

Engineering
GREAT Solutions

IMI Orton

Manufacturers of High Integrity
Butterfly Valves



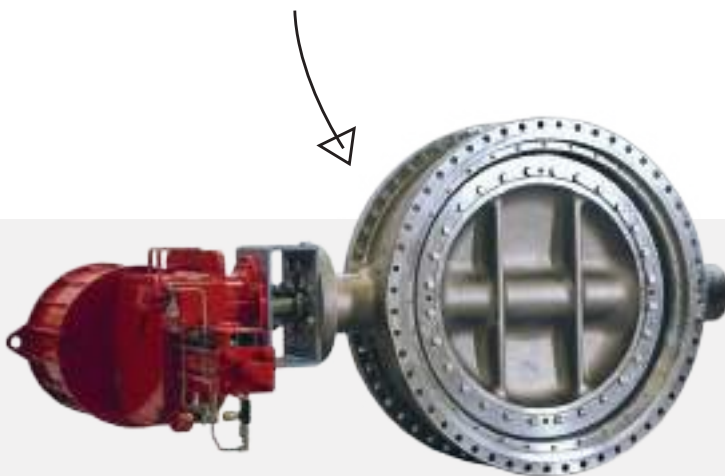
A Proud History

Founded by Mr. Licini in 1963 to produce concentric lined rubber valves, in 1982 IMI Orton initiated the production of double eccentric rubber-seated valves and in 1987 the production of triple eccentric metal-seated valves. IMI Orton obtained certification for its compliance with ISO 9001 in 1992 with 14001 and 18001 coming over the following years.

IMI Orton was acquired by IMI in 2006 and is now an international leader in the manufacture of triple offset metal-seated valves, large diameter double eccentric butterfly valves and concentric rubber-lined valves for on-off and control service.

IMI Orton has over 50 years of experience designing customised valve solutions for its customers, combining efficiency and reliability with the highest safety standards for use in extreme operating environments.

MV Series valve featuring unique triple eccentric metal seat design



VF Series valve with double eccentric, zero leakage design



Manufacturers of High Integrity Butterfly Valves

IMI Orton offers a full range of valve designs which include any kind of traditional butterfly valves, non-return butterfly valves, quarter turn disc control valves and triple eccentric metal-seated valves with seating/seal technology fully engineered to meet all customer specifications.

IMI Orton's expert team of engineers make our valves the ideal choice for any specific application or requirement.



Tight shut-off in both on and off-shore facilities

Critical applications

Oil & Gas

Our valves have proven long-term performance and reliability in both on and off-shore facilities where tight shut-off isolation and modulating features are essential. Our ability to act as real partners to customers operating in critical and harsh environments is a source of great pride for the team at IMI Orton.

Desalination

Our valves help customers operate desalination plants efficiently and reliably. The perfect sealing and modulating capability of our valves when used to protect the pumps in the desalination process is highly regarded by plant operators. We also offer customers an ongoing maintenance programme, to ensure trouble-free performance for years to come.

LNG

IMI Orton valves are in use in LNG liquefaction plants and regasification terminals worldwide. Customers choose us for the wide range of technical solutions we can offer, and for our state-of-the-art testing facility, which means that every valve is comprehensively tested before it is supplied.

Petrochemical & Refining

With a very wide range of valves from 2" to 120", IMI Orton products are widely installed in petrochemical plants around the world. PTA plants with process licensed manufacturers have approved IMI Orton products, and regularly install IMI Orton valves to guarantee top performance and easy maintenance.



Installed on petrochemical plants all over the world

Key technologies

Triple eccentric design

The unique IMI Orton triple eccentric design eliminates friction between the disc seal ring and the seat in the body, thereby preventing wear and any consequential leakage. The result is a valve with a longer service life.

The MV Series valve discs include a resilient, laminated metal seal ring, composed of alternating layers of corrosion-resistant alloy and composite graphite. Each individual lamination provides an independent seal, unaffected by damage to the others. While improving long-term sealing properties, the resilience of the laminated design also allows lower operating torques. For high temperature and more severe applications, a hardened, non-laminated solid seal ring is available.

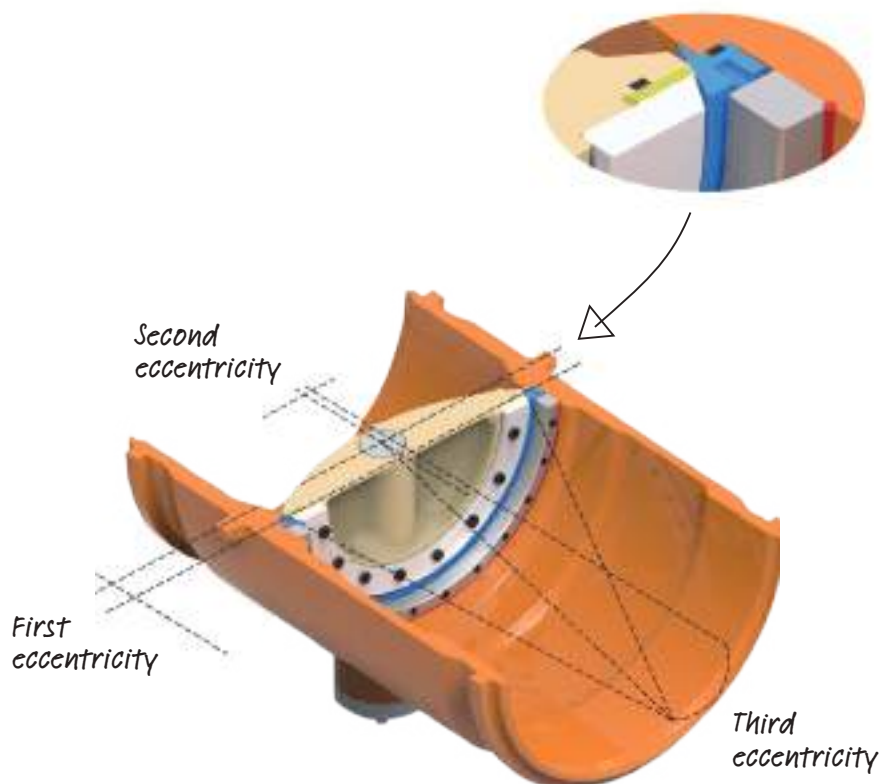
Assembled on the disc, the seal ring is engineered with tolerance to allow radial compression and flexing when torque is applied to close the valve. Consequently, the valve seals tightly even when pressurised from the reverse direction. In addition, the resiliency of the seal ring compensates for differences in expansion rates between body and trim.



Seal ring seated



Seal ring prior to seating



Key services

Continuous investment and improvement in computerised systems, integrated machining centres and computer controlled state of the art machine tools, ensure the highest level of component quality in line with our policy of maintaining IMI Orton as a manufacturing centre of excellence.

IMI Orton is equipped with vertical turning and horizontal milling capabilities enabling production of valves of up to 4000mm (160").

Product development

IMI Orton is committed to developing new products based on customer needs.

IMI Orton regularly reviews its product lines and surveys customer requirements and specifications to ensure effective additions to, and strengthening of its product range.

The research and development department controls a suite of test facilities, which includes hydraulic, gas, cycle, vacuum, CV loop and cryogenic testing with provision also for prototype manufacturing.

Engineering excellence

IMI Orton's extensive expertise in valve design, together with integrated CAD/CAM systems fully exploit the opportunities for innovative and competitive engineering solutions while ensuring compliance with all relevant standards.

State-of-the-art testing facility

IMI Orton's in-house testing facility allows us to test the capabilities of valves up to 120" in size. We can pressure test to ASME Cl.2500, and temperature test from cryogenic to high temperatures (-196°C to +700°C).

Prior to shipment all valves are subjected to stringent pressure and tightness tests as well as a full functional test.

Modern inspection equipment and special test facilities have been developed to carry out in-house high temperature or cryogenic tests, cycle tests, CV tests, torque tests or high-pressure tests.

- > All valves are internally tested and certified
- > Three vertical test rigs are available, including hydraulic press with up to 600 tons of power.

MV Series fire test

The MV series valves have successfully passed a fire-safe test in accordance with BS6755 Part 2 in 1987, API 607 4th Edition in 1997 and ISO/FDIS 10497 in 2006.



Our facility in Piacenza



Our team can realise your product requirements



The factory floor



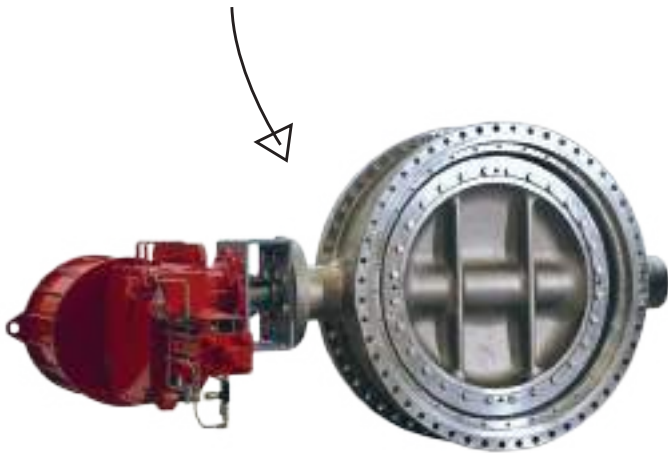
Testing down
to -196°C

Products

Valve Types

IMI Orton offers a full range of valve designs which include any kind of traditional butterfly valves, non-return butterfly valves, quarter turn disc control valves and triple eccentric metal-seated valves with seating/seal technology.

Zero leakage bi-directional tight shut-off



MV Series

Customers worldwide specify our MV Series valves in their applications because of their unique combination of perfect isolation, reliability and compactness. This makes them fit for purpose in critical tight shut-off, high pressure, high temperature or cryogenic, critical fluids for isolation duties but also for light control when required. Features include:

- > Triple eccentric design
- > Resilient metal-to-metal seal
- > Zero leakage bi-directional tight shut-off
- > Quarter turn friction-free operation
- > Full metal construction
- > Fire-safe and fire-tested
- > Integral external position indicator on valve shaft and body
- > External anti-blowout device
- > Wide range of materials and sizes
- > Very large size up to 120"
- > Pressure class up to ASME/ANSI 2500

MV Series Cryogenic

MV Series is perfect for cryogenic service and is specified worldwide for its proven performance. Recommended for critical cryo applications from low to high pressure, for long-term tight shut off in isolation service as well as for throttling. Ideal selection for SDV, ESDV. Features include:

- > Triple eccentric design
- > Resilient metal-to-metal seal
- > Quarter turn friction-free operation
- > Full metal construction
- > Fire-safe and fire-tested
- > Integral external position indicator on valve shaft and body
- > Extended bonnet for shaft packing sealing
- > Top / Side entry port for in-line maintenance and inspection purposes
- > External anti-blowout device
- > Very large sizes up to 80"



VF Series

Our VF Series valves are specified worldwide for their unique combination of shut-off, control and reliability features, together with their compactness and fitness for purpose in critical tight shut-off isolation duties and combined isolation / non-return applications. Features include:

- > Double eccentric
- > Uninterrupted seating
- > Interchangeable and adjustable seal ring
- > Self-cleaning seat
- > Shaft protected from aggressive media
- > Welded, bolted or integral seat
- > Self-lubricating bearings
- > Corrosion resistant shaft bushing
- > Rubber vulcanized or epoxy lined body
- > Very large sizes up to 160"



DS Series

Our DS Series valves are specified worldwide for their unique sealing performance delivered by their robust rubber liner design with a metal reinforced and high quality construction materials. They are manufactured using stable and durable components to ensure long-term reliability. Features include:

- > Fully rated up to 20 bar
- > Replaceable vulcanized rubber liner on a metal rigid support
- > Complete double seal protects stem from media
- > Self-centering disc (up to 24")
- > No pins or keys to connect disc (up to 24")
- > Self-lubricating and resistant alloy bushings
- > Wide range of materials available
- > Sizes up to 160"



MR Series

Control butterfly valve for use with process fluids, hydrocarbons and other abrasive agents. Features include:

- > Concentric design metal to metal
- > Position seated
- > Leakage class to ANSI B16.104 Cl.II or Cl. III
- > Inherently fire safe
- > Characterised trim available with disc and integral baffles
- > Sizes up to 80"



NR Series

Non-return butterfly valve for pump protection, water transportation and other applications. Features include:

- > Resilient seal ring on the Disc (rubber or metal)
- > External hydraulic dampers for a Non-Slam effect and closure speed control
- > Double or triple eccentricity
- > Bi-Directional axial shaft support
- > Easy installation and maintenance
- > Low pressure drop in flow conditions
- > Large sizes up to 48"



TF Series

PTFE lined butterfly valve for sea water, chemical fluids and other applications. Features include:

- > Pure virgin PTFE liner on a back-ring of vulcanized rubber
- > Cartridge fully interchangeable
- > Bi-directional tight shut-off
- > Self centering disc
- > Body and stem isolated from the fluid
- > Easy installation and maintenance
- > No pins or keys to connect the disc
- > Available for size up to 24"



TT Series

Full PTFE lined butterfly valve for use with HCL, HNO₃, bleach and other aggressive agents. Features include:

- > Pure virgin PTFE seat on the body
- > Disc and shaft fully covered by PFA
- > Bi-directional tight shut-off
- > Self-centering disc with axial springs
- > Easy installation and maintenance
- > High resistance to aggressive agents
- > Available for size up to 12"

Our global reach

For more than 50 years our business has been synonymous with innovation and performance in the severe service valve and controls industry. We have manufacturing operations in 19 countries and support our customers on the ground via local manufacturing facilities and our global service network, which includes 200 dedicated aftermarket specialists.



Europe

- | | | |
|---|--|---|
| 1
IMI Critical Engineering HQ
Birmingham, UK | 6
IMI CCI Florence
Montelupo
Italy | 11
IMI Orton
Piacenza
Italy |
| 2
IMI Bopp & Reuther Mannheim
Mannheim, Germany | 7
IMI CCI Manchester
Manchester
UK | 12
IMI Remosa
Cagliari
Italy |
| 3
IMI CCI Aberdeen
Aberdeen
UK | 8
IMI CCI Milan
Milan
Italy | 13
IMI SSF
Chesterfield
UK |
| 4
IMI CCI Austria
Vienna
Austria | 9
IMI CCI Sweden
Säffle
Sweden | 14
IMI STI
Levate
Italy |
| 5
IMI CCI Brno
Šlapanice
Czech Republic | 10
IMI CCI Switzerland
Balterswil
Switzerland | 15
IMI Th Jansen
St. Ingbert
Germany |

Asia

- | | |
|--|--|
| 21
IMI Critical Engineering Chennai
Chennai, India | 26
IMI CCI Malaysia
Kuala Lumpur
Malaysia |
| 22
IMI Critical Engineering China
Shanghai, China | 27
IMI CCI Seoul
Seoul
Republic of Korea |
| 23
IMI CCI Bangalore
Karnataka
India | 28
IMI CCI Singapore
Singapore |
| 24
IMI CCI Japan
Kobe
Japan | 29
IMI CCI SriCity
Andhra Pradesh
India |
| 25
IMI CCI Korea
Paju
Republic of Korea | |



North America

30
IMI CCI Houston
Texas, USA

31
IMI CCI RSM
California
USA

32
IMI Fluid Kinetics
Kansas
USA

33
IMI NH
Ontario
Canada

34
IMI Z&J Houston
Texas
USA

South America

35
IMI CCI Brazil
Sao Paulo
Brazil

36
IMI InterAtiva
Sorocaba
Brazil

Middle East & Africa

37
IMI CCI Middle East
Dubai
UAE

38
IMI CCI South Africa
Witbank
South Africa

Russia

39
IMI Critical Engineering Russia
Moscow
Russia

Australia

40
IMI CCI Australia
Victoria
Australia

IMI Orton

Orton S.r.l.
Via dei Bazachi 50
29121
Piacenza
Italy

Tel: +39 0523 762 511
Fax: +39 0523 762 512

imiorton.sales@imi-critical.com

IMI Critical Engineering

Lakeside, Solihull Parkway
Birmingham Business Park
Birmingham B37 7XZ
United Kingdom

Tel: +44 (0)121 717 3700
Fax: +44 (0)121 717 3701

www.imi-critical.com