

## Product information

### Filter series F-MI3 · 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.

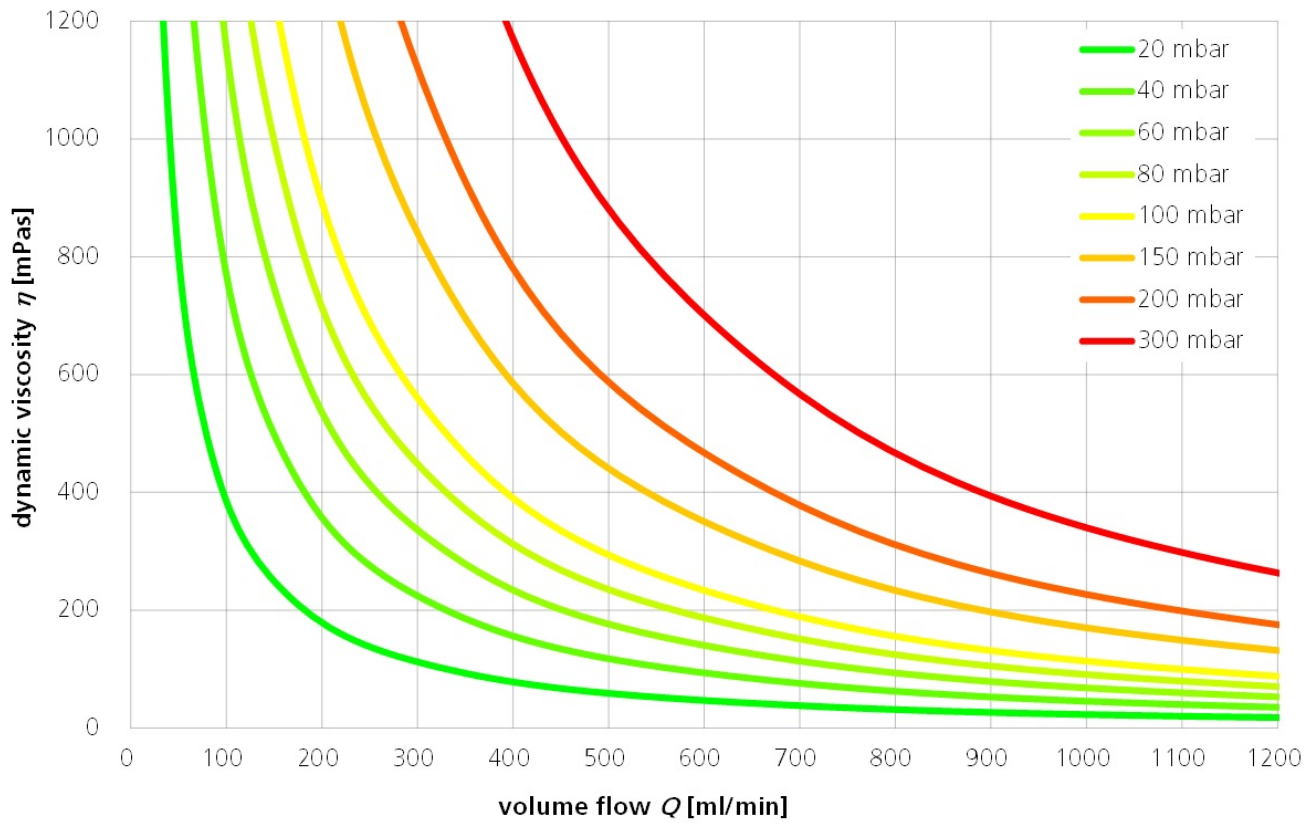
The filter series F-MI3 is available in three different configurations. The »inlet filter«, without an external housing, is directly immersed in the liquid. The »inline filters« are designed to be installed downstream in the feed line, i.e. directly before the pump. The maintenance-friendly »T-design« 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. 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 or alloy C22, 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
- Wide configuration variety  
different body shapes and body materials, filter  
fineness and sealing materials
- User-friendly and economical  
filter elements can be cleaned or replaced

Characteristics

pressure drop  $\Delta p$  F-MI-3 (10  $\mu\text{m}$ )



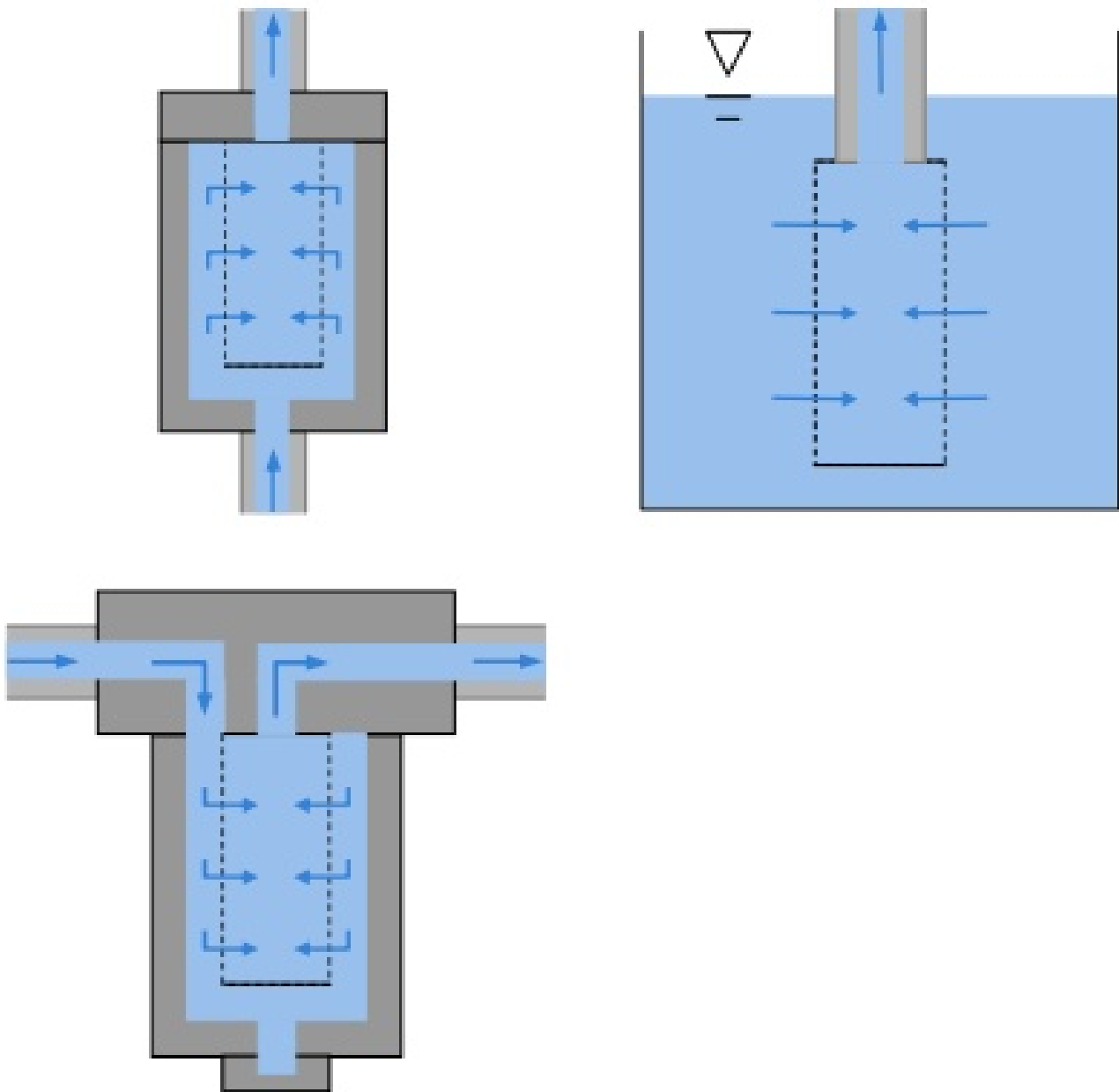
## Technical data

Type	Inlet filter Inline filter (straight, T-shape)
Liquid temperature range	Inlet filter: -200 ... +250 °C Inline filter: -10 ... +140 °C (-40 ... +275 °C *)
Differential pressure range	Inlet filter: - Inline filter: max. 10 bar
Operating pressure	Inlet filter: - Inline filter: max. 200 bar
Seal materials	Inlet filter: - Inline filter: FPM, FFPM, EPDM
Materials	stainless steel
Internal volume	Inlet filter: - Straight shape: 65 ml T-shape: 92 ml
Measurements (ø x H)	Inlet filter: Ø 35 x 84 mm Straight shape: Ø 48 x 105 mm T-shape: Ø 70 x 114 mm
Fluid connection	conical internal thread 3/8" NPT
Filter fineness	10 µm; optional: 3 µm, 25 µm, 40 µm, 100 µm
Filter area	160 cm <sup>2</sup>
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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## Contact

HNP Mikrosysteme GmbH  
Bleicherufer 25  
19053 Schwerin  
Germany

T +49 385 52190-300  
F +49 385 52190-333  
info@hnp-mikrosysteme.de

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