

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.

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]

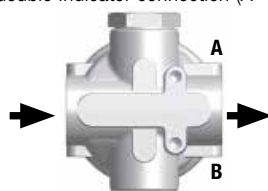
Filter series	Weights [kg]				Volumes [dm³]			
	Length	2	3	4	Length	2	3	4
FMP 039		0.60	0.70	0.80		0.19	0.26	0.34

Executions

Execution 1:
without indicator connection



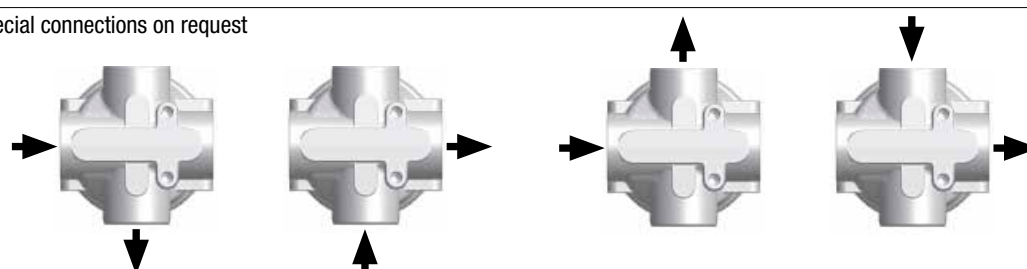
Execution 6
double indicator connection (A - B)



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.

Special connections on request



Flow rates [l/min]

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

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

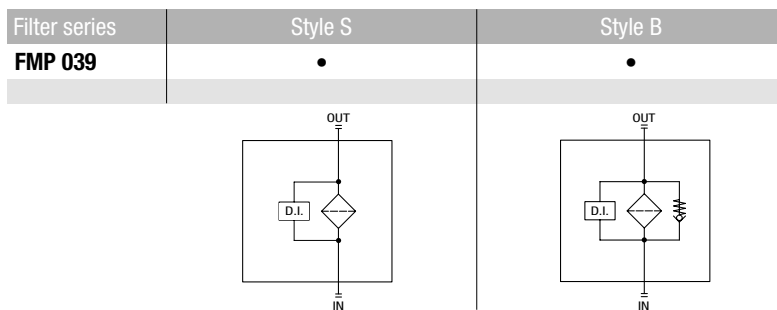
The reference fluid has a kinematic viscosity of 30 mm²/s (cSt) and a density of 0.86 kg/dm³.

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.

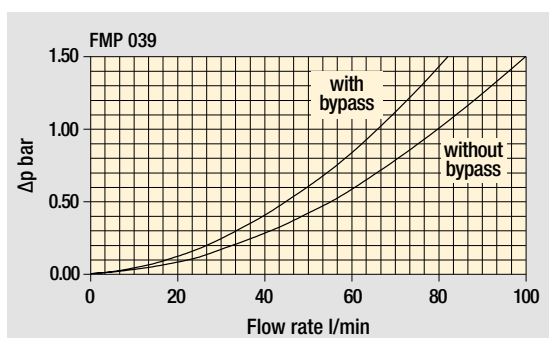
Please, contact our Sales Department for further additional information.

Hydraulic symbols

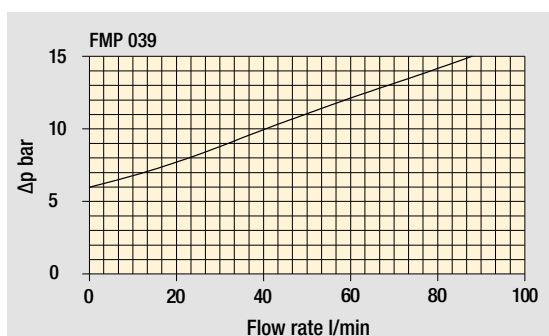


Pressure drop

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.

FMP 039

Designation & Ordering code

COMPLETE FILTER

Series and size FMP039	Configuration example: FMP039	3	B	A	B	6	A03	N	P01
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)									
A03 Inorganic microfiber 3 µm	A16 Inorganic microfiber 16 µm								
A06 Inorganic microfiber 6 µm	A25 Inorganic microfiber 25 µm								
A10 Inorganic microfiber 10 µm	M25 Wire mesh 25 µm								

Element Δp N 20 bar	Execution P01 MP Filtri standard Pxx Customized
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FILTER ELEMENT

Element series and size HP039	Configuration example: HP039	3	A03	A	N	P01
Element length 2 3 4						
Filtration rating (filter media)						
A03 Inorganic microfiber 3 µm	A16 Inorganic microfiber 16 µm					
A06 Inorganic microfiber 6 µm	A25 Inorganic microfiber 25 µm					
A10 Inorganic microfiber 10 µm	M25 Wire mesh 25 µm					

Seals A NBR V FPM	Element Δp N 20 bar	Execution P01 MP Filtri standard Pxx Customized
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CLOGGING INDICATORS

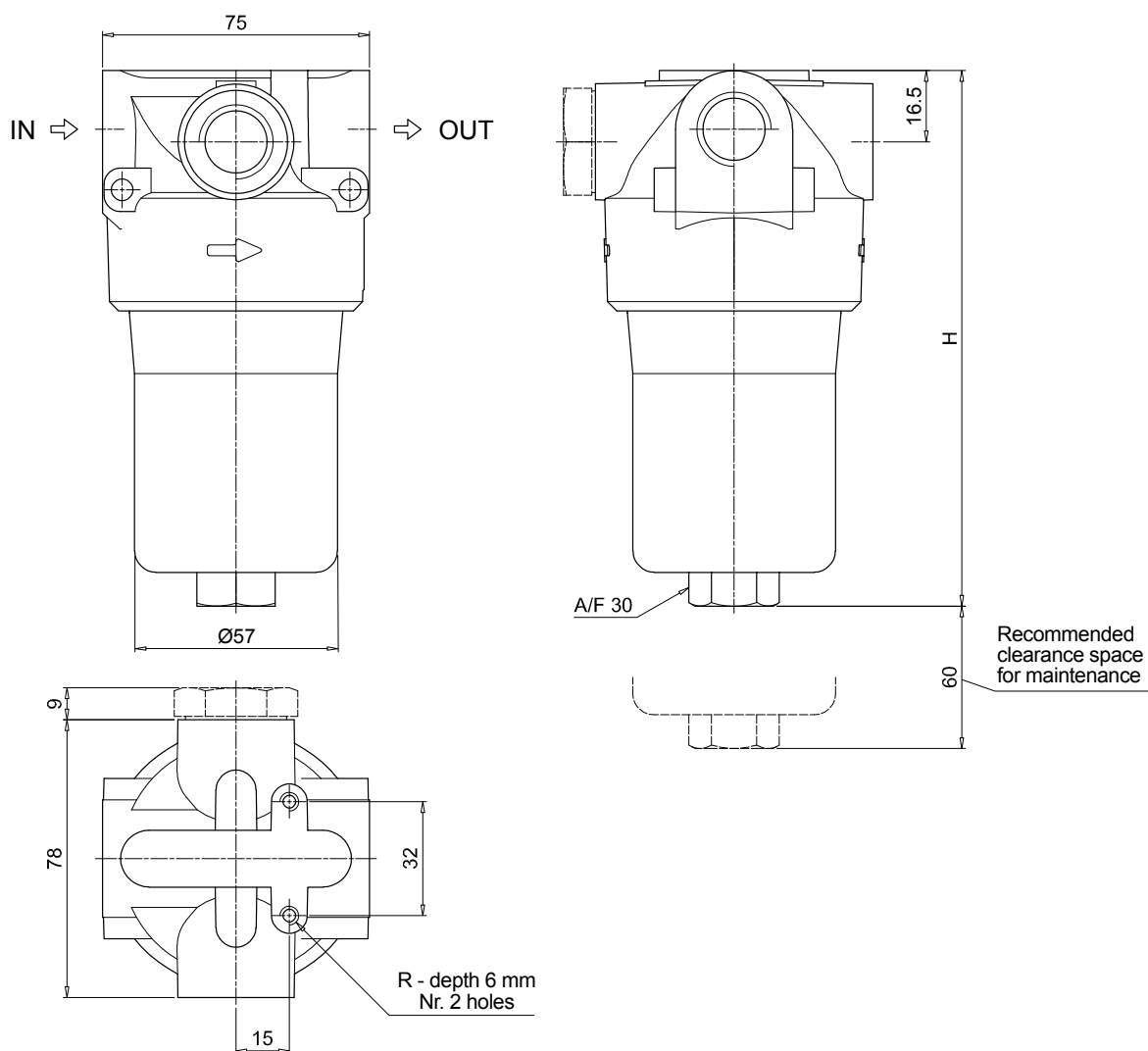
See page 727

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

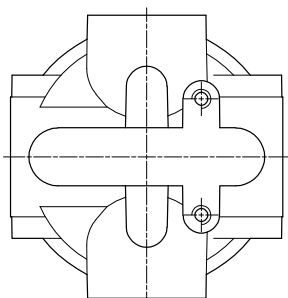
PLUGS

See page 747

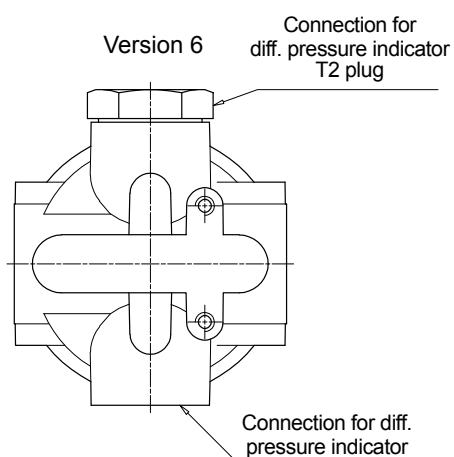
T2 Plug (not included)



Version 1



Version 6



The position of the T2 plug is reversible

FMP039

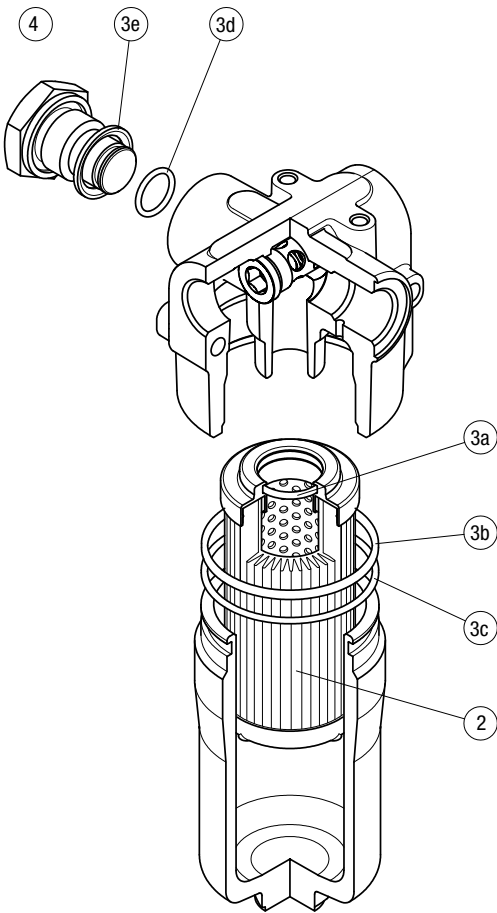
Filter length	H [mm]
2	151
3	194
4	238

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.
		2	3 (3a ÷ 3e)
Filter series	Filter element	Seal Kit code number	
		NBR	FPM
FMP 039	See order table	02050509	02050510

DIFFERENTIAL PRESSURE INDICATORS

Series		Configuration example 1:							
DE	Electrical differential pressure indicator	DE	M	12	H	F	50	P01	UL
DL	Electrical/Visual differential pressure indicator	DE	U	50	V	A	50	P01	
DT	Electronic differential pressure indicator	DL	E	20	V	A	71	P01	
DV	Visual differential pressure indicator	DT	A	50	H	F	70	P01	
		Configuration example 5:	DV	M	70	V		P01	
Type		DE	DL	DT	DV				
A	Standard type	•	•	•	A	With automatic reset			
M	With wired electrical connection	•	-	-	M	With manual reset			
U	Standard type 210 bar, UL certified	•	-	-					
E	For high power supply	-	•	-					
Pressure setting		DEA	DEM	DEU	DLA	DLE	DTA	DVA	DVM
50	5.0 bar	•	•	•	•	•	•	•	•
70	7.0 bar	•	•	•	•	•	•	•	•
95	9.5 bar	•	•	-	•	•	•	•	•
Seals		DEA	DEM	DEU	DLA	DLE	DTA	DVA	DVM
H	HNBR	•	•	-	•	•	•	•	•
V	FPM	•	•	•	•	•	•	•	•
Thermostat		DEA	DEM	DEU	DLA	DLE	DT		
A	Without thermostat	•	•	•	•	•	-		
F	With thermostat	-	•	-	-	•	•		
Electrical connections		DEA	DEM	DEU	DLA	DLE	DT		
10	Connection AMP Superseal series 1.5	-	•	-	-	-	-		
20	Connection AMP Timer Junior	-	•	-	-	-	-		
30	Connection Deutsch DT-04-2-P	-	•	-	-	-	-		
35	Connection Deutsch DT-04-3-P	-	•	-	-	-	-		
50	Connection EN 175301-803	•	-	•	-	•	-		
51	Connection EN 175301-803, transparent base with lamps 24 Vdc	-	-	-	•	-	-		
52	Connection EN 175301-803, transparent base with lamps 110 Vdc	-	-	-	•	-	-		
70	Connection IEC 61076-2-101 D (M12)	-	-	-	-	-	•		
71	Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc	-	-	-	•	-	-		
Option									
P01	MP Filtri standard								
Pxx	Customized								

PLUGS

Series		Configuration example	
T2	Plug	T2	H
Seals			
H	HNBR		
V	FPM		