

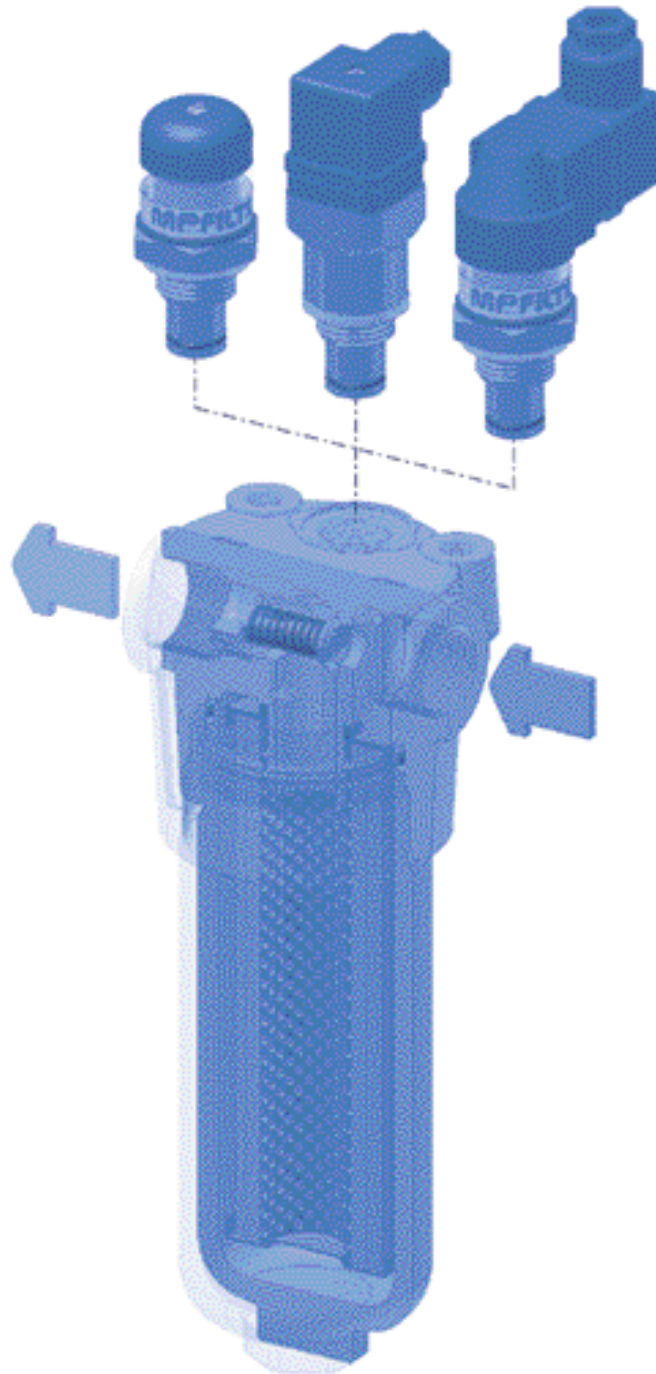
# FMM 050



# FMM

# SERIES 050

*Working pressure*  
**280 bar**

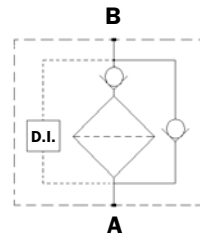
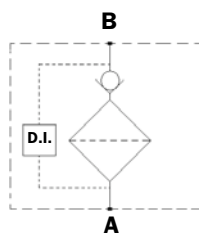
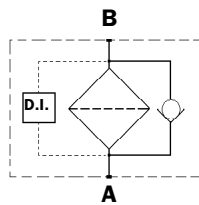
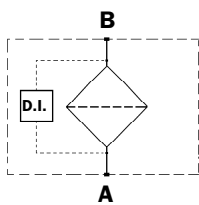


Style S

Style B

Style T

Style D



# Technical data

## Filter body (Materials)

- Head: Cast iron (chemical heat treatment)
- Housing: Steel (chemical heat treatment)
- Bypass valve: Steel

## Pressure

- Working pressure: 280 bar (28 MPa)
- Test pressure: 420 bar (42 MPa)
- Burst pressure: 840 bar (84 MPa)
- Pulsed pressure fatigue test 1,000,000 of cycles with variable pressure from 0 to 280 bar (28 MPa)

## Temperature

- From -25°C to +110°C

## Bypass valve

- Opening pressure 6 bar  $\pm$ 10%
- Other opening pressures on request.

## Elements type $\Delta p$

- Micro fibre filter elements series N: 20 bar
- Micro fibre filter elements series H: 210 bar
- Stainless steel mesh elements series N: 20 bar
- Oil flow from exterior to interior.

## Seals

- Standard Nitrile (NBR) series A
- Optional FPM series V

## Weights without filter elements (kg)

### Length

- FMM050-1 2.6
- FMM050-2 3.6
- FMM050-3 3.9
- FMM050-4 4.5
- FMM050-5 6.1

## Filter internal volumes (dm<sup>3</sup>)

### Length

- FMM050-1 0.38
- FMM050-2 0.48
- FMM050-3 0.58
- FMM050-4 0.69
- FMM050-5 0.86

## Connections

In-line Inlet/Outlet

## Compatibility

- Bodies compatible with: Mineral oils to ISO 2943 - aqueous emulsions Synthetic fluids, water/glycol.
- Filter elements compatible with: Mineral oils to ISO 2943 - aqueous emulsions Synthetic fluids, water/glycol.

- Nitrile (NBR) seals series A, compatible with: Mineral oils to ISO 2943 - aqueous emulsions Synthetic fluids, water/glycol.
- V series FPM seals, compatible with: Synthetic fluids type HS-HFDR-HFDS-HFDU.

## Filter Element Area

Filter element in stainless steel mesh

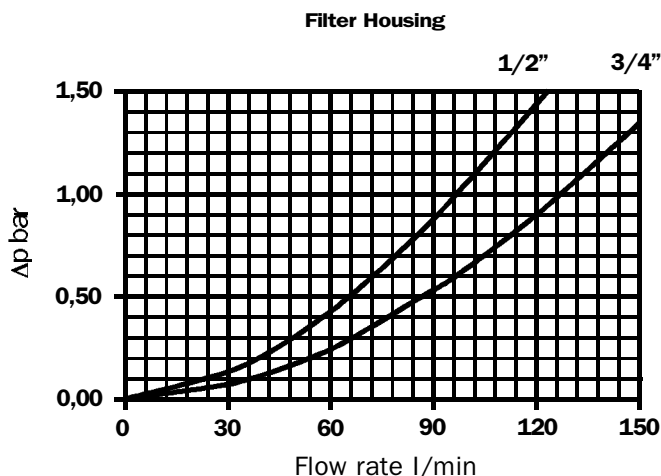
Type	Length				
	1	2	3	4	5
HP050	450	700	1000	1300	2100

Values expressed in cm<sup>2</sup>

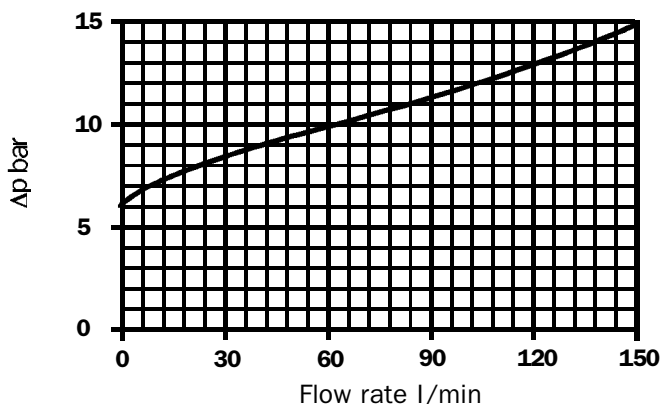
## Pressure drops $\Delta p$ Housing

The curves are plotted using mineral oil with density of 0.86 kg/dm<sup>3</sup> to ISO 3968.

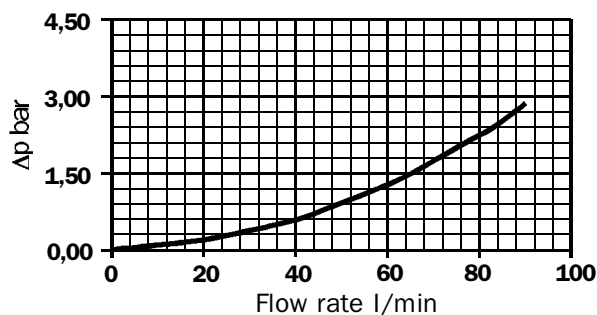
$\Delta p$  varies proportional with density.



## Bypass valve pressure drops

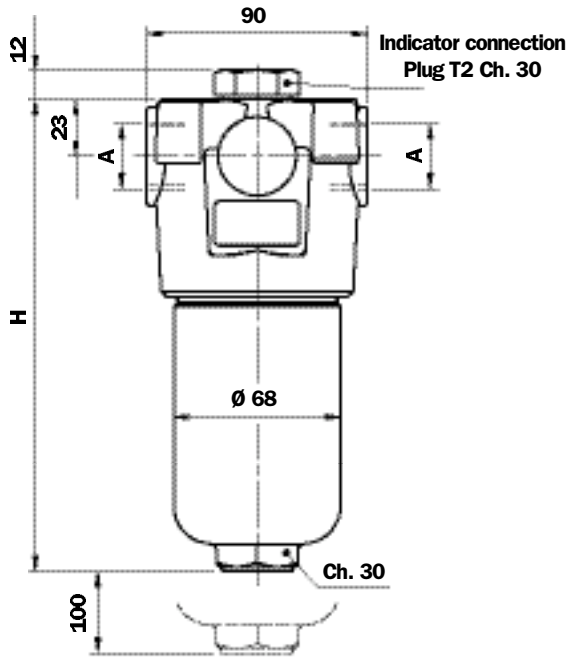


## Filter housing with check valve



# FMM 050

## Dimensions

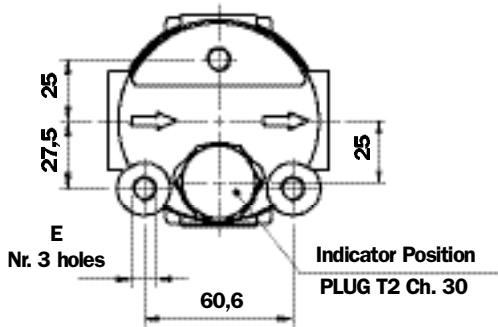


### Recommended maximum flow rate

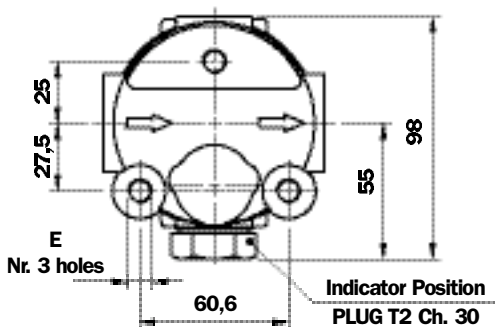
- Pressure drop of complete filter equal to  $\Delta p$  1.5 bar.
- Oil kinematic viscosity 30 mm<sup>2</sup>/s (cSt).
- Density 0.86 kg/dm<sup>3</sup>.
- Connections of filter under test G 3/4".

Filter element type	Flow rate l/min Series N	Flow rate l/min Series H	Filter Length
A03	44	30	1
A06	44	40	
A10	80	58	
A16	82	60	
A25	110	75	
M25	140	-	2
A03	53	45	
A06	58	50	
A10	87	78	
A16	100	90	
A25	125	119	
M25	140	-	3
A03	68	59	
A06	71	62	
A10	100	92	
A16	110	100	
A25	135	130	
M25	140	-	4
A03	85	75	
A06	92	82	
A10	118	106	
A16	120	112	
A25	135	135	
M25	145	-	5
A03	110	94	
A06	112	98	
A10	130	112	
A16	135	120	
A25	140	140	
M25	152	-	

### With standard indicator



### Option P03 with indicator at 90°

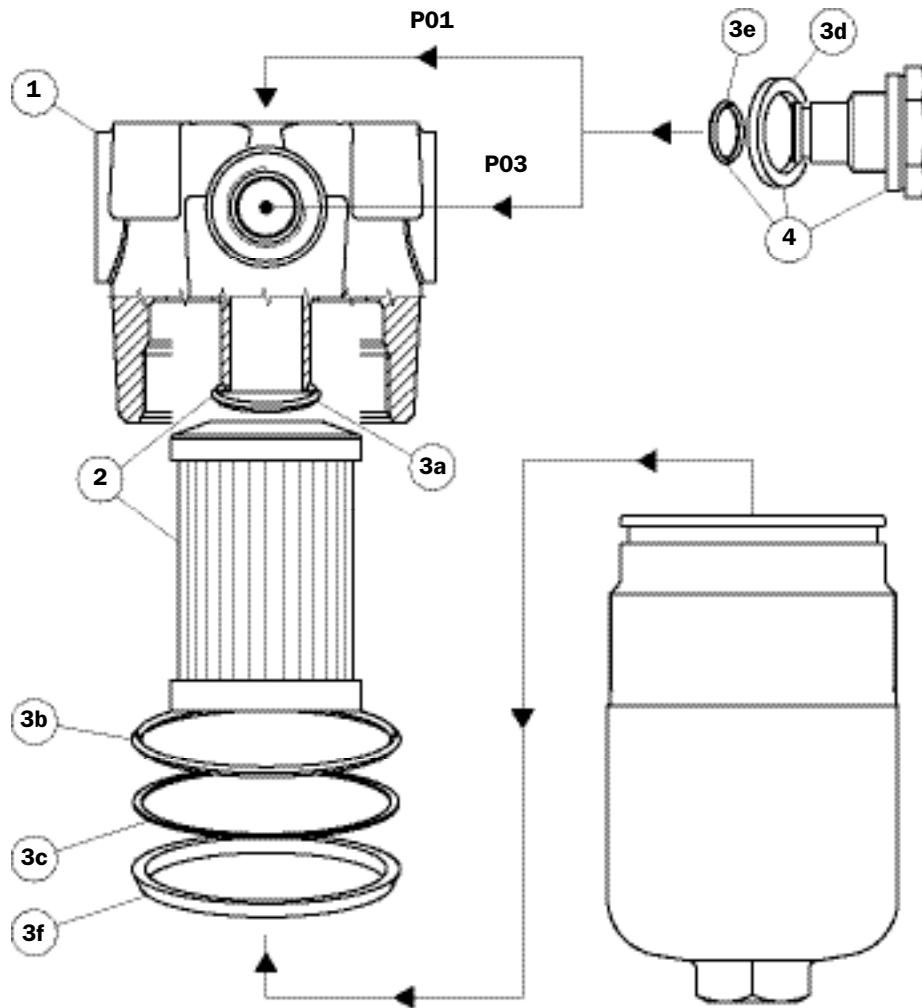


A		E
Threaded Connections		Depth 15 mm
18x1,5	ISO 6149	M10
22x1,5	ISO 6149	M10
G 1/2"		M10
G 3/4"		M10
1/2" NPT		3/8" UNC
3/4" NPT		3/8" UNC
SAE 8 (3/4" - 16 UNF)		3/8" UNC
SAE 12 (1 1/16" - 12 UN)		3/8" UNC

Filter Length	H mm
1	158
2	195
3	237
4	285
5	407

**Note.** Differential indicator versions are supplied with plug T2.

# Spare parts FMM050



Pos.	Description	Qty.	FMM 050 series FILTER 050 1 - 2 - 3 - 4 - 5	
1	Complete filter	1	See order table	
2	Filter Element	1	See order table	
3	Seal kits	1	NBR 02050314	FPM 02050315
3a	O-Ring for filter element	1	OR 3093 Ø 23.47 x 2.62	
3b	O-Ring for housing	1	OR 3225 Ø 56.82 x 2.62	
3c	Anti-extrusion ring	1	Parbak 139 Ø 56.03 x 2.18	
3d	Gasket	1	01030058 (HNBR)	01030046 (FPM)
3e	O-Ring	1	OR 2050 Ø 12.42 x 1.78	
3f	Protection seal	1	01026521	
4	Indicator plug	1	T2H	T2V
-	Indicator	1	See order table	

# Ordering information FMM050

## Filter assembly FMM 050

Example: HP050

1	2	3	4	5	6	7a
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	B	A	C	A10	N	P01

## Filter element HP 050

Example: HP050

1	5	3	6	7b
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	A10	A	N	P01

### 1 - Filter lengths

1
2
3
4
5

### 2 - Bypass valve

S	Without bypass
B	With bypass
T	Without bypass + check valve*
D	With bypass + check valve*

\*Reduced cross-section oilways

### 3 - Seals

A	NBR
V	FPM

### 4 - Threaded connections

A	M18x1.5 ISO 6149
B	M22x1.5 ISO 6149
C	G 1/2"
D	G 3/4"
E	1/2" NPT
F	3/4" NPT
G	SAE 8 (3/4" - 16 UNF)
H	SAE 12 (1 1/16" - 12 UN)

### 5 - Filter elements

A03	Inorganic microfibre 3 µ
A06	Inorganic microfibre 6 µ
A10	Inorganic microfibre 10 µ
A16	Inorganic microfibre 16 µ
A25	Inorganic microfibre 25 µ
M25	Stainless steel mesh 25 µ (N style only)

βx (c) ≥ 1000  
see page 10

### 6 - Filter elements differential pressure

N	20 bar
S	210 bar

### 7 - Options

#### a) Filter

P01	Standard threaded connection for indicator
P02	Without threaded connection for indicator
P03	Threaded connection for indicator at 90°
Pxx	Customer request

#### b) Filter element

P01	MP Filtri standard
Pxx	Customer request

DIFFERENTIAL INDICATORS (see page 15)

**MP Filtri** - The filter functions as described in this bulletin are valid exclusively for original MP Filtri filter elements and replacement parts. All rights reserved

The data in this publication is marketing information. MP Filtri reserves the right to make changes to the product described herein at any time it deems fit in relation to technical or commercial requirements. The colors of the products shown on the cover are for illustration purposes only.  
Copyright. All rights reserved.