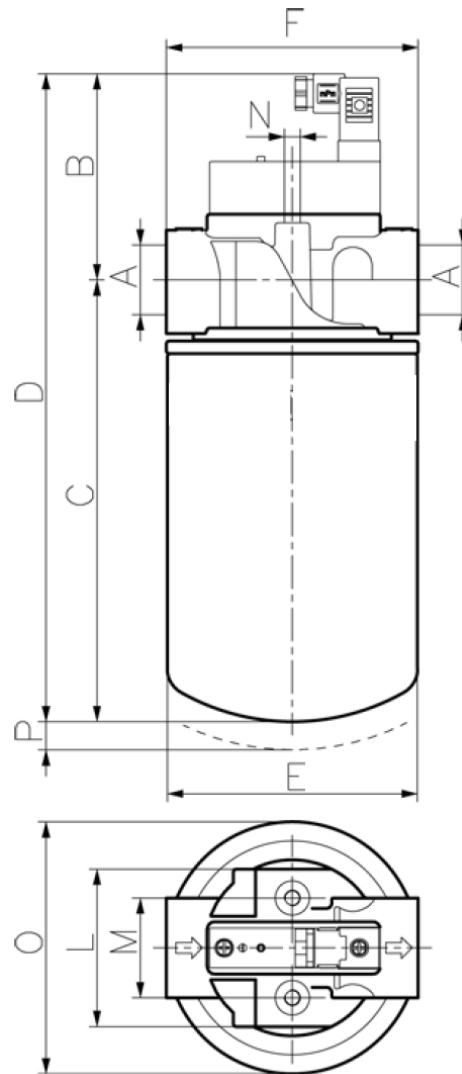


Series SPM 35-120  
 25 BAR (350 PSI)  
 20 BAR (290 PSI) for SPM 120



**Dimensions:**

type	A	B (O4)	B (E9)	B (E11)	C	D	E	F	L	M	N	O	P
SPM 35	½"	43 [1.69]	78 [3.07]	95 [3.74]	168 [6.61]	246 [9.69]	96 [3.78]	95 [3.74]	60 [2.36]	38 [1.5]	M6	96 [3.78]	20 [0.79]
SPM 55	1"	43 [1.69]	78 [3.07]	95 [3.74]	233 [9.17]	311 [12.24]	96 [3.78]	95 [3.74]	60 [2.36]	38 [1.5]	M6	96 [3.78]	20 [0.79]
SPM 120	1 ¼"	51 [2.01]	86.5 [3.41]	95 [3.74]	210 [8.27]	297 [11.69]	138 [5.43]	140 [5.51]	94 [3.7]	50 [1.97]	M8	138 [5.43]	40 [1.57]

Dimensions: mm [inches]

Designs and performance values are subject to change.

# Spin-On Filter

## Series SPM 35-120

### 25 BAR (350 PSI), 20 BAR (290 PSI)

### for SPM120

#### Description:

Eaton's spin-on filters are designed to provide one of the highest cleanliness levels for hydraulic systems, featuring cartridges that are engineered to fit into many leading filter systems on the market.

Series SPM filters are available with the following features:

- Compatible with a variety of mediums such as oils, fuels, emulsions, glycol water and synthetic fluids
- Cartridge pressure is 25 bar (350 psi) & 20 bar (290 psi) for SPM120 size
- Cartridge replacement does not require any tooling or equipment to optimize maintenance efficiency
- Other configurations are available upon request

Eaton's spin-on filters are manufactured and tested according to ISO 2941, ISO 3723 and ISO 2942.

#### 1. Type index:

##### 1.1. Complete filter: (ordering example)

**SPM. 35. 10VG. G. 3. R. E1**

1	2	3	4	5	6	7
---	---	---	---	---	---	---

##### 1 series:

SPM = medium pressure spin-on filter

##### 2 Nominal size: 35, 55, 120

##### 3 filter-material:

25VG, 10VG, 6VG, 3VG microglass

##### 4 process connection:

G = BSPP thread connection

NPT = NPT thread connection

##### 5 process connection size:

3 = 1/2" (SPM 35)

5 = 1" (SPM 55)

6 = 1 1/4" (SPM 120)

##### 6 bypass valve:

- = without

R = bypass valve filter Δp1.75 BAR ( 25 PSI)

##### 7 clogging indicator:

- = without

O4 = visual differential 1.5 BAR (22 PSI)

E9.1,5 = electrical differential 1.5 BAR (22 PSI)

E11.1,5 = visual-electrical 1.5 BAR (22 PSI)

##### 1.2. Filter element: (ordering example)

**01SM. 35. 10VG**

1	2	3
---	---	---

##### 1 series

SM = spin-on cartridge for medium pressure filter

##### 2 nominal size: 35, 55, 120

##### 3 filter-material:

25VG, 10VG, 6VG, 3VG microglass

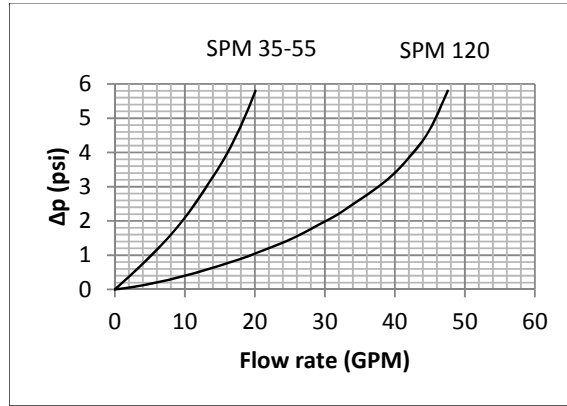
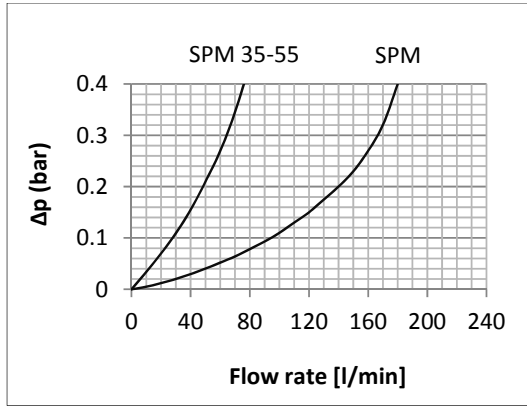
## Technical data:

operating temperature:	-25°C to +110°C (-13°F to +230°F)
operating medium	mineral oil, other media on request
max. operating pressure:	25 BAR ( 350 PSI), 20 BAR (290 PSI)
opening pressure by-pass valve:	$\Delta p$ 1.75 BAR (25 PSI)
gasket:	Nitrile (NBR)

Classified under the Pressure Equipment Directive 2014/68/EC for mineral oil (fluid group 2), Article 4, Para. 3.  
 Classified under ATEX Directive 2014/34/EC according to specific application (see questionnaire sheet-no. 34279-4).

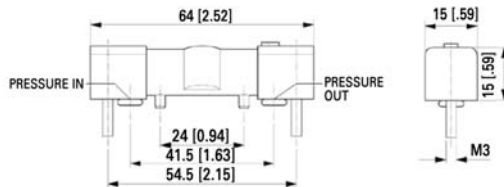
## Pressure drop flow curves:

Curves are calculated in accordance with ISO 3968 and are valid for clean filtering elements.  
 $\Delta P$  changes along with the density in presence of an eddy flow, and along with the dynamic viscosity in presence of a laminar flux.  
 Curves are valid for mineral oils with density of 0,86 kg/dm<sup>3</sup> and a kinematic viscosity of 30 mm<sup>2</sup>/sec (cSt) (139 SUS).  
 When choosing the filtering medium consider the pressure losses deriving from the flow rate:  
 Between 0,3-0,5 bar (4,35-7,25 psi) for filters fitted on return line.  
 Between 1-1,5 bar (14,5-22 psi) for filters fitted on pressure line.  
 (The total pressure drop of assembly is to be calculated by sum of housing  $\Delta p$  and the element  $\Delta p$ )

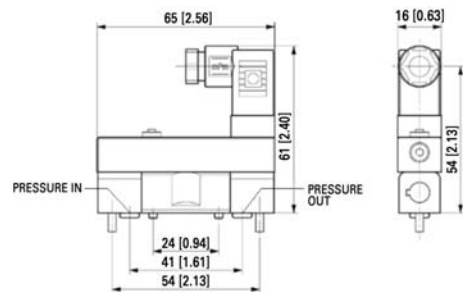


## Clogging Indicator:

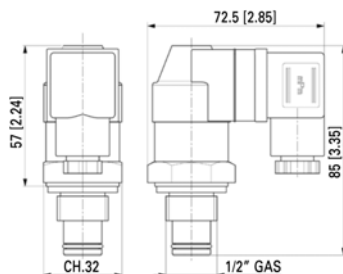
Dimensions: mm [inches]



Type:	O4 (visual differential)
Case:	Trogramit
Gasket:	o-ring NBR (viton on request)
Max working temperature:	110°C (+230°F)
Setting:	1.5 bar (22 psi)

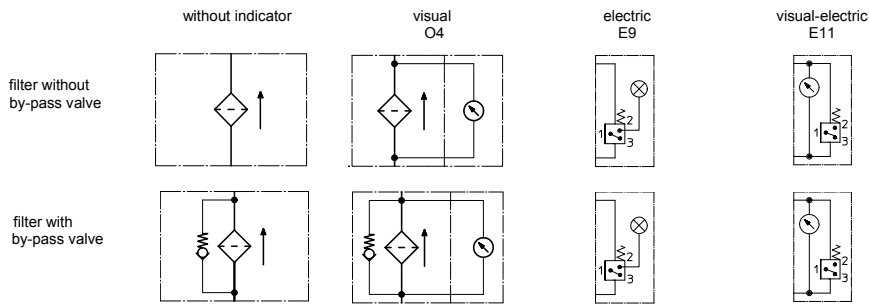


Type:	E9 (electrical differential)
Case:	Trogramit
Max switched voltage:	200 V (DC) – 300 V (AC)
Max switched current:	1.5 A
Protection rate:	IP65
Gasket:	o-ring NBR (viton on request)
Max working temperature:	125°C (+257°F)
Setting:	1.5 bar (22 psi)



Type:	E11 (visual-electrical)
Case:	brass
Gasket:	bonded seal
Max switched voltage:	250 V
Max switched current:	5 A
Protection rate:	IP65
Setting:	1.5 bar (22 psi)

## Symbols:



## Test methods:

Filter elements are tested according to the following ISO standards:

ISO 2941	Verification of collapse/burst resistance
ISO 2942	Verification of fabrication integrity
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

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