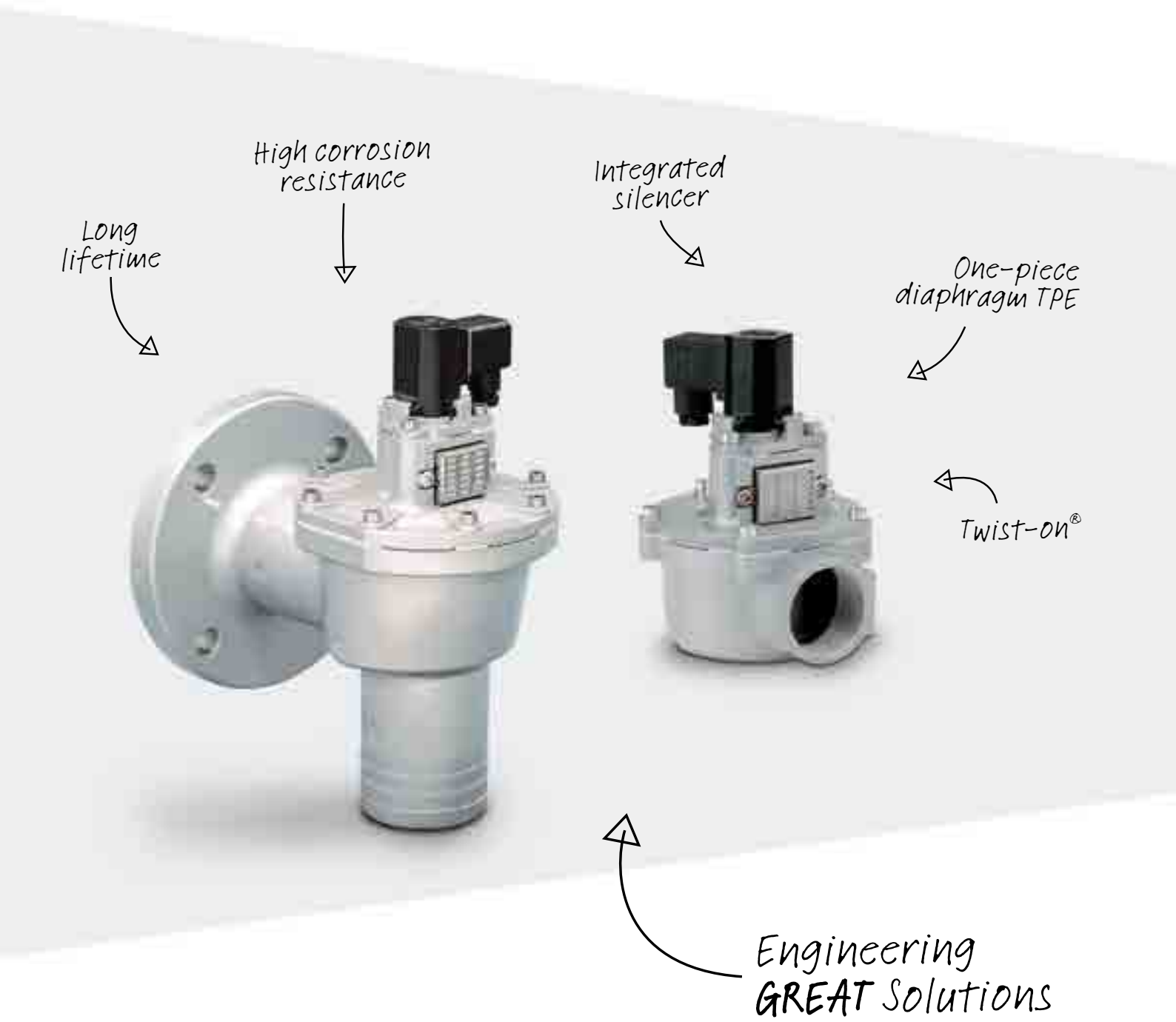
IMI
Precision Engineering

Dust Filter Valves



Speed saves energy - innovative filter valves

IMI BUSCHJOST®

Contents

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 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.

Dust collector valves

A number of technologies to clean dust filters effectively and inexpensively are available. One of the most efficient is the air-blasting technique. The basic principle is straightforward. A short, intense pulse of air blasts into the soiled filter element. Dust and loose dirt from the filter fall to the ground and can be removed from there. Following the short cleaning cycle the filter is ready and the filter system can again operate at full capacity.

Filter valves for air-blasting have been developed to allow efficient and inexpensive cleaning. Top priorities in the developers' requirements specification were to optimise the filter cleaning, reduce air consumption and prolong the valves' service life.
To achieve optimum cleaning with the compressed air pulse, the pressure in the filter has to reach the set point very quickly. This means that the valves must open fully within a few milliseconds.

Compared with the previous models, this filter valve series has extremely fast opening times, which are essential for effective, intensive cleaning. The closing mechanism is just as fast as the opening mechanism. This determines the economical operation of a valve. The air pulse must return to zero as quickly as possible, as any minor delay will only consume air and cost money.

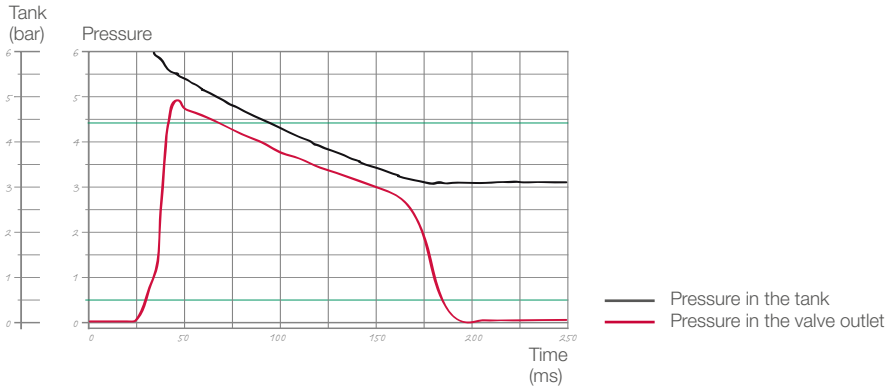
Product highlights:

- High grade materials
- Solenoid exchangeable without tools (Twist-on®)
- CE-Mark
- Optimized strength
- Designed with newest CAD-Technologies
- High flow rate
- One-piece diaphragm
- Usable from -40 °C ... +140 °C
- High corrosion resistance (optional)
- Explosion proof up to hazardous area 1/21 and temperature class T4/ T5
- Usable for low pressure and vacuum applications
- Integrated silencer
- Frost proof solenoid system
- International registrations like Gost-R or CRN availabele

Measurement protocols:

(Example)

Type:	8296600.8171.02400
Port Size:	G 1 1/2
Tank volume:	32 dm^3
Reservoir pressure:	6 bar
Electrical pulse:	50 ms
Pulse length:	165 ms
Max. pressure:	4.9 bar
Pressure quotient:	82.0 %
Reservoir pressure drop:	2.9 bar
Volume / Impulse:	85.3 Ndm^3
Pressure rise time 10-90:	13 ms
Opening time:	38.5 ms
Closing time:	133.7 ms



Options & Variants

Solenoids

Twist-on®

Solenoid 8000

Ex-Solenoid

Diaphragms

Standard

Temperature

Low pressure

Connections

Flange version

Flange version

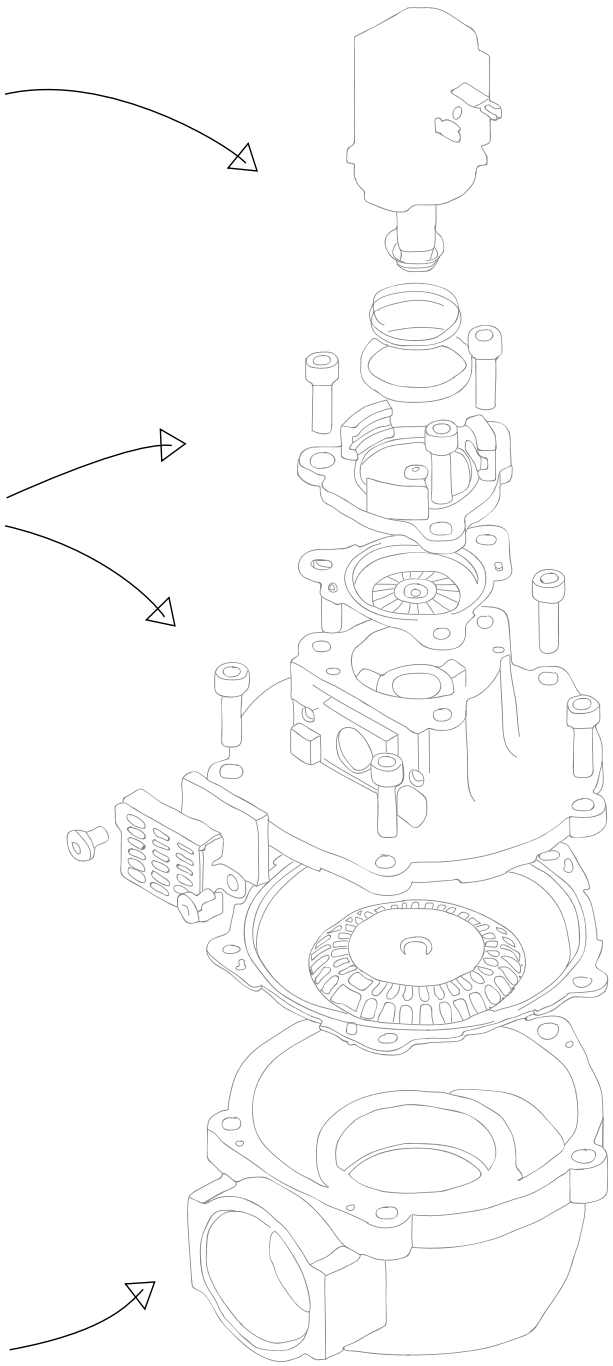
Tank assembly

Bodies

Aluminium

Stainless steel

Special coating



Applications

Environment

Lime Industry

Pharmaceutical Industry

Primary industry

Coal mining

Chemical Working Industry

High pressure Air Pulse

The design of the housing geometry, the control holes and especially the diaphragm seal is impressive. Kv value is a determining factor of the flow rate and is considerably higher in this valve series.

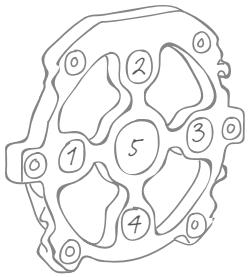
The Kv value of the G 1½ valve, for example, is approximately 30 % higher than that of comparable standard models. Pressure-rise time is crucial in ensuring effective cleaning; the pulse of the valve reaches its maximum after a few milliseconds, letting the valve open around 25 % faster than conventional dust filter valves. Reduced pressure rise times and an improved flow rate result in considerably stronger air pulses. This often allows the required operating pressure to be reduced, leading to not insignificant savings in operating costs.

In addition to the flow coefficient value in Kv and the pressure rise time, the pressure loss in the valve determines the quality and efficiency of a filter valve. The lower the pressure difference between the valve outlet and the pressure of the internal tank when the valve is 100 % open, the lower the operating pressure can be. This has a positive effect on the energy balance of the equipment. Here, customers again feel the direct benefits of the use of modern simulation technologies. The pressure drop across the valve can be decreased by approximately 15 %. All the valves in the series are equipped with a silencer.

Picture	Mounting	Port size	Nominal diameter (mm)						Pilot operated	Solenoid operated	Material
			20	25	40	50	65	80			
	Single valve	G 3/4 - G 3	•	•	•	•	•	•	82900	82960	Aluminium
	Single valve	3/4" NPT - 3" NPT	•	•	•	•	•	•	82910	82970	Aluminium
	Single valve	G 3/4 - G 1 1/2	•	•	•				83300	83320	Stainless Steel
	Single valve	3/4" NPT - 1 1/2" NPT	•	•	•				Special number	Special number	Stainless Steel
	Flange version	DN 25 + DN 40 + DN 65		•	•	•	•		82900 Option 54	82900 Option 54	Aluminium
	Single valve	Compression Fittings DN 25 + DN 40		•	•				83640	83670	Aluminium
	Valve for tank mounting with blow-tube	DN 25 - DN 65		•	•	•	•		83930	83920	Aluminium
	Flange version mounting without blow-tube	DN 80						•	8393900.XXXX.XXXXX	8392900.XXXX.XXXXX	Aluminium
	Filter cleaning system	DN 25		•					8589XXX.XXXX.XXXXX	8589XXX.XXXX.XXXXX	Aluminium
	Filter cleaning system	DN 25		•					8588XXX.XXXX.XXXXX	8588XXX.XXXX.XXXXX	Aluminium

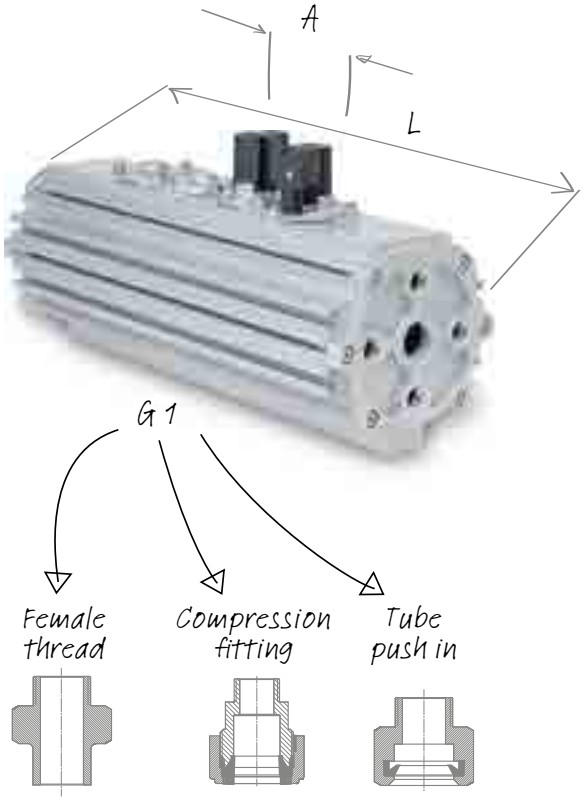
Picture	Description	Measuring range	Series	Material
	Pneumatic Controller (Control of max. 20 dust filter valves)	2 - 8 bar	82870	Grey cast iron

Flex-on®-System



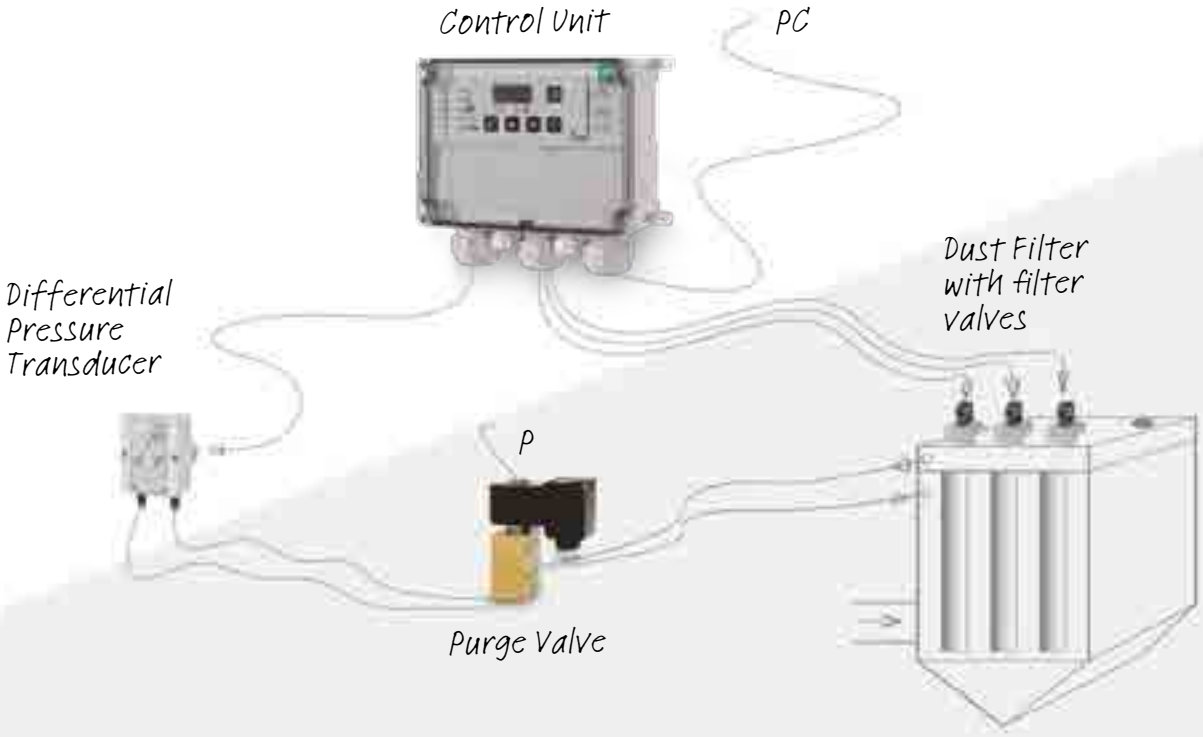
Connection 1 ... 4 G 1/2
Connection 5 G 1/2 ... G 1

Filter cleaning system



Overview

- System for Dust Collector
- With integrated filter valves
- For air
- Fluid temperature –40 °C … +140 °C
- Operating pressure 0,4 … 8 bar
- Aluminium / PA66
- "A" variable from 70 ... 800 mm
- "L" maximum length 2.000 mm



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