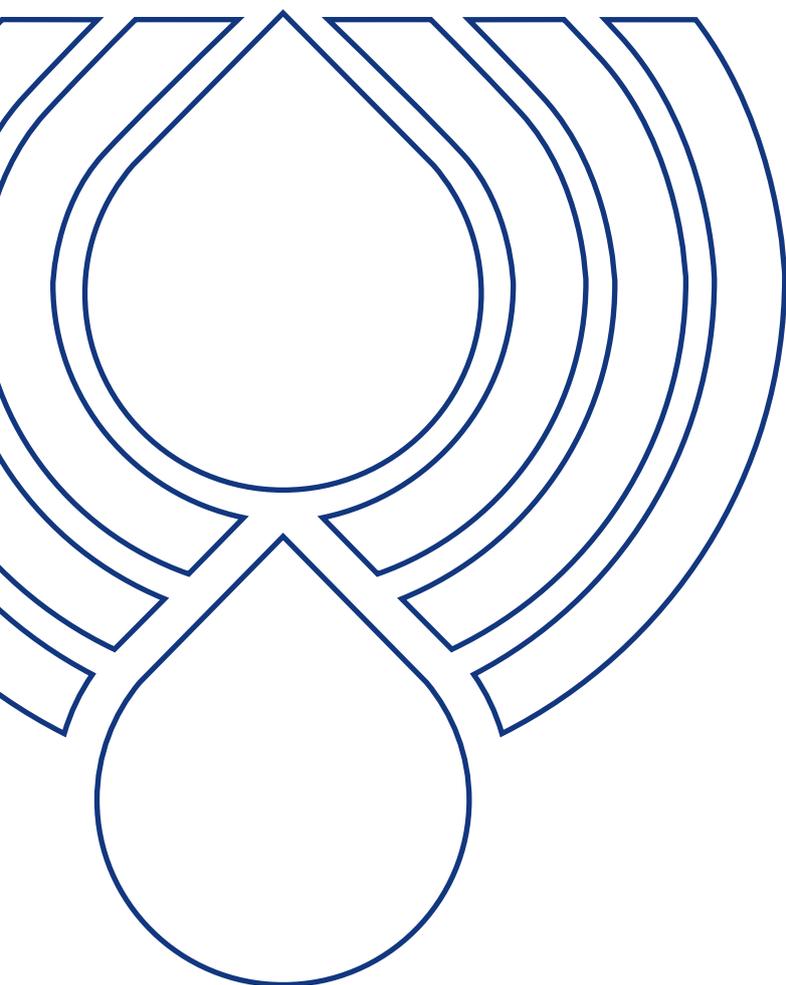


TANK ACCESSORIES

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

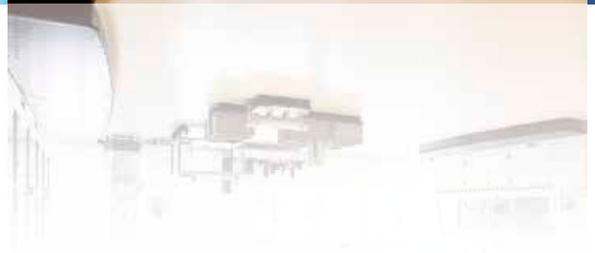
Our foreign Branches enable us to offer a diversified range of products that allow us to successfully face the aggressive challenge of international competition, and also to maintain a stable presence at a local level.

The Group boasts **8** business branches



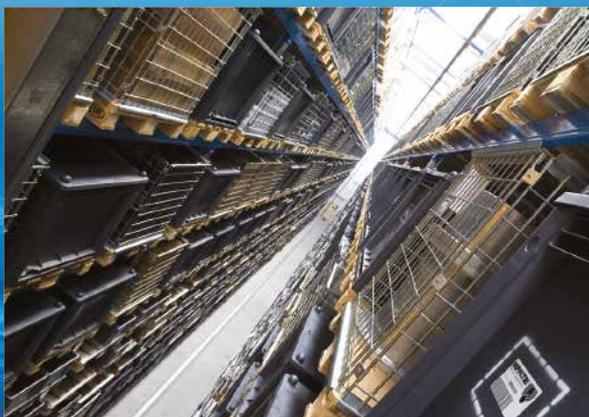
TECHNOLOGY

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

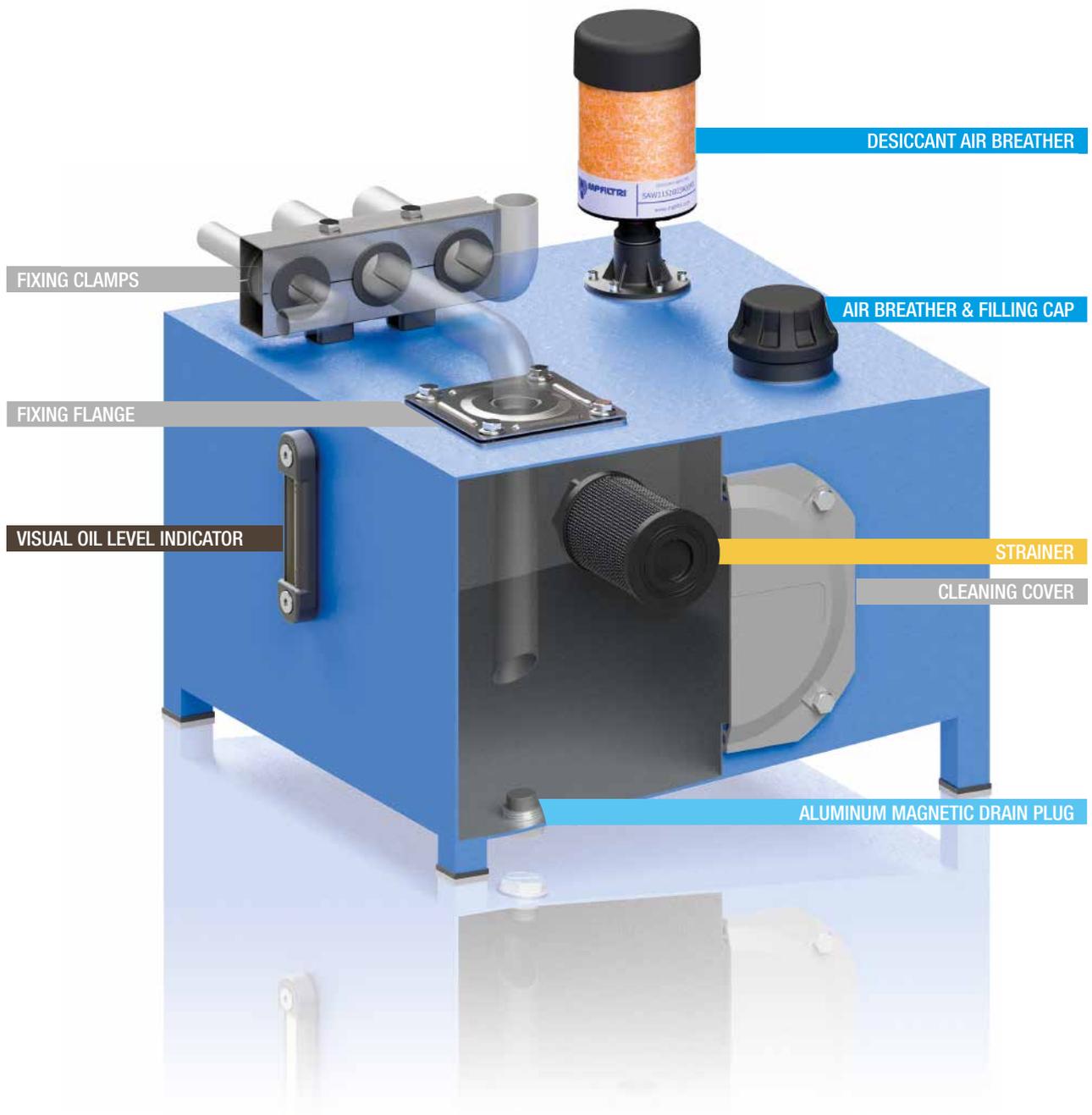
POWER TRANSMISSION PRODUCTS

- 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 page 89
LVA - LVU 95

LCP - LCC series

Visual oil level indicators



LCP GENERAL INFORMATION

Technical data

Visual oil level indicators

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

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

Available features:

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

Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

T Series

Weight

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

Materials

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

M Series

Weight

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

Materials

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

N Series

Weight

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

Materials

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

Temperature

From -20 °C to + 80 °C

Quantity

25 pcs/pack



Designation & Ordering code

LCP

Series and size

LCP

Configuration example 1 : LCP G26 N S B S P01

Configuration example 2 : LCP G42 T S A P01

Configuration example 3 : LCP G20 M C A P01

Connections to the tank

| Material: | N | T | M |
|----------------------------|---|---|---|
| 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)

Baffle

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

Seals

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

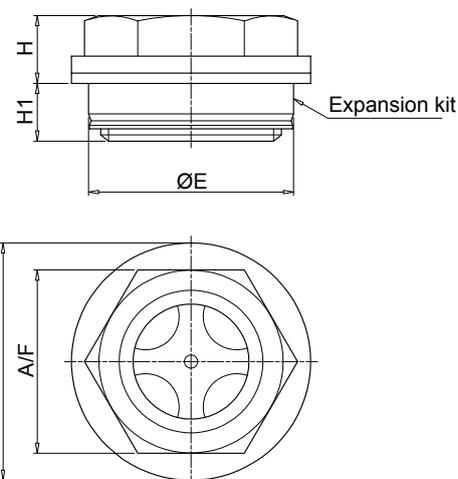
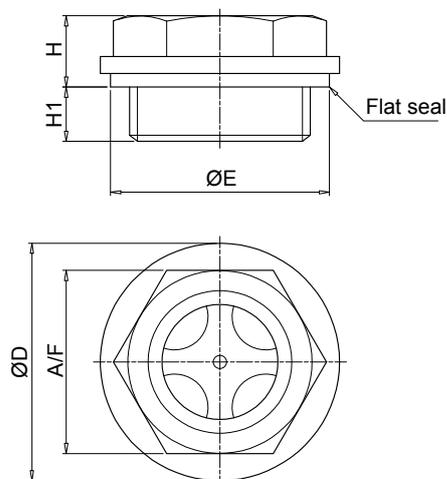
Expansion kit

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

Execution

P01 MP Filtri standard
Pxx Customized

LCP - N



without expansion kit

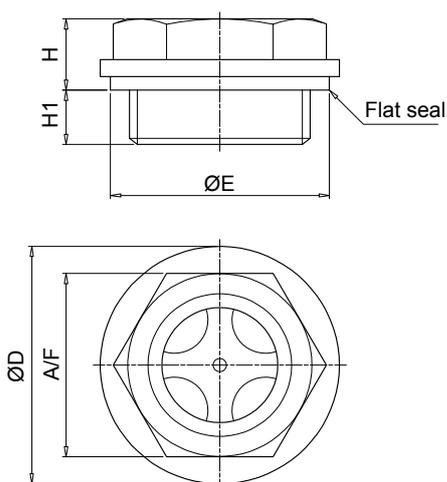
| Connection | ØD [mm] | ØE [mm] | A/F [mm] | H [mm] | H1 [mm] |
|------------|---------|---------|----------|--------|---------|
| G13 | 20 | 18.5 | 17 | 9 | 7 |
| G16 | 22 | 21.5 | 18 | 10 | 7 |
| G20 | 28 | 26 | 22 | 10 | 7 |
| G26 | 35 | 32 | 27 | 10.5 | 8 |
| G33 | 42 | 41 | 34 | 13.5 | 10.5 |
| 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 |

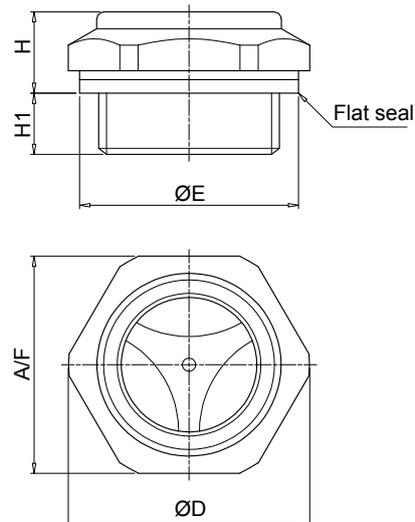
Note: for installation onto OB Cleaning covers see page 147

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

| 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 |
|--------------------------|---|---|--|---|
| Expansion kit: | S | K | | |
| A NBR | | • | | • |
| B Inorganic fiber | • | | | |

| Material: | N | | | | | | T |
|-----------------------------|-----|-----|-----|-----|-----|-----|---|
| Expansion kit: | G20 | G26 | G33 | G42 | G48 | G60 | |
| S Without | • | • | • | • | • | • | |
| K With expansion kit | • | • | • | • | • | | |

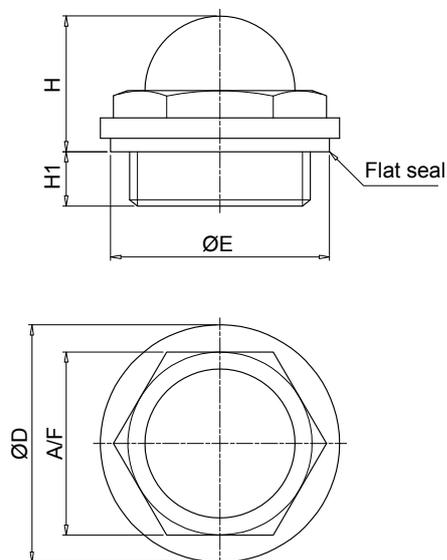
Execution

P01 MP Filtri standard

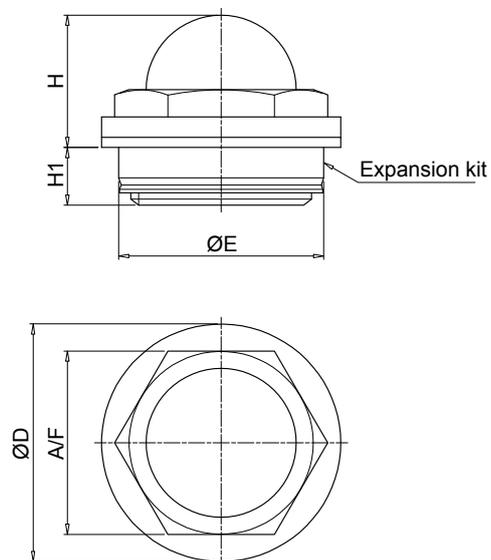
Pxx Customized

LCC - N

without expansion kit



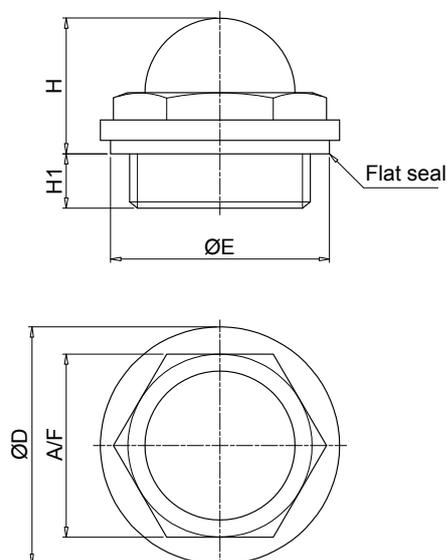
with expansion kit



| 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

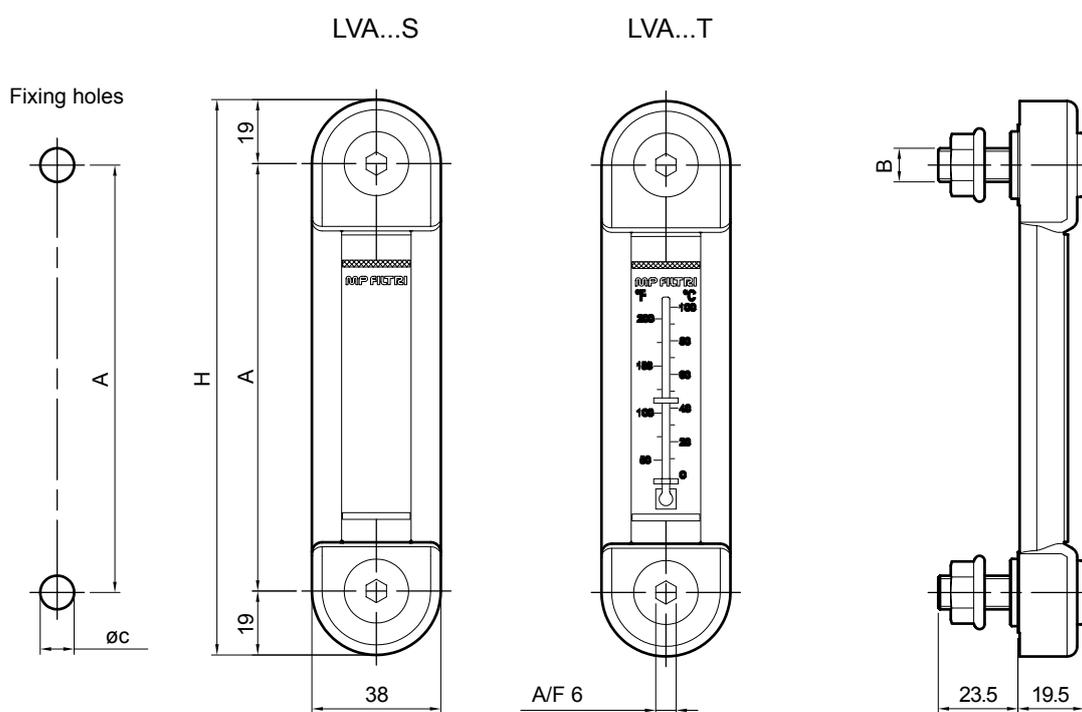


Designation & Ordering code

| LVA | | Configuration example : | | | | | | |
|-----------------------|--|-------------------------|----|---|---|---|-----|-----|
| Series | 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 |



Note: for installation onto OB Cleaning covers see page 147

Technical data

Visual oil level indicators

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

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

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

Available features:

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

Common applications:

- Hydraulic systems
- Mobile machines
- Industrial equipment

Materials

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

Operating temperature

From -25 °C to +70 °C

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

Quantity

10 pcs/pack



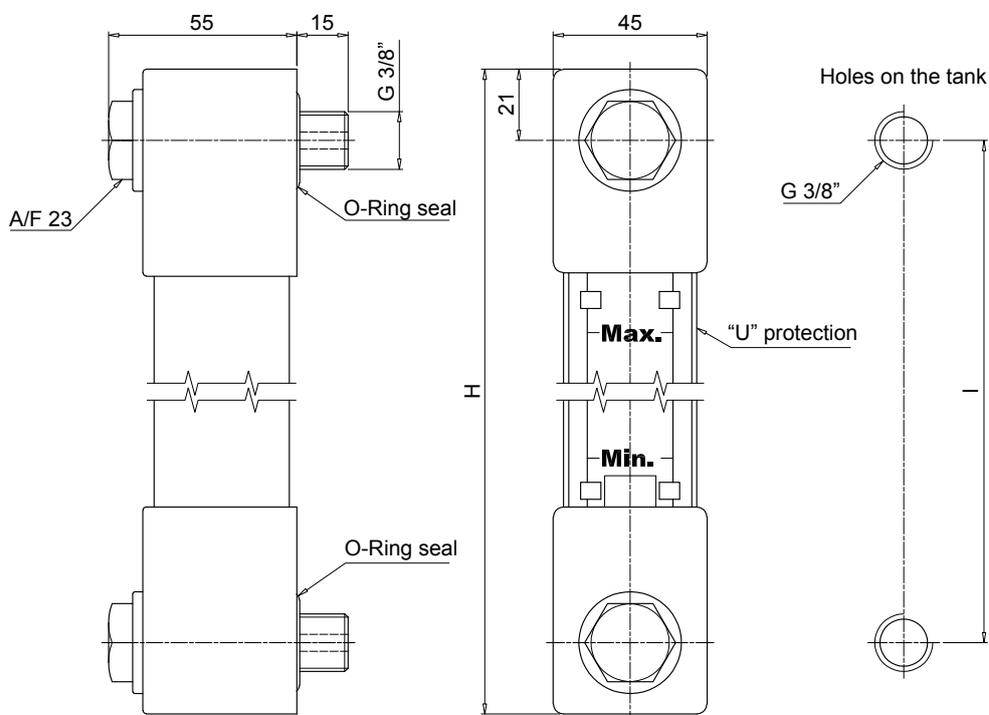
Designation & Ordering code

LVU

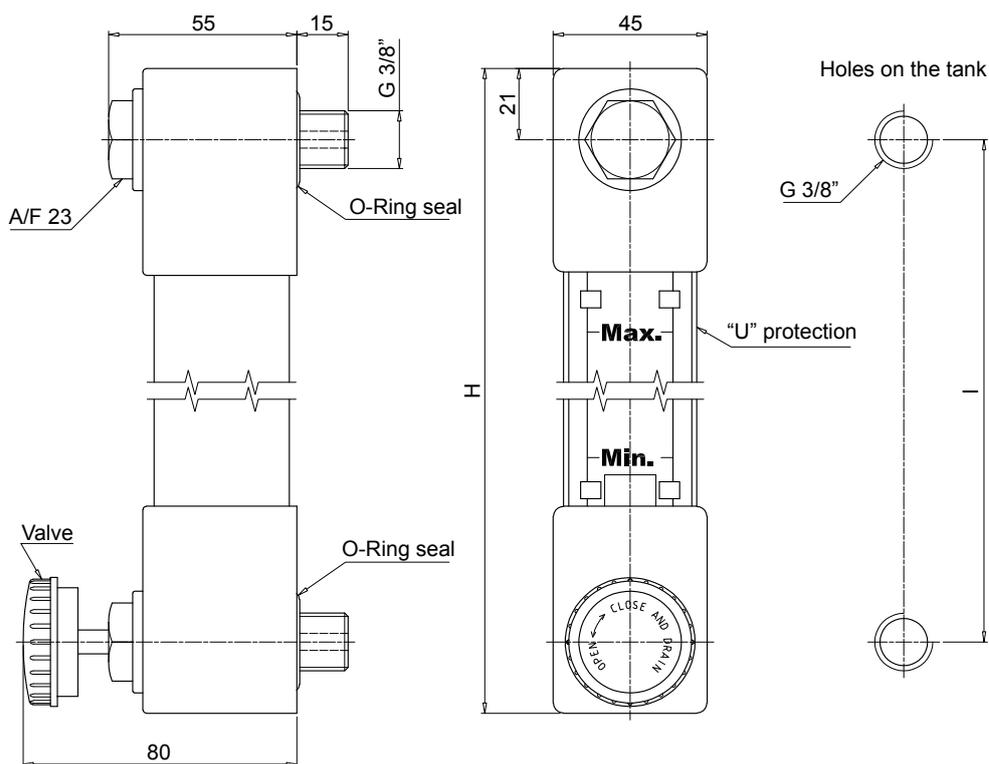
| Series | Configuration example : | | | | | |
|----------------------------|--------------------------------------|------|------|------|----|-----|
| LVU | LVU | 0500 | U | A | 10 | P01 |
| Size | | | | | | |
| 0500 | Distance between center = 500 mm | | | | | |
| 1000 | Distance between center = 1000 mm | | | | | |
| 1500 | Distance between center = 1500 mm | | | | | |
| 2000 | Distance between center = 2000 mm | | | | | |
| Different sizes on request | | | | | | |
| Body | Size | | | | | |
| | 500 | 1000 | 1500 | 2000 | | |
| 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 | | | | | |

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

Connection 10



Connection 20





WORLDWIDE NETWORK

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PASSION TO PERFORM



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