

# LMP 900

SERIES

IN-LINE FILTER

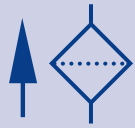


Maximum working pressure 430 psi

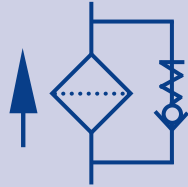
Flow rate to 320 gpm

# LMP900

## SERIES



Filter Symbol  
without bypass



Filter Symbol  
with bypass

The **LMP 900 series** filter has been designed and developed to satisfy the demands of low pressure line applications in the Hydraulic market.

For example:

- In-line & Off-line filtration
- Over-boost filtration
- Test bench
- Return filtration
- Lubrication system

### Technical data

#### Filter body (Materials)

- Head: Aluminium
- Bowl: Aluminium
- By-pass valve: Steel
- DIN 24550 filter element - size 1000

#### Pressure

- Working pressure: 430 psi (3 MPa)
- Test pressure: 640 psi (4,5 MPa)
- Burst pressure: 1280 psi (9 MPa)
- Fatigue test: 1.000.000 cycles  
with pressure impulses from 0 to 430 psi (3 MPa)

#### Working Temperature

- from -25 C to + 110 °C

#### Bypass valve

- Bypass valve setting - 3,5 bar ±10%
- Other pressure settings available.

#### Filter elements - Collapse pressure

- Microfibre elements N series: 145 bar
- Stainless steel square wire mesh M series: 145 bar
- Filtration flow-path: outside to inside.

#### Seals

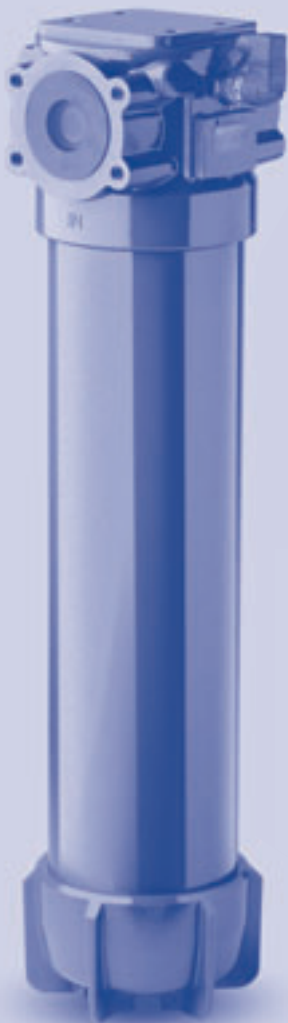
- Standard Buna-N series A
- Viton option series V
- EPDM option series E

#### Weights (lbs)

- LMP900 - 1 47 lbs (21Kg)
- LMP900 - 2 80 lbs (36Kg)

#### Volume of filter

- LMP900 - 1 860 in<sup>3</sup>
- LMP900 - 2 1530 in<sup>3</sup>



## Compatibility with fluids

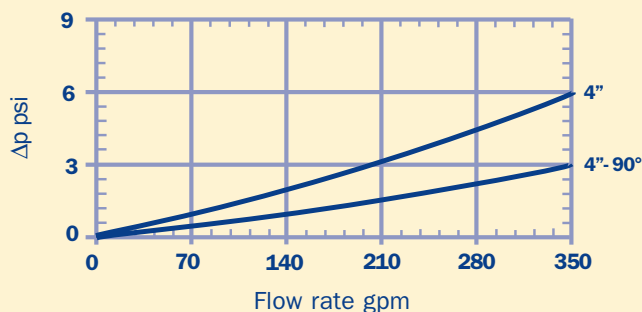
- **Body, compatible for use with:**  
Mineral oil according to ISO 2943 - water-based emulsions-synthetic fluids - water- glycol.
- **Filter elements, compatible for use with mineral oil** according to ISO 2943, synthetic fluids, water-based emulsions and water-glycol.
- **Seals in Nitrile (Buna-N) A series, compatible with:**  
Mineral oil according to ISO 2943 - water-based emulsions-water- glycol.
- **Seals in Viton V series, compatible with:**  
Synthetic fluids type HS-HFDR-HFDS-HFDU

## Technical data

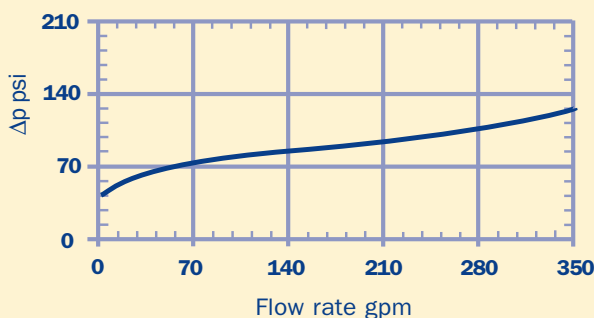
### Housing pressure drop

The curves were obtained using a mineral oil with a density of 0,86 kg/dm<sup>3</sup> according to ISO 3968.

### Housing pressure drop



### Bypass valve pressure drop



## CU 900 - Y Factor

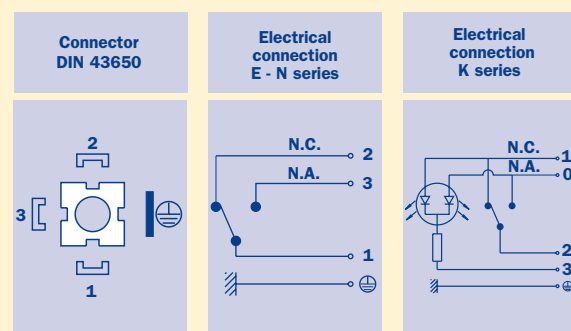
For application with kinematic viscosities other than 150 SUS - see below

"Y" factor for the pressure drop of the individual filter elements

Filter Element	Y Factor filter element N - M series	Filter Length
A03	0,0486	1
A06	0,0495	
A10	0,0270	
A16	0,0243	
A25	0,0222	
M25	0,0111	
A03	0,0230	2
A06	0,0214	
A10	0,0120	
A16	0,0108	
A25	0,0102	
M25	0,0055	

## Electrical

K - E - N Series		
Supply voltage 50/60 Hz	Load	
(V)	Resistive (A)	Inductive (A)
Vca 125 (~)	5	5
Vca 250 (~)	5	5
Vcc 30 (=)	5	3
Vcc 125 (=)	0,5	0,03
Vcc 250 (=)	0,25	0,03



## Filter Selection

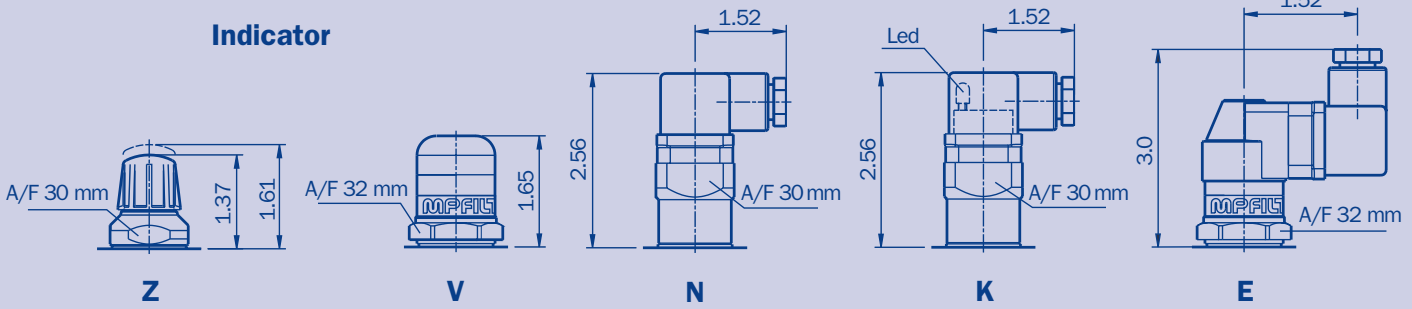
- Δp Total
- Δpc Filter housing
- Δpe Filter element
- Y Factor
- Q gpm = Flow rate
- V1 = Reference viscosity 150 SUS
- V2 = Working viscosity in SUS
- Δp Tot. = Δpc + Δpe
- Δpe = Y x Q x ( V2/V1 )

## Sizing Example

- Q = 160 gpm
- V<sub>2</sub> = 230 SUS at 104° F
- P<sub>max</sub> = 285 psi
- Filtration = 16 μm absolute
- Δp Tot. max = 8.5 psi (recommended)
- Collapse pressure Δp<sub>max</sub> 150 psi
- Δpc = 1.57 psi (\* see diagramm)
- Δpe = 0,0243 x 160 x (230/150) = 5,96 psi
- Δp Tot. = 1.57 + 5.96 = 7.53 psi

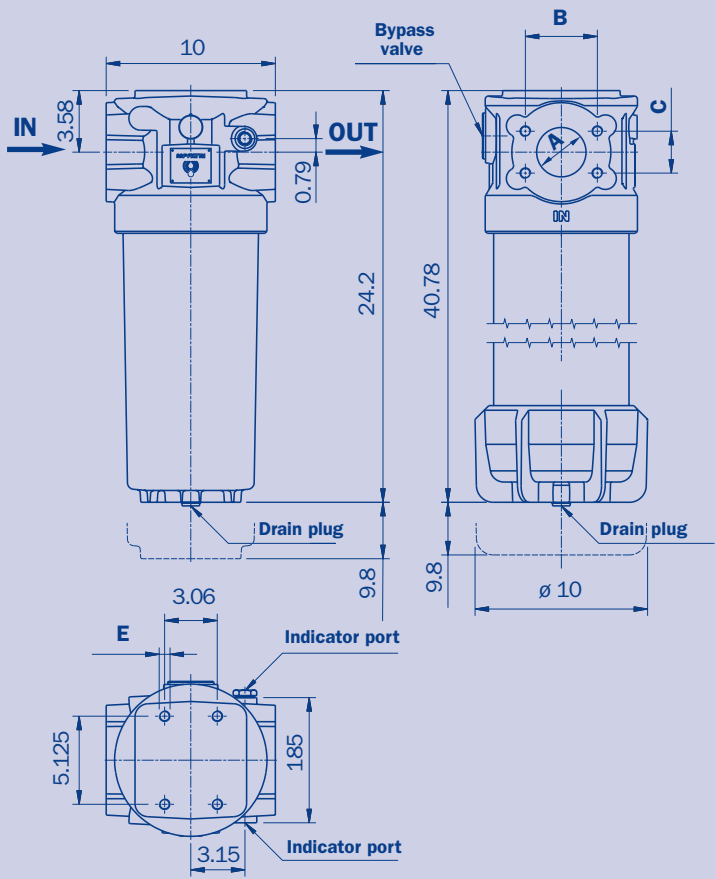
**Filter selected: LMP 900 length. 1**

## Indicator



## Length 1 filter element

## Length 2 filter element



## Filter selection quick reference guide

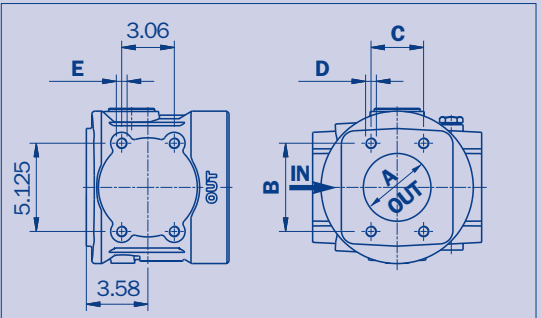
The following filter sizing recommendations are based on using a mineral oil fluid @ 150 SUS (Cīsts) with a maximum filter assembly (housing & filter element) pressure drop of 8.5 psi.

Filter element type	Flow rate gpm N series	Port Size	Filter Length	H
A03	130	4"	1	24.2
A06	145			
A10	200			
A16	210			
A25	230			
M25	265	4"	2	40.78
A03	200			
A06	220			
A10	275			
A16	291			
A25	310			
M25	330			

## Flange connections

A Connection	B	C	D	E (15mm)
3" SAE-3000 psi/M	4.19	2.44	M16	M16
3" SAE-3000 psi/UNC	4.19	2.44	5/8" UNC	5/8" UNC
4" SAE-3000 psi/M	5.125	3.06	M16	M16
4" SAE-3000 psi/UNC	5.125	3.06	5/8" UNC	5/8" UNC

## P02 Option - OUTLET port at 90°



## Filter Assembly LMP

1 2 3 4 5 6 7 9<sub>a</sub> 10

Example: LMP 900 2 B A F1 A 10 N P01 / V7

## Filter element CU 900

6 8 9<sub>b</sub>

Example: CU 900 A 10 N P01

### 1 - Size

**900** LMP 900

### 2 - Filter Length

**1**  
**2**

### 3 - Valve

**S** Without bypass  
**B** With bypass

### 4 - Seals

**A** Buna-N  
**V** Viton  
**E** EPDM

### 5 - Port options

Type

**F1** 3" SAE 3000 PSI/M  
**F2** 3" SAE 3000 PSI/UNC  
**F3** 4" SAE 3000 PSI/M  
**F4** 4" SAE 3000 PSI/UNC

### 6 - Filter Element

**A03** Inorganic Microfibre 3 µm  
**A06** Inorganic Microfibre 6 µm  
**A10** Inorganic Microfibre 10 µm β<sub>x</sub>(c) ≥ 1000  
**A16** Inorganic Microfibre 16 µm  
**A25** Inorganic Microfibre 25 µm  
**M25** Wire mesh 25 µm

### 7 - Elements collapse pressure

**N** 10 bar

### 8 - Filter element seals

**N** Buna-N  
**V** Viton  
**E** EPDM

### 9 - Options

#### a) Filter

**P01** MP Filtri standard  
**P02** 90° OUT connection  
**P03** Customer request

#### b) Filter Element

**P01** MP Filtri standard  
**P02** Customer request

### 10 - Filter condition indicator

**Z6** Visual (pop-up) 30 bar  
**Z7** Visual (pop-up) 75 bar  
**V6** Visual 30 bar  
**V7** Visual 75 bar  
**N6** Electrical 30 bar  
**N7** Electrical 75 bar  
**E6** Visual-electrical 30 bar  
**E7** Visual- electrical 75 bar  
**K6\*** Visual- electrical 30 bar  
**K7\*** Visual- electrical 75 bar

\* { 1 - 24 Volt  
2 - 110 Volt  
3 - 220 Volt

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

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