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: Nylon - Steel
- Element: Zinc-Plated Steel - Painted Steel

Bypass valve
- Return filter opening pressure: 175 kPa (1.75 bar) ±10%
- Suction filter opening pressure: 30 kPa (0.3 bar) ±10%

Δp element type
- Δp: 5 bar
- Fluid flow through the filter element from OUT to IN

Seals
Standard NBR - series A

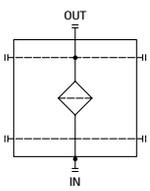
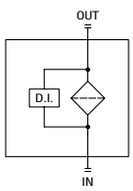
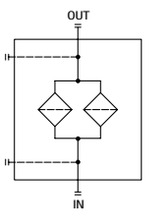
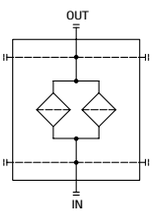
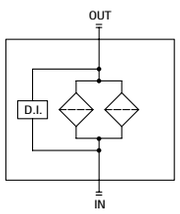
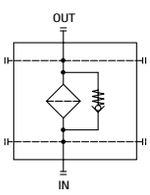
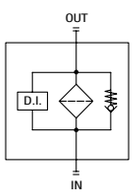
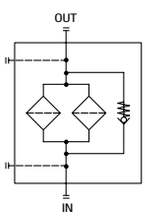
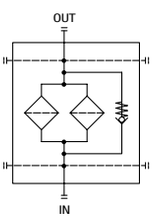
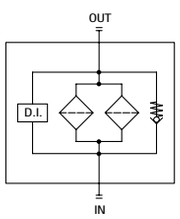
Temperature
From -20 °C to +110 °C

Note
MPS filters are provided for vertical mounting

Weights [kg] and volumes [dm³]

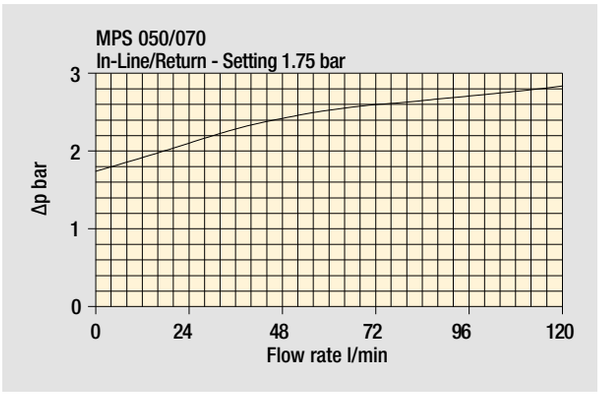
Filter series	Weights [kg]	Volumes [dm³]
MPS 050	1.00	0.70
MPS 051	1.05	0.70
MPS 070	1.20	0.95
MPS 071	1.25	0.95
MPS 100	2.10	1.65
MPS 101	2.20	1.65
MPS 150	2.40	2.00
MPS 151	2.50	2.00
MPS 200	3.90	3.00
MPS 250	4.60	3.70
MPS 300-301	5.30	3.40
MPS 350-351	6.00	4.10

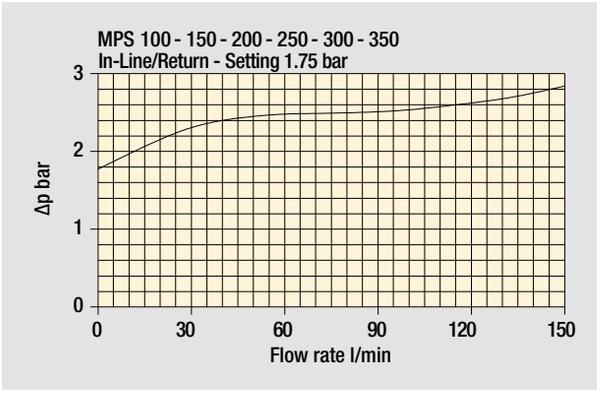
Hydraulic symbols

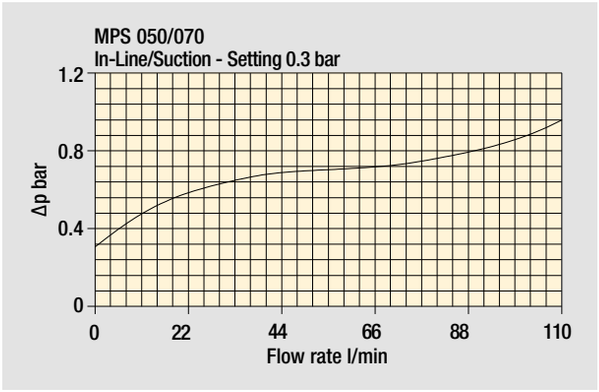
Filter series					
MPS 050	•				
MPS 051		•			
MPS 070	•				
MPS 071		•			
MPS 100	•				
MPS 101		•			
MPS 150	•				
MPS 151		•			
MPS 200			•		
MPS 250			•		
MPS 300				•	
MPS 301					•
MPS 350				•	
MPS 351					•
	Style U/P	Style U/P	Style U	Style U/P	Style U/P
					
	Style R/S	Style R/S	Style R/S	Style R/S	Style R/S
					

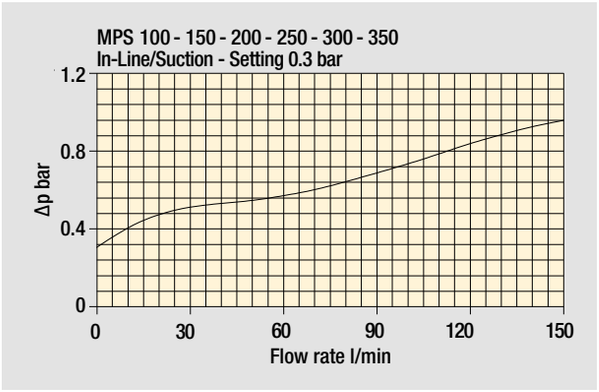
Pressure drop

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.

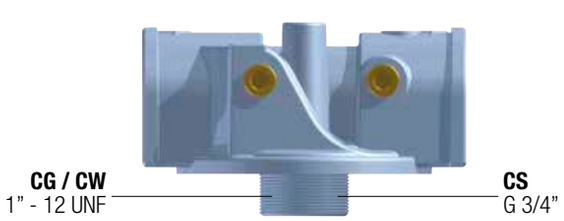
Water holding capacities:
CW 050= 240 ml
Ordering code: **CW050P10AP01**

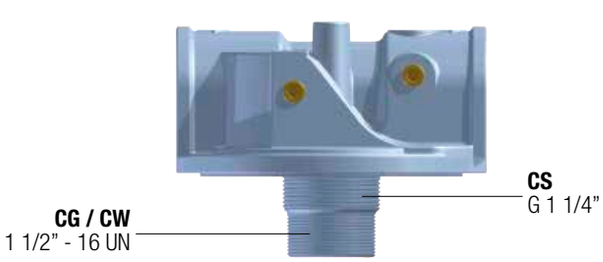
CW 150= 788 ml
Ordering code: **CW150P10AP01**

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





Designation & Ordering code

COMPLETE FILTER

Configuration example : MPS050 | R | G1 | A10 | A | P01

Series and size

MPS050 | **MPS070** With connections for clogging indicators
MPS051 | **MPS071** With connections for differential indicators

Bypass valve	MPS 050 - 070	MPS 051 - 071
R Return: 1.75 bar	•	•
S Suction: 30 kPa	•	
U Without bypass	•	
P Without bypass		•

Connections

G1 G 3/4”
G2 3/4” NPT
G3 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
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

Seal

A NBR

Execution

P01 MP Filtri standard

CARTRIDGE

Configuration example: CS050 | A10 | A | P01

Cartridge series and size

CS050 | **CS070**

Filtration rating (filter media)

A03 Inorganic microfiber 3 µm
A06 Inorganic microfiber 6 µm
A10 Inorganic microfiber 10 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

Seals

A NBR

Execution

P01 MP Filtri standard
Pxx Customized

ACCESSORIES

Clogging indicators on RETURN line

		page
BVA	Axial pressure gauge	315
BVR	Radial pressure gauge	315
BVP	Visual pressure indicator with automatic reset	316
BVQ	Visual pressure indicator with manual reset	316
BEA	Electrical pressure indicator	314
BEM	Electrical pressure indicator	314
BLA	Electrical / visual pressure indicator	314-315

Clogging indicators on SUCTION line

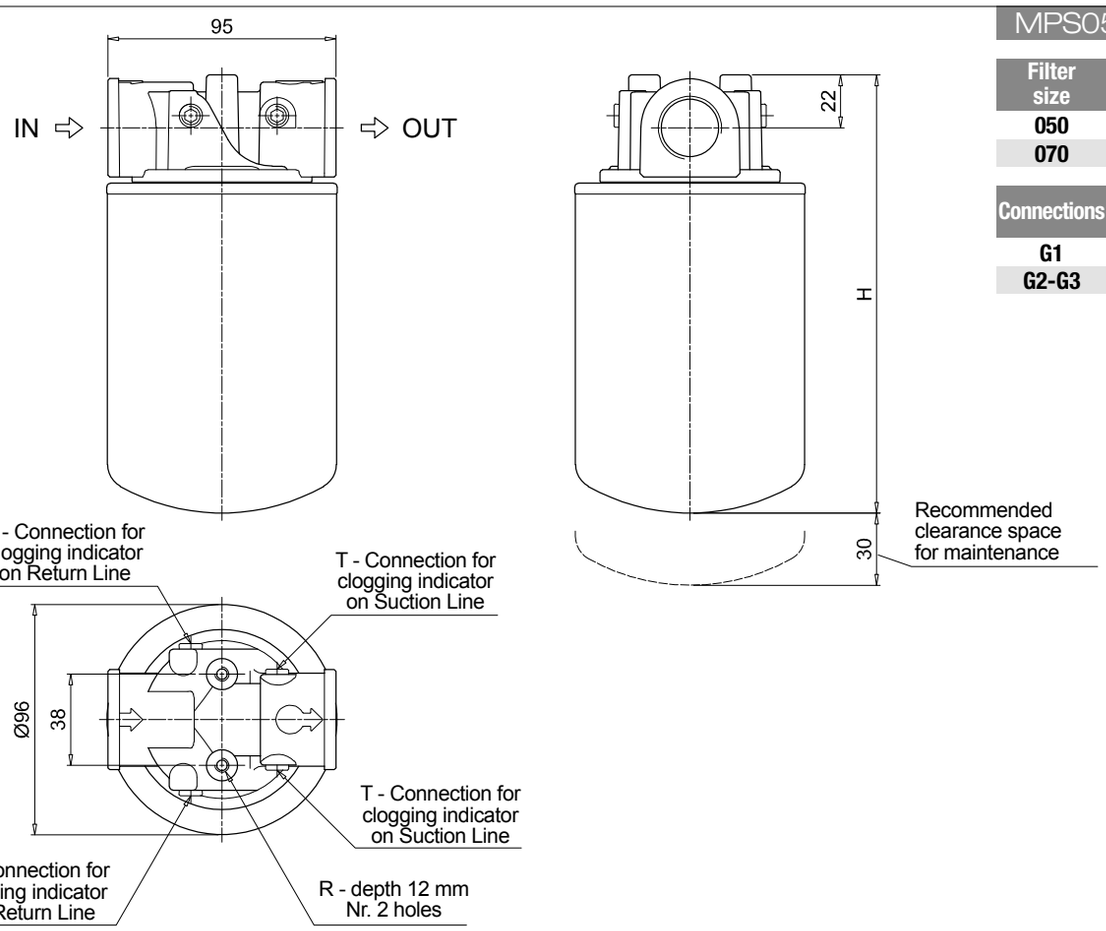
		page
VVB	Axial pressure gauge	313
VVS	Radial pressure gauge	313
VEB	Electrical vacuum indicator	312
VLB	Electrical/visual vacuum indicator	312

Differential indicators

		page
DEA	Electrical differential indicator	317
DEM	Electrical differential indicator	317-318
DLA	Electrical / visual differential indicator	318-319
DLE	Electrical / visual differential indicator	319
DTA	Electronic differential indicator	320
DVA	Visual differential indicator	320
DVM	Visual differential indicator	320

Dimensions

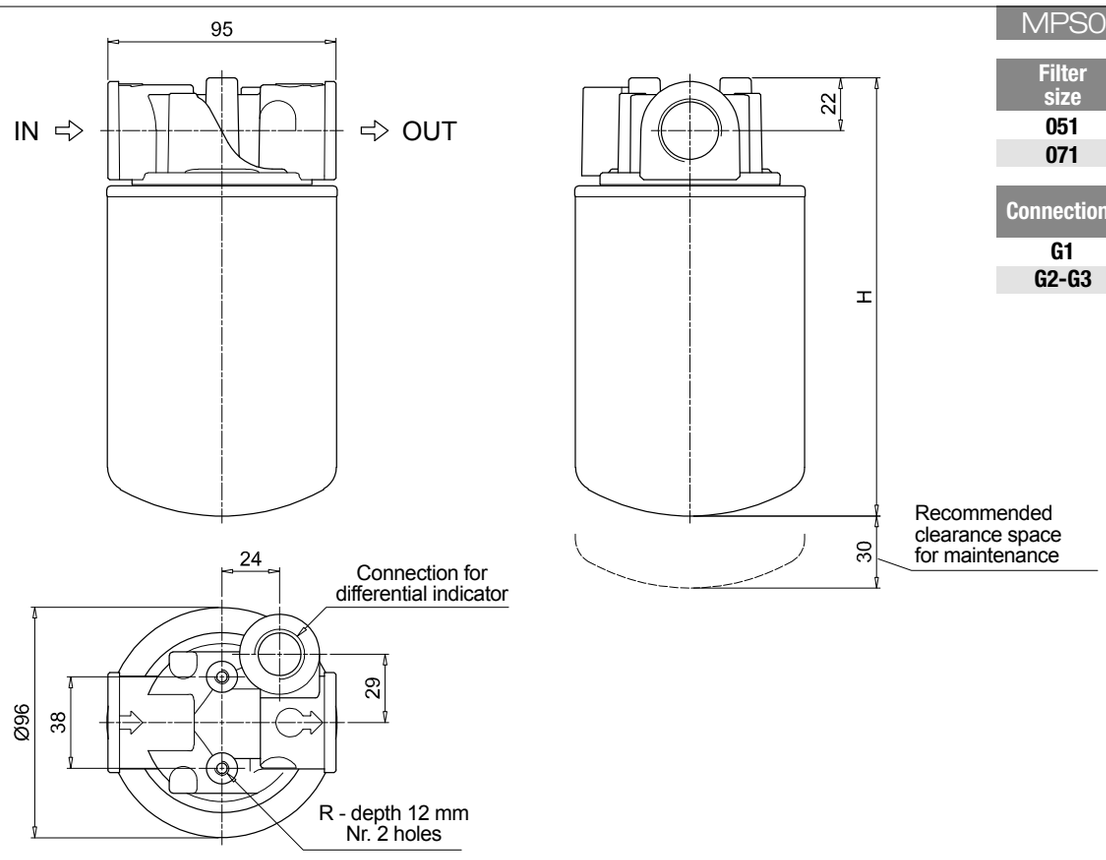
MPS050 - MPS070



Filter size	H [mm]
050	192
070	256

Connections	T	R
G1	G 1/8"	M6
G2-G3	1/8" NPT	1/4" UNC

MPS051 - MPS071



Filter size	H [mm]
051	192
071	256

Connections	R
G1	M6
G2-G3	1/4" UNC

MPS MPS100 - MPS150 MPS101 - MPS151

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 indicators

Bypass valve	MPS 100 - 150	MPS 101 - 151
R Return: 1.75 bar	•	•
S Suction: 30 kPa	•	
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

A06 Inorganic microfiber 6 µm

A10 Inorganic microfiber 10 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

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

A06 Inorganic microfiber 6 µm

A10 Inorganic microfiber 10 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

Seals

A NBR

Execution

P01 MP Filtri standard

Pxx Customized

ACCESSORIES

Clogging indicators on RETURN line	page
BVA Axial pressure gauge	315
BVR Radial pressure gauge	315
BVP Visual pressure indicator with automatic reset	316
BVQ Visual pressure indicator with manual reset	316

	page
BEA Electrical pressure indicator	314
BEM Electrical pressure indicator	314
BLA Electrical / visual pressure indicator	314-315

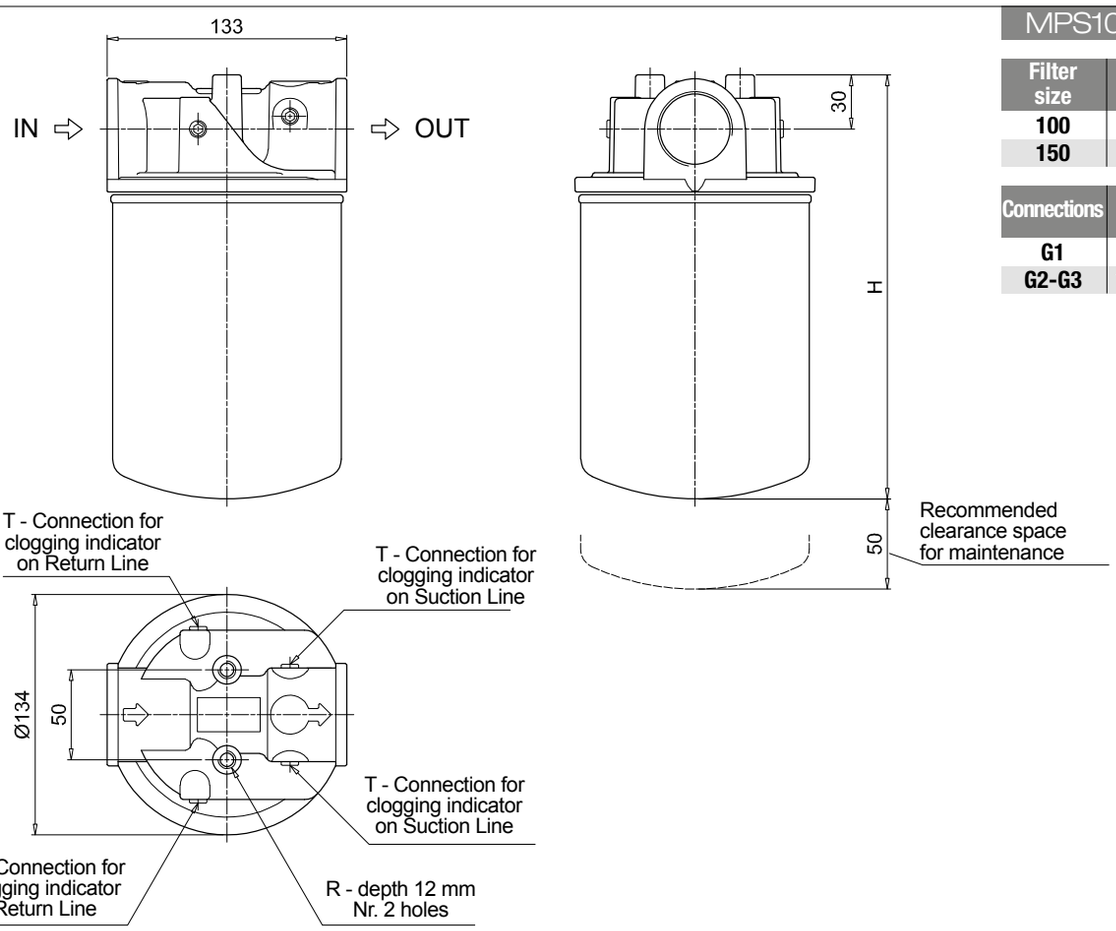
Clogging indicators on SUCTION line	page
VVB Axial pressure gauge	313
VVS Radial pressure gauge	313

	page
VEB Electrical vacuum indicator	312
VLB Electrical/visual vacuum indicator	312

Differential indicators	page
DEA Electrical differential indicator	317
DEM Electrical differential indicator	317-318
DLA Electrical / visual differential indicator	318-319
DLE Electrical / visual differential indicator	319

	page
DTA Electronic differential indicator	320
DVA Visual differential indicator	320
DVM Visual differential indicator	320

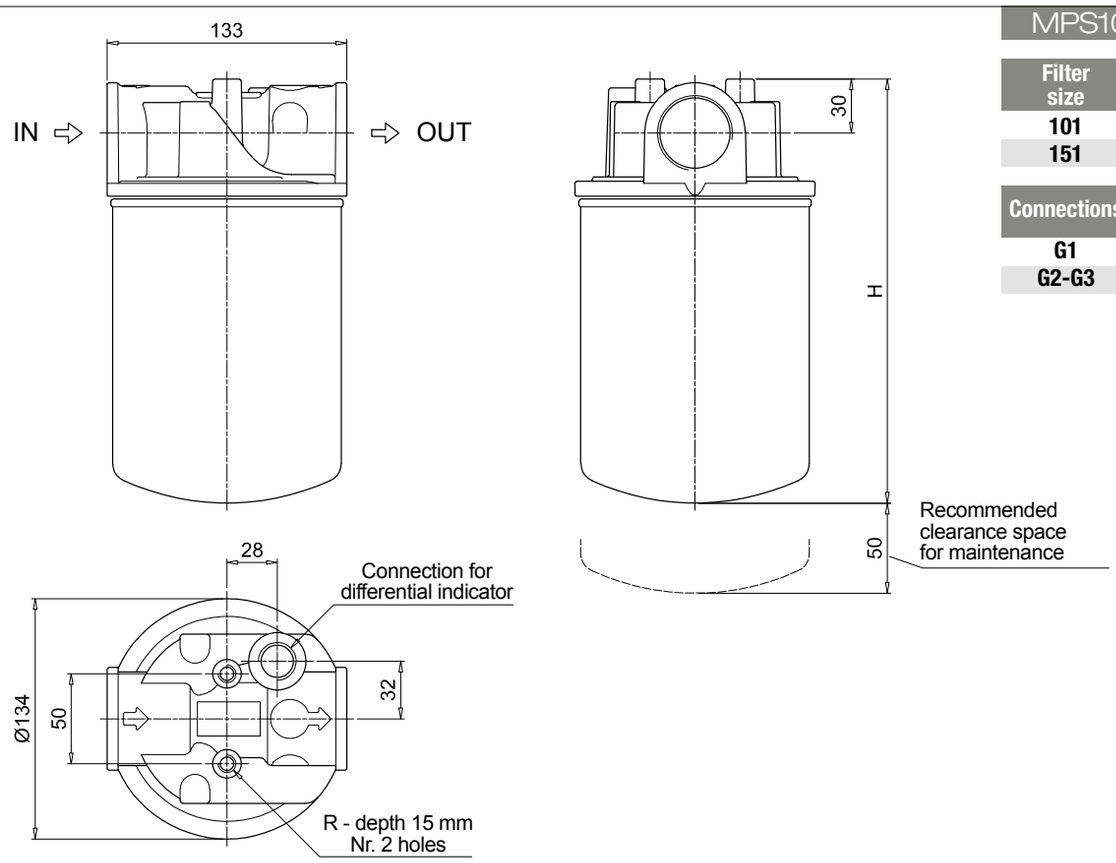
Dimensions



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

MPS MPS200 - MPS250

Designation & Ordering code

COMPLETE FILTER

Configuration example : MPS200 | R | G1 | A10 | A | P01

Series and size
MPS200 | **MPS250**

Bypass valve
- **R** Return: 1.75 bar
- **S** Suction: 30 kPa
- **U** Without bypass

Connections
- **G1** G 1 1/2”
- **G2** 1 1/2” NPT
- **G3** SAE 24 - 1 7/8” - 12 UN

Filtration rating (filter media)
- **A03** Inorganic microfiber 3 µm
- **A06** Inorganic microfiber 6 µm
- **A10** Inorganic microfiber 10 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

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
- **A06** Inorganic microfiber 6 µm
- **A10** Inorganic microfiber 10 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

Seals
- **A** NBR

Execution
- **P01** MP Filtri standard
- **Pxx** Customized

ACCESSORIES

Clogging indicators on RETURN line

		page
BVA	Axial pressure gauge	315
BVR	Radial pressure gauge	315
BVP	Visual pressure indicator with automatic reset	316
BVQ	Visual pressure indicator with manual reset	316
BEA	Electrical pressure indicator	314
BEM	Electrical pressure indicator	314
BLA	Electrical / visual pressure indicator	314-315

Clogging indicators on SUCTION line

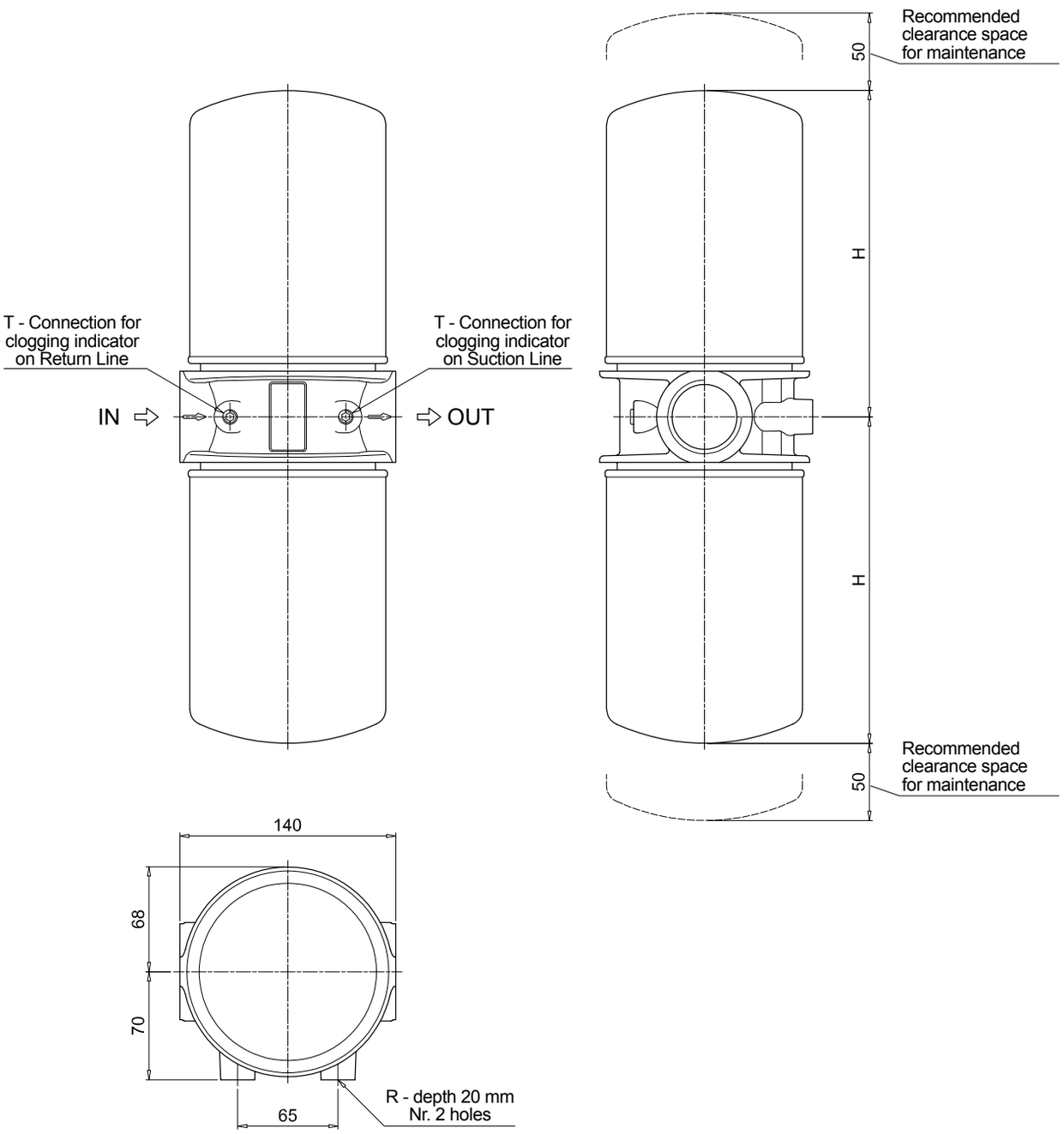
		page
VVB	Axial pressure gauge	313
VVS	Radial pressure gauge	313
VEB	Electrical vacuum indicator	312
VLB	Electrical/visual vacuum indicator	312

Dimensions

MPS200 - MPS250

Filter size	H [mm]
200	213
250	262

Connections	T	R
G1	G 1/8"	M10
G2-G3	1/8" NPT	7/16" UNC



MPS MPS300 - MPS350 MPS301 - MPS351

Designation & Ordering code

COMPLETE FILTER

Configuration example : MPS300 | R | F1 | A10 | A | P01

Series and size

MPS300 | **MPS350** With connections for clogging indicators
MPS301 | **MPS351** With connections for differential indicators

Bypass valve	MPS 300 - 350	MPS 301 - 351
R Return: 1.75 bar	•	•
S Suction: 30 kPa	•	
U Without bypass	•	
P Without bypass		•

Connections

G1 G 1 1/2”
G2 1 1/2” NPT
G3 SAE 24 - 1 7/8” - 12 UN
F1 1 1/2” SAE 3000 psi/M
F2 1 1/2” SAE 3000 psi/UNC

Filtration rating (filter media)

A03 Inorganic microfiber 3 µm
A06 Inorganic microfiber 6 µm
A10 Inorganic microfiber 10 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

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
A06 Inorganic microfiber 6 µm
A10 Inorganic microfiber 10 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

Seals
A NBR

Execution
P01 MP Filtri standard
Pxx Customized

ACCESSORIES

Clogging indicators on RETURN line	page		page
BVA Axial pressure gauge	315	**BEA** Electrical pressure indicator	314
BVR Radial pressure gauge	315	**BEM** Electrical pressure indicator	314
BVP Visual pressure indicator with automatic reset	316	**BLA** Electrical / visual pressure indicator	314-315
BVQ Visual pressure indicator with manual reset	316		

Clogging indicators on SUCTION line	page		page
VVB Axial pressure gauge	313	**VEB** Electrical vacuum indicator	312
VVS Radial pressure gauge	313	**VLB** Electrical/visual vacuum indicator	312

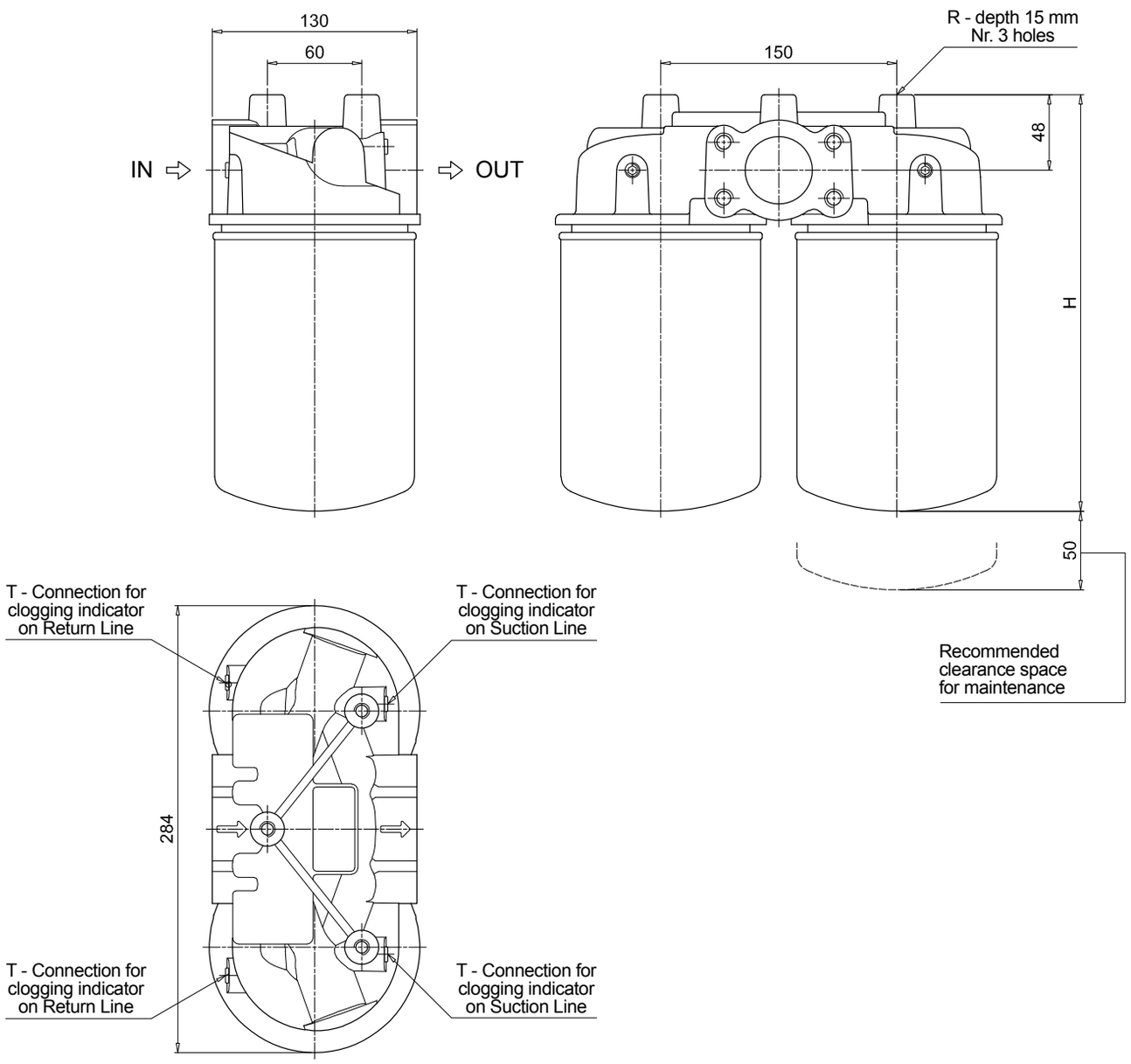
Differential indicators	page		page
DEA Electrical differential indicator	317	**DTA** Electronic differential indicator	320
DEM Electrical differential indicator	317-318	**DVA** Visual differential indicator	320
DLA Electrical / visual differential indicator	318-319	**DVM** Visual differential indicator	320
DLE Electrical / visual differential indicator	319		

Dimensions

MPS300 - MPS350

Filter size	H [mm]
300	266
350	315

Connections	T	R
G1	G 1/8"	M10
G2-G3	1/8" NPT	7/16" UNC
F1	G 1/8"	M10
F2	1/8" NPT	7/16" UNC



Dimensions

MPS301 - MPS351	
Filter size	**H [mm]**
301	266
351	315

Connections	**R**
G1	M10
G2-G3	7/16" UNC
F1	M10
F2	7/16" UNC