

The Original
GALPERTI®
ENGINEERING AND FLOW CONTROL



**API 6D - API 6A
TRUNNION MOUNTED BALL VALVES
SUBSEA & SPECIAL VALVES**



www.affgroup.net.au

Project Piping Specialists

AFF
AUSTRALASIAN FITTINGS & FLANGES





Product Range

PRODUCT RANGE

API 6D

API 6A

SERVICE	SIZE (in/mm) - PRESSURE RANGE				SIZE (in) - PRESSURE RANGE (1)				
	ASME 150-600	ASME 900	ASME 1500	ASME 2500	API 2000	API 3000	API 5000	API 10000	API 15000

SIDE - ENTRY

Standard	2" - 48" 50 - 1200	2" - 36" 50 - 900	2" - 30" 50 - 750	2" - 24" 50 - 600	2.1/16" 21.1/4"	2.1/16" 20.3/4"	2.1/16" 16.3/4"	2.1/16" 11"	2.1/16" 11"
Low Temperature -46°C / -50°F	2" - 48" 50 - 1200	2" - 36" 50 - 900	2" - 30" 50 - 750	2" - 24" 50 - 600	2.1/16" 21.1/4"	2.1/16" 20.3/4"	2.1/16" 16.3/4"	2.1/16" 11"	2.1/16" 11"
Cryogenic -47°C to -196°C / -52°F to -320°F	2" - 24" 50 - 600	2" - 24" 50 - 600	2" - 16" 50 - 400	2" - 12" 50 - 300	-	-	-	-	-
Sub Sea	2" - 48" 50 - 1200	2" - 36" 50 - 900	2" - 30" 50 - 750	2" - 24" 50 - 600	2.1/16" 21.1/4"	2.1/16" 20.3/4"	2.1/16" 20.3/4"	2.1/16" 11"	2.1/16" 11"
Underground	2" - 48" 50 - 1200	2" - 36" 50 - 900	2" - 30" 50 - 750	2" - 24" 50 - 600	2.1/16" 21.1/4"	2.1/16" 20.3/4"	2.1/16" 20.3/4"	2.1/16" 11"	2.1/16" 11"
High Temperature 280°C to 450°C / 536°F to 842°F	2" - 24" 50 - 600	2" - 24" 50 - 600	2" - 16" 50 - 400	2" - 12" 50 - 300	2.1/16" 21.1/4"	2.1/16" 20.3/4"	2.1/16" 20.3/4"	-	-
Underground Low Temperature -46°C / -50°F	2" - 48" 50 - 1200	2" - 36" 50 - 1400	2" - 30" 50 - 750	2" - 24" 50 - 600	2.1/16" 21.1/4"	2.1/16" 20.3/4"	2.1/16" 20.3/4"	2.1/16" 11"	2.1/16" 11"

TOP - ENTRY

Standard	2" - 48" 50 - 1200	2" - 36" 50 - 900	2" - 30" 50 - 750	2" - 24" 50 - 600	2.1/16" 21.1/4"	2.1/16" 20.3/4"	2.1/16" 16.3/4"	2.1/16" 11"	2.1/16" 11"
Low Temperature -46°C / -50°F	2" - 48" 50 - 1200	2" - 36" 50 - 900	2" - 30" 50 - 750	2" - 24" 50 - 600	2.1/16" 21.1/4"	2.1/16" 20.3/4"	2.1/16" 16.3/4"	2.1/16" 11"	2.1/16" 11"
Cryogenic -47°C to -196°C / -52°F to -320°F	2" - 24" 50 - 600	2" - 24" 50 - 600	2" - 16" 50 - 400	2" - 12" 50 - 300	-	-	-	-	-
Sub Sea	2" - 48" 50 - 1200	2" - 36" 50 - 900	2" - 30" 50 - 750	2" - 24" 50 - 600	2.1/16" 21.1/4"	2.1/16" 20.3/4"	2.1/16" 20.3/4"	2.1/16" 11"	2.1/16" 11"
Underground	2" - 48" 50 - 1200	2" - 36" 50 - 900	2" - 30" 50 - 750	2" - 24" 50 - 600	2.1/16" 21.1/4"	2.1/16" 20.3/4"	2.1/16" 20.3/4"	2.1/16" 11"	2.1/16" 11"
High Temperature 280°C to 450°C / 536°F to 842°F	2" - 24" 50 - 600	2" - 24" 50 - 600	2" - 16" 50 - 400	2" - 12" 50 - 300	2.1/16" 21.1/4"	2.1/16" 20.3/4"	2.1/16" 20.3/4"	-	-
Underground Low Temperature -46°C / -50°F	2" - 48" 50 - 1200	2" - 36" 50 - 1400	2" - 30" 50 - 750	2" - 24" 50 - 600	2.1/16" 21.1/4"	2.1/16" 20.3/4"	2.1/16" 20.3/4"	2.1/16" 11"	2.1/16" 11"

WELDED BODY

Standard	2" - 48" 50 - 1200	2" - 36" 50 - 900	2" - 30" 50 - 750	2" - 12" 50 - 300
Low Temperature -46°C / -50°F	2" - 48" 50 - 1200	2" - 36" 50 - 900	2" - 30" 50 - 750	2" - 12" 50 - 300
Sub Sea	2" - 48" 50 - 1200	2" - 36" 50 - 900	2" - 30" 50 - 750	2" - 12" 50 - 300
Underground	2" - 48" 50 - 1200	2" - 36" 50 - 900	2" - 30" 50 - 750	2" - 12" 50 - 300
Underground Low Temperature -46°C / -50°F	2" - 48" 50 - 1200	2" - 36" 50 - 900	2" - 30" 50 - 750	2" - 12" 50 - 300

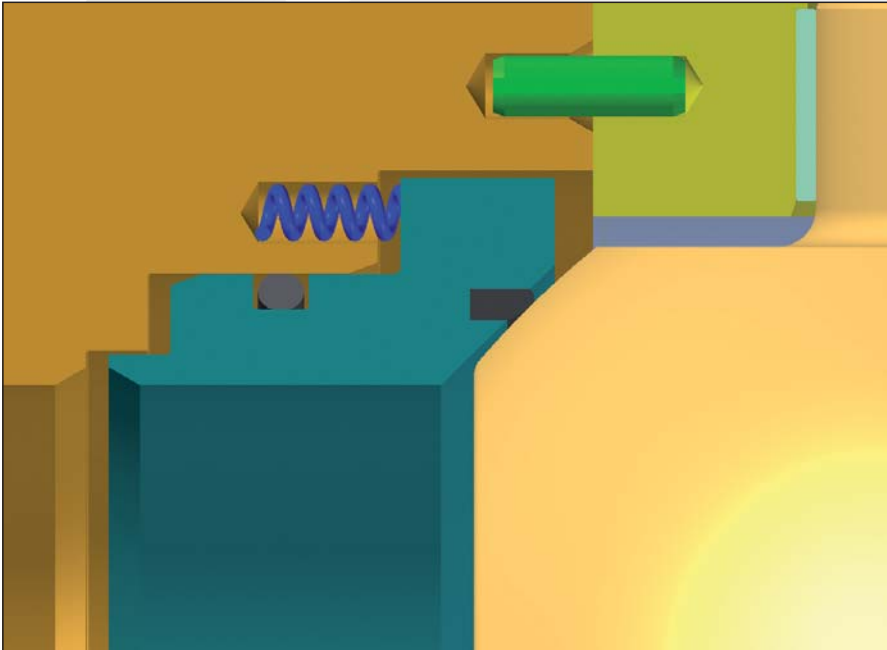


Ball Valve Design Features

FEATURE	SIDE-ENTRY	TOP-ENTRY	WELDED BODY
Trunnion Mounted	Standard	Standard	Standard
Independent Stem & Ball (Generally from 3')	Standard	Standard	Standard
Independent Floating Seats	Standard	Standard	Standard
Soft Seat Insert	Standard	Standard	Standard
Metal to Metal Seat (Seat and ball)	On Request	On Request	On Request
Self Relieving Seats	Standard	Standard	Standard
Single Piston Seat Effect	Standard	Standard	Standard
Double Piston Seat Effect	On Request	On Request	On Request
Combination (Self Relieving/Double Piston) Seats	On Request	On Request	On Request
API 6A or API 6D Design and Construction	As needed	As needed	As needed
Face to Face Dimensions to API 6D and ANSI B16.10	Standard	Standard	Standard
Fire Safe Design to API 6FA - API 607 - BS 6755 Part 2	Standard	Standard	Standard
Full, Reduced or Venturi Port	As needed	As needed	As needed
STD Flanged Ends - Welded Ends - Hub Ends (G-LoK) -*	As needed	As needed	As needed
Transition Pups for Welded Ends Valves	As needed	As needed	As needed
Antistatic	Standard	Standard	Standard
Anti-Blowout Stem	Standard	Standard	Standard
Double Block and Bleed	On Request	On Request	On Request
Possibility to Check Seat Integrity In Line with Ball in Open or Closed Position	Standard	Standard	Standard
Double Body Seals	Standard	Standard	Standard
Triple Stem Seals	Standard	Standard	Standard
Drain Plug (Generally from 3')	Standard	Standard	Standard
Vent Valve (Generally from 3')	Standard	Standard	Standard
Emergency Sealant Injection on Stem (Generally from 3')	Standard	Standard	Standard
Emergency Sealant Injection on Seats (on 6" & larger)	On Request	On Request	On Request
Seat Pocket Overlay	On Request	On Request	On Request
Seals Area Overlay	On Request	On Request	On Request
Wetted Parts Overlay	On Request	On Request	On Request
Body Internal Lining	On Request	On Request	N/A
Extended Stem for Underground Installation	On Request	On Request	On Request
Extended Bonnet for Low or High Temperature	On Request	On Request	On Request
Locking Device	On Request	On Request	On Request
Lifting Lugs	Standard on 6" and Larger		
Supporting Feet	Standard on 6" and Larger		
Manual or Motorized Operation	As Needed	As Needed	As Needed
In-line Maintenance	N/A	Yes	N/A
On site Maintenance	Yes	Yes	N/A
<i>Note: Other features are available on request.</i>			
<i>* Compact Flanges (GC-Compact)</i>			

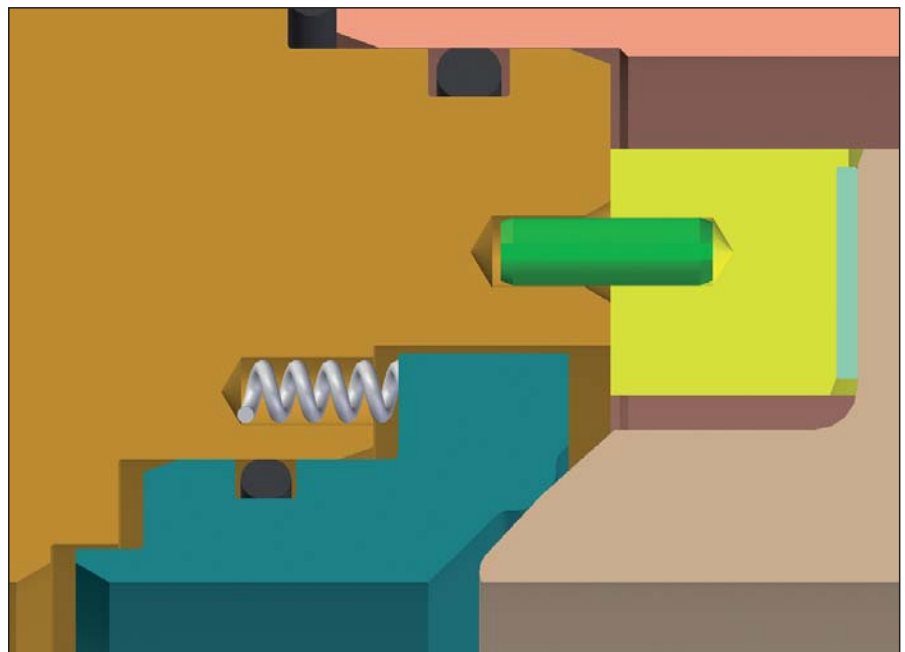
SOFT-SEATED VALVES

Valves specified for standard service have a seat design including a resilient material insert at the valve seat. This soft seat insert is considered a secondary seal that provides a backup to the primary metal to metal sealing interface between ball and seat.



METAL-SEATED VALVES

For certain service conditions; such as abrasive liquids or gas service, for high temperature (above 250°C) or for low temperature (below - 50°C), a metal to metal seating interface without resilient seals is recommended. The seating material selection recommendation will depend on specific application and operating parameters.





Galperti Engineering trunnion-mounted valves

TRUNNION MOUNTED BALL

The term “trunnion mounted” describes a ball valve design where the ball is fixed in the plane of the axis of rotation and where the seats are free to move laterally towards the ball sealing surface to effect a leak tight seal. The movement of the seats is by a combination of flow forces, of pressure loads and of other mechanical loads such as springs or similar mechanism.

The load exerted by the thrust spring or similar mechanism at the seats provides the sealing loads to effect the seat to ball sealing at low pressure conditions. The loading at the seat to ball interface is assisted by pressure loading as the line pressure increases. The bearings at each trunnion and the sizing of the stem shaft diameters

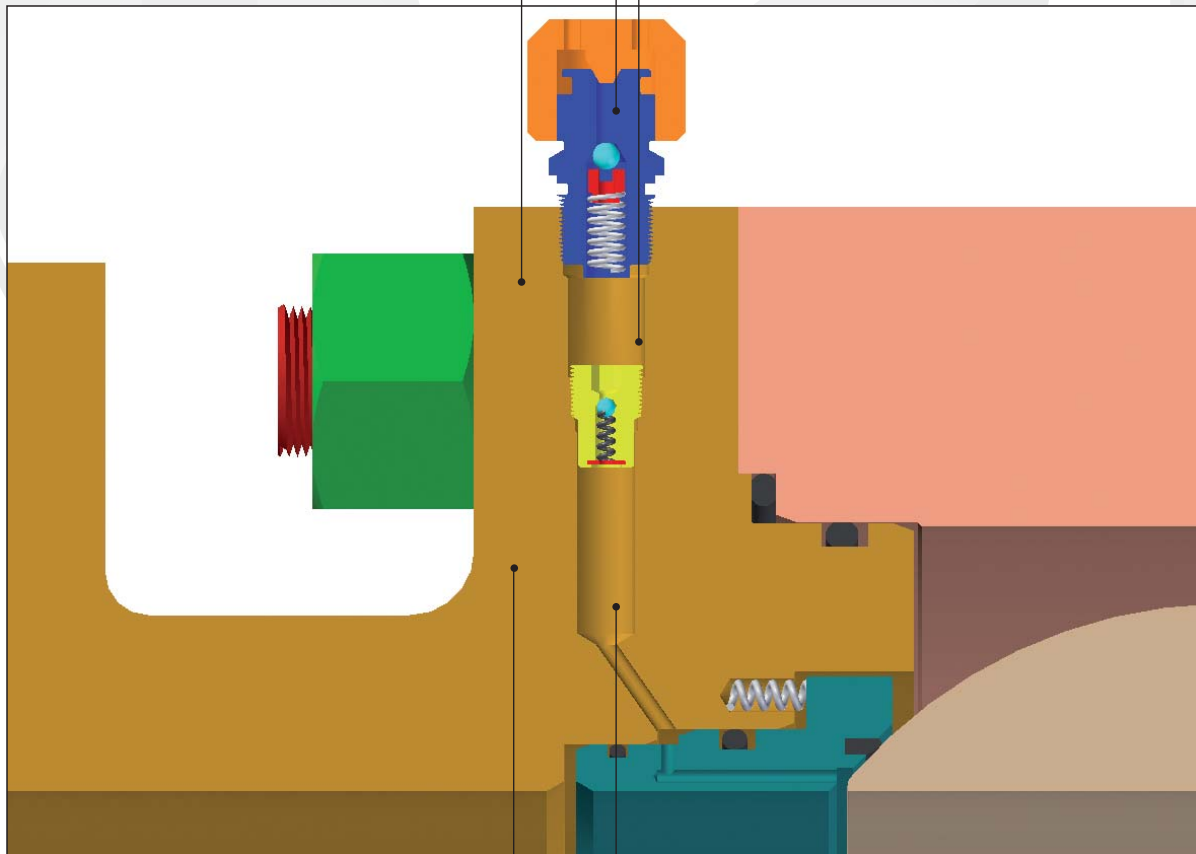
are designed to withstand operational and pressure loads as specified by application, pressure class, differential pressure conditions and as may be required for the gear or motor operation of the valve.

TWO PIECE BALL AND STEM

Ball and stem are individual components designed with interface and sizing characteristics to minimize stress concentrations and loads.

ANTI STATIC DESIGN

The valve design is such that there is full continuity of electrical conductivity throughout all metallic components.



FLOATING SEATS (SELF-RELIEVING)

Bi-directional operation of the valve is assured through the use of floating seats (seat assemblies).

The seat design minimizes the operating torque without reducing the sealing capability.

Sealing is guaranteed from zero differential pressure to maximum rating of valve. The “Floating seats” design is offered as the standard feature.

Other seat designs available include double piston effect or a combination of self relieving and double piston effect, and are available on request or based on operational data provided.

LOW EMISSION FEATURE

Seals and Seat tightness feature available for compliance with more regulatory emissions and pollution standards. Leak tightness and seal leakage criteria should be specified at time inquiry. Low emission characteristics and capability result from materials selection and the manufacturing processes for microfinishing ball and seat sealing surfaces.

DOUBLE BLOCK AND BLEED

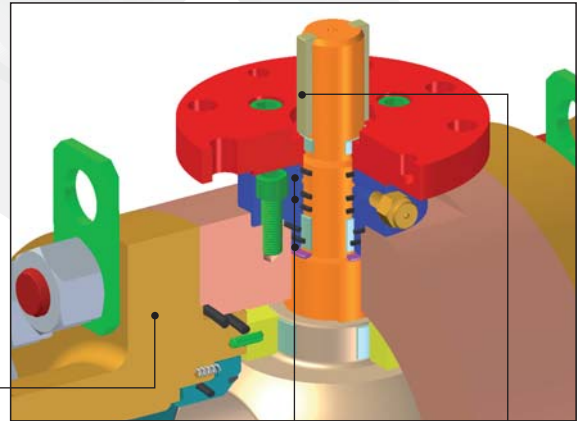
A standard feature of all Galperti Engineering ball valves is the double block and bleed capability of the valve in either the open or closed position.



Design features

STEM SEALS

Valve design utilizes twin O-rings and one graphite gasket to guarantee seal integrity of stem to bonnet interface. Replacement of the graphite seal with valve at pressure is possible with the ball in any position by removal of the adaptor plate after bleeding any pressure through the grease injection fitting.



ANTI BLOW-OUT STEM

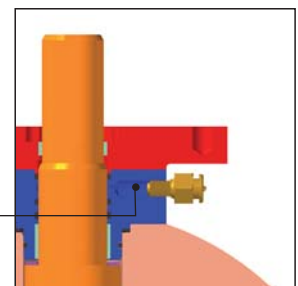
Valve design provides integral mechanical stop to prevent inadvertent blowout of the stem by the gland trunnion piece. Other designs available on request.

BODY SEALING

Dual sealing arrangement includes non metallic seal rings plus a graphite gasket at the static body closure interface. This seal arrangement ensures zero leakage and fire safety.

BALL ALIGNMENT KEY

The stem key provides a positive mechanical stop to control ball rotation from the full open to full closed position. The Galperti design incorporates a single key for valves where nominal port size is 4inch or smaller and a double key arrangement for valves with nominal port size 6 inch or larger.



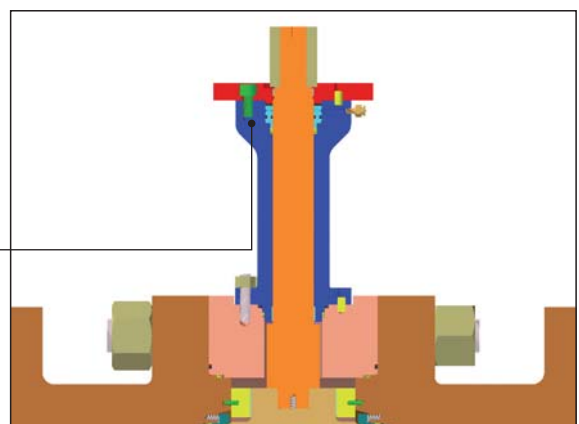
EMERGENCY SEALANT INJECTION

The standard emergency sealant design incorporates an injection port between the double stem seals at the stem to bonnet interface. If specified, a similar configuration injection port can also be provided at the valve seats for valves of 6" (full bore) and larger.

Note that emergency sealant injection ports are not supplied on valves for low temperature or high temperature applications.

EXTENDED BONNET

Galperti Engineering recommends stem extensions for valves where service conditions and temperatures are at or below - 50°C or above 250°C.



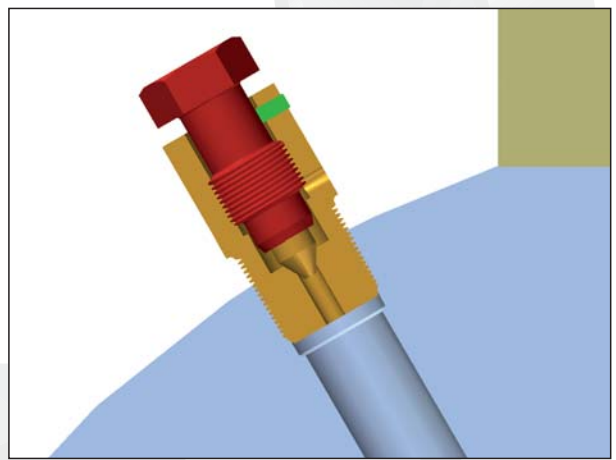
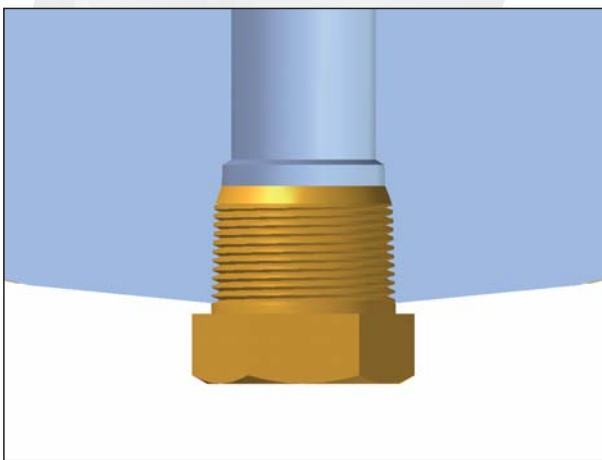


STEM EXTENSIONS

Valves can be supplied with extended stem design for underground installations, for cryogenic service, for remote location or for service where valve requires insulation. The extended stem design can also include as applicable; auxiliary piping for connection to vent points and drain points.

VENT VALVE AND DRAIN PLUG

All valves (3" and above) are supplied with vent valve in bonnet area and a drain plug at the base of valve body. Client specified vent or drain configurations can be incorporated and are available on request.



ACTUATION

Valves can be fitted with lever or handwheel or gear operator or motor operator (electric, pneumatic or hydraulic) as per client request and specification operational parameters noted at time of inquiry.

ACTUATORS MOUNTING

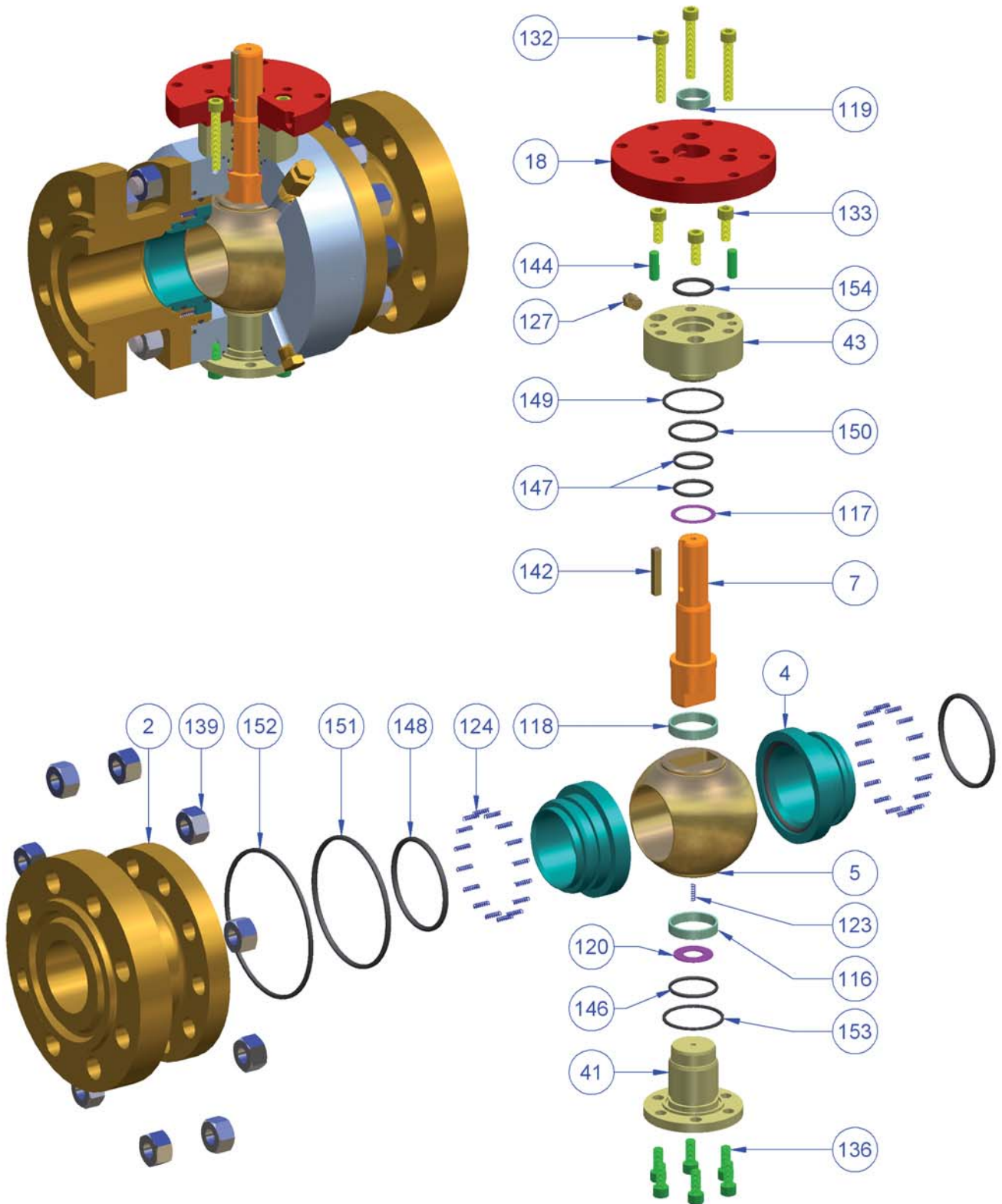
Actuator mounting flanges, unless otherwise specified are in full accordance with ISO 5211-FF. Galperti recommends installation and fitting of the actuator and FAT of actuated valve at the Galperti plant. In the event field installation is specified, then Galperti recommends that field supervision and support be carried out by a Galperti Technician.

ENDS

Valves end port configuration can be supplied as flanged or weld end or clamp hub connector design or compact flanged design.

FIRE SAFE

Valves are fully designed and tested firesafe to API 6FA, API 607, BS 6755 Part 2.

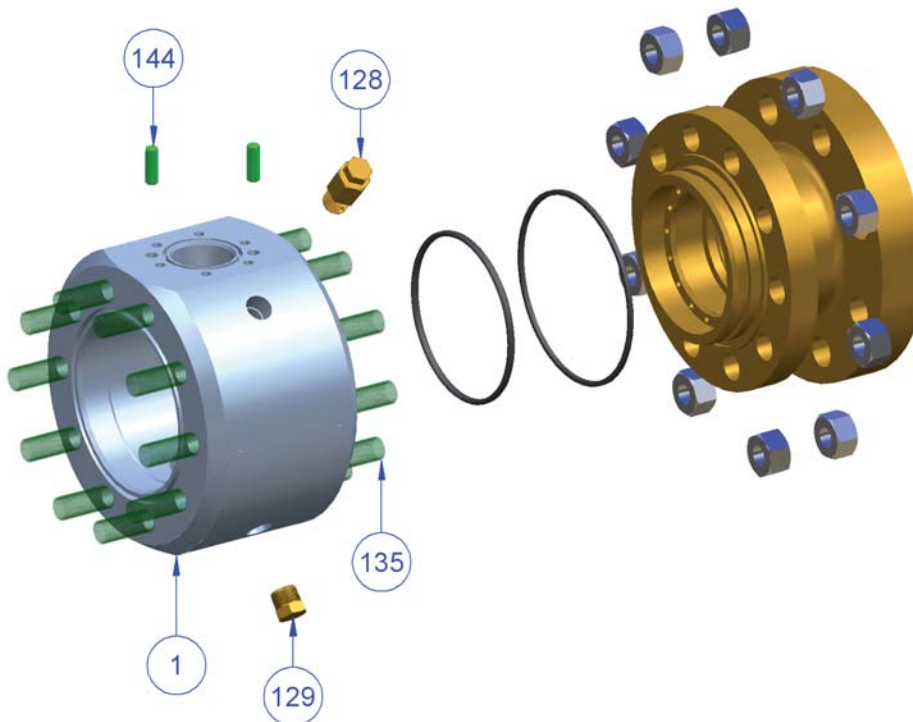




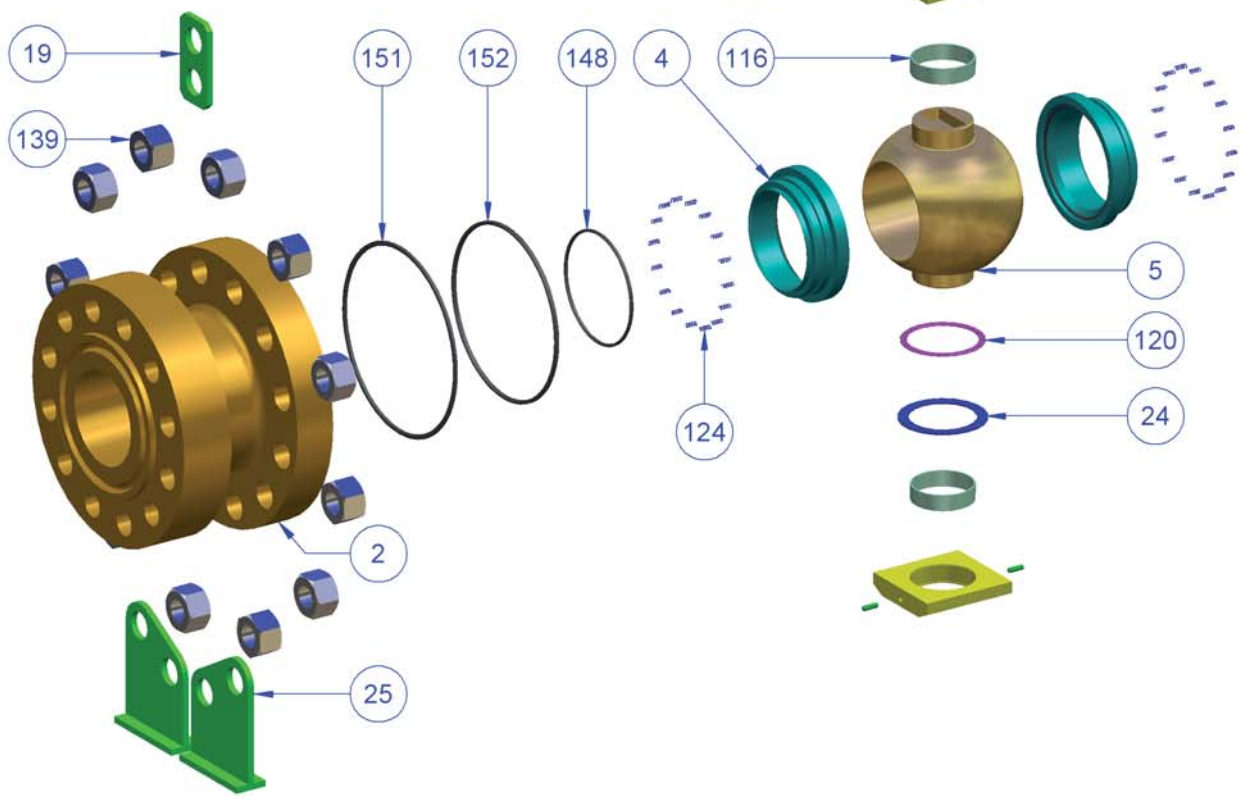
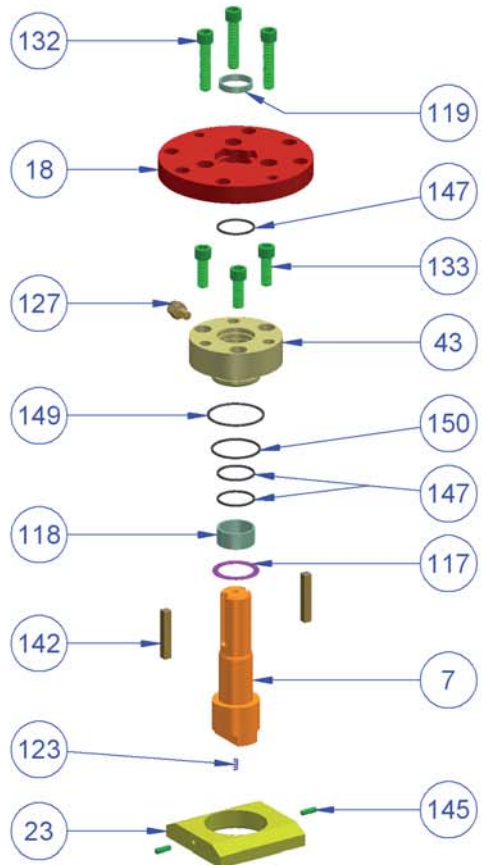
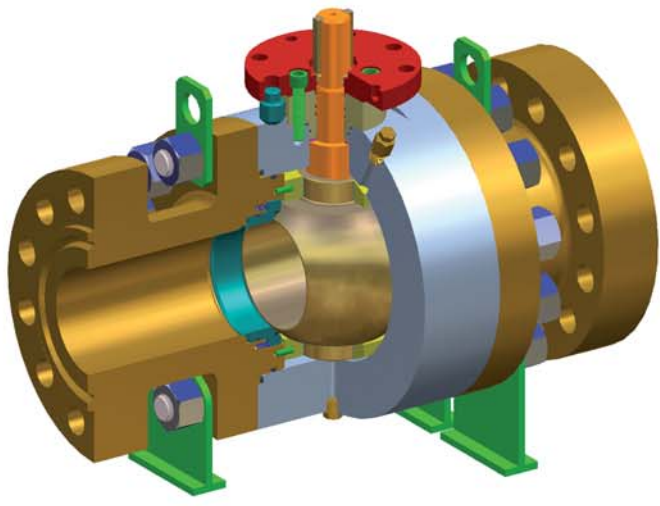
Bolted Body Side Entry 4" & Smaller

SPARE PARTS	POS.	PART NAME	SPARE PARTS	POS.	PART NAME
	1	BODY		129	DRAIN PLUG
	2	CLOSURE		132	ADAPTER PLATE CAP SCREW
√	4	SEAT		133	GL. TRUNNION CAP SCREW
	5	BALL		135	BODY/CLOSURE STUD BOLT
	7	STEM		136	TRUNNION CAP SCREW
	18	ADAPTER PLATE		139	BODY/CLOSURE NUT
	41	TRUNNION		142	STEM KEY
	43	GLAND TRUNNION		144	STOP PIN
√	116	BALL BEARING	√	146	BODY/TRUNNION O-RING
√	117	STEM THRUST WASHER	√	147	STEM O-RING
√	118	STEM BEARING	√	148	SEAT O-RING
√	119	ADAPTER PLATE BEARING	√	149	BODY/GL.TRUNNION GASKET
√	120	BALL THRUST WASHER	√	150	BODY/GL.TRUNNION O-RING
	123	ANTISTATIC DEVICE (SPRING)	√	151	BODY/CLOSURE O-RING
	124	SEAT SPRING	√	152	BODY/CLOSURE GASKET
	127	STEM GREASE FITTING	√	153	BODY/TRUNNION GASKET
	128	VENT VALVE	√	154	STEM GASKET

Spare parts (√) = Two years recommended spare parts.



S03	BALL VALVE S.E. TRUNNION MOUNTED B.B. FULL BORE 2 PIECES
S04	BALL VALVE S.E. TRUNNION MOUNTED B.B. REDUCED BORE 2 PIECES
S05	BALL VALVE S.E. TRUNNION MOUNTED B.B. FULL BORE 3 PIECES
S06	BALL VALVE S.E. TRUNNION MOUNTED B.B. REDUCED BORE 3 PIECES
S40	BALL VALVE SUBSEA S.E. TRUNNION MOUNTED B.B. FULL BORE 2 PIECES
S41	BALL VALVE SUBSEA S.E. TRUNNION MOUNTED B.B. REDUCED BORE 2 PIECES
S42	BALL VALVE SUBSEA S.E. TRUNNION MOUNTED B.B. FULL BORE 3 PIECES
S43	BALL VALVE SUBSEA S.E. TRUNNION MOUNTED B.B. REDUCED BORE 3 PIECES

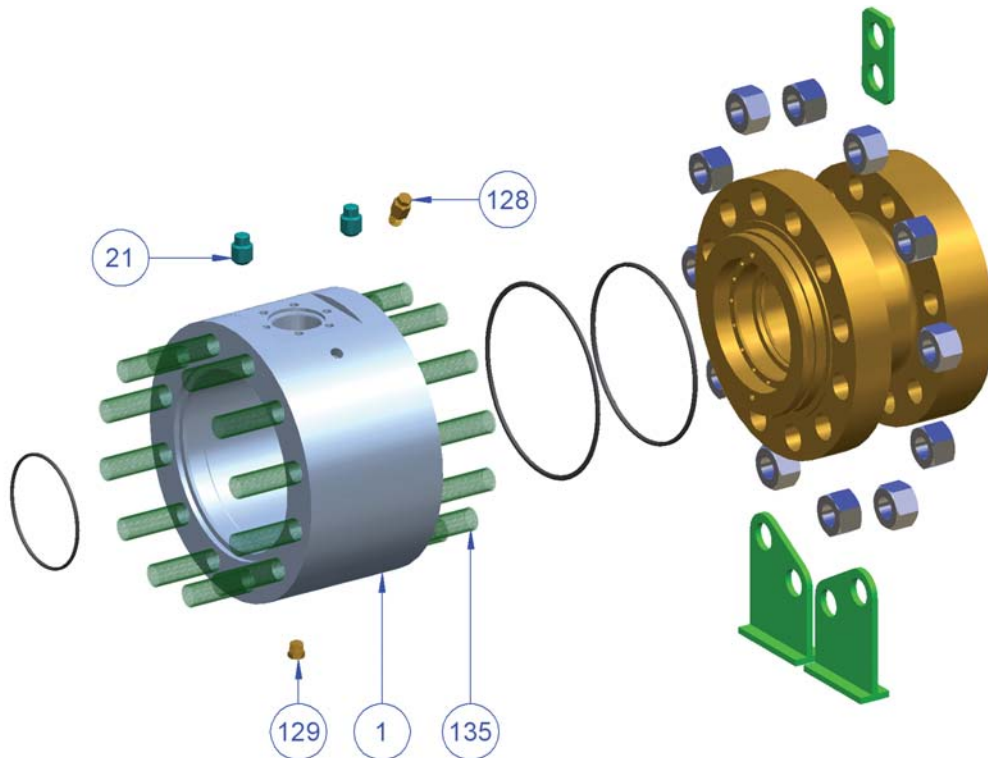




Bolted Body Side Entry 6" & Larger

SPARE PARTS	POS.	PART NAME	SPARE PARTS	POS.	PART NAME
	1	BODY		123	ANTISTATIC DEVICE (SPRING)
	2	CLOSURE		124	SEAT SPRING
√	4	SEAT		127	STEM GREASE FITTING
	5	BALL		128	VENT VALVE
	7	STEM		129	DRAIN PLUG
	18	ADAPTER PLATE		132	ADAPTER PLATE CAP SCREW
	19	LIFTING LUG		133	GL. TRUNNION CAP SCREW
	21	ANCHOR PIN		135	BODY/CLOSURE STUD BOLT
	23	BALL SUPPORT		139	BODY/CLOSURE NUT
	24	BALL SPACER RING		142	STEM KEY
	25	VALVE SUPPORT		145	PIN BALL SUPPORT
	43	GLAND TRUNNION	√	147	STEM O-RING
√	116	BALL BEARING	√	148	SEAT O-RING
√	117	STEM THRUST WASHER	√	149	BODY/GL.TRUNNION O-RING
√	118	STEM BEARING	√	150	BODY/GL.TRUNNION O-RING
√	119	ADAPTER PLATE BEARING	√	151	BODY/CLOSURE O-RING
√	120	BALL THRUST WASHER	√	152	BODY/CLOSURE O-RING

Spare parts (√) = Two years recommended spare parts.



S20	BALL VALVE S.E. TRUNNION MOUNTED B.B. FULL BORE 2 PIECES
S21	BALL VALVE S.E. TRUNNION MOUNTED B.B. REDUCED BORE 2 PIECES
S22	BALL VALVE S.E. TRUNNION MOUNTED B.B. FULL BORE 3 PIECES
S23	BALL VALVE S.E. TRUNNION MOUNTED B.B. REDUCED BORE 3 PIECES
S28	BALL VALVE SUBSEA S.E. TRUNNION MOUNTED B.B. FULL BORE 2 PIECES
S29	BALL VALVE SUBSEA S.E. TRUNNION MOUNTED B.B. REDUCED BORE 2 PIECES
S30	BALL VALVE SUBSEA S.E. TRUNNION MOUNTED B.B. FULL BORE 3 PIECES
S31	BALL VALVE SUBSEA S.E. TRUNNION MOUNTED B.B. REDUCED BORE 3 PIECES



Design Features Side Entry

SPLIT BODY - SIDE ENTRY BODY CLOSURE DESIGN

The body is made of three forged parts and the bolted construction allows ease of disassembly on the job site in the event repairs or maintenance is needed.

The bolts threads are as per ISO metric or ANSI imperial, depending on client specification.

The tightening of the bolts is made by hydraulic tools with a predetermined torque.

MAINTENANCE

Side entry design - SE and Top entry design -TE are trunnion mounted ball valves designed to be easily disassembled and reassembled for repair or maintenance on site.

Side Entry Ball Valves can be easily serviced on site without the need of special tools, providing the valve is removed from the line.



16" 2500# METAL SEATED

4" 2500# METAL SEATED



Design Features Side Entry



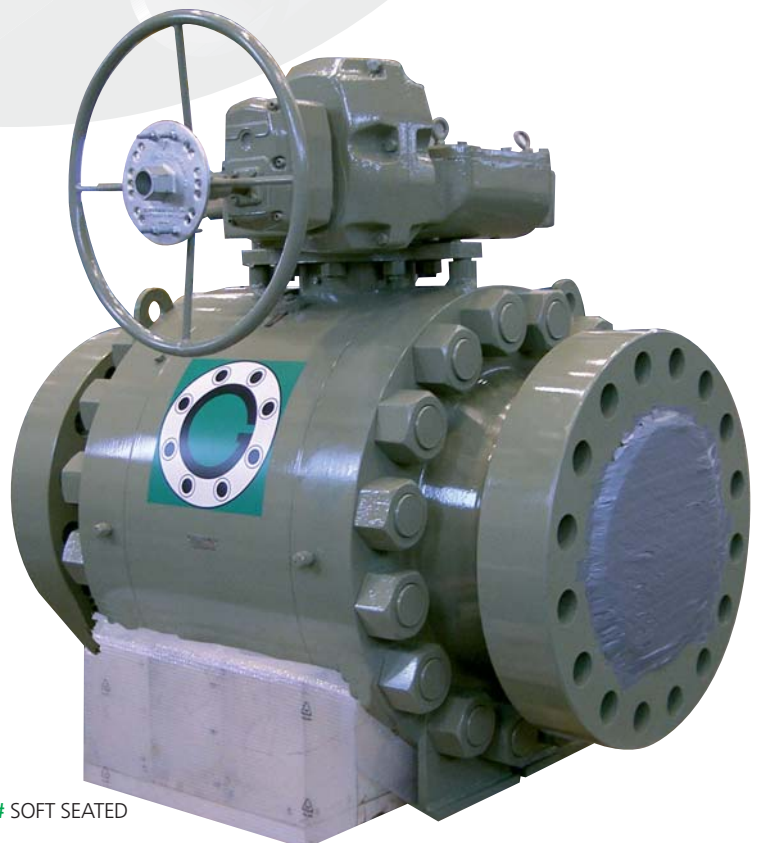
12" 2500# METAL SEATED



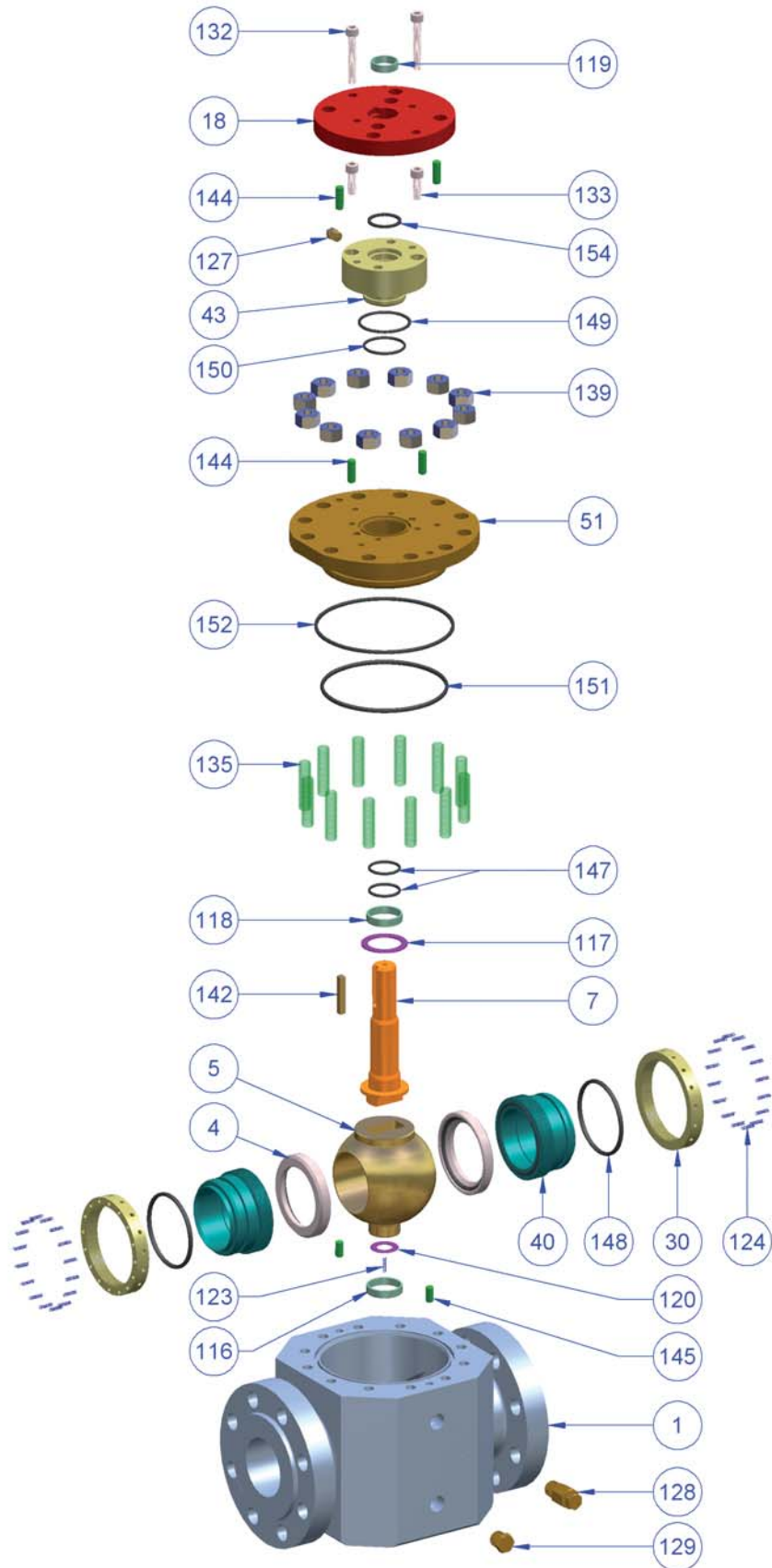
16" 1500# METAL SEATED



12" 310 BARG
METAL SEATED



20" 1500# SOFT SEATED

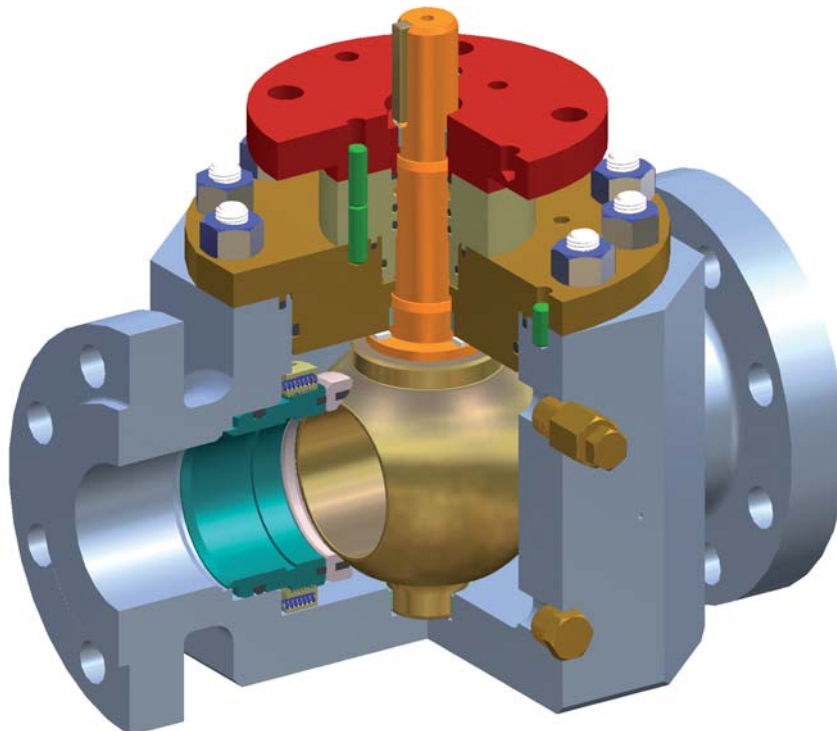




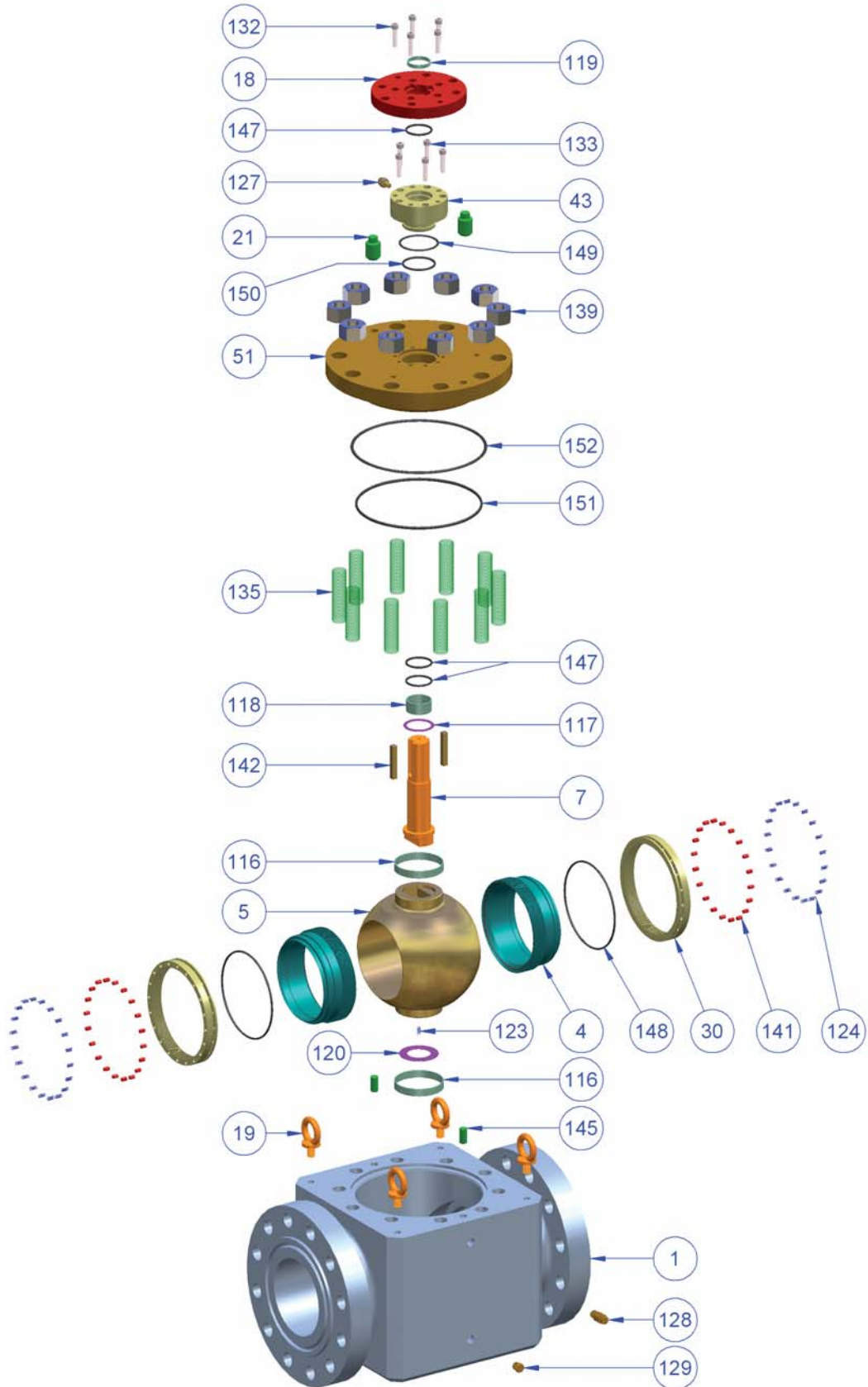
Bolted Body Top Entry 4" & Smaller

SPARE PARTS	POS.	PART NAME	SPARE PARTS	POS.	PART NAME
	1	BODY		128	VENT VALVE
√	4	SEAT		129	DRAIN PLUG
	5	BALL		132	ADAPTER PLATE CAP SCREW
	7	STEM		133	GL. TRUNNION CAP SCREW
	18	ADAPTER PLATE		135	BODY/BONNET STUD BOLT
	30	SPRING CARRIER		139	BODY/BONNET NUT
√	40	PISTON SEAT		142	STEM KEY
	43	GLAND TRUNNION		144	STOP PIN
	51	BONNET		145	BONNET PIN
√	116	BALL BEARING	√	147	STEM O-RING
√	117	STEM THRUST WASHER	√	148	SEAT O-RING
√	118	STEM BEARING	√	149	BONNET/GL.TRUNNION GASKET
√	119	ADAPTER PLATE BEARING	√	150	BONNET/GL.TRUNNION O-RING
√	120	BALL THRUST WASHER	√	151	BODY/BONNET O-RING
	123	ANTISTATIC DEVICE (SPRING)	√	152	BODY/BONNET GASKET
	124	SEAT SPRING	√	154	STEM GASKET
	127	STEM GREASE FITTING			

Spare parts (√) = Two years recommended spare parts.



S11	BALL VALVE T.E. TRUNNION MOUNTED B.B. FULL BORE
S12	BALL VALVE T.E. TRUNNION MOUNTED B.B. REDUCED BORE
S15	BALL VALVE SUBSEA T.E. TRUNNION MOUNTED B.B. FULL BORE
S16	BALL VALVE SUBSEA T.E. TRUNNION MOUNTED B.B. REDUCED BORE

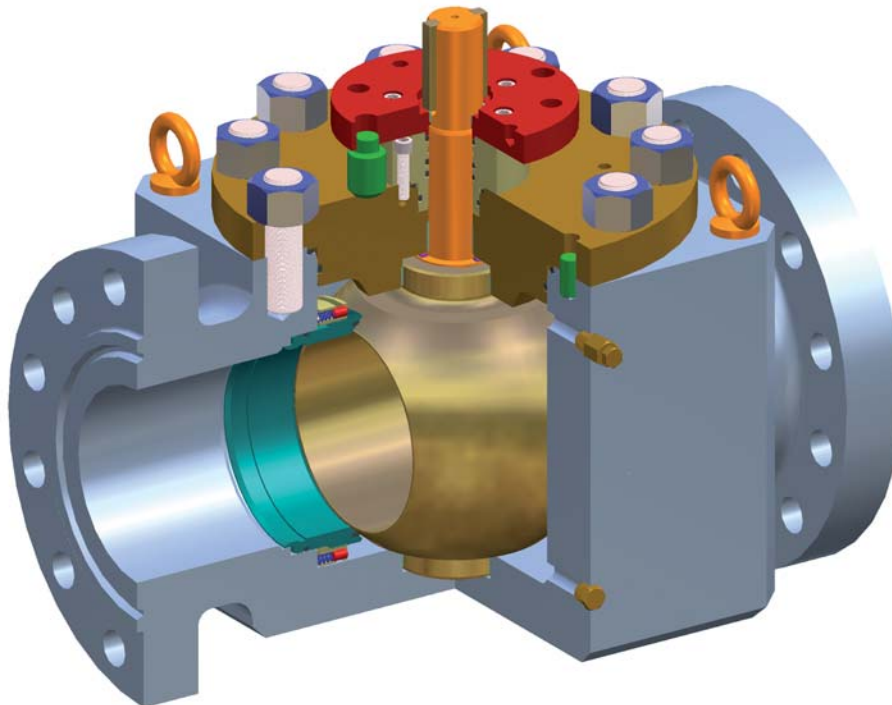




Bolted Body Top Entry 6" & Larger

SPARE PARTS	POS.	PART NAME	SPARE PARTS	POS.	PART NAME
	1	BODY		127	STEM GREASE FITTING
√	4	SEAT		128	VENT VALVE
	5	BALL		129	DRAIN PLUG
	7	STEM		132	ADAPTER PLATE CAP SCREW
	18	ADAPTER PLATE		133	GL. TRUNNION CAP SCREW
	19	EYE BOLT		135	BODY/BONNET STUD BOLT
	21	ANCHOR PIN		139	BODY/BONNET NUT
	30	SPRING CARRIER		141	SPRING CARRIER PIN
	43	GLAND TRUNNION		142	STEM KEY
	51	BONNET		145	BONNET PIN
√	116	BALL BEARING	√	147	STEM O-RING
√	117	STEM THRUST WASHER	√	148	SEAT O-RING
√	118	STEM BEARING	√	149	BONNET/GL.TRUNNION O-RING
√	119	ADAPTER PLATE BEARING	√	150	BONNET/GL.TRUNNION O-RING
√	120	BALL THRUST WASHER	√	151	BODY/BONNET O-RING
	123	ANTISTATIC DEVICE (SPRING)	√	152	BODY/BONNET O-RING
	124	SEAT SPRING			

Spare parts (√) = Two years recommended spare parts.



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S12	BALL VALVE T.E. TRUNNION MOUNTED B.B. REDUCED BORE
S15	BALL VALVE SUBSEA T.E. TRUNNION MOUNTED B.B. FULL BORE
S16	BALL VALVE SUBSEA T.E. TRUNNION MOUNTED B.B. REDUCED BORE



Design Features Top Entry

TOP ENTRY BODY AND CLOSURE DESIGN

The body to bonnet joint is designed in accordance with ASME VIII Div. 1. The body thickness design is in accordance with ASME B16.34. The resulting overall body and bonnet structure and closure interface is generous in size thus allowing for a wide selection of gasket types and sealing configurations to meet severe operating parameters and services conditions such as sour service, low temperature and high temperature conditions.

MAINTENANCE

The top entry ball valve is designed to be maintained in line. The bolted construction allows disassembly on-site for inspections and maintenance or repairs.

Clearing the bonnet off the valve allows free access to the ball and the seats which can simultaneously be taken out with the use of simple tools available on request, without the need of removing the valve from the line.

A special modified design is available for maintenance of top entry to be installed with stem in horizontal position.



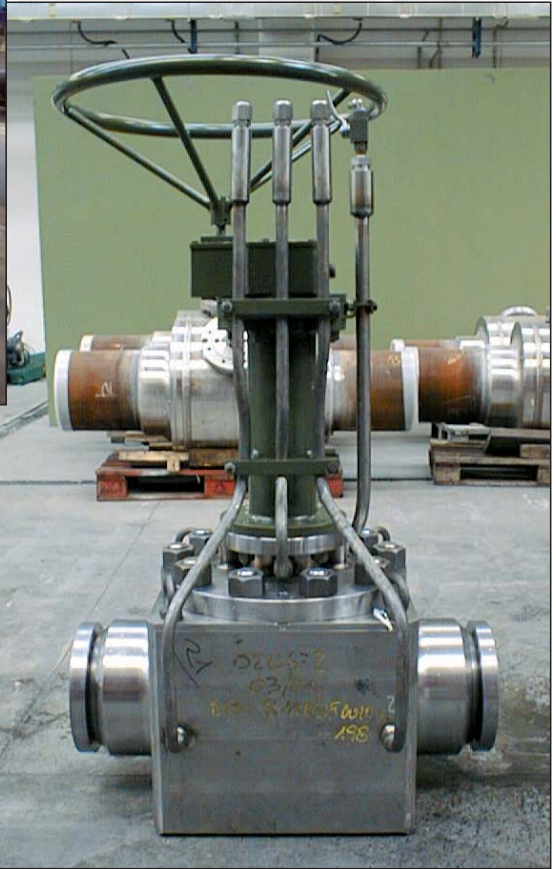
16" 2500# METAL SEATED



Design Features Top Entry



16" 2500# METAL SEATED



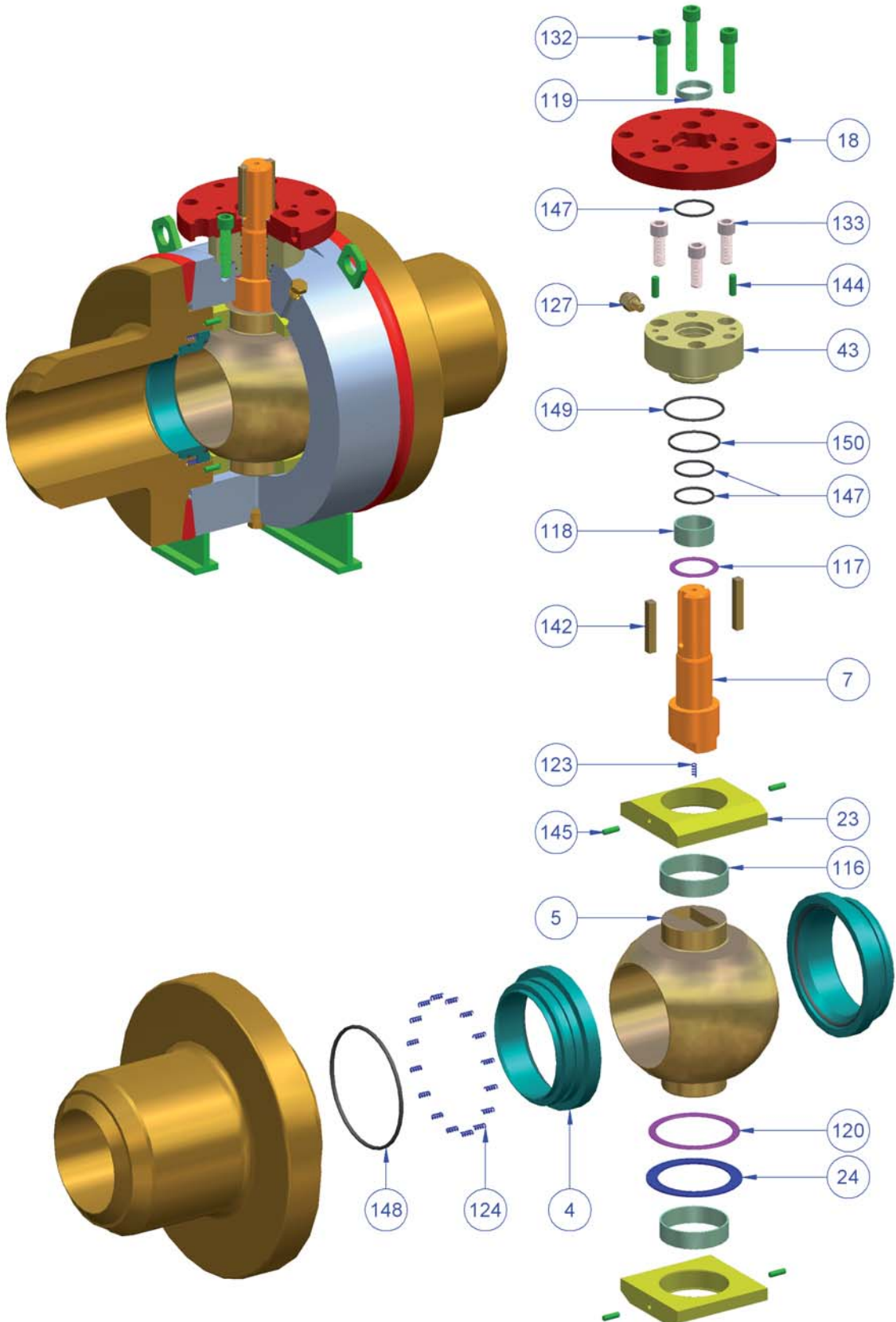
8" 900# METAL SEATED



16" 2500# METAL SEATED



12" 2500# METAL SEATED

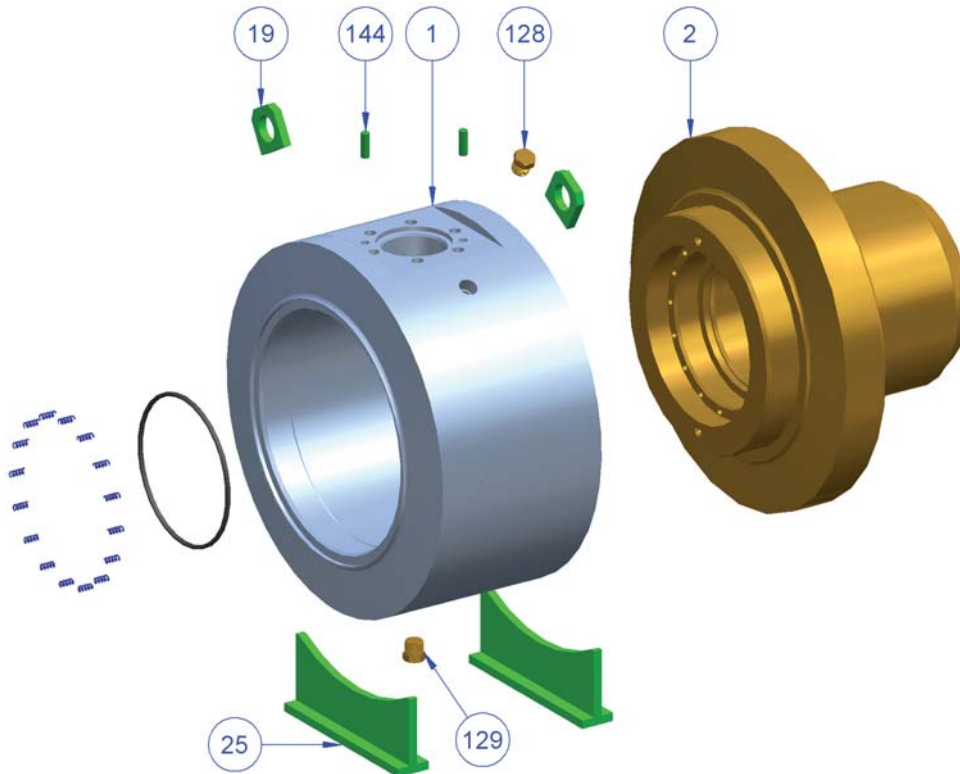




Welded Body Subsea

SPARE PARTS	POS.	PART NAME	SPARE PARTS	POS.	PART NAME
	1	BODY	√	120	BALL THRUST WASHER
	2	CLOSURE		123	ANTISTATIC DEVICE (SPRING)
√	4	SEAT		124	SEAT SPRING
	5	BALL		127	STEM GREASE FITTING
	7	STEM		128	VENT PLUG
	18	ADAPTER PLATE		129	DRAIN PLUG
	19	LIFTING LUG		132	ADAPTER PLATE CAP SCREW
	23	BALL SUPPORT		133	GL. TRUNNION CAP SCREW
	24	BALL SPACER RING		142	STEM KEY
	25	VALVE SUPPORT		144	STOP PIN
	43	GLAND TRUNNION		145	PIN BALL SUPPORT
√	116	BALL BEARING	√	147	STEM O-RING
√	117	STEM THRUST WASHER	√	148	SEAT O-RING
√	118	STEM BEARING	√	149	BODY/GL. TRUNNION O-RING
√	119	ADAPTER PLATE BEARING	√	150	BODY/GL. TRUNNION O-RING

Spare parts (√) = Two years recommended spare parts.



S32	BALL VALVE SUBSEA S.E. TRUNNION MOUNTED FULLY WELDED FULL BORE 2 PIECES
S33	BALL VALVE SUBSEA S.E. TRUNNION MOUNTED FULLY WELDED REDUCED BORE 2 PIECES
S34	BALL VALVE SUBSEA S.E. TRUNNION MOUNTED FULLY WELDED FULL BORE 3 PIECES
S35	BALL VALVE SUBSEA S.E. TRUNNION MOUNTED FULLY WELDED REDUCED BORE 3 PIECES



Welded Body Subsea

BODY CONSTRUCTION

The body closure design is per ASME Section VIII Div 1. The body is a weldment of forged hot formed rings. The fabricated body assembly is subjected to NDE per ASME VIII Div. 1, App. 12 on the circumferential weld joints of the body. A dye penetrant test is performed on the welded joints.

MAINTENANCE

The Fully Welded Design provides for limited maintenance on-site. On-site repairs or maintenance is limited to inspection and replacement of the upper seal at the stem to bonnet. The upper O-ring can be replaced with the line under pressure, provided that the body cavity is bleed off to atmosphere with the ball in the closed position. A complete replacement of the stem, gland plate and the stem seals can also be achieved with the valve installed in line without pressure. Sealant can be injected into the stem sealing area through a standard grease injection fitting to allow for temporary sealing.

Note: sealant is not required for a normal operation.



16" 600# FULLY WELDED METAL SEATED





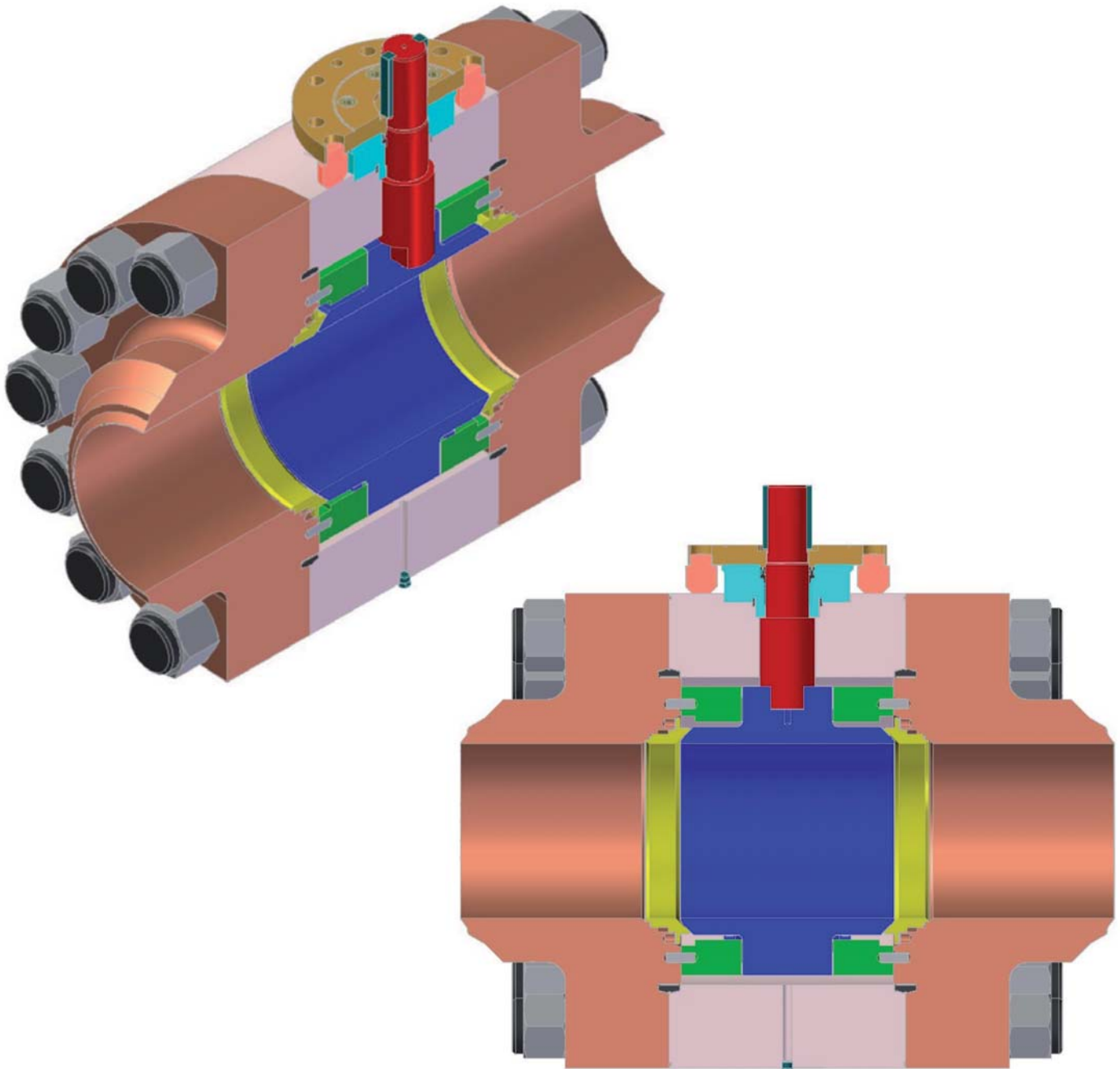
MAIN VALVE FEATURES

The Galperti Subsea Design standard is a side entry, bolted bonnet, trunnion mounted, metal seated design, suitable for subsea installation. The Top Entry and Fully Welded designs are also available with features suitable for subsea service. The valve is designed for deepwater subsea installation and operation. All valve components, including gaskets are selected for specific service conditions. All sealing areas are weld overlay with Nickel Alloy material. The valves, including flange bolting, are designed to withstand full operating pressure, pipe loads and reactions (moments and forces).

The valve internal profile is properly shaped to minimize turbulence to avoid local wear, effects of erosion and to avoid any potential obstacle to the passage of pigs.

The seat and ball design guarantees the optimum flexibility and stiffness to achieve tight shut-off at the metal-to-metal ball to seat sealing and at the lip sealed seat-to-body interface.

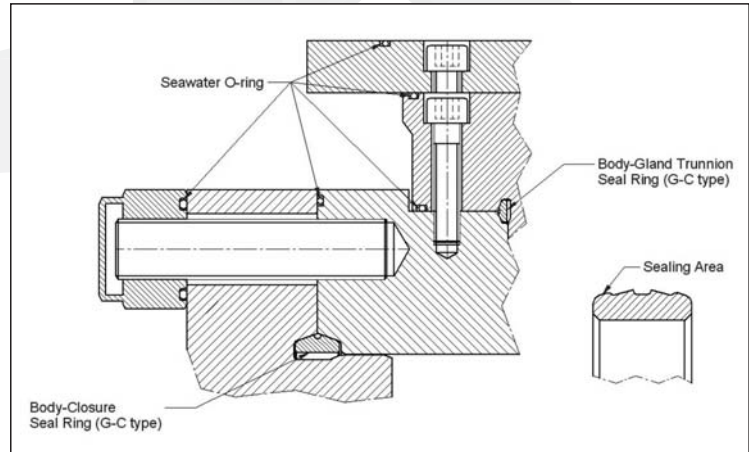
All critical joint gaskets utilize our proven compact flange seal ring technology to prevent external leakage and are tailor made to specific project design conditions and specification. Our design includes FEA verification under the most critical operating and design conditions.





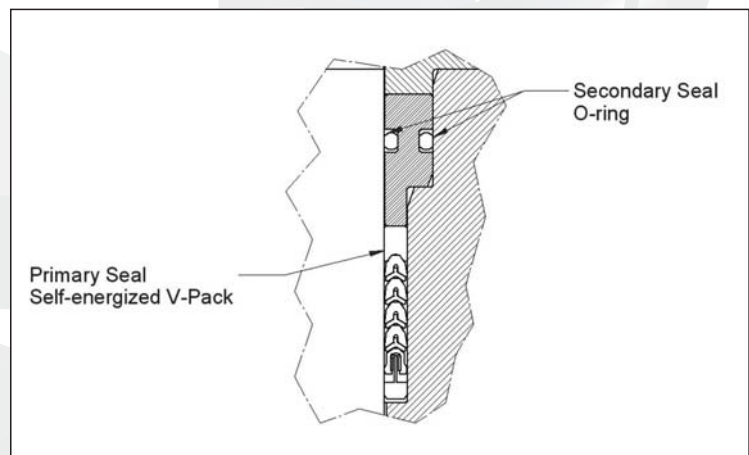
BODY CLOSURE AND BODY GLAND TRUNNION SEAL

Leakage integrity at the closure and body gland interfaces is achieved by the use of our field proven compact seal ring design feature. This type of compact seal ring is well known for its efficiency in severe sub-sea pipeline applications over many years (full data is available). The Body Gland Trunnion and the Body-to-Gland Trunnion Seals are fully metal to metal, auto energised and pressure energising. This metal seal gasket is designed to achieve a bi-directional seal, thus it also provides tight seal from the external environment to valve body cavity. An O-Ring gasket is provided to create an additional barrier against leaks from environment to valve body. Body Flange Bolting preload insures proper loading of the gasketed closure to achieve a leak tight closure for all predictable operating conditions.



STEM SEAL

Stem leak tightness integrity is achieved by use of a multiple sealing system. The primary seal is made by a self energised V-PACK. The secondary seal is made by a lantern ring with 2 o-rings. The first sealing barrier is made by the lip seal which then energises the back-up rings which are made up of different thermoplastic materials (PEEK, PTFE, reinforced PTFE) and which combine to achieve a tight seal, long life and anti-extrusion performance. This V-PACK is auto-energised to guarantee maintenance-free operating life.



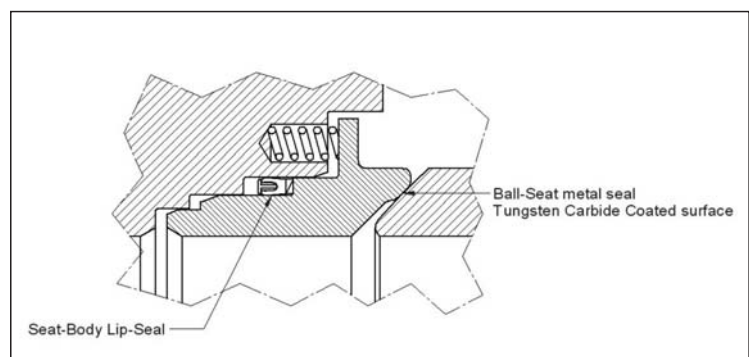
SEAT SEALS

Seat-to-Body Seal

The seat-to-body seal is achieved through the use of a thermoplastic lip seal. Thermoplastic materials are selected and combined to achieve tight seal, long life and anti extrusion capability. The seat gasket provides a single piston effect and is a self relieving feature. If required a bi-directional type can be provided to obtain double piston function. The seat gasket is spring energized to provide a tight seal at low pressure. The seat gasket is sized to accommodate the different gaps between body pockets and seats arising from predictable operating loads; verification is carried out by FEA.

Seat-to-Ball Seal

The seat-to-ball seal is achieved with ground and lapped Tungsten Carbide Coated surfaces on both seat rings and ball. In order to guarantee sealing capability throughout the whole range of operating pressure, the seat rings are designed to provide the exact flexibility required to match the elastic deformations of the ball. Simulation is carried out utilizing FEA and this analysis includes a study of the contact pressures between the ball and seats. Contact stress shall be enough to guarantee tight seal (all around the contact surface) while stress shall not exceed allowable figures to avoid excessive wear or damage to the carbide. TCC and relevant manufacturing procedures come from previous experiences of valves operating in identical services. Qualifications and operation records are available for review.



MATERIAL SELECTION

Metallic Materials

Metallic materials selection is carried out in accordance with client specified service and operating parameters. Selection may include, but is not limited to; Low Temp Carbon Steel CRA clad (if required, locally or on the whole of the wetted surfaces), Stainless Steels, Duplex Stainless Steel, Super Duplex Stainless Steel, Nickel-Alloys.

All metal parts, including cladding, are designed and manufactured by Galperti Engineering & Flow Control S.r.l. having full control of all production stages from forging through final machining and secondary processes. Bolting materials are supplied with restricted hardness to comply with Cathodic Protection requirements.

Soft Materials

O-Rings and Lip Seals V-PACK, are designed and manufactured by a qualified subcontractor.

V-Pack packings are made with a combination of different thermoplastic material rings, such as: PEEK rings (Top/Bottom) which prevent HP extrusion, or Carbon reinforced PTFE which combines good tightness and anti-extrusion capabilities. PTFE which provides excellent tightness.

Hardfacings

Hardfacing of complete spherical ball surface and seat seal areas is achieved through the use of Tungsten Carbide Coating. A recommended process is W123 PRAXAIR. Other TC coating is available on request.

6" 150# METAL SEATED
4" 150# METAL SEATED



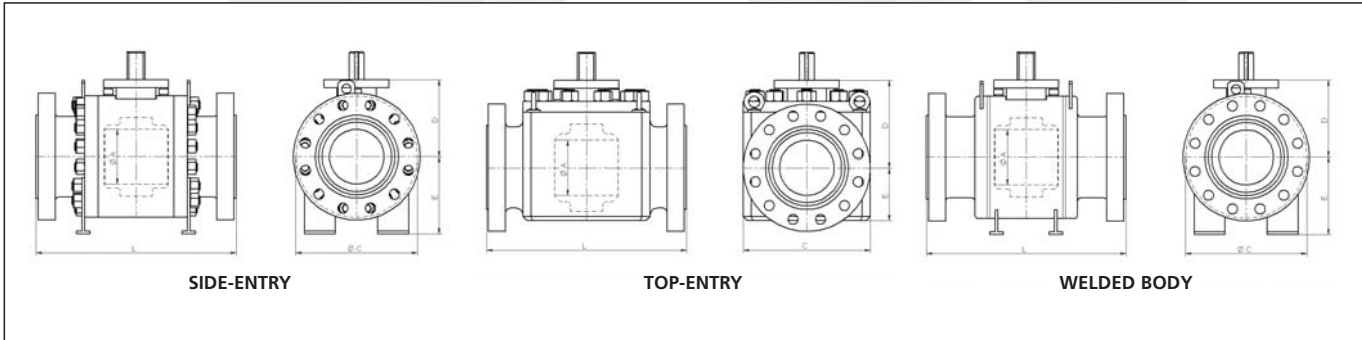
2" 1500# METAL SEATED

10" 1500# METAL SEATED





Dimension & Weights



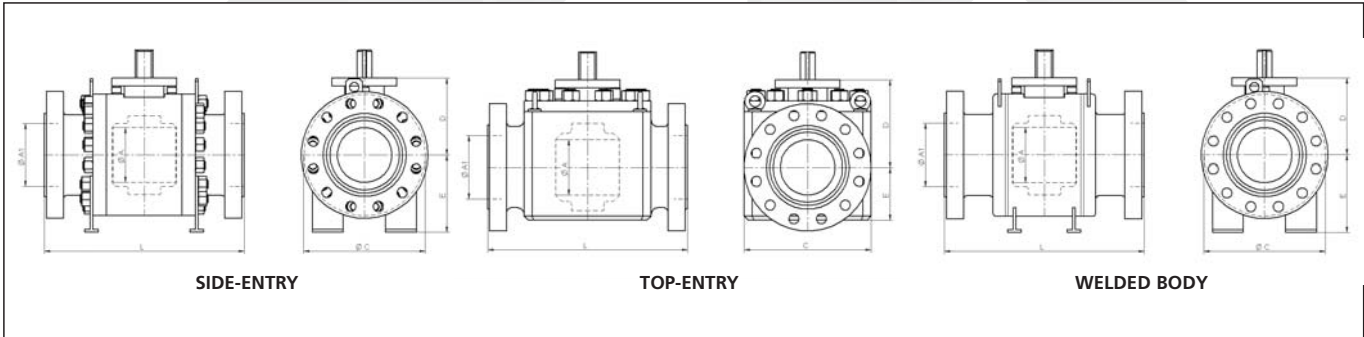
ASME CLASS 150# FULL BORE

ALL TYPES		SIDE-ENTRY						TOP-ENTRY					WELDED BODY						
SIZE in/mm	A	L-RF	L-WE	C	D	E	WEIGHT lb/Kg*	L-RF ●	L-WE ●	C	D	E	WEIGHT lb/Kg*	L-RF	L-WE	C	D	E	WEIGHT lb/Kg*
2	1,93	7,01	8,50	5,79	4,72	4,17	51	11,50	11,50	7,40	6,81	3,11	79	7,01	8,50	6,42	4,25	3,31	49
50	49	178	216	147	120	106	23	292	292	188	173	79	36	178	216	163	108	84	22
3	2,91	7,99	11,14	7,91	5,79	5,20	97	14,02	14,02	9,61	8,50	4,02	119	7,99	11,14	8,74	5,31	4,65	79
80	74	203	283	201	147	132	44	356	356	244	216	102	54	203	283	222	135	118	36
4	3,94	9,02	12,01	9,57	6,73	6,18	148	17,01	17,01	11,85	9,45	4,80	247	9,02	12,01	9,72	6,38	5,63	141
100	100	229	305	243	171	157	67	432	432	301	240	122	112	229	305	247	162	143	64
6	5,91	15,51	17,99	12,13	8,62	12,05	538	22,01	22,01	15,63	10,87	6,50	472	15,51	17,99	12,13	8,62	12,05	516
150	150	394	457	308	219	306	244	559	559	397	276	165	214	394	457	308	219	306	234
8	7,91	17,99	20,51	15,94	10,08	13,62	875	25,98	25,98	18,82	12,32	8,31	891	17,99	20,51	15,94	10,08	13,62	560
200	201	457	521	405	256	346	397	660	660	478	313	211	404	457	521	405	256	346	254
10	9,92	20,98	22,01	18,58	11,81	15,16	1279	30,98	30,98	22,68	13,94	9,76	1036	20,98	22,01	18,58	11,81	15,16	719
250	252	533	559	472	300	385	580	787	787	576	354	248	470	533	559	472	300	385	326
12	11,93	24,02	25,00	21,97	13,70	16,69	1773	32,99	32,99	25,24	15,43	11,61	1863	24,02	25,00	21,97	13,70	16,69	1100
300	303	610	635	558	348	424	804	838	838	641	392	295	845	610	635	558	348	424	499
14	13,15	27,01	30,00	23,43	14,96	18,66	2198	35,00	35,00	26,85	15,94	14,80	1951	27,01	30,00	23,43	14,96	18,66	1616
350	334	686	762	595	380	474	997	889	889	682	405	376	885	686	762	595	380	474	733
16	15,16	30,00	32,99	26,89	16,57	20,28	2623	39,02	39,02	28,86	16,93	16,22	3038	30,00	32,99	26,89	16,57	20,28	2423
400	385	762	838	683	421	515	1190	991	991	733	430	412	1378	762	838	683	421	515	1099
18	17,17	34,02	35,98	30,43	18,35	21,81	3680	42,99	42,99	32,44	18,82	17,83	3386	34,02	35,98	30,43	18,35	21,81	3274
450	436	864	914	773	466	554	1669	1092	1092	824	478	453	1536	864	914	773	466	554	1485
20	19,17	35,98	39,02	33,43	19,72	23,46	4934	47,01	47,01	37,64	21,14	21,61	6303	35,98	39,02	33,43	19,72	23,46	4127
500	487	914	991	849	501	596	2238	1194	1194	956	537	549	2859	914	991	849	501	596	1872
22	21,18	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
550	538	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
24	23,19	42,01	45,00	39,53	22,95	26,81	7335	55,00	55,00	43,46	25,24	23,82	9848	42,01	45,00	39,53	22,95	26,81	6863
600	589	1067	1143	1004	583	681	3327	1397	1397	1104	641	605	4467	1067	1143	1004	583	681	3113
26	24,92	45,00	49,02	42,40	24,92	28,78	9286	57,01	57,01	46,06	25,43	25,63	10183	45,00	49,02	42,40	24,92	28,78	8389
650	633	1143	1245	1077	633	731	4212	1448	1448	1170	646	651	4619	1143	1245	1077	633	731	3805
28	26,93	49,02	52,99	45,55	26,34	30,12	10633	60,98	60,98	48,86	27,44	27,24	12628	49,02	52,99	45,55	26,34	30,12	10117
700	684	1245	1346	1157	669	765	4823	1549	1549	1241	697	692	5728	1245	1346	1157	669	765	4589
30	28,94	50,98	55,00	49,45	27,91	32,24	12718	65,00	65,00	52,48	28,86	29,84	15388	50,98	55,00	49,45	27,91	32,24	11665
750	735	1295	1397	1256	709	819	5769	1651	1651	1333	733	758	6980	1295	1397	1256	709	819	5291
32	30,67	54,02	60,00	51,85	29,49	33,82	14469	70,00	70,00	56,06	30,43	30,83	18799	54,02	60,00	51,85	29,49	33,82	13662
800	779	1372	1524	1317	749	859	6563	1778	1778	1424	773	783	8527	1372	1524	1317	749	859	6197
34	32,68	57,99	64,02	54,33	31,42	34,96	17699	75,98	75,98	59,29	31,65	32,05	22185	57,99	64,02	54,33	31,42	34,96	16195
850	830	1473	1626	1380	798	888	8028	1930	1930	1506	804	814	10063	1473	1626	1380	798	888	7346
36	34,41	60,00	67,99	57,76	32,87	36,42	20615	82,01	82,01	61,50	32,44	32,83	25393	60,00	67,99	57,76	32,87	36,42	18618
900	874	1524	1727	1467	835	925	9351	2083	2083	1562	824	834	11518	1524	1727	1467	835	925	8445
38	36,42	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
950	925	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
40	38,43	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1000	976	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
42	40,16	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1050	1020	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
48	45,91	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1200	1166	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

- Weight figures are relevant to flanged end valves.
 * For dimensions & weights in larger sizes consult the factory.
 - Minimum bore for full-opening valves shall not less than those specified.
 - End to end dimensions according to API 6D/ISO 14313 Class 600.
 Dimensions C, D, E and weights are subject to change without notice.



Dimension & Weights



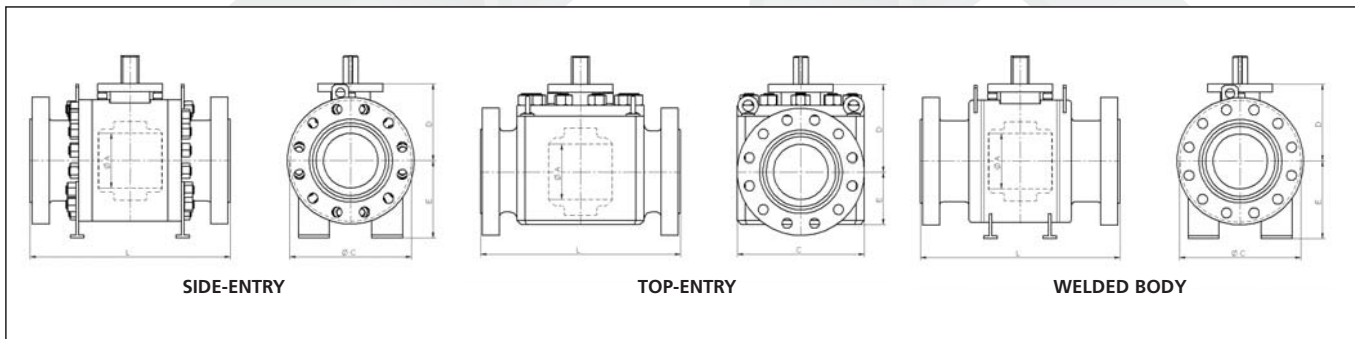
ASME CLASS 150# REDUCED BORE

ALL TYPES			SIDE-ENTRY					TOP-ENTRY					WELDED BODY							
SIZE in/mm	A1	A	L-RF	L-WE	C	D	E	WEIGHT lb/Kg*	L-RF ●	L-WE ●	C	D	E	WEIGHT lb/Kg*	L-RF	L-WE	C	D	E	WEIGHT lb/Kg*
3x2 80x50	2,91 74	1,93 49	7,99 203	11,14 283	5,79 147	4,72 120	4,17 106	62 28	14,02 356	14,02 356	7,40 188	6,81 173	3,11 79	90 41	7,99 203	11,14 283	6,42 163	4,25 108	3,31 84	60 27
4x3 100x80	3,94 100	2,91 74	9,02 229	12,01 305	7,91 201	5,79 147	5,20 132	108 49	17,01 432	17,01 432	9,61 244	8,50 216	4,02 102	130 59	9,02 229	12,01 305	8,74 222	5,31 135	4,65 118	90 41
6x4 150x100	5,91 150	3,94 100	15,51 394	17,99 457	9,57 243	6,73 171	6,18 157	163 74	22,01 559	22,01 559	11,85 301	9,45 240	4,80 122	262 119	15,51 394	17,99 457	9,72 247	6,38 162	5,63 143	157 71
8x6 200x150	7,91 201	5,91 150	17,99 457	20,51 521	12,13 308	8,62 219	12,05 306	571 259	25,98 660	25,98 660	15,63 397	10,87 276	6,50 165	505 229	17,99 457	20,51 521	12,13 308	8,62 219	12,05 306	549 249
10x8 250x200	9,92 252	7,91 201	20,98 533	22,01 559	15,94 405	10,08 256	13,62 346	904 410	30,98 787	30,98 787	18,82 478	12,32 313	8,31 211	919 417	20,98 533	22,01 559	15,94 405	10,08 256	13,62 346	589 267
12x10 300x250	11,93 303	9,92 252	24,02 610	25,00 635	18,58 472	11,81 300	15,16 385	1340 608	32,99 838	32,99 838	22,68 576	13,94 354	9,76 248	1098 498	24,02 610	25,00 635	18,58 472	11,81 300	15,16 385	780 354
14x10 350x250	13,15 334	9,92 252	27,01 686	30,00 762	18,58 472	11,81 300	15,16 385	1393 632	35,00 889	35,00 889	22,68 576	13,94 354	9,76 248	1151 522	27,01 686	30,00 762	18,58 472	11,81 300	15,16 385	833 378
14x12 350x300	13,15 334	11,93 303	27,01 686	30,00 762	21,97 558	13,70 348	16,69 424	1825 828	35,00 889	35,00 889	25,24 641	15,43 392	11,61 295	1916 869	27,01 686	30,00 762	21,97 558	13,70 348	16,69 424	1153 523
16x12 400x300	15,16 385	11,93 303	30,00 762	32,99 838	21,97 558	13,70 348	16,69 424	1865 846	39,02 991	39,02 991	25,24 641	15,43 392	11,61 295	1955 887	30,00 762	32,99 838	21,97 558	13,70 348	16,69 424	1193 541
16x14 400x350	15,16 385	13,15 334	30,00 762	32,99 838	23,43 595	14,96 380	18,66 474	2238 1015	39,02 991	39,02 991	26,85 682	15,94 405	14,80 376	1991 903	30,00 762	32,99 838	23,43 595	14,96 380	18,66 474	1656 751
18x16 450x400	17,17 436	15,16 385	34,02 864	35,98 914	26,89 683	16,57 421	20,28 515	2672 1212	42,99 1092	42,99 1092	28,86 733	16,93 430	16,22 412	3086 1400	34,02 864	35,98 914	26,89 683	16,57 421	20,28 515	2471 1121
20x16 500x400	19,17 487	15,16 385	35,98 914	39,02 991	26,89 683	16,57 421	20,28 515	2747 1246	47,01 1194	47,01 1194	28,86 733	16,93 430	16,22 412	3161 1434	35,98 914	39,02 991	26,89 683	16,57 421	20,28 515	2546 1155
20x18 500x450	19,17 487	17,17 436	35,98 914	39,02 991	30,43 773	18,35 466	21,81 554	3754 1703	47,01 1194	47,01 1194	32,44 824	18,82 478	17,83 453	3461 1570	35,98 914	39,02 991	30,43 773	18,35 466	21,81 554	3349 1519
24x20 600x500	23,19 589	19,17 487	42,01 1067	45,00 1143	33,43 849	19,72 501	23,46 596	5071 2300	55,00 1397	55,00 1397	37,64 956	21,14 537	21,61 549	6440 2921	42,01 1067	45,00 1143	33,43 849	19,72 501	23,46 596	4264 1934
30x24 750x600	28,94 735	23,19 589	50,98 1295	55,00 1397	39,53 1004	22,95 583	26,81 681	7529 3415	65,00 1651	65,00 1651	43,46 1104	25,24 641	23,82 605	10042 4555	50,98 1295	55,00 1397	39,53 1004	22,95 583	26,81 681	7057 3201
36x30 900x750	34,41 874	28,94 735	60,00 1524	67,99 1727	49,45 1256	27,91 709	32,24 819	13040 5915	82,01 2083	82,01 2083	52,48 1333	28,86 733	29,84 758	15710 7126	60,00 1524	68,03 1728	49,45 1256	27,91 709	32,24 819	11987 5437
40x36 1000x900	38,43 976	34,41 874	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
48x40 1200x1000	45,91 1166	38,43 976	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

- Weight figures are relevant to flanged end valves.
 - * For dimensions & weights in larger sizes consult the factory.
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 - End to end dimensions according to API 6D/ISO 14313 Class 600.
- Dimensions C, D, E and weights are subject to change without notice.



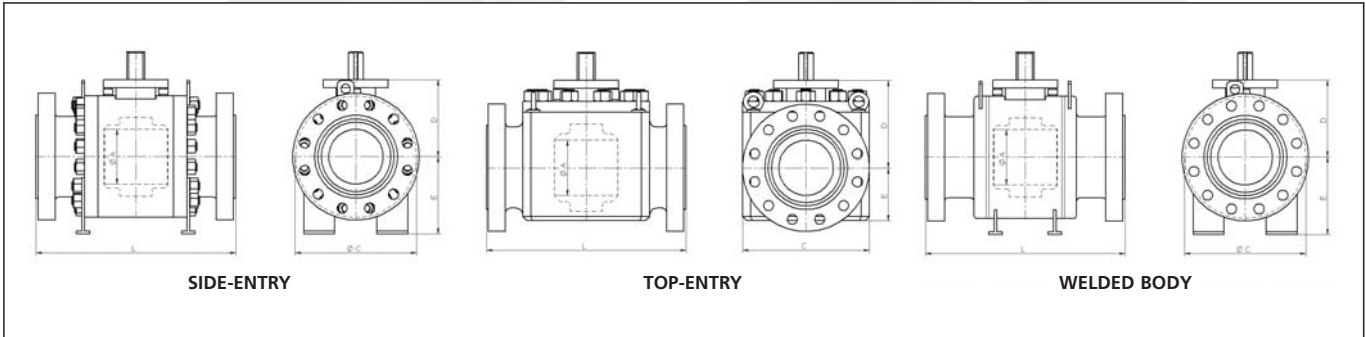
Dimension & Weights



ASME CLASS 300# REDUCED BORE

ALL TYPES			SIDE-ENTRY							TOP-ENTRY						WELDED BODY					
SIZE in/mm	A1	A	L-RF	L-WE	C	D	E	WEIGHT lb/Kg*	L-RF •	L-WE •	C	D	E	WEIGHT lb/Kg*	L-RF	L-WE	C	D	E	WEIGHT lb/Kg*	
3x2 80x50	2,91 74	1,93 49	11,14 283	11,14 283	5,79 147	4,72 120	4,17 106	71 32	14,02 356	14,02 356	7,40 188	6,81 173	3,11 79	108	11,14 283	11,14 283	6,50 165	4,25 108	3,27 83	71 32	
4x3 100x80	3,94 100	2,91 74	12,01 305	12,01 305	7,91 201	5,79 147	5,20 132	139 63	17,01 432	17,01 432	9,61 244	8,50 216	4,02 102	165	12,01 305	12,01 305	8,86 225	5,31 135	4,65 118	115 52	
6x4 150x100	5,91 150	3,94 100	15,87 403	15,87 403	9,57 243	6,73 171	6,18 157	209 95	22,01 559	22,01 559	11,85 301	9,45 240	4,80 122	317	15,87 403	15,87 403	9,80 249	6,38 162	5,63 143	227 103	
8x6 200x150	7,91 201	5,91 150	19,76 502	20,51 521	12,24 311	8,62 219	12,05 306	608 276	25,98 660	25,98 660	15,63 397	10,87 276	6,50 165	670	19,76 502	20,51 521	12,24 311	8,62 219	12,05 306	586 266	
10x8 250x200	9,92 252	7,91 201	22,36 568	22,01 559	16,10 409	10,08 256	13,62 346	957 434	30,98 787	30,98 787	18,82 478	12,32 313	8,31 211	972	22,36 568	22,01 559	16,10 409	10,08 256	13,62 346	642 291	
12x10 300x250	11,93 303	9,92 252	25,51 648	25,00 635	18,74 476	11,81 300	15,16 385	1433 650	32,99 838	32,99 838	22,05 560	13,94 354	9,76 248	1598	25,51 648	25,00 635	18,74 476	11,81 300	15,16 385	849 385	
14x10 350x250	13,15 334	9,92 252	30,00 762	30,00 762	18,74 476	11,81 300	15,16 385	1539 698	35,00 889	35,00 889	22,05 560	13,94 354	9,76 248	1704	30,00 762	30,00 762	18,74 476	11,81 300	15,16 385	955 433	
14x12 350x300	13,15 334	11,93 303	30,00 762	30,00 762	22,20 564	13,70 348	16,69 424	1944 882	35,00 889	35,00 889	25,24 641	15,43 392	11,61 295	2134	30,00 762	30,00 762	22,20 564	13,70 348	16,69 424	1250 567	
16x12 400x300	15,16 385	11,93 303	32,99 838	32,99 838	22,20 564	13,70 348	16,69 424	2055 932	39,02 991	39,02 991	25,24 641	15,43 392	11,61 295	2244	32,99 838	32,99 838	22,20 564	13,70 348	16,69 424	1360 617	
16x14 400x350	15,16 385	13,15 334	32,99 838	32,99 838	23,66 601	14,96 380	18,66 474	2421 1098	39,02 991	39,02 991	26,85 682	15,94 405	14,80 376	2623	32,99 838	32,99 838	23,66 601	14,96 380	18,66 474	1814 823	
18x16 450x400	17,17 436	15,16 385	35,98 914	35,98 914	27,17 690	16,57 421	20,28 515	2829 1283	42,99 1092	42,99 1092	28,86 733	17,48 444	16,22 412	3569	35,98 914	35,98 914	27,17 690	16,57 421	20,28 515	2628 1192	
20x16 500x400	19,17 487	15,16 385	39,02 991	39,02 991	27,17 690	16,57 421	20,28 515	2992 1357	47,01 1194	47,01 1194	28,86 733	17,48 444	16,22 412	3732	39,02 991	39,02 991	27,17 690	16,57 421	20,28 515	2791 1266	
20x18 500x450	19,17 487	17,17 436	39,02 991	39,02 991	30,75 781	18,35 466	21,81 554	3999 1814	47,01 1194	47,01 1194	32,44 824	19,13 486	17,83 453	4312	39,02 991	39,02 991	30,75 781	18,35 466	21,81 554	3596 1631	
24x20 600x500	23,19 589	19,17 487	45,00 1143	45,00 1143	33,78 858	17,20 437	23,46 596	5476 2484	55,00 1397	55,00 1397	37,64 956	21,46 545	21,50 546	7923	45,00 1143	45,00 1143	33,78 858	17,20 437	23,46 596	4647 2108	
30x24 750x600	28,94 735	23,19 589	55,00 1397	55,00 1397	39,96 1015	22,95 583	26,81 681	8505 3858	65,00 1651	65,00 1651	43,46 1104	25,83 656	23,82 605	11241	55,00 1397	55,00 1397	39,96 1015	22,95 583	26,81 681	8034 3644	
36x30 900x750	34,41 874	28,94 735	67,99 1727	67,99 1727	49,96 1269	27,91 709	32,24 819	14088 6390	82,01 2083	82,01 2083	52,09 1323	30,43 773	29,84 758	17342	67,99 1727	67,99 1727	49,96 1269	27,91 709	32,24 819	13012 5902	
40x36 1000x900	38,43 976	34,41 874	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
48x40 1200x1000	45,91 1166	38,43 976	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	

- Weight figures are relevant to flanged end valves.
 - * For dimensions & weights in larger sizes consult the factory.
 - Minimum bore for full-opening valves shall not less than those specified.
 - End to end dimensions according to API 6D/ISO 14313 Class 600.
- Dimensions C, D, E and weights are subject to change without notice.



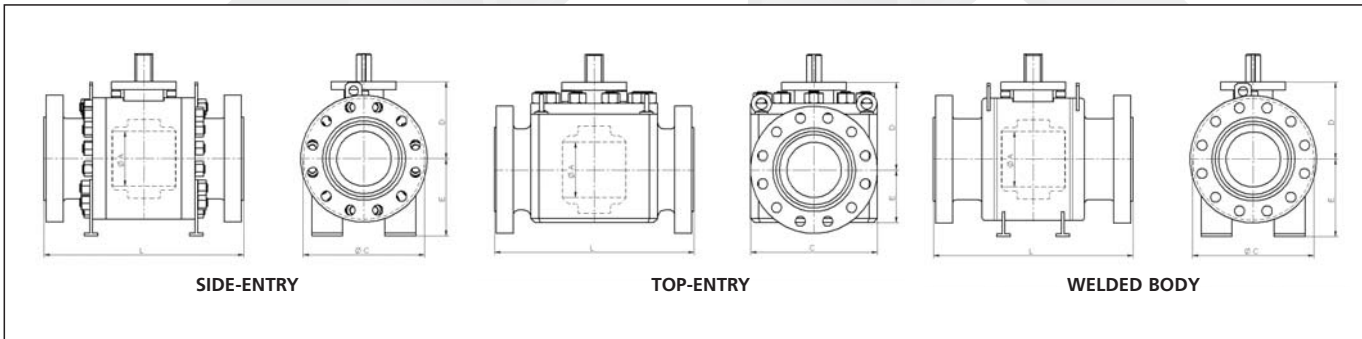
ASME CLASS 600# REDUCED BORE

ALL TYPES			SIDE-ENTRY							TOP-ENTRY							WELDED BODY						
SIZE in/mm	A1	A	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*
3x2	2,91	1,93	14,02	14,13	14,02	5,75	4,72	4,17	79	14,02	14,13	14,02	7,40	6,81	3,11	130	14,02	14,13	14,02	6,61	4,25	3,39	77
80x50	74	49	356	359	356	146	120	106	36	356	359	356	188	173	79	59	356	359	356	168	108	86	35
4x3	3,94	2,91	17,01	17,13	17,01	7,91	5,75	5,20	174	17,01	17,13	17,01	9,61	8,50	4,02	209	17,01	17,13	17,01	9,02	6,22	4,80	181
100x80	100	74	432	435	432	201	146	132	79	432	435	432	244	216	102	95	432	435	432	229	158	122	82
6x4	5,91	3,94	22,01	22,13	22,01	9,57	6,73	6,18	311	22,01	22,13	22,01	11,85	9,45	4,80	428	22,01	22,13	22,01	10,00	7,60	5,79	346
150x100	150	100	559	562	559	243	171	157	141	559	562	559	301	240	122	194	559	562	559	254	193	147	157
8x6	7,91	5,91	25,98	26,14	25,98	12,48	8,62	12,40	785	25,98	26,14	25,98	15,63	10,87	6,50	741	25,98	26,14	25,98	12,48	8,62	12,40	763
200x150	201	150	660	664	660	317	219	315	356	660	664	660	397	276	165	336	660	664	660	317	219	315	346
10x8	9,92	7,91	30,98	31,14	30,98	16,42	10,08	14,02	1274	30,98	31,14	30,98	18,82	12,32	8,31	1228	30,98	31,14	30,98	16,42	10,08	14,02	871
250x200	252	201	787	791	787	417	256	356	578	787	791	787	478	313	211	557	787	791	787	417	256	356	395
12x10	11,93	9,92	32,99	33,11	32,99	19,13	11,81	15,63	1722	32,99	33,11	32,99	22,05	13,94	9,76	1744	32,99	33,11	32,99	19,13	11,81	15,63	1003
300x250	303	252	838	841	838	486	300	397	781	838	841	838	560	354	248	791	838	841	838	486	300	397	455
14x10	13,15	9,92	35,00	35,12	35,00	19,13	11,81	15,63	1819	35,00	35,12	35,00	22,05	13,94	9,76	1841	35,00	35,12	35,00	19,13	11,81	15,63	1100
350x250	334	252	889	892	889	486	300	397	825	889	892	889	560	354	248	835	889	892	889	486	300	397	499
14x12	13,15	11,93	35,00	35,12	35,00	22,64	13,70	17,20	2407	35,00	35,12	35,00	25,24	15,43	11,61	2452	35,00	35,12	35,00	22,64	13,70	17,20	1510
350x300	334	303	889	892	889	575	348	437	1092	889	892	889	641	392	295	1112	889	892	889	575	348	437	685
16x12	15,16	11,93	39,02	39,13	39,02	22,64	13,70	17,20	2632	39,02	39,13	39,02	25,24	15,43	11,61	2676	39,02	39,13	39,02	22,64	13,70	17,20	1735
400x300	385	303	991	994	991	575	348	437	1194	991	994	991	641	392	295	1214	991	994	991	575	348	437	787
16x14	15,16	13,15	39,02	39,13	39,02	24,13	14,92	19,21	3073	39,02	39,13	39,02	26,85	17,01	14,61	3657	39,02	39,13	39,02	24,13	14,92	19,21	2310
400x350	385	334	991	994	991	613	379	488	1394	991	994	991	682	432	371	1659	991	994	991	613	379	488	1048
18x16	17,17	15,16	42,99	43,11	42,99	27,72	16,57	20,91	3578	42,99	43,11	42,99	30,43	19,76	17,20	4610	42,99	43,11	42,99	27,72	16,57	20,91	3307
450x400	436	385	1092	1095	1092	704	421	531	1623	1092	1095	1092	773	502	437	2091	1092	1095	1092	704	421	531	1500
20x16	19,17	15,16	47,01	47,24	47,01	27,72	16,57	20,91	3807	47,01	47,24	47,01	30,43	19,76	17,20	4839	47,01	47,24	47,01	27,72	16,57	20,91	3536
500x400	487	385	1194	1200	1194	704	421	531	1727	1194	1200	1194	773	502	437	2195	1194	1200	1194	704	421	531	1604
20x18	19,17	17,17	47,01	47,24	47,01	31,42	18,35	22,52	5007	47,01	47,24	47,01	32,83	21,22	19,02	6285	47,01	47,24	47,01	31,42	18,35	22,52	4469
500x450	487	436	1194	1200	1194	798	466	572	2271	1194	1200	1194	834	539	483	2851	1194	1200	1194	798	466	572	2027
24x20	23,19	19,17	55,00	55,39	55,00	34,45	19,72	24,21	6953	55,00	55,39	55,00	37,64	23,54	21,61	10811	55,00	55,39	55,00	34,45	19,72	24,21	5855
600x500	589	487	1397	1407	1397	875	501	615	3154	1397	1407	1397	956	598	549	4904	1397	1407	1397	875	501	615	2656
30x24	28,94	23,19	65,00	65,51	65,00	40,79	22,95	27,64	10536	65,00	65,51	65,00	44,88	27,20	24,84	13722	65,00	65,51	65,00	40,79	22,95	27,64	9839
750x600	735	589	1651	1664	1651	1036	583	702	4779	1651	1664	1651	1140	691	631	6224	1651	1664	1651	1036	583	702	4463
36x30	34,41	28,94	82,01	82,64	82,01	50,94	27,91	33,23	17606	82,01	82,64	82,01	52,87	34,84	32,05	22004	82,01	82,64	82,01	50,94	27,91	33,23	16036
900x750	874	735	2083	2099	2083	1294	709	844	7986	2083	2099	2083	1343	885	814	9981	2083	2099	2083	1294	709	844	7274
40x36	38,43	34,41	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1000x900	976	874	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
48x40	45,91	38,43	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1200x1000	1166	976	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

- Weight figures are relevant to flanged end valves.
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- Minimum bore for full-opening valves shall not less than those specified.
- End to end dimensions according to API 6D/ISO 14313 Class 600.
- Dimensions C, D, E and weights are subject to change without notice.



Dimension & Weights



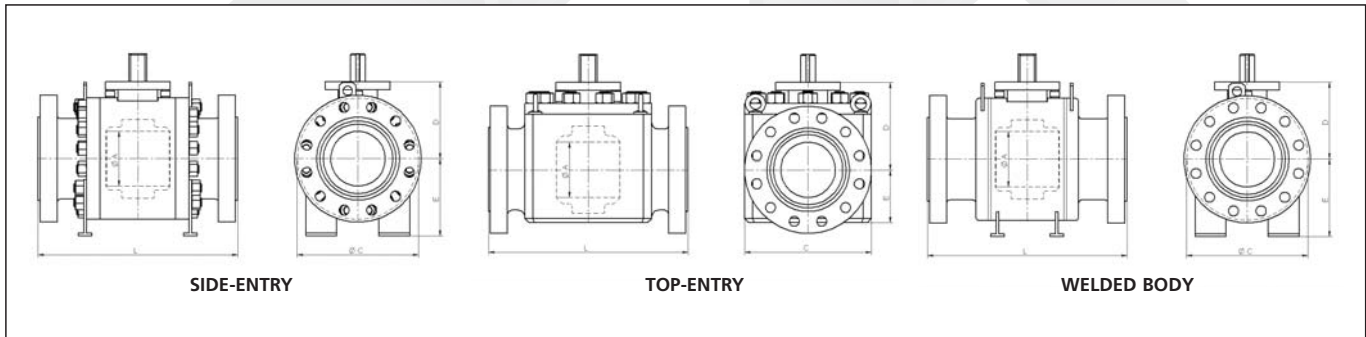
ASME CLASS 900# FULL BORE

ALL TYPES		SIDE-ENTRY							TOP-ENTRY							WELDED BODY						
SIZE in/mm	A	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*
2	1,93	14,49	14,61	14,49	6,50	5,00	4,53	132	14,49	14,61	14,49	8,74	7,60	3,31	170	14,49	14,61	14,49	7,01	4,76	3,50	112
50	49	368	371	368	165	127	115	60	368	371	368	222	193	84	77	368	371	368	178	121	89	51
3	2,91	15,00	15,12	15,00	8,54	6,22	5,75	190	15,00	15,12	15,00	10,20	9,02	4,41	251	15,00	15,12	15,00	9,57	6,22	5,00	172
80	74	381	384	381	217	158	146	86	381	384	381	259	229	112	114	381	384	381	243	158	127	78
4	3,94	17,99	18,11	17,99	10,39	7,68	7,01	397	17,99	18,11	17,99	12,32	10,75	5,08	414	17,99	18,11	17,99	10,63	7,60	6,02	300
100	100	457	460	457	264	195	178	180	457	460	457	313	273	129	188	457	460	457	270	193	153	136
6	5,91	24,02	24,13	24,02	13,43	9,65	10,00	875	24,02	24,13	24,02	16,02	12,87	6,81	853	24,02	24,13	24,02	13,43	9,65	10,00	814
150	150	610	613	610	341	245	254	397	610	613	610	407	327	173	387	610	613	610	341	245	254	369
8	7,91	29,02	29,13	29,02	16,81	11,02	11,61	1435	29,02	29,13	29,02	20,67	14,45	9,02	1682	29,02	29,13	29,02	16,81	11,02	11,61	869
200	201	737	740	737	427	280	295	651	737	740	737	525	367	229	763	737	740	737	427	280	295	394
10	9,92	32,99	33,11	32,99	20,43	12,68	13,82	2154	32,99	33,11	32,99	24,37	14,72	10,39	2108	32,99	33,11	32,99	20,43	12,68	13,82	1140
250	252	838	841	838	519	322	351	977	838	841	838	619	374	264	956	838	841	838	519	322	351	517
12	11,93	37,99	38,11	37,99	24,06	14,61	15,63	2983	37,99	38,11	37,99	28,35	18,43	12,40	3181	37,99	38,11	37,99	24,06	14,61	15,63	1709
300	303	965	968	965	611	371	397	1353	965	968	965	720	468	315	1443	965	968	965	611	371	397	775
14	12,68	40,51	40,87	40,51	27,24	15,59	18,03	3680	40,51	40,87	40,51	28,19	17,56	15,83	4418	40,51	40,87	40,51	27,24	15,59	18,03	2524
350	322	1029	1038	1029	692	396	458	1669	1029	1038	1029	716	446	402	2004	1029	1038	1029	692	396	458	1145
16	14,69	44,49	44,88	44,49	30,83	17,17	20,04	4442	44,49	44,88	44,49	32,83	20,16	18,03	6259	44,49	44,88	44,49	30,83	17,17	20,04	3801
400	373	1130	1140	1130	783	436	509	2015	1130	1140	1130	834	512	458	2839	1130	1140	1130	783	436	509	1724
18	16,65	47,99	48,50	47,99	34,06	19,45	22,05	6213	47,99	48,50	47,99	35,24	23,62	20,24	8389	47,99	48,50	47,99	34,06	19,45	22,05	5130
450	423	1219	1232	1219	865	494	560	2818	1219	1232	1219	895	600	514	3805	1219	1232	1219	865	494	560	2327
20	18,54	52,01	52,52	52,01	36,85	21,22	23,70	8389	52,01	52,52	52,01	38,86	26,65	22,64	11217	52,01	52,52	52,01	36,85	21,22	23,70	6488
500	471	1321	1334	1321	936	539	602	3805	1321	1334	1321	987	677	575	5088	1321	1334	1321	936	539	602	2943
24	22,44	60,98	61,73	60,98	44,45	24,76	27,95	12472	60,98	61,73	60,98	46,85	31,77	26,42	17608	60,98	61,73	60,98	44,45	24,76	27,95	10776
600	570	1549	1568	1549	1129	629	710	5657	1549	1568	1549	1190	807	671	7987	1549	1568	1549	1129	629	710	4888
26	24,29	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
650	617	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
28	26,18	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
700	665	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
30	28,03	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
750	712	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
32	29,92	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
800	760	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
34	31,81	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
850	808	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
36	33,66	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
900	855	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

- Weight figures are relevant to flanged end valves.
- * For dimensions & weights in larger sizes consult the factory.
- Minimum bore for full-opening valves shall not less than those specified.
- End to end dimensions according to API 6D/ISO 14313 Class 600.
- Dimensions C, D, E and weights are subject to change without notice.



Dimension & Weights



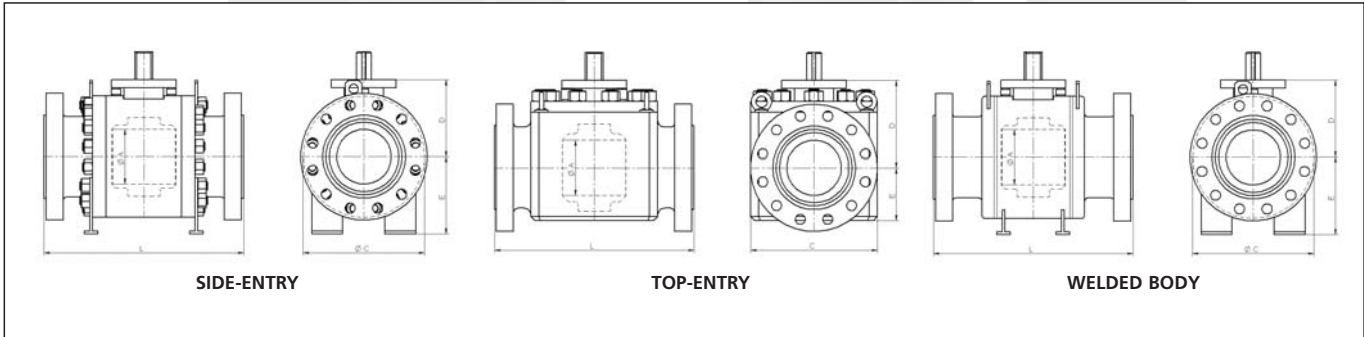
ASME CLASS 900# REDUCED BORE

ALL TYPES			SIDE-ENTRY							TOP-ENTRY							WELDED BODY						
SIZE in/mm	A1	A	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*
3x2	2,91	1,93	15,00	15,12	15,00	6,50	5,00	4,53	148	15,12	15,00	15,00	8,74	7,60	3,31	185	15,00	15,12	15,00	7,01	4,76	3,50	128
80x50	74	49	381	384	381	165	127	115	67	384	381	381	222	193	84	84	381	384	381	178	121	89	58
4x3	3,94	2,91	17,99	18,11	17,99	8,54	6,22	5,75	229	18,11	17,99	17,99	10,20	9,02	4,41	291	17,99	18,11	17,99	9,57	6,22	5,00	212
100x80	100	74	457	460	457	217	158	146	104	460	457	457	259	229	112	132	457	460	457	243	158	127	96
6x4	5,91	3,94	24,02	24,13	24,02	10,39	7,68	7,01	511	24,13	24,02	24,02	12,32	10,75	5,08	529	24,02	24,13	24,02	10,63	7,60	6,02	414
150x100	150	100	610	613	610	264	195	178	232	613	610	610	313	273	129	240	610	613	610	270	193	153	188
8x6	7,91	5,91	29,02	29,13	29,02	13,43	9,65	10,00	1030	29,13	29,02	29,02	16,02	12,87	6,81	1008	29,02	29,13	29,02	13,43	9,65	10,00	968
200x150	201	150	737	740	737	341	245	254	467	740	737	737	407	327	173	457	737	740	737	341	245	254	439
10x8	9,92	7,91	32,99	33,11	32,99	16,81	11,02	11,61	1620	33,11	32,99	32,99	20,67	14,45	9,02	1867	32,99	33,11	32,99	16,81	11,02	11,61	1054
250x200	252	201	838	841	838	427	280	295	735	841	838	838	525	367	229	847	838	841	838	427	280	295	478
12x10	11,93	9,92	37,99	38,11	37,99	20,43	12,68	13,82	2344	38,11	37,99	37,99	24,37	14,72	10,39	2297	37,99	38,11	37,99	20,43	12,68	13,82	1329
300x250	303	252	965	968	965	519	322	351	1063	968	965	965	619	374	264	1042	965	968	965	519	322	351	603
14x10	12,68	9,92	40,51	40,87	40,51	20,43	12,68	13,82	2467	40,87	40,51	40,51	24,37	14,72	10,39	2421	40,51	40,87	40,51	20,43	12,68	13,82	1453
350x250	322	252	1029	1038	1029	519	322	351	1119	1038	1029	1029	619	374	264	1098	1029	1038	1029	519	322	351	659
14x12	12,68	11,93	40,51	40,87	40,51	24,06	14,61	15,63	3106	40,87	40,51	40,51	28,35	18,43	12,40	3305	40,51	40,87	40,51	24,06	14,61	15,63	1832
350x300	322	303	1029	1038	1029	611	371	397	1409	1038	1029	1029	720	468	315	1499	1029	1038	1029	611	371	397	831
16x12	14,69	11,93	44,49	44,88	44,49	24,06	14,61	15,63	3221	44,88	44,49	44,49	28,35	18,43	12,40	3419	44,49	44,88	44,49	24,06	14,61	15,63	1947
400x300	373	303	1130	1140	1130	611	371	397	1461	1140	1130	1130	720	468	315	1551	1130	1140	1130	611	371	397	883
16x14	14,69	12,68	44,49	44,88	44,49	27,24	15,59	18,03	3794	44,88	44,49	44,49	28,19	17,56	15,83	4533	44,49	44,88	44,49	27,24	15,59	18,03	2639
400x350	373	322	1130	1140	1130	692	396	458	1721	1140	1130	1130	716	446	402	2056	1130	1140	1130	692	396	458	1197
18x16	16,65	14,69	47,99	48,50	47,99	30,83	17,17	20,04	4777	48,50	47,99	47,99	32,83	20,16	18,03	6594	47,99	48,50	47,99	30,83	17,17	20,04	4136
450x400	423	373	1219	1232	1219	783	436	509	2167	1232	1219	1219	834	512	458	2991	1219	1232	1219	783	436	509	1876
20x16	18,54	14,69	52,01	52,52	52,01	30,83	17,17	20,04	5104	52,52	52,01	52,01	32,83	20,16	18,03	6920	52,01	52,52	52,01	30,83	17,17	20,04	4462
500x400	471	373	1321	1334	1321	783	436	509	2315	1334	1321	1321	834	512	458	3139	1321	1334	1321	783	436	509	2024
20x18	18,54	16,65	52,01	52,52	52,01	34,06	19,45	22,05	6539	52,52	52,01	52,01	35,24	23,62	20,24	8715	52,01	52,52	52,01	34,06	19,45	22,05	5456
500x450	471	423	1321	1334	1321	865	494	560	2966	1334	1321	1321	895	600	514	3953	1321	1334	1321	865	494	560	2475
24x20	22,44	18,54	60,98	61,73	60,98	36,85	21,22	23,70	9738	61,73	60,98	60,98	38,86	26,65	22,64	12566	60,98	61,73	60,98	36,85	21,22	23,70	7837
600x500	570	471	1549	1568	1549	936	539	602	4417	1568	1549	1549	987	677	575	5700	1549	1568	1549	936	539	602	3555
30x24	28,03	22,44	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
750x600	712	570	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
36x30	33,66	28,03	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
900x750	855	712	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

- Weight figures are relevant to flanged end valves.
 - * For dimensions & weights in larger sizes consult the factory.
 - Minimum bore for full-opening valves shall not less than those specified.
 - End to end dimensions according to API 6D/ISO 14313 Class 600.
- Dimensions C, D, E and weights are subject to change without notice.



Dimension & Weights



ASME CLASS 1500# FULL BORE

SIZE in/mm	SIDE-ENTRY								TOP-ENTRY								WELDED BODY							
	A	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*		
2	1,93	14,49	14,61	14,49	6,50	5,00	4,53	132	14,49	14,61	14,49	8,74	7,60	3,31	179	14,49	14,61	14,49	8,86	4,76	4,37	128		
50	49	368	371	368	165	127	115	60	368	371	368	222	193	84	81	368	371	368	225	121	111	58		
3	2,91	18,50	18,62	18,50	8,54	6,22	5,75	245	18,50	18,62	18,50	11,02	9,72	4,41	313	18,50	18,62	18,50	12,09	6,22	6,18	251		
80	74	470	473	470	217	158	146	111	470	473	470	280	247	112	142	470	473	470	307	158	157	114		
4	3,94	21,50	21,61	21,50	10,43	7,68	7,01	406	21,50	21,61	21,50	14,02	11,61	5,67	606	21,50	21,61	21,50	13,43	7,60	7,44	425		
100	100	546	549	546	265	195	178	184	546	549	546	356	295	144	275	546	549	546	341	193	189	193		
6	5,67	27,76	27,99	27,76	17,17	11,22	12,83	1032	27,76	27,99	27,76	17,95	14,45	7,52	1301	27,76	27,99	27,76	17,17	11,22	12,83	977		
150	144	705	711	705	436	285	326	468	705	711	705	456	367	191	590	705	711	705	436	285	326	443		
8	7,56	32,76	33,11	32,76	21,54	13,11	14,84	1704	32,76	33,11	32,76	21,61	17,20	10,00	2064	32,76	33,11	32,76	21,54	13,11	14,84	1041		
200	192	832	841	832	547	333	377	773	832	841	832	549	437	254	936	832	841	832	547	333	377	472		
10	9,41	39,02	39,37	39,02	26,14	15,71	17,72	2579	39,02	39,37	39,02	25,63	19,76	12,01	3545	39,02	39,37	39,02	26,14	15,71	17,72	1367		
250	239	991	1000	991	664	399	450	1170	991	1000	991	651	502	305	1608	991	1000	991	664	399	450	620		
12	11,30	44,49	45,12	44,49	30,75	16,93	20,00	3567	44,49	45,12	44,49	29,65	22,17	14,02	5609	44,49	45,12	44,49	30,75	16,93	20,00	2050		
300	287	1130	1146	1130	781	430	508	1618	1130	1146	1130	753	563	356	2544	1130	1146	1130	781	430	508	930		
14	12,40	49,49	50,24	49,49	34,84	20,00	23,07	4396	49,49	50,24	49,49	33,66	23,74	17,64	6482	49,49	50,24	49,49	34,84	20,00	23,07	3027		
350	315	1257	1276	1257	885	508	586	1994	1257	1276	1257	855	603	448	2940	1257	1276	1257	885	508	586	1373		
16	14,17	54,49	55,39	54,49	39,49	22,36	25,63	5315	54,49	55,39	54,49	35,63	25,75	18,43	10542	54,49	55,39	54,49	39,49	22,36	25,63	4553		
400	360	1384	1407	1384	1003	568	651	2411	1384	1407	1384	905	654	468	4782	1384	1407	1384	1003	568	651	2065		
18	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
450	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
20	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
500	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
24	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
600	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
26	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
650	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
28	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
700	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
750	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		

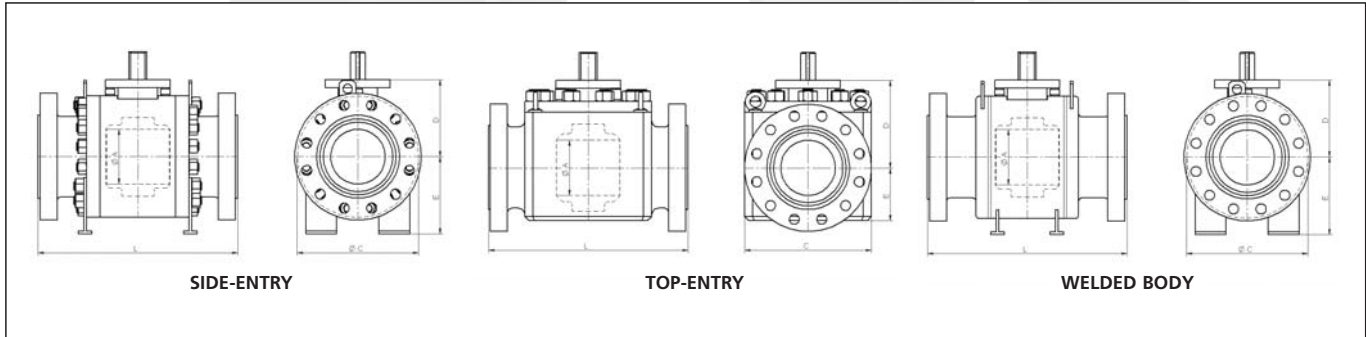
ASME CLASS 2500# FULL BORE

SIZE in/mm	SIDE-ENTRY								TOP-ENTRY							
	A	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*	
2	1,65	17,76	17,87	17,76	7,99	6,42	4,80	265	17,76	17,87	17,76	10,20	9,21	3,82	216	
50	42	451	454	451	203	163	122	120	451	454	451	259	234	97	98	
3	2,44	22,76	22,99	22,76	10,00	7,24	5,59	489	22,76	22,99	22,76	12,80	11,30	5,12	395	
80	62	578	584	578	254	184	142	222	578	584	578	325	287	130	179	
4	3,43	26,50	26,89	26,50	14,80	7,99	10,00	811	26,50	26,89	26,50	16,26	13,46	6,61	787	
100	87	673	683	673	376	203	254	368	673	683	673	413	342	168	357	
6	5,16	35,98	36,50	35,98	17,20	9,41	11,61	1682	35,98	36,50	35,98	19,65	15,04	9,80	2132	
150	131	914	927	914	437	239	295	763	914	927	914	499	382	249	967	
8	7,05	40,24	40,87	40,24	26,42	15,75	15,43	4418	40,24	40,87	40,24	24,65	18,43	12,64	4015	
200	179	1022	1038	1022	671	400	392	2004	1022	1038	1022	626	468	321	1821	
10	8,78	50,00	50,87	50,00	31,65	18,62	17,44	6706	50,00	50,87	50,00	28,86	20,55	14,02	5944	
250	223	1270	1292	1270	804	473	443	3042	1270	1292	1270	733	522	356	2696	
12	10,43	55,98	56,89	55,98	34,84	20,87	20,04	9264	55,98	56,89	55,98	30,83	23,35	16,42	7829	
300	265	1422	1445	1422	885	530	509	4202	1422	1445	1422	783	593	417	3551	
14	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
350	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
16	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
400	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
18	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
450	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
20	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
500	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
24	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
600	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	

- Weight figures are relevant to flanged end valves.
- * For dimensions & weights in larger sizes consult the factory.
- Minimum bore for full-opening valves shall not less than those specified.
- End to end dimensions according to API 6D/ISO 14313 Class 600. Dimensions C, D, E and weights are subject to change without notice.



Dimension & Weights



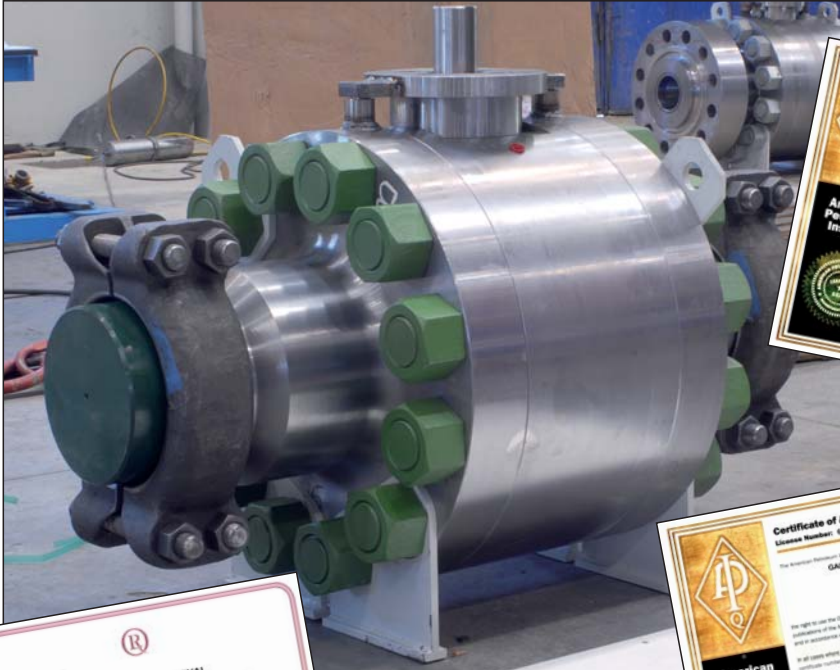
ASME CLASS 1500# REDUCED BORE

ALL TYPES			SIDE-ENTRY							TOP-ENTRY							WELDED BODY						
SIZE in/mm	A1	A	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*
3x2 80x50	2,91 74	1,93 49	18,50 470	18,62 473	18,50 470	6,50 165	5,00 127	4,53 115	174 79	18,50 470	18,62 473	18,50 470	8,74 222	7,60 193	3,31 84	220 100	18,50 470	18,62 473	18,50 470	8,86 225	4,76 121	4,37 111	170 77
4x3 100x80	3,94 100	2,91 74	21,50 546	21,61 549	21,50 546	8,54 217	6,22 158	5,75 146	289 131	21,50 546	21,61 549	21,50 546	11,02 280	9,72 247	4,41 112	357 162	21,50 546	21,61 549	21,50 546	12,09 307	6,22 158	6,18 157	295 134
6x4 150x100	5,67 144	3,94 100	27,76 705	27,99 711	27,76 705	10,43 265	7,68 195	7,01 178	580 263	27,76 705	27,99 711	27,76 705	14,02 356	11,61 295	5,67 144	780 354	27,76 705	27,99 711	27,76 705	13,43 341	7,60 193	7,44 189	600 272
8x6 200x150	7,56 192	5,67 144	32,76 832	33,11 841	32,76 832	17,17 436	11,22 285	12,83 326	1274 578	32,76 832	33,11 841	32,76 832	17,95 456	14,45 367	7,52 191	1543 700	32,76 832	33,11 841	32,76 832	17,17 436	11,22 285	12,83 326	1219 553
10x8 250x200	9,41 239	7,56 192	39,02 991	39,37 1000	39,02 991	21,54 547	13,11 333	14,84 377	2053 931	39,02 991	39,37 1000	39,02 991	21,61 549	17,20 437	10,00 254	2412 1094	39,02 991	39,37 1000	39,02 991	21,54 547	13,11 333	14,84 377	1389 630
12x10 300x250	11,30 287	9,41 239	44,49 1130	45,12 1146	44,49 1130	26,14 664	15,71 399	17,72 450	3016 1368	44,49 1130	45,12 1146	44,49 1130	25,63 651	19,76 502	12,01 305	3982 1806	44,49 1130	45,12 1146	44,49 1130	26,14 664	15,71 399	17,72 450	1803 818
14x10 350x250	12,40 315	9,41 239	49,49 1257	50,24 1276	49,49 1257	26,14 664	15,71 399	17,72 450	3563 1616	49,49 1257	50,24 1276	49,49 1257	25,63 651	19,76 502	12,01 305	4528 2054	49,49 1257	50,24 1276	49,49 1257	26,14 664	15,71 399	17,72 450	2350 1066
14x12 350x300	12,40 315	11,30 287	49,49 1257	50,24 1276	49,49 1257	30,75 781	16,93 430	20,00 508	4114 1866	49,49 1257	50,24 1276	49,49 1257	29,65 753	22,17 563	14,02 356	6155 2792	49,49 1257	50,24 1276	49,49 1257	30,75 781	16,93 430	20,00 508	2597 1178
16x12 400x300	14,17 360	11,30 287	54,49 1384	55,39 1407	54,49 1384	30,75 781	16,93 430	20,00 508	4744 2152	54,49 1384	55,39 1407	54,49 1384	29,65 753	22,17 563	14,02 356	6786 3078	54,49 1384	55,39 1407	54,49 1384	30,75 781	16,93 430	20,00 508	3228 1464
16x14 400x350	14,17 360	12,40 315	54,49 1384	55,39 1407	54,49 1384	34,84 885	20,00 508	23,07 586	5027 2280	54,49 1384	55,39 1407	54,49 1384	33,66 855	23,74 603	17,64 448	7112 3226	54,49 1384	55,39 1407	54,49 1384	34,84 885	20,00 508	23,07 586	3657 1659
18x16 450x400	* *	14,17 360	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *
20x16 500x400	* *	14,17 360	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *
20x18 500x450	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *
24x20 600x500	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *
30x24 750x600	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *

ASME CLASS 2500# REDUCED BORE

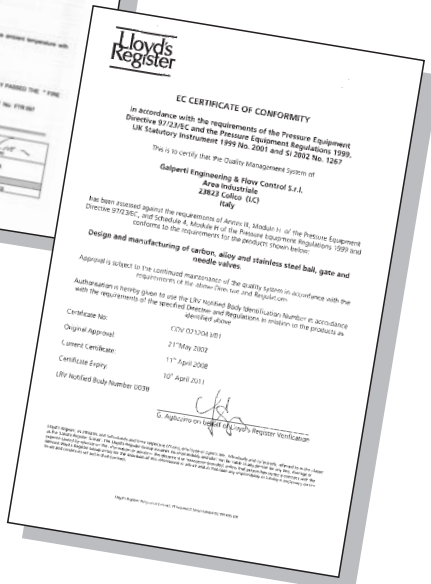
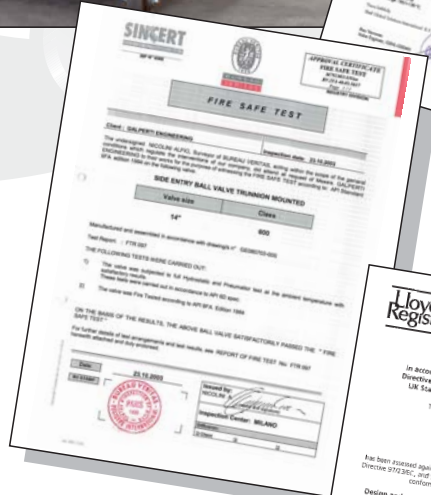
ALL TYPES			SIDE-ENTRY							TOP-ENTRY						
SIZE in/mm	A1	A	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*	L-RF	L-RTJ	L-WE	C	D	E	WEIGHT lb/Kg*
3x2 80x50	2,44 62	1,65 42	22,76 578	22,99 584	22,76 578	7,99 203	6,42 163	4,80 122	370 168	22,76 578	22,99 584	22,76 578	10,20 259	9,21 234	3,82 97	322 146
4x3 100x80	3,43 87	2,44 62	26,50 673	26,89 683	26,50 673	10,00 254	7,24 184	5,59 142	591 268	26,50 673	26,89 683	26,50 673	12,80 325	11,30 287	5,12 130	496 225
6x4 150x100	5,16 131	3,43 87	35,98 914	36,50 927	35,98 914	14,80 376	7,99 203	10,00 254	1279 580	35,98 914	36,50 927	35,98 914	16,26 413	13,46 342	6,61 168	1254 569
8x6 200x150	7,05 179	5,16 131	40,24 1022	40,87 1038	40,24 1022	17,20 437	9,41 239	11,61 295	2075 941	40,24 1022	40,87 1038	40,24 1022	19,65 499	15,04 382	9,80 249	2524 1145
10x8 250x200	8,78 223	7,05 179	50,00 1270	50,87 1292	50,00 1270	26,42 671	15,75 400	15,43 392	5406 2452	50,00 1270	50,87 1292	50,00 1270	24,65 626	18,43 468	12,64 321	5002 2269
12x10 300x250	10,43 265	8,78 223	55,98 1422	56,89 1445	55,98 1422	31,65 804	18,62 473	17,44 443	7787 3532	55,98 1422	56,89 1445	55,98 1422	28,86 733	20,55 522	14,02 356	7024 3186
14x10 350x250	* *	8,78 223	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *
16x12 400x300	* *	10,43 265	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *
20x16 500x400	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *
24x20 600x500	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *

- Weight figures are relevant to flanged end valves.
 * For dimensions & weights in larger sizes consult the factory.
 - Minimum bore for full-opening valves shall not less than those specified.
 - End to end dimensions according to API 6D/ISO 14313 Class 600. Dimensions C, D, E and weights are subject to change without notice.





Testings & Certifications



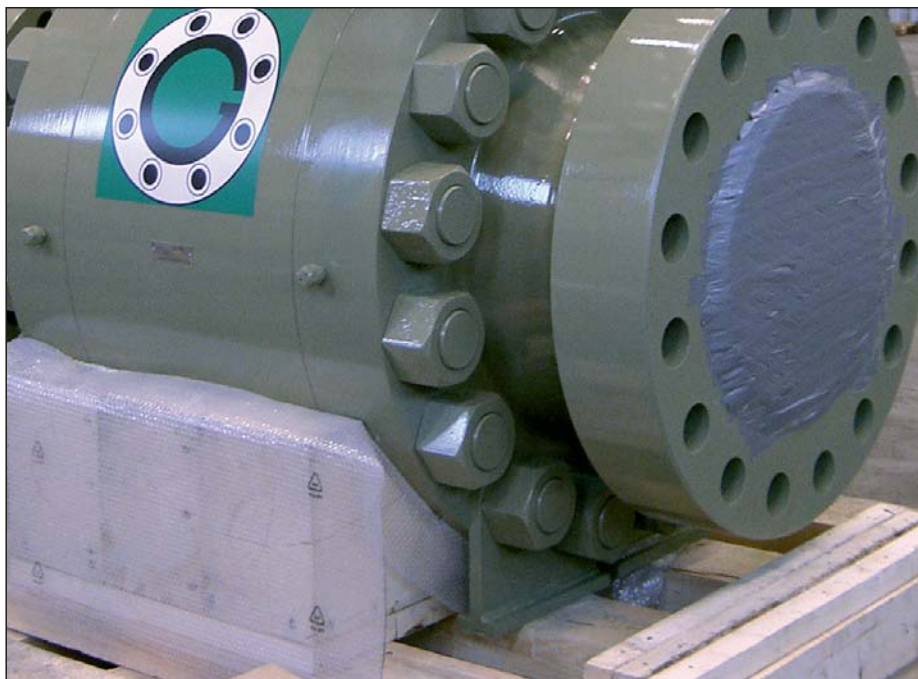
GENERAL NOTES

- Valves should be kept in fully open position during storage and transportation.
- Always use flange/weld end protectors prior to installation.
- Always use lifting lugs (do not use handwheel/actuator for lifting or positioning).
- Storage should always be fully in accordance with Galperti Engineering procedure.
- Pup pieces may be required for weld end valves to avoid damage to soft seals at closures or at seats.
- Always ensure that line is flushed prior to operating the valve.
- Dry valve internals thoroughly after testing to avoid internal corrosion.
- Valves must either be fully open or fully closed during in line testing.
- Ball valves should not be used for choking or throttling service as this can cause abnormal wear at seat areas.
- When ordering valves always specify all design and service conditions to allow correct material and trim selection.
- Valves for use in high pressure gas service to be specified with anti-explosion decomposition (AED) soft seal materials.
- For all actuated valves ensure that all design and operating conditions are fully specified to Galperti Engineering to ensure correct actuator sizing.
- Valves are supplied with any type of coating according to customers specifications (epoxy coating, FBE, TSA, etc.).
- Packing of valves is made according to customers specifications and international standards.





Coating & Packing





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