

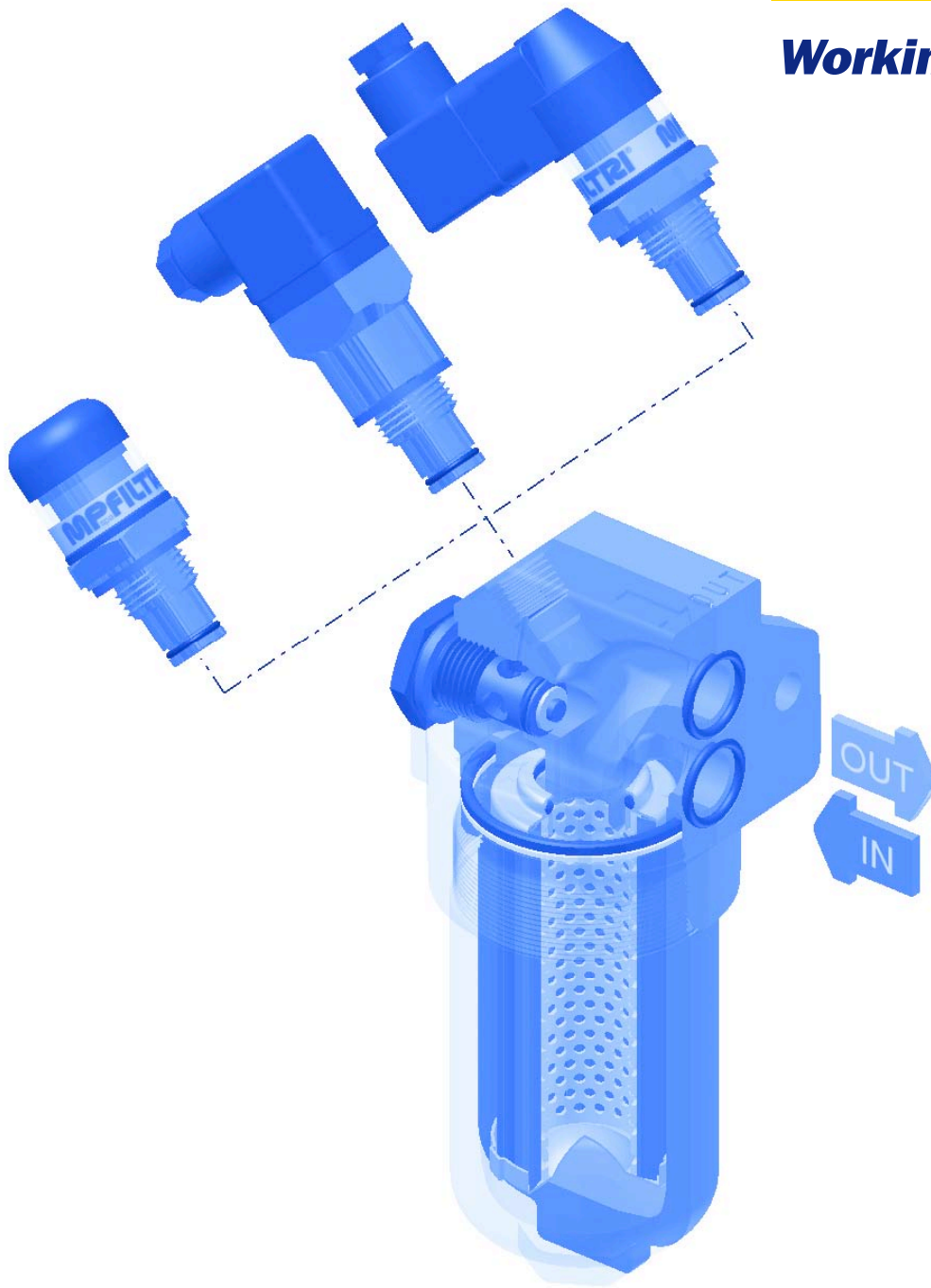
FHB



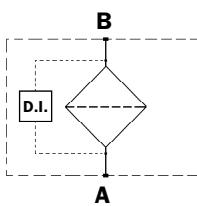
SERIES FHB

Working pressure

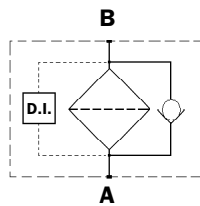
4600 psi



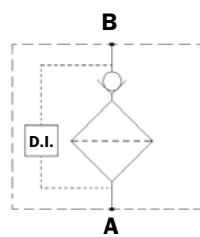
Style S



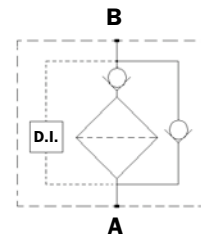
Style B



Style T



Style D



Technical data

Filter body (Materials)

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

Pressure

- Maximum operating pressure: 4600 psi (32 MPa)
- Test pressure: 6000 psi (42 MPa)
- Burst pressure: 12000 psi (84 MPa)
- Pulsed pressure fatigue test 1,000,000 of cycles with pressure from 0 to 4600 psi (32 MPa)

Temperature

- From -13°F to + 230°F

Bypass valve

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

Elements type Δp

- Elements in microfibre series N: 300 psi
- Elements in microfibre series H: 3000 psi
- Elements in stainless steel mesh 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	1	2	3	4	5
• FHB 050	5.7	6.4	9.9	11.2	14.3
• FHB 065	6.2	7.1	10.8	-	-
• FHB 135	15.4	17.9	23.6	-	-
• FHB 320	28.7	33.1	46.3	52.9	-

Filter internal volumes (in³)

Length	1	2	3	4	5
• FHB 050	20.1	26.2	31.7	38.4	56.8
• FHB 065	21.4	28.7	36.6	-	-
• FHB 135	33.6	51.9	73.2	-	-
• FHB 320	76.3	11.9	170.9	213.6	-

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

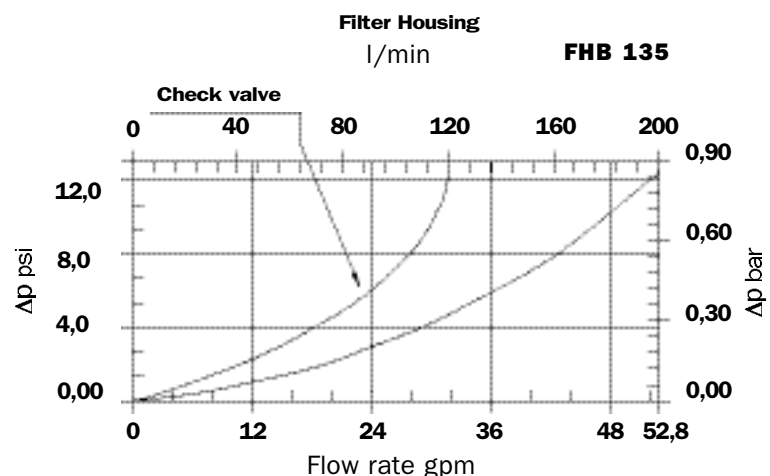
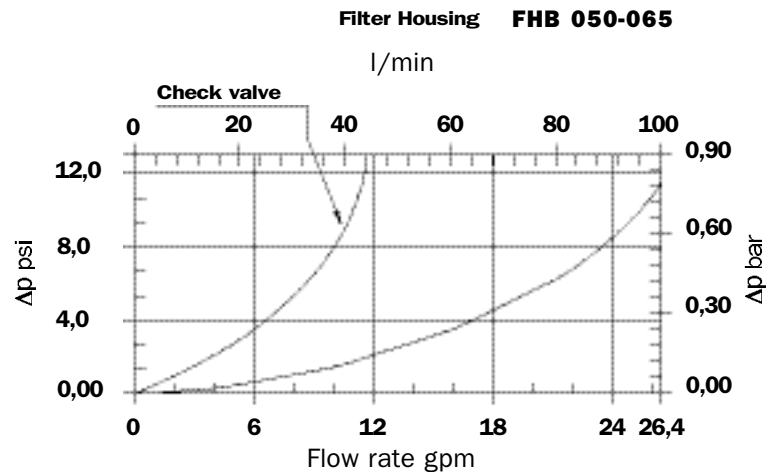
Type	Length				
	1	2	3	4	5
HP050	69,8	108,5	155	201,5	325,5
HP065	58	82,2	164,9	-	-
HP135	147,3	313,1	418,5	-	-
HP320	255,8	565	925,4	1283,4	-

Values in in²

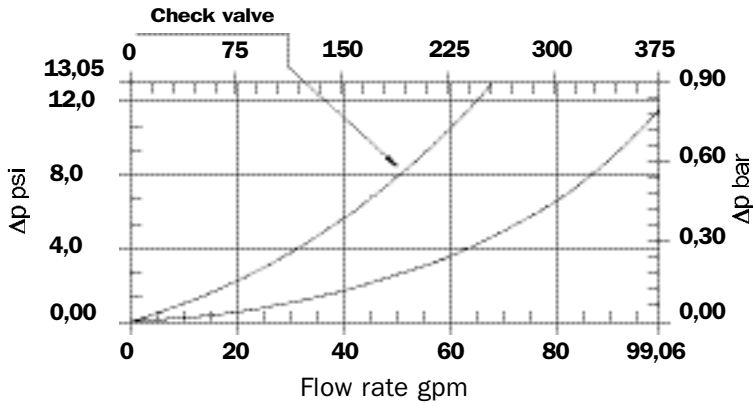
Pressure drops Δp Body

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

Δp varies proportional with density.



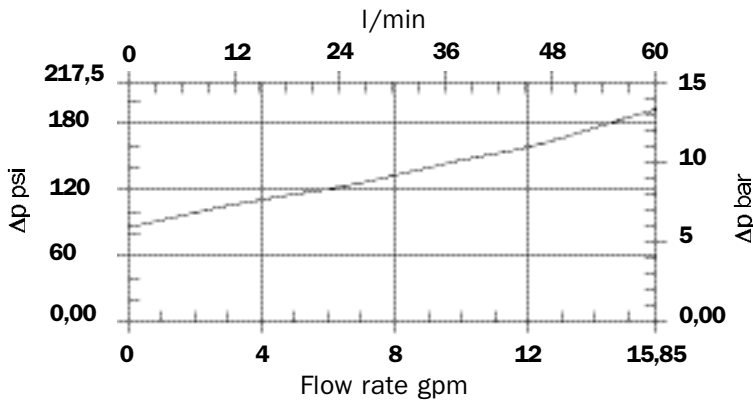
Filter Housing
l/min **FHB 320**



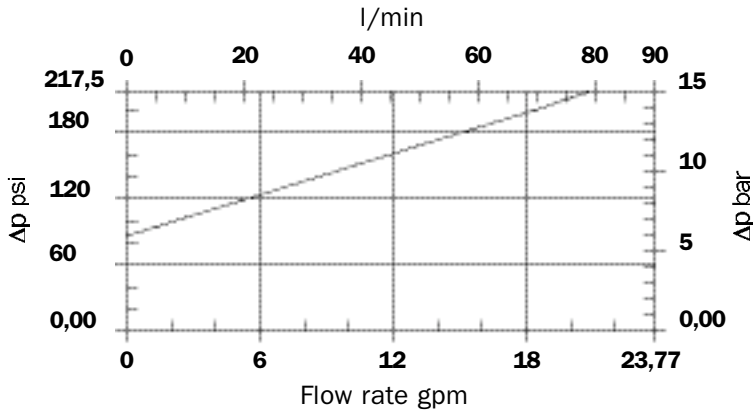
Valves

Bypass valve pressure drop

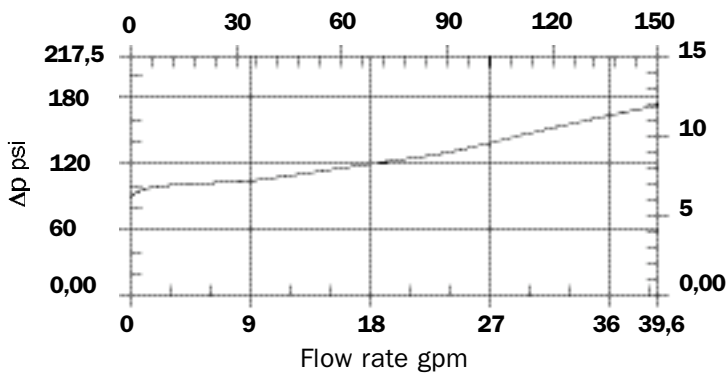
FHB 050-065



FHB 135



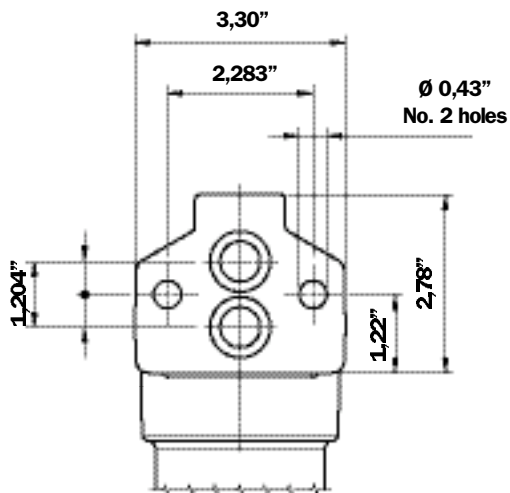
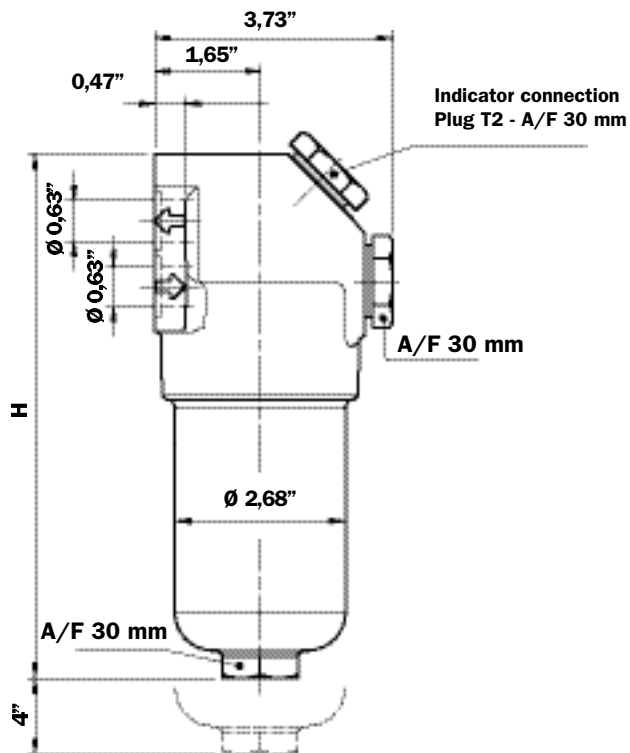
FHB 320



Dimensioni

FHB 050

FHB 065



FHB 050

Recommended maximum flow rate

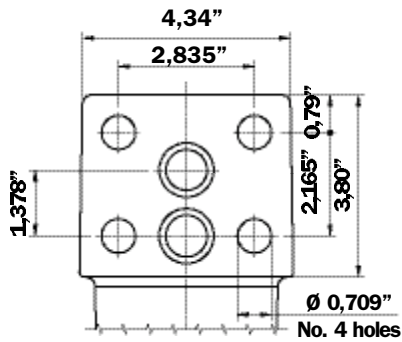
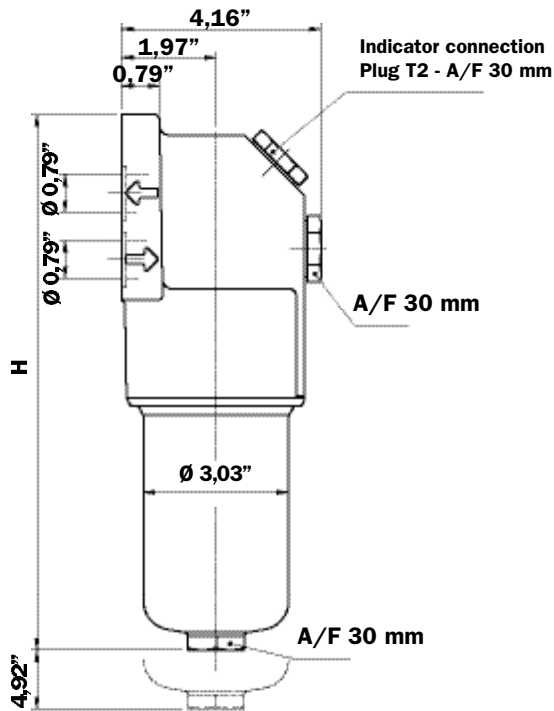
- Pressure drop of complete filter equal to Δp 21,75 psi.
- Oil kinematic viscosity 150 SUS.
- Density 53,69 lbs/ft³.

Filter element type	Flow rate gpm Series N	Flow rate gpm Series H	Filter Length
A03	11,4	7,9	1
A06	11,4	10,6	
A10	20,6	15,3	
A16	21,1	15,9	
A25	26,4	19,5	
M25	34,3	-	2
A03	13,7	11,9	
A06	15,3	13,2	
A10	21,4	19,8	
A16	24,6	22,5	
A25	29,6	28,5	3
M25	34,3	-	
A03	17,2	15,3	
A06	18,5	16,4	
A10	24,6	23,0	
A16	26,2	25,4	4
A25	31,2	30,4	
M25	35,7	-	
A03	21,7	19,3	
A06	23,0	21,1	
A10	27,7	26,4	5
A16	28,5	26,9	
A25	32,2	31,2	
M25	35,7	-	
A03	26,9	22,5	
A06	27,5	24,3	5
A10	31,7	27,7	
A16	32,2	29,6	
A25	33,8	30,4	
M25	37,0	-	

Filter Length **H inch**

1	6,93"
2	8,39"
3	10,04"
4	11,93"
5	16,73"

FHB 135



Recommended maximum flow rate

- Pressure drop of complete filter equal to $\Delta p 21,75\text{ psi}$.
- Oil kinematic viscosity 150 SUS .
- Density $53,69\text{ lbs/ft}^3$.

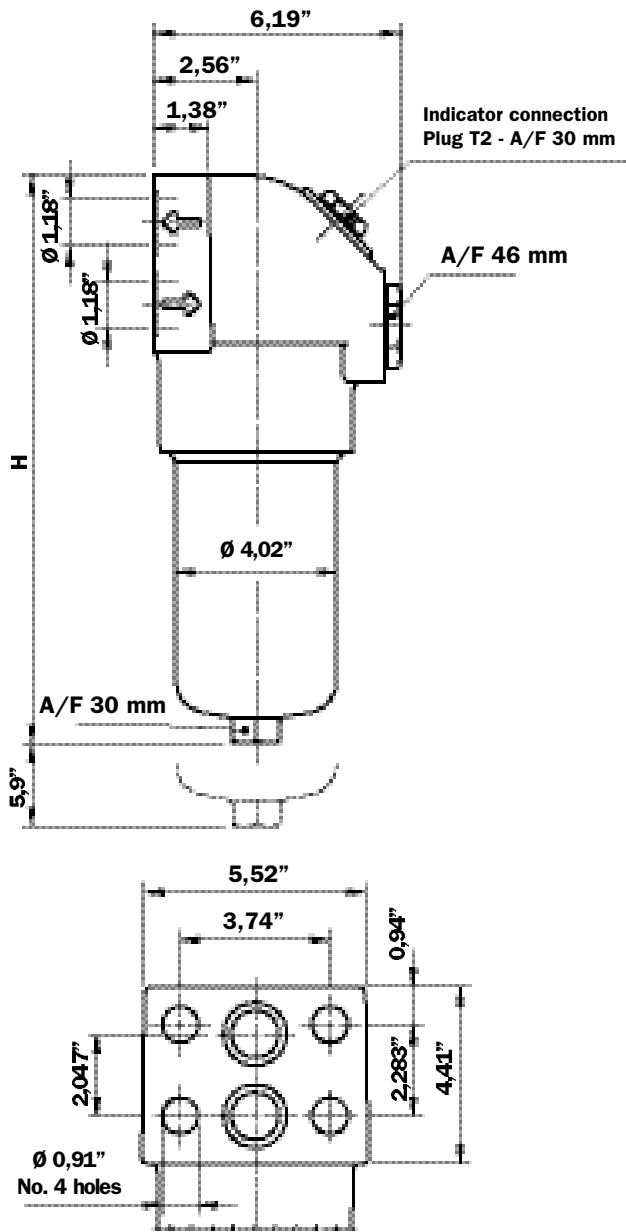
Filter element type	Flow rate gpm Series N	Flow rate gpm Series H	Filter Length
A03	17,7	12,7	1
A06	19,0	14,5	
A10	31,7	25,6	
A16	34,1	26,4	
A25	46,8	42,0	
M25	-	-	
A03	29,1	90	2
A06	30,6	110	
A10	40,2	137	
A16	40,7	37,0	
A25	59,2	48,1	
M25	-	-	
A03	40,2	33,3	3
A06	40,9	37,2	
A10	52,8	46,2	
A16	54,2	49,4	
A25	59,7	54,7	
M25	-	-	

Filter Length	H inch
1	10,47"
2	14,92"
3	17,87"

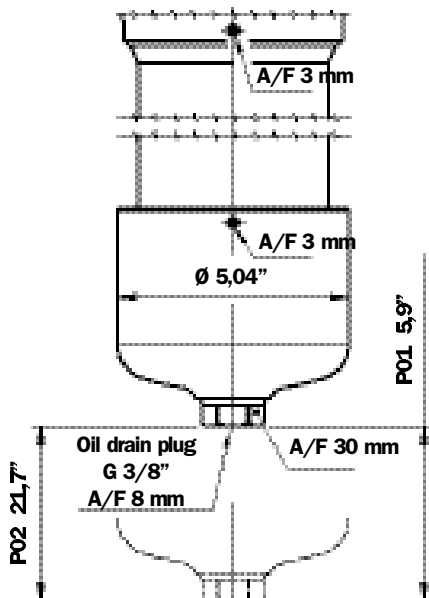
FHB 320

Recommended maximum flow rate

- Pressure drop of complete filter equal to Δp 21,75 psi.
- Oil kinematic viscosity 150 SUS.
- Density 53,69 lbs/ft³.



Only for FHB 320 length 4



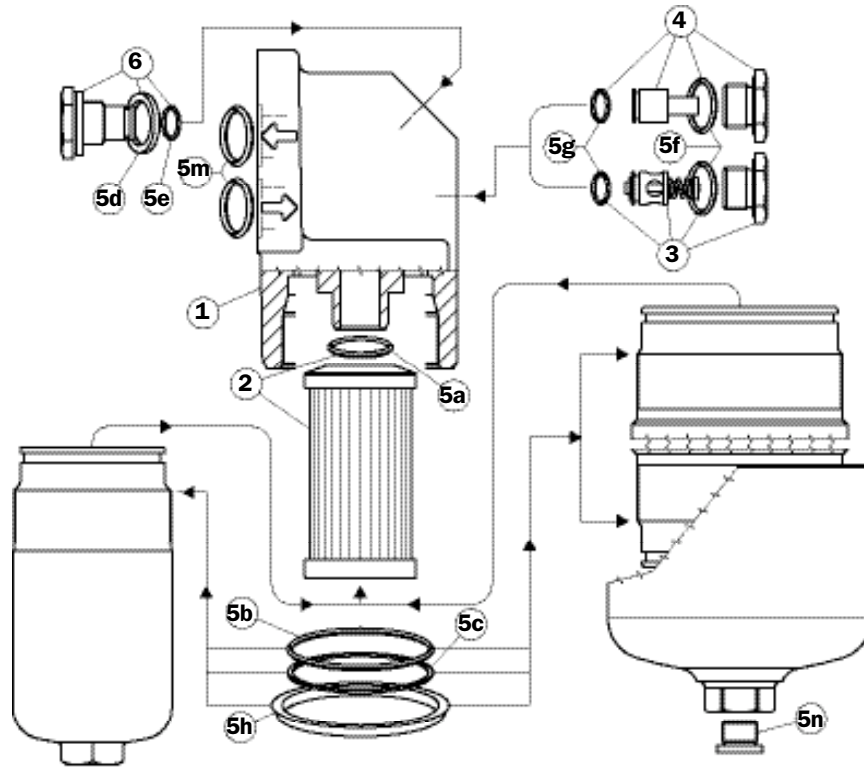
Filter element type	Flow rate gpm Series N	Flow rate gpm Series H	Filter Length
A03	34,3	29,1	1
A06	37,8	30,9	
A10	62,9	50,7	
A16	75,3	52,8	
A25	89,8	79,3	
M25	116,2	-	
A03	68,4	52,8	2
A06	74,5	60,8	
A10	103,0	84,0	
A16	104,3	85,9	
A25	118,9	101,7	
M25	121,5	-	
A03	87,2	71,3	3
A06	97,2	82,4	
A10	116,2	100,4	
A16	118,9	100,9	
A25	121,5	104,3	
M25	126,8	-	
A03	97,0	81,9	4
A06	103,0	87,7	
A10	118,9	103,0	
A16	122,3	103,0	
A25	126,8	103,6	
M25	129,4	-	

Filter Length H inch

1	11,77"
2	16,61"
3	21,81"
4	27,91"

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 ID 924" x 103"		OR 4100 ID 984" x 139"		OR 3106 ID 1,049" x 103"		OR 144 ID 1,563" x 139"		
5b	O-Ring for housing	1	OR 3225 ID 2,237" x 103"		OR 159 ID 2,187" x 139"		OR 3256 ID 2,550" x 103"		2 pz.	OR 3350 ID 3,487" x 103"	
5c	Anti-extrusion ring	1	Parbak 139 ID 2,206" x 086"		Parbak 227 ID 2,147" x 118"		Parbak 144 ID 2,518" x 086"		2 pz.	Parbak 153 ID 3,518" x 086"	
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 ID 489" x 070"								
5f	Bp or Non Bp O-Ring	1	Bonded seal - G 1/2" - FPM							OR 3143 (NBR 90 Sh A) ID 1,424" x 103"	
5g	Bp or Non Bp O-Ring	1	OR 2050 - ID 489" x 070"							OR 3106 ID 1,049" x 103"	
5h	Protective seal	1	01026521				01026509		01026510		
5m	Head seal	2	OR 3075 ID 742" x 103"				OR 3093 ID 924" x 103"		OR 4131 ID 1,304" x 139"		
5n	Oil drain plug	1								G 3/8" with bonded seal	
-	Indicators	1	See order table								
6	Indicator plug	1	T2H				T2V				

Ordering information FHB

Filter assembly FHB

Example: FHB

1	2	3	4	F1	5	6	7 a
065	2	B	A	F1	A10	N	P01

Filter element HP

Example: HP

1	2	5	4	6	7 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	Without bypass
B	With bypass side B - Standard
D	With bypass + check valve*
T	Without bypass + check valve*

*Reduced cross-section oilways

4 - Seals

A	NBR
V	FPM

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 (series N)

βx (c) ≥ 1000
see page 10

6 - Filter elements collapse pressure

N	300 psi
H	3000 psi (for HP 065, 135, 320)
S	3000 psi (for HP 050)

7 - Options

a) Filter

P01	MP Filtri standard
P02	Maintenance from base of housing (FHB 320 4 only)
Pxx	Customer request

b) Filter element

P01	MP Filtri standard
Pxx	Customer request

DIFFERENTIAL INDICATORS (see page 15)

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