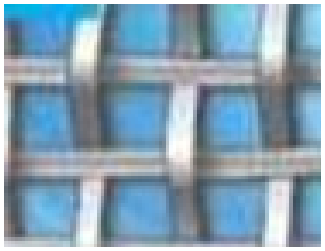
EXAPOR®MAX 3

Innovation in Filtration

Increased machine availability, longer maintenance intervals and lower operating costs - always on the safe side with EXAPOR®MAX 3 filter elements from ARGO-HYTOS.

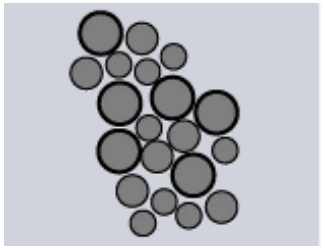


Filter finenesses
5 µm (c) $\underline{\beta}_{5(c)} = 200$
10 µm (c) $\underline{\beta}_{10(c)} = 200$
16 µm (c) $\beta_{16(c)} = 200$

Benefit:
Reliable oil cleanliness and permanent protection of sensitive components over the entire operating life.

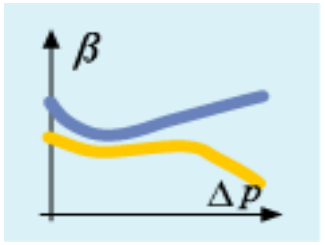
Low pressure drop
Improvement of up to 20% compared to EXAPOR®MAX 2.

Benefit:
Good cold start performance, i.e. closed bypass valve even at low temperatures.
Lower energy consumption results in lower operating costs and conserves resources.



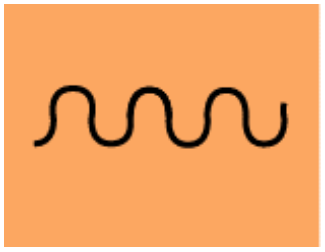
High dirt holding capacity
Improvement of up to 15% compared to EXAPOR®MAX 2.

Benefit:
Longer maintenance intervals and thus improved productivity and economic efficiency.



Excellent differential pressure stability
Return filters: > 10 bar
Pressure filters: > 20 bar

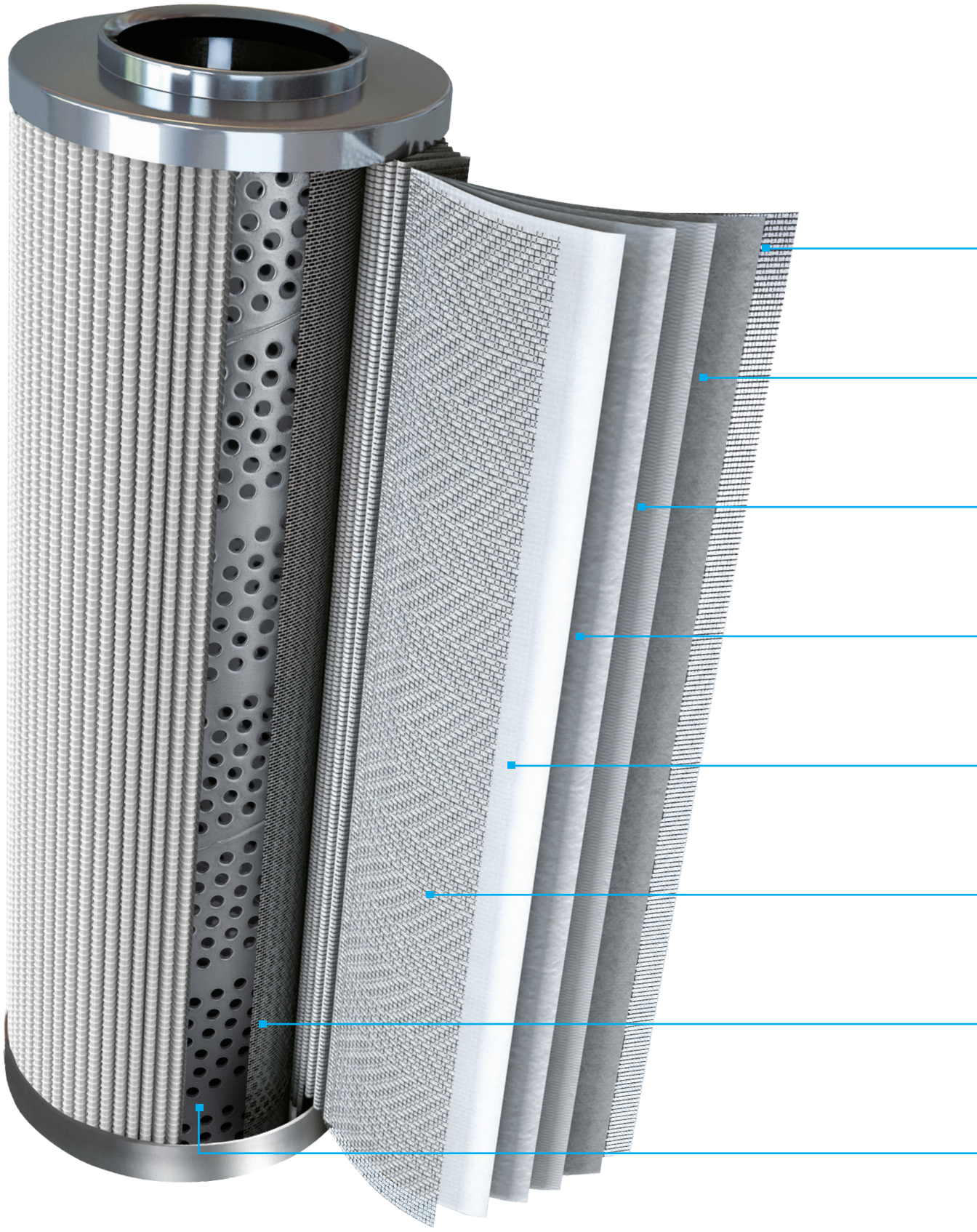
Benefit:
Ensuring filtration stability by avoiding damage to the filter bellows.

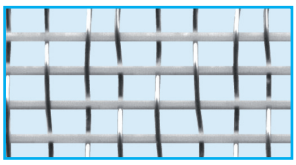


High flow fatigue strength
EXAPOR®MAX 3 filter elements withstand the flow fatigue tests (ISO 23181) with the following parameters without being damaged:
0 ... 5 bar > 10^5 load cycles; 0 ... 2 bar > 10^6 load cycles

Benefit:
Guarantee of oil cleanliness even with strongly alternating flow loads.

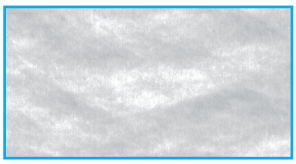
Application examples





Hybrid protective fabric (patented) or protective fabric

Protection of filter materials from external mechanical damage, prevents electrostatic charge, keeps the pleats open for the free flow of the hydraulic medium

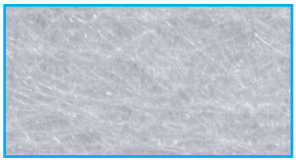


Pre-filter layer (multilayer fleece)

Separation of coarse particles, increase in dirt holding capacity

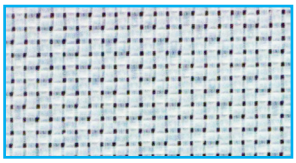
Fine filter layer (multilayer fleece)

Separation of fine particles, improvement of oil cleanliness



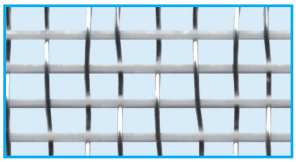
Protective fleece

Protection of the fine filter layer, improved differential pressure and flow fatigue stability



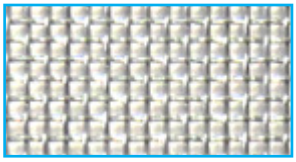
Safety fabric

Additional protection of the filter elements with a differential pressure stability of 160 bar (2320 psi)



Hybrid support fabric (patented)

Support of the filter materials, keeping the pleats open for the free flow of the medium. Prevents build-up of electrostatic charges and improved flow fatigue stability

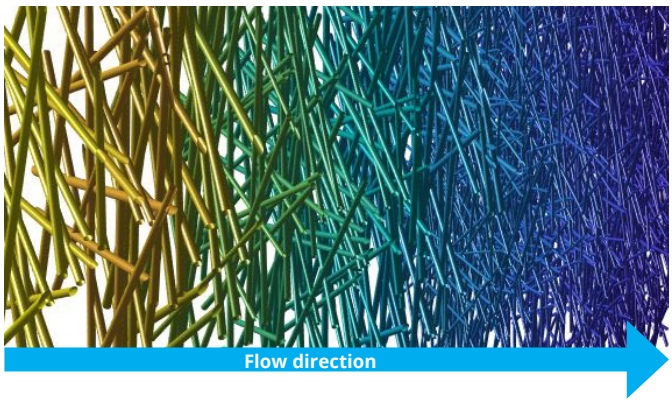


Woven sleeve

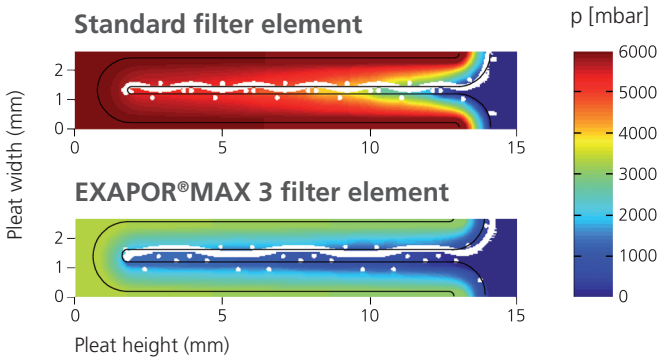
A fine wire mesh provides additional support for the pleated filter material with filter elements having a differential pressure stability of 160 bar (2320 psi)

Perforated core

Full surface support of the pleated filter material, ensuring collapse pressure stability

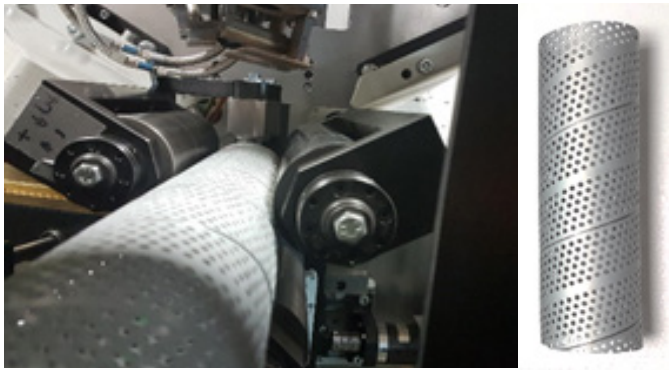


Multiphase glass fiber filter media
For the first time, nonwovens with multiphase structure or so-called gradient structure are used. The precise adjustment of the individual filter materials results in particularly long maintenance intervals and low pressure losses.



Hybrid support or hybrid protective fabric
The hybrid support fabric used consists of plastic wires to improve the flow fatigue stability and stainless steel wires to support and keep open the pleats for an optimal inflow. The special weaving technique creates an excellent pleat channel formation to reduce the pressure loss.

Longitudinal seam bonding
The complete embedding of the cut edges in the bond increases the mechanical stability and guarantees that the ends of the filter bellows are 100% tightly connected to each other. Loose threads, fibers or leaks are thus avoided.



Laser-welded perforated cores
The tubes are welded edge to edge. In contrast to wrapfolded perforated cores, no dirt can be deposited on this connection. In addition, the spiral-shaped welded seam increases the stability. This allows the sheet thickness to be reduced and the installation space to be better utilized.