INDUSTRIAL GASES

V 0035 - 1450
Depth / Coalescence / Particle Filter



MAIN FEATURES & BENEFITS

- Coalescence / particle filter for the retention of oil and water aerosols as well as particles from compressed air or gases in industrial applications
- Innovative filtration technology; wrapped depth filter medium with medium with high dirt-holding capacity; achievement of high retention rates with low differential pressure
- Validated performance data acc. to ISO 12500; reliable achievement of compressed air quality acc. to ISO 8573-1
- Flow-optimised design, minimum pressure loss for economic compressed air purification (saving of energy costs)
- Unique ease of changing the flow directions as coalescence filter or particle filter by changing the position of the coding clip in the filter bowl

PRODUCT DESCRIPTION

The filter elements type V are designed for the processing of compressed air or gases in industrial applications. Validated performance data acc. to ISO 12500-1 (oil aerosol retention) and ISO 12500-3 (particulate retention) for reliable achievement of compressed air quality suitable to achieve ISO 8573-1 quality classes.

By a flow-optimised design of the filter element as well as by the assigned filter media and the advanced production technology, the differential pressure is minimized and a continuously high separation effiency is ensured.

The filter elements type V possess the threedimensional micro fibre fleece made of polyester, which works oleophobic and hydrophobic. By utilising various filtration mechanisms such as retention by direct impact, sieve effect and diffusion effect, liquid aerosols and solid particles are being retained in the filter.

INDUSTRIES



- Chemical and pharmaceutical industry



- PCB assembly and CD manufacturing



- Surface finishing



- Machine building industry and plant engineering / construction



- Energy and power generation

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Technical alterations reserved (01/2026)

PRODUCT DESCRIPTION

The V filter element is designed and developed for the following applications:

- **Central compressed air processing:**

Prefilter for the protection of fridge dryers and adsorption dryers, applications with expected high particle intake

- **Downstream applications:**

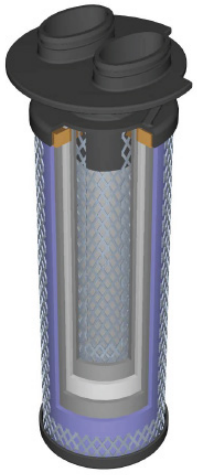
Final filtration for control and process air

- **Adsorption dryers /activated carbon adsorbers:**

Particle filter for the retention of adsorbent abrasion

- **Automotive industry:**

Purification of paint- and lacqering finishing air



Cross section of the depth filter

PRODUCT SPECIFICATIONS

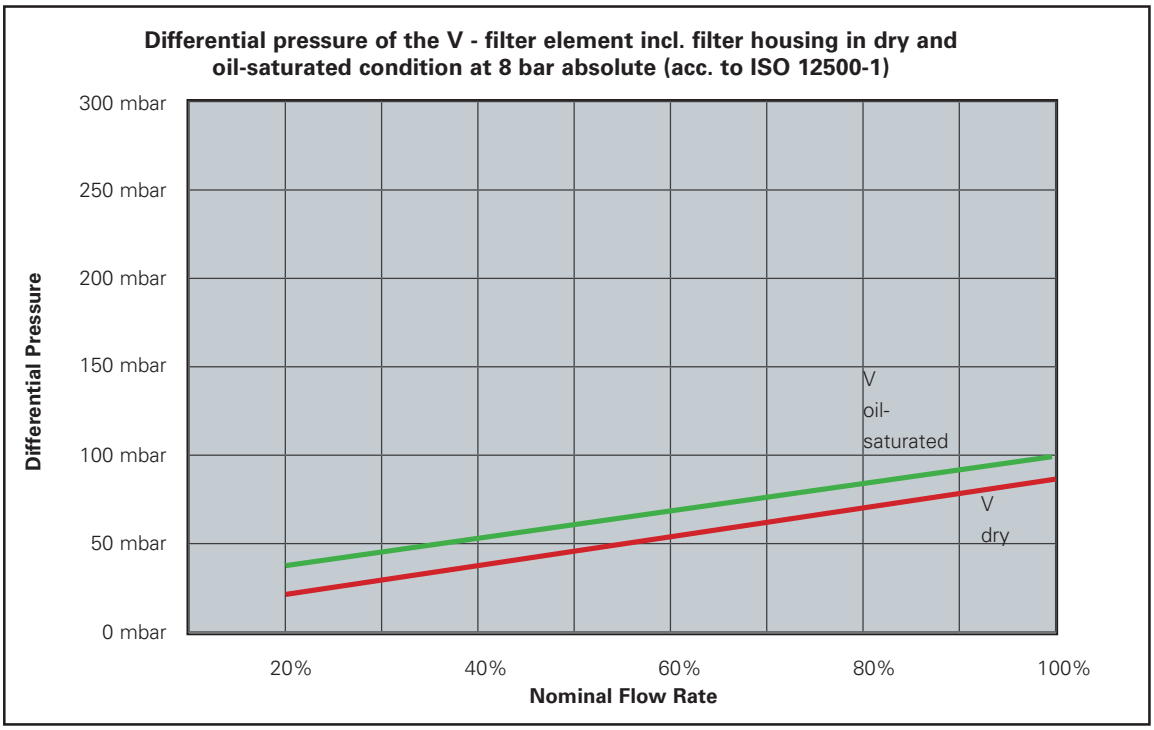
Features	Benefits
Validated performance data acc. to ISO 12500-1 and ISO 12500-3	Reliable achievement of the compressed air quality according to ISO 8573-1
Intelligent overall concept	Flow range, filtration grades, efficiencies and available options perfectly meet requirements of air purification
Flow-optimised Design	Minimum pressure losses, thereby savings of energy costs
Coalescence sleeve fixed by outside support liner	Flow area between element and housing guaranteed at any time; optimised drainage function by constant stabile structure of the coalescence sleeve
Support liner made of stainless steel stretch metal	Protection of the filter media against pressure shocks. Low pressure loss by a large free cross-sectional area
Use of stainless steel material in combination with glass fiber reinforced polyamide	Optimal corrosion protection

Materials	
Filter media	Micro fibre polyester fleece
Coalescence sleeve	Polyester fleece
Inner and outer support liner	Stainless steel 1.4301 / 304
End caps	Glass fibre reinforced polymer
O-rings	Viton: silicone free and free of compound (Standard)
Bonding	Polyurethane
Validation	
Validation of high-effiency filters acc. to ISO 12500-1 and ISO 12500-3	

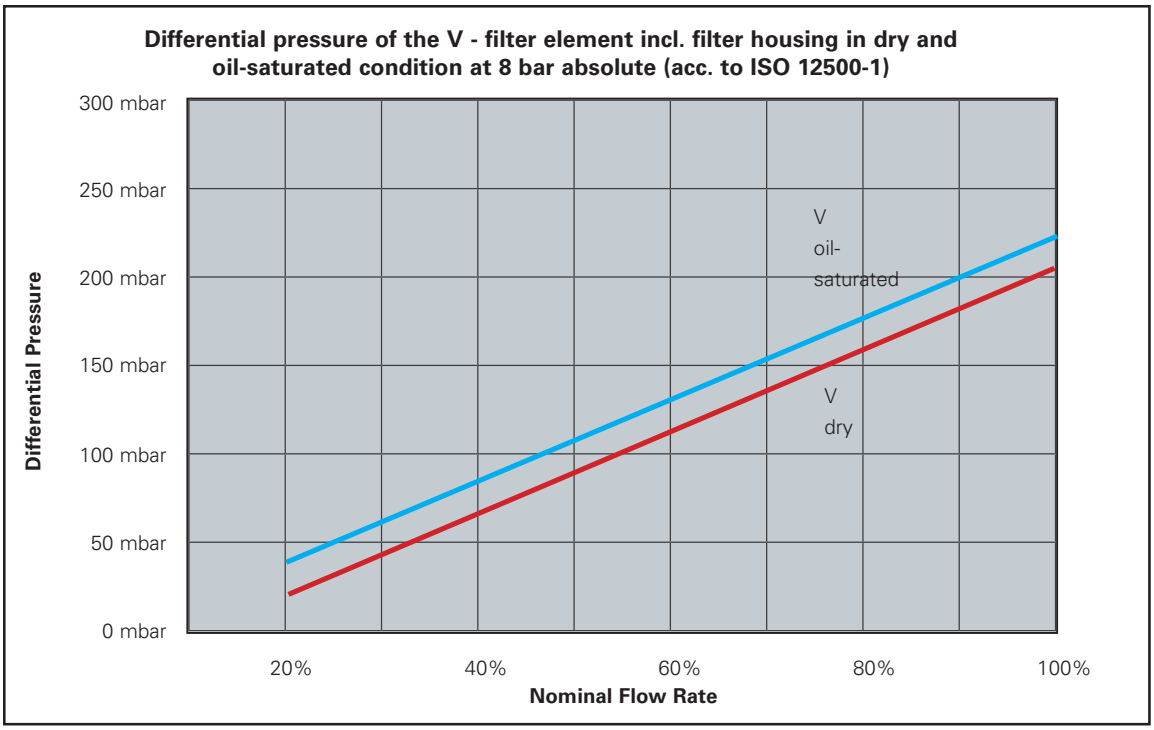
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PERFORMANCE DATA

0035 - 1100



1450



PERFORMANCE DATA

Operating pressure bar g	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Conversion factor fp	0.25	0.38	0.50	0.63	0.75	0.88	**1.00**	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2.00	2.13

Element Type	Nominal Flow Rate at 7 bar g m³/h*	Sizing example for pressure which deviates from nominal pressure
0035	35	V_{nom} = 350 m³/h, operating pressure = 9 bar (g) $V_{corr} = \frac{V_{nom}}{fp}$ $V_{corr} = \frac{350\ m^3/h}{1.25} = 280\ m^3/h$ **Calculated size: Type 0320**
0070	70	
0120	120	
0210	210	
0320	320	
0450	450	
0600	600	
0750	750	
1100	1100	
1450	1450	

* m³ related to 1 bar abs. und 20°C

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CERTIFICATE

Compliance Certificate with the order
according to
DIN EN 10204 2.2

Confirmation of Design and Performance Data with Test Report.
Results of the type test (validation) are listed below.

Filter type	V	Filter size					0035-1100			
Retention of oil aerosols acc. to ISO 12500-1										
Oil retention rate at 8 bar absolute and 10 mg/m³ inlet concentration							96%			
Residual oil concentration at inlet concentration of					10 mg/m³		< 0.40 mg/m³			
					3 mg/m³		< 0.20 mg/m³			
Retention of particles acc. to ISO 12500-3										
Particle diameter [µm]	lower	0.19	0.24	0.36	0.52	0.81	1.16	1.78	2.74	3.92
	upper	0.24	0.36	0.52	0.81	1.16	1.78	2.74	3.92	6.00
Particle retention rate at 8 bar absolute [%]		17.1	22.3	31.7	50.9	83.1	98.5	100	100	100

Filter type	V	Filter size	1450
Retention of oil aerosols acc. to ISO 12500-1			
Oil retention rate at 8 bar absolute and 10 mg/m3 inlet concentration			80...85%
Residual oil concentration at inlet concentration of		10 mg/m³	≤ 1.5...2 mg/m³
		3 mg/m³	≤ 0.45...0.6 mg/m³
Retention of particles acc. to ISO 12500-3			
Particle diameter [µm]	1.78 - 2.74	1.16 - 1.78	0.81 - 1.16
Particle retention rate at 8 bar absolute [%]	100	98.5	83.1

Wolfgang Bongartz
Global Product Manager Industrial Gases
Donaldson Filtration Deutschland GmbH

For more information please contact your Donaldson Sales Representative and visit our website at **www.donaldson.com**.

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Contact us

Donaldson Europe BV
Research Park No. 1303, Interleuvenlaan, 1
B-3001 Leuven, Belgium
Telephone: +32 (0) 16 38 38 11

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