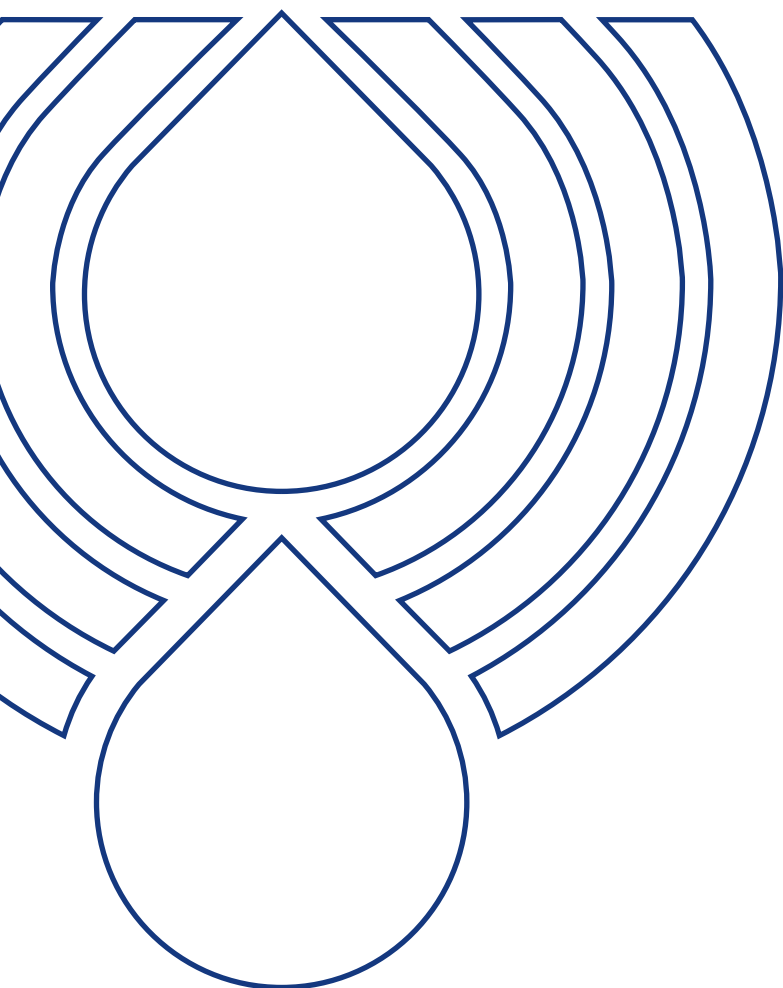


# TANK ACCESSORIES



**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 **9** 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

- Off-line, 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

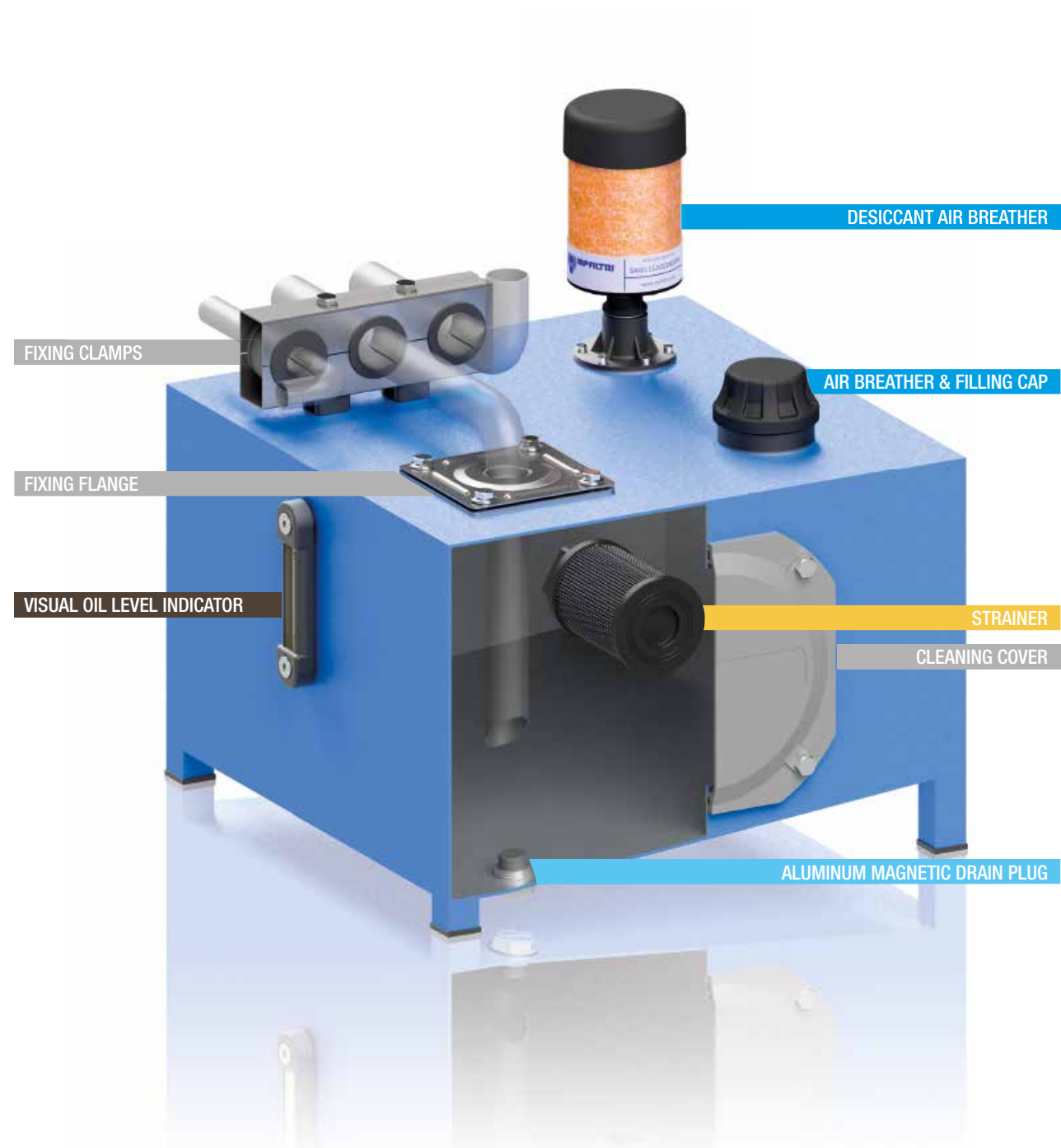
- Aluminium bell-housings for motors from 0.12 kW to 400 kW
- Couplings in Aluminium Cast Iron - Steel
- Damping rings
- Foot bracket
- Aluminium tanks
- Cleaning covers



### TANK ACCESSORIES

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

# TANK ACCESSORIES



|          |             |                     |
|----------|-------------|---------------------|
| <b>1</b> | <b>page</b> | <b>INTRODUCTION</b> |
| 1        |             | COMPANY             |
| 6        |             | PRODUCT RANGE       |

|           |             |   |
|-----------|-------------|---|
| <b>10</b> | <b>page</b> | <b>STRAINERS</b>  |
| 13        |             | STR & MPA - MPM<br>Submerged suction filter, with bypass or magnetic column |

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| 45        |             | TA 46 - TAP 50 - SAP 50<br>Filler plug and air filter up to 200 l/min      |
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| 63        |             | TAP 114<br>Filler plug and polyamide air filter up to 1600 l/min           |
| 67        |             | TAP 115 & SAP 115<br>Filler plug and polyamide air filter up to 3000 l/min |

|           |             |  |
|-----------|-------------|--|
| <b>72</b> | <b>page</b> | <b>FILLER AND DRAIN PLUGS</b>                |
| 75        |             | TC 50<br>Polyamide filler plug               |
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| <b>86</b> | <b>page</b> | <b>VISUAL OIL LEVEL INDICATORS</b>                       |
| 89        |             | LCP - LCC<br>Visual oil level indicator - round shape    |
| 95        |             | LVA - LVU<br>Visual oil level indicator - vertical shape |

|            |             |   |
|------------|-------------|---|
| <b>100</b> | <b>page</b> | <b>ELECTRICAL OIL LEVEL INDICATORS</b>                      |
| 103        |             | LEN - LEG - LET - LEM - LEU<br>Electric oil level indicator |
| 115        |             | LVK<br>Visual and Electric oil level indicator              |

|            |             |                                     |
|------------|-------------|-------------------------------------|
| <b>120</b> | <b>page</b> | <b>ACCESSORIES</b>                  |
| 123        |             | EM1<br>Pressure gauge isolator      |
| 129        |             | SVM<br>Gauge selector valve         |
| 133        |             | FTA - FTR<br>Oil tank fixing flange |
| 137        |             | MULTIFIT SFT<br>Fixing clamps       |
| 143        |             | OB<br>Cleaning covers               |
| 149        |             | SE10LT<br>Aluminium tanks           |



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

# Strainers







# 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 - Polyamide

### Bypass valve

Opening pressure 30 kPa (0.3 bar)

### Elements

Fluid flow through the filter element from OUT to IN.

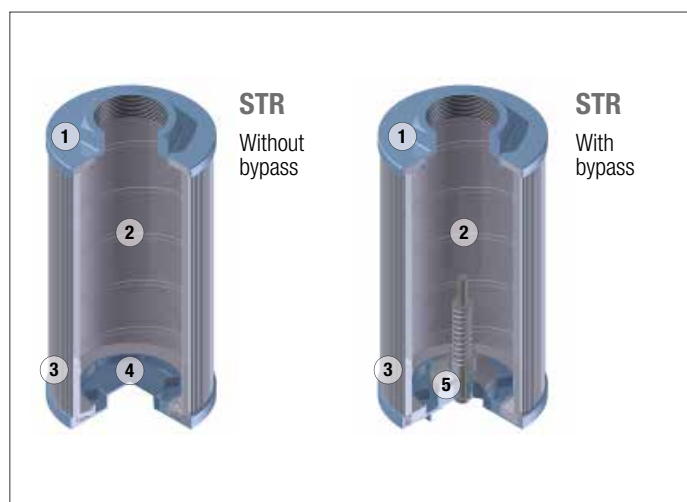
### Temperature

From -25 °C to +110 °C



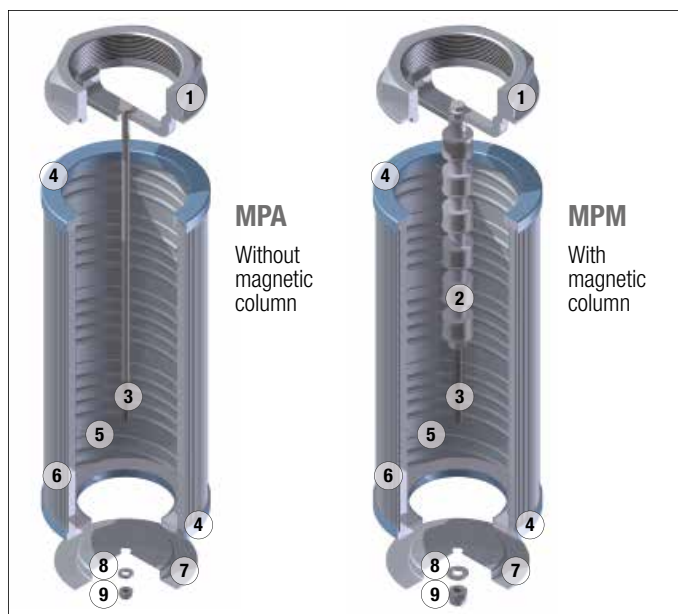
## Quantity

| Series and size  | pcs/pack |
|--|----------|
| <b>STR</b> 045 - 050   | 12       |
| <b>STR</b> 065 - 070 - 086 - 100                                     | 6        |
| <b>STR</b> 140 - 150   | 1        |
| <b>MPA - MPM</b> 012   | 12       |
| <b>MPA - MPM</b> 015 - 025 - 030 - 045 - 050 - 075 - 095 - 120 - 150 | 6        |
| <b>MPA - MPM</b> 180 - 220 - 280 - 300 - 380 - 430                   | 1        |

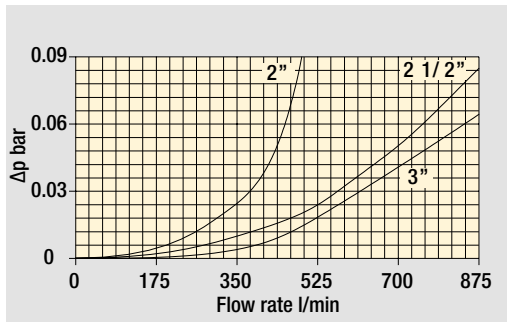
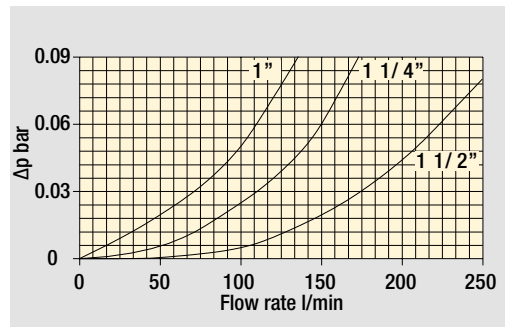
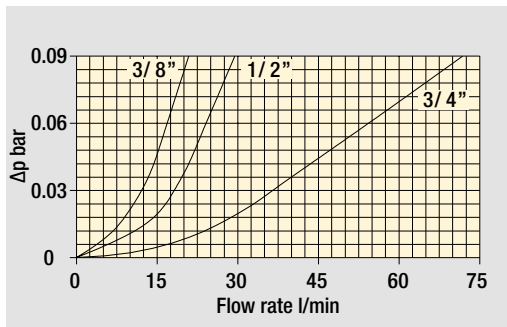


## Weights [kg]

| Filter series    |             |
|------------------|-------------|
| <b>STR</b>       | see page 17 |
| <b>MPA - MPM</b> | 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 |
|-----------------|--------|-------|
| STR & MPA - MPM | 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 |
|---------------|---------|---------|
| STR           | •       | •       |
| MPA - MPM     | •       |         |
|               |         |         |

### 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

#### Series and size

STR045  
STR050  
STR065  
STR070  
STR086  
STR100  
STR140  
STR150

Configuration example 1: STR045 1 B G1 M60 P01

Configuration example 2: STR100 4 S G2 M250 P01

#### Length and connection

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

#### Valves

S Without bypass  
B With bypass 0.3 bar

#### Thread

G1 BSP  
G2 NPT

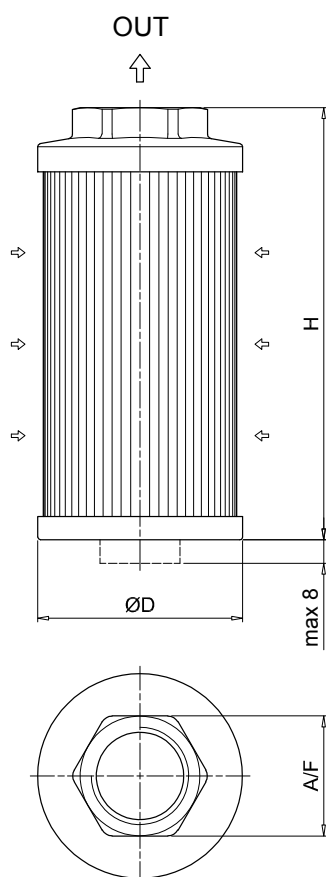
#### Filtration rating

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





| STR        |        |        |          |        |            |             |
|------------|--------|--------|----------|--------|------------|-------------|
| Size       | Length | Thread | Ø D [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

| Series     |                         |
|------------|-------------------------|
| <b>MPA</b> | Without magnetic column |
| <b>MPM</b> | With magnetic column    |

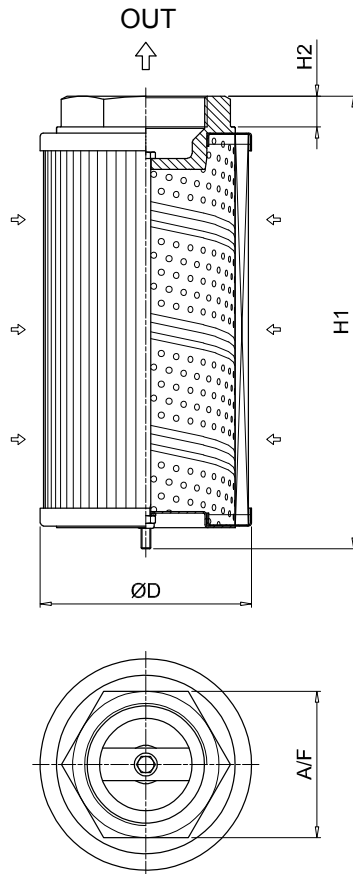
|                          |            |            |           |             |            |
|--------------------------|------------|------------|-----------|-------------|------------|
| Configuration example 1: | <b>MPA</b> | <b>030</b> | <b>G1</b> | <b>M60</b>  | <b>P01</b> |
| Configuration example 2: | <b>MPM</b> | <b>430</b> | <b>G2</b> | <b>M250</b> | <b>P01</b> |

| Length and connection |        |
|-----------------------|--------|
| <b>012</b>            | 3/8"   |
| <b>015</b>            | 1/2"   |
| <b>025</b>            | 1/2"   |
| <b>030</b>            | 3/4"   |
| <b>045</b>            | 3/4"   |
| <b>050</b>            | 1"     |
| <b>075</b>            | 1"     |
| <b>095</b>            | 1 1/4" |
| <b>120</b>            | 1 1/4" |
| <b>150</b>            | 1 1/2" |
| <b>180</b>            | 1 1/2" |
| <b>220</b>            | 2"     |
| <b>280</b>            | 2"     |
| <b>300</b>            | 2 1/2" |
| <b>380</b>            | 2"     |
| <b>430</b>            | 3"     |

| Thread    |     |
|-----------|-----|
| <b>G1</b> | BSP |
| <b>G2</b> | NPT |

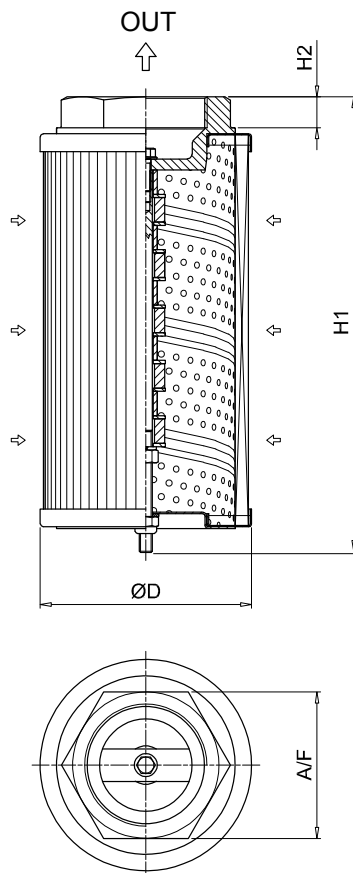
| Filtration rating |           |        |
|-------------------|-----------|--------|
| <b>M25</b>        | Wire mesh | 25 µm  |
| <b>M60</b>        | Wire mesh | 60 µm  |
| <b>M90</b>        | Wire mesh | 90 µm  |
| <b>M250</b>       | Wire mesh | 250 µm |

| Execution  |                    |
|------------|--------------------|
| <b>P01</b> | MP Filtri standard |
| <b>Pxx</b> | Customized         |



### MPA

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



### MPM

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

Polyamide air breather filter

# SA series

Metal air breather filter



## Technical data

### Air breathers & Filler plugs

#### Polyamide 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 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 |     |
| <b>SAP054</b> | L03               | L10 |
| <b>SAP075</b> | 350               | 400 |

### Materials

- Cover: Polyamide
- Connection: Polyamide
- Filter element: Resin impregnated paper

### Temperature

From -25 °C to +100 °C

### Weight

SAP 054 - 0.06 kg  
SAP 075 - 0.15 kg



## Designation & Ordering code

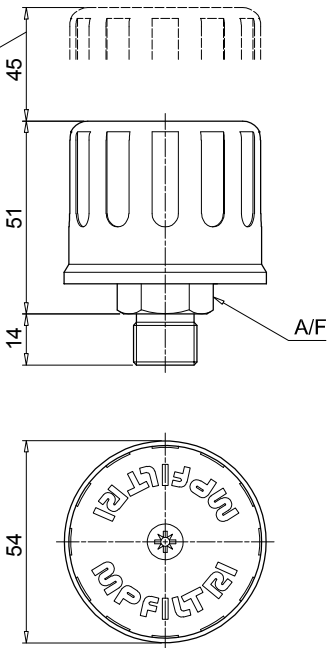
### COMPLETE AIR FILTER

| Series and size   |                         |        | Configuration example : SAP054 |                        |  |  |  | G2 | L10 | A | P01 |
|-------------------|-------------------------|--------|--------------------------------|------------------------|--|--|--|----|-----|---|-----|
| SAP054            |                         |        |                                |                        |  |  |  |    |     |   |     |
| SAP075            |                         |        |                                |                        |  |  |  |    |     |   |     |
| Connections       |                         | SAP054 | SAP075                         |                        |  |  |  |    |     |   |     |
| G1                |                         | G 3/8" | G 1/2"                         |                        |  |  |  |    |     |   |     |
| G2                |                         | G 1/2" | G 3/4"                         |                        |  |  |  |    |     |   |     |
|                   |                         |        |                                |                        |  |  |  |    |     |   |     |
| Filtration rating |                         |        |                                |                        |  |  |  |    |     |   |     |
| L03               | Resin impregnated paper | 3 µm   |                                |                        |  |  |  |    |     |   |     |
| L10               | Resin impregnated paper | 10 µm  |                                |                        |  |  |  |    |     |   |     |
|                   |                         |        |                                |                        |  |  |  |    |     |   |     |
| Seals             |                         |        |                                |                        |  |  |  |    |     |   |     |
| A                 | NBR                     |        |                                |                        |  |  |  |    |     |   |     |
|                   |                         |        |                                |                        |  |  |  |    |     |   |     |
|                   |                         |        |                                | Execution              |  |  |  |    |     |   |     |
|                   |                         |        |                                | P01 MP Filtri standard |  |  |  |    |     |   |     |
|                   |                         |        |                                | Pxx Customized         |  |  |  |    |     |   |     |

### FILTER ELEMENT

| Filter element series and size |                         |       | Configuration example : |                    | A4 | L10 | P01 |
|--------------------------------|-------------------------|-------|-------------------------|--------------------|----|-----|-----|
| A4                             | SAP054                  |       |                         |                    |    |     |     |
| A7                             | SAP075                  |       |                         |                    |    |     |     |
| Filtration rating              |                         |       |                         |                    |    |     |     |
| L03                            | Resin impregnated paper | 3 µm  |                         |                    |    |     |     |
| L10                            | Resin impregnated paper | 10 µm |                         |                    |    |     |     |
|                                |                         |       |                         |                    |    |     |     |
|                                |                         |       | Execution               |                    |    |     |     |
|                                |                         |       | P01                     | MP Filtri standard |    |     |     |
|                                |                         |       | Pxx                     | Customized         |    |     |     |

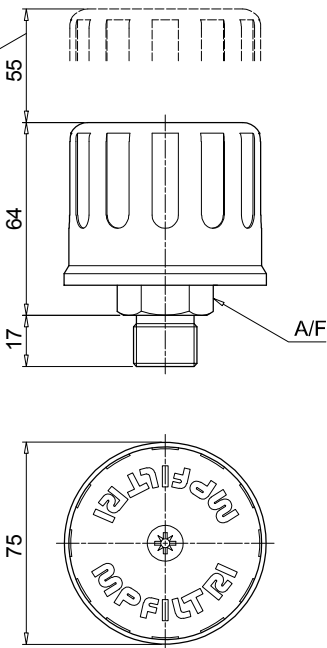
Recommended  
clearance space  
for maintenance



SAP054

| Connections | A/F<br>[mm] |
|-------------|-------------|
| <b>G1</b>   | 22          |
| <b>G2</b>   | 27          |

Recommended  
clearance space  
for maintenance



SAP075

| Connections | A/F<br>[mm] |
|-------------|-------------|
| <b>G1</b>   | 27          |
| <b>G2</b>   | 32          |

### 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 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               | L10  |
| SA036 | 140               | 140  |
| SA053 | 250               | 250  |
| SA075 | 350               | 400  |
| SA115 | 800               | 850  |
| SA145 | 1800              | 1850 |
| SA185 | 2300              | 2500 |

### Materials

- Cover: Steel
- Connection: Anodized steel, Galvanized steel
- Filter element: Resin impregnated 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**

#### Connections

|           | 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 impregnated paper | 3 µm  |
| <b>L10</b> | Resin impregnated paper | 10 µm |
| <b>S</b>   | Without filter element  |       |

Configuration example : **SA115** | **G1** | **L10** | **A** | **P01**

#### Seals

**A** NBR

#### Execution

**P01** MP Filtri standard

**Pxx** Customized

### FILTER ELEMENT

#### Filter element series and size

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

#### Filtration rating

|            |                         |       |
|------------|-------------------------|-------|
| <b>L03</b> | Resin impregnated paper | 3 µm  |
| <b>L10</b> | Resin impregnated paper | 10 µm |

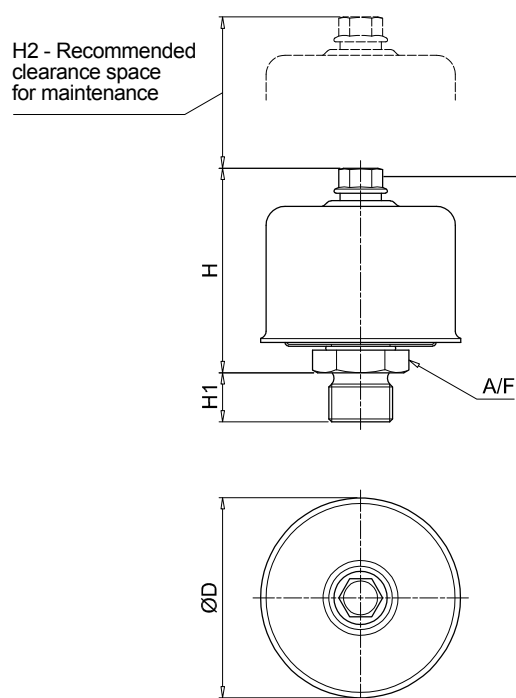
Configuration example : **A8** | **L10** | **P01**

#### Execution

**P01** MP Filtri standard

**Pxx** Customized

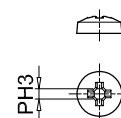




## Type of bolt/nut

**Phillips:**

SA036

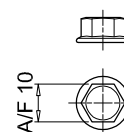
**Hexagonal:**

SA053

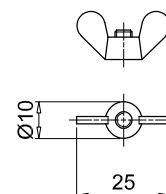
SA075

SA115

SA145

**Wings:**

SA185



| Type       | Connections | 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 breathers



# SAW 115 GENERAL INFORMATION

## Technical data

### Air breathers & Filler plugs

#### Moisture control desiccant air breathers

##### 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 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: Polyamide  
Internal Support Pipe: Polyamide  
Screen: Polycarbonate  
Cover: Polyamide  
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

Length 1 0.32 kg  
Length 2 0.56 kg  
Length 3 0.84 kg

#### Total Weight

Length 1 0.60 kg  
Length 2 0.90 kg  
Length 3 1.20 kg



## Designation & Ordering code

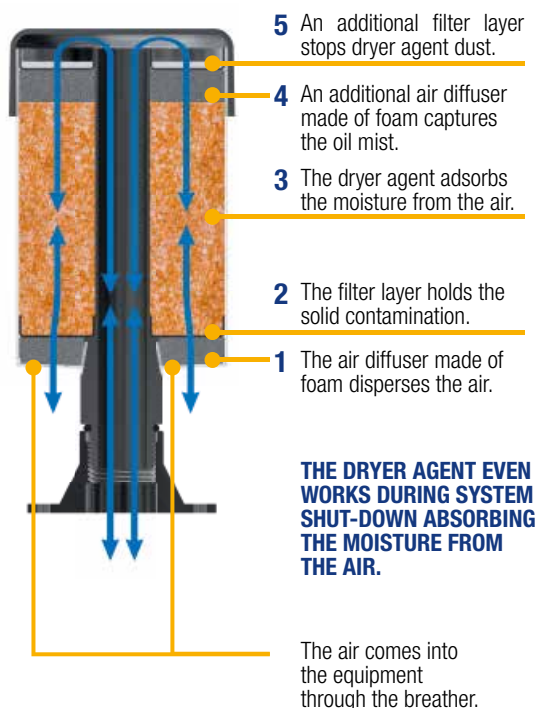
### COMPLETE AIR FILTER

| Serie                                    | Configuration example : SAW115 1 G 03 A 0 0 P01 |  |  |                               |  |  |  |  |
|--|---|--|--|-------------------------------|--|--|--|--|
| <b>SAW115</b>                            |   |  |  |                               |  |  |  |  |
| Length                                   |   |  |  |                               |  |  |  |  |
| <b>1   2   3</b>                         |   |  |  |                               |  |  |  |  |
| Connections                              |   |  |  |                               |  |  |  |  |
| <b>G 1"</b>                              |   |  |  |                               |  |  |  |  |
| Filtration rating                        |   |  |  |                               |  |  |  |  |
| <b>03</b> Inorganic microfiber 3 $\mu$ m |   |  |  |                               |  |  |  |  |
| Seals                                    |   |  |  |                               |  |  |  |  |
| <b>A</b> NBR                             |   |  |  |                               |  |  |  |  |
| Valve                                    |   |  |  |                               |  |  |  |  |
| <b>0</b> Without valve                   |   |  |  |                               |  |  |  |  |
| Option                                   |   |  |  | Execution                     |  |  |  |  |
| <b>0</b> Standard                        |   |  |  | <b>P01</b> MP Filtri standard |  |  |  |  |
|  |   |  |  | <b>Pxx</b> Customized         |  |  |  |  |

### ACCESSORIES

| Serie                     | Configuration example : SMG1 S A P02 |                               |  |  |
|---------------------------|--------------------------------------|-------------------------------|--|--|
| <b>SMG</b> Adapter Flange |                                      |                               |  |  |
| Connections               |                                      |                               |  |  |
| <b>S</b> Without screws   |                                      |                               |  |  |
| Seals                     |                                      | Execution                     |  |  |
| <b>A</b> NBR              |                                      | <b>P02</b> MP Filtri standard |  |  |

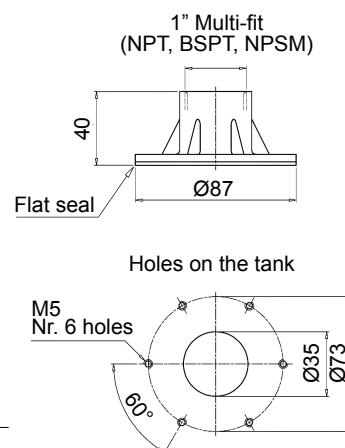
### How does SAW Series works



### SAW115

| Length | H [ mm ] |
|--------|----------|
| 1      | 154      |
| 2      | 205      |
| 3      | 256      |

Optional 6-hole tank flange  
SMG1 type



(\*) 1" Multi-fit (NPT, BSPT, NPSM)

## 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<br>[ 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 breathers with interchangeable filter element





### Air breathers & Filler plugs

#### Metal air breathers with interchangeable filter element 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 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  |



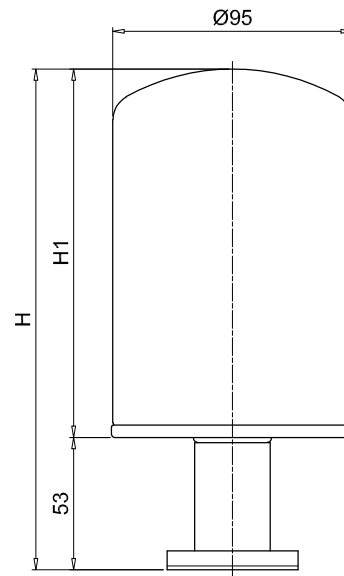
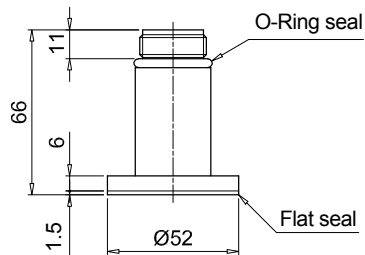
## Designation & Ordering code

### COMPLETE AIR FILTER

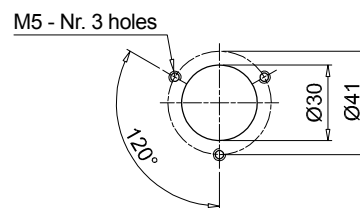
| Series and size        |                         |               |               | Configuration example 1 : SCS050 C G2 V P01     |     |     |          |     |   |
|------------------------|-------------------------|---------------|---------------|---|-----|-----|----------|-----|---|
| <b>SCS050</b>          | <b>SCS070</b>           | <b>SCS100</b> | <b>SCS150</b> | Configuration example 2 : SCS150 C G2 A10 V P01 |     |     |          |     |   |
| Connections            |                         |               |               |   |     |     |          |     |   |
| <b>C</b>               | Weld riser              |               |               |   |     |     |          |     |   |
| <b>F</b>               | Screwed flange          |               |               |   |     |     |          |     |   |
| Threaded connection    |                         | SCS050 - 070  |               | SCS100 - 150                                    |     |     |          |     |   |
| <b>G1</b>              | ISO 228                 | G 3/4"        |               | G 1 1/4"  |     |     |          |     |   |
| <b>G2</b>              | 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 impregnated paper | 10 µm         | •             | •   | •   | •   |          |     |   |
|                        |                         |               |               |   |     |     | Seals    |     |   |
|                        |                         |               |               |   |     |     | <b>A</b> | NBR | Execution<br><b>P01</b> MP Filtri standard<br><b>Pxx</b> Customized |
|                        |                         |               |               |   |     |     | <b>V</b> | FPM |   |

### FILTER ELEMENT

| Filter element series |                          |       | Threaded connection: |    | Configuration example : |     |           |                    |     |
|-----------------------|--------------------------|-------|----------------------|----|-------------------------|-----|-----------|--------------------|-----|
| CS                    | Connection ISO 228       |       | G1                   | G2 | CG                      | 150 | A10       | V                  | P01 |
| CG                    | Connection U.S. standard |       |                      |    |                         |     |           |                    |     |
| Filter element size   |                          |       |                      |    |                         |     |           |                    |     |
| 050                   | 070                      | 100   | 150                  |    |                         |     |           |                    |     |
| Filtration rating     |                          |       |                      |    |                         |     |           |                    |     |
| A03                   | Inorganic microfiber     | 3 µm  |                      |    |                         |     |           |                    |     |
| A10                   | Inorganic microfiber     | 10 µm |                      |    |                         |     |           |                    |     |
| P10                   | Resin impregnated paper  | 10 µm |                      |    |                         |     |           |                    |     |
|                       |                          |       |                      |    | Seals                   |     | Execution |                    |     |
|                       |                          |       |                      |    | A                       | NBR | P01       | MP Filtri standard |     |
|                       |                          |       |                      |    | V                       | FPM | Pxx       | Customized         |     |



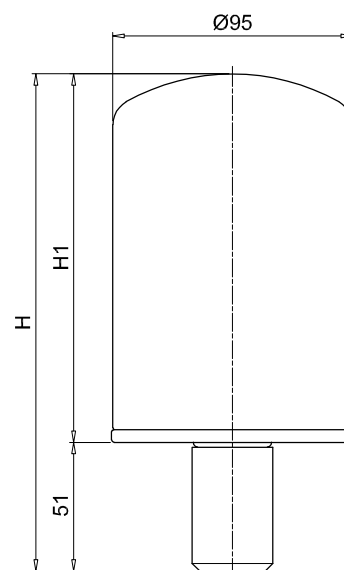
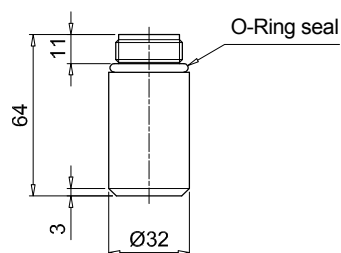
Holes on the tank



### SCS050-070

#### Screwed flange

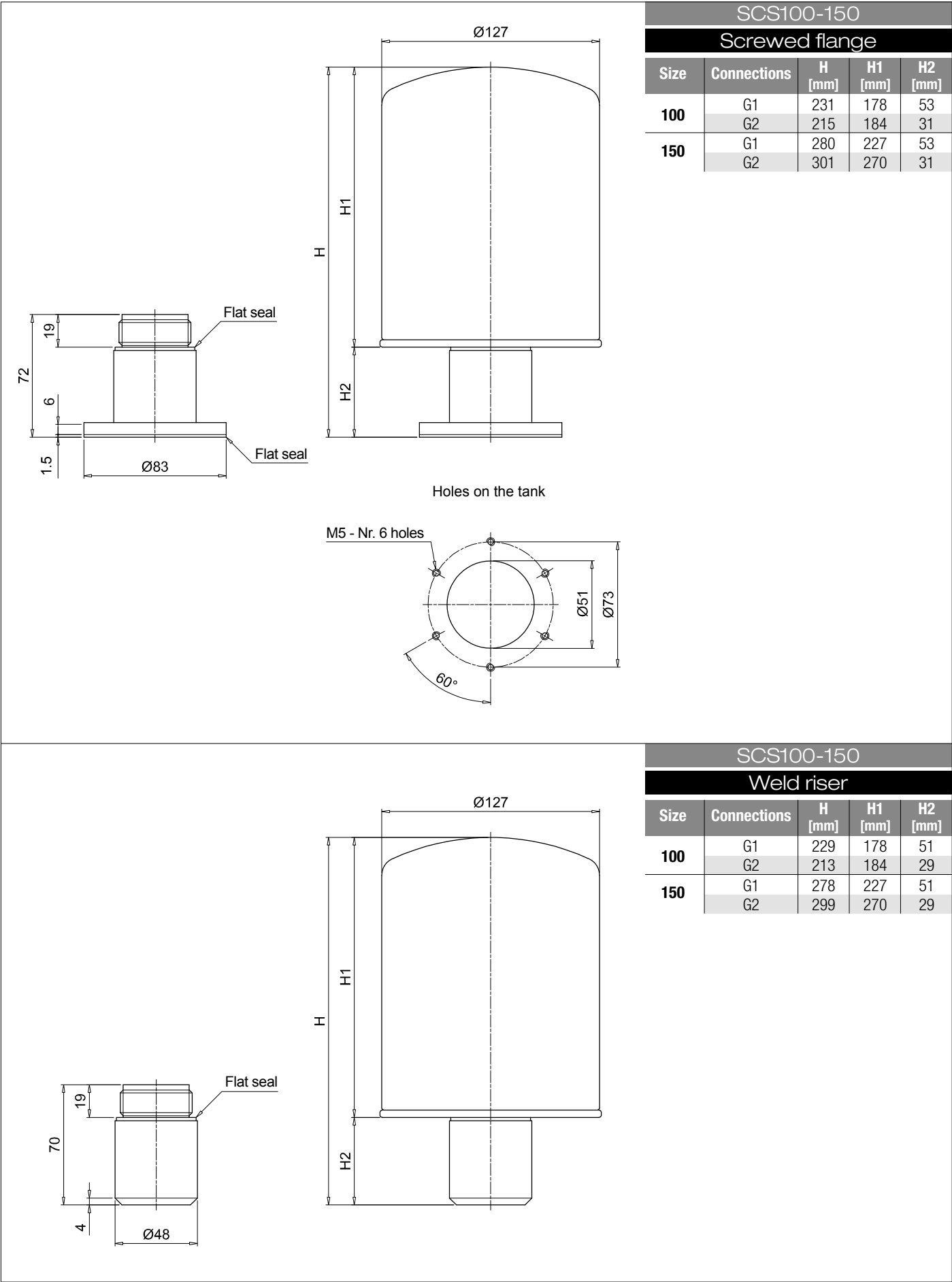
| Size       | H [mm] | H1 [mm] |
|------------|--------|---------|
| <b>050</b> | 199    | 146     |
| <b>070</b> | 263    | 210     |



### SCS050-070

#### Weld riser

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







# SME 1 - SMF 1 - SML 1 series

Risers for breathers and filler caps installation



## Technical data

## Air breathers &amp; 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 polyamide tanks, mainly used in the mobile machines
- SMF: sloping riser made of polyamide for polyamide tanks, mainly used in the mobile machines
- SML: sloping riser made of aluminum for metal tanks, mainly used in the industrial equipment and heavy-duty applications

## Materials SME

- Body: Polyamide
- Seals: NBR
- Screws: Galvanized steel

## Materials SMF

- Body: Polyamide
- Seals: NBR
- Screws: Galvanized steel

## Materials SML

- Body: Aluminium
- Seals: NBR
- Screws: Galvanized steel

## Temperature

From -25 °C to +100 °C

## Weight

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



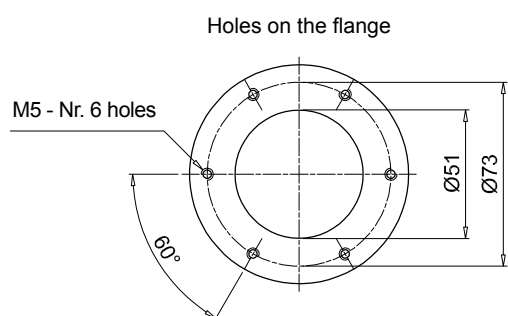
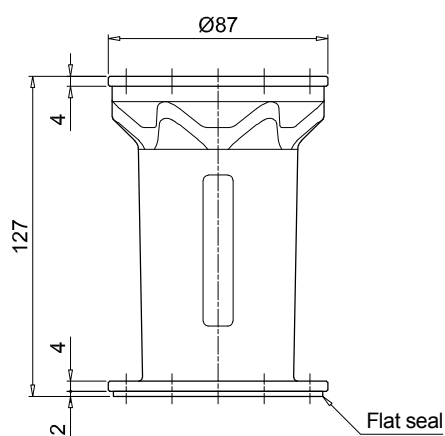
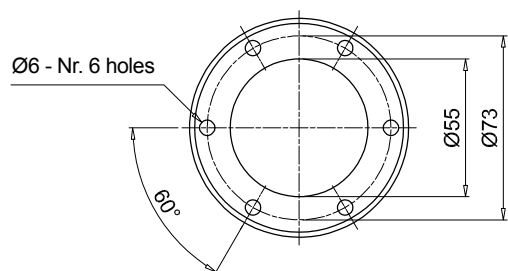
## Designation &amp; Ordering code

## COMPLETE ADAPTER

| Series      |                          | Configuration example : |      |      |     |
|-------------|--------------------------|-------------------------|------|------|-----|
| <b>SME1</b> | Polyamide vertical riser | SMF1                    | M    | A    | P01 |
| <b>SMF1</b> | Polyamide sloping riser  |                         |      |      |     |
| <b>SML1</b> | Aluminium sloping riser  |                         |      |      |     |
| Connections |                          |                         |      |      |     |
| <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    | •                       |      |      |     |



SME1

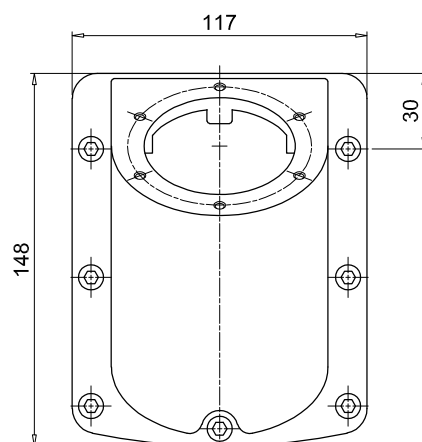
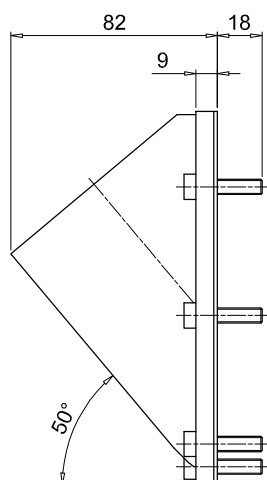


Holes on the flange

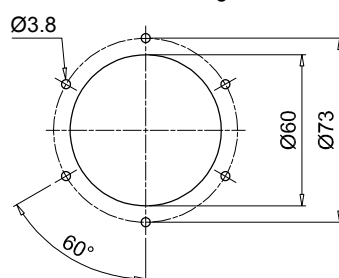
# SME 1-SMF 1-SML 1

## Dimensions

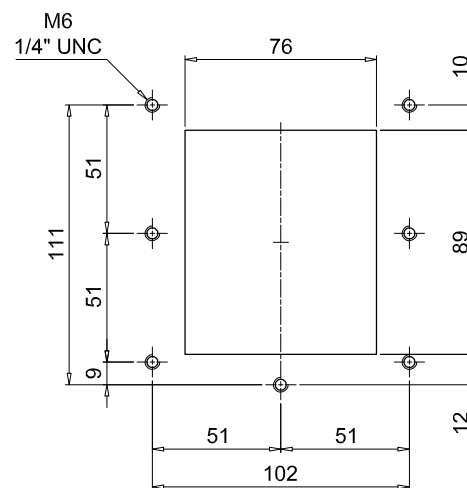
### SMF1



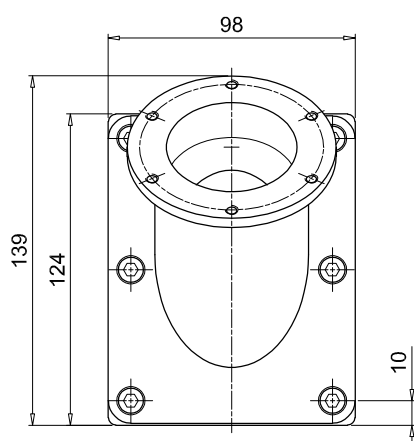
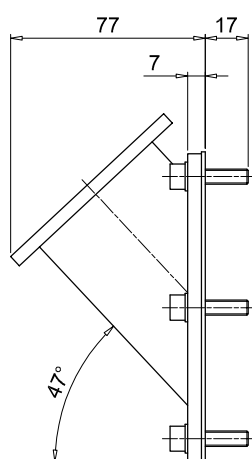
Holes on the flange



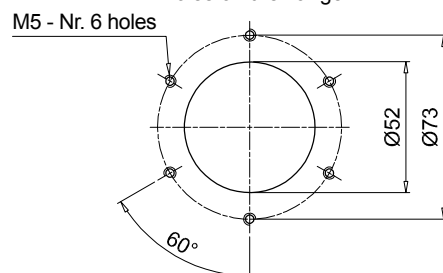
Holes on the tank



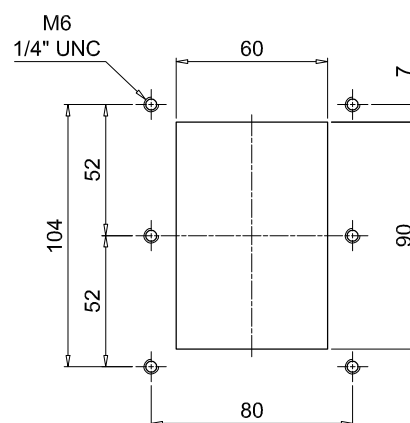
### SML1



Holes on the flange



Holes on the tank







# TA 46    TAP 50    SAP 50 series

**Steel filler plug  
and air filter**

**Polyamide  
filler plug**

**Polyamide  
air filter**



# TA 46 GENERAL INFORMATION

## Technical data

### Air breathers & Filler plugs

#### Steel filler plug and air filter Flow rates 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 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

|             | Flow rate [l/min] |     |
|-------------|-------------------|-----|
|             | Filtration rating |     |
| <b>TA46</b> | 03                | 10  |
|             | 150               | 200 |

### Materials (version G/N)

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

### Materials (version B)

- Cover: Chrome plated steel
- Filter element: Resin impregnated paper, Polyurethane
- Flange: Galvanized steel
- Connection: Galvanized steel
- Seals: NBR
- Chain: Brass
- Screws: Galvanized steel
- Basket: Galvanized steel

### Temperature

From -25 °C to +100 °C

### Weight

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



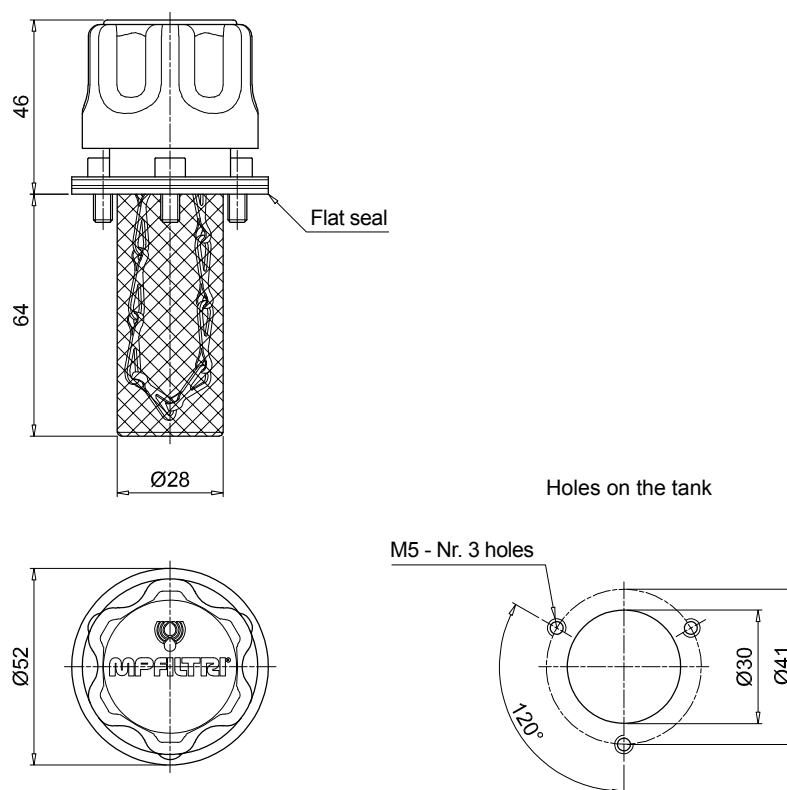
## Designation & Ordering code

### COMPLETE FILLER PLUG

| Serie             |                                   | Configuration example 1 : | TA46 | B | 03 | A | 0 | 0 | 1 | P01 |
|-------------------|-----------------------------------|---------------------------|------|---|----|---|---|---|---|-----|
| TA46              |                                   | Configuration example 2 : | TA46 | G | 10 |   |   |   |   | P01 |
| Connections       |                                   |                           |      |   |    |   |   |   |   |     |
| <b>B</b>          | Screwed flange with bayonet mount |                           |      |   |    |   |   |   |   |     |
| <b>G</b>          | G 1/4"                            |                           |      |   |    |   |   |   |   |     |
| <b>N</b>          | 1/4" NPT                          |                           |      |   |    |   |   |   |   |     |
| Filtration rating |                                   |                           |      |   |    |   |   |   |   |     |
| <b>03</b>         | Resin impregnated paper 3 µm      |                           |      |   |    |   |   |   |   |     |
| <b>10</b>         | Polyurethane 10 µm                |                           |      |   |    |   |   |   |   |     |
| Seals             |                                   | Connection:               | B    | G | N  |   |   |   |   |     |
| <b>A</b>          | NBR                               |                           | •    |   |    |   |   |   |   |     |
| Valve             |                                   | Connection:               | B    | G | N  |   |   |   |   |     |
| <b>0</b>          | Without valve                     |                           | •    |   |    |   |   |   |   |     |
| Version           |                                   | Connection:               | B    | G | N  |   |   |   |   |     |
| <b>0</b>          | Standard                          |                           | •    |   |    |   |   |   |   |     |
| Basket            |                                   | Connection:               | B    | G | N  |   |   |   |   |     |
| <b>1</b>          | With basket                       |                           | •    |   |    |   |   |   |   |     |
| Execution         |                                   |                           |      |   |    |   |   |   |   |     |
| <b>P01</b>        | MP Filtri standard                |                           |      |   |    |   |   |   |   |     |
| <b>Pxx</b>        | Customized                        |                           |      |   |    |   |   |   |   |     |

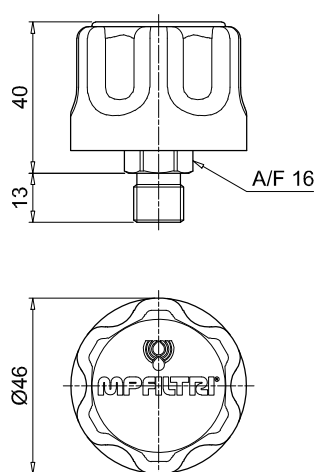
### TA46

#### Screwed flange



### TA46

#### Threaded connection





# TAP 50 GENERAL INFORMATION

## Technical data

### Air breathers & Filler plugs

#### Filler plug and polyamide air filters

##### Flow rates 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                | 10  |
| <b>TAP50</b> | 180               | 202 |

### Materials

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

### Temperature

From -25 °C to +100 °C

### Weight

TAP 50 0.60 kg

### Quantity

10 pcs/pack



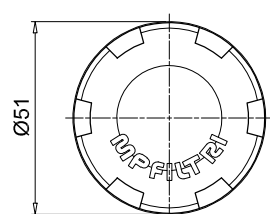
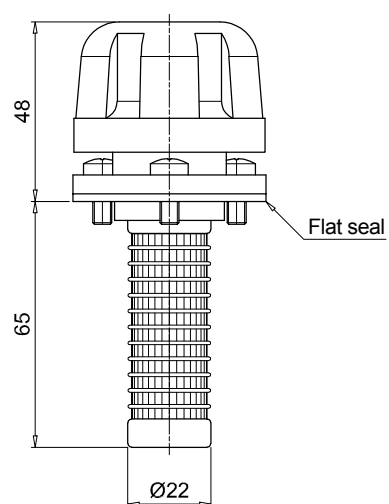
## Designation & Ordering code

### COMPLETE FILLER PLUG

| Serie             | Configuration example :          |   |    |   |   |   |     |
|-------------------|----------------------------------|---|----|---|---|---|-----|
| <b>TAP50</b>      | TAP50                            | C | 03 | A | 1 | 1 | P01 |
| Connections       |                                  |   |    |   |   |   |     |
| <b>C</b>          | Screwed flange with G 3/4" mount |   |    |   |   |   |     |
| Filtration rating |                                  |   |    |   |   |   |     |
| <b>03</b>         | Resin impregnated paper 3 µm     |   |    |   |   |   |     |
| <b>10</b>         | Polyurethane 10 µm               |   |    |   |   |   |     |
| Seals             |                                  |   |    |   |   |   |     |
| <b>A</b>          | NBR                              |   |    |   |   |   |     |
| Valve             |                                  |   |    |   |   |   |     |
| <b>0</b>          | Without valve                    |   |    |   |   |   |     |
| <b>1</b>          | 0.5 bar pressurization valve     |   |    |   |   |   |     |
| Basket            |                                  |   |    |   |   |   |     |
| <b>1</b>          | With basket                      |   |    |   |   |   |     |
| Execution         |                                  |   |    |   |   |   |     |
| <b>P01</b>        | MP Filtri standard               |   |    |   |   |   |     |
| <b>Pxx</b>        | Customized                       |   |    |   |   |   |     |

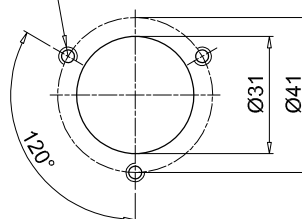
TAP50

Screwed flange



Holes on the tank

M5 - Nr. 3 holes



# SAP 50 GENERAL INFORMATION

## Technical data

### Air breathers & Filler plugs

#### Air breathers

#### Flow rates 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. They are 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 |     |
| <b>SAP50</b> | 03                | 10  |
|              | 180               | 204 |

### Materials

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

### Temperature

From -25 °C to +100 °C

### Weight

SAP 50 0.40 kg

### Quantity

10 pcs/pack



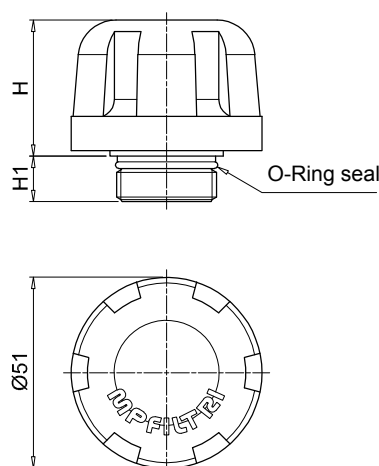
## Designation & Ordering code

### COMPLETE AIR FILTER

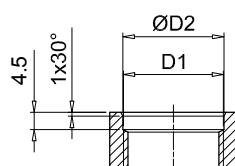
| Serie             |                              | Configuration example : |           |            |          |          |          |            |
|-------------------|------------------------------|-------------------------|-----------|------------|----------|----------|----------|------------|
| <b>SAP50</b>      |                              | <b>SAP50</b>            | <b>G3</b> | <b>L03</b> | <b>A</b> | <b>1</b> | <b>0</b> | <b>P01</b> |
| Connections       |                              |                         |           |            |          |          |          |            |
| <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 impregnated 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

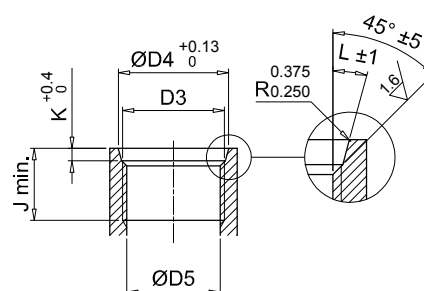
Threaded  
connection



Housing on the tank  
for connections BPS



Housing on the tank  
for connections SAE



| Connections | H<br>[mm] | H1<br>[mm] | D1<br>[mm] | ØD2<br>[mm] | D3<br>[mm]               | ØD4<br>[mm] | ØD5<br>[mm]      | J min.<br>[mm] | K<br>[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<br>12.751 | 12.7           | 2.5       | 12° |
| <b>G10</b>  | 35        | 14.5       | -          | -           | SAE 12 - 1 1/16" - 12 UN | 29.2        | 24.978<br>24.696 | 19             | 3.3       | 15° |



# TA 80 series

Steel filler plug and air filter up to 550 l/min



# TA 80 GENERAL INFORMATION

## Technical data

### Air breathers & Filler plugs

#### Steel filler plug and air filter Flow rates 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 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

|             | Flow rate [l/min] |     |     |
|-------------|-------------------|-----|-----|
|             | Filtration rating | 03  | 10  |
| <b>TA80</b> |                   | 450 | 550 |

### Materials

- Cover: Chrome Plated steel
- Filter element: Resin impregnated paper, Polyurethane
- Pressurization valve: Polyamide (bodies), Galvanized steel (end cap - disk), Steel (spring), NBR (seals)
- Flange and anti-splash feature: Galvanized steel
- Seals: 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



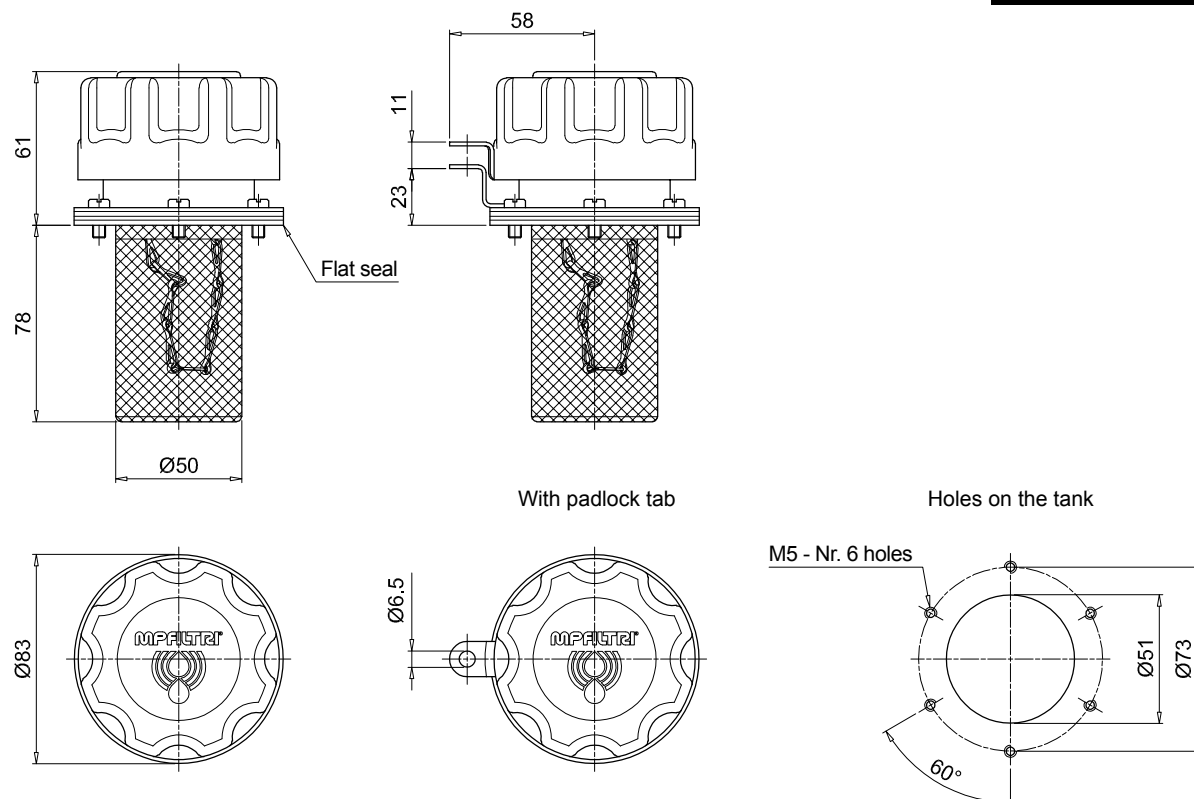
## Designation & Ordering code

### COMPLETE FILLER PLUG / COMPLETE AIR FILTER

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

### TA80

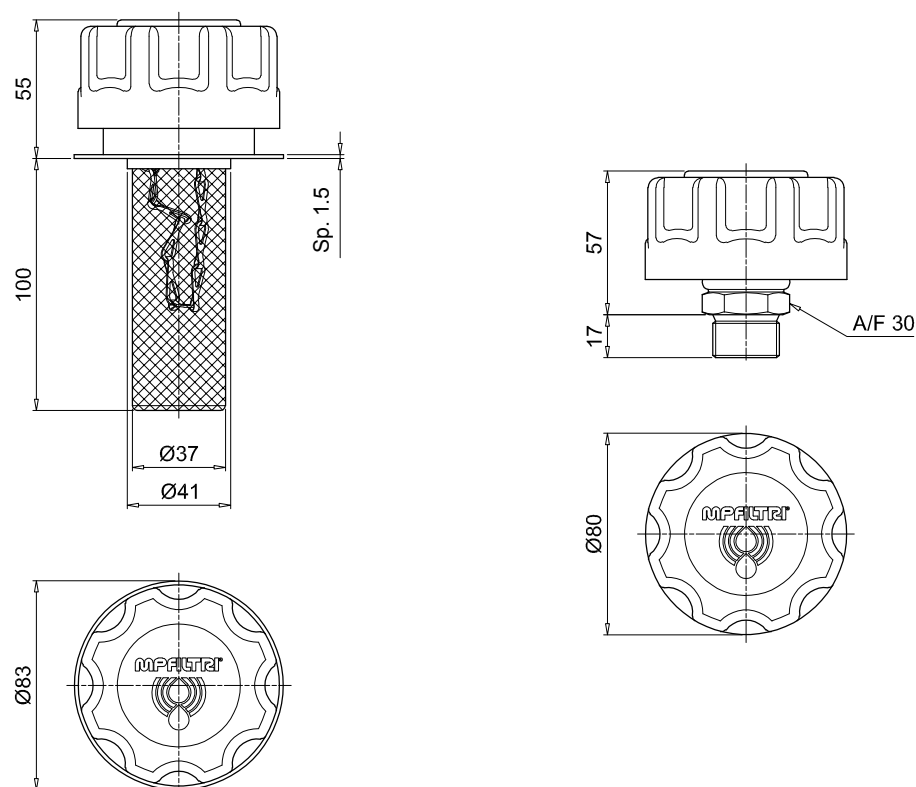
#### Screwed flange



### TA80

#### Weld flange

#### Threaded connection







# TAP 90 series

Filler plug and polyamide air filter up to 550 l/min



# TAP 90 GENERAL INFORMATION

## Technical data

### Air breathers & Filler plugs

#### Filler plug and polyamide air filters

##### Flow rates 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 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                | 10  |
| TAP90 | 450               | 550 |

#### Materials

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

#### Temperature

From -25 °C to +100 °C

#### Weight

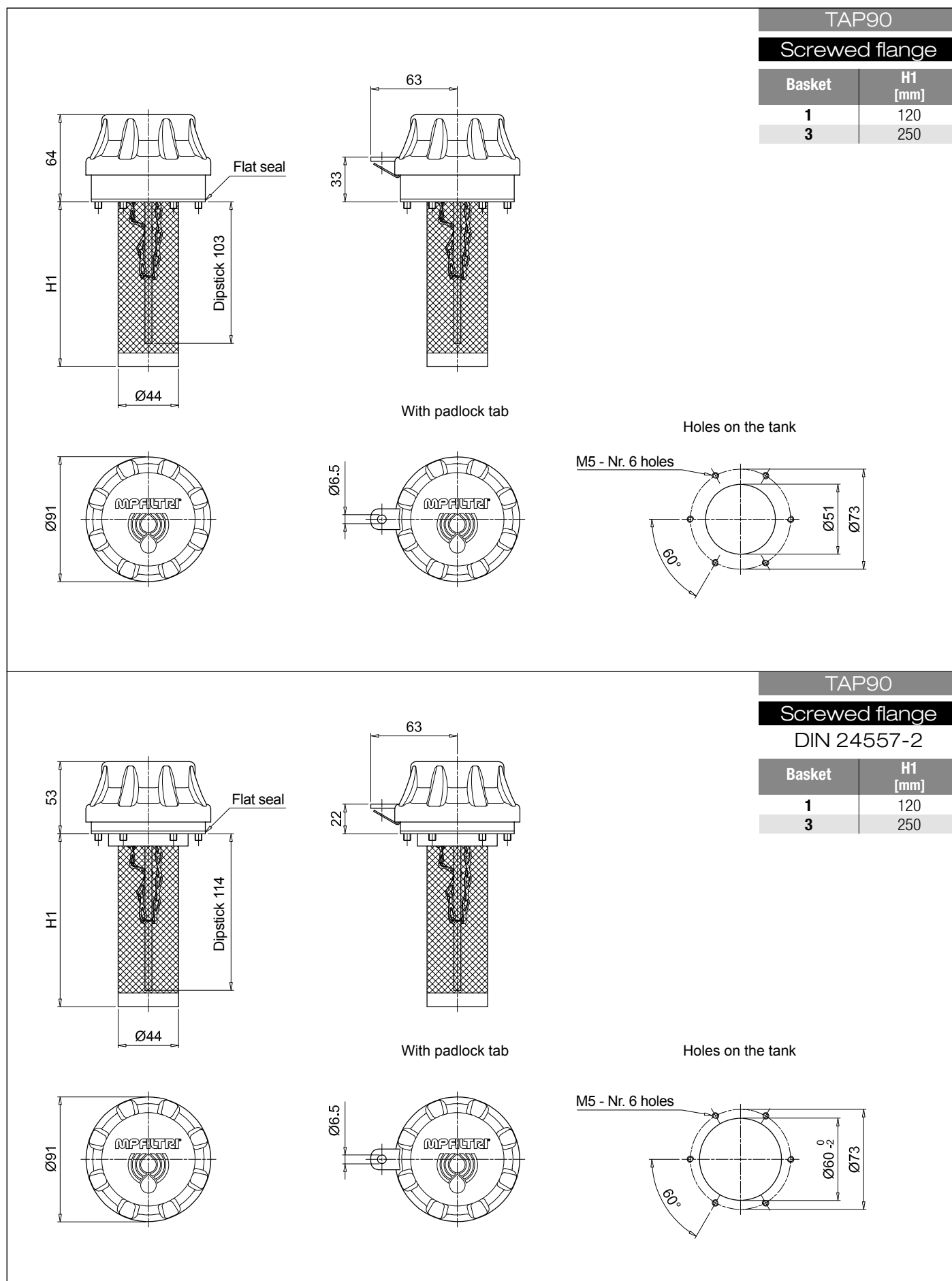
L 120 mm 0.25 kg  
L 250 mm 0.31 kg



## Designation & Ordering code

### COMPLETE BREATHER PLUG

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

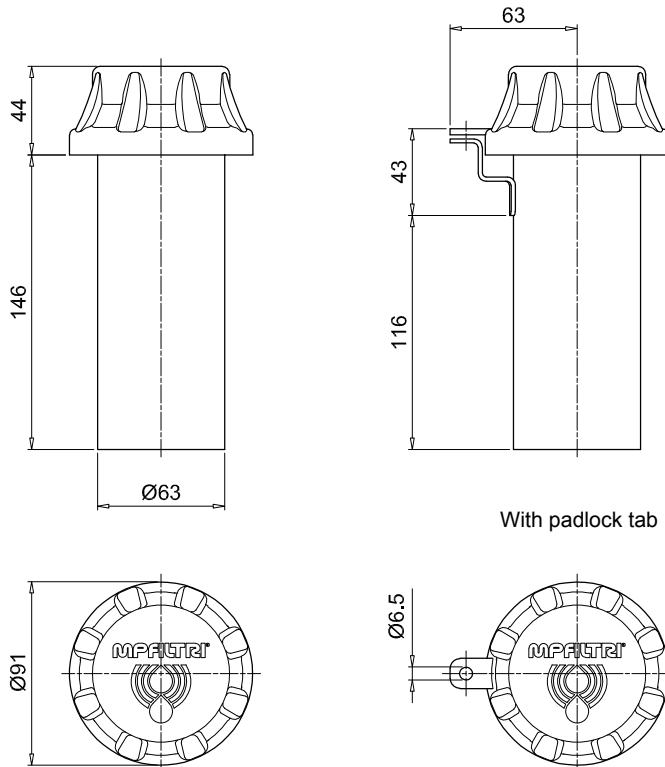


# TAP 90

## Dimensions

### TAP90

#### Weld riser

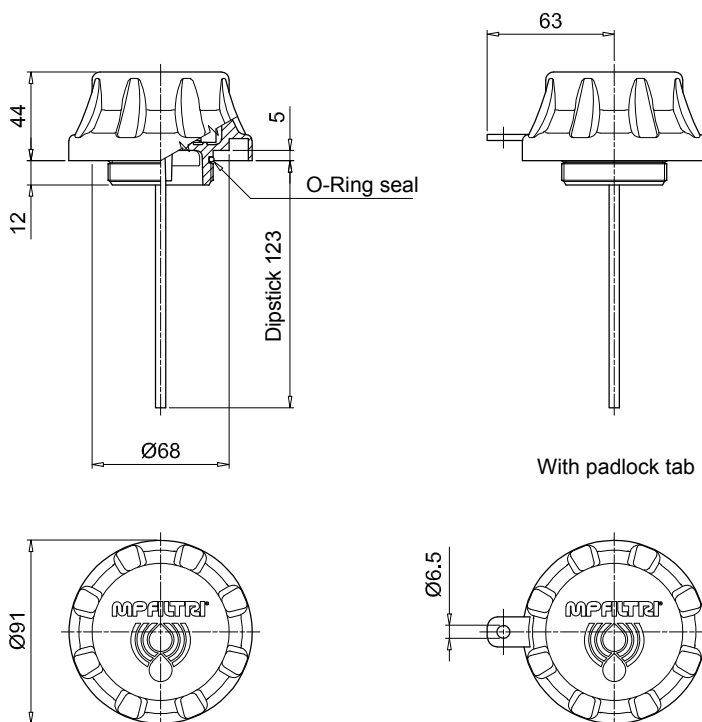


With padlock tab

### TAP90

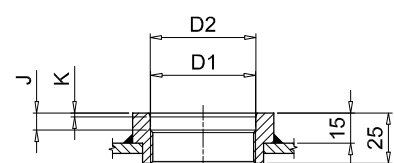
#### Threaded connection

| Connections | 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 G - H - M - Q







# TAP 114 series

Filler plug and polyamide air filter up to 1600 l/min





# TAP 114 GENERAL INFORMATION

## Technical data

### Air breathers & Filler plugs

#### Filler plug and polyamide air filters

##### Flow rates 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 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

#### 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: Polyamide
- Filter element: Resin impregnated paper
- Flange: Polyamide
- Seals: NBR
- Screws: Galvanized steel
- Basket: Polyamide

### Temperature

From -25 °C to +100 °C

### Weight

|                  |          |
|------------------|----------|
| TAP 114 length 1 | 0.185 kg |
| TAP 114 length 3 | 0.200 kg |



## Designation & Ordering code

### COMPLETE FILLER PLUG / COMPLETE AIR FILTER

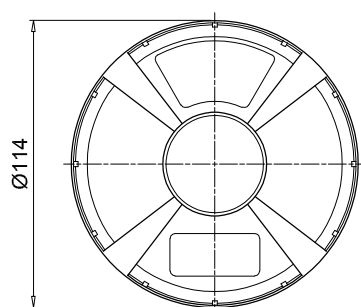
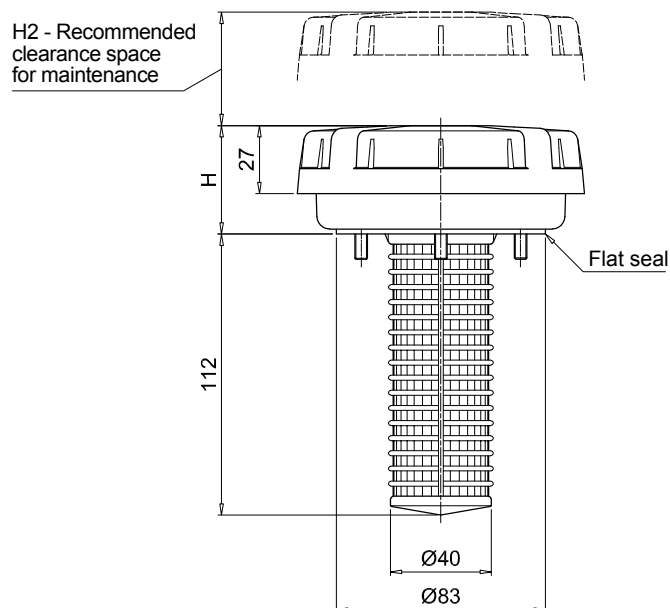
| Series                                   | Configuration example : TAP114 1 L10 A 1 P01 |  |  |  |  |                               |
|--|--|--|--|--|--|-------------------------------|
| <b>TAP114</b>                            |  |  |  |  |  |                               |
| Length            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

### FILTER ELEMENT

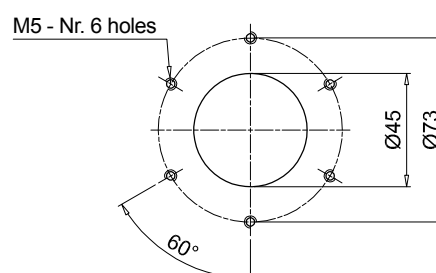
| Filter element series                    | Configuration example : A114 1 L10 P01 |  |  |                               |
|--|--|--|--|-------------------------------|
| <b>A114</b>                              |  |  |  |                               |
| Length                                   |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

TAP114

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



Holes on the tank





# TAP 115 - SAP 115

Filler plug and polyamide air filter up to 3000 l/min



# TAP 115 GENERAL INFORMATION

## Technical data

### Air breathers & Filler plugs

#### Filler plug and polyamide air filters

##### Flow rates up to 2150 l/min

TAP115 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 directly fitted on the tank.

#### Available features:

- Flanged connection, for a maximum flow rate of 2150 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
- 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  | L10  |
| <b>TAP115 length 1</b> |                   | 1600 | 2000 |
| <b>TAP115 length 2</b> |                   | 2150 | 2150 |

### Materials

- Cover/flange: Polyamide
- Filter element: Microfibre, Resin impregnated paper
- Seals: NBR, FPM
- Basket/screws: Galvanized steel

### Clogging indicators

- Manual reset
- Set pressure 0.062 bar  $\pm 10\%$

### Temperature

From -25 °C to +100 °C

### Weight

|         |          |          |
|---------|----------|----------|
| TAP 115 | length 1 | 0.460 kg |
| TAP 115 | length 2 | 0.585 kg |



## Designation & Ordering code

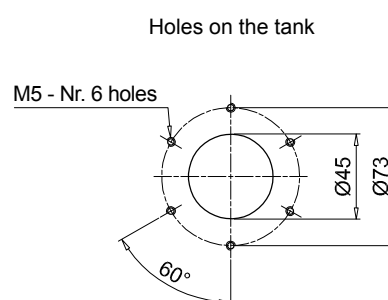
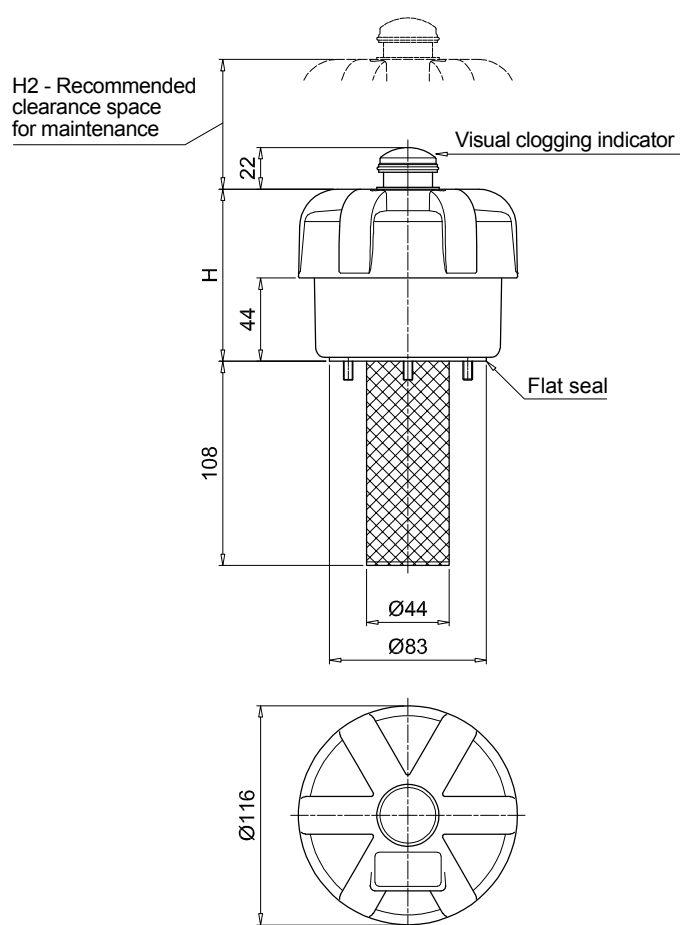
### COMPLETE FILLER PLUG / COMPLETE AIR FILTER

| Series                                   | Configuration example : TAP115 2 F A03 A 1 A P01 |  |  |  |  |  |  |  |                               |
|--|--|--|--|--|--|--|--|--|-------------------------------|
| <b>TAP115</b>                            |  |  |  |  |  |  |  |  |                               |
| Length                                   |  |  |  |  |  |  |  |  |                               |
| <b>1</b>   <b>2</b>                      |  |  |  |  |  |  |  |  |                               |
| Connections                              |  |  |  |  |  |  |  |  |                               |
| <b>F</b> Flange                          |  |  |  |  |  |  |  |  |                               |
| Filtration rating                        |  |  |  |  |  |  |  |  |                               |
| <b>A03</b> Inorganic microfiber 3 µm     |  |  |  |  |  |  |  |  |                               |
| <b>L10</b> Resin impregnated paper 10 µm |  |  |  |  |  |  |  |  |                               |
| Seals                                    |  |  |  |  |  |  |  |  |                               |
| <b>A</b> NBR                             |  |  |  |  |  |  |  |  |                               |
| <b>V</b> FPM                             |  |  |  |  |  |  |  |  |                               |
| Version                                  |  |  |  |  |  |  |  |  |                               |
| <b>1</b> With basket                     |  |  |  |  |  |  |  |  |                               |
| Clogging indicator                       |  |  |  |  |  |  |  |  |                               |
| <b>A</b> Without indicator               |  |  |  |  |  |  |  |  |                               |
| <b>B</b> With visual clogging indicator  |  |  |  |  |  |  |  |  |                               |
|  |  |  |  |  |  |  |  |  | Execution                     |
|  |  |  |  |  |  |  |  |  | <b>P01</b> MP Filtri standard |
|  |  |  |  |  |  |  |  |  | <b>Pxx</b> Customized         |

### FILTER ELEMENT

| Filter element series                    | Configuration example : A115 2 A03 P01 |  |  |                               |
|--|--|--|--|-------------------------------|
| <b>A115</b>                              |  |  |  |                               |
| Length                                   |  |  |  |                               |
| <b>1</b>   <b>2</b>                      |  |  |  |                               |
| Filtration rating                        |  |  |  |                               |
| <b>A03</b> Inorganic microfiber 3 µm     |  |  |  |                               |
| <b>L10</b> Resin impregnated paper 10 µm |  |  |  |                               |
|  |  |  |  | Execution                     |
|  |  |  |  | <b>P01</b> MP Filtri standard |
|  |  |  |  | <b>Pxx</b> Customized         |

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



## Technical data

## Air breathers &amp; Filler plugs

## Filler plug and polyamide air filters

## Flow rates 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 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
- 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               | L10  |
| <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: Polyamide
- Filter element: Microfibre, Resin impregnated paper
- Connection: Polyamide
- Seals: NBR, FPM

## Clogging indicators

- Manual reset
- Set pressure 0.062 bar  $\pm 10\%$

## Temperature

From -25 °C to +100 °C

## Weight

|                  |          |
|------------------|----------|
| SAP 115 length 1 | 0.410 kg |
| SAP 115 length 2 | 0.525 kg |



## Designation &amp; Ordering code

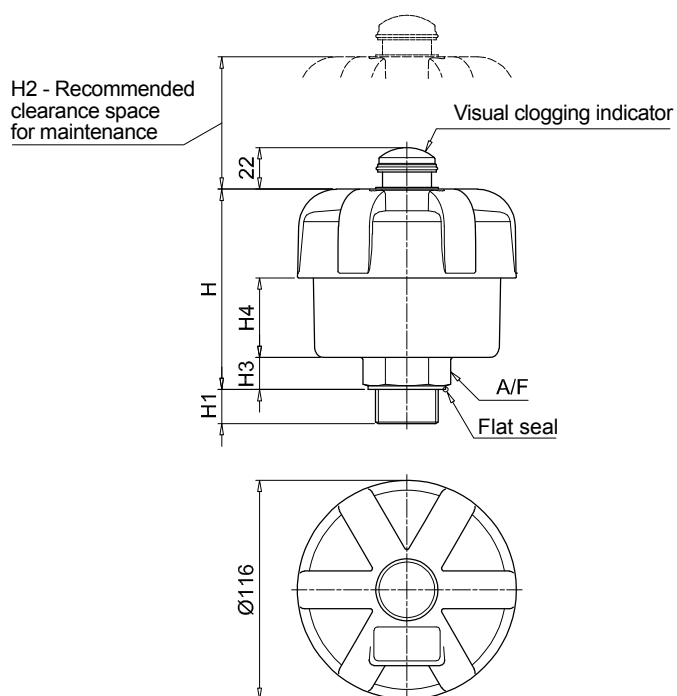
## COMPLETE FILLER PLUG / COMPLETE AIR FILTER

| Series                                       | Configuration example : SAP115 2 A A03 A 1 A P01 |  |  |  |  |  |  |                               |
|--|--|--|--|--|--|--|--|-------------------------------|
| <b>SAP115</b>                                |  |  |  |  |  |  |  |                               |
| Length                                       |  |  |  |  |  |  |  |                               |
| <b>1   2  </b>                               |  |  |  |  |  |  |  |                               |
| Connections                                  |  |  |  |  |  |  |  |                               |
| <b>A G 1" C G 1 1/2"</b>                     |  |  |  |  |  |  |  |                               |
| Filtration rating                            |  |  |  |  |  |  |  |                               |
| <b>A03 Inorganic microfiber 3 µm</b>         |  |  |  |  |  |  |  |                               |
| <b>L10 Resin impregnated paper 10 µm</b>     |  |  |  |  |  |  |  |                               |
| Seals  |  |  |  |  |  |  |  |                               |
| <b>A NBR</b>                                 |  |  |  |  |  |  |  |                               |
| Version                                      |  |  |  |  |  |  |  |                               |
| <b>0 Standard 1 With anti-splash feature</b> |  |  |  |  |  |  |  |                               |
| Clogging indicator                           |  |  |  |  |  |  |  |                               |
| <b>A Without indicator</b>                   |  |  |  |  |  |  |  |                               |
| <b>B With visual clogging indicator</b>      |  |  |  |  |  |  |  |                               |
|  |  |  |  |  |  |  |  | Execution                     |
|  |  |  |  |  |  |  |  | <b>P01</b> MP Filtri standard |
|  |  |  |  |  |  |  |  | <b>Pxx</b> Customized         |


## FILTER ELEMENT

| Filter element series                    | Configuration example : A115 2 A03 P01 |  |  |                               |
|--|--|--|--|-------------------------------|
| <b>A115</b>                              |  |  |  |                               |
| Length                                   |  |  |  |                               |
| <b>1   2  </b>                           |  |  |  |                               |
| Filtration rating                        |  |  |  |                               |
| <b>A03 Inorganic microfiber 3 µm</b>     |  |  |  |                               |
| <b>L10 Resin impregnated paper 10 µm</b> |  |  |  |                               |
|  |  |  |  | Execution                     |
|  |  |  |  | <b>P01</b> MP Filtri standard |
|  |  |  |  | <b>Pxx</b> Customized         |

| SAP115   |             |           |            |            |            |            |             |
|----------|-------------|-----------|------------|------------|------------|------------|-------------|
| Length   | Connections | H<br>[mm] | H1<br>[mm] | H2<br>[mm] | H3<br>[mm] | H4<br>[mm] | A/F<br>[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          |







---

**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

Polyamide filler plug



# TC 50 GENERAL INFORMATION

## Technical data

## Filler and Drain Plugs

### Polyamide filler plug

TC50 is a range of plastic 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 directly fitted on the tank.

### Available features:

- G 1" male threaded connection, with or without nut
- Metal filtration, to hold the coarse contamination contained into the air
- Filling basket, to hold the coarse contamination contained into the fluid and to diffuse the fluid flow into the tank
- Caps with different graphics and colours, for the use in several applications

### Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

## Materials

- Cover: Polyamide
- Filter element: Galvanized steel
- Filler cap: Polyamide
- Strainer: Galvanized steel / Polyamide  
AISI 304 / Polyamide
- Collar: Polyamide
- Seals: Inorganic fibre
- Ringnut: Phosphatized steel

## Temperature

From -25 °C to +100 °C

## Weight

TC 50 G1" conn. 0.70 kg

TC 50 with ringnut 0.10 kg

## Quantity

25 pcs/pack



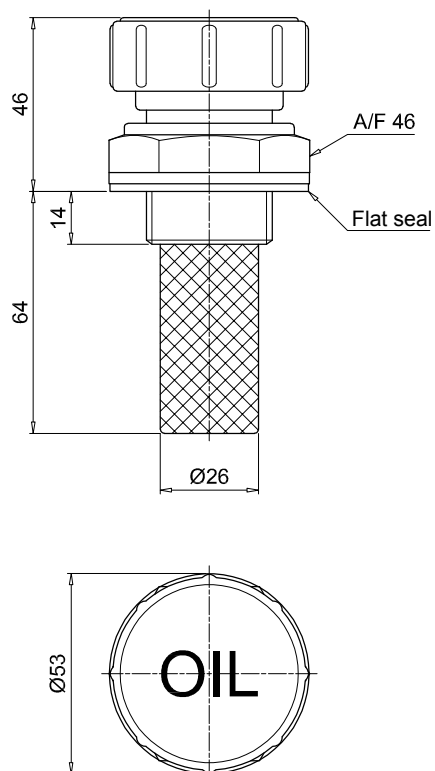
### Designation & Ordering code

## COMPLETE FILLER PLUG

| Series                   |                                      | Configuration example :       |    |     |   |   |   |     |     |
|--------------------------|--------------------------------------|-------------------------------|----|-----|---|---|---|-----|-----|
| <b>TC50</b>              |                                      | TC50                          | G1 | L90 | P | R | O | C70 | P01 |
| <b>Connections</b>       |                                      |                               |    |     |   |   |   |     |     |
| <b>G1</b>                | G 1"                                 |                               |    |     |   |   |   |     |     |
| <b>GA</b>                | With ringnut                         |                               |    |     |   |   |   |     |     |
| <b>Filtration rating</b> |                                      |                               |    |     |   |   |   |     |     |
| <b>L90</b>               | Galvanized steel                     |                               |    |     |   |   |   |     |     |
| <b>Seals</b>             |                                      |                               |    |     |   |   |   |     |     |
| <b>P</b>                 | Inorganic fiber                      |                               |    |     |   |   |   |     |     |
| <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>Basket</b>            |                                      |                               |    |     |   |   |   |     |     |
| <b>S</b>                 | Without basket                       |                               |    |     |   |   |   |     |     |
| <b>C70</b>               | With basket 70 mm - galvanized steel |                               |    |     |   |   |   |     |     |
| <b>I70</b>               | With basket 70 mm - AISI 304         |                               |    |     |   |   |   |     |     |
|                          |                                      | <b>Execution</b>              |    |     |   |   |   |     |     |
|                          |                                      | <b>P01</b> MP Filtri standard |    |     |   |   |   |     |     |
|                          |                                      | <b>Pxx</b> Customized         |    |     |   |   |   |     |     |

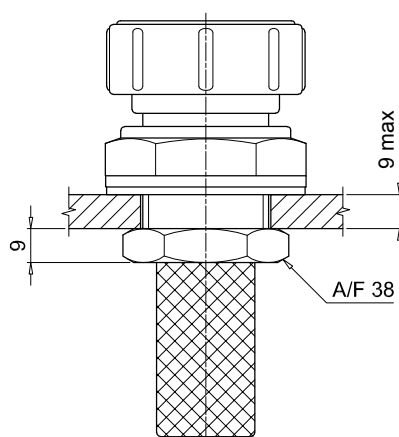
## TC50

### Threaded connection

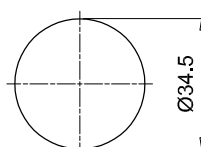


## TC50

### With ringnut



Through hole on the tank





# TKT - TSD - TKM series

Filler and draining plugs





## Technical data

### Filler and draining plugs

#### Polyamide filler plug

TKT is a range of polyamide compact filler plugs for filling of the fluid into the systems during the commissioning and maintenance procedures. They are 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: Polyamide
- Seals: NBR, Inorganic fibre
- Labyrinth: Polyamide
- Anti-splash feature: Resin impregnated 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

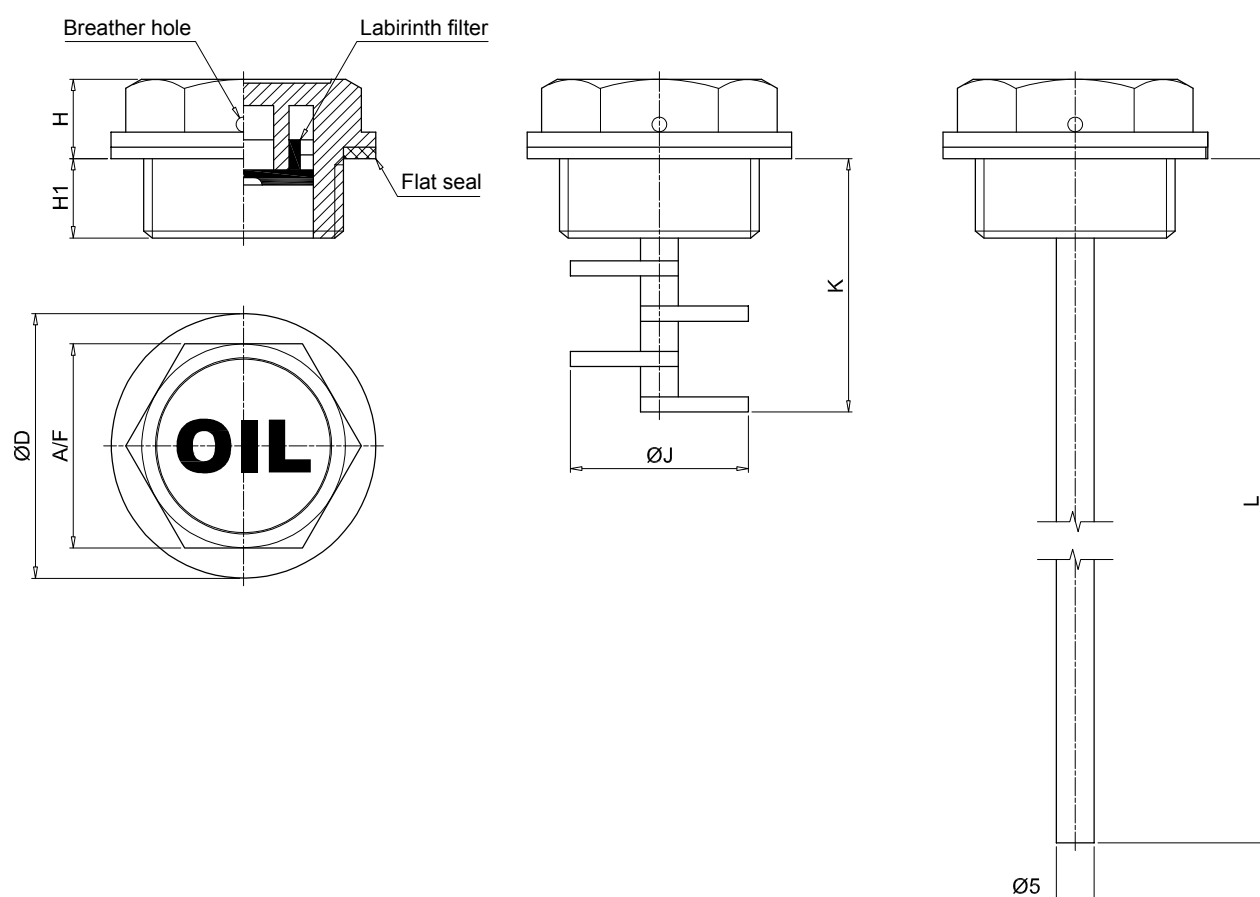
25 pcs/pack



## Designation & Ordering code

### COMPLETE FILLER PLUG

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



| Connections | ØD<br>[mm] | A/F<br>[mm] | H<br>[mm] | H1<br>[mm] | ØJ<br>[mm] | K<br>[mm] | L<br>[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 / draining plugs

#### Polyamide filler plug

TSD is a range of polyamide 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 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: Polyamide
- Cover: Polyamide
- Seal: NBR
- Filter: Galvanized steel
- Anti-splash feature: Polyamide
- 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

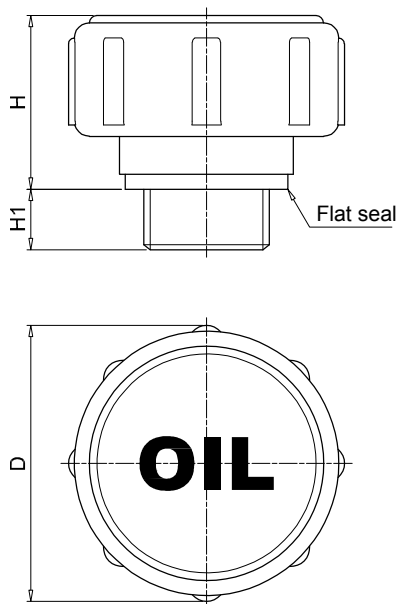


## Designation & Ordering code

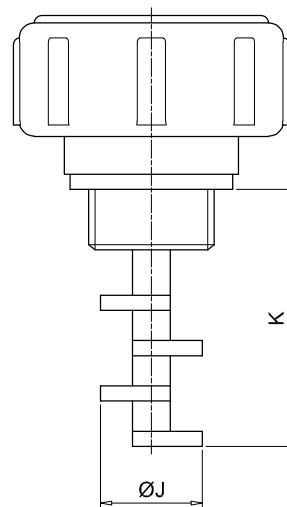
### COMPLETE FILLER PLUG

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

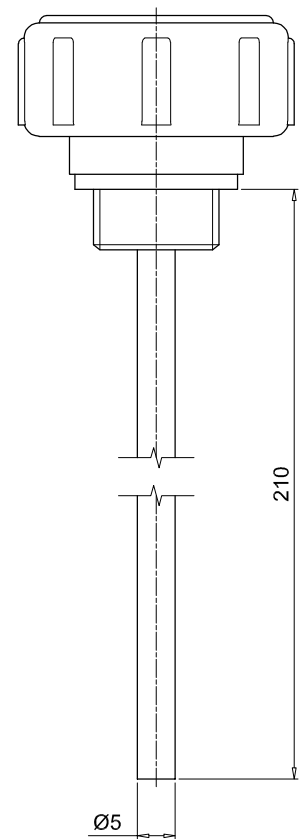
Version S



Version F



Version A



| Connections | ØD<br>[mm] | H<br>[mm] | H1<br>[mm] | ØJ<br>[mm] | K<br>[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

### Filler / draining plugs

#### Aluminium 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 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 avec insert magnétique
- 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

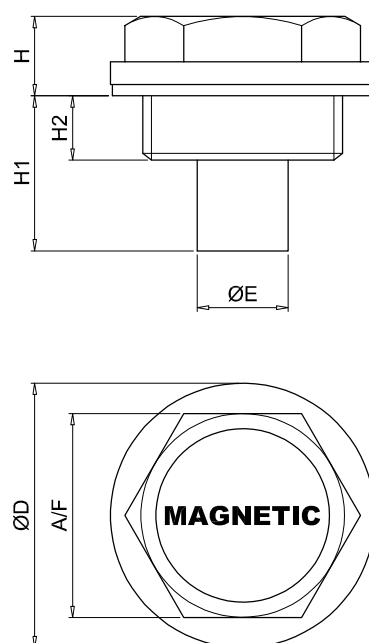
25 pcs/pack



## Designation & Ordering code

### COMPLETE DRAIN PLUG

| Series                        | Configuration example : |     |   |     |
|-------------------------------|-------------------------|-----|---|-----|
| <b>TKM</b>                    | TKM                     | G20 | B | P01 |
| Connections                   |                         |     |   |     |
| <b>G13</b> G 1/4"             |                         |     |   |     |
| <b>G16</b> G 3/8"             |                         |     |   |     |
| <b>G20</b> G 1/2"             |                         |     |   |     |
| <b>G26</b> G 3/4"             |                         |     |   |     |
| <b>G33</b> G 1"               |                         |     |   |     |
| Seals                         |                         |     |   |     |
| <b>B</b> Inorganic fiber      |                         |     |   |     |
| Execution                     |                         |     |   |     |
| <b>P01</b> MP Filtri standard |                         |     |   |     |
| <b>Pxx</b> Customized         |                         |     |   |     |



| Connections | $\varnothing D$<br>[mm] | A/F<br>[mm] | $\varnothing E$<br>[mm] | H<br>[mm] | H1<br>[mm] | H2<br>[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  
LVA - LVU

page 89  
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# LCP - LCC series

Visual oil level indicator - round shape



# LCP GENERAL INFORMATION

## Technical data

### Visual Oil Level Indicators

#### Visual oil level indicator - round shape

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"
- Contrast baffle, to allow an easy monitoring of the level
- Special fixing 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 baffle : Polyamide
- Seals: NBR

### M Series

#### Weight

|        |      |
|--------|------|
| LCPG20 | 6 g  |
| LCPG26 | 9 g  |
| LCPG33 | 13 g |

#### Materials

- Body: Aluminium
- Lens: Thermoplastic
- Contrast baffle : Polyamide
- 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: Polyamide
- Lens: Thermoplastic
- Contrast baffle : Polyamide
- Seals: Inorganic fibre, NBR
- Special fixing kit: Brass, NBR

#### Temperature

From -20 °C to + 80 °C

#### Quantity

25 pcs/pack

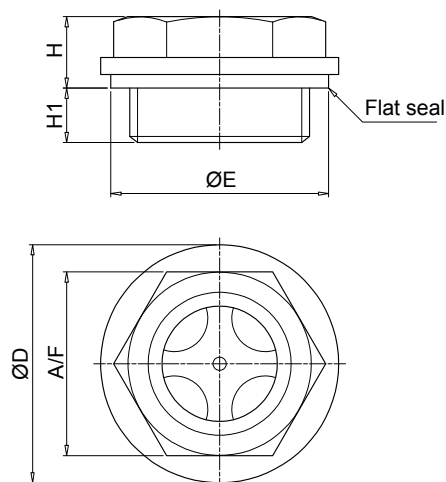


## Designation & Ordering code

### COMPLETE VISUAL OIL LEVEL INDICATOR

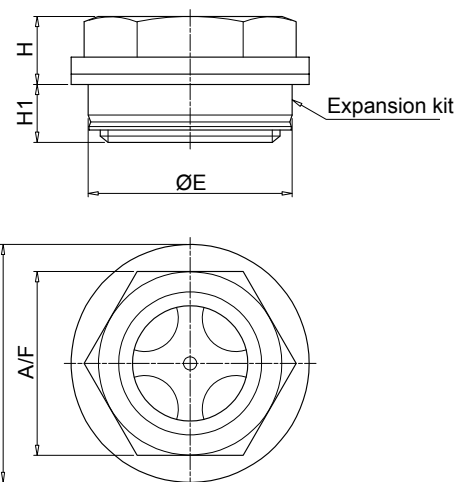
| Series             |  |                            |     |     | Configuration example 1 : |     |     |     |                           |     |     |     |     |     | N                     | S   | B | S | P01 |     |     |   |   |  |           |  |  |  |  |
|--------------------|--|----------------------------|-----|-----|---------------------------|-----|-----|-----|---------------------------|-----|-----|-----|-----|-----|-----------------------|-----|---|---|-----|-----|-----|---|---|--|-----------|--|--|--|--|
| LCP                |  |                            |     |     | Configuration example 2 : |     |     |     |                           |     |     |     |     |     | LCP                   | G42 | T | S | A   |     | P01 |   |   |  |           |  |  |  |  |
| Connections        |  |                            |     |     | Material:                 | N   | T   | M   | Configuration example 3 : |     |     |     |     |     |                       |     |   |   | LCP | G20 | M   | C | A |  | P01       |  |  |  |  |
| G13                |  | G 1/4"                     |     |     |                           | •   | •   |     |                           |     |     |     |     |     |                       |     |   |   |     |     |     |   |   |  |           |  |  |  |  |
| G16                |  | G 3/8"                     |     |     |                           | •   | •   |     |                           |     |     |     |     |     |                       |     |   |   |     |     |     |   |   |  |           |  |  |  |  |
| G20                |  | G 1/2"                     |     |     |                           | •   | •   | •   |                           |     |     |     |     |     |                       |     |   |   |     |     |     |   |   |  |           |  |  |  |  |
| G26                |  | G 3/4"                     |     |     |                           | •   | •   | •   |                           |     |     |     |     |     |                       |     |   |   |     |     |     |   |   |  |           |  |  |  |  |
| G33                |  | G 1"                       |     |     |                           | •   | •   | •   |                           |     |     |     |     |     |                       |     |   |   |     |     |     |   |   |  |           |  |  |  |  |
| G42                |  | G 1 1/4"                   |     |     |                           | •   | •   |     |                           |     |     |     |     |     |                       |     |   |   |     |     |     |   |   |  |           |  |  |  |  |
| G48                |  | G 1 1/2"                   |     |     |                           | •   |     |     |                           |     |     |     |     |     |                       |     |   |   |     |     |     |   |   |  |           |  |  |  |  |
| G60                |  | G 2"                       |     |     |                           | •   |     |     |                           |     |     |     |     |     |                       |     |   |   |     |     |     |   |   |  |           |  |  |  |  |
| Material           |  |                            |     |     |                           |     |     |     |                           |     |     |     |     |     |                       |     |   |   |     |     |     |   |   |  |           |  |  |  |  |
| N                  |  |                            |     |     | Black Polyamide           |     |     |     |                           | T   |     |     |     |     | Transparent polyamide |     |   |   |     | M   |     |   |   |  | Aluminium |  |  |  |  |
|                    |  | Material:                  | N   |     |                           |     |     |     |                           |     |     |     | T   |     |                       |     |   |   |     |     |     |   | M |  |           |  |  |  |  |
| Contrast baffle    |  | Connection:                | G13 | G16 | G20                       | G26 | G33 | G42 | G48                       | G60 | G13 | G16 | G20 | G26 | G33                   | G42 |   |   |     |     |     |   |   |  |           |  |  |  |  |
| S                  |  | Without contrast baffle    | •   | •   | •                         | •   | •   | •   | •                         | •   | •   | •   | •   | •   | •                     | •   | • |   |     |     |     |   |   |  |           |  |  |  |  |
| C                  |  | With contrast baffle       |     | •   | •                         | •   | •   | •   | •                         | •   |     |     |     | •   | •                     | •   | • |   |     |     |     |   |   |  |           |  |  |  |  |
|                    |  | Material:                  | N   |     |                           |     |     |     |                           |     |     |     | T   |     |                       |     |   |   |     |     |     |   | M |  |           |  |  |  |  |
| Seals              |  | Expansion kit:             |     |     |                           | S   | K   |     |                           |     |     |     |     |     |                       |     |   |   |     |     |     |   |   |  |           |  |  |  |  |
| A                  |  | NBR                        |     |     |                           |     | •   |     |                           |     |     |     |     | •   |                       |     |   | • |     |     |     |   |   |  |           |  |  |  |  |
| B                  |  | Inorganic fiber            |     |     |                           | •   |     |     |                           |     |     |     |     |     |                       |     |   |   |     |     |     |   |   |  |           |  |  |  |  |
|                    |  | Material:                  | N   |     |                           |     |     |     |                           |     |     |     | T   |     |                       |     |   |   |     |     |     |   | M |  |           |  |  |  |  |
| Special fixing kit |  | Connection:                | G13 | G16 | G20                       | G26 | G33 | G42 | G48                       | G60 |     |     |     |     |                       |     |   |   |     |     |     |   |   |  |           |  |  |  |  |
| S                  |  | Without special fixing kit | •   | •   | •                         | •   | •   | •   | •                         | •   |     |     |     |     |                       |     |   |   |     |     |     |   |   |  |           |  |  |  |  |
| K                  |  | With special fixing kit    |     |     | •                         | •   | •   | •   | •                         | •   |     |     |     |     |                       |     |   |   |     |     |     |   |   |  |           |  |  |  |  |
| Execution          |  |                            |     |     |                           |     |     |     |                           |     |     |     |     |     |                       |     |   |   |     |     |     |   |   |  |           |  |  |  |  |
| P01                |  | MP Filtri standard         |     |     |                           |     |     |     |                           |     |     |     |     |     |                       |     |   |   |     |     |     |   |   |  |           |  |  |  |  |
| Pxx                |  | Customized                 |     |     |                           |     |     |     |                           |     |     |     |     |     |                       |     |   |   |     |     |     |   |   |  |           |  |  |  |  |

## LCP - N



## without expansion kit

| Connections | 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      |

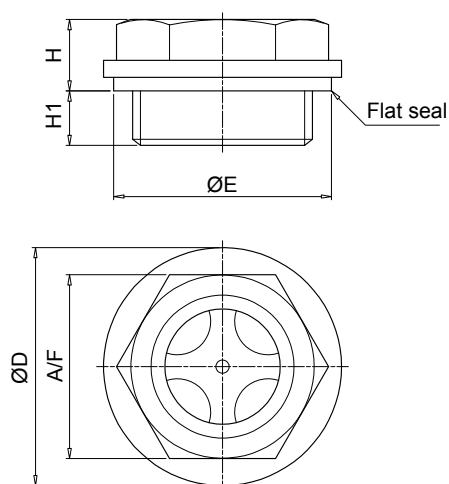


## with expansion kit

| Connections | 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    |

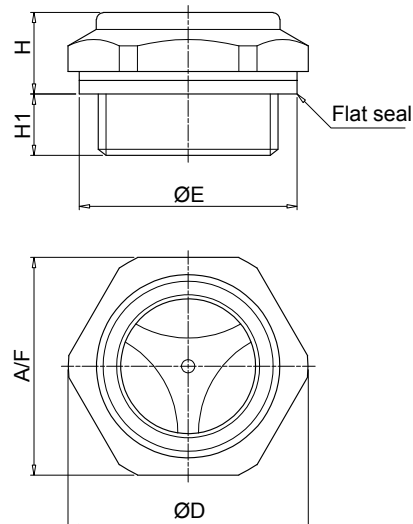
**Note:** for installation onto OB Cleaning covers see page 147

## LCP - T



| Connections | 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      |

## LCP - M



| Connections | 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

#### Visual oil level indicator - round shape

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: Polyamide
- Lens: Polyamide
- Contrast screen: Polyamide
- 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



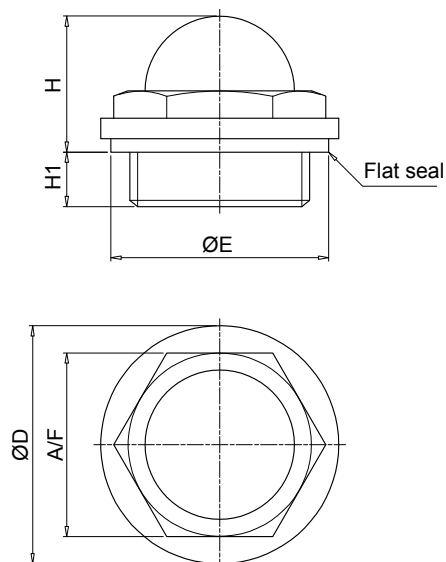
## Designation & Ordering code

### COMPLETE VISUAL OIL LEVEL INDICATORS

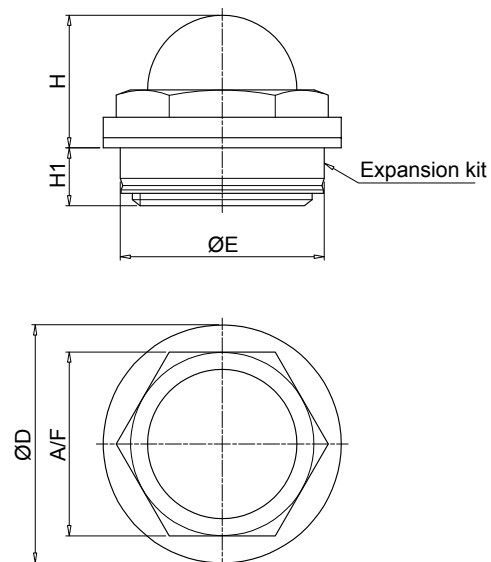
| Series                                      |                       |           |           |                       |     |     |     |     |     |
|---|-----------------------|-----------|-----------|-----------------------|-----|-----|-----|-----|-----|
| <b>LCC</b>                                  |                       |           |           |                       |     |     |     |     |     |
| Configuration example 1 : LCC G20 N A K P01 |                       |           |           |                       |     |     |     |     |     |
| Configuration example 2 : LCC G33 T A P01   |                       |           |           |                       |     |     |     |     |     |
| Connections                                 |                       |           | Material: |                       | N   | T   |     |     |     |
| <b>G13</b>                                  | G 1/4"                |           |           |                       |     |     |     |     |     |
| <b>G16</b>                                  | G 3/8"                |           |           |                       |     | •   |     |     |     |
| <b>G20</b>                                  | G 1/2"                |           |           |                       | •   | •   |     |     |     |
| <b>G26</b>                                  | G 3/4"                |           |           |                       | •   | •   |     |     |     |
| <b>G33</b>                                  | G 1"                  |           |           |                       | •   | •   |     |     |     |
| <b>G42</b>                                  | G 1 1/4"              |           |           |                       | •   |     |     |     |     |
| <b>G48</b>                                  | G 1 1/2"              |           |           |                       | •   |     |     |     |     |
| <b>G60</b>                                  | G 2"                  |           |           |                       | •   |     |     |     |     |
| Material                                    |                       |           |           |                       |     |     |     |     |     |
| <b>N</b>                                    | Black polyamide       |           | <b>T</b>  | Transparent polyamide |     |     |     |     |     |
| Seals                                       |                       | Material: |           | Expansion kit:        |     | N   | T   |     |     |
| <b>A</b>                                    | NBR                   |           |           |                       |     | •   | •   |     |     |
| <b>B</b>                                    | Inorganic fiber       |           |           |                       |     | •   |     |     |     |
| Expansion kit                               |                       |           |           |                       |     |     |     |     |     |
|   |                       | Material: |           | Connection:           |     |     |     |     |     |
| <b>S</b>                                    | Without expansion kit |           |           | G20                   | G26 | G33 | G42 | G48 | G60 |
| <b>K</b>                                    | With expansion kit    |           |           | •                     | •   | •   | •   | •   | •   |
| Execution                                   |                       |           |           |                       |     |     |     |     |     |
| <b>P01</b>                                  | MP Filtri standard    |           |           |                       |     |     |     |     |     |
| <b>Pxx</b>                                  | Customized            |           |           |                       |     |     |     |     |     |

## LCC - N

without expansion kit



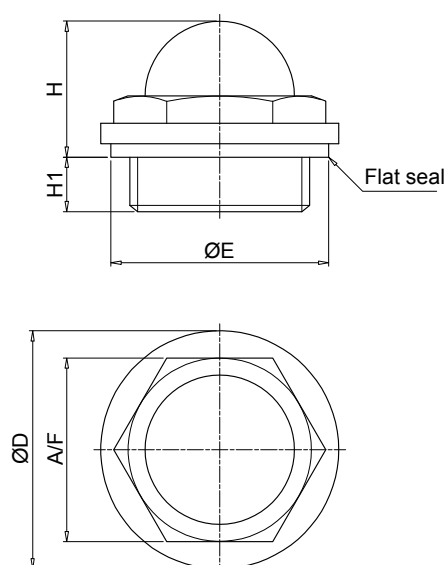
with expansion kit



| Connections | ØD<br>[mm] | ØE<br>[mm] | A/F<br>[mm] | H<br>[mm] | H1<br>[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         |

| Connections | ØD<br>[mm] | ØE<br>[mm] | A/F<br>[mm] | H<br>[mm] | H1<br>[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



| Connections | ØD<br>[mm] | ØE<br>[mm] | A/F<br>[mm] | H<br>[mm] | H1<br>[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 indicator - vertical shape





## Technical data

### Visual Oil Level Indicators

#### Oil level indicator - vertical shape

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
- Polyamide guard
- Seal: NBR / FPM

### Operating pressure

Max 1 bar at +80°C

### 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



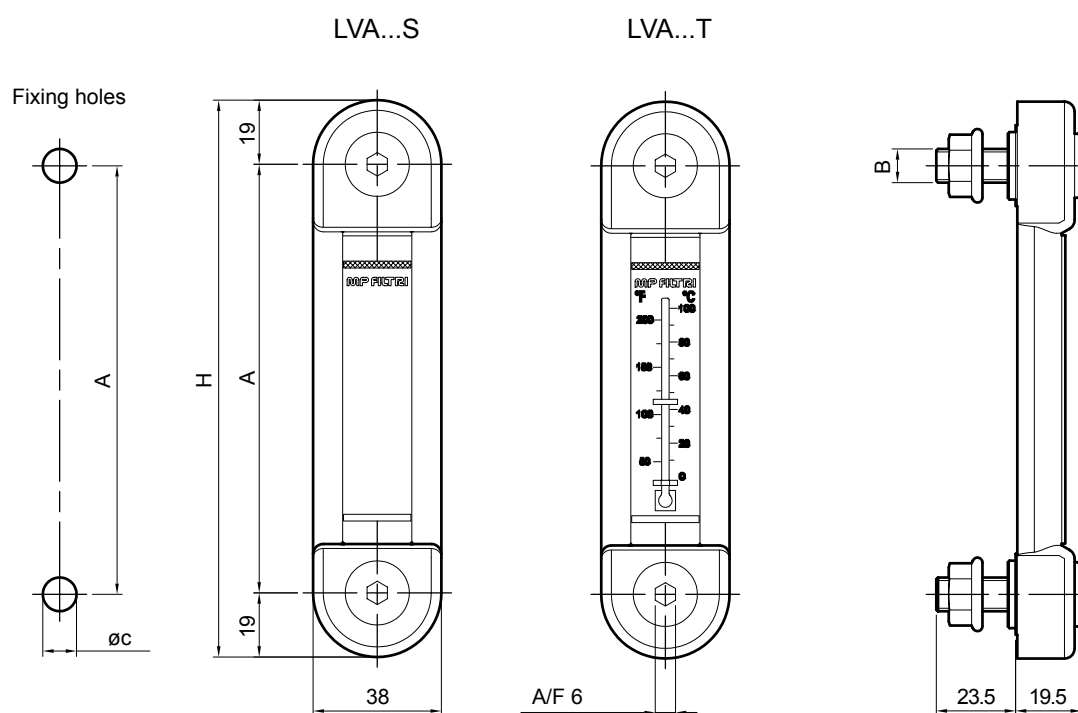
## Designation & Ordering code

### COMPLETE VISUAL OIL LEVEL INDICATORS

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



## Technical data

### Visual Oil Level Indicators

#### Oil level indicator - vertical shape

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: Polyamide
- Connection G 3/8": Nickel plated brass
- G 3/8" valve: Steel
- Seal: NBR
- Pipe: Borosilicate glass, Acrylic
- Float: Polyamide
- Protection: Aluminium
- Clamps min-max: Polyamide

### Temperature

From -25 °C to +70 °C

### Weight

| Series   | 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  |

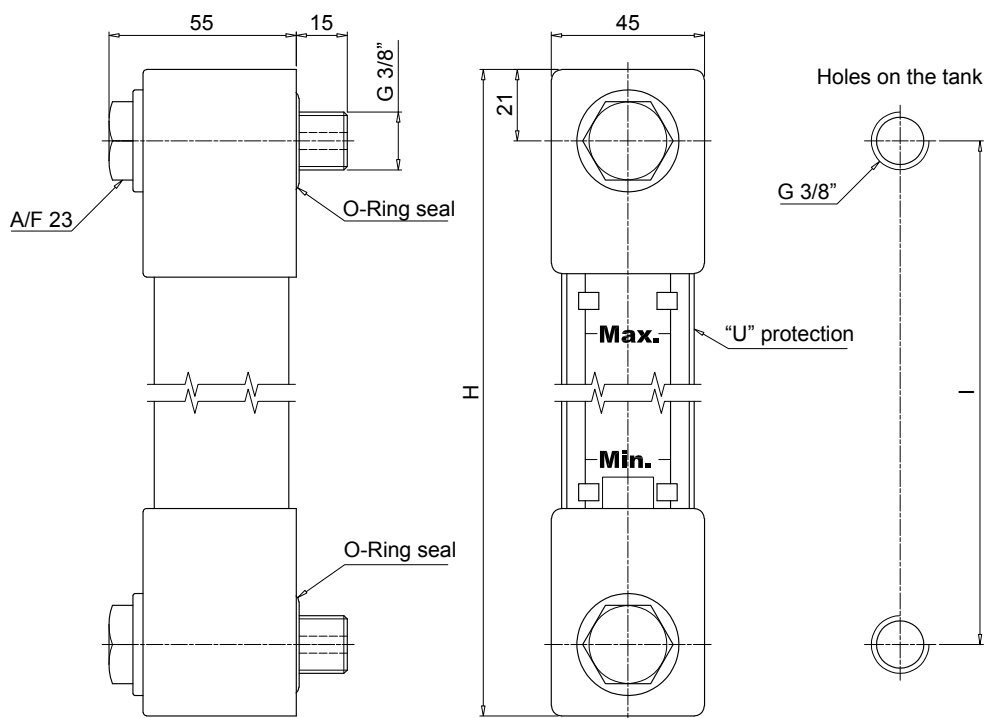


## Designation & Ordering code

### COMPLETE VISUAL OIL LEVEL INDICATORS

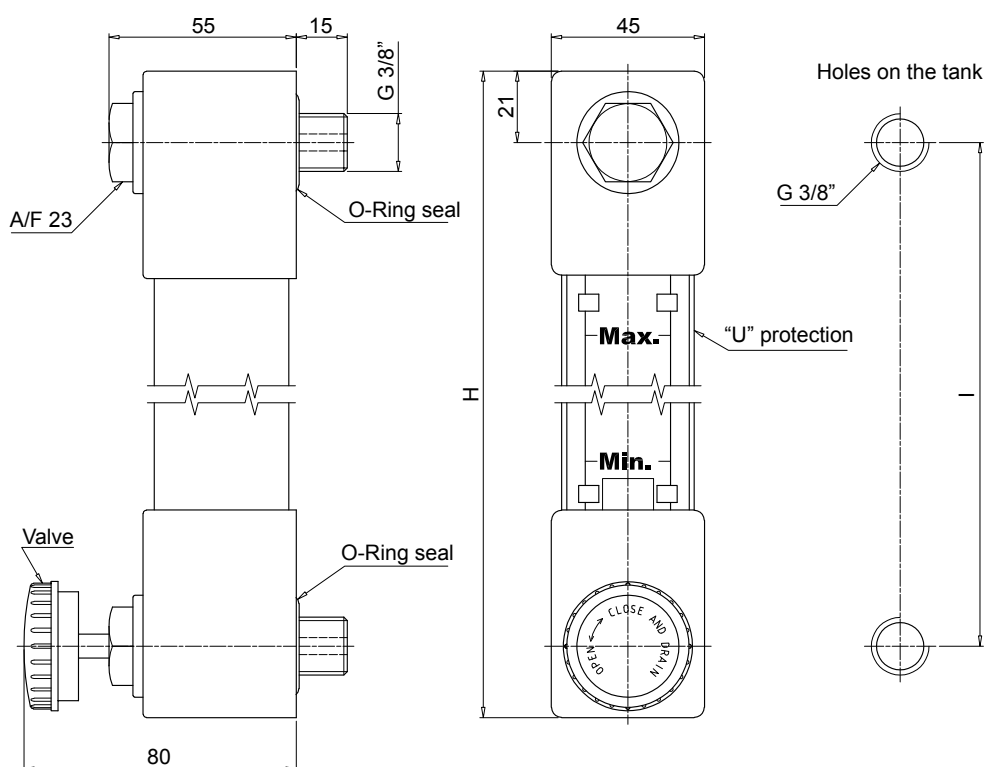
| Series                                 |   |      |      |      | Configuration example : |      |   |   |    |     |
|--|---|------|------|------|-------------------------|------|---|---|----|-----|
| LVU                                    |   |      |      |      | LVU                     | 0500 | U | A | 10 | P01 |
| Size                                   |   |      |      |      |                         |      |   |   |    |     |
| 0500 Distance between center = 500 mm  |   |      |      |      |                         |      |   |   |    |     |
| 1000 Distance between center = 1000 mm |   |      |      |      |                         |      |   |   |    |     |
| 1500 Distance between center = 1500 mm |   |      |      |      |                         |      |   |   |    |     |
| 2000 Distance between center = 2000 mm |   |      |      |      |                         |      |   |   |    |     |
| Different sizes on request             |   |      |      |      |                         |      |   |   |    |     |
|  |   | Size |      |      |                         |      |   |   |    |     |
| Body                                   |   | 500  | 1000 | 1500 | 2000                    |      |   |   |    |     |
| S                                      | Standard plexiglass                     | •    | •    | •    | •                       |      |   |   |    |     |
| U                                      | Plexiglass, with “U” protection         | •    | •    | •    | •                       |      |   |   |    |     |
| P                                      | Borosilicate glass, with “U” protection | •    | •    | •    |                         |      |   |   |    |     |
| Seals                                  |   |      |      |      |                         |      |   |   |    |     |
| A                                      | NBR                                     |      |      |      |                         |      |   |   |    |     |
| V                                      | FPM                                     |      |      |      |                         |      |   |   |    |     |
| Connections                            |   |      |      |      |                         |      |   |   |    |     |
| 10                                     | G 3/8”                                  |      |      |      |                         |      |   |   |    |     |
| 20                                     | G 3/8”, with drain valve                |      |      |      |                         |      |   |   |    |     |
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|  |   |      |      |      |                         |      |   |   |    |     |
|  |   |      |      |      |                         |      |   |   |    |     |

Without drain valve connection  
Port Size 10



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

With drain valve connection  
Port Size 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 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:

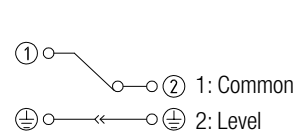
- G 1" male threaded or flanged connections
- Adjustable size on request, to meet every size of tank
- 1 or 2 floats, to monitor the minimum level, the maximum level or both of them

#### Common applications:

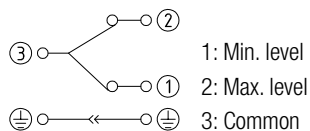
- Hydraulic systems
- Mobile machines
- Industrial equipment

#### 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
- Float: Polyamide foam
- O-Ring: NBR
- Circlip: Phosphor bronze
- Contact: N.C. (Normally Closed)

### 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

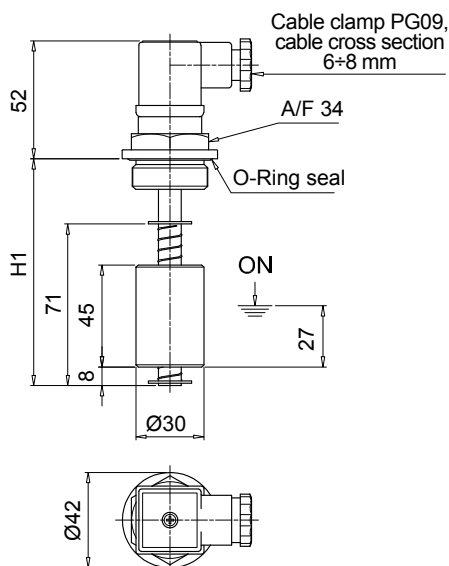


## Designation & Ordering code

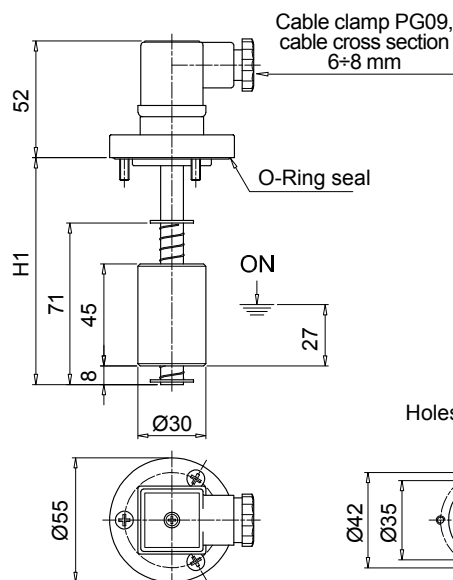
### COMPLETE ELECTRICAL OIL LEVEL INDICATORS

| Series                                   | Configuration example : | LEN | A | 350 | 2 | A | 1 | A | G | S | P01 |
|--|-------------------------|-----|---|-----|---|---|---|---|---|---|-----|
| <b>LEN</b>                               |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Tube material</b>                     |                         |     |   |     |   |   |   |   |   |   |     |
| <b>A</b> Brass                           |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Length</b>                            |                         |     |   |     |   |   |   |   |   |   |     |
| <b>150   200   250   350   400   500</b> |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Number of floats</b>                  |                         |     |   |     |   |   |   |   |   |   |     |
| <b>1</b> Nr. 1 float                     |                         |     |   |     |   |   |   |   |   |   |     |
| <b>2</b> Nr. 2 floats                    |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Float material</b>                    |                         |     |   |     |   |   |   |   |   |   |     |
| <b>A</b> Polyamide foam                  |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Electrical switch</b>                 |                         |     |   |     |   |   |   |   |   |   |     |
| <b>1</b> N.C. (Normally Closed)          |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Seals</b>                             |                         |     |   |     |   |   |   |   |   |   |     |
| <b>A</b> NBR                             |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Connections</b>                       |                         |     |   |     |   |   |   |   |   |   |     |
| <b>G</b> G 1"                            |                         |     |   |     |   |   |   |   |   |   |     |
| <b>F</b> Nr. 3 holes flange              |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Electrical connection</b>             |                         |     |   |     |   |   |   |   |   |   |     |
| <b>S</b> EN 175301-803 connector         |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Execution</b>                         |                         |     |   |     |   |   |   |   |   |   |     |
| <b>P01</b> MP Filtri standard            |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Pxx</b> Customized                    |                         |     |   |     |   |   |   |   |   |   |     |

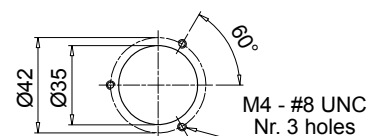
Connection "G"



Connection "F"



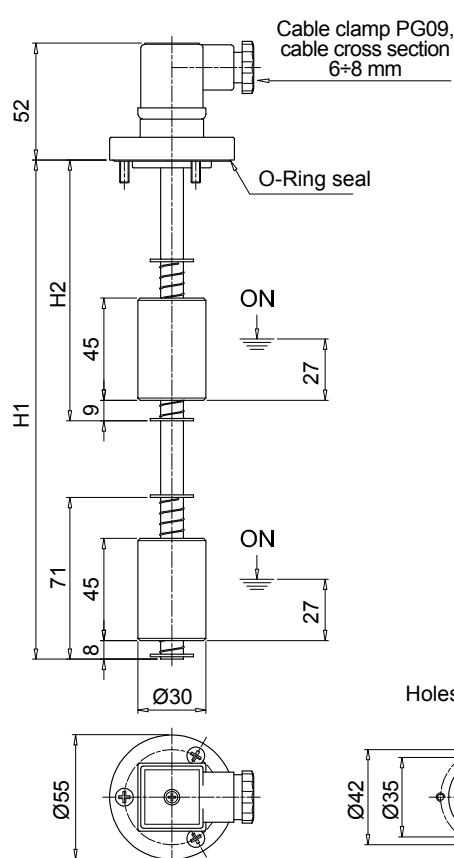
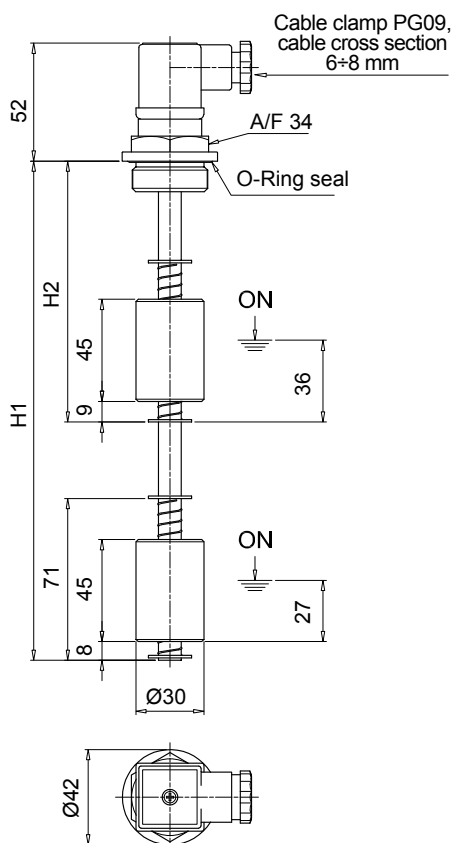
Holes on the tank



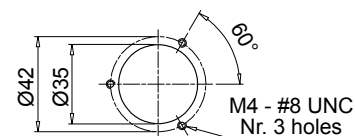
LEN

Nr. 1 float

| Length | H1<br>[mm] |
|--------|------------|
| 150    | 150        |
| 200    | 200        |
| 250    | 250        |
| 350    | 350        |
| 400    | 400        |
| 500    | 500        |



Holes on the tank



LEN

Nr. 2 floats

| Length | H1<br>[mm] | H2<br>[mm] |
|--------|------------|------------|
| 200    | 200        | 95         |
| 250    | 250        | 105        |
| 350    | 350        | 115        |
| 400    | 400        | 115        |
| 500    | 500        | 125        |

# LEG GENERAL INFORMATION

## 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.

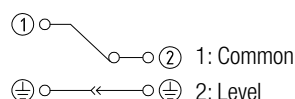
#### Available features:

- Flanged connections
- Adjustable size on request, to meet every size of tank
- Floating monitor for oil level check

#### Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

#### Electrical symbol:



**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: Polyamide foam
- O-Ring: NBR
- Circlip: Phosphor bronze
- Contact: N.C. (Normally Closed)

### 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

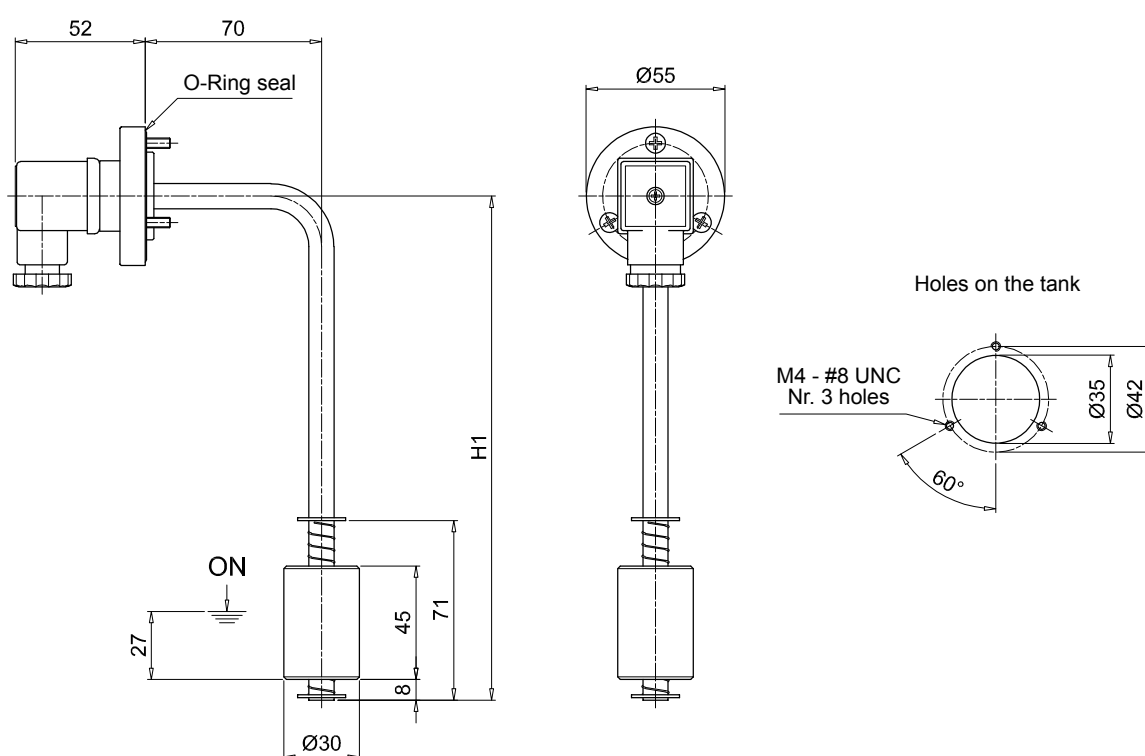


## Designation & Ordering code

### COMPLETE ELECTRICAL OIL LEVEL INDICATOR

| Series                           | Configuration example : | LEG | A | 200 | 1 | A | 1 | A | F | S | P01 |
|----------------------------------|-------------------------|-----|---|-----|---|---|---|---|---|---|-----|
| <b>LEG</b>                       |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Tube material</b>             |                         |     |   |     |   |   |   |   |   |   |     |
| <b>A</b> Brass                   |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Length</b>                    |                         |     |   |     |   |   |   |   |   |   |     |
| <b>102   200  </b>               |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Number of floats</b>          |                         |     |   |     |   |   |   |   |   |   |     |
| <b>1</b> Nr. 1 float             |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Float material</b>            |                         |     |   |     |   |   |   |   |   |   |     |
| <b>A</b> Polyamide foam          |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Electrical switch</b>         |                         |     |   |     |   |   |   |   |   |   |     |
| <b>1</b> N.C. (Normally Closed)  |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Seals</b>                     |                         |     |   |     |   |   |   |   |   |   |     |
| <b>A</b> NBR                     |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Connections</b>               |                         |     |   |     |   |   |   |   |   |   |     |
| <b>F</b> Nr. 3 holes flange      |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Electrical connection</b>     |                         |     |   |     |   |   |   |   |   |   |     |
| <b>S</b> EN 175301-803 connector |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Execution</b>                 |                         |     |   |     |   |   |   |   |   |   |     |
| <b>P01</b> MP Filtri standard    |                         |     |   |     |   |   |   |   |   |   |     |
| <b>Pxx</b> Customized            |                         |     |   |     |   |   |   |   |   |   |     |

| LEG            |            |
|----------------|------------|
| Size           | H1<br>[mm] |
| <b>LEG 102</b> | 103        |
| <b>LEG 200</b> | 200        |



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

## Technical data

### Electrical Oil Level Indicators

LET 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 integrated thermostat allows to get a remote monitoring of the temperature.

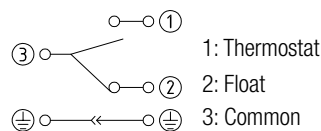
#### Available features:

- G 1" male threaded or flanged connections
- Adjustable size on request, to meet every size of tank
- Floating monitor for oil level check

#### Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

#### Electrical symbol:



**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: Polyamide foam
- O-Ring: NBR
- Circlip: Phosphor bronze
- Contact: N.C. (Normally Closed)

### 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

|           |         |
|-----------|---------|
| LET A 200 | 0.20 kg |
| LET A 300 | 0.23 kg |
| LET A 400 | 0.28 kg |



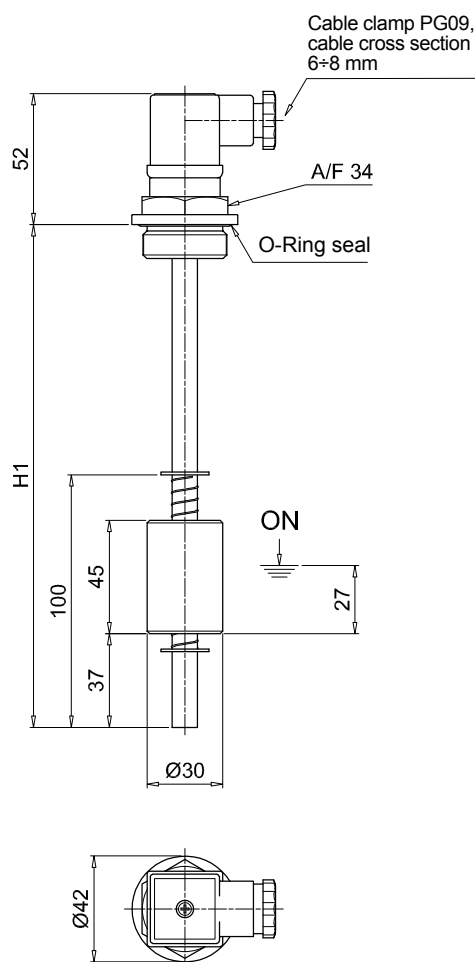
## Designation & Ordering code

### COMPLETE ELECTRICAL OIL LEVEL INDICATOR

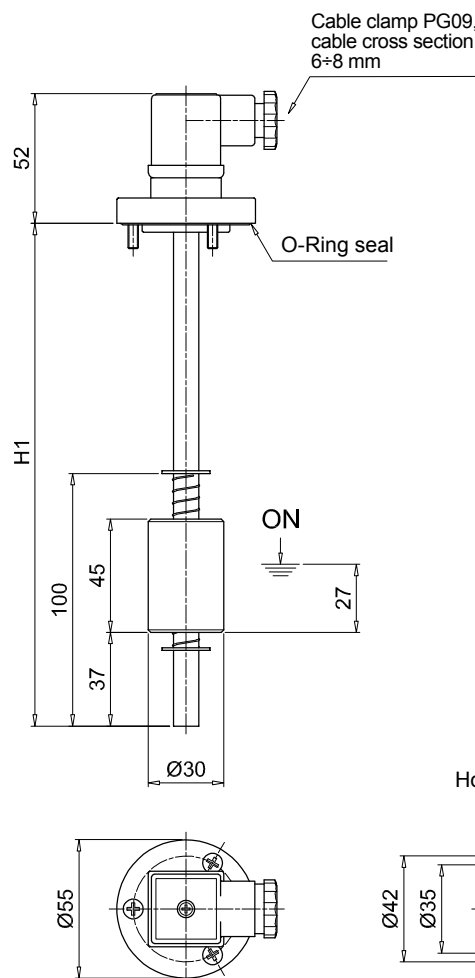
| Series                              | Configuration example : | LET | A | 300 | 1 | A | 1 | A | F | S | 50 | P01 |
|-------------------------------------|-------------------------|-----|---|-----|---|---|---|---|---|---|----|-----|
| <b>LET</b>                          |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>Tube material</b>                |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>A</b> Brass                      |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>Length</b>                       |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>200   300   400</b>              |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>Number of floats</b>             |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>1</b> Nr. 1 float                |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>Float material</b>               |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>A</b> Polyamide foam             |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>Electrical switch</b>            |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>1</b> N.C. (Normally Closed)     |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>Seals</b>                        |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>A</b> NBR                        |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>Connections</b>                  |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>G</b> G 1"                       |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>F</b> Nr. 3 holes flange         |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>Electrical connection</b>        |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>S</b> EN 175301-803 connector    |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>Thermostat setting</b>           |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>50</b> 50°C N.O. (Normally Open) |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>Execution</b>                    |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>P01</b> MP Filtri standard       |                         |     |   |     |   |   |   |   |   |   |    |     |
| <b>Pxx</b> Customized               |                         |     |   |     |   |   |   |   |   |   |    |     |

| LET        |         |
|------------|---------|
| Length     | H1 [mm] |
| <b>200</b> | 200     |
| <b>300</b> | 300     |
| <b>400</b> | 400     |

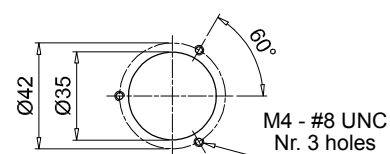
### Connection "G"



### Connection "F"



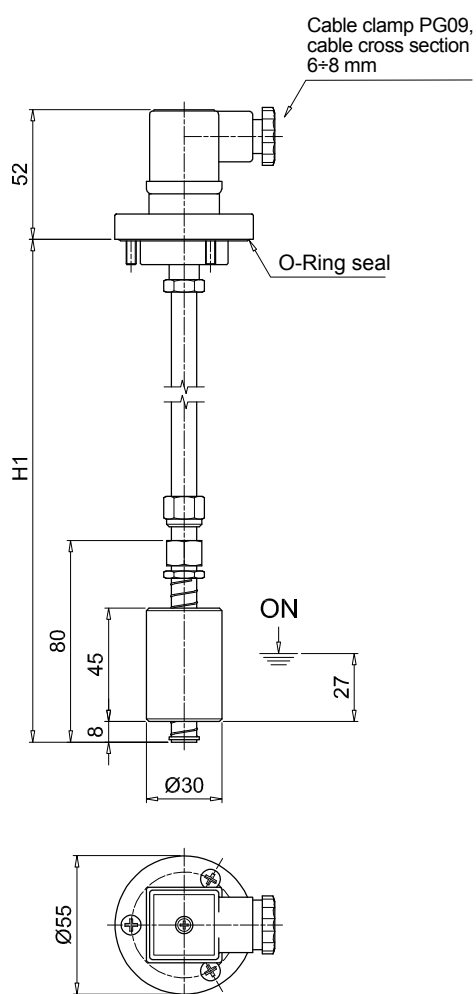
### Holes on the tank



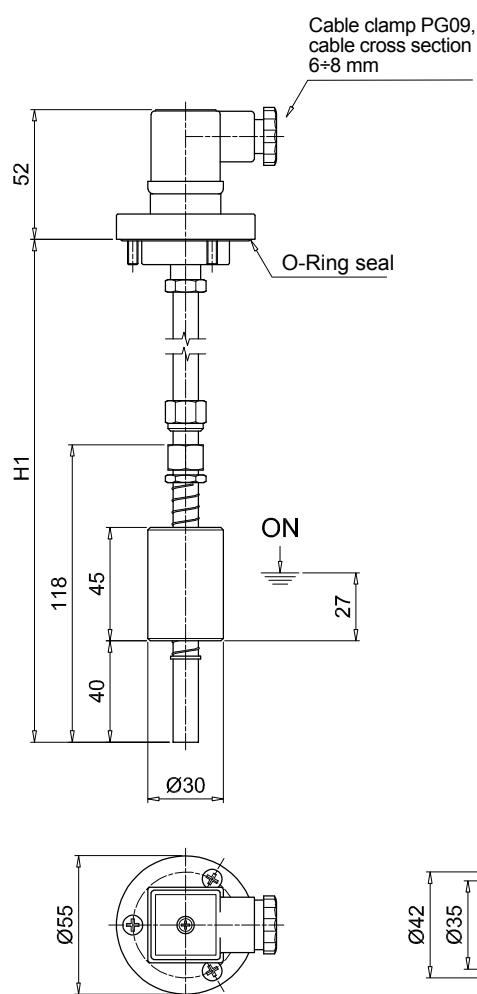
## 110

| LEM         |            |
|-------------|------------|
| Length      | H1<br>[mm] |
| <b>500</b>  | 500        |
| <b>1000</b> | 1000       |

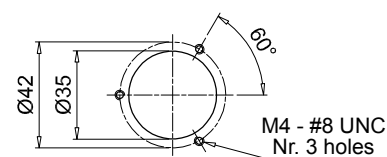
Without thermostat



With thermostat



Holes on the tank





## 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.

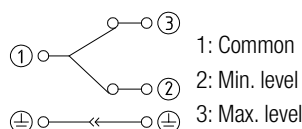
#### Available features:

- Flanged connections
- Setting size for each tank type
- Double Floating monitor for oil level check

#### Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

#### Electrical symbol:



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

### Materials

- Flange / Threaded body: Aluminium
- Tube: AISI 304
- Float: NBR, 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

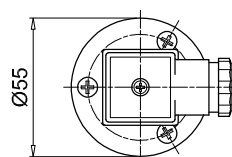
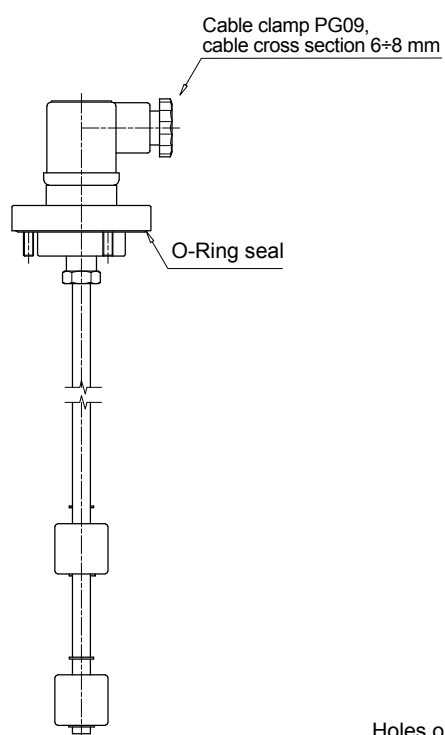
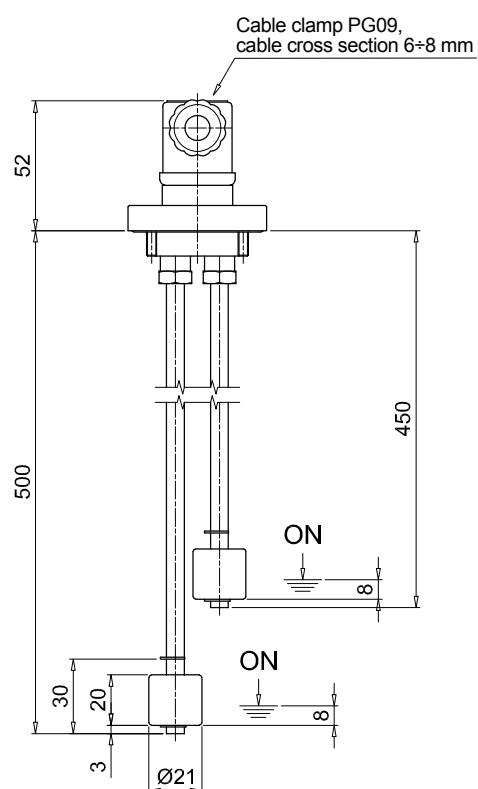
LEU 0.415 kg



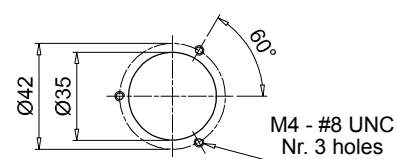
## Designation & Ordering code

### COMPLETE ELECTRICAL OIL LEVEL INDICATOR

| 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</b>               |                         |     |   |   |   |   |   |   |   |     |
| <b>F</b> Nr. 3 holes flange      |                         |     |   |   |   |   |   |   |   |     |
| <b>Electrical connection</b>     |                         |     |   |   |   |   |   |   |   |     |
| <b>S</b> EN 175301-803 connector |                         |     |   |   |   |   |   |   |   |     |
| <b>Execution</b>                 |                         |     |   |   |   |   |   |   |   |     |
| <b>P01</b> MP Filtri standard    |                         |     |   |   |   |   |   |   |   |     |
| <b>Pxx</b> Customized            |                         |     |   |   |   |   |   |   |   |     |



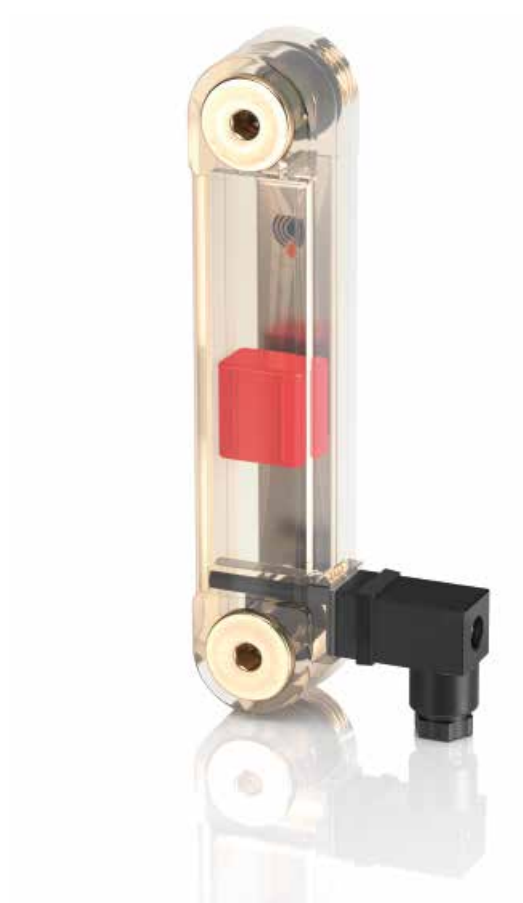
Holes on the tank





# LVK series

Electrical and visual oil level indicator



## Technical data

### Electrical 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.

#### 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 |



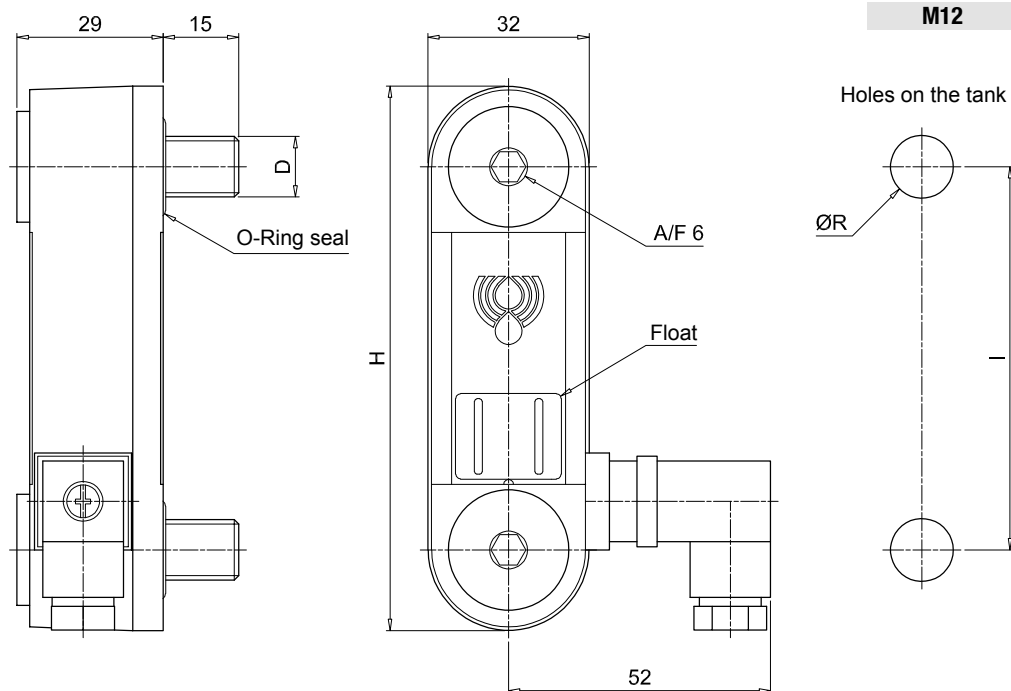
## Designation & Ordering code

### COMPLETE ELECTRICAL AND VISUAL OIL LEVEL INDICATORS

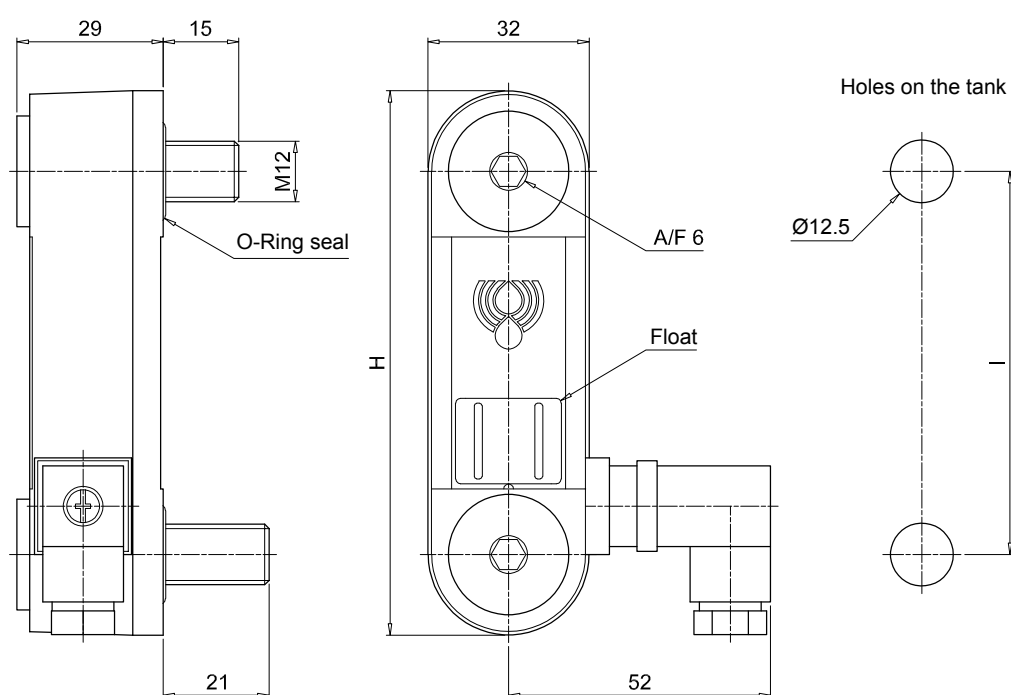
| Series                                |                                  | Configuration example : LVK 20 A M12 1 T 5 P01 |     |   |  |  |  |  |  |  |  |
|---------------------------------------|----------------------------------|--|-----|---|--|--|--|--|--|--|--|
| LVK                                   |                                  |  |     |   |  |  |  |  |  |  |  |
| 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 |   |  |  |  |  |  |  |  |
| S                                     | Standard                         | •  | •   |   |  |  |  |  |  |  |  |
| T                                     | With thermostat                  |  | •   |   |  |  |  |  |  |  |  |
| P                                     | With PT100 sensor                |  | •   |   |  |  |  |  |  |  |  |
| Thermostat setting                    |                                  | Version  |     |   |  |  |  |  |  |  |  |
|                                       |                                  | S  | T   | P |  |  |  |  |  |  |  |
| S                                     | Standard (no setting)            | •  |     | • |  |  |  |  |  |  |  |
| 1                                     | 50°C N.O. (Normally Open)        |  | •   |   |  |  |  |  |  |  |  |
| 2                                     | 60°C N.O. (Normally Open)        |  | •   |   |  |  |  |  |  |  |  |
| 3                                     | 70°C N.O. (Normally Open)        |  | •   |   |  |  |  |  |  |  |  |
| 5                                     | 50°C N.C. (Normally Closed)      |  | •   |   |  |  |  |  |  |  |  |
| 6                                     | 60°C N.C. (Normally Closed)      |  | •   |   |  |  |  |  |  |  |  |
| 7                                     | 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     |
| Connections | D [mm] | ØR [mm] |
| <b>M10</b>  | M10    | 10.5    |
| <b>M12</b>  | M12    | 12.5    |

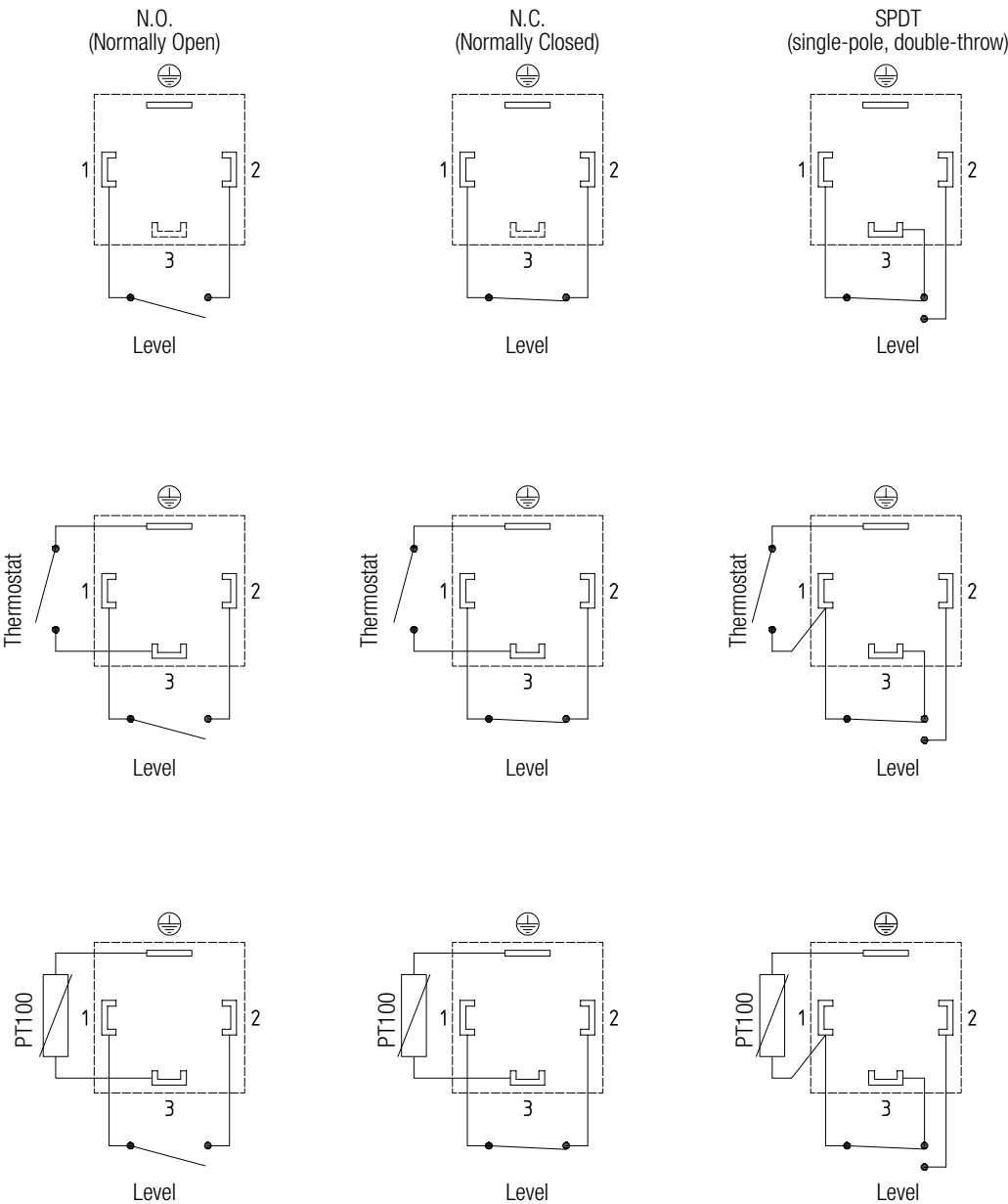
### Without thermostat



### 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.

**MULTIFIX** 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      |
| MULTIFIX SFT | 137      |
| OB           | 143      |
| SE10LT       | 149      |



# EM1 series

Pressure gauge isolator



# EM1 GENERAL INFORMATION

## Technical data

### Accessories

#### Pressure gauge isolator

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.

#### 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: Polyamide
- Stop ring: Steel
- Spring: Steel
- Nameplate: Aluminium
- Nut-screw: Galvanized steel

#### Materials C

- Body: Cast iron
- Pin: Steel
- Seals: NBR, FPM
- Knob/cover: Polyamide
- 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 |



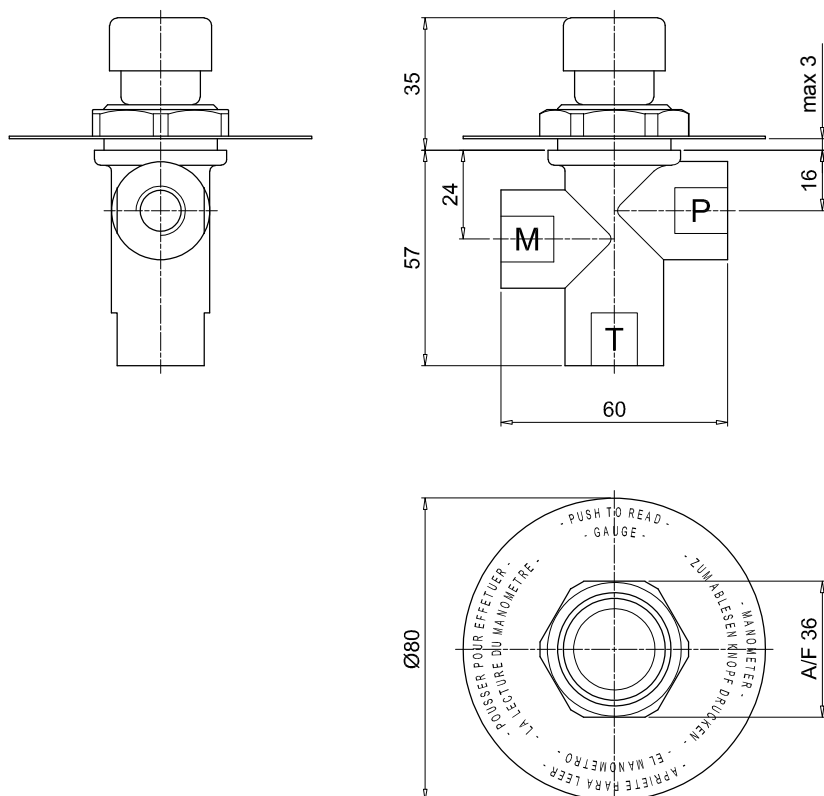
## Designation & Ordering code

### COMPLET PRESSURE-GAUGE ISOLATOR

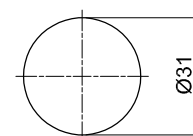
| Series  | Configuration example : |   |    |   |     |
|---|-------------------------|---|----|---|-----|
| <b>EM1</b>  | EM1                     | A | G2 | A | P01 |
| <b>Version</b>  |                         |   |    |   |     |
| <b>A</b> Threaded connections, panel mount with hex nut         |                         |   |    |   |     |
| <b>B</b> Threaded connections, panel mount with screws          |                         |   |    |   |     |
| <b>C</b> Manifold/threaded connections, panel mount with screws |                         |   |    |   |     |
| <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   |                         |   |    |   |     |

EM1

version A

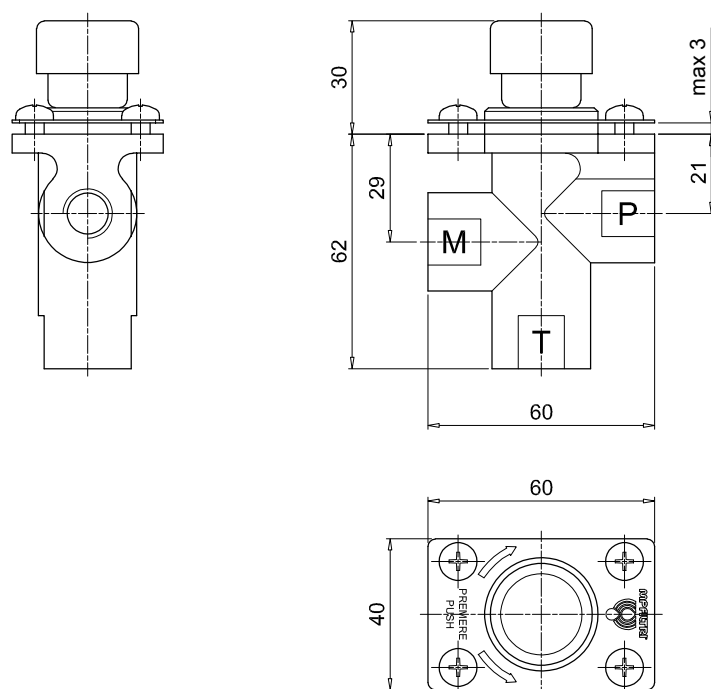


Holes on the panel

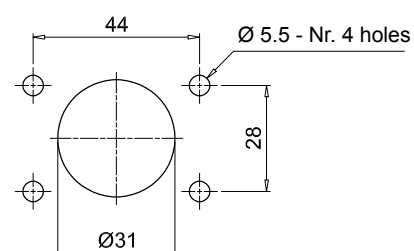


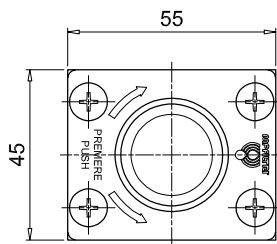
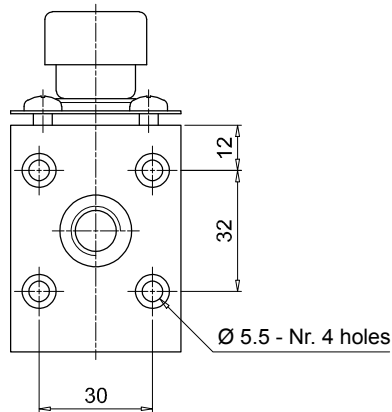
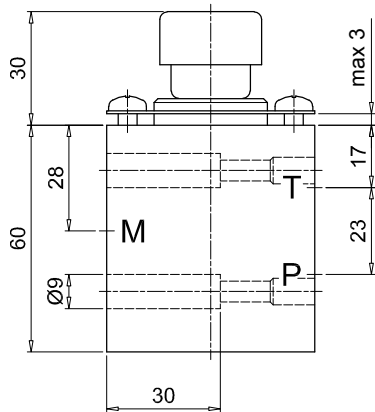
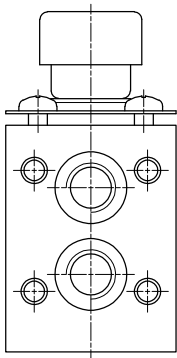
EM1

version B

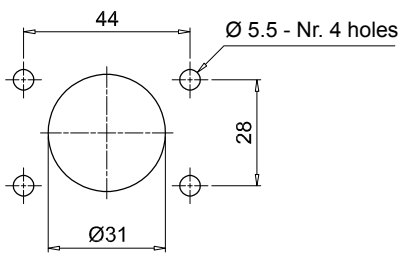


Holes on the panel





Holes on the panel









# SVM series

Gauge selector valve



## Technical data

### Accessories

#### Gauge selector valve

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 depressurize the pressure gauge by means of the T fitting connected to the reservoir.

#### 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: Polyamide
- Ringnut: Polyamide
- Nut-screw: Galvanized steel, Phosphatized steel

### Operating pressure

400 bar

### Operating temperature

From -25 °C to + 100 °C

### Weight

SVM version 3 1.547 kg  
SVM version 6 1.507 kg

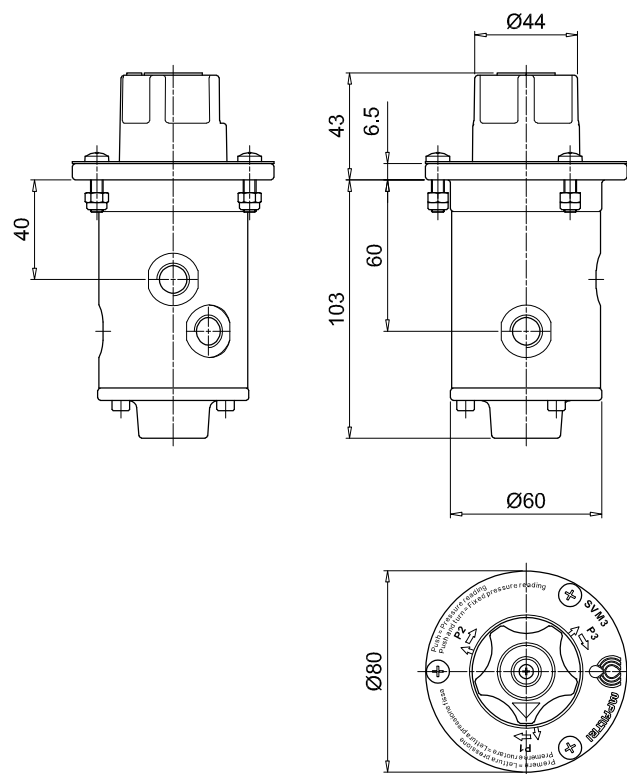


## Designation & Ordering code

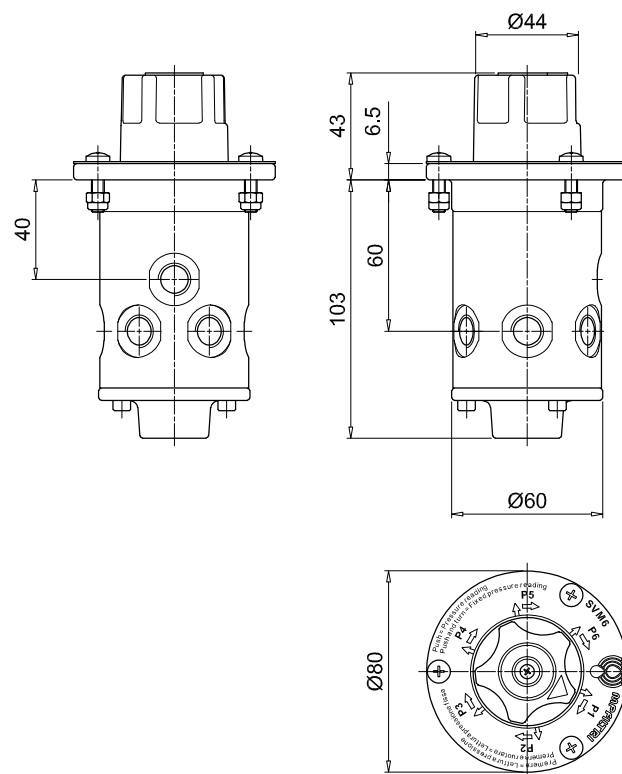
### COMPLETE GAUGE ISOLATOR VALVE

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

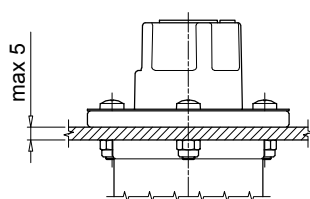
SVM  
version 3



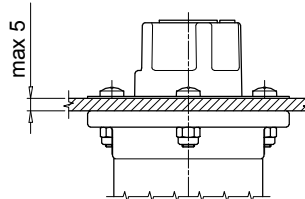
SVM  
version 6



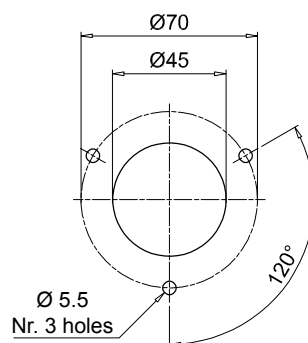
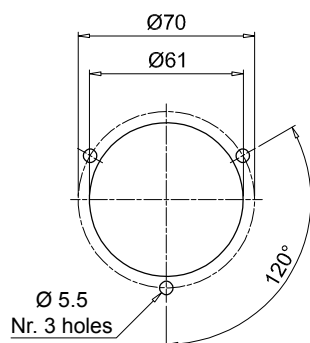
External mount



Internal mount



Holes on the panel





# FTA -FTR series

Oil tank fixing flange



# FTA - FTR GENERAL INFORMATION

## Technical data

### Accessories

#### 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 temperature

From -25 °C to + 100 °C

### Materials

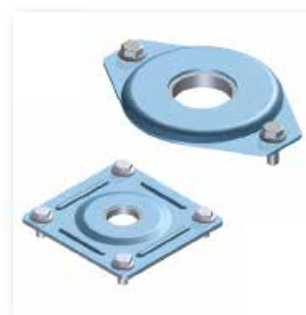
- Flange: Galvanized steel
- Flange seal: Inorganic fibre
- Tube seal: NBR
- Screw: Galvanized steel

#### 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 |

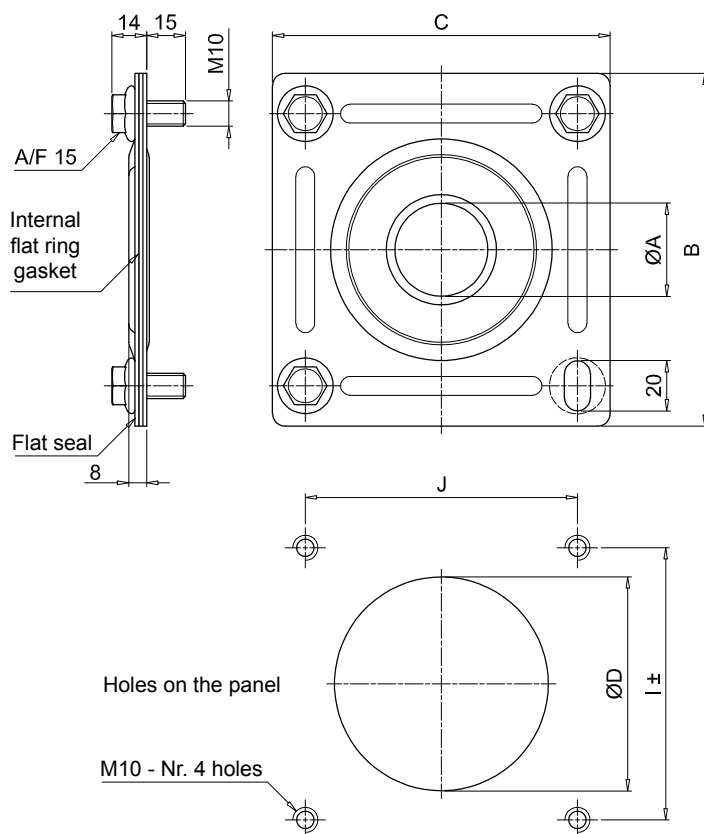


## Designation & Ordering code

### COMPLETE OIL TANK FIXING FLANGE

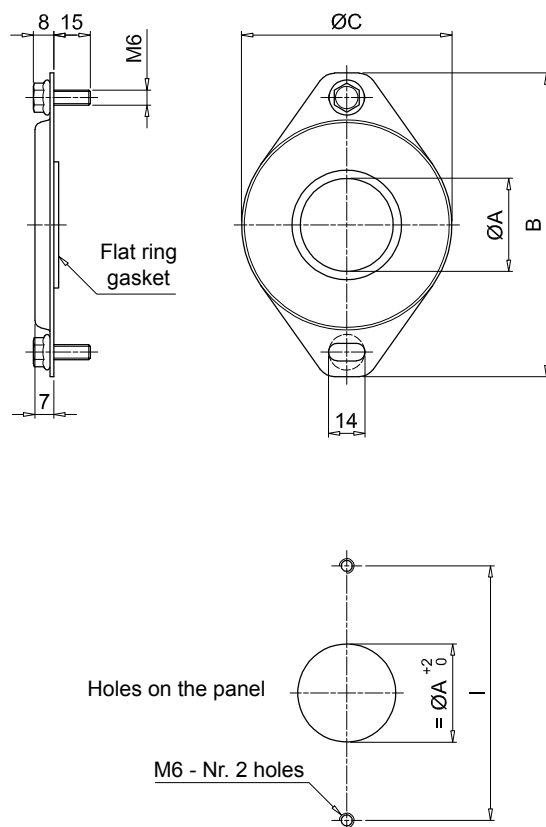
| Series       |                    |     | Configuration example : FTA 2630 G A P01 |  |  |  |  |
|--------------|--------------------|-----|--|--|--|--|--|
| FTA          |                    | FTR |  |  |  |  |  |
| Size         |                    | FTA | FTR                                    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

### FTA



| Size        | ØA [mm] |     | B [mm] | C [mm] | ØD [mm] | I [mm] | J [mm] |
|-------------|---------|-----|--------|--------|---------|--------|--------|
|             | min     | max |        |        |         |        |        |
| <b>1215</b> | 12      | 15  | 140    | 134    | 85      | 108±1  | 108    |
| <b>1620</b> | 16      | 20  |        |        |         |        |        |
| <b>2225</b> | 22      | 25  |        |        |         |        |        |
| <b>2630</b> | 26      | 30  |        |        |         |        |        |
| <b>3235</b> | 32      | 35  |        |        |         |        |        |
| <b>3842</b> | 38      | 42  | 190    | 184    | 130     | 159±4  | 159    |
| <b>4850</b> | 48      | 50  |        |        |         |        |        |
| <b>6061</b> | 60      | 61  |        |        |         |        |        |
| <b>7577</b> | 75      | 77  |        |        |         |        |        |
| <b>8789</b> | 87      | 89  |        |        |         |        |        |

### FTR



| Size        | ØA [mm] |     | B [mm] | ØC [mm] | I [mm] |
|-------------|---------|-----|--------|---------|--------|
|             | min     | max |        |         |        |
| <b>0610</b> | 6       | 10  | 71     | 40      | 54     |
| <b>1215</b> | 12      | 15  |        |         |        |
| <b>1620</b> | 16      | 20  |        |         |        |
| <b>2225</b> | 22      | 25  |        |         |        |
| <b>2630</b> | 26      | 30  |        |         |        |
| <b>3235</b> | 32      | 35  | 121    | 84      | 102    |
| <b>3842</b> | 38      | 42  |        |         |        |
| <b>4850</b> | 48      | 50  |        |         |        |
| <b>6061</b> | 60      | 61  |        |         |        |





# MULTIFIX SFT series

Fixing clamps



## Technical data

### Accessories

#### 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



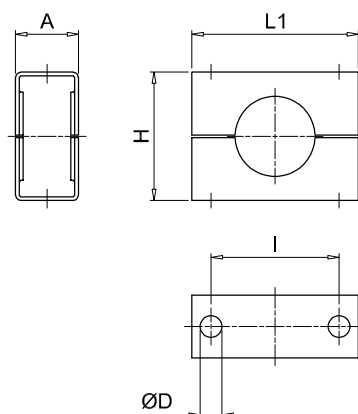
## Designation & Ordering code

### COMPLETE FIXING CLAMP

| Serie          |                       |    |    |    | Configuration example : |    |    |     |
|----------------|-----------------------|----|----|----|-------------------------|----|----|-----|
| <b>SFT</b>     |                       |    |    |    | SFT                     | 51 | 19 | P01 |
| 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            |    |    |    |                         |    |    |     |

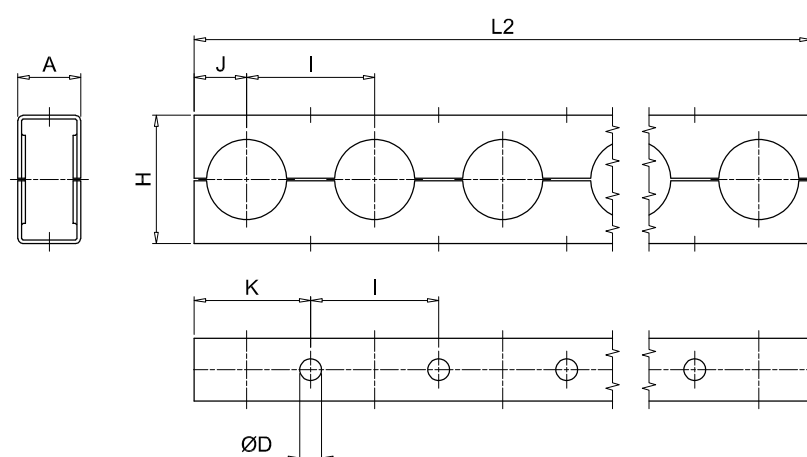
SFT

Single pipe



SFT

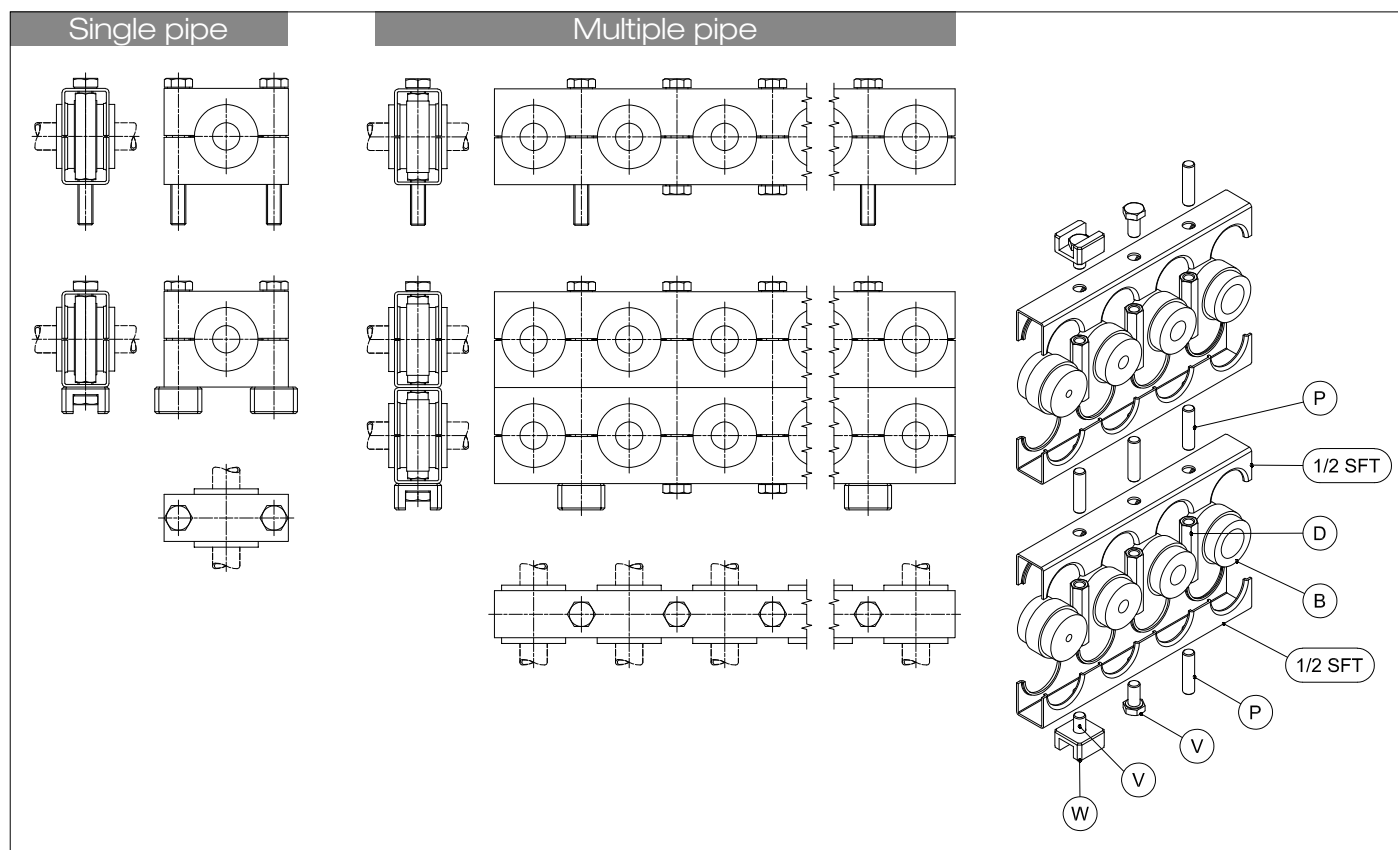
Multiple pipe



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

# SFT MULTIFIX

## Assembly



## Designation & Ordering code

### RUBBER BUSH

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

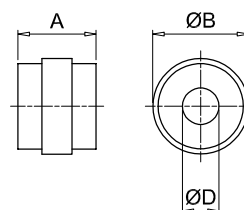
**Series**  
**B** Rubber bush

**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**

## Dimensions



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

| Pipe diameter | 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

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

#### Series

**D** Hexagon connection nut

#### Size

**38**

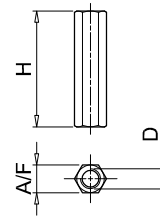
**51**

**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

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

#### Series

**P** Stud bolt

#### Size

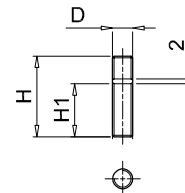
**38 - 51**

**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

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

#### Series

**V** Hexagon head screw

#### Size

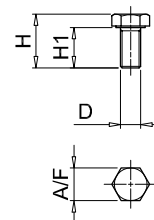
**38 - 51**

**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

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

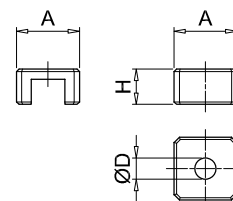
#### Series

**W** Welding foot

#### Size

**38 - 51**

**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

### Accessories

#### 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
- 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

### COMPLETE CLEANING COVER

#### Size

**OB275**

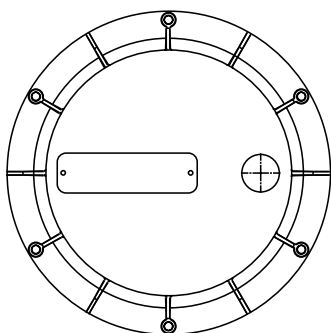
**OB350**

**OB356**

**OB400**

**OB475**

## Available customization



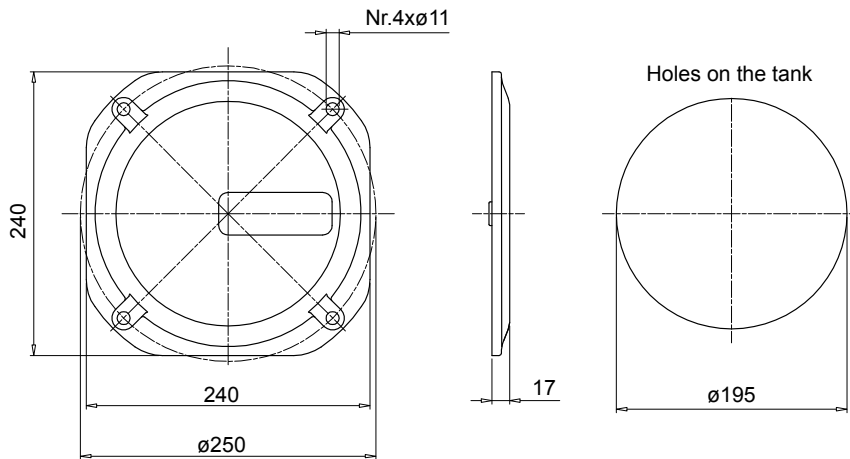
Nameplate with customer logo

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.

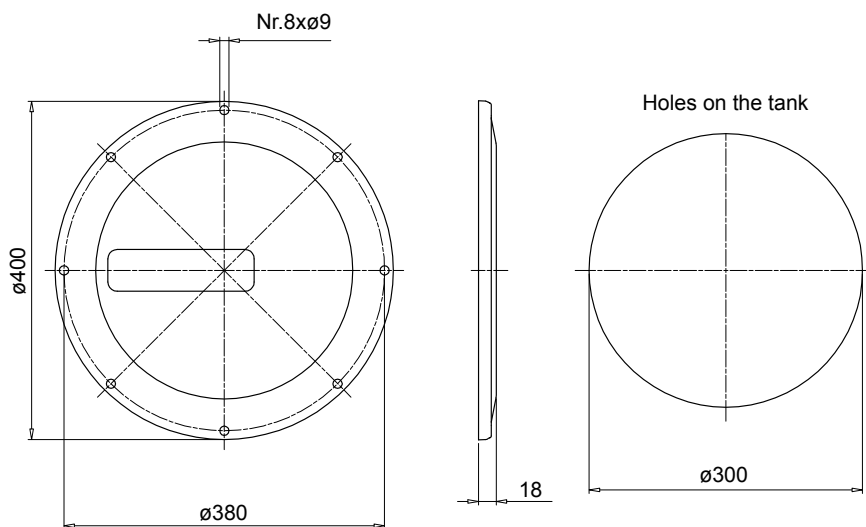
## OB275



| 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



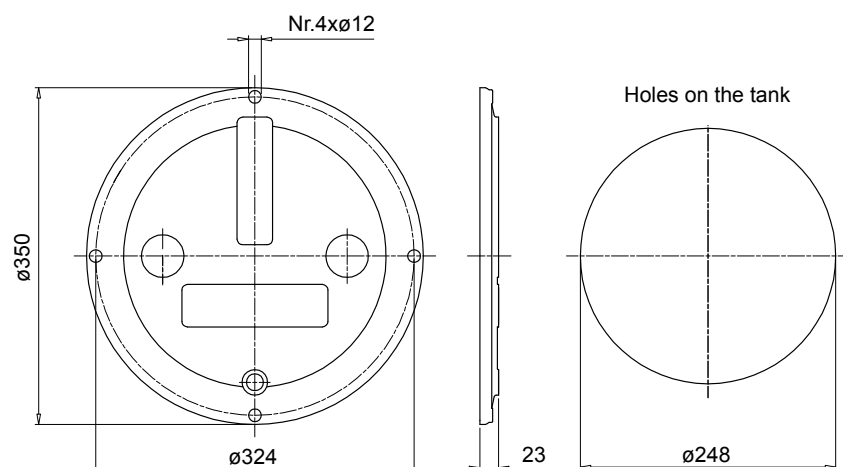
| Code              | Description       | Seal |
|-------------------|-------------------|------|
| <b>OB400P01GN</b> | Door with MP Logo | NBR  |
| <b>OB400P02GN</b> | Blank cover       | NBR  |
| <b>OB400P01GV</b> | Door with MP Logo | FPM  |
| <b>OB400P02GV</b> | Blank cover       | FPM  |

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

# OB OB350 - OB356 - OB475

## Dimensions

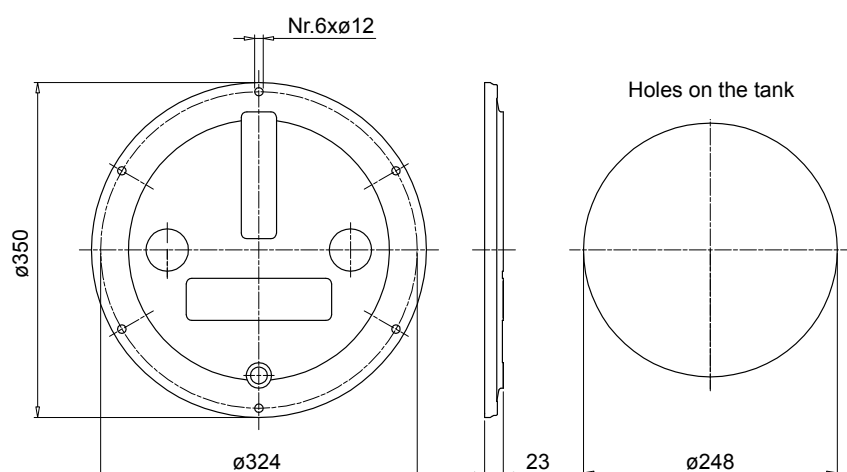
### OB350



| 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        |

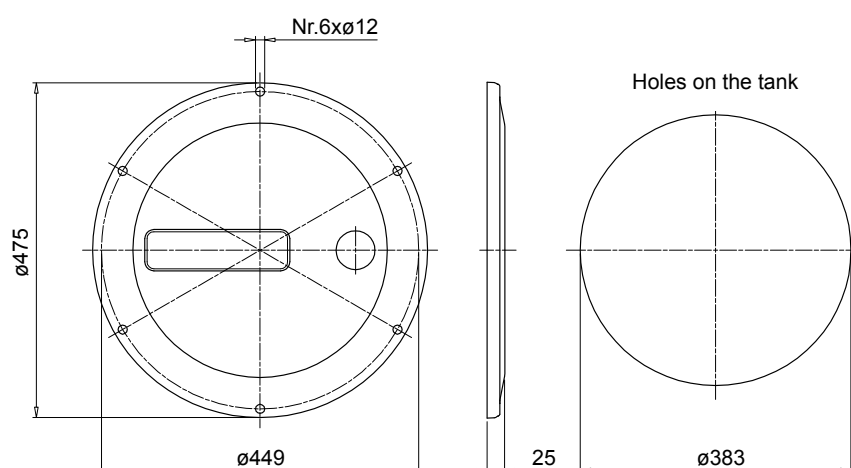
### OB356



| 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



| 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  |

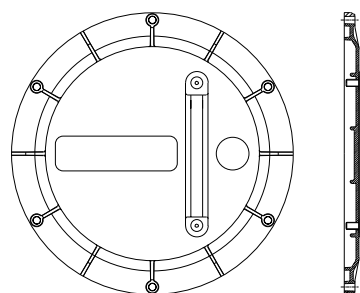
| Code                | Description       |
|---------------------|-------------------|
| <b>OB475P01</b>     | Door with MP Logo |
| <b>OB475P02</b>     | Blank cover       |
| <b>GU0475DINNBR</b> | Seal              |
| <b>GU0475DINVTN</b> | Seal              |

## 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.

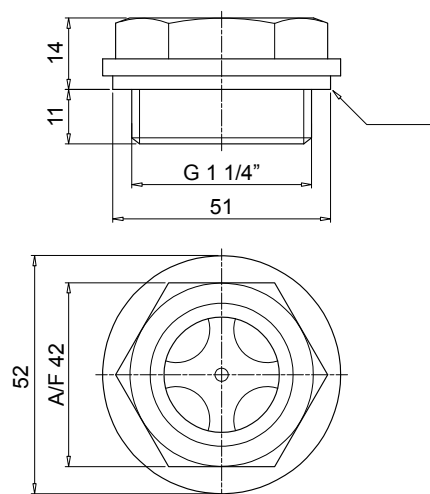
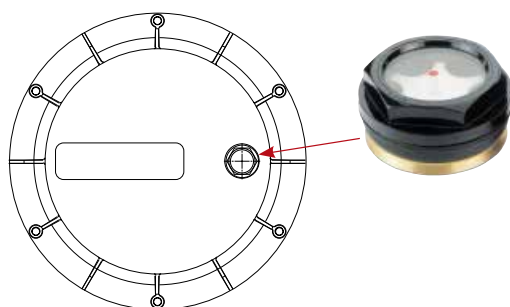
| Indicator code | OB275** | OB350** | OB356** | OB400** | OB475** |
|----------------|---------|---------|---------|---------|---------|
| LVA 10**       | •       | •       | •       | •       | •       |
| LVA 20**       |         | •       | •       | •       | •       |
| LVA 30**       |      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

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



## LCPG42N...S

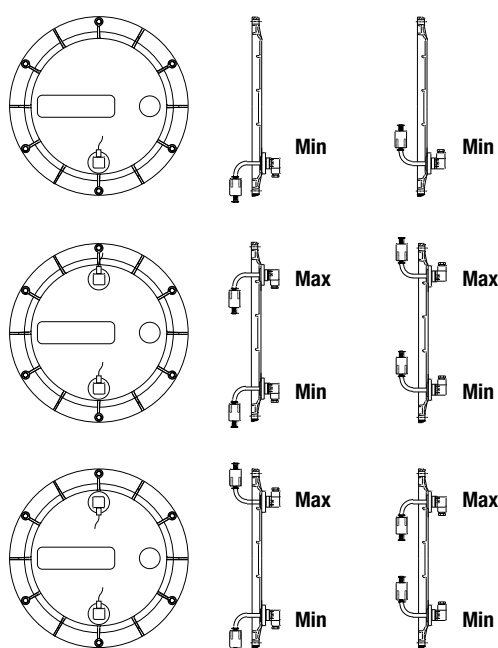
LCP spy eyes (see page 90) can also be mounted on MP Filtri cleaning covers to improve the maintenance and the service level.



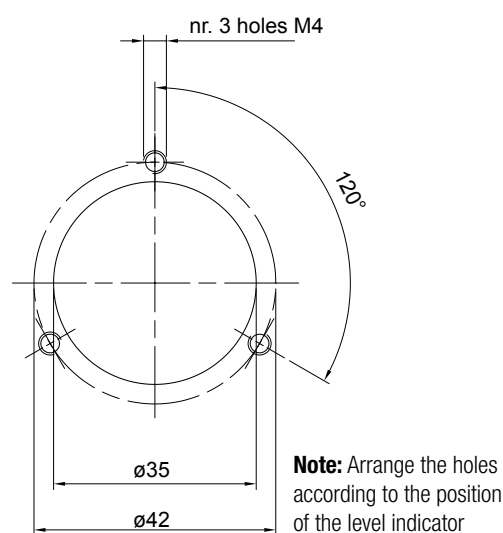
## LEG

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





# 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

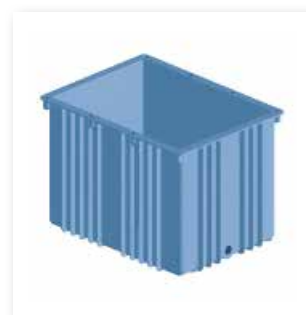
The lid is sealed by a gasket made of special paper, which must be ordered separately indicating code "GUS 10.0".

### Material

Pressure die-cast aluminium alloy

### Weight

SE10LT 4 kg



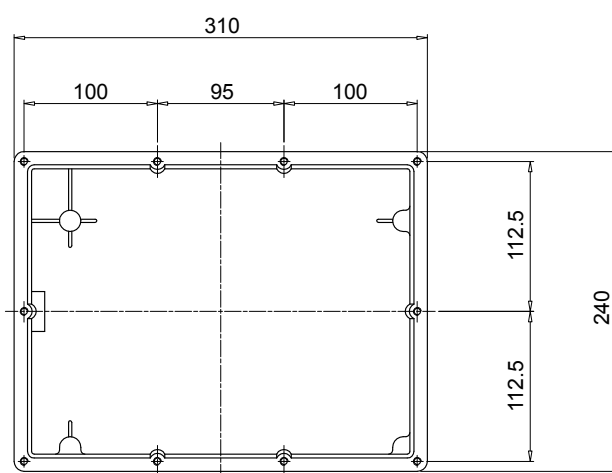
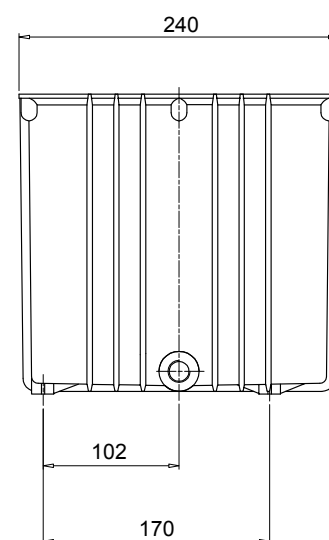
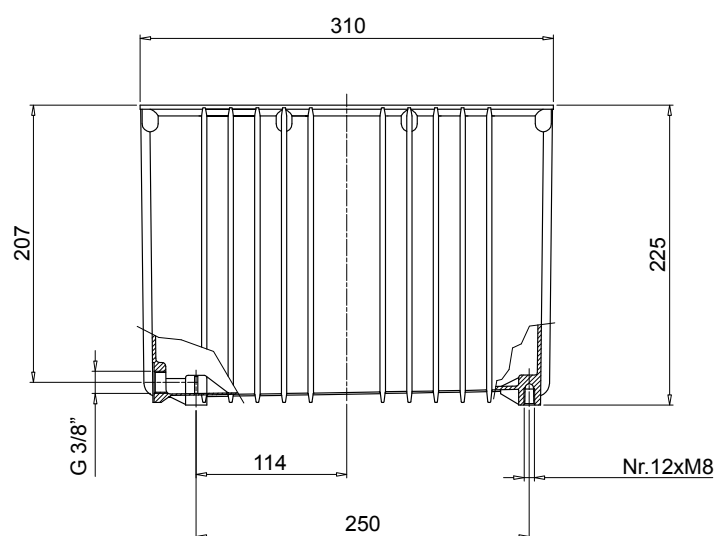
## Designation & Ordering code

SE10LT

Size

SE10LT

SE10LT





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