

MP Filter  
MFB Series



 HYDRAULIC  
COMPONENTS  
& FLUID CONTAMINATION  
CONTROL

# MFB series

BOWL ASSEMBLY

Maximum working pressure up to 0.8 MPa (8 bar) - Flow rate up to 700 l/min



## Description

## Technical data

### Return filter Bowl assembly

**Maximum working pressure up to 0.8 MPa (8 bar)**  
**Flow rate up to 700 l/min**

MFB is a range of return filter kits for protection of the reservoir against the system contamination.

They are directly integrated in the moulded reservoir in immersed or semi-immersed position to save space into the tank.

Treaded or flanged covers can be provided.

The filter output must be always immersed into the fluid to avoid aeration or foam generation into the reservoir.

#### Available features:

- Fine filtration rating, to get a good cleanliness level into the reservoir
- Bypass valve integrated into the filter element, to relieve excessive pressure drop across the filter media
- Extension tube, to be used in deep reservoirs (sold as separate item)
- Diffuser, to reduce the risk of aeration, foaming and noise (sold as separate item)

#### Common applications:

Mobile machines

### Bowl assembly materials

- Cover: Polyamide: MFB 020-030-100  
Aluminium: MFB 180-190
- Bowl: Polyamide

### Filter element materials

- Caps: Polyamide
- Spring: Spring steel

### Pressure

- Test pressure: 1.2 MPa (12 bar)
- Min. Burst pressure: 2.4 MPa (24 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 0.8 MPa (8 bar)

### Bypass valve

- Opening pressure 0.175 MPa (1.75 bar)  $\pm 10\%$
- Opening pressure 0.3 MPa (3 bar)  $\pm 10\%$

### Filter element features

Filter MFB		Filter element MF	
$\Delta p$ Element type			
Element media	Construction	$\Delta p$ Series	$\Delta p$
A - Microfiber	Standard	H	10 bar
M - Wire mesh	Standard	N	10 bar
P - Paper	Standard	N	10 bar
<i>Please see ordering code tables to check element <math>\Delta p</math> series availability based on filter features.</i>			
<b>Flow direction through the filter element:</b>			
From OUT to IN			

### Seals

- Standard NBR series A
- Optional FPM series V

### Temperature

From -25 °C to +110 °C

### Note

MFB filters are provided for vertical mounting

## Weights [kg] and volumes [dm<sup>3</sup>]

Filter series	Weights [kg]					Volumes [dm <sup>3</sup> ]				
	Length	1	2	3	4	Length	1	2	3	4
<b>MFB 020</b>		0.25	0.35	0.40	-		0.10	0.15	0.20	-
<b>MFB 030</b>		0.25	-	-	-		0.15	-	-	-
<b>MFB 100</b>		0.50	0.60	0.75	0.95		0.35	0.50	0.80	1.10
<b>MFB 180</b>		1.60	2.40	-	-		1.50	2.90	-	-
<b>MFB 190</b>		-	2.40	-	-		-	3.00	-	-

Flow rates [l/min]

Filter series	Length	Filter element design - H series					Filter element design - N series		
		A03	A06	A10	A16	A25	M25 M60 M90	P10	P25
MFB 020	1	7	10	23	28	42	59	51	54
	2	17	20	45	48	56	72	64	67
	3	21	24	50	55	59	76	74	75
MFB 030	1	7	10	24	29	47	84	60	66
MFB 100	1	18	20	53	56	65	153	87	96
	2	28	38	65	75	95	158	111	123
	3	48	55	125	135	169	289	224	251
	4	79	89	180	185	198	306	264	289
MFB 180	1	127	148	235	243	278	441	285	299
	2	231	262	358	382	388	472	404	412
MFB 190	2	261	305	489	528	546	696	583	598

**Maximum flow rate for a complete return filter with a pressure drop  $\Delta p = 0.5$  bar.**

The reference fluid has a kinematic viscosity of 30 mm<sup>2</sup>/s (cSt) and a density of 0.86 kg/dm<sup>3</sup>.

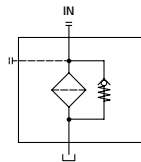
For different pressure drop or fluid viscosity we recommend to use our selection software available on [www.mpfiltri.com](http://www.mpfiltri.com).

You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure.

Please, contact our Sales Department for further additional information.

## Hydraulic symbols

Filter series	Style 1 connection
MFB 020	•
MFB 030	•
MFB 100	•
MFB 180	•
MFB 190	•



# MFB MFB020 - MFB030 - MFB100 - MFB180 - MFB190

## Designation & Ordering code

### COMPLETE FILTER

Series and size						Configuration example 1:							
<b>MFB020</b>	<b>MFB030</b>	<b>MFB100</b>	<b>MFB180</b>	<b>MFB190</b>		MFB100	1	A	2	A10	H	E	P01
Filter element with private spigot						Configuration example 2:							
						MFB180	2	V	1	M25	N	B	P01
Length													
Length	MFB020	MFB030	MFB100	MFB180	MFB190								
1	•	•	•	•	-								
2	•	-	•	•	•								
3	•	-	•	-	-								
4	-	-	•	-	-								
Seals													
<b>A</b> NBR													
<b>V</b> FPM													
Version													
Version	MFB020	MFB030	MFB100	MFB180	MFB190								
1 Without cover	•	•	•	•	•								
2 With flanged cover type MPF	-	•	•	•	•								
3 With threaded cover type MPT	•	-	•	-	-								
Filtration rating (filter media)													
<b>A03</b> Inorganic microfiber 3 µm						<b>M25</b> Wire mesh 25 µm							
<b>A06</b> Inorganic microfiber 6 µm						<b>M60</b> Wire mesh 60 µm							
<b>A10</b> Inorganic microfiber 10 µm						<b>M90</b> Wire mesh 90 µm							
<b>A16</b> Inorganic microfiber 16 µm						<b>P10</b> Resin impregnated paper 10 µm							
<b>A25</b> Inorganic microfiber 25 µm						<b>P25</b> Resin impregnated paper 25 µm							
Element Δp						Filter media							
Element Δp						Axx	Mxx	Pxx					
<b>N</b> 10 bar						-	•	•					
<b>H</b> 10 bar						•	-	-					
						<b>Bypass valve</b>		<b>Execution</b>					
						<b>E</b> 3 bar		<b>P01</b> MP Filtri standard					
						<b>B</b> 1.75 bar		<b>Pxx</b> Customized					

### FILTER ELEMENT

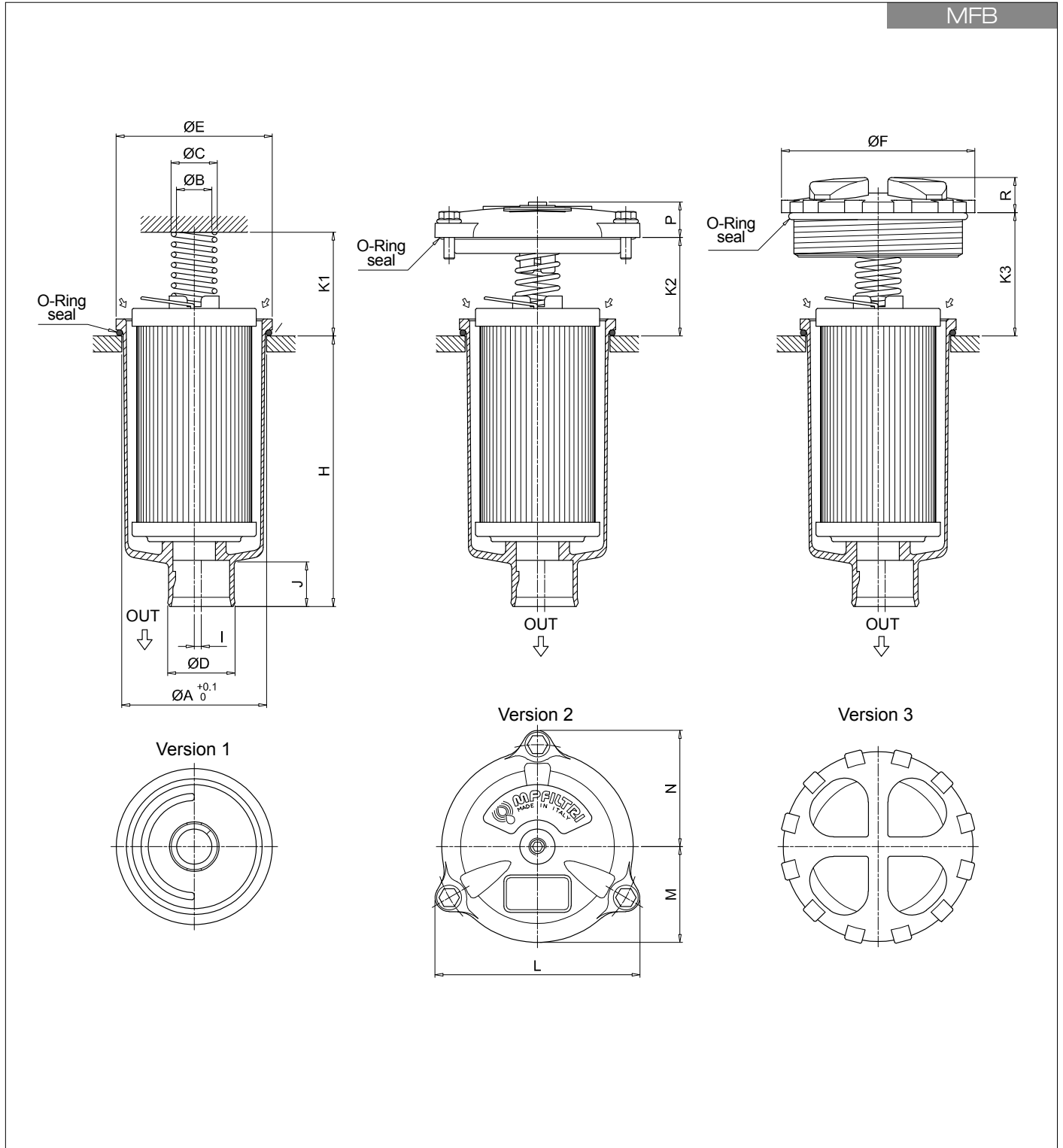
Element series and size						Configuration example 1:							
<b>MF020</b>	<b>MF030</b>	<b>MF100</b>	<b>MF180</b>	<b>MF190</b>		MF100	1	A10	H	B	E	P01	
Filter element with private spigot						Configuration example 2:							
						MF180	2	M25	N	V		P01	
Element length													
Element length	MF020	MF030	MF100	MF180	MF190								
1	•	•	•	•	-								
2	•	-	•	•	•								
3	•	-	•	-	-								
4	-	-	•	-	-								
Filtration rating (filter media)													
<b>A03</b> Inorganic microfiber 3 µm						<b>M25</b> Wire mesh 25 µm							
<b>A06</b> Inorganic microfiber 6 µm						<b>M60</b> Wire mesh 60 µm							
<b>A10</b> Inorganic microfiber 10 µm						<b>M90</b> Wire mesh 90 µm							
<b>A16</b> Inorganic microfiber 16 µm						<b>P10</b> Resin impregnated paper 10 µm							
<b>A25</b> Inorganic microfiber 25 µm						<b>P25</b> Resin impregnated paper 25 µm							
Element Δp						Filter media							
Element Δp						Axx	Mxx	Pxx					
<b>N</b> 10 bar						-	•	•					
<b>H</b> 10 bar						•	-	-					
						<b>Seals</b>		<b>Bypass valve</b>		<b>Execution</b>			
						<b>B</b> NBR		<b>E</b> 3 bar		<b>P01</b> MP Filtri standard			
						<b>V</b> FPM		<b>-</b> 1.75 bar		<b>Pxx</b> Customized			

### ADDITIONAL FEATURES

See page 268

	MFB020	MFB030	MFB100	MFB180	MFB190
<b>TE</b> Extension tube	•	•	•	•	•
<b>DFS</b> Diffuser with fast lock connection	-	-	•	-	-

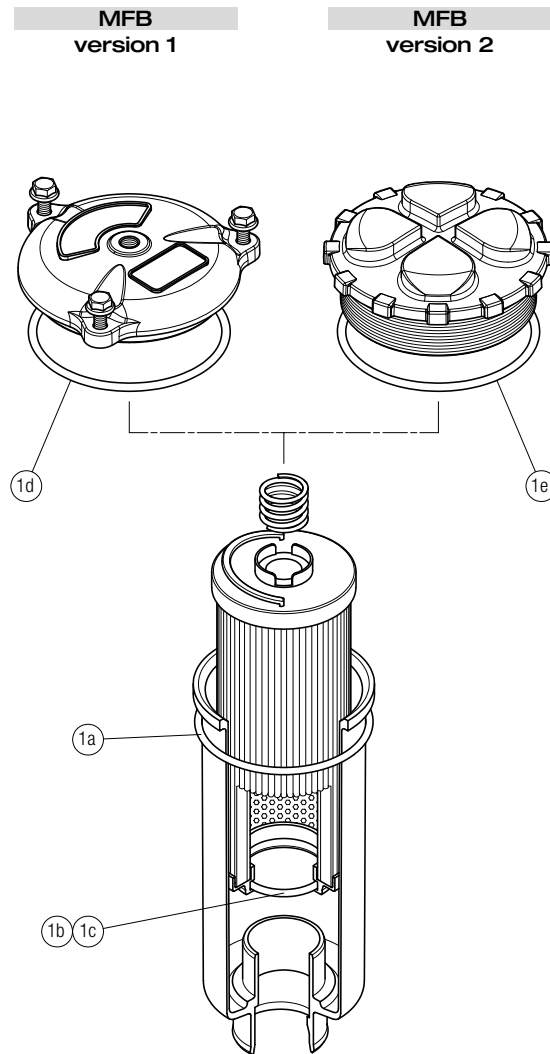
MFB



Filter size	Filter Length	ø A [mm]	ø B [mm]	ø C [mm]	ø D [mm]	ø E [mm]	ø F [mm]	H [mm]	I [mm]	J [mm]	K1 [mm]	K2 [mm]	K3 [mm]	L [mm]	M [mm]	N [mm]	P [mm]	R [mm]
<b>020</b>	1	52	20.5	26	32	56	75	111	0	24	42	-	36	-	-	-	-	18
	2	52	20.5	26	32	56	75	175	0	24	42	-	36	-	-	-	-	18
	3	52	20.5	26	32	56	75	214	0	24	42	-	36	-	-	-	-	18
<b>030</b>	1	60.5	20	25.5	32	68	-	92	3	21	33	35	-	92	42	52	18	-
	1	80.5	20	26	38	88	111	107	4	24	58	55	69	116	54	66	20	20
	2	80.5	20	26	38	88	111	154	4	24	58	55	69	116	54	66	20	20
	3	80.5	20	26	47	88	111	232	0	24	58	55	69	116	54	66	20	20
<b>100</b>	4	80.5	20	26	47	88	111	334	2.5	24	58	55	69	116	54	66	20	20
	1	112.5	26	33.5	47	121	-	234	0	31	58	58	69	159	76	95	21	-
	2	112.5	26	33.5	47	121	-	447	0	31	58	58	69	159	76	95	21	-
	2	112.5	26	33.5	50	121	-	454	0	38	58	58	69	159	76	95	21	-

# MFB SPARE PARTS

Order number for spare parts



Q.ty: 1 pc.		
1 (1a ÷ 1e)		
Item:	Seal Kit code number	
Filter series	NBR	FPM
<b>MFB 020</b>	02050572	02050573
<b>MFB 030</b>	02050574	02050575
<b>MFB 100</b>	02050555	02050556
<b>MFB 180</b>	02050576	02050577
<b>MFB 190</b>	02050578	02050579

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