

# HYDRAULIC FILTRATION PRODUCTS SPIN ON FILTERS



PASSION TO PERFORM



# Filter element

## Element description

M - Wire Mesh  $\Delta p$  145 psi (10 bar)

P - Paper  $\Delta p$  145 psi (10 bar)

A - Microfibre  $\Delta p$  145 psi (10 bar)

### Characteristics of filter elements with nominal filtration, M series

For wire mesh filter elements, filtration degree is defined as the maximum diameter of a sphere corresponding to the mesh size, in microns.

### Characteristics of filter elements with nominal filtration, P series

For cellulose filter elements, filtration efficiency expressed in micron is to be construed as nominal  $\beta_{X@} > 2$ .

### Characteristics of filter elements with absolute filtration, A series

For microfibre filter elements, filtration degree is defined by the test bench MULTIPASS ISO 16889.

## Reference standards

All filter elements comply with the following ISO standards.

**ISO 2941** - Collapse and burst resistance.

**ISO 2942** - Bubble point test resistance.

**ISO 2943** - Compatibility with fluids.

**ISO 3723** - Resistance to axial deformation.

**ISO 23181** - Fatigue test with flow.

**ISO 3968** - Pressure drop.

**ISO 16889** - Filtration efficiency by means of Multipass.

**N.B.** P series cellulose cartridges are compatible only with mineral oils in according to ISO 2943 - 4.

## Multipass test in compliance new ISO 16889 Contaminant ISO MTD

Filtration	$\beta_{X@} \geq 1000$
Filter element	
A01*	<4
A03	5
A06	7
A10	10
A16	15
A25	20

\* On request

## International standards for fluid contamination control

Components	Recommended filtrations									
	12/10/7	13/11/8	14/12/9	15/13/10	16/14/11	17/15/12	18/16/13	19/17/14	20/18/15	
Servo valves			●	●	●					
Proportional Valves				●	●	●				
Variable displacement pumps.					●	●	●			
Cartridge valves						●	●	●		
Piston pumps						●	●	●		
Vane pumps							●	●	●	
Pressure - flow rate control valves							●	●	●	
Solenoid valves							●	●	●	
ISO code	12/10/7	13/11/8	14/12/9	15/13/10	16/14/11	17/15/12	18/16/13	19/17/14	20/18/15	
NAS code	1	2	3	4	5	6	7	8	9	
Absolute filtration recommended	$\beta_{<4@} \geq 1000$		$\beta_{5@} \geq 1000$		$\beta_{7@} \geq 1000$		$\beta_{10@} \geq 1000$	$\beta_{15@} \geq 1000$	$\beta_{20@} \geq 1000$	



# MPS

**Maximum pressure 174 psi (12 bar)**

**Flow rates to 96 gpm (365 l/min)**

## Technical data

### Filter housing (Materials)

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

### Pressure

- Working pressure: 174 psi (12 bar - 1,2 MPa)

### Temperature

- From -4 °F to +230 °F / -20 °C to +110 °C

### Bypass valve

- Return filter opening pressure: 25 psi ±10% (1,75 bar ±10%)
- Suction filter opening pressure: 4.35 psi ±10% (30 kPa ±10%)

### Δp Elements type

- Δp: 73 psi (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 lbs (kg)

• MPS050	2.20 (1,00)
• MPS051	2.31 (1,05)
• MPS070	2.65 (1,20)
• MPS071	2.76 (1,25)
• MPS100	4.63 (2,10)
• MPS101	4.85 (2,20)
• MPS150	5.29 (2,40)
• MPS151	5.51 (2,50)
• MPS200	8.60 (3,90)
• MPS250	10.14 (4,60)
• MPS300-301	11.68 (5,30)
• MPS350-351	13.23 (6,00)

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

• MPS050-051	42.72 (0,70)
• MPS070-071	57.97 (0,95)
• MPS100-101	100.69 (1,65)
• MPS150-151	122.05 (2,00)
• MPS200	183.07 (3,00)
• MPS250	225.79 (3,70)
• MPS300-301	207.48 (3,40)
• MPS350-351	250.20 (4,10)

### Filter housings Δp pressure drop

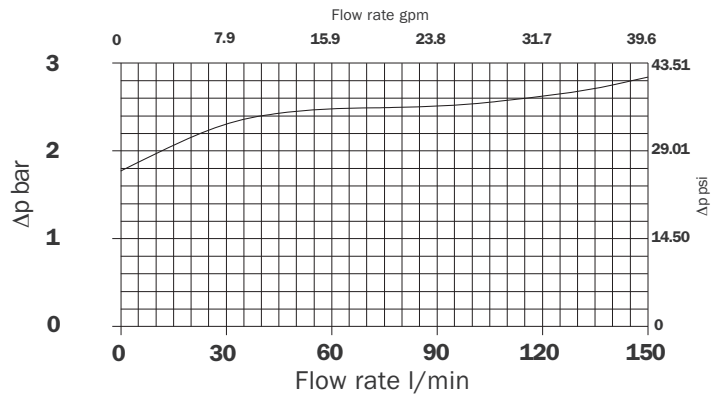
The curves are plotted utilising mineral oil with density of 53,69 lbs/ft<sup>3</sup> (0,86 kg/dm<sup>3</sup>) to ISO 3968.

Δp varies proportionally with density.

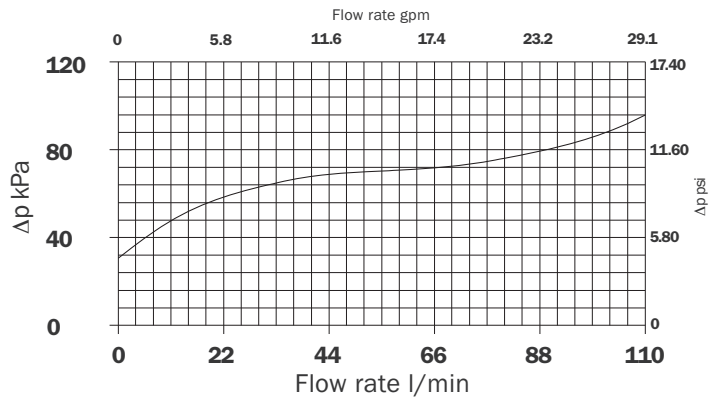
Valves: Bypass valve pressure drop



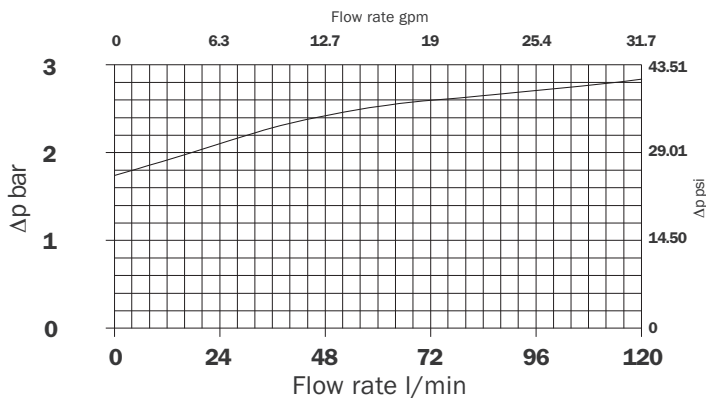
**MPS 100-150-200-250-300-350**  
In-Line/Return - Setting 25 psi (1,75 bar)



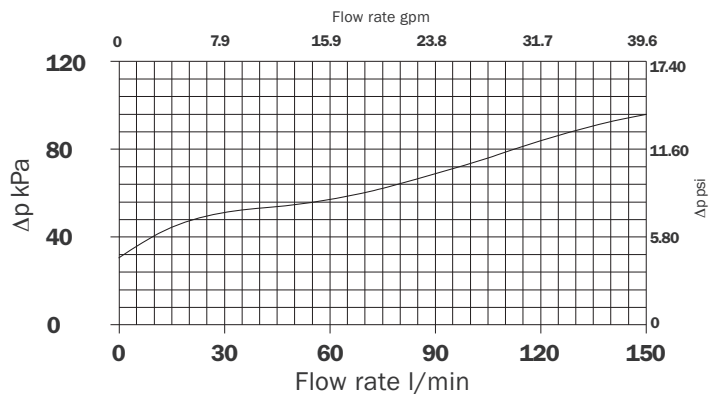
**MPS 050/070**  
In-Line/Suction - Setting 4,35 psi (30 kPa)



**MPS 050/070**  
In-Line/Return - Setting 25 psi (1,75 bar)



**MPS 100-150-200-250-300-350**  
In-Line/Suction - Setting 4,35 psi (30 kPa)



# Filter sizing - Imperial unit of measure

## In-Line/Suction Filter

The following filter sizing recommendations are based using a mineral oil fluid at 150/212/311 SUS with a maximum total filter assembly (housing and filter element) of **1.45 psi**.

### MPS 050

	SUS		
	151	212	311
<b>P10</b>	5.3	4.5	3.2
<b>P25</b>	6.6	5.5	4.5
<b>M25</b>	7.9	7.4	6.9

Flow rate gpm

### MPS 070

	SUS		
	151	212	311
<b>P10</b>	6.1	5.5	4.5
<b>P25</b>	7.4	6.9	5.8
<b>M25</b>	8.2	7.6	7.1

Flow rate gpm

### MPS 100

	SUS		
	151	212	311
<b>P10</b>	13.2	10.8	8.7
<b>P25</b>	15.8	14.8	11.9
<b>M25</b>	19.8	17.7	15.1

Flow rate gpm

### MPS 150

	SUS		
	151	212	311
<b>P10</b>	-	13.2	9.5
<b>P25</b>	17.9	15.8	14.0
<b>M25</b>	20.3	19.5	17.9

Flow rate gpm

### MPS 200

	SUS		
	151	212	311
<b>P10</b>	26.4	22.4	17.2
<b>P25</b>	33.0	29.1	23.8
<b>M25</b>	39.6	35.6	33.0

Flow rate gpm

### MPS 250

	SUS		
	151	212	311
<b>P10</b>	27.7	23.2	20.3
<b>P25</b>	34.3	31.7	26.9
<b>M25</b>	40.9	36.9	34.3

Flow rate gpm

### MPS 300

	SUS		
	151	212	311
<b>P10</b>	26.4	22.4	17.2
<b>P25</b>	33.0	29.0	23.8
<b>M25</b>	39.6	35.6	33.0

Flow rate gpm

### MPS 350

	SUS		
	151	212	311
<b>P10</b>	27.7	23.2	20.3
<b>P25</b>	34.3	31.7	26.9
<b>M25</b>	40.9	36.9	34.3

Flow rate gpm

## In-Line/Return Filter

The following filter sizing recommendations are based using a mineral oil fluid at 150/212/311 SUS with a maximum total filter assembly (housing and filter element) of **7.25 psi**.

### MPS 050 - 051

	SUS		
	151	212	311
<b>A03</b>	13.2	10.6	8.2
<b>A06</b>	13.5	11.1	8.4
<b>A10</b>	16.4	14.3	11.9
<b>A25</b>	18.5	17.2	15.3
<b>P10</b>	16.9	15.3	12.9
<b>P25</b>	19.0	17.9	15.8
<b>M25</b>	21.1	20.6	19.8

Flow rate gpm

### MPS 070 - 071

	SUS		
	151	212	311
<b>A03</b>	14.0	11.6	9.0
<b>A06</b>	16.1	14.0	11.3
<b>A10</b>	16.9	15.0	12.7
<b>A25</b>	19.8	19.0	17.4
<b>P10</b>	18.7	17.4	15.6
<b>P25</b>	20.3	19.5	18.2
<b>M25</b>	21.1	20.6	20.3

Flow rate gpm

### MPS 100 - 101

	SUS		
	151	212	311
<b>A03</b>	21.9	16.6	11.9
<b>A06</b>	27.7	22.4	16.9
<b>A10</b>	33.8	28.3	22.2
<b>A25</b>	44.4	40.7	29.0
<b>P10</b>	42.3	37.5	31.4
<b>P25</b>	46.2	43.6	38.3
<b>M25</b>	50.2	47.5	44.9

Flow rate gpm

### MPS 150 - 151

	SUS		
	151	212	311
<b>A03</b>	31.7	26.4	19.8
<b>A06</b>	33.8	29.1	22.2
<b>A10</b>	38.0	33.3	26.4
<b>A25</b>	46.0	43.3	38.3
<b>P10</b>	43.3	39.3	33.0
<b>P25</b>	48.1	45.4	42.3
<b>M25</b>	51.5	50.2	47.5

Flow rate gpm

### MPS 200

	SUS		
	151	212	311
<b>A03</b>	43.6	33.0	23.8
<b>A06</b>	55.5	44.9	33.0
<b>A10</b>	66.0	55.5	43.6
<b>A25</b>	84.5	77.9	68.7
<b>P10</b>	79.2	71.3	60.7
<b>P25</b>	87.2	81.9	74.0
<b>M25</b>	95.1	91.1	85.8

Flow rate gpm

### MPS 250

	SUS		
	151	212	311
<b>A03</b>	62.1	51.5	39.6
<b>A06</b>	66.0	55.5	43.6
<b>A10</b>	74.0	64.7	52.8
<b>A25</b>	88.5	81.9	74.0
<b>P10</b>	83.2	75.3	66.0
<b>P25</b>	92.4	87.2	79.2
<b>M25</b>	96.4	95.1	91.1

Flow rate gpm

### MPS 300 - 301

	SUS		
	151	212	311
<b>A03</b>	43.6	33.0	23.8
<b>A06</b>	55.5	44.9	33.0
<b>A10</b>	66.0	55.5	43.6
<b>A25</b>	84.5	77.9	68.7
<b>P10</b>	79.2	71.3	60.7
<b>P25</b>	87.2	81.9	74.0
<b>M25</b>	95.1	91.1	85.9

Flow rate gpm

### MPS 350 - 351

	SUS		
	151	212	311
<b>A03</b>	62.1	51.5	39.6
<b>A06</b>	66.0	55.5	43.6
<b>A10</b>	74.0	64.7	52.8
<b>A25</b>	88.5	81.9	74.0
<b>P10</b>	83.2	75.3	66.0
<b>P25</b>	92.4	87.2	79.2
<b>M25</b>	96.4	95.1	91.1

Flow rate gpm

# Filter sizing - Metric unit of measure

## 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

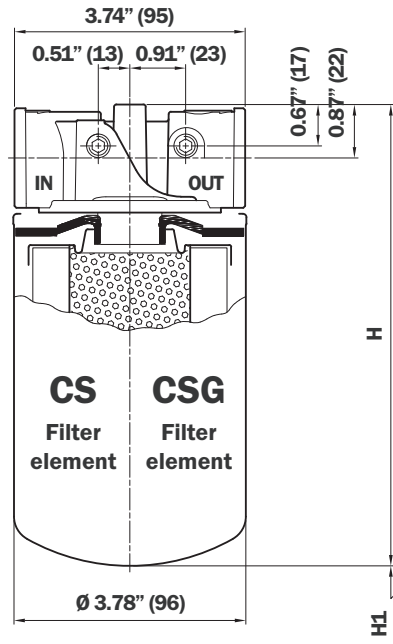
Flow rate l/min

### MPS 350 - 351

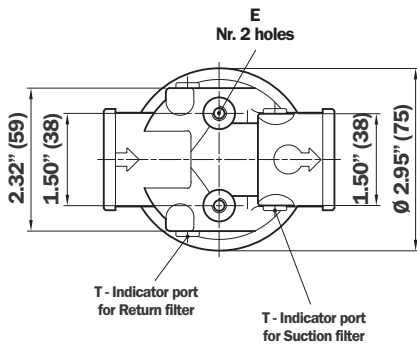
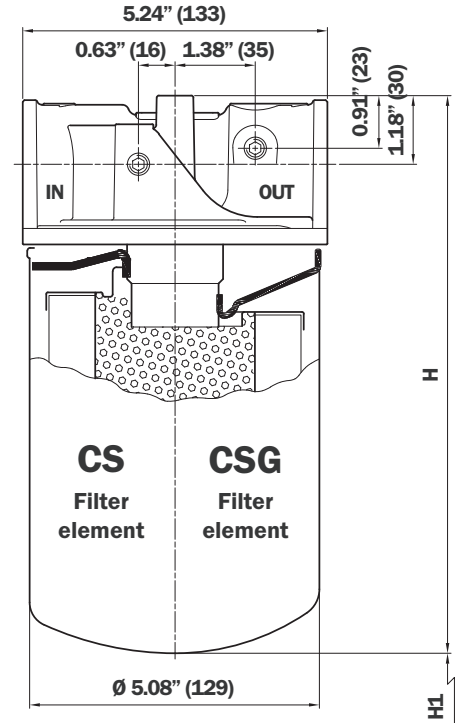
	mm <sup>2</sup> /s (cSt)		
	32	46	68
<b>A03</b>	235	195	150
<b>A06</b>	250	210	165
<b>A10</b>	280	245	200
<b>A25</b>	335	310	280
<b>P10</b>	315	285	250
<b>P25</b>	350	330	300
<b>M25</b>	365	360	345

Flow rate l/min

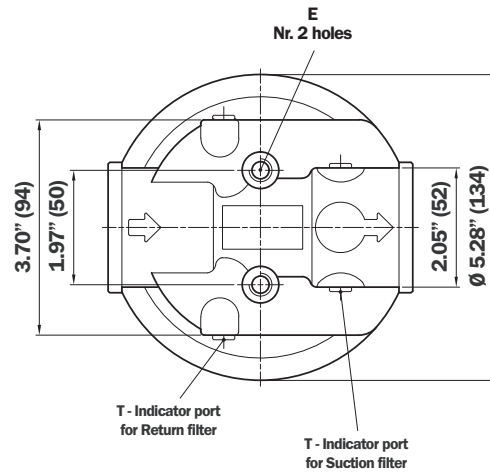
# MPS 050 / 070



# MPS 100 / 150



## MPS 100 - 150



### MPS 050 - 070 - 100 - 150

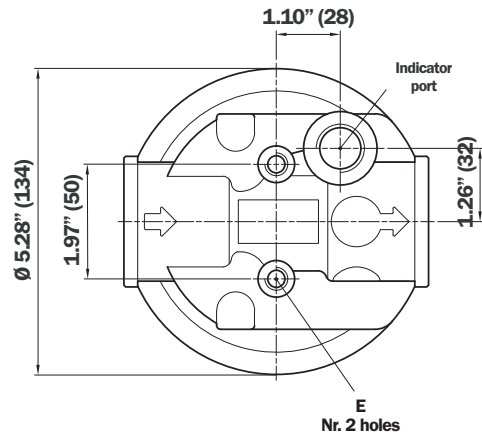
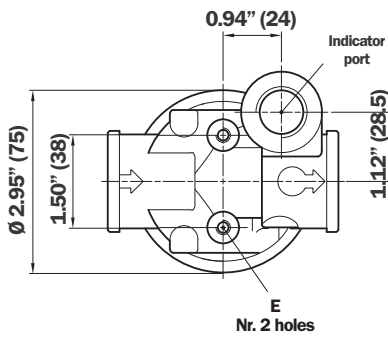
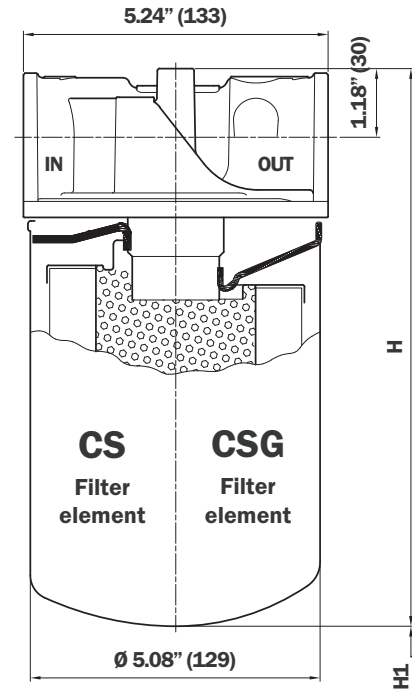
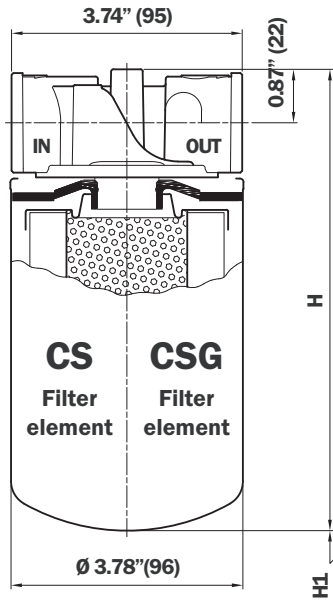
Length Filter	H inch (mm)	H1 inch (mm)
050	7.56" (192)	1.18" (30)
070	10" (254)	1.18" (30)
100	9.65" (245)	1.97" (50)
150	11.46" (291)	1.97" (50)

### Thread connections

Type	Size MPS 050 - 070	Size MPS 100 - 150	T	E Depth 0.47 inch (12 mm) MPS 050 - 070	E Depth 0.59 inch (12 mm) MPS 100 - 150
G1	G 3/4"	G 1 1/4"	G 1/8"	M6	M8
U2/G2	3/4" NPT	1 1/4" NPT	1/8" NPT	1/4" UNC	5/16" UNC
U3/G3	SAE 12 - 1 1/16" - 12 UN	SAE 20 - 1 5/8" - 12 UN	1/8" NPT	1/4" UNC	5/16" UNC
U4/G4	SAE 8 - 3/4" - 16 UNF	SAE 16 - 1 5/16" - 12 UN	1/8" NPT	1/4" UNC	5/16" UNC
U5	G 1"	-	G 1/8"	M6	-
U6	1" NPT	-	1/8" NPT	1/4" UNC	-

# MPS 051 / 071

# MPS 101 / 151



## MPS 051 - 071 - 101 - 151

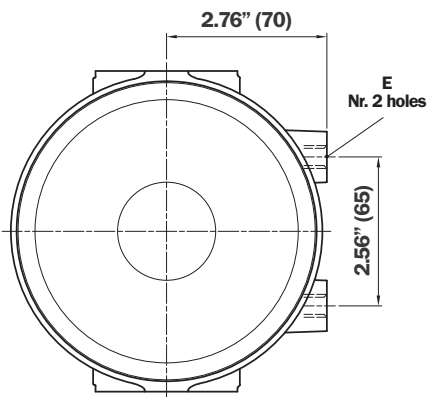
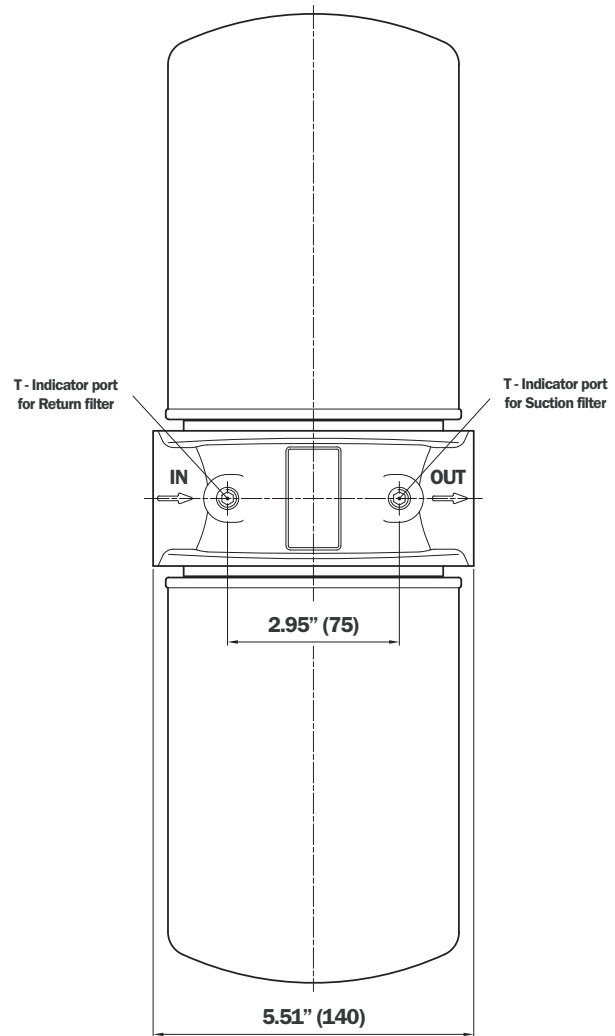
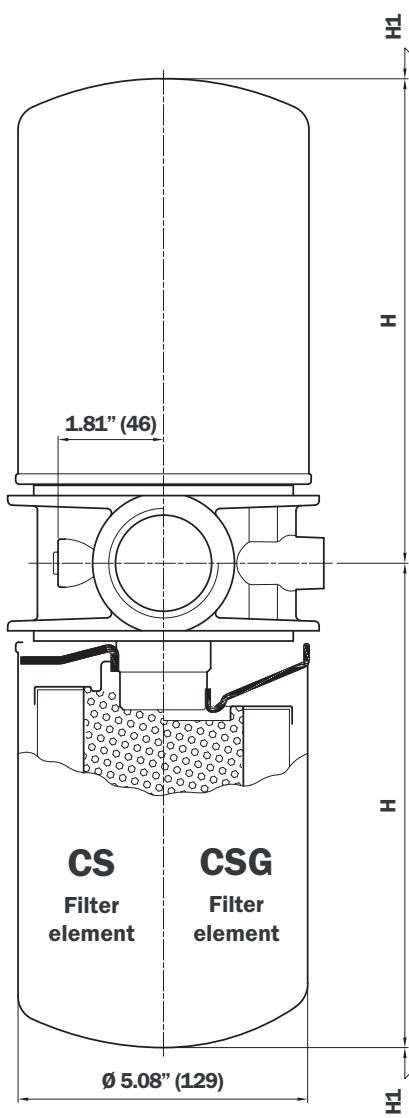
Length Filter	H inch (mm)	H1 inch (mm)
051	7.56" (192)	1.18" (30)
071	10" (254)	1.18" (30)
101	9.65" (245)	1.97" (50)
151	11.46" (291)	1.97" (50)

## Thread connections

Type	Size		E	
	MPS 051 - 071	MPS 101 - 151	Depth 0.47 inch (12 mm) MPS 051 - 071	Depth 0.59 inch (15 mm) MPS 101 - 151
G1	G 3/4"	G 1 1/4"	M6	M8
U2/G2	3/4" NPT	1 1/4" NPT	1/4" UNC	5/16" UNC
U3/G3	SAE 12 - 1 1/16" - 12 UN	SAE 20 - 1 5/8" - 12 UN	1/4" UNC	5/16" UNC
U4/G4	SAE 8 - 3/4" - 16 UNF	SAE 16 - 1 5/16" - 12 UN	1/4" UNC	5/16" UNC
U5	G 1"	-	M6	-
U6	1" NPT	-	1/4" UNC	-



# MPS 200 - 250



## MPS 200 - 250

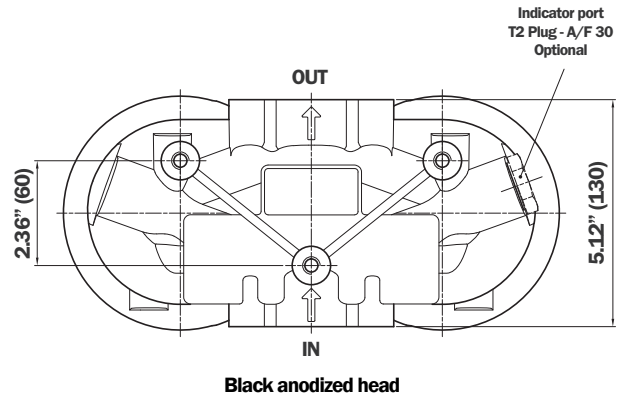
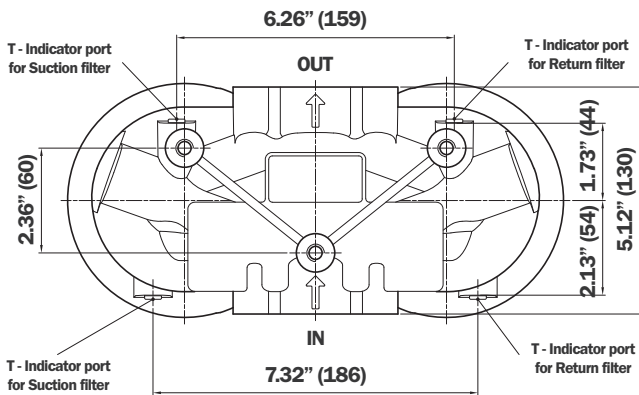
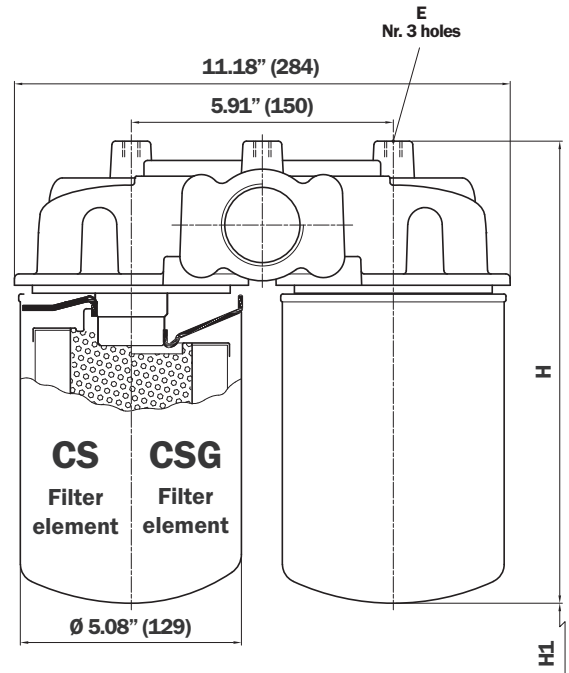
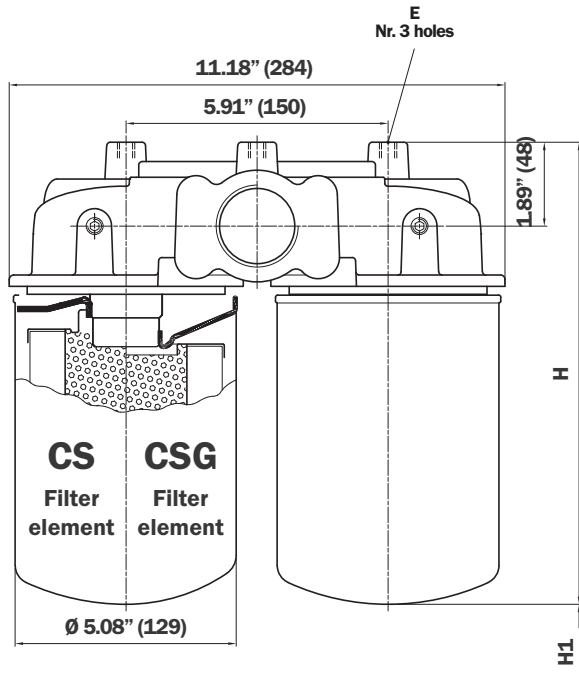
Length Filter	H inch (mm)	H1 inch (mm)
200	8.39" (213)	1.97" (50)
250	10.20" (259)	1.97" (50)

## Thread connections

Type	Size	T	E Depth 0.79 inch (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 inch (mm)	H1 inch (mm)
300	10.47" (266)	1.97" (50)
350	12.28" (312)	1.97" (50)

## MPS 301 - 351

Length Filter	H inch (mm)	H1 inch (mm)
301	10.47" (266)	1.97" (50)
351	12.28" (312)	1.97" (50)

## MPS 300/301 - 350/351 Thread/Flange connections

Type	Size	T	E Depth 0.59 inch (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

Type	Size	T	E Depth 0.59 inch (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 - CSG - CSGW



### CS - Thread connections

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

### CSG/CSGW - Thread connections

Type	Size
050 - 051 - 070 - 071	1" - 12 UNF

### CSG/CSGW - Thread connections

Type	Size
100 - 150 - 200 - 250 - 300 - 350	1 1/2" - 16 UN

### CSGW:

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:

CSGW 50 = 5.24 oz (155 ml) - Ordering code: **CSGW50P10A, CSGW50P25A**

CSGW 100 = 12.17 oz (360 ml) - Ordering code: **CSGW100P10A**

CSGW 150 = 25.36 oz (750 ml) - Ordering code: **CSGW150A03A, CSGW150P10A, CSGW150P25A**

### Water holding capacities CSGW

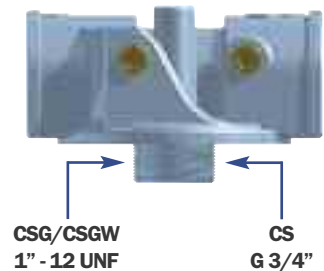
Viscosity	141/212 SUS (30/46 mm <sup>2</sup> /s (cSt))	good
	> 212 SUS (> 46 mm <sup>2</sup> /s (cSt))	poor

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

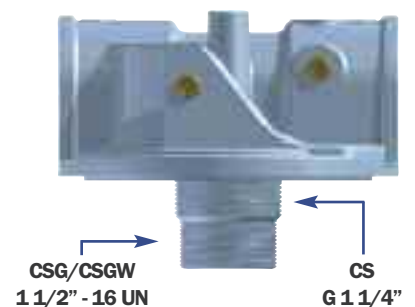
Flow rate	CSGW50 1.85/3.96 gpm (7/15 l/min)	good
	CSGW50 5.28 gpm (> 20 l/min)	poor
	CSGW150 5.28/10.57 gpm (20/40 l/min)	good
	CSGW150 13.21 gpm (> 50 l/min)	poor

Temperature	104/140 °F (40/60 °C)	good
	< 86 °F (< 30 °C)	poor

### Head MPS 050 - 070



### Head MPS 100 - 200 - 300



# MPS Ordering Information Series "O" Barametic Indicator

Designation & Ordering code

## COMPLETE FILTER

Series and size Configuration example: **MPS100** **R** **G1** **A10** **A** **P01**

<b>MPS050</b>	use MPS050 style head	<b>MPS200</b>	uses MP200 style head
<b>MPS070</b>	use MPS050 style head	<b>MPS250</b>	uses MP200 style head
<b>MPS100</b>	use MPS100 style head	<b>MPS300</b>	uses MP 300 style head black anodize
<b>MPS150</b>	use MPS100 style head	<b>MPS350</b>	uses MP 300 style head black anodize

### Bypass valve

<b>U</b>	without bypass, with 4 indicator ports (plugged)
<b>S</b>	with 4.5 psi bypass, with 4 indicator ports (plugged)
<b>R</b>	with 25 psi bypass, with 4 indicator ports (plugged)
<b>D</b>	with 50 psi bypass, with 4 indicator ports (plugged)
<b>T</b>	with 15 psi bypass, with 4 indicator ports (plugged)

### Connections

Note: MPS050..G. head - use CS can only MPS050.. U. Head - use CSG only

MPS050..U4. head only available without bypass

	MPS 050-070	MPS 100-150	MPS 200-250	MPS 300-350
<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			
<b>G1</b>	G 3/4"	G 1 1/4"	G 1 1/2"	G 1 1/2"
<b>G2</b>	3/4" NPT	1 1/4" NPT	1 1/2" NPT	1 1/2" NPT
<b>G3</b>	SAE 12 - 1 1/16" - 12 UN	SAE 20 - 1 5/8" - 12 UN	SAE 24 - 1 7/8" - 12 UN	SAE 24 - 1 7/8" - 12 UN
<b>G4</b>	SAE 8 - 3/4" - 16 UNF	SAE 16 - 1 5/16" - 12 UN		
<b>F1</b>				1 1/2" SAE 3000 psi/M
<b>F2</b>				1 1/2" SAE 3000 psi/UNC

### Filtration rating (filter media)

<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

Seal
<b>A</b> NBR
<b>V</b> FPM

Execution
<b>P01</b> MP Filtri standard

# MPS Ordering Information Series "1" Differential Indicator

Designation & Ordering code

## COMPLETE FILTER

Series and size Configuration example: **MPS101** **R** **G1** **A10** **A** **P01**

<b>MPS051</b>	use MPS051 style head	<b>MPS301</b>	uses MP 301 style head
<b>MPS071</b>	use MPS051 style head	<b>MPS351</b>	uses MP 301 style head
<b>MPS101</b>	use MPS101 style head		
<b>MPS151</b>	use MPS101 style head		

### Bypass valve

<b>P</b>	without bypass, with differential indicator ports
<b>R</b>	with 25 psi bypass, with differential indicator ports
<b>D</b>	with 50 psi bypass, with differential indicator ports

### Connections

Note: MPS050..G. head - use CS can only MPS050.. U. Head - use CSG only

MPS050..U4. head only available without bypass

	MPS 051-071	MPS 101-151	MPS 301-351
<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		
<b>G1</b>	G 3/4"	G 1 1/4"	G 1 1/2"
<b>G2</b>	3/4" NPT	1 1/4" NPT	1 1/2" NPT
<b>G3</b>	SAE 12 - 1 1/16" - 12 UN	SAE 20 - 1 5/8" - 12 UN	SAE 24 - 1 7/8" - 12 UN
<b>G4</b>	SAE 8 - 3/4" - 16 UNF	SAE 16 - 1 5/16" - 12 UN	
<b>F1</b>			1 1/2" SAE 3000 psi/M
<b>F2</b>			1 1/2" SAE 3000 psi/UNC

### Filtration rating (filter media)

<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

### Seal

<b>A</b>	NBR
<b>V</b>	FPM

### Execution

<b>P01</b>	MP Filtri standard
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# CLOGGING INDICATORS



## Introduction

Filter elements are efficient only if their dirt holding capacity is fully exploited. This is achieved by using filter housings equipped with clogging indicators.

These devices trip when the clogging of the filter element causes an increase in pressure drop across the filter element.

The indicator is set to alarm before the element becomes fully clogged.

MP Filtri can supply indicators of the following designs:

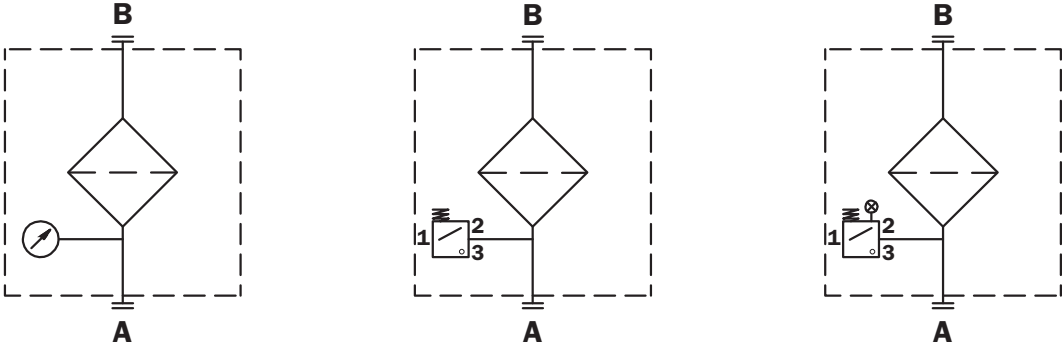
- **Vacuum switches and gauges**
- **Pressure switches and gauges**
- **Differential pressure indicators**

These type of devices can be provided with a visual, electrical or both signals.

The electronic model is available with warning signals and alarm (only available for differential type indicators).

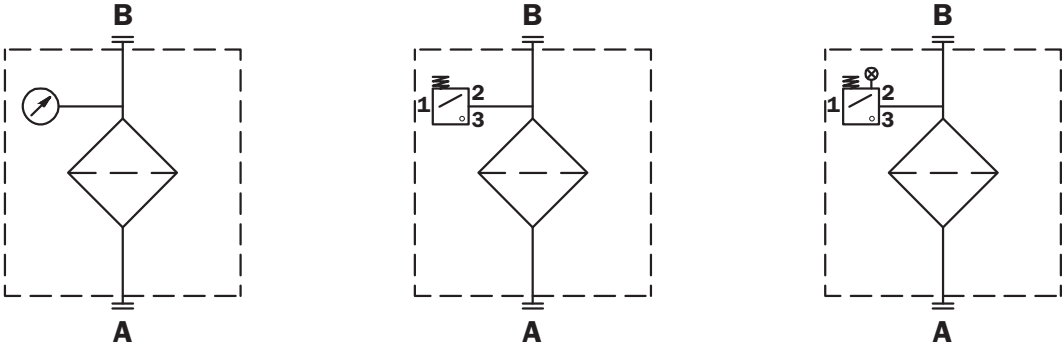
## BAROMETRIC INDICATORS

Pressure indicators are used on the return line to check the efficiency of the filter element. They measure the pressure upstream of the filter element. Standard items are produced with 1/8" NPT connection.



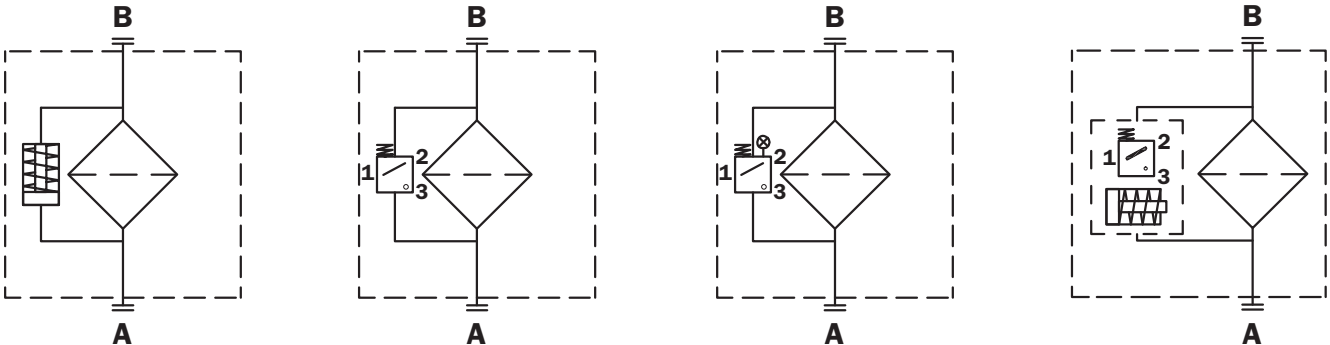
## VACUUM INDICATORS

Vacuum indicators are used on the suction line to check the efficiency of the filter element. They measure the pressure downstream of the filter element. Available products with 1/8" NPT to be fitted on MPS series.



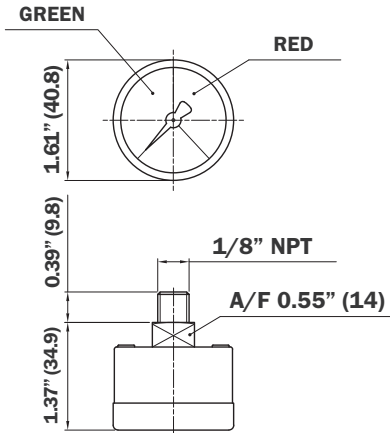
## DIFFERENTIAL INDICATORS (SERIES "1" ONLY)

Differential indicators are used on the pressure line to check the efficiency of the filter element. They measure the pressure upstream and downstream of the filter element (differential pressure). Also available in Stainless Steel models.



# BAROMETRIC INDICATORS

## VR VA COLOR



Available setting:  
From 0 to 40 psi (VR VA COLOR)

### Axial Pressure Gauge

#### Materials:

- Case: Painted steel
- Window: Clear plastic
- Dial: Painted steel
- Pointer: Painted aluminum
- Pressure connection: Brass
- Pressure element: Bourdon tube cu-alloy soft soldered

#### Technical data:

- Indicator type: Axial pressure gauge
- Max working pressure: 40 psi
- Working temperature: From -40 °F to 140 °F
- Compatibility with fluids: Mineral oils

Available ABS version (body only)

### HYDRAULIC SYMBOL

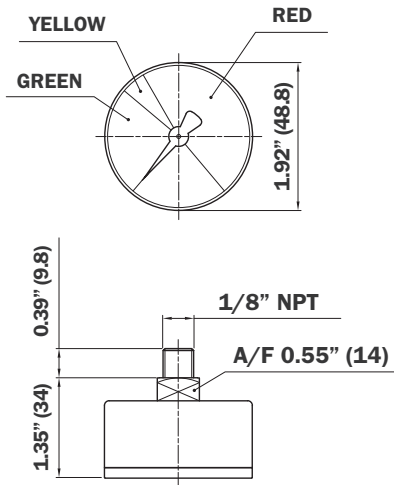


### GRADUATED DISPLAY

GREEN BACKGROUND  
(from 0 to 20 psi)  
Clean filter element

RED BACKGROUND  
(from 20 to 40 psi)  
Bypass

## CI-20



Available setting:  
From 0 to 60 psi (CI-20)

### Axial Pressure Gauge

#### Materials:

- Case: Painted steel
- Window: Clear plastic
- Dial: Painted steel
- Pointer: Painted aluminum
- Pressure connection: Brass
- Pressure element: Bourdon tube cu-alloy soft soldered

#### Technical data:

- Indicator type: Axial pressure gauge
- Max working pressure: 60 psi
- Working temperature: From -40 °F to 140 °F
- Compatibility with fluids: Mineral oils

### HYDRAULIC SYMBOL



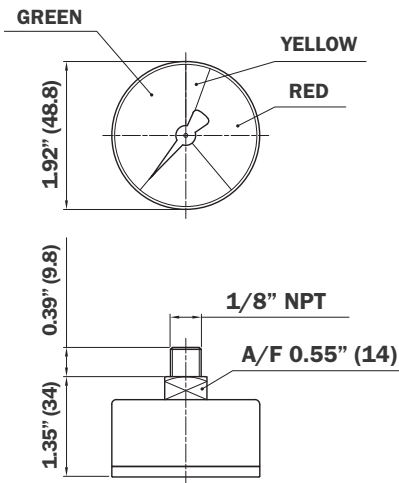
### GRADUATED DISPLAY

GREEN BACKGROUND  
(from 0 to 20 psi)  
Clean filter element

YELLOW BACKGROUND  
(from 20 to 25 psi)  
Warning

RED BACKGROUND  
(from 25 to 60 psi)  
Bypass

## CI-30



Available setting:  
From 0 to 60 psi (CI-30)

### Axial Pressure Gauge

#### Materials:

- Case: Painted steel
- Window: Clear plastic
- Dial: Painted steel
- Pointer: Painted aluminum
- Pressure connection: Brass
- Pressure element: Bourdon tube cu-alloy soft soldered

#### Technical data:

- Indicator type: Axial pressure gauge
- Max working pressure: 60 psi
- Working temperature: From -40 °F to 140 °F
- Compatibility with fluids: Mineral oils

### HYDRAULIC SYMBOL



### GRADUATED DISPLAY

GREEN BACKGROUND  
(from 0 to 30 psi)  
Clean filter element

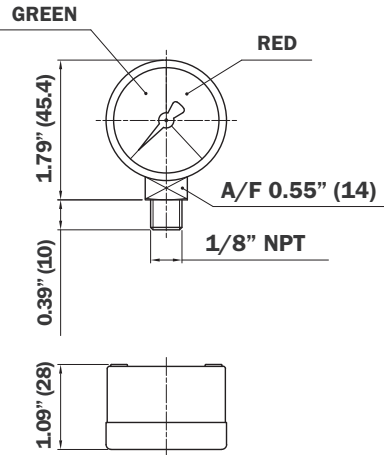
YELLOW BACKGROUND  
(from 30 to 35 psi)  
Warning

RED BACKGROUND  
(from 35 to 60 psi)  
Bypass



# BAROMETRIC INDICATORS

## V1 COLOR



Available setting:  
From 0 to 40 psi (V1 COLOR)

### Axial Pressure Gauge

#### Materials:

- Case: Painted steel
- Window: Clear plastic
- Dial: Painted steel
- Pointer: Painted aluminum
- Pressure connection: Brass
- Pressure element: Bourdon tube cu-alloy soft soldered

#### Technical data:

- Indicator type: Axial pressure gauge
- Max working pressure: 40 psi
- Working temperature: From -40°F to 140°F
- Compatibility with fluids: Mineral oils

### HYDRAULIC SYMBOL

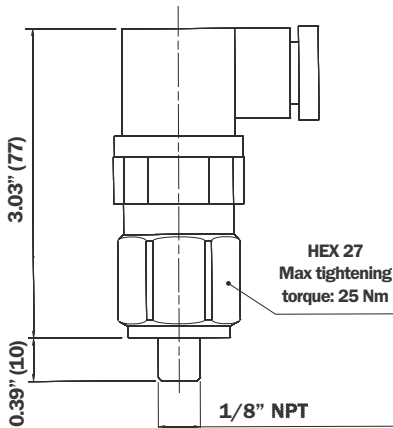


### GRADUATED DISPLAY

GREEN BACKGROUND  
(from 0 to 20 psi)  
Clean filter element

RED BACKGROUND  
(from 20 to 40 psi)  
Bypass

## ER-EC



Available setting:  
22 psi (1.5 bar) ±10%

### Electrical Pressure Indicator

#### Materials:

- Body: Brass
- Internal parts: Brass - Nylon
- Seals: NBR

#### Technical data:

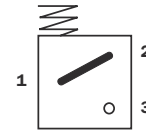
- Indicator type: Electrical pressure indicator
- Max working pressure: 580 psi (40 bar)
- Proof pressure: 870 psi (60 bar)
- Working temperature: From -20°F to +180°F
- Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC fluids in according to ISO 2943

#### Electrical data:

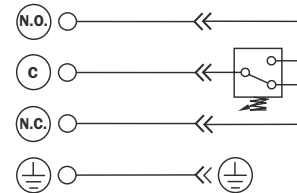
- Resistive load: 5 A / 14 V<sub>DC</sub>  
4 A / 30 V<sub>DC</sub>  
5 A / 125 V<sub>AC</sub>  
5 A / 250 V<sub>AC</sub>
- Electrical connections: 50 - EN 175301-803
- Protection degree: IP 65 in according to EN 60529

Available Atex version

### HYDRAULIC SYMBOL

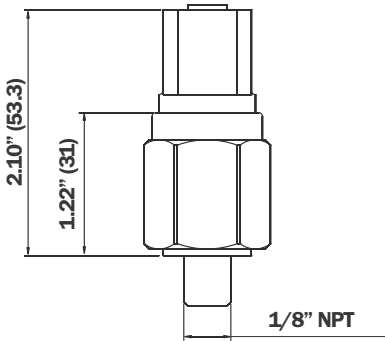
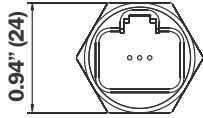


### ELECTRICAL SYMBOL



# BAROMETRIC INDICATORS

## MPDF



### Electrical Pressure Indicator

#### Materials:

- Body: Zinc plated steel
- Internal parts: Silver Nickel alloy contact (Optional: Gold contact)
- Seals: NBR (Optional: FPM, EPDM, HNBR)

#### Technical data:

- Indicator type: Electrical pressure indicator
- Max overpressure: 9000 psi
- Working temperature: From -20°F to +180°F Nitrile
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC fluids in according to ISO 2943

#### Electrical data:

- Resistive load: 100 VA / 42 Vdc
- Switch type: Blade contact
- Protection: IP 67
- Mating connector: DT06-2S (Integrated Deutsch Receptacle)

### WIRING CODE

CONTACT	DEUTSCH RECEPTACLE
Common	Pin A
Normally Closed	Pin B
Normally Open	Pin B

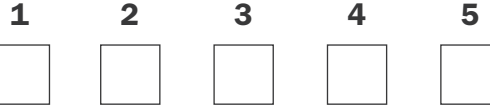
### PRESSURE RANGE

Set Point: 1.5 psi to 2175 psi

## Ordering information MPDF

### Series

## MPDF



Example: **MPDF - 30F - 2M - B - DR - 1**

### 1 - Pressure selection

Field adjustable - Select model code

Model	Adjustment Range (psi)
1	1.5 to 14.5
2	14.5 to 145
3	50 to 350
4	250 to 1000
5	500 to 2175

OR

Insert set point value XXXX followed by: R, F, BR, BR

Set Point	Direction	Description
XXXX	R	PSI rising pressure
	F	PSI falling pressure
	BR	BAR rising pressure
	BF	BAR falling pressure

### 2 - Thread option

**2M** 1/8 NPT male

### 3 - Circuit

- A** SPST (Normally Open)
- B** SPST (Normally Closed)

### 4 - Electrical termination

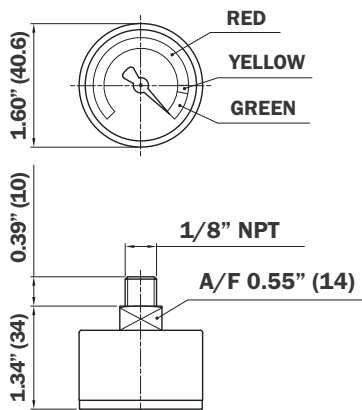
**DR** Integrated Deutsch Receptacle - Mates with DT06-2S

### 5 - Options

- 1** Viton diaphragm
- 2** EPDM diaphragm
- 4** HNBR diaphragm
- 7** Gold contact, 0.4 VA, 30 V<sub>DC</sub>
- 20** Seal Adjustment Screw
- OC** Oxygen cleaned switches
- SR** Snubber

# VACUUM INDICATORS

## VS V VO COLOR



Available setting:  
From -30 to 0 inHg (-76 to 0 cmHg)

### Axial Vacuum Gauge

#### Materials:

- Case: Black plastic
- Window: Clear plastic
- Dial: Painted steel
- Pointer: Painted aluminum
- Pressure connection: Brass
- Pressure element: Bourdon tube cu-alloy soft soldered

#### Technical data:

- Indicator type: Axial vacuum gauge
- Working temperature: From -40°F to 140°F
- Compatibility with fluids: Mineral oils

Available ABS version (body only)

### HYDRAULIC SYMBOL



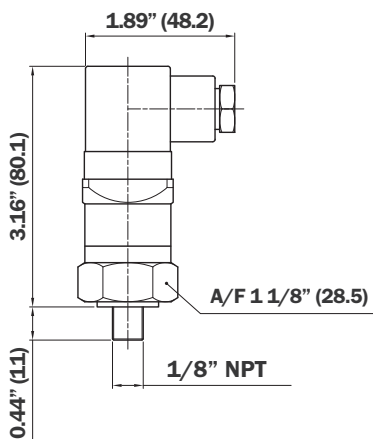
### GRADUATED DISPLAY

GREEN BACKGROUND  
From 0 to -5 inHg (0 to -13 cmHg)  
Clean filter element

YELLOW BACKGROUND  
From -5 to -8 inHg (-13 to -20 cmHg)  
Warning

RED BACKGROUND  
From -8 to -30 inHg (-20 to -76 cmHg)  
Bypass

## E1 E2 E3 E4 E0



Available setting:  
From 5 to 30 inHg (13 to 76 cmHg)

### Electrical Vacuum Indicator

#### Materials:

- Body: Brass
- Seals: NBR

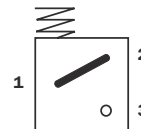
#### Technical data:

- Indicator type: Electrical vacuum indicator
- Repeatability: +/- 2% at 70°F ambient temperature
- Max overpressure: 350 psi
- Working temperature: From -40°F to +180°F
- Compatibility with fluids: Mineral oils

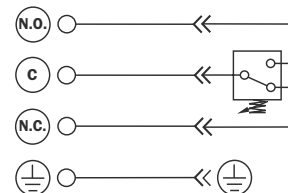
#### Electrical data:

- Resistive load: 7 A / 12/24Vdc  
7 A / 125/250Vac  
3 A / 250Vac
- Protection degree: DIN43650 IP65

### HYDRAULIC SYMBOL

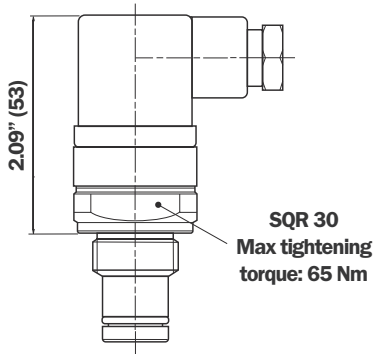


### ELECTRICAL SYMBOL



# DIFFERENTIAL INDICATORS

## DEA



Available settings:  
18 psi (1.2 bar)  $\pm 10\%$  (DEA12xA50P01)  
30 psi (2 bar)  $\pm 10\%$  (DEA20xA50P01)

### Electrical Differential Indicator

#### Materials:

- Body: Brass
- Internal parts: Brass - Nylon
- Seals: HNBR - FPM

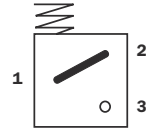
#### Technical data:

- Indicator type: Electrical differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -13°F to +230°F
- Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC fluids in according to ISO 2943

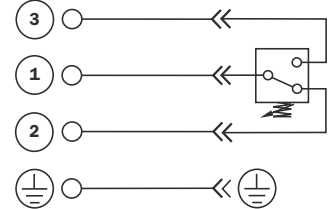
#### Electrical data:

- Resistive load: 0.2 A / 115 V<sub>DC</sub>
- Electrical connections: 50 - EN 175301-803
- Protection degree: IP 66 in according to EN 60529  
IP69K in according to ISO 20653

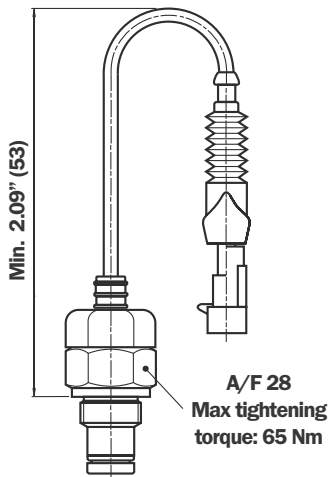
### HYDRAULIC SYMBOL



### ELECTRICAL SYMBOL



## DEM



Available settings:  
18 psi (1.2 bar)  $\pm 10\%$  (DEM12xx10P01)  
30 psi (2 bar)  $\pm 10\%$  (DEM20xx10P01)

### Electrical Differential Indicator

#### Materials:

- Body: Brass
- Internal parts: Brass - Nylon
- Seals: HNBR - FPM

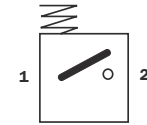
#### Technical data:

- Indicator type: Electrical differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -13°F to +230°F
- Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC fluids in according to ISO 2943

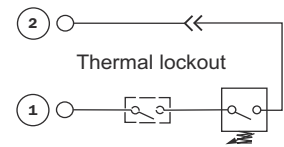
#### Electrical data:

- Resistive load: 0.2 A / 115 V<sub>DC</sub>
- Electrical connections: 10 - AMP Superseal series 1.5
- Switching type: Normally open contacts (N.C. on request)
- Thermal lockout: Normally open up to 30°C (F option)
- Protection degree: IP 66 in according to EN 60529

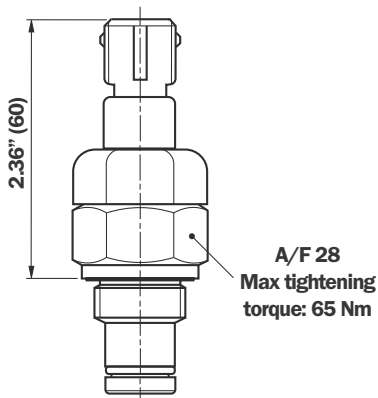
### HYDRAULIC SYMBOL



### ELECTRICAL SYMBOL



## DEM



Available settings:  
18 psi (1.2 bar)  $\pm 10\%$  (DEM12xx20P01)  
30 psi (2 bar)  $\pm 10\%$  (DEM20xx20P01)

### Electrical Differential Indicator

#### Materials:

- Body: Brass
- Internal parts: Brass - Nylon
- Seals: HNBR - FPM

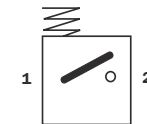
#### Technical data:

- Indicator type: Electrical differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -13°F to +230°F
- Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC fluids in according to ISO 2943

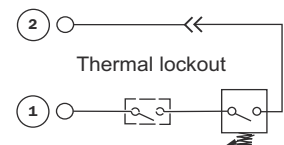
#### Electrical data:

- Resistive load: 0.2 A / 115 V<sub>DC</sub>
- Electrical connections: 20 - AMP Time junior
- Switching type: Normally open contacts (N.C. on request)
- Thermal lockout: Normally open up to 30°C (F option)
- Protection degree: IP 66 in according to EN 60529

### HYDRAULIC SYMBOL

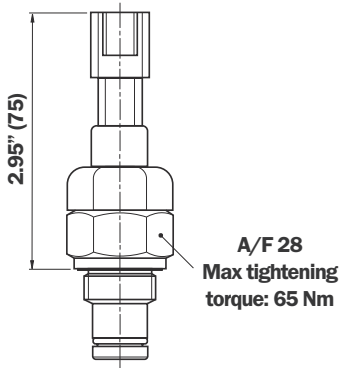


### ELECTRICAL SYMBOL



# DIFFERENTIAL INDICATORS

## DEM



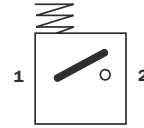
Available settings:  
 18 psi (1.2 bar) ±10% (DEM12xx30P01)  
 30 psi (2 bar) ±10% (DEM20xx30P01)

### Electrical Differential Indicator

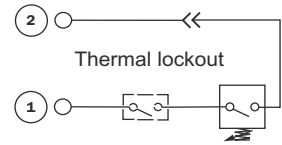
- Materials:**
- Body: Brass
  - Internal parts: Brass - Nylon
  - Seals: HNBR - FPM
- Technical data:**
- Indicator type: Electrical differential indicator
  - Max working pressure: 420 bar
  - Proof pressure: 630 bar
  - Burst pressure: 1260 bar
  - Working temperature: From -13°F to +230°F
  - Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC fluids in according to ISO 2943

- Electrical data:**
- Resistive load: 0.2 A / 115 V<sub>dc</sub>
  - Electrical connections: 30 - Deutsch DT-04-2-P
  - Switching type: Normally open contacts (N.C. on request)
  - Thermal lockout: Normally open up to 30°C (F option)
  - Protection degree: IP 66 in according to EN 60529

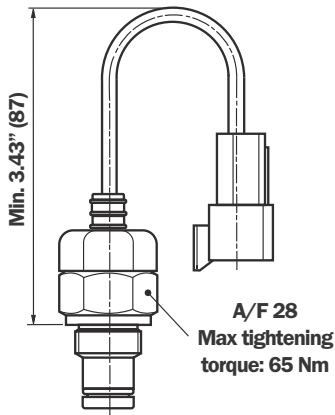
### HYDRAULIC SYMBOL



### ELECTRICAL SYMBOL



## DEM



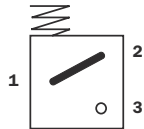
Available settings:  
 18 psi (1.2 bar) ±10% (DEM12xx35P01)  
 30 psi (2 bar) ±10% (DEM20xx35P01)

### Electrical Differential Indicator

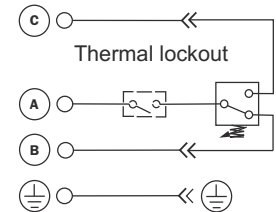
- Materials:**
- Body: Brass
  - Internal parts: Brass - Nylon
  - Seals: HNBR - FPM
- Technical data:**
- Indicator type: Electrical differential indicator
  - Max working pressure: 420 bar
  - Proof pressure: 630 bar
  - Burst pressure: 1260 bar
  - Working temperature: From -13°F to +230°F
  - Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC fluids in according to ISO 2943

- Electrical data:**
- Resistive load: 0.2 A / 115 V<sub>dc</sub>
  - Electrical connections: 25 - Deutsch DT-04-3-P
  - Switching type: Normally open contacts (N.C. on request)
  - Thermal lockout: Normally open up to 30°C (F option)
  - Protection degree: IP 66 in according to EN 60529

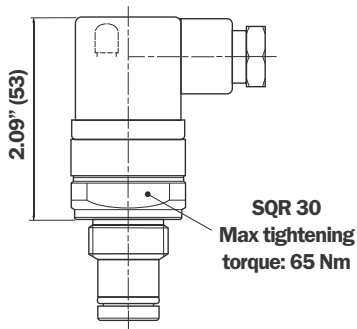
### HYDRAULIC SYMBOL



### ELECTRICAL SYMBOL



## DLA



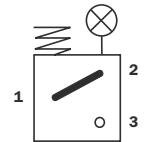
Available settings:  
 18 psi (1.2 bar) ±10% (DLA12xAxxP01)  
 30 psi (2 bar) ±10% (DLA20xAxxP01)

### Electrical/Visual Differential Indicator

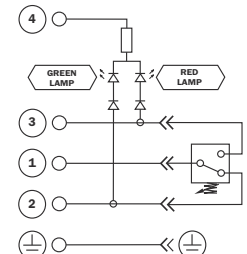
- Materials:**
- Body: Brass
  - Internal parts: Brass - Nylon
  - Seals: HNBR - FPM
- Technical data:**
- Indicator type: Electrical/Visual differential indicator
  - Max working pressure: 420 bar
  - Proof pressure: 630 bar
  - Burst pressure: 1260 bar
  - Working temperature: From -13°F to +230°F
  - Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC fluids in according to ISO 2943

- Electrical data:**
- Resistive load: 51: 0.8 A / 24 V<sub>dc</sub>  
52: 0.2 A / 115 V<sub>dc</sub>
  - Electrical connections: 51 - EN 175301-803 (24 V<sub>dc</sub> lamps)  
52 - EN 175301-803 (110 V<sub>dc</sub> lamps)
  - Protection degree: IP 66 in according to EN 60529  
IP 69K in according to ISA 20653

### HYDRAULIC SYMBOL

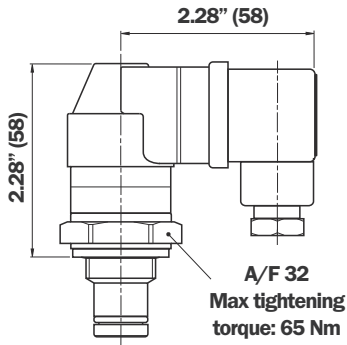


### ELECTRICAL SYMBOL



# DIFFERENTIAL INDICATORS

## DLE



Available settings:  
 18 psi (1.2 bar) ±10% (DLE12xA50P01)  
 30 psi (2 bar) ±10% (DLE20xA50P01)

### Electrical/Visual Differential Indicator

#### Materials:

- Body: Brass
- Internal parts: Brass - Nylon
- Seals: HNBR - FPM

#### Technical data:

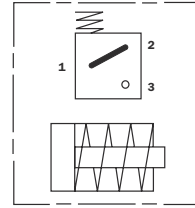
- Indicator type: Electrical/Visual differential indicator
  - Max working pressure: 420 bar
  - Proof pressure: 630 bar
  - Burst pressure: 1260 bar
  - Working temperature: From -13°F to +230°F
  - Compatibility with fluids: Mineral oils, Synthetic fluids
- HFA, HFB, HFC fluids in according to ISO 2943

#### Electrical data:

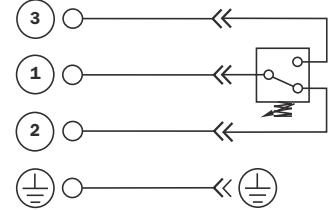
- Resistive load: 5 A / 250 Vdc
- Electrical connections: 50 - EN 175301-803
- Protection degree: IP 65 in according to EN 60529

Available DIN connector with lamps

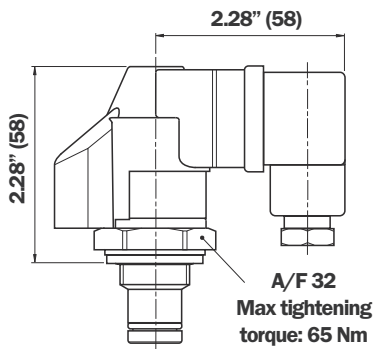
### HYDRAULIC SYMBOL



### ELECTRICAL SYMBOL



## DLE



Available settings:  
 18 psi (1.2 bar) ±10% (DLE12xF50P01)  
 30 psi (2 bar) ±10% (DLE20xF50P01)

### Electrical/Visual Differential Indicator

#### Materials:

- Body: Brass
- Internal parts: Brass - Nylon
- Seals: HNBR - FPM

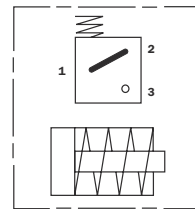
#### Technical data:

- Indicator type: Electrical/Visual differential indicator
  - Max working pressure: 420 bar
  - Proof pressure: 630 bar
  - Burst pressure: 1260 bar
  - Working temperature: From -13°F to +230°F
  - Compatibility with fluids: Mineral oils, Synthetic fluids
- HFA, HFB, HFC fluids in according to ISO 2943

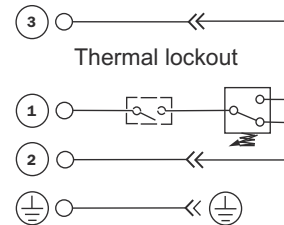
#### Electrical data:

- Resistive load: 5 A / 250 Vdc
- Thermal lockout setting: +30°C
- Electrical connections: 50 - EN 175301-803
- Protection degree: IP 65 in according to EN 60529

### HYDRAULIC SYMBOL

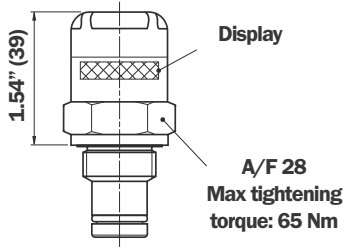


### ELECTRICAL SYMBOL



# DIFFERENTIAL INDICATORS

## DVA



Available settings:  
18 psi (1.2 bar) ±10% (DVA12xP01)  
30 psi (2 bar) ±10% (DVA20xP01)

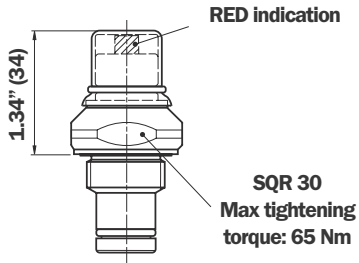
### Visual Differential Indicator

- Materials:**
- Body: Brass
  - Internal parts: Brass - Nylon
  - Seals: HNBR - FPM
- Technical data:**
- Indicator type: Visual differential indicator
  - Reset: Automatic reset
  - Max working pressure: 420 bar
  - Proof pressure: 630 bar
  - Burst pressure: 1260 bar
  - Working temperature: From -13 °F to +230 °F
  - Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC fluids in according to ISO 2943

### HYDRAULIC SYMBOL



## DVM



Available settings:  
18 psi (1.2 bar) ±10% (DVM12xP01)  
30 psi (2 bar) ±10% (DVM20xP01)

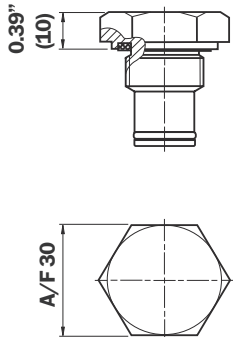
### Visual Differential Indicator

- Materials:**
- Body: Brass
  - Internal parts: Brass - Nylon
  - Seals: HNBR - FPM
- Technical data:**
- Indicator type: Visual differential indicator
  - Reset: Manual reset
  - Max working pressure: 420 bar
  - Proof pressure: 630 bar
  - Burst pressure: 1260 bar
  - Working temperature: From -13 °F to +230 °F
  - Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC fluids in according to ISO 2943

### HYDRAULIC SYMBOL



## T2



### Indicator Plug

- Materials:**
- Body: Phosphated Steel
  - Seals: T2H (green): HNBR  
T2V (black): FPM  
T2E (purple): EPDM  
T2F (blue): MFQ

# Ordering Information DE - DL - DV

<b>Series</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>DE</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Example:** DE A 20 H A 50 P01

<b>Series</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>DL</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Example:** DL A 20 H A 52 P01

<b>Series</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>7</b>
<b>DV</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Example:** DV A 20 H P01

<b>Series</b>	<b>1</b>	<b>4</b>
<b>T2</b>	<input type="checkbox"/>	<input type="checkbox"/>

**Example:** T2 H

## 1 - Series

- DE** Electrical indicator
- DL** Electrical/Visual indicator
- DV** Visual indicator
- T2** Indicator plug

## 2 - Type

### DE series

- A** Standard type
- M** With wired connector

### DL series

- E** Standard type for high power supply

### DV series

- A** Automatic reset
- M** Manual reset

## 3 - Setting pressure

- 12** 18 psi (1.5 bar)
- 20** 30 psi (2 bar)

## 4 - Seals

- H** HNBR
- V** FPM
- On request

## 5 - Thermostat (excluded for DV)

- A** Without thermostat
- F** With thermostat (Normally open up to 30°C)  
Option available only for DEM series

## 6 - Electrical connection

### DEA - DLE series

- 50** EN 175301-803 connector

### DEM series

- 10** AMP Superseal series 1.5  
(Normally open contacts)
- 20** AMP Timer Junior  
(Normally open contacts)
- 30** Deutsch DT-04-2-P  
(Normally open contacts)
- 35** Deutsch DT-04-3-P  
(Normally open contacts)
- On request

### DLA series

- 51** EN175301-803 clear connector  
with 24 V lamps
- 52** EN175301-803 clear connector  
with 110 V lamps

## 7 - Option

- P01** MP Filtri standard
- Pxx** Customer request





# OPERATING & MAINTENANCE MANUAL



Long working life of the hydraulic components and correct use of the hydraulic systems can be assured only when maintenance is performed correctly and at regular intervals. Filtration products will only be guaranteed if original MP Filtri replacements elements and spares are used. In order to prevent the filter elements from collapsing due to excessive hydraulic pressure it is essential to use clogging & differential indicators that serve to inform the user of the need to change the cartridge. Effective contamination control can be assured only by the correct use of clogging indicators.

## INSTALLATION

- A:** Check that the pressure value of the selected filter is higher than the system's maximum operating pressure (the maximum pressure value is shown on the dataplate).
- B:** Check that the filter body contains the filter cartridge.
- C:** Check that the operating fluid is compatible with the material of the body, cartridge and seals.
- D:** Secure the filter using the relevant threaded holes, to rigid brackets.  
Rigid installation makes it possible to unscrew the housing without introducing flexing of the hydraulic fittings, limiting any points of stress transfer.
- E:** Install the filter in an accessible position for correct and trouble-free maintenance and visibility.
- F:** Start the machine and check for absence of oil leak from the filter and relative fittings.
- G:** Repeat the visual inspection when the system arrives at the operating temperature of the oil.

## MAINTENANCE

- A:** All maintenance operations must be performed only by suitably trained personnel.
- B:** The hydraulic system must be depressurised before performing maintenance operations (except for duplex filter).
- C:** Maintenance must be carried out using suitable tools and containers to collect the fluid contained in the filter body.  
Spent fluids must be disposed of in compliance with statutory legislation.
- D:** Do not use naked flames during maintenance operations.
- E:** Use the utmost caution in relation to the temperature of the fluid. High temperature can lead to residual pressure with resulting undesirable movements of mechanical parts.

## CHANGING THE FILTER ELEMENT

- A:** The data on which the filter elements are changed must be entered in the machine datasheet.
- B:** Spare parts installed must be in compliance with the specifications given in the machine operating and maintenance manual.
- C:** Filter bodies and tools must be thoroughly cleaned prior to each maintenance operation.
- D:** After having opened the filter to change the filter element, check the condition of the seals and renew them if necessary.  
Clean thoroughly before reassembling.

## CHANGING THE FILTER ELEMENT MPS FILTERS

**1**

Depressurise the system and clean the filter.

**2**

Unscrew the filter element (Fig. 1).

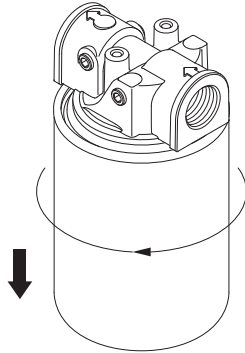


Fig. 1

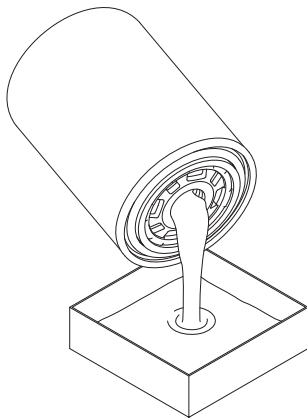


Fig. 2

### !!! WARNING !!!

**3**

Collect the spent oil and cartridge in a suitable container and dispose of them in compliance with statutory legislation (Fig. 2).

**4**

Lubricate the filter element seal with the operating fluid (Fig. 3).

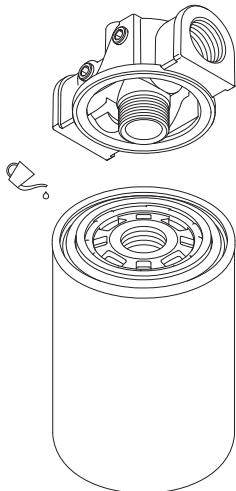


Fig. 3

**5**

Screw the cover into the head when the seal comes in contact with the head, rotate half a turn (Fig. 4).

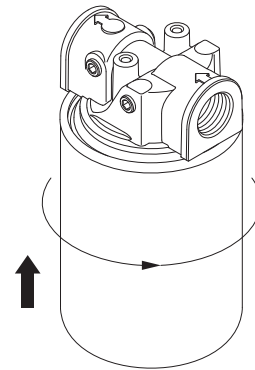


Fig. 4

**6**

Start the machine and check for the absence of leaks. Repeat the check when the machine has reached its operating temperature.

## CHANGING THE FILTER ELEMENT FILTERS MPS 200

**1**

Depressurise the system and clean the filter.

**2**

Unscrew first the bottom filter element (Fig. 5).

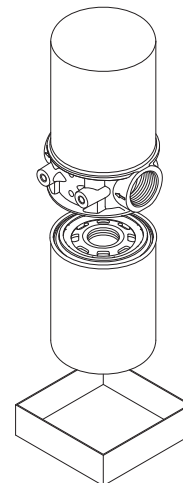
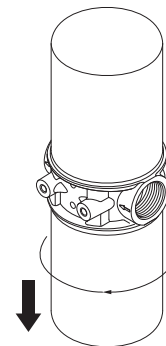


Fig. 5



## WORLDWIDE NETWORK

### HEADQUARTERS

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Pessano con Bornago  
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sales@mpfiltri.it

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**PASSION TO PERFORM**



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