

Valve Product Portfolio

IMI TRUFLO ITALY

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02 The IMI Group

IMI plc

IMI Truflo Italy is a part of IMI plc, a global engineering group focused on the precise control and movement of fluids in critical applications. IMI plc through its leading international companies, operates in over 50 countries to deliver innovative engineering solutions to address global trends such as clean energy, energy efficiency, healthcare and increasing automation.



Our Critical Engineering division is a world leading provider of highly-engineered flow control solution for critical applications that are able to withstand temperature and pressure extremes and intensely abrasive and corrosive cyclical



Our Precision Engineering division specialises in the design and manufacture of technologies for applications where precision, speed and reliability are essential.



Our Hydronic Engineering division is the leading global provider of technologies that pneumatic and other flow control deliver operational and energy efficient water-based heating and cooling systems inside buildings.

The IMI way

operations.

It's IMI's goal to become the most admired and most innovative enginnering solutions company of our size anywhere in the world. We believe that admiration comes not only from great products and services, delivered by dedicated people to world class customers, but from the way we go about business. Our way is the IMI Way.

Critical engineering Platform

Our missions is to be the preferred solutions provider of high-quality engineered valves, flow control products and services through the unique combination of engineering know-how and technology to solve our customer's toughest and most critical applications. IMI Critical engineering has over 200,000 valves in operation currently around the world supported by a global sales and service network. Additionally, we have factories located in 12 countries staffed by over 3,000 highly committed employees. We are unique in the industry for our direct sales approach and dedicated support for customers world-wide with the ability to supply parts at short notice, undertake major plant upgrades and overhaul and repair existing equipment.

ISOLATION Division

Fully aligned with our group philosophy ethics and values ,we provide our customers with a unique range of rotary valves solutions from ½" to 120", combining side entry, top entry, segment ball and double and triple eccentric butterfly valves for On-Off and Flow Control applications. Supported by the Independent Isolation Engineering Project and Procurement, Centre of Excellence, Truflo Solutions, our four "state of the art" manufacturing sites, make our division to be among the most advanced solution providers in the Oil & Gas, LNG, Petrochemical and Water Industry. Our Customers can count on a team of experts that can provide solutions that go beyond the knowledge of a single valve manufacturer.

IMI Critical Engineering

Manufacturing facilities & Sales offices Sales offices

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Engineering GREAT Solutions

Our Company & Operation Philosophy

IMI Truflo Italy, with its manufacturing unit located in northern Italy, is an international leader and a centre of excellence specialized in engineering and manufacturing of dedicated valves for the Oil, Gas, Chemical and Petrochemical industries, PTA (Purified Terephthalic Acid) plants, LNG ships, LNG plants and terminals.

Its products are designed for use in the most severe service applications where safety integrity and performance are critical. IMI Truflo Italy offers a full range of valve designs which include ball (top-entry, side-entry and fully welded), MSV & DBB fully engineered to completely cover the customers' specifications in this quality driven market.

IMI Truflo Italy engineers, sales representatives and workers are product and application specialists and are trained to advise on complex flow control issues and problems. They manage the design, supply and delivery of product solutions which meet and exceed clients requirements, whatever the size of their projects or the complexity of the application and of the service.

IMI Truflo Italy products take advantage of a further step in design and development, thanks to the support given by our independent Isolation Engineering Centre of Excellence, Truflo Solutions, acting independently from the Operating Business Units, namely IMI Truflo Italy, Orton and Interativa.

Thanks to its highly talented professionals, combining the experiences collected across the full division, our experts are capable of bringing solutions that exceed the knowledge of each individual company. Furthermore, our Isolation Engineering Centre of Excellence, is providing training and consultancy to all personnel of our Division.

Process management

As well as its experience, IMI Truflo Italy offers a unique added value to its clients: a full and effective process management, from design to finished product testing. We achieve our strength through a close cooperation with our clients since the early stages of a project, which is accurately tracked during all steps of design, production, assembly, testing and delivery. Focusing on customer satisfaction, the same level of attention is given to any phase of the product life, from quotation to field service.

Process Knowledge

Since its foundation IMI Truflo Italy has given critical importance to developing process knowledge and expertise not only within its own organization but also its customer base. Through close cooperation with important users of its products, IMI Truflo Italy strives all the time to develop even better technologies and improved application support for all its customers. Thousands of installations successfully operating worldwide allow our designers to make profit of the experience in several applications, resulting in a continuous improvement of performance, reliability and safety of the IMI Truflo Italy range of valves. The dynamic behaviour of all valve components is accurately analyzed, also thanks to simulation programs developed on the basis of practical field experience.

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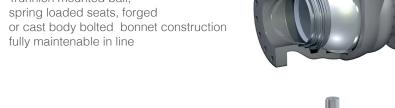
03 Our Products

SIDE-ENTRY

Trunnion mounted ball, spring loaded seats, 2 or 3 pieces bolted body construction

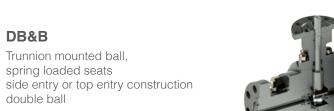


TOP-ENTRY Trunnion mounted ball,



FULLY WELDED

Trunnion mounted ball, spring loaded seats, 2 or 3 pieces all welded body construction



3-WAY/ MULTIPORT

Trunnion mounted ball, spring loaded seats side entry or top entry construction T-port or L-port piggable or not piggable design



1/2" through 60"

DN15 through DN 1500 **RATING** Class 150 through 2500 & 4500 API 2000 through API 15000 **ENDS** Flanged, Hub, welding ends

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1/2" through 60" DN15 through DN 1500 **RATING** Class 150 through 2500 & 4500

API 2000 through API 15000

ENDS Flanged, Hub, welding ends



SIZE 1/2" through 36" DN15 through DN 900

API 2000 through API 15000

RATING Class 150 through 2500 & 4500

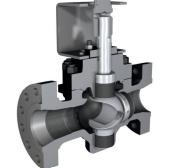
ENDS Flanged, Hub, welding ends

SIZE 1/2" through 36" DN15 through DN 900 **RATING** Class 150 through 2500 & 4500

API 2000 through API 15000 **ENDS** Flanged, Hub, welding ends



Trunnion mounted, spring loaded, sigle or double seats, side entry, top entry, fully welded construction for either pressure or flow control design



C - REX / O - REX

Trunnion mounted double eccentric torque-seated valves, single seat, top entry design



FLOATING

Seat supported, forged construction. Two or Three pieces bolted body.



WEDGE BALL

Design, Springless seats

Trunnion mounted ball, Top Entry

Cast or forged body, Tight shutoff metal to metal sealing, available on multiple size combination.



SIZE According to customer demands **RATING** Class 150 through 2500

API 2000 through API 15000 **ENDS** Flanged, Hub

1/2" through 60"

DN15 through DN 1500

RATING Class 150 through 2500 & 4500

DN15 through DN 1000

RATING Class 150 through 2500 & 4500

ENDS Flanged, Hub, welding ends

1/2" through 8"

RATING Class 150 through 2500

DN15 through DN 200

ENDS Flanged, Hub, welding ends

API 2000 through API 15000

ENDS Flanged, Hub, welding ends

SIZE 1/2" through 40"

API 2000 through API 15000



SIZE 1/2" through 24" DN15 through DN 600 **RATING** Class 150 through 2500

ENDS Flanged, Hub, welding ends

04 Materials & Applications

Materials

Our valves are available in a wide range of metallic materials for both pressure containing components (body, closure body cover) and pressure controlling components (ball, seat, stem, trim). Here are some examples of materials available:

Carbon Steel (CS) Low Temp. CS Low Alloy Steel (LAS) Martensitic SS Austenitic SS Duplex SS Super Duplex SS Ni Alloys Cu Alloys Ti Alloys Co Alloys

Aluminium / Bronze





CS and LTCS are also available partially or fully cladded. Partial cladding includes dynamic seal areas or static and dynamic seal areas. Full cladding includes all wetted areas. Cladding material can be: AISI 316L SS, 22/05 Duplex SS, 25/07 Superduplex SS and Inconel 625.



Applications

Our trunnion mounted ball valves can be installed in a wide range of application. Here are some examples of the same divided by location and by service

Well-Head; Flow-Lines HIPPS Pipeline Valves Sub-sea Riser-ESDV Cryogenic GOV; SDV; BDV; XXV; XV Low-temp Scraper Trap isolation Hot tapping Process Valves Inching SSIV Scraper -trap ROV Switching valves

Metering valves Quick closing (below 1 sec) Oil Sand Slurry Hi-Temperature Buried / Underground Valves

> Flow Control **Pressure Control**

Special tests

IMI Truflo Italy has the possibility to perform the following test:

Hi-pressure hydrostatic tests up to 1550 barg (155 MPa, 22500 psi) Hi-Pressure Nitrogen Test up to 1000 barg (100 MPa; 15000 psi) Low Temperature / Cryogenic Test Down to -196°C (-321 °F) Hi-Temperature Test up to 800 °C (1470 °F) Fugitive emission ISO 15848

Fire Safe (ISO 10497/API607) Cycling Test Bending Test Sub-Sea Test Flow-Test Vacuum Test



Certification

IMI Truflo Italy has a quality system certified in accordance with ISO 9001:20015/API Q1 9th edition ISO TS29001:2007

In addition IMI Truflo Italy has the following product certifications:

- API 6D
- API 6A
- API 6D SS
- API 17D
- PED 2014/68/UE ATEX 94/9/EC
- ISO 61508 SIL III
- ISO 10497/API 607 (Fire Safe)
- ISO 15848 Fugitive Emission
- ISO/TS29001
- ISO14001
- OHSAS18001
- Achilles



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