

# MPS

**Maximum pressure 12 bar**  
**Flow rates to 365 l/min**

## Technical data

### Filter housing (Materials)

- Head: Aluminium
- Bypass valve: Nylon - Steel
- Element: Zinc-Plated Steel, Painted Steel

### Pressure

- Working pressure: 12 bar (1,2 MPa)

### Temperature

- From -20°C to +110°C

### Bypass valve

- Return filter opening pressure: 1,75 bar  $\pm 10\%$
- Suction filter opening pressure: 30 kPa  $\pm 10\%$

### $\Delta p$ Elements type

- $\Delta p$ : 5 bar
- Fluid flow through the filter element from OUT to IN.

### Seals

- Standard NBR series A

### MPS FILTERS ARE PROVIDED FOR VERTICAL MOUNTING

#### Weights (kg)

- MPS050 1,00
- MPS051 1,05
- MPS070 1,20
- MPS071 1,25
- MPS100 2,10
- MPS101 2,20
- MPS150 2,40
- MPS151 2,50
- MPS200 3,90
- MPS250 4,60
- MPS300-301 5,30
- MPS350-351 6,00

#### Volumes (dm<sup>3</sup>)

- MPS050-051 0,70
- MPS070-071 0,95
- MPS100-101 1,65
- MPS150-151 2,00
- MPS200 3,00
- MPS250 3,70
- MPS300-301 3,40
- MPS350-351 4,10

### Filter housings $\Delta p$ pressure drop

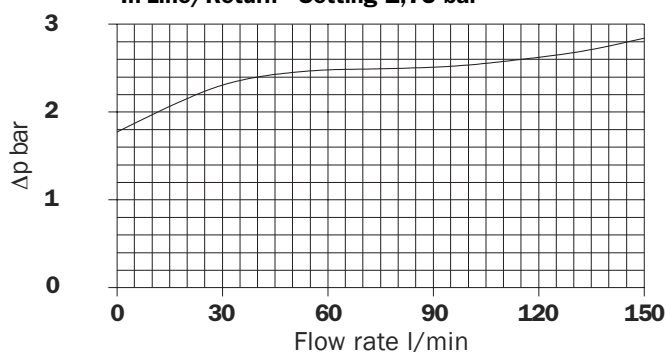
The curves are plotted utilising mineral oil with density of 0,86 kg/dm<sup>3</sup> to ISO 3968.

$\Delta p$  varies proportionally with density.

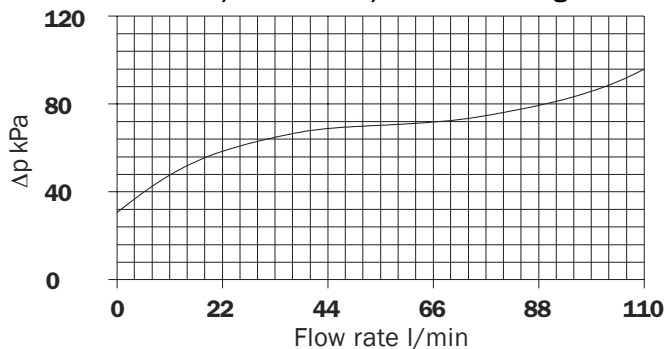
### Valves: Bypass valve pressure drop



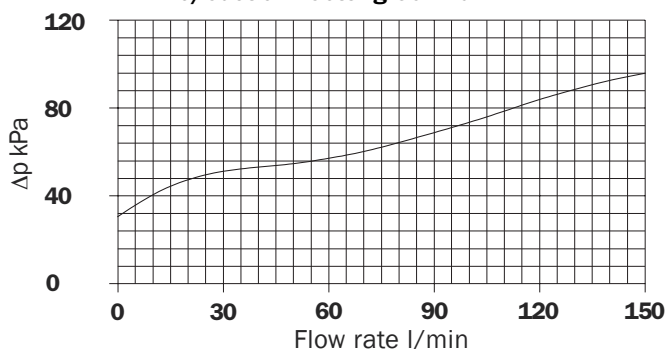
**MPS 100-150-200-250-300-350**  
**In-Line/Return - Setting 1,75 bar**



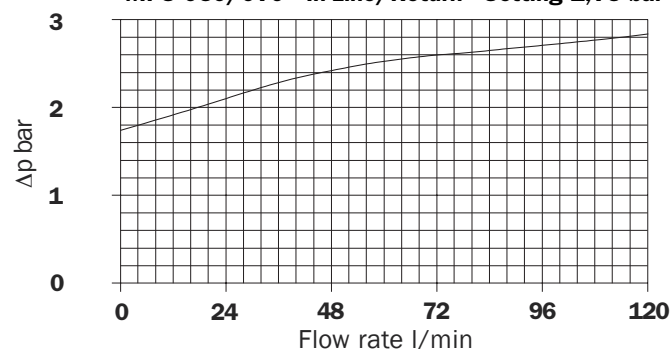
**MPS 050/070 - In-Line/Suction - Setting 30 kPa**



**MPS 100-150-200-250-300-350**  
**In-Line/Suction - Setting 30 kPa**



**MPS 050/070 - In-Line/Return - Setting 1,75 bar**



## In-Line/Suction Filter

The following filter sizing recommendations are based using a mineral oil fluid at 30/46/68 mm<sup>2</sup>/s (cSt) with a maximum total filter assembly (housing and filter element) of **10 kPa (0,1 bar)**.

### MPS 050

	mm <sup>2</sup> /s (cSt)		
	32	46	68
<b>P10</b>	20	17	12
<b>P25</b>	25	21	17
<b>M25</b>	30	28	26
Flow rate l/min			

### MPS 070

	mm <sup>2</sup> /s (cSt)		
	32	46	68
<b>P10</b>	23	21	17
<b>P25</b>	28	26	22
<b>M25</b>	31	29	27
Flow rate l/min			

### MPS 100

	mm <sup>2</sup> /s (cSt)		
	32	46	68
<b>P10</b>	50	41	33
<b>P25</b>	60	56	45
<b>M25</b>	75	67	57
Flow rate l/min			

### MPS 150

	mm <sup>2</sup> /s (cSt)		
	32	46	68
<b>P10</b>	-	50	36
<b>P25</b>	68	60	53
<b>M25</b>	77	74	68
Flow rate l/min			

### MPS 200

	mm <sup>2</sup> /s (cSt)		
	32	46	68
<b>P10</b>	100	85	65
<b>P25</b>	125	110	90
<b>M25</b>	150	135	125
Flow rate l/min			

### MPS 250

	mm <sup>2</sup> /s (cSt)		
	32	46	68
<b>P10</b>	105	88	77
<b>P25</b>	130	120	102
<b>M25</b>	155	140	130
Flow rate l/min			

### MPS 300

	mm <sup>2</sup> /s (cSt)		
	32	46	68
<b>P10</b>	100	85	65
<b>P25</b>	125	110	90
<b>M25</b>	150	135	125
Flow rate l/min			

### MPS 350

	mm <sup>2</sup> /s (cSt)		
	32	46	68
<b>P10</b>	105	88	77
<b>P25</b>	130	120	102
<b>M25</b>	155	140	130
Flow rate l/min			

## In-Line/Return Filter

The following filter sizing recommendations are based using a mineral oil fluid at 30/46/68 mm<sup>2</sup>/s (cSt) with a maximum total filter assembly (housing and filter element) of **50 kPa (0,5 bar)**.

### MPS 050 - 051

	mm <sup>2</sup> /s (cSt)		
	32	46	68
<b>A03</b>	50	40	31
<b>A06</b>	51	42	32
<b>A10</b>	62	54	45
<b>A25</b>	70	65	58
<b>P10</b>	64	58	49
<b>P25</b>	72	68	60
<b>M25</b>	80	78	75
Flow rate l/min			

### MPS 070 - 071

	mm <sup>2</sup> /s (cSt)		
	32	46	68
<b>A03</b>	53	44	34
<b>A06</b>	61	53	43
<b>A10</b>	64	57	48
<b>A25</b>	75	72	66
<b>P10</b>	71	66	59
<b>P25</b>	77	74	69
<b>M25</b>	80	78	77
Flow rate l/min			

### MPS 100 - 101

	mm <sup>2</sup> /s (cSt)		
	32	46	68
<b>A03</b>	83	63	45
<b>A06</b>	105	85	64
<b>A10</b>	128	107	84
<b>A25</b>	168	154	132
<b>P10</b>	160	142	119
<b>P25</b>	175	165	145
<b>M25</b>	190	180	170
Flow rate l/min			

### MPS 150 - 151

	mm <sup>2</sup> /s (cSt)		
	32	46	68
<b>A03</b>	120	100	75
<b>A06</b>	128	110	84
<b>A10</b>	144	126	100
<b>A25</b>	174	164	145
<b>P10</b>	164	149	125
<b>P25</b>	182	172	160
<b>M25</b>	195	190	180
Flow rate l/min			

### MPS 200

	mm <sup>2</sup> /s (cSt)		
	32	46	68
<b>A03</b>	165	125	90
<b>A06</b>	210	170	125
<b>A10</b>	250	210	165
<b>A25</b>	320	295	260
<b>P10</b>	300	270	230
<b>P25</b>	330	310	280
<b>M25</b>	360	345	325
Flow rate l/min			

### MPS 250

	mm <sup>2</sup> /s (cSt)		
	32	46	68
<b>A03</b>	235	195	150
<b>A06</b>	250	210	165
<b>A10</b>	280	245	200
<b>A25</b>	335	310	280
<b>P10</b>	315	285	250
<b>P25</b>	350	330	300
<b>M25</b>	365	360	345
Flow rate l/min			

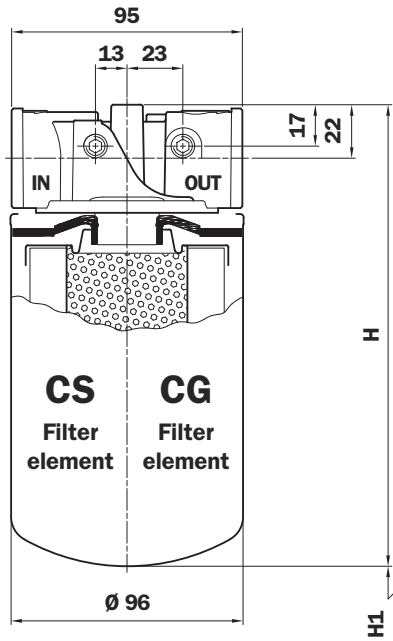
### MPS 300 - 301

	mm <sup>2</sup> /s (cSt)		
	32	46	68
<b>A03</b>	165	125	90
<b>A06</b>	210	170	125
<b>A10</b>	250	210	165
<b>A25</b>	320	295	260
<b>P10</b>	300	270	230
<b>P25</b>	330	310	280
<b>M25</b>	360	345	325
Flow rate l/min			

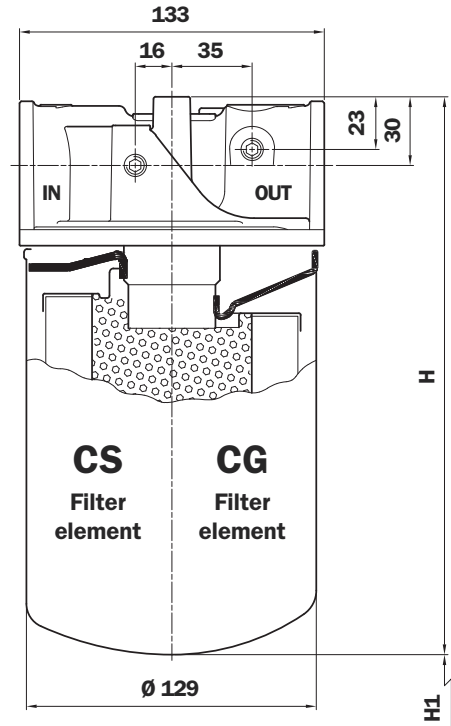
### MPS 350 - 351

	mm <sup>2</sup> /s (cSt)		
	32	46	68
<b>A03</b>	235	195	150
<b>A06</b>	250	210	165
<b>A10</b>	280	245	200
<b>A25</b>	335	310	280
<b>P10</b>	315	285	250
<b>P25</b>	350	330	300
<b>M25</b>	365	360	345
Flow rate l/min			

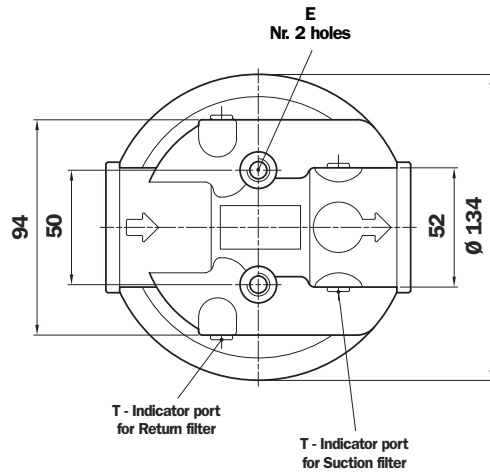
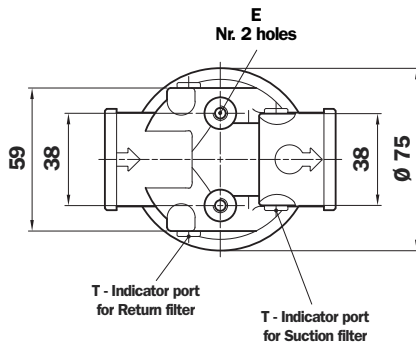
# MPS 050 / 070



# MPS 100 / 150



## MPS 100 - 150



## MPS 050 - 070 - 100 - 150

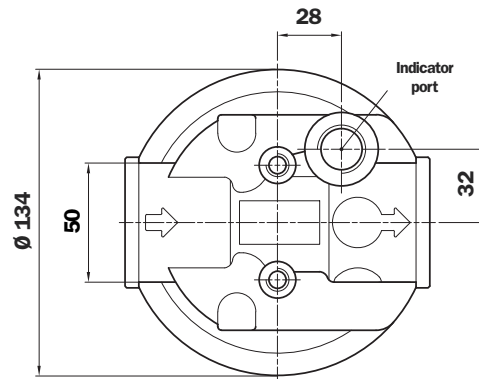
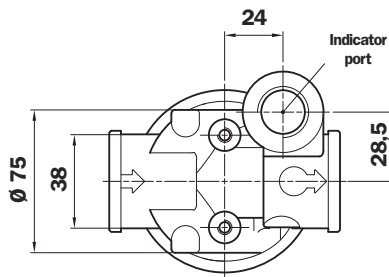
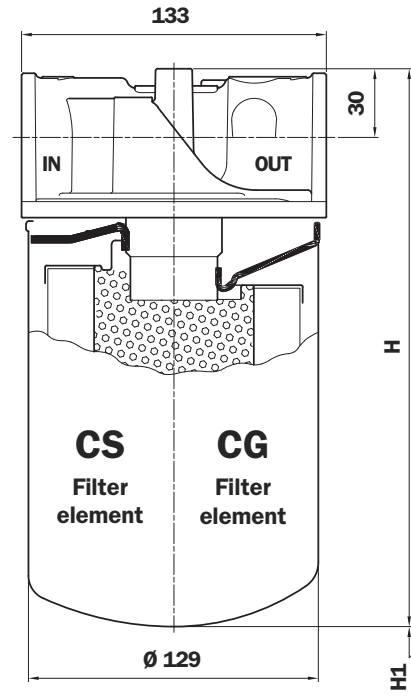
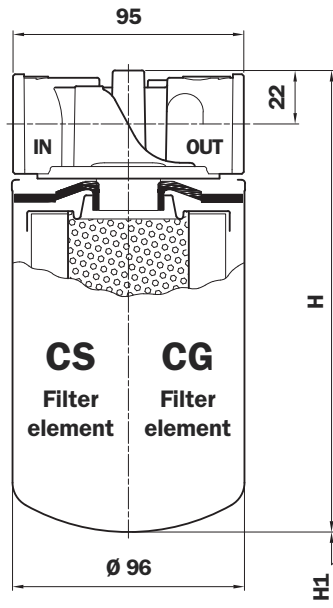
Length Filter	H mm	H1 mm
050	192	30
070	254	30
100	245	50
150	291	50

## Thread connections

Type	Size MPS 050 - 070	Size MPS 100 - 150	T	E Depth 12 mm MPS 050 - 070	E Depth 15 mm MPS 100 - 150
G1	G 3/4"	G 1 1/4"	G 1/8"	M6	M8
G2	3/4" NPT	1 1/4" NPT	1/8" NPT	1/4" UNC	5/16" UNC
G3	SAE 12 - 1 1/16" - 12 UN	SAE 20 - 1 5/8" - 12 UN	1/8" NPT	1/4" UNC	5/16" UNC
G4	SAE 8 - 3/4" - 16 UNF	-	1/8" NPT	1/4" UNC	-
G5	G 1"	-	G 1/8"	M6	-
G6	1" NPT	-	1/8" NPT	1/4" UNC	-

# MPS 051 / 071

# MPS 101 / 151



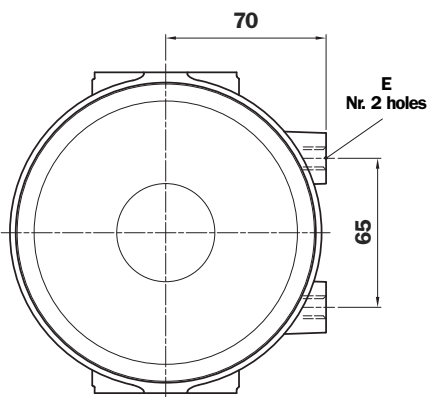
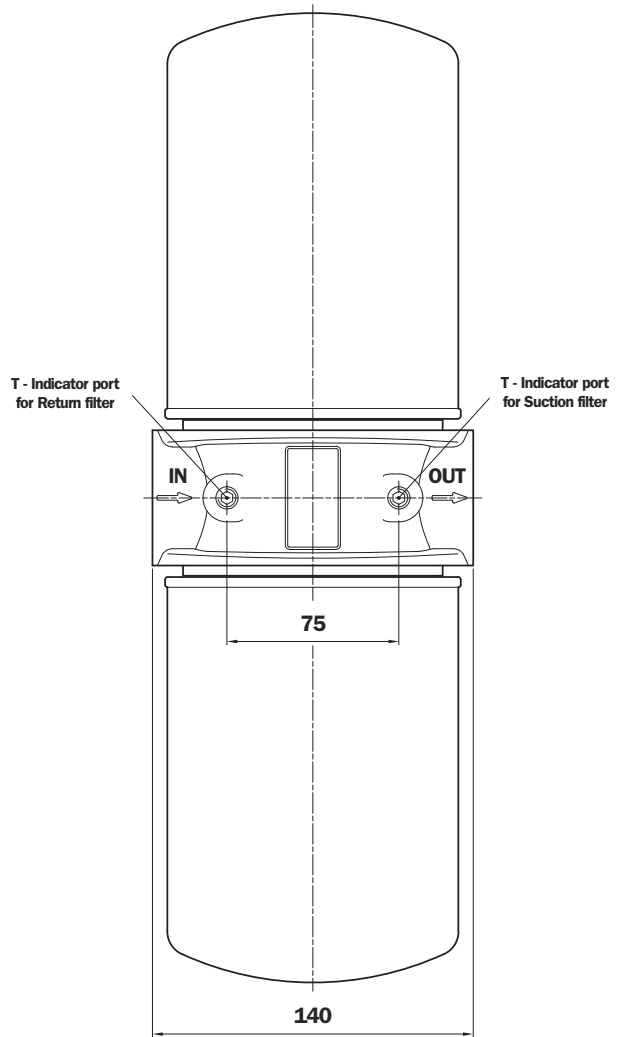
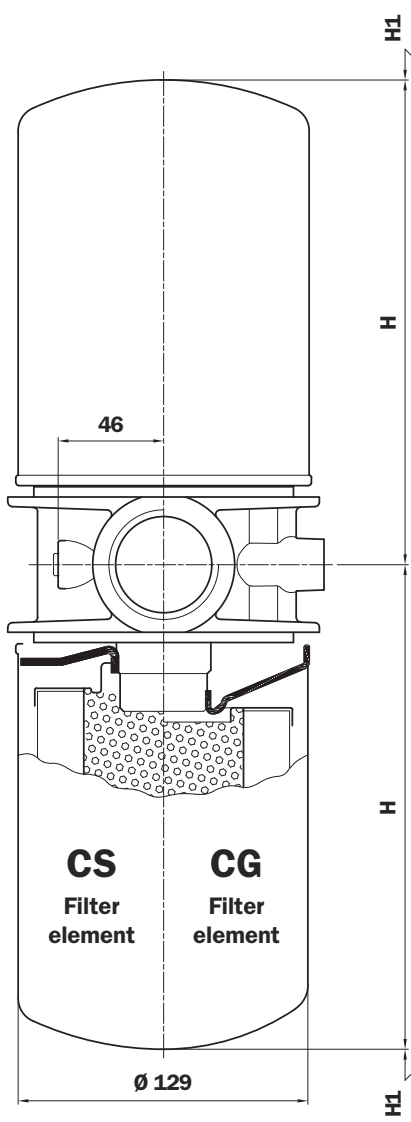
## MPS 051 - 071 - 101 - 151

Length Filter	H mm	H1 mm
051	192	30
071	254	30
101	245	50
151	291	50

## Thread connections

Type	Size MPS 051 - 071	Size MPS 101 - 151	E Depth 12 mm MPS 051 - 071	E Depth 15 mm MPS 101 - 151
G1	G 3/4"	G 1 1/4"	M6	M8
G2	3/4" NPT	1 1/4" NPT	1/4" UNC	5/16" UNC
G3	SAE 12 - 1 1/16" - 12 UN	SAE 20 - 1 5/8" - 12 UN	1/4" UNC	5/16" UNC
G4	SAE 8 - 3/4" - 16 UNF	-	1/4" UNC	-
G5	G 1"	-	M6	-
G6	1" NPT	-	1/4" UNC	-

# MPS 200 - 250



## MPS 200 - 250

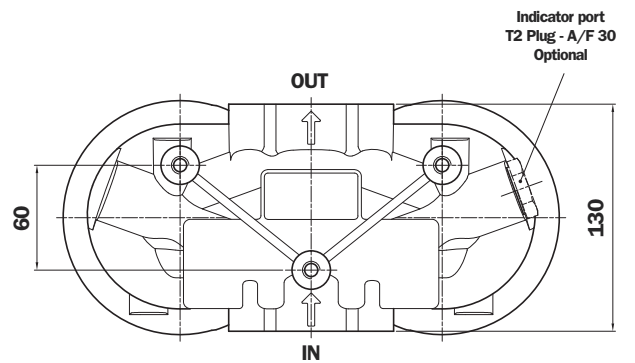
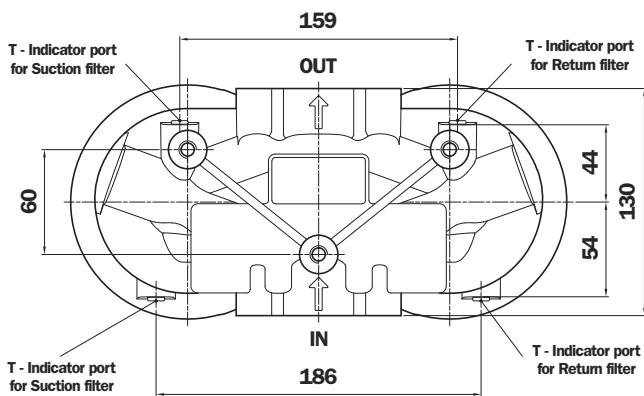
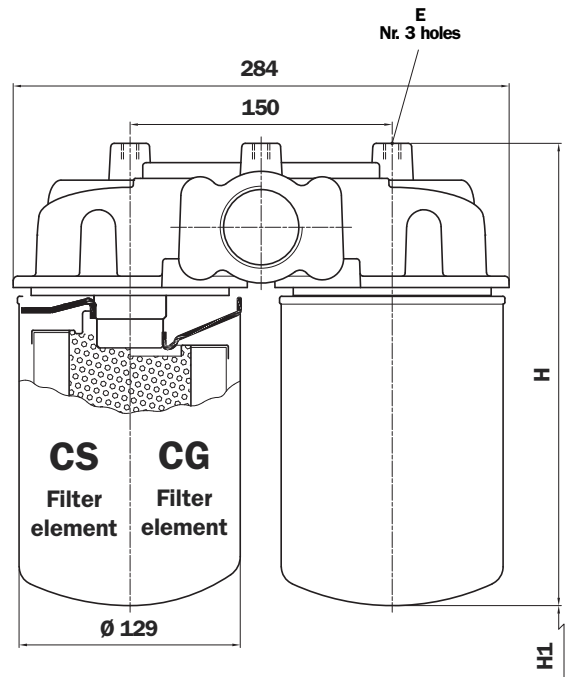
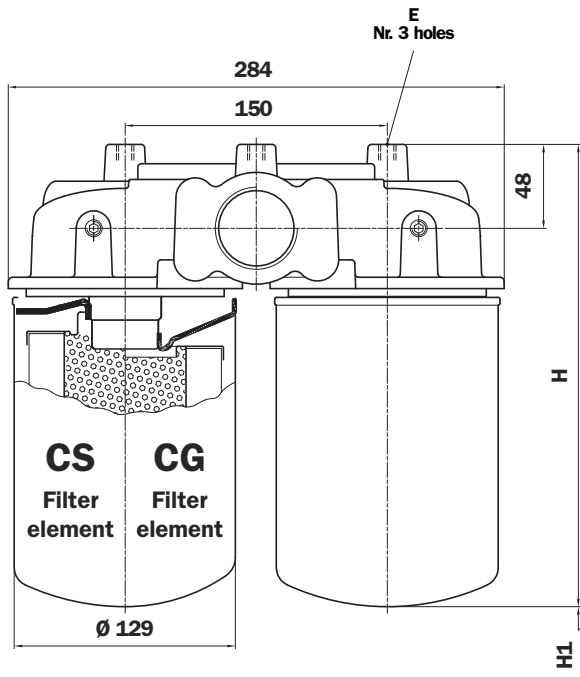
Length Filter	H mm	H1 mm
200	213	50
250	259	50

## Thread connections

Type	Size	T	E Depth 20 mm
G1	G 1 1/2"	G 1/8"	M10
G2	1 1/2" NPT	1/8" NPT	7/16" UNC
G3	SAE 24 - 1 7/8" - 12 UN	1/8" NPT	7/16" UNC

# MPS 300 - 350

# MPS 301 - 351



## MPS 300 - 350

Length Filter	H mm	H1 mm
300	266	50
350	312	50

## MPS 301 - 351

Length Filter	H mm	H1 mm
301	266	50
351	312	50

## MPS 300 - 350 Thread connections

Type	Size	T	E Depth 15 mm
G1	G 1 1/2"	G 1/8"	M10
G2	1 1/2" NPT	1/8" NPT	7/16" UNC
G3	SAE 24 - 1 7/8" - 12 UN	1/8" NPT	7/16" UNC

## MPS 301 - 351 Flange connections

Type	Size	T	E Depth 15 mm
F1	1 1/2" SAE 3000 psi/M	G 1/8"	M10
F2	1 1/2" SAE 3000 psi/UNC	1/8" NPT	7/16" UNC

# Filter element CS - CG - CW



## CS - Thread connections

Type	Size
050 - 070	G 3/4"
100 - 150	G 1 1/4"

## CG/CW - Thread connections

Type	Size
050 - 070	1" - 12 UNF

## CG/CW - Thread connections

Type	Size
100 - 150	1 1/2" - 16 UN

### CW:

This series of canister 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**

### Water holding capacities CW

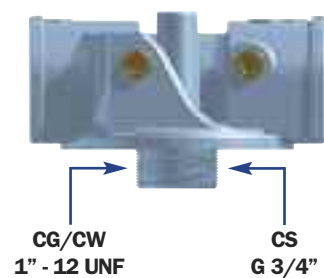
Viscosity	30/46 mm <sup>2</sup> /s (cSt)	good
	> 46 mm <sup>2</sup> /s (cSt)	poor

H <sub>2</sub> O p.p.m.	600/800 p.p.m.	good
	> 800 p.p.m.	poor

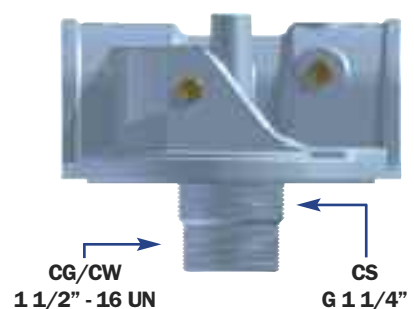
Flow rate	CW050 7/15 l/min	good
	CW050 > 20 l/min	poor
	CW150 20/40 l/min	good
	CW150 > 50 l/min	poor

Temperature	40/60 °C	good
	< 30 °C	poor

### Head MPS 050 - 070



### Head MPS 100 - 200 - 300



# Ordering information MPS

## Filter assembly MPS

	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Example 1: MPS</b>	<b>050</b>	<b>R</b>	<b>G3</b>	<b>P25</b>	<b>A</b>	<b>P01</b>
<b>Example 2: MPS</b>	<b>101</b>	<b>U</b>	<b>G1</b>	<b>M60</b>	<b>A</b>	<b>P01</b>

## Filter element CS

	<b>1</b>	<b>2</b>	<b>5</b>	<b>6</b>	<b>7</b>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Example 1:</b>	<b>CS</b>	<b>050</b>	<b>P25</b>	<b>A</b>	<b>P01</b>
<b>Example 2:</b>	<b>CS</b>	<b>100</b>	<b>M60</b>	<b>A</b>	<b>P01</b>

### 1 - Filter element

<b>CS</b>	Filter element European std.
<b>CG</b>	Filter element USA std.
<b>CW</b>	Water retention

### 2 - Style

#### Filter:

Series 0*	Series 1*	Filter element
<b>050</b>	<b>051</b>	<b>050</b>
<b>070</b>	<b>071</b>	<b>070</b>
<b>100</b>	<b>101</b>	<b>100</b>
<b>150</b>	<b>151</b>	<b>150</b>
<b>200</b>		<b>100</b> x 2 elements
<b>250</b>		<b>150</b> x 2 elements
<b>300</b>	<b>301</b>	<b>100</b> x 2 elements
<b>350</b>	<b>351</b>	<b>150</b> x 2 elements

### 3 - Valves

#### Series 0\*

<b>R</b>	With bypass 1,75 bar ±10%
<b>S</b>	With bypass 30 kPa ±10% (only for Suction filter)
<b>U</b>	Without bypass

#### Series 1\*

<b>R</b>	With bypass
<b>P</b>	Without bypass

### 4 - Connections

#### Threaded

#### MPS - CS element 050 - 051 - 070 - 071

Type	Size
<b>G1</b>	G 3/4"
<b>G2</b>	3/4" NPT
<b>G3</b>	SAE 12 - 1 1/16" - 12 UN
<b>G4</b>	SAE 8 - 3/4" - 16 UNF
<b>G5</b>	G 1"
<b>G6</b>	1" NPT

#### MPS - CG element 050 - 051 - 070 - 071

Type	Size
<b>U1</b>	G 3/4"
<b>U2</b>	3/4" NPT
<b>U3</b>	SAE 12 - 1 1/16" - 12 UN
<b>U4</b>	SAE 8 - 3/4" - 16 UNF
<b>U5</b>	G 1"
<b>U6</b>	1" NPT

#### MPS - CS element 100 - 101 - 150 - 151

Type	Size
<b>G1</b>	G 1 1/4"
<b>G2</b>	1 1/4" NPT
<b>G3</b>	SAE 20 - 1 5/8" - 12 UN

#### MPS - CS element 200 - 250 - 300 - 301 - 350 - 351

Type	Size
<b>G1</b>	G 1 1/2"
<b>G2</b>	1 1/2" NPT
<b>G3</b>	SAE 24 - 1 7/8" - 12 UN

#### Flanged

#### MPS - CS element 300 - 301 - 350 - 351

Type	Size
<b>F1</b>	1 1/2" SAE 3000 psi/M
<b>F2</b>	1 1/2" SAE 3000 psi/UNC

### 5 - Filter element

<b>A03</b>	Inorganic microfibre 3 µm	Absolute filtration Inorganic Microfibre βx (c) ≥ 1000
<b>A06</b>	Inorganic microfibre 6 µm	
<b>A10</b>	Inorganic microfibre 10 µm	
<b>A25</b>	Inorganic microfibre 25 µm	
<b>M25</b>	Wire mesh 25 µm	Nominal Filtration
<b>M60</b>	Wire mesh 60 µm	
<b>M90</b>	Wire mesh 90 µm	
<b>P10</b>	Resin - Impregnated paper	Nominal Filtration
<b>P25</b>	Resin - Impregnated paper	

### 6 - Filter seals

<b>A</b>	NBR
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### 7 - Option

<b>P01</b>	MP Filtri standard
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**\*Series "0":**  
Connections for Suction and  
Return indicator included.

**\*Series "1":**  
Connection for differential indicator.

**For Clogging Indicator:**  
See page 318

**MP Filtri** - The filter functions as described in this bulletin are valid exclusively for original MP Filtri filter elements and replacement parts. All rights reserved.

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