



Filtro MP  
Serie MPS



 HYDRAULIC  
COMPONENTS  
& FLUID CONTAMINATION  
CONTROL

# MPS series

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



## 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)  $\pm 10\%$
- Inline / Suction filter opening pressure: 0.03 MPa (0.3 bar)  $\pm 10\%$

### Filter element features

Filter MPS	Filter element CS	
<b><math>\Delta p</math> Element type</b>		
Element media	Construction	$\Delta p$
A - Microfiber	Standard	5 bar
M - Wire mesh	Standard	5 bar
P - Paper	Standard	5 bar
<i>Please see ordering code tables to check element <math>\Delta p</math> series availability based on filter features.</i>		
<b>Flow direction through the filter element:</b> From OUT to IN		

### Seals

Standard NBR - series A

### Temperature

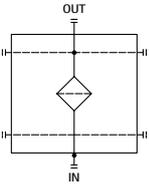
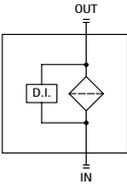
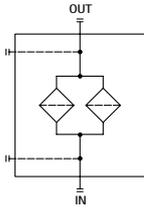
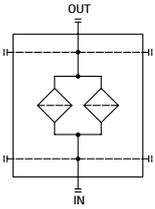
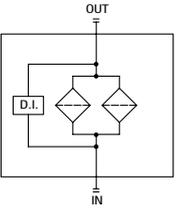
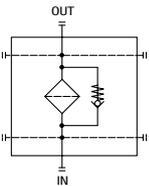
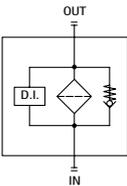
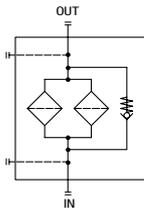
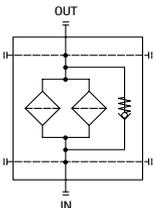
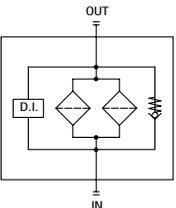
From -20 °C to +110 °C

### Note

MPS filters are provided for vertical mounting

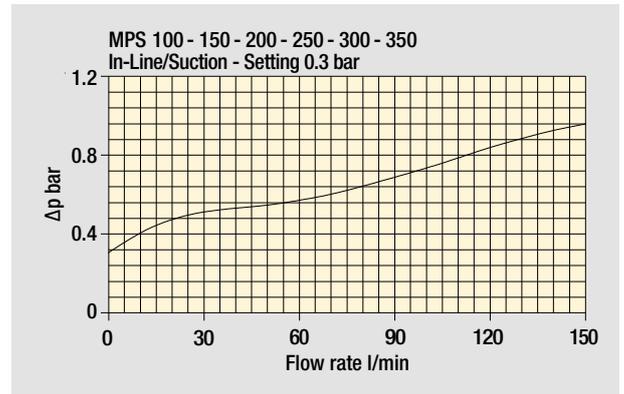
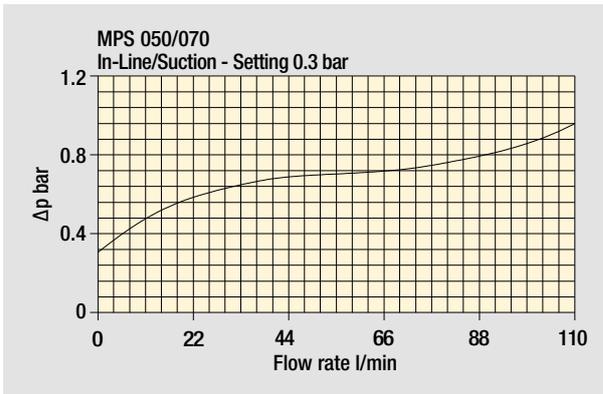
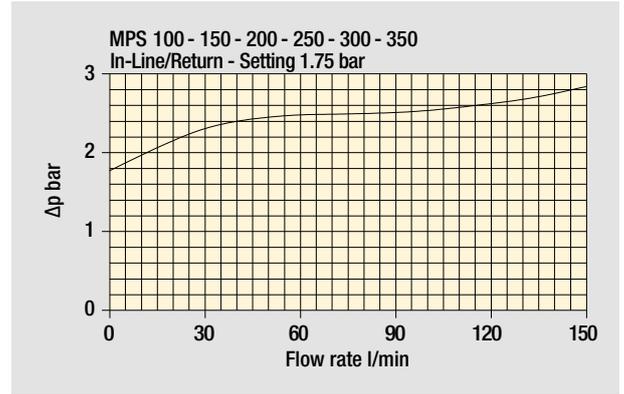
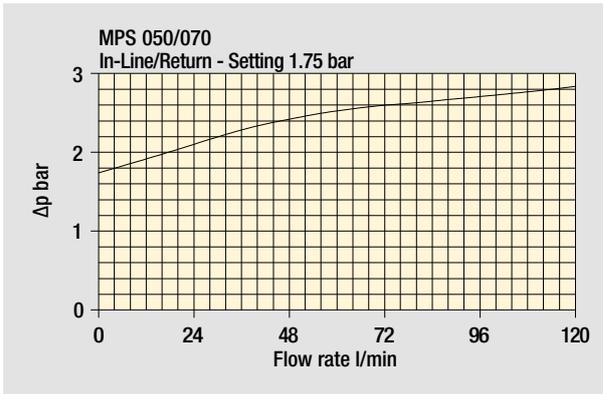
## Weights [kg] and volumes [dm<sup>3</sup>]

Filter series	Weights [kg]	Volumes [dm <sup>3</sup> ]
<b>MPS 050</b>	1.00	0.70
<b>MPS 051</b>	1.05	0.70
<b>MPS 070</b>	1.20	0.95
<b>MPS 071</b>	1.25	0.95
<b>MPS 100</b>	2.10	1.65
<b>MPS 101</b>	2.20	1.65
<b>MPS 150</b>	2.40	2.00
<b>MPS 151</b>	2.50	2.00
<b>MPS 200</b>	3.90	3.00
<b>MPS 250</b>	4.60	3.70
<b>MPS 300-301</b>	5.30	3.40
<b>MPS 350-351</b>	6.00	4.10

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<sup>3</sup> in compliance with ISO 3968.  $\Delta p$  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

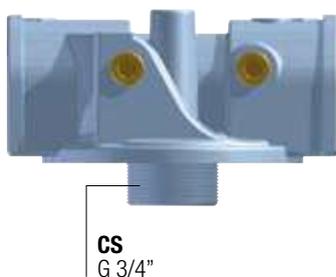
Element	Connection
CS 050 - 070	G 3/4"
CS 100 - 150	G 1 1/4"
CG / CW 050 - 070	1" - 12 UNF
CG / CW 100 - 150	1 1/2" - 16 UN

### Water holding capacities CW

	good	poor
<b>Viscosity</b>	30/46 mm <sup>2</sup> /s (cSt)	> 46 mm <sup>2</sup> /s (cSt)
<b>H<sub>2</sub>O p.p.m.</b>	600/800 p.p.m.	> 800 p.p.m.
<b>Flow rate</b>	CW050 7/15 l/min CW150 20/40 l/min	CW050 > 20 l/min CW150 > 50 l/min
<b>Temperature</b>	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.

# MPS MPS050 - MPS070 MPS051 - MPS071

## Designation & Ordering code

### COMPLETE FILTER

<b>Series and size</b>		Configuration example: <b>MPS050</b> <b>R</b> <b>G1</b> <b>A10</b> <b>A</b> <b>P01</b>				
<b>MPS050</b>   <b>MPS070</b>	With connections for clogging indicators					
<b>MPS051</b>   <b>MPS071</b>	With connections for differential pressure indicators					
<b>Bypass valve</b>		<b>MPS 050 - 070</b>	<b>MPS 051 - 071</b>			
<b>R</b>	Inline / Return: with bypass 1.75 bar	•	•			
<b>S</b>	Inline / Suction: with bypass 0.3 bar	•	-			
<b>U</b>	Without bypass	•	-			
<b>P</b>	Without bypass	-	•			
<b>Connections</b>						
<b>G1</b>	G 3/4"					
<b>G2</b>	3/4" NPT					
<b>G3</b>	SAE 12 - 1 1/16" - 12 UN					
<b>Filtration rating (filter media)</b>						
<b>A03</b>	Inorganic microfiber 3 µm	<b>M25</b>	Wire mesh 25 µm			
<b>A06</b>	Inorganic microfiber 6 µm	<b>M60</b>	Wire mesh 60 µm			
<b>A10</b>	Inorganic microfiber 10 µm	<b>M90</b>	Wire mesh 90 µm			
<b>A25</b>	Inorganic microfiber 25 µm	<b>P10</b>	Resin impregnated paper 10 µm			
		<b>P25</b>	Resin impregnated paper 25 µm			
		<b>Seal</b>	<b>A</b> NBR	<b>Execution</b>	<b>P01</b> MP Filtri standard	

### CARTRIDGE

<b>Cartridge series and size</b>		Configuration example: <b>CS050</b> <b>A10</b> <b>A</b> <b>P01</b>			
<b>CS050</b>   <b>CS070</b>					
<b>Filtration rating (filter media)</b>					
<b>A03</b>	Inorganic microfiber 3 µm	<b>M25</b>	Wire mesh 25 µm		
<b>A06</b>	Inorganic microfiber 6 µm	<b>M60</b>	Wire mesh 60 µm		
<b>A10</b>	Inorganic microfiber 10 µm	<b>M90</b>	Wire mesh 90 µm		
<b>A25</b>	Inorganic microfiber 25 µm	<b>P10</b>	Resin impregnated paper 10 µm		
		<b>P25</b>	Resin impregnated paper 25 µm		
		<b>Seals</b>	<b>A</b> NBR	<b>Execution</b>	<b>P01</b> MP Filtri standard <b>Pxx</b> Customized

### CLOGGING INDICATORS

See pages 717-719

#### Clogging indicators on RETURN line

<b>BVA</b>	Axial pressure gauge
<b>BVR</b>	Radial pressure gauge
<b>BVP</b>	Visual pressure indicator with automatic reset
<b>BVQ</b>	Visual pressure indicator with manual reset

<b>BEA</b>	Electrical pressure indicator
<b>BEM</b>	Electrical pressure indicator
<b>BET</b>	Electrical pressure indicator
<b>BLA</b>	Electrical / visual pressure indicator

#### Clogging indicators on SUCTION line

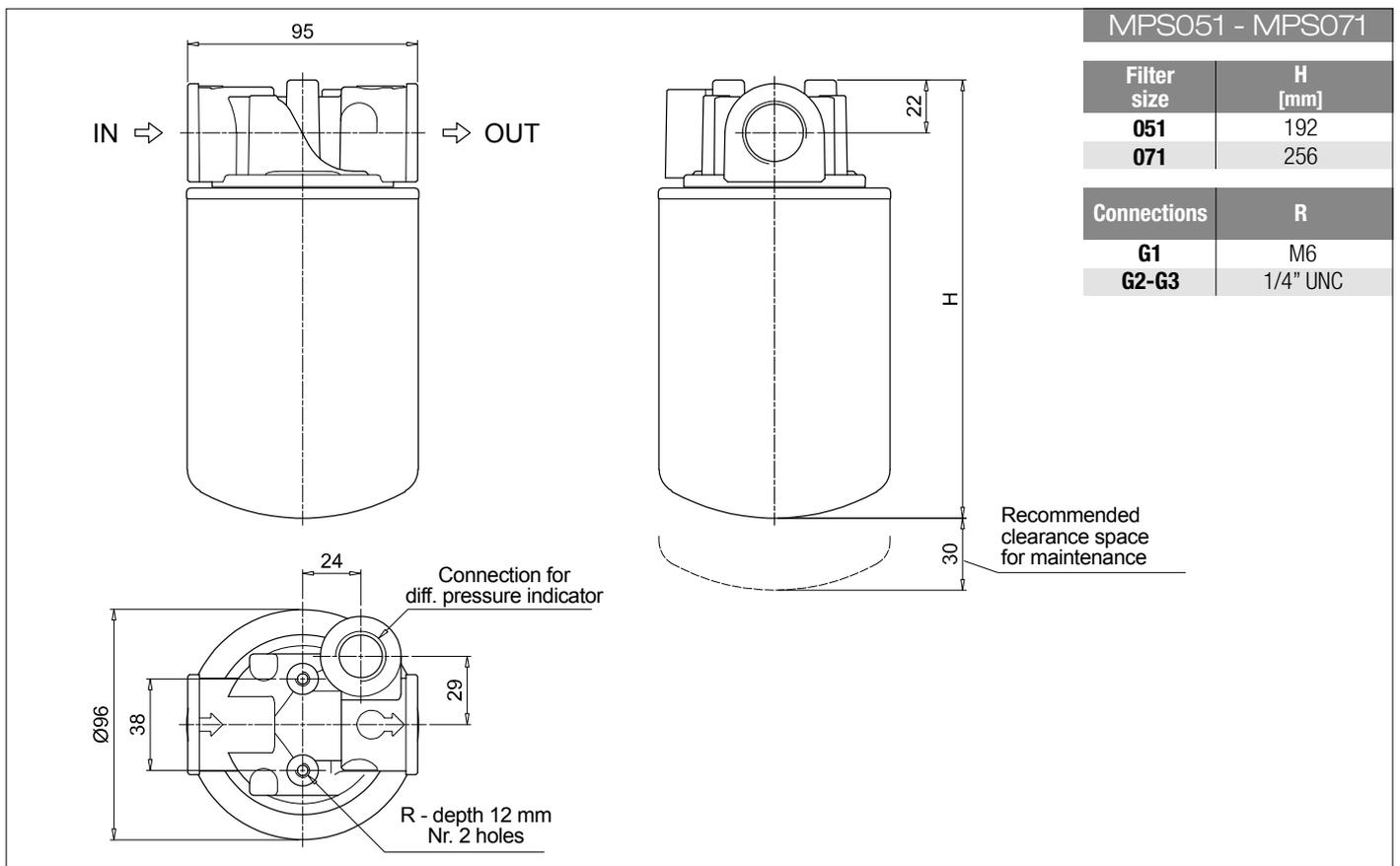
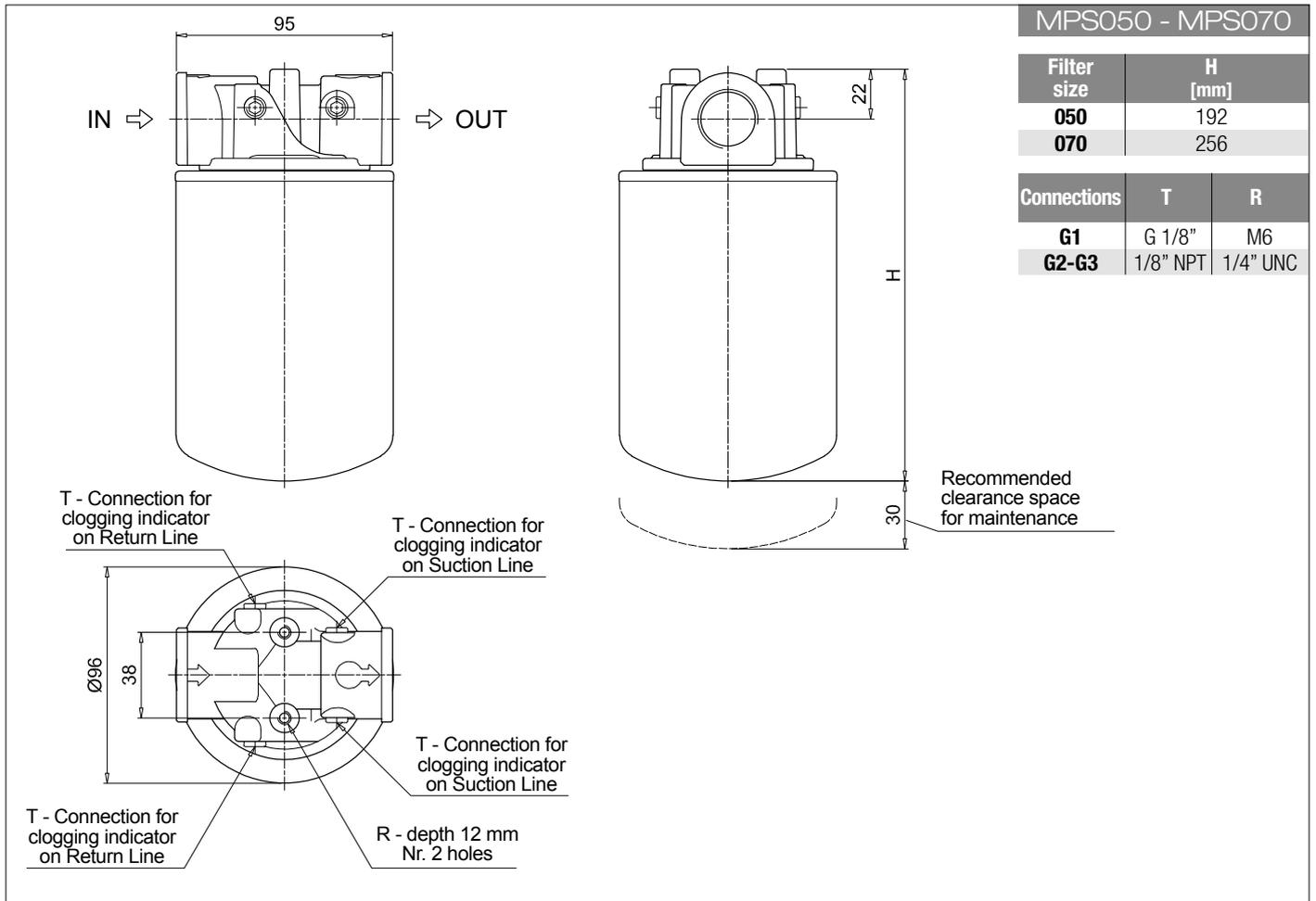
<b>VVB</b>	Axial pressure gauge
<b>VVS</b>	Radial pressure gauge

<b>VEB</b>	Electrical vacuum indicator
<b>VLB</b>	Electrical / visual vacuum indicator

#### Differential pressure indicators

<b>DEA</b>	Electrical differential pressure indicator
<b>DEM</b>	Electrical differential pressure indicator
<b>DEU</b>	Electrical differential pressure indicator
<b>DLA</b>	Electrical / visual differential pressure indicator

<b>DLE</b>	Electrical / visual differential pressure indicator
<b>DTA</b>	Electronic differential pressure indicator
<b>DVA</b>	Visual differential pressure indicator
<b>DVM</b>	Visual differential pressure indicator



# MPS MPS100 - MPS150 MPS101 - MPS151

## Designation & Ordering code

### COMPLETE FILTER

<b>Series and size</b>		Configuration example: <b>MPS100</b> <b>R</b> <b>G1</b> <b>A10</b> <b>A</b> <b>P01</b>				
<b>MPS100</b>   <b>MPS150</b>	With connections for clogging indicators					
<b>MPS101</b>   <b>MPS151</b>	With connections for differential pressure indicators					
<b>Bypass valve</b>		<b>MPS 100 - 150</b>	<b>MPS 101 - 151</b>			
<b>R</b>	Inline / Return: with bypass 1.75 bar	•	•			
<b>S</b>	Inline / Suction: with bypass 0.3 bar	•	-			
<b>U</b>	Without bypass	•	-			
<b>P</b>	Without bypass	-	•			
<b>Connections</b>						
<b>G1</b>	G 1 1/4"					
<b>G2</b>	1 1/4" NPT					
<b>G3</b>	SAE 20 - 1 5/8" - 12 UN					
<b>Filtration rating (filter media)</b>						
<b>A03</b>	Inorganic microfiber 3 µm	<b>M25</b>	Wire mesh 25 µm			
<b>A06</b>	Inorganic microfiber 6 µm	<b>M60</b>	Wire mesh 60 µm			
<b>A10</b>	Inorganic microfiber 10 µm	<b>M90</b>	Wire mesh 90 µm			
<b>A25</b>	Inorganic microfiber 25 µm	<b>P10</b>	Resin impregnated paper 10 µm			
		<b>P25</b>	Resin impregnated paper 25 µm			
		<b>Seal</b>		<b>Execution</b>		
		<b>A</b> NBR		<b>P01</b> MP Filtri standard		

### CARTRIDGE

<b>Cartridge series and size</b>		Configuration example: <b>CS100</b> <b>A10</b> <b>A</b> <b>P01</b>			
<b>CS100</b>   <b>CS150</b>					
<b>Filtration rating (filter media)</b>					
<b>A03</b>	Inorganic microfiber 3 µm	<b>M25</b>	Wire mesh 25 µm		
<b>A06</b>	Inorganic microfiber 6 µm	<b>M60</b>	Wire mesh 60 µm		
<b>A10</b>	Inorganic microfiber 10 µm	<b>M90</b>	Wire mesh 90 µm		
<b>A25</b>	Inorganic microfiber 25 µm	<b>P10</b>	Resin impregnated paper 10 µm		
		<b>P25</b>	Resin impregnated paper 25 µm		
		<b>Seals</b>		<b>Execution</b>	
		<b>A</b> NBR		<b>P01</b> MP Filtri standard <b>Pxx</b> Customized	

### CLOGGING INDICATORS

See pages 717-719

#### Clogging indicators on RETURN line

<b>BVA</b>	Axial pressure gauge
<b>BVR</b>	Radial pressure gauge
<b>BVP</b>	Visual pressure indicator with automatic reset
<b>BVQ</b>	Visual pressure indicator with manual reset

<b>BEA</b>	Electrical pressure indicator
<b>BEM</b>	Electrical pressure indicator
<b>BET</b>	Electrical pressure indicator
<b>BLA</b>	Electrical / visual pressure indicator

#### Clogging indicators on SUCTION line

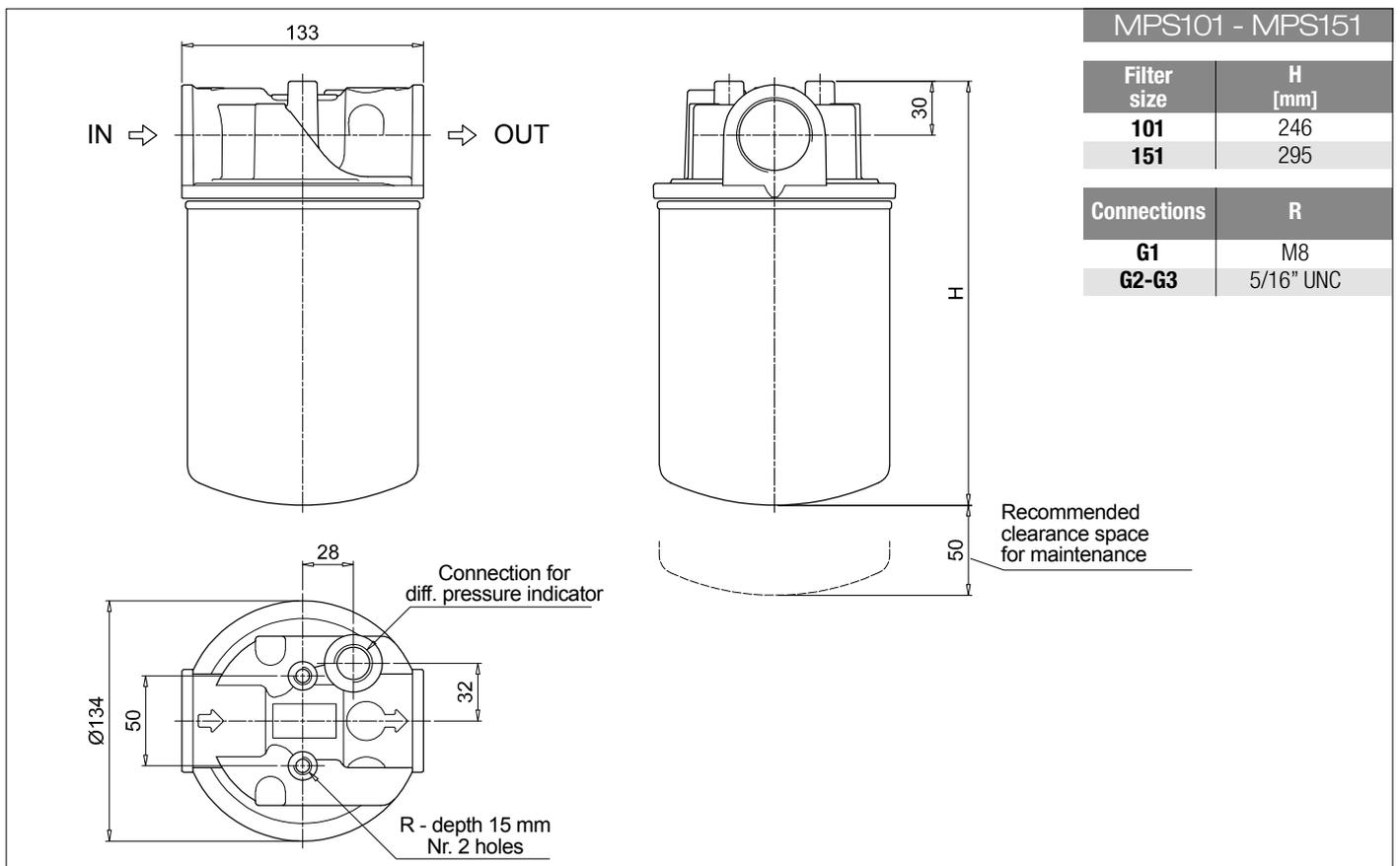
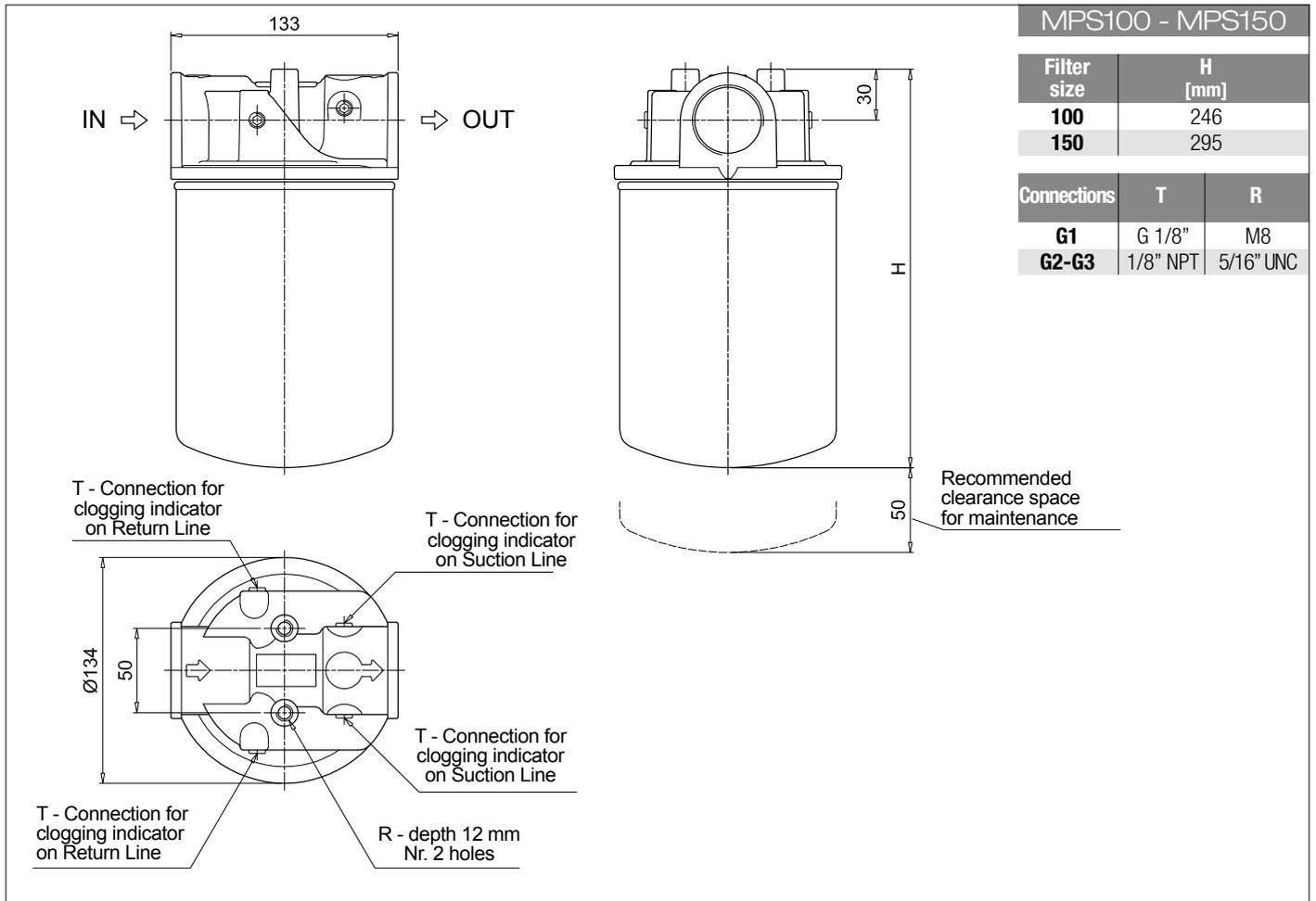
<b>VVB</b>	Axial pressure gauge
<b>VVS</b>	Radial pressure gauge

<b>VEB</b>	Electrical vacuum indicator
<b>VLB</b>	Electrical / visual vacuum indicator

#### Differential pressure indicators

<b>DEA</b>	Electrical differential pressure indicator
<b>DEM</b>	Electrical differential pressure indicator
<b>DEU</b>	Electrical differential pressure indicator
<b>DLA</b>	Electrical / visual differential pressure indicator

<b>DLE</b>	Electrical / visual differential pressure indicator
<b>DTA</b>	Electronic differential pressure indicator
<b>DVA</b>	Visual differential pressure indicator
<b>DVM</b>	Visual differential pressure indicator



# MPS MPS200 - MPS250

## Designation & Ordering code

### COMPLETE FILTER

#### Series and size

**MPS200** | **MPS250**

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

#### Bypass valve

**R** Inline / Return: with bypass 1.75 bar

**S** Inline / Suction: with bypass 0.3 bar

**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

#### Cartridge series and size

**CS100** | **CS150**

Configuration example: **CS100** **A10** **A** **P01**

#### 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

### CLOGGING INDICATORS

See pages 717-719

#### 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

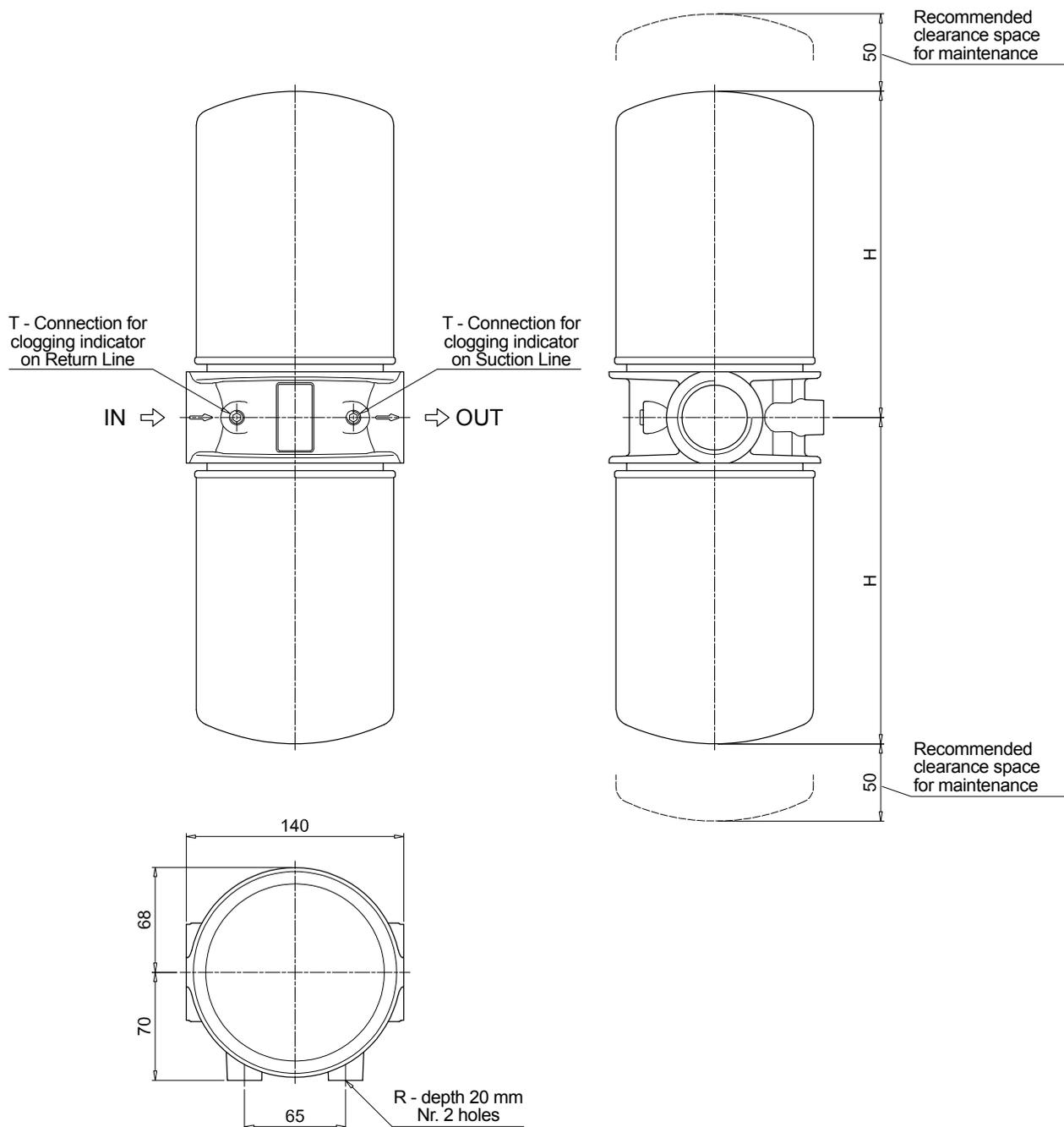
**VEB** Electrical vacuum indicator

**VLB** Electrical / visual vacuum indicator

### MPS200 - MPS250

Filter size	H [mm]
<b>200</b>	213
<b>250</b>	262

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



# MPS MPS300 - MPS350 MPS301 - MPS351

## Designation & Ordering code

### COMPLETE FILTER

<b>Series and size</b>		Configuration example: <b>MPS300</b> <b>R</b> <b>F1</b> <b>A10</b> <b>A</b> <b>P01</b>				
<b>MPS300</b>   <b>MPS350</b>	With connections for clogging indicators					
<b>MPS301</b>   <b>MPS351</b>	With connections for differential pressure indicators					
<b>Bypass valve</b>		<b>MPS 300 - 350</b>	<b>MPS 301 - 351</b>			
<b>R</b>	Inline / Return: with bypass 1.75 bar	•	•			
<b>S</b>	Inline / Suction: with bypass 0.3 bar	•	-			
<b>U</b>	Without bypass	•	-			
<b>P</b>	Without bypass	-	•			
<b>Connections</b>						
<b>G1</b>	G 1 1/2"					
<b>G2</b>	1 1/2" NPT					
<b>G3</b>	SAE 24 - 1 7/8" - 12 UN					
<b>F1</b>	1 1/2" SAE 3000 psi/M					
<b>F2</b>	1 1/2" SAE 3000 psi/UNC					
<b>Filtration rating (filter media)</b>						
<b>A03</b>	Inorganic microfiber 3 µm	<b>M25</b>	Wire mesh 25 µm			
<b>A06</b>	Inorganic microfiber 6 µm	<b>M60</b>	Wire mesh 60 µm			
<b>A10</b>	Inorganic microfiber 10 µm	<b>M90</b>	Wire mesh 90 µm			
<b>A25</b>	Inorganic microfiber 25 µm	<b>P10</b>	Resin impregnated paper 10 µm			
		<b>P25</b>	Resin impregnated paper 25 µm			
		<b>Seal</b>		<b>Execution</b>		
		<b>A</b> NBR		<b>P01</b> MP Filtri standard		

### CARTRIDGE

<b>Cartridge series and size</b>		Configuration example: <b>CS100</b> <b>A10</b> <b>A</b> <b>P01</b>			
<b>CS100</b>   <b>CS150</b>					
<b>Filtration rating (filter media)</b>					
<b>A03</b>	Inorganic microfiber 3 µm	<b>M25</b>	Wire mesh 25 µm		
<b>A06</b>	Inorganic microfiber 6 µm	<b>M60</b>	Wire mesh 60 µm		
<b>A10</b>	Inorganic microfiber 10 µm	<b>M90</b>	Wire mesh 90 µm		
<b>A25</b>	Inorganic microfiber 25 µm	<b>P10</b>	Resin impregnated paper 10 µm		
		<b>P25</b>	Resin impregnated paper 25 µm		
		<b>Seals</b>		<b>Execution</b>	
		<b>A</b> NBR		<b>P01</b> MP Filtri standard	
				<b>Pxx</b> Customized	

### CLOGGING INDICATORS

See pages 717-719

<b>Clogging indicators on RETURN line</b>		
<b>BVA</b>	Axial pressure gauge	<b>BEA</b> Electrical pressure indicator
<b>BVR</b>	Radial pressure gauge	<b>BEM</b> Electrical pressure indicator
<b>BVP</b>	Visual pressure indicator with automatic reset	<b>BET</b> Electrical pressure indicator
<b>BVQ</b>	Visual pressure indicator with manual reset	<b>BLA</b> Electrical / visual pressure indicator
<b>Clogging indicators on SUCTION line</b>		
<b>VVB</b>	Axial pressure gauge	<b>VEB</b> Electrical vacuum indicator
<b>VVS</b>	Radial pressure gauge	<b>VLB</b> Electrical / visual vacuum indicator
<b>Differential pressure indicators</b>		
<b>DEA</b>	Electrical differential pressure indicator	<b>DLE</b> Electrical / visual differential pressure indicator
<b>DEM</b>	Electrical differential pressure indicator	<b>DTA</b> Electronic differential pressure indicator
<b>DEU</b>	Electrical differential pressure indicator	<b>DVA</b> Visual differential pressure indicator
<b>DLA</b>	Electrical / visual differential pressure indicator	<b>DVM</b> Visual differential pressure indicator

### PLUGS

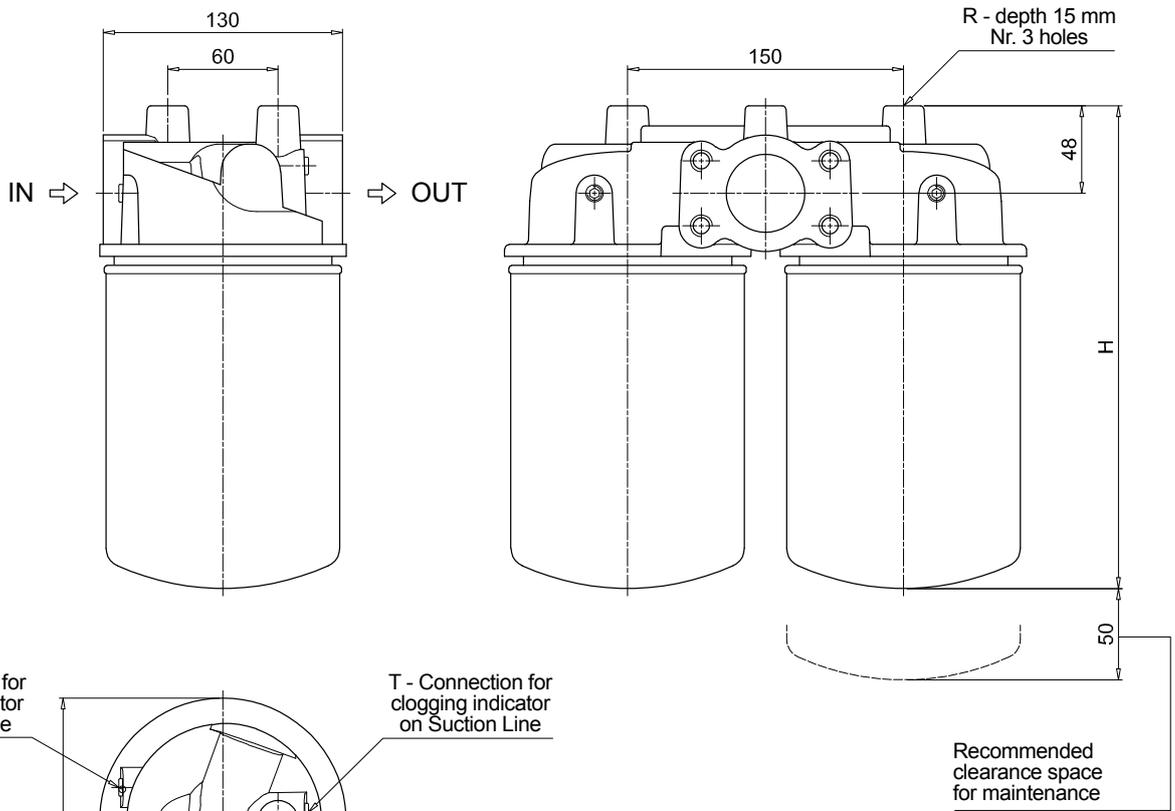
See page 741

<b>T2</b>	Plug (not included)
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### MPS300 - MPS350

Filter size	H [mm]
<b>300</b>	266
<b>350</b>	315

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



# MPS MPS300 - MPS350 MPS301 - MPS351

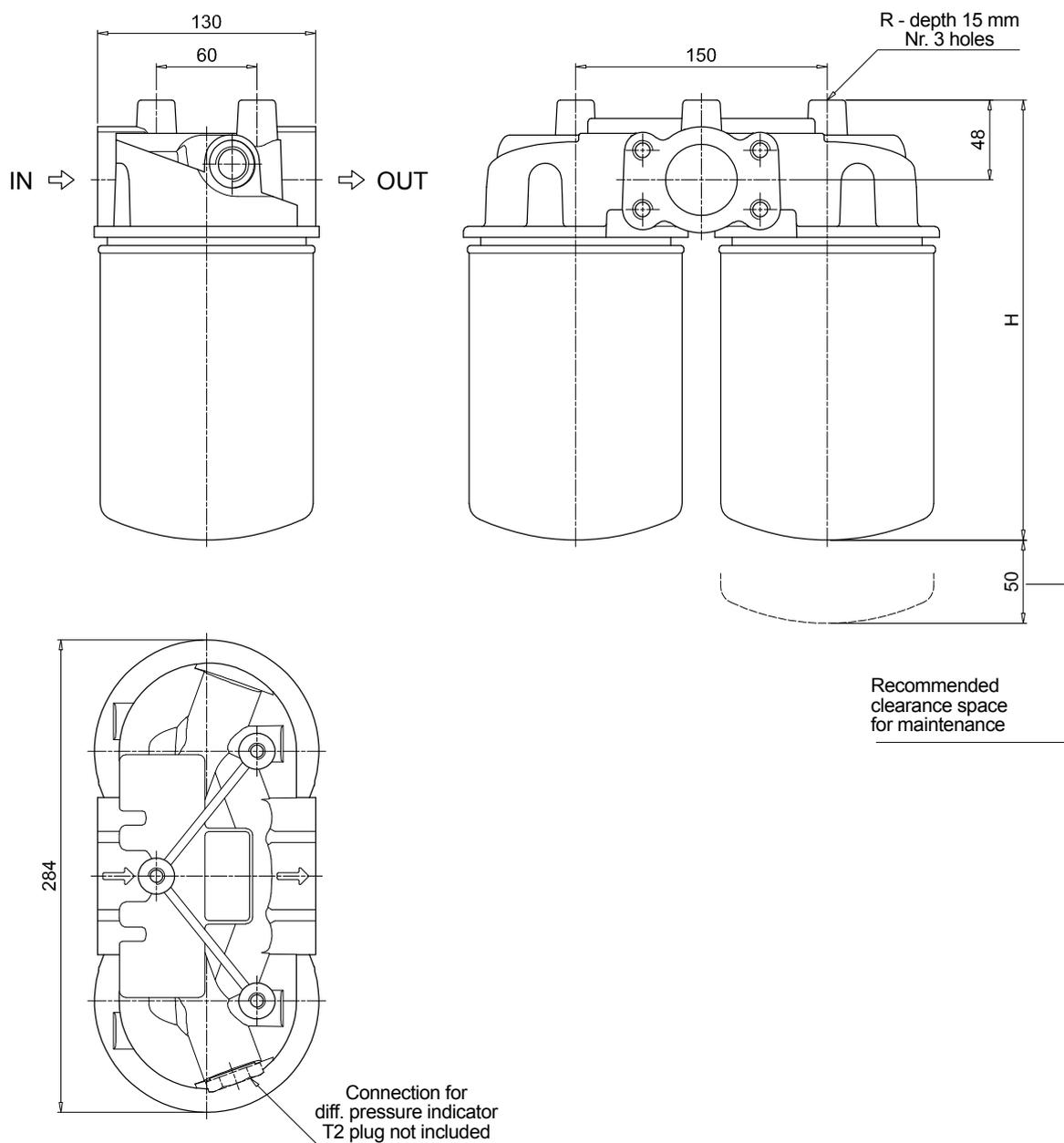
## Dimensions

### MPS301 - MPS351

Filter size	H [mm]
<b>301</b>	266
<b>351</b>	315

Connections	R
<b>G1</b>	M10
<b>G2-G3</b>	7/16" UNC
<b>F1</b>	M10
<b>F2</b>	7/16" UNC



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