

Modular Valves



Valve Specialists™

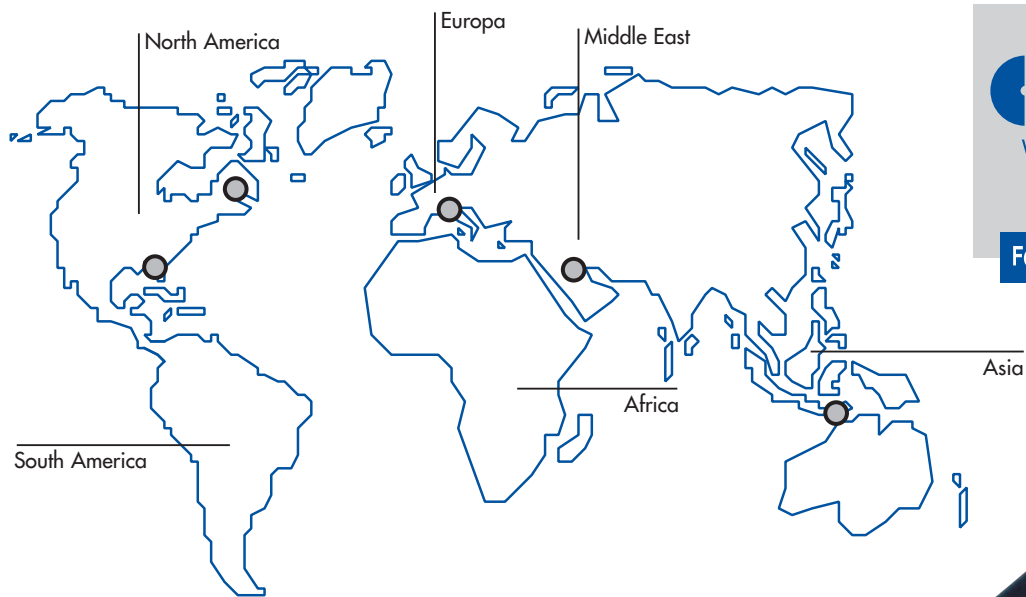


DBB



C-MV 1

30 years of innovations



OMB Group is a family owned and operated business founded by Mr Roberto Brevi in 1973. The company now operates 4 plants in 3 countries with more than 150 personnel of 15 different nationalities.



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the group

THE OMB GROUP

OMB is pleased to present its Modular Valve catalogue. Modular Valves combine the different valve elements which OMB has been manufacturing for many years in its gate, globe, check and ball products.

OMB has been engineering and manufacturing forged steel valves for the oil, gas and energy industry since its founding in 1973.

In these past 30 years millions of valves have been supplied to major oil and gas companies worldwide and the OMB name became synonymous of absolute reliability, superior quality and competitive pricing.

Ball Valves have been produced by OMB from 1982. Initially Floating Ball Valves were supplied to North Sea projects. More recently the product range has been expanded to include Trunnion Mounted Side and Top Entry valves. Now all material and design version are made.



The **Brevi** family is active in the management of the operations. Roberto Brevi, Founder and Chairman, with Simone and Fabio, Managing Directors.



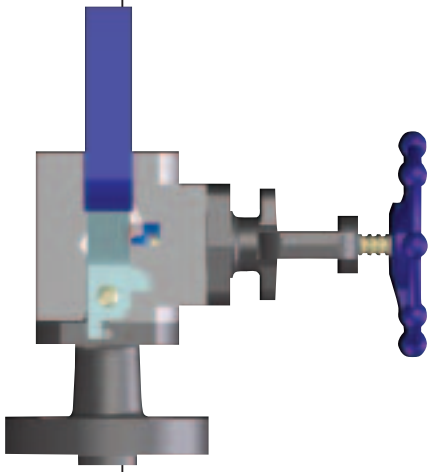
OMB is based in **Bergamo**, a town 45 Km from Milan with easy access to airports, highways and seaports. Bergamo is the world center for the forged steel valves production with a large valve parts subcontracting base.

engineering

ENGINEERING

Engineering

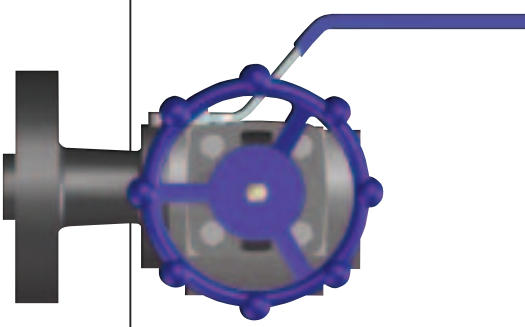
Nearly 10% of our workforce is fully engaged in the R&D and Engineering of our various product lines. We combine a unique expertise in multiturn and quarterturn design and manufacturing being the only company which can proudly consider itself within the leading manufacturers of both forged steel gate/globe and check valves and ball valves, the core components of Modular Valves.



More than 60,000 components covering our complete range of gate, globe, check, needle and ball valves are available in our system. Millions of components are in our inventories.

Experience

Each product we make has been refined over the past 30 years. Within our extensive experience list you can find the most severe valve applications from cryogenic to high temperature, corrosive, sour and steam services.



We use the latest CAD and 3D modeling software to design our valves and assemblies. Stress analysis calculations are available on demand.

Computer aided design

We use the latest CAD-CAM equipment, with 3D capability and FE tools to analyse each components and the complete valve assembly.

Customization

We engineer each DBB valve specific to our customers needs and, through collaboration with them, we continually improve our valves design to increase the valve life and performance.



forgings

FORGINGS AND RAW MATERIALS



Rings for bodies, flanges and seats are of forged material supplied by qualified Italian forging masters.

We place particular care in the selection of the raw material sources and forging suppliers.

We have long term agreements with the most qualified suppliers of forgings in Italy and long working relationships, in some cases of 30 years.



Balls are supplied in forged steel in various grades of materials. ENP Carbon Steel Stainless Steel in F316 Duplex Steel in F51 grade.

All parts for gate, globe and check valves are supplied from closed die forgings, to ensure that the optimal material structure is maintained.

We have more than 200 different dies covering gate, globe, check, needle and ball valves parts of which are used in the construction of our Modular Valves.

Exotic Materials

Material Group	Common Name	Nominal Type	UNS	Forging Spec.	Casting Spec. Equivalent
Nickel-Iron Alloy	Incoloy 800	33Ni-42F e-21Cr	N08800	B564-N08800	
	Incoloy 825	42Ni-21.5Cr-3Mo-2.3Cu	N08825	B564-N08825	A494-CU5MCuC
Nickel	Nickel	99/95Ni	N02200	B160-N02200 (bar)	A494-CZ-100
	Monel 400	67Ni-30Cu	N04400	B564-N04400	A494-M35-1
Nickel-Copper	Monel 500		N05500	B564-N05500	
	Nickel-Alloy	904L	N08904	904L	n/a
Nickel Superalloy's	Inconel 600	72Ni-15Cr-8Fe	N06600	B564-N06600	A494-CY40
	Inconel 625	60Ni-22Cr-9Mo-3.5Cb	N06625	B564-N06625*	A494-CW-6MC
	Hastelloy C-276	54Ni-15Cr-16Mo	N10276	B564-N10276*	A494-CW-2M
Titanium	Titanium	98Ti	R50400	B381-Gr2	B367-C2

Carbon and Stainless Steel

Material Group	Common Name	Nominal Type	UNS	Forging Spec.	Casting Spec. Equivalent	
Carbon Steel	CS	C-Mn-Fe	K03504	A105N	A261-WCB	
Low Temperature Carbon Steel	LTCS	C-Mn-Fe	K03011	A350-LF2	A352-LC A A352-LC B A352-LC C	
Low Temperature Alloy Steel	Nickel Steel	3.1/2Ni	K32025	A350-LF3	A352-LC3	
Stainless Steel	Austenitic S.Steel 300 Series S.Steel	304: 18Cr-8Ni	S30400	A182-F304	A351-CF8	
		304L: 18Cr-8Ni	S30403	A182-F304L	A351-CF3	
		304H:	S30409	A182-F304H		
		316: 16Cr-12Ni-2Mo	S31600	A182-F316	A351-CF8M	
		316L: 16Cr-12Ni-2Mo	S31603	A182-F316L	A351-CF3M	
		316H:	S31609	A182-F316H		
		316Ti:	S31635	A182-F316Ti		
		321: 18Cr-10Ni-Ti	S32100	A182-F321		
		321H:	S32109	A182-F321H		
		347: 18Cr-10Ni-Cb(Nb)	S34700	A182-F347	A351-CF8C	
		347H:	S34709	A182-F347H		
		317L:	S31703	A182-F347L	A351-CG3M	
		Alloy 20	28Ni-19Cr-Cu-Mo	N08020	A182-F20	A351-CN7M
		Duplex 2205	22Cr-5Ni-3Mo-N	S31803 S32205	A182-F51	A890-J92205
		Super Duplex 2507	25Cr-7Ni-4Mo-N	S32750	A182-F53	A351-CD4MCu A890 5A
Super Austenitic 6Mo	20Cr-18Ni-6Mo	S31254	A182-F44	A351-CK3MCuN		

manufacturing

MANUFACTURING



From 1/2" gate bonnets to 48" ball valves bodies and closures we know how to machine every single parts.

Our machining shops are equipped to handle large and small batches of any components.

We operate more than 50 CNC and robotized units linked to the engineering center via CAM link to ensure no information is lost and no errors are made.



OMB Cenate has been our headquarters since 1982. It reached the current size of 8,000 m² after the expansions of 1993-1994. It is highly automatized with robots developed by Italiana Robot, an OMB group company. The OMB plant is one of the most specialized plants in the world for the production of forged steel gate, globe, check and needle valves with a capacity in excess of 100,000 valves per month.

From ISO to ATEX



OMB Plants have been audited and our products are approved by all the major oil and gas companies. Our Quality Assurance system has been certified to meet **ISO9000 vision 2000** rules by BVQI. Our products are CE certified (According to PED), **ATEX** approved, have **API6D** and **API 6A** certifications and **Gost-R** and TA-Luft approvals.

We believe we forgot none: for further details contact us or check on our web site at www.ombvalves.com for the latest developments and Certifications copy.

From 1/2" gate to 48" trunnion



OMB Group has manufacturing locations in **Singapore** (OMB Asia) and in the **Kingdom of Saudi Arabia** (IVM-OMB Saudi) and direct distribution and sales support centers in **USA** and **Canada**. The OMB distribution network is present in more than 50 countries.



The **Fluicon** plant was opened in 1996 near OMB main plant. The division specializes in engineering and manufacturing all type of ball valves in a large variety of material and pressure classes.

We manufacture every valve that bears the OMB name. We do not believe in "screwdriver" or "paper-only" factory: all our valves have been carefully machined, assembled and tests by our engineers. You are welcome to come and see by yourself!

OMB Production

Gate-Globe-Check

	SW-NPT		Flanged-BW			PS	TC
	#800	#1500	#150	#300	#600		
1/4-3/8							
1/2							
3/4							
1							
1 1/2							
2							
3							
4							
6							
8							
10							
12							

Fluicon Production

	2 Pieces		3 Pieces			Side Entry				Top Entry			Full Welded						
	SW-NPT		SW-NPT		Flanged-BW	Flanged				Flanged-BW			Flanged-BW						
	#800	#1500	#800	#1500	#300	#600	#1500	#2500	#150	#300	#600	#900	#1500	#2500	#300	#600	#900	#1500	#2500
1/4-3/8																			
1/2																			
3/4																			
1																			
1 1/2																			
2																			
3																			
4																			
6																			
8																			
10																			
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26																			
28																			
30																			
32																			
36																			
40																			
42																			
48																			

forgings

FORGINGS



All OMB forgings come from qualified Italian forging operations.



We hold an extensive inventory of parts, in excess of 8million Euro at any time, with a combination of materials and sizes to cover most of our production needs.

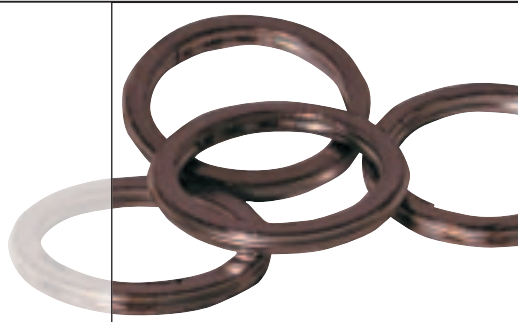


All our **gate and globe bonnets** are forged in closed dies. This guarantee stronger components, higher resistance to corrosion and wear, with lower weight.

We designed our valves with operational **Safety** in mind. Thanks to the use of closed die forgings, the handling areas have no sharp edges, limiting the risk of injuries to the operators.



Each forging carries a heat number embossed on the surface to allow complete lot traceability.



Gaskets are supplied as primary sealing between body and bonnets. OMB is now able to certify OPM emission from the gasket area thanks to special fully contained design, close tolerances and controlled material density.

Garlock EVSP 9000 packing sets are available for all our gate, globe and needle valves offering a superior stem sealing tested to meet the most stringent new Fugitive Emissions standards.

Garlock
Sealing Technologies

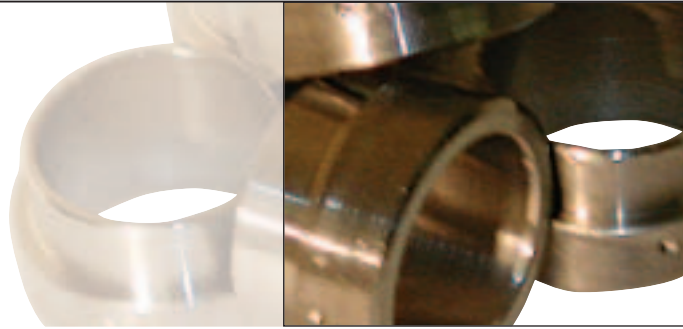


For higher pressure valves, oval ring joints are available in a wide range of materials as an option.



Vendors selection and approval is carried out following a series of qualifications procedure that verify each supplier capability and strength. An extensive audit program is maintained to ensure continuous improvements.

SEALING sealing



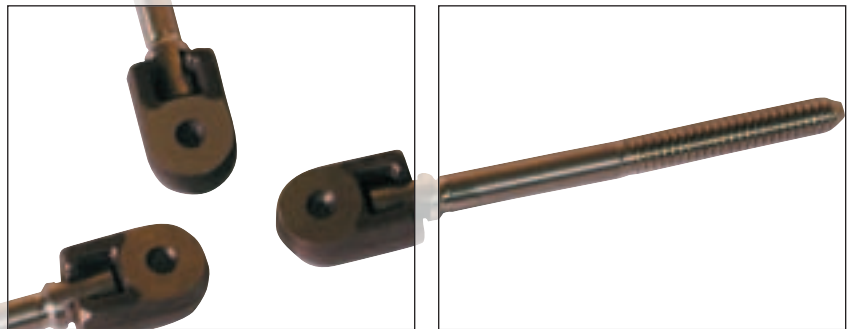
GLOBE: both renewable (screwed-in) or integral **seats** are available. Renewable seat is standard up to class #800.

GATE valves **seats** are pressed-in: design, tolerances and procedure ensure a perfect fit. On request and for special service we can supply welded-in seats.

STELLITE® grade 6 is the usual hardfacing material when this is requested.

We have been working to improve **stems and wedges** in two areas:

- tight tolerances in the connection to meet stringent "Pull Test" resistant design to API602.
- perfect exterior surfaces of stem to guarantee smooth operation and lowest emissions.



(Gate Globe Check)

trims
TRIMS



OMB nameplates are securely fixed on the valve handwheel or (for check valve) cover. **Nameplate** material can be chosen between Aluminum or Stainless steel. The nameplate records all valve data as well as the Test number which identifies the operator who tested the valve before shipment.



From the wide Fluicon Ball valve range we can offer soft and Metal seats to cover all applications. Our expertise of 25 years in the ball valves is available to our customers to help select the best possible material according to the service conditions.

We have one of the industry's largest supplier bases on our doorstep. The major suppliers of valve parts are based within 1 hour of trucking distance from our plants, allowing a fast response to special needs.



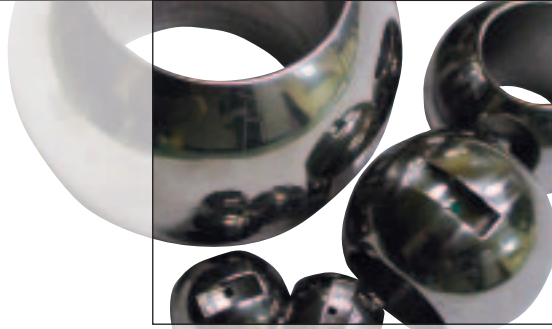
O-Rings are used to seal ball valve stems, seats and inserts. We have 30 years experience and a wide material range to provide solutions for all conditions.

TRIMS
trims (ball)

metal to metal

METAL TO METAL

design options



Excellent Sealing Characteristics

Wide range of fluid services



Standard and Extreme Operating Temperatures

Superior Sealing

High precision machining results in superior ball and seat interfacing for tight shutoff conforming to ANSI B16.104 class V and MSS SP-61.

Dependable Operations

Spring loaded seats maintain close contact with the ball assuring tight sealing even at low pressures. This results in stable opening and closing torques at high differential pressures over a wide range of temperatures as well as high frequency.

Fire Safe

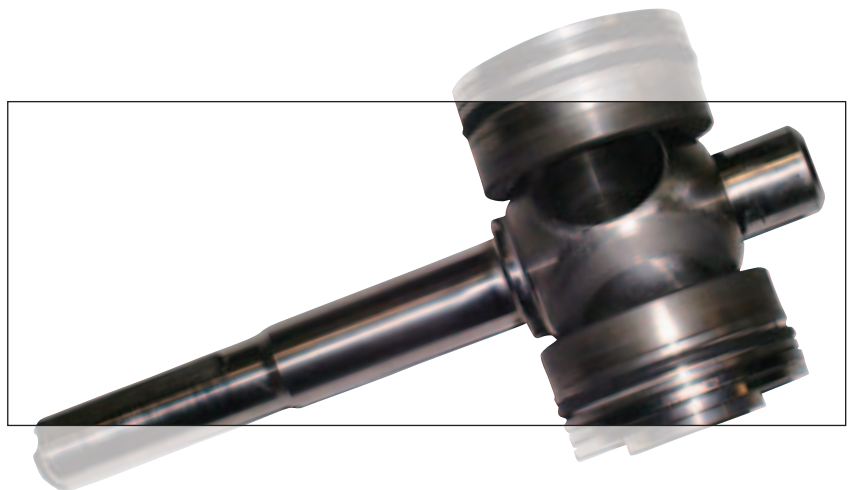
The combination of metal seats and soft carbon seals insure fire-safe capabilities.

Material Selection

Various material components are available for a variety of service applications up to 500° C (932° F).

Versatility

Surface-hardened ball and seats allows use in more severe applications such as slurries, pulp stock and other abrasive media in long life.



design options

Design

Always Forged Construction
Sizes: 1/2"-24" Floating /Trunnion Ball
Soft and Metal Seated
Sizes: 1/2"-2" Gate,Globe
and Check valves
Soft insert and Metal Seated
Bore: Reduced and Full
Ratings: 150lb, 300lb, 600lb, 800lb,
900lb, 1,500lb and 2,500lb
Ends:Threaded, Socket Weld, Flanged
RF/RTJ Weld and Hub Connections

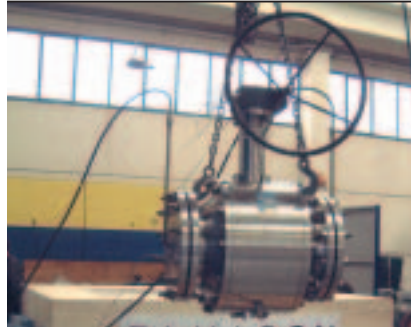
Materials

Low Temperature Carbon steel,
Dual Grade Stainless,
Duplex and Superduplex steels
for bodies and trims.
Special material for soft seals.

Options

Drip Plates
Thermal Relief wedge and disc
bleed-holes
Antistatic devices
Fire safe Certified
Low Emission designs to MESC 77/312
Actuation and Controls
NACE MR0175+MR0103
for Sour Service.

We offer a wide range
of alternative designs
for Cryogenic service from
-196C to -45C. We have testing
equipment than can handle valves
of any size and criticality



Few companies have the extensive Cryogenic **testing facilities** and expertise owned by OMB.
We have 6 cryogenic test benches which can handle up to a combination of 12 valves down to -196C.
Gas testing can be performed with 3 different "sniffer" testing equipment (by Varian, Leybold and Edwards).
Temperature cycling and pressure cycling according to the latest ISO fugitive emissions test standards can also be performed on cryogenic service valves.

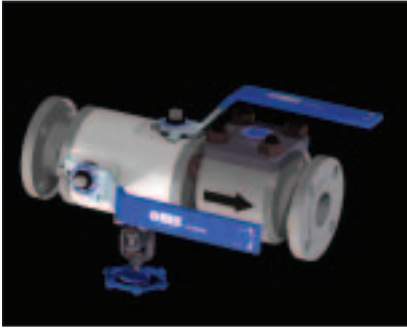


CRYOGENIC
cryogenic

OMB DBB Small

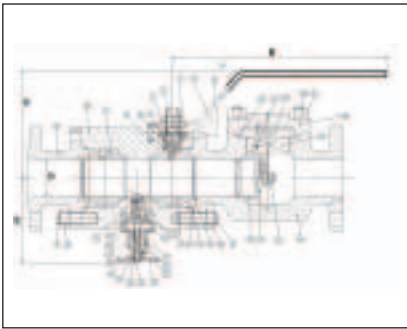


Small DBB



Key Features

OMB standard offer for Double Block and Bleed service combines a needle valves and two floating ball valves into a compact forged body of standard length.



Technical Specifications

Floating ball design - Design to **ASME B16.34** - **Firesafe** design to API 607 Revision 4 - Soft and Metal Seated options - Anti-blow out stem - Class 150 to 2500 - Temperature range - **-196C to 550C**

Size **1/2" to 2"**

Standard end-to-end dimension allows replacement of standard single ball valves by double valve in existing lines

Lever, Oval and Round handwheel operators.
Actuation on request

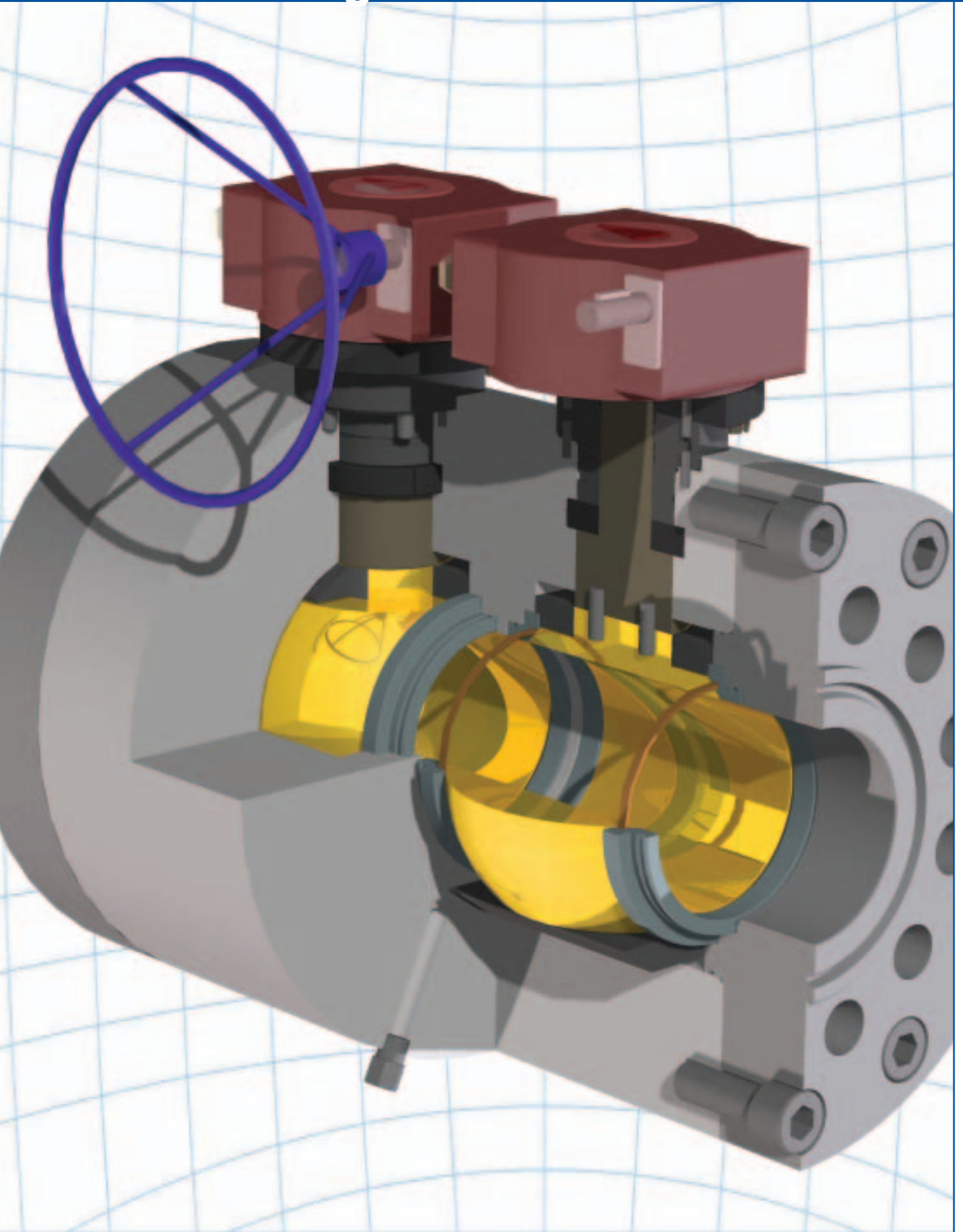
Dimensions on request

Materials: include carbon steel, stainless steel and duplex
Material traceability to BS EN 10204 3.1.B. as standard

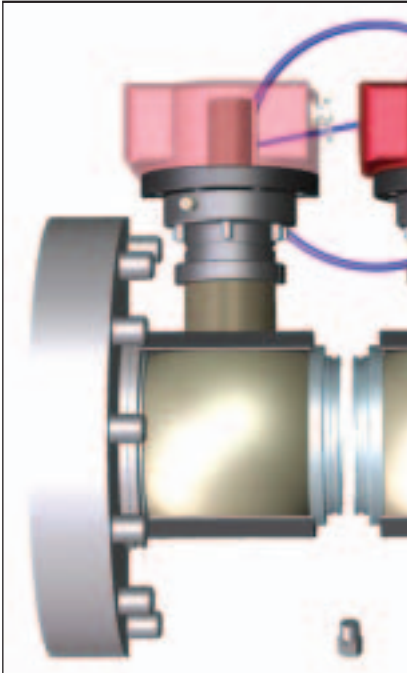


Complete forged construction provide a higher material integrity guarantee. At OMB we only manufacture valves in forged steel materials since our starting in 1973.

OMB DBB Large



Large DBB

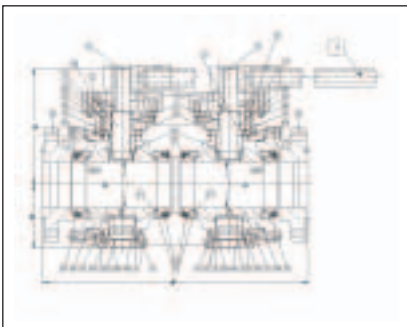


Key Features

From OMB proprietary technology in the large Trunnion mounted Pipeline Ball Valves design we derived a series of DBB valves with unique features and performance: providing cost effective solutions to double isolation.

Technical Specifications

Trunnion Mounted design - Design to **API 6D, ASME VIII, ANSI B16.34** - **Firesafe** design to API 607 Revision 4 / API 6FA - Piggable design - Flanged, Hubbed or Butt Weld Ends - **Standard length** with same end-to-end dimensions of single valve allows replacement of single ball valves in existing lines. We can also meet customer specified end-to-end dimension



Geared handwheel operators.

Actuation on request

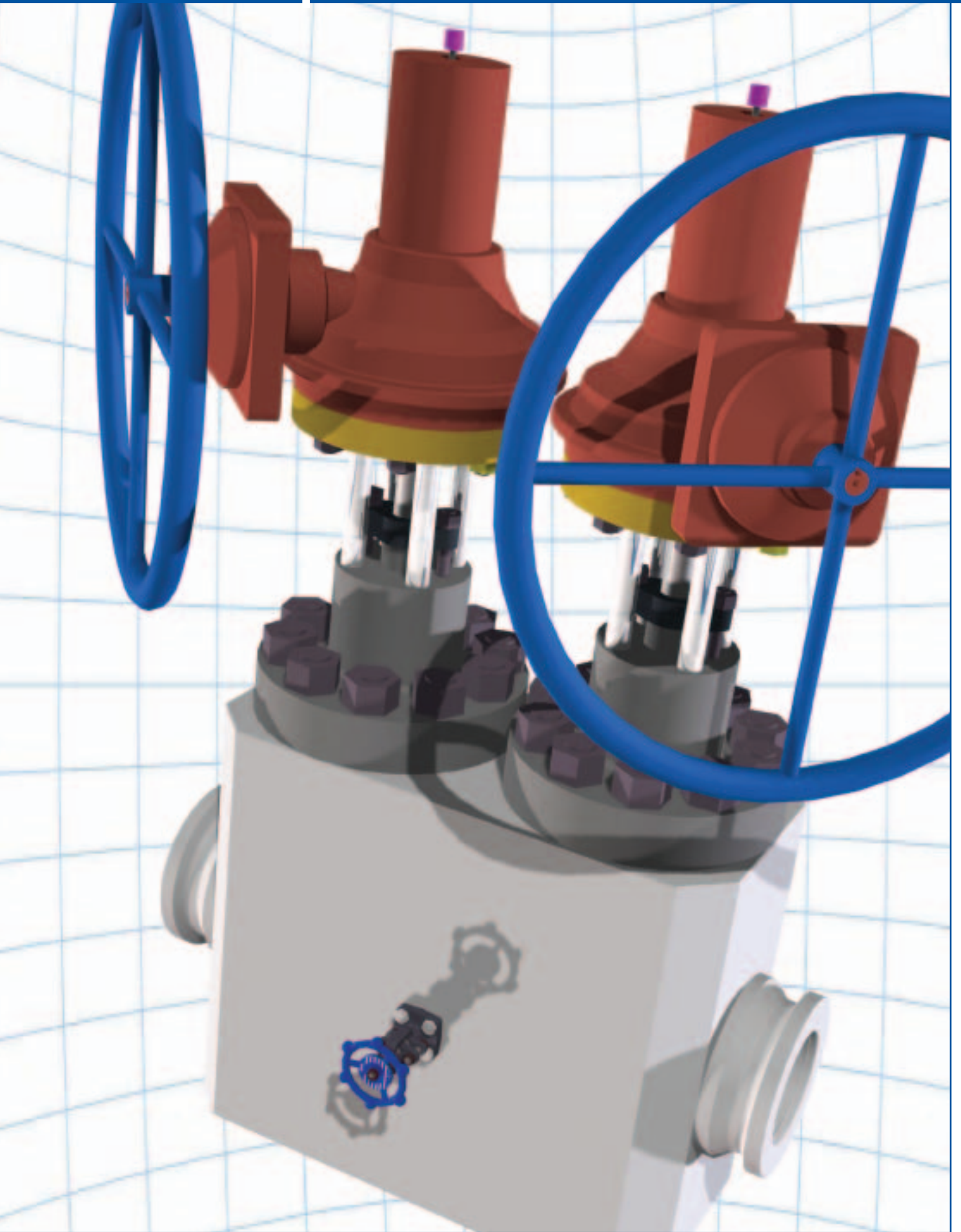
Size 8" to 24"

Temperature range from -20C to 150C

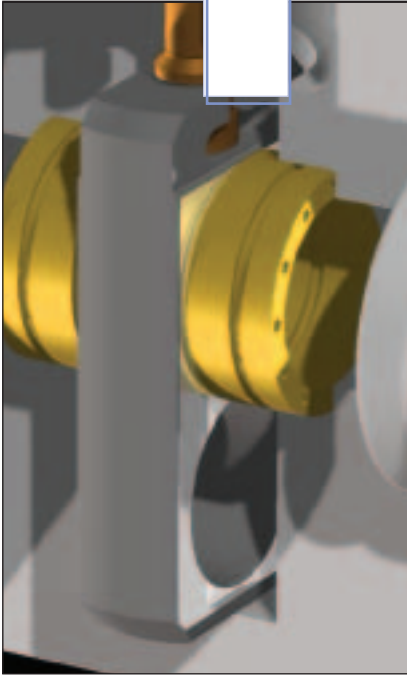
Dimensions on request

Material: include carbon steel, stainless steel and duplex
Material traceability to BS EN 10204 3.1.B. as standard

OMB Fluicon division is the organization within our group developing the ball valve activities. Active on worldwide range, with a consolidated approval and experience record, Fluicon is the core of our development of the large size DBB valves.



Special DBB



Key Features

Challenge us, give us something to prove our ability. We enjoy the challenge of new design.

Technical Specifications

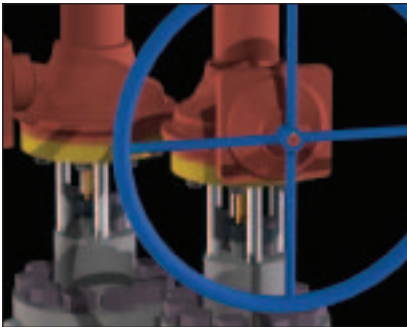
(example) **Gate-plug-Gate configuration**

Design to **API 6A**

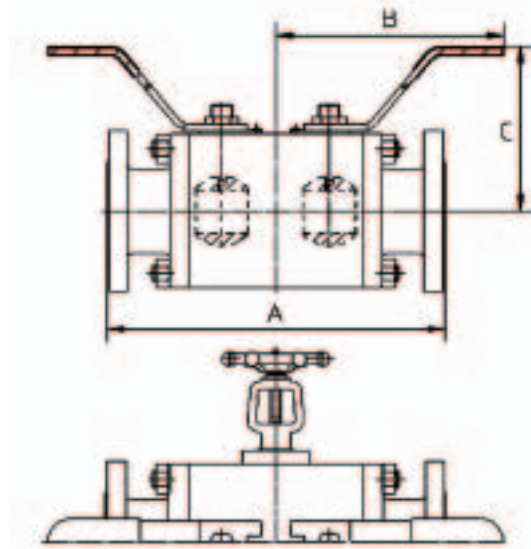
Size 2" to 8"

Dimensions on request

Material: include carbon steel, stainless steel and duplex with any combination of trim and sealing materials



Our Double Thu Conduit Gate design



CLASS 150-300-600 BALL - NEEDLE - BALL

Flanged End - Flanged End

REGULAR PORT		1/4		3/8		1/2		3/4		1		1.1/4		1.1/2		2	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
Class 150	A	-	-	-	-	180.5	7.1	180.5	7.1	187.5	7.38	-	-	187.5	7.38	190.5	7.5
Class 300	A	-	-	-	-	180.5	7.1	187.5	7.38	187.5	7.38	-	-	193.5	7.61	197	7.75
Class 600	A	-	-	-	-	200	7.87	200	7.87	200	7.87	-	-	210	8.26	216	8.5
Lever	B	-	-	-	-	142.5	5.6	142.5	5.6	142.5	5.6	-	-	142.5	5.6	142.5	5.6
Max dependent on flange	C	-	-	-	-	175	6.89	175	6.89	175	6.89	-	-	175	6.89	175	6.89
Approx. Weight	Class 150	Kg / Lb		-	-	4.1	9	4.1	9	4.5	9.9	-	-	4.5	9.9	5.2	11.5
	Class 300	Kg / Lb		-	-	4.1	9	4.5	9.9	4.5	9.9	-	-	5.6	12.3	6.3	13.8
	Class 600	Kg / Lb		-	-	7.1	15.6	7.1	15.6	7.1	15.6	-	-	7.5	16.5	8.2	18

CLASS 1500 BALL - NEEDLE - BALL

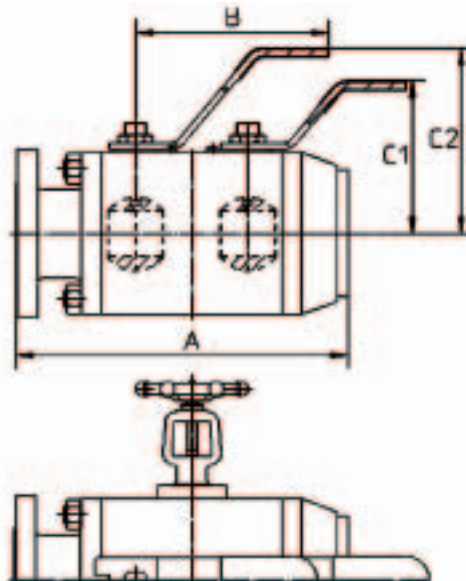
Flanged End - Flanged End

FULL PORT		1/4		3/8		1/2		3/4		1		1.1/4		1.1/2		2	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
End to End	A	-	-	-	-	216	8.5	216	8.5	222	8.74	-	-	228.5	8.99	241.5	9.5
Lever	B	-	-	-	-	142.5	5.61	142.5	5.61	142.5	5.61	-	-	142.5	5.61	142.5	5.61
Max dependent on flange	C	-	-	-	-	175	6.89	175	6.89	175	6.89	-	-	175	6.89	175	6.89
Approx. Weight	Kg / Lb	-	-	-	-	8.2	18	8.2	18	9.5	20.9	-	-	10	22	12.5	27.5

CLASS 2500 BALL - NEEDLE - BALL

Flanged End - Flanged End

FULL PORT		1/4		3/8		1/2		3/4		1		1.1/4		1.1/2		2	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
End to End	A	-	-	-	-	228.5	8.99	228.5	8.99	235	9.25	-	-	254	10	266.5	10.5
Lever	B	-	-	-	-	142.5	5.61	142.5	5.61	142.5	5.61	-	-	142.5	5.61	142.5	5.61
Max dependent on flange	C	-	-	-	-	175	6.89	175	6.89	175	6.89	-	-	175	6.89	175	6.89
Approx. Weight	Kg / Lb	-	-	-	-	10	22	10	22	12	26.4	-	-	14.5	31.9	17	37.4



CLASS 150-300-600 BALL - NEEDLE - BALL

Flanged End - Screw or Socket End

REGULAR PORT		1/4		3/8		1/2		3/4		1		1.1/4		1.1/2		2			
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.		
Class 150	A	-	-	-	-	165	6.5	165	6.5	168.5	6.63	-	-	168.5	6.63	170	6.69		
Class 300	A	-	-	-	-	165	6.5	168.5	6.63	168.5	6.63	-	-	171.5	6.75	173	6.81		
Class 600	A	-	-	-	-	174.5	6.87	174.5	6.87	174.5	6.87	-	-	179.5	7	182.5	7.2		
Lever	B	-	-	-	-	142	5.59	142	5.59	142	5.59	-	-	142	5.59	142	5.59		
Max dependent on flange	C1	-	-	-	-	72.5	2.86	72.5	2.86	72.5	2.86	-	-	72.5	2.86	72.5	2.86		
	C2	-	-	-	-	121	4.77	121	4.77	121	4.77	-	-	121	4.77	121	4.77		
Approx. Weight	Class 150	Kg / Lb		-	-	-	-	2.8	6.1	2.8	6.1	3.1	6.8	-	-	3.1	6.8	3.3	7.3
	Class 300	Kg / Lb		-	-	-	-	2.8	6.1	3.1	6.8	3.1	6.8	-	-	3.3	7.3	3.4	7.5
	Class 600	Kg / Lb		-	-	-	-	3.6	7.9	3.6	7.9	3.6	7.9	-	-	3.9	8.6	4.2	9.2

CLASS 1500 BALL - NEEDLE - BALL

Flanged End - Screw or Socket End

FULL PORT		1/4		3/8		1/2		3/4		1		1.1/4		1.1/2		2	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
End to End	A	-	-	-	-	182.5	7.2	182.5	7.2	185.5	7.3	-	-	189	7.44	195.5	7.7
Lever	B	-	-	-	-	142	5.59	142	5.59	142	5.59	-	-	142	5.59	142	5.59
Max dependent on flange	C1	-	-	-	-	72.5	2.86	72.5	2.86	72.5	2.86	-	-	72.5	2.86	72.5	2.86
	C2	-	-	-	-	121	4.77	121	4.77	121	4.77	-	-	121	4.77	121	4.77
Approx. Weight	Kg / Lb	-	-	-	-	4.2	9.2	4.2	9.2	4.3	9.5	-	-	4.5	9.5	5.1	11.2

CLASS 2500 BALL - NEEDLE - BALL

Flanged End - Screw or Socket End

FULL PORT		1/4		3/8		1/2		3/4		1		1.1/4		1.1/2		2	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
End to End	A	-	-	-	-	189	7.44	189	7.44	192	7.55	-	-	201.5	7.93	208	8.2
Lever	B	-	-	-	-	142	5.59	142	5.59	142	5.59	-	-	142	5.59	142	5.59
Max dependent on flange	C1	-	-	-	-	72.5	2.86	72.5	2.86	72.5	2.86	-	-	72.5	2.86	72.5	2.86
	C2	-	-	-	-	121	4.77	121	4.77	121	4.77	-	-	121	4.77	121	4.77
Approx. Weight	Kg / Lb	-	-	-	-	4.5	9.5	4.5	9.5	4.9	10.8	-	-	6.1	13.5	7.8	17.1

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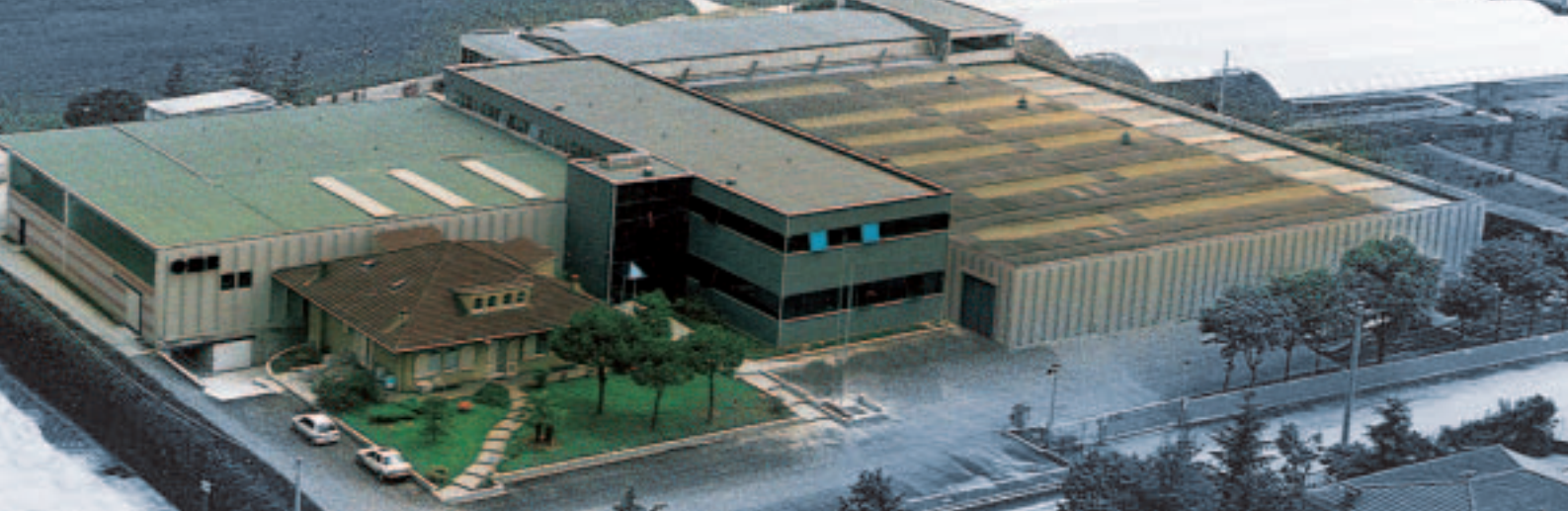
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