



ultravalve
— Your single source valve stockist - est 1986 —

Oil & Gas Division





Valpres has manufactured ball valves since 1978 and was one of the first to introduce the split body concept. Today Valpres designs and manufactures a wide range of high quality, manually operated or actuated, on-off and control ball valves for use in oil, gas, water, steam and power generation applications as well as general industry.

BONOMI

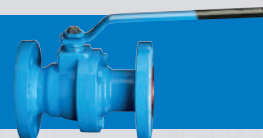
UK



Bonomi (UK) Ltd, established in 1999, offer a complete range of products and complementary services for the flow control industry. This brochure offers just an overview; if you cannot find what you are looking for please contact the sales office for our complete product catalogue.

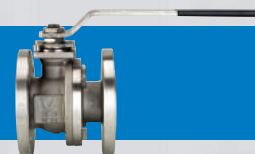
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API 608 FLOATING BALL VALVES



Applications

API 608 floating ball valves can be used in a variety of markets and applications:

- Oil & natural gas markets
- Petrochemical
- Power
- Water treatment

API 608 product line

This product range has been designed and developed to meet the requirements of the petrochemical market.

Many features are available including increased thickness and oversized driving train.

The technical characteristics, along with the carefully selected materials used, make these valves ideal for use in standard and severe service conditions. They are especially reliable when used in combination with an actuator unit.

Available sizes and ratings for API 608

Size/ Rating	150			300			600		
	STD	HT	CRYO	STD	HT	CRYO	STD	HT	CRYO
1/2"	•	•	•	•	•	•	•	•	•
3/4"	•	•	•	•	•	•	•	•	•
1"	•	•	•	•	•	•	•	•	•
1 1/2"	•	•	•	•	•	•	•	•	•
2"	•	•	•	•	•	•	•	•	•
3"	•	•	•	•	•	•	•	•	•
4"	•	•	•	•	•	•	•	•	•
6"	•	•	•	•	•	•	•	•	•

Reduced bore size available above 2"

Function

On-off/modulating (as option only).

Design

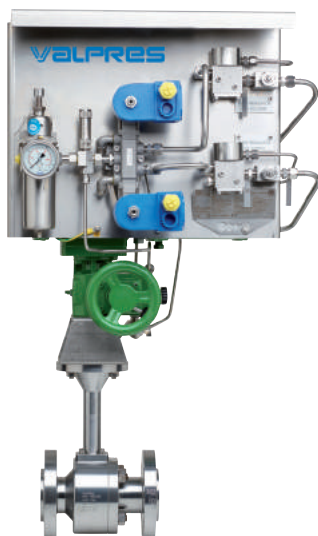
Side entry, 2 piece, bolted body.

Temperature range

-196°C to 420°C

Technical features

- Design of construction: API 608.
- Pressure and temperature range: ASME B16.34.
- Face to face dimension: ASME B16.10.
- Connections to ASME B16.5 (other ends an option).
- Tested to API 598 (other standards available as an option).
- Firesafe design to API 607/ISO 10497/API 6FA.
- Anti blowout stem.
- Antistatic device.
- Soft and metal seats.
- Various extensions available (extended stem for insulation, extended bonnet for HT, extended bonnet for LT).
- Manual and automatic operators available.
- Fugitive emission compliant (ISO 15848-1).
- Type approved: DNV GL Class Program CP 0186 – Valves.



Materials

In stock: A352/LCC/A351 CF8M (w/SS316 trim and 17 4 PH stem).

Made to order (cast or forged/forged bar):

- Low alloy CS for high temperature.
- Other carbon steels.
- Martensitic, austenitic, superaustenitic, duplex, superduplex stainless steels.
- Nickel Alloys (Inconel 625, Incoloy 825, Hastelloy, Monel, etc).
- Titanium.
- Al Ni Bz.

Seat materials

- RPTFE (standard).
- Optional materials: PEEK, PCTFE, VESPEL®, metal to metal (TCC or CCC).

Seal materials

- FKM (standard).
- Optional materials: HNBR, EPDM, FFKM, (P)VMQ, graphite.

SPLIT BODY BALL VALVES



765000 / 765001



765000 – Stainless steel 'split body' ball valve
765001 – Carbon steel 'split body' ball valve
Direct Mount – PN16

766000 / 766001



766000 – Stainless steel 'split body' ball valve
766001 – Carbon steel 'split body' ball valve
Direct Mount – ANSI 150

760000 / 760001



760000 – Stainless steel 'split body' ball valve
760001 – Carbon steel 'split body' ball valve
PN16

760005 / 762000



760005 – Stainless steel 'split body' ball valve
762000 – Carbon steel 'split body' ball valve
ANSI 150

760040 / 760041



760040 – Stainless steel 'split body' ball valve
760041 – Carbon steel 'split body' ball valve
PN40

761030 / 761031



761030 – Stainless steel 'split body' ball valve
761031 – Carbon steel 'split body' ball valve
ANSI 300

760801 / 760802



760801 – Stainless steel 'split body' long pattern ball valve
760802 – Carbon steel 'split body' long pattern ball valve
PN16/40

760200 / 760150



760200 – Stainless steel 'split body' ball valve
760150 – Carbon steel 'split body' ball valve
ANSI 600

WAFER BALL VALVES

720006 / 720009



720006 – Stainless steel wafer ball valve
720009 – Carbon steel wafer ball valve
ANSI 150

720212 / 720232



720212 – Stainless steel wafer ball valve
720232 – Carbon steel wafer ball valve
ANSI 300

763100 / 764100



763100 – Stainless steel wafer split full bore flanged ball valve
764100 – Carbon steel wafer split full bore flanged ball valve
ANSI 600

763030 / 764150



763030 – Stainless steel wafer split full bore flanged ball valve
764150 – Carbon steel wafer split full bore flanged ball valve
PN100

721000 / 722000



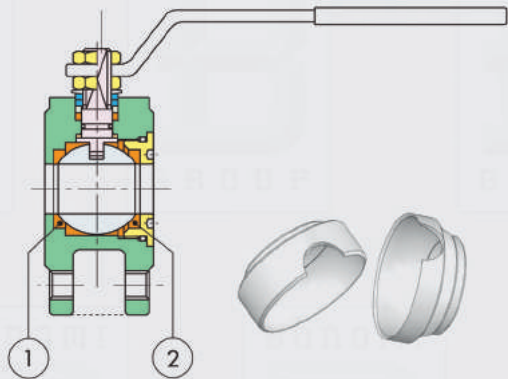
721000 – Stainless steel wafer pattern full bore flanged ball valve
722000 – Carbon steel wafer pattern full bore flanged ball valve
PN16

720078 / 720008



720078 – Stainless steel wafer pattern full bore ball valve
720008 – Carbon steel wafer pattern full bore ball valve
PN40

Water Ball Valve with Integral Seat



Flanged ball valve with integral seats, full bore from DN15 to DN100

Size/Rating	Part Name	Materials	N°P
1	Ball Seat	P.T.F.E	1
2	Ball Seat	P.T.F.E	1

Fire Safe Option



720191
720233

720191 – Stainless steel wafer pattern full bore ball valve
720233 – Carbon steel wafer pattern full bore ball valve
ANSI 150

720184
720195

720184 – Stainless steel wafer pattern full bore ball valve
720195 – Carbon steel wafer pattern full bore ball valve
PN16



TRUNNION MOUNTED BALL VALVES



Applications

Valpres trunnion valves can be used in a variety of markets and applications, but not limited to:

- Upstream liquid and gaseous hydrocarbons processing.
- LNG & GTL.
- Gas transmission and distribution.
- Power industry and steam generation.
- Petrochemical industry.
- Water transmission & desalination plants.

Size and pressure rating

Available in the following size/ratings, both in full and reduced bore, according to API 6D/API6A configurations.

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"	•	•	•	•	•	•

Materials

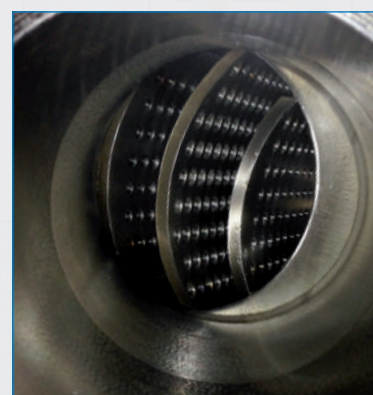
A wide selection of materials are available ranging from carbon steels, stainless steels (including duplex, superduplex and superaustenitic), Ni alloys (up to Inconel 625 and incoloy 825) and other advanced materials. Split body valves are generally made from forged or centrifugal casting, whereas top entry valves are generally manufactured from cast material. All the materials are supplied from approved sources and the characteristics of all the materials may be supplied as per specific requirements.

Operation

Valpres valves can be supplied with a manual lever/ gearbox or with any type of actuator. All valves are tested as a package prior to delivery. We can also supply the complete valve and actuator package including pneumatic or electric actuators.

Temperature range -196°C (-320°F) to +350°C (+675°F).

Others available upon request.



Technical features

Trunnion mounted balls (Fig. 1)

Permitting ease of operation, minimizing the torque and reducing seat seal wear.

Body seals (Fig. 2)

Double O-rings, or the combination of O-rings and gaskets, enable a perfect and safe sealing of all body joints.

Stem features (Fig. 3)

Antiblowout stem allows the replacement of the stem seals with the valve in the fully closed position. The stem seal integrity is achieved by the use of three O-rings. The upper seal can be replaced with the valve in line and under pressure. Stem and ball are separate components; this ensures a better alignment and lower torque. Stem and trunnion are supported by P.T.F.E. impregnated steel bearing sleeves. Emergency stem sealant injection feature is standard on valves 4" and above.

Seats features (Fig. 4-5)

Independent floating spring loaded seats are always in contact with the ball to provide an effective tight seal even at low differential pressures. Independent upstream and downstream seats permit draining of fluid from the body cavity, allowing double block and bleed operation. With the standard single piston seats feature, there is an automatic body cavity release of over pressure to the line through the down stream seat.

Double piston seat (that maintains the sealing capacity of the valve even in the case of failure of the upstream seats) or a combination of double sealing features on the downstream side/single sealing on the upstream seat is available on request. A seat emergency sealant injection system is available on request which can restore the sealing integrity if damage occurs to the sealing surfaces.

Extended bonnet (Fig. 6)

Ball valves to be used in low temperature/cryogenic service are equipped with extended bonnet to allow vapour space between body cavity and gland seals. This feature preserves stem seals from damage that may occur during operation at cryogenic temperatures, and allows stem seal servicing even on valves installed on insulated lines. Vapour space length or insulating thickness shall be specified. Valpres standards are: BS 6364 and ISO 28921. Ball valves to be used in high temperature service are equipped with extended bonnet to allow the valves to be insulated and allow the top of the valve to exchange the heat, reduce the risk of burns and protect the operating systems from high temperatures.

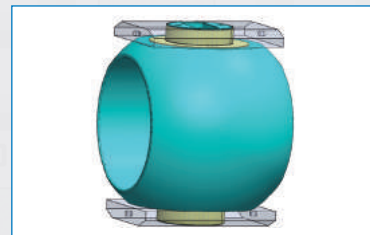


Fig. 1

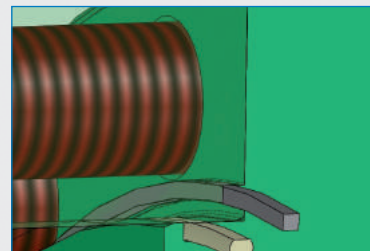


Fig. 2

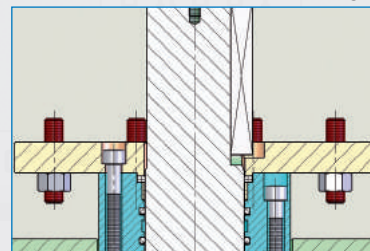


Fig. 3

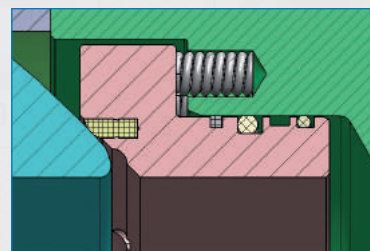


Fig. 4

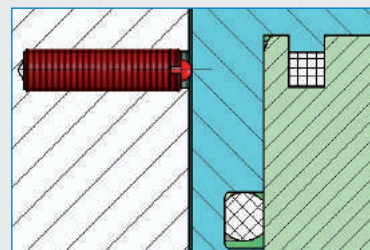


Fig. 5

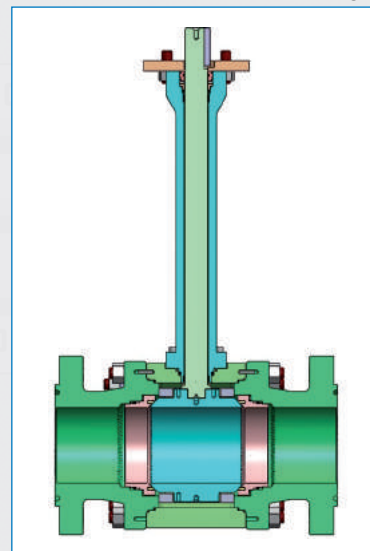


Fig. 6



CRYOGENIC VALVES



Applications

- LNG storage, distribution, loading and unloading.
- CO2 and nitrogen injection for enhanced oil recovery.
- Petroleum refining and gas treatment skids.
- Air separation plants.
- LNG, LPG, CO2 and food trailers and carriers.
- Fuel stations.
- High purity cryogenic/gas systems.
- Lyophilization systems.
- Liquid and gaseous oxygen for steel production.

Cryogenic valves

Valpres has developed a number of quality solutions for tough applications involving all types of cryogenic fluids; LNG, oxygen, hydrogen, carbon dioxide, nitrogen, etc. Our portfolio of cryogenic valves incorporates advanced technology and designs due to our innovative engineering team that has over 30 years experience working in this area. This line of product permits automatic or manual control of cryogenic fluids in the safest conditions, even for the operators and the environment. Valpres valves may be tested at cryogenic temperatures down to -196°C , in compliance to the customers specifications.

Configurations

Valpres cryogenic valves are available in five basic body configurations:

- Floating ball – side entry.
- Floating ball – top entry.
- Trunnion mounted – side entry.
- Trunnion mounted – top entry.
- Double block and bleed (twin ball).

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"	•	•	•			

Type	Boiling Point		Liquid density	Type	Boiling Point		Liquid density
	0° C	0° F			0° C	0° F	
Natural gas (LNG)	-168	-270	26	Air	-194.4	-318	57.87
Methane (CH ₄)	-161.5	-258	26.20	Nitrogen (N ₂)	-195.8	-320	50.45
Oxygen (O ₂)	-182.9	-296	71.20	Hydrogen (H ₂)	-252.7	-423	4.43
Argon (A)	-185.9	-303	87.40	Helium (He)	-268.9	-452	7.82
Carbon Dioxide (CO ₂)	-78.5	-109	50.60	Absolute zero	-273.16	-460	-

Technical features

- Compliance with ASME B16.34, ISO 28921, BS 6364, ASME B16.5, ASME B16.25, API 608, API 6D.
- End to end dimensions to ASME 16.10, long pattern.
- Gear operated starting from 6" 150# - 4" 300# - 3" 600# and up.
- A variety of connections are available: flanged, screwed end, socket weld, butt weld.
- Full austenitic stainless steel body and closure ensuring excellent impact strength, minimal heat loss and protection against corrosion.
- P.T.F.E, P.C.T.F.E (Kel-F) or metal to metal seats (depending on the pressure rating and the operations required).
- SS316/316L, XM-19 or 17-4 PH stems (depending on the service).
- Extended bonnet, as a minimum according to BS6364 or ISO 28921.
- Blowout proof stem.
- Positive ball cavity relief and low operational torques. In floating ball valves this is normally achieved through a hole in the upstream side of the ball, causing the valve to be unidirectional, but Valpres has also designed a unique floating ball valve with bi-directional seats, self cavity relief, in order to overcome this limitation (feature available upon request).
- Low emission stem sealing systems.
- Firesafe design.
- Accurate drying, cleaning and degreasing of all parts prior to shipping.

Floating ball split body side entry (Fig. 1)

Two or three-piece construction makes it easy to assemble and install. It is versatile in application and simple to maintain.

Floating ball top entry (Fig. 2)

The single piece forged body construction, allows access to the valve trim and makes the maintenance operations possible while the valve is in line. Also, the risk of fugitive emission due to line bending loads is minimized with this design.

Trunnion mounted valves split body side entry (Fig. 3)

Incorporates all the main features of Valpres standard trunnion valves, such as:

- Anti blowout stem.
- Independent ball and stem.
- Antistatic device.
- Independent spring loaded seats, self cavity relief.
- Soft or metal to metal seats.
- Double block and bleed (if there is no requirement for pressure relief hole in the ball).
- Firesafe design.

Trunnion mounted valves top entry (Fig. 4)

Single piece cast body construction (forged body is available on smaller sizes). This design is advisable when the valves are welded to the line, since the trim is accessible and the valve maintainable without removing it from the line.

Double block and bleed – twin ball valves (Fig. 5)

This solution combines the feature of the side or top entry valves with the advantage of achieving an effective process isolation with one single valve assembly. The other advantages are:

- Reduced overall weight.
- Reduced installation costs and related piping costs.
- Leak paths minimization.



Fig. 1



Fig. 2



Fig. 3

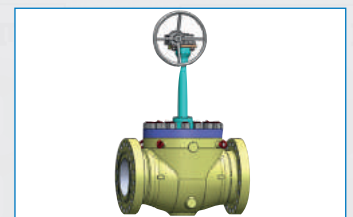


Fig. 4



Fig. 5

ROTARY CONTROL FLOATING AND TRUNNION BALL VALVES



The VP1-L trim (for liquids) offers enhanced management of moderate and severe cavitation while the VP1-G trim (for gas and steam) offers greatly reduced noise levels. These standard trims are able to manage the process even under difficult conditions and severe service. Furthermore, the same basic geometry is used with both liquids and gases allowing product standardization. The principle of curved plates (Fig. 1-3) provides excellent throttling performance in terms of FL, sigma and XT coefficients without sacrificing the maximum capacity of the valve. Also the minimum flow rates have been carefully evaluated by technicians and engineers to ensure the best rangeability. The Valpres trims are designed to be installed both on floating and trunnion ball valves. Valpres control valves can be designed full or reduced bore according to process conditions.



Fig. 1



Fig. 2

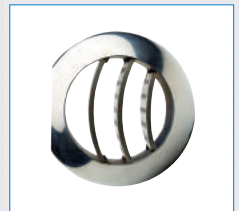


Fig. 3

Technical features

VP1 valves are sized according to IEC 60534 and ISA75 international sizing equations. Customized calculations and CFD can be adopted for special applications. Valve sizing is performed with latest generation VALPSIZE™ 2.0 sizing tool.

- Noise is evaluated according to customized IEC and VDMA equations.
- Venturi outlet closures can be adopted to better control velocity profiles in steam/gas applications.
- Valve body construction and flanges can be manufactured according to customer specifications. Floating and trunnion control ball valves replicate the standard features that are implemented in the on-off valves.
- Materials: solid metal alloys can be adopted as well as weld overlays in Corrosion Resistant Alloys (CRA).
- Metal to metal seal contact is available as a standard solution, leakage rate Class V. Soft seated valves are for clean fluids and tight shut off applications.
- Special plates design and high peak frequencies allow standard noise reduction up to 20dB(A) thanks to velocity control (Fig. 6).
- Liquid Recovery Factor up to 0.96 thanks to special plates design and multiple pressure drop stage (Fig. 7-8).
- Real rangeability up to 200:1 with standard trim. Customized trim can be adopted to increase the rangeability to 300:1 and above.
- Resistors can be installed to increase valve performance. When required 30Db(A) noise reduction can be reached with combined solutions.
- High Inherent Cv value (i.e. VP1-L 4" with Cv=500 vs globe valve 4" with Cv=160-200: this implies that an 8" globe valve is required to compare the capacity) (Fig. 9).
- VP1 valves are intrinsically self-cleaning trim and they are suitable to handle 2-phase fluids, pulp, flashing liquids and dirty fluids.
- Cryogenic and high temperature design is available.
- VP2 design is available for special and very severe applications.
- Valves are also available with a V-shaped ball in the following standard design (Fig. 10). Customized V-shape balls are available upon request to better respond to the required process conditions. Various type of liquids, gases and steam can be controlled by these valves. Soft seats are standard. Metal to metal seats are available for high temperatures and dirty or slurry conditions.



Fig. 4



Fig. 5

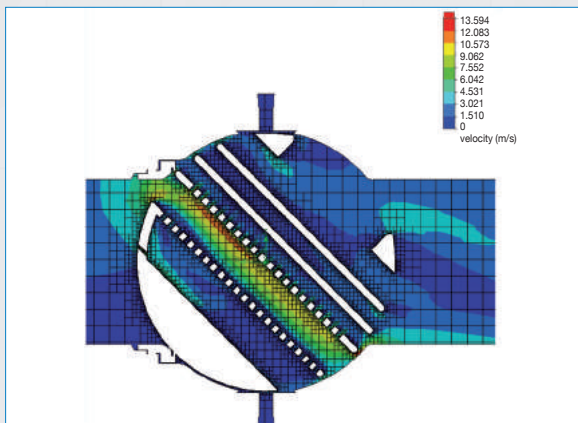


Fig. 6 – CFD showing the velocity reduction inside the trim (VP2 G).

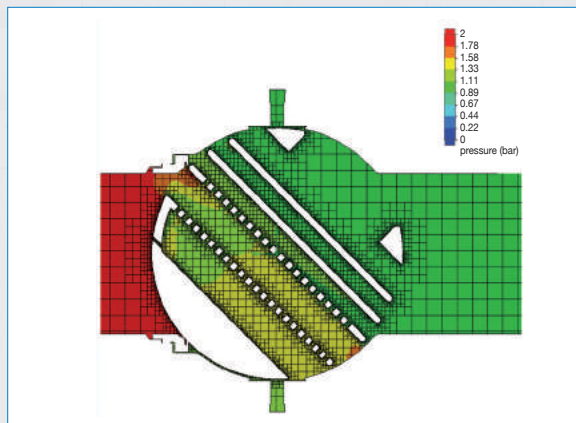


Fig. 7 – CFD showing the pressure reduction inside the trim VP2 G.

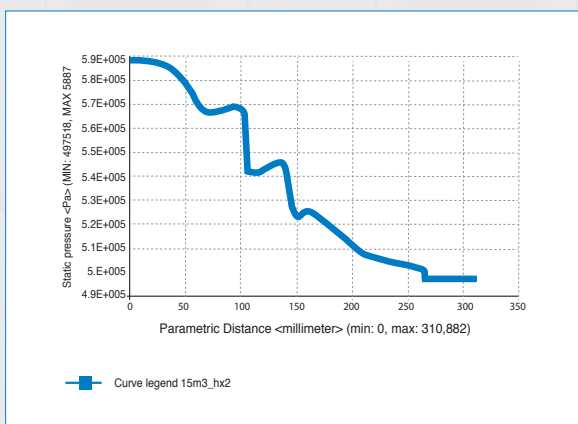


Fig. 8 – Step-wise pressure drop curve inside the body cavity.

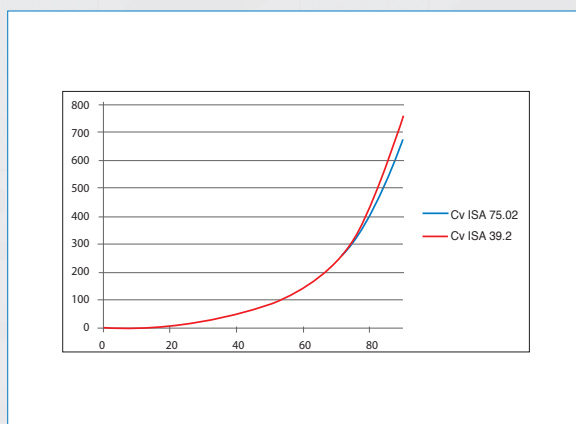


Fig. 9 – CV curve of a DN 100 valves with 90° V-ball.



Fig.10 – 90°, 60° and 30°-60° V-Shape.

Valve design & trims available

Trunnion			
Rating 150/300/600			
SIZE			
3"	•	•	•
4"	•	•	•
6"	•	•	•
8"	•	•	•
10"	•	•	•
12"	•	•	•
14"	•	•	•
16"	•	•	•
18"	•	•	•
20"	•	•	•
24"	•	•	•
30"	•	•	•
36"	•	•	•
40"	•	•	•
42"	•	•	•
48"	•	•	•

Floating			
Rating 150/300 (PN/40)			
SIZE			
1/2"	•	•	•
3/4"	•	•	•
1"	•	•	•
1 1/2"	•	•	•
2"	•	•	•
3"	•	•	•
4"	•	•	•
6"	•	•	•

- VP0 TRIM
- VP-VBALL TRIM
- VP1-VP2 TRIM

For 900#, 1500#, 2500# valves contact BONOMI UK sales office.
Customized trims available upon request.

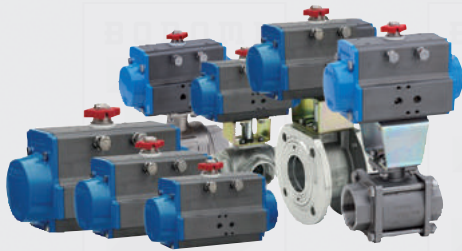
Patterns customized on process parameters are available, as well as on pressure classes not mentioned on the present standard table.

Valpres control ball valves can be supplied with pneumatic, electric or hydraulic actuators and electro-pneumatic or SMART positioner, sourced from main approved suppliers in the Oil&Gas market. For valves up to 8" 600# Valbia's rack and pinion pneumatic actuators may be used (see also Valbia catalogue or www.valbia.it).

ACTUATORS AND ACTUATED VALVE WORKSHOP



ACTUATORS



Pneumatic Actuators 0° – 90°.
CE II 2 G/D c T6 APPROVED.



PTFE Coated Pneumatic Actuators.
CE II 2 G/D c T6 APPROVED.



Pneumatic Actuators 0° – 180°.
CE II 2 G/D c T6 APPROVED.



Stainless Steel Pneumatic Actuators.
CE II 2 G/D c T6 APPROVED.

THE ACTUATED VALVE WORKSHOP



- Pneumatic and Electric Actuators
- Single and Double Acting
- Comprehensive Range of Valves (Ex-Stock)
- Fully Assembled and Tested

APPLICATIONS AND SPECIALS

This brochure contains just an overview of our oil & gas offering. If you cannot find what you require please contact the sales office on [024 7635 4535](tel:02476354535) or sales@bonomi.co.uk

The solution you require may well be unique and at Bonomi we are fully equipped to deal with such enquiries.

With a proven track record of supplying bespoke solutions to the oil & gas industry you can be confident of receiving the support you require.



PROJECT NAME	END USER	VALVE TYPE	BRAND LOGO
Off-shore Installation replacement valves	Maersk	Metal Seated Ball Valves	 MAERSK
Buzzard Field Development, North Sea	Nexen	Trunnion valves in SDSS	
North Sea Fields	Taq	Metal Seated Ball Valves for dirty service	
Captain Field, Chevron Upstream Europe	Chevron Texaco	Floating trunnion ball valves	
Golden Eagle	Nexen	Trunnion valves in SDSS	
North Sea Fields	Marathon UK	Cryogenic and standard DBB ball valves soft seated	
Ninian Platform	CNRL	Cryogenic ball valves soft seated	
Morecambe Gas terminal	BG	HT Ball valves	
North Sea Fields	Maersk UK	Manual ball valves low temp with lip seals	 MAERSK
North Sea Fields	Taq	Manual ball valves cryogenic	
Clair Ridge	BP	Manual valves in SS	
Liverpool Bay	BHP Petroleum	Trunnion Mounted Ball Valve	
Scott Field, North Sea	Amerada Hess	Trunnion Mounted Ball Valve	
Liverpool Bay	Hamilton Oil Company	Trunnion Mounted Ball Valve	
Captain Field, Chevron Upstream Europe	Chevron Texaco	Floating and Trunnion ball valves	
Golden Eagle	Nexen	Floating Ball valves and manual valves - carbon steel and titanium	
Scott Field, North Sea	Amerada Hess	Trunnion Ball Valves/cryogenic ball valves soft seated in 6mo	
Montrose Platform	Talisman	Manual and actuated valves superduplex	
Britannia	Britannia	Floating / Trunnion ball valves – soft & metal seated	
Dragon LNG	BG Group PETRONAS	Top Entry cryogenic valves	
Captain Field, North Sea	Chevron Texaco	Top Entry On Off actuated valves	

ultravalve

— Your single source valve stockist - est 1986 —

Ultravalve LTD

Diamond Works
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Halesowen, West Midlands
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To ensure quality and technical standards at the highest level, the manufacturer reserves the right to alter the specifications without notice.

