



THE **X** CONCEPT FOR OUR FILTERS

Protect the performance of your system with MYclean.  
Quality and efficiency are fundamental for MP Filtri:  
this exclusive new filter element possesses polygon shape geometry and specific seal  
that ensures only original spare parts can be used - ensuring correct operation and  
higher system reliability.

MFBX series

with **MYCLEAN** MFX Filter Element



- **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.

The products identified as MFBX are protected by:

- Italian Patent n° 102014902261205
- Canadian Patent n° 2,937,258
- European Patent n° 3 124 092 B1
- US Patent n° 20170030384 A1



TOGETHER WITH **MYCLEAN**, AS OPTION, MFBX SERIES CAN BE PROVIDED WITH

**zerospark**<sup>®</sup>  
THE ANTI-STATIC FILTERS

THE **Z** CONCEPT FOR OUR FILTERS



Zerospark<sup>®</sup> is a specialist solution designed to solve the problem of electrostatic discharge inside hydraulic filters. Caused by the electrical charge build-up due to the passage of oil through the filters, this can result in damage to filter elements, oils and circuit components. It can even cause fire hazards in environments where flammable materials are present.

# MFBX series

BOWL ASSEMBLY

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



## 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  
Polyamide: MFBX 020-030-100  
Aluminium: MFBX 180-190

- Bowl: Polyamide

#### Filter element materials

- Caps: Polyamide
- 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	-	-

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
<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.**

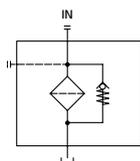
The reference fluid has a kinematic viscosity of 30 mm<sup>2</sup>/s (cSt) and a density of 0.86 kg/dm<sup>3</sup>.

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

#### Series and size

**MFBX020** | **MFBX100** | **MFBX190** Filter featuring  
**MFBX030** | **MFBX180** **MYCLEAN** Filter Element

Configuration example 1: **MFBX100** | **1** | **A** | **2** | **A10** | **H** | **E** | **P01**

Configuration example 2: **MFBX180** | **2** | **V** | **1** | **M25** | **N** | **B** | **P01**

Length	MFBX020	MFBX030	MFBX100	MFBX180	MFBX190
1	•	•	•	•	-
2	•	-	•	•	•
3	•	-	•	-	-
4	-	-	•	-	-

#### Seals

**A** NBR  
**V** FPM

Version	MFBX020	MFBX030	MFBX100	MFBX180	MFBX190
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		
	Axx	Mxx	Pxx
<b>N</b> 10 bar	-	•	•
<b>H</b> 10 bar	•	-	-

Bypass valve	Executions	
	Base	zérospark*
<b>E</b> 3 bar	<b>P01</b>	<b>Z01*</b> MP Filtri standard
<b>B</b> 1.75 bar	<b>Pxx</b>	<b>Zxx*</b> Customized

\* Not for Mxx filter media

### FILTER ELEMENT

#### Element series and size

**MFXX020** | **MFXX100** | **MFXX030** | **MFXX180** Filter Element with **MYCLEAN** feature

Configuration example 1: **MFXX180** | **2** | **M25** | **H** | **V** | **P01**

Configuration example 2: **MFXX100** | **1** | **A10** | **N** | **B** | **E** | **P01**

Element length	MFXX020	MFXX030	MFXX100	MFXX180	MFXX190
1	•	•	•	•	-
2	•	-	•	•	•
3	•	-	•	-	-
4	-	-	•	-	-

#### Filtration rating (filter media)

<b>A03</b> Inorganic microfiber 3 µm	<b>M25</b> Wire mesh 25 µm
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<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		
	Axx	Mxx	Pxx
<b>N</b> 10 bar	-	•	•
<b>H</b> 10 bar	•	-	-

Seals	Bypass valve	Executions	
		Base	zérospark*
<b>B</b> NBR	<b>E</b> 3 bar	<b>P01</b>	<b>Z01*</b> MP Filtri standard
<b>V</b> FPM	- 1.75 bar	<b>Pxx</b>	<b>Zxx*</b> Customized

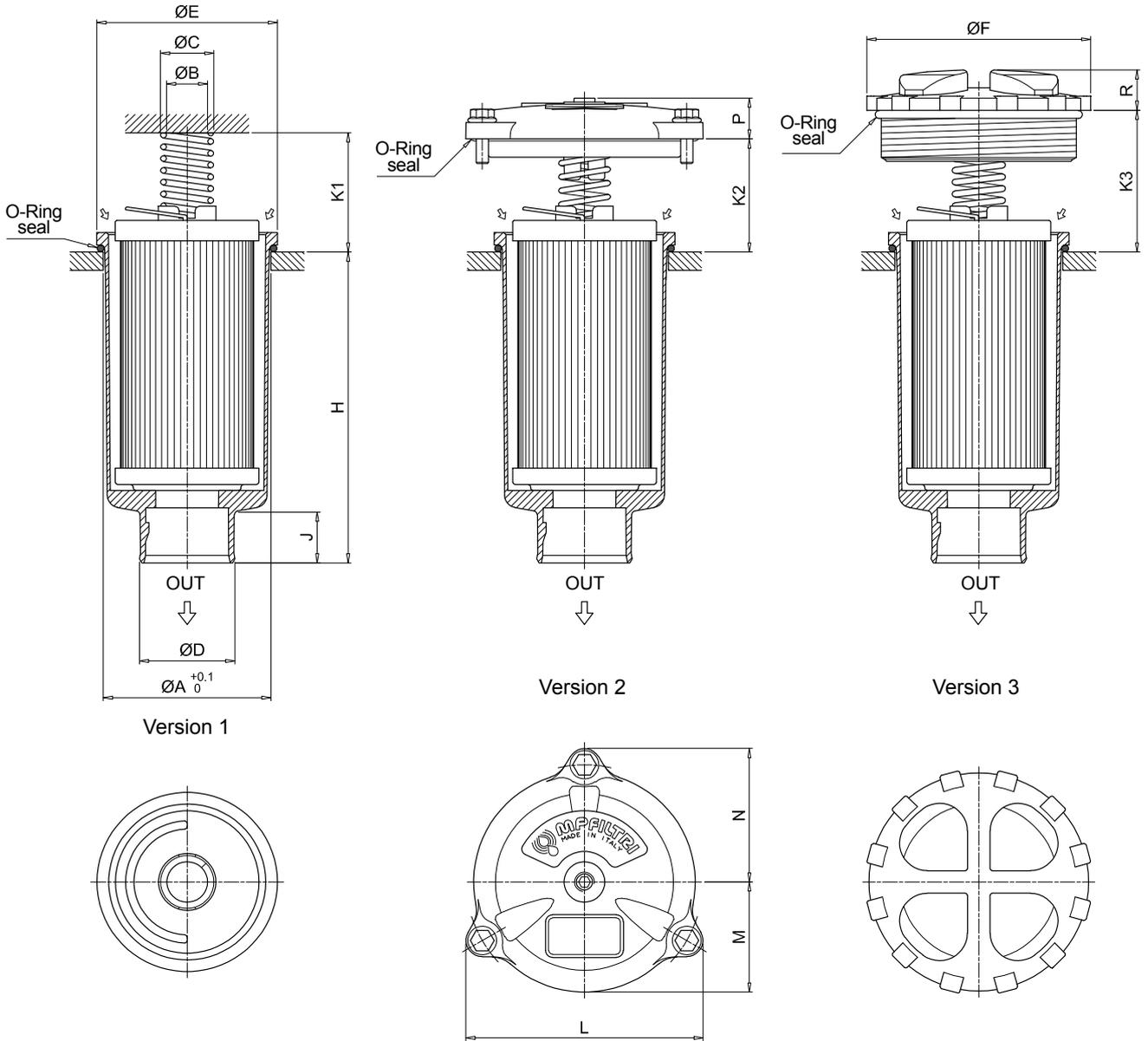
\* Not for Mxx filter media

### ACCESSORIES

See page 268-269

	MFBX020	MFBX030	MFBX100	MFBX180	MFBX190
<b>TE</b> Extension tube	•	•	•	•	•
<b>DFS</b> Diffuser with fast lock connection	-	-	•	-	-

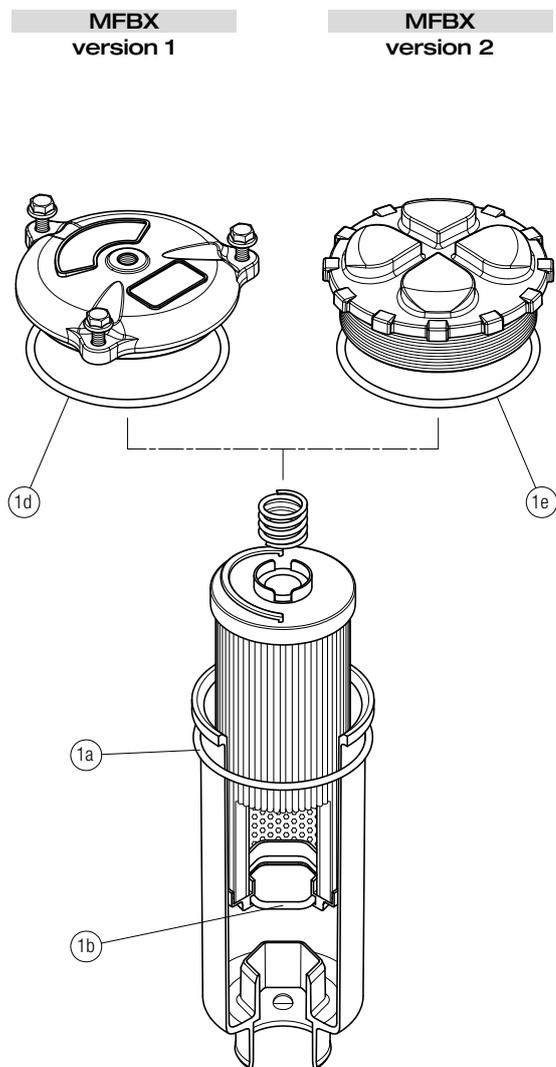
MFBX



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>		
1 (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

# Accessories

## DIFFUSER WITH FAST LOCK CONNECTION

Configuration example: **DFS 32 A 075**

Series	Size	Ø D [mm]	Version	Length
<b>DFS</b>	<b>40</b>	<b>40</b>	<b>A</b> Standard	<b>075</b> Standard

COMPATIBILITY TABLE							
Filter series	Filter size			Filter Length	DFS32	DFS40	
MPF	100	104	110	1	•	-	
				2	-	-	
				3	-	-	
				4	-	•	
MPFX	100	104	110	1	-	•	
				2	-	•	
				3	-	•	
				4	-	•	
MPT	110	114	116	120	1	•	-
					2	-	-
					3	-	•
					4	-	•
MPTX	110	114	116	120	1	-	•
					2	-	•
					3	-	•
					4	-	•

## DIPSTICK

Configuration example: **DPT 20 M10 A P01**

Series	Length	H [mm]
<b>DPT</b>	<b>15</b>	<b>134</b>
	<b>20</b>	<b>184</b>
	<b>25</b>	<b>234</b>
	<b>30</b>	<b>284</b>
	<b>35</b>	<b>334</b>

**Materials**

- Screw: phosphatized steel
- Stick: phosphatized steel
- Handle: Polyamide

**Technical data**

Working temperature: from -25 °C to +110 °C

**Seals**

<b>A</b>	NBR
<b>V</b>	FPM

**Fastening**

<b>M8</b>	Fastening with screws Ø D = M8
<b>M10</b>	Fastening with screws Ø D = M10

**Execution**

<b>P01</b>	MP Filtri standard
<b>Pxx</b>	Customized

## FILLER PLUG

**Materials**

- Body: Polyamide
- Seal: NBR

**Technical data**

Tightening torque: 15 N·m

O-Ring 3106

M30x1.5

For any further information, please, contact our commercial dept.

## POLYAMIDE EXTENSION TUBE

H1 - Total length immersed in the tank

Conf. example: **TE** **40** **A** **250**

Series	Length	H [mm]	25-32-40	51-62
<b>TE</b>	<b>200</b>	200	•	•
<b>250</b>	<b>250</b>	250	•	-
<b>300</b>	<b>300</b>	300	•	•
<b>350</b>	<b>350</b>	350	•	-
<b>400</b>	<b>400</b>	400	•	•
<b>450</b>	<b>450</b>	450	•	-
<b>500</b>	<b>500</b>	500	•	•
<b>600</b>	<b>600</b>	600	-	•

Size	Ø D [mm]
<b>25</b>	25
<b>32</b>	32
<b>40</b>	40
<b>51</b>	51
<b>62</b>	62

Material **A** Polyamide

COMPATIBILITY TABLE																					
Filter series	Filter size			Filter length	Tube length																
					TE25	TE32	TE40	TE51	TE62	200	250	300	350	400	450	500	600				
MPF	30			1	•	-	-	-	-	-	266	316	366	416	466	516	566	-			
MPF	100	104	110	1	-	•	-	-	-	-	275	325	375	425	475	525	575	-			
				2	-	•	-	-	-	-	-	322	372	422	472	522	572	622	-		
				3	-	-	•	-	-	-	-	-	400	450	500	550	600	650	700	-	
				4	-	-	-	-	-	-	-	-	502	552	602	652	702	752	802	-	
MPFX	100	104	110	1	-	-	•	-	-	-	277	327	377	427	477	527	577	-			
				2	-	-	•	-	-	-	-	322	372	422	472	522	572	622	-		
				3	-	-	-	-	-	-	-	-	400	450	500	550	600	650	700	-	
				4	-	-	-	-	-	-	-	-	502	552	602	652	702	752	802	-	
MPF	181	182	184	1	-	-	•	-	-	-	410	460	510	560	610	660	710	-			
				2	-	-	•	-	-	-	-	623	673	723	773	823	873	923	-		
MPFX	400	410	450	451	1	-	-	-	•	-	620	-	720	-	820	-	920	1020			
					2	-	-	-	-	•	-	-	352	-	452	-	552	-	652	752	
					3	-	-	-	-	-	•	-	-	411	-	511	-	611	-	711	811
MPT	110	114	116	120	1	-	-	-	-	•	597	-	697	-	797	-	897	997			
					2	-	-	-	-	-	-	-	278	328	378	428	478	528	578	-	
					3	-	-	-	-	-	-	-	-	342	392	442	492	542	592	642	-
					4	-	-	-	-	-	-	-	-	380	430	480	530	580	630	680	-
MPTX	110	114	116	120	1	-	•	-	-	-	273	323	373	423	473	523	573	-			
					2	-	-	•	-	-	-	-	320	370	420	470	520	570	620	-	
					3	-	-	-	•	-	-	-	-	396	446	496	546	596	646	696	-
					4	-	-	-	-	•	-	-	-	498	548	598	648	698	748	798	-
MPTX	110	114	116	120	1	-	-	•	-	-	273	323	373	423	473	523	573	-			
					2	-	-	-	•	-	-	-	318	368	418	468	518	568	618	-	
					3	-	-	-	-	•	-	-	-	396	446	496	546	596	646	696	-
					4	-	-	-	-	-	•	-	-	498	548	598	648	698	748	798	-

## STEEL EXTENSION TUBE

H1

ØD

Configuration example: **MPF191** **2** **A** **F1** **A10** **H** **B** **S60**

Length	H1 [mm]
<b>S30</b>	300
<b>S35</b>	350
<b>S40</b>	400
<b>S45</b>	450
<b>S50</b>	500
<b>S60</b>	600
<b>S70</b>	700
<b>S80</b>	800
<b>S90</b>	900

COMPATIBILITY TABLE							
Filter series	Filter size			Filter length	Ø D [mm]		
					52	65	
MPF	191	192	194	2	•	-	
				1	•	-	
	400	410	450	451	2	-	•
					3	-	•
	750				1	-	•