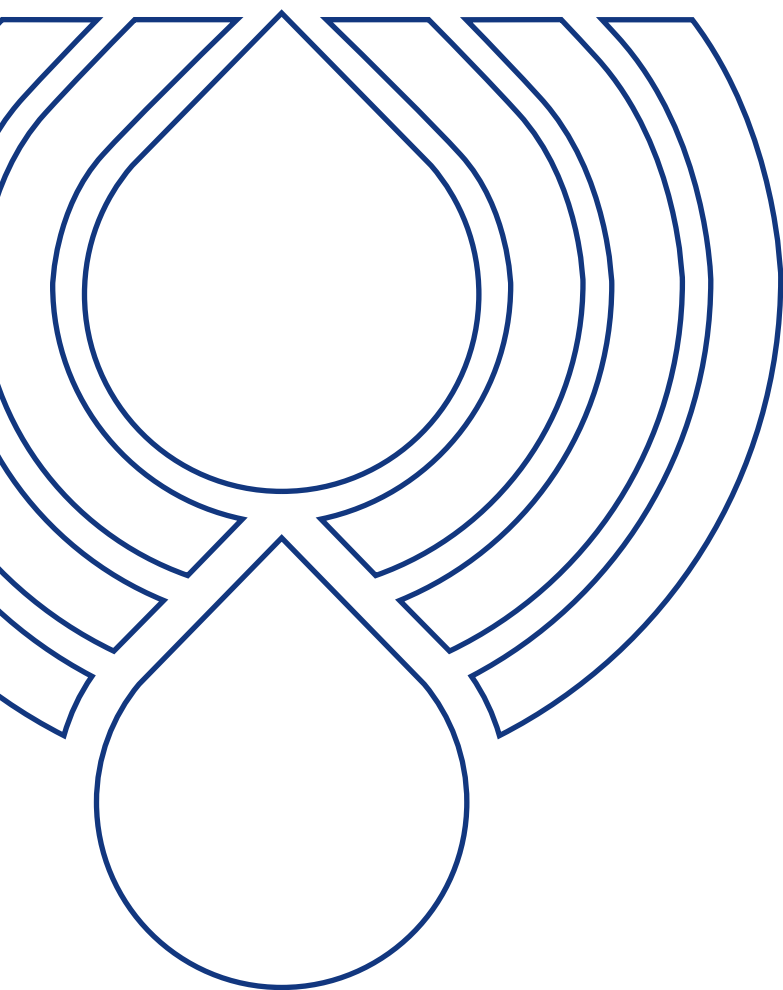


TANK ACCESSORIES

VISUAL OIL LEVEL INDICATORS



PASSION TO PERFORM





A WORLDWIDE LEADER IN THE FIELD OF HYDRAULIC FILTRATION EQUIPMENT.

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

MARKET LEADER



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



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

WORLDWIDE PRESENCE

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

The Group boasts **8** business branches



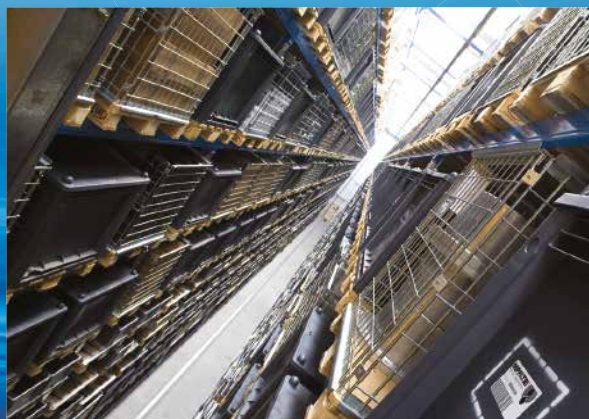
TECHNOLOGY

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



AND PRODUCTION

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





SUCTION FILTERS

Flow rates
up to 875 l/min

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

RETURN FILTERS

Flow rates
up to 3000 l/min

Pressure
up to 20 bar

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

RETURN / SUCTION FILTERS

Flow rates
up to 300 l/min

Pressure
up to 80 bar

Mounting:
- In-Line
- Tank top

SPIN-ON FILTERS

Flow rates
up to 365 l/min

Pressure
up to 35 bar

Mounting:
- In-Line
- Tank top

LOW & MEDIUM PRESSURE FILTERS

Flow rates
up to 3000 l/min

Pressure
up to 80 bar

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

HIGH PRESSURE FILTERS

Flow rates
up to 750 l/min

Pressure from 110 bar
up to 560 bar

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

PRODUCT RANGE

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

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

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

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



STAINLESS STEEL HIGH PRESSURE FILTERS

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

Mounting:

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



CONTAMINATION MONITORING PRODUCTS

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



MOBILE FILTRATION UNITS

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



POWER TRANSMISSION PRODUCTS

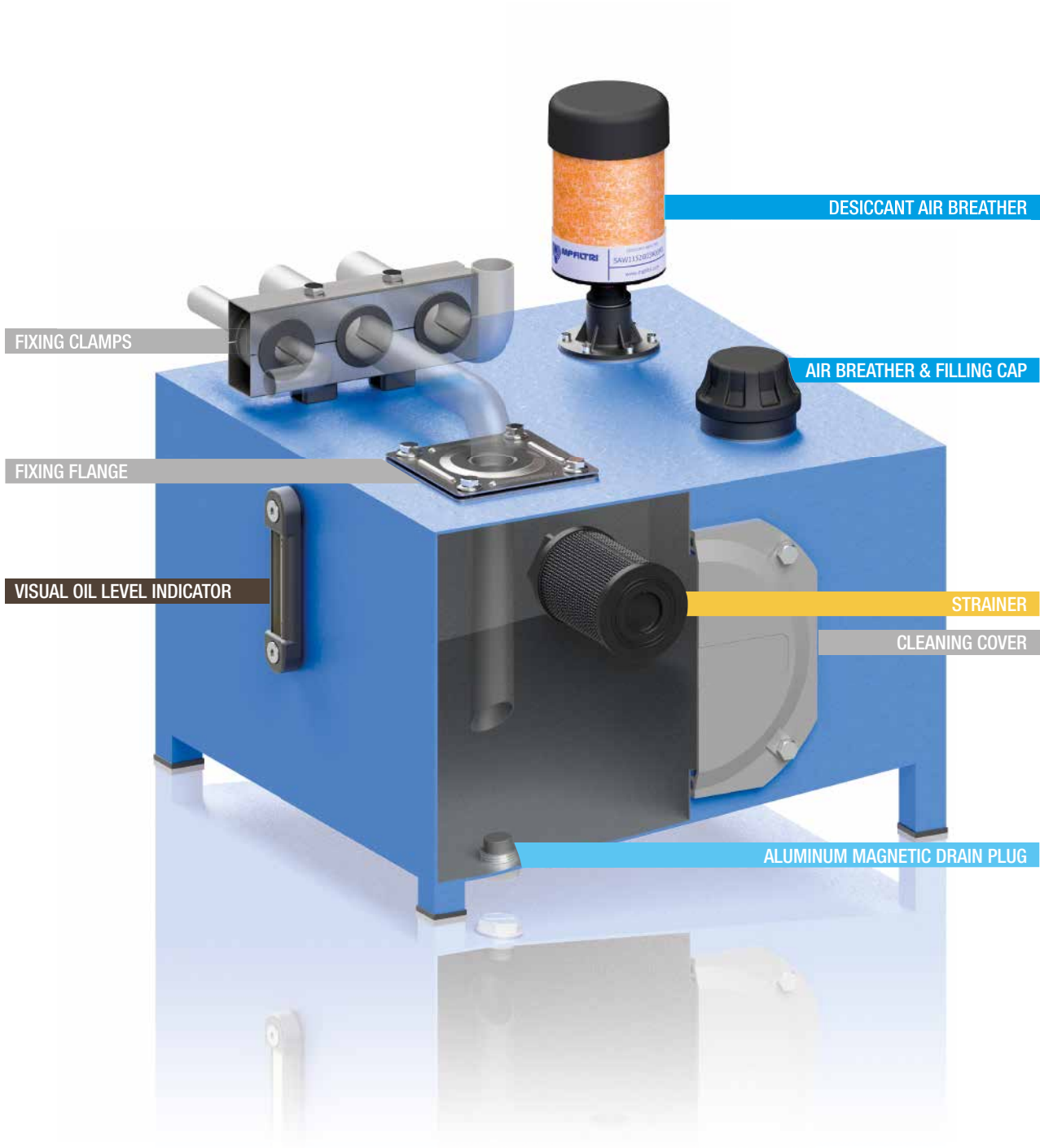
- Aluminium bell-housings for motors from 0.12 kW to 400 kW
- Couplings in Aluminium Cast Iron - Steel
- Damping rings
- Foot bracket
- Aluminium tanks
- Cleaning covers



TANK ACCESSORIES

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

TANK ACCESSORIES



1	page	INTRODUCTION
1		COMPANY
6		PRODUCT RANGE

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

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

72	page	FILLER AND DRAIN PLUGS
75		TC 50 Nylon filler plug
79		TKT - TSD Nylon filler plugs
79		TKM Aluminium magnetic drain plug

86	page	VISUAL OIL LEVEL INDICATORS
89		LCP - LCC Spy eyes
95		LVA - LVU Visual oil level indicator

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

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

LC

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

LV

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

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

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

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

Visual Oil Level Indicators



LCP - LCC
LVA - LVU

page 89
95

LCP - LCC series

Visual oil level indicators



LCP GENERAL INFORMATION

Technical data

Visual oil level indicators

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

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

Available features:

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

Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

T Series

Weight

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

M Series

Weight

LCPG20	6 g
LCPG26	9 g
LCPG33	13 g

N Series

Weight

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

Materials

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

Materials

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

Materials

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

Temperature

From -20 °C to + 80 °C

Quantity

25 pcs/pack



Designation & Ordering code

LCP

Series and size

LCP

Connections to the tank	Material:	N	T	M
G13 Thread G 1/4"		•	•	
G16 Thread G 3/8"		•	•	
G20 Thread G 1/2"		•	•	•
G26 Thread G 3/4"		•	•	•
G33 Thread G 1"		•	•	•
G42 Thread G 1 1/4"		•	•	
G48 Thread G 1 1/2"		•		
G60 Thread G 2"		•		

Material

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

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

Seals	Material:	N				T				M
	Expansion kit:		S	K						
A NBR				•					•	•
B Inorganic fiber			•							

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

Configuration example 1 : LCP G26 N S B S P01

Configuration example 2 : LCP G42 T S A P01

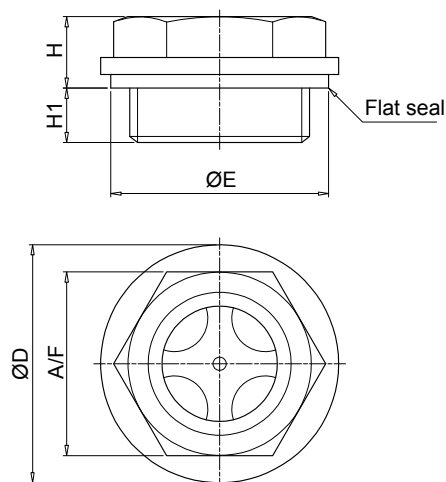
Configuration example 3 : LCP G20 M C A P01

Execution

P01 MP Filtri standard

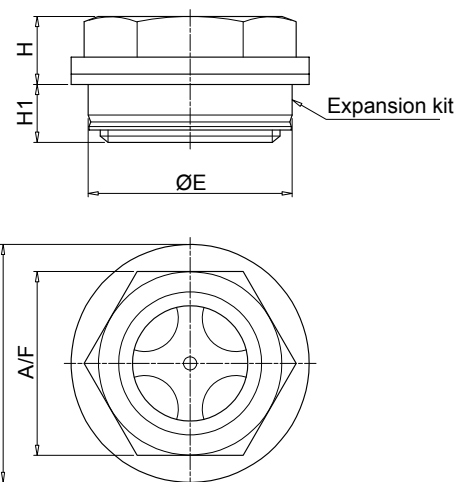
Pxx Customized

LCP - N



without expansion kit

Connection	ØD [mm]	ØE [mm]	A/F [mm]	H [mm]	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

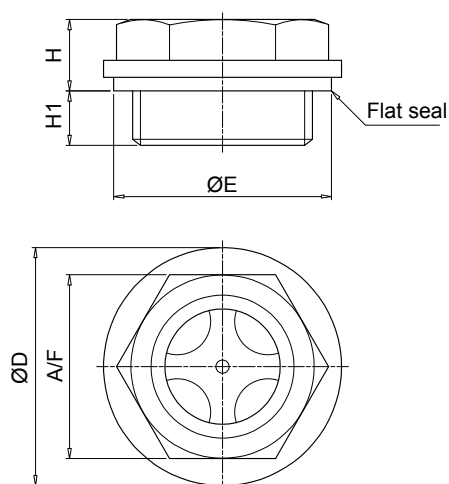


with expansion kit

Connection	ØD [mm]	ØE [mm]	A/F [mm]	H [mm]	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

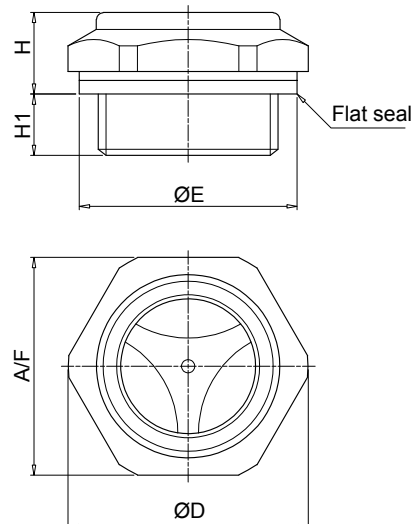
Note: for installation onto OB Cleaning covers see page 147

LCP - T



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

LCP - M



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

Note: for installation onto OB Cleaning covers see page 147

Technical data

Visual oil level indicators

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

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

Available features:

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

Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

N Series

Weight

LCCG26	7 g
LCCG42	20 g
LCCG60	40 g

Materials

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

T Series

Weight

LCCG16	2 g
LCCG20	4 g
LCCG33	9 g

Materials

- Body: Polyamide
- Seals: NBR

Temperature

From -20 °C to + 80 °C

Quantity

25 pcs/pack



Designation & Ordering code

LCC

Series and size

LCC

Configuration example 1 : LCC G20 N A K P01

Configuration example 2 : LCC G33 T A P01

Connections to the tank

Material: N T

G13	Thread G 1/4"		
G16	Thread G 3/8"		•
G20	Thread G 1/2"	•	•
G26	Thread G 3/4"	•	•
G33	Thread G 1"	•	•
G42	Thread G 1 1/4"	•	
G48	Thread G 1 1/2"	•	
G60	Thread G 2"	•	

Material

N Black nylon **T** Transparent polyamide

Material: N T

Seals Expansion kit: S K

A NBR •

B Inorganic fiber •

Material: N T

Expansion kit Connection: G20 G26 G33 G42 G48 G60

S Without • • • • •

K With expansion kit • • • • •

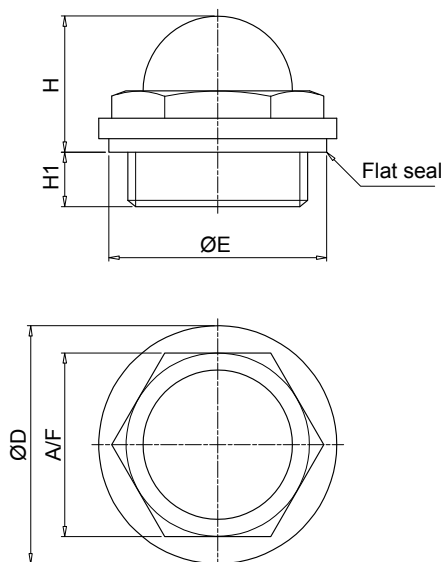
Execution

P01 MP Filtri standard

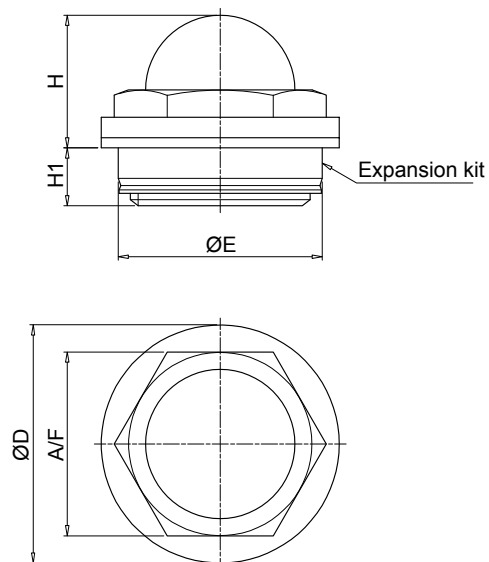
Pxx Customized

LCC - N

without expansion kit



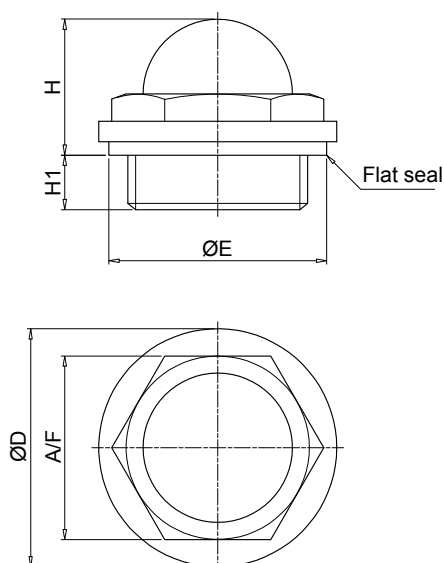
with expansion kit



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

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

LCC - T



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



Technical data

Visual oil level indicators

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

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

Available features:

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

Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

Materials

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

Operating pressure

Max 1 bar at +80°C

Operating temperature

From -25 °C to +80 °C

Weight

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

Quantity

10 pcs/pack

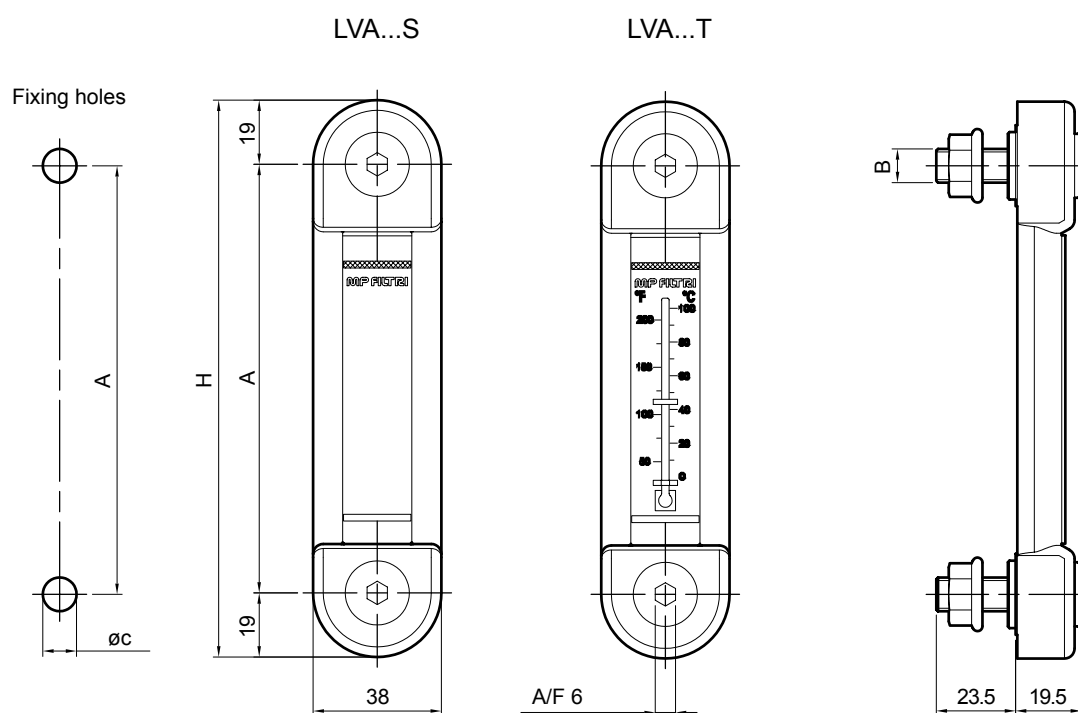


Designation & Ordering code

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

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

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



Technical data

Visual oil level indicators

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

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

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

Available features:

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

Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

Materials

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

Operating temperature

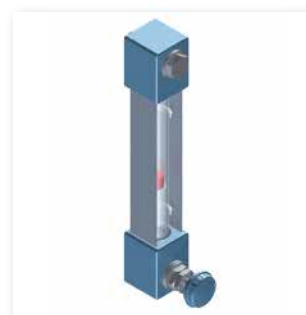
From -25 °C to +70 °C

Weight

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

Quantity

10 pcs/pack



Designation & Ordering code

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



WORLDWIDE NETWORK

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PASSION TO PERFORM



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