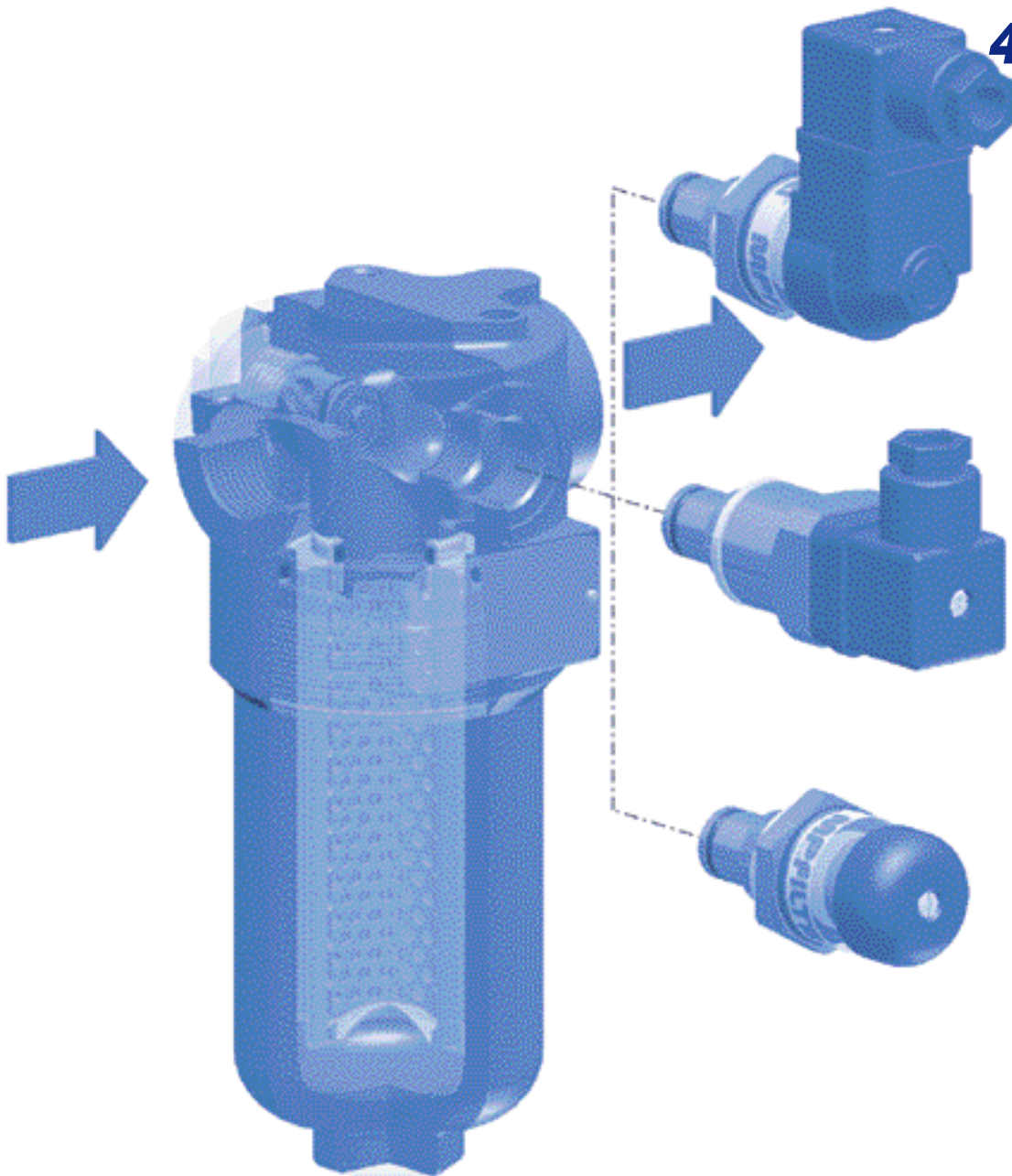


FMP



SERIES FMP

Working pressure
4000 psi



Style S

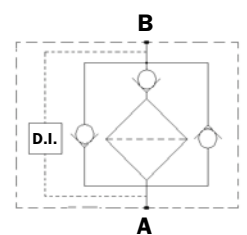
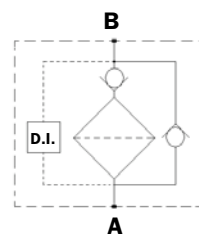
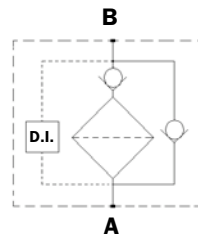
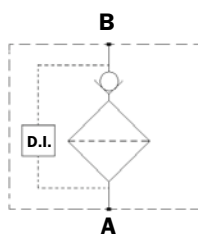
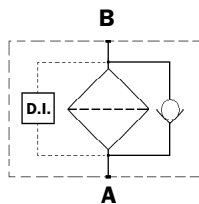
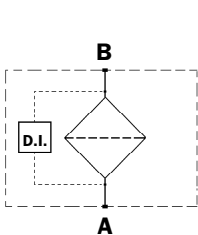
Style B

Style T

Style D

Style V

Style Z



Technical data

Filter body (Materials)

- Head: Cast iron (chemical heat treatment)
- Housing: Cast iron (chemical heat treatment)
- Bypass valve: Brass
- Reverse Flow : Steel (series 135 - 320 only)
- Check valve: Steel

Pressure

- Maximum operating pressure: 4000 psi (28 MPa)
- Test pressure: 6000 psi (42 MPa)
- Burst pressure: 12000 psi (84 MPa)
- Pulsed pressure fatigue test 1,000,000 cycles with pressure from 0 to 4000 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 Δp

- Microfibre elements series N - R: 300 psi
- Elements in stainless steel mesh series N: 300 psi
- Elements in microfibre series H - S: 3000 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
• FMP 065	6.6	7.5	11.5	—
• FMP 135	13.2	18	26.5	—
• FMP 320	28	32.4	45.6	52.2

Filter internal volumes (in³)

Length	1	2	3	4
• FMP 065	23.2	27.5	40.1	—
• FMP 135	24.4	62.2	75.5	—
• FMP 320	98.2	159.3	199.5	256.3

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

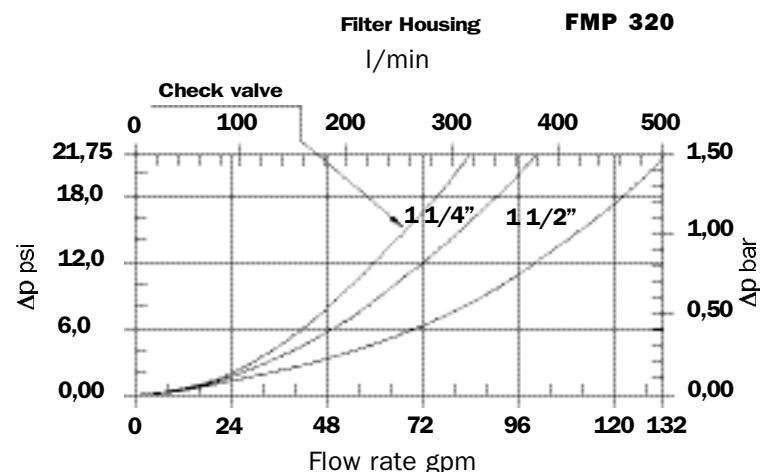
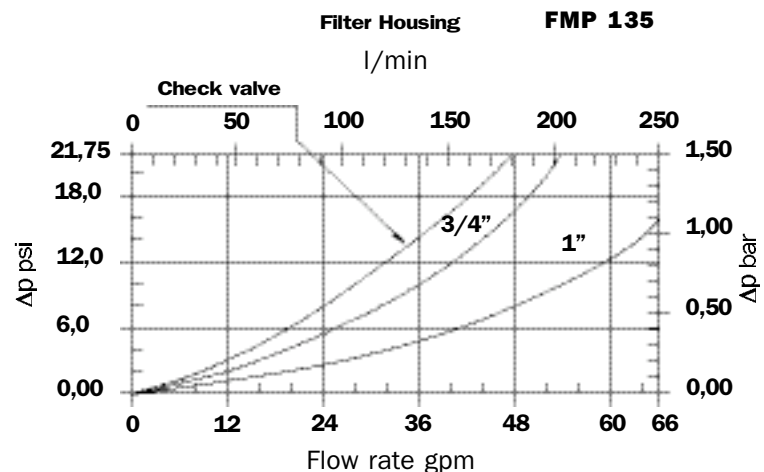
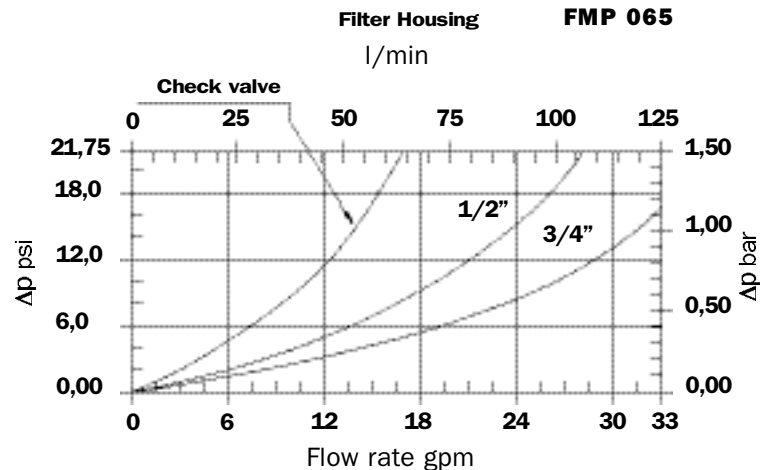
Type	Length			
	1	2	3	4
HP065	58	82	165	-
HP135	147	313	419	-
HP320	256	565	925	1283

Values in in²

Pressure drops Δp Body

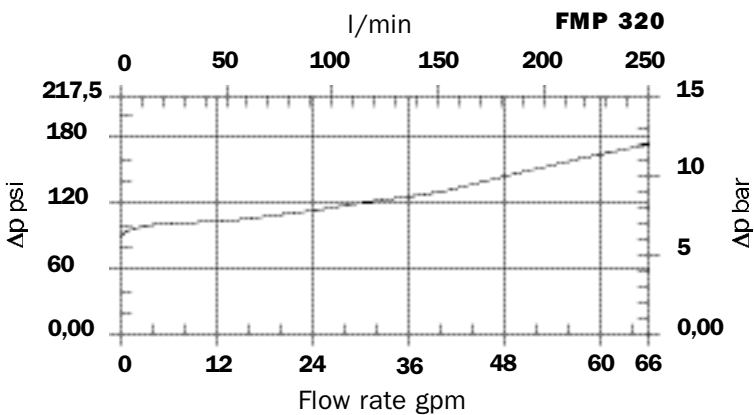
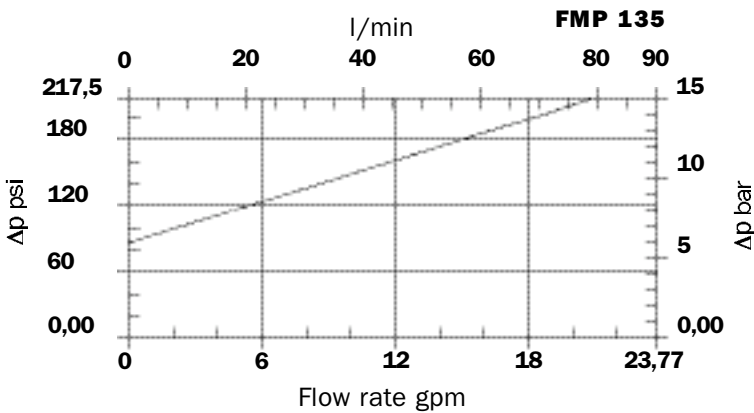
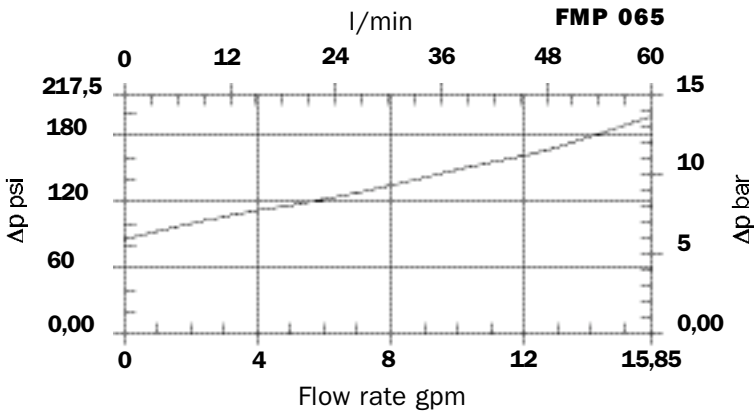
The curves are plotted using mineral oil with specific density 0,86.

Δp varies proportional with density.

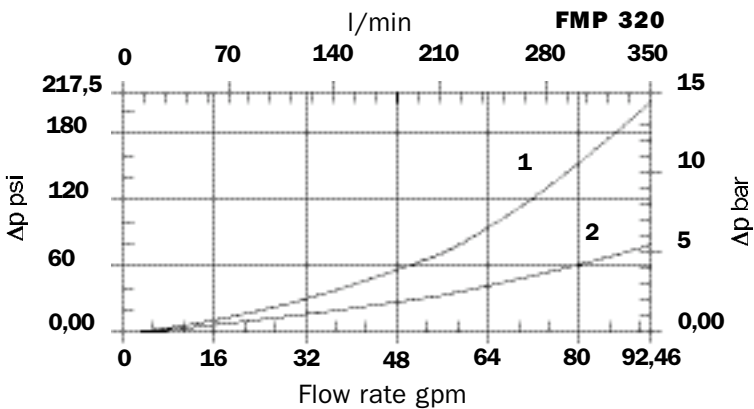


Valves

Bypass valve pressure drops

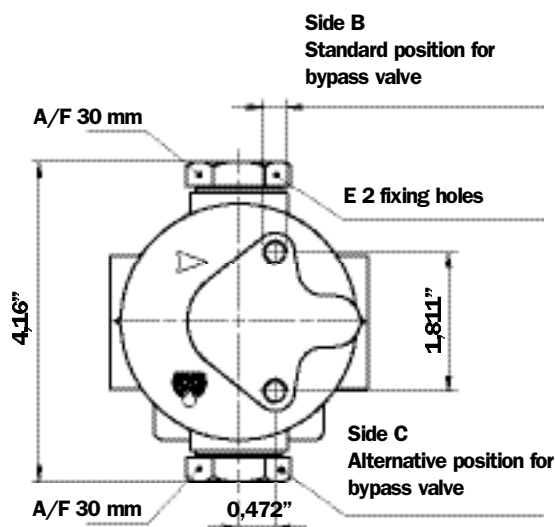
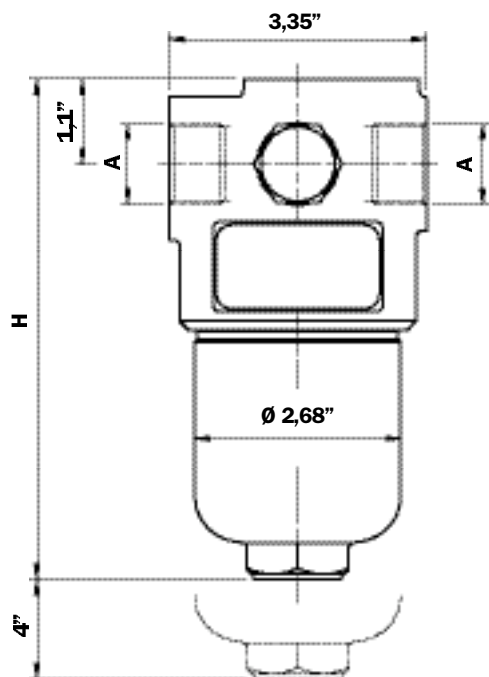


Pressure drop in reverse flow valves



- 1 - Reverse Flow
- 2 - In filter direction

FMP 065



Indicator and bypass valve positions can be inverted.

Recommended maximum flow rate

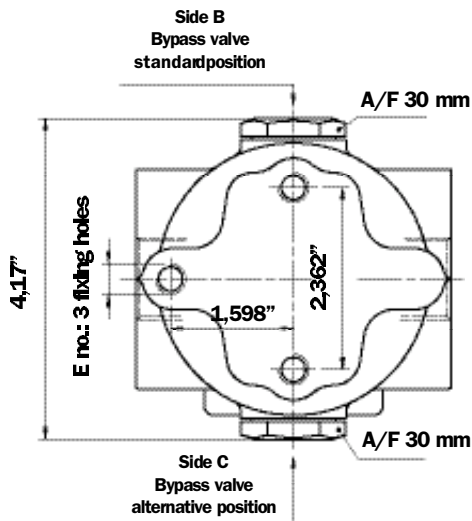
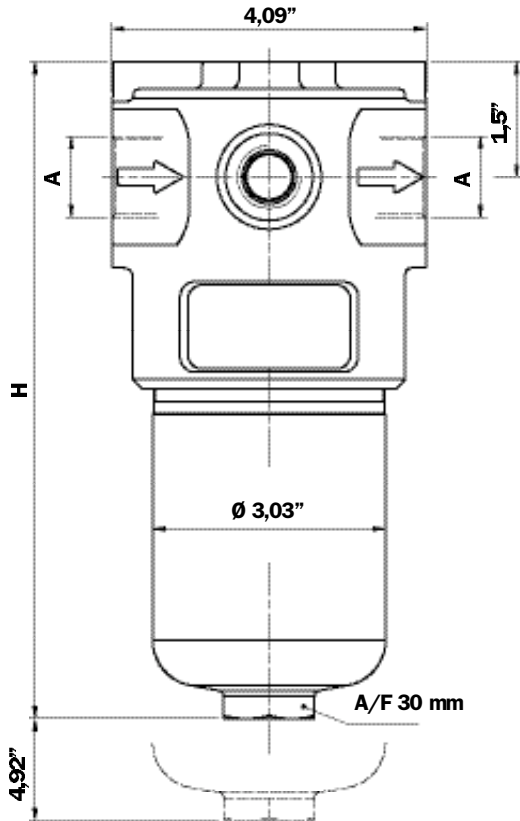
- Pressure drop of complete filter equal to Δp 21,75 psi.
- Oil kinematic viscosity 150 SUS.
- Density 53,69 lbs/ft³.
- Connections of filter under test G 3/4".

Filter element type	Flow rate gpm Series N	Flow rate gpm Series H	Filter Length
A03	6,1	5,8	1
A06	7,9	6,1	
A10	12,7	11,4	
A16	14,0	13,2	
A25	19,0	18,0	
M25	27,7	-	2
A03	8,2	7,9	
A06	11,9	9,2	
A10	15,9	15,1	
A16	16,9	16,6	
A25	21,7	20,3	3
M25	28,0	-	
A03	14,0	13,7	
A06	16,1	15,3	
A10	20,9	20,6	
A16	22,2	21,9	
A25	24,8	24,6	
M25	28,5	-	

A Threaded Connections	E Depth 0,6"
G 1/2"	M8
1/2" NPT	5/16" UNC
G 3/4"	M8
3/4" NPT	5/16" UNC
SAE 8 (3/4"- 16 UNF)	5/16" UNC
SAE 12 (1 1/16"- 12 UN)	5/16" UNC

Filter Length	H inch
1	6,65"
2	7,87"
3	11,89"

FMP 135



Indicator and bypass valve positions can be inverted.

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.
- Connections of filter under test G 1".

Filter element type	Flow rate gpm Series N	Flow rate gpm Series H	Filter Length
A03	18,2	13,2	1
A06	19,5	15,1	
A10	31,7	25,9	
A16	34,1	26,7	
A25	45,2	41,2	
M25	52,8	-	
A03	29,1	24,0	2
A06	30,9	29,1	
A10	39,1	35,9	
A16	39,9	36,7	
A25	54,9	46,2	
M25	60,8	-	
A03	39,6	33,3	3
A06	40,4	37,0	
A10	50,7	44,9	
A16	51,5	47,3	
A25	56,3	51,8	
M25	61,3	-	

A Threaded Connections E Depth 0,6"

G 3/4"	M10
3/4" NPT	3/8" UNC
G 1"	M10
1" NPT	3/8" UNC
SAE 12 (1 1/16" - 12 UN)	3/8" UNC
SAE 16 (1 5/16" - 12 UN)	3/8" UNC

A Flanged Connections B Depth 0,6"

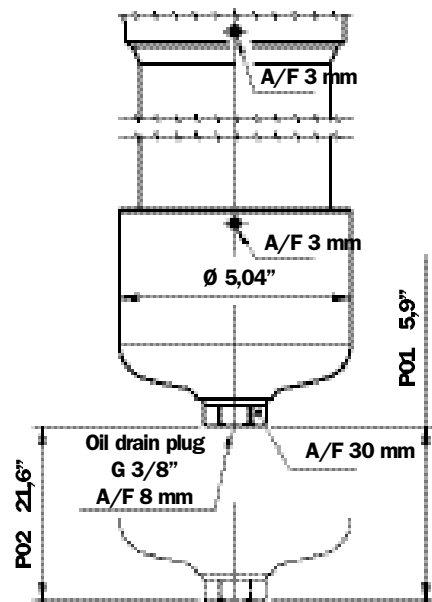
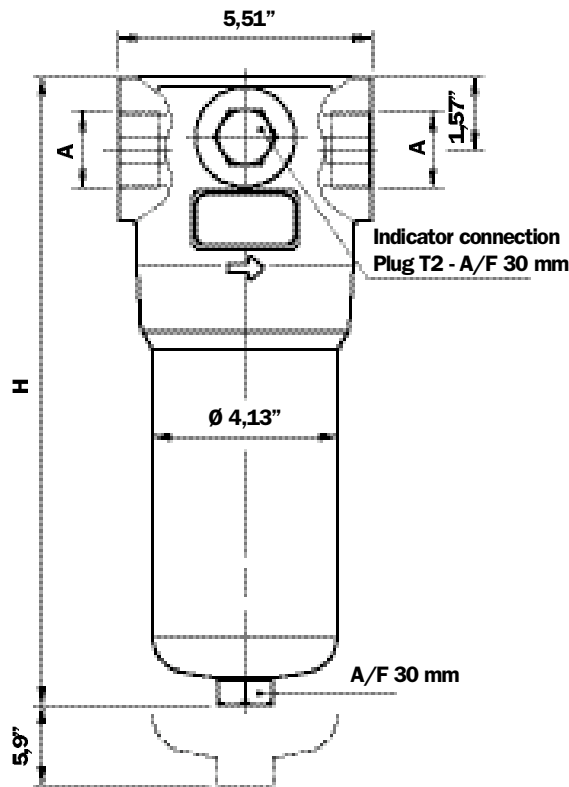
3/4" SAE 3000 psi/M	M10
3/4" SAE 3000 psi/UNC	3/8" UNC
1" SAE 3000 psi/M	M10
1" SAE 3000 psi/UNC	3/8" UNC

Filter Length H inch

1	8,66"
2	13,11"
3	16,06"

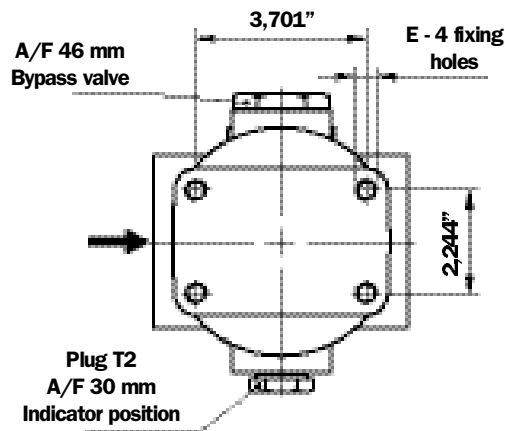
FMP 320

Only for FMP 320 length 4

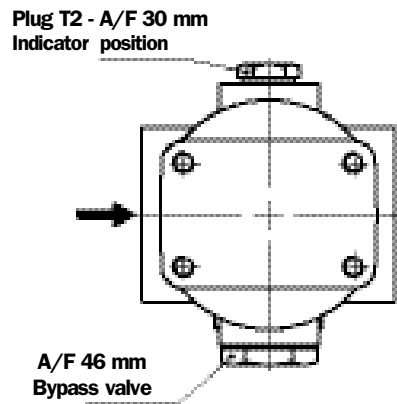


Style P01 standard maintenance from head.
Style P02 maintenance option from housing base.

Larger B
Bypass valve standard
position



Larger C
Bypass valve alternative
position



FMP 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.
- Connections of filter under test G 1 1/2".

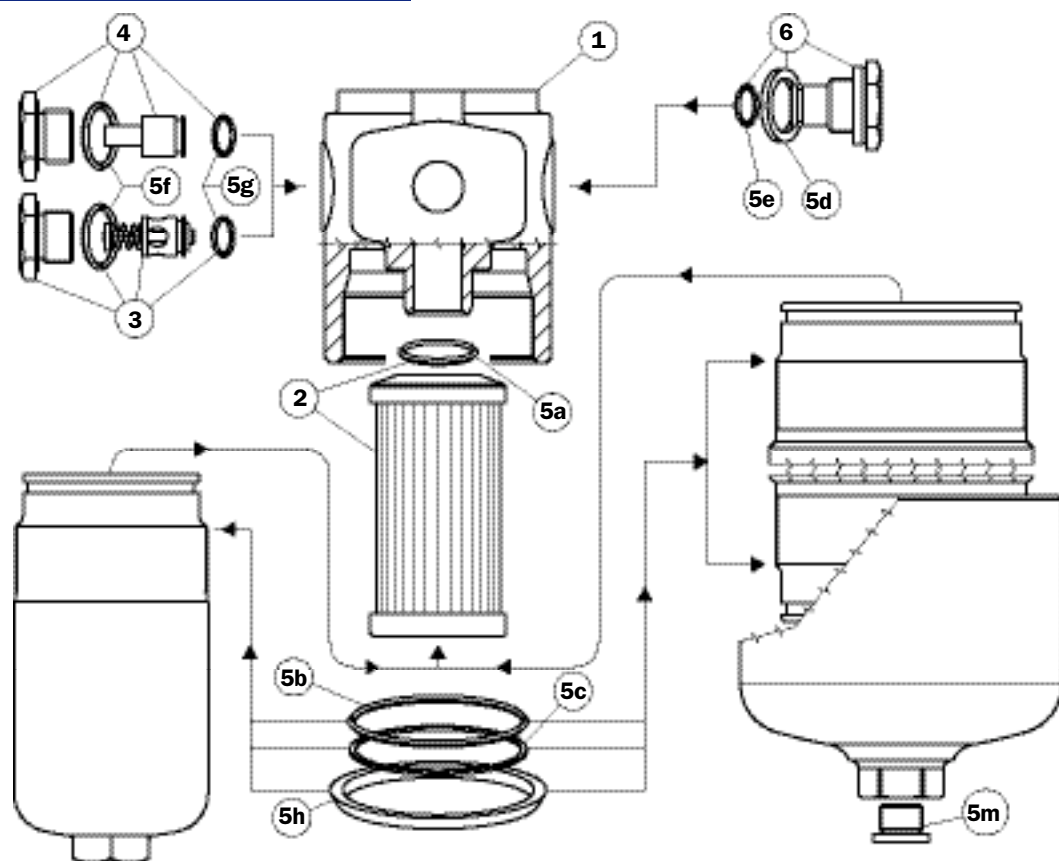
Filter element type	Flow rate gpm Series N	Flow rate gpm Series H	Filter Length
A03	33,3	28,3	1
A06	36,2	29,6	
A10	60,8	48,9	
A16	72,4	51,0	
A25	87,2	77,1	
M25	112,3	-	2
A03	65,5	50,7	
A06	71,3	58,1	
A10	99,3	79,3	
A16	104,3	82,4	
A25	116,2	99,9	3
M25	117,6	-	
A03	84,3	67,4	
A06	93,3	79,3	
A10	112,8	97,0	
A16	116,2	99,1	4
A25	118,9	110,2	
M25	122,8	-	
A03	93,5	78,7	
A06	99,1	84,5	
A10	113,6	99,1	4
A16	118,1	100,9	
A25	123,4	111,5	
M25	125,5	-	

A Threaded Connections	E Depth 0,6"
G 1 1/4"	M12
1 1/4" NPT	1/2" UNC
G 1 1/2"	M12
1 1/2" NPT	1/2" UNC
SAE 20 (1 5/8" 12 UN)	1/2" UNC
SAE 24 (1 7/8" 12 UN)	1/2" UNC

A Flanged Connections	E Depth 0,6"
1 1/4" SAE 3000 psi/M	M12
1 1/4" SAE 3000 psi/UNC	1/2" UNC
1 1/2" SAE 3000 psi/M	M12
1 1/2" SAE 3000 psi/UNC	1/2" UNC

Filter Length	H inch
1	10,35"
2	15,2"
3	20,38"
4	26,5"

Spare parts FMP



Pos.	Description	Qty.	FMP Series FILTER						
			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)				02001396 (NBR) 02001397 (FPM)		
4	Non bypass assembly	1	02001314 (NBR) 02001386 (FPM)				02001398 (NBR) 02001399 (FPM)		
5	Seal kits	1	NBR 02050267	FPM 02050278	NBR 02050293	FPM 02050294	NBR 02050274	FPM 02050285	
5a	Filter element O-Ring	1	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 159 ID 2,187" x 139"		OR 3256 ID 2,550" x 103"		2 pcs.	OR 3350 ID 3,487" x 103"	
5c	Anti-extrusion ring	1	Parbak 227 ID 2,147" x 118"		Parbak 144 ID 2,518" x 086"		2 pcs.	Parbak 153 ID 3,518" x 086"	
5d	Gasket	1	01030058 (HNBR)	01030046 (FPM)	01030058 (HNBR)	01030046 (FPM)	01030058 (HNBR)	01030046 (FPM)	
5e	O-Ring	1	O-R 2050 ID 489" x 070"						
5f	Bp or Non Bp O-Ring	1	Bonded seal G 1/2" - FPM			Bonded seal G 1/2" - FPM		O-R 3143 (NBR 90 Sh A) Ø 36,14 x 2,62	
5g	Bp or Non Bp O-Ring	1	OR 2050 ID 489" x 070"			OR 2050 ID 489" x 070"		OR 3106 ID 1,049" x 103"	
5h	Protective seal	1	01026521			01026509		01026510	
5m	Oil drain plug (not all model)	1	-			-		G 3/8" with bonded seal	
-	Indicators	1	See order table						
6	Indicator plug	1	T2H	T2V	T2H	T2V	T2H	T2V	

Ordering information FMP

Filter assembly FMP

Example: FMP

Filter element HP

Example: HP

1	2	3	4	5	6	7	8 a
065	2	B	A	G1	A03	N	P01

1	2	6	4	7	8 b
065	2	A03	A	N	P01

1 - Size

065
135
320

2 - Filter length

1
2
3
4

(only for FMP 320)

3 - Valves

S	Without bypass side B - Optional
B	With bypass side B - Standard
C	With bypass side C - Optional
D	With bypass side B + check valve*
V	With Reverse Flow* (Only for size 320)
Z	With Reverse Flow + bypass* (Only for size 320)
T	Without bypass + check valve*
E	Without bypass side C - Optional

*Reduced cross-section oilways

4 - Seals

A	NBR
V	FPM

6 - 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 (style N only)

βx (c) ≥ 1000
See page 10

7 - Filter elements collapse pressure

N	300 psi
H	3000 psi
R	300 psi (Filter with reverse flow + bypass)
S	3000 psi (Filter with reverse flow)

8 - Options

a) Filter

P01	MP Standard filters
P02	Maintenance from housing base (only for FMP 320 - 4)
Pxx	Customer request

b) Filter element

P01	MP Filtri standard
Pxx	Customer request

5 - Connections

Type	065	135	320
G1	G 1/2"	G 3/4"	G 1 1/4"
G2	G 3/4"	G 1"	G 1 1/2"
G3	1/2" NPT	3/4" NPT	1 1/4" NPT
G4	3/4" NPT	1" NPT	1 1/2" NPT
G5	SAE 8 (3/4" 16 UNF)	SAE 12 (1 - 1/16" 12 UN)	SAE 20 (1 5/8" 12 UN)
G6	SAE 12 (1 - 1/16" 12 UN)	SAE 16 (1 - 5/16" 12 UN)	SAE 24 (1 7/8" 12 UN)
F1	-	3/4" SAE 3000 PSI/M	1 - 1/4" SAE 3000 PSI/M
F2	-	1" SAE 3000 PSI/M	1 - 1/2" SAE 3000 PSI/M
F3	-	3/4" SAE 3000 PSI/UNC	1 - 1/4" SAE 3000 PSI/UNC
F4	-	1" SAE 3000 PSI/UNC	1 - 1/2" SAE 3000 PSI/UNC

DIFFERENTIAL INDICATORS
(see page 15)

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