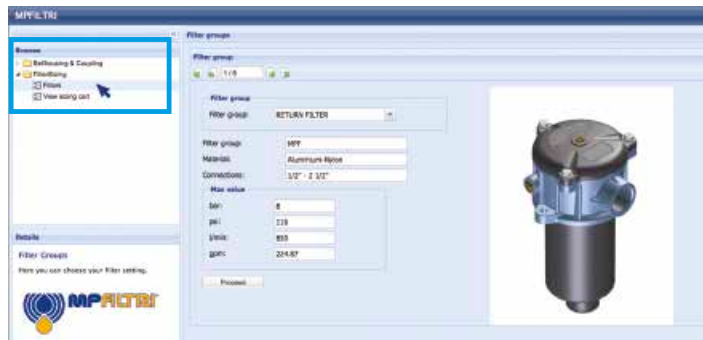


MPT series

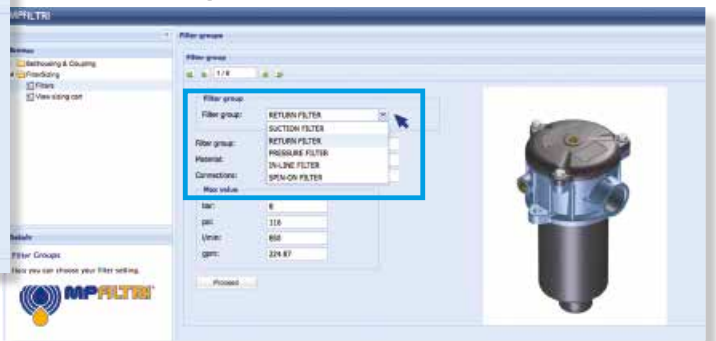
Maximum working pressure up to 800 kPa (8 bar) - Flow rate up to 300 l/min



Step 1 Select "FILTERS"



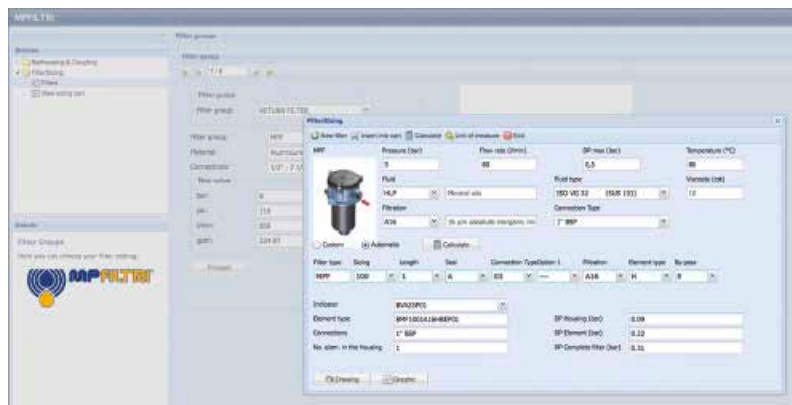
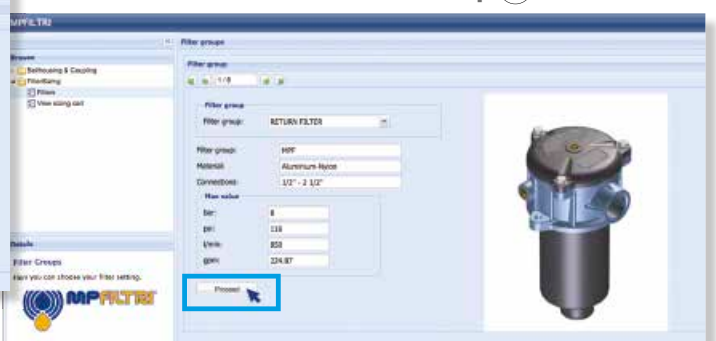
Step 2 Choose filter group (Return Filter, Pressure Filter, etc.)



Step 3 Choose filter type (MPF, MPT, etc.) in function of the max working pressure and the max flow rate



Step 4 Push "PROCEED"



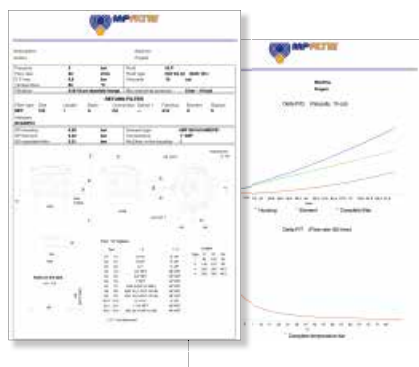
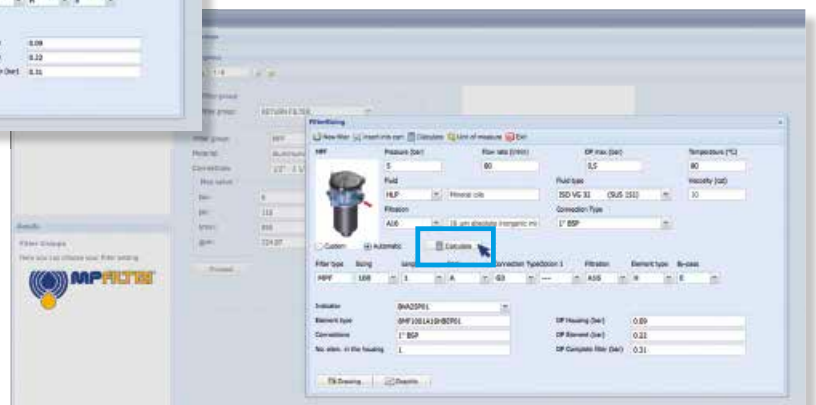
Step 5

Insert all application data to calculate the filter size following the sequence:

- working pressure
- working flow rate
- working pressure drop
- working temperature
- fluid material and fluid type
- filtration media
- connection type

Step 6

Push "CALCULATE" to have result; in case of any mistake, the system will advice which parameter is out of range to allow to modify/adjust the selection



Step 7

Download PDF Datasheet "Report.aspx" pushing the button "Drawing"

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 [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 ASSEMBLY SIZING 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.

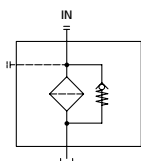
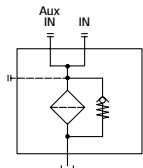
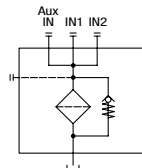
The reference fluid has a kinematic viscosity of 30 mm²/s (cSt) and a density of 0.86 kg/dm³.

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

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.

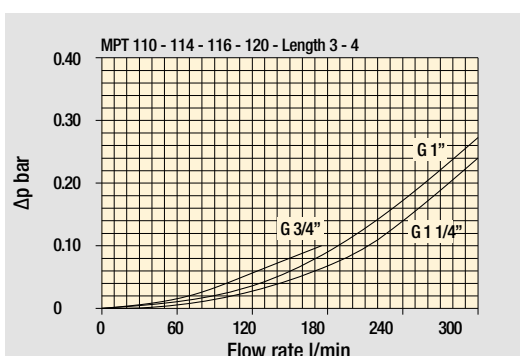
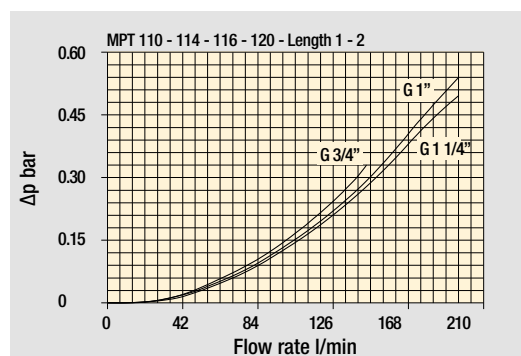
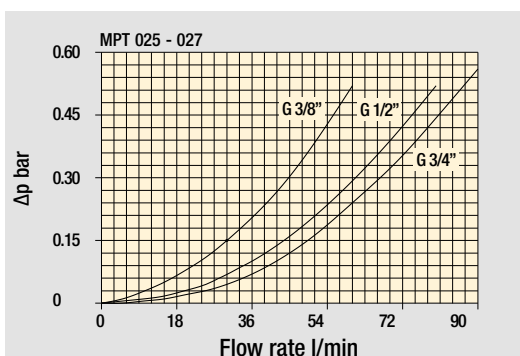
Hydraulic symbols

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

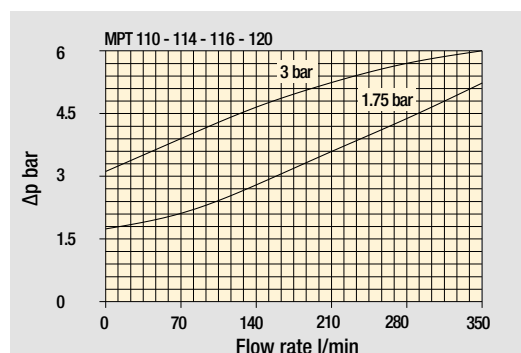
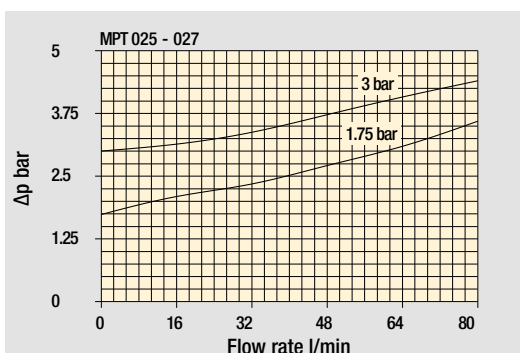




Pressure drop

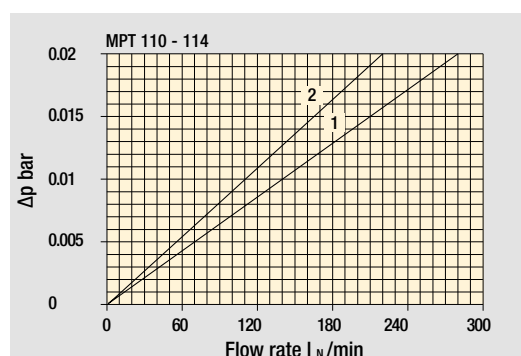
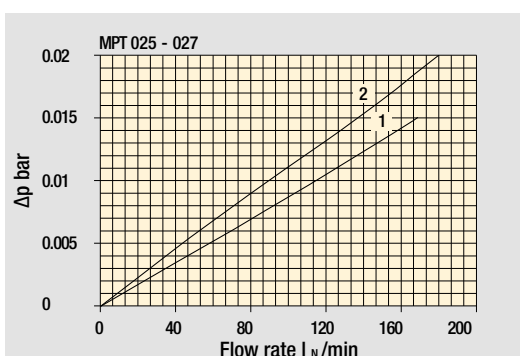
Filter housings Δp pressure drop



Bypass valve pressure drop



Air breather pressure drop







- 1 ☐ With air breather 10 μ m
- 2 ☐ 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

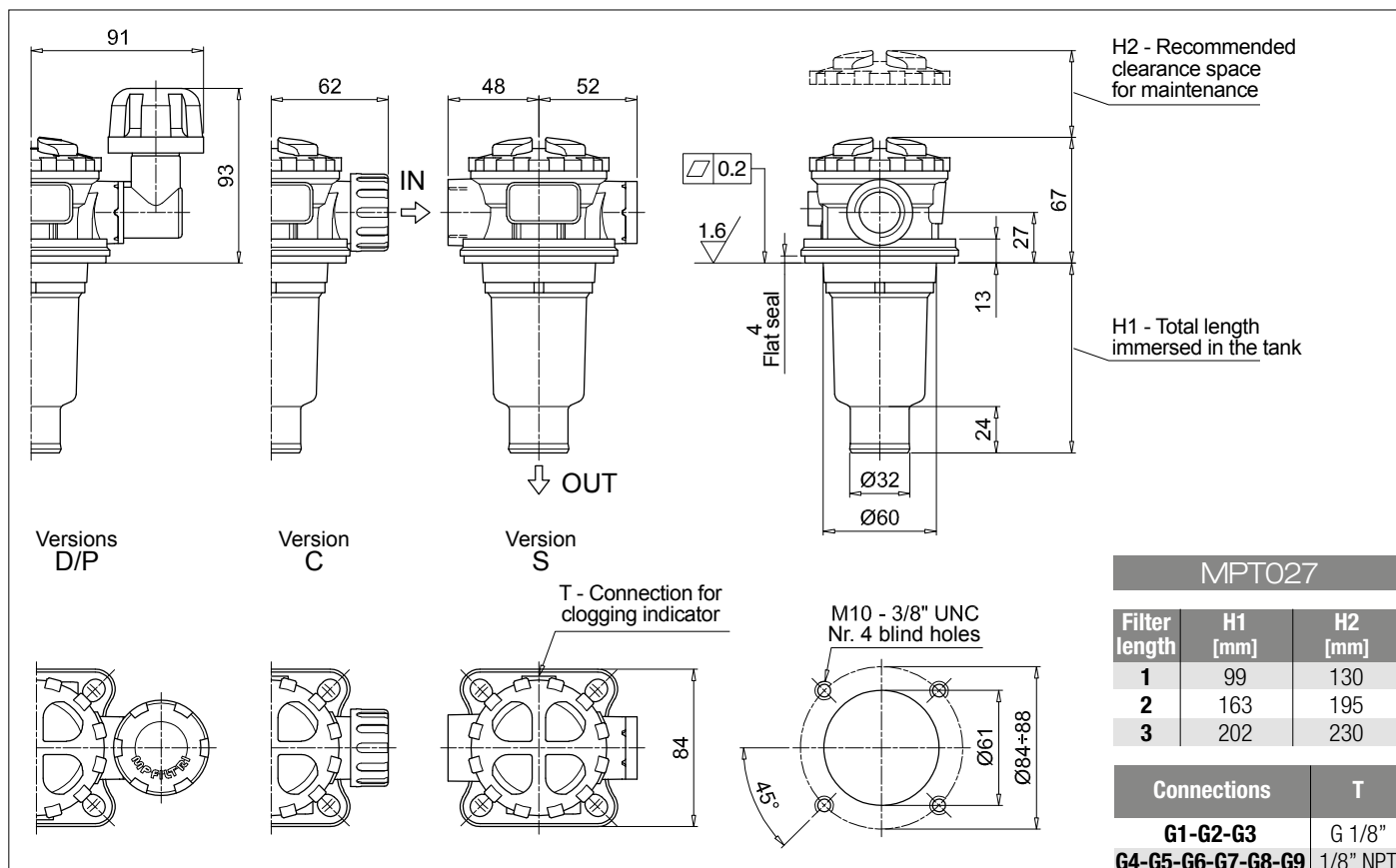
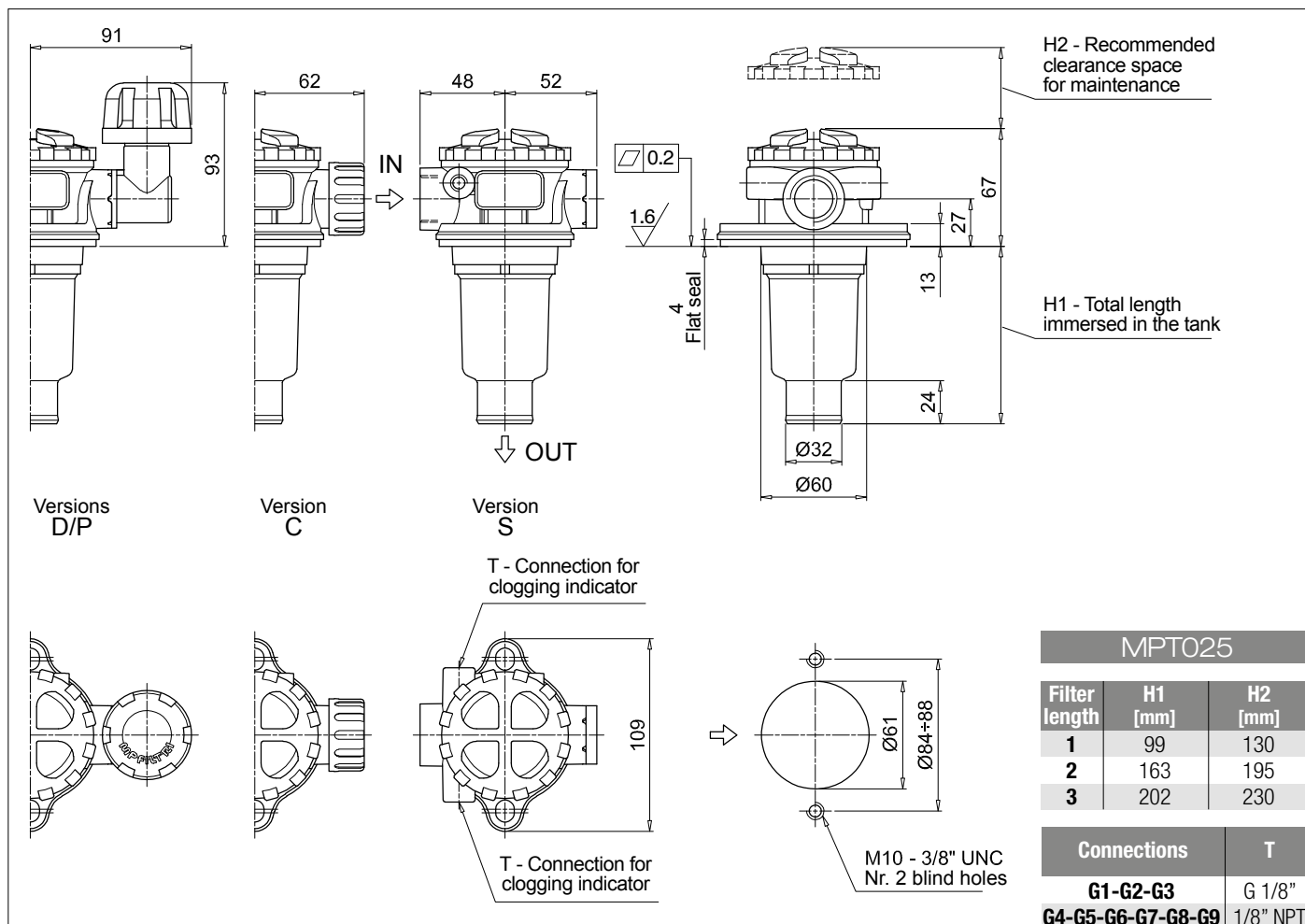


MPT MPT025 - MPT027

Designation & Ordering code

COMPLETE FILTER

Series and size		Configuration example 1:									
MPT025	MPT027	Filter element with standard spigot		Configuration example 2:							
				MPT025	1	S	A	G3	A10	E	P01
				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									
		Axx	Mxx	Pxx							
A	NBR	•	•	•							
V	FPM	•	•	•							
W	NBR head anodized	•	•								
Z	FPM head anodized	•	•								
		filter element compatible with fluids HFA-HFB-HFC									
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				Execution			
				E 3 bar				P01 MP Filtri standard			
				B 1.75 bar				Pxx Customized			



Designation & Ordering code

COMPLETE FILTER

Series and size				Configuration example 1:								
MPT110 Filter element with standard spigot				Configuration example 2:								
				MPT110	1	S	A	G1	0	A06	E	P01
Length												
1	2	3	4									
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												

FILTER ELEMENT

Element series and size			Configuration example 1:						
MF100	Filter element with standard spigot		Configuration example 2:						
			1	A06	H	B	E	P01	
			3	M25	N	V		P01	
Element length									
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						
			Axx	Mxx	Pxx				
N	10 bar			•	•				
H	10 bar		•						
W	10 bar, compatible with fluids HFA, HFB and HFC		•	•					
			Seals		Bypass valve		Execution		
			B NBR		E 3 bar		P01 MP Filtri standard		
			V FPM		1.75 bar		Pxx Customized		

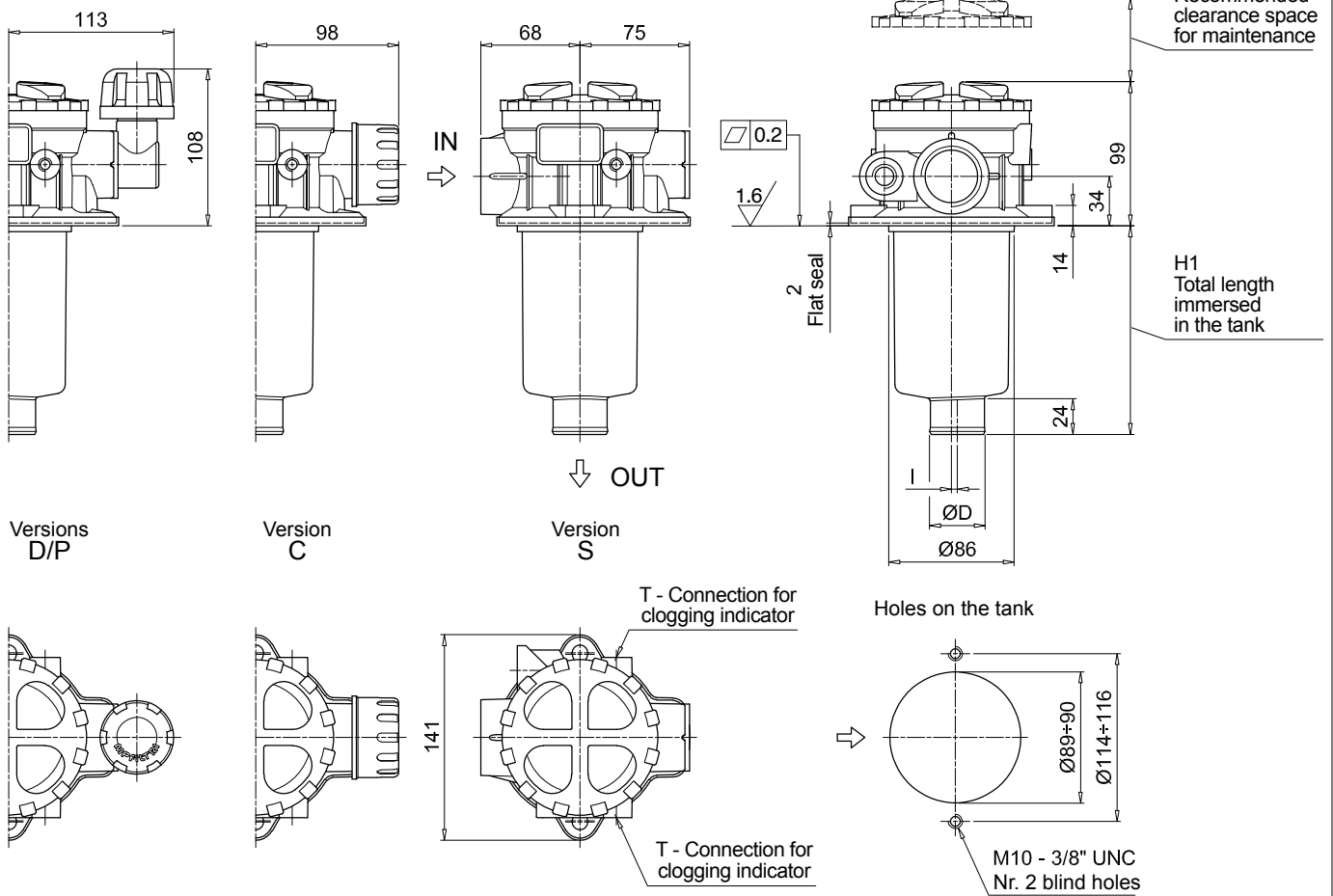
ACCESSORIES

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		page
TE Extension tube	248	DPT Dipstick	249
DFS Diffuser with fast lock connection	249		

MPT110

Filter length	H1 [mm]	H2 [mm]	D [mm]	I [mm]
1	97	120	38	4
2	144	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



Designation & Ordering code

COMPLETE FILTER

Series and size		Configuration example 1:		MPT114	4	S	A	G3	A10	E	P01
MPT114 Filter element with standard spigot		Configuration example 2:		MPT114	3	C	W	G6	A03	B	P01
Length											
1 2 3 4											
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								
			Axx	Mxx	Pxx						
A NBR			•	•	•						
V FPM			•	•	•						
W NBR head anodized			filter element compatible with fluids HFA-HFB-HFC			•	•				
Z FPM head anodized						•	•				
Connections											
G1 G 3/4"		G6 1 1/4" NPT									
G2 G 1"		G7 SAE 12 - 1 1/16" - 12 UN									
G3 G 1 1/4"		G8 SAE 16 - 1 5/16" - 12 UN									
G4 3/4" NPT		G9 SAE 20 - 1 5/8" - 12 UN									
G5 1" 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		Execution					
				E 3 bar		P01 MP Filtri standard					
				B 1.75 bar		Pxx Customized					

FILTER ELEMENT

Element series and size				Configuration example 2:	MF100	4	A10	H	B	E	P01
MF100 Filter element with standard spigot				Configuration example 1:	MF100	3	A03	W	B		P01
Element length											
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									
		Axx	Mxx	Pxx							
N	10 bar		•	•							
H	10 bar	•									
W	10 bar, compatible with fluids HFA, HFB and HFC	•	•								
				Seals		Bypass valve		Execution			
				B NBR		E 3 bar		P01 MP Filtri standard			
				V FPM		1.75 bar		Pxx Customized			

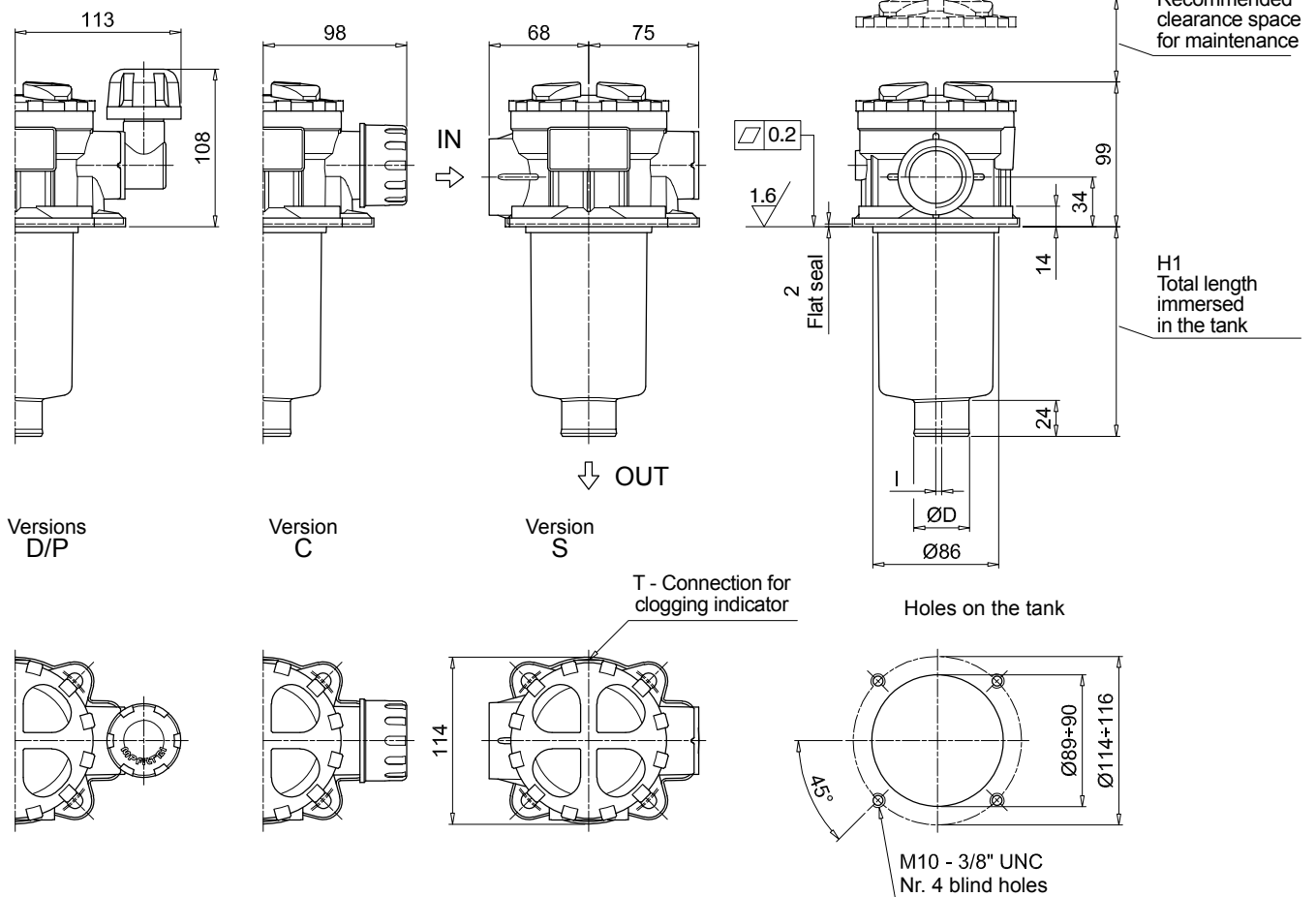
ACCESSORIES

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			page
TE	Extension tube	248	DPT	Dipstick	249
DFS	Diffuser with fast lock connection	249			

MPT114

Filter length	H1 [mm]	H2 [mm]	D [mm]	I [mm]
1	97	120	38	4
2	144	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



Designation & Ordering code

COMPLETE FILTER

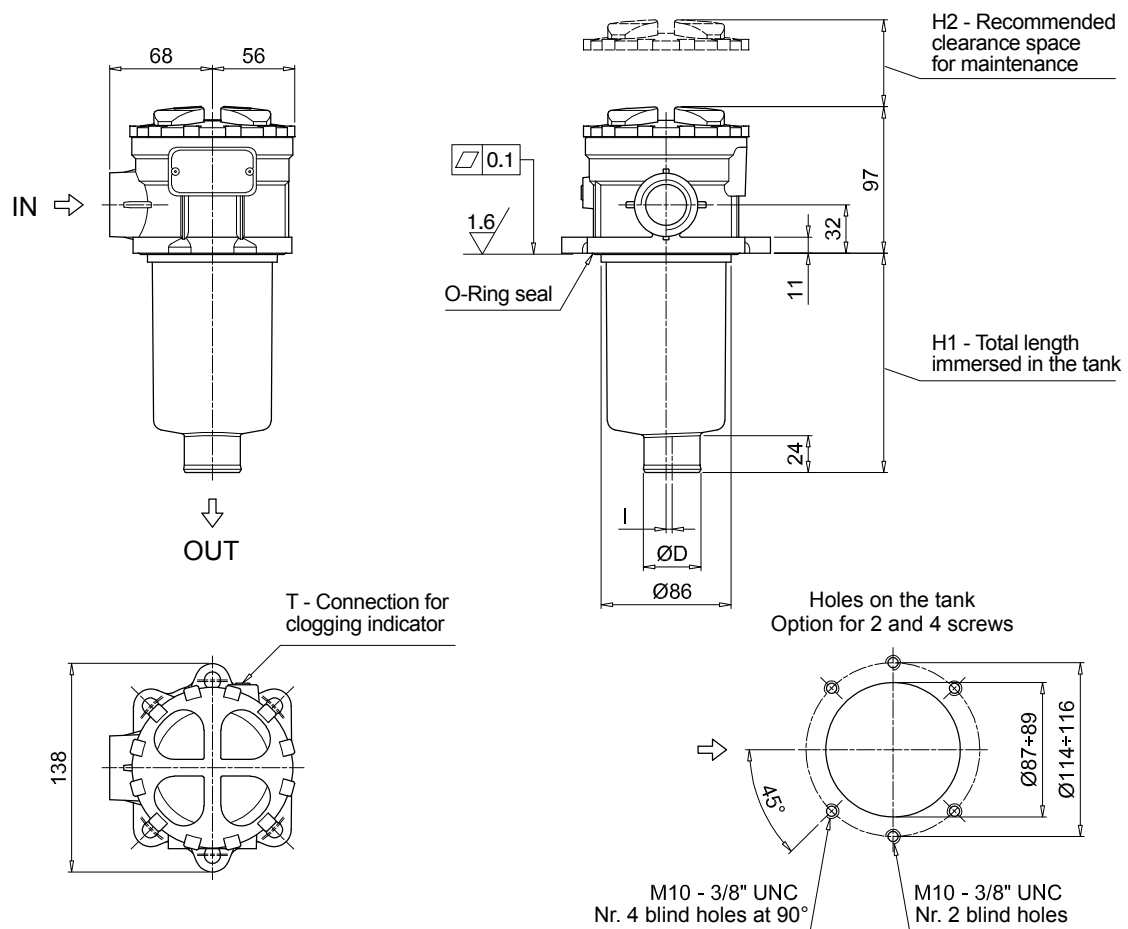
Series and size		Configuration example 1:									
MPT116 Filter element with standard spigot		Configuration example 2:									
		MPT116	1	S	A	G1	M90	E	P01		
			2	S	Z	G9	A03	B	P01		
Length											
1 2 3 4											
Air breather											
S Without air breather											
Seals and treatments		Filtration rating									
		Axx	Mxx	Pxx							
A NBR		•	•	•							
V FPM		•	•	•							
W NBR head anodized		•	•								
Z FPM head anodized		•	•								
Flat seal on the head on request											
Connections											
G1 G 3/4"		G6 1 1/4" NPT									
G2 G 1"		G7 SAE 12 - 1 1/16" - 12 UN									
G3 G 1 1/4"		G8 SAE 16 - 1 5/16" - 12 UN									
G4 3/4" NPT		G9 SAE 20 - 1 5/8" - 12 UN									
G5 1" 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			Execution						
		E 3 bar			P01 MP Filtri standard						
		B 1.75 bar			Pxx Customized						

FILTER ELEMENT

Element series and size		Configuration example 2: MF100 1 M90 N B E P01							
MF100 Filter element with standard spigot		Configuration example 1: MF100 2 A03 W V P01							
Element length									
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							
		Axx	Mxx	Pxx					
N 10 bar			•	•					
H 10 bar		•							
W 10 bar, compatible with fluids HFA, HFB and HFC		•	•						
		Seals			Bypass valve		Execution		
		B NBR			E 3 bar		P01 MP Filtri standard		
		V FPM			B 1.75 bar		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			page
TE Extension tube		248	DPT Dipstick		249
DFS Diffuser with fast lock connection		249			



Designation & Ordering code

COMPLETE FILTER

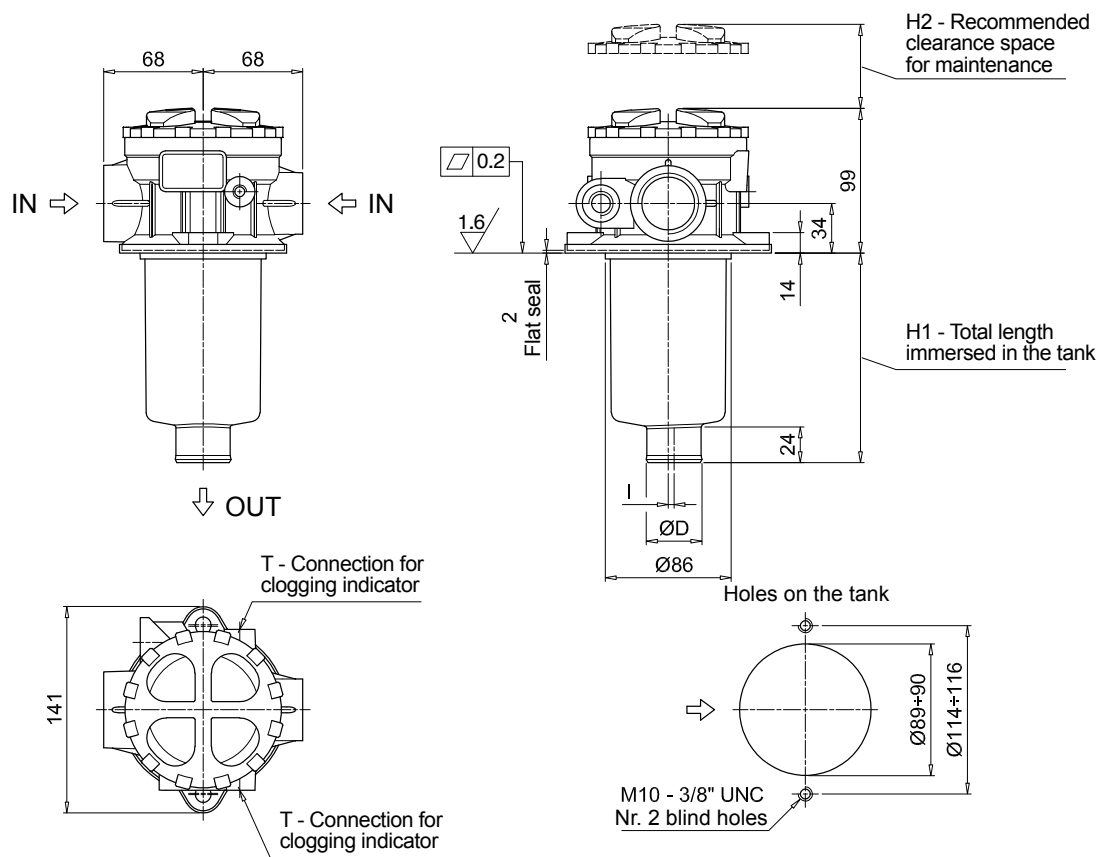
Series and size				Configuration example 1:										MPT120	1	A	G1	0	A06	E	P01										
MPT120				Filter element with standard spigot										Configuration example 2:										MPT120	3	V	G4	1	M25	B	P01
Length																															
1 2 3 4																															
												Filtration rating																			
Seals and treatments												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						SAE 6 - 9/16" - 18 UNF						SAE 8 - 3/4" - 16 UNF													
G7 SAE 12 - 1 1/16" - 12 UN						SAE 12 - 1 1/16" - 12 UN																									
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	1	A06	H	B	E	P01
MF100 Filter element with standard spigot		Configuration example 2:	MF100	3	M25	N	V		P01
Element length									
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		•							
W 10 bar, compatible with fluids HFA, HFB and HFC		•	•						
		Seals		Bypass valve		Execution			
		B NBR		E 3 bar		P01 MP Filtri standard			
		V FPM		1.75 bar		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		page
TE	Extension tube	248	DPT	Dipstick 249
DFS	Diffuser with fast lock connection	249		



MPT120

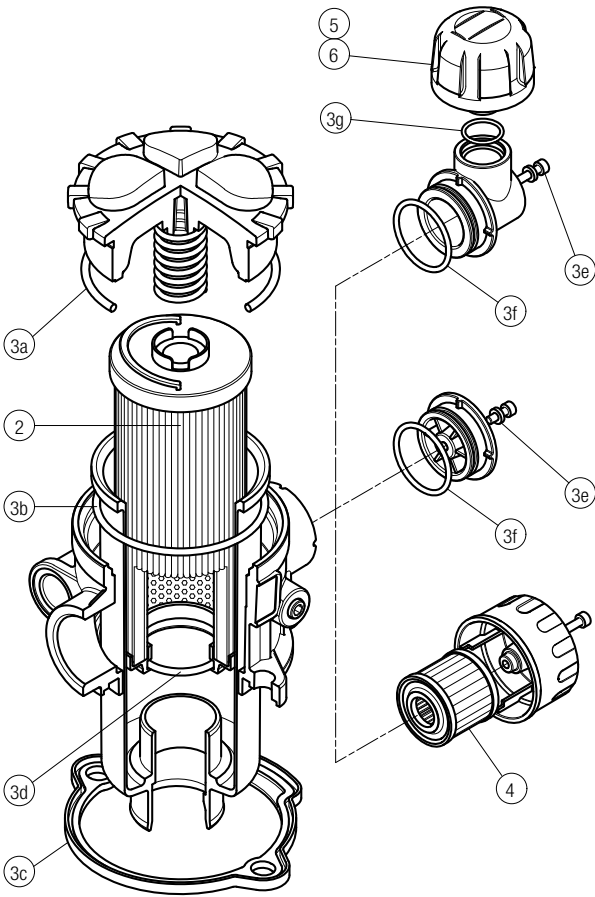
Filter length	H1 [mm]	H2 [mm]	D [mm]	I [mm]
1	97	120	38	4
2	147	170	38	4
3	222	250	47	-
4	324	350	47	2.5

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

MPT SPARE PARTS

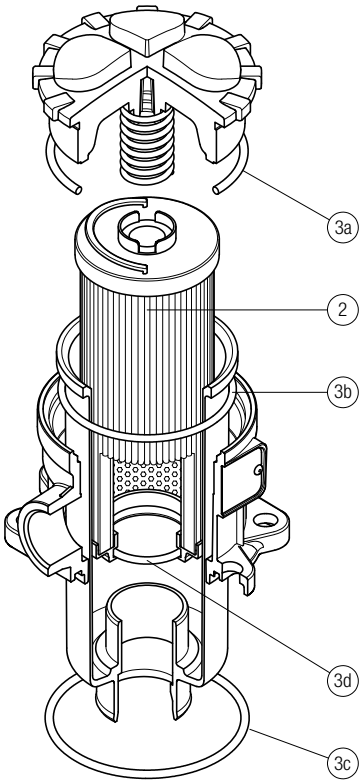
Order number for spare parts

MPT 025 - 027 - 110



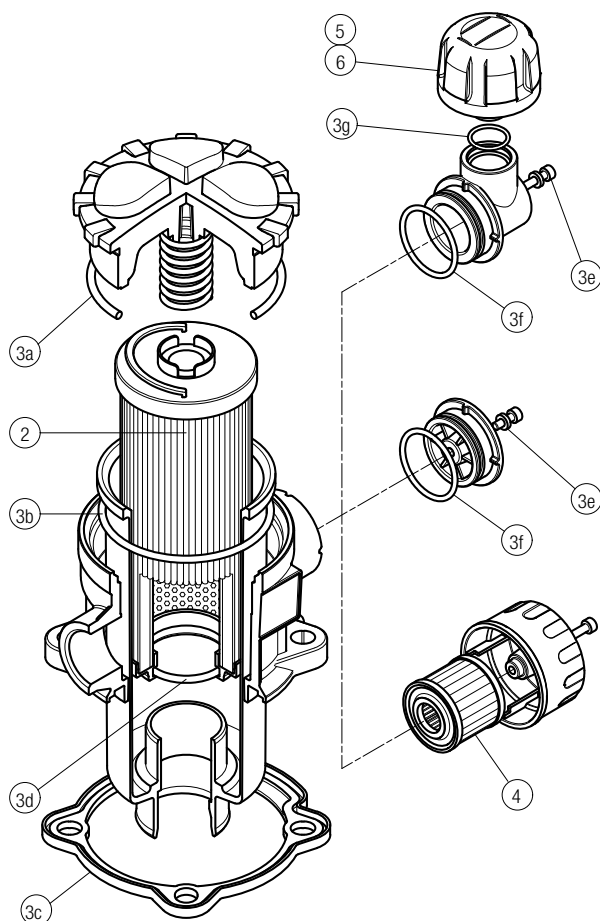
Q.ty: 1 pc.		Q.ty: 1 pc.		Q.ty: 1 pc.	Q.ty: 1 pc.	Q.ty: 1 pc.
Item:		2		3 (3a ÷ 3g)	4	5
Filter series	Filter element	Seal Kit code number		C	D	P
		NBR	FPM			
MPT 025	See order table	02050557	02050558	10 µm A3L03	10 µm SAP50G3L03A0P01	10 µm SAP50G3L03A1P01
MPT 027		02050559	02050560	10 µm A3L03	10 µm SAP50G3L03A0P01	10 µm SAP50G3L03A1P01
MPT 110		02050561	02050562	10 µm A5L03	10 µm SAP50G3L03A0P01	10 µm SAP50G3L03A1P01

MPT 116



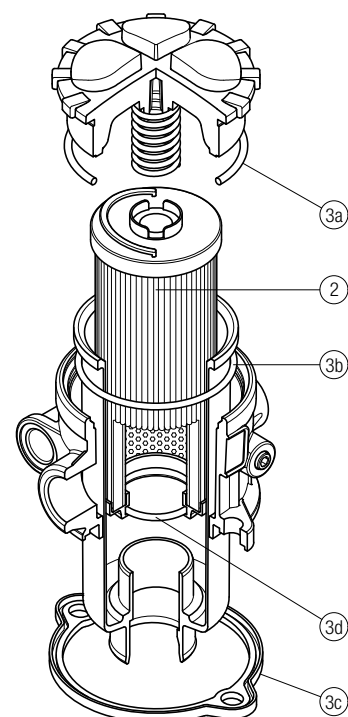
Q.ty: 1 pc.		Q.ty: 1 pc.	
Item:		3 (3a ÷ 3d)	
Filter series	Filter element	Seal Kit code number	NBR
MPT 116	See order table	02050466	02050467

MPT 114



Item:	Q.ty: 1 pc.	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

MPT 120



Q.ty: 1 pc.		Q.ty: 1 pc.	
Item:	2	3	(3a ÷ 3d)
Filter series	Filter element	Seal Kit code number	
		NBR	FPM
MPT 120	See order table	02050563	02050564