FMP 039 series

Maximum working pressure up to 11 MPa (110 bar) - Flow rate up to 80 l/min
FMP 039

**Description**

**High Pressure filters**

In-line

Maximum working pressure up to 11 MPa (110 bar)

Flow rate up to 80 l/min

FMP039 is a range of versatile medium pressure filter for transmission, protection of sensitive components in medium pressure hydraulic systems and filtration of the coolant into the machine tools. They are directly connected to the lines of the system through the hydraulic fittings.

**Available features:**
- 1/2" female threaded connections, for a maximum flow rate of 80 l/min
- Fine filtration rating, to get a good cleanliness level into the system
- Bypass valve, to relieve excessive pressure drop across the filter media
- Low collapse filter element “N”
- Visual, electrical and electronic differential clogging indicators

**Common applications:**

Delivery lines, in any medium pressure industrial equipment or mobile machines

**Technical data**

**Filter housing materials**

- Head: Anodized aluminium
- Housing: Anodized aluminium
- Bypass valve: Steel

**Pressure**

- Test pressure: 17 MPa (170 bar)
- Burst pressure: 33 MPa (330 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 11 MPa (110 bar)

**Bypass valve**

- Opening pressure 600 kPa (6 bar) ±10%
- Other opening pressures on request.

**Δp element type**

- Microfibre filter elements - series N: 20 bar
- Wire mesh filter elements - series N: 20 bar
- Fluid flow through the filter element from OUT to IN.

**Seals**

- Standard NBR series A
- Optional FPM series V

**Temperature**

From -25 °C to +110 °C

**Connections**

In-line Inlet/Outlet

**Note**

FMP 039 filters are provided for vertical mounting

**Weights [kg] and volumes [dm³]**

<table>
<thead>
<tr>
<th>Filter series</th>
<th>Weights [kg]</th>
<th>Volumes [dm³]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Length 2</td>
<td>3</td>
</tr>
<tr>
<td>FMP 039</td>
<td>0.60</td>
<td>0.70</td>
</tr>
</tbody>
</table>

**Executions**

**Execution 1:** without indicator connection

**Execution 6:** double indicator connection (A - B)

**A:** Closure cap with standard T2 steel. The position of the cap is reversible.

**B:** Standard closure cap with plastic thread protection.

Special connections on request

If necessary, a second T2 plug is available, see ordering information.
Pressure drop

Filter housings Δp pressure drop

Bypass valve pressure drop

The curves are plotted using mineral oil with density of 0.86 kg/dm³ in compliance with ISO 3968. Δp varies proportionally with density.

Maximum flow rate for a complete pressure filter with a pressure drop Δp = 1.5 bar.

The reference fluid has a kinematic viscosity of 30 mm²/s (cSt) and a density of 0.86 kg/dm³.

For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.

You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure.

Please, contact our Sales Department for further additional information.

Hydraulic symbols

Filter series | Style S | Style B
---|---|---
FMP 039 | • | •

Filter element design - N Series

| Filter series | Length | A03 | A06 | A10 | A16 | A25 | M25 |
---|---|---|---|---|---|---|---|
FMP 039 | 2 | 20 | 26 | 45 | 52 | 61 | 97 |
| 3 | 35 | 39 | 56 | 64 | 76 | 82 | 98 |
| 4 | 44 | 48 | 66 | 71 | 82 | 92 |
## Complete Filter

<table>
<thead>
<tr>
<th>Series and size</th>
<th>Configuration example:</th>
<th>FMP039</th>
<th>3</th>
<th>B</th>
<th>A</th>
<th>B</th>
<th>6</th>
<th>A03</th>
<th>N</th>
<th>P01</th>
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<tbody>
<tr>
<td><strong>Length</strong></td>
<td></td>
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<td>2</td>
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<td>4</td>
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<tr>
<td><strong>Valves</strong></td>
<td></td>
<td></td>
<td>S</td>
<td>Without bypass</td>
<td>B</td>
<td>With bypass 6 bar</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Seals</strong></td>
<td>A</td>
<td>NBR</td>
<td>V</td>
<td>FPM</td>
<td></td>
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<tr>
<td><strong>Connections</strong></td>
<td>A</td>
<td>G 1/2&quot;</td>
<td>B</td>
<td>1/2&quot; NPT</td>
<td>C</td>
<td>SAE 8 - 3/4&quot; - 16 UNF</td>
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<tr>
<td><strong>Connection for differential indicator</strong></td>
<td>1</td>
<td>Without connections</td>
<td>6</td>
<td>With two connections on both sides</td>
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<tr>
<td><strong>Filtration rating (filter media)</strong></td>
<td>A03</td>
<td>Inorganic microfiber 3 µm</td>
<td>A16</td>
<td>Inorganic microfiber 16 µm</td>
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<tr>
<td></td>
<td>A06</td>
<td>Inorganic microfiber 6 µm</td>
<td>A25</td>
<td>Inorganic microfiber 25 µm</td>
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</tr>
<tr>
<td></td>
<td>A10</td>
<td>Inorganic microfiber 10 µm</td>
<td>M25</td>
<td>Wire mesh 25 µm</td>
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<tr>
<td><strong>Execution</strong></td>
<td>N</td>
<td>20 bar</td>
<td>P01</td>
<td>MP Filtri standard</td>
<td>Px</td>
<td>Customized</td>
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## Filter Element

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<th>HP039</th>
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<th>A03</th>
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<tr>
<td></td>
<td>A06</td>
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<td>M25</td>
<td>Wire mesh 25 µm</td>
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<tr>
<td><strong>Seals</strong></td>
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<td>NBR</td>
<td>V</td>
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<tr>
<td><strong>Execution</strong></td>
<td>N</td>
<td>20 bar</td>
<td>P01</td>
<td>MP Filtri standard</td>
<td>Px</td>
<td>Customized</td>
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</tr>
</tbody>
</table>

## Clogging Indicators

- **DEA** Electrical differential indicator
- **DEM** Electrical differential indicator
- **DLA** Electrical / visual differential indicator
- **DLE** Electrical / visual differential indicator
- **DTA** Electrical differential indicator
- **DVA** Visual differential indicator
- **DVM** Visual differential indicator

## Plugs

- **T2** Differential indicator plug

See page 687

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High Pressure filters
FMP 039

Dimensions

IN ➔

OUT

ø57

Recommended clearance space for maintenance

Connections R

A/F 30

Version 1

Version 6

R - depth 6 mm
Nr. 2 holes

The position of the T2 plug is reversible

Connection for differential indicator

T2 plug

Connection for differential indicator

The position of the T2 plug is reversible

FMP039

<table>
<thead>
<tr>
<th>Filter length</th>
<th>H (mm)</th>
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<table>
<thead>
<tr>
<th>Connections</th>
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<tbody>
<tr>
<td>A</td>
<td>M6</td>
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<td>B - C</td>
<td>1/4&quot; UNC</td>
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Order number for spare parts

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<thead>
<tr>
<th>Item</th>
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<th>Filter element</th>
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<th>Q ty: 1 pc.</th>
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<tbody>
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<td>02050509</td>
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<tr>
<td>3d</td>
<td></td>
<td>3e</td>
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<td>(3a ÷ 3e)</td>
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High Pressure Filters