Filter Technology
Reducing compressed air usage

High grade materials

Twist-on®

Flex-on®

Modular

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.
Filter technology in use

Filter technology includes product filters and dust filter systems.

Filter technology originates in product filter systems that filter out the product from a stream of air or gas within manufacturing processes.

Pneumatic conveyor systems (pressure or vacuum systems) contain filter systems that separate the product from the air. Examples here are mill operations and the pharma and cement industry.

The importance of the dust filter system sector has increased over the past few years because of ever more stringent environmental requirements. Air and gases contaminated with dust may only be released into the environment following a filtration process.

In another process, dust filter systems support the reduction of harmful gases, as in the case of desulphurisation. Combustion air sucked in for gas turbines also has to be cleaned of the tiniest solid particles to prevent damage to the turbine blades.

The majority of filter systems are compressed-air cleaning filter systems with textile or cartridge filters. The filter elements are cleaned by blasting them with compressed air.

IMI Buschjost filter valves control this compressed air stream from a compressed air reservoir or tank. During the cleaning process, the compressed air stream not only cleans itself but also the secondary air drawn in with it (Venturi and Coandă-effect nozzles).

The choice of valves and storage systems used has a decisive impact on cleaning efficiency. IMI Precision Engineering offers optimally designed valve solutions, supported by time-relay controls, differential pressure regulators, test line cleaners and other accessories.

Product highlights:

- Media temperature –40 °C ... +80 °C
- Operating pressure 0,4 ... 8 bar
- Modular, flexible filter cleaning system
- Designed for the smallest filter systems
- Low dust deposits
- Suitable for pulse cleaning and for flush cleaning with pressurised air
- Short reaction times
- High pressure peaks
- Excellent perfusion
- Pulse duration is very short paying economic dividends
Options & Variants

Valves

2/2-way valves, solenoid pilot operated

Series 82900/82910

DN 20 ... 80, G3/4 ... 3, 3/4 ... 2 1/2 NPT

Series 83670

Series 83920

2/2-way valves, pilot operated

DN 20 ... 80, G3/4 ... 3, 3/4 ... 2 1/2 NPT

2/2-way valves, solenoid pilot operated

DN 25 ... 40

Series 83920

Diaphragms

Standard  Temperature  Low pressure
Control units

Valve controllers for industrial filters

Number of valves:
- **Master version**: 1...8
- **Slave version**: 16 (with expansions max. 64)

**Series 83497xx.0000.xxxxx**

- Pneumatic controllers, pneumatically actuated
- Number of valves: max. 64

**Series 8349500.0000.xxxxx**

- Valve controllers for industrial filters
- Number of valves: 1...8

**Internal thread**
- \( \Phi \text{G1/8}, Z=\text{G1/4} \)

**Protection class:**
- \( \text{II 2 GD c II B} \)
- \( T85°C \)
- \( \text{I Mac} \)

**Up to 576 valves**

Features:
- Up to 512 valves are controlled
- Simple to operate
- Minimized training requirements
- Safety
- International deployable
IMI Precision Engineering is now offering a particularly compact filter cleaning system with a modular design that can be adapted to customer requirements. The high quality system solution meets all current guidelines and makes the customers’ need to build expensive tanks redundant. As a matter of fact, filter systems around the world need to become more and more efficient. For this reason IMI precision Engineering extends its IMI Buschjost 6" flex-on filter cleaning system by a 3" version that has a smaller footprint but the ability to serve the same range of applications. This tank system is modular, flexible and designed for the smallest filter systems. It allows customers to easily stay abreast of increasing environmental demands.

The compact filter cleaning systems is based on a tank with a maximum length of 2,000 mm and a diameter of 75 mm. Manufactured from aluminium alloy, the smooth surface allows impurities and dust deposits to be removed extremely easily. And unlike steel tanks, the high quality material cannot corrode. But there are even more customer benefits: expensive tank construction can be avoided, with the customer receiving a tailor-made system shortly after drawing approval.

This system is manufactured in high quality at our German production site and delivered with a letter of conformity in accordance with Pressure Equipment Directive (PED), Category 1.

The filter cleaning system is designed for valve sizes up to DN 25. Special valves with a variety of characteristics are also available, allowing the system to be equally suitable for pulse cleaning and for flush cleaning with pressurised air. The filter cleaning system works reliably with no loss of pressure or leakage at media temperatures between -40 °C ... +80 °C. The operating pressure range is 0.4 and 8 bar. Apart from filter valves and blowpipes, the filter cleaning system can also be equipped with a control box or peripheral devices such as feed and drainage valves, monometer or a measurement line cleaner, depending on the field of use. Integrated filter ventilation valves with high performance diaphragms ensure short reaction times, high pressure peaks and excellent perfusion. Due to the extremely short response times of the diaphragms, the pulse duration is very short, saving expensive pressurised air and quickly paying economic dividends.

Systems for dust collectors with integrated filter valves

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Connections

- Hose connection
- Plug connection
- Crimp connection

Connection G 1/2 resp. 1/2 NPT (condensate drain, pressure gauge, pressure switch etc.)

Filter cleaning system

8589001.8171.02400 (Example)

 Dodgers mm for

Valves DN 25
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.

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