Modular Valve Design offers Countless Configurations

Optional with NPT thread

Universal in use

Optimal flow rate

Engineering GREAT Solutions
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 singly, or combined in powerful customised solutions to improve performance and productivity.

> **Partnership & Problem solving**
We get closer to our customers to understand their exact challenges.
IMI Precision Engineering's Proven Classics

Versatile and flexible thanks to modular system

IMI Buschjost process and all-media valves are synonyms for the highest quality and innovation coupled with a tremendous service and application spectrum. For more than 80 years, they have been developed and produced in the North Rhine-Westphalian town of Bad Oeynhausen, one of IMI Precision Engineering’s four German sites. The portfolio is wide and diverse, comprising solenoid valves with or without differential pressure as well as remote controlled, filter and proportional valves. The range is rounded off by bespoke special solutions for individual customer applications.

This brochure presents a small but essential selection of proven standard valves. Suitable for numerous sectors and applications, they have proven their merit a thousand-fold in practise over the years to become genuine and indispensable classics in the market.

The modular system enables a versatile and flexible use of the valves. Do you require an especially high or low temperature version, a specific material or a special approval? Our modular system includes these and many more options. If needed, you can also supplement your valve with the appropriate accessories. Our experts will be pleased to advise you.

Options:
- Normally open (NO)
- Sealed core tube/media separated
- NBR, FPM, EPDM or PTFE seat seals
- Plastic body (valves)
- Manual override
- Oxygen version
- Position indicator
- Catching version
- Low temperature version
- DVGW
- SIL
- Free of paint-wetting impairment substances
- Drinking water version
- High temperature version
  - Diaphragm valves up to +150 °C
  - Piston valves up to +200 °C

Accessories:
- Mounting angle
- PWM plug connectors
- Conduit coil 6852
- Solenoids according to ATEX
- Dirt traps

Note: Not every option is available for each series.
## Modular Valve Design offers Countless Configurations

### The Modular System

<table>
<thead>
<tr>
<th>Series</th>
<th>Series</th>
<th>Design</th>
<th>Actuation</th>
<th>Connection</th>
<th>Fluid temperature</th>
<th>Pressure range (bar)</th>
<th>Material housing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brass</td>
<td>Stainless steel</td>
<td>82400</td>
<td>82730</td>
<td>Diaphragm valves</td>
<td>Solenoid operated, internally piloted</td>
<td>G1/4...2</td>
<td>0.1...16 bar</td>
</tr>
<tr>
<td></td>
<td></td>
<td>82530</td>
<td>82560</td>
<td>Diaphragm valves</td>
<td>Solenoid operated, with forced lift</td>
<td>G1/4...1/2</td>
<td>0...10 bar</td>
</tr>
<tr>
<td></td>
<td></td>
<td>82540</td>
<td>82590</td>
<td>Diaphragm valves</td>
<td>Solenoid operated, with forced lift</td>
<td>G1/4...1/2</td>
<td>0...10 bar</td>
</tr>
<tr>
<td></td>
<td></td>
<td>85360</td>
<td>-</td>
<td>Piston valves</td>
<td>Solenoid operated, internally piloted</td>
<td>G1/4...2</td>
<td>0.5...40 bar</td>
</tr>
<tr>
<td></td>
<td></td>
<td>85600</td>
<td>85840</td>
<td>Piston valves</td>
<td>Solenoid operated, with forced lift</td>
<td>85600: G1/2...2</td>
<td>0...25 bar</td>
</tr>
<tr>
<td></td>
<td></td>
<td>86700</td>
<td>86740</td>
<td>Piston valves</td>
<td>Solenoid operated, with forced lift</td>
<td>G1/4...2</td>
<td>0...25 bar</td>
</tr>
</tbody>
</table>

### Thread

- + Valve options
- + Solenoid options
- + Voltage / Frequency
- + Accessories

= Your individual valve
The Features – Labyrinth Technology

In using innovative labyrinth technology, IMI Precision Engineering has revolutionised its IMI Buschjost piston valves.

The valve pistons are equipped with low-wear, labyrinth seals made from graphitised PTFE guide rings replacing the traditional groove ring. The labyrinth seal can withstand temperatures up to +200 °C and is insensitive to pressure spikes against the direction of flow. It is also distinguished by a long service life, simple and compact installation plus a high flow rate.

Force lifted operated valves with labyrinth pistons score with a crucial advantage: The special nature of the seal reduces the piston’s motion resistance, thereby increasing the effective actuation force. The valve thus functions especially reliably, even under the toughest conditions.

Valves equipped with labyrinth technology are utilised in numerous applications, for instance in the energy sector, where they are used as shut-off valves for liquid fuels. In industrial automation, they are installed in injection moulding and tunnel drilling machines, while in the food and beverage industry they are used for blowing PET bottles.

Product highlights:
- Compact design
- Durable and robust
- High flow rate
- High-quality graphitised PTFE seals
- Brass and stainless steel
- Maximum pressure ratings up to 40 bar (580 psi)
- 1/4 ... 2 (ISO G/NPT) port size options

Durable, robust and low-wearing
Water hammer, also called fluid hammer or hydraulic shock, creates a pressure spike in a pipe system that can damage seals, gauges, pipes and fittings – virtually anything upstream. IMI Precision Engineering addresses the problem of water hammer at the source – the valve. Our superior solenoid valves are proven to reduce pressure spikes by more than 80%, compared to the competition.

**Product highlights:**
- 2/2-Way valves – Normally closed and open
- Brass and stainless steel
- International approvals available
- Compact design
- Maximum pressure ratings up to 16 bar (232 psi)
- 1/4 ... 2 (ISO G/NPT) port size options
- Options:
  - NBR, FKM, EPDM seat seals
  - Manual override
  - Latching coil options
  - Customized solutions

Protects your system against pressure surges

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![Graph showing pressure spikes over time for different valves: IMI Buschjost, Competitor A, Competitor B, and Competitor C. The graph illustrates the reduction in pressure spikes achieved by the IMI valves compared to the competition.]
The Features – Click-on® Solenoid System

What was once actually the name of a simple yet effective fastening technology for solenoids has developed over the course of time into a complete valve range: the Click-on® dry solenoid system. A clip made from stainless steel, which is joined captively to the valve housing, holds the solenoid securely in place, irrespective of the mounting position. A manual intervention is sufficient to fasten or replace the solenoids, with no need for tools. The Click-on® solenoid system is available for all standard voltages as well as for numerous special voltages and also with EEx or CSA approval.

When developing the Click-on® system, the valves equipped with this were also optimised further: Modern materials such as PVDF or Sandvik were used, new diaphragm and piston designs resulted, flow rates and wall thicknesses were optimised.

Product highlights:

- Various solenoid valves, replaceable without tools
- Captive retention clip made from stainless steel
- Long service life
- Low maintenance requirement
- Simple and compact installation
- Housing made from brass or stainless steel
- 1/4 ... 2 (ISO G/NPT) port size options

Solenoids easy to change without tools
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

Supported by distributors worldwide.

IMI Precision Engineering

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