

MPT series

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



Description

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

Technical data

Filter housing materials

- Head: Aluminium

- Cover: Nylon

- Bowl: Nylon

Bypass valve

- Opening pressure 175 kPa (1.75 bar) ±10%

- Opening pressure 300 kPa (3 bar) ±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

Return filters

154



ТОВ "Промислова Гідравліка": <https://promhydraulic.com.ua/ua/>

Телефонуйте: +380 (95) 670-15-32, +380 (98) 533-91-67, +380 (96) 244-48-42

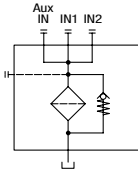
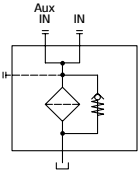
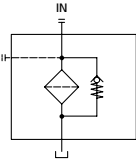
FILTER ASSEMBLY SIZING
Flow rates [l/min]

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.

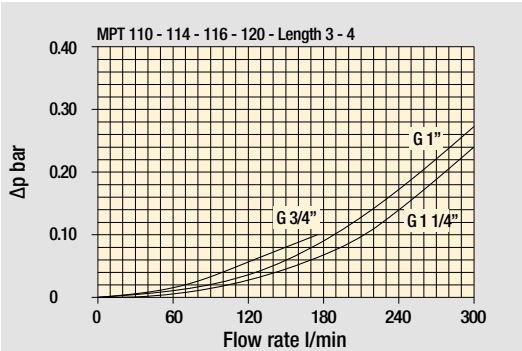
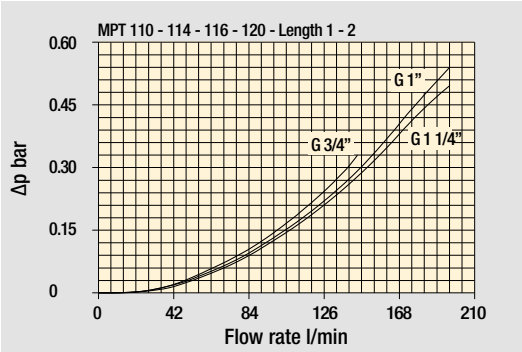
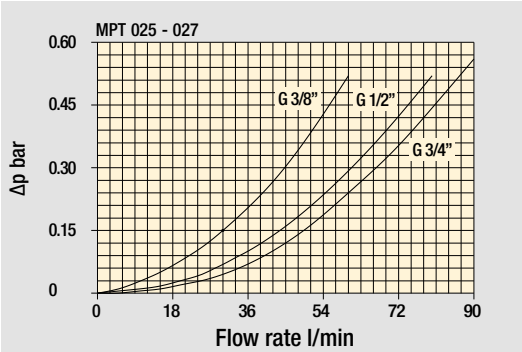
Hydraulic symbols

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

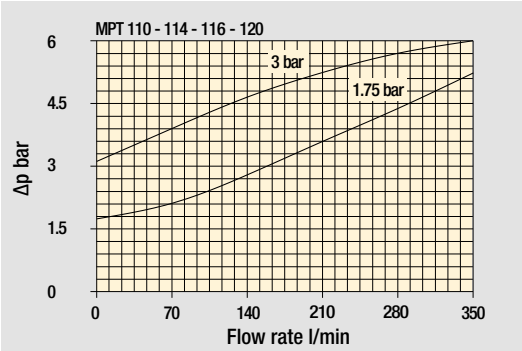
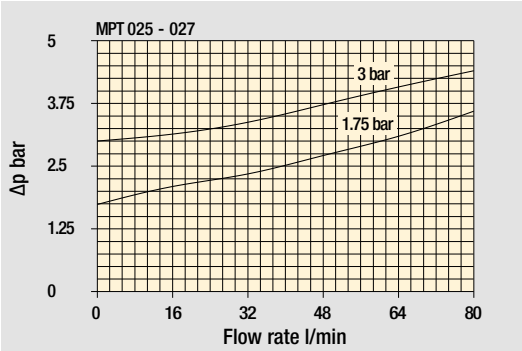


Pressure drop

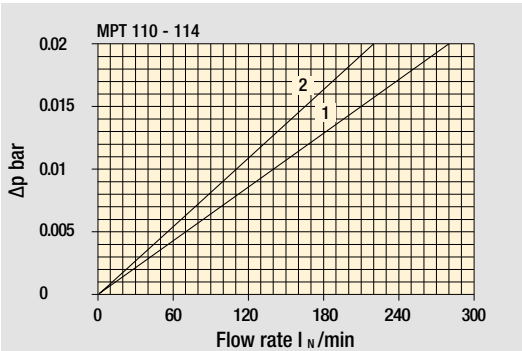
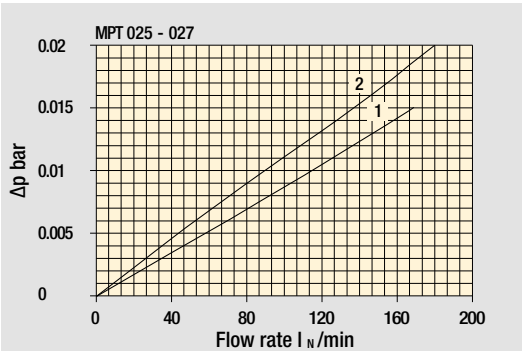
Filter housings Δp pressure drop



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

MPT025 | MPT027

Filter element with standard spigot

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

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"

G2 G 1/2"

G3 G 3/4"

G4 3/8" NPT

G5 1/2" NPT

G6 3/4" NPT

G7 SAE 6 - 9/16" - 18 UNF

G8 SAE 8 - 3/4" - 16 UNF

G9 SAE 12 - 1 1/16" - 12 UN

Filtration rating (filter media)

A03 Inorganic microfiber 3 µm

A06 Inorganic microfiber 6 µm

A10 Inorganic microfiber 10 µm

A16 Inorganic microfiber 16 µm

A25 Inorganic microfiber 25 µm

M25 Wire mesh 25 µm

M60 Wire mesh 60 µm

M90 Wire mesh 90 µm

P10 Resin impregnated paper 10 µm

P25 Resin impregnated paper 25 µm

Filtration rating

Axx Mxx Pxx

• • •

• • •

• •

• •

Configuration example 1:

MPT025

1

S

A

G3

A10

E

P01

Configuration example 2:

MPT027

3

C

W

G6

A03

B

P01

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

Element length

1 | 2 | 3

Filtration rating (filter media)

A03 Inorganic microfiber 3 µm

A06 Inorganic microfiber 6 µm

A10 Inorganic microfiber 10 µm

A16 Inorganic microfiber 16 µm

A25 Inorganic microfiber 25 µm

M25 Wire mesh 25 µm

M60 Wire mesh 60 µm

M90 Wire mesh 90 µm

P10 Resin impregnated paper 10 µm

P25 Resin impregnated paper 25 µm

Element Δp

N 10 bar

H 10 bar

W 10 bar, compatible with fluids HFA, HFB and HFC

Filter media

Axx Mxx Pxx

• •

•

• •

Configuration example 1:

MF020

1

A10

H

B

E

P01

Configuration example 2:

MF020

3

A03

W

B

P01

Seals

B NBR

V FPM

Bypass valve

E 3 bar

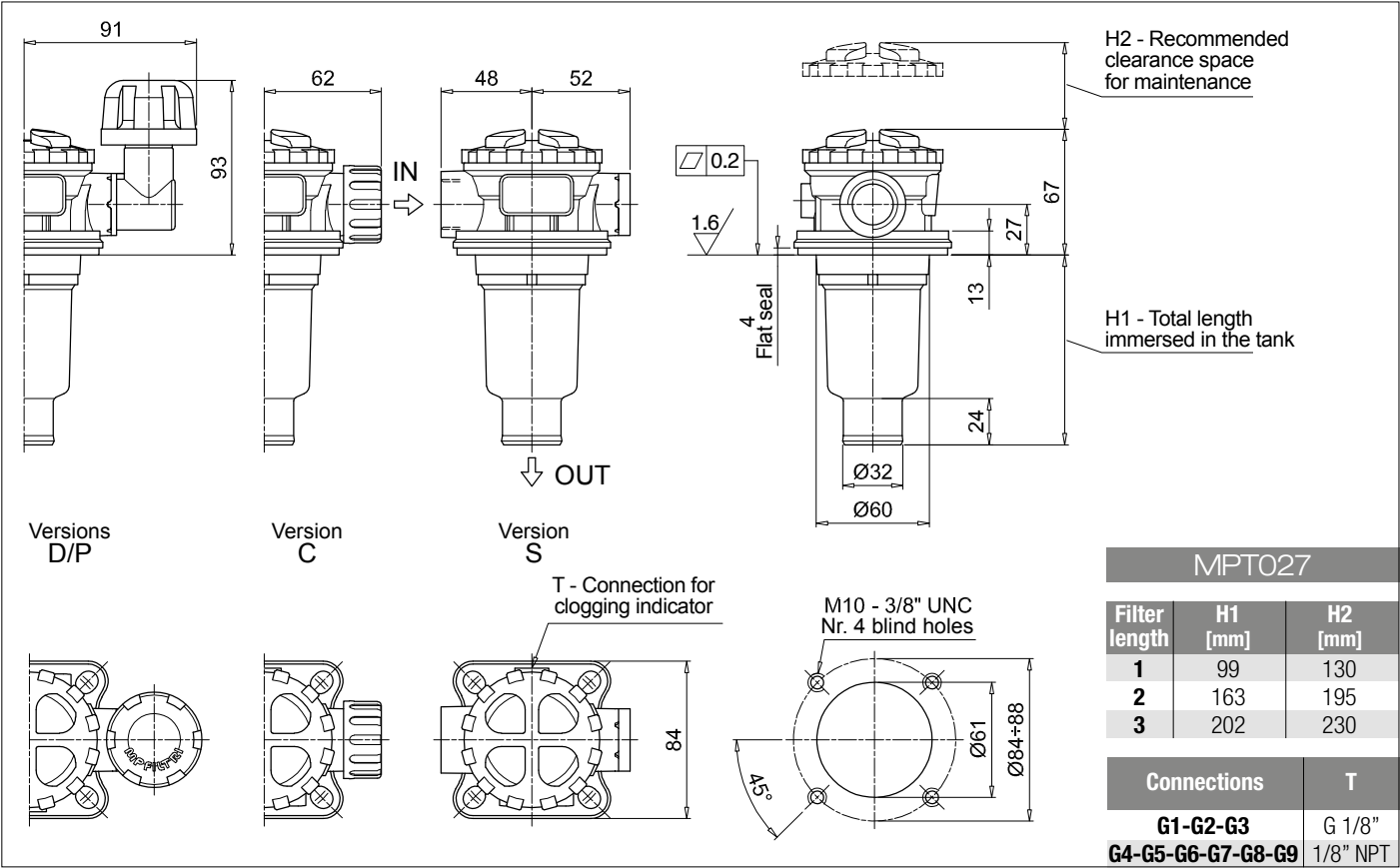
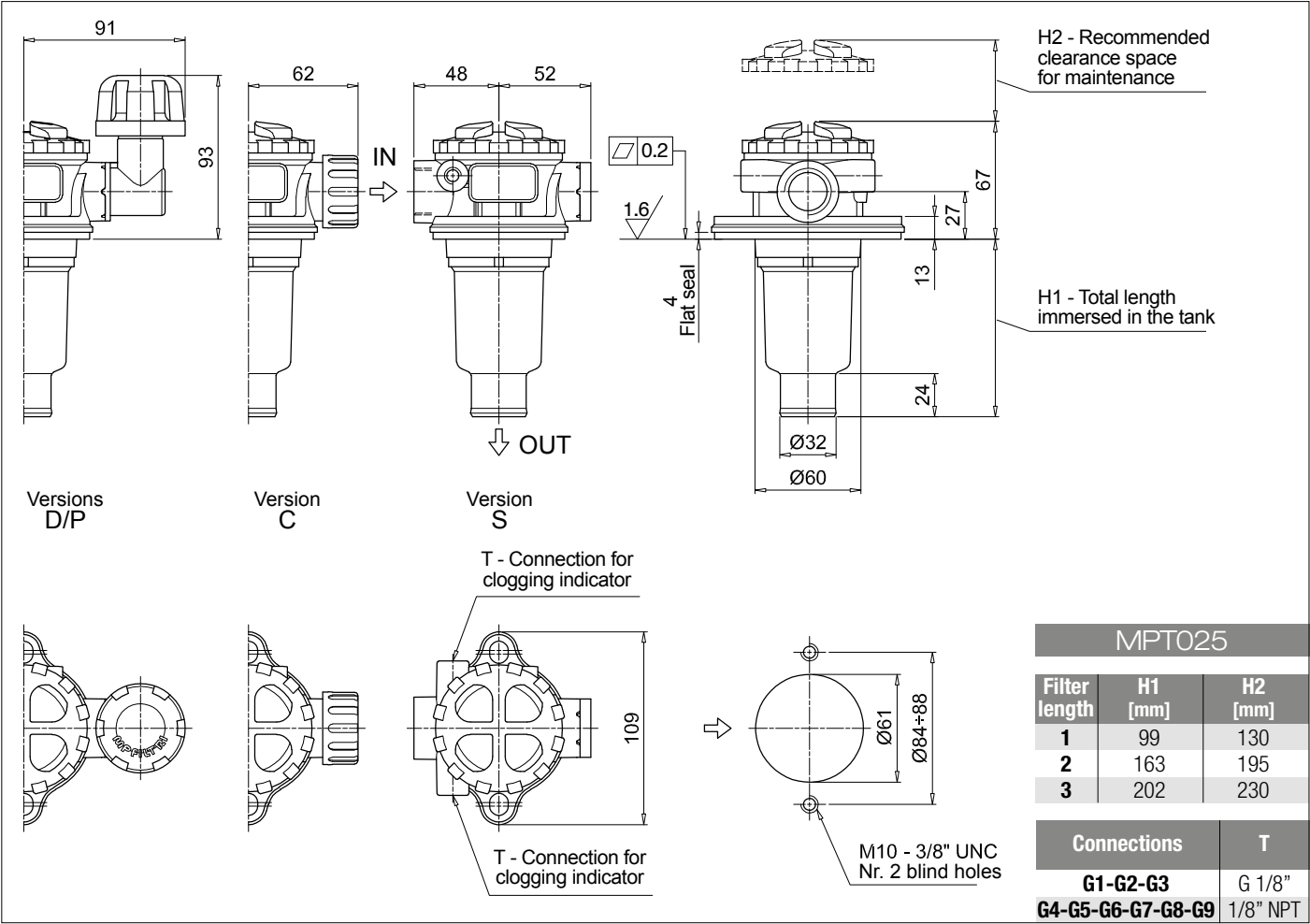
1.75 bar

Execution

P01 MP Filtri standard

Pxx Customized

ACCESSORIES			
Indicators		page	page
BVA	Axial pressure gauge	240	239
BVR	Radial pressure gauge	240	239
BVP	Visual pressure indicator with automatic reset	241	239-240
BVQ	Visual pressure indicator with manual reset	241	
Additional features		page	
TE	Extension tube	248	
DPT	Dipstick	249	



Designation & Ordering code

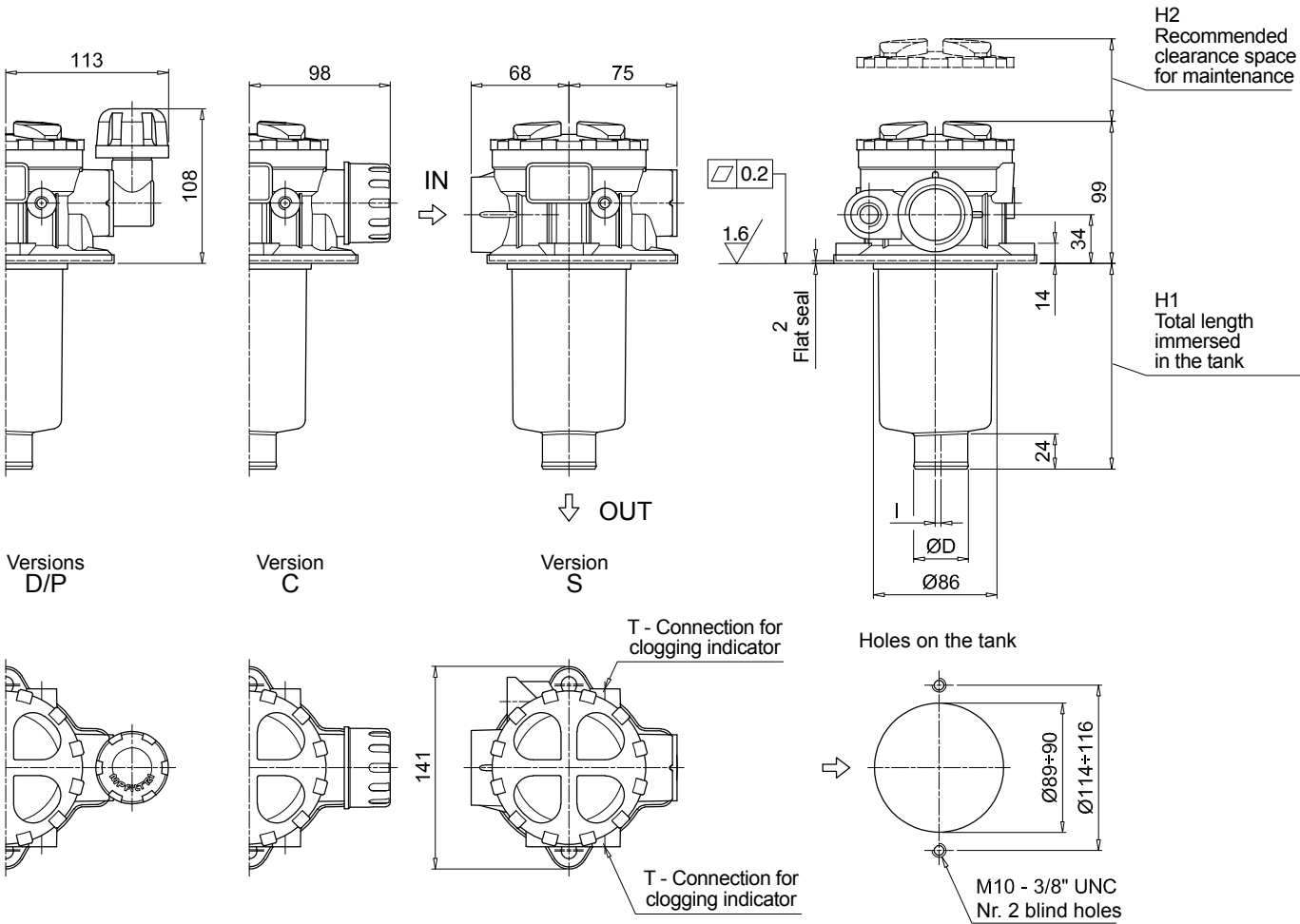
COMPLETE FILTER										
Series and size			Configuration example 1:							
MPT110 Filter element with standard spigot			Configuration example 2:							
Length										
1 2 3 4										
Air breather										
S Without air breather										
C With air breather 10 µm										
D With anti-splash and 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			• •							
Z FPM head anodized			• •							
Main Connections			Aux size 1			Aux size 2			Aux size 2	
G1 G 3/4"			G 3/8"			G 1/2"			G6 1 1/4" NPT	
G2 G 1"									3/8" NPT	
G3 G 1 1/4"									1/2" NPT	
G4 3/4" NPT									SAE 6 - 9/16" - 18 UNF	
G5 1" NPT			3/8" NPT			1/2" NPT			SAE 8 - 3/4" - 16 UNF	
Aux connection - see previous table										
D 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										
A06 Inorganic microfiber 6 µm										
A10 Inorganic microfiber 10 µm										
A16 Inorganic microfiber 16 µm										
A25 Inorganic microfiber 25 µm										
M25 Wire mesh 25 µm										
M60 Wire mesh 60 µm										
M90 Wire mesh 90 µm										
P10 Resin impregnated paper 10 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	page
BVA	Axial pressure gauge	240	239
BVR	Radial pressure gauge	240	239
BVP	Visual pressure indicator with automatic reset	241	239-240
BVQ	Visual pressure indicator with manual reset	241	
Additional features		page	page
TE	Extension tube	248	249
DFS	Diffuser with fast lock connection	249	
DPT	Dipstick		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

MPT114

Filter element with standard spigot

Configuration example 1:

MPT114

4

S

A

G3

A10

E

P01

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

A

NBR

V

FPM

W

NBR head anodized

Z

FPM head anodized

filter element compatible with fluids HFA-HFB-HFC

Filtration rating

Axx

Mxx

Pxx

Connections

G1

G 3/4"

G2

G 1"

G3

G 1 1/4"

G4

3/4" NPT

G5

1" NPT

G6

1 1/4" NPT

G7

SAE 12 - 1 1/16" - 12 UN

G8

SAE 16 - 1 5/16" - 12 UN

G9

SAE 20 - 1 5/8" - 12 UN

Filtration rating (filter media)

A03

Inorganic microfiber 3 µm

A06

Inorganic microfiber 6 µm

A10

Inorganic microfiber 10 µm

A16

Inorganic microfiber 16 µm

A25

Inorganic microfiber 25 µm

M25

Wire mesh 25 µm

M60

Wire mesh 60 µm

M90

Wire mesh 90 µm

P10

Resin impregnated paper 10 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

MF100

Filter element with standard spigot

Configuration example 2:

MF100

4

A10

H

B

E

P01

Configuration example 1:

MF100

3

A03

W

B

P01

Element length

1

2

3

4

Filtration rating (filter media)

A03

Inorganic microfiber 3 µm

A06

Inorganic microfiber 6 µm

A10

Inorganic microfiber 10 µm

A16

Inorganic microfiber 16 µm

A25

Inorganic microfiber 25 µm

M25

Wire mesh 25 µm

M60

Wire mesh 60 µm

M90

Wire mesh 90 µm

P10

Resin impregnated paper 10 µm

P25

Resin impregnated paper 25 µm

Element Δp

N

10 bar

H

10 bar

W

10 bar, compatible with fluids HFA, HFB and HFC

Filter media

Axx

Mxx

Pxx

Seals

B

NBR

V

FPM

Bypass valve

E

3 bar

1.75 bar

Execution

P01

MP Filtri standard

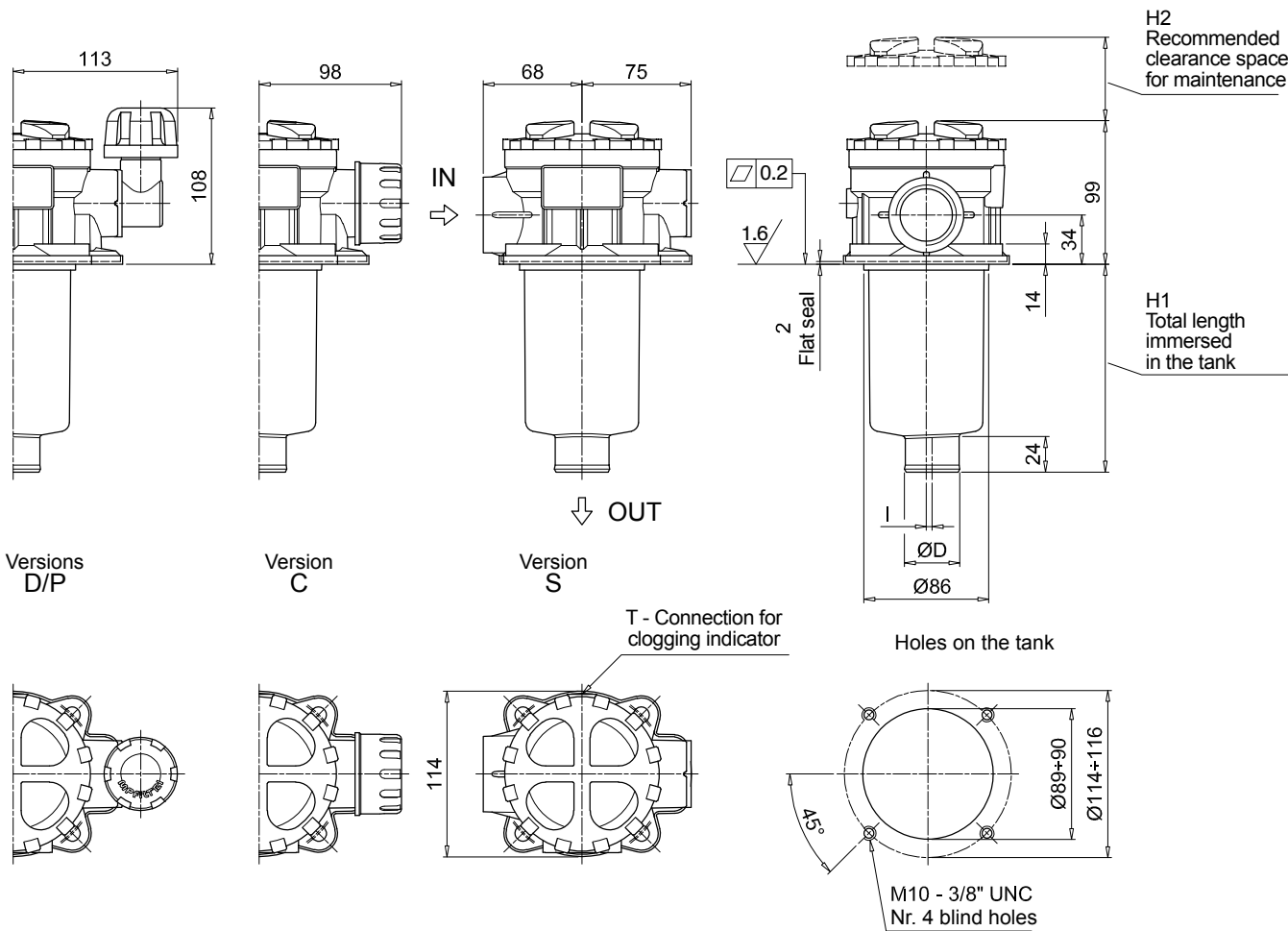
Pxx

Customized

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

MPT116

Filter element with standard spigot

Configuration example 1:

MPT116

1

S

A

G1

M90

E

P01

Configuration example 2:

MPT116

2

S

Z

G9

A03

B

P01

Length

1

2

3

4

Air breather

S

Without air breather

Seals and treatments

A

NBR

Filtration rating

Axx

Mxx

Pxx

V

FPM

W

NBR

head anodized

filter element compatible with fluids HFA-HFB-HFC

Z

FPM

head anodized

Flat seal on the head on request

Connections

G1

G 3/4"

G2

G 1"

G3

G 1 1/4"

G4

3/4" NPT

G5

1" NPT

G6

1 1/4" NPT

G7

SAE 12 - 1 1/16" - 12 UN

G8

SAE 16 - 1 5/16" - 12 UN

G9

SAE 20 - 1 5/8" - 12 UN

Filtration rating (filter media)

A03

Inorganic microfiber

3 µm

A06

Inorganic microfiber

6 µm

A10

Inorganic microfiber

10 µm

A16

Inorganic microfiber

16 µm

A25

Inorganic microfiber

25 µm

M25

Wire mesh

25 µm

M60

Wire mesh

60 µm

M90

Wire mesh

90 µm

P10

Resin impregnated paper

10 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

MF100

Filter element with standard spigot

Configuration example 2:

MF100

1

M90

N

B

E

P01

Configuration example 1:

MF100

2

A03

W

V

P01

Element length

1

2

3

4

Filtration rating (filter media)

A03

Inorganic microfiber

3 µm

A06

Inorganic microfiber

6 µm

A10

Inorganic microfiber

10 µm

A16

Inorganic microfiber

16 µm

A25

Inorganic microfiber

25 µm

M25

Wire mesh

25 µm

M60

Wire mesh

60 µm

M90

Wire mesh

90 µm

P10

Resin impregnated paper

10 µm

P25

Resin impregnated paper

25 µm

Element Δp

N

10 bar

H

10 bar

W

10 bar, compatible with fluids HFA, HFB and HFC

Filter media

Axx

Mxx

Pxx

Seals

B

NBR

V

FPM

Bypass valve

E

3 bar

1.75 bar

Execution

P01

MP Filtri standard

Pxx

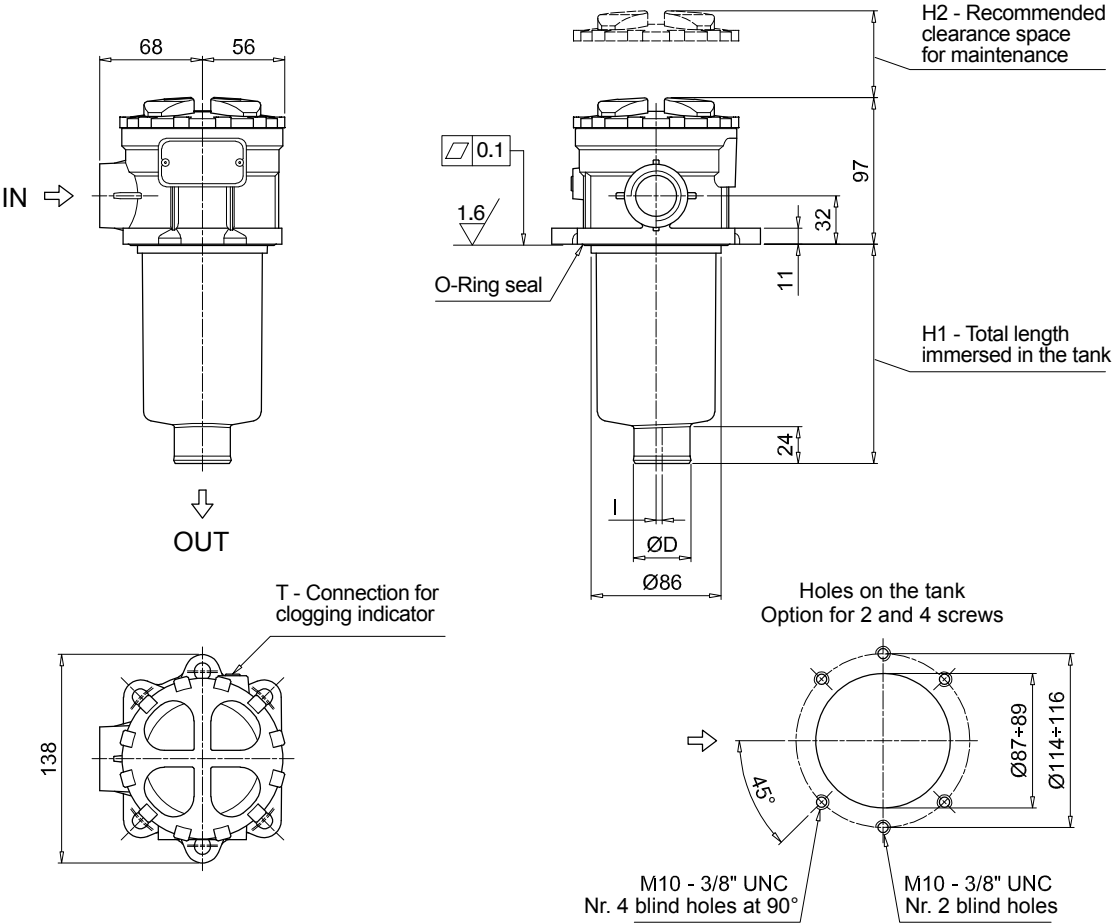
Customized

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



MPT116				
Filter length	H1 [mm]	H2 [mm]	D [mm]	I [mm]
1	99	120	38	4
2	146	170	38	4
3	224	250	47	-
4	326	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

MPT120 Filter element with standard spigot

Length

1 | 2 | 3 | 4 |

Seals and treatments

	Axx	Mxx	Pxx
A NBR	•	•	•
V FPM	•	•	•
W NBR head anodized	•	•	
Z FPM head anodized	•	•	

Main Connections

	Rear connections	Aux size 1	Aux size 2
G1 G 3/4"	G 3/4"		
G2 G 1"	G 1"	G 3/8"	G 1/2"
G3 G 1 1/4"	G 3/4"		
G4 3/4" NPT	3/4" NPT		
G5 1" NPT	1" NPT	3/8" NPT	1/2" NPT
G6 1 1/4" NPT	3/4" NPT		
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	SAE 6 - 9/16" - 18 UNF	SAE 8 - 3/4" - 16 UNF
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

E 3 bar | B 1.75 bar

Execution

P01 MP Filtri standard | Pxx Customized

FILTER ELEMENT

Element series and size

MF100 Filter element with standard spigot

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

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

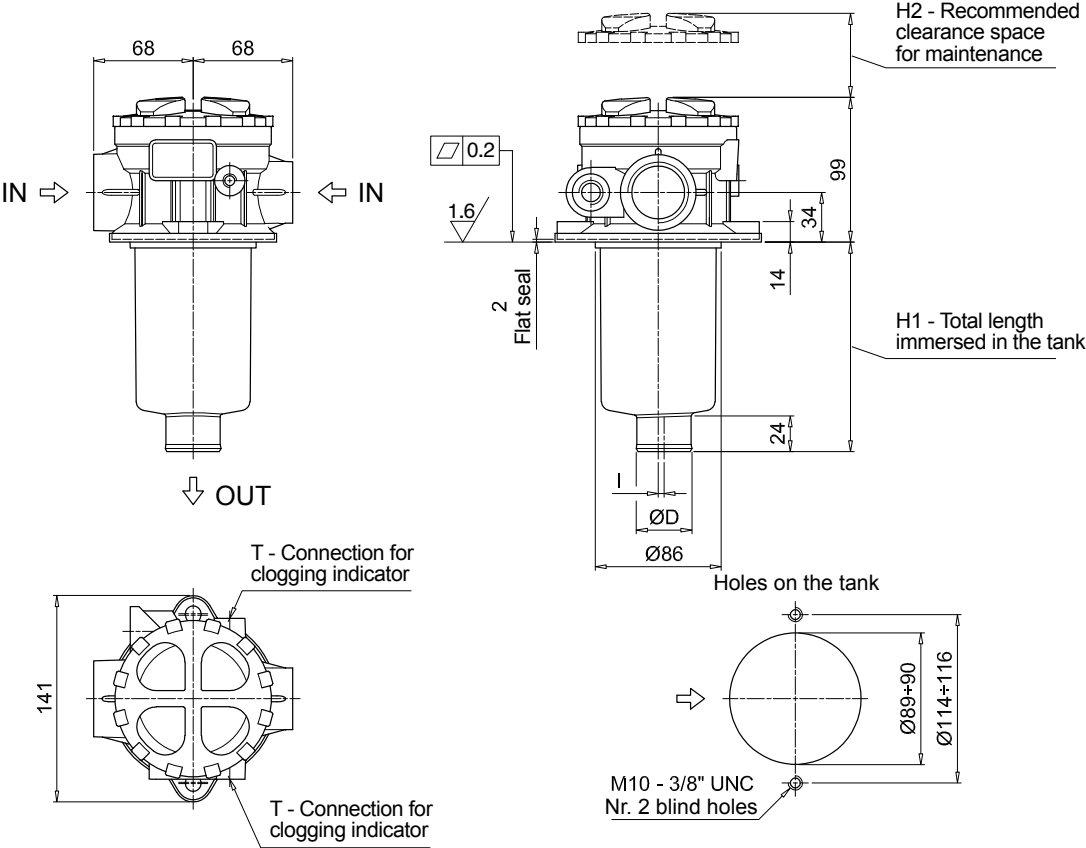
Execution

P01 MP Filtri standard | Pxx Customized

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

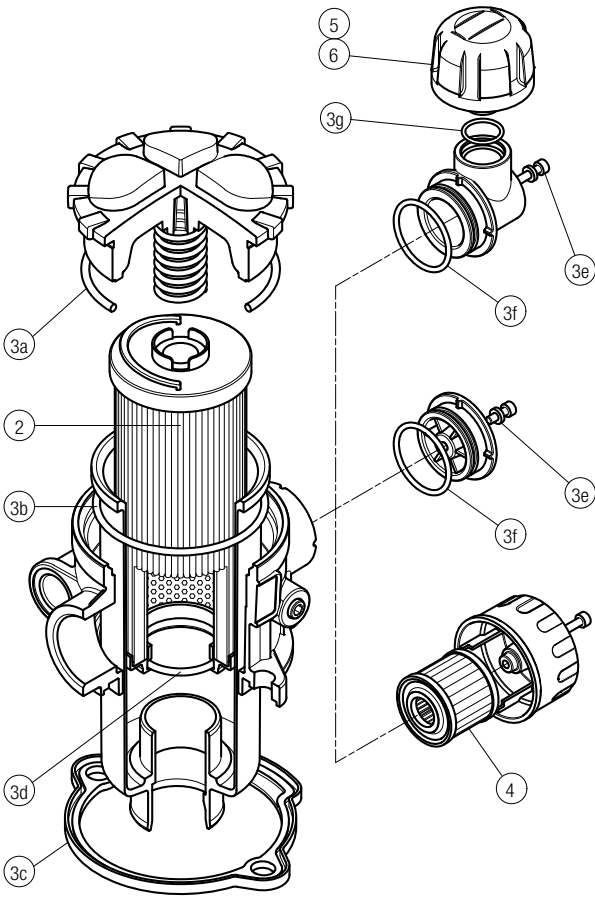
MPT120				
Filter length	H1 [mm]	H2 [mm]	D [mm]	I [mm]
1	97	120	38	4
2	147	170	38	4
3	222	250	47	-
4	324	350	47	2.5

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



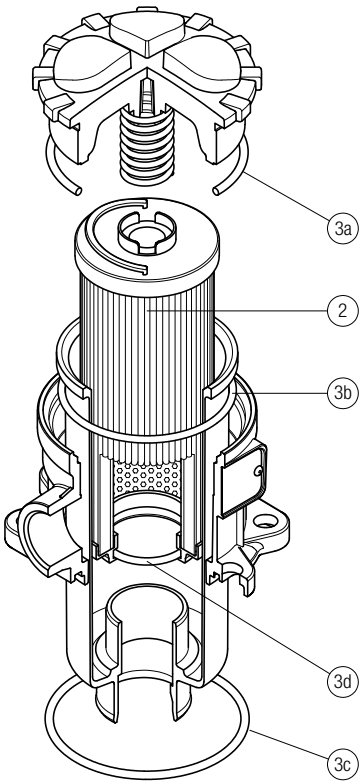
Order number for spare parts

MPT 025 - 027 - 110



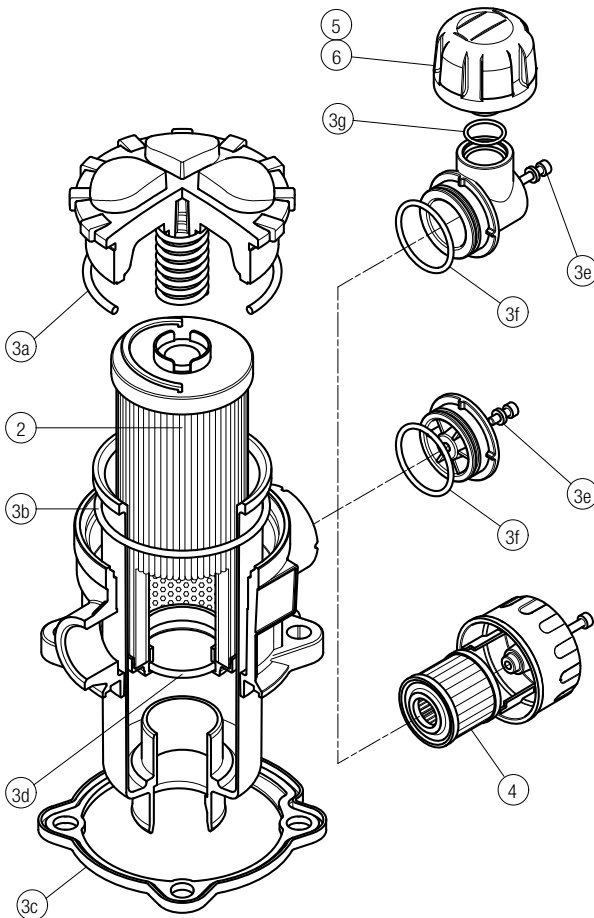
Item:		Q.ty: 1 pc.		Q.ty: 1 pc.		Q.ty: 1 pc.		Q.ty: 1 pc.		Q.ty: 1 pc.	
		2		3 (3a ÷ 3g)		4		5		6	
Filter series	Filter element	Seal Kit code number									
		NBR	FPM	C		D		P			
MPT 025	See order table	02050557	02050558	10 µm A3L03	10 µm SAP50G3L03A0P01	10 µm SAP50G3L03A0P01	10 µm SAP50G3L03A1P01	10 µm SAP50G3L03A0P01	10 µm SAP50G3L03A1P01	10 µm SAP50G3L03A0P01	10 µm SAP50G3L03A1P01
MPT 027		02050559	02050560	10 µm A3L03	10 µm SAP50G3L03A0P01	10 µm SAP50G3L03A0P01	10 µm SAP50G3L03A1P01	10 µm SAP50G3L03A0P01	10 µm SAP50G3L03A1P01	10 µm SAP50G3L03A0P01	10 µm SAP50G3L03A1P01
MPT 110		02050561	02050562	10 µm A5L03	10 µm SAP50G3L03A0P01	10 µm SAP50G3L03A0P01	10 µm SAP50G3L03A1P01	10 µm SAP50G3L03A0P01	10 µm SAP50G3L03A1P01	10 µm SAP50G3L03A0P01	10 µm SAP50G3L03A1P01

MPT 116



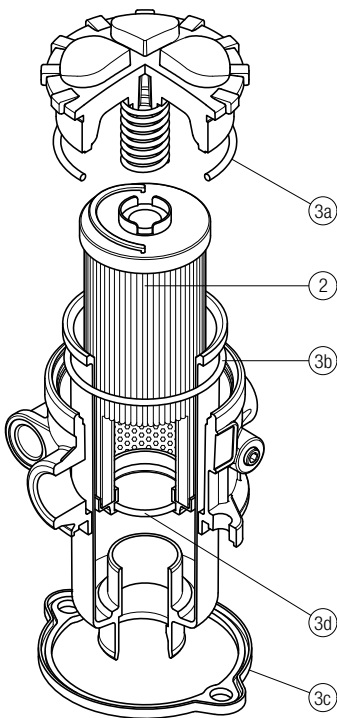
Item:		Q.ty: 1 pc.		Q.ty: 1 pc.	
		2		3 (3a ÷ 3d)	
Filter series	Filter element	Seal Kit code number			
		NBR	FPM		
MPT 116	See order table	02050466	02050467		

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



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