



Donaldson
FILTRATION SOLUTIONS

M/S ULTRAPLEAT™ COALESCING PARTICLE FILTER ELEMENTS

Process Filtration

Donaldson® M/S UltraPleat™ filter elements are designed to remove water/oil aerosols and solid particulates from compressed air and gases at a low differential pressure.

The UltraPleat technology optimizes the flow design of the filtration media and media pleat shape; with this new technology, high filtration efficiency is maintained while reducing the differential pressure.

The filter element uses three-dimensional borosilicate glass microfiber, which is oleophobic and hydrophobic. The element performance has also been validated according to ISO 12500-1 (oil retention) and ISO 12500-3 (particulate retention), which assures your application will receive compressed air quality as specified in ISO 8573-1. The UltraPleat media removes liquid aerosols and solid particles down to 0.01 µm.



M/S UltraPleat™

APPLICATIONS

Donaldson UltraPleat may be used for pre-filtration or final filtration, for control and process air in the following industries:

- Food and beverage
- Chemical and energy
- Pharmaceutical
- Industrial compressed air and gas

FEATURES	BENEFITS
Optimized flow design	Allows for low pressure loss, thereby saving on energy consumption
Optimized pleated media	Allows the UltraPleat element to maintain its particle removal efficiency while lowering the filter pressure drop – pleated media allows for higher capacity than a wrapped filter
Coalescing sleeve	The coalescing sleeve optimizes drainage functions by providing a constant and stable structure
Validated filter performance according to ISO 12500-1 and ISO12500-3	Reliable achievement of the compressed air quality according to ISO 8573-1

SPECIFICATIONS

MATERIALS	
Filter Media	Borosilicate glass fiber fleece
Coalescing Sleeve	Polyester fleece
Inner and Outer Support Liner	304 SS
End Caps	Glass fiber reinforced polymer
O-Rings	Viton®*, silicone-free and free of compounds
Potting Compound	Polyurethane

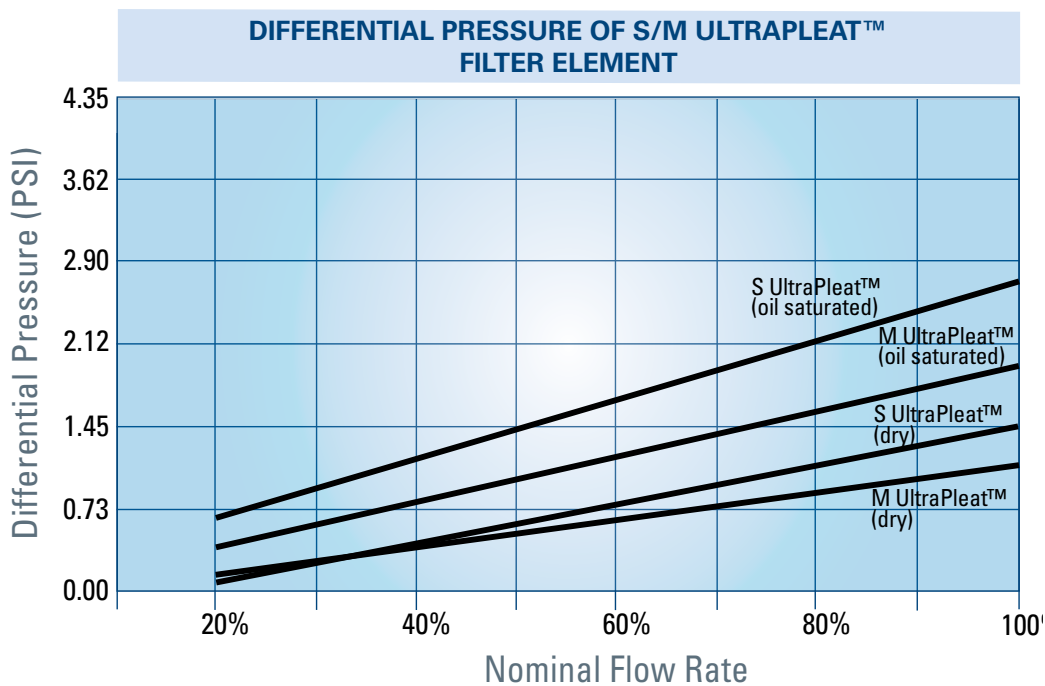
*Viton is a registered trademark of DuPont PerformanceElastomers L.L.C.

OPERATING PRESSURE (psig)	CONVERSION FACTOR (fp)
15	0.26
30	0.39
45	0.52
60	0.65
75	0.78
90	0.86
100	1.0
115	1.13
130	1.26
150	1.43
160	1.52
175	1.65
190	1.78
200	1.87
220	2.04
230	2.13

ELEMENT TYPE	NOMINAL FLOW RATE 100 psig (scfm)*
0035	20
0070	41
0120	70
0210	123
0320	188
0450	264
0600	353
0750	441
1100	647

$V_{nom} = 200$ cfm, operating pressure = 130 psi
 $V_{corr} = V_{nom} / fp$
 $V_{corr} = 200$ cfm / 1.20 = 165 cfm
 Calculated Size: Type 0320

*cfm related to 15 psi abs. and 68°F



(Including filter housing in dry and oil-saturated condition at 116 psi absolute [acc. to ISO 12500-1])

CERTIFICATE

Certificate of compliance 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		M ULTRAPLEAT™		FILTER SIZE				0035 - 1100	
Retention of oil aerosols acc. to ISO 12500-1									
Oil retention rate at 116 psi absolute and 10 ppm w/v inlet concentration								99.4...99.9%	
Oil concentration at inlet concentration of				10 ppm				0.01...0.06 ppm	
				3 ppm				< 0.01...0.02 ppm	
Retention of particles acc. to ISO 12500-3									
Particle diameter [µm]	lower	0.19	0.24	0.36	0.52	0.81	1.16		
	upper	0.24	0.36	0.52	0.81	1.16	1.78		
Particle retention rate at 116 psi absolute [%]		99	99.6	99.97	99.999	99.998	---		
Particle retention rate of 0.01 µm particles at 14.5 psi absolute						99.999%			

FILTER TYPE		S ULTRAPLEAT™		FILTER SIZE				0035 - 1100	
Retention of oil aerosols acc. to ISO 12500-1									
Oil retention rate at 116 psi absolute and 10 ppm w/v inlet concentration								99.9%	
Oil concentration at inlet concentration of				10 ppm				0.01 ppm	
				3 ppm				< 0.01 ppm	
Retention of particles acc. to ISO 12500-3									
Particle diameter [µm]	lower	0.19	0.24	0.36	0.52	0.81	1.16		
	upper	0.24	0.36	0.52	0.81	1.16	1.78		
Particle retention rate at 116 psi absolute [%]		99.979	99.9952	99.999	99.998	99.996	---		
Particle retention rate related to particle diameter 0.01 µm at 14.5 psi absolute						99.99999%			



Important Notice

Many factors beyond the control of Donaldson can affect the use and performance of Donaldson products in a particular application, including the conditions under which the product is used. Since these factors are uniquely within the user's knowledge and control, it is essential the user evaluate the products to determine whether the product is fit for the particular purpose and suitable for the user's application. All products, specifications, availability and data are subject to change without notice, and may vary by region or country.



Filter Products Company

5220 Klockner Dr.

Richmond, VA 23231 USA

Tel: 1 (800) 726-5515 / E-mail: info@filterproducts.com