

MPS/MST

SERIES

S PIN - ON FILTER SUCTION - RETURN

F indynamica
drive and control products



MPFILTRI
filtri per oleodinamica



Maximum working pressure 175 PSI

Flow rates to 80 GPM

MPS / MST

The **MPS** spin-on filter series is a complete product range suitable, for both suction and return applications.

Utilising spin-on canisters, the MPS series are quick and easy to service and provide a 'clean' solution when changing elements.

The filter elements are either resin-impregnated paper ($\beta_x > 2$), glass fibre ($\beta_x \geq 75$) or square wire mesh.

The unique filter head is designed for both European CS and American CSG standard canister series. One head design series accommodates both styles of elements.

Also available is a new design utilizing a pressure differential visual and electrical indicators - ideal for lubrication applications.

MPS filters are specifically designed for contamination control in hydraulic and lubrication circuits, mobile and agricultural applications and machine tool systems.

The **CSGW** series of canister removes water from oil while filtering the oil at the same time.

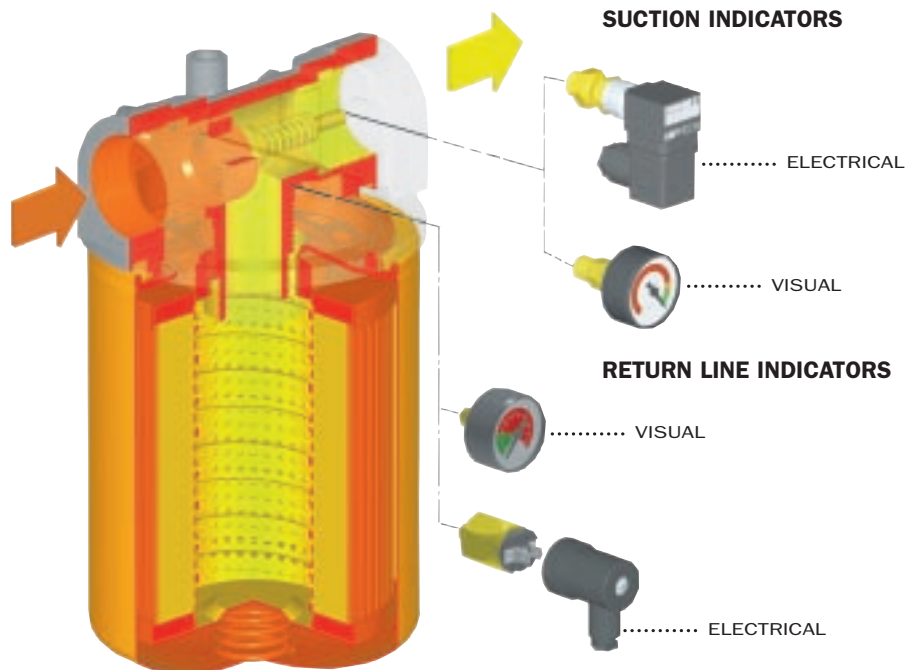
Water absorbent polymers up to 800 times their own weight, provide this major feature.

Water holding capacities: - CSGW 050 - 240 ml.
CSGW 150 - 788 ml.

DIFFERENTIAL INDICATORS For Use with series "1" filter heads.



For Use with series "0" filter head.



New

absolute filter elements
independently tested
in the following Institutes:

Institute of Filtration
(France)



Filter element:

Materials

End caps:

Galvanized steel

Support tube:

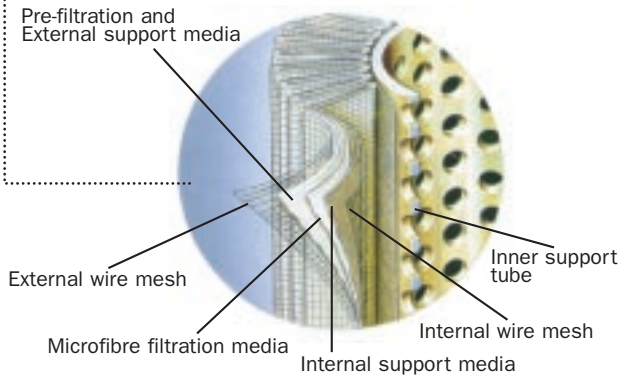
Galvanized steel

Support frames:

Galvanized steel with an epoxy coating

A Series

Inorganic microfibre



MP Filter elements - Conform to the following ISO standards

- ISO 2941 - Verification of collapse/burst resistance.
- ISO 2942 - Verification of fabrication integrity and determination of the first bubble point.
- ISO 2943 - Verification of material compatibility with fluids.
- ISO 3723 - Method for end load test.
- ISO 3724 - Verification of flow fatigue characteristics.
- ISO 3968 - Evaluation of pressure drop versus flow characteristics.
- ISO 16889 - Multi-pass method for evaluating filtration performance.

Element material Absolute filtration

A Series

Inorganic microfibre with acrylic support

Contamination retention

as per ISO 16889: Multi-pass test.

New improved $\beta \geq 75$ filter elements with greater efficiency and increased dirt holding capacity

Filter elements	Dimensions for β (μm) values				Filtration ratios			ΔP (psi)
	$\beta \geq 2$ (50%)	$\beta \geq 20$ (95%)	$\beta \geq 75$ (98,7%)	$\beta \geq 200$ (99,5%)	β_2	β_{10}	β_{30}	
A03	-	2	2,4	3	20	> 10.000	> 10.000	100
A06	-	3	4,6	6	8	> 2.000	> 10.000	100
A10	3	6	7,8	10	1,5	≥ 200	> 10.000	100
A25	13	19	22	25	-	> 1,5	> 35	100

N.B. Other materials giving different degrees of filtration are available on request.

Filtering area Filter elements

Type CS-CSG-CT	050	070	100	150
A03/A06	300	500	620	840
A10/A25	300	500	620	840

Values in in²

Element material Nominal filtration

P Series

Resin - impregnated paper

M Series

Square wire mesh (filtration degree is defined in microns by the maximum diameter of a sphere corresponding to the mesh size)

Filtering area Filter elements

Type CS-CSG-CT	050	070	100	150
P10/P25	380	650	670	900
M25	160	200	310	375
M60	160	200	310	375
M90	160	200	310	375

Values in n²

CSGW Series

Resin - impregnated paper

Type CSGW	050	150
P10/P25	310	475

Materials	Head Aluminium	Bypass valve Nylon
	Seals A Series: Nitrile (Buna-N) V Series: Viton	Indicator Brass
Working temperature	From -13 to +230°F For temperatures outside this range, please consult our Sales Network Organization	
Pressure filter body	Maximum working pressure up to	175 psi
Collapse pressure filter elements		60 psi
Bypass valve Calibration pressure	Bypass valve, differential opening pressure:	S series: 4,0 psi ± 10% (MPS series only) R series: 25 psi ± 10%
Types of indicators for MPS series "0" (MPS 050-070-100...) and MST series		
	Description: MPS series filters are fitted with indicators switching: Suction filters at a pressure of: 3 psi ± 10% Line filters at a pressure of: 18 psi ± 10% (MPS series only) Return filter at a pressure of: 18 psi ± 10% (MPS-MST series only)	
Visual indicator	Suction filter: (MPS series only) VS vacuum switch	scale 0 - 30 in Hg
	Return and line filter VR colour coded pressure gauge	scale 0 - 30 psi
Electrical indicator	Suction filter (MPS series only) "E0" Vacuum switch with change over contact	Operational information: Switching at 3 psi ± 10% Max voltage: 250V 50÷60 Hz Max current: 5 A resistive, 2 A inductive Protection degree IP65
	Return filter ER Pressure switch with N.O. contacts EC Pressure switch with N.C. contacts	Switching at 18 psi ± 10% Max voltage: 48V 50÷60 Hz Max current: 0,5A resistive 0,2A inductive
Types of indicators for MPS series "1" (MPS 051-071-101-151-301-351)		
	MPS filter series 1 (051-071-101... and so on) are fitted with, differential style indicators.	
Visual indicator	1V - Z1 Series for Filter with bypass set to 25 psi	switching at 18 psi ± 10%
	V6 - Z6 Series for Filter without bypass	switching at 30 psi ± 10%
Electrical indicator	N1 Series for Filter with bypass set to 25 psi	switching at 18 psi ± 10%
	N6 Series for Filter without bypass	switching at 30 psi ± 10%
Visual-electrical indicator	1E - K1* Series for Filter with bypass set to 25 psi	switching at 18 psi ± 10%
	E6 - K6* Series for Filter without bypass	switching at 30 psi ± 10%

*For K visual-electrical indicator, specify the voltage (il. K61 = LED: 24 volt)

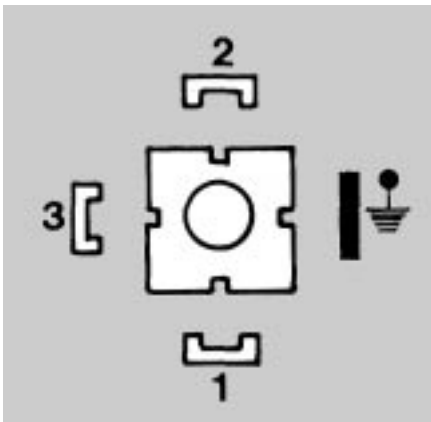
* { 1 - 24 Volt
2 - 115 Volt
3 - 230 Volt

Pressure differential indicator option

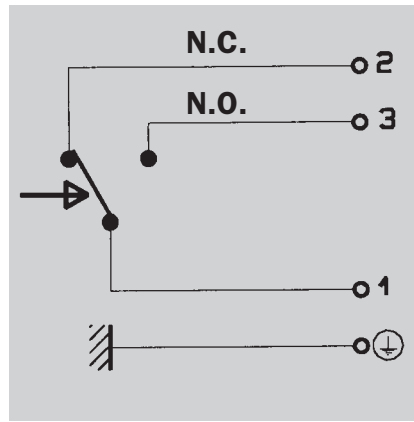
K - E - N Series

Supply voltage (50/60 Hz)	Resistive load	Inductive load
(V)	(A)	(A)
Vca 125	5	2
Vca 250	5	2
Vcc 30	5	3
Vcc 125	0,5	0,03
Vcc 250	0,25	0,03

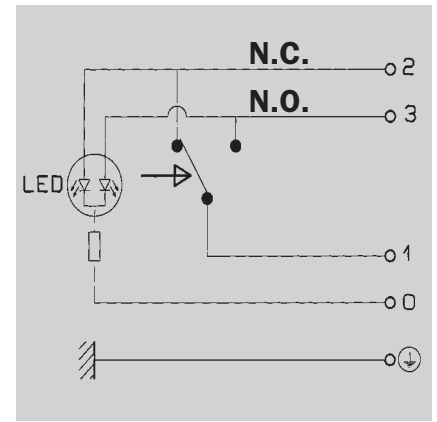
CONNECTOR DIN 43650



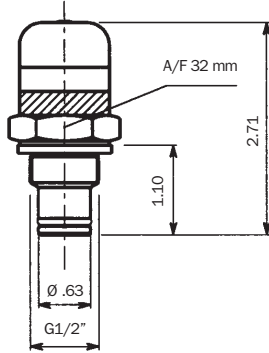
ELECTRICAL CONNECTION E - N SERIES



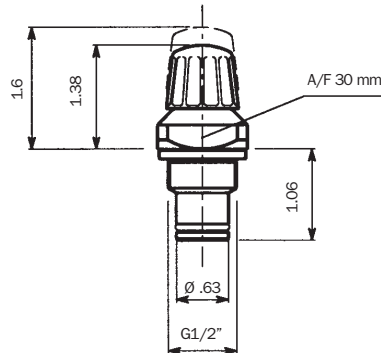
ELECTRICAL CONNECTION K SERIES



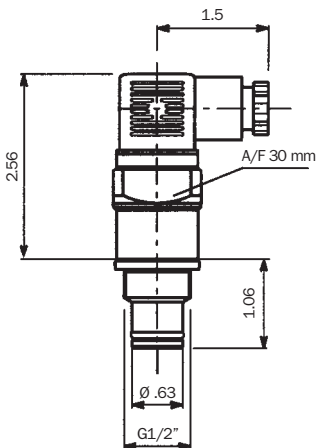
Visual V series



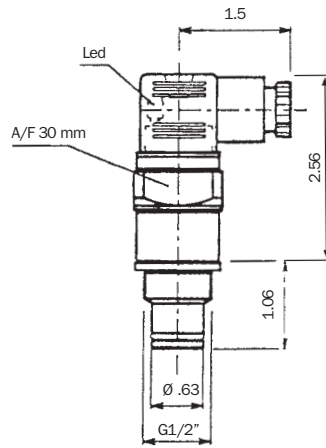
Visual Z series



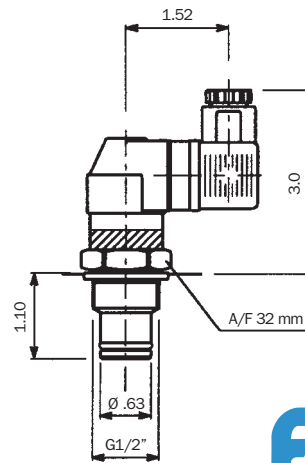
Electrical N series



Visual led - Electrical K series



Visual - Electrical E series



Fluid

Compatibility

Filter head and bowls

compatible for use with:

- mineral oils
(types HH-HL-HM-HR-HV-HG as per ISO 6743/4)
- water-based emulsions
(types HFAE-HFAS as per ISO 6743/4)
- synthetic fluids
(types HS-HFDR-HFDS-HFDU as per ISO 6743/4)
- water-glycol (types HFC as per ISO 6743/4)

Seals

A Series

Nitrile (Buna-N) compatible with mineral oils
(types HH-HL-HM-HR-HV-HG as per ISO 6743/4)

water-based emulsions

(types HFAE-HFAS as per ISO 6743/4)

water - glycol (types HFC as per ISO 6743/4)

V Series

Viton compatible with synthetic fluids

(types HS-HFDR-HFDS-HFDU as per ISO 6743/4)

Filter elements

As per ISO 2943; suitable for mineral oils

(types HH-HL-HM-HR-HV-HG as per ISO 6743/4)

and synthetic fluids (A and M series only)

(types HS-HFDR-HFDS-HFDU as per ISO 6743/4)

For water-based emulsions (types HFAE-HFAS as per ISO 6743/4) and fluids other than those mentioned, please consult our Sales Network Organization.

International standards for contamination fluid control

A general (no direct) comparison between ISO 4406 and NAS 1638 is given in table below.

Contamination codes ISO 4406			Correspondent codes NAS 1638	Recommended filtration degree	Typical applications
<i>4µm(c)</i>	<i>6µm(c)</i>	<i>14µm(c)</i>		<i>B x ≥ 75</i>	
14	12	9	3	3	High precision and laboratory servo-systems
17	15	12	6	3-6	Robotic and servo-systems
18	16	13	7	10-12	Very sensitive - high reliability systems
20	18	15	9	12-15	Sensitive - reliable systems
21	19	16	10	15-25	General equipment of limited reliability
23	21	18	12	25-40	Low - pressure equipment not in continuous service

Selection & installation information

Filter elements A Series

types

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

P Series

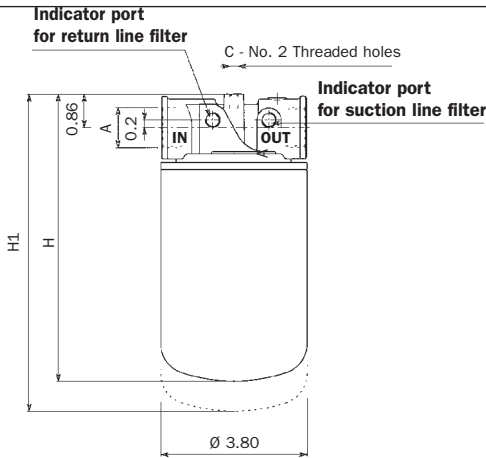
Nominal cellulose impregnated paper media, available in 10 and 25 micron.
Example - **P10** or **P25**

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 150 SUS with a maximum total filter assembly (housing and filter element) pressure drop of 30% of the filter condition indicator (6 psi) for line and return filter and 1.15 psi for suction filter.



Lengths

Type	H	H1
050-051	7.08	7.87
070-071	9.76	10.55

050-051 MPS 070-071

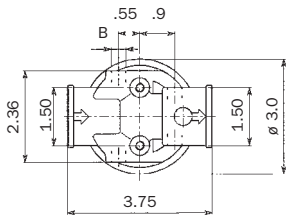
MPS SERIES 050-051 SIZES

Filter assembly	Line Flow rate gpm *	Suction Flow rate gpm *	Port size BSP/NPT/SAE	Weight lbs **
A03	10.5	2.3	SEE TABLE BELOW	2,2
A06	11.6	2.9		
A10	12.7	3.7		
A25	15.3	4.7		
P10	14.5	4.2		
M60-M90	-	6.3		

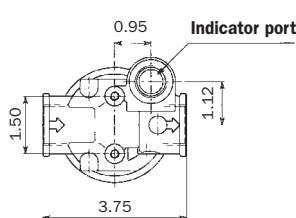
MPS SERIES 070-071 SIZES

Filter assembly	Line Flow rate gpm *	Suction Flow rate gpm *	Port size BSP/NPT/SAE	Weight lbs **
A03	12.0	2.9	SEE TABLE BELOW	2,9
A06	13.0	3.4		
A10	14.0	4.0		
A25	16.7	5.3		
P10	15.3	4.7		
M60-M90	-	6.9		

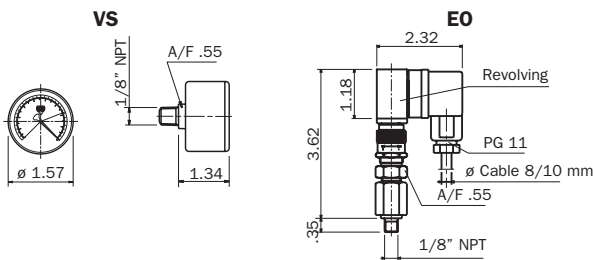
MPS 050-070 Series



MPS 051-071 Series



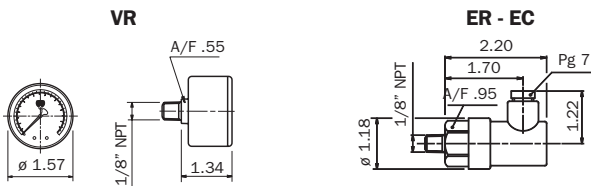
Indicator for suction filter MPS 050-070 (only for option G2-G3-G4-G6)



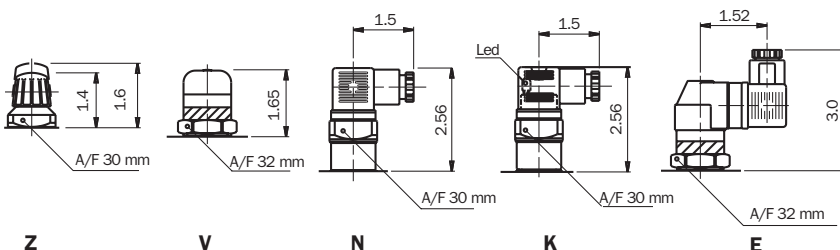
Thread connections

Type	A	B	C
G1	3/4" BSP	1/8" BSP	M6
G2	3/4" NPT	1/8" NPT	1/4" UNC
G3	SAE 12 - 1 1/16" - 12 UN	1/8" NPT	1/4" UNC
G4	SAE 8 - 3/4" - 16 UNF	1/8" NPT	1/4" UNC
G5	1" BSP	1/8" BSP	M6
G6	1" NPT	1/8" NPT	1/4" UNC

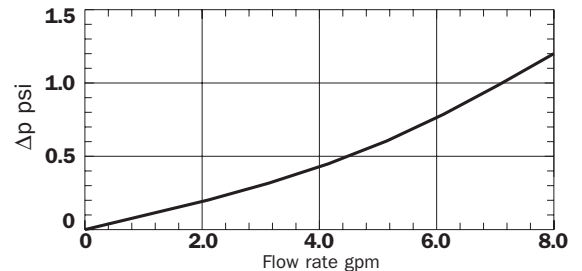
Indicator for return filter MPS 050-070 (only for option G2-G3-G4-G6)



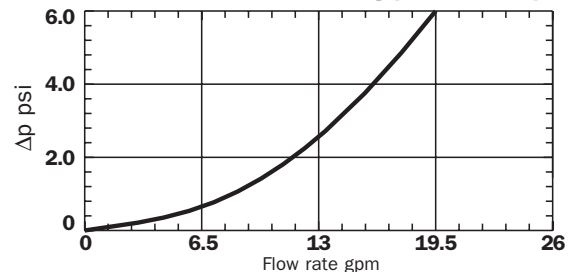
Indicator for line filter MPS 051-071



Suction filter - Housing pressure drop



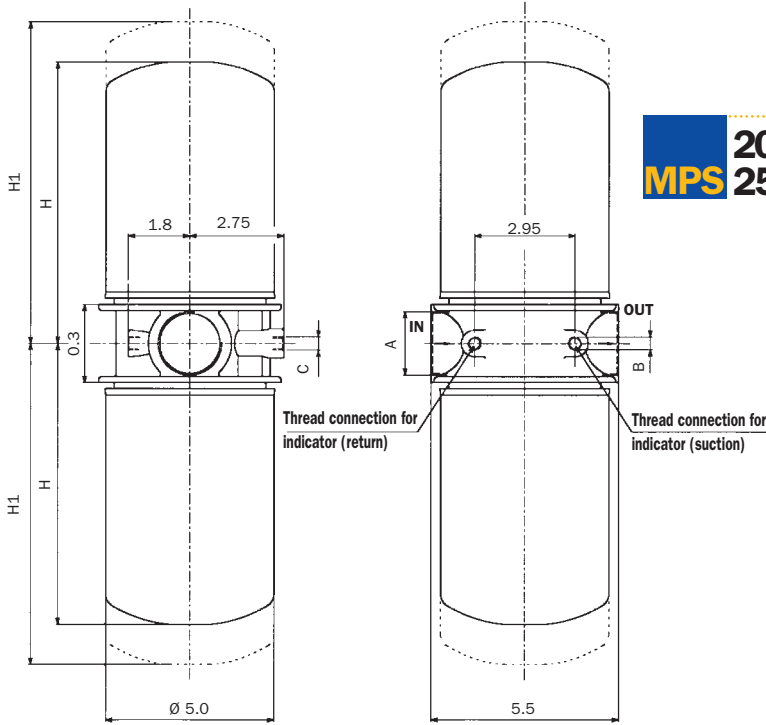
Return line filter - Housing pressure drop



Selection & installation information

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 150 SUS with a maximum total filter assembly (housing and filter element) pressure drop of 30% of the filter condition indicator (6 psi) for line and return filter and 1.15 psi for suction filter.



MPS 200
MPS 250

MPS SERIES 200 SIZES

Filter assembly	Line Flow rate gpm *	Suction Flow rate gpm *	Port size BSP/NPT/SAE	Weight lbs **
A03	34.3	7.9	1 1/2"	8.90
A06	45.0	11.9		
A10	58.0	17.0		
A25	76.7	29.0		
P10	71.4	26.4		
M60-M90	-	31.7		

MPS SERIES 250 SIZES

Filter assembly	Line Flow rate gpm *	Suction Flow rate gpm *	Port size BSP/NPT/SAE	Weight lbs **
A03	47.6	13.2	1 1/2"	9.35
A06	55.5	15.8		
A10	66.0	21.0		
A25	82.0	33.0		
P10	74.0	31.2		
M60-M90	-	34.3		

* Flow rates with 150 SUS fluid viscosity
** Weight including filter element

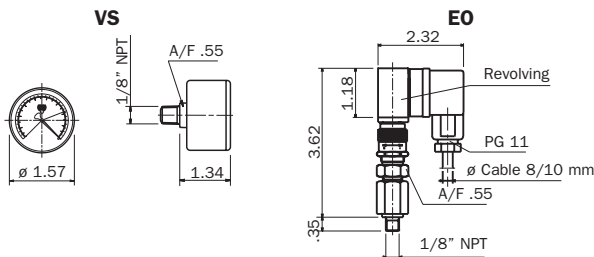
Lengths

Type	H	H1
200	8.50	9.50
250	10.27	11.26

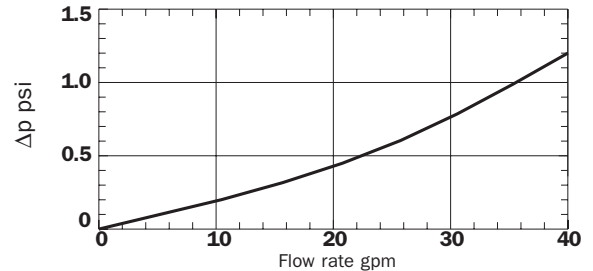
Thread connections

Type	A	B	C
G1	1 1/2" BSP	1/8" BSP	M10
G2	1 1/2" NPT	1/8" NPT	3/8" UNC
G3	SAE 24 - 1 7/8" - 12 UN	1/8" NPT	3/8" UNC

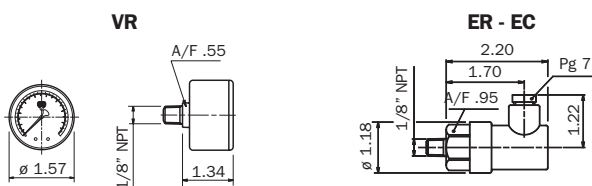
Indicator for suction filter (only for option G2-G3)



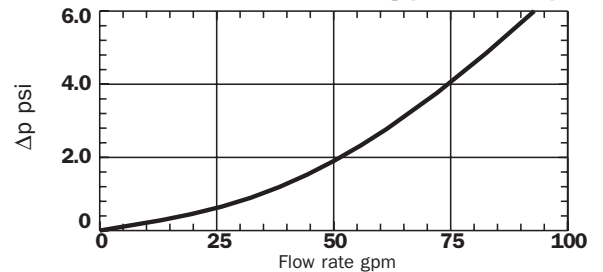
Suction filter - Housing pressure drop



Indicator for return filter (only for option G2-G3)



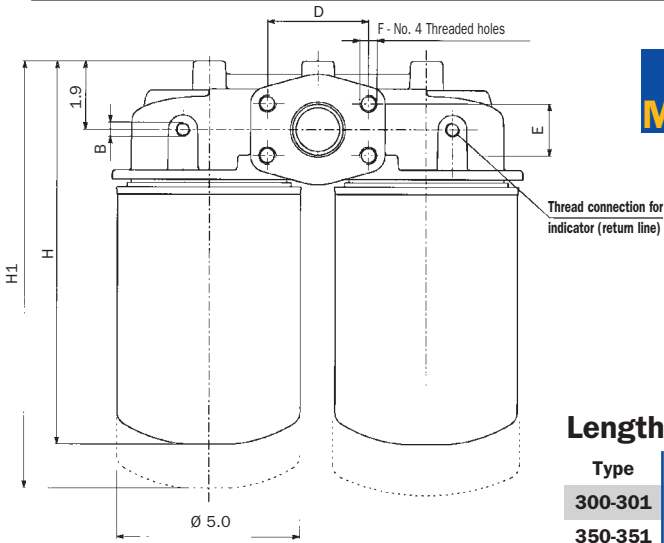
Return line filter - Housing pressure drop



Selection & installation information

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 150 SUS with a maximum total filter assembly (housing and filter element) pressure drop of 30% of the filter condition indicator (6 psi) for line and return filter and 1,15 psi for suction filter.



MPS 300-301 MPS 350-351

MPS SERIES 300-301 SIZES

Filter assembly	Line Flow rate gpm *	Suction Flow rate gpm *	Port size BSP/NPT/SAE	Weight lbs **
A03	34.4	7.9	1 1/2"	12.0
A06	45.0	11.9		
A10	58.2	17.0		
A25	76.7	29.0		
P10	71.4	26.4		
M60-M90	-	31.7		

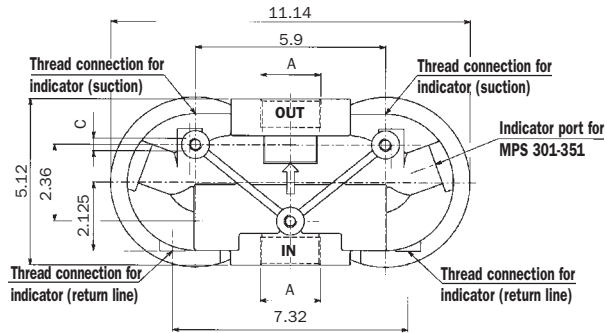
Lengths

Type	H	H1
300-301	10.45	11.42
350-351	12.20	13.20

MPS SERIES 350-351 SIZES

Filter assembly	Line Flow rate gpm *	Suction Flow rate gpm *	Port size BSP/NPT/SAE	Weight lbs **
A03	47.6	13.2	1 1/2"	12.5
A06	55.5	15.8		
A10	66.0	21.0		
A25	82.0	33.0		
P10	74	31.2		
M60-M90	-	34.3		

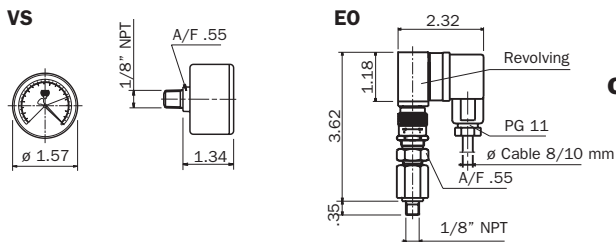
* Flow rates with 150 SUS fluid viscosity
** Weight including filter element



Thread connections

Type	A	B	C
G1	1 1/2" BSP	1/8" BSP	M10
G2	1 1/2" NPT	1/8" NPT	3/8" UNC
G3	SAE 24 - 1 7/8" - 12 UN	1/8" NPT	3/8" UNC

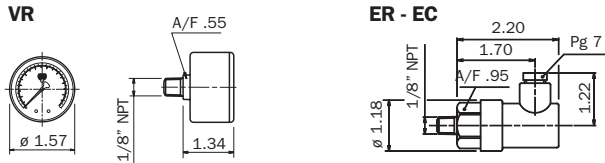
Indicator for suction filter MPS 300-350 (only for option G2-G3-F2)



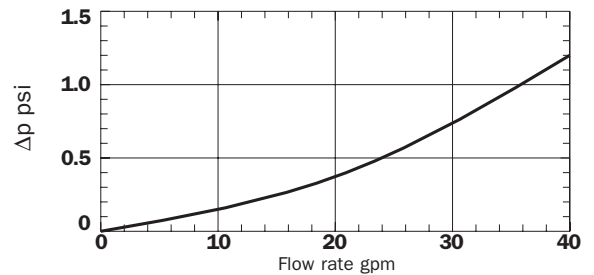
Flange connections

Type	A	B	C	D	E	F
F1	1 1/2" SAE 3000 PSI/M	1/8" BSP	M12	2.75	1.406	M12
F2	1 1/2" SAE 3000 PSI/UNC	1/8" NPT	1/2" UNC	2.75	1.406	1/2" UNC

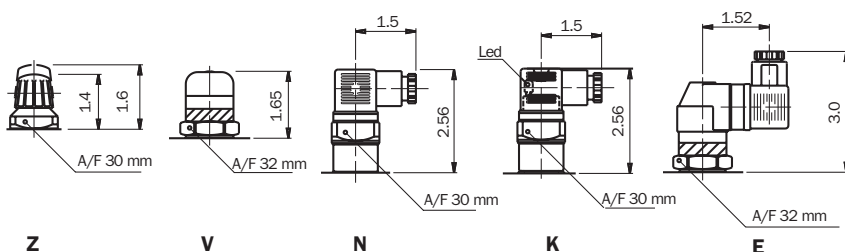
Indicator for return filter MPS 300-350 (only for option G2-G3-F2)



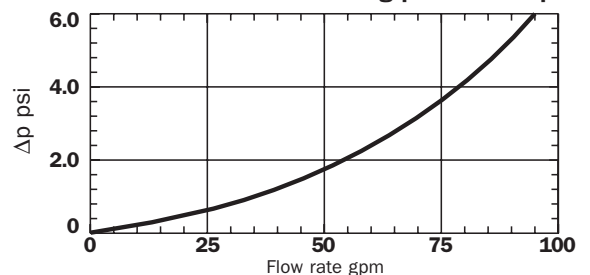
Suction filter - Housing pressure drop



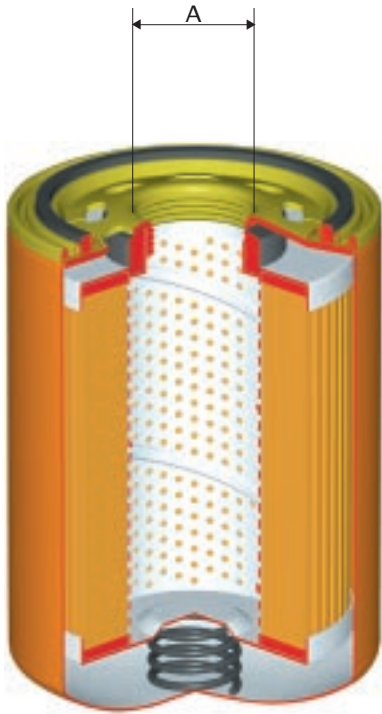
Indicator for line filter MPS 301-351



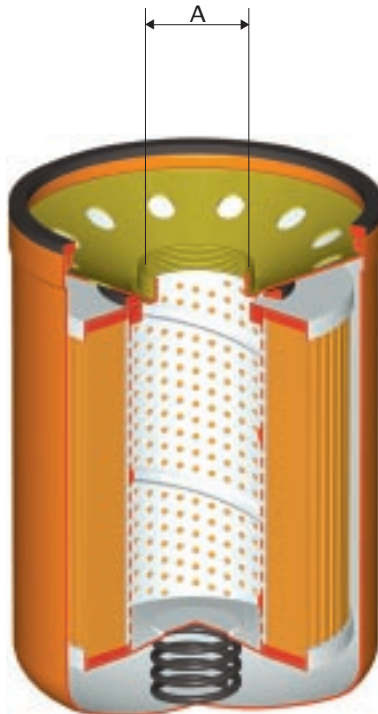
Return line filter - Housing pressure drop



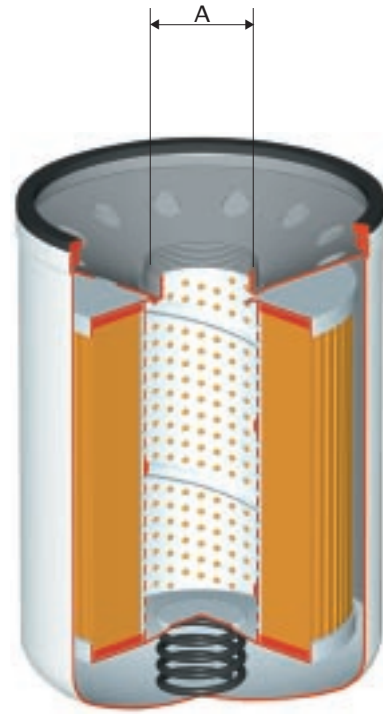
FILTER ELEMENT SERIES -



CS



CSG



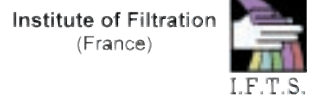
CSGW

New

absolute filter elements
independently tested
in the following Institutes:

Thread connections

Type	A
CS 050-070	3/4" BSP
CS 100-150	1 1/4" BSP
Type	A
CSG 050-070	1" - 12 UN
CSG 100-150	1 1/2" - 16 UN
Type	A
CSGW 050	1" - 12 UN
CSGW 150	1 1/2" - 16 UN

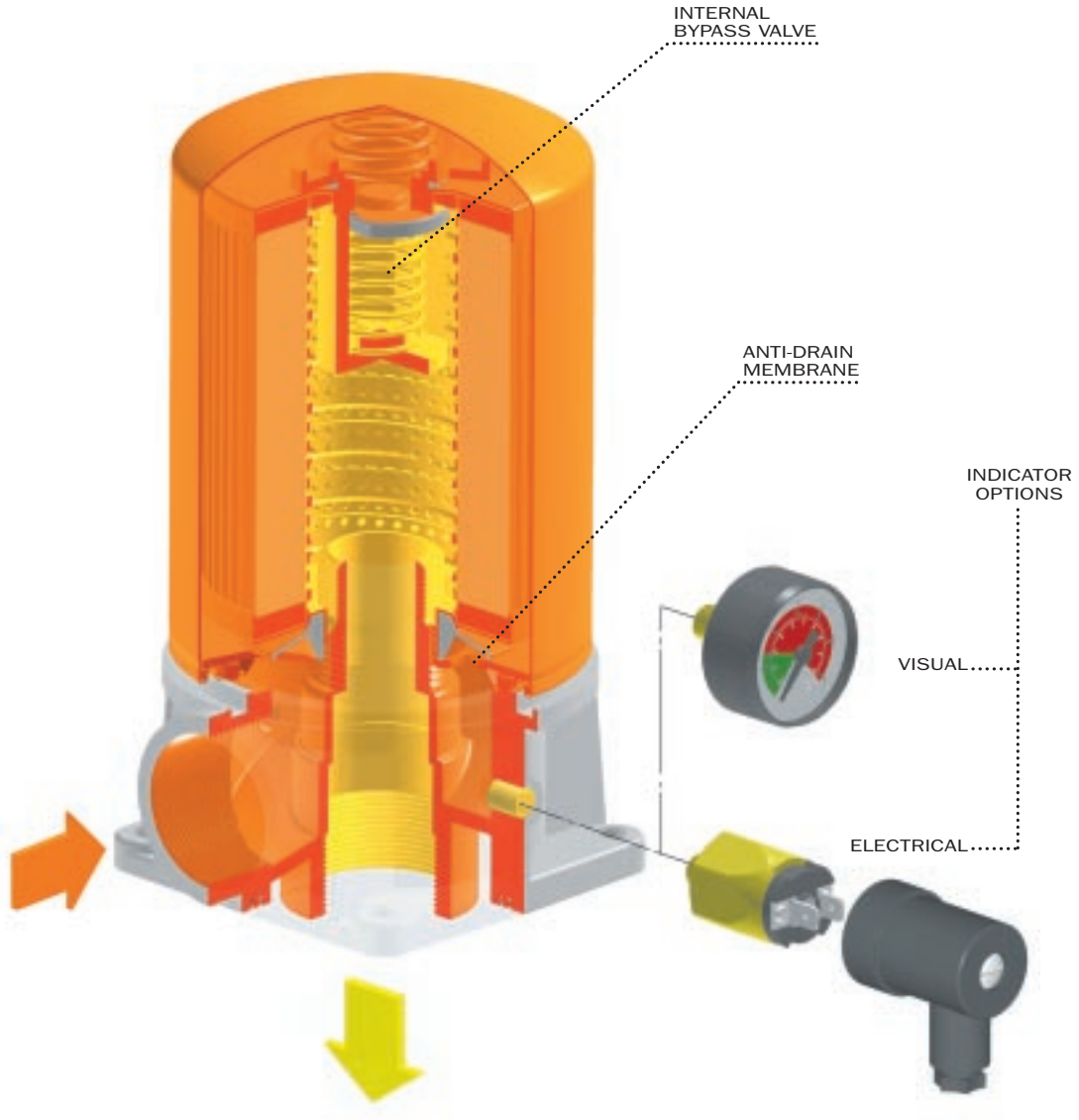


Description

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:



Selection & installation information

Filter elements **A Series**

types

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

P Series

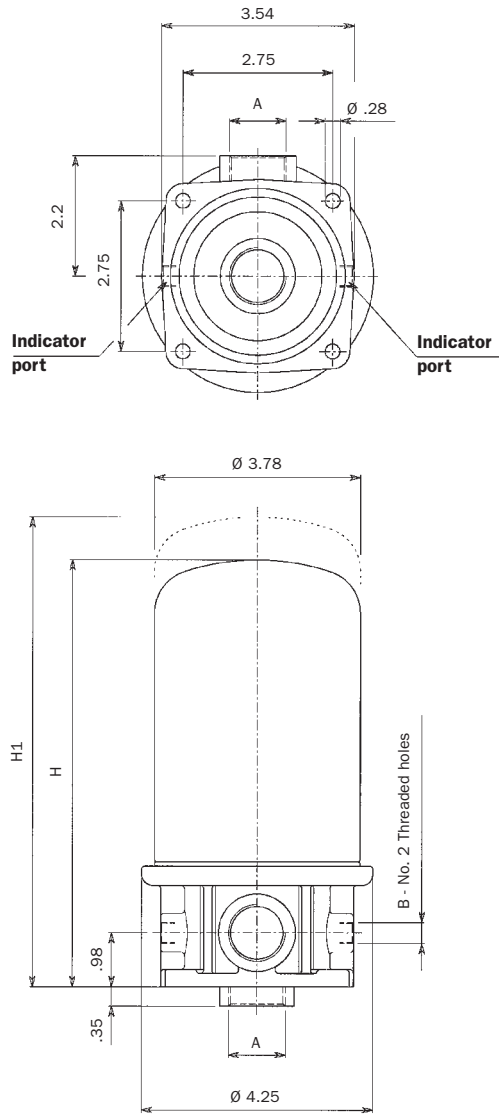
Nominal cellulose impregnated paper media, available in 10 and 25 micron.
Example - **P10** or **P25**

M Series

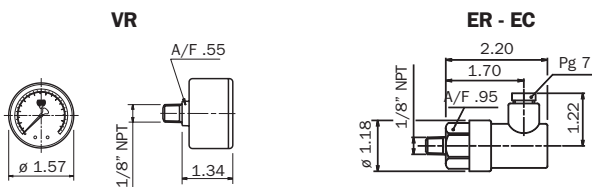
Metal mesh media, available in 25, 60, and 90 micron.
Example - **M25, M60** or **M90**.

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 150 SUS with a maximum total filter assembly (housing and filter element) pressure drop of 30% of the filter condition indicator (6 psi) for line and return filter.



Indicator (only for option G2-G3)



MST SERIES 050 SIZES

MST 050-070

Filter assembly	Line Flow rate gpm *	Port size BSP/NPT/SAE	Weight lbs **
A03	11.0	3/4"	2.66
A06	13.2		
A10	17.0		
A25	19.8		
P10	18.0		

MST SERIES 070 SIZES

Filter assembly	Line Flow rate gpm *	Port size BSP/NPT/SAE	Weight lbs **
A03	14.5	3/4"	3.35
A06	15.8		
A10	18.0		
A25	21.0		
P10	20.0		

* Flow rates with 150 SUS fluid viscosity
** Weight including filter element

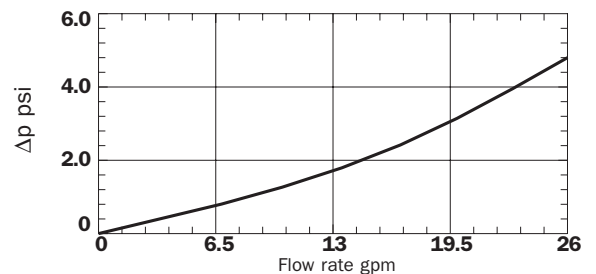
Thread connections

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

Lengths

Type	H	H1
050	7.48	8.20
070	10.43	11.15

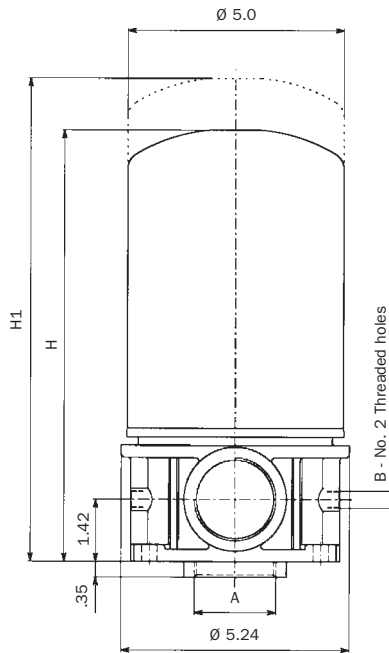
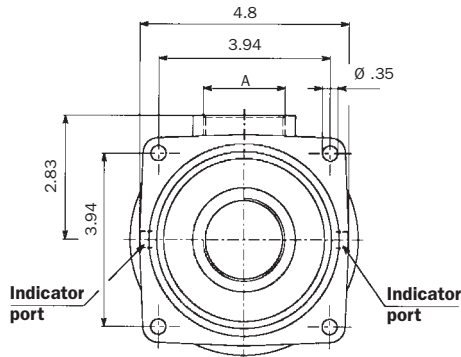
Housing pressure drop



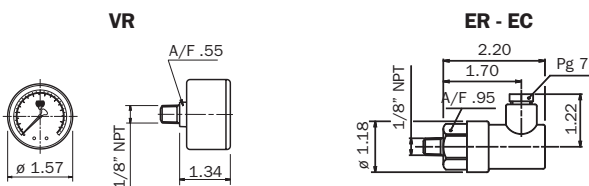
Selection & installation information

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 150 SUS with a maximum total filter assembly (housing and filter element) pressure drop of 30% of the filter condition indicator (6 psi) for line and return filter.



Indicator (only for option G2-G3)



MST 100-150

MST SERIES 100 SIZES

Filter assembly	Line Flow rate gpm *	Port size BSP/NPT/SAE	Weight lbs **
A03	21.0	1 1/2"	5.2
A06	23.8		
A10	33.0		
A25	49.0		
P10	46.3		

MST SERIES 150 SIZES

Filter assembly	Line Flow rate gpm *	Port size BSP/NPT/SAE	Weight lbs **
A03	23.8	1 1/2"	5.4
A06	29.0		
A10	37.0		
A25	55.5		
P10	50.3		

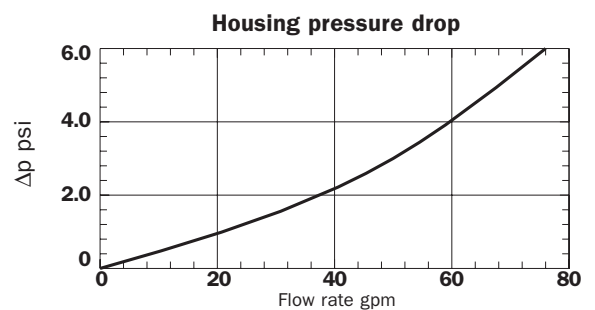
* Flow rates with 150 SUS fluid viscosity
** Weight including filter element

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 UNF	1/8" NPT

Lengths

Type	H	H1
100	9.84	10.9
150	11.02	12.0



General

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

Filter assembly pressure drop - $\Delta p_{\text{Total}} = \Delta p_{\text{Housing}} + \Delta p_{\text{Filter element}}$

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:

$$\Delta p_1 \text{ Filter element} = (\text{working viscosity} / \text{brochure viscosity}) \times \Delta p \text{ filter element}$$

Brochure viscosity 150 SUS

Filter assembly sizing example

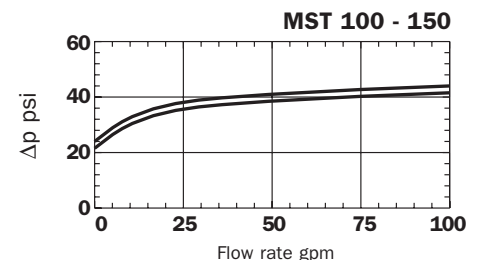
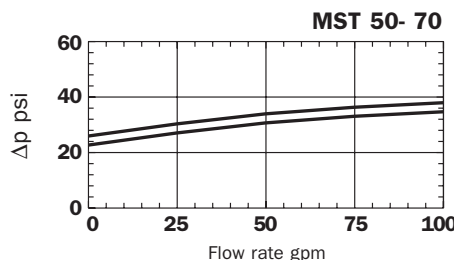
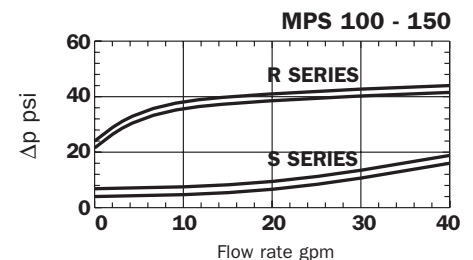
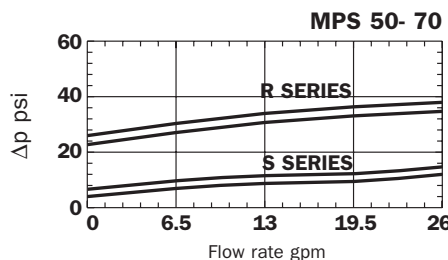
- Customer requires a 26 gpm filter assembly
- Mineral oil fluid: 230 SUS at 104 °F
- 25 micron absolute filtration
- return line application

Selection :

- **Housing pressure drop** - MPS 100/101 with 26 gpm $\Delta p = 1.85$ psi (see curve on page 8)
- **Filter element pressure drop** brochure viscosity - CS100A25 with 26 gpm $\Delta p = 1.3$ psi (see curve on page 17)
- **Filter element pressure drop** working viscosity - With 230 SUS $\Delta p_1 = 1.3 \times (230/150) = 2.0$ psi
- **Filter assembly pressure drop** $\Delta p_{\text{Total}} = \Delta p_{\text{Housing}} + \Delta p_1 \text{ Filter element} = 1.85 + 2.0 = 3.85 \text{ psi}^*$ { Acceptable pressure drop value, as per our recommendations

Bypass valves pressure drop

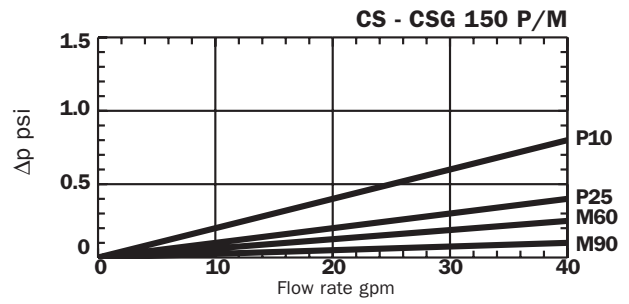
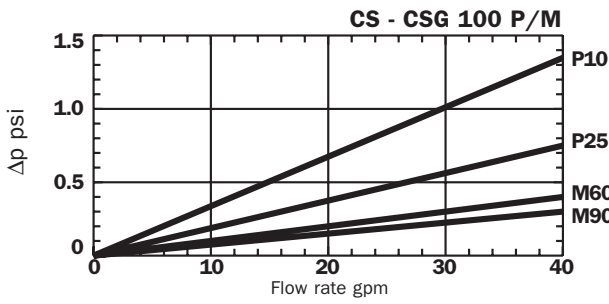
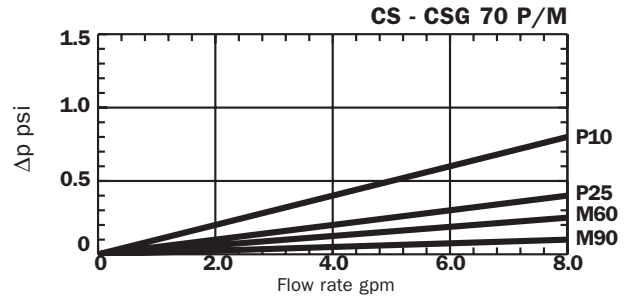
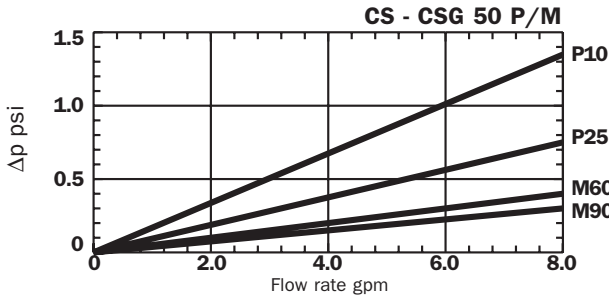
The curves were obtained using a mineral oil with a density of 0,86
The Δp varies proportionally to the density.



R series: Return filter
S series: Suction filter

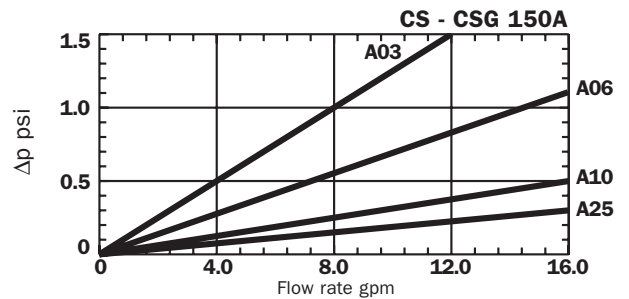
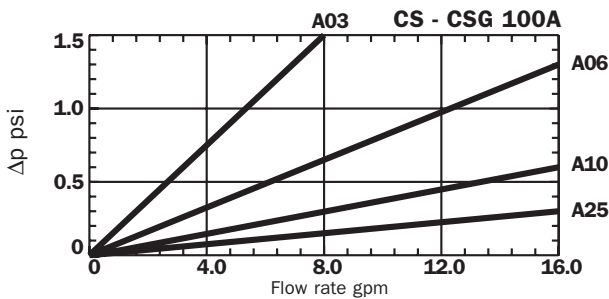
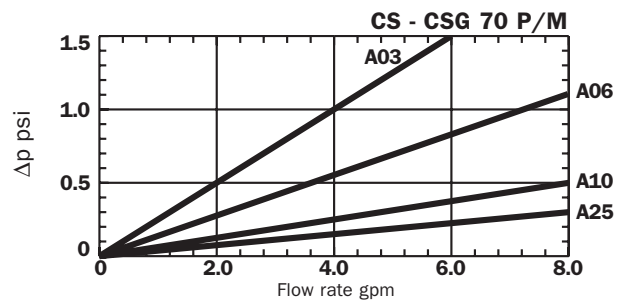
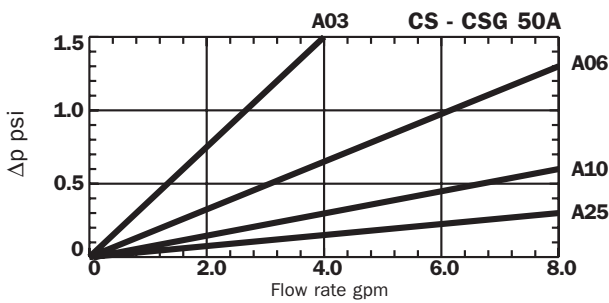
Filter elements - P/M Series

The curves were obtained using a mineral oil with a kinematic viscosity of 150 SUS.
The Δp varies proportionally to the fluid kinematic viscosity.



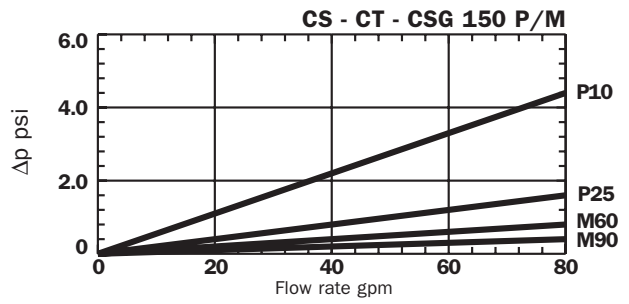
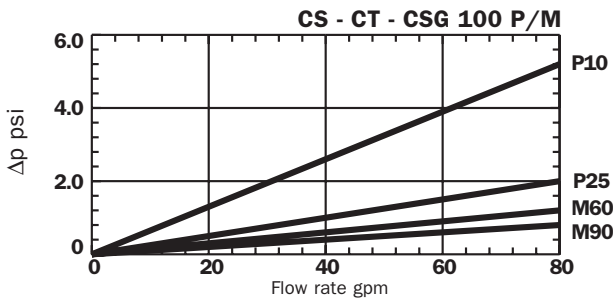
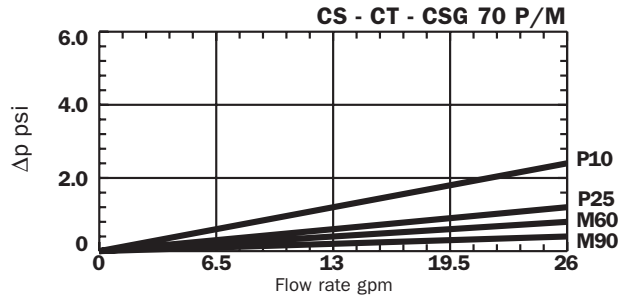
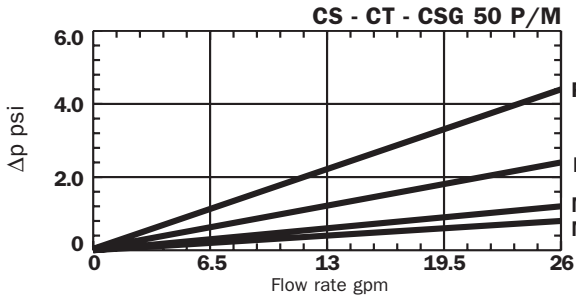
Filter elements - A Series

The curves were obtained using a mineral oil with a kinematic viscosity of 150 SUS.
The Δp varies proportionally to the fluid kinematic viscosity.



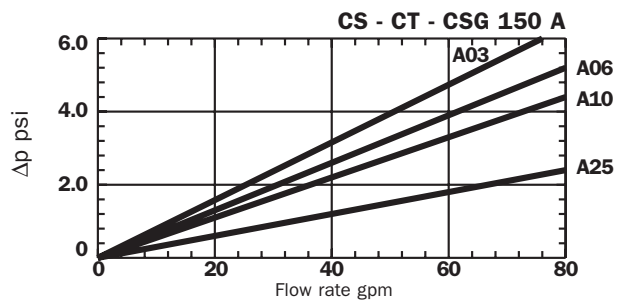
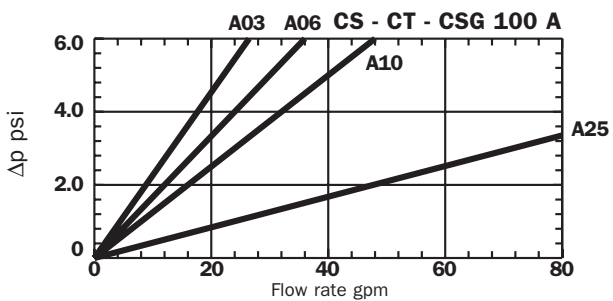
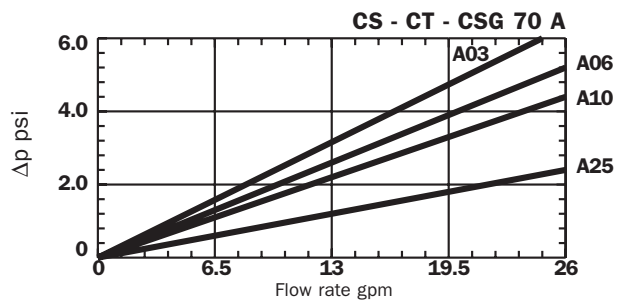
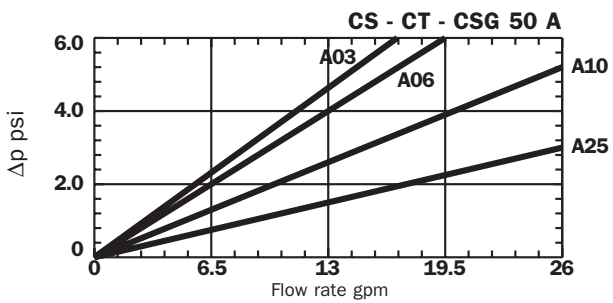
Filter elements - P/M Series

The curves were obtained using a mineral oil with a kinematic viscosity of 150 SUS.
The Δp varies proportionally to the fluid kinematic viscosity.



Filter elements - A Series

The curves were obtained using a mineral oil with a kinematic viscosity of 150 SUS.
The Δp varies proportionally to the fluid kinematic viscosity.



Nominal sizes

Series 0	Series 1	
050	051	
070	071	
100	101	
150	151	
200	-	
250	-	
300	301	
350	351	

Bypass valve

Filter series "0"	
C	With bypass 25 psi - 4 indicator ports
O	Without bypass with indicator ports on suction
P	Without bypass with indicator ports on return
R	with bypass 25 psi and indicator ports on return
S	With bypass 4.5 psi and indicator ports on suction
U	Without bypass without indicator ports
Filter series "1"	
R	With bypass 25 psi
P	Without bypass

Port options

Type	MPS 050-071	MPS 100-151	MPS 200-250	MPS 300-351
G1	3/4" BSP	1 1/4" BSP	1 1/2" BSP	1 1/2" BSP
G2	3/4" NPT	1 1/4" NPT	1 1/2" NPT	1 1/2" NPT
G3	SAE 12	SAE 20	SAE 24	SAE 24
G4	SAE 8	-	-	-
G5	1" BSP	-	-	-
G6	1" NPT	-	-	-
F1	-	-	-	1 1/2" SAE 3000 Psi/M
F2	-	-	-	1 1/2" SAE 3000 Psi/UNC

G4 Option without bypass only

Series

CS	European std. filter element
CSG	USA standard filter element
CSGW	USA standard filter element (water removal type)

Filter condition indicator

S	With threaded hole only
T	With plug
Indicators for suctions filters (MPS series only)	
VS	Visual vacuum gauge
EO	Electrical vacuum switch exchange contact
Indicators for return filters (for MPS/MST series)	
VR	Colour coded pressure gauge
ER	Pressure switch with N.O. contacts
EC	Pressure switch with N.C. contacts
Differential Indicators for line filters (only for series "1")	
S	With threaded hole only
T2	Plug for indicator port
1V	Visual 15 psi
V6	Visual 30 psi
Z1	Visual 18 psi
Z6	Visual 30 psi
N1	Electrical 18 psi
N6	Electrical 30 psi
1E	Visual-electrical 18 psi
E6	Visual-electrical 30 psi
K1*	Visual-Electrical 18 psi
K6*	Visual-Electrical 30 psi

*For K visual-electrical indicator, specify the voltage (f.i. K61)

Seals

A	Nitrile (Buna - N)
V	Viton

Filter elements M/P series

P10	Resin-impregnated paper $\beta_x \geq 2$
P25	
M25	Square wire mesh
M60	
M90	

Filter elements A series

A03	Inorganic microfibre $\beta_x \geq 75$
A06	
A10	
A25	

Nominal sizes

050	use 1 element for MPS 050-051
070	use 1 element for MPS 070-071
100	use 1 element for MPS 100-101
100	use 2 elements for MPS 200
100	use 2 elements for MPS 300-301
150	use 1 element for MPS 150-151
150	use 2 elements for MPS 250
150	use 2 elements for MPS 300-301

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

Data held in this publication is given only for indicative purposes. MP Filtri reserves to introduce modifications to described items for technical or commercial reasons. Copyright reserved.

MST

Findynamica
drive and control products

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

Seals

A	Nitrile (Buna - N)
V	Viton

Bypass valve

B	Calibration: 25 psi
---	---------------------

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 $\beta_x \geq 2$
M25 M60 M90	

Filter elements A series

A03 A06 A10 A25	Inorganic microfibre $\beta_x \geq 75$
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CT

Replacement element

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

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SERIES

CLOGGING INDICATORS



Findynamica
drive and control products

Production summary



Contamination monitoring products

- Calibrated on test rigs manufactured and certified to ISO 11943 based on methods from ISO 11171
- On-line and In-line counting to 400 bar
- Bottle sampler options
- Mobile designs RS 232 - RS 485 digital bus interface



Suction filters

- Flow rates to 620 l/min
- Mounting:
- Tank immersed
 - In-Line
 - In tank with shut off valve
 - In tank with flooded suction



Return filters

- Flow rates to 3000 l/min
 - Pressure to 20 bar
- Mounting:
- In-Line
 - Tank top
 - In single and duplex designs



Pressure filters

- Flow rates to 700 l/min
 - Pressure from 110 bar to 560 bar
- Mounting:
- In-Line
 - Manifold
 - In single and duplex designs



Spin-On filters

- Flow rates to 300 l/min
 - Pressure to 35 bar
- Mounting:
- In-Line
 - Tank top

Production summary



Stainless Steel Pressure filters

- Flow rates to 100 l/min
- Pressure from 350 bar to 700 bar

Mounting:

- In-Line
- Manifold
- In single and duplex designs



In-Line filters

- Flow rates to 3000 l/min
- Pressure to 80 bar

Mounting:

- In-Line
- Parallel manifold version
- In single and duplex designs



Filtration units

- Flow rates from 15 l/min to 200 l/min
- In static and mobile style



Accessories

- Oil filler and air breather plugs
- Optical and electrical level gauges
- Pressure gauge valve selectors
- Pipe fixing brackets
- Pressure gauges

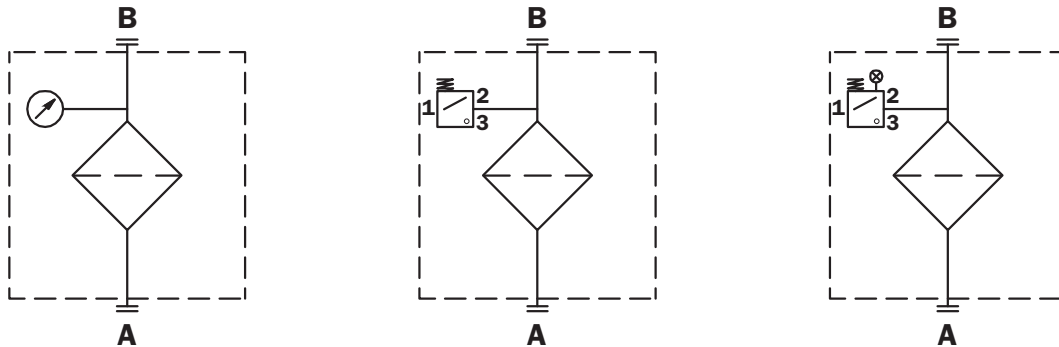


Mechanical Products

- Aluminium bell housings for motors from 0.12 kW to 400 kW
- Couplings in Aluminium - Cast Iron - Steel
- Damping rings
- Support feet
- Aluminium tanks
- Inspection doors

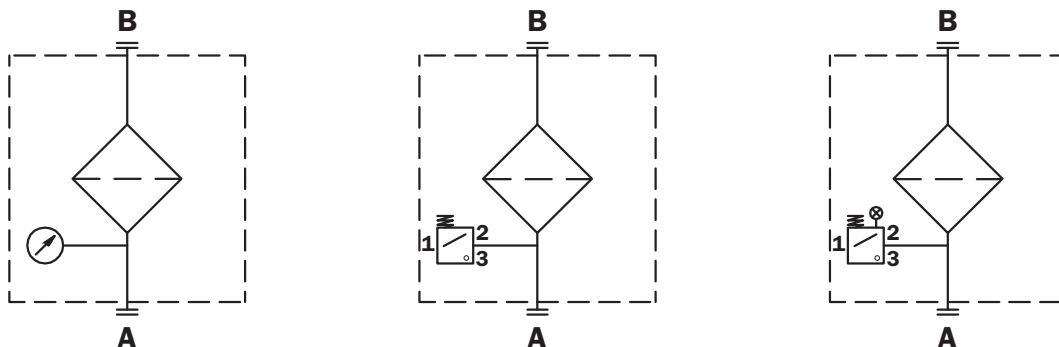
VACUUM INDICATORS

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. Standard items are produced with R 1/4" EN 10226 connection. Available products with R 1/8" EN 10226 to be fitted on MPS series.



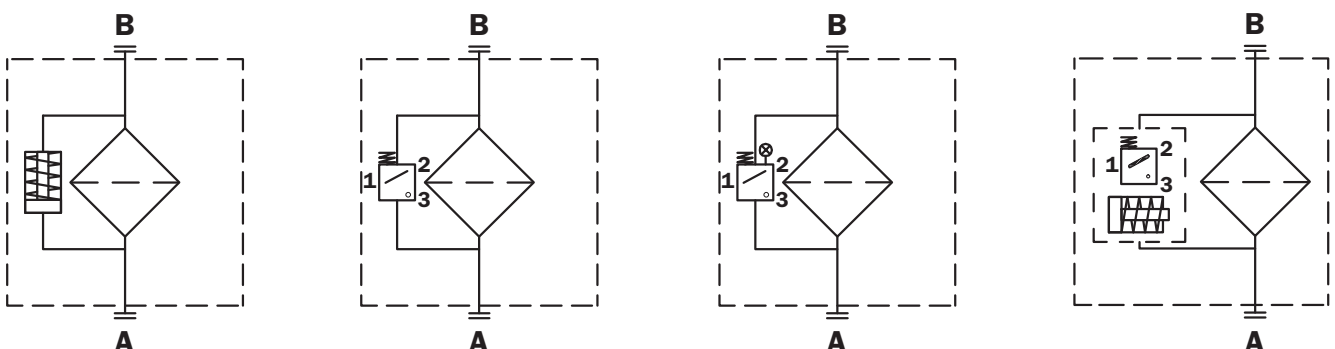
BAROMETRIC INDICATORS

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 R 1/8" EN 10226 connection.



DIFFERENTIAL INDICATORS

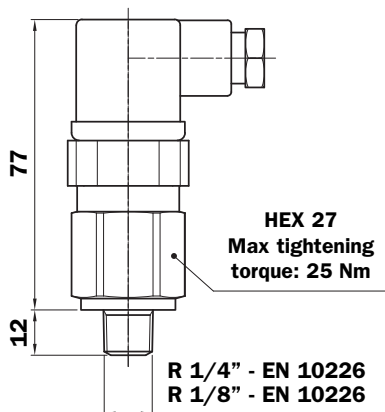
Differential indicators are used on the Pressure line to check the efficiency of the filter element. They measure the pressure upstream and downstream of the filter element (differential pressure). Standard items are produced with special connection G 1/2" size. Also available in Stainless Steel models.



Filter series	VISUAL INDICATOR	ELECTRICAL INDICATOR	ELECTRICAL/VISUAL INDICATOR	ELECTRONIC INDICATOR
Suction filters				
SF2 250 - 251 - 350 SF2 500 - 501 - 502 - 503 - 504 - 505 SF2 510 - 535 - 540 FAS	VVA16P01 VVR16P01	VEA21AA50P01	VLA21AA51P01 VLA21AA52P01 VLA21AA53P01 VLA21AA71P01	
Return filters				
MPF - MPT with bypass 1,75 bar MPH with bypass 1,75 bar	BVA14P01 BVR14P01 BVP15HAP01 BVP15HMP01	BEA15HA50P01 BEM15HA41P01	BLA15HA51P01 BLA15HA52P01 BLA15HA53P01 BLA15HA71P01	
MPF - MPT with bypass 3 bar MPH with bypass 2,5 bar FRI 255 RF2 250	BVA25P01 BVR25P01 BVP20HAP01 BVP20HMP01	BEA20HA50P01 BEM20HA41P01	BLA20HA51P01 BLA20HA52P01 BLA20HA53P01 BLA20HA71P01	
FRI 025 - 040 - 100 - 250 - 630 - 850	DVA20xP01 DVM20xP01	DEA20xA50P01 DEM20xAxxP01	DLA20xA51P01 DLA20xA52P01 DLA20xA71P01 DLE20xA50P01 DLE20xF50P01	DTA20xF70P01
Suction/Return filters				
MRS 116 - 165 - 166 Suction line	VVB16P01 VVS16P01	VEB21AA50P01	VLB21AA51P01 VLB21AA52P01 VLB21AA53P01 VLB21AA71P01	
MRS 116 - 165 - 166 Return line	BVA14P01 BVR14P01 BVP15HAP01 BVP15HMP01	BEA15HA50P01 BEM15HA41P01	BLA15HA51P01 BLA15HA52P01 BLA15HA53P01 BLA15HA71P01	
Spin-On filters				
MPS 050 - 070 - 100 - 150 MPS 200 - 250 - 300 - 350 Suction line	VVB16P01 VVS16P01	VEB21AA50P01	VLB21AA51P01 VLB21AA52P01 VLB21AA53P01 VLB21AA71P01	
MPS 050 - 070 - 100 - 150 MPS 200 - 250 - 300 - 350 MST 050 - 070 - 100 - 150 Return line	BVA14P01 BVR14P01 BVP15HAP01 BVP15HMP01	BEA15HA50P01 BEM15HA41P01	BLA15HA51P01 BLA15HA52P01 BLA15HA53P01 BLA15HA71P01	
MPS 051 - 071 - 101 - 151 MPS 301 - 351 MSH 050 - 070 - 100 - 150 In-line	DVA12xP01 DVM12xP01	DEA12xA50P01 DEM12xAxxP01	DLA12xA51P01 DLA12xA52P01 DLA12xA71P01 DLE12xA50P01 DLE12xF50P01	

Filter series	VISUAL INDICATOR	ELECTRICAL INDICATOR	ELECTRICAL/VISUAL INDICATOR	ELECTRONIC INDICATOR
Low Pressure In-Line filters				
LMP 110 - 112 - 116 - 118 - 119 LMP 120 - 122 - 123 LMP 210 - 211 LMP 400 - 401 - 430 - 431 LMP 900 - 901 - 950 - 951 LMD 400 - 401 - 431 - 951 With bypass valve	DVA20xP01 DVM20xP01	DEA20xA50P01 DEM20xAxxP01	DLA20xA51P01 DLA20xA52P01 DLA20xA71P01 DLE20xA50P01 DLE20xF50P01	DTA20xF70P01
LMP 110 - 112 - 116 - 118 - 119 LMP 120 - 122 - 123 LMP 210 - 211 LMP 400 - 401 - 430 - 431 LMP 900 - 901 - 950 - 951 LMD 400 - 401 - 431 - 951 MPD 250 - 251 Without bypass valve	DVA50xP01 DVM50xP01	DEA50xA50P01 DEM50xAxxP01	DLA50xA51P01 DLA50xA52P01 DLA50xA71P01 DLE50xA50P01 DLE50xF50P01	DTA50xF70P01
High Pressure In-Line filters				
FMP 039 - 065 - 135 - 320 FMM 050 FHP 010 - 011 - 065 - 135 - 320 - 500 FHB 050 - 135 - 320 FHM 006 - 007 - 010 - 050 - 135 - 320 - 500 FHF 325 FHD 021 - 051 - 326 - 333 With bypass valve	DVA50xP01 DVM50xP01	DEA50xA50P01 DEM50xAxxP01	DLA50xA51P01 DLA50xA52P01 DLA50xA71P01 DLE50xA50P01 DLE50xF50P01	DTA50xF70P01
FMP 039 - 065 - 135 - 320 FMM 050 FHP 010 - 011 - 065 - 135 - 320 - 500 FHB 050 - 135 - 320 FHM 006 - 007 - 010 - 050 - 135 - 320 - 500 FHF 325 FHD 021 - 051 - 326 - 333 Without bypass valve	DVA70xP01 DVM70xP01	DEA70xA50P01 DEM70xAxxP01	DLA70xA51P01 DLA70xA52P01 DLA70xA71P01 DLE70xA50P01 DLE70xF50P01	DTA70xF70P01
Stainless Steel High Pressure In-Line filters				
FZB 039 FZP 039 - 136 FZH 010 - 011 - 039 With bypass valve	DVX50xP01 DVY50xP01	DEX50xA50P01	DLX50xA51P01 DLX50xA52P01 DLY50xA50P01	
FZB 039 FZP 039 - 136 FZH 010 - 011 - 039 Without bypass valve	DVX70xP01 DVY70xP01	DEX70xA50P01	DLX70xA51P01 DLX70xA52P01 DLY70xA50P01	

VEA - VEB



Available connections:
R 1/4" EN 10226 (VEA21AA50P01)
R 1/8" EN 10226 (VEB21AA50P01)

Electrical Vacuum Indicator


Materials:

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

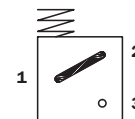
Technical data:

- Indicator type: Electrical vacuum indicator
- Setting pressure: -0,21 bar \pm 10%
- Max working pressure: 10 bar
- Proof pressure: 15 bar
- Working temperature: From -25 °C to +80 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

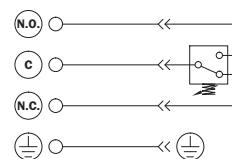
Electrical data:

- Resistive load: 5 A / 14 Vdc
4 A / 30 Vdc
5 A / 125 VAc
5 A / 250 VAc
- Electrical connections: 50 - EN 175301-803
- Protection degree: IP 65 in according to EN 60529
- Available ATEX product  II 1GD Ex ia IIC Tx Ex ia IIIC Tx °C X

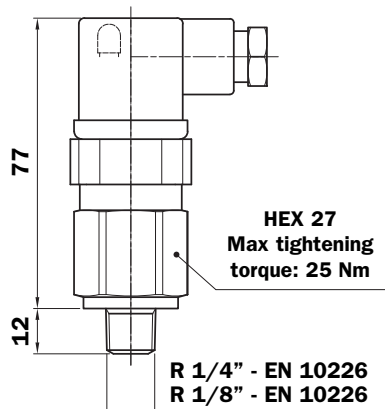
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



VLA - VLB



Available connections:
R 1/4" EN 10226 (VLA21AAxxP01)
R 1/8" EN 10226 (VLB21AAxxP01)

Electrical/Visual Vacuum Indicator

Materials:

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

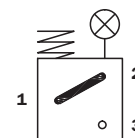
Technical data:

- Indicator type: Electrical/Visual vacuum indicator
- Setting pressure: -0,21 bar \pm 10%
- Max working pressure: 10 bar
- Proof pressure: 15 bar
- Working temperature: From -25 °C to +80 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

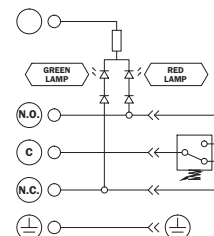
Electrical data:

- Resistive load: 51: 0,8 A / 24 Vdc
52: 0,2 A / 115 Vdc
53: 4 A / 230 Vdc
- Electrical connections: 51 - EN 175301-803 (24 Vdc lamps)
52 - EN 175301-803 (110 Vdc lamps)
53 - EN 175301-803 (230 VAc lamps)
- Protection degree: IP 65 in according to EN 60529

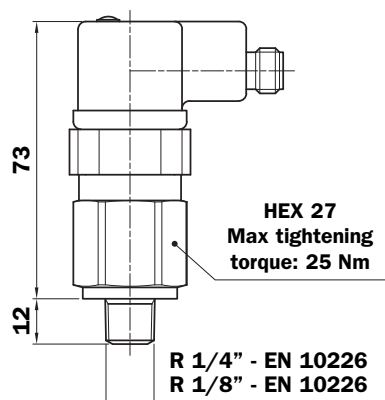
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



VLA - VLB



Available connections:
R 1/4" EN 10226 (VLA21AA71P01)
R 1/8" EN 10226 (VLB21AA71P01)

Electrical/Visual Vacuum Indicator

Materials:

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

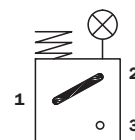
Technical data:

- Indicator type: Electrical/Visual vacuum indicator
- Setting pressure: -0,21 bar \pm 10%
- Max working pressure: 10 bar
- Proof pressure: 15 bar
- Working temperature: From -25 °C to +80 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

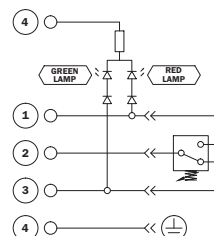
Electrical data:

- Resistive load: 0,4 A / 24 Vdc
- Electrical connections: 71 - M12 IEC 61076-2-101 (24 Vdc lamps)
- Protection degree: IP 65 in according to EN 60529

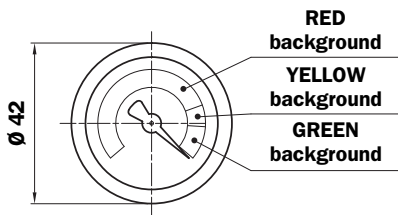
HYDRAULIC SYMBOL



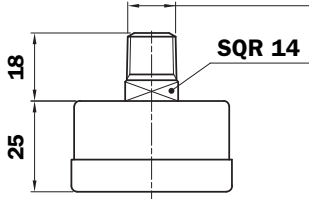
ELECTRICAL SYMBOL



VVA - VVB



R 1/4" - EN 10226
R 1/8" - EN 10226



Available connections:
R 1/4" EN 10226 (VVA16P01)
R 1/8" EN 10226 (VVB16P01)

Axial Vacuum Gauge

Materials:

- Case: Painted Steel
- Window: Clear plastic
- Dial: Painted Steel
- Pointer: Painted Aluminium
- Pressure connection: Brass
- Pressure element: Bourdon tub Cu-alloy soft soldered

Technical data:

- Indicator type: Axial vacuum gauge
- Max working pressure: Static: 7 bar
Fluctuating: 6 bar
Short time: 10 bar
- Working temperature: From -40 °C to +60 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943
- Accuracy class: cl. 2.5
- Protection degree: IP 31 in according to EN 60529

HYDRAULIC SYMBOL



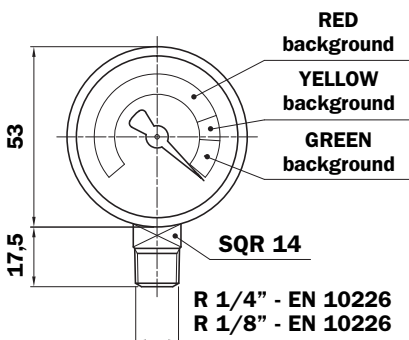
GRADUATED DISPLAY

GREEN BACKGROUND
(from 0 to -12 cmHg)
Clean filter element

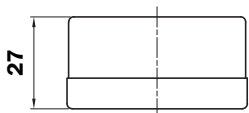
YELLOW BACKGROUND
(from -12 to -18 cmHg)
Warning

RED BACKGROUND
(from -18 to -76 cmHg)
Bypass

VVR - VVS



R 1/4" - EN 10226
R 1/8" - EN 10226



Available connections:
R 1/4" EN 10226 (VVR16P01)
R 1/8" EN 10226 (VVS16P01)

Radial Vacuum Gauge

Materials:

- Case: Painted Steel
- Window: Clear plastic
- Dial: Painted Steel
- Pointer: Painted Aluminium
- Pressure connection: Brass
- Pressure element: Bourdon tub Cu-alloy soft soldered

Technical data:

- Indicator type: Radial vacuum gauge
- Max working pressure: Static: 7 bar
Fluctuating: 6 bar
Short time: 10 bar
- Working temperature: From -40 °C to +60 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943
- Accuracy class: cl. 2.5
- Protection degree: IP 31 in according to EN 60529

HYDRAULIC SYMBOL



GRADUATED DISPLAY

GREEN BACKGROUND
(from 0 to -12 cmHg)
Clean filter element

YELLOW BACKGROUND
(from -12 to -18 cmHg)
Warning

REDBACKGROUND
(from -18 to -76 cmHg)
Bypass

Series	1	2	3	4	5	6	7
VE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Example:	VE	A	21	A	A	50	P01

Series	1	2	3	4	5	6	7
VL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Example:	VL	A	21	A	A	52	P01

Series	1	2	3	7
VV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Example:	VV	A	16	P01

1 - Series

- VE** Electrical indicator
- VL** Electrical/Visual indicator
- VV** Visual indicator

2 - Type

VE - VL series

- A** R 1/4" EN 10226 connection
- B** R 1/8" EN 10226 connection

VV series

- A** Axial vacuumeter
R 1/4" EN 10226 connection
- B** Axial vacuumeter
R 1/8" EN 10226 connection
- R** Radial vacuumeter
R 1/4" EN 10226 connection
- S** Radial vacuumeter
R 1/8" EN 10226 connection

3 - Setting pressure

VEA - VLA series

- 21** -0,21 bar

VVA - VVR series

- 16** -0,16 bar

4 - Seals (excluded for VV)

- A** NBR
- On request

5 - Thermostat (excluded for VV)

- A** Without thermostat

6 - Electrical connection (excluded for VV)

VEA series

- 50** EN 175301-803 connector

VLA series

- 51** EN 175301-803 clear connector with 24 V lamps
- 52** EN 175301-803 clear connector with 110 V lamps
- 53** EN 175301-803 clear connector with 230 V lamps
- 71** M12 IEC 61076-2-101 clear connector with 24 V lamps

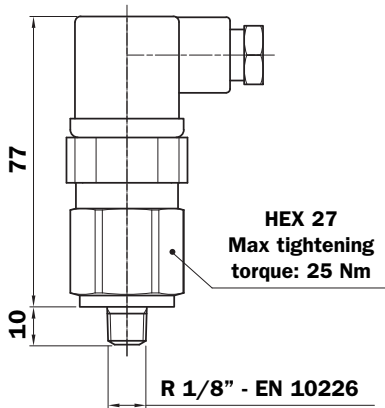
7 - Option

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

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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BEA



Available setting:
1,5 bar $\pm 10\%$ (BEA15HA50P01)
2 bar $\pm 10\%$ (BEA20HA50P01)

Electrical Pressure Indicator

Materials:

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

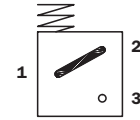
Technical data:

- Indicator type: Electrical pressure indicator
- Max working pressure: 40 bar
- Proof pressure: 60 bar
- Working temperature: From -25 °C to +80 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

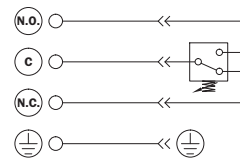
Electrical data:

- Resistive load: 5 A / 14 VDC
4 A / 30 VDC
5 A / 125 VAC
5 A / 250 VAC
- Electrical connections: 50 - EN 175301-803
- Protection degree: IP 65 in according to EN 60529
- Available Atex product II 1GD Ex ia IIC Tx Ex ia IIC Tx °C X

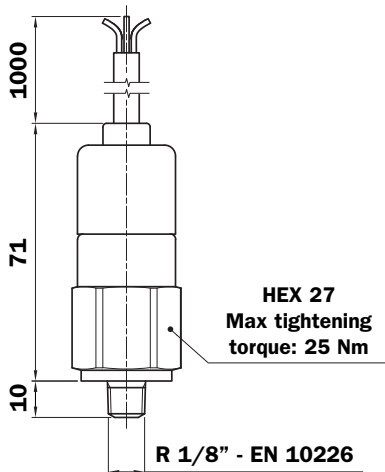
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



BEM



Available setting:
1,5 bar $\pm 10\%$ (BEM15HA50P01)
2 bar $\pm 10\%$ (BEM20HA50P01)

Electrical Pressure Indicator

Materials:

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

Technical data:

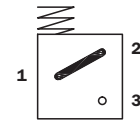
- Indicator type: Electrical pressure indicator
- Max working pressure: 40 bar
- Proof pressure: 60 bar
- Working temperature: From -25 °C to +80 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

Electrical data:

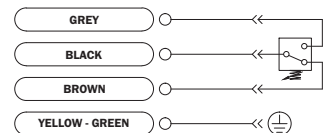
- Resistive load: 5 A / 14 VDC
4 A / 30 VDC
5 A / 125 VAC
5 A / 250 VAC
- Electrical connections: 50 - EN 175301-803
- Protection degree: IP 67 in according to EN 60529

On request this indicator can be provided with main connectors in use for wirings.

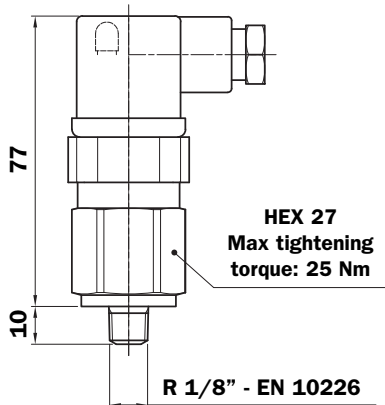
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



BLA



Available setting:
1,5 bar $\pm 10\%$ (BLA15HAxxP01)
2 bar $\pm 10\%$ (BLA20HAxxP01)

Electrical/Visual Pressure Indicator

Materials:

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

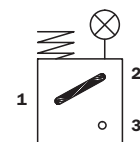
Technical data:

- Indicator type: Electrical/Visual pressure indicator
- Max working pressure: 40 bar
- Proof pressure: 60 bar
- Working temperature: From -25 °C to +80 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

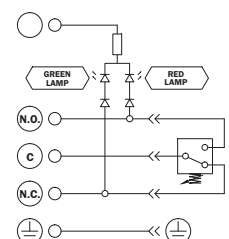
Electrical data:

- Resistive load: 51: 0,8 A / 24 VDC
52: 0,2 A / 115 VDC
53: 4 A / 230 VDC
- Electrical connections: 51 - EN 175301-803 (24 VDC lamps)
52 - EN 175301-803 (110 VDC lamps)
53 - EN 175301-803 (230 VAC lamps)
- Protection degree: IP 65 in according to EN 60529

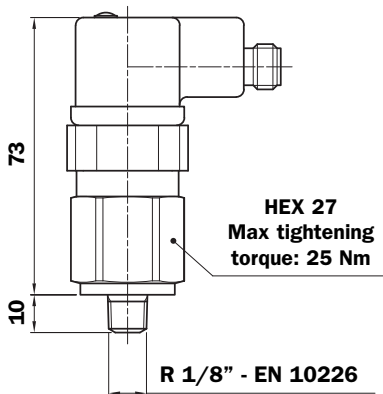
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



BLA



Available setting:
1,5 bar $\pm 10\%$ (BLA15HA71P01)
2 bar $\pm 10\%$ (BLA20HA71P01)

Electrical/Visual Pressure Indicator

Materials:

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

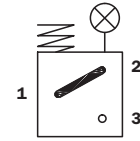
Technical data:

- Indicator type: Electrical/Visual pressure indicator
- Max working pressure: 40 bar
- Proof pressure: 60 bar
- Working temperature: From -25°C to $+80^{\circ}\text{C}$
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

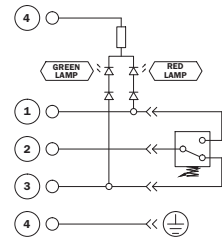
Electrical data:

- Resistive load: 0,4 A / 24 VDC
- Electrical connections: 71 - M12 IEC 61076-2-101 (24 VDC lamps)
- Protection degree: IP 65 in according to EN 60529

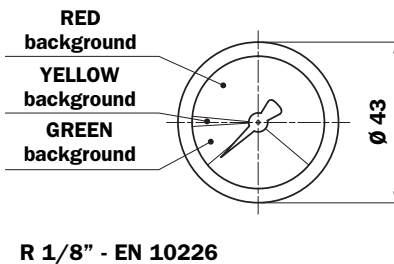
HYDRAULIC SYMBOL



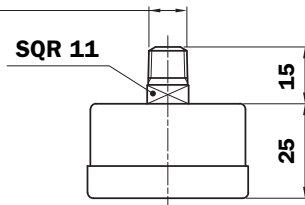
ELECTRICAL SYMBOL



BVA



R 1/8" - EN 10226



Available setting:
1,4 bar $\pm 10\%$ (BVA14P01)
2,5 bar $\pm 10\%$ (BVA25P01)

Axial Pressure Gauge

Materials:

- Case: Painted Steel
- Window: Clear plastic
- Dial: Painted Steel
- Pointer: Painted Aluminium
- Pressure connection: Brass
- Pressure element: Bourdon tub cu-alloy soft soldered

Technical data:

- Indicator type: Axial pressure gauge
- Max working pressure: Static: 7 bar
Fluctuating: 6 bar
Short time: 10 bar
- Working temperature: From -40°C to $+60^{\circ}\text{C}$
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943
- Accuracy class: cl. 2.5
- Protection degree: IP 31 in according to EN 60529

HYDRAULIC SYMBOL

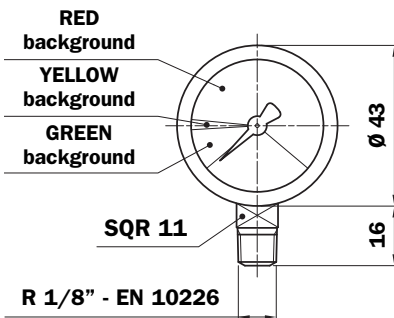


GRADUATED DISPLAY

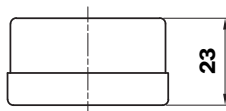
BVA14P01
GREEN BACKGROUND (from 0 to 1,4 bar)
Clean filter element
YELLOW BACKGROUND (from 1,4 to 1,7 bar)
Warning
RED BACKGROUND (from 1,7 to 10 bar)
Bypass

BVA25P01
GREEN BACKGROUND (from 0 to 2,5 bar)
Clean filter element
YELLOW BACKGROUND (from 2,5 to 3 bar)
Warning
RED BACKGROUND (from 3 to 10 bar)
Bypass

BVR



R 1/8" - EN 10226



Available setting:
1,4 bar $\pm 10\%$ (BVR14P01)
2,5 bar $\pm 10\%$ (BVR25P01)

Radial Pressure Gauge

Materials:

- Case: Painted Steel
- Window: Clear plastic
- Dial: Painted Steel
- Pointer: Painted Aluminium
- Pressure connection: Brass
- Pressure element: Bourdon tub cu-alloy soft soldered

Technical data:

- Indicator type: Radial pressure gauge
- Max working pressure: Static: 7 bar
Fluctuating: 6 bar
Short time: 10 bar
- Working temperature: From -40°C to $+60^{\circ}\text{C}$
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943
- Accuracy class: cl. 2.5
- Protection degree: IP 31 in according to EN 60529

HYDRAULIC SYMBOL



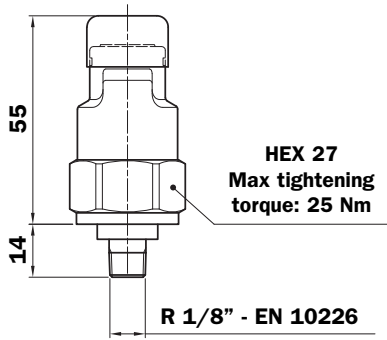
GRADUATED DISPLAY

BVR14P01
GREEN BACKGROUND (from 0 to 1,4 bar)
Clean filter element
YELLOW BACKGROUND (from 1,4 to 1,7 bar)
Warning
RED BACKGROUND (from 1,7 to 10 bar)
Bypass

BVR25P01
GREEN BACKGROUND (from 0 to 2,5 bar)
Clean filter element
YELLOW BACKGROUND (from 2,5 to 3 bar)
Warning
RED BACKGROUND (from 3 to 10 bar)
Bypass

BAROMETRIC INDICATORS

BVP - BVQ



Available setting:
 1,5 bar $\pm 10\%$ (BVP15AP01 - BVQ15AP01)
 2 bar $\pm 10\%$ (BVP20AP01 - BVQ20AP01)

Visual Pressure Indicator

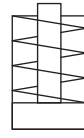
Materials:

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

Technical data:

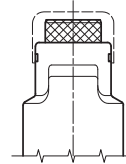
- Indicator type: Visual pressure indicator
- Reset: BVP - Automatic reset
BVQ - Manual reset
- Max working pressure: 10 bar
- Proof pressure: 15 bar
- Working temperature: From -25 °C to +80 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943
- Protection degree: IP 45 in according to EN 60529

HYDRAULIC SYMBOL

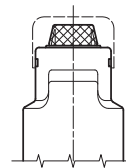


SIGNALS

GREEN BUTTON: INLET PRESSURE



RED BUTTON: CLOGGED FILTER ELEMENT



Findynamica
 drive and control products

Series	1	2	3	4	5	6	7
BE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Example:	BE	A	20	H	A	50	P01

Series	1	2	3	4	5	6	7
BL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Example:	BL	A	20	H	A	52	P01

Series	1	2	3	4	7
BV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Example:	BV	P	20	H	P01

Series	1	2	3	7
BV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Example:	BV	A	14	P01

1 - Series

<input type="checkbox"/> BE	Electrical indicator
<input type="checkbox"/> BL	Electrical/Visual indicator
<input type="checkbox"/> BV	Visual indicator

2 - Type

BE series

<input type="checkbox"/> A	Standard type
<input type="checkbox"/> M	With wired connector

BL series

<input type="checkbox"/> A	Standard type
-----------------------------------	---------------

BV series

<input type="checkbox"/> A	Axial manometer
<input type="checkbox"/> R	Radial manometer
<input type="checkbox"/> P	Visual pressure indicator - Automatic reset
<input type="checkbox"/> Q	Visual pressure indicator - Manual reset

3 - Setting pressure

BEA - BEM - BLA - BVP series

<input type="checkbox"/> 15	1,5 bar
<input type="checkbox"/> 20	2 bar

BVA - BVR series

<input type="checkbox"/> 14	1,4 bar
<input type="checkbox"/> 25	2,5 bar

4 - Seals (excluded for BVA - BVR)

<input type="checkbox"/> H	HNBR
<input type="checkbox"/>	On request

5 - Thermostat (excluded for BV)

<input type="checkbox"/> A	Without thermostat
-----------------------------------	--------------------

6 - Electrical connection (excluded for BV)

BEA series

<input type="checkbox"/> 50	EN 175301-803 connector
------------------------------------	-------------------------

BEM series

<input type="checkbox"/> 41	Four core cable
<input type="checkbox"/>	On request

BLA series

<input type="checkbox"/> 51	EN 175301-803 clear connector with 24 V lamps
<input type="checkbox"/> 52	EN 175301-803 clear connector with 110 V lamps
<input type="checkbox"/> 53	EN 175301-803 clear connector with 230 V lamps
<input type="checkbox"/> 71	M12 IEC 61076-2-101 clear connector with 24 V lamps

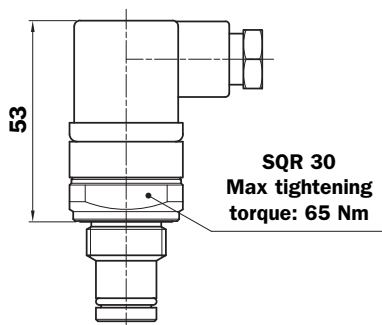
7 - Option

<input type="checkbox"/> P01	MP Filtri standard
<input type="checkbox"/> Pxx	Customer request

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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DEA



Available setting:
 1,2 bar ±10% (DEA12xA50P01)
 2 bar ±10% (DEA20xA50P01)
 5 bar ±10% (DEA50xA50P01)
 7 bar ±10% (DEA70xA50P01)
 9,5 bar ±10% (DEA95xA50P01)

Electrical Differential Indicator

Materials:

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

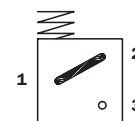
Technical data:

- Indicator type: Electrical differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

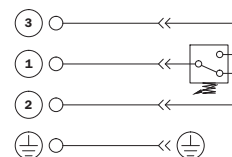
Electrical data:

- Resistive load: 0,2 A / 115 Vdc
- Electrical connections: 50 - EN 175301-803
- Protection degree: IP 66 in according to EN 60529
IP 69K in according to ISO 20653

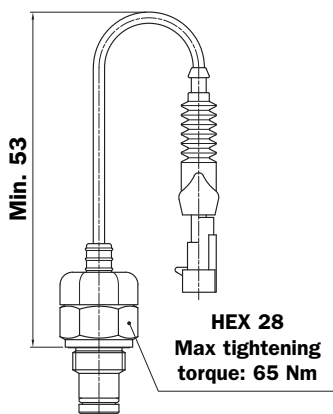
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DEM



Available setting:
 1,2 bar ±10% (DEM12xx10P01)
 2 bar ±10% (DEM20xx10P01)
 5 bar ±10% (DEM50xx10P01)
 7 bar ±10% (DEM70xx10P01)
 9,5 bar ±10% (DEM95xx10P01)

Electrical Differential Indicator

Materials:

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

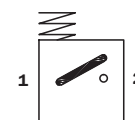
Technical data:

- Indicator type: Electrical differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

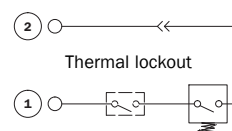
Electrical data:

- Resistive load: 0,2 A / 115 Vdc
- 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

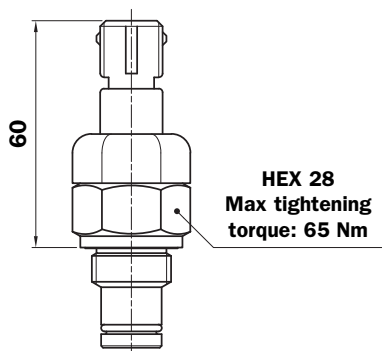
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DEM



Available setting:
 1,2 bar ±10% (DEM12xx20P01)
 2 bar ±10% (DEM20xx20P01)
 5 bar ±10% (DEM50xx20P01)
 7 bar ±10% (DEM70xx20P01)
 9,5 bar ±10% (DEM95xx20P01)

Electrical Differential Indicator

Materials:

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

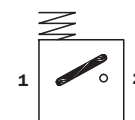
Technical data:

- Indicator type: Electrical differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

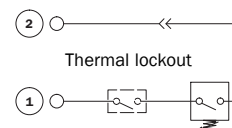
Electrical data:

- Resistive load: 0,2 A / 115 Vdc
- 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

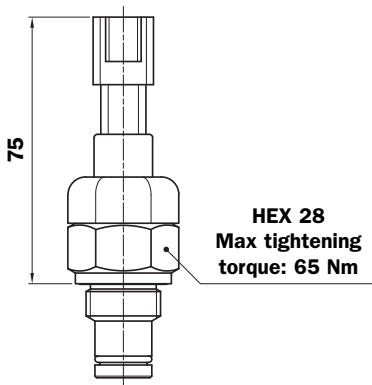
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DEM



Available setting:
 1,2 bar ±10% (DEM12xx30P01)
 2 bar ±10% (DEM20xx30P01)
 5 bar ±10% (DEM50xx30P01)
 7 bar ±10% (DEM70xx30P01)
 9,5 bar ±10% (DEM95xx30P01)

Electrical Differential Indicator

Materials:

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

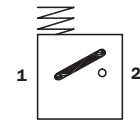
Technical data:

- Indicator type: Electrical differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

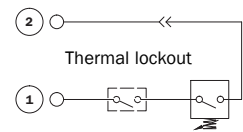
Electrical data:

- Resistive load: 0,2 A / 115 Vdc
- 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

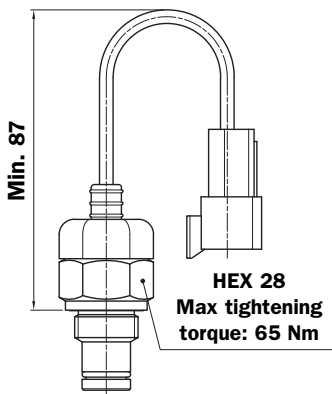
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DEM



Available setting:
 1,2 bar ±10% (DEM12xx35P01)
 2 bar ±10% (DEM20xx35P01)
 5 bar ±10% (DEM50xx35P01)
 7 bar ±10% (DEM70xx35P01)
 9,5 bar ±10% (DEM95xx35P01)

Electrical Differential Indicator

Materials:

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

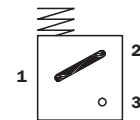
Technical data:

- Indicator type: Electrical differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

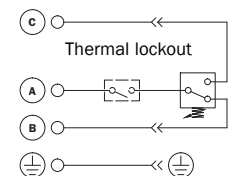
Electrical data:

- Resistive load: 0,2 A / 115 Vdc
- Electrical connections: 35 - Deutsch DT-04-3-P
- Switching type: SPDT contact
- Thermal lockout: Normally open up to 30 °C (F option)
- Protection degree: IP 66 in according to EN 60529

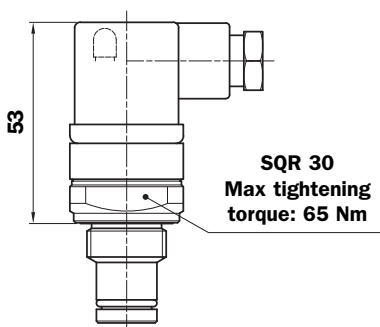
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DLA



Available setting:
 1,2 bar ±10% (DLA12xAxxP01)
 2 bar ±10% (DLA20xAxxP01)
 5 bar ±10% (DLA50xAxxP01)
 7 bar ±10% (DLA70xAxxP01)
 9,5 bar ±10% (DLA95xAxxP01)

Electrical/Visual Differential Indicator

Materials:

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

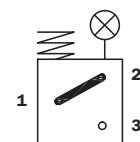
Technical data:

- Indicator type: Electrical/Visual differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

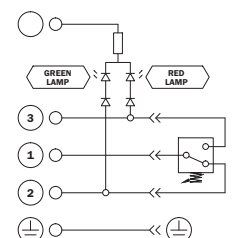
Electrical data:

- Resistive load: 51: 0,8 A / 24 Vdc
52: 0,2 A / 115 Vdc
- Electrical connections: 51 - EN 175301-803 (24 Vdc lamps)
52 - EN 175301-803 (110 Vdc lamps)
- Protection degree: IP 66 in according to EN 60529
IP 69K in according to ISO 20653

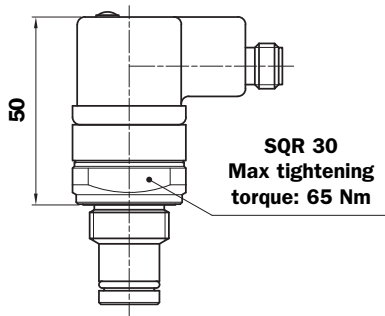
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DLA



Available setting:

- 1,2 bar ±10% (DLA12xA71P01)
- 2 bar ±10% (DLA20xA71P01)
- 5 bar ±10% (DLA50xA71P01)
- 7 bar ±10% (DLA70xA71P01)
- 9,5 bar ±10% (DLA95xA71P01)

Electrical/Visual Differential Indicator

Materials:

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

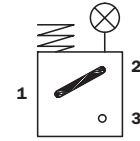
Technical data:

- Indicator type: Electrical/Visual differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

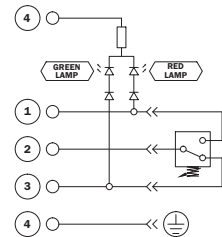
Electrical data:

- Resistive load: 0,4 A / 24 Vdc
- Electrical connections: 71 - M12 IEC 61076-2-101 (24 Vdc lamps)
IP 65 in according to EN 60529
- Protection degree: IP 69K in according to ISO 20653

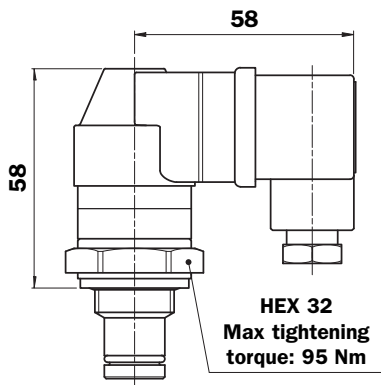
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DLE



Available setting:

- 1,2 bar ±10% (DLE12VA50P01)
- 2 bar ±10% (DLE20VA50P01)
- 5 bar ±10% (DLE50VA50P01)
- 7 bar ±10% (DLE70VA50P01)
- 9,5 bar ±10% (DLE95VA50P01)

Electrical/Visual Differential Indicator

Materials:

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

Technical data:

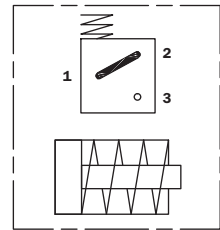
- Indicator type: Electrical/Visual differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

Electrical data:

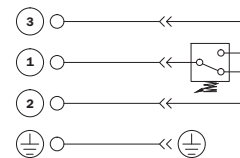
- Resistive load: 5 A / 250 VAC
- Electrical connections: 50 - EN 175301-803
- Protection degree: IP 65 in according to EN 60529

Available the connector with lamps

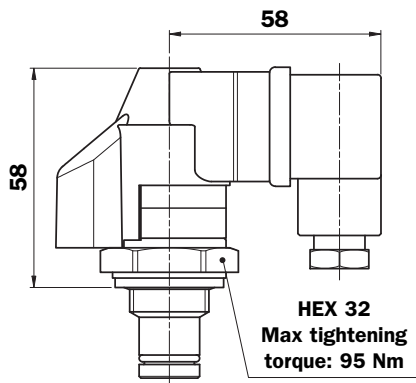
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DLE



Available setting:

- 1,2 bar ±10% (DLE12VF50P01)
- 2 bar ±10% (DLE20VF50P01)
- 5 bar ±10% (DLE50VF50P01)
- 7 bar ±10% (DLE70VF50P01)
- 9,5 bar ±10% (DLE95VF50P01)

Electrical/Visual Differential Indicator

Materials:

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

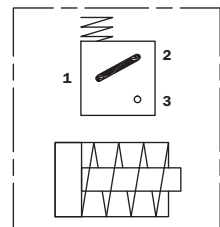
Technical data:

- Indicator type: Electrical/Visual differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

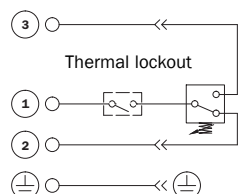
Electrical data:

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

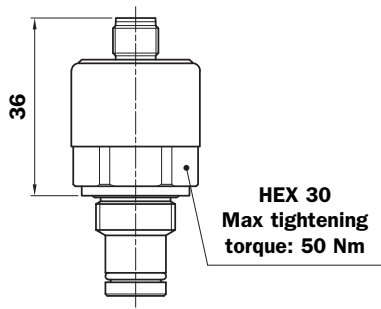
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DTA



Available setting:
 1,2 bar ±10% (DTA12xF70P01)
 2 bar ±10% (DTA20xF70P01)
 5 bar ±10% (DTA50xF70P01)
 7 bar ±10% (DTA70xF70P01)
 9,5 bar ±10% (DTA95xF70P01)

Electronic Differential Indicator

Materials:

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

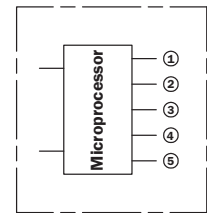
Technical data:

- Indicator type: Electronic differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

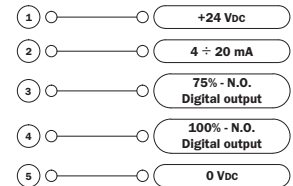
Electrical data:

- Power supply: 24 VDC
- Analogue output: From 4 to 20 mA
- Thermal lockout: 30 °C (all output signals stalled up to 30 °C)
- Protection degree: IP 67 in according to EN 60529

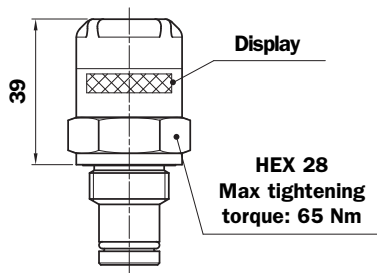
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DVA



Available setting:
 1,2 bar ±10% (DVA12xP01)
 2 bar ±10% (DVA20xP01)
 5 bar ±10% (DVA50xP01)
 7 bar ±10% (DVA70xP01)
 9,5 bar ±10% (DVA95xP01)

Visual Differential Indicator

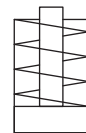
Materials:

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

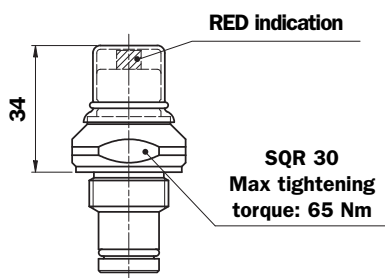
Technical data:

- Indicator type: Visual differential indicator
- Reset: Automatic reset
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

HYDRAULIC SYMBOL



DVM



Available setting:
 1,2 bar ±10% (DVM12xP01)
 2 bar ±10% (DVM20xP01)
 5 bar ±10% (DVM50xP01)
 7 bar ±10% (DVM70xP01)
 9,5 bar ±10% (DVM95xP01)

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 -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

HYDRAULIC SYMBOL



Series	1	2	3	4	5	6	7
DE	<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**

Series	1	2	3	4	5	6	7
DL	<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**

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

Example: **DT A 20 H F 70 P01**

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

Example: **DV A 20 H P01**

1 - Series

- DE** Electrical indicator
- DL** Electrical/Visual indicator
- DT** Electronic indicator
- DV** Visual indicator

2 - Type

DE series

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

DL series

- A** Standard type
- E** Standard type for High power supply

DT series

- A** Standard type

DV series

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

3 - Setting pressure

- 12** 1,5 bar
- 20** 2 bar
- 50** 5 bar
- 70** 7 bar
- 95** 9,5 bar

4 - Seals

- H** HNBR
- On request

5 - Thermostat (excluded for DV)

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

6 - Electrical connection (excluded for BV)

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
(Change over contacts)
- On request

DLA series

- 51** EN 175301-803 clear connector
with 24 V lamps
- 52** EN 175301-803 clear connector
with 110 V lamps
- 71** M12 IEC 61076-2-101 clear
connector with 24 V lamps

DTA series

- 70** M12 IEC 61076-2-101 connector

7 - Option

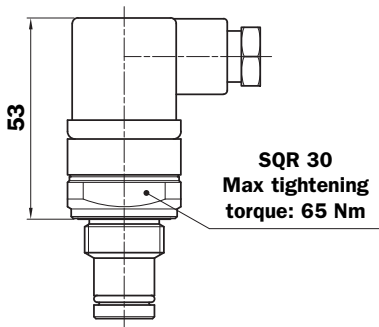
- P01** MP Filtri standard
- Pxx** Customer request

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

The data in this publication are purely guideline. MP Filtri reserves the right to make changes to the models described herein at any time it deems fit in relation to technical or commercial requirements. The colours of the products shown on the cover are purely guideline. Copyright. All rights reserved.

STAINLESS STEEL DIFFERENTIAL INDICATORS

DEX



Available setting:
 1,2 bar ±10% (DEX12xA50P01)
 2 bar ±10% (DEX20xA50P01)
 5 bar ±10% (DEX50xA50P01)
 7 bar ±10% (DEX70xA50P01)
 9,5 bar ±10% (DEX95xA50P01)

Electrical Differential Indicator

Materials:

- Body: AISI 316L
- Internal parts: AISI 316L - Nylon
- Seals: HNBR - MFQ

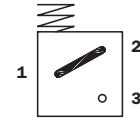
Technical data:

- Indicator type: Electrical differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

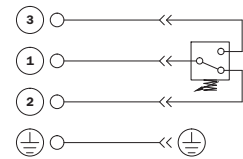
Electrical data:

- Resistive load: 0,2 A / 115 Vdc
- Electrical connections: 50 - EN 175301-803
- Protection degree: IP 66 in according to EN 60529
IP 69K in according to ISO 20653

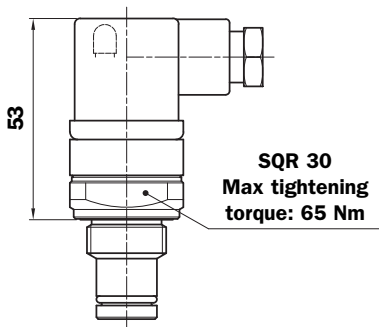
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DLX



Available setting:
 1,2 bar ±10% (DLX12xAxxP01)
 2 bar ±10% (DLX20xAxxP01)
 5 bar ±10% (DLX50xAxxP01)
 7 bar ±10% (DLX70xAxxP01)
 9,5 bar ±10% (DLX95xAxxP01)

Electrical/Visual Differential Indicator

Materials:

- Body: AISI 316L
- Internal parts: AISI 316L - Nylon
- Seals: HNBR - MFQ

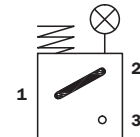
Technical data:

- Indicator type: Electrical differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

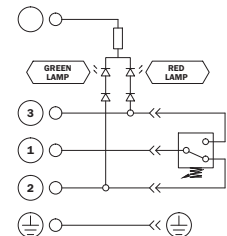
Electrical data:

- Resistive load: 51: 0,8 A / 24 VDC
52: 0,2 A / 115 VDC
- Electrical connections: 51 - EN 175301-803 (24 VDC lamps)
52 - EN 175301-803 (110 VDC lamps)
- Protection degree: IP 66 in according to EN 60529
IP 69K in according to ISO 20653

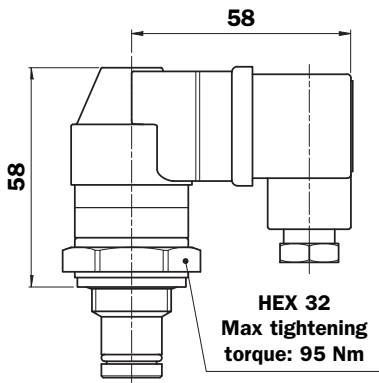
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DLY



Available setting:
 1,2 bar ±10% (DLY12VA50P01)
 2 bar ±10% (DLY20VA50P01)
 5 bar ±10% (DLY50VA50P01)
 7 bar ±10% (DLY70VA50P01)
 9,5 bar ±10% (DLY95VA50P01)

Electrical/Visual Differential Indicator

Materials:

- Body: AISI 316L
- Internal parts: AISI 316L - Nylon
- Seals: FPM

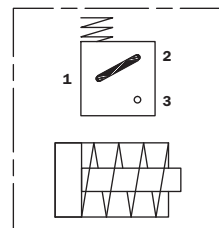
Technical data:

- Indicator type: Electrical/Visual differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

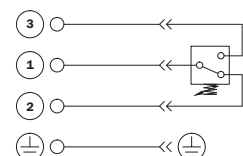
Electrical data:

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

HYDRAULIC SYMBOL

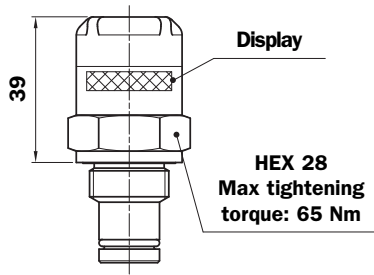


ELECTRICAL SYMBOL



STAINLESS STEEL DIFFERENTIAL INDICATORS

DVX



Available setting:
 1,2 bar $\pm 10\%$ (DVX12xP01)
 2 bar $\pm 10\%$ (DVX20xP01)
 5 bar $\pm 10\%$ (DVX50xP01)
 7 bar $\pm 10\%$ (DVX70xP01)
 9,5 bar $\pm 10\%$ (DVX95xP01)

Visual Differential Indicator

Materials:

- Body: AISI 316L
- Internal parts: AISI 316L - Nylon
- Seals: HNBR - MFQ

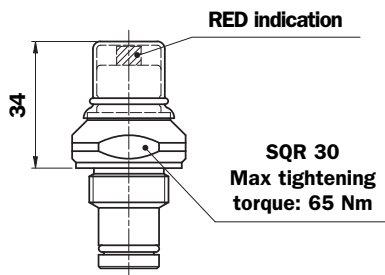
Technical data:

- Indicator type: Visual differential indicator with automatic reset
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25°C to $+110^{\circ}\text{C}$
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

HYDRAULIC SYMBOL



DVY



Available setting:
 1,2 bar $\pm 10\%$ (DVY12xP01)
 2 bar $\pm 10\%$ (DVY20xP01)
 5 bar $\pm 10\%$ (DVY50xP01)
 7 bar $\pm 10\%$ (DVY70xP01)
 9,5 bar $\pm 10\%$ (DVY95xP01)

Visual Differential Indicator

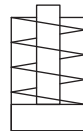
Materials:

- Body: AISI 316L
- Internal parts: AISI 316L - Aluminium
- Seals: HNBR - MFQ

Technical data:

- Indicator type: Visual differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25°C to $+110^{\circ}\text{C}$
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC fluids in according to ISO 2943

HYDRAULIC SYMBOL



Series	1	2	3	4	5	6	7
DE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Example:	DE	X	20	H	A	50	P01

Series	1	2	3	4	5	6	7
DL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Example:	DL	X	20	H	A	52	P01

Series	1	2	3	4	7
DV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Example:	DV	X	20	H	P01

1 - Series

- DE** Electrical indicator
- DL** Electrical/Visual indicator
- DV** Visual indicator

2 - Type

- X** Standard type
- Y** Optional type

3 - Setting pressure

- 12** 1,5 bar
- 20** 2 bar
- 50** 5 bar
- 70** 7 bar
- 95** 9,5 bar

4 - Seals

- H** HNBR
- F** MFQ
- On request

5 - Thermostat (excluded for DV)

- A** Without thermostat

6 - Electrical connection (excluded for DV)

DEX series

- 50** EN 175301-803 connector

DLA series

- 51** EN 175301-803 clear connector with 24 V lamps
- 52** EN 175301-803 clear connector with 110 V lamps
- 71** M12 IEC 61076-2-101 clear connector with 24 V lamps

7 - Option

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

VACUUM INDICATORS

Old code	New code
E0	VED20AA50P01
E0P01	VEB21AA50P01
E1	VEC20AA50P01
E1P01	VEA21AA50P01
E1P02	VEA21AA05P01
-	-
-	VVS16P01
VP01	VVR16P01
VOP01	VVA16P01
VSP01	WVB16P01

BAROMETRIC INDICATORS

Old code	New code	Old code	New code
FE08H1AP01	BEA08HA50P01	VP15AMP01	BVQ15HP01
FE08H1BP01	BLA08HA51P01	VP20AAP01	BVP20HP01
FE15H1AP01	BEA15HA50P01	VP20AMP01	BVQ20HP01
FE15H1BP01	BLA15HA51P01	-	-
FE15H1DP01	BLA15HA53P01	VRP01	BVA14P01
FE15H1EP01	BEM15HA41P01	VR25P01	BVA25P01
FE20H1AP01	BEA20HA50P01	V1P01	BVR14P01
FE20H1BP01	BLA20HA51P01	-	BVR25P01
FE20H1CP01	BLA20HA52P01		
FE20H1DP01	BLA20HA53P01		
FE20H1EP01	BEM20HA41P01		
FE25H1AP01	BEA25HA50P01		
FE25H1BP01	BLA25HA51P01		
VP15AAP01	BVP15HP01		

STAINLESS STEEL DIFFERENTIAL INDICATORS

Old code	New code	Old code	New code
1EX	DLY12HA50P01 - DLY12VA50P01	VB6FP01	DVY20FP01
E6X	DLY20HA50P01 - DLY20VA50P01	VB6HP01	DVY20HP01
E6XE	DLY20EA50P01	VB7FP01	DVY50FP01
E7X	DLY50HA50P01 - DLY50VA50P01	VB7HP01	DVY50HP01
E8X	DLY70HA50P01 - DLY70VA50P01	VB7VP01	DVY50VP01
-	-	VB8EP01	DVY70EP01
K7X1HP01	DLX50HA51P01	VB8FP01	DVY70FP01
K8X1HP01	DLX70HA51P01	VB8HP01	DVY70HP01
-	-	-	-
N7X	DEX50HA50P01	1VX	DVX12HP01 - DVX12VP01
N7XEP01	DEX50EA50P01	V6X	DVX20HP01 - DVX20VP01
N8X	DEX70HA50P01	V7X	DVX50HP01 - DVX50VP01
N8XEP01	DEX70EA50P01	V7XE	DVX50EP01
		V8X	DVX70HP01 - DVX70VP01
		V8XE	DVX70EP01

DIFFERENTIAL INDICATORS

Old code	New code	Old code	New code
1E	DLE12HA50P01 - DLE12VA50P01	NM6HA11P01	DEM20HA10P01
E6	DLE20HA50P01 - DLE20VA50P01	NM6HA31P01	DEM20HA30P01
E6E	DLE20EA50P01	NM6HA36P01	DEM20HA31P01
E6H	DLE20HA50P01	NM7HA11P01	DEM50HA10P01
E7	DLE50HA50P01 - DLE50VA50P01	NM7HA21P01	DEM50HA20P01
E7E	DLE50EA50P01	NM7HA31P01	DEM50HA30P01
E7H	DLE50HA50P01	NM7HA32P01	DEM50HA35P01
E8	DLE70HA50P01 - DLE70VA50P01	NM7HC32P01	DEM50HF35P01
E8E	DLE70EA50P01	NM7VA11P01	DEM50VA10P01
E8H	DLE70HA50P01	NM7VC11P01	DEM50VF10P01
E9	DLE95HA50P01 - DLE95VA50P01	NM8HA11P01	DEM70HA10P01
E9E	DLE95EA50P01	NM8HA31P01	DEM70HA30P01
E9H	DLE95HA50P01	NM8HA36P01	DEM70HA32P01
-	-	-	-
J1	DLE12HF50P01 - DLE12VF50P01	NR2HP01	DEA12HA50P01
J6	DLE20HF50P01 - DLE20VF50P01	NR2VP01	DEA12VA50P01
J7	DLE50HF50P01 - DLE50VF50P01	NR6EP01	DEA20EA50P01
J8	DLE70HF50P01 - DLE70VF50P01	NR6HP01	DEA20HA50P01
J9	DLE95HF50P01 - DLE95VF50P01	NR6VP01	DEA20VA50P01
-	-	NR7HP01	DEA50HA50P01
KR21HP01	DLA12HA51P01	NR7VP01	DEA50VA50P01
KR21VP01	DLA12VA51P01	NR8EP01	DEA70EA50P01
KR31HP01	DLA30HA51P01	NR8HP01	DEA70HA50P01
KR61HP01	DLA20HA51P01	NR8VP01	DEA70VA50P01
KR61VP01	DLA20VA51P01	NR9HP01	DEA95HA50P01
KR62HP01	DLA20HA52P01	NR9VP01	DEA95VA50P01
KR62VP01	DLA20VA52P01	-	-
KR71HP01	DLA50HA51P01	U3HP01	DVM30HP01
KR71VP01	DLA50VA51P01	U6HP01	DVM20HP01
KR72HP01	DLA50HA52P01	U6VP01	DVM20VP01
KR72VP01	DLA50VA52P01	U7HP01	DVM50HP01
KR81HP01	DLA70HA51P01	U7VP01	DVM50VP01
KR81VP01	DLA70VA51P01	U8VP01	DVM70VP01
KR82HP01	DLA70HA52P01	-	-
KR91HP01	DLA95HA51P01	1V	DVA12HP01 - DVA12VP01
-	-	V6	DVA20HP01 - DVA20VP01
NE2HTP01	DTA12HF70P01	V6E	DVA20EP01
NE2VSP01	DTA12VF70P01	V6H	DVA20HP01
NE6HSP01	DTA20HF70P01	V7	DVA50HP01 - DVA50VP01
NE6HTP01	DTA20HF70P01	V7E	DVA50EP01
NE6VSP01	DTA20VF70P01	V7H	DVA50HP01
NE6VTP01	DTA20VF70P01	V8	DVA70HP01 - DVA70VP01
NE7HSP01	DTA50HF70P01	V8E	DVA70EP01
NE7HTP01	DTA50HF70P01	V9	DVA95HP01 - DVA95VP01
NE7VSP01	DTA50VF70P01	V9E	DVA95EP01
NE7VTP01	DTA50VF70P01	-	-
NE8HSP01	DTA70HF70P01	Z2HP01	DVM12HP01
NE8HTP01	DTA70HF70P01	Z2VP01	DVM12VP01
NE8VSP01	DTA70VF70P01	Z6EP01	DVM20EP01
NE8VTP01	DTA70VF70P01	Z6HP01	DVM20HP01
NE8VSP01	DTA70VF70P01	Z6VP01	DVM20VP01
NE8VTP01	DTA70VF70P01	Z7HP01	DVM50HP01
NE8VSP01	DTA70VF70P01	Z7VP01	DVM50VP01
NE8VTP01	DTA70VF70P01	Z7XHP01	DVY70HP01
NE9VTP01	DTA95VF70P01	Z8EP01	DVM70EP01
		Z8HP01	DVM70HP01
		Z8VP01	DVM70VP01
		Z9HP01	DVM95HP01