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# Production programme



## Contamination monitoring products

- Particle counters calibrated to ISO 11171
- On-line and In-line counting up to 400 bar
- Bottle sampler options
- Remote operating capability - Windows based software package



## Suction filters

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



## Return Filters

- Flow rates to 1500 l/min
  - Pressure to 20 bar
- Mounting:
- In-line
  - Tank top
  - In single and duplex designs



## Pressure Filters

- Flow rates to 700 l/min
  - Pressure from 110 bar to 420 bar
- Mounting:
- In-line
  - Manifold
  - In single and duplex designs



## Spin-On Filters

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



## Stainless Steel Pressure Filters

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

Mounting:

- In-line
- Manifold
- In single and duplex designs



## In-line filters

- Flow rates to 3000 l/min
- Pressures to 60 bar

Mounting:

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



## Filtration units

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



## Accessories

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



## Mechanical Products

- Aluminium bell housings for motors from 0.12 kW to 400 kW
- Couplings in aluminium - cast iron - steel
- Damping rings
- Support feet
- Aluminium tanks
- Inspection doors

# Contents



## Tank immersed suction filters

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## Oil filler and air breather plugs

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## Breather filters

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## Filler plugs

Page 40

## Visual level indicators

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## Pressure gauge selectors

Page 60



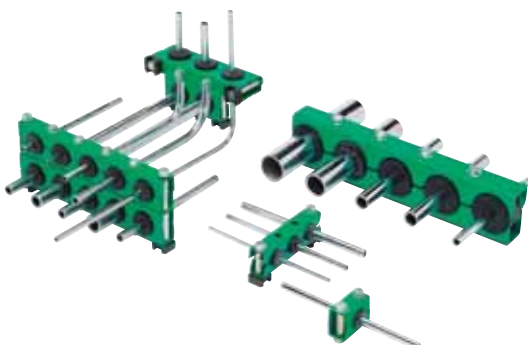
## Oil tank fixing flange FTA - FTR

Page 66



## Multifix fixing clamps

Page 68



# STR

Tank immersed suction strainers



# Flow rates to 900 l/min

# Series STR

## STR (Materials)

- 1 - Connection: Nylon
- 2 - Support tubes: Galvanised steel
- 3 - Cap: Nylon
- 4 - Valve: Nylon - Steel

## Filtration

- M60 - 60 micron
- M90 - 90 micron
- M250 - 250 micron

## Bypass valves

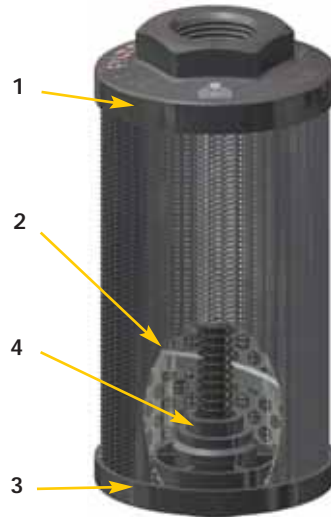
- Opening pressure: 30 kPa  $\pm$  10%

## Temperature

- From -25°C to +110°C

Oil flow from exterior to interior.

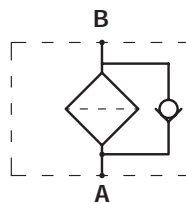
STR with bypass



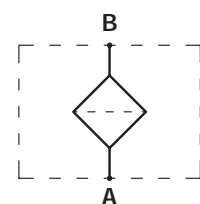
STR without bypass



Style B



Style S

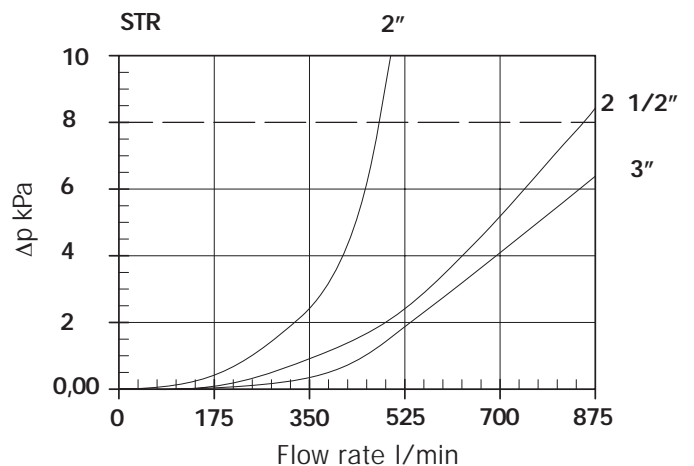
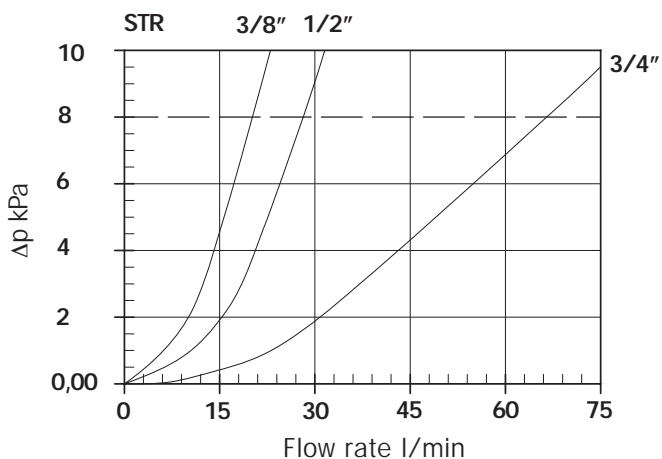
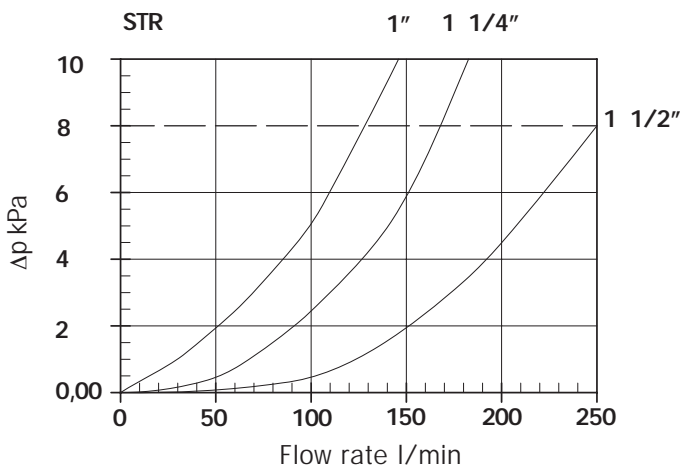


## Compatibility

- To ISO 2943; valid for mineral oils (type HHHM-HRHVHG to ISO 6743/4) and synthetic fluids (type HS-HFDR-HFDS-HFDU to ISO 6743/4).
- For aqueous emulsions (type HFAE-HFAS to ISO 6743/4) and other fluids different from those indicated, contact Engineering - Sales Department.

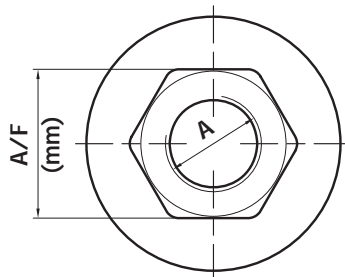
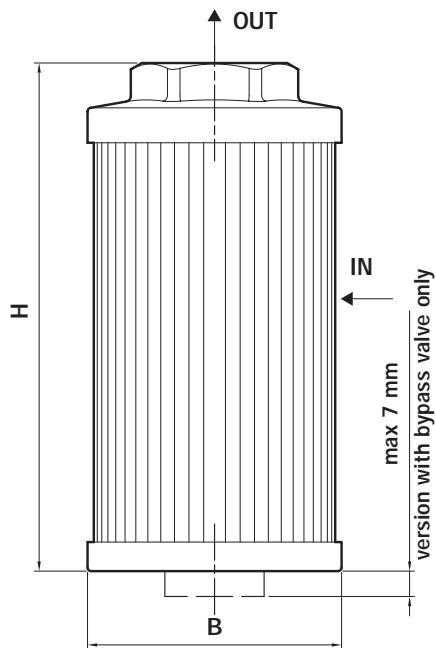
## Filter body $\Delta p$ pressure drop

The curves are plotted using mineral oil reference viscosity 30 mm<sup>2</sup>/s (cSt) to ISO 3968.





# Dimensions

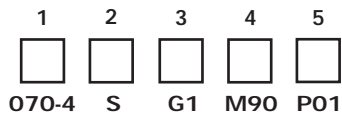


Size	A	B (mm)	H (mm)	A/F (mm)	Weight (kg.)
045-1 G1	G 3/8"				0,15
045-1 G2	3/8" NPT				0,15
045-2 G1	G 1/2"	46	105		0,19
045-2 G2	1/2" NPT			30	0,19
050-1 G1	G 3/8"				0,11
050-1 G2	3/8" NPT	52	79		0,11
050-2 G1	G 1/2"				0,11
050-2 G2	1/2" NPT				0,11
065-1 G1	G 1/2"				0,19
065-1 G2	1/2" NPT		110		0,19
065-2 G1	G 3/4"				0,22
065-2 G2	3/4" NPT	65			0,22
065-3 G1	G 3/4"				0,24
065-3 G2	1" NPT		144		0,24
065-4 G1	G 1"				0,22
065-4 G2	1" NPT			41	0,22
070-1 G1	G 1/2"				0,18
070-1 G2	1/2" NPT		95		0,18
070-2 G1	G 3/4"				0,17
070-2 G2	3/4" NPT	70			0,17
070-3 G1	G 3/4"				0,22
070-3 G2	3/4" NPT		141		0,22
070-4 G1	G 1"				0,24
070-4 G2	1" NPT				0,24
086-1 G1	G 1 1/2"				0,33
086-1 G2	1 1/2" NPT		143		0,33
086-2 G1	G 2"				0,30
086-2 G2	2" NPT				0,30
086-3 G1	G 1 1/2"				0,43
086-3 G2	1 1/2" NPT	86	201		0,43
086-4 G1	G 2"				0,40
086-4 G2	2" NPT				0,40
086-5 G1	G 1 1/2"				0,53
086-5 G2	1 1/2" NPT		261		0,53
086-6 G1	G 2"				0,50
086-6 G2	2" NPT				0,50
100-1 G1	G 1 1/4"		137		0,47
100-1 G2	1 1/4" NPT			69	0,47
100-2 G1	G1 1/4"				0,58
100-2 G2	1 1/4" NPT				0,58
100-3 G1	G 1 1/2"				0,55
100-3 G2	1 1/2" NPT	99	227		0,55
100-4 G1	G 2"				0,51
100-4 G2	2" NPT				0,51
100-5 G1	G 1 1/2"		137		0,43
100-5 G2	1 1/2" NPT				0,43
140-1 G1	G 1 1/2"				0,70
140-1 G2	1 1/2" NPT		160		0,70
140-2 G1	G 2"				0,68
140-2 G2	2" NPT				0,68
140-3 G1	G 2"				0,94
140-3 G2	2" NPT	130	262		0,94
140-4 G1	G 2 1/2"				1,10
140-4 G2	2 1/2" NPT		272		1,10
140-5 G1	G 3"			101	1,0
140-5 G2	3" NPT				1,0
140-6 G1	G 3"		330		1,17
140-6 G2	3" NPT				1,17

## Suction filter

STR

Example: STR



Box Qty	1 - Part NO	Size
12	045-1	3/8"
12	045-2	1/2"
12	050-1	3/8"
12	050-2	1/2"
6	065-1	1/2"
6	065-2	3/4"
6	065-3	1"
6	065-4	1"
6	070-1	1/2"
6	070-2	3/4"
6	070-3	3/4"
6	070-4	1"
6	086-1	1 1/2"
6	086-2	2"
6	086-3	1 1/2"
6	086-4	2"
6	086-5	1 1/2"
6	086-6	2"
6	100-1	1 1/4"
6	100-2	1 1/4"
6	100-3	1 1/2"
6	100-4	2"
6	100-5	1 1/2"
-	140-1	1 1/2"
-	140-2	2"
-	140-3	2"
-	140-4	2 1/2"
-	140-5	3"
-	140-6	3"

### 2 - Valve

- S Without
- B With bypass

### 3 - Connection

- G1 BSP thread
- G2 NPT thread

### 4 - Filter element

- M60 Wire mesh
- M90 Wire mesh
- M250 Wire mesh

### 5 - Options

- P01 MP Standard

# OIL FILLER AND AIR BREATHER FILLER CAPS



The complete series of oil filter and breather filler caps makes it possible to meet all market demands. Metal and plastic styles suitable for use on mobile equipment are available. Filler caps perform a dual function, air filtration at the tank inlet and prefiltration of the fluid by means of the strainer, 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.

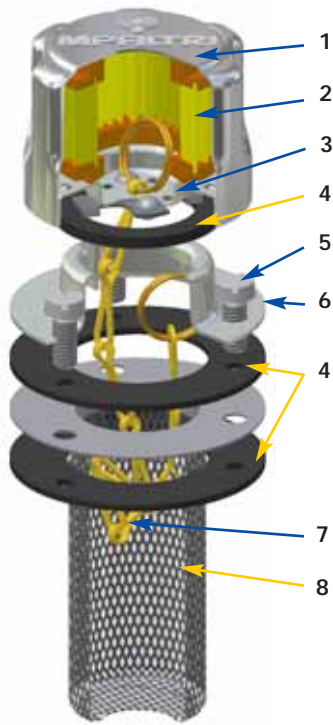
#### Temperature

- from -25° to +100°C

#### Compatibility

- NBR seals and Cork Gasket, compatible with:  
Mineral oils to ISO 2943 - aqueous emulsions  
Synthetic fluids, glycol water.
- FPM seals, compatible with:  
Synthetic fluids type HS-HFDR-HFDS-HFDU.

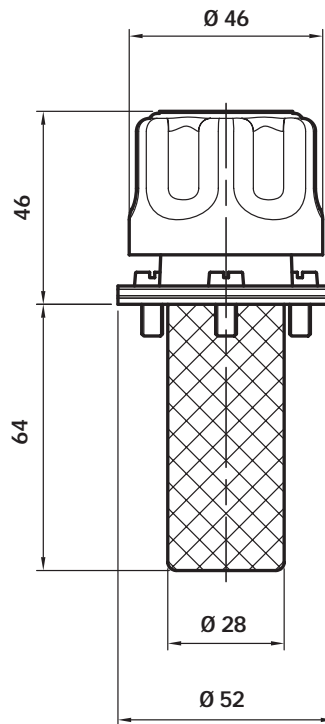
Dimensions



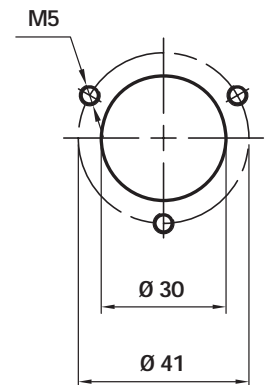
TA46 B (Materials)

- 1 - Cover: Chrome plated steel
- 2 - Breather filter: Resin impregnated cellulose
- 3 - 6 - Flange: Galvanised Steel
- 4 - Seals: NBR  
Cork Gasket
- 5 - Screws: Galvanised Steel
- 7 - Chain, ring: Brass
- 8 - Strainer: Galvanised Steel

Bayonet connection



Reservoir holes



Flow rates with  $\Delta p: 0,02$  bar

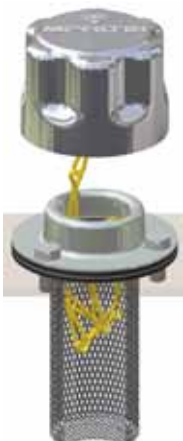
Filtration	l/min
3 $\mu$ m	150
10 $\mu$ m	200

Weight

TA 46: 0,100 kg

TA 46 B

Bayonet connection  
Non-removable strainer

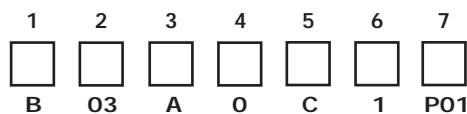


Ordering information

Filler caps series

TA46

Example: TA46



1 - Connection to reservoir

**B** Flange with bayonet connection

2 - Filter element

**03** 3  $\mu$ m

**10** 10  $\mu$ m

3 - Seals

**A** NBR

**B** Cork Gasket

4 - Valves

**0** Without

5 - Variants

**0** Standard

**C** With chain

6 - Strainer

**0** Without strainer

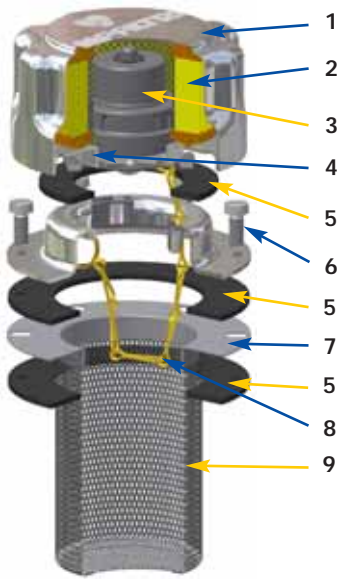
**1** L= 65 mm

7 - Options

**P01** MP Standard

# Series TA 80

## Metal filler / breather filler caps



TA80 B/D (Materials)

- 1 - Cover: Chrome plated steel
- 2 - Breather filter: Resin impregnated cellulose
- 3 - Pressurisation valve: Bodies: Nylon  
End cap-disk: Galvanised Steel
- 4 - Flange and anti-slosh feature: Galvanised Steel
- 5 - Seals: Cork Gasket  
NBR
- 6 - Screws and washers: Galvanised Steel
- 7 - Flange: Galvanised Steel
- 8 - Chain, ring: Brass
- 9 - Strainer TA80B: Galvanised Steel

Flow rates with  $\Delta p$ : 0,02 bar

Filtration	l/min
3 $\mu m$	450
10 $\mu m$	550

### Weight

Strainer L 80 mm: 0,330 Kg  
Strainer L 150 mm: 0,350 Kg

### TA 80 B

Bayonet connection  
Non-removable strainer



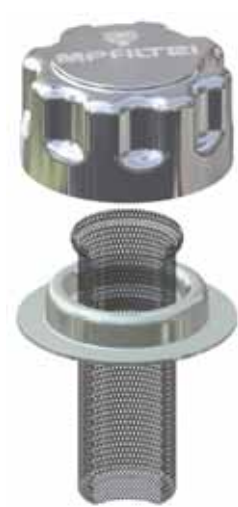
### TA 80 B

Bayonet connection  
With Padlock Hasp



### TA 80 D

Bayonet connection  
Removable strainer



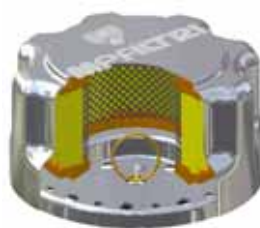
### TA80B00....P01

Bayonet connection  
Closed filler cap without  
filter element



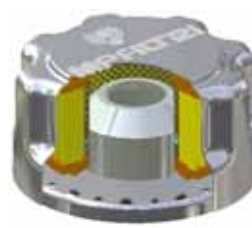
### TA80B10....P01

Bayonet connection  
Filler cap with filter element



### TA80B03.9..P01

Bayonet connection  
Filler cap with anti-slosh  
feature and filter element

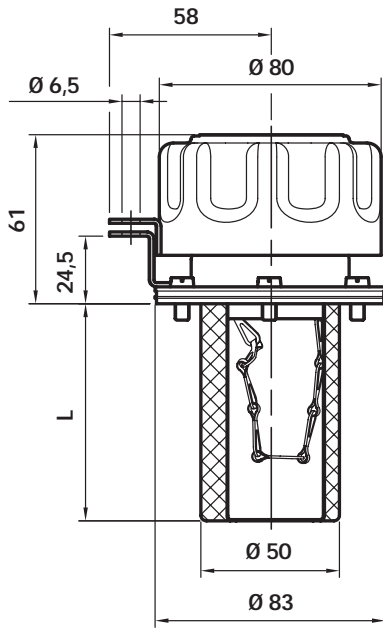


### TA80B10.1..P01

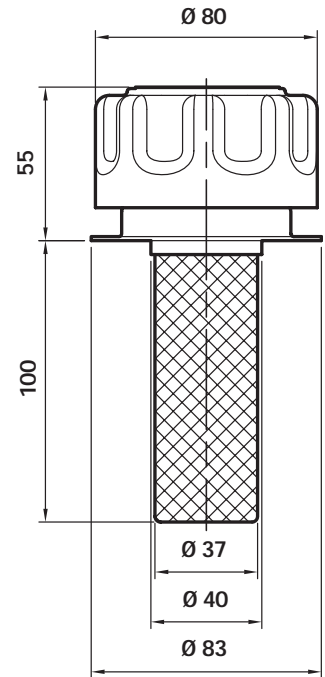
Bayonet connection  
Filler cap with  
pressurisation valve and  
filter element



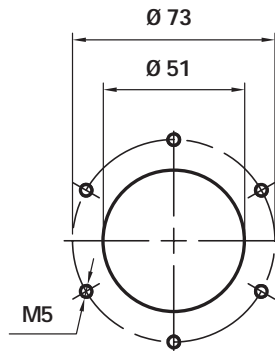
## Bayonet connection



## Weld flange



## Reservoir holes

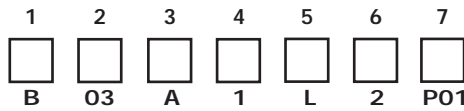


# Ordering information

### Filler caps series

TA80

Example: TA80



#### 1 - Connection to reservoir

- B Flange with bayonet connection
- D Weld flange

#### 2 - Filter element

- 00 Without filter (Blank filler cap)
- 03 3 µm
- 10 10 µm

#### 3 - Seals

- A NBR
- B Cork Gasket

#### 4 - Valves

- 0 Without
- 1 0,3 bar pressurisation valve (only with seals NBR)
- 2 0,7 bar pressurisation valve (only with seals NBR)
- 9 Anti-slosh feature (only with filter element 3 µm)

#### 5 - Variants

- 0 Standard
- L With Padlock Hasp (B versions only)

#### 6 - Strainer

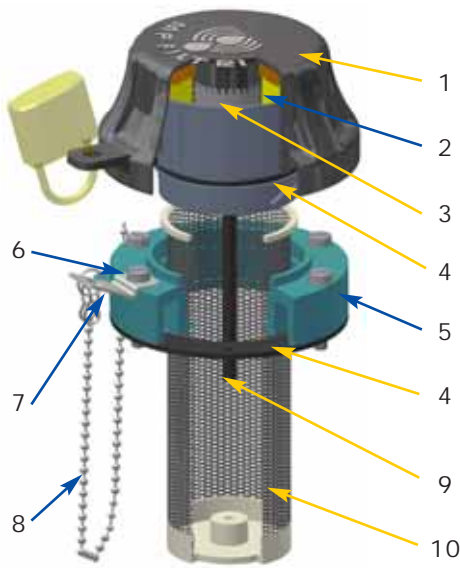
- 0 Without strainer
- 1 L= 80 mm (B versions only)
- 2 L= 150 mm (B versions only)
- 3 L= 100 mm (D versions only)

#### 7 - Options

- P01 MP Standard

# Series TAP 90

Nylon filler /  
breather filler caps



### TAP90 (Materials)

- 1 - Cover/ringnut: Nylon
- 2 - Breather filter: Resin impregnated cellulose  
Polyurethane
- 3 - Pressurisation valve:  
Nylon  
Galvanised Steel  
NBR
- 4 - Seal: NBR
- 5 - Flange B: Nylon
- 6 - Screws: Galvanised Steel
- 7 - Padlock hasp: Galvanised Steel
- 8 - Chain, ring: Brass
- 9 - Dipstick: Phosphated steel
- 10 - Strainer: Galvanised Steel/Nylon

Flow rate with  $\Delta p$ : 0,02 bar

Filtration	l/min
3 $\mu m$	450
10 $\mu m$	550

### Weight

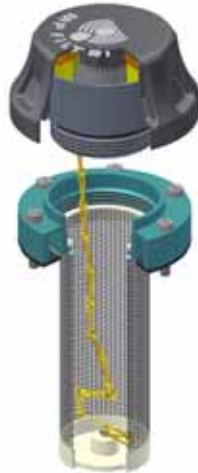
Strainer L 120 mm: 0,180 Kg  
Strainer L 250 mm: 0,210 Kg

**TAP90 B.....**  
Flange with  
bayonet connection



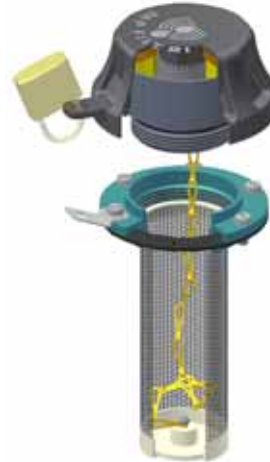
External chain

**TAP90 R.....**  
Flange with  
M52x2 connection



Internal chain

**TAP90 F.....**  
Flange with spigot  
DIN 24557 Connection  
M52x2



Internal chain

**TAP90 C.....**  
Weld riser  
Connection  
M52x2



Weld riser in  
galvanised steel,  
internal chain

**TAP90 B-C-R-F**  
With dipstick



**TAP90 B-C-R-F**  
Closed filler cap without  
filter element

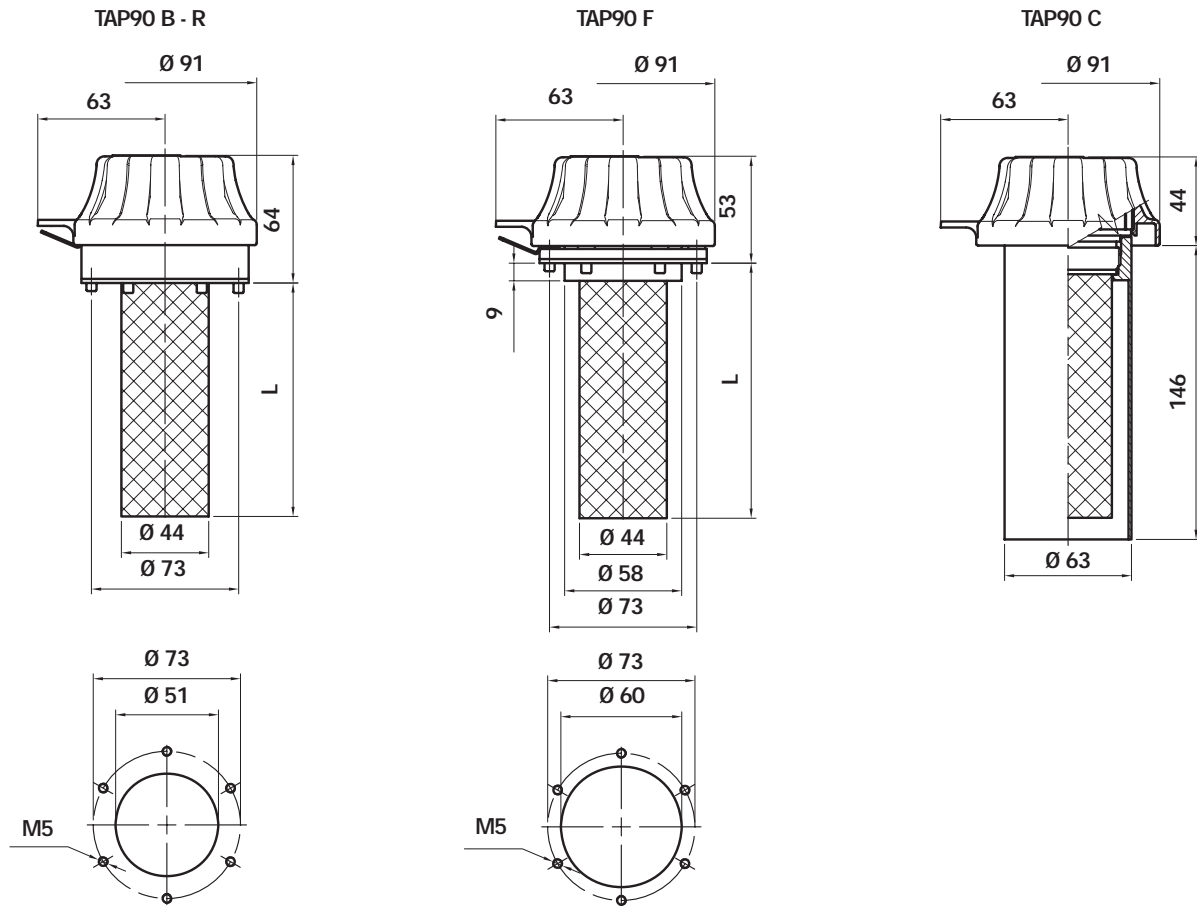


**TAP90 B-C-R-F**  
Filler cap with filter  
element



**TAP90 B-C-R-F**  
Filler cap with  
pressurisation valve



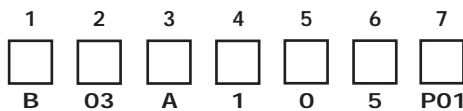


## Ordering information

### Filler caps series

#### TAP90

Example: TAP90



#### 1 - Connection to reservoir

<b>B</b>	Flange with bayonet connection
<b>C</b>	Weld riser (M52X2 version only)
<b>F</b>	Flange with threaded M52x2 connection Spigot Ø 60 (DIN 24557)
<b>R</b>	Flange with M52X2 threaded connection

#### 2 - Filter element

<b>00</b>	Without filter (Blank filler cap)
<b>03</b>	3 µm
<b>10</b>	10 µm

#### 3 - Seals

<b>A</b>	NBR
----------	-----

#### 4 - Valves

<b>0</b>	Without
<b>1</b>	0.3 bar pressurisation valve
<b>2</b>	0.7 bar pressurisation valve

#### 5 - Variantes

<b>0</b>	Standard
<b>L</b>	With Padlock Hasp
<b>A</b>	With Dipstick
<b>C</b>	With Chain external for connection <b>B</b> With Chain internal for connection <b>C-F-R</b> (with strainer only)
<b>D</b>	With Padlock Hasp and chain external for raccordement <b>B</b> With Padlock Hasp and chain internal for raccordements <b>C-F-R</b> (with strainer only)
<b>E</b>	Dipstick and chain external (only connection <b>B</b> )
<b>F</b>	Dipstick and Padlock Hasp
<b>G</b>	Dipstick, Padlock Hasp and chain external (only connection <b>B</b> )

#### 6 - Strainer

<b>0</b>	Without strainer
<b>1</b>	L= 120 mm
<b>3</b>	L= 250 mm

In the version with chain the L= 120 strainer features a press fitting.

INOX strainer on request

#### 7 - Options

<b>P01</b>	MP Standard
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# Series TAP 114

Nylon filler /  
breather caps



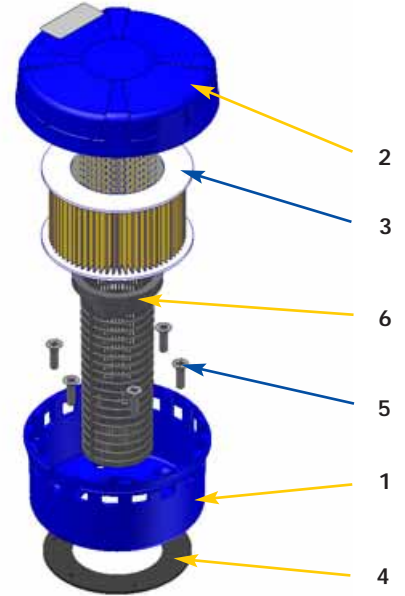
Example  
TAP114

Length 1



Example  
TAP114

Length 2

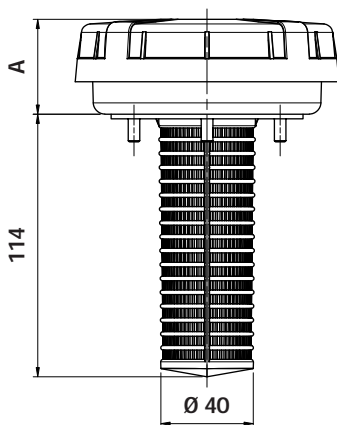


TAP114 (Materials)

- 1 - Flange: Nylon
- 2 - Cover: Nylon
- 3 - Breather filter: Resin impregnated cellulose
- 4 - Seal: NBR
- 5 - Screws: Galvanised Steel
- 6 - Strainer: Nylon

## Dimensions

TAP 114



Lenght	A
1	41
2	56

Flow rates with  $\Delta p$ : 0,02 bar

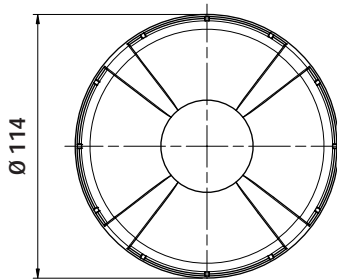
Length 1	Filtration	l/min
	10 $\mu m$	1450

Length 2	Filtration	l/min
	10 $\mu m$	1600

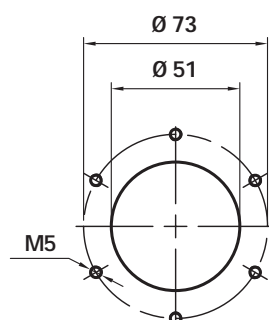
Weight

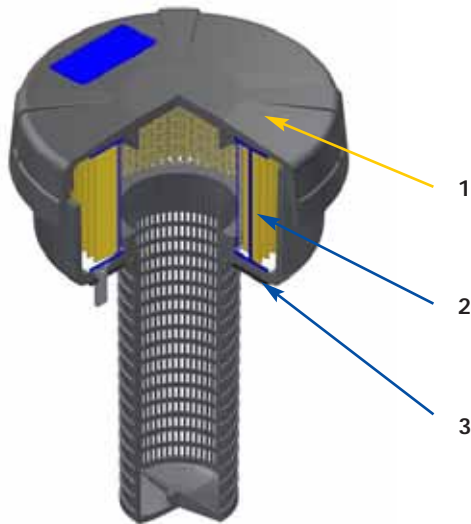
TAP 114 1: 0,185 Kg

TAP 114 2: 0,200 Kg



Reservoir holes





### TAP 114 spare parts

Item.	Description	Qty	Filler cap series TAP 114	
1	Complete filler cap	1	See order table	
2	Filter Element	1	See order table	
3	Seal	1	NBR 01026306	FPM 01026332

## Ordering information

### Filler cap series TAP114

Example: TAP114

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	L10	A	1	P01

### Filter Element A114

Example: A114

1	2	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	L10	P01

### 1 - Length

<input type="checkbox"/>	1
<input type="checkbox"/>	2

### 2 - Filter element

<input type="checkbox"/>	L10	Resin impregnated cellulose 10 µm
--------------------------	-----	-----------------------------------

### 3 - Seal

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

### 4 - Strainer

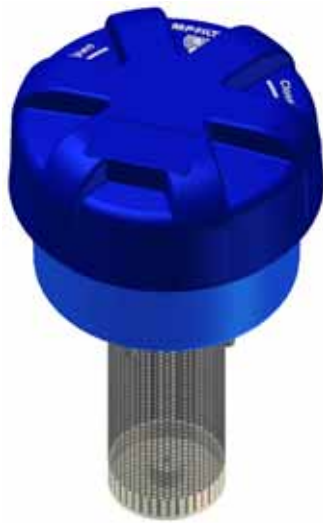
<input type="checkbox"/>	0	Without strainer
<input type="checkbox"/>	1	L= 114 mm

### 5 - Options

<input type="checkbox"/>	P01	MP Filtri standard
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# Series TAP 115

Nylon filler /  
breather filler caps



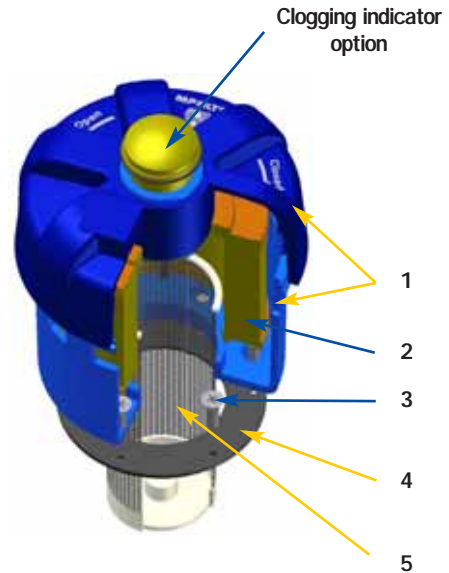
Example  
TAP115

Length 1  
Without Indicator



Example  
TAP115

Length 2  
With Indicator



TAP115 (Materials)

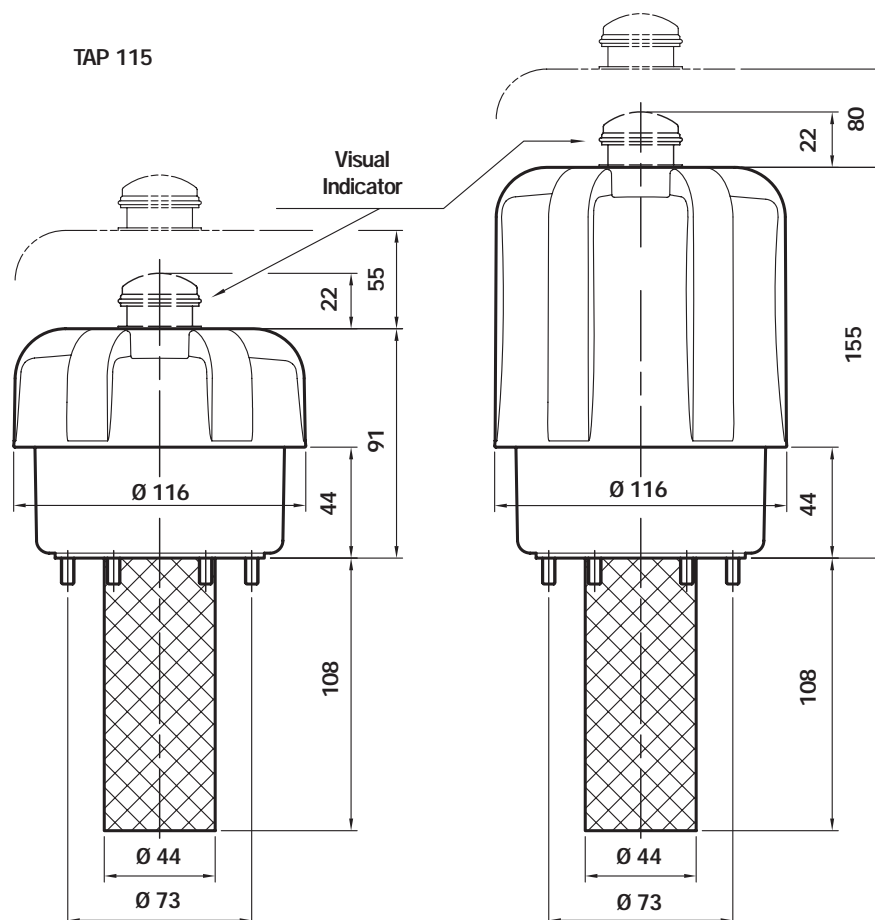
- 1 - Cover/Flange: Nylon
- 2 - Breather filter: Resin impregnated cellulose/Microfibre
- 3 - Seals: NBR  
FPM
- 4 - Screws: Galvanised Steel
- 5 - Strainer: Galvanised Steel/Nylon

Clogging indicator

Set pressure: - 0,062 bar  $\pm$  10 %

Manual reset

## Dimensions



Flow rates with  $\Delta p$ : 0,02 bar

Length 1

Filtration	l/min
3 $\mu$ m	1600
10 $\mu$ m	2000

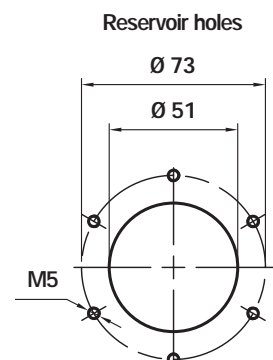
Length 2

Filtration	l/min
3 $\mu$ m	2150
10 $\mu$ m	2150

Weight

TAP 115 1: 0,460 Kg

TAP 115 2: 0,585 Kg



## Changing the filter element in

### TAP 115 series filler caps

1 Thoroughly clean the filler cap and adjacent parts.

2 Unscrew and raise the cover.

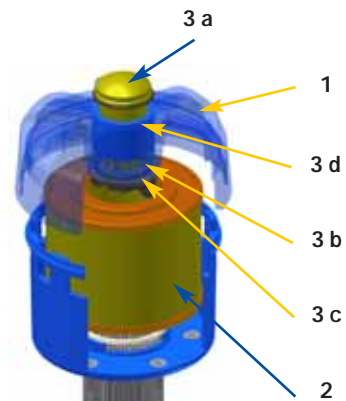


3 Renew the filter element and screw the cover fully home into the cartridge (DO NOT OVER TIGHTEN).



### TAP 115 spare parts

Pos.	Description	Q.ty	Filler cap series TAP 115	
1	Complete filler cap	1	See order table	
2	Filter Element	1	See order table	
3	Indicator Kit	1	NBR	FPM
			02005187	02005188
3a	Visual indicator	1	S62P01	
3b	Seal	1	O-R 3106 Ø 26,64 X 2,62	
3c	Indicator securing screw	1	01022670	
3d	O-R indicator	1	O-R 2112 Ø 28,3 x 1,78	



## Ordering information

#### Filler caps series

##### TAP115

Example: TAP115

1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	F	A03	A	1	B	P01

#### Filter Element

##### A115

Example: A115

1	3	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	A03	P01

#### 1 - Length

<input type="checkbox"/> 1
<input type="checkbox"/> 2

#### 2 - Connection

<input type="checkbox"/> F	Flange
----------------------------	--------

#### 3 - Filter element

<input type="checkbox"/> L10	Resin impregnated cellulose 10 µm
<input type="checkbox"/> A03	Inorganic microfibre 3 µm

#### 4 - Seals

<input type="checkbox"/> A	NBR
<input type="checkbox"/> V	FPM

#### 5 - Strainer

<input type="checkbox"/> 0	Without
<input type="checkbox"/> 1	L= 120 mm

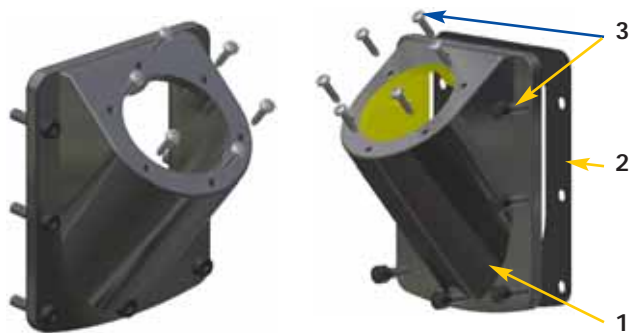
#### 6 - Indicator

<input type="checkbox"/> A	Without
<input type="checkbox"/> B	Visual indicator

#### 7 - Options

<input type="checkbox"/> P01	MP Standard
------------------------------	-------------

# Series SMF Nylon inclined flange



SMF (Materials)

1 - Flange: Nylon

2 - Seals: NBR

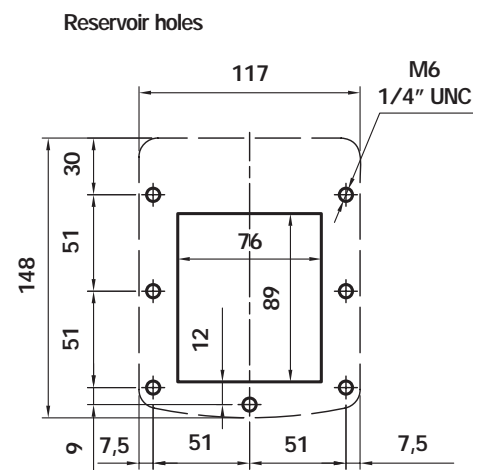
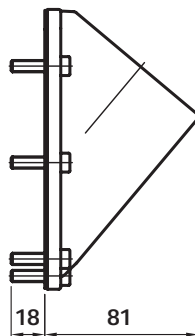
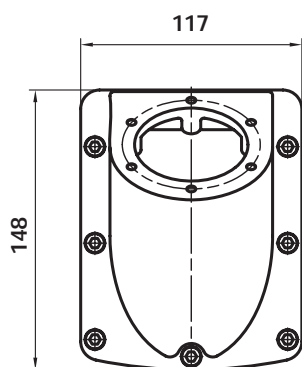
Cork Gasket

3 - Screws: Galvanised/Phosphated steel


**Weight**

SMF: 0,325 Kg

## Dimensions



## Ordering information

SMF 1      1      2      3  
  
 Example: SMF 1    M    A    P01

### 1 - Connection to reservoir

**M**    Fixing with Metric screws  
**U**    Fixing with UNC screws

### 2 - Seals

**A**    NBR  
**B**    Cork Gasket

### 3 - Options

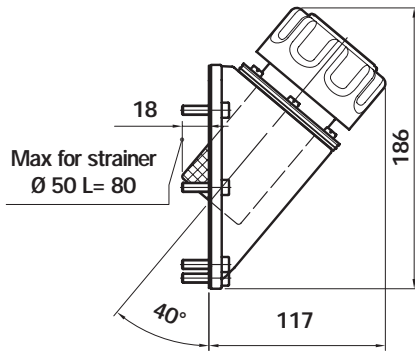
**P01**    MP Standard

- Nylon inclined flange
- Metal filler / breather filler caps

# Series TAF 80

## Dimensions

TAF 80 B



For tank hole see "SMF 1" page 18.

Flow rate with  $\Delta p$ : 0,02 bar

Filtration	l/min
3 $\mu\text{m}$	450
10 $\mu\text{m}$	550

Weight

TAF 80: 0,655 Kg

## Ordering information

TAF80      1   2   3   4   5   6   7   8  
 Example: TAF80    B   O3   A   1   L   1   M   PO1

### 1 - Filler cap connection

**B** Flange with bayonet connection

### 2 - Filter element

**00** Without filter (Blank filler cap)  
**03** 3  $\mu\text{m}$   
**10** 10  $\mu\text{m}$

### 3 - Seals

**A** NBR  
**B** Cork Gasket

### 4 - Pressurisation valve

**0** Without  
**1** 0.3 bar pressurisation valve  
**2** 0.7 bar pressurisation valve  
**9** Anti-slosh feature (only with filter element 3  $\mu\text{m}$ )

} Only with seal NBR

### 5 - Variants

**0** Standard  
**L** With Padlock Hasp

### 6 - Strainer

**0** Without  
**1** L= 80 mm

### 7 - Connection to reservoir

**M** Fixing with Metric screws  
**U** Fixing with UNC screws

### 8 - Options

**PO1** MP Standard

# Series TAF 90

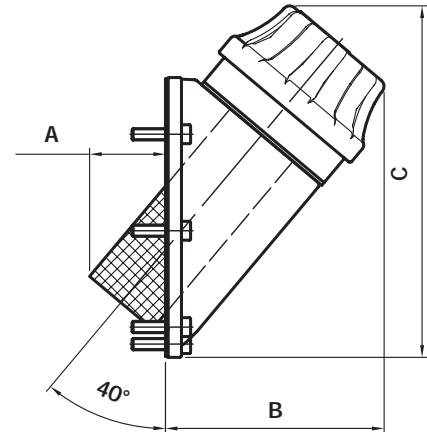
- Nylon inclined flange
- Nylon filler / breather filler caps

## Dimensions

TAF 90 ...



TAF 90 B - R - F



Flow rate with  $\Delta p$ : 0,02 bar

Filtration l/min

3  $\mu m$  450

10  $\mu m$  550

Weight

TAF 90: 0,535 Kg

TYPE	A	B	C
TAF90 B - R	40	116	186
TAF90 F	48	109	178

For tank hole see "SMF 1" page 18.

## Ordering information

TAF90 1 2 3 4 5 6 7 8  
 Example: TAF90 **B** **O3** **A** **1** **L** **1** **M** **P01**

### 1 - Filler cap connection

- B** Flange with bayonet connection
- F** Flange with threaded connection M52x2 Spigot  $\varnothing$  60 (DIN 24557)
- R** Flange with threaded connection M52x2

### 2 - Filter element

- 00** Without filter (Blank filler cap)
- 03** 3  $\mu m$
- 10** 10  $\mu m$

### 3 - Seals

- A** NBR

### 4 - Pressurisation valve

- 0** Without
- 1** 0.3 bar pressurisation valve
- 2** 0.7 bar pressurisation valve

### 5 - Variants

- O** Standard
- L** With Padlock Hasp
- C** With Chain external for connection **B**  
With Chain internal for connection **F-R** (with strainer only)
- D** With Padlock Hasp and chain external for raccordement **B**  
With Padlock Hasp and chain internal for raccordements **F-R** (with strainer only)

### 6 - Strainer

- 0** Without
- 1** L= 120 mm

### 7 - Connection to reservoir

- M** Fixing with Metric screws
- U** Fixing with UNC screws

### 8 - Options

- P01** MP Standard

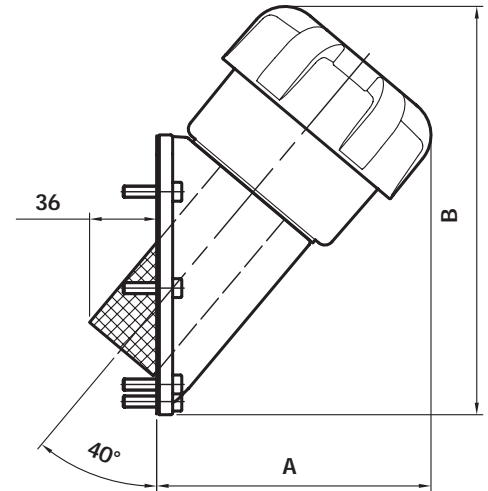
- Nylon inclined flange
- Nylon filler / breather filler caps

# Series TAF 115

## Dimensions

TAF 1151 F

TAF 115



Flow rate with  $\Delta p$ : 0,02 bar

Length 1		Length 2	
Filtration	l/min	Filtration	l/min
3 $\mu\text{m}$	1600	3 $\mu\text{m}$	2150
10 $\mu\text{m}$	2000	10 $\mu\text{m}$	2150
Weight		Weight	
TAF 115 1: 0,785 Kg		TAF 115 2: 0,910 Kg	

Length	A	B
1	145	216
2	187	266

For tank hole see "SMF 1" page 18.

## Ordering information

TAF115  
 Example: TAF115 1 2 3 4 5 6 7 8  
2 F A03 A 1 B M P01

### 1 - Filler cap length

1  
2

### 2 - Connection

F Flange

### 3 - Filter element

L10 Resin impregnated cellulose 10  $\mu\text{m}$   
A03 Inorganic microfibre 3  $\mu\text{m}$ 

### 4 - Seals

A NBR  
V FPM

### 5 - Strainer

0 Without  
1 L= 120 mm

### 6 - Indicator

A Without  
B Visual indicator

### 7 - Connection to reservoir

M Fixing with Metric screws  
U Fixing with UNC screws

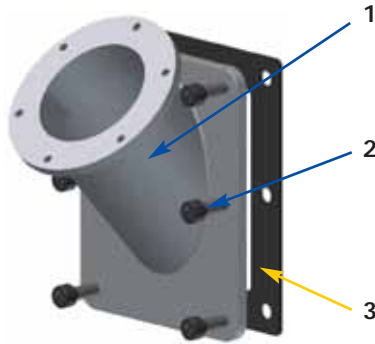
### 8 - Options

P01 MP Standard



# Series SML Aluminium inclined flange

Aluminium inclined  
flange



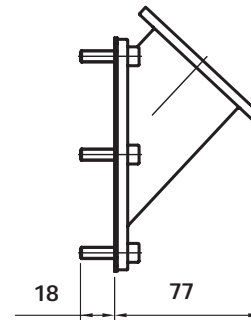
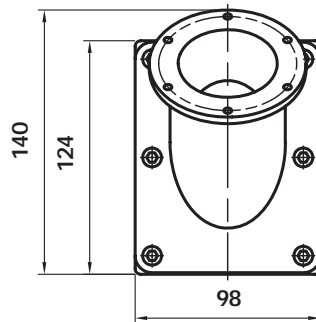
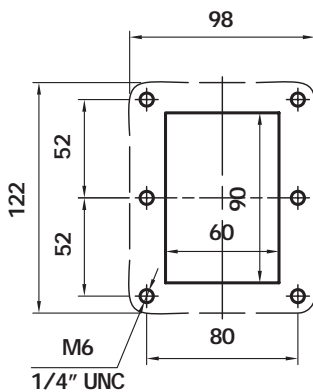
SML (Materials)

- 1 - Flange: Aluminium
- 2 - Screws: Phosphated steel
- 3 - Seals: NBR  
Cork Gasket

**Weight**

SML: 0,380 Kg

## Dimensions



## Ordering information

SML 1      1      2      3  
          
 Example: SML 1    M    A    P01

### 1 - Connection to reservoir

- M    Fixing with Metric screws
- U    Fixing with UNC screws

### 2 - Seals

- A    NBR
- B    Cork Gasket

### 3 - Options

- P01    MP Standard

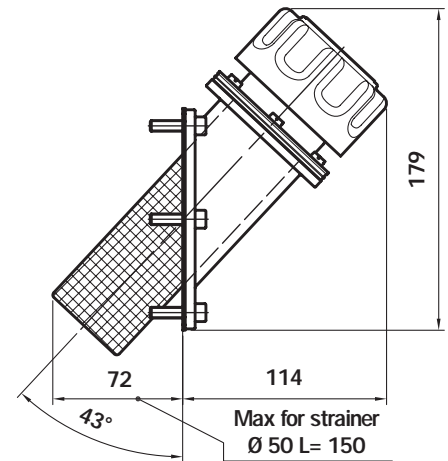
- Aluminium inclined flange
- Metal filler / breather filler caps

# Series TAL 80

## Dimensions



TAL 80 B



For tank hole see "SML 1" page 22.

Flow rate with  $\Delta p$ : 0,02 bar

Filtration	l/min
3 $\mu\text{m}$	450
10 $\mu\text{m}$	550

Weight

TAL 80 1: 0,710 Kg

## Ordering information

TAL80 1 2 3 4 5 6 7 8  
 Example: TAL80 B 03 A 1 L 2 M P01

### 1 - Filler cap connection

B Flange with bayonet connection

### 2 - Filter element

00 Without filter (Blank filler cap)  
03 3  $\mu\text{m}$   
10 10  $\mu\text{m}$

### 3 - Seals

A NBR  
B Cork Gasket

### 4 - Pressurisation valve

0 Without  
1 0.3 bar pressurisation valve  
2 0.7 bar pressurisation valve  
9 Anti-slosh feature (only with filter element 3  $\mu\text{m}$ )

} Only with seal NBR

### 5 - Variants

0 Standard  
L With padlock hasp

### 6 - Strainer

0 Without  
1 L= 80 mm  
2 L= 150 mm

### 7 - Connection to reservoir

M Fixing with Metric screws  
U Fixing with UNC screws

### 8 - Options

P01 MP Standard

# Series TAL 90

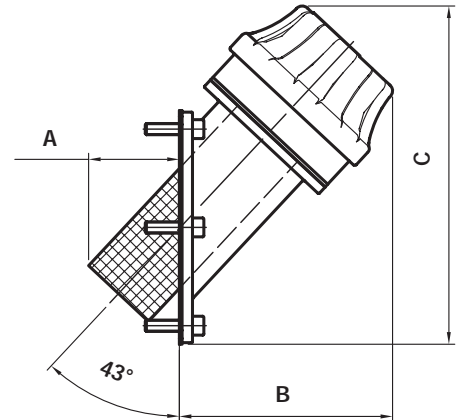
- Aluminium inclined flange
- Nylon filler / breather filler caps

## Dimensions

TAL 90 ...



TAL 90 B - R - F



Flow rate with  $\Delta p$ : 0,02 bar

Filtration	l/min
3 $\mu\text{m}$	450
10 $\mu\text{m}$	550

Weight

TAL 90: 0,560 Kg

TYPE	A	B	C
TAL90 B - R	48	113	179
TAL90 F	56	106	171

For tank hole see "SML 1"  
page 22.

## Ordering information

TAL90 1 2 3 4 5 6 7 8  
 Example: TAL90 **B** **O3** **A** **1** **L** **1** **M** **PO1**

### 1 - Filler cap Connection

<b>B</b>	Flange with bayonet connection
<b>F</b>	Flange with threaded connection M52x2 Spigot $\varnothing$ 60 (DIN 24557)
<b>R</b>	Flange with threaded connection M52x2

### 2 - Filter element

<b>00</b>	Without filter (Blank filler cap)
<b>03</b>	3 $\mu\text{m}$
<b>10</b>	10 $\mu\text{m}$

### 3 - Seals

<b>A</b>	NBR
----------	-----

### 4 - Pressurisation valve

<b>0</b>	Without
<b>1</b>	0.3 bar pressurisation valve
<b>2</b>	0.7 bar pressurisation valve

### 5 - Variants

<b>O</b>	Standard
<b>L</b>	With Padlock Hasp
<b>C</b>	With Chain external for connection <b>B</b> With Chain internal for connection <b>F-R</b> (with strainer only)
<b>D</b>	With Padlock Hasp and chain external for raccordement <b>B</b> With Padlock Hasp and chain internal for raccordements <b>F-R</b> (with strainer only)

### 6 - Strainer

<b>0</b>	Without
<b>1</b>	L = 120 mm

### 7 - Connection to reservoir

<b>M</b>	Fixing with Metric screws
<b>U</b>	Fixing with UNC screws

### 8 - Options

<b>PO1</b>	MP Standard
------------	-------------

- Aluminium inclined flange
- Nylon filler / breather filler caps

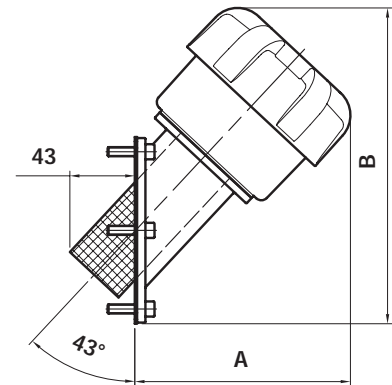
# Series TAL 115

## Dimensions

TAL 115 1 F



TAL 115



Flow rate with  $\Delta p$ : 0,02 bar

Length 1		Length 2	
Filtration	l/min	Filtration	l/min
3 $\mu\text{m}$	1600	3 $\mu\text{m}$	2150
10 $\mu\text{m}$	2000	10 $\mu\text{m}$	2150
Weight		Weight	
TAL 115 1: 0,840 Kg		TAL 115 2: 0,965 Kg	

Length	A	B
1	143	209
2	187	257

For tank hole see "SML 1" page 22.

## Ordering information

TAL115  
 Example: TAL115 1 2 3 4 5 6 7 8  
2 F A03 A 1 B M P01

### 1 - Filler cap length

- 1
- 2

### 2 - Connection

- F Flange

### 3 - Filter element

- L10 Resin impregnated cellulose 10  $\mu\text{m}$
- A03 Inorganic microfibre 3  $\mu\text{m}$

### 4 - Seals

- A NBR
- V FPM

### 5 - Strainer

- 0 Without
- 1 L= 120 mm

### 6 - Indicator

- A Without
- B Visual indicator

### 7 - Connection to reservoir

- M Fixing with Metric screws
- U Fixing with UNC screws

### 8 - Options

- P01 MP Standard

# Series **ATS**

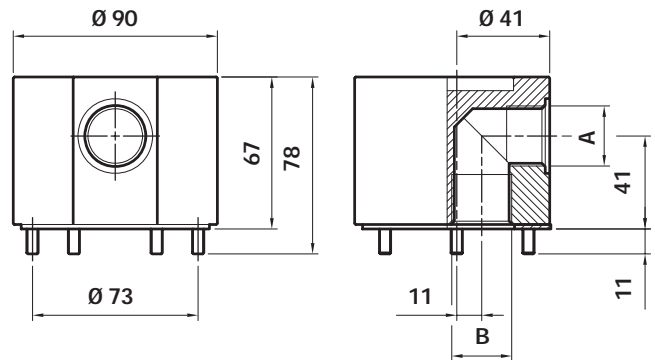
Universal adapter for oil filling to reservoir.  
Possible use with oil filter/air breather filler caps type:

- TA 80
- TAP 90
- TAP 115
- SCS 100 F

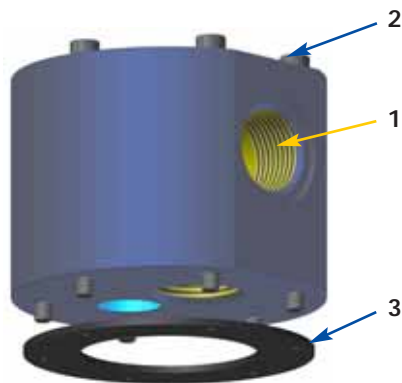
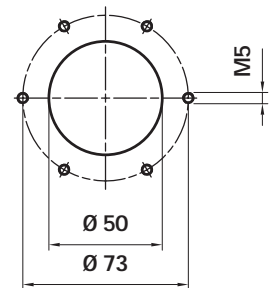
## Dimensions



**Adapter for  
Filler and breather plugs**



**Reservoir  
holes**



- ATS (Materials)
- 1 - Adapter: Anodised Aluminium
  - 2 - Screws: Steel
  - 3 - Seals: NBR  
FPM  
Cork Gasket

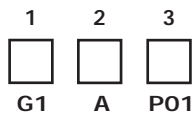
**Weight**  
ATS: 1 Kg

Connection	A	B
G1	G 3/4"	G 3/4"
G2	SAE 12	1 1/16" 12 UN

## Ordering information

Adapter for  
filler caps  
ATS 1

Example: ATS 1



1 - Connection

<b>G1</b>	G 3/4"
<b>G2</b>	SAE 20 (1 1/16" 12 UN)

2 - Seals

<b>A</b>	NBR
<b>B</b>	Cork Gasket
<b>V</b>	FPM

3 - Options

<b>P01</b>	MP Standard
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# AIR BREATHER FILTERS



The comprehensive series of breather filters makes it possible to meet all market demands. Metal and plastic styles suitable for use on mobile equipment are available.

The function of breather filters is to intercept environmental contamination.

The correct use of breather filters ensures longer life of filter cartridges installed in the hydraulic circuit, and in applications where high level of contamination are present.

The use of breather filters calls for the simultaneous installation of plugs for filling and topping up fluids; it is recommended to use plugs complete with strainer for correct prefiltration of the fluid. If the filler plug is equipped with a filter, the filtration degree must be the same as that of the breather filter.

## Temperature

- from -25° to +100°C

## Compatibility

- NBR seals and Cork Gasket, compatible with:  
Mineral oils to ISO 2943 - aqueous emulsions  
Synthetic fluids, glycol water.
- FPM seals, compatible with:  
Synthetic fluids type HS-HFDR-HFDS-HFDU.

Ordering information

**TA46G-N...P01**

With filter



Flow rate with  $\Delta p$ : 0,02 bar

Filtration	l/min
3 $\mu m$	150
10 $\mu m$	200

**Weight**

TA 46: 0,110 kg

Breather filter	1	2	3
<b>TA46</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Example: TA46	G	03	P01

1 - Connection to reservoir

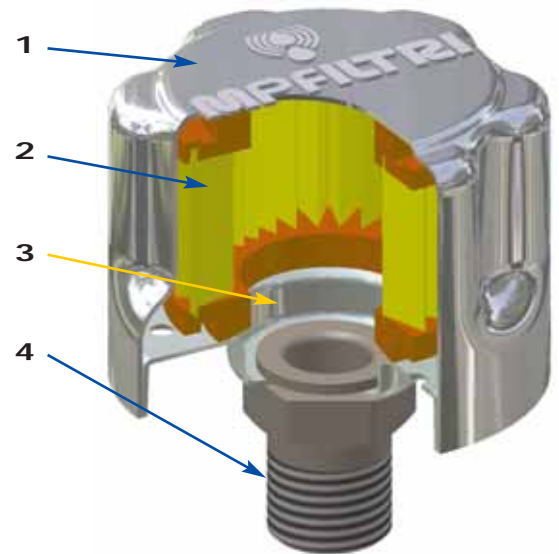
3 - Options

<input type="checkbox"/> G	G 1/4"
<input type="checkbox"/> N	1/4" NPT

P01 MP Standard

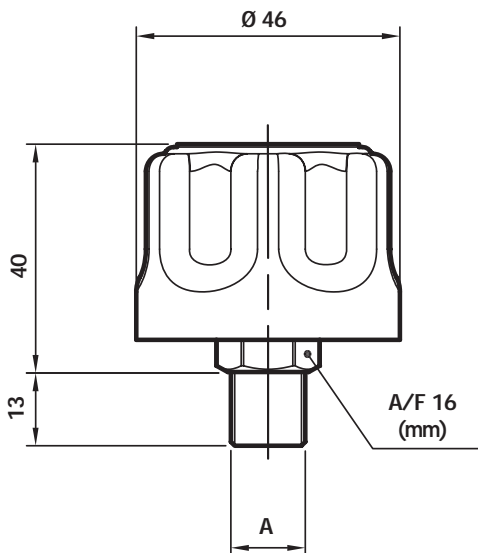
2 - Filter element

<input type="checkbox"/> 03	3 $\mu m$
<input type="checkbox"/> 10	10 $\mu m$



**Dimensions**

**Threaded connection**



Connection	A
G	G 1/4"
N	1/4" NPT

TA46 G - N (Materials)

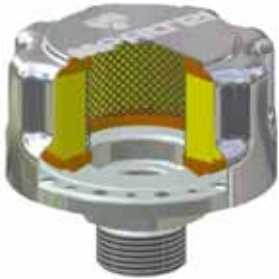
- 1 - Cover: Chrome plated steel
- 2 - Breather filter: Resin impregnated cellulose  
Polyurethane/Stainless steel
- 3 - Flange: Galvanised Steel
- 4 - Threaded connection: Phosphated Steel

# Series TA 80

## Ordering information

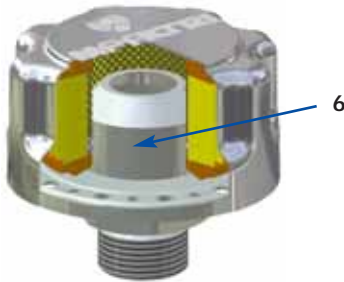
### TA80G.....P01

With filter



### TA80G03.9P01

With anti-slosh feature



### TA80G...A...P01

With filter and pressurisation valve



**Breather filter**  
**TA80**

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Example: TA80 G 03 A 1 P01

#### 1 - Connection to reservoir

G	G 3/4"
N	3/4" NPT

#### 5 - Options

P01	MP Standard
-----	-------------

#### 2 - Filter element

03	3 µm
10	10 µm

#### 3 - Seal

0	Without
A	NBR (pressurised only)

#### 4 - Valves

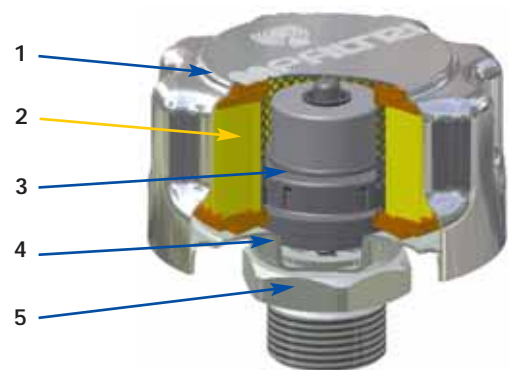
0	Without
1	0.3 bar pressurisation valve
2	0.7 bar pressurisation valve
9	Anti-slosh feature (only with filter element 3 µm)

Flow rate with  $\Delta p$ : 0,02 bar

Filtration	l/min
3 µm	450
10 µm	550

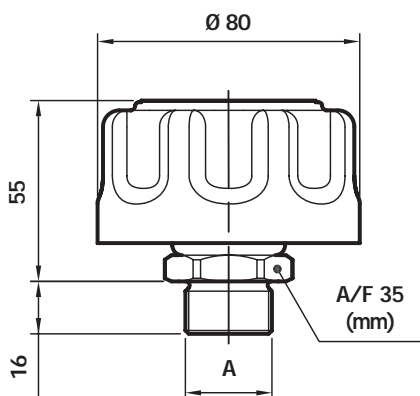
**Weight**  
 TA 80: 0,350 Kg

### TA80



## Dimensions

### Threaded connection



Connection	A
G	G 3/4"
N	3/4" NPT

TA80 G (Materials)

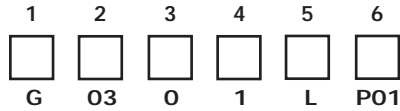
- 1 - Cover: Chrome plated steel
- 2 - Breather filter: Resin impregnated cellulose  
Polyurethane
- 3 - Pressurisation valve: Nylon  
Galvanised Steel  
NBR
- 4 - Flange: Galvanised Steel
- 5 - Threaded connection: Galvanised Steel
- 6 - Anti-slosh feature: Galvanised Steel



**Ordering information**

**Air breathers**  
**TAP90**

Example: TAP90



**1 - Connection to reservoir**

G	M52x2
H	G 1 1/2"
L	G 1 1/4"
M	3/4" NPT
N	1" NPT
Q	G 3/4"

**4 - Pressurisation valve**

0	Without
1	0.3 bar pressurisation valve
2	0.7 bar pressurisation valve

**5 - Variants**

O	Standard
A	With Dipstick
L	With Padlock Hasp
F	With Dipstick and Padlock Hasp

**2 - Filter element**

03	3 µm
10	10 µm

**3 - Seal**

O	Without
A	NBR

**6 - Options**

P01	MP Standard
-----	-------------

**TAP 90 G**  
With filter



TAP90 (Materials)

- 1 - Cover/ringnut: Nylon
- 2 - Breather filter: Resin impregnated cellulose  
Polyurethane
- 3 - Seal: NBR

**Flow rate with Δp: 0,02 bar**

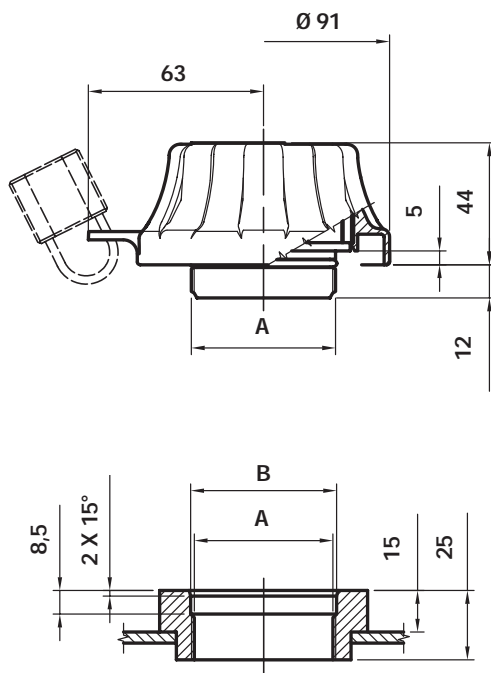
Filtration	l/min
3 µm	450
10 µm	550

**Weight**

TAP 90: 0,130 Kg

**Dimensions**

TAP 90 for connection on weld flange



	A	B
G	M52x2	Ø 52,5
H	G 1 1/2"	Ø 48,5
L	G 1 1/4"	Ø 42
M	3/4" NPT	-
N	1" NPT	-
Q	G 3/4"	-

**TAP G**  
With Pressurisation



**TAP G**  
With Dipstick



# SAP

Series

# 054 - 075

## SAP 054 - 075



SAP 054 - 075 (Materials)

- 1 - Cover: Nylon
- 2 - Connection: Nylon
- 3 - Filter element: Resin impregnated cellulose

Flow rate with  $\Delta p$ : 0,02 bar

Filtration	l/min
<b>SAP 054</b>	
3 $\mu$ m	200
10 $\mu$ m	250
<b>SAP 075</b>	
3 $\mu$ m	350
10 $\mu$ m	400

### Weights

SAP 054: 0,060 Kg  
SAP 075: 0,150 Kg

## Ordering information

<b>Breather filter</b>	1	2	3	4	5
<b>SAP</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Example: SAP</b>	<b>075</b>	<b>G4</b>	<b>L10</b>	<b>A</b>	<b>PO1</b>

<b>Filter element</b>	1	3
<b>Example:</b>	<b>A7</b>	<b>L10</b>

### 1 - Size

Filter	Filter element
<b>054</b>	<b>A4</b>
<b>075</b>	<b>A7</b>

### 3 - Filter element

<b>L03</b>	Resin impregnated cellulose 3 $\mu$ m
<b>L10</b>	Resin impregnated cellulose 10 $\mu$ m

### 2 - Connessione al serbatoio

	SAP 054	SAP 075
<b>G1</b>	G 3/8"	G 1/2"
<b>G2</b>	G 1/2"	G 3/4"
<b>G3</b>	-	-
<b>G4</b>	1/2" NPT	1/2" NPT
<b>G5</b>	-	3/4" NPT

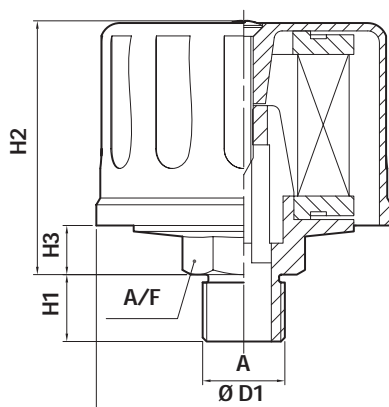
### 4 - Seal

<b>A</b>	NBR
----------	-----

### 5 - Opzioni

<b>PO1</b>	MP Filtri
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## Dimensions



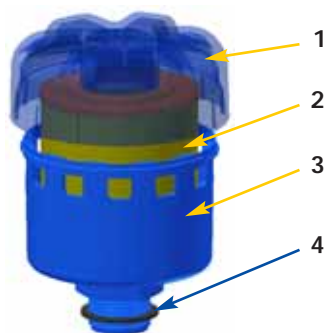
### Connection to reservoir " A "

Type SAP	G1	G2	G3	G4	G5
<b>054</b>	G 3/8"	G 1/2"	-	1/2" NPT	-
<b>075</b>	G 1/2"	G 3/4"	-	1/2" NPT	3/4" NPT

### Dimensions

Type SAP	D1	H1	H2	H3	A/F (mm)
<b>054 G1</b>	54	13,5	51	8	22
<b>054 G2</b>					27
<b>054 G4</b>					27
<b>075 G1</b>	75	17	64	9	32
<b>075 G2</b>					27
<b>075 G4</b>					27
<b>075 G5</b>					32

## Nylon breather filter



SAP115 (Materials)

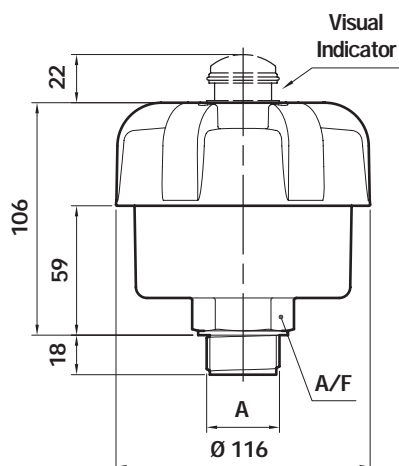
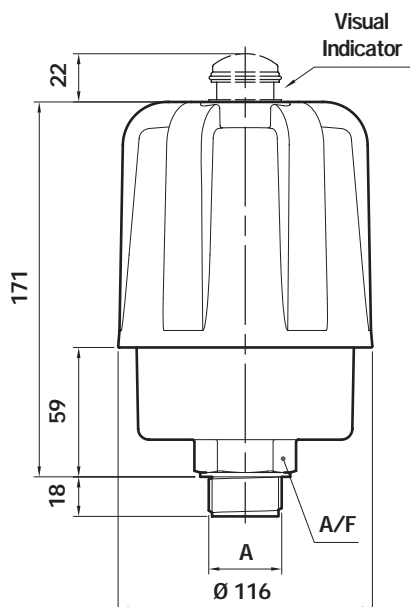
- 1 - Cover: Nylon
- 2 - Breather filter: Resin impregnated cellulose  
Inorganic microfibre
- 3 - Connection: Nylon
- 4 - Seals: NBR  
FPM



### Clogging indicator

Set pressure: - 0.062 bar ± 10 %

Manual reset



# Series SAP 115

## Ordering information

### Breather filter SAP115

Example: SAP115

### Filter element A115

Example: A115

### 1 - Length

1
2

### 2 - Connection

A	G 1"
B	M33x2
C	G 1 1/2"

### 3 - Filter element

L10	Resin impregnated cellulose 10 µm
A03	Inorganic microfibre 3 µm

### 4 - Seals

A	NBR
V	FPM

1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	A	A03	A	1	B	P01
1	3	7				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
2	A03	P01				

### 5 - Variants

0	Without
1	With anti-slosh feature

### 6 - Indicator

A	Without
B	Visual indicator

### 7 - Options

P01	MP Standard
-----	-------------

### Flow rate with Δp: 0,02 bar

TYPE	Flitration	I/min	
		SAP 115 1	SAP 115 2
G 1"	L10	2170	2800
	A03	1830	2800
G 1 1/2"	L10	2330	3000
	A03	1995	3000

### Weight

SAP 115 1: 0,410 Kg  
SAP 115 2: 0,525 Kg

## Dimensions

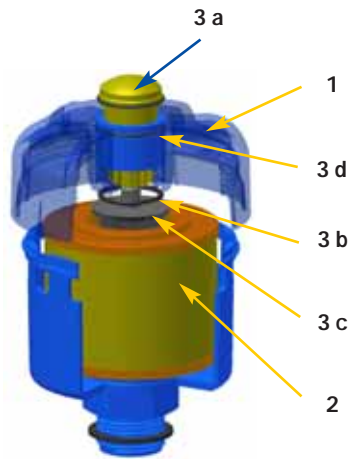
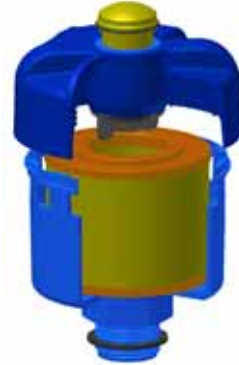
Connection	A	A/F (mm)
A	G 1"	41
B	M33x2	41
C	G 1 1/2"	55

## Changing the filter element in breather filters series SAP 115

1 Thoroughly clean the plug and adjacent parts.

2 Unscrew and raise the cover.

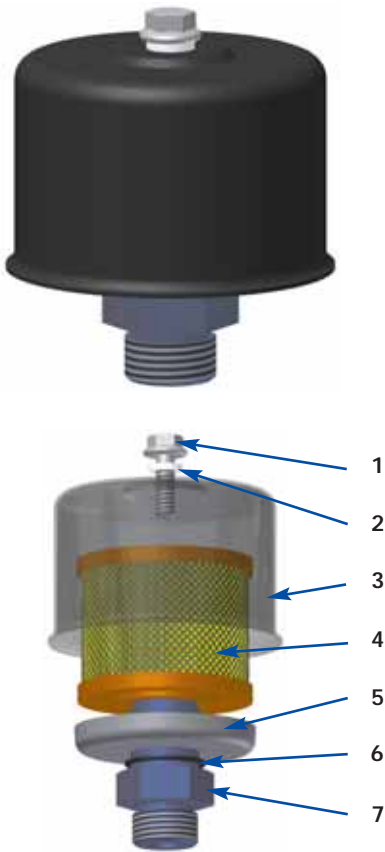
3 Renew the filter element and screw the cover fully home into the cartridge (DO NOT OVER TIGHTEN).



### SAP 115 spare parts

Pos.	Description	Q.ty	Plug series SAP 115	
1	Complete plug	1	See order table	
2	Filter Element	1	See order table	
3	Indicator Kit	1	NBR 02005187	FPM 02005188
3a	Visual indicator	1	S62P01	
3b	Seal	1	O-R 3106 Ø 26,64 X 2,62	
3c	Indicator securing screw	1	01022670	
3d	O-R indicator	1	OR 2112 Ø 28,3 x 1,78	

SA



Ordering information

**Breather filter**  
**SA**  
 Example: SA

	1	2	3	4	5
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	075	G4	L10	A	P01

**Filter element**  
 Example:

	1	3
	<input type="checkbox"/>	<input type="checkbox"/>
	A7	L10

1 - Size

Filter
036
053
075
115
145
185

Filter element
A05
A5
A7
A8
A10
A11

3 - Filter element

L03	Resin impregnated cellulose 10 µm (O36 excluded)
L10	Resin impregnated cellulose 10 µm
S	Without

4 - Seal

A	NBR
---	-----

5 - Options

P01	MP Standard
-----	-------------

2 - Connection to reservoir

Type	G1	G2	G3	G4	G5	G6
036	G 1/4"	G 3/8"	G 1/2"	1/4" NPT	3/8" NPT	1/2" NPT
053	G 1/4"	G 3/8"	-	1/4" NPT	3/8" NPT	-
075	G 1/2"	G 3/4"	-	1/2" NPT	3/4" NPT	-
115	G 1"	-	-	1" NPT	-	-
145	G 1 1/2"	-	-	1 1/2" NPT	-	-
185	G 2 1/2"	-	-	2 1/2" NPT	-	-

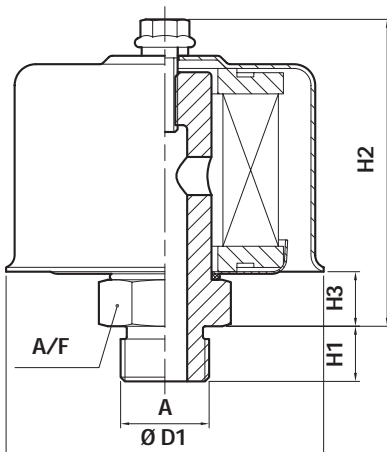
SA (Materials)

- 1 - Screw: Galvanised Steel
- 2 - Washer: Teflon
- 3 - Cover: Steel
- 4 - Filter element: Plastisol  
Galvanised steel mesh  
Resin impregnated cellulose
- 5 - Ring: Galvanised Steel
- 6 - Seal: NBR
- 7 - Connection: Anodised Aluminium  
Galvanised Steel

Connection to reservoir " A "

Type	G1	G2	G3	G4	G5	G6	Weight (Kg)
036	G 1/4"	G 3/8"	G 1/2"	1/4" NPT	3/8" NPT	1/2" NPT	0,080
053	G 1/4"	G 3/8"	-	1/4" NPT	3/8" NPT	-	0,150
075	G 1/2"	G 3/4"	-	1/2" NPT	3/4" NPT	-	0,260
115	G 1"	-	-	1" NPT	-	-	0,400
145	G 1 1/2"	-	-	1 1/2" NPT	-	-	0,590
185	G 2 1/2"	-	-	2 1/2" NPT	-	-	1,220

Dimensions

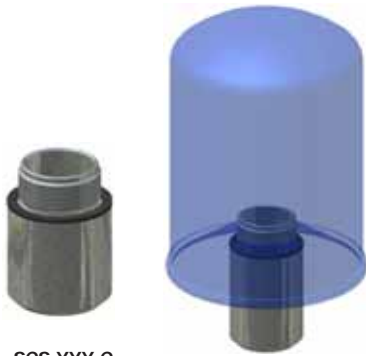


Dimension

Type	D1	H1	H2	H3	A/F (mm)
036	36	13	36,5	9	22
053	53	13	52,5	7	22
075 G1		13			27
075 G2	75	17	68,5	11,5	32
075 G4		15			27
075 G5		20			32
115	115	17	80	11	38
145	145	25	115	13	55
185	185	25	164	23	80

Flow rate with Δp: 0,02 bar

Type	3 µm	10 µm
	l/min	
036	-	140
053	250	250
075	350	400
115	800	850
145	1800	1850
185	5300	5500



SCS XXX C



SCS XXX F

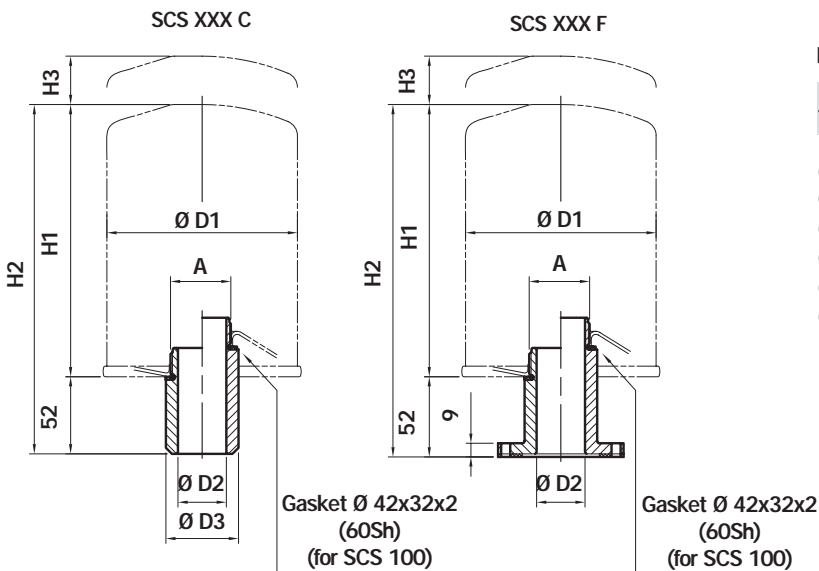
Flow rate with  $\Delta p$ : 0,02 bar

Type	Filtration l/min	
	P10	A03
SCS 050	P10	550
	A03	515
	A10	530
SCS 070	P10	550
	A03	515
	A10	530
SCS 100	P10	1415
	A03	1300
	A10	1330
SCS 150	P10	1415
	A03	1300
	A10	1330

SCS (Materials)

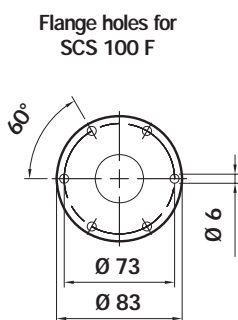
Riser: Galvanised steel

## Dimensions

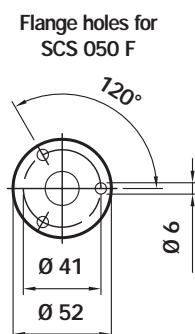


Dimension SCS - CS - CG

Type	D1	H1	H2	H3	Weight (Kg)
CS/CG050	96	143	195	20	0,73
CS/CG070	96	210	262	20	0,95
CS100	129	180	232	25	1,3
CS150	129	220	272	25	1,6
CG100	129	180	232	30	1,3
CG150	129	265	317	30	1,6



Flange holes for SCS 100 F



Flange holes for SCS 050 F

SCS Riser dimensions

Type	A	D2	D3	Weight (Kg)
SCS050...G1	G 3/4"	18	32	0,200
SCS050...G2	1" 12 UN	18	32	0,265
SCS100...G1	G 1 1/4"	32	48	0,450
SCS100...G2	1 1/2" 16 UN	32	48	0,645



# FILLER CAPS



The series TK range of filler caps is composed of styles with breather filter, dipstick for measuring the reservoir fluid level and anti-slosh fins to prevent spillage of oil from the reservoir on mobile equipment.

#### Temperature

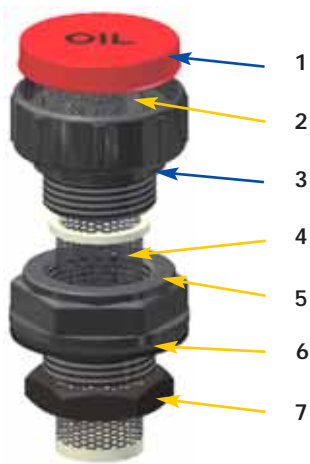
- from -25° to +100°C

#### Compatibility

- Mineral oils to ISO 2943 - aqueous emulsions  
Synthetic fluids, glycol water.



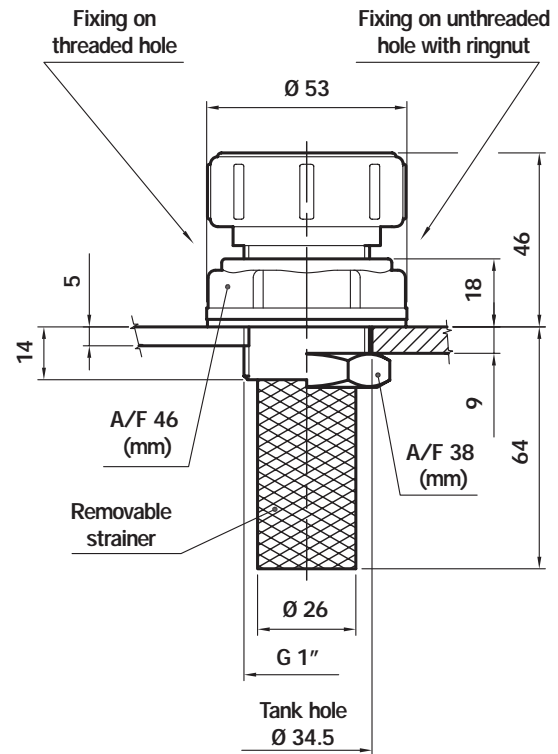
Dimensions



TC50 ((Materials)

- 1 - Cover: Nylon
- 2 - Breather filter: Galvanised steel wire
- 3 - Filler cap: Nylon
- 4 - Strainer: Galvanised Steel/Nylon  
AISI 304 Stainless steel/Nylon
- 5 - Collar: Nylon
- 6 - Seal: Inorganic fibre
- 7 - Ringnut: Phosphated steel

**TC50G1.....P01**  
**Threaded reservoir**



Weight

- TC 50 G1: 0,070 Kg
- TC 50 GA: 0,100 Kg



**TC50GA.....P01**  
**Unthreaded hole in reservoir**



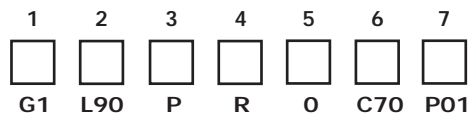
Codice per l'ordinazione

Filler

filler caps series

TC50

Example: TC50



1 - Connection

- G1 G 1"
- GA With ringnut

2 - Filter element

- L90 Steel

3 - Seals

- P Inorganic fibre

4 - Cover colour

- R Red
- G Yellow

5 - Cover wording

- O Oil
- N Neutral

6 - Strainer

- C70 Strainer L= 70 - Galvanised steel.
- I70 Strainer L= 70 - AISI 304 Stainless steel
- S Without strainer

7 - Options

- P01 MP Standard



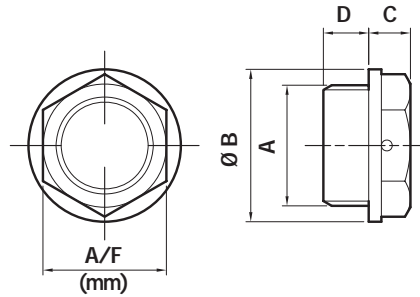
TKT (Materials)

- 1 - Body: Nylon
- 2 - Seals: NBR  
Inorganic fibre
- 3 - Labyrinth: Nylon
- 4 - Anti-slosh feature: Nylon
- 5 - Dipstick: Phosphated steel

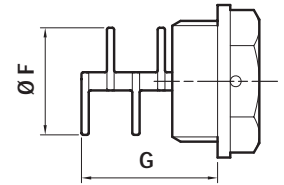
Quantity per pack  
Number of Parts

TKT 25

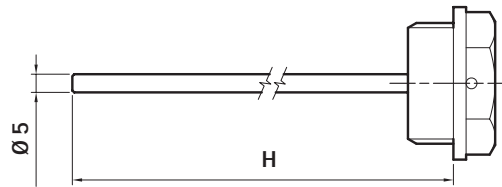
TKT\*\*\*\*S



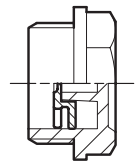
TKT\*\*\*\*F



TKT\*\*\*\*A



TKT\*\*\*\*L

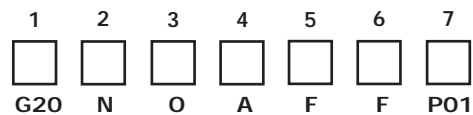


Size	A	ØB	C	A/F (mm)	D	ØF	G	H
G13	G 1/4"	20	7	17	9	-	-	206
G16	G 3/8"	22	8	18	10	13,5	33	207
G20	G 1/2"	28	8	22	11	17,5	34	208
G26	G 3/4"	35	9	27	12	23,5	35	209
G33	G 1"	42	11,5	34	12,5	29,5	37,5	202,5
G42	G 1 1/4"	52	12	42	13	38	40	203
G48	G 1 1/2"	58	14	47	13	38	38	203
G60	G 2"	74	14	64	20	-	-	200

N.B. Seals thickness 2 mm.  
Recommended tightening torque 10÷15 Nm.

Threaded round filler caps

TKT  
Example: TKT



1 - Size

- 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"

2 - Colour

- N** Black nylon

3 - Cover wording

- N** Neutral
- O** Oil

Ordering information

4 - Seal

- A** NBR  
x TKT\*\*\*\*F and TKT\*\*\*\*A
- B** Inorganic fibre  
x TKT\*\*\*\*S and TKT\*\*\*\*L

5 - Style

- S** Without breather
- F** Breather hole

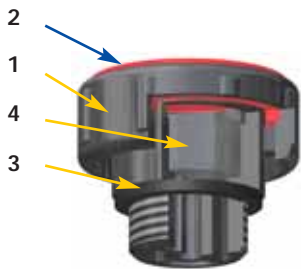
6 - Accessories

- S** Without
- A** Standard dipstick
- F** Anti-slosh feature (except G13-G60)
- L** Labyrinth filter (except G33-G42-G48-G60)

7 - Options

- PO1** MP Standard

Dimensions



TSD (Materials)

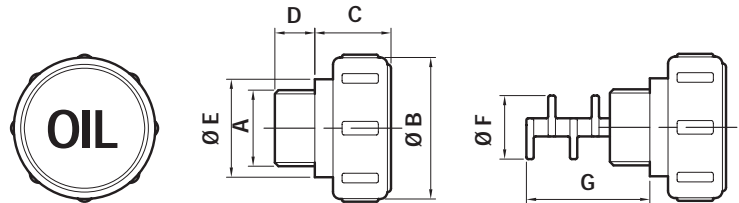
- 1 - Body: Nylon
- 2 - Cover: Nylon
- 3 - Seal: NBR
- 4 - Filter: Galvanised steel
- 5 - Anti-slosh feature: Nylon
- 6 - Dipstick: Phosphated steel



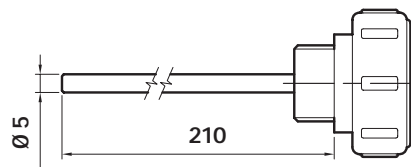
Quantity per pack  
Number of Parts  
TSD 25

TSD\*\*\*\*S

TSD\*\*\*\*F



TSD\*\*\*\*A



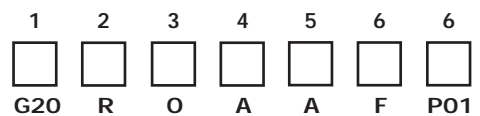
Size	A	Ø B	C	D	Ø E	Ø F	G
G16	G 3/8"	35	21	10	23	13,5	36
G20	G 1/2"	39	21	11	27	17,5	36
G26	G 3/4"	45	21	12	33	23,5	37
G33	G 1"	51	24,5	13	39	29,5	44
G42	G 1 1/4"	66	29,5	14	54	38	47
G48	G 1 1/2"	66	29,5	14	54	38	47

N.B. Seals thickness 2 mm.  
Recommended tightening torque 10÷15 Nm.

Ordering information

Threaded  
round  
filler caps  
TSD

Example: TSD



1 - Size

- 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"

2 - Cover colour

- R Red
- Y Yellow

3 - Cover wording

- N Neutral
- O Oil
- G Gasoil

4 - Seal

- A NBR

5 - Filter

- A Steel
- O Without (for "Gasoil" only)

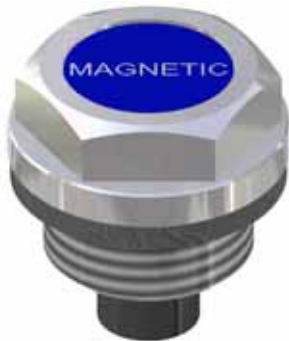
6 - Accessories

- S Without
- A Standard dipstick
- F Anti-slosh feature

7 - Options

- P01 MP Standard

## Dimensions



TKM (Materials)

Body: Aluminium

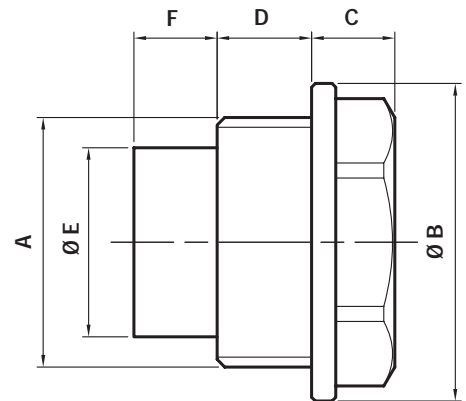
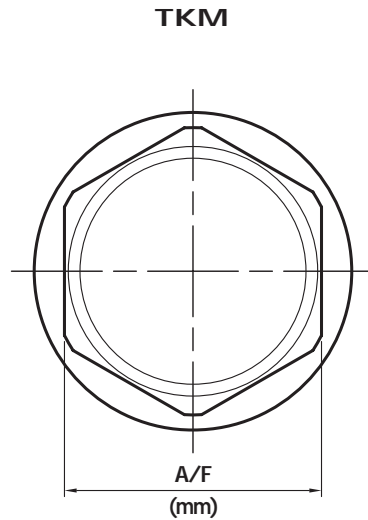
Seal: Inorganic fibre

**Temperature**

- from -25° to +100°C

**Compatibility**

- Only mineral oils to ISO 2943



Size	A	Ø B	C	D	Ø E	F	A/F (mm)
G13	G 1/4"	19	4,5	7	9,5	6	15
G16	G 3/8"	22	8	9	8	6	18
G20	G 1/2"	28	8	9	10	8	22
G26	G 3/4"	35	9	10	12	11	27
G33	G 1"	42	11	12,5	25	11	37

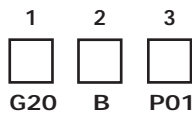
N.B. Seals thickness 2 mm.

Recommended tightening torque 10-15 Nm.

## Ordering information

Threaded  
round  
plug  
TKM

Example: TKM



## 1 - Size

G13	G 1/4"
G16	G 3/8"
G20	G 1/2"
G26	G 3/4"
G33	G 1"

## 2 - Seals

B	Inorganic fibre
---	-----------------

## 3 - Options

P01	MP Standard
-----	-------------

# VISUAL LEVEL INDICATORS



## LV...

The 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. Series LV... level indicators are available with fixing centre distance from 76 to 1000 mm.

## LVK

This level indicator series is available with electric alarm and visual and electrical temperature switches, level indicators are available with fixing centre distance from 76 to 254 mm.

## LC...

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

These indicators are available in three configurations, with transparent plastic body and with black body, and an aluminum body version. Fixing to reservoirs with unthreaded holes or reduced thickness can be achieved using series LCC/T equipped with expansion kit.

### Temperature

- LVA: from -25° to +100°C
- LVU: from -25° to +70°C
- LVU: from -25° to +100°C (only with pyrex lens)
- LVK/LC...: from -20° to +80°C

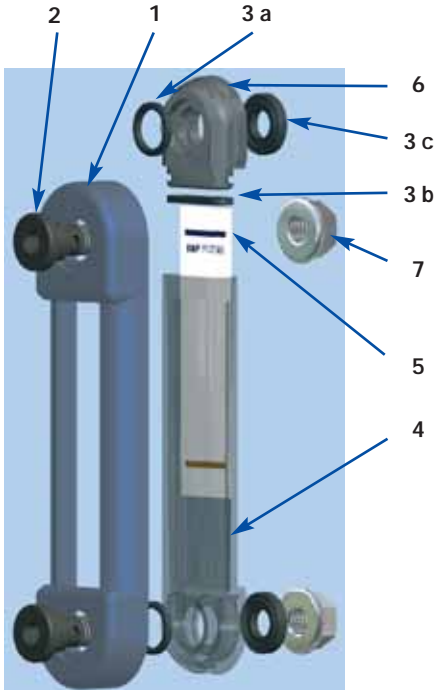
### Compatibility

#### LVA/LVK/LVU

- NBR seals and Cork Gasket, compatible with: Mineral oils to ISO 2943 - aqueous emulsions Synthetic fluids, glycol water.
- FPM seals, compatible with: Synthetic fluids type HS-HFDR-HFDS-HFDU.

#### LC...

- Mineral oils to ISO 2943 - aqueous emulsions Synthetic fluids, glycol water.



LVA (Materials)

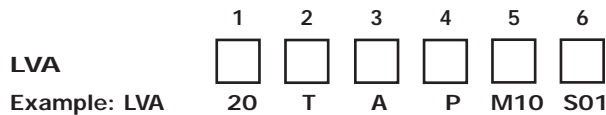
- 1 - Cover: Polyamide
- 2 - Screws: Phosphated steel
- 3 - Seals: NBR  
FPM
- 4 - Lens: Polyamide
- 5 - Nameplate: Painted aluminium
- 6 - Terminal cap: Nylon
- 7 - Nuts: Galvanised steel

Quantity per pack  
Number of Parts

LVA 10

Screw tightening torque: 15Nm

LVA20T.....S01



1 - Size

- 10
- 20
- 30

2 - Accessories

- S Without thermometer
- T With thermometer

3 - Seals

- A NBR
- V FPM

4 - Cover

- P Cover polyamide

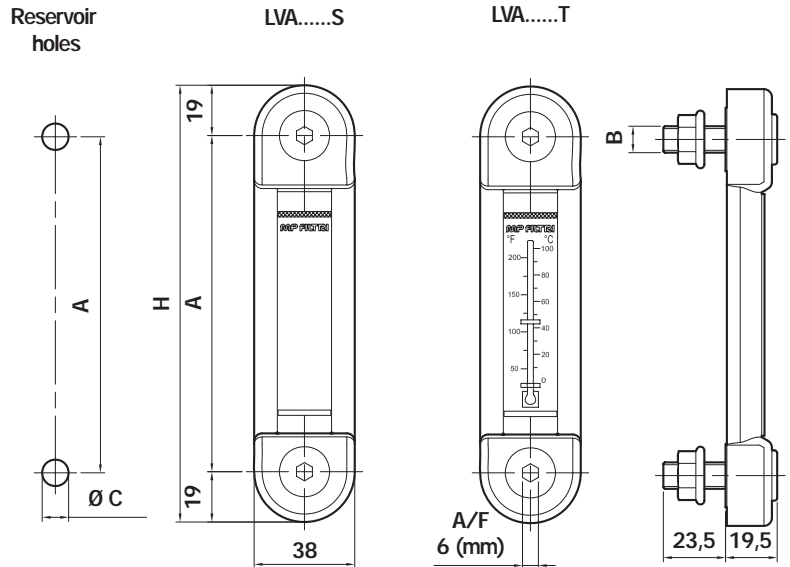
5 - Connection

- M10 Screws M10
- M12 Screws M12
- U38 Screws 3/8" UNC
- U12 Screws 1/2" UNC

6 - Options

- S01 With nuts - Tag MP Filtri
- S02 Without nuts - Tag MP Filtri

Dimensions



Size	A	H	Weight (Kg)
LVA10	76	114	0,13
LVA20	127	165	0,18
LVA30	254	292	0,23

Type	B	C
LVA.....M10	M10	10,5
LVA.....M12	M12	12,5
LVA.....U38	3/8" UNC	10
LVA.....U12	1/2" UNC	13,5

Ordering information

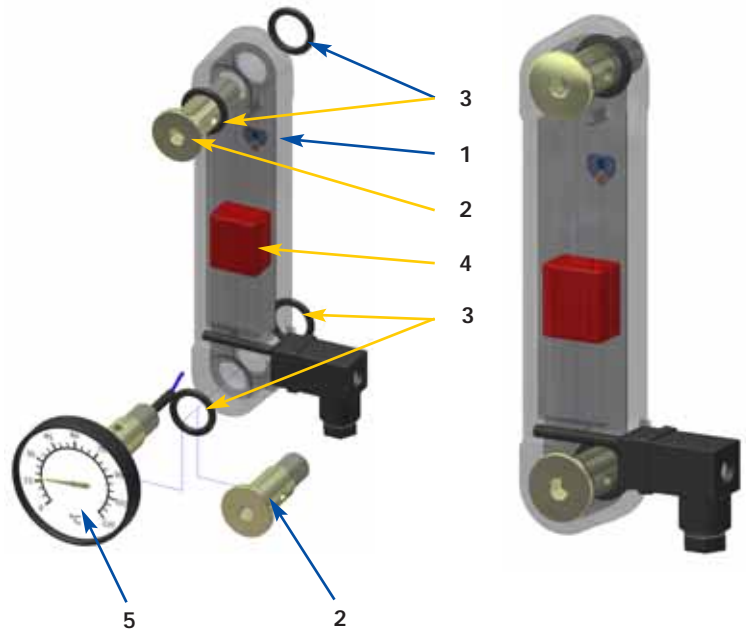
### Description

Visual/electric level indicator with temperature controls for both static and mobile applications. Completely transparent, it provides a view of the fluid over the entire length, both from the front and on both sides. The quality and thickness, 4 millimetres, of the construction material provides the utmost dependability and mechanical strength without any need for additional protection.

### LVK (Materials)

- 1 - Body: Polyamide
- 2 - Screws: Nickel plated brass (Standard)  
AISI 316 (Option)
- 3 - Seals: NBR (Standard)  
FPM (Option)
- 4 - Float: Polyamide
- 5 - Sensor thermometer: Screw + thermometer

**Temperatures:** from -20°C to +80°C  
**Screw tightening torque:** 10Nm

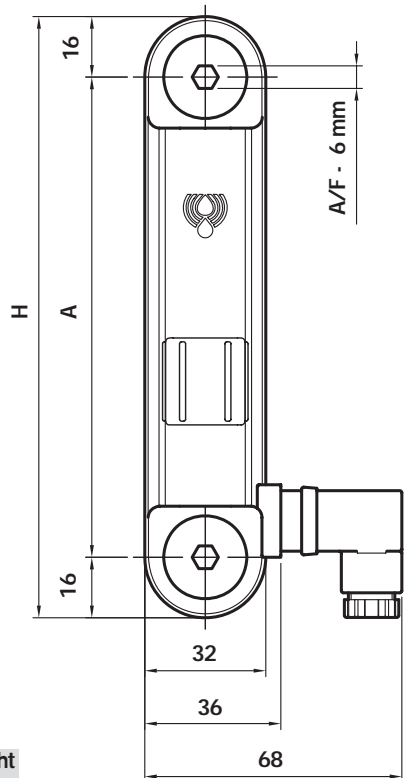
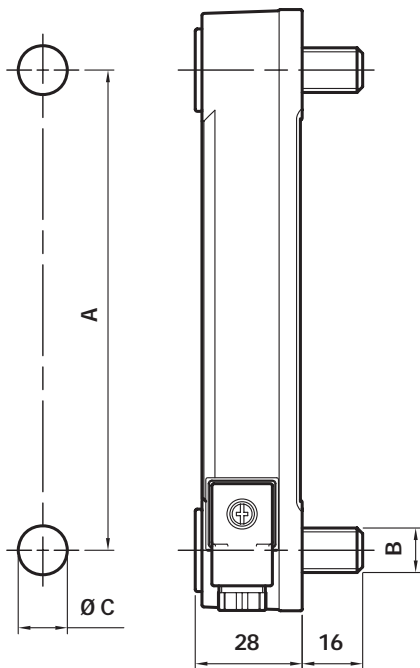


### Compatibility

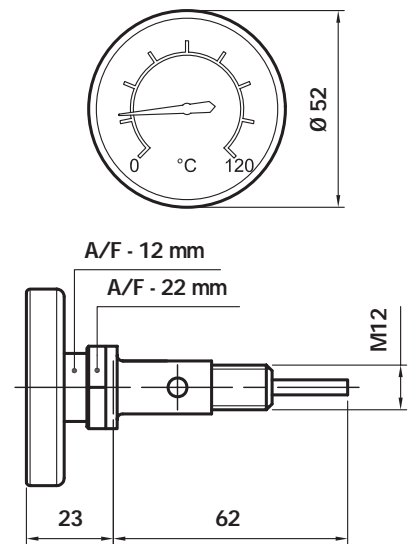
- NBR seals, compatible with:  
Mineral oils to ISO 2943 - aqueous emulsions  
Synthetic fluids, glycol water.
- FPM seals, compatible with:  
Synthetic fluids type HS-HFDR-HFDS-HFDU.

## Dimensions

Reservoir holes



Sensor thermometer



Weight (Kg)

TV12 0,100 Kit Sensor thermometer + Screw M12

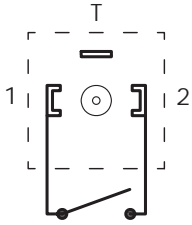
Size	A	H	Weight (Kg)
LVK10	76	108	0,14
LVK20	127	159	0,17
LVK30	254	286	0,25

Type	B	C
LVK.....M10	M10	10,5
LVK.....M12	M12	12,5

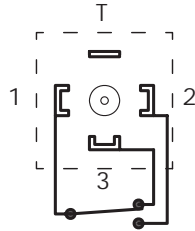
## Combination of available electrical contacts

### Electrical contact with no liquid

Normally open  
N.O.

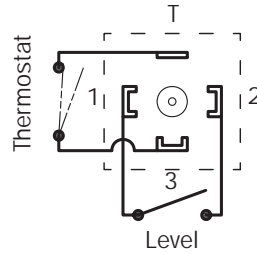


SPDT  
Switch

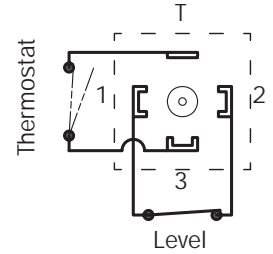


### Electrical contact with no liquid + thermostat

Normally  
open N.O.



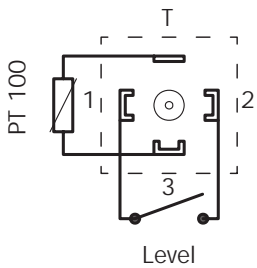
Normally  
closed N.C.



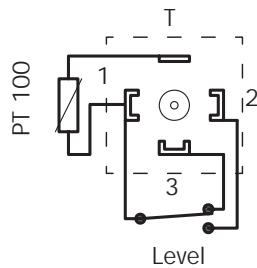
Available thermostated contact N.C. - N.O. in both setups

### Electrical contact with no liquid + PT 100

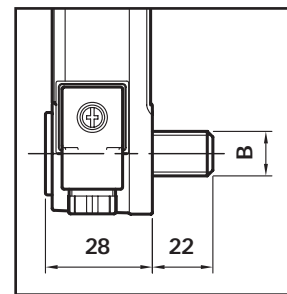
Normally  
closed N.O.



SPDT  
Switch



### Dimension inferior screw electrical contact + thermostated or PT 100



### Thermostat electrical specifications

Voltage: 250 V Switchable

Frequency: 50 Hz

Load values: 4.0 A.  $\cos \varphi 0.6$  (IMOT)

6,3 A.  $\cos \varphi 1$  (IN)

Max load: 10 A.  $\cos \varphi 1$

Switching temperature: 50°C - 60°C - 70°C

Tolerances:  $\pm 5^\circ\text{C}$

### Electrical specifications

Contact with no liquid

	N.O. N.C.	Switch
D.C. Switchable Power	40 W	20 W
D.C. current intensity - A.C.	40 V.A.	-
Switchable voltage	2 A	1 A
Voltage switchable	230 V	150 V



	1	2	3	4	5	6	7
<b>LVK</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Example: LVK	20	A	M12	1	S	S	P01

**1 - Size**

- 10
- 20
- 30

**2 - Seal**

A	NBR
---	-----

**3 - Connection**

M10	Screws M10
M12	Screws M12 (Standard)

**4 - Electrical contacts with no liquid\***

1	N.A.
2	N.C.
3	Switch SPDT

**5 - Style**

S	Standard	} Only for connection <b>M12</b>
T	Thermostatted	
P	PT 100	

**6 - Thermostated**

S	Standard Without	} Only for style T
1	50° N.A.	
2	60° N.A.	
3	70° N.A.	
5	50° N.C.	
6	60° N.C.	
7	70° N.C.	

**7 - Options**

P01	MP Standard
-----	-------------

\* Available electrical contacts see page 49

**Accessories/Options\***

<b>TV12</b>	Kit w/ Sensor thermometer Screw M12
<b>M10 X</b>	Kit w/ Screws M10 stainless steel AISI 316
<b>M12 X</b>	Kit w/ Screws M12 stainless steel AISI 316
<b>02050432</b>	Kit w/ FPM seals

\* All the accessories are supplied separately from code LVK

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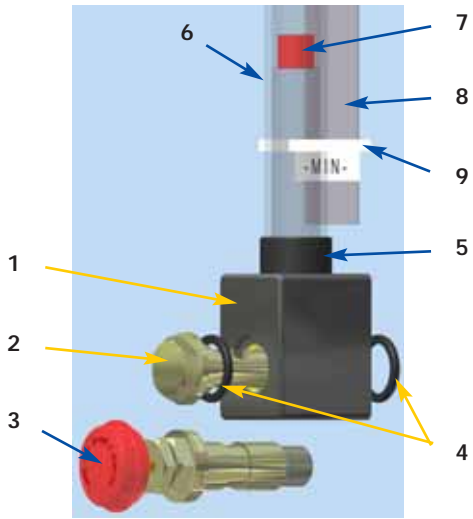
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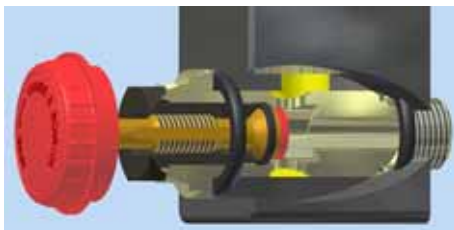
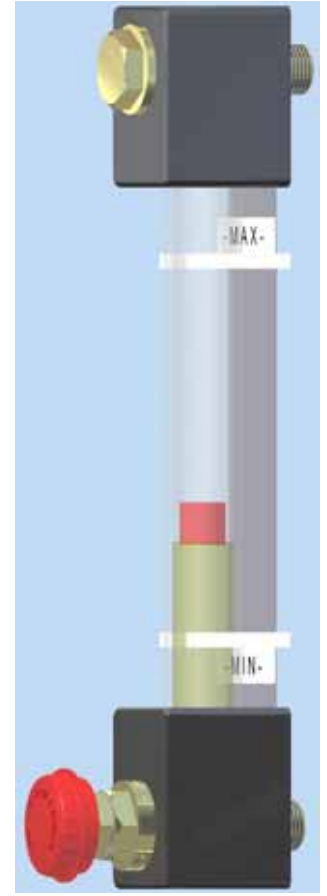
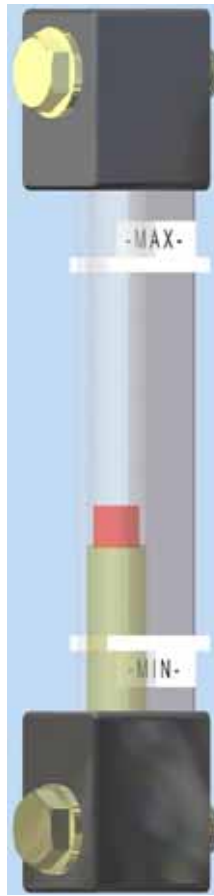
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LVU (Materials)

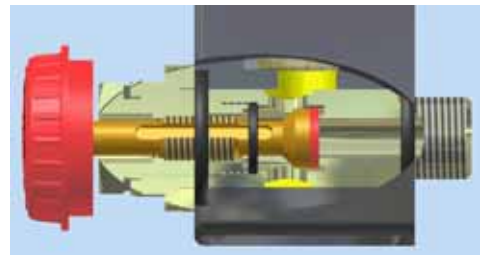
- 1 - Head: Nylon
- 2 - Connection G 3/8": Nickel plated brass
- 3 - G 3/8" valve: Steel
- 4 - Seal: NBR
- 5 - Pipe Seal: NBR
- 6 - Pipe: Acrylic  
Pyrex
- 7 - Float: Nylon
- 8 - Protection: Aluminium
- 9 - Clamps MIN - MAX: Nylon



Open the valve completely.

Allows the oil to flow from the reservoir to the level tube.

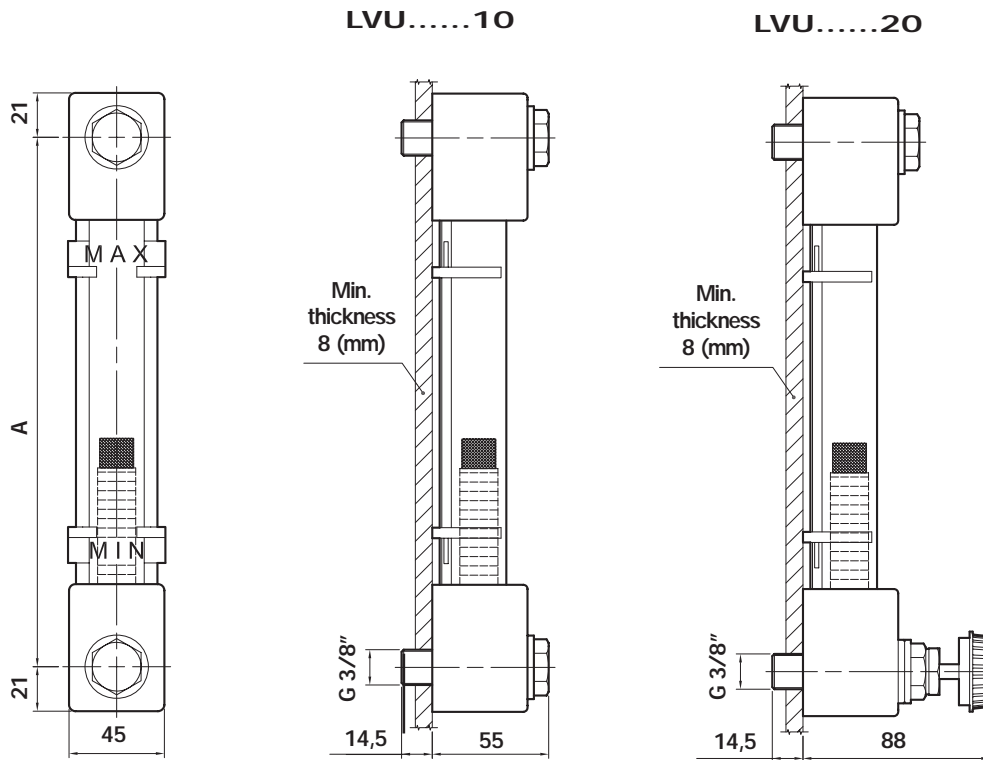
**ATTENTION** - The intermediate valve opening or closing position allows the oil to flow from the reservoir to the exterior.



Close the valve fully.

Stops the oil flow from the reservoir to the level tube.

Allows the oil to be discharged from the level tube to an external container.



## LVU spare parts

Pos.	Description	Q. ty	LVU
1	Seals kit	1	02050130
4	O-Ring	4	OR 4181 Ø 20,22 x 3,53
2	Fixing element kit series 10	1	02049014
2	G 3/8" connection	2	
3	Fixing element kit series 20	1	02049015
2	G 3/8" connection	1	
3	G 3/8" bibcock	1	

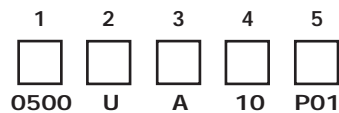
Weights	Version U (Kg)	Version S (Kg)
0500	0,780	0,580
1000	1,150	0,790
1500	1,550	1,100
2000	1,950	1,400

Size	A (mm)
0500	500
1000	1000
1500	1500
2000	2000

## Ordering information

### Visual level indicator series LVU

Example: LVU



#### 1 - Size

0500	Dimension "A" in mm
1000	Dimension "A" in mm
1500	Dimension "A" in mm
2000	Max. dimension "A" in mm
XXXX	Dimension "A" in mm (on request)

#### 2 - Variants

S	Standard
U	"U" protection
P	"U" protection + Pyrex lens (max size 1500)

#### 3 - Seal

A	NBR
---	-----

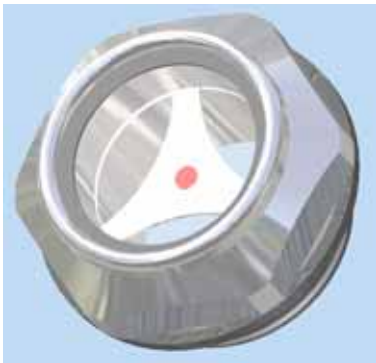
#### 4 - Filter

10	2 G 3/8" connections
20	1 G 3/8" connection + 1 valve

#### 3 - Options

P01	MP Standard
-----	-------------

# Series LCP\*\*\*M

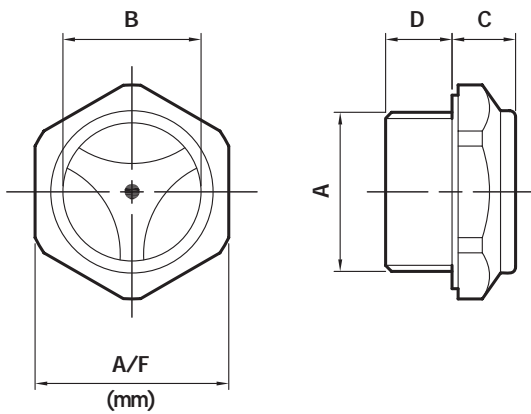


LCP\*\*\*M\*\* (Materials)

- 1 - Body: Aluminium
- 2 - Lens: Thermoplastic
- 3 - Contrast screen: Nylon
- 4 - Seal: Inorganic fibre

## Dimensions

LCP\*\*\*M\*\*



Size	A	B	C	D	A/F (mm)
G20	G 1/2"	16	9	10	27
G26	G 3/4"	20	10	12	32
G33	G 1"	25	11	14	40

N.B. Seals thickness 2 mm.  
Recommended tightening torque 10÷15 Nm.

### Spare parts

Size	Seal Inorg. fibre
G20	1.026.902
G26	1.026.903
G33	1.026.905

## Ordering information

### Threaded sight plug

LCP\*\*\*M

Example: LCP

1 - Size

G20	G 1/2"
G26	G 3/4"
G33	G 1"

2 - Material

M	Metal (Aluminium)
---	-------------------

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G20	M	C	B	P01

3 - Accessories

C	Baffle
---	--------

4 - Seal

B	Inorganic fibre
---	-----------------

3 - Options

P01	MP Standard
-----	-------------

Quantity per pack  
Number of Parts

LCP/M	25
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Standard view



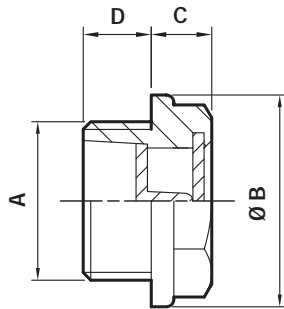
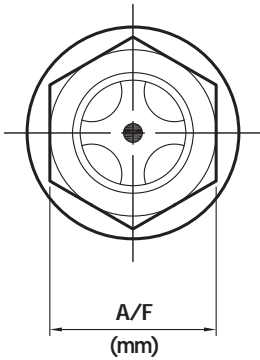
With view contrast and Expansion kit

LCP\*\*\*N\*\*\*\*\* (Materials)

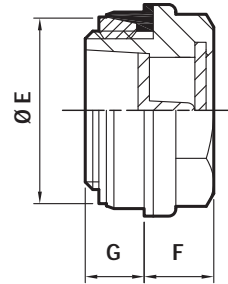
- 1 - Body: Nylon
- 2 - Lens: Thermoplastic
- 3 - Contrast screen: Nylon
- 4 - Seals: NBR  
Inorganic fibre
- 5 - Expansion kit: Brass - NBR

## Dimensions

LCP\*\*\*N\*\*S



LCP\*\*\*N\*\*K



Size	A	ØB	C	D	A/F (mm)	ØE	F	G
G13	G 1/4"	20	7	9	17	-	-	-
G16	G 3/8"	22	8	9	18	19,5	9,2	7,8
G20	G 1/2"	28	8	9	22	25,5	9,2	7,8
G26	G 3/4"	35	9	10	27	29,5	10,5	8,5
G33	G 1"	42	11,5	12,5	34	39	13	11
G42	G 1 1/4"	52	12	13	42	49	13,5	11,5
G48	G 1 1/2"	58	14	13	47	54	15,5	11,5
G60	G 2"	74	14	20	64	-	-	-

### Spare parts

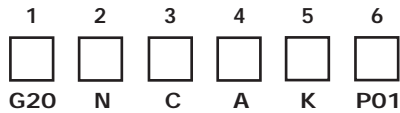
Size	Expansion kit
-	-
G16	2026020
G20	2026021
G26	2026019
G33	2026023
G42	2026025
G48	2026026
-	-

N.B. Recommended tightening torque 10 Nm.

## Ordering information

Threaded sight plug LCP\*\*\*N

Example: LCP



### 1 - Size

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"

### 2 - Material

**N** Black nylon

### 3 - Accessories

**S** Standard view (G13 only)

**C** Baffle

### 4 - Seal

**A** NBR (only K)

**B** Inorganic fibre

Quantity per pack  
Number of Parts

LCP/N 25

Ø hole for Expansion kit

Size	Diameter
G16	Ø 20
G20	Ø 26
G26	Ø 30
G33	Ø 40
G42	Ø 50
G48	Ø 55

### 5 - Expansion kit

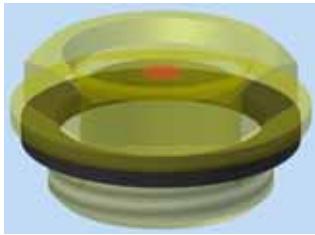
**S** Without

**K** Expansion kit (for except G13)

### 6 - Options

**P01** MP Standard

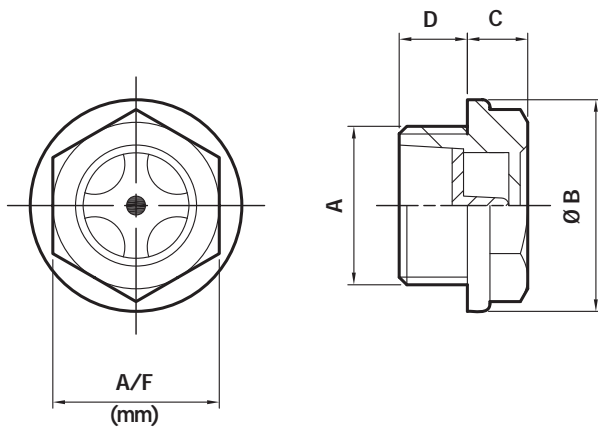
# Series LCP\*\*\*T



- LCP\*\*\*T\*\* (Materials)
- 1 - Body: Polyammide
  - 2 - Contrast screen: Nylon
  - 3 - Seal: NBR

## Dimensions

LCP\*\*\*T\*\*



Size	A	Ø B	C	D	A/F (mm)
G13	G 1/4"	19	4,5	7	15
G16	G 3/8"	21,7	5	7,5	17
G20	G 1/2"	27	5,5	8	21
G26	G 3/4"	32,8	6	9	26
G33	G 1"	39,8	6,5	10	32
G42	G 1 1/4"	52	12	13	42

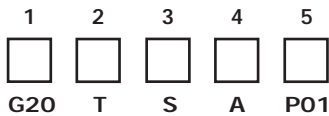
N.B. Seals thickness 2 mm.  
Recommended tightening torque 10 Nm.

## Ordering information

**Threaded sight plug**

**LCP\*\*\*T**

Example: LCP



1 - Size

G13	G 1/4"
G16	G 3/8"
G20	G 1/2"
G26	G 3/4"
G33	G 1"
G42	G 1 1/4"

2 - Material

T	Polyammide
---	------------

3 - Accessories

S	Without baffle
C	Baffle (G26-G33-G42 only)

4 - Seal

A	NBR
---	-----

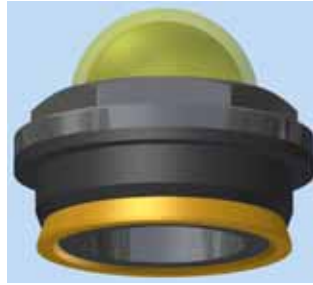
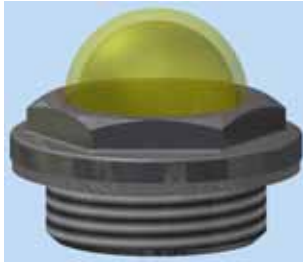
5 - Options

P01	MP Standard
-----	-------------

Quantity per pack  
Number of Parts

LCP/T 25

# Series LCC\*\*\*N

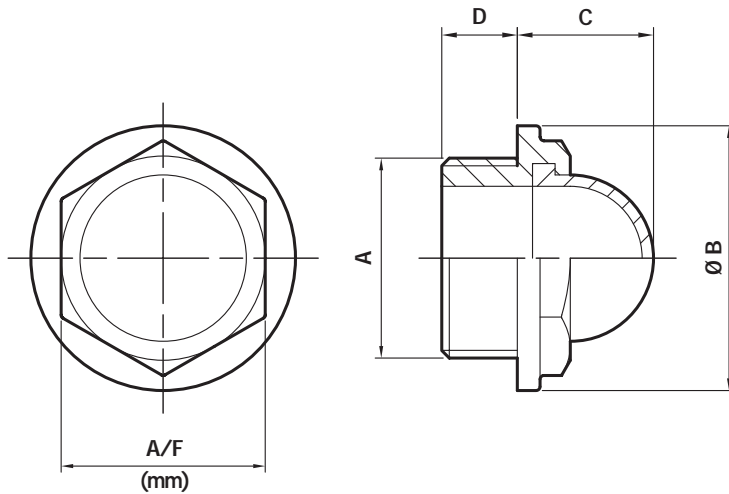


LCC\*\*\*N\*\*\* (Materials)

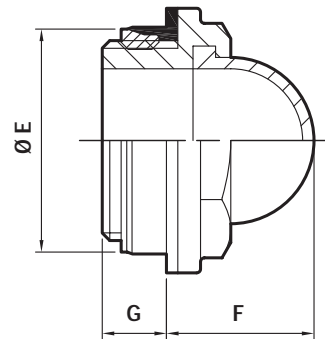
- 1 - Body: Nylon
- 2 - Lens: Polyamide
- 3 - Contrast screen: Nylon
- 4 - Seals: NBR  
Inorganic fibre
- 5 - Expansion kit: Brass - NBR

## Dimensions

LCC\*\*\*N\*\*\*S



LCC\*\*\*N\*\*\*K



Size	A	ØB	C	D	A/F (mm)	ØE	F	G
G20	G 1/2"	28	15,5	9,5	22	25,5	16,7	8,3
G26	G 3/4"	35	18	10	27	29,5	19,5	8,5
G33	G 1"	42	22	12	34	39	23,5	10,5
G42	G 1 1/4"	52	28	13	44	49	29,5	11,5
G48	G 1 1/2"	58	31	13,5	50	54	32,5	12
G60	G 2"	74	37	20	64	-	-	-

### Spare parts

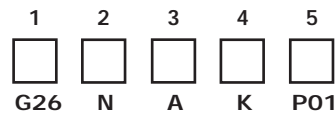
Size	Expansion kit
G20	2026021
G26	2026019
G33	2026023
G42	2026025
G48	2026026
-	-

N.B. Seals thickness 2 mm.  
Recommended tightening torque 10 Nm.

## Ordering information

### Threaded sight plug LCC\*\*\*N

Example: LCC



#### 1 - Size

G20	G 1/2"
G26	G 3/4"
G30	G 7/8"
G33	G 1"
G42	G 1 1/4"
G48	G 1 1/2"
G60	G 2"

#### 2 - Material

N	Black nylon
---	-------------

#### 3 - Seal

A	NBR (K only)
B	Inorganic fibre

#### 4 - Expansion

S	Without
K	Expansion kit

#### 5 - Options

P01	MP Standard
-----	-------------

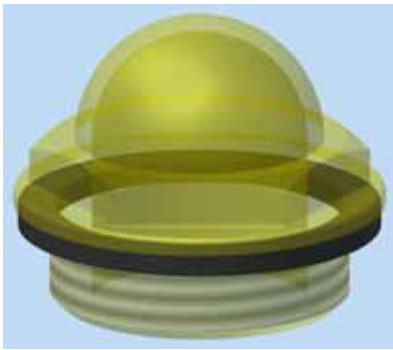
Quantity per pack  
Number of Parts

LCC/N 25

Ø hole for Expansion kit

Size	Diameter
G20	Ø 26
G26	Ø 30
G33	Ø 40
G42	Ø 50
G48	Ø 55

# Series LCC\*\*\*T

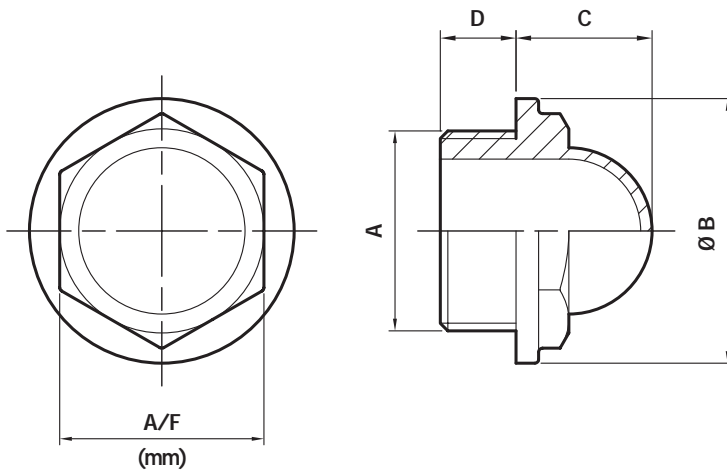


LCC\*\*\*T\*\* (Materials)

- 1 - Body: Polyammide
- 2 - Seal: NBR

## Dimensions

LCC\*\*\*T\*\*



Size	A	ØB	C	D	A/F (mm)
G13	G 1/4"	19	10,5	7	15
G16	G 3/8"	21,7	12	7,5	17
G20	G 1/2"	27	14,5	8	21
G26	G 3/4"	32,8	17	9	26
G33	G 1"	39,8	20,5	10	32

N.B. Seals thickness 2 mm.  
Recommended tightening torque 10 Nm.

## Ordering information

Threaded  
sight  
plug  
LCC\*\*\*T

Example: LCC

1 - Size

G13	G 1/4"
G16	G 3/8"
G20	G 1/2"
G26	G 3/4"
G33	G 1"

2 - Material

T	Polyammide
---	------------

1	2	3	4
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G20	T	A	P01

3 - Seal

A	NBR
---	-----

4 - Options

P01	MP Standard
-----	-------------

Quantity per pack  
Number of Parts

LCC/T 25



# PRESSURE GAUGE SELECTORS



Gauge isolator valves are designed to protect pressure gauges from pressure shocks when the pressure reading is not required; after each reading setting the selector to the closed position serves to depressurise the pressure gauge by means of the T fitting connected to the reservoir. 3 and 6-way pressure gauge selectors perform the same function as the gauge isolator valves, allowing pressure values from different parts of the system to be read using a single pressure gauge.

## Working pressure

- 400 bar

## Temperature

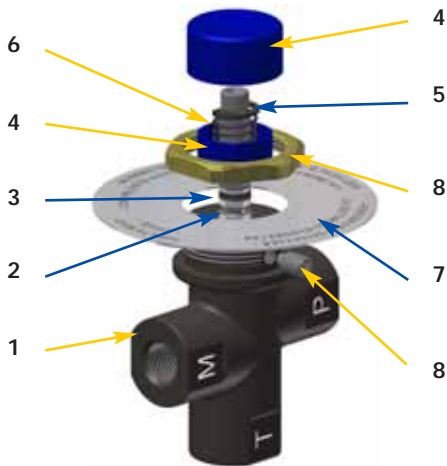
- from -25° to +100°C

## Compatibility

- NBR seals, compatible with:  
Mineral oils to ISO 2943 - aqueous emulsions  
Synthetic fluids, glycol water.
- FPM seals, compatible with:  
Synthetic fluids type HS-HFDR-HFDS-HFDU.

# Series EM1 - A

Instructions for using gauge isolators series:  
EM1 "A"



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

EM1-A (Materials)

- 1 - Body: Cast iron
- 2 - Pin: Steel
- 3 - Seals: NBR - FPM
- 4 - Knob/Cover: Nylon
- 5 - Stop ring: Steel
- 6 - Spring: Steel
- 7 - Nameplate: Aluminium
- 8 - Nut-Screw: Galvanised steel

Weight

EM1-A: 0,410 Kg

## Ordering information

Pressure gauge isolator  
EM1

Example: EM1



1 - Mounting type

A Panel mounting with hex nut

3 - Seal

A NBR  
 V FPM

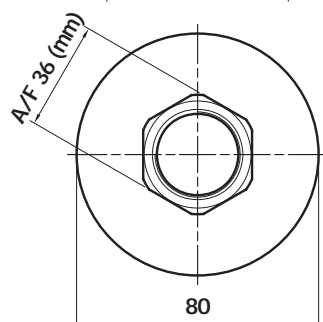
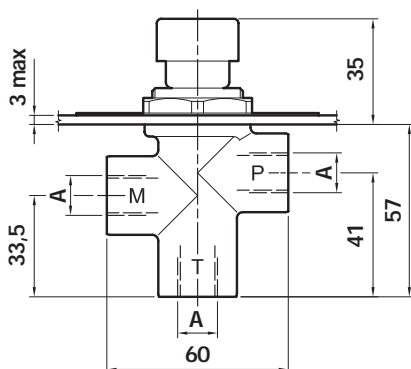
2 - Connections

G1 G 1/4"  
 G2 1/4" NPT  
 G3 SAE 5 (1/2" 20 UNF)

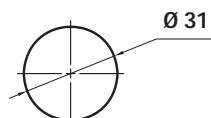
4 - Options

P01 MP Standard

## Dimensions

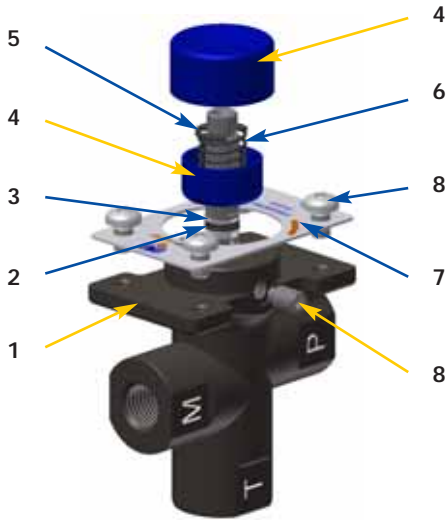


Mounting holes



Type	A
G1	G 1/4"
G2	1/4" NPT
G3	SAE 5 (1/2" 20 UNF)

# Series EM1 - B



### EM1-B (Materials)

- 1 - Body: Cast iron
- 2 - Pin: Steel
- 3 - Seals: NBR - FPM
- 4 - Knob/Cover: Nylon
- 5 - Stop ring: Steel
- 6 - Spring: Steel
- 7 - Nameplate: Aluminium
- 8 - Nut-Screw: Galvanised steel

### Weight/Mounting type

EM1-B: 0,440 Kg

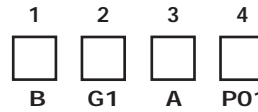
### Specifications for using gauge isolators series: EM1 "B"

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

## Ordering information

### Pressure gauge isolator EM1

Example: EM1



#### 1 - Mounting type

B Panel mounting with screws

#### 2 - Connections

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

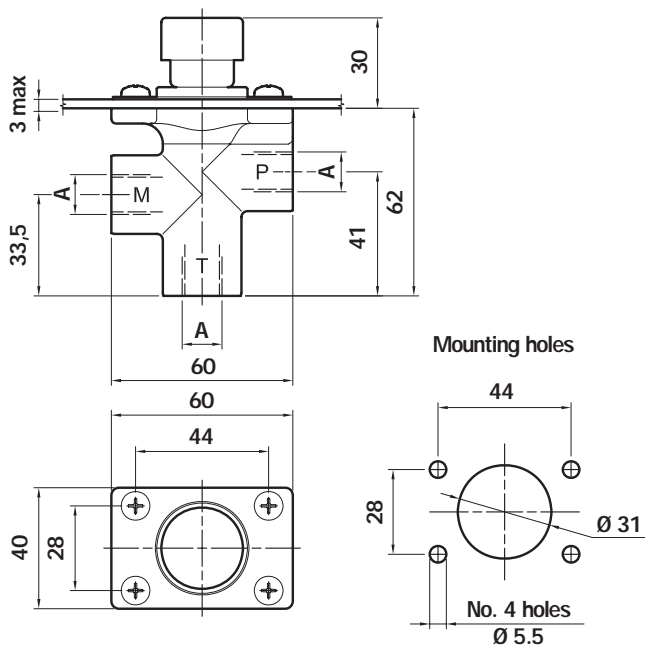
#### 3 - Seal

- A NBR
- V FPM

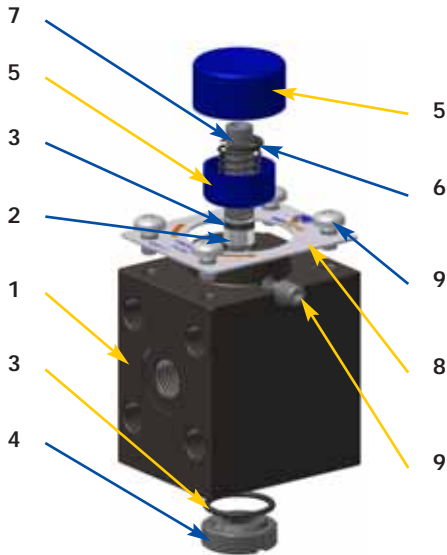
#### 4 - Options

PO1 MP Standard

## Dimensions



Type	A
G1	G 1/4"
G2	1/4" NPT
G3	SAE 5 (1/2" 20 UNF)

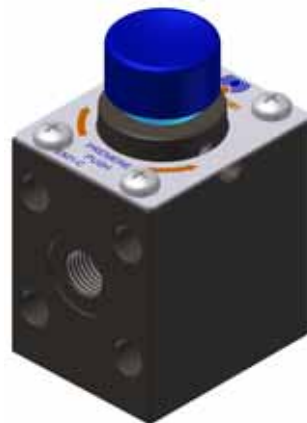


EM1-C (Materials)

- 1 - Body: Cast iron
- 2 - Pin: Steel
- 3 - Seals: NBR - FPM
- 4 - Plug: Anodised Aluminium
- 5 - Knob/Cover: Nylon
- 6 - Stop ring: Steel
- 7 - Spring: Steel
- 8 - Nameplate: Aluminium
- 9 - Screw: Galvanised steel

Weight

EM1-C: 1,0 Kg



Instructions for using gauge isolators series:  
EM1 "C"

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

Ordering information

Pressure gauge isolator EM1

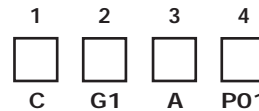
Example: EM1

1 - Mounting type

**C** Universal

2 - Connections

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



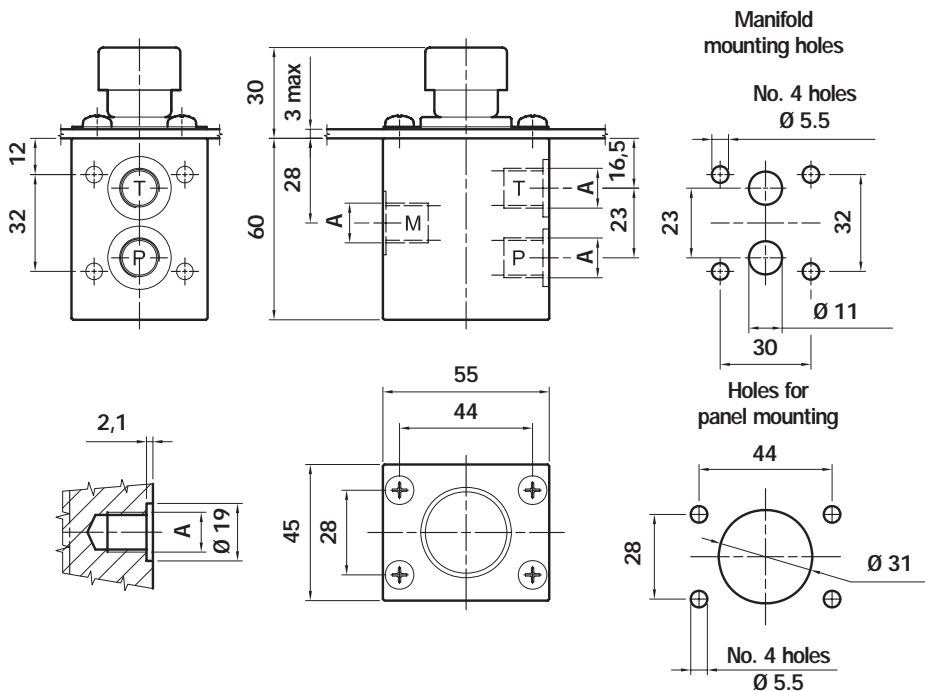
3 - Seal

- A** NBR
- V** FPM

4 - Options

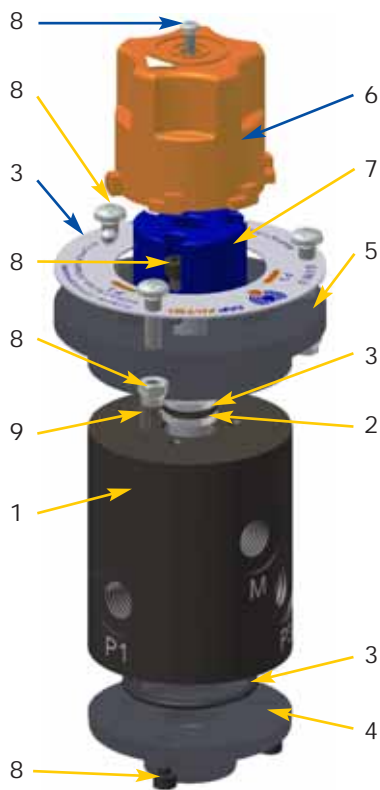
- PO1** MP Standard

Dimensions



Type	A
G1	G 1/4"
G2	1/4" NPT
G3	SAE 5 (1/2" 20 UNF)

# Series SVM



SVM (Materials)

- 1 - Body: Cast iron
- 2 - Pin: Steel
- 3 - Seals: NBR - FPM
- 4 - Cover: Anodised Aluminium

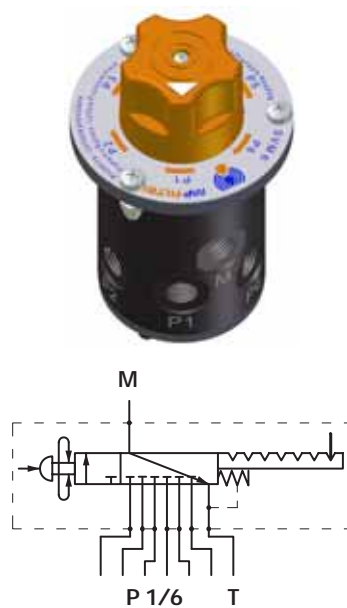
5 - Flange: Anodised Aluminium

- 6 - Knob: Nylon
- 7 - Ringnut: Nylon
- 8 - Screws-Nuts: Galvanised/Phosphated steel
- 9 - Pin: Steel

Weights  
 SVM 3: 1,547 Kg  
 SVM 6: 1,507 Kg

Hydraulic schematics

SVM 6

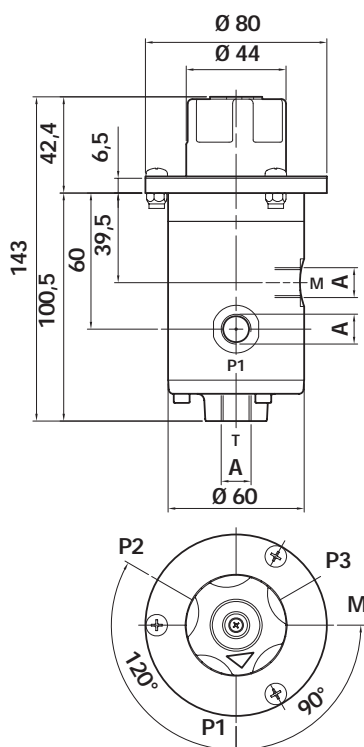


SVM 3

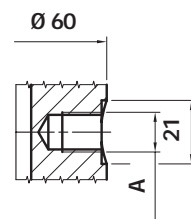
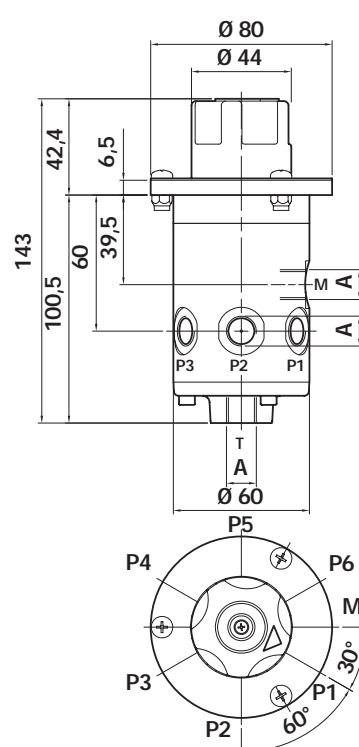


## Dimensions

SVM 3

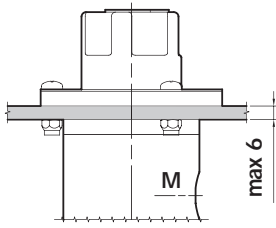


SVM 6

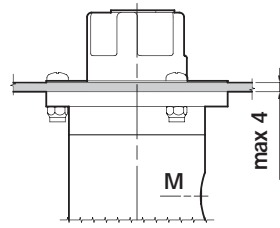
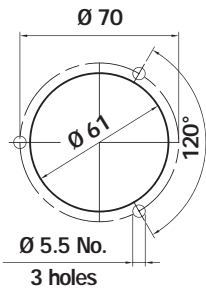


Type	A
G1	G 1/4"
G2	1/4" NPT
G3	SAE 5 (1/2" 20 UNF)

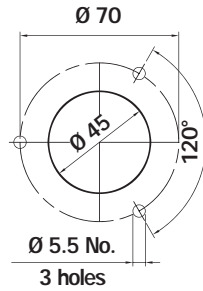
## Mounting holes



Type A



Type B



## Instructions for using gauge isolators series: SVM

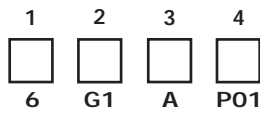
- 1 Knob not pressed: pressure gauge isolated.
- 2 Turn the knob to select the pressure value.
- 3 Knob pressed: pressure gauge reading.
- 4 Knob pressed and turned: the knob remains in position and pressure gauge measures pressure continuously.
- 5 To isolate the pressure gauge from pressure reading, turn the button until it returns to the not pressed position.



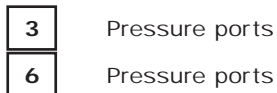
## Ordering information

### Selector for pressure gauge SVM

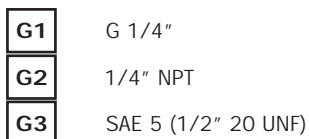
Example: SVM



#### 1 - Number of connections



#### 2 - Connections



#### 3 - Seal



#### 4 - Options



# OIL TANK FIXING FLANGE

## FTA - FTR



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.

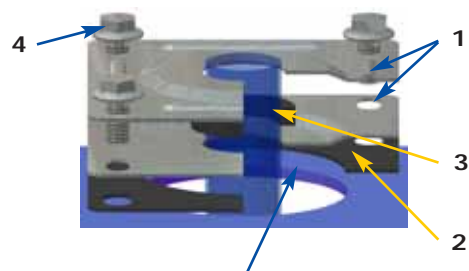
### Temperature

- from -25° to +100°C

### Compatibility

- NBR seals and Cork Gasket, compatible with:  
Mineral oils to ISO 2943 - aqueous emulsions  
Synthetic fluids, glycol water.

### FTA



Drill the panel:

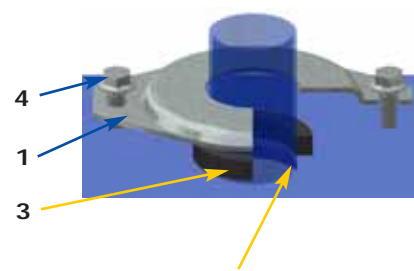
- Ø 105 for types from 1215 ÷ 3842
- Ø 145 for types from 4850 ÷ 8789

### FTA - FTR (Materials)

- 1 - Flange: Galvanised steel
- 2 - Flange seal: Inorganic fibre
- 3 - Tube seal: NBR
- 4 - Screw: Galvanised steel

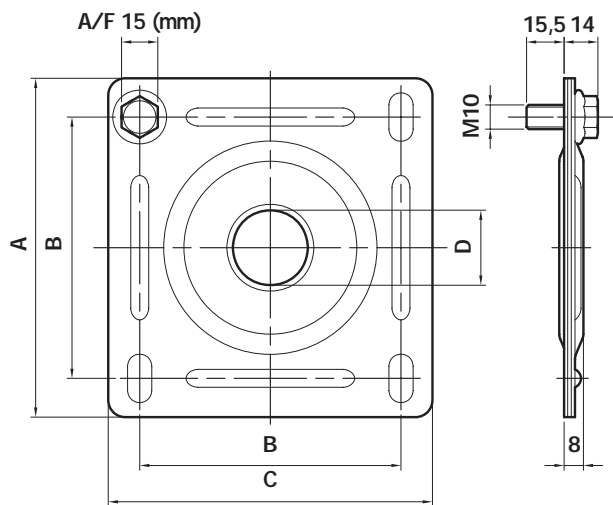
- 1 - Flexible element
- 2 - Seal

### FTR



Drill the panel max 2 mm more than the pipe Ø

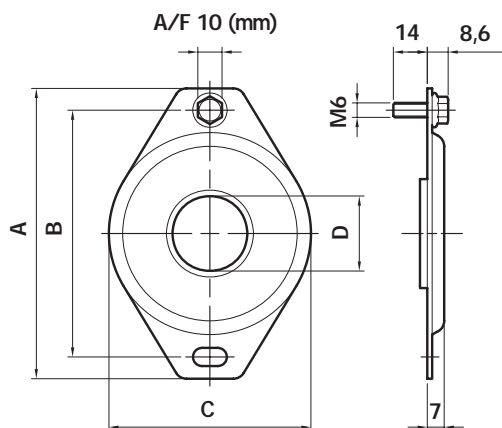
## FTA



Type	A	B	C	Ø D	Weight (Kg)
FTA 1215	140	108	134	12÷15	0,590
FTA 1620	140	108	134	16÷20	0,570
FTA 2225	140	108	134	22÷25	0,550
FTA 2630	140	108	134	26÷30	0,530
FTA 3235	140	108	134	32÷35	0,500
FTA 3842	140	108	134	38÷42	0,520
FTA 4850	190	159	184	48÷50	0,920
FTA 6061	190	159	184	60÷61	0,900
FTA 7577	190	159	184	75÷77	0,860
FTA 8789	190	159	184	87÷89	0,830

N.B. Tightening torque MAX 20 Nm.

## FTR



Type	A	B	C	Ø D	Weight (Kg)
FTR 0610	71	54	39,5	6÷10	0,045
FTR 1215	71	54	39,5	12÷15	0,043
FTR 1620	71	54	39,5	16÷20	0,040
FTR 2225	120	102	83,5	22÷25	0,100
FTR 2630	120	102	83,5	26÷30	0,103
FTR 3235	120	102	83,5	32÷35	0,098
FTR 3842	120	102	83,5	38÷42	0,095
FTR 4850	120	102	83,5	48÷50	0,090
FTR 6061	120	102	83,5	60÷61	0,085

N.B. Tightening torque MAX 20 Nm.

## Ordering information

### Suction line flange FTA

Example: FTA

1 - Size

Ø Pipe Min - Max	Size
12 - 15	1215
16 - 20	1620
22 - 25	2225
26 - 30	2630
32 - 35	3235
38 - 42	3842
48 - 50	4850
60 - 61	6061
75 - 77	7577
87 - 89	8789

1	2	3	4
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2630	G	A	P01

2 - Flange seal

G Inorganic fibre

3 - Pipe seal

A NBR

4 - Options

P01 MP Standard

### Return line flange FTR

Example: FTR

1 - Size

Ø Pipe Min - Max	Size
6 - 10	0610
12 - 15	1215
16 - 20	1620
22 - 25	2225
26 - 30	2630
32 - 35	3235
38 - 42	3842
48 - 50	4850
60 - 61	6061

1	2	3	4
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2630	O	A	P01

2 - Flange seal

O Without

3 - Pipe seal

A NBR

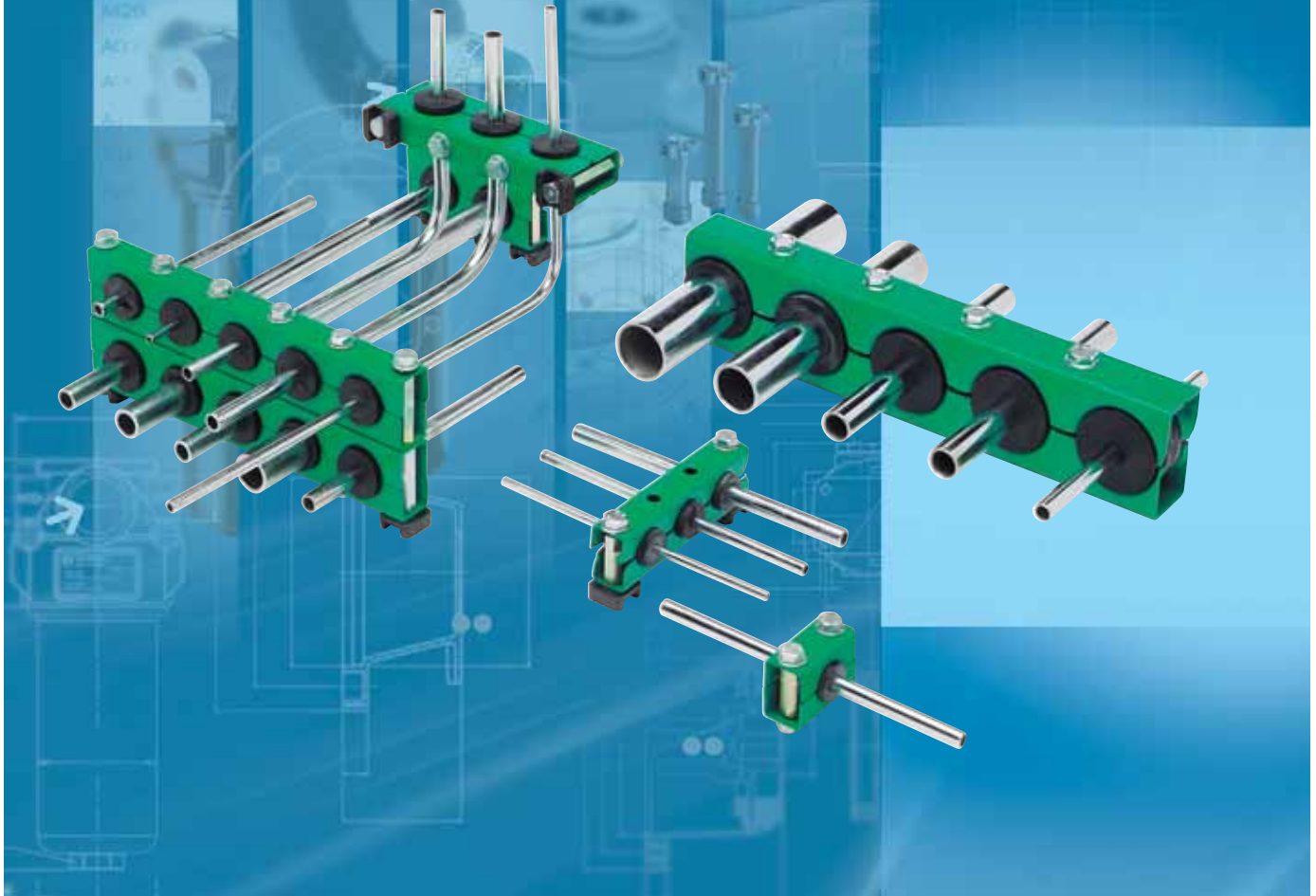
4 - Options

P01 MP Standard



# MULTIFIX

## FIXING CLAMPS



MULTIFLEX 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.

MULTIFLEX 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.

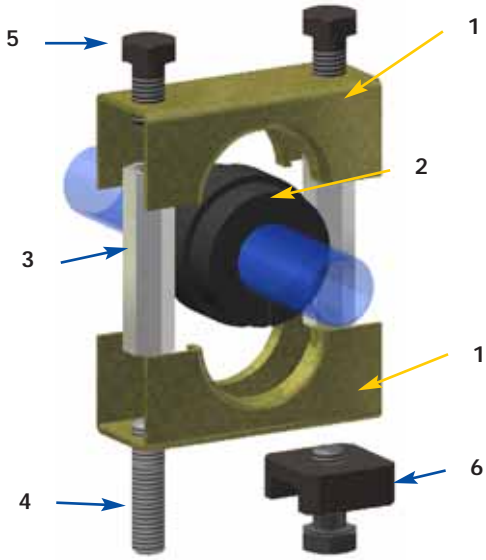
### Temperature

- from -25° to +100°C

### Compatibility

- NBR seals and Cork Gasket, compatible with:  
Mineral oils to ISO 2943 - aqueous emulsions  
Synthetic fluids, glycol water.

SFT Single



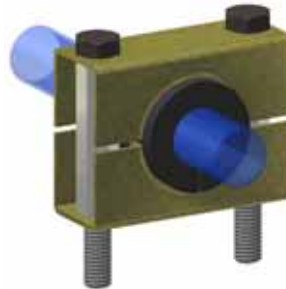
SFT (Materials)

- 1 - Pair of brackets: Galvanised steel
- 2 - Bush: NBR
- 3 - Spacer: Steel
- 4 - Studs: Steel
- 5 - Screws: Steel
- 6 - Foot + screw: Steel

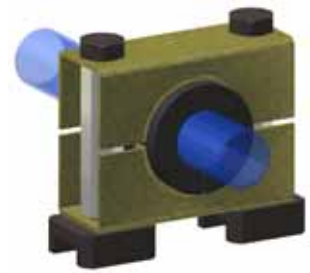
Ordering information

Size

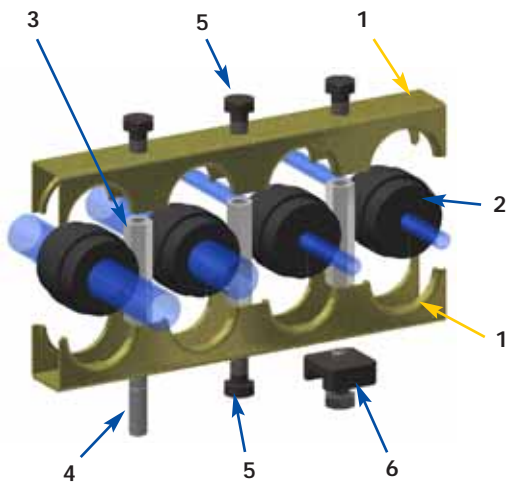
- 1 - SFT 38 - 51 - 78
- 2 - B 38 - 51 - 78
- 3 - D 38 - 51 - 78
- 4 - P 38 - 51 - 78
- 5 - Screws: Steel
- 6 - W 38 - 51 - 78



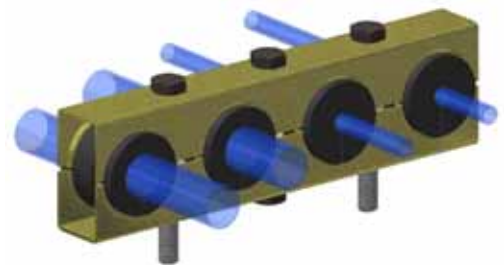
Fixing with threaded holes



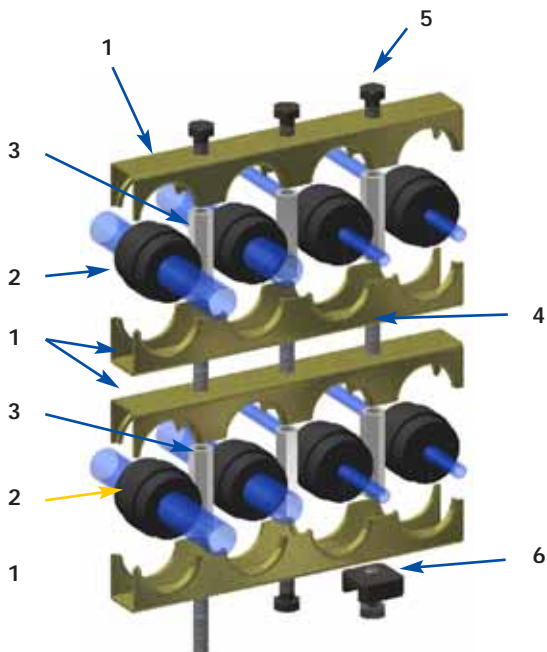
Fixing with welded foot



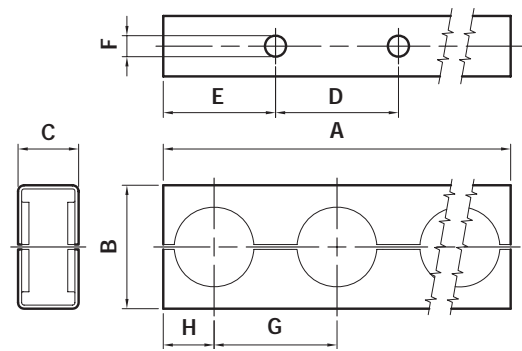
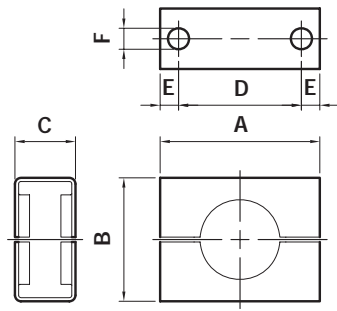
SFT Modular



SFT Modular and Stacked

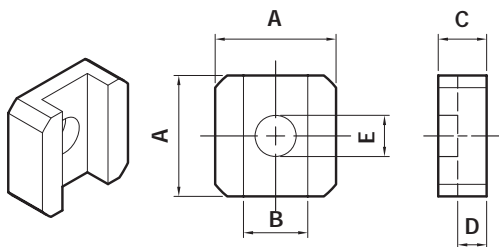


# Dimensions

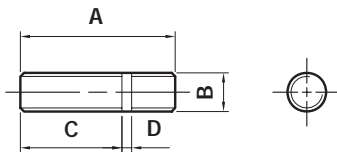


Ordering information	A	B	C	D	E	F	Weights (Kg)
SFT 38 1	56	38	25	38,1	9	8,7	0,07
SFT 51 1	66	51	25	50,8	7,5	8,7	0,09
SFT 78 1	95	78	41	76,2	9,5	11,1	0,34

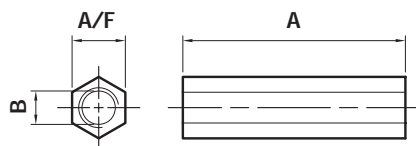
Ordering information	A	B	C	D	E	F	G	H	Weights (Kg)
SFT 38 26	982	38	25	38,1	34	8,7	38,1	15	1,04
SFT 51 19	956	51	25	50,8	47	8,7	50,8	21	1,25
SFT 78 16	1213	78	41	76,2	72	11,1	76,2	35	4,14



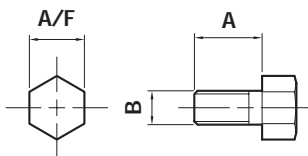
Foot	SFT 38/51	SFT 78
A	25	32
B	13,3	17,5
C	10	12
D	6	8
E	8,5	11



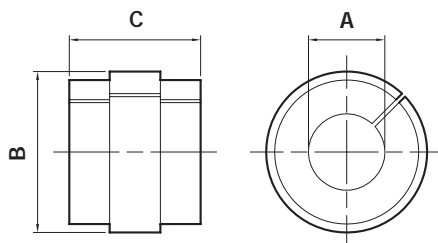
Stud	SFT 38/51	SFT 78
A	32	38
B	M8	M10
C	21	22
D	2	2



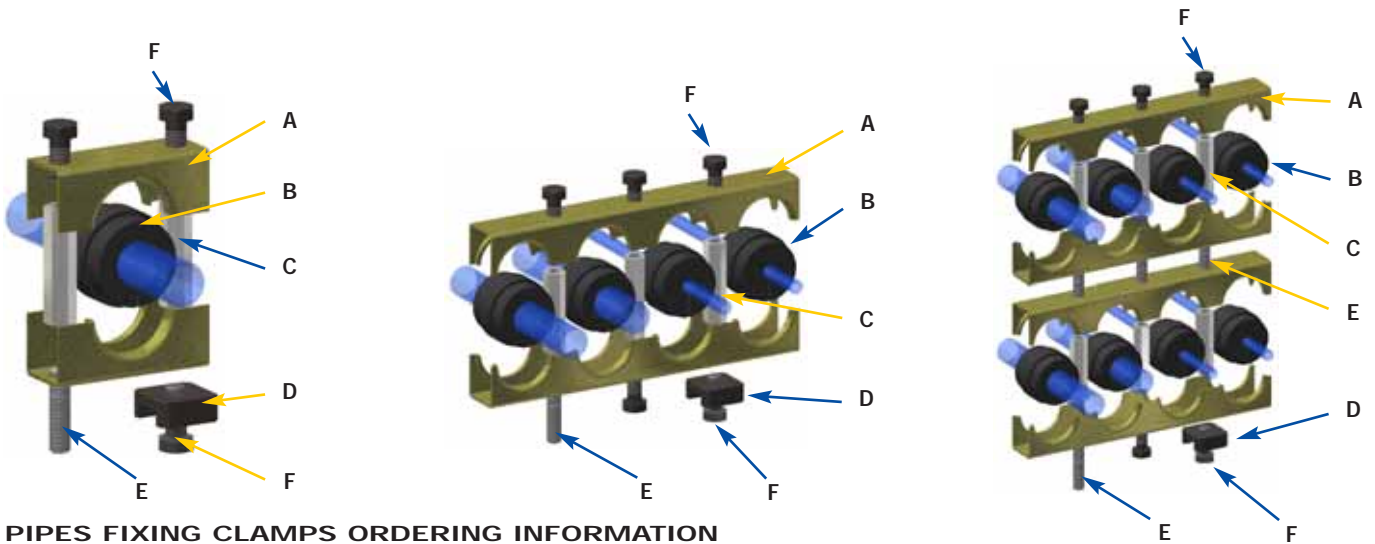
Spacer	SFT 38	SFT 51	SFT 78
A	33	46	72
B	M8	M8	M10
A/F	11	11	13



Screw	SFT 38/51	SFT 78
A	16	30
B	M8	M10
A/F	13	17



Bushes		SFT 78	
SFT 51		B = Ø 59	C = 45 Ø A
Bushes	B = Ø 38	C = 31 Ø A	8
SFT 38	B = Ø 25	C = 31 Ø A	10
			12
		6	15
		8	18
		10	22
		12	25
		15	28
		18	33
		22	35
		25	42
		28	50



## PIPES FIXING CLAMPS ORDERING INFORMATION

A	1	2	3
SFT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Example: SFT	51	19	P01

### 1 - Size

- 38
- 51
- 78

### 2 - No. of tube connections

#### Single style

- 1 All sizes / Single hole

#### Multiple style

- 26 Size 38 / No. holes: 26
- 19 Size 51 / No. holes: 19
- 16 Size 78 / No. holes: 16
- xx On request

### 3 - Options

- P01 MP Standard

## ORDERING INFORMATION FOR ACCESSORIES FOR: SFT

### " B " Pipe bushes

Size 38	Size 51	Size 78	Øe Pipe (mm)	Øe Pipe (inch)
B38 6	B51 6	-	6	1/4"
B38 8	B51 8	B78 8	8	5/16"
B38 10	B51 10	B78 10	10	3/8"
B38 1214	B51 1214	B78 1214	12 - 14	1/2"
B38 1516	B51 1516	B78 1516	15 - 16	5/8"
B38 1820	B51 1820	B78 1820	18 - 20	3/4"
	B51 22	B78 22	22	7/8"
	B51 25	B78 25	25	1"
	B51 28	-	28	-
		B78 2830	28 - 30	1 1/8"
		B78 33	33	1 1/4"
		B78 3538	35 - 38	1 3/8" - 1 1/2"
		B78 42	42	1 3/4"
		B78 50	50	2"

Example: B 51 1516

### " C " Spacer

- D38M Size 38 Metric
- D51M Size 51 Metric
- D78M Size 78 Metric
- D38U Size 38 UNC
- D51U Size 51 UNC
- D78U Size 78 UNC

Example: D 51 M

### " D " Foot

- W3851 Size 38 and 51
- W78 Size 78

Example: W 3851

### " E " Stud

- P3851M Size 38 and 51 Metric
- P78M Size 78 Metric
- P3851U Size 38 and 51 UNC
- P78U Size 78 UNC

Example: P3851 M

### " F " Screw

- V3851M Size 38 and 51 Metric
- V78M Size 78 Metric
- V3851U Size 38 and 51 UNC
- V78U Size 78 UNC

Example: V 3851 M