



Industrial Automation

IMI Buschjost

Hydrogen Refuelling Stations

Breakthrough
engineering for
a better world



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Breakthrough engineering for a better world

We create solutions for our customers which enable smarter, safer, more productive and sustainable factories, production lines and warehouse operations. Our pneumatic, electric motion and fluid control systems help machine builders and end users around the world automate and optimise manufacturing and warehousing processes.

We have partnered with customers in industrial automation for over a century, applying our experience and innovation to create lasting value for their businesses. Our solutions support critical industries such as automotive, food and beverage, pharmaceuticals and even the space industry. We support the automation of precision manufacturing, product assembly, testing and packaging.

We use the latest digital technologies in our automation products and constantly innovate in close partnership with our customers. By applying our deep expertise, we can solve their toughest automation challenges, today and tomorrow. Through increased productivity, efficiency and safety, our customers can serve their own customers better, creating sustainable competitive advantage and delivering growth.

Our world-class product portfolio includes IMI Norgren, IMI Bimba, IMI Bahr and IMI Buschjost.

Breakthrough engineering you can count on.



Hydrogen Refuelling Stations

We offer an extensive range of high quality components and complete system solutions to tackle the biggest challenges currently facing hydrogen infrastructure development.

- Helping to reduce complexity
- Simplified assembly by reduction of parts and modular solutions
- Improving the safety, reliability and performance of fluid and process control sub-systems
- Reduction of fittings and therefore potential leakage points

We have extensive expertise in hydrogen and high pressure products and solutions. Our Hydrogen product portfolio includes a complete range of fluid and process control components specifically designed with hydrogen in mind. Suitable for storage, compression and dispensing applications, our products are designed to provide leading performance and maximum safety for pressures up to 1,050 bar.

Our market leading products combine to create an extensive range of proven valve and pressure control solutions including:

- Pressure Regulators (Spring, Dome, Proportional Pressure Reducers, Back Pressure Valves)
- Solenoid Operated Valves
- Manual Stop Valves
- Filters - Inline and Tee-Type
- Check Valves
- Safety and Relief Valves



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High Pressure Solenoid Valve

●● Tackling hydrogen embrittlement and ensuring system safety through innovative design (Patent pending). ●●

We have over 60 years of high-pressure application expertise and is dedicated to tackling the biggest challenges within the hydrogen industry. The latest development in our commitment to hydrogen, is our new high-pressure solenoid valve. Incorporating a servo operated piston and designed specifically with hydrogen refuelling in mind, our high pressure hydrogen valve is compact, reduces complexity by eliminating the need for pilot gas systems and is pre-cooling ready for fast fuelling applications at temperatures as low as -50°C.

In addition to offering high flow efficiency through high KV values, our innovative design and material selection offers significant improvements in the reliability and safety of your station.

Series 83830/83840
High pressure solenoid valve
DN 8 & DN 13 with
integrated check-valve



High pressure
solenoid valve
DN 8 & DN 13



- High pressure solenoid valve DN 8 + DN 13
83830 (1,050 bar) / 83840 (550 bar)**
- Maximum inlet pressure: 1,050 bar
 - Function: 2/2 normally closed
 - No internal or external soft sealing
 - Operating pressure range: 10 ... 1050 bar
 - Burst pressure: 3,000+ bar
 - Port size: 13/16-16 UNF and 3/4-14 NPS cone & thread for MP tubing
 - Material: All fluid wetted, pressure retaining parts made from 316L / 1.4404

- Ambient temperature: -45 ... +55°C
- Minimum fluid temperature: -50°C (Pre-cooling ready)
- Voltage: 24 V d.c., 100% ED., IP66, 16 W
- Eliminates the need for pilot gas systems
- Ex: II 2G EX eb mbIIIC T4 Gb; II 2D EX mb tbIIB T125°C Db
- PED: Article 4, chapter 3
- Optional: Integrated check-valve

Pressure Regulation

●● With a robust, corrosion resistant, sealed spring housing design our regulators are built to last, offering product lifetime up to 35 years with stable pressure precision for up to 10 years without adjustment. ●●

We offer proven solutions for high pressure gas control on the outlet from the compressor, as well as in downstream pressure reduction applications such as in the dispenser. Our spring loaded pressure regulators (also called reducers or controllers) control the outlet pressure over a range of varying inlet pressures and flows with high levels of regulation accuracy.

Series D479
High pressure
proportional regulator



Series J50
High pressure regulator



- High Pressure Proportional Regulator D479**
- Maximum inlet pressure: 1,050 bar (15.229 psi)
 - Manual adjustment via via proportional dome
 - 0 ... 4 bar
 - Material: stainless steel 316L
 - Seat material: stainless steel/1.4401
 - Ambient temperature: -45 ... +50°C,
 - Media temperature: -40 ... +85°C, depending on the sealing material
 - Port size: 13/16-16 UN cone thread connector for 9/16" MP tubing and 9/16-18 UNF cone thread connector for 3/8" MP tubing

- High Pressure Regulator J50**
- Maximum inlet pressure: 550 bar (aluminium), 750 bar (stainless steel)
 - Manual adjustment via knob
 - Maximum inlet pressure: 550 bar (aluminium), 750 bar (stainless steel).
 - Regulating pressure range: 0 ... 275 bar (aluminium), 0 ... 550 bar (stainless steel)
 - Body material: Aluminium/L 168.T6511, stainless steel 316/1.4401
 - Seat material: stainless steel/1.4401
 - Ambient temperature: -50... +150°C, depending on the sealing material.
 - Port size: G3/8, NPT 3/8
 - Flow: 2.9 m³/h



Type 240
Pilot Valve



- Type 240 – Pilot Valve**
6 bar Ex d I/P Converter
- Designed to work with D479 dome pressure transducer
 - Advanced electronic control
 - Tight Shut-Off feature solves leakage problems caused by zero-point drift
 - Fail-Safe (unit pressure falls to zero on signal failure)
 - Field replaceable filter
 - Controllable according to SAE J2601 refuelling ramps
 - Ex db IIC encapsulation

Filtration

●● Our robust, corrosion resistant design, stainless steel mesh material and low pressure drop, offers optimal contamination protection for pressure system components. ●●

Particle contamination at high pressures will reduce the service life of hydrogen control equipment and is unsuitable for fluid being dispensed for on-vehicle applications. Our filters provide protection against particle ingress and are suitable for use in high flow systems with a tolerance to high differential pressures.

Series W11/W12
High pressure filter



MP line filter



- High pressure filter**
Series W11/W12
- Maximum inlet pressure: 550 bar
 - Material: stainless steel 316/1.4401
 - Filtration accuracy: 5 µm ... 25 µm
 - Ambient temperature: -50 ... +135°C depending on sealing material
 - Port size: 3/4" NPT, 1" NPT, 13/16-16 UNF cone & thread for MP tubing
 - Filter element easily removable for maintenance

- High pressure filter**
MP line filter
- Material: stainless steel 316L
 - Maximum inlet pressure: 1,050 bar
 - Mesh size: 5 µm ... 25 µm
 - Port size: 13/16-16 UNF, 9/16-18 UNF cone & thread for MP tubing
 - Temperature range: -50 ... +85°C
 - Filter element easily removable for maintenance
 - Flow: 2.9 m³/h

Complementary Components

●● **Completing our One-Stop-Shop portfolio with complementary standard products for Hydrogen systems.** ●●

Reliable non-return valves for critical conditions and shut-off valves for manual intervention into the process line. These components are applicable throughout any high pressure system.



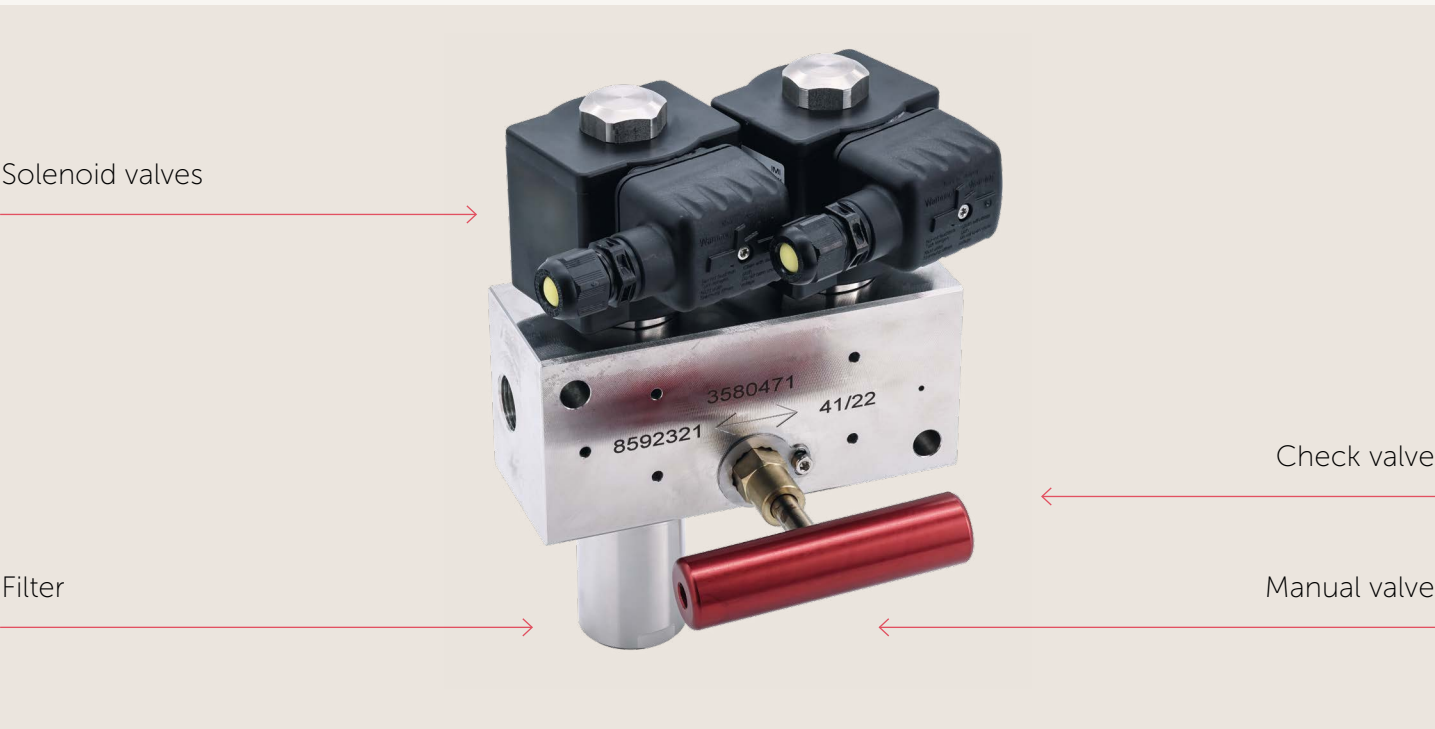
- Series N10 In-line check-valve**
- Maximim inlet pressure: 1,050 bar
 - Crack pressure: 0,5 bar
 - Port size: 13/16-16 UNF cone & thread for MP tubing
 - Material: stainless steel 316L
 - Seat material: PEEK
 - Ambient temperature: -40 ... +85°C
 - Media temperature: -40 ... +85°C

- MP Manual valves 90° elbow & straight**
- Maximim inlet pressure: 1,500 bar
 - Port size: 7/16-20 UNF to 13/16-16 UNF cone & thread for MP tubing
 - Material: stainless steel 316L
 - Seat material: PTFE compound
 - Ambient temperature: -50 ... +100°C
 - Media Temperature: -60 ... +200°C

Custom Manifolds

●● **High complexity in a simple package! Fewer leak points, smaller footprint, reduced piping, and simple mounting.** ●●

Tailored to your individual application needs, we integrate our extensive portfolio of components into custom manifolds. Tapping into our experience with industry leaders, our engineers provide a unique service to simplify and optimise system layouts, enabling cost-effective series production.

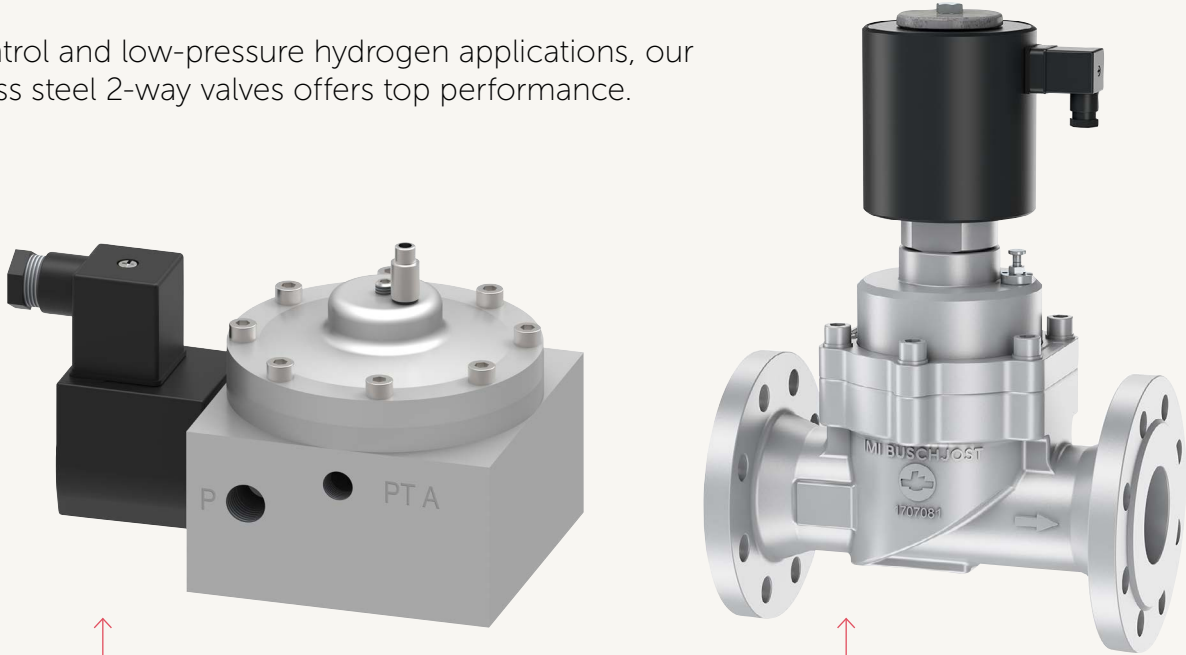


- Configurations integrating ...**
- 83830 & 83840 solenoid valves
 - Instrumentation ports
 - Filters 5µm – 25µm
 - Manual valves
 - Check-valves
 - Regulators

- For applications such as ...**
- Refuelling dispensers
 - Storage management
 - Compressor manifolds
 - Customised block & bleed

Auxiliary Products

For coolant control and low-pressure hydrogen applications, our range of stainless steel 2-way valves offers top performance.



Low pressure regulator
8592121.9151.02400

Series 86540



Series 84520



Series 82610



Series 86740



Type 240
I/P Converter

Need a clever,
customisable way
of combining individual
components?

Contact our hydrogen experts to learn about
our modular manifold solutions.



Our Industrial Automation sector operates four global centres of technical excellence and a sales and service network in 50 countries, as well as manufacturing capability in Europe, Americas and Asia Pacific.

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