high-performance filter FF / MF /SMF with nanotechnology





High performance filter ultrafilter

■ ultrafilter high-performance depth filter for removal of water and oil aerosols as well as particles from compressed air and gases.

■ Thanks to the unique combination of binderfree, non-woven nanofibre filter media and pleating technology, a reduction in energy costs of 70 % is achieved, as well as an improved filtration performance.

■ The new nanofibre material from ultrafilter is oleophobic, which means oil and water are actively rejected, so the differential pressure drop and therefore operation costs are reduced to a a minmum compared with a conventional filter element.

Advantages and benefits

- 450 % greater filter media compared to standard elements
- Iower differential pressure
- improved filtration efficiency
- greater dirt-capturing capacity
- 70 % less energy costs

Applications

- chemical and petrochemical industry
- pharmaceutical industry
- food & beverage
- plastic industry
- process filtration
- instrumentation air

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ultrafilter nanofilters FF, MF, SMF

Features:	Benefits:
Binderfree, thermally welded nanofilter media	Low differential pressure
Oleophobe filter media	and high particle load Rejects oil and water
Pleated filter media	450 % more filtration surface, higher particle load capacity, low air flow speed
Support sleeves of stainless steel (316L)	Extremely large free flow, secure and long operation

Materials:	
outer foam sock	 blue polyurethane foam sock up to 80 °C HT/CR sock up to 120 °C HT/NX sock up to 180 °C
Support sleeved inner/outer	Stainless steel 1.4301
Pre- and after filter medium	pleated Cerex
Filter medium	binderfree nanofibres of borosilicate
Bonding	Polyurethane
End caps	Aluminium
O-rings	Perbunan, silicon free and free of parting compounds

Validation

Validation of ultrafilter high-performance filters by University Amberg

Retention rate at a particle size of 0,01 μm FF = 99,999 % MF = 99,99998 %

SMF	= 99,99999 %	
Residual oil content		
at an inlet of 3 mg/m ³		

FF	=	0,1 mg/m³
MF	=	0,03 mg/m³
SMF	=	<0,001 mg/m ³

Max. differential pressure		
5 bar at 20 °C, independant		
from operation pressure		

Start-up differential pressure		
FF	=	0,05 bar
MF	=	0,08 bar
SMF	=	0,09 bar



element	correction
	factor
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

Technical alterations reserved.



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