

Van Borselen Filters

High-Performance Filter

VBPF / VBPMF / VBPSMF

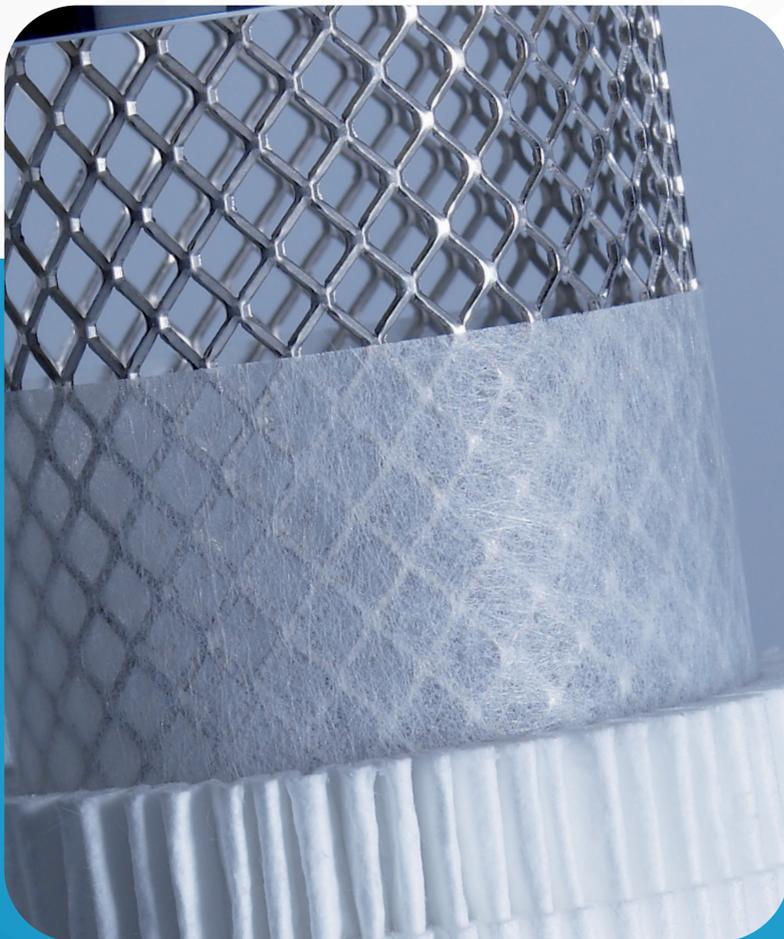
With nanotechnology

VAN BORSELEN FILTERS



High performance filters from Van Borselen Filters

- ◆ Van Borselen Filters high-performance depth filters 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 & pleating technology, a reduction in energy costs of 70% is achieved, as well as an improved filtration performance.
- ◆ The new nanofibre material from Van Borselen Filters is oleophobic, which means oil and water are actively rejected, so the differential pressure drop and therefore operation costs are reduced to a minimum compared with a conventional



Advantages and benefits

- 450% greater filter media compared to standard elements
- Lower 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

Features

- Binderfree, thermally welded nanofilter media
- Oleophobic filter media
- Pleated filter media
- Support sleeves of stainless steel (316L)

Benefits

- Low differential pressure and high particle load
- Rejects oil and water
- 450% more filtration surface, higher particle load capacity, low air flow speed
- Extremely large free flow, secure and long operation

Materials

- Support sleeves inner/outer : Stainless steel 1.4301
- Pre- and after filter medium : Peated Cerex
- Outer foam sock :
 - HT/CR sock up to 120 oC
 - HT/NX sock up to 180 oC
- Filter medium : Binderfree nanofibres
- Bonding : Polyurethane
- End caps : Stainless steel
- O-rings : Perbunan, silicon free and free of parting compounds

| Type | Residual oil content at | | Oil retention rate acc. to ISO 12500-1 |
|--------|-------------------------|----------------------|---|
| | 3 mg/m ³ | 10 mg/m ³ | |
| VBPF | <0,1 ppm | 0,2 ppm | 99,6% |
| VBPMF | <0,03 ppm | 0,03 ppm | 99,7% |
| VBPSMF | <0,01 ppm | 0,02 ppm | 99,8% |

Validation

Validation of Van Borselen Filters
high-performance filters by University Amberg

Retention rate at a particle size of 0,01 µm (ISO 8573-1)

VBPF = 99,999%
VBPMF = 99,99998%
VBPSMF = 99,99999%

Max. differential pressure

5 bar at 20 oC, independant from operation pressure

Start-up differential pressure

VBPF = 0,04 bar
VBPMF = 0,08 bar
VBPSMF = 0,09 bar

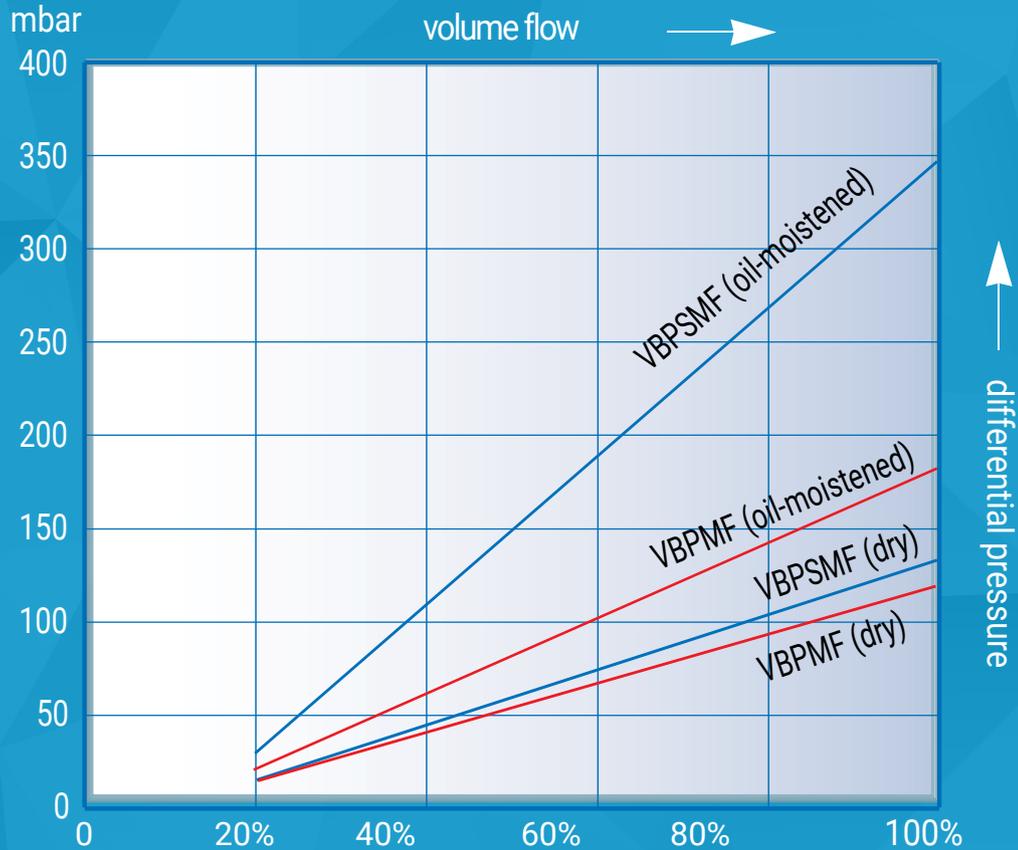
Operating Temperature

T_{min} = -85 °C T_{max} = 180 °C

| 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 |

| Element | Correction Factor |
|---------|-------------------|
| 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 |

Differential pressure VBPMF/VBPSMF element including filter housing in dry and oil-moistened condition (acc. to ISO 12500-1).



Van Borselen Filters

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