

MSH series

Maximum working pressure up to 3.5 MPa (35 bar) - Flow rate up to 195 l/min



Description

Technical data

Spin-on filters

Maximum working pressure up to 3.5 MPa (35 bar)
Flow rate up to 195 l/min

MSH is a range of spin-on filters suitable to be used in 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 1/4", for a maximum flow rate of 195 l/min
- Fine filtration rating, to get a good cleanliness level into the reservoir
- Strong sealing between the housing and cans, to be used in heavy applications
- Bypass valve, to relieve excessive pressure drop across the filter media
- Visual, electrical and electronic differential clogging indicators for low pressure applications

Common applications:

- Delivery lines, in economic industrial equipment or mobile machines

Filter housing materials

- Head: Anodized Aluminium
- Bypass valve: Nylon - Steel
- Element: Aluminium - Painted Steel

Bypass valve

Opening pressure: 250 kPa (2.5 bar) $\pm 10\%$

Δp element type

- Δp : 5 bar
- Oil flow from OUT to IN

Seals

- Standard NBR - series A
- Optional FPM - series V

Temperature

From -20 °C to +110 °C

Note

MSH filters are provided for vertical mounting



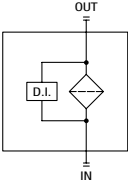
Weights [kg] and volumes [dm³]

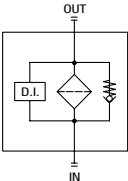
Filter series	Weights [kg]	Volumes [dm³]
MSH 050	1.50	0.65
MSH 070	1.90	0.95
MSH 100	3.30	1.80
MSH 150	3.80	2.20

Cartridge

Thread connections		CH 
Type	Connection	
CH 050 - 070	M32 x 2	
CH 100 - 150	M45 x 2	

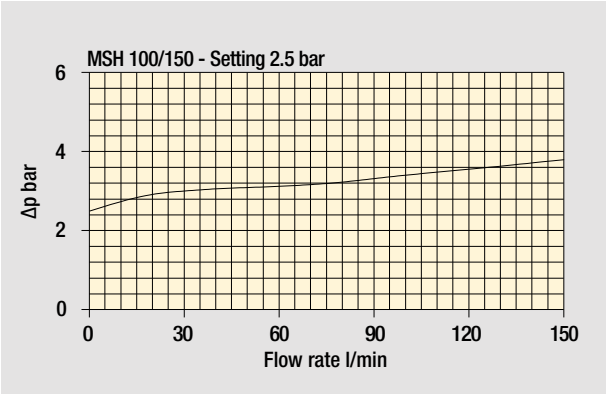
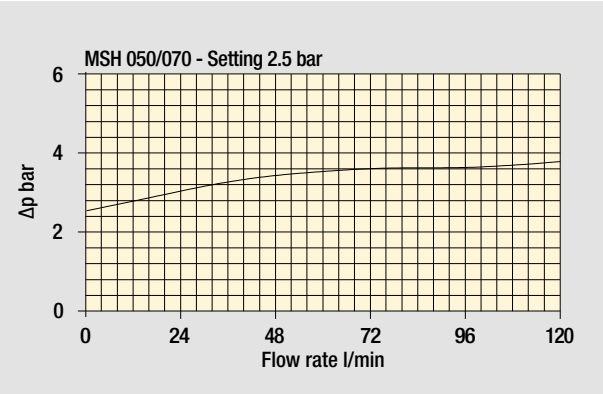
Filter series	Style S	Style B
MSH 050	•	•
MSH 070	•	•
MSH 100	•	•
MSH 150	•	•





Pressure drop

Bypass valve
pressure drop



The curves are plotted using mineral oil with density of 0.86 kg/dm³ in compliance with ISO 3968. Δp varies proportionally with density.

MSH MSH050 - MSH070 MSH100 - MSH150

Designation & Ordering code

COMPLETE FILTER

Series and size			Configuration example : MSH050					B	A	G1	A10	P01
MSH050 MSH070 MSH100 MSH150												
Bypass valve												
S	Without bypass											
B	2.5 bar											
Seal												
A	NBR											
Connections			MSH 050 - 070		MSH 100 - 150							
G1	G 1"				G 1 1/2"							
G2	G 3/4"				G 1 1/4"							
G3	1" NPT				1 1/2" NPT							
G4	3/4" NPT				1 1/4" NPT							
G5	SAE 16 - 1 5/16" - 12 UN				SAE 24 - 1 7/8" - 12 UN							
G6	SAE 12 - 1 1/16" - 12 UN				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								
Execution												
P01 MP Filtri standard												

CARTRIDGE

Cartridge series and size			Configuration example: CH050			
CH050	CH070	CH100	CH150	A10	A	P01
Filtration rating (filter media)						
A03	Inorganic microfiber	3 µm	M25	Wire mesh	25 µm	Seal A NBR
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	
						Execution
						P01 MP Filtri standard
						Pxx Customized

CLOGGING INDICATORS

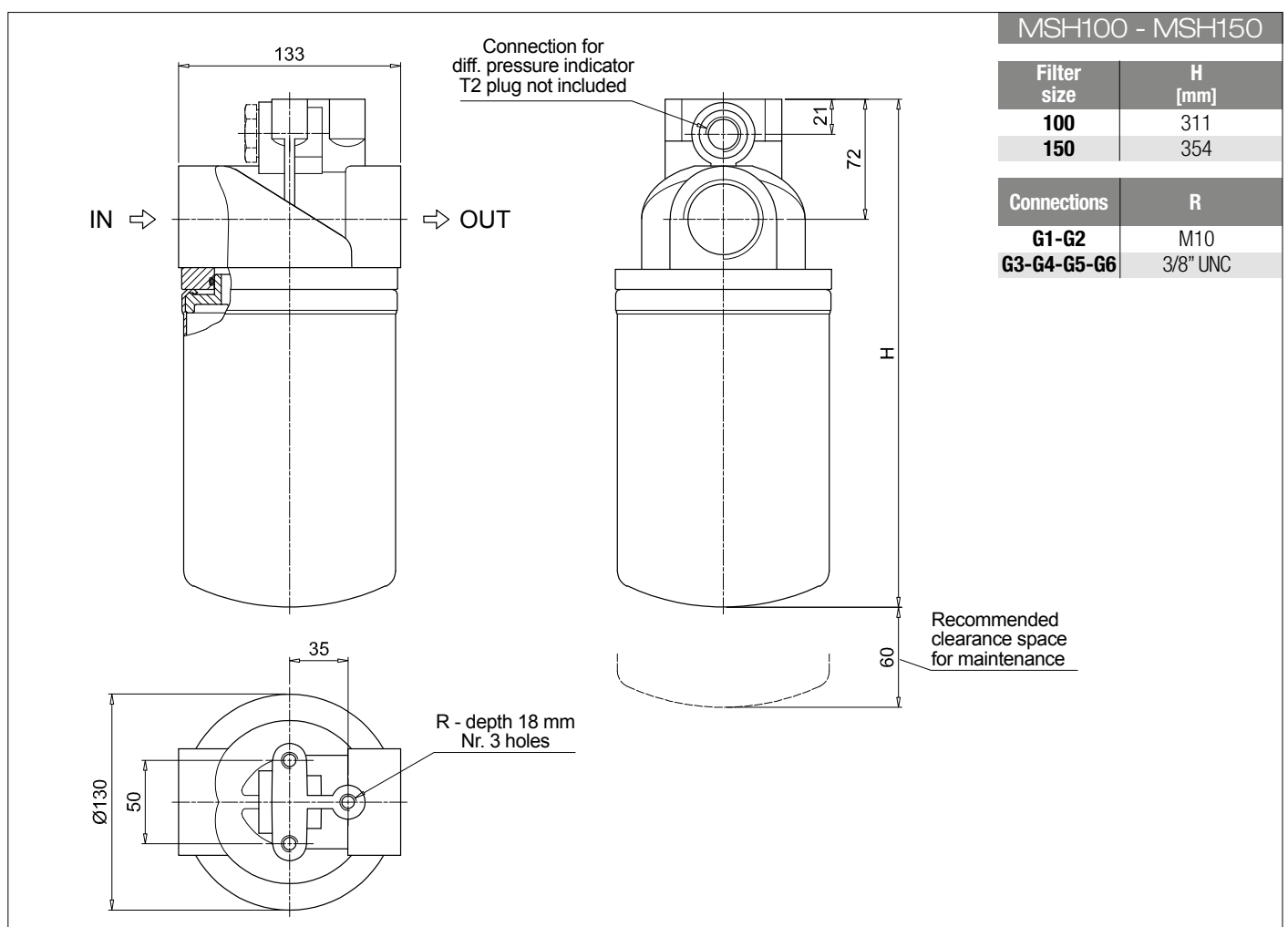
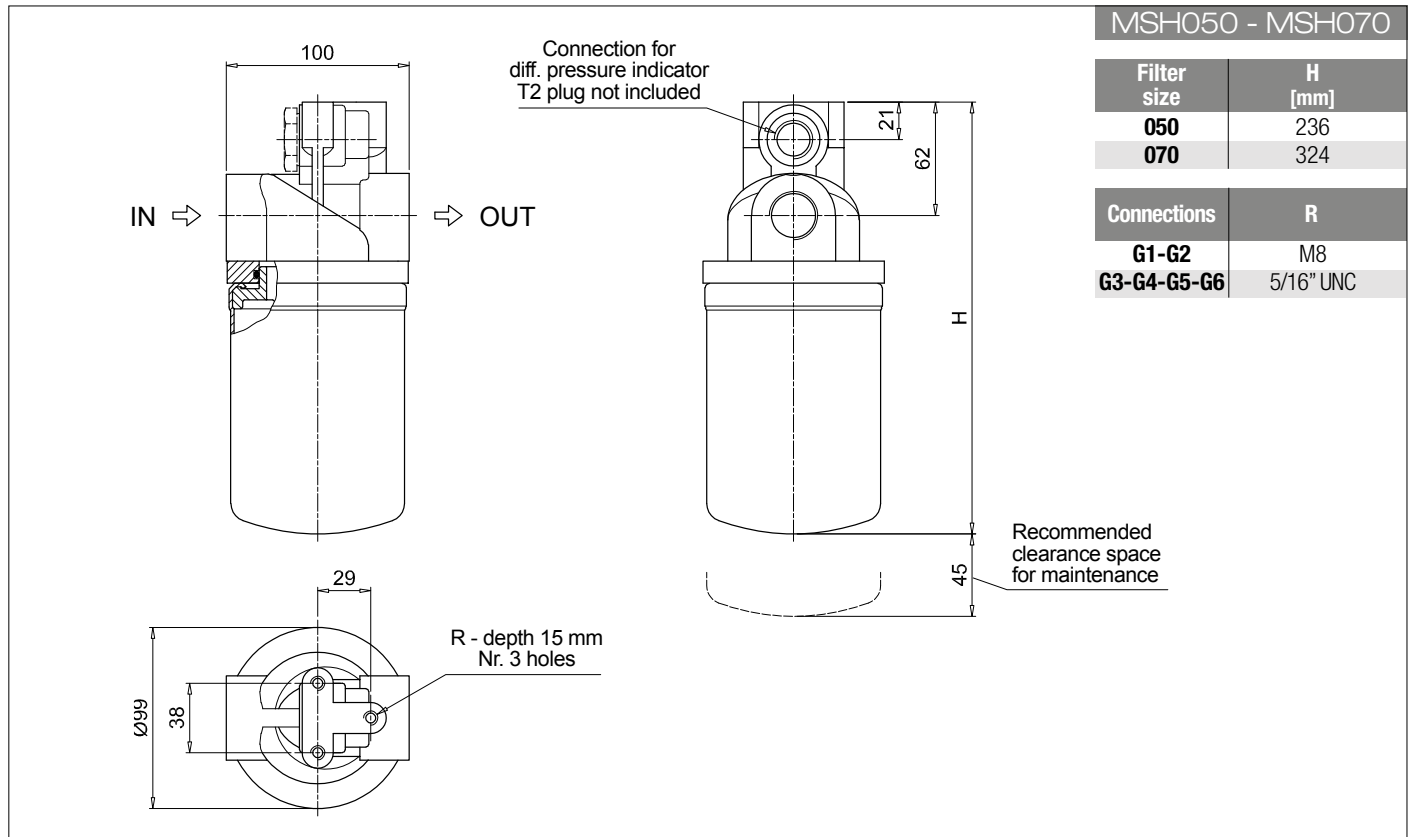
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Differential pressure indicators	
DEA	Electrical differential pressure indicator
DEM	Electrical differential pressure indicator
DLA	Electrical / visual differential pressure indicator
DLE	Electrical / visual differential pressure indicator
DTA	Electronic differential pressure indicator
DVA	Visual differential pressure indicator
DVM	Visual differential pressure indicator

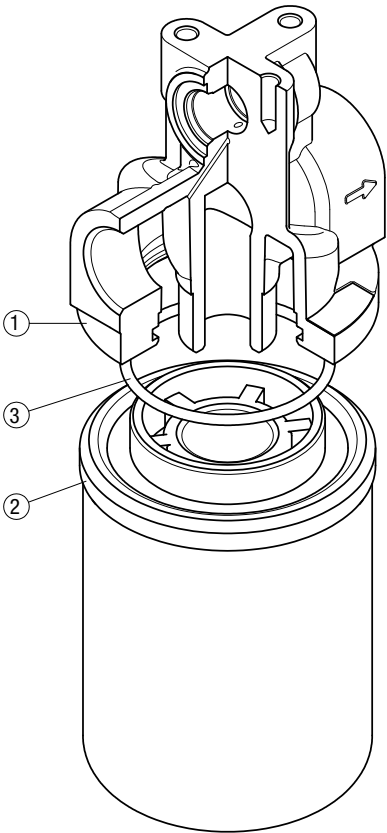
PLUGS

See page 747

T2	Plug (not included)
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Order number for spare parts



Item:	Q.ty: 1 pc. 1	Q.ty: 1 pc. 2	Q.ty: 1 pc. 3
Filter series	Filter assembly	Cartridge	Seal code number
MSH 050-070	See order table	See order table	0-R 167 (ø 63.50 x 3.53)
MSH 100-150	See order table	See order table	0-R 4362 (ø 91.67 x 3.53)

Designation & Ordering code

VACUUM INDICATORS

Series	Configuration example 1:	VE	B	21	A	A	50	P01	EX
VE Electrical vacuum indicator	Configuration example 2:	VL	B	21	A	A	71	P01	
VL Electrical/Visual vacuum indicator	Configuration example 3:	VV	S	20				P01	
VV Vacuum gauge									
Type VE - VL	Type VV								
B Connection EN 10226 - R1/8"	B Axial connection EN 10226 - R1/8"								
	S Radial connection EN 10226 - R1/8"								
Vacuum setting	VE	VL	VV						
20 -0.16 bar	-	-	•						
21 -0.21 bar	•	•	-						
Seals	VE	VL							
A NBR	•	•							
Thermostat	VE	VL							
A Without thermostat	•	•							
Electrical connections	VE	VL							
50 Connection EN 175301-803	•	-							
51 Connection EN 175301-803, transparent base with lamps 24 Vdc	-	•							
52 Connection EN 175301-803, transparent base with lamps 110 Vdc	-	•							
53 Connection EN 175301-803, transparent base with lamps 230 Vac	-	•							
71 Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc	-	•							
Option									
P01 MP Filtri standard									
Pxx Customized									
Certifications	VEB	VL	VV						
Without	•	•	•						
EX ATEX certification	•	-	-						
UL UL certification	-	-	-						

BAROMETRIC (PRESSURE) INDICATORS

Series	Configuration example 1:	BE	M	15	H	A	41	P01	
BE Electrical pressure indicator	Configuration example 2:	BL	A	20	H	A	71	P01	
BL Electrical/Visual pressure indicator	Configuration example 3:	BV	R	14				P01	
BV Visual pressure indicator	Configuration example 4:	BV	P	20	H			P01	
Type	BE	BL	BV						
A Standard type	•	•	A Axial connection pressure gauge						
M With wired electrical connection	•	-	R Radial connection pressure gauge						
			P Visual indicator with automatic reset						
			Q Visual indicator with manual reset						
Pressure setting	BEA-BEM	BLA	BVA-BVR	BVP-BVQ					
14 1.4 bar	-	-	•	-					
15 1.5 bar	•	•	-	-					
20 2 bar	•	•	-	•					
25 2.5 bar	-	-	•	-					
Seals	BE	BLA	BVA-BVR	BVP-BVQ					
H HNBR	•	•	-	•					
Thermostat	BEA-BEM	BLA	BV						
A Without thermostat	•	•	-						
Electrical connections	BEA	BEM	BL						
10 Connection AMP Superseal series 1.5	-	-	-						
30 Connection Deutsch DT-04-2-P	-	-	-						
41 Connection via four-core cable	-	•	-						
50 Connection EN 175301-803	•	-	-						
51 Connection EN 175301-803, transparent base with lamps 24 Vdc	-	-	•						
52 Connection EN 175301-803, transparent base with lamps 110 Vdc	-	-	•						
53 Connection EN 175301-803, transparent base with lamps 230 Vac	-	-	•						
71 Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc	-	-	•						
Option									
P01 MP Filtri standard									
Pxx Customized									
Certifications	BEA	BEM-BET	BL	BV					
Without	•	•	•	•					
EX ATEX certification	•	-	-	-					
UL UL certification	•	-	-	-					

DIFFERENTIAL PRESSURE INDICATORS

Series				Configuration example 1:										
DE Electrical differential pressure indicator				Configuration example 2:	DE	U	50	V	A	50	P01	UL		
DL Electrical/Visual differential pressure indicator				Configuration example 3:	DL	E	20	V	A	71	P01			
DT Electronic differential pressure indicator				Configuration example 4:	DT	A	50	H	F	70	P01			
DV Visual differential pressure indicator				Configuration example 5:	DV	M	70	V			P01			
Type	DE	DL	DT	DV										
A Standard type	•	•	•	A With automatic reset										
M With wired electrical connection	•	-	-	M With manual reset										
U Standard type 210 bar, UL certified	•	-	-											
E For high power supply	-	•	-											
Pressure setting	DEA	DEM	DEU	DLA	DLE	DTA	DVA	DVM						
12 1.2 bar	•	•	-	•	•	•	•	•						
20 2.0 bar	•	•	•	•	•	•	•	•						
Seals	DEA	DEM	DEU	DLA	DLE	DTA	DVA	DVM						
H HNBR	•	•	-	•	•	•	•	•						
V FPM	•	•	•	•	•	•	•	•						
Thermostat	DEA	DEM	DEU	DLA	DLE	DT								
A Without thermostat	•	•	•	•	•	-								
F With thermostat	-	•	-	-	•	•								
Electrical connections							DEA	DEM	DEU	DLA	DLE	DT		
10 Connection AMP Superseal series 1.5							-	•	-	-	-	-		
20 Connection AMP Timer Junior							-	•	-	-	-	-		
30 Connection Deutsch DT-04-2-P							-	•	-	-	-	-		
35 Connection Deutsch DT-04-3-P							-	•	-	-	-	-		
50 Connection EN 175301-803							•	-	•	-	•	-		
51 Connection EN 175301-803, transparent base with lamps 24 Vdc							-	-	-	•	-	-		
52 Connection EN 175301-803, transparent base with lamps 110 Vdc							-	-	-	•	-	-		
70 Connection IEC 61076-2-101 D (M12)							-	-	-	-	-	•		
71 Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc							-	-	-	•	-	-		
													Option	
													P01 MP Filtri standard	
													Pxx Customized	
													Certifications	
													DEU	
													OTHERS	
													Without	
													-	
													•	
													UL UL certification	
													•	
													-	

PLUGS

Series		Configuration example	
T2 Plug		T2	H
Seals			
H HNBR			
V FPM			