

Innovative Filtration Technology

The 110 LE(N) Filter Series



Three major Benefits: The New 110 LE(N) 0040-0400 Filter Series

With their impressive design, simple operation and inspired technology



New Design: Filter Head

The cyclone effect due to the redesigned filter head combine to offer the possibility of diverting the inlet flow in a specific direction. This action enhances flow properties and dirt absorption capacity.

New Molding: Filter Bowl

The new filter bowl design improves filter element mounting and stability, keeping the element in place and at the same time ensuring constant pressure distribution.

New Technology: The Cyclone Effect

Increasing efficiency and decreasing costs with innovative ideas. The cyclone effect optimizes dirt absorption, while simultaneously lengthening the service life and change intervals of the filter.

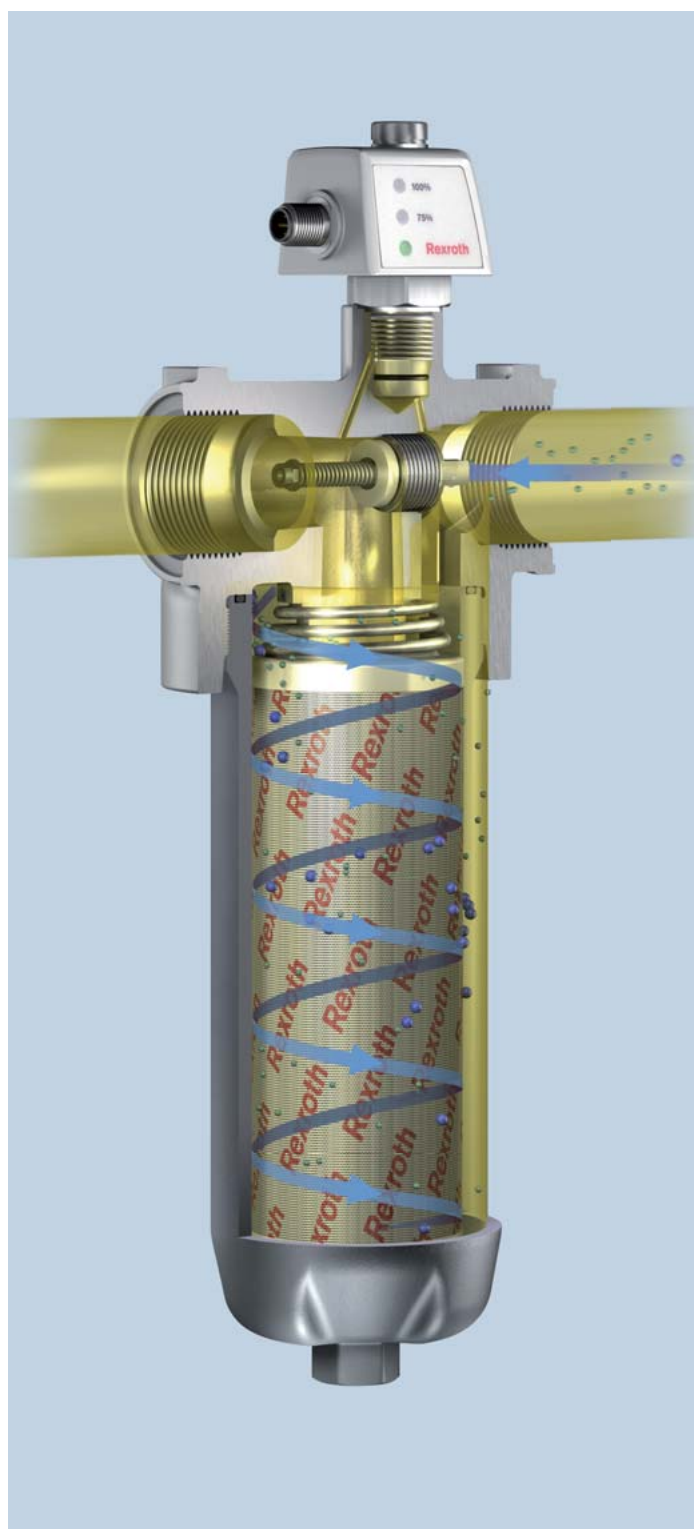


Further Technical Developments:

- ▶ Mechanical/electronic contamination indicator for filter monitoring.
- ▶ Light alloy construction, ideal for mineral oils, synthetic oils, bio oils and HFC-hydraulic fluids.



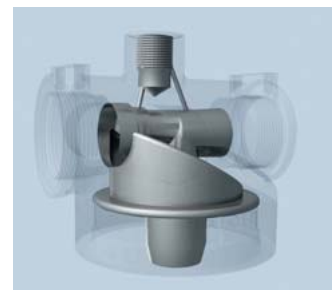
Perfect Rotation with the Cyclone Effect for more efficiency



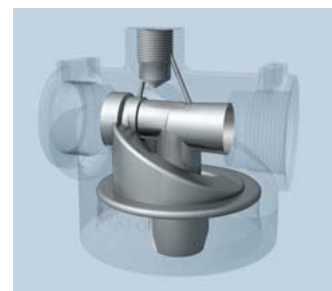
The cyclone effect brings a touch of pure innovation to our new 110 LE(N) 0040-0400 filter series: Instead of flowing directly against the filter element, the incoming fluid flows along a tangent and then moves toward the bottom of the filter in a spiral motion.

This patent pending feature ensures that heavy dirt particles are transported to the outside and that the filter pores do not become blocked prematurely. Depending on the speed of the flow, coarse particles of contamination residue may accumulate in the indentations of the filter bowl below the filter element.

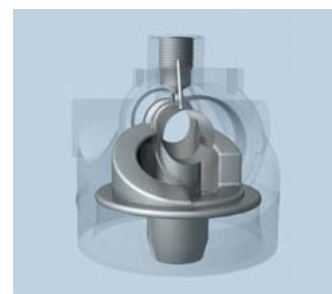
Entry of the medium ▶



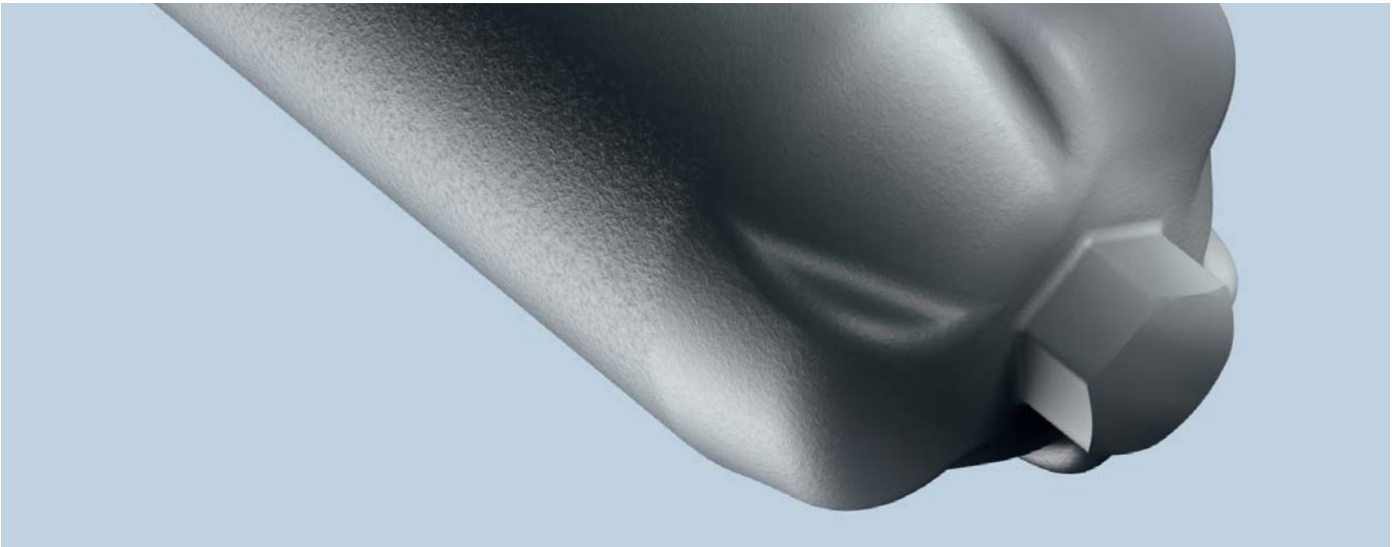
Tangential alignment of the medium ▶



Positively-driven flow on a path similar to that of a cyclone ▶



Optimum Filter Bowl Design



The filter bowl design is another highlight of our new filter series. This innovative blueprint makes it easier to remove the filter element from the filter head.

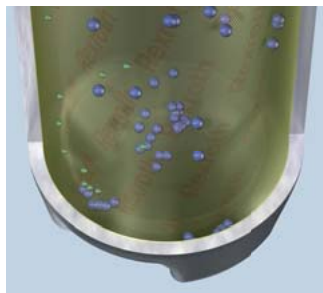
The filter head is fitted with a pressure spring, fixing the filter element's position inside the filter bowl.

This ensures that the filter element is protected against flow influences and vibrations. In addition, the medium is prevented from flowing upward and out of the filter. The spin created by the cyclone effect is decreased in this area.

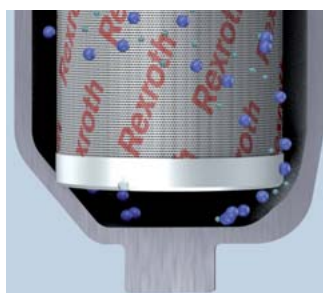
The medium can now also flow underneath the filter element at the areas of the filter bowl that curve out (in contrast to a conventional hydraulic filter design), consistent pressure is distributed around the filter element. Therefore the risk of the filter being overloaded when subjected to changing operating conditions is prevented.



◀ Pressure spring



◀ Cyclone effect



◀ Crimping for equal subflow

New Direction in Filter Technology

Our new filter series offers the approved filter technology of Rexroth in combination with innovative concepts.

The filter element is located inside the filter housing. The differential pressure is monitored constantly throughout the filtration process and a new, modular maintenance indicator on the top of the housing alerts you to the fact that the

filter element needs changing as soon as the dirt absorption capacity of the filter is reached.

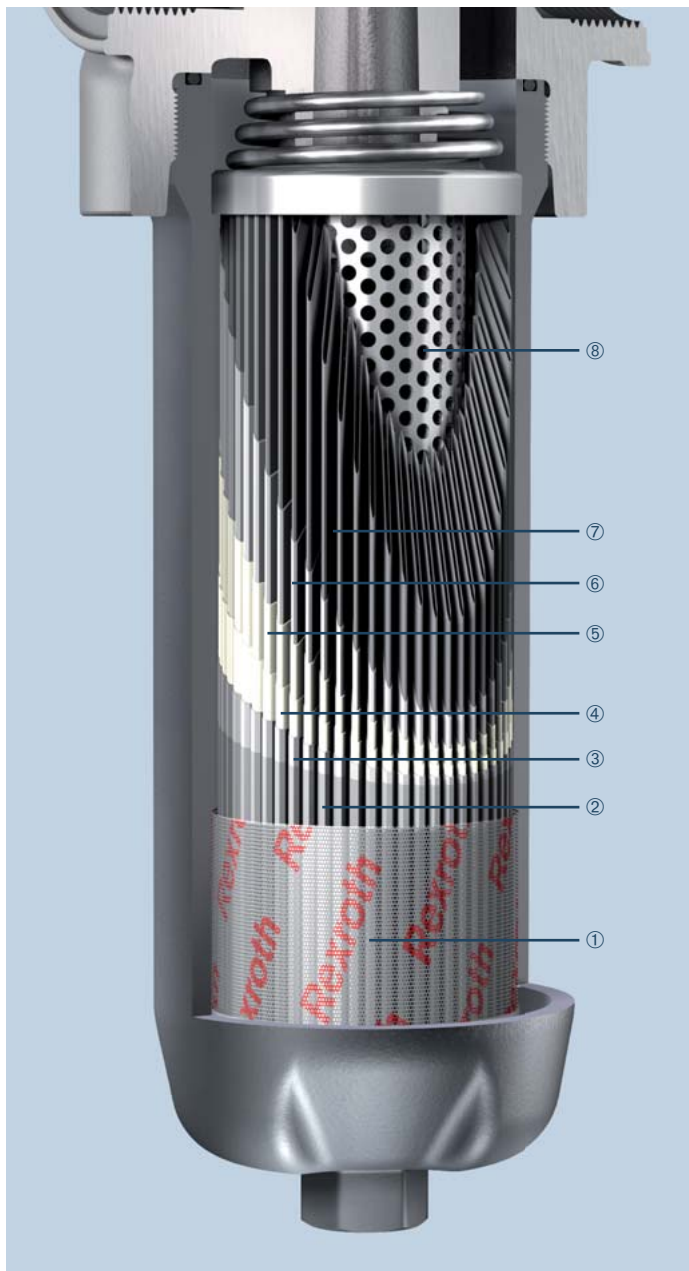
A pressure spring feature involving automatic positioning and centering of the filter element on the mounting pins in the filter housing ensures that the element is easy to install and remove.

Filter Element

The filter element has at its core six layers of asymmetrically positioned, inorganic glass fiber media. The optimized combination of individual filter layers achieves a high filtration efficiency and dirt holding capacity, while keeping pressure loss to a minimum.

The filter material, in its pleated state, is positioned around an internal support tube in a cylindrical configuration and then wrapped in a protective sleeve made from perforated plastic film. These measures ensure that the filter material is protected against mechanical damage and the medium flows evenly to the entire filter area.

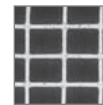
The cross-section diagram shown here illustrates the fan-shaped structure of the filter element.



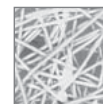
① Protective sleeve



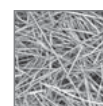
② Support mesh



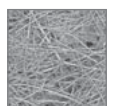
③ Protective fleece



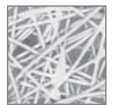
④ Prefilter



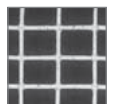
⑤ Main filter



⑥ Protective fleece



⑦ Support mesh



⑧ Supporting cylinder



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