

# FMP 039 series

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



## INSTALLATION, SERVICE AND MAINTENANCE MANUAL AND SAFETY INSTRUCTIONS



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# FMP 039 GENERAL INFORMATION

## Description

## Technical data

### 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

#### 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)  $\pm 10\%$
- Other opening pressures on request.

#### $\Delta p$ 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

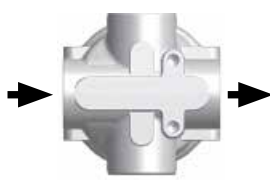
FMP 039 filters are provided for vertical mounting

## Weights [kg] and volumes [dm<sup>3</sup>]

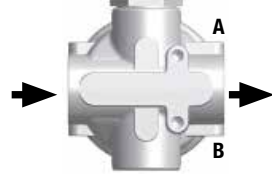
Filter series	Weights [kg]				Volumes [dm <sup>3</sup> ]			
	Length	2	3	4	Length	2	3	4
<b>FMP 039</b>		0.60	0.70	0.80		0.19	0.26	0.34

## Executions

**Execution 1:**  
without indicator connection



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

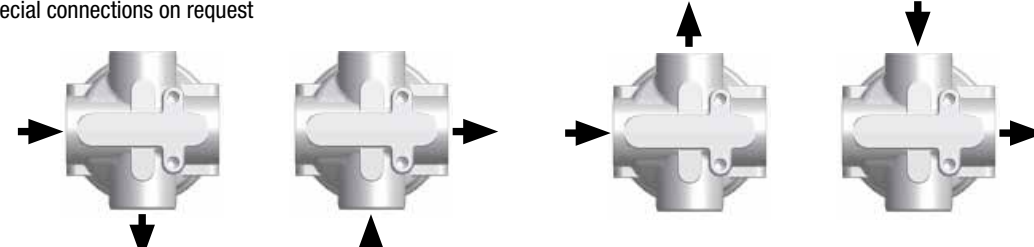


**A:**  
Closure cap with standard T2 steel. The position of the cap is reversible.

**B:**  
Standard closure cap with plastic thread protection. If necessary, a second T2 plug is available, see ordering information.

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Special connections on request



Filter series	Length	Filter element design - N Series					
		A03	A06	A10	A16	A25	M25
<b>FMP 039</b>	<b>2</b>	20	26	45	52	61	97
	<b>3</b>	35	39	56	64	76	98
	<b>4</b>	44	48	66	71	82	92

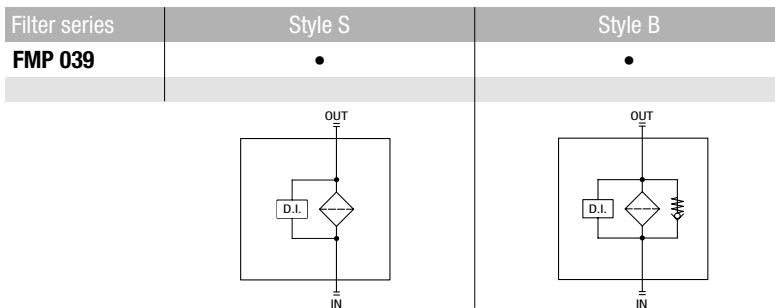
### Maximum flow rate for a complete pressure filter with a pressure drop $\Delta p = 1.5$ bar.

The reference fluid has a kinematic viscosity of 30 mm<sup>2</sup>/s (cSt) and a density of 0.86 kg/dm<sup>3</sup>.

For different pressure drop or fluid viscosity we recommend to use our selection software available on [www.mpfiltri.com](http://www.mpfiltri.com).

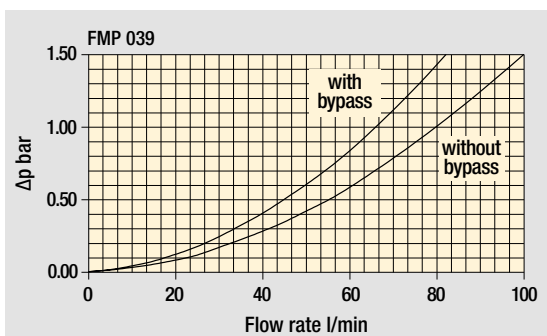
You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure. Please, contact our Sales Department for further additional information.

## Hydraulic symbols

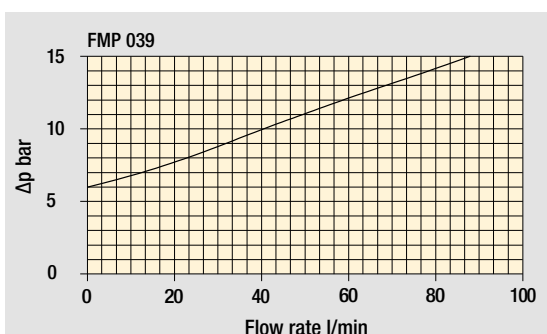


## Pressure drop

Filter housings  $\Delta p$  pressure drop



Bypass valve pressure drop



The curves are plotted using mineral oil with density of 0.86 kg/dm<sup>3</sup> in compliance with ISO 3968.  $\Delta p$  varies proportionally with density.

# FMP 039

## Designation & Ordering code

### COMPLETE FILTER

Configuration example: **FMP039** | **3** | **B** | **A** | **B** | **6** | **A03** | **N** | **P01**

**Series and size**  
**FMP039**

**Length**  
**2** | **3** | **4**

**Valves**  
**S** Without bypass  
**B** With bypass 6 bar

**Seals**  
**A** NBR  
**V** FPM

**Connections**  
**A** G 1/2"  
**B** 1/2" NPT  
**C** SAE 8 - 3/4" - 16 UNF

**Connection for differential pressure indicator**  
**1** Without connections  
**6** With two connections on both sides

**Filtration rating (filter media)**

<b>A03</b> Inorganic microfiber 3 µm	<b>A16</b> Inorganic microfiber 16 µm
<b>A06</b> Inorganic microfiber 6 µm	<b>A25</b> Inorganic microfiber 25 µm
<b>A10</b> Inorganic microfiber 10 µm	<b>M25</b> Wire mesh 25 µm

**Element Δp**  
**N** 20 bar

**Execution**  
**P01** MP Filtri standard  
**Pxx** Customized

### FILTER ELEMENT

Configuration example: **HP039** | **3** | **A03** | **A** | **N** | **P01**

**Element series and size**  
**HP039**

**Element length**  
**2** | **3** | **4**

**Filtration rating (filter media)**

<b>A03</b> Inorganic microfiber 3 µm	<b>A16</b> Inorganic microfiber 16 µm
<b>A06</b> Inorganic microfiber 6 µm	<b>A25</b> Inorganic microfiber 25 µm
<b>A10</b> Inorganic microfiber 10 µm	<b>M25</b> Wire mesh 25 µm

**Seals**  
**A** NBR  
**V** FPM

**Element Δp**  
**N** 20 bar

**Execution**  
**P01** MP Filtri standard  
**Pxx** Customized

### CLOGGING INDICATORS

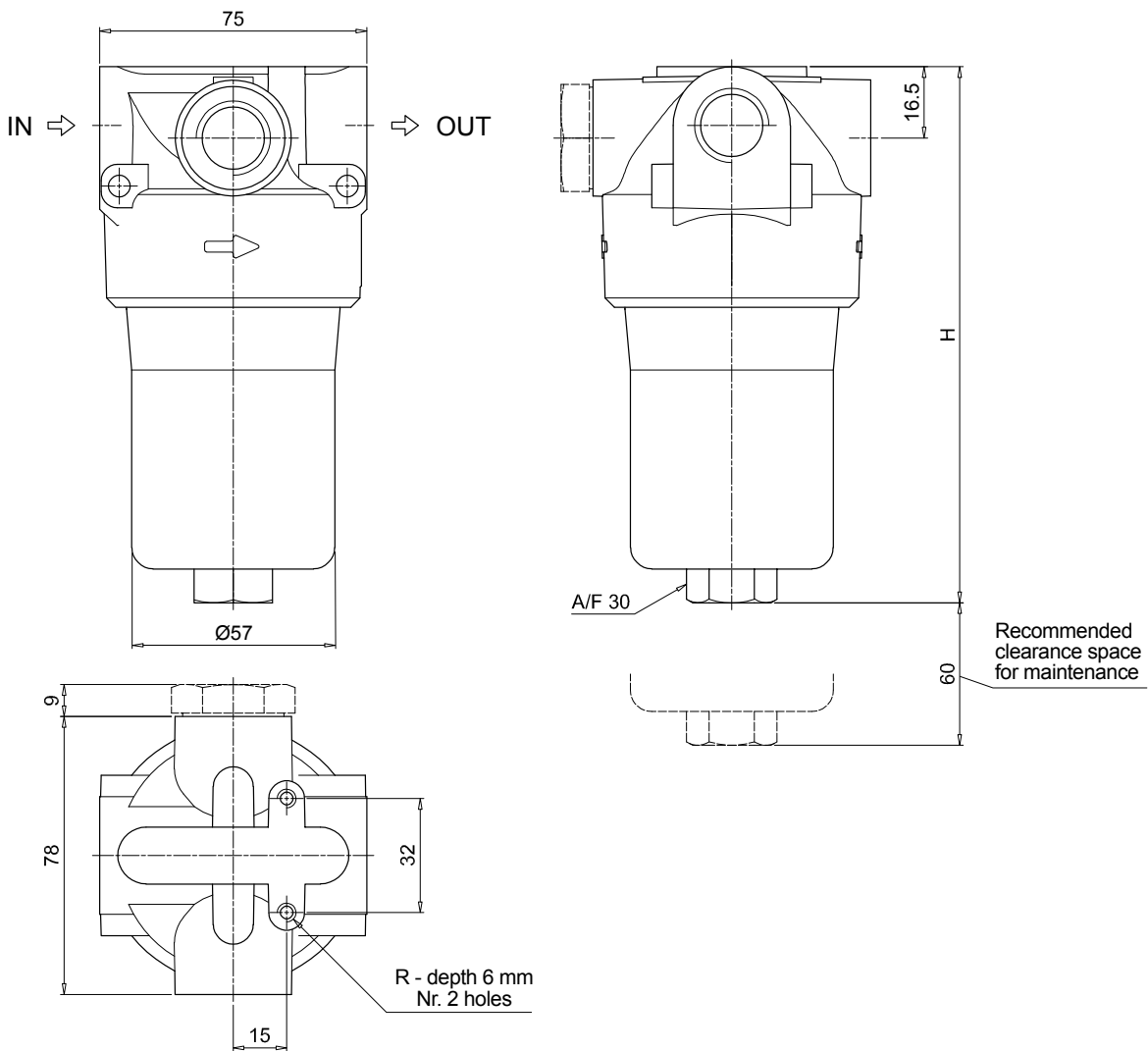
See page 717

<b>DEA</b> Electrical differential pressure indicator	<b>DLE</b> Electrical / visual differential pressure indicator
<b>DEM</b> Electrical differential pressure indicator	<b>DTA</b> Electronic differential pressure indicator
<b>DEU</b> Electrical differential pressure indicator	<b>DVA</b> Visual differential pressure indicator
<b>DLA</b> Electrical / visual differential pressure indicator	<b>DVM</b> Visual differential pressure indicator

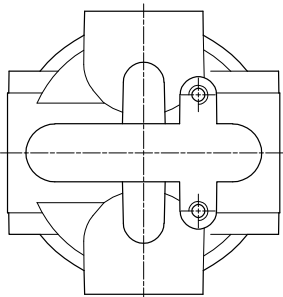
### PLUGS

See page 737

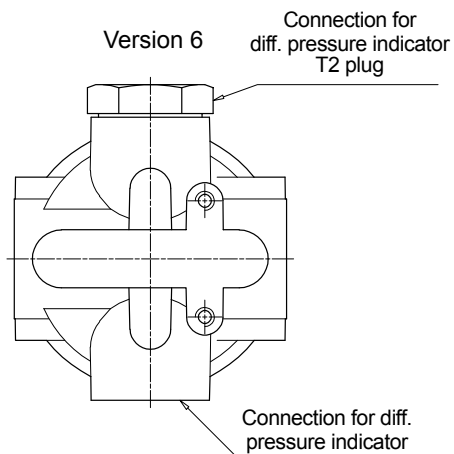
<b>T2</b> Plug (not included)
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Version 1



Version 6



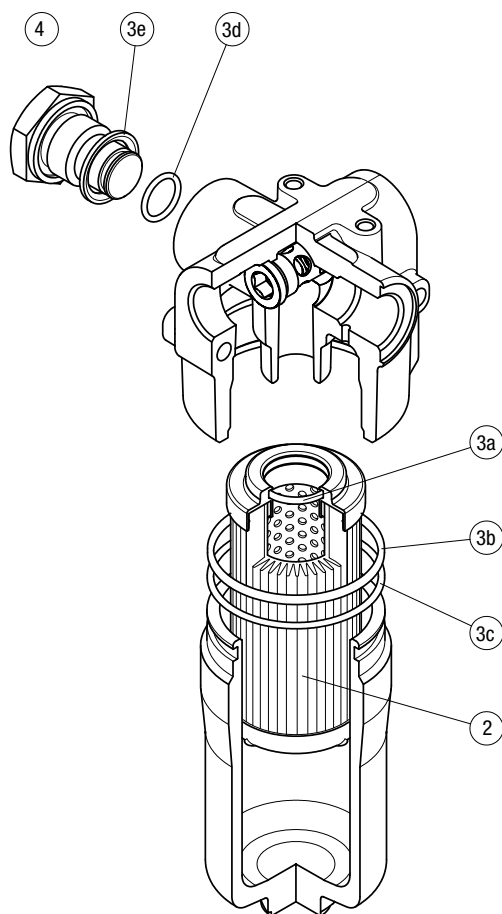
The position of the T2 plug is reversible

FMP039	
Filter length	H [mm]
2	151
3	194
4	238
Connections	R
A	M6
B - C	1/4" UNC

# FMP 039 SPARE PARTS

Order number for spare parts

FMP 039



Item:	Q.ty: 1 pc.	Q.ty: 1 pc.	
Filter series	Filter element	Seal Kit code number	
		NBR	FPM
<b>FMP 039</b>	See order table	02050509	02050510

