

Technical Recommendations

Suction Filters

Type series ES · Application in hydrostatic gears



Suction filter type series ES

Description

Certain versions of our built-in suction filters in the ES series are designed for use in front of filler pumps of hydrostatic gears. Particular attention has been paid to the specific requirements of the manufacturers of these gears regarding filter fineness and pressure drop.

These filters have no bypass-valve, so that unfiltered oil cannot enter the circulation.

Versions without a foot-valve are intended for vertical installation, in which case particular attention must be paid to the oil-level:

- › at max. oil-level:
sufficient safety-clearance below the filter cover must be maintained.
- › at min. oil-level:
sufficient level of oil above the filter inlet must be maintained.

Suction filters designed for installation below the oil-level are fitted with a foot-valve. The oil-feed to the filter casing is cut off automatically when the filter cover is opened.

Some gear manufacturers insist that filters be designed to handle double the maximum output of the filler pump. Our filters already conform to this requirement.

The flow-data for the filters shown in the tables are based on the following assumptions:

1. The use of ATF oils with approx. 26 to 28 mm²/s at 50 °C or hydraulic oils with a viscosity and viscosity temperature characteristic corresponding to standard ATF oils (also see info-sheet 00.003).
2. Under normal operating conditions an operating viscosity of ≤ 35 mm²/s should be reached within 15 minutes of commencement of operation.
3. Effective oil capacity in litres should be about 0,5 to 1 x the maximum output of the filler pump.
4. A pressure drop Δp between filter outlet and filler pump inlet of $\leq 0,05$ bar at viscosity of 35 mm²/s.

Should operating conditions differ from the above, please contact us for further information.

Details of pressure gradients for individual filters are given on the specification sheets of the respective filters, chapter diagrams.