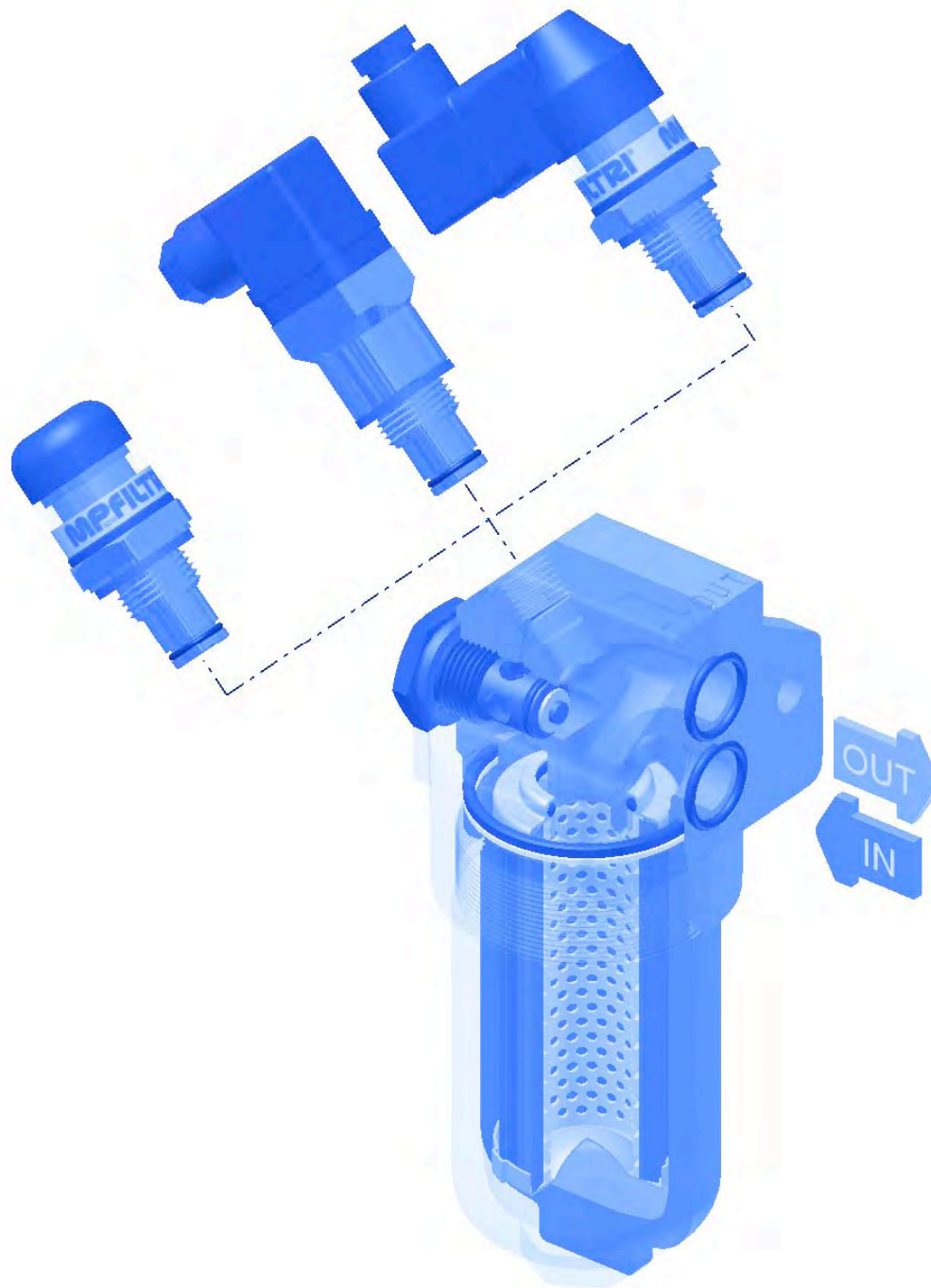


# FHB

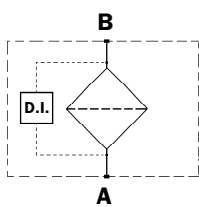


# SERIES FHB

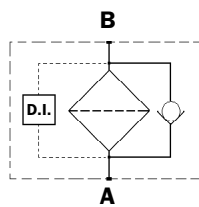
*Working pressure*  
**320 bar**



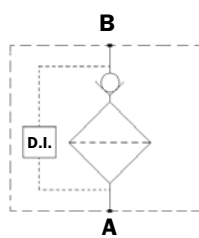
Style S



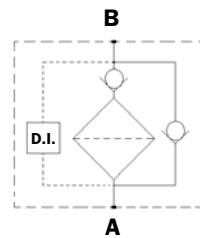
Style B



Style T



Style D



# Technical data

## Filter body (Materials)

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

## Pressure

- Maximum operating pressure: 320 bar (32 MPa)
- Test pressure: 420 bar (42 MPa)
- Burst pressure: 840 bar (84 MPa)
- Pulsed pressure fatigue test 1,000,000 of cycles with pressure from 0 to 320 bar (32 MPa)

## Temperature

- From -25°C to +110°C

## Bypass valve

- Opening pressure 6 bar ±10%
- Other opening pressures on request.

## Elements type $\Delta p$

- Elements in microfibre series N : 20 bar
- Elements in microfibre series H : 210 bar
- Elements in stainless steel mesh 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	1	2	3	4	5
• FHB 050	2,6	2,9	4,5	5,1	6,5
• FHB 065	2,8	3,2	4,9	-	-
• FHB 135	6,7	8,1	10,7	-	-
• FHB 320	13,0	15,0	21,0	24,0	-

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

Length	1	2	3	4	5
• FHB 050	0,33	0,43	0,52	0,63	0,93
• FHB 065	0,35	0,47	0,60	-	-
• FHB 135	0,55	0,85	1,20	-	-
• FHB 320	1,25	1,95	2,80	3,50	-

## Connections

Side manifold 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

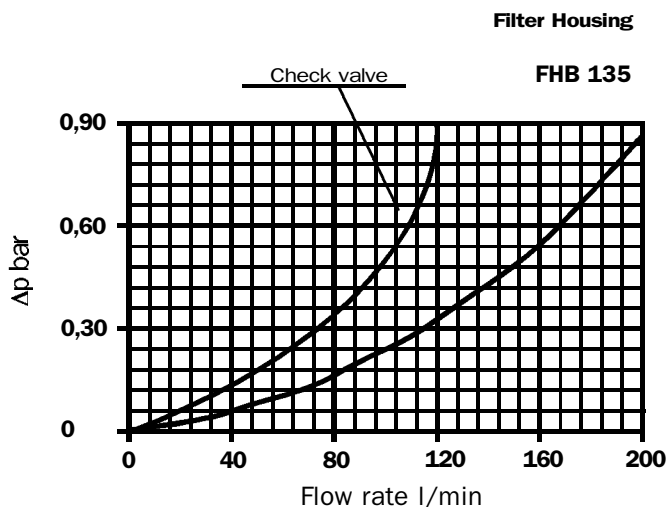
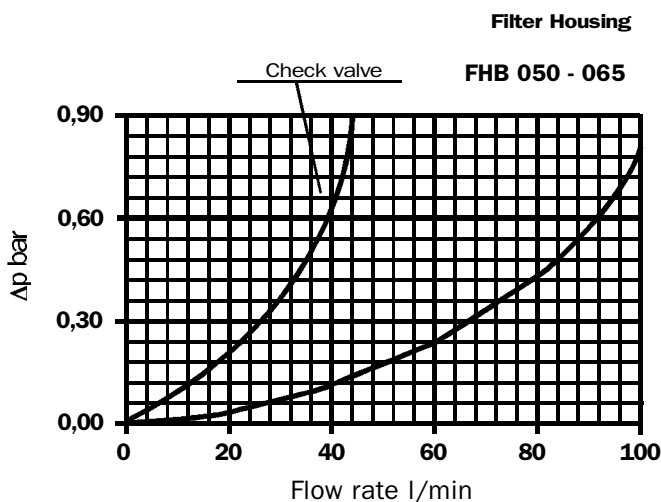
Type	Length				
	1	2	3	4	5
HP050	450	700	1000	1300	2100
HP065	374	530	1064	-	-
HP135	950	2020	2700	-	-
HP320	1650	3645	5970	8280	-

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

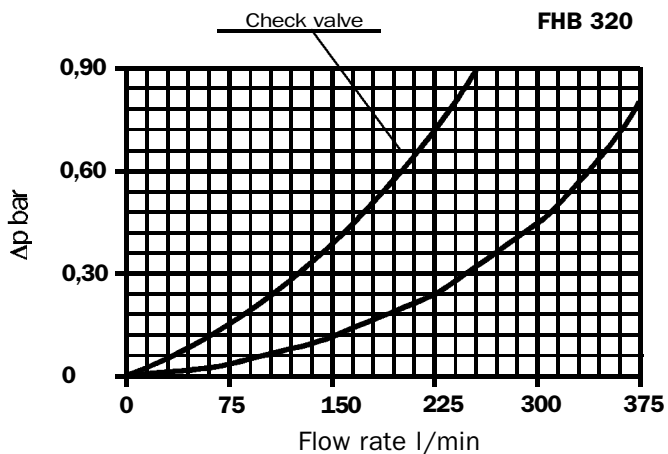
## Pressure drops $\Delta p$ Housing

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.

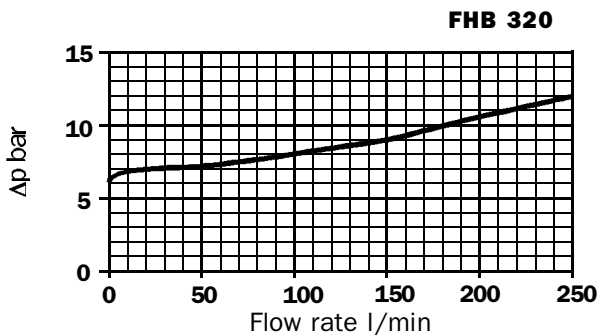
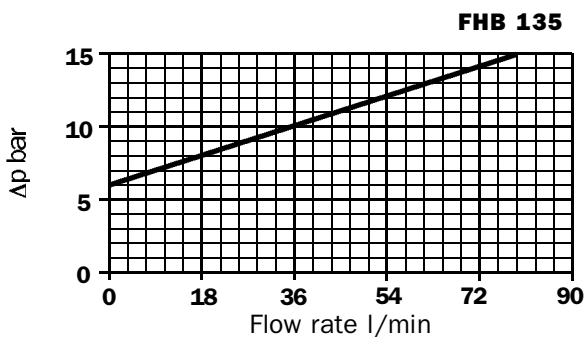
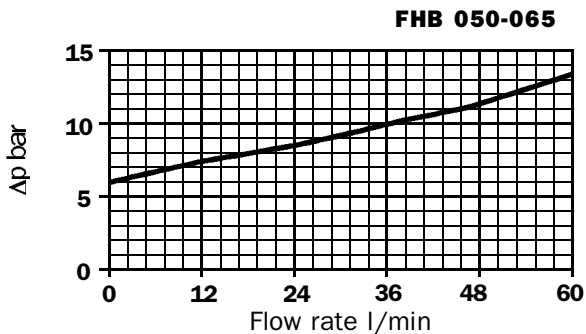


**Filter Housing**



**Valves**

**Bypass valve pressure drop**



# Dimensions

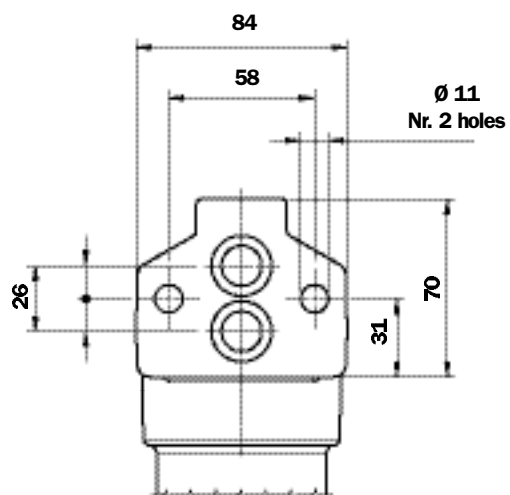
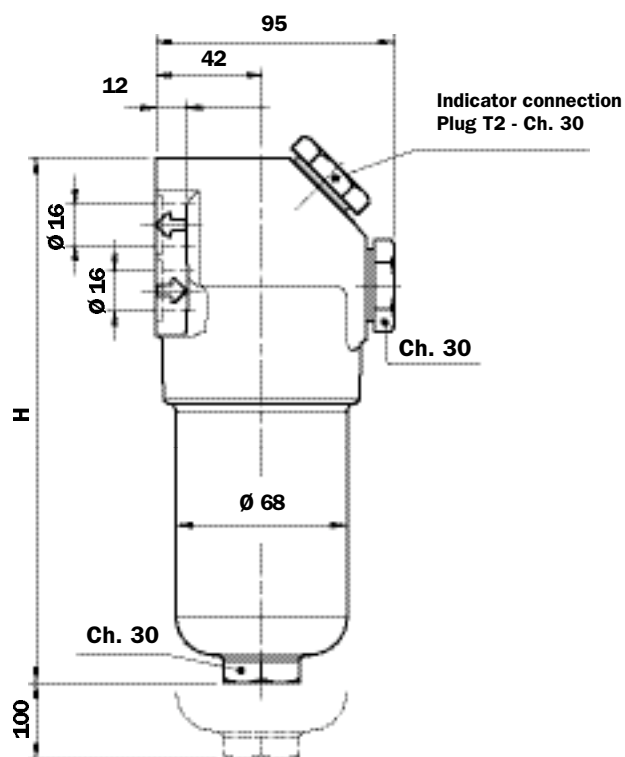
## FHB 050

## FHB 065

# FHB 050

### 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>.

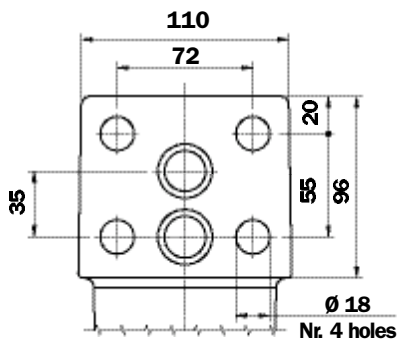
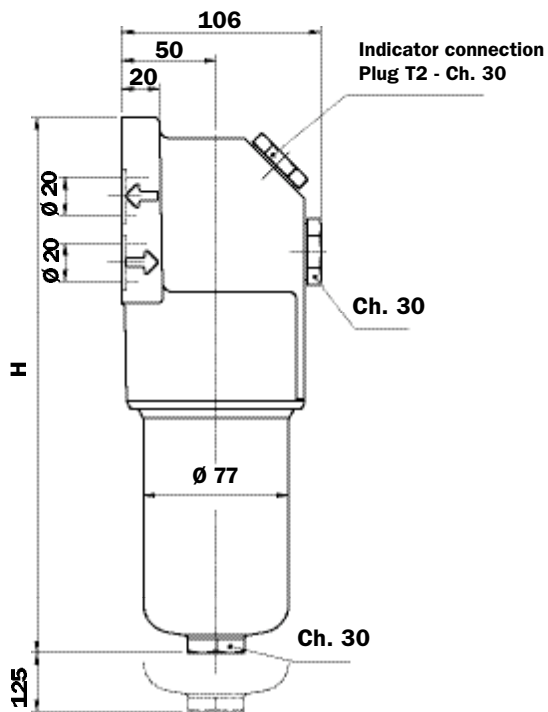


Filter element type	Flow rate l/min Series N	Flow rate l/min Series H	Filter Length
A03	43	30	1
A06	43	40	
A10	78	58	
A16	80	60	
A25	100	74	
M25	130	-	2
A03	52	45	
A06	58	50	
A10	81	75	
A16	93	85	
A25	112	108	3
M25	130	-	
A03	65	58	
A06	70	62	
A10	93	87	
A16	99	96	4
A25	118	115	
M25	135	-	
A03	82	73	
A06	87	80	
A10	105	100	5
A16	108	102	
A25	122	118	
M25	135	-	
A03	102	85	
A06	104	92	5
A10	120	105	
A16	122	112	
A25	128	115	
M25	140	-	

Filter Length	H mm
1	176
2	213
3	255
4	303
5	425



# FHB 135



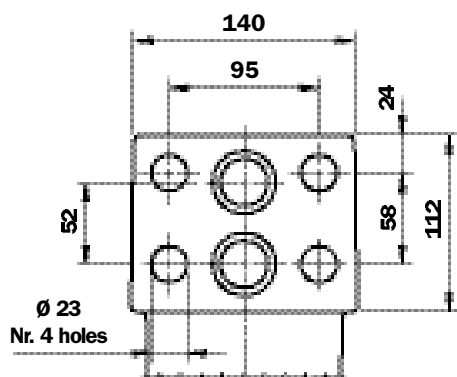
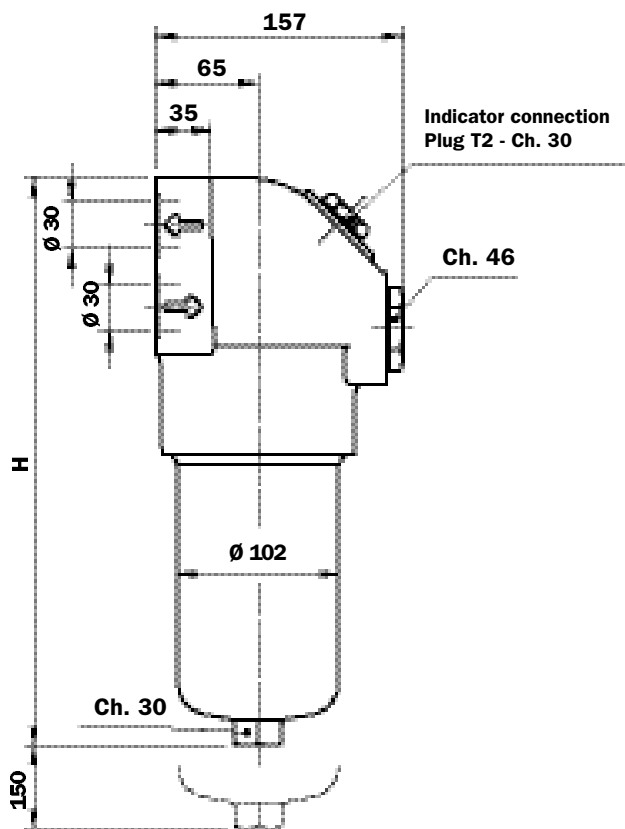
## Recommended maximum flow rate

- 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>.

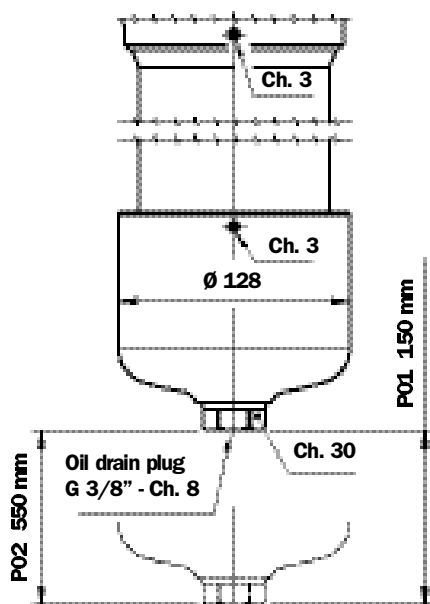
Filter element type	Flow rate l/min Series N	Flow rate l/min Series H	Filter Length
A03	67	48	1
A06	72	55	
A10	120	97	
A16	129	100	
A25	177	159	
M25	-	-	
A03	110	90	2
A06	116	110	
A10	152	137	
A16	154	140	
A25	224	182	
M25	-	-	
A03	152	126	3
A06	155	141	
A10	200	175	
A16	205	187	
A25	226	207	
M25	-	-	

Filter Length	H mm
1	266
2	379
3	454

# FHB 320



Only for FHB 320 length 4



## 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>.

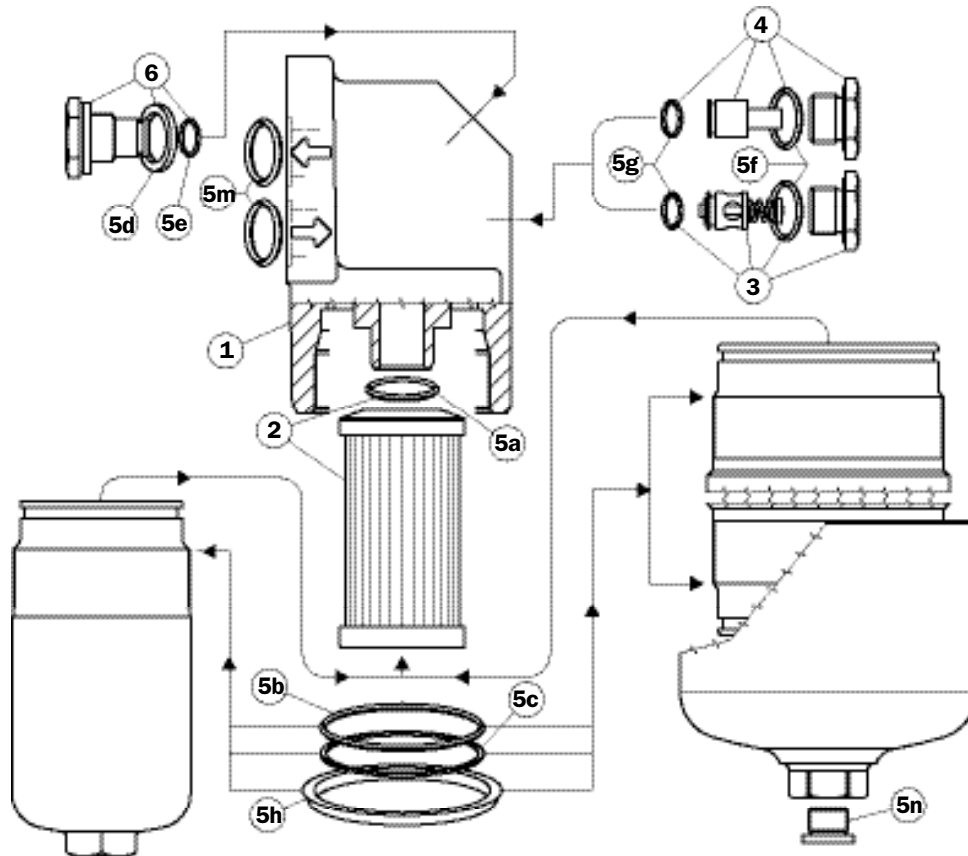
Filter element type	Flow rate l/min Series N	Flow rate l/min Series H	Filter Length
A03	130	110	1
A06	143	117	
A10	238	192	
A16	285	200	
A25	340	300	
M25	440	-	
A03	259	200	2
A06	282	230	
A10	390	318	
A16	395	325	
A25	450	385	
M25	460	-	
A03	330	270	3
A06	368	312	
A10	440	380	
A16	450	382	
A25	460	395	
M25	480	-	
A03	367	310	4
A06	390	332	
A10	450	390	
A16	463	390	
A25	480	430	
M25	490	-	

Filter Length	H mm
1	299
2	422
3	554
4	709

Style P01 standard maintenance from head.  
Style P02 maintenance option from housing base.



# Spare parts FHB



Pos.	Description	Qty.	FHB Series FILTER								
			050 1 - 2 - 3 - 4 - 5		065 1 - 2 - 3		135 1 - 2 - 3		320 1 - 2 - 3 - 4		
1	Complete filter	1	See order table								
2	Filter element	1	See order table								
3	Bypass assembly	1	02001312 (NBR) 02001385 (FPM)				02001381 (NBR) 02001382 (FPM)				
4	Non bypass assembly	1	02001314 (NBR) 02001386 (FPM)				02001383 (NBR) 02001384 (FPM)				
5	Seal kits	1	NBR 02050412	FPM 02050413	NBR 02050266	FPM 02050277	NBR 02050270	FPM 02050281	NBR 02050273	FPM 02050284	
5a	Filter element O-Ring	1	OR 3093 Ø 23,47 x 2,62		OR 4100 Ø 24,99 x 3,53		OR 3106 Ø 26,65 x 2,62		OR 144 Ø 39,69 x 3,53		
5b	O-Ring for housing	1	OR 3225 Ø 56,82 x 2,62		OR 159 Ø 55,56 x 3,53		OR 3256 Ø 64,77 x 2,62		2 pz.	OR 3350 Ø 88,57 x 2,62	
5c	Anti-extrusion ring	1	Parbak 139 Ø 56,03 x 2,18		Parbak 227 Ø 54,53 x 3		Parbak 144 Ø 63,96 x 2,18		2 pz.	Parbak 153 Ø 89,36 x 2,18	
5d	Gasket	1	01030058 (HNBR)	01030046 (FPM)	01030058 (HNBR)	01030046 (FPM)	01030058 (HNBR)	01030046 (FPM)	01030058 (HNBR)	01030046 (FPM)	
5e	O-Ring	1	OR 2050 Ø 12,42 x 1,78								
5f	Bp or Non Bp O-Ring	1	Bonded seal - G 1/2" - FPM							OR 3143 (NBR 90 Sh A) Ø 36,14 x 2,62	
5g	Bp or Non Bp O-Ring	1	OR 2050 - Ø 12,42 x 1,78 - FPM							OR 3106 Ø 26,64 x 2,62	
5h	Protective seal	1	01026521				01026509		01026510		
5m	Head seal	2	OR 3075 Ø 18,72 x 2,62				OR 3093 Ø 23,47 x 2,62		OR 4131 Ø 32,92 x 3,53		
5n	Oil drain plug	1								G 3/8" with bonded seal	
-	Indicators	1	Vedi tabella ordinazione								
6	Indicator plug	1	T2H				T2V				

## Filter assembly

### FHB

Example: FHB

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>F1</b>	<b>5</b>	<b>6</b>	<b>7 a</b>
□	□	□	□	□	□	□	□
065	2	B	A	F1	A10	N	P01

## Filter element

### HP

Example: HP

<b>1</b>	<b>2</b>	<b>5</b>	<b>4</b>	<b>6</b>	<b>7 b</b>
□	□	□	□	□	□
065	2	A10	A	N	P01

### 1 - Size

050
065
135
320

### 2 - Filter length

1
2
3
4
5

(FHB 050-320 only)

(FHB 050 only)

### 3 - Valves

S
B
D
T
E

Without bypass side B - Standard

With bypass side B - Standard

Without bypass + check valve\*

Without bypass + check valve\*

Without bypass side C - Optional

\*Reduced cross-section oilways

### 4 - Seals

A
V

NBR

FPM

### 5 - Filter elements

A03
A06
A10
A16
A25
M25

Inorganic microfibre 3 µ

Inorganic microfibre 6 µ

Inorganic microfibre 10 µ

Inorganic microfibre 16 µ

Inorganic microfibre 25 µ

Stainless steel mesh 25 µ (series N)

βx (c) ≥ 1000  
see page 10

### 6 - Filter elements collapse pressure

N
H
S

20 bar

210 bar (for HP 065, 135, 320)

210 bar (for HP 050)

### 7 - Options

#### a) Filter

P01
P02
Pxx

MP Filtri standard

Maintenance from base of housing  
(FHB 320 4 only)

Customer request

#### b) Filter element

P01
Pxx

MP Filtri standard

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

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