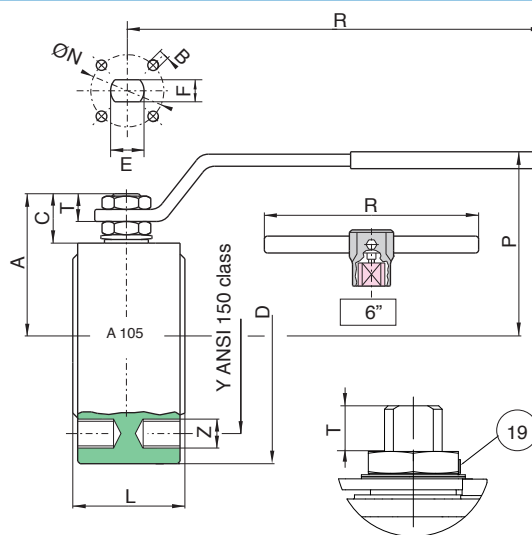
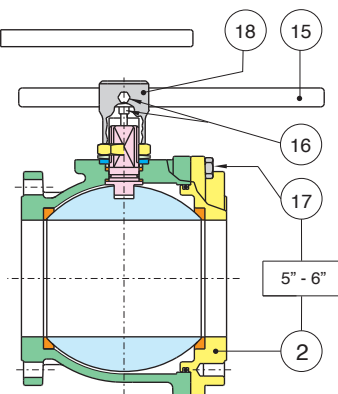
720017: size 1/2" to 6".

720791: STEAM SERVICE TRIM - size 1" to 4".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.



TAPPED THROUGH THE BODY
FROM 1/2" TO 1 1/2"



N POS	PART NAME	MATERIAL	N POS
1	BODY	ASTM A105/WCB	1
2	END CONNECTION	ASTM A105/WCB	1
3	BALL	A479-304 / A351 CF8	1
4	BALL SEATS	RPTFE	2
5	O-RING	FKM (Viton)	1
6	THRUST WASHER	PTFE	1
7	RING	FKM (Viton)	1
8	STEM SEAL	PTFE	1
9	PACKING GLAND	STEEL	1
10	END STOP	STEEL	2-1
11	SPRING WASHER	STEEL	2
12	NUT	STEEL	2
13	STEM	AISI 304	1
14	HANDLE	STEEL	1
15	HANDLE DN 150-200	STEEL	1
16	SCREW	STEEL	2
17	SCREW	STEEL	8-12
18	BODY HANDLE DN150-200	CAST IRON	1
19	UNSCREWING GROWER	A182-F316	1

SIZE	D	Y	Z UNC	L	R	P	A	C	T	E	F	ISO 5211 ØN	B	Break Torque in-Lbs	Cv	Weight Lbs
1/2"	3.50	2.38	4x1/2"	1.37	5.17	2.53	1.85	0.61	0.35	M10	0.27	1.26	4xM5	35	22.21	2.86
3/4"	3.88	2.75	4x1/2"	1.57	5.17	2.71	2.02	0.61	0.35	M10	0.27	1.26	4xM5	115	40.50	3.96
1"	4.25	3.12	4x1/2"	1.81	6.87	3.16	2.40	0.76	0.45	M12	0.31	1.65 (F04)	4xM5	124	74.63	5.95
1 1/4"	4.62	3.50	4x1/2"	2.12	6.87	3.32	2.53	0.64	0.45	M12	0.31	1.65 (F04)	4xM5	150	120.10	9.47
1 1/2"	5.00	3.88	4x1/2"	2.50	9.86	4.03	3.07	0.96	0.51	M16	0.39	1.97 (F05)	4xM6	195	201.32	11.31
2"	6.00	4.75	4x5/8"	3.22	9.86	4.37	3.42	0.98	0.53	M16	0.39	1.97 (F05)	4xM6	292	348.60	19.18
2 1/2"	7.00	5.50	4x5/8"	4.05	12.65	5.03	4.11	1.10	0.70	M20	0.55	2.76 (F07)	4xM8	540	631.37	34.17
3"	7.50	6.00	4x5/8"	4.80	12.65	5.45	4.52	1.12	0.70	M20	0.55	2.76 (F07)	4xM8	637	1009.48	45.85
4"	9.00	7.50	8x5/8"	5.98	15.01	6.16	5.39	1.35	0.86	M24	0.70	4.02 (F10)	4xM10	956	1577.34	75.39
5"	10.00	8.50	8x3/4"	7.71	15.01	7.02	6.25	1.33	0.86	M24	0.70	4.02 (F10)	4xM10	1018	2730.87	115.74
6"	11.00	9.50	8x3/4"	9.13	27.55	9.33	7.93	2.02	1.18	M42	1.18	4.92 (F12)	4xM12	2903	4247.46	135.5



SERIES 720288 STAINLESS STEEL WAFER BALL VALVE

Stainless steel, ANSI class 300 flanged ball valve full port, stainless steel ball and stem.

- Temperature range -4°F to 366°F.
- Blow-out proof stem.
- RPTFE seats, packing and thrust washer.
- Space saving design.
- 100% tested.
- TUV T.A. Luft approved.
- ANSI B16.34 design.
- ISO 5211 mounting pad with double "D" stem.

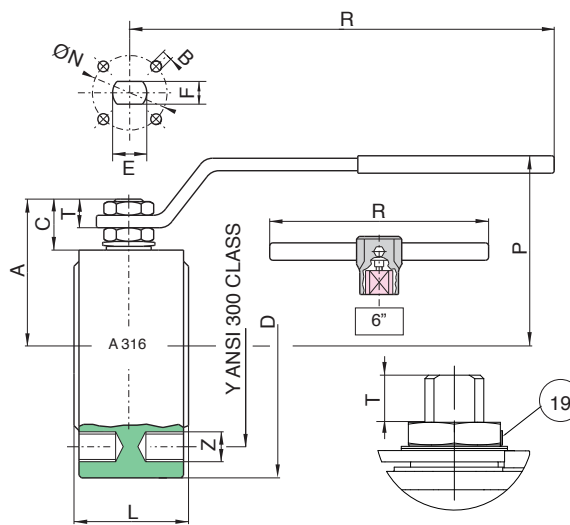
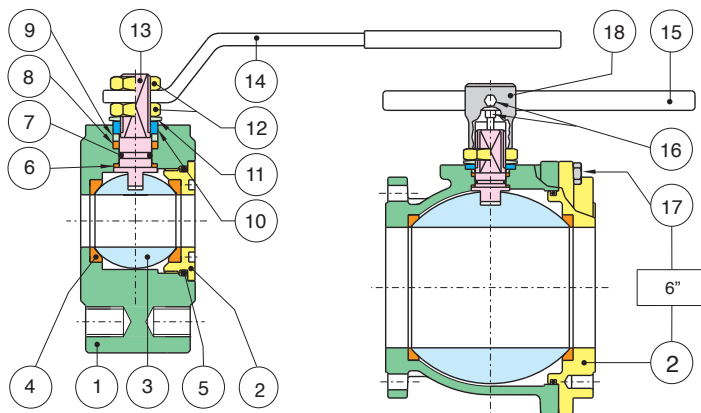
720288: size 1/2" to 6".

720741: FIRE SAFE APPROVED TO BS6755PART.2 WITH ANTISTATIC STEM DEVICE AND CARBON FILLED PTFE SEATS - size 1/2" to 6".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.



Low temperature design
-40°C ON DEMAND



N° POS	PART NAME	MATERIAL	N° PCS
1	BODY	A479-316/A351 CF8M	1
2	END CONNECTION	A479-316/A351 CF8M	1
3	BALL	A479-316/A351 CF8M	1
4	BALL SEATS	RPTFE	2
5	RING	FKM (Viton)	1
6	THRUST WASHER	PTFE	1
7	RING	FKM (Viton)	1
8	STEM SEAL	PTFE	1
9	PACKING GLAND	STEEL	1
10	END STOP	STEEL	2-1
11	SPRING WASHER	STEEL	2
12	NUT	STEEL	2
13	STEM	AISI 316	1
14	HANDLE	STEEL	1
15	HANDLE DN 150-200	STEEL	1
16	SCREW	STEEL	2
17	SCREW	STEEL	12
18	BODY HANDLE DN150-200	CAST IRON	1
19	UNSCREWING GROWER	A182-F316	1

SIZE	D	Y	Z UNC	L	R	P	A	C	T	E	F	ISO 5211 ØN	B	Break Torque in-Lbs	Cv	Weight Lbs
1/2"	3.75	2.62	4x1/2"	1.38	5.17	2.54	1.85	0.45	0.33	M10	0.28	1.26	4xM5	35	22.21	3.10
3/4"	4.62	3.25	4x5/8"	1.57	5.17	2.71	2.03	0.37	0.33	M10	0.28	1.26	4xM5	115	40.50	5.50
1"	4.88	3.50	4x5/8"	1.81	6.87	3.17	2.40	0.51	0.45	M12	0.32	1.65 (F04)	4xM5	124	74.63	6.80
1 1/4"	5.25	3.88	4x5/8"	2.12	6.87	3.33	2.54	0.65	0.45	M12	0.32	1.65 (F04)	4xM5	150	120.10	9.30
1 1/2"	6.12	4.50	4x3/4"	2.50	9.86	4.03	3.07	0.80	0.47	M16	0.39	1.97 (F05)	4xM6	195	201.32	15.00
2"	6.50	5.00	8x5/8"	3.23	9.86	4.43	3.43	0.63	0.47	M16	0.39	1.97 (F05)	4xM6	292	348.60	23.00
2 1/2"	7.50	5.88	8x3/4"	4.05	12.66	5.08	4.11	0.73	0.67	M20	0.55	2.75 (F07)	4xM8	540	631.37	39.00
3"	8.25	6.62	8x3/4"	4.80	12.66	5.45	4.53	0.83	0.71	M20	0.55	2.75 (F07)	4xM8	637	1009.48	55.00
4"	10.00	7.88	8x3/4"	5.98	15.02	6.20	5.39	0.93	0.83	M24	0.71	4.02 (F10)	4xM10	956	1577.34	100.00
6"	12.50	10.62	12x3/4"	9.13	27.56	9.33	7.93	2.03	1.18	M42	1.18	4.92 (F12)	4xM12	2903	4247.46	223.00

SERIES 720289 CARBON STEEL WAFER BALL VALVE

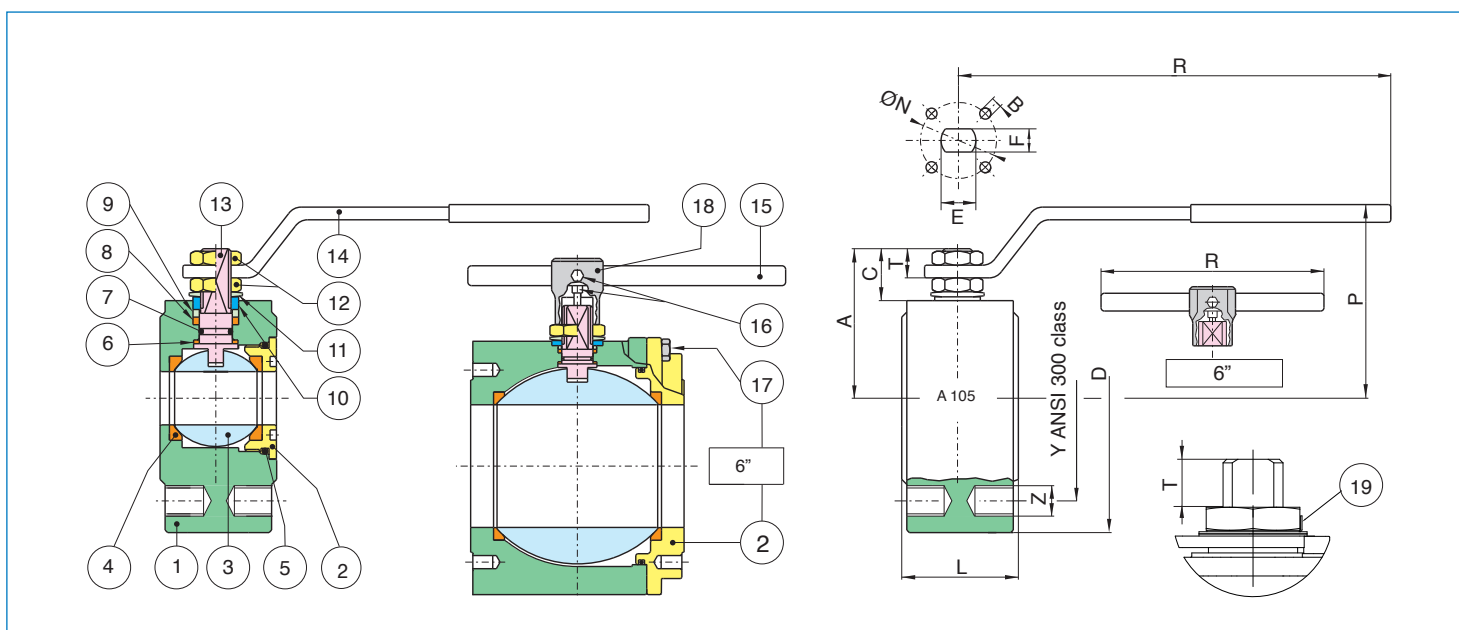
Carbon steel, ANSI class 300 flanged ball valve, stainless steel ball and stem.

- Temperature range -4°F to 366°F.
- Blow-out proof stem.
- RPTFE seats, packing and thrust washer.
- Space saving design.
- 100% tested.
- TUV T.A. Luft approved.
- ANSI B16.34 design.
- ISO 5211 mounting pad with double "D" stem.
- Locking handles available.

720289: size 1/2" to 6".

720744: FIRE SAFE APPROVED TO BS6755PART.2 WITH ANTISTATIC STEM DEVICE AND CARBON FILLED PTFE SEATS - size 1/2" to 6".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.



N POS	PART NAME	MATERIAL	N POS
1	BODY	ASTM A105/WCB	1
2	END CONNECTION	ASTM A105	1
3	BALL	A479-304/A351CF8	1
4	BALL SEATS	RPTFE	2
5	RING	FKM (Viton)	1
6	THRUST WASHER	PTFE	1
7	RING	FKM (Viton)	1
8	STEM SEAL	PTFE	1
9	PACKING GLAND	STEEL	1
10	END STOP	STEEL	2-1
11	SPRING WASHER	STEEL	2
12	NUT	STEEL	2
13	STEM	AISI 304	1
14	HANDLE	STEEL	1
15	HANDLE DN 150-200	STEEL	1
16	SCREW	STEEL	2
17	SCREW	STEEL	12
18	BODY HANDLE DN150-200	CAST IRON	1
19	UNSCREWING GROWER	A182-F316	1

SIZE	D	Y	Z UNC	L	R	P	A	C	T	E	F	ISO 5211 ØN	B	Break Torque (in/Lbs)	Cv	Weight Lbs
1/2"	3.75	2.62	4x1/2"	1.38	5.17	2.54	1.85	0.45	0.33	M10	0.28	1.26	4xM5	35	22.21	3.10
3/4"	4.62	3.25	4x5/8"	1.57	5.17	2.71	2.03	0.37	0.33	M10	0.28	1.26	4xM5	115	40.50	5.50
1"	4.88	3.50	4x5/8"	1.81	6.87	3.17	2.40	0.51	0.45	M12	0.32	1.65 (F04)	4xM5	124	74.63	6.80
1 1/4"	5.25	3.88	4x5/8"	2.12	6.87	3.33	2.54	0.35	0.45	M12	0.32	1.65 (F04)	4xM5	150	102.10	9.30
1 1/2"	6.12	4.50	4x3/4"	2.50	9.86	4.03	3.07	0.80	0.47	M16	0.39	1.97 (F05)	4xM6	195	201.32	15.00
2"	6.50	5.00	8x5/8"	3.23	9.86	4.43	3.43	0.63	0.47	M16	0.39	1.97 (F05)	4xM6	292	348.60	23.00
2 1/2"	7.50	5.88	8x3/4"	4.05	12.66	5.08	4.11	0.73	0.67	M20	0.55	2.76 (F07)	4xM8	540	631.37	39.00
3"	8.25	6.62	8x3/4"	4.80	12.66	5.45	4.53	0.83	0.71	M20	0.55	2.76 (F07)	4xM8	637	1009.48	55.00
4"	10.00	7.88	8x3/4"	5.98	15.02	6.20	5.39	0.93	0.83	M24	0.71	4.02 (F10)	4xM10	956	1577.34	100.00
6"	15.74	10.62	12x3/4"	9.13	27.56	9.33	7.93	2.03	1.18	M42	1.18	4.92 (F12)	4xM12	2903	4247.46	223.00



FOR STEAM

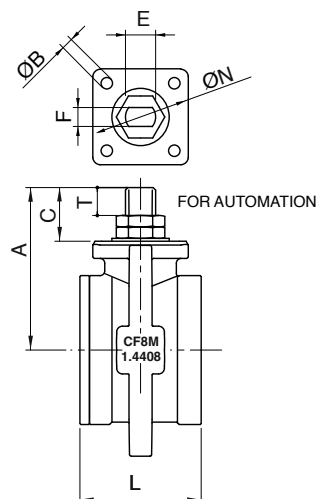
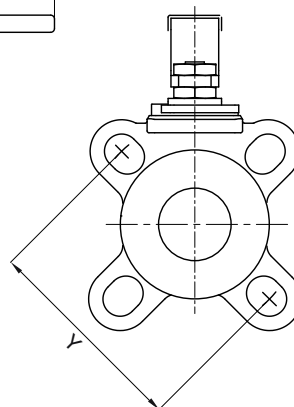
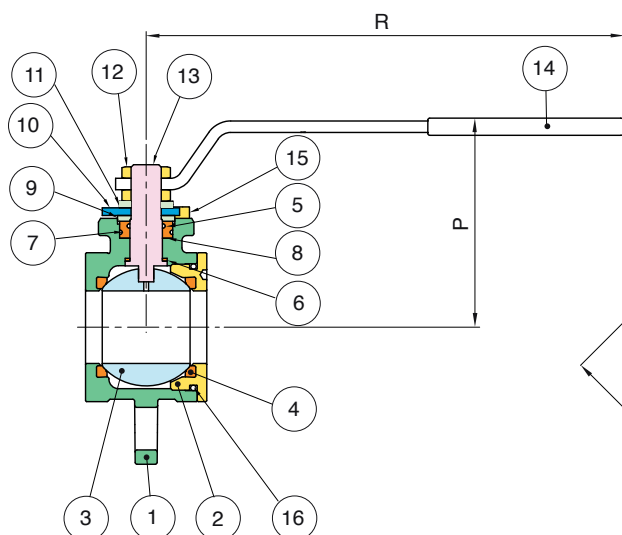
COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.

SERIES 725002 STAINLESS STEEL WAFER BALL VALVE

Stainless steel, ANSI class 150 flanged ball valve, full port.

- Temperature range -4°F to 406°F.
- Blow-out proof stem.
- RPTFE seats, packing and thrust washer.
- Space saving design.
- 100% tested.
- TUV T.A. Luft approved.
- Antistatic stem device.
- Steam service trim (250 WSP).
- ISO 5211 mounting pad with double "D" stem.

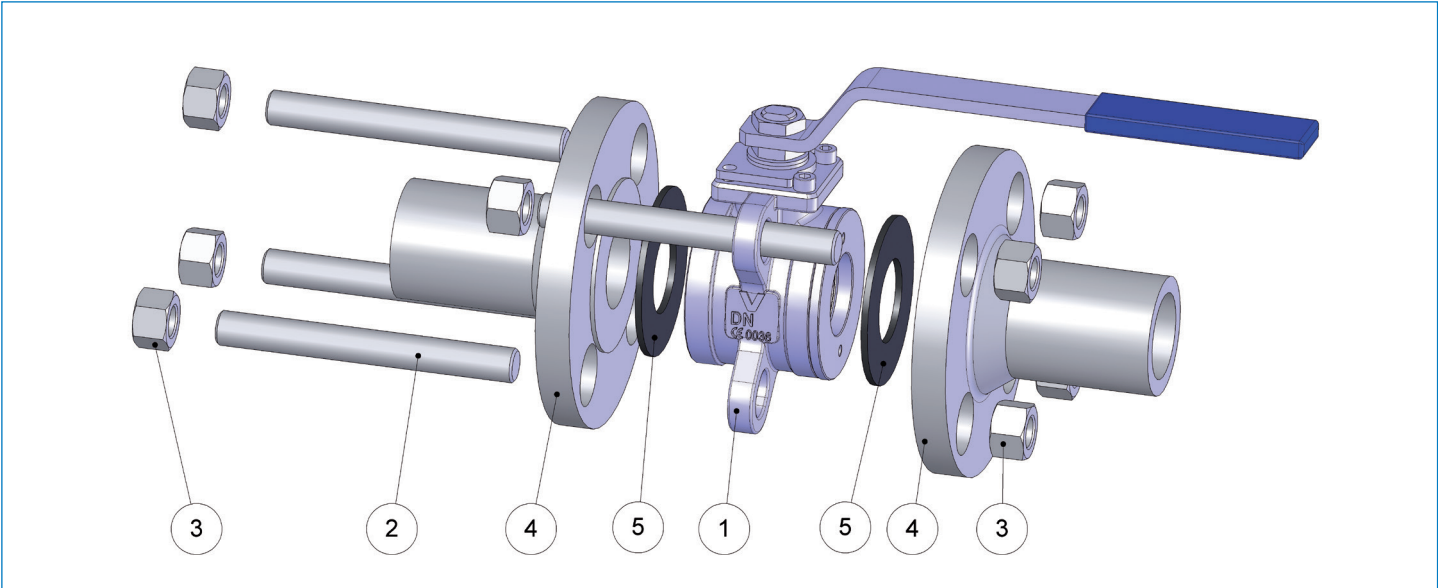
725002: size 1" to 4".



N. POS	PART NAME	MATERIAL	N. POS
1	BODY	A351 - CF8M	1
2	END CONNECTION	A479-316	1
3	BALL	A479-316/A351 CF8M	1
4	BALL SEAT	RPTFE	2
5	O-RING	FKM (Viton)	1
6	THRUST WASHER	PTFE	1
7	RING	FKM (Viton)	1
8	STEM SEAL	PTFE	1
9	PACKING GLAND	A479-316	1
10	END STOP	CARBON STEEL	1
11	SPRING WASHER	CARBON STEEL	2
12	NUT	CARBON STEEL	2
13	STEM	A479-316	1
14	HANDLE	CARBON STEEL	1
15	SCREW	CARBON STEEL	2
16	O-RING	FKM (Viton)	1

SIZE	Y	L	R	P	A	C	T	E	F	ISO 5211 ØN	B	Break Torque in-Lbs	Cv	Weight Lbs
1"	ANSI-150	1.81	6.85	3.58	2.81	0.90	0.41	M12	0.31	1.65 (F04)	4xM5	124	74.63	2.86
1 1/4"	ANSI-150	2.12	6.85	3.74	2.95	0.90	0.41	M12	0.31	1.65 (F04)	4xM5	150	120.10	3.64
1 1/2"	ANSI-150	2.50	9.84	4.33	3.34	1.10	0.59	M16	0.39	1.96 (F05)	4xM6	195	201.32	4.74
2"	ANSI-150	3.23	9.84	4.68	3.68	1.10	0.59	M16	0.39	1.96 (F05)	4xM6	292	348.60	8.27
2 1/2"	ANSI-150	4.05	12.63	5.70	4.78	1.31	0.70	M20	0.55	2.76 (F07)	4xM8	540	631.37	16.20
3"	ANSI-150	4.80	12.63	6.06	5.15	1.31	0.70	M20	0.55	2.76 (F07)	4xM8	637	1009.48	22.71
4"	ANSI-150	5.60	12.63	6.57	5.67	1.31	0.70	M20	0.55	2.76 (F07)	4xM8	956	1577.34	35.28

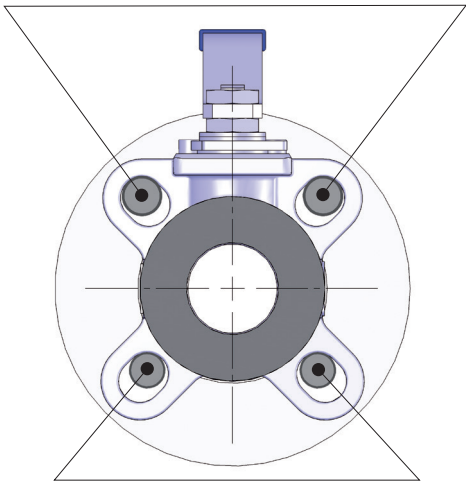
ASSEMBLING BETWEEN FLANGES LAYOUT



POS.	PART NAME
1	BODY
2	BOLT
3	NUT
4	END CONNECTION
5	TIGHTENING SEAL

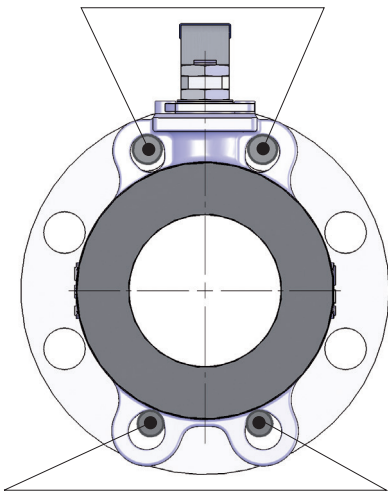
VALVE ALIGNMENT SIZES FROM (1" TO 3")

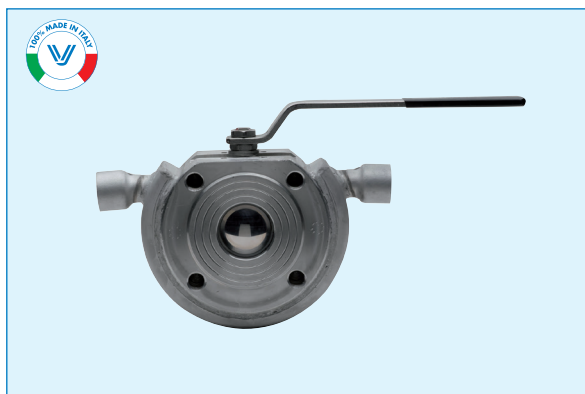
First insert the two bottom bolts. Let the valve lean, insert the two upper bolts, tighten the nuts.



VALVE ALIGNMENT (4")

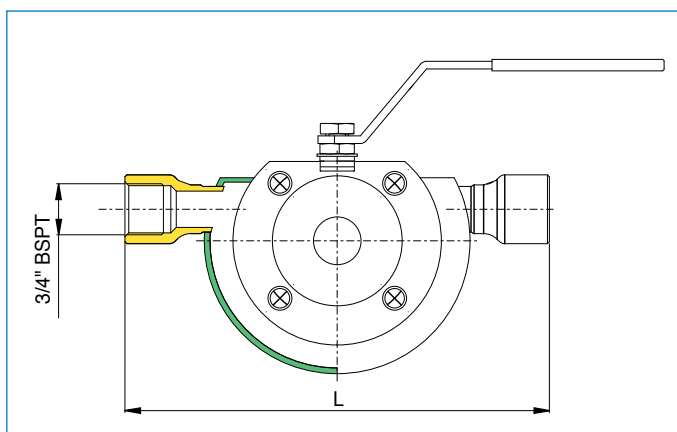
First insert the two upper bolts. Let the valve lean, put the two bottom bolts, tighten the nuts.





SERIES **WAFER** - SPECIAL USES

Flanged ball valve, with heating jacket in stainless or carbon steel.
• Full port sizes from 1/2" to 6".

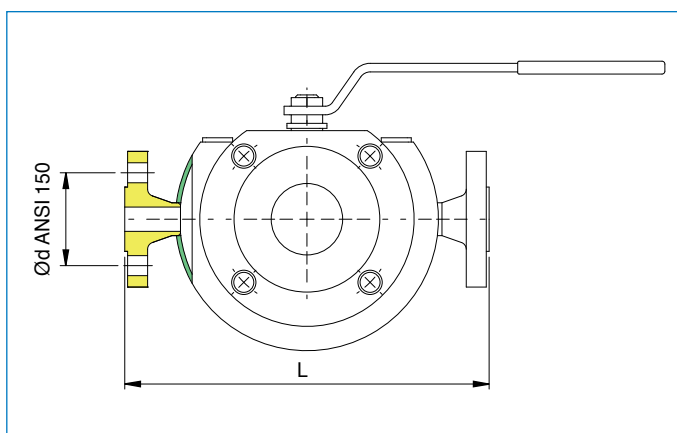


SIZE	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
Ød	3/4" BSPT								1" BSPT		
CARBON STEEL	8.86	9.25	8.86	9.45	9.84	10.24	10.83	11.42	11.81	12.60	14.17
STAINLESS STEEL							10.63	10.63	10.63	12.01	13.39



SERIES **WAFER** - SPECIAL USES

Flanged ball valve, with heating jacket in stainless or carbon steel.
• Full port sizes from 1/2" to 6".



SIZE	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
Ød	1/2"								1"		
CARBON STEEL	7.87	8.27	8.27	9.05	9.45	10.04	10.83	11.42	12.60	14.96	16.34
STAINLESS STEEL							10.24	10.83	11.81	14.96	16.34



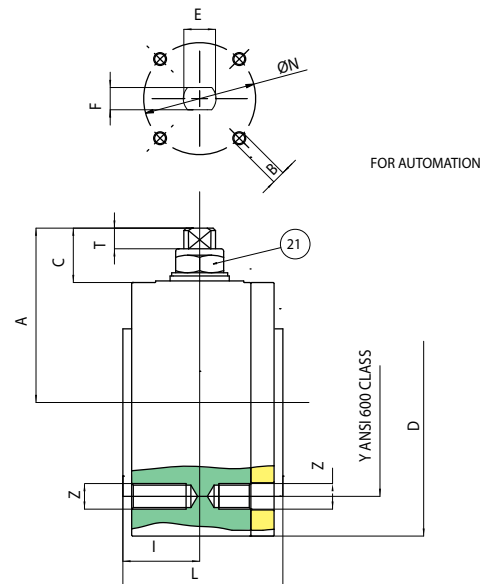
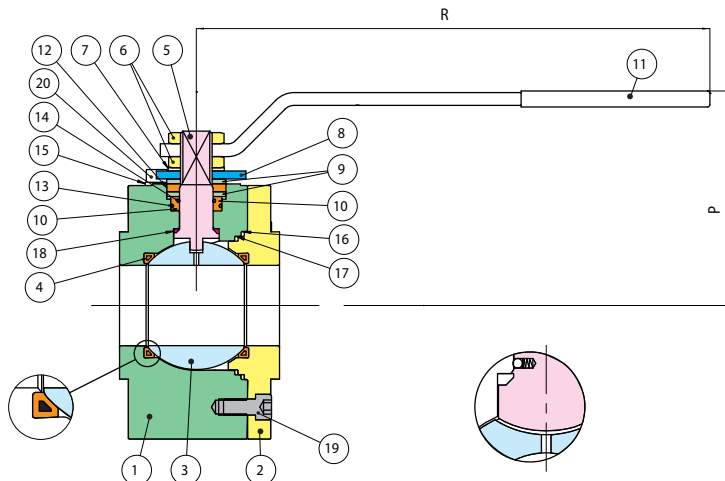
SERIES 763101 STAINLESS STEEL WAFER BALL VALVE

Stainless steel, ANSI class 600 flanged ball valve, full port.

- Temperature range -4°F to 366°F.
- Blow-out proof stem.
- Metal filled PTFE seats.
- Space saving design.
- 100% tested.
- Fire Safe certified to API 607.
- ANSI B16.34 design.
- Antistatic Device.
- ISO 5211 mounting pad with double "D" stem.

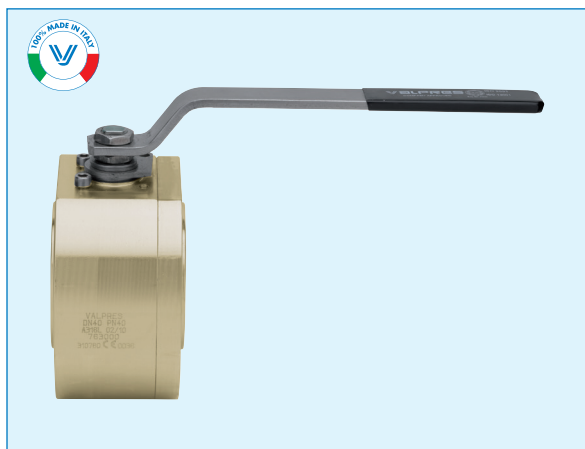
763101: size 1/2" to 4".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.



N° POS	PART NAME	MATERIAL	N° PCS
1	BODY	A182-F316/F316L	1
2	END CONNECTION	A182-F316/F316L	1
3	BALL	A479-316/A351-CF8M	1
4	BALL SEAT	RPTFE	2
5	STEM	A479-316	1
6	NUT	STAINLESS STEEL	2
7	SPRING WASHER	STAINLESS STEEL	2
8	90° STOP	STAINLESS STEEL	1
9	BUSH	A479-316	2
10	STEM SEAL	PTFE	1
11	HANDLE	STAINLESS STEEL	1
12	STEM SEAL	GRAPHOIL	1
13	RING	FKM (Viton)	1
14	RING	FKM (Viton)	1
15	WASHER	A479-304	2
16	BODY SEAL	GRAPHOIL	1
17	BODY SEAL	PTFE	1
18	THRUST WASHER	PTFE	1
19	SCREW	STAINLESS STEEL	3-4-7
20	SCREW	STAINLESS STEEL	2
21	NUT	STAINLESS STEEL	1

SIZE	D	Y	Z	I	L	R	P	A	C	T	E	F	ISO 5211 ØN	B	Break Torque in-Lbs	Cv	Weight Lbs
1/2"	3.74	2.63	4x1/2"	0.93	2.17	5.16	2.80	2.07	0.69	0.30	M10	0.28	1.65-F04	M5	58	22.21	5.29
3/4"	4.53	3.25	4x5/8"	0.94	2.36	6.85	3.46	2.66	0.89	0.40	M12	0.31	1.65-F04	M5	93	40.50	8.38
1"	4.92	3.50	4x5/8"	1.04	2.56	6.85	3.62	2.85	0.93	0.43	M12	0.31	1.65-F04	M5	177	74.63	10.58
1 1/2"	6.10	4.50	4x3/4"	1.50	3.35	9.88	5.16	4.21	1.26	0.48	M16	0.39	1.97-F05	M6	354	201.32	24.68
2"	6.50	5.00	8x5/8"	1.89	3.94	12.64	5.28	4.29	1.34	0.51	M20	0.55	2.76-F07	M8	443	348.60	30.86
3"	8.27	6.63	8x3/4"	2.95	5.91	15.00	6.10	5.20	1.71	0.63	M24	0.71	2.76-F07	M8	2213	1009.48	70.53
4"	10.83	8.50	8x7/8"	3.64	7.28	15.00	7.28	6.50	1.71	0.75	M24	0.71	4.02-F10	M10	2478	1577.34	154.28



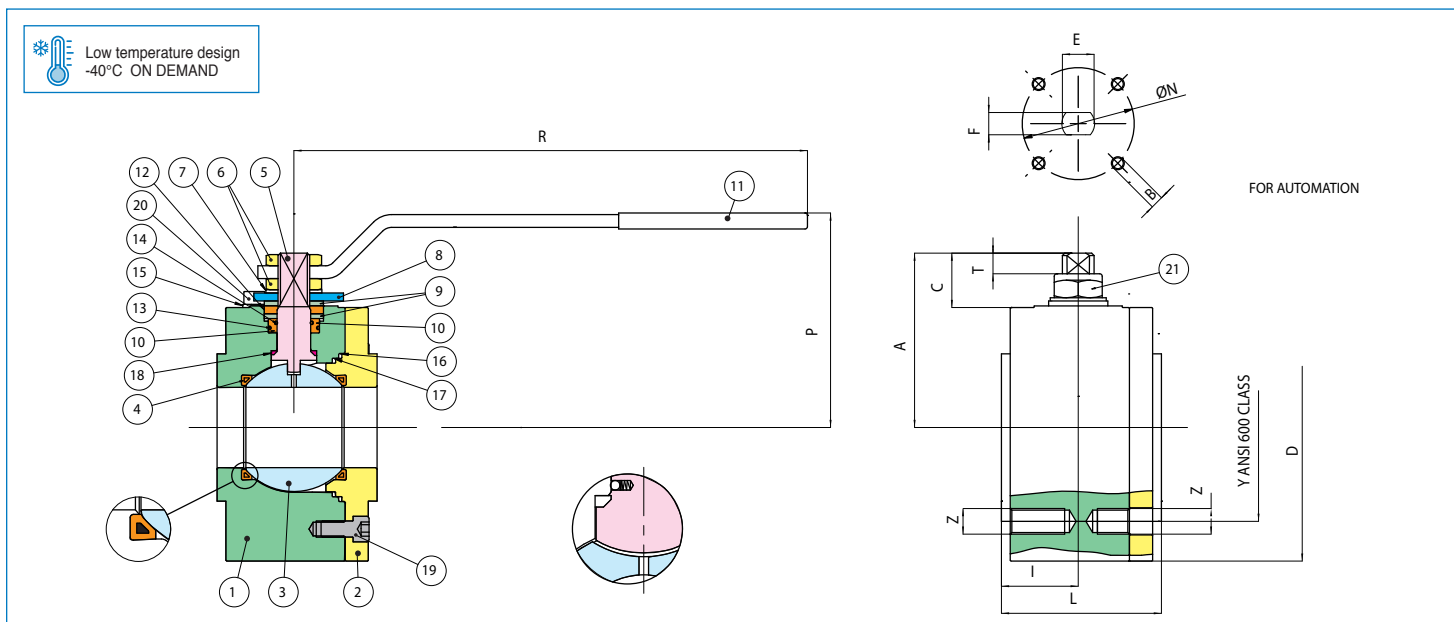
COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.

SERIES 764101 LOW TEMPERATURE CARBON STEEL WAFER BALL VALVE

Carbon steel, ANSI class 600 flanged ball valve, full port.

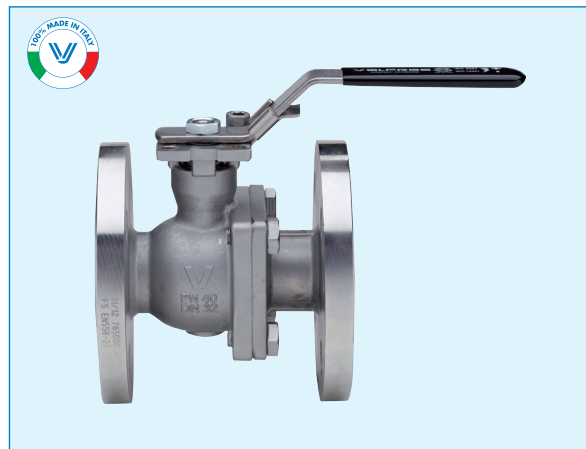
- Temperature range -4°F to 366°F.
- Blow-out proof stem.
- Metal filled PTFE seats.
- Space saving design.
- 100% tested.
- Fire Safe certified to API 607.
- ANSI B16.34 design.
- Antistatic Device.
- ISO 5211 mounting pad with double "D" stem.

764101: size 1/2" to 4".



N. POS	PART NAME	MATERIAL	N. POS
1	BODY	A350 - LF2	1
2	END CONNECTION	A350 - LF2	1
3	BALL	A479-304/A351-CF8	1
4	BALL SEAT	RPTFE	2
5	STEM	A182 - F304	1
6	NUT	CARBON STEEL	2
7	SPRING WASHER	CARBON STEEL	2
8	90° STOP	CARBON STEEL	1
9	BUSH	A479-316	2
10	STEM SEAL	PTFE	1
11	HANDLE	CARBON STEEL	1
12	STEM SEAL	GRAPHOIL	1
13	RING	FKM (Viton)	1
14	RING	FKM (Viton)	1
15	WASHER	A479-304	2
16	BODY SEAL	GRAPHOIL	1
17	BODY SEAL	PTFE	1
18	THRUST WASHER	PTFE	1
19	SCREW	CARBON STEEL	3-4-7
20	SCREW	STAINLESS STEEL	2
21	NUT	STAINLESS STEEL	1

SIZE	D	Y	Z	I	L	R	P	A	C	T	E	F	ISO 5211 ØN	B	Break Torque in-Lbs	Cv	Weight Lbs
1/2"	3.74	2.63	4x1/2"	0.93	2.17	5.16	2.80	2.07	0.69	0.30	M10	0.28	1.65-F04	M5	58	22.21	5.29
3/4"	4.53	3.25	4x5/8"	0.94	2.36	6.85	3.46	2.66	0.89	0.40	M12	0.31	1.65-F04	M5	93	40.50	8.38
1"	4.92	3.50	4x5/8"	1.04	2.56	6.85	3.62	2.85	0.93	0.43	M12	0.31	1.65-F04	M5	177	74.63	10.58
1 1/2"	6.10	4.50	4x3/4"	1.50	3.35	9.88	5.16	4.21	1.26	0.48	M16	0.39	1.97-F05	M6	354	201.32	24.68
2"	6.50	5.00	8x5/8"	1.89	3.94	12.64	5.28	4.29	1.34	0.51	M20	0.55	2.76-F07	M8	443	348.60	30.86
3"	8.27	6.63	8x3/4"	2.95	5.91	15.00	6.10	5.20	1.71	0.63	M24	0.71	2.76-F07	M8	2213	1009.48	70.53
4"	10.83	8.50	8x7/8"	3.64	7.28	15.00	7.28	6.50	1.71	0.75	M24	0.71	4.02-F10	M10	2478	1577.34	154.28



COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.

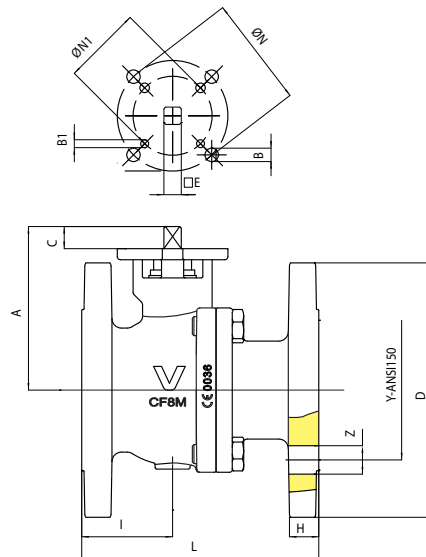
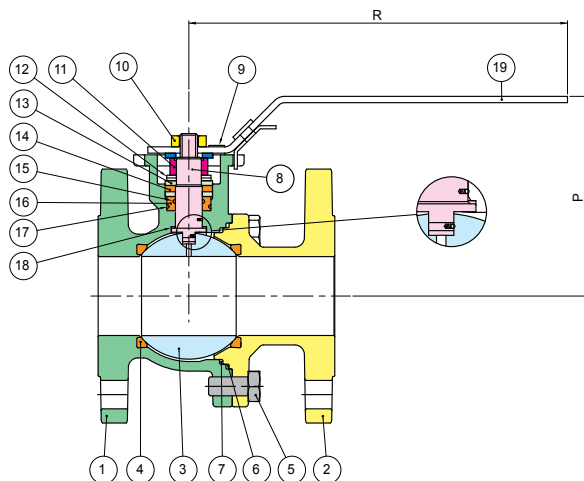
SERIES 766000 STAINLESS STEEL DIRECT MOUNT BALL VALVE

Stainless steel, ANSI class 150 flanged ball valve, full port, with locking handle.

- Direct mount ISO 5211/square stem.
- Temperature range -4°F to 366°F.
- Blow-out proof stem, adjustable stem packing.
- PTFE seats, packing and thrust washer and FKM Viton O-rings.
- Fire safe certified to API 607.
- 100% tested.
- ANSI B16.5, B16.10, B16.34 design.
- Antistatic Device.
- Standard locking handle.

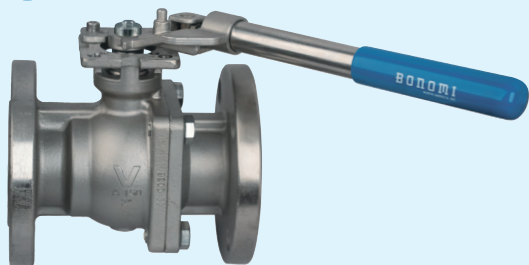
766000: size 1" to 4".

 Low temperature design
-40°C ON DEMAND



N POS	PART NAME	MATERIAL	N PCS
1	BODY	A351-CF8M	1
2	END CONNECTION	A351-CF8M	1
3	BALL	A479-304/A351-CF8	1
4	BALL SEAT	PTFE	2
5	SCREW	STAINLESS STEEL	4-8
6	BODY SEAL	GRAPHOIL	1
7	BODY SEAL	PTFE	1
8	STEM	A479-304	1
9	SCREW	STAINLESS STEEL	1
10	NUT	STAINLESS STEEL	1
11	NUT	STAINLESS STEEL	1
12	SPRING WASHER	STAINLESS STEEL	2
13	BUSH	A479-316	2
14	STEM SEAL	GRAPHOIL	1
15	O-RING	FKM (Viton)	1
16	STEM SEAL	PTFE	1
17	O-RING	FKM (Viton)	1
18	THRUST WASHER	PTFE	1
19	HANDLE	STAINLESS STEEL	1

SIZE	D	Y	Z	H	I	L	P	R	A	C	E mm	ØN	B	ISO 5211	B1	Break Torque in-Lbs	Cv	Weight Lbs
1"	4.33	3.13	4xØ0.63	0.57	2.13	5.00	3.66	6.30	2.72	0.43	9	1.97-F05	0.28	-	-	124	74.63	8.38
1 1/2"	5.12	3.88	4xØ0.63	0.69	2.99	6.50	4.65	9.45	3.70	0.55	11	2.76-F07	0.33	1.97-F05	M6	195	201.32	15.43
2"	5.91	4.04	4xØ0.75	0.77	3.33	7.01	5.00	9.45	4.06	0.53	11	2.76-F07	0.33	1.97-F05	M6	292	348.60	21.16
3"	7.48	6.00	4xØ 0.75	0.94	3.66	7.99	6.38	12.60	5.41	0.69	14	4.02-F10	0.43	2.76-F07	M10	637	1009.48	39.45
4"	9.06	7.50	8xØ0.75	0.94	3.92	9.02	6.97	14.96	6.04	0.75	17	4.02-F10	0.43	2.76-F07	M10	956	1577.34	53.56

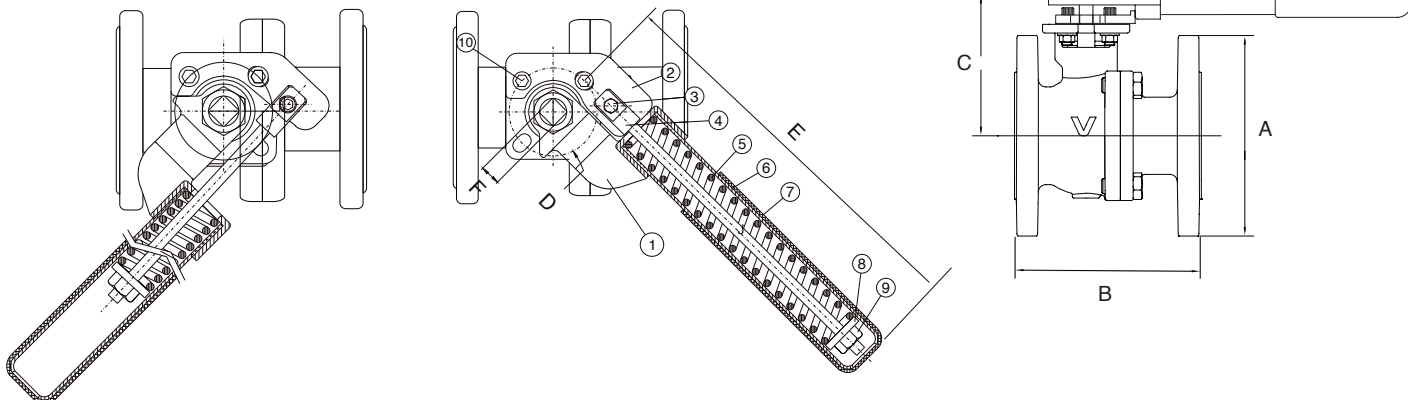


SERIES 766000 SRL DEADMAN SPRING RETURN

Deadman spring lever, Split Body style, ANSI 150 class flanged raised face stainless steel ball valve, full port.

- ISO 5211 mounting pad and stem.
- Blowout proof stem.
- Standard grounded ball & stem.
- Certified to API 607 and API 6FA.
- Designed to ANSI 16.5, 16.10, 16.34.
- TUV T.A. Luft approved.
- NACE MR 0175.

766000 SRL: size 1" to 2".



N POS	HANDLE COMPONENTS	MATERIAL
1	HANDLE HEAD	ASTM A351 - CF8M
2	ANCHOR	ASTM A351 - CF8M
3	ANCHOR SCREW	AISI 316
4	SPRING ROD	AISI 316
5	SPRING	AISI 301
6	HANDLE EXTENSION	AISI 304
7	SLEEVE	VINYL
8	WASHER	AISI 304
9	HEX NUT	AISI 304
10	SOCKET HEAD SCREW	AISI 304

SIZE	A	B	C	D ISO 5211	E	F (mm)
1"	4.33	5.00	2.72	F03	8.75	9
1 1/2"	5.12	6.50	3.70	F05	11.50	11
2"	5.91	7.01	4.06	F05	11.50	11

Valve materials and size: see Table page 98; Series 766000



SERIES 766001 CARBON STEEL DIRECT MOUNT BALL VALVE

Carbon steel, ANSI class 150 flanged ball valve, full port, with locking handle.

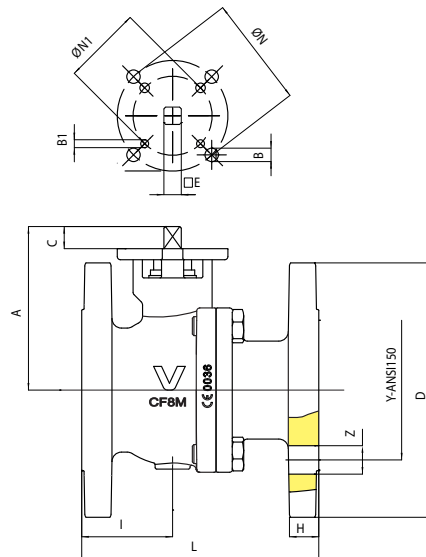
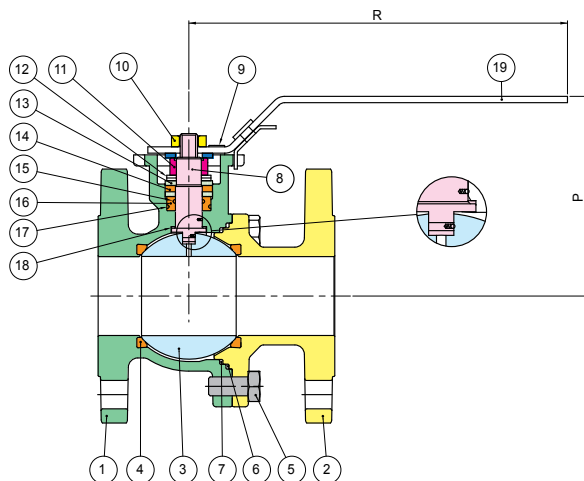
- Direct mount ISO 5211/square stem.
- Temperature range -4°F to 366°F.
- Blow-out proof stem, adjustable stem packing.
- PTFE seats, and FKM Viton O-rings.
- Fire Safe certified to API 607.
- 100% tested.
- ANSI B16.5, B16.10, B16.34 design.
- Antistatic Device.
- Standard locking handle.

766001: size 1" to 4".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 010.3



Low temperature design
-40°C ON DEMAND



N POS	PART NAME	MATERIAL	N POS
1	BODY	A352-LCB	1
2	END CONNECTION	A352-LCB	1
3	BALL	A479-304 A351-CF8	1
4	BALL SEAT	PTFE	2
5	SCREW	CARBON STEEL	4-8
6	BODY SEAL	GRAPHOIL	1
7	BODY SEAL	PTFE	1
8	STEM	A479-304	1
9	SCREW	CARBON STEEL	1
10	NUT	CARBON STEEL	1
11	NUT	CARBON STEEL	1
12	SPRING WASHER	CARBON STEEL	2
13	BUSH	A479-316	2
14	STEM SEAL	GRAPHOIL	1
15	O-RING	FKM (Viton)	1
16	STEM SEAL	PTFE	1
17	O-RING	FKM (Viton)	1
18	THRUST WASHER	PTFE	1
19	HANDLE	STAINLESS STEEL	1

SIZE	D	Y	Z	H	I	L	P	R	A	C	E mm	ØN	B	ISO 5211	B1	Break Torque in-Lbs	Cv	Weight Lbs
1"	4.33	3.13	4xØ0.63	0.57	2.13	5.00	3.66	6.30	2.72	0.43	9	1.97-F05	0.28	-	-	124	74.63	8.38
1 1/2"	5.12	3.88	4xØ0.63	0.69	2.99	6.50	4.65	9.45	3.70	0.55	11	2.76-F07	0.33	1.97-F05	M6	195	201.32	15.43
2"	5.91	4.04	4xØ0.75	0.77	3.33	7.01	5.00	9.45	4.06	0.53	11	2.76-F07	0.33	1.97-F05	M6	292	348.60	21.16
3"	7.48	6.00	4xØ 0.75	0.94	3.66	7.99	6.38	12.60	5.41	0.69	14	4.02-F10	0.43	2.76-F07	M10	637	1009.48	39.45
4"	9.06	7.50	8xØ0.75	0.94	3.92	9.02	6.97	14.96	6.04	0.75	17	4.02-F10	0.43	2.76-F07	M10	956	1577.34	53.56



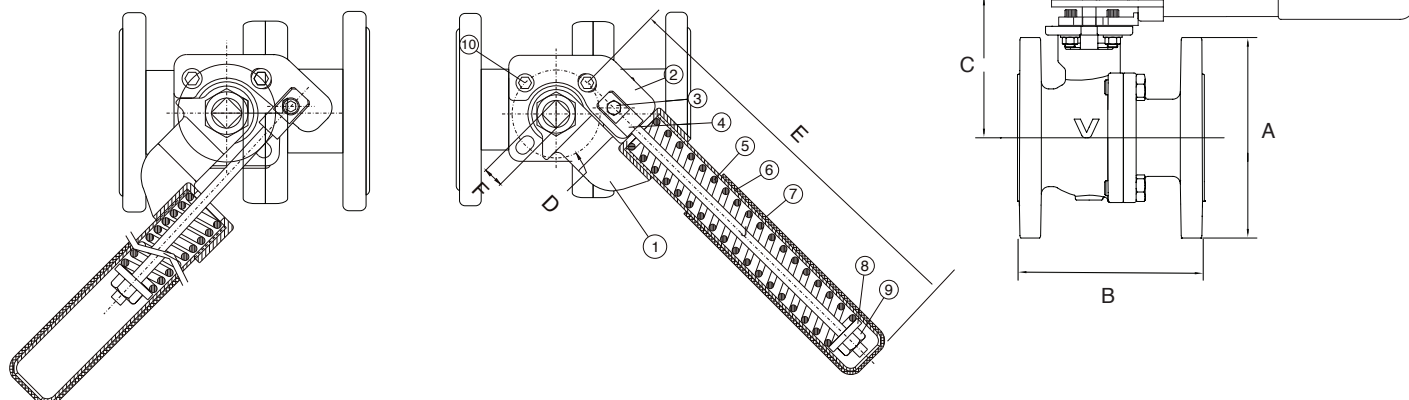
SERIES 766001 SRL DEADMAN SPRING RETURN

Carbon steel, ANSI class 150 flanged ball valve, full port, with locking handle.

- Direct mount ISO 5211/square stem.
- Temperature range -4°F to 366°F.
- Blow-out proof stem, adjustable stem packing.
- PTFE seats, and FKM Viton O-rings.
- Fire Safe certified to API 607.
- 100% tested.
- ANSI B16.5, B16.10, B16.34 design.
- Antistatic Device.
- Standard locking handle.

766001 SRL: size 1" to 2".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 010.3

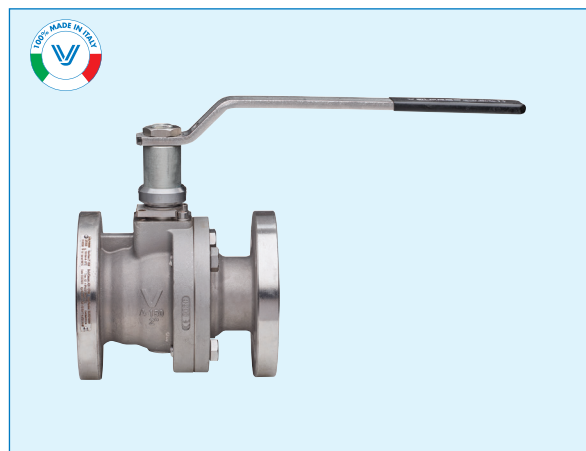


N POS	HANDLE COMPONENTS	MATERIAL
1	HANDLE HEAD	ASTM A351 - CF8M
2	ANCHOR	ASTM A351 - CF8M
3	ANCHOR SCREW	AISI 316
4	SPRING ROD	AISI 316
5	SPRING	AISI 301
6	HANDLE EXTENSION	AISI 304
7	SLEEVE	VINYL
8	WASHER	AISI 304
9	HEX NUT	AISI 304
10	SOCKET HEAD SCREW	AISI 304

SIZE	A	B	C	D ISO 5211	E	F (mm)
1"	4.33	5.00	2.72	F03	8.75	9
1 1/2"	5.12	6.50	3.70	F05	11.50	11
2"	5.91	7.01	4.06	F05	11.50	11

Valve materials and size: see Table page 96; Series 766001.

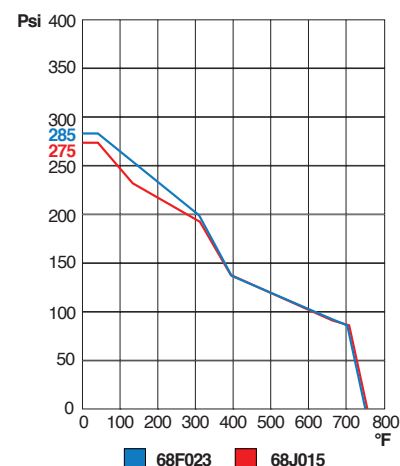
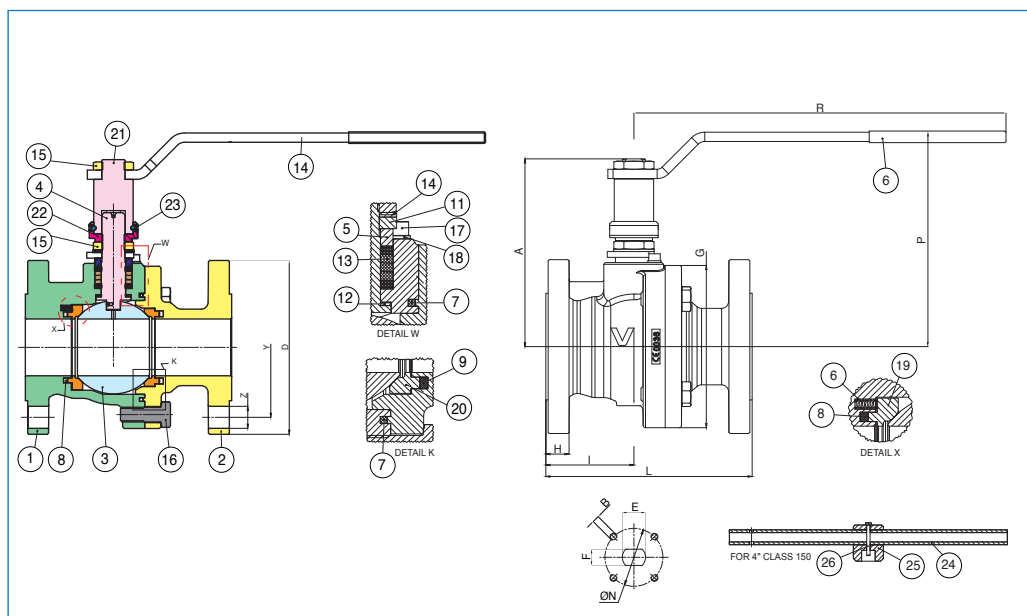
SPLIT-BODY METAL SEATS



SERIES 68F023 68J015 CARBON STEEL STAINLESS STEEL

- ANSI class 150, full port split body flanged ball valve with metal seats.
- API 608, ASME B16.34, ASME B16.10, ASME B16.5, ASME B1.1 design.
 - 100% tested according to API 598 standards.
 - Tungsten alloy lapped metal seats.
 - RPTFE packing and thrust washer.
 - Vacuum rating: 10-3 torr.
 - Full port, sizes 1/2" - 4".
 - Blow out proof stem, locking handle optional.
 - Fire Safe design.
 - Antistatic Device.
 - ISO 5208 leakage class A 1/2" to 2", class D 3" to 4".
 - ISO 5211 mounting pad with double "D" stem.
 - Temperature range: -4° F to 700° F.

NEW

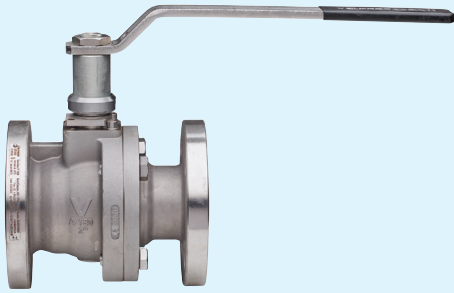


N POS	PART NAME	MATERIAL		N POS
		68F023	68J015	
1	BODY	A352-LCC	A351-CF8M	1
2	END CONNECTION	A352-LCC	A351-CF8M	1
3	BALL	A479-Tp316/A351 CF8M +CCC 150µm	A479-Tp316/A351 CF8M +CCC 150µm	1
4	STEM	A564 Tp630 H1 150D (17-4-PH)	A564 Tp630 H1 150D (17-4-PH)	1
5	BUSH	AISI 316	AISI 316	1
6	SPRING WASHER	INCONEL X750	INCONEL X750	6
7	BODY SEAT	GRAPHITE	GRAPHITE	1
8	SEAT GASKET	GRAPHITE	GRAPHITE	1
9	SEAT GASKET	GRAPHITE	GRAPHITE	1
10	HANDLE	Fe 37 + Z/P	Fe 37 + Z/P	1
11	90° STOP	AISI 316	AISI 316	1
12	ATEM SEAT	PMT 316 HT	PMT 316 HT	1
13	GRAPHITE PACK	GRAPHITE	GRAPHITE	1
14	SPRING WASHER	52CRV4 + Z/P	SS 304	2
15	NUT	CS 6S + Z/P	A2-70 (SS 304)	1-2
16	SCREW	A193 B8 Cl.2	A193 B8 Cl.2	4-8-12
17	SCREW	A2-70 (SS 304)	A2-70 (SS 304)	2
18	WASHER	AISI 316	AISI 316	2
19	METAL SEAT	A479-Tp316/A351 CF8M +CCC 150µm	A479-Tp316/A351 CF8M +CCC 150µm	1
20	METAL SEAT	A479-Tp316/A351 CF8M +CCC 150µm	A479-Tp316/A351 CF8M +CCC 150µm	1
21	EXTENSION	CARBON STEEL + Z/P	CARBON STEEL + Z/P	1
22	BUSH	CARBON STEEL + Z/P	CARBON STEEL + Z/P	1
23	SCREW	CARBON STEEL + Z/P	CARBON STEEL + Z/P	2
24	LEVER PIPE	FE 42 + Z/P	FE 42 + Z/P	1
25	BODY HANDLE	ASTM-A1905	ASTM-A1905	1
26	SCREW	A2-70 (ss 304)	A2-70 (ss 304)	1

Size	D	Y	ØZ	H	I	L	G	P	R	A	C	T	E	F	ØN	B	Cv	Break Torque in-Lbs	Weight Lbs
1/2"	3.74	2.63	4xØ16	0.58	2.47	5.51	3.23	5.98	6.85	4.49	0.85	0.27	M12	0.31	1.65 (F04)	M5	22.20	221.25	7.50
3/4"	4.53	3.25	4xØ16	0.64	2.64	5.98	3.54	6.14	6.85	4.65	0.83	0.27	M12	0.31	1.65 (F04)	M5	40.46	265.50	10.58
1"	4.92	3.50	4xØ19	0.70	2.78	6.50	4.13	5.94	9.84	5.00	1.14	0.37	M16	0.39	1.97 (F05)	M6	74.56	486.75	14.99
1-1/2"	6.10	4.50	4xØ22	0.83	4.09	7.48	5.04	6.97	12.64	6.06	1.40	0.61	M20	0.55	1.97 (F05)	M6	201.14	619.50	26.68
2"	6.50	5.00	8xØ19	0.91	3.54	8.50	5.51	11.26	12.64	6.38	1.46	0.65	M20	0.55	1.97 (F05)	M6	348.30	1416.00	31.75
3"	8.27	6.63	8xØ22	1.14	4.80	11.10	7.40	8.39	15.00	7.50	1.75	0.81	M24	0.71	4.02 (F10)	M10	1008.61	1991.25	71.65
4"	10.04	7.87	8xØ22	1.27	5.04	12.01	9.25	-	-	6.57	1.65	0.73	M24	0.71	4.02 (F10)	M10	1575.97	2832.00	136.91

VALPRES





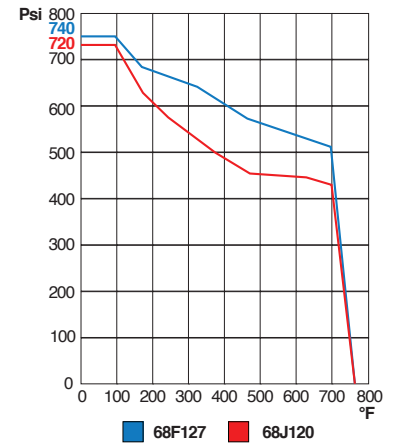
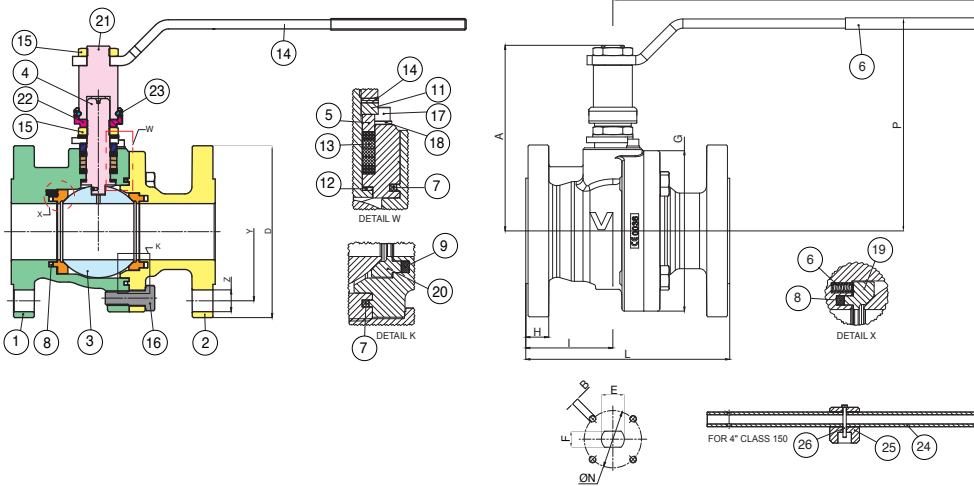
SERIES 68F127 68J120

CARBON STEEL STAINLESS STEEL

ANSI class 300, full port split body flanged ball valve with metal seats.

- API 608, ASME B16.34, ASME B16.10, ASME B16.5, ASME B1.1 design.
- 100% tested according to API 598 standards.
- Tungsten alloy lapped metal seats.
- RPTFE. packing and thrust washer.
- Vacuum rating: 10-3 torr.
- Full port, sizes 1/2" - 4".
- Blow out proof stem, locking handle optional.
- Fire Safe design.
- Antistatic Device.
- ISO 5208 leakage class A 1/2" to 2", class D 3" to 4".
- ISO 5211 mounting pad with double "D" stem.
- Temperature range: -4° F to 700° F.

NEW



N° POS	PART NAME	MATERIAL		N° POS
		68F127	68J120	
1	BODY	A352-LCC	A351-CF8M	1
2	END CONNECTION	A352-LCC	A351-CF8M	1
3	BALL	A479-Tp316/A351 CF8M +CCC 150µm	A479-Tp316/A351 CF8M +CCC 150µm	1
4	STEM	A564 Tp630 H1 150D (17-4-PH)	A564 Tp630 H1 150D (17-4-PH)	1
5	BUSH	AISI 316	AISI 316	1
6	SPRING WASHER	INCONEL X750	INCONEL X750	6
7	BODY SEAT	GRAPHITE	GRAPHITE	1
8	SEAT GASKET	GRAPHITE	GRAPHITE	1
9	SEAT GASKET	GRAPHITE	GRAPHITE	1
10	HANDLE	Fe 37 + Z/P	Fe 37 + Z/P	1
11	90° STOP	AISI 316	AISI 316	1
12	ATEM SEAT	PMT 316 HT	PMT 316 HT	1
13	GRAPHITE PACK	GRAPHITE	GRAPHITE	1
14	SPRING WASHER	52CRV4 + Z/P	SS 304	2
15	NUT	CS 6S + Z/P	A2-70 (SS 304)	1-2
16	SCREW	A193 B8 Cl.2	A193 B8 Cl.2	4-6
17	SCREW	A2-70 (SS 304)	A2-70 (SS 304)	2
18	WASHER	AISI 316	AISI 316	2
19	METAL SEAT	A479-Tp316/A351 CF8M +CCC 150µm	A479-Tp316/A351 CF8M +CCC 150µm	1
20	METAL SEAT	A479-Tp316/A351 CF8M +CCC 150µm	A479-Tp316/A351 CF8M +CCC 150µm	1
21	EXTENSION	CARBON STEEL + Z/P	CARBON STEEL + Z/P	1
22	BUSH	CARBON STEEL + Z/P	CARBON STEEL + Z/P	1
23	SCREW	CARBON STEEL + Z/P	CARBON STEEL + Z/P	2
24	LEVER PIPE	FE 42 + Z/P	FE 42 + Z/P	1
25	BODY HANDLE	ASTM-A1905	ASTM-A1905	1
26	SCREW	A2-70 (ss 304)	A2-70 (ss 304)	1

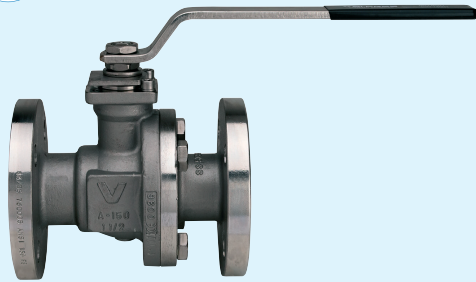
Size	D	Y	ØZ	H	I	L	G	P	R	A	C	T	E	F	ØN	B	Cv	Break Torque in-Lbs	Weight Lbs
1/2"	3.74	2.63	4xØ16	0.58	2.47	5.51	3.23	5.98	6.85	4.49	0.85	0.27	M12	0.31	1.65 (F04)	M5	22.20	221.25	7.50
3/4"	4.53	3.25	4xØ16	0.64	2.64	5.98	3.54	6.14	6.85	4.65	0.83	0.27	M12	0.31	1.65 (F04)	M5	40.46	265.50	10.58
1"	4.92	3.50	4xØ19	0.70	2.78	6.50	4.13	5.94	9.84	5.00	1.14	0.37	M16	0.39	1.97 (F05)	M6	74.56	486.75	14.99
1-1/2"	6.10	4.50	4xØ22	0.83	4.09	7.48	5.04	6.97	12.64	6.06	1.40	0.61	M20	0.55	1.97 (F05)	M6	201.14	619.50	26.68
2"	6.50	5.00	8xØ19	0.91	3.54	8.50	5.51	11.26	12.64	6.38	1.46	0.65	M20	0.55	1.97 (F05)	M6	348.30	1416.00	31.75
3"	8.27	6.63	8xØ22	1.14	4.80	11.10	7.40	8.39	15.00	7.50	1.75	0.81	M24	0.71	4.02 (F10)	M10	1008.61	1991.25	71.65
4"	10.04	7.87	8xØ22	1.27	5.04	12.01	9.25	-	-	6.57	1.65	0.73	M24	0.71	4.02 (F10)	M10	1575.97	2832.00	136.91

* Requires Gear Operator for Manual Use



VALPRES





SERIES 760005 STAINLESS STEEL BALL VALVE

Stainless steel, ANSI class 150 flanged ends ball valve, full port.

- Blow-out proof stem, adjustable stem packing.
- PTFE seats, packing and thrust washer.
- Standard grounded stem and ball.
- 100% tested.
- PED 97/23/CE.
- Locking handle plate.
- Temperature range -4°F to 366°F.
- ANSI B16.5, B16.10, B16.34 design.
- Fire Safe API 6FA-API 607.
- Antistatic Device.
- ISO 5211 mounting pad and double "D" stem.
- Fugitive emissions tested to ISO 15848-1.

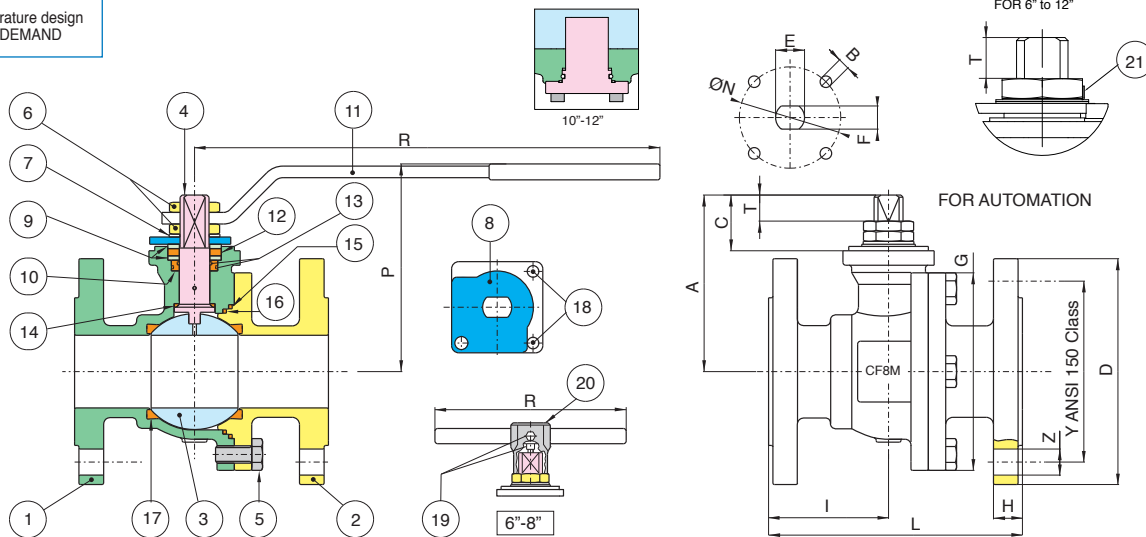
F.E. TESTED
ISO 15848-1

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.

760005: sizes 1/2" to 12" (10" and 12" TRUNNION).

760021: STEAM SERVICE TRIM - sizes 1/2" to 8".

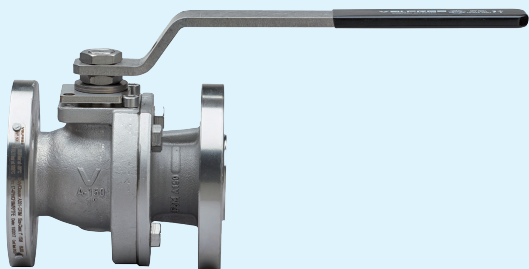
760V05: V-PACK AVAILABLE - sizes 1/2" to 8".



N POS	PART NAME	MATERIAL	N POS
1	BODY	A351 CF8M	1
2	END CONNECTION	A351 CF8M	1
3	BALL	A479-316/A351-CF8M	1
4	STEM	A479-316	1
5	SCREW	STAINLESS STEEL	4-8-12
6	NUT	STAINLESS STEEL	1-2
7	SPRING WASHER	STAINLESS STEEL	2
8	TRAVEL STOP	STAINLESS STEEL	1
9	PACKING GLAND	STAINLESS STEEL	2
10	STEM SEAL	PTFE	1
11	HANDLE	STAINLESS STEEL	1
12	STEM SEAL	GRAPHOIL	1
13	O-RING	FKM (Viton)	2
14	THRUST WASHER	PTFE	1
15	SEAL	GRAPHOIL	1
16	SEAL	PTFE	1
17	BALL SEATS	PTFE	2
18	SCREW	STAINLESS STEEL	2
19	SCREW	STAINLESS STEEL	2
20	BODY HANDLE	CAST IRON	1
21	UNSCREWING GROWER	A182-F316	1

SIZE	D	Y	Z	H	I	L	G	P	R	A	C	T	E	F	ISO 5211 ØN	B	Break Torque in-Lbs	Cv	Weight Lbs
1/2"	3.54	2.38	4xØ0.63	0.45	1.83	4.25	2.80	3.46	5.16	2.05	0.75	0.31	M10	0.28	1.65-F04	M5	35	22.21	4.21
3/4"	3.94	2.76	4xØ0.63	0.51	2.09	4.61	2.89	3.66	5.16	2.20	0.75	0.31	M10	0.28	1.65-F04	M5	115	40.50	5.36
1"	4.33	3.13	4xØ0.63	0.57	2.34	5.00	3.56	3.50	6.85	2.85	1.08	0.51	M12	0.31	1.97-F05	M6	124	74.63	8.15
1 1/2"	5.12	3.88	4xØ0.63	0.69	3.03	6.50	4.49	5.24	9.84	4.17	1.18	0.39	M16	0.39	1.97-F05	M6	195	201.32	15.65
2"	5.91	4.74	4xØ0.75	0.77	3.39	7.01	5.37	5.67	12.64	4.80	1.52	0.71	M20	0.55	2.76-F07	M8	292	348.60	23.80
2 1/2"	7.01	5.49	4xØ0.75	0.69	3.74	7.48	6.3	6.24	13.59	6.03	1.61	0.71	M20	0.63	F07	M8	620	631.37	35.71
3"	7.48	6.00	4xØ0.75	0.94	3.13	7.99	7.03	6.81	15.00	5.94	1.69	0.71	M24	0.71	4.02-F10	M10	637	1009.48	47.61
4"	9.06	7.50	8xØ0.75	0.94	4.33	9.02	8.21	7.36	15.00	6.50	1.69	0.71	M24	0.71	4.02-F10	M10	956	1577.34	67.00
6"	11.02	9.51	8xØ0.87	1.00	7.13	15.51	12.24	12.01	27.56	9.65	2.68	1.61	M42	1.18	4.92-F12	M12	2903	4247.46	171.91
8"	13.58	11.75	8xØ0.87	1.14	8.35	17.99	15.83	13.70	27.56	11.34	2.68	1.61	M42	1.18	4.92-F12	M12	5824	7886.81	274.62
10" *	15.94	14.25	12xØ1.02	1.27	11.88	20.98	19.69	-	-	13.90	3.19	1.85	M52	1.50	5.51-F14	M16	-	12924.50	429.78
12" *	19.09	17.00	12xØ1.02	1.33	13.93	24.02	22.05	-	-	15.12	3.19	1.85	M52	1.50	5.51-F14	M16	-	19444.08	559.82

* TRUNNION supplied without handle.



SERIES 68J000 API 608 STAINLESS STEEL BALL VALVE

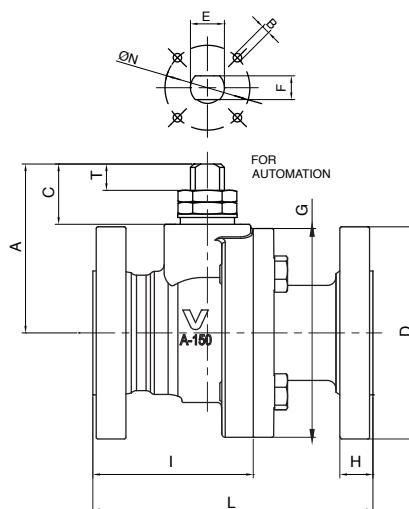
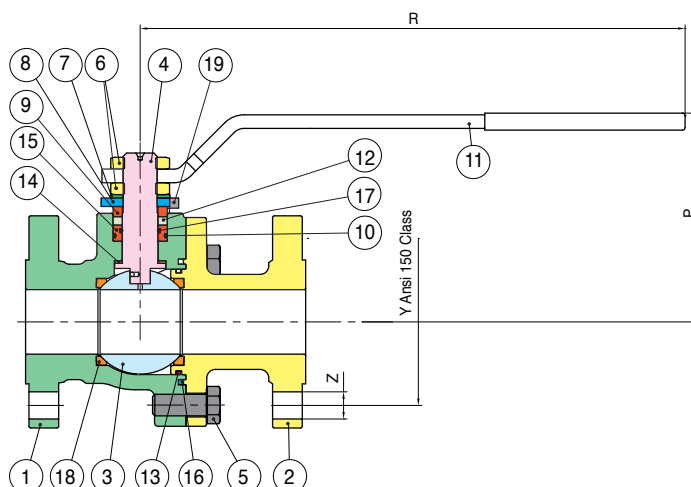
Stainless steel, ANSI class 150, flanged ball valve, full port.

- API 608, ASME B16.34, ASME B16.10, ASME B16.5, ASME B1.1 design.
- Temperature range -4°F to 366°F.
- 100% tested according to API 598 standards.
- RTFE seats, packing and thrust washer.
- Blow-out proof stem, locking handle.
- Fire Safe design.
- Antistatic Device.
- ISO 5211 mounting pad with double "D" stem.
- Locking device.

68J000: sizes 1/2" to 6".

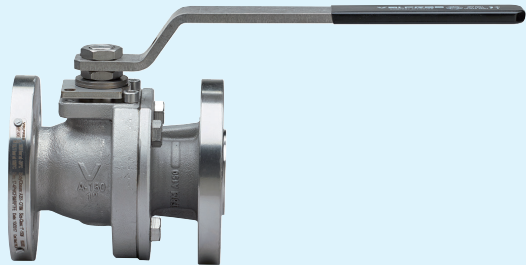
Temperature range: -20° +180°
Vacuum: 10⁻³ torr.

Low temperature design
-40°C ON DEMAND



N POS	PART NAME	MATERIAL	N POS
1	BODY	A351-CF8M	1
2	END CONNECTION	A351-CF8M	1
3	BALL	A479-Tp316	1
4	STEM	A564 Tp630 H1150D (17-4-PH)	1
5	SCREW	A193 B8 Cl.2	4-8-12
6	NUT	STAINLESS STEEL	2
7	SPRING WASHER	A182-F304	2
8	90° STOP	AISI 316	1
9	BUSH	A479-Tp316L	1
10	O-RING	FKM (Viton)	1
11	HANDLE	AISI 316	1
12	STEM SEAL	GRAPHITE	1
13	O-RING	FKM (Viton)	1
14	THRUST WASHER	RPTFE	1
15	O-RING BUSH	A479-Tp316L	1
16	BODY SEAT	GRAPHITE	1
17	O-RING	FKM (Viton)	2
18	BALL SEAT	RPTFE	2
19	SCREW	A2-70	1

SIZE	D	Y	Z	H	I	L	G	P	R	A	C	T	E	F	ISO 5211 ON	B	Break Torque in-Lbs	Cv	Weight Lbs
1/2"	3.54	2.37	4xØ0.63	0.46	1.79	4.25	3.23	3.74	6.85	2.13	0.85	0.27	M12	8	1.65-F04	M5	66.38	16.59	5.29
3/4"	3.94	2.75	4xØ0.63	0.53	1.91	4.61	3.54	3.90	6.85	2.28	0.83	0.27	M12	8	1.65-F04	M5	115.05	30.25	7.28
1"	4.33	3.13	4xØ0.63	0.58	2.09	5.00	4.13	3.94	9.84	2.94	1.14	0.37	M16	10	1.96-F05	M6	168.15	55.75	10.61
1 1/2"	4.92	3.87	4xØ0.63	0.71	3.72	6.50	4.84	4.84	12.64	3.94	1.40	0.61	M20	14	1.96-F05	M6	327.45	150.39	19.18
2"	5.91	4.74	4xØ0.63	0.77	2.99	7.01	5.51	5.24	12.64	4.27	1.44	0.65	M20	14	1.96-F05	M6	495.60	260.41	26.24
3"	7.48	6.00	4xØ0.63	0.96	3.35	7.99	7.40	6.57	15.00	5.89	1.75	0.81	M24	18	2.75-F07	M8	1053.15	754.11	53.14
4"	9.06	7.50	4xØ0.63	0.96	3.54	9.02	9.25	7.32	15.00	6.57	1.67	0.73	M24	18	4.01-F10	M10	1654.95	1178.31	84.89
6"	11.02	9.50	4xØ0.63	1.02	9.49	15.51	12.40	0.00	0.00	9.65	2.68	1.61	M42	30	4.92-F12	M12	4469.25	3172.95	189.19



SERIES 68R015 API 608 SUPER DUPLEX STAINLESS STEEL BALL VALVE

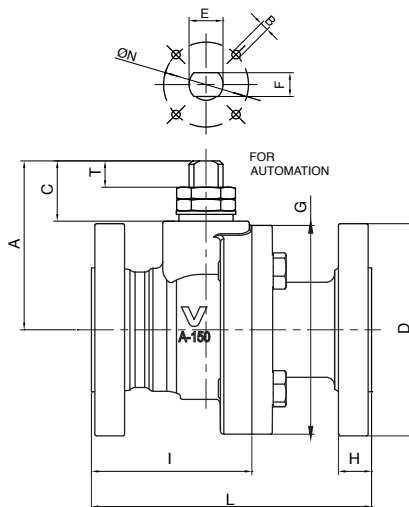
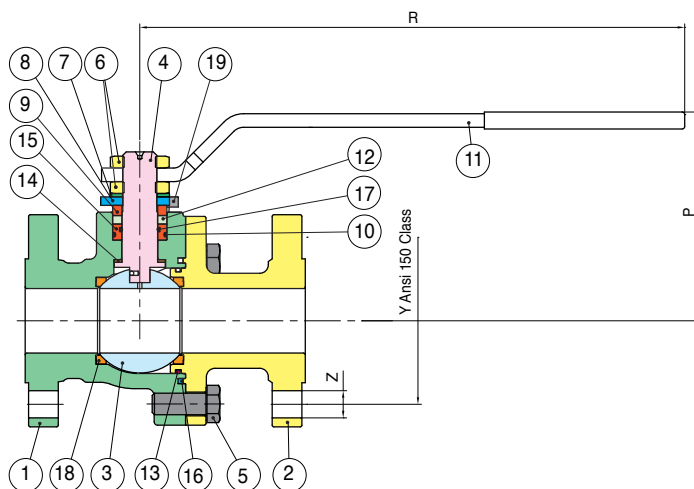
- Super Duplex Stainless steel, ANSI class 150, flanged ball valve, full port.
- API 608, ASME B16.34, ASME B16.10, ASME B16.5, ASME B1.1 design.
 - Temperature range: -4°F to 366°F.
 - 100% tested according to API 598 standards.
 - RTFE seats, packing and thrust washer.
 - Blow-out proof stem, locking handle.
 - Fire Safe design.
 - Antistatic Device.
 - ISO 5211 mounting pad with double "D" stem.
 - Locking device.

68R015: sizes 1/2" to 6".

Temperature range: -20° +180°
Vacuum: 10⁻³ torr.

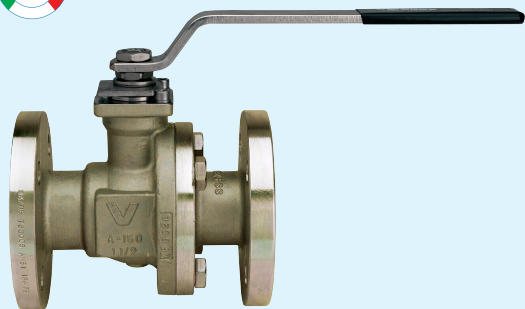


Low temperature design
-40°C ON DEMAND



N POS	PART NAME	MATERIAL	N PCS
1	BODY	UNS S32760 (ASTM A995-Gr. 6)	1
2	END CONNECTION	UNS S32760 (ASTM A995-Gr. 6)	1
3	BALL	UNS S32760 (ASTM A995-Gr. 6)/A479-F55	1
4	STEM	A479-F55 / A182-F55	1
5	SCREW	A193 B8 Cl.2	4-6-12
6	NUT	STAINLESS STEEL	2
7	SPRING WASHER	STAINLESS STEEL	2
8	90° STOP	AISI 316	1
9	BUSH	A479-Tp316L	1
10	O-RING	FKM (Viton)	1
11	HANDLE	AISI 316	1
12	STEM SEAL	GRAPHITE	1
13	O-RING	FKM (Viton)	1
14	THRUST WASHER	RPTFE	1
15	O-RING BUSH	A479-Tp316L	1
16	BODY SEAT	GRAPHITE	1
17	O-RING	FKM (Viton)	2
18	BALL SEAT	RPTFE	2
19	SCREW	A2-70	1

SIZE	D	Y	Z	H	I	L	G	P	R	A	C	T	E	F	ISO 5211 QN	B	Break Torque in-Lbs	Cv	Weight Lbs
1/2"	3.54	2.37	4xØ0.63	0.46	1.79	4.25	3.23	3.74	6.85	2.13	0.85	0.27	M12	8	1.65-F04	M5	66.38	16.59	5.29
3/4"	3.94	2.75	4xØ0.63	0.53	1.91	4.61	3.54	3.90	6.85	2.28	0.83	0.27	M12	8	1.65-F04	M5	115.05	30.25	7.28
1"	4.33	3.13	4xØ0.63	0.58	2.09	5.00	4.13	3.94	9.84	2.94	1.14	0.37	M16	10	1.96-F05	M6	168.15	55.75	10.61
1 1/2"	4.92	3.87	4xØ0.63	0.71	3.72	6.50	4.84	4.84	12.64	3.94	1.40	0.61	M20	14	1.96-F05	M6	327.45	150.39	19.18
2"	5.91	4.74	4xØ0.63	0.77	2.99	7.01	5.51	5.24	12.64	4.27	1.44	0.65	M20	14	1.96-F05	M6	495.60	260.41	26.24
3"	7.48	6.00	4xØ0.63	0.96	3.35	7.99	7.40	6.57	15.00	5.89	1.75	0.81	M24	18	2.75-F07	M8	1053.15	754.11	53.14
4"	9.06	7.50	4xØ0.63	0.96	3.54	9.02	9.25	7.32	15.00	6.57	1.67	0.73	M24	18	4.01-F10	M10	1654.95	1178.31	84.89
6"	11.02	9.50	4xØ0.63	1.02	9.49	15.51	12.40	0.00	0.00	9.65	2.68	1.61	M42	30	4.92-F12	M12	4469.25	3172.95	189.19



SERIES 762000 CARBON STEEL BALL VALVE

F.E. TESTED
ISO 15848-1

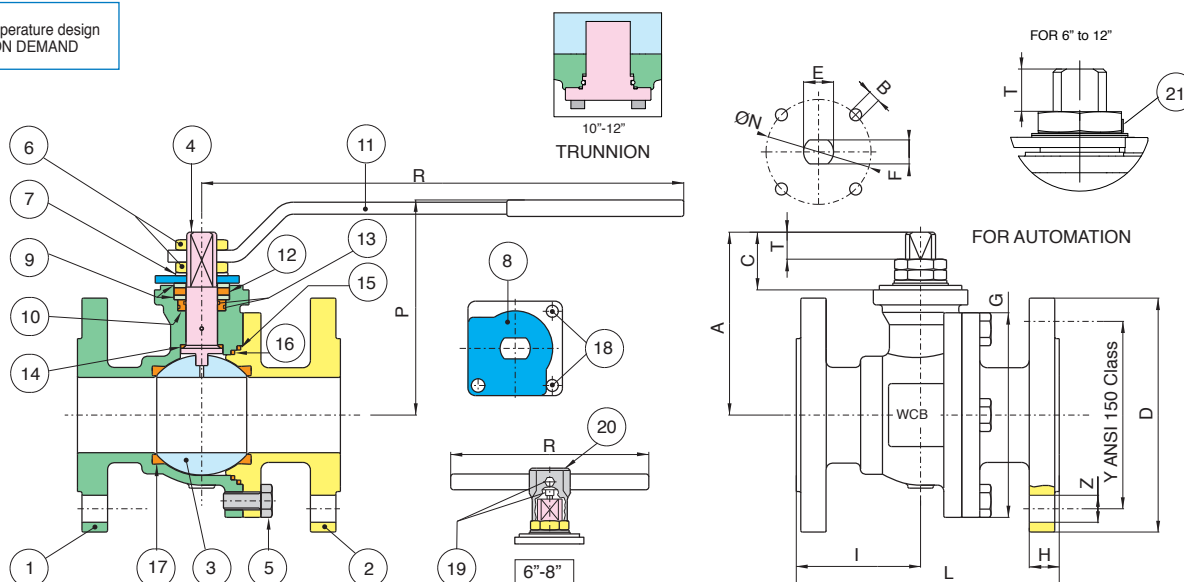
Carbon steel, ANSI class 150 flanged ball valve, full port.

- Temperature range -4°F to 366°F.
 - Blow-out proof stem, adjustable stem packing.
 - PTFE seats, packing and thrust washer.
 - 100% tested.
 - PED 97/23/CE.
 - Locking handle plate.
 - ANSI B16.5, B16.10, B16.34 design.
 - Fire Safe API 6FA-API 607.
 - Antistatic Device.
 - ISO 5211 mounting pad with double "D" stem.
 - Fugitive emissions tested to ISO 15848-1.
- 762000** sizes 1/2" to 12" (10" and 12" TRUNNION).
762V00: V-PACK AVAILABLE - sizes 1/2" to 8".
760137: STEAM SERVICE TRIM - sizes 1/2" to 8".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.



Low temperature design
-40°C ON DEMAND



QTY	PART NAME	MATERIAL	QTY
1	BODY	A216 WCB	1
2	END CONNECTION	A216 WCB	1
3	BALL	A479-304/A351 CF8	1
4	STEM	A479-304	1
5	SCREW	STAINLESS STEEL	4-8-12
6	NUT	STAINLESS STEEL	1-2
7	SPRING WASHER	STEEL	2
8	TRAVEL STOP	STEEL	1
9	PACKING GLAND	STEEL	2
10	STEM SEAL	PTFE	1
11	HANDLE	STEEL	1
12	STEM SEAL	GRAPHOIL	1
13	O-RING	FKM (Viton)	2
14	THRUST WASHER	PTFE	1
15	SEAL	GRAPHOIL	1
16	SEAL	PTFE	1
17	BALL SEATS	PTFE	2
18	SCREW	STEEL	2
19	SCREW	STEEL	2
20	BODY HANDLE	CAST IRON	1
21	UNSCREWING GROWER	A182-F316	1

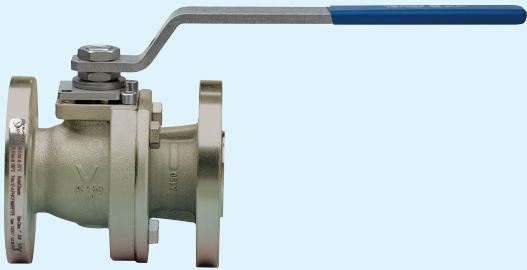
SIZE	D	Y	Z	H	I	L	G	P	R	A	C	T	E	F	ISO 5211 ØN	B	Break Torque in-Lbs	Cv	Weight Lbs
1/2"	3.54	2.38	4xØ0.63	0.45	1.83	4.25	2.80	3.46	5.16	2.05	0.75	0.31	M10	0.28	1.65-F04	M5	35	22.21	4.21
3/4"	3.94	2.76	4xØ0.63	0.51	2.09	4.61	2.89	3.66	5.16	2.20	0.75	0.31	M10	0.28	1.65-F04	M5	115	40.50	5.36
1"	4.33	3.13	4xØ0.63	0.57	2.34	5.00	3.56	3.50	6.85	2.85	1.08	0.51	M12	0.31	1.97-F05	M6	124	74.63	8.15
1 1/2"	5.12	3.88	4xØ0.63	0.69	3.03	6.50	4.49	5.24	9.84	4.17	1.18	0.39	M16	0.39	1.97-F05	M6	195	201.32	15.65
2"	5.91	4.74	4xØ0.75	0.77	3.39	7.01	5.37	5.67	12.64	4.80	1.52	0.71	M20	0.55	2.76-F07	M8	292	348.60	23.80
3"	7.48	6.00	4xØ0.75	0.94	3.13	7.99	7.03	6.81	15.00	5.94	1.69	0.71	M24	0.71	4.02-F10	M10	637	1009.48	47.61
4"	9.06	7.50	8xØ0.75	0.94	4.33	9.02	8.21	7.36	15.00	6.50	1.69	0.71	M24	0.71	4.02-F10	M10	956	1577.34	67.00
6"	11.02	9.51	8xØ0.87	1.00	7.13	15.51	12.24	12.01	27.56	9.65	2.68	1.61	M42	1.18	4.92-F12	M12	2903	4247.46	171.91
8"	13.58	11.75	8xØ0.87	1.14	8.35	17.99	15.83	13.70	27.56	11.34	2.68	1.61	M42	1.18	4.92-F12	M12	5824	7886.81	274.62
10" *	15.94	14.25	12xØ1.02	1.27	11.88	20.98	19.69	-	-	13.90	3.19	1.85	M52	1.50	5.51-F14	M16	-	12924.50	429.78
12" *	19.09	17.00	12xØ1.02	1.33	13.93	24.02	22.05	-	-	15.12	3.19	1.85	M52	1.50	5.51-F14	M16	-	19444.08	559.82

* TRUNNION supplied without handle.



VALPRES





SERIES 68F000

API 608 CARBON STEEL BALL VALVE

Carbon steel, ANSI class 150, flanged ball valve, full port.

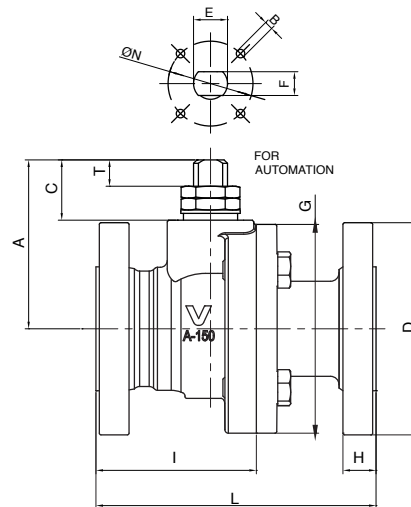
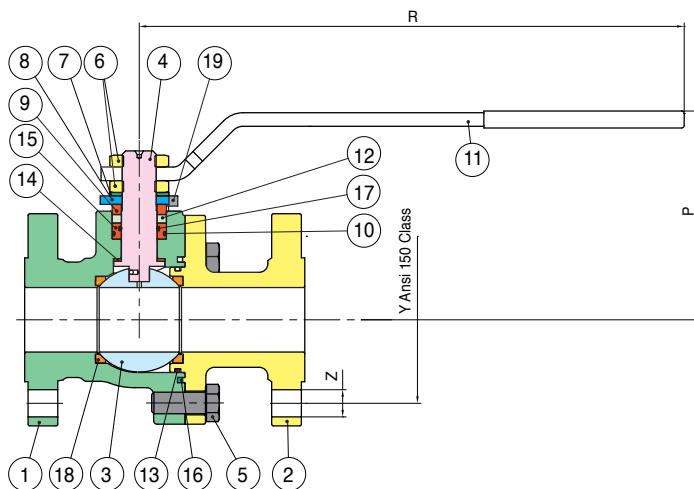
- API 608, ASME B16.34, ASME B16.10, ASME B16.5, ASME B1.1 design.
- 100% tested according to API 598 standards.
- RTFE seats, packing and thrust washer.
- Blow-out proof stem, locking handle.
- Fire Safe design.
- Antistatic Device.
- ISO 5211 mounting pad with double "D" stem.
- Locking device.
- Temperature range -4°F to 366°F.

68F000: sizes 1/2" to 6".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.

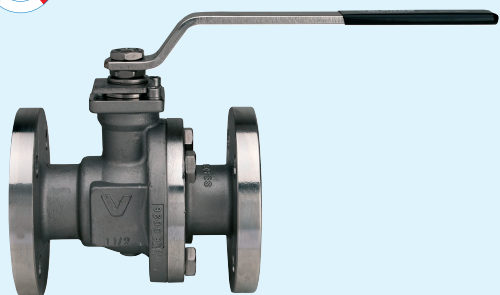
Temperature range: -20° +180°
Vacuum: 10⁻³ torr.

Low temperature design
-40°C ON DEMAND



N POS	PART NAME	MATERIAL	N PCS
1	BODY	A352-LCC	1
2	END CONNECTION	A352-LCC	1
3	BALL	A479-Tp316	1
4	STEM	A564-Tp316 H1150D (17-4-PH)	1
5	SCREW	A32017	4-8-12
6	NUT	CARBON STEEL	2
7	SPRING WASHER	CARBON STEEL	2
8	90° STOP	AISI 316	1
9	BUSH	A479-Tp316L	1
10	O-RING	FKM (Viton)	1
11	HANDLE	CARBON STEEL	1
12	STEM SEAL	GRAPHITE	1
13	O-RING	FKM (Viton)	1
14	THRUST WASHER	RPTFE	1
15	O-RING BUSH	A479-Tp316L	1
16	BODY SEAT	GRAPHITE	1
17	O-RING	FKM (Viton)	2
18	BALL SEAT	RPTFE	2
19	SCREW	CARBON STEEL	1

SIZE	D	Y	Z	H	I	L	G	P	R	A	C	T	E	F	ISO 5211 ON	B	Break Torque in-Lbs	Cv	Weight Lbs
1/2"	3.54	2.37	4xØ0.63	0.46	1.79	4.25	3.23	3.74	6.85	2.13	0.85	0.27	M12	8	1.65-F04	M5	66.38	16.59	5.29
3/4"	3.94	2.75	4xØ0.63	0.53	1.91	4.61	3.54	3.90	6.85	2.28	0.83	0.27	M12	8	1.65-F04	M5	115.05	30.25	7.28
1"	4.33	3.13	4xØ0.63	0.58	2.09	5.00	4.13	3.94	9.84	2.94	1.14	0.37	M16	10	1.96-F05	M6	168.15	55.75	10.61
1 1/2"	4.92	3.87	4xØ0.63	0.71	3.72	6.50	4.84	4.84	12.64	3.94	1.40	0.61	M20	14	1.96-F05	M6	327.45	150.39	19.18
2"	5.91	4.74	4xØ0.75	0.77	2.99	7.01	5.51	5.24	12.64	4.27	1.44	0.65	M20	14	1.96-F05	M6	495.60	260.41	26.24
3"	7.48	6.00	4xØ0.75	0.96	3.35	7.99	7.40	6.57	15.00	5.89	1.75	0.81	M24	18	2.75-F07	M8	1053.15	754.11	53.14
4"	9.06	7.50	8xØ0.75	0.96	3.54	9.02	9.25	7.32	15.00	6.57	1.67	0.73	M24	18	4.01-F10	M10	1654.95	1178.31	84.89
6"	11.02	9.50	8xØ0.87	1.02	9.49	15.51	12.40	0.00	0.00	9.65	2.68	1.61	M42	30	4.92-F12	M12	4469.25	3172.95	189.19



SERIES 761030 STAINLESS STEEL BALL VALVE

F.E. TESTED
ISO 15848-1

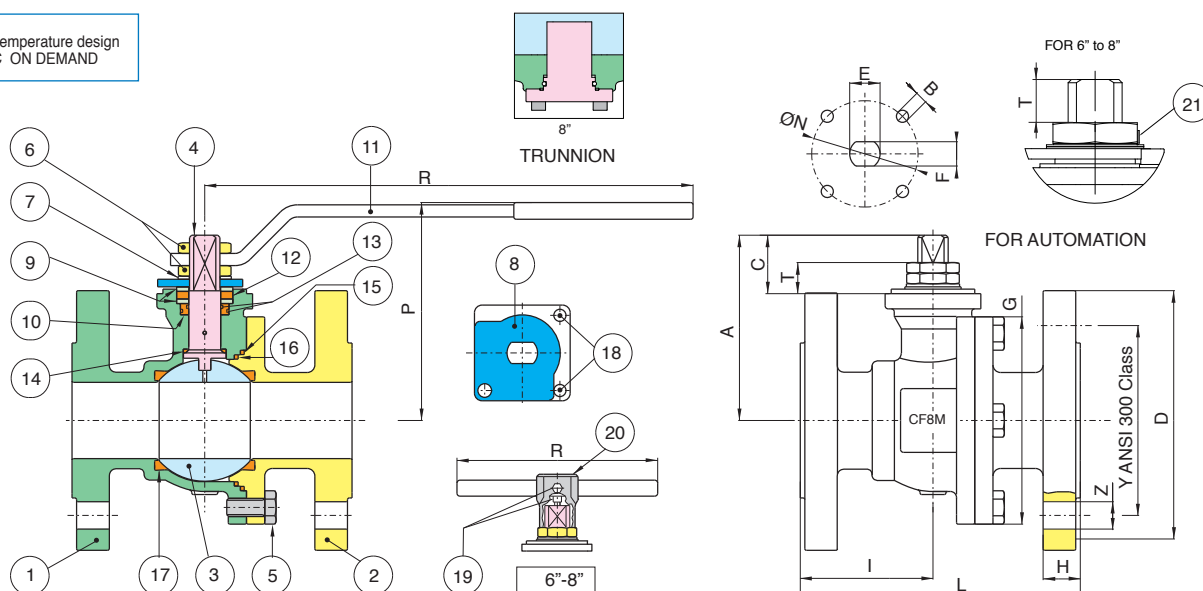
Stainless steel, ANSI class 300 flanged ball valve, full port.

- Blow-out proof stem, adjustable stem packing.
- RTFE seats, packing and thrust washer.
- 100% tested.
- PED 97/23/CE.
- Locking handle plate.
- Temperature range -4°F to 366°F.
- ANSI B16.5, B16.10, B16.34 design.
- Fire Safe API 6FA-API 607.
- Antistatic Device.
- ISO 5211 mounting pad with double "D" stem.
- Fugitive emissions tested to ISO 15848-1.

761030: sizes 1/2" to 8" (8" TRUNNION).

760195: STEAM SERVICE TRIM - size 1/2" to 6".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.



N POS	PART NAME	MATERIAL	N POS
1	BODY	CF8M	1
2	END CONNECTION	CF8M	1
3	BALL	A479-316/A351-CF8M	1
4	STEM	A479-316	1
5	SCREW	STAINLESS STEEL	4-8-12
6	NUT	STAINLESS STEEL	1-2
7	SPRING WASHER	STAINLESS STEEL	2
8	TRAVEL STOP	STAINLESS STEEL	1
9	PACKING GLAND	STAINLESS STEEL	2
10	STEM SEAL	PTFE	1
11	HANDLE	STAINLESS STEEL	1
12	STEM SEAL	GRAPHOIL	1
13	O-RING	FKM (Viton)	2
14	THRUST WASHER	PTFE	1
15	SEAL	PTFE	1
16	SEAL	PTFE	1
17	BALL SEATS	RPTFE	2
18	SCREW	STAINLESS STEEL	2
19	SCREW	STAINLESS STEEL	2
20	BODY HANDLE	CAST IRON	1
21	UNSCREWING GROWER	A182-F316	1

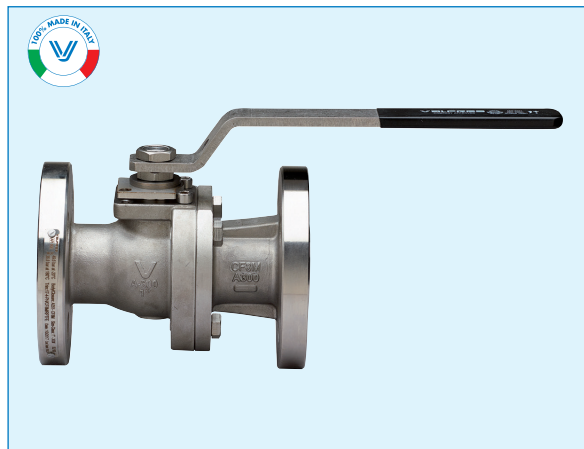
SIZE	D	Y	Z	H	I	L	G	P	R	A	C	T	E	F	ISO 5211 QN	B	Break Torque in-Lbs	Cv	Weight Lbs
1/2"	3.74	2.62	4xØ0.63	0.57	2.42	5.51	3.35	3.46	5.16	2.05	0.75	0.31	M10	0.28	1.65-F04	M5	44	22.21	5.07
3/4"	4.53	3.25	4xØ0.75	0.63	2.40	5.98	3.07	3.66	5.16	2.20	0.75	0.31	M10	0.28	1.65-F04	M5	142	40.50	7.71
1"	4.92	3.50	4xØ0.79	0.69	2.78	6.50	3.78	4.29	6.85	2.85	1.08	0.51	M12	0.31	1.97-F05	M6	150	74.63	11.46
1 1/2"	6.10	4.51	4xØ0.87	0.83	3.09	7.48	4.96	5.24	9.84	4.21	1.18	0.39	M16	0.39	1.97-F05	M6	240	201.32	22.04
2"	6.50	5.00	8xØ0.79	0.89	3.39	8.50	5.37	5.67	12.64	4.80	1.52	0.71	M20	0.55	2.76-F07	M8	345	348.60	26.45
3"	8.27	6.63	8xØ0.87	1.14	3.19	11.14	7.03	6.81	15.00	5.94	1.69	0.71	M24	0.71	4.02-F10	M10	770	1009.48	59.51
4"	10.04	7.87	8xØ0.87	1.26	3.48	12.01	8.62	7.36	15.00	6.50	1.69	0.71	M24	0.71	4.02-F10	M10	1160	1577.34	90.36
6"	12.60	10.63	12xØ0.87	1.46	6.77	15.87	12.05	12.01	27.56	9.65	2.68	1.61	M42	1.18	4.92-F12	M12	1240	4247.46	204.97
8" *	15.00	12.99	12xØ1.02	1.63	9.88	19.76	16.14	13.70	27.56	11.34	2.70	1.61	M42	1.18	4.92-F12	M12	3505	7886.81	332.80

* TRUNNION max Δp= 362 psi.



VALPRES





SERIES 68J100 API 608 STAINLESS STEEL BALL VALVE

Stainless steel, ANSI class 300, flanged ball valve, full port.

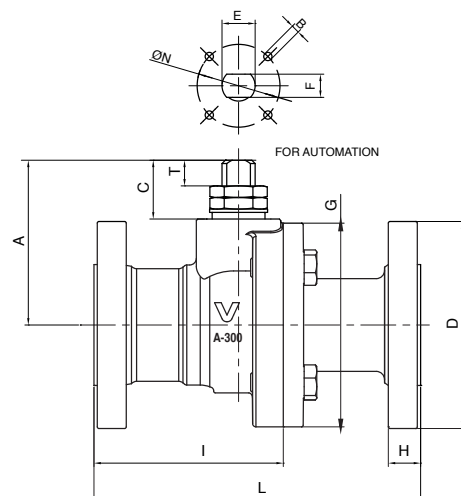
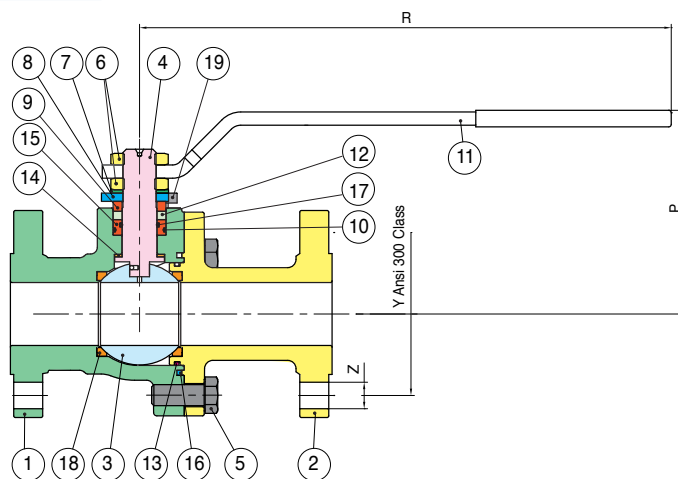
- API 608, ASME B16.34, ASME B16.10, ASME B16.5, ASME B1.1 design.
- Temperature range -4°F to 366°F.
- 100% tested according to API 598 standards.
- RTFE seats, packing and thrust washer.
- Blow-out proof stem, locking handle.
- Fire Safe design.
- Antistatic Device.
- ISO 5211 mounting pad with double "D" stem.
- Locking device.

68J100: sizes 1/2" to 6".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.

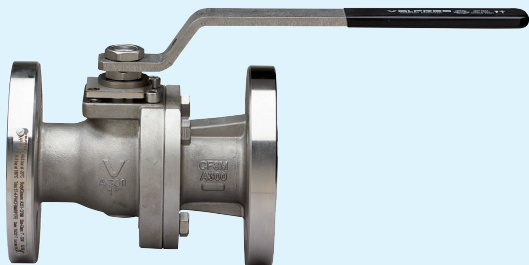
Temperature range: -20° +180°
Vacuum: 10⁻⁶ torr.

Low temperature design
-40°C ON DEMAND



N POS	PART NAME	MATERIAL	N PCS
1	BODY	A351-CF8M	1
2	END CONNECTION	A351-CF8M	1
3	BALL	A479-Tp316	1
4	STEM	A564 Tp630 H1150D (17-4-PH)	1
5	SCREW	A193 B8 Cl.2	4+8-12
6	NUT	STAINLESS STEEL	2
7	SPRING WASHER	A182-F304	2
8	90° STOP	AISI 316	1
9	BUSH	A479-Tp316L	1
10	O-RING	FKM (Viton)	1
11	HANDLE	AISI 316	1
12	STEM SEAL	GRAPHITE	1
13	O-RING	FKM (Viton)	1
14	THRUST WASHER	RPTFE	1
15	O-RING BUSH	A479-Tp316L	1
16	BODY SEAT	GRAPHITE	1
17	O-RING	FKM (Viton)	2
18	BALL SEAT	RPTFE	2
19	SCREW	A2-70	1

SIZE	D	Y	Z	H	I	L	G	P	R	A	C	T	E	F	ISO 5211 ØN	B	Break Torque in-Lbs	Cv	Weight Lbs
1/2"	3.54	2.63	4xØ0.63	0.58	2.47	5.51	3.23	3.74	6.85	2.13	0.85	0.27	M12	8	1.65-F04	M5	110.63	16.59	6.84
3/4"	3.94	3.25	4xØ0.75	0.64	2.64	5.98	3.54	3.90	6.85	2.28	0.83	0.27	M12	8	1.65-F04	M5	168.15	30.25	9.92
1"	4.33	3.50	4xØ0.75	0.70	2.78	6.50	4.13	3.94	9.84	2.94	1.14	0.37	M16	10	1.96-F05	M6	247.80	55.75	14.11
1 1/2"	4.92	4.50	4xØ0.86	0.83	4.09	7.48	5.04	4.84	12.64	3.90	1.40	0.61	M20	14	1.96-F05	M6	429.23	150.39	25.58
2"	5.91	5.00	8xØ0.75	0.91	3.54	8.50	5.51	5.24	12.64	4.29	1.44	0.65	M20	14	1.96-F05	M6	601.80	260.41	31.75
3"	7.48	6.63	8xØ0.86	1.14	4.80	11.10	7.40	6.57	15.00	5.91	1.75	0.81	M24	18	2.75-F07	M8	1389.45	754.11	70.56
4"	9.06	7.87	8xØ0.86	1.27	5.04	12.01	9.25	7.32	24.02	6.57	1.67	0.73	M24	18	4.01-F10	M10	3309.90	1178.31	115.54
6"	11.02	10.63	12xØ0.86	1.46	7.89	15.87	12.68	0.00	0.00	9.65	2.68	1.48	M42	30	4.92-F12	M12	8673.00	3172.95	240.35



SERIES 68R115 API 608 SUPER DUPLEX STAINLESS STEEL BALL VALVE

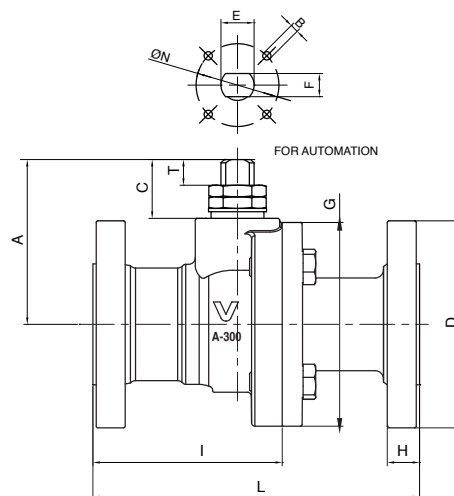
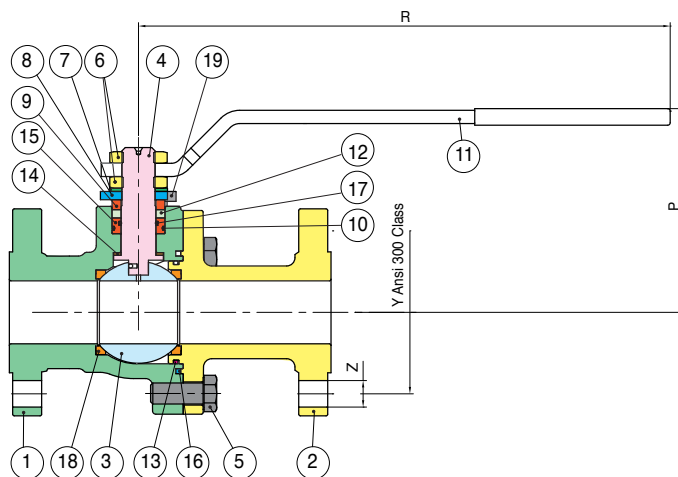
- Super Duplex stainless steel, ANSI class 300, flanged ball valve, full port.
- API 608, ASME B16.34, ASME B16.10, ASME B16.5, ASME B1.1 design.
 - Temperature range: -4°F to 366°F.
 - 100% tested according to API 598 standards.
 - RTFE seats, packing and thrust washer.
 - Blow-out proof stem, locking handle.
 - Fire Safe design.
 - Antistatic Device.
 - ISO 5211 mounting pad with double "D" stem.
 - Locking device.

68R115: sizes 1/2" to 6".

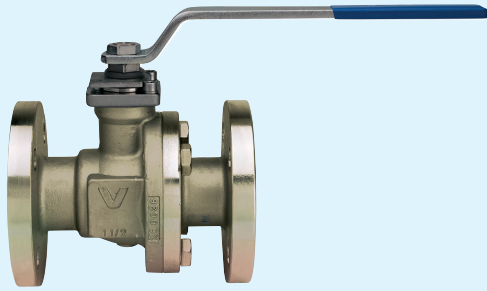
COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.

Temperature range: -20° +180°
Vacuum: 10⁻³ torr.

Low temperature design
-40°C ON DEMAND



N POS	PART NAME	MATERIAL	N POS	SIZE	D	Y	Z	H	I	L	G	P	R	A	C	T	E	F	ISO 5211 ON	B	Break Torque in-Lbs	Cv	Weight Lbs
1	BODY	UNS S32760 (ASTM A995-Gr. 6)	1	1/2"	3.54	2.63	4xØ0.63	0.58	2.47	5.51	3.23	3.74	6.85	2.13	0.85	0.27	M12	8	1.65-F04	M5	110.63	16.59	6.84
2	END CONNECTION	UNS S32760 (ASTM A995-Gr. 6)	1	3/4"	3.94	3.25	4xØ0.75	0.64	2.64	5.98	3.54	3.90	6.85	2.28	0.83	0.27	M12	8	1.65-F04	M5	168.15	30.25	9.92
3	BALL	UNS S32760 (ASTM A995-Gr. 6)/A479-F55	1	1"	4.33	3.50	4xØ0.75	0.70	2.78	6.50	4.13	3.94	9.84	2.94	1.14	0.37	M16	10	1.96-F05	M6	247.80	55.75	14.11
4	STEM	A479-F55 / A182-F55	1	1 1/2"	4.92	4.50	4xØ0.86	0.83	4.09	7.48	5.04	4.84	12.64	3.90	1.40	0.61	M20	14	1.96-F05	M6	429.23	150.39	25.58
5	SCREW	A193 B8 Cl.2	4+8+12	2"	5.91	5.00	8xØ0.75	0.91	3.54	8.50	5.51	5.24	12.64	4.29	1.44	0.65	M20	14	1.96-F05	M6	601.80	260.41	31.75
6	NUT	STAINLESS STEEL	2	3"	7.48	6.63	8xØ0.86	1.14	4.80	11.10	7.40	6.57	15.00	5.91	1.75	0.81	M24	18	2.75-F07	M8	1389.45	754.11	70.56
7	SPRING WASHER	STAINLESS STEEL	2	4"	9.06	7.87	8xØ0.86	1.27	5.04	12.01	9.25	7.32	24.02	6.57	1.67	0.73	M24	18	4.01-F10	M10	3309.90	1178.31	115.54
8	90° STOP	AISI 316	1	6"	11.02	10.63	12xØ0.86	1.46	7.89	15.87	12.68	0.00	0.00	9.65	2.68	1.48	M42	30	4.92-F12	M12	8673.00	3172.95	240.35
9	BUSH	A479-Tp316L	1																				
10	O-RING	FKM (Viton)	1																				
11	HANDLE	AISI 316	1																				
12	STEM SEAL	GRAPHITE	1																				
13	O-RING	FKM (Viton)	1																				
14	THRUST WASHER	RPTFE	1																				
15	O-RING BUSH	A479-Tp316L	1																				
16	BODY SEAT	GRAPHITE	1																				
17	O-RING	FKM (Viton)	2																				
18	BALL SEAT	RPTFE	2																				
19	SCREW	A2-70	1																				



SERIES 761031 CARBON STEEL BALL VALVE

F.E. TESTED
ISO 15848-1

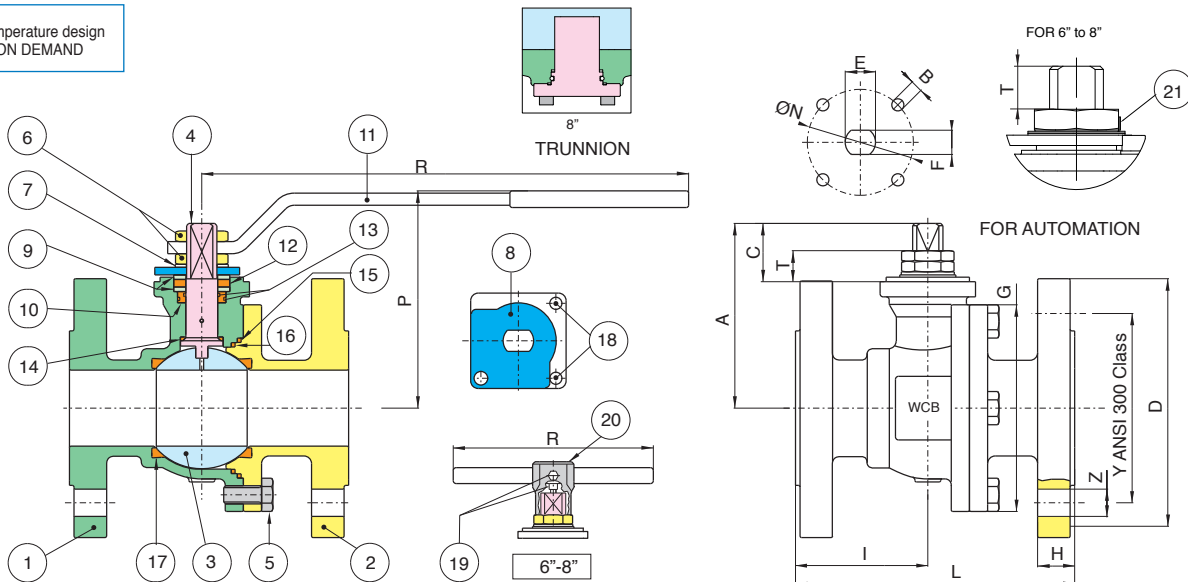
Carbon steel, ANSI class 300 flanged ball valve, full port.

- Temperature range -4°F to 366°F.
- Blow-out proof stem, adjustable stem packing.
- RTFE. seats, packing and thrust washer.
- 100% tested.
- PED 97/23/CE.
- Locking handle plate.
- ANSI B16.5 - B16.10 B16.34 design.
- Fire Safe API 6FA-API 607.
- Antistatic Device.
- ISO 5211 mounting pad with double "D" stem.
- Fugitive emissions tested to ISO 15848-1.

761031: sizes 1/2" to 8" (8" TRUNNION).

760266: STEAM SERVICE TRIM - sizes 1/2" to 8".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.



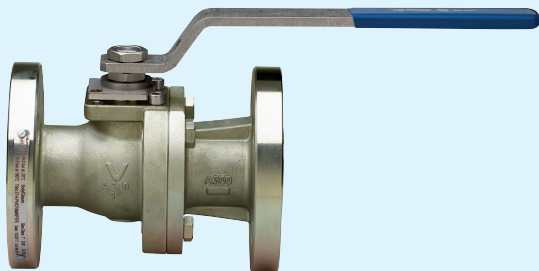
N° POS	PART NAME	MATERIAL	N° PCS
1	BODY	A216 WCB	1
2	END CONNECTION	A216 WCB	1
3	BALL	A479-304/A351-CF8	1
4	STEM	A479-304	1
5	SCREW	STAINLESS STEEL	4-8-12
6	NUT	CARBON STEEL 1/2"-1 1/2" 2"-8"	1-2
7	SPRING WASHER	STEEL	2
8	TRAVEL STOP	CARBON STEEL	1
9	PACKING GLAND	CARBON STEEL	2
10	STEM SEAL	PTFE	1
11	HANDLE	CARBON STEEL	1
12	STEM SEAL	GRAPHOIL	1
13	O-RING	FKM (Viton)	2
14	THRUST WASHER	PTFE	1
15	SEAL	GRAPHOIL	1
16	SEAL	PTFE	1
17	BALL SEATS	RPTFE	2
18	SCREW	CARBON STEEL	2
19	SCREW	CARBON STEEL	2
20	BODY HANDLE	CAST IRON	1
21	UNSCREWING GROWER	A182-F316	1

SIZE	D	Y	Z	H	I	L	G	P	R	A	C	T	E	F	ISO 5211 ØN	B	Break Torque in-Lbs	Cv	Weight Lbs
1/2"	3.74	2.62	4xØ0.63	0.57	2.42	5.51	3.35	3.46	5.16	2.05	0.75	0.31	M10	0.28	1.65-F04	M5	44	22.21	5.07
3/4"	4.53	3.25	4xØ0.75	0.63	2.40	5.98	3.07	3.66	5.16	2.20	0.75	0.31	M10	0.28	1.65-F04	M5	142	40.50	7.71
1"	4.92	3.50	4xØ0.79	0.69	2.78	6.50	3.78	4.29	6.85	2.85	1.08	0.51	M12	0.31	1.97-F05	M6	150	74.63	11.46
1 1/2"	6.10	4.51	4xØ0.87	0.83	3.09	7.48	4.96	5.24	9.84	4.21	1.18	0.39	M16	0.39	1.97-F05	M6	240	201.32	22.04
2"	6.50	5.00	8xØ0.79	0.89	3.39	8.50	5.37	5.67	12.64	4.80	1.52	0.71	M20	0.55	2.76-F07	M8	345	348.60	26.45
3"	8.27	6.63	8xØ0.87	1.14	3.19	11.14	7.03	6.81	15.00	5.94	1.69	0.71	M24	0.71	4.02-F10	M10	770	1009.48	59.51
4"	10.04	7.87	8xØ0.87	1.26	3.48	12.01	8.62	7.36	15.00	6.50	1.69	0.71	M24	0.71	4.02-F10	M10	1160	1577.34	90.36
6"	12.60	10.63	12xØ0.87	1.46	6.77	15.87	12.05	12.01	27.56	9.65	2.68	1.61	M42	1.61	4.92-F12	M12	1240	4247.46	204.97
8" *	15.00	12.99	12xØ1.02	1.63	9.88	19.76	16.14	13.70	27.56	11.34	2.70	1.61	M42	1.61	4.92-F12	M12	3505	7886.81	332.80

* TRUNNION max Δp= 362 psi

VALPRES





SERIES 68F100

API 608 CARBON STEEL BALL VALVE

Carbon steel, ANSI class 300, flanged ball valve, full port.

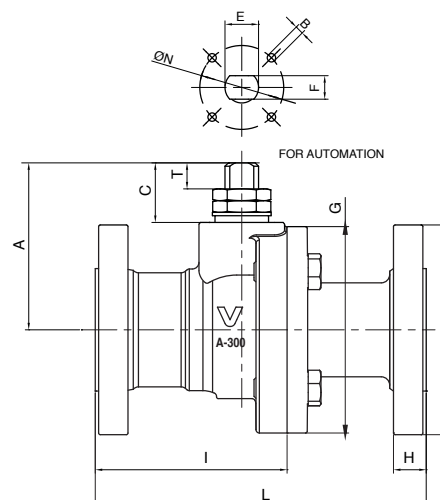
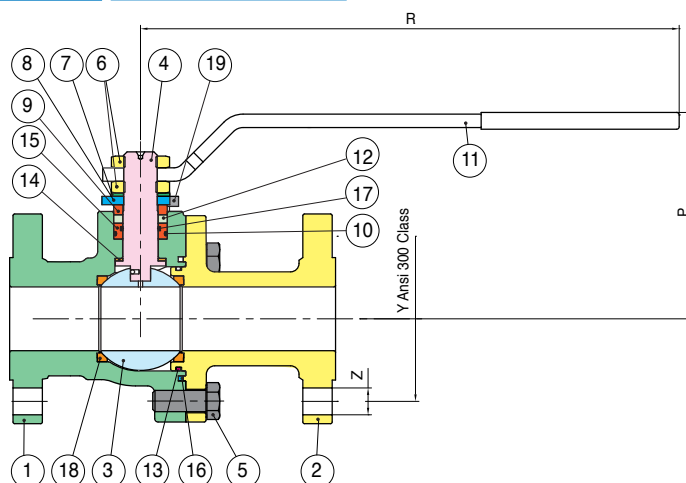
- API 608, ASME B16.34, ASME B16.10, ASME B16.5, ASME B1.1 design.
- 100% tested according to API 598 standards.
- RTFE seats, packing and thrust washer.
- Blow-out proof stem, locking handle.
- Fire Safe design.
- Antistatic Device.
- ISO 5211 mounting pad with double "D" stem.
- Locking device.
- Temperature range -4°F to 366°F.

68F100: sizes 1/2" to 6".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.

Temperature range: -20° +180°
Vacuum: 10⁻³ torr.

Low temperature design
-40°C ON DEMAND



N POS	PART NAME	MATERIAL	N PCS
1	BODY	A352-LCC	1
2	END CONNECTION	A352-LCC	1
3	BALL	A479-Tp316	1
4	STEM	A564-Tp316 H1150D (17-4-PH)	1
5	SCREW	A32017	4+8-12
6	NUT	CARBON STEEL	2
7	SPRING WASHER	CARBON STEEL	2
8	90° STOP	AISI 316	1
9	BUSH	A479-Tp316L	1
10	O-RING	FKM (Viton)	1
11	HANDLE	CARBON STEEL	1
12	STEM SEAL	GRAPHITE	1
13	O-RING	FKM (Viton)	1
14	THRUST WASHER	RPTFE	1
15	O-RING BUSH	A479-Tp316L	1
16	BODY SEAT	GRAPHITE	1
17	O-RING	FKM (Viton)	2
18	BALL SEAT	RPTFE	2
19	SCREW	CARBON STEEL	1

SIZE	D	Y	Z	H	I	L	G	P	R	A	C	T	E	F	ISO 5211 ØN	B	Break Torque in-Lbs	Cv	Weight Lbs
1/2"	3.54	2.63	4xØ0.63	0.58	2.47	5.51	3.23	3.74	6.85	2.13	0.85	0.27	M12	8	1.65-F04	M5	110.63	16.59	6.84
3/4"	3.94	3.25	4xØ0.75	0.64	2.64	5.98	3.54	3.90	6.85	2.28	0.83	0.27	M12	8	1.65-F04	M5	168.15	30.25	9.92
1"	4.33	3.50	4xØ0.75	0.70	2.78	6.50	4.13	3.94	9.84	2.94	1.14	0.37	M16	10	1.96-F05	M6	247.80	55.75	14.11
1 1/2"	4.92	4.50	4xØ0.86	0.83	4.09	7.48	5.04	4.84	12.64	3.90	1.40	0.61	M20	14	1.96-F05	M6	429.23	150.39	25.58
2"	5.91	5.00	8xØ0.75	0.91	3.54	8.50	5.51	5.24	12.64	4.29	1.44	0.65	M20	14	1.96-F05	M6	601.80	260.41	31.75
3"	7.48	6.63	8xØ0.86	1.14	4.80	11.10	7.40	6.57	15.00	5.91	1.75	0.81	M24	18	2.75-F07	M8	1389.45	754.11	70.56
4"	9.06	7.87	8xØ0.86	1.27	5.04	12.01	9.25	7.32	24.02	6.57	1.67	0.73	M24	18	4.01-F10	M10	3309.90	1178.31	115.54
6"	11.02	10.63	12xØ0.86	1.46	7.89	15.87	12.68	0.00	0.00	9.65	2.68	1.48	M42	30	4.92-F12	M12	8673.00	3172.95	240.35



SERIES 68J401

API 608 STAINLESS STEEL BALL VALVE

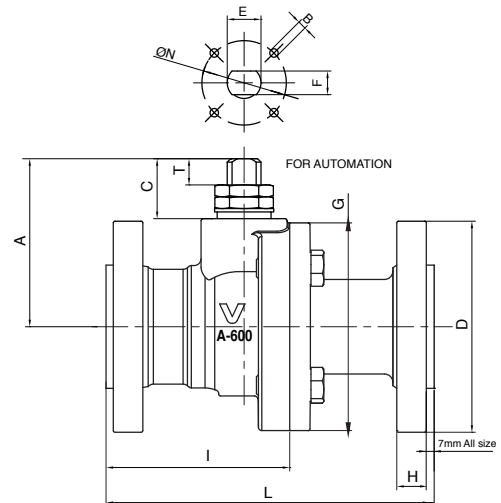
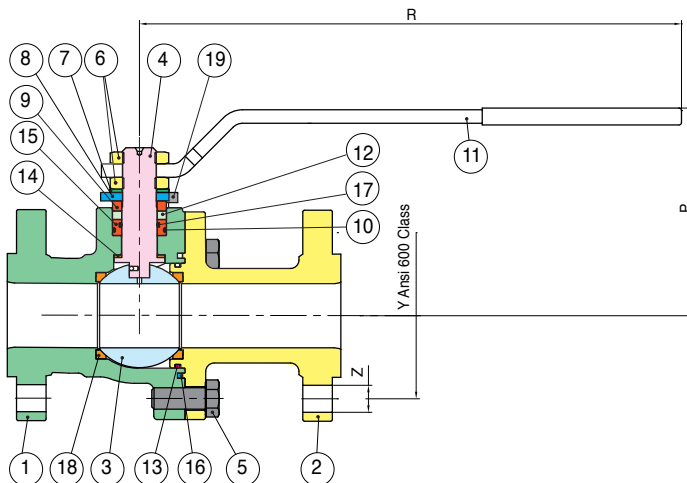
Stainless steel, ANSI class 600, flanged ball valve, full port.

- API 608, ASME B16.34, ASME B16.10, ASME B16.5, ASME B1.1 design.
- Temperature range -4°F to 366°F.
- 100% tested according to API 598 standards.
- RTFE seats, packing and thrust washer.
- Blow-out proof stem, locking handle.
- Fire Safe design.
- Antistatic Device.
- ISO 5211 mounting pad with double "D" stem.
- Locking device.

68J401: sizes 1/2" to 2".

Temperature range: -20° +180°
Vacuum: 10⁻³ torr.

Low temperature design
-40°C ON DEMAND



N POS	PART NAME	MATERIAL	N PCS
1	BODY	A351-CF8M	1
2	END CONNECTION	A351-CF8M	1
3	BALL	A479-Tp316	1
4	STEM	A564 Tp630 H1150D (17-4-PH)	1
5	SCREW	A193 B8 Cl.2	4-6
6	NUT	STAINLESS STEEL	2
7	SPRING WASHER	A182-F304	2
8	90° STOP	AISI 316	1
9	BUSH	A479-Tp316L	1
10	O-RING	FKM (Viton)	1
11	HANDLE	AISI 316	1
12	STEM SEAL	GRAPHITE	1
13	O-RING	FKM (Viton)	1
14	THRUST WASHER	RPTFE	1
15	O-RING BUSH	A479-Tp316L	1
16	BODY SEAT	GRAPHITE	1
17	O-RING	FKM (Viton)	2
18	BALL SEAT	RPTFE	2
19	SCREW	A2-70	1

SIZE	D	Y	Z	H	I	L	G	P	R	A	C	T	E	F	ISO 5211 ON	B	Break Torque in-Lbs	Cv	Weight Lbs
1/2"	3.54	2.63	4xØ0.63	0.58	2.47	6.50	3.23	3.74	6.85	2.13	0.85	0.27	M12	8	1.65-F04	M5	159.30	16.59	7.94
3/4"	3.94	3.25	4xØ0.75	0.64	2.64	7.48	3.54	3.90	6.85	2.28	0.83	0.27	M12	8	1.65-F04	M5	225.68	30.25	11.25
1"	4.33	3.50	4xØ0.75	0.70	2.78	8.50	4.13	3.94	9.84	2.94	1.14	0.37	M16	10	1.96-F05	M6	354.00	55.75	15.88
1 1/2"	4.92	4.50	4xØ0.86	0.83	4.09	9.49	5.04	4.84	12.64	3.90	1.40	0.61	M20	14	1.96-F05	M6	610.65	150.39	29.11
2"	5.91	5.00	8xØ0.75	0.91	3.54	11.50	5.51	5.24	12.64	4.29	1.44	0.65	M20	14	1.96-F05	M6	1062.00	260.41	38.37



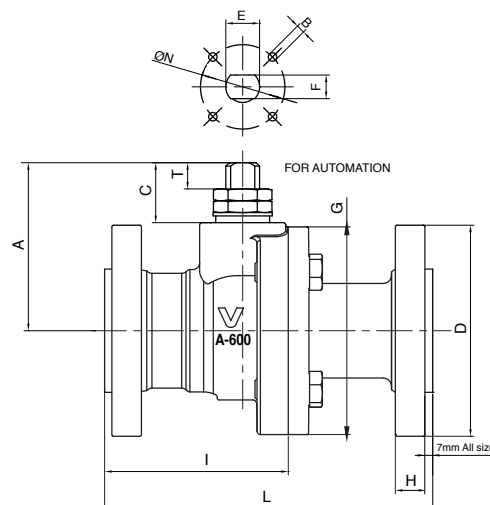
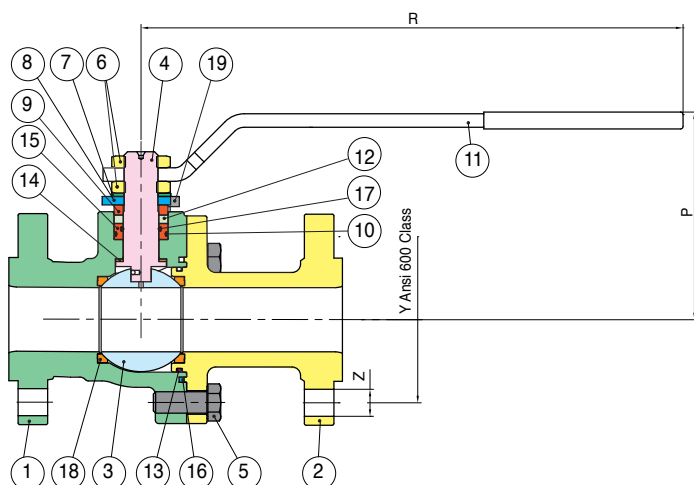
SERIES 68R415 API 608 SUPER DUPLEX STAINLESS STEEL BALL VALVE

- Super Duplex stainless steel, ANSI class 600, flanged ball valve, full port.
- API 608, ASME B16.34, ASME B16.10, ASME B16.5, ASME B1.1 design.
 - Temperature range -4°F to 366°F.
 - 100% tested according to API 598 standards.
 - RTFE seats, packing and thrust washer.
 - Blow-out proof stem, locking handle.
 - Fire Safe design.
 - Antistatic Device.
 - ISO 5211 mounting pad with double "D" stem.
 - Locking device.

68R415: sizes 1/2" to 2".

Temperature range: -20° +180°
Vacuum: 10⁻³ torr.

Low temperature design
-40°C ON DEMAND



N° POS	PART NAME	MATERIAL	N° PCS
1	BODY	UNS S32760 (ASTM A895-Gr. 6)	1
2	END CONNECTION	UNS S32760 (ASTM A895-Gr. 6)	1
3	BALL	UNS S32760 (ASTM A895-Gr. 6) / A478-F55	1
4	STEM	A564 Tp630 H1150D (17-4-PH)	1
5	SCREW	A193 B8 Cl.2	4-6
6	NUT	STAINLESS STEEL	2
7	SPRING WASHER	STAINLESS STEEL	2
8	90° STOP	AISI 316	1
9	BUSH	A479-Tp316L	1
10	O-RING	FKM (Viton)	1
11	HANDLE	AISI 316	1
12	STEM SEAL	GRAPHITE	1
13	O-RING	FKM (Viton)	1
14	THRUST WASHER	RPTFE	1
15	O-RING BUSH	A479-Tp316L	1
16	BODY SEAT	GRAPHITE	1
17	O-RING	FKM (Viton)	2
18	BALL SEAT	RPTFE	2
19	SCREW	A2-70	1

SIZE	D	Y	ØZ	H	I	L	G	P	R	A	C	T	E	F	ISO 5211 ØN	B	Break Torque in-Lbs	Cv	Weight Lbs
1/2"	3.54	2.63	4xØ0.63	0.58	2.47	6.50	3.23	3.74	6.85	2.13	0.85	0.27	M12	8	1.65-F04	M5	159.30	16.59	7.94
3/4"	3.94	3.25	4xØ0.75	0.64	2.64	7.48	3.54	3.90	6.85	2.28	0.83	0.27	M12	8	1.65-F04	M5	225.68	30.25	11.25
1"	4.33	3.50	4xØ0.75	0.70	2.78	8.50	4.13	3.94	9.84	2.94	1.14	0.37	M16	10	1.96-F05	M6	354.00	55.75	15.88
1 1/2"	4.92	4.50	4xØ0.86	0.83	4.09	9.49	5.04	4.84	12.64	3.90	1.40	0.61	M20	14	1.96-F05	M6	610.65	150.39	29.11
2"	5.91	5.00	8xØ0.75	0.91	3.54	11.50	5.51	5.24	12.64	4.29	1.44	0.65	M20	14	1.96-F05	M6	1062.00	260.41	38.37



SERIES 68F400 API 608 CARBON STEEL BALL VALVE

Carbon steel, ANSI class 600, flanged ball valve, full port.

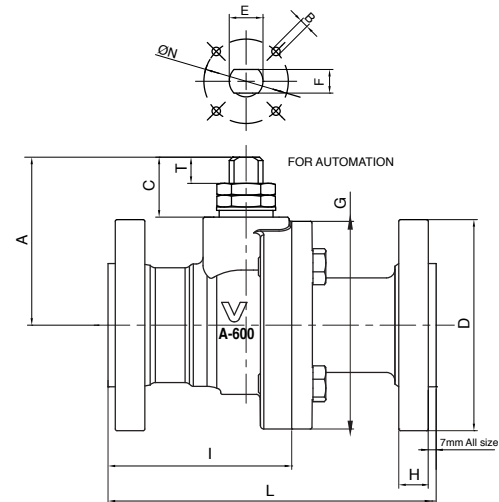
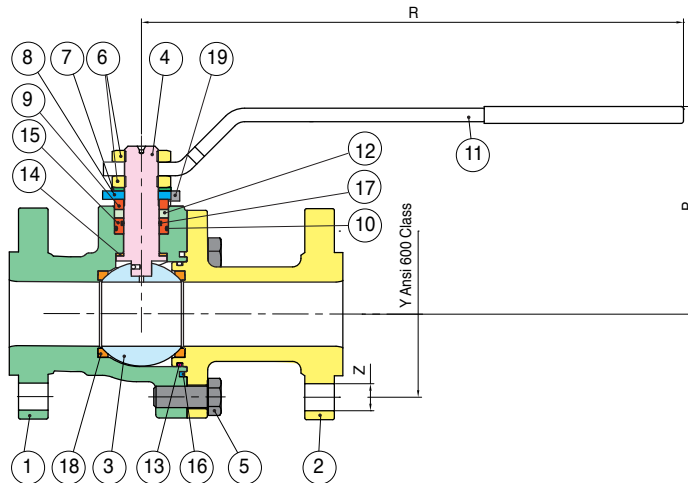
- API 608, ASME B16.34, ASME B16.10, ASME B16.5, ASME B1.1 design.
- Temperature range: -4°F to 366°F.
- 100% tested according to API 598 standards.
- RTFE seats, packing and thrust washer.
- Blow-out proof stem, locking handle.
- Fire Safe design.
- Antistatic Device.
- ISO 5211 mounting pad with double "D" stem.
- Locking device.

68F400: sizes 1/2" to 2".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.

Temperature range: -20° +180°
Vacuum: 10⁻³ torr.

Low temperature design
-40°C ON DEMAND



N	PART NAME	MATERIAL	N
1	BODY	A352-LCC	1
2	END CONNECTION	A352-LCC	1
3	BALL	A479-Tp316	1
4	STEM	A564-Tp316 H115OD (17-4-PH)	1
5	SCREW	A32017	4-6
6	NUT	CARBON STEEL	2
7	SPRING WASHER	CARBON STEEL	2
8	90° STOP	AISI 316	1
9	BUSH	A479-Tp316L	1
10	O-RING	FKM (Viton)	1
11	HANDLE	CARBON STEEL	1
12	STEM SEAL	GRAPHITE	1
13	O-RING	FKM (Viton)	1
14	THRUST WASHER	RPTFE	1
15	O-RING BUSH	A479-Tp316L	1
16	BODY SEAT	GRAPHITE	1
17	O-RING	FKM (Viton)	2
18	BALL SEAT	RPTFE	2
19	SCREW	CARBON STEEL	1

SIZE	D	Y	Z	H	I	L	G	P	R	A	C	T	E	F	ISO 5211 ØN	B	Break Torque in-Lbs	Cv	Weight Lbs
1/2"	3.54	2.63	4xØ0.63	0.58	2.47	6.50	3.23	3.74	6.85	2.13	0.85	0.27	M12	8	1.65-F04	M5	159.30	16.59	7.94
3/4"	3.94	3.25	4xØ0.75	0.64	2.64	7.48	3.54	3.90	6.85	2.28	0.83	0.27	M12	8	1.65-F04	M5	225.68	30.25	11.25
1"	4.33	3.50	4xØ0.75	0.70	2.78	8.50	4.13	3.94	9.84	2.94	1.14	0.37	M16	10	1.96-F05	M6	354.00	55.75	15.88
1 1/2"	4.92	4.50	4xØ0.86	0.83	4.09	9.49	5.04	4.84	12.64	3.90	1.40	0.61	M20	14	1.96-F05	M6	610.65	150.39	29.11
2"	5.91	5.00	8xØ0.75	0.91	3.54	11.50	5.51	5.24	12.64	4.29	1.44	0.65	M20	14	1.96-F05	M6	1062.00	260.41	38.37

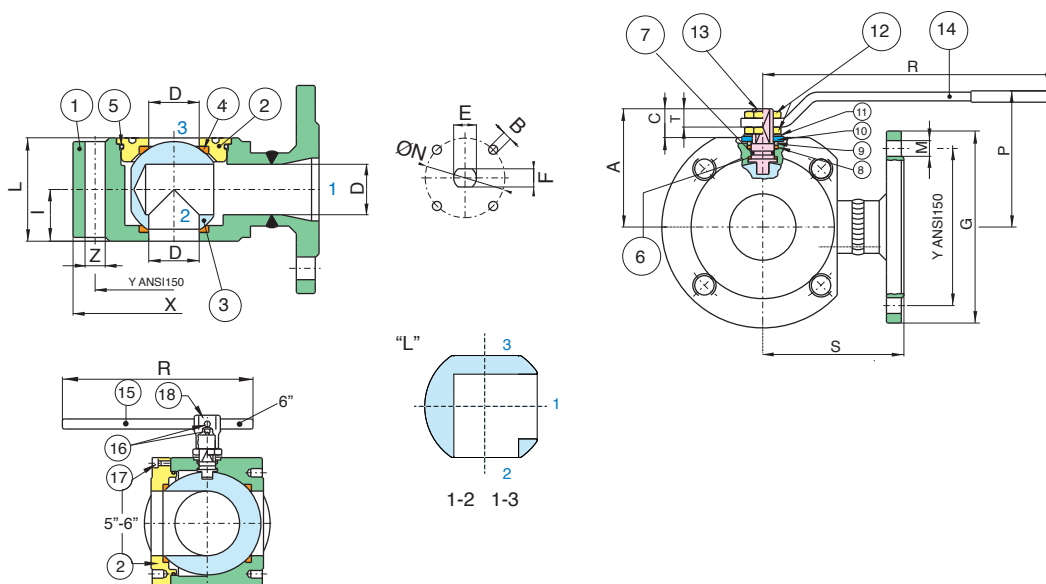


SERIES 776032 (L) CARBON STEEL 3-WAY BALL VALVE

Compact design, carbon steel, ANSI class 150 flanged 3-way ball valve. stainless steel ball and stem.

- 3-way, diverter, two seats, L reduced port.
- Temperature range -4°F to 366°F.
- Blow-out proof stem.
- RPTFE seats, packing and thrust washer.
- 100% tested.
- TUV T.A. Luft approved.
- ISO 5211 mounting pad with double "D" stem.

776032: sizes 1/2" to 6".



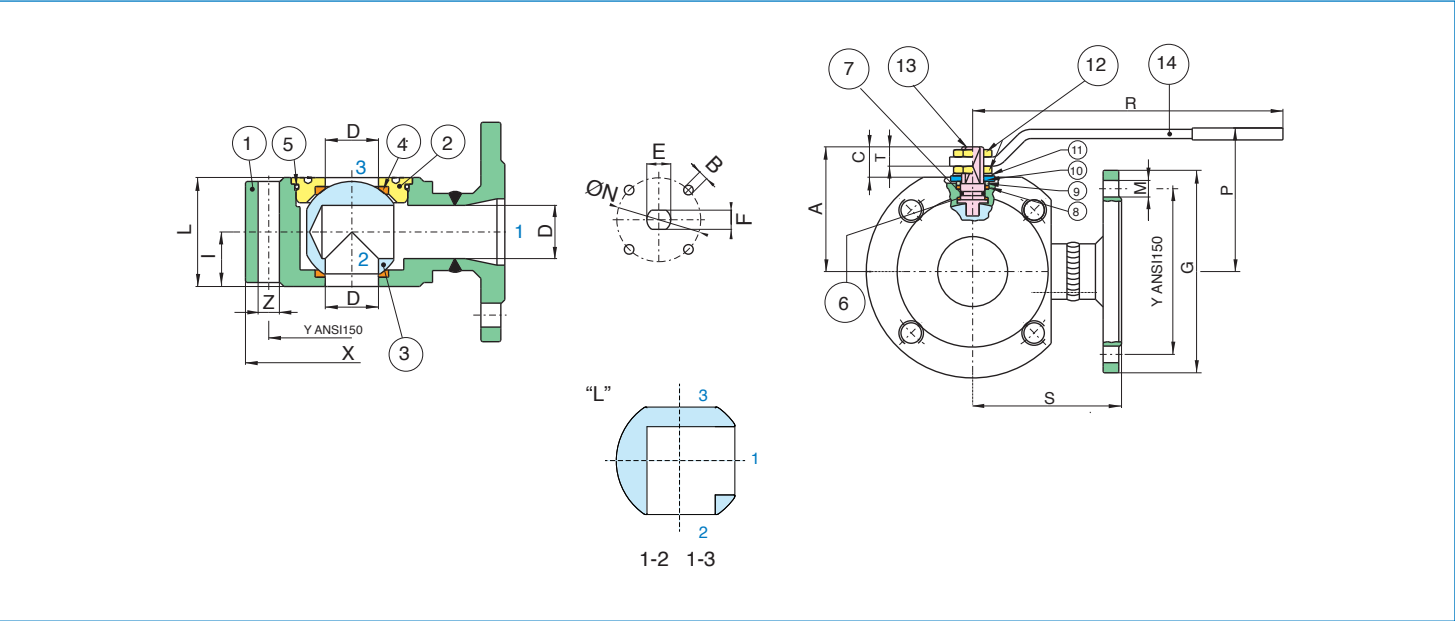
N POS	PART NAME	MATERIAL	N POS	SIZE	X	Y	Z UNC	I	L	R	P	A	C	T	G	M	D	S	E	F	ISO 5211 ØN	B	Break Torque in-Lbs	CV	Weight Lbs
1	BODY	ASTM A105	1	1/2"	3.50	2.38	4x1/2"	0.78	1.57	5.17	2.54	1.85	0.61	0.35	3.50	4xØ 0.62	0.39	2.99	0.39	0.27	1.26	4xM5	35	3.2	4.91
2	END CONNECTION	ASTM A105	1	3/4"	3.88	2.75	4x1/2"	0.78	1.57	5.17	2.71	1.95	0.53	0.35	3.88	4xØ 0.62	0.59	3.23	0.39	0.27	1.26	4xM5	115	6	6.30
3	BALL	AISI 304	1	1"	4.25	3.12	4x1/2"	0.90	1.81	6.87	3.17	2.32	0.70	0.49	4.25	4xØ 0.62	0.78	3.38	0.47	0.31	1.65 (F04)	4xM5	124	10.6	8.57
4	BALL SEATS	RPTFE	2	1 1/4"	4.62	3.50	4x1/2"	1.14	2.28	6.87	3.33	2.52	0.61	0.45	4.62	4xØ 0.62	0.98	3.93	0.47	0.31	1.65 (F04)	4xM5	150	16.6	13.69
5	O-RING	FKM (Viton)	1	1 1/2"	5.00	3.88	4x1/2"	1.39	2.79	9.86	4.03	3.07	0.96	0.51	5.00	4xØ 0.62	1.26	4.13	0.63	0.39	1.97 (F05)	4xM6	195	29.9	18.73
6	THRUST WASHER	PTFE	1	2"	6.00	4.75	4x5/8"	1.61	3.22	9.86	4.29	3.35	0.98	0.53	6.00	4xØ 0.75	1.57	4.52	0.63	0.39	1.97 (F05)	4xM6	292	46.7	27.05
7	O-RING	FKM (Viton)	1	2 1/2"	7.00	5.50	4x5/8"	2.08	4.17	12.65	4.29	4.11	1.10	0.71	7.00	4xØ 0.75	1.97	4.92	0.78	0.55	2.76 (F07)	4xM8	540	73.1	44.10
8	STEM SEAL	PTFE	1	3"	7.50	6.00	4x5/8"	2.40	4.80	12.65	5.37	4.45	1.10	0.71	7.50	4xØ 0.75	2.52	5.90	0.78	0.55	2.76 (F07)	4xM8	637	133.9	53.66
9	PACKING GLAND	STEEL	1	4"	9.00	7.50	8x5/8"	2.99	5.98	15.01	6.12	5.35	1.36	0.86	9.00	8xØ 0.75	2.99	6.26	0.94	0.70	4.02 (F10)	4xM10	956	188.7	84.76
10	END STOP	STEEL (1/2" - 2") STEEL (2 1/2" - 6")	2 1	5"	9.84	8.50	8x3/4"	3.85	7.70	15.02	7.01	6.25	1.36	0.86	10.03	8xØ 0.86	3.93	7.48	0.94	0.72	4.92 (F12)	4xM10	1018	326.7	140.00
11	SPRING WASHER	STEEL	2	6"	11.08	9.50	8x3/4"	4.56	9.13	27.6	9.92	7.90	1.92	1.18	11.02	8xØ 0.86	4.90	8.26	1.65	1.18	4.92 (F12)	4xM12	2903	510.5	220.00
12	NUT	STEEL	2																						
13	STEM	AISI 304	1																						
14	HANDLE	STEEL	1																						
15	HANDLE DN 150	CARBON STEEL	1																						
16	SCREW	CARBON STEEL	1																						
17	SCREW	CARBON STEEL	8																						
18	BODY HANDLE	EN-GJL250	1																						

* For automation please consult factory.



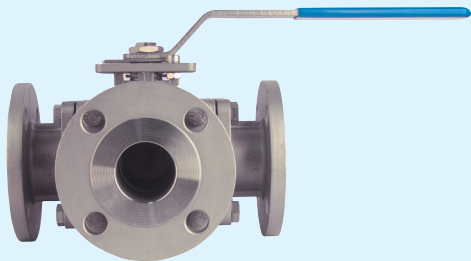
SERIES 776018 (L)
STAINLESS STEEL 3-WAY BALL VALVE

- Compact design, stainless steel, ANSI class 150 flanged 3-way ball valve.
- 3-way, diverter, two seats, L reduced port.
 - Temperature range -4°F to 366°F.
 - Blow-out proof stem.
 - RPTFE seats, packing and thrust washer.
 - 100% tested.
 - TUV T.A. Luft approved.
 - ISO 5211 mounting pad with double “D” stem.
- 776018:** sizes 1/2” to 4”.



N POS	PART NAME	MATERIAL	N POS
1	BODY	AISI 316	1
2	END CONNECTION	AISI 316	1
3	BALL	AISI 316	1
4	BALL SEATS	RPTFE	2
5	O-RING	FKM (Viton)	1
6	THRUST WASHER	PTFE	1
7	O-RING	FKM (Viton)	1
8	STEM SEAL	PTFE	1
9	PACKING GLAND	STEEL	1
10	END STOP	STEEL (1/2" - 2") STEEL (2 1/2" - 4")	2 1
11	SPRING WASHER	STEEL	2
12	NUT	STEEL	2
13	STEM	AISI 316	1
14	HANDLE	STEEL	1

SIZE	X	Y	Z UNC	I	L	R	P	A	C	T	G	M	D	S	E	F	ISO 5211 ØN	B	Break Torque in-Lbs	CV	Weight Lbs
1/2"	3.50	2.38	4X1/2"	0.78	1.57	5.17	2.54	1.85	0.61	0.35	3.50	4 X Ø 0.62	0.39	2.99	0.39	0.27	1.26	4XM5	35	3.2	4.91
3/4"	3.88	2.75	4X1/2"	0.78	1.57	5.17	2.71	1.95	0.53	0.35	3.88	4 X Ø 0.62	0.59	3.23	0.39	0.27	1.26	4XM5	115	6	6.30
1"	4.25	3.12	4X1/2"	0.90	1.81	6.87	3.17	2.32	0.70	0.49	4.25	4 X Ø 0.62	0.78	3.38	0.47	0.31	1.65 (F04)	4XM5	124	10.6	8.57
1 1/4"	4.62	3.50	4X1/2"	1.14	2.28	6.87	3.33	2.52	0.61	0.45	4.62	4 X Ø 0.62	0.98	3.93	0.47	0.31	1.65 (F04)	4XM5	150	16.6	13.69
1 1/2"	5.00	3.88	4X1/2"	1.39	2.79	9.86	4.03	3.07	0.96	0.51	5.00	4 X Ø 0.62	1.26	4.13	0.63	0.39	1.97 (F05)	4XM6	195	29.9	18.73
2"	6.00	4.75	4X5/8"	1.61	3.22	9.86	4.29	3.35	0.98	0.53	6.00	4 X Ø 0.75	1.57	4.52	0.63	0.39	1.97 (F05)	4XM6	292	46.7	27.05
2 1/2"	7.00	5.50	4X5/8"	2.08	4.17	12.65	4.29	4.11	1.10	0.71	7.00	4 X Ø 0.75	1.97	4.92	0.78	0.55	2.76 (F07)	4XM8	540	73.1	44.10
3"	7.50	6.00	4X5/8"	2.40	4.80	12.65	5.37	4.45	1.10	0.71	7.50	4 X Ø 0.75	2.52	5.90	0.78	0.55	2.76 (F07)	4XM8	637	133.9	53.66
4"	9.00	7.50	8X5/8"	2.99	5.98	15.01	6.12	5.35	1.36	0.86	9.00	8 X Ø 0.75	2.99	6.26	0.94	0.70	4.02 (F10)	4XM10	956	188.7	84.76



SERIES 97L150 - 97T150

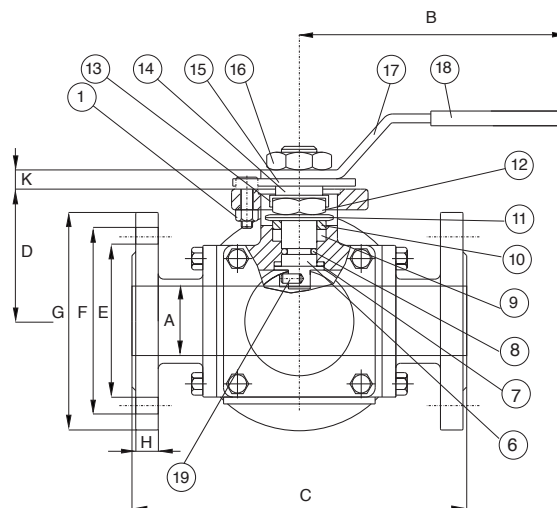
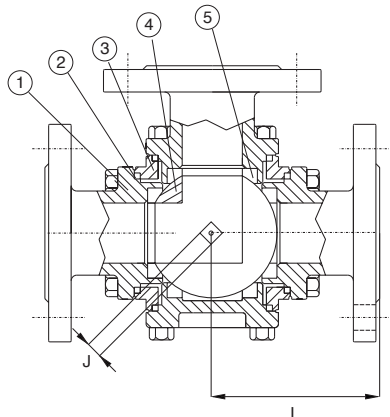
L-PORT

T-PORT

3-way ANSI 150 direct mount stainless steel, block body, full port ball valve.

- ANSI 150 full port flanged.
- ISO 5211 mounting pad.
- Reinforced TFE seats and seals.
- Multiple chevron style stem packing.
- Investment cast and sand cast body construction.
- Meets International standards.
- 1000 PSI WOG.
- T and L port designs.

97L150 - 97T150: sizes 1/2" to 6".



N POS	PART NAME	MATERIAL	N PCS
1	FLANGED ENDS	A351 CF8M	3
2	GASKET	PTFE	4
3	BODY	A351 CF8M	1
4	BALL	AISI 316	1
5	BALL SEATS	PTFE	4
6	THRUST WASHER	RPTFE	1
7	STEM	AISI 316	1
8	O-RING	FKM (Viton)	1
9	STEM PACKING	PTFE	1
10	GLAND	AISI 304	2
11	DISC WASHER	AISI 301	1
12	STEM NUT	AISI 304	1
13	NUT STOP	AISI 304	1
14	SPACE WASHER	AISI 304	1
15	STOPPER PLATE	AISI 304	1
16	HANDLE NUT	AISI 304	1
17	HANDLE	AISI 304	1
18	HANDLE SLEEVE	VINYL	1
19	INSERT PIN	AISI 304	1
20	STOP PIN	AISI 316	1
21	STOP PIN NUT	AISI 304	1
22	BOLTS	AISI 304	8

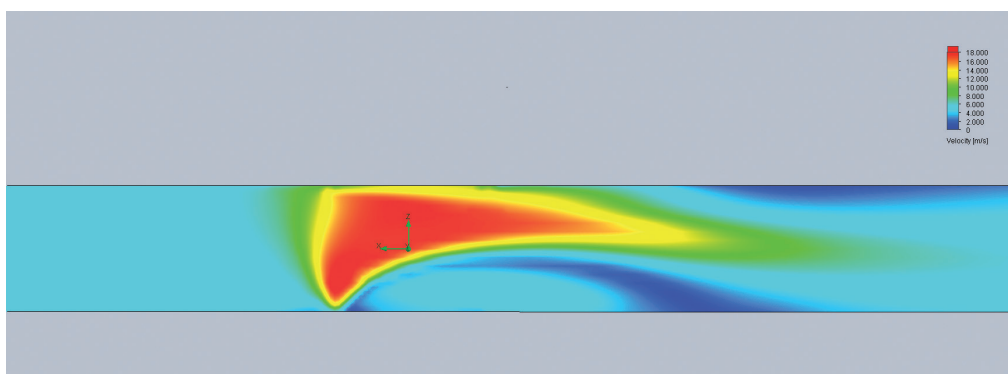
SIZE	A	B	C	D	E	F	G	H	J	K	L	ISO 5211	Cv	Break Torque	Weight Lbs
1/2"	0.59	5.12	5.98	1.61	1.39	2.38	3.50	0.44	9	11	2.99	F03/F04	6	110	8.00
3/4"	0.79	6.50	6.57	1.93	1.69	2.76	3.86	0.44	11	14	3.29	F04/F05	16	125	10.00
1"	0.98	6.50	7.48	2.17	2.01	3.13	4.25	0.44	11	14	3.74	F04/F05	31	325	14.00
1 1/2"	1.50	8.07	8.66	2.91	2.87	3.88	5.00	0.56	14	18	4.33	F05/F07	75	500	27.00
2"	1.97	12.80	9.96	3.66	3.62	4.74	5.98	0.62	17	23	4.98	F07/F10	140	900	47.00
2 1/2"	2.44	15.75	11.81	4.67	4.13	5.49	7.01	0.70	22	25	5.91	F10	210	1200	63.00
3"	2.99	19.69	12.01	5.37	5.00	6.00	7.48	0.75	22	25	6.01	F10	375	1500	76.00
4"	3.78	25.59	14.51	6.16	6.18	7.50	9.02	0.94	22	25	7.26	F10	670	3000	161.00
6"	5.91	47.24	16.81	6.28	8.50	9.51	11.00	1.00	36	36	8.41	F12	4743	5000	290.00

Floating control valves

Valpres has expanded its own product range adding V-ball control ball valves. This type of ball can be mounted on the valve series INOX-VAL, RADIAMONT, WAFER, SPLIT-BODY, WAFER-SPLIT. V-ball control valves are available with the patterns V30-60, V60, V90.

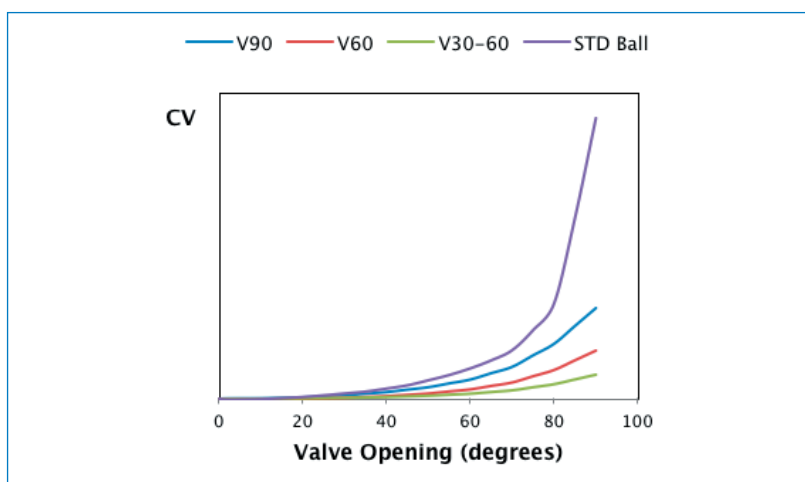
Valve type	Pressure Class Range	Openings (Degrees)	10°	20°	30°	40°	50°	60°	70°	80°	90°
		SIZE [inch]	Cv	Cv	Cv	Cv	Cv	Cv	Cv	Cv	Cv
V 90 	150-300 CLASS	1/2"	0	0.1	0.3	0.7	1.2	2.0	3.4	5.9	10
		3/4"	0	0.3	0.8	1.6	2.7	4.6	7.7	13.3	22
		1"	0	0.5	1.4	2.8	4.9	8.2	13.7	23.7	39
		1 1/4"	0	0.8	2.2	4.5	8.0	13.4	22.4	38.8	64
		1 1/2"	0	1.1	3.3	6.6	11.6	19.5	32.6	56.4	93
		2"	0	2.0	6.0	12.0	21.2	35.6	59.5	102.9	170
		2 1/2"	0.24	2.41	8.67	18.00	33.47	57.52	99.19	168.99	288.42
		3"	0	4.7	13.6	27.3	48.1	80.9	135.4	234.1	387
		4"	0	8.1	23.6	47.5	83.8	140.8	235.7	407.5	675
		6"	0	17.7	51.6	103.8	183.1	307.6	514.9	890.2	1473
F _L	-	-	0.94	0.93	0.92	0.88	0.85	0.81	0.75	0.65	0.50
X _L	-	-	0.84	0.86	0.84	0.82	0.82	0.82	0.79	0.62	0.24
V 60 	150-300 CLASS	1/2"	0	0.1	0.2	0.4	0.7	1.2	1.9	3.3	6
		3/4"	0	0.1	0.4	0.9	1.5	2.6	4.3	7.5	12
		1"	0	0.3	0.8	1.6	2.7	4.6	7.7	13.4	22
		1 1/4"	0	0.4	1.3	2.5	4.5	7.6	12.7	21.9	36
		1 1/2"	0	0.7	2.0	4.0	7.1	11.9	20.0	34.5	57
		2"	0	1.1	3.1	6.3	11.1	18.7	31.2	54.0	89
		2 1/2"	0.24	2.07	6.82	14.33	25.08	41.58	68.92	108.96	157.93
		3"	0	2.7	7.9	16.0	28.2	47.4	79.3	137.1	227
		4"	0	4.3	12.4	25.0	44.1	74.1	124.1	214.5	355
		6"	0	9.6	28.0	56.3	99.3	166.8	279.3	482.8	799
F _L	-	-	0.94	0.93	0.92	0.88	0.85	0.81	0.75	0.65	0.50
X _L	-	-	0.84	0.86	0.84	0.82	0.82	0.82	0.79	0.62	0.24
V 30-60 	150-300 CLASS	1/2"	0	0.0	0.1	0.2	0.4	0.6	1.0	1.7	3
		3/4"	0	0.1	0.2	0.5	0.8	1.3	2.2	3.9	6
		1"	0	0.1	0.4	0.8	1.4	2.4	4.0	6.9	11
		1 1/4"	0	0.2	0.7	1.3	2.3	3.9	6.5	11.3	18
		1 1/2"	0	0.3	1.0	2.0	3.5	5.9	9.8	17.0	28
		2"	0	0.5	1.5	3.1	5.5	9.2	15.4	26.7	44
		2 1/2"	0.06	2.19	6.13	11.49	19.24	30.03	44.19	66.64	96.37
		3"	0	1.3	3.9	7.8	13.8	23.2	38.9	67.2	111
		4"	0	2.1	6.1	12.3	21.6	36.3	60.8	105.2	174
		6"	0	4.7	13.7	27.6	48.7	81.9	137.0	236.9	392
F _L	-	-	0.94	0.93	0.92	0.88	0.85	0.81	0.75	0.65	0.5
X _L	-	-	0.84	0.86	0.84	0.82	0.82	0.82	0.79	0.62	0.24

Quotes valid for series: Inox-val, Radiamont, Wafer and Split Body for the relevant sizes and pressure classes.



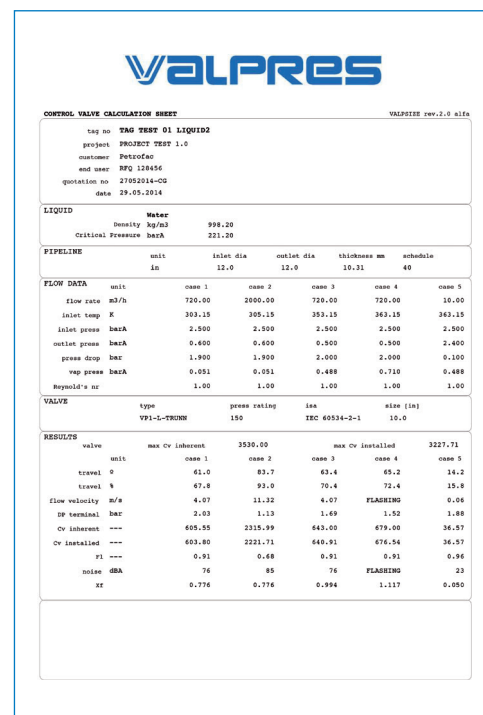
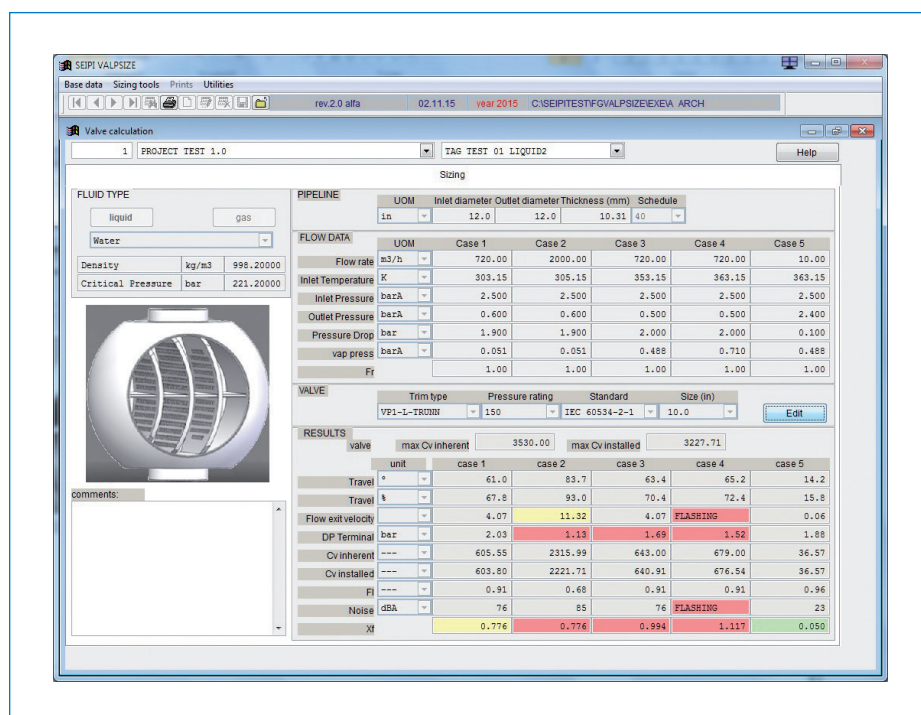
Example velocity plot for V-ball 30-60.

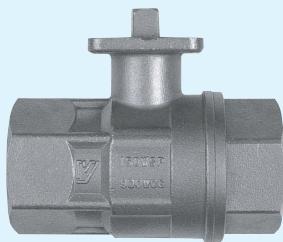
V-ball can be used on liquid, gas and steam service and grants an accurate and precise flow control with a rangeability up to 500:1. Valve design has been validated using finite element analysis software FEA, computational fluid dynamics software CFD and Flow Loop testing. CV and KV curves are available upon request.



VALPSIZE software, available upon request, allows the user to size the valves properly (ISA 75.02, IEC 60534-2-1) to check fluid velocity, valve openings, noise and other critical issues.

Valpres control valves are available with manual lever, Valbia electric or pneumatic actuators.





SERIES 700076-V36 - 700076-V6 - 700076-V9 STAINLESS STEEL DIRECT MOUNT BALL VALVE

2-piece stainless steel FNPT threaded, direct mount ball valve, full port.

- Pressure rating 1000 psi, 150 psi steam.
- Temperature -4°F to +366°F.
- Blow-out proof stem.
- 23% carbon and 2% graphite filled PTFE seats.
- Low operating torque.
- Double O-ring stem packing.
- 100% electronically tested in the open and closed position at 80 psi.
- ISO 5211 mounting pad.
- ANSI B1.20.1 connections.

700076V36 - 700076V6 - 700076V9: size 1/2" to 3".



COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.

V-ball options



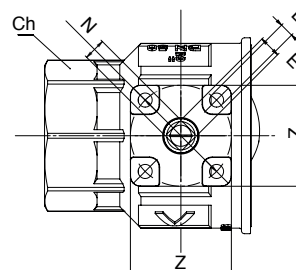
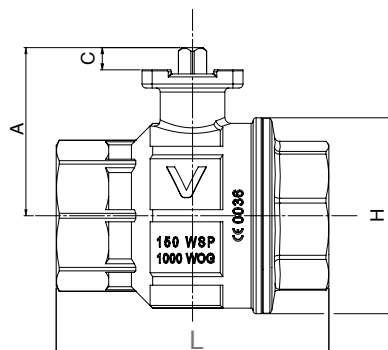
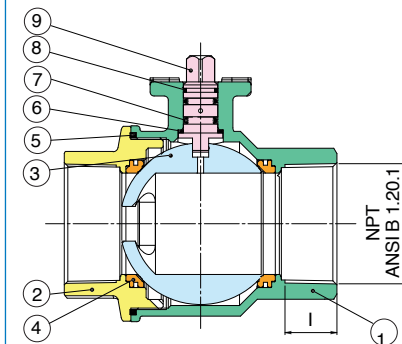
V30-60



V6

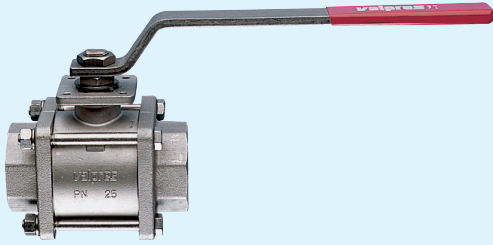


V9



N POS	PART NAME	MATERIAL	N PCS
1	BODY	CF8M	1
2	END CONNECTION	CF8M	1
3	BALL	A182-F316	1
4	BALL SEAT	23% CARBON + 2% GRAPHITE FILLED PTFE	2
5	BODY SEAT	PTFE	1
6	ANTI-FRICTION RING	TFM	1
7	O-RING	FKM (Viton)	2
8	STEM SEAT	Virgin PTFE	1
9	STEM	A182-F316	1

SIZE	I	L	H	CH	A	C	E mm	ISO 5211	B	Z	Cv	psi	Weight Lbs	Break Torque in-Lbs
1/2"	0.59	2.63	1.35	1.06	1.63	0.35	9	F03	0.23	1.49	22.21	1000	0.68	53.10
3/4"	0.64	3.07	1.65	1.25	1.71	0.35	9	F03	0.23	1.49	40.50	1000	0.91	53.10
1"	0.75	3.54	2.02	1.61	2.10	0.35	9	F03	0.23	1.49	74.63	1000	1.35	53.10
1 1/4"	0.84	3.93	2.53	1.96	2.24	0.35	9	F03	0.23	1.49	120.10	1000	2.22	53.10
1 1/2"	0.84	4.40	3.03	2.16	2.91	0.43	11	F05	0.27	1.96	201.32	1000	3.69	150.46
2"	1.01	5.31	3.81	2.75	3.27	0.43	11	F05	0.27	1.96	348.60	1000	6.49	150.46
2 1/2"	1.22	6.32	4.64	3.39	4.94	0.66	17	F07/F10	0.39/0.47	3.64	631.37	800	16.38	484
3"	1.34	7.01	5.48	4.09	5.34	0.71	17	F07/F10	0.39/0.47	3.64	1009.48	800	22.82	772



250 PSI STEAM

SERIES 710190-V36 - 710190-V6 - 710190-V9 STAINLESS STEEL 3-PC V-BALL VALVE

3-piece stainless steel 250 WSP, FNPT threaded V-ball valve, 30-60, 60,90 degrees V ports.

- Temperature range -4°F to 406°F.
- Blow-out proof stem, Antistatic Device.
- ISO 5211 mounting pad with double "D" stem.
- 100% tested.
- TUV T.A. Luft approved.
- Working steam pressure 250 psi.
- 25% carbon filled PTFE ball seats; thermal relief hole in the ball.

710190V36 - 710190V6 - 710190V9: size 1/2" to 4".

710061V36 - 710061V6 - 710061V9: SOCKET WELD - size 1/2" to 4".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.

V-ball options



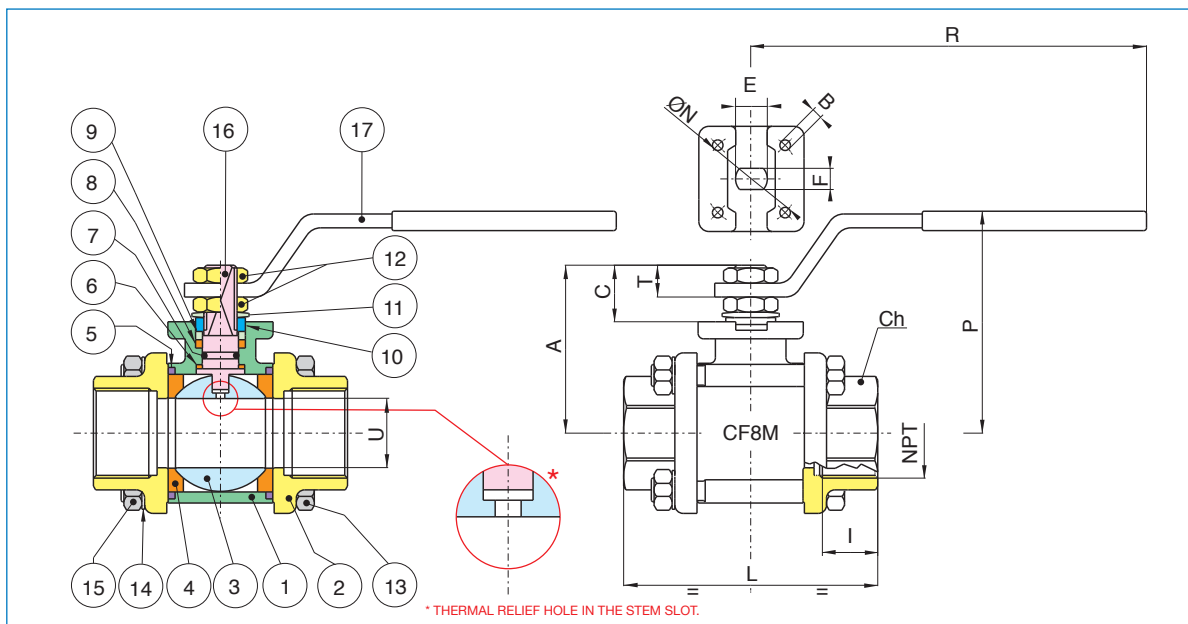
V30-60



V6



V9



N POS	PART NAME	MATERIAL	N POS	SIZE	U	I	L	CH	R	P	A	C	T	E	F	ISO 5211 ØN	B	WOG	Weight Lbs
1	BODY	CF8M	1	1/2"	0.59	0.59	2.55	1.06	5.17	2.51	1.85	0.59	0.39	0.39	0.27	1.41 (F03)	0.23	1000	0.88
2	END CONNECTION	CF8M	2	3/4"	0.78	0.64	2.99	1.25	5.17	2.67	2.02	0.59	0.39	0.39	0.27	1.65 (F04)	0.21	600	1.32
3	BALL	AISI 316	1	1"	0.98	0.75	3.62	1.61	6.87	3.09	2.36	0.76	0.49	0.47	0.31	1.65 (F04)	0.23	600	2.42
4	BALL SEAT	RPTFE	2	1 1/4"	1.25	0.84	4.19	1.96	6.87	3.28	2.53	0.76	0.49	0.47	0.31	1.65 (F04)	0.21	365	3.36
5	O-RING	FKM (Viton)	2	1 1/2"	1.49	0.84	4.56	2.16	9.86	3.93	3.11	0.94	0.64	0.62	0.39	1.96 (F05)	0.25	365	4.61
6	STEM SEAL	RPTFE	1	2"	1.96	1.01	5.35	2.75	9.86	4.21	3.38	0.94	0.64	0.62	0.39	1.96 (F05)	0.25	365	7.03
7	O-RING	FKM (Viton)	1	3"	3.15	1.31	7.08	4.13	12.65	5.41	4.48	1.10	0.70	0.78	0.55	2.75 (F07)	M8	250	29.45
8	STEM SEAL	RPTFE	1	4"	3.93	1.54	8.54	5.11	15.01	6.16	5.39	1.35	0.86	0.94	0.70	4.01 (F10)	M10	250	46.79
9	PACKING GLAND	AISI 303 (1/4" - 2") STEEL (2 1/2" - 4")	1																
10	END STOP	AISI 430 (1/4" - 2") STEEL (2 1/2" - 4")	2																
11	SPRING WASHER	STEEL (2 1/2" - 4")	2																
12	NUT	AISI 304 (1/4" - 2") STEEL (2 1/2" - 4")	2																
13	BOLT	AISI 304 (1/4" - 2") STEEL (2 1/2" - 4")	4																
14	WASHER	AISI 304 (1/4" - 2") STEEL (2 1/2" - 4")	4																
15	NUT	AISI 304 (1/4" - 2") STEEL (2 1/2" - 4")	4																
16	STEM	AISI 316	1																
17	HANDLE	AISI 430 (1/4" - 2") STEEL (2 1/2" - 4")	1																

SERIES 630LLV3 - 630LLV6 - 630LLV9 (NPT) 631LLV3 - 631LLV6 - 631LLV9 (SW)

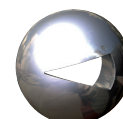
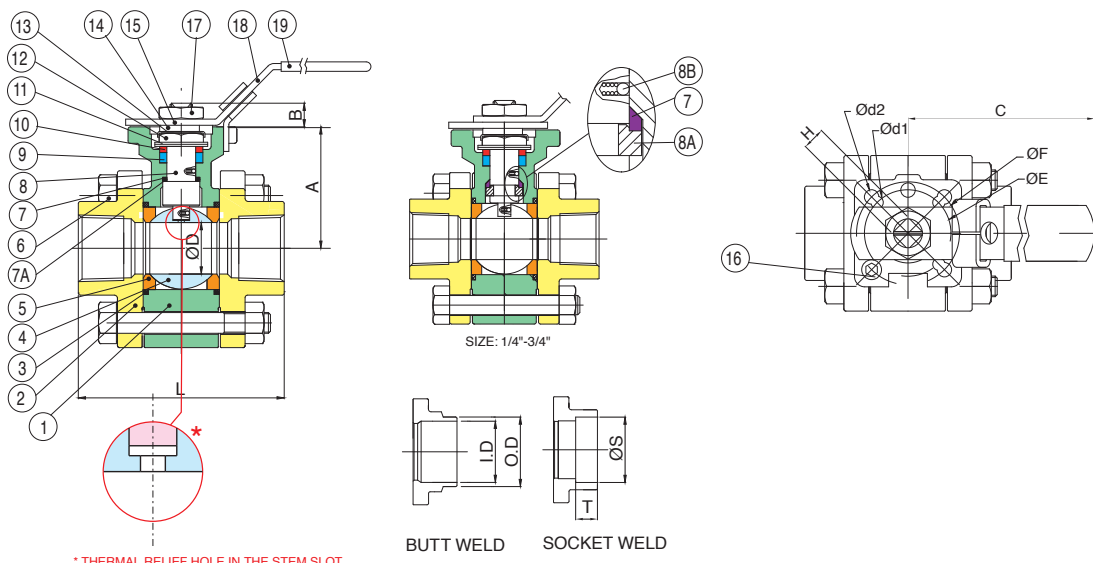
Carbon steel direct mount 3 piece V-port ball valve with locking lever, sizes 1/4" to 4".

- Temperature range -4°F to 406°F.
- Class 900 sizes 1/4" to 2, Class 600 sizes 2 1/2" to 4".
- Working pressure: 2200 psi (1/4" to 2"), 1480 psi (2 1/2" to 4").
- ISO 5211 mounting pad/square stem.
- TFM-4215 ball seats.
- Standard latch locking handle.
- Conforms to ANSI B16.34, ANSI B1.20.1 thread depths, NACE MR0175.
- Fire Safe to API 607-6th edition.
- Working steam pressure 250 psi.
- Standard SS 316 and stem in carbon steel models.
- Temperature range: -50°F to 550°F.

250 PSI STEAM

NEW

V-ball options



V30



V60



V90

N POS	PART NAME	MATERIAL	N PCS
1	BODY	WCB	1
2	END CAP	WCB	2
3	GASKEY (BODY)	TFM	2
4	BALL	SS 316	1
5	BALL SEATS	TFM 4215	2
6	BOLTS	SS 304	*
7	THRUST WASHER	TFM	1
7A	THRUST WASHER	PEEK	1
8	STEM	SS 316	1
8A	HALF SPLIT RING	SS 316	1
8B	ANTI-STATIC	SS 316	1
9	STEM PACKING	TFM	1
10	GLAND WASHER	SS 304	1
11	DISK WASHER	SS 301	1
12	STEM NUT	SS 304	1
13	NUT STOP	SS 304	1
14	SPACE WASHER	SS 304	1
15	PLATER	SS 304	1
16	STOP IN	SS 304	1
17	HANDLE NUT	SS 304	1
18	HANDLE	SS 304	1
19	HANDLE COVER	PLASTISOL	1

SIZE	A	B	ØD	Ød1	Ød2	ISO 5211		H mm	L	SW		BW (40#)		Break Torque in-Lbs	WOG	Weight Lbs
						ØE	ØF			ØS	T	I.D	O.D			
1/4"	1.81	0.37	0.43	0.24	0.24	F03	F04	9	2.61	0.56	0.44	0.55	0.36	71	2200	1.5
3/8"	1.81	0.37	0.49	0.24	0.24	F03	F04	9	2.61	0.69	0.44	0.67	0.50	71	2200	1.5
1/2"	1.89	0.37	0.59	0.24	0.24	F03	F04	9	2.76	0.86	0.50	0.84	0.63	107	2200	2.2
3/4"	2.08	0.47	0.79	0.24	0.24	F04	F05	11	3.62	1.07	0.56	1.05	0.82	133	2200	3.8
1"	2.32	0.47	0.98	0.24	0.27	F04	F05	11	4.13	1.33	0.63	1.31	1.05	160	2200	5.6
1 1/4"	2.44	0.57	1.26	0.27	0.36	F05	F07	14	4.37	1.67	0.69	1.66	1.38	222	2200	7.0
1 1/2"	2.75	0.57	1.49	0.27	0.36	F05	F07	14	4.88	1.92	0.72	1.91	1.61	416	2200	11
2"	3.54	0.75	4.97	0.36	0.45	F07	F10	17	5.91	2.41	0.84	2.38	2.06	736	2200	22
2 1/2"	4.13	0.71	2.50	0.36	0.45	F07	F10	17	6.50	2.91	0.87	2.88	2.47	1461	1480	32
3"	4.68	0.98	3.07	0.45	0.53	F10	F12	22	7.68	3.54	1.00	3.51	3.07	2213	1480	44
4"	5.67	0.98	3.89	0.45	0.53	F10	F12	22	9.65	4.54	1.26	4.51	4.02	3368	1480	87



250 PSI STEAM

SERIES 730LLV3 - 730LLV6 - 730LLV9 (NPT) 731LLV3 - 731LLV6 - 731LLV9 (SW)

Stainless steel direct mount 3 piece V-port ball valve with locking lever, sizes 1/4" to 4".

- Class 900 sizes 1/4" to 2, Class 600 sizes 2 1/2" to 4".
- Working pressure: 2160 psi (1/4" to 2"), 1440psi (2 1/2" to 4").
- ISO 5211 mounting pad/square stem.
- TFM-4215 ball seats.
- Standard latch locking handle.
- Conforms to ANSI B16.34, ANSI B1.20.1 thread depths, NACE MR0175.
- Fire Safe to API 607-6th edition.
- Standard SS 316 and stem in carbon steel models.
- Temperature range: -50°F to 550°F.

NEW

V-ball options



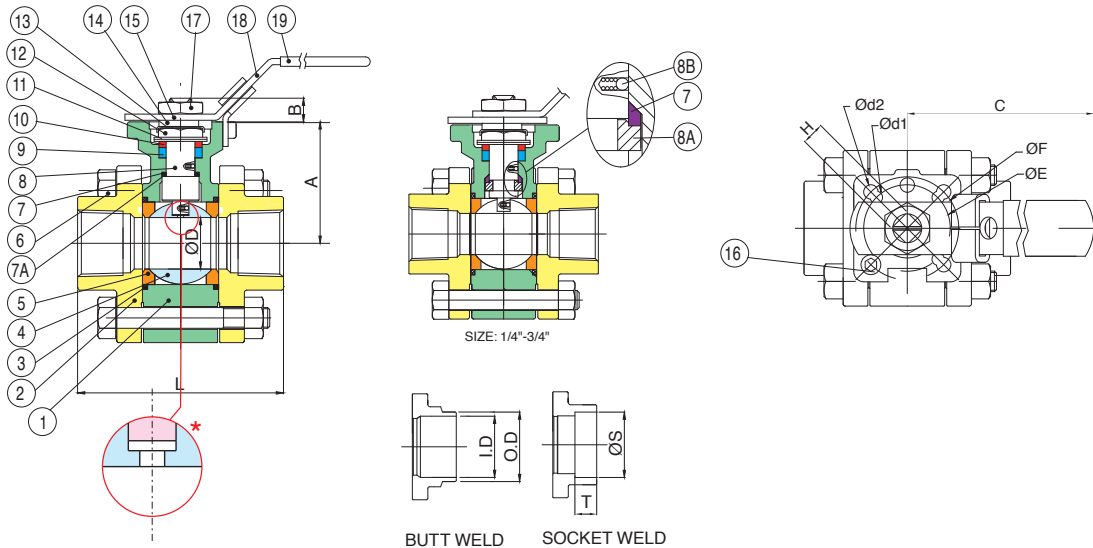
V30



V60



V90



* THERMAL RELIEF HOLE IN THE STEM SLOT.

BUTT WELD

SOCKET WELD

N POS	PART NAME	MATERIAL	N PCS	SIZE	A	B	ØD	Ød1	Ød2	ISO 5211		H mm	L	SW		BW (40#)		Break Torque in-Lbs	WOG	Weight Lbs
										ØE	ØF			ØS	T	I.D	O.D			
1	BODY	CF8M	1	1/4"	1.81	0.37	0.43	0.24	0.24	F03	F04	9	2.61	0.56	0.44	0.55	0.36	71	2160	1.5
2	END CAP	CF8M	2	3/8"	1.81	0.37	0.49	0.24	0.24	F03	F04	9	2.61	0.69	0.44	0.67	0.50	71	2160	1.5
3	GASKET (BODY)	TFM	2	1/2"	1.89	0.37	0.59	0.24	0.24	F03	F04	9	2.76	0.86	0.50	0.84	0.63	107	2160	2.2
4	BALL	SS 316	1	3/4"	2.08	0.47	0.79	0.24	0.24	F04	F05	11	3.62	1.07	0.56	1.05	0.82	133	2160	3.8
5	BALL SEATS	TFM 4215	2	1"	2.32	0.47	0.98	0.24	0.27	F04	F05	11	4.13	1.33	0.63	1.31	1.05	160	2160	5.6
6	BOLTS	SS 304	*	1 1/4"	2.44	0.57	1.26	0.27	0.36	F05	F07	14	4.37	1.67	0.69	1.66	1.38	222	2160	7.0
7	THRUST WASHER	TFM	1	1 1/2"	2.75	0.57	1.49	0.27	0.36	F05	F07	14	4.88	1.92	0.72	1.91	1.61	416	2160	11
7A	THRUST WASHER	PEEK	1	2"	3.54	0.75	4.97	0.36	0.45	F07	F10	17	5.91	2.41	0.84	2.38	2.06	736	2160	22
8	STEM	SS 316	1	2 1/2"	4.13	0.71	2.50	0.36	0.45	F07	F10	17	6.50	2.91	0.87	2.88	2.47	1461	1440	32
8A	HALF SPLIT RING	SS 316	1	3"	4.68	0.98	3.07	0.45	0.53	F10	F12	22	7.68	3.54	1.00	3.51	3.07	2213	1440	44
8B	ANTI-STATIC	SS 316	1	4"	5.67	0.98	3.89	0.45	0.53	F10	F12	22	9.65	4.54	1.26	4.51	4.02	3368	1440	87
9	STEM PACKING	TFM	1																	
10	GLAND WASHER	SS 304	1																	
11	DISK WASHER	SS 301	1																	
12	STEM NUT	SS 304	1																	
13	NUT STOP	SS 304	1																	
14	SPACE WASHER	SS 304	1																	
15	PLATER	SS 304	1																	
16	STOP IN	SS 304	1																	
17	HANDLE NUT	SS 304	1																	
18	HANDLE	SS 304	1																	
19	HANDLE COVER	PLASTISOL	1																	

SERIES 770V3 - 770V6 - 770V9 (NCF) 771V3 - 771V6 - 771V9 (CF)

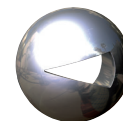


Stainless steel direct mount 3 piece V-port ball valve with sanitary connections, sizes 1/2" to 4".

- Highly polished internals and end caps with 8-12 Ra finish.
- A materials comply with FDA, USDA & 3A requirements.
- Investment cast body and end caps.
- ASTM 316 stainless steel.
- 100% tested and inspected prior to shipping.
- Full traceability of a components.
- SST x PTFE steam seats available for high temperature applications.
- Standard seats are 50% PTFE/50% SS.
- Cavity fillers are virgin PTFE.

NEW

V-ball options



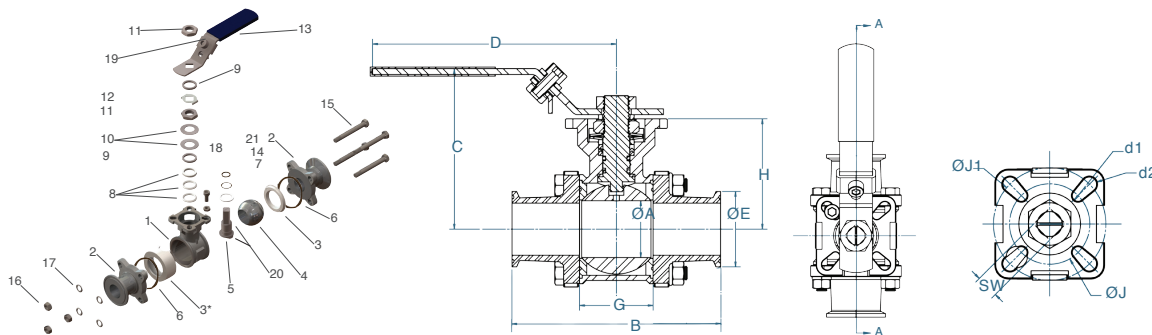
V30



V60



V90



N POS	PART NAME	MATERIAL	N PCS
1	BODY	CF8M/316SS	1
2	END CAPS	CF8M/316SS	2
3	SEATS	50% PTFE/50% SS	2
4	BALL	316SS	1
5	STEM	316SS	1
6	BODY SEAL	PTFE	2
7	STEM GASKET	PTFE	1
8	STEM SEALS	PTFE	3
9	GLAND RING	301SS	2
10	BELLEVILLE WASHER	304SS	2
11	LEVER NUT	304SS	1
12	LOCKING TAB	304SS	1
13	HANDLE	304SS	1
14	O-RING	304SS	1
15	BOLTS	304SS	4
16	BOLTS NUT	304SS	4
17	WASHER	304SS	4
18	STOP SCREW	PVC	1
19	LOCKING DEVICE	304SS	1
20	STATIC DEVICE	316SS	2
21	O-RING	Viton	1

SIZE	A	B	C	D	E	G	H	L	J	J1	d1	d2	SW	ISO 5211	Weight Lbs
1/2"	0.37	3.50	2.79	4.33	1.00	0.99	1.67	0.32	1.42	1.65	0.24	0.24	0.35	F03/F04	1.67
3/4"	0.63	4.00	2.89	4.33	1.00	1.09	1.76	0.32	1.42	1.65	0.24	0.24	0.35	F03/F04	1.91
1"	0.87	4.50	3.31	5.32	1.98	1.30	2.13	0.39	1.65	1.97	0.24	0.28	0.43	F04/F05	3.17
1 1/2"	1.37	5.50	4.31	6.50	1.98	1.94	2.89	0.58	1.97	2.76	0.28	0.35	0.55	F05/F07	7.24
2"	1.87	6.25	4.68	6.50	2.52	2.50	3.26	0.58	1.97	2.76	0.28	0.35	0.55	F05/F07	10.1
2 1/2"	2.37	7.00	5.25	9.06	3.05	2.76	4.21	0.67	2.76	4.02	0.35	0.43	0.67	F07/F10	21.8
3"	2.88	9.00	6.30	11.81	3.58	4.02	4.62	0.67	2.76	4.02	0.35	0.43	0.67	F07/F10	29
4"	3.84	9.50	6.90	11.81	8.90	4.02	5.21	0.67	2.76	4.02	0.35	0.43	0.67	F07/F10	46.5



SERIES 723102-V36 - 723102-V6 - 723102-V9 DIRECT MOUNT STAINLESS STEEL WAFER V-BALL VALVE

Direct mount Stainless steel ANSI class 150 flanged V-ball valve 30-60, 60, 90 degrees V ports.

- Temperature range -4°F to +366°F.
- Antistatic stem device.
- Blow-out proof stem.
- TFM-MPTFE ball seats and thrust washer standard.
- Triple stem seals - two Viton (FKM) O-rings and one PTFE seat.
- 100% electronically tested in the open and closed position at 80 psi
- Low torque design.

723102V36 - 723102V6 - 723102V9: size 1" to 4".

V-ball options



V30-60

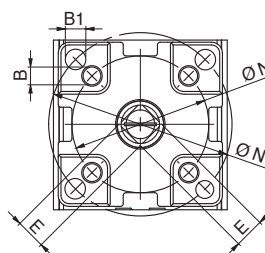
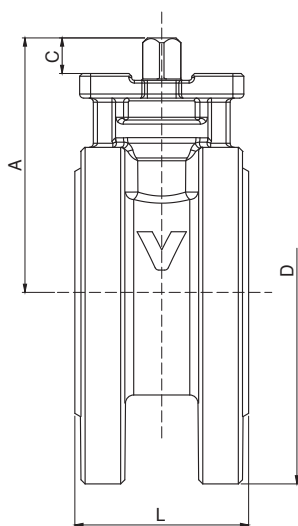
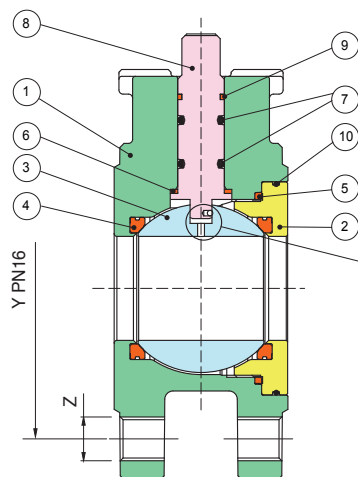


V6



V9

Temperature range: -20° +160°
Vacuum: 10⁻³ torr.



N POS	PART NAME	MATERIAL	N PCS
1	BODY	A351-CF8M	1
2	END CONNECTION	A479-Tp316/A182-F316	1
3	BALL	A351-CF8M	1
4	BALL SEAT	TFM-MPTFE	2
5	BODY SEAT	PTFE	1
6	THRUST WASHER	TFM-MPTFE	1
7	O-RING	FKM (Viton)	2
8	STEM	A564-Tp630 H1150D (17-4-PH)	1
9	STEM SEAT	PTFE	1
10	O-RING	FKM (Viton)	1

SIZE	D	Y	Z	L	A	C	E	ISO 5211 ØN	B	B1	Break Torque in-Lbs	Cv	Weight Lbs
1"	4.33	3.35	4x5/8"	1.89	2.76	0.43	9	F03/F05	0.22	0.28	89	74.63	5.29
1 1/4"	5.12	3.94	4x5/8"	2.13	3.23	0.39	9	F03/F05	0.22	0.28	116	120.10	7.72
1 1/2"	5.51	4.33	4x3/4"	2.50	3.66	0.51	11	F05	0.26	-	151	201.32	9.92
2"	6.10	4.92	8x5/8"	3.23	4.00	0.53	11	F05/F07	0.26	0.35	177	348.60	14.77
2 1/2"	7.09	5.71	8x3/4"	4.06	5.06	0.73	14	F07	0.35	-	284	596.66	24.03
3"	7.48	6.30	8x3/4"	4.80	5.43	0.71	14	F07	0.35	-	390	1009.48	30.87
4"	8.66	7.09	8x3/4"	5.98	6.02	0.73	17	F07	0.35	-	531	1577.34	46.08



SERIES 724102-V36 - 724102-V6 - 724102-V9

DIRECT MOUNT

CARBON STEEL WAFER V-BALL VALVE

Direct mount Carbon steel ANSI class 150 flanged V-ball valve 30-60, 60, 90 degrees V ports.

- Temperature range -4°F to +366°F.
- Antistatic stem device.
- TFM-MPTFE ball seats and thrust washer standard.
- Triple stem seals - two Viton (FKM) O-rings and one PTFE seat.
- ISO 5211 Pad.
- Low torque design.

724102V36 - 724102V6 - 724102V9: size 1" to 4".

V-ball options



V30-60

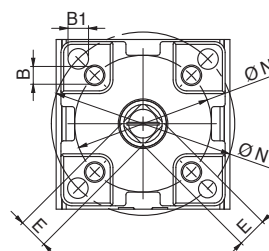
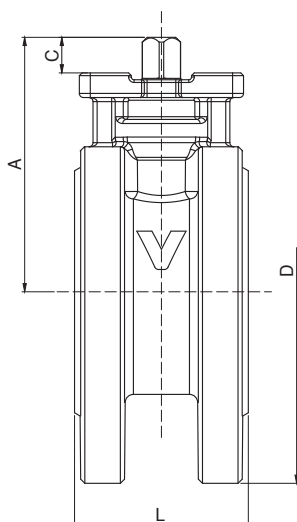
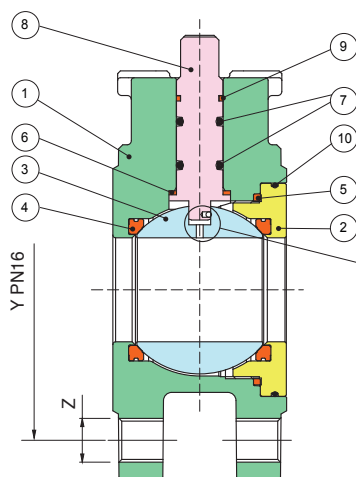


V6



V9

Temperature range: -20° +160°
Vacuum: 10⁻³ torr.



N POS	PART NAME	MATERIAL	N PCS	SIZE	D	Y	Z	L	A	C	E	ISO 5211 ØN	B	B1	Break Torque in-Lbs	Cv	Weight Lbs
1	BODY	A352-LCB	1	1"	4.33	3.35	4x5/8"	1.89	2.76	0.43	9	F03/F05	0.22	0.28	74.63	89	5.29
2	END CONNECTION	ASTM A105	1	1 1/4"	5.12	3.94	4x5/8"	2.13	3.23	0.39	9	F03/F05	0.22	0.28	120.10	116	7.72
3	BALL	A351-CF8/A182-F304	1	1 1/2"	5.51	4.33	4x3/4"	2.50	3.66	0.51	11	F05	0.26	-	201.32	151	9.92
4	BALL SEAT	TFM-MPTFE	2	2"	6.10	4.92	8x5/8"	3.23	4.00	0.53	11	F05/F07	0.26	0.35	348.60	177	14.77
5	BODY SEAT	PTFE	1	2 1/2"	7.09	5.71	8x3/4"	4.06	5.06	0.73	17	F07	0.35	-	596.66	284	24.03
6	THRUST WASHER	TFM-MPTFE	1	3"	7.48	6.30	8x3/4"	4.80	5.43	0.71	17	F07	0.35	-	1009.48	390	30.87
7	O-RING	FKM (Viton)	2	4"	8.66	7.09	8x3/4"	5.98	6.02	0.73	17	F07	0.35	-	1577.34	531	46.08
8	STEM	A564-Tp630 H1150D (17-4-PH)	1														
9	STEM SEAT	PTFE	1														
10	O-RING	FKM (Viton)	1														



SERIES 720370-V36 - 720370-V6 - 720370-V9 STAINLESS STEEL WAFER V-BALL VALVE

Stainless steel ANSI class 150 flanged V-ball valve 30-60, 60, 90 degrees V ports.

- Temperature range -4°F to 406°F.
- Blow-out proof stem, Antistatic Device.
- RPTFE seats, packing and thrust washer.
- Thermal relief hole in the ball.
- Space saving design.
- 100% tested.
- TUV T.A. Luft approved.
- ANSI B16.34 design.
- ISO 5211 mounting pad and double "D" stem.

720370V36 - 720370V6 - 720370V9: size 1/2" to 6".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.

V-ball options



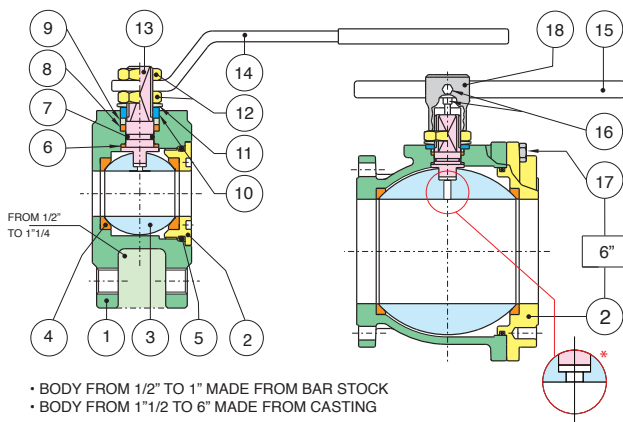
V30-60



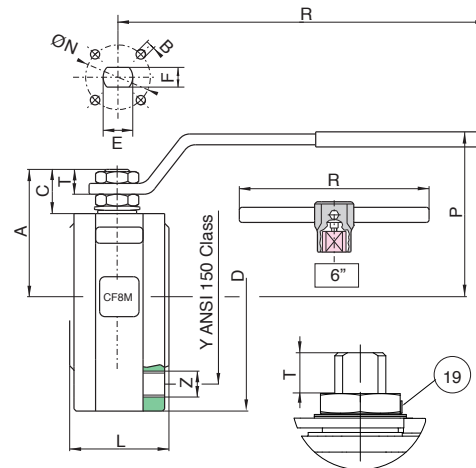
V6



V9

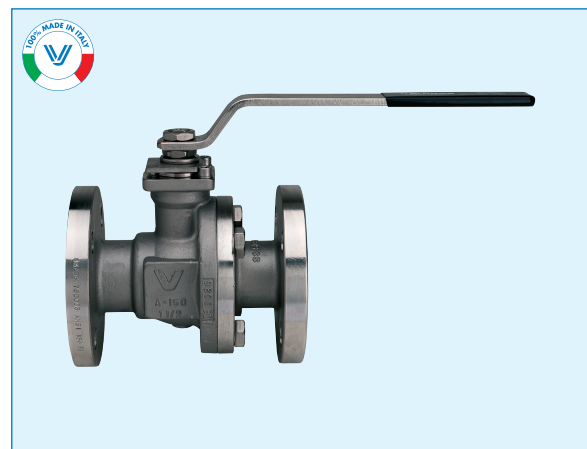


* THERMAL RELIEF HOLE IN THE STEM SLOT.



N POS	PART NAME	MATERIAL	N PCS	SIZE	D	Y	Z UNC	L	R	P	A	C	T	E	F	ISO 5211 ØN	B	Weight Lbs
1	BODY	A479-316 / A351 CF8M	1	1/2"	3.50	2.38	4x1/2"	1.37	5.17	2.53	1.85	0.61	0.35	M10	0.27	1.26 (F03)	4XM5	2.86
2	END CONNECTION	A479-316 / A351 CF8M	1	3/4"	3.88	2.75	4x1/2"	1.57	5.17	2.71	2.02	0.61	0.35	M10	0.27	1.26 (F03)	4XM5	3.96
3	BALL	A479-316 / A351 CF8M	1	1"	4.25	3.12	4x1/2"	1.81	6.87	3.16	2.40	0.76	0.45	M12	0.31	1.65 (F04)	4XM5	5.95
4	BALL SEATS	RPTFE	2	1 1/2"	5.00	3.88	4x1/2"	2.50	9.86	4.03	3.07	0.96	0.51	M16	0.39	1.97 (F05)	4XM6	7.27
5	RING	FKM (Viton)	1	2"	6.00	4.75	4x5/8"	3.22	9.86	4.37	3.42	0.98	0.53	M16	0.39	1.97 (F05)	4XM6	12.12
6	THRUST WASHER	RPTFE	1	3"	7.50	6.00	4x5/8"	4.80	12.65	5.45	4.52	1.12	0.70	M20	0.55	2.76 (F07)	4XM8	28.21
7	RING	FKM (Viton)	1	4"	9.00	7.50	8x5/8"	5.98	15.01	6.16	5.39	1.35	0.86	M24	0.70	4.02 (F10)	4XM10	46.07
8	STEM SEAL	RPTFE	1	6"	11.00	9.50	8x3/4"	9.13	27.55	9.33	7.93	2.02	1.18	M42	1.18	4.92 (F12)	4XM12	101.63
9	PACKING GLAND	STEEL	1															
10	END STOP	AISI 430 (1/2"-2") STEEL (2 1/2"-6")	2 1															
11	SPRING WASHER	STEEL	2															
12	NUT	STEEL	2															
13	STEM	A479-316 / A351 CF8M	1															
14	HANDLE	STEEL	1															
15	HANDLE DN 150-200	STEEL	1															
16	SCREW	STEEL	2															
17	SCREW	STEEL	8															
18	BODY HANDLE DN150-200	CAST IRON	1															
19	UNSCREWING GROWER	A182-F316	1															

SPLIT-BODY V-BALL



SERIES 760021V36 - 760021V6 - 760021V9 STAINLESS STEEL V-BALL VALVE

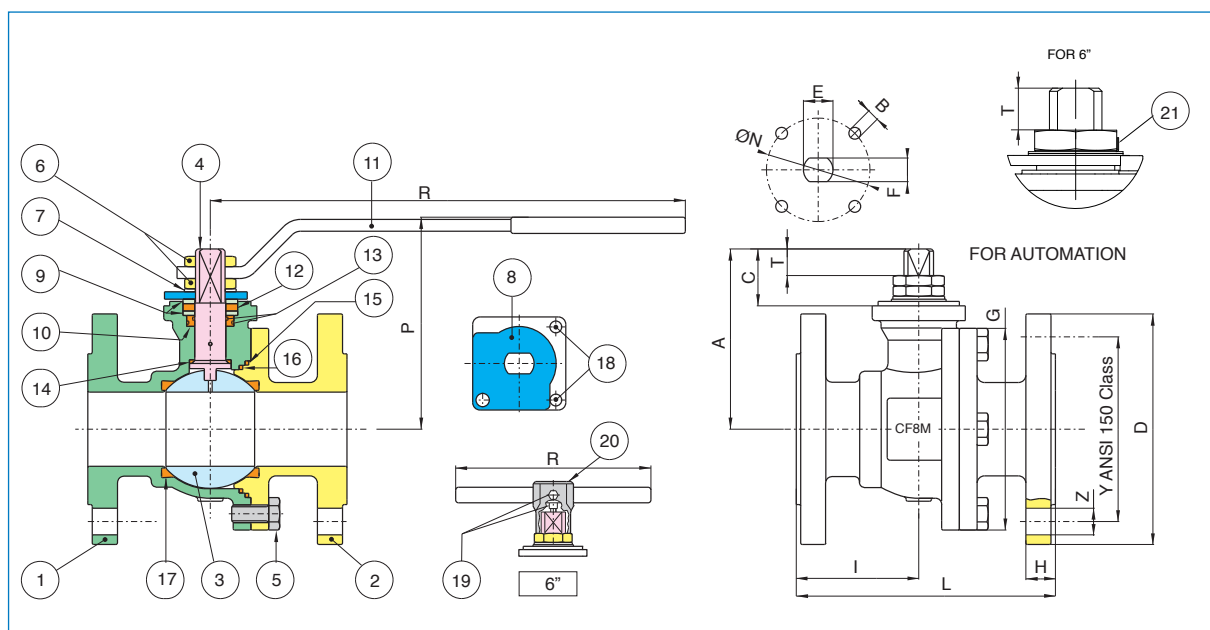
Stainless steel, ANSI class 150 flanged ends V-ball valve 30-60, 60, 90 degrees V ports.

- Temperature range -4°F to 406°F.
- Blow-out proof stem, adjustable stem packing.
- RPTFE seats, packing and thrust washer.
- Standard grounded stem and ball.
- Thermal relief hole in the ball.
- 100% tested.
- PED 97/23/CE.
- Locking handle plate.
- ANSI B16.5, B16.10, B16.34 design.
- Fire Safe API 6FA-API 607.
- Antistatic Device.
- ISO 5211 mounting pad and double "D" stem.

760021V36 - 760021V6 - 760021V9: size 1/2" to 6".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.

V-ball options



V30-60



V6



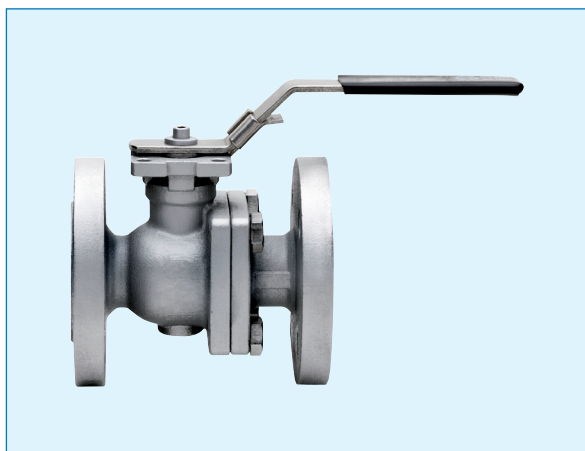
V9

N POS	PART NAME	MATERIAL	N PCS
1	BODY	A351 CF8M	1
2	END CONNECTION	A351 CF8M	1
3	BALL	A479-316/A351-CF8M	1
4	STEM	A479-316	1
5	SCREW	STAINLESS STEEL 1/2" - 2" 4	4
6	NUT	STAINLESS STEEL 1/2" - 4" 2	2
7	SPRING WASHER	STAINLESS STEEL	2
8	TRAVEL STOP	STAINLESS STEEL	1
9	PACKING GLAND	STAINLESS STEEL	2
10	STEM SEAL	PTFE	1
11	HANDLE	STAINLESS STEEL	1
12	STEM SEAL	GRAPHOIL	1
13	O-RING	FKM (Viton)	2
14	THRUST WASHER	RPTFE	1
15	SEAL	GRAPHOIL	1
16	SEAL	PTFE	1
17	BALL SEATS	RPTFE	2
18	SCREW	STAINLESS STEEL	2
19	SCREW	STAINLESS STEEL	2
20	BODY HANDLE	CAST IRON	1
21	UNSCREWING GROWER	A182-F316	1

SIZE	D	Y	Z	H	I	L	G	P	R	A	C	T	E	F	ISO 5211 ØN	B	Weight Lbs
1/2"	3.54	2.38	4xØ0.63	0.45	1.83	4.25	2.80	3.46	5.16	2.05	0.75	0.31	M10	0.28	1.65-F04	M5	4.21
3/4"	3.94	2.76	4xØ0.63	0.51	2.09	4.61	2.89	3.66	5.16	2.20	0.75	0.31	M10	0.28	1.65-F04	M5	5.36
1"	4.33	3.13	4xØ0.63	0.57	2.34	5.00	3.56	3.50	6.85	2.85	1.08	0.51	M12	0.31	1.97-F05	M6	8.15
1 1/2"	5.12	3.88	4xØ0.63	0.69	3.03	6.50	4.49	5.24	9.84	4.17	1.18	0.39	M16	0.39	1.97-F05	M6	15.65
2"	5.91	4.74	4xØ0.75	0.77	3.39	7.01	5.37	5.67	12.64	4.80	1.52	0.71	M20	0.55	2.76-F07	M8	23.80
3"	7.48	6.00	4xØ0.75	0.94	3.13	7.99	7.03	6.81	15.00	5.94	1.69	0.71	M24	0.71	4.02-F10	M10	47.61
4"	9.06	7.50	8xØ0.75	0.94	4.33	9.02	8.21	7.36	15.00	6.50	1.69	0.71	M24	0.71	4.02-F10	M10	67.00
6"	11.02	9.51	8xØ0.87	1.00	7.13	15.51	12.24	12.01	27.56	9.65	2.68	1.61	M42	1.18	4.92-F12	M12	171.91

VALPRES





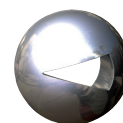
SERIES VF300 - VF600 - VF900 STAINLESS STEEL V-BALL VALVE

Stainless steel, ANSI class 150 flanged V-ball valve, 30, 60, 90 degrees V ports.

- Temperature range -18°F to 392°F.
- ISO 5211 mounting pad.
- Locking handle standard.
- ANSI 16.5, 16.10, and 16.34.
- Antistatic design.
- Blowout proof stem and carbon filled PTFE ball seats.
- Thermal relief hole in the ball.
- Direct mount ISO 5211.
- Latch locking handle.

VF300 - VF600 - VF900: size 1/2" to 6".

V-ball options



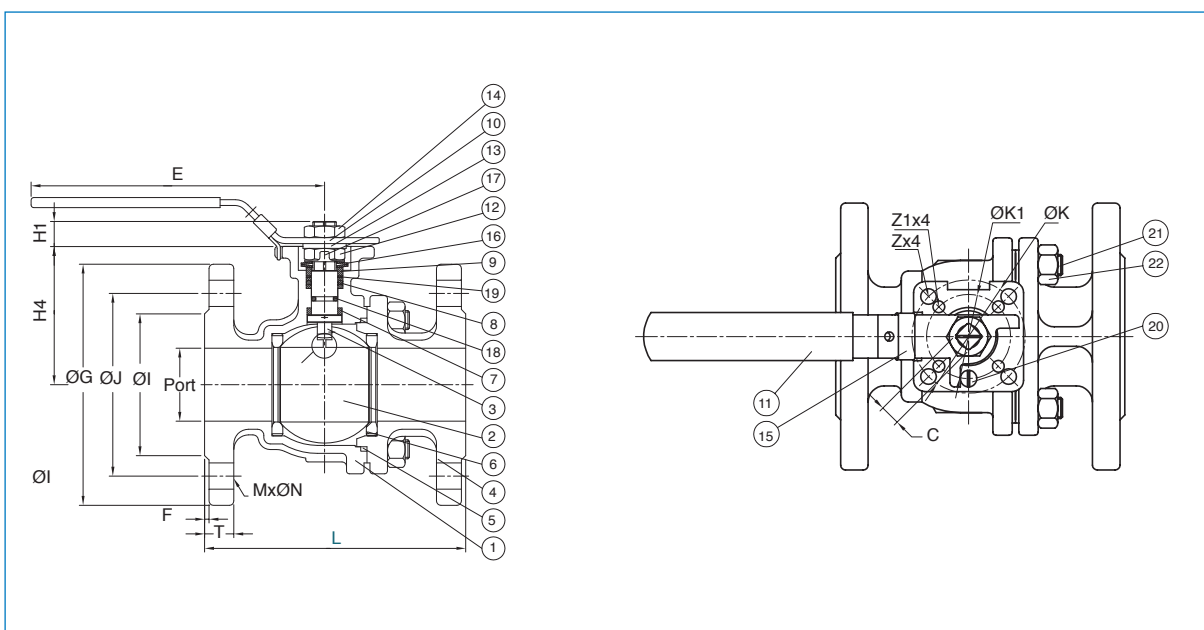
V30



V60

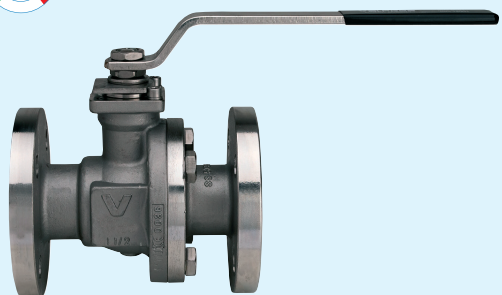


V90



N POS	PART NAME	MATERIAL	N POS
1	BODY	ASTM A351 Gr. CF8M	1
2	BALL	ASTM A351 Gr. CF8M	1
3	STEM	AISI 316	1
4	END CAP	ASTM A351 Gr. CF8M	2
5	BODY SEAL	PTFE	1
6	SEAT	Carbon graphite filled PTFE	2
7	THRUST WASHER	PTFE	1
8	STEM PACKING	PTFE	1
9	GLAND	AISI 304	1
10	HANDLE	AISI 304	1
11	HANDLE COVER	PLASTIC	1
12	STEM NUT	AISI 304	1
13	HANDLE WASHER	AISI 304	1
14	HANDLE NUT	AISI 304	1
15	LOCKING PAD	AISI 304	1
16	BELLEVILLE WASHER	AISI 304	2
17	TAB WASHER	AISI 304	1
18	O-RING	FKM (Viton)	1
19	PACKING FOLLOWER	PTFE +25% GF	1
20	STOP PIN	AISI 304	1
21	BODY STUD	ASTM A193 GR.B8	4-8
22	BOLT NUT	ASTM A194 GR.8	4-8

SIZE	Port	L	E	H1	H4	C mm	ØG	ØJ	ØI	T	F	M	ØN	ISO 5211	Z	Z1	Break Torque in-Lbs	Weight Lbs
1/2"	0.59	4.25	4.41	0.33	1.89	9	3.50	2.38	1.38	0.44	0.06	4	0.63	F05 F03	7.0	6.0	62	3.9
3/4"	0.79	4.61	4.41	0.33	2.44	9	3.88	2.76	1.69	0.50	0.06	4	0.63	F05 F03	7.0	6.0	106	4.9
1"	0.98	5.00	5.35	0.37	2.52	9	4.25	3.12	2.01	0.56	0.06	4	0.63	F05 F03	7.0	6.0	177	6.8
1 1/4"	1.26	5.51	7.28	0.37	2.80	9	4.63	3.50	2.50	0.63	0.06	4	0.63	F05 F03	7.0	6.0	224	9.2
1 1/2"	1.50	6.50	7.80	0.55	2.99	14	5.00	3.88	2.88	0.69	0.06	4	0.63	F07 F05	9.0	7.0	371	13.3
2"	1.97	7.01	7.80	0.54	3.33	14	6.00	4.75	3.62	0.75	0.06	4	0.75	F07 F05	9.0	7.0	486	19.2
2 1/2"	2.52	7.48	10.34	0.71	4.20	17	7.00	5.50	4.12	0.92	0.06	4	0.75	F10 F07	11.0	9.0	840	24.8
3"	2.99	7.99	10.34	0.71	4.57	17	7.50	6.00	5.00	0.94	0.06	4	0.75	F10 F07	11.0	9.0	1250	41
4"	3.94	9.02	12.80	0.71	6.08	17	9.00	7.50	6.19	0.94	0.06	4	0.75	F10 F07	11.0	9.0	1860	57
6"	5.91	15.51	29.53	1.18	8.39	27	11.00	9.50	8.50	1.00	0.06	8	0.88	F12 n/a	0.55	n/a	2310	168



SERIES 760195-V36 - 760195-V6 - 760195-V9 STAINLESS STEEL V-BALL VALVE

Stainless steel, ANSI class 300 flanged V-ball valve 30-60, 60, 90 degrees V ports.

- Temperature range -4°F to 406°F.
- Blow-out proof stem, adjustable stem packing.
- RPTFE seats, packing and thrust washer.
- 100% tested.
- PED 97/23/CE.
- Locking handle plate.
- Thermal relief hole in the ball.
- ANSI B16.5, B16.10, B16.34 design.
- Fire Safe API 6FA-API 607.
- Antistatic Device.
- ISO 5211 mounting pad and double "D" stem.

760195V36 - 760195V6 - 760195V9: size 1/2" to 6".

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.

V-ball options



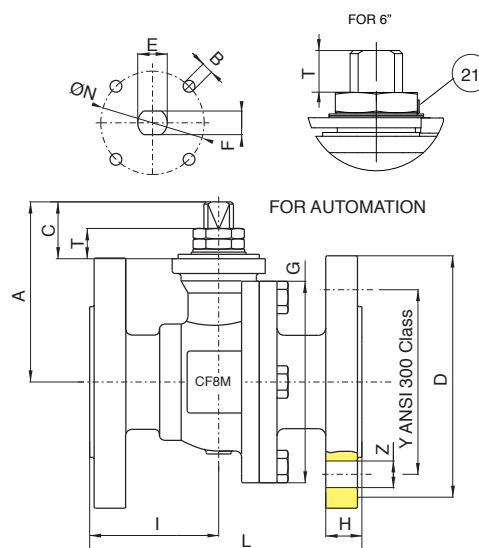
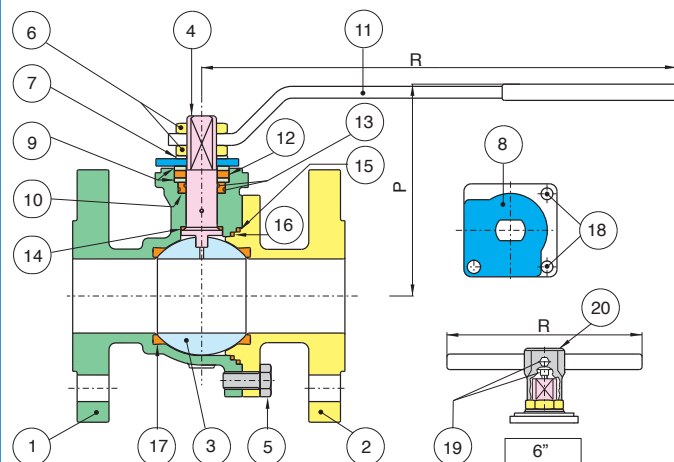
V30-60



V6



V9



N POS	PART NAME	MATERIAL	N POS
1	BODY	CF8M	1
2	END CONNECTION	CF8M	1
3	BALL	A479-316/A351-CF8M	1
4	STEM	A479-316	1
5	SCREW	STAINLESS STEEL 1/2"-1 1/2" 2"-6"	4
6	NUT	STAINLESS STEEL 1/2"-1 1/2" 2"-6"	2
7	SPRING WASHER	STAINLESS STEEL	2
8	TRAVEL STOP	STAINLESS STEEL	1
9	PACKING GLAND	STAINLESS STEEL	2
10	STEM SEAL	PTFE	1
11	HANDLE	STAINLESS STEEL	1
12	STEM SEAL	GRAPHOIL	1
13	O-RING	FKM (Viton)	2
14	THRUST WASHER	RPTFE	1
15	SEAL	GRAPHOIL	1
16	SEAL	PTFE	1
17	BALL SEATS	RPTFE	2
18	SCREW	STAINLESS STEEL	2
19	SCREW	STAINLESS STEEL	2
20	BODY HANDLE	CAST IRON	1
21	UNSCREWING GROWER	A182-F316	1

SIZE	D	Y	Z	H	I	L	G	P	R	A	C	T	E	F	ISO 5211 ØN	B	Weight Lbs
1/2"	3.74	2.62	4xØ0.63	0.57	2.42	5.51	3.35	3.46	5.16	2.05	0.75	0.31	M10	0.28	1.65-F04	M5	5.07
3/4"	4.53	3.25	4xØ0.75	0.63	2.40	5.98	3.07	3.66	5.16	2.20	0.75	0.31	M10	0.28	1.65-F04	M5	7.71
1"	4.92	3.50	4xØ0.79	0.69	2.78	6.50	3.78	4.29	6.85	2.85	1.08	0.51	M12	0.31	1.97-F05	M6	11.46
1 1/2"	6.10	4.51	4xØ0.87	0.83	3.09	7.48	4.96	5.24	9.84	4.21	1.18	0.39	M16	0.39	1.97-F05	M6	22.04
2"	6.50	5.00	8xØ0.79	0.89	3.39	8.50	5.37	5.67	12.64	4.80	1.52	0.71	M20	0.55	2.76-F07	M8	26.45
3"	8.27	6.63	8xØ0.87	1.14	3.19	11.14	7.03	6.81	15.00	5.94	1.69	0.71	M24	0.71	4.02-F10	M10	59.51
4"	10.04	7.87	8xØ0.87	1.26	3.48	12.01	8.62	7.36	15.00	6.50	1.69	0.71	M24	0.71	4.02-F10	M10	90.36
6"	12.60	10.63	12xØ0.87	1.46	6.77	15.87	12.05	12.01	27.56	9.65	2.68	1.08	M42	1.18	4.92-F12	M12	204.97