ultradepth® FF, MF, SMF

The depth filter for the removal of water and oil aerosols as well as solid particles from compressed air and gases with absolute retention efficiency.

Cross section of the ultradepth® depth filter

Product Description:

The ultradepth® depth filter employs the three dimensional micro fibre fleece ultrair® made out of binderfree glassfibre. A prefilter medium 1 µm is integrated and realises an effective two stage filtration.

Characteristics:

By utilising various filtration mechanisms such as retention by direct impact, sieve effect and diffusion effect, liquid aerosols and solid particles down to the size of 0.01 µm are being retained in the filter.

Applications:

The ultradepth® depth filter is for example being utilised in the following industries

- Chemical industry
- Petrochemical industry
- Pharmaceutical industry
- Plastic industry
- General machine fabrication
- Air conditioning technology
- Food industry
- Paint industry
- Beverage industry
- Process industry for instrumentation and control air

ultrafilter international AG Büssingstraße 1 · D-42781 Haan · Phone ++49/2129/569-0 · Fax ++49/2129/569-100

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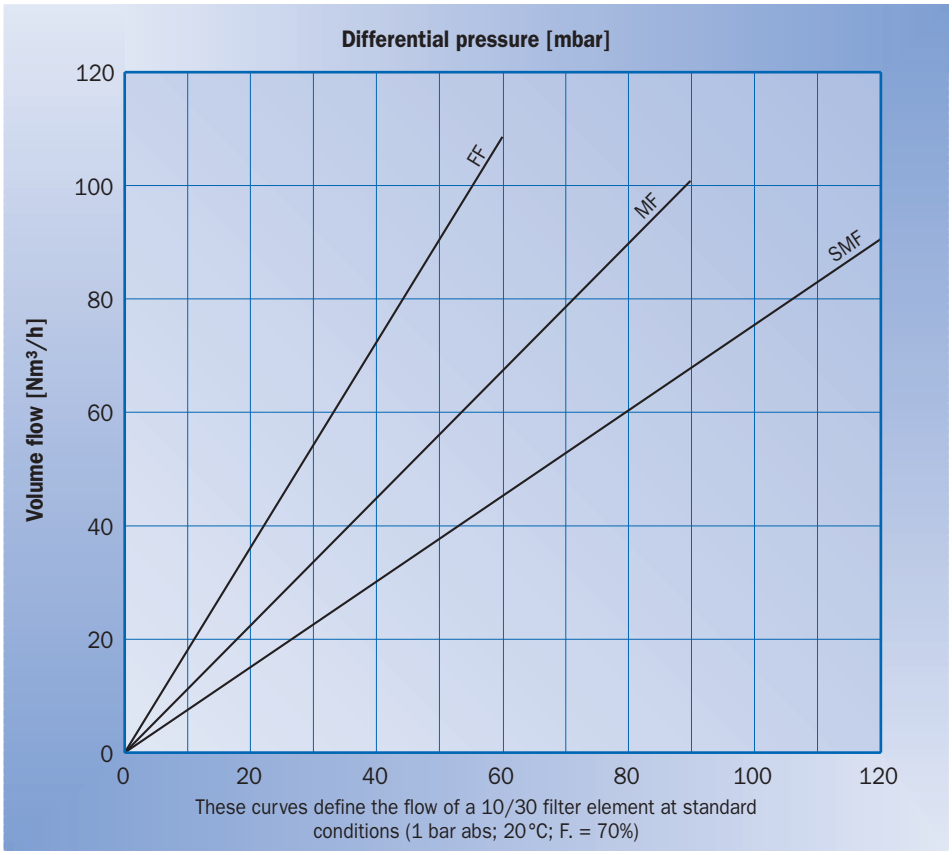
Feature:	Benefits:
Expanded inner and outer stainless steel support sleeves for the secure hold of the filter medium	No danger of corrosion – large openings ensure low differential pressure drop and high throughput
Binderfree depth filter medium made out of borosilicate glass fibres	Low differential pressure drop; high throughput
Removal of liquid aerosols and solid particles down to 0,01 µm	Validated retention efficiency, high level of security and safety
Large surface area, large void volume (> 94%)	High dirt holding capacity; guaranteed service life time

Technical data

Materials:	
Outer foam sock	• blew polyurethane foam sock up to 80 °C • HT/CR sock up to 120 °C • HT/NX-sock up to 180 °C
Support sleeves – inner and outer	Stainless steel 1.4301/304
Pre- and after filter medium	Cerex®
Filter medium	Binderfree borosilicate
Bonding	Epoxy resin
End caps	Aluminium
2 O-Ring	Perbunan – siliconfree and free of parting compound (Standard)

Performance of FF, MF, SMF elements – compressed air



These curves define the flow of a 10/30 filter element at standard conditions (1 bar abs; 20 °C; F. = 70%)

Validation:
Valdidation of high-efficiency filters by Technical University Dresden

Retention rate related to particles 0,01 µm:		
FF	=	99.999%
MF	=	99.99998%
SMF	=	99.99999%

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

Max. differential pressure:
5 bar at 20 °C, irrespective of system pressure

Initial differential pressure at nominal flow:		
FF	=	0.05 bar
MF	=	0.08 bar
SMF	=	0.12 bar

Element type	Correction factor Filter surface KF
02/05	0.04
03/05	0.08
03/10	0.12
04/10	0.17
04/20	0.19
05/20	0.25
05/25	0.32
07/25	0.47
07/30	0.68
10/30	1.0
15/30	1.55
20/30	2.10
30/30	3.28
30/50	5.89