MPS series

Maximum working pressure up to 1.2 MPa (12 bar) - Flow rate up to 365 l/min



MPS GENERAL INFORMATION

Description

Spin-on filters

Maximum working pressure up to 1.2 MPa (12 bar)
Flow rate up to 365 l/min

MPS is a range of spin-on filters suitable to be used in suction, return and low pressure lines.
They offer a good balance between performances, dimensions and prices.
They are directly connected to the lines of the system through the hydraulic fittings.

Available features:

- Female threaded connections up to 1 1/2" and flanged connections up to 1 1/2", for a maximum flow rate of 365 l/min
- Fine filtration rating, to get a good cleanliness level into the reservoir
- Water removal elements (CW), to remove the free water from the hydraulic fluid
- Double connection for the cans, to fit both European and American standard elements
- Double cans fitting, to increase the life time of the filter
- Bypass valve, to relieve excessive pressure drop across the filter media
- Visual, electrical and electronic clogging indicators for suction and return applications
- Visual, electrical and electronic differential clogging indicators for low pressure applications

Common applications:

- Suction lines, Return lines, Delivery lines, in economic industrial equipment or mobile machines.
- Off-line filtration tank in economic industrial equipment or mobile machines

Technical data

Filter housing materials

- Head: Aluminium
- Bypass valve: Polyamide - Steel
- Element: Zinc-Plated Steel - Painted steel

Pressure

- Test pressure: 1.8 MPa (18 bar)
- Min. Burst pressure: 3.6 MPa (36 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 1.2 MPa (12 bar)

Bypass valve

- Inline / Return filter opening pressure: 0.175 MPa (1.75 bar) ±10%
- Inline / Suction filter opening pressure: 0.03 MPa (0.3 bar) ±10%

Filter element features

Filter		Filter element
MPS		CS
Δp Element type		
Element media	Construction	Δp
A - Microfiber	Standard	5 bar
M - Wire mesh	Standard	5 bar
P - Paper	Standard	5 bar
Please see ordering code tables to check element Δp series availability based on filter features.		
Flow direction through the filter element: From OUT to IN		

Seals

Standard NBR - series A

Temperature

From -20 °C to +110 °C

Note

MPS filters are provided for vertical mounting

Weights [kg] and volumes [dm³]

Filter series	Weights [kg]	Volumes [dm³]
MPS 050	1.00	0.70
MPS 051	1.05	0.70
MPS 070	1.20	0.95
MPS 071	1.25	0.95
MPS 100	2.10	1.65
MPS 101	2.20	1.65
MPS 150	2.40	2.00
MPS 151	2.50	2.00
MPS 200	3.90	3.00
MPS 250	4.60	3.70
MPS 300-301	5.30	3.40
MPS 350-351	6.00	4.10

Hydraulic diagram

Filter series					
MPS 050	•	-	-	-	-
MPS 051	-	•	-	-	-
MPS 070	•	-	-	-	-
MPS 071	-	•	-	-	-
MPS 100	•	-	-	-	-
MPS 101	-	•	-	-	-
MPS 150	•	-	-	-	-
MPS 151	-	•	-	-	-
MPS 200	-	-	•	-	-
MPS 250	-	-	•	-	-
MPS 300	-	-	-	•	-
MPS 301	-	-	-	-	•
MPS 350	-	-	-	•	-
MPS 351	-	-	-	-	•
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	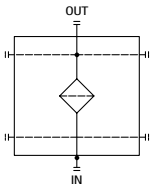	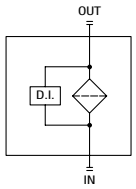	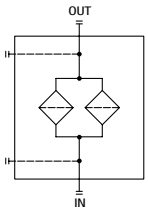	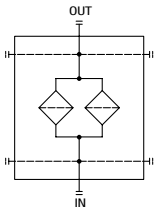	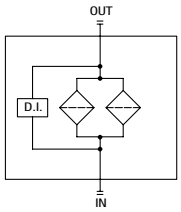
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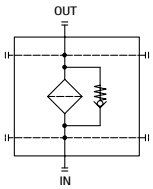
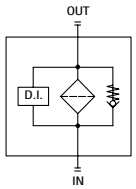
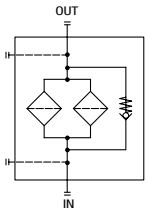
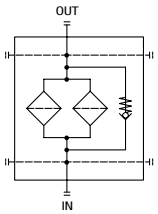
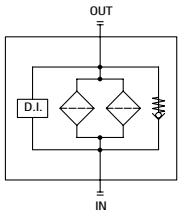
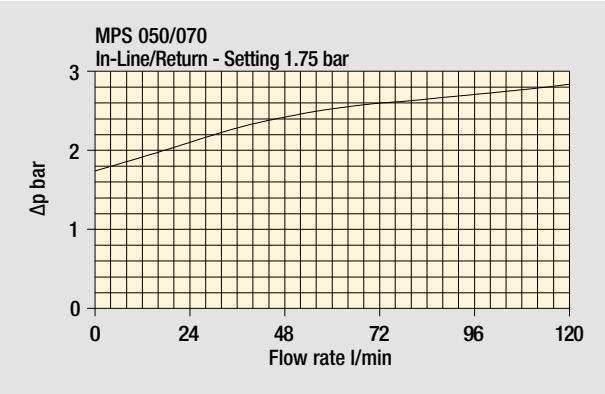
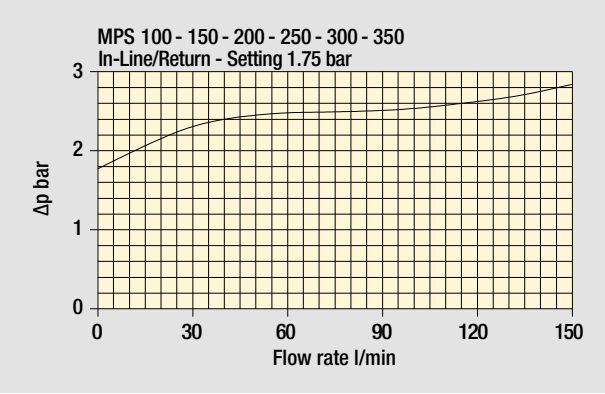
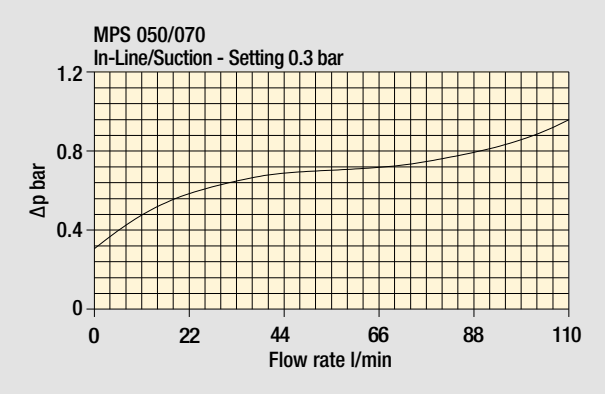
					

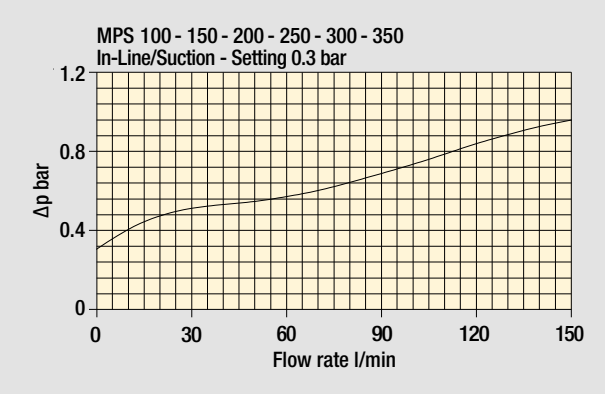
Pressure drop

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.

CS 050 - 070 - 100 - 150
CG - CW 050 - 070



CG - CW 100 - 150



CW
This series of cartridge removes water from oil while filtering the oil at the same time.
Water absorbent polymers up to 800 times their own weight provide this major feature.

Water holding capacities:
CW 050= 240 ml
Ordering code: **CW050P10AP01**

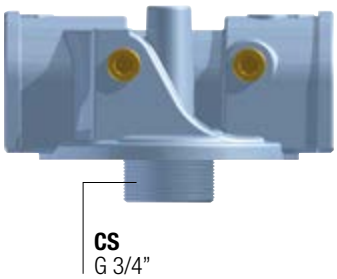
CW 150= 788 ml
Ordering code: **CW150P10AP01**

Thread connections	
Element	Connection
CS 050 - 070	G 3/4"
CS 100 - 150	G 1 1/4"
CG / CW 050 - 070	1" - 12 UNF
CG / CW 100 - 150	1 1/2" - 16 UN

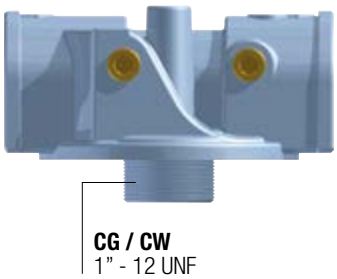
Water holding capacities CW		
	good	poor
Viscosity	30/46 mm^2/s (cSt)	> 46 mm^2/s (cSt)
H_2O p.p.m.	600/800 p.p.m.	> 800 p.p.m.
Flow rate	CW050 7/15 l/min CW150 20/40 l/min	CW050 > 20 l/min CW150 > 50 l/min
Temperature	40/60 °C	< 30 °C

Heads

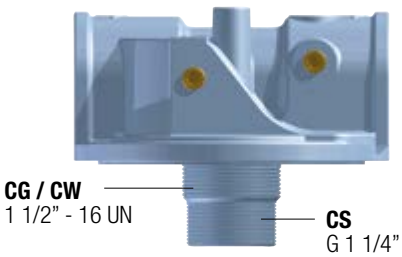
CS 050 - 070



CG / CW 050 - 070



CS / CG / CW 100 - 150



CG and CW cartridges are not foreseen as first equipment supply for MPS filters; they can be provided only as loose spare parts.
For this reason, only CS cartridges are foreseen as first equipment supply in the following Designation & Ordering code pages for MPS filters.

Designation & Ordering code

COMPLETE FILTER

Configuration example : MPS100 | R | G1 | A10 | A | P01

Series and size

MPS100	**MPS150**	With connections for clogging indicators
MPS101	**MPS151**	With connections for differential pressure indicators

Bypass valve

		MPS 100 - 150	MPS 101 - 151
R	Inline / Return: with bypass 1.75 bar	•	•
S	Inline / Suction: with bypass 0.3 bar	•	-
U	Without bypass	•	-
P	Without bypass	-	•

Connections

G1	G 1 1/4”
G2	1 1/4” NPT
G3	SAE 20 - 1 5/8” - 12 UN

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
A25	Inorganic microfiber	25 µm	**P10**	Resin impregnated paper	10 µm
			P25	Resin impregnated paper	25 µm

Seal

A	NBR

Execution

P01	MP Filtri standard

CARTRIDGE

Configuration example: CS100 | A10 | A | P01

Cartridge series and size

CS100 | **CS150**

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
A25	Inorganic microfiber	25 µm	**P10**	Resin impregnated paper	10 µm
			P25	Resin impregnated paper	25 µm

Seals

A	NBR

Execution

P01	MP Filtri standard
Pxx	Customized

CLOGGING INDICATORS

See pages 781-783

Clogging indicators on RETURN line

BVA	Axial pressure gauge
BVR	Radial pressure gauge
BVP	Visual pressure indicator with automatic reset
BVQ	Visual pressure indicator with manual reset
BEA	Electrical pressure indicator
BEM	Electrical pressure indicator
BET	Electrical pressure indicator
BLA	Electrical / visual pressure indicator

Clogging indicators on SUCTION line

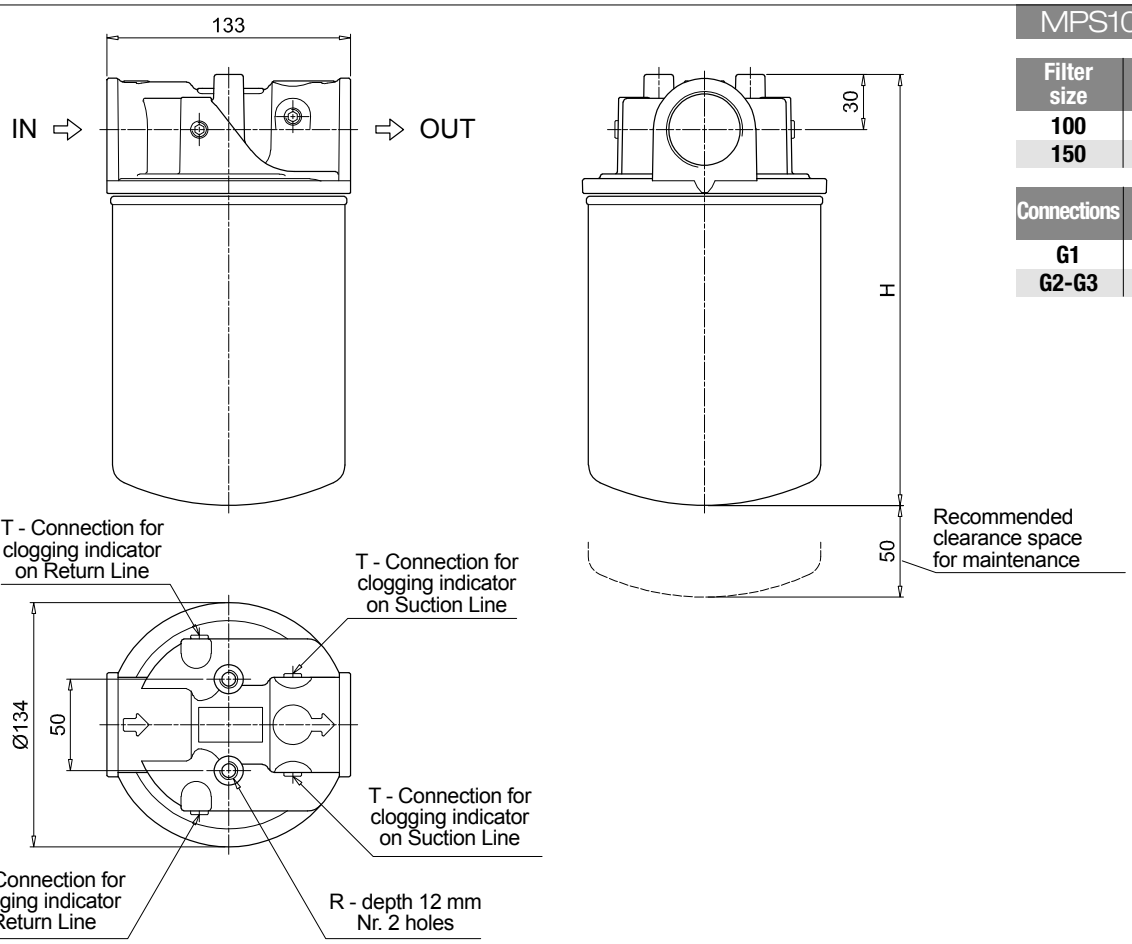
VVB	Axial pressure gauge
VVS	Radial pressure gauge
VEB	Electrical vacuum indicator
VLB	Electrical / visual vacuum indicator

Differential pressure indicators

DEA	Electrical differential pressure indicator
DEM	Electrical differential pressure indicator
DEU	Electrical differential pressure indicator
DLA	Electrical / visual differential pressure indicator
DLE	Electrical / visual differential pressure indicator
DTA	Electronic differential pressure indicator
DTI	I-O Link electronic differential pressure indicator
DVA	Visual differential pressure indicator
DVM	Visual differential pressure indicator

Dimensions

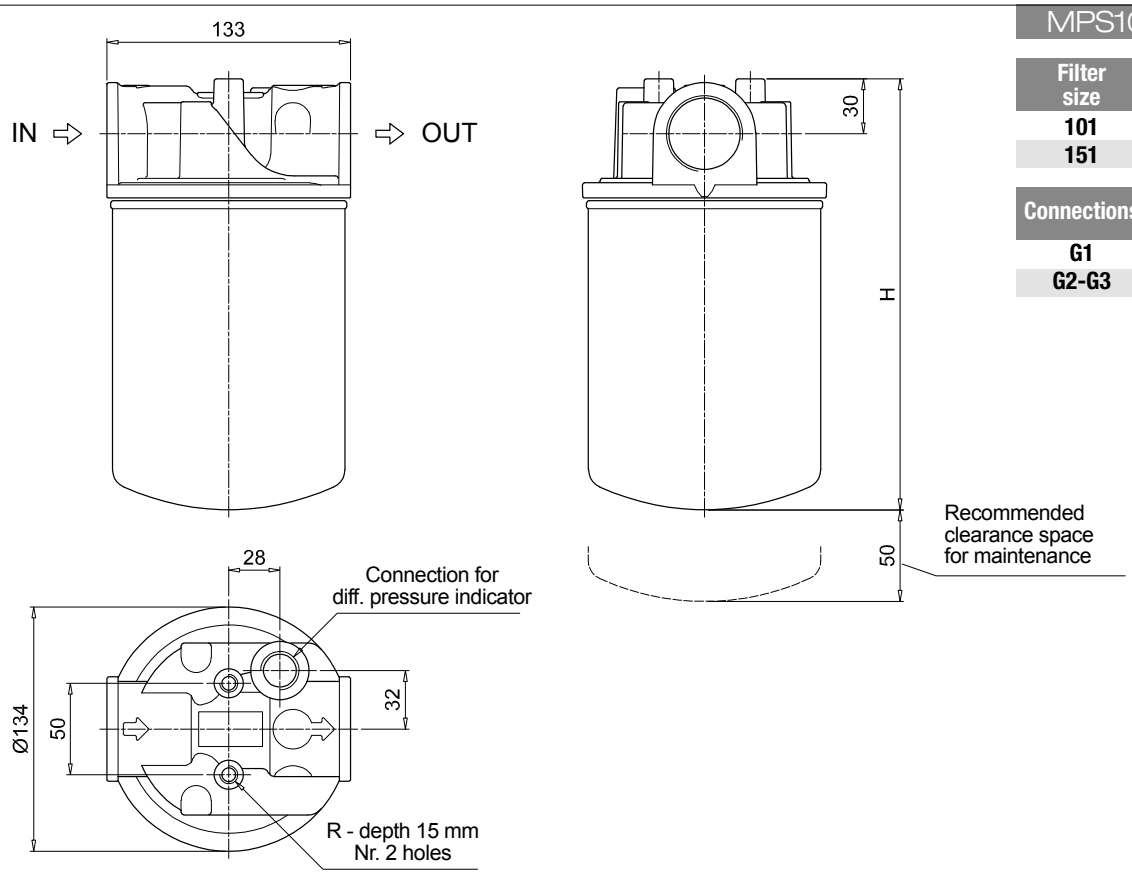
MPS100 - MPS150



Filter size	H [mm]
100	246
150	295

Connections	T	R
G1	G 1/8"	M8
G2-G3	1/8" NPT	5/16" UNC

MPS101 - MPS151



Filter size	H [mm]
101	246
151	295

Connections	R
G1	M8
G2-G3	5/16" UNC