

Ultrair V

Coalescing Filter Element

Coalescing depth filter element for removal of water, oil aerosols and solid particles from compressed air and gases with a retention rate validated according to ISO 12500 and ISO 5011.

Donaldson Ultrair V filter elements

are designed for high quality filtration of compressed air and gas in industrial applications.

Ultrair V element performance has been validated in accordance with ISO 12500, which assures that your application will receive compressed air quality as specified by ISO 8573-1.

The combination of flow channel design optimized through the use of computational fluid dynamics software, careful selection of filtration media, and advanced production technology give the Ultrair V element a very low pressure drop while maintaining a high separation efficiency.

Ultrair V elements utilize a three-dimensional polyester microfiber fleece media, which is ideal for coalescing and draining away oil and water aerosols in the airstream. In addition, this media will capture and retain particulate contaminants through direct impaction, sieving and diffusion.

Applications

The Donaldson Ultrair V coalescing depth filter element is ideal in the following industries and applications:

- Plant air
- Food
- Beverage
- General machine fabrication
- Air conditioning technology
- Process industry (instrumentation and control air)
- Chemical
- Petrochemical
- Pharmaceutical
- Plastic



Ultrair V Coalescing Depth Filter Element

Operating Pressure psi	Conversion factor f_p	Element Type	Flow Rate 100 psi cfm
15	0.25	0035	20
30	0.36	0070	41
45	0.50	0120	70
60	0.60	0210	123
75	0.75	0320	188
90	0.90	0450	264
100	1.00	0600	353
115	1.10	0750	441
130	1.20	1100	647
150	1.40		
160	1.50		
175	1.60		
190	1.75		
200	1.90		
220	2.00		
250	2.10		

Sizing example for pressure which deviates from nominal pressure:
 $V_{nom} = 200$ cfm, operating pressure = 130 psi
 $V_{corr} = V_{nom}/f_p$
 $V_{corr} = 200\text{cfm}/1.25 = 165$ cfm
Calculated Size: Type 0320

*cfm related to 15 psi abs. and 68°F

Ultrair V

Features

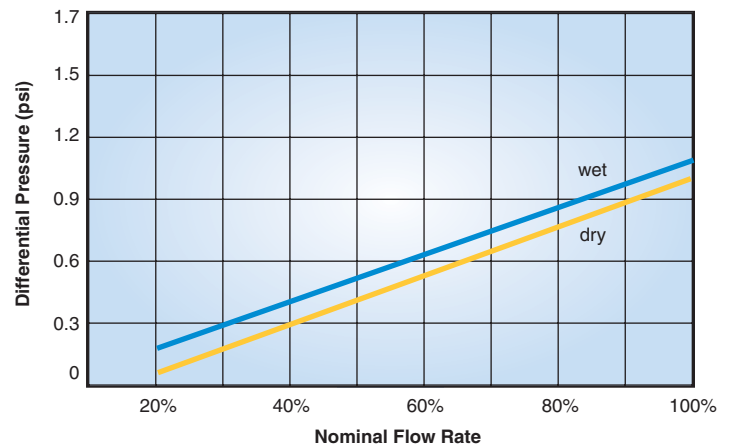
Benefits

Performance validated in accordance with ISO 12500	Reliable filtration of compressed air in accordance with quality specifications of ISO 8573-1
"Total filter" design concept	Every aspect of filter designed, optimized and selected to yield flow capacities, filtration grades and efficiencies in line with industry requirements
Optimized flow channels	Minimizes pressure drop, resulting in energy savings
Stainless steel inner and outer support cores	Protection against pressure shock in either direction; no corrosion for long element life
Coalescing sleeve bound to outer SS support core	No inflation of sleeve, assuring constant contact with main filter body for optimized drainage of coalesced water and oil

Specifications

Residual oil content at an inlet concentration of 2.5 ppm	0.5 ppm
Validation	Validation of high-efficiency filters according to ISO 12500 and ISO 5011 (particles)
Particle retention rate related to ISO fine dust:	V = 90%
Materials	
Filter Media	Polyester fiber fleece
Coalescing Sleeve	Polyester fleece
Bonding	Polyurethane
End Caps	Glass-fiber reinforced polymer
O-Rings	Perbunan®: silicone free and free of compound (standard)
Inner and Outer Support Cores	304 Stainless steel

Differential pressure of the V - filter element in dry and wet condition at 116 psi absolute



* Perbunan® is a registered trademark of LANXESS Deutschland GmbH.



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