

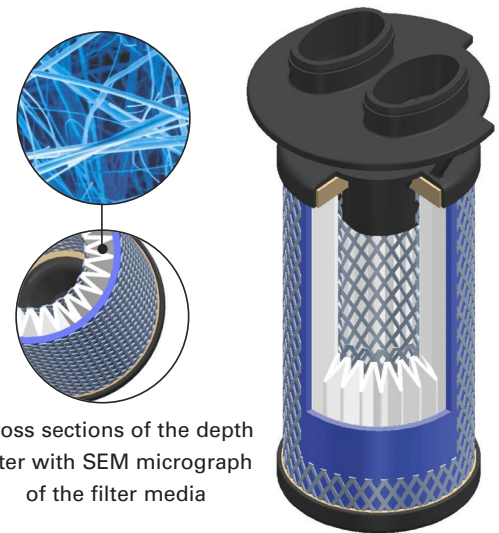
Coalescing depth filter elements for removal of water and oil aerosols, and solid particles, from compressed air and gas with a retention rate validated according to ISO 12500.

Donaldson Ultrair M and Ultrair S filter elements are designed for high quality filtration of compressed air and gas in industrial applications.

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



Cross sections of the depth filter with SEM micrograph of the filter media

Coalescing Ultrair
Filter Element Types M/S

APPLICATIONS

The Donaldson Ultrair M and Ultrair S coalescing filter elements are ideal in the following industries and applications:

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

Operating Pressure (psi)	Conversion Factor (f _p)
15	0.25
30	0.36
45	0.50
60	0.60
75	0.75
90	0.90
100	1.00
115	1.10
130	1.20
150	1.40
160	1.50
175	1.60
190	1.75
200	1.90
220	2.00
250	2.10

Element Type	Flow Rate 100 psi (cfm)*
0035	20
0070	41
0120	70
0210	123
0320	188
0450	264
0600	353
0750	441
1100	647

Sizing example for pressure which deviates from nominal pressure:

$V_{nom} = 200$ cfm, operating pressure = 130 psi

$V_{corr} = V_{nom} / f_p$

$V_{corr} = 200 \text{ cfm} / 1.25 = 165 \text{ cfm}$

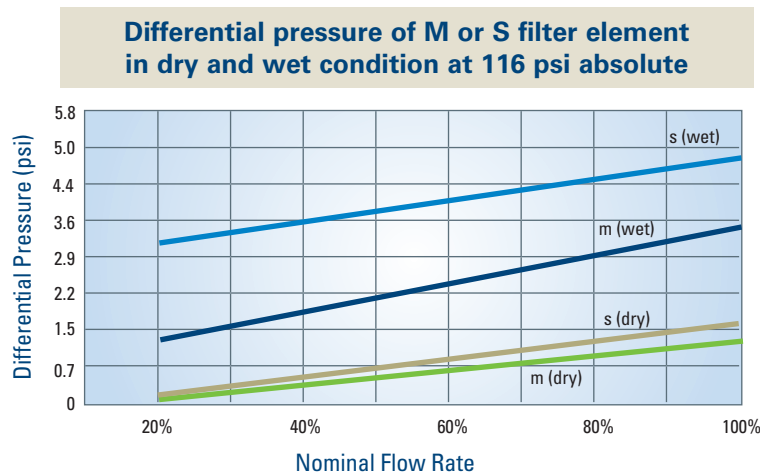
Calculated Size: Type 0320

*cfm related to 15 psi abs. and 68°F

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
Pleated filter media	High filtration surface area of low pressure drop and high dirt-holding capacity
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, ensuring constant contact with main filter body for optimized drainage of coalesced water and oil

SPECIFICATIONS

MATERIALS		Validation	Validation of high-efficiency filters to ISO 12500
Filter Media	Borosilicate glass fiber fleece	Residual oil content at an inlet concentration of 2.5 PPM	S = 0.005 PPM M = 0.004 PPM
Coalescing Sleeve	Polyester fleece		Retention rate related to particles of 0.01 µm
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		



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



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