MPFX series

Maximum working pressure up to 800 kPa (8 bar) - Flow rate up to 750 l/min



MYCLEAN

THE NEW FILTER CONCEPT

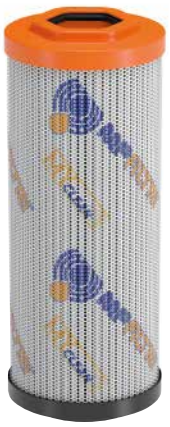
MPFX
MPTX
MFBX
MFX
series

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.





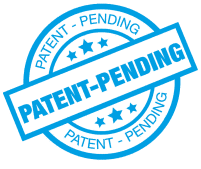
Filter element featuring our UNIQUE end cap with polygonal design.



UNIQUE polygonal spigot fitting within the filter bowl.

The products identified as MPFX, MPTX, MFBX and MFX are protected by Italian Patent n° 102015000040473 and by one or more of the following patent applications:

European Patent Pending: n° 16181725.9
US Patent Pending: n° 15/224,337
Canadian Patent Pending: n° 2,937,258



MPFX GENERAL INFORMATION

Description

Return filter

Maximum working pressure up to 800 kPa (8 bar)
Flow rate up to 750 l/min

MPFX is a range of return filters for protection of the reservoir against the system contamination.
They are directly fixed to the reservoir, in immersed or semi-immersed position.
The filter output must be always immersed into the fluid to avoid aeration or foam generation into the reservoir.

Available features:
- Female threaded connections up to 2" and flanged connections up to 2", for a maximum flow rate of 750 l/min
- Multiple connections, to connect several return lines or drains
- 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
- 2, 3 or 4 fixing holes for installation, to meet any reservoir surface flatness and roughness
- O-ring or Flat seal, to meet any reservoir surface flatness and roughness
- Oil dipstick, to easily check the level of the fluid into the reservoir (sold as separate item)
- 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)
- Filler plug, to fill cleaned fluid into the tank without an additional connection
- Visual, electrical and electronic clogging indicators
- 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:
- Light Industrial equipment
- Mobile application

Technical data

Filter housing materials
- Head: Aluminium

- Cover
  Nylon: MPFX 030-100-104-110
  Aluminium: MPFX 181-182-184-191-192-194-400-410-450-451-750

- Bowl: Nylon

Bypass valve
- Opening pressure 175 kPa (1.75 bar) ±10%
- Opening pressure 300 kPa (3 bar) ±10%

Δp element type
- Microfiber 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

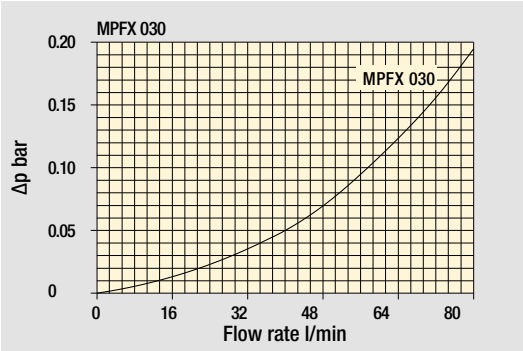
Note
MPFX filters are provided for vertical mounting

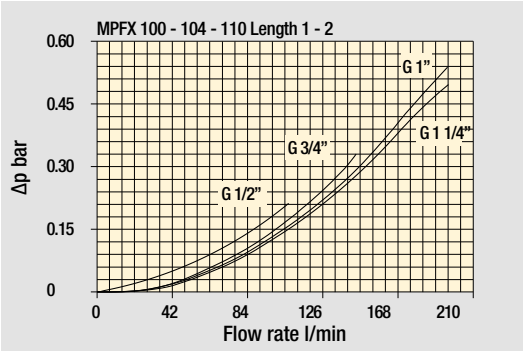


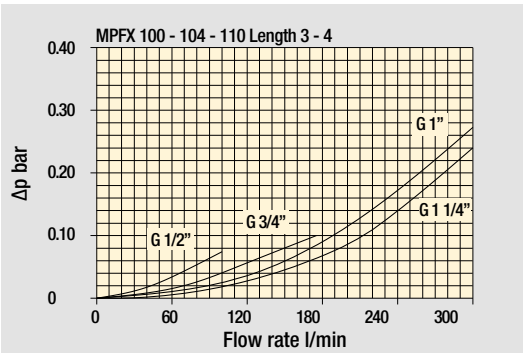
Weights [kg] and volumes [dm³]

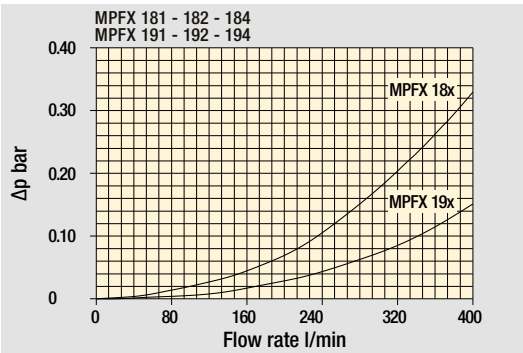
Filter series	Weights [kg]					Volumes [dm³]				
	Length	1	2	3	4	Length	1	2	3	4
MPFX 030		0.40	-	-	-		0.29	-	-	-
MPFX 100		0.61	0.64	0.67	0.74		0.64	0.85	1.20	1.65
MPFX 104		0.82	0.96	1.02	1.25		0.64	0.85	1.20	1.65
MPFX 110		0.64	0.68	0.71	0.78		-	-	-	-
MPFX 181		2.20	3.00	-	-		2.50	4.00	-	-
MPFX 182		2.30	3.10	-	-		2.50	4.00	-	-
MPFX 184		2.55	3.45	-	-		2.65	4.45	-	-
MPFX 191		-	3.00	-	-		-	4.25	-	-
MPFX 192		-	3.10	-	-		-	4.25	-	-
MPFX 194		-	3.45	-	-		-	4.45	-	-
MPFX 400		3.35	3.65	3.90	-		3.70	4.60	5.40	-
MPFX 410		3.55	3.85	4.10	-		3.70	4.60	5.40	-
MPFX 450-451		3.95	4.25	4.50	-		3.70	4.60	5.40	-
MPFX 750		6.30	-	-	-		8.45	-	-	-

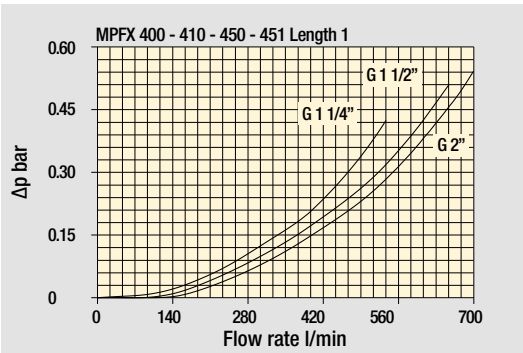
Filter housings Δp pressure drop

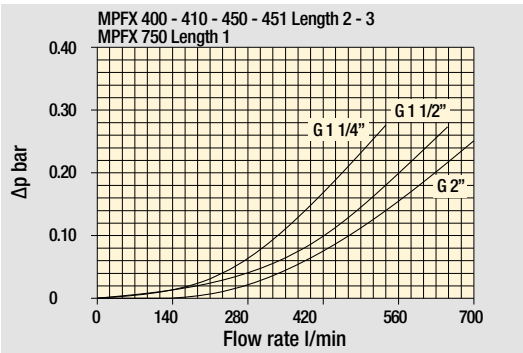




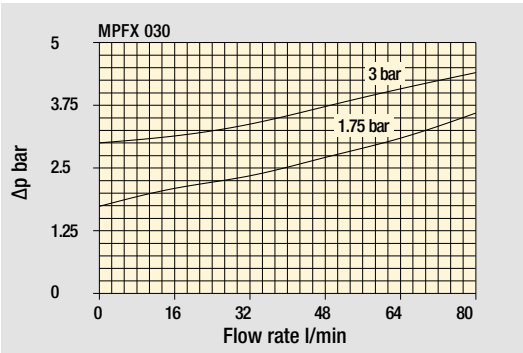


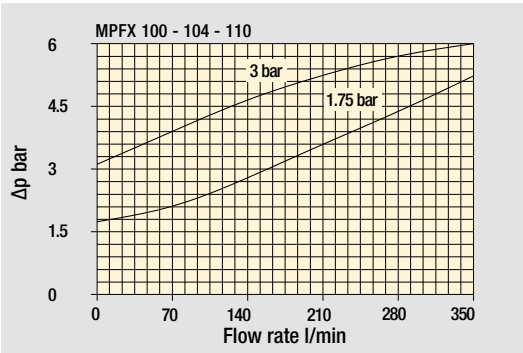


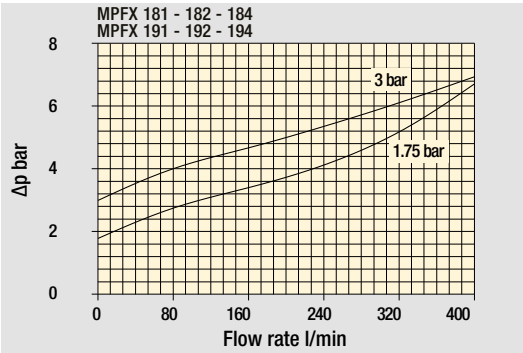


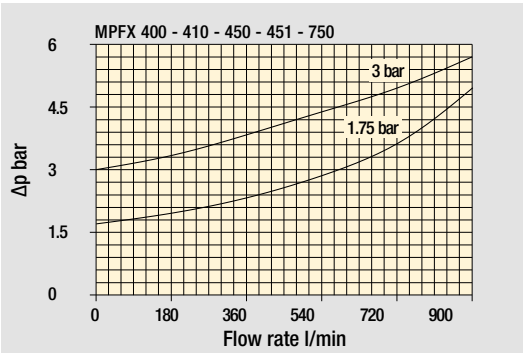


Bypass valve pressure drop









The curves are plotted using mineral oil with density of 0.86 kg/dm^3 in compliance with ISO 3968.
Δp varies proportionally with density.

MPFX GENERAL INFORMATION

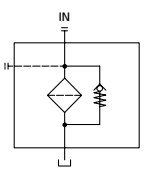
Flow rates [l/min]

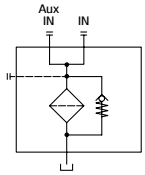
Filter series	Length	Filter element design - H series					Filter element design - N series		
		A03	A06	A10	A16	A25	M25 M60 M90	P10	P25
MPFX 030	**1**	7	10	24	29	47	84	60	66
MPFX 100-104-110	**1**	18	20	53	56	65	153	87	96
	2	28	38	65	75	95	158	111	123
	3	48	55	125	135	169	289	224	251
	4	79	89	180	185	198	306	264	289
MPFX 181-182-184	**1**	127	148	235	243	278	441	285	299
	2	231	262	358	382	388	472	404	412
MPFX 191-192-194	**2**	261	305	489	528	546	696	583	598
MPFX 400	**1**	150	171	294	304	350	585	370	390
	2	237	252	454	462	589	868	619	645
	3	248	288	553	609	621	885	680	703
MPFX 410	**1**	146	167	277	285	325	512	341	357
	2	226	239	396	402	485	644	503	519
	3	236	269	462	497	505	653	539	553
MPFX 450-451	**1**	150	171	294	304	350	585	370	390
	2	237	252	454	462	589	868	619	645
	3	248	288	553	609	621	885	680	703
MPFX 750	**1**	392	465	623	700	769	929	804	819

Maximum flow rate for a complete return filter with a pressure drop Δp = 0.5 bar.
The reference fluid has a kinematic viscosity of 30 mm^2/s (cSt) and a density of 0.86 kg/dm^3.
For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.
Please, contact our Sales Department for further additional information.

Hydraulic symbols

Filter series	Style 1 connection	Style 2 connections
MPFX 030	•	
MPFX 100	•	
MPFX 104	•	
MPFX 110		•
MPFX 181	•	
MPFX 182		•
MPFX 184	•	•
MPFX 191	•	
MPFX 192	•	
MPFX 194	•	•
MPFX 400	•	
MPFX 410		•
MPFX 450	•	
MPFX 451		•
MPFX 750	•	

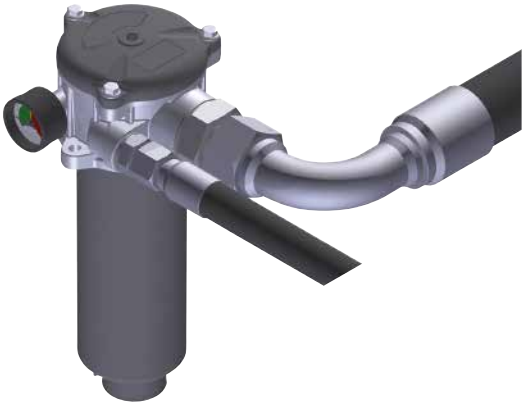




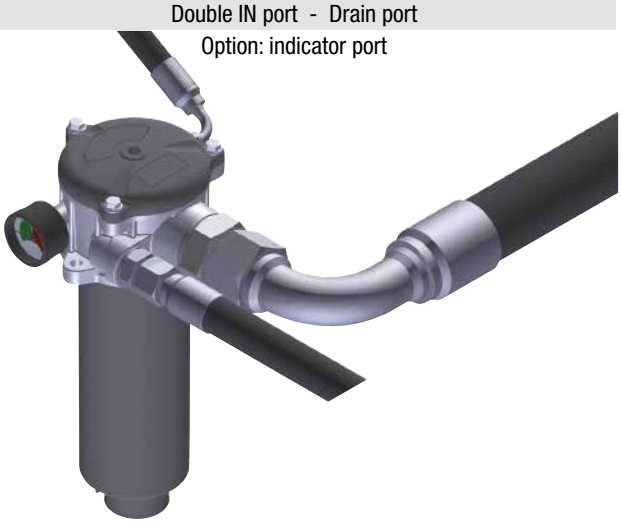
Standard - Single IN port



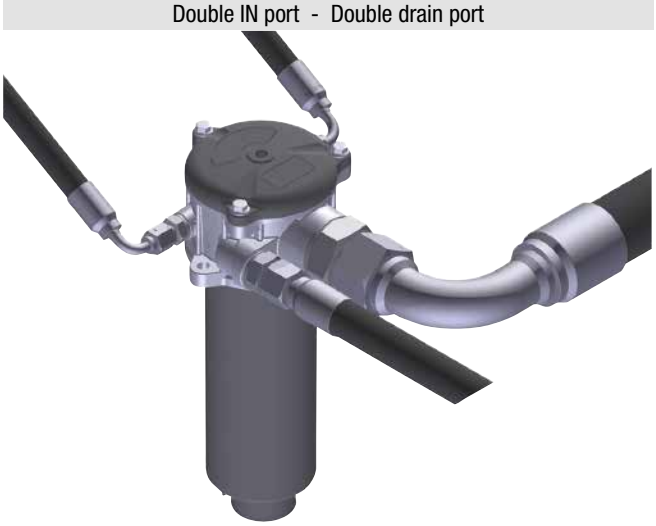
Double IN port
Option: double indicator port



Double IN port - Drain port
Option: indicator port



Double IN port - Double drain port



MPFX MPFX184 - MPFX194

Designation & Ordering code

COMPLETE FILTER

Configuration example 1: MPFX184 | 1 | A | G1 | A25 | H | E | P01

Configuration example 2: MPFX194 | 2 | V | F3 | P10 | N | B | P01

Series and size

MPFX184 | **MPFX194** Filter element with private spigot

Length	Size 184	Size 194
1	•	
2	•	•

Seals and treatments

A	NBR	**W**	NBR head anodized
V	FPM	**Z**	FPM head anodized

Main Connections	Rear connections	Main Connections	Rear connections
G1 G 1 1/4"	-	**G13** G 1 1/2"	-
G2 G 1 1/4"	G 1 1/4"	**G14** G 1 1/2"	G 1 1/4"
G4 1 1/4" NPT	-	**G15** 1 1/2" NPT	-
G5 1 1/4" NPT	1 1/4" NPT	**G16** 1 1/2" NPT	1 1/4" NPT
G7 SAE 20 - 1 5/8" - 12 UN	-	**F1** 1 1/2" SAE 3000 psi/M	-
G8 SAE 20 - 1 5/8" - 12 UN	SAE 20 - 1 5/8" - 12 UN	**F2** 1 1/2" SAE 3000 psi/UNC	-
G10 SAE 24 - 1 7/8" - 12 UN	-	**F3** 1 1/2" SAE 3000 psi/M	1 1/2" SAE 3000 psi/M
G11 SAE 24 - 1 7/8" - 12 UN	SAE 20 - 1 5/8" - 12 UN	**F4** 1 1/2" SAE 3000 psi/UNC	1 1/2" SAE 3000 psi/UNC

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 Axx	Mxx	Pxx
N 10 bar		•	•
H 10 bar	•		
W 10 bar, compatible with fluids HFA, HFB and HFC	•	•	

Bypass valve

E	3 bar
B	1.75 bar

Execution

P01	MP Filtri standard
Pxx	Customized

FILTER ELEMENT

Configuration example 1: MFX180 | 1 | A25 | H | B | E | P01

Configuration example 2: MFX180 | 2 | P10 | N | V | | P01

Element series and size

MFX180 Filter element with private spigot

Element length

1

2

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 Axx	Mxx	Pxx
N 10 bar		•	•
H 10 bar	•		
W 10 bar, compatible with fluids HFA, HFB and HFC	•	•	

Seals

B	NBR
V	FPM

Bypass valve

E	3 bar
	1.75 bar

Execution

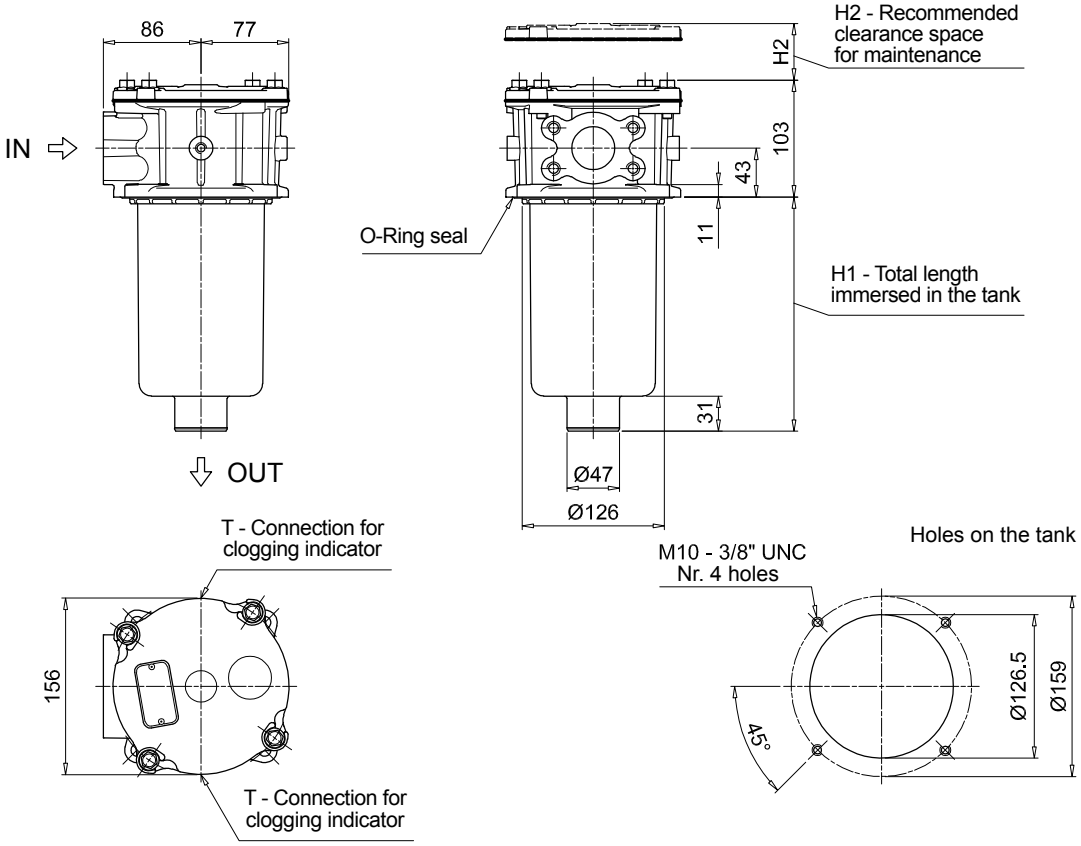
P01	MP Filtri standard
Pxx	Customized

ACCESSORIES

Indicators	page
BVA Axial pressure gauge	240
BVR Radial pressure gauge	240
BVP Visual pressure indicator with automatic reset	241
BVQ Visual pressure indicator with manual reset	241

	page
BEA Electrical pressure indicator	239
BEM Electrical pressure indicator	239
BLA Electrical / visual pressure indicator	239-240

Additional features	page
TE Extension tube	248
T5 Filler plug M30x1.5	249

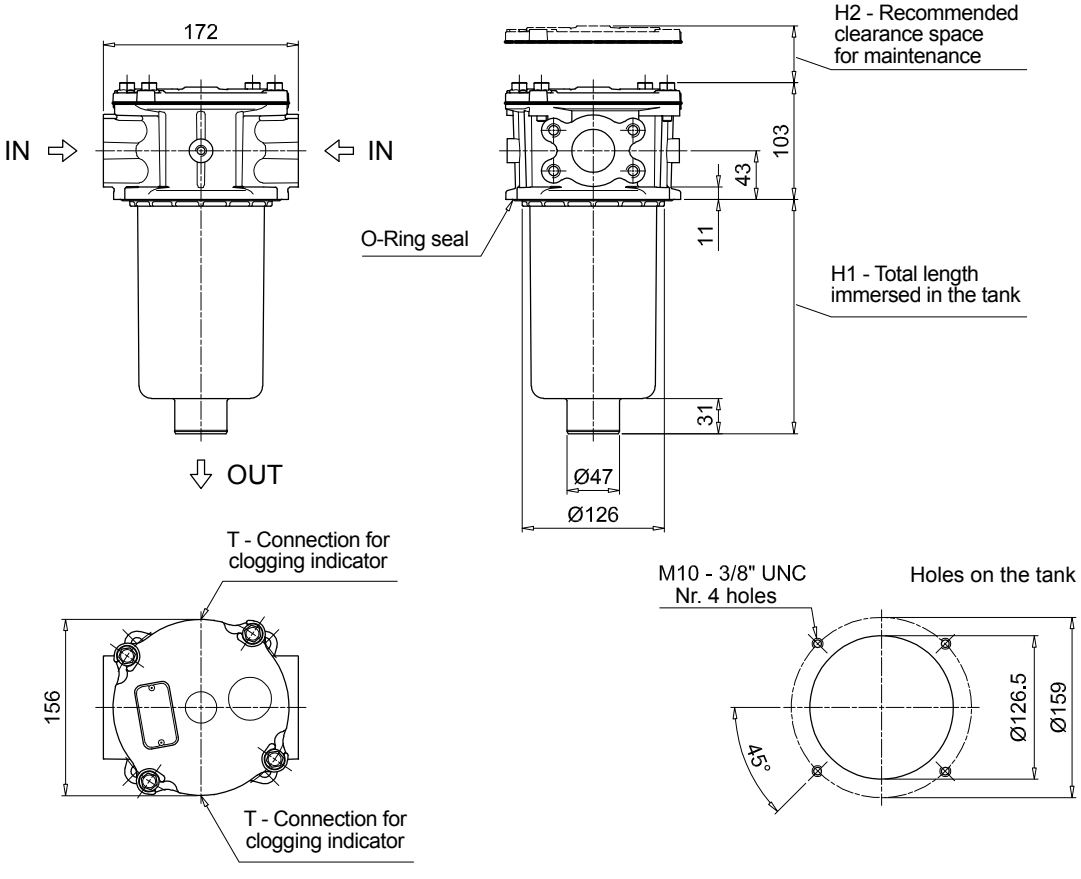


MPFX184

1 connection port

Filter length	H1 [mm]	H2 [mm]
1	232	260
2	445	480

Connection	T
G1	G 1/8"
G4 - G7 - G10	1/8" NPT
G13	G 1/8"
G15 - F1 - F2	1/8" NPT



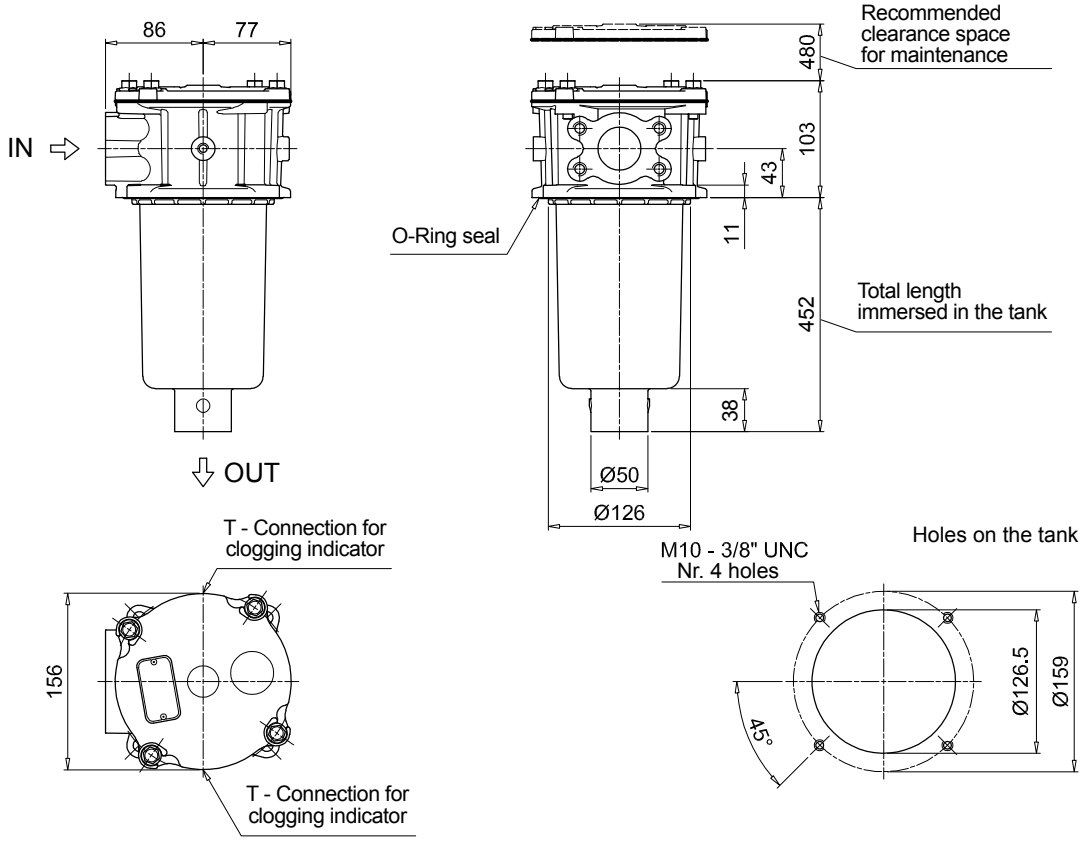
MPFX184

2 connection ports

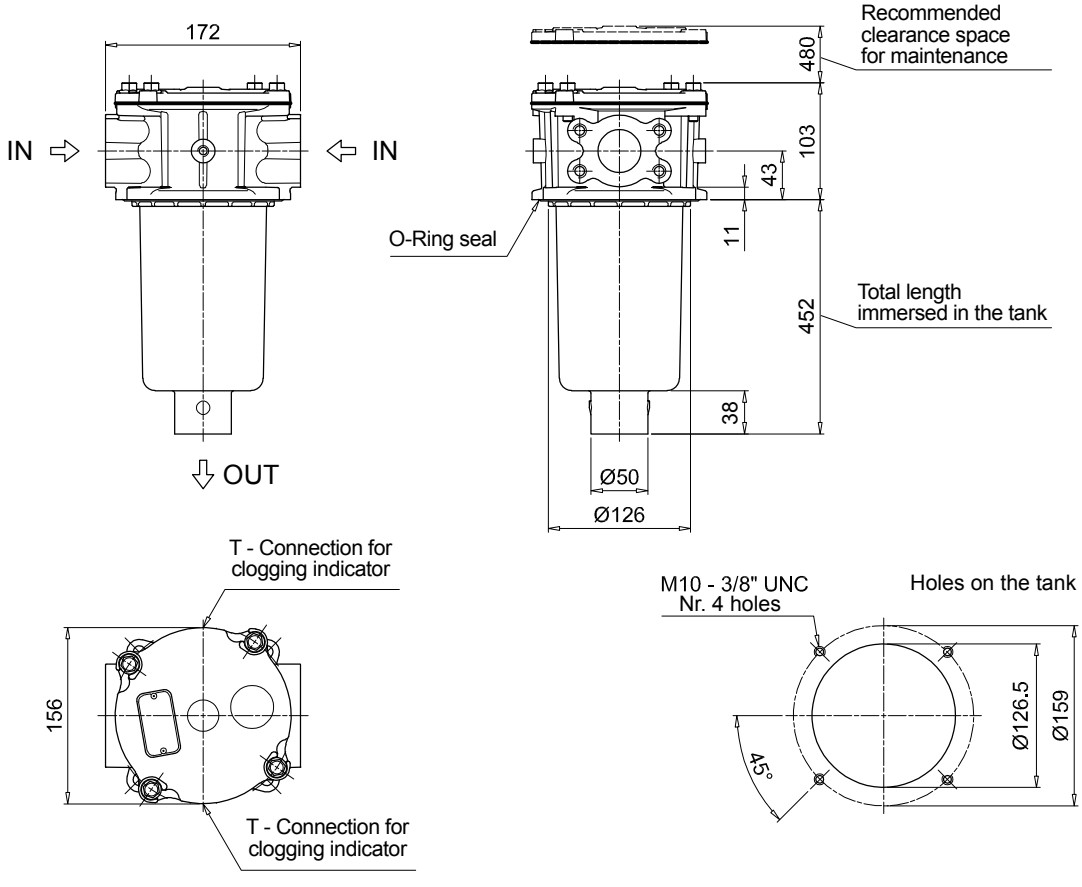
Filter length	H1 [mm]	H2 [mm]
1	232	260
2	445	480

Connection	T
G2	G 1/8"
G5 - G8 - G11	1/8" NPT
G14	G 1/8"
G16 - F3 - F4	1/8" NPT

Dimensions



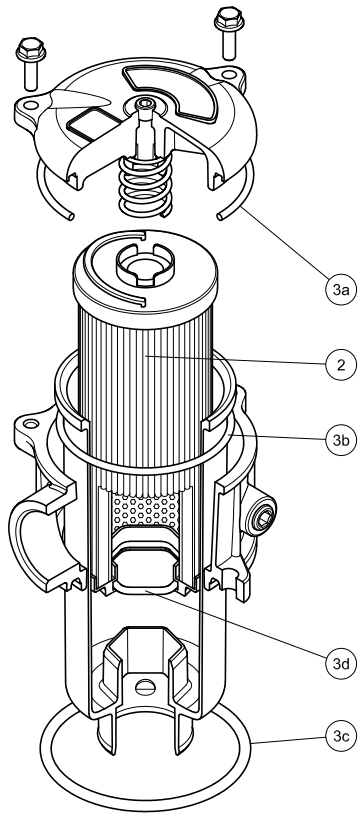
MPFX194	
1 connection port	
Connections	**T**
G1	G 1/8"
G4 - G7 - G10	1/8" NPT
G13	G 1/8"
G15 - F1 - F2	1/8" NPT



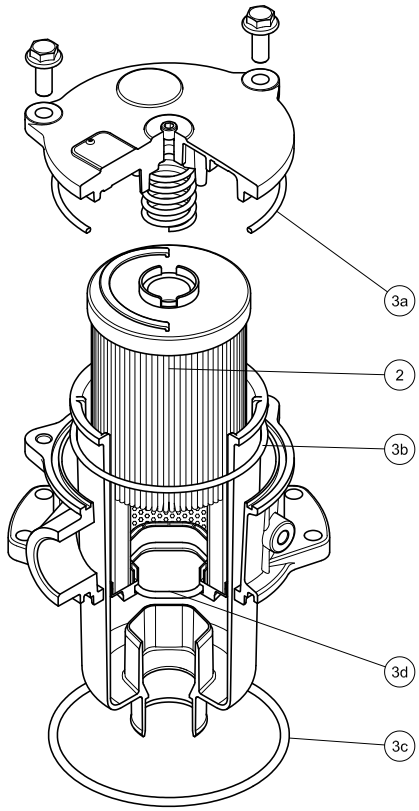
MPFX194	
2 connection ports	
Connections	**T**
G2	G 1/8"
G5 - G8 - G11	1/8" NPT
G14	G 1/8"
G16 - F3 - F4	1/8" NPT

Order number for spare parts

MPFX 100



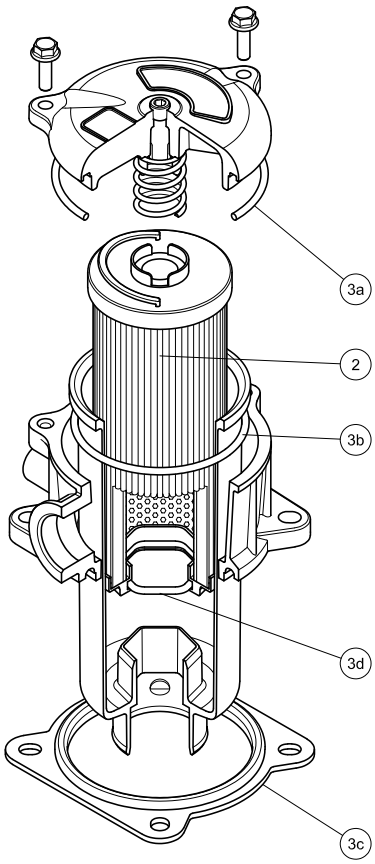
MPFX 181



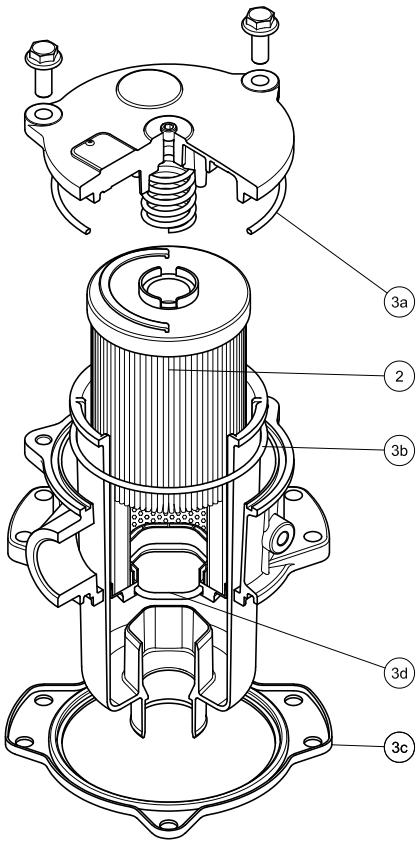
O-RING SEAL

Item:	Q.ty: 1 pc. 2	Q.ty: 1 pc. 3 (3a ÷ 3d)	
Filter series	Filter element	Seal Kit code number NBR	FPM
MPFX 030	See order table	02050675	02050676
MPFX 100-110		02050677	02050678
MPFX 181-182		02050681	02050682
MPFX 184		02050685	02050686
MPFX 191-192		02050683	02050684
MPFX 194		02050687	02050688
MPFX 400-410		02050695	02050696
MPFX 450-451		02050697	02050698
MPFX 750		02050699	02050700

MPFX 104



MPFX 181



FLAT SEAL

Item:	Q.ty: 1 pc. 2	Q.ty: 1 pc. 3 (3a ÷ 3d)	
Filter series	Filter element	Seal Kit code number NBR	FPM
MPFX 104	See order table	02050679	02050680
MPFX 181-182		02050691	02050692
MPFX 191-192		02050691	02050692