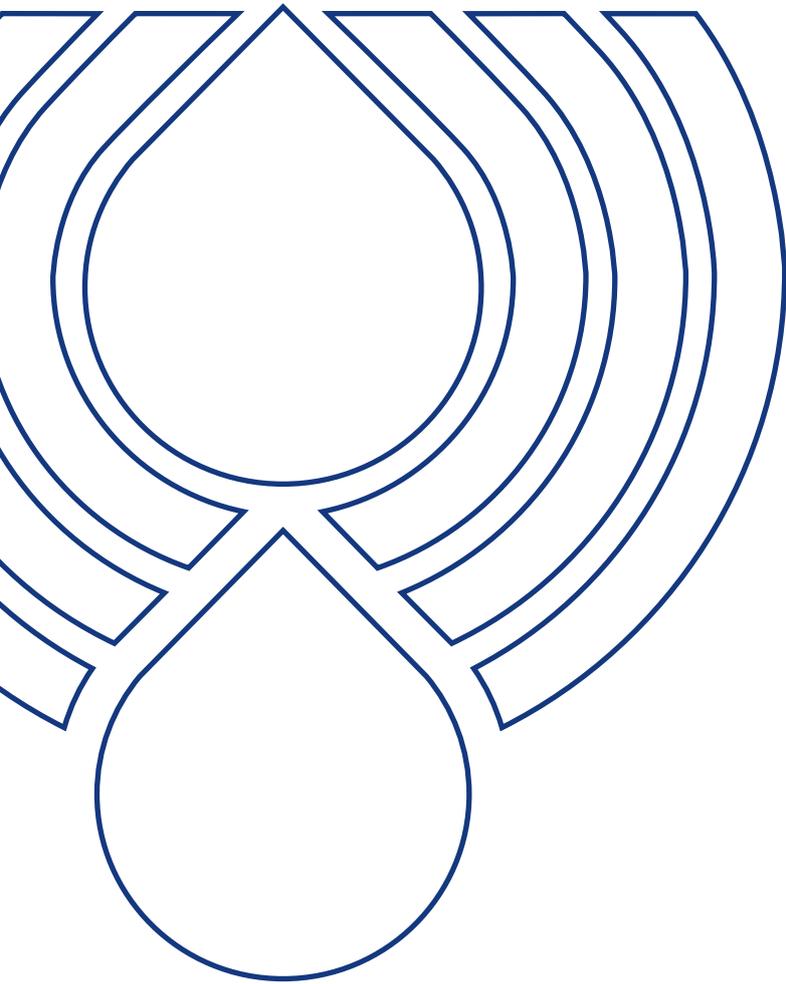


# TANK ACCESSORIES



PASSION TO PERFORM







## A WORLDWIDE LEADER IN THE FIELD OF HYDRAULIC FILTRATION EQUIPMENT.

Our company started life in 1964, when Bruno Pasotto decided to attempt to cater for the requests of a market still to be fully explored, with the study, design, development, production and marketing of a vast range of filters for hydraulic equipment, capable of satisfying the needs of manufacturers in all sectors. The quality of our products, our extreme competitiveness compared with major international producers and our constant activities of research, design and development has made us a worldwide leader in the field of hydraulic circuit filtering. Present for over 50 years in the market, we have played a truly decisive role in defining our sector, and by now we are a group capable of controlling our entire chain of production, monitoring all manufacturing processes to guarantee superior quality standards and to provide concrete solutions for the rapidly evolving needs of customers and the market.

## MARKET LEADER



Our work is based on a skillful interaction between advanced technology and fine workmanship, **customizing products according to specific market requests**, focusing strongly on innovation and quality, and following every step in the manufacturing of both standard and special products, fully respecting customer expectations.



Our customer-oriented philosophy, which enables us to satisfy all customer requests **rapidly and with personalized products**, makes us a **dynamic and flexible enterprise**. The possibility of constantly controlling and monitoring the entire production process is essential to allow us to guarantee the quality of our products.

## WORLDWIDE PRESENCE

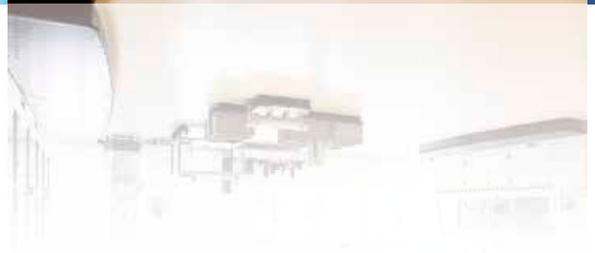
Our foreign Branches enable us to offer a diversified range of products that allow us to successfully face the aggressive challenge of international competition, and also to maintain a stable presence at a local level.

The Group boasts **8** business branches



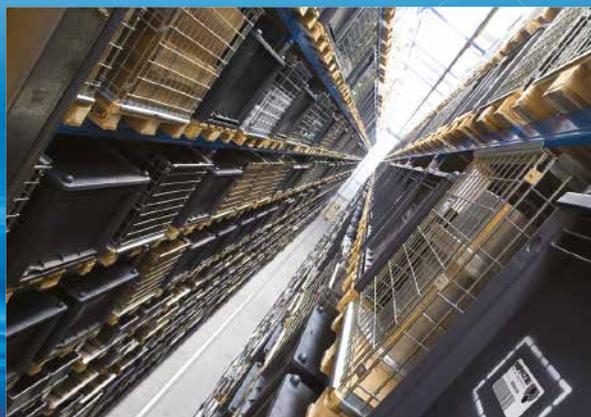
## TECHNOLOGY

Our constant **quest for excellence in quality and technological innovation** allows us to offer only the best solutions and services for applications in many fields, including general industry, test rigs, lubrication, heavy engineering, renewable energies, naval engineering, offshore engineering, aviation systems, emerging technologies and mobile plant (i.e. tractors, excavators, concrete pumps, platforms).



## AND PRODUCTION

Our high level of technological expertise means **we can rely entirely on our own resources, without resorting to external providers.** This in turn enables us to satisfy a growing number of customer requests, also exploiting our constantly updated range of machines and equipment, featuring **fully-automated workstations** capable of **24-hour production.**





### SUCTION FILTERS

Flow rates  
up to 875 l/min

Mounting:  
- Tank immersed  
- In-Line  
- In tank with  
shut off valve  
- In tank  
with flooded suction

### RETURN FILTERS

Flow rates  
up to 3000 l/min

Pressure  
up to 20 bar

Mounting:  
- In-Line  
- Tank top  
- In single  
and duplex designs

### RETURN / SUCTION FILTERS

Flow rates  
up to 300 l/min

Pressure  
up to 80 bar

Mounting:  
- In-Line  
- Tank top

### SPIN-ON FILTERS

Flow rates  
up to 365 l/min

Pressure  
up to 35 bar

Mounting:  
- In-Line  
- Tank top

### LOW & MEDIUM PRESSURE FILTERS

Flow rates  
up to 3000 l/min

Pressure  
up to 80 bar

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

### HIGH PRESSURE FILTERS

Flow rates  
up to 750 l/min

Pressure from 110 bar  
up to 560 bar

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

## PRODUCT RANGE

MP Filtri can offer a vast and articulated range of products for the global market, suitable for all industrial sectors using hydraulic equipment.

This includes filters (suction, return, return/suction, spin-on, pressure, stainless steel pressure) and structural components (motor/pump bell-housings, transmission couplings, damping rings, foot brackets, aluminium tanks, cleaning covers).

We can provide all the skills and solutions required by the modern hydraulics industry to monitor contamination levels and other fluid conditions.

Mobile filtration units and a full range of accessories allow us to supply everything necessary for a complete service in the hydraulic circuits.



### STAINLESS STEEL HIGH PRESSURE FILTERS

Flow rates up to 125 l/min  
Pressure from 320 bar  
up to 1000 bar

Mounting:

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

### CONTAMINATION MONITORING PRODUCTS

- Online, in-line particle counters
- Off-line bottle sampling products
- Fully calibrated using relevant ISO standards
- A wide range of variants to support fluid types and communication protocols

### MOBILE FILTRATION UNITS

Flow rates from 15 l/min  
up to 200 l/min

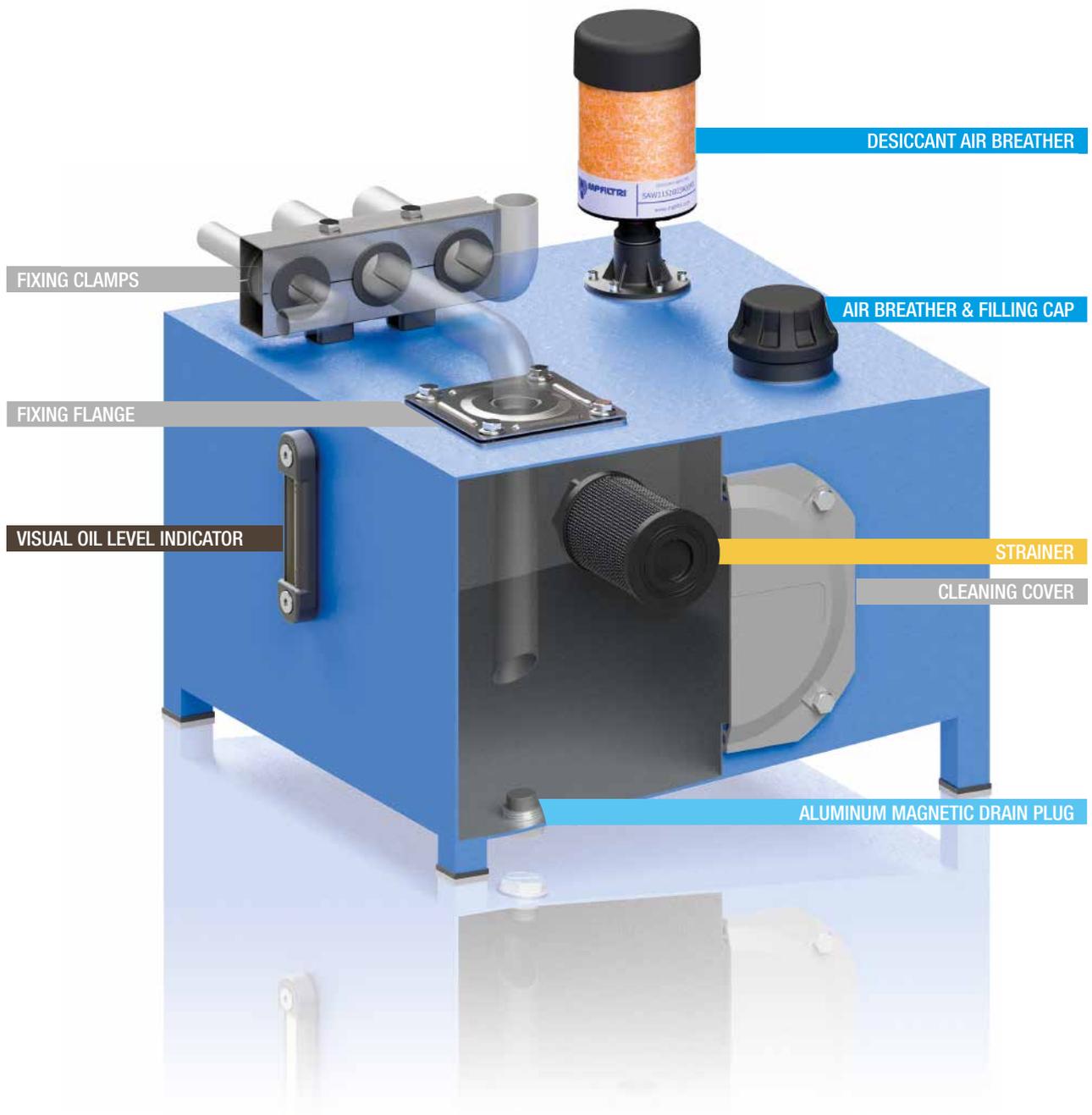
### POWER TRANSMISSION PRODUCTS

- Aluminium bell-housings for motors from 0.12 kW to 400 kW
- Couplings in Aluminium Cast Iron - Steel
- Damping rings
- Foot bracket
- Aluminium tanks
- Cleaning covers

### TANK ACCESSORIES

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

# TANK ACCESSORIES



## 1 page INTRODUCTION

1	COMPANY
6	PRODUCT RANGE

## 10 page STRAINERS

13	STR & MPA - MPM	Submerged suction filter, with bypass or magnetic column
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## 20 page AIR BREATHERS AND FILLER PLUGS

23	SAP 054-075 - SA	Air breathers
29	SAW 115	Desiccant air breathers
33	SCS	Metal air breathers with interchangeable filter element
39	SME 1 - SMF 1 - SML 1	Risers for breathers and filler caps installation
45	TA 46 - TAP 50 - SAP 50	Filling cap, air breather & filling cap
53	TA 80	Filling cap
57	TAP 90	Air breather & filling cap
63	TAP 114	Air breather & filling cap
67	TAP 115 & SAP 115	Filling cap, air breather & filling cap

## 72 page FILLER AND DRAIN PLUGS

75	TC 50	Nylon filler plug
79	TKT - TSD	Nylon filler plugs
79	TKM	Aluminium magnetic drain plug

## 86 page VISUAL OIL LEVEL INDICATORS

89	LCP - LCC	Spy eyes
95	LVA - LVU	Visual oil level indicator

## 100 page ELECTRICAL OIL LEVEL INDICATORS

103	LEN - LEG - LET - LEM - LEU	Electrical oil level indicator
115	LVK	Electrical and visual oil level indicator

## 120 page ACCESSORIES

123	EM1	Gauge isolator valves
129	SVM	Gauge isolator valves
133	FTA - FTR	Oil tank fixing flange
137	SFT	Fixing clamps
143	OB	Cleaning covers
149	SE10LT	Aluminium tanks

**Strainers are used as safety filters to protect pumps from gross contamination which can cause them to grip.**





# STR & MPA - MPM series

Flow rate up to 875 l/min



# STR & MPA-MPM GENERAL INFORMATION

## Description

## Technical data

### Strainers

**Flow rate up to 875 l/min**

#### STR

STR is a range of suction strainers for protection of the downstream pump against the coarse contamination.

They are placed below the oil level directly connected to the suction line of the pump.

#### Available features:

- Female threaded connections up to 3", for a maximum flow rate of 875 l/min
- Bypass valve, to relieve excessive pressure drop across the filter media

#### Common application:

- Mobile machines (Construction and Agriculture machines)
- Industrial equipment

#### MPA - MPM

MPA and MPM are ranges of suction strainers for protection of the downstream pump against the coarse contamination.

They are placed below the minimum oil level, directly connected to the suction line of the pump.

The robust design allows the use of these filters in any heavy duty application.

#### Available features:

- Female threaded connections up to 3", for a maximum flow rate of 875 l/min
- Magnetic column (MPM), to hold the ferrous particles

#### Common application:

Industrial equipment

#### STR materials

- 1 - Connection: Polyamide, GF reinforced
- 2 - Core tube: Tinned steel
- 3 - Wire mesh
- 4 - End cap: Polyamide, GF reinforced
- 5 - Bypass valve: Polyamide, GF reinforced - Steel

#### MPA - MPM materials

- 1 - Connection: Aluminium
- 2 - Magnetic column
- 3 - Tie rod: Galvanized steel
- 4 - End cap: Galvanized steel
- 5 - Core tube: Galvanized steel
- 6 - Filter media: Wire mesh
- 7 - Bottom: Galvanized steel
- 8 - Washer: Galvanized steel
- 9 - Self-locking nut: Galvanized steel - Nylon

#### Bypass valve

Opening pressure 30 kPa (0.3 bar)

#### Elements

Fluid flow through the filter element from OUT to IN.

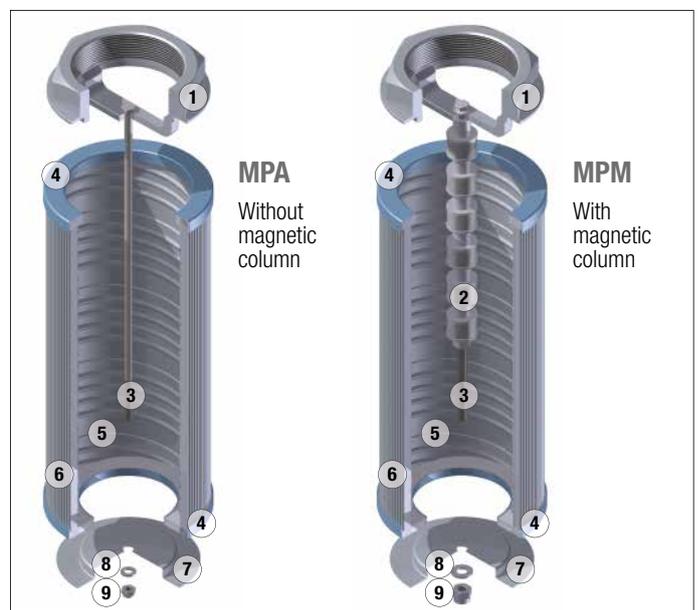
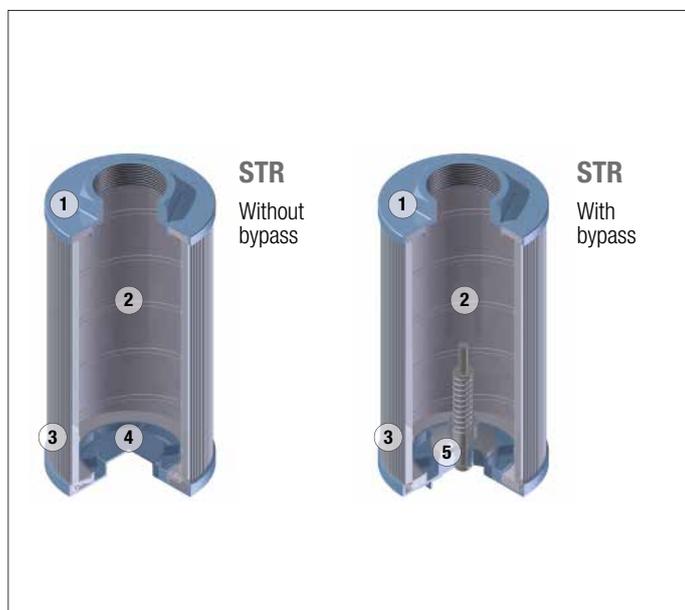


#### Temperature

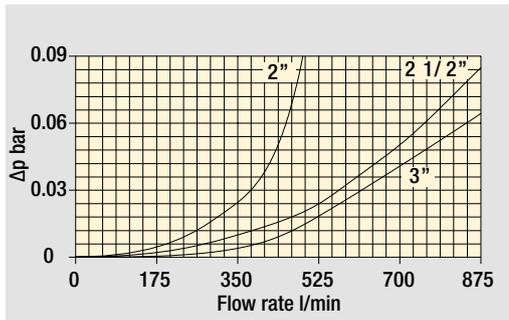
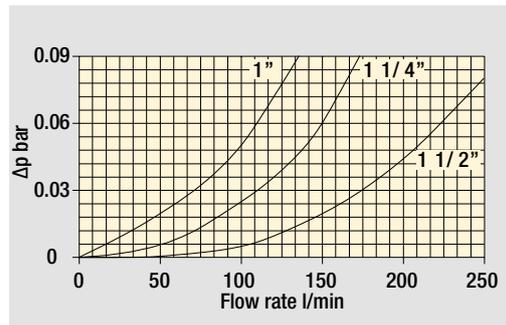
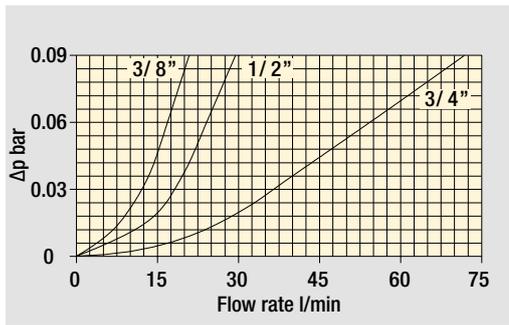
From -25 °C to +110 °C

## Weights [kg]

Filter series	
STR	see page 17
MPA - MPM	see page 19



Filters pressure drop  $\Delta p$   
in function of connection type



The curves are plotted using mineral oil with density of  $0.86 \text{ kg/dm}^3$  in compliance with ISO 3968.  
 $\Delta p$  varies proportionally with density.

### Flow rates [l/min]

Filter series	Thread	l/min
<b>STR &amp; MPA - MPM</b>	3/8"	19
	1/2"	28
	3/4"	67
	1"	126
	1 1/4"	167
	1 1/2"	258
	2"	480
	2 1/2"	854
	3"	995

### Hydraulic symbols

Filter series	Style S	Style B
<b>STR</b>	•	•
<b>MPA - MPM</b>	•	

### Maximum flow rate for a complete suction filter with a pressure drop $\Delta p = 0.08 \text{ bar}$ .

The reference fluid has a kinematic viscosity of  $30 \text{ mm}^2/\text{s}$  (cSt)  
and a density of  $0.86 \text{ kg/dm}^3$ .

For different pressure drop or fluid viscosity we recommend to use  
our selection software available on [www.mpfiltri.com](http://www.mpfiltri.com).

Please, contact our Sales Department for further additional information.

### COMPLETE FILTER

#### Element series and size

<b>STR045</b>
<b>STR050</b>
<b>STR065</b>
<b>STR070</b>
<b>STR086</b>
<b>STR100</b>
<b>STR140</b>
<b>STR150</b>

Configuration example 1: 

STR045	1	B	G1	M60	P01
--------	---	---	----	-----	-----

Configuration example 2: 

STR100	4	S	G2	M250	P01
--------	---	---	----	------	-----

#### Connection type

	STR045	STR050	STR065	STR070	STR086	STR100	STR140	STR150
<b>1</b>	3/8"	3/8"	1/2"	1/2"	1 1/2"	1 1/4"	1 1/2"	2"
<b>2</b>	1/2"	1/2"	3/4"	3/4"	2"	1 1/4"	2"	2 1/2"
<b>3</b>	-	-	3/4"	3/4"	1 1/2"	1 1/2"	2"	3"
<b>4</b>	-	-	1"	1"	2"	2"	2 1/2"	-
<b>5</b>	-	-	-	-	1 1/2"	1 1/2"	3"	-
<b>6</b>	-	-	-	1/2"	2"	-	3"	-

#### Valves

<b>S</b>	Without bypass
<b>B</b>	With bypass 0.3 bar

#### Thread type

<b>G1</b>	Thread GAS
<b>G2</b>	Thread NPT

#### Filtration rating (filter media)

<b>M25</b>	Wire mesh	25 µm
<b>M60</b>	Wire mesh	60 µm
<b>M90</b>	Wire mesh	90 µm
<b>M250</b>	Wire mesh	250 µm

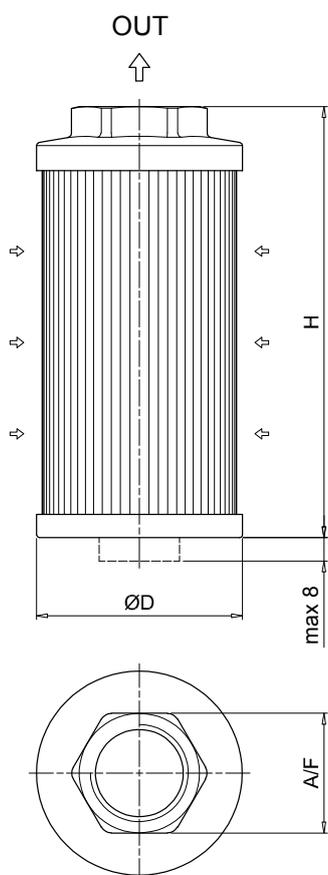
### OTHER INFORMATION

#### Conditions of packaging

Filter size	Pcs. per box
<b>045</b>	12
<b>050</b>	12
<b>065</b>	6
<b>070</b>	6
<b>086</b>	6
<b>100</b>	6
<b>140</b>	1
<b>150</b>	1

#### Execution

<b>P01</b>	MP Filtri standard
<b>Pxx</b>	Customized



STR						
Filter size	Connection type	Thread	ØD [mm]	H [mm]	A / F [mm]	Weight [kg]
<b>045</b>	1	3/8"	46	105	30	0.15
	2	1/2"	46	105	30	0.19
<b>050</b>	1	3/8"	52	79	30	0.11
	2	1/2"	52	79	30	0.11
<b>065</b>	1	1/2"	65	110	41	0.19
	2	3/4"	65	110	41	0.22
	3	3/4"	65	144	41	0.24
	4	1"	65	144	41	0.22
<b>070</b>	1	1/2"	70	95	41	0.18
	2	3/4"	70	95	41	0.17
	3	3/4"	70	141	41	0.23
	4	1"	70	141	41	0.22
	6	1/2"	70	141	41	0.24
<b>086</b>	1	1 1/2"	86	143	69	0.33
	2	2"	86	143	69	0.30
	3	1 1/2"	86	201	69	0.43
	4	2"	86	201	69	0.40
	5	1 1/2"	86	261	69	0.53
	6	2"	86	261	69	0.50
<b>100</b>	1	1 1/4"	99	137	69	0.47
	2	1 1/4"	99	227	69	0.58
	3	1 1/2"	99	227	69	0.55
	4	2"	99	227	69	0.51
	5	1 1/2"	99	137	69	0.43
<b>140</b>	1	1 1/2"	130	160	69	0.70
	2	2"	130	160	69	0.68
	3	2"	130	262	69	0.94
	4	2 1/2"	130	272	101	1.10
	5	3"	130	272	101	1.00
	6	3"	130	330	101	1.17
<b>150</b>	1	2"	150	150	70	0.34
	2	2 1/2"	150	212	90	0.37
	3	3"	150	272	100	0.40

# MPA-MPM

## Designation & Ordering code

### COMPLETE FILTER

#### Element series

**MPA** Without magnetic column

**MPM** With magnetic column

Configuration example 1: **MPA** **030** **G1** **M60** **P01**

Configuration example 2: **MPM** **430** **G2** **M250** **P01**

#### Connections

**012** 3/8"

**015** 1/2"

**025** 1/2"

**030** 3/4"

**045** 3/4"

**050** 1"

**075** 1"

**095** 1 1/4"

**120** 1 1/4"

**150** 1 1/2"

**180** 1 1/2"

**220** 2"

**280** 2"

**300** 2 1/2"

**380** 2"

**430** 3"

#### Thread type

**G1** Thread GAS

**G2** Thread NPT

#### Filtration rating (filter media)

**M25** Wire mesh 25 µm

**M60** Wire mesh 60 µm

**M90** Wire mesh 90 µm

**M250** Wire mesh 250 µm

#### Execution

**P01** MP Filtri standard

**Pxx** Customized

### OTHER INFORMATION

#### Conditions of packaging

Size Pcs. per box

**012** 12

**015** 6

**025** 6

**030** 6

**045** 6

**050** 6

**075** 6

**095** 6

**120** 6

**150** 6

**180** 1

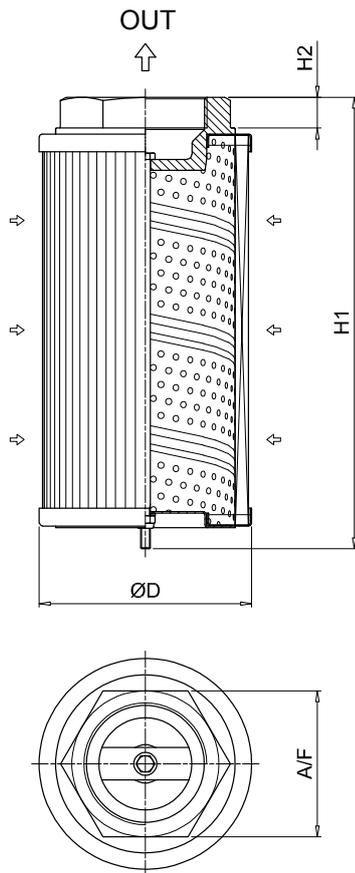
**220** 1

**280** 1

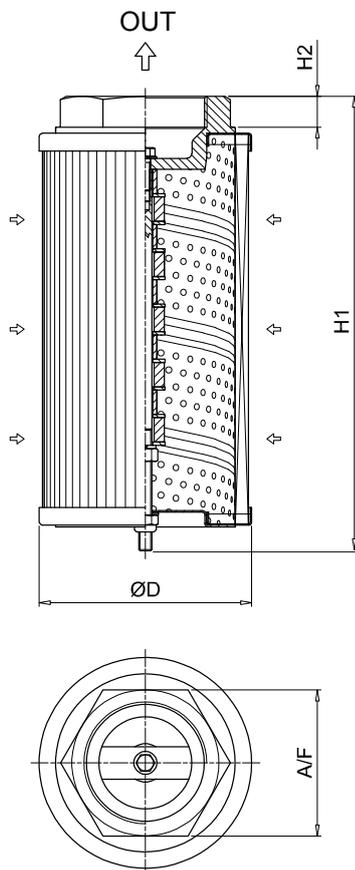
**300** 1

**380** 1

**430** 1



MPA						
Filter size	Thread	ØD [mm]	H1 [mm]	H2 [mm]	A/F [mm]	Weight [kg]
012	3/8"	50	98	16	28	0.17
015	1/2"	50	98	16	28	0.17
025	1/2"	70	113	16	28	0.27
030	3/4"	70	115	18	42	0.36
045	3/4"	70	160	18	42	0.39
050	1"	70	160	18	42	0.35
075	1"	99	145	18	42	0.54
095	1 1/4"	99	148	20	60	0.63
120	1 1/4"	99	239	20	60	0.95
150	1 1/2"	99	239	20	60	0.91
180	1 1/2"	130	174	20	60	0.98
220	2"	130	162	13	80	1.00
280	2"	130	272	13	80	1.60
300	2 1/2"	130	281	20	90	1.67
380	2"	130	322	13	80	1.60
430	3"	130	335	22	106	1.93



MPM						
Filter size	Thread	ØD [mm]	H1 [mm]	H2 [mm]	A/F [mm]	Weight [kg]
012	3/8"	50	98	16	28	0.17
015	1/2"	50	98	16	28	0.17
025	1/2"	70	113	16	28	0.27
030	3/4"	70	115	18	42	0.36
045	3/4"	70	160	18	42	0.39
050	1"	70	160	18	42	0.35
075	1"	99	148	18	42	0.54
095	1 1/4"	99	154	20	60	0.63
120	1 1/4"	99	244	20	60	0.95
150	1 1/2"	99	244	20	60	0.91
180	1 1/2"	130	174	20	60	0.98
220	2"	130	163	13	80	1.00
280	2"	130	273	13	80	1.60
300	2 1/2"	130	282	20	90	1.67
380	2"	130	323	13	80	1.60
430	3"	130	336	22	106	1.93



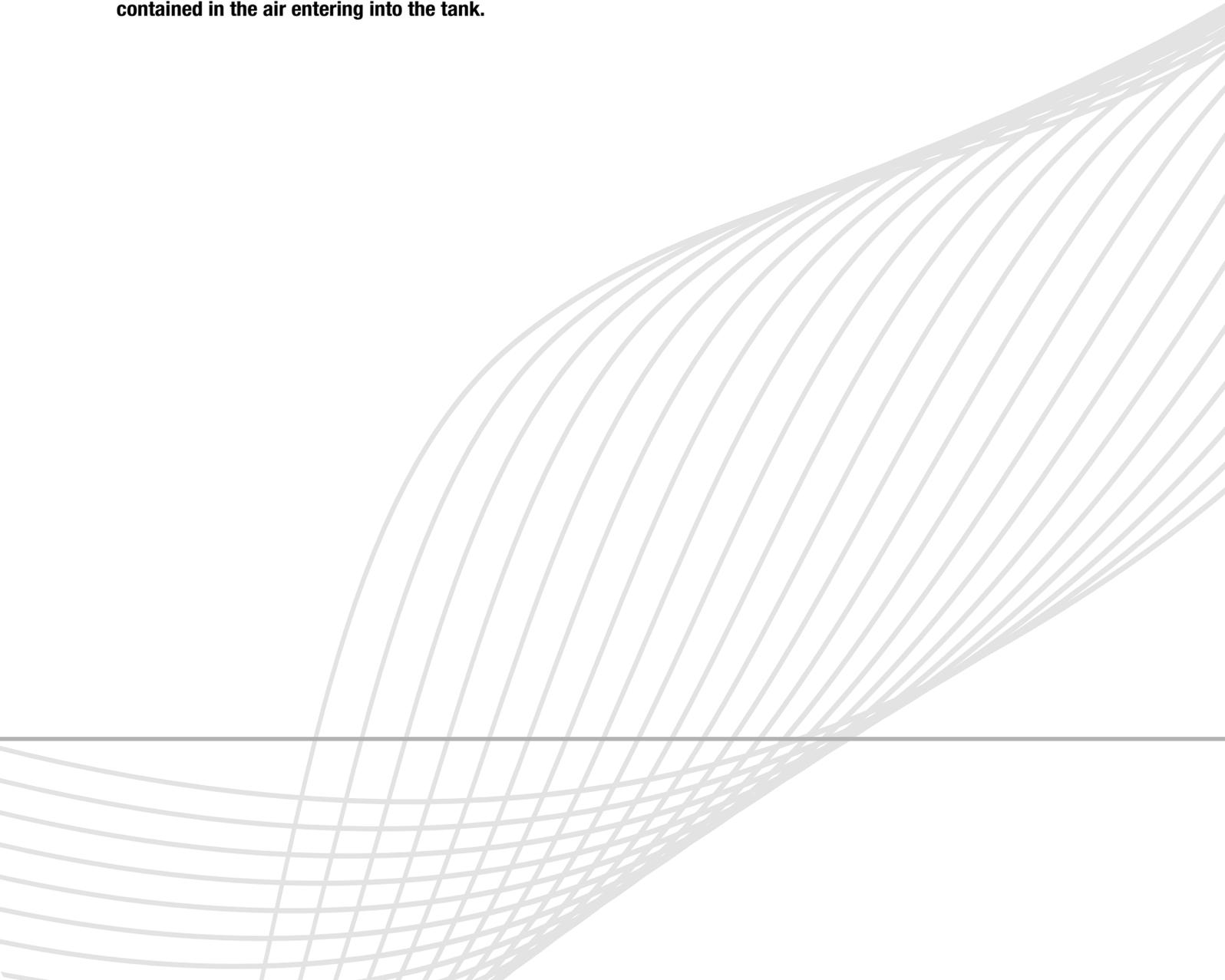
**The complete series of air breathers and filler plugs makes it possible to meet all market demands.**

**Metal and plastic versions suitable for use on mobile equipment are available.**

**Filler plugs perform a dual function, air filtration at the tank inlet and prefiltration of the fluid by means of the basket, in order to prevent the ingress of foreign material into the tank during filling and top-up operations.**

**Correct operation of breather filters makes for longer life of the filter cartridges installed in the hydraulic circuit, and in applications where high level of contamination are present.**

**Desiccant breathers are also available to absorb free water and moisture contained in the air entering into the tank.**



# Air Breathers & Filler Plugs



SAP 054-075 - SA	page 23
SAW 115	29
SCS	33
SME 1 - SMF 1 - SML 1	39
TA 46 - TAP 50 - SAP 50	45
TA 80	53
TAP 90	57
TAP 114	63
TAP 115 & SAP 115	67



# SAP 054-075 series

Nylon air breather filter

# SA series

Metal air breather filter



## Technical data

### Air breathers & Filler plugs

#### Nylon air breather filter Flow rate up to 400 l/min

SAP is a range of plastic air breathers for protection of the tank against the solid contamination contained into the air. They are usually directly fitted on the tank.

#### Available features:

- Male threaded connections up to 3/4", for a maximum flow rate of 400 l/min
- Replaceable filter element
- Fine cellulose filtration, to get a good cleanliness level into the reservoir
- Polyester media is an option for heavy environmental conditions (high humidity, sand ...)

#### Common applications:

- Mobile machines (construction and agriculture machines)
- Industrial equipment

#### Flow rate $\Delta p$ 0.02 bar

	Flow rate [l/min]	
	Filtration rating	L03
<b>SAP054</b>	200	250
<b>SAP075</b>	350	400

#### Materials

- Cover: Nylon
- Connection: Nylon
- Filter element: Resin impregnate paper

#### Temperature

From -25 °C to +100 °C

#### Weight

SAP 054 - 0.06 kg  
SAP 075 - 0.15 kg



## Designation & Ordering code

### COMPLETE AIR BREATHER

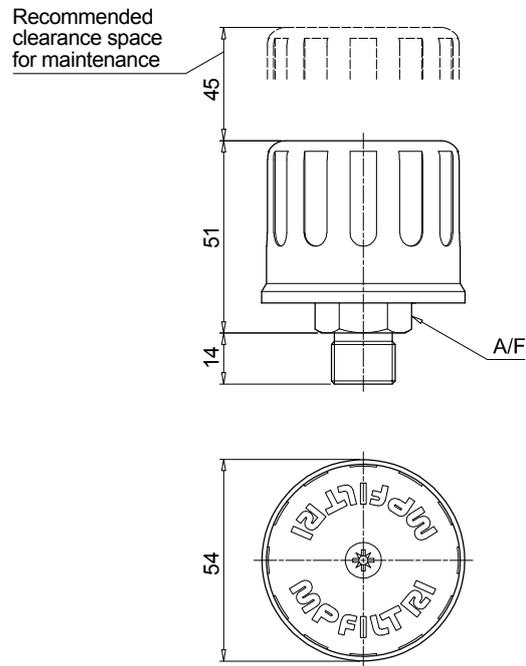
Series and size	Configuration example : SAP054 G2 L10 A P01				
<b>SAP054</b>					
<b>SAP075</b>					
Connections to the tank	SAP054	SAP075			
<b>G1</b>	G 3/8"	G 1/2"			
<b>G2</b>	G 1/2"	G 3/4"			
Filtration rating					
<b>L03</b>	Resin impregnate paper	3 µm			
<b>L10</b>	Resin impregnate paper	10 µm			
Seals					
<b>A</b>	NBR				
			Execution		
			<b>P01</b>	MP Filtri standard	
			<b>Pxx</b>	Customized	

### FILTER ELEMENT

Filter element series and size	Configuration example : A4 L10 P01			
<b>A4</b>	SAP054			
<b>A7</b>	SAP075			
Filtration rating				
<b>L03</b>	Resin impregnate paper	3 µm		
<b>L10</b>	Resin impregnate paper	10 µm		
			Execution	
			<b>P01</b>	MP Filtri standard
			<b>Pxx</b>	Customized

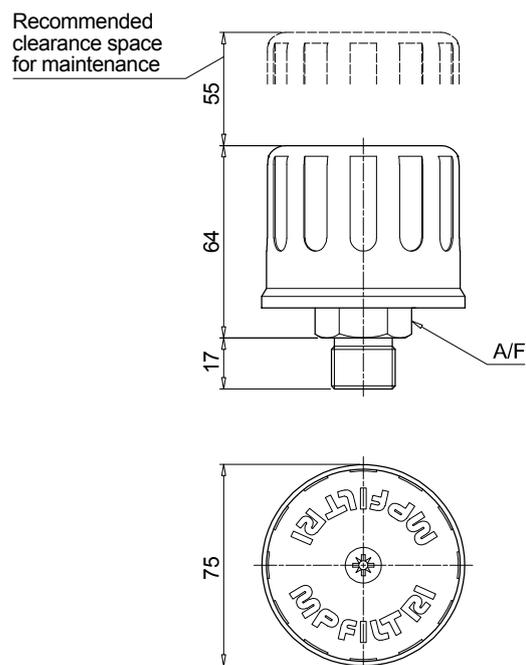
### SAP054

Connection	A/F [mm]
<b>G1</b>	22
<b>G2</b>	27



### SAP075

Connection	A/F [mm]
<b>G1</b>	27
<b>G2</b>	32



## Technical data

### Air breathers & Filler plugs

#### Metal air breather filter

#### Flow rate up to 2500 l/min

SA is a range of metal air breathers for protection of the tank against the solid contamination contained into the air.

They are usually directly fitted on the tank. The robust design allows the use of these filters in any heavy-duty application.

#### Available features:

- Male threaded connections up to 2 1/2", for a maximum flow rate of 2500 l/min
- Replaceable filter element
- Fine cellulose filtration, to get a good cleanliness level into the reservoir
- Polyester media is an option for heavy environmental conditions (high humidity, sand ...)

#### Common applications:

- Mobile machines (construction and agriculture machines)
- Industrial equipment

#### Flow rate $\Delta p$ 0.02 bar

	Flow rate [l/min]	
	Filtration rating	L03
<b>SA036</b>	140	140
<b>SA053</b>	250	250
<b>SA075</b>	350	400
<b>SA115</b>	800	850
<b>SA145</b>	1800	1850
<b>SA185</b>	2300	2500

#### Materials

- Cover: Steel
- Connection: Anodized steel, Galvanized steel
- Filter element: Resin impregnate paper
- Screws: Galvanized steel
- Washer: Teflon
- Ring: Galvanized steel
- Seals: NBR

#### Temperature

From -25 °C to +100 °C

#### Weight

- SA 036 - 0.08 kg
- SA 053 - 0.15 kg
- SA 075 - 0.26 kg
- SA 115 - 0.40 kg
- SA 145 - 0.59 kg
- SA 185 - 1.22 kg



## Designation & Ordering code

### COMPLETE AIR BREATHER

#### Series and size

**SA036** | **SA053** | **SA075** | **SA115** | **SA145** | **SA185**

Configuration example : SA115 G1 L10 A P01

#### Connections to the tank

	SA036	SA053	SA075	SA115	SA145	SA185
<b>G1</b>	G 1/4"	G 1/4"	G 1/2"	G 1"	G 1 1/2"	G 2 1/2"
<b>G2</b>	G 3/8"	G 3/8"	G 3/4"	-	-	-
<b>G3</b>	G 1/2"	-	-	-	-	-
<b>G4</b>	1/4" NPT	1/4" NPT	1/2" NPT	1" NPT	1 1/2" NPT	2 1/2" NPT
<b>G5</b>	3/8" NPT	3/8" NPT	3/4" NPT	-	-	-
<b>G6</b>	1/2" NPT	-	-	-	-	-

#### Filtration rating

<b>L03</b>	Resin impregnate paper	3 $\mu$ m
<b>L10</b>	Resin impregnate paper	10 $\mu$ m
<b>S</b>	Without filter element	

#### Seals

**A** NBR

#### Execution

**P01** MP Filtri standard

**Pxx** Customized

### FILTER ELEMENT

#### Filter element series and size

**A05** | **A5** | **A7** | **A8** | **A10** | **A11**

Configuration example : A8 L10 P01

#### Filtration rating (filter media)

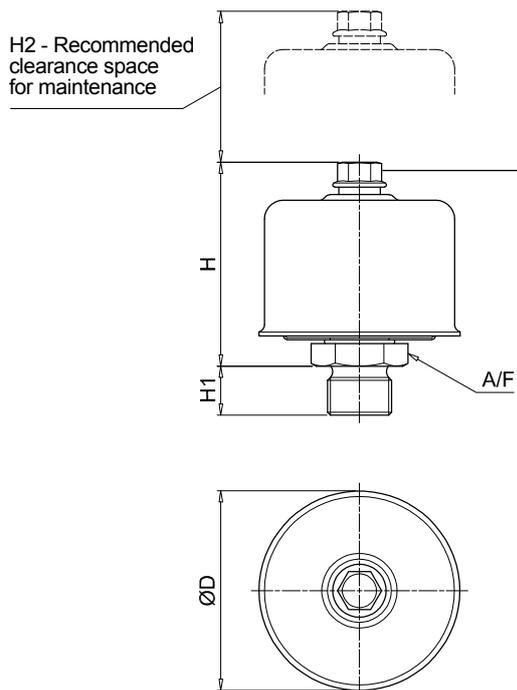
<b>L03</b>	Resin impregnate paper	3 $\mu$ m
<b>L10</b>	Resin impregnate paper	10 $\mu$ m

#### Execution

**P01** MP Filtri standard

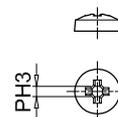
**Pxx** Customized

SA

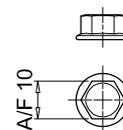


### Type of bolt/nut

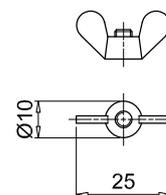
**Phillips:**  
SA036



**Hex:**  
SA053  
SA075  
SA115  
SA145



**Wings:**  
SA185



Type	Connection	ØD [mm]	H [mm]	H1 [mm]	H2 [mm]	A/F [mm]
<b>036</b>	G1 ÷ G6	36	37	13	30	22
<b>053</b>	G1-G2-G4-G5	53	53	13	50	22
<b>075</b>	G1	75	69	13	60	27
	G2			17		32
	G4			15		27
	G5			20		32
<b>115</b>	G1 - G4	115	80	17	70	38
<b>145</b>	G1 - G4	145	115	25	100	55
<b>185</b>	G1 - G4	185	164	25	150	90



# SAW 115 series

Moisture control desiccant air breather



# SAW 115 GENERAL INFORMATION

## Technical data

### Air breathers & Filler plugs

#### Moisture control desiccant air breather

#### Max air flow up to 453 l/min

SAW is a range of desiccant breathers; they are products that combine the filtration of the solid contamination and the absorption of the free water contained into the air.

They are usually directly fitted on the tank; the filter layers remove the solid contamination while the desiccant agent holds the moisture contained in the air that enters into the tank as result of the tank breathing.

While in service or during shut-down, the desiccant agent dries the equipment, absorbing moisture from the reservoir.

#### Available features:

- Male threaded connections up to 1", for a maximum flow rate of 453 l/min
- Fine filtration rating, to get a good cleanliness level into the reservoir

#### Common applications:

Hydraulic systems, oil storage, tanks, transformers, renewable energy, Gearboxes.

#### Chemical Compatibility

Recommended:

- All Gear Oil
- Most Hydraulic Fluid
- Mineral and Synthetic Oil

Not Recommended:

- Phosphate Ester
- Hydrogen Sulphide
- Sulphuric Acid
- High Alkaline Cleaner

#### Flow rate $\Delta p$ 0.02 bar

	Flow rate [l/min]
Filtration rating	03
<b>SAW115</b>	453

#### Materials

Connection: Nylon  
Internal Support Pipe: Nylon  
Screen: Polycarbonate  
Cover: Nylon  
Dryer Agent: Silica Gel

**Filter Efficiency** 3 $\mu$ m absolute ( $B_3 \geq 200$ )

**Seals** NBR

**Temperature** From -25 °C to +90 °C

#### Humidity Level Below Ambient Conditions

SAW115G03A00P01 : protects 30,000+ cycles

Deliquescent: Protects 5,000 cycles  
(Testing parameters 23 °C, 30 l/min)

#### Silica Gel Weight

Lenght 1: 0.32 kg

Lenght 2: 0.56 kg

Lenght 3: 0.84 kg

#### Total Weight

Lenght 1: 0.60 kg

Lenght 2: 0.90 kg

Lenght 3: 1.20 kg



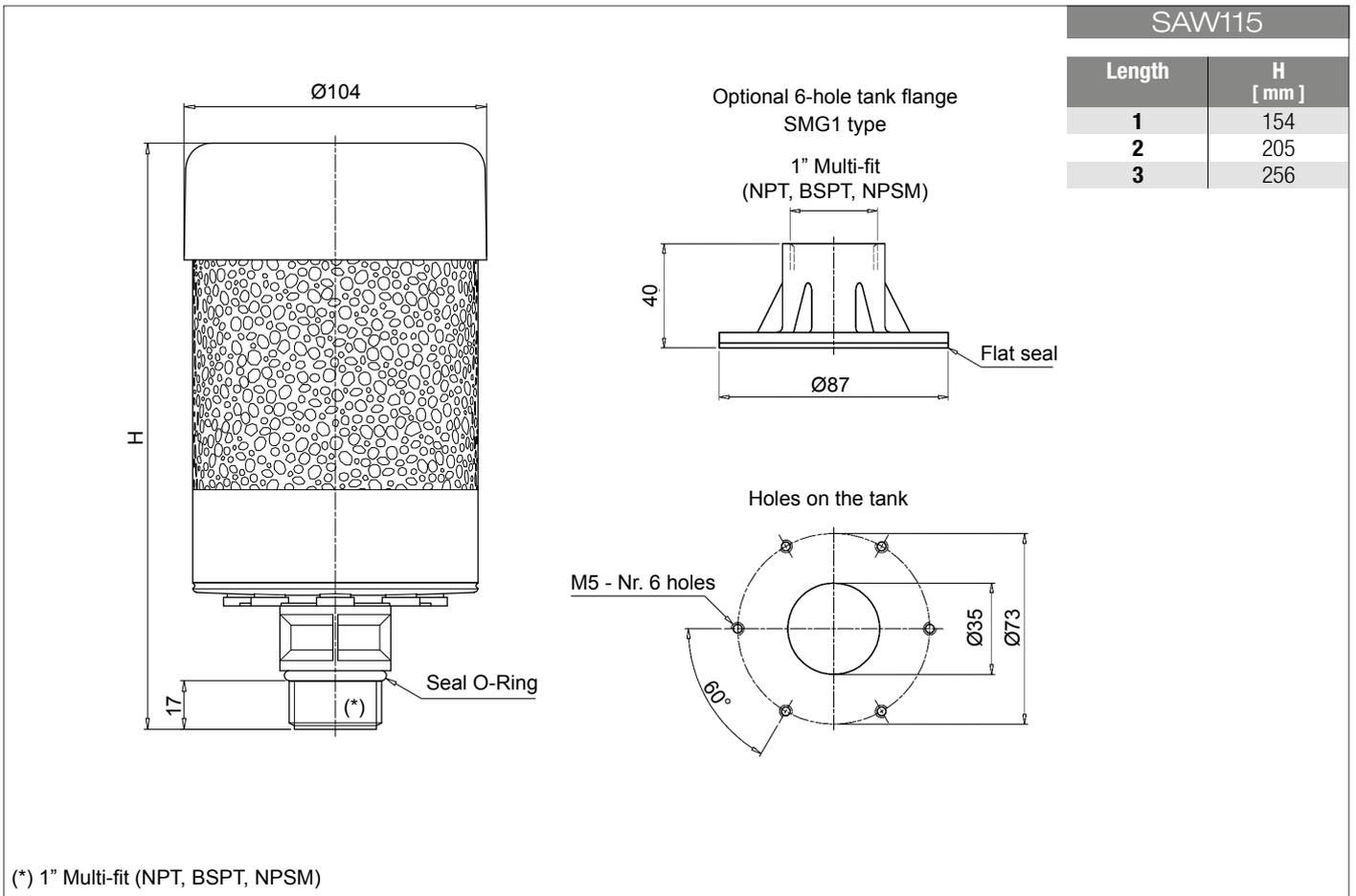
## Designation & Ordering code

### MOISTURE CONTROL DESICCANT BREATHER

Series and size	Configuration example :	SAW115	1	G	03	A	0	0	P01
<b>SAW115</b>									
<b>Length</b>			1   2   3						
<b>Connections to the tank</b>				G Thread 1"					
<b>Filtration rating</b>					03 Orange Silica Gel				
<b>Seals</b>						A NBR			
<b>Valve</b>							0 Without valve		
<b>Option</b>								0 Standard	
<b>Execution</b>									P01 MP Filtri standard Pxx Customized

### ACCESSORIES

Series and size	Configuration example :	SMG1	S	A	P02
<b>SMG Adapter Flange</b>					
<b>Connections to the tank</b>			S Without screws		
<b>Seals</b>				A NBR	
<b>Execution</b>					P02 MP Filtri standard



## Silica gel

Active breather



Depleted breather



Silica gel is the most efficient and economic moisture adsorbent for general applications.

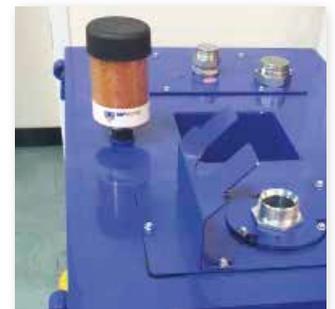
A white breather means the unit has done its job keeping moisture out of your lubricants.

Whenever the colour changes from orange to white it's time to replace the breather with a new one.

All breathers should be changed at least once a year.

### IMPORTANT

Dispose of the exhausted silica gel according to the regulations in force in the country of use.



## Air vent holes

Max hydraulic flow rate [ l/min (cfm) ]	Holes to open
up to 110 (4)	2
from 111 to 220 (4-8)	4
from 221 to 330 (8-12)	6
from 331 to 452 (12-16)	8

### IMPORTANT INSTALLATION INFORMATION

- The air vent holes are plugged for any new breather
- The plugs protect the dryer agent during storage and shipment
- The plugs must be taken out during the installation, according to the max hydraulic flow rate





# SCS series

Metal air breather filter



## Technical data

### Air breathers & Filler plugs

#### Metal air breather filter

#### Flow rate up to 1330 l/min

SCS is a range of air breathers for protection of the tank against the solid contamination contained into the air.

They are composed of a spin-on filter can screwed on a connection tube, directly fitted on the tank. They are usually directly fitted on the tank.

#### Available features:

- Weld or flanged connection, for a maximum flow rate of 1415 l/min
- Fine cellulose and microfibre filtration, to get a good cleanliness level into the reservoir

#### Common applications:

- Mobile machines (construction and agriculture machines)
- Industrial equipment

### Flow rate $\Delta p$ 0.02 bar

	Flow rate [l/min]			
	Filtration rating	P10	A03	A10
<b>SCS050</b>	550	515	530	
<b>SCS070</b>	550	515	530	
<b>SCS100</b>	1415	1300	1330	
<b>SCS150</b>	1415	1300	1330	

### Materials

Riser: Galvanized steel

### Temperature

From -25 °C to +100 °C

### Weight

SCS050...G1: 0,200 kg  
 SCS050...G2: 0,265 kg  
 SCS100...G1: 0,450 kg  
 SCS100...G2: 0,645 kg

CS/CG050: 0,73 kg  
 CS/CG070: 0,95 kg  
 CS100: 1,3 kg  
 CS150: 1,6 kg  
 CG100: 1,3 kg  
 CG150: 1,6 kg



## Designation & Ordering code

### METAL AIR BREATHER FILTER

#### Series and size

**SCS050** | **SCS070** | **SCS100** | **SCS150**

Configuration example 1: **SCS050** | **C** | **G2** | | **V** | **P01**

Configuration example 2: **SCS150** | **C** | **G2** | **A10** | **V** | **P01**

#### Connections to the tank

**C** Weld riser

**F** Screwed flange

#### Threaded connection

	SCS050 - 070	SCS100 - 150
<b>G1</b> Connection ISO 228	G 3/4"	G 1 1/4"
<b>G2</b> Connection U.S. standard	1" - 12 UNF	1 1/2" - 16 UN

#### Filtration rating

Size:	050	070	100	150
Without filter element	•	•	•	•
<b>A03</b> Inorganic microfiber 3 µm	•	•	•	•
<b>A10</b> Inorganic microfiber 10 µm	•	•	•	•
<b>P10</b> Resin impregnate paper 10 µm	•	•	•	•

#### Seals

**A** NBR

**V** FPM

#### Execution

**P01** MP Filtri standard

**Pxx** Customized

### FILTER ELEMENT

#### Filter element series

Threaded connection:	G1	G2
<b>CS</b> Connection ISO 228	•	
<b>CG</b> Connection U.S. standard		•

Configuration example: **CG** | **150** | **A10** | **V** | **P01**

#### Filter element size

**050** | **070** | **100** | **150**

#### Filtration rating

<b>A03</b> Inorganic microfiber 3 µm	
<b>A10</b> Inorganic microfiber 10 µm	
<b>P10</b> Resin impregnate paper 10 µm	

#### Seals

**A** NBR

**V** FPM

#### Execution

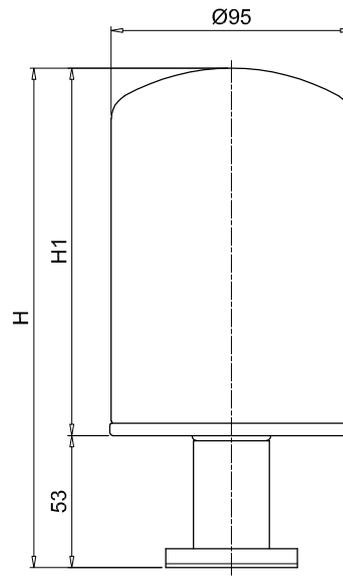
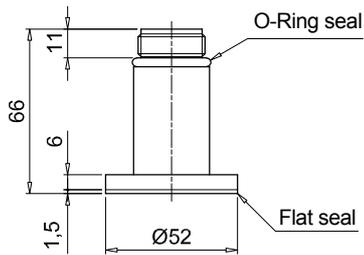
**P01** MP Filtri standard

**Pxx** Customized

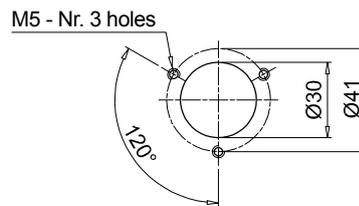
### SCS050-070

#### Screwed flange

Size	H [mm]	H1 [mm]
<b>050</b>	199	146
<b>070</b>	263	210



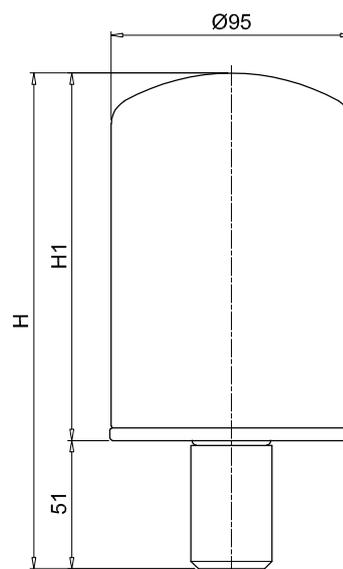
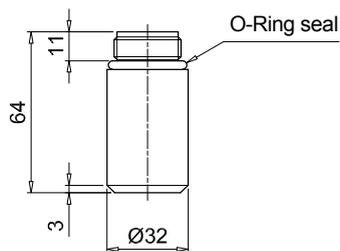
Holes on the tank



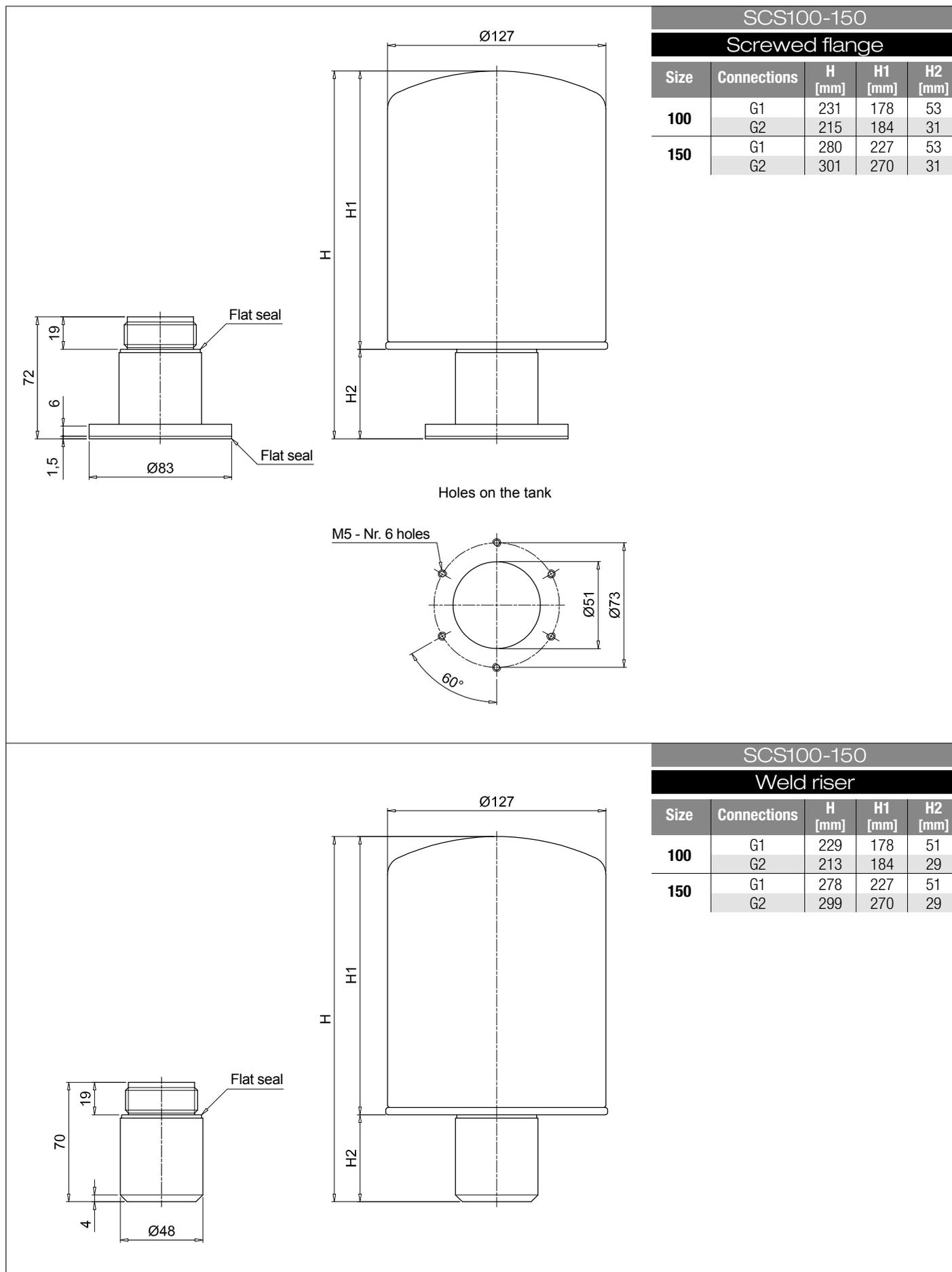
### SCS050-070

#### Weld riser

Size	H [mm]	H1 [mm]
<b>050</b>	197	146
<b>070</b>	261	210



## Dimensions







# SME 1 - SMF 1 - SML 1 series

Risers for breathers and filler caps installation



### Technical data

#### Air breathers & Filler plugs

#### Risers for breathers and filler caps installation

SME/SMF/SML are ranges of risers for installation of the breathers and filler caps in any place on the tank. They make the maintenance operation easy and fast.

#### Available features:

- SME: vertical riser made of polyamide for nylon tanks, mainly used in the mobile machines
- SMF: sloping riser made of polyamide for nylon tanks, mainly used in the mobile machines
- SML: sloping riser made of aluminium for metal tanks, mainly used in the industrial equipment and heavy-duty applications

#### Materials SME

- Body: Nylon
- Seals: NBR  
Cork gasket
- Screws: Phosphatized steel  
Galvanized steel

#### Materials SMF

- Body: Nylon
- Seals: NBR  
Cork gasket
- Screws: Phosphatized steel  
Galvanized steel

#### Materials SML

- Body: Aluminium
- Seals: NBR  
Cork gasket
- Screws: Phosphatized steel

#### Temperature

From -25 °C to +100 °C

#### Weight

- SME - 0.250 kg
- SMF - 0.325 kg
- SML - 0.380 kg

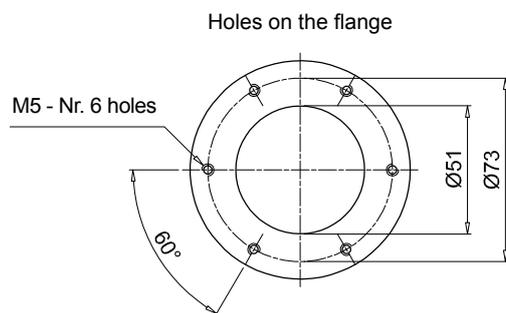
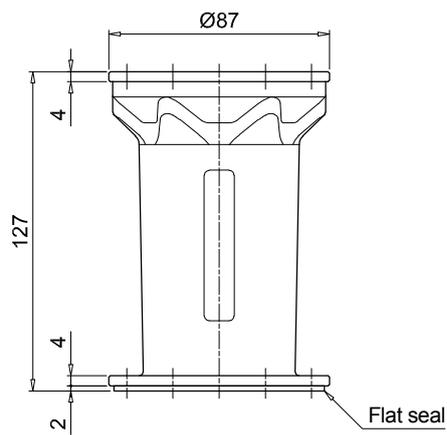
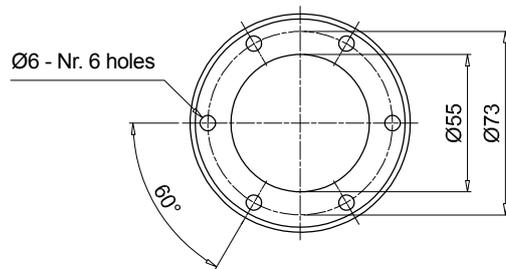


### Designation & Ordering code

#### SME / SMF / SML

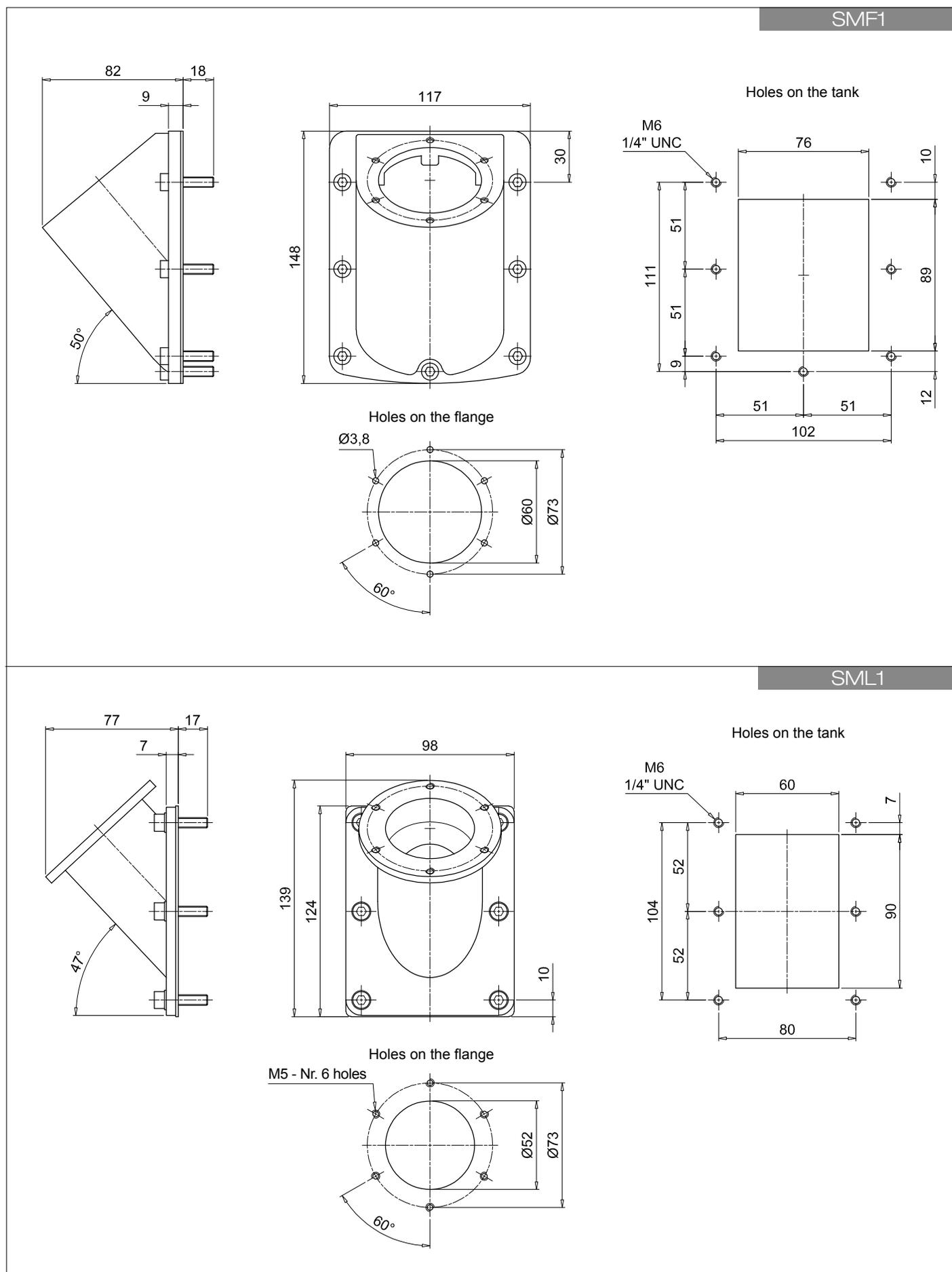
Series and size		Configuration example: <b>SMF1</b> <b>M</b> <b>A</b> <b>P01</b>			
<b>SME1</b>	Polyamide vertical riser				
<b>SMF1</b>	Polyamide sloping riser				
<b>SML1</b>	Aluminium sloping riser				
Connections to the tank					
<b>M</b>	Metric screws				
<b>U</b>	UNC screws				
Seals					
<b>A</b>	NBR				
Execution		Series			
		SME1	SMF1	SML1	
<b>P01</b>	MP Filtri standard		•	•	
<b>P02</b>	Standard without logo	•			
<b>Pxx</b>	Customized	•	•	•	

SME1



# SME 1-SMF 1-SML 1

## Dimensions







TA 46

TAP 50

SAP 50 series

**Metal oil filler  
and air breather filler cap**

**Nylon oil filler  
and breather plug**

**Nylon air  
breather filter**



## Technical data

### Air breathers & Filler plugs

#### Metal oil filler and air breather filler cap Flow rate up to 200 l/min

TA46 is a range of compact metal air breathers and filler caps for protection of the tank against the solid contamination contained into the air and filling of the fluid into the systems during the commissioning and maintenance procedures. They are usually directly fitted on the tank. The robust design allows the use of these filters in any heavy-duty application.

#### Available features:

- Male threaded connections up to 1/4" and flanged connection with bayonet, for a maximum flow rate of 200 l/min
- Fine cellulose filtration, to get a good cleanliness level into the reservoir
- Filling basket, to hold the coarse contamination contained into the fluid and to diffuse the fluid flow into the tank

#### Common applications:

- Compact hydraulic systems
- Compact mobile machines
- Industrial equipment

#### Flow rate $\Delta p$ 0.02 bar

TA46	Flow rate [l/min]	
	Filtration rating 03	10
	150	200

#### Materials (version G/N)

- Cover: Chrome plated steel
- Filter element: Resin impregnate paper, Polyurethane
- Flange: Galvanized steel
- Connection: Phosphatized steel

#### Materials (version B)

- Cover: Chrome plated steel
- Filter element: Resin impregnate paper, Polyurethane
- Flange: Galvanized steel
- Connection: Phosphatized steel
- Seals: NBR
- Chain, ring: Cork gasket
- Screws: Galvanized steel
- Basket: Brass

#### Temperature

From -25 °C to +100 °C

#### Weight

TA 46 B 0.10 kg  
TA 46 G/N 0.11 kg



## Designation & Ordering code

### COMPLETE AIR BREATHER - TA46

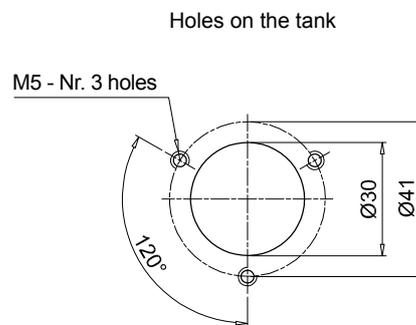
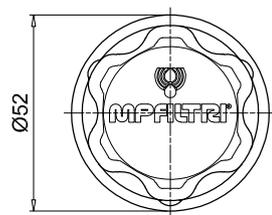
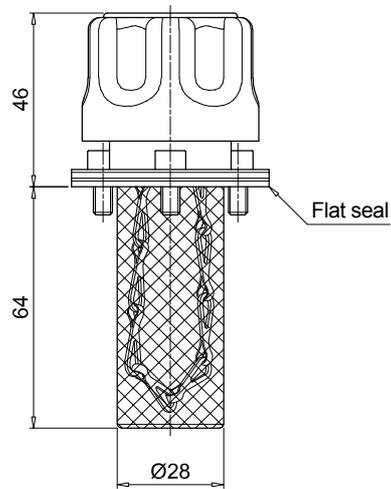
Series and size	Configuration example 1:	TA46	B	03	A	0	0	1	P01
<b>TA46</b>	Configuration example 2:	TA46	G	10					P01
<b>Connections to the tank</b>									
<b>B</b>	Screwed flange with bayonet mount								
<b>G</b>	Thread G 1/4"								
<b>N</b>	Thread 1/4" NPT								
<b>Filtration rating</b>									
<b>03</b>	Resin impregnate paper	3 $\mu$ m							
<b>10</b>	Polyurethane	10 $\mu$ m							
<b>Seals</b>									
<b>A</b>	NBR	•							
<b>Valve</b>									
<b>0</b>	Without valve	•							
<b>Version</b>									
<b>0</b>	Standard	•							
<b>Basket</b>									
<b>1</b>	With basket	•							

#### Execution

**P01** MP Filtri standard  
**Pxx** Customized

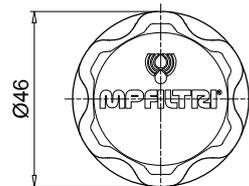
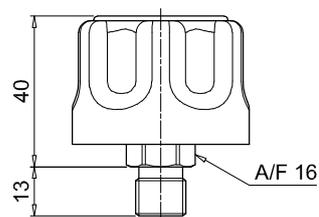
TA46

Screwed flange



TA46

Threaded connection



# TAP 50 GENERAL INFORMATION

## Technical data

### Air breathers & Filler plugs

#### Nylon oil filler and breather plug

#### Flow rate up to 200 l/min

TAP50 is a range of compact plastic air breathers and filler caps for protection of the tank against the solid contamination contained into the air and filling of the fluid into the systems during the commissioning and maintenance procedures.

#### Available features:

- Flanged connection with bayonet, for a maximum flow rate of 200 l/min
- Fine cellulose filtration, to get a good cleanliness level into the reservoir
- Filling basket, to hold the coarse contamination contained into the fluid and to diffuse the fluid flow into the tank

#### Common applications:

- Compact hydraulic systems
- Compact mobile machines
- Industrial equipment

### Flow rate $\Delta p$ 0.02 bar

	Flow rate [l/min]	
	Filtration rating	03
<b>TAP50</b>	180	202

### Materials

- Cover/ringnut: Nylon
- Filter element: Resin impregnate paper, Polyurethane
- Pressurization valve: Nylon, Galvanized steel, NBR
- Seals: NBR
- Flange: Nylon
- Screws: Galvanized steel
- Basket: Nylon

### Temperature

From -25 °C to +100 °C

### Weight

0.60 kg

### Quantity

10 pcs/pack



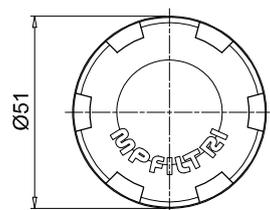
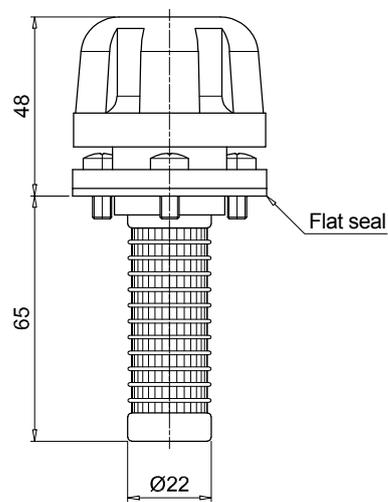
## Designation & Ordering code

### COMPLETE OIL FILLER PLUG - TAP50

Series and size	Configuration example :							
<b>TAP50</b> Nylon oil filler and breather plug	TAP50	C	03	A	1	1	P01	
<b>Connections to the tank</b>								
<b>C</b> Screwed flange with G 3/4" mount								
<b>Filtration rating</b>								
<b>03</b> Resin impregnate paper 3 µm								
<b>10</b> Polyurethane 10 µm								
<b>Seals</b>								
<b>A</b> NBR								
<b>Valve</b>								
<b>0</b> Without valve								
<b>1</b> 0.5 bar pressurization valve								
<b>Basket</b>								
<b>1</b> With basket								
<b>Execution</b>								
<b>P01</b> MP Filtri standard								
<b>Pxx</b> Customized								

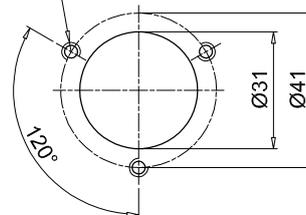
TAP50

Screwed flange



Holes on the tank

M5 - Nr. 3 holes



# SAP 50 GENERAL INFORMATION

## Technical data

### Air breathers & Filler plugs

#### Nylon air breather filter

#### Flow rate up to 200 l/min

SAP50 is a range of compact plastic air breathers for protection of the tank against the solid contamination contained into the air.

The integrated air breather protects the tank against the solid contamination contained into the air. They are usually directly fitted on the tank.

#### Available features:

- Male threaded connections up to 3/4", for a maximum flow rate of 200 l/min.
- Fine cellulose filtration, to get a good cleanliness level into the reservoir.

#### Common applications:

- Compact hydraulic systems
- Compact mobile machines
- Industrial equipment

### Flow rate $\Delta p$ 0.02 bar

	Flow rate [l/min]	
	Filtration rating	03
<b>SAP50</b>	180	204

### Materials

- Cover/Connection: Nylon
- Filter element: Resin impregnate paper, Polyurethane
- Pressurization valve: Nylon, Galvanized steel, NBR
- Seals: NBR

### Temperature

From -25 °C to +100 °C

### Weight

0.40 kg

### Quantity

10 pcs/pack



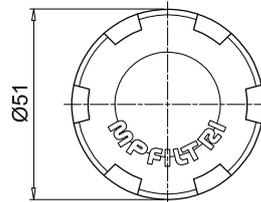
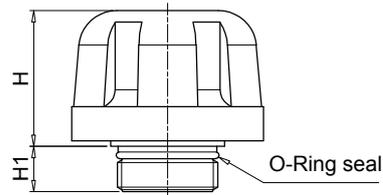
## Designation & Ordering code

### COMPLETE AIR BREATHER - SAP50

Series and size	Configuration example :						
<b>SAP50</b> Nylon air filter	SAP50	G3	L03	A	1	0	P01
Connections to the tank							
<b>G1</b>	G 1/4"						
<b>G2</b>	G 3/8"						
<b>G3</b>	G 1/2"						
<b>G4</b>	G 3/4"						
<b>G9</b>	SAE 6 - 9/16" - 18 UNF						
<b>G10</b>	SAE 12 - 1 1/16" - 12 UN						
Filtration rating							
<b>L03</b>	Resin impregnate paper 3 µm						
<b>L10</b>	Polyurethane 10 µm						
Seals							
<b>A</b>	NBR						
Valve	Connection						
	G1	G2	G3	G4	G9	G10	
<b>0</b>	Without valve						
<b>1</b>	0.5 bar pressurization valve						
Basket							
<b>0</b>	Without basket						
Execution							
<b>P01</b>	MP Filtri standard						
<b>Pxx</b>	Customized						

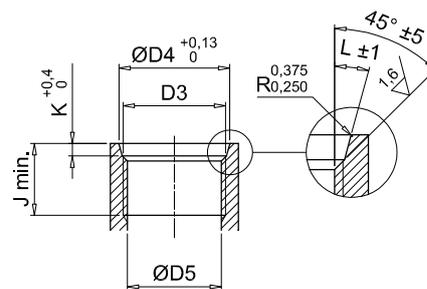
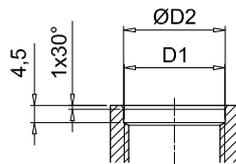
SAP50

Threaded connection



Housing on the tank for connections GAS

Housing on the tank for connections SAE



Connections	H [mm]	H1 [mm]	D1 [mm]	$\text{Ø}D2$ [mm]	D3 [mm]	$\text{Ø}D4$ [mm]	$\text{Ø}D5$ [mm]	J min. [mm]	K [mm]	L
<b>G1</b>	36	12	G 1/4"	13.5	-	-	-	-	-	-
<b>G2</b>	36	12	G 3/8"	17	-	-	-	-	-	-
<b>G3</b>	36	12	G 1/2"	21.5	-	-	-	-	-	-
<b>G4</b>	36	12	G 3/4"	26.7	-	-	-	-	-	-
<b>G9</b>	36	12	-	-	SAE 6 - 9/16" - 18 UNF	15.6	13.081 12.751	12.7	2.5	12°
<b>G10</b>	35	14.5	-	-	SAE 12 - 1 1/16" - 12 UN	29.2	24.978 24.696	19	3.3	15°



# TA 80 series

Metal oil filler and air breather filler cap



# TA 80 GENERAL INFORMATION

## Technical data

### Air breathers & Filler plugs

#### Metal oil filler and air breather filler cap Flow rate up to 550 l/min

TA80 is a range of metal air breathers and filler caps for protection of the tank against the solid contamination contained into the air and filling of the fluid into the systems during the commissioning and maintenance procedures.

They are usually directly fitted on the tank. The robust design allows the use of these filters in any heavy-duty application.

#### Available features:

- Male threaded connections up to 3/4" and flanged connection with bayonet, for a maximum flow rate of 550 l/min
- Fine cellulose filtration, to get a good cleanliness level into the reservoir
- Pressurization valve with different setting, to guarantee a positive pressure into the tank in any application with metal or plastic tanks
- Padlock tab, to secure the air breather to the tank
- Filling basket, to hold the coarse contamination contained into the fluid and to diffuse the fluid flow into the tank

#### Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

#### Flow rate $\Delta p$ 0.02 bar

TA80	Flow rate [l/min]	
	Filtration rating 03	10
	450	550

#### Materials

- Cover: Chrome Plated steel
- Filter element: Resin impregnate paper, Polyurethane
- Pressurization valve: Nylon (bodies), Galvanized steel (end cap - disk), Steel (spring), NBR (seals)
- Flange and anti-splash feature: Galvanized steel
- Seals: Cork Gasket, NBR
- Screws, Flange: Galvanized steel
- Chain, Ring: Brass
- Basket (only TA80B): Galvanized steel

#### Temperature

From -25 °C to +100 °C

#### Weight

L 80 mm 0.33 kg  
L 100 mm 0.35 kg

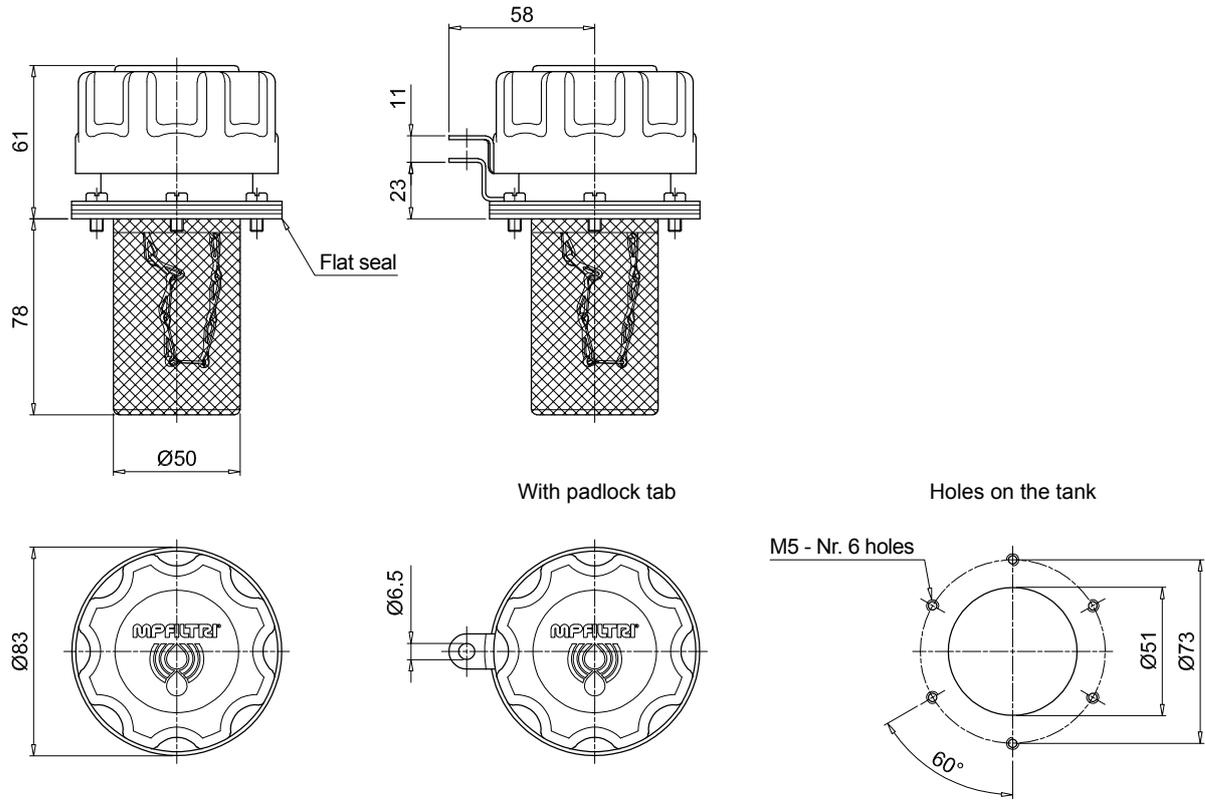


## Designation & Ordering code

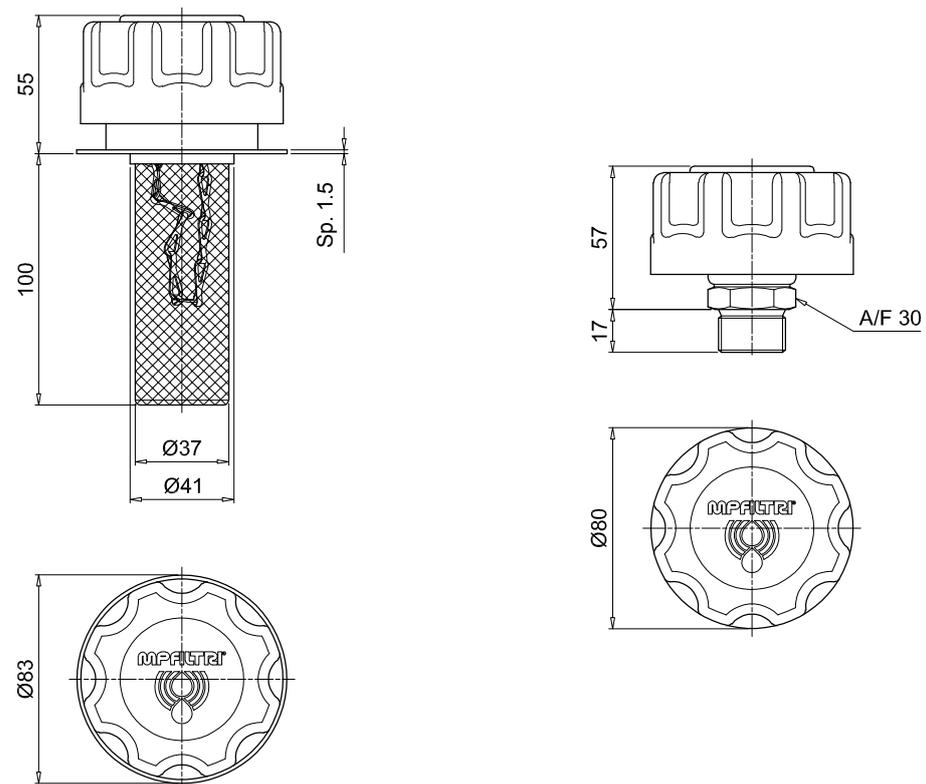
### COMPLETE BREATHER PLUG - TA80

Series and size	Configuration example 1:								
<b>TA80</b>	TA80	B	03	A	0	L	1	P01	
	Configuration example 2:								
	TA80	G	10	A	2			P01	
Connections to the tank									
<b>B</b> Screwed flange with bayonet mount	<b>G</b> Thread G 3/4"								
<b>D</b> Weld flange with bayonet mount	<b>N</b> Thread 3/4" NPT								
Filtration rating	Connection:	B	D	G	N				
<b>00</b> Without filter (blind filler plug)		•	•						
<b>03</b> Resin impregnate paper 3 µm		•	•	•	•				
<b>10</b> Polyurethane 10 µm		•	•	•	•				
Seals									
<b>A</b> NBR									
Valve	Filtration rating:	00	03	10					
<b>0</b> Without valve		•	•	•					
<b>1</b> 0.3 bar pressurization valve			•	•					
<b>2</b> 0.7 bar pressurization valve			•	•					
<b>9</b> With anti-splash feature			•	•					
Version	Connection:	B	D	G	N				
<b>0</b> Standard		•	•						
<b>L</b> With padlock tab		•							
Basket	Connection:	B	D	G	N				
<b>0</b> Without basket		•	•						
<b>1</b> L = 80 mm		•							
<b>3</b> L = 100 mm			•						
Execution									
<b>P01</b> MP Filtri standard									
<b>Pxx</b> Customized									

TA80  
Screwed flange



TA80  
Weld flange  
Threaded connection





# TAP 90 series

Nylon oil filler and air breather filler cap



# TAP 90 GENERAL INFORMATION

## Technical data

### Air breathers & Filler plugs

#### Nylon oil filler and air breather filler cap

#### Flow rate up to 550 l/min

TAP90 is a range of plastic air breathers and filler caps for protection of the tank against the solid contamination contained into the air and filling of the fluid into the systems during the commissioning and maintenance procedures.

They are usually directly fitted on the tank.

#### Available features:

- Male threaded connections up to 1 1/2" and flanged connection with bayonet, for a maximum flow rate of 550 l/min
- Fine cellulose filtration, to get a good cleanliness level into the reservoir
- Pressurization valve with different setting, to guarantee a positive pressure into the tank in any application with metal or plastic tanks
- Padlock tab, to secure the air breather to the tank
- Filling basket, to hold the coarse contamination contained into the fluid and to diffuse the fluid flow into the tank
- Dipstick, to monitor the fluid level into the tank even in complicated positions

#### Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

### Flow rate $\Delta p$ 0.02 bar

	Flow rate [l/min]	
	Filtration rating	03
<b>TAP90</b>	450	550

### Materials

- Cover/Ringnut: Nylon
- Filter element: Resin impregnate paper, Polyurethane
- Pressurization valve: Nylon (bodies), Galvanized steel (end cap - disk), NBR (seals)
- Flange B: Nylon
- Seals: NBR
- Screws: Galvanized steel
- Padlock tab: Galvanized steel
- Chain, Ring: Brass
- Dipstick: Phosphatized steel
- Basket: Galvanized steel, Nylon

### Temperature

From -25 °C to +100 °C

### Weight

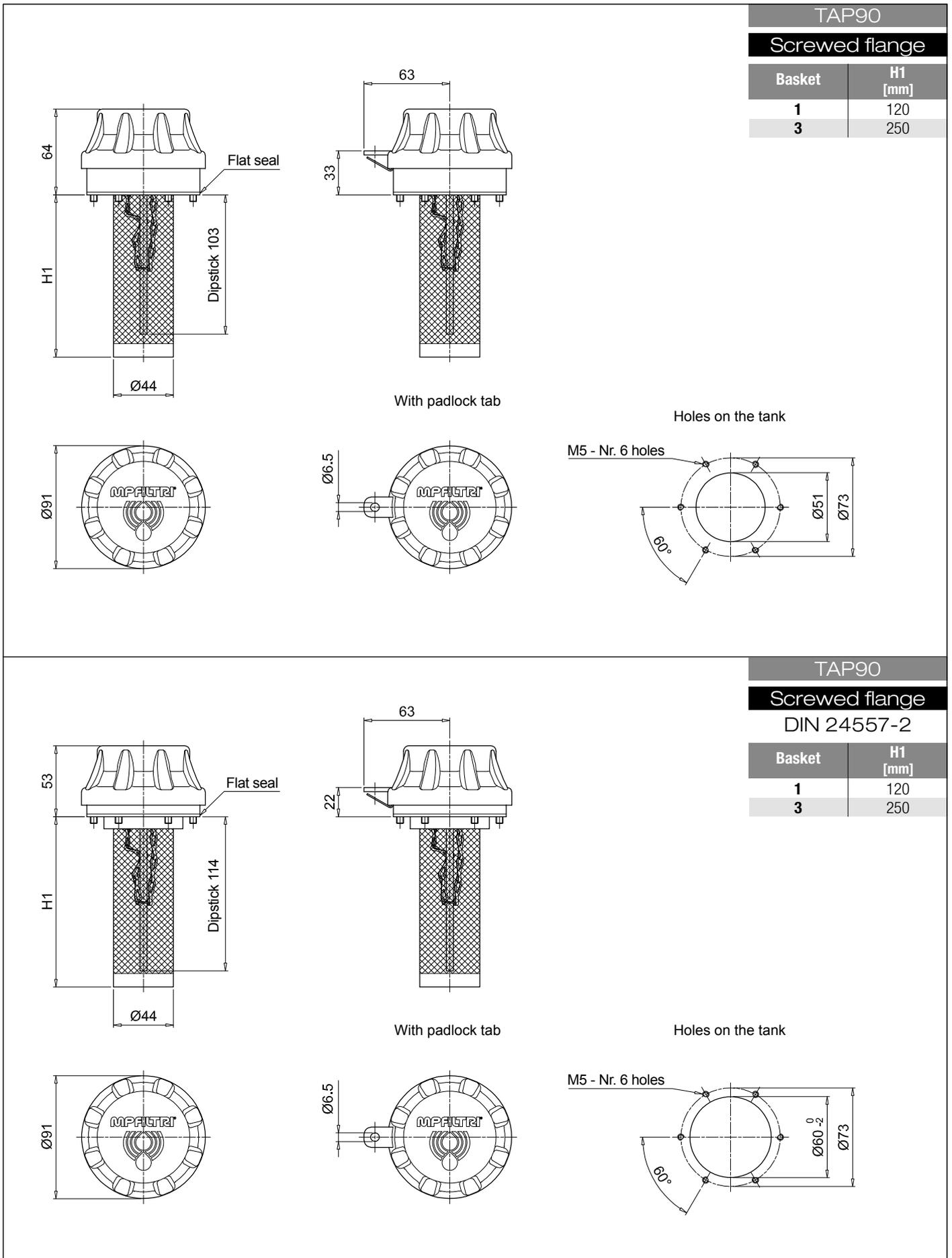
L 120 mm 0.25 kg  
L 250 mm 0.31 kg



## Designation & Ordering code

### COMPLETE BREATHER PLUG - TAP90

Series and size	Configuration example 1 :									
<b>TAP90</b>	TAP90	R	03	A	1	A	1	P01		
Series and size	Configuration example 2 :									
<b>TAP90</b>	TAP90	G	10	A	2	L				P01
Connections to the tank		Connection								
<b>R</b> Screwed flange with M52x2 mount	<b>H</b> Thread G 1 1/2"									
<b>F</b> Screwed flange DIN 24557-2	<b>M</b> Thread 3/4" NPT									
<b>C</b> Weld riser	<b>G</b> Thread M52x2									
<b>Q</b> Thread G 3/4"										
Filtration rating	R	F	C	Q	H	M	G			
<b>00</b> Without filter (blind filler plug)	•	•	•							
<b>03</b> Resin impregnate paper 3 µm	•	•	•	•	•	•	•			
<b>10</b> Polyurethane 10 µm	•	•	•	•	•	•	•			
Valve	Filtration rating:		00	03	10					
<b>0</b> Without valve			•	•	•					
<b>1</b> 0.3 bar pressurization valve				•	•					
<b>2</b> 0.7 bar pressurization valve				•	•					
Version										
<b>0</b> Standard	<b>A</b> With dipstick									
<b>L</b> With padlock tab	<b>F</b> With padlock tab and dipstick									
Basket	Connection									
<b>0</b> Without basket	•	•	•							
<b>1</b> With basket 120 mm	•	•	•							
<b>3</b> With basket 250 mm	•	•	•							
Seals										
<b>A</b> NBR										
Execution										
<b>P01</b> MP Filtri standard										
<b>Pxx</b> Customized										

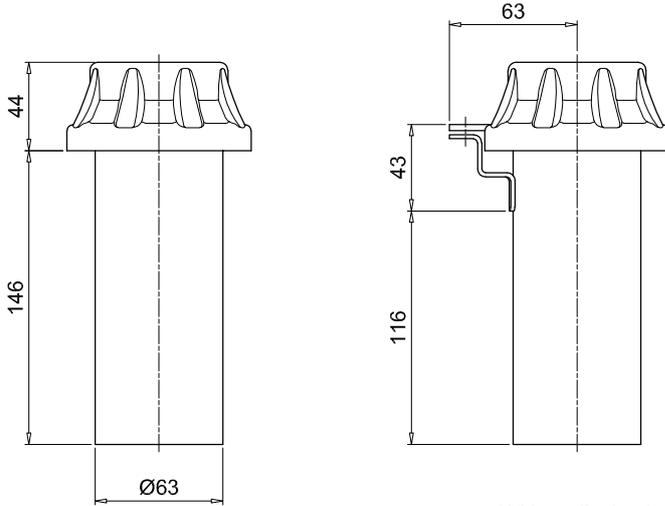


# TAP 90

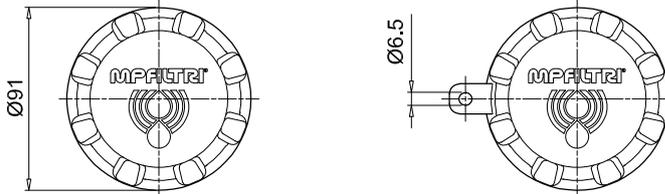
## Dimensions

TAP90

Weld riser



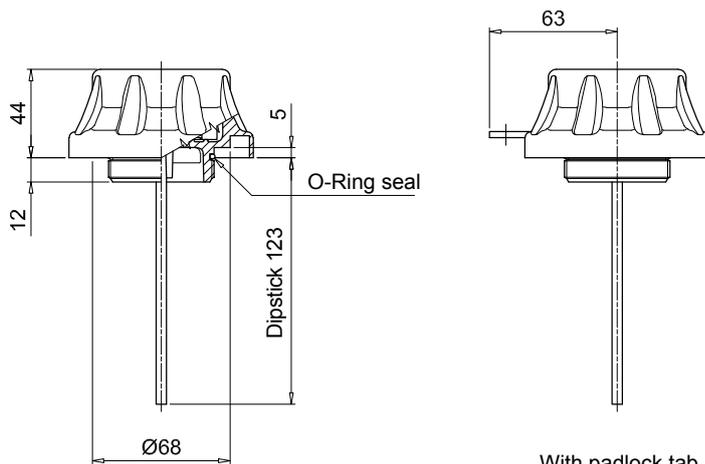
With padlock tab



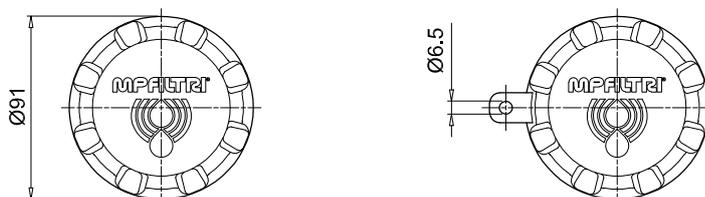
TAP90

Threaded connection

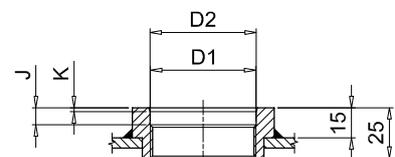
Connection	D1 [mm]	D2 [mm]	J [mm]	K [mm]
Q	G 3/4"	-	-	-
H	G 1 1/2"	48.5	8.5	2x15°
M	3/4" NPT	-	-	-
G	M 52x2	52.5	8.5	2x15°



With padlock tab



Housing on the tank for connections GH-MT







# TAP 114 series

Nylon oil filler and air breather filler cap



# TAP 114 GENERAL INFORMATION

## Technical data

### Air breathers & Filler plugs

#### Nylon oil filler and air breather filler cap Flow rate up to 1600 l/min

TAP114 is a range of plastic large air breathers and filler caps for protection of the tank against the solid contamination contained into the air and filling of the fluid into the systems during the commissioning and maintenance procedures.

They are usually directly fitted on the tank.

#### Available features:

- Flanged connection, for a maximum flow rate of 1600 l/min
- Replaceable filter element
- Fine cellulose filtration, to get a good cleanliness level into the reservoir
- Polyester media is an option for heavy environmental conditions (high humidity, sand ...)
- Filling basket, to hold the coarse contamination contained into the fluid and to diffuse the fluid flow into the tank
- Dipstick, to monitor the fluid level into the tank even in complicated positions

#### Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

#### Flow rate $\Delta p$ 0.02 bar

	Flow rate [l/min]
Filtration rating	L10
<b>TAP114 length 1</b>	1450
<b>TAP114 length 3</b>	1600

#### Materials

- Cover: Nylon
- Filter element: Resin impregnate paper
- Flange: Nylon
- Seals: NBR
- Screws: Galvanized steel
- Basket: Nylon

#### Temperature

From -25 °C to +100 °C

#### Weight

Length 1 - 0.185 kg

Length 2 - 0.200 kg



## Designation & Ordering code

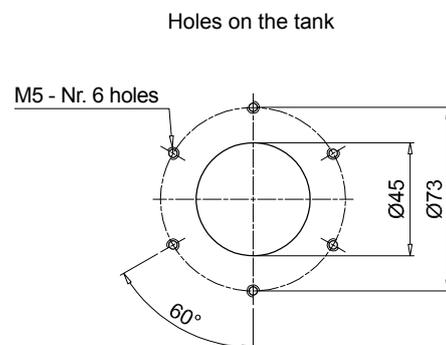
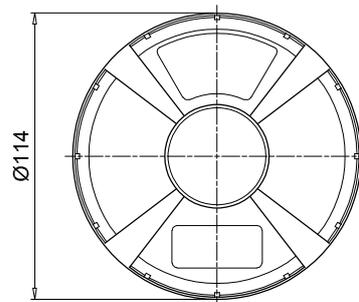
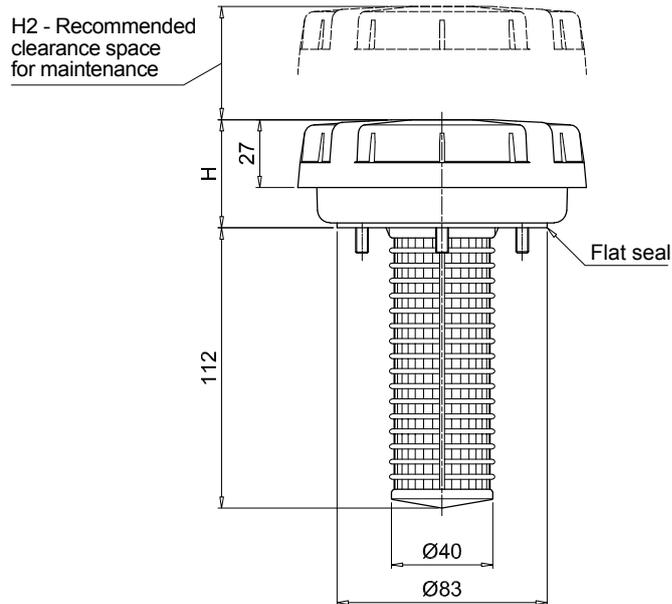
### COMPLETE BREATHER PLUG - TAP114

Series and size	Configuration example : TAP114 1 L10 A 1 P01					
<b>TAP114</b>						
Length	1   3					
Filtration rating	<b>L10</b> Resin impregnate paper 10 µm					
Seals	<b>A</b> NBR					
Version	<b>1</b> With basket					
						<b>Execution</b>
						<b>P01</b> MP Filtri standard
						<b>Pxx</b> Customized

### FILTER ELEMENT

Filter element series and size	Configuration example : A114 1 L10 P01			
<b>A114</b>				
Length	1   3			
Filtration rating	<b>L10</b> Resin impregnate paper 10 µm			
				<b>Execution</b>
				<b>P01</b> MP Filtri standard
				<b>Pxx</b> Customized

TAP114		
Length	H [mm]	H2 [mm]
<b>1</b>	43	30
<b>3</b>	70	60





# TAP 115 & SAP 115

Nylon oil filler and air breather filler cap

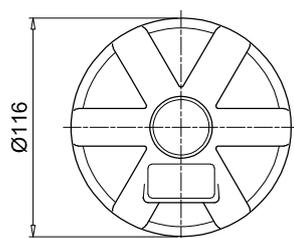
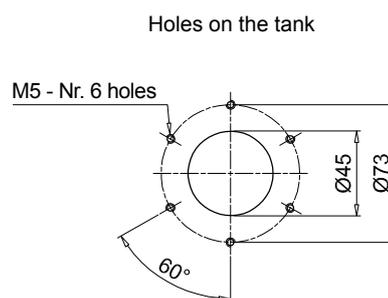
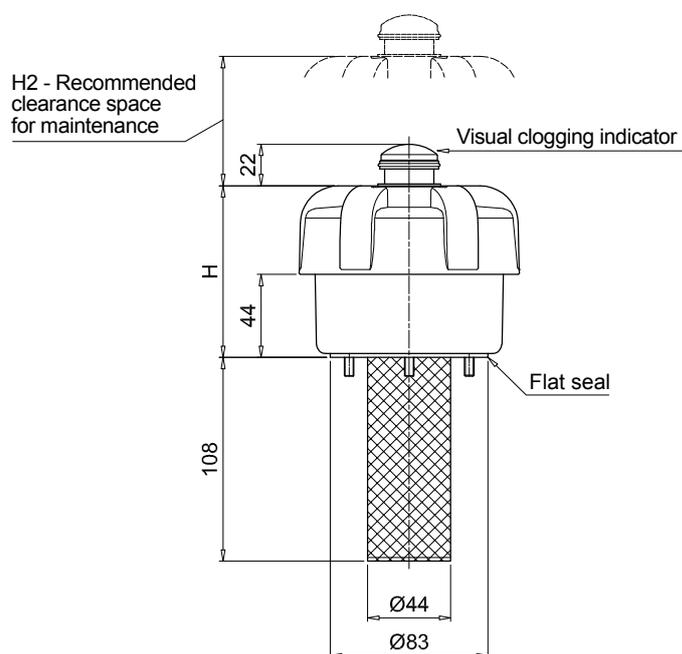




# TAP 115

## Dimensions

TAP115		
Length	H [mm]	H2 [mm]
<b>1</b>	91	55
<b>2</b>	155	80



## Technical data

### Air breathers & Filler plugs

#### Nylon oil filler and air breather filler cap

#### Flow rate up to 3000 l/min

SAP115 is a range of plastic large air breathers for protection of the tank against the solid contamination contained into the air. They are usually directly fitted on the tank.

#### Available features:

- Male threaded connections up to 1 1/2", for a maximum flow rate of 3000 l/min.
- Replaceable filter element.
- Fine cellulose and microfibre filtration, to get a good cleanliness level into the reservoir. Polyester media is an option for heavy environmental conditions (High humidity, sand ...)
- Visual clogging indicator
- Antisplash, to avoid fluid coming out through the air breather due to sloshing
- Visual clogging indicator
- Filling basket, to hold the coarse contamination contained into the fluid and to diffuse the fluid flow into the tank

#### Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

### Flow rate $\Delta p$ 0.02 bar

	Flow rate [l/min]	
	Filtration rating	A03
<b>SAP115 length 1 - G1"</b>	1830	2170
<b>SAP115 length 2 - G1"</b>	2800	2800
<b>SAP115 length 1 - G1 1/2"</b>	1995	2330
<b>SAP115 length 2 - G1 1/2"</b>	3000	3000

### Materials

- Cover/flange: Nylon
- Filter element: Microfibre, Resin impregnate paper
- Connection: Nylon
- Seals: NBR, FPM

### Clogging indicators

- Manual reset
- Set pressure 0.062 bar +/- 10%

### Temperature

From -25 °C to +100 °C

Weight	Length 1	Length 2
SAP 115	0.41 kg	0.525 kg



## Designation & Ordering code

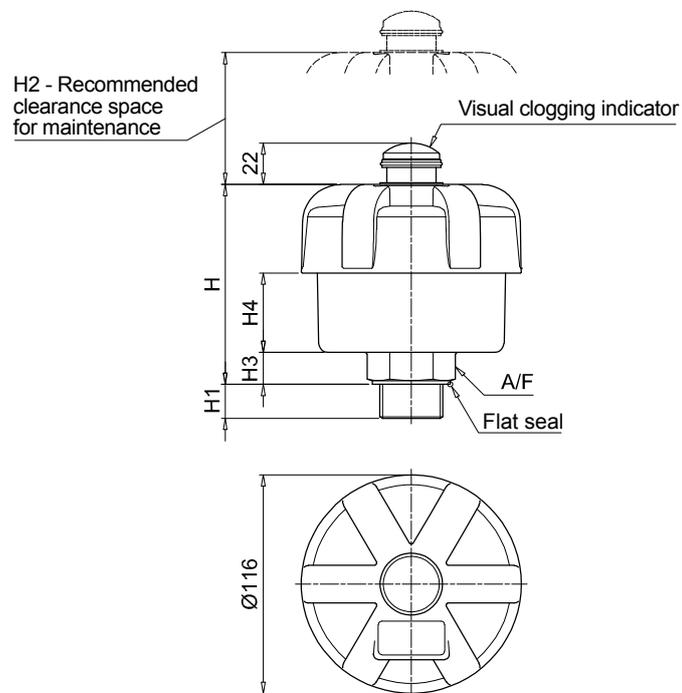
### COMPLETE BREATHER PLUG - SAP115

Series and size	Configuration example:	SAP115	2	A	A03	A	1	A	P01
<b>SAP115</b> Threaded connection									
<b>Length</b>									
<b>1</b>   <b>2</b>									
<b>Connection to the tank</b>									
<b>A</b> Thread G 1"									
<b>C</b> Thread G 1 1/2"									
<b>Filtration rating</b>									
<b>A03</b> Inorganic microfiber 3 µm									
<b>L10</b> Polyurethane 10 µm									
<b>Seals</b>									
<b>A</b> NBR									
<b>Version</b>									
<b>0</b> Standard									
<b>1</b> With anti-splash feature									
<b>Clogging indicator</b>									
<b>A</b> Without indicator									
<b>B</b> With visual clogging indicator									
<b>Execution</b>									
<b>P01</b> MP Filtri standard									
<b>Pxx</b> Customized									

### FILTER ELEMENT

Filter element series and size	Configuration example:	A115	2	A03	P01
<b>A115</b>					
<b>Length</b>					
<b>1</b>   <b>2</b>					
<b>Filtration rating</b>					
<b>A03</b> Inorganic microfiber 3 µm					
<b>L10</b> Polyurethane 10 µm					
<b>Execution</b>					
<b>P01</b> MP Filtri standard					
<b>Pxx</b> Customized					

SAP115							
Length	Connection	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	A/F [mm]
<b>1</b>	A	106	18	55	17	42	41
	C	111	23	55	22	42	55
<b>2</b>	A	170	18	80	17	106	41
	C	175	23	80	22	106	55





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**The filler plugs series is composed by different versions: with breather filter, with dipstick for measuring the reservoir fluid level or with anti-splash fins to prevent spillage of oil from the reservoir to be specifically used on mobile equipments.**

# Filler and Drain Plugs



TC 50 page 75  
TKT - TSD - TKM 79



# TC 50 series

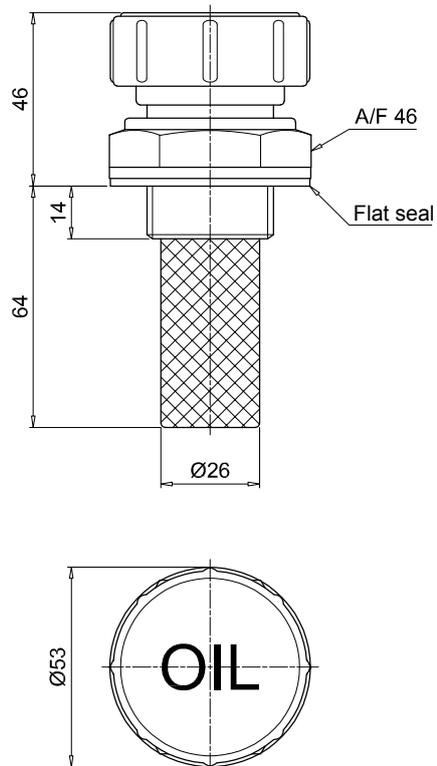
Nylon filler cap





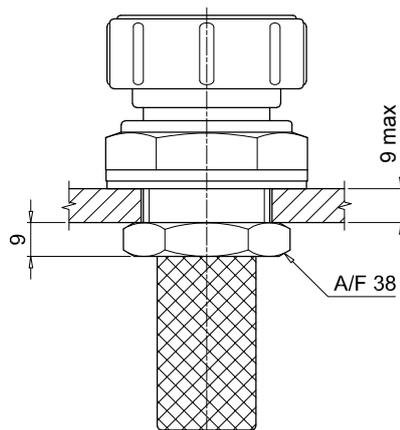
TC50

Threaded connection

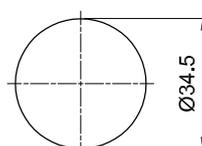


TC50

With ringnut



Through hole on the tank





# TKT - TSD - TKM series

Nylon and aluminium filler and drain plugs



## Technical data

### Filler plugs

#### Nylon filler plug

TKT is a range of nylon compact filler plugs for filling of the fluid into the systems during the commissioning and maintenance procedures. They are usually directly fitted on the tank.

#### Available features:

- Male threaded connections up to G 2"
- Breathing hole, to reduce the pressure inside the filter during the maintenance operations
- Caps with different graphics and colours, for the use in several applications
- Dipstick, to monitor the fluid level into the tank even in complicated positions
- Antisplash, to avoid fluid coming out through the air breather due to sloshing
- Labyrinth filter, to avoid fluid coming out through the air breather due to sloshing

#### Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

### Materials

- Body: Nylon
- Seals: NBR, Inorganic fibre
- Labyrinth: Nylon
- Anti-splash feature: Resin impregnate paper
- Dipstick: Phosphatized steel

### Temperature

From -25 °C to +100 °C

### Weight

TKTG 13	5 g
TKTG 16	8 g
TKTG 20	10 g
TKTG 26	15 g
TKTG 33	30 g
TKTG 42	32 g
TKTG 60	35 g

### Quantity

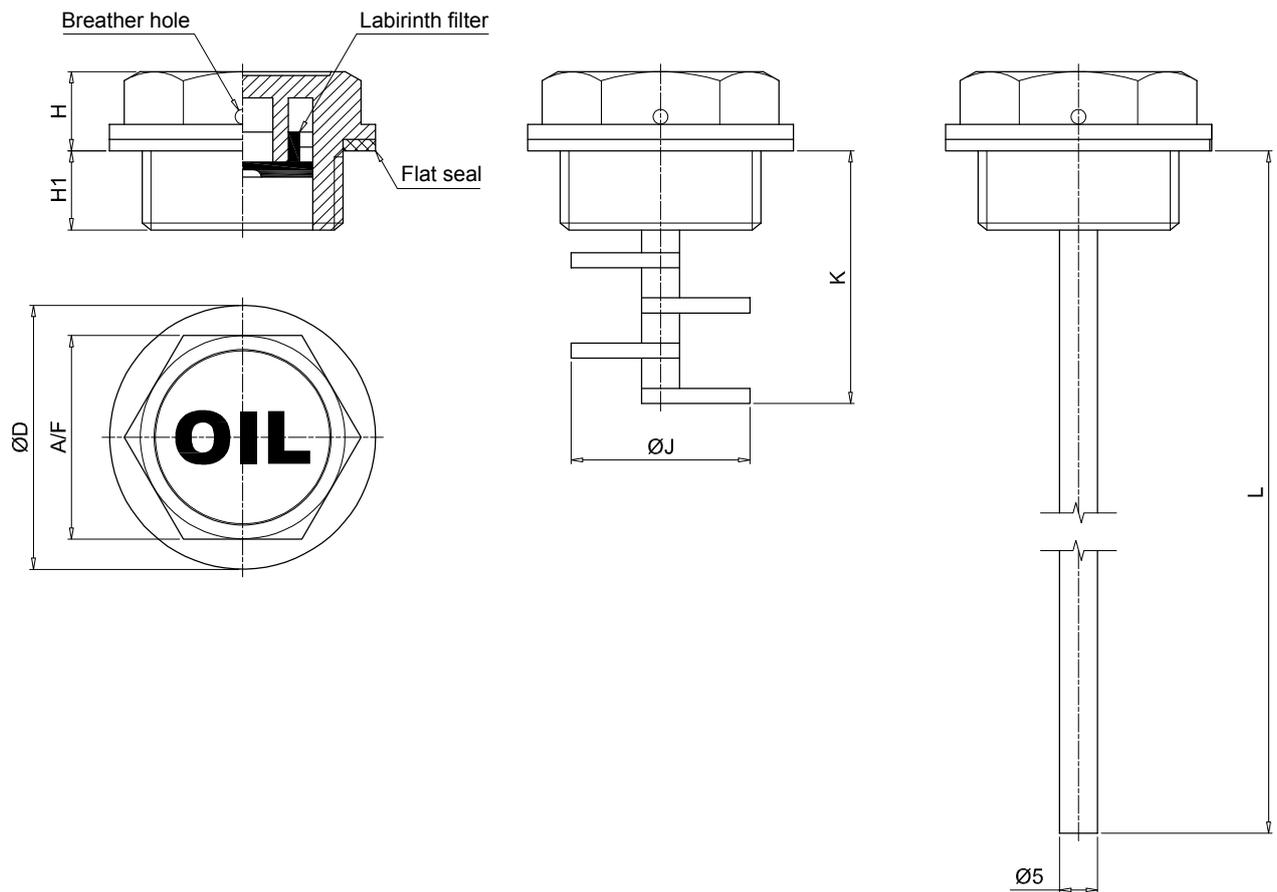
25 pcs/pack



## Designation & Ordering code

### FILLER PLUG - TKT

Series and size	Configuration example : TKT G26 N N A F S P01									
<b>TKT</b>										
<b>Connections to the tank</b>	Version									
	S	A	F	L						
<b>G13</b> Thread G 1/4"	•	•		•						
<b>G16</b> Thread G 3/8"	•	•	•	•						
<b>G20</b> Thread G 1/2"	•	•	•	•						
<b>G26</b> Thread G 3/4"	•	•	•	•						
<b>G33</b> Thread G 1"	•	•	•							
<b>G42</b> Thread G 1 1/4"	•	•	•							
<b>G48</b> Thread G 1 1/2"	•	•	•							
<b>G60</b> Thread G 2"	•	•								
<b>Colour</b>										
<b>N</b> Black nylon										
<b>Cover wording</b>										
<b>O</b> Oil	<b>N</b> Neutral									
<b>Seals</b>	Version									
	S	A	F	L						
<b>A</b> NBR		•	•							
<b>B</b> Inorganic fiber	•			•						
<b>Breather hole</b>										
<b>S</b> Without breather hole	<b>F</b> With breather hole									
<b>Version</b>										
<b>S</b> Standard	<b>F</b> With anti-splash feature									
<b>A</b> With dipstick	<b>L</b> With labyrinth filter									
<b>Execution</b>										
<b>P01</b> MP Filtri standard										
<b>Pxx</b> Customized										



Connections	ØD [mm]	A/F [mm]	H [mm]	H1 [mm]	ØJ [mm]	K [mm]	L [mm]
<b>G13</b>	20	17	8.5	7.5	-	-	205
<b>G16</b>	22	18	9.5	8.5	13.5	32	206
<b>G20</b>	28	22	9.5	9.5	17.5	33	207
<b>G26</b>	35	27	10.5	10.5	23.5	34	208
<b>G33</b>	42	34	10.5	10.5	29.5	36	201
<b>G42</b>	52	42	11	11	38	38	201
<b>G48</b>	58	47	11	11	38	36	201
<b>G60</b>	74	64	18	18	-	-	198

# TSD GENERAL INFORMATION

## Technical data

### Filler plugs

#### Nylon filler plug

TSD is a range of nylon compact air breathers and filler plugs for protection of the tank against the solid contamination contained into the air and filling of the fluid into the systems during the commissioning and maintenance procedures.

They are usually directly fitted on the tank.

#### Available features:

- Male threaded connections up to G 1 1/2"
- Metal filtration, to hold the coarse contamination contained into the air
- Caps with different graphics and colours, for the use in several applications
- Dipstick, to monitor the fluid level into the tank even in complicated positions
- Antisplash, to avoid fluid coming out through the air breather due to sloshing

#### Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

#### Materials

- Body: Nylon
- Cover: Nylon
- Seal: NBR
- Filter: Galvanized steel
- Anti-splash feature: Nylon
- Dipstick: Phosphatized steel

#### Temperature

From -25 °C to +100 °C

#### Weight

TSDG16	15 g
TSDG20	25 g
TSDG26	28 g
TSDG33	60 g
TSDG42	69 g
TSDG48	74 g

#### Quantity

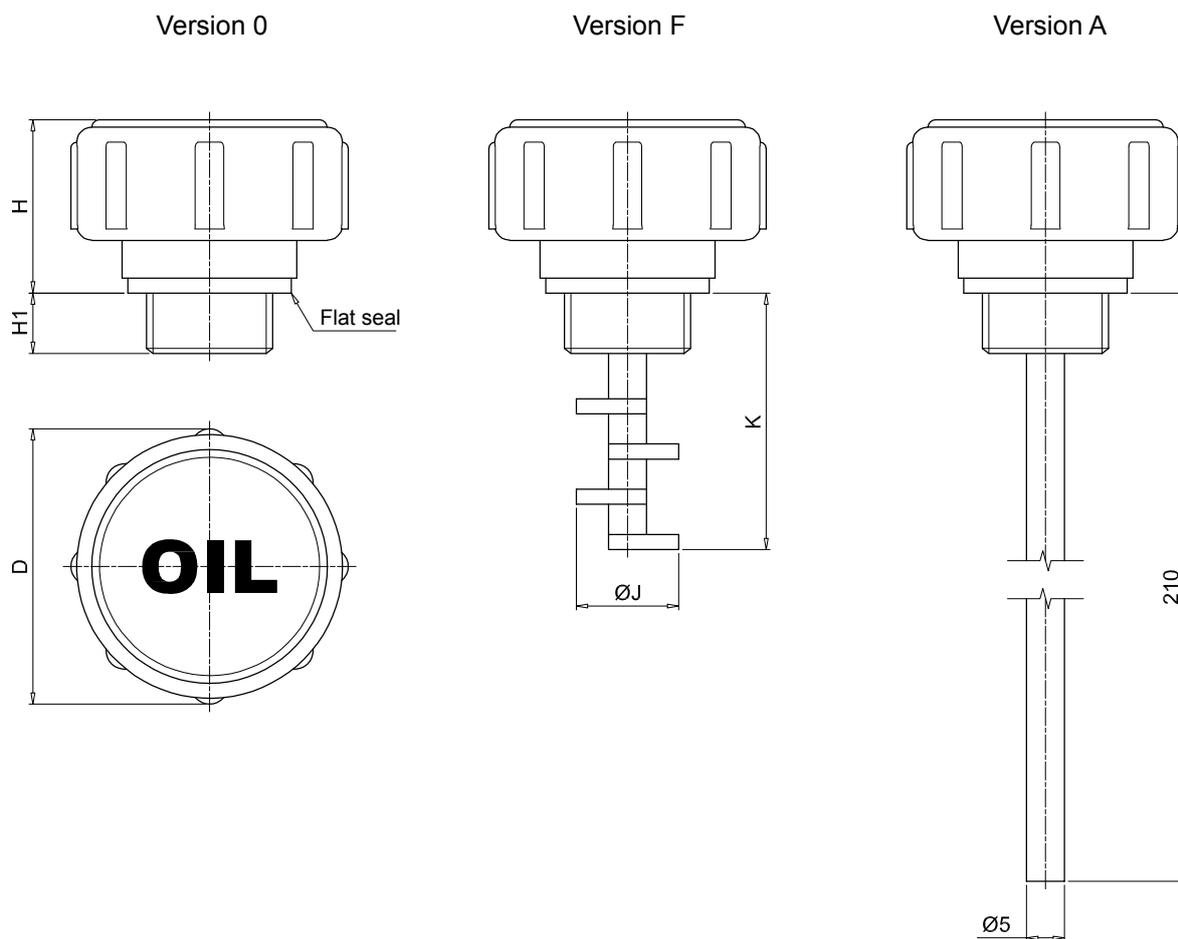
25 pcs/pack



## Designation & Ordering code

### FILLER PLUG - TSD

Series and size	Configuration example :								
<b>TSD</b>	TSD	G26	R	G	A	F	S	P01	
<b>Connections to the tank</b>									
<b>G16</b> Thread G 3/8"	<b>G33</b> Thread G 1"								
<b>G20</b> Thread G 1/2"	<b>G42</b> Thread G 1 1/4"								
<b>G26</b> Thread G 3/4"	<b>G48</b> Thread G 1 1/2"								
<b>Cover colour</b>									
<b>R</b> Red	<b>Y</b> Yellow								
<b>Cover wording</b>									
<b>O</b> Oil									
<b>N</b> Neutral									
<b>G</b> Gasoil									
<b>Seals</b>									
<b>A</b> NBR									
<b>Filter element</b>			Cover wording						
<b>O</b> Without filter element	•	•	•						
<b>A</b> Steel filter element	•	•							
<b>Version</b>									
<b>S</b> Standard									
<b>A</b> With dipstick									
<b>F</b> With anti-splash feature									
								<b>Execution</b>	
								<b>P01</b> MP Filtri standard	
								<b>Pxx</b> Customized	



Connections	ØD [mm]	H [mm]	H1 [mm]	ØJ [mm]	K [mm]
<b>G16</b>	36.5	23	8	13.5	34
<b>G20</b>	40.5	23	9	17.5	34
<b>G26</b>	46.5	23	10	23.5	35
<b>G33</b>	52.5	24	11	29.5	42
<b>G42</b>	67.5	31.5	12	38	45
<b>G48</b>	67.5	31.5	11	38	45

## Technical data

### Drain plugs

#### Aluminium magnetic drain plug

TKM is a range of aluminium compact plugs for draining of the fluid from the systems during the commissioning and maintenance procedures. They are usually directly fitted on the bottom of the tank. The integrated magnet holds the ferrous contamination.

#### Available features:

- Male threaded connections up to G 1"

#### Common applications:

- Hydraulic systems  
- Mobile machines  
- Industrial equipment

#### Materials

- Body: Aluminium  
- Seal: Inorganic fibre

#### Temperature

From -25 °C to +100 °C

#### Weight

TKMG13 14 g  
TKMG16 23 g  
TKMG20 42 g  
TKMG26 95 g  
TKMG33 98 g

#### Quantity

1 pc/pack



## Designation & Ordering code

### DRAIN PLUG - TKM

#### Series and size

**TKM**

Configuration example: **TKM** **G20** **B** **P01**

#### Connections to the tank

**G13** Thread G 1/4"

**G16** Thread G 3/8"

**G20** Thread G 1/2"

**G26** Thread G 3/4"

**G33** Thread G 1"

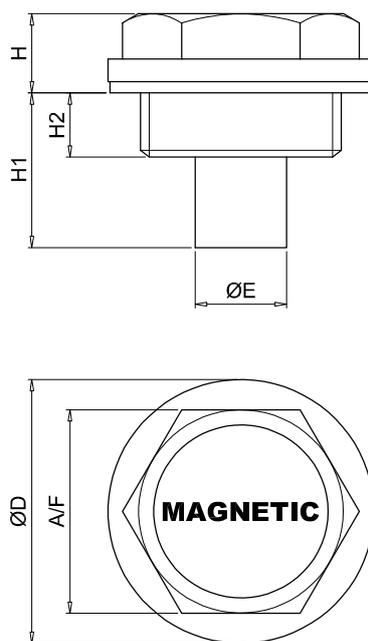
#### Seals

**B** Inorganic fiber

#### Execution

**P01** MP Filtri standard

**Pxx** Customized



Connection	ØD [mm]	A/F [mm]	ØE [mm]	H [mm]	H1 [mm]	H2 [mm]
<b>G13</b>	19	15	9.5	6	11.5	5.5
<b>G16</b>	22	18	8	9.5	13.5	7.5
<b>G20</b>	28	22	10	9.5	15.5	7.5
<b>G26</b>	35	27	12	10.5	20.5	8.5
<b>G33</b>	42	34	25	13	30.5	10.5

## **LC**

The sight plugs series allow visibility of the fluid contained in the reservoirs, showing the level and also any changes in transparency and emulsion.

## **LV**

The oil level indicators series is available for both static and mobile applications; the construction materials used make it possible to guarantee service with wide temperature variations and compatibility with all hydraulic fluids.

LVA / LVU level indicators are available with fixing centre distance from 76 to 1000 mm.

These indicators are available in three configurations, with transparent plastic body, with black plastic body and with aluminium body.

Fixing to reservoirs with unthreaded holes or with reduced thickness can be achieved using series LCC equipped with expansion kit.

# Visual Oil Level Indicators



LCP - LCC page 89  
LVA - LVU 95



# LCP - LCC series

Visual oil level indicators



# LCP GENERAL INFORMATION

## Technical data

### Visual oil level indicators

LCP is a range of plastic compact fluid level indicators, usually called spy eyes, for monitoring of the fluid level into the tank. They are directly fitted on the tank side.

Housings made of polyamide or steel can be selected, to meet every condition.

### Available features:

- Male threaded connections up to G 2"
- Baffle, to allow an easy monitoring of the level
- Expansion kit, for reliable sealing even in tanks with thin walls

### Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

### T Series

#### Weight

LCPG13	1 g
LCPG16	2 g
LCPG20	4 g
LCPG26	8 g
LCPG33	10 g
LCPG42	12 g

### Materials

- Body: Polyamide
- Contrast screen: Nylon
- Seals: NBR

### M Series

#### Weight

LCPG20	6 g
LCPG26	9 g
LCPG33	13 g

### Materials

- Body: Aluminium
- Lens: Thermoplastic
- Contrast screen: Nylon
- Seals: Inorganic fibre

### N Series

#### Weight

LCPG13	2 g
LCPG16	4 g
LCPG20	7 g
LCPG26	9 g
LCPG30	12 g
LCPG33	18 g
LCPG42	25 g
LCPG48	48 g
LCPG60	59 g

### Materials

- Body: Nylon
- Lens: Thermoplastic
- Contrast screen: Nylon
- Seals: Inorganic fibre, NBR
- Expansion kit: Brass, NBR

### Temperature

From -20 °C to + 80 °C

### Quantity

25 pcs/pack



## Designation & Ordering code

### LCP

#### Series and size

#### LCP

Configuration example 1 : LCP G26 N S B S P01

Configuration example 2 : LCP G42 T S A P01

Configuration example 3 : LCP G20 M C A P01

#### Connections to the tank

Material:	N	T	M
<b>G13</b> Thread G 1/4"	•	•	
<b>G16</b> Thread G 3/8"	•	•	
<b>G20</b> Thread G 1/2"	•	•	•
<b>G26</b> Thread G 3/4"	•	•	•
<b>G33</b> Thread G 1"	•	•	•
<b>G42</b> Thread G 1 1/4"	•	•	
<b>G48</b> Thread G 1 1/2"	•		
<b>G60</b> Thread G 2"	•		

#### Material

**N** Black nylon      **T** Transparent polyamide      **M** Metal (aluminium)

#### Baffle

Material:	N								T				M		
Connection:	G13	G16	G20	G26	G33	G42	G48	G60	G13	G16	G20	G26	G33	G42	M
<b>S</b> Without	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
<b>C</b> With baffle		•	•	•	•	•	•	•				•	•	•	•

#### Seals

Material:	N			T	M
Expansion kit:	S	K			
<b>A</b> NBR		•		•	•
<b>B</b> Inorganic fiber	•				

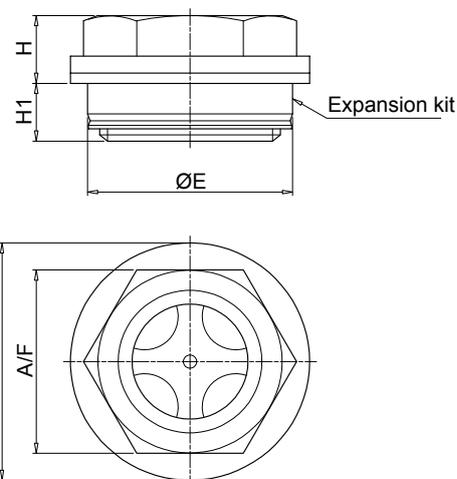
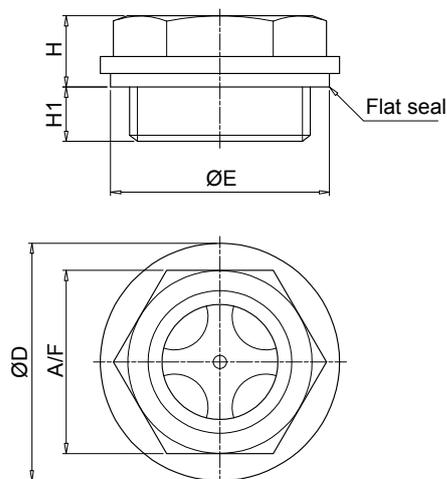
#### Expansion kit

Material:	N							T	M	
Connection:	G13	G16	G20	G26	G33	G42	G48	G60		
<b>S</b> Without	•	•	•	•	•	•	•	•		
<b>K</b> With expansion kit		•	•	•	•	•	•			

#### Execution

**P01** MP Filtri standard  
**Pxx** Customized

### LCP - N



#### without expansion kit

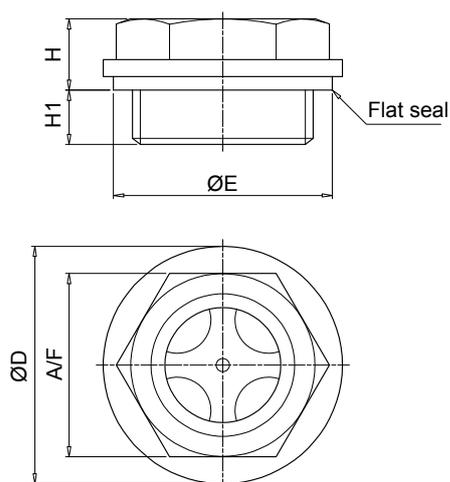
Connection	ØD [mm]	ØE [mm]	A/F [mm]	H [mm]	H1 [mm]
<b>G13</b>	20	18.5	17	9	7
<b>G16</b>	22	21.5	18	10	7
<b>G20</b>	28	26	22	10	7
<b>G26</b>	35	32	27	10.5	8
<b>G33</b>	42	41	34	13.5	10.5
<b>G42</b>	52	51	42	14	11
<b>G48</b>	58	53.5	47	16	11
<b>G60</b>	74	72	64	16	18

#### with expansion kit

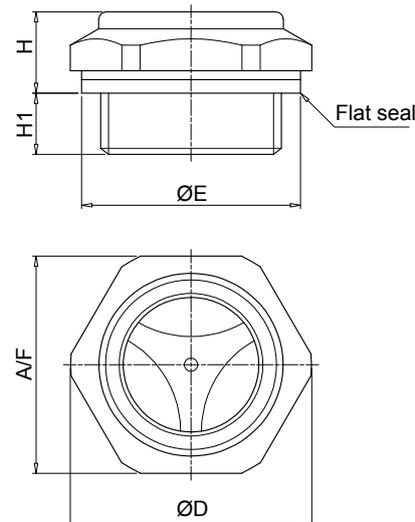
Connection	ØD [mm]	ØE [mm]	A/F [mm]	H [mm]	H1 [mm]
<b>G20</b>	28	26	22	9	8
<b>G26</b>	35	30	27	10	8.5
<b>G33</b>	42	40	34	13	11
<b>G42</b>	52	50	42	13.5	11.5
<b>G48</b>	58	55	47	15.5	11.5

**Note:** for installation onto OB Cleaning covers see page 147

### LCP - T



### LCP - M



Connection	ØD [mm]	ØE [mm]	A/F [mm]	H [mm]	H1 [mm]
<b>G13</b>	20	18.5	15	6.5	5
<b>G16</b>	22	21.5	17	7	5.5
<b>G20</b>	28	26	21	8	6
<b>G26</b>	33	32	26	8.5	7
<b>G33</b>	41	41	32	9	8
<b>G42</b>	52	51	42	14	11

Connection	ØD [mm]	ØE [mm]	A/F [mm]	H [mm]	H1 [mm]
<b>G20</b>	29.5	26	27	11	7
<b>G26</b>	35.5	32	32	12	9
<b>G33</b>	44.5	41	40	13	8

**Note:** for installation onto OB Cleaning covers see page 147

## Technical data

### Visual oil level indicators

LCC is a range of plastic compact fluid level indicators, usually called spy eyes, for monitoring of the fluid level into the tank. They are directly fitted on the tank side.

The special shape of the screen allows the monitoring of the fluid level from every position.

#### Available features:

- Male threaded connections up to G 2"
- Expansion kit, for reliable sealing even in tanks with thin walls

#### Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

### N Series

#### Weight

LCCG26	7 g
LCCG42	20 g
LCCG60	40 g

#### Materials

- Body: Nylon
- Lens: Polyamide
- Contrast screen: Nylon
- Seals: Inorganic fibre, NBR
- Expansion kit: Brass / NBR

### T Series

#### Weight

LCCG16	2 g
LCCG20	4 g
LCCG33	9 g

#### Materials

- Body: Polyamide
- Seals: NBR

#### Temperature

From -20 °C to + 80 °C

#### Quantity

25 pcs/pack



## Designation & Ordering code

### LCC

#### Series and size

**LCC**

Configuration example 1: LCC G20 N A K P01

Configuration example 2: LCC G33 T A P01

#### Connections to the tank

Material: N T

Material:	N	T
<b>G13</b> Thread G 1/4"		
<b>G16</b> Thread G 3/8"		•
<b>G20</b> Thread G 1/2"	•	•
<b>G26</b> Thread G 3/4"	•	•
<b>G33</b> Thread G 1"	•	•
<b>G42</b> Thread G 1 1/4"	•	
<b>G48</b> Thread G 1 1/2"	•	
<b>G60</b> Thread G 2"	•	

#### Material

**N** Black nylon      **T** Transparent polyamide

Material:	N			T
Expansion kit:	S	K		
<b>A</b> NBR		•		•
<b>B</b> Inorganic fiber	•			

Material:	N						T
Expansion kit:	Connection:	G20	G26	G33	G42	G48	G60
<b>S</b> Without		•	•	•	•	•	•
<b>K</b> With expansion kit		•	•	•	•	•	

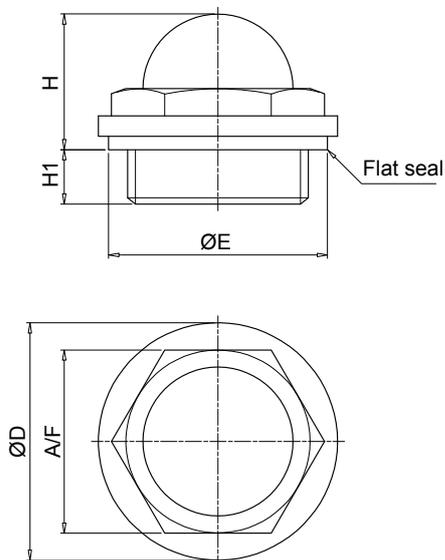
#### Execution

**P01** MP Filtri standard

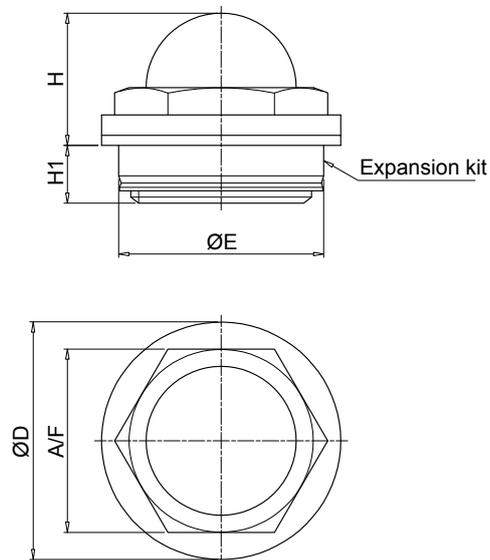
**Pxx** Customized

### LCC - N

without expansion kit



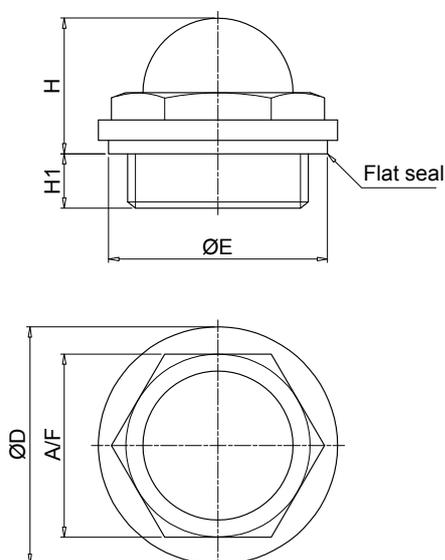
with expansion kit



Connection	ØD [mm]	ØE [mm]	A/F [mm]	H [mm]	H1 [mm]
<b>G20</b>	28	26	22	17.5	17.5
<b>G26</b>	35	32	27	20	8
<b>G33</b>	42	41	34	24	10
<b>G42</b>	52	51	44	30	11
<b>G48</b>	58	53.5	50	33	11.5
<b>G60</b>	74	72	64	39	18

Connection	ØD [mm]	ØE [mm]	A/F [mm]	H [mm]	H1 [mm]
<b>G20</b>	28	26	22	16.5	8.5
<b>G26</b>	35	30	27	19.5	8.5
<b>G33</b>	42	40	34	23.5	10.5
<b>G42</b>	52	50	44	29.5	11.5
<b>G48</b>	58	55	50	32.5	12

### LCC - T



Connection	ØD [mm]	ØE [mm]	A/F [mm]	H [mm]	H1 [mm]
<b>G13</b>	19	18.5	15	12.5	5
<b>G16</b>	21.5	21.5	17	14	5.5
<b>G20</b>	27	26	21	16.5	6
<b>G26</b>	33	32	26	19	7
<b>G33</b>	40	41	32	22.5	8



# LVA - LVU series

Visual oil level indicators



# LVA GENERAL INFORMATION

## Technical data

### Visual oil level indicators

LVA is a range of plastic compact fluid level indicators for monitoring of the fluid level into the tank. They are directly fitted on the tank side. The fluid comes in through the lower connection screw and it is easily visible through the screen.

A white background plate, an orange line for the minimum level and a blue line for the maximum level allow an easy monitoring of the level.

### Available features:

- Several male threaded connections, with or without nuts
- Three different sizes, to meet every size of tank
- Thermometer, to check the temperature of the fluid

### Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

### Materials

- Body: Transparent amorphous polyamide lens
- Nylon guard
- Seal: A -NBR / V - FPM

### Operating pressure

Max 1 bar at +80°C

### Operating temperature

From -25 °C to +80 °C

### Weight

LVA 10 0.13 kg  
LVA 20 0.18 kg  
LVA 30 0.23 kg

### Quantity

10 pcs/pack



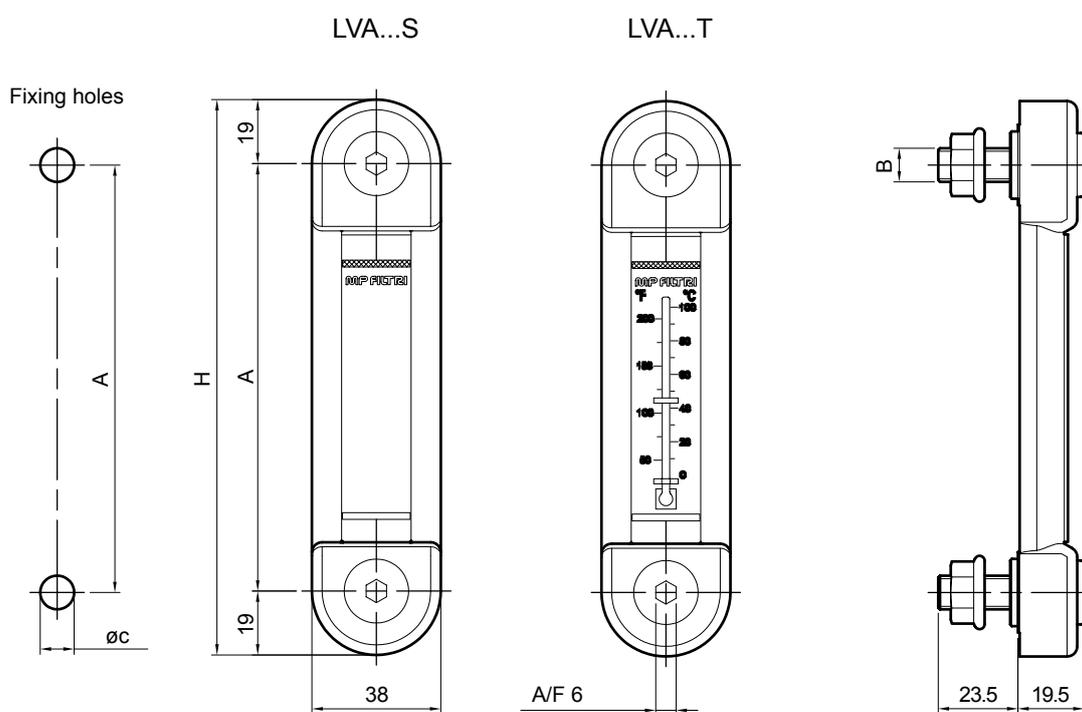
## Designation & Ordering code

LVA	
<b>Series</b> LVA	Configuration example : LVA 20 T A P M10 S01
<b>Size</b> 10   20   30	
<b>Thermometer</b> S Without thermometer T With thermometer	
<b>Seals</b> A NBR V FPM	
<b>Cover material</b> P Polyamide	
<b>Connections</b> M10 Screws M10 M12 Screws M12 U38 Screws 3/8" UNC U12 Screws G 1/2" UNC	
	<b>Execution</b> S01 Tag MP Filtri, with nuts S02 Tag MP Filtri, without nuts

LVA		
Size	A [mm]	H [mm]
<b>LVA10</b>	76	114
<b>LVA20</b>	127	165
<b>LVA30</b>	254	292

Type	B [mm]	C [mm]
<b>LVA...M10</b>	M10	10.5
<b>LVA...M12</b>	M12	12.5
<b>LVA...U38</b>	3/8" UNC	10.0
<b>LVA...U12</b>	1/2" UNC	13.5



**Note:** for installation onto OB Cleaning covers see page 147

## Technical data

### Visual oil level indicators

LVU is a range of plastic fluid level indicators for monitoring of the fluid level into the tank. They are directly fitted on the tank side.

The fluid comes in through the lower connection screw and it is easily visible through the screen.

A background plate, a red float and the adjustable minimum level and maximum level indicators allow an easy check of the level.

### Available features:

- G 3/8" male threaded connections
- Adjustable size on request, to meet every size of tank
- Drain valve, to drop the oil for the maintenance procedures
- Glass screen and "U" protection, to meet heavy duty applications

### Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

### Materials

- Head: Nylon
- Connection G 3/8": Nickel plated brass
- G 3/8" valve: Steel
- Seal: NBR
- Pipe seal: NBR, Acrylic
- Pipe: Pyrex
- Float: Nylon
- Protection: Aluminium
- Clamps min-max: Nylon

### Operating temperature

From -25 °C to +70 °C

Weight	version U	version S
LVU 0500	0.780 kg	0.580 kg
LVU 1000	1.150 kg	0.790 kg
LVU 1500	1.550 kg	1.100 kg
LVU 2000	1.950 kg	1.400 kg

### Quantity

10 pcs/pack



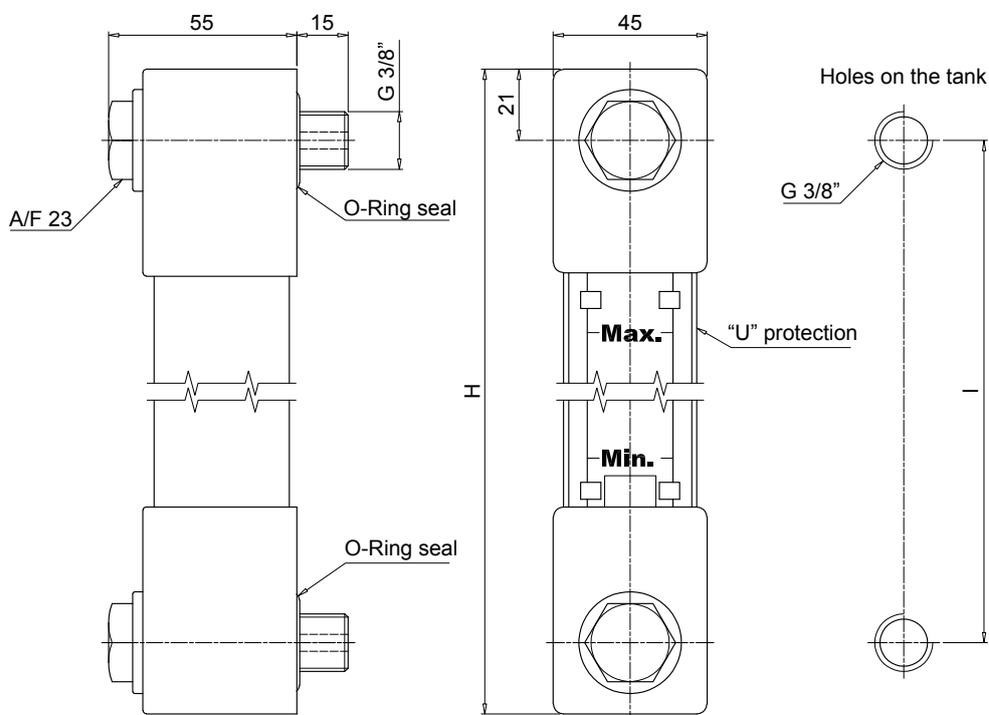
## Designation & Ordering code

### LVU

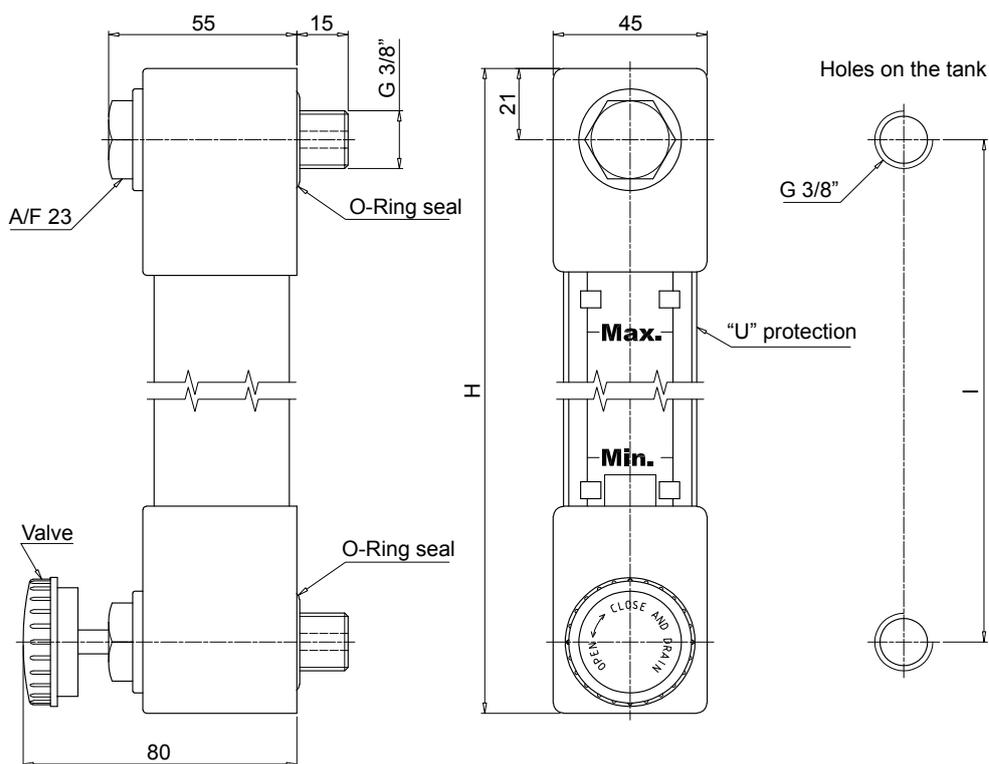
Series	Configuration example :					
<b>LVU</b>	LVU	0500	U	A	10	P01
<b>Size</b>						
<b>0500</b>	Distance between center = 500 mm					
<b>1000</b>	Distance between center = 1000 mm					
<b>1500</b>	Distance between center = 1500 mm					
<b>2000</b>	Distance between center = 2000 mm					
Different sizes on request						
<b>Body</b>	Size					
	500	1000	1500	2000		
<b>S</b>	Standard plexiglass body					
<b>U</b>	Plexiglass body, with "U" protection					
<b>P</b>	Pyrex body, with "U" protection					
<b>Seals</b>						
<b>A</b>	NBR					
<b>V</b>	FPM					
<b>Connections</b>						
<b>10</b>	Connection G 3/8"					
<b>20</b>	Connection G 3/8", with drain valve					
<b>Execution</b>						
<b>P01</b>	MP Filtri standard					
<b>Pxx</b>	Customized					

LVU		
Size	H [mm]	I [mm]
0500	542	500
1000	1042	1000
1500	1542	1500
2000	2042	2000

### Connection 10



### Connection 20



**Electromagnetic float level indicators use the action of a magnet fixed to the float to change the electrical status of a reed switch mounted inside the tube.**

**As the fluid level in the tank changes, the float moves together with the magnet that, connected with the reed switch, move the contacts thereby tripping an alarm signal.**

**The movement of the float is normally limited by mechanical stops because once the magnet exceeds the point at which it activates the reed switch, the switch reverts to its original status.**

**To invert the contact status from N.O. to N.C. and vice versa, it is normally sufficient to invert the float.**

# Electrical Oil Level Indicators



LEN - LEG - LET - LEM - LEU page 103  
LVK 115



# LEN - LEG - LET - LEM - LEU series

Electrical oil level indicators



## Technical data

### Electrical oil level indicators

LEN is a range of electrical fluid level indicators for monitoring of the fluid level into the tank.

They are directly fitted on the tank.

The float moves through the rod while the fluid level changes.

A magnet, fitted into the float, turns a reed sensor fixed into the rod.

#### Available features:

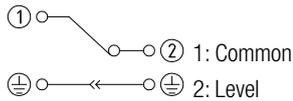
- G 1" male threaded or flanged connections
- Adjustable size on request, to meet every size of tank
- 1 or 2 floats, to monitor the minimum level, the maximum level or both of them.

#### Common applications:

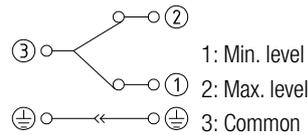
- Hydraulic systems
- Mobile machines
- Industrial equipment

#### Electrical symbol:

LEN 1 Float



LEN 2 Floats



**Note:** to invert the contact status from NC to NO and vice versa, simply invert the float.

### Materials

- Flange/Threaded body: Aluminium
- Tube: Brass, AISI 304 (on request)
- Float: Nylon foam, AISI 316 (on request)
- O-Ring: NBR
- Circlip: Phosphor bronze
- Contact: N.C. reed, N.O. (on request)

### Electrical data

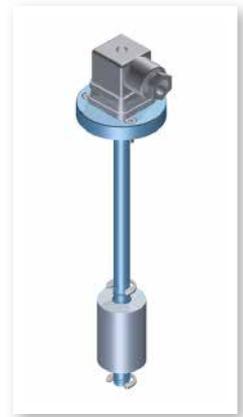
- Protection rating: IP65
- Max switching capacity: 80 W
- Max switching current: 1 A
- Max switching voltage: 250 Vac
- Fluid specific gravity: > 0.75

### Temperature

From -15 °C to + 80 °C

### Weight

LEN 1 float 0.185 kg  
LEN 2 floats 0.230 kg

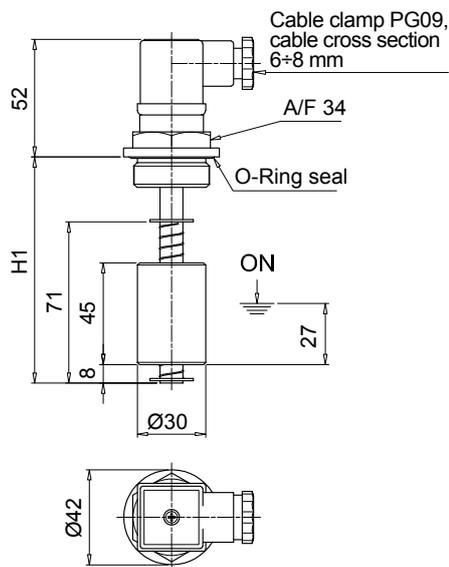


## Designation & Ordering code

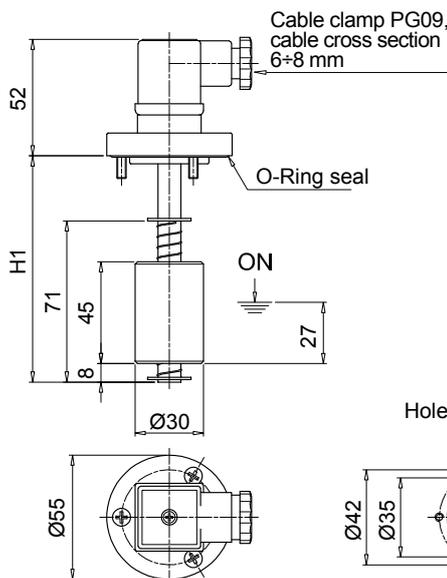
### LEN

Series	Configuration example :									
<b>LEN</b>	LEN	A	350	2	A	1	A	G	S	P01
<b>Tube material</b>										
<b>A</b> Brass										
<b>Length</b>										
<b>150   200   250   350   400   500</b>										
<b>Number of floats</b>	Length									
	150	200	250	350	400	500				
<b>1</b> Nr. 1 float	•	•	•	•	•	•				
<b>2</b> Nr. 2 floats		•	•	•	•	•				
<b>Float material</b>										
<b>A</b> Nylon foam										
<b>Electrical switch</b>										
<b>1</b> N.C. (normally closed)										
<b>Seals</b>										
<b>A</b> NBR										
<b>Connections to the tank</b>										
<b>G</b> Thread G 1"										
<b>F</b> Nr. 3 holes flange										
<b>Electrical connection</b>										
<b>S</b> DIN 43650 connector										
<b>Execution</b>										
<b>P01</b> MP Filtri standard										
<b>Pxx</b> Customized										

### Connection "G"



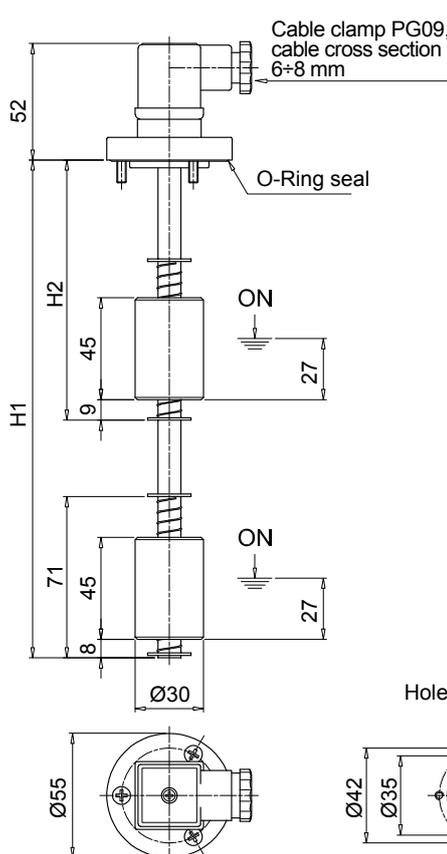
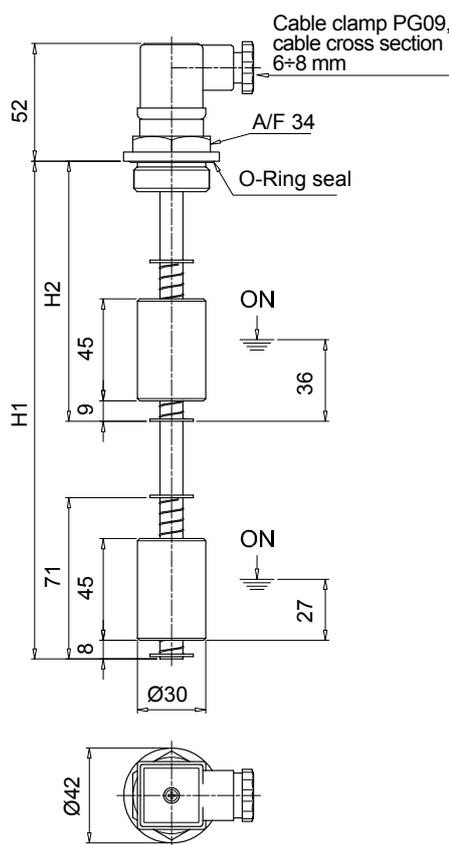
### Connection "F"



LEN

Nr. 1 float

Length	H1 [mm]
150	150
200	200
250	250
350	350
400	400
500	500



LEN

Nr. 2 floats

Length	H1 [mm]	H2 [mm]
200	200	95
250	250	105
350	350	115
400	400	115
500	500	125

Optional

### DIN 43650 CONNECTOR

#### Materials

- Flange: aluminum
- Rod: brass
- Float: nylon foam
- Seals: A= NBR - V= FPM

#### Temperature

From -15 °C to +80 °C

For temperatures outside this range, contact MP Filtri Technical and Sales Department

## Technical data

### Electrical oil level indicators

LEG is a range of electrical fluid level indicators for monitoring of the fluid level into the tank.

They are directly fitted on the tank side.

The float moves through the rod while the fluid level changes.

A magnet, fitted into the float, turns a reed sensor fixed into the rod.

### Available features:

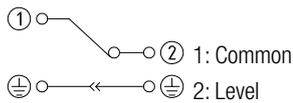
- Flanged connections
- Adjustable size on request, to meet every size of tank
- 1 float, to monitor the minimum level or the maximum level.

### Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

### Electrical symbol:

LEG 1 Float



**Note:** to invert the contact status from NC to NO and vice versa, simply invert the float.

### Materials

- Flange: Aluminium
- Tube: Brass
- Float: Nylon foam
- O-Ring: NBR
- Circlip: Phosphor bronze
- Contact: N.C. reed, N.O. (on request)

### Electrical data

- Protection rating: IP65
- Max switching capacity: 80 W
- Max switching current: 1 A
- Max switching voltage: 250 Vac
- Fluid specific gravity: > 0.75

The electrical properties indicated are referred to resistive loads; for capacitive and inductive loads and incandescent lamps, use protection circuits.

### Temperature

From -15 °C to + 80 °C

### Weight

LEG A 102 0.19 kg  
LEG A 200 0.22 kg

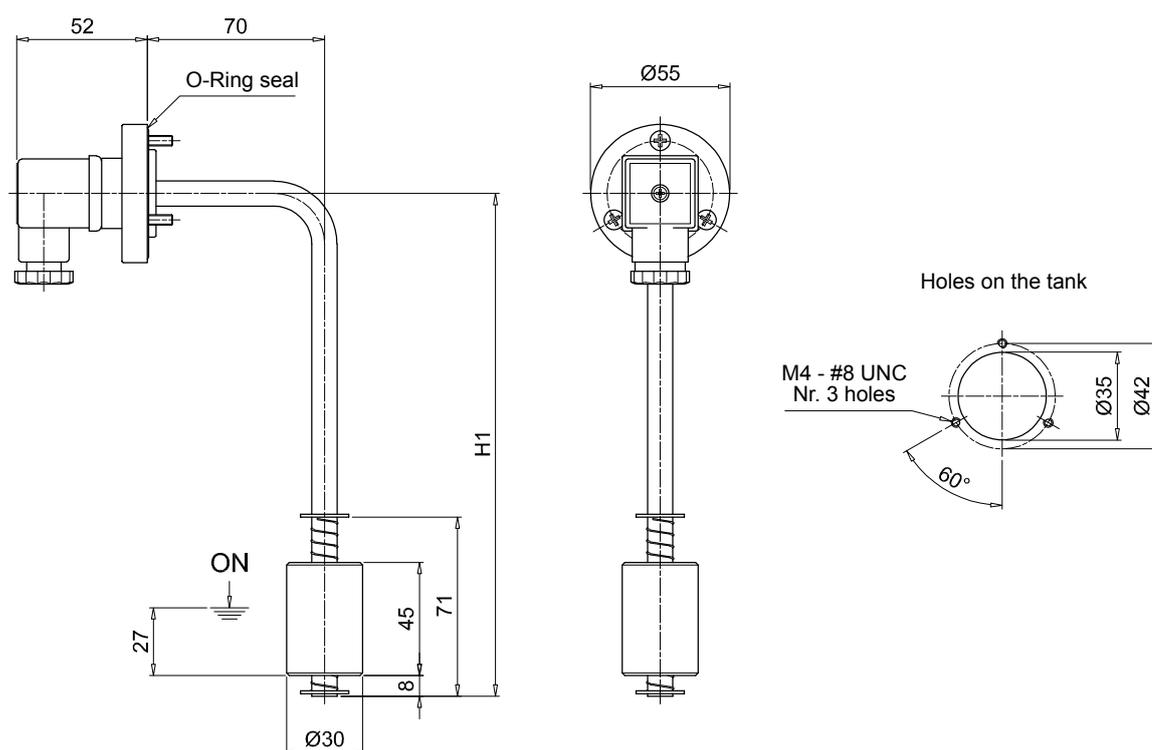


## Designation & Ordering code

### LEG

Series	Configuration example :	LEG	A	200	1	A	1	A	F	S	P01
<b>LEG</b>											
<b>Tube material</b>			A								
<b>A</b> Brass											
<b>Length</b>				200							
<b>102   200  </b>											
<b>Number of floats</b>					1						
<b>1</b> Nr. 1 float											
<b>Float material</b>						A					
<b>A</b> Nylon foam											
<b>Electrical switch</b>							1				
<b>1</b> N.C. (normally closed)											
<b>Seals</b>								A			
<b>A</b> NBR											
<b>Connection to the tank</b>									F		
<b>F</b> Nr. 3 holes flange											
<b>Electrical connection</b>										S	
<b>S</b> DIN 43650 connector											
											<b>Execution</b>
											<b>P01</b> MP Filtri standard
											<b>Pxx</b> Customized

LEG	
Size	H1 [mm]
LEG 102	103
LEG 200	200



Optional

### DIN 43650 CONNECTOR

#### Materials

- Flange: aluminum
- Rod: brass
- Float: nylon foam
- Seals: A= NBR - V= FPM

#### Temperature

From -15 °C to +80 °C

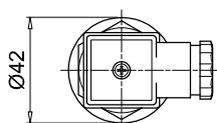
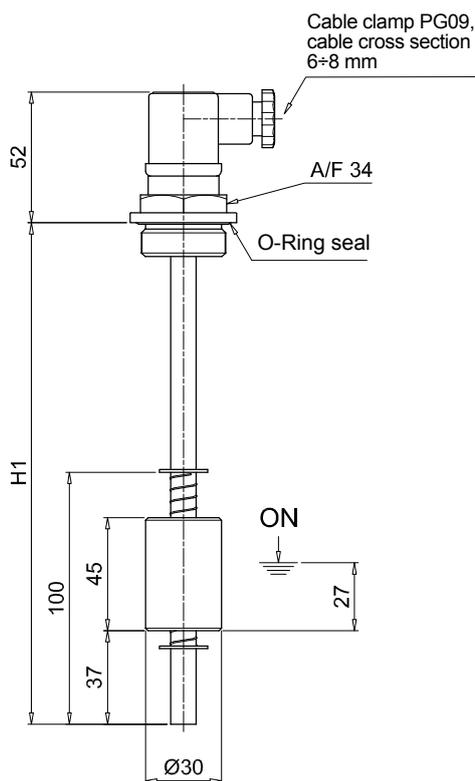
For temperatures outside this range, contact  
MP Filtri Technical and Sales Department

**Note:** for installation onto OB Cleaning covers see page 147

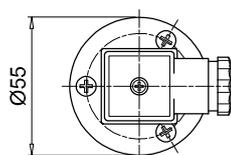
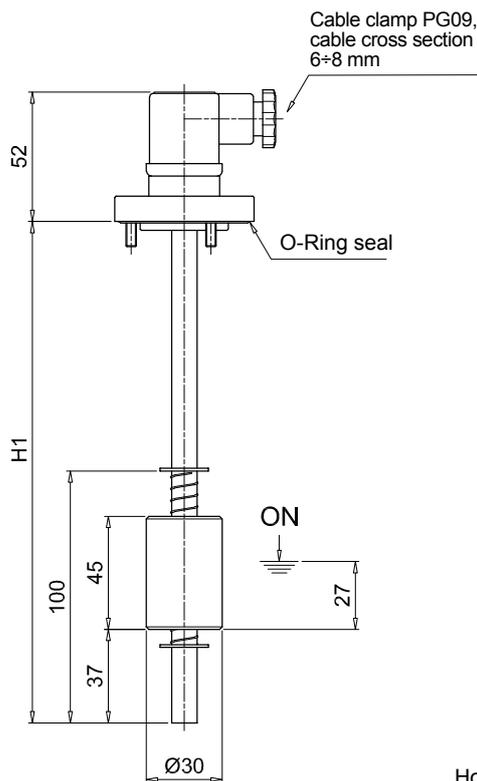


LET	
Length	H1 [mm]
200	200
300	300
400	400

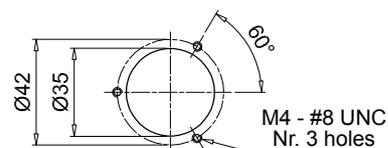
### Connection "G"



### Connection "F"



### Holes on the tank



Optional

### DIN 43650 CONNECTOR

#### Materials

- Flange: aluminum
- Rod: brass
- Float: nylon foam
- Seals: A= NBR - V= FPM

#### Temperature

From -15 °C to +80 °C

For temperatures outside this range, contact  
MP Filtri Technical and Sales Department

## Technical data

### Electrical oil level indicators

LEM is a range of electrical fluid level indicators for monitoring of the fluid level into the tank. They are directly fitted on the tank. The float moves through the rod while the fluid level changes. A magnet, fitted into the float, turns a reed sensor fixed into the rod. The setting point is adjustable on site, with few easy actions.

#### Available features:

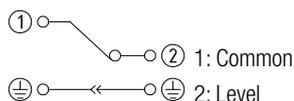
- Flanged connections
- Adjustable size on request, to meet every size of tank
- 1 float, to monitor the minimum level or the maximum level
- Integrated thermostat, to get a remote monitoring of the temperature.

#### Common applications:

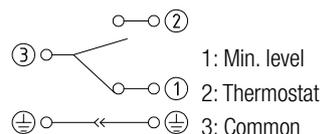
- Hydraulic systems
- Mobile machines
- Industrial equipment

#### Electrical symbol:

LEM 1 Float



LEM 2 Floats with thermostat



**Note:** to invert the contact status from NC to NO and vice versa, simply invert the float.

### Materials

- Flange/Threaded body: Aluminium
- Tube: Brass
- Float: Nylon foam
- O-Ring: NBR
- Circlip: Phosphor bronze
- Float contact: N.C. reed, N.O. (on request)
- Thermostat contact: N.O., N.C. (on request)

### Electrical data

- Protection rating: IP65
- Max switching capacity: 80 W
- Max switching current: 1 A
- Max switching voltage: 250 Vac
- Fluid specific gravity: > 0.75

### Temperature

From -15 °C to + 80 °C

### Weight

LEM 0.406 kg

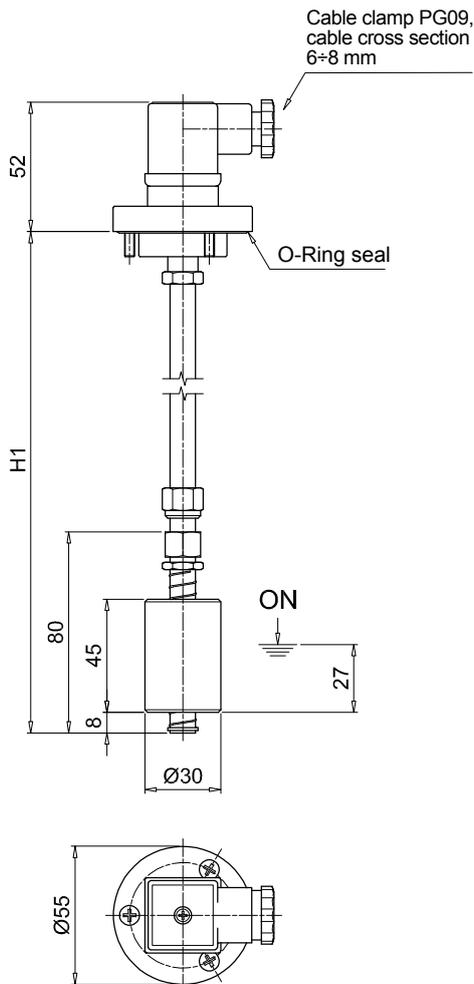


## Designation & Ordering code

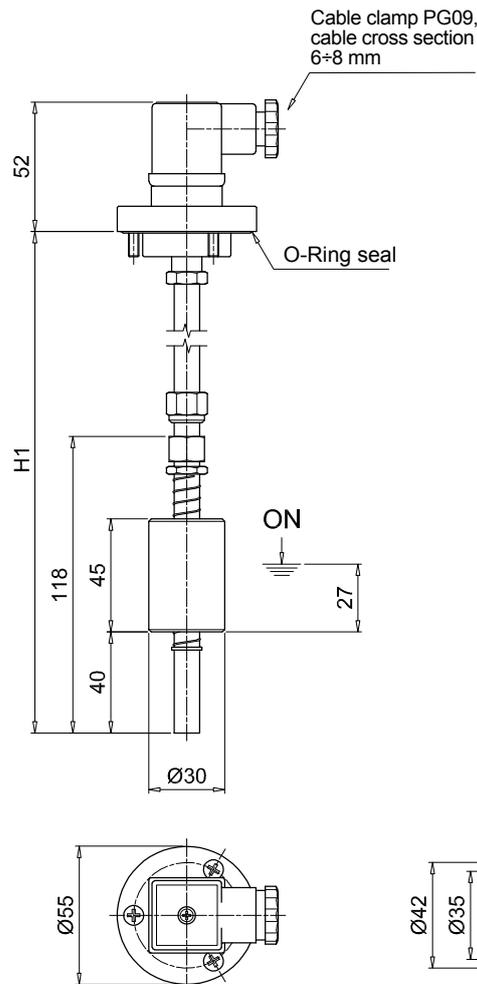
LEM										
Series	Configuration example : LEM A 1000 1 A 1 A F S 60 P01									
<b>LEM</b>										
Tube material	A Brass									
Length	500   1000									
Number of floats	1 Nr. 1 float									
Float material	A Nylon foam									
Electrical switch	1 N.C. (normally closed)									
Seals	A NBR									
Connections to the tank	F Nr. 3 holes flange									
Electrical connection	S DIN 43650 connector									
Thermostat setting	00 Without thermostat 60 60°C N.O. (normally open)									
Execution	P01 MP Filtri standard Pxx Customized									

LEM	
Length	H1 [mm]
500	500
1000	1000

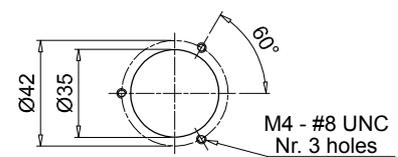
### Without thermostat



### With thermostat



### Holes on the tank



Optional

### DIN 43650 CONNECTOR

#### Materials

- Flange: aluminum
- Rod: brass
- Float: nylon foam
- Seals: A= NBR - V= FPM

#### Temperature

From -15 °C to +80 °C

For temperatures outside this range, contact  
MP Filtri Technical and Sales Department

## Technical data

### Electrical oil level indicators

LEU is a range of electrical fluid level indicators for monitoring of the fluid level into the tank. They are directly fitted on the tank. The float moves through the rod while the fluid level changes. A magnet, fitted into the float, turns a reed sensor fixed into the rod. The setting point is adjustable on site, with few easy actions. They are made of stainless steel, to meet every heavy duty application.

#### Available features:

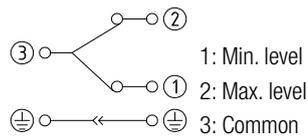
- Flanged connections
- Adjustable size on request, to meet every size of tank
- 2 floats, to monitor both the minimum level and the maximum level.

#### Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

#### Electrical symbol:

LEU 2 Floats



**Note:** to invert the contact status from NC to NO and vice versa, simply invert the float.

### Materials

- Flange: Aluminium
- Tube: AISI 304
- Float: Hard rubber, AISI 316 (on request)
- O-Ring: NBR
- Circlip: AISI 304
- Float contact: N.C. reed, N.O. (on request)

### Electrical data

- Protection rating: IP65
- Max switching capacity: 50 W
- Max switching current: 0.5 A
- Max switching voltage: 250 Vac
- Fluid specific gravity: > 0.75

### Temperature

From -15 °C to + 80 °C

### Weight

LEU 1 float 0.310 kg  
 LEU 2 floats 0.415 kg

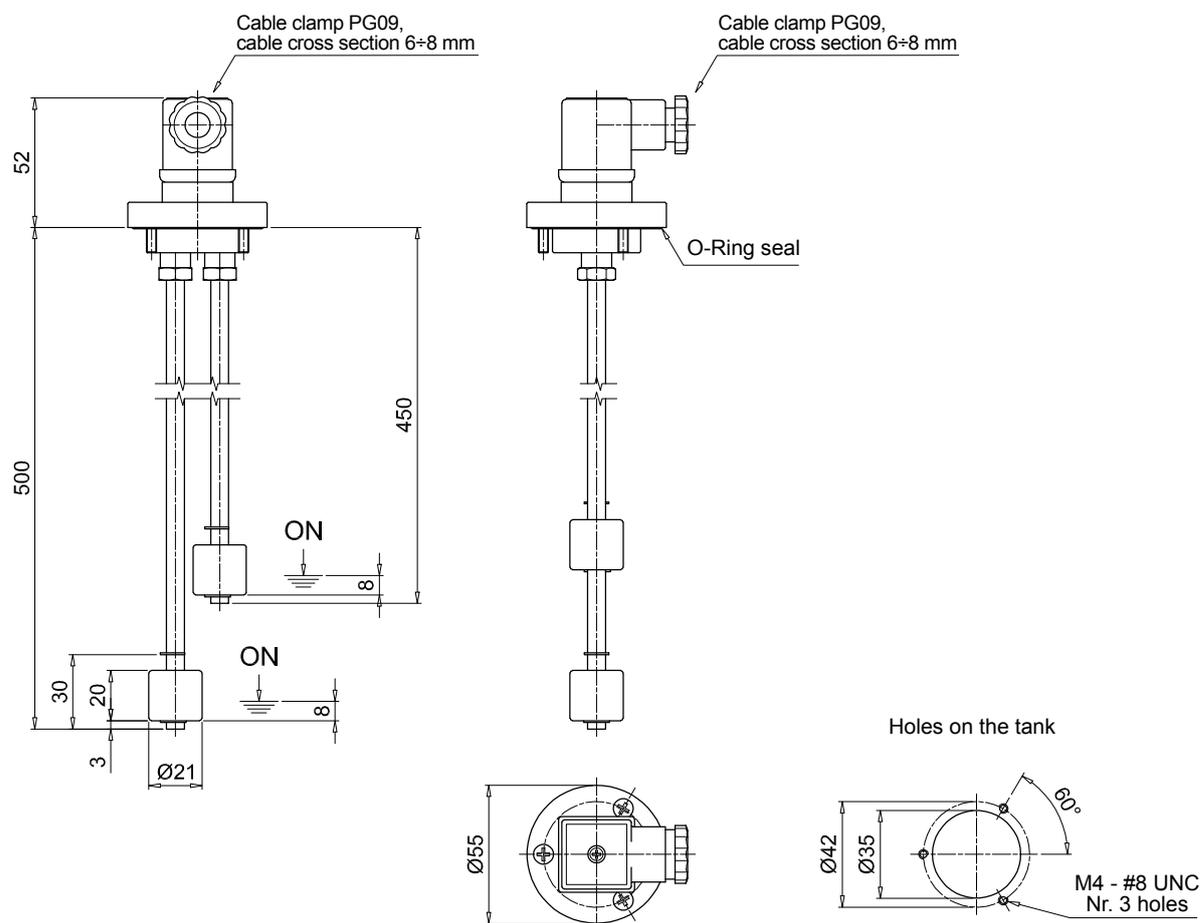


## Designation & Ordering code

### LEU

Series	Configuration example :	LEU	B	2	B	1	A	F	S	P01
<b>LEU</b>										
<b>Tube material</b>										
<b>B</b> AISI 304										
<b>Number of floats</b>										
<b>2</b> Nr. 2 floats										
<b>Float material</b>										
<b>B</b> NBR										
<b>Electrical switch</b>										
<b>1</b> N.C. (normally closed)										
<b>Seals</b>										
<b>A</b> NBR										
<b>Connections to the tank</b>										
<b>F</b> Nr. 3 holes flange										
<b>Electrical connection</b>										
<b>S</b> DIN 43650 connector										
<b>Execution</b>										
<b>P01</b> MP Filtri standard										
<b>Pxx</b> Customized										

LEU



Optional

### DIN 43650 CONNECTOR

#### Materials

- Flange: aluminum
- Rod: brass
- Float: nylon foam
- Seals: A= NBR - V= FPM

#### Temperature

From  $-15^\circ\text{C}$  to  $+80^\circ\text{C}$

For temperatures outside this range, contact  
MP Filtri Technical and Sales Department



# LVK series

Electrical and visual oil level indicator



## Technical data

### Electrical and visual oil level indicators

LVK is a range of electrical and visual fluid level indicators for monitoring of the fluid level into the tank. They are directly fitted on the tank side. The float moves through the indicator housing while the fluid level changes.

A magnet, fitted into the float, turns a reed sensor fixed into the housing.

#### Available features:

- Several male threaded connections
- Three different sizes, to meet every size of tank
- Thermometer, thermostat or PT100, to check the temperature of the fluid

#### Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

#### Electrical symbol:

see page. 118

### Materials

- Head: Polyamide
- Screws: Nickel plated brass (standard), Aisi 314 (optional)
- Seal: NBR (standard), FPM (optional)
- Float: Polyamide
- Sensor thermometer: Screw + thermometer

### Temperature

From -20 °C to + 80 °C

### Weight

LVK 10	0.140 kg
LVK 20	0.170 kg
LVK 30	0.250 kg

### Quantity

25 pcs/pack



## Designation & Ordering code

### LVK

Series **LVK** Configuration example : **LVK** **20** **A** **M12** **1** **T** **5** **P01**

#### Series

#### Length

**10** | **20** | **30** |

#### Seals

**A** NBR

#### Connections

**M10** Screws M10 | **M12** Screws M12

#### Electrical switch in absence of fluid

- 1** N.O. (normally open)
- 2** N.C. (normally closed)
- 3** SPDT (single-pole, double throw)

Version	Connection	
	M10	M12
<b>S</b> Standard	•	•
<b>T</b> With thermostat		•
<b>P</b> With PT100 sensor		•

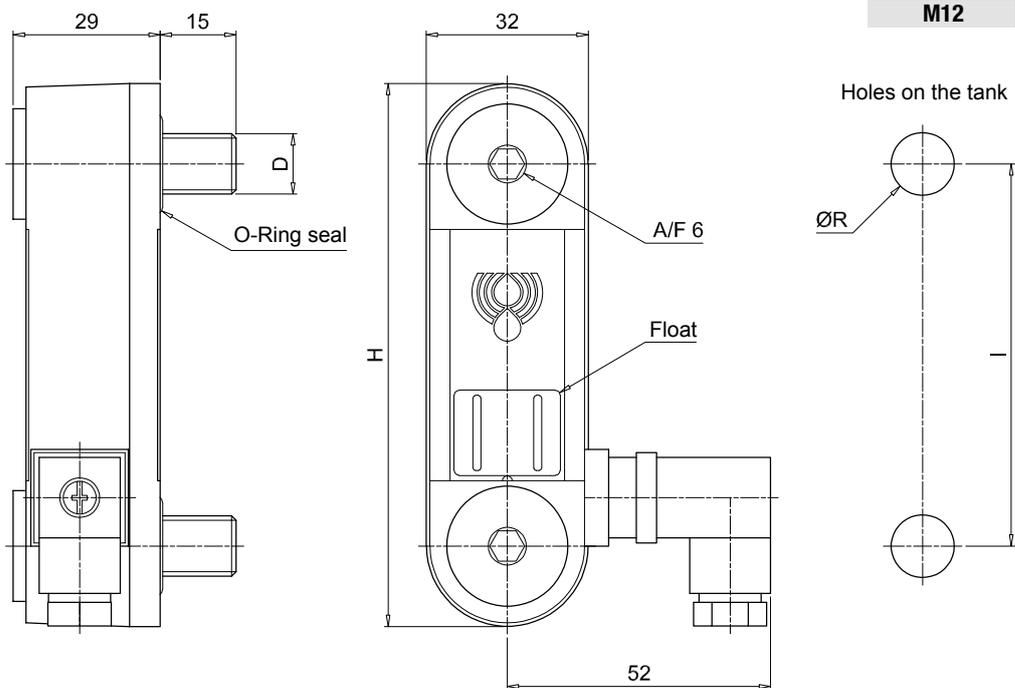
Thermostat setting	Version		
	S	T	P
<b>S</b> Standard (no setting)	•		•
<b>1</b> 50°C N.O. (normally open)		•	
<b>2</b> 60°C N.O. (normally open)		•	
<b>3</b> 70°C N.O. (normally open)		•	
<b>5</b> 50°C N.C. (normally closed)		•	
<b>6</b> 60°C N.C. (normally closed)		•	
<b>7</b> 70°C N.C. (normally closed)		•	

#### Execution

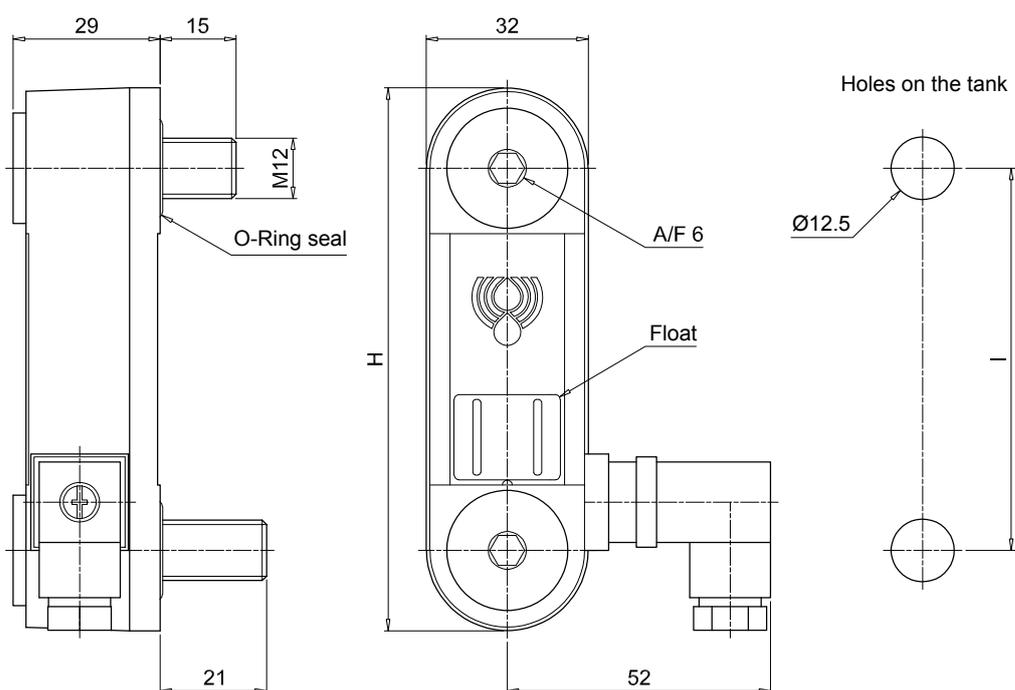
**P01** MP Filtri standard  
**Pxx** Customized

LVK		
Size	H [mm]	I [mm]
<b>10</b>	108	76
<b>20</b>	159	127
<b>30</b>	286	254
Connection	D [mm]	ØR [mm]
<b>M10</b>	M10	10.5
<b>M12</b>	M12	12.5

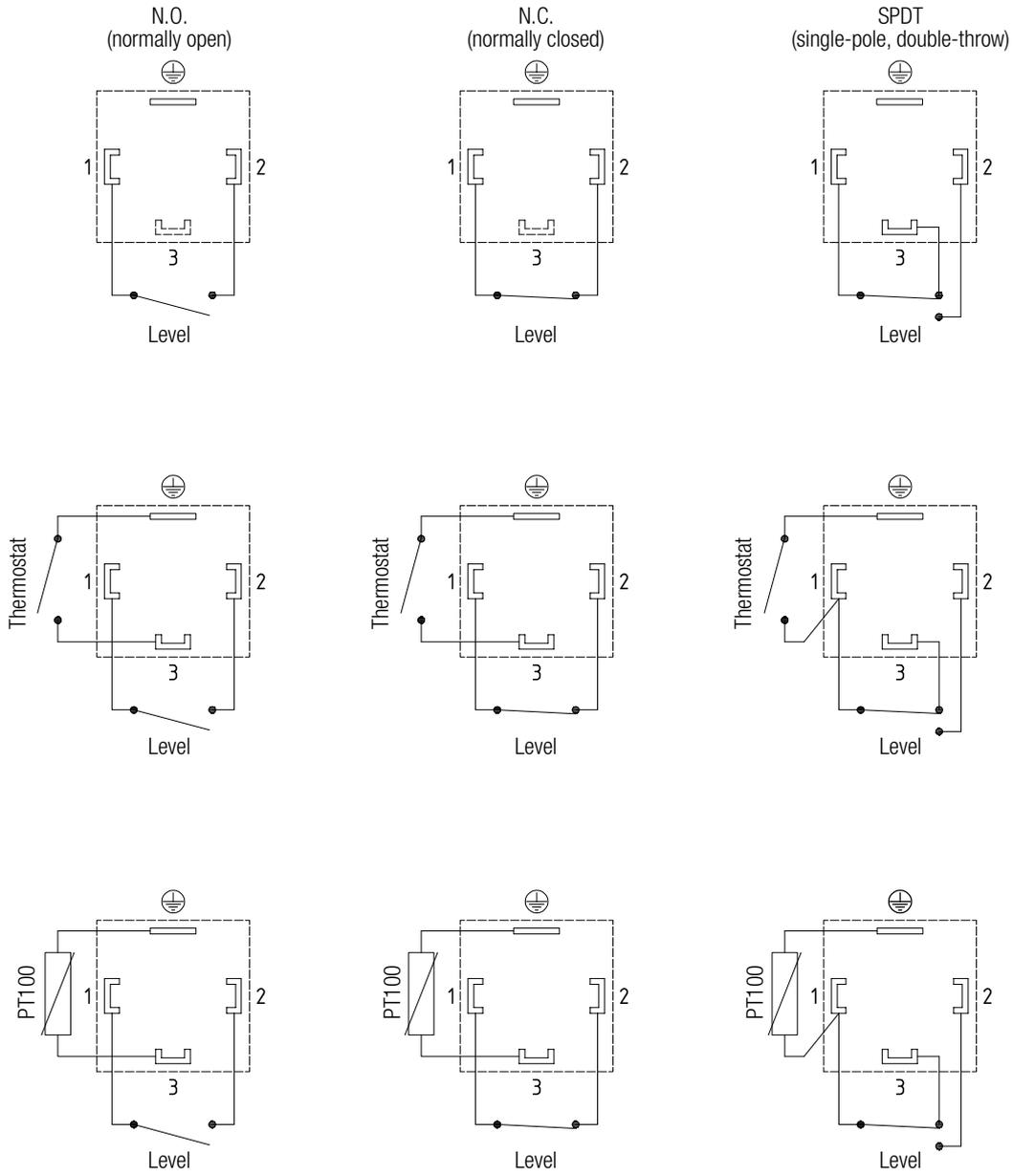
### Without thermostat



### With thermostat



## Electrical symbols





**EM1 & SVM gauge isolator valves are designed to protect pressure gauges from pressure shocks when the pressure reading is not required.**

**FTA/FTR flanges make it possible to fix suction and return lines on the reservoir cover.**

**MULTIFLEX fixing clamps make it possible to install various pipelines of different types and diameters, rapidly, easily, and, more importantly, economically.**

**CLEANING COVERS, facilitating the maintenance of oil tanks in hydraulic power units, without necessarily having to dismantle the unit.**

**ALUMINIUM TANKS of 10 litres capacity, allowing the assembly of a compact hydraulic power unit.**

# Accessories



EM1	page 123
SVM	129
FTA - FTR	133
SFT	137
OB	143
SE10LT	149



# EM1 series

Gauge isolator valves



# EM1 GENERAL INFORMATION

## Technical data

### Gauge isolator valves

Gauge isolator valves are designed to protect pressure gauges from pressure shocks when the pressure reading is not required; after each reading setting the selector to the closed position serves to depressurise the pressure gauge by means of the T fitting connected to the reservoir.

3 and 6-way pressure gauge selectors perform the same function as the gauge isolator valves, allowing pressure values from different parts of the system to be read using a single pressure gauge.

### Working instructions:

- Button not pressed: pressure gauge isolated
- Button pressed: pressure gauge reading
- Button pressed and turned (either to left or right): button remains in position and pressure gauge measures pressure continuously.
- To isolate the pressure gauge from pressure reading, turn the button until it returns to the not pressed position.

### Materials A-B

- Body: Cast iron
- Pin: Steel
- Seals: NBR, FPM
- Knob/cover: Nylon
- Stop ring: Steel
- Spring: Steel
- Nameplate: Aluminium
- Nut-screw: Galvanized steel

### Materials C

- Body: Cast iron
- Pin: Steel
- Seals: NBR, FPM
- Knob/cover: Nylon
- Stop ring: Steel
- Spring: Steel
- Nameplate: Aluminium
- Nut-screw: Galvanized steel
- Plug: Anodized steel

### Operating pressure

400 bar

### Operating temperature

From -25 °C to + 100 °C

### Weight

- EM1 version A 0.41 kg
- EM1 version B 0.44 kg
- EM1 version C 1.00 kg

### Quantity

25 pcs/pack



## Designation & Ordering code

### EM1

#### Series and size

**EM1**

Configuration example : **EM1** **A** **G2** **A** **P01**

#### Version

- A** Threaded connections, panel mount with hex nut
- B** Threaded connections, panel mount with screws
- C** Manifold/threaded connections, panel mount with screws

#### Connection

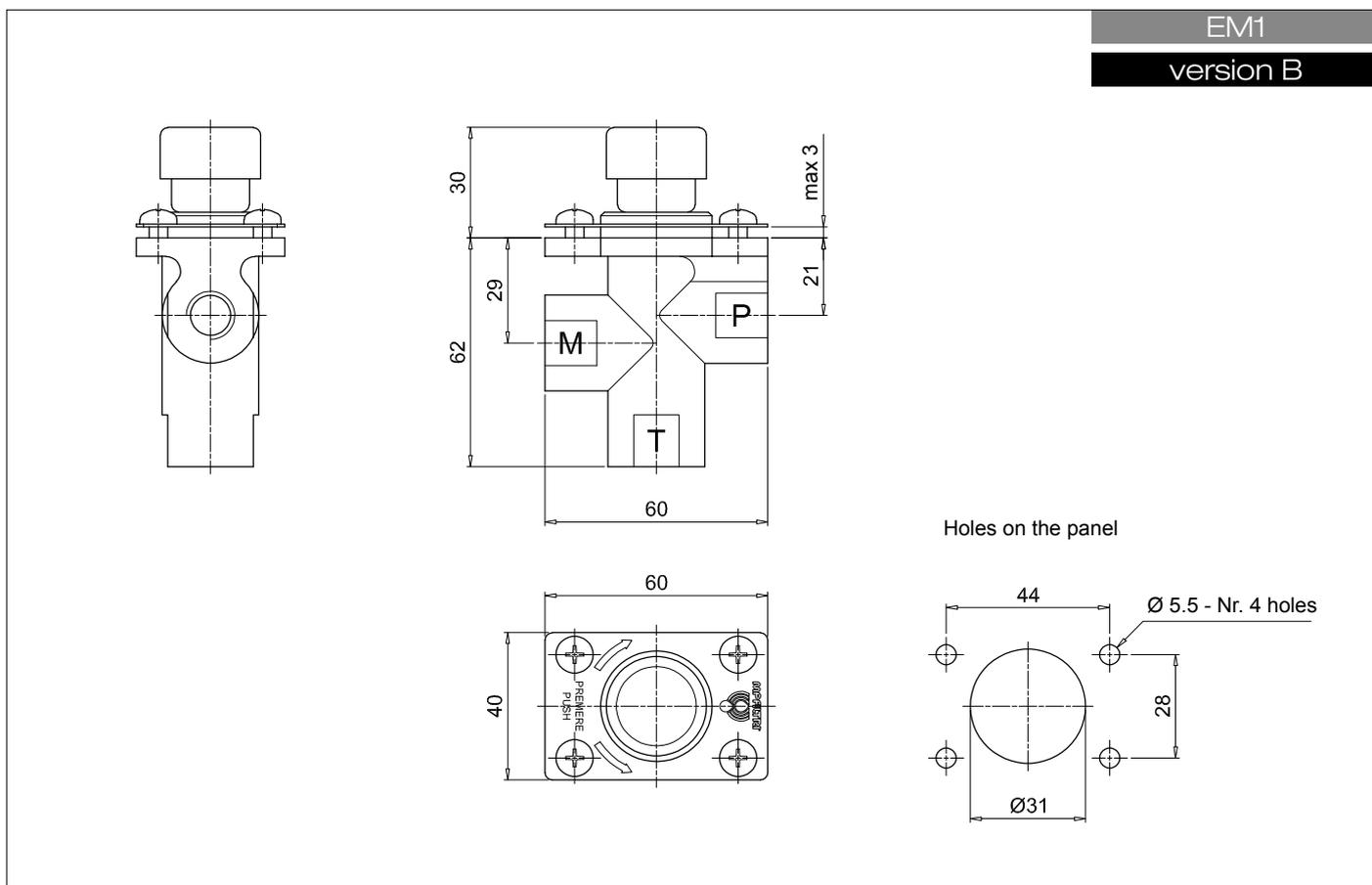
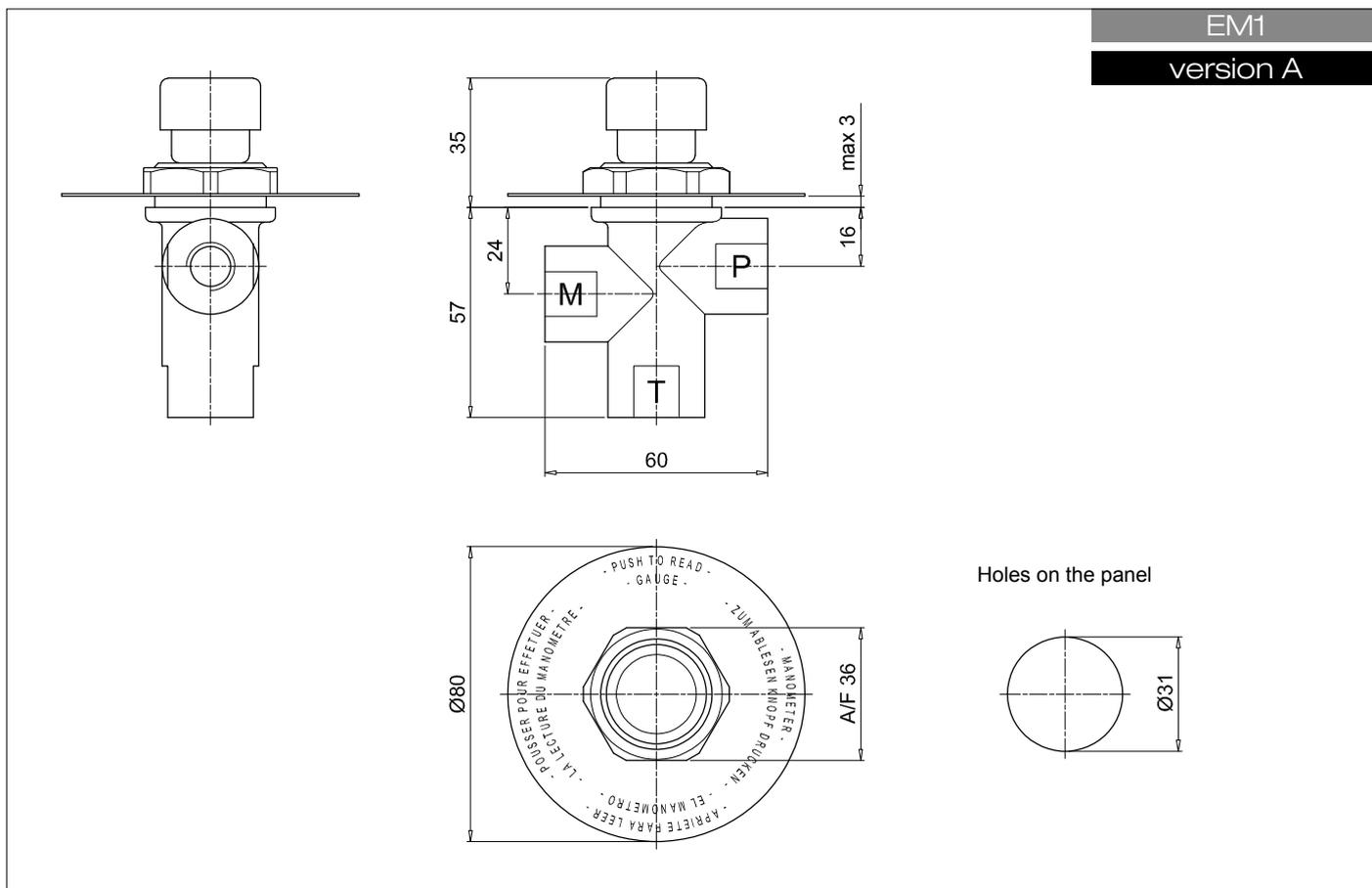
- G1** G 1/4"
- G2** 1/4" NPT
- G3** SAE 5 - 1/2" - 20 UNF

#### Seals

- A** NBR
- V** FPM

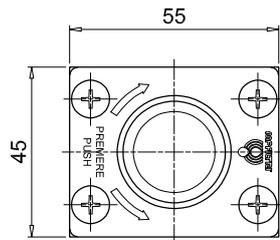
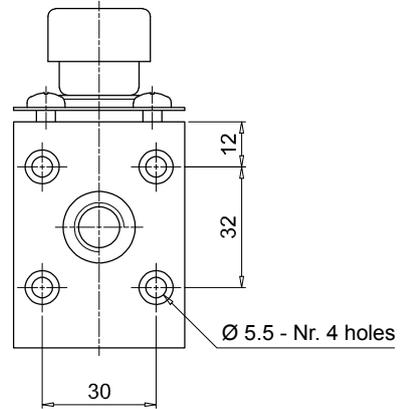
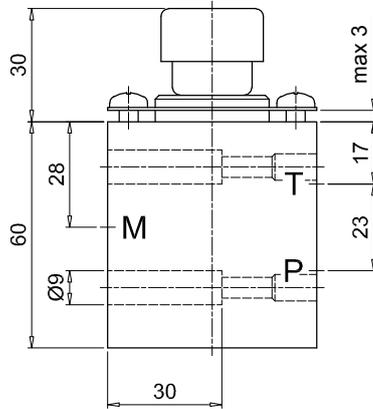
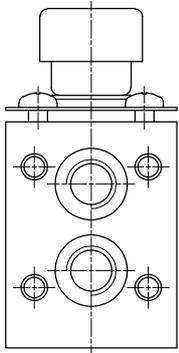
#### Execution

- P01** MP Filtri standard
- Pxx** Customized

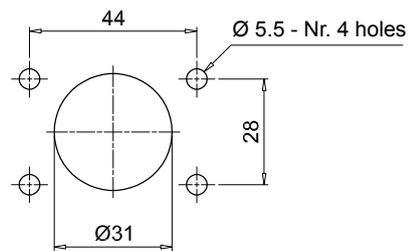


EM1

version C



Holes on the panel







# SVM series

Gauge isolator valves



# SVM GENERAL INFORMATION

## Technical data

### Gauge isolator valves

Gauge isolator valves are designed to protect pressure gauges from pressure shocks when the pressure reading is not required; after each reading setting the selector to the closed position serves to depressurise the pressure gauge by means of the T fitting connected to the reservoir.

3 and 6-way pressure gauge selectors perform the same function as the gauge isolator valves, allowing pressure values from different parts of the system to be read using a single pressure gauge.

### Working instructions:

- Knob not pressed: pressure gauge isolated
- Knob pressed: pressure gauge reading
- Knob pressed and turned: the knob remains in position and pressure gauge measures pressure continuously.
- To isolate the pressure gauge from pressure reading, turn the button until it returns to the not pressed position.

### Materials

- Body: Cast iron
- Pin: Steel
- Seals: NBR, FPM
- Cover: Anodized aluminium
- Flange: Anodized aluminium
- Knob: Nylon
- Ringnut: Nylon
- Nut-screw: Galvanized steel, Phosphatized steel
- Pin: Steel

### Operating temperature

From -25 °C to + 100 °C

### Weight

SVM length 3 1.547 kg  
SVM length 6 1.507 kg

### Quantity

25 pcs/pack



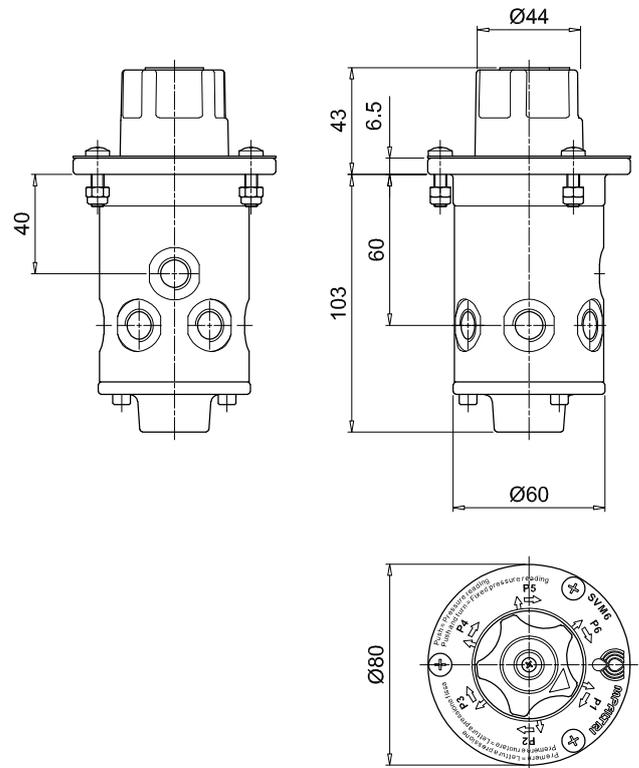
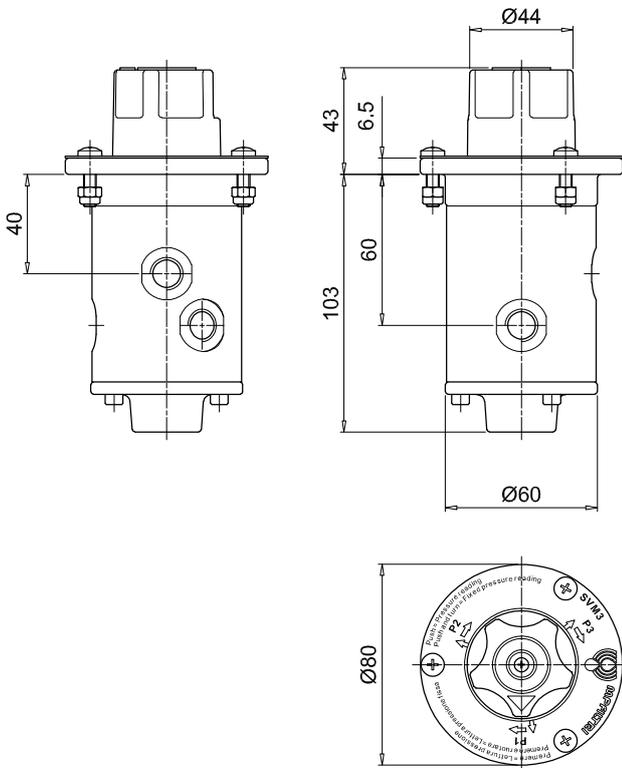
## Designation & Ordering code

### SVM

Series and size	Configuration example :				
<b>SVM</b>	SVM	3	G1	A	P01
<b>Version</b>					
<b>3</b> Nr. 3 pressure ports					
<b>6</b> Nr. 6 pressure ports					
<b>Connection</b>					
<b>G1</b> G 1/4"					
<b>G2</b> 1/4" NPT					
<b>G3</b> SAE 5 - 1/2" - 20 UNF					
<b>Seals</b>					
<b>A</b> NBR					
<b>V</b> FPM					
<b>Execution</b>					
<b>P01</b> MP Filtri standard					
<b>Pxx</b> Customized					

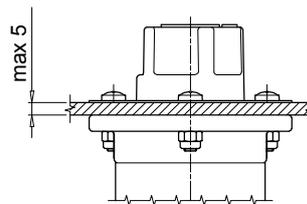
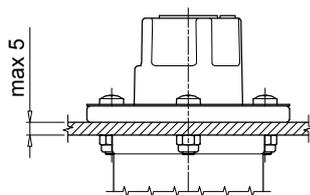
SVM  
version 3

SVM  
version 6

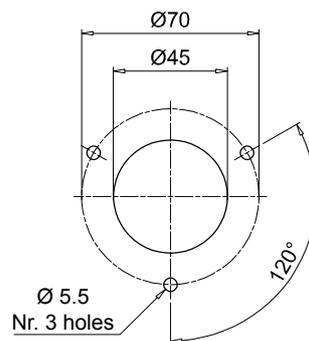
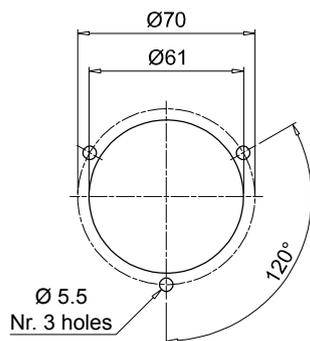


External mount

Internal mount



Holes on the panel





# FTA -FTR series

Oil tank fixing flange



# FTA - FTR GENERAL INFORMATION

## Technical data

### Oil tank fixing flange

FT flanges make it possible to fix suction and return lines on the reservoir cover.

Fitting a flexible insert allows separation of pipes.

Both rigid pipes and flexible hoses can be separated from the reservoir walls, absorbing vibration and reducing plant noise emissions.

### Operating pressure

400 bar

### Operating temperature

From -25 °C to + 100 °C

### Materials

- Flange: Galvanized steel
- Flange seal: Inorganic fibre
- Tube seal: NBR
- Screw: Galvanized steel

### Weight FTA

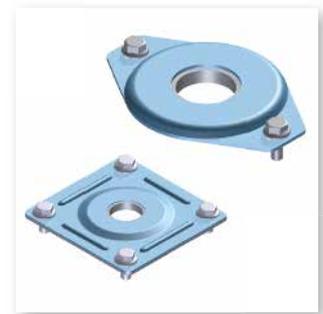
FTA 1215	0.590 kg
FTA 1620	0.570 kg
FTA 2225	0.550 kg
FTA 2630	0.530 kg
FTA 3235	0.500 kg
FTA 3842	0.520 kg
FTA 4850	0.920 kg
FTA 6061	0.900 kg
FTA 7577	0.860 kg
FTA 8789	0.830 kg

### Weight FTR

FTR 0610	0.450 kg
FTR 1215	0.430 kg
FTR 1620	0.400 kg
FTR 2225	0.100 kg
FTR 2630	0.103 kg
FTR 3235	0.980 kg
FTR 3842	0.950 kg
FTR 4850	0.900 kg
FTR 6061	0.850 kg

### Quantity

25 pcs/pack

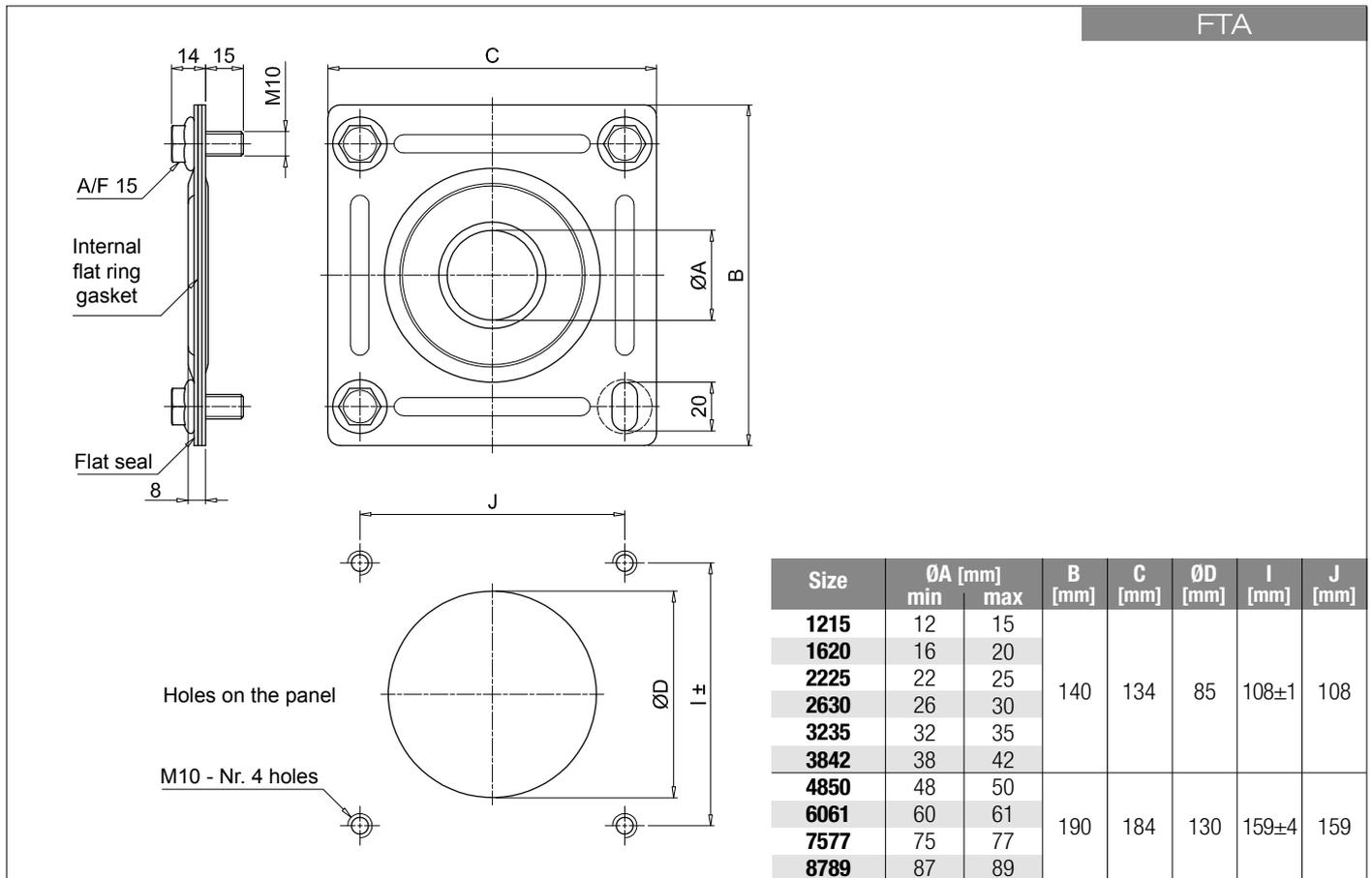


## Designation & Ordering code

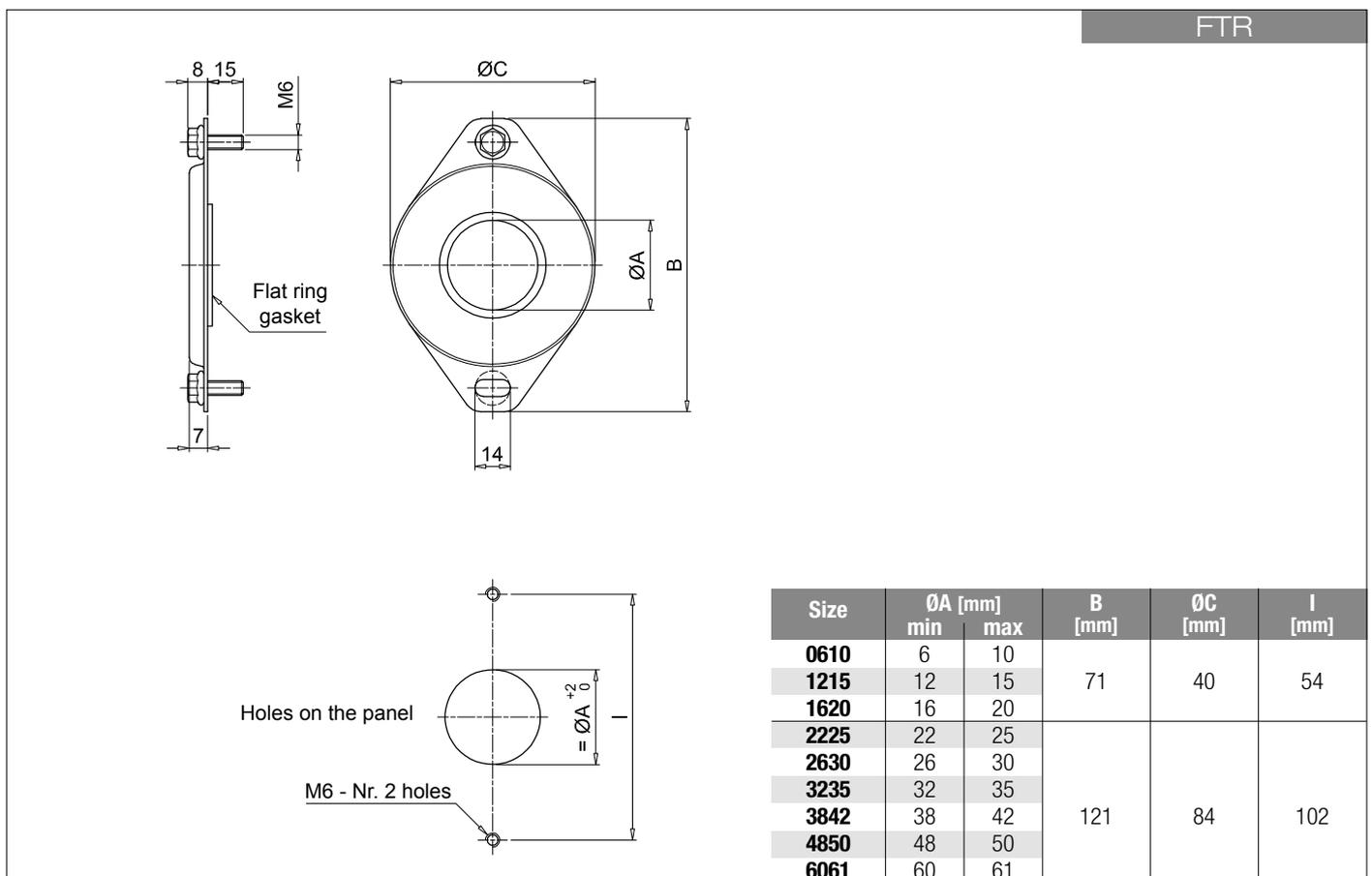
### FTA - FTR

Series		Configuration example :				
<b>FTA</b>	<b>FTR</b>	FTA	2630	G	A	P01
Size	FTA	FTR				
<b>0610</b> Pipe Ø06 ÷ 10 mm		•				
<b>1215</b> Pipe Ø12 ÷ 15 mm	•	•				
<b>1620</b> Pipe Ø16 ÷ 20 mm	•	•				
<b>2225</b> Pipe Ø22 ÷ 25 mm	•	•				
<b>2630</b> Pipe Ø26 ÷ 30 mm	•	•				
<b>3235</b> Pipe Ø32 ÷ 35 mm	•	•				
<b>3842</b> Pipe Ø38 ÷ 42 mm	•	•				
<b>4850</b> Pipe Ø48 ÷ 50 mm	•	•				
<b>6061</b> Pipe Ø60 ÷ 61 mm	•	•				
<b>7577</b> Pipe Ø75 ÷ 77 mm	•					
<b>8789</b> Pipe Ø87 ÷ 89 mm	•					
Flange seals	FTA	FTR				
<b>G</b> Inorganic fiber	•					
<b>O</b> Without seal		•				
Pipe seals						
<b>A</b> NBR						
Execution						
<b>P01</b> MP Filtri standard						
<b>Pxx</b> Customized						

### FTA



### FTR





# SFT series

Fixing clamps



## Technical data

### Fixing clamps

MULTIFIX fixing clamps are particularly suitable when a series of pipelines must be installed requiring neat and high precision installation. These brackets make it possible to install various pipelines of different types and diameters, rapidly, easily, and, more importantly, economically.

MULTIFIX clamps support, guide, and absorb impact and vibration, protecting the pipes and dispensing with the need for complex and unsightly mounting systems with angle clamps etc.

An orderly layout facilitates maintenance resulting in significant savings in running costs; it also allows intuitive visual design of the plant, which can be assembled easily even without specialised labour.

### Materials

- Pair of brackets: Galvanized steel
- Bush: NBR
- Spacer: Steel
- Studs: Steel
- Screws: Steel
- Foot and screw: Steel

### Weight

SFT 38 1	0.050 kg
SFT 51 1	0.100 kg
SFT 78 1	0.570 kg

### Operating temperature

From -25 °C to + 100 °C

### Quantity

25 pcs/pack



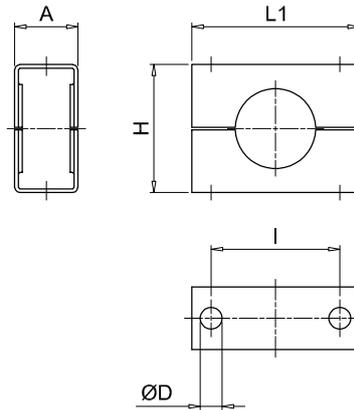
## Designation & Ordering code

### SFT

Series	Configuration example :			SFT	51	19	P01
<b>SFT</b> Pair of brackets							
Size							
<b>38</b> Height 38 mm - 1 1/2"							
<b>51</b> Height 51 mm - 2"							
<b>78</b> Height 78 mm - 3"							
Number of pipe	38	51	78				
<b>1</b> Single pipe	•	•	•				
<b>16</b> Nr. 16 pipes			•				
<b>19</b> Nr. 19 pipes		•					
<b>26</b> Nr. 26 pipes	•						
Execution							
<b>P01</b> MP Filtri standard							
<b>Pxx</b> Customized							

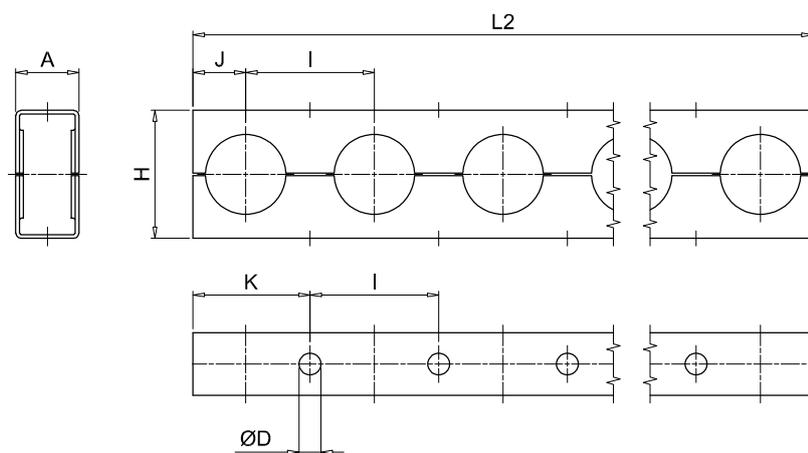
SFT

Single pipe



SFT

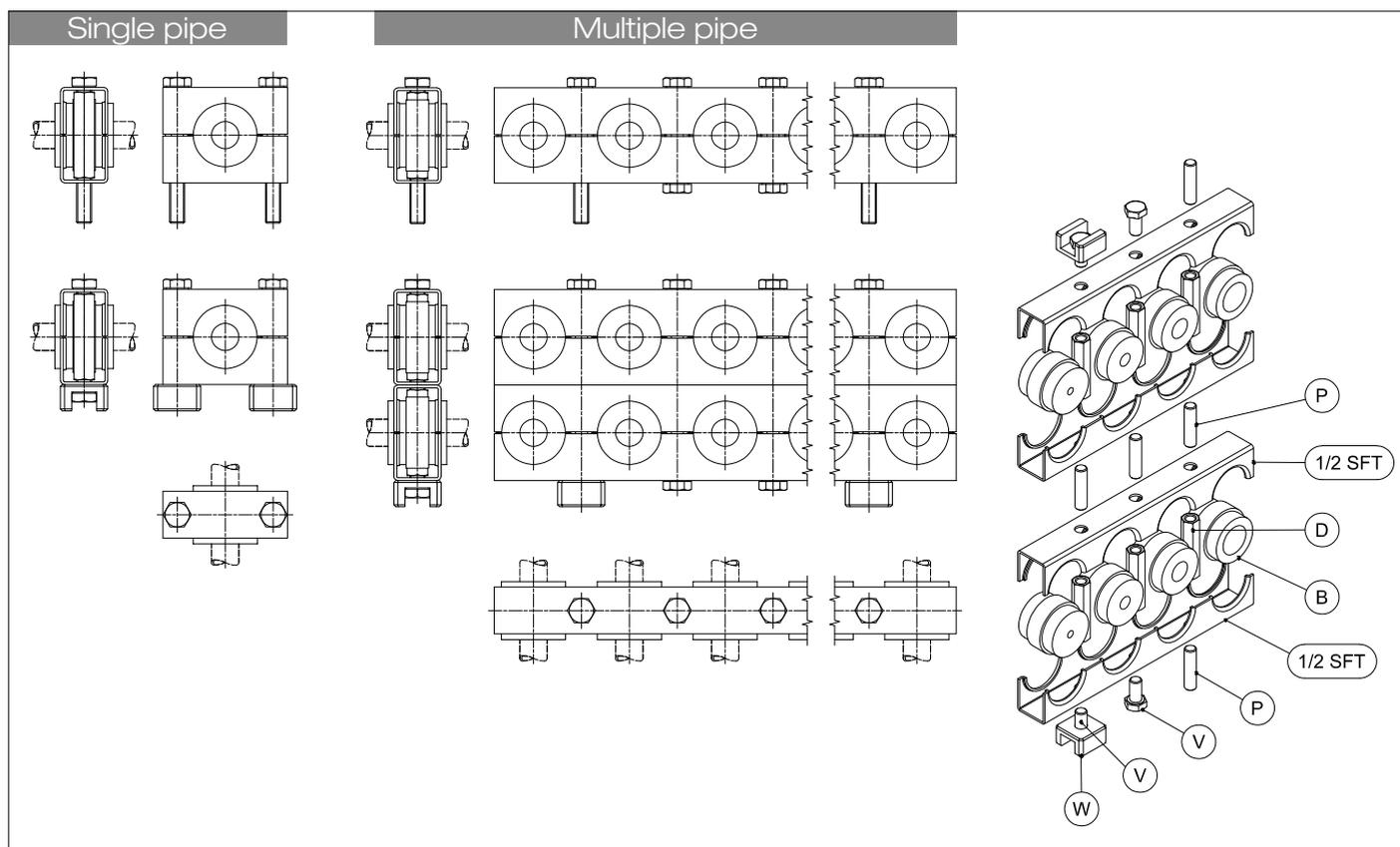
Multiple pipe



Size	A [mm]	ØD [mm]	H [mm]	I [mm]	J [mm]	K [mm]	L1 [mm]	L2 [mm]
<b>38</b>	25	8.7	38	38.1	15	34	56	982
<b>51</b>	25	8.7	51	50.8	21	46	66	956
<b>78</b>	41	11.1	78	76.2	35	73	95	1213

# SFT MULTIFIX

## Assembly



## Designation & Ordering code

## Dimensions

### RUBBER BUSH

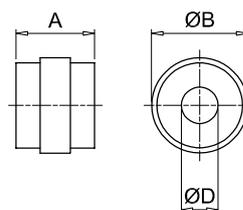
Configuration example: **B** | **51** | **1820**

**Series**  
**B** Rubber bush

**Size**  
**38**  
**51**  
**78**

Pipe diameter	38	51	78
<b>6</b> Pipe Ø6 mm	•	•	
<b>8</b> Pipe Ø8 mm	•	•	•
<b>10</b> Pipe Ø10 mm - 1/8"	•	•	•
<b>1214</b> Pipe Ø12 ÷ 14 mm - 1/4"	•	•	•
<b>1516</b> Pipe Ø15 ÷ 16 mm - 3/8"	•	•	•
<b>1820</b> Pipe Ø18 ÷ 20 mm - 1/2"	•	•	•
<b>22</b> Pipe Ø22 mm - 5/8"		•	•
<b>25</b> Pipe Ø25 mm - 3/4"		•	•
<b>28</b> Pipe Ø28 mm		•	
<b>2830</b> Pipe Ø28 ÷ 30 mm - 7/8"			•
<b>33</b> Pipe Ø33 mm - 1"			•
<b>3538</b> Pipe Ø35 ÷ 38 mm - 1 1/8"			•
<b>42</b> Pipe Ø42 mm - 1 1/4"			•
<b>50</b> Pipe Ø50 mm			•

**B**



Size	A [mm]	ØB [mm]
<b>38</b>	31	25
<b>51</b>	31	38
<b>78</b>	45	59

Pipe	ØD [mm]	Ø nom. pipe [inch]
<b>6</b>	6	-
<b>8</b>	8	-
<b>10</b>	10	1/8"
<b>1214</b>	12÷14	1/4"
<b>1516</b>	15÷16	3/8"
<b>1820</b>	18÷20	1/2"
<b>22</b>	22	5/8"
<b>25</b>	25	3/4"
<b>28</b>	28	-
<b>2830</b>	28÷30	7/8"
<b>33</b>	33	1"
<b>3538</b>	35÷38	1 1/8"
<b>42</b>	42	1 1/4"
<b>50</b>	50	-

## HEXAGON CONNECTION NUT D

Configuration example: **D** **51** **M**

Series

**D** Hexagon connection nut

Size

**38**

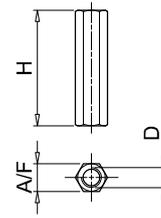
**51**

**78**

Screws

**M** Metric

**U** UNC



Size	Screws [mm]	D [mm]	H [mm]	A/F [mm]
<b>38</b>	M	M8	33	11
	U	5/16" UNC		
<b>51</b>	M	M8	46	11
	U	5/16" UNC		
<b>78</b>	M	M10	72	13
	U	3/8" UNC		

## STUD BOLT P

Configuration example: **P** **3851** **M**

Series

**P** Stud bolt

Size

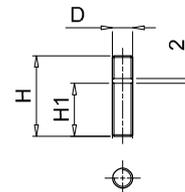
**3851**

**78**

Screws

**M** Metric

**U** UNC



Size	Screws [mm]	D [mm]	H [mm]	H1 [mm]
<b>38 - 51</b>	M	M8	32	21
	U	5/16" UNC		
<b>78</b>	M	M10	38	22
	U	3/8" UNC		

## HEXAGON HEAD SCREW V

Configuration example: **V** **3851** **M**

Series

**V** Hexagon head screw

Size

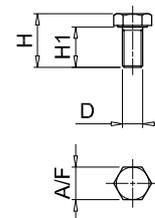
**3851**

**78**

Screws

**M** Metric

**U** UNC



Size	Screws [mm]	D [mm]	H [mm]	H1 [mm]	A/F [mm]
<b>38 - 51</b>	M	M8	21	16	13
	U	5/16" UNC			
<b>78</b>	M	M10	36	30	17
	U	3/8" UNC			

## WELDING FOOT W

Configuration example: **W** **3851**

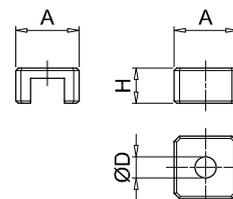
Series

**W** Welding foot

Size

**3851**

**78**



Size	H [mm]	ØD [mm]	H [mm]
<b>38 - 51</b>	25	8.5	14
<b>78</b>	32	11	16



# OB series

Cleaning covers



## Technical data

### Cleaning covers

The pressure die-cast aluminium alloy cleaning covers offer superior mechanical strength and are manufactured to DIN 24339 standard. They provide easy access to the inside of the oil tank for inspection and cleaning purposes, without necessarily having to dismantle the unit. On request and also for small quantities inspection doors can be supplied with:

- customer logo
- hole cut for visual level indicator
- hole cut for visual and electrical level indicator
- oil sample plug

#### Compatibility with fluids

- Mineral oils types HH-LL-HM-HR-HV-HC, to ISO 6743/4 standard
- Water based emulsions types HFAE-HFAS, to ISO 6743/4 standard
- Water glycol type HFC, to ISO 6743/4 standard: ask for anodized version

OB275 and OB400 cleaning covers are designed according to DIN 24339.

### Materials

- Cleaning covers: Pressure die-cast aluminium alloy / cast iron
- Seal: NBR 70 Shore A

Weight	with seal	without seal
OB275	2.06 kg	1.76 kg
OB350	2.10 kg	1.80 kg
OB356	2.10 kg	1.80 kg
OB400	3.20 kg	2.90 kg
OB475	3.70 kg	3.40 kg

### Operating temperature

From -30 °C to +80 °C



## Designation & Ordering code

**OB**

### Size

**OB275**

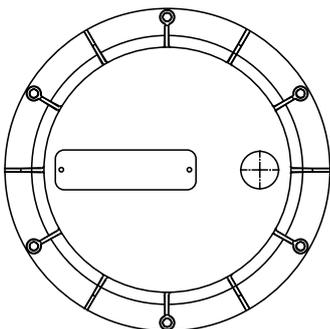
**OB350**

**OB356**

**OB400**

**OB475**

## Available customization

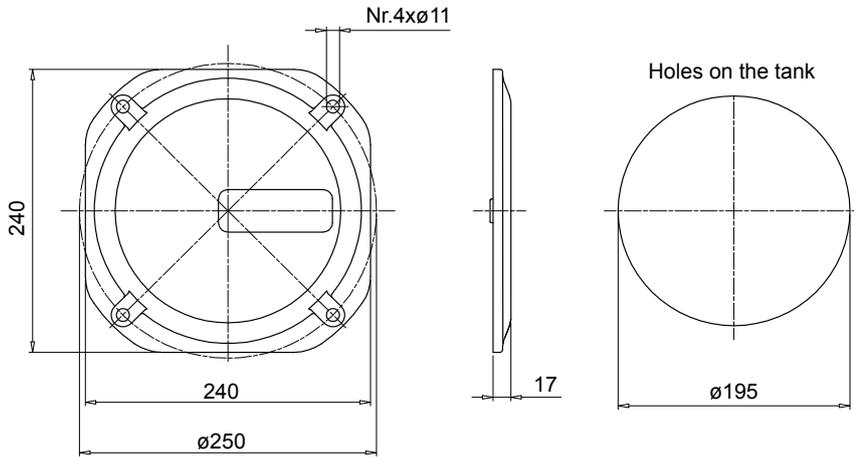


Nameplate with customer logo  
Ordering information: **OB475LOGOP05**

The nameplates applied to the new inspection door are identical to those applied to the old door. The difference with the new door is that nameplates are fixed with rivets.

**For ordering information codes, minimum order quantities, fixing hole positions and other details not indicated in this publication, contact MP Filtri Technical and Sales Department.**

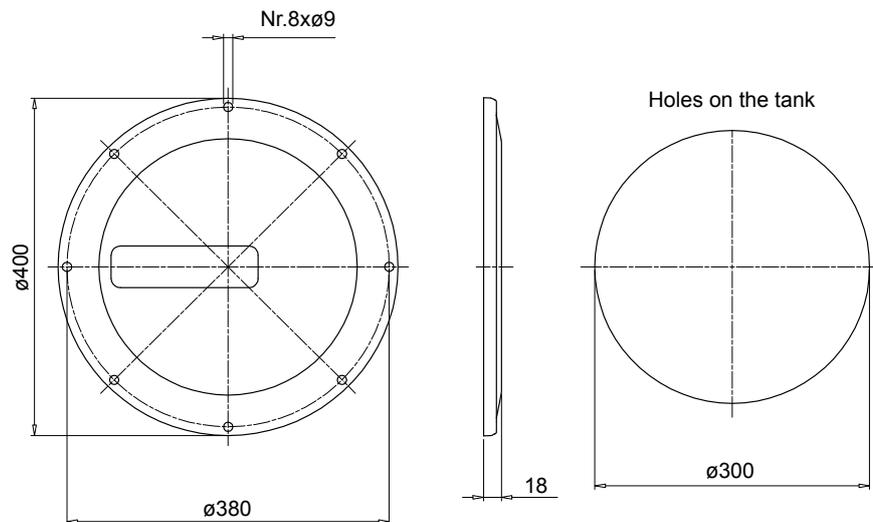
### OB275



Code	Description	Seal
<b>OB275P01GN</b>	Door with MP Logo	NBR
<b>OB275P02GN</b>	Blank cover	NBR
<b>OB275P01GV</b>	Door with MP Logo	FPM
<b>OB275P02GV</b>	Blank cover	FPM

Code	Description
<b>OB275P01</b>	Door with MP Logo
<b>OB275P02</b>	Blank cover
<b>GU0275NBR</b>	Seal
<b>GU0275VTN</b>	Seal

### OB400



Code	Description	Seal
<b>OB400P01GN</b>	Door with MP Logo	NBR
<b>OB400P02GN</b>	Blank cover	NBR
<b>OB400P01GV</b>	Door with MP Logo	FPM
<b>OB400P02GV</b>	Blank cover	FPM

Code	Description
<b>OB400P01</b>	Door with MP Logo
<b>OB400P02</b>	Blank cover
<b>GU0400DINNBR</b>	Seal
<b>GU0400DINVTN</b>	Seal

## Dimensions

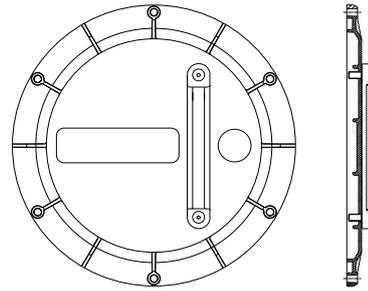
			OB350		
	Nr.4x $\phi$ 12		Holes on the tank		
	$\phi$ 350	$\phi$ 324	23	$\phi$ 248	
	Code	Description	Seal		
	<b>OB350P01GN</b>	Door with MP Logo	NBR		
	<b>OB350P02GN</b>	Blank cover	NBR		
	<b>OB350P01GV</b>	Door with MP Logo	FPM		
	<b>OB350P02GV</b>	Blank cover	FPM		
	Code	Description			
	<b>OB350DIN000</b>	Door			
	<b>GU0350DINNBR</b>	Seal			
	<b>GU0350DINVTN</b>	Seal			
			OB356		
	Nr.6x $\phi$ 12		Holes on the tank		
	$\phi$ 350	$\phi$ 324	23	$\phi$ 248	
	Code	Description	Seal		
	<b>OB356P01GN</b>	Door with MP Logo	NBR		
	<b>OB356P02GN</b>	Blank cover	NBR		
	<b>OB356P01GV</b>	Door with MP Logo	FPM		
	<b>OB356P02GV</b>	Blank cover	FPM		
	Code	Description			
	<b>OB356DIN000</b>	Door			
	<b>GU0350DINNBR</b>	Seal			
	<b>GU0350DINVTN</b>	Seal			
			OB475		
	Nr.6x $\phi$ 12		Holes on the tank		
	$\phi$ 475	$\phi$ 449	25	$\phi$ 383	
	Code	Description	Seal		
	<b>OB475P01GN</b>	Door with MP Logo	NBR		
	<b>OB475P02GN</b>	Blank cover	NBR		
	<b>OB475P01GV</b>	Door with MP Logo	FPM		
	<b>OB475P02GV</b>	Blank cover	FPM		
	Code	Description			
	<b>OB475P01</b>	Door with MP Logo			
	<b>OB475P02</b>	Blank cover			
	<b>GU0475DINNBR</b>	Seal			
	<b>GU0475DINVTN</b>	Seal			

**LVA**

LVA visual level indicators (see page 96) can also be mounted on MP Filtri cleaning covers to improve the maintenance and the service level.

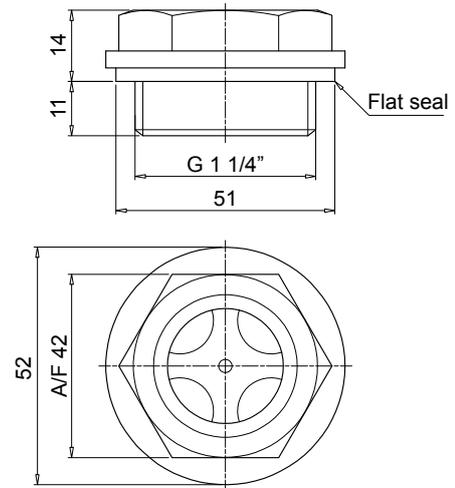
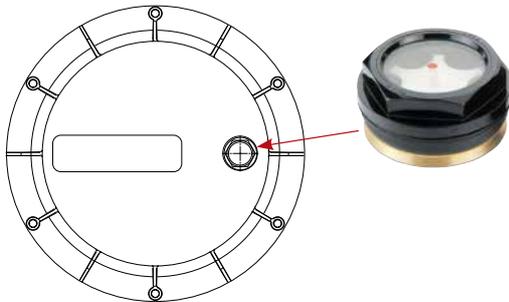
Indicator code	OB275**	OB350**	OB356**	OB400**	OB475**
LVA 10**	•	•	•	•	•
LVA 20**		•	•	•	•
LVA 30**				•	•

**Note:**  
Preparing for to fit the level on request



**LCPG42N...S**

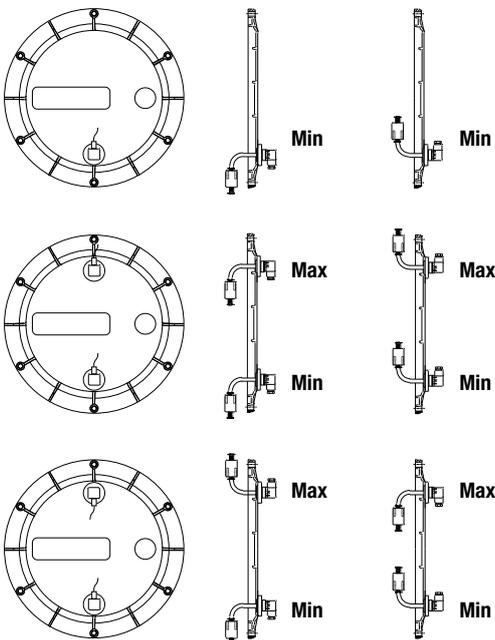
LCP spy eyes (see page 90) can also be mounted on MP Filtri cleaning covers to improve the maintenance and the service level.



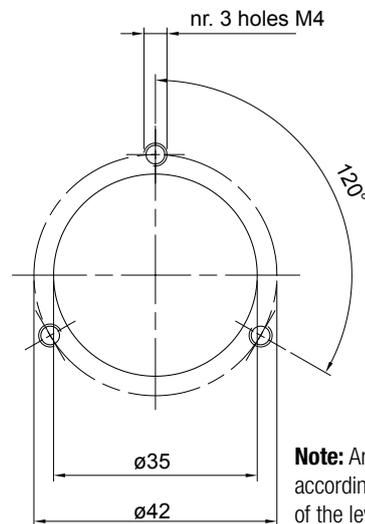
**LEG**

LEG series electrical level indicators (see page 106) are supplied with a 3-hole fixing flange and a reed switch having NC-NO contacts. Designed typically for installation on the vertical walls of oil tanks, these devices can also be mounted onto OB475 inspection door to indicate the minimum and maximum oil levels in the tank.

To operate correctly, the float must be positioned vertically and at a minimum distance of 35 mm from walls made of ferrous metal.



Layout of fixing holes for LEG level indicator



**Note:** Prepared for visual indicator on request

**Note:** Arrange the holes according to the position of the level indicator



# SE10LT series

Aluminium tanks



# SE10LT GENERAL INFORMATION

## Technical data

### Aluminium tanks

With 10 litres capacity, MP Filtri aluminium tank SE10LT allows the assembly of a compact hydraulic power unit.

Made of pressure die-cast aluminium alloy, these tanks feature superior strength and optimum design and are ideal for compact hydraulic power units.

Generously proportioned fins ensure efficient cooling.

The tank is supplied with:

- M6 threaded fixing holes for lid
- feet with M8 threaded fixing holes
- G 3/8" threaded drain hole

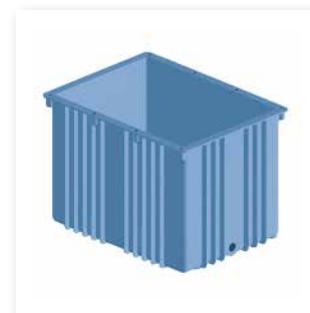
The lid is sealed by a gasket made of special paper, which must be ordered separately indicating code "GUS 10.0".

### Material

Pressure die-cast aluminium alloy

### Weight

SE10LT 4 kg



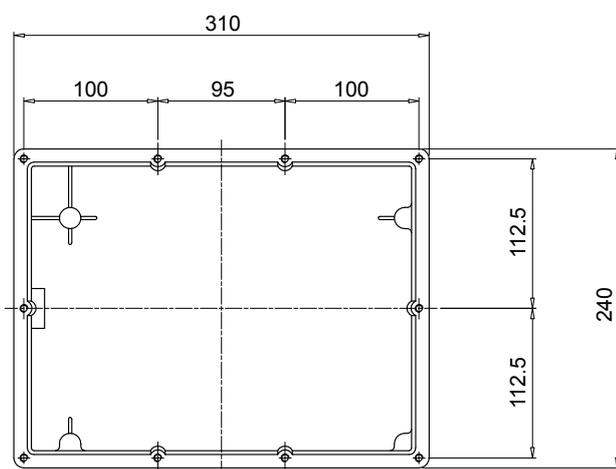
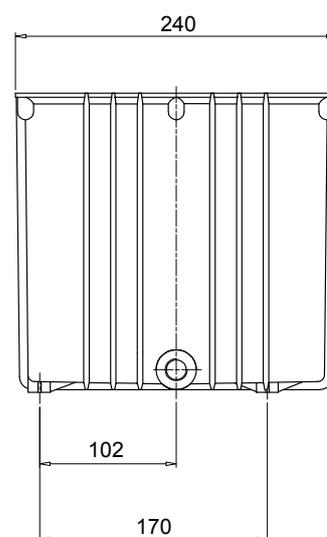
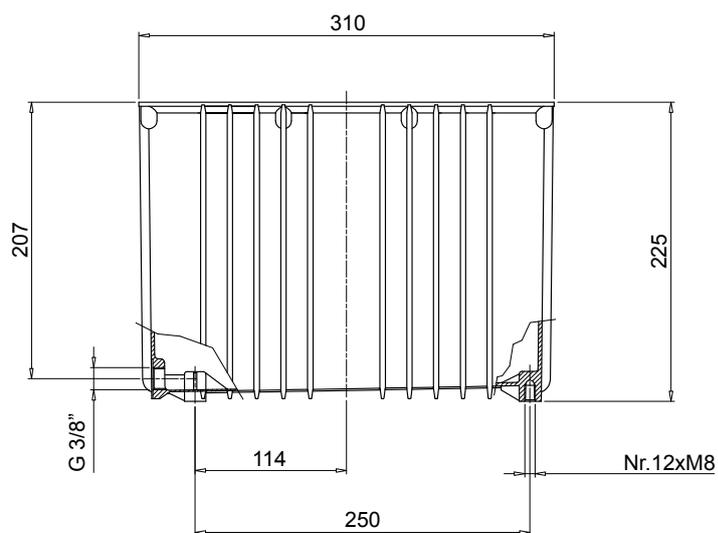
## Designation & Ordering code

**SE10LT**

Size

**SE10LT**

SE10LT



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