

# VT Ball Valves

## Improved Reliability and Durability

-40°C TO +85°C

DN15 - DN32  
(G1/2" - G1 1/4")  
(1/2" NPT - 1 1/4" NPT)



Flange and in-line versions

Various handle options

Engineering  
**GREAT** Solutions

# Contents

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**03** Delivering expertise, solutions and value to the rail sector

---

**04** VT Ball Valve Benefits

---

---

**06** Global testing and validation

---

**07** International Standards of Compliance

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## Engineering GREAT solutions through people, products, innovation and service

IMI Precision Engineering is a world-leader in fluid and motion control. Building close, collaborative relationships with our customers, we gain a deep understanding of their engineering needs and then mobilise our resources and expertise to deliver distinctive products and solutions.

Wherever precision, speed and engineering reliability are essential, our global footprint, problem-solving capability and portfolio of high performance products enables us to deliver GREAT solutions which help customers tackle the world's most demanding engineering challenges.

> **Reliability**

We deliver and support our high quality products through our global service network.

> **High performance products**

Calling on a world-class portfolio of fluid and motion control products including IMI Norgren, IMI Buschjost, IMI FAS, IMI Herion and IMI Maxseal. We can supply these individually, or combined into powerful customised & Modular solutions to improve performance and productivity.

> **Partnership & Problem Solving**

We get closer to our customers to understand their exact challenges.

# Delivering expertise, solutions and value to the rail sector

For over 30 years, IMI Precision Engineering has delivered robust, reliable and bespoke solutions to the rail sector.

Our products continue to give millions of miles of reliable service across the world's most challenging environments, from the cold of China and Eastern Europe to Australian outback heat.

With a true understanding of the daily issues faced by rail operators and original equipment manufacturers, we design for the precise needs of the rail industry, including:

- > Temperatures ranging from -40°C (-40°F) to +85°C (+176°F)
- > Voltage tolerances of +/- 30%
- > EN 61373 category 1 class A and B vibration resistance
- > EN45545 Fire and Smoke

We talk extensively to maintenance professionals and work closely with rail engineers to ask the questions they ask. That means we can offer customised, practical solutions to the metro, intercity, high-speed, freight and permanent-way rail industries, covering:

- > Air preparation equipment
- > Brake sub-systems and components
- > Coupling control systems
- > Door and step systems
- > Pantograph control systems
- > Water control systems
- > Freight control and actuation
- > Suspension control
- > HVAC
- > Sanding

By listening and responding to your specific challenges, we help you make significant improvements and savings in terms of cost of ownership, energy efficiency, reduced weight, reduced maintenance and more.

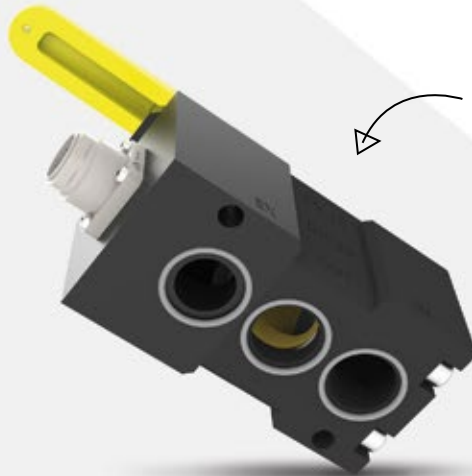


# VT Ball Valve Benefits

Wide temperature range



Flange and in-line version



Easy to maintain

Different monitoring options



High corrosion protection 1000 hrs



Complete porting range DN15 - DN32  
(G1/2" - G1 1/4")  
(1/2" NPT - 1 1/4" NPT)

**Product Highlights:**

- > Designed specifically for the Rail Sector
- > Leak tight design over wide temperature range
- > 3/2 Function, Flange and In-Line versions
- > Choice of operating handles
- > Choice of position monitoring options
- > Robust design
- > Easy to maintain
- > DN15 – DN32 (G1/2" - G1 1/4")  
(1/2" NPT - 1 1/4" NPT)

\* T10 range G1/4 / Interface version also available

**Technical Specification:**

- > Medium: Compressed air, water, inert gases and any other fluid compatible with the valve materials
- > Operating Pressure:  
0 to 12 bar (0 to 174 psi)

- > Electrical Monitoring;
  - > Monitoring Options:  
Open position, Close position,  
Open/close position,  
Open/open position <sup>\*2)</sup>,  
Close/close position <sup>\*2)</sup>,  
Close/close position

<sup>\*2)</sup> Interface version with two switches, Inline version with DPDT switch

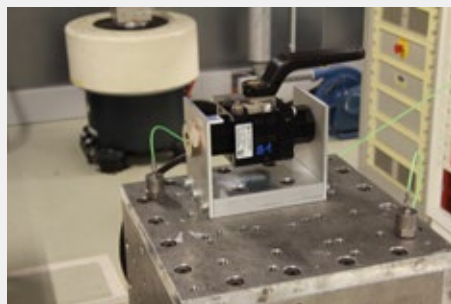
- > Handle Option;
  - > Lever, latching, locking –  
red, yellow, white, black
  - > Different handle positions available
- > Maximum Voltage: 250V a.c
- > Maximum Current:  
5A (inline version)  
6A (flange version)
- > Temperature Range:  
-40°C to +85°C working,  
-55°C to +85°C – storage
- > Electrical Connection:
  - > Single switch:  
DIN EN 175301-803 (DIN 43650)
  - > Double switch:  
DIN EN 175201-804 (DIN 43651)
  - > Inline:  
Free cable end
- > Protection Class: IP65 (DIN 40050)

*Different handle  
options*



## Global testing and validation

We fully understand the challenges, standards and specifications that matter to the daily operations of the rail industry. We are well used to designing high-quality products with close regard to temperature range, voltage tolerance, vibration resistance, and safety requirements.



# International Standards of Compliance

EU Standards	
<b>NF F11-101: 1994</b>	Railway rolling stock - Connecting and airtight interfaces for flanged pneumatic apparatuses
<b>NF F11-806:1996</b>	Railway rolling stock - Shut-off plug valves, for compressed air Circuits
<b>NF F11-102:1996</b>	Railway rolling stock - Degrees of protection against external attacks to pneumatic and electro-pneumatic apparatuses
<b>EN 60077-1:2002</b>	Railway applications - Electric equipment for rolling stock
<b>EN 61373: 2010</b>	Railway applications - Rolling stock equipment - Shock and vibration tests
<b>EN45545: 2013</b>	Fire protection on Railway Vehicles
<b>EN50155: 2007 which includes:</b>	Electronic Equipment used on Rolling Stock
> <b>EN60068-2-1</b>	Test A Cold Temperature
> <b>EN60068-2-2</b>	Test B Dry Heat
> <b>EN60068-2-30</b>	Damp Heat, Cyclic
> <b>EN61373: 2010</b>	Shock and Vibration Category 1 Class B
> <b>EN50121-3-2</b>	Electromagnetic Compatibility
<b>EN ISO 9227: 2012</b>	Salt Spray Test up to 1000 hours
US Standards	
<b>IEEE 16:2004</b>	Standard for Electrical and Electronic Control Apparatus on Rail Vehicles
<b>NFPA 130 - 2014 Edition</b>	Standard for Fixed Guideway Transit and Passenger Rail Systems
<b>49 CFR §238.105</b>	Train electronic hardware and software safety
<b>MIL-STD-810G CHG-1</b>	Environmental engineering considerations and laboratory tests
Russia Standards	
<b>GOST 17516.1-90</b>	Electrotechnical articles. General requirements for stability to effect of environment mechanical factors
<b>GOST 30631-99</b>	General requirements for machinery, instrumentation and other industrial products regarding the mechanical externally acting factors during operation
<b>GOST 15150-69</b>	Machines, instruments and other industrial products. Modifications for different climatic regions. Categories, operating, storage and transportation conditions as to environment climatic aspects influence
<b>GOST 17433-80</b>	Industrial purity Compressed air grades of contamination



IMI Precision Engineering operates four global centres of technical excellence and a sales and service network in 75 countries, as well as manufacturing capability in the USA, Germany, China, UK, Switzerland, Czech Republic, Mexico and Brazil.

For information on all IMI Precision Engineering companies visit [www.imi-precision.com](http://www.imi-precision.com)

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# IMI

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