

FHM

Maximum pressure 320 bar
Flow rates to 450 l/min



Technical data

Filter housing (Materials)

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

Pressure

- Working pressure: 320 bar (32 MPa)
- Test pressure: 480 bar (48 MPa)
- Burst pressure: 960 bar (96 MPa)
- Pulse pressure fatigue test: 1.000.000 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.

Δp Elements type

- Microfibre filter elements series N: 20 bar
- Microfibre filter elements series H: 210 bar (excluded FHM 050 - 500)
- Microfibre filter elements series S: 210 bar (only for FHM 050 - 500)
- 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

FHM FILTERS ARE PROVIDED FOR VERTICAL MOUNTING

Weights (kg)

Length	1	2	3	4	5
• FHM 006	2,17	-	-	-	-
• FHM 007	-	4,74	5,95	-	-
• FHM 010	-	4,74	5,95	-	-
• FHM 050	5,31	5,68	6,09	6,56	7,74
• FHM 065	5,47	5,83	7,04	-	-
• FHM 135	8,78	10,38	11,43	-	-
• FHM 320	19,8	21,93	24,22	26,70	-
• FHM 500	35	39,17	42,69	54,70	60,50

Volumes (dm³)

Length	1	2	3	4	5
• FHM 006	0,12	-	-	-	-
• FHM 007	-	0,30	0,50	-	-
• FHM 010	-	0,30	0,50	-	-
• FHM 050	0,29	0,38	0,48	0,60	0,89
• FHM 065	0,27	0,34	0,56	-	-
• FHM 135	0,49	0,82	1,03	-	-
• FHM 320	1,04	1,76	2,53	3,36	-
• FHM 500	1,63	2,35	2,96	5,11	6,44

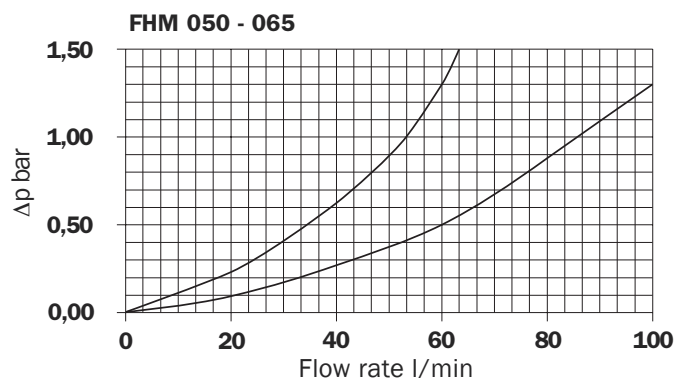
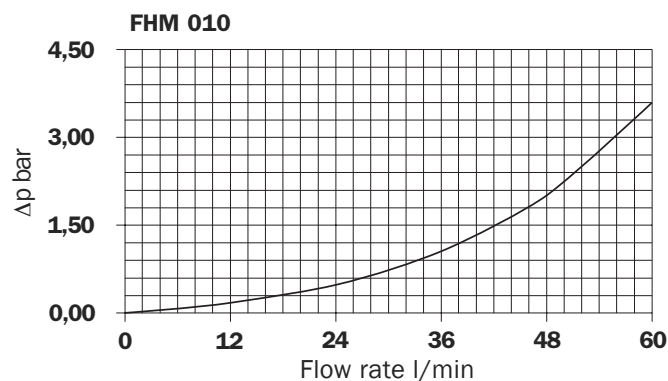
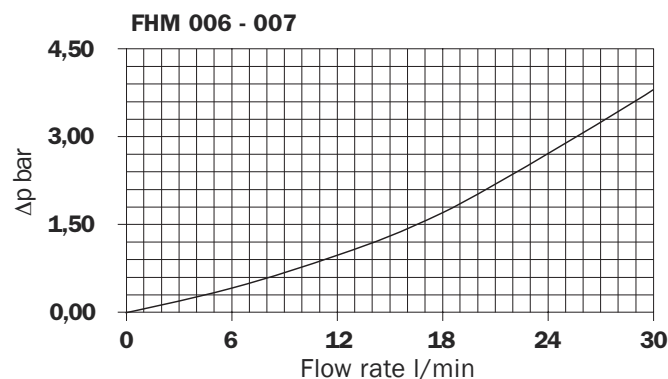
Connections

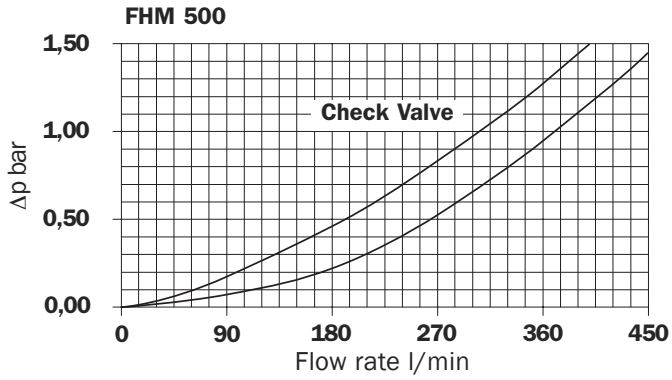
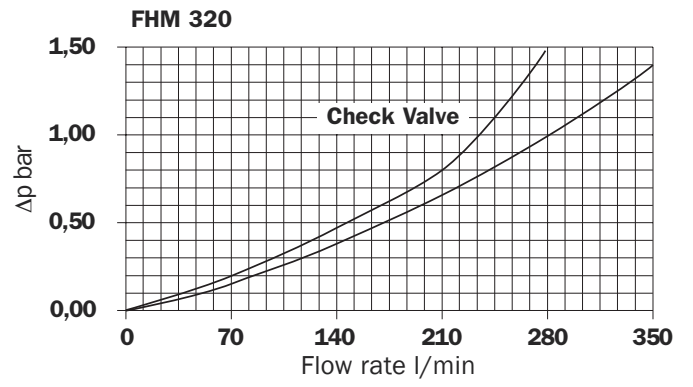
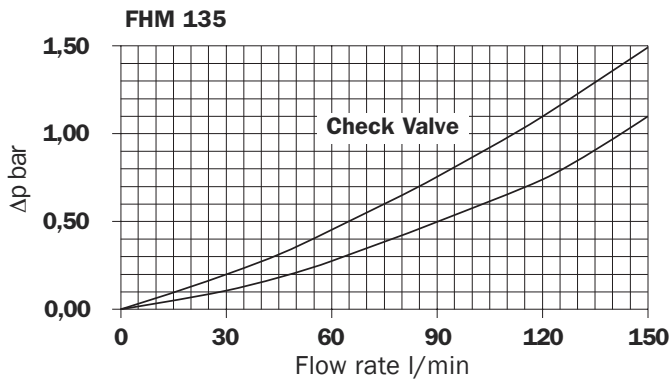
- FHM: Manifold mounting

Filter housings Δp pressure drop

The curves are plotted utilising mineral oil with density of 0,86 kg/dm³ to ISO 3968.

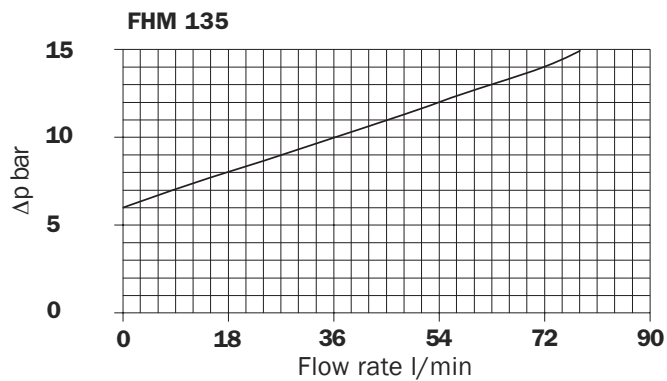
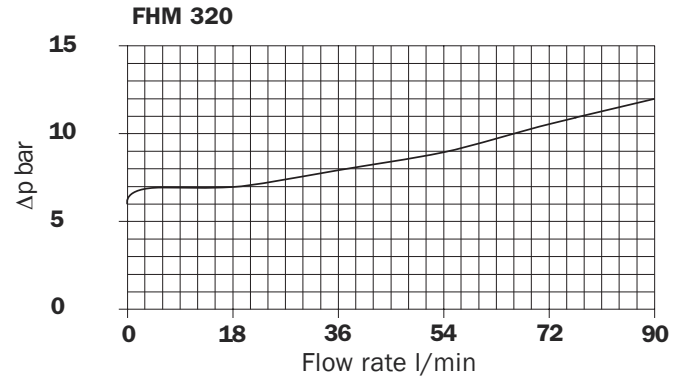
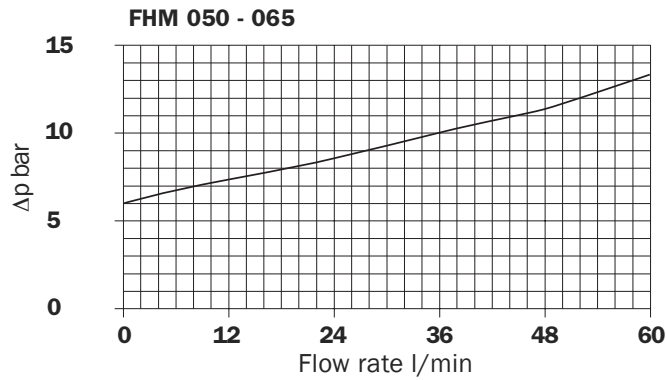
Δp varies proportionally with density.





Valves

Bypass valve pressure drop



Recommended maximum flow rate

- Pressure drop of filter assembly equal to Δp 1,5 bar.
- Oil kinematic viscosity 30 mm²/s (cSt).
- Density 0,86 kg/dm³.

Length	Filtration				
	A03	A06	A10	A16	A25

FHM 006	1	8	9	12	13	14
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Serie H - Flow rate l/min

Length	Filtration				
	A03	A06	A10	A16	A25

FHM 007	2	12	13	14	15	16
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	3	13	14	15	16	17
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Serie H - Flow rate l/min

Length	Filtration				
	A03	A06	A10	A16	A25

FHM 010	2	19	21	27	28	31
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	3	26	27	31	32	33
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Serie H - Flow rate l/min

Length	Filtration					
	A03	A06	A10	A16	A25	M25

FHM 050	1	38	39	65	67	80	100
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	2	46	50	68	75	88	102
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	3	56	58	75	80	93	103
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	4	67	70	84	85	95	104
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	5	81	82	93	95	100	105
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Serie N - Flow rate l/min

Length	Filtration				
	A03	A06	A10	A16	A25

FHM 050	1	28	36	50	52	62
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	2	41	44	63	70	85
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	3	51	53	71	77	90
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	4	62	65	80	81	92
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	5	73	74	83	88	97
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Serie H - Flow rate l/min

Length	Filtration					
	A03	A06	A10	A16	A25	M25

FHM 065	1	23	30	47	53	71	102
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	2	30	44	58	63	80	103
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	3	51	59	78	82	92	105
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Serie N - Flow rate l/min

Length	Filtration				
	A03	A06	A10	A16	A25

FHM 065	1	22	23	43	50	67
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	2	30	34	56	62	75
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	3	51	57	76	81	91
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Serie H - Flow rate l/min

Length	Filtration					
	A03	A06	A10	A16	A25	M25

FHM 135	1	60	65	98	104	130	149
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	2	90	96	117	119	154	165
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	3	118	119	143	145	156	167
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Serie N - Flow rate l/min

Length	Filtration				
	A03	A06	A10	A16	A25

FHM 135	1	45	51	83	85	122
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	2	78	91	109	110	134
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	3	102	111	130	136	146
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Serie H - Flow rate l/min

Length	Filtration					
	A03	A06	A10	A16	A25	M25

FHM 320	1	111	121	187	217	252	310
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	2	200	215	280	292	320	328
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	3	245	267	311	320	325	332
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	4	266	280	314	325	336	340
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Serie N - Flow rate l/min

Length	Filtration				
	A03	A06	A10	A16	A25

FHM 320	1	97	102	156	162	228
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	2	162	181	236	240	282
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	3	206	233	275	280	305
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	4	232	246	280	284	310
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Serie H - Flow rate l/min

Length	Filtration					
	A03	A06	A10	A16	A25	M25

FHM 500	1	240	268	320	330	350	410
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	2	275	298	345	350	375	420
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	3	325	339	382	385	400	430
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	4	348	370	395	400	410	440
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	5	374	383	405	410	425	450
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Serie N - Flow rate l/min

Length	Filtration				
	A03	A06	A10	A16	A25

FHM 500	1	140	150	238	240	300
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	2	210	235	298	305	325
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	3	258	265	325	330	360
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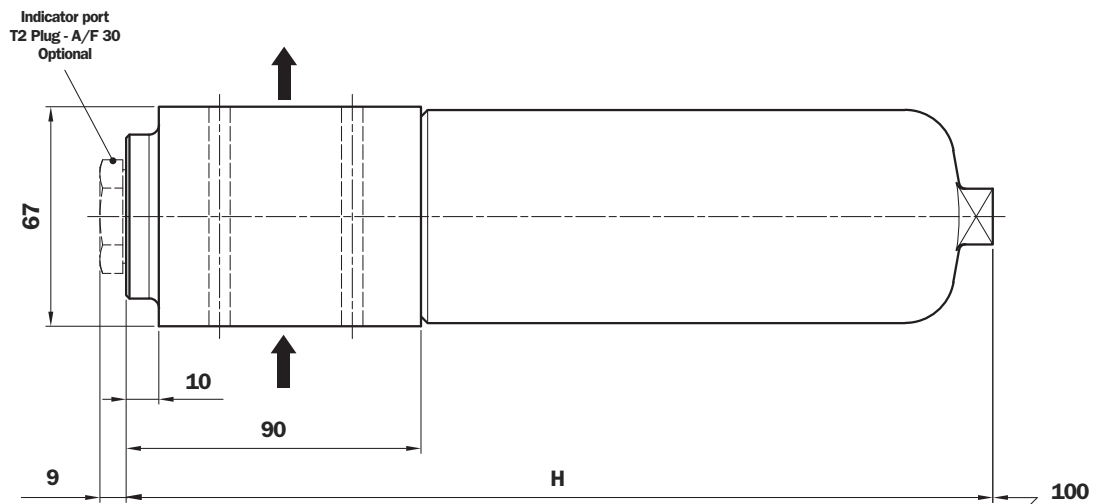
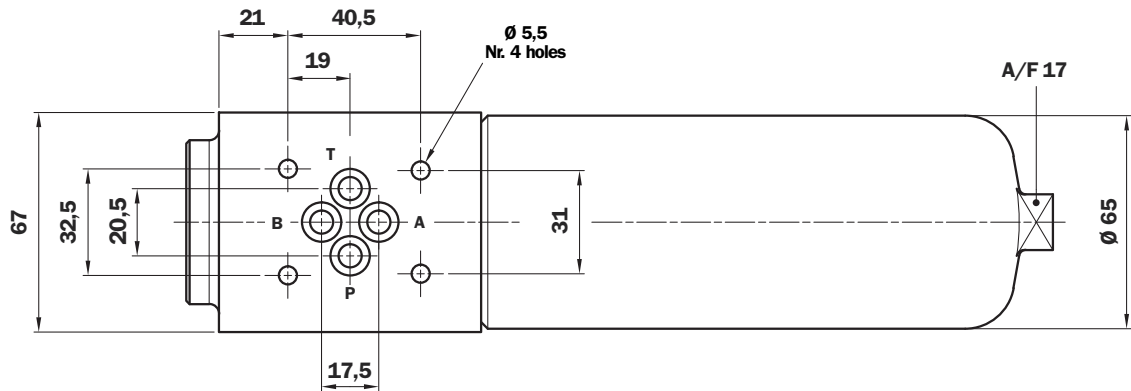
	4	287	315	360	365	390
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	5	340	347	385	390	410
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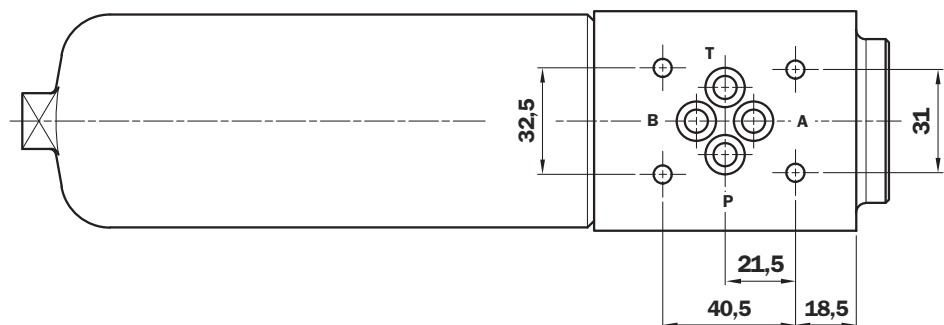
Serie H - Flow rate l/min

FHM 007

G1 - Housing side "A"



G2 - Housing side "B"



FHM 007

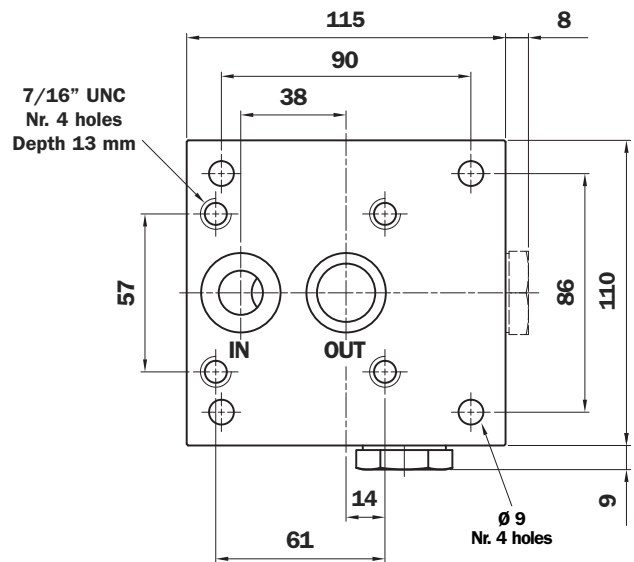
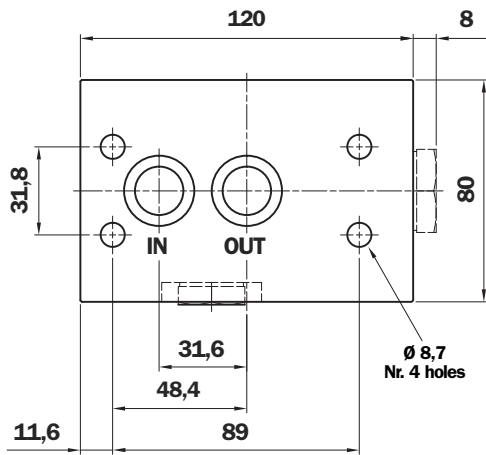
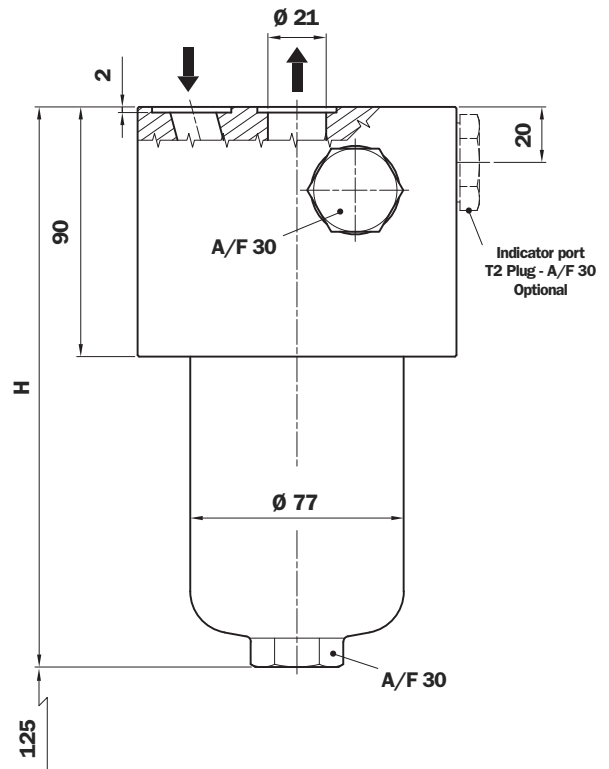
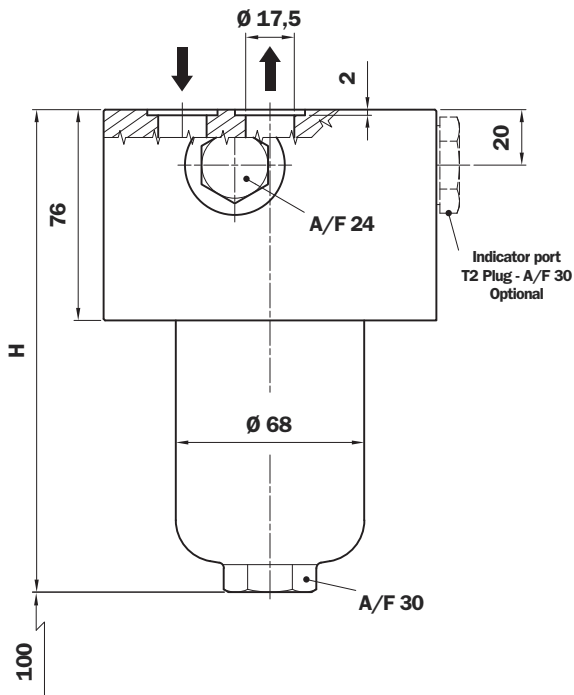
Length Filter	H mm
2	265
3	366

Manifold connections

Type	Size
G1	Housing side "A"
G2	Housing side "B"

FHM 050 - 065

FHM 135



FHM 050

Length Filter	H mm
1	154
2	191
3	233
4	281
5	403

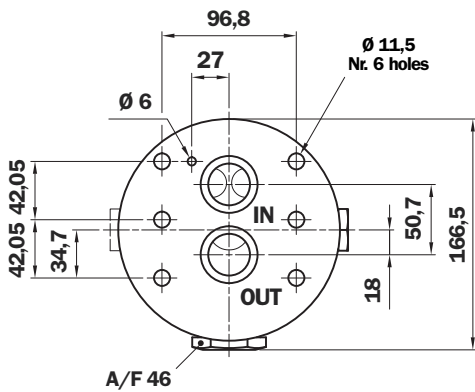
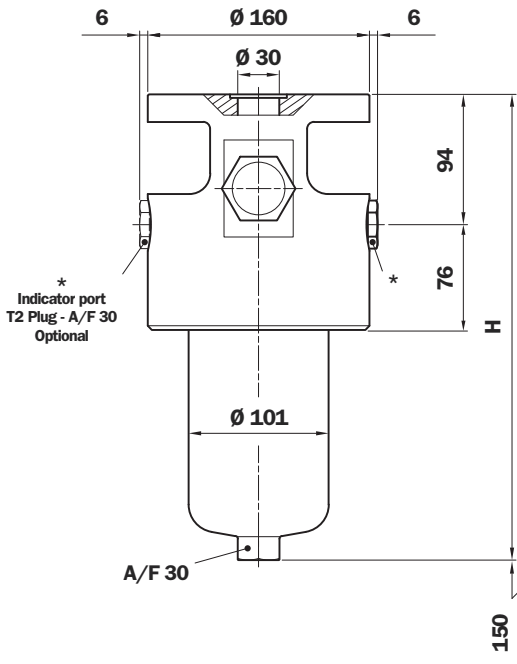
FHM 065

Length Filter	H mm
1	162
2	193
3	295

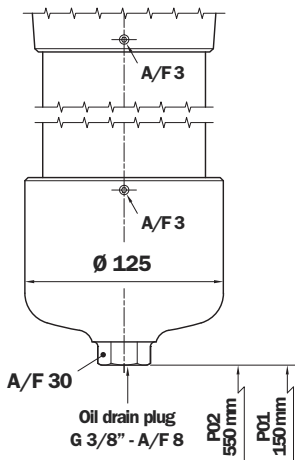
FHM 135

Length Filter	H mm
1	202
2	315
3	390

FHM 320

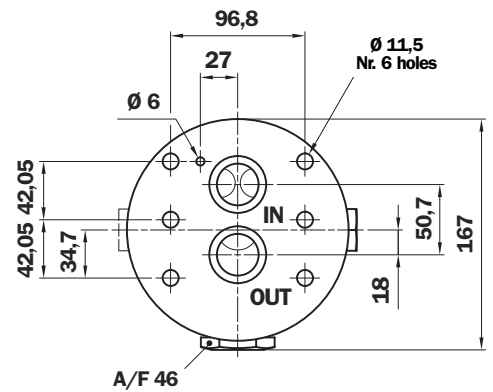
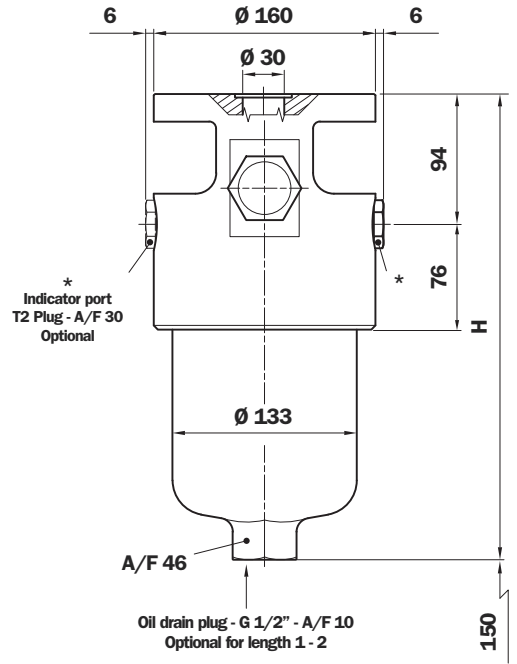


FHM 320 length 4

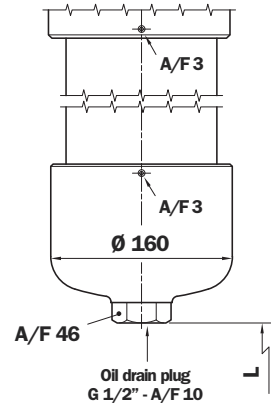


Style P01
Standard maintenance from head.
Style P02
Maintenance option from housing base.

FHM 500



FHM 500 length 4 - 5



FHM 500

Length Filter	H mm
1	355
2	445
3	521
4	679
5	845

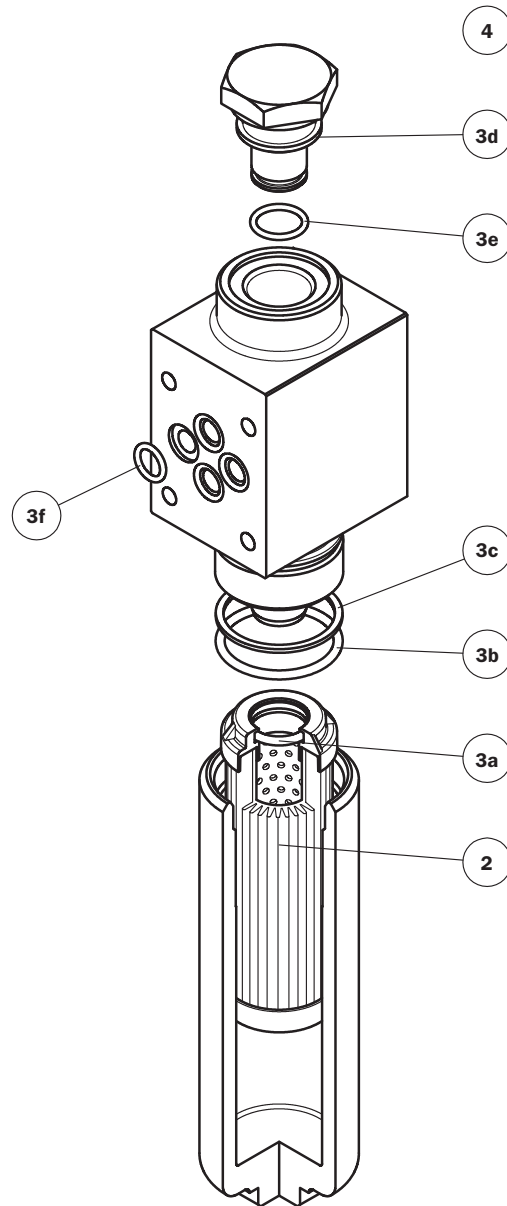
Style P01	
Filter length	L (mm)
4-5	150

Style P02	
Filter length	L (mm)
4	480
5	650

FHM 320

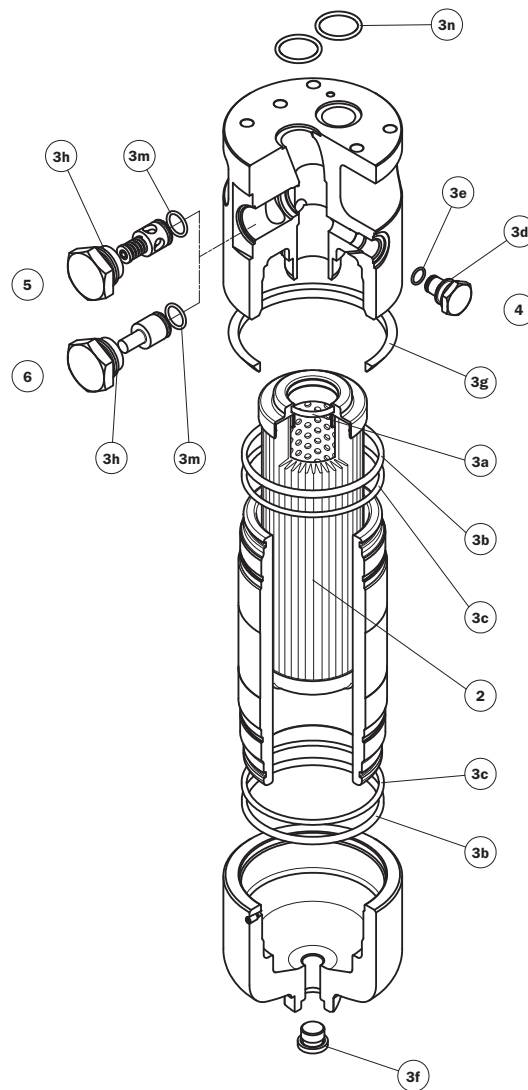
Length Filter	H mm
1	293
2	416
3	548
4	702

Spare parts



Item	Description	Q.ty	FILTER Series					
			FHM 006		FHM 007		FHM 010	
1	Filter assembly	1	See order table					
2	Filter element	1	See order table					
3	Seal Kit	1	NBR 02050324	FPM 02050325	NBR 02050600	FPM 02050601	NBR 02050320	FPM 02050321
3a	Filter element seal	1	O-R 121 Ø 15,88 x 2,62		O-R 4100 Ø 24,99 x 3,53		O-R 4100 Ø 24,99 x 3,53	
3b	Bowl seal	1	O-R 3125 Ø 31,22 x 2,62		O-R 3187 Ø 47,29 x 2,62		O-R 3187 Ø 47,29 x 2,62	
3c	Bowl anti-extrusion ring	1	Parbak 124 Ø 32,21 x 2,18		Parbak 134 Ø 48,08 x 2,18		Parbak 134 Ø 48,08 x 2,18	
3d	Gasket	1	01030058 (HNBR)	01030046 (FPM)	01030058 (HNBR)	01030046 (FPM)	01030058 (HNBR)	01030046 (FPM)
3e	O-Ring indicator	1	O-R 2050 Ø 12,42 x 1,78		O-R 2050 Ø 12,42 x 1,78		O-R 2050 Ø 12,42 x 1,78	
3f	Connection seal	1	4 pcs	O-R 108 Ø 8,73 x 1,78	4 pcs	O-R 108 Ø 8,73 x 1,78	5 pcs	O-R 2050 Ø 12,42 x 1,78
4	Indicator connection plug	1	T2H	T2V	T2H	T2V	T2H	T2V

PRESSURE FILTER



Item	Description	Q.ty	FILTER Series									
			FHM 050		FHM 065		FHM 135		FHM 320		FHM 500	
1	Filter assembly	1	See order table									
2	Filter element	1	See order table									
3	Seal kit	1	NBR 02050410	FPM 02050411	NBR 02050268	FPM 02050279	NBR 02050271	FPM 02050282	NBR 02050275	FPM 02050286	NBR 02050332	FPM 02050333
3a	Filter element seal	1	O-R 3093 Ø 23,67 x 2,62		O-R 4100 Ø 24,99 x 3,53		O-R 3106 Ø 26,65 x 2,62		O-R 144 Ø 39,69 x 3,53		O-R 153 Ø 49,21 x 3,53	
3b	Bowl seal	1	O-R 3225 Ø 56,82 x 2,62		O-R 159 Ø 55,56 x 3,53		O-R 3256 Ø 64,77 x 2,62		2 pcs. O-R 3350 Ø 88,57 x 2,62	2 pcs. O-R 4462 Ø 117,10 x 3,53		
3c	Bowl 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 pcs. Parbak 153 Ø 89,36 x 2,18	2 pcs. Parbak 247 Ø 117,63 x 3		
3d	Gasket	1	01030058 (HNBR)	01030046 (FPM)	01030058 (HNBR)	01030046 (FPM)	01030058 (HNBR)	01030046 (FPM)	01030058 (HNBR)	01030046 (FPM)	01030058 (HNBR)	01030046 (FPM)
3e	O-Ring indicator	1	O-R 2050 Ø 12,42 x 1,78		O-R 2050 Ø 12,42 x 1,78		O-R 2050 Ø 12,42 x 1,78		O-R 2050 Ø 12,42 x 1,78		O-R 2050 Ø 12,42 x 1,78	
3f	Drain plug	1	-		-		-		G 3/8" with bonded seal		G 1/2" with bonded seal	
3g	Protective seal	1	01026521		01026521		01026509		01026510		-	
3h	Bp or no Bp O-Ring	1	O-R 121 (90 Sh A) Ø 15,88 x 2,62		O-R 121 (90 Sh A) Ø 15,88 x 2,62		O-R 3087 (90 Sh A) Ø 21,89 x 2,62		O-R 3143 (90 Sh A) Ø 36,14 x 2,62		O-R 3143 (90 Sh A) Ø 36,14 x 2,62	
3m	Bp or no Bp O-Ring	1	O-R 2031 Ø 7,66 x 1,78		O-R 2031 Ø 7,66 x 1,78		O-R 2037 Ø 9,25 x 1,78		O-R 3106 Ø 26,65 x 2,62		O-R 3106 Ø 26,65 x 2,62	
3n	Connection seal	2	O-R 3081 Ø 20,24 x 2,62		O-R 3081 Ø 20,24 x 2,628		O-R 3093 Ø 23,67 x 2,62		O-R 4137 Ø 34,52 x 3,53		O-R 4137 Ø 34,52 x 3,53	
4	Indicator connection plug	1	T2H	T2V	T2H	T2V	T2H	T2V	T2H	T2V	T2H	T2V
5	Bypass assembly	1	02001400	02001401	02001400	02001401	02001404	02001405	02001408	02001409	02001408	02001409
6	Non-Bypass assembly	1	02001402	02001403	02001402	02001403	02001406	02001407	02001410	02001411	02001410	02001411

Ordering information FHM

Filter assembly	1	2	3	4	5	6	7	8a
FHM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Example: FHM 050 1 S A F1 A03 S P01

Filter element	1	2	6	4	7	8b
HP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Example: HP 050 1 A03 A S P01

1 - Style

Filter	Filter element
006	§ See below
007	065
010	065
050	050
065	065
135	135
320	320
500	500

2 - Filter length

006	1				
007		2	3		
010		2	3		
050	1	2	3	4	5
065	1	2	3		
135	1	2	3		
320	1	2	3	4	
500	1	2	3	4	5

3 - Valves

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

*Reduced cross-section oilways

N.B. Style 006 - 007 - 010 are available only in "S" version without bypass.

4 - Filter seals

A	NBR
V	FPM

5 - Connections

Manifold

Type	Size
FHM 006 - 007 - 010	
G1	Housing side "A"
G2	Housing side "B"
Type	Size
FHM 050 - 065 - 135 - 320 - 500	
F1	-

6 - Filter element

A03	Inorganic microfibre 3 µm	Absolute filtration Inorganic Microfibre βx (c) ≥ 1000
A06	Inorganic microfibre 6 µm	
A10	Inorganic microfibre 10 µm	
A16	Inorganic microfibre 16 µm	
A25	Inorganic microfibre 25 µm	
M25	Wire mesh 25 µm	Nominal Filtration

7 - Max filter element differential pressure

N	Δp 20 bar (excluded FHM 006 - 007 - 010)
H	Δp 210 bar
S	Δp 210 bar (only for FHM 050 - 500)

8 - Option

a - Filter

P01	MP Filtri standard
P02	Maintenance from base of housing (only FHM 320 length 4 - FHM 500 length 4/5)
Pxx	Customer request

b - Filter element

P01	MP Filtri standard
Pxx	Customer request

§ Filter element for FHM 006:

- HP 011 3 A03 x H P01
- HP 011 3 A06 x H P01
- HP 011 3 A10 x H P01
- HP 011 3 A16 x H P01
- HP 011 3 A26 x H P01
- HP 011 3 M25 x H P01

"x" = seal

A	NBR
V	FPM

Indicator plug

Phosphated Steel plug T2 has to be ordered separately.

Code

T2H	Seal NBR
T2V	Seal FPM

For Clogging Indicator:
See page 318

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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