

# MFBX series

BOWL ASSEMBLY

Maximum working pressure up to 800 kPa (8 bar) - Flow rate up to 700 l/min



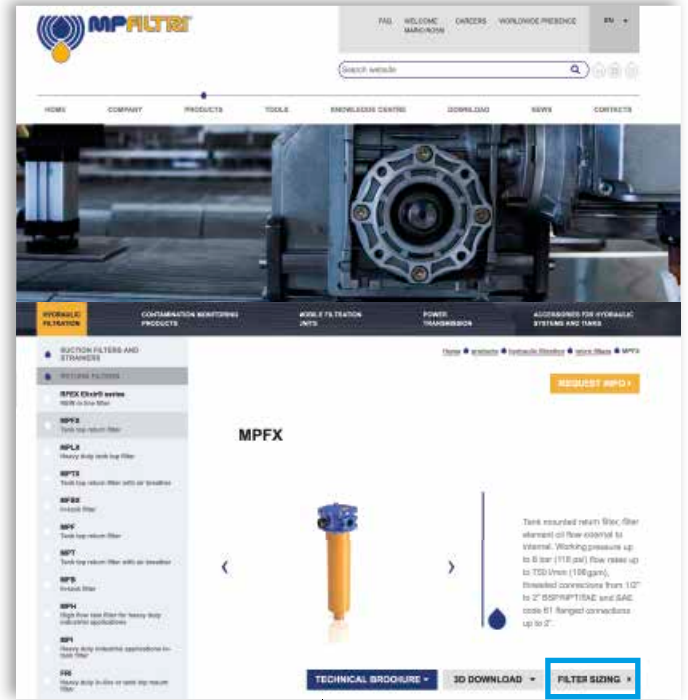
# TYPICAL FILTER SIZING Selection Software

## Step ①

Select "FILTER SIZING SOFTWARE" after login

OR

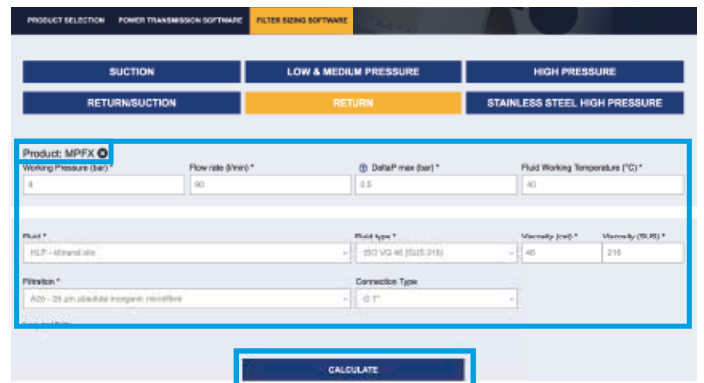
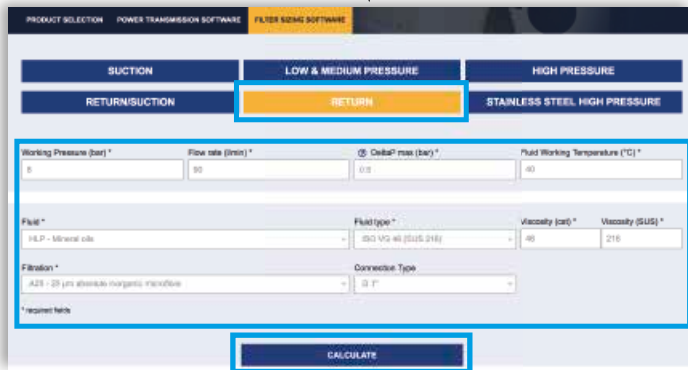
Select "FILTER SIZING" after login from a product page



Choose the type of filter family.  
Enter the main data for sizing the filter  
then push CALCULATE.

## Step ②

Enter the main data for sizing the filter  
then push CALCULATE.



## Step ③

Select the desired options to choose the appropriate filter type for the application.

Working Pressure: 8 (bar) | Fluid: HLP | Flow rate: 90 (l/min) | Fluid type: ISO VG 46 (SUS 216) | DP max of the project: 0.5 (bar) | Seal: A - NBR | Working Temperature: 40 (°C) | Optional seals: V - FPM | Filtration: 25 µm absolute inorganic microfibre | Working Temperature with options: -20 + 110 (°C) | Connection Type: G 1" | Viscosity: 46 (cst) - 216 (SUS)

**Filter type:** MPFX: Tank top mounting - (Pmax 1 - B: 1.75 bar (Systems) - Seal: A - NBR

**Option1:** Single or duplex | **DIN Standard:** NOT APPLICABLE | **Indicator:** Visual

Image	Code	Press	Qmax	DP	Housing DP	Element DP	Connection	Seal	Link					
		bar	psi	bar	psi	bar	psi							
	MPFX-100-3-A-G3-A25-HBP51	8	116	25.74	25.3	0.47	7	0.12	2	0.35	5	G 1"	A	Adjustment Report
	MPFX-150-3-A-G3-A25-HBP51	8	178	66.74	25.3	0.47	7	0.12	2	0.38	6	G 1"	A	Adjustment Report

## Step 4

Choose the most suitable filter from the proposed list.

Image	Code	Peak bar	Qmax psi	Qmax m³/min	Qmax gpm us	ΔP bar	ψ	Housing ΔP bar	ψ	Element ΔP bar	ψ	Connection	Seal	Link
	MPFX-103-3-A-Q3-A25-H-BPFI	8	116	25.74	25.3	0.47	7	0.12	2	0.33	5	G 1"	A	
	MPFX-104-3-A-Q3-A25-H-BPFI	8	116	25.74	25.3	0.47	7	0.12	2	0.33	5	G 1"	A	

## Step 5

It is possible to change the filter modifying every parameter.



### A SAVE YOUR FILTER'S REPORT



### B MANUAL EDIT



SAVE IN YOUR ARCHIVE  
typing your reference data and then SAVE AS PDF



A new browser window displays the pdf

see **A**

Close the report window



By clicking your WELCOME button, the SHOW REPORTS is displayed: select it to see your filters list.



THE NEW FILTER CONCEPT

MPFX  
MPLX  
MPTX  
MFBX  
MFX  
series

## NEW FILTER ELEMENT WITH EXCLUSIVE INTERFACE CONNECTION

- **Protects the machine from improper use of non-original products.**
- **Safety of constant quality protection & reliability**

With exclusive filter element you are sure that only MP Filtri filter elements can be used, ensuring the best cleaning level of the oil due to the use of originals filter elements.



Filter element featuring our UNIQUE end cap with polygonal design.



UNIQUE polygonal spigot fitting within the filter bowl.

The products identified as MPFX, MPLX, MPTX, MFBX and MFX are protected by:

Italian Patent n° 102014902261205

Canadian Patent n° 2,937,258

and by the following patent applications:

European Patent n° 16181725.9

US Patent Pending n° 15/224,337



## Description

## Technical data

### Return filter Bowl assembly

**Maximum working pressure up to 800 kPa (8 bar)**  
**Flow rate up to 700 l/min**

MFBX 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)
- MyClean interface connection, to protect the product against non-original spare parts
- External protective wrap, to optimize the flow through the element and to save the element efficiency against non-proper handling

#### Common applications:

Mobile machines

#### Bowl assembly materials

- Cover  
Nylon: MFBX 020-030-100  
Aluminium: MFBX 180-190

- Bowl: Nylon

#### Filter element materials

- Caps: Nylon
- Spring: Spring steel

#### Bypass valve

- Opening pressure 175 kPa (1.75 bar)  $\pm 10\%$
- Opening pressure 300 kPa (3 bar)  $\pm 10\%$

#### $\Delta p$ element type

- Microfibre filter elements - series H: 10 bar
- Fluid flow through the filter element from OUT to IN

#### Seals

- Standard NBR series A
- Optional FPM series V

#### Temperature

From -25 °C to +110 °C

#### Note

MFBX 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>MFBX 020</b>		0.25	0.35	0.40	-		0.10	0.15	0.20	-
<b>MFBX 030</b>		0.25	-	-	-		0.15	-	-	-
<b>MFBX 100</b>		0.50	0.60	0.75	0.95		0.35	0.50	0.80	1.10
<b>MFBX 180</b>		1.60	2.40	-	-		1.50	2.90	-	-
<b>MFBX 190</b>		-	2.40	-	-		-	3.00	-	-

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

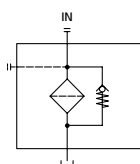
The reference fluid has a kinematic viscosity of 30 mm<sup>2</sup>/s (cSt) and a density of 0.86 kg/dm<sup>3</sup>.

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
<b>MFBX 020</b>	•
<b>MFBX 030</b>	•
<b>MFBX 100</b>	•
<b>MFBX 180</b>	•
<b>MFBX 190</b>	•



## Designation & Ordering code

### COMPLETE FILTER

<b>Series and size</b>						Configuration example 1: <b>MFBX100</b>   <b>1</b>   <b>A</b>   <b>2</b>   <b>A10</b>   <b>H</b>   <b>E</b>   <b>P01</b>							
<b>MFBX020</b>   <b>MFBX030</b>   <b>MFBX100</b>   <b>MFBX180</b>   <b>MFBX190</b>						Configuration example 2: <b>MFBX180</b>   <b>2</b>   <b>V</b>   <b>1</b>   <b>M25</b>   <b>N</b>   <b>B</b>   <b>P01</b>							
Filter element with private spigot													
<b>Length</b>		MFBX020	MFBX030	MFBX100	MFBX180	MFBX190							
1		•	•	•	•								
2		•		•	•	•							
3		•		•									
4				•									
<b>Seals</b>													
<b>A</b> NBR													
<b>V</b> FPM													
<b>Version</b>		MFBX020	MFBX030	MFBX100	MFBX180	MFBX190							
1	Without cover	•	•	•	•	•							
2	With flanged cover type MPF		•	•	•	•							
3	With threaded cover type MPT	•		•									
<b>Filtration rating (filter media)</b>													
<b>A03</b>	Inorganic microfiber 3 µm												
<b>A06</b>	Inorganic microfiber 6 µm												
<b>A10</b>	Inorganic microfiber 10 µm												
<b>A16</b>	Inorganic microfiber 16 µm												
<b>A25</b>	Inorganic microfiber 25 µm												
<b>M25</b>	Wire mesh 25 µm												
<b>M60</b>	Wire mesh 60 µm												
<b>M90</b>	Wire mesh 90 µm												
<b>P10</b>	Resin impregnated paper 10 µm												
<b>P25</b>	Resin impregnated paper 25 µm												
<b>Element Δp</b>				Filter media									
				Axx	Mxx	Pxx							
<b>N</b>	10 bar				•	•							
<b>H</b>	10 bar				•								
<b>W</b>	10 bar, compatible with fluids HFA, HFB and HFC			•	•								
							<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				

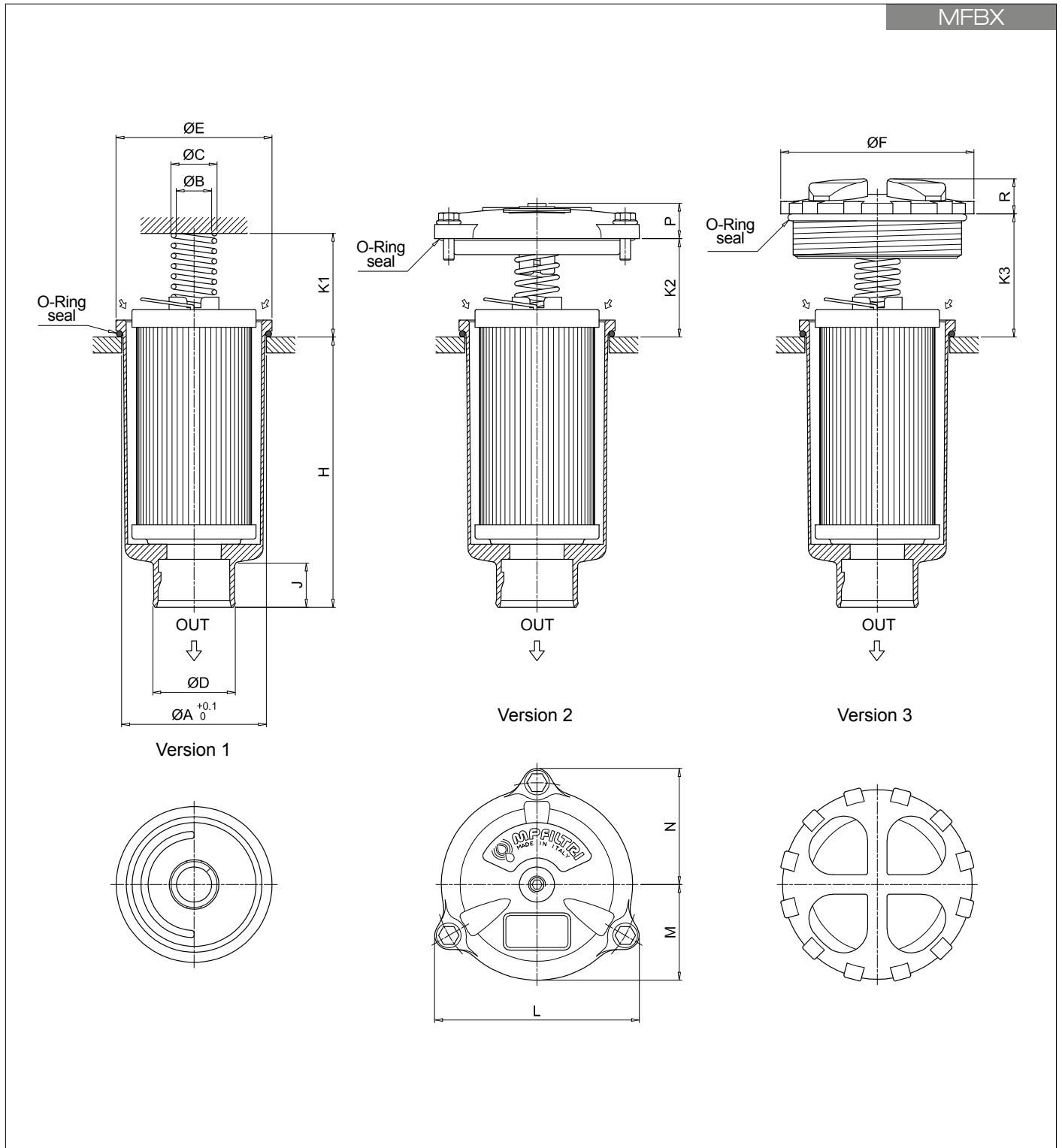
### FILTER ELEMENT

<b>Element series and size</b>						Configuration example 1: <b>MFX180</b>   <b>2</b>   <b>M25</b>   <b>H</b>   <b>V</b>   <b></b>   <b>P01</b>									
<b>MFX020</b>   <b>MFX030</b>   <b>MFX100</b>   <b>MFX180</b>						Configuration example 2: <b>MFX100</b>   <b>1</b>   <b>A10</b>   <b>N</b>   <b>B</b>   <b>E</b>   <b>P01</b>									
Filter element with private spigot															
<b>Element length</b>		MFX020	MFX030	MFX100	MFX180	MFX190									
1		•	•	•	•										
2		•		•	•	•									
3		•		•											
4				•											
<b>Filtration rating (filter media)</b>															
<b>A03</b>	Inorganic microfiber 3 µm														
<b>A06</b>	Inorganic microfiber 6 µm														
<b>A10</b>	Inorganic microfiber 10 µm														
<b>A16</b>	Inorganic microfiber 16 µm														
<b>A25</b>	Inorganic microfiber 25 µm														
<b>M25</b>	Wire mesh 25 µm														
<b>M60</b>	Wire mesh 60 µm														
<b>M90</b>	Wire mesh 90 µm														
<b>P10</b>	Resin impregnated paper 10 µm														
<b>P25</b>	Resin impregnated paper 25 µm														
<b>Element Δp</b>				Filter media											
				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				

### ACCESSORIES

<b>Additional features</b>											page	
		MFBX020	MFBX030	MFBX100	MFBX180	MFBX190						
<b>TE</b>	Extension tube	•	•	•	•	•						248
<b>DFS</b>	Diffuser with fast lock connection			•								249

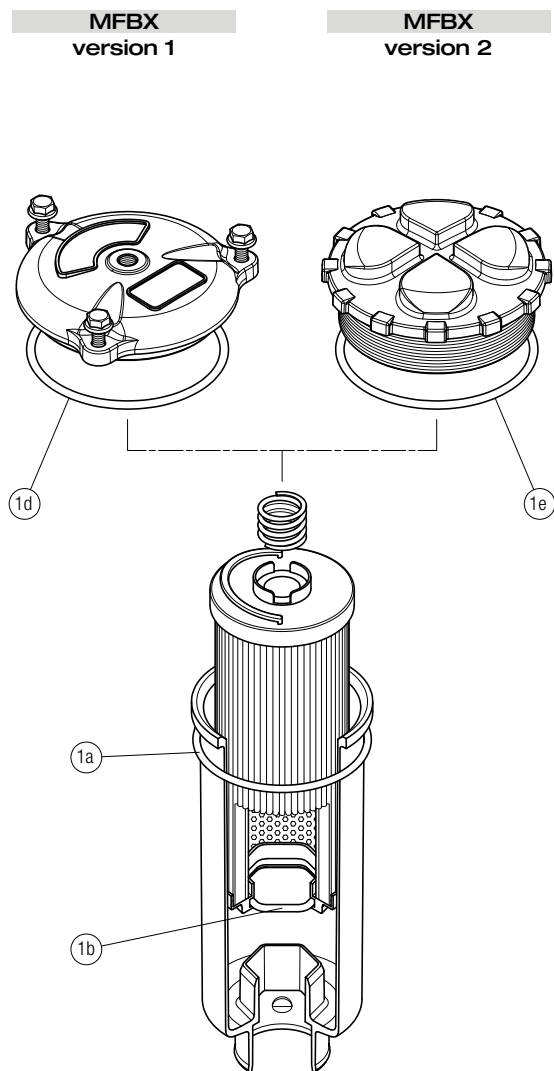




Filter size	Filter Length	Ø A [mm]	Ø B [mm]	Ø C [mm]	Ø D [mm]	Ø E [mm]	Ø F [mm]	H [mm]	J [mm]	K1 [mm]	K2 [mm]	K3 [mm]	L [mm]	M [mm]	N [mm]	P [mm]	R [mm]
<b>020</b>	1	52	20.5	26	32	56	75	111	24	42	-	36	-	-	-	-	18
	2	52	20.5	26	32	56	75	175	24	42	-	36	-	-	-	-	18
	3	52	20.5	26	32	56	75	214	24	42	-	36	-	-	-	-	18
<b>030</b>	1	60.5	20	25.5	32	68	-	93	21	33	35	-	92	42	52	18	-
	2	80.5	20	26	47	88	111	109	24	58	55	69	116	54	66	20	20
<b>100</b>	1	80.5	20	26	47	88	111	154	24	58	55	69	116	54	66	20	20
	2	80.5	20	26	47	88	111	232	24	58	55	69	116	54	66	20	20
	3	80.5	20	26	47	88	111	334	24	58	55	69	116	54	66	20	20
<b>180</b>	1	112.5	26	33.5	47	121	-	234	31	58	69	-	159	76	95	21	-
	2	112.5	26	33.5	47	121	-	447	31	58	69	-	159	76	95	21	-
<b>190</b>	2	112.5	26	33.5	50	121	-	454	38	58	69	-	159	76	95	21	-

# MFBX SPARE PARTS

Order number for spare parts



Item: <span style="float: right;">Q.ty: 1 pc.</span>		
<b>1</b> (1a ÷ 1d)		
Filter series	Seal Kit code number	
	NBR	FPM
<b>MFBX 020</b>	02050713	02050714
<b>MFBX 030</b>	02050715	02050716
<b>MFBX 100</b>	02050717	02050718
<b>MFBX 180-190</b>	02050719	02050720