

# Filter Series F-MI



- [F-MI0]**
- Internal volume: 0.3 ml
  - Filter area: 1.3 cm<sup>2</sup>
  - Fluid connection\*\*: 1/4" - 28 UNF



- [F-MI1]**
- Internal volume\*: 7.5 - 11 ml
  - Filter area: 9.5 cm<sup>2</sup>
  - Fluid connection\*\*: 1/8" NPT



- [F-MI2]**
- Internal volume\*: 20 - 30 ml
  - Filter area\*: 61 - 72 cm<sup>2</sup>
  - Fluid connection\*\*: 1/8" NPT



- [F-MI3]**
- Internal volume\*: 65 - 84 ml
  - Filter area\*: 135 - 150 cm<sup>2</sup>
  - Fluid connection\*\*: 3/8" NPT



- [F-MI4]**
- Internal volume: 195 ml
  - Filter area\*: 407 - 450 cm<sup>2</sup>
  - Fluid connection\*\*: G 1/2"

\* depending on design, size and configuration  
 \*\* other connections on request

## Filter series F-MI

Liquids and gases efficiently filtered

The **F-MI filter series from HNP Mikrosysteme** is used in a wide range of applications in the life science, mechanical engineering, chemical and pharmaceutical production and food industry.

In microfluidics, the use of filters is a question of purity or particle size limitation in the liquids processed. Processes at the molecular level are often involved that do not tolerate impurities. Filters keep foreign particles, fibers and, in the worst case, chips away from downstream devices and microfluidic structures.

The **F-MI0 to F-MI4 filter series** includes three different designs in five sizes. There is a wide selection of media-resistant and certified materials. Filter finenesses of 3, 10, 25, 40, 50 and 100 µm are available. Our experts will be happy to advise you on the right choice of filter from this wide range of variants, according to the properties and requirements of your process.

### Function

- guarantees purity in the production process
- protects the end-product from contamination
- protects sensitive periphery from particles
- ensures the functionality of the system

### Material

- corrosion-resistant materials 316L stainless steel or alloy C22
- media-resistant and certified sealing materials FPM, FFPM or EPDM

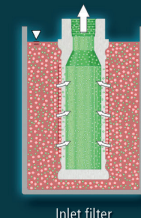
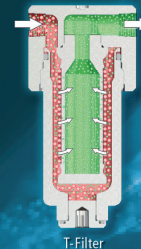
### Advantages at a glance

- high filtration capacity in relation to the internal volume due to large filter area
- high-performance filter elements for low pressure losses even at higher flow rates and viscosities
- variety of designs due to different housing shapes (t-filter, inline or inlet filter) and housing materials, filter finenesses and sealing materials
- purely metallic filter elements
- suitable for food and pharmaceutical industries: FDA-compliant sealing materials, surface roughness ≤ Ra 0.8 and hygienic fittings on request
- user-friendly and economical: filter elements can be cleaned and replaced
- optional filter monitoring and electrical heating elements can be integrated
- professional advice and configuration by our experts

### Filter structure Example F-MI2-T



### Functional principle of filter designs



## Filter accessories

### Filter monitoring

When using a filter in a pump system, it should be placed as close as possible to the pump. The filter is being monitored by means of a suction pressure sensor. The measured pressure shows the pressure loss of the entire suction line upstream of the pump and allows conclusions to be drawn about the condition of the filter element. Maintenance and cleaning can be carried out as required and unnecessary downtimes can be avoided. A reliable media supply is guaranteed.

In addition to simple pressure sensors with analog output, pressure switches with digital display, LED displays or configurable output signals are available. Pressure switches provide feedback when a defined pressure threshold is reached. They can be configured for specific applications using the IO-Link interface.



### Electrical heating module

An electric heating module is available for the larger filters. Consisting of a heating jacket and a thermocouple, it prevents the media temperature from dropping, thus ensuring a stable production process.



### Filter series F-MI0 - F-MI4

Internal volume:	0.3 ... 195 ml
Filter fineness:	3 ... 100 µm
Max. system pressure:	140 ... 200 bar
Max. differential pressure:	5 ... 20 bar
Liquid temperature:	-200 ... +275 °C
Height:	21.5 ... 174 mm
Weight:	2 ... 3.100 g
Diameter:	6.5 ... 80 mm