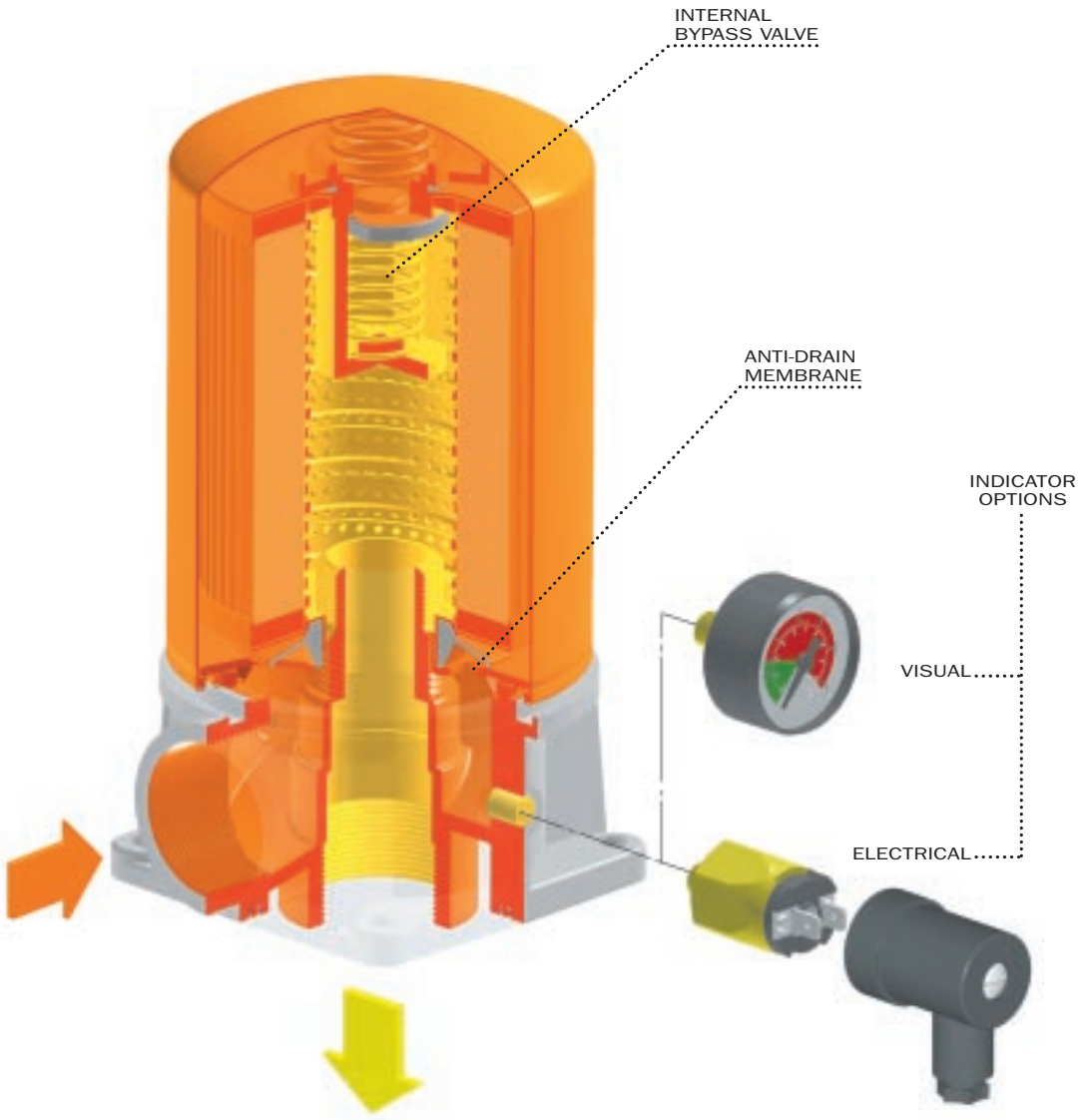
Description

MST - Suitable for installation on return lines, mounted tank top where the flow does not exceed 350 l/min.
MST use spin - on canisters incorporating a bypass valve.
To avoid oil leaks during maintenance, the canisters have a special anti-drain membrane.
MST - filter is ideal for machine tool and agricultural applications.



New

absolute filter elements
independently tested
in the following Institutes:

Institute of Filtration
(France)
I.F.T.S.

VETENSKAP OCH KONST
KUNGL TEKNISKA HÖGSKOLAN
Royal Institute of Technology

UNI EN ISO 9001
N° 037/98
ITALCERT

Filter elements types

A Series

Absolute inorganic microfibre filtration media, available in 3, 6, 10 and 25 micron
Example - **A03, A06, A10** or **A25**

P Series

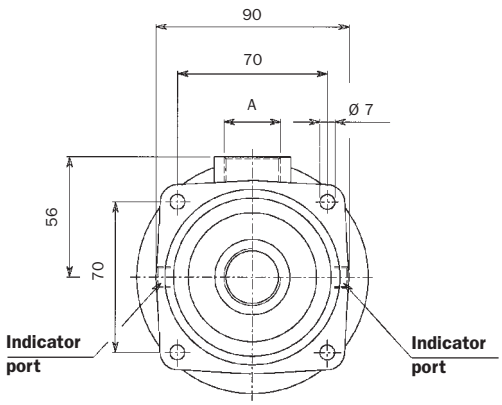
Nominal cellulose impregnated paper media, available in 10 and 25 micron.
Example - **P10** or **P25**

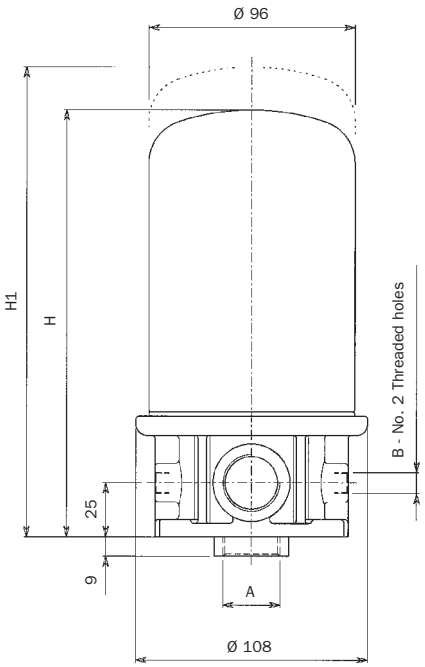
M Series

Metal mesh media, available in 25, 60, and 90 micron.
Example - **M25**, **M60** or **M90**.

Please refer to individual pressure drop curves to obtain filter assembly pressure drop information

The following filter sizing recommendations are based using a mineral oil fluid at 30 mm²/s (cSt) with a maximum total filter assembly (housing and filter element) pressure drop of 30% of the filter condition indicator (0.4 bar) for line and return filter.





MST 050-070

MST SERIES 050 SIZES

Filter assembly	Flow rate l/min *	Port size BSP/NPT/SAE	Weight kg **
A03	42	3/4"	1,2
A06	50		
A10	65		
A25	75		
P10	68		

MST SERIES 070 SIZES

Filter assembly	Flow rate l/min *	Port size BSP/NPT/SAE	Weight kg **
A03	55	3/4"	1,5
A06	60		
A10	68		
A25	80		
P10	76		

* Flow rates with 30 mm²/s fluid viscosity
** Weight including filter element

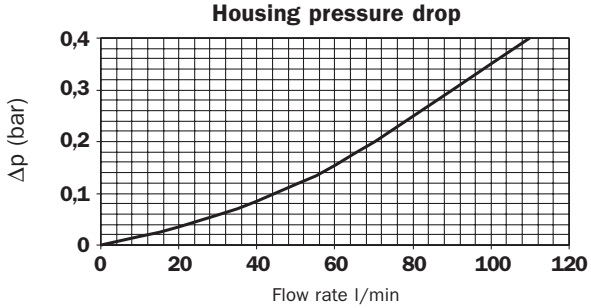
Thread connections

Type	A	B
G1	3/4" BSP	1/8" BSP
G2	3/4" NPT	1/8" NPT
G3	SAE 8 - 3/4" - 16 UN	1/8" NPT

Lengths

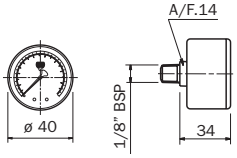
Type	H	H1
050	190	208
070	265	283

Housing pressure drop

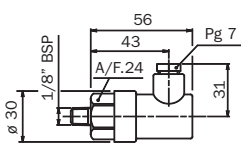


Indicator (only for option G1)

VR - VA

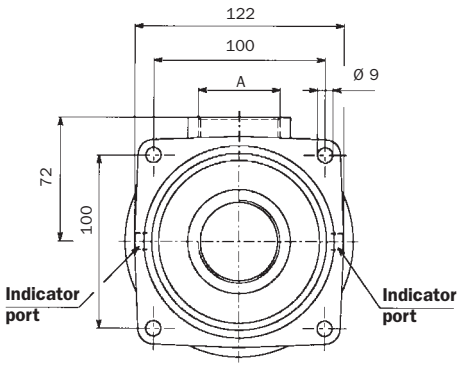


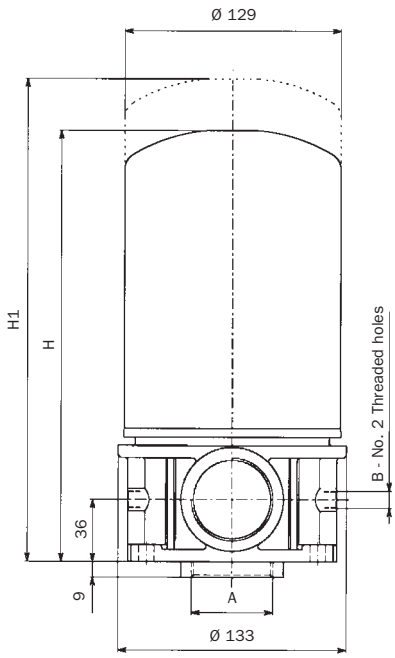
ER - EC



Please refer to individual pressure drop curves to obtain filter assembly pressure drop information

The following filter sizing recommendations are based using a mineral oil fluid at 30 mm²/s (cSt) with a maximum total filter assembly (housing and filter element) pressure drop of 30% of the filter condition indicator (0.4 bar) for line and return filter.





MST 100-150

MST SERIES 100 SIZES

Filter assembly	Flow rate l/min *	Port size BSP/NPT/SAE	Weight kg **
A03	80	1 1/2"	2,3
A06	90		
A10	125		
A25	185		
P10	175		

MST SERIES 150 SIZES

Filter assembly	Flow rate l/min *	Port size BSP/NPT/SAE	Weight kg **
A03	90	1 1/2"	2,4
A06	110		
A10	140		
A25	210		
P10	190		

* Flow rates with 30 mm²/s fluid viscosity
** Weight including filter element

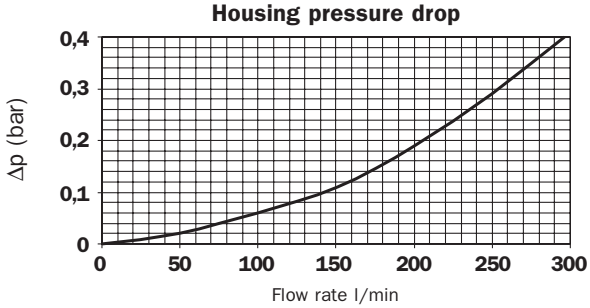
Thread connections

Type	A	B
G1	1 1/2" BSP	1/8" BSP
G2	1 1/2" NPT	1/8" NPT
G3	SAE 20 - 1 5/8" - 12 UN	1/8" NPT

Lengths

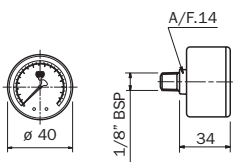
Type	H	H1
100	250	275
150	280	305

Housing pressure drop

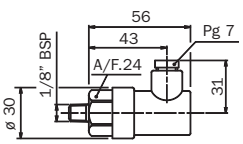


Indicator (only for option G1)

VR - VA



ER - EC



Pressure drop information

General

Pressure drop versus flow rate curve information for both housing and filter elements is in accordance with ISO 3968

Filter assembly pressure drop - Δp Total = Δp Housing + Δp Filter element

Housing pressure drop - The housing pressure drop is proportional to the fluid density

Filter element pressure drop - Filter element pressure drop is proportional to kinematic viscosity therefore always check the fluid operating temperature and fluid type to obtain the working viscosity according to the following formula:

Δp_1 Filter element = (working viscosity/brochure viscosity) x Δp filter element

Brochure viscosity 30 mm²/s (cSt)

1kPa = 0,01 bar

Filter assembly sizing example

- Customer requires a 100 l/min filter assembly
- Mineral oil fluid: ISO VG46 (46 mm²/s (cSt) at 40°C)
- 25 micron absolute filtration
- return line application

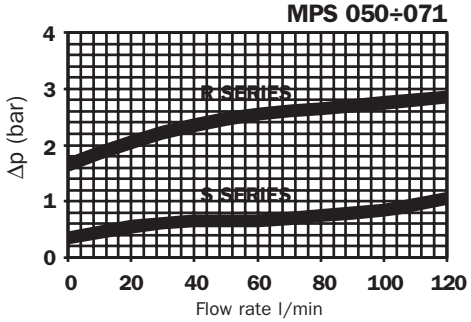
Selection :

- **Housing pressure drop** - MPS 100/101 with 100 l/min Δp = 0,13 bar (see curve on page 8)
- **Filter element pressure drop** brochure viscosity - CS 100A25 with 100 l/min Δp = 0,09 bar (see curve on page 17)
- **Filter element pressure drop** working viscosity - With 46 mm²/s (cSt) Δp_1 = 0,09 x (46/30) = 0,138 bar
- **Filter assembly pressure drop** Δp Total = Δp Housing + Δp_1 Filter element = 0,13 + 0,138 = **0,268 bar*** { Acceptable pressure drop value, as per our recommendations

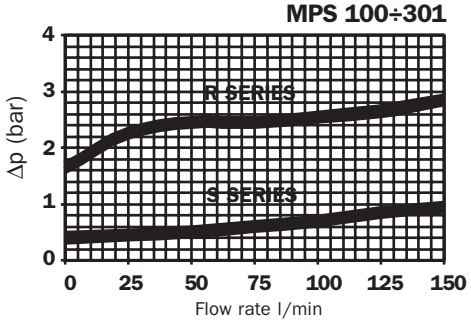
Bypass valves pressure drop

The curves were obtained using a mineral oil with a density of 0,86 kg/dm.^{3} The Δp varies proportionally to the density.

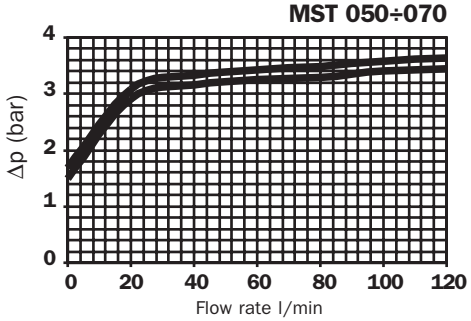
MPS 050÷071



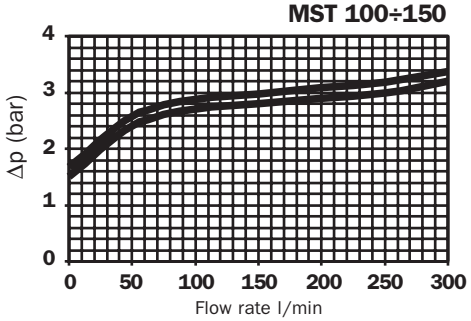
MPS 100÷301



MST 050÷070



MST 100÷150

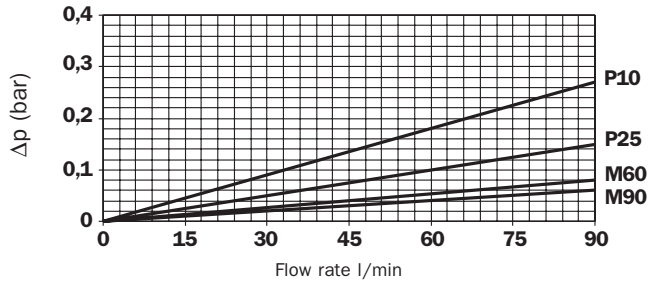


R series: Return filter
S series: Suction filter

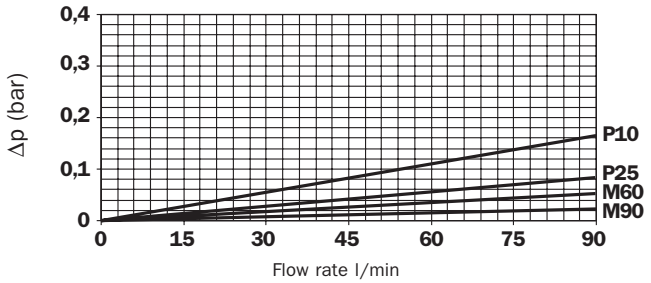
Filter elements - P/M Series

The curves were obtained using a mineral oil with a kinematic viscosity of 30 mm^2/s (cSt).
The Δp varies proportionally to the fluid kinematic viscosity.

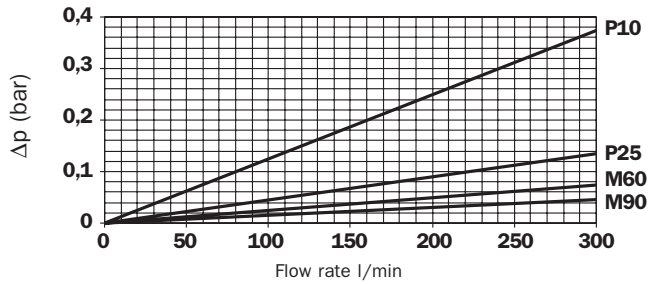
CS - CT - CG 050 - P/M



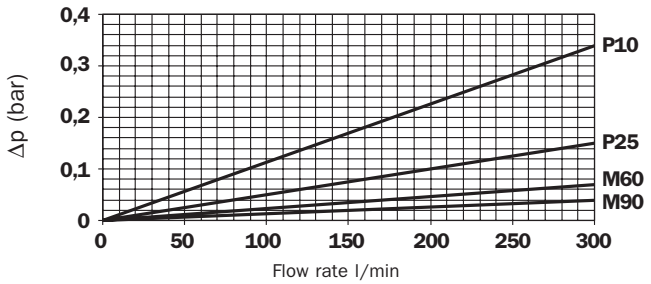
CS - CT - CG 070 - P/M



CS - CT - CG 100 - P/M



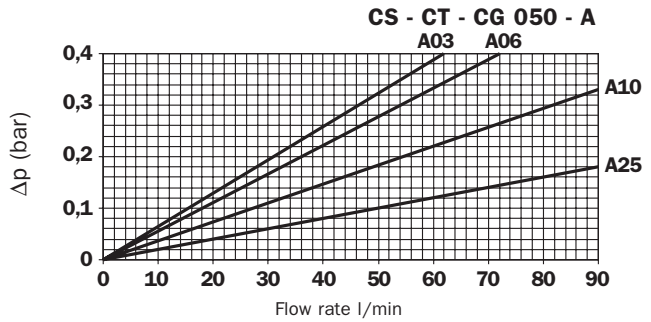
CS - CT - CG 150 - P/M



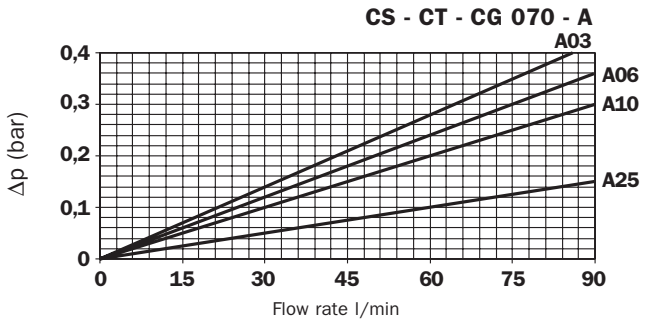
Filter elements - A Series

The curves were obtained using a mineral oil with a kinematic viscosity of 30 mm^2/s (cSt).
The Δp varies proportionally to the fluid kinematic viscosity.

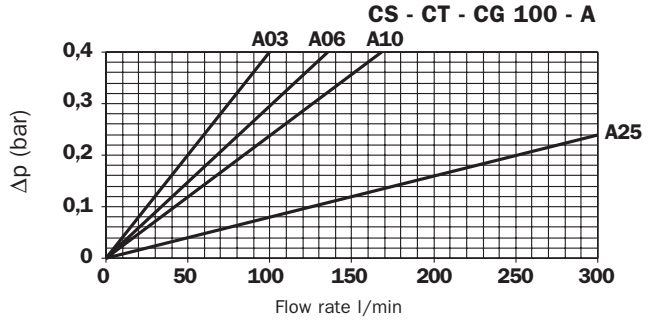
CS - CT - CG 050 - A



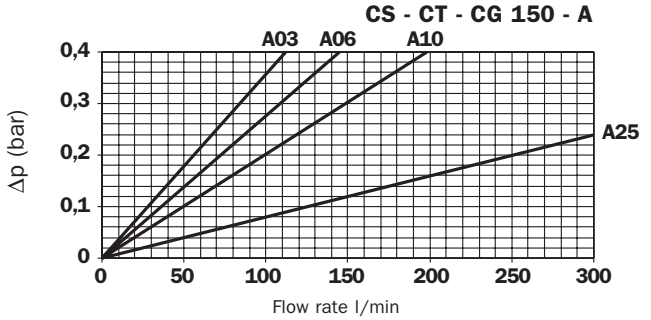
CS - CT - CG 070 - A



CS - CT - CG 100 - A



CS - CT - CG 150 - A



Ordering information

MST [ ] [ ] [ ] [ ] [ ] [ ]

Nominal sizes

050	
070	
100	
150	

Filter elements indicator

S	With threaded hole only
T	With plug
VR	Colour coded pressure gauge
ER	Pressure switch with N.O. contacts
EC	Pressure switch with N.C. contacts

Bypass valve

B	Calibration: 1,75 bar

Seals

A	Nitrile (Buna - N)
V	Viton

Seals

A	Nitrile (Buna - N)
V	Viton

Port options

Type	MST 050-070	MST 100-150
G1	3/4" BSP	1 1/2" BSP
G2	3/4" NPT	1 1/2" NPT
G3	SAE 8	SAE 20

Filter elements M/P series

P10 P25	Resin-impregnated paper ßx ≥ 2
M25 M60 M90	Square wire mesh

Filter elements A series

A03 A06 A10 A25	Inorganic microfibre ßx ≥ 200

CT [ ] [ ] [ ] [ ]

Replacement element

MP Filtri - Filtration products will only be guaranteed if original MP Filtri replacement elements and spares are used