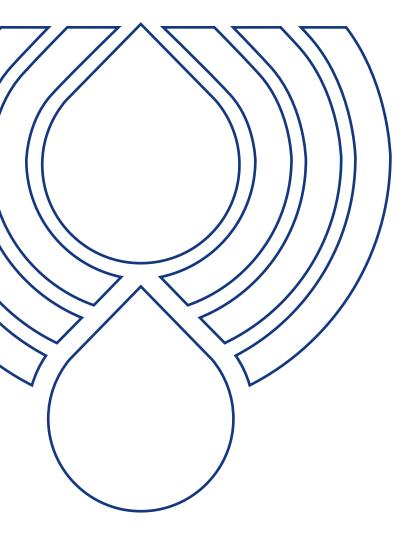
## **TANK ACCESSORIES**



PASSION TO PERFORM





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

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





## **WORLDWIDE PRESENCE**

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

The Group boasts **8** business branches



### **TECHNOLOGY**

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





### AND PRODUCTION

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

















#### SUCTION **FILTERS**

Flow rates up to 875 l/min

#### Mounting:

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

#### **RETURN FILTERS**

Flow rates up to 3000 l/min

Pressure

up to 20 bar

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

#### **RETURN /** SUCTION **FILTERS**

Flow rates up to 300 l/min

Pressure up to 80 bar

Mounting:

- In-Line
- Tank top

#### SPIN-ON **FILTERS**

Flow rates up to 365 l/min

Pressure up to 35 bar

Mounting:

- In-Line
- Tank top

#### **LOW & MEDIUM** PRESSURE **FILTERS**

Flow rates up to 3000 I/min

Pressure up to 80 bar

Mounting:

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

#### HIGH PRESSURE **FILTERS**

Flow rates up to 750 l/min

Pressure from 110 bar up to 560 bar

Mounting:

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



### **PRODUCT RANGE**

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

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

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

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









#### STAINLESS STEEL HIGH PRESSURE FILTERS

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

#### Mounting:

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

## CONTAMINATION MONITORING PRODUCTS

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

#### MOBILE FILTRATION UNITS

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

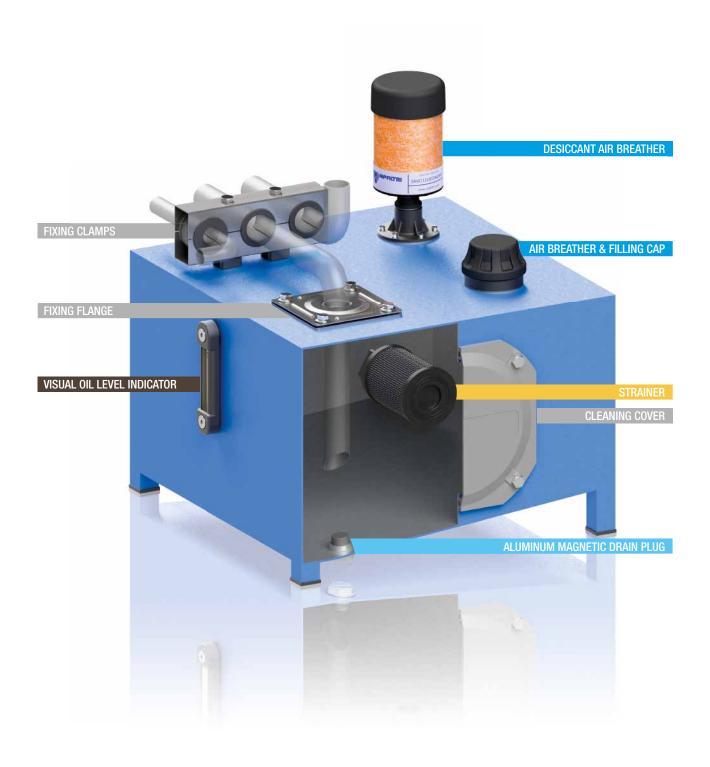
# POWER TRANSMISSION PRODUCTS

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

#### TANK ACCESSORIES

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

## **TANK ACCESSORIES**







1 pag	je	INTRODUCTION
1	COMPANY	
6	PRODUCT RANGE	

10 pag	ge	STRAINERS
13	STR & MPA - MPM	Submerged suction filter, with bypass or magnetic column

20 pag	je	AIR BREATHERS AND FILLER PLUGS
23	SAP 054-075 - SA	Air breathers
29	SAW 115	Desiccant air breathers
33	SCS	Metal air breathers with interchangeable filter element
39	SME 1 - SMF 1 - SML 1	Risers for breathers and filler caps installation
45	TA 46 - TAP 50 - SAP 50	Filling cap, air breather & filling cap
53	TA 80	Filling cap
57	TAP 90	Air breather & filling cap
63	TAP 114	Air breather & filling cap
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72 page	e	FILLER AND DRAIN PLUGS
75	TC 50	Nylon filler plug
79	TKT - TSD	Nylon filler plugs
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86 pag	ge	VISUAL OIL LEVEL INDICATORS
89	LCP - LCC	Spy eyes
95	LVA - LVU	Visual oil level indicator

100 page		ELECTRICAL OIL LEVEL INDICATORS
103	LEN - LEG - LET - LEM - LEU	Electrical oil level indicator
115	LVK	Electrical and visual oil level indicator

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



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



# Strainers



STR & MPA - MPM page 13





# STR & MPA - MPM series

Flow rate up to 875 I/min



## STR & MPA-MPM GENERAL INFORMATION

#### Description

#### **Strainers**

#### Flow rate up to 875 I/min

#### STR

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

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

#### **Available features:**

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

#### **Common application:**

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

#### MPA - MPM

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

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

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

#### **Available features:**

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

#### **Common application:**

Industrial equipment

#### Technical data

#### **STR** materials

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

#### MPA - MPM materials

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

#### Bypass valve

Opening pressure 30 kPa (0.3 bar)

#### **Elements**

Fluid flow through the filter element from OUT to IN.



From -25 °C to +110 °C



#### Weights [kg]

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



STR Without bypass

(14)



STR With bypass



MPA
Without magnetic column



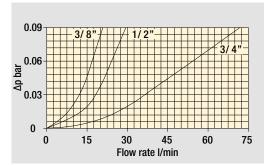
MPM With magnetic

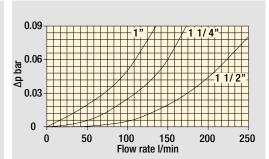
column

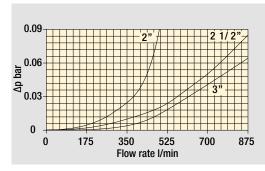
## GENERAL INFORMATION STR & MPA-MPM

Pressure drop

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







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

### Flow rates [I/min]

#### Hydraulic symbols

			-
Filter series	Thread		
	3/8" 19 1/2" 28 3/4" 67 1" 126 1 1/4" 167 1 1/2" 258		
	1/2"	28	
	3/4"	67	
	1"	126	
CTD O MDA MDM	1 1/4"	167	
STR & MPA - MPM	1 1/2"	258	
	2"	480	
	2 1/2"	854	
	2"	480	
	3"	995	

Filter series	Style S	Style B
STR	•	•
MPA - MPM	•	
	OUT TO THE PROPERTY OF THE PRO	OUT IN

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

The reference fluid has a kinematic viscosity of 30 mm<sup>2</sup>/s (cSt) and a density of 0.86 kg/dm<sup>3</sup>.

For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.

Please, contact our Sales Department for further additional information.



## Designation & Ordering code

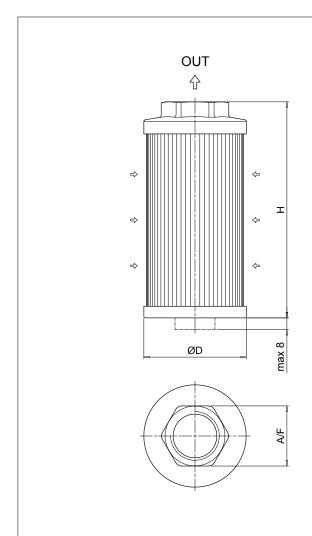
								COMPI	ETE FIL	TER							
Flem	ent ser	ies and s	ize							Configuration example 1:	STR045	1		В	G1	M60	P01
STRO		ros ana s	120				<u> </u>			Configuration example 2:		4	7	S	G2	M250	
STRO										Samgaradon oxumpio 2.	3111100	7	⊥ L				
STRO																	
STRO																	
STRO																	
STR1																	
STR1	40																
STR1	50																
Conn	ection	tvne							l								
			0 STR06	55 STR07	'0 STR086	STR100	STR140	STR150									
1 3	3/8"	3/8"	1/2"	1/2"	1 1/2"	1 1/4"	1 1/2"	2"									
2 1	1/2"	1/2"	3/4"	3/4"	2"	1 1/4"	2"	2 1/2"									
3 -		-	3/4"	3/4"	1 1/2"	1 1/2"	2"	3"									
4 -		-	1"	1"	2"	2"	2 1/2"	-									
5 -		-	-	-	1 1/2"	1 1/2"	3"	-									
6 -		-	-	1/2"	2"	-	3"	-	•								
Valve																	
S		out bypa							-								
В	With	bypass	0.3 bar														
Threa	ad type																
G1		ad GAS															
G2	Thre	ad NPT															
Filtra	ition ra	ting (filte	r media)														
M25		mesh															
M60		mesh															
M90		mesh															
M250	<b>)</b> Wire	mesh 2	50 µm						-								
				HER INF	ORMATIO	ON								PO	ecution	Filtri star	ndard
		of packag												Px		stomized	iuui u
	size F	os. per b	OX														
045		12															
050		12															
065		6															
070		6															
086		6															
100		6															
140		1															
150		1							-								

MPALTRI

(16)



#### **Dimensions**



	STR						
Filte	r	Connection	Thread	ØD	Н	A/F	Weight
size		type		[mm]	[mm]	[mm]	[kg]
045	5	1	3/8"	46	105	30	0.15
		2	1/2"	46	105	30	0.19
050	)	1	3/8"	52	79	30	0.11
		2	1/2"	52	79	30	0.11
		1	1/2"	65	110	41	0.19
065	5	2	3/4"	65	110	41	0.22
-		3	3/4"	65	144	41	0.24
		4	1"	65	144	41	0.22
		1	1/2"	70	95	41	0.18
		2	3/4"	70	95	41	0.17
070	)	3	3/4"	70	141	41	0.23
		4	1"	70	141	41	0.22
		6	1/2"	70	141	41	0.24
		1	1 1/2"	86	143	69	0.33
		2	2"	86	143	69	0.30
086	6	3	1 1/2"	86	201	69	0.43
		4	2"	86	201	69	0.40
		5	1 1/2"	86	261	69	0.53
		6	2"	86	261	69	0.50
		1	1 1/4"	99	137	69	0.47
400		2	1 1/4"	99	227	69	0.58
100	,	3	1 1/2"	99	227	69	0.55
		4	2"	99	227	69	0.51
		5	1 1/2"	99	137	69	0.43
		1 2	1 1/2"	130	160	69	0.70
		3	2"	130	160	69	0.68
140	)		2"	130	262	69	0.94
		4	2 1/2"	130	272	101	1.10
		5	3"	130	272	101	1.00
		6	3" 2"	130	330	101	1.17
150	,			150	150 212	70	0.34
130	,	2	2 1/2"	150		90	0.37
		3	3"	150	272	100	0.40

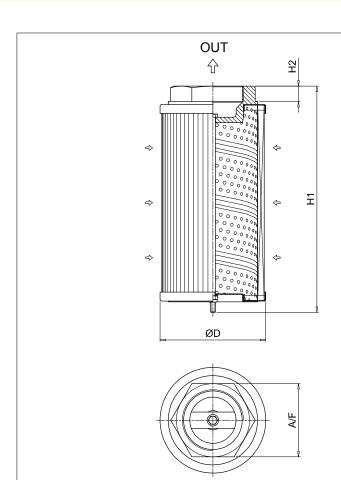


## Designation & Ordering code

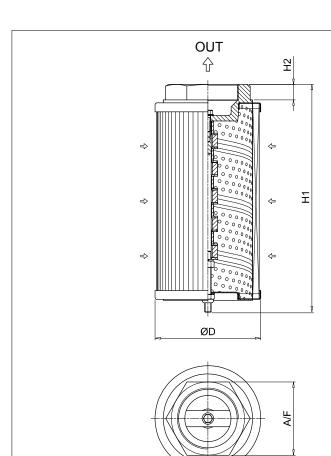
		COMPLETE FILTER					
Fleme	nt series		Configuration example 1:	MPA	030 G1	M60	P01
MPA	Without magnetic column		Configuration example 2:	MPM	430 G2	M250	P01
MPM	With magnetic column		comigaration oxampio 2.				
Conne	ctions						
012	3/8"						
015	1/2"	-					
025	1/2"	-					
030	3/4"	_					
045	3/4"	<u>-</u>					
050	1"	-					
075	1"	-					
095	1 1/4"	-					
120	1 1/4"	-					
150	1 1/2"	-					
180	1 1/2"	-					
220	2"	-					
280	2"	-					
300	2 1/2"	-					
380	2"						
430	3"	-					
Thread G1	d type Thread GAS						
G2	Thread NPT	-					
uz	Tilledu ivr i	-					
Ciltrot	ion rating (filter media)	ı					
M25	Wire mesh 25 µm	1					
M60	Wire mesh 60 μm	-			Execution		
M90	Wire mesh 90 μm	-				ı P Filtri stan	dard
M250	·	-				stomized	- Gai u
	Loo piii	-			- AA OU	o.o.iii.cou	

	OTH	HER INFORMATION
Condi	tions of packa	ging
Size	Pcs. per box	
012	12	
015	6	
025	6	
030	6	
045	6	
050	6	
075	6	
095	6	
120	6	
150	6	
180	1	
220	1	
280	1	
300	1	
380	1	
430	1	

### Dimensions



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



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

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

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

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

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

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



# Air Breathers & Filler Plugs



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



# SAP 054-075 series

Nylon air breather filter

SA SETIES

Metal air breather filter



## SAP 054-075 GENERAL INFORMATION

#### Technical data

#### Air breathers & Filler plugs

#### Nylon air breather filter

#### Flow rate up to 400 I/min

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

They are usually directly fitted on the tank.

#### **Available features:**

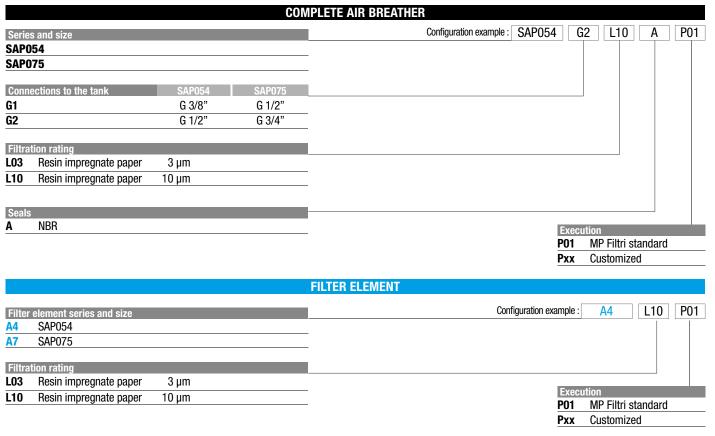
- Male threaded connections up to 3/4 ", for a maximum flow rate of 400 l/min
- Replaceable filter element
- Fine cellulose filtration, to get a good cleanliness level into the reservoir
- Polyester media is an option for heavy environmental conditions (high humidity, sand ...)

#### **Common applications:**

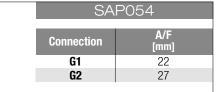
- Mobile machines (construction and agriculture machines)
- Industrial equipment

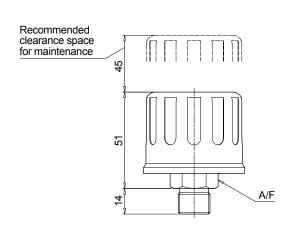
### Flow rate $\Delta p$ 0.02 bar Flow rate [I/min] SAP054 200 250 350 400 **SAP075 Materials** - Cover: Nylon - Connection: Nylon - Filter element: Resin impregnate paper **Temperature** From -25 °C to +100 °C Weight SAP 054 - 0.06 kg SAP 075 - 0.15 kg

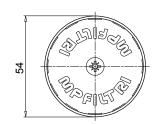
#### Designation & Ordering code



#### **Dimensions**

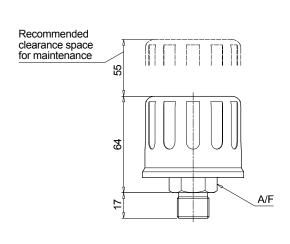


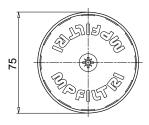




## <u>S</u>AP075

Connection	A/F [mm]
G1	27
G2	32





#### Technical data

#### Air breathers & Filler plugs

#### Metal air breather filter

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

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

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

#### **Available features:**

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

#### **Common applications:**

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

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

Flow rate [l/min]					
	Filtration rating	L03	L10		
SA036		140	140		
SA053		250	250		
SA075		350	400		
SA115		800	850		
SA145		1800	1850		
SA185		2300	2500		

#### **Materials**

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

#### **Temperature**

From -25 °C to +100 °C

#### Weight

SA 036 - 0.08 kg SA 053 - 0.15 kg

SA 075 - 0.26 kg SA 115 - 0.40 kg

SA 145 - 0.59 kg

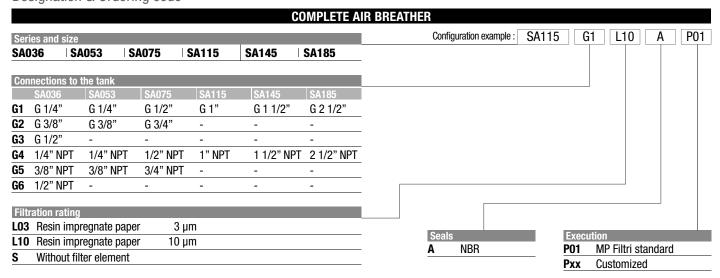
SA 185 - 1.22 kg



Customized

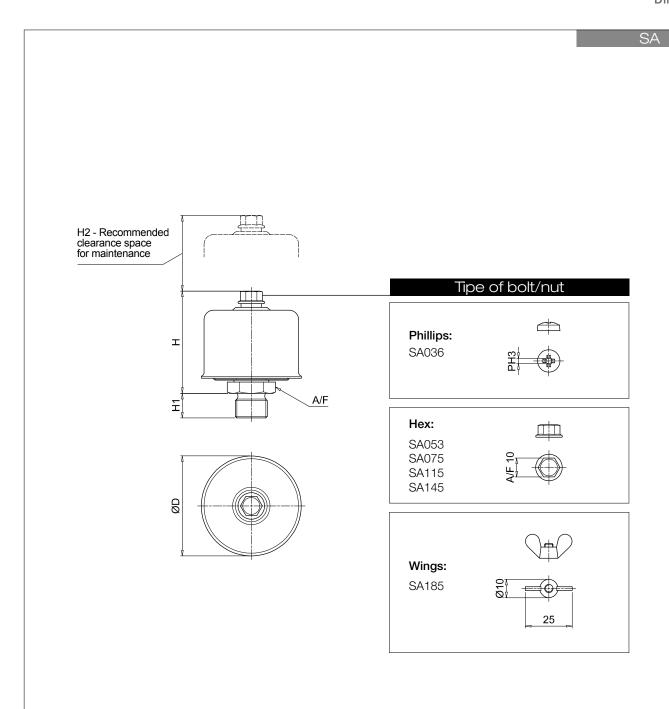
Pxx

#### Designation & Ordering code



				FILTE	R ELEMENT				
Filter	element series and size					Configuration example	A8	L10	P01
A05	A5 A7	<b>A8</b>	A10	A11			•		
Filtra	tion rating (filter media)								
L03	Resin impregnate paper	3 μm							
L10 Resin impregnate paper		10 μm				Exec	ution	-	
						P01	MP Filtri	standard	





Type	Connection	ØD [mm]	H [mm]	H1 [mm]	H2 [mm]	A/F [mm]
036	G1 ÷ G6	36	37	13	30	22
053	G1-G2-G4-G5	53	53	13	50	22
	G1		69	13	60	27
075	G2	75		17		32
070	G4	10	00	15		27
	G5			20		32
115	G1 - G4	115	80	17	70	38
145	G1 - G4	145	115	25	100	55
185	G1 - G4	185	164	25	150	90

28



# SAW 115 series

Moisture control desiccant air breather



## SAW 115 GENERAL INFORMATION

#### Technical data

#### Air breathers & Filler plugs

#### Moisture control desiccant air breather Max air flow up to 453 l/min

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

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

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

#### **Available features:**

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

#### **Common applications:**

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

#### **Chemical Compatibility**

#### Recommended:

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

Not Recommended:

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

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

Flow rate [I/min]

**SAW115** 453

#### **Materials**

Connection: Nylon

Internal Support Pipe: Nylon Screen: Polycarbonate Cover: Nylon

Cover: Nylon

Dryer Agent: Silica Gel

Filter Efficiency 3µm absolute (B<sub>3</sub> ≥200)

Seals NBR

Temperature From -25 °C to +90 °C

#### **Humidity Level Below Ambient Conditions**

SAW1153G03A00P01: protects 30,000+ cycles

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

### Silica Gel Weight

Lenght 1: 0.32 kg

Lenght 2: 0.56 kg

Lenght 3: 0.84 kg

#### **Total Weight**

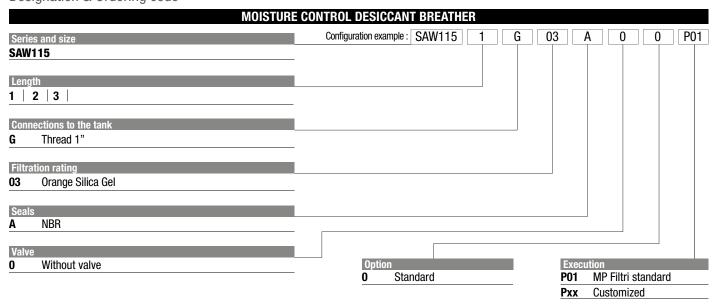
Lenght 1: 0.60 kg

Lenght 2: 0.90 kg

Lenght 3: 1.20 kg

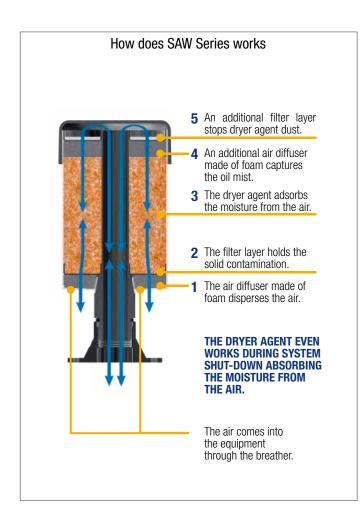


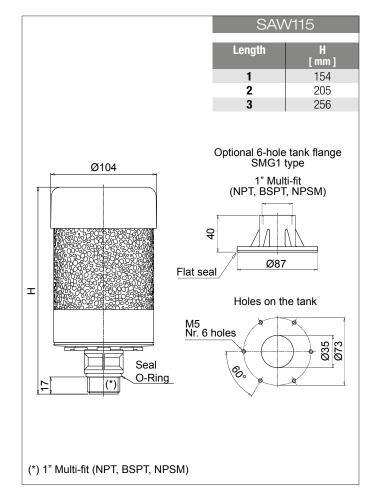
#### Designation & Ordering code



	ACCESSORIES	
Series and size	Configu	uration example : SMG1 S A P02
SMG Adapter Flange		
Connections to the tank		
S Without screws	Seals	Execution
	Δ NRR	PO2 MP Filtri standard

#### **Dimensions**





#### Silica gel



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

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

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

All breathers should be changed at least once a year.

#### **IMPORTANT**

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



#### Air vent holes

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

#### IMPORTANT INSTALLATION INFORMATION

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





# SCS series

Metal air breather filter



#### Technical data

#### Air breathers & Filler plugs

#### Metal air breather filter

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

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

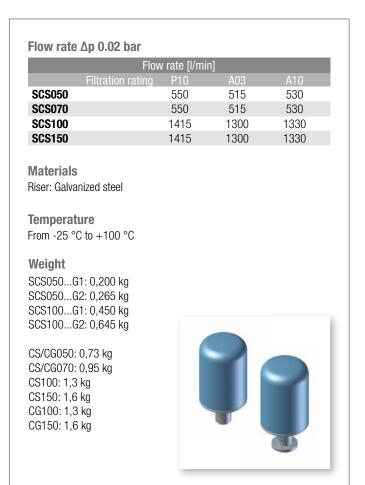
They are composed of a spin-on filter can screwed on a connection tube, directly fitted on the tank. They are usually directly fitted on the tank.

#### **Available features:**

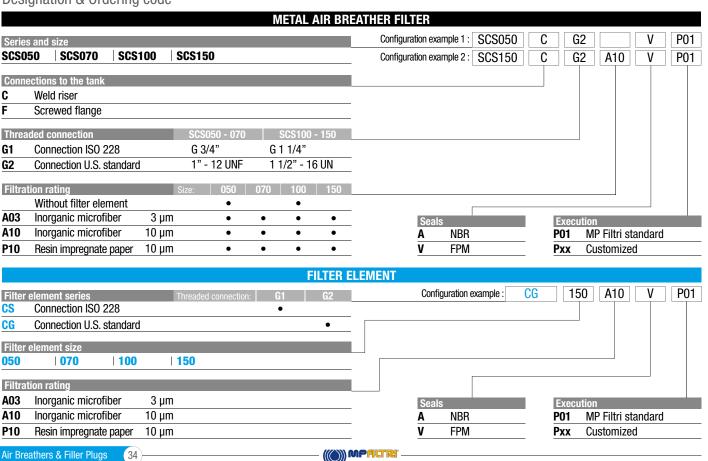
- Weld or flanged connection, for a maximum flow rate of 1415 l/min
- Fine cellulose and microfibre filtration, to get a good cleanliness level into the reservoir

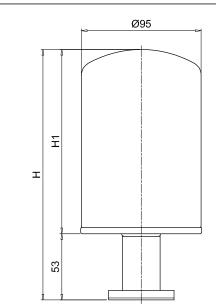
#### **Common applications:**

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

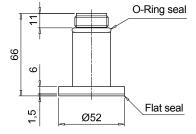


#### Designation & Ordering code

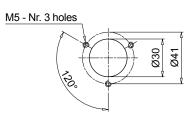




SCS050-070					
Screwed flange					
Size	H [mm]	H1 [mm]			
050	199	146			
070	263	210			

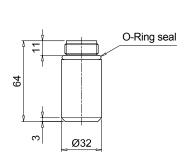


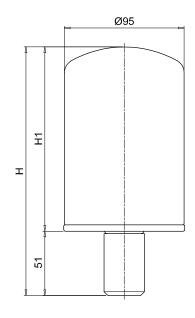
Holes on the tank

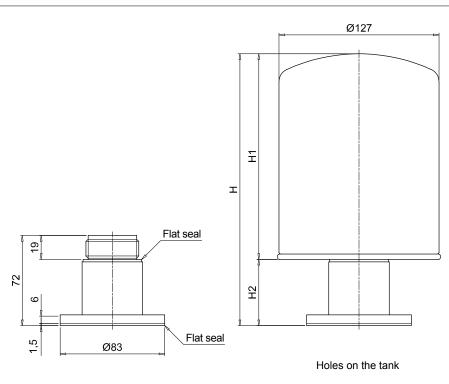


# SCS050-070

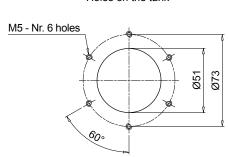
Weld riser					
Size	H [mm]	H1 [mm]			
050	197	146			
070	261	210			

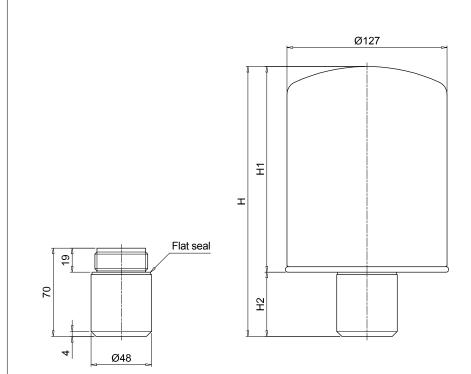






SCS100-150						
Screwed flange						
Size Connections H H1 H2 [mm] [mm] [mm]						
100	G1	231	178	53		
	G2	215	184	31		
150	G1	280	227	53		
100	G2	301	270	31		





#### SCS100-150 Weld riser Connections [mm] 229 [mm] 51 [mm] G1 178 100 213 184 29 G2 278 227 51 G1 150 G2 299 270 29

(36)





# SME1-SMF1-SML1 series

Risers for breathers and filler caps installation



### Technical data

# Air breathers & Filler plugs

Risers for breathers and filler caps installation

 $\mbox{SME/SML}$  are ranges of risers for installation of the breathers and filler caps in any place on the tank.

They make the maintenance operation easy and fast.

#### **Available features:**

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

#### **Materials SME**

- Body: Nylon - Seals: NBR

Cork gasket

- Screws: Phosphatized steel Galvanized steel

#### **Materials SMF**

- Body: Nylon

- Seals: NBR

Cork gasket - Screws: Phosphatized steel

Galvanized steel

#### **Materials SML**

- Body: Aluminium

- Seals: NBR

Cork gasket
- Screws: Phosphatized steel

# **Temperature**

From -25 °C to +100 °C

## Weight

SME - 0.250 kg

SMF - 0.325 kg

SML - 0.380 kg

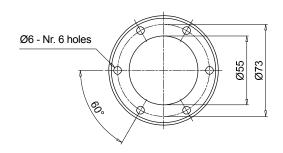


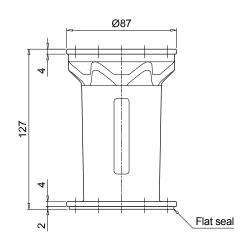
# Designation & Ordering code

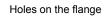
					SME / SMF / SML
Series	and size				Configuration example : SMF1 M
SME1	Polyamide vertical riser				
SMF1	Polyamide sloping riser				
SML1	Aluminium sloping riser				
Conne	ctions to the tank				
M	Metric screws				
U	UNC screws				
Seals					
A	NBR				
-					
Execut	ion	SME1	Series SMF1	SML1	
P01	MP Filtri standard	SIVILI	SIVII I	- SIVIL I	
P02	Standard without logo	•			
Pxx	Customized	•	•	•	

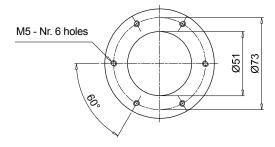
40

SME1



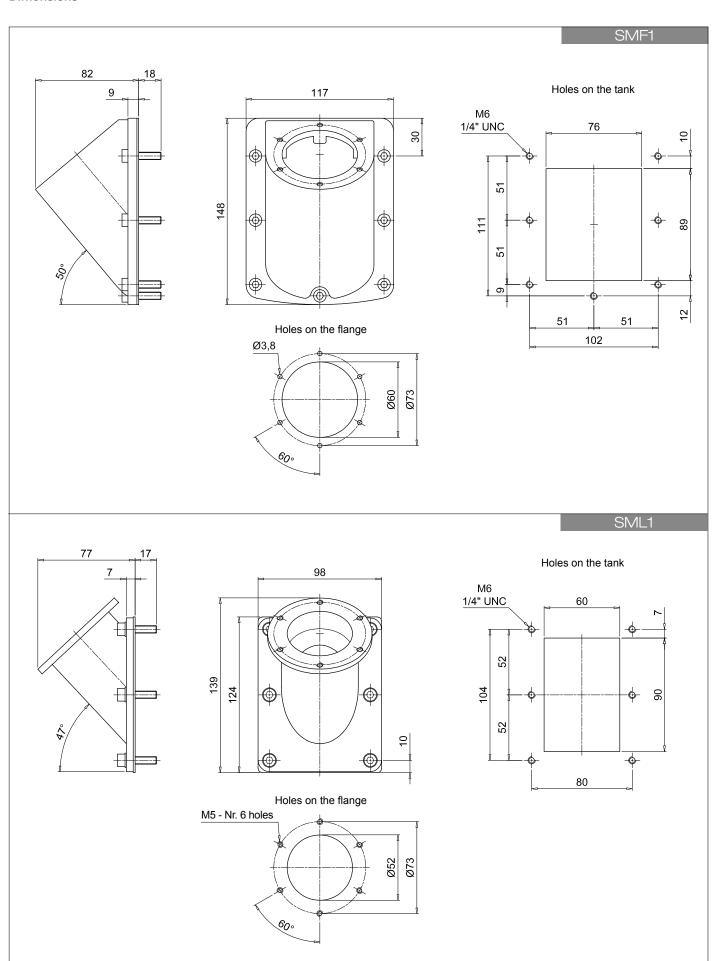






# SME1-SMF1-SML1

# **Dimensions**





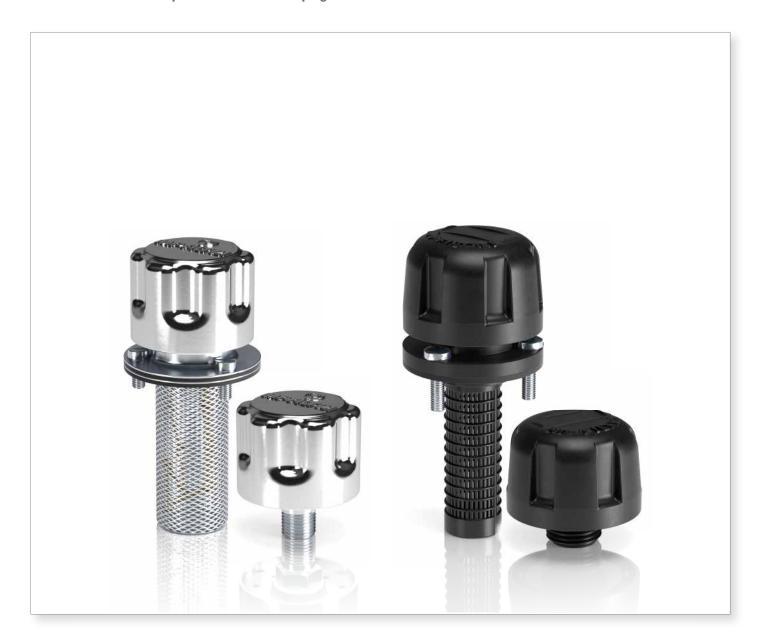


# TA 46 TAP 50 SAP 50 series

Metal oil filler and air breather filler cap

Nylon oil filler and breather plug

Nylon air breather filter



#### Technical data

# Air breathers & Filler plugs

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

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

#### **Available features:**

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

#### **Common applications:**

- Compact hydraulic systems
- Compact mobile machines
- Industrial equipment

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

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

#### Materials (version G/N)

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

#### **Materials (version B)**

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

#### **Temperature**

From -25 °C to +100 °C

#### Weight

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



P01

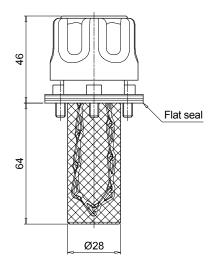
MP Filtri standard Customized

# Designation & Ordering code

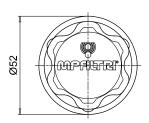
#### **COMPLETE AIR BREATHER - TA46** Configuration example 1: **TA46** В 03 P01 Series and size **TA46** Configuration example 2: **TA46** P01 G 10 Connections to the tank В Screwed flange with bayonet mount G Thread G 1/4" Thread 1/4" NPT Resin impregnate paper 3 µm 10 Polyurethane 10 µm NBR Without valve Standard With basket

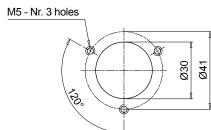
# TA46

# Screwed flange



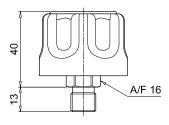
Holes on the tank

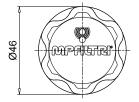




# TA46

# Threaded connection





# TAP 50 general information

## Technical data

# Air breathers & Filler plugs

# Nylon oil filler and breather plug Flow rate up to 200 l/min

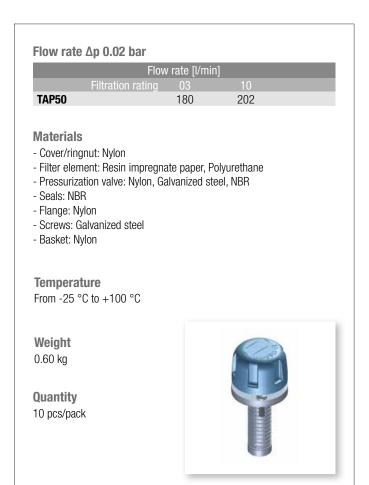
TAP50 is a range of compact plastic air breathers and filler caps for protection of the tank against the solid contamination contained into the air and filling of the fluid into the systems during the commissioning and maintenance procedures.

#### **Available features:**

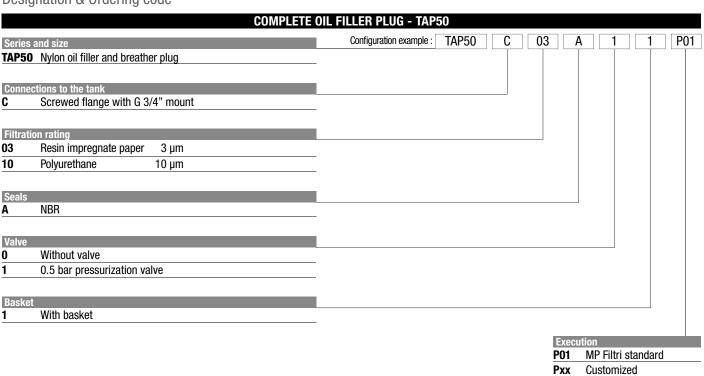
- Flanged connection with bayonet, for a maximum flow rate of 200 l/min
- Fine cellulose filtration, to get a good cleanliness level into the reservoir
- Filling basket, to hold the coarse contamination contained into the fluid and to diffuse the fluid flow into the tank

## **Common applications:**

- Compact hydraulic systems
- Compact mobile machines
- Industrial equipment

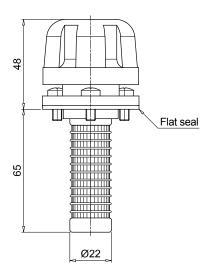


# Designation & Ordering code

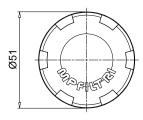


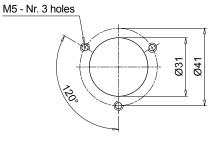
# TAP50

# Screwed flange



Holes on the tank





# SAP 50 GENERAL INFORMATION

## Technical data

# Air breathers & Filler plugs

# Nylon air breather filter Flow rate up to 200 l/min

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

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

#### **Available features:**

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

#### **Common applications:**

- Compact hydraulic systems
- Compact mobile machines
- Industrial equipment

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

Flow rate [l/min]					
Filtra	tion rating 03	10			
SAP50	180	204			

#### **Materials**

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

### **Temperature**

From -25 °C to +100 °C

#### Weight

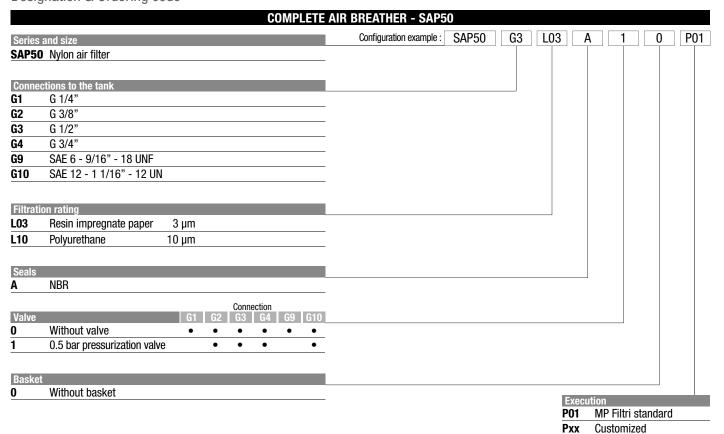
0.40 kg

#### Quantity

10 pcs/pack

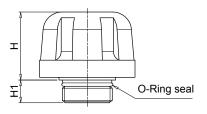


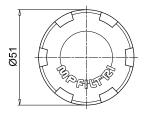
# Designation & Ordering code



# SAP50

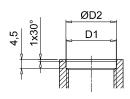
# Threaded connection

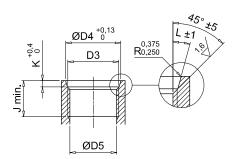




# Housing on the tank for connections GAS

Housing on the tank for connections SAE





Connections	H [mm]	H1 [mm]	D1 [mm]	ØD2 [mm]	D3 [mm]	ØD4 [mm]	ØD5 [mm]	J min. [mm]	K [mm]	L
G1	36	12	G 1/4"	13.5	-	-	-	-	-	-
G2	36	12	G 3/8"	17	-	-	-	-	-	-
G3	36	12	G 1/2"	21.5	-	-	-	-	-	-
G4	36	12	G 3/4"	26.7	-	-	-	-	-	-
G9	36	12	-	-	SAE 6 - 9/16" - 18 UNF	15.6	13.081 12.751	12.7	2.5	12°
G10	35	14.5	-	-	SAE 12 - 1 1/16" - 12 UN	29.2	24.978 24.696	19	3.3	15°



# TA 80 series

Metal oil filler and air breather filler cap



## Technical data

# Air breathers & Filler plugs

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

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

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

#### **Available features:**

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

#### **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

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

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

#### **Materials**

- Cover: Chrome Plated steel
- Filter element: Resin impregnate paper, Polyurethane
- Pressurization valve:

Nylon (bodies), Galvanized steel (end cap - disk), Steel (spring), NBR (seals)

- Flange and anti-splash feature: Galvanized steel
- Seals: NBR
- Screws, Flange: Galvanized steel
- Chain, Ring: Brass
- Basket (only TA80B): Galvanized steel

#### **Temperature**

From -25 °C to +100 °C

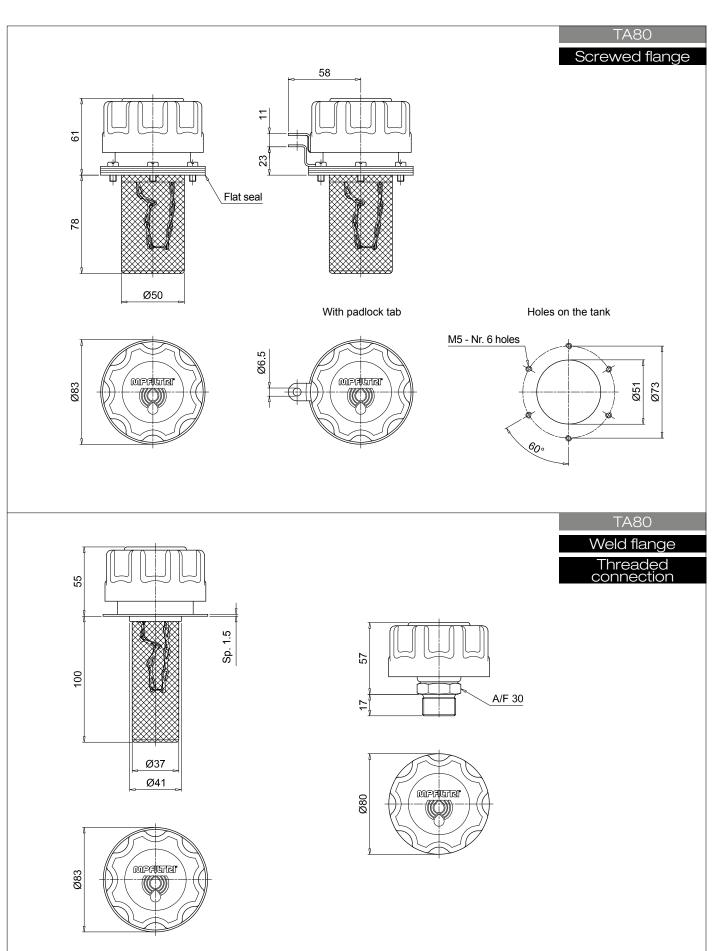
#### Weight

L 80 mm 0.33 kg L 100 mm 0.35 kg



# Designation & Ordering code

	COMPLE	TE BREATHER PLU(	G - TA80						
Ser	ies and size	Configuration example 1 :	TA80	В	03	4	0 L	1	P01
BAT	0	Configuration example 2 :	TA80	G	10 /	<b>A</b>	2		P01
Cor	nections to the tank	I							
В	Screwed flange with bayonet mount <b>G</b> Thread G 3/4"								
D	Weld flange with bayonet mount  N Thread 3/4" NPT	-							
1-911									
00	ration rating Connection: B D G N Without filter (blind filler plug)								
03	Resin impregnate paper 3 µm • • •	-							
10	Polyurethane 10 μm • • •	-							
	·	<del>.</del>							
Sea	<del></del>								
Α	NBR	<del>-</del>							
Val	ve Filtration rating: 00 03 10								
0	Without valve • • •								
1	0.3 bar pressurization valve • •	=							
2	0.7 bar pressurization valve • •	-							
9	With anti-splash feature • •	=							
Ver	sion Connection: B D G N	I							
0	Standard • •								
L	With padlock tab •	=							
	·	-							
Bas									
0	Without basket • •	=							
1	L = 80 mm •	-				Exec			
3	L = 100 mm	-				P01		i standard	
						Pxx	Custom	ızea	





# TAP 90 series

Nylon oil filler and air breather filler cap



# TAP 90 general information

#### Technical data

# Air breathers & Filler plugs

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

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

They are usually directly fitted on the tank.

#### **Available features:**

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

### **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

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

Flow rate [I/min]					
Filtration	rating 03	10			
TAP90	450	550			

#### **Materials**

- Cover/Ringnut: Nylon
- Filter element: Resin impregnate paper, Polyurethane
- Pressurization valve:

Nylon (bodies), Galvanized steel (end cap - disk), NBR (seals)

- Flange B: Nylon
- Seals: NBR
- Screws: Galvanized steel
- Padlock tab: Galvanized steel
- Chain, Ring: Brass
- Dipstick: Phosphatized steel
- Basket: Galvanized steel, Nylon



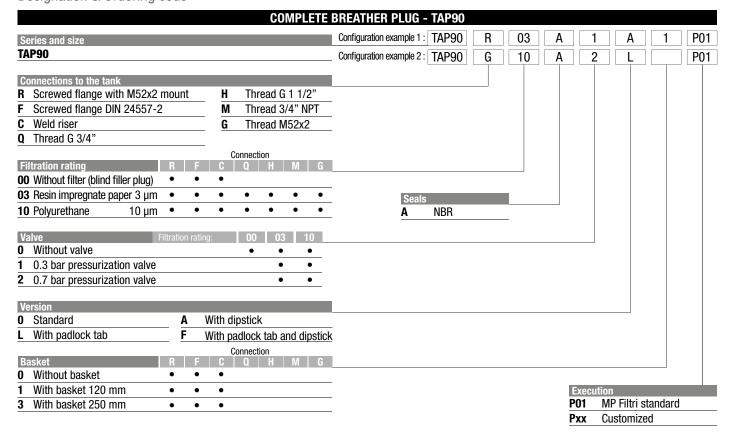
#### **Temperature**

From -25 °C to +100 °C

#### Weight

L 120 mm 0.25 kg L 250 mm 0.31 kg

# Designation & Ordering code

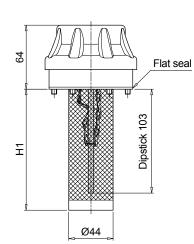


58



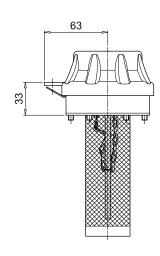
# Screwed flange

Basket	H1 [mm]
1	120
3	250



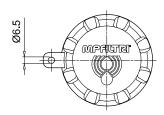
mpaurar

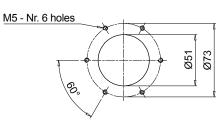
**Ø** 



With padlock tab

Holes on the tank



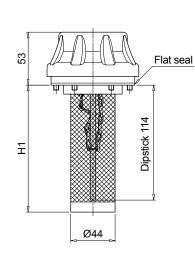


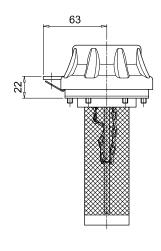
# TAP90

# Screwed flange

DIN 24557-2

Basket	H1 [mm]
1	120
3	250

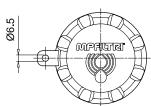


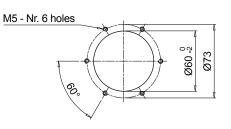


With padlock tab

Holes on the tank

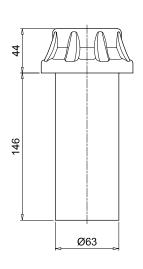


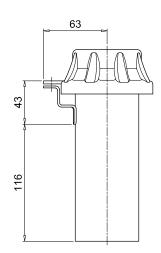




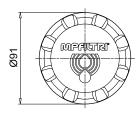
# TAP90

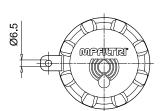
# Weld riser



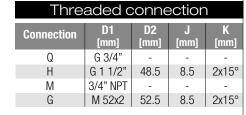


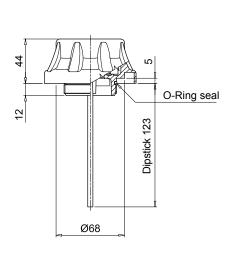
With padlock tab

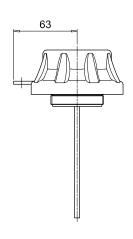




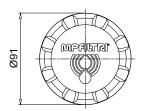
# TAP90

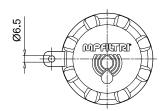




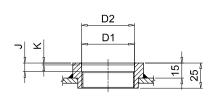


With padlock tab





Housing on the tank for connections GH-MT







# TAP 114 series

Nylon oil filler and air breather filler cap



# TAP 114 GENERAL INFORMATION

## Technical data

# Air breathers & Filler plugs

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

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

They are usually directly fitted on the tank.

#### **Available features:**

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

#### **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

## Flow rate $\Delta p$ 0.02 bar

Flow rate [l/min]
Filtration rating L10

TAP114 length 1 1450

TAP114 length 3 1600

#### **Materials**

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

#### **Temperature**

From -25 °C to +100 °C

#### Weight

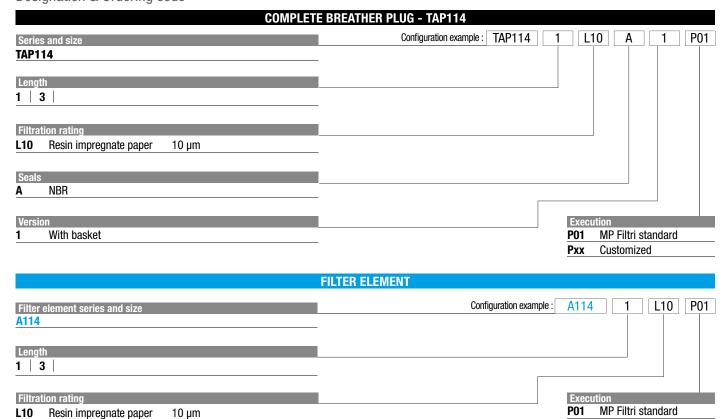
Length 1 - 0.185 kg Length 2 - 0.200 kg



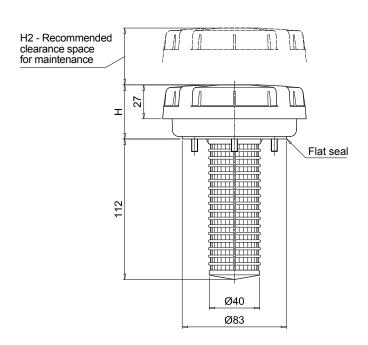
Pxx

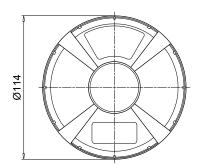
Customized

# Designation & Ordering code

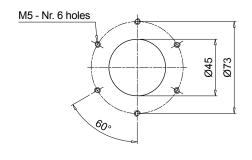


TAP114			
Length	H [mm]	H2 [mm]	
1	43	30	
3	70	60	





# Holes on the tank





# TAP 115 & SAP 115

Nylon oil filler and air breather filler cap



# TAP 115 GENERAL INFORMATION

## Technical data

# Air breathers & Filler plugs

# Nylon oil filler and air breather filler cap Flow rate up to 2150 l/min

TAP115 is a range of plastic large air breathers and filler caps for protection of the tank against the solid contamination contained into the air and filling of the fluid into the systems during the commissioning and maintenance procedures.

They are usually directly fitted on the tank.

#### **Available features:**

- Flanged connection, for a maximum flow rate of 2150 l/min
- Replaceable filter element.
- Fine cellulose and microfibre filtration, to get a good cleanliness level into the reservoir. Polyester media is an option for heavy environmental conditions (High humidity, sand ....)
- Visual clogging indicator
- Filling basket, to hold the coarse contamination contained into the fluid and to diffuse the fluid flow into the tank

#### **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

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

Flow rate [l/min]					
Filtration rating	A03	L10			
TAP115 length 1	1600	2000			
TAP115 length 2	2150	2150			

#### **Materials**

- Cover/flange: Nylon
- Filter element: Microfibre, Resin impregnate paper
- Seals: NBR. FPM
- Basket/screws: Galvanized steel

# **Clogging indicators**

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

#### **Temperature**

From -25 °C to +100 °C

**Weight** Length 1 Length 2 TAP 115 0.46 kg 0.585 kg



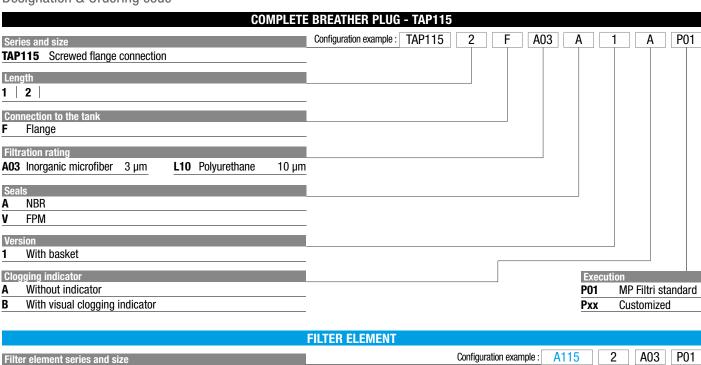
P01

Pxx

MP Filtri standard

Customized

# Designation & Ordering code



10 µm

A03 Inorganic microfiber

Filtration rating

A115

Length

1 | 2 |

3 µm

L10 Polyurethane

TAP115    Length   H   H2   [mm]   [mm]     1   91   55     2   155   80
Holes on the tank  at seal  M5 - Nr. 6 holes  Ooo



#### Technical data

# Air breathers & Filler plugs

# Nylon oil filler and air breather filler cap Flow rate up to 3000 l/min

SAP115 is a range of plastic large air breathers for protection of the tank against the solid contamination contained into the air.

They are usually directly fitted on the tank.

#### **Available features:**

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

### **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

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

Filtration rating A03 L10  SAP115 length 1 - G1" 1830 2170  SAP115 length 2 - G1" 2800 2800  SAP115 length 1 - G1 1/2" 1995 2330	Flow rate [l/min]						
<b>SAP115 length 2 - G1"</b> 2800 2800	Filtra	tion rating A03	L10				
•	AP115 length 1 - G1"	1830	2170				
<b>SAP115 length 1 - G1 1/2"</b> 1005 2330	AP115 length 2 - G1"	2800	2800				
<b>5Ai 113 Icligiti i - 41 172</b> 1555 2550	AP115 length 1 - G1	<b>1/2"</b> 1995	2330				
<b>SAP115 length 2 - G1 1/2"</b> 3000 3000	AP115 length 2 - G1	<b>1/2"</b> 3000	3000				

#### **Materials**

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

### **Clogging indicators**

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

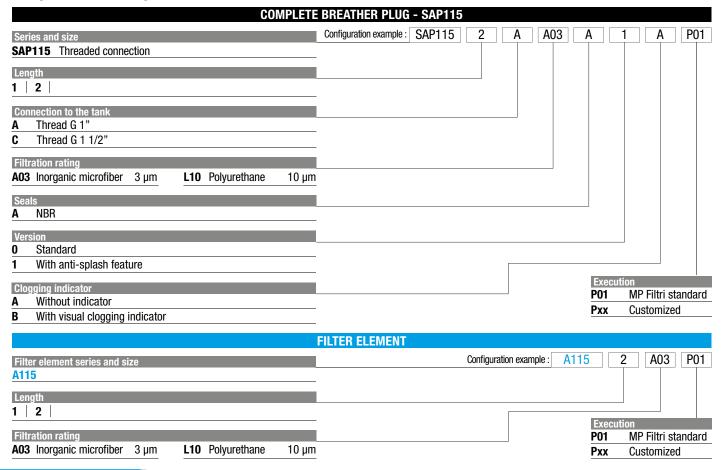
#### **Temperature**

From -25 °C to +100 °C

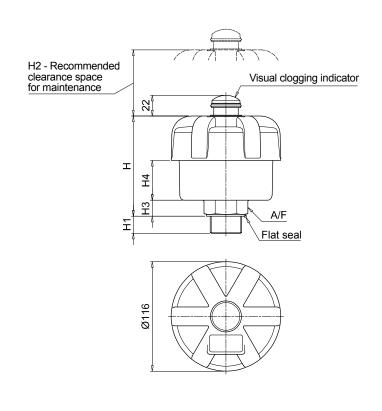
Weight Length 1 Length 2 SAP 115 0.41 kg 0.525 kg



# Designation & Ordering code



SAP115								
Length	Connection	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	A/F [mm]	
4	А	106	18	55	17	42	41	
	С	111	23	55	22	42	55	
•	А	170	18	80	17	106	41	
2	С	175	23	80	22	106	55	



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



# Filler and Drain Plugs



TC 50	page 75
TKT - TSD - TKM	79



## TC 50 series

Nylon filler cap



## TC 50 general information

#### Technical data

#### Filler plugs

#### Nylon filler plug

TC50 is a range of plastic compact air breathers and filler plugs for protection of the tank against the solid contamination contained into the air and filling of the fluid into the systems during the commissioning and maintenance procedures.

They are usually directly fitted on the tank.

#### **Available features:**

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

#### **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

#### **Materials**

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

#### **Temperature**

From -25 °C to +100 °C

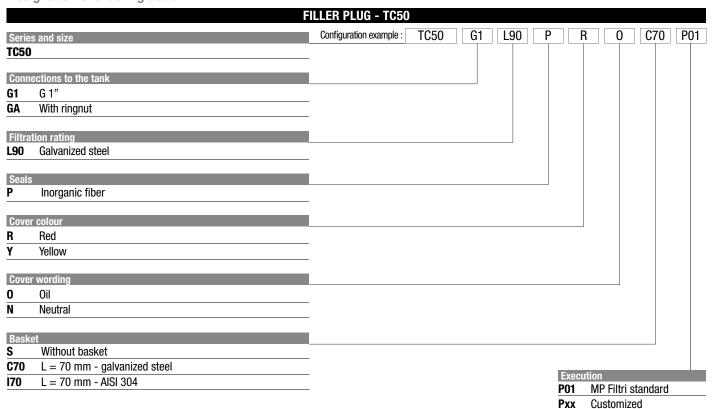
#### Weight

TC 50 G1" conn. 0.70 kg TC 50 with ringnut 0.10 kg

## Quantity

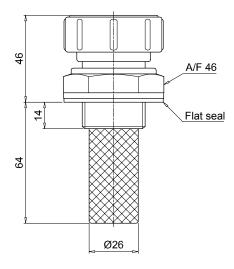
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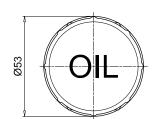




## TC50

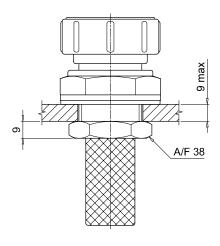
## Threaded connection



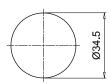


## TC50

## With ringnut



Through hole on the tank





## TKT - TSD - TKM series

Nylon and aluminium filler and drain plugs



#### Filler plugs

#### Nylon filler plug

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

#### **Available features:**

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

#### **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

#### **Materials**

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

#### **Temperature**

From -25 °C to +100 °C

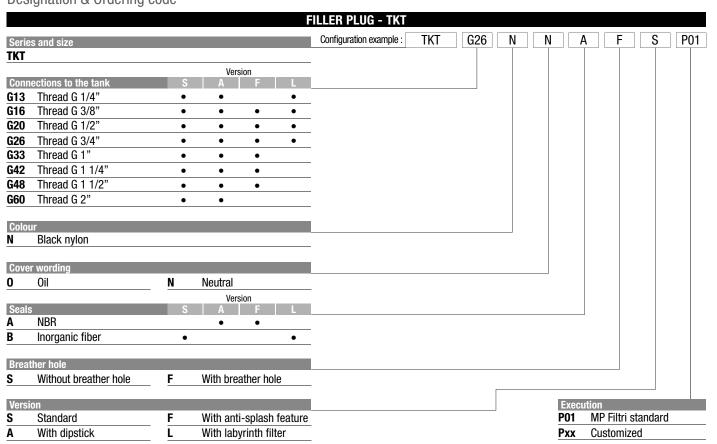
#### Weight

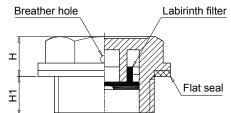
TKTG 13 5 g
TKTG 16 8 g
TKTG 20 10 g
TKTG 26 15 g
TKTG 33 30 g
TKTG 42 32 g
TKTG 60 35 g

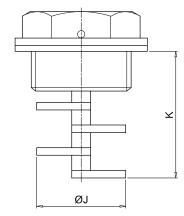
#### Quantity

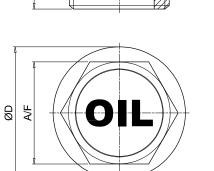
25 pcs/pack

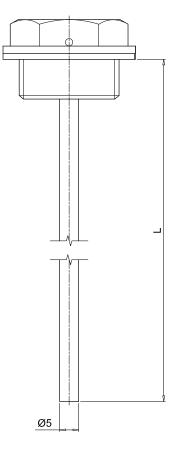












Connections	ØD [mm]	A/F [mm]	H [mm]	H1 [mm]	ØJ [mm]	K [mm]	L [mm]
G13	20	17	8.5	7.5	-	-	205
G16	22	18	9.5	8.5	13.5	32	206
G20	28	22	9.5	9.5	17.5	33	207
G26	35	27	10.5	10.5	23.5	34	208
G33	42	34	10.5	10.5	29.5	36	201
G42	52	42	11	11	38	38	201
G48	58	47	11	11	38	36	201
G60	74	64	18	18	-	-	198

#### Filler plugs

#### Nylon filler plug

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

They are usually directly fitted on the tank.

#### **Available features:**

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

#### **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

#### **Materials**

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

#### **Temperature**

From -25 °C to +100 °C

#### Weight

TSDG16 15 g

TSDG20 25 g

TSDG26 28 g

TSDG33 60 g

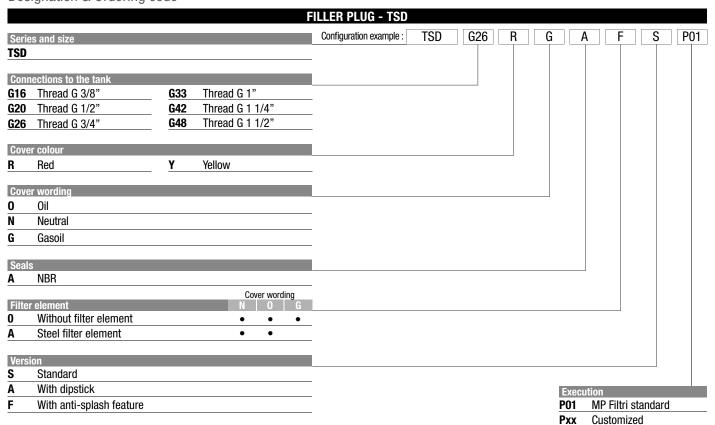
TSDG42 69 g

TSDG48 74 g

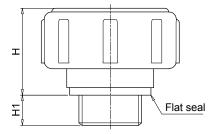
#### Quantity

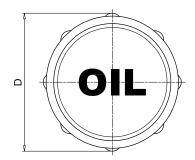
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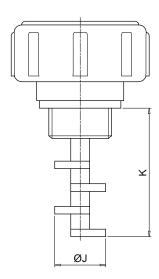


Version 0

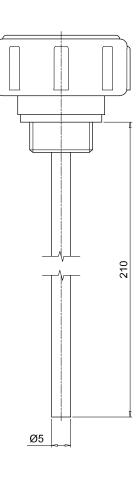




Version F



## Version A



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

## Drain plugs

## Aluminium magnetic drain plug

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

#### **Available features:**

- Male threaded connections up to G 1"

## **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

#### **Materials**

- Body: Aluminium
- Seal: Inorganic fibre

## **Temperature**

From -25 °C to +100 °C

#### Weight

TKMG13 14 g

TKMG16 23 g

TKMG20 42 g

TKMG26 95 g

TKMG33 98 g

## Quantity

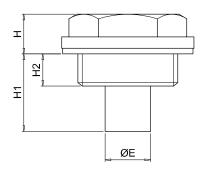
1 pc/pack

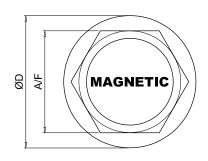


## Designation & Ordering code

9	n a cracing coac	DRAIN PLUG - TKM					
		DRAIN FLUG - TRIVI	0	TIA	000		DO:
Series and size			Configuration example :	TKM	G20	В	PO <sup>-</sup>
TKM							
Connections to	the tank						
G13 Thread	I G 1/4"						
G16 Thread	I G 3/8"						
<b>G20</b> Thread	I G 1/2"						
<b>G26</b> Thread	I G 3/4"						
G33 Thread	I G 1"						
Seals							
	nic fiber						
		<del></del>					
				_			
				Execu		andard	
				P01	MP Filtri st		
				Pxx	Customized	d	

84)-





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

#### LC

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

## LV

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

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

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



## Visual Oil Level Indicators

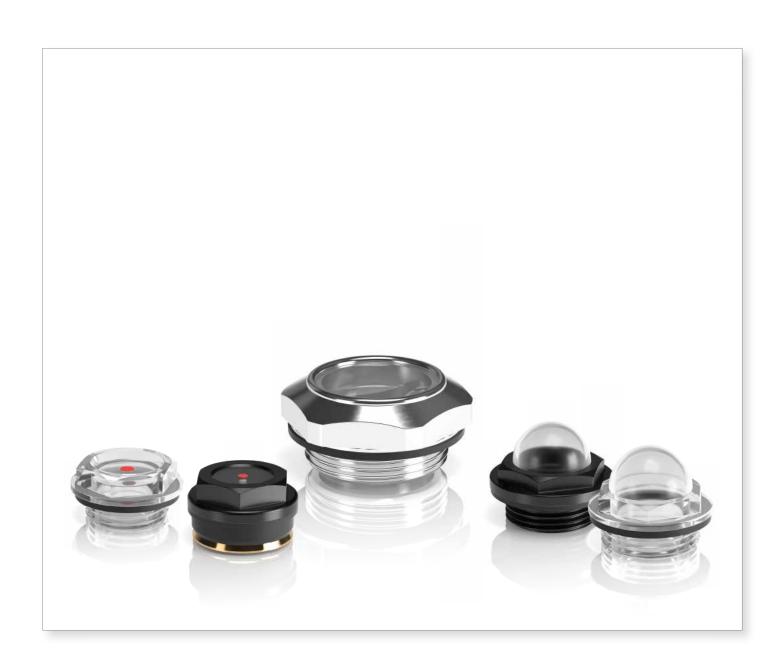


LCP - LCC	page 89
LVA - LVU	95



## LCP - LCC series

Visual oil level indicators



## Visual oil level indicators

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

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

#### **Available features:**

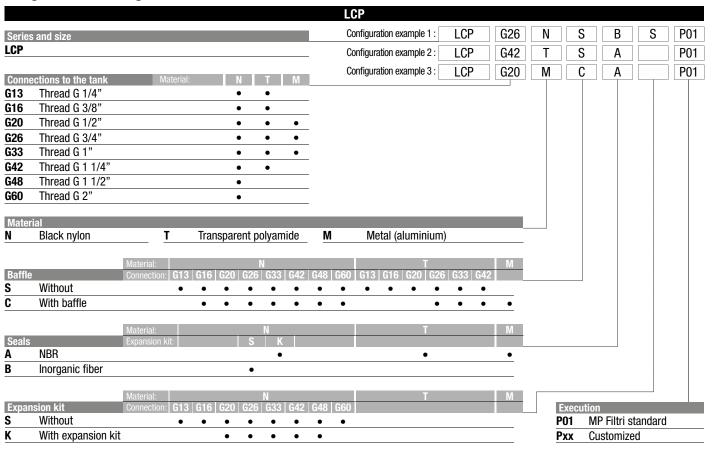
- Male threaded connections up to G 2"
- Baffle, to allow an easy monitoring of the level
- Expansion kit, for reliable sealing even in thanks with thin walls

#### **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

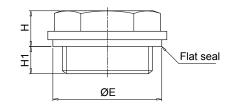
#### **T Series Materials** - Body: Polyamide Weight LCPG13 1 g - Contrast screen: Nylon LCPG16 2g - Seals: NBR LCPG20 4 g LCPG26 8 g LCPG33 10 g LCPG42 12 g **M Series Materials** - Body: Aluminium Weight - Lens: Thermoplastic LCPG20 6 g - Contrast screen: Nylon LCPG26 9 g LCPG33 13 g - Seals: Inorganic fibre **N** Series **Materials** Weight - Body: Nylon - Lens: Thermoplastic LCPG13 2 q - Contrast screen: Nylon LCPG16 4 g LCPG20 7 g - Seals: Inorganic fibre, NBR LCPG26 9 g - Expansion kit: Brass, NBR LCPG30 12 g LCPG33 18 g LCPG42 25 g LCPG48 48 g LCPG60 59 g **Temperature** From -20 °C to + 80 °C Quantity

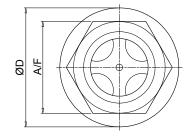
## Designation & Ordering code



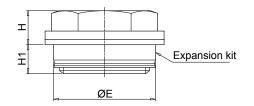
25 pcs/pack

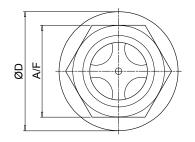






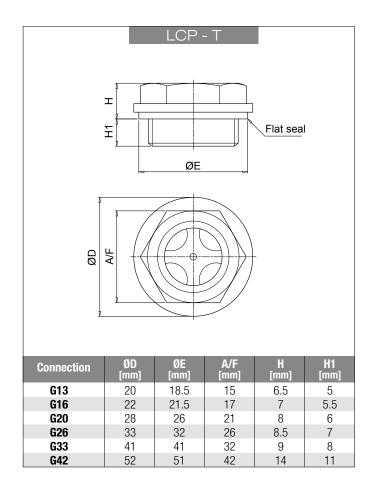
without expansion kit									
Connection         ØD   ØE   A/F   H   H1   [mm]         H   H1   [mm]									
G13	20	18.5	17	9	7				
G16	22	21.5	18	10	7				
G20	28	26	22	10	7				
G26	35	32	27	10.5	8				
G33	42	41	34	13.5	10.5				
G42	52	51	42	14	11				
G48	58	53.5	47	16	11				
G60	74	72	64	16	18				

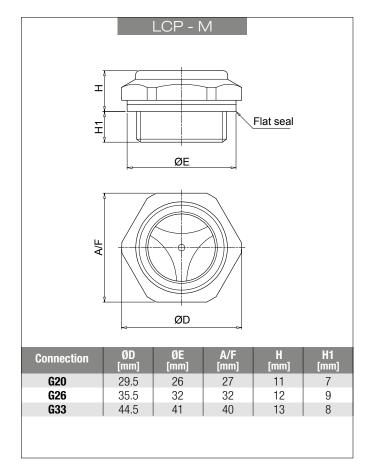




with expansion kit											
Connection	Connection         ØD [mm]         ØE [mm]         A/F H H1 [mm]										
G20	28	26	22	9	8						
G26	35	30	27	10	8.5						
G33	42	40	34	13	11						
G42	52	50	42	13.5	11.5						
G48	58	55	47	15.5	11.5						

Note: for installation onto OB Cleaning covers see page 147





Note: for installation onto OB Cleaning covers see page 147



## Visual oil level indicators

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

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

#### **Available features:**

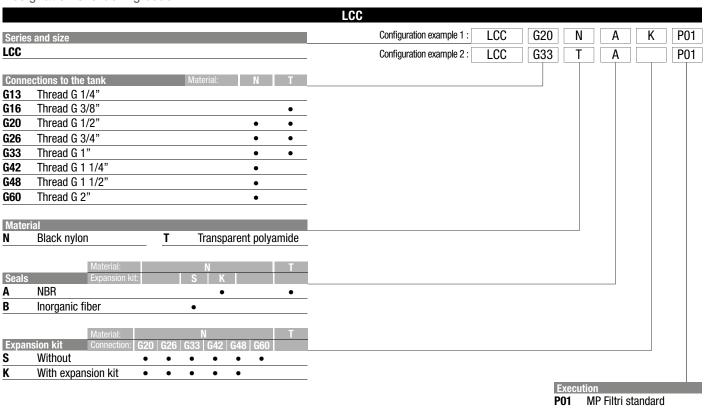
- Male threaded connections up to G 2"
- Expansion kit, for reliable sealing even in thanks with thin walls

#### **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

**N Series Materials** - Body: Nylon Weight LCCG26 7 g - Lens: Polyamide LCCG42 20 g - Contrast screen: Nylon LCCG60 40 g - Seals: Inorganic fibre, NBR - Expansion kit: Brass / NBR **T Series Materials** - Body: Polyamide Weight LCCG16 2g - Seals: NBR LCCG20 4 g LCCG33 9 g **Temperature** From -20 °C to +80 °C Quantity 25 pcs/pack

Customized



H1 [mm]

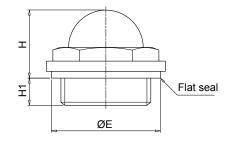
8.5 8.5

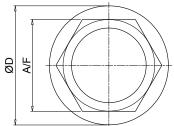
10.5

11.5 12

## LCC - N

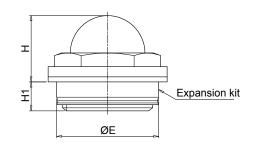
## without expansion kit

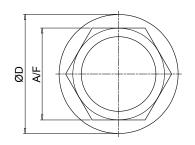




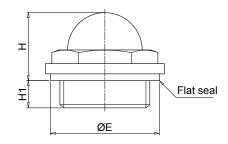
<u>,                                      </u>					
ection	ØD [mm]	ØE [mm]	A/F [mm]	H [mm]	[
20	20	00	00	47.5	

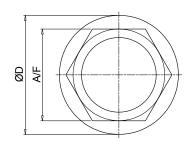
## with expansion kit





Connection	ØD [mm]	ØE [mm]	A/F [mm]	H [mm]	H1 [mm]	Connection	ØD [mm]	ØE [mm]	A/F [mm]	H [mm]
G20	28	26	22	17.5	17.5	G20	28	26	22	16.5
G26	35	32	27	20	8	G26	35	30	27	19.5
G33	42	41	34	24	10	G33	42	40	34	23.5
G42	52	51	44	30	11	G42	52	50	44	29.5
G48	58	53.5	50	33	11.5	G48	58	55	50	32.5
G60	74	72	64	39	18			•		





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



## LVA - LVU series

Visual oil level indicators



## Visual oil level indicators

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

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

#### **Available features:**

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

#### **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

#### **Materials**

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

## **Operating pressure**

Max 1 bar at +80°C

#### **Operating temperature**

From -25 °C to +80 °C

#### Weight

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

## Quantity

10 pcs/pack



## Designation & Ordering code

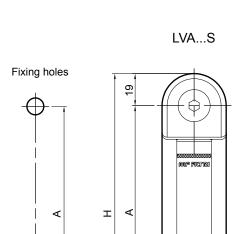
D 001	gridian d ordoring bodo									
		LVA								
Series	3	Configuration example :	LVA	20		Т	Α	Р	M10	S01
LVA										
Size										
10	20   30									
		-								
Thern	nometer									
S	Without thermometer					_				
T	With thermometer	-								
Seals										
Α	NBR	_								
V	FPM	_								
Cover	material									
Р	Polyamide	_								
	ections									
M10	Screws M10	-								
M12	Screws M12	-								
U38	Screws 3/8" UNC	-			ution					
U12	Screws G 1/2" UNC	S01 Tag MP Filtri, with nuts S02 Tag MP Filtri, without nuts								
				S02	la	g MP	Filtri, V	withou	t nuts	

96



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

Туре	B [mm]	C [mm]
LVAM10	M10	10.5
LVAM12	M12	12.5
LVAU38	3/8" UNC	10.0
LVAU12	1/2"UNC	13.5

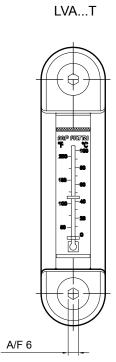


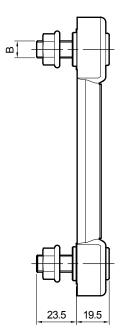
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38





## Visual oil level indicators

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

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

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

#### **Available features:**

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

#### **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

#### **Materials**

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

#### **Operating temperature**

From -25 °C to +70 °C

 Weight
 version U
 version S

 LVU 0500
 0.780 kg
 0.580 kg

 LVU 1000
 1.150 kg
 0.790 kg

 LVU 1500
 1.550 kg
 1.100 kg

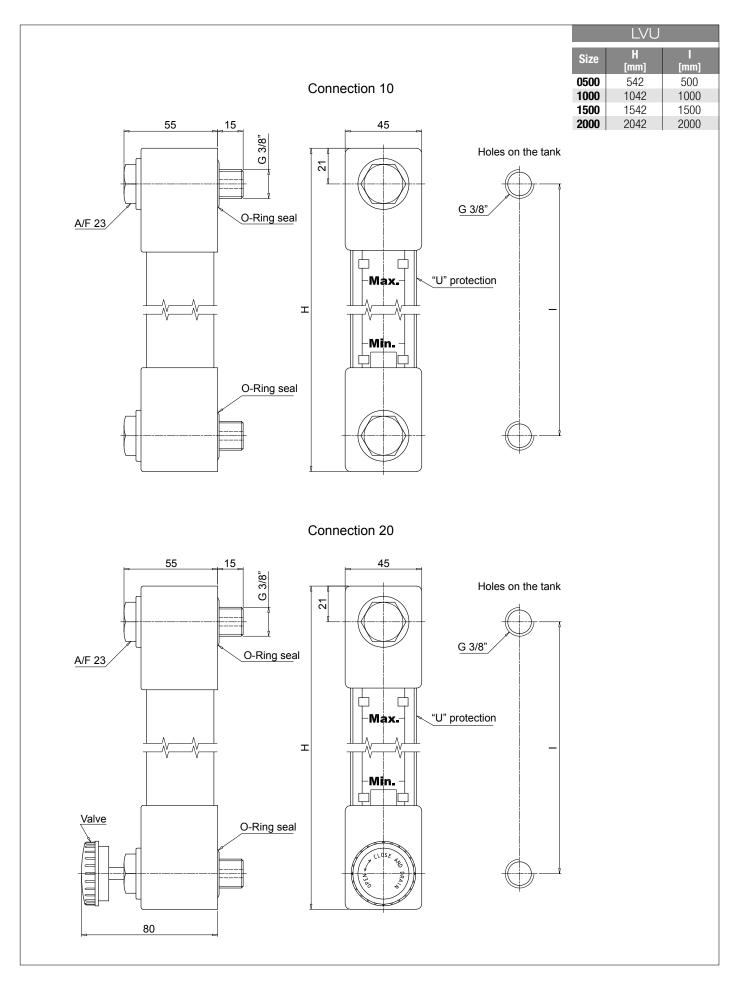
 LVU 2000
 1.950 kg
 1.400 kg



10 pcs/pack



Configuration example: LVU 0500 U A 10 PC  Do Distance between center = 500 mm Do Distance between center = 1500 mm Do Distance between center = 1500 mm Do Distance between center = 2000 mm erent sizes on request  Size  dy  Standard plexiglass body  Plexiglass body, with "U" protection  Pyrex body, with "U" protection  NBR  FPM  Innections  Connection G 3/8"  Connection G 3/8", with drain valve  Execution  POI MP Filtri standard		9												
DO Distance between center = 500 mm DO Distance between center = 1500 mm DO Distance between center = 1500 mm DO Distance between center = 2000 mm PO Distance between center = 2000 mm  Bize dy  Standard plexiglass body  Plexiglass body, with "U" protection  Pyrex body, with "U" protection  NBR  FPM  Innections  Connection G 3/8"  Connection G 3/8", with drain valve  Execution  PO1 MP Filtri standard							LVU							
DO Distance between center = 500 mm DO Distance between center = 1500 mm DO Distance between center = 1500 mm DO Distance between center = 2000 mm DO Distance between center = 1500 mm DO Distance per 1500 mm DO Di	Series						l	Configuration example :	LVU	0500	U	Α	10	PC
Distance between center = 500 mm Dio Distance between center = 1000 mm Dio Distance between center = 1500 mm Dio Distance between center = 2000 mm Dio	VU													
DO Distance between center = 500 mm DO Distance between center = 1000 mm DO Distance between center = 1500 mm DO Distance between center = 2000 mm  British Size							<u>-</u>							
DO Distance between center = 500 mm DO Distance between center = 1000 mm DO Distance between center = 1500 mm DO Distance between center = 2000 mm PO Distance between center = 2000 mm  Bo Distance between center = 1500 mm	Size						ı							
DO Distance between center = 1000 mm DO Distance between center = 1500 mm DO Distance between center = 2000 mm erent sizes on request  Size  dy  Standard plexiglass body  Plexiglass body, with "U" protection  Pyrex body, with "U" protection  NBR  FPM  Innections  Connection G 3/8"  Connection G 3/8", with drain valve  Execution  PO1 MP Filtri standard		Distance between center – 500 mm												
DO Distance between center = 1500 mm DO Distance between center = 2000 mm  Interest sizes on request  Size  dy  Standard plexiglass body  Plexiglass body, with "U" protection  Pyrex body, with "U" protection  NBR  FPM  Innections  Connection G 3/8"  Connection G 3/8", with drain valve  Execution  PO1 MP Filtri standard							-							
DO Distance between center = 2000 mm erent sizes on request  Size  dy 500 1000 1500 2000  Standard plexiglass body • • • •  Plexiglass body, with "U" protection • • •  Pyrex body, with "U" protection • • •  NBR  FPM  Innections  Connection G 3/8"  Connection G 3/8", with drain valve  Execution  PO1 MP Filtri standard														
erent sizes on request  Size  dy 500 1000 1500 2000  Standard plexiglass body Plexiglass body, with "U" protection Pyrex body, with "U" protection  NBR  FPM  Connection G 3/8"  Connection G 3/8", with drain valve  Execution  P01 MP Filtri standard														
Size    Size   Standard plexiglass body   Standard plexiglass body   Standard plexiglass body, with "U" protection   Standard plexiglass body   Standard plexiglass   Stand	2000	Distance between center = 2000 mm					-							
Standard plexiglass body  Plexiglass body, with "U" protection  Pyrex body, with "U" protection  NBR  FPM  Innections  Connection G 3/8"  Connection G 3/8", with drain valve  Execution  P01 MP Filtri standard	Differe	nt sizes on request												
Standard plexiglass body Plexiglass body, with "U" protection Pyrex body, with "U" protection  NBR FPM  Innections Connection G 3/8" Connection G 3/8" Connection G 3/8" MP Filtri standard	Podv		E00	Siz		2000	ı							
Plexiglass body, with "U" protection  Pyrex body, with "U" protection  NBR  FPM  Innections  Connection G 3/8"  Connection G 3/8", with drain valve  Execution  P01 MP Filtri standard		Ctandard playiglass hady	500	1000	1500	2000								
Pyrex body, with "U" protection  NBR  FPM  Innections  Connection G 3/8"  Connection G 3/8", with drain valve  Execution  P01 MP Filtri standard	<u>.                                      </u>		-			•	-							
NBR FPM  Innections Connection G 3/8" Connection G 3/8", with drain valve  Execution P01 MP Filtri standard	<u> </u>		•	•	•	•	=							
NBR FPM  Innections Connection G 3/8" Connection G 3/8", with drain valve  Execution P01 MP Filtri standard	)	Pyrex body, with "U" protection	•	•	•		=							
NBR FPM  Innections Connection G 3/8" Connection G 3/8", with drain valve  Execution P01 MP Filtri standard														
rnnections Connection G 3/8" Connection G 3/8", with drain valve  Execution P01 MP Filtri standard	Seals													
nnections Connection G 3/8" Connection G 3/8", with drain valve  Execution P01 MP Filtri standard	١	NBR												
nnections Connection G 3/8" Connection G 3/8", with drain valve  Execution P01 MP Filtri standard	ı	FPM					-							
Connection G 3/8" Connection G 3/8", with drain valve  Execution P01 MP Filtri standard							-							
Connection G 3/8" Connection G 3/8", with drain valve  Execution P01 MP Filtri standard														
Connection G 3/8", with drain valve  Execution P01 MP Filtri standard		Connection C 2/0"												
P01 MP Filtri standard	0						=							
P01 MP Filtri standard	20	Connection G 3/8, with drain valve					-			Exe	cution			
Pxx Customized												Filtri s	standar	d
										Pxx	Cus	stomiz	ed	



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

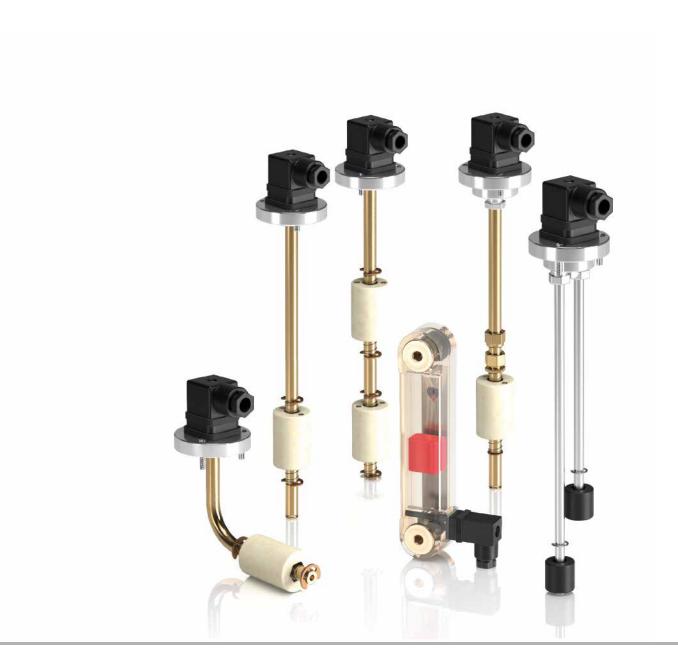
As the fluid level in the tank changes, the float moves together with the magnet that, connected with the reed switch, move the contacts thereby tripping an alarm signal.

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

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



## Electrical Oil Level Indicators

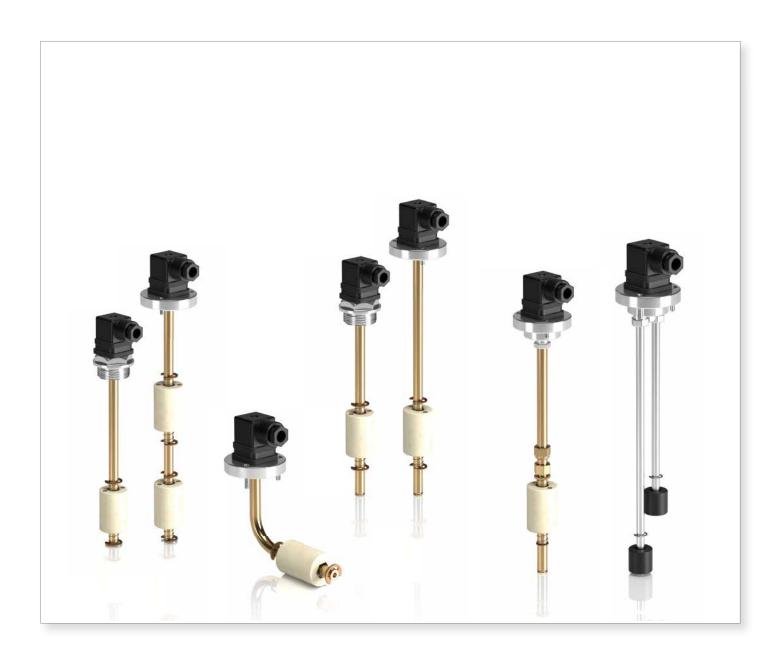


LEN - LEG - LET - LEM - LEU page 103



## LEN - LEG - LET - LEM - LEU series

**Electrical oil level indicators** 



## Electrical oil level indicators

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

They are directly fitted on the tank.

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

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

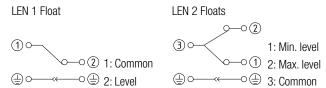
#### **Available features:**

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

#### **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

#### **Electrical symbol:**



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

#### **Materials**

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

#### **Electrical data**

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

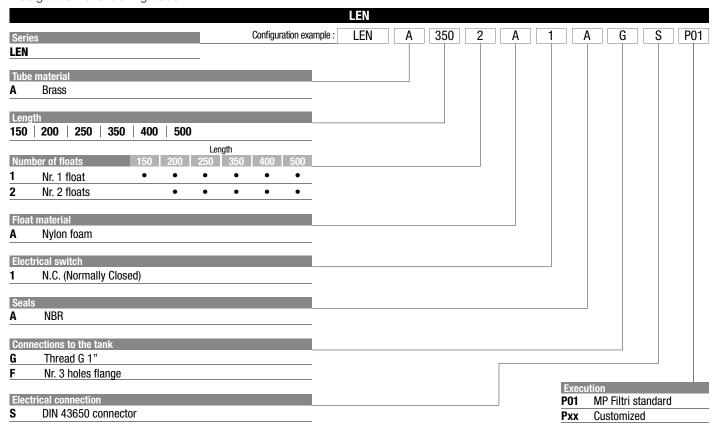
#### **Temperature**

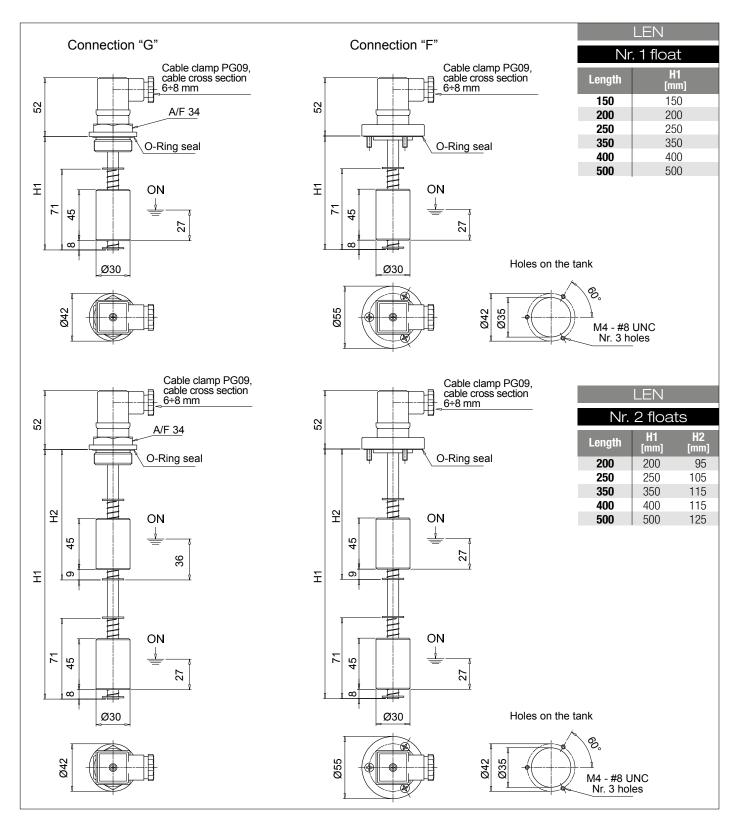
From -15 °C to + 80 °C

#### Weight

LEN 1 float  $0.185 \, \text{kg}$ LEN 2 floats 0.230 kg







## **Optional**

### **DIN 43650 CONNECTOR**

#### **Materials**

- Flange: aluminum

- Rod: brass

- Float: nylon foam

- Seals: A= NBR - V= FPM

#### **Temperature**

From -15 °C to +80 °C

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

## Electrical oil level indicators

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

They are directly fitted on the tank side.

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

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

#### **Available features:**

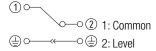
- Flanged connections
- Adjustable size on request, to meet every size of tank
- 1 float, to monitor the minimum level or the maximum level.

#### **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

#### **Electrical symbol:**

LEG 1 Float



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

#### **Materials**

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

#### **Electrical data**

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

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

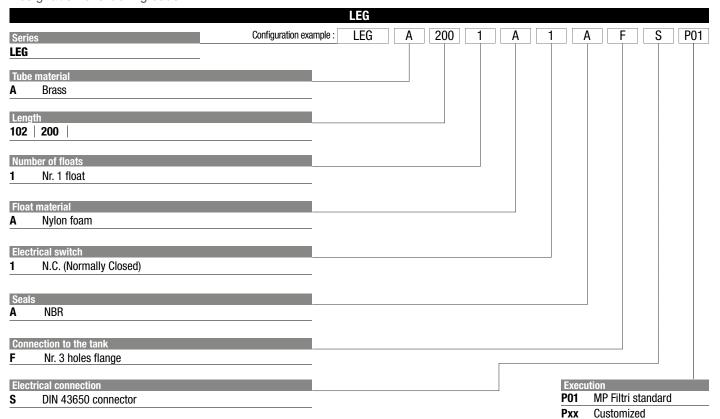
#### Temperature

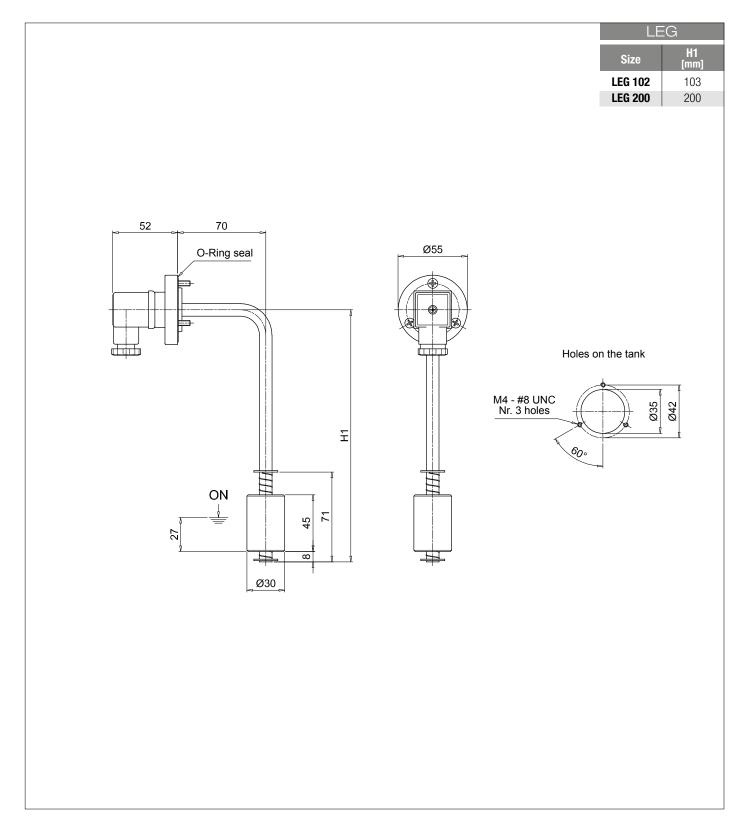
From -15 °C to + 80 °C

#### Weight

LEG A 102 0.19 kg LEG A 200 0.22 kg







## Optional

## **DIN 43650 CONNECTOR**

**Materials** 

- Flange: aluminum

- Rod: brass

- Float: nylon foam

- Seals: A= NBR - V= FPM

**Temperature** 

From -15 °C to +80 °C

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

Note: for installation onto OB Cleaning covers see page 147



## Electrical oil level indicators

LET is a range of electrical fluid level indicators for monitoring of the fluid level into the tank. They are directly fitted on the tank. The float moves through the rod while the fluid level changes. A magnet, fitted into the float, turns a reed sensor fixed into the rod. The integrated thermostat allows to get a remote monitoring of the temperature.

#### **Available features:**

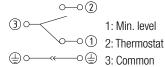
- G 1" male threaded or flanged connections
- Adjustable size on request, to meet every size of tank
- 1 float, to monitor the minimum level or the maximum level.

#### **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

### **Electrical symbol:**

LET 2 Floats with thermostat



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

#### **Materials**

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

#### **Electrical data**

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

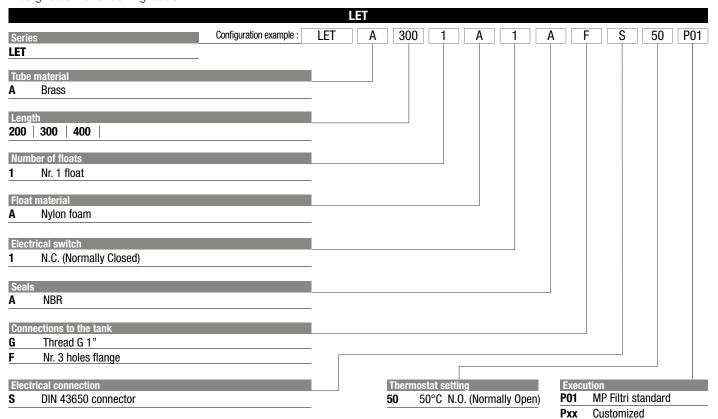
#### **Temperature**

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

#### Weight

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

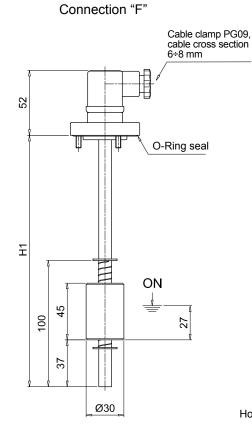


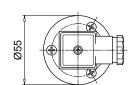


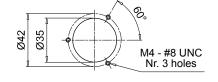


LE	ĒΤ
Length	H1 [mm]
200	200
300	300
400	400

## Connection "G" Cable clamp PG09, cable cross section 6÷8 mm 52 A/F 34 O-Ring seal Ξ ON 100 27 37 Ø30







Holes on the tank

## Optional

## **DIN 43650 CONNECTOR**

### **Materials**

- Flange: aluminum

- Rod: brass

- Float: nylon foam

- Seals: A= NBR - V= FPM

### **Temperature**

From -15 °C to +80 °C

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



## Electrical oil level indicators

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

#### **Available features:**

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

## **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

**Electrical symbol:** LEM 2 Floats with thermostat LEM 1 Float 0--0(2) 1: Min. level >---- ② 1: Common 2: Thermostat 

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

#### **Materials**

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

#### **Electrical data**

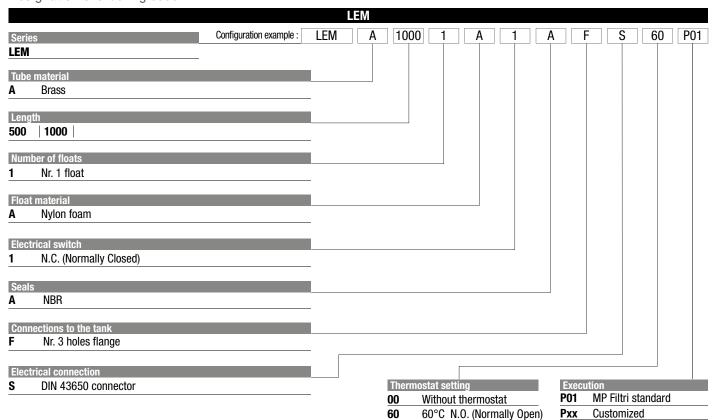
- Protection rating: IP65
- Max switching capacity: 80 W
- Max switching current: 1 A
- Max switching voltage: 250 Vac
- Fluid specific gravity: > 0.75

## **Temperature**

From -15 °C to +80 °C

Weight LEM 0.406 kg





LE	M
Length	H1 [mm]
500	500
1000	1000

## With thermostat Without thermostat Cable clamp PG09, cable cross section 6÷8 mm Cable clamp PG09, cable cross section 6÷8 mm 52 52 O-Ring seal O-Ring seal Ξ Ξ ON 45 118 27 ON 80 27 40 Ø30 Ø30 Holes on the tank M4 - #8 UNC Nr. 3 holes

## Optional

## **DIN 43650 CONNECTOR**

### **Materials**

- Flange: aluminum

- Rod: brass

- Float: nylon foam

- Seals: A= NBR - V= FPM

### **Temperature**

From -15 °C to +80 °C

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

## Electrical oil level indicators

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

#### **Available features:**

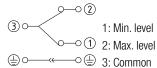
- Flanged connections
- Adjustable size on request, to meet every size of tank
- 2 floats, to monitor both the minimum level and the maximum level.

#### **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

### **Electrical symbol:**

#### LEU 2 Floats



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

#### **Materials**

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

### **Electrical data**

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

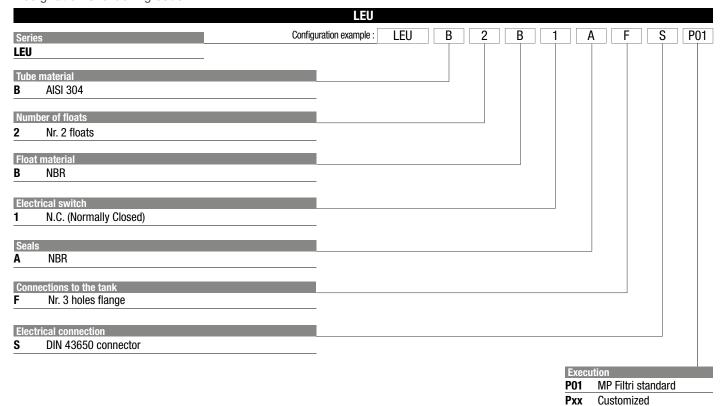
#### **Temperature**

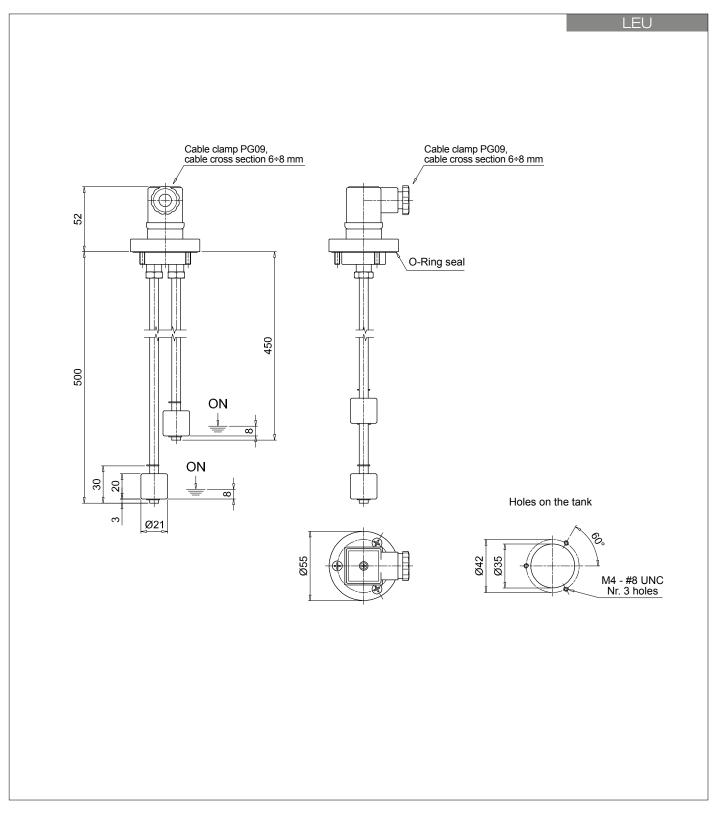
From -15 °C to + 80 °C

## Weight

LEU 1 float 0.310 kg LEU 2 floats 0.415 kg







## Optional

## **DIN 43650 CONNECTOR**

### **Materials**

- Flange: aluminum

- Rod: brass

- Float: nylon foam

- Seals: A= NBR - V= FPM

### **Temperature**

From -15 °C to +80 °C

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



## LVK series

**Electrical and visual oil level indicator** 



## Electrical and visual oil level indicators

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

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

#### **Available features:**

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

### **Common applications:**

- Hydraulic systems
- Mobile machines
- Industrial equipment

### **Electrical symbol:**

see page. 118

#### **Materials**

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

#### **Temperature**

From -20 °C to + 80 °C

### Weight

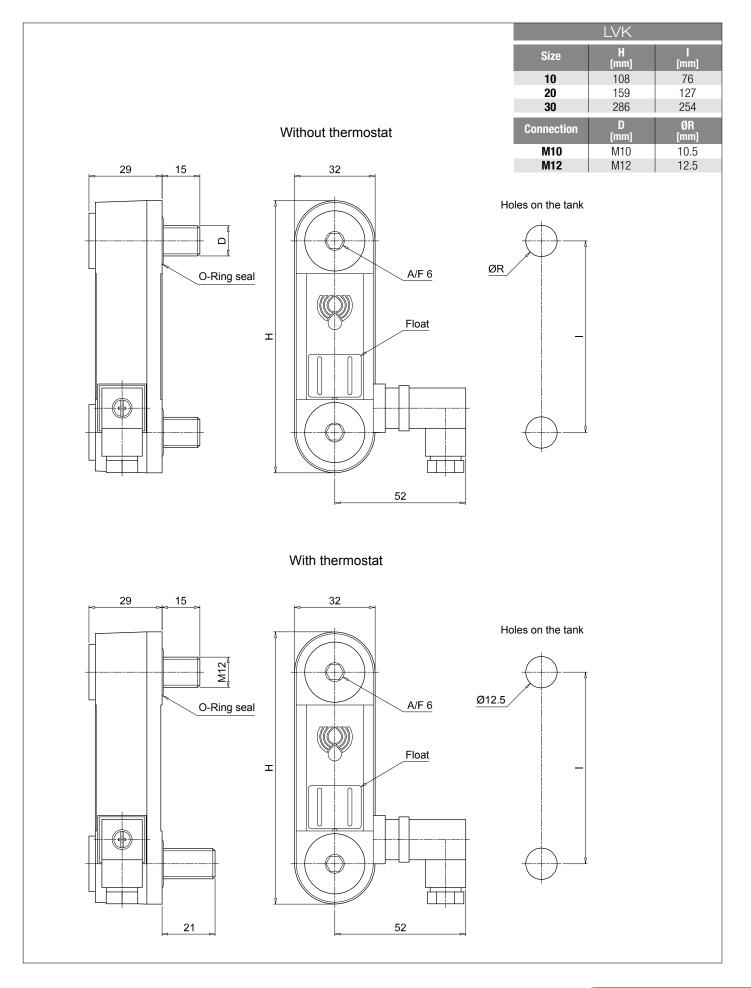
LVK 10 0.140 kg LVK 20 0.170 kg LVK 30 0.250 kg

#### Quantity

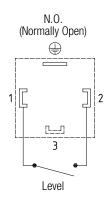
25 pcs/pack

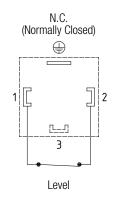


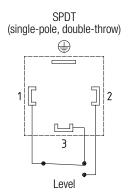
					LVK										
Series					Configuration example :	LVK	20	Α	M	112	1	Т		5	P01
LVK					,										
Lengt	h	_	-	-											
10	20   30														
Seals															
A	NBR														
Conne	ections				-										
M10	Screws M10 M12	Screws I	W12							_					
Flectr	ical switch in absence of fluid														
1	N.O. (Normally Open)														
2	N.C. (Normally Closed)				=										
3	SPDT (single-pole, double throw)				_										
-		C	onnection		=										
Version		M10		M12											
S	Standard	•		•	_										
T	With thermostat			•	_										
Р	With PT100 sensor			•	_										
Thous	nostat setting		Version	В											
S	Standard (no setting)	•		•										J	
1	50°C N.O. (Normally Open)		•		=										
2	60°C N.O. (Normally Open)		•		=										
3	70°C N.O. (Normally Open)		•		=										
5	50°C N.C. (Normally Closed)		•		_										$\perp$
6	60°C N.C. (Normally Closed)		•		_					P01	cution ME	Filtr	i stand	hard	
7	70°C N.C. (Normally Closed)		•		_					Pxx		stom		Jai U	
-					=					1 //	. Ju	OLUIII	i20u		

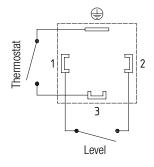


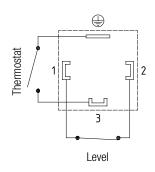
## Electrical symbols

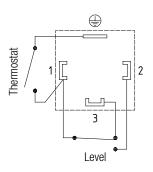


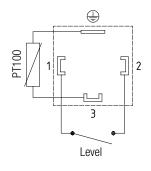


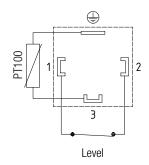


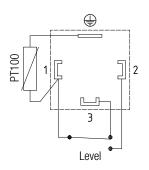














EM1 & SVM gauge isolator valves are designed to protect pressure gauges from pressure shocks when the pressure reading is not required.

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

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

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

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



# Accessories



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



## EM1 series

**Gauge isolator valves** 



#### Gauge isolator valves

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

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

## **Working instructions:**

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

#### **Materials A-B**

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

## **Operating pressure**

400 bar

## **Operating temperature**

From -25 °C to + 100 °C

## Weight

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

## Quantity

25 pcs/pack

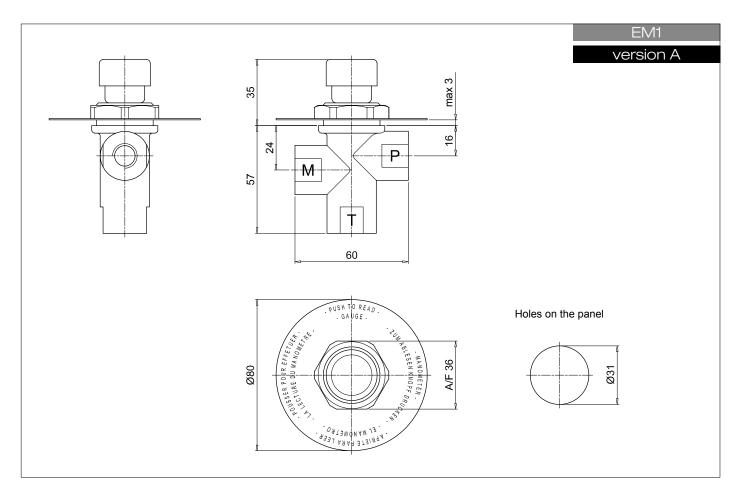
#### **Materials C**

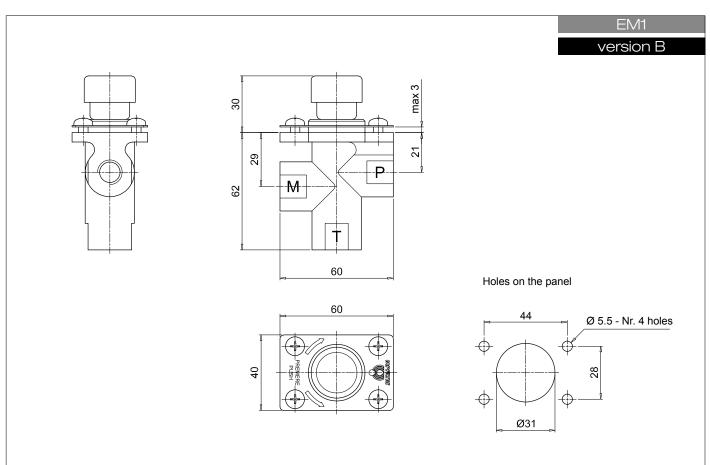
- Body: Cast iron
- Pin: Steel
- Seals: NBR, FPM
- Knob/cover: Nylon
- Stop ring: Steel
- Spring: Steel
- Nameplate: Aluminium
- Nut-screw: Galvanized steel
- Plug: Anodized steel



3	
	EM1
Series and size	Configuration example : EM1 A G2 A P01
EM1	
Version	
A Threaded connections, panel mount with hex nut	
B Threaded connections, panel mount with screws	
	.
C Manifold/threaded connections, panel mount with screws	
Connection	
<b>G1</b> G 1/4"	
	-
<b>G2</b> 1/4" NPT	
<b>G3</b> SAE 5 - 1/2" - 20 UNF	
Seals	
A NBR	
V FPM	
Execution	
P01 MP Filtri standard	_
Pxx Customized	_
	-

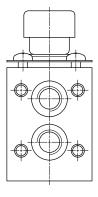


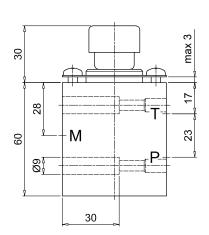


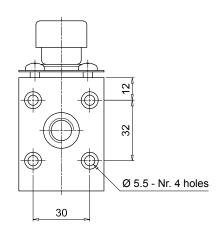


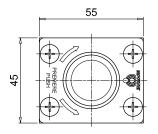
EM1

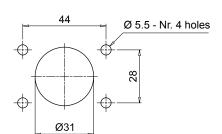
## version C











Holes on the panel





# SVM series

**Gauge isolator valves** 



## Gauge isolator valves

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

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

## **Working instructions:**

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

#### **Materials**

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

#### **Operating temperature**

From -25 °C to + 100 °C

## Weight

SVM length 3 1.547 kg SVM length 6 1.507 kg

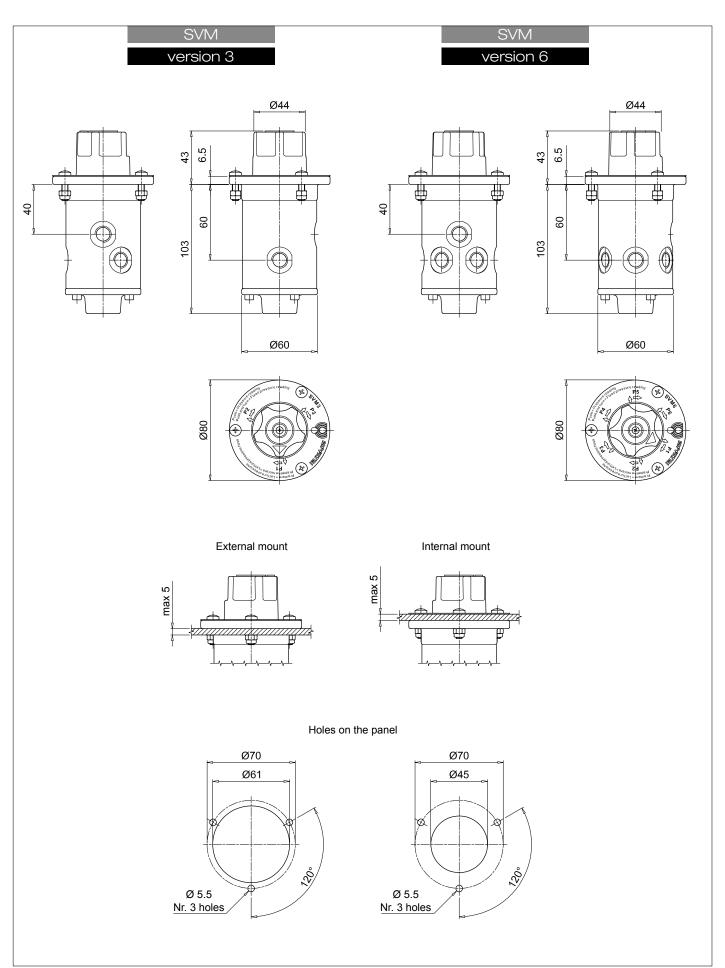
## Quantity

25 pcs/pack



		SVM	
Seri	es and size	Configuration example : SVM 3 G1 A	P01
SVN			
Vers	sion	_	
3	Nr. 3 pressure ports		
6	Nr. 6 pressure ports		
Con	nection		
G1	G 1/4"		
G2	1/4" NPT		
G3	SAE 5 - 1/2" - 20 UNF	_	
Sea	ls .		
Α	NBR		
V	FPM		
	cution		
	MP Filtri standard	_	
Pxx	Customized		







# FTA -FTR series

Oil tank fixing flange



## FTA - FTR GENERAL INFORMATION

## Technical data

## Oil tank fixing flange

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

Fitting a flexible insert allows separation of pipes.

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

## **Operating pressure**

400 bar

## **Operating temperature**

From -25 °C to + 100 °C

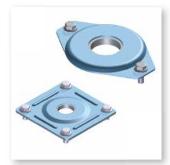
#### **Materials**

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

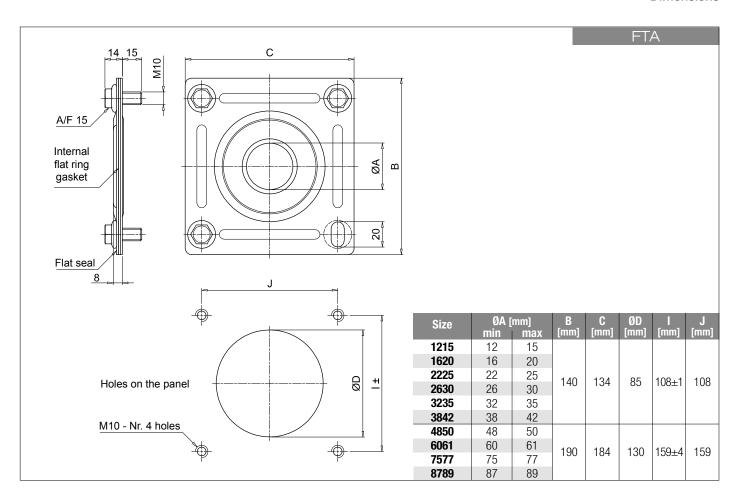
Weight F	TA	Weight FTR					
FTA 1215	0.590 kg	FTR 0610	0.450 kg				
FTA 1620	0.570 kg	FTR 1215	0.430 kg				
FTA 2225	0.550 kg	FTR 1620	0.400 kg				
FTA 2630	0.530 kg	FTR 2225	0.100 kg				
FTA 3235	0.500 kg	FTR 2630	0.103 kg				
FTA 3842	0.520 kg	FTR 3235	0.980 kg				
FTA 4850	0.920 kg	FTR 3842	0.950 kg				
FTA 6061	0.900 kg	FTR 4850	0.900 kg				
FTA 7577	0.860 kg	FTR 6061	0.850 kg				
FTA 8789	0.830 kg						

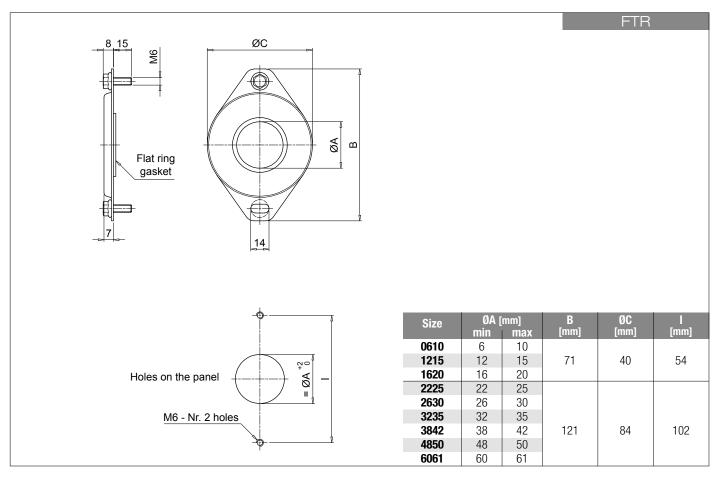
## Quantity

25 pcs/pack



				FTA - FTR						
Series					Configuration example :	FTA	2630	G	Α	P01
FTA		FTR								
		_		_						
Size		FTA	FTR							
0610	Pipe Ø06 ÷ 10 mm		•	_						
1215	Pipe Ø12 ÷ 15 mm	•	•	_						
1620	Pipe Ø16 ÷ 20 mm	•	•	_						
2225	Pipe Ø22 ÷ 25 mm	•	•	=						
2630	Pipe Ø26 ÷ 30 mm	•	•	=						
3235	Pipe Ø32 ÷ 35 mm	•	•	_						
3842	Pipe Ø38 ÷ 42 mm	•	•	_						
4850	Pipe Ø48 ÷ 50 mm	•	•							
6061	Pipe Ø60 ÷ 61 mm	•	•	_						
7577	Pipe Ø75 ÷ 77 mm	•		_						
8789	Pipe Ø87 ÷ 89 mm	•		_						
Flange	e seals	FTA	FTR							
G	Inorganic fiber	•								
0	Without seal		•	_						
				=						
Pipe s	eals			I						
A	NBR									
				-						
Execu	tion			1						
P01	MP Filtri standard									
Pxx	Customized			=						





(136)



# SFT series

**Fixing clamps** 



## Fixing clamps

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

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

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

#### **Materials**

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

#### Weight

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

## **Operating temperature**

From -25 °C to + 100 °C

## Quantity

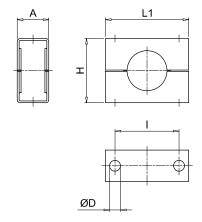
25 pcs/pack



					SFT
Serie	<b>S</b>	-	-	-	Configuration example : SFT 51 19 P01
SFT	Pair of brackets				
Size					
38	Height 38 mm - 1 1/2"				
51	Height 51 mm - 2"				
78	Height 78 mm - 3"				-
	-				-
Num	ber of pipe	38	51	78	
1	Single pipe	•	•	•	
16	Nr. 16 pipes			•	
19	Nr. 19 pipes		•		
26	Nr. 26 pipes	•			
Exec	ution				
P01	MP Filtri standard				
Pxx	Customized				_

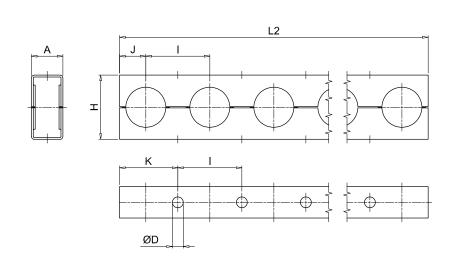
SFT

Single pipe



SFT

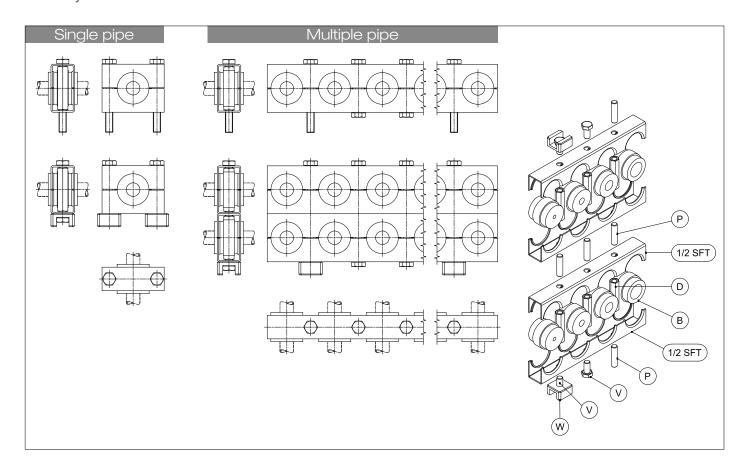
Multiple pipe

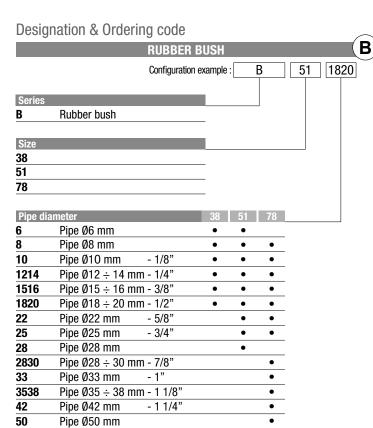


Size	A [mm]	ØD [mm]	H [mm]	l [mm]	J [mm]	K [mm]	L1 [mm]	L2 [mm]
38	25	8.7	38	38.1	15	34	56	982
51	25	8.7	51	50.8	21	46	66	956
78	41	11.1	78	76.2	35	73	95	1213

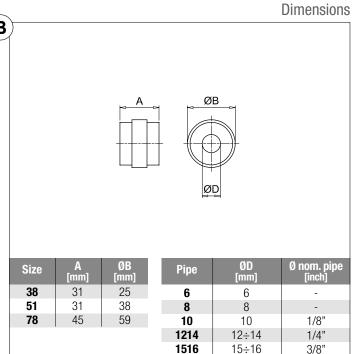
## SET MUI TIFIX

## Assembly





(140)



1820

22

25

28

2830

33 3538

42

50

18÷20

22

25

28

28÷30 33

35÷38

42

50

1/2"

5/8"

3/4"

7/8"

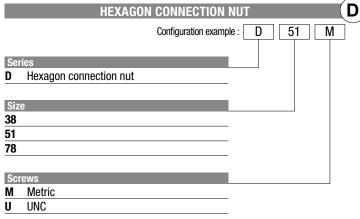
1"

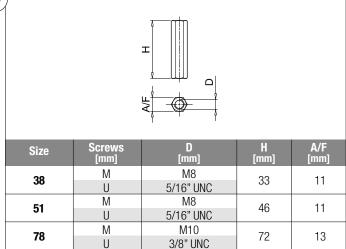
1 1/8"

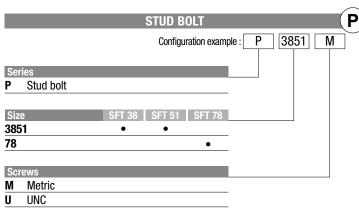
1 1/4"

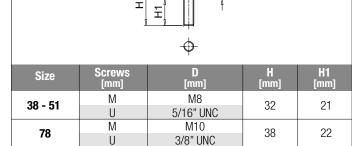
## Designation & Ordering code

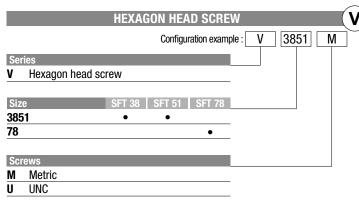
**Dimensions** 

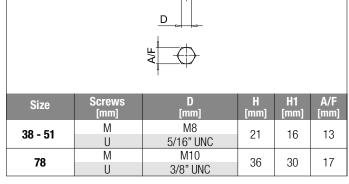


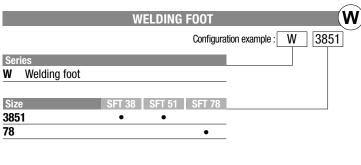


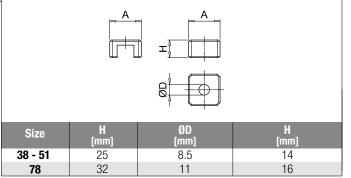














# OB series

### **Cleaning covers**



### Technical data

### Cleaning covers

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

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

### Compatibility with fluids

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

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

### **Materials**

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

Weight	with seal	without sea
0B275	2.06 kg	1.76 kg
OB350	2.10 kg	1.80 kg
OB356	2.10 kg	1.80 kg
OB400	3.20 kg	2.90 kg
OB475	3.70 kg	3.40 kg

### **Operating temperature**

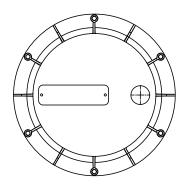
From -30 °C to +80 °C



### Designation & Ordering code

Size	ı
0B275	
0B350	-
OB356	-
0B400	-
0B475	-

### Available customization



Nameplate with customer logo

Ordering information: **0B475L0G0P05** 

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

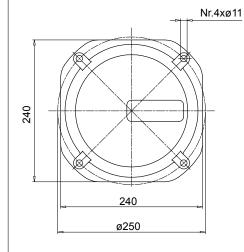
For ordering information codes, minimum order quantities, fixing hole positions and other details not indicated in this publication, contact MP Filtri Technical and Sales Department.

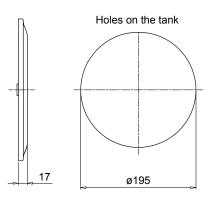


### **Dimensions**

### Cleaning cover according to DIN 24339

### OB275

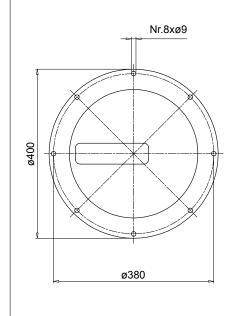


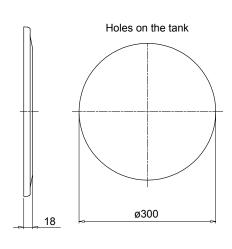


Code	Description	Seal
<b>OB275P01GN</b> Do	oor with MP Logo	NBR
<b>0B275P02GN</b> BI	ank cover	NBR
<b>0B275P01GV</b> Do	oor with MP Logo	FPM
<b>0B275P02GV</b> BI	ank cover	FPM

Code	Description
OB275P01	Door with MP Logo
0B275P02	Blank cover
GU0275NBR	Seal
GU0275VTN	Seal

### OB400



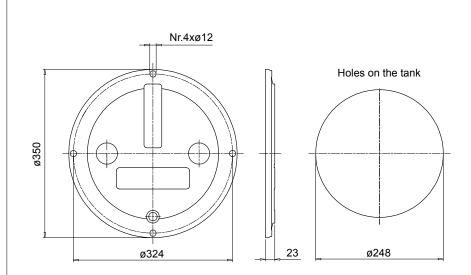


Code	Description	Seal
OB400P01GN	Door with MP Logo	NBR
OB400P02GN	Blank cover	NBR
OB400P01GV	Door with MP Logo	FPM
OB400P02GV	Blank cover	FPM

Code	Description
OB400P01	Door with MP Logo
0B400P02	Blank cover
<b>GU0400DINNBR</b>	Seal
GU0400DINVTN	Seal

## OB350 - OB356 - OB475

### **Dimensions**

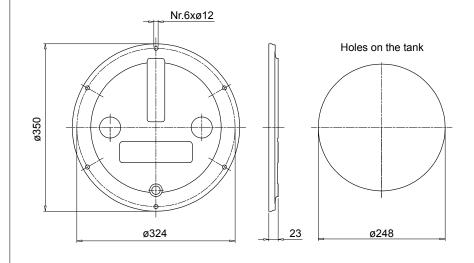


### OB350

Code	Description	Seal
OB350P01GN	Door with MP Logo	NBR
OB350P02GN	Blank cover	NBR
OB350P01GV	Door with MP Logo	FPM
OB350P02GV	Blank cover	FPM

Code	Description
OB350DIN000	Door
<b>GU0350DINNBR</b>	Seal
GU0350DINVTN	Seal

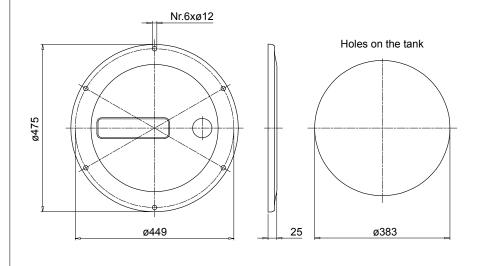
### OB356



Code	Description	Seal
OB356P01GN	Door with MP Logo	NBR
OB356P02GN	Blank cover	NBR
OB356P01GV	Door with MP Logo	FPM
OB356P02GV	Blank cover	FPM

Code	Description
OB356DIN000	Door
<b>GU0350DINNBR</b>	Seal
<b>GU0350DINVTN</b>	Seal

### OB475



Code	Description	Seal
OB475P01GN	Door with MP Logo	NBR
OB475P02GN	Blank cover	NBR
OB475P01GV	Door with MP Logo	FPM
OB475P02GV	Blank cover	FPM

Code	Description
OB475P01	Door with MP Logo
0B475P02	Blank cover
<b>GU0475DINNBR</b>	Seal
GU0475DINVTN	Seal

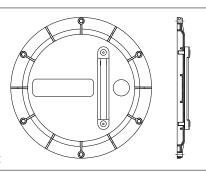
### Installations

### LVA

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

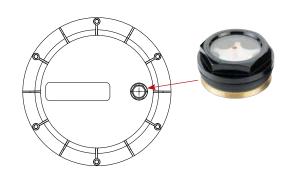
Indicator code	0B275**	OB350**	OB356**	OB400**	OB475**
LVA 10**	•	•	•	•	•
LVA 20**		•	•	•	•
LVA 30**				•	•

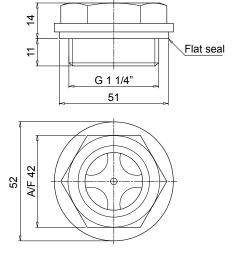
## **Note:**Preparing for to fit the level on request



### LCPG42N...S

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

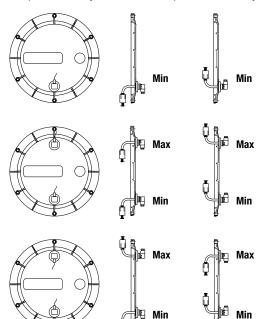




### LEG

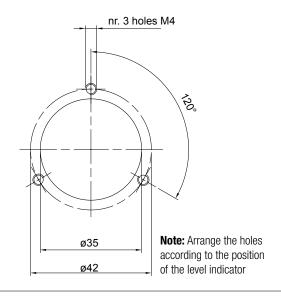
**LEG** series electrical level indicators (see page 106) are supplied with a 3-hole fixing flange and a reed switch having NC-NO contacts. Designed typically for installation on the vertical walls of oil tanks, these devices can also be mounted onto OB475 inspection door to indicate the minimum and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

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



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

### Layout of fixing holes for LEG level indicator





## SE10LT series

### **Aluminium tanks**





## SE10LT GENERAL INFORMATION

### Technical data

### Aluminium tanks

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

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

Generously proportioned fins ensure efficient cooling.

The tank is supplied with:

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

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

#### Material

Pressure die-cast aluminium alloy

### Weight

SE10LT 4 kg



### Designation & Ordering code

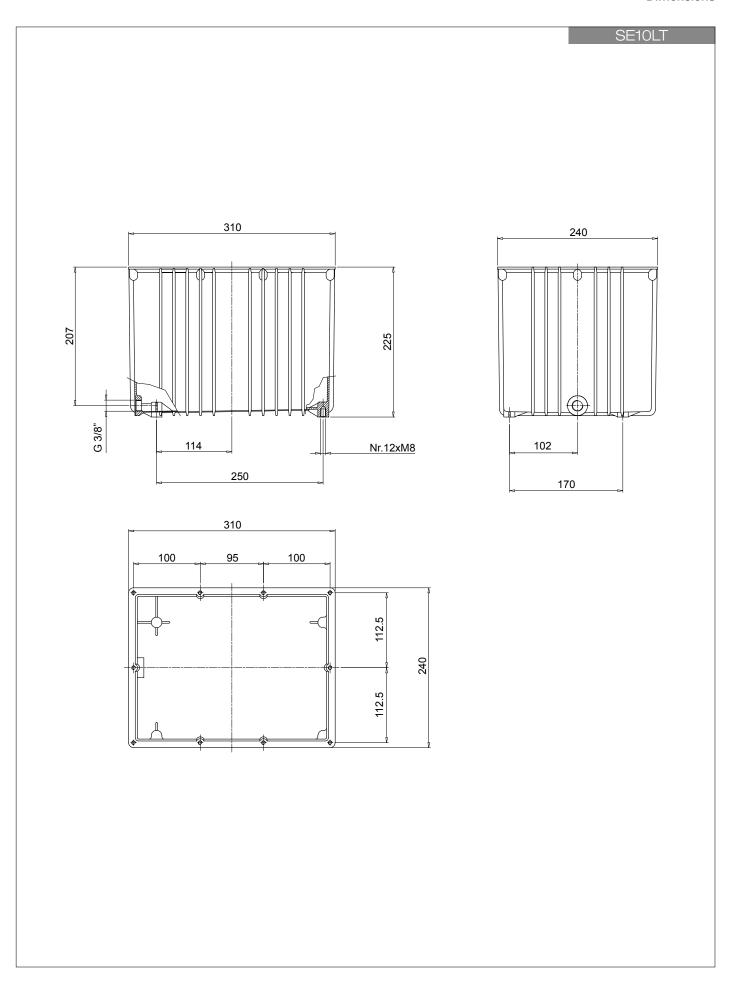
SE10LT

Size

SE10LT

(150)

### Dimensions



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### **WORLDWIDE NETWORK**

### **HEADQUARTERS**

### MP Filtri S.p.A.

Pessano con Bornago Milano - Italy +39 02 957031 sales@mpfiltri.it

### **BRANCH OFFICES**

### **ITALFILTRI LLC**

Moscow - Russia +7 (495) 220 94 60 mpfiltrirussia@yahoo.com

### MP Filtri Canada Inc.

Concord, Ontario - Canada +1 905 303 1369 sales@mpfiltricanada.com

### **MP Filtri France SAS**

Villeneuve la Garenne France +33 (0)1 40 86 47 00 sales@mpfiltrifrance.com

### **MP Filtri Germany GmbH**

St. Ingbert - Germany +49 (0) 6894 95652-0 sales@mpfiltri.de

### MP Filtri India Pvt. Ltd.

Bangalore - India +91 80 4147 7444 / +91 80 4146 1444 sales@mpfiltri.co.in

### MP Filtri (Shanghai) Co., Ltd.

Shanghai - Minhang District - China +86 21 58919916 116 sales@mpfiltrishanghai.com

### MP Filtri U.K. Ltd.

Bourton on the Water Gloucestershire - United Kingdom +44 (0) 1451 822 522 sales@mpfiltri.co.uk

### MP Filtri U.S.A. Inc.

Quakertown, PA - U.S.A. +1 215 529 1300 sales@mpfiltriusa.com



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