

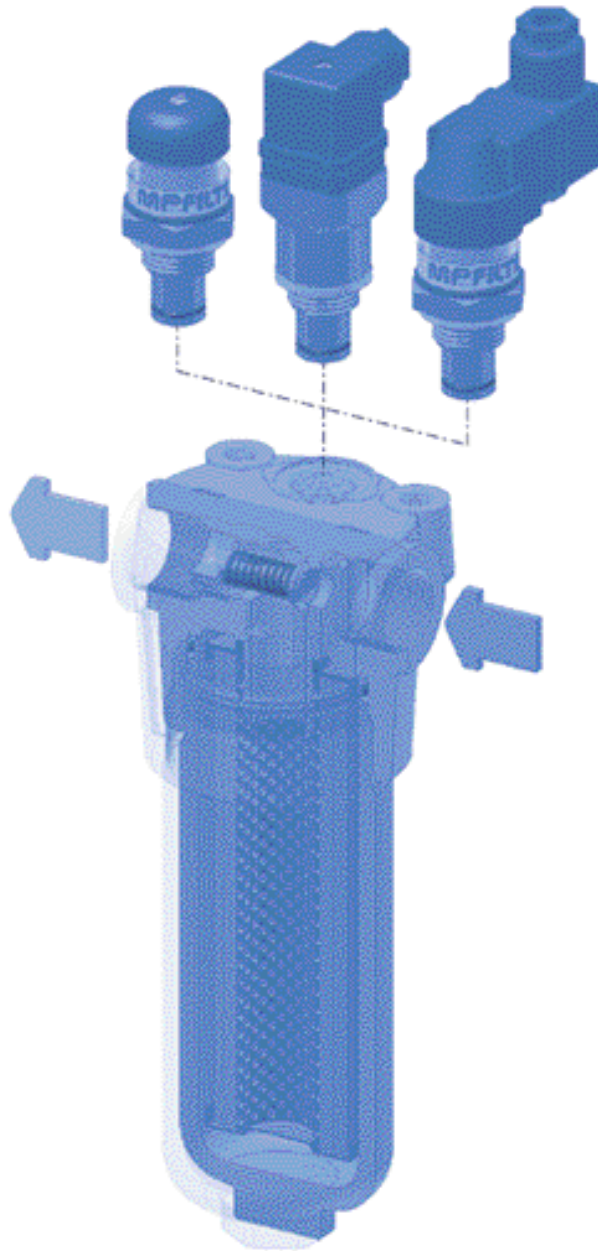
# FMM 050



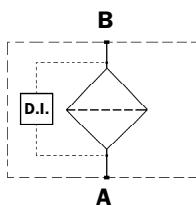
# FMM

# SERIES 050

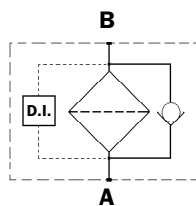
**Working pressure**  
**4000 psi**



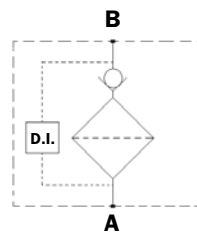
Style S



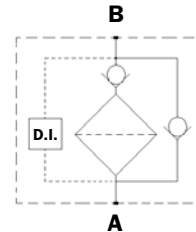
Style B



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: 4000 psi (28 MPa)
- Test pressure: 6090 psi (42 MPa)
- Burst pressure: 12200 psi (84 MPa)
- Pulsed pressure fatigue test 1,000,000 of cycles with variable pressure from 0 to 4060 psi (28 MPa)

## Temperature

- From - 13°F to + 230°F

## Bypass valve

- Opening pressure 90 psi  $\pm$ 10%
- Other opening pressures on request.

## Elements type $\Delta p$

- Microfibre filter elements series N: 300 psi
- Microfibre filter elements series H: 3000 psi
- Stainless steel mesh elements series N: 300 psi
- Oil flow from exterior to interior.

## Seals

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

## Weights without filter elements (lbs)

### Length

- FMM050-1 5.7
- FMM050-2 8.0
- FMM050-3 8.6
- FMM050-4 9.9
- FMM050-5 13.5

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

### Length

- FMM050-1 23.2
- FMM050-2 29.3
- FMM050-3 35.4
- FMM050-4 42.1
- FMM050-5 52.5

## 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 Length

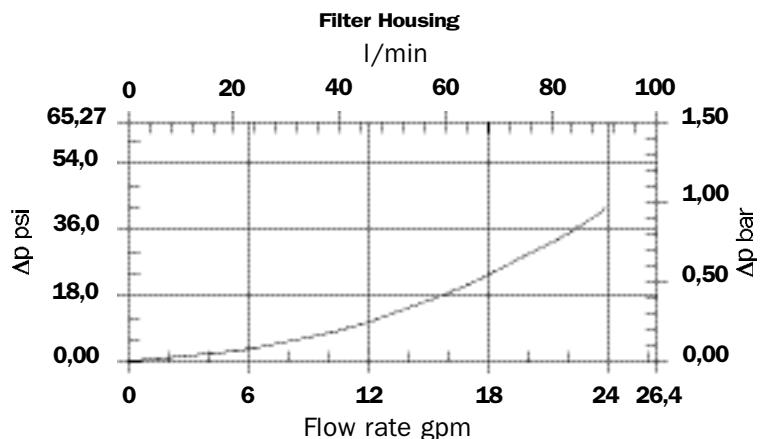
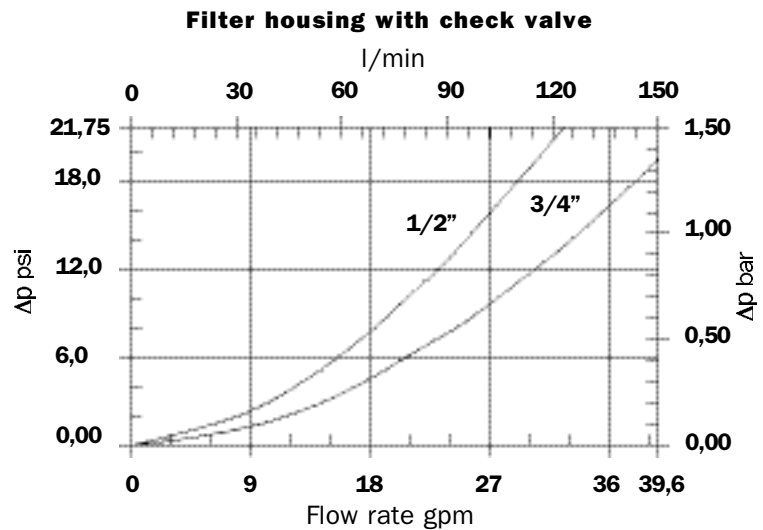
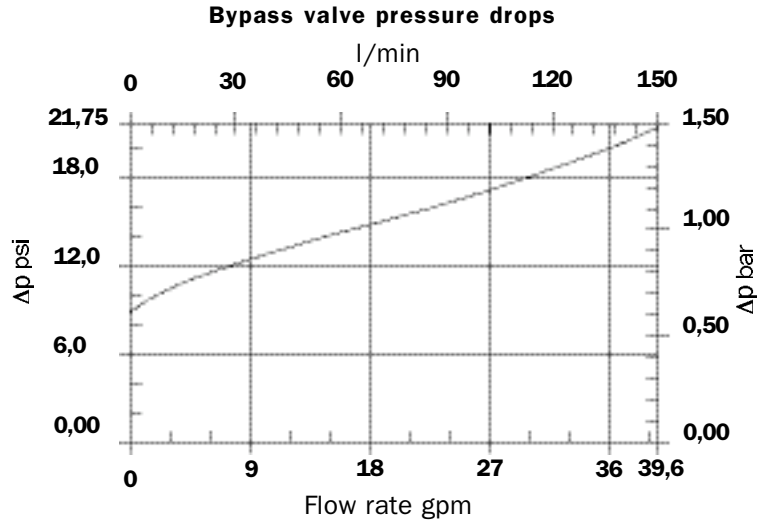
Type	1	2	3	4	5
HP050	70	108	155	200	325

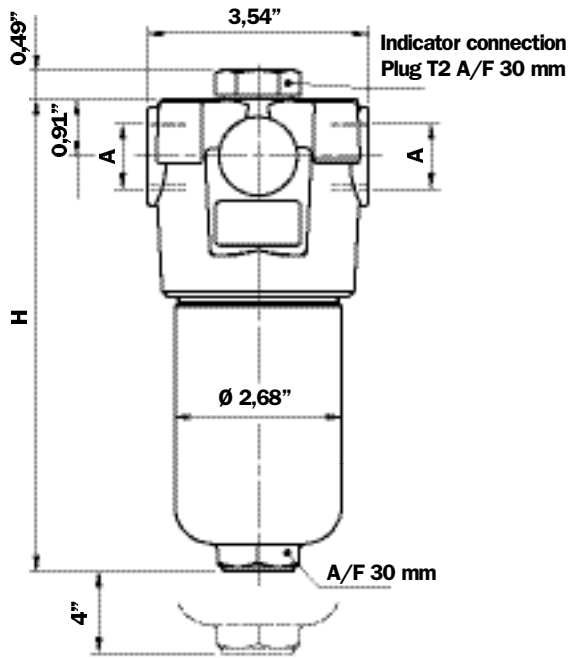
Values in in<sup>2</sup>

## Pressure drops $\Delta p$ Body

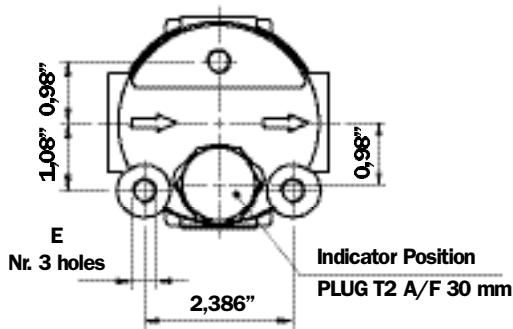
The curves are plotted using mineral oil with specific density 0,86.

$\Delta p$  varies proportional with density.

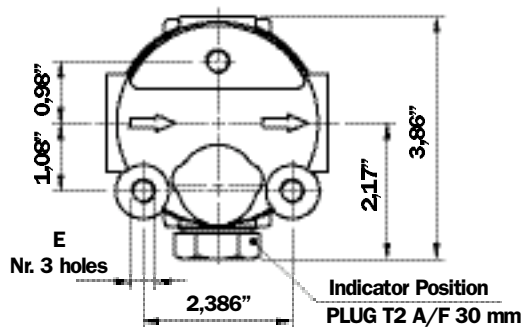




With standard indicator



Option P03 with indicator at 90°



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

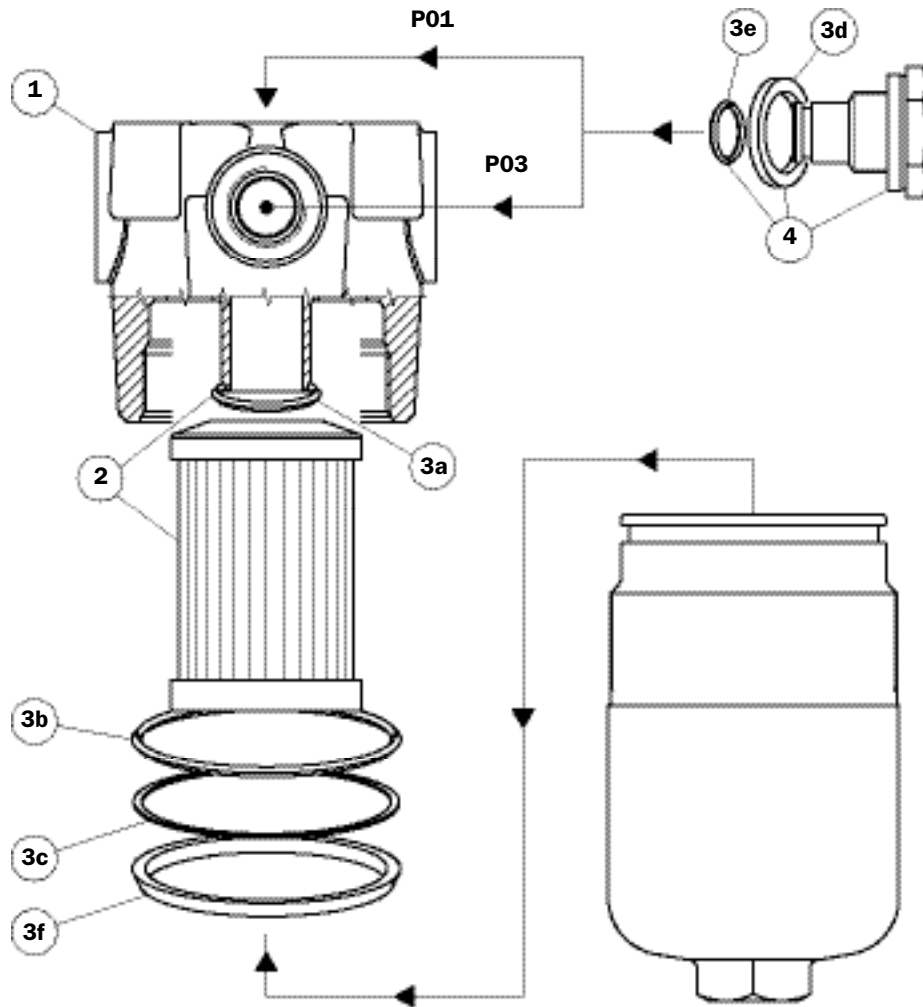
### Recommended maximum flow rate

- Pressuredrop of complete filter equal to  $\Delta p$  21,75 psi.
- Oil kinematic viscosity 150 SUS.
- Density 53,69 lbs/ft<sup>3</sup>.
- Connections of filter under test G 3/4".

Filter element type	Flow rate gpm Series N	Flow rate gpm Series H	Filter Length
A03	11,6	7,9	1
A06	11,6	10,6	
A10	21,1	15,3	
A16	21,7	15,9	
A25	29,1	19,8	
M25	37,0	-	2
A03	14,0	11,9	
A06	15,3	13,2	
A10	23,0	20,6	
A16	26,4	23,8	
A25	33,0	31,4	3
M25	37,0	-	
A03	18,0	15,6	
A06	18,8	16,4	
A10	26,4	24,3	
A16	29,1	26,4	4
A25	35,7	34,3	
M25	37,0	-	
A03	22,5	19,8	
A06	24,3	21,7	
A10	31,2	28,0	5
A16	31,7	29,6	
A25	35,7	35,7	
M25	38,3	-	
A03	29,1	24,8	
A06	29,6	25,9	5
A10	34,3	29,6	
A16	35,7	31,7	
A25	37,0	37,0	
M25	40,2	-	

Filter Length	H inch	A		E	
		Threaded Connections	Depth 15 mm	Threaded Connections	Depth 15 mm
1	6,22"	18x1,5	ISO 6149	M10	
		22x1,5	ISO 6149	M10	
2	7,68"	G 1/2"		M10	
		G 3/4"		M10	
3	9,33"	1/2" NPT		3/8" UNC	
		3/4" NPT		3/8" UNC	
4	11,22"	SAE 8 (3/4" - 16 UNF)		3/8" UNC	
		SAE 12 (1 1/16" - 12 UN)		3/8" UNC	
5	16,02"	SAE 12 (1 1/16" - 12 UN)		3/8" UNC	

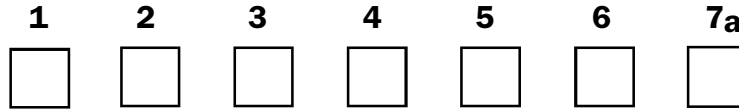
# Spare parts FMM050



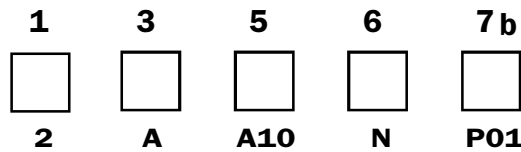
Pos.	Description	Qty.	FMM 050 series FILTER 050 1 - 2 - 3 - 4 - 5	
1	Complete filter	1	See order table	
2	Filter Element	1	See order table	
3	Seal kits	1	NBR 02050314	FPM 02050315
3a	O-Ring for filter element	1	OR 3093 ID 932" x 103"	
3b	O-Ring for housing	1	OR 3225 ID 2,237" x 103"	
3c	Anti-extrusion ring	1	Parbak 139 ID 2,206" x 086"	
3d	Bonded seal	1	G 1/2" - FPM	
3e	O-Ring	1	OR 2050 ID 489" x 070" - FPM	
3f	Protection seal	1	01026521	
4	Indicator plug	1	T2	
-	Indicator	1	See order table	

# Ordering information FMM050

## Filter assembly FMM 050



## Filter element HP 050



Example: HP050

### 1 - Filter lengths



### 5 - Filter elements

A03	Inorganic microfibre 3 $\mu$	} $\beta_x(c) \geq 1000$ see page 9
A06	Inorganic microfibre 6 $\mu$	
A10	Inorganic microfibre 10 $\mu$	
A16	Inorganic microfibre 16 $\mu$	
A25	Inorganic microfibre 25 $\mu$	
M25	Stainless steel mesh 25 $\mu$ (N style only)	

### 2 - Bypass valve

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

\*Reduced cross-section oilways

### 6 - Filter elements differential pressure

N	300 psi
S	3000 psi

### 3 - Seals

A	NBR
V	FPM

### 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

### 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)

#### b) Filter element

P01	MP Filtri standard
Pxx	Customer request

DIFFERENTIAL INDICATORS (see page 15)

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