

# MFB 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**

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

#### 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

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	-	-

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>.

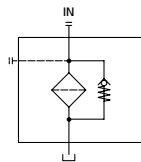
For different pressure drop or fluid viscosity we recommend to use our selection software available on [www.mpfiltri.com](http://www.mpfiltri.com).

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

### FILTER ELEMENT

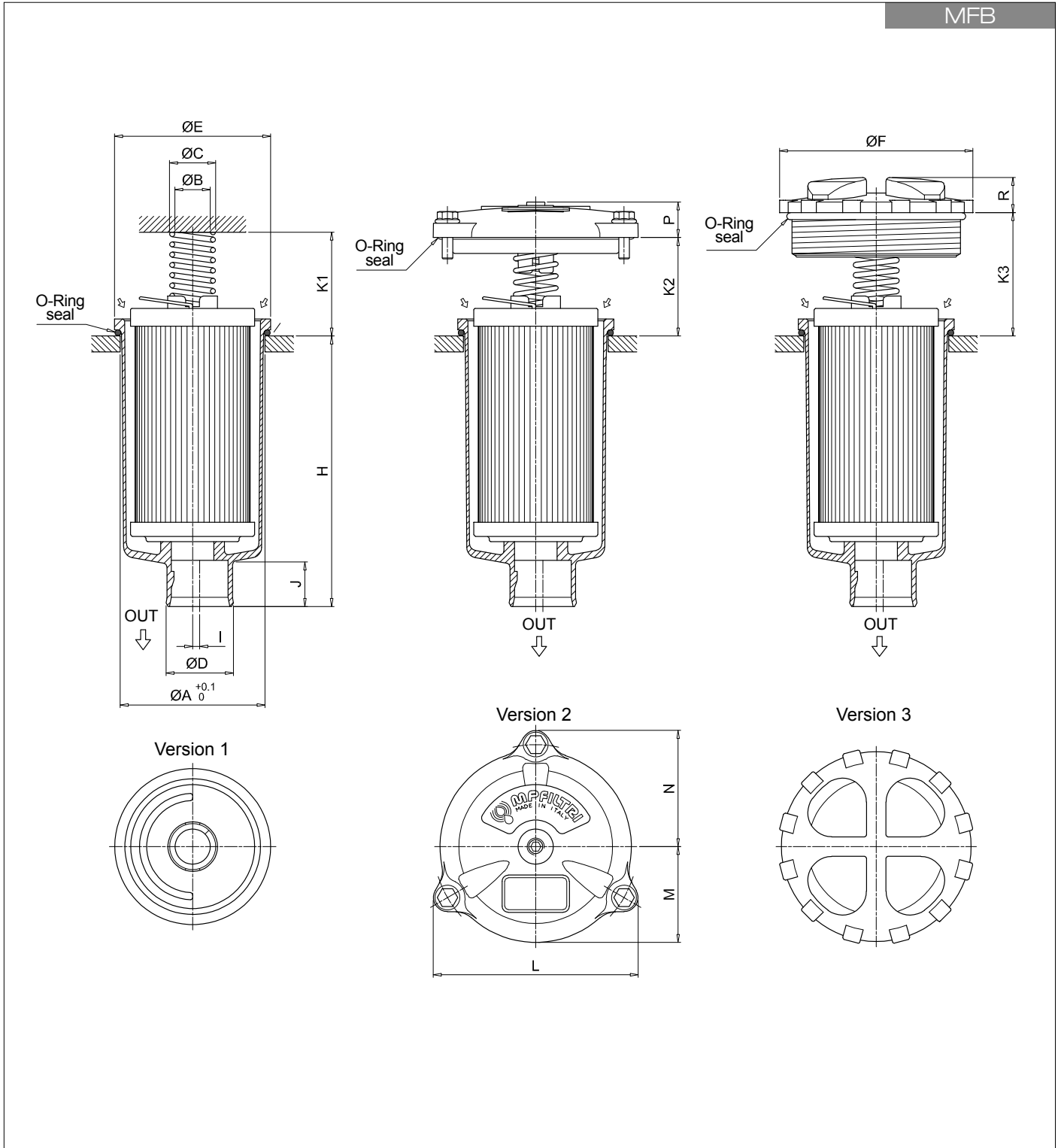
Element series and size						Configuration example 1: MF100 1 A10 H B E P01											
MF020   MF030   MF100   MF180   MF190						Configuration example 2: MF180 2 M25 N V P01											
Filter element with private spigot																	
Element length	MF020	MF030	MF100	MF180	MF190												
1	•	•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

### ACCESSORIES

See page 262

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

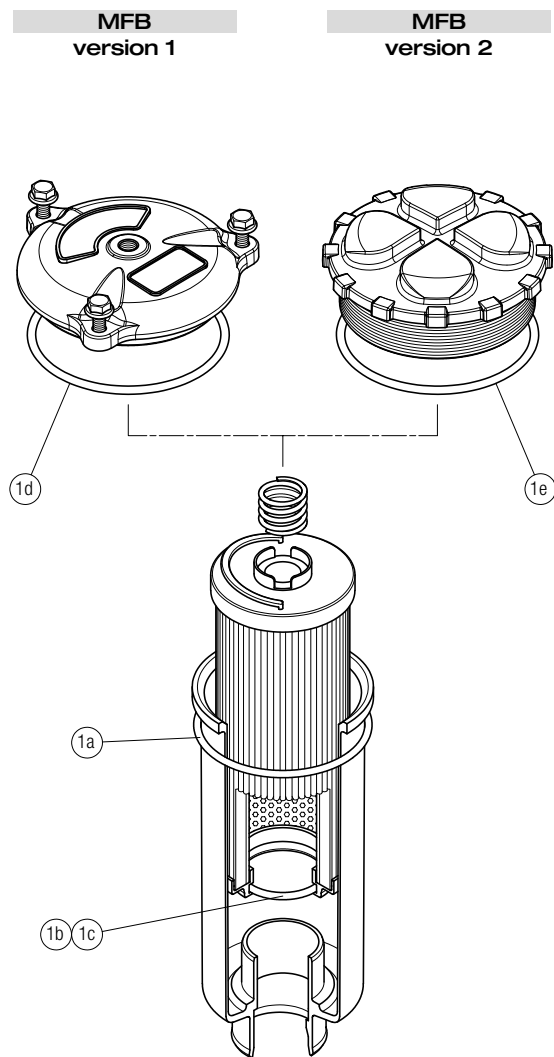
MFB



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



Item: <span style="float: right;">Q.ty: 1 pc.</span>		
<b>1</b> (1a ÷ 1e)		
Filter series	Seal Kit code number	
	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



# Accessories

## POLYAMIDE EXTENSION TUBE

H1 - Total length immersed in the tank

Configuration example: **TE** **40** **A** **250**

Series	Size	Material	Length	H [mm]
<b>TE</b>			<b>200</b>	200
			<b>250</b>	250
			<b>300</b>	300
			<b>350</b>	350
			<b>400</b>	400
			<b>450</b>	450
			<b>500</b>	500

Filter series		Filter size		Filter length	Tube length										
					TE25	TE32	TE40	200	250	300	350	400	450	500	
MPF - MPFX	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 MPFX	181	182	184	1	-	-	•	410	460	510	560	610	660	710	
				2	-	-	-	623	673	723	773	823	873	923	
MPT MPTX	025		027	1	•	-	-	278	328	378	428	478	528	578	
				2	-	-	-	342	392	442	492	542	592	642	
				3	-	-	-	380	430	480	530	580	630	680	
MPT	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 - Total length immersed in the tank

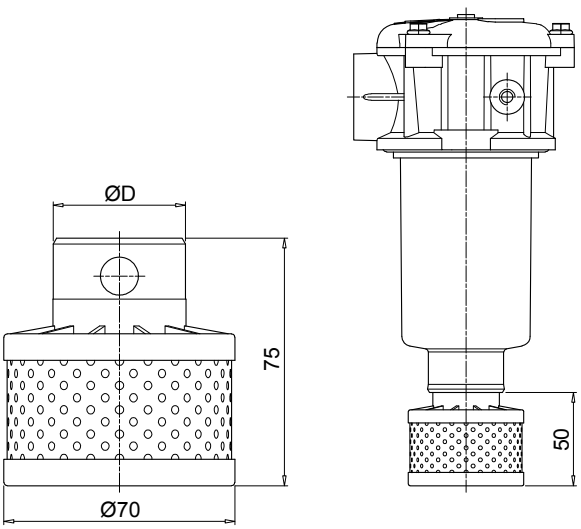
Configuration example: **MPF191** **2** **A** **F1** **A10** **H** **B** **S60**

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

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	-	•



## DIFFUSER WITH FAST LOCK CONNECTION

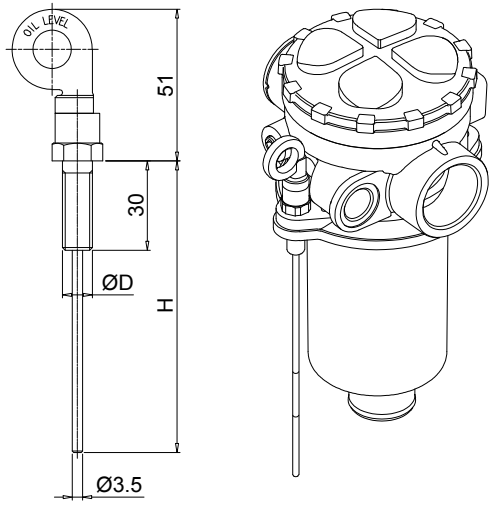


Configuration example: **DFS 32 A 075**

Series		<b>DFS</b>
Size		<b>32</b>
Size	ø D [mm]	<b>32</b>
<b>40</b>	40	
Version		<b>A</b> Standard
Length		<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



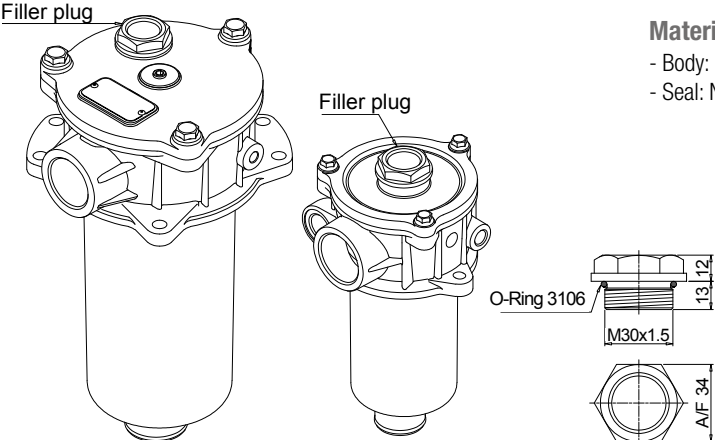
Configuration example: **DPT 20 M10 A P01**

Series		<b>DPT</b>
Length	H [mm]	<b>20</b>
<b>15</b>	134	
<b>20</b>	184	
<b>25</b>	234	
<b>30</b>	284	
<b>35</b>	334	
Fastening		<b>M8</b> Fastening with screws ø D = M8
		<b>M10</b> Fastening with screws ø D = M10
Seals		<b>A</b> NBR
		<b>V</b> FPM
Execution		<b>P01</b> MP Filtri standard
		<b>Pxx</b> Customized

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

**Technical data**  
 Working temperature: from -25 °C to +110 °C

## FILLER PLUG



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

Series		<b>DPT</b>
Length	H [mm]	<b>20</b>
<b>15</b>	134	
<b>20</b>	184	
<b>25</b>	234	
<b>30</b>	284	
<b>35</b>	334	
Fastening		<b>M8</b> Fastening with screws ø D = M8
		<b>M10</b> Fastening with screws ø D = M10
Seals		<b>A</b> NBR
		<b>V</b> FPM
Execution		<b>P01</b> MP Filtri standard
		<b>Pxx</b> Customized

**Materials**  
 - Body: Polyamide  
 - Seal: NBR

**Technical data**  
 Tightening torque: 15 N·m

O-Ring 3106 / M30x1.5 / 13 / 12 / A/F 34

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