

MRSX series

Maximum working pressure up to 1 MPa (10 bar) - Flow rate up to 300 l/min



Return / Suction filter

Tank mounted

Maximum working pressure up to 1 MPa (10 bar)

Flow rate up to 300 l/min

MRSX is a range of suction/return filters for hydraulic systems with two or more circuits (both open and closed loops). They are able to provide pressurized oil cleaned by fine filtration to the feed pump of the hydrostatic systems.

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 return connections up to 1 1/4", for a maximum return flow rate of 300 l/min
- Multiple connections, to connect several return and suction lines
- Fine filtration rating, to get a good cleanliness level into the reservoir
- Bypass valve to the tank, to relieve excessive pressure drop across the filter media when the return flow is enough higher than the suction flow
- Bypass valve to the suction line with additional suction filter element, to relieve excessive pressure drop across the filter media when the return flow is not enough higher than the suction flow
- De-pressurization valve, to reduce the pressure inside the filter during the maintenance operations
- Anti-cavitation valve with additional suction filter element, to ensure fluid to the feed pump of the hydrostatic systems during cold starts or initial filling
- Reservoir side mounting, to save space in the machines
- Visual, electrical and electronic clogging indicators
- MYclean interface connection, to protect the product against non-original spare parts
- External protective wrap, to optimize the flow through the element and to save the element efficiency against non-proper handling

Common applications:

Mobile machines with hydrostatic systems on board
(i.e. skid steer loaders, telehandlers, dumpers, road sweepers)

Filter housing materials

- Head: Aluminium
- Cover
 - Nylon: MRSX 116
 - Aluminium: MRSX 165-166
- Bowl: Nylon

Δp element type

- RSX: 10 bar
- Oil flow from exterior to interior.

Seals

- Standard NBR series A
- Optional FPM series V

Temperature

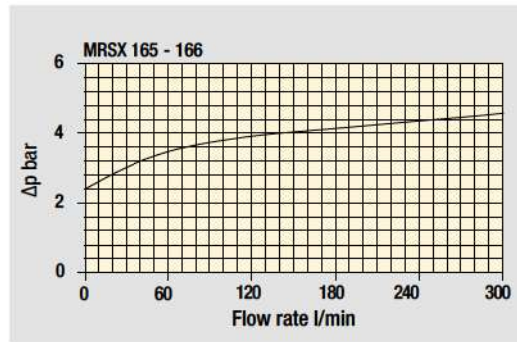
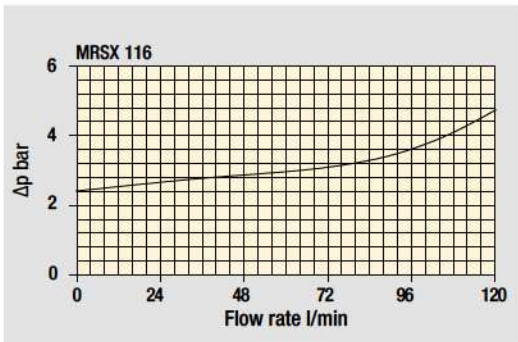
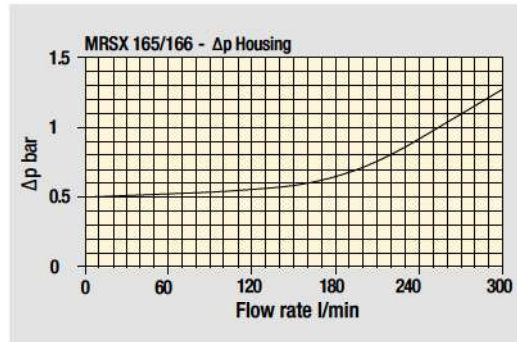
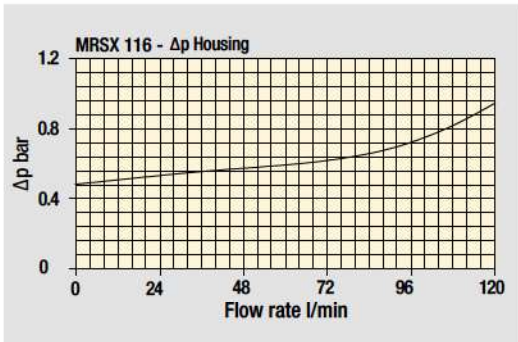
From -25 °C to +110 °C



Weights [kg] and volumes [dm³]

Filter series	Weights [kg]				Volumes [dm ³]			
	Length	1	2	3	Length	1	2	3
MRSX 116		1.30	1.40	-		0.80	1.00	-
MRSX 165		3.40	3.80	4.10		2.00	2.60	3.00
MRSX 166		3.40	3.80	4.10		2.00	2.60	3.00

Filter housings Δp 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.

MRSX GENERAL INFORMATION

Flow rates [l/min]

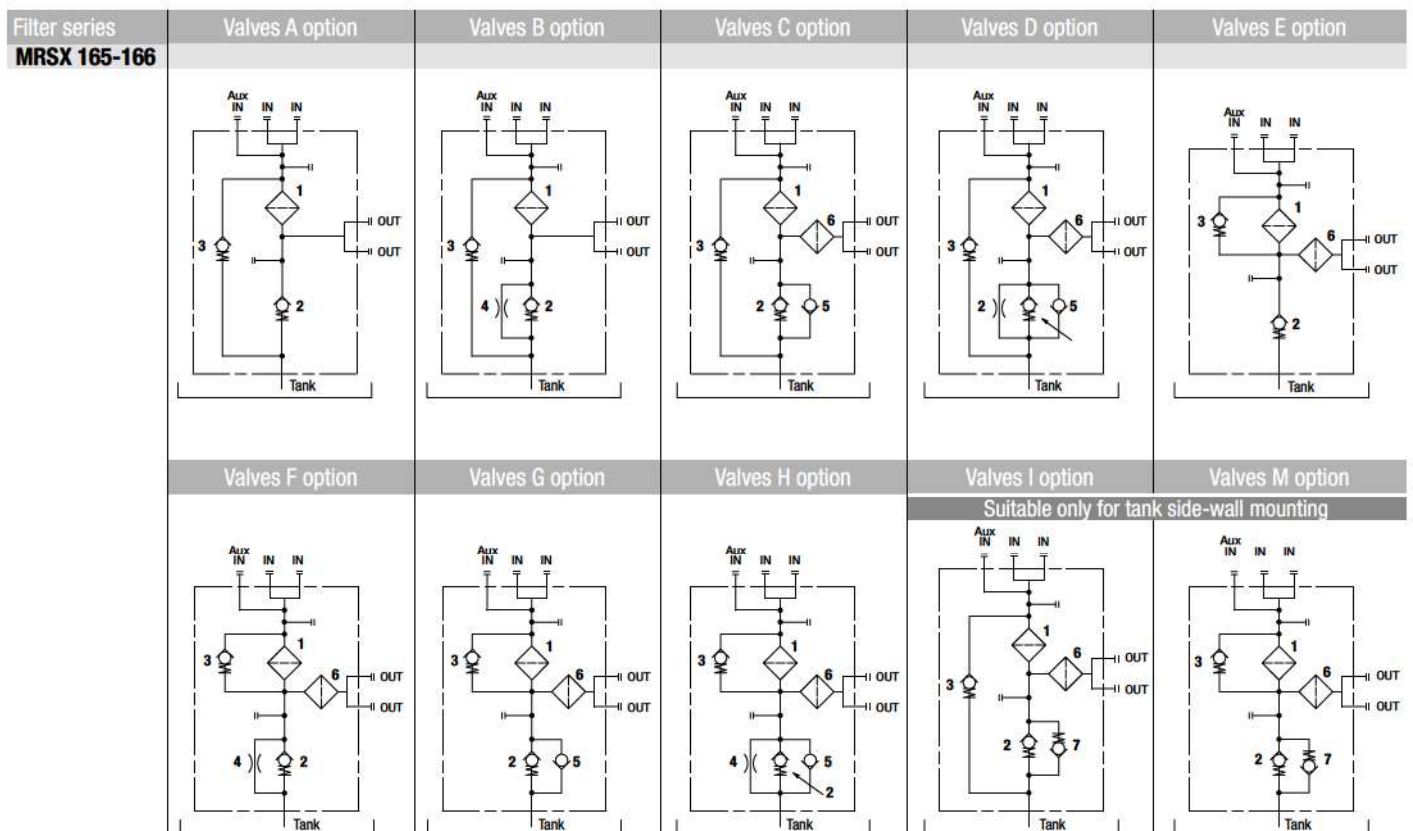
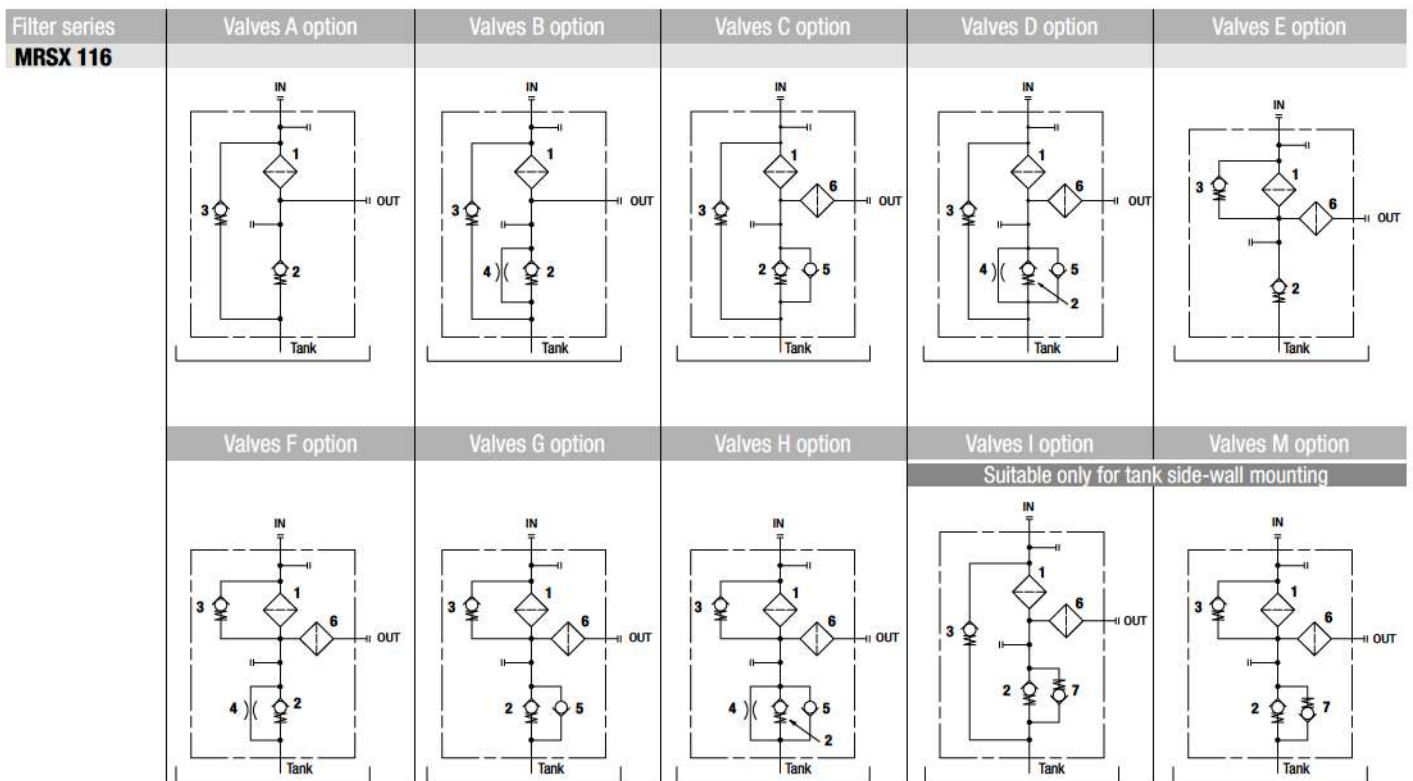
Filter series	Length	A10	A16	A25
MRSX 116	1	74	82	87
	2	108	113	124
MRSX 165 - 166	1	155	166	178
	2	187	196	200
	3	201	205	217

Maximum flow rate for a complete return/suction filter with a pressure drop $\Delta p = 1$ 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.

Please, contact our Sales Department for further additional information.



LEGEND

- | | |
|---|--|
| 1 - Filter element | 5 - Anti-Cavitation valve |
| 2 - Back-Pressure valve: opening pressure 0.5 bar \pm 10% | 6 - Safety filter element (wire mesh 60 μ m) |
| 3 - Bypass valve: opening pressure 2.5 bar \pm 10% | 7 - Anti-Cavitation valve / Anti-Emptying valve |
| 4 - Depressurization valve | |

MRSX MRSX165 - MRSX166

Designation & Ordering code

COMPLETE FILTER

Series and size		Configuration example: MRSX166 2 C V G3 1 A10 S P01											
MRSX165 MRSX166 Filter element with private spigot													
Length		1 2 3											
Hydraulic diagram configuration - see page 257													
		Bypass valve to tank					Bypass valve to OUT						
A	B	C	D										
E	F	G	H										
I													
M													
Seals and treatments													
A	NBR, O-Ring on head			B			NBR, flat seal on head						
V	FPM, O-Ring on head			D			FPM, flat seal on head						
Connections													
		IN (size 165)		IN (size 166)		Aux IN		OUT					
G1	G 1 1/4"		G 1"		G 1 1/4"		G 1"						
G2	1 1/4" NPT		1" NPT		1 1/4" NPT		1" NPT						
G3	SAE 20 - 1 5/8" - 12 UN		SAE 16 - 1 5/16" - 12 UN		SAE 20 - 1 5/8" - 12 UN		SAE 16 - 1 5/16" - 12 UN						
Aux IN connection				MRSX 165		MRSX 166							
0	Without aux IN connection												
1	With aux IN connection - see previous table												
Filtration rating (filter media)													
A10 Inorganic microfiber 10 µm													
A16 Inorganic microfiber 16 µm													
A25 Inorganic microfiber 25 µm													
		Valves configuration											
Mounting position													
S	Standard		A	B	C	D	E	F	G	H	I	M	
B	Tank side-wall mounting												
		Execution											
		P01 MP Filtri standard											
		Pxx Customized											

FILTER ELEMENT

Element series and size		Configuration example: RSX165 2 A10 V P01						
RSX165 Filter element with private spigot								
Element length		1 2 3						
Filtration rating (filter media)								
A10 Inorganic microfiber 10 µm								
A16 Inorganic microfiber 16 µm								
A25 Inorganic microfiber 25 µm								
		Seals		Execution				
		A NBR		P01 MP Filtri standard				
		V FPM		Pxx Customized				

ACCESSORIES

Indicators on Return Line	page		page
BVA Axial pressure gauge	278	BEA Electrical pressure indicator	276
BVR Radial pressure gauge	278	BEM Electrical pressure indicator	276
BVP Visual pressure indicator with automatic reset	279	BET Electrical pressure indicator	276-277
BVQ Visual pressure indicator with manual reset	279	BLA Electrical / visual pressure indicator	277-278
Indicators on Suction Line	page		page
VVB Axial vacuum gauge	275	VEB Electrical vacuum indicator	274
VVS Radial vacuum gauge	275	VLB Electrical / visual vacuum indicator	274