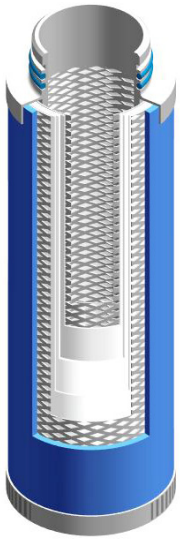
Donaldson
FILTRATION SOLUTIONS

P-FF, P-MF, P-SMF
COALESCING FILTER ELEMENTS
Compressed Air & Process Filtration

The P-FF, P-MF, and P-SMF coalescing depth filters are used for the removal of water, oil aerosols and solid particles from compressed air and gases with absolute retention efficiency.

The coalescing filter uses a three dimensional micro fiber fleece made out of binderfree glass fiber. A 1 µm pre-filter medium is integrated and allows for effective two-stage filtration.

By using various filtration mechanisms such as impaction, sieving, and diffusion, liquid aerosols and solid particles down to the size of 0.01 µm are being retained in the filter.



P-FF, P-MF, and P-SMF

APPLICATIONS

The P-FF, P-MF and P-SMF coalescing filters are used in the following industries:

- Chemical
- Petrochemical
- Pharmaceutical
- Plastics
- Paint
- General machine fabrication
- Food
- Paint
- Beverage
- Instrumentation and control air

FEATURES	BENEFITS
Expanded inner and outer stainless steel support sleeves for the secure hold of the filter medium	No danger of corrosion – large openings ensure low differential pressure drop and high throughput
Binderfree depth filter medium made of borosilicate glass	Low differential pressure drop
Removal of liquid aerosols and solid particles down to 0.01 µm	Validated retention efficiency, high level of contaminant removal
Large media surface area	High dirt holding capacity, long service life

SPECIFICATIONS

MATERIALS	
Filter Media	Borosilicate
Pre- & After-Filter Media	Cerex®*
Outer Foam Socks	Blue polyurethane foam sock up to 176°F HT/CR sock up to 248°F HT/NX sock up to 356°F
Bonding	Polyurethane
End Caps	Aluminum
Two O-Rings	Perbunan®**: silicone free and free of parting compound (standard)
Inner and Outer Support Sleeves	304 Stainless steel

Validation	Validation of high-efficiency filters by Technical University Dresden
Residual oil content at an inlet concentration of 3 mg/m³	FF = 0.1 mg/m³ MF = 0.03 mg/m³ SMF = <0.01 mg/m³
Retention rate related to particles of 0.01 µm	FF = 99.999% MF = 99.99998% SMF = 99.99999%
Maximum Differential Pressure	72.5 psi at 68°F regardless of system pressure
Initial Differential Pressure at Nominal Flow	FF = 0.73 psi MF = 1.20 psi SMF = 1.70 psi

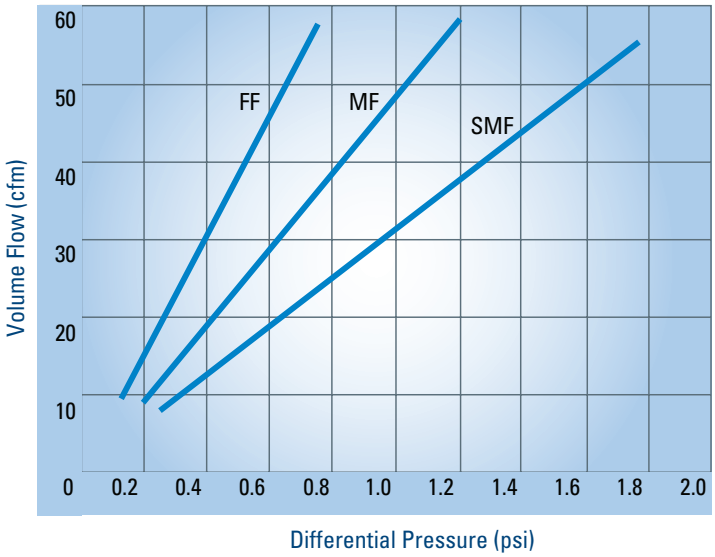
PRESSURE DROP CALCULATIONS

Element Size	Correction Factor Filter Surface (C_F)
0205	0.08
0305	0.10
0310	0.12
0410	0.17
0420	0.19
0520	0.25
0525	0.32
0725	0.47
0730	0.68
1030	1.00
1530	1.55
2030	2.10
3030	3.20
3050	5.65

The performance curve is based on 1030 element, or one ten inch equivalent (TIE), and the correction factor for filter surface C_F for a 1030 = 1.00.

Performance of P-FF, P-MF, P-SMF elements — compressed air

These curves define the flow of a 1030 filter element at standard conditions (14.7 psia; 68°F; R.H.= 70%)



* Cerex® is a registered trademark of Cerex Advanced Fabrics, Inc.
** Perbunan® is a registered trademark of LANXESS Deutschland GmbH.

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Donaldson Company, Inc.
Compressed Air and Process Filtration
PO Box 1299
Minneapolis, MN
55440-1299 U.S.A.

Tel 800-543-3634 (USA)
Tel 800-343-3639 (within Mexico)
Fax 952-885-4791

compressedair@donaldson.com
donaldsonprocessfilters.com

MEMBER OF CAGI Compressed Air & Gas Institute

P-FF, P-MF, P-SMF Coalescing Filter Elements (07/14)