

**THAT'S**

***Perar***

**QUALITY**

**THE BEST GUARANTEE OF SAFETY**

**One of the first since 1962 ...**



**That's Perar Quality ...**

Founded in 1962, Perar S.p.A is a privately owned company and a leading Italian manufacturer of high quality valves for a wide variety of oil & gas applications.

As oil and gas exploration and production continues to move into even deeper waters, Perar S.p.A is uniquely prepared to execute projects efficiently and safely, bringing decades of experience and the expertise needed to develop the most challenging fields.

With its main plant in Rescaldina ( near Malpensa airport ) and an established subsea division in Delebio that is totally dedicated to the engineering and manufacturing of subsea valves and actuators, Perar S.p.A offers a global product range of API6D and API6A Ball Valves.

Perar's Quality Management System has been accredited by Det Norske Veritas according to **ISO 9001:2008**.

The American Petroleum Institute has granted Perar S.p.A the **API 6D, API 6DSS, API 6A and API 17D** Monogram License certifications for the design, manufacturing, testing and documentation of valve package solutions for subsea applications.

These certifications are other examples of Perar's dedication to constantly improving its products and services.

Fully dedicated manufacturing and testing facilities, as well as exclusively assigned engineers and personnel or API certifications, are illustrations of Perar's commitment to the customized & subsea valve industry.



## **SPLIT BODY BALL VALVES**

API spec 6D Ball Valves Trunnion supported ball, forged steel, 3 pieces split body side entry, metal to metal or soft seated sealing design self relieving spring loaded seats or double piston effect sealing system, anti-static device, anti-blow-out proof stem double block and bleed or block and bleed, venting and drain fittings, self lubricating stem and trunnion bearings to assure low operating torque throughout entire valve life, fire safe design to BS 6755 parts 2.



## **FULLY WELDED BALL VALVES**



API spec 6D Ball Valves Trunnion supported ball, forged steel, welded body construction, double piston seats sealing system, anti-static device, anti-blow-out proof stem, block and bleed, venting and drain fittings, self lubricating stem and trunnion bearings to assure low operating torque throughout entire valve life, fire safe design to BS 6755 parts 2 or API 6fA or API 607. Emergency sealing system at stem and seats area, if required. Safety relief valve in case of cavity over pressure (suggested only with Liquid Hydrocarbon).

## **TOP ENTRY BALL VALVES**

API spec 6D Ball Valves Trunnion supported ball, Top Entry design, cast body, bolted bonnet, metal to metal or soft seated sealing design, self relieving spring loaded seats or double piston effect sealing system, anti-static device, anti blow-out proof stem, double block and bleed or block and bleed, venting and drain fittings, self lubricating stem and trunnion bearings to assure low operating torque throughout entire valve life, fire safe design to BS 6755 parts 2. Some of these Top Entry valves are installed in vertical position, have been supplied with internal sleeves to allow the line to be flushed without damaging the valve seats, while some of them are metal seated.



## **CRYOGENIC BALL VALVES**



Perar has specialised in Low Temperature and Cryogenic service to the extreme temperature of minus 196 Deg C, in accordance with the most stringent specifications. Perar Ball Valves in cryogenic service are supplied with extended bonnet with a sufficient gas column length (vapour space) to keep the stem seals exposed only to vapour and not to the cold liquid to ensure functional integrity. Suitable seals are selected considering the customer's process indication. PTFE lip seal spring energised or KEL-F are commonly used.



## FLOATING BALL VALVES



Perar API Spec. 6D/BS 5351 Floating Ball Valves, ANSI B16.5 RF flanges ends, 2/3 pieces split body, forged steel body, side entry, anti-static device to BS 5351 anti-blowout proof stem, fire safe design to BS 6755 part 2, full or reduced bore, lever or gear operated. Perar Bare stock Floating Ball Valves, ANSI B.2.1 two pieces screwed body construction, side entry, class 600/800, 3000, 6000, anti-blowout stem, anti-static device, seat supported ball, NPT ends or socket weld ends according to ANSI B16.11, fire safe design, zinc plated body.

## COMPACT BODY BALL VALVES



Compact Ball valve is a manufacturer standard design suitable to combine a compact ball valve design with robustness and reliable performances.

The valves do not rely on lubricant or grease to assist sealing between the ball and seat also when metal-to-metal sealing is used. The valve design is based on trunnion mounted or support plate configuration in order to get the operating torque as lower as possible.

API6A design, bi-directional sealing, spring loaded metal-to-metal seats, end flange connection directly to the valve body, valve stem retained by shoulder on the body as anti-blow out design, end flanges sized to withstand bending load up to 100% of pipe yield at full working pressure, fire testing to ISO 10497, compact design to save between 50% and 70% of valve weight if compared to standard ANSI valves

## SUBSEA VALVES

Perar engineers have developed a comprehensive range of subsea valves, operators and hydraulic actuators to deliver complete tailor made packages meeting the highest subsea specifications.



Our subsea valve portfolio includes trunnion mounted ball valves, gate valves (through conduit slab, double expanding types) and non-return valves (swing check and nozzle check). The in-house tailor made gearbox and hydraulic actuators, in quarter turn or linear operation, complete the package and provide the most. With a dedicated Subsea Division, internal machining, cladding, structural welding or hyperbaric testing capabilities, we are uniquely prepared to execute projects efficiently and safely, bringing you decades of subsea experience and the expertise you need to develop the most challenging fields.

**Subsea ball valves** come in side entry, top entry, fully welded or twin double block and bleed construction and are tailored to API 6DSS, API 6A, API 17D with the addition of customer and project requirements.

Double piston sealing system, special heavy coating, sub-sea gearbox or c/w ROV adapter receptacle connection, if required complete this special execution.



**Subsea swing check valves** are tailored according to API 6DSS, API 6A, API 17D with the

addition of customer and project requirements. The subsea swing check valves can be provided with ROV lock open system to keep the valve fully open for reverse pigging (Bi-directional piggable valve).

**Subsea gate valves** come in through conduit slab or double expanding type and are tailored according to API 6DSS, API 6A, API 17D with the addition of customer and project requirements. The valves do not rely on lubricant or grease to assist sealing between the gate and seats. Perar valves are designed with enhanced sealing and seating systems to maximize the mean time between failures thus increasing the reliability and preventing from any potential risk during operation.

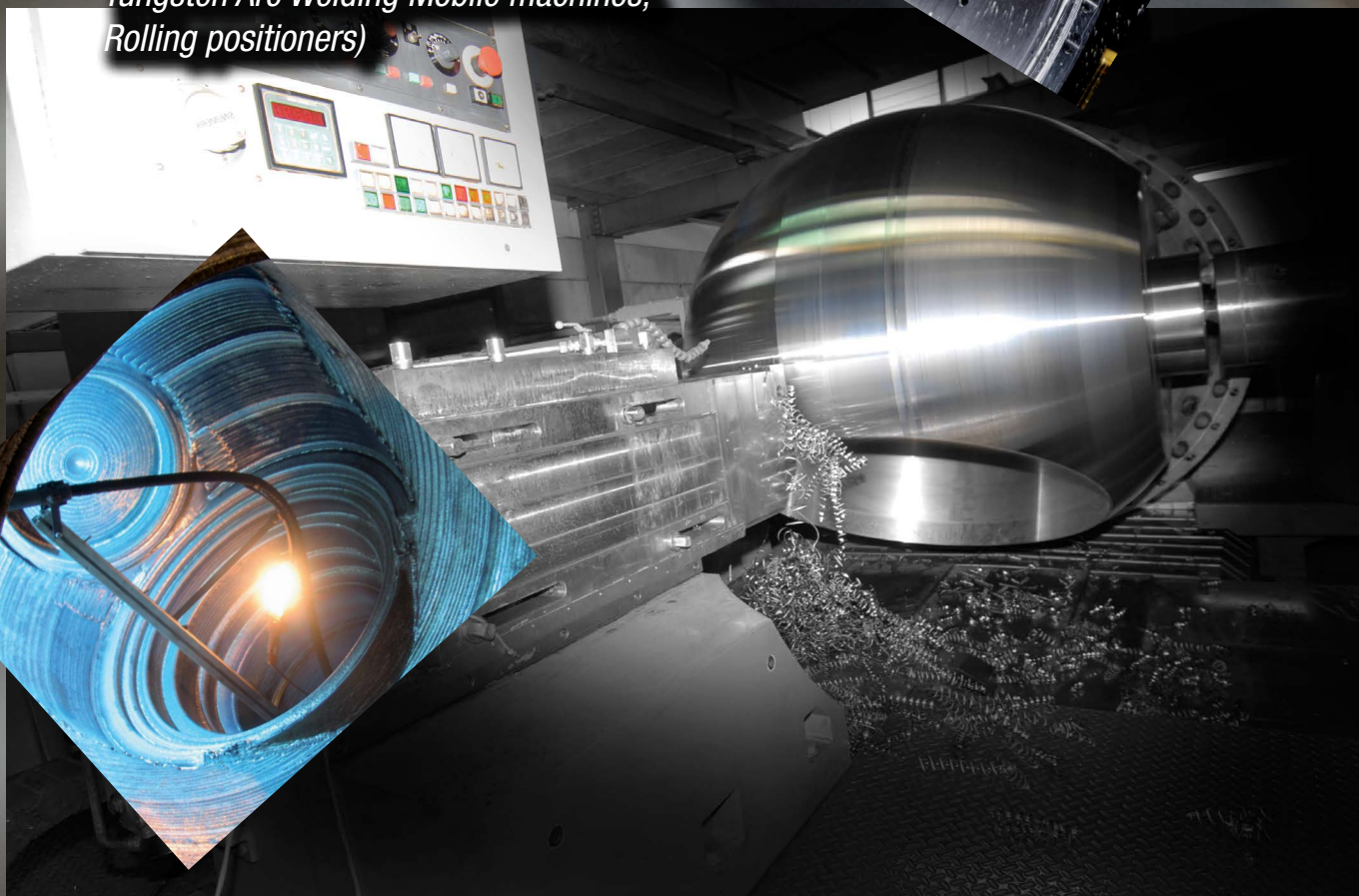
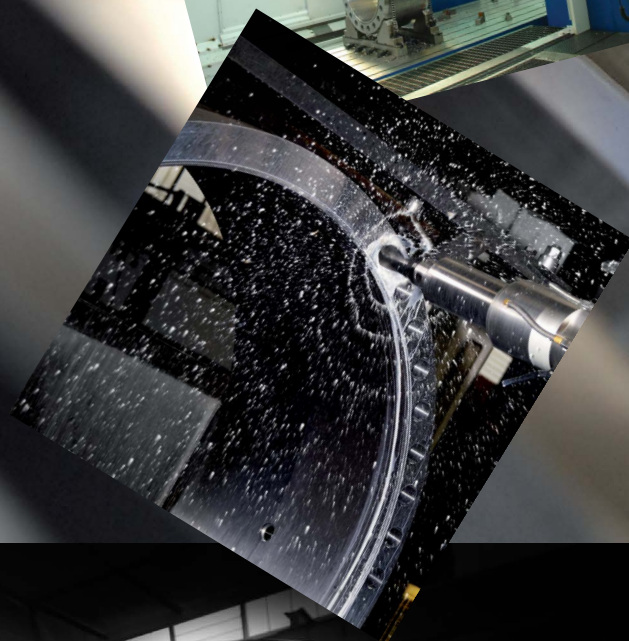


# IN - HOUSE MANUFACTURING

To maintain the highest standards of quality all critical manufacturing steps are kept in-house to allow Perar 'hands on' Project Management and Project Quality Control.

Our main plant located in Rescaldina North of Milan, integrates:

- *CNC Machining*  
(horizontal lathes, vertical lathes, parallel lathes, machining centers, drilling, ball turning/grinding, lathes/cutter)
- *Welding facilities for cladding, structural welding*  
(Submerged Arc Welding stations, Gas Metal Arc Welding stations, Gas Metal Arc Welding mobile machines, Tungsten Arc Welding Mobile machines, Rolling positioners)



# IN - HOUSE TESTING

Perar heavily invested in advanced cleaning and testing equipment to meet increasing design life and meet highest level of quality and reliability.

## HYDRAULIC ACTUATOR ASSEMBLY & TESTING

*Ultrasonic washing machine for optimal cleaning of the hydraulic cylinder components*

*Assembly of the hydraulic piston/cylinder in White room (ISO 14644.1 Class 8)*

*Hydraulic flushing units (SAE AS4059 6B-F)*

*Hydraulic test benches for Linear actuators*

*Hydraulic test benches for Quarter-turn actuators*

*ROV torque tool ISO 13628-8 Class 4 for override mechanism testing*

## VALVE/ACTUATOR ASSEMBLY QUALIFICATION TESTING AND FAT

*Automatic test panel for API 6A PR2 and endurance cycling (1,200 cycles) qualification testing*

*Low and High temperature testing equipment for API 6A PR2 testing on valve and actuator*

*Sand slurry testing to API 14D*

*Bending moment test bench to simulate pipe loadings to 3,500 KNm*

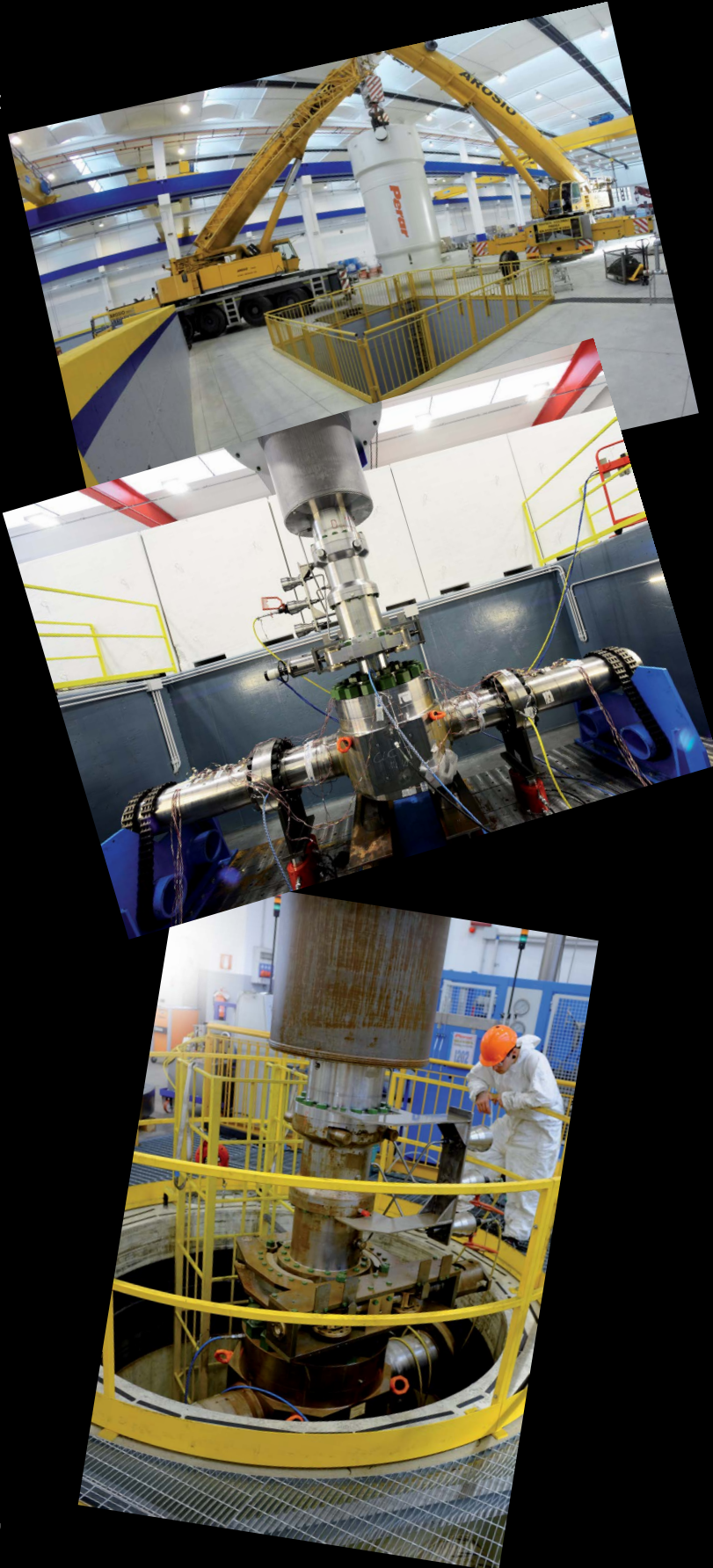
*Fugitive emission testing*

*Test pits allocated to FAT and Qualification tests*

*Hyperbaric chamber: Shallow water pressure vessel (simulating 50 bar external pressure)*

*Hyperbaric chamber: Ultra-deepwater pressure vessel (simulating 450 bar external pressure)*

Qualification testing is an on-going activity at Perar works, please question about packages already qualified to 3,000m / 10,000ft water depth.



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