



BONOMI
NORTH AMERICA



2025



PRICE LIST
EFFECTIVE FEBRUARY 1st 2025



VALPRES VALBIA

FRABO



TVL
TECNOVIELLE

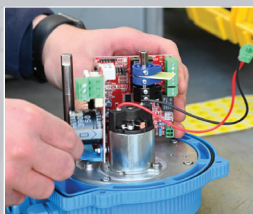
GIBSON
valves



CONFLOW

BONOMI

NORTH AMERICA



Excellence allows the Bonomi Group to compete on the international markets.

The challenge can be met thanks to the passion and the energy of men and women who research, design, engineer, and manufacture technologically advanced and high quality products.

A perfectly integrated team effort to provide high standards and customer satisfaction.
We are ready.



BONOMI GROUP PLUMBING DIVISION



Brass ball valves, gas cocks, brass butterfly valves, check valves, back flow prevention devices, pressure reducers and self cleaning filters. Multilayers pipe and press brass fittings, press systems and valves for copper, copper-nickel, stainless and carbon steel pipes.



Copper and bronze, carbon and stainless steel pressfittings, copper and bronze solder fittings, bronze and brass threaded fittings.



Brass valves and fittings for polyethylene pipes.



Stainless steel and copper-nickel pressfittings, push-fit system for gravity and vacuum drains, deck/ bulkhead pipe penetrations.



BONOMI GROUP INDUSTRIAL DIVISION

Stainless steel and carbon steel, cast iron ball valves, butterfly valves, trunnion, cryogenic and control ball valves.

Production of rack and pinion double acting and spring return pneumatic actuators, multi-turn and quarter-turn electric actuators. Supply and automation of ball and butterfly valves and accessories.

Choke valves, special valves and control systems for Oil&Gas industry.

Butterfly valves, check valves, dumpers, ball valves and customized valves for different industrial applications.

Metal seated ball valves for critical operating conditions such as high temperatures (up to +1200°F), low temperatures (up to -330°F), abrasive services, dangerous applications, and engineering for specific services.

Pneumatic and electric actuated control and on-off valves, Hygienic pneumatic valves, self-actuated pressure reducers, heat exchangers, unfired steam generators, condensate separators, condensate return units and manifolds.



OUR HISTORY

- 1901** **Rubinetterie Bresciane Bonomi** was initially founded in Lumezzane simply as a valve manufacturer for the winery industry.
- 1967** Thanks to a commitment to research and development through investments, Rubinetterie Bresciane Bonomi has been affirmed as the **first** leading international player in manufacturing **two-piece ball valves**.
- 1978** **Valpres** was founded as a specialized manufacturer of steel and cast iron ball valves with a focus on industrial applications.
- 1980** Bonomi Group acquires **Univers****, a producer of non ferrous metal items, turned and machined, according to customer drawings, turned parts.
- 1995** **Valbia** was founded for the production and distribution of electric and pneumatic actuators on a global scale.
- 1998** **Bonomi Deutschland** was founded.
- 1999** **Bonomi UK** was founded.
- 2000** **Bonomi India** was founded.
Bonomi Group acquires **Bossini Stampaggio****, active hot forging manufacturer.
- 2003** **Bonomi North America** was founded.
- 2012** **Bonomi Brasil** was founded for the production and distribution of pneumatic actuators for the domestic market.
- 2013** **Bonomi-GPK Russia** was founded.
- 2014** The **new production facility of Rubinetterie Bresciane Bonomi** is opened in Gussago: 1,300,000 sq. ft, 463,000 sq. ft of which is covered by with state of-the-art technologies granting the plant the A+ energy certification.
- 2018** **Bonomi China** (Bonomi Valves Automation Shenzhen) was founded.
- 2019** Bonomi Group has completed the acquisition of **Fra.Bo****, Italian leading manufacturer of fittings for plumbing installations.
- 2020** Bonomi Group acquires **Quam**, company specialized in designing and producing choke valves, special valves and control systems for Oil&Gas industry and all the assets of the innovative startup **Loclain****.
- 2021** Bonomi Group has completed the acquisition of **Tecnovielle****, manufacturer of brass valves and fittings for polyethylene pipes.
- 2022** Bonomi Group acquires **Penta**, a company specialized in the production of metal seated ball valves for critical operating conditions, **Ghibson Italia***, a company specialized in the production of butterfly valves and check valves for different industrial applications, **Ghibson & Co.***, a company which supports and completes the range of Ghibson Italia and **AVS AB***** - Automatik Ventiler System (today **Bonomi Scandinavia**) a Swedish commercial company supplying industrial plants.
- 2023** Bonomi Group acquires **Chibro**, a company specialized in the production of stainless steel and cupronickel pressfittings, push-fit system for gravity and vacuum drains, deck/bulkhead pipe penetrations, **Savinox***, a company that offers customers a wide range of stainless-steel and special alloys products especially serving for the marine sector.
- 2024** Bonomi Group acquires **Conflow**, a company specializing in the design, construction, and servicing of industrial valves, globe valves, regulating and on-off valves, as well as pressure reducers and heat exchangers for liquids, gases, and vapours.

**TODAY AND
TOMORROW
GROW TO
COMPETE ON
INTERNATIONAL
MARKETS**

* Ghibson 85% - Savinox 70%.

** Merger by incorporation.

*** Change company name.



IMPORTANT NUMBERS

333+ Mio \$

2023 turnover of Bonomi Group:

Rubinetterie Bresciane Bonomi, Valpres, Valbia, Fra.Bo, Quam, Tecnovielle, Penta, Ghibson, Chibro, Conflow

1000+

Employees in Italy

11

Production facilities

8

International sales divisions

118

Approvals

100+

Patents and trademarks

100+

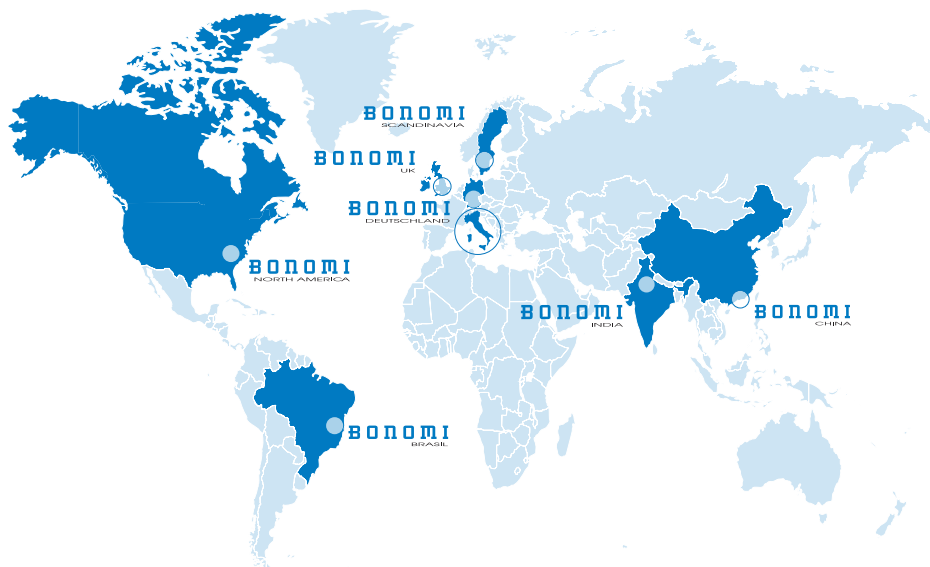
Countries we transact with

2.8 + Mio sq. ft. Sqm production plant area

1.2 + Mio sq. ft. Sqm covered production plant area

52 Main alloys machined

+33000 Sold items



KEY POINTS

Very high **level of automation**: in the production lines, the control system and production management (MES) with the real time data collection, in logistics; this allows traceability from raw material to delivery.

Constant investment in product, in process and method innovation, aimed at **maximum customer satisfaction**.

The companies of the group are engaged in a 360° **digital transformation**, from R&D to production, to sales and marketing, to the relationship with the consumer through CRM, with a fundamental presence of high specialized human capital.

Bonomi Group has always deemed important to adapt its company management system to the international reference standards:

- ISO 9001, products' quality management system, since 1994, first company in Italy in our market segment (previously EN 29002 certified).
- ISO 14001, environmental management system, since 2001.
- ISO 45001, occupational health and safety management system, since 2004.
- ISO 50001, energy management system, since 2015.
- API 6D, specification for pipeline valves, since 2013.
- API 6A, specification for wellhead and christmas tree equipment, since 2009.
- AEO/AEOF, Authorized Economic Operator Full (internal management of customs procedures relating to import and exports of goods), since 2014.

Bonomi Group has always placed great emphasis on sustainability and quality. In 2022, it drew up its first group **sustainability report**, which shows an ongoing commitment to social, environmental and governance (ESG) values in the conduct of all activities.

We work every day for a **total quality**, which depends on the quality of the individual operations in the production process.

Environmental commitment and sustainable production: the electricity needed is produced mainly from the photovoltaic panels (1,8 MW).

The heat is obtained mainly through an internal geothermal plant.

Architectural solutions, like shed roofs, maximize the zenithal light and minimize the solar radiation during summertime.

Low environmental impact products used in production processes.

Wastes recycles processes (oils, waters, materials, etc.) eliminate pollution or disposal hazards.

Bonomi Group is teaming up with its employees, promoting their sense of belonging through the lever of "well-being" in the workplace.

The company provides to employees with a gym, training courses, advancements of career, **corporate welfare** projects, designed primarily for employees but also involving more and more local companies.

Bonomi Group is in fact one of the founding members of **Welstep** business network.

Rubinetterie Bresciane Bonomi was awarded as one of the best company in Italy at **Welfare Index PMI** event in 2019, 2020, 2021 and 2022 for its strong commitment to welfare. In 2024, the same award was obtained as Bonomi Group for all the measures taken by the various companies in the group to safeguard the well-being of people.

ISO 9001 - ISO 14001 - ISO 45001 - ISO 50001





**RUBINETTERIE
BRESCIANE**


 Allianz S.p.A.
 LOMBARDI & ASSOCIATI SRL
 Agende di Credito via Tondino
 10121 Milano, 02
 20120 Caricchiolo via Roma
 Tel. 02/583101 - Telefax 02/583102
 e-mail: panna.panna@allianz.it
 Internet: www.allianz.it

CERTIFICATE OF INSURANCE

We, **ALLIANZ S.p.A.**, hereby certify that we have in force the insurance policy described hereunder and
 as to the Insured in connection with the coverage, as hereinafter specified, provided by said policy.

POLICY DESCRIPTION

Policy Number: 0030340842
 Name and Address of the Insured: **VALPARES SRL**
 C/A - 20122 SOTTO IL TETTO 11 - 20060 MARCHEGGIO BS ITALY
 Coverage and Limits: **Product Liability up to a limit of Euro 1.000.000,00 per event and per year**
 Effective date - **Midnight - 12.30.2023**
 Expiration date - **Midnight - 12.31.2024**

The premium has been paid.

Notwithstanding any statement, term or condition of any contract or other document with respect to
 which this certificate may be issued or any provision the insurance afforded by the policy described herein
 is not in force, existence and condition of said policy.

This certificate of insurance is not an insurance policy.
 It does not constitute an agreement of insurance and confers no rights upon the certificate holder.
 This certificate does not amount, either on its face or by reference to the above mentioned policy.
 The coverage includes third party damages caused by defective products.

ALLIANZ S.p.A.
 LOMBARDI & ASSOCIATI S.p.A.


Date: 01.12.2024





Allianz S.p.A.
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E-mail: allianz@allianz.it
www.allianz.it
Sede e Direzione Generale
in Italia
Rappresentanza legale
in Italia
CERTIFICATE OF INSURANCE

We, Allianz S.p.A., hereby certify to have in force the insurance policy described hereunder and to be the insurer in connection with the coverage, as hereinafter specified, provided by law and policy.

POLICY NUMBER: 36510701

Name and address of the insured: **PISTA SRL**
VIA GIORDANO BRUNO/CINQUE 23 23100 MAZZARO BS ITALY

Coverage and limits: **Product Liability cover up to a limit of EUR 1.000.000.000 per event and per year**

Effective date : Midnight 12/10/2023
Expiry date : Midnight 12/10/2025
The premium has been paid.

Notwithstanding any reservation, term or condition of any contract or other document with respect to which this certificate may be issued or any provision, the insurance afforded by the policy described herein is subject to all terms, exclusions and conditions of each policy.

The certificate of insurance is not an insurance policy.

This certificate does not serve as proof of information and only confers no right upon the certificate holder.

This certificate shall be issued, extended or alter the coverage offered by the above mentioned Insured Company as the "insurances of the coverage process parameters": the policy also operates for the acts of downloading and sending products.

L&G FIDELITY SYSTEM
127 CHATELAIN & CO
STREET COLLEGE HBS 463
MONTREAL, Quebec

DATED 12/10/2023
ALLIANZ GLOBAL
REINSURANCE COMPANY LIMITED

CANCELLATION: Should the above described policy be cancelled before the expiration date stated, the issuing underwriter will not refund to the policyholder the entire premium due, but will refund only what remains after deducting its full cost upon the issuance of any cancellation or termination.

	CENED Certificazione ENergetica degli EDifici Azienda certificata classe "A" - "A+" con certificato n.17081 - 000459/12 e 000460/12	
	AEOF Authorized Economic Operator (AEOF)	
	TÜV Süddeutschland Bau und Betrieb GmbH Pressure Equipment Directive 2014/68/EU	
	TÜV Süddeutschland Bau und Betrieb GmbH Equipment for use in potentially explosive atmospheres 2014/34/EU	
	BSI British Standards institute Construction Products Directive Regulation (EU) n. 305/2011	
	TÜV Süddeutschland Bau und Betrieb GmbH Safety Integrity Level	
	RINA Registro Italiano Navale	
	RINA Registro Italiano Navale Marine Equipment Directive 2014/90/EU	
	A2A Reti Gas ITALGAS Iren 2i Rete Gas	
	Deutscher Verein des Gas- und Wasserfaches DVGW W 534 - W 531 - VP 614 DVGW GW 335-B4 - DVGW G 5600-I	
	TÜV Süddeutschland Bau und Betrieb GmbH T.A. LUFT	
	TÜV Bayern Hessen Sachsen Südwest E.V. FIRE SAFE BS 6755 Part.2, API Specification 6FA and ISO 10497	
	DBI GTI Gastechnologisches Institut	
	VdS	
	Schweizerischer Verein des Gas- und Wasserfaches DVGW VP 614	
	Österreichische vereinigung für Das gas- und wasserfach	
	UA	
	ARGB	
	GDV: godkendt til drikkevand	
	VA	
	DNV GL	
	KIWA swedcert	
	American Bureau of Shipping	

	Factory Mutual Research	
	Underwriters Laboratories Inc.	
	Underwriters Laboratories Inc. ANSI/NSF 61-372 Drinking Water System Components and Lead Content Verification	
	American Petroleum Institute API 6A License number 6A-1741	
	American Petroleum Institute API 6D License number 6D-1428	
	ICC-ES PMG	
	IAPMO Uniform Plumbing Code	
	Technical Standards and Safety Authority	
	CSA International	
	Water Regulation Advisory Scheme (By WRC Evaluation & Testing Centre)	
	Lloyd's Register Marine	
	The United Kingdom Conformity Assessed	
	Bureau Veritas Industry and Marine Division	
	Laboratoire Santé Environnement Hygiène de Lyon ACS: Attestation de Conformité Sanitaire	
	Centre scientifique et technique du bâtiment	
	NF	
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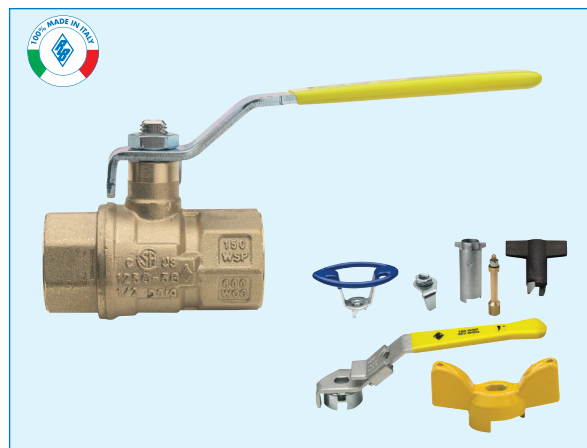
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SERIES 161N - 162N COMPACT STYLE

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 1/4".

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

MEETS THE DESIGN CRITERIA OF MSS SP-110.



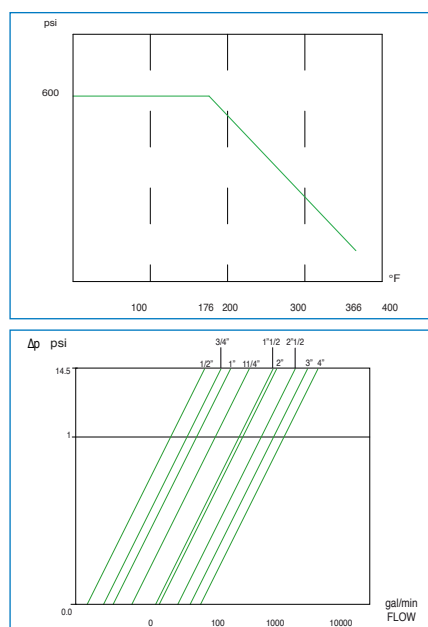
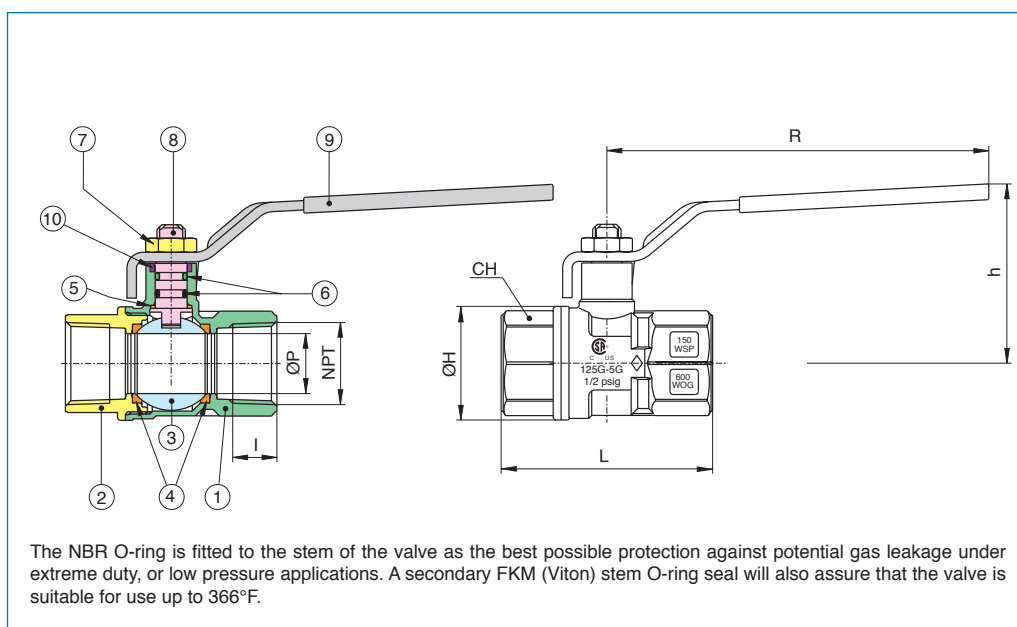
400 WOG
up to 2"



C US
up to 2"

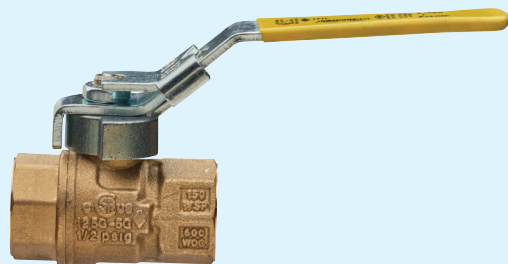


up to 2"



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
7	NUT	STEEL CL04	1	2 1/2"	2.44	0.93	5.16	4.09	3.27	8.07	4.59	593.06	600	6.67
8	STEM	BRASS C38500	1	3"	2.99	1.02	5.94	4.96	3.86	8.07	4.98	958.84	600	9.82
9	HANDLE	STEEL DD11	1	4"	2.99	1.09	6.50	4.96	4.92	8.07	4.98	1526.59	600	12.57
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.



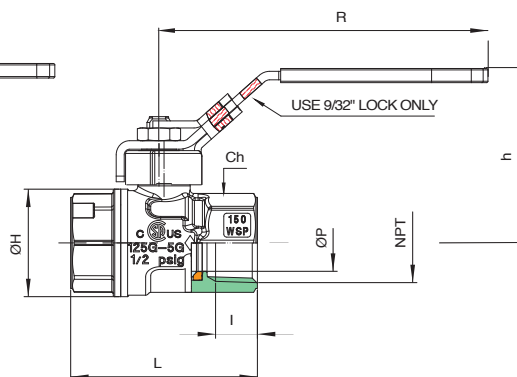
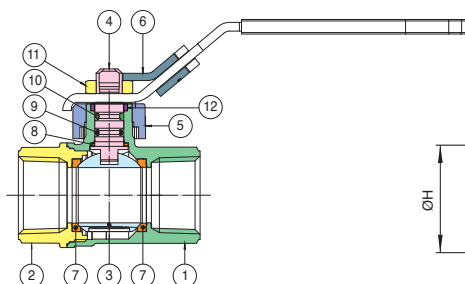
400 WOG
up to 2"



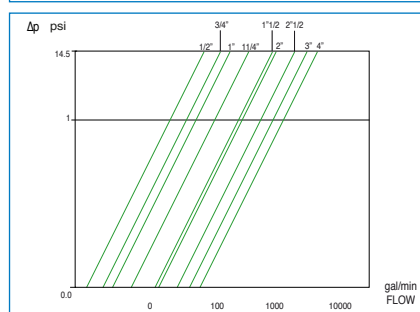
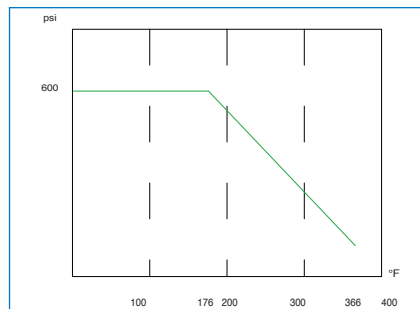
C US
up to 2"



up to 2"



The NBR 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 FKM (Viton) stem o-ring seal will also assure that the valve is suitable for use up to 366°F.



POS.	PART NAME	MATERIAL	P.S.	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.



MEETS THE DESIGN CRITERIA OF MSS SP-110.

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 1/4".

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

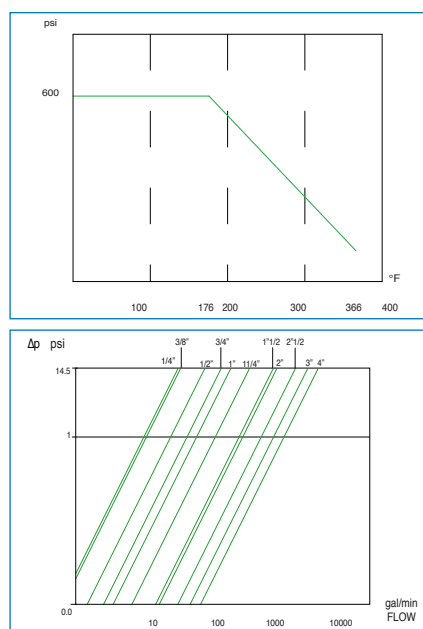
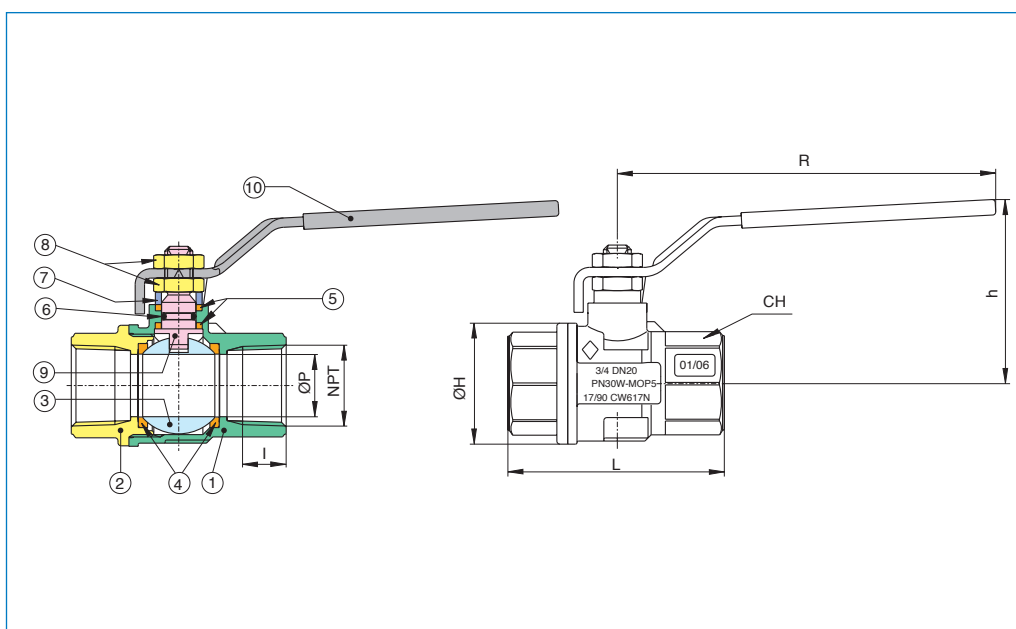
171NCR: CHROME PLATED - size 1/4" to 4".



up to 2"

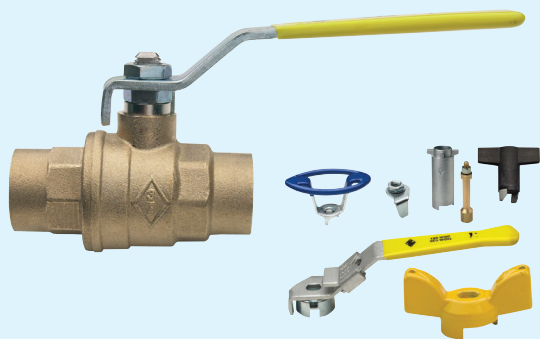


up to 2"



POS.	PART NAME	MATERIAL	POS.	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

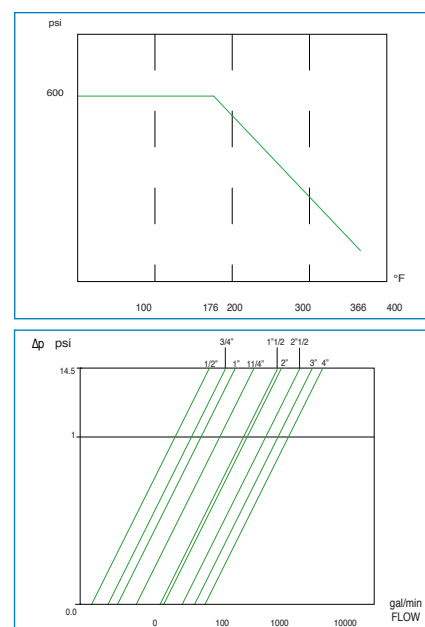
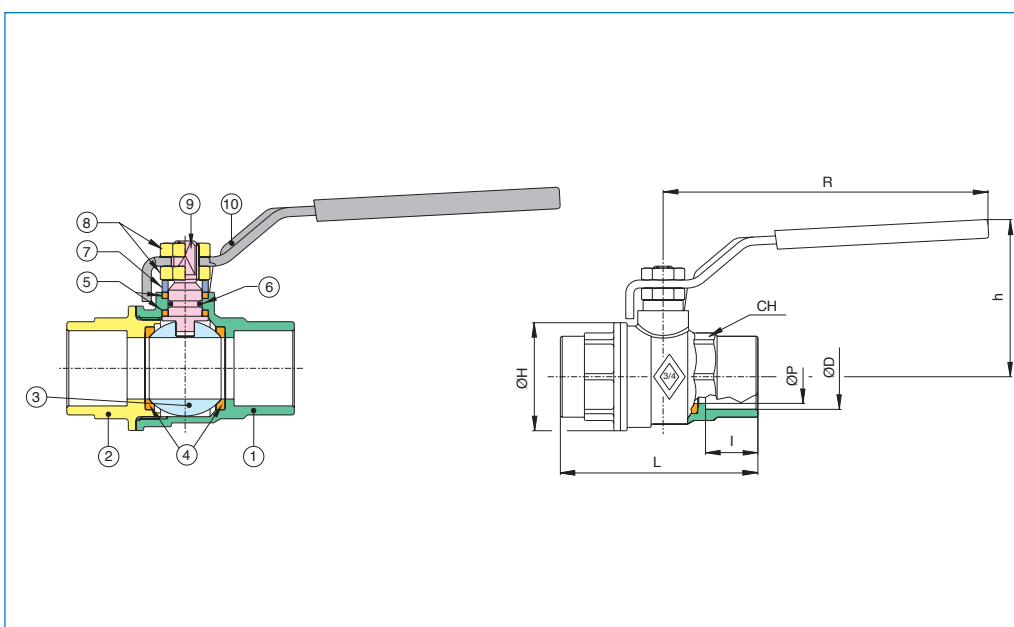


Brass ball valve with solder ends, full port.

- 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.

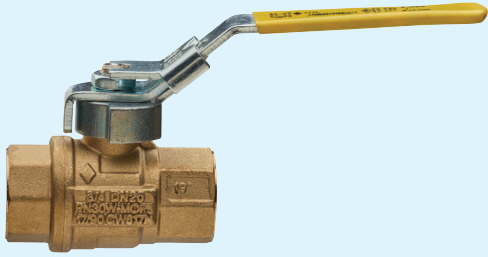
1715: LEVER HANDLE - size 1/2" to 4".

1725: T-HANDLE - size 1/2" to 1 1/4".



POS.	PART NAME	MATERIAL	P.C.S.	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.



MEETS THE DESIGN CRITERIA OF MSS SP-110.

SERIES 171L COMMERCIAL STYLE

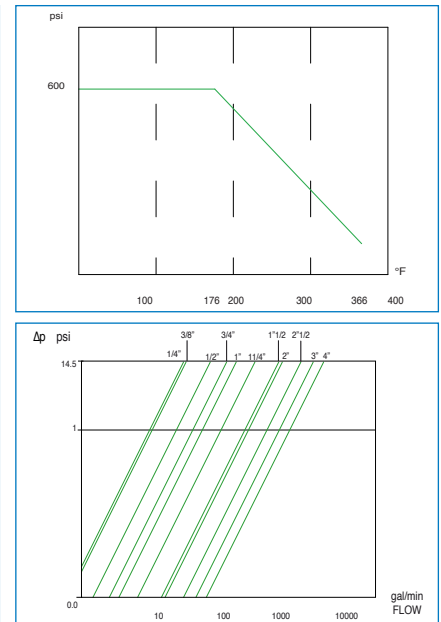
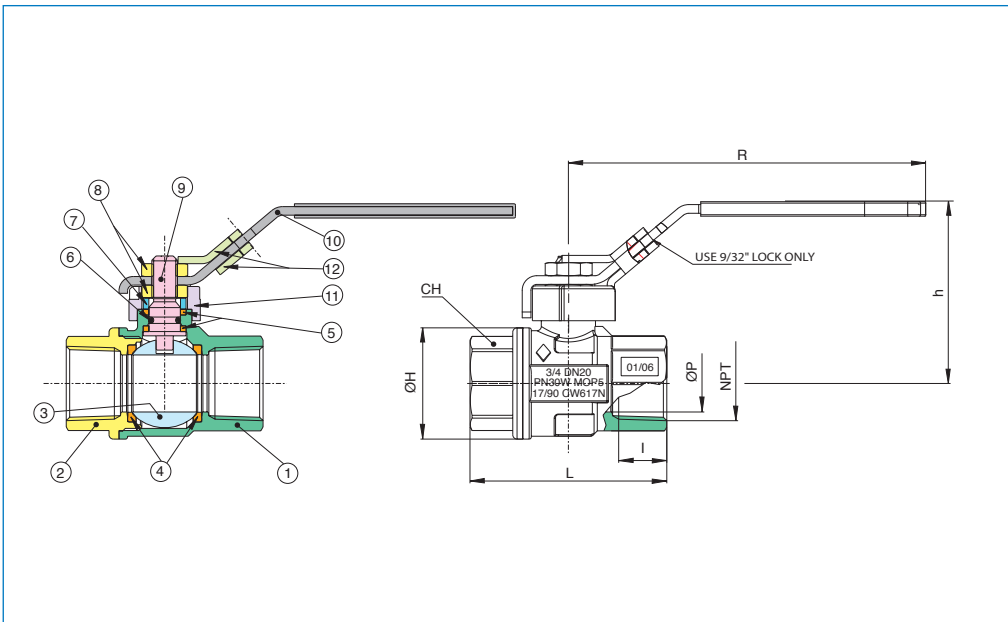
- Brass ball valve, FNPT threaded, full port, with latch lock handle.
- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, chrome plated brass ball.
- PTFE seats, seals, and thrust washer.
- Adjustable stem packing.
- 100% electronically 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".

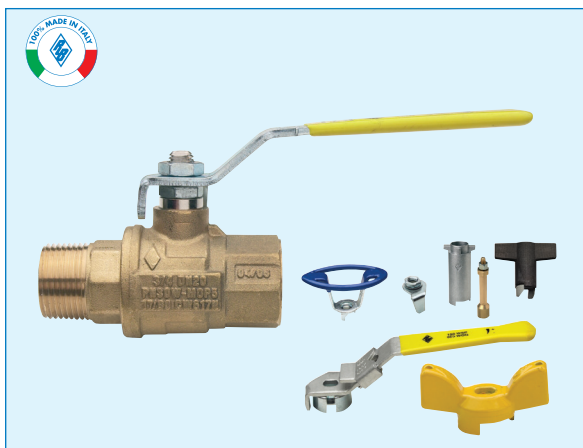


up to 2"



POS.	PART NAME	MATERIAL	PCS	SIZE	ØP	I	L	ØH	CH	R	h	Cv	psi	Weight (Lbs)
1	BODY	BRASS C37700	1	1/4"	0.39	0.39	2.03	0.91	0.79	3.78	1.83	6.24	600	0.40
2	END CONNECTION	BRASS C37700	1	3/8"	0.39	0.41	2.03	0.91	0.79	3.78	1.83	6.94	600	0.39
3	BALL	BRASS C37700	1	1/2"	0.59	0.54	2.44	1.30	0.98	3.78	1.99	18.84	600	0.57
4	BALL SEAT	PTFE	2	3/4"	0.79	0.55	2.72	1.54	1.22	4.84	2.48	34.10	600	0.93
5	THRUST WASHER/STEM SEAL	PTFE	2	1"	0.98	0.66	3.07	1.93	1.50	4.84	2.64	49.71	600	1.32
6	O-RING	NBR	1	1 1/4"	1.26	0.68	3.43	2.32	1.89	5.94	3.15	102.89	600	2.13
7	PACKING GLAND	BRASS C38500	1	1 1/2"	1.57	0.68	3.90	2.87	2.13	5.94	3.39	265.90	600	2.95
8	NUT	STEEL CL 04	2	2"	1.95	0.70	4.31	3.39	2.64	6.30	3.82	306.36	600	4.57
9	STEM	BRASS C38500	1	2 1/2"	2.56	0.93	5.59	4.37	3.54	8.11	5.02	624.28	600	9.29
10	HANDLE	Fe DD11 UNI EN 10111	1	3"	3.15	1.02	6.46	5.35	4.13	8.11	5.45	1009.25	600	12.01
11	BUSH	ZAMA G Zn Al4 UNI EN 1774	1	4"	3.94	1.09	7.60	6.54	5.12	10.28	6.56	1606.94	600	22.72
12	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 171M - 172M COMMERCIAL STYLE

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

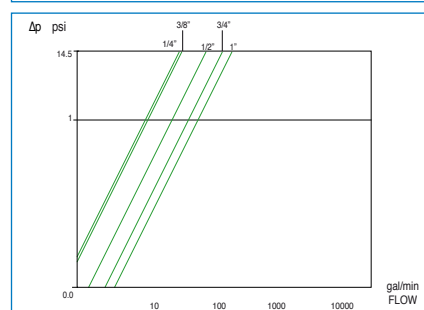
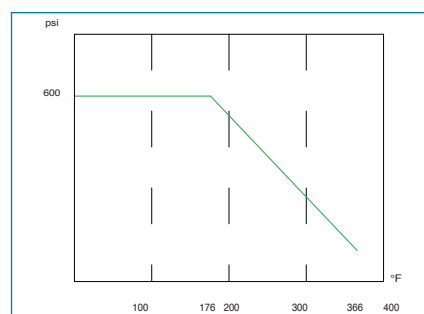
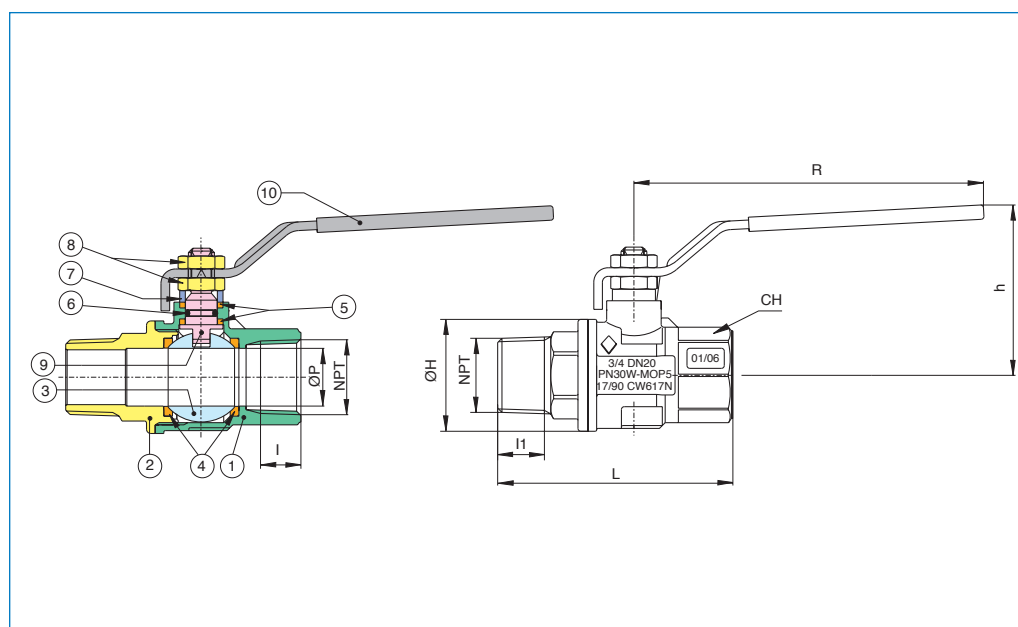
- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, chrome plated brass ball.
- PTFE seats, seals, and thrust washer.
- Adjustable stem packing.
- 100% electronically tested in the open and closed position at 80 psi.
- Not to be used 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 1/4".

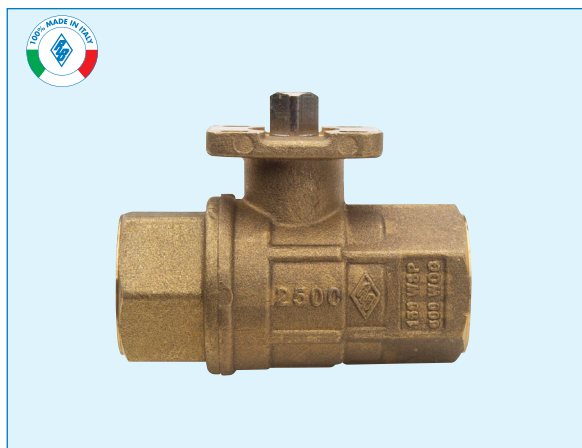
171MCR: CHROME PLATED - size 1/4" to 1".

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



POS.	PART NAME	MATERIAL	P.C.	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 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.

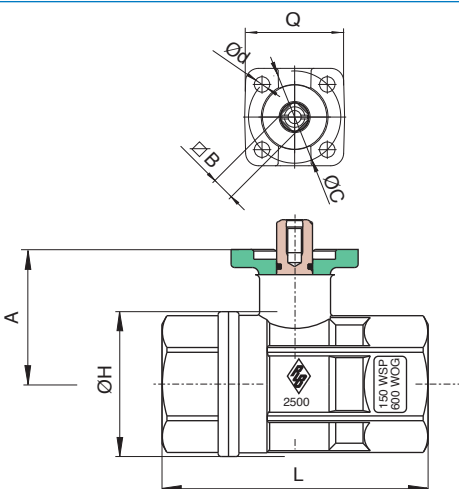
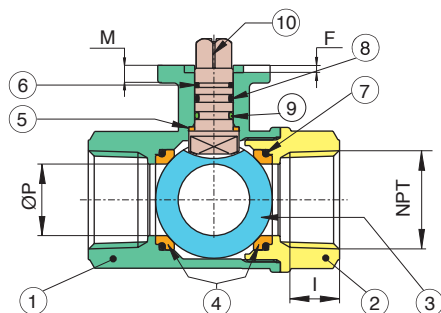
250N: WITH BRASS BALL AND STEM - size 1/4" to 4".

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

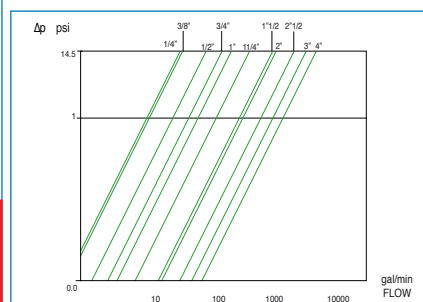
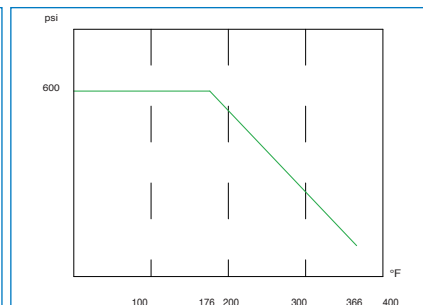


MEETS THE DESIGN CRITERIA OF MSS SP-110.

O-RING BACKING PTFE SEATS

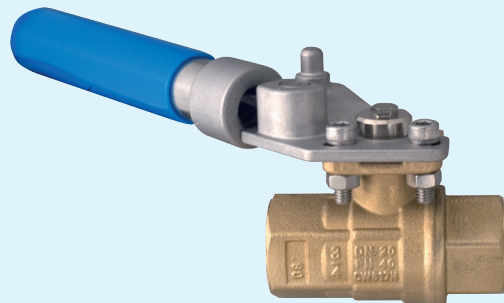


* Torque values in the table are measured in laboratory tests under the following conditions:
TEMPERATURE: 68°F
PRESSURE: 0 psi
FLUID: purified water



POS.	PART NAME	MATERIAL	POS.	SIZE	Q	A	ØC ISO 5211	F	ØB mm	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	9	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	9	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	9	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	9	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	9	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	9	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	11	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	11	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	14	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	14	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	17	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.

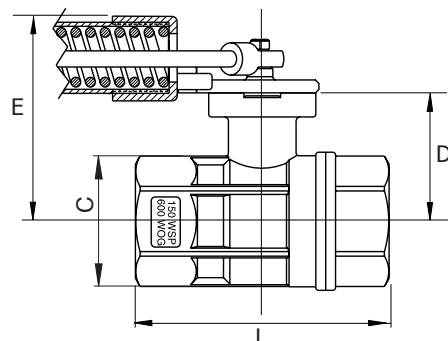
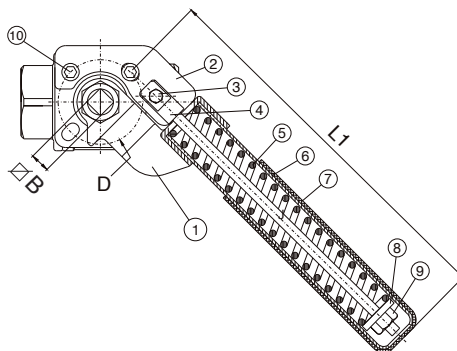
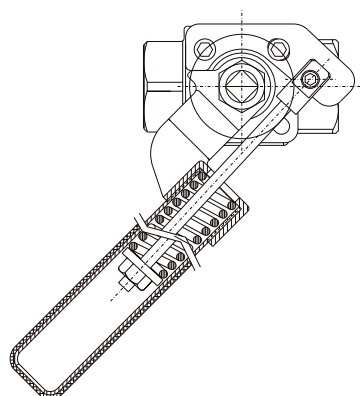
- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, chrome plated brass ball ball and double O-ring stem packing.
- PTFE seats with O-ring backing for low operating torque.
- Adjustable spring return lever.
- 100% electronically tested 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



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 20 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.

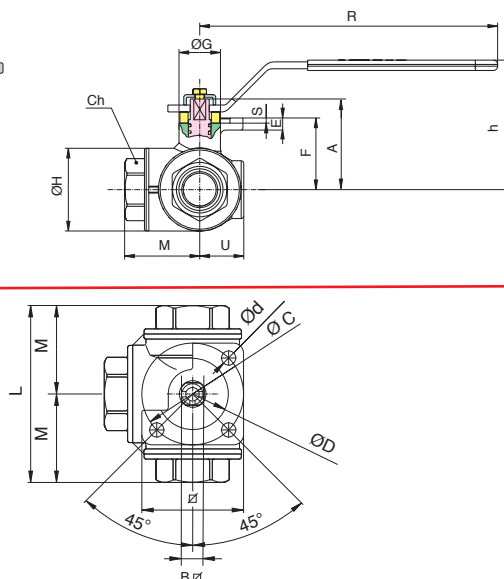
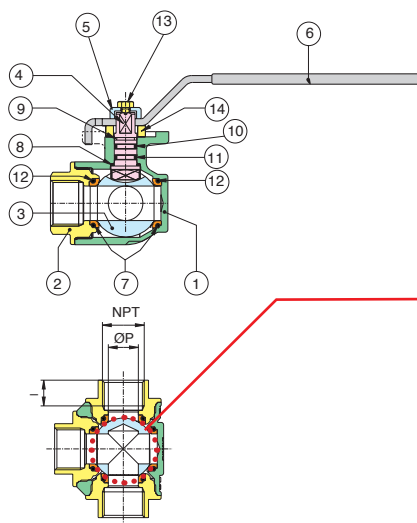
- Pressure rating 400 WOG-100 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, chrome plated brass ball and double O-ring stem packing.
- PTFE seats with O-ring backing for low operating torque.
- 100% electronically tested in the open and closed position at 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.

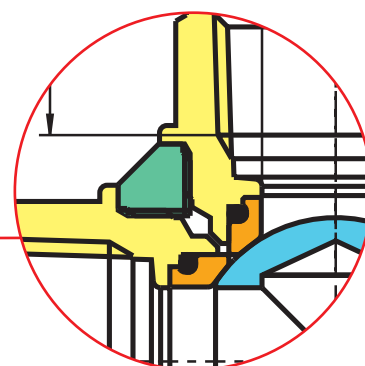
365N: LEVER HANDLE - size 1/4" to 3", "L" flow pattern.



MEETS THE DESIGN CRITERIA OF MSS SP-110.



O-RING BACKING PTFE SEATS

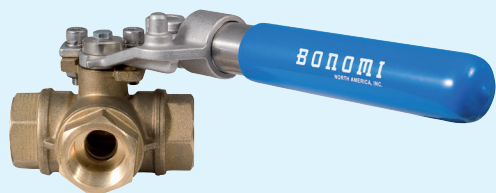


* Torque values in the table are measured in laboratory tests under the following conditions:
TEMPERATURE: 68°F
PRESSURE: 0 psi
FLUID: purified water

POS.	PART NAME	MATERIAL	POS.	SIZE	ØP	ØH	I	L	M	CH	R	h	ØG	Ød	ØC	U	E	F	A	B mm	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	1.42 F03	0.77	0.20	1.20	0.35	9	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	1.42 F03	0.77	0.20	1.20	0.35	9	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	1.42 F03	0.77	0.20	1.20	0.35	9	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	1.42 F03	0.87	0.20	1.29	0.35	9	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 F05	1.00	0.28	1.63	0.43	11	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 F05	1.22	0.28	1.85	0.43	11	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 F05	1.49	0.28	2.34	0.43	11	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 F07	1.75	0.31	2.91	0.59	14	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 F07	2.20	0.31	3.35	0.59	14	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 F07	2.20	0.31	3.35	0.59	14	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.

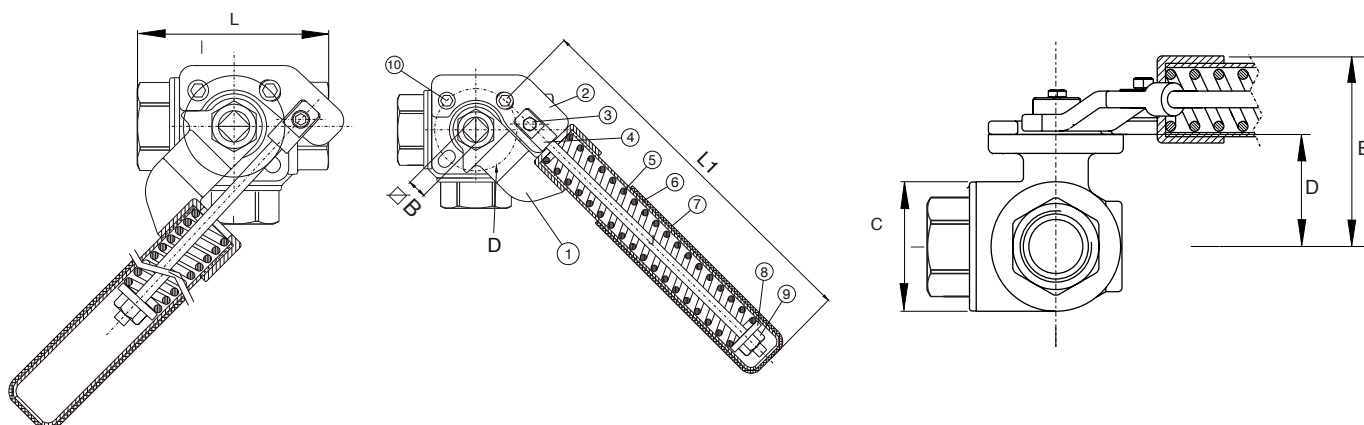
355N SRL: DEADMAN LEVER - size 1/4" to 2".

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



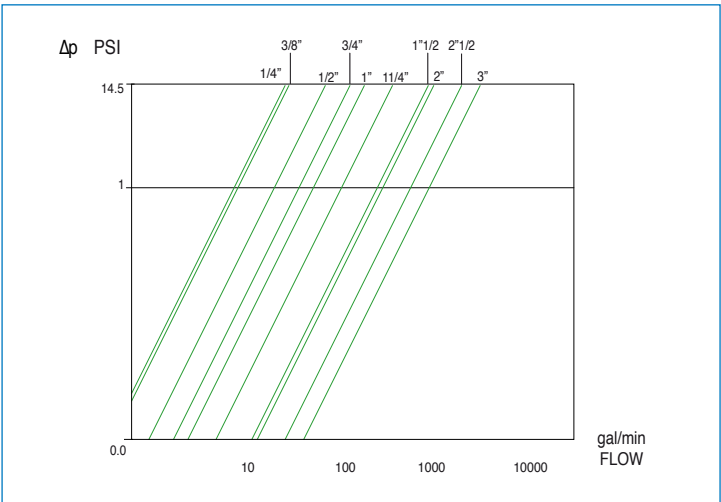
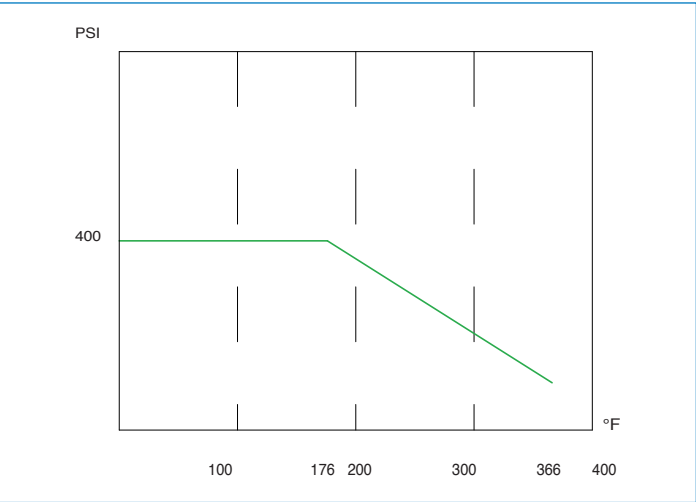
OPEN CONDITION

CLOSE CONDITION



POS.	PART NAME	MATERIAL	SIZE	L1	∅ B	D ISO 5211	HANDLE TORQUE (In-Lbs)	E	L	D	C	F	G	Weight (Lbs) 355N SRL	Weight (Lbs) 365N 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	1/2"	6.70	0.35	F03	132	1.70	2.87	1.20	1.34	1.44	0.77	3.46	3.46
4	SPRING ROD	AISI 316	3/4"	6.70	0.35	F03	132	1.79	3.19	1.29	1.53	1.60	0.87	3.73	3.73
5	SPRING	AISI 301	1"	8.65	0.35	F05	177	2.79	3.74	1.63	1.89	1.87	1.00	4.94	4.94
6	HANDLE EXTENSION	AISI 304	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
7	SLEEVE	VINYL	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
8	WASHER	AISI 304	2"	11	0.55	F07	487	3.82	5.73	2.90	3.38	2.87	1.75	14.07	14.07
9	HEX NUT	AISI 304													
10	SOCKET HEAD SCREW	AISI 304													

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.

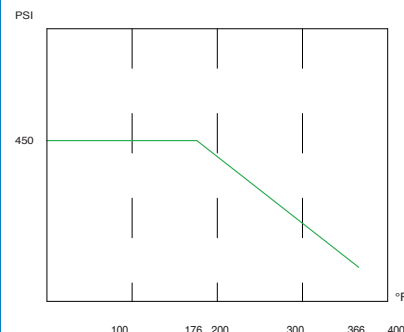
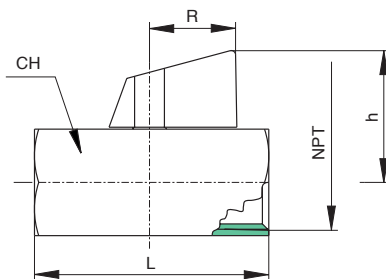
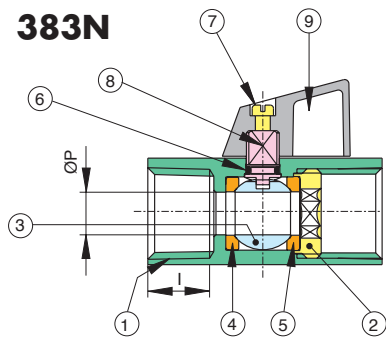
- Pressure rating 450 psi.
- Temperature range -4°F to +330°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, chrome plated brass ball.
- PTFE seats and FKM (Viton) seal.
- 100% electronically tested in the open and closed position at 80 psi.
- Not to be used for drinking water.
- Valve to be used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

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

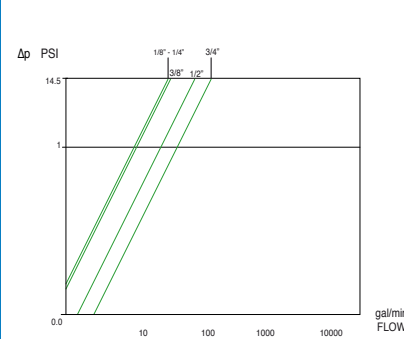
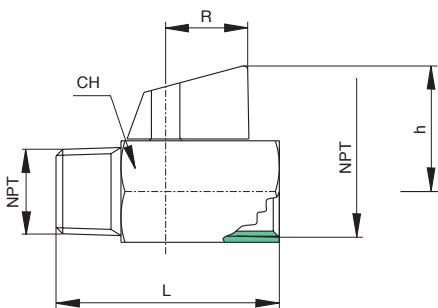
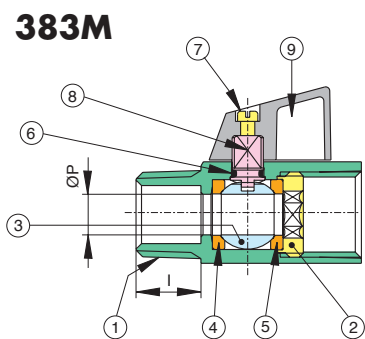
383M: MNPT X FNPT THREADED - size 1/8" to 3/4".

MEETS THE DESIGN CRITERIA OF MSS SP-110.

383N



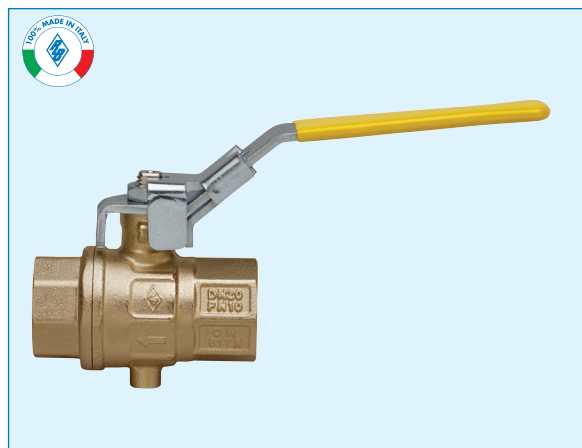
383M



POS	PART NAME	MATERIAL	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.





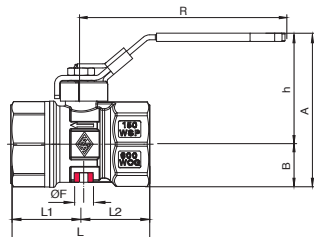
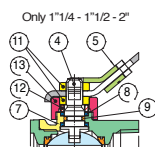
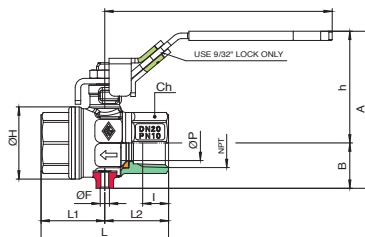
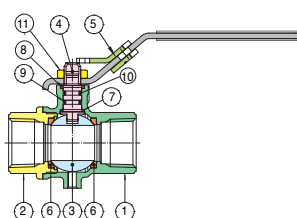
SERIES 511L SAFETY EXHAUST



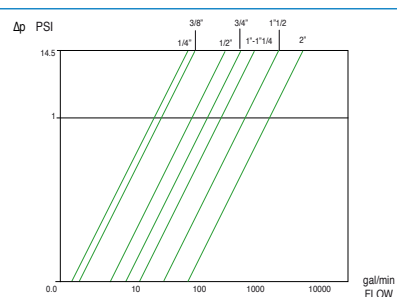
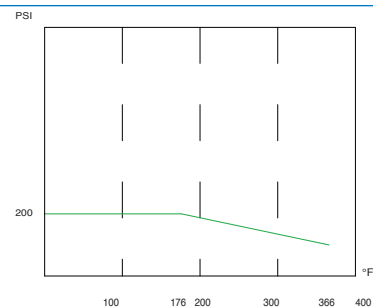
Exhaust brass ball valve, full port with bleed hole, FNPT threaded, with latch lock handle.

- 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".

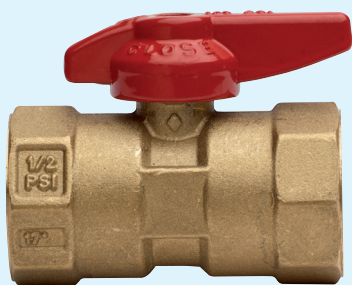


The NBR O-ring is fitted to the stem of the valve as the best possible protection against potential gas leakage under extreme duty, or low pressure applications. A secondary FKM (Viton) stem O-ring seal will also assure that the valve is suitable for use up to 366°F.



POS.	PART NAME	MATERIAL	POS.	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.



SERIES 9280 FIP-FIP GAS BALL VALVE



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

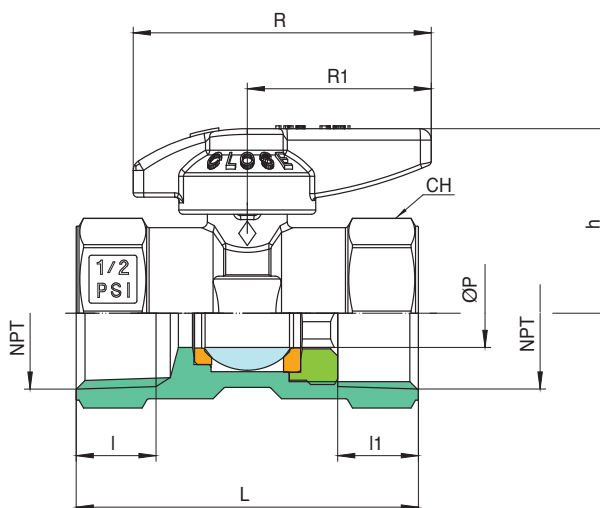
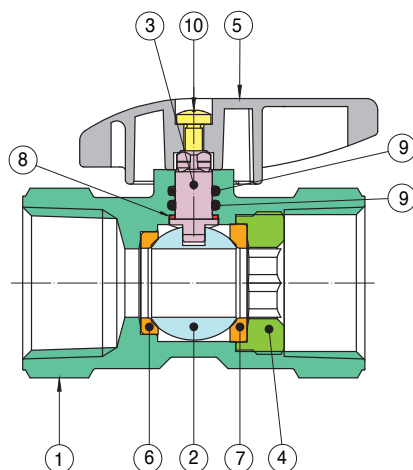
According to:

- 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".

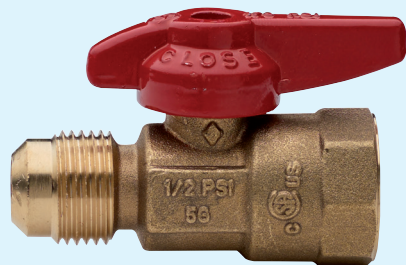
ONE PIECE BODY

MEETS THE DESIGN CRITERIA OF MSS SP-110.



POS.	PART NAME	MATERIAL	POS.	SIZE	ØP	I	I1	L	R	R1	CH	h	Weight (Lbs)
1	BODY	BRASS C37700	1	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
2	BALL	BRASS C38500	1										
3	STEM	BRASS C38500	1										
4	RING NUT	BRASS C38500	1	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
5	HANDLE	G Zn Al4 UNI 3717 ALLOY	1										
6	BALL SEAT	PTFE	1										
7	BALL SEAT	PTFE	1	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
8	THRUST WASHER	PE	1										
9	O-RING	NBR	2										
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 9281 FIP-FLARE GAS BALL VALVE



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

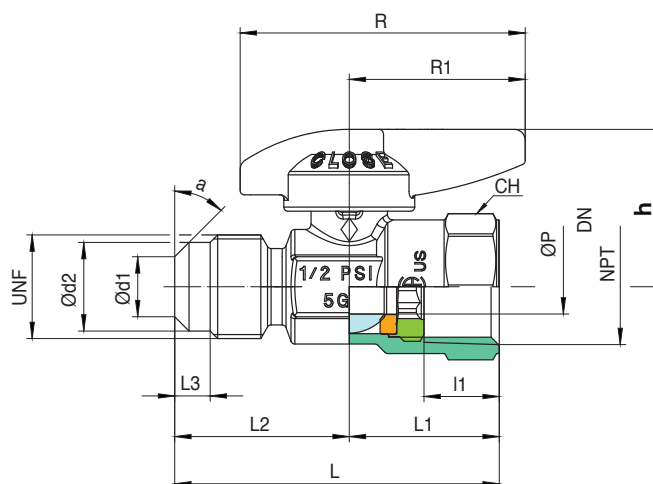
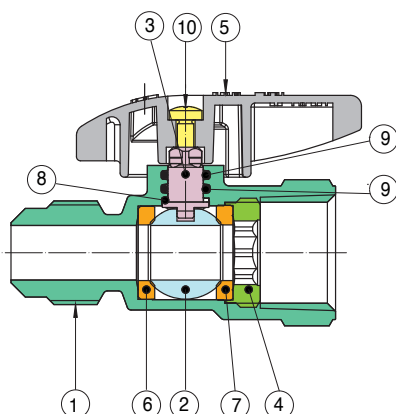
According to:

- 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".

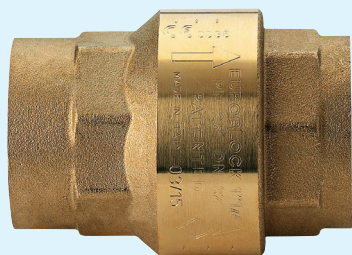
ONE PIECE BODY

MEETS THE DESIGN CRITERIA OF MSS SP-110.



POS.	PART NAME	MATERIAL	POS.	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																	
4	RING NUT	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
5	HANDLE	G Zn Al4 UNI 3717 ALLOY	1																	
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																	
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

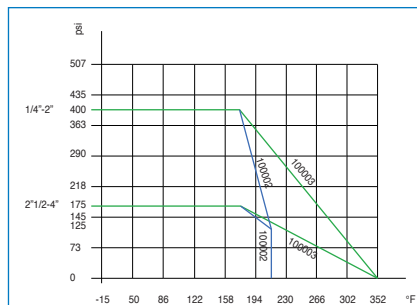
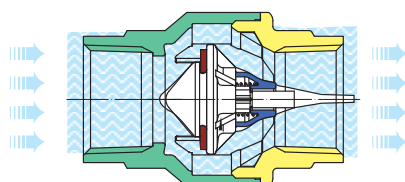
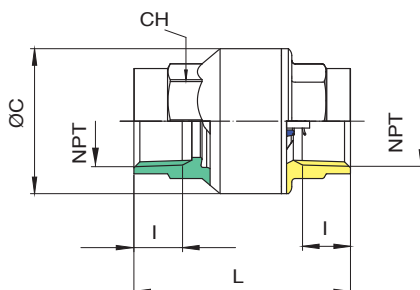
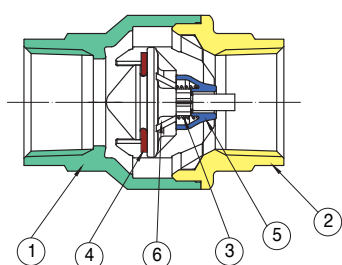
High flow rate brass, FNPT threaded, in-line spring loaded check valve.

- 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".



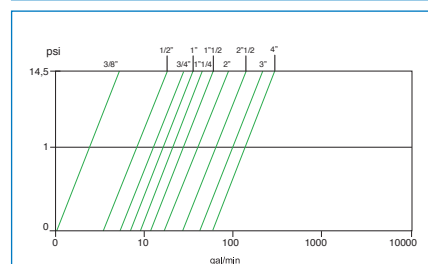
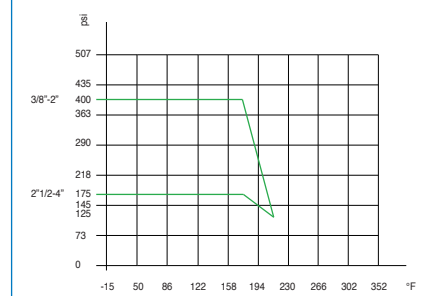
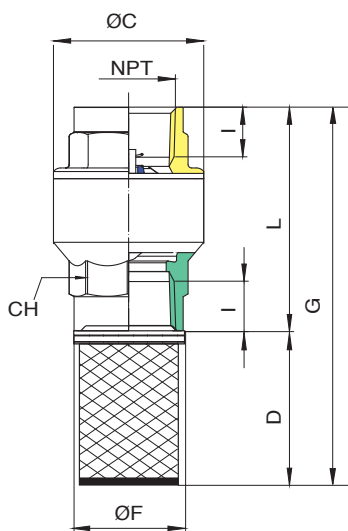
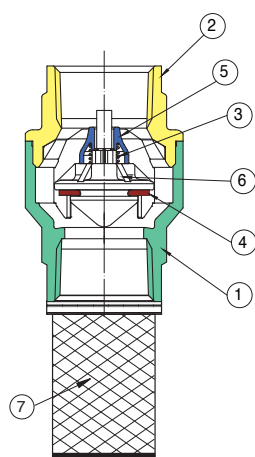


SERIES 100102 FOOT VALVE

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".



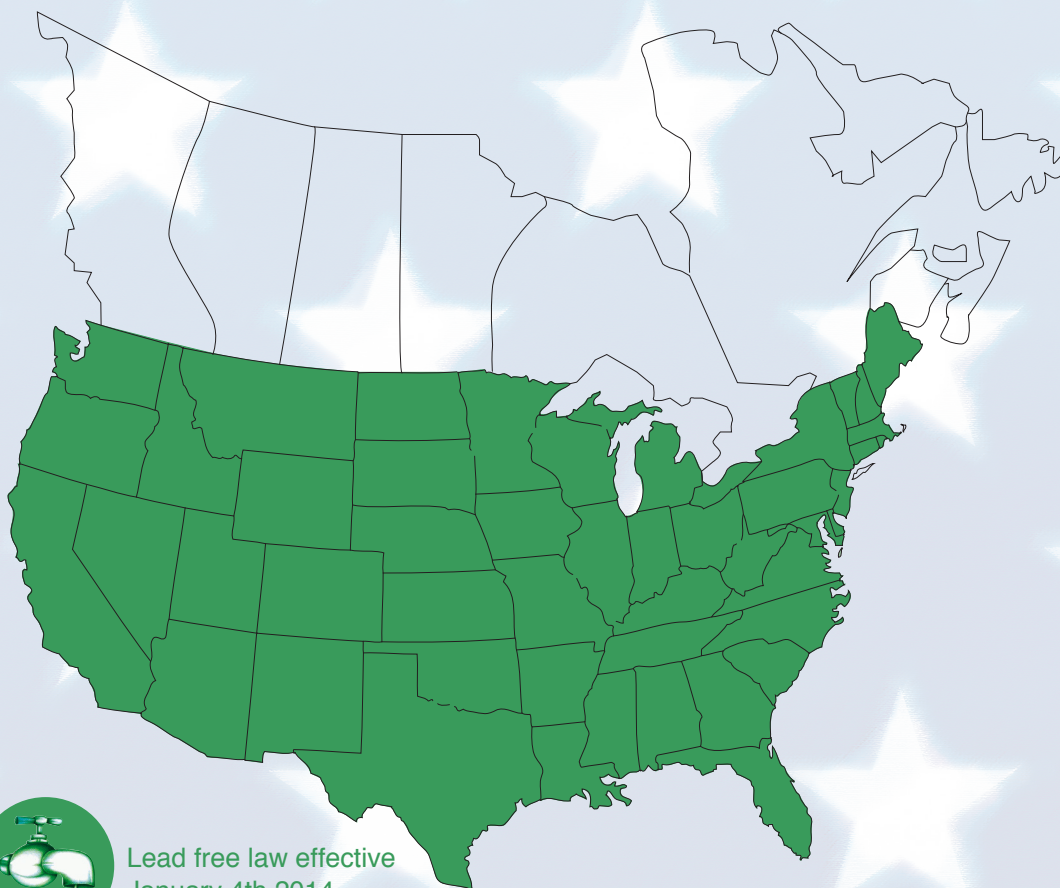
POS.	PART NAME	MATERIAL	POS.
1	BODY	BRASS C37700	1
2	END CONNECTION	BRASS C37700	1
3	SPRING	STAINLESS STEEL	1
4	SEAT	NBR	1
5	SUPPORT	POM	1
6	DISC	POLYPHENYLENE SULFIDE	1
7	SCREEN	STAINLESS STEEL NYLON 1000 MICRON	1

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 North America lead free valves are available. Brass forgings vs. bronze sand castings. Another advantage Bonomi North America valves have over other lead free valves is that Bonomi North America 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

LF superRBronze

Forged bronze ball valve, FNPT threaded, full port.

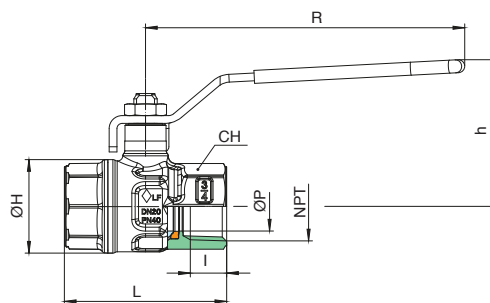
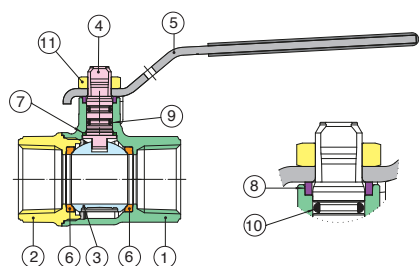
- Pressure rating 600 WOG - 150 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Made in specially formulated dezincification-resistant silicon bronze.
- SLT coated LF brass ball.
- Blow-out proof stem.
- PTFE seats and double O-ring packing.
- 100% electronically tested in the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

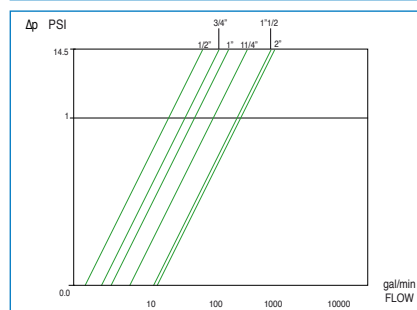
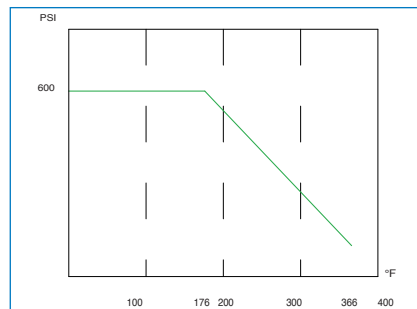
400 WOG



C US

Max. 250 psig
up to 2"

The NBR 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 FKM (Viton) stem O-ring seal will also assure that the valve is suitable for use up to 366°F.



POS.	PART NAME	MATERIAL	P.C.S.	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	PACKING RING	PTFE	1											
9	O-RING	NBR	1											
10	O-RING	FKM (Viton)	1											
11	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.

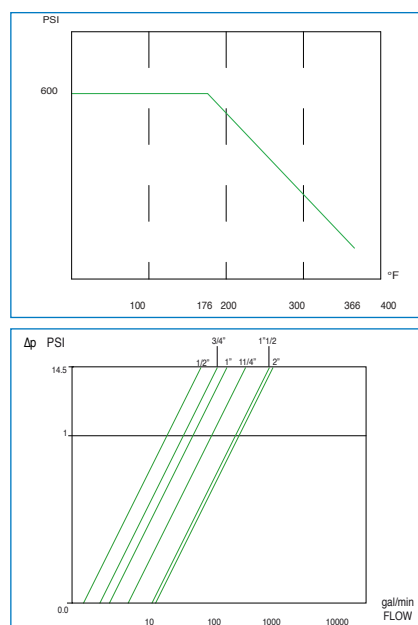
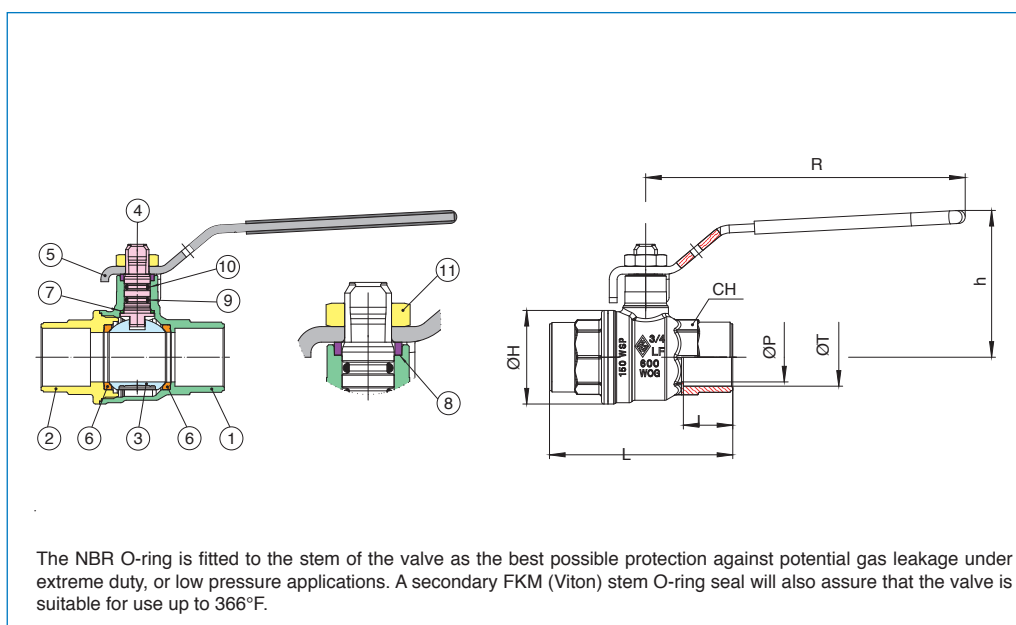
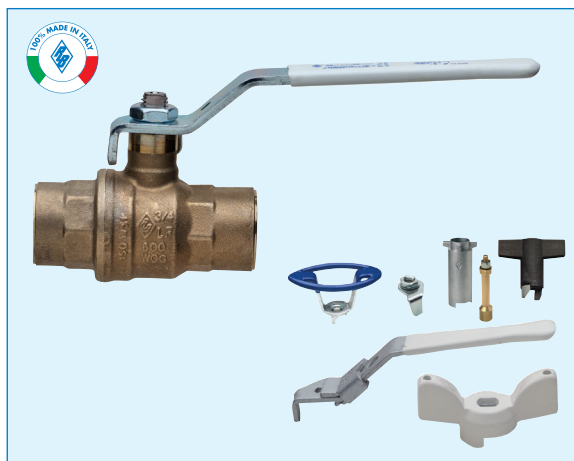
- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to +366°F.
- ANSI B16.18 connections.
- Made in specially formulated dezincification-resistant silicon bronze.
- SLT coated LF brass ball.
- Blow-out proof stem.
- PTFE seats and double O-ring packing.
- 100% electronically tested in the open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



HEALTH
EFFECTS US-CA
NSF 372
NSF 61



POS.	PART NAME	MATERIAL	PCS	SIZE	ØP	I	ØT	L	ØH	Ch	R	h	Cv	psi	Weight (Lbs)
1	BODY	LF BRONZE*	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 BRONZE*	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 CW 510L*	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 CW 510L*	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	2.33
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	3.80
7	THRUST WASHER	PTFE	1												
8	PACKING RING	PTFE	1												
9	O-RING	FKM (Viton)	1												
10	O-RING	NBR	1												
11	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 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 61



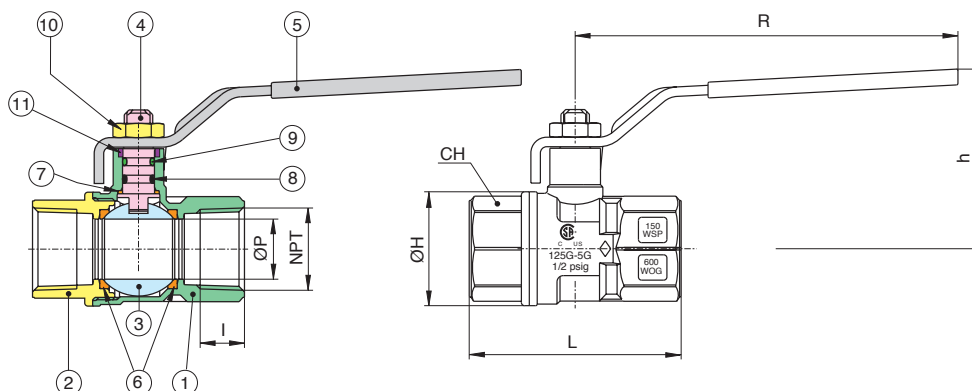
400 WOG
up to 2"



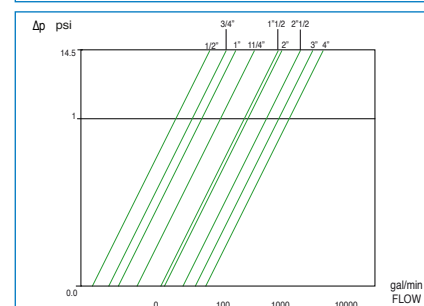
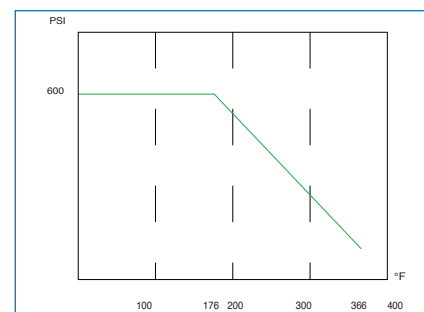
C US
up to 2"



up to 2"



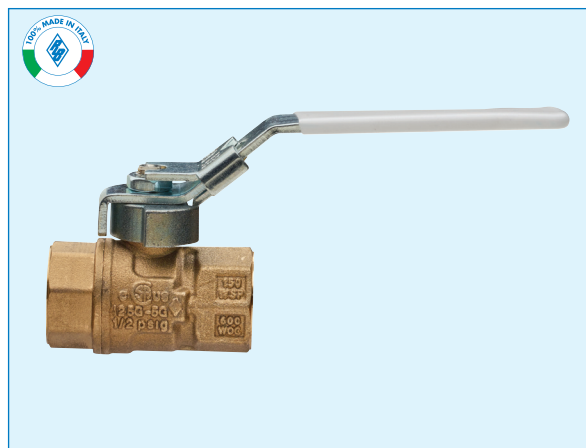
The NBR O-ring is fitted to the stem of the valve as the best possible protection against potential gas leakage under extreme duty, or low pressure applications. A secondary FKM (Viton) stem O-ring seal will also assure that the valve is suitable for use up to 366°F.



POS.	PART NAME	MATERIAL	QTY	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

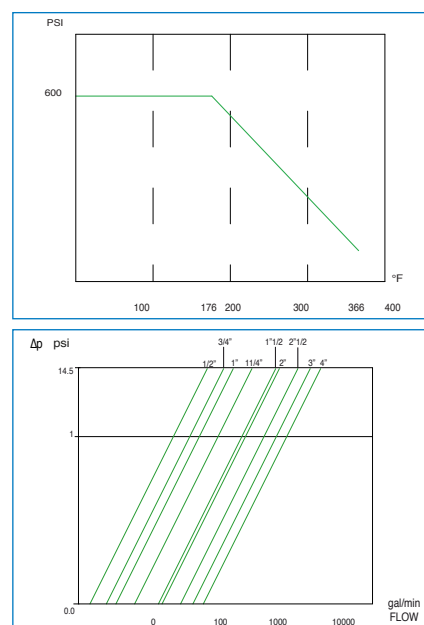
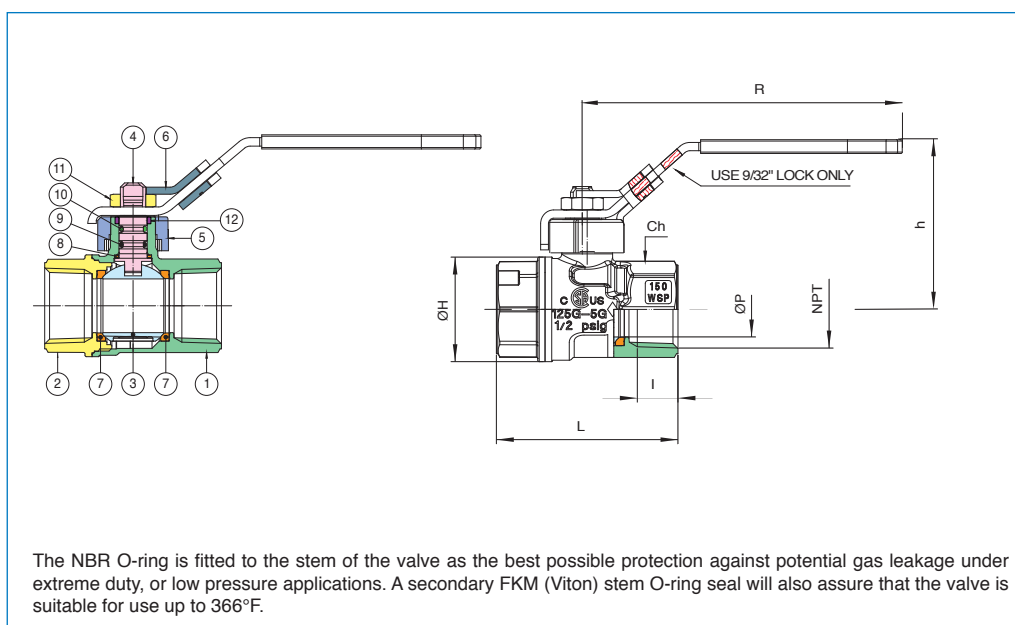
Lead free brass ball valve, FNPT threaded, full port, with latch lock handle.

- 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.



POS	PART NAME	MATERIAL	P.O.S	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".

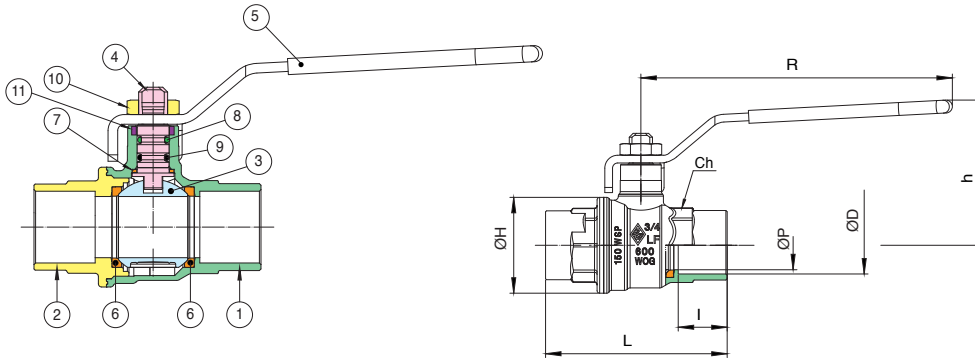
1625 LF: T-HANDLE - size 1/2" to 1".



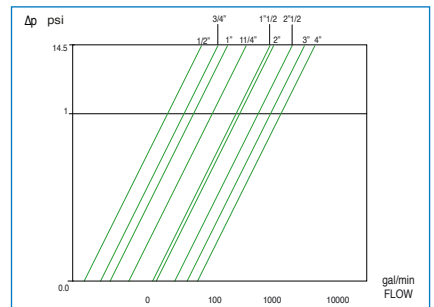
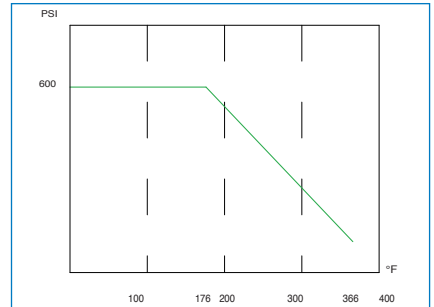
HEALTH
EFFECTS US-CA
NSF 372
NSF 61



MEETS THE DESIGN CRITERIA OF MSS SP-110.



The NBR 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 FKM (Viton) stem O-ring seal will also assure that the valve is suitable for use up to 366°F.



POS	PART NAME	MATERIAL	PCS	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.

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 161N LFPT COMPACT STYLE

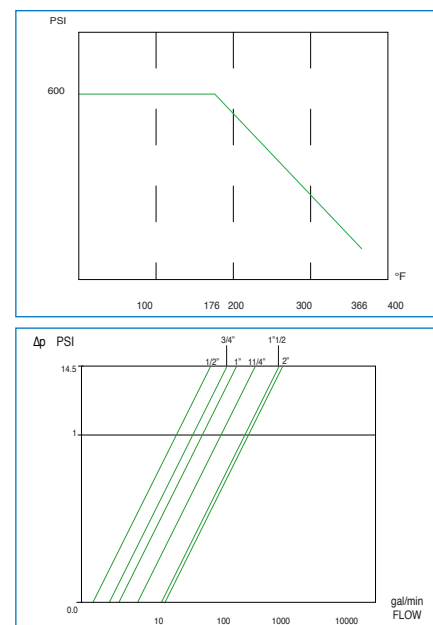
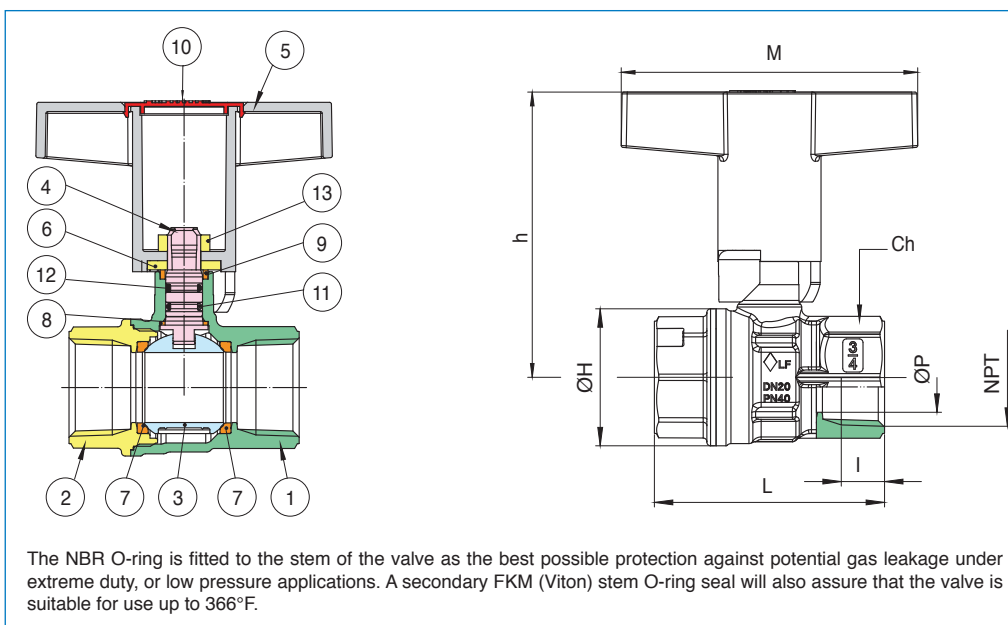
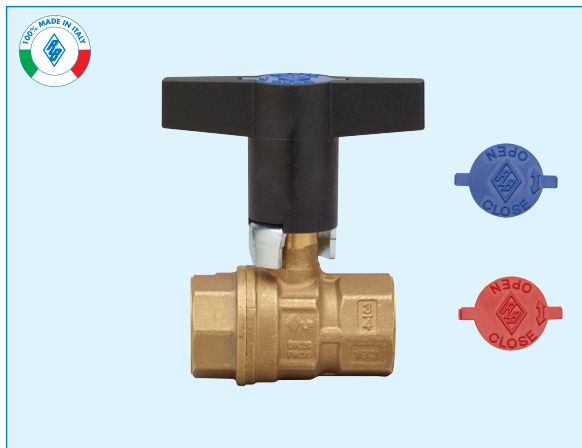
Lead free brass ball valve, FNPT threaded, full port.

- 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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POS.	PART NAME	MATERIAL	POS.	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.

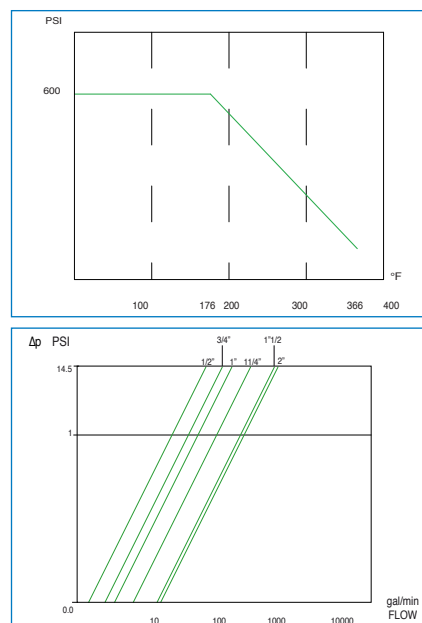
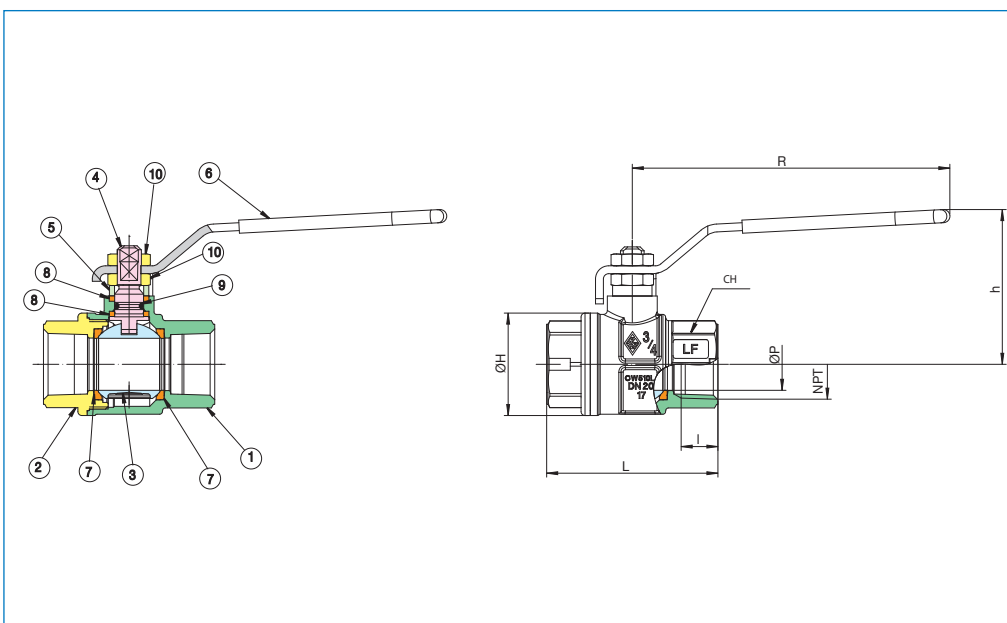
- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, STL coated LF brass ball.
- PTFE seats, seals, and thrust washer.
- Adjustable stem packing.
- 100% electronically tested in the open and closed position at 80 psi.
- Valve to be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



Max. 250 psig



POS.	PART NAME	MATERIAL	POS.	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.



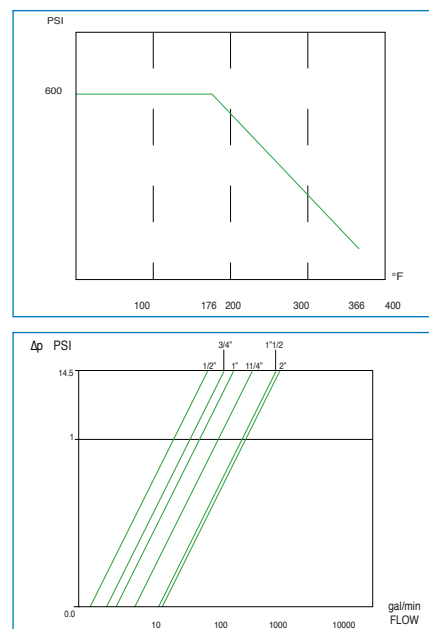
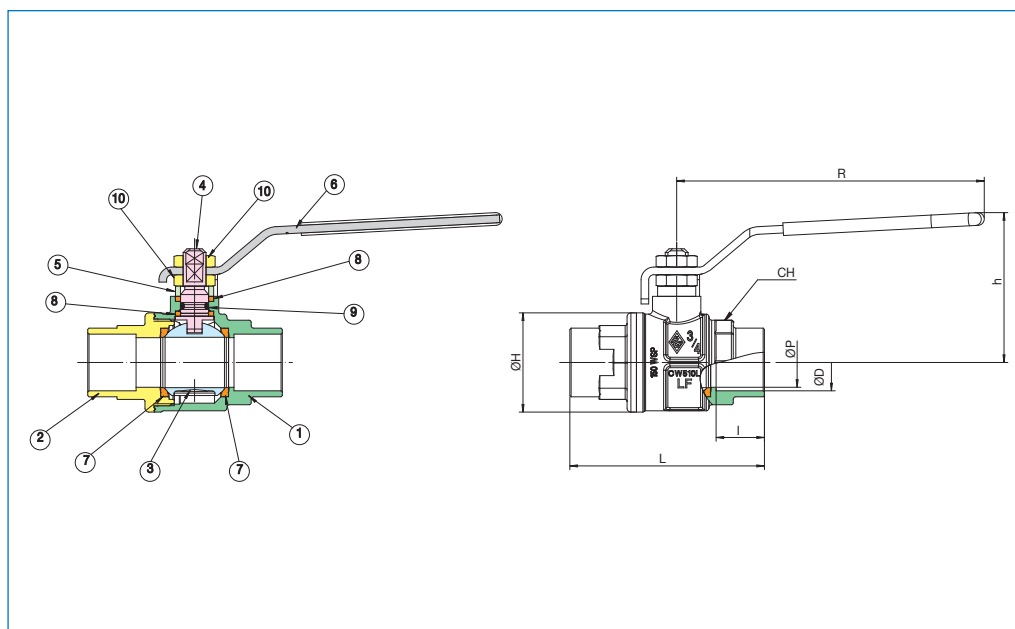
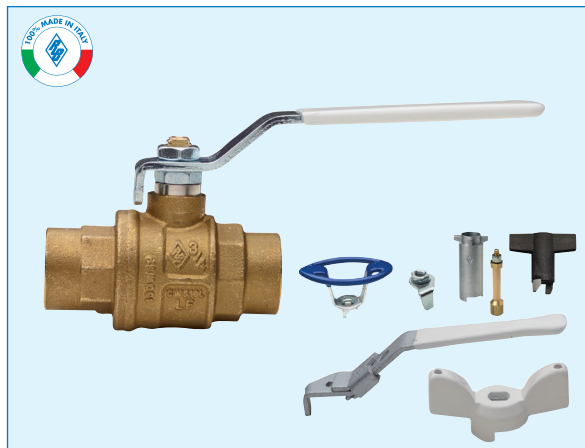
SERIES 1715 LF - 1725 LF COMMERCIAL STYLE

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".



POS	PART NAME	MATERIAL	POS	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.

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SERIES 171N LFPT COMMERCIAL STYLE

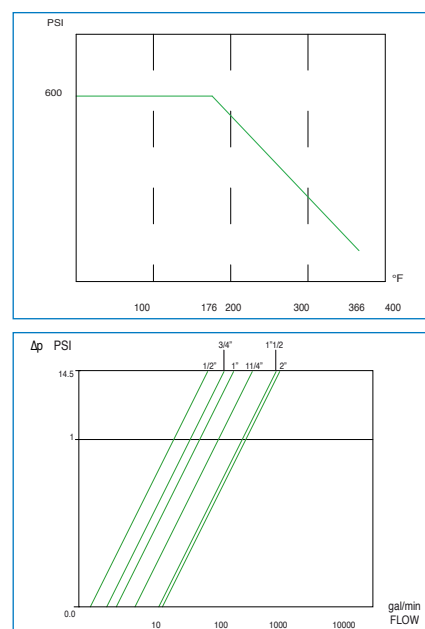
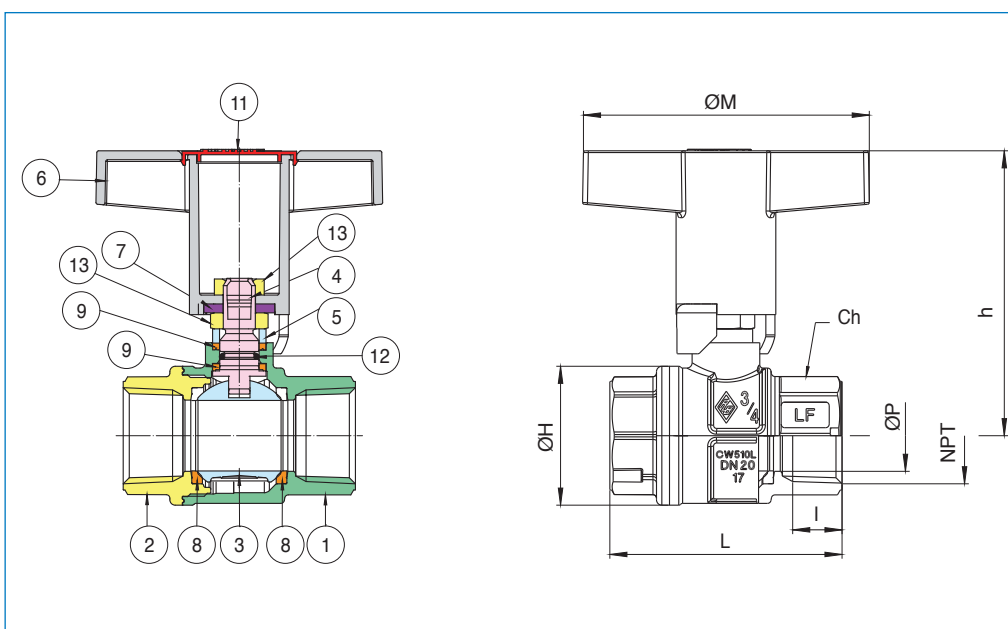
Lead free brass ball valve, FNPT threaded, full port.

- 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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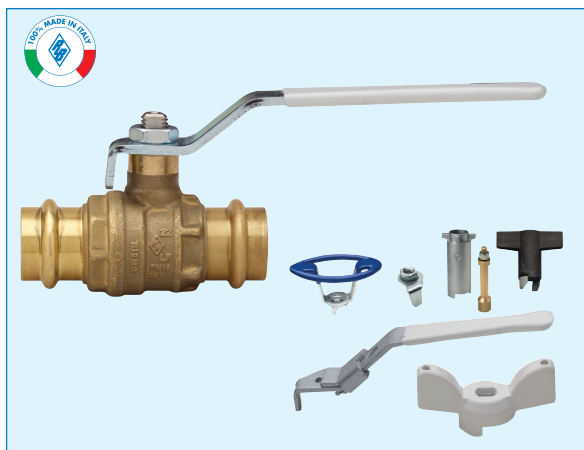


POS.	PART NAME	MATERIAL	PCS	SIZE	ØP	I	L	ØH	Ch	M	h	Cv	psi	Weight (Lbs)
1	BODY	LF BRASS C28500*	1	1/2"	0.59	0.54	2.34	1.30	0.98	3.15	2.87	18.84	600	0.54
2	END CONNECTION	LF BRASS C28500*	1	3/4"	0.79	0.55	2.56	1.54	1.22	3.15	3.15	34.10	600	0.91
3	BALL	LF BRASS C28500*	1	1"	0.98	0.66	3.07	1.93	1.50	3.15	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

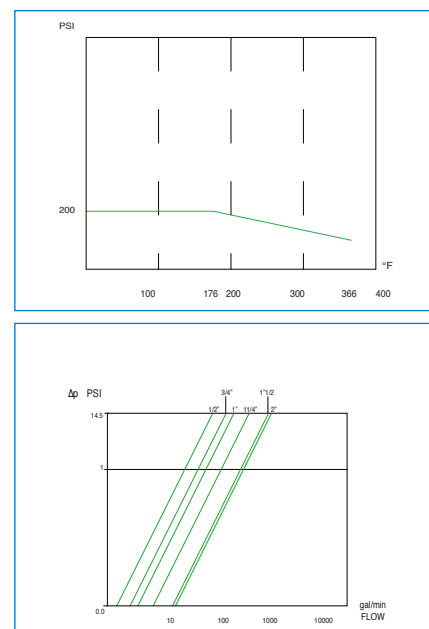
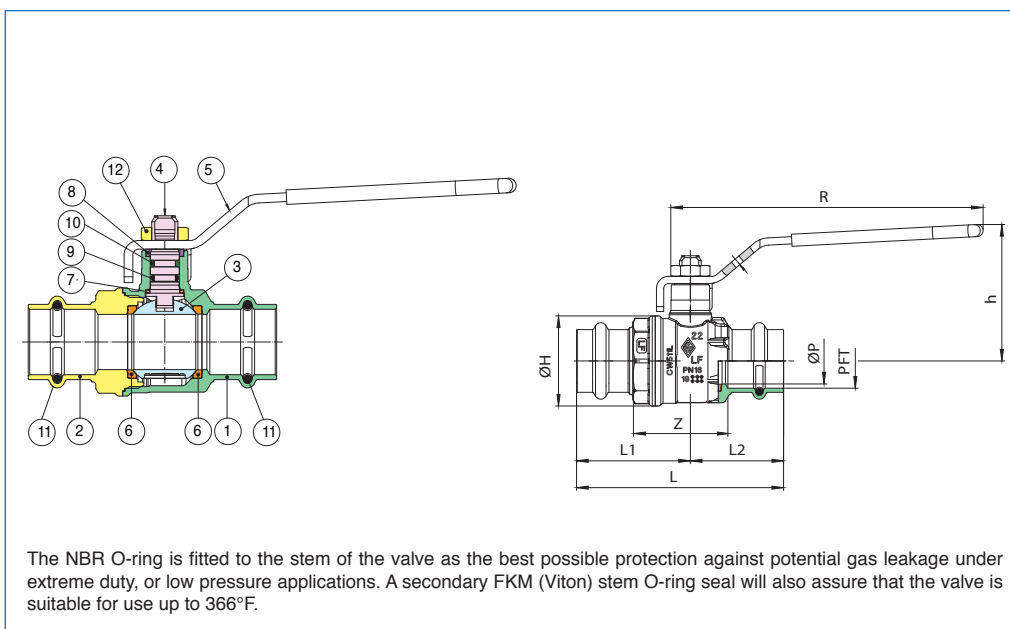
Lead free brass ball valve with EURO-PRESS connections full port.

- 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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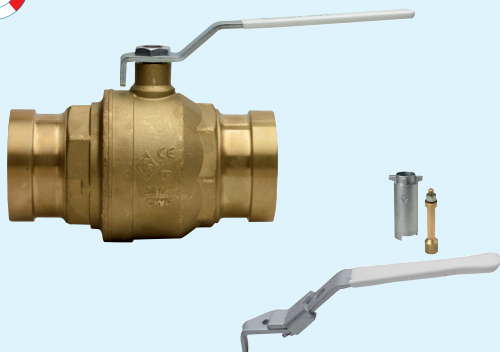


POS.	PART NAME	MATERIAL	POS.
1	BODY	LF DZR BRASS C27453*	1
2	END CONNECTION	LF DZR BRASS C27453*	1
3	BALL	LF BRASS C28500*	1
4	STEM	LF BRASS C28500*	2
5	HANDLE	STEEL DD11	2
6	BALL SEAT	PTFE	1
7	THRUST WASHER	PTFE	1
8	PACKING RING	PTFE	1
9	O-RING	NBR	1
10	O-RING	FKM (Viton)	1
11	O-RING	EPDM PEROX	1
12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

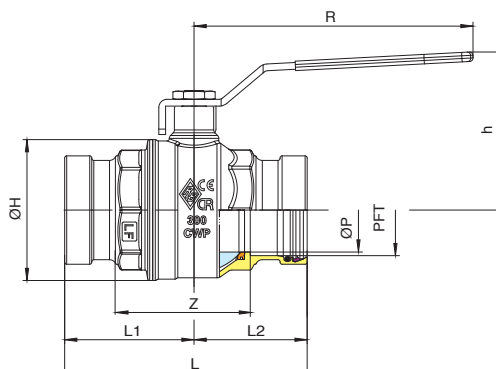
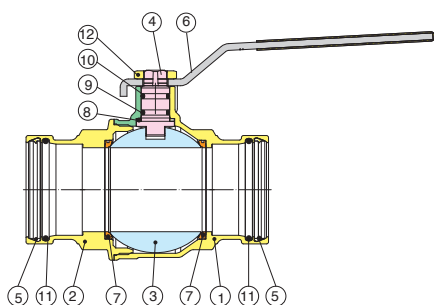
Lead free brass ball valve with XLC EURO-PRESS connections full port.

- 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.

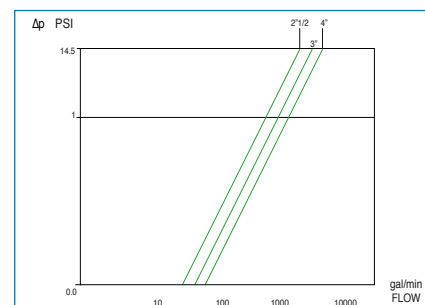
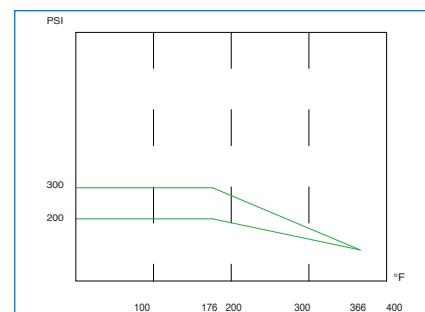
1670XLC LF: size 2 1/2" to 4".



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The NBR 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 FKM (Viton) stem O-ring seal will also assure that the valve is suitable for use up to 366°F.



POS.	PART NAME	MATERIAL	QTY
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

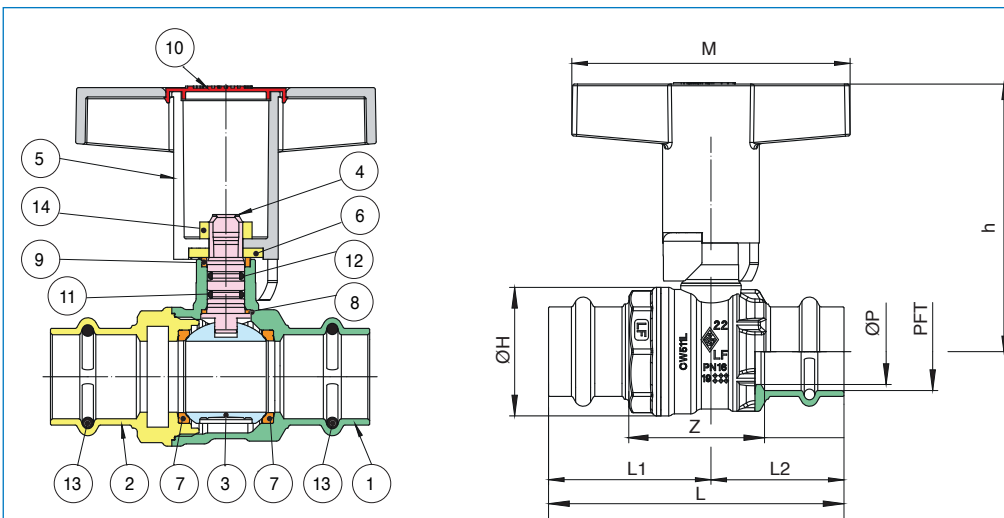
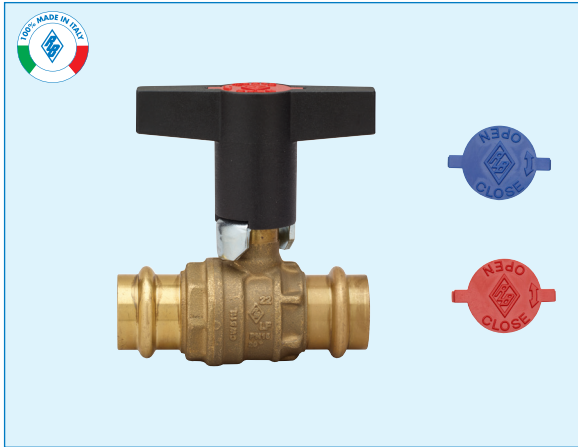
Lead free brass ball valve with EURO-PRESS connections, full port.

- 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.

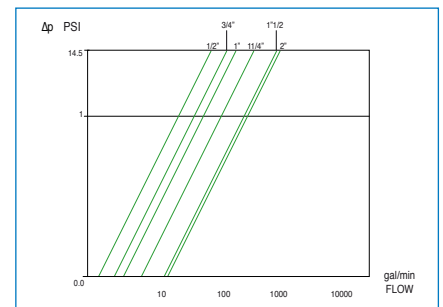
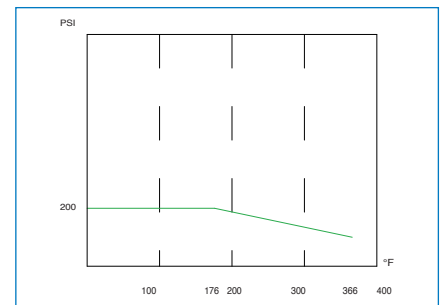
1570 LFPT: size 1/2" to 2".



HEALTH
EFFECTS US-CA
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The NBR 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 FKM (Viton) stem O-ring seal will also assure that the valve is suitable for use up to 366°F.

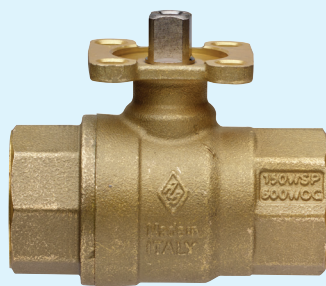


POS.	PART NAME	MATERIAL	POS.
1	BODY	LF DZR BRASS C27453*	1
2	END CONNECTION	LF DZR BRASS C27453*	1
3	BALL	LF BRASS C28500*	1
4	STEM	LF BRASS C28500*	1
5	T-HANDLE	PA6.6	1
6	90° STOP	STEEL DD11	1
7	BALL SEAT	PTFE	2
8	THRUST WASHER	PTFE	1
9	PACKING RING	PTFE	1
10	CAP	ABS	1
11	O-RING	NBR	1
12	O-RING	FKM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

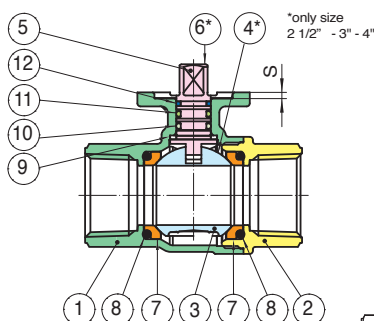
- Pressure rating 600 WOG-150 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, SLT. coated LF brass ball and and double O-ring stem packing.
- PTFE seats with O-ring backing for low operating torque.
- 100% electronically tested in the open and closed position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

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

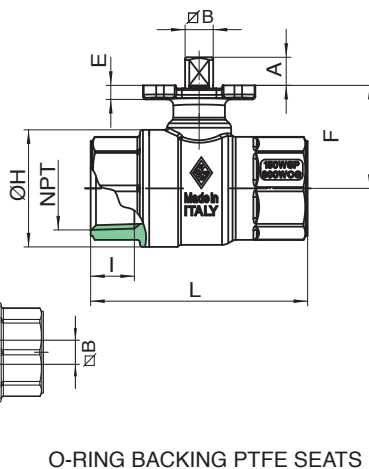
253N LF: WITH STAINLESS STEEL BALL AND STEM - size 1/4" to 4".



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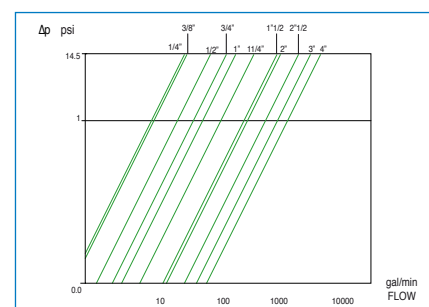
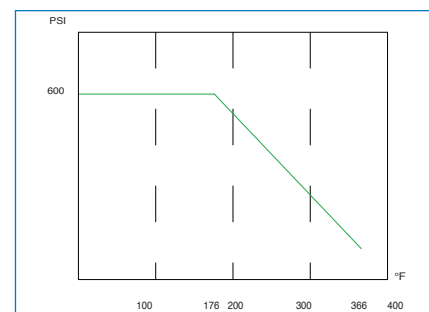


*only size
2 1/2" - 3" - 4"



O-RING BACKING PTFE SEATS

* 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	POS	SIZE	∠	I	CH	ØH	L	A	B	ØC ISO 5211	ØD	S	E	F	∠B mm	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	9	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	9	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	9	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	9	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	9	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	9	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	11	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	11	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	14	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	14	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	17	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.

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 LF SRL

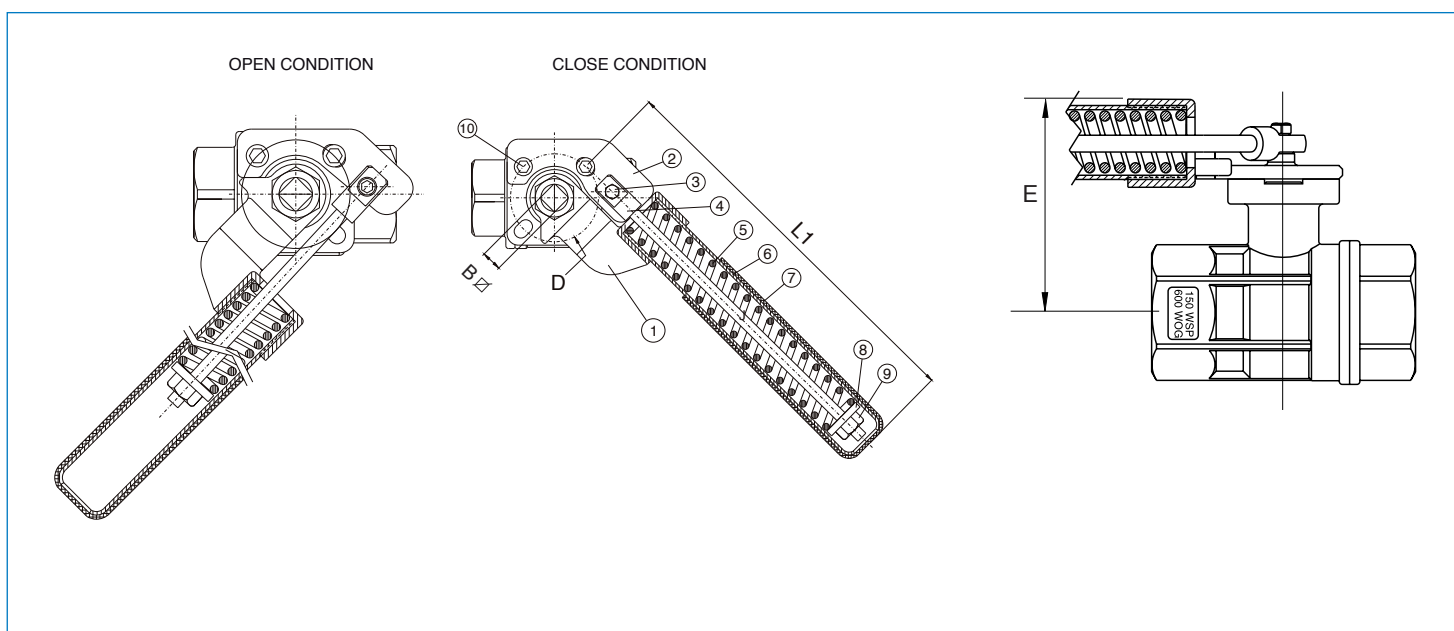
DIRECT MOUNT 2-WAY BALL VALVE DEADMAN SPRING RETURN



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.

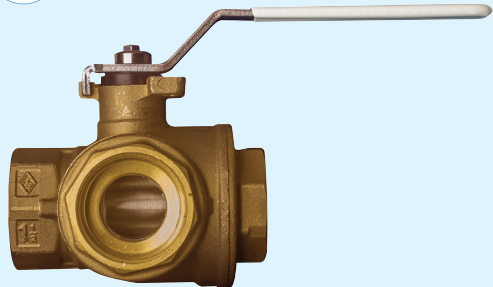
250N LF SRL: size 1/4" to 3".



POS.	PART NAME	MATERIAL	SIZE	L1	ØB	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.

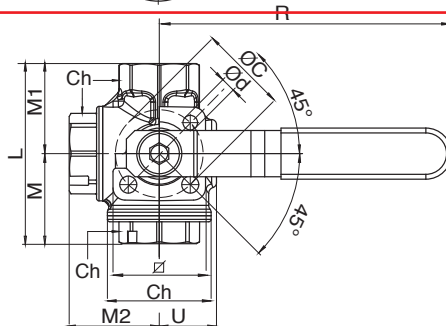
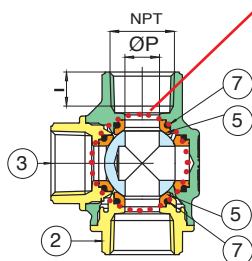
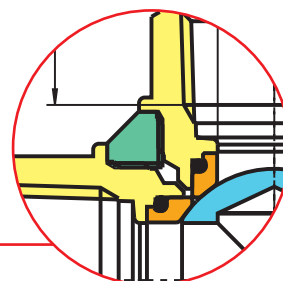
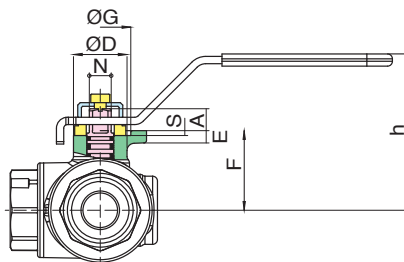
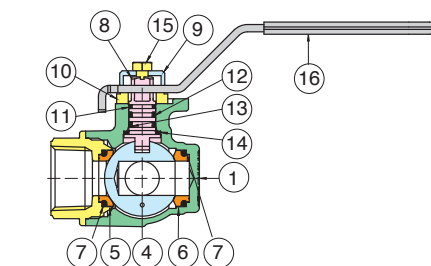
- Pressure rating 400 WOG-100 WSP.
- Temperature range -4°F to +366°F.
- ANSI B1.20.1 connections.
- Blow-out proof stem, T.E.A. coated LF brass ball and double O-ring stem packing.
- PTFE seats with O-ring backing for low operating torque.
- 100% electronically tested in the open and closed position 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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* 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	QTY	SIZE	ØP	ØH	I	L	Ch	A	Ød	ØC	ØD	E	F	ØG	M	M1	M2	ØB mm	S	U	h	R	Cv 355NLF	Cv 365NLF	psi	Weight (Lbs) 355N LF	Weight (Lbs) 365N LF	*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	0.87	1.18	1.18	1.18	9	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	0.87	1.22	1.22	1.22	9	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	0.87	1.39	1.39	1.40	9	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	0.87	1.48	1.48	1.48	9	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	0.94	1.75	1.75	1.75	11	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	0.94	2.05	1.99	1.99	11	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	1.26	2.43	2.22	2.43	11	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	1.46	2.89	2.52	2.89	14	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	1.46	3.46	3.46	3.46	14	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	1.46	3.54	3.54	3.54	14	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) DIRECT MOUNT 3-WAY BALL VALVE 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".

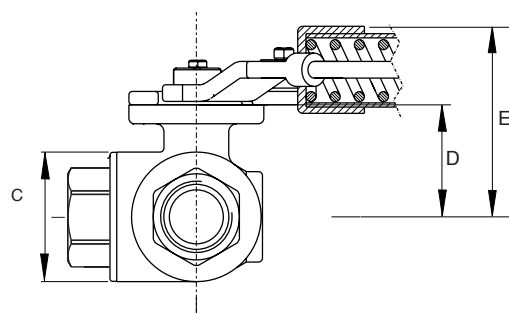
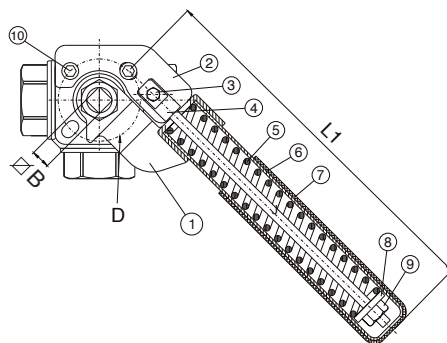
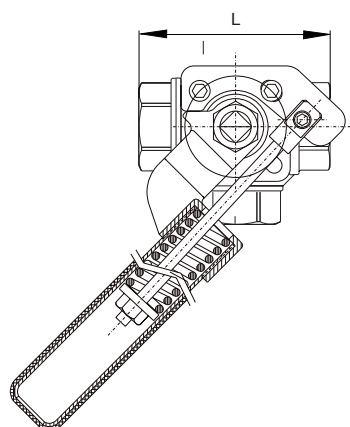


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OPEN CONDITION

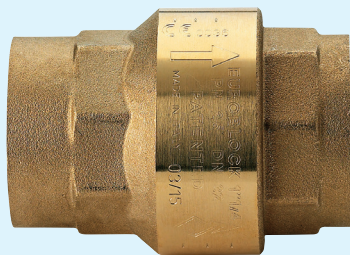
CLOSE CONDITION



POS.	PART NAME	MATERIAL	SIZE	L	∅ B	D ISO 5211	handle torque (in-Lbs)	E	D	C	Weight (Lbs) 355N LF SRL	Weight (Lbs) 365N LF 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.

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SERIES 100012 LF CHECK VALVE

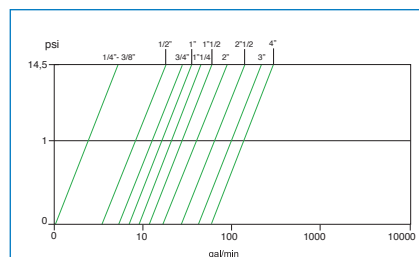
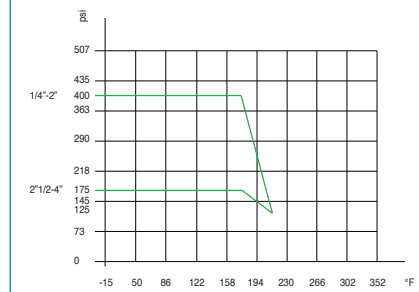
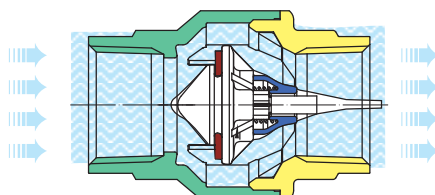
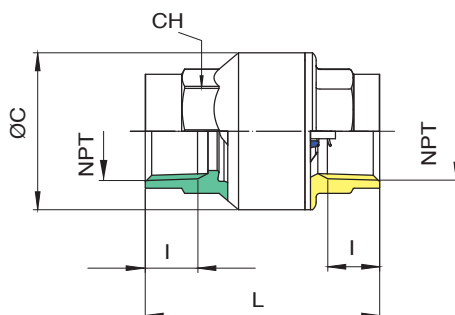
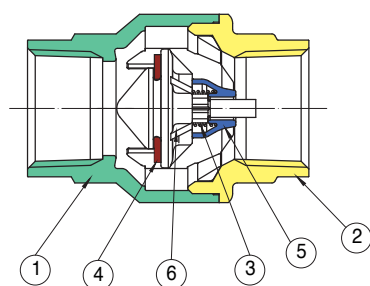
High flow rate, lead free brass, FNPT threaded, in-line spring loaded check valve.

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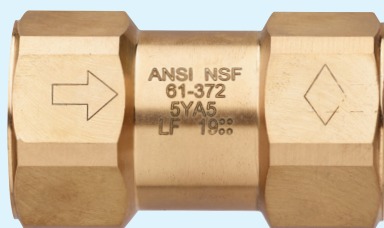
POS	PART NAME	MATERIAL	POS
1	BODY	LF BRASS C28500*	1
2	END CONNECTION	LF BRASS C28500*	1
3	SPRING	AISI 302	1
4	SEAT	NBR	1
5	SUPPORT	POM	1
6	DISC	POLYPHENYLENE SULFIDE	1

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

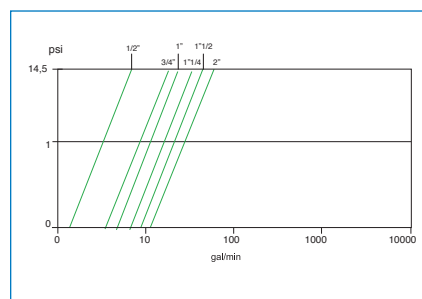
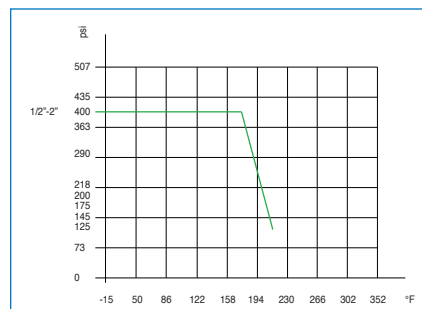
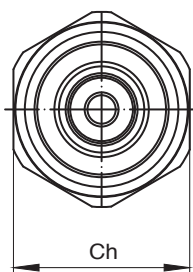
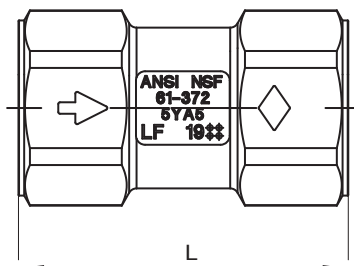
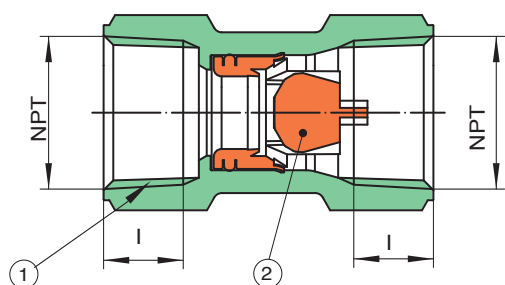
Unibody lead free brass, FNPT threaded, in-line spring loaded check valve.

- 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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POS.	PART NAME	MATERIAL	PCS	SIZE	L	Ch	psi	Cv	Weight (Lbs)
1	BODY	LF BRASS C28500*	1	1/2"	0.71	2.22	400	5.32	0.24
				3/4"	0.91	2.87	400	10.17	0.38
				1"	0.94	3.17	400	17.34	0.69
2	CHECK VALVE	POM	1	1 1/4"	1.02	3.33	400	25.43	0.82
				1 1/2"	1.42	4.41	400	36.99	1.12
				2"	1.57	5.24	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.

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SERIES 100112 LF FOOT VALVE

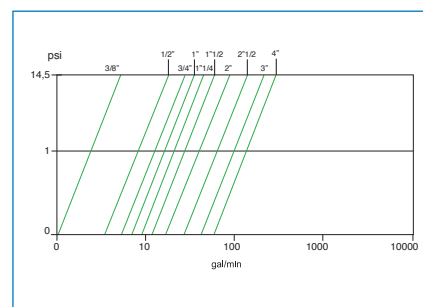
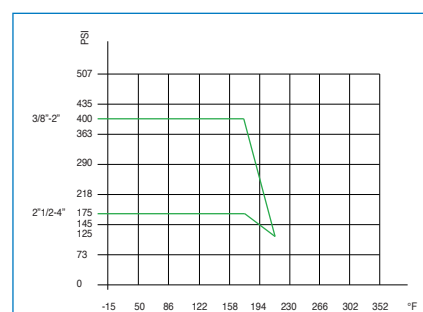
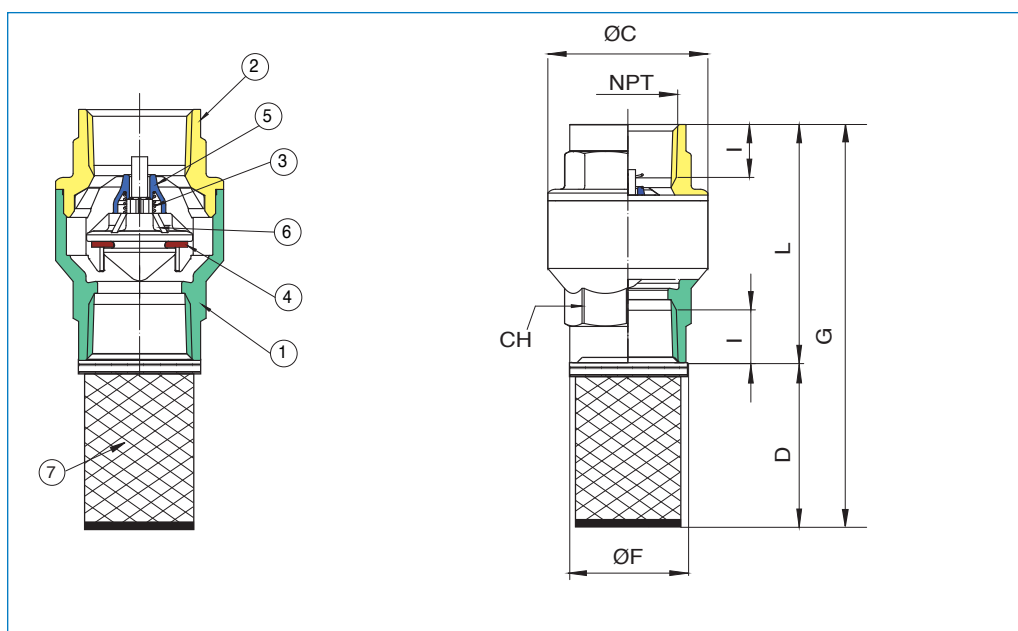
High flow rate, lead free brass, FNPT threaded, in-line spring loaded check valve.

- 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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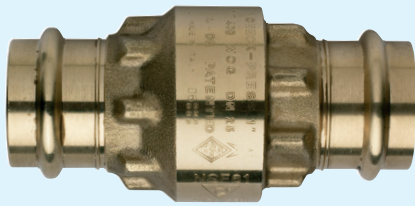


POS.	PART NAME	MATERIAL	Q _P	SIZE	I	L	ØC	D	ØF	G	CH	psi	Cv	Weight (Lbs)
1	BODY	LF BRASS C28500*	1	3/8"	0.41	1.73	1.06	1.67	0.91	3.41	0.79	400	2.1	0.21
2	END CONNECTION	LF BRASS C28500*	1	1/2"	0.54	2.32	1.36	1.69	1.02	4.02	0.98	400	9.2	0.36
3	SPRING	AISI 302	1	3/4"	0.55	2.56	1.65	1.89	1.26	4.45	1.22	400	15.1	0.52
4	SEAT	NBR	1	1"	0.66	2.76	1.93	1.89	1.61	4.65	1.50	400	22.1	0.80
5	SUPPORT	POM	1	1 1/4"	0.68	2.93	2.40	2.24	1.93	5.18	1.89	400	34.3	1.26
6	DISC	POLYPHENYLENE SULFIDE	1	1 1/2"	0.68	3.17	2.87	2.68	2.17	5.85	2.13	400	51.9	1.76
7	STRAINER	STAINLESS STEEL NYLON 1000 MICRON	1	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

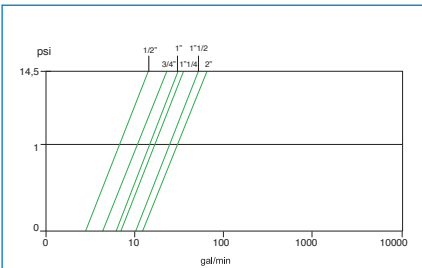
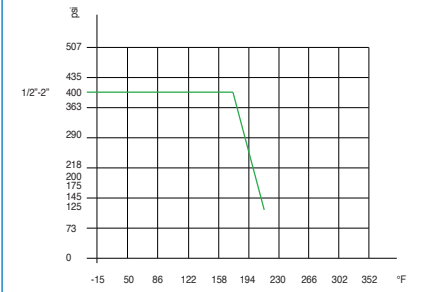
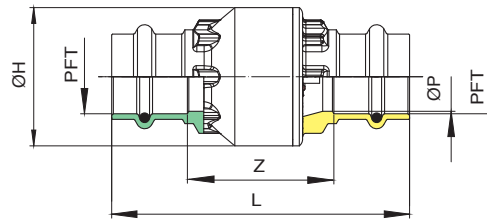
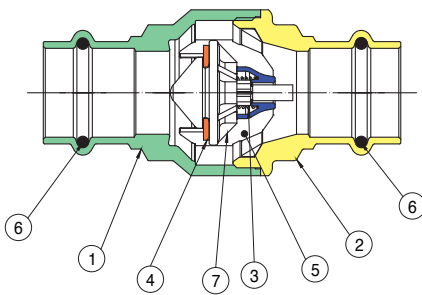
High flow rate, lead free brass, EURO-PRESS connections, in-line spring loaded check valve.

- 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".



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POS.	PART NAME	MATERIAL	POS.
1	BODY	LF DZR BRASS C27453*	1
2	END CONNECTION	LF DZR BRASS C27453*	1
3	SPRING	AISI 302	1
4	SEAT	NBR	1
5	SUPPORT	POM	1
6	O-RING	EPDM PEROX	2
7	DISC	POLYPHENYLENE SULFIDE	1

SIZE	ØP	Z	L	ØH	Cv	Max work press (psi)	Max test press (psi)	Weight (Lbs)
1/2"	0.59	1.50	2.99	1.36	9.36	200	400	0.31
3/4"	0.79	1.67	3.56	1.65	16.30	200	400	0.52
1"	0.98	1.93	3.94	1.93	24.16	200	400	0.80
1 1/4"	1.26	1.95	4.09	2.40	35.84	200	400	1.16
1 1/2"	1.57	1.95	4.96	2.87	51.90	200	400	1.77
2"	1.97	2.38	5.57	3.44	82.19	200	400	2.77

* 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 100622 LF PRESS CHECK VALVE

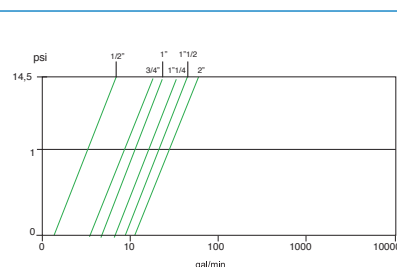
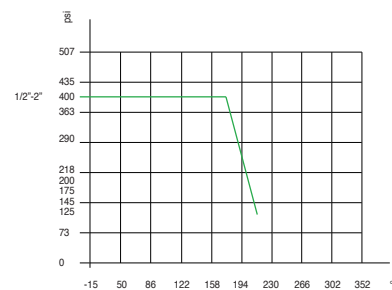
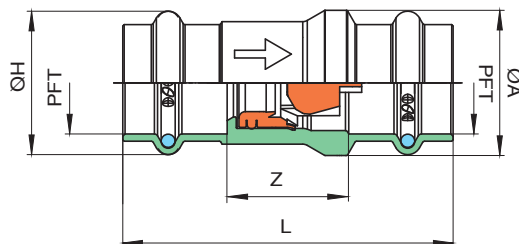
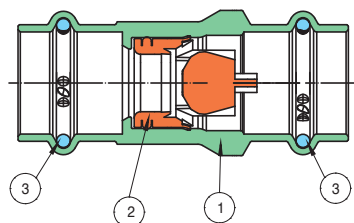
Unibody lead free brass, EUROPRESS connections, in-line spring loaded check valve.

- 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"



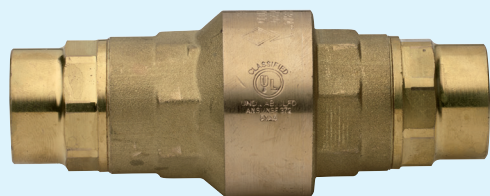
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POS.	PART NAME	MATERIAL	POS.	SIZE	Z	L	ØH	Ch	Cv	psi	Weight (Lbs)
1	BODY	LF DZR BRASS C27453*	1	1/2"	0.81	2.22	0.96	-	5.32	200	0.17
				3/4"	1.06	2.87	1.24	-	10.17	200	0.31
2	CHECK VALVE	POM	1	1"	1.28	3.17	1.50	-	17.34	200	0.49
				1 1/4"	1.59	3.64	-	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

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SERIES 100712 LF IN-LINE SWEAT ENDS CHECK VALVE

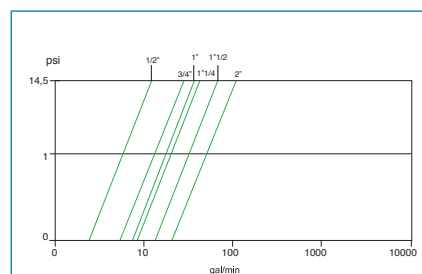
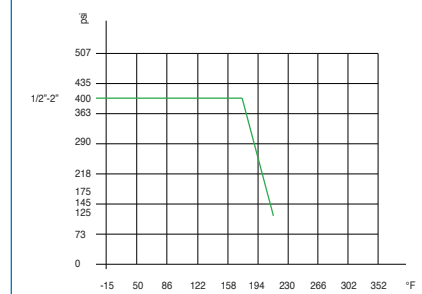
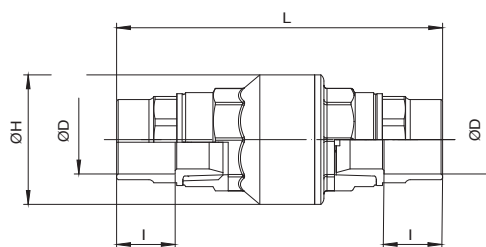
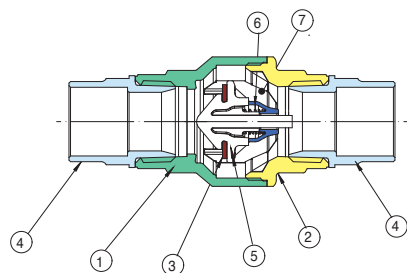


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Lead free brass, solder ends, in-line spring loaded check valve.

- 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".

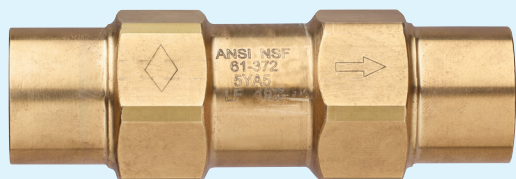


P.O.S.	PART NAME	MATERIAL	P.O.S.
1	BODY	LF BRASS C28500*	1
2	END CONNECTION	LF BRASS C28500*	1
3	SEAT	NBR	1
4	CONNECTION	LF BRASS C28500	1
5	DISC	POLYPHENYLENE SULFIDE	1
6	SPRING	AISI 302	2
7	SUPPORT	POM	1

SIZE	ØD	I	L	ØH	Cv	psi	Weight (Lbs)
1/2"	0.63	0.50	3.43	1.36	8.1	400	0.44
3/4"	0.88	0.75	4.17	1.65	14.1	400	0.73
1"	1.13	0.91	4.88	1.93	20.9	400	1.14
1 1/4"	1.38	0.97	5.26	2.40	35.84	400	1.92
1 1/2"	1.63	1.10	5.79	2.87	51.90	400	2.49
2"	2.13	1.34	6.56	3.44	82.19	400	3.71

* 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

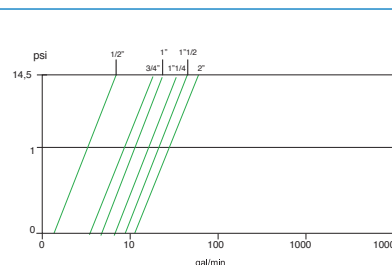
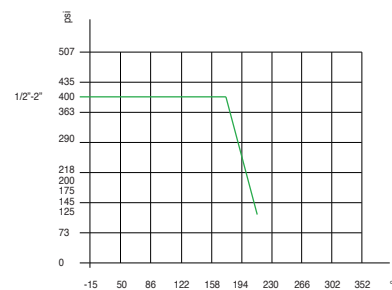
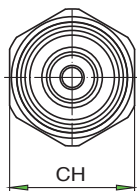
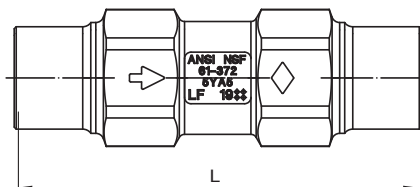
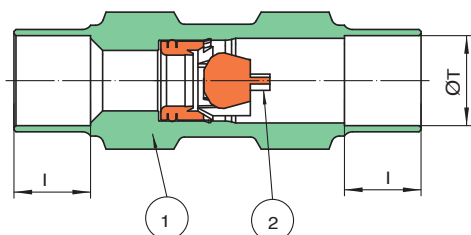
Unibody lead free brass, solder ends, in-line spring loaded check valve.

- 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".



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POS.	PART NAME	MATERIAL	Q3 POS	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.

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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 North America 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.

Always tighten valve components with two wrenches; one holding the valve end closest to the pipe joint/fitting being tightened, and the other around the pipe/fitting to tighten the connection. This prevents transmitting torque through the valve body joint. To avoid damage to valve, seal, or seat, **never** over-tighten a valve connection. Twist valve on until it stops, and use the wrenches to make 1-1/2 more turns.

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.

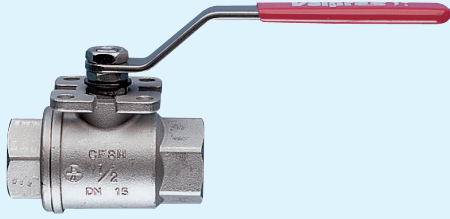
MAINTENANCE

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.



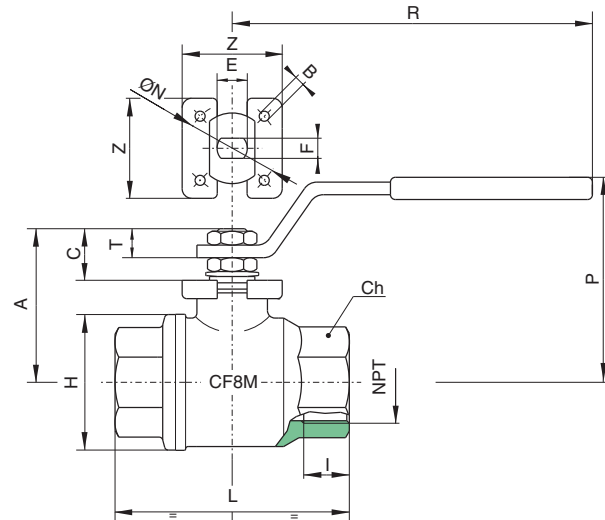
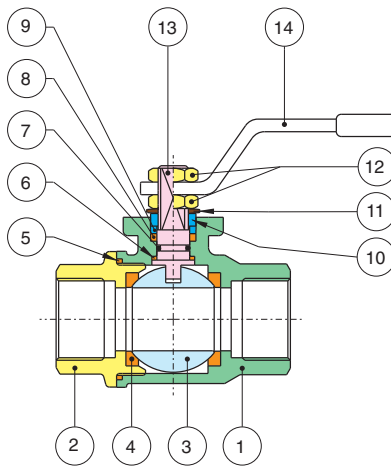
SERIES 700001 STAINLESS STEEL BALL VALVE

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

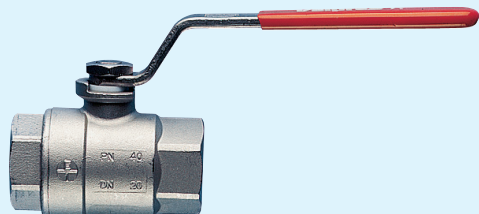
- Pressure rating 2000 psi 1/2", 1500 psi 3/4" to 1", 1000 psi 1 1/4" to 2", 350 psi 2 1/2" to 4", 150 psi steam.
- Temperature range -4°F to +366°F.
- Blow-out proof stem, adjustable stem packing.
- PTFE seats, packing, and thrust washer.
- ISO 5211 mounting pad and double "D" stem.
- 100% electronically 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".

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



POS.	PART NAME	MATERIAL	POS.	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")	2	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																		



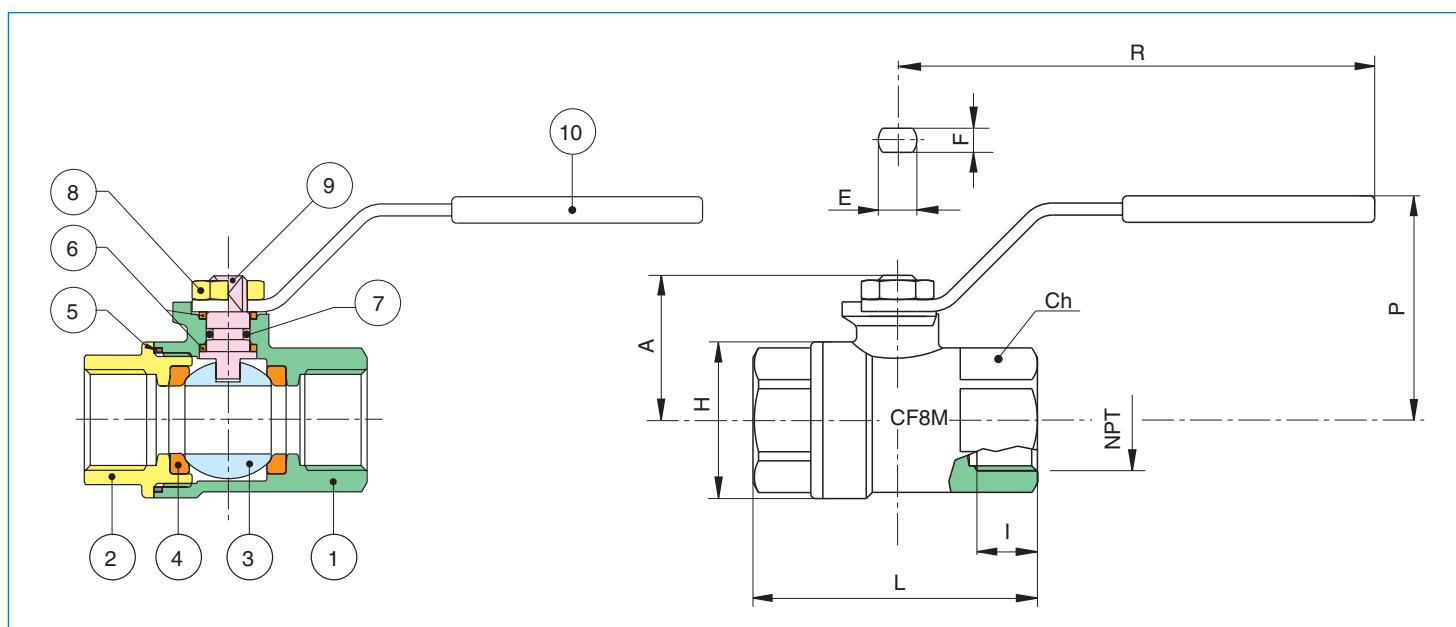
SERIES 700023 STAINLESS STEEL BALL VALVE

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.



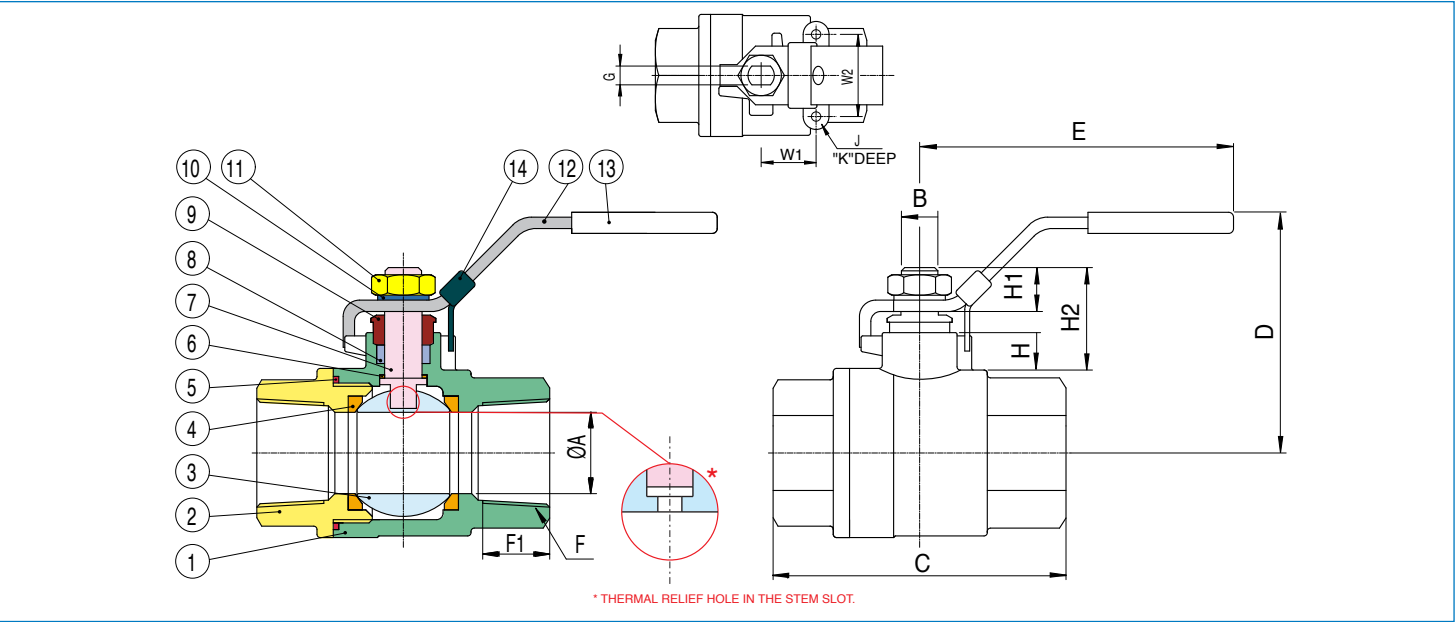
P.O.S.	PART NAME	MATERIAL	P.O.S.
1	BODY	CF8M	1
2	END CONNECTION	CF8M	1
3	BALL	AISI 316 - CF8M	1
4	BALL SEAT	PTFE	2
5	SEAL	PTFE	1
6	STEM SEAL	PTFE	2
7	O-RING	FKM (Viton)	1
8	NUT	AISI 304	1
9	STEM	AISI 316	1
10	HANDLE	AISI 430	1

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"), 1000 psi (2 1/2" to 4") 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 4".

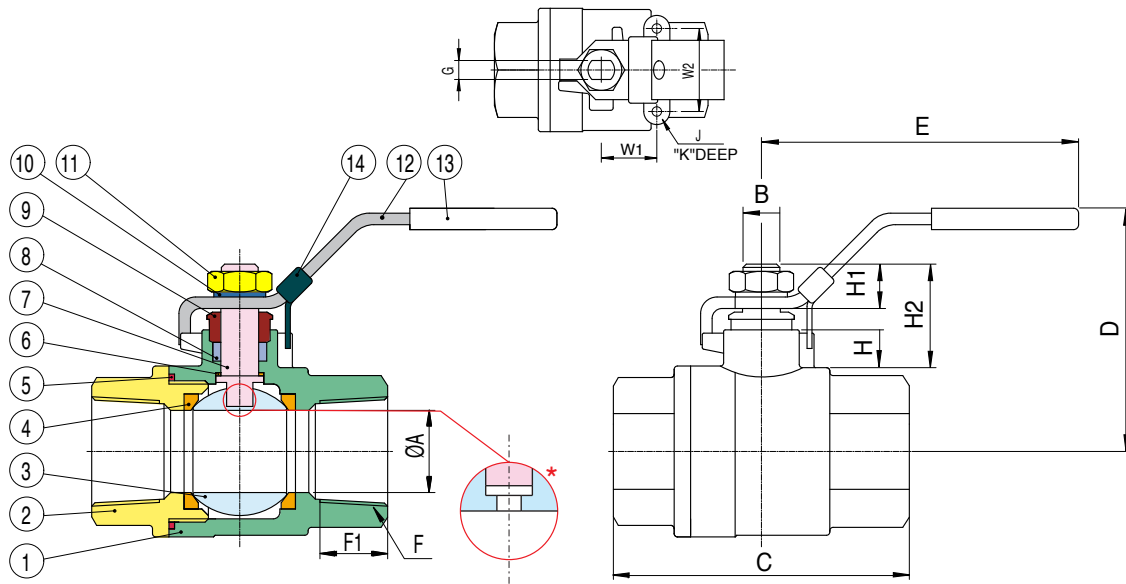


POS.	PART NAME	MATERIAL	QTY	SIZE	ØA	B	C	D	E	F1	J	K	G	H	H1	H2	W1	W2	Cv	Weight (Lbs)
1	BODY	CF8M	1	1/4"	0.45	0.31	2.16	1.96	3.93	0.59	10-24UNC	0.23	0.20	0.31	0.38	0.87	0.50	1.12	22	0.51
2	END CAP	CF8M	1	3/8"	0.49	0.31	2.16	1.96	3.93	0.59	10-24UNC	0.23	0.20	0.31	0.38	0.87	0.50	1.12	27	0.51
3	BALL	AISI 316/CF8M	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	37	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	68	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	109	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	185	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	268	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	486	6.86
9	GLAND BUSH	AISI 304	1	2 1/2"	2.56	0.78	6.56	5.59	9.72	1.18	1/4-20UNC	0.27	0.47	0.65	1.08	2.33	1.38	2.17	843	13.20
10	STEM WASHER	AISI 304	1	3"	3.15	0.78	7.60	6.02	9.72	1.31	1/4-20UNC	0.27	0.47	0.73	1.08	2.32	1.38	2.17	1277	22.30
11	STEM NUT	AISI 304	1	4"	3.94	0.94	10.24	7.18	12.60	1.54	1/4-20UNC	0.27	0.63	0.98	1.57	3.13	1.97	2.36	2055	46.30
12	HANDLE	AISI 304	1																	
13	HANDLE SLEEVE	VINYL	1																	
14	LOCKING DEVICE	AISI 304	1																	



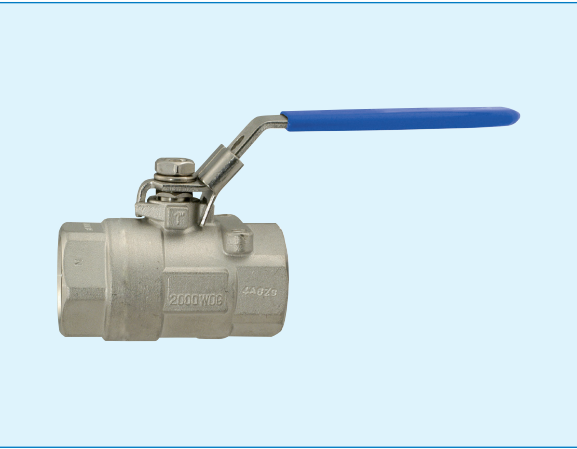
SERIES 600 LL CARBON STEEL BALL VALVE

- 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"), 1000 psi (2 1/2" to 4") 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 4".



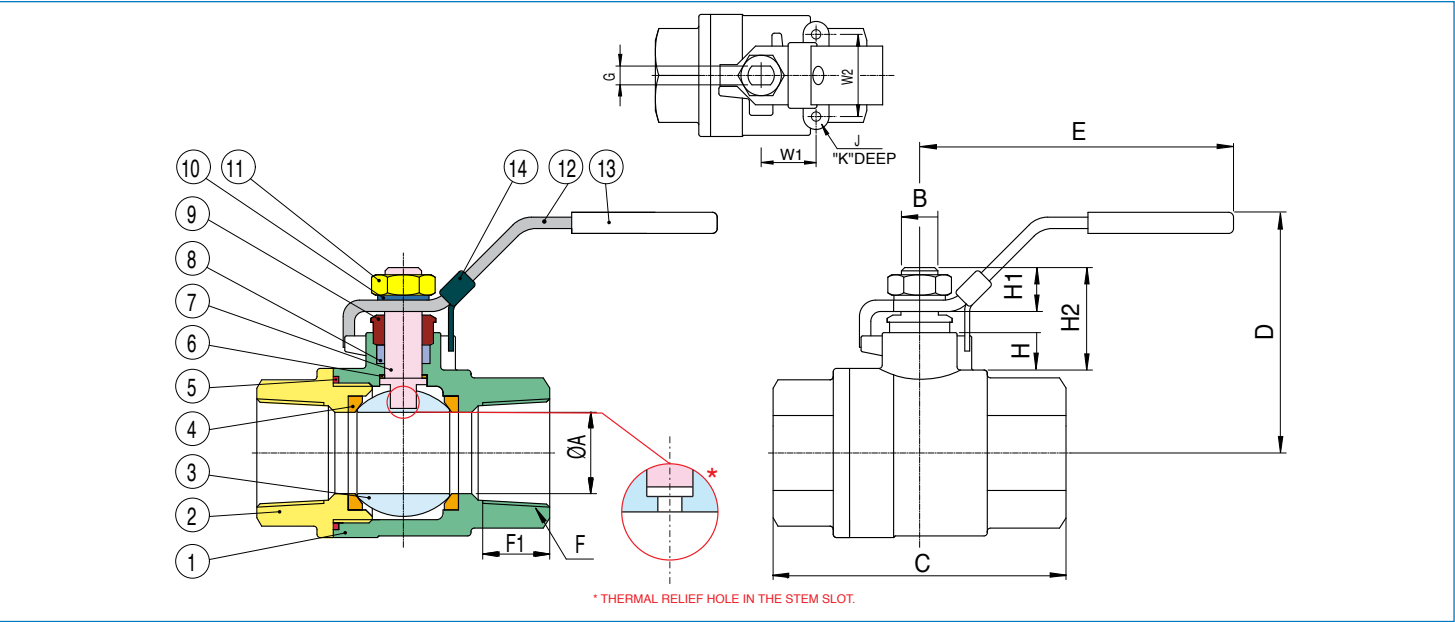
POS	PART NAME	MATERIAL	POS
1	BODY	WCB	1
2	END CAP	WCB	1
3	BALL	AISI 316/CF8M	1
4	SEAT	RTFE	2
5	JOINT GASKET	PTFE	1
6	THRUST WASHER	PTFE	1
7	STEM	AISI 316	1
8	V RING PACKING	PTFE	1
9	GLAND BUSH	STEEL	1
10	STEM WASHER	STEEL	1
11	STEM NUT	STEEL	1
12	HANDLE	STEEL	1
13	HANDLE SLEEVE	VINYL	1
14	LOCKING DEVICE	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	22	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	27	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	37	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	68	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	109	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	185	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	268	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	486	6.86
2 1/2"	2.56	0.78	6.56	5.59	9.72	1.18	1/4-20UNC	0.27	0.47	0.65	1.08	2.33	1.38	2.17	843	13.20
3"	3.15	0.78	7.60	6.02	9.72	1.31	1/4-20UNC	0.27	0.47	0.73	1.08	2.32	1.38	2.17	1277	22.30
4"	3.94	0.94	10.24	7.18	12.60	1.54	1/4-20UNC	0.27	0.63	0.98	1.57	3.13	1.97	2.36	2055	46.30



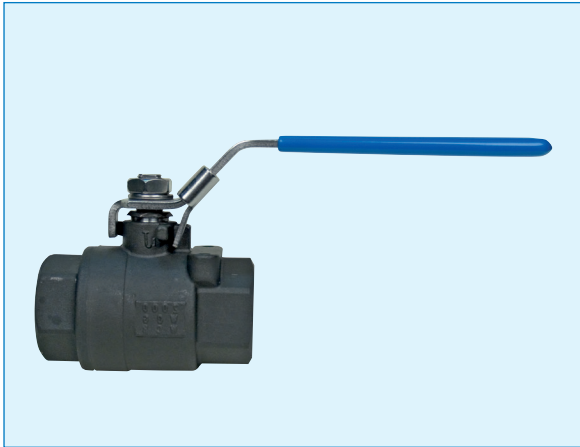
SERIES 7700 LL
STAINLESS STEEL SEAL WELD BALL VALVE

- 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".



POS.	PART NAME	MATERIAL	P.O.S.
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

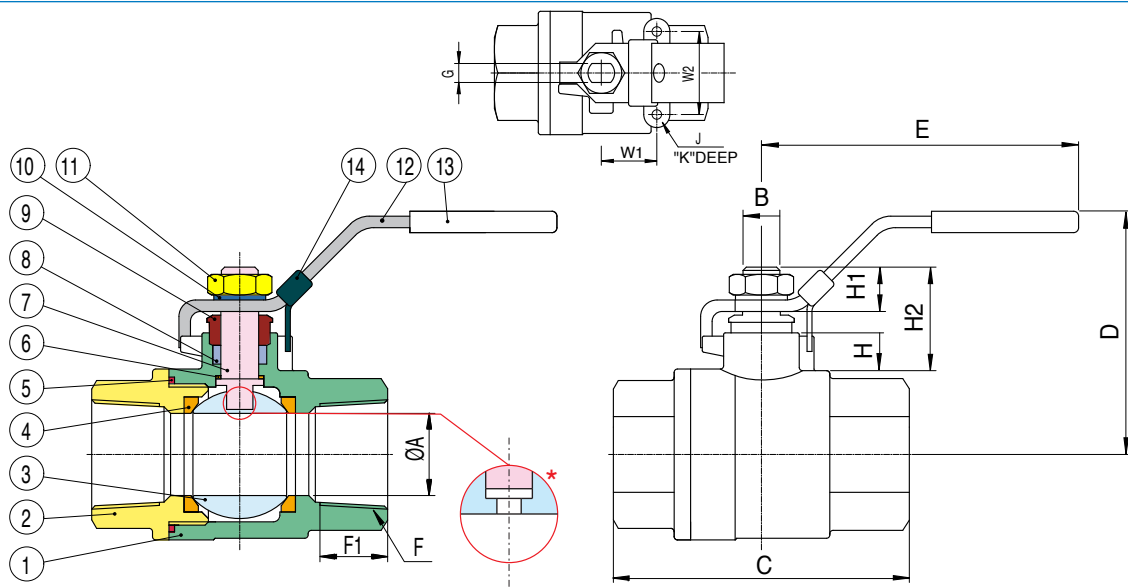


SERIES 6600 LL CARBON STEEL SEAL WELD BALL VALVE

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".



* THERMAL RELIEF HOLE IN THE STEM SLOT.

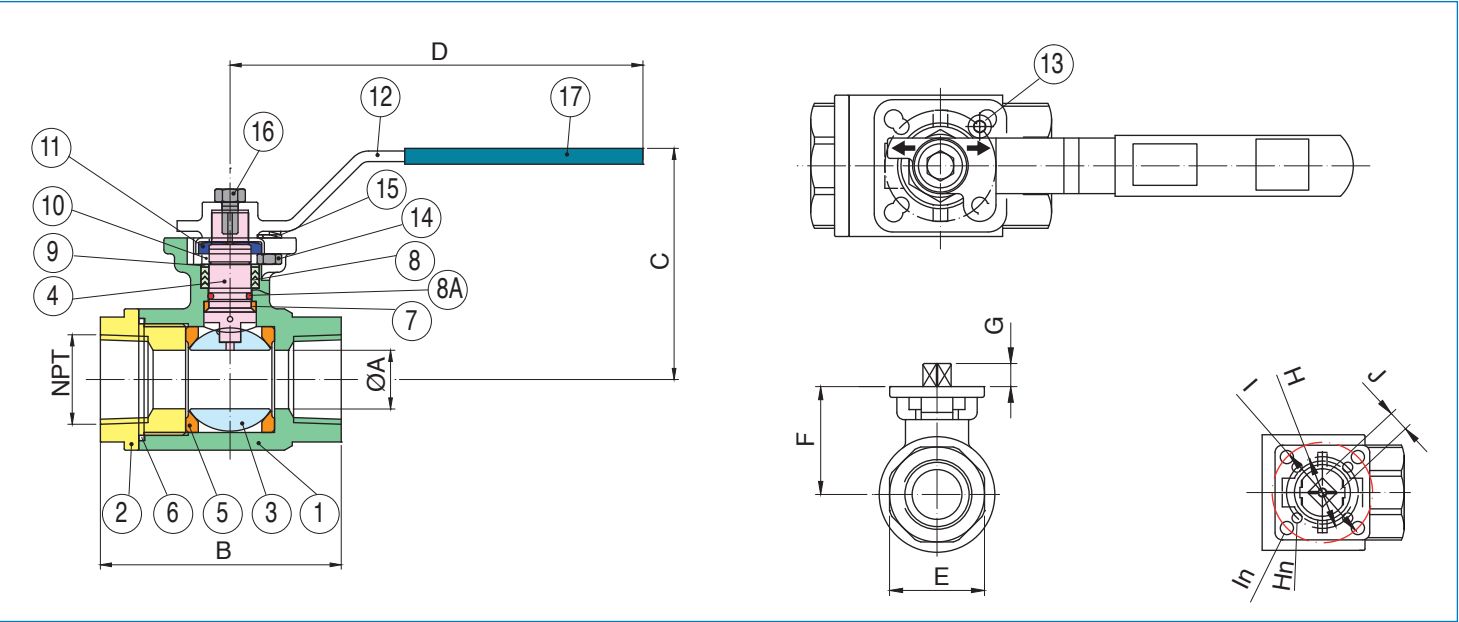
POS.	PART NAME	MATERIAL	PCS.
1	BODY	WCB	1
2	END CAP	WCB	1
3	BALL	AISI 316	1
4	SEAT	RTFE.	2
5	JOINT GASKET	PTFE	1
6	THRUST WASHER	PTFE	1
7	STEM	AISI 316	1
8	V RING PACKING	PTFE	1
9	GLAND BUSH	STEEL	1
10	STEM WASHER	STEEL	1
11	STEM NUT	STEEL	1
12	HANDLE	STEEL	1
13	HANDLE SLEEVE	VINYL	1
14	LOCKING DEVICE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

- 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.



POS.	PART NAME	MATERIAL	POS.	SIZE	ØA	B	C	D	E	F	G	ISO 5211 I	Hn	In	J mm	Cv	Torque in-Lbs	Weight (Lbs)
1	BODY	CF8M/WCB	1	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
2	END CAP	CF8M/WCB	1	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
3	BALL	CF8M	1	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
4	ANTI-STATIC STEM	AISI 316	1	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
5	BALL SEAT	DELFIN	2	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
6	BODY SEAL	PTFE	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
7	THRUST WASHER	PTFE	1	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
8	STEM PACKING	PTFE	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
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															

* Varies with size.



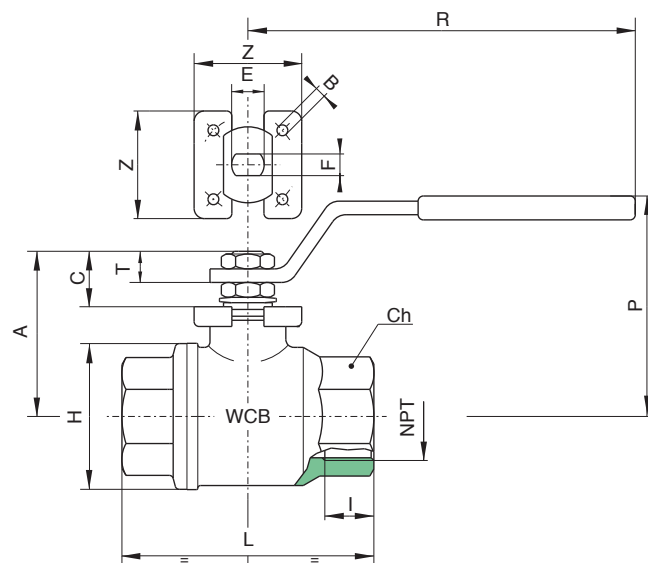
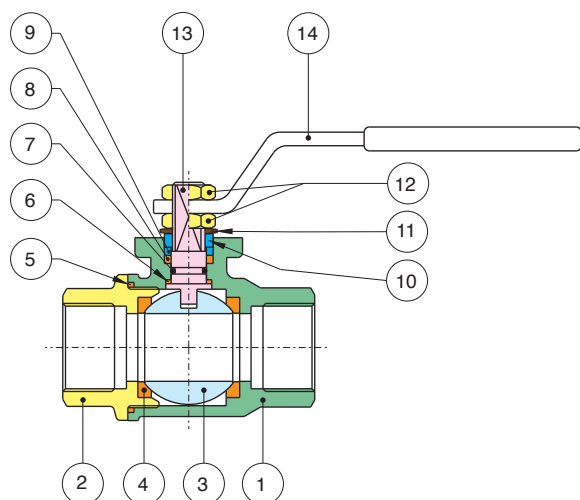
SERIES 700056 CARBON STEEL BALL VALVE

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

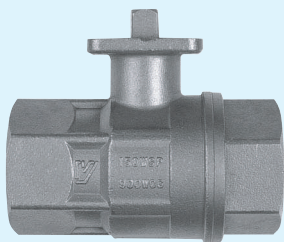
- Pressure rating 1000 psi -150 psi steam.
- Temperature -4°F to +366°F.
- Blow-out proof stem, adjustable stem packing.
- PTFE seats, packing and thrust washer.
- 100% electronically tested in the open and closed position at 80 psi.
- TUV T.A. Luft approved.
- ISO 5211 pad with double "D" stem.
- ANSI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

700056: size 1/4" to 2".

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



POS.	PART NAME	MATERIAL	P.C.S.	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																		

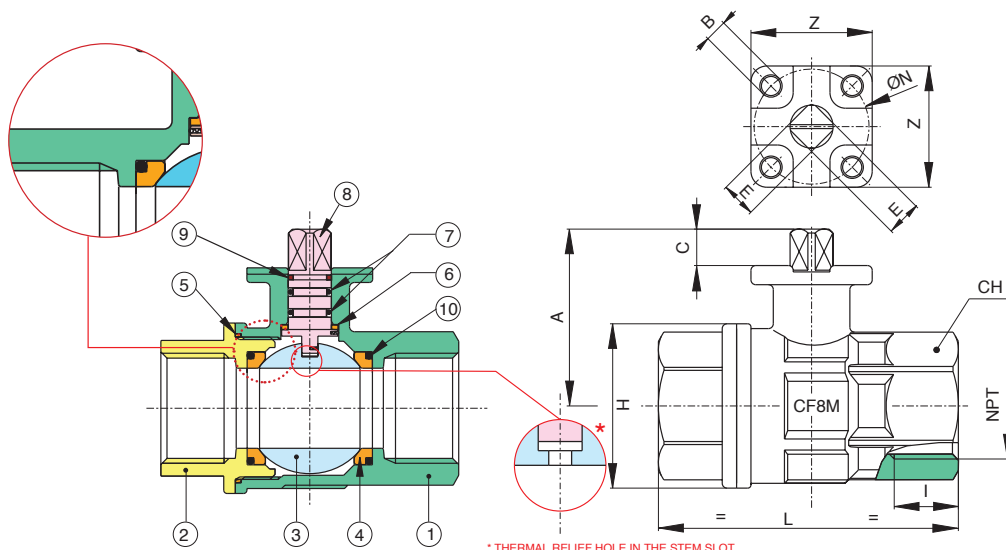


SERIES 700076 STAINLESS STEEL DIRECT MOUNT BALL VALVE

- 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".



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

P.C.S	PART NAME	MATERIAL	P.C.S
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

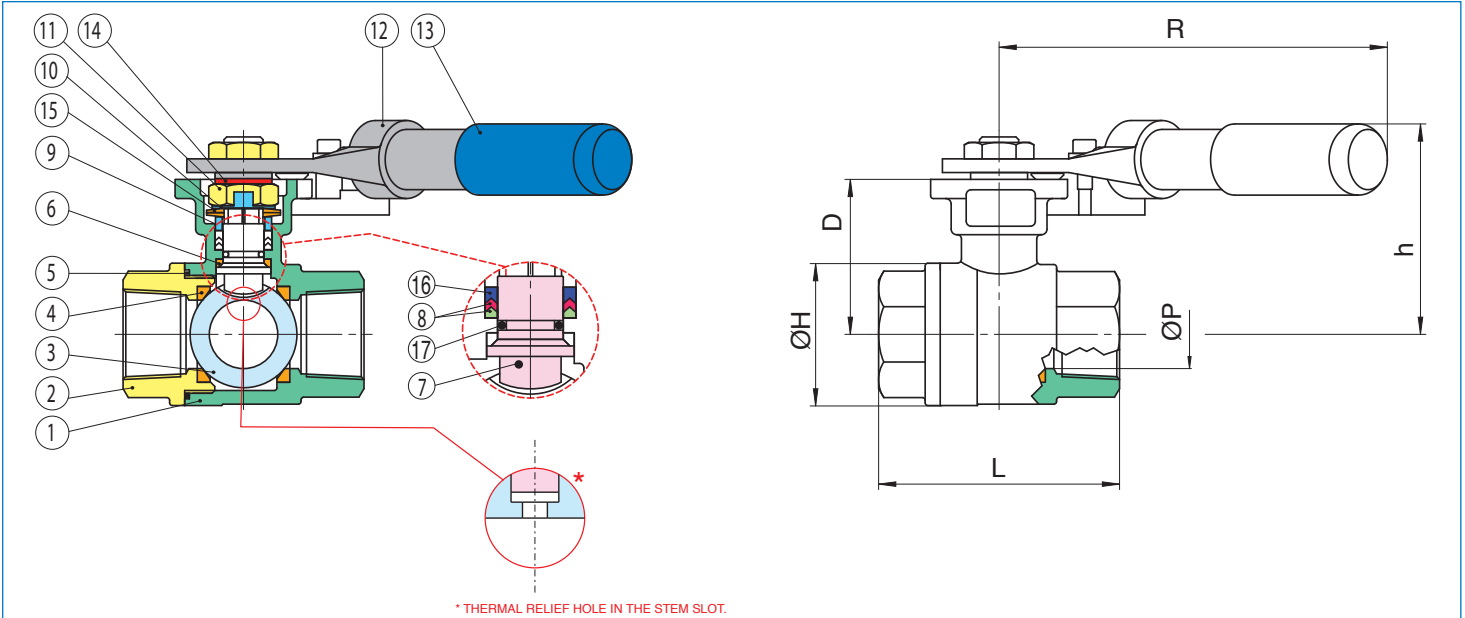
SIZE	I	L	H	CH	A	C	E	mm	ISO 5211	B	Z	Cv	psi	Weight (Lbs)	*Torque in-Lbs
1/4"	0.59	2.56	1.44	1.02	1.78	0.26	9		F03/F04 1.42"-1.65"	0.24	1.65	7.91	1000	0.95	60
3/8"	0.59	2.56	1.44	1.02	1.78	0.26	9		F03/F04 1.42"-1.65"	0.24	1.65	10.22	1000	0.89	60
1/2"	0.59	2.63	1.35	1.06	1.63	0.35	9		1.42" (ISO F03)	0.23	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.

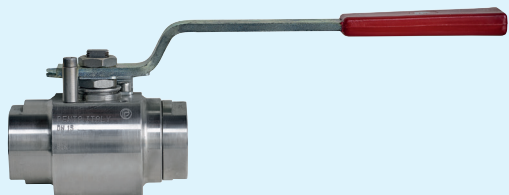
- Temperature range -40°F to +450°F.
 - Working pressure to 1000 psi 1/4" - 2" and 800 psi 2-1/2" - 4"
 - Blow-out proof stem.
 - Adjustable spring return lever.
 - Antistatic design.
 - ANSI B1.20.1 connections.
- 2200 SRL:** size 1/4" to 4".



POS	PART NAME	MATERIAL	PCS
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	ØP	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	9	1000	1.80
3/8"	0.49	6.30	1.52	1.46	2.31	2.56	F03/F04	9	1000	1.80
1/2"	0.59	6.30	1.52	1.46	2.31	2.56	F03/F04	21	1000	1.70
3/4"	0.79	6.30	1.82	1.69	2.60	2.94	F03/F04	50	1000	2.00
1"	0.98	6.30	2.23	2.05	3.02	3.47	F04/F05	90	1000	2.80
1 1/4"	1.26	6.30	2.40	2.48	3.19	4.02	F04/F05	110	1000	3.80
1 1/2"	1.50	8.27	3.05	2.87	3.84	4.33	F05/F07	240	1000	6.60
2"	1.97	8.27	3.35	3.54	4.14	4.92	F05/F07	400	1000	8.80
2 1/2"	2.50	19.90	3.68	4.69	6.67	6.53	F07/F10	700	800	22.08
3"	3.07	19.90	4.09	5.59	7.08	7.28	F07/F10	980	800	34.96
4"	3.90	19.90	5.20	6.91	8.19	8.62	F10/F12	1700	800	43.22

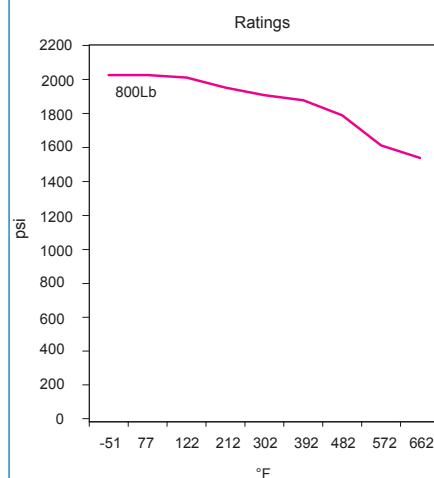
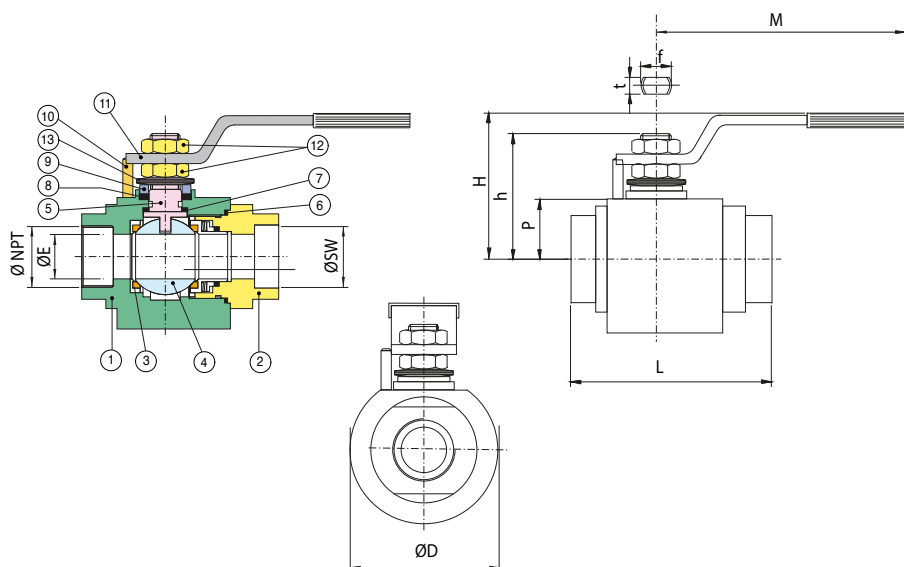
CLASS 800 METAL SEATED



SERIES AP20PCS - AP20PSS CARBON STEEL - STAINLESS STEEL BALL VALVE 2 PIECES SCREWED HIGH TEMPERATURE

Metal seated floating ball valves, CLASS 800 bi-directional.

- 2-piece screwed body from barstock.
- Temperature range carbon steel valve -20°F to +662°F.
- Temperature range stainless steel valve -40°F to +662°F.
- Blow-out proof stem.
- PENTAFITE standard ball seats, other metal seats on request.
- API 598 Bubble Tight (Exceed ANSI B16.104/FCI70-2 CL.VI).
- Consult factory for temperatures between -50°F and 750°F.
- Adjustable, live-loaded graphite packing.
- NPT threaded female Std, SW on request.
- NACE MR01-75 compliant materials.
- 100 mm stem elongation on request.
- Butt welding ends with integral nipples available on request.
- Locking lever operator available on request.



POS	PART NAME	MATERIAL	PCS
1	BODY	F316 / A105	1
2	END CAP	F316 / A105	1
3	SEAT	PENTAFITE/WC/ST6/ CRC/live loaded PEEK	2
4	BALL	F316 / CF8M	1
	BALL COATING	Hard Chromium Nitrides (HCR) HVOF Tungsten Carbides (WC)HVOF Stellite GR.6 (ST6) HVOF Chrome Carbides (CRC)	
5	STEM	17/4 PH	1
6	SEAL BODY	GRAPHITE	1
7	PRIMARY STEM SEAL	GRAPHITE	1
8	SECONDARY STEM SEAL	GRAPHITE	1
9	GLAND BOLT	304 SST	1
10	STOP PLATE	304 SST	1
11	HANDLE	CARBON ST./S.S.	1
12	STEM NUTS	304 S.S.	2
13	STEM SPRING	UNS S30100	1

SIZE	DN	ØE	L(NPT)	L(SW)	L(BW)	ØD	M	H	h	P	F/t	ISO 5211	Cv	Torque in-Lbs PENTAFITE seats	Weight (Lbs)
1/2"	15	12.5	80	70	270	58	145	70	50	24	10/6	F03	30	464	1.2
3/4"	20	19	90	85	285	64	145	75	53	27	10/6	F03	64	653	1.5
1"	25	24	110	105	305	78	275	83	63	32	16/10	F05	120	740	2.5
1 1/2"	40	38	130	125	325	104	380	123	91.5	42	22/14	F07	247	2234	5.3
2"	50	51	155	140	350	138	380	120	102	61	22/14	F07	510	3336	11.5





SERIES 380S - 380SM MINI BALL VALVE

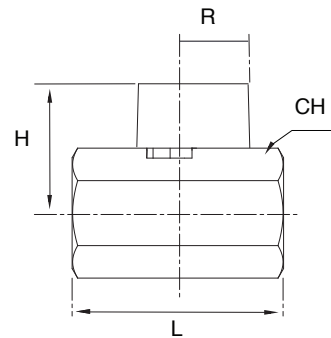
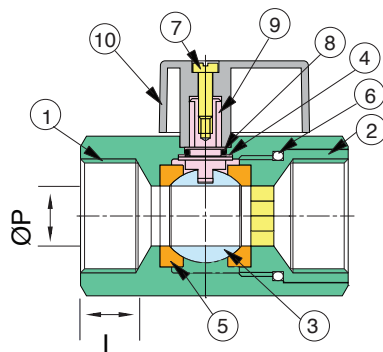
Stainless steel ball valve mini series, standard port.

- 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.

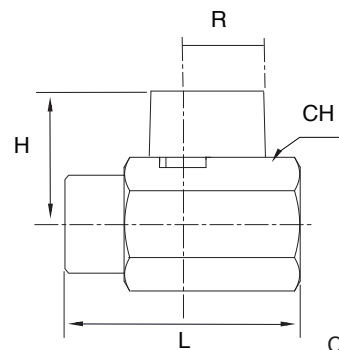
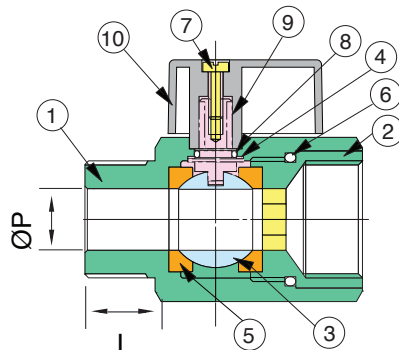
380S: FNPT THREADED - size 1/4" to 1/2".

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

380S



380SM



CONNECTION: ANSI B 1.20.1

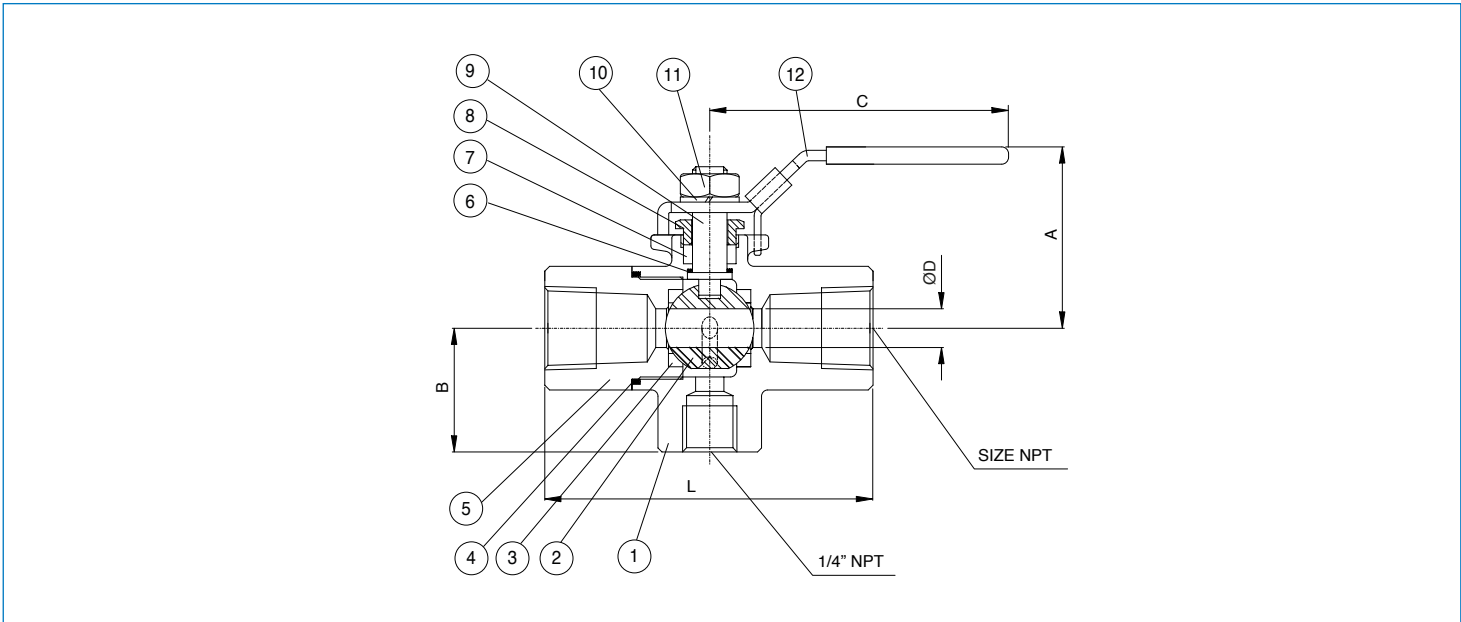
POS.	PART NAME	MATERIAL	PCS
1	BODY	AISI 316	1
2	RETAINING BUSH	AISI 316	1
3	BALL	AISI 316	1
4	BALL SEAT	PTFE	1
5	BALL SEAT	PTFE	1
6	O-RING	FKM (Viton)	1
7	SCREW	AISI 304	1
8	O-RING	FKM (Viton)	1
9	STEM	AISI 316	1
10	HANDLE	ABS	1

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

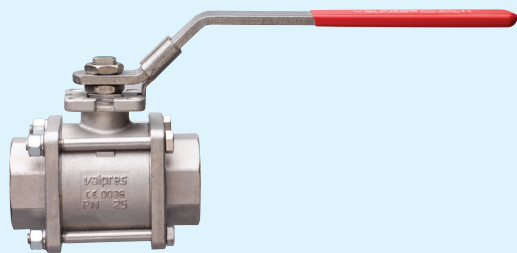


SERIES 511SL
STAINLESS STEEL SAFETY EXHAUST BALL VALVE

- Stainless steel safety exhaust ball valve.
- Full port, sizes 1/2" to 3/4".
 - Working pressure is 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.



POS.	PART NAME	MATERIAL	POS.	SIZE	A	B	C	D	E	F	L	d	Weight (Lbs)
1	BODY	CF8M	1	1/4"	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	3/8"	1.77	1.22	4.80	0.37	1.10	0.50	2.78	0.15	1.15
4	GASKET	GRAPHITE	1										
5	END CAP	CF8M	1	1/2"	1.77	1.22	4.80	0.37	1.10	0.50	2.78	0.15	1.15
6	THRUST WASHER	TFM 4215	1										
7	STEM PACKING	GRAPHITE	1	3/4"	1.93	1.32	4.80	0.57	1.10	0.50	2.93	0.15	1.30
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-PCS 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".

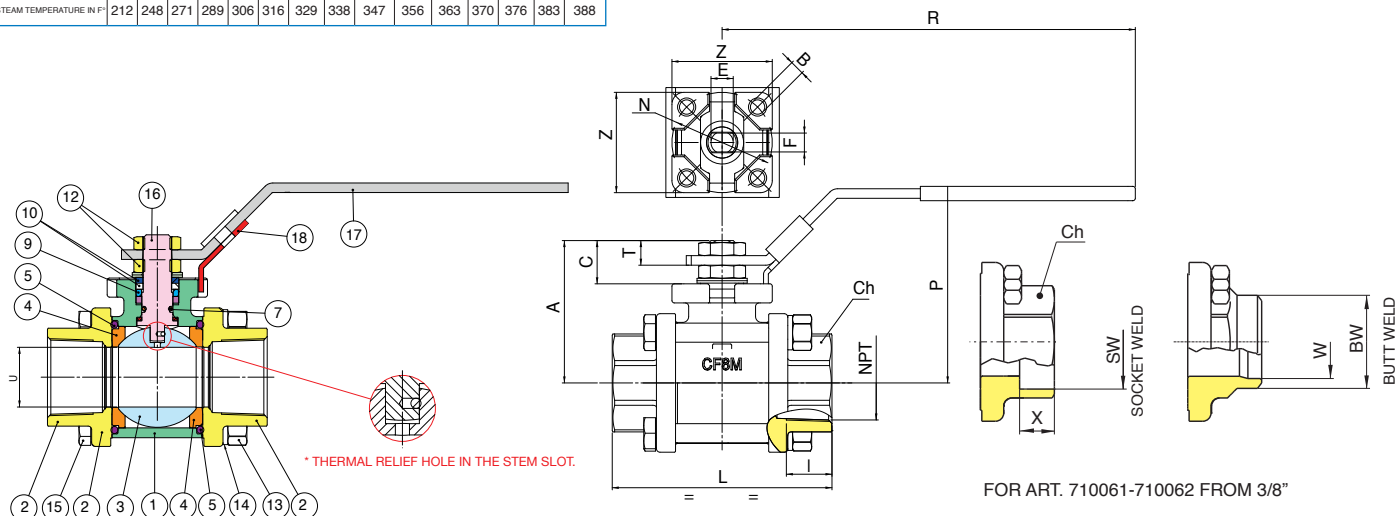
710062: BUTT WELD - size 3/8" to 4".

* 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

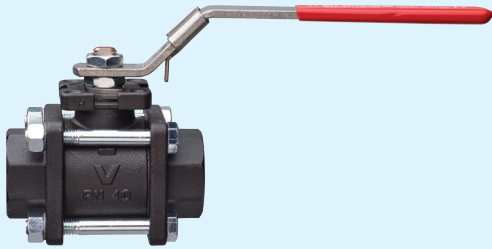


FOR ART. 710061-710062 FROM 3/8"

POS	PART NAME	MATERIAL	QTY
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 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")	6
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".

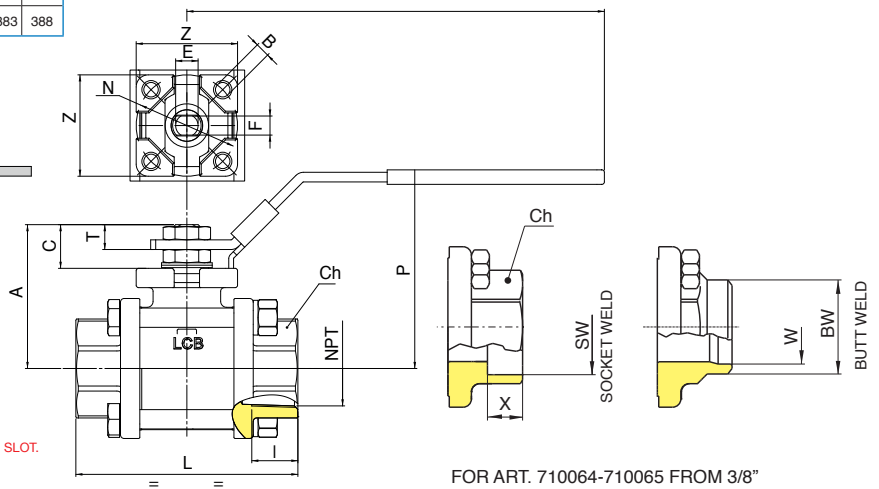
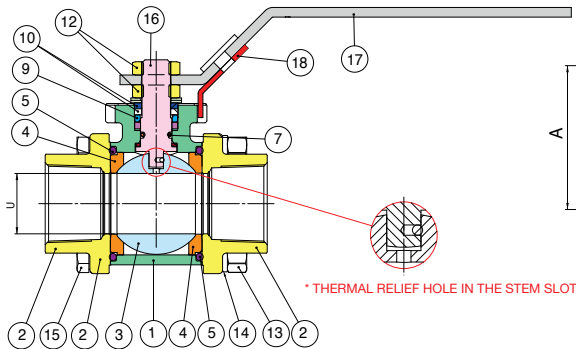
710065: BUTT WELD - size 3/8" to 4".

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



POS.	PART NAME	MATERIAL	P.C.S.
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

CARBON STEEL - STAINLESS STEEL BALL VALVE

3-piece ball valve, with latch locking lever, full port.

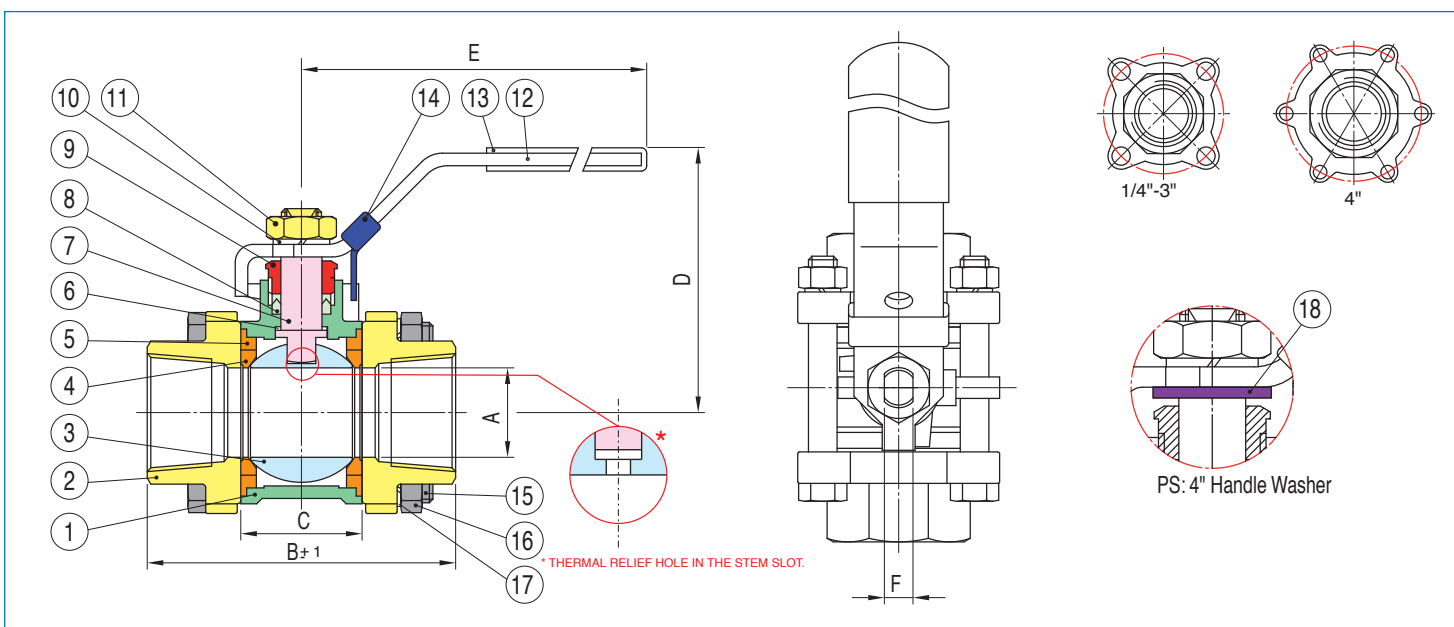
- Pressure rating 1/4" to 2" 1000 psi, 2 1/2" to 4" 800 psi - 150 psi steam.
- Temperature range -40°F +440°F.

- 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".



POS	PART NAME	MATERIAL	PCS
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



SERIES 620 LL FNPT - 720 LL FNPT

SERIES 621 LL SW - 721 LL SW

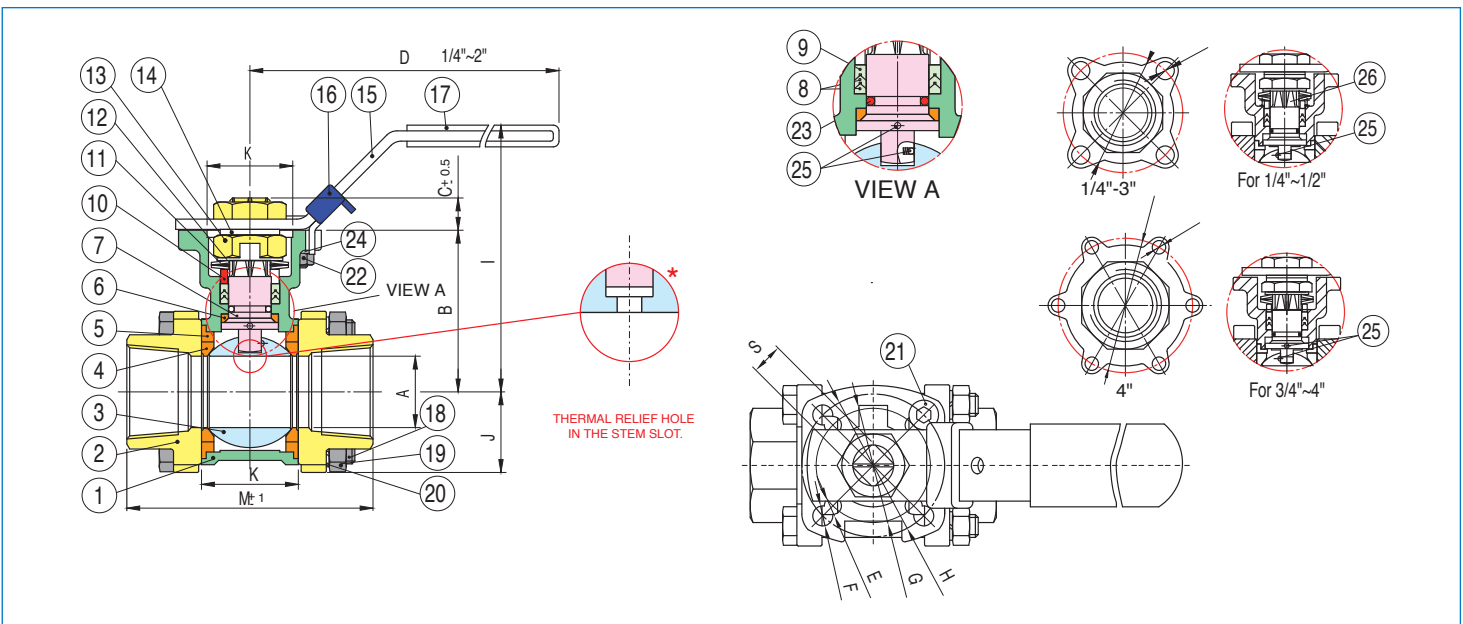
CARBON STEEL - STAINLESS STEEL BALL VALVE

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".



POS	PART NAME	MATERIAL	QCS
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

* Depending on size.

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	22	1020	1094	F10/F12	47.9



250 PSI STEAM

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

SERIES 630 LL FNPT - 730 LL FNPT

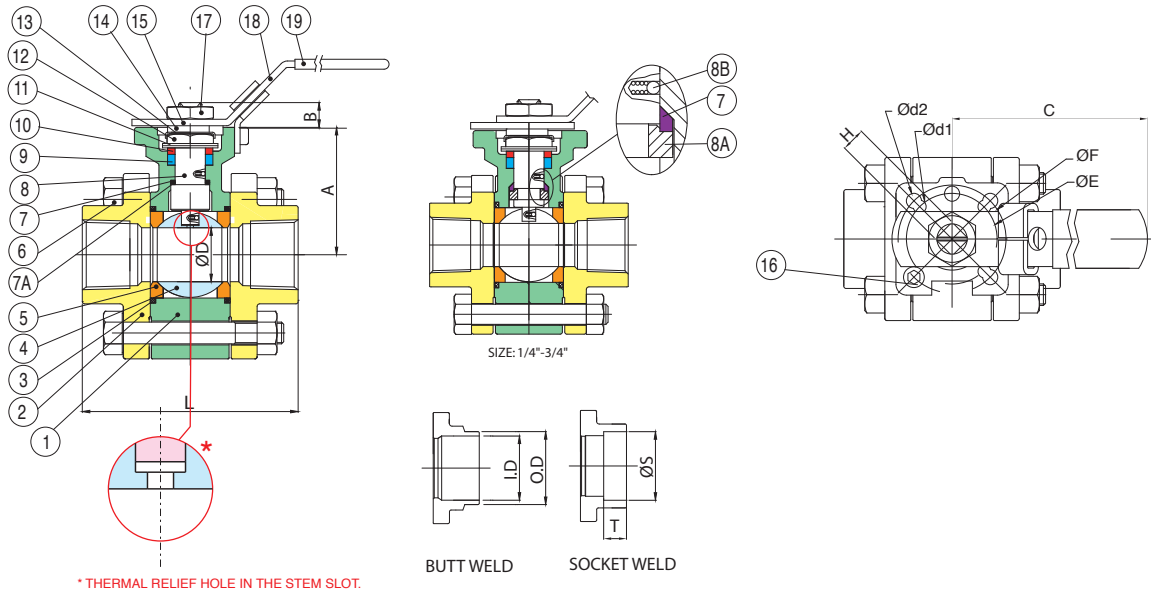
SERIES 631 LL SW - 731 LL SW

SERIES 632 LL BW - 732 LL BW (SCHEDULE 80#)

CARBON STEEL - STAINLESS STEEL BALL VALVE

- 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 1/4"-2" and Fire Safe design 2 1/2" - 4".
- 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".



* THERMAL RELIEF HOLE IN THE STEM SLOT.

BUTT WELD

SOCKET WELD

POS.	PART NAME	MATERIAL	PCS
1	BODY	CF8M/WCB	1
2	END CAP	CF8M/WCB	2
3	GASKET (BODY)	TFM/GRAPHITE	2
4	BALL	AISI 316	1
5	BALL SEATS	TFM 4215	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/GRAPHITE	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.

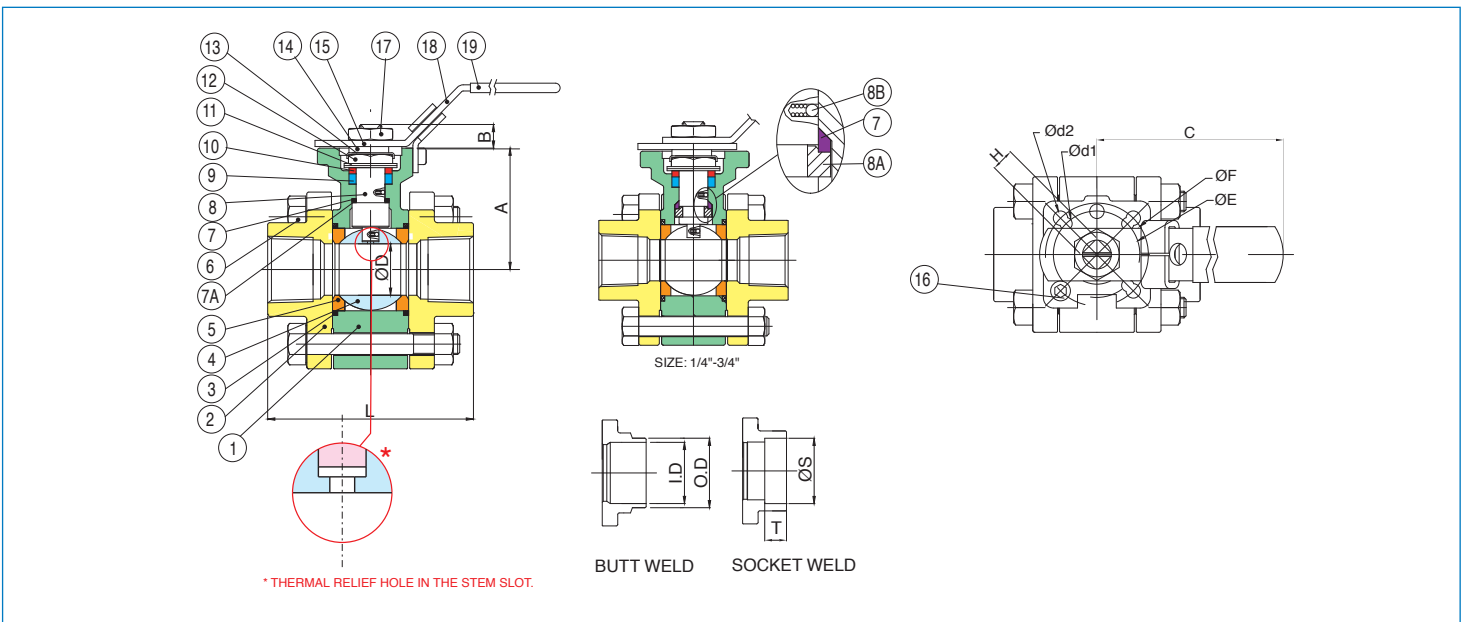
SIZE	A	B	ØD	Ød1	Ød2	ISO 5211		H mm	L	SW		BW(80#)		Torque in-Lbs	Cv	Weight (Lbs)
						ØE	ØF			ØS	T	O.D	I.D			
1/4"	1.81	0.37	0.43	0.24	0.24	F03	F04	9	2.61	0.56	0.44	0.55	0.30	71	8.5	1.5
3/8"	1.81	0.37	0.49	0.24	0.24	F03	F04	9	2.61	0.69	0.44	0.67	0.43	71	8.5	1.5
1/2"	1.89	0.37	0.59	0.24	0.24	F03	F04	9	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
1 1/4"	2.44	0.57	1.26	0.27	0.36	F05	F07	14	4.37	1.67	0.69	1.66	1.28	222	110	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	1.50	416	240	11
2"	3.54	0.75	1.97	0.36	0.45	F07	F10	17	5.91	2.41	0.84	2.38	1.94	736	400	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	2.32	1461	700	32
3"	4.68	0.98	3.07	0.45	0.53	F10	F12	22	7.68	3.54	1.00	3.51	2.90	2213	980	44
4"	5.67	0.98	3.89	0.45	0.53	F10	F12	22	9.65	4.54	1.26	4.51	3.83	3368	1700	87



SERIES 740H NPT - 741H SW - 742H 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".



POS	PART NAME	MATERIAL	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.



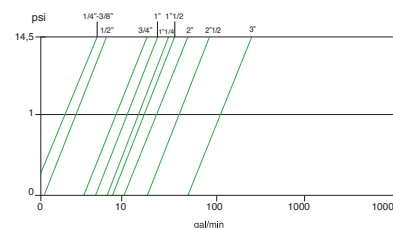
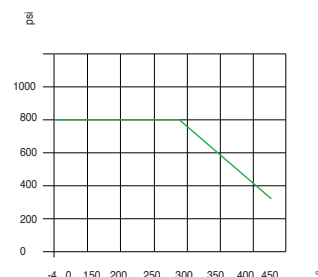
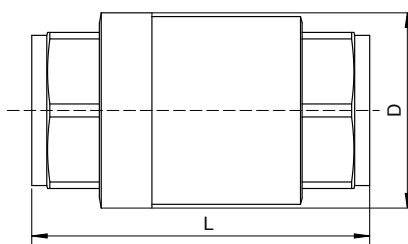
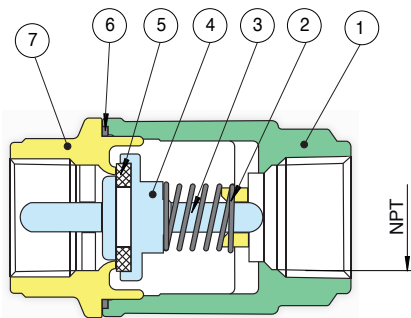
SERIES S800 CHECK VALVE

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 +400°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".



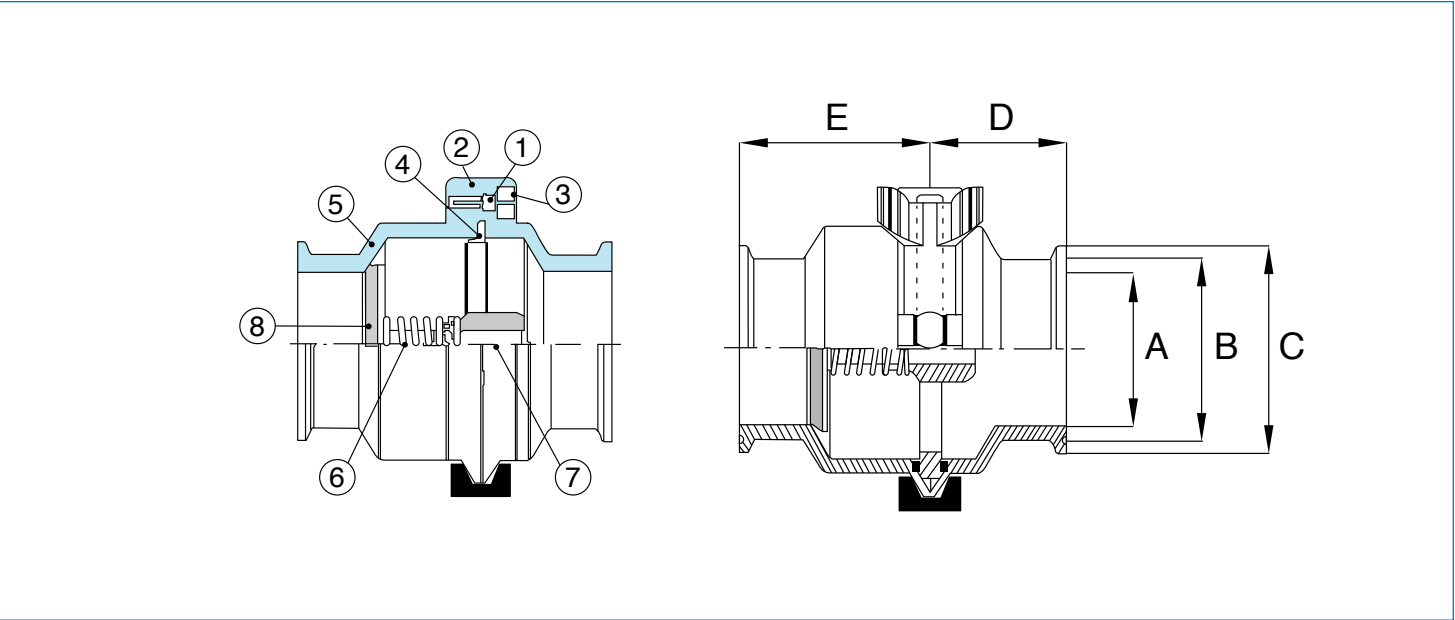
POS.	PART NAME	MATERIAL	P.O.S.
1	BODY	ASTM A351-CF8M	1
2	SPRING	AISI 316	1
3	CENTER GUIDE	ASTM A351-CF8M	1
4	DISC	ASTM A351-CF8M	1
5	SEAT	PTFE	1
6	GASKET	PTFE	1
7	END CAP	ASTM A351-CF8M	1

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 in-line 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).



POS.	PART NAME	MATERIAL	POS.
1	SHORT BODY	SS 316L	1
2	LONG BODY	SS 316L	1
3	SCREW	SS 316	1
4	BODY O-RING	FKM (Viton)	1
5	SEAT RING	FKM (Viton)	1
6	SPRING	SS 316	1
7	FLOW SUPPORT PLATE	SS 316	1
8	DISC	SS 316L	1

SIZE	A	B	C	D	E	Cv	psi	Weight (Lbs)
1/4"	0.37	0.69	1.00	1.10	1.54	2.3	235	2.20
3/8"	0.63	0.69	1.00	1.10	1.54	6.2	235	2.20
1/2"	0.87	1.71	1.99	1.65	2.32	13.0	235	3.50
3/4"	1.37	1.71	1.99	1.65	2.32	29.0	235	3.50
1"	1.87	2.22	2.52	1.65	2.32	51.0	235	5.40
1 1/4"	2.37	2.78	3.05	1.65	2.32	72.0	150	6.00
1 1/2"	2.87	3.29	3.58	1.65	2.32	95.0	150	6.25
3"	3.82	4.43	4.69	2.32	2.60	170.0	100	16.00



SERIES S250 CHECK VALVE

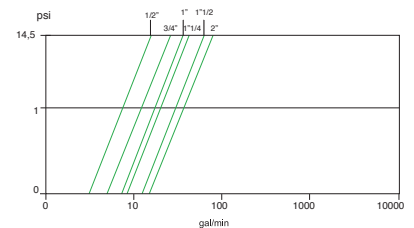
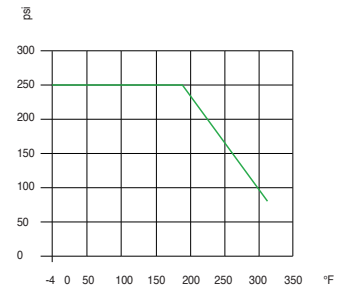
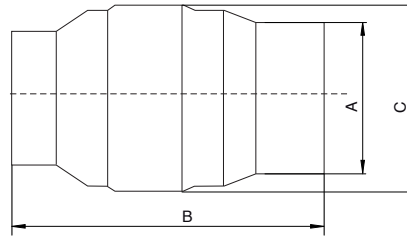
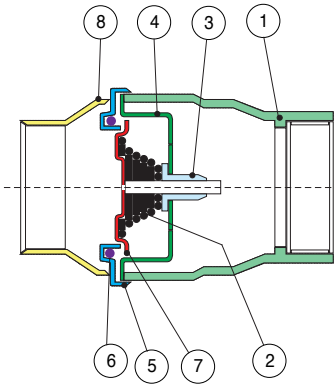


High capacity, in-line spring loaded, stainless check valve, FNPT threaded.

- 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".



POS.	PART NAME	MATERIAL	POS.	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 SERIES 771

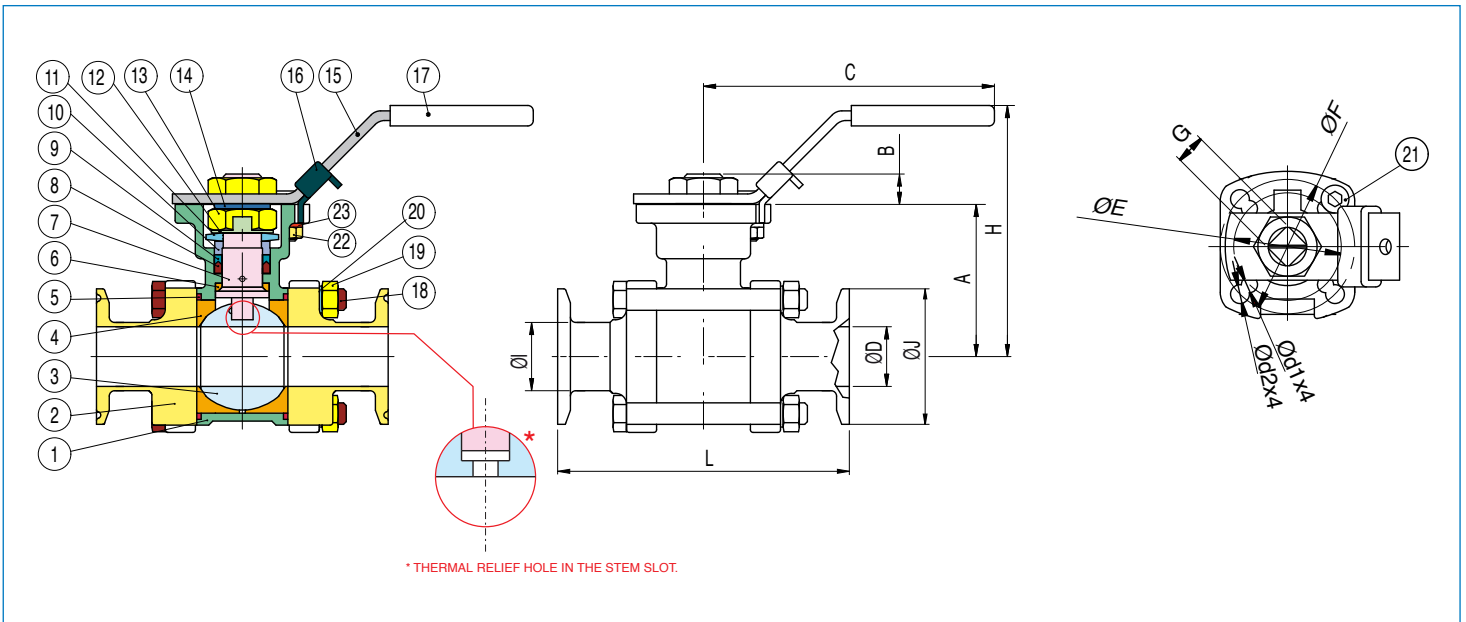
STAINLESS STEEL SANITARY BALL VALVE

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 6").
- 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 6".

771: CAVITY FILLED - size 1/2" to 6".



POS.	PART NAME	MATERIAL	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) •

SERIES 956N (T) - 966N (L) •

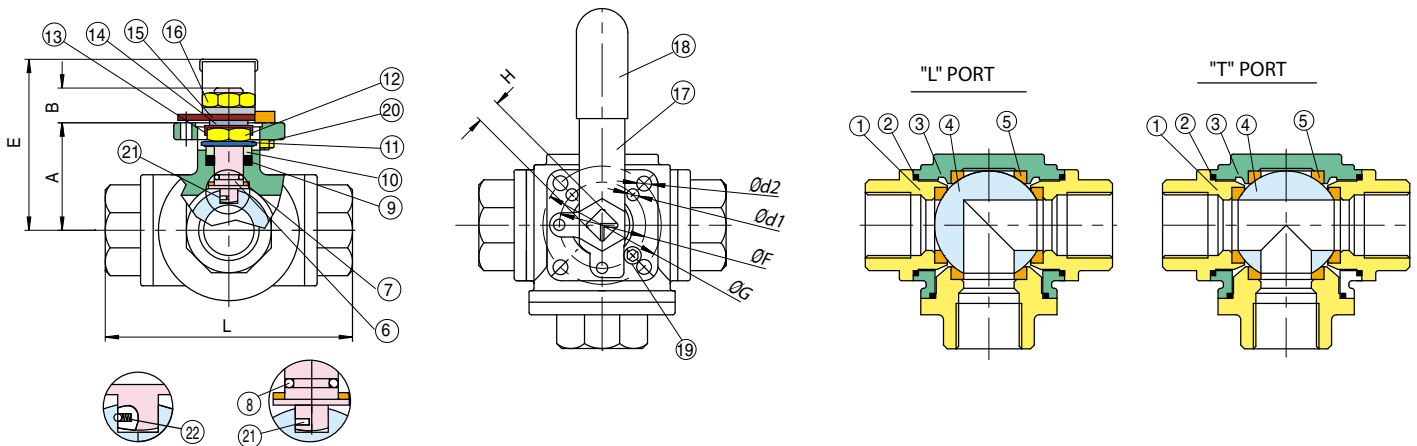
STAINLESS STEEL DIRECT MOUNT 3-WAY BALL VALVE

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".



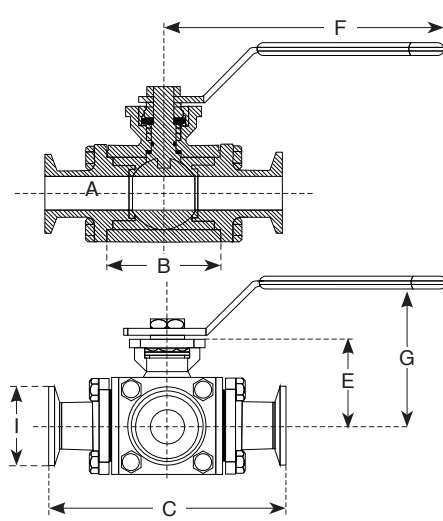
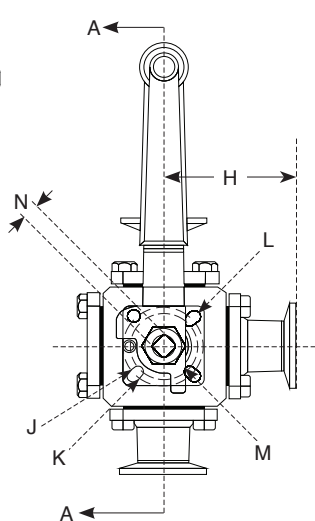
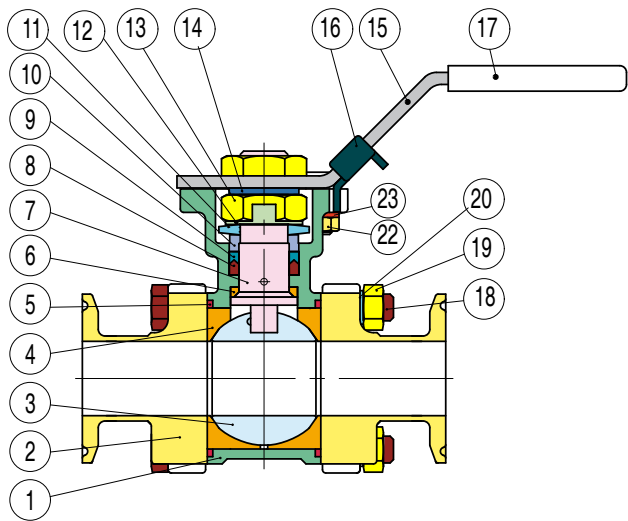
POS.	PART NAME	MATERIAL	P.O.S
1	END CAP	A351 CF8M	3
2	GASKET	PTFE	3
3	BODY	A351 CF8M	1
4	BALL	AISI 316	1
5	SEATS	RPTFE	4
6	STEM	AISI 316	1
7	STEM SEAL	RPTFE	1
8	O-RING	FKM (Viton)	1
9	STEM PACKING	PTFE	1
10	GLAND	AISI 304	1
11	DISK WASHER	AISI 301	2
12	STEM NUT	AISI 304	1
13	NUT STOP	AISI 304	1
14	SPACE 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	L	Port	psi	ISO 5211	CV 955N-956N		CV 965N 966N	Weight (Lbs) 956-966	Weight (Lbs) 955-965	Torque in-Lbs
FULL PORT	STANDARD PORT													T-Port through	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	17/14	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"- 600 psi, 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".



POS.	PART NAME	MATERIAL	QTY
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

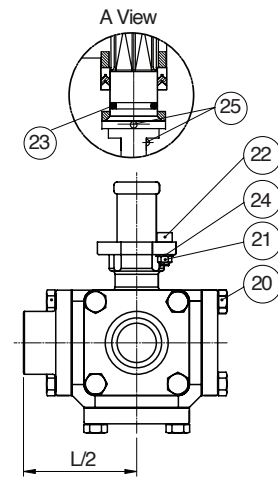
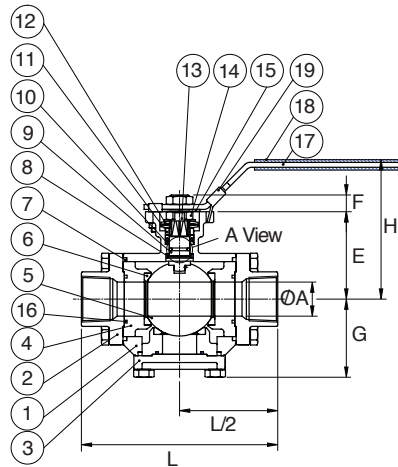
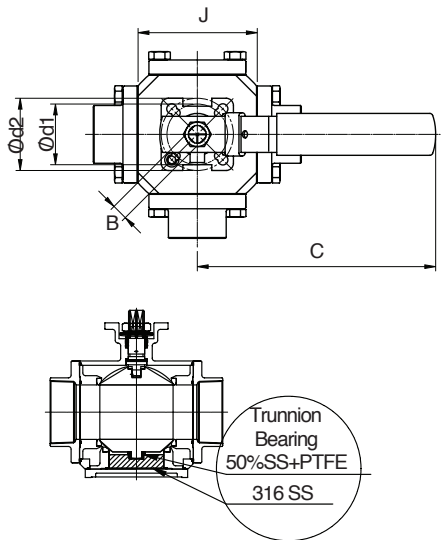
T-PORT

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".



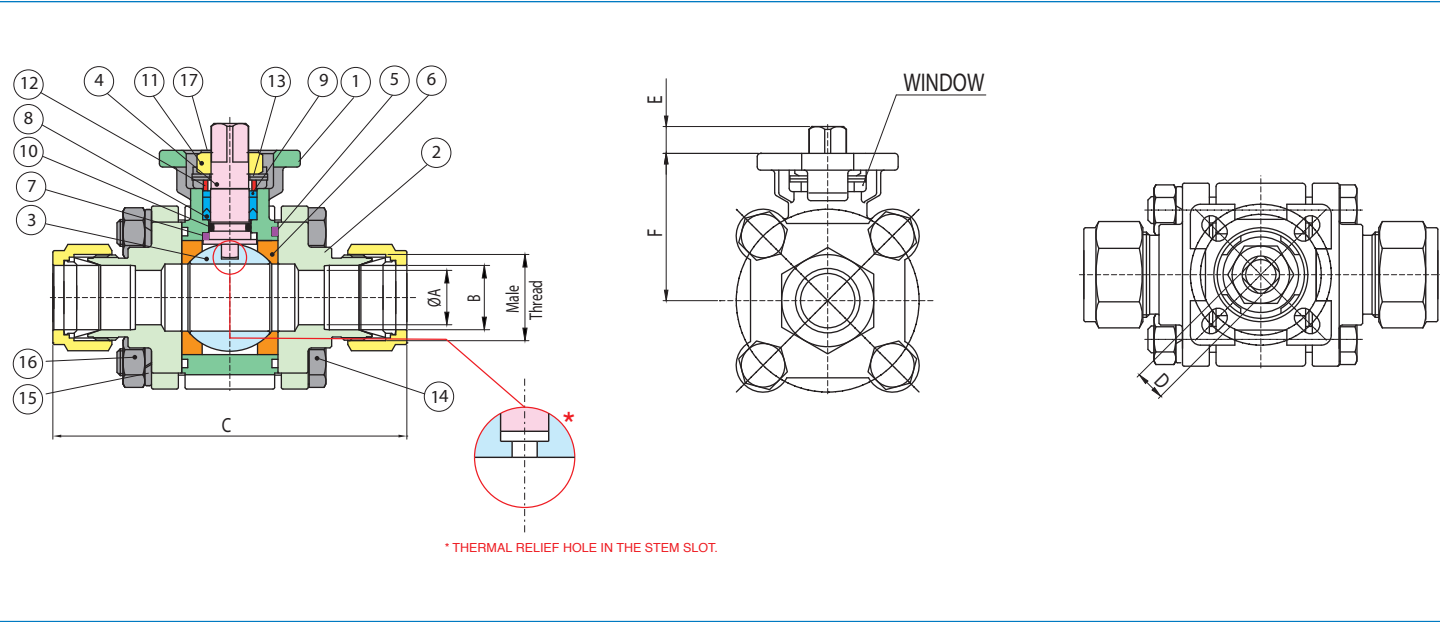
POS	PART NAME	MATERIAL	QTY
1	BODY	CF8M	1
2	END CAP A	CF8M	4
3	END CAP B	CF8M	1
4	SEAT RETAINER	CF8M	5
5	BALL	AISI 316	1
6	SEAT	PTFE/RTFE	5
7	JOINT GASKET	PTFE	5
8	STEM SEAL	RPTFE	1
9	STEM	AISI 316	1
10	STEM PACKING	25% GLASS FILLED PTFE	1 SET
11	GLAND	AISI 304	1
12	BELLEVILLE WASHER	AISI 301	2
13	LOCK 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 VALVE

- 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".



POS	PART NAME	MATERIAL	QTY
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

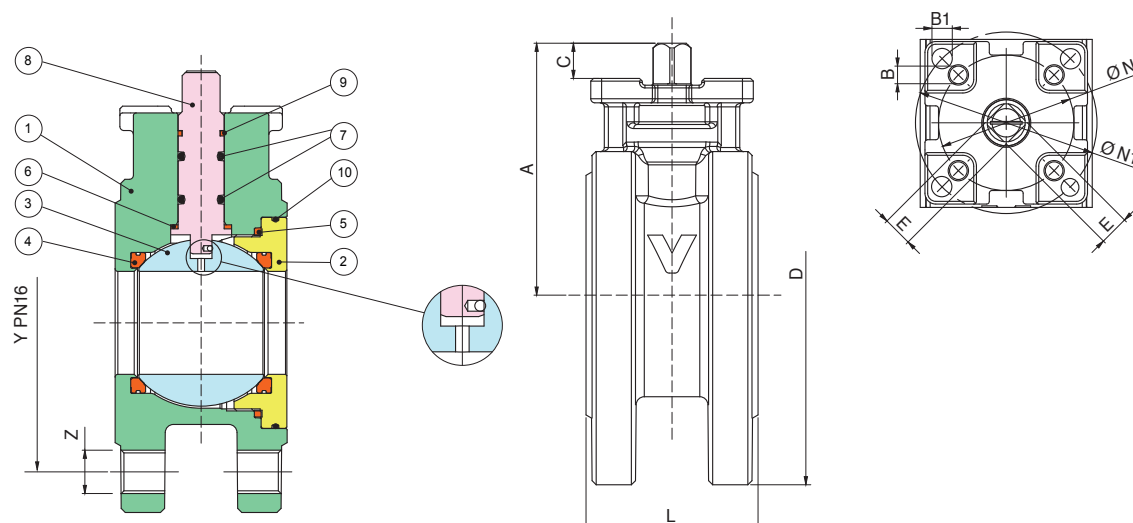


SERIES 723101 DIRECT MOUNT STAINLESS STEEL WAFER BALL VALVE

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".



POS	PART NAME	MATERIAL	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														

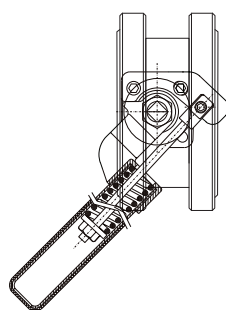


SERIES 723101 SRL DEADMAN SPRING RETURN

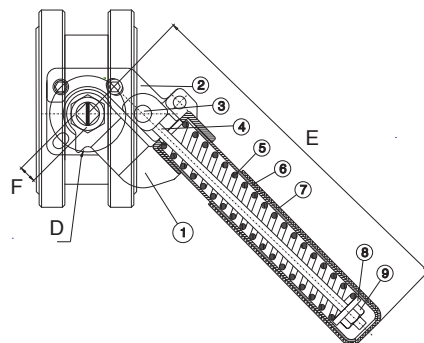
Stainless steel direct mount, ASME/ANSI class 150 Wafer-style flanged ball valve, full port with deadman spring return handle.

- Temperature range -4°F to +366°F.
- 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/square stem.
- 17-4 PH stem.
- Lockable spring return handle.

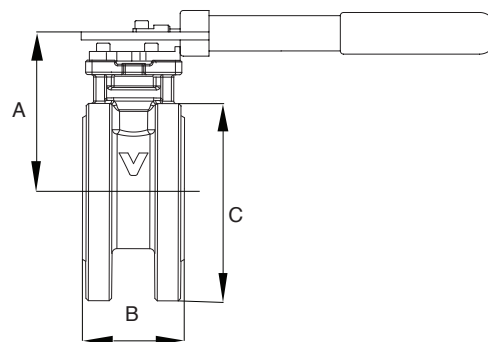
723101 SRL: size 1" to 3".



OPEN POSITION



CLOSED POSITION



POS.	PART NAME	MATERIAL	QTY
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

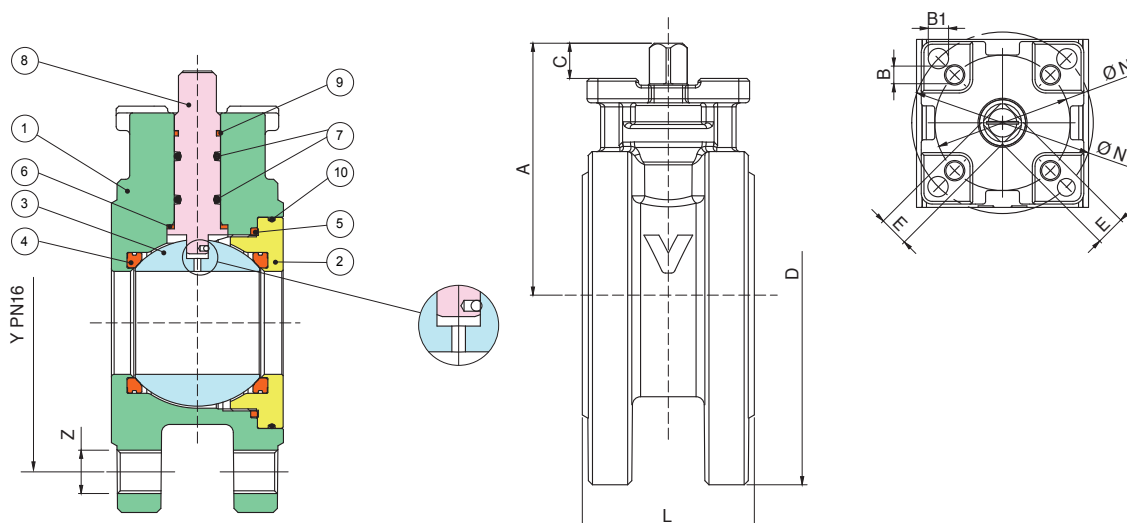


SERIES 724101 DIRECT MOUNT CARBON STEEL WAFER BALL VALVE

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".



POS.	PART NAME	MATERIAL	QTY
1	BODY	A352-LCB	1
2	END CONNECTION	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

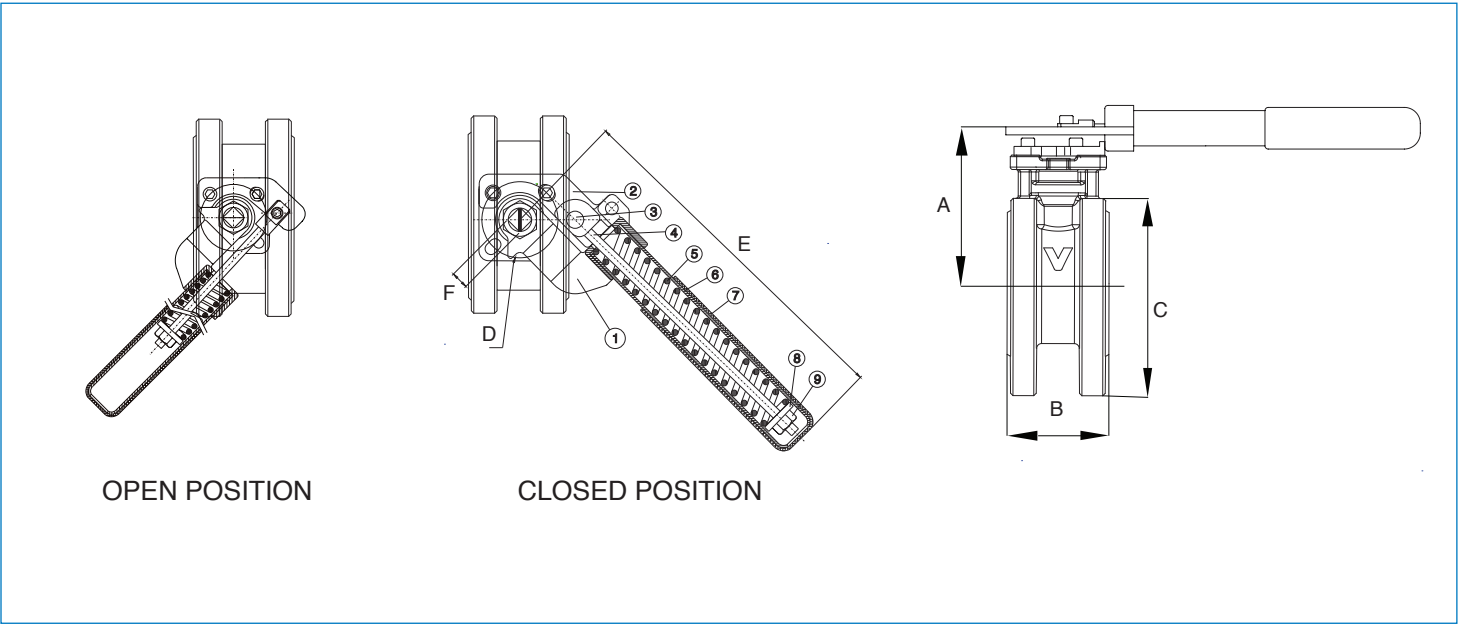


SERIES 724101 SRL
DEADMAN SPRING RETURN

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.
- 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/square stem.
- 17-4 PH stem.
- Lockable spring return handle.

724101 SRL: size 1" to 3".



POS	PART NAME	MATERIAL	PCS	SIZE	A	B	C	D ISO 5211	E	F mm	Valve Torque in-Lbs	Handle Torque in-Lbs
1	HANDLE HEAD	ASTM A351-CF8M	1	1"	2.76	1.89	4.33	F05	8.75	11	85	195
2	ANCHOR	ASTM A351-CF8M	1	1 1/4"	3.23	2.13	5.12	F05	8.75	11	112	195
3	ANCHOR SCREW	AISI 316	1	1 1/2"	3.66	2.50	5.51	F05	11.50	11	142	195
4	SPRING ROD	AISI 316	1	2"	4.00	3.23	6.10	F05	11.50	11	169	195
5	SPRING	AISI 301	1	2 1/2"	5.06	4.06	7.09	F07	17.72	14	275	487
6	HANDLE EXTENSION	AISI 304	1	3"	5.43	4.80	7.48	F07	17.72	14	381	487
7	SLEEVE	VINYL	1									
8	WASHER	AISI 304	1									
9	HEX NUT	AISI 304	1									
10	SOCKET HEAD SCREW	AISI 304	1									



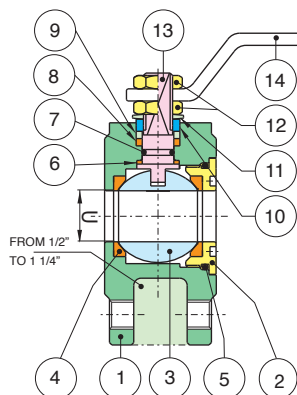
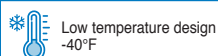
SERIES 720016 STAINLESS STEEL WAFER BALL VALVE

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

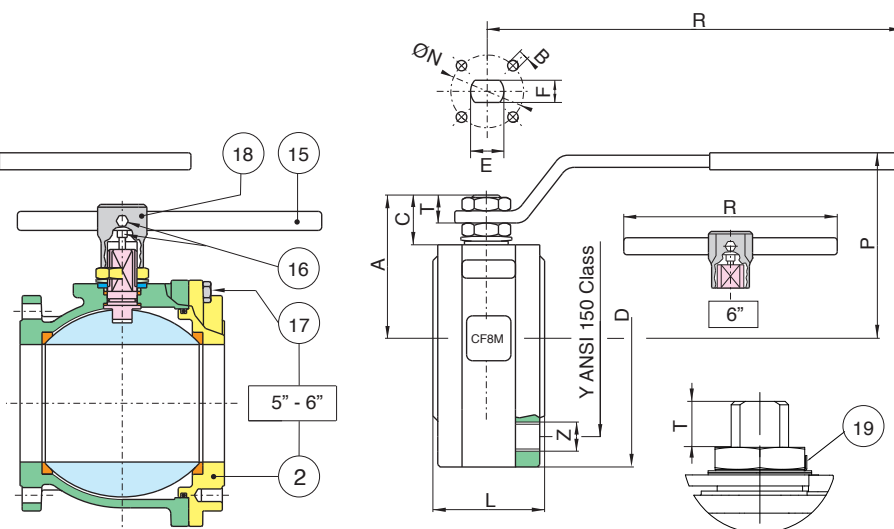
- Temperature range -4°F to +366°F.
- Blow-out proof stem.
- RPTFE seats, packing and thrust washer.
- Space saving design.
- 100% tested.
- TUV T.A. Luft approved.
- ANSI B16.34 design.
- ISO 5211 mounting pad with double "D" stem.
- Locking handles available.

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



POS.	PART NAME	MATERIAL	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	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

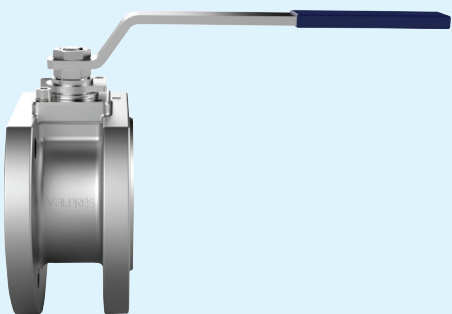
This type of shaft seal utilizes polymers in substitution of elastomers.

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.



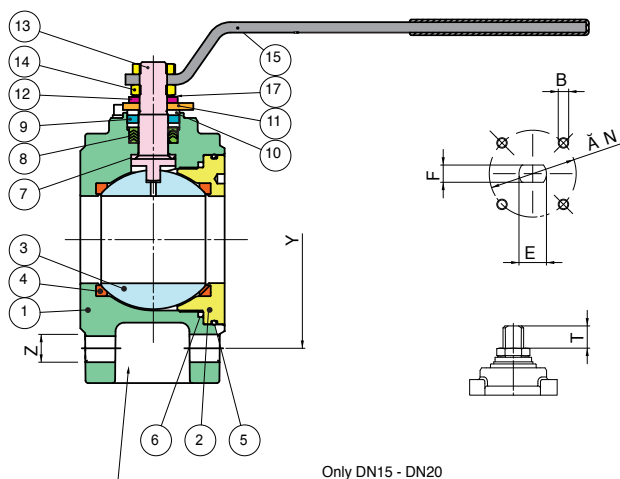
SERIES 721V16 STAINLESS STEEL WAFER BALL VALVE

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

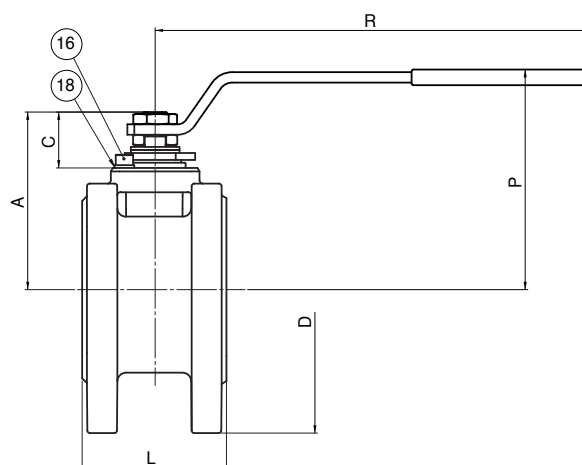
- Temperature range -40°F to +366°F.
- Blow-out proof stem.
- TFM-MPTFE ball seats PTFE V-pack stem packing graphoil stem seat.
- Space saving design.
- 100% tested.
- Fugitive emission 15848 tested.
- ANSI B16.34 design.
- ISO 5211 mounting pad with double "D" stem.
- Locking handles available.
- Fire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



Only DN15 - DN20



POS.	PART NAME	MATERIAL	QTY	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																



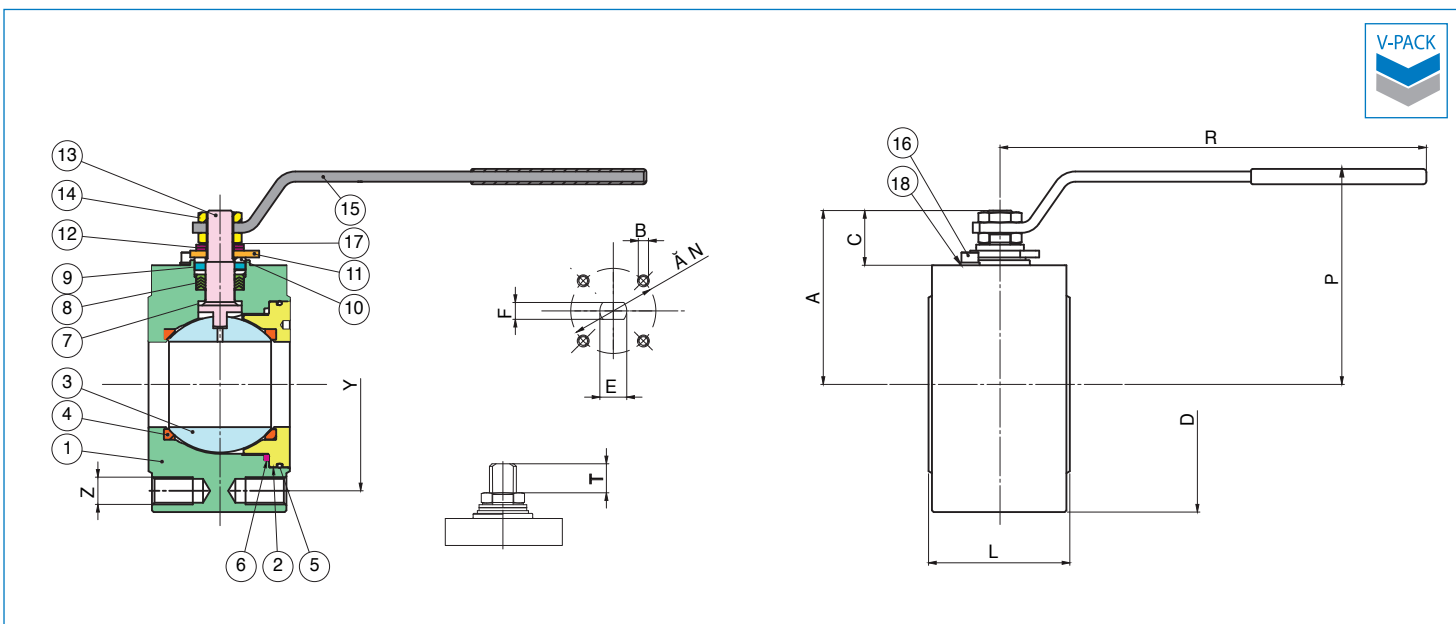
SERIES 722V17 CARBON STEEL WAFER BALL VALVE

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.



POS.	PART NAME	MATERIAL	P.C.S	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

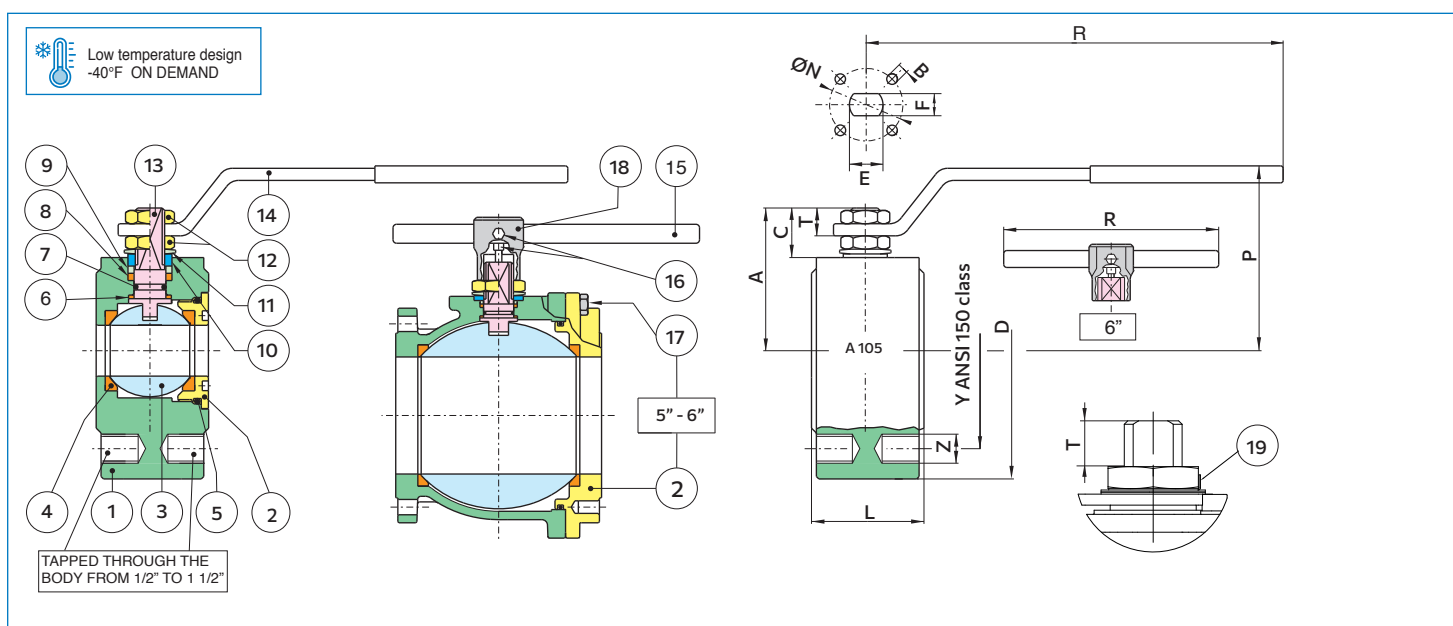
Carbon steel ANSI class 150 flanged ball valve, full port.

- 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.



POS.	PART NAME	MATERIAL	P.C.S
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

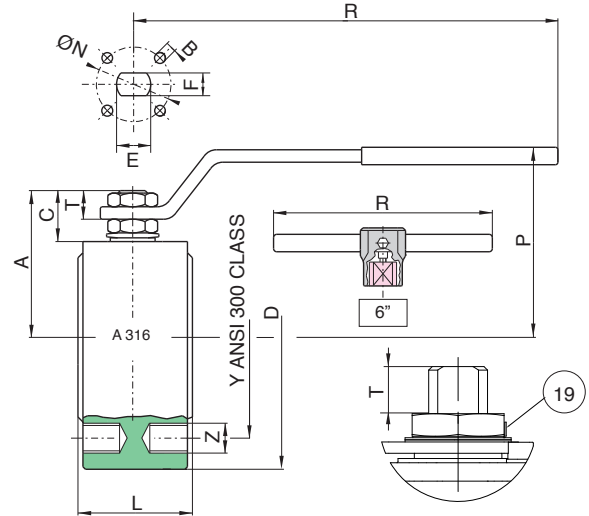
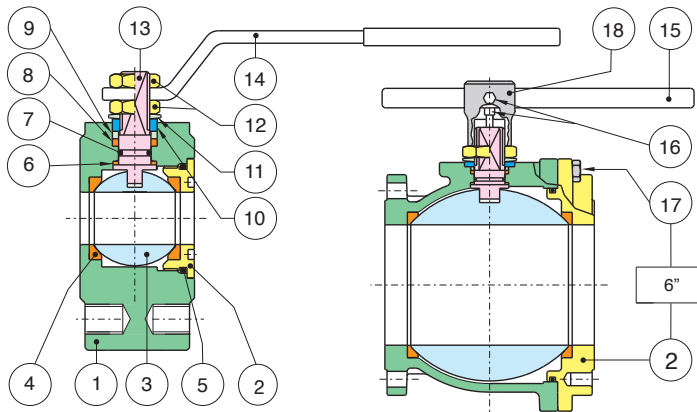
Stainless steel, ANSI class 300 flanged ball valve full port, stainless steel ball and stem.

- 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.



POS.	PART NAME	MATERIAL	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

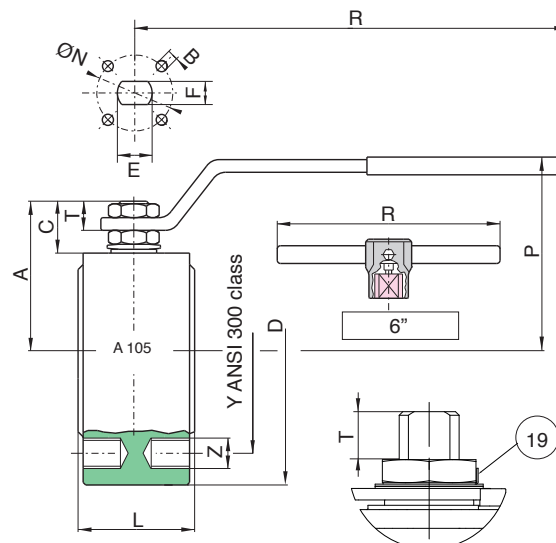
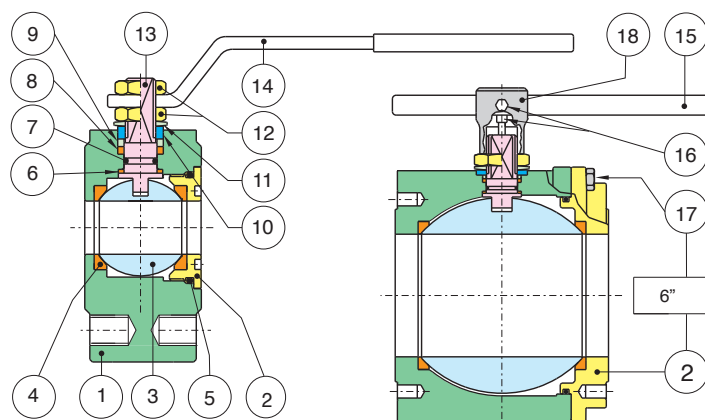
Carbon steel, ANSI class 300 flanged ball valve, stainless steel ball and stem.

- 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.



POS.	PART NAME	MATERIAL	QTY	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	BODY	ASTM A105/WCB	1	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
2	END CONNECTION	ASTM A105	1	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
3	BALL	A479-304/A351CF8	1	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
4	BALL SEATS	RPTFE	2	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
5	RING	FKM (Viton)	1	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
6	THRUST WASHER	PTFE	1	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
7	RING	FKM (Viton)	1	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
8	STEM SEAL	PTFE	1	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
9	PACKING GLAND	STEEL	1	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
10	END STOP	STEEL	2-1	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
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																	



SERIES 725002 STAINLESS STEEL WAFER BALL VALVE

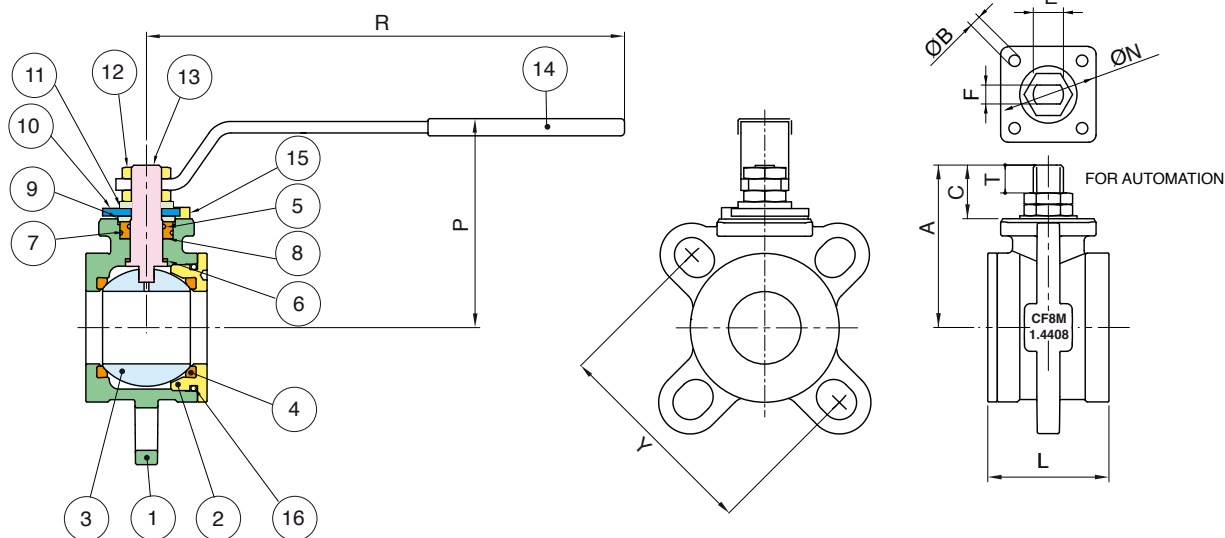
Stainless steel, ANSI class 150 flanged ball valve, full port.

- 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".

FOR STEAM

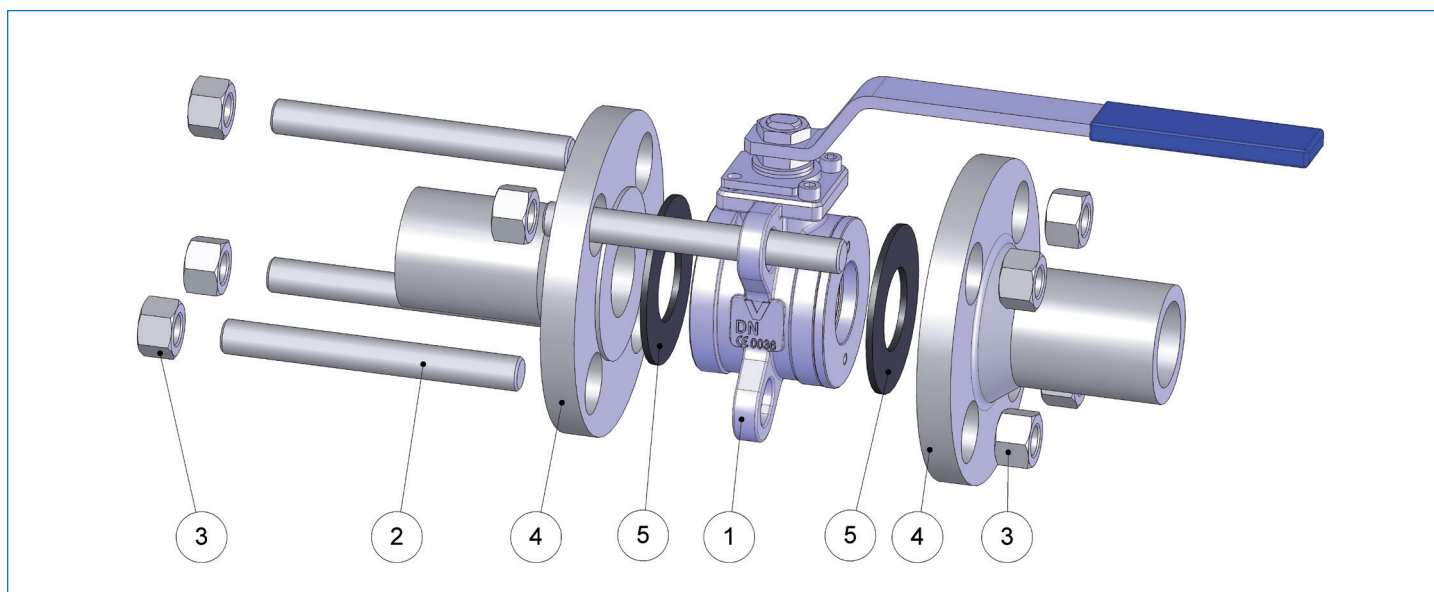
COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.



POS.	PART NAME	MATERIAL	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

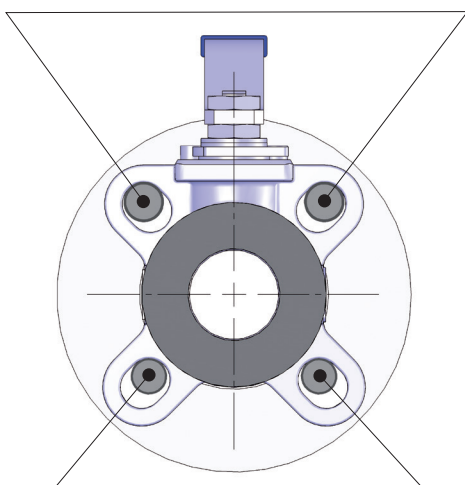
ASSEMBLING BETWEEN FLANGES LAYOUT



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

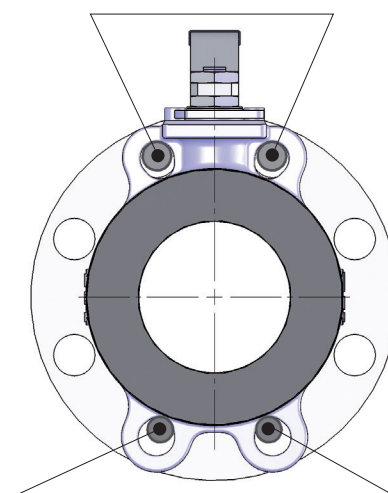
VALVE ALIGNMENT SIZES FROM (1" TO 3")

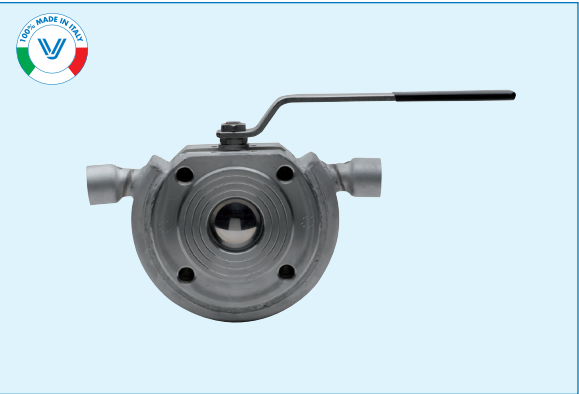
First insert the two bottom bolts. Let the valve lean, insert the two upper bolts, tighten the nuts.



VALVE ALIGNMENT (4")

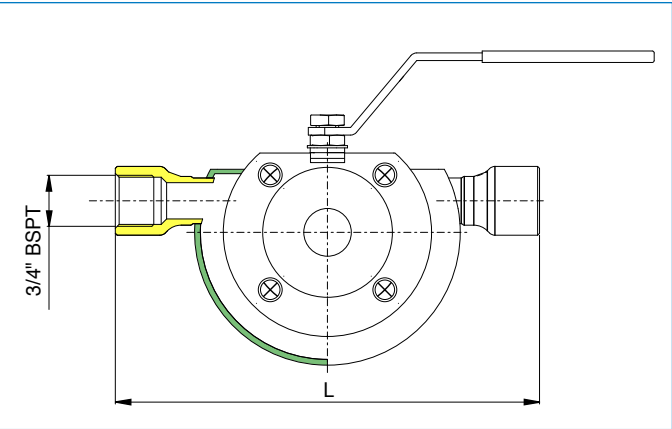
First insert the two upper bolts. Let the valve lean, put the two bottom bolts, tighten the nuts.





SERIES **WAFER - SPECIAL USES**

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

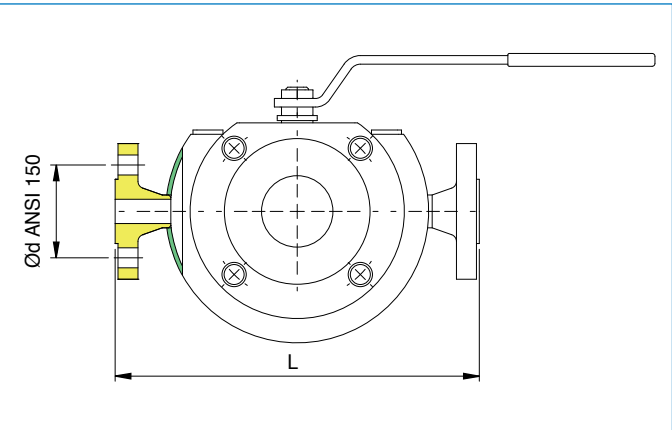


SIZE	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
Ød	3/4" BSPT								1" BSPT		
CARBON STEEL	8.86	9.25	8.86	9.45	9.84	10.24	10.83	11.42	11.81	12.60	14.17
STAINLESS STEEL							10.63	10.63	10.63	12.01	13.39



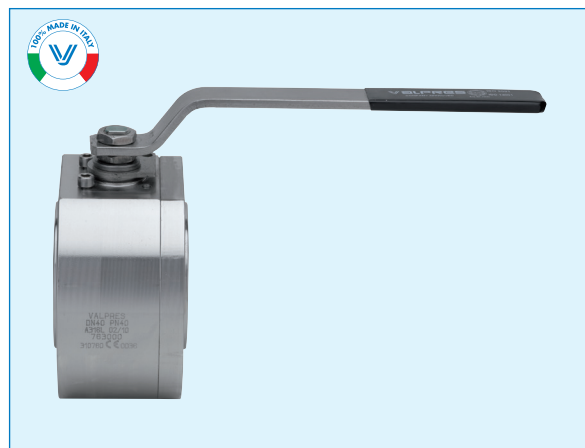
SERIES **WAFER - SPECIAL USES**

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





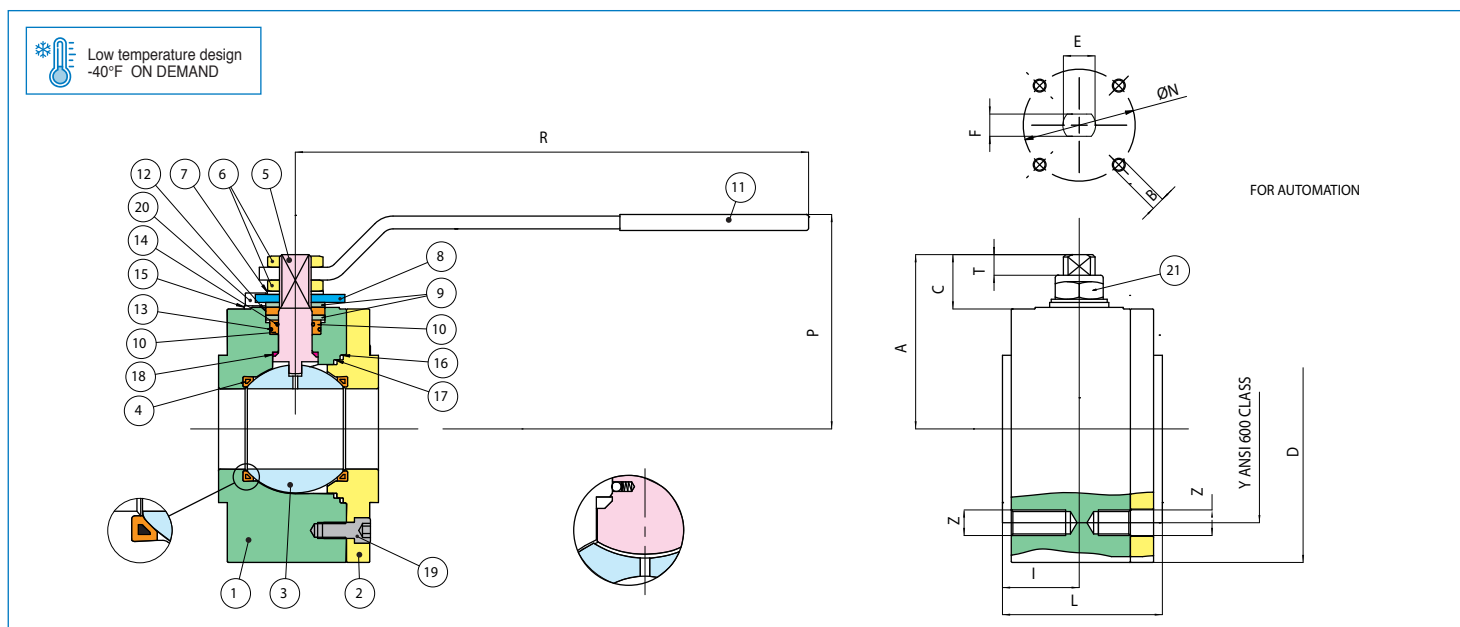
SERIES 763101 STAINLESS STEEL WAFER BALL VALVE

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.

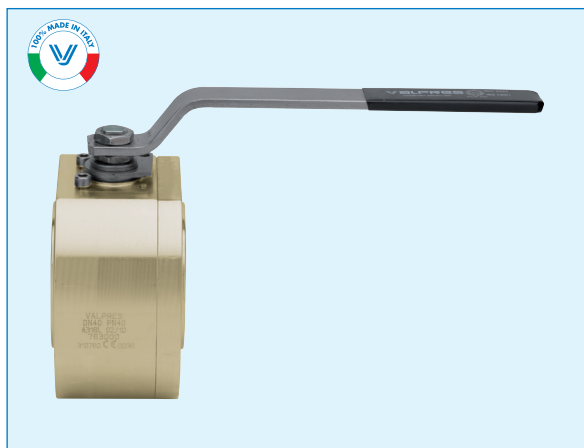
763101: size 1/2" to 4".

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



POS.	PART NAME	MATERIAL	P.C.S
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



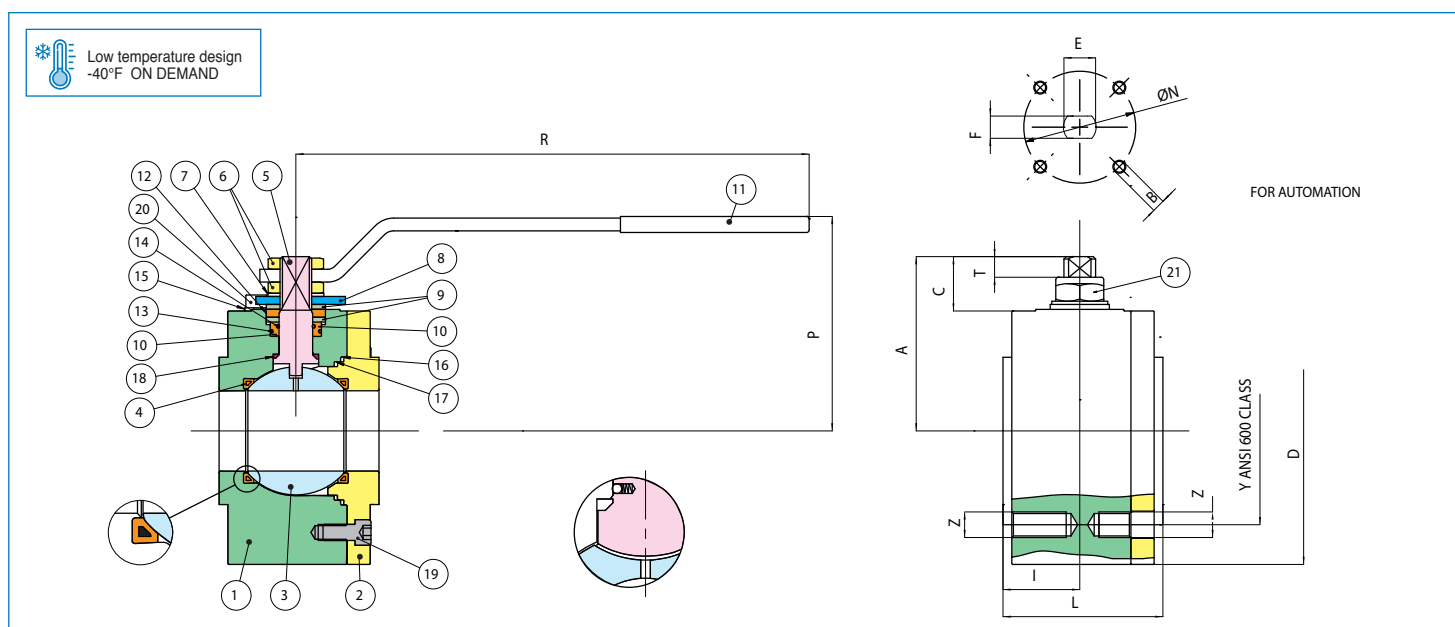
COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.

SERIES 764101 LOW TEMPERATURE CARBON STEEL WAFER BALL VALVE

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

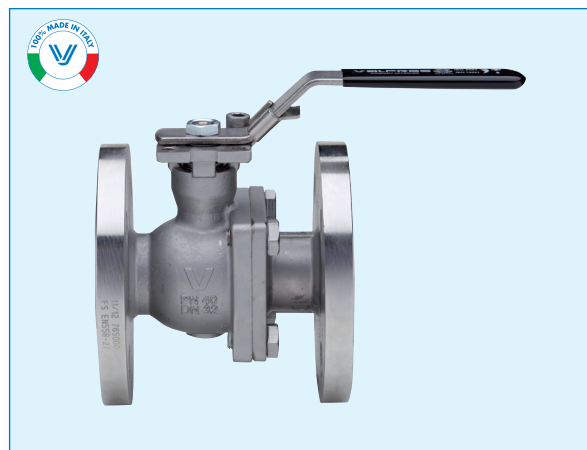
- Temperature range -4°F to +366°F.
- Blow-out proof stem.
- Metal filled PTFE seats.
- Space saving design.
- 100% tested.
- Fire Safe certified to API 607.
- ANSI B16.34 design.
- Antistatic Device.
- ISO 5211 mounting pad with double "D" stem.

764101: size 1/2" to 4".



POS.	PART NAME	MATERIAL	P.C.
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



SERIES 766000

STAINLESS STEEL DIRECT MOUNT BALL VALVE

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

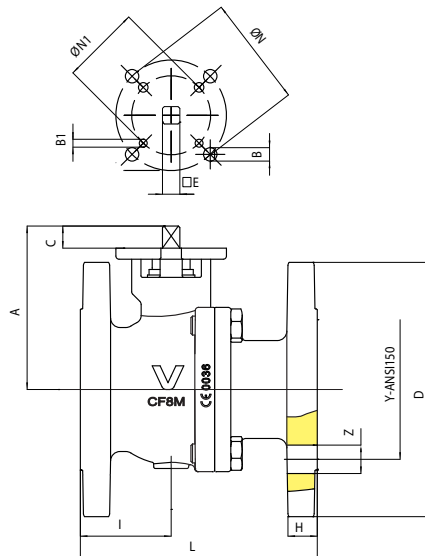
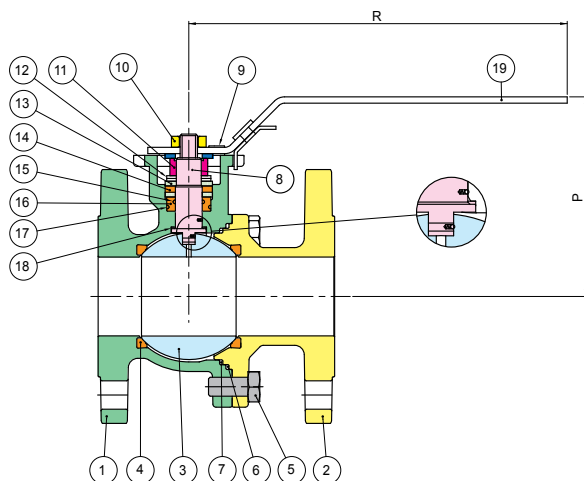
- Direct mount ISO 5211/square stem.
- Temperature range -4°F to +366°F.
- Blow-out proof stem, adjustable stem packing.
- PTFE seats, packing and thrust washer and FKM Viton O-rings.
- Fire safe certified to API 607.
- 100% tested.
- ANSI B16.5, B16.10, B16.34 design.
- Antistatic Device.
- Standard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

766000: size 1" to 4".

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

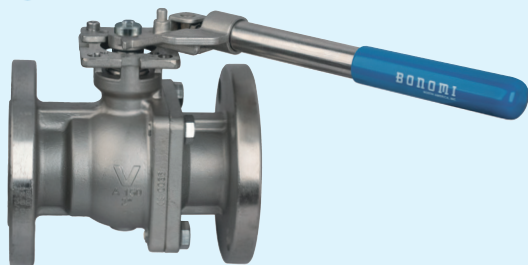


Low temperature design
-40°F ON DEMAND



POS.	PART NAME	MATERIAL	P.O.S.
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
2 1/2"	7.08	5.50	4xØ0.75	0.91	2.95	7.48	6.06	12.60	5.06	0.69	14	2.76-F07	0.33	2.76-F07	M6	465	630.82	33.95
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

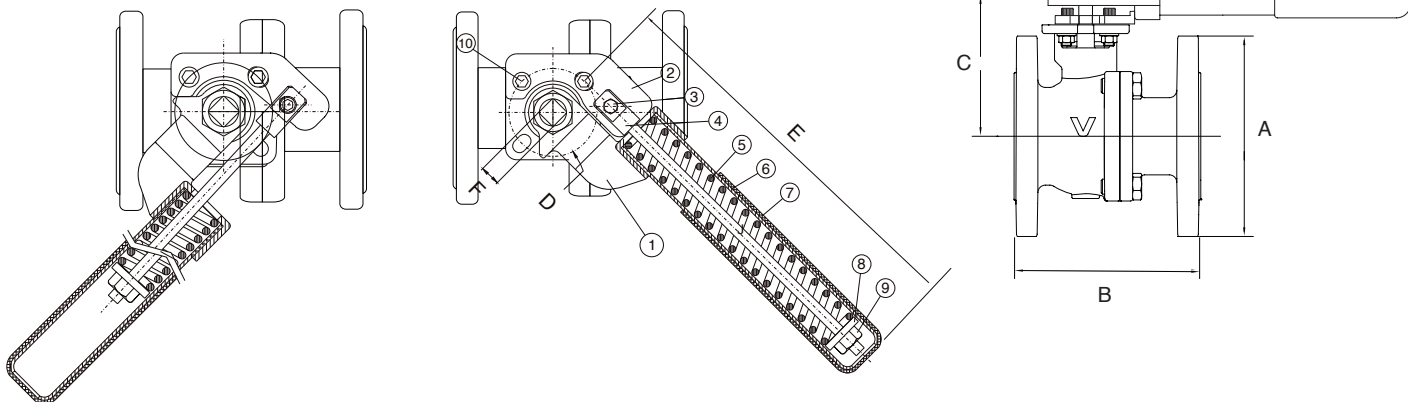


SERIES 766000 SRL DEADMAN SPRING RETURN

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.

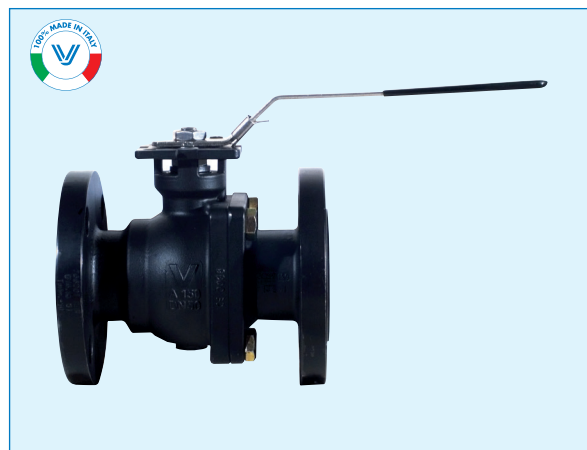
766000 SRL: size 1" to 2".



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.

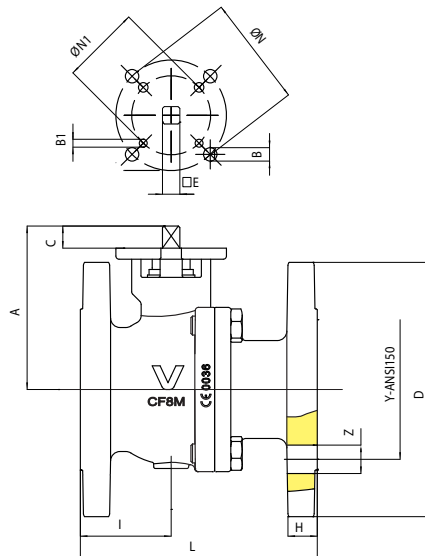
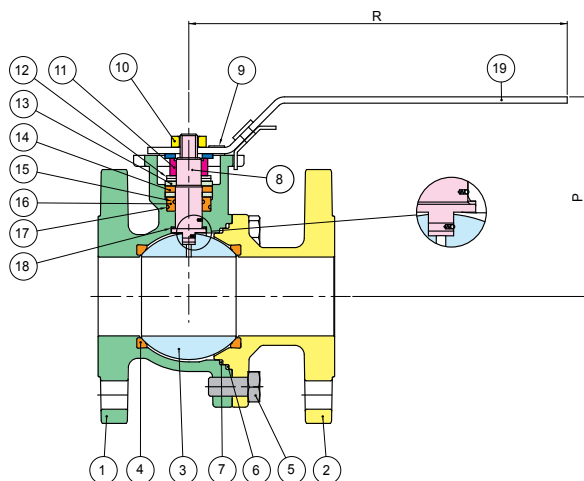
- Direct mount ISO 5211/square stem.
- Temperature range -4°F to +366°F.
- Blow-out proof stem, adjustable stem packing.
- PTFE seats, and FKM Viton O-rings.
- Fire Safe certified to API 607.
- 100% tested.
- ANSI B16.5, B16.10, B16.34 design.
- Antistatic Device.
- Standard locking handle.

766001: size 1" to 4".

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



Low temperature design
-40°F ON DEMAND



POS.	PART NAME	MATERIAL	P.C.S
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
2 1/2"	7.08	5.50	4xØ0.75	0.91	2.95	7.48	6.06	12.60	5.06	0.69	14	2.76-F07	0.33	2.76-F07	M6	465	630.82	33.95
3"	7.48	6.00	4xØ0.75	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



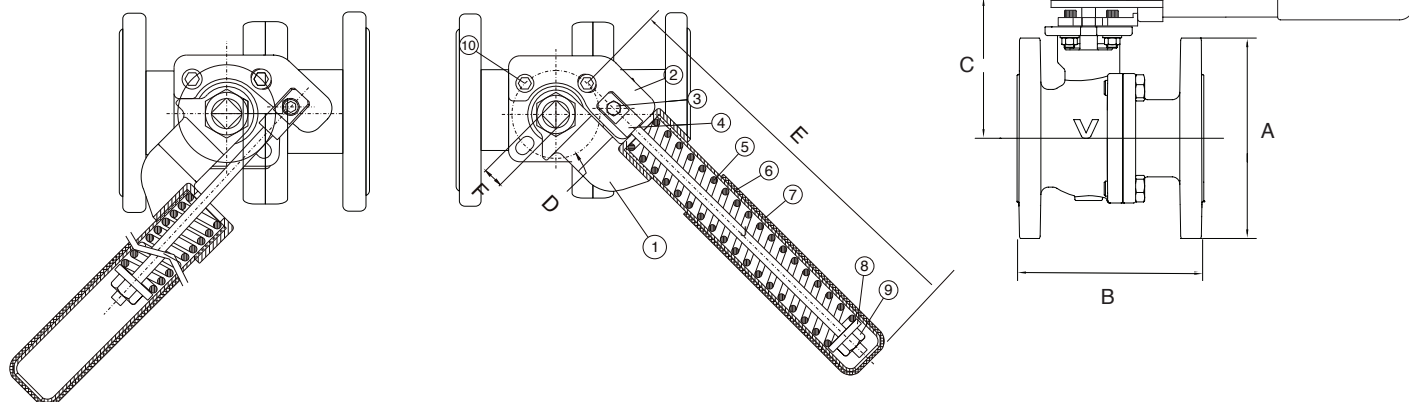
SERIES 766001 SRL DEADMAN SPRING RETURN

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".

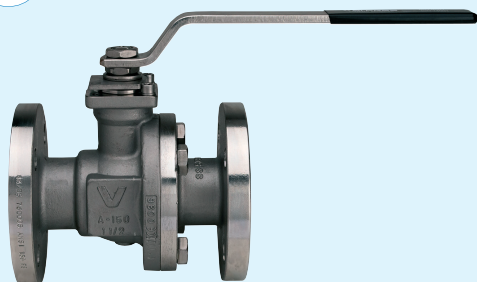
COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 010.3.



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 104; Series 766001.



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.

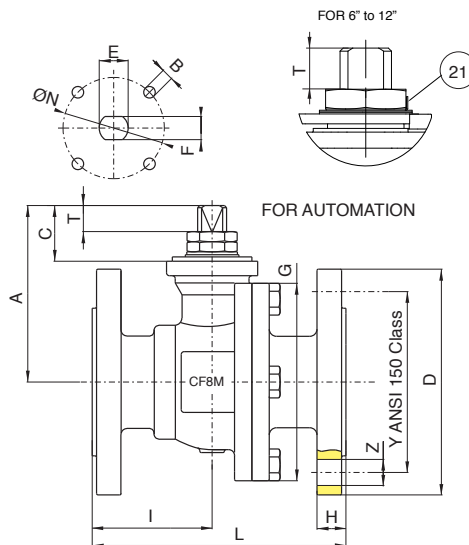
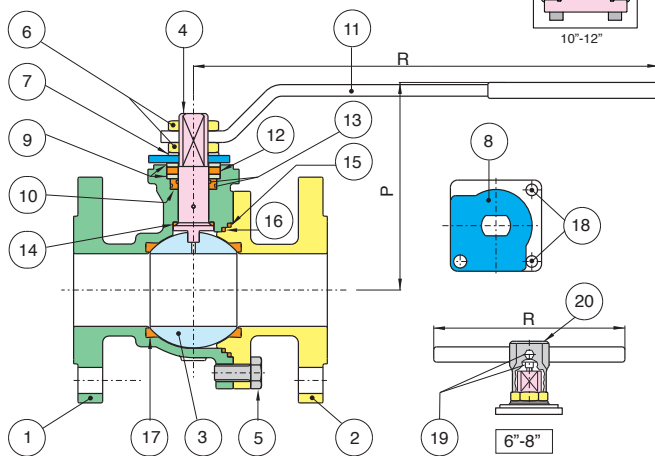
F.E. TESTED
ISO 15848-1

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".

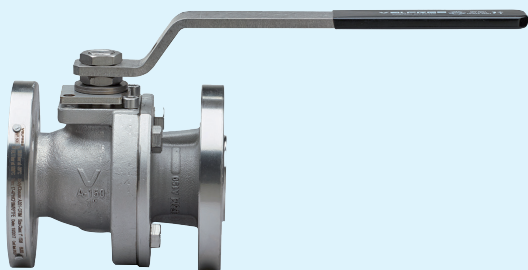
760V05: V-PACK AVAILABLE - sizes 1/2" to 8".



POS	PART NAME	MATERIAL	PQS
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
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.

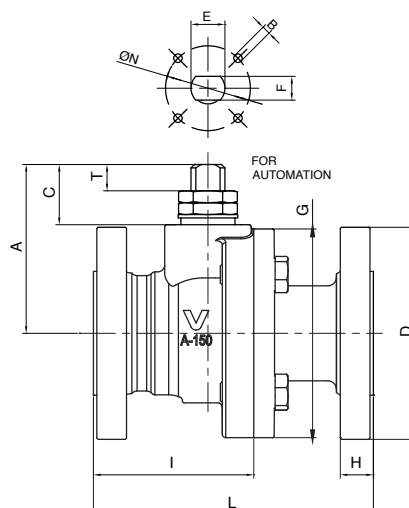
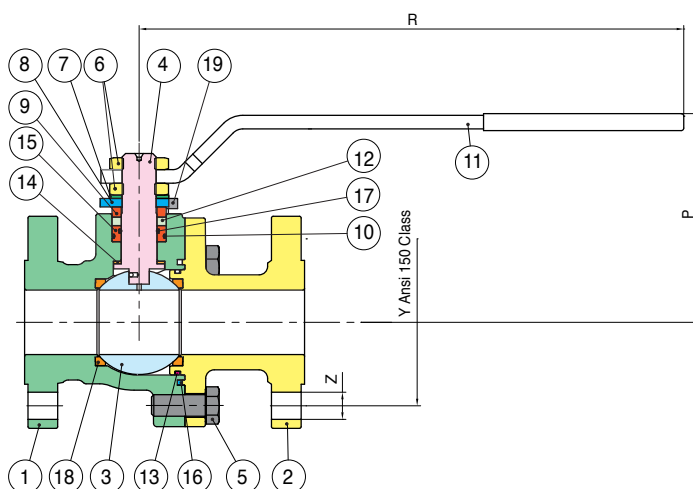
- API 608, ASME B16.34, ASME B16.10, ASME B16.5, ASME B1.1 design.
- Temperature range -4°F to +366°F.
- 100% tested according to API 598 standards.
- RTFE seats, packing and thrust washer.
- Blow-out proof stem, locking handle.
- Fire Safe API 607.
- Antistatic Device.
- ISO 5211 mounting pad with double "D" stem.
- Locking device.

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

Vacuum: 10^{-3} torr.

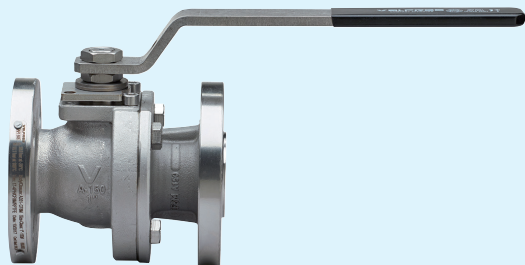


Low temperature design
-40°F ON DEMAND



POS.	PART NAME	MATERIAL	Q.S.
1	BODY	A351-CF8M	1
2	END CONNECTION	A351-CF8M	1
3	BALL	A479-Tp316	1
4	STEM	A564 Tp630 H115OD (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	4xØ0.75	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 68R015 API 608 SUPER DUPLEX STAINLESS STEEL BALL VALVE

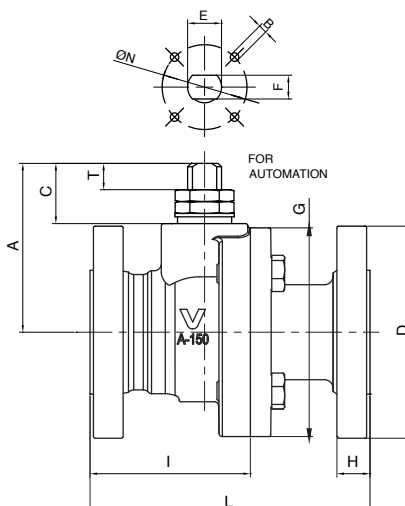
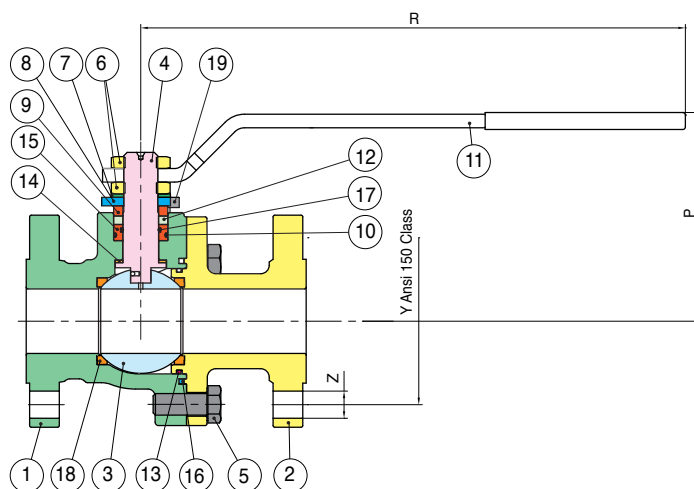
- Super Duplex Stainless steel, ANSI class 150, flanged ball valve, full port.
- API 608, ASME B16.34, ASME B16.10, ASME B16.5, ASME B1.1 design.
 - Temperature range: -4°F to +366°F.
 - 100% tested according to API 598 standards.
 - RTFE seats, packing and thrust washer.
 - Blow-out proof stem, locking handle.
 - Fire Safe API 607.
 - Antistatic Device.
 - ISO 5211 mounting pad with double "D" stem.
 - Locking device.

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

Vacuum: 10⁻³ torr.

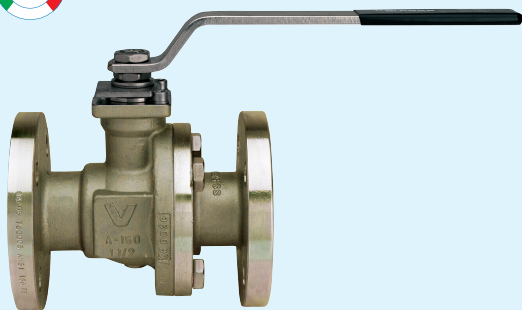


Low temperature design
-40°F ON DEMAND



POS.	PART NAME	MATERIAL	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)/A479-F55	1
4	STEM	A479-F55 / A182-F55	1
5	SCREW	A193 B8 Cl.2	4-8-12
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 ØN	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



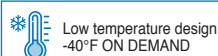
SERIES 762000 CARBON STEEL BALL VALVE

F.E. TESTED
ISO 15848-1

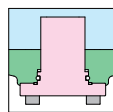
Carbon steel, ANSI class 150 flanged ball valve, full port.

- 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".
7620137: STEAM SERVICE TRIM - sizes 1/2" to 8".

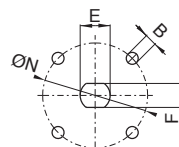
COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.



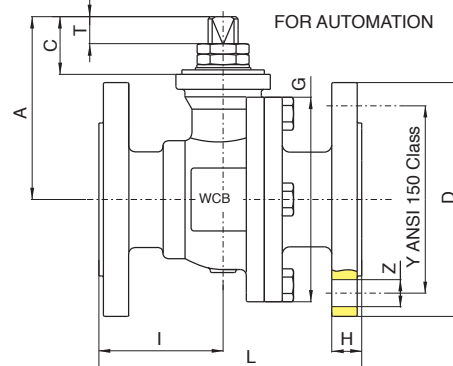
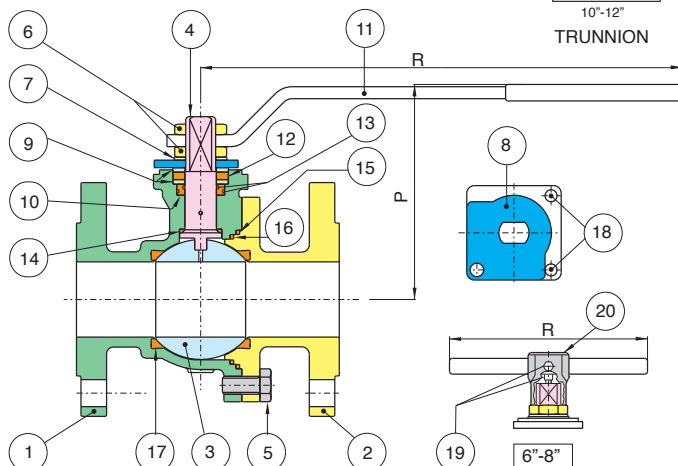
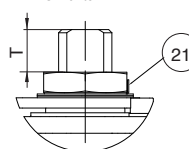
Low temperature design
-40°F ON DEMAND



10"-12"
TRUNNION



FOR 6" to 12"



POS.	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

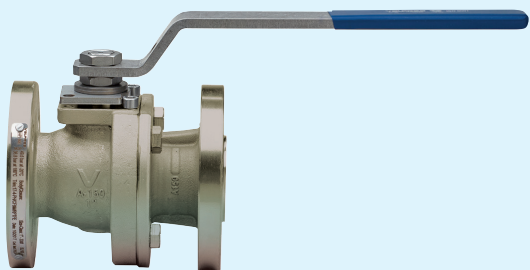
SIZE	D	Y	Z	H	I	L	G	P	R	A	C	T	E	F	ISO 5211 ØN	B	Break Torque in-Lbs	Cv	Weight (Lbs)
1/2"	3.54	2.38	4xØ0.63	0.45	1.83	4.25	2.80	3.46	5.16	2.05	0.75	0.31	M10	0.28	1.65-F04	M5	35	22.21	4.21
3/4"	3.94	2.76	4xØ0.63	0.51	2.09	4.61	2.89	3.66	5.16	2.20	0.75	0.31	M10	0.28	1.65-F04	M5	115	40.50	5.36
1"	4.33	3.13	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 API 607.
- Antistatic Device.
- ISO 5211 mounting pad with double "D" stem.
- Locking device.
- Temperature range -4°F to +366°F.

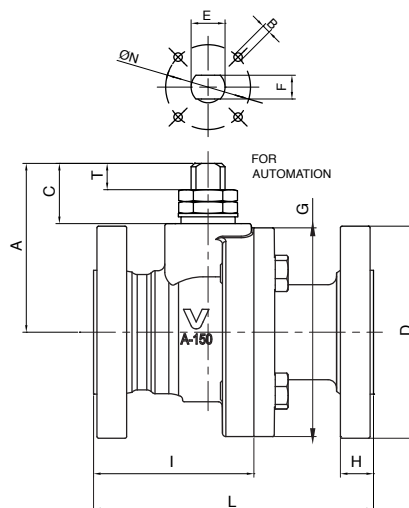
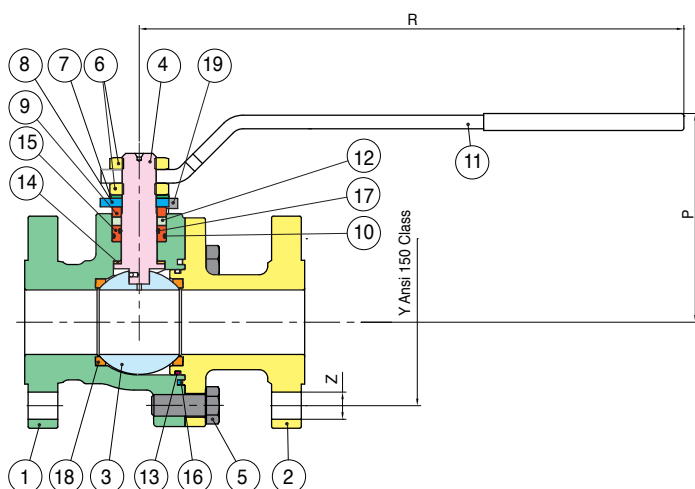
68F000: sizes 1/2" to 6".

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

Vacuum: 10⁻³ torr.

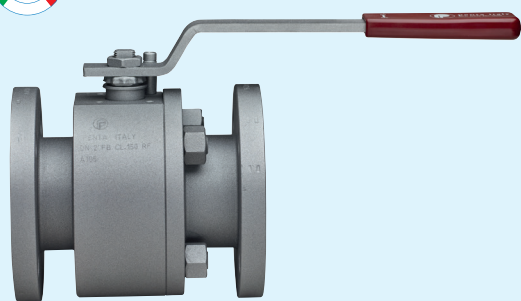


Low temperature design
-40°F ON DEMAND



POS.	PART NAME	MATERIAL	QTY
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	-	-	9.65	2.68	1.61	M42	30	4.92-F12	M12	4469.25	3172.95	189.19

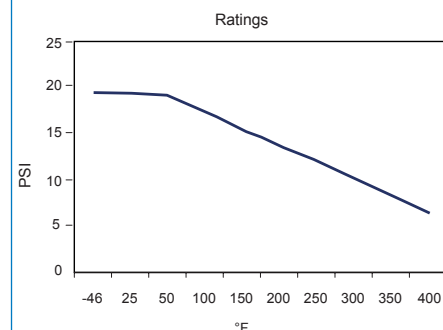
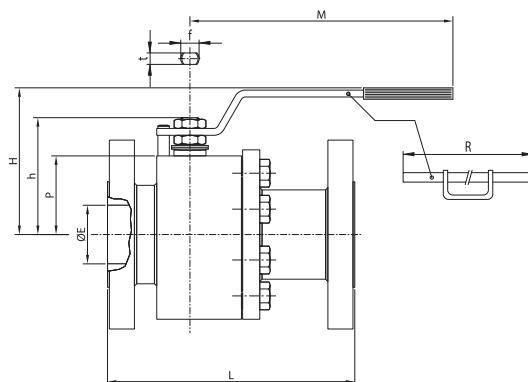
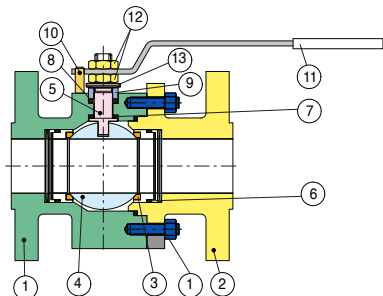


SERIES AP64CS-AP64SS

CARBON STEEL - STAINLESS STEEL FLANGED BALL VALVES ANSI 150

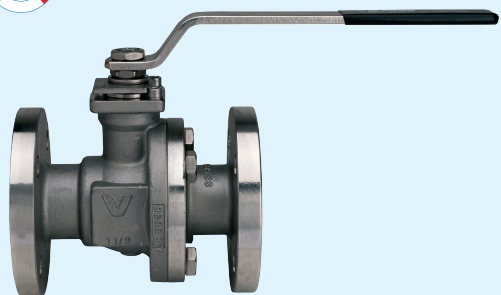
Metal seated floating ball valves, **bi-directional**.

- 2-piece bolted body from barstock
- Temperature range carbon steel valve: -20°F to +662°F.
- Temperature range stainless steel valve: -40°F to +662°F.
- Consult factory for temperatures between -50°F and +750°F.
- Blow-out proof stem.
- PENTAFITE standard ball seats, other metal seats on request.
- For high temperature clean services.
- 100 mm stem elongation on request
- Adjustable, live-loaded graphite packing.
- API 598 inspection and testing.
- API 607 fire tested.
- Locking lever operator available on request.
- NACE MR01-75 compliant materials.



POS.	PART NAME	MATERIAL	Q.S
1	BODY/CONNECTOR BOLTS	F316 / A105	1
2	END CAP	F316 / A105	1
3	SEAT	PENTAFITE/WC/ST6/ CRC/live loaded PEEK	2
4	BALL	F316 / CF8M	1
	BALL COATING	Hard Chromium Nitrides (HCR) HVOF Tungsten Carbides (WC)HVOF Stellite GR.6 (ST6) HVOF Chrome Carbides (CRC)	
5	STEM	17/4 PH	1
6	SEAL BODY	GRAPHITE	1
7	PRIMARY STEM SEAL	GRAPHITE	1
8	SECONDARY STEM SEAL	GRAPHITE	1
9	GLAND BOLT	304 SST	1
10	STOP PLATE	304 SST	1
11	HANDLE	CARBON ST./S.S.	1
12	STEM NUTS	A193-B8/ A193-B7	2
13	STEM SPRING	304 S.S.	1

SIZE	E	L	H	h	P	M	R	F/t	s	ISO 5211	Break Torque in-Lbs PENTAFITE seats	Cv	Weight (Lbs)
1/2"	0.55	4.25	2.52	2.05	1.3	5.71	-	0.39/0.24	0.21	F03	203	27	5.51
3/4"	0.75	4.62	2.6	2.17	1.42	5.71	-	0.39/0.24	0.21	F03	248	59	6.61
1"	0.94	5.50	3.35	2.76	1.69	7.09	-	0.47/0.31	0.33	F03	274	113	12.13
1 1/4"	1.14	5.50	3.54	2.87	1.89	7.09	-	0.47/0.31	0.33	F03	372	147	15.43
1 1/2"	1.49	6.50	4.65	3.78	2.48	10.83	-	0.63/0.39	0.37	F05	637	274	24.25
2"	2.00	7.00	5.04	4.06	2.7	10.83	-	0.63/0.39	0.41	F05	858	488	37.48
2 1/2"	2.51	7.50	5.47	4.8	3.23	14.96	-	0.86/0.55	0.51	F07	1380	835	48.5
3"	2.99	8.00	5.67	5.04	3.48	14.96	-	0.86/0.55	0.51	F07	1575	1200	57.32
4"	4.01	9.00	7.87	6.18	4.37	17.32	19.69	1.18/0.70	0.67	F10	2319	2139	105.82



SERIES 761030 STAINLESS STEEL BALL VALVE

F.E. TESTED
ISO 15848-1

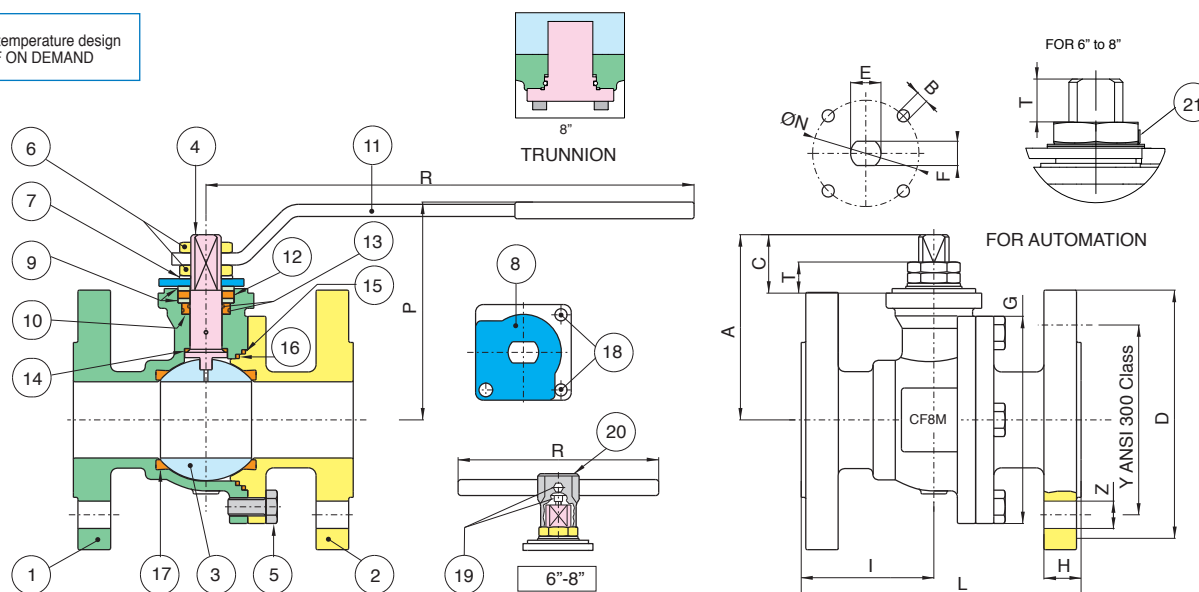
Stainless steel, ANSI class 300 flanged ball valve, full port.

- Blow-out proof stem, adjustable stem packing.
- RPTFE 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".

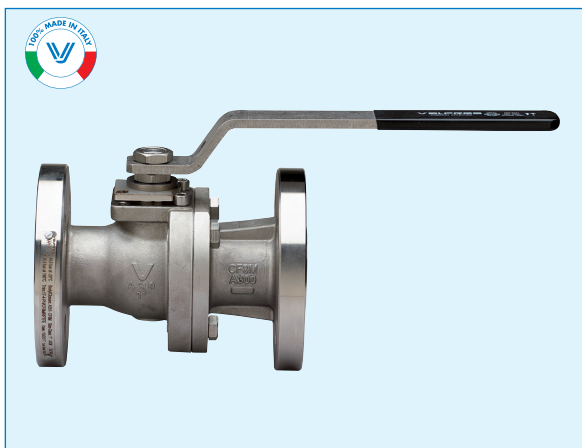
COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.



POS	PART NAME	MATERIAL	PCS
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 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	1.18	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.



SERIES 68J100 API 608 STAINLESS STEEL BALL VALVE

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

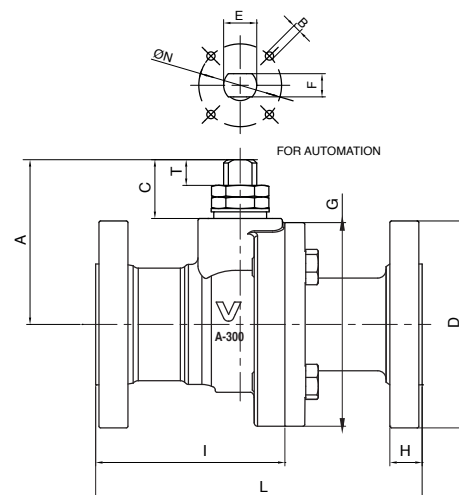
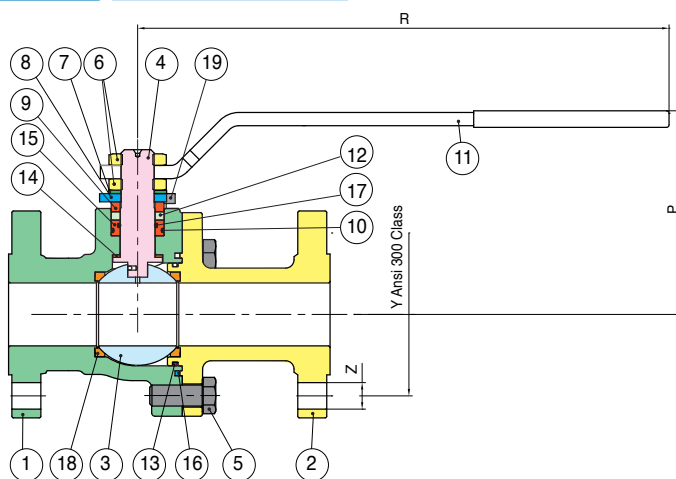
- API 608, ASME B16.34, ASME B16.10, ASME B16.5, ASME B1.1 design.
- Temperature range -4°F to +366°F.
- 100% tested according to API 598 standards.
- RPTFE seats, packing and thrust washer.
- Blow-out proof stem, locking handle.
- Fire Safe API 607.
- Antistatic Device.
- ISO 5211 mounting pad with double "D" stem.
- Locking device.

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

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

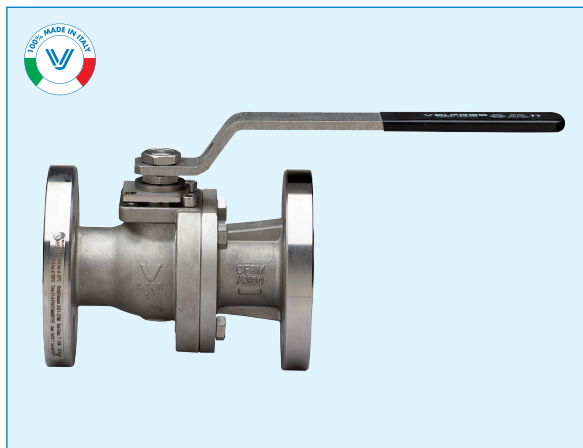
Vacuum: 10⁻³ torr.

Low temperature design
-40F ON DEMAND



POS.	PART NAME	MATERIAL	POS.
1	BODY	A351-CF8M	1
2	END CONNECTION	A351-CF8M	1
3	BALL	A479-Tp316	1
4	STEM	A564 Tp630 H115OD (17-4-PH)	1
5	SCREW	A193 B8 Cl.2	4-6-8-12
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	2.63	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	-	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

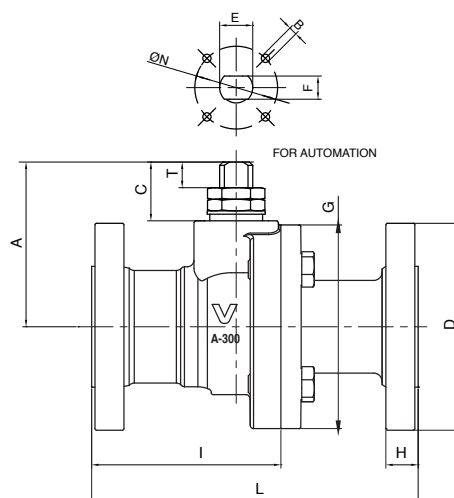
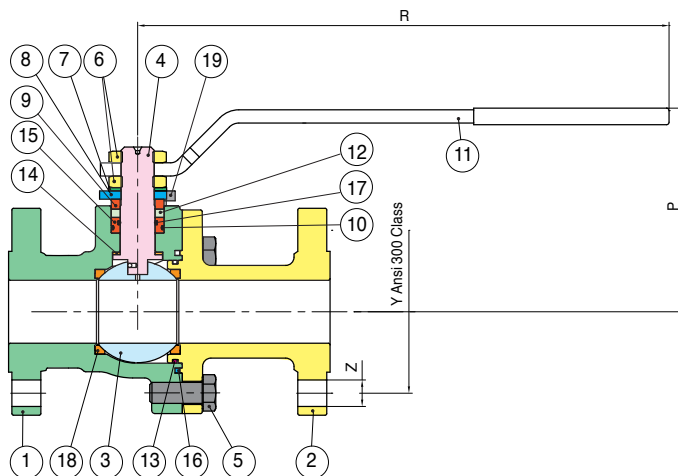
- Super Duplex stainless steel, ANSI class 300, flanged ball valve, full port.
- API 608, ASME B16.34, ASME B16.10, ASME B16.5, ASME B1.1 design.
 - Temperature range: -4°F to +366°F.
 - 100% tested according to API 598 standards.
 - RPTFE seats, packing and thrust washer.
 - Blow-out proof stem, locking handle.
 - Fire Safe API 607.
 - 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.

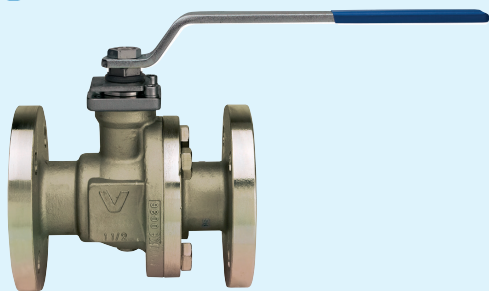
Vacuum: 10^{-3} torr.



Low temperature design
-40°F ON DEMAND



POS.	PART NAME	MATERIAL	QTY	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	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	4-6-8-12	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	-	-	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																				



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

SERIES 761031 CARBON STEEL BALL VALVE

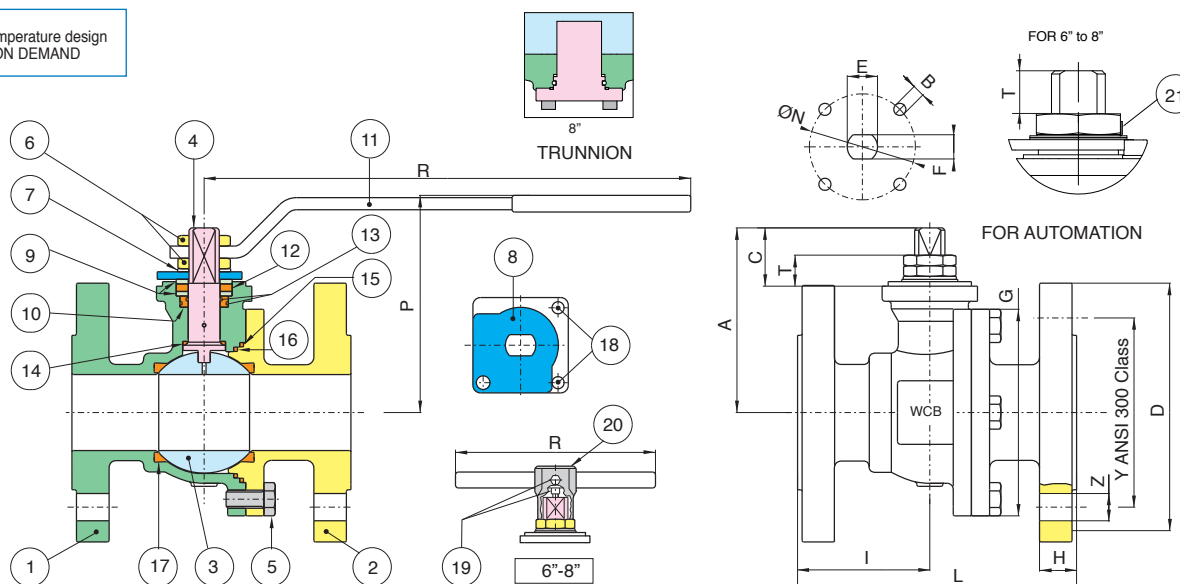
F.E. TESTED
ISO 15848-1

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

- Temperature range -4°F to +366°F.
- Blow-out proof stem, adjustable stem packing.
- RPTFE. 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".



POS	PART NAME	MATERIAL	POS
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



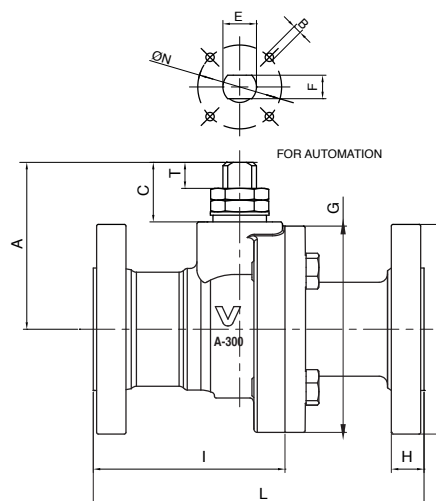
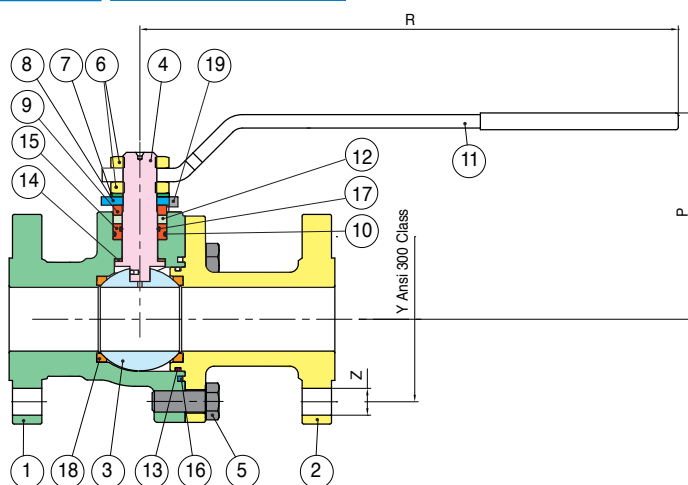
SERIES 68F100 API 608 CARBON STEEL BALL VALVE

- 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.
 - RPTFE seats, packing and thrust washer.
 - Blow-out proof stem, locking handle.
 - Fire Safe API 607.
 - 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".

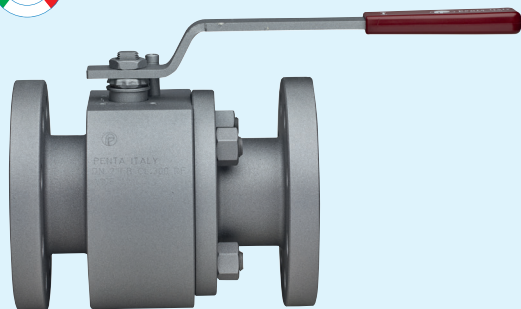
COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.

Vacuum: 10⁻³ torr.

Low temperature design
-40°F ON DEMAND



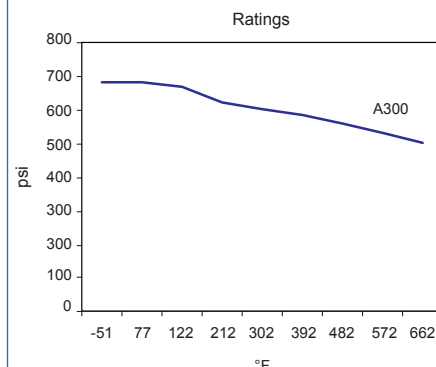
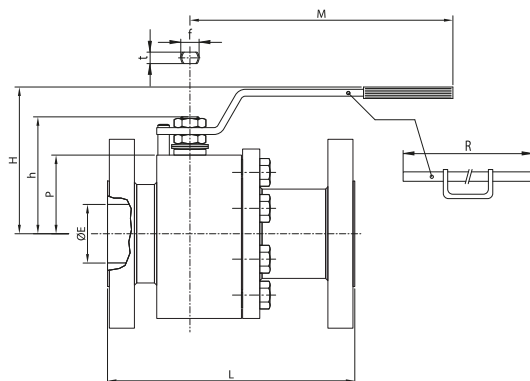
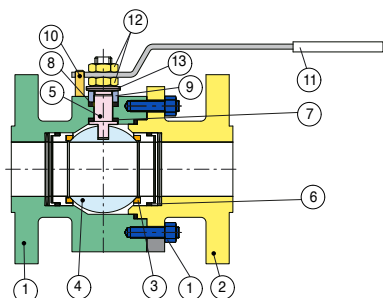
POS.	PART NAME	MATERIAL	POS.	SIZE	D	Y	Z	H	I	L	G	P	R	A	C	T	E	F	ISO 5211 QN	B	Break Torque in-Lbs	Cv	Weight (Lbs)
1	BODY	A352-LCC	1	1/2"	3.54	2.63	4xØ0.63	0.58	2.47	5.51	3.23	3.74	6.85	2.13	0.85	0.27	M12	8	1.65-F04	M5	110.63	16.59	6.84
2	END CONNECTION	A352-LCC	1	3/4"	3.94	3.25	4xØ0.75	0.64	2.64	5.98	3.54	3.90	6.85	2.28	0.83	0.27	M12	8	1.65-F04	M5	168.15	30.25	9.92
3	BALL	A479-Tp316	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	A564-Tp316 H115OD (17-4-PH)	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	A32017	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	CARBON 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	CARBON 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	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																				



SERIES AP60CS-AP60SS CARBON STEEL - STAINLESS STEEL FLANGED BALL VALVES ANSI 300

Metal seated floating ball valves, **bi-directional**.

- 2-piece bolted body from barstock.
- Temperature range carbon steel valve: -20°F to +662°F
- Temperature range stainless steel valve: -40°F to +662°F.
- Blow-out proof stem.
- PENTAFITE standard ball seats, other metal seats on request.
- For high temperature clean services.
- API 598 Bubble Tight (exceed ANSI B16.104/ FCI 70-2 CL.VI.).
- Consult factory for temperatures between -50°F and +750°F.
- Adjustable, live-loaded graphite packing.
- API 598 Inspection and testing.
- 100 mm stem elongation on request.
- API 607 fire tested.
- Locking device for lever operator available on request.
- NACE MR01-75 compliant materials.



POS	PART NAME	MATERIAL	POS
1	BODY/CONNECTOR BOLTS	F316 / A105	1
2	END CAP	F316 / A105	1
3	SEAT	PENTAFITE/WC/ST6/ CRC/live loaded PEEK	2
4	BALL	F316 / CF8M	1
	BALL COATING	Hard Chromium Nitrides (HCR) HVOF Tungsten Carbides (WC) HVOF Stellite GR.6 (ST6) HVOF Chrome Carbides (CRC)	
5	STEM	17/4 PH	1
6	SEAL BODY	GRAPHITE	1
7	PRIMARY STEM SEAL	GRAPHITE	1
8	SECONDARY STEM SEAL	GRAPHITE	1
9	GLAND BOLT	304 SST	1
10	STOP PLATE	304 SST	1
11	HANDLE	CARBON ST./S.S.	1
12	STEM NUTS	A193-B8/ A193-B7	2
13	STEM SPRING	304 S.S.	1

SIZE	E	L	H	h	P	M	R	F/t	s	ISO 5211	Break Torque in-Lbs PENTAFITE seats	Cv	Weight (Lbs)
1/2"	0.55	5.50	2.52	2.05	1.3	5.71	-	0.39/0.24	0.21	F03	221	27	6.61
3/4"	0.75	6.00	2.6	2.17	1.42	5.71	-	0.39/0.24	0.21	F03	310	59	8.82
1"	0.94	6.50	3.35	2.76	1.69	7.09	-	0.47/0.31	0.33	F03	363	113	13.23
1 1/4"	1.14	7.00	3.54	2.87	1.89	7.09	-	0.47/0.31	0.33	F03	665	147	17.64
1 1/2"	1.49	7.50	4.65	3.78	2.48	10.83	-	0.63/0.39	0.37	F05	814	274	29.76
2"	2.00	8.50	5.04	4.06	2.7	10.83	-	0.63/0.39	0.41	F05	1177	488	41.89
2 1/2"	2.51	9.50	5.47	4.8	3.23	14.96	-	0.86/0.55	0.51	F07	2549	835	55.12
3"	2.99	11.12	5.67	5.04	3.48	14.96	-	0.86/0.55	0.51	F07	3009	1200	88.18
4"	4.01	12.00	7.87	6.18	4.37	17.32	19.69	1.18/0.70	0.67	F10	4090	2139	138.89



SERIES 68J401

API 608 STAINLESS STEEL BALL VALVE

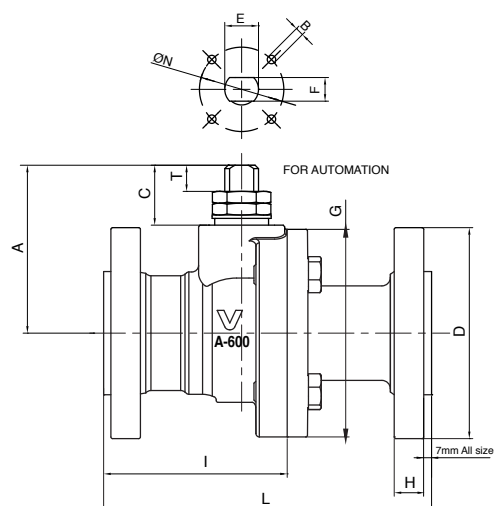
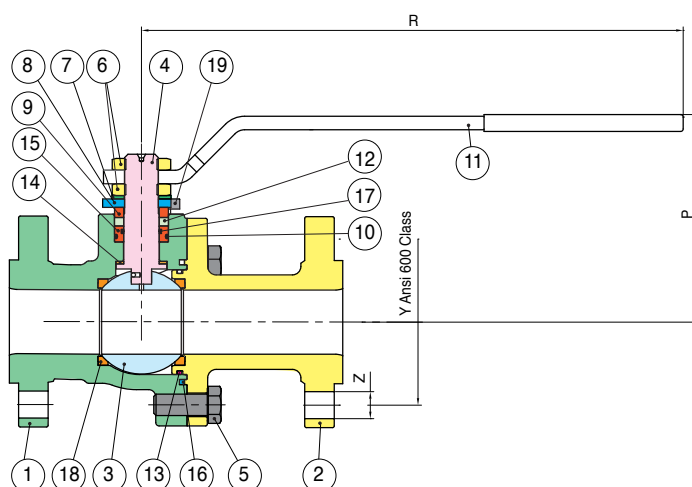
Stainless steel, ANSI class 600, flanged ball valve, full port.

- 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 API 607.
- Antistatic Device.
- ISO 5211 mounting pad with double "D" stem.
- Locking device.

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

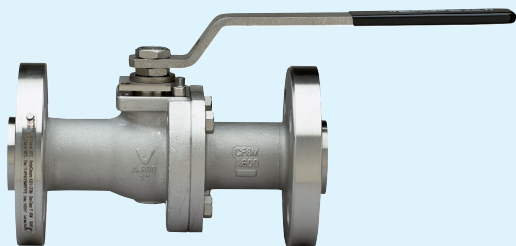
Vacuum: 10^{-3} torr.

Low temperature design
-40°F ON DEMAND



POS	PART NAME	MATERIAL	P.C.S
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



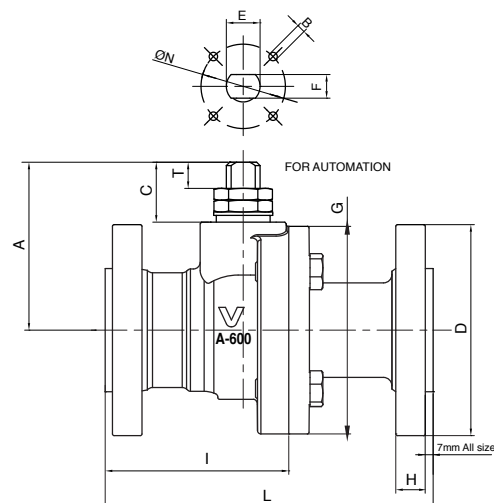
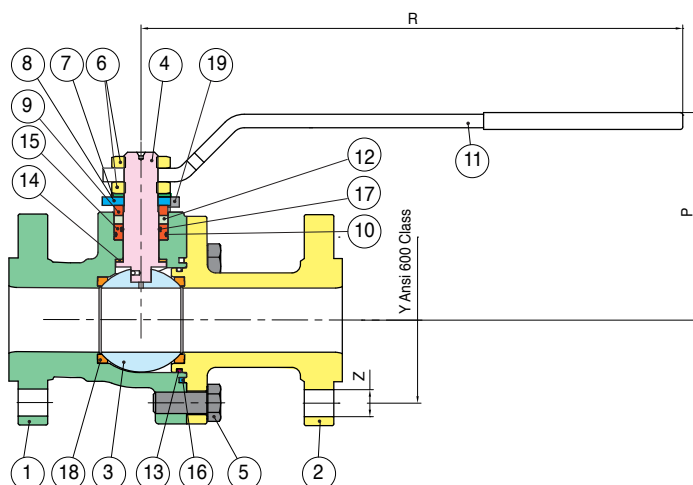
SERIES 68R415 API 608 SUPER DUPLEX STAINLESS STEEL BALL VALVE

- 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 API 607.
 - Antistatic Device.
 - ISO 5211 mounting pad with double "D" stem.
 - Locking device.

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

Vacuum: 10^{-3} torr.

Low temperature design
-40°F ON DEMAND



POS.	PART NAME	MATERIAL	P.O.S
1	BODY	UNS S32780 (ASTM A895-Gr. 6)	1
2	END CONNECTION	UNS S32780 (ASTM A895-Gr. 6)	1
3	BALL	UNS S32780 (ASTM A895-Gr. 6) / A479-F55	1
4	STEM	A564 Tp303 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 API 607.
- Antistatic Device.
- ISO 5211 mounting pad with double "D" stem.
- Locking device.

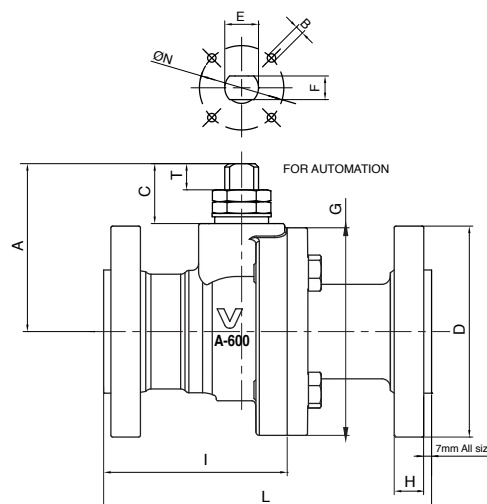
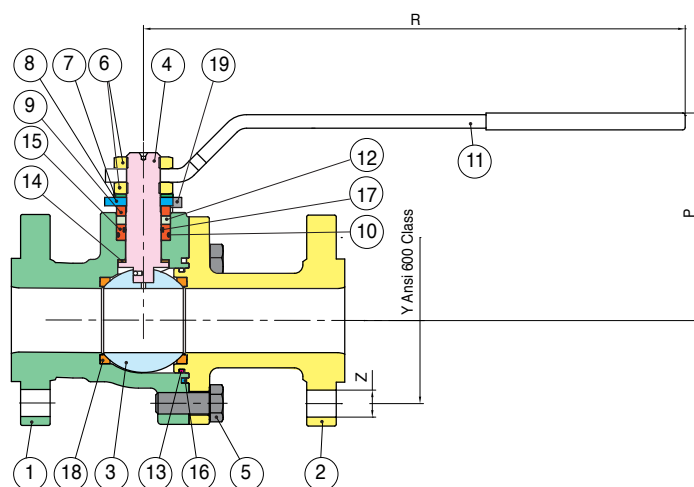
68F400: sizes 1/2" to 2".

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

Vacuum: 10^{-3} torr.

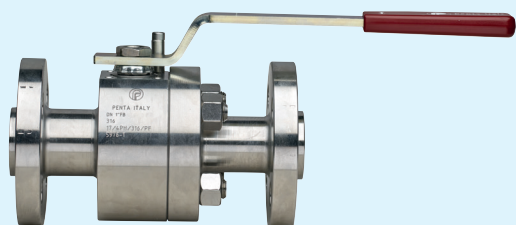


Low temperature design
-40°F ON DEMAND



POS.	PART NAME	MATERIAL	PCS
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

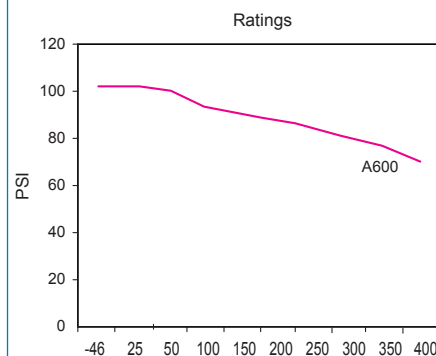
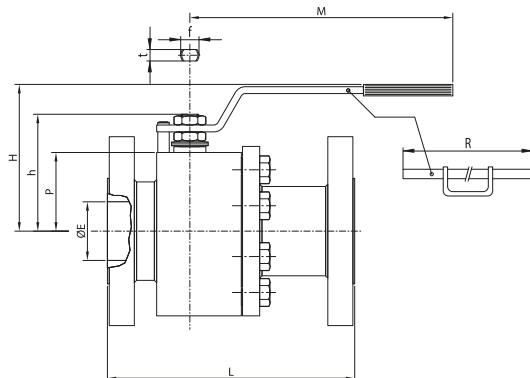
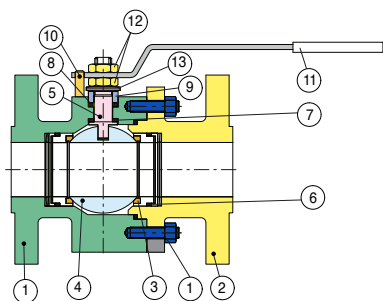


SERIES AP606CS-AP606SS

CARBON STEEL - STAINLESS STEEL FLANGED BALL VALVES ANSI 600

Metal seated floating ball valves, **bi-directional**.

- 2-piece bolted body from barstock.
- Temperature range carbon steel valve: -20°F to +662°F.
- Temperature range stainless steel valve: -40°F to +662°F.
- Consult factory for temperatures between -50°F and +750°F.
- Blow-out proof stem.
- PENTAFITE standard ball seats, other metal seats on request.
- For high temperature clean services.
- API 598 Bubble Tight (exceed ANSI B16.104/ FCI 70-2 CL.VI).
- Adjustable, live-loaded graphite packing.
- 100 mm stem elongation STD.
- API 607 fire tested.
- Locking lever operator available on request.
- NACE MR01-75 compliant materials.



POS.	PART NAME	MATERIAL	P.S.
1	BODY/CONNECTOR BOLTS	F316 / A105	1
2	END CAP	F316 / A105	1
3	SEAT	PENTAFITE / WC / ST6	2
4	BALL	F316 / CF8M	1
	BALL COATING	Hard Chromium Nitrides (HCR) HVOF Tungsten Carbides (WC) HVOF Stellite GR.6 (ST6) HVOF Chrome Carbides (CRC)	
5	STEM	17/4 PH	1
6	SEAL BODY	GRAPHITE	1
7	PRIMARY STEM SEAL	GRAPHITE	1
8	SECONDARY STEM SEAL	GRAPHITE	1
9	GLAND BOLT	304 SST	1
10	STOP PLATE	304 SST	1
11	HANDLE	CARBON ST./S.S.	1
12	STEM NUTS	A193-B8/ A193-B7	2
13	STEM SPRING	304 S.S.	1

SIZE	E	L	H	h	P	M	R	F/t	s	ISO 5211	Break Torque in-Lbs PENTAFITE seats	Cv	Weight (Lbs)
1/2"	0.55	6.5	3.35	2.05	1.3	5.15	-	0.39/0.24	0.21	F03	283	27	15.43
3/4"	0.75	7.5	3.42	2.17	1.42	5.15	-	0.39/0.24	0.21	F03	487	59	18.74
1"	0.94	8.5	3.98	2.99	2.01	10.83	-	0.63/0.39	0.32	F05	610	113	22.05
1 1/2"	1.49	9.5	4.96	4.13	2.56	14.96	-	0.86/0.55	0.47	F07	1133	247	40.79
2"	2.00	11.5	5.31	4.45	2.95	14.96	-	0.86/0.55	0.45	F07	1930	488	55.12
2 1/2"	2.52	13	6.61	5.35	3.54	17.32	19.69	1.18/0.70	0.67	F10	3115	835	83.78
3"	2.99	14	6.77	5.55	3.74	17.32	19.69	1.18/0.70	0.67	F10	3292	1200	110.23

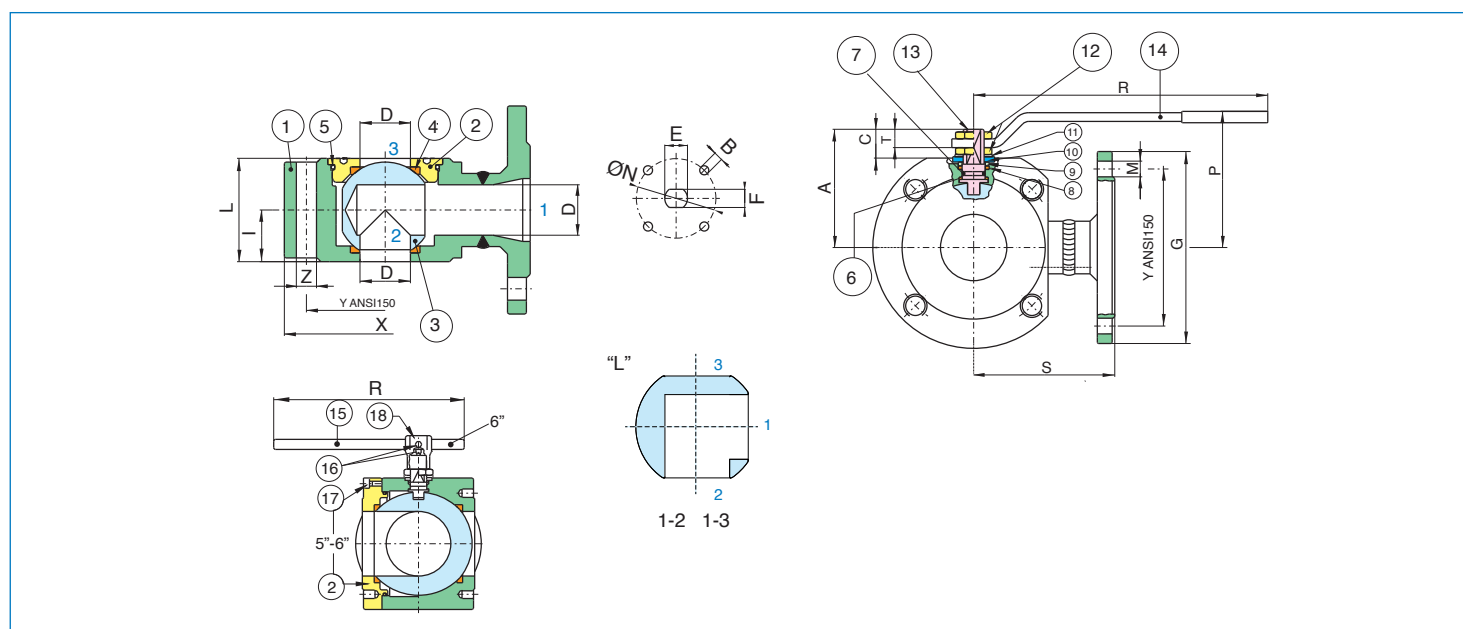


SERIES 776032 (L) CARBON STEEL 3-WAY BALL VALVE

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".



POS	PART NAME	MATERIAL	POS
1	BODY	ASTM A105	1
2	END CONNECTION	ASTM A105	1
3	BALL	AISI 304	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")	2
11	SPRING WASHER	STEEL (2 1/2" - 6")	1
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

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	4xØ 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	4xØ 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	4xØ 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	4xØ 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	4xØ 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	4xØ 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	4xØ 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	4xØ 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	8xØ 0.75	2.99	6.26	0.94	0.70	4.02 (F10)	4xM10	956	188.7	84.76
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
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

* For automation please consult factory.

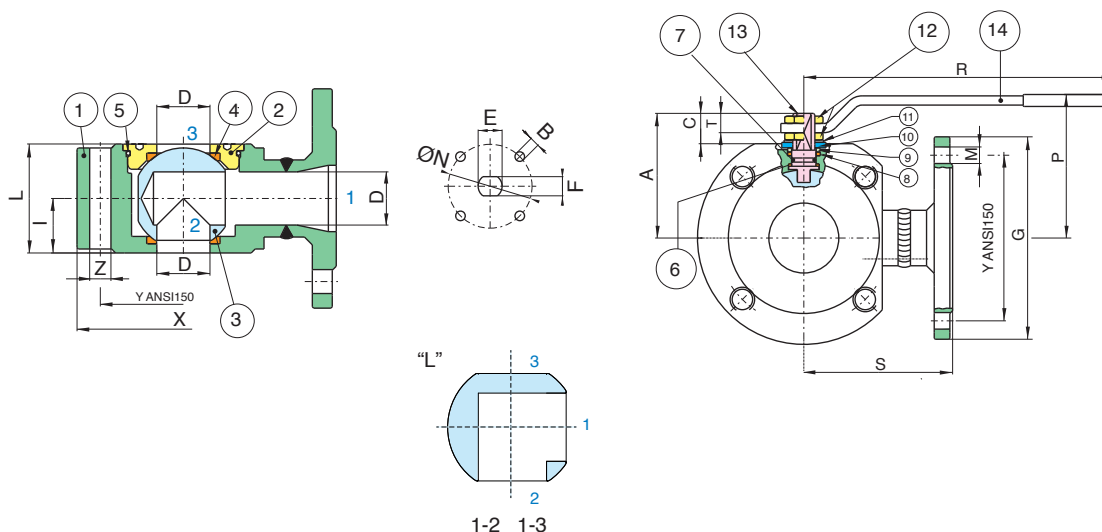


SERIES 776018 (L) STAINLESS STEEL 3-WAY BALL VALVE

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".

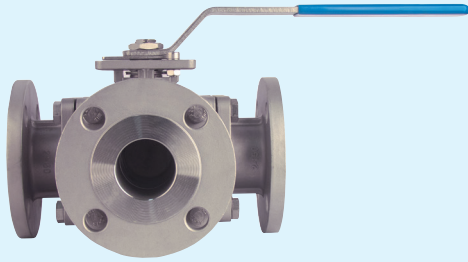


POS.	PART NAME	MATERIAL	POS.	SIZE	X	Y	Z UNC	I	L	R	P	A	C	T	G	M	D	S	E	F	ISO 5211 ØN	B	Break Torque in-Lbs	CV	Weight (Lbs)
1	BODY	AISI 316	1	1/2"	3.50	2.38	4x1/2"	0.78	1.57	5.17	2.54	1.85	0.61	0.35	3.50	4 X Ø0.62	0.39	2.99	0.39	0.27	1.26	4xM5	35	3.2	4.91
2	END CONNECTION	AISI 316	1	3/4"	3.88	2.75	4x1/2"	0.78	1.57	5.17	2.71	1.95	0.53	0.35	3.88	4 X Ø0.62	0.59	3.23	0.39	0.27	1.26	4xM5	115	6	6.30
3	BALL	AISI 316	1	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 Ø0.62	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	4 X Ø0.62	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	4 X Ø0.62	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	4 X Ø0.75	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	4 X Ø0.75	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	4 X Ø0.75	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	8 X Ø0.75	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" - 4")	2 1																						
11	SPRING WASHER	STEEL	2																						
12	NUT	STEEL	2																						
13	STEM	AISI 316	1																						
14	HANDLE	STEEL	1																						

SERIES 97L150 - 97T150

L-PORT

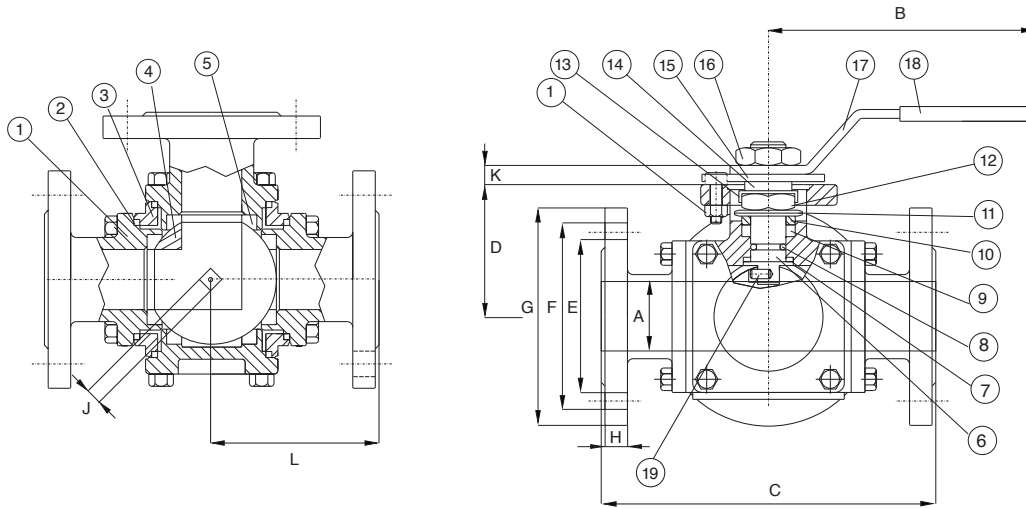
T-PORT



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

- ANSI 150 full port flanged.
- Temperature range -4°F to +366°F.
- 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".



POS.	PART NAME	MATERIAL	QTY	SIZE	A	B	C	D	E	F	G	H	J	K	L	ISO 5211	Cv	Break Torque	Weight (Lbs)
1	FLANGED ENDS	A351 CF8M	3	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
2	GASKET	PTFE	4	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
3	BODY	A351 CF8M	1	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
4	BALL	AISI 316	1	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
5	BALL SEATS	PTFE	4	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
6	THRUST WASHER	RPTFE	1	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
7	STEM	AISI 316	1	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
8	O-RING	FKM (Viton)	1	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
9	STEM PACKING	PTFE	1	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
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																

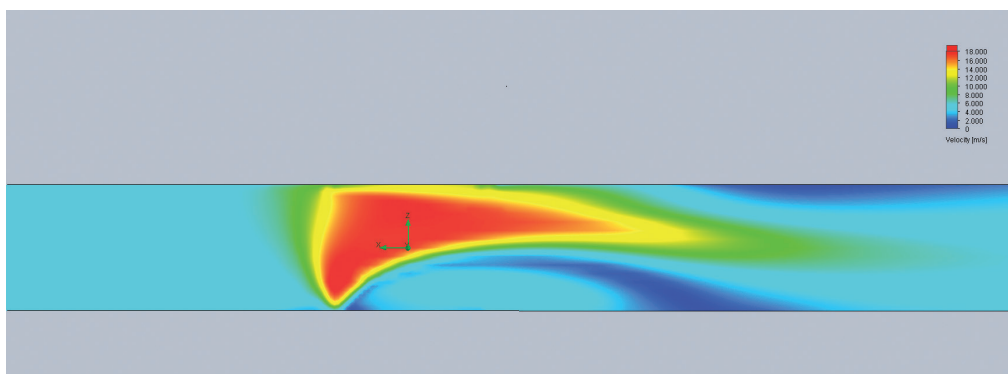


Floating control valves

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.

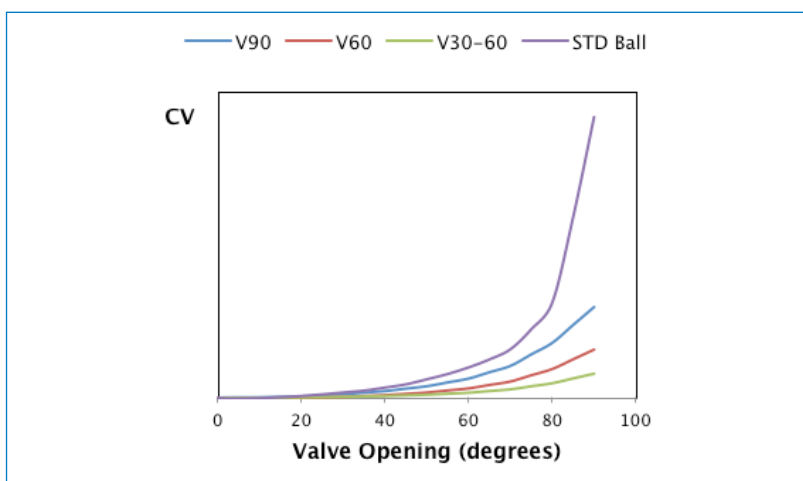
Valve type	Pressure Class Range	Openings (Degrees)	10°	20°	30°	40°	50°	60°	70°	80°	90°
		SIZE [inch]	Cv	Cv	Cv	Cv	Cv	Cv	Cv	Cv	Cv
V90	150-300 CLASS	1/2"	-	0.1	0.3	0.7	1.2	2.0	3.4	5.9	10
		3/4"	-	0.3	0.8	1.6	2.7	4.6	7.7	13.3	22
		1"	-	0.5	1.4	2.8	4.9	8.2	13.7	23.7	39
		1 1/4"	-	0.8	2.2	4.5	8.0	13.4	22.4	38.8	64
		1 1/2"	-	1.1	3.3	6.6	11.6	19.5	32.6	56.4	93
		2"	-	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"	-	4.7	13.6	27.3	48.1	80.9	135.4	234.1	387
		4"	-	8.1	23.6	47.5	83.8	140.8	235.7	407.5	675
		6"	-	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
V60	150-300 CLASS	1/2"	-	0.1	0.2	0.4	0.7	1.2	1.9	3.3	6
		3/4"	-	0.1	0.4	0.9	1.5	2.6	4.3	7.5	12
		1"	-	0.3	0.8	1.6	2.7	4.6	7.7	13.4	22
		1 1/4"	-	0.4	1.3	2.5	4.5	7.6	12.7	21.9	36
		1 1/2"	-	0.7	2.0	4.0	7.1	11.9	20.0	34.5	57
		2"	-	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"	-	2.7	7.9	16.0	28.2	47.4	79.3	137.1	227
		4"	-	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
V30-60	150-300 CLASS	1/2"	-	-	0.1	0.2	0.4	0.6	1.0	1.7	3
		3/4"	-	0.1	0.2	0.5	0.8	1.3	2.2	3.9	6
		1"	-	0.1	0.4	0.8	1.4	2.4	4.0	6.9	11
		1 1/4"	-	0.2	0.7	1.3	2.3	3.9	6.5	11.3	18
		1 1/2"	-	0.3	1.0	2.0	3.5	5.9	9.8	17.0	28
		2"	-	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"	-	1.3	3.9	7.8	13.8	23.2	38.9	67.2	111
		4"	-	2.1	6.1	12.3	21.6	36.3	60.8	105.2	174
		6"	-	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.



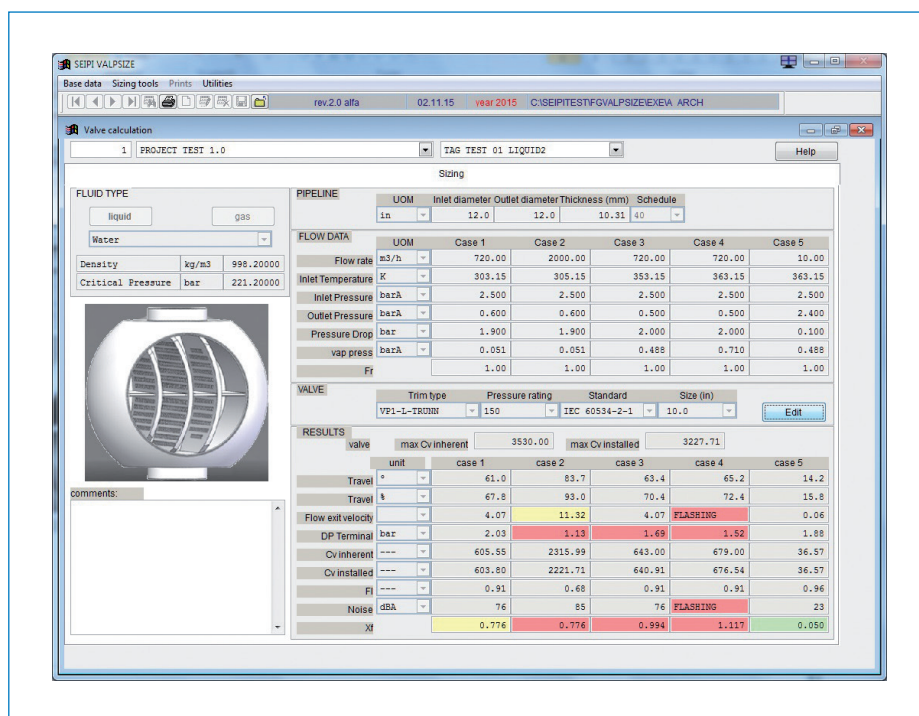
Example velocity plot for V-ball 30-60.

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.



VALPRES

CONTROL VALVE CALCULATION SHEET

VALPRES rev.3.0.xls

tag no TAG TEST 01 LIQUID2

project PROJECT TEST 1.0

customer Petrofac

end user HFD 126156

quotation no 27052014-OS

date 29.05.2014

LIQUID

Material	Water
Density kg/m ³	999.20
Critical Pressure barA	221.20

PIPELINE

unit	inlet dia	outlet dia	thickness mm	schedule
in	12.0	12.0	10.31	40

FLOW DATA

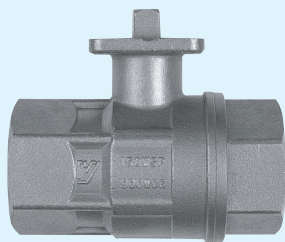
unit	case 1	case 2	case 3	case 4	case 5
flow rate m ³ /h	720.00	2000.00	720.00	720.00	10.00
inlet temp K	303.15	305.15	353.15	363.15	363.15
inlet press barA	2.500	2.500	2.500	2.500	2.500
outlet press barA	0.600	0.600	0.500	0.500	2.400
pressure drop bar	1.900	1.900	2.000	2.000	0.100
vap press barA	0.051	0.051	0.485	0.710	0.485
Reynold's nr	1.00	1.00	1.00	1.00	1.00

VALVE

type	pressure rating	ISA	size (in)
VP1-L-TR000	150	IEC 60534-2-1	10.0

RESULTS

valve	max Cv inherent	3530.00	max Cv installed	3227.71
Travel	61.0	83.7	63.4	65.2
Travel %	67.8	93.0	70.4	72.4
flow velocity m/s	4.07	11.32	4.07	FLASHING
DP terminal bar	2.03	1.13	1.69	1.52
Cv inherent	605.55	2315.99	643.00	679.00
Cv installed	603.80	2221.71	640.91	676.54
F1	0.91	0.68	0.91	0.91
noise dBA	76	85	76	FLASHING
Xi	0.776	0.776	0.994	1.117



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



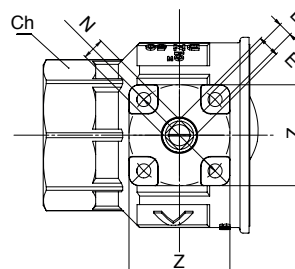
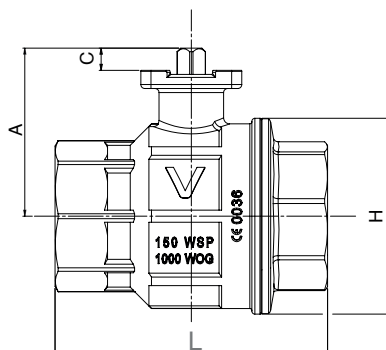
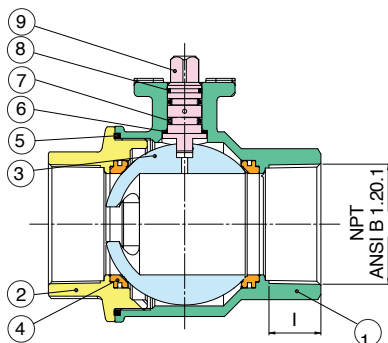
V30-60



V6

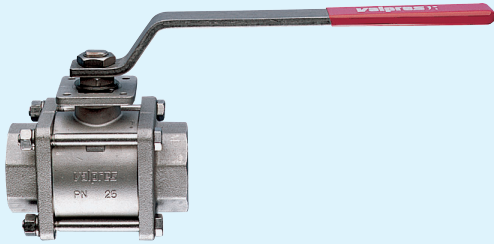


V9



POS.	PART NAME	MATERIAL	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	55
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	55
1"	0.75	3.54	2.02	1.61	2.10	0.35	9	F03	0.23	1.49	74.63	1000	1.35	80
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	89
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
2"	1.01	5.31	3.81	2.75	3.27	0.43	11	F05	0.27	1.96	348.60	1000	6.49	213
2 1/2"	1.22	6.32	4.64	3.39	4.94	0.66	14	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	14	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-PCS 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



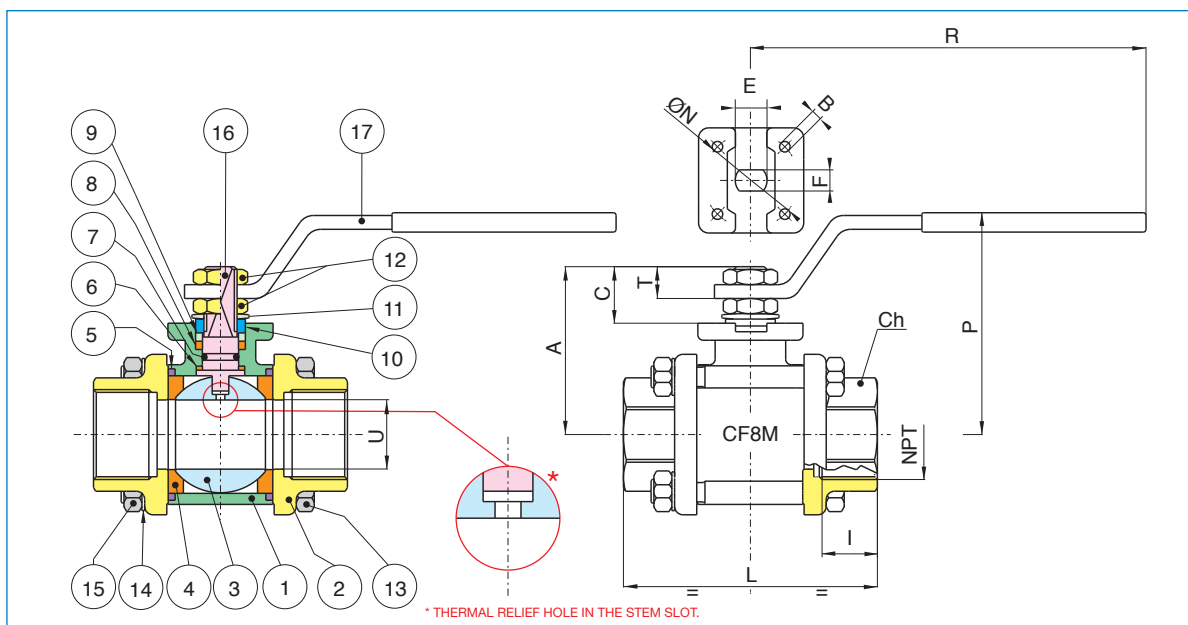
V30-60



V6



V9



POS.	PART NAME	MATERIAL	Q'S	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	ENDING 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																

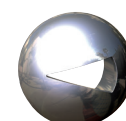


SERIES 630LLV3 - 630LLV6 - 630LLV9 - 630LLSL (NPT) 631LLV3 - 631LLV6 - 631LLV9 - 631LLSL (SW)

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 1/4"-2" and Fire Safe design 2 1/2" - 4".
- Working steam pressure 250 psi.
- Standard SS 316 and stem in carbon steel models.
- Temperature range: -50°F to 550°F.

V-ball options



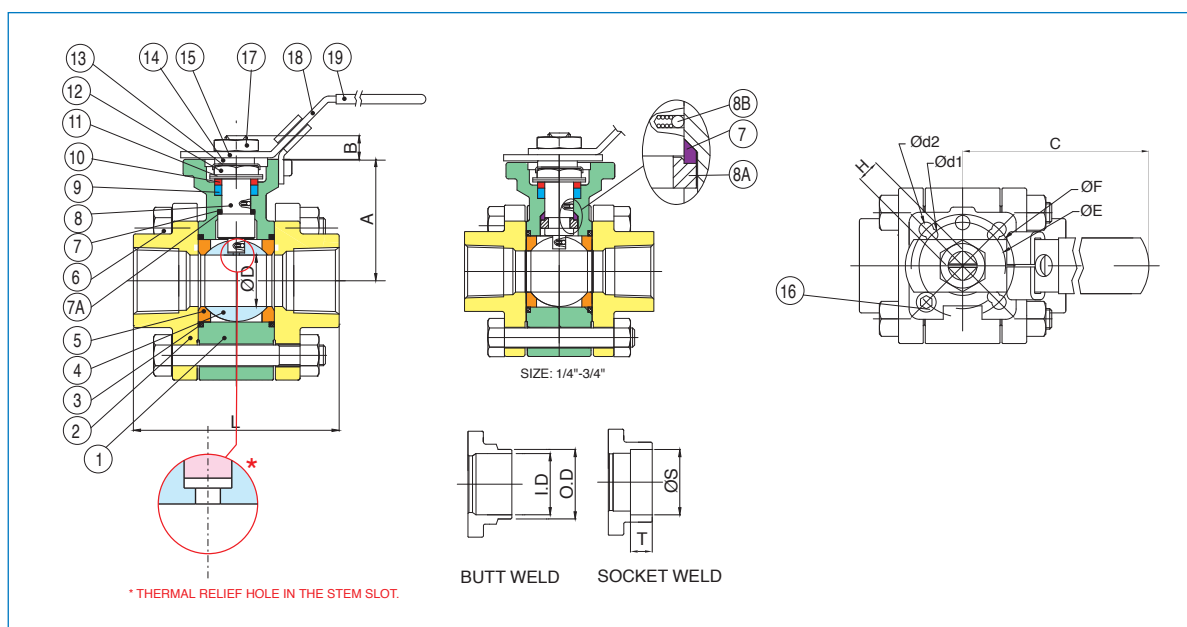
V30



V60



V90



POS.	PART NAME	MATERIAL	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	WCB	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	2200	1.5
2	END CAP	WCB	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	2200	1.5
3	GASKEY (BODY)	TFM/GRAPHITE	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	2200	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	2200	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	2200	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	2200	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	2200	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	2200	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	1480	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	1480	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	1480	87
9	STEM PACKING	TFM/GRAPHITE	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																	



250 PSI STEAM

SERIES 730LLV3 - 730LLV6 - 730LLV9 - 730LLSL (NPT) 731LLV3 - 731LLV6 - 731LLV9 - 731LLSL (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"), 1440 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 1/4"-2" and Fire Safe design 2 1/2" - 4".
- Standard SS 316 and stem in carbon steel models.
- Temperature range: -50°F to +550°F.

V-ball options



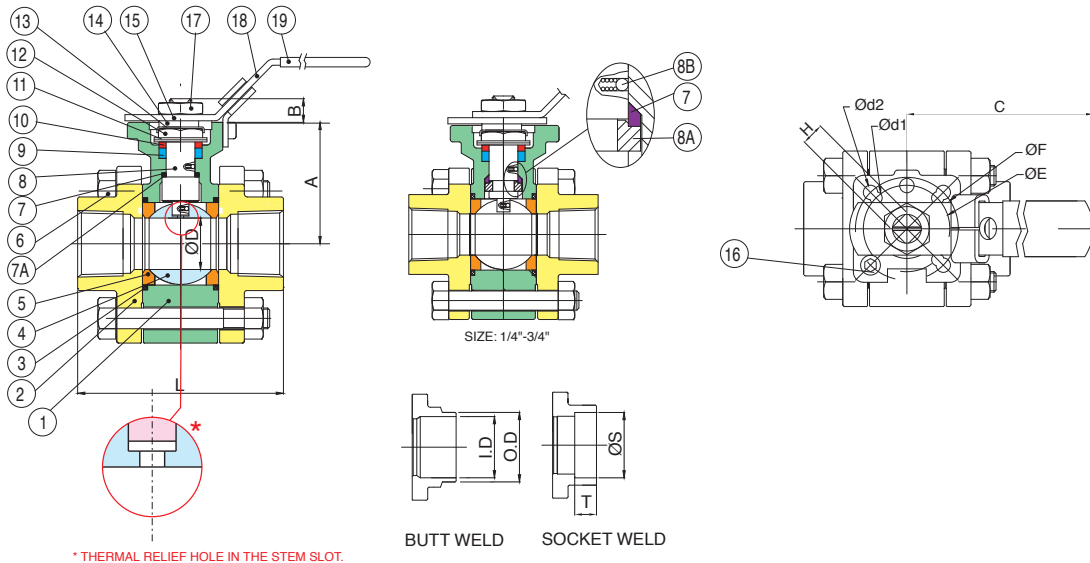
V30



V60



V90



* THERMAL RELIEF HOLE IN THE STEM SLOT.

POS.	PART NAME	MATERIAL	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/GRAPHITE	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/GRAPHITE	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																	

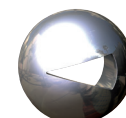
SERIES 770V3 - 770V6 - 770V9 (NCF) 771V3 - 771V6 - 771V9 (CF)



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.

V-ball options



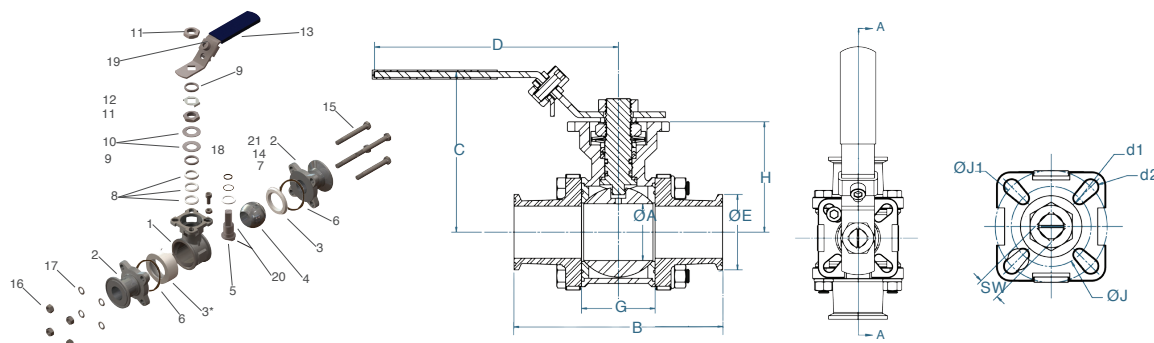
V30



V60



V90



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



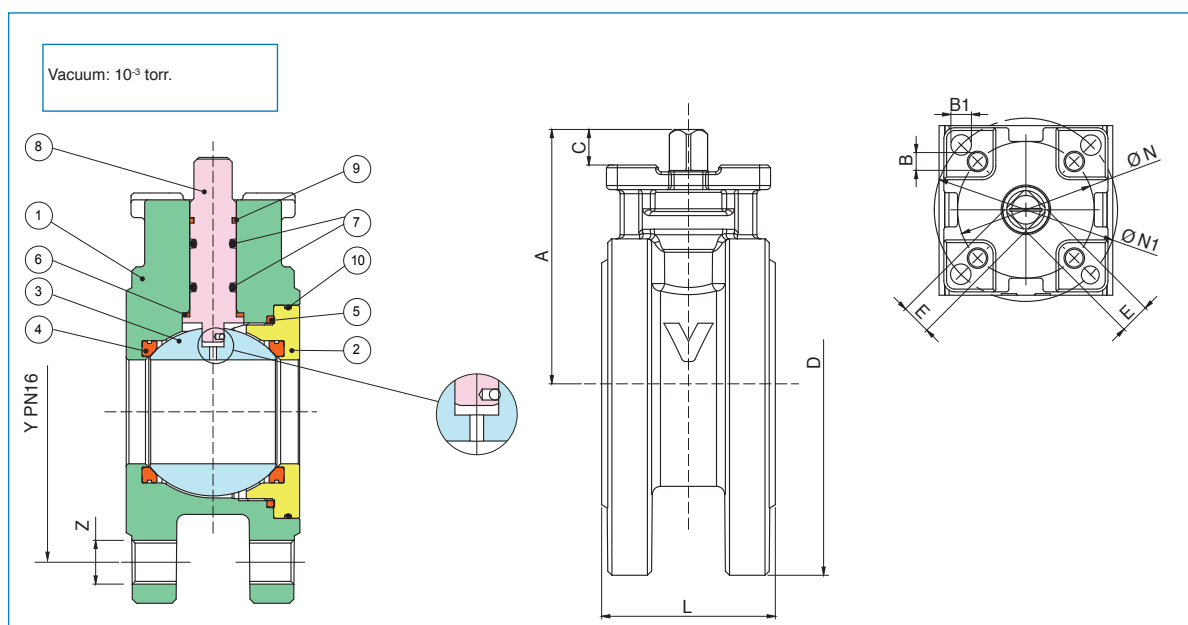
V30-60



V6



V9



POS	PART NAME	MATERIAL	P.C.S
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



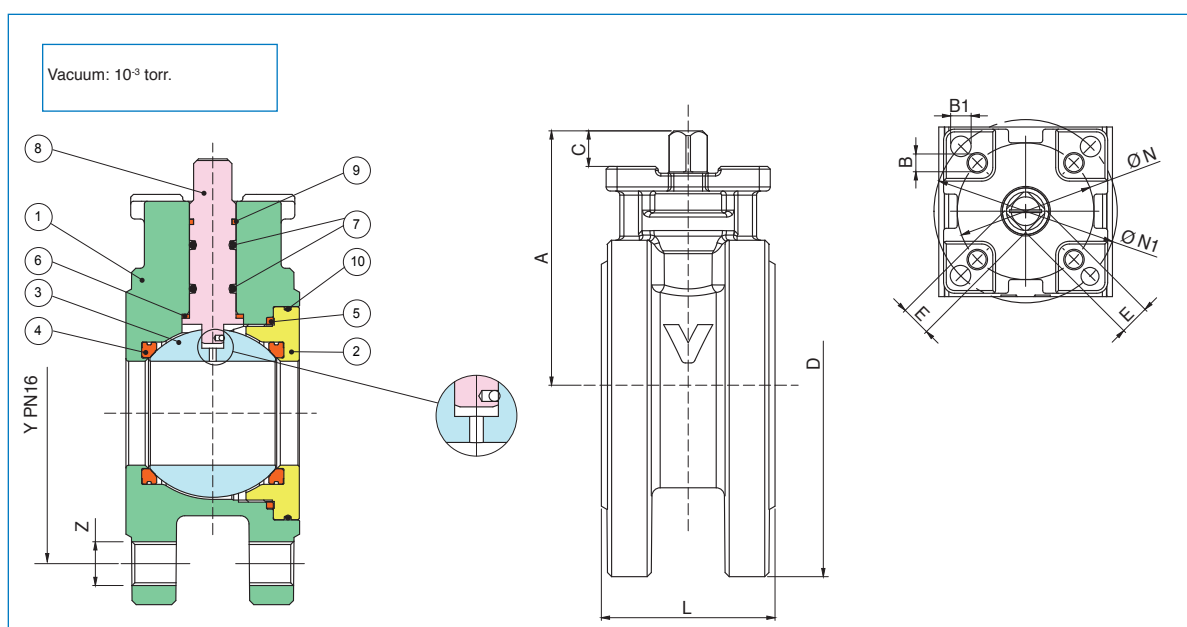
V30-60



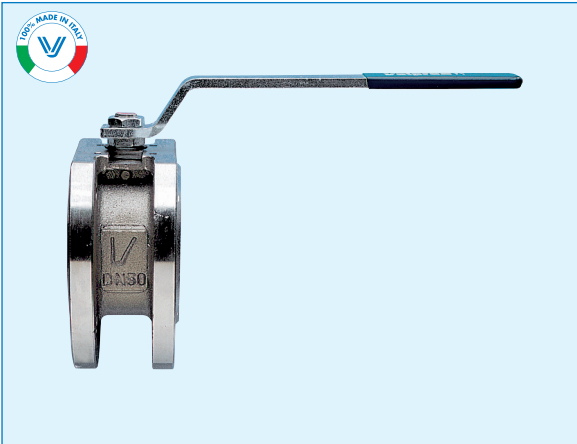
V6



V9



POS	PART NAME	MATERIAL	P.C.S	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														



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

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".

V-ball options



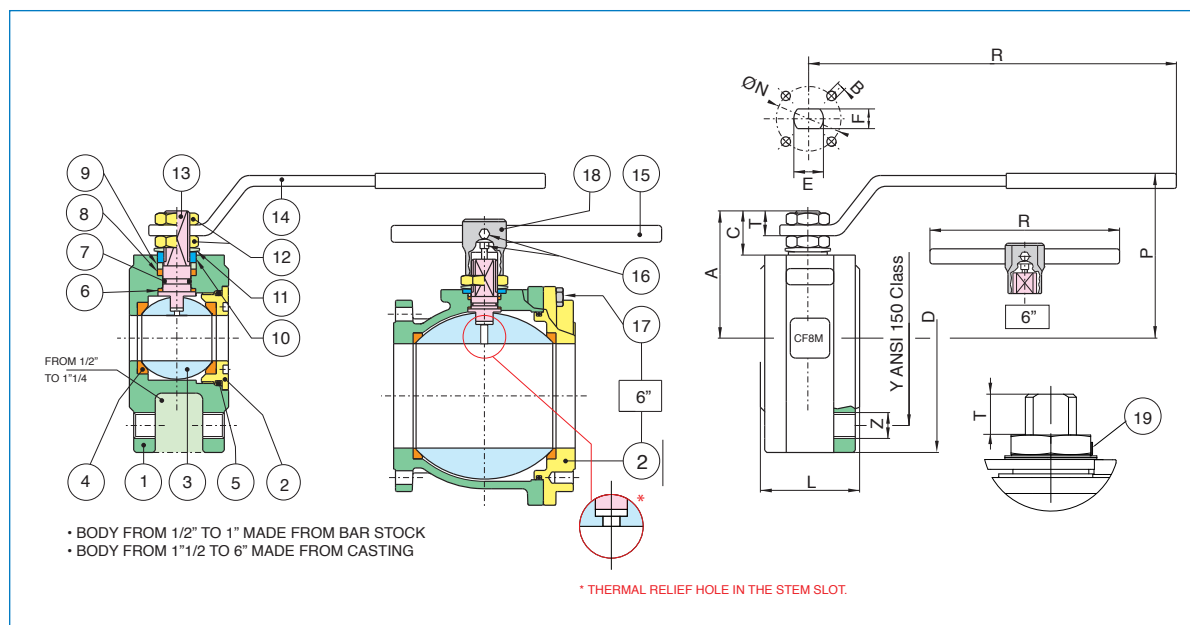
V30-60



V6

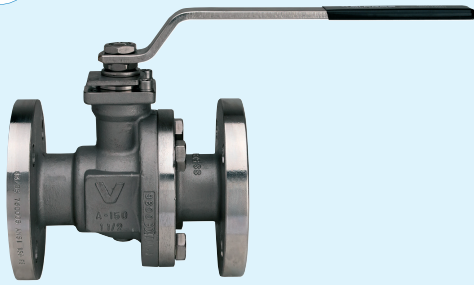


V9



POS.	PART NAME	MATERIAL	POS.	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	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 / 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 760021-V36 - 760021-V6 - 760021-V9 STAINLESS STEEL V-BALL VALVE

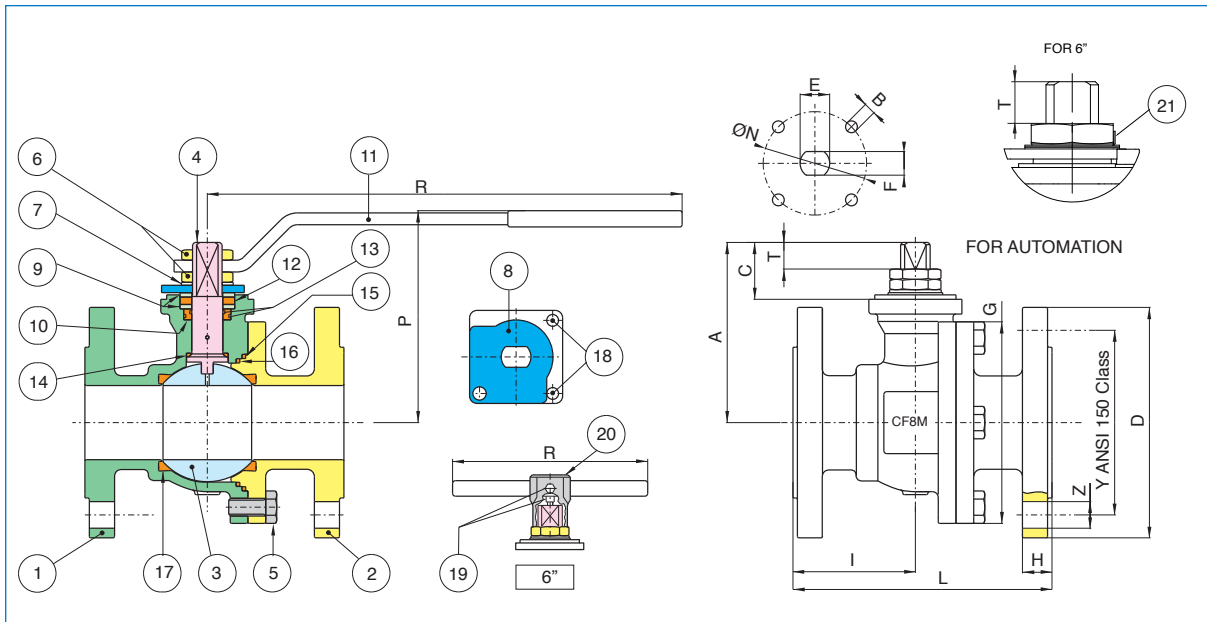
Stainless steel, ANSI class 150 flanged ends V-ball valve 30-60, 60, 90 degrees V-ports.

- 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

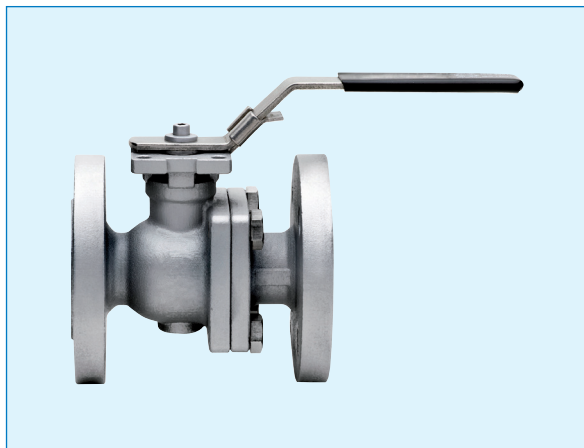


V6



V9

POS	PART NAME	MATERIAL	POS	SIZE	D	Y	Z	H	I	L	G	P	R	A	C	T	E	F	ISO 5211 ØN	B	Weight (Lbs)
1	BODY	A351 CF8M	1	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
2	END CONNECTION	A351 CF8M	1	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
3	BALL	A479-316/A351-CF8M	1	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
4	STEM	A479-316	1	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
5	SCREW	STAINLESS STEEL 1/2" - 2" 3" - 6" 8"	4	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
6	NUT	STAINLESS STEEL 1/2" - 4" 5" - 8"	2	2 1/2"	7.09	5.50	4xØ0.75	0.91	2.95	7.48	-	6.06	12.64	5.06	0.69	0.69	14	14	2.76-F07	M8	34.49
7	SPRING WASHER	STAINLESS STEEL	2	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
8	TRAVEL STOP	STAINLESS STEEL	2	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
9	PACKING GLAND	STAINLESS STEEL	2	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
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																		



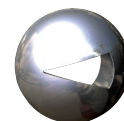
SERIES VF300 - VF600 - VF900 STAINLESS STEEL V-BALL VALVE

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



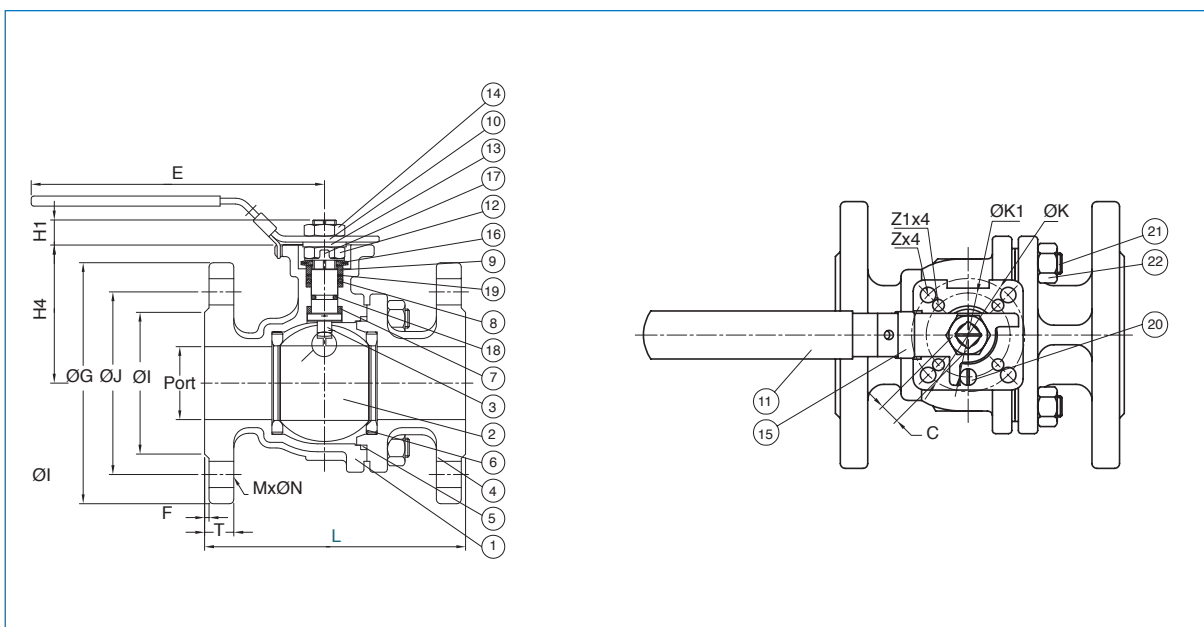
V30



V60



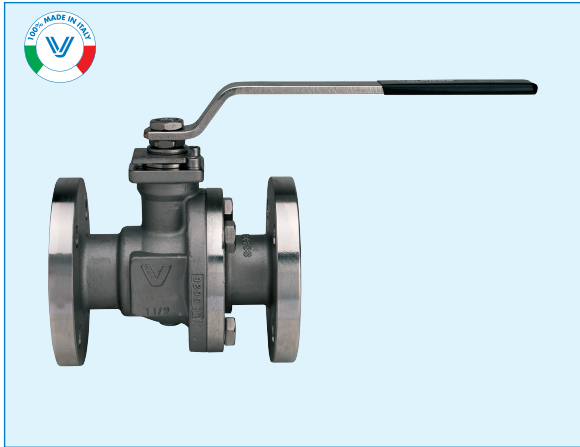
V90



POS.	PART NAME	MATERIAL	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

SPLIT-BODY V-BALL



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

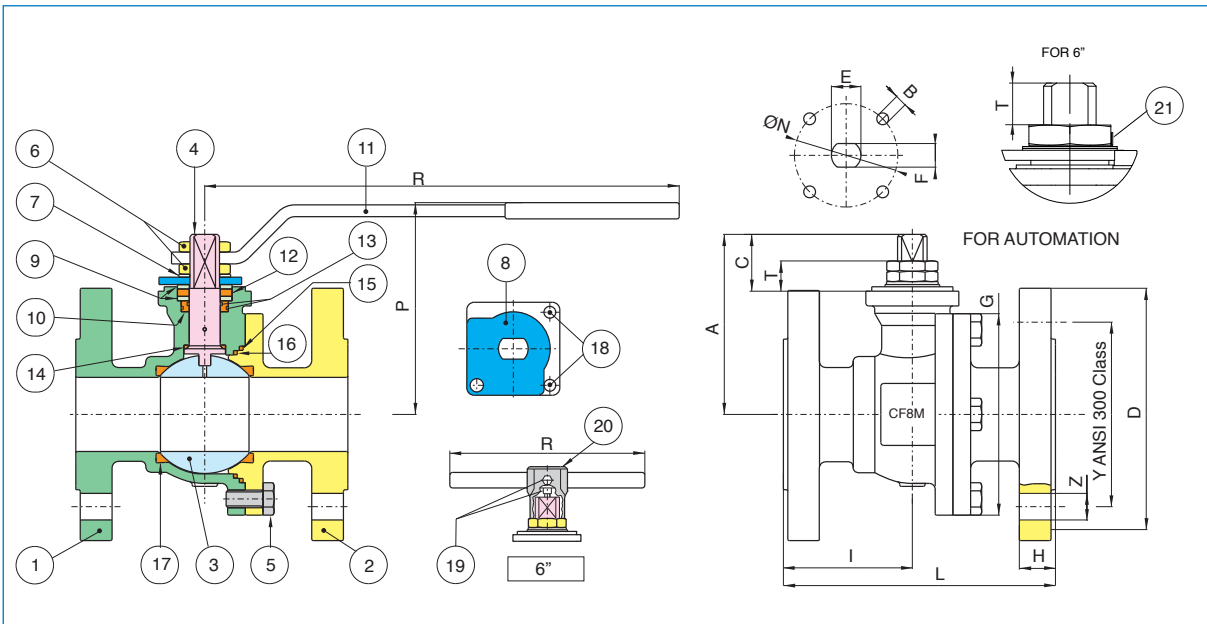
Stainless steel, ANSI class 300 flanged V-ball valve 30-60, 60, 90 degrees V-ports.

- 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

POS	PART NAME	MATERIAL	QTY
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



SERIES N500S CF8M SS DISC

Manually operated Wafer butterfly valves.

- Epoxy coated ductile iron (EN-GJS 400-15) Wafer body.
- N500S - sizes 1-1/2" to 24".
- ISO 5211 direct mounting pad/square stem.
- Food grade EPDM resilient seat -30°F to +266°F.
- API 609 face to face flange.
- Floating dual shaft disc design.
- Pressure rating: 250 psi: 1 1/2"-20" and 150 psi: 24".
- MSS SP 67 compliant.
- No pins in disc prevent potential leak points.
- NSF certified for drinking water service.

N500S: size 1 1/2" to 24".

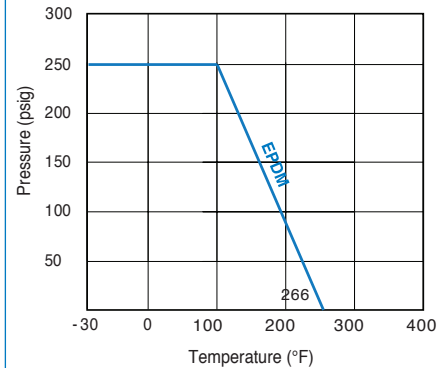
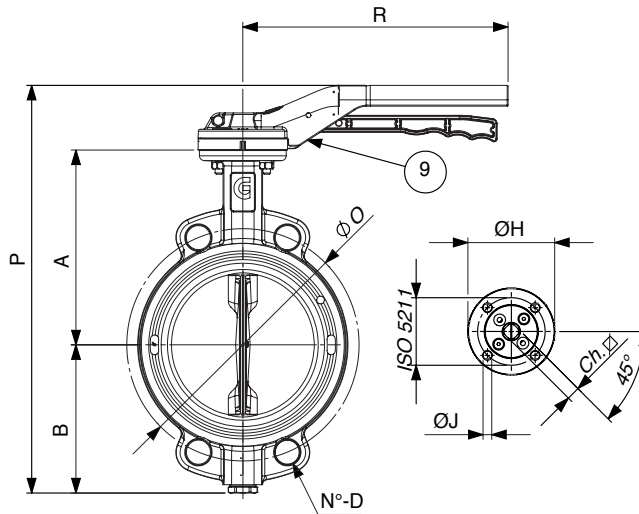
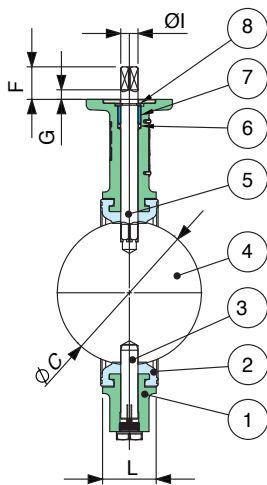
530S: FKM SEATS - size 2" to 24".

540S: NBR SEATS - size 2" to 24".



NSF/ANSI
61, 372
EPDM SEATS
ONLY

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POS.	PART NAME	MATERIAL	PCS	SIZE	ISO 5211	∠Ch	A	B	ØC	F	G	ØH	ØI	ØJ	L	N°-D	P	R	Weight (Lbs)	Seat torque lbf-in		Cv (GPM@ 1psi)	
																				100 psi	250 psi	50% OP	100% OP
1	BODY	DUCTILE IRON	1	1 1/2"	F07	11 mm	5.12	2.95	1.93	1.34	0.39	3.54	0.55	0.35	1.30	2-0.71	10.71	8.66	8.82	97	124	20.4	104
2	SEAT	EPDM	1	2"	F07	11 mm	5.43	3.19	2.17	1.34	0.39	3.54	0.55	0.35	1.69	4-0.79	11.26	8.66	10.14	106	133	31.8	134.9
3	LOWER SHAFT	A430F	1	2 1/2"	F07	11 mm	5.67	3.86	2.68	1.34	0.39	3.54	0.55	0.35	1.81	4-0.79	12.17	8.66	12.13	142	159	48	254.2
4	DISC	ASTM A351 CF8M (A316)	1	3"	F07	11 mm	6.22	4.33	3.19	1.34	0.39	3.54	0.55	0.35	1.81	4-0.79	13.19	8.66	12.79	266	354	72.6	431.5
5	UPPER SHAFT	A430F	1	4"	F07	11 mm	6.81	5.04	3.98	1.34	0.39	3.54	0.63	0.35	2.05	4-0.98	14.49	8.66	17.20	381	425	109.1	689.5
6	O-RING	NBR	1	5"	F07	14 mm	7.32	5.51	4.96	1.34	0.39	3.54	0.71	0.35	2.20	4-0.98	15.47	10.83	20.39	460	620	173.2	1200
7	BUSHING	SINT. BRONZE	1	6"	F07	14 mm	7.95	6.10	5.91	1.34	0.39	3.54	0.71	0.35	2.20	4-0.98	16.69	10.83	24.58	531	797	260.7	1756.1
8	STOP RING	SPRING STEEL	1	8"	F10	17 mm	9.45	7.48	7.87	1.50	0.39	4.92	0.87	0.43	2.36	4-0.98	19.57	-	30.86	947	1859	482.4	3105.2
9	HANDLEVER	ALUMINIUM	1	10"	F10	22 mm	10.63	8.66	9.84	1.50	0.39	4.92	1.18	0.43	2.68	4-1.10	21.93	-	48.50	1549	2832	730.5	5191.8
				12"	F10	22 mm	11.81	9.72	11.73	1.50	0.39	4.92	1.18	0.43	3.07	4-1.10	24.17	-	70.55	2390	3452	1054.8	8169
				14"	F12	27 mm	12.99	11.02	13.43	1.10	-	5.91	1.38	0.55	3.07	4-1.14	26.65	-	92.59	3983	7523	1449.4	9337.7
				16"	F12	27 mm	13.98	12.01	15.35	1.10	-	5.91	1.57	0.55	4.02	4-1.18	28.62	-	167.55	4248	7966	1782.5	10871.9
				18"	F14	36 mm	15.75	13.50	17.48	1.46	-	6.89	1.77	0.55	4.49	4-1.26	31.89	-	242.51	4602	6373	2398.2	15063.3
				20"	F14/F16	36 mm	16.61	14.41	19.49	1.46	-	8.27	1.77	0.71/0.87	5.00	4-1.26	33.66	-	308.65	5310	7169	2920	18313
				24"	F16	46 mm	19.49	18.11	23.43	2.95	-	8.27	2.36	0.87	6.06	4-1.54	40.24	-	485.02	17347	20357	4510	25473.2

* 10" - 24" available in bare stem version only

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.



BUTTERFLY VALVES



SERIES N501S CF8M SS DISC

Manually operated Lug butterfly valves.

- Epoxy coated ductile iron (EN-GJS 400-15) Lug body.
- N501S - sizes 1-1/2" to 24".
- ISO 5211 direct mounting pad/square stem.
- Food grade EPDM resilient seat -30°F to +266°F.
- API 609 face to face flange.
- Floating dual shaft disc design
- Pressure rating: 250 psi: 1 1/2"-20" and 150 psi: 24".
- MSS SP 67 compliant.
- No pins in disc prevent potential leak points.
- NSF certified for drinking water service.

N501S: size 1 1/2" to 24".

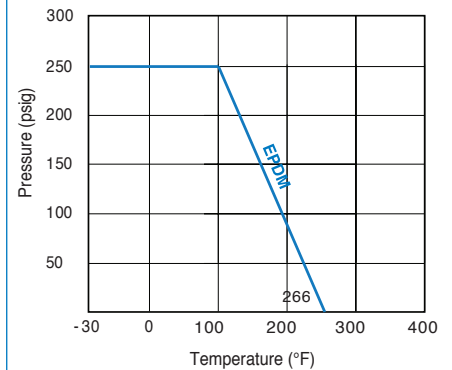
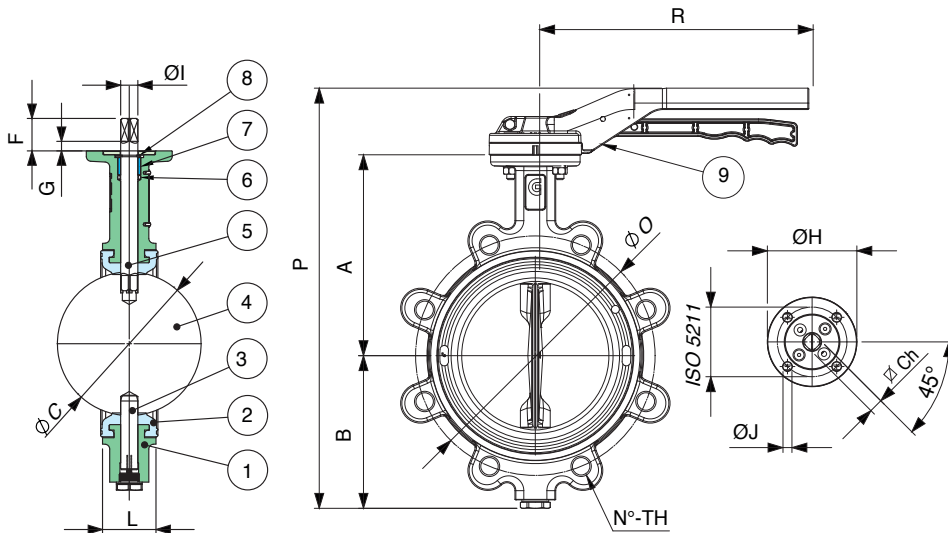
531S: FKM SEATS - size 2" to 24".

541S: NBR SEATS - size 2" to 24".



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POS.	PART NAME	MATERIAL	PCS	SIZE	ISO 5211	∠Ch	A	B	ØC	F	G	ØH	ØI	ØJ	L	N°-D	P	R	Weight (Lbs)	Seat torque lbf-in		Cv (GPM@ 1psi)	
																				100 psi	250 psi	50% OP	100% OP
1	BODY	DUCTILE IRON	1	1 1/2"	F07	11 mm	5.12	2.95	1.93	1.34	0.39	3.54	0.55	0.35	1.30	4-1/2"-13	10.71	8.66	10.58	97	124	20.4	104
2	SEAT	EPDM	1	2"	F07	11 mm	5.43	3.19	2.17	1.34	0.39	3.54	0.55	0.35	1.69	4-5/8"-11	11.26	8.66	12.13	106	133	31.8	134.9
3	LOWER SHAFT	A430F	1	2 1/2"	F07	11 mm	5.67	3.86	2.68	1.34	0.39	3.54	0.55	0.35	1.81	4-5/8"-11	12.17	8.66	15.65	142	159	48	254.2
4	DISC	ASTM A351 CF8M (A316)	1	3"	F07	11 mm	6.22	4.33	3.19	1.34	0.39	3.54	0.55	0.35	1.81	4-5/8"-11	13.19	8.66	17.42	266	354	72.6	431.5
5	UPPER SHAFT	A430F	1	4"	F07	11 mm	6.81	5.04	3.98	1.34	0.39	3.54	0.63	0.35	2.05	8-5/8"-11	14.49	8.66	21.83	381	425	109.1	689.5
6	O-RING	NBR	1	5"	F07	14 mm	7.32	5.51	4.96	1.34	0.39	3.54	0.71	0.35	2.20	8-3/4"-10	15.47	10.83	25.90	460	620	173.2	1200
7	BUSHING	SINT. BRONZE	1	6"	F07	14 mm	7.95	6.10	5.91	1.34	0.39	3.54	0.71	0.35	2.20	8-3/4"-10	16.69	10.83	29.87	531	797	260.7	1756.1
8	STOP RING	SPRING STEEL	1	8"	F10	17 mm	9.45	7.48	7.87	1.50	0.39	4.92	0.87	0.43	2.36	8-3/4"-10	19.57	-	59.52	947	1859	482.4	3105.2
9	HANDLEVER	ALUMINIUM	1	10"	F10	22 mm	10.63	8.66	9.84	1.50	0.39	4.92	1.18	0.43	2.68	12-7/8"-9	21.93	-	74.96	1549	2832	730.5	5191.8
				12"	F10	22 mm	11.81	9.72	11.73	1.50	0.39	4.92	1.18	0.43	3.07	12-7/8"-9	24.17	-	108.03	2390	3452	1054.8	8169
				14"	F12	27 mm	12.99	11.02	13.43	1.10	-	5.91	1.38	0.55	3.07	12-1"-8	26.65	-	136.69	3983	7523	1449.4	9337.7
				16"	F12	27 mm	13.98	12.01	15.35	1.10	-	5.91	1.57	0.55	4.02	16-1"-8	28.62	-	198.42	4248	7966	1782.5	10871.9
				18"	F14	36 mm	15.75	13.50	17.48	1.46	-	6.89	1.77	0.55	4.49	16-1 1/8"-7	31.89	-	374.79	4602	6373	2398.2	15063.3
				20"	F14/F16	36 mm	16.61	14.41	19.49	1.46	-	8.27	1.77	0.71/0.87	5.00	20-1 1/8"-7	33.66	-	396.83	5310	7169	2920	18313
				24"	F16	46 mm	19.49	18.11	23.43	2.95	-	8.27	2.36	0.87	6.06	20-1 1/4"-8	40.24	-	639.34	17347	20357	4510	25473.2

* 10" - 24" available in bare stem version only

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 GN500S CF8M SS DISC

Gear operated Wafer butterfly valves.

- Epoxy coated ductile iron (EN-GJS 400-15) Wafer body.
- GN500S - sizes 1-1/2" to 24".
- ISO 5211 direct mounting pad/square stem.
- Food grade EPDM resilient seat -30°F to +266°F.
- API 609 face to face flange.
- Floating dual shaft disc design.
- Pressure rating: 250 psi: 1 1/2"-20" and 150 psi: 24".
- MSS SP 67 compliant.
- No pins in disc prevent potential leak points.
- NSF certified for drinking water service.

GN500S: size 1 1/2" to 24".

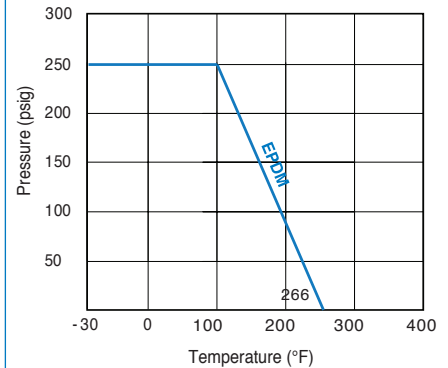
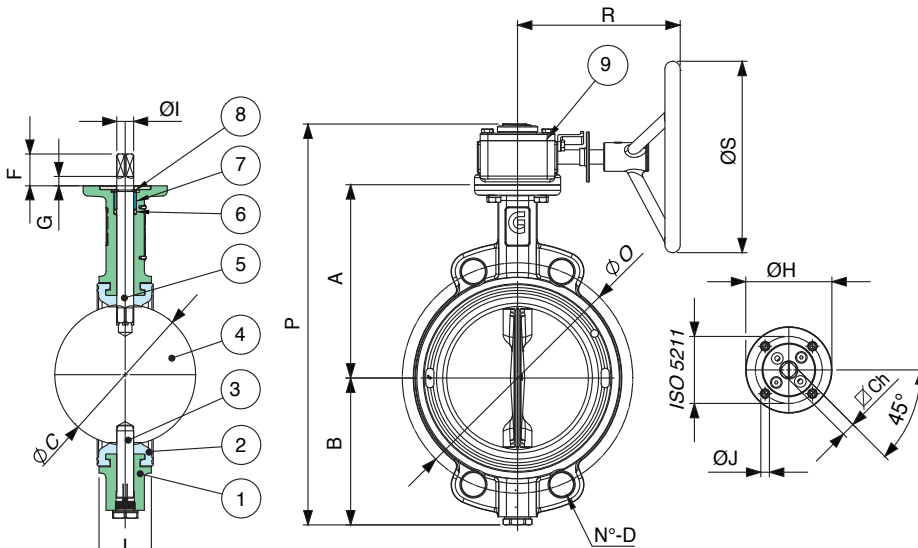
G530S: FKM SEATS - size 2" to 24".

G540S: NBR SEATS - size 2" to 24".



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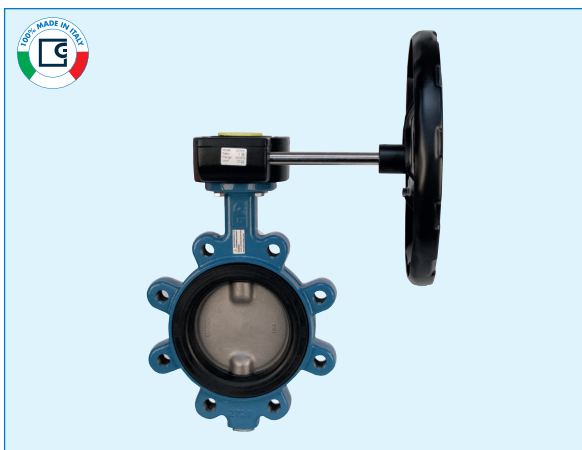
POS.	PART NAME	MATERIAL	PCS	SIZE	ISO 5211	∅Ch	A	B	∅C	F	G	∅H	∅I	∅J	L	N°-D	P	R	∅S	Weight (Lbs)	Seat torque lbf-in		Cv (GPM@ 1psi)	
																					100 psi	250 psi	50% OP	100% OP
1	BODY	DUCTILE IRON	1	1 1/2"	F07	11 mm	5.12	2.95	1.93	1.34	0.39	3.54	0.55	0.35	1.30	2-0.71	10.59	6.69	7.87	9.70	97	124	20.4	104
				2"	F07	11 mm	5.43	3.19	2.17	1.34	0.39	3.54	0.55	0.35	1.69	4-0.79	11.14	6.69	7.87	11.02	106	133	31.8	134.9
2	SEAT	EPDM	1	2 1/2"	F07	11 mm	5.67	3.86	2.68	1.34	0.39	3.54	0.55	0.35	1.81	4-0.79	12.05	6.69	7.87	13.01	142	159	48	254.2
				3"	F07	11 mm	6.22	4.33	3.19	1.34	0.39	3.54	0.55	0.35	1.81	4-0.79	13.07	6.69	7.87	13.67	266	354	72.6	431.5
3	LOWER SHAFT	A430F	1	4"	F07	11 mm	6.81	5.04	3.98	1.34	0.39	3.54	0.63	0.35	2.05	4-0.98	14.37	6.69	7.87	18.08	381	425	109.1	689.5
				5"	F07	14 mm	7.32	5.51	4.96	1.34	0.39	3.54	0.71	0.35	2.20	4-0.98	15.35	6.69	7.87	20.72	460	620	173.2	1200
4	DISC	ASTM A351 CF8M (A316)	1	6"	F07	14 mm	7.95	6.10	5.91	1.34	0.39	3.54	0.71	0.35	2.20	4-0.98	16.57	6.69	7.87	24.91	531	797	260.7	1756.1
				8"	F10	17 mm	9.45	7.48	7.87	1.50	0.39	4.92	0.87	0.43	2.36	4-0.98	19.51	7.05	7.87	38.80	947	1859	482.4	3105.2
5	UPPER SHAFT	A430F	1	10"	F10	22 mm	10.63	8.66	9.84	1.50	0.39	4.92	1.18	0.43	2.68	4-1.10	21.87	7.05	7.87	56.44	1549	2832	730.5	5191.8
				12"	F10	22 mm	11.81	9.72	11.73	1.50	0.39	4.92	1.18	0.43	3.07	4-1.10	24.11	7.05	7.87	78.48	2390	3452	1054.8	8169
6	O-RING	NBR	1	14"	F12	27 mm	12.99	11.02	13.43	1.10	-	5.91	1.38	0.55	3.07	4-1.14	27.52	10.43	13.78	119.05	3983	7523	1449.4	9337.7
				16"	F12	27 mm	13.98	12.01	15.35	1.10	-	5.91	1.57	0.55	4.02	4-1.18	29.49	10.43	13.78	194.01	4248	7966	1782.5	10871.9
7	BUSHING	SINT. BRONZE	1	18"	F14	36 mm	15.75	13.50	17.48	1.46	-	6.89	1.77	0.55	4.49	4-1.26	33.15	11.81	15.75	271.17	4602	6373	2398.2	15063.3
				20"	F14/F16	36 mm	16.61	14.41	19.49	1.46	-	8.27	1.77	0.71/0.87	5.00	4-1.26	34.92	11.81	15.75	337.31	5310	7169	2920	18313
8	STOP RING	SPRING STEEL	1	24"	F16	46 mm	19.49	18.11	23.43	2.95	-	8.27	2.36	0.87	6.06	4-1.54	51.38	14.72	19.69	529.33	17347	20357	4510	25473.2

*Consult factory for larger sizes

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.



BUTTERFLY VALVES



SERIES GN501S CF8M SS DISC

Gear operated Lug butterfly valves.

- Epoxy coated ductile iron (EN-GJS 400-15) Lug body.
- GN501S - sizes 1 1/2" to 24"
- ISO 5211 direct mounting pad/square stem.
- Food grade EPDM resilient seat -30°F to +266°F.
- API 609 face to face flange.
- Floating dual shaft disc design.
- Pressure rating 250 psi: 1 1/2"-20" and 150 psi: 24".
- MSS SP 67 compliant.
- No pins in disc prevent potential leak points.
- NSF certified for drinking water service.

GN501S: size 1 1/2" to 24".

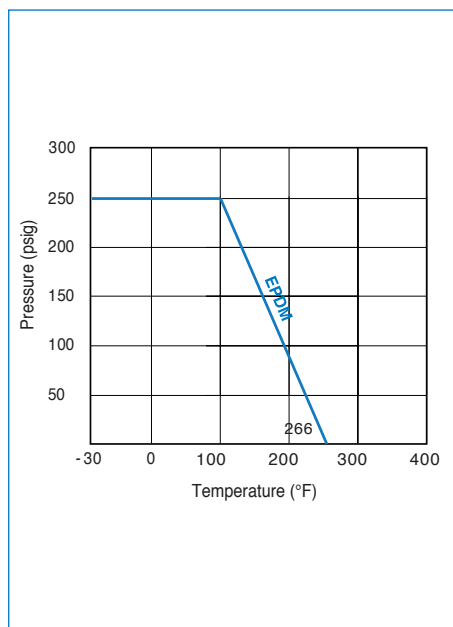
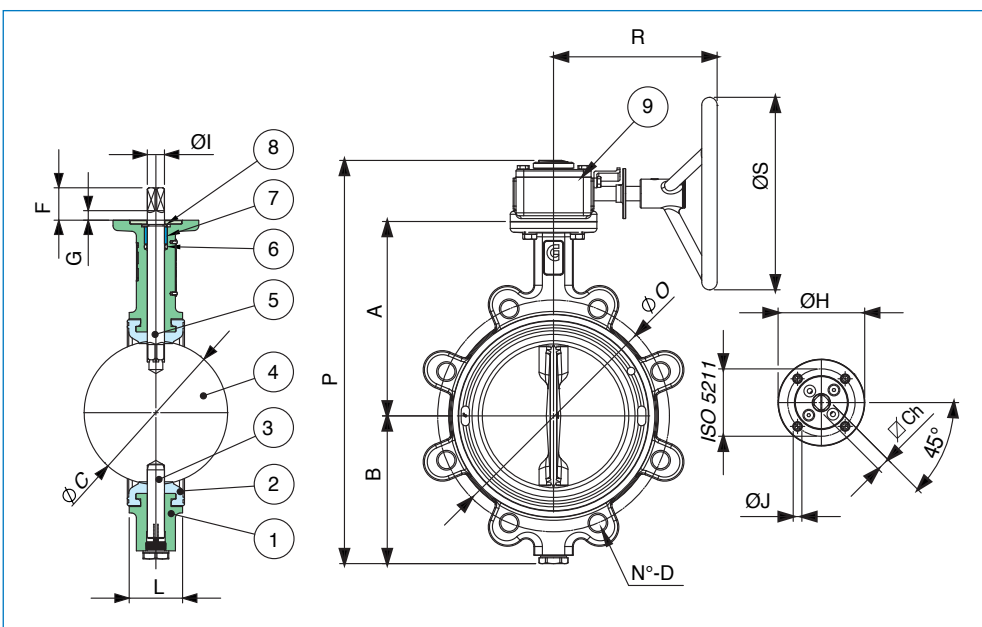
G531S: FKM SEATS - size 2" to 24".

G541S: NBR SEATS - size 2" to 24".



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POS.	PART NAME	MATERIAL	PCS
1	BODY	DUCTILE IRON	1
2	SEAT	EPDM	1
3	LOWER SHAFT	A430F	1
4	DISC	ASTM A351 CF8M (A316)	1
5	UPPER SHAFT	A430F	1
6	O-RING	NBR	1
7	BUSHING	SINT. BRONZE	1
8	STOP RING	SPRING STEEL	1
9	GEAR	DUCTILE IRON	1

SIZE	ISO 5211	ØCh	A	B	ØC	F	G	ØH	ØI	ØJ	L	N°-D	P	R	ØS	Weight (Lbs)	Seat torque lbf-in		Cv (GPM@ 1psi)	
																	100 psi	250 psi	50% OP	100% OP
1 1/2"	F07	11 mm	5.12	2.95	1.93	1.34	0.39	3.54	0.55	0.35	1.30	4-1/2"-13	10.59	6.69	7.87	11.46	97	124	20.4	104
2"	F07	11 mm	5.43	3.19	2.17	1.34	0.39	3.54	0.55	0.35	1.69	4-5/8"-11	11.14	6.69	7.87	13.01	106	133	31.8	134.9
2 1/2"	F07	11 mm	5.67	3.86	2.68	1.34	0.39	3.54	0.55	0.35	1.81	4-5/8"-11	12.05	6.69	7.87	16.53	142	159	48	254.2
3"	F07	11 mm	6.22	4.33	3.19	1.34	0.39	3.54	0.55	0.35	1.81	4-5/8"-11	13.07	6.69	7.87	18.30	266	354	72.6	431.5
4"	F07	11 mm	6.81	5.04	3.98	1.34	0.39	3.54	0.63	0.35	2.05	8-5/8"-11	14.37	6.69	7.87	22.71	381	425	109.1	689.5
5"	F07	14 mm	7.32	5.51	4.96	1.34	0.39	3.54	0.71	0.35	2.20	8-3/4"-10	15.35	6.69	7.87	26.23	460	620	173.2	1200
6"	F07	14 mm	7.95	6.10	5.91	1.34	0.39	3.54	0.71	0.35	2.20	8-3/4"-10	16.57	6.69	7.87	30.20	531	797	260.7	1756.1
8"	F10	17 mm	9.45	7.48	7.87	1.50	0.39	4.92	0.87	0.43	2.36	8-3/4"-10	19.51	7.05	7.87	67.46	947	1859	482.4	3105.2
10"	F10	22 mm	10.63	8.66	9.84	1.50	0.39	4.92	1.18	0.43	2.68	12-7/8"-9	21.87	7.05	7.87	82.89	1549	2832	730.5	5191.8
12"	F10	22 mm	11.81	9.72	11.73	1.50	0.39	4.92	1.18	0.43	3.07	12-7/8"-9	24.11	7.05	7.87	115.96	2390	3452	1054.8	8169
14"	F12	27 mm	12.99	11.02	13.43	1.10	-	5.91	1.38	0.55	3.07	12-1"-8	27.52	10.43	13.78	163.14	3983	7523	1449.4	9337.7
16"	F12	27 mm	13.98	12.01	15.35	1.10	-	5.91	1.57	0.55	4.02	16-1"-8	29.49	10.43	13.78	224.87	4248	7966	1782.5	10871.9
18"	F14	36 mm	15.75	13.50	17.48	1.46	-	6.89	1.77	0.55	4.49	16-1 1/8"-7	33.15	11.81	15.75	403.45	4602	6373	2398.2	15063.3
20"	F14/F16	36 mm	16.61	14.41	19.49	1.46	-	8.27	1.77	0.71/0.87	5.00	16-1 1/8"-7	34.92	11.81	15.75	425.49	5310	7169	2920	18313
24"	F16	46 mm	19.49	18.11	23.43	2.95	-	8.27	2.36	0.87	6.06	16-1 1/8"-7	51.38	14.72	19.69	683.65	17347	20357	4510	25473.2

*Consult factory for larger sizes

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 550P PTFE COATED SS DISC

Manually operated Wafer butterfly valves.

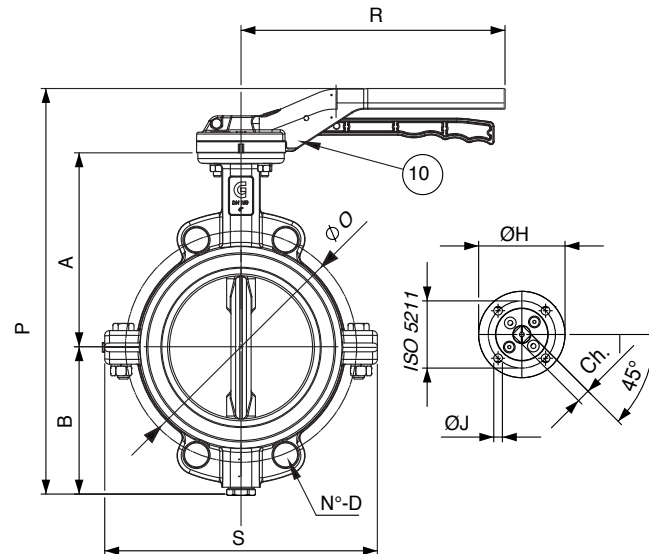
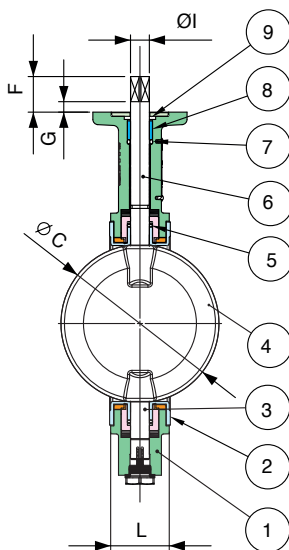
- Epoxy coated ductile iron (EN-GJS 400-15) Wafer body.
- 550P - sizes 2" to 12".
- ISO 5211 direct mounting pad/square stem.
- PTFE seat -70°F to +392°F.
- API 609 face to face flange.
- Floating dual shaft disc design.
- Pressure rating 250 psi: 2"- 8" and 150 psi: 10"-12".
- MSS SP 67 compliant.
- No pins in disc prevent potential leak points.
- FDA approved PTFE coating.
- Stainless steel body available on request.

550P: size 2" to 12".

G550P: GEAR OPERATED VERSION size 2" to 12".

FDA
FDA APPROVED
PTFE COATING

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POS.	PART NAME	MATERIAL		SIZE	ISO 5211	ØCh	A	B	ØC	F	G	ØH	ØI	ØJ	L	N°-D	P	R	S	Weight (Lbs)	Seat torque lb-in		Cv (GPM@ 1psi)	
																					100 psi	250 psi	50% OP	100% OP
1	BODY	DUCTILE IRON	1	2"	F07	11 mm	5.43	3.19	2.17	1.34	0.39	3.54	0.55	0.35	1.69	4-0.79	11.26	8.66	6.50	11.46	142	221	31.8	134.9
2	SEAT	PTFE	1	2 1/2"	F07	11 mm	5.67	3.86	2.68	1.34	0.39	3.54	0.55	0.35	1.81	4-0.79	12.17	8.66	7.32	13.01	177	248	48	254.2
3	LOWER SHAFT	A630	1	3"	F07	11 mm	6.22	4.33	3.19	1.34	0.39	3.54	0.55	0.35	1.81	4-0.79	13.19	8.66	7.72	13.67	354	487	72.6	431.5
4	DISC	S.S. PTFE LINED	1	4"	F07	11 mm	6.81	5.04	3.98	1.34	0.39	3.54	0.63	0.35	2.05	4-0.98	14.49	8.66	8.66	18.96	451	584	109.1	689.5
5	SECONDARY SEAL	PTFE	2	5"	F07	14 mm	7.32	5.51	4.96	1.34	0.39	3.54	0.71	0.35	2.20	4-0.98	15.47	10.83	9.84	23.92	531	752	173.2	1200
6	UPPER SHAFT	A630	1	6"	F07	14 mm	7.95	6.10	5.91	1.34	0.39	3.54	0.71	0.35	2.20	4-0.98	16.69	10.83	10.94	27.67	620	885	260.7	1756.1
7	O-RING	VITON	1	8"	F10	17 mm	9.45	7.48	7.87	1.50	0.39	4.92	0.87	0.43	2.36	4-0.98	19.57	-	13.98	33.51	1283	1938	482.4	3105.2
8	BUSHING	PTFE	1	10"	F10	22 mm	10.63	8.66	9.84	1.50	0.39	4.92	1.18	0.43	2.68	4-1.10	21.93	-	15.67	54.01	1947	-	730.5	5191.8
9	STOP RING	SPRING STEEL	1	12"	F10	22 mm	11.81	9.72	11.73	1.50	0.39	4.92	1.18	0.43	3.07	4-1.10	24.17	-	17.91	70.55	2478	-	1054.8	8169
10	HANDLEVER	ALUMINIUM	1																					

* 10" - 12" available in bare stem or gear operated version only

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.



BUTTERFLY VALVE



SERIES 551P PTFE COATED SS DISC

Manually operated Lug butterfly valves.

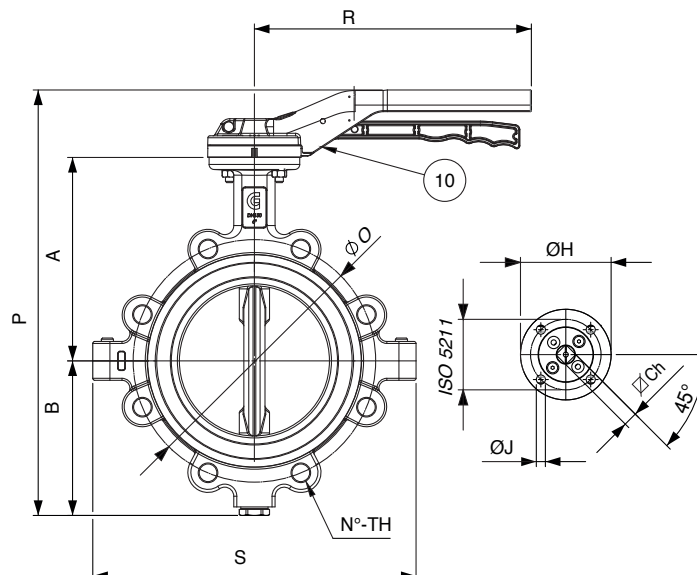
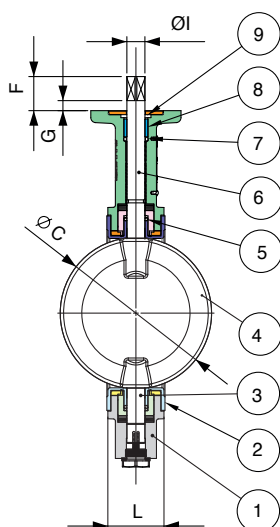
- Epoxy coated ductile iron (EN-GJS 400-15) Lug body.
- 551P - sizes 2" to 12".
- ISO 5211 direct mounting pad/square stem.
- PTFE seat -70°F to +392°F.
- API 609 face to face flange.
- Floating dual shaft disc design.
- Pressure rating: 250 psi 2"-8" and 150 psi: 10"-12".
- MSS SP 67 compliant.
- No pins in disc prevent potential leak points.
- FDA approved PTFE coating.

551P: size 2" to 12".

G551P: GEAR OPERATED VERSION size 2" to 12".

FDA
FDA APPROVED
PTFE COATING

NEW



POS.	PART NAME	MATERIAL	
1	BODY	DUCTILE IRON	1
2	SEAT	PTFE	1
3	LOWER SHAFT	A630	1
4	DISC	S.S. PTFE LINED	1
5	SECONDARY SEAL	PTFE	2
6	UPPER SHAFT	A630	1
7	O-RING	VITON	1
8	BUSHING	PTFE	1
9	STOP RING	SPRING STEEL	1
10	HANDLEVER	ALUMINIUM	1

SIZE	ISO 5211	∠Ch	A	B	ØC	F	G	ØH	ØI	ØJ	L	N°-D	P	R	S	Weight (Lbs)	Seat torque lbf-in		Cv (GPM@ 1psi)	
																	100 psi	250 psi	50% OP	100% OP
2"	F07	11 mm	5.43	3.19	2.17	1.34	0.39	3.54	0.55	0.35	1.69	4-5/8"-11	11.26	8.66	6.50	12.57	142	221	31.8	134.9
2 1/2"	F07	11 mm	5.67	3.86	2.68	1.34	0.39	3.54	0.55	0.35	1.81	4-5/8"-11	12.17	8.66	7.32	14.33	177	248	48	254.2
3"	F07	11 mm	6.22	4.33	3.19	1.34	0.39	3.54	0.55	0.35	1.81	4-5/8"-11	13.19	8.66	9.53	20.72	354	487	72.6	431.5
4"	F07	11 mm	6.81	5.04	3.98	1.34	0.39	3.54	0.63	0.35	2.05	8-5/8"-11	14.49	8.66	10.63	22.49	451	584	109.1	689.5
5"	F07	14 mm	7.32	5.51	4.96	1.34	0.39	3.54	0.71	0.35	2.20	8-3/4"-10	15.47	10.83	11.69	29.21	531	752	173.2	1200
6"	F07	14 mm	7.95	6.10	5.91	1.34	0.39	3.54	0.71	0.35	2.20	8-3/4"-10	16.69	10.83	12.64	32.96	620	885	260.7	1756.1
8"	F10	17 mm	9.45	7.48	7.87	1.50	0.39	4.92	0.87	0.43	2.36	8-3/4"-10	19.57	-	16.54	55.12	1283	1938	482.4	3105.2
10"	F10	22 mm	10.63	8.66	9.84	1.50	0.39	4.92	1.18	0.43	2.68	12-7/8"-9	21.93	-	18.58	66.14	1947	-	730.5	5191.8
12"	F10	22 mm	11.81	9.72	11.73	1.50	0.39	4.92	1.18	0.43	3.07	12-7/8"-9	24.17	-	21.26	99.21	2478	-	1054.8	8169

* 10" - 12" available in bare stem or gear operated version only

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.



HIGH PERFORMANCE BUTTERFLY VALVE



SERIES 8100 - 9100

CARBON STEEL - STAINLESS STEEL

Manually operated ANSI 150 class, high performance Wafer style butterfly valves.

- Temperature range -20°F to +446°F, 150 WSP.

- ISO 5211 direct mounting pad/square stem.

- Compact design, easy access to packing.

- Replaceable seat design.

- Multiple V-ring stem packing.

- RPTFE seats, metal seats upon request.

- 18" to 24" sizes available upon request.

- NACE MR0175.

- FC170-2 compliant.

- CRNs available upon request.

- 10 position locking handle.

- Soft seat leakage protection - Class VI.

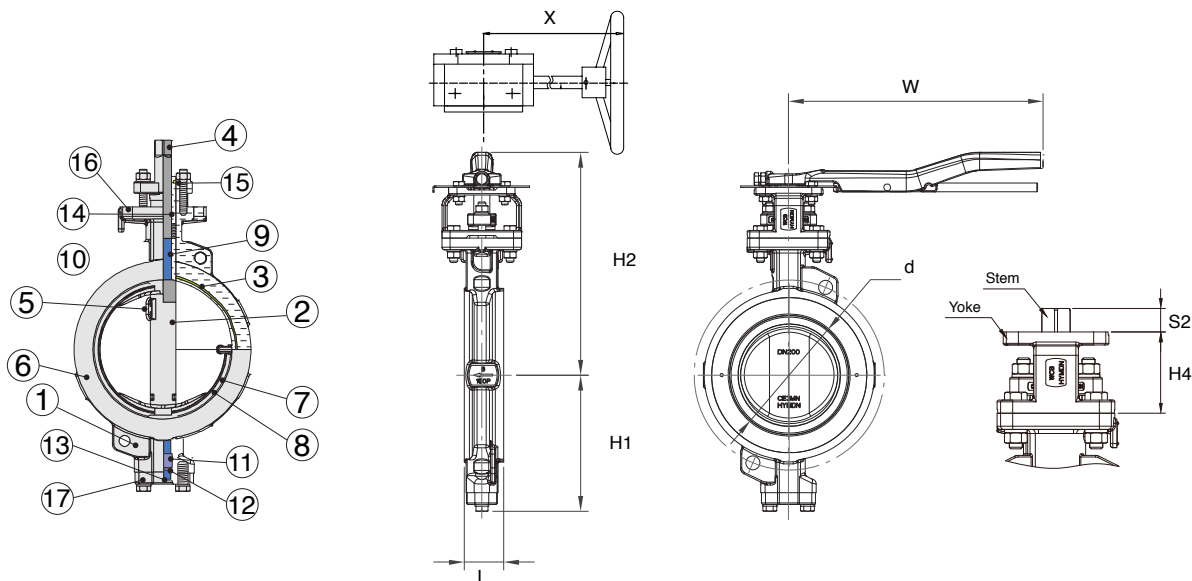
- Metal seat leakage protection - Class V.

8100-9100: size 2" to 16".

8120-9120: METAL SEATED VERSION - size 2" to 16".

8140-9140: API 607 FIRE SAFE VERSION - size 2" to 16".

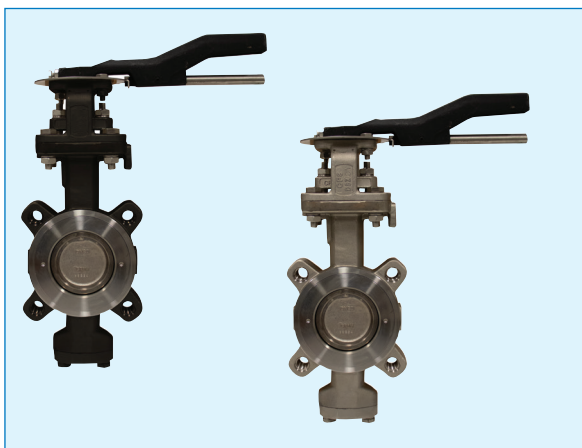
G8100-G9100: GEAR OPERATED VERSION - size 2" to 16".



POS.	PART NAME	MATERIAL		PCS	Size	L	d	H1	H2	W	X	H4	S2	Stem	Yoke ISO	Cv	Break Torque (lbf-in)	Weight (Lbs)
1	BODY	A216 Gr. WCB	A351 Gr. CF8M	1	2"	1.77	1.81	4.65	9.21	8.66	6.06	2.76	0.63	14	F07	70	133	11.0
2	DISC	A351 Gr. CF8M		1	2 1/2"	1.89	2.40	4.96	9.53	8.66	6.06	2.76	0.63	14	F07	150	150	13.0
3	SEAT	8100 - 9100	Carbon-filled PTFE	1	3"	1.89	2.99	5.28	10.24	8.66	6.06	2.76	0.63	14	F07	227	177	15.0
		8120 - 9120	Inconel 718		4"	2.13	3.78	5.67	10.63	8.66	6.06	2.76	0.63	14	F07	473	283	20.0
		8140 - 9140	Fire safe seat		5"	2.24	4.65	7.01	11.42	11.81	6.06	2.76	0.75	17	F07	605	381	26.0
4	STEM	A182 Gr. F316		1	6"	2.24	5.63	7.48	12.01	11.81	6.06	3.15	0.75	17	F07	1010	487	29.0
5	TAPER PIN	A182 Gr. F316L		2	8"	2.44	7.40	8.43	13.78	15.75	8.82	3.15	0.83	17	F10	2004	894	46.0
6	RETAINER RING	A351 Gr. CF8M		1	10"*	2.76	9.29	10.00	10.24	-	8.82	3.94	0.94	22	F10	3199	1407	66.0
7	SPRING	A182 Gr. F316		1	12"*	3.19	11.06	11.73	11.42	-	8.46	3.94	1.14	27	F12	4672	2266	101.0
8	LOCK PIN	PTFE		1	14"*	3.62	12.38	11.97	17.95	-	13.62	3.94	1.10	27	F14	3740	2266	231.5
9	STEM BUSH	PTFE + SS316L	A182 Gr. F316	2	16"*	4.02	14.47	13.39	20.63	-	13.62	3.94	1.46	36	F16	5449	1859	284.4
10	GLAND PACKING	Carbon-filled RTFE		1														
11	THRUST RING	A351 Gr. CF8M		1														
12	THRUST PLATE	PTFE + SS316L		1														
13	GASKET	PTFE		1														
14	GLAND BUSH	A351 Gr. CF8M		1														
15	ANTI-BLOWOUT PIN	A182 Gr. F316		1														
16	GLAND FLANGE	A351 Gr. CF8		1														
17	BOTTOM COVER	A351 Gr. CF8M		1														

* 10" - 16" available in bare stem or gear operated versions only.

HIGH PERFORMANCE BUTTERFLY VALVE



SERIES 8101 - 9101 CARBON STEEL - STAINLESS STEEL

Manually operated ANSI 150 class, high performance Lug style butterfly valves.

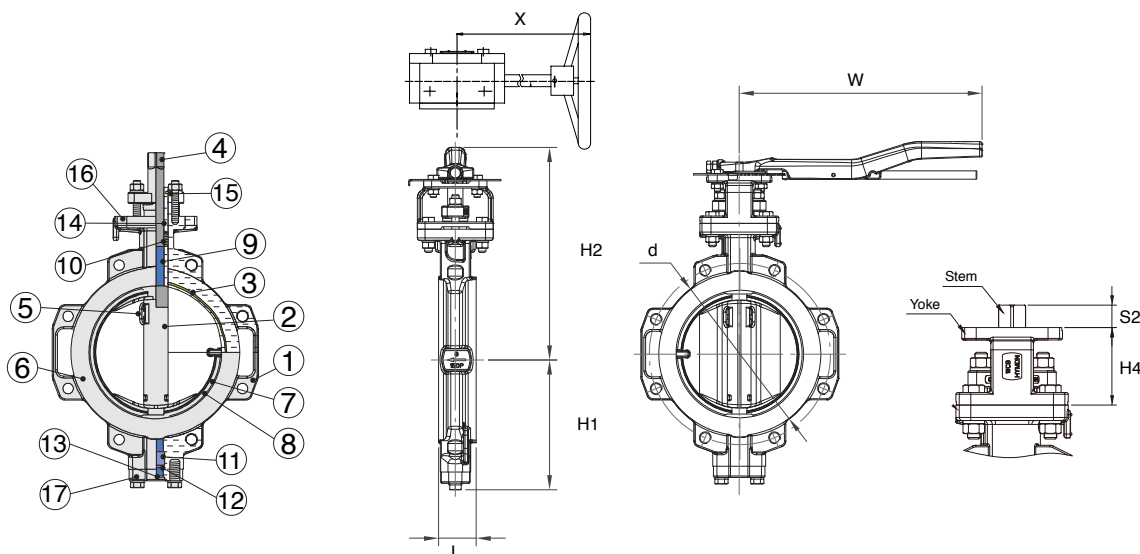
- Temperature range -20°F to +446°F, 150 WSP.
- ISO 5211 direct mounting pad/square stem.
- Compact design, easy access to packing.
- Replaceable seat design.
- NACE MR0175.
- FC170-2 compliant.
- CRNs available upon request.
- Multiple V-ring stem packing.
- RPTFE seats, metal seats upon request.
- 10 position locking handle.
- Soft seat leakage protection - Class VI.
- Metal seat leakage protection - Class V.
- 18" to 24" sizes available upon request.

8101-9101: size 2" to 16".

8121-9121: METAL SEATED VERSION - size 2" to 16".

8141-9141: API 607 FIRE SAFE VERSION - size 2" to 16".

G8101-G9101: GEAR OPERATED VERSION - size 2" to 16".



POS	PART NAME	MATERIAL		PCS
1	BODY	A216 Gr. WCB	A351 Gr. CF8M	1
2	DISC	A351 Gr. CF8M		1
3	SEAT	8101 - 9101	Carbon-filled PTFE	1
		8121 - 9121	Inconel 718	
		8141 - 9141	Fire safe seat	
4	STEM	A182 Gr. F316		1
5	TAPER PIN	A182 Gr. F316L		2
6	RETAINER RING	A351 Gr. CF8M		1
7	SPRING	A182 Gr. F316		1
8	LOCK PIN	PTFE		1
9	STEM BUSH	PTFE + SS316L	A182 Gr. F316	2
10	GLAND PACKING	Carbon-filled RTFE		1
11	THRUST RING	A351 Gr. CF8M		1
12	THRUST PLATE	PTFE + SS316L		1
13	GASKET	PTFE		1
14	GLAND BUSH	A351 Gr. CF8M		1
15	ANTI-BLOWOUT PIN	A182 Gr. F316		1
16	GLAND FLANGE	A351 Gr. CF8		1
17	BOTTOM COVER	A351 Gr. CF8M		1

Size	L	d	H1	H2	W	X	H4	S2	Stem	Yoke ISO	Cv	Break Torque lbf-in	Weight (Lbs)
2"	1.77	1.81	4.65	9.21	8.66	6.06	2.76	0.63	14	F07	70	133	11.0
2 1/2"	1.89	2.40	4.96	9.53	8.66	6.06	2.76	0.63	14	F07	150	150	13.0
3"	1.89	2.99	5.28	10.24	8.66	6.06	2.76	0.63	14	F07	227	177	15.0
4"	2.13	3.78	5.67	10.63	8.66	6.06	2.76	0.63	14	F07	473	283	20.0
5"	2.24	4.65	7.01	11.42	11.81	6.06	2.76	0.75	17	F07	605	381	26.0
6"	2.24	5.63	7.48	12.01	11.81	6.06	3.15	0.75	17	F07	1010	487	29.0
8"	2.44	7.40	8.43	13.78	15.75	8.82	3.15	0.83	17	F10	2004	894	46.0
10"*	2.76	9.29	10.00	10.24	-	8.82	3.94	0.94	22	F10	3199	1407	66.0
12"*	3.19	11.06	11.73	11.42	-	8.46	3.94	1.14	27	F12	4672	2266	101.0
14"***	3.62	12.38	11.97	17.95	-	13.62	3.94	1.10	27	F14	3740	2266	291.0
16"***	4.02	14.47	13.39	20.63	-	13.62	3.94	1.46	36	F16	5449	1859	375.1

* 10" - 16" available in bare stem or gear operated versions only.

HIGH PERFORMANCE BUTTERFLY VALVE



SERIES 8300 - 9300

CARBON STEEL - STAINLESS STEEL

Manually operated ANSI 300 class, high performance Wafer style butterfly valves.

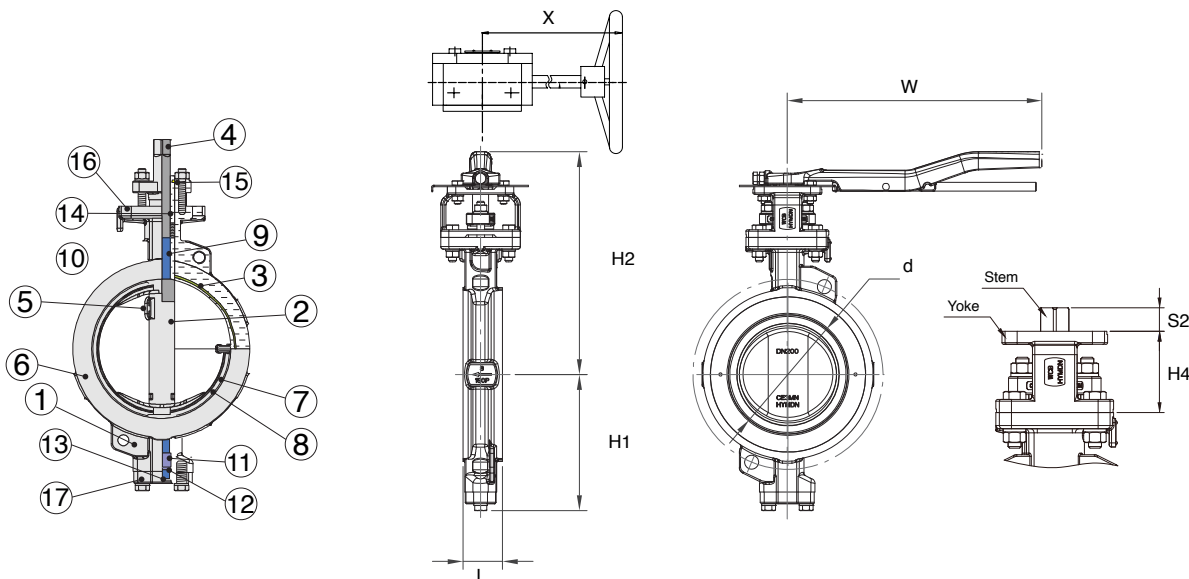
- Temperature range -20°F to +446°F, 150 WSP.
- ISO 5211 direct mounting pad/square stem.
- Compact design, easy access to packing.
- Replaceable seat design.
- NACE MR0175.
- FC170-2 compliant.
- CRNs available upon request.
- Multiple V-ring stem packing.
- RPTFE seats, metal seats upon request.
- 10 position locking handle.
- Soft seat leakage protection - Class VI.
- Metal seat leakage protection - Class V.
- 14" to 24" sizes available upon request.

8300-9300: size 2" to 12"

8320-9320: METAL SEATED VERSION - size 2" to 12"

8340-9340: API 607 FIRE SAFE VERSION - size 2" to 12"

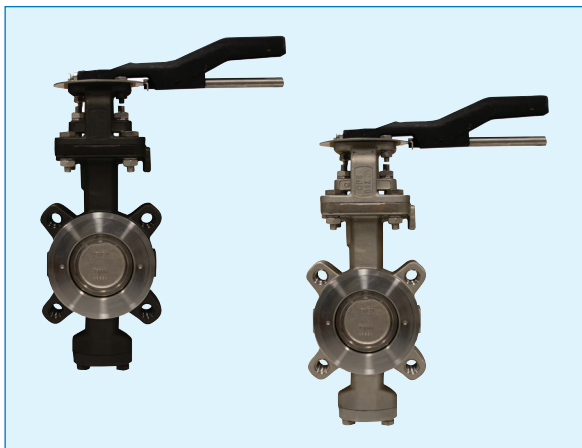
G8300-G9300: GEAR OPERATED VERSION - size 2" to 12"



POS.	PART NAME	MATERIAL	PCS	Size	L	D	D1	d	H1	H2	W	X	H4	S2	Stem	Yoke ISO	Cv	Break Torque lbf-in	Weight (Lbs)
1	BODY	A216 Gr. WCB A351 Gr. CF8M	1	2"	1.77	3.74	5.91	1.81	4.65	9.21	8.66	6.06	2.76	0.63	14	F07	70	336	11.0
2	DISC	A351 Gr. CF8M	1	2 1/2"	1.89	4.41	7.09	2.40	4.96	9.53	8.66	6.06	2.76	0.63	14	F07	150	372	13.0
3	SEAT	8300 - 9300 Carbon-filled PTFE 8320 - 9320 Inconel 718 8340 - 9340 Fire safe seat	1	3"	1.89	4.96	7.48	2.99	5.28	10.24	8.66	6.06	2.76	0.63	14	F07	227	434	15.0
4	STEM	A182 Gr. F316	1	4"	2.13	6.10	9.06	3.78	5.67	10.63	8.66	6.06	2.76	0.63	14	F07	473	726	20.0
5	TAPER PIN	A182 Gr. F316L	2	5"	2.24	7.24	10.04	4.65	7.01	11.42	11.81	6.06	2.76	0.75	17	F07	605	1248	26.0
6	RETAINER RING	A351 Gr. CF8M	1	6"	2.24	8.46	11.02	5.63	7.48	12.01	11.81	6.06	3.15	0.75	17	F07	1010	1823	29.0
7	SPRING	A182 Gr. F316	1	8"	2.44	10.51	13.58	7.40	8.43	13.78	15.75	8.82	3.15	0.83	17	F10	2004	3213	46.0
8	LOCK PIN	PTFE	1	10"*	2.76	12.83	15.94	9.29	10.00	10.24	-	8.82	3.94	0.94	22	F10	3199	5549	66.0
9	STEM BUSH	PTFE + SS316L A182 Gr. F316	2	12"*	3.19	14.76	19.09	11.06	11.73	11.42	-	8.46	3.94	1.14	27	F12	4672	8717	101.0
10	GLAND PACKING	Carbon-filled RTFE	1																
11	THRUST RING	A351 Gr. CF8M	1																
12	THRUST PLATE	PTFE + SS316L	1																
13	GASKET	PTFE	1																
14	GLAND BUSH	A351 Gr. CF8M	1																
15	ANTI-BLOWOUT PIN	A182 Gr. F316	1																
16	GLAND FLANGE	A351 Gr. CF8	1																
17	BOTTOM COVER	A351 Gr. CF8M	1																

* 10" - 12" available in bare stem or gear operated versions only.

HIGH PERFORMANCE BUTTERFLY VALVE



SERIES 8301 - 9301 CARBON STEEL - STAINLESS STEEL

Manually operated ANSI 300 class, high performance Lug style butterfly valves.

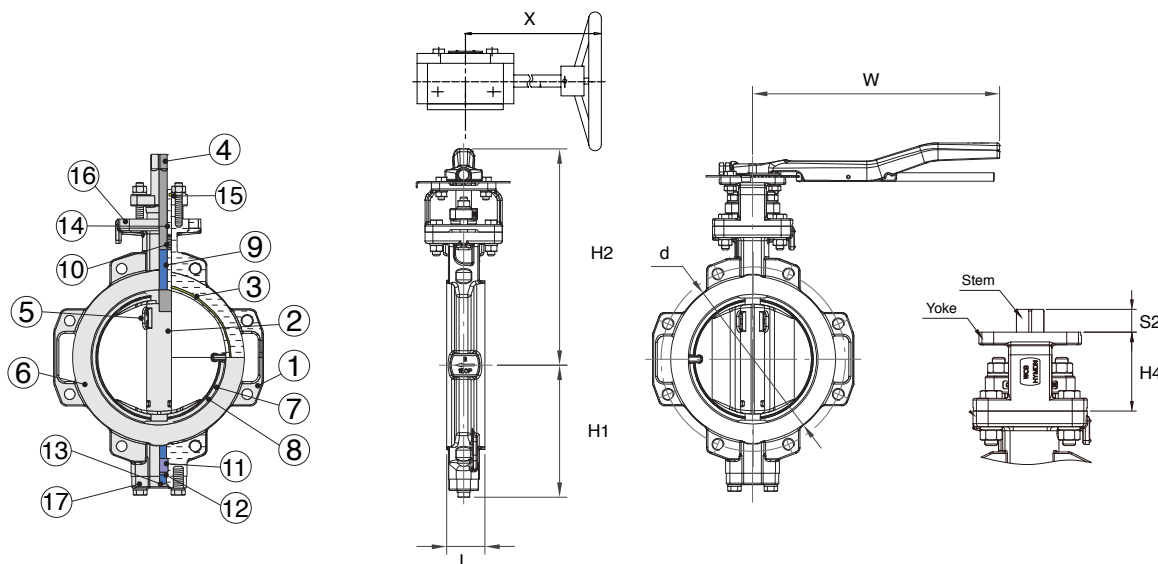
- Temperature range -20°F to +446°F, 150 WSP.
- ISO 5211 direct mounting pad/square stem.
- Compact design, easy access to packing.
- Replaceable seat design.
- NACE MR0175.
- FC170-2 compliant.
- CRNs available upon request.
- Multiple V-ring stem packing.
- RPTFE seats, metal seats upon request.
- 10 position locking handle.
- Soft seat leakage protection - Class VI.
- Metal seat leakage protection - Class V.
- 14" to 24" sizes available upon request.

8301-9301: size 2" to 12".

8321-9321: METAL SEATED VERSION - size 2" to 12".

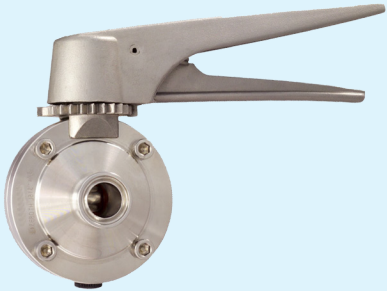
8341-9341: API 607 FIRE SAFE VERSION - size 2" to 12".

G8301-G9301: GEAR OPERATED VERSION - size 2" to 12".



POS	PART NAME	MATERIAL		QTY	Size	L	D	D1	d	H1	H2	W	X	H4	S2	Stem	Yoke ISO	Cv	Break Torque lbf-in	Weight (Lbs)
1	BODY	A216 Gr. WCB	A351 Gr. CF8M	1	2"	1.77	3.74	5.91	1.81	4.65	9.21	8.66	6.06	2.76	0.63	14	F07	70	336	11.0
2	DISC	A351 Gr. CF8M		1	2 1/2"	1.89	4.41	7.09	2.40	4.96	9.53	8.66	6.06	2.76	0.63	14	F07	150	372	13.0
3	SEAT	8301 - 9301	Carbon-filled PTFE	1	3"	1.89	4.96	7.48	2.99	5.28	10.24	8.66	6.06	2.76	0.63	14	F07	227	434	15.0
		8321 - 9321	Inconel 718																	
		8341 - 9341	Fire safe seat																	
4	STEM	A182 Gr. F316		1	4"	2.13	6.10	9.06	3.78	5.67	10.63	8.66	6.06	2.76	0.63	14	F07	473	726	20.0
5	TAPER PIN	A182 Gr. F316L		2	5"	2.24	7.24	10.04	4.65	7.01	11.42	11.81	6.06	2.76	0.75	17	F07	605	1248	26.0
6	RETAINER RING	A351 Gr. CF8M		1	6"	2.24	8.46	11.02	5.63	7.48	12.01	11.81	6.06	3.15	0.75	17	F07	1010	1823	29.0
7	SPRING	A182 Gr. F316		1	8"	2.44	10.51	13.58	7.40	8.43	13.78	15.75	8.82	3.15	0.83	17	F10	2004	3213	46.0
8	LOCK PIN	PTFE		1	10"*	2.76	12.83	15.94	9.29	10.00	10.24	-	8.82	3.94	0.94	22	F10	3199	5549	66.0
9	STEM BUSH	PTFE + SS316L	A182 Gr. F316	2	12"*	3.19	14.76	19.09	11.06	11.73	11.42	-	8.46	3.94	1.14	27	F12	4672	8717	101.0
10	GLAND PACKING	Carbon-filled RTFE		1																
11	THRUST RING	A351 Gr. CF8M		1																
12	THRUST PLATE	PTFE + SS316L		1																
13	GASKET	PTFE		1																
14	GLAND BUSH	A351 Gr. CF8M		1																
15	ANTI-BLOWOUT PIN	A182 Gr. F316		1																
16	GLAND FLANGE	A351 Gr. CF8		1																
17	BOTTOM COVER	A351 Gr. CF8M		1																

* 10" - 16" available in bare stem or gear operated versions only.

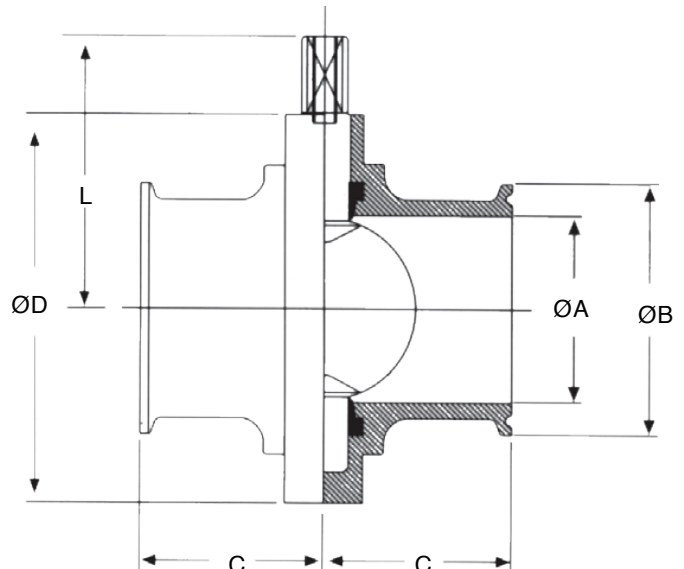
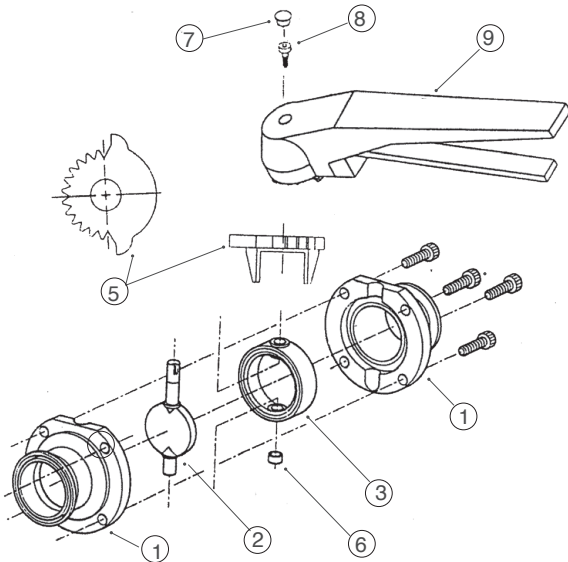


SERIES **BFVSTCE** STAINLESS STEEL SANITARY BUTTERFLY VALVE

Stainless steel butterfly valve with EPDM seats and Sanitary Tri-Clamp Ends.

- AISI 316 L stainless steel.
- EPDM seat standard.
- Silicone or FKM (Viton) seats optional.
- Full port, sizes 1/2" to 8."
- Sanitary Tri-Clamp Ends.
- Surface finish meets 3-A, FDA & USDA standards.
- 13-position, 304SS spring loaded lever lock handle 1/2" to 6".
- 110 psi at 200°F.

BFVSTCE: size 1/2" to 8".

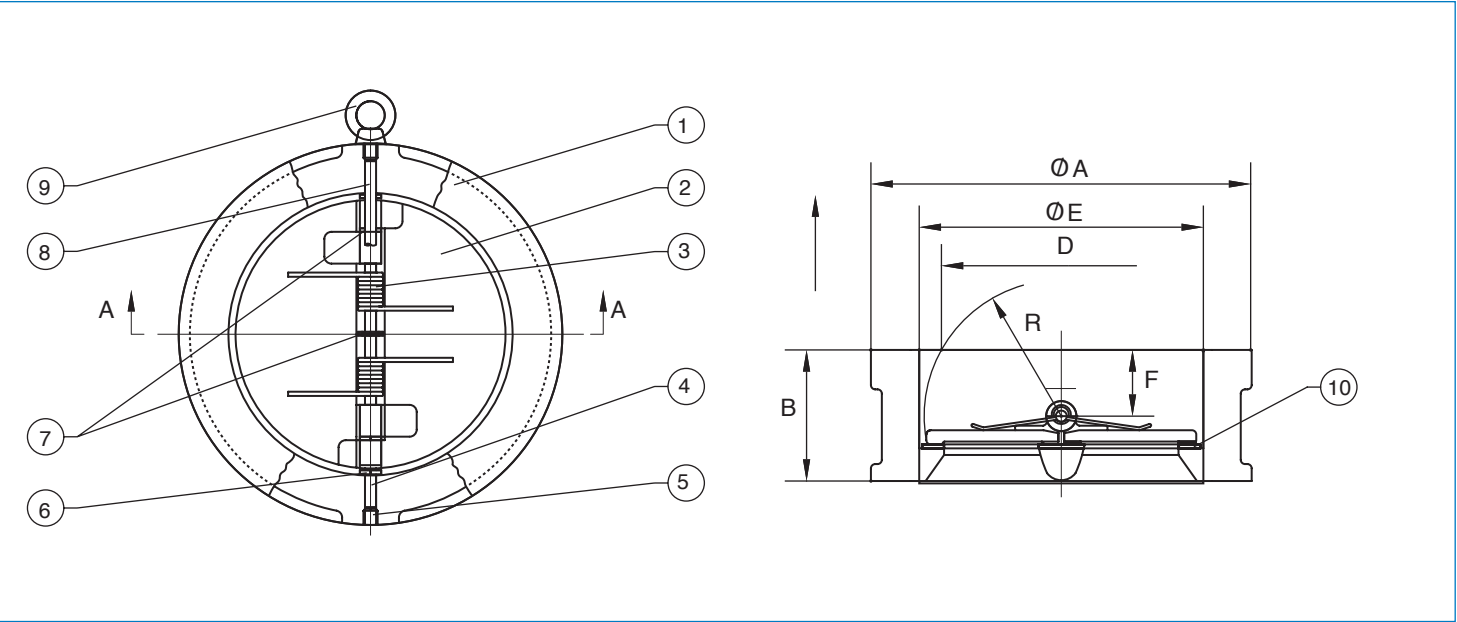


POS.	PART NAME	MATERIAL	SIZE	A	B	C	D	L	Break Torque (lbf-in)	Cv	Weight (Lbs)
1	BODY HALF (2)	AISI 316L	1/2"	3.00	1.00	1.75	3.10	2.16	60	7	3.38
2	DISC	AISI 316L	3/4"	3.00	1.00	1.75	3.10	2.16	70	11	3.38
3	SEAT	EPDM	1"	0.87	1.99	1.75	3.11	2.40	140	23	3.38
4	BODY BOLTS (4)	AISI 304	1 1/2"	1.37	1.99	1.75	3.35	2.53	165	80	3.25
5	NOTCH PLATE	AISI 316	2"	1.87	2.52	1.87	4.13	2.93	185	230	3.84
6	BODY CAP	BUNA-N	2 1/2"	2.37	3.05	1.91	4.41	3.06	200	264	4.84
7	HANDLE CAP	BUNA-N	3"	2.84	3.58	2.03	4.92	3.32	255	372	5.79
8	HANDLE SCREW	AISI 304	4"	3.84	4.69	2.39	6.18	4.00	350	800	7.96
9	13-POSITION HANDLE	AISI 304	6"	5.84	6.57	3.00	8.20	6.35	925	1200	9.95
			8"	7.93	8.54	3.28	11.22	7.83	960	2800	12.43



SERIES **NCI150E**
CHECK VALVE

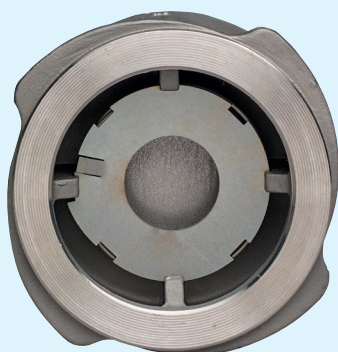
- Double door wafer style check valve.
- Ductile iron body.
 - Stainless steel dual disc.
 - Stainless steel spring loaded.
 - Pressure rating 200 psi.
 - Temperature range -30°F to +250°F (EPDM seats).
 - Epoxy coated body.
 - Food grade EPDM or Viton seat options.
 - Can be used with ANSI 125 or 150 flanges.
 - Light weight and compact.
 - NSF certified for drinking water service (EPDM seats only).
- NCI150E:** size 2" to 12".



POS.	PART NAME	MATERIAL	QTY
1	BODY	CAST IRON, DUCTILE IRON	1
2	PLATE	DUCTILE IRON + NI, CF8M	1
3	SPRING	STAINLESS STEEL	1
4	HINGE PIN	STAINLESS STEEL	1
5	PLUG	CARBON STEEL	1
6	BODY BEARING	PTFE	1
7	SPRING BEARING	PTFE	1
8	STOP PIN	STAINLESS STEEL	1
9	EYE BOLT	CARBON STEEL	1
10	BODY SEAT	EPDM, VITON	1

SIZE	OA	B	D	OE	F	R	Cv	psi	Cracking pressure (psig)	Weight (Lbs)
2"	4.01	1.69	1.70	2.56	0.74	1.13	70	300	4.35	3.30
2 1/2"	4.76	1.81	2.37	3.15	0.78	1.42	120	300	6.53	5.30
3"	5.23	2.52	2.61	3.70	1.10	1.70	190	300	6.53	7.90
4"	6.73	2.52	3.57	4.61	1.06	2.07	340	300	8.7	12.60
5"	7.59	2.76	4.60	5.71	1.18	2.58	590	300	10.88	16.10
6"	8.62	2.99	5.69	6.69	1.22	3.09	870	300	10.88	19.80
8"	10.8	3.50	7.80	8.82	1.29	4.11	1650	300	11.6	37.50
10"	13.2	4.49	9.20	10.43	1.96	4.99	2700	300	11.6	57.30
12"	15.9	4.49	11.18	12.20	1.69	5.83	4300	300	14.5	92.60





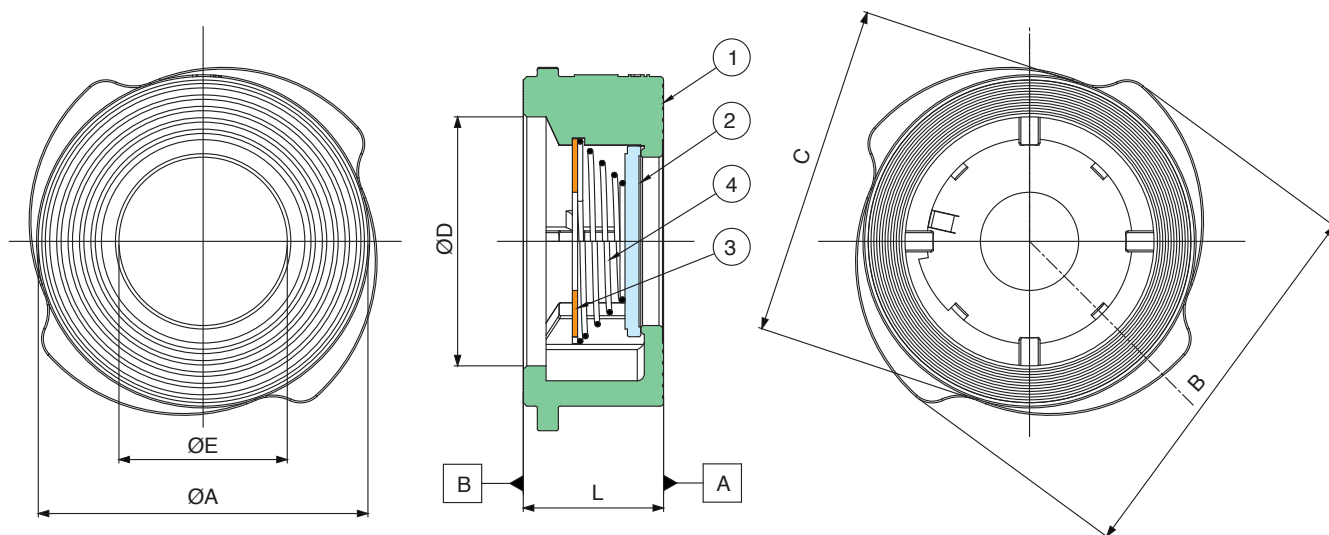
SERIES GB15MM SILENT CHECK VALVE

Stainless steel metal to metal seated silent check valve.

- Pressure rating 750 psi.
- Temperature range -65°F to +480°F.
- 0.35 psi cracking pressure.
- Can be intalled in any position.
- Usable as a vacuum breaker, overpressure, and bottom valve.
- Low head loss.
- Can be used with ANSI 150 or 300 flanges.
- EPDM, NBR, FKM, or PTFE seats available upon request.

GB15MM: size 1/2" to 4".

NEW



POS.	PART NAME	MATERIAL	P.CS
1	BODY	A351-CF8M	1
2	DISC	A240/AISI 316L	1
3	STOP RING	AISI 316L	1
4	SPRING	AISI 316	1

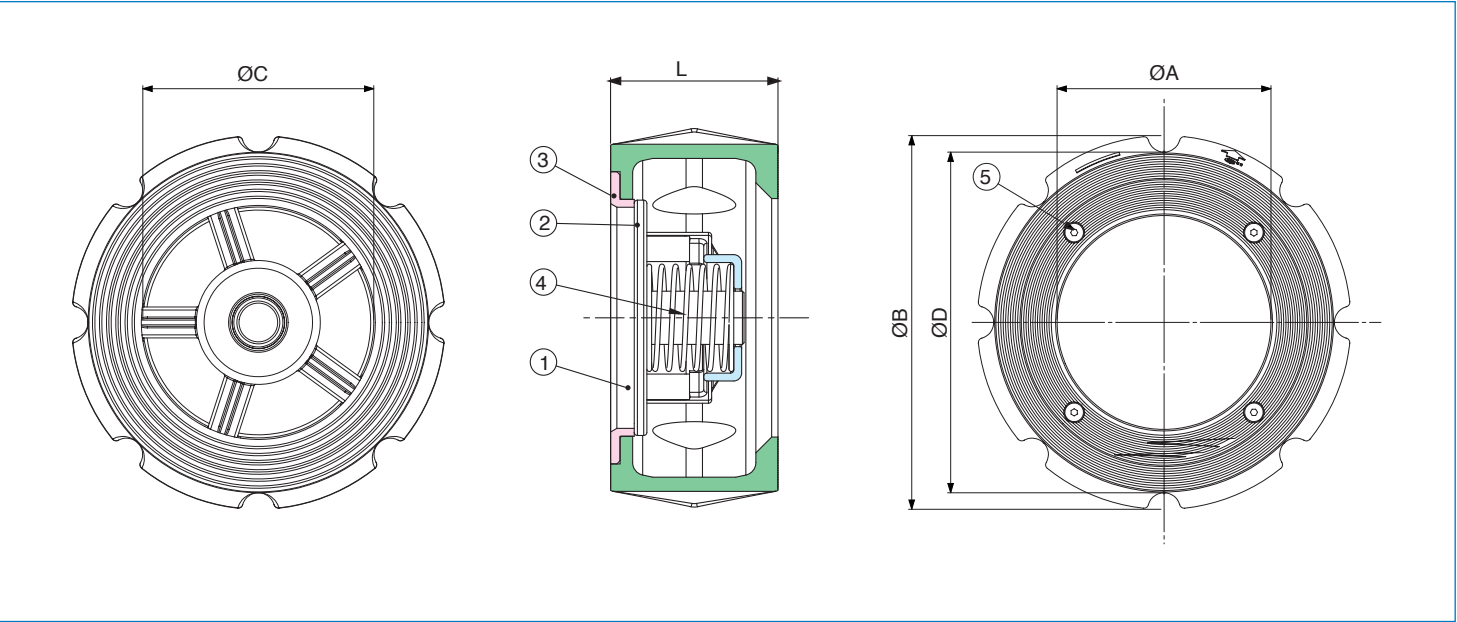
SIZE	ØA	B	C	ØD	ØE	L	psi	Weight (Lbs)
1/2"	1.69	2.13	1.77	0.91	0.55	0.67	750	0,24
3/4"	1.89	2.52	2.12	1.10	0.75	0.79	750	0.40
1"	2.28	2.80	2.48	1.42	0.98	0.87	750	0.57
1 1/4"	2.68	3.19	2.83	1.97	1.22	1.10	750	0.88
1 1/2"	2.95	3.66	3.23	2.28	1.50	1.26	750	1.21
2"	3.70	4.33	3.74	2.80	1.89	1.57	750	2.20
2 1/2"	4.45	5.12	4.53	3.39	2.44	1.81	750	3.31
3"	5.08	5.87	5.16	4.13	3.03	1.97	750	4.41
4"	6.26	7.13	6.30	5.12	3.74	2.36	750	7.05



SERIES **GH15MM**
SILENT CHECK VALVE

- Stainless steel metal to metal seated silent check valve.
- Pressure rating 360 psi.
 - Temperature range -65°F to +480°F.
 - 0.35 psi cracking pressure.
 - Can be installed in any position.
 - Usable as a vacuum breaker, overpressure, and bottom valve.
 - Low head loss.
 - Can be used with ANSI 150 flanges.
 - EPDM, NBR, FKM, or PTFE seats available upon request.
- GH15MM:** size 5" to 8".

NEW



POS	PART NAME	MATERIAL	PCS
1	BODY	A351-CF8M	1
2	SEAT	AISI 316 L	1
3	DISC	AISI 316 L	1
4	SPRING	AISI 316 L	1
10	SCREW	AISI 316 L	1

SIZE	ØB	ØD	L	ØA	C	psi	Weight (Lbs)
5"	8.27	7.56	3.54	4.72	4.92	365	18.07
6"	9.53	8.66	4.17	5.51	5.91	365	27.56
8"	10.75	-	5.51	7.20	7.87	365	42.55



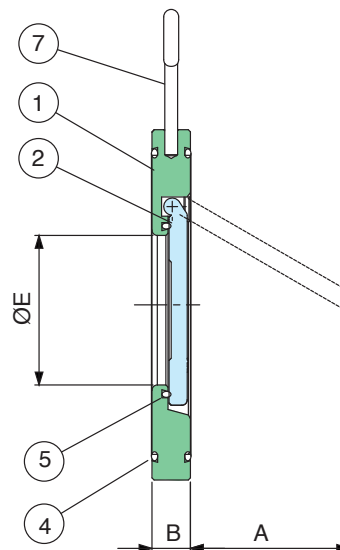
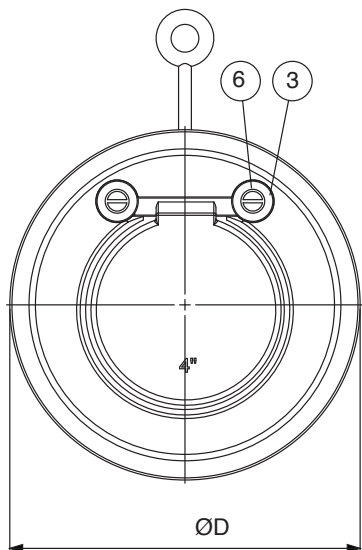
SERIES GS15P SWING CHECK VALVE

Stainless steel PTFE seated swing check valve.

- Pressure rating 360 psi: 1 1/2" - 20" and C/F: 24".
- Temperature range -65°F to +390°F.
- Can be installed in two positions (upward and horizontal flow).
- Can be used with ANSI 150 flanges.
- Low head loss.
- Different materials available upon request.
- EPDM, NBR, or FKM seats available upon request.

GS15P: size 1 1/2" to 24".

NEW



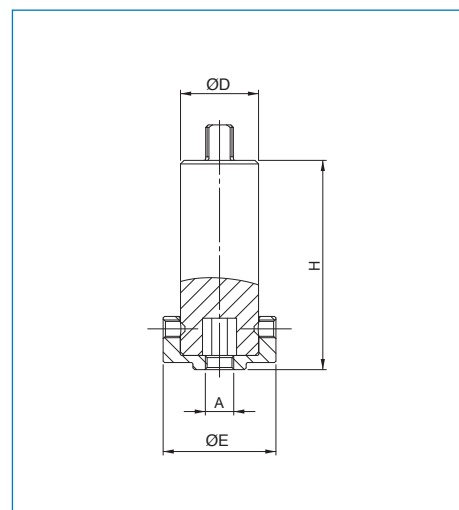
	PART NAME	MATERIAL	P.CS
1	BODY	A316	1
2	CLAPET	A316	1
3	WASHER	A316	2
5	O-RING	PTFE	2
6	O-RING	PTFE	1
4	SCREW	A316	2
7	EYE SCREW	STEEL	1

SIZE	D	B	E	psi	Weight (Lbs)
1 1/2"	3.39	0.55	0.87	360	1.54
2"	4.17	0.55	1.26	360	1.98
2 1/2"	4.88	0.55	1.57	360	2.65
3"	5.43	0.55	2.13	360	3.31
4"	6.89	0.71	2.76	360	5.51
5"	7.68	0.71	3.62	360	7.05
6"	8.70	0.79	4.41	360	11.68
8"	10.98	0.87	6.06	360	21.38
10"	13.35	1.02	7.87	360	35.71
12"	16.14	1.26	9.45	360	61.73
14"	17.72	1.50	10.63	360	70.55
16"	20.24	1.73	12.20	360	105.82
18"	21.57	1.97	13.98	360	138.89
20"	23.82	2.20	15.94	360	191.80
24"	C/F	C/F	C/F	C/F	C/F



STEM EXTENSION FOR TEMPERATURE PROTECTION

ART.	SIZE	H	A	ØD	ØE	FOR USE WITH SERIES	NOT VALID FOR	MATERIALS
RI6502	1/8"	2.32	M5	0.87	1.26	70	Series 700076 (all sizes) Series 700023 (all sizes) Series 766 (all sizes)	PLATED CARBON STEEL
	1/4"	2.32	M5	0.87	1.26	70 - 71		
	3/8"	2.32	M5	0.87	1.26	70 - 71		
	1/2"	2.32	M5	0.87	1.26	70		
RI6503	1/2"	2.32	M6	0.91	1.34	71 - 72 - 76 - 776		
	3/4"	2.32	M6	0.91	1.34	70 - 71 - 72 - 76 - 776		
RI6504	1"	2.38	M6	0.91	1.34	70 - 71 - 72 - 73 - 76 - 776		
	1 1/4"	2.38	M6	0.91	1.34	70 - 71 - 72 - 73 - 76 - 776		
RI6505	1 1/4"	2.20	M6	1.10	1.57	70 - 71 - 72 - 73 - 76 - 776		
	1 1/2"	2.20	M6	1.10	1.57	70 - 71 - 72 - 73 - 75 - 776		
	2"	2.20	M6	1.10	1.57	75		
	2 1/2"	2.20	M6	1.10	1.57	76		
RI6506	2"	2.13	M8	1.34	1.77	70 - 71 - 72 - 73 - 76 - 776		
	2 1/2"	2.13	M8	1.34	1.77	70 - 71 - 72 - 73 - 776 - 75		
	3"	2.13	M8	1.34	1.77	75		
	4"	2.13	M8	1.34	1.77	76		
RI6507	3"	1.89	M8	1.46	1.97	70 - 71 - 72 - 73 - 76 - 776		
	4"	1.89	M8	1.46	1.97	72 - 73 - 75 - 76 - 776		
	5"	1.89	M8	1.46	1.97	72 - 73 - 75 - 76 - 776		





1. Presentation



Valpres has expanded the range of available products. The Oil&Gas team, with a very high seniority in the industry, has developed a range of valves to meet end users and EPC contractors requirements in the **Oil&Gas** sector as well as in industrial sector with severe applications. For this reason it has acquired, in addition to the existing quality, environment and safety system certifications, the **API 6A** and **API 6D** certifications for ball valves.

With this objective, Valpres has developed the new product line that includes:

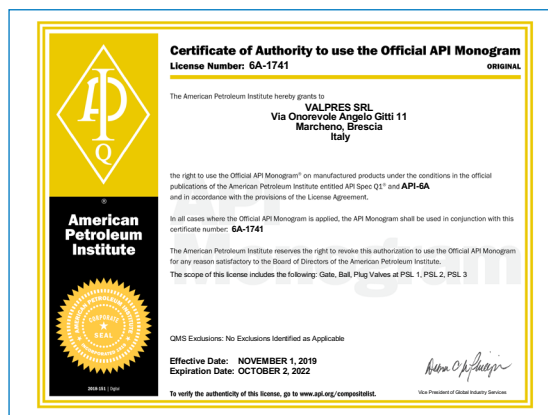
- Floating and trunnion mounted forged ball valves.
- Double block and bleed (twin ball) valves.
- Control ball valve for incompressible and compressible fluids.

All the above are also available for cryogenic and corrosive services.

The new products are developed through accurate and formal verification and validation processes with calculations, finite element analysis (FEA) and computational fluid dynamics analysis (CFD), in order to ensure the performance of the valves in the conditions requested by the customer.

For more severe applications, field validations are also provided as well as tests at certified laboratories or universities.

The integrated management of the entire production cycle, from contract review to the product and documentation final acceptance, ensures full traceability and guarantees the necessary quality standards.



2. Product range

Available sizes and pressure classes are listed in the tables below.

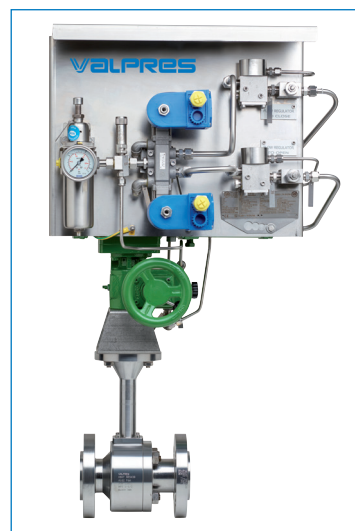
The materials used for construction are in accordance to the customer specifications (carbon steels, austenitic, duplex, nickel alloys) and non-metallic materials (thermoplastics and elastomers) are carefully chosen to ensure the best performances.

Available trunnion mounted ball valves range

Size/ Rating	150	300	600	900	1500	2500
1 1/2"	•	•	•	•	•	•
2"	•	•	•	•	•	•
3"	•	•	•	•	•	•
4"	•	•	•	•	•	•
6"	•	•	•	•	•	•
8"	•	•	•	•	•	•
10"	•	•	•	•	•	•
12"	•	•	•	•	•	•
14"	•	•	•	•	•	
16"	•	•	•	•	•	
18"	•	•	•	•	•	
20"	•	•	•	•	•	
24"	•	•	•	•	•	
30"	•	•	•	•		
36"	•	•	•	•		
42"	•	•	•			
48"	•	•	•			

Available floating ball valves range

Size/ Rating	150	300	600	900	1500	2500
1/2"	•	•	•	•	•	•
3/4"	•	•	•	•	•	•
1"	•	•	•	•	•	•
1 1/2"	•	•	•	•	•	•
2"	•	•	•	•	•	•
3"	•	•	•			
4"	•	•	•			
6"	•	•				



3. Technical data

The below technical data illustrate the standard range.

Customized features are available according to individual customer specifications:

- Construction/design: API 6D-API 6A-ASME B16.34-API-608.
- Manual or actuated operation devices.
- Minimum thickness according to ASME VIII-ASME B16.34.
- Firesafe: ISO 10497, API 6FA, API 607.
- Face to face according to ANSI B16.10, API 6D and API 6A.
- Flanged ends, welded ends, threaded or according to customer request.
- Full or reduced bore (reduced bore starting from 2").
- Anti-blowout stem and antistatic device.
- Self-relieving seats (piston effect seats are also available for the trunnion valves).
- Double Block and Bleed feature on trunnion valves.
- Standard drain on all trunnion valves and vent fitting from 6" and above.
- Drain ports according to specifications, bleed fittings, welded, flanged valves, etc.
- Support feet and lifting lugs for standard valves over 250 Kg.
- Locking devices.

All Valpres valves are 100% tested in accordance to API 6D/BS12266 or API 6A, as well as to the applicable project or client specifications.

Non-destructive tests are always carried out according to quality control plans issued for order.

All certification and documentation is issued in accordance to the standards and specifications prescribed by Valpres' customers.

GENERAL SPECIFICATIONS

Valbia manufactures rack and pinion pneumatic actuators, available in spring return or double acting version, with 0°-90° standard rotation or 0°-180°, and are standardly furnished with FKM VITON seals. Valbia offers a product with a unique patented design, which is able to guarantee high quality standard, performance and reliability.

Valbia actuators are versatile and suitable to different applications and operating conditions.

Bonomi North America also provides a wide range of accessories such as solenoid valves, limit switches, positioners, and manual overrides.

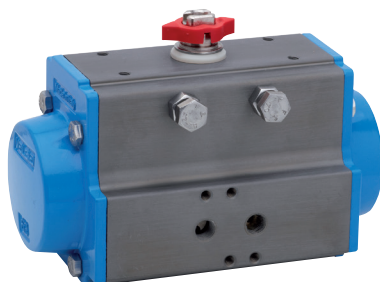
Valbia pneumatic actuators are available in three versions:

- The 82 series: aluminum with 0°-90° rotation.
- The 83 series: aluminum with 0°-180° rotation.
- The 84 series: stainless steel with 0°-90° rotation.

In addition, Valbia offers a wide range of special versions designed to provide specific solutions for severe applications.

82 SERIES PNEUMATIC ACTUATORS

The 82 series, with an extruded and hard anodized aluminum body, is manufactured in 15 models to guarantee a wide range of choice according to the requested torque; it allows a 0°-90° rotation and is available in the spring return (SR) or double acting (DA) versions.



83 SERIES PNEUMATIC ACTUATORS

Available only in the double acting version, the 83 series is manufactured in 9 models according to the different torque output required. These actuators can provide a 0°-180° rotation with the possibility to adjust the run of the pistons by using the cam adjustment and the bolts mounted on the end caps.



84 SERIES PNEUMATIC ACTUATORS

The 84 series presents the same compact design and the same technical features of the 82 series, with the exception of construction material; The 84 series of Valbia is, in fact, manufactured using body, caps and pinion in stainless steel (A351 CF8M) and it is available in 5 models.



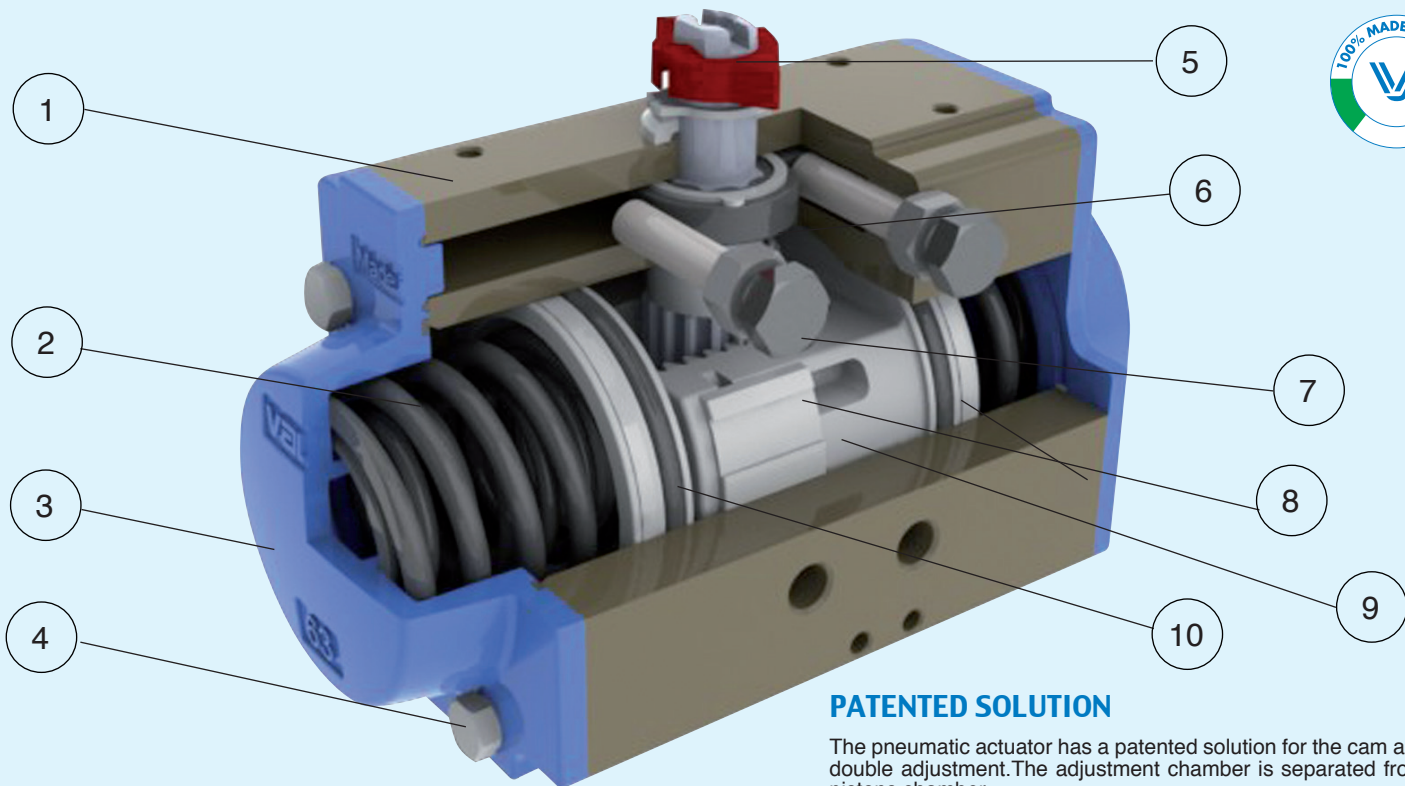
High temperature as standard: to withstand temperatures up to 302°F.

Low temperature option: for applications that require the use down to -40°F.

With 303 stainless steel pinion.

PTFE coating: coating applied over the entire actuator surface and cured in the oven. It provides excellent corrosion protection in a wide range of applications, involving chemical wash-downs.





PATENTED SOLUTION

The pneumatic actuator has a patented solution for the cam and the double adjustment. The adjustment chamber is separated from the pistons chamber. This reduces the number of possible leak paths of the air cylinder and allowing performances and longer term reliability of the actuator.

STANDARD VITON SEALS

- 1 **HARD ANODIZED EXTRUDED ALUMINIUM BODY:**
 - Hard anodized SURFACE finish (45-50 micron).
 - Excellent wear resistance.
 - High corrosion resistance.
 - Special surface finishing or coating for corrosive environments upon request.
 - High quality bore lapping to ensure low friction and long life.
- 2 **CONCENTRIC SPRING SETS**
 - Paint coating.
 - High resistance and reliability.
 - Spring sets to suit different air pressure/torque requirements.
 - Long end cap screws to allow safe dismantling for maintenance.
 - Same body dimensions for DA/SR versions.
- 3 **DIE CAST ALUMINUM END CAPS:**
 - Polyester powder coated.
 - Special coating for corrosive environments upon request.
- 4 **ASSEMBLING SCREW:**
 - Stainless steel.

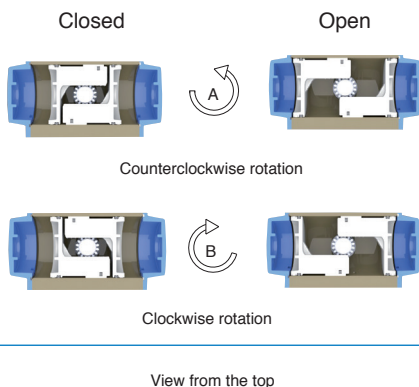
STANDARDS CONNECTION:

- Top of pinion according to Namur standards.
- Solenoid valve connection according to Namur standards.
- Bottom according to ISO 5211-DIN 3337 patterns.

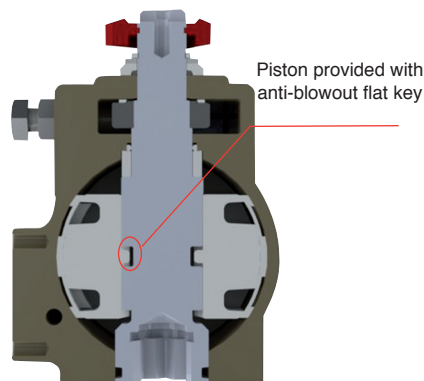
NOMINAL VALUES:

- Max. air pressure rating: 120 psi.
- Working temperature: standard (-4°F; +302°F), low (-40°F; +185°F).
- No lubrication maintenance required for the entire actuator lifetime.
- 100% factory tested.

ROTATION OPTION



ANTI-BLOWOUT SYSTEM

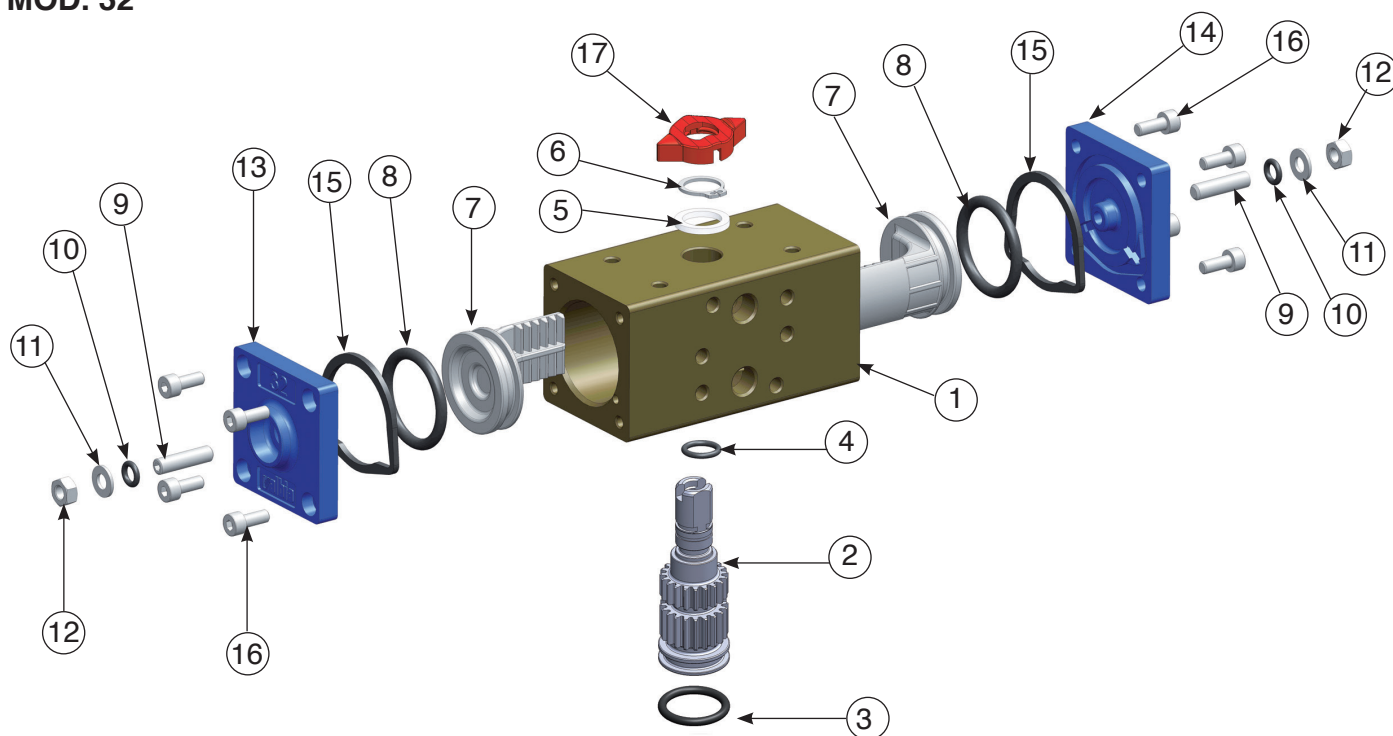


- 5 **SOLID STEEL BARSTOCK PINION (NOT CASTING):**
 - Nickel-plating to prevent internal and external corrosion for standard version.
 - Stainless steel for corrosive environments upon request.
 - Anti-blowout design.
- 6 **0°-90° ROTATION ADJUSTMENT CAM:**
 - Stainless steel.
 - $\pm 5^\circ$ Adjustment for open and close position.
- 7 **0-90° ADJUSTMENT BOLTS:**
 - Stainless steel.
- 8 **POM PISTON GUIDES:**
 - Large contact area.
 - Low friction thanks to lubricating material.
 - Long life.
- 9 **DIE CAST ALUMINUM PISTONS:**
 - Chemical nickel plating upon request.
- 10 **SEALS:**
 - Standard FKM (Viton).
 - Silicone low temperature version.

TWIN RACK AND PINION DESIGN:

- Consistent torque output.
- Compact design.
- Balanced internal forces.
- Robust design to ensure long life.

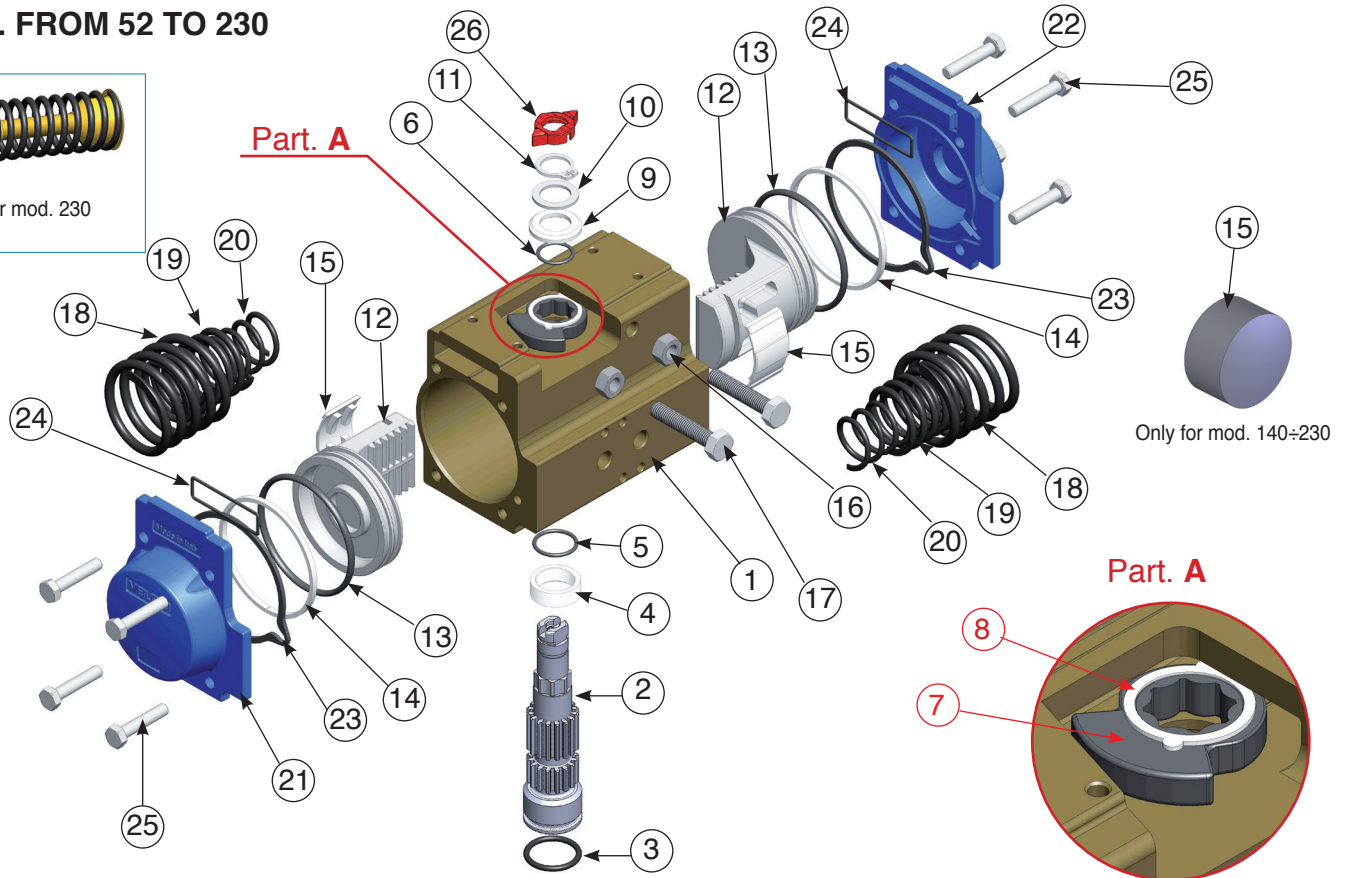
MOD. 32



POS.	DESCRIPTION	MATERIAL	TREATMENT	Q.TY
1	Body	Extruded aluminum	Hard anodized	1
2	Anti-blowout pinion	Steel	Nickel plated	1
• 3	O-ring	FKM (Viton)		1
• 4	O-ring	FKM (Viton)		1
• 5	Spacer ring	POM		1
6	Snap ring	Steel	Nickel plated	1
7	Piston	Die cast aluminum		2
• 8	O-ring	FKM (Viton)		2
9	Adjustment bolt	Stainless steel		2
• 10	O-ring	FKM (Viton)		2
11	Washer	Stainless steel		2
12	Adjustment bolt retaining nut	Stainless steel		2
13	Left end cap	Die cast aluminum	Powder-coated	1
14	Right end cap	Die cast aluminum	Powder-coated	1
15	End cap seats	FKM (Viton)		2
16	End cap fixing screw	Stainless steel		8
17	Position indicator	Thermoplastic rubber TPE		1

• Parts subject to wear.

MOD. FROM 52 TO 230



POS.	DESCRIPTION	MATERIAL	TREATMENT	Q.TY DA	Q.TY SR
1	Body	Extruded aluminum	Hard anodized	1	1
2	Anti-blowout pinion	Steel	Nickel plated	1	1
• 3	O-ring	FKM (Viton)		1	1
• 4	Spacer ring	POM		1	1
• 5	O-ring	FKM (Viton)		1	1
• 6	O-ring	FKM (Viton)		1	1
7	Cam	Stainless steel		1	1
8	Spacer	POM		1	1
• 9	Spacer	POM		1	1
10	Washer	Stainless steel		1	1
** 11	Snap ring	Steel	Nickel plated	1	1
12	Piston	Die cast aluminum		2	2
• 13	O-ring	FKM (Viton)		2	2
• 14	Anti-friction ring	POM		2	2
• 15	Thrust block	POM		2 [4]	2 [4]
16	Adjustment bolt retaining nut	Stainless steel		2	2
17	Adjustment bolt	Stainless steel		2	2
18	External spring	Steel	Painted	0	See spring settings at page 171
*** 19	Central spring	Steel	Painted	0	
20	Internal spring	Steel	Painted	0	
21	Left end cap	Die cast aluminum	Powder-coated	1	1
22	Right end cap	Die cast aluminum	Powder-coated	1	1
23	End cap seats	FKM (Viton)		2	2
24	O-ring	FKM (Viton)		2	2
25	End cap screw	Stainless steel		8	8
26	Position indicator	Thermoplastic rubber TPE		1	1

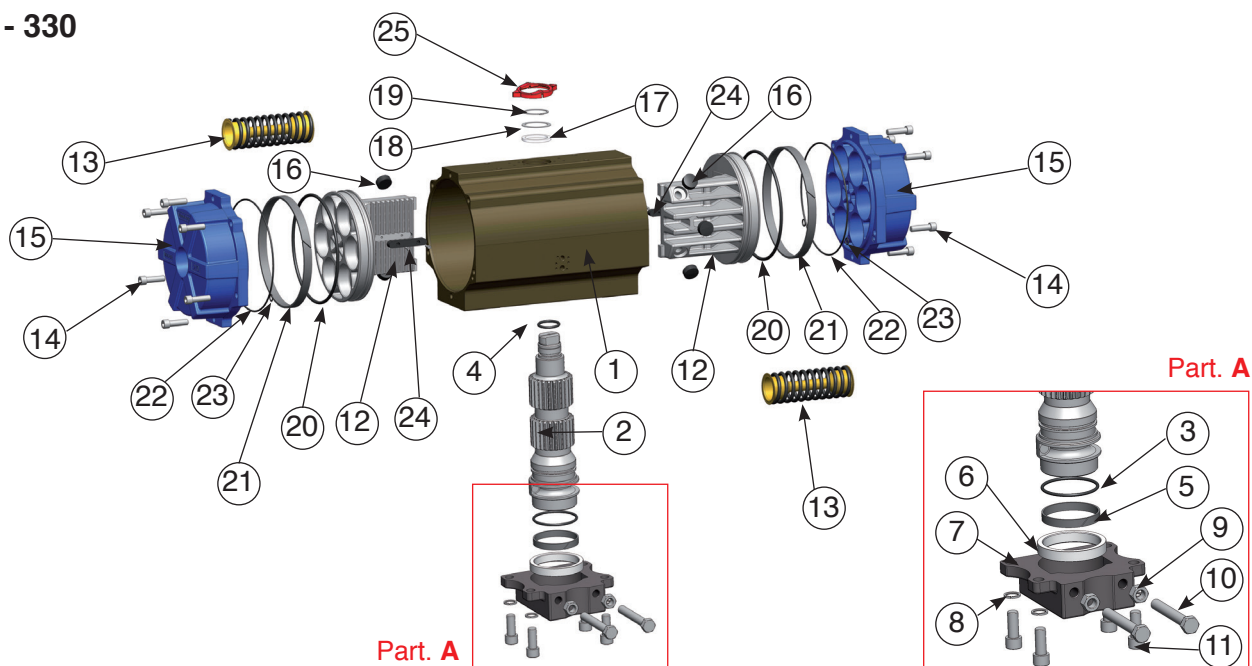
• Parts subject to wear.

(4) Valid for mod.140-160-180-200-230 only.

** Reinforced series DIN 471 - UNI 7436.

*** Only for mod.160-180-200.

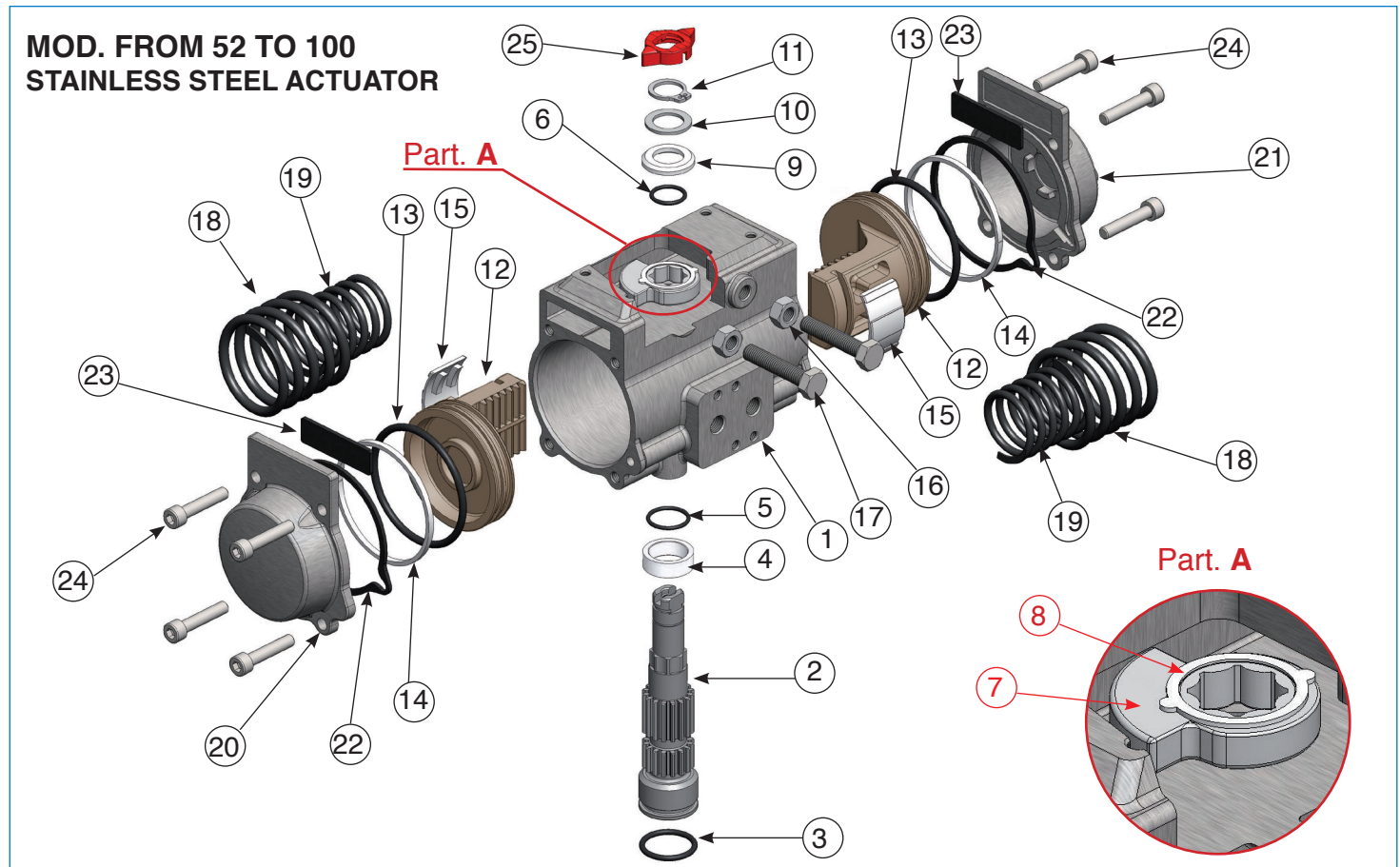
MOD. 270 - 330



POS.	DESCRIPTION	MATERIAL	TREATMENT	Q.TY DA	Q.TY SR
1	Body	Extruded aluminum	Hard anodized	1	1
2	Anti-blowout pinion	Steel	Nickel plated	1	1
• 3	O-ring	FKM (Viton)		1	1
• 4	O-ring	FKM (Viton)		1	1
• 5	Anti-friction ring	P.T.F.E 15% graphite		1	1
• 6	Anti-friction ring	P.T.F.E		1	1
7	Plate	mod.270 GGG40 - mod.330 C45	Painted	1	1
8	Washer	Stainless steel		4	8
9	Adjustment bolt retaining nut	Stainless steel		2	2
10	Adjustment bolt	Steel	Zinc plated	2	2
11	Screws	Stainless steel		4	4
12	Piston	Die cast aluminum		2	2
13	Precompressed spring	Steel	Painted	0	See spring settings at page 171
14	End cap screw	Stainless steel		mod.270 12 mod.330 16	mod.270 12 mod.330 16
15	End cap	Die cast aluminum	Powder-coated	2	2
• 16	Thrust block	POM		mod.270 6 mod.330 8	mod.270 6 mod.330 8
• 17	Spacer ring	POM		1	1
18	Pinion washer	Stainless steel		1	1
19	Snap ring	Steel	Nickel plated	1	1
• 20	O-ring	FKM (Viton)		2	2
• 21	Anti-friction ring	P.T.F.E 15% graphite		2	2
22	O-ring	FKM (Viton)		2	2
23	O-ring	FKM (Viton)		mod.270 4 mod.330 2	mod.270 4 mod.330 2
24	Anti-blowout key	POM		2	2
25	Position indicator	Thermoplastic rubber TPE		1	1

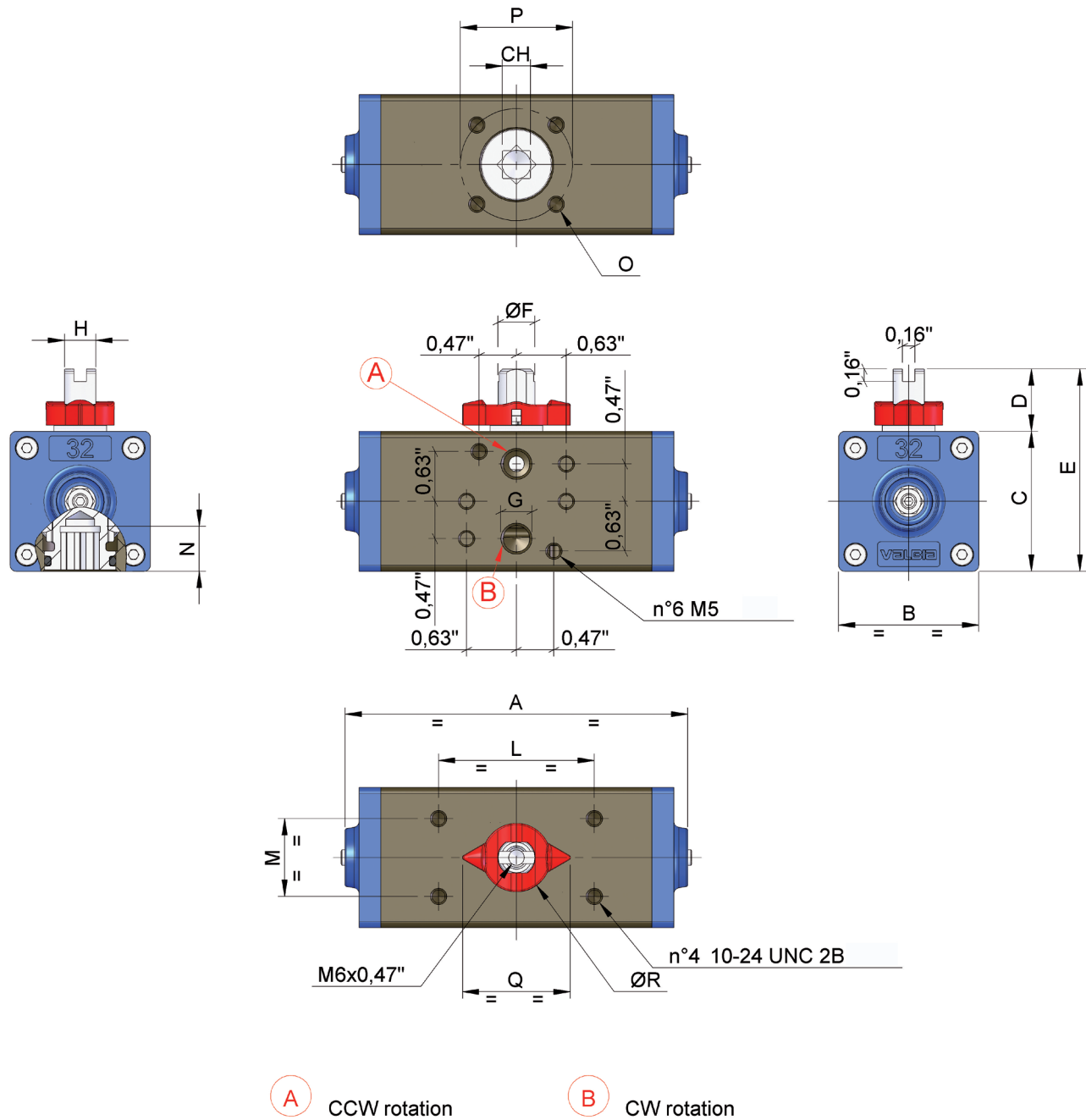
• Parts subject to wear.

MOD. FROM 52 TO 100
STAINLESS STEEL ACTUATOR



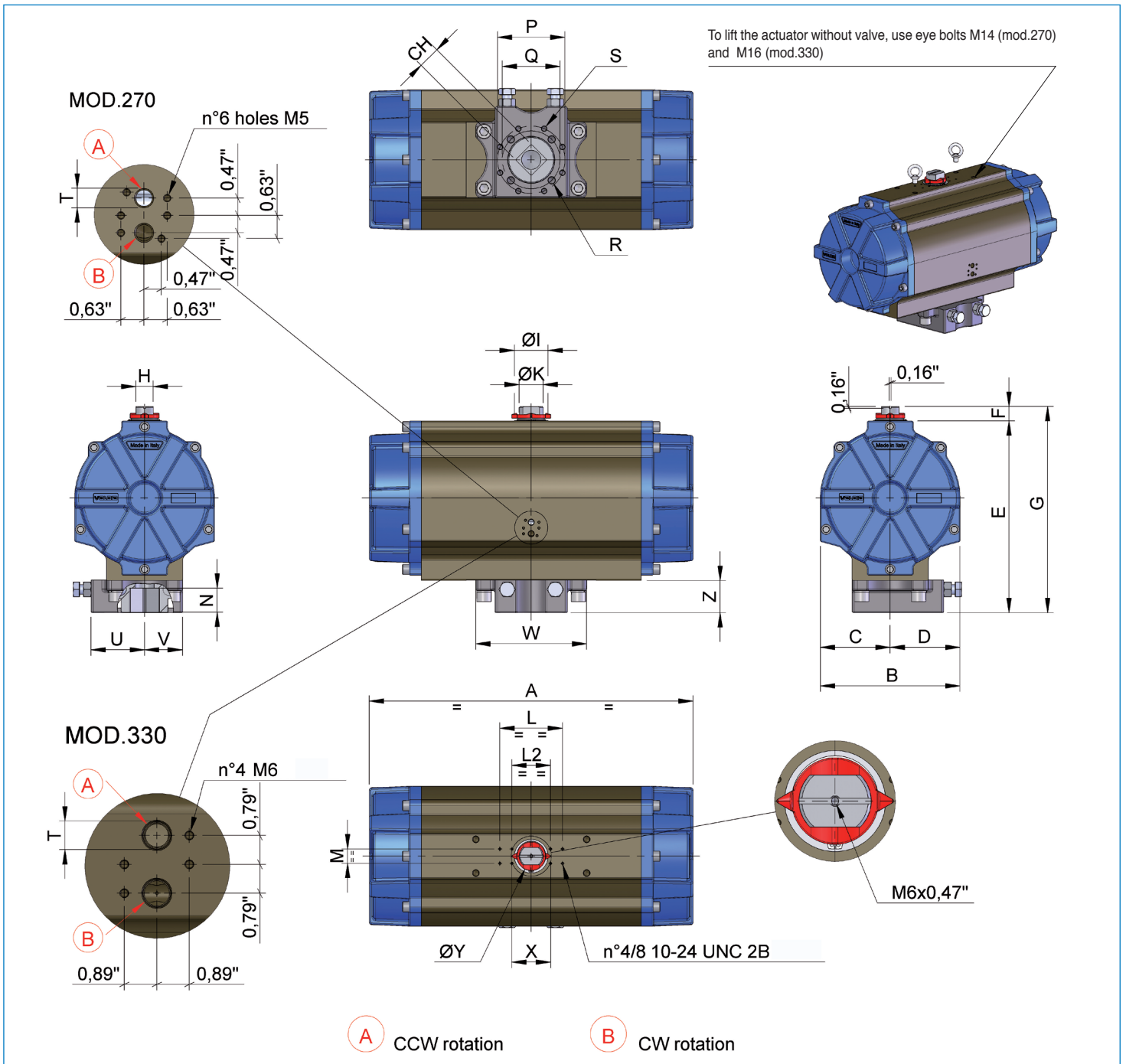
POS.	DESCRIPTION	MATERIAL	TREATMENT	Q.TY DA	Q.TY SR
1	Body	Stainless steel		1	1
2	Anti-blowout pinion	Stainless steel		1	1
• 3	O-ring	FKM (Viton)		1	1
• 4	Spacer ring	POM		1	1
• 5	O-ring	FKM (Viton)		1	1
• 6	O-ring	FKM (Viton)		1	1
7	Cam	Stainless steel		1	1
8	Spacer	POM		1	1
• 9	Spacer	POM		1	1
10	Washer	Stainless steel		1	1
11	Snap ring	Stainless steel		1	1
12	Piston	Die cast aluminum	Hard anodized	2	2
• 13	O-ring	FKM (Viton)		2	2
• 14	Anti-friction ring	POM		2	2
• 15	Thrust block	POM		2	2
16	Adjustment bolt retaining nut	Stainless steel		2	2
17	Adjustment bolt	Stainless steel		2	2
18	External spring	Steel	Powder coating	0	See spring settings at page 171
19	Internal spring	Steel	Powder coating	0	
20	Left end cap	Stainless steel		1	1
21	Right end cap	Stainless steel		1	1
22	End cap seats	FKM (Viton)		2	2
23	End cap seats	FKM (Viton)		2	2
24	End cap screw	Stainless steel		8	8
25	Position indicator	Thermoplastic rubber TPE		1	1

• Parts subject to wear.



MOD.	PATTERN ISO 5211	CH mm	A	B	C	D	E	ØF	G NPT	H	L	M	N	O	P	Q	ØR
32	F03	9	4.33	1.77	1.77	0.79	2.56	0.46	1/8"	0.39	1.97	0.98	0.47	10-24 UNC 2Bx0.30	1.42	1.36	0.87

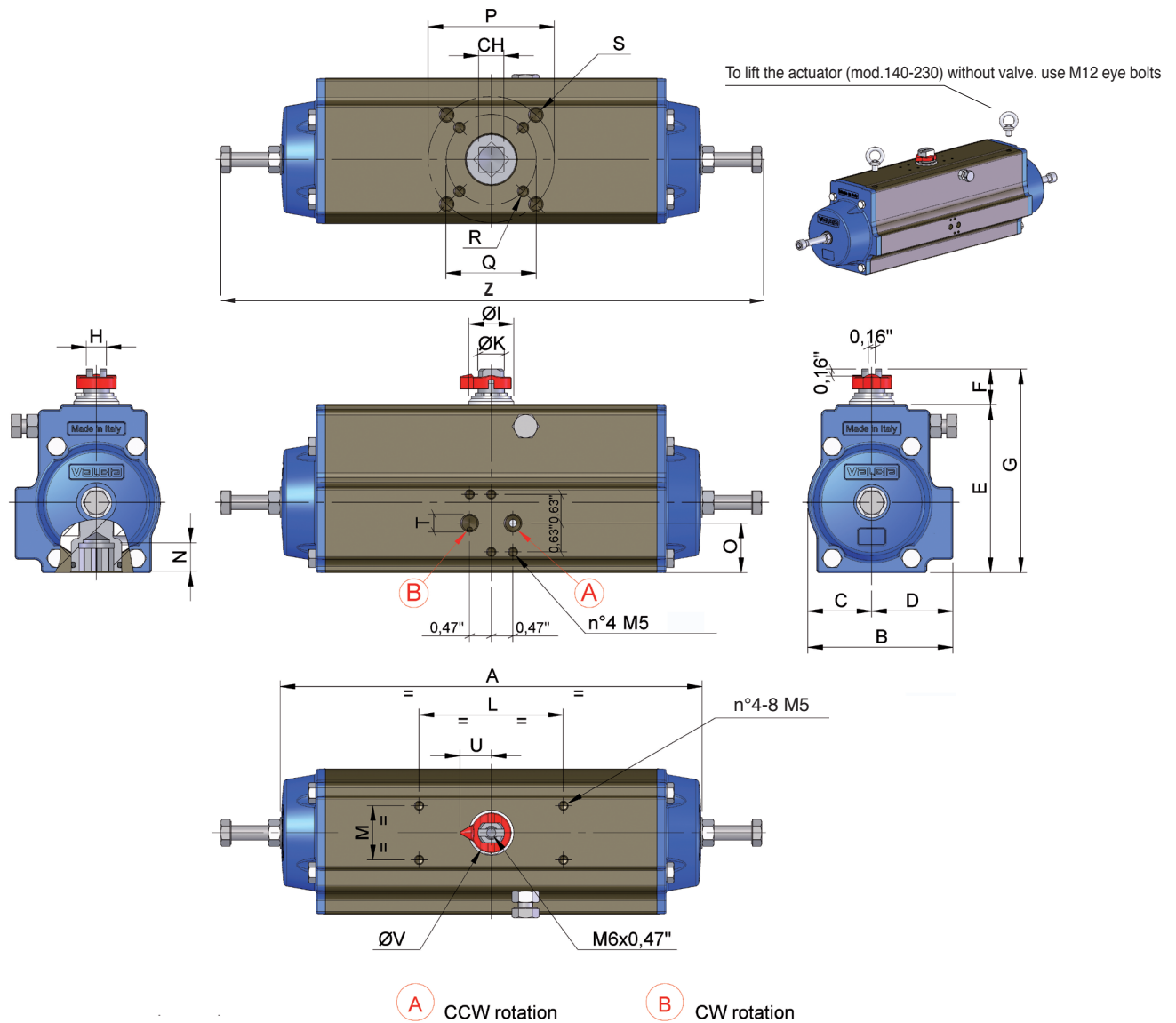
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MOD.	PATTERN ISO 5211	CH mm	A	B	C	D	E	F	G	H	ØI	ØK	L	L2	M	N	P	Q	R	S	T NPT	U	V	W	Z	X	ØY
270	F16	** 46	26.46	11.42	5.71	5.71	15.71	1.18	16.89	1.42	2.76	1.97	5.12	3.15	1.18	1.97	-	6.50	3/4-10 UNC 2Bx1.18"	-	1/4"	4.37	3.11	9.06	2.68	3.17	2.36
330	F16-F25	** 55	34.69	15.83	7.91	7.91	19.88	1.97	21.85	1.42	4.29	1.97	5.12	-	1.18	2.44	10	6.50	3/4-10 UNC 2Bx1.18"	5/8-11 UNC 2Bx1.02"	1/2"	5.08	5.32	11.69	3.74	3.17	2.36

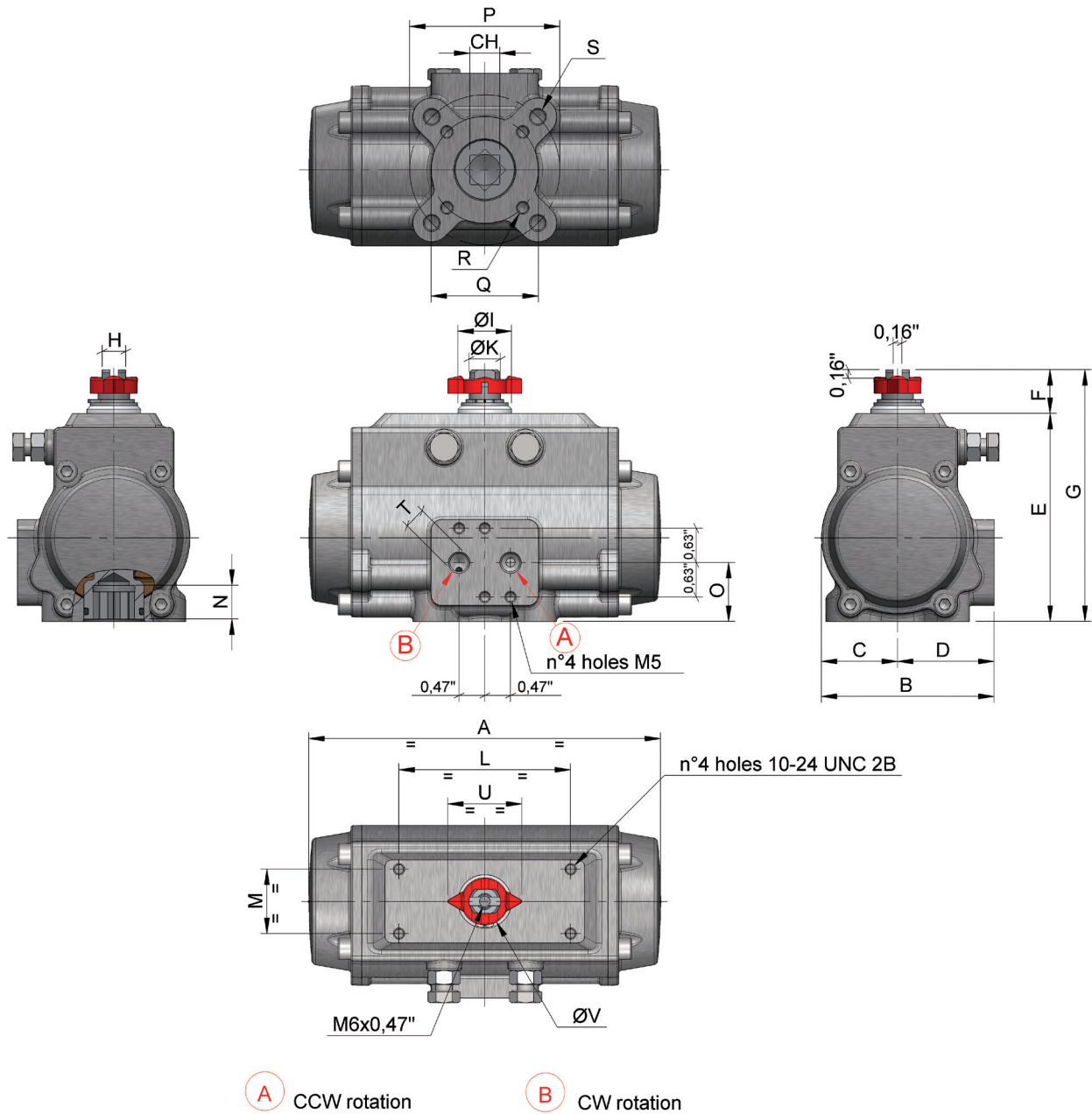
** 45° square drive only.

SERIES 83 DIMENSIONS 180° DOUBLE ACTING ACTUATORS



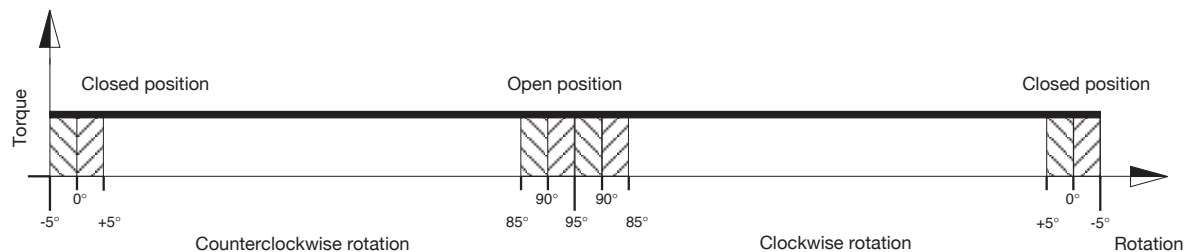
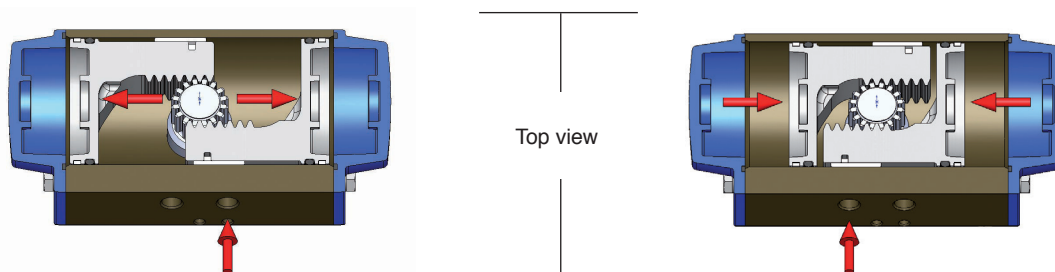
MOD.	PATTERN ISO 5211	CH mm	A	B	C	D	E	F	G	H	ØI	ØK	L	M	N	O	P	Q	R	S	T BSPT	U	ØV
52	F03-F05	11	7.76	2.80	1.18	1.61	3.21	0.79	4.0	0.39	0.83	0.47	3.15	1.18	0.47	1.04	1.97	1.42	M5X7.5	M6x9	1/8"	0.67	0.87
63	F05 - F07	14	9.17	3.17	1.40	1.77	3.66	0.79	4.45	0.43	0.98	0.59	3.15	1.18	0.63	1.08	2.76	1.97	M6X8	M8X12	1/8"	0.67	0.87
75	F05 - F07	17	11.73	3.72	1.65	2.07	4.37	0.79	5.16	0.51	1.14	0.75	3.15	1.18	0.75	1.38	2.76	1.97	M6X8	M8X12	1/8"	0.83	1.14
85	F05 - F07	17	13.43	4.17	1.87	2.30	4.92	0.79	5.71	0.59	1.38	0.87	3.15	1.18	0.75	1.65	2.76	1.97	M6X8	M8X12	1/8"	0.83	1.14
100	F07 - F10	17	15.28	4.84	2.17	2.68	5.43	0.79	6.21	0.59	1.38	0.87	3.15	1.18	0.81	1.97	4.02	2.76	M8X8	M10X14	1/4"	0.83	1.14
115	F07 - F10	22	18.78	5.39	2.52	2.87	6.39	1.18	7.57	0.87	1.93	1.26	3.15/5.12	1.18	0.94	1.97	4.02	2.76	M8X12	M10X15	1/4"	1.26	1.73
125	F07 - F10	22	21.14	5.83	2.68	3.15	6.87	1.18	8.05	0.87	1.93	1.26	3.15/5.12	1.18	0.94	2.40	4.02	2.76	M8X12	M10X15	1/4"	1.26	1.73
140	F10 - F12	27	24.02	6.46	3.01	3.44	7.76	1.18	8.94	0.94	1.93	1.38	3.15/5.12	1.18	1.14	2.80	4.92	4.02	M10X15	M12X18	1/4"	1.26	1.73
160	F10 - F12	27	25.35	7.32	3.43	3.90	8.70	1.18	9.88	1.18	2.24	1.57	3.15/5.12	1.18	1.26	3.15	4.92	4.02	M10X14	M12X17	1/4"	1.57	2.36

The length of the adjustment bolts changes according to the angle of rotation needed.



MOD.	PATTERN ISO 5211	CH mm	A	B	C	D	E	F	G	H	ØI	ØK	L	M	N	O	P	Q	R	S	T NPT	U	ØV
52	F03-F05	11	5.55	2.80	1.18	1.61	3.37	0.79	4.15	0.39	0.83	0.47	3.15	1.18	0.47	1.04	1.97	1.42	10-24 UNC 2Bx0.29"	1/4-20 UNC 2Bx0.35"	1/8"	1.36	0.87
63	F05-F07	14	6.46	3.17	1.40	1.77	3.82	0.79	4.61	0.43	0.98	0.59	3.15	1.18	0.63	1.08	2.76	1.97	1/4-20 UNC 2Bx0.31"	5/16-18 UNC 2Bx0.47"	1/8"	1.36	0.87
75	F05-F07	17	8.27	3.72	1.65	2.07	4.53	0.79	5.32	0.51	1.14	0.75	3.15	1.18	0.75	1.38	2.76	1.97	1/4-20 UNC 2Bx0.31"	5/16-18 UNC 2Bx0.47"	1/8"	1.65	1.14
85	F05-F07	17	9.47	4.17	1.87	2.30	5.08	0.79	5.87	0.59	1.38	0.86	3.15	1.18	0.75	1.65	2.76	1.97	1/4-20 UNC 2Bx0.31"	5/16-18 UNC 2Bx0.47"	1/8"	1.65	1.14
100	F07-F10	17	10.83	4.84	2.17	2.68	5.66	0.79	6.45	0.59	1.38	0.86	3.15	1.18	0.81	2.07	4.02	2.76	5/16-18 UNC 2Bx0.35"	3/8-16 UNC 2Bx0.55"	1/8"	1.65	1.14

DOUBLE ACTING ACTUATOR



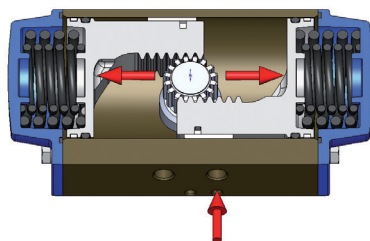
The torque of a double acting actuator remains consistent throughout the complete action.

The actuator can be sized using the following guidelines:

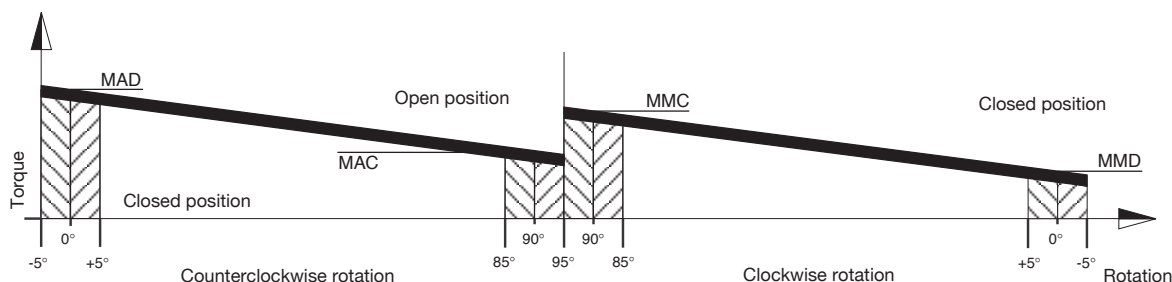
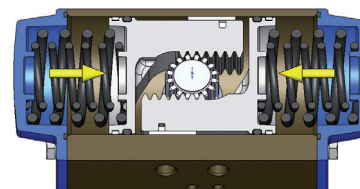
1. Define the maximum torque of the valve.
2. Increase the torque value by 25% - 50% to add a safety factory (subject to the type of valve and working conditions).
3. Use the torque chart considering the available air pressure find a torque value exact to or exceeding the one obtained.
4. Move horizontally in the chart to find sufficient actuator output torque.

TYPE	AIR SUPPLY PRESSURE (psi)							
	40	50	60	70	80	90	100	115
	DOUBLE ACTING ACTUATORS TORQUE OUTPUT (in/Lbs)							
DA 32	34	43	55	64	71	82	87	101
DA 52 *	88	112	133	158	178	201	227	263
DA 63 *	152	193	238	282	320	361	405	469
DA 75 *	283	356	435	513	586	659	736	851
DA 85 *	406	514	628	744	853	960	1072	1237
DA 100 *	645	814	989	1163	1333	1505	1681	1939
DA 115	1065	1344	1640	1932	2212	2488	2779	3211
DA 125	1402	1771	2153	2539	2905	3274	3650	4220
DA 140	2003	2504	3005	3506	4006	4509	5009	5764
DA 160	2804	3501	4196	4899	5596	6292	6987	8045
DA 180	3860	4825	5790	6746	7711	8661	9627	11081
DA 200	5198	6494	7796	9089	10393	11670	12972	14924
DA 230	8589	10738	12880	15031	17180	19289	21440	24671
DA 270	12625	15777	18935	22093	25246	28361	31511	36269
DA 330	22464	28083	33702	39321	44939	50476	56086	64555

* Valid also for stainless steel actuator.



Top view



The output torque of a spring return actuator is not consistent but decreasing. This is due to the action of the springs. When compressed by the air pushing out the pistons, they accumulate energy which will be available in a decreasing way during the clockwise rotation inversion. The output torque given by the actuator is defined by four values.

Opening rotation

MAD = Actuator torque with unfolded spring.

MAC = Actuator torque with compressed springs.

Closing rotation

MMC = Torque with compressed springs.

MMD = Torque with unfolded springs

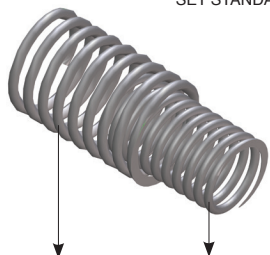
The SR actuator can be sized using the following guidelines:

1. Define the maximum torque of the valve.
2. Increase the torque value by 25% - 50% to add a safety factor (subject to the type of valve and working conditions).
3. Use torque chart considering the available air pressure to find a sufficient actuator output torque by looking at the lower between the MMD and MAC values.
4. Move horizontally in the chart to find the actuator model required.

VALID FROM MOD. 52 TO MOD. 140 *

SPRING SETTING

SET STANDARD 05

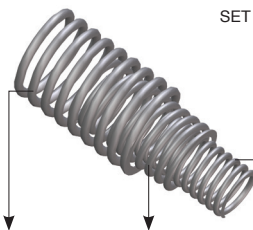


SET	EXTERNAL SPRING	INTERNAL SPRING
01	1	1
02	2	-
03	1	2
04	2	1
05	2	2

VALID FROM MOD. 160 TO MOD. 200

SPRING SETTING

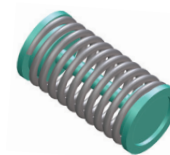
SET STANDARD 06



SET	EXTERNAL SPRING	CENTRAL SPRING	INTERNAL SPRING
01	-	2	-
02	2	-	-
03	1	2	-
04	2	-	2
05	2	2	-
06	2	2	2

VALID FROM MOD. 230 TO MOD. 330

SPRING SETTING



PRE-TENSIONED SPRING

SET	N° OF SPRINGS FOR EACH SIDE	
01	2/3	MOD. 230 MOD. 270 e 330
02	3/3	
03	3/4	
04	4/4	
05	4/5	
06	5/5	
07	5/6	
08	6/6	

* Valid also for stainless steel actuator from mod. 52 to mod. 100.

SR ACTUATORS TORQUE OUTPUT

MOD.	SET	SPRING TORQUE (in/Lbs)		AIR SUPPLY PRESSURE (psi)															
				40		50		60		70		80		90		100		115	
				SPRING RETURN ACTUATORS TORQUE OUTPUT (in/Lbs)															
		0° MMD	90° MMC	0° MAD	90° MAC	0° MAD	90° MAC	0° MAD	90° MAC	0° MAD	90° MAC	0° MAD	90° MAC	0° MAD	90° MAC	0° MAD	90° MAC	0° MAD	90° MAC
SR52	1	32	44	48	23	72	47	95	70										
	2	42	59			61	31	84	54	108	77								
	3	46	66					80	47	104	70	127	94	150	117				
	4	57	82					70	31	93	55	116	78	140	101	163	125		
	5	72	105							78	32	101	55	125	78	148	102	183	137
SR63	1	44	85	92	38	134	80	176	122										
	2	58	109			120	56	162	98	204	140								
	3	71	128					149	79	191	121	233	162	275	204				
	4	85	152					136	54	177	96	219	138	261	180	303	222		
	5	111	196							151	53	193	95	235	136	276	178	339	241
SR75	1	89	172	168	63	244	138	319	214										
	2	118	226			215	85	291	160	366	235								
	3	133	249					275	137	351	212	426	288	502	363				
	4	162	303					247	83	322	158	398	234	473	309	549	385		
	5	205	380							279	81	354	157	430	232	505	308	618	421
SR85	1	143	242	238	109	349	219	460	330										
	2	176	298			316	163	427	274	537	384								
	3	215	361					387	211	498	322	609	432	720	543				
	4	248	417					354	155	465	265	576	376	687	487	797	633		
	5	321	536							392	146	503	257	614	368	725	478	891	645
SR100	1	218	395	384	154	556	326	728	499										
	2	288	521			485	199	658	372	830	544								
	3	318	564					628	329	801	502	973	674	1146	847				
	4	389	691					558	203	730	375	903	548	1075	720	1248	893		
	5	489	860							630	206	802	378	975	551	1147	723	1406	982
SR115	1	363	658	650	270	935	555	1220	840										
	2	449	835			848	378	1133	663	1419	949								
	3	538	957					1044	541	1329	827	1615	1112	1900	1397				
	4	625	1133					958	365	1243	650	1528	935	1813	1220	2098	1505		
	5	800	1432							1067	352	1352	637	1638	922	1923	1207	2350	1635
SR125	1	470	877	850	328	1224	703	1599	1077										
	2	560	1040			1135	400	1400	840	2000	1883								
	3	718	1313					1351	640	1725	1015	2099	1389	2474	1763				
	4	808	1477					1261	477	1636	851	2010	1226	2384	1600	2758	1974		
	5	1055	1913							1388	415	1762	789	2136	1164	2511	1538	3072	2099
SR140	1	726	1346	1240	508	1742	1010	2244	1512										
	2	815	1523			1642	821	2144	1323	2646	1825								
	3	1036	1958					1910	856	2412	1358	2914	1861	3408	2355				
	4	1134	2126					1810	668	2312	1170	2814	1672	3308	2166	3810	2668		
	5	1453	2728							1979	515	2481	1017	2975	1511	3477	2013	4233	2769
SR160	1	735	1159	2036	1585	2741	2290												
	2	1053	1664			2405	1532	3085	2438										
	3	1266	1991			2184	1405	2863	2084	3552	2773								
	4	1637	2584					2465	1456	3153	2463	3859	2850						
	5	1788	2823							2985	1896	3691	2603	4405	3317				
	6	2372	3744									3080	1620	3795	2335	4474	3014	5528	4069
SR180	1	903	1487	2540	1921	3239	2620												
	2	1416	2230			2691	1823	4089	3222										
	3	1611	2602			2487	1434	3885	2832	5275	4222								
	4	2319	3664					3133	1735	4523	3124	5222	3824						
	5	2319	3717							4523	3036	5222	3735	5921	4434				
	6	3222	5151									4266	2248	4965	2947	6364	4346	7762	5744
SR200	1	1496	2222	3638	2895	4954	4211												
	2	2098	3124			4264	3211	5531	4477										
	3	2549	3788			3812	2556	5080	3823	6338	5081								
	4	2992	4620					4549	2885	5807	4144	7132	5468						
	5	3593	5346							5196	3418	6521	4742	7837	6058				
	6	4487	6842									5539	3150	6854	4465	8122	5732	10066	7677
SR230	1	3443	5895	4124	1522	5682	3080	8789	6187										
	2	4124	7072			4956	1823	8063	4930										
	3	4815	8258					7328	3682	10444	6797								
	4	5505	9435					6603	2425	9718	5541	11276	7098						
	5	6196	10612					5868	1177	8984	4293	10541	5850	12090	7399				
	6	6877	11789							8258	3036	9815	4594	11364	6142	14480	9258	17586	12364
SR270	1	4478	7001	8096	5530	11308	8742	14548	11982										
	2	5372	8399	7141	4061	10353	7273	13627	10513										
	3	6266	9798	5229	2592	9397	5804	12637	9044	15877	12284								
	4	7169	11196			8450	4344	11690	7583	14930	10823	18141	14036						
	5	8063	12595					10734	6114	13974	9354	17185	12566	20397	18478				
	6	8957	13993					9778	4645	13018	7885	16230	11097	19441	14308				
	7	9851	15400					8823	3216	12062	6416	15275	9628	18486	12839	21717	16071		
	8	10745	16799					7867	1707	11107	4947	14319	8159	17530	11370	20762	14602	25593	19434
SR330	1	7824	12143	12046	7452	16117	11524	24260	19666										
	2	9382	14577	10382	4868	14453	8939	22596	17082										
	3	10948	17002	8718	2292	12789	6364	20932	14506	29075	22649								
	4	12515	19436			11134	3779	19277	11922	27420	20065	31491	24136						
	5	14082	21861					17613	9346	25756	17489	29827	21560	33898	25632				
	6	15639	24295					15949	6762	24092	14905	28163	18976	32234	23047				
	7	17206	26720					14294	4186	22437	12329	26508	16400	30579	20472	38713	28606		
	8	18772	29154							20773	9745	24844	13816	28915	17887	37049	26021	45192	34164

CYCLE TIME (sec)																	
	MODEL	TYPE	32	52	63	75	85	100	115	125	140	160	180	200	230	270	330
0°-90° ROT.	COUNTERCLOCKWISE ROTATION (DA)	CCW	0.03	0.07	0.11	0.18	0.36	0.38	0.60	0.80	1.13	1.43	1.99	3.08	4.15	6.16	5.50
	CLOCKWISE ROTATION (DA)	CW	0.03	0.05	0.10	0.15	0.25	0.34	0.54	0.70	0.94	1.25	1.80	2.41	3.80	5.47	5.50
	COUNTERCLOCKWISE ROTATION (SR)	CCW	-	0.07	0.13	0.32	0.32	0.54	0.92	1.20	1.64	2.27	3.08	3.58	6.20	8.97	6.40
	CLOCKWISE ROTATION (SR)	CW	-	0.07	0.13	0.22	0.30	0.48	0.75	0.94	1.25	1.60	2.38	2.80	5.40	6.62	7.40
0°-180° ROT.	COUNTERCLOCKWISE ROTATION (DA)	CCW	-	0.08	0.14	0.34	0.42	0.64	1.11	1.87	2.95	3.03	-	-	-	-	-
	CLOCKWISE ROTATION (DA)	CW	-	0.06	0.12	0.25	0.39	0.62	1.08	1.13	2.03	2.29	-	-	-	-	-

SERIES 82-83 WEIGHT CHART (Lbs)																
MODEL \ TYPE	32	52	63	75	85	100	115	125	140	160	180	200	230	270	330	
90° DA	1.08	2.47	3.66	6.13	8.60	12.13	19.51	23.81	35.94	47.96	63.95	81.59	128.99	182.29	370.44	
90° SR	-	2.87	4.34	7.47	10.58	15.44	25.25	31.05	48.07	65.05	87.98	121.28	156.56	221.10	460.85	
180° DA	-	3.75	5.51	9.26	13.19	18.81	30.10	38.26	55.11	68.78	-	-	-	-	-	

SERIES 84 STAINLESS STEEL ACTUATOR WEIGHT CHART (Lbs)					
MODEL TYPE	52	63	75	85	100
90° DA	4.98	6.90	10.94	16.54	22.49
90° SR	5.38	7.59	12.28	18.41	25.86

ACTUATOR AIR CONSUMPTION CHART																	
(in³) CUBIC INCHES																	
	MODEL	TYPE	32	52	63	75	85	100	115	125	140	160	180	200	230	270	330
0°-90° ROT.	COUNTERCLOCKWISE ROTATION (DA/SR)	CCW	2.44	6.1	11.6	21.96	31.12	48.2	78.72	99.47	137.91	220.3	282.54	347.83	651.73	915.35	1556.11
	CLOCKWISE ROTATION (DA)	CW	1.83	7.93	14.04	26.85	39.06	61.02	104.35	134.86	192.83	306.33	402.75	643.8	918.4	1086.22	2697.25
0°-180° ROT.	COUNTERCLOCKWISE ROTATION (DA)	CCW	-	10.37	20.13	36.61	54.92	83.6	130	176.96	299	329.52	-	-	-	-	-
	CLOCKWISE ROTATION (DA)	CW	-	9.76	17.7	34.17	50.65	80.55	137.3	183	238	385.67	-	-	-	-	-

To obtain the air consumption in NI/min. multiply the value in the chart for the correct parameters. That is to say for the supplied absolute pressure and the number of strokes in a minute.

GENERAL SPECIFICATIONS

Valbia provides a wide range of quarter-turn single-phase electric actuators, available with different voltages of power supply (12V/24V/100-240V) and frequency (50/60 Hz), with CE, UL and CSA certifications and different levels of protection enclosure (IP-UL Type).

Valbia electric actuators are suitable for the automation of a great variety of ball and butterfly valves, with torque values from 90 to 3100 lbs-in.

Valbia selects, manufactures and uses high quality components to assure high performances:

- The electronic circuit boards are assembled in Italy using state of the art components. The motor adjusts its speed at the load variations in order to consistently maintain the specified cycle time.
- The torque limiter and the heaters are both included in the standard version and are always automatically operating when the actuator is powered, to ensure a continuous protection against condensation and over-torque.
- The gear train is made of two steel and techno-polymer gear wheels, inserted in a strong die-cast aluminum structure and sustained by hardened steel pinions mounted on self-lubricating bushes, to provide a strong mechanical construction.
- The Valbia electric actuators are all designed with an ISO 5211 standard bottom connection pattern, in order to allow the direct mount of all ISO 5211 designed valve.

Valbia manufactures two series of electric actuators:

- The 85 series, with a technopolymer enclosure.
- The 86 series, with a powder coated aluminum enclosure.

In addition, Valbia offers a wide range of special versions designed to provide effective solutions for special applications.

VERSION	VOLTAGE	VB010	VB015		VB030		VB060		VB110		VB190		VB270		VB350	
		85	85	86	85	86	85	86	85	86	85	86	85	86	85	86
ON/OFF	100-240V	• **	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	24V	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	12V		•	•	•	•	•	•	•	•	•	•	•	•	•	•
BATTERY BACKUP	100-240V			•	•	•	•	•	•	•	•	•	•	•	•	•
	24V			•	•	•	•	•	•	•	•	•	•	•	•	•
	12V															
POSITIONER	100-240V			•	•	•	•	•	•	•	•	•	•	•	•	•
	24V			•	•	•	•	•	•	•	•	•	•	•	•	•
	12V			•	•	•	•	•	•	•	•	•	•	•	•	•
BATTERY BACKUP+ POSITIONER	100-240V			•	•	•	•	•	•	•	•	•	•	•	•	•
	24V			•	•	•	•	•	•	•	•	•	•	•	•	•
	12V															
THREE POSITIONS	100-240V				•	•	•	•	•	•	•	•	•	•	•	•
	24V				•	•	•	•	•	•	•	•	•	•	•	•
THREE POSITIONS+ BATTERY BACKUP+	100-240V				•	•	•	•	•	•	•	•	•	•	•	•
	24V				•	•	•	•	•	•	•	•	•	•	•	•

** 110V only.

ELECTRIC ACTUATOR VERSIONS

Standard 0°-90° rotation

Also available with adjustable rotation up to 270° upon request (85 series).

Special version with std (4-20mA or 0-10 V) or reverse (20-4mA or 10-0V) positioner

The modulating version can be controlled by a current (4-20 mA) or voltage (0-10V) command. The proportional control allows a resolution command of 0.9°, with a positioning tolerance of less than 1% of the potentiometer full scale.

Special version with battery backup for fail-safe operation

This special version is available for ON/OFF standard version, for the positioner version, and for the three positions version. Battery operation is immediately activated, As soon as the power supply is interrupted. the battery will operate the actuator in one of the following modes:

- For the ON/OFF standard version: fail close, fail open, or complete the interrupted cycle.
- For the version with positioner: fail open or fail close.

Special version with three positions - Standard version 0°-90° (on request 0°-180°/0°-270°)

This version is designed for special applications: it allows to set up 3 different limit switch positions: open, middle and closed.

In use of installation in areas subject to vibrations, please contact our sales department.

85 SERIES ELECTRIC ACTUATOR

MANUAL OVERRIDE

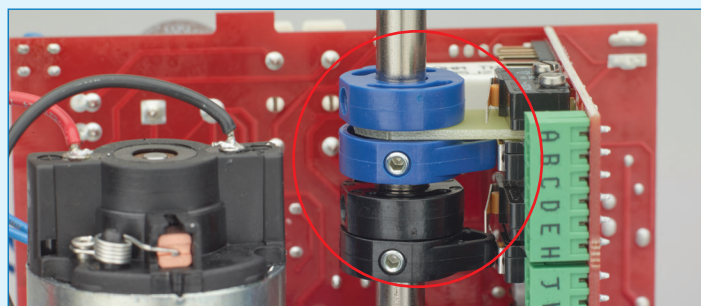
CONTROL BOARD

POWER SUPPLY BOARD



HEATERS:

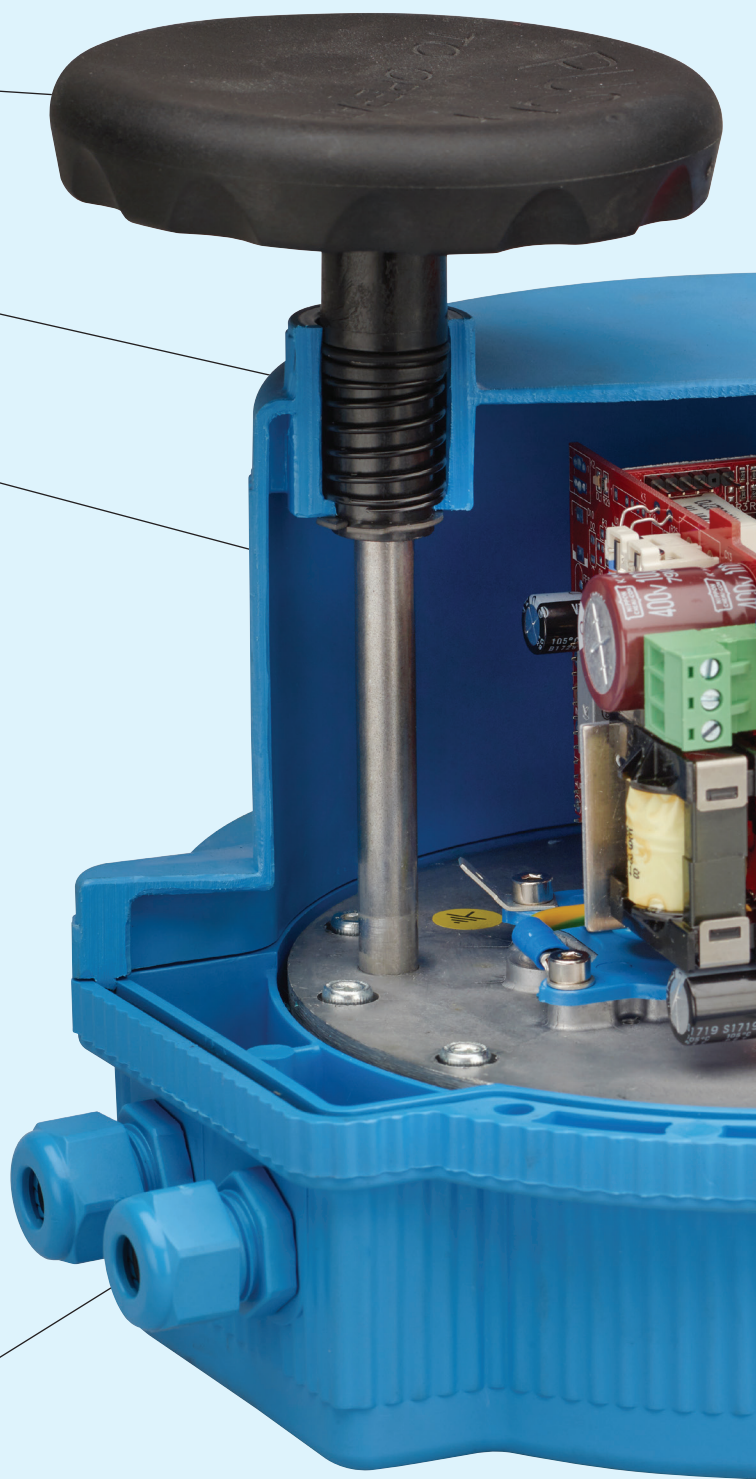
- Managed by the control board to guarantee the optimal internal temperature and avoid condensation.



POSITION CAMS:

- Black cams: limit switches open and close adjustment.
- Blue cams: additional limit switches open and close adjustment.

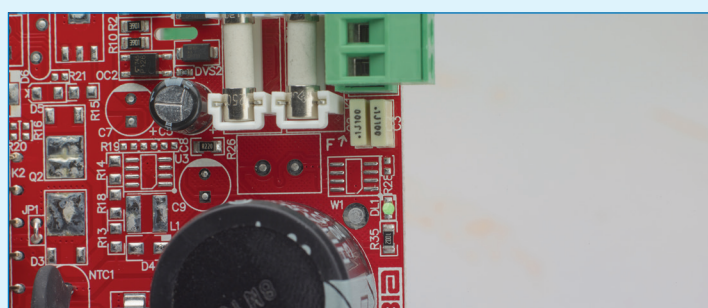
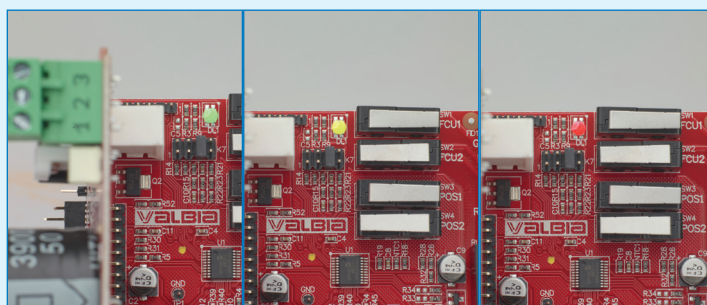
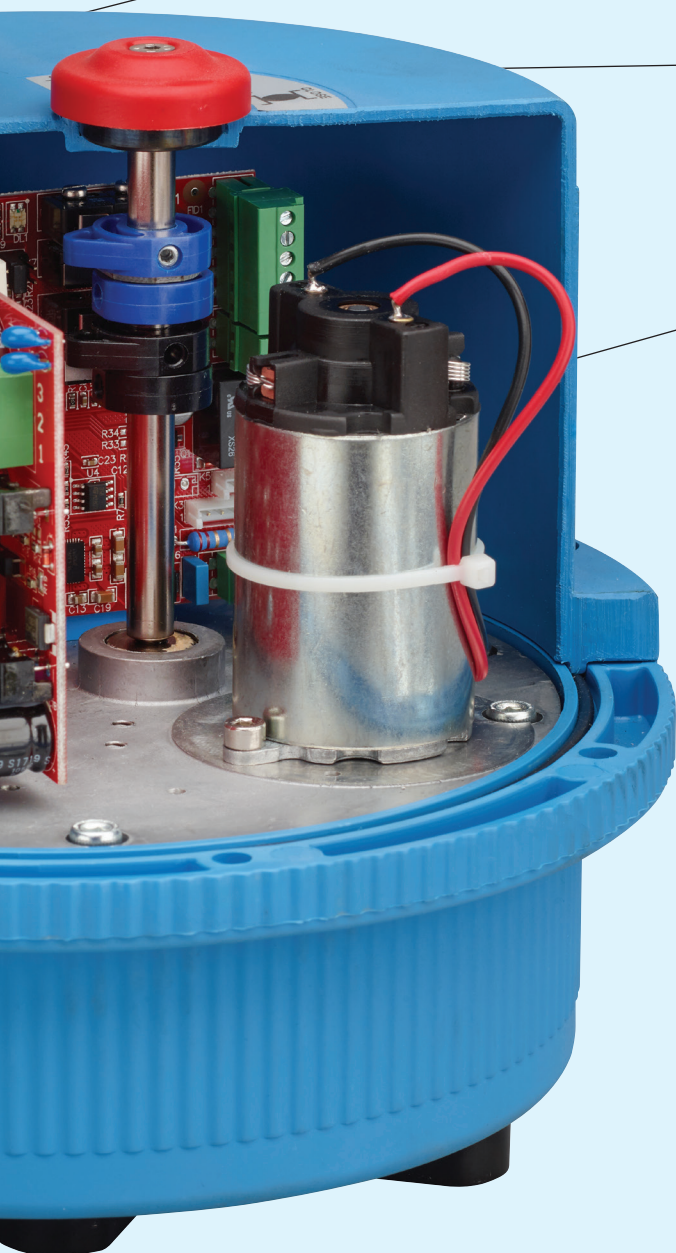
PG 11 ELECTRIC CONNECTIONS



TECHNOPOLYMER ENCLOSURE

POSITION INDICATOR

DC MOTOR



LED lights to indicate: power supply ON (green). actuator working conditions (yellow) and fault (red).

TECHNICAL DATA SERIES 85

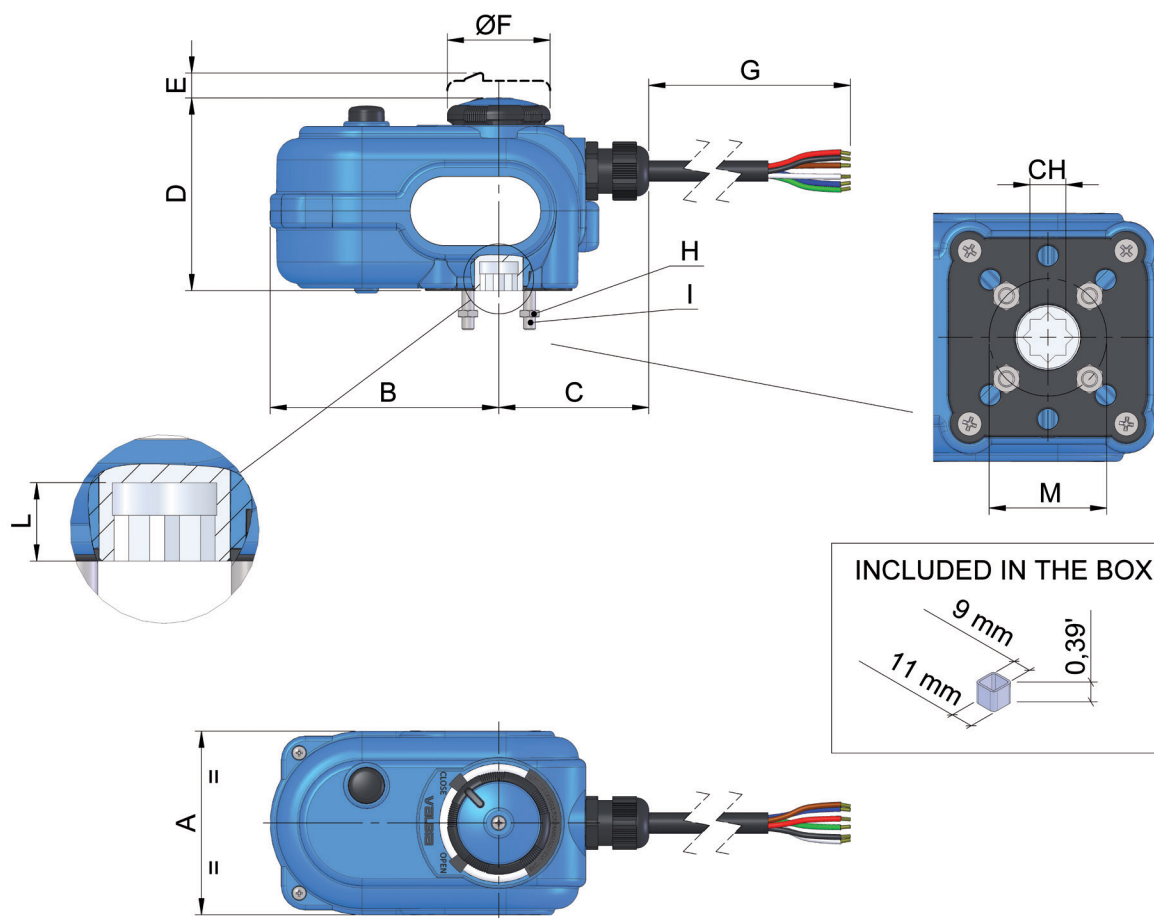
MODEL		VB010	VB015	VB030	VB060	VB110	VB190	VB270	VB350
MAX WORKING TORQUE (IN-LBS)		89	133	266	530	975	1680	2390	3100
NOMINAL TENSION (V)	LOW VOLTAGE	NOT AVAILABLE	12V AC/DC	12V AC/DC	12V AC/DC	12V AC/DC	12V AC/DC	12V AC/DC	12V AC/DC
		24V AC/DC	24V AC/DC	24V AC/DC	24V AC/DC	24V AC/DC	24V AC/DC	24V AC/DC	24V AC/DC
	HIGH VOLTAGE	110V AC	100-240V AC	100-240V AC	100-240V AC	100-240V AC	100-240V AC	100-240V AC	100-240V AC
WORKING TIME (sec)		8 sec. (dc) 6.5 sec (ac)	10	8	9	27	27	50	50
TORQUE LIMITER		STD	STD	STD	STD	STD	STD	STD	STD
DUTY RATING		75%	12V AC/24V AC 12V DC/24V DC 100-240V AC	50% 24V AC/DC 100-240V AC	50% 24V AC/DC 100-240V AC	50% 24V AC/DC 100-240V AC	50% 24V AC/DC 100-240V AC	50% 24V AC/DC 100-240V AC	50% 24V AC/DC 100-240V AC
PROTECTION		IP65/Type4	IP65/Type4	IP67/Type4x	IP67/Type4x	IP67/Type4x	IP67/Type4x	IP67/Type4x	IP67/Type4x
APPROVALS		CE. & UL***	CE. & UL	CE. UL & CSA	CE. UL & CSA	CE. UL & CSA	CE. UL & CSA	CE. UL & CSA	CE. UL & CSA
ENCLOSURE		TECHNOPOLYMER	TECHNOPOLYMER	TECHNOPOLYMER	TECHNOPOLYMER	TECHNOPOLYMER	TECHNOPOLYMER	TECHNOPOLYMER	TECHNOPOLYMER
ROTATION		90°	90°	90°	90°	90°	90°	90°	90°
SPECIAL ROTATION		NOT AVAILABLE	180°	180° or 270°	180° or 270°	180° or 270°	180° or 270°	180° or 270°	180° or 270°
MANUAL OVERRIDE		STD	STD	STD	STD	STD	STD	STD	STD
POSITION INDICATOR		STD	STD	STD	STD	STD	STD	STD	STD
WORKING TEMPERATURE		+23°F +131°F	-4°F +131°F	-4°F +131°F	-4°F +131°F	-4°F +131°F	-4°F +131°F	-4°F +131°F	-4°F +131°F
HEATER		STD WIRED	STD	STD	STD	STD	STD	STD	STD
AUXILIARY LIMIT SWITCHES		n°1 STD (type SPDT)	* n°2 STD (type SPDT)	* n°2 STD (type SPDT)	n°2 STD (type SPDT)	n°2 STD (type SPDT)	n°2 STD (type SPDT)	n°2 STD (type SPDT)	n°2 STD (type SPDT)
PATTERN ISO 5211		F03-F05	F03-F05	F03-F05	F05-F07	F07-F10	F07-F10	F07-F10	F07-F10
SQUARE DRIVE (mm)		11	11	11	14	17	17	22	22
SPECIAL SQUARE DRIVE UPON REQUEST (mm)		9	9	9-14	11-17	14-22	14-22	17	17
FAIL-SAFE OPERATION (BATTERY BACKUP)		NOT AVAILABLE	NOT AVAILABLE	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST
STD (4~20mA or 0~10 VDC) REVERSE (20~4mA or 10~0 VDC) MODE POSITIONER		NOT AVAILABLE	NOT AVAILABLE	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST
THREE POSITIONS		NOT AVAILABLE	NOT AVAILABLE	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST
ROTARY POTENTIOMETER (5K Ω 1W)		NOT AVAILABLE	NOT AVAILABLE	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST
ELECTRICAL CONNECTIONS - STANDARD**		PIG TAIL WIRE	PG11	PG11	PG11	PG11	PG11	PG11	PG11
WEIGHT (Lbs)		1.65	3.09	5.05	7.28	10.80	10.80	13.23	13.23

* F04 or F07 upon request.

** 1/2" Conduit - Optional. *** 24V DC only.

POWER CONSUMPTION																
MODEL		VB010	VB015		VB030		VB060		VB110		VB190		VB270		VB350	
	NOMINAL VOLTAGE	110V AC - 60Hz	100-240V AC													
VERSION H	ABSORBED CURRENT	0.41 A	0.3-0.19 A		0.4-0.2 A		0.6-0.3 A		0.4-0.2 A		0.6-0.3 A		0.6-0.3 A		0.75-0.4 A	
	ABSORBED POWER	45 VA	30-46 VA		40-48 VA		60-72 VA		40-48 VA		60-72 VA		60-72 VA		75-96 VA	
	NOMINAL VOLTAGE	24V AC/DC	12V AC/DC	24V AC/DC	12V AC/DC	24V AC/DC	12V AC/DC	24V AC/DC	12V AC/DC	24V AC/DC	12V AC/DC	24V AC/DC	12V AC/DC	24V AC/DC	12V AC/DC	24V AC/DC
VERSION L	ABSORBED CURRENT	0.6 A	1.2 A	0.6 A	2.2-1.8 A	1-0.7 A	3.8-2.85 A	1.8-1.2 A	2.2-1.8 A	1-0.7 A	3.8-2.85 A	1.8-1.2 A	3.8-2.85 A	1.8-1.2 A	4.75-3.65 A	1.95-1.65 A
	ABSORBED POWER	8.5-5 VA	15 VA		26.5-22 VA	24-17 VA	46-34 VA	43-29 VA	26.5-22 VA	24-17 VA	46-34 VA	43-29 VA	46-34 VA	43-29 VA	57-44 VA	47-40 VA
	FREQUENCY	50/60 HZ														

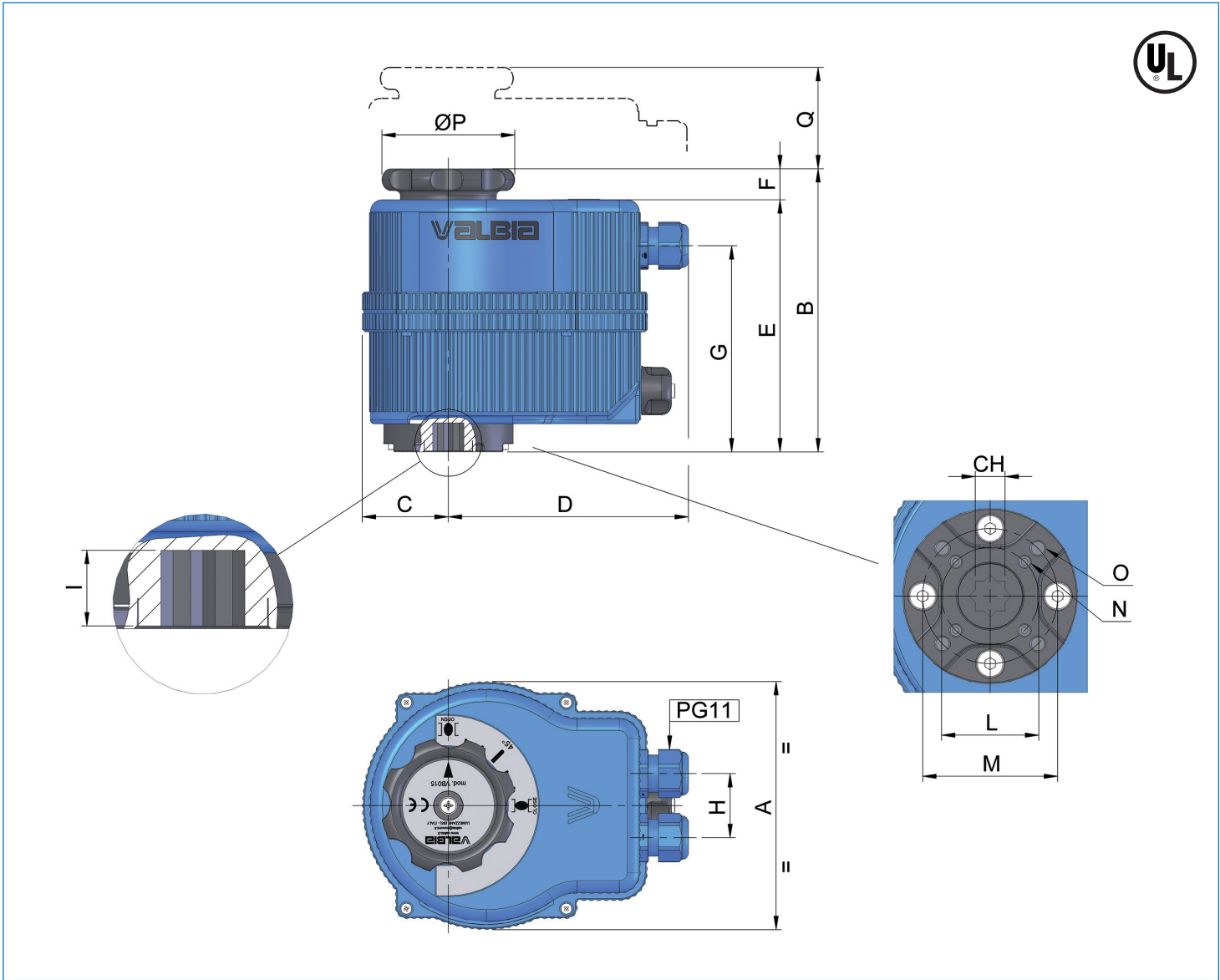
MOD. VB010



MOD.	ISO 5211 PATTERN	CH mm	A	B	C	D	E	F	G	H	I	L	M
VB010	F03-F05	9 or 11	2.99	3.72	2.44	3.15	0.28	1.69	31.5	M5	M5x0.63*	0.47	1.42

* Pre-mounted screw.

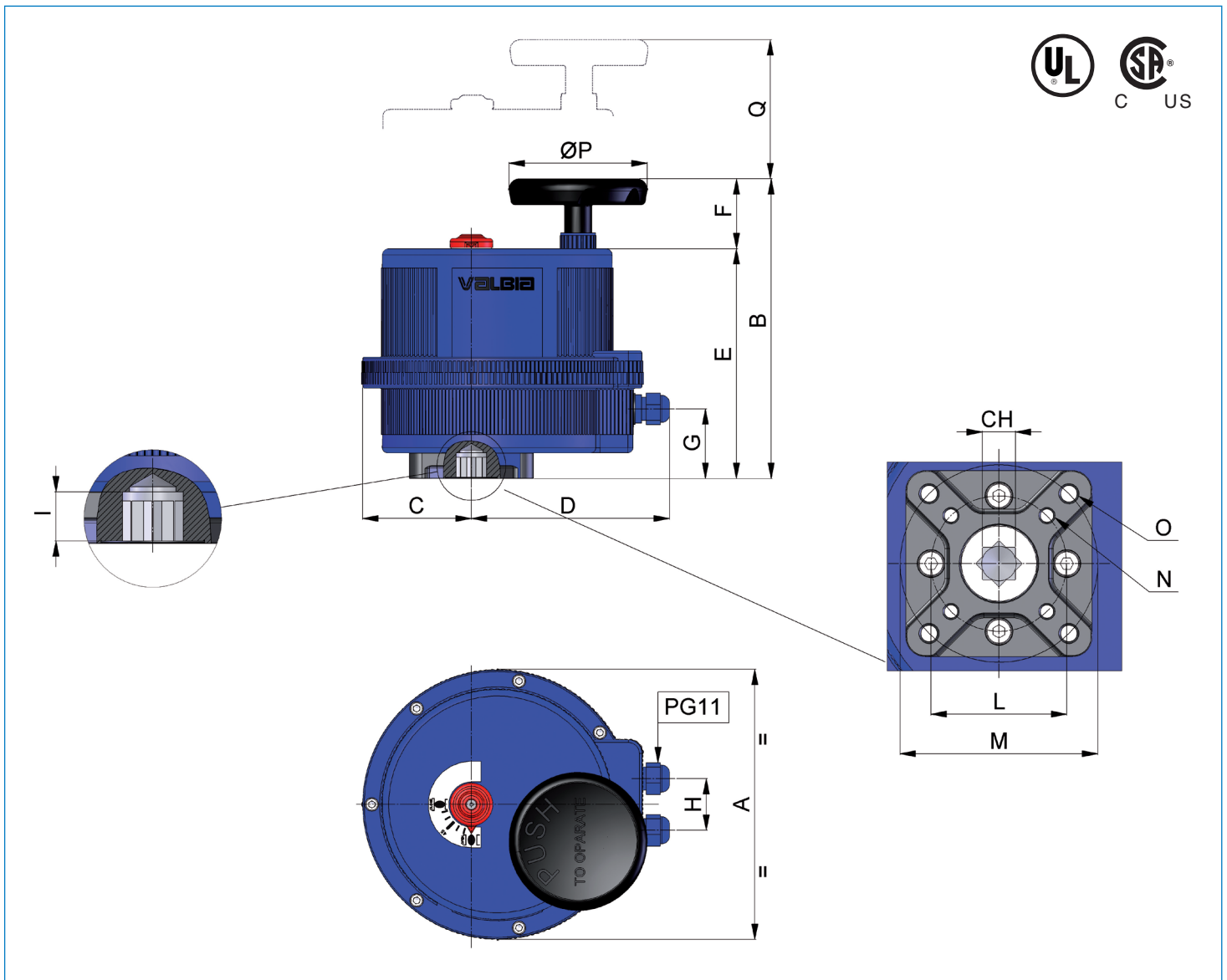
MOD. VB015



MOD.	ISO 5211 PATTERN	CH mm	A	B	C	D	E	F	G	H	I	L	M	N	O	ØP	Q
VB015	* F03 - F05	11	4.84	5.57	1.67	4.74	4.96	0.61	4.06	1.26	0.55	1.42	1.97	10-24 UNC 2BX0.47	1/4-20 UNC 2BX0.51	2.68	2.56

* Upon request F04 or F07.

MOD. VB030 – VB350



MOD.	ISO 5211 PATTERN	CH mm	A	B	C	D	E	F	G	H	I	L	M	N	O	ØP	Q
VB030	* F03 - F05	11	6.18	7.40	2.38	5.10	5.75	1.65	1.30	1.42	0.47	1.42	1.97	10-24 UNC 2BX0.47	1/4-20 UNC 2BX0.51	2.56	3.94
VB060	F05 - F07	14	7.28	8.46	2.66	5.77	6.81	1.65	2.01	1.42	0.63	1.97	2.76	1/4-20 UNC 2BX0.59	5/16-18 UNC 2BX0.63	2.56	4.33
VB110	F07 - F10	17	8.31	9.14	3.31	6.02	7.01	2.13	2.13	1.58	0.75	2.76	4.02	5/16-18 UNC 2BX0.75	3/8-16 UNC 2BX0.75	4.33	4.53
VB190	F07 - F10	17	8.31	9.14	3.31	6.02	7.01	2.13	2.13	1.58	0.75	2.76	4.02	5/16-18 UNC 2BX0.75	3/8-16 UNC 2BX0.75	4.33	4.53
VB270	F07 - F10	22	8.74	9.19	3.03	6.69	7.17	2.03	2.13	1.58	0.95	2.76	4.02	5/16-18 UNC 2BX0.75	3/8-16 UNC 2BX0.75	4.33	4.53
VB350	F07 - F10	22	8.74	9.19	3.03	6.69	7.17	2.03	2.13	1.58	0.95	2.76	4.02	5/16-18 UNC 2BX0.79	3/8-16 UNC 2BX0.75	4.33	4.53

* Upon request F04 or F07.

ELECTRIC ACTUATOR SERIES 86 DESIGN VB015M

ALUMINIUM ALLOY ENCLOSURE WITH POLYESTER POWDER COATING

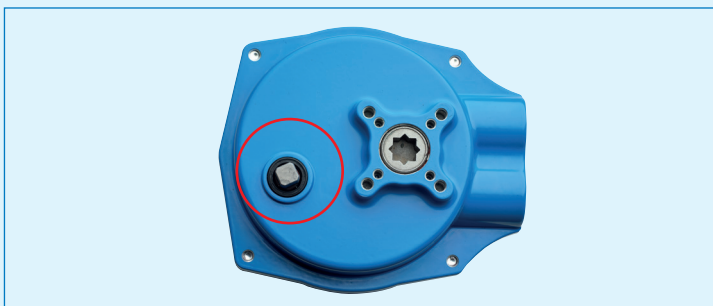
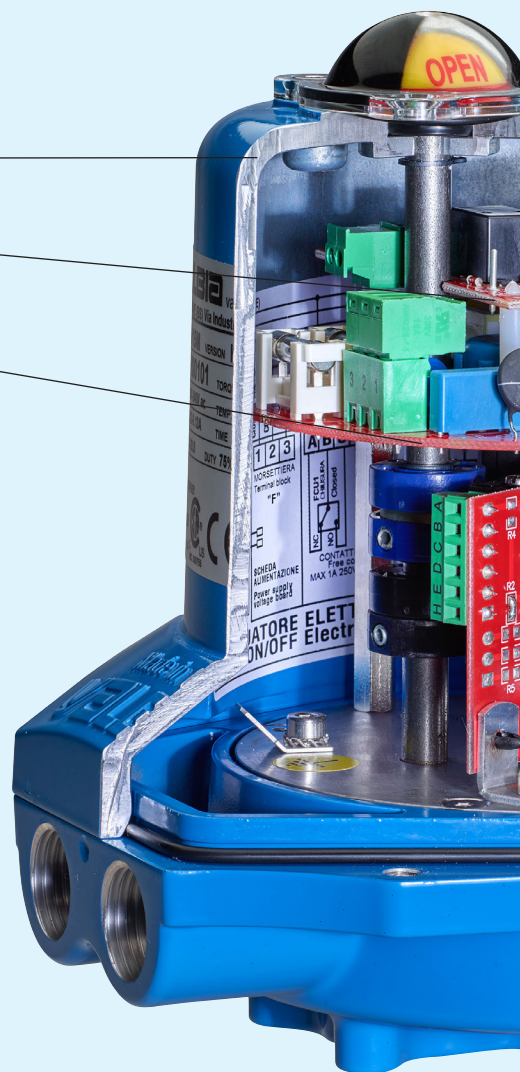
CONTROL BOARD

POWER SUPPLY BOARD

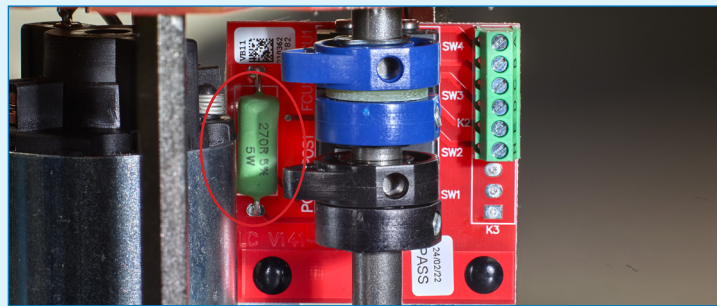


POSITION CAMS:

- Black cams: limit switches open and close adjustment.
- Blue cams: free limit switches open and close adjustment.

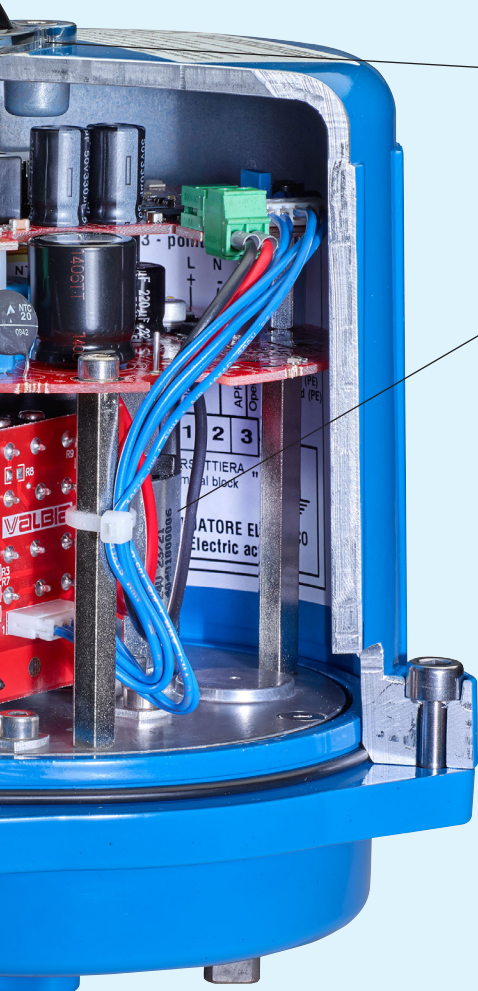


MANUAL EMERGENCY CONTROL WITH 10 mm KEY



HEATING RESISTOR:

- Managed by control board to guarantee the right internal temperature.



DOME POSITION INDICATOR

MOTORE DC

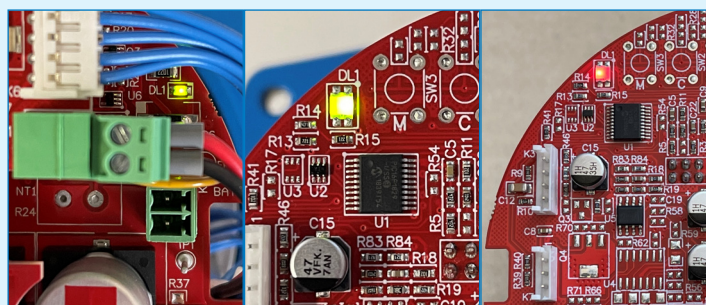
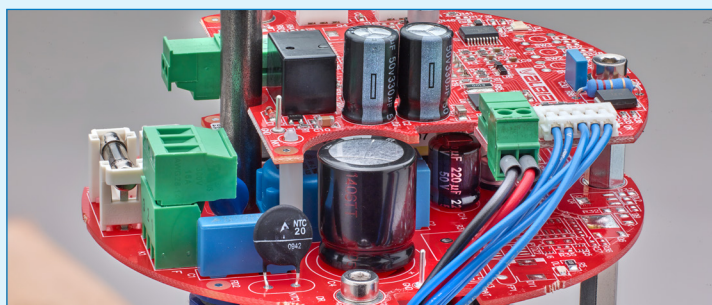


CAPTIVE COVER BOLT:

- Cover bolts are specially designed to prevent losing them during maintenance or installation.
- All external bolts are stainless steel.



EASIER UPPER COVER OPENING



LED lights to indicate: power supply ON (green), actuator working conditions (yellow) and fault (red).

86 SERIES ELECTRIC ACTUATOR

ALUMINUM ALLOY ENCLOSURE WITH POLYESTER POWDER COATING

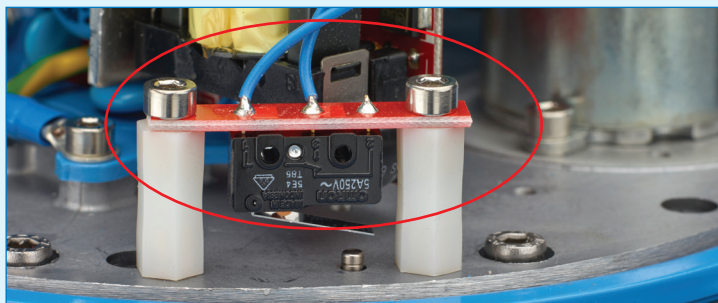
CONTROL BOARD

POWER SUPPLY BOARD



POSITION CAMS:

- Black cams: limit switches open and close adjustment.
- Blue cams: additional limit switches open and close adjustment.



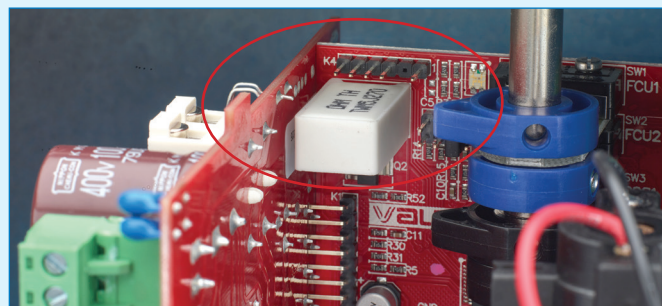
SNAP SWITCH (only for mod. VB110M - VB350M):

- To avoid the motor automatic rotation when the actuator is in manual mode.



MANUAL OVERRIDE SWITCH (only for mod. VB110M - VB350M):

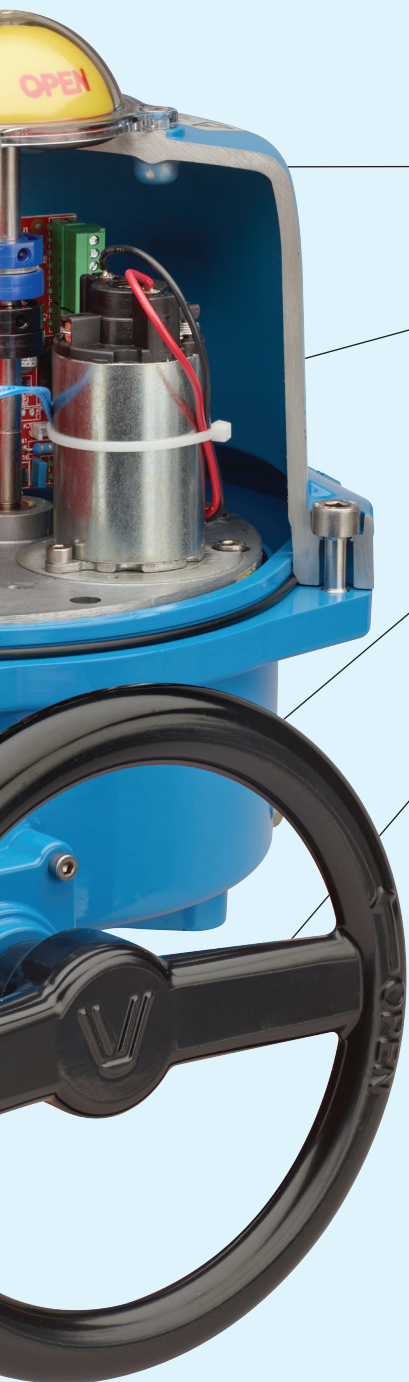
- Engages and disengages the manual override.



HEATER:

- Managed by the control board to guarantee the optimal internal temperature and avoid condensation.





DOME POSITION INDICATOR

DC MOTOR

OPEN/CLOSED POSITION ADJUSTMENT BOLTS

MANUAL OVERRIDE

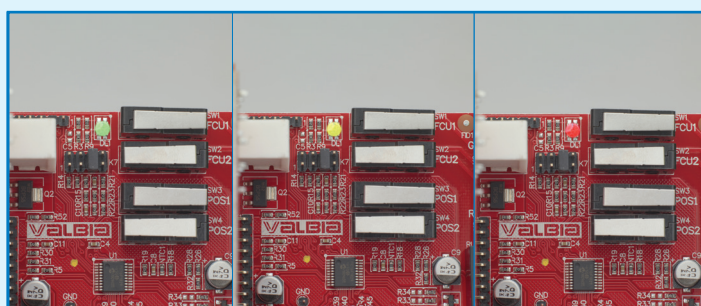
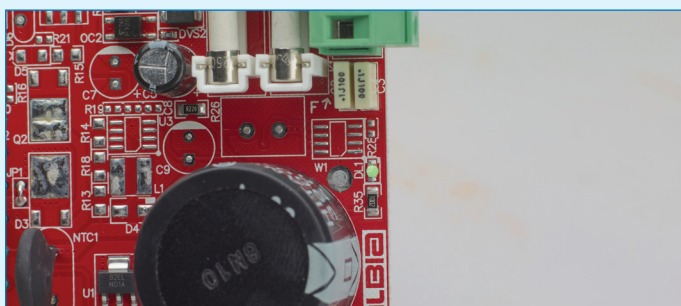


CAPTIVE COVER BOLT:

- Cover bolts are specially designed to prevent losing them during maintenance or installation.
- All external bolts are stainless steel.



EASY COVER OPENING

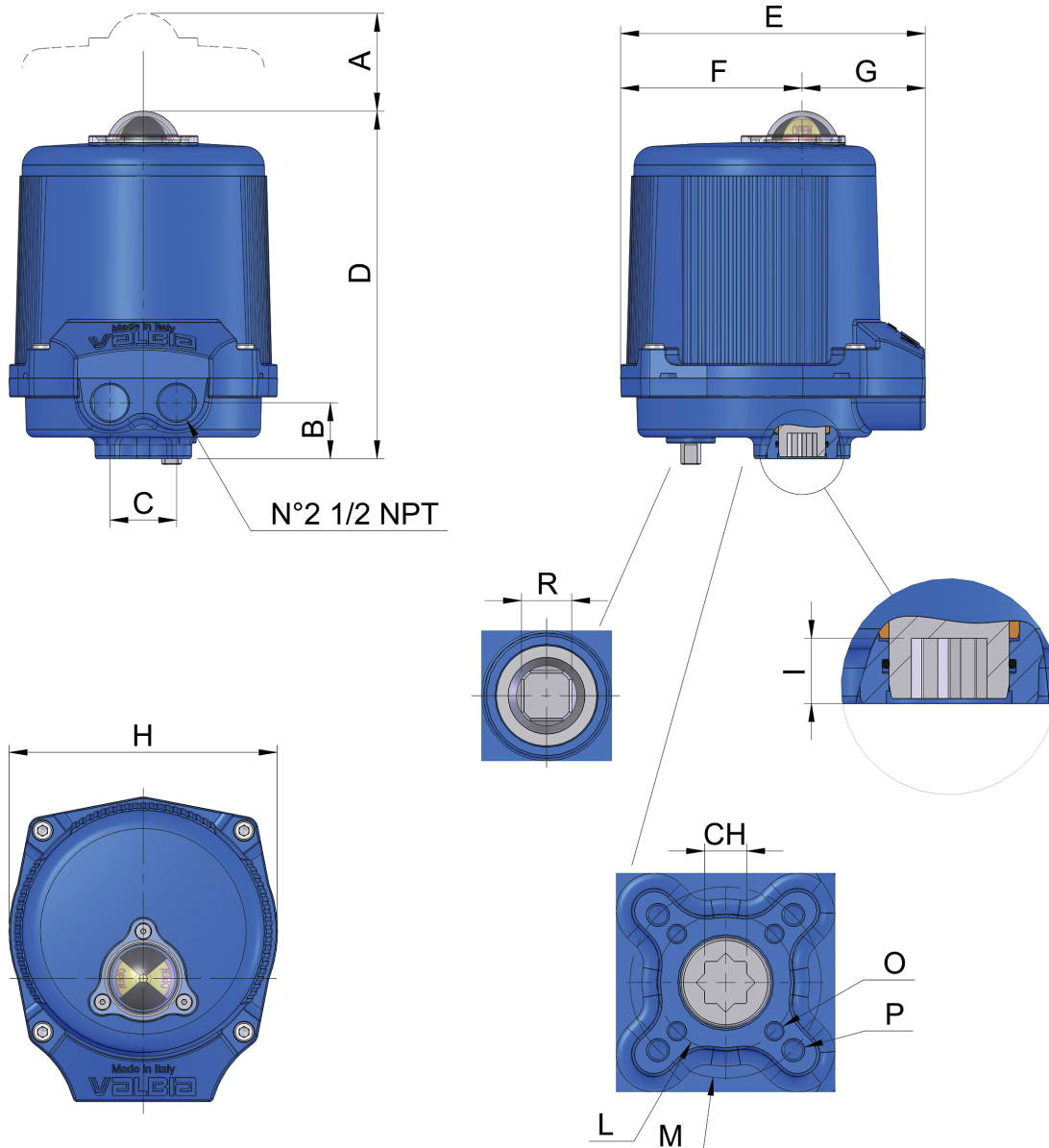


LED lights to indicate: power supply ON (green), actuator working conditions (yellow) and fault (red).

MODEL		VB015M	VB030M	VB060M	VB110M	VB190M	VB270M	VB350M
MAX WORKING TORQUE (in-Lbs)		150	266	530	975	1680	2390	3100
NOMINAL VOLTAGE (V)	LOW VOLTAGE	12V AC/DC	12V AC/DC	12V AC/DC	12V AC/DC	12V AC/DC	12V AC/DC	12V AC/DC
		24V AC/DC	24V AC/DC	24V AC/DC	24V AC/DC	24V AC/DC	24V AC/DC	24V AC/DC
	MULTIVOLTAGE	100-240V AC	100-240V AC	100-240V AC	100-240V AC	100-240V AC	100-240V AC	100-240V AC
WORKING TIME (sec)		9	8	9	27	27	50	50
TORQUE LIMITER		STD	STD	STD	STD	STD	STD	STD
DUTY RATING	12V AC/DC	50%	50%	50%	50%	50%	50%	50%
	24V AC/DC	75%	75%	75%	75%	75%	75%	75%
	100-240V AC							
PROTECTION (IP rating/UL)		IP68/Type4x	IP68/Type4x	IP68/Type4x	IP68/Type4x	IP68/Type4x	IP68/Type4x	IP68/Type4x
APPROVALS		CE, UL & CSA	CE, UL & CSA	CE, UL & CSA	CE, UL & CSA	CE, UL & CSA	CE, UL & CSA	CE, UL & CSA
ENCLOSURE		Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
ROTATION		90°	90°	90°	90°	90°	90°	90°
MECHANICAL STOPS (only reg. 0-90°)		NO	NO	NO	STD	STD	STD	STD
MANUAL OVERRIDE		STD 0.39 in	STD 0.39 in	STD 0.39 in	STD with handwheel and power switch	STD with handwheel and power switch	STD with handwheel and power switch	STD with handwheel and power switch
DOME POSITION INDICATOR		STD	STD	STD	STD	STD	STD	STD
WORKING TEMPERATURE		-4°F +131°F	-4°F +131°F	-4°F +131°F	-4°F +131°F	-4°F +131°F	-4°F +131°F	-4°F +131°F
HEATER		STD	STD	STD	STD	STD	STD	STD
ADDITIONAL LIMIT SWITCHES		n° STD (type SPDT)	n° STD (type SPDT)	n° STD (type SPDT)	n° STD (type SPDT)	n° STD (type SPDT)	n° STD (type SPDT)	n° STD (type SPDT)
ISO 5211 PATTERNS		F03-F05	F03-F05-F07	F07-F10	F07-F10	F07-F10	F07-F10	F07-F10
SQUARE DRIVE		11	11	14	17	17	22	22
SPECIAL SQUARE DRIVE (mm) UPON REQUEST		9-14	9-14	11-17	14-22	14-22	17	17
FAIL-SAFE OPERATION (BATTERY BACKUP)		UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST
		NOT AVAILABLE FOR 12V MOD						
STD (4-20mA or 0-10 VDC) REVERSE (20-4 mA or 10-0 VDC) MODE POSITIONER		UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST
ROTARY POTENTIOMETER (5K Ω 1W)		UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST
THREE POSITIONS		N/A	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST
ELECTRIC CONDUITS		N°2 1/2" NPT	N°2 1/2" NPT	N°2 1/2" NPT	N°2 1/2" NPT	N°2 1/2" NPT	N°2 1/2" NPT	N°2 1/2" NPT
WEIGHT (Lbs)		5.6	7.3	9.9	18.7	18.7	20.9	20.9

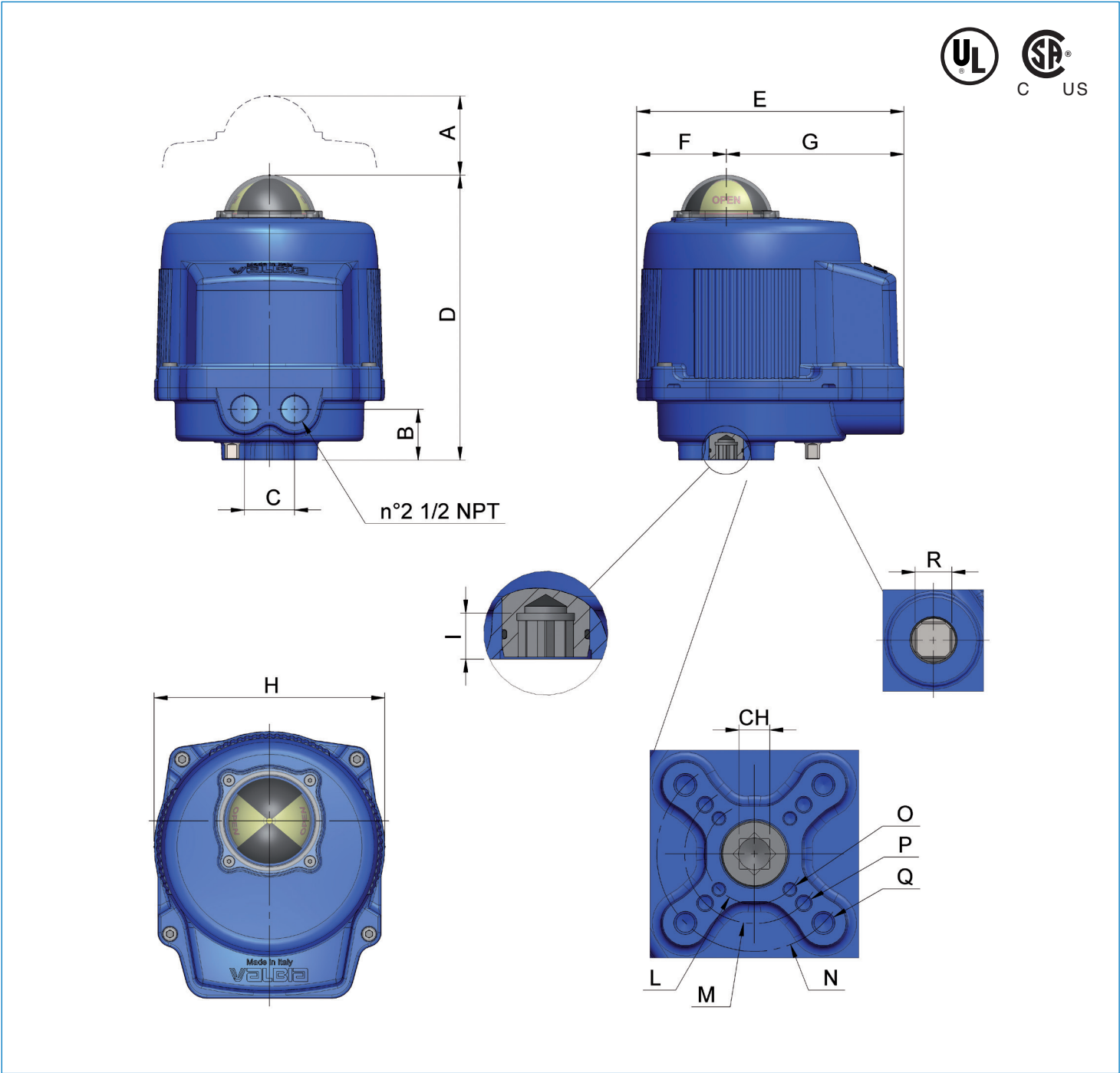
POWER CONSUMPTION									
MODEL		VB015M	VB030M	VB060M	VB110M	VB190M	VB270M	VB350M	
VERSION H	NOMINAL VOLTAGE	100-240V AC							
	ABSORBED CURRENT	0.22-0.12 A	0.4-0.2 A	0.6-0.3 A	0.4-0.2 A	0.6-0.3 A	0.6-0.3 A	0.75-0.4 A	
	ABSORBED POWER	22-28.8 VA	40-48 VA	60-72 VA	40-48 VA	60-72 VA	60-72 VA	75-96 VA	
VERSION L	NOMINAL VOLTAGE	12V AC/DC	24V AC/DC	12V AC/DC	24V AC/DC	12V AC/DC	24V AC/DC	12V AC/DC	24V AC/DC
	ABSORBED CURRENT	1.9-1.1 A	0.8-0.5A	2.2-1.8 A	1.0-0.7 A	3.8-2.85 A	1.8-1.2 A	3.8-2.85 A	1.8-1.2 A
	ABSORBED POWER	23-13.5 VA	10-12 VA	26.5-22 VA	24-17 VA	46-34 VA	43-29 VA	46-34 VA	43-29 VA
FREQUENCY		50/60 HZ							

VB015M MOD.

NEW

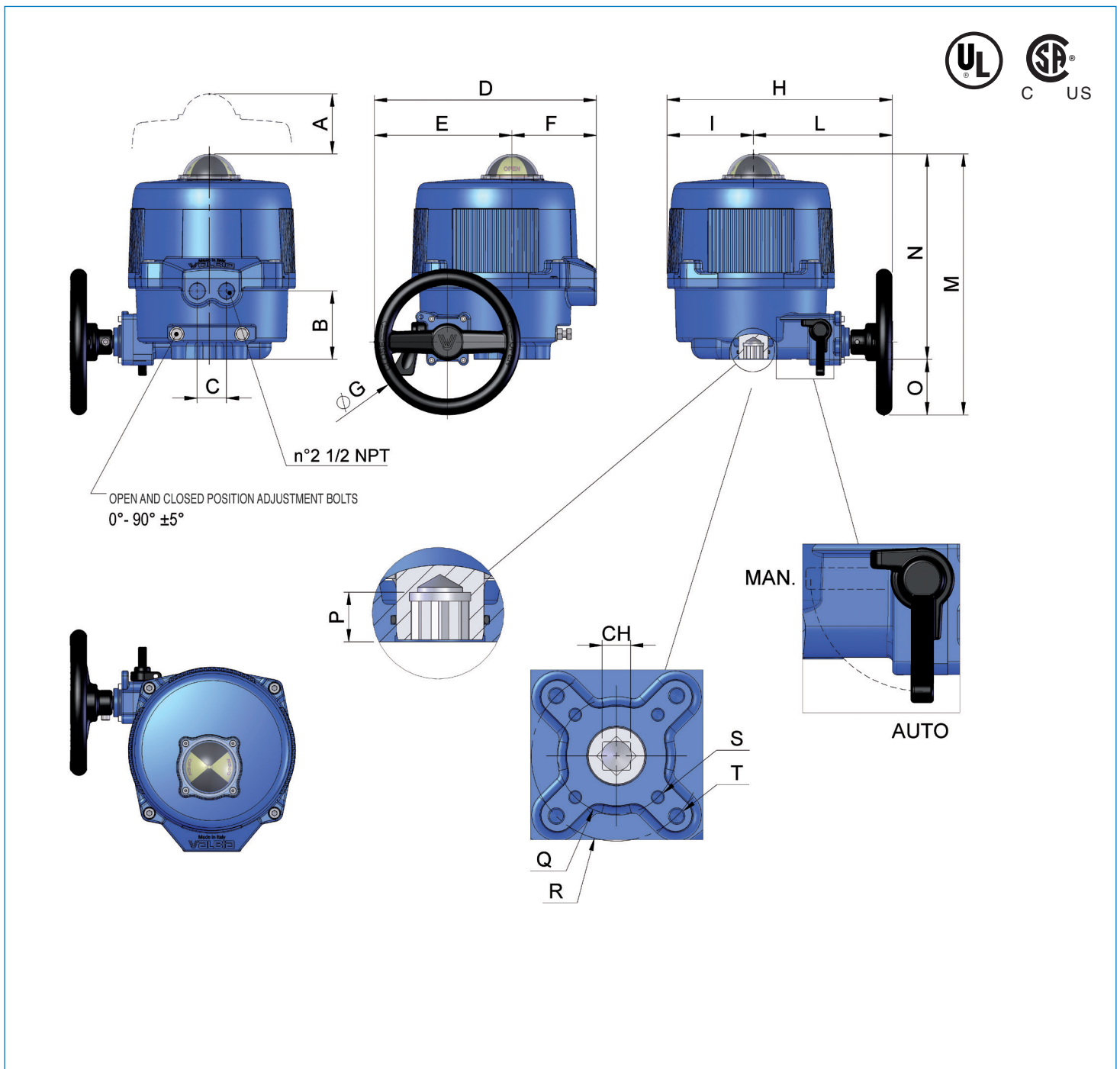
MOD.	ISO 5211 PATTERN	CH mm	A	B	C	D	E	F	G	H	I	L	M	O	P	R
VB015M	F03-F05	11	3.93	1.12	1.33	6.97	6.10	3.63	2.47	5.37	0.47	1.42	1.97	10-24 UNC 2B x 0.33"	1/4-20 UNC 2B x 0.37"	0.39

VB030M – VB060M MOD.



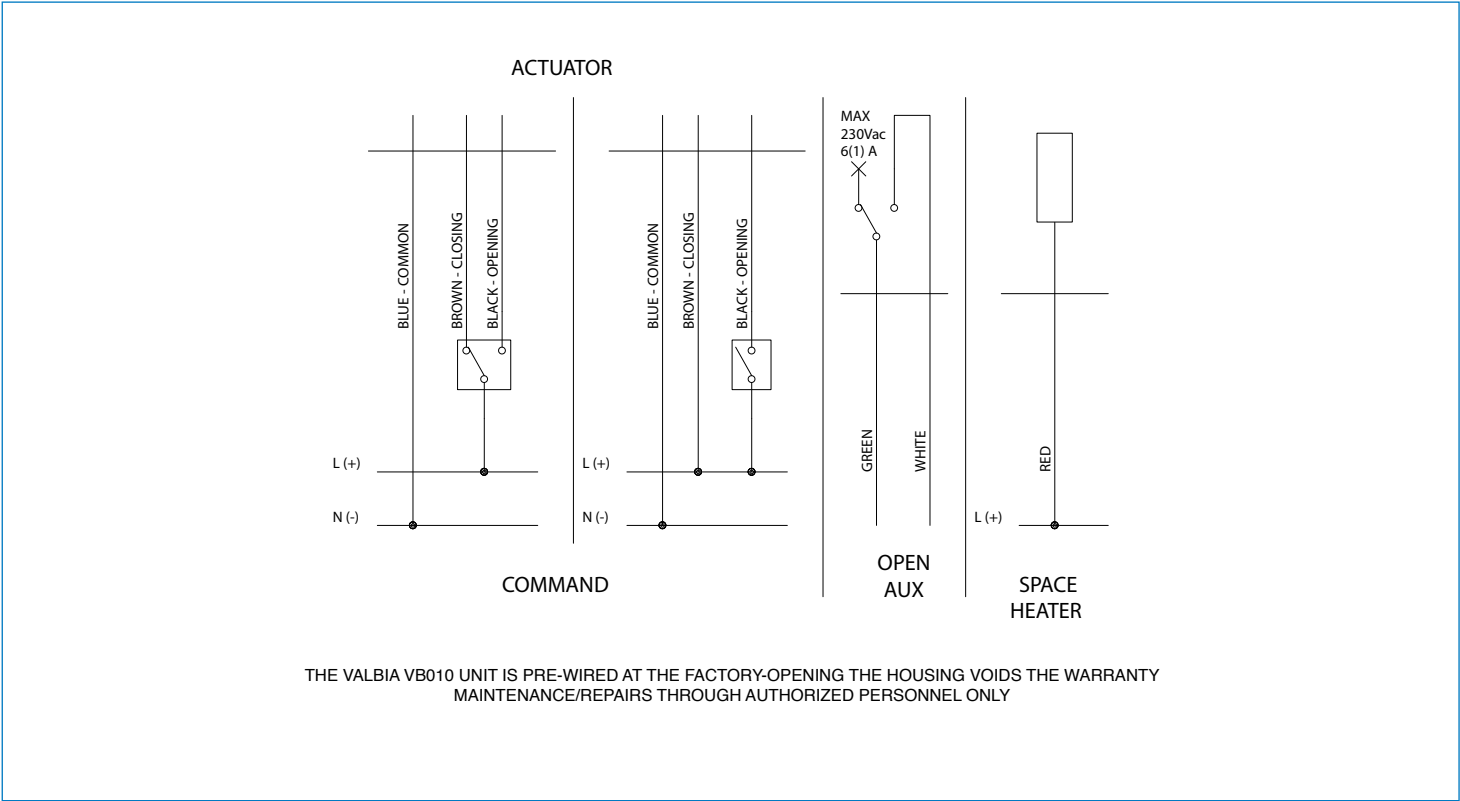
MOD.	ISO 5211 PATTERN	CH mm	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R
VB030M	F03-F05-F07	11	5.47	1.42	1.38	7.83	7.36	2.48	4.88	6.34	0.47	1.42	1.97	2.76	10-24 UNC 2B x 0.31"	1/4-20 UNC 2B x 0.39"	5/16-18 UNC 2B x 0.43"	0.39
VB060M	F05-F07	14	5.47	2.20	1.38	8.66	7.76	2.48	5.28	6.93	0.63	-	1.97	2.76	-	1/4-20 UNC 2B x 0.55"	5/16-18 UNC 2B x 0.59"	0.39

VB110M ÷ VB350M MOD.

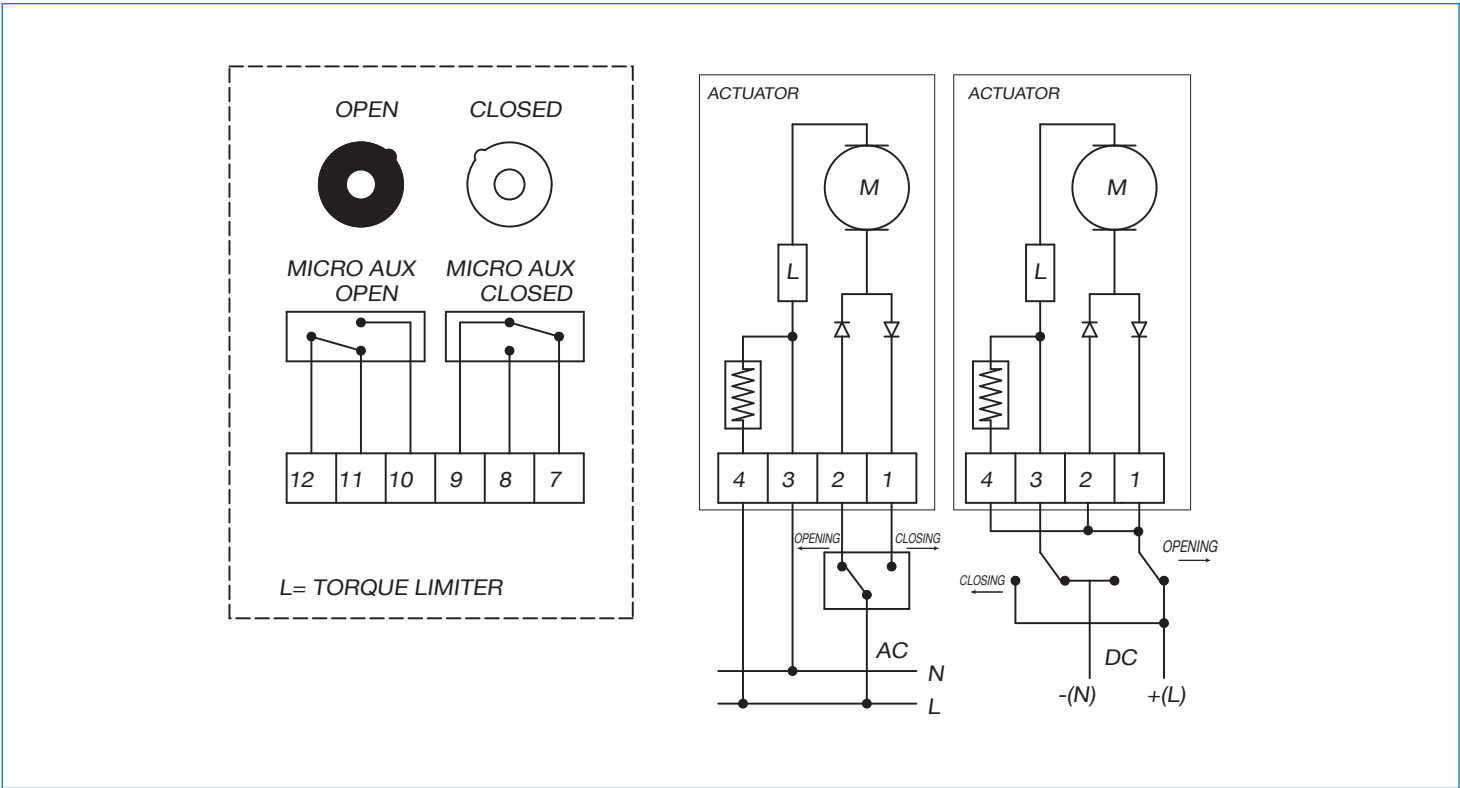


MOD.	ISO 5211 PATTERN	CH mm	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	T
VB110M	F07-F10	17	5.47	3.23	1.38	10.47	6.50	3.98	6.89	10.63	4.05	6.57	12.32	9.68	2.64	0.75	2.76	4.02	5/16-18 UNC 2B x 0.39"	3/8-16 UNC 2B x 0.39"
VB190M	F07-F10	17	5.47	3.23	1.38	10.47	6.50	3.98	6.89	10.63	4.05	6.57	12.32	9.68	2.64	0.75	2.76	4.02	5/16-18 UNC 2B x 0.38"	3/8-16 UNC 2B x 0.38"
VB270M	F07-F10	22	5.47	3.27	1.38	10.98	7.24	3.74	6.89	10.83	4.29	6.53	12.36	9.72	2.64	0.94	2.76	4.02	5/16-18 UNC 2B x 0.59"	3/8-16 UNC 2B x 0.59"
VB350M	F07-F10	22	5.47	3.27	1.38	10.98	7.24	3.74	6.89	10.83	4.29	6.53	12.36	9.72	2.64	0.94	2.76	4.02	5/16-18 UNC 2B x 0.59"	3/8-16 UNC 2B x 0.59"

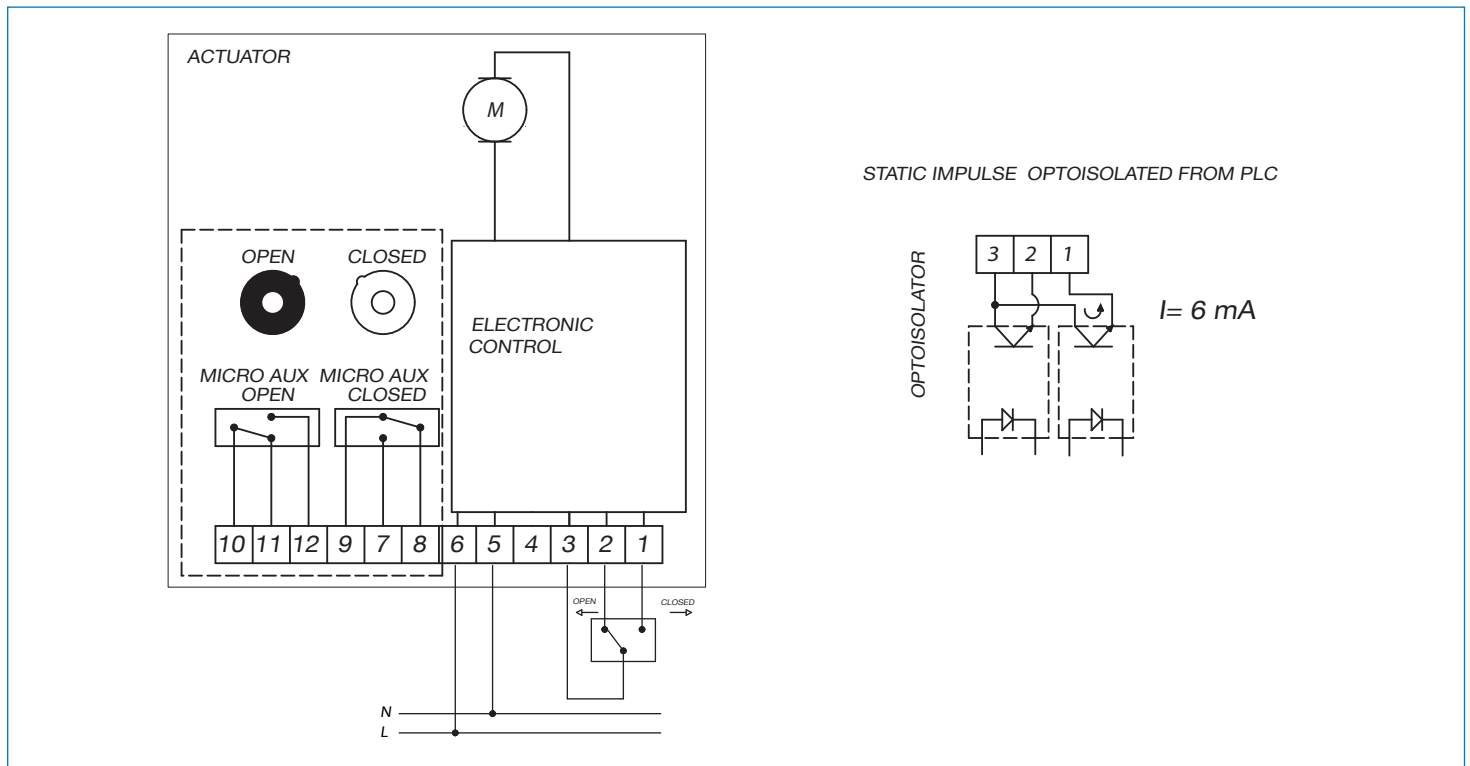
ELECTRIC WIRING VB010 24V AC/DC 50/60 HZ. 110V AC 60HZ



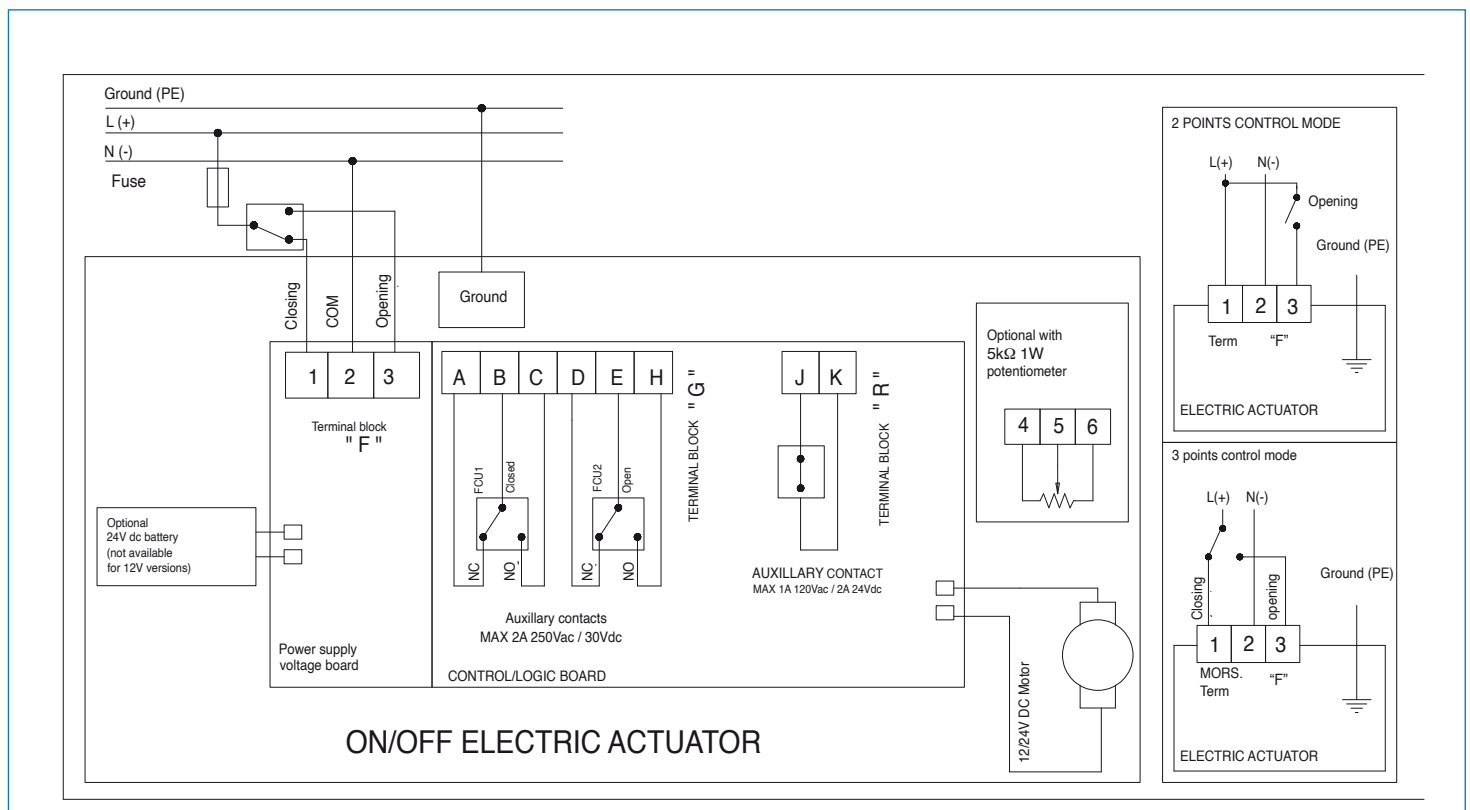
ELECTRIC WIRING VB015 12V-24V AC/DC 50/60 HZ



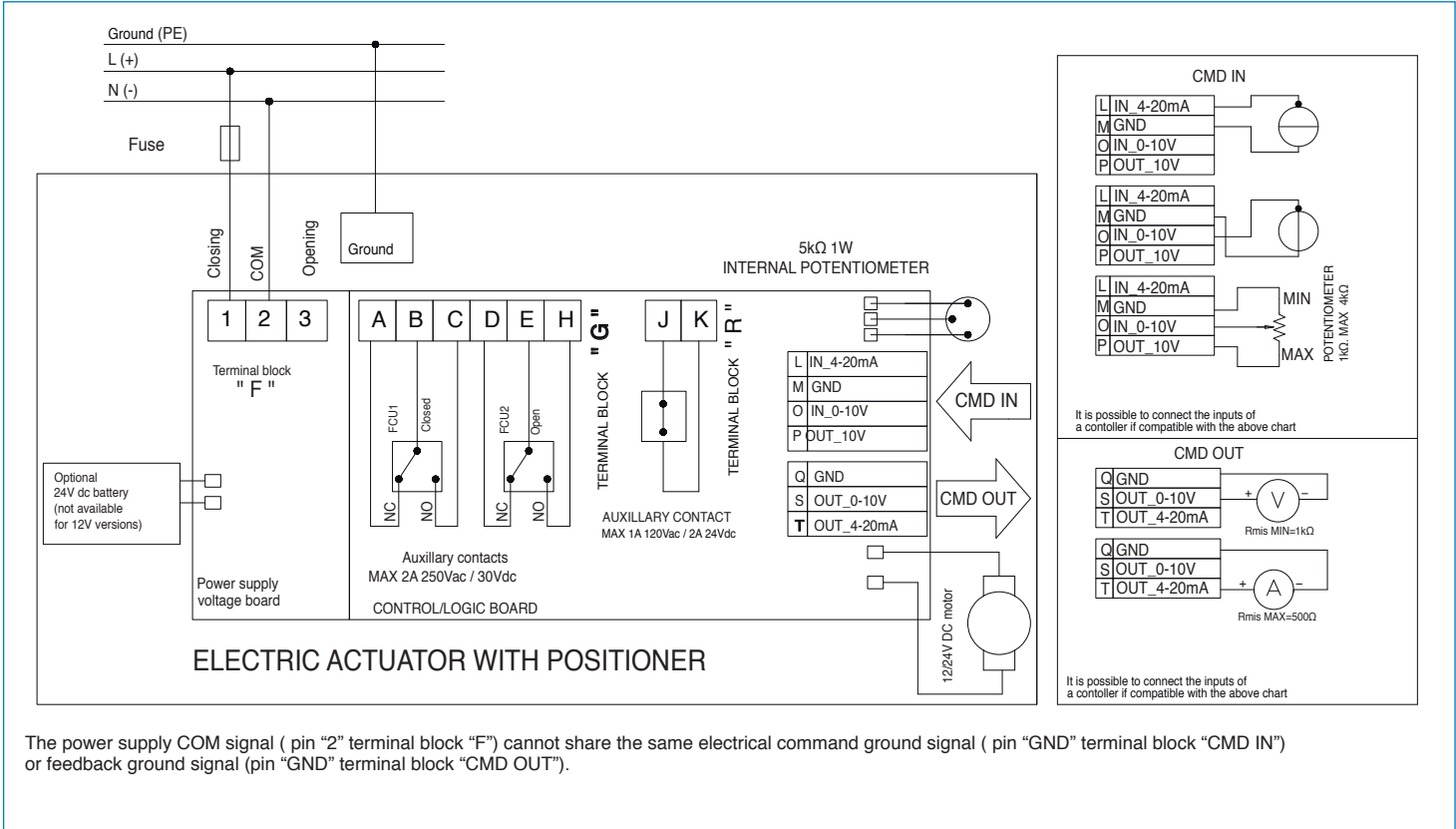
ELECTRIC WIRING VB015 100-240V 50/60Hz



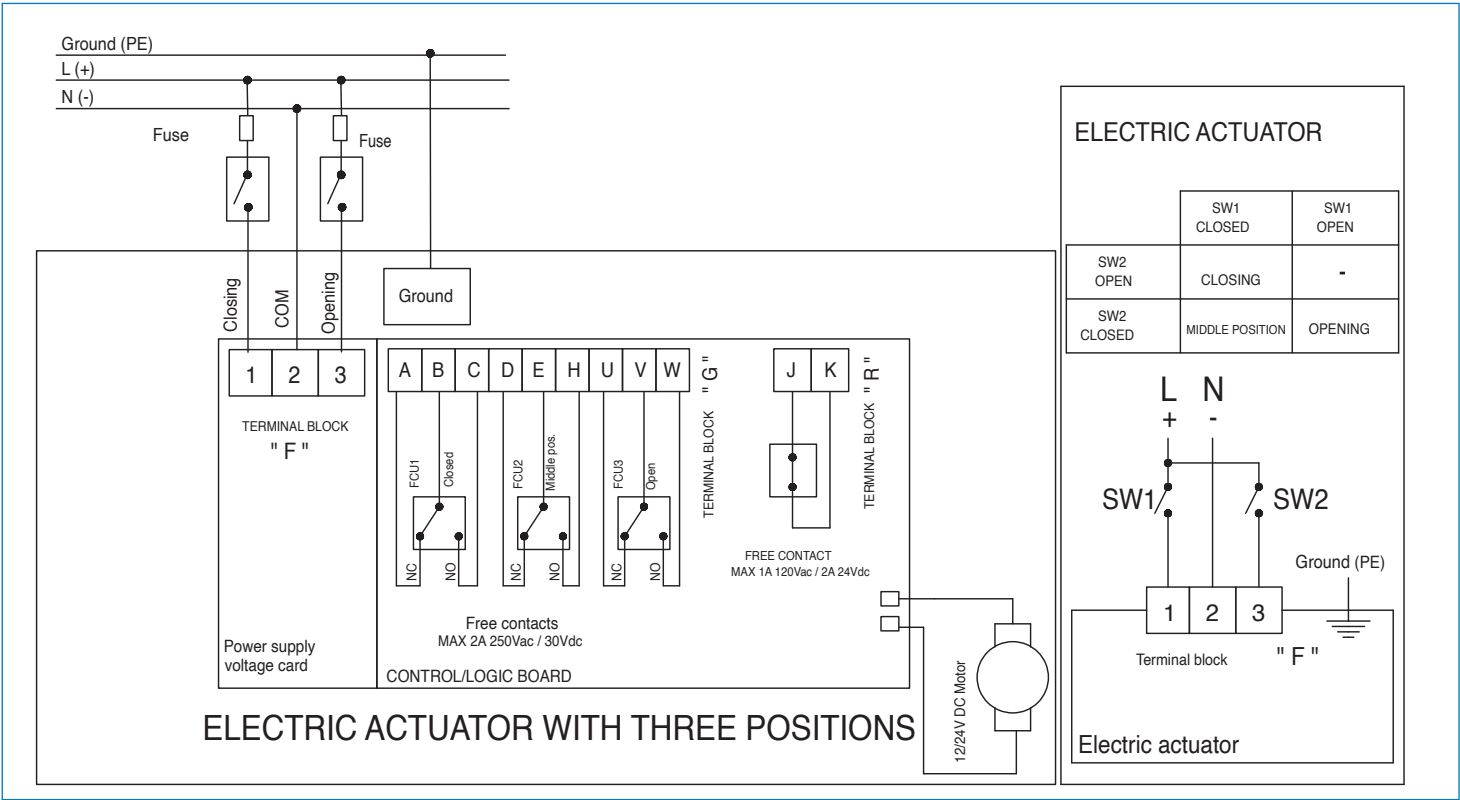
ELECTRIC WIRING FROM VB030 TO VB350 AND FROM VB015M TO VB350M 12V AC/DC 50/60 Hz. 24V AC/DC 50/60 Hz. 100-240V AC 50/60 Hz



ELECTRIC WIRING WITH POSITIONER FROM VB030 TO VB350 AND FROM VB015M TO VB350M. 24V AC/DC 50/60 Hz. 100-240V AC 50/60 Hz



ELECTRIC WIRING WITH THREE POSITIONS FROM VB030 TO VB350 AND FROM VB030M TO VB350M 12V AC/DC 50/60Hz. 24V AC/DC 50/60Hz. 100-240V AC 50/60Hz









BONOMI
NORTH AMERICA



2025



PRICE LIST
EFFECTIVE FEBRUARY 1st 2025



VALPRES VALBIA

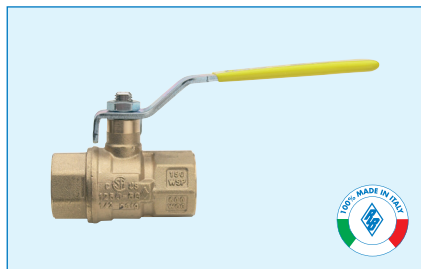
FRABO



TVL
TECNOVIELLE



CONFLOW



TYPE 161N – 162N (T-HANDLE)

Full port brass ball valve FNPT threaded with lever handle.



Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	10.40	14.90	20.70	35.30	48.50	78.00	174.60	244.90	363.90
Package	40	20	10	10	4	4	6	6	4
Master Box	80	40	20	20	8	8	6	6	4
Master Box weight	33.44	28.09	21.45	34.81	19.53	34.26	40.85	59.75	51.10

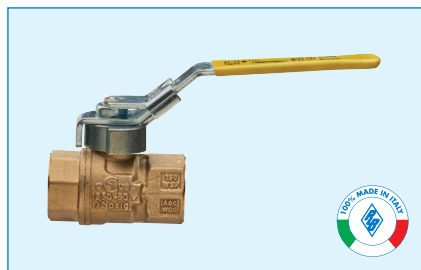
162N: available size 1/2" to 1".

TYPE 161L

Full port brass ball valve FNPT threaded with latch lock handle.



Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	16.30	21.50	28.20	44.30	58.10	88.00	230.40	341.20	441.70
Package	50	25	20	6	4	4	2	4	2
Master Box	100	50	40	12	8	8	4	4	2
Master Box weight	49.58	40.94	46.74	24.10	21.13	36.91	34.93	52.96	55.35



TYPE 171N – 172N (T-HANDLE)

Full port brass ball valve FNPT threaded with lever handle.



Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	9.80	9.80	12.30	17.50	26.00	44.30	64.00	95.40	211.60	297.30	517.40
Package	70	40	40	20	10	6	4	2	6	4	2
Master Box	140	80	80	40	20	12	8	8	6	4	2
Master Box weight	49.38	25.99	38.787	33.14	24.71	25.53	23.61	18.63	50.95	52.67	44.45

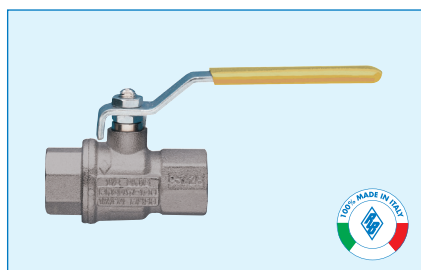
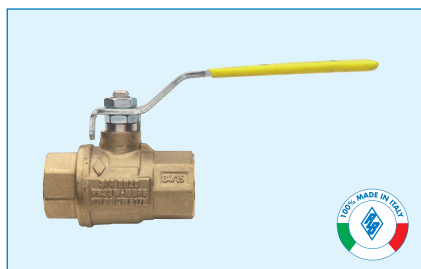
172N: available size 1/4" to 1".

TYPE 171NCR

Full port chrome plated brass ball valve FNPT threaded, with lever handle.



Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	10.00	10.00	13.00	18.60	26.70	47.60	69.70	102.80	228.20	320.70	530.30
Package	70	70	50	25	20	10	6	4	2	4	2
Master Box	140	140	80	50	40	12	12	4	6	4	2
Master Box weight	49.64	44.67	50.93	42.12	51.11	45.20	40.12	35.17	35.36	54.49	45.12

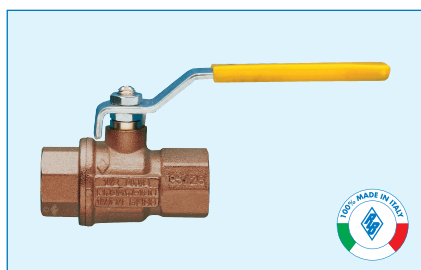


TYPE 171S

Full port brass ball valve FNPT threaded with lever handle, with stainless steel ball and stem.



Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	20.10	20.10	21.40	31.20	42.10	65.00	92.10	141.40	263.80	441.00	706.00
Package	70	70	20	25	10	6	6	4	6	4	2
Master Box	140	140	80	50	20	12	12	8	6	4	2
Master Box weight	48.61	43.98	40.41	41.38	26.04	27.25	38.76	40.54	62.83	65.81	58.55



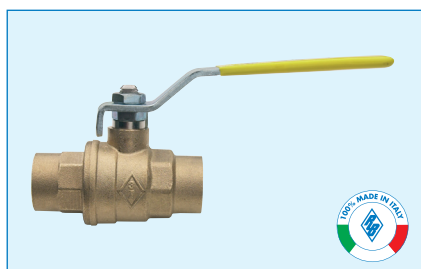
TYPE 1715 – 1725 (T-HANDLE)

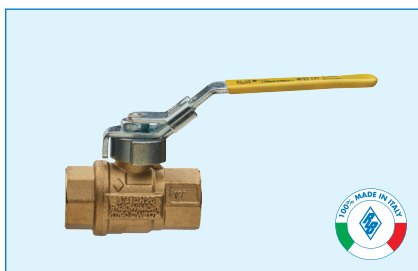
Full port brass ball valve solder ends with lever handle.



Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	12.30	17.50	26.00	44.30	64.00	95.40	219.70	319.00	563.10
Package	40	25	10	6	6	4	4	3	2
Master Box	80	50	20	12	12	8	4	3	2
Master Box weight	40.79	41.93	25.15	25.38	34.39	35.71	38.56	44.33	50.42

1725: available size 1/2" to 1".





TYPE 171L

Full port brass ball valve FNPT threaded with latch lock handle.



Up to 2"

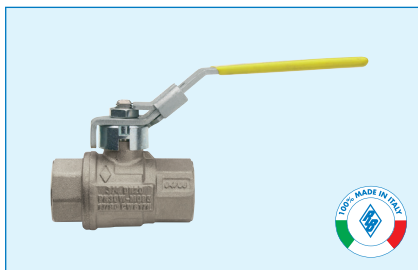


C US



Up to 2"

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	19.50	19.50	22.50	29.70	40.00	66.40	94.00	134.00	257.00	346.90	590.80
Package	70	40	40	20	15	6	6	2	6	4	2
Master Box	140	80	80	40	30	12	12	8	6	4	2
Master Box weight	57.23	32.98	47.66	38.98	41.40	27.23	37.15	19.95	56.55	49.74	47.13

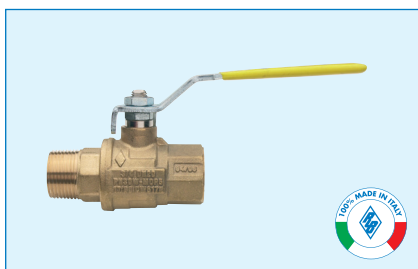


TYPE 171LCR

Full port chrome plated brass ball valve FNPT threaded, with latch lock handle.



Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	19.80	19.80	23.10	30.30	40.60	69.00	98.00	140.50	270.00	364.30	620.40
Package	70	70	50	25	20	10	6	4	2	-	-
Master Box	140	140	100	50	40	20	12	8	4	4	2
Master Box weight	48.73	44.72	50.49	42.01	51.29	45.25	40.85	35.08	38.48	55.26	45.70

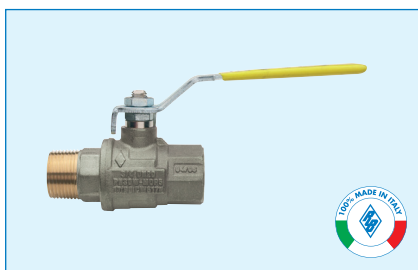


TYPE 171M - 172M (T-HANDLE)

Full port brass ball valve MNPT x FNPT threaded with lever handle.



Size	1/4"	3/8"	1/2"	3/4"	1"
US\$	11.60	11.70	14.60	20.80	30.20
Package	70	40	50	20	20
Master Box	140	80	100	40	40
Master Box Weight	42.66	28.68	53.64	35.21	52.49

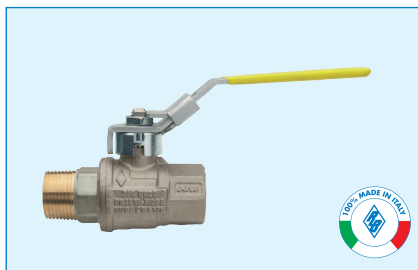


TYPE 171MCR

Full port chrome plated brass ball valve, MNPT x FNPT threaded, with lever handle.



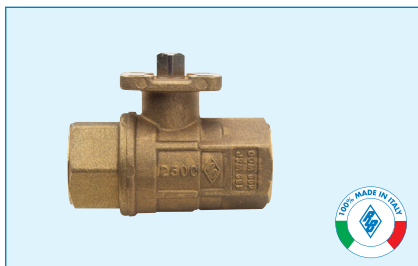
Size	1/4"	3/8"	1/2"	3/4"	1"
US\$	11.90	11.90	15.60	21.60	31.00
Package	70	70	50	25	20
Master Box	140	140	100	50	40
Master Box Weight	49.03	46.87	54.03	44.76	41.99



TYPE 171MCRL

Full port chrome plated brass ball valve, MNPT x FNPT threaded, with locking lever handle.

Size	1/4"	3/8"	1/2"	3/4"	1"
US\$	21.30	21.30	25.50	33.70	44.80
Package	70	70	50	25	20
Master Box	140	140	100	50	40
Master Box Weight	49.47	47.31	54.47	45.20	42.43

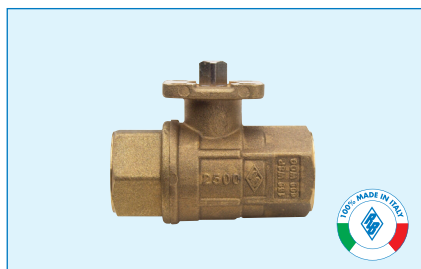


TYPE 250N

Full port brass ball valve FNPT threaded with ISO 5211 pad for actuators.



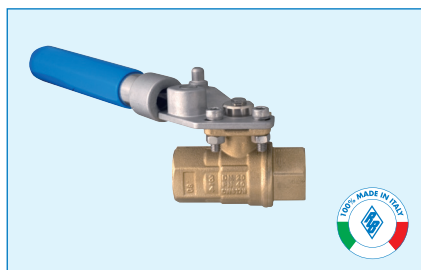
Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	45.50	45.50	45.90	51.50	77.40	117.90	166.90	257.20	437.90	627.40	1,046.00
Package	40	10	40	30	15	10	4	2	5	4	2
Master Box	80	60	80	60	30	20	8	4	5	4	2
Master Box weight	60.83	48.79	55.84	55.01	49.19	46.36	31.33	26.30	48.66	54.37	43.10



TYPE 253N

Full port brass ball valve FNPT threaded with stainless steel stem & ball and ISO 5211 pad for actuators.

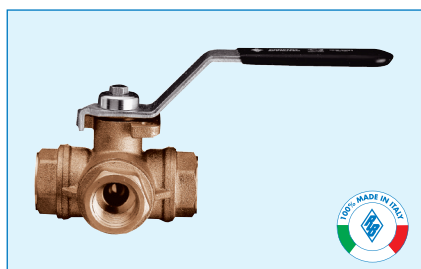
Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	74.50	74.50	74.50	84.20	110.60	153.60	218.70	342.60
Package	40	40	40	30	10	10	6	4
Master Box	80	80	80	60	20	20	12	8
Master Box weight	67.31	63.38	55.67	54.87	32.03	45.66	45.48	51.50



TYPE 250N SRL

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

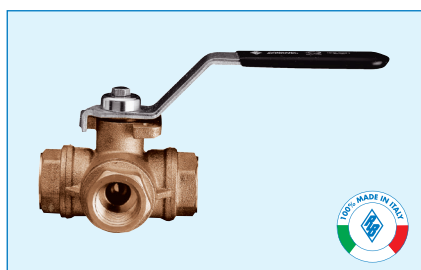
Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
US\$	149.00	149.00	149.00	154.00	179.00	218.00	277.00	363.00	583.00	764.00
Package	1	1	1	1	1	1	1	1	1	1
Master Box	-	-	-	-	-	-	-	-	-	-
Master Box weight	3.06	3.04	2.93	3.13	3.84	4.48	6.70	6.95	15.27	19.08



TYPE 355N (T)

3-way reduced port brass ball valve FNPT threaded with lever handle and ISO 5211 pad for actuators.

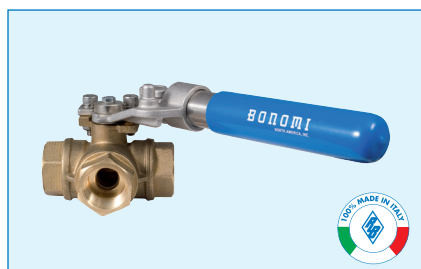
Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
US\$	65.30	65.30	65.40	75.00	111.30	173.90	272.30	414.00	769.40	772.20
Package	5	5	10	6	6	4	2	1	3	2
Master Box	30	30	20	12	12	8	4	2	3	2
Master Box weight	38.51	36.40	25.86	19.47	34.06	34.90	26.57	23.83	60.16	40.08



TYPE 365N (L)

3-way reduced port brass ball valve FNPT threaded with lever handle and ISO 5211 pad for actuators.

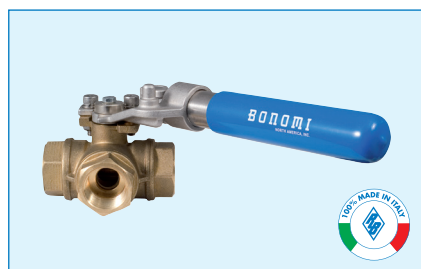
Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
US\$	65.30	65.30	65.40	75.00	111.30	173.90	272.30	414.00	769.40	772.20
Package	5	5	10	6	6	4	4	1	3	2
Master Box	30	30	20	12	12	8	8	2	3	2
Master Box weight	39.04	37.19	26.04	19.71	34.90	36.00	53.64	24.43	62.10	41.34



TYPE 355N SRL (T)

Deadman spring return lever, 3-way reduced port brass ball valve, FNPT threaded.

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	168.00	168.00	168.00	178.00	214.00	273.00	383.00	520.00
Package	1	1	1	1	1	1	1	1
Master Box	-	-	-	-	-	-	-	-
Weight	3.48	3.39	3.46	3.73	4.94	6.39	9.46	14.07



TYPE 365N SRL (L)

Deadman spring return lever, 3-way reduced port brass ball valve, FNPT threaded.

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	168.00	168.00	168.00	178.00	214.00	273.00	383.00	520.00
Package	1	1	1	1	1	1	1	1
Master Box	-	-	-	-	-	-	-	-
Weight	3.48	3.39	3.46	3.73	4.94	6.39	9.46	14.07



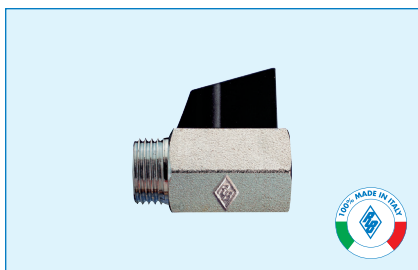


TYPE 383N

Mini brass ball valve reduced port. FNPT threaded.



Size	1/8"	1/4"	3/8"	1/2"	3/4"
US\$	10.70	10.70	10.70	12.60	18.90
Package	50	50	50	25	25
Master Box	300	300	300	150	50
Master Box weight	71.85	68.61	60.34	51.54	26.28

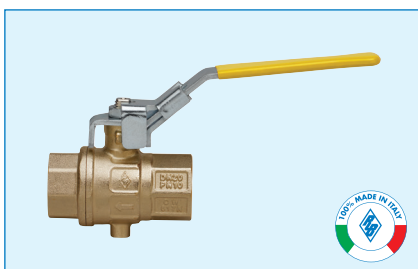


TYPE 383M

Mini brass ball valve reduced port. MNPT x FNPT threaded.



Size	1/8"	1/4"	3/8"	1/2"	3/4"
US\$	10.70	10.70	10.70	12.60	18.90
Package	50	50	50	35	25
Master Box	300	300	300	210	50
Master Box weight	58.95	56.64	53.99	66.56	24.96

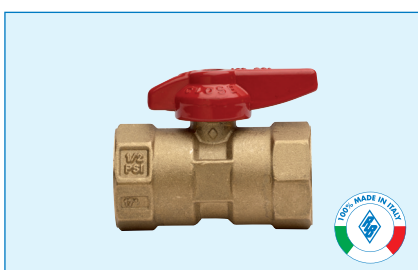


TYPE 511L

Safety exhaust full port brass ball valve 200 psi. FNPT threaded with latch lock handle.



Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	25.80	24.20	26.00	34.20	42.60	71.10	102.00	146.20
Package	40	40	40	20	10	6	4	2
Master Box	80	80	80	40	20	12	8	8
Master Box weight	33.38	30.49	44.58	37.46	27.27	21.45	17.02	12.46



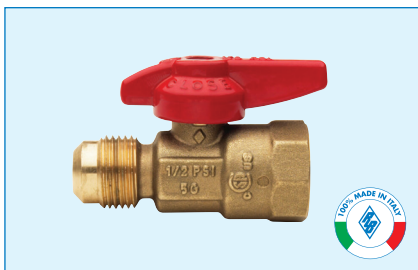
TYPE 9280

ONE PIECE BODY

FIP x FIP gas ball valve.



Size	3/8" FIP X 3/8" FIP	1/2" FIP X 1/2" FIP	3/4" FIP X 3/4" FIP
US\$	10.00	12.00	16.00
Package	100	100	60
Master Box	200	200	120
Master Box weight	36.31	59.63	57.17



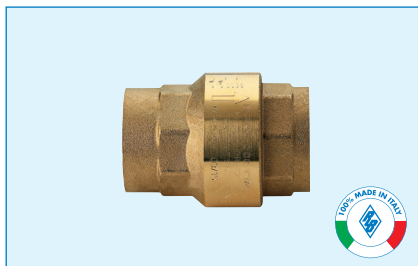
TYPE 9281

ONE PIECE BODY

FIP x FLARE gas ball valve.



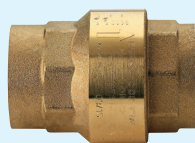
Size	3/8" FIP X 3/8" FLARE	1/2" FIP X 3/8" FLARE	1/2" FIP X 1/2" FLARE
US\$	9.70	12.10	12.10
Package	100	100	100
Master Box	200	200	200
Master Box weight	40.94	53.77	51.74



TYPE 100002

High flow rate spring loaded brass check valve FNPT threaded, with NBR seat.

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	10.60	10.60	12.00	16.30	21.50	33.40	47.80	67.00	152.10	213.10	349.50
Package	1	1	1	1	1	1	1	1	2	2	2
Master Box	144	144	144	75	75	30	30	12	4	4	2
Master Box weight	33.77	31.04	46.72	39.77	57.66	36.99	49.60	28.79	20.44	28.48	24.03



TYPE 100003

High flow rate spring loaded brass check valve FNPT threaded, with FKM Viton seat.

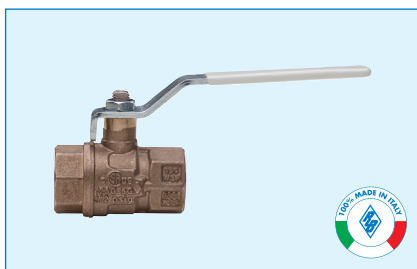
Size	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	10.90	12.50	17.70	22.80	35.90	52.70	71.80	158.80	222.40	363.70
Package	1	1	1	1	1	1	1	2	2	2
Master Box	144	144	75	75	30	30	12	4	4	2
Master Box weight	31.04	47.11	37.37	57.56	38.47	49.67	28.81	20.48	28.63	24.01



TYPE 100102

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

Size	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	17.90	19.90	24.10	29.70	43.00	57.20	79.60	181.80	250.80	403.60
Package	20	20	10	6	4	4	2	2	1	2
Master Box	120	120	60	36	24	8	4	4	2	2
Master Box weight	28.75	45.15	32.95	29.83	30.95	15.39	11.23	21.60	16.24	25.31



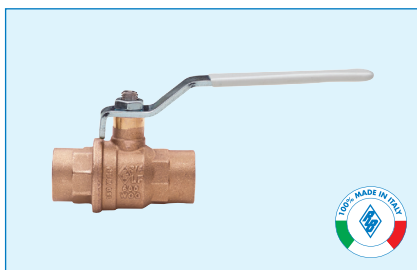
TYPE B11N LF – B12N LF (T-HANDLE)

Forged bronze ball valve, female/female, full port sizes 1/2" up to 2".



Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	26.50	35.50	47.40	79.50	108.90	179.50
Package	50	25	10	6	4	4
Master Box	100	50	20	12	8	8
Master Box weight	43.34	34.35	21.65	21.12	20.13	33.09

B12N LF: available size 1/2" to 1".



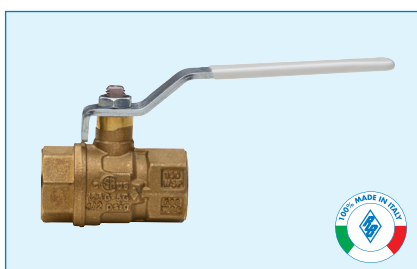
TYPE B115 LF – B125 LF (T-HANDLE)

Forged bronze ball valve with solder ends, full port sizes 1/2" up to 2".



Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	26.50	35.50	47.40	79.50	108.90	179.50
Package	40	20	10	10	4	2
Master Box	80	40	20	20	8	4
Master Box weight	32.74	25.84	19.91	33.09	20.26	18.43

B125 LF: available size 1/2" to 1".



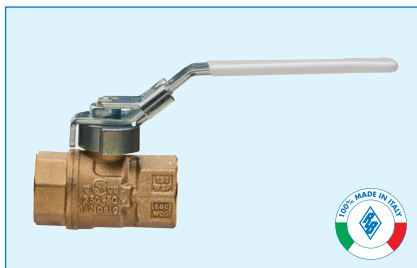
TYPE 161N LF – 162N LF (T-HANDLE)

Full port lead free brass ball valve FNPT threaded with lever handle.



Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	11.20	17.00	25.00	39.80	57.00	92.80	240.40	334.10	472.10
Package	50	25	10	6	4	4	6	4	2
Master Box	100	50	20	12	8	8	6	4	2
Master Box weight	42.00	35.21	22.05	21.30	19.76	34.33	49.89	50.99	50.20

162N LF: available size 1/2" to 1".

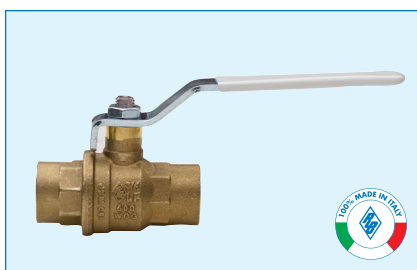


TYPE 161L LF

Full port lead free brass ball valve FNPT threaded, with latch lock handle.



Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	16.40	22.70	30.10	45.20	61.90	95.80	304.50	402.80	565.10
Package	50	25	20	6	4	4	2	-	-
Master Box	100	50	40	12	8	8	4	4	2
Master Box weight	50.09	42.00	47.27	24.05	21.80	36.84	34.93	52.96	55.35



TYPE 1615 LF – 1625 LF (T-HANDLE)

Full port lead free brass ball valve, solder ends with lever handle.



Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	11.23	17.00	25.00	39.80	57.00	92.80	240.40	334.10	472.10
Package	40	20	10	6	4	2	-	-	-
Master Box	80	40	20	12	8	8	6	4	2
Master Box weight	34.12	27.03	20.27	21.14	20.27	15.97	52.80	51.48	61.10

1625 LF: available size 1/2" to 1".

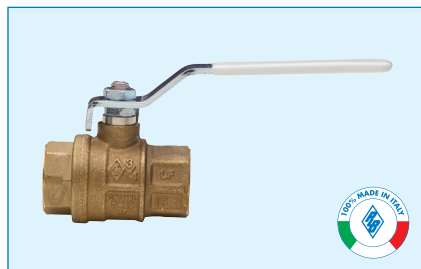


TYPE 161N LFPT

Lead free brass valve. FNPT threaded with thermal plastic tee handle.



Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	20.60	26.50	33.90	52.40	69.90	106.40
Package	1	1	1	1	1	1
Weight	0.42	0.62	0.97	1.59	2.20	4.01



TYPE 171N LF – 172N LF (T-HANDLE)

Full port lead free brass ball valve FNPT threaded with lever handle.



Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	15.20	15.20	18.40	26.20	39.60	71.80	105.30	162.50
Package	70	70	40	25	20	6	4	4
Master Box	140	140	80	50	40	12	8	8
Master Box weight	44.91	40.90	38.82	42.04	47.55	25.99	25.79	41.34

172N LF: available size 1/4" to 1".

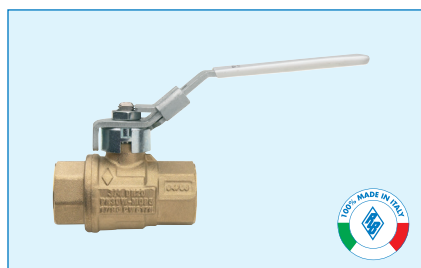


TYPE 171N LFPT

Full port lead free brass ball valve, FNPT threaded with thermal plastic tee handle.



Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	28.10	35.60	48.60	84.20	117.70	176.00
Package	1	1	1	1	1	1
Weight	0.54	0.91	1.24	2.25	3.24	5.18

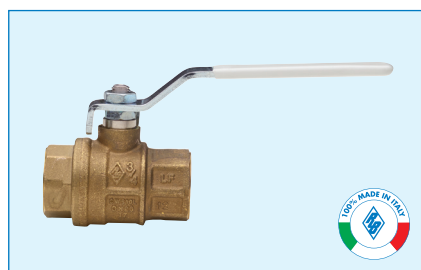


TYPE 171L LF

Full port lead free brass ball valve FNPT threaded with latch lock handle.



Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	24.90	24.90	28.50	38.30	53.70	94.10	134.10	200.70
Package	70	70	50	25	20	10	6	4
Master Box	140	140	100	50	40	20	12	8
Master Box weight	48.73	44.72	50.49	42.01	51.29	42.25	40.85	35.08



TYPE 171S LF

Full port lead free brass ball valve FNPT threaded with lever handle with stainless steel ball and stem.



600 WOG



HEALTH EFFECTS US-CA NSF 372 NSF 61



Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	31.40	46.20	63.30	95.50	131.80	196.50
Package	50	25	20	10	6	4
Master Box	100	50	40	20	12	8
Master Box weight	48.37	41.05	47.55	42.79	38.85	39.82



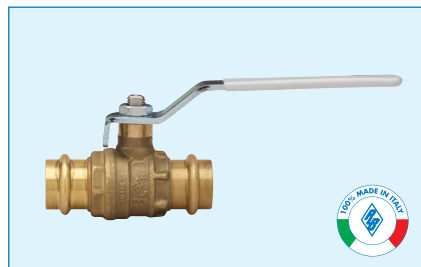
TYPE 1715 LF – 1725 LF (T-HANDLE)

Full port lead free brass ball valve solder ends with lever handle.



Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	18.40	26.20	39.60	71.80	105.30	162.50
Package	40	25	10	6	4	2
Master Box	80	50	20	12	8	8
Master Box weight	40.50	41.38	25.11	27.40	27.23	22.38

1725 LF: available size 1/2" to 1".



TYPE 1570 LF

Lead free brass ball valve with EURO-PRESS connections full port sizes 1/2" - 2".



HEALTH EFFECTS US-CA NSF 372 NSF 61



Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	17.20	24.30	33.30	50.40	76.80	129.70
Package	40	20	20	10	4	2
Master Box	80	40	40	20	8	8
Master Box weight	34.86	30.80	44.33	33.14	21.94	19.29

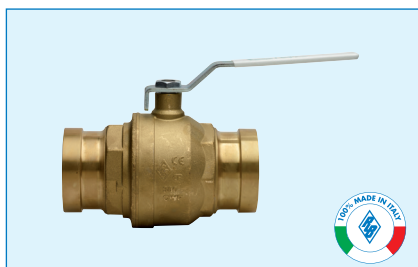


TYPE 1570 LFPT

Lead free brass valve. EURO-PRESS connections with thermal plastic tee handle.



Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	27.00	33.70	42.40	63.40	90.00	143.20
Package	1	1	1	1	1	1
Weight	0.52	0.81	1.21	1.77	2.73	4.70

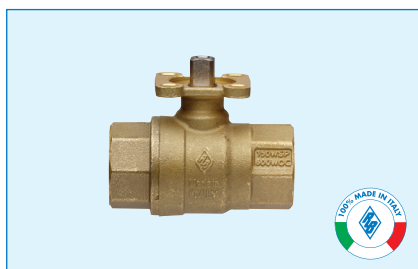


TYPE 1670XLC LF

Full port lead free ball valve with XLC press connections, lever handle.



Size	2 1/2"	3"	4"
US\$	324.00	457.40	766.10
Package	4	2	1
Master Box	4	2	1
Master Box weight	35.60	28.02	29.01

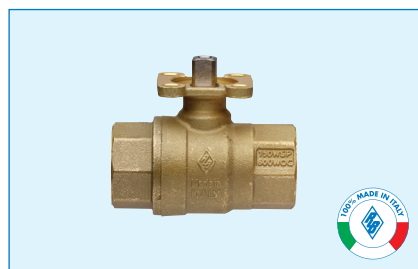


TYPE 250N LF

Full port lead free brass ball valve FNPT threaded, with ISO 5211 pad for actuators.



Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	45.50	45.50	45.90	51.50	77.40	117.90	166.90	257.20	437.90	627.40	1,046.00
Package	40	10	40	30	15	10	4	2	5	4	2
Master Box	80	60	80	60	30	20	8	4	5	4	2
Master Box weight	38.62	27.84	41.45	31.20	38.16	23.76	29.64	23.08	54.92	65.90	55.89



TYPE 253N LF

Full port lead free brass ball valve FNPT threaded with stainless steel stem & ball and ISO 5211 pad for actuators.



Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	74.50	74.50	74.50	84.20	110.60	153.60	218.70	342.60	584.50	837.50	1,404.20
Package	40	40	40	30	10	10	6	4	2	4	2
Master Box	80	80	80	60	20	20	12	8	4	4	2
Master Box weight	37.65	35.54	40.48	45.99	26.43	38.89	39.22	45.24	44.93	65.72	55.84

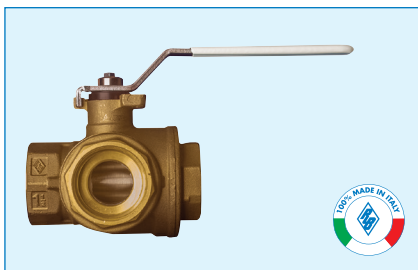


TYPE 250N LF SRL

Full port lead free brass ball valve FNPT threaded with deadman spring return handle.



Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
US\$	149.00	149.00	149.00	154.00	179.00	218.00	277.00	363.00	583.00	764.00
Package	1	1	1	1	1	1	1	1	1	1
Master Box	-	-	-	-	-	-	-	-	-	-
Master Box weight	2.71	2.68	2.75	2.99	3.46	4.09	6.20	8.49	16.52	21.95

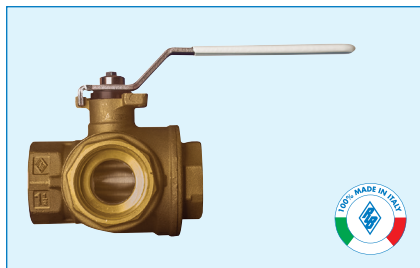


TYPE 355N LF(T)

3-way reduced port lead free brass ball valve FNPT threaded with lever handle and ISO 5211 pad for actuators.



Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
US\$	65.30	65.30	65.40	75.00	111.30	173.90	272.30	414.00	769.40	772.20
Package	5	5	10	6	6	4	2	1	3	2
Master Box	30	30	20	12	12	8	4	2	3	2
Master Box weight	31.77	30.53	22.64	18.12	29.92	31.61	23.81	21.01	59.46	39.88

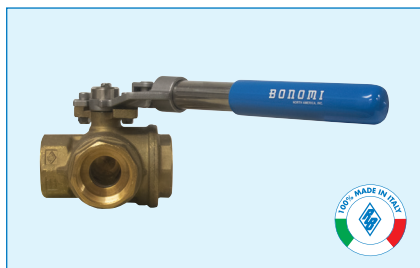


TYPE 365N LF(L)

3-way reduced port lead free brass ball valve FNPT threaded with lever handle and ISO 5211 pad for actuators.



Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
US\$	65.30	65.30	65.40	75.00	111.30	173.90	272.30	414.00	769.40	772.20
Package	5	5	10	6	6	4	2	1	3	2
Master Box	30	30	20	12	12	8	4	2	3	2
Master Box weight	32.08	30.89	22.88	18.43	30.67	32.21	24.98	21.54	61.33	41.14

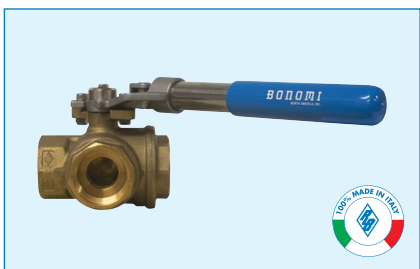


TYPE 355N LF SRL(T)

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



Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	168.00	168.00	168.00	178.00	214.00	273.00	383.00	520.00
Package	1	1	1	1	1	1	1	1
Master Box	-	-	-	-	-	-	-	-
Master Box weight	3.48	3.39	3.46	3.73	4.94	6.39	9.46	14.07

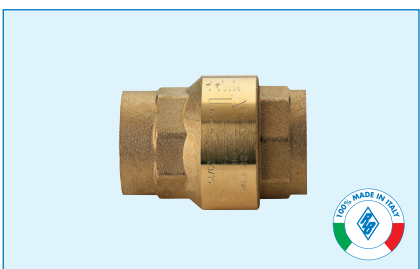


TYPE 365N LF SRL (L)

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



Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	168.00	168.00	168.00	178.00	214.00	273.00	383.00	520.00
Package	1	1	1	1	1	1	1	1
Master Box	-	-	-	-	-	-	-	-
Master Box weight	3.48	3.39	3.46	3.73	4.94	6.39	9.46	14.07



TYPE 100012 LF

High flow rate spring loaded lead free brass check valve FNPT threaded, with NBR seat.



Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	14.10	14.10	14.10	19.20	26.30	40.00	71.30	83.60	176.40	243.80	444.70
Package	1	1	1	1	1	1	1	1	2	2	2
Master Box	144	144	144	75	75	30	30	12	4	4	2
Master Box weight	35.43	30.97	46.47	36.62	54.17	36.77	49.38	28.75	20.66	29.28	24.41



TYPE 100022 LF

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



Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	12.40	15.80	21.00	27.50	37.20	53.30
Package	25	20	1	1	1	1
Master Box	100	80	60	50	40	32
Master Box weight	25.71	32.03	42.33	41.69	45.79	58.51

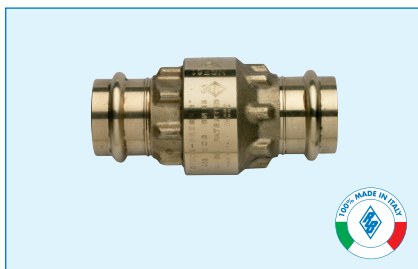


TYPE 100112 LF

High flow rate spring loaded lead free brass foot valve FNPT threaded, with NBR seat.



Size	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	22.90	22.90	28.50	36.60	51.50	87.80	99.60	225.90	308.70	499.50
Package	20	20	10	6	4	4	2	1	1	1
Master Box	120	120	60	36	24	8	4	2	1	1
Master Box weight	32.14	41.77	32.51	29.07	32.25	16.55	13.01	17.61	16.51	10.84



TYPE 100612 LF

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

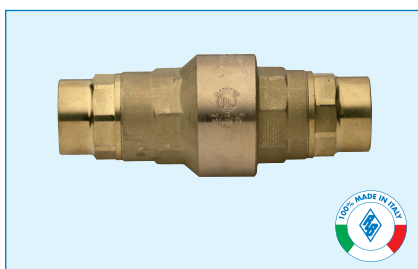
Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	41.50	53.50	71.60	101.60	163.80	218.00
Package	1	1	1	1	1	1
Master Box	60	48	36	24	16	8
Master Box weight	18.96	26.86	29.67	28.55	29.08	23.89



TYPE 100622 LF

Unibody lead free brass, EURO-PRESS connections, in-line spring loaded check valve.

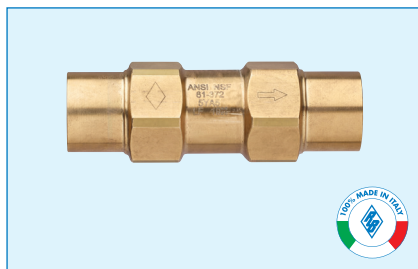
Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	21.00	27.20	35.60	47.70	63.80	90.80
Package	1	1	1	1	1	1
Master Box	100	60	50	25	16	8
Master Box weight	17.88	19.38	25.29	18.65	20.83	16.42



TYPE 100712 LF

High flow rate spring loaded lead free brass check valve, with solder ends.

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	31.50	40.40	51.20	85.40	111.20	144.80
Package	1	1	1	1	1	1
Master Box	60	48	36	24	16	8
Master Box weight	27.05	35.20	42.79	47.76	41.54	31.39



TYPE 100722 LF

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

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	18.20	22.20	30.40	46.40	82.20	96.50
Package	1	1	1	1	1	1
Master Box	60	48	36	24	16	8
Master Box weight	31.04	28.57	34.13	34.92	33.51	26.63

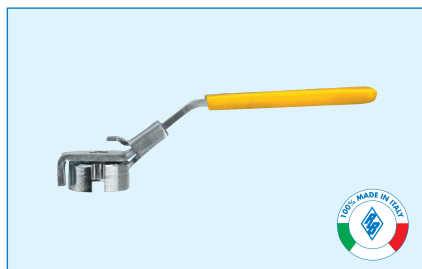




TYPE 110102

Stainless steel strainer (1000 micron) for spring loaded check valves.

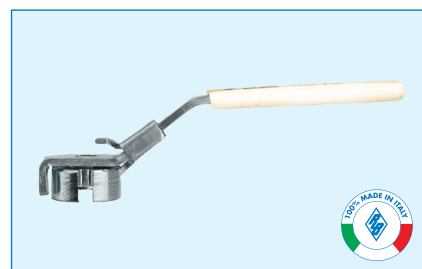
Size	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	6.80	6.80	7.00	7.10	7.90	9.20	9.30	21.80	30.00	36.70
Package	20	20	10	6	4	4	4	2	1	2
Master Box	400	240	150	20	12	8	4	20	10	6
Master Box weight	89.00	115.10	54.72	34.39	19.07	13.12	5.29	12.50	5.14	4.65



TYPE 6100

Locking device for brass ball valves.

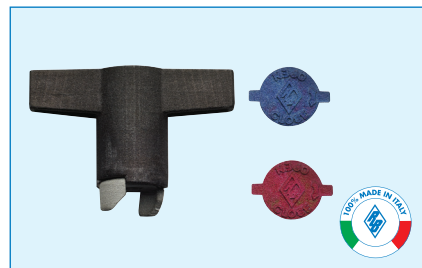
Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	8.00	8.00	8.00	8.30	8.30	10.50	10.50	12.40	34.70	34.70	47.70
Package	10	10	10	10	10	20	20	20	5	5	5
Master Box	60	60	62	60	60	40	40	40	10	10	10
Master Box weight	10.93	10.06	10.06	17.97	18.03	20.59	14.56	26.43	14.82	9.90	21.86



TYPE 6100LF

Locking device for lead-free brass valves.

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
(US\$)	8.00	8.00	8.00	8.30	8.30	10.50	10.50	12.40	34.70	34.70	47.70
Package	10	10	10	10	10	20	20	20	5	5	5
Master Box	60	60	62	60	60	40	40	40	10	10	10
Master Box Weight	10.93	10.06	10.06	17.97	18.03	20.59	14.56	26.43	14.82	9.90	21.86



TYPE RI76

T-handle polyamide thermal plastic.

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Code	RI765	RI766	RI766	RI767	RI767	RI768
US\$	6.70	6.80	6.80	10.20	10.20	10.50
Package	1	1	1	1	1	1
Master Box	50	50	50	50	50	50



TYPE 6120

Oval handle for brass ball valves.

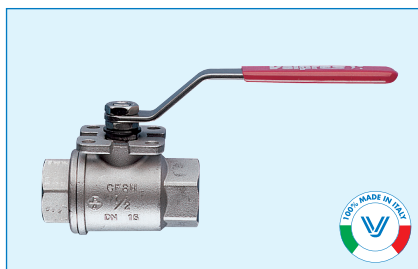
Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	24.70	24.70	24.70	25.30	25.30	33.20	33.20	33.40
Package	20	20	20	20	20	15	15	15
Master Box	40	40	40	40	40	30	30	30
Master Box weight	19.81	19.54	19.54	14.68	19.89	16.98	17.888	17.04



TYPE 5808

Stem extension for brass ball valves.

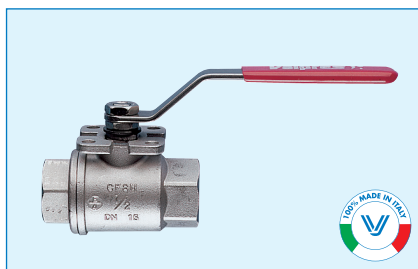
Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	8.50	8.50	8.50	12.00	12.00	14.30	14.30	19.80	17.50	17.50	18.10
Package	1	1	1	1	1	1	1	1	1	1	1
Master Box	100	100	100	80	80	50	50	40	25	25	25
Master Box weight	15.87	15.87	15.87	17.31	17.31	16.14	16.14	21.80	16.36	16.36	23.96



TYPE 700001

Full port stainless steel ball valve 350-2000 psi FNPT threaded, with ISO 5211 pad and double "D" stem.

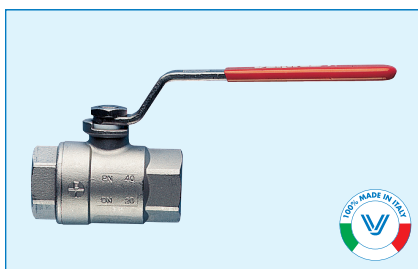
Size	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	76.00	76.00	76.00	83.00	108.00	147.00	187.00	249.00	351.00	784.00	1,000.00	1,572.00
Package	10	10	10	10	5	6	2	2	2	1	1	1
Master Box weight	7.15	6.06	5.24	7.49	6.86	13.83	5.44	9.97	15.41	15.31	22.94	40.52



TYPE 700071

Full port stainless steel ball valve 350-2000 psi FNPT threaded, with ISO 5211 pad and double "D" stem. NPT B.1.20.1. Fire Safe.

Size	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	82.00	82.00	82.00	91.00	119.00	162.00	205.00	273.00	386.00	863.00	1,099.00	1,729.00
Package	10	10	10	10	5	6	2	2	2	1	1	1
Master Box weight	7.15	6.06	5.24	7.49	6.86	13.83	5.44	9.97	15.41	15.31	22.94	40.52



TYPE 700023

Full port stainless steel ball valve 1000 psi. FNPT threaded.

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	64.00	64.00	64.00	75.00	95.00	135.00	164.00	239.00
Package	15	15	10	15	5	2	2	2
Master Box weight	7.10	6.58	5.60	13.91	7.25	5.16	7.44	13.54



TYPE 700LL

Full port stainless steel ball valve, FNPT threaded, with locking device 2000 psi (1/4"-1") 1500 psi (1 1/4"-2").

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
700LL US\$	32.00	32.00	39.00	49.00	68.00	89.00	129.00	182.00	349.00	533.00	995.00
Package	50	50	80	60	30	25	15	10	1	1	1
Master Box weight	25.00	25.00	66.40	68.40	60.60	67.50	62.70	68.60	13.20	22.30	46.30



TYPE 7700LL

Full port stainless steel ball valve, FNPT threaded, with locking device 2000 psi.

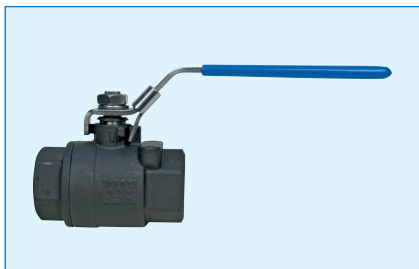
Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
7700LL US\$	63.00	63.00	63.00	83.00	112.00	148.00	214.00	300.00
7700OHL US\$	86.00	86.00	86.00	107.00	136.00	172.00	247.00	334.00
Package	50	50	80	60	30	25	15	10
Master Box weight	25.00	25.00	66.40	68.40	60.60	67.50	62.70	68.60



TYPE 600LL

Full port carbon steel ball valve, FNPT threaded, with locking device 2000 psi (1/4"-1") 1500 psi (1 1/4"-2").

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
600LL US\$	25.00	25.00	29.00	36.00	51.00	68.00	92.00	130.00	309.00	462.00	857.00
Package	50	50	80	60	30	25	15	10	1	1	1
Master Box weight	25.00	25.00	66.40	68.40	60.60	67.50	62.70	68.60	13.20	22.30	46.30



TYPE 6600LL

Full port carbon steel ball valve. FNPT threaded, with locking device 2000 psi.

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
6600LL US\$	57.00	57.00	57.00	75.00	103.00	133.00	183.00	258.00
6600OHL US\$	80.00	80.00	80.00	100.00	127.00	157.00	217.00	291.00
Package	50	50	80	60	30	25	15	10
Master Box weight	25.00	25.00	66.40	68.40	60.60	67.50	62.70	68.60



TYPE 3000

Carbon steel FNPT threaded ball valve 3000 psi - full port (1/4"-1 1/2") and standard port (2") ISO 5211 direct mounting pad.

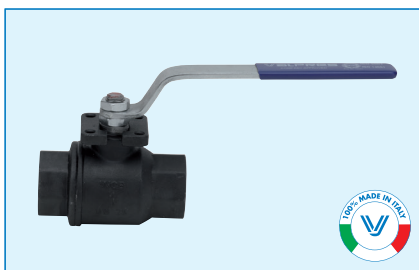
Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	100.00	100.00	100.00	114.00	156.00	223.00	337.00	394.00
Package	1	1	1	1	1	1	1	1
Master Box weight	1.4	1.4	1.5	2.0	3.1	4.8	8.1	10.5



TYPE 3100

Stainless steel FNPT threaded ball valve 3000 psi - full port (1/4"-1 1/2") and standard port (2") ISO 5211 direct mounting pad.

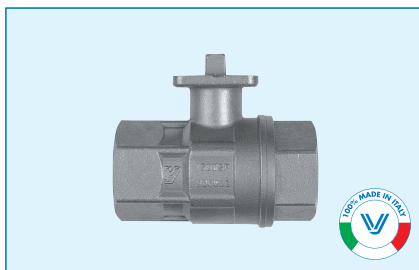
Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	123.00	123.00	123.00	143.00	189.00	279.00	406.00	495.00
Package	1	1	1	1	1	1	1	1
Master Box weight	1.4	1.4	1.5	2.0	3.1	4.8	8.1	10.5



TYPE 700056

Full port carbon steel ball valve 1000 psi FNPT threaded, ISO 5211 pad and double "D" stem and standard latch lock handle.

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	69.00	69.00	74.00	89.00	111.00	147.00	179.00	247.00
Package	10	10	10	5	6	2	2	2
Master Box weight	8.59	8.22	7.38	6.37	13.38	6.36	10.35	17.31



TYPE 700076

Full port stainless steel ball valve 1000 psi. FNPT threaded. with ISO 5211 direct mounting pad.



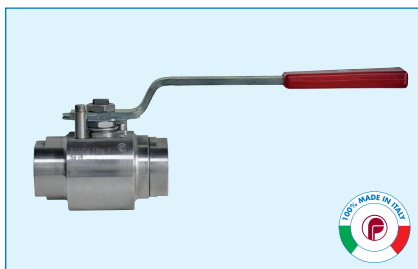
Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
US\$	64.00	64.00	108.00	120.00	150.00	212.00	260.00	378.00	554.00	751.00
Package	10	10	10	6	5	2	2	2	1	1
Master Box weight	12.00	12.00	13.73	5.67	8.02	4.82	7.51	13.40	15.30	21.30



TYPE 2200 SRL

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

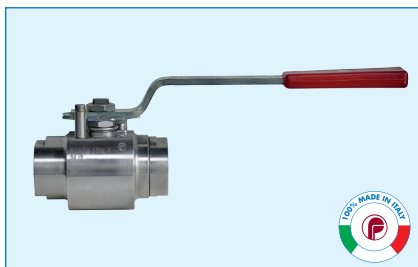
Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	183.00	183.00	183.00	192.00	227.00	253.00	428.00	492.00	1,049.00	1,290.00	1,725.00
Package	1	1	1	1	1	1	1	1	1	1	1
Master Box weight	1.80	1.80	1.70	2.00	2.80	3.80	6.60	8.80	22.08	34.96	43.22



TYPE AP20PCS

Metal seated floating ball valves, carbon steel, CLASS 800 bi-directional.

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
AP20PCS US\$	975.00	1,032.00	1,218.00	-	1,717.00	2,414.00
S.S. Stem Extension Adder	335.00	335.00	358.00	-	502.00	502.00
Package	1	1	1		1	1
Master Box weight	1.2	1.5	2.5		5.3	11.5



TYPE AP20PSS

Metal seated floating ball valves, stainless steel, CLASS 800 bi-directional.

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
AP20PSS US\$	1,060.00	1,133.00	1,383.00	-	2,051.00	3,017.00
S.S. Stem Extension Adder	335.00	335.00	358.00	-	502.00	502.00
Package	1	1	1		1	1
Master Box weight	1.2	1.5	2.5		5.3	11.5



TYPE 380S

Mini stainless steel reduced port, FNPT threaded ball valve.

Size	1/4"	3/8"	1/2"
US\$	44.00	44.00	44.00
Package	1	1	1
Master Box weight	0.42	0.37	0.37



TYPE 380SM

Mini stainless steel reduced port, FNPT x MNPT threaded ball valve.

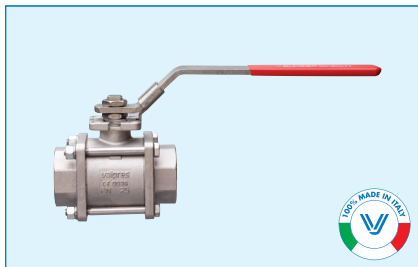
Size	1/4"	3/8"	1/2"
US\$	44.00	44.00	44.00
Package	1	1	1
Master Box weight	0.36	0.35	0.35



TYPE 511SL

Full port safety exhaust stainless steel ball valve. FNPT threaded.

Size	1/4"	3/8"	1/2"	3/4"	1"
511SL US\$	97.00	97.00	97.00	127.00	173.00
511SL-SSBM US\$	120.00	120.00	120.00	150.00	196.00
511SOHL US\$	121.00	121.00	121.00	153.00	199.00
Package	1	1	1	1	1
Master Box	1.20	1.20	1.20	1.35	1.35

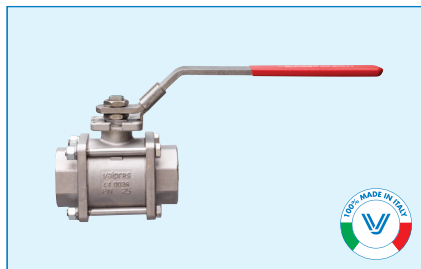


TYPE 710190

FOR STEAM

Full port 3-piece stainless steel ball FNPT valve threaded with ISO 5211 pad and double "D" stem, standard latch lock handle.

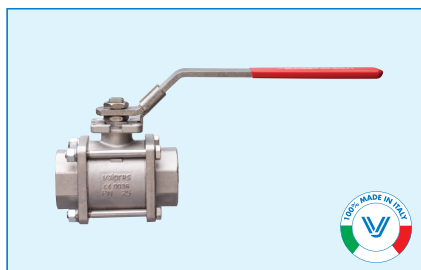
Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	102.00	102.00	134.00	161.00	221.00	280.00	362.00	465.00	897.00	1,200.00	2,023.00
Package	10	10	6	5	2	4	2	2	1	1	1
Master Box weight	6.50	6.12	6.30	7.89	5.76	15.61	11.47	17.31	18.26	28.19	48.13



TYPE 710061 FOR STEAM

Full port 3-piece stainless steel ball valve socket weld, with ISO 5211 pad and double "D" stem, standard latch lock handle.

Size	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	102.00	134.00	161.00	221.00	280.00	362.00	465.00	897.00	1,200.00	2,023.00
Package	10	6	5	2	4	2	2	1	1	1
Master Box weight	5.82	6.18	7.96	5.70	16.01	11.26	17.54	18.54	28.37	49.25



TYPE 710062 FOR STEAM

Full port 3-piece stainless steel ball valve butt weld, with ISO 5211 pad and double "D" stem, standard latch lock handle.

Size	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	102.00	134.00	161.00	221.00	280.00	362.00	465.00	897.00	1,200.00	2,023.00
Package	10	6	5	2	4	2	2	1	1	1
Master Box weight	5.91	6.24	8.08	5.83	16.22	11.42	17.78	17.69	28.05	48.30



TYPE 710085 FOR STEAM

Full port 3-piece carbon steel ball valve FNPT threaded with ISO 5211 pad and double "D" stem, standard latch lock handle.

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	95.00	95.00	113.00	131.00	176.00	229.00	300.00	381.00	667.00	920.00	1,538.00
Package	5	5	5	5	2	4	2	2	1	1	1
Master Box weight	5.66	5.18	4.95	7.39	5.65	15.22	11.24	17.46	19.11	29.61	49.15



TYPE 710064 FOR STEAM

Full port 3-piece carbon steel ball valve socket weld with ISO 5211 pad and double "D" stem, standard latch lock handle.

Size	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	95.00	113.00	131.00	176.00	229.00	300.00	381.00	667.00	920.00	1,538.00
Package	6	6	5	2	4	2	2	1	1	1
Master Box weight	6.33	5.93	7.31	5.63	15.49	10.86	18.08	17.98	29.60	49.20



TYPE 710065 FOR STEAM

Full port 3-piece carbon steel ball valve butt weld with ISO 5211 pad and double "D" stem, standard latch lock handle.

Size	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	95.00	113.00	131.00	176.00	229.00	300.00	381.00	667.00	920.00	1,538.00
Package	6	6	5	2	4	2	2	1	1	1
Master Box weight	6.05	6.05	7.59	5.72	15.92	11.44	17.87	17.43	28.81	47.30



TYPE 610LL (FNPT) - 611LL (SW) - 612LL (BW) LIQUIDATION

Full port 3-piece carbon steel ball valve with locking lever.

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	40.00	40.00	52.00	64.00	82.00	115.00	162.00	236.00	504.00	708.00	1,238.00
Package	1	1	1	1	1	1	1	1	1	1	1
Master Box weight	0.8	0.8	1.1	1.5	2.2	3.6	5.3	8.1	16.2	22.5	45.7



TYPE 710LL (FNPT) – 711LL (SW) – 712LL (BW)

LIQUIDATION

Full port 3-piece stainless steel ball valve with locking lever.

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	49.00	49.00	63.00	78.00	97.00	138.00	200.00	290.00	627.00	874.00	1,527.00
Package	1	1	1	1	1	1	1	1	1	1	1
Master Box weight	0.8	0.8	1.1	1.5	2.2	3.6	5.3	8.1	16.2	22.5	45.7



TYPE 620LL (FNPT) – 621LL (SW) – 622LL (BW)

Full port 3-piece carbon steel direct mount ball valve with locking lever and ISO 5211 direct mounting pad.

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	78.00	78.00	80.00	91.00	129.00	176.00	252.00	358.00	693.00	869.00	1,496.00
Package	1	1	1	1	1	1	1	1	1	1	1
Master Box weight	1.4	1.4	1.6	1.8	3.0	6.0	6.5	9.8	21.0	28.0	47.9



TYPE 720LL (FNPT) – 721LL (SW) – 722LL (BW)

Full port 3-piece stainless steel direct mount ball valve with locking lever and ISO 5211 direct mounting pad.

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	88.00	88.00	90.00	104.00	148.00	202.00	305.00	407.00	819.00	1,019.00	1,753.00
Package	1	1	1	1	1	1	1	1	1	1	1
Master Box weight	1.4	1.4	1.6	1.8	3.0	6.0	6.5	9.8	21.0	28.0	47.9



TYPE 630LL (FNPT) – 631LL (SW) – 632LL (BW)

Full port high performance 3-piece carbon steel ball valves with locking lever and ISO 5211 direct mounting pad.

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
630LL - 631LL - 632LL (US\$)	94.00	94.00	102.00	134.00	171.00	248.00	315.00	588.00	1,075.00	1,625.00	3,102.00
630OHL - 631OHL - 632OHL (US\$)	123.00	123.00	131.00	167.00	204.00	285.00	353.00	-	-	-	-
630LL-SE - 631LL-SE - 632LL-SE (US\$)	261.00	261.00	269.00	325.00	362.00	580.00	648.00	978.00	1,465.00	2,076.00	3,553.00
630LL-SE - 631LL-SE - 632LL-SE (US\$)	186.00	186.00	194.00	241.00	279.00	383.00	451.00	779.00	1,266.00	1,627.00	3,104.00
Package	1	1	1	1	1	1	1	1	1	1	1
Master Box weight	1.40	1.40	1.60	1.80	3.00	6.00	6.50	9.80	21.00	28.00	87.00



TYPE 640LL (FNPT) – 641LL (SW) – 642LL (BW)

Full port high performance 3-piece carbon steel ball valve with PEEK seats with locking lever and ISO 5211 direct mounting pad.

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
640LL - 641LL - 642LL (US\$)	151.00	151.00	157.00	238.00	329.00	513.00	579.00	1,169.00	1,722.00	2,795.00	5,142.00
640OHL - 641OHL - 642OHL (US\$)	227.00	227.00	234.00	316.00	404.00	586.00	652.00	-	-	-	-
640LL-SE - 641LL-SE - 642LL-SE (US\$)	372.00	372.00	380.00	483.00	570.00	895.00	962.00	1,551.00	2,100.00	3,372.00	5,525.00
640LL-SE - 641LL-SE - 642LL-SE (US\$)	293.00	293.00	300.00	394.00	482.00	689.00	755.00	1,342.00	1,892.00	2,900.00	5,053.00
Package	1	1	1	1	1	1	1	1	1	1	1
Master Box weight	1.40	1.40	1.60	1.80	3.00	6.00	6.50	9.80	21.00	28.00	87.00



TYPE 730LL (FNPT) – 731LL (SW) – 732LL (BW)

Full port high performance 3-piece stainless steel ball valves with locking lever and ISO 5211 direct mounting pad.

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
730LL - 731LL - 732LL (US\$)	113.00	113.00	124.00	171.00	223.00	322.00	408.00	775.00	1,419.00	2,146.00	4,179.00
730OHL - 731OHL - 732OHL (US\$)	141.00	141.00	153.00	204.00	256.00	359.00	445.00	-	-	-	-
730LL-SE - 731LL-SE - 732LL-SE (US\$)	280.00	280.00	291.00	362.00	414.00	654.00	741.00	1,165.00	1,809.00	2,597.00	4,630.00
730LL-SE - 731LL-SE - 732LL-SE (US\$)	204.00	204.00	216.00	278.00	330.00	458.00	544.00	966.00	1,610.00	2,146.00	4,181.00
Package	1	1	1	1	1	1	1	1	1	1	1
Master Box weight	1.40	1.40	1.60	1.80	3.00	6.00	6.50	9.80	21.00	28.00	87.00



TYPE 740LL (FNPT) – 741LL (SW) – 742LL (BW)

Full port high performance 3-piece stainless steel ball valve with PEEK seats with locking lever and ISO 5211 direct mounting pad.

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
740LL - 741LL - 742LL (US\$)	160.00	160.00	172.00	264.00	364.00	565.00	645.00	1,309.00	1,910.00	3,164.00	5,915.00
740OHL - 741OHL - 742OHL (US\$)	238.00	238.00	249.00	342.00	439.00	638.00	718.00	-	-	-	-
740LL-*FEB - 741LL-*FEB - 742LL-*FEB (US\$)	385.00	385.00	394.00	508.00	607.00	948.00	1,028.00	1,686.00	2,350.00	3,749.00	6,315.00
740LL-*SE - 741LL-*SE - 742LL-*SE (US\$)	305.00	305.00	315.00	419.00	518.00	742.00	822.00	1,476.00	2,140.00	3,277.00	5,844.00
Package	1	1	1	1	1	1	1	1	1	1	1
Master Box weight	1.40	1.40	1.60	1.80	3.00	6.00	6.50	9.80	21.00	28.00	87.00



TYPE 740H (FNPT) – 741H (SW) – 742H (BW)

Direct mount full port high pressure to 3600 psi high temperature to 500°F 3-piece stainless steel ball valve with locking lever.

Size	1/4"	3/8"	1/2"	3/4"	1"
US\$	169.00	169.00	169.00	259.00	360.00
Package	1	1	1	1	1
Master Box weight	1.4	1.4	1.6	1.8	3.0



TYPE S800

High capacity spring loaded stainless steel check valve 800 WOG, FNPT threaded with PTFE seat.

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
US\$	68.00	68.00	68.00	107.00	124.00	242.00	308.00	395.00	871.00	1,212.00
Package	1	1	1	1	1	1	1	1	1	1
Master Box	-	-	-	-	-	-	-	-	-	-
Weight	0.42	0.42	0.40	0.85	1.30	2.50	3.40	6.00	12.00	18.00



TYPE S350-STC

High capacity 316L stainless steel check valve with double pin center clamp and sanitary end connections.

Size	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"
US\$	272.00	272.00	284.00	326.00	377.00	480.00	556.00	999.00
Weight	2.20	2.20	3.50	3.50	5.40	6.00	6.25	16.00



TYPE S250

High capacity spring loaded stainless steel check valve 250 WOG, FNPT threaded with FKM seat.



Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	33.00	36.00	42.00	56.00	68.00	118.00
Package	1	1	1	1	1	1
Master Box	-	-	-	-	-	-
Weight	0.21	0.28	0.42	0.62	0.86	1.55



TYPE 770

3-piece stainless steel. full port sanitary valve non-cavity-filled, standard seats, locking handle and ISO 5211 direct mounting pad.

Size	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"
US\$	131.00	134.00	173.00	349.00	455.00	904.00	1,173.00	1,931.00	11,623.00
Package	12	12	12	6	4	2	2	1	1
Master Box weight	21.58	24.46	39.58	44.98	41.94	45.14	59.54	46.50	54.00



TYPE 771

3-piece stainless steel, full port sanitary valve, cavity-filled seats, locking handle and ISO 5211 direct mounting pad.

Size	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"
US\$	157.00	160.00	213.00	444.00	611.00	1,156.00	1,610.00	2,520.00	15,608.00
Package	12	12	12	6	4	2	2	1	1
Master Box weight	21.58	24.46	39.58	44.98	41.94	45.14	59.54	46.50	54.00



TYPE 955N "T" 965N "L"

Stainless steel 3-way. reduced port ball valve. with ISO 5211 direct mounting pad. FNPT threaded.

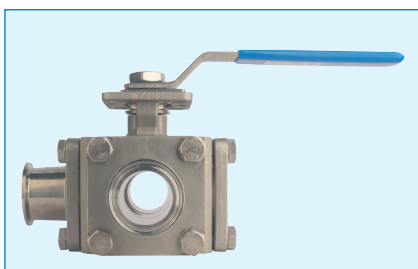
Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
US\$	126.00	150.00	198.00	268.00	368.00	546.00	985.00	1,225.00
Package	30	10	10	6	4	3	2	2
Master Box weight	43.50	19.00	33.50	28.80	29.80	34.80	41.80	46.50



TYPE 956N "T" 966N "L"

Stainless steel 3-way. full port ball valve, with ISO 5211 direct mounting pad, FNPT threaded.

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
US\$	125.00	126.00	148.00	192.00	265.00	389.00	553.00	949.00
Package	30	30	20	10	6	4	3	2
Master Box weight	43.50	43.50	38.00	32.50	29.40	28.40	35.40	42.80



TYPE 97L STC(L) - 97T STC(T)

3-way direct mount stainless steel, block body, full port ball valve with sanitary Tri-Clamp ends, sizes 1/2" to 4".

Size	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"
US\$	871.00	929.00	1,180.00	1,588.00	1,993.00	5,011.00	5,322.00	7,679.00
Package	1	1	1	1	1	1	1	1
Master Box weight	3.50	4.20	6.80	12.60	19.70	30.00	44.30	120.00



TYPE 97L-97T- 97X

3-way direct mount stainless steel, block body, full port ball valve, sizes 1/4" to 4" .

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
97L (US\$)	513.00	637.00	758.00	836.00	1,353.00	1,711.00	2,529.00	3,278.00	6,840.00
97T (US\$)	496.00	618.00	738.00	816.00	1,331.00	1,676.00	2,450.00	3,091.00	6,518.00
97X (US\$)	556.00	684.00	823.00	912.00	1,460.00	1,860.00	2,800.00	3,722.00	7,643.00
Package	1	1	1	1	1	1	1	1	1
Master Box weight	1.30	2.80	4.80	5.90	10.90	13.80	22.50	28.90	57.70



TYPE 1300

3-piece stainless steel standard port instrumentation ball valve 2000 psi with compression ends, locking handle and ISO 5211 direct mounting pad.

Size	1/4"	3/8"	1/2"	3/4"
US\$	172.00	182.00	197.00	249.00
Package	1	1	1	1
Master Box weight	0.8	0.9	0.9	1.2



TYPE 723101

Stainless steel flanged ANSI 150 Wafer ball valve.

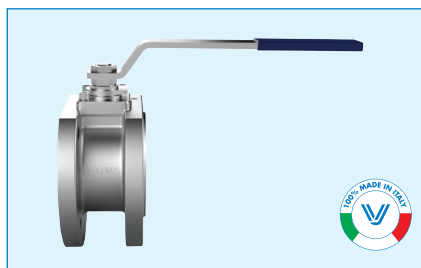
Size	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	343.00	433.00	534.00	660.00	1,026.00	1,286.00	1,780.00
Package	1	1	1	1	1	1	1
Weight	5.29	7.72	9.92	14.77	24.03	30.87	46.08



TYPE 723101 SRL

Stainless steel direct mount full port ANSI 150 Wafer ball valve with deadman spring return handle.

Size	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
US\$	448.00	537.00	651.00	777.00	1,190.00	1,451.00
Package	1	1	1	1	1	1
Weight	7.54	9.97	12.92	17.77	29.73	36.57



TYPE 721V16

Stainless steel ANSI class 150 Wafer flanged valve V-stem packing.

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	307.00	351.00	371.00	475.00	551.00	700.00	1,070.00	1,366.00	1,885.00
Package	1	1	1	1	1	1	1	1	1
Weight	1.64	2.15	2.56	3.86	5.35	7.5	12.3	16.83	24.3



TYPE 720016

Stainless steel flanged ANSI 150 Wafer ball valve.

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
720016 US\$	256.00	291.00	317.00	405.00	465.00	601.00	899.00	1,160.00	1,665.00	3,192.00	4,542.00
Package	1	1	1	1	1	1	1	1	1	1	1
Weight	2.86	3.96	5.95	9.47	7.27	12.12	21.16	28.21	46.08	82.67	101.63



TYPE 724101

Carbon steel direct mount full port ANSI 150 Wafer ball valve.

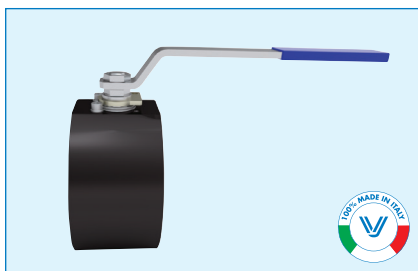
Size	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	251.00	280.00	339.00	414.00	671.00	770.00	1,085.00
Package	1	1	1	1	1	1	1
Weight	5.29	7.72	9.92	14.77	24.03	30.87	46.08



TYPE 724101 SRL

Carbon steel flanged ANSI 150 Wafer direct mount, full port ball valve with deadman spring handle.

Size	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
US\$	355.00	385.00	456.00	531.00	835.00	934.00
Package	1	1	1	1	1	1
Weight	7.54	9.97	12.92	17.77	29.73	36.57



TYPE 722V17

Carbon steel ANSI class 150 Wafer flanged valve V-stem packing.

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	203.00	225.00	233.00	280.00	330.00	381.00	627.00	742.00	1,087.00
Package	1	1	1	1	1	1	1	1	1
Weight	1.64	2.15	2.56	3.86	5.35	7.5	12.3	16.83	24.3



TYPE 720017

Carbon steel ANSI class 150 Wafer flanged valve.

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
720017 US\$	168.00	171.00	203.00	237.00	273.00	319.00	520.00	631.00	953.00	1,573.00	2,335.00
720791 US\$	-	-	212.00	-	294.00	344.00	-	680.00	998.00	-	-
Package	1	1	1	1	1	1	1	1	1	1	1
Weight	2.86	4.18	5.95	9.25	13.00	19.18	34.17	45.19	75.39	115.74	135.50



TYPE 720288

Stainless steel flanged ANSI 300 Wafer ball valve.

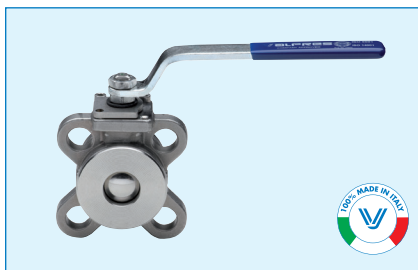
Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"
720288 US\$	328.00	412.00	449.00	589.00	740.00	1,062.00	1,849.00	2,094.00	3,906.00	8,273.00
720741 US\$	360.00	453.00	495.00	648.00	814.00	1,168.00	2,035.00	2,304.00	4,296.00	9,099.00
Package	1	1	1	1	1	1	1	1	1	1
Weight	3.10	5.50	6.80	9.30	15.00	23.00	39.00	54.00	99.80	222.50



TYPE 720289

Carbon steel flanged ANSI 300 Wafer ball valve.

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"
720289 US\$	242.00	277.00	281.00	353.00	390.00	527.00	780.00	918.00	1,660.00	3,313.00
720744 US\$	267.00	305.00	311.00	389.00	428.00	581.00	858.00	1,009.00	1,826.00	3,645.00
Package	1	1	1	1	1	1	1	1	1	1
Weight	3.10	5.50	6.80	9.30	15.00	23.00	39.00	54.00	99.80	222.50

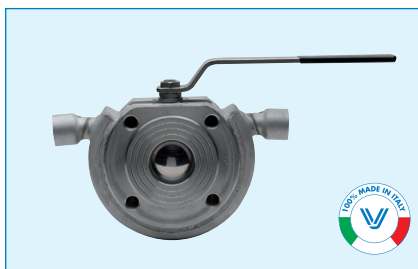


TYPE 725002

FOR STEAM

Stainless steel, flanged ANSI 150 Wafer ball valve. Steam service trim.

Size	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	270.00	305.00	348.00	469.00	697.00	911.00	1,292.00
Package	1	1	1	1	1	1	1
Weight	2.86	3.63	4.73	8.26	16.20	22.70	35.27

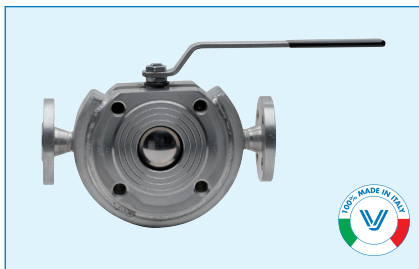


TYPE WAFER - SPECIAL USES ON REQUEST

Flanged ball valve with jacket in stainless or carbon steel, full bore 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"
US\$ STAINLESS STEEL	CONSULT FACTORY										
US\$ CARBON STEEL	CONSULT FACTORY										
Weight SS	2.1	2.6	3	4.3	5.4	8	11.9	15.4	23.4	42.8	67.4
Weight CS	2.1	2.6	3.5	5.1	7.1	10.2	17.1	22.4	36.8	44	69.2

*Amounts to be added to the base price of the valves.



TYPE WAFER – SPECIAL USES ON REQUEST

Flanged ball valve with jacket in stainless or carbon steel, full bore 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"
US\$ STAINLESS STEEL	CONSULT FACTORY										
US\$ CARBON STEEL	CONSULT FACTORY										
Weight SS	3.2	3.7	4.2	5.4	6.6	9.1	12.9	16.6	25.4	45.6	69
Weight CS	3.2	3.7	4.6	6.3	8.4	11.4	18.4	23.7	39	47	70.8

*Amounts to be added to the base price of the valves.

TYPE 763101

Stainless steel flanged ANSI 600 Wafer ball valve.

Size	1/2"	3/4"	1"	1 1/2"	2"	3"	4"
US\$	593.00	754.00	793.00	1,187.00	1,808.00	3,484.00	6,916.00
Package	1	1	1	1	1	1	1
Weight	5.29	8.38	10.58	24.68	30.86	70.53	154.28

TYPE 764101

Carbon steel flanged ANSI 600 Wafer ball valve.

Size	1/2"	3/4"	1"	1 1/2"	2"	3"	4"
US\$	446.00	517.00	526.00	692.00	938.00	1,783.00	3,062.00
Package	1	1	1	1	1	1	1
Weight	5.29	8.38	10.58	24.68	30.86	70.53	154.28

TYPE 766000

Stainless steel flanged ANSI 150 Split-Body, full port ball valve with locking handle and ISO 5211 direct mounting pad.

Size	1"	1 1/2"	2"	2 1/2"	3"	4"
766000 US\$	380.00	559.00	739.00	1,253.00	1,373.00	1,946.00
G766000 US\$ (Gear Op)	548.00	726.00	907.00	1,438.00	1,566.00	2,200.00
Package	1	1	1	1	1	1
766000 Weight (Lbs.)	8.38	15.43	21.16	34.49	39.45	53.56
G766000 Weight (Lbs.)	19.88	26.93	32.66	45.99	50.95	82.16

TYPE 766000 SRL

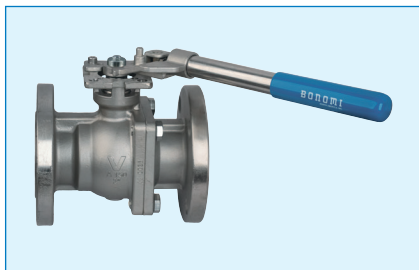
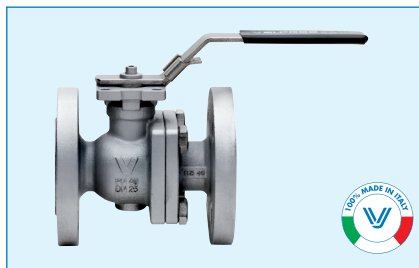
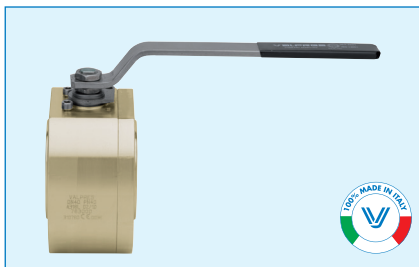
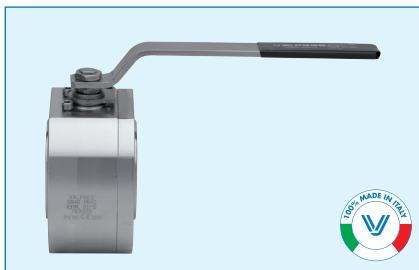
Stainless steel flanged ANSI 150 Split-Body, full port ball valve with spring return lever handle.

Size	1"	1 1/2"	2"
US\$	485.00	676.00	856.00
Package	1	1	1
Weight	10.63	18.43	24.16

TYPE 766001

Carbon steel flanged ANSI 150 Split-Body, full port, flanged ends ball valve with locking handle and ISO 5211 direct mounting pad.

Size	1"	1 1/2"	2"	2 1/2"	3"	4"
766001 US\$	292.00	417.00	541.00	840.00	983.00	1,360.00
G766001 US\$ (Gear Op)	459.00	584.00	708.00	1,025.00	1,175.00	1,614.00
Package	1	1	1	1	1	1
766001 Weight (Lbs.)	8.38	15.43	21.16	34.49	39.45	53.56
G766001 Weight (Lbs.)	19.88	26.93	32.66	45.99	50.95	82.16





TYPE 760005

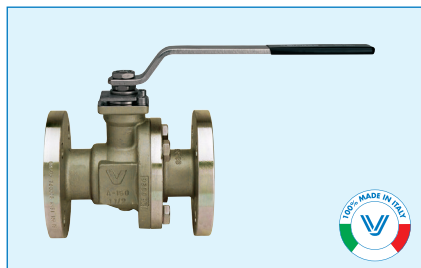
TYPE 760021

TYPE 68J000 API 608

TYPE 68R015 API 608

TYPE 762000

217



TYPE 760137

Carbon steel flanged. ANSI 150, full port, Split-Body ball valve, fire safe. Antistatic Device with ISO 5211 pad and double "D" stem.

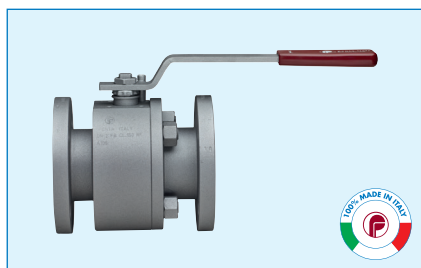
Size	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	12"
760137 US\$	277.00	298.00	349.00	518.00	654.00	1,143.00	1,517.00	3,821.00	7,072.00	16,644.00	22,432.00
G760137 US\$ (Gear Op)	535.00	556.00	602.00	771.00	932.00	1,498.00	1,896.00	4,417.00	7,700.00	-	-
Package	1	1	1	1	1	1	1	1	1	1	1
760137 Weight	4.21	5.36	8.15	15.65	23.80	47.61	67.00	171.91	274.62	429.78	559.82
G760137 Weight	16.71	17.86	21.15	28.65	37.30	80.21	99.60	212.91	315.62	-	-



TYPE 68F000 API 608

Carbon steel flanged ANSI 150, full port, Split-Body ball valve with ISO 5211 pad and double "D" stem.

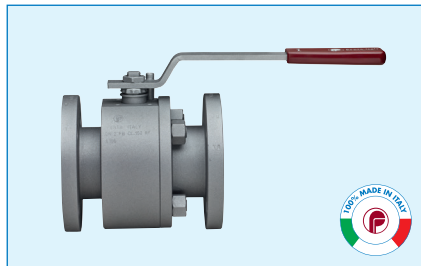
Size	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	6"
US\$	466.00	522.00	624.00	857.00	1,034.00	1,790.00	2,608.00	6,609.00
Package	1	1	1	1	1	1	1	1
Weight	5.29	7.28	10.61	19.18	26.24	53.14	84.89	189.19



TYPE AP64CS

Metal seated floating ball valves, carbon steel, bi-directional, ANSI 150.

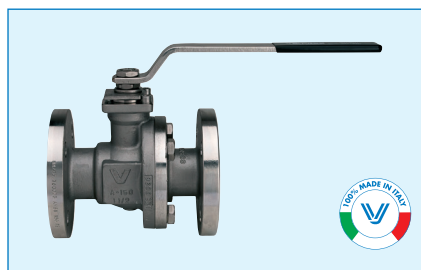
Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
AP64CS US\$	1,295.00	1,375.00	1,454.00	1,644.00	2,191.00	2,638.00	3,675.00	4,076.00	6,266.00
S.S. Stem Extension Adder	287.00	287.00	287.00	287.00	345.00	345.00	518.00	518.00	961.00
Package	1	1	1	1	1	1	1	1	1
Weight	5.51	6.61	12.13	15.43	24.25	37.48	48.50	57.32	105.82



TYPE AP64SS

Metal seated floating ball valves, stainless steel, bi-directional, ANSI 150.

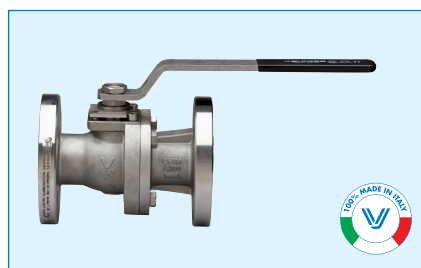
Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
AP64SS US\$	1,536.00	1,663.00	1,802.00	2,078.00	2,846.00	3,658.00	4,894.00	5,459.00	8,715.00
S.S. Stem Extension Adder	287.00	287.00	287.00	287.00	345.00	345.00	518.00	518.00	961.00
Package	1	1	1	1	1	1	1	1	1
Weight	5.51	6.61	12.13	15.43	24.25	37.48	48.50	57.32	105.82



TYPE 761030

Stainless steel flanged ANSI 300, full port Split-Body ball valve, fire-safe, Antistatic Device with ISO 5211 pad and double "D" stem.

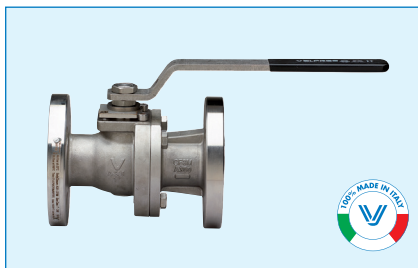
Size	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	6"	8"
761030 US\$	381.00	447.00	595.00	898.00	1,043.00	2,095.00	2,947.00	7,515.00	15,324.00
760195 US\$	417.00	491.00	655.00	987.00	1,146.00	2,303.00	3,240.00	8,266.00	16,856.00
Package	1	1	1	1	1	1	1	1	1
Weight	5.07	7.71	11.46	22.04	26.45	59.51	90.36	204.97	332.80



TYPE 68J100 API 608

Stainless steel flanged, ANSI 300, full port Split-Body ball valve with ISO 5211 pad and double "D" stem.

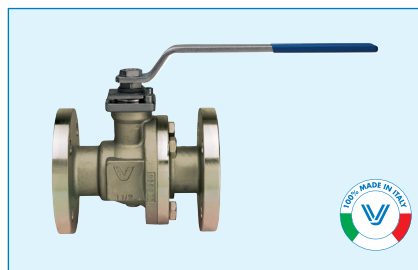
Size	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	6"
US\$	684.00	780.00	944.00	1,372.00	1,688.00	3,063.00	4,450.00	11,066.00
Package	1	1	1	1	1	1	1	1
Weight	6.84	9.92	14.11	25.58	31.75	70.56	115.54	240.35



TYPE 68R115 API 608

Super Duplex stainless steel flanged, ANSI 300, full port Split-Body ball valve with ISO 5211 pad and double "D" stem.

Size	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	6"
US\$	1,066.00	1,266.00	1,570.00	2,326.00	2,982.00	5,137.00	8,721.00	17,921.00
Package	1	1	1	1	1	1	1	1
Weight	6.84	9.92	14.11	25.58	31.75	70.56	115.54	240.35



TYPE 761031

Carbon steel flanged ANSI 300, full port Split-Body ball valve, fire-safe, Antistatic Device with ISO 5211 pad and double "D" stem.

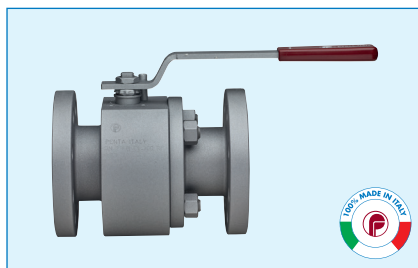
Size	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	6"	8"
761031 US\$	282.00	327.00	399.00	599.00	694.00	1,283.00	1,751.00	4,415.00	8,932.00
762066 US\$	310.00	358.00	437.00	656.00	762.00	1,410.00	1,926.00	4,855.00	9,824.00
Package	1	1	1	1	1	1	1	1	1
Weight	5.07	7.71	11.46	22.04	26.45	59.51	90.36	204.97	332.80



TYPE 68F100 API 608

Carbon steel, flanged ANSI 300, full port Split-Body ball valve with ISO 5211 pad and double "D" stem.

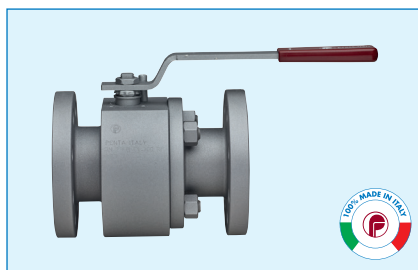
Size	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	6"
US\$	511.00	576.00	693.00	1,010.00	1,203.00	2,166.00	3,199.00	8,088.00
Package	1	1	1	1	1	1	1	1
Weight	6.84	9.92	14.11	25.58	31.75	70.56	115.54	240.35



TYPE AP60CS

Metal seated floating ball valves, carbon steel, bi-directional, ANSI 300.

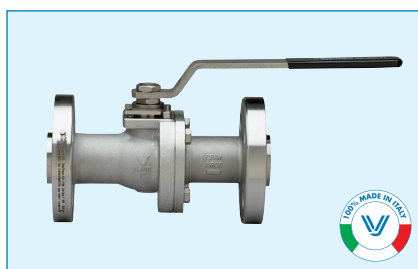
Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
AP60CS US\$	1,320.00	1,474.00	1,556.00	1,727.00	2,318.00	2,860.00	4,208.00	4,823.00	7,145.00
S.S. Stem Extension Adder	287.00	287.00	287.00	287.00	345.00	345.00	518.00	518.00	961.00
Package	1	1	1	1	1	1	1	1	1
Weight	6.61	8.82	13.23	17.64	29.76	41.89	55.12	88.18	138.89



TYPE AP60SS

Metal seated floating ball valves, stainless steel, bi-directional, ANSI 300.

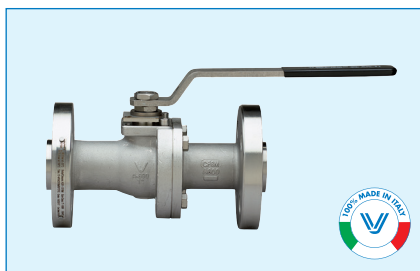
Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
AP60SS US\$	1,661.00	1,940.00	2,136.00	2,453.00	3,279.00	4,157.00	5,813.00	7,009.00	10,626.00
S.S. Stem Extension Adder	287.00	287.00	287.00	287.00	345.00	345.00	518.00	518.00	961.00
Package	1	1	1	1	1	1	1	1	1
Weight	6.61	8.82	13.23	17.64	29.76	41.89	55.12	88.18	138.89



TYPE 68J401 API 608

Stainless steel, flanged ANSI 600, full port Split-Body ball valve with ISO 5211 pad and double "D" stem.

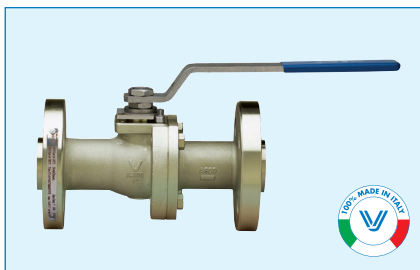
Size	1/2"	3/4"	1"	1 1/2"	2"
US\$	820.00	952.00	1,154.00	1,712.00	2,122.00
Package	1	1	1	1	1
Weight	7.94	11.25	15.88	29.11	38.37



TYPE 68R415 API 608

Super Duplex stainless steel, flanged ANSI 600, full port Split-Body ball valve with ISO 5211 pad and double "D" stem.

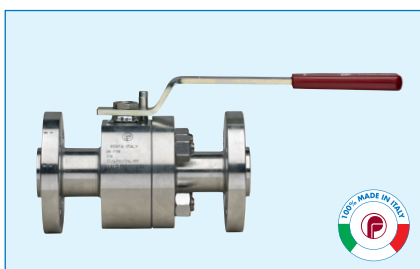
Size	1/2"	3/4"	1"	1 1/2"	2"
US\$	1,180.00	1,393.00	1,691.00	2,654.00	3,966.00
Package	1	1	1	1	1
Weight	7.94	11.25	15.88	29.11	38.37



TYPE 68F400 API 608

Carbon steel, flanged ANSI 600, full port Split-Body ball valve with ISO 5211 pad and double "D" stem.

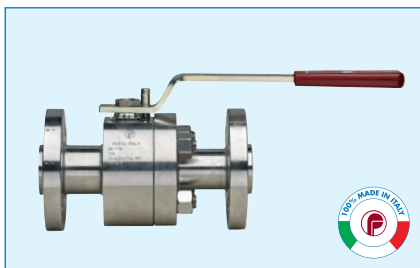
Size	1/2"	3/4"	1"	1 1/2"	2"
US\$	659.00	736.00	916.00	1,307.00	1,507.00
Package	1	1	1	1	1
Weight	7.94	11.25	15.88	29.11	38.37



TYPE AP606CS

Metal seated floating ball valves, carbon steel, bi-directional, ANSI 600.

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
AP606CS US\$	A RICHIESTA - ON REQUEST								
Package	1	1	1	-	1	1	-	1	1
Weight	15.43	18.74	22.05	-	40.79	55.12	-	83.78	110.23



TYPE AP606SS

Metal seated floating ball valves, stainless steel, bi-directional, ANSI 600.

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
AP606SS US\$	A RICHIESTA - ON REQUEST								
Package	1	1	1	-	1	1	-	1	1
Weight	15.43	18.74	22.05	-	40.79	55.12	-	83.78	110.23



TYPE 776018 (L)

Stainless steel flanged ANSI 150 3-way diverter ball valve with ISO 5211 pad and double "D" stem.

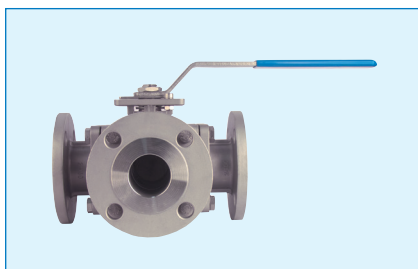
Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	665.00	742.00	769.00	1,065.00	1,224.00	1,356.00	2,758.00	3,579.00	5,121.00
Package	1	1	1	1	1	1	1	1	1
Weight	4.91	6.30	8.57	13.69	18.73	27.05	44.10	53.66	84.76



TYPE 776032 (L)

Carbon steel flanged ANSI 150 3-way diverter ball valve with ISO 5211 pad and double "D" stem.

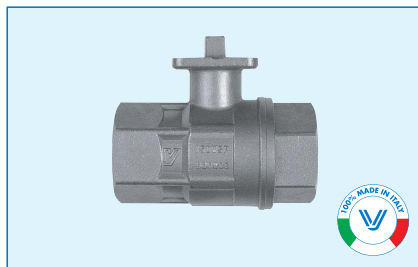
Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
US\$	422.00	441.00	457.00	555.00	645.00	780.00	1,155.00	1,551.00	2,160.00	4,361.00	6,567.00
Package	1	1	1	1	1	1	1	1	1	1	1
Weight	4.91	6.30	8.57	13.69	18.73	27.05	44.10	53.66	84.76	140.00	200.00



TYPE 97L150 – 97T150

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

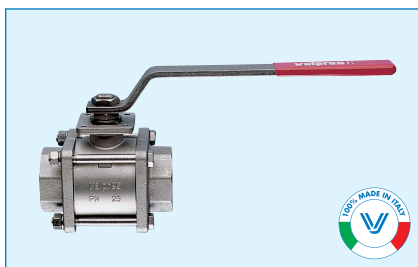
Size	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"
US\$	505.00	563.00	871.00	1,704.00	2,264.00	3,386.00	4,857.00	6,674.00	14,122.00
Package	1	1	1	1	1	1	1	1	1
Master Box weight	8.00	10.00	14.00	27.00	47.00	63.00	76.00	161.00	290.00



TYPE 700076-V36/V6/V9

2-piece direct mount stainless steel FNPT threaded, 30-60, 60, and 90 degrees V-ball valve.

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
US\$	122.00	134.00	166.00	243.00	277.00	381.00	824.00	964.00
Package	10	6	5	2	2	2	1	1
Master Box weight	13.73	5.67	8.02	4.82	7.51	13.40	15.30	21.30



TYPE 710190-V36/V6/V9

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

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	3"	4"
US\$	119.00	146.00	190.00	243.00	306.00	403.00	1,095.00	1,873.00
Package	1	1	1	1	1	1	1	1
Weight	0.88	1.32	2.42	3.36	4.61	7.03	29.45	46.79



TYPE 630LL-V3/V6/V9/SL

Full port high performance 3-piece carbon steel ball valve with locking lever and ISO 5211 direct mounting pad, 30, 60, 90 degrees V-ball valve.

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	158.00	198.00	250.00	399.00	521.00	883.00	1,567.00	2,154.00	4,023.00
Package	1	1	1	1	1	1	1	1	1
Weight	1.60	1.80	3.00	6.00	6.50	9.80	21.00	28.00	87.00



TYPE 730LL-V3/V6/V9/SL

Full port high performance 3-piece stainless steel ball valve with locking lever and ISO 5211 direct mounting pad, 30, 60, 90 degrees V-ball valve.

Size	1/2"	3/4"	1"	1-1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	180.00	235.00	302.00	473.00	614.00	1,070.00	1,911.00	2,675.00	5,100.00
Package	1	1	1	1	1	1	1	1	1
Weight	1.60	1.80	3.00	6.00	6.50	9.80	21.00	28.00	87.00



TYPE 770-V3/V6/V9

3-piece stainless steel, 30, 60, 90 degree V-port non-cavity filled sanitary valve, locking handle and ISO 5211 direct mounting pad.

Size	1/2"*	3/4"*	1"	1 1/2"	2"	2 1/2"	3"	4"
US\$	854.00	905.00	914.00	1,164.00	1,363.00	1,944.00	2,542.00	3,770.00
Package	12	12	12	6	4	2	2	1
Master Box weight	21.58	24.46	39.58	44.98	41.94	45.14	59.54	46.50

* Cavity-filled.

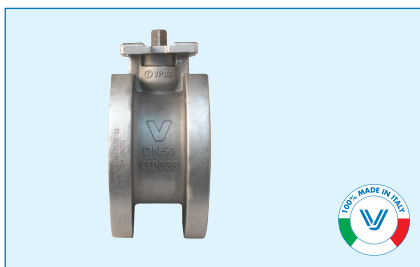


TYPE 771-V3/V6/V9

3-piece stainless steel, 30, 60, 90 degree V-port cavity-filled sanitary valve, locking handle and ISO 5211 direct mounting pad.

Size	1/2"*	3/4"*	1"	1 1/2"	2"	2 1/2"	3"	4"
US\$	854.00	905.00	1,104.00	1,478.00	1,984.00	3,072.00	4,285.00	6,576.00
Package	12	12	12	6	4	2	2	1
Master Box Weight	21.58	24.46	39.58	44.98	41.94	45.14	59.54	46.50

* Cavity-filled.



TYPE 723102-V36/V6/V9

Stainless steel direct mount flanged ANSI 150, 30-60, 60 and 90 degrees V-ball valve.

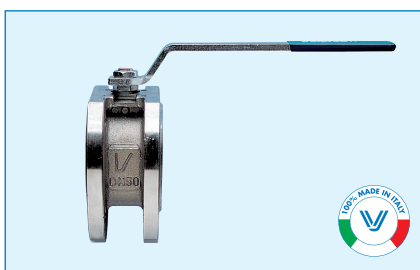
Size	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	353.00	479.00	479.00	568.00	696.00	1,394.00	2,070.00
Package	1	1	1	1	1	1	1
Weight	5.29	7.72	9.92	14.77	24.03	30.87	46.08



TYPE 724102-V36/V6/V9

Carbon steel direct mount flanged ANSI 150, 30-60, 60 and 90 degrees V-ball valve.

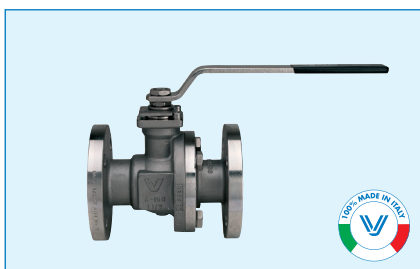
Size	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	275.00	356.00	356.00	403.00	476.00	939.00	1,408.00
Package	1	1	1	1	1	1	1
Weight	5.29	7.72	9.92	14.77	24.03	30.87	46.08



TYPE 720370-V36/V6/V9

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

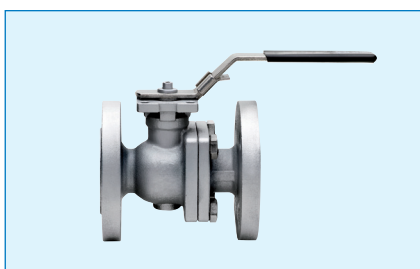
Size	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	6"
US\$	233.00	269.00	293.00	431.00	562.00	1,177.00	1,772.00	5,216.00
Package	1	1	1	1	1	1	1	1
Weight	2.86	3.96	5.95	7.27	12.12	28.21	46.07	101.63



TYPE 760021-V36/V6/V9

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

Size	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	6"
US\$	290.00	329.00	387.00	611.00	844.00	1,644.00	2,304.00	5,865.00
Package	1	1	1	1	1	1	1	1
Weight	4.21	5.36	8.15	15.65	23.80	47.61	67.00	171.91



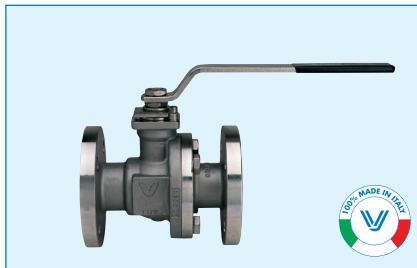
TYPE VF300-600-900

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

LIQUIDATION

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"
US\$ VF300	196.00	244.00	323.00	439.00	567.00	826.00	*	1,782.00	*	*
US\$ VF600	196.00	*	*	439.00	*	*	1,537.00	*	*	*
US\$ VF900	196.00	244.00	323.00	439.00	567.00	826.00	1,537.00	*	*	*
Package	1	1	1	1	1	1	1	1	1	1
Weight	3.90	4.90	6.80	9.20	13.30	19.20	24.80	41.00	57.00	168.00

* see 760021-V36/V6/V9



TYPE 760195-V36/V6/V9

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

Size	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	6"
US\$	331.00	393.00	513.00	772.00	910.00	1,913.00	2,784.00	7,559.00
Package	1	1	1	1	1	1	1	1
Weight	5.07	7.71	11.46	22.04	26.45	59.51	90.36	204.97



TYPE N500S

Lever operated butterfly valve EPDM seat, Wafer body SS disc.

NEW



EPDM only

Size	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
N500S US\$	85.00	88.00	97.00	110.00	143.00	186.00	226.00	372.00	556.00	875.00	1,788.00	2,276.00	3,497.00	4,674.00	8,418.00
530S (FKM) US\$	-	138.00	178.00	194.00	260.00	417.00	440.00	649.00	1,115.00	1,648.00	2,859.00	3,793.00	5,935.00	8,470.00	C/F
540S (NBR) US\$	-	88.00	97.00	110.00	143.00	186.00	226.00	372.00	556.00	875.00	1,788.00	2,276.00	3,497.00	4,674.00	C/F
Package	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Weight	8.82	10.14	12.13	12.79	17.20	20.39	24.58	30.86	48.50	70.55	92.59	167.55	242.51	308.65	485.02



TYPE N501S

Lever operated butterfly valve EPDM seat, lug body SS disc.

NEW



EPDM only

Size	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
N501S US\$	95.00	96.00	113.00	126.00	176.00	223.00	275.00	425.00	698.00	996.00	1,950.00	3,166.00	4,385.00	5,809.00	8,590.00
531S (FKM) US\$	-	157.00	190.00	217.00	300.00	400.00	478.00	751.00	1,142.00	1,729.00	3,287.00	4,562.00	7,059.00	9,650.00	C/F
541S (NBR) US\$	-	96.00	113.00	126.00	176.00	223.00	275.00	425.00	698.00	996.00	1,950.00	3,166.00	4,385.00	5,809.00	C/F
Package	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Weight	10.58	12.13	15.65	17.42	21.83	25.9	29.87	59.52	74.96	108.03	136.69	198.42	374.79	396.83	639.34



TYPE GN500S

Gear operated butterfly valve EPDM seat, Wafer body SS disc.

NEW



EPDM only

Size	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
GN500S US\$	247.00	250.00	282.00	295.00	350.00	393.00	433.00	646.00	830.00	1,209.00	2,327.00	2,815.00	4,109.00	5,286.00	9,393.00
G530S (FKM) US\$	-	300.00	363.00	379.00	467.00	624.00	647.00	923.00	1,389.00	1,982.00	3,398.00	4,332.00	6,547.00	9,082.00	C/F
G540S (NBR) US\$	-	250.00	282.00	295.00	350.00	393.00	433.00	646.00	830.00	1,209.00	2,327.00	2,815.00	4,109.00	5,286.00	C/F
Package	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Weight	9.70	11.02	13.01	13.67	18.08	20.72	24.91	38.80	56.44	78.48	119.05	194.01	271.17	337.31	529.33



TYPE GN501S

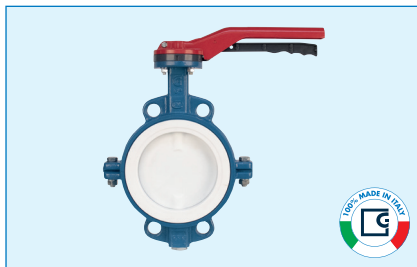
Gear operated butterfly valve EPDM sea, lug body SS disc.

NEW



EPDM only

Size	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
GN501S US\$	257.00	258.00	298.00	311.00	383.00	430.00	482.00	699.00	972.00	1,330.00	2,489.00	3,705.00	4,997.00	6,421.00	9,565.00
G531S (FKM) US\$	-	319.00	375.00	402.00	507.00	607.00	685.00	1,025.00	1,416.00	2,063.00	3,826.00	5,101.00	7,671.00	10,262.00	C/F
G541S (NBR) US\$	-	258.00	298.00	311.00	383.00	430.00	482.00	699.00	972.00	1,330.00	2,489.00	3,705.00	4,997.00	6,421.00	C/F
Package	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Weight	11.46	13.01	16.53	18.30	22.71	26.23	30.20	67.46	82.89	115.96	163.14	224.87	403.45	425.49	683.65

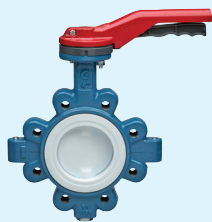


TYPE 550P

Manually operated butterfly valve PTFE seat, wafer body, PTFE coated SS disc.

NEW

Size	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
550P US\$	798.00	987.00	1,073.00	1,351.00	1,558.00	1,820.00	2,834.00	3,889.00	5,207.00
G550P US\$	960.00	1,172.00	1,258.00	1,558.00	1,765.00	2,027.00	3,108.00	4,163.00	5,541.00
Package	1	1	1	1	1	1	1	1	1
Weight	11.46	13.01	13.67	18.96	23.92	27.67	33.51	54.01	70.55



TYPE 551P

NEW

Manually operated butterfly valve PTFE seat, Lug body, PTFE coated SS disc.

Size	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
551P US\$	880.00	1,011.00	1,094.00	1,415.00	1,633.00	1,865.00	2,901.00	4,158.00	5,632.00
G551P US\$	1,042.00	1,196.00	1,279.00	1,622.00	1,840.00	2,072.00	3,175.00	4,432.00	5,966.00
Package	1	1	1	1	1	1	1	1	1
Weight	12.57	14.33	20.72	22.49	29.21	32.96	55.12	66.14	99.21



TYPE 8100

Carbon steel manually operated ANSI 150, high performance Wafer style, butterfly valves.

Size	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"
8100 US\$	429.00	446.00	502.00	687.00	1,031.00	1,115.00	1,736.00	2,304.00	3,146.00	7,370.00	8,853.00
G8100 US\$	647.00	664.00	737.00	810.00	1,154.00	1,238.00	1,898.00	2,467.00	3,713.00	7,855.00	9,582.00
Package	1	1	1	1	1	1	1	1	1	1	1
Weight	19.90	20.80	21.90	31.30	35.50	42.80	68.80	87.80	121.30	231.50	284.40



TYPE 9100

Stainless steel manually operated ANSI 150, high performance Wafer style, butterfly valves.

Size	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"
9100 US\$	545.00	578.00	631.00	882.00	1,310.00	1,440.00	2,207.00	2,985.00	4,107.00	8,060.00	11,680.00
G9100 US\$	789.00	829.00	895.00	1,005.00	1,433.00	1,564.00	2,370.00	3,148.00	4,674.00	8,546.00	12,409.00
Package	1	1	1	1	1	1	1	1	1	1	1
Weight	10.40	11.30	12.40	21.80	26.00	33.30	44.40	64.90	94.00	231.50	284.40



TYPE 8101

Carbon steel manually operated ANSI 150, high performance lug style, butterfly valves.

Size	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"
8101 US\$	472.00	495.00	538.00	815.00	1,229.00	1,310.00	1,970.00	2,729.00	3,685.00	7,784.00	9,459.00
G8101 US\$	700.00	728.00	780.00	938.00	1,352.00	1,433.00	2,133.00	2,892.00	4,252.00	8,270.00	10,188.00
Package	1	1	1	1	1	1	1	1	1	1	1
Weight	17.00	18.60	19.90	22.30	26.90	28.70	57.80	70.90	104.60	291.00	375.10



TYPE 9101

Stainless steel manually operated ANSI 150, high performance lug style, butterfly valves.

Size	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"
9101 US\$	588.00	628.00	705.00	1,144.00	1,611.00	1,720.00	2,554.00	3,672.00	4,994.00	12,115.00	14,739.00
G9101 US\$	840.00	890.00	984.00	1,267.00	1,734.00	1,844.00	2,716.00	3,835.00	5,562.00	12,600.00	15,468.00
Package	1	1	1	1	1	1	1	1	1	1	1
Weight	17.00	18.60	19.90	22.30	26.90	28.70	57.80	70.90	104.60	291.00	375.10



TYPE 8300

Carbon steel manually operated ANSI 300, high performance Wafer style, butterfly valves.

Size	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
8300 US\$	535.00	555.00	575.00	784.00	1,173.00	1,392.00	2,183.00	3,210.00	4,329.00
G8300 US\$	777.00	802.00	826.00	907.00	1,296.00	1,515.00	2,346.00	3,373.00	4,896.00
Package	1	1	1	1	1	1	1	1	1
Weight	19.90	20.80	21.90	31.30	35.50	42.80	68.80	87.80	121.30



TYPE 9300

Stainless steel manually operated ANSI 300, high performance Wafer style, butterfly valves.

Size	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
9300 US\$	658.00	691.00	722.00	1,034.00	1,484.00	1,849.00	2,867.00	4,431.00	5,954.00
G9300 US\$	926.00	968.00	1,005.00	1,157.00	1,607.00	1,972.00	3,029.00	4,594.00	6,522.00
Package	1	1	1	1	1	1	1	1	1
Weight	19.90	20.80	21.90	31.30	35.50	42.80	68.80	87.80	121.30



TYPE 8301

Carbon steel manually operated ANSI 300, high performance Lug style, butterfly valves.

Size	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
8301 US\$	622.00	645.00	665.00	978.00	1,435.00	1,727.00	2,651.00	3,818.00	5,176.00
G8301 US\$	883.00	911.00	935.00	1,102.00	1,558.00	1,850.00	2,814.00	3,982.00	5,744.00
Package	1	1	1	1	1	1	1	1	1
Weight	19.90	20.80	21.90	31.30	35.50	42.80	68.80	87.80	121.30



TYPE 9301

Stainless steel manually operated ANSI 300, high performance Lug style, butterfly valves.

Size	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
9301 US\$	777.00	814.00	851.00	1,334.00	1,983.00	2,445.00	3,806.00	5,627.00	7,727.00
G9301 US\$	1,072.00	1,117.00	1,163.00	1,457.00	2,106.00	2,568.00	3,969.00	5,789.00	8,294.00
Package	1	1	1	1	1	1	1	1	1
Weight	19.90	20.80	21.90	31.30	35.50	42.80	68.80	87.80	121.30



TYPE BFBVSTC

Stainless steel Butterfly valve with EPDM seats and sanitary Tri-Clamp Ends.

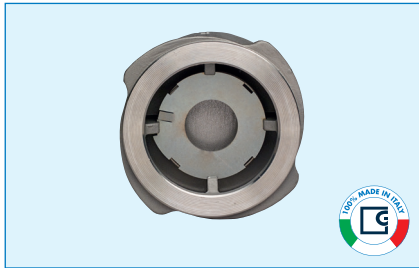
Size	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
US\$	427.00	427.00	272.00	291.00	331.00	369.00	427.00	639.00	1,916.00	4,643.00
Package	1	1	1	1	1	1	1	1	1	1
Weight	3.38	3.38	3.38	3.24	3.84	4.84	5.79	7.96	9.95	12.43



NCI 150E (EPDM seat)

Double door Wafer style check valve.

Size	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
NCI150E US\$	79.00	100.00	145.00	202.00	253.00	348.00	574.00	912.00	1,188.00
Package	1	1	1	1	1	1	1	1	1
Weight	3.30	5.30	7.90	12.60	16.10	19.80	37.50	57.30	92.60



TYPE GB15MM

NEW

Stainless steel metal to metal seated silent check valve.

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
US\$	64.00	67.00	77.00	100.00	114.00	158.00	227.00	287.00	455.00
Package	1	1	1	1	1	1	1	1	1
Weight	0.24	0.4	0.57	0.88	1.21	2.20	3.31	4.41	7.05



TYPE GH15MM

NEW

Stainless steel metal to metal seated silent check valve.

Size	5"	6"	8"
US\$	1,639.00	2,189.00	3,801.00
Package	1	1	1
Weight	18.07	27.56	42.55



TYPE GS15P

NEW

Stainless steel PTFE seated swing check valve.

Size	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
US\$	286.00	294.00	363.00	367.00	548.00	571.00	839.00	1,111.00	2,470.00	2,751.00	3,903.00	3,881.00	8,821.00	10,669.00	11,497.00
Package	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Weight	1.54	1.98	2.55	3.31	5.51	7.05	11.68	21.38	35.71	61.73	70.55	105.82	138.89	191.80	C/F



STEM EXTENSION FOR TEMPERATURE PROTECTION

Lever stem extension for temperature protection for 70, 71, 72, 76, and 776 valve series.

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"
Code	RI6503	RI6503	RI6504	RI6504	RI6505	RI6505	RI6506	RI6506	RI6507	RI6507
US\$	57.00	57.00	57.00	57.00	62.00	62.00	66.00	66.00	76.00	76.00
Package	1	1	1	1	1	1	1	1	1	1



STEM EXTENSION

Lever stem extension for 70, 71, 72, 76, and 776 valve series.

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"
Code	890022	890022	890023	890023	890024	890024	890025	890025	890026	890026
US\$	41.00	41.00	41.00	41.00	44.00	44.00	55.00	55.00	60.00	60.00
Package	1	1	1	1	1	1	1	1	1	1
Pkg. weight	-	-	-	-	-	-	-	-	-	-



FUGITIVE EMISSIONS BONNET

Model	Description	US\$
FEB-9MM	ISO Fugitive emissions bonnet with F04 pattern at valve connection and F03/F04 pattern at handle connection and 9 mm square stem	167.00
FEB-11MM	ISO Fugitive emissions bonnet with F05 pattern at valve connection and F04/F05 pattern at handle connection and 11 mm square stem	191.00
FEB-14MM	ISO Fugitive emissions bonnet with F07 pattern at valve connection and F05/F07 pattern at handle connection and 14 mm square stem	332.00
FEB-17MM	ISO Fugitive emissions bonnet with F10 pattern at valve connection and F07/F10 pattern at handle connection and 17 mm square stem	390.00
FEB-22MM	ISO Fugitive emissions bonnet with F12 pattern at valve connection and F10/F12 pattern at handle connection and 22 mm square stem	450.00



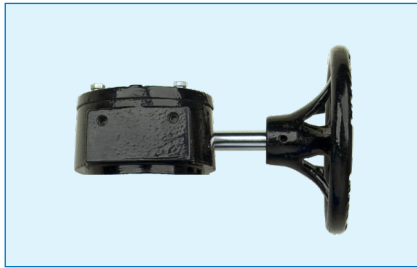
ISO STEM EXTENSIONS

Model	Description	US\$
SE-ISO-9MM-F04XF03/F04	ISO stem extension with F04 pattern at valve connection and F03/F04 pattern at handle connection and 9mm square stem	91.00
SE-ISO-11MM-F05XF04/F05	ISO stem extension with F05 pattern at valve connection and F04/F05 pattern at handle connection and 11mm square stem	107.00
SE-ISO-14MM-F07XF05/F07	ISO stem extension with F07 pattern at valve connection and F05/F07 pattern at handle connection and 14mm square stem	135.00
SE-ISO-17MM-F10XF07/F10	ISO stem extension with F10 pattern at valve connection and F07/F10 pattern at handle connection and 17mm square stem	191.00
SE-ISO-22MM-F10/F12XF10/F12	ISO stem extension with F10 pattern at valve connection and F12/F10 pattern at handle connection and 17mm square stem	284.00



ISO OVAL HANDLES

Model	Description	US\$
OH-ISO-9MM	ISO locking oval handle with 9mm stem	28.00
OH-ISO-11MM	ISO locking oval handle with 11mm stem	32.00
OH-ISO-14MM	ISO locking oval handle with 14mm stem	37.00



REPLACEMENT GEAR OPERATORS

MODEL	DESCRIPTION	WEIGHT (LBS.)	US\$
50G-1	F05/9mm	9.50	117.00
50G-1A	F07/11mm	9.50	117.00
50G-1B	F07/14mm	9.50	117.00
50G-1C	F07/17mm	9.50	153.00
50G-2	F10/17mm	24.40	154.00
50G-2A	F10/22mm	24.40	154.00
50G-3	F10/22mm	27.30	193.00
50G-3A	F14/27mm	27.30	539.00

GEAR OPERATOR REPLACEMENT SIZING GUIDE



GEAR OP W/ DIRECT MOUNT FLANGED ANSI 150 SPLIT-BODY BALL VALVE

Size	1"	1 1/2"	2"	3"	4"
G766000	50G-1	50G-1A	50G-1A	50G-1B	50G-2
G766001	50G-1	50G-1A	50G-1A	50G-1B	50G-2



GEAR OP W/ FLANGED ANSI 150 SPLIT-BODY BALL VALVE

Size	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
G760005	50G-1	50G-1	50G-1A	50G-1A	50G-1B	50G-2	50G-2	50G-2	50G-3	50G-3
G760021	50G-1	50G-1	50G-1A	50G-1A	50G-1B	-	50G-2	50G-2	50G-3	50G-3
G762000	50G-1	50G-1	50G-1A	50G-1A	50G-1B	-	50G-2	50G-2	50G-3	50G-3
G760137	50G-1	50G-1	50G-1A	50G-1A	50G-1B	-	50G-2	50G-2	50G-3	50G-3



GEAR OP W/ RUBBER LINED BUTTERFLY VALVE

Size	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
GN500S	50G-1	50G-1	50G-1	50G-1	50G-1A	50G-1B	50G-1B	50G-2	50G-2A	50G-3
GN501S	50G-1	50G-1	50G-1	50G-1	50G-1A	50G-1B	50G-1B	50G-2	50G-2A	50G-3
G531S	-	50G-1	50G-1	50G-1	50G-1A	50G-1B	50G-1B	50G-2	50G-2A	50G-3
G541S	-	50G-1	50G-1	50G-1	50G-1A	50G-1B	50G-1B	50G-2	50G-2A	50G-3



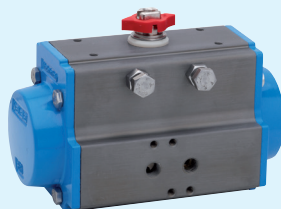
GEAR OP W/ RUBBER LINED GROOVED AND BUTTERFLY VALVE

Size	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
G700E	50G-1A	50G-1A	50G-1A	50G-1A	50G-1B	50G-1B	50G-2	50G-2A	50G-3



GEAR OP W/ HIGH PERFORMANCE BUTTERFLY VALVE

Size	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
G8100/G9100	50G-1B	50G-1B	50G-1B	50G-1B	50G-1C	50G-1C	50G-2	50G-2A	C/F
G8101G/9101	50G-1B	50G-1B	50G-1B	50G-1B	50G-1C	50G-1C	50G-2	50G-2A	C/F
G8300/G9300	50G-1B	50G-1B	50G-1B	50G-1B	50G-1C	50G-1C	50G-2	50G-2A	C/F
G8301/G9301	50G-1B	50G-1B	50G-1B	50G-1B	50G-1C	50G-1C	50G-2	50G-2A	C/F



VALBIA DOUBLE ACTING PNEUMATIC ACTUATORS “DA” – Viton seals standard

MODEL	DA32V	DA52V	DA63V	DA75V	DA85V	DA100V	DA115V	DA125V	DA140V	DA160V	DA180V	DA200V	DA230V	DA270V	DA330V
FKM/VITON SEALS	82DA1307	82DA1310	82DA1312	82DA1375	82DA1314	82DA1318	82DA1370	82DA1319	82DA1320	82DA1379	82DA1380	82DA1321	82DA1323	82DA1377	82DA1333
US\$	121.00	187.00	213.00	307.00	340.00	437.00	569.00	659.00	932.00	1,352.00	1,549.00	1,872.00	3,213.00	4,728.00	11,187.00
Pkg. weight	1.08	2.47	3.66	6.13	8.60	12.12	19.51	23.81	35.93	47.95	63.93	81.57	128.97	182.25	370.38

VALBIA SPRING RETURN PNEUMATIC ACTUATORS “SR” – Viton seals standard

MODEL	SR52V	SR63V	SR75V	SR85V	SR100V	SR115V	SR125V	SR140V	SR160V	SR180V	SR200V	SR230V	SR270V	SR330V
FKM/VITON SEALS	82SR1310	82SR1312	82SR1375	82SR1314	82SR1318	82SR1370	82SR1319	82SR1320	82SR1379	82SR1380	82SR1321	82SR1323	82SR1377	82SR1333
US\$	197.00	233.00	334.00	379.00	498.00	664.00	755.00	1,114.00	1,526.00	2,036.00	2,427.00	4,112.00	5,076.00	13,554.00
Pkg. weight	2.87	4.34	7.47	10.58	15.43	25.24	31.04	48.06	65.04	87.96	121.25	156.53	221.06	460.77



VALBIA ACTUATOR 0° – 180° (metric only)

MODEL	DA52V-180	DA63V-180	DA75V-180	DA85V-180	DA100V-180	DA115V-180	DA125V-180	DA140V-180	DA160V-180
CODE	83DA0710	83DA0712	83DA0775	83DA0714	83DA0718	83DA0770	83DA0719	83DA0720	83DA0779
US\$	465.00	536.00	567.00	679.00	824.00	1,117.00	1,276.00	1,833.00	2,229.00
Pkg. weight	3.75	5.51	9.26	13.18	18.81	30.09	38.25	55.12	68.78



VALBIA STAINLESS STEEL ACTUATOR 0° - 90°

MODEL	SSDA52V SSDA63V SSDA75V SSDA85V SSDA100V				
CODE	84DA1310	84DA1312	84DA1375	84DA1314	84DA1318
US\$	877.00	993.00	1,367.00	1,563.00	1,927.00
Weight	5.00	6.90	10.90	16.60	22.50

MODEL	SSSR52V SSSR63V SSSR75V SSSR85V SSSR100V				
CODE	84SR1310	84SR1312	84SR1375	84SR1314	84SR1318
US\$	903.00	1,024.00	1,409.00	1,615.00	1,987.00
Weight	5.40	7.60	12.30	18.50	25.90



VALBIA PTFE – COATED PNEUMATIC ACTUATORS – Viton seals standard

MODEL	DA32VP	DA52VP	DA63VP	DA75VP	DA85VP	DA100VP	DA115VP	DA125VP	DA140VP	DA160VP	DA180VP	DA200VP	DA230VP	DA270VP	DA330VP
CODE	82DAH807	82DAH810	82DAH812	82DAH875	82DAH814	82DAH818	82DAH870	82DAH819	82DAH820	82DAH879	82DAH880	82DAH821	82DAH823	82DAH877	82DAH833
US\$	200.00	273.00	324.00	425.00	480.00	642.00	803.00	957.00	1,332.00	1,911.00	2,286.00	2,771.00	4,316.00	5,988.00	13,271.00
Weight	1.08	2.47	3.66	6.13	8.60	12.12	19.51	23.81	35.93	47.95	63.93	81.57	128.97	182.25	370.38

MODEL	SR52VP	SR63VP	SR75VP	SR85VP	SR100VP	SR115VP	SR125VP	SR140VP	SR160VP	SR180VP	SR200VP	SR230VP	SR270VP	SR330VP
CODE	82SRH810	82SRH812	82SRH875	82SRH814	82SRH818	82SRH870	82SRH819	82SRH820	82SRH879	82SRH880	82SRH821	82SRH823	82SRH877	82SRH833
US\$	285.00	340.00	444.00	518.00	689.00	885.00	1,044.00	1,472.00	2,136.00	2,689.00	3,329.00	5,230.00	6,831.00	15,767.00
Weight	2.87	4.34	7.47	10.58	15.43	25.24	31.04	48.06	65.04	87.96	121.25	156.53	221.06	460.77

PRICE LIST PNEUMATIC ACTUATOR SPARE PARTS

SET OF SPRINGS FOR SPRING RETURN ACTUATORS

*screws not included.

	SET 05	SET 05	SET 05	SET 05	SET 05	SET 05	SET 05	SET 05	SET 05	SET 06	SET 06	SET 06	N° 1 screw*	N° 1 screw*	N° 1 screw*
SIZE	52	63	75	85	100	115	125	140	160	180	200	230	270	330	
CODE	RI3385	RI3386	RI3387	RI3388	RI3389	RI3390	RI3391	RI4048	RI4738	RI4600	RI4746	RI4601	RI3531	RI4602	
US\$	32.00	40.00	59.00	66.00	93.00	133.00	172.00	226.00	588.00	695.00	847.00	115.00	111.00	309.00	

SET OF SEALS O-RING (NBR70 -4°F + 185°F)

	32	52	63	75	85	100	115	125	140	160	180	200	230	270	330
SIZE	32	52	63	75	85	100	115	125	140	160	180	200	230	270	330
CODE	RI3101	RI4603	RI4604	RI4605	RI4606	RI4607	RI4608	RI4609	RI4610	RI4611	RI4612	RI4613	RI4614	RI4615	RI4616
US\$	18.00	18.00	19.00	20.00	23.00	24.00	28.00	28.00	26.00	85.00	91.00	91.00	100.00	83.00	108.00

SET OF SEALS O-RING (VITON -4°F + 302°F)

	32	52	63	75	85	100	115	125	140	160	180	200	230	270	330
SIZE	32	52	63	75	85	100	115	125	140	160	180	200	230	270	330
CODE	RI3326	RI4617	RI4618	RI4619	RI4620	RI4621	RI4622	RI4623	RI4624	RI4625	RI4626	RI4627	RI4628	RI4629	RI4630
US\$	31.00	28.00	36.00	47.00	69.00	80.00	88.00	90.00	79.00	125.00	142.00	150.00	207.00	229.00	553.00

SET OF SEALS O-RING (SILICON -40°F + 302°F)

	32	52	63	75	85	100	115	125	140	160	180	200	230	270	330
SIZE	32	52	63	75	85	100	115	125	140	160	180	200	230	270	330
CODE	-	RI4631	RI4632	RI4633	RI4634	RI4635	RI4636	RI4637	RI4638	RI4639	RI4640	RI4641	RI4642	RI4643	RI4644
US\$	-	27.00	32.00	36.00	64.00	66.00	84.00	91.00	62.00	112.00	119.00	132.00	137.00	194.00	226.00

SET GUIDES FOR ACTUATORS (TEMPERATURE -4°F + 185°F)

	32	52	63	75	85	100	115	125	140	160	180	200	230	270	330
SIZE	32	52	63	75	85	100	115	125	140	160	180	200	230	270	330
CODE	-	RI4645	RI4646	RI4647	RI4648	RI4649	RI4650	RI4651	RI4652	RI4653	RI4654	RI4655	RI4656	RI4657	RI4658
US\$	-	24.00	24.00	24.00	24.00	24.00	27.00	27.00	120.00	167.00	207.00	174.00	179.00	450.00	508.00

SET GUIDES FOR ACTUATORS (TEMPERATURE -4°F + 302°F)

	32	52	63	75	85	100	115	125	140	160	180	200	230	270	330
SIZE	32	52	63	75	85	100	115	125	140	160	180	200	230	270	330
CODE	-	RI4659	RI4660	RI4661	RI4662	RI4663	RI4664	RI4665	RI4666	RI4667	RI4668	RI4669	RI4670	RI4671	RI4672
US\$	-	24.00	26.00	27.00	37.00	38.00	34.00	35.00	125.00	173.00	192.00	147.00	96.00	450.00	508.00

PINION NAMUR

	32	52	63	75	85	100	115	125	140	160	180	200	230	270	330
SIZE	32	52	63	75	85	100	115	125	140	160	180	200	230	270	330
CODE	RI3156	RI4673	RI4674	RI4675	RI4676	RI4677	RI4678	RI4679	RI4680	RI4681	RI4682	RI4683	RI4684	RI4685	RI4686
US\$	60.00	72.00	79.00	96.00	100.00	155.00	206.00	224.00	236.00	282.00	353.00	445.00	713.00	1,193.00	2,950.00

END CAP

	32	52	63	75	85	100	115	125	140	160	180	200	230	270	330
SIZE	32	52	63	75	85	100	115	125	140	160	180	200	230	270	330
RIGHT	RI3401	RI4690	RI4692	RI4694	RI4696	RI4698	RI4700	RI4702	RI4704	RI4706	RI4708	RI4710	RI4712	RI4714	RI4715
US\$	34.00	35.00	36.00	37.00	42.00	50.00	82.00	82.00	110.00	146.00	155.00	172.00	220.00	359.00	1,027.00
LEFT	RI3401	RI4691	RI4693	RI4695	RI4697	RI4699	RI4701	RI4703	RI4705	RI4707	RI4709	RI4711	RI4713	RI4714	RI4716
US\$	34.00	35.00	36.00	37.00	42.00	50.00	82.00	82.00	110.00	146.00	155.00	172.00	220.00	359.00	1,027.00

FOR STAINLESS STEEL ACTUATOR SPARE PARTS, PLEASE CONTACT OUR SALES DEPARTMENT.





APPROVALS

MODEL VB010	CE	UL	**
MODEL VB015	CE	UL	
MODEL FROM VB030 TO VB350	CE	UL	CSA US *

* CSA approved for indoor use only.
** 24VDC only.

STANDARD VERSION 0° - 90° - Standard Suffix - 00*

MODEL	VB010	VB015	VB030	VB060	VB110	VB190	VB270	VB350
VOLTAGE	100-240V AC (-003)							
CODE	85H0C410	85H00101	85H00103	85H00106	85H00111	85H00119	85H00127	85H00135
US\$	269.00	331.00	536.00	638.00	747.00	792.00	865.00	970.00
VOLTAGE	24V AC/DC (-002)							
CODE	85L00010	85L00101	85L00103	85L00106	85L00111	85L00119	85L00127	85L00135
US\$	250.00	275.00	487.00	559.00	655.00	686.00	743.00	896.00
VOLTAGE	12V AC/DC (-001)							
CODE	NOT AVAILABLE	85L10101	85L10103	85L10106	85L10111	85L10119	85L10127	85L10135
US\$	-	331.00	536.00	638.00	747.00	792.00	865.00	970.00
WEIGHT	1.65	3.09	5.05	7.28	10.80	10.80	13.23	13.23

VERSION WITH BATTERY BACKUP *01 (OPERATING NORMALLY CLOSED) - Standard Suffix - 01*

MODEL	VB030	VB060	VB110	VB190	VB270	VB350
VOLTAGE	100-240V AC (-013)					
CODE	85H00903	85H00906	85H00911	85H00919	85H00927	85H00935
US\$	1,118.00	1,199.00	1,323.00	1,433.00	1,505.00	1,612.00
VOLTAGE	24V AC/DC (-012)					
CODE	85L00903	85L00906	85L00911	85L00919	85L00927	85L00935
US\$	1,042.00	1,130.00	1,266.00	1,356.00	1,428.00	1,526.00
WEIGHT	5.05	7.28	10.80	10.80	13.23	13.23

VERSION WITH POSITIONER *02 - 4-20 mA or 0-10V DC - or REVERSE 20-4 mA or 10-0V DC - Standard Suffix - 02*

MODEL	VB030	VB060	VB110	VB190	VB270	VB350
VOLTAGE	100-240V AC (-023)					
CODE	85H01003	85H01006	85H01011	85H01019	85H01027	85H01035
US\$	1,075.00	1,135.00	1,204.00	1,332.00	1,405.00	1,475.00
VOLTAGE	24V AC/DC (-022)					
CODE	85L01003	85L01006	85L01011	85L01019	85L01027	85L01035
US\$	973.00	1,036.00	1,107.00	1,200.00	1,299.00	1,391.00
VOLTAGE	12V AC/DC (-021)					
CODE	85L11003	85L11006	85L11011	85L11019	85L11027	85L11035
US\$	1,075.00	1,135.00	1,204.00	1,332.00	1,405.00	1,475.00
WEIGHT	5.05	7.28	10.80	10.80	13.23	13.23

VERSION WITH POSITIONER AND BATTERY BACKUP *04 - 4-20 mA or 0-10V DC - or REVERSE 20-4 mA or 10-0V DC - Standard Suffix - 04*

MODEL	VB030	VB060	VB110	VB190	VB270	VB350
VOLTAGE	110V AC (-043)					
CODE	85H0CD03	85H0CD06	85H0CD11	85H0CD19	85H0CD27	85H0CD35
US\$	1,252.00	1,331.00	1,525.00	1,615.00	1,722.00	1,819.00
VOLTAGE	24V AC/DC (-042)					
CODE	85L0CD03	85L0CD06	85L0CD11	85L0CD19	85L0CD27	85L0CD35
US\$	1,169.00	1,265.00	1,429.00	1,529.00	1,633.00	1,748.00
WEIGHT	5.05	7.28	10.80	10.80	13.23	13.23

VERSION WITH THREE POSITIONS *06 - Standard Suffix - 06*

MODEL	VB030	VB060	VB110	VB190	VB270	VB350
VOLTAGE	100-240V AC (-063)					
CODE	85H0CE03	85H0CE06	85H0CE11	85H0CE19	85H0CE27	85H0CE35
US\$	756.00	878.00	992.00	1,079.00	1,155.00	1,267.00
VOLTAGE	24V AC/DC (-062)					
CODE	85L0CE03	85L0CE06	85L0CE11	85L0CE19	85L0CE27	85L0CE35
US\$	685.00	799.00	911.00	990.00	1,067.00	1,170.00
WEIGHT	5.05	7.28	10.80	10.80	13.23	13.23

VERSION WITH THREE POSITIONS AND BATTERY BACKUP *08 - Standard Suffix - 08*

MODEL	VB030	VB060	VB110	VB190	VB270	VB350
VOLTAGE	100-240V AC (-083)					
CODE	85H0D403	85H0D406	85H0D411	85H0D419	85H0D427	85H0D435
US\$	1,008.00	1,119.00	1,228.00	1,330.00	1,468.00	1,623.00
VOLTAGE	24V AC/DC (-082)					
CODE	85L0D403	85L0D406	85L0D411	85L0D419	85L0D427	85L0D435
US\$	936.00	1,045.00	1,162.00	1,258.00	1,395.00	1,544.00
WEIGHT	5.05	7.28	10.80	10.80	13.23	13.23

* VOLTAGE SUFFIX

1 = 12V AC/DC	2 = 24V AC/DC	3 = 100-240V AC or 110V AC
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APPROVALS

MODEL FROM
VB030M TO VB350M



STANDARD VERSION 0° - 90° - Standard Suffix - 00*



MODEL	VB015M	VB030M	VB060M	VB110M	VB190M	VB270M	VB350M
VOLTAGE	100-240V AC (-003)						
CODE	86H00101	86H00103	86H00106	86H00111	86H00119	86H00127	86H00135
US\$	464.00	653.00	748.00	1,216.00	1,276.00	1,494.00	1,615.00
VOLTAGE	24V DC (-002)						
CODE	86L00101	86L00103	86L00106	86L00111	86L00119	86L00127	86L00135
US\$	421.00	603.00	697.00	1,146.00	1,199.00	1,442.00	1,542.00
VOLTAGE	12V DC (-001)						
CODE	86L10101	86L10103	86L10106	86L10111	86L10119	86L10127	86L10135
US\$	464.00	653.00	748.00	1,216.00	1,276.00	1,494.00	1,615.00
WEIGHT	5.60	7.30	9.90	18.70	18.70	20.90	20.90

VERSION WITH BATTERY BACKUP *01 (OPERATING NORMALLY CLOSED) - Standard Suffix - 01*



MODEL	VB015M	VB030M	VB060M	VB110M	VB190M	VB270M	VB350M
VOLTAGE	100-240V AC (-013)						
CODE	86H00901	86H00903	86H00906	86H00911	86H00919	86H00927	86H00935
US\$	1,075.00	1,524.00	1,595.00	2,080.00	2,296.00	2,394.00	2,607.00
VOLTAGE	24V DC (-012)						
CODE	86L00901	86L00903	86L00906	86L00911	86L00919	86L00927	86L00935
US\$	1,028.00	1,433.00	1,505.00	2,008.00	2,169.00	2,267.00	2,466.00
WEIGHT	5.60	7.30	9.90	18.70	18.70	20.90	20.90

VERSION WITH POSITIONER *02 - 4-20 mA or 0-10V DC - or REVERSE 20-4 mA or 0-10V DC - Standard Suffix - 02*



MODEL	VB015M	VB030M	VB060M	VB110M	VB190M	VB270M	VB350M
VOLTAGE	100-240V AC (-023)						
CODE	86H01001	86H01003	86H01006	86H01011	86H01019	86H01027	86H01035
US\$	979.00	1,428.00	1,585.00	2,028.00	2,192.00	2,333.00	2,451.00
VOLTAGE	24V DC (-022)						
CODE	86L01001	86L01003	86L01006	86L01011	86L01019	86L01027	86L01035
US\$	889.00	1,320.00	1,473.00	1,937.00	2,094.00	2,234.00	2,348.00
VOLTAGE	12V DC (-021)						
CODE	86L11001	86L11003	86L11006	86L11011	86L11019	86L11027	86L11035
US\$	979.00	1,428.00	1,585.00	2,028.00	2,192.00	2,333.00	2,451.00
WEIGHT	5.60	7.30	9.90	18.70	18.70	20.90	20.90

VERSION WITH POSITIONER AND BATTERY BACKUP *04 - 4-20 mA or 0-10V DC - or REVERSE 20-4 mA or 0-10V DC - Standard Suffix - 04*



MODEL	VB015M	VB030M	VB060M	VB110M	VB190M	VB270M	VB350M
VOLTAGE	100-240V AC (-043)						
CODE	86H0CD01	86H0CD03	86H0CD06	86H0CD11	86H0CD19	86H0CD27	86H0CD35
US\$	1,093.00	1,646.00	1,811.00	2,263.00	2,560.00	2,599.00	2,894.00
VOLTAGE	24V DC (-042)						
CODE	86L0CD01	86L0CD03	86L0CD06	86L0CD11	86L0CD19	86L0CD27	86L0CD35
US\$	1,046.00	1,577.00	1,643.00	2,033.00	2,273.00	2,377.00	2,584.00
WEIGHT	5.60	7.30	9.90	18.70	18.70	20.90	20.90

VERSION WITH THREE POSITIONS *06 - Standard Suffix - 06*



MODEL	VB030M	VB060M	VB110M	VB190M	VB270M	VB350M
VOLTAGE	100-240V AC (-063)					
CODE	86H0CE03	86H0CE06	86H0CE11	86H0CE19	86H0CE27	86H0CE35
US\$	1,319.00	1,422.00	1,834.00	2,038.00	2,090.00	2,258.00
VOLTAGE	24V DC (-062)					
CODE	86L0CE03	86L0CE06	86L0CE11	86L0CE19	86L0CE27	86L0CE35
US\$	1,204.00	1,294.00	1,748.00	1,966.00	2,019.00	2,185.00
WEIGHT	7.30	9.90	18.70	18.70	20.90	20.90

VERSION WITH THREE POSITIONS AND BATTERY BACKUP *08 - Standard Suffix - 08*



MODEL	VB030M	VB060M	VB110M	VB190M	VB270M	VB350M
VOLTAGE	100-240V AC (-083)					
CODE	86H0D403	86H0D406	86H0D411	86H0D419	86H0D427	86H0D435
US\$	1,744.00	2,019.00	2,458.00	2,747.00	2,768.00	3,009.00
VOLTAGE	24V DC (-082)					
CODE	86L0D403	86L0D406	86L0D411	86L0D419	86L0D427	86L0D435
US\$	1,644.00	1,915.00	2,374.00	2,654.00	2,678.00	2,912.00
WEIGHT	7.30	9.90	18.70	18.70	20.90	20.90

* VOLTAGE SUFFIX

1 = 12V AC/DC

2 = 24V AC/DC

3 = 100-240V AC or 110V AC



SPRING RETURN ELECTRIC ACTUATORS (NO MANUAL OVERRIDE)

Standard suffix - 05*



MODEL	EA045	EA120	EA180	EA230
VOLTAGE	24 AC/DC, 110V AC or 220V AC			
US\$	6,078.00	8,844.00	14,504.00	15,355.00
WEIGHT	62.0	130.0	214.0	214.0

SPRING RETURN ELECTRIC ACTUATORS (WITH MANUAL OVERRIDE)

Standard suffix - 05*

MODEL	EA045-M	EA120-M	EA180-M	EA230-M
VOLTAGE	24 AC/DC, 110V AC or 220V AC			
US\$	7,759.00	11,057.00	16,929.00	17,779.00
WEIGHT	84.0	168.0	302.0	302.0

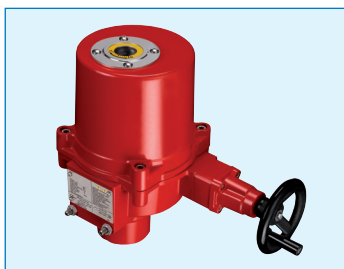


EXPLOSION PROOF ELECTRIC ACTUATORS - Standard Suffix - 00*

NEMA 4x, 7, 8, 9
IP68



MODEL	EAX035	EAX045
VOLTAGE	24 AC/DC, 110V AC OR 220V AC	
ON-OFF (US\$) -00*	1,700.00	1,944.00
POSITIONER (US\$) -02*	2,639.00	2,886.00
WEIGHT	4.41	6.61

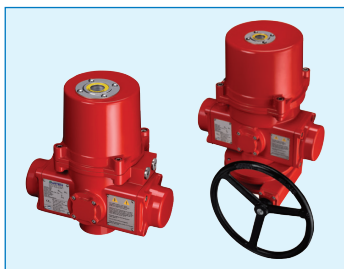


EXPLOSION PROOF ELECTRIC ACTUATORS (with handwheel) - Standard Suffix - 00*

NEMA 4x, 7, 8, 9
IP68



MODEL	EAX080	EAX130	EAX360	EAX450	EAX575	EAX880	EAX1330
VOLTAGE	24 AC/DC, 110V AC OR 220V AC						
ON-OFF (US\$) -00*	4,022.00	4,407.00	4,977.00	5,406.00	5,584.00	6,325.00	7,517.00
POSITIONER (US\$) -02*	4,960.00	5,349.00	5,918.00	6,346.00	6,714.00	7,455.00	8,648.00
WEIGHT	24.25	24.25	44.09	44.09	68.00	99.00	99.00



SPRING RETURN EXPLOSION PROOF ELECTRIC ACTUATORS

NEMA 4x, 7,8,9
IP68



MODEL	EAX045	EAX120	EAX180	EAX230
VOLTAGE	24 AC/DC, 110V AC OR 220VAC			
ON-OFF (US\$) -05*	9,182.00	13,952.00	21,111.00	22,445.00
POSITIONER (US\$) -07*	10,108.00	14,877.00	22,140.00	23,475.00
WEIGHT	62.00	130.00	214.00	214.00

SPRING RETURN EXPLOSION PROOF ELECTRIC ACTUATORS (with handwheel)

NEMA 4x, 7,8,9
IP68



MODEL	EAX045-M	EAX120-M	EAX180-M	EAX230-M
VOLTAGE	24 AC/DC, 110V AC OR 220V AC			
ON-OFF (US\$) -05*	10,739.00	16,317.00	23,769.00	24,992.00
POSITIONER (US\$) -07*	11,822.00	17,400.00	24,853.00	26,074.00
WEIGHT	84.00	168.00	302.00	302.00

VOLTAGE SUFFIX							
ON/OFF		POSITIONER		SPRING RETURN ON/OFF		SPRING RETURN POSITIONER	
-002	24V AC/DC	-022	24V AC/DC	-052	24V AC/DC	-072	24V AC/DC
-003	110V AC	-023	110V AC	-053	110V AC	-073	110V AC
-004	220V AC	-024	220V AC	-054	220V AC	-074	220V AC



WARRANTY, LIMITATIONS OF LIABILITY, RETURNS

Bonomi North America, Inc. warrants that its products shipped to its initial purchaser will be free of all defects in material and workmanship for a period of one year from the date of delivery.

Should any failure to conform to this warranty appear before the one year delivery period, and the product[s] are stored, installed, and maintained in accordance with the published Bonomi North America literature recommendations and standard industry practice, Bonomi North America, Inc. will repair or replace the product at its own expense.

The correction of non-conformities in the time period mentioned above shall constitute fulfillment of all Bonomi North America, Inc. liabilities to its initial purchaser.

Bonomi North America, Inc. shall not be liable for consequential damages to loss of other equipment or property, loss profits or revenue, except the price of the Bonomi North America goods to which this liability is referred.

The customer is expected to check the received goods upon arrival at its premises, Any evident damage to the product or severe damage to its packaging that could affect the functionality of the received item should be reported immediately and no later than 10 days after delivery, preferably with pictures, to sales@bonominorthamerica.com. This includes reporting any incorrect product and/or incorrect quantities.

The customer must obtain an RMA (return of materials authorization) from the Inside Sales Department prior to returning any items. The request for RMA should include part number, quantity, and customer's purchase order or invoice number with which the product was originally shipped.

The purchase of interim replacement item(s) does not relieve the customer of financial responsibility of the returned items. All returned items will be inspected, tested, and evaluated. The results of this process will always dictate the follow-up action. All returns must come from the initial purchaser and should not ship directly from the contractor or end-user to Bonomi North America.

If a returned product is confirmed defective, with the above mentioned warranty conditions, Bonomi North America, Inc. has a first duty of repairing the product, if possible. Should a repair not be possible then the next option should be a replacement or a credit.

No credit will be issued for returned products that have been clearly misused, installed incorrectly, manipulated, modified, damaged at the customer's premises or during the return shipment, However, if the product can be properly repaired at a reasonable cost, Bonomi North America, Inc. will offer the repair option to the customer.

If the purpose of the RMA is to return items ordered in error or items that were not able to be utilized, then these returns will be subject to a restock fee. The standard restock fee for manually operated valves and fittings is 20% while automated packages and items requiring partial/full disassembly and testing when returning will be subject to a 30% restocking fee.

These items must return in new/unused and in resellable condition in order to qualify for credit. Preventing damage to returning merchandise during the shipping process will be the sole responsibility of the customer, It is recommended that new packing materials be used when returning goods as the packing materials used to ship from our business is intended for single use only.

If the returning merchandise comprises all or the majority of the cost of the original PO under which it was ordered and where there was free freight granted, then Bonomi North America, Inc. may ask to recoup some or all of the original freight cost, deducting this amount from the final credit.

Likewise, if the returning merchandise comprises all of a PO that originally shipped via a prepay-and-add method then Bonomi North America, Inc. will deduct this freight amount from the final credit, should the invoice be open at the time of crediting.

Even in the above mentioned cases, the return of non-defective customized products such as assembled packages of valves and actuators and/or of orders supplied more than 2 months before and/or exceeding the value of \$1,500, will be at the discretion of Bonomi North America and, if accepted, may result in significantly higher restocking fees, depending on the amount of labor involved in disassembling, refurbishing, testing, and restocking the individual components.



This image shows a full page of white paper with horizontal blue lines, resembling notebook paper. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.



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To ensure the highest quality and technical standards, the manufacturer reserves the right to modify specifications without prior notice.
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