



SUBSEA
BALL VALVES



The image features a large offshore oil rig on the left, with a complex steel structure and a tall derrick. To its right is a red support vessel with a white superstructure, equipped with various deck equipment. The background shows a clear blue sky and a calm sea. A dark blue diagonal graphic element is overlaid on the right side of the image, containing the company logo and tagline.

BÖHMER

OUR EXPERIENCE - YOUR SAFETY

PERFORMANCE FROM START TO FINISH

Ensuring the safety of the entire pipeline system requires the valves for oil and gas applications to be able to meet the most challenging demands, especially for subsea application.

The design is optimized for each specific field of application and complies with the latest standards and regulations. Böhmer-Subsea Ball Valves are a guarantee for long lasting reliability and marine environment protection.

Renowned oil and gas companies trust in our experience for Sub-sea Ball Valves.

EXPERIENCE, EXPERTISE, PERFORMANCE. WE ARE BÖHMER!

We have been a reliable ball valve manufacturer since 1956. More than 300 highly qualified employees and modern machinery are the components of our success.

The structure of our plant and equipment, as well as our production, which is based on the most modern economic and ecological requirements, guarantee our customers maximum performance, quality and cost-effectiveness.

Decades of research and development enable us to manufacture a wide variety of ball valves for diverse applications. Thanks to our modular design system, we can always react flexibly to market needs. Needless to say, we offer special designs for individual customer requirements.



Branch factory in Hattingen




Main factory in Sprockhövel



Branch factory in Kunshan, China



Branch factory in Karaganda, Kazakhstan



Today we are proud to have facilities located on 23,000 m² of production and administration floor-space in our main factory and 13,500 m² in our branch factory in Hattingen.

Furthermore we are present outside of Europe with two production facilities. In China we produce split body ball valves for the local market. Our plant in Kazakhstan is delivering district heating ball valves to regional customers.

Our large warehousing capacity enables us to meet even short-term deadlines. On-time deliveries are standard for us.

Our regular customers are demanding and therefore appreciate our first-class service. They have relied on the quality and reliability of Böhmer ball valves for decades. We are proud to be recognized as one of the leading valve manufacturers.

BÖHMER STANDARD FOR SUBSEA APPLICATION - AN OVERVIEW

Each single valve is the product of more than sixty years of experience. This experience enables us to produce ball valves that are more than adequate of the strong requirements of the subsea industry.

The fully welded design eliminates potential leakages to the outside. The material of the sealings as well as of the components in touch with the medium is chosen to fulfill the highest demands. This way a long service life is given while the valves are absolutely maintenance free.

No wonder Böhmer is one of the few manufacturers with API 6DSS approval.

STANDARD SPECIFICATIONS



Sizes and pressure classes:

- ≤ 36 inch Class 1500
- ≤ 48 inch Class 900
- ≤ 56 inch Class 150 to 600



Materials:

- Body: ASTM A350 LF2 or ASTM A694 F52 to F65
- Trim: ASTM A350 LF2, Stainless Steel; Duplex
- Sealings: FPM, HNBR, Nylon, PEEK, TCC



Sealing design:

- Soft sealing
- PMSS
- Metal to metal sealing



Connections:

- BW ends
- Flanges according to ASME B 16.5 up to 24"
- Flanges ASME B 16.47 series A for sizes > 24"



Actuation:

- Standard lever or special T-lever
- Gear box with ROV bucket according
- Hydraulic actuator



Bleed Connection:

- Plugged and seal welded
- special bleed facilities



WE ALSO OFFER COMPLETELY TAILOR MADE BALL VALVE SOLUTIONS!



Approval:

- API 6D
- API 6DSS



Applications:

- Pipeline End Manifold (PLEM)
- Subsea Oil- and gas pipelines
- Jacket Flooding Systems
- Hot tapping subsea
- On- and offshore platforms
- Shipbuilding (FPSO storage tanks)
- Special applications



Optional features:

- Body material duplex
- Trim material duplex
- CRA overlay (SS316 or Inconel 625) for seat ring area, seat pockets or complete passage
- Metal to metal sealing
- Drain valve with pressure tight cap
- Lip Sealings

PRECISELY DESIGNED AND PROVEN IN THE FIELD

Böhmer fully welded subsea ball valves fulfill the requirements of the most common national and international standards.

BASIC DESIGN FEATURES

Seat Seal System

The Böhmer ball valves provide spring supported seats as a standard. The seats are pressed against the ball surface by the spring elements and ensure a tight shut-off at low line pressure. In addition the sealing effect is assisted by the pressure in line. So the total sealing force is the sum of the spring force and the force resulting from the pressure which increases proportionally with the line pressure. Depending on applications and customer requirements the below mentioned sealing systems can be delivered:

- soft seated
- primary metal seated / secondary soft seated
- metal to metal seated

Stem Sealing

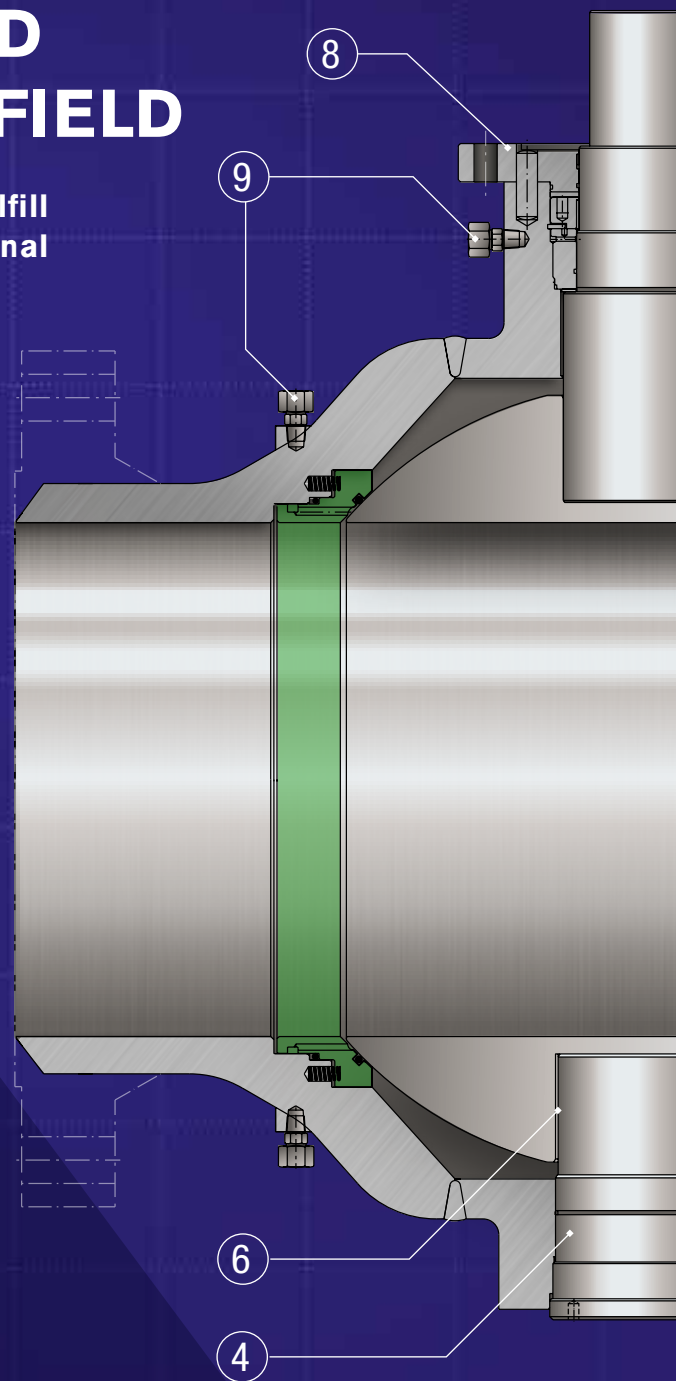
The sealing of the stem to the atmosphere is achieved by three independent sealing systems. The stem sealing design ensures the anti-blow-out function, too. Therefore, the three stem sealings are easily replaceable under full line pressure in open or closed position.

Trunnion Mounted Ball

The standard design of Böhmer ball valves provides a trunnion mounted ball for the nominal sizes 3 inch and higher. The maintenance-free bearings for stem and trunnion are self-lubricating, thus ensuring a lower torque especially for high pressure ratings.

Anti-Static Device

The ball valve design includes an electric conductive connection between the internal parts of the ball valve and the body, providing the anti-static function.

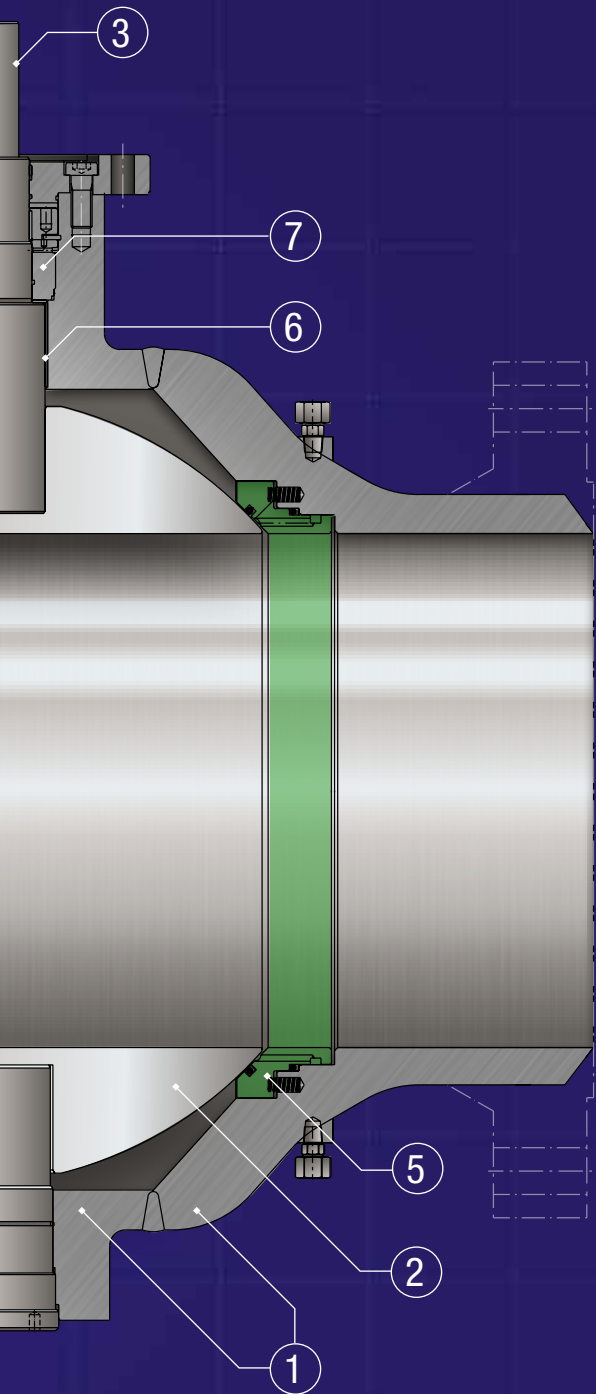


Fire Protection

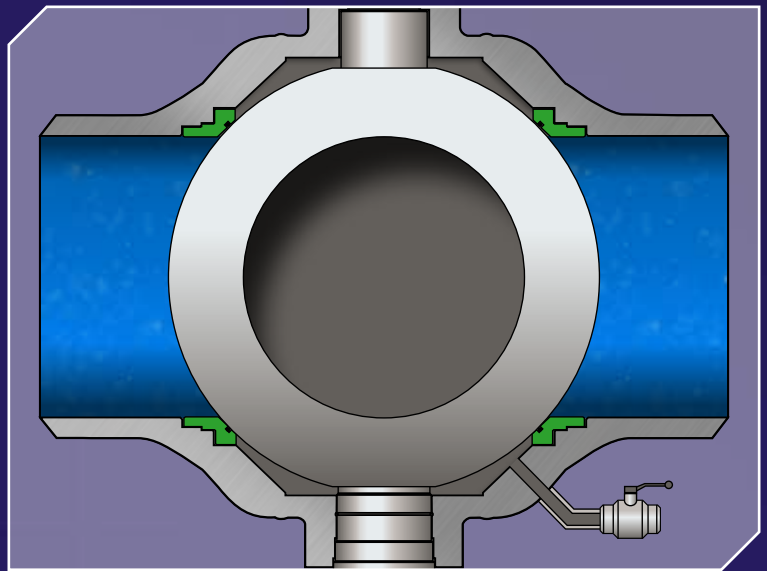
The design ensures the fire safe requirements in accordance with the international standards as API 6FA, API 607, BS 6755 P 2 and ISO 10497.

Emergency Sealing

As an option, Böhmer ball valves can be delivered with an additional emergency sealant injection for the seat-rings and stem sealing.

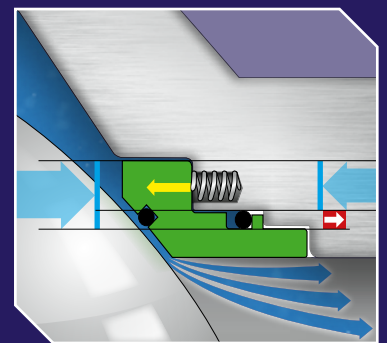
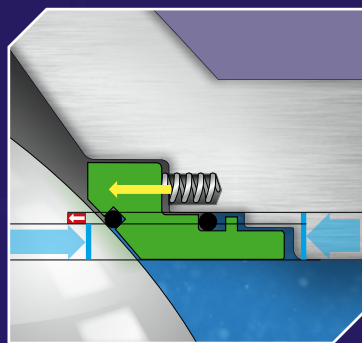


- ① Body
- ② Ball
- ③ Stem
- ④ Trunnion
- ⑤ Seat-rings
- ⑥ Self lubricating bearings
- ⑦ Anti blow-out device of the stem
- ⑧ Top mounting flange for gearboxes or actuators
- ⑨ Emergency sealant injection as an option



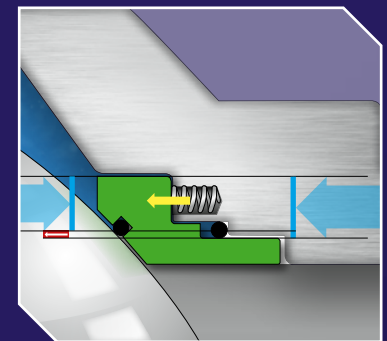
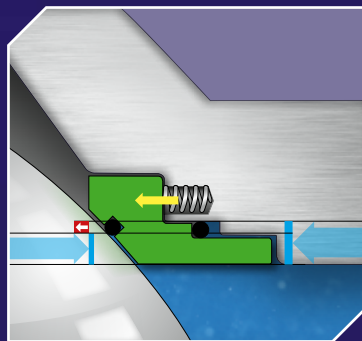
Double Block and Bleed

The cavity can be relieved via vent or drain connections at the cavity. The upstream and downstream seat rings ensure the tight shut off to the cavity in closed position (optional in open position as well). This enables the verification of the tightness of the ball valve under full working pressure.



Single-Piston-Effect (Self-relieving Seat Design)

This seat system is designed to automatically vent any excessive build-up pressure in the body cavity. The floating seat design allows for relieving the overpressure into the pipeline.



Double-Piston-Effect (Bi-directional Seating System)

With this design the seat rings tighten independently of the actual pressure relations. A redundant sealing system is created. Self relieving of the cavity does not happen in closed position (optional in open position as well).

DESIGN EXAMPLES

Hydraulic operated ball valve

SSIV at PLEM

- fully welded
- super duplex steel trim
- metal seated
- hydraulic actuator with single acting spring return
- taylor made solution
- maintenance free,



ROV operable ball valve

for platform flooding system

- fully welded
- with T-lever
- stainless steel trim
- taylor made solution
- maintenance free



**Ball valve with subsea gear box
for PLEM - crude oil unloading**

- fully welded
- with ROV bucket
- CRA cladding with Inconel 625
at seat pocket
- taylor made solution
- long life span,

**Ball valve with subsea gear box
SPIBV at PLET and PLEM**

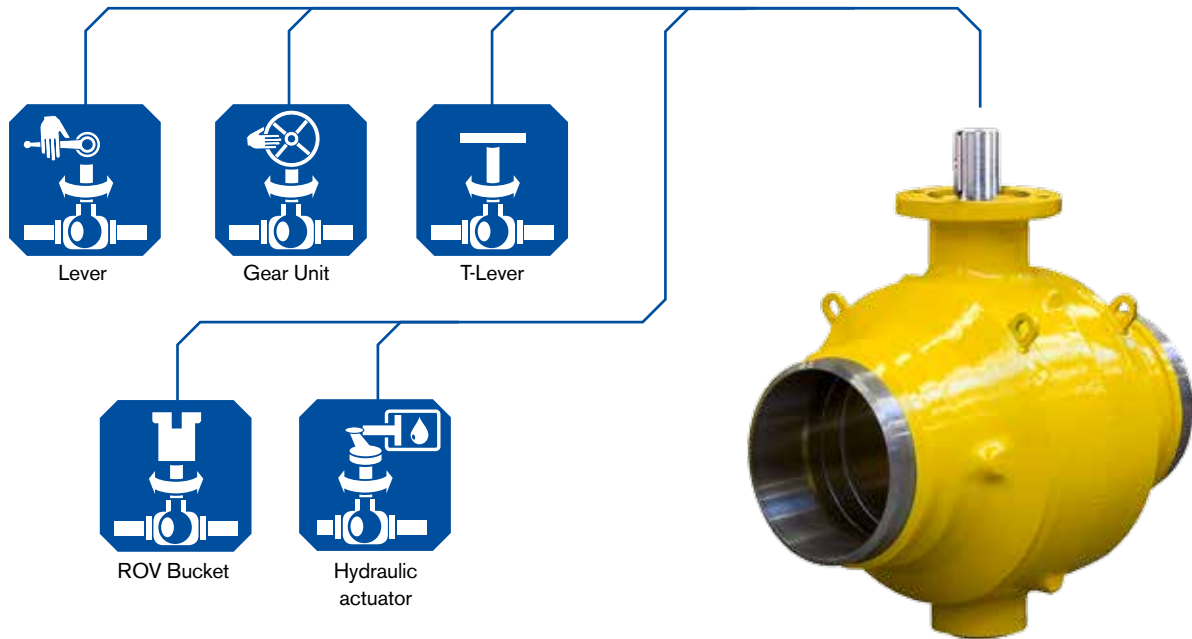
- fully welded
- ROV bucket (DIN EN ISO 13628-8 Class2)
- with vertical ingress
- Duplex trim
- CRA cladding with Inconel 625
from seat pockets to welding ends
- long life span
- bleed port seal welded after FAT



CRA Corrosion Resistance Alloy
DBB Double Block and Bleed
DIB Double Isolation Bleed
FAT Factory Acceptance Test
PLEM Pipeline End Manifold

PLET Pipeline End Termination
ROV Remotely Operated Vehicle
RTJ Ring Tight Joint
SPIBV Subsea Production Isolation Ball Valve
SSIV Subsea Isolation Valve

ACTUATORS FOR BÖHMER SUBSEA BALL VALVES



Hydraulic ball valve actuators

Böhmer ball valves can be combined with actuators made by all established actuator manufacturers. We look forward to receiving your technical inquiries.

Ball valves with special T-Lever or ROV-Bucket

The solutions allow safe and convenient actuating of the ball valves by ROV or divers.

The actuating torque is defined by the range of application, the operating conditions and the design of the ball valve. Our technical engineers will be at your service in order to select the best suitable actuator for your ball valve.



PRODUCT RANGE

Our product range includes more than 100.000 different kinds of ball valves.

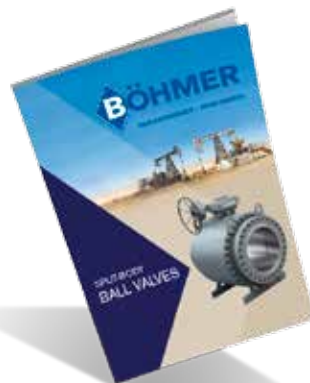


MORE INFORMATION:

Please ask your Böhmer contact for other special catalogues or simply download them from our website



**District heating
& steam**



**Split-body
ball valves**



**Fully welded
ball valves**

BÖHMER BALL VALVES IN OPERATION

We keep in step with time!

Thanks to our comprehensive product line, we are already able to fulfill almost every customer demand.

But we do not rest on our laurels!

In order to be able to satisfy all customers' wishes in the future, our highly qualified engineers and designers take meticulous care to develop the next generations of ball valves. As a result, we develop innovative solutions which are successful in fields such as district heating, the gas industry, pipeline construction, hydraulics, pneumatics, plant engineering and construction, petrochemicals and subsea applications.



District heating



Oil, gas, petrochemicals



Shipbuilding



Power plants



As one of the world's leading manufacturers of ball valves, we are always conscious of our responsibilities to our customers.

Now and in the future, the name Böhmer will continue to be a distinguished synonym for our comprehensive promise to perform.

BÖHMER
OUR EXPERIENCE – YOUR SAFETY



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