

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, 3 or 6 fixing holes for installation, to suit a variety of reservoir surfaces
- O-ring or Flat Seal to suit a variety of reservoir surfaces
- 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 [dm ³]				
	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 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.

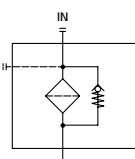
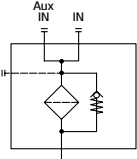
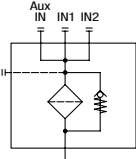
The reference fluid has a kinematic viscosity of 30 mm²/s (cSt) and a density of 0.86 kg/dm³.

For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.

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.

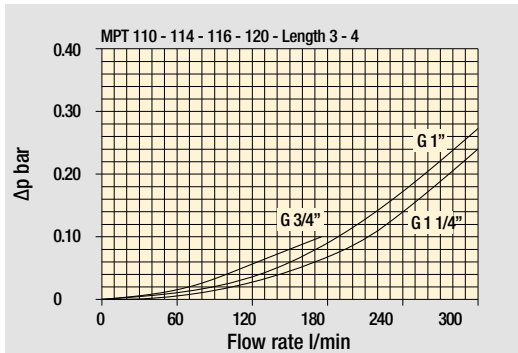
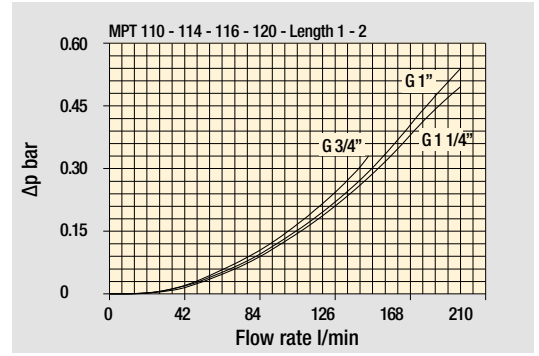
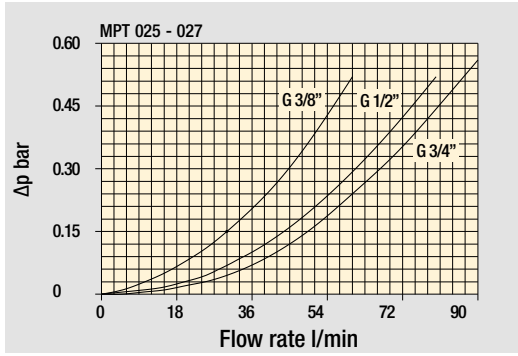
Hydraulic symbols

Filter series	Style 1 connection	Style 2 connections	Style 3 connections
MPT 025	•		
MPT 027	•		
MPT 110		•	
MPT 114	•		
MPT 116	•		
MPT 120			•

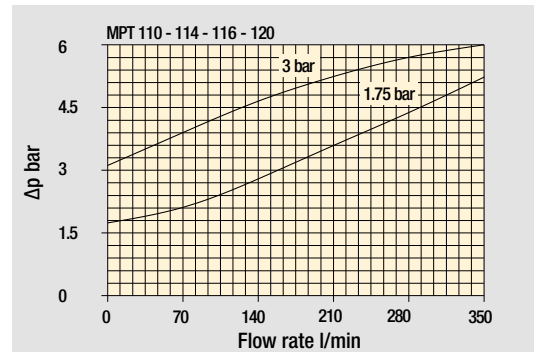
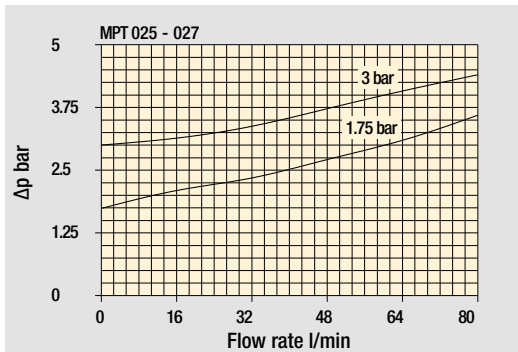
		
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Pressure drop

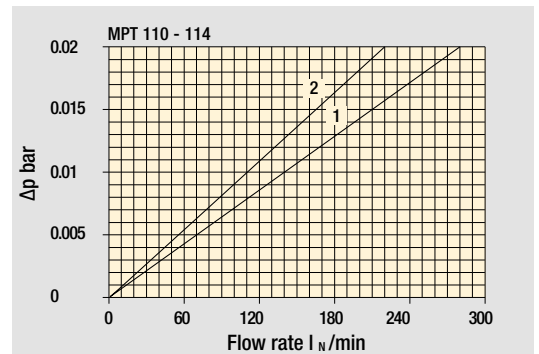
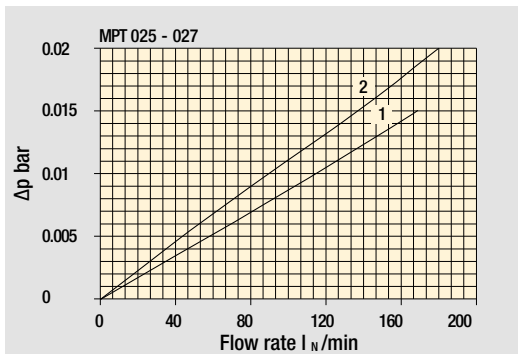
Filter housings Δp pressure drop



Bypass valve pressure drop



Air breather pressure drop







- 1 C With air breather 10 μ m
- 2 D With anti-splash and SAP50 10 μ m

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 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



MPT MPT025 - MPT027

Designation & Ordering code

COMPLETE FILTER

Series and size MPT025 MPT027 Filter element with standard spigot	Configuration example 1: MPT025 1 S A G3 A10 E P01
	Configuration example 2: MPT027 3 C W G6 A03 B P01
Length 1 2 3	
Air breather S Without air breather C With air breather 10 µm D With anti-splash and air breather SAP050 10 µm P With anti-splash and air breather SAP050 10 µm, pressurization 0.5 bar	
Seals and treatments	Filtration rating
A NBR	Axx Mxx Pxx
V FPM	• • •
W NBR head anodized filter element compatible with fluids HFA-HFB-HFC	• • •
Z FPM head anodized	• • •
Connections	
G1 G 3/8" G6 3/4" NPT	
G2 G 1/2" G7 SAE 6 - 9/16" - 18 UNF	
G3 G 3/4" G8 SAE 8 - 3/4" - 16 UNF	
G4 3/8" NPT G9 SAE 12 - 1 1/16" - 12 UN	
G5 1/2" NPT	
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 E 3 bar B 1.75 bar
	Execution P01 MP Filtri standard Pxx Customized

FILTER ELEMENT

Element series and size MF020 Filter element with standard spigot	Configuration example 1: MF020 1 A10 H B E P01
	Configuration example 2: MF020 3 A03 W B P01
Element length 1 2 3	
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	• • •
W 10 bar, compatible with fluids HFA, HFB and HFC	• • •
	Seals B NBR V FPM
	Bypass valve E 3 bar B 1.75 bar
	Execution P01 MP Filtri standard Pxx Customized

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		

