

Product information

Filter series F-MI4 · Filters



Description

Filters are used in fluidic systems to protect sensitive components from damage due to contamination and particles. For the safe operation of micro annular gear pumps and their precision-machined rotors, the use of a 10 µm meshed filter is recommended. With compact filter units made out of corrosion-resistant materials, with high filtration performance and different mesh sizes, HNP Mikrosysteme offers suitable filter solutions for all of its pump series.

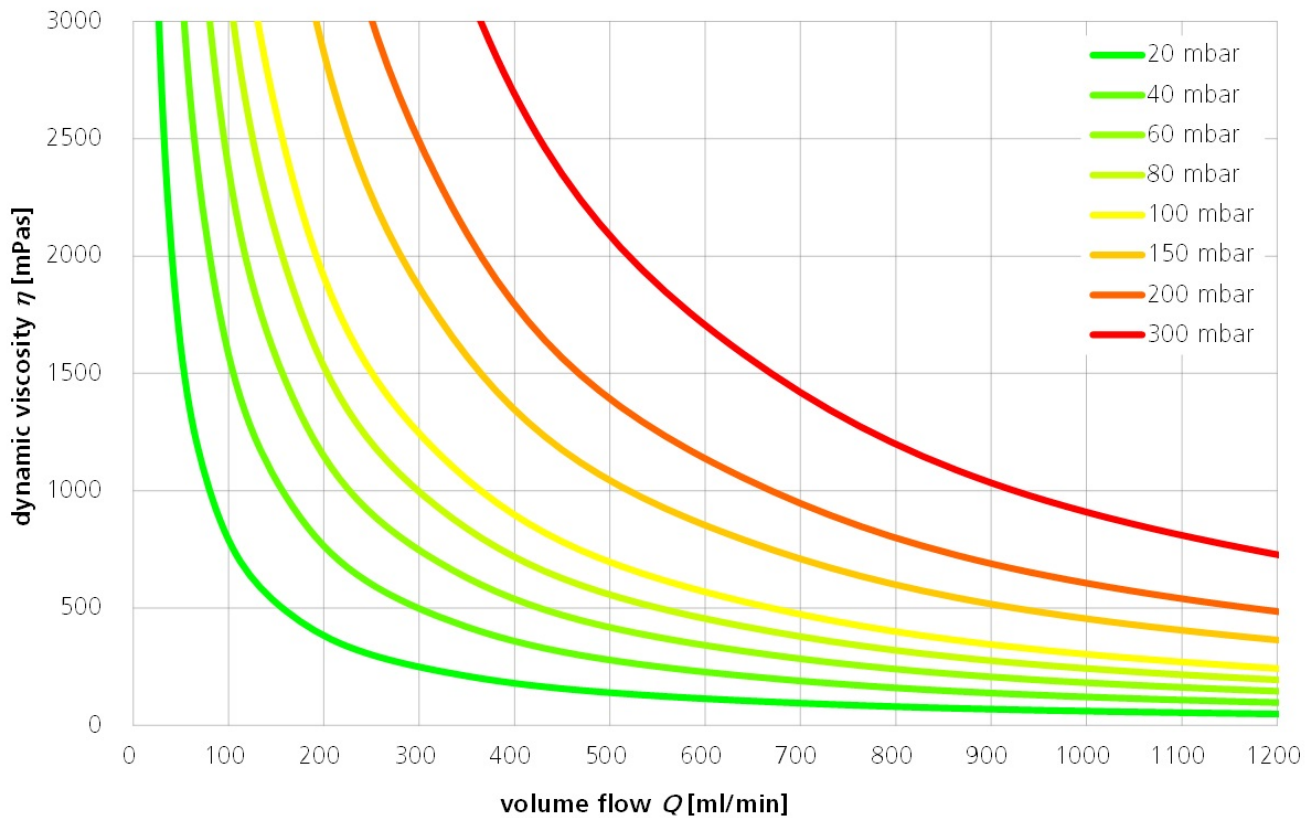
The filter series F-MI4 is available in two different configurations. The »inlet filter«, without an external housing, is directly immersed in the liquid. The »inline filter« in the maintenance-friendly »T-design« is designed to be installed downstream in the feed line, i.e. directly before the pump and offers the advantage of changing the filter element without having to uninstall the filter from the feed line, and the option to open the bottom for releasing medium or emptying the filter. Also it is possible to install a maintenance indicator. This indicates optically and electrically the maintenance/cleaning of the filter element. To avoid sedimentation and cross-contamination the filters have small dead volumes and are manufactured with smooth surfaces (Ra 0.8).

Advantages

- Corrosion-resistant materials
stainless steel, FFPM
- Metal filter elements
without solder or adhesives
- High filtration performance and small size
pleated filter elements for low pressure drops even at
high flow rates and viscosities
- Configuration variety
different mesh sizes and sealing materials
- User-friendly and economical
filter elements can be cleaned or replaced

Characteristics

pressure drop Δp F-MI4 (10 μm)



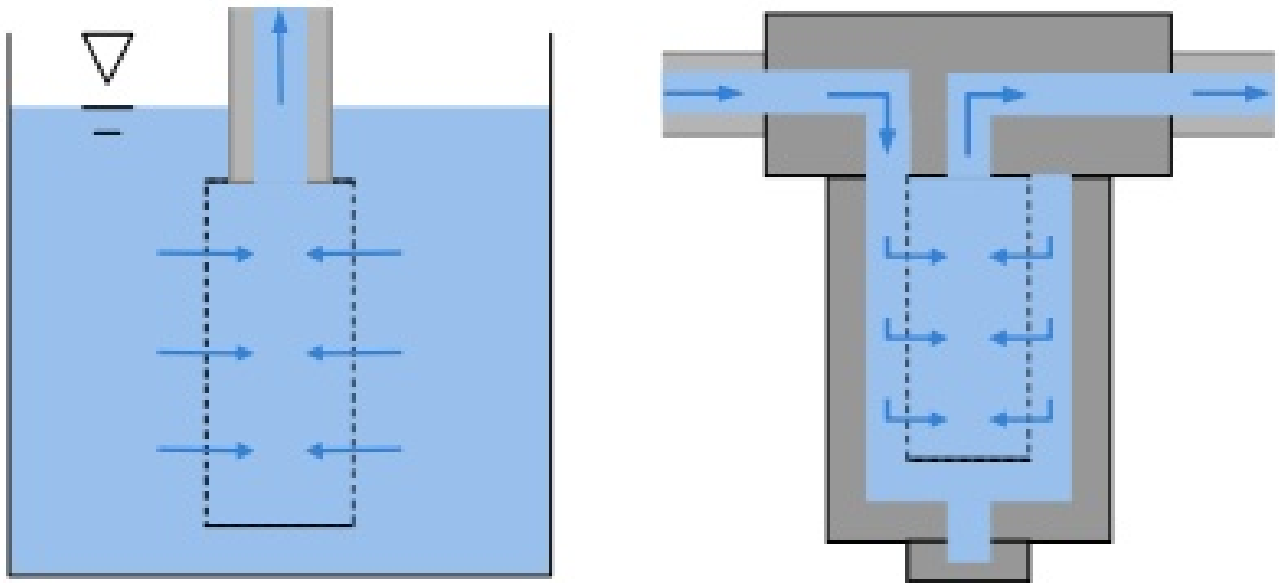
Technical data

| | |
|-----------------------------|--|
| Type | Inlet filter Inline filter (T-shape) |
| Liquid temperature range | Inlet filter: -200 ... +275 °C Inline filter: -10 ... +140 °C (-40 ... +275 °C *) |
| Differential pressure range | Inlet filter: - Inline filter: max. 20 bar |
| Operating pressure | Inlet filter: - Inline filter: max. 40 bar |
| Seal materials | Inlet filter: - Inline filter: FPM, FFPM, EPDM |
| Materials | stainless steel |
| Internal volume | Inlet filter: - Inline filter: 200 ml |
| Measurements (ø x H) | Inlet filter: Ø 44 x 106 mm Inline filter: Ø 80 x 173 mm |
| Fluid connection | cylindrical internal thread G 1/2" |
| Mesh size | 10 μm ; optional: 25 μm |
| Filter area | 400 cm ² |
| Remarks | * depending on seal material |

Notice

Even if single parameters are within the indicated performance range of technical data, certain parameter combinations may not be achievable. Single parameters may exceed their indicated performance range under adequate circumstances. For detailed evaluation please contact HNP Mikrosysteme. Actual performance may vary. Specifications are subject to change without notice.

Principle



Patents and trademarks

Micro annular gear pumps (and housings) are protected by assigned patents: EP 1 354 135 B1; US 7,698,818 B2; DE 10 2011 001 041 B4; CN 103 348 141 B; US 10,012,220 B2; CN 103 732 921 B; US 9,404,492 B2; US 6,520,757 B1.

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Last update 2019/08