

MPT series

Maximum working pressure up to 800 kPa (8 bar) - Flow rate up to 300 l/min



Description

Technical data

Return filter

Maximum working pressure up to 800 kPa (8 bar)
Flow rate up to 300 l/min

MPT is a range of return filters with integrated breather filter, 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 1 1/4", for a maximum flow rate of 300 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, 4 or 6 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
- Screw-in cover with a special shape, to allow the filter element replacement without the use of specific tools
- 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)
- Integrated breather filter, to clean the air that moves into the reservoir as result of the oil level fluctuation
- Integrated breather filter with pressurization valve, to clean the air that moves into the reservoir as result of the oil level fluctuation and to guarantee the pressurization into the reservoir
- Visual, electrical and electronic clogging indicators

Common applications:

- Light industrial equipment
- Mobile application

Filter housing materials

- Head: Aluminium
- Cover: Nylon
- Bowl: Nylon

Bypass valve

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

Δp 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

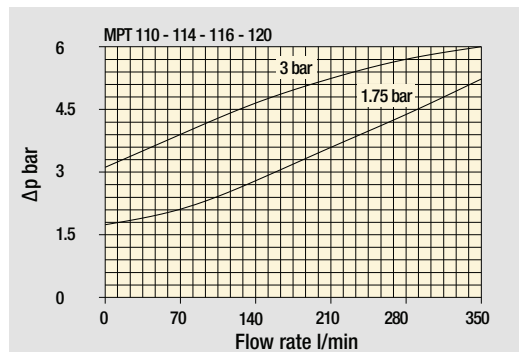
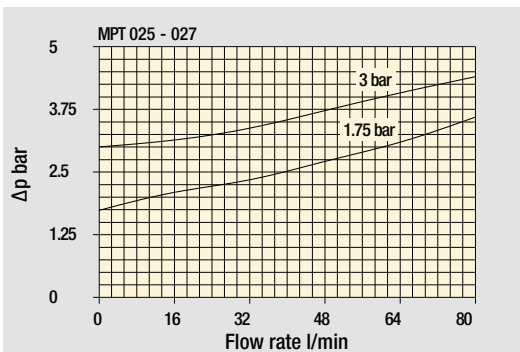
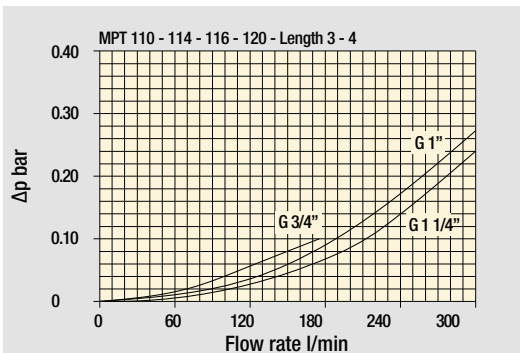
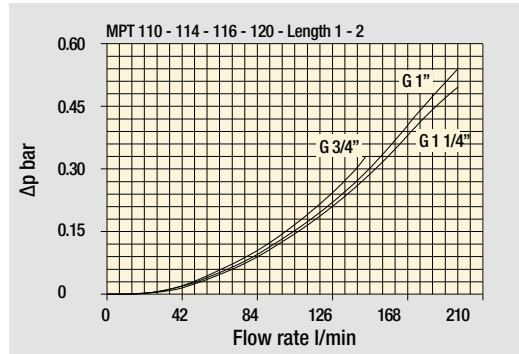
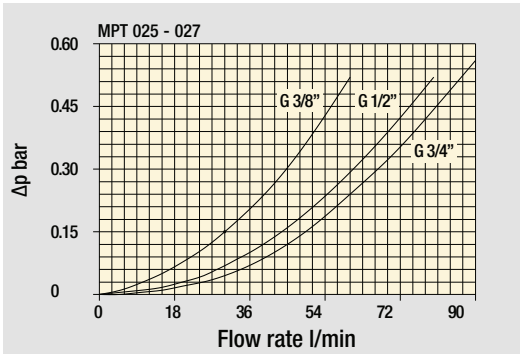
MPT filters are provided for vertical mounting



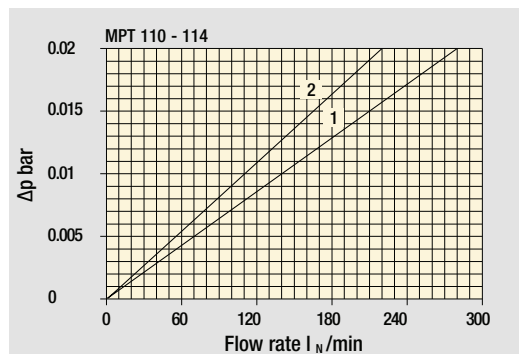
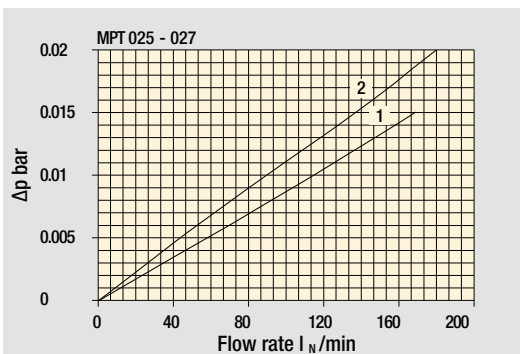
Weights [kg] and volumes [dm³]

Filter series	Weights [kg]					Volumes [dm³]				
	Length	1	2	3	4	Length	1	2	3	4
MPT 025		0.41	0.45	0.50	-		0.24	0.35	0.42	-
MPT 027		0.44	0.48	0.55	-		0.24	0.35	0.42	-
MPT 110		1.00	1.05	1.15	1.40		0.72	0.93	1.28	1.74
MPT 114		1.10	1.15	1.25	1.50		0.72	0.93	1.28	1.74
MPT 116		1.10	1.15	1.25	1.50		0.72	0.93	1.28	1.74
MPT 120		1.00	1.05	1.15	1.40		0.72	0.93	1.28	1.74

Filter housings Δp pressure drop



Bypass valve pressure drop



Air breather pressure drop

- 1 ☐ C With air breather 10 μm
- 2 ☐ D With anti-splash and SAP50 10 μm

The curves are plotted using mineral oil with density of 0.86 kg/dm³ in compliance with ISO 3968.
 Δp varies proportionally with density.

MPT 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	
MPT 025-027	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	
MPT 110-114 116-120	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	

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

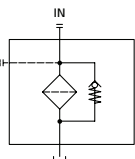
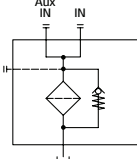
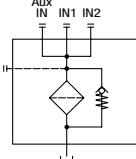
The reference fluid has a kinematic viscosity of 30 mm²/s (cSt) and a density of 0.86 kg/dm³.

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	Style 3 connections
MPT 025	•		
MPT 027	•		
MPT 110		•	
MPT 114	•		
MPT 116	•		
MPT 120			•

MPT 025 -027		
Air breather port plugged Indicator port	Air breather standard Indicator port	Anti-splash air breather & pressurized Double indicator port
		

Multiport - Multifunction

MPT 110	
Standard - Single IN Port	Double IN Port - Double indicator port
	
Double IN Port Option: double drain port	Double IN Port - Indicator port Option: drain port
	

MPT 120
Triple IN port
Option: double drain port



Designation & Ordering code

COMPLETE FILTER

Series and size		Configuration example 1: MPT120 1 A G1 0 A06 E P01									
MPT120 Filter element with standard spigot		Configuration example 2: MPT120 3 V G4 1 M25 B P01									
Length											
1	2	3	4								
Seals and treatments				Filtration rating							
				Axx	Mxx	Pxx					
A	NBR			•	•	•					
V	FPM			•	•	•					
W	NBR	head anodized	filter element compatible with fluids HFA-HFB-HFC	•	•						
Z	FPM	head anodized		•	•						
Main Connections		Rear connections		Aux size 1		Aux size 2					
G1	G 3/4"		G 3/4"		G 3/8"	G 1/2"					
G2	G 1"		G 1"								
G3	G 1 1/4"		G 3/4"								
G4	3/4" NPT		3/4" NPT		3/8" NPT	1/2" NPT					
G5	1" NPT		1" NPT								
G6	1 1/4" NPT		3/4" NPT								
G7	SAE 12 - 1 1/16" - 12 UN		SAE 12 - 1 1/16" - 12 UN		SAE 6 - 9/16" - 18 UNF	SAE 8 - 3/4" - 16 UNF					
G8	SAE 16 - 1 5/16" - 12 UN		SAE 16 - 1 5/16" - 12 UN								
G9	SAE 20 - 1 5/8" - 12 UN		SAE 12 - 1 1/16" - 12 UN								
Aux connection - see previous table											
0	Not machined		1	Aux size 1		2	Aux size 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					
		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 Filter element with standard spigot		MF100	1	A06	H	B	E	P01		
Element length		Configuration example 2:								
1	2	3	4	MF100	3	M25	N	V		P01
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			Seals		Bypass valve		Execution	
N	10 bar	Axx	Mxx	Pxx	B	NBR	E	3 bar	P01	MP Filtri standard
H	10 bar		•	•	V	FPM		1.75 bar	Pxx	Customized
W	10 bar, compatible with fluids HFA, HFB and HFC	•	•							

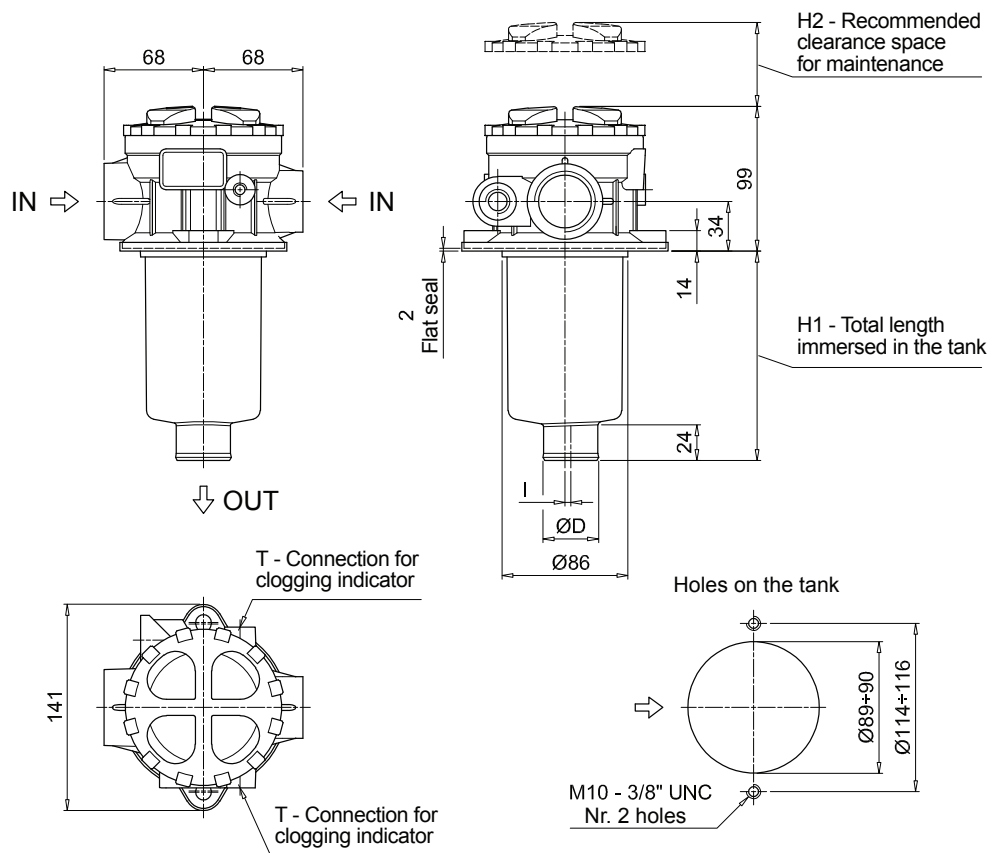
ACCESSORIES

Indicators		page			page
BVA	Axial pressure gauge	240	BEA	Electrical pressure indicator	239
BVR	Radial pressure gauge	240	BEM	Electrical pressure indicator	239
BVP	Visual pressure indicator with automatic reset	241	BLA	Electrical / visual pressure indicator	239-240
BVQ	Visual pressure indicator with manual reset	241			
Additional features		page			
TE	Extension tube	248	DPT	Dipstick	249
DFS	Diffuser with fast lock connection	249			

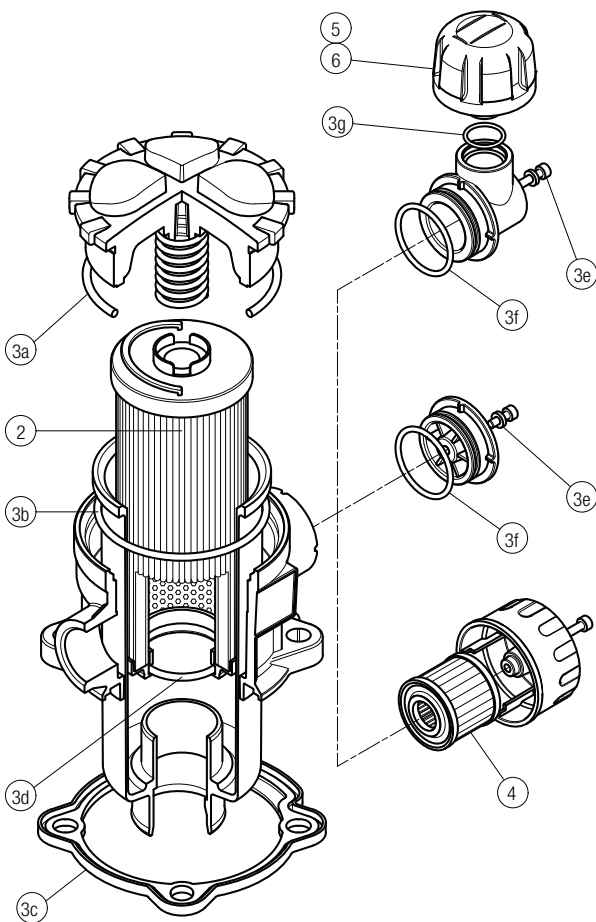
MPT120

Filter length	H1 [mm]	H2 [mm]	D [mm]	I [mm]
1	97	120	38	4
2	147	170	38	4
3	222	250	47	-
4	324	350	47	2.5

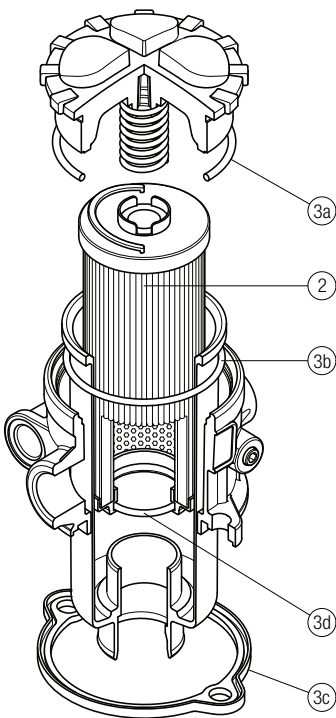
Connections	T
G1-G2-G3	G 1/8"
G4-G5-G6-G7-G8-G9	1/8" NPT



MPT 114



MPT 120



Item:		Q.ty: 1 pc.		Q.ty: 1 pc.		Q.ty: 1 pc.		Q.ty: 1 pc.	
2		3 (3a ÷ 3g)		4		5		6	
Filter series	Filter element	Seal Kit code number		Air breather filter element - version:					
		NBR	FPM	C	D		P		
MPT 114	See order table	02050580	02050581	10 µm A5L03	10 µm SAP50G3L03A0P01		10 µm SAP50G3L03A1P01		