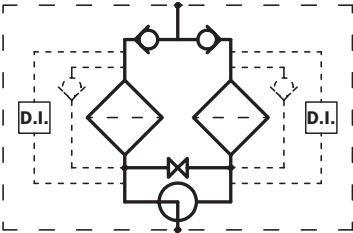


LMD 400 - 401 - 431



LMD 400 - 401 - 431
Double filter



Maximum pressure 16 bar
Flow rates to 590 l/min

Filter housing (Materials)

- Head: Anodised Aluminium
- Housing: Anodised Aluminium
- Manifolds: Steel - Painted black
- Bypass valve: Steel
- 3-way ball valve: Steel housings - Stainless Steel ball
- Valve: Phosphated Steel - Stainless Steel

Pressure

- Working pressure: 16 bar (1.6 MPa)
- Test pressure: 25 bar (2.5 MPa)

Temperature

- From -25 °C to +110 °C

Bypass valve

- Opening pressure 3.5 bar ±10%
- Other opening pressures on request.

Δp Elements type

- Series N and W elements: 20 bar
- Oil flow from exterior to interior.

Seals

- Standard FPM series V

Weights (kg)

Length

- LMD400 - 401 4 60
- LMD400 - 401 5 65
- LMD400 - 401 6 72
- LMD431 5 68
- LMD431 6 75

Volumes (dm³)

Length

- LMD400 - 401 - 431 4 18
- LMD400 - 401 - 431 5 24
- LMD400 - 401 - 431 6 32

Connections

Inlet-Outlet

- Twin vertically mounted (excluded version LMD 400)
- In-Line

Compatibility (to ISO 2943)

- Housings compatible with: Mineral oils, synthetic fluids, aqueous emulsions, water and glycol
- The filter elements are compatible with: Mineral oils, synthetic fluids. Aqueous emulsions, water and glycol (series W required).
- NBR seals series A, compatible with: Mineral oils, synthetic fluids, aqueous emulsions and water and glycol.
- FPM seals series V, compatible with: Synthetic fluids type HS-HFDR-HFDS-HFDU

Filter Element Area

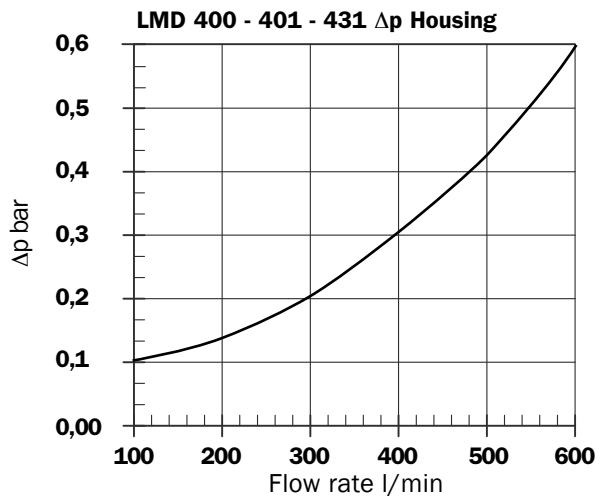
Filter element in stainless steel mesh

| Type | Length | | |
|-------------------------------------|--------|-------|-------|
| | 4 | 5 | 6 |
| CU 400 | 6550 | 10200 | 15300 |
| Values expressed in cm ² | | | |

Filter housing Δp pressure drop

The curves are plotted utilising mineral oil with density of 0.86 kg/dm³ to ISO 3968.

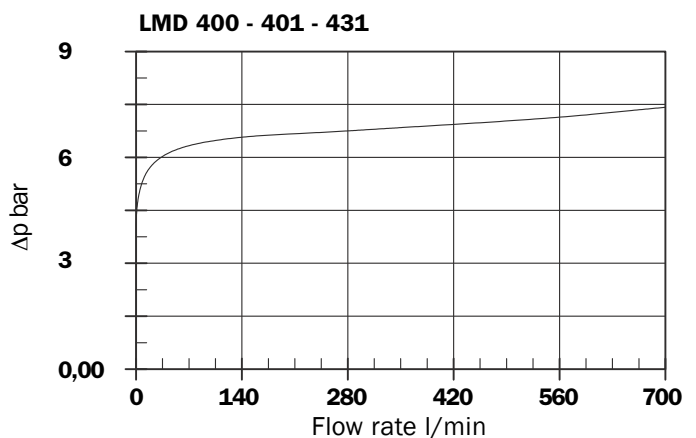
Δp varies proportionally with density.



Valves

Bypass valve pressure drop

For individual filter body



Option P02 for LMD 431



Option P02 “Internal tube for reduced flow rate” is recommended for flow rate values below: 150 l/min. The use of option P02 makes it easier to fill the housing with the operating fluid.

P02 “Internal tube for reduced flow rates”

Recommended maximum flow rate

Recommended maximum flow rate for filters installed on lubrication lines, return or in-line filters is defined by the maximum oil velocity in the connections. For filters mounted on Off-Line lines the maximum recommended flow rate is defined by the pressure drop of the filter element.

Filter for pressurised lubrication, max. oil velocity 2.5 m/sec.
Return or in-line filter, max oil velocity 5 m/sec.

| | Connections |
|---------------------|------------------------|
| Oil velocity | 2 1/2" |
| 2,5 m/sec. | 500 |
| 5 m/sec. | 1000 |
| | Flow rate l/min |

Off-Line filter, filter element recommended maximum pressure drop must be equal to Δp 0.2 ÷ 0.3 bar.

Recommended maximum flow rate

- Pressure drop of filter assembly equal to Δp 0.6 bar.
- Oil kinematic viscosity 30 mm²/s (cSt).
- Density 0.86 kg/dm³.

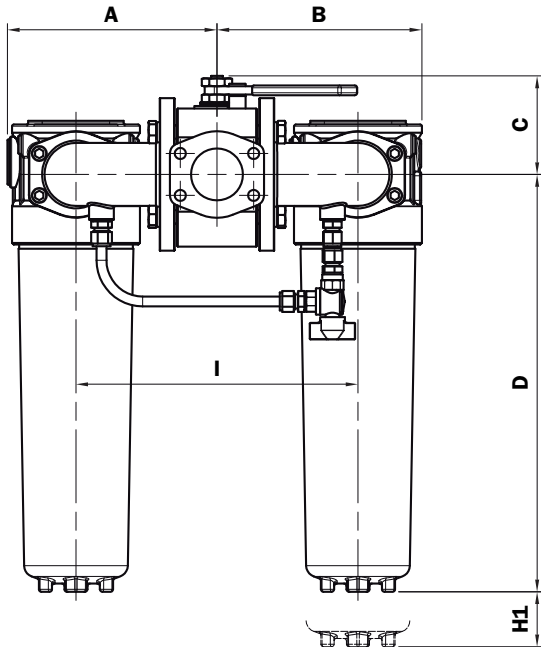
Filtration

| | Length | A03 | A06 | A10 | A16 | A25 | P10 | P25 | M25 |
|----------------------|--------|-----|-----|-----|-----|-----|-----|-----|-----|
| LMD 400 - 401 | 4 | 265 | 310 | 410 | 430 | 485 | 500 | 520 | 570 |
| 431 | 5 | 355 | 385 | 465 | 500 | 540 | 530 | 540 | 580 |
| | 6 | 390 | 440 | 510 | 520 | 560 | 540 | 555 | 590 |

Flow rate l/min

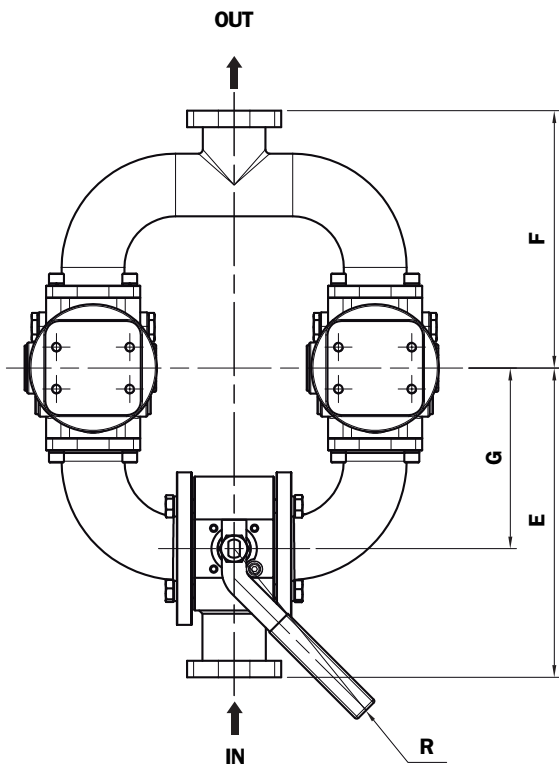
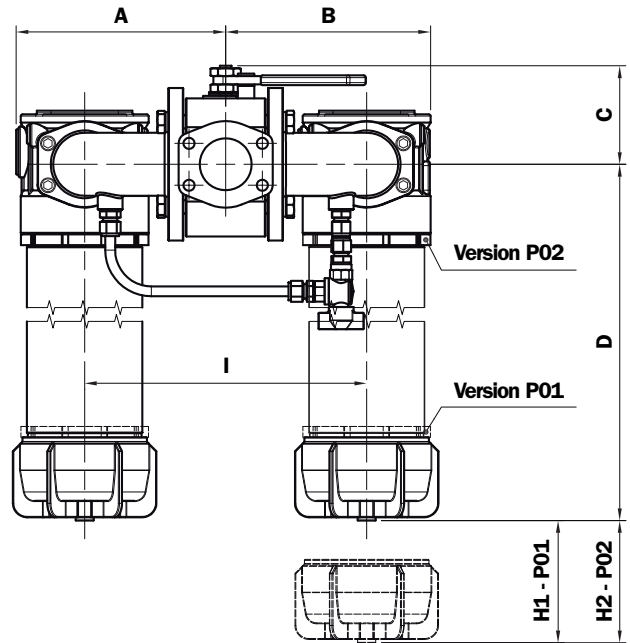
LMD 400

Length 4

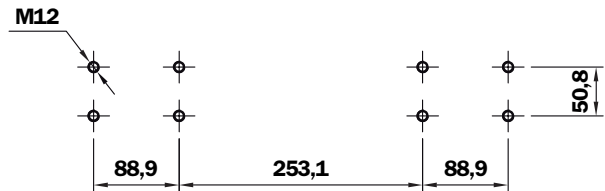


LMD 400

Length 5 - 6



Filter fixing holes LMD 400

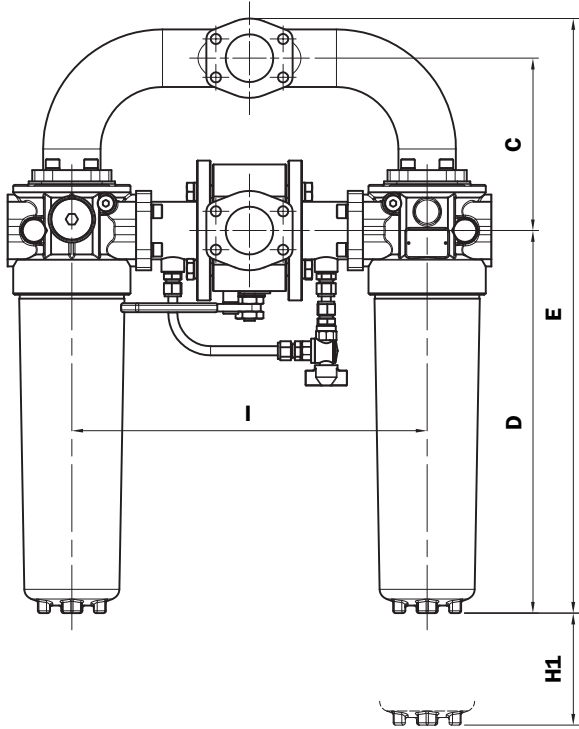


LMD 400

| Length Filter | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H1 mm | H2 mm | I mm | R mm |
|---------------|------|------|------|------|------|------|------|-------|-------|------|------|
| 4 | 255 | 255 | 120 | 513 | 351 | 285 | 195 | 120 | - | 342 | 255 |
| 5 | 255 | 255 | 120 | 765 | 351 | 285 | 195 | 120 | 660 | 342 | 255 |
| 6 | 255 | 255 | 120 | 1095 | 351 | 285 | 195 | 120 | 990 | 342 | 255 |

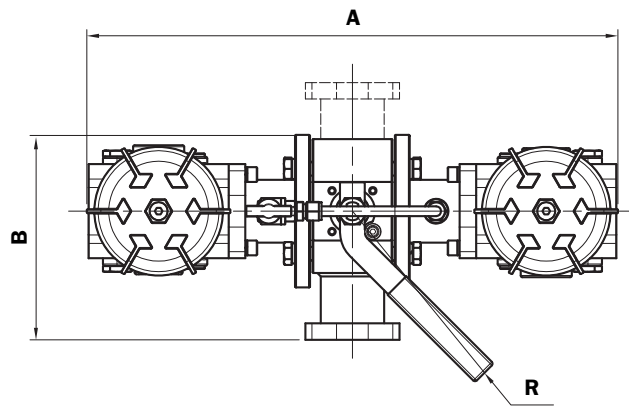
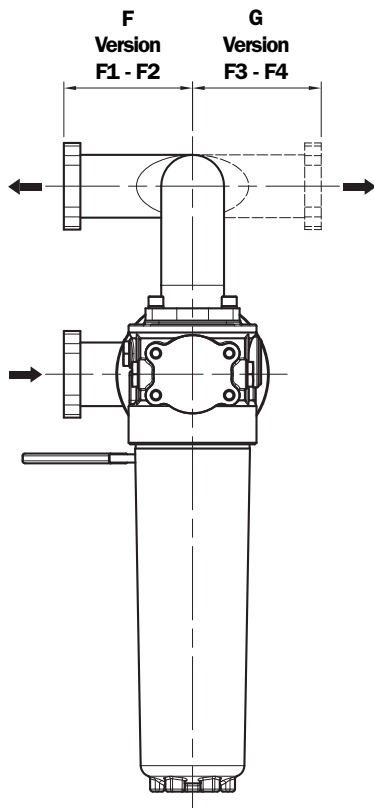
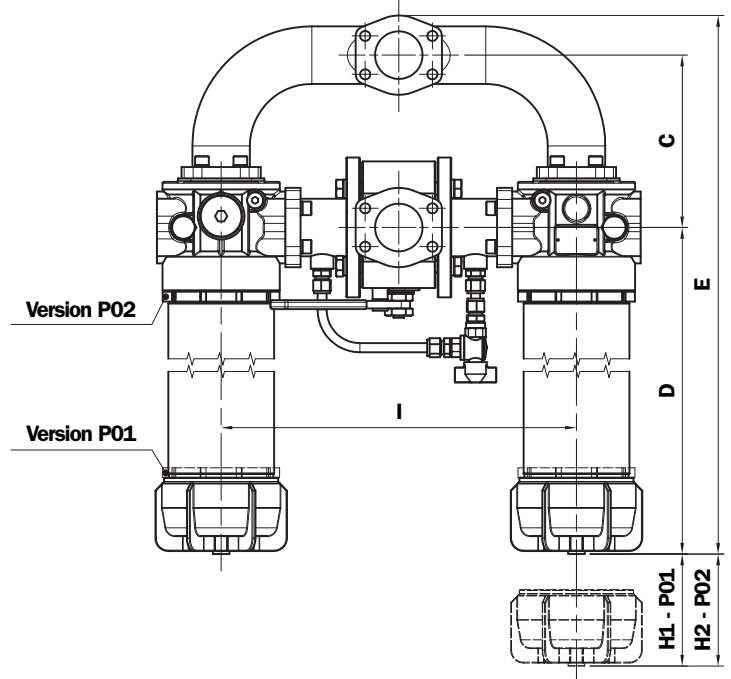
LMD 401

Length 4



LMD 401

Length 5 - 6

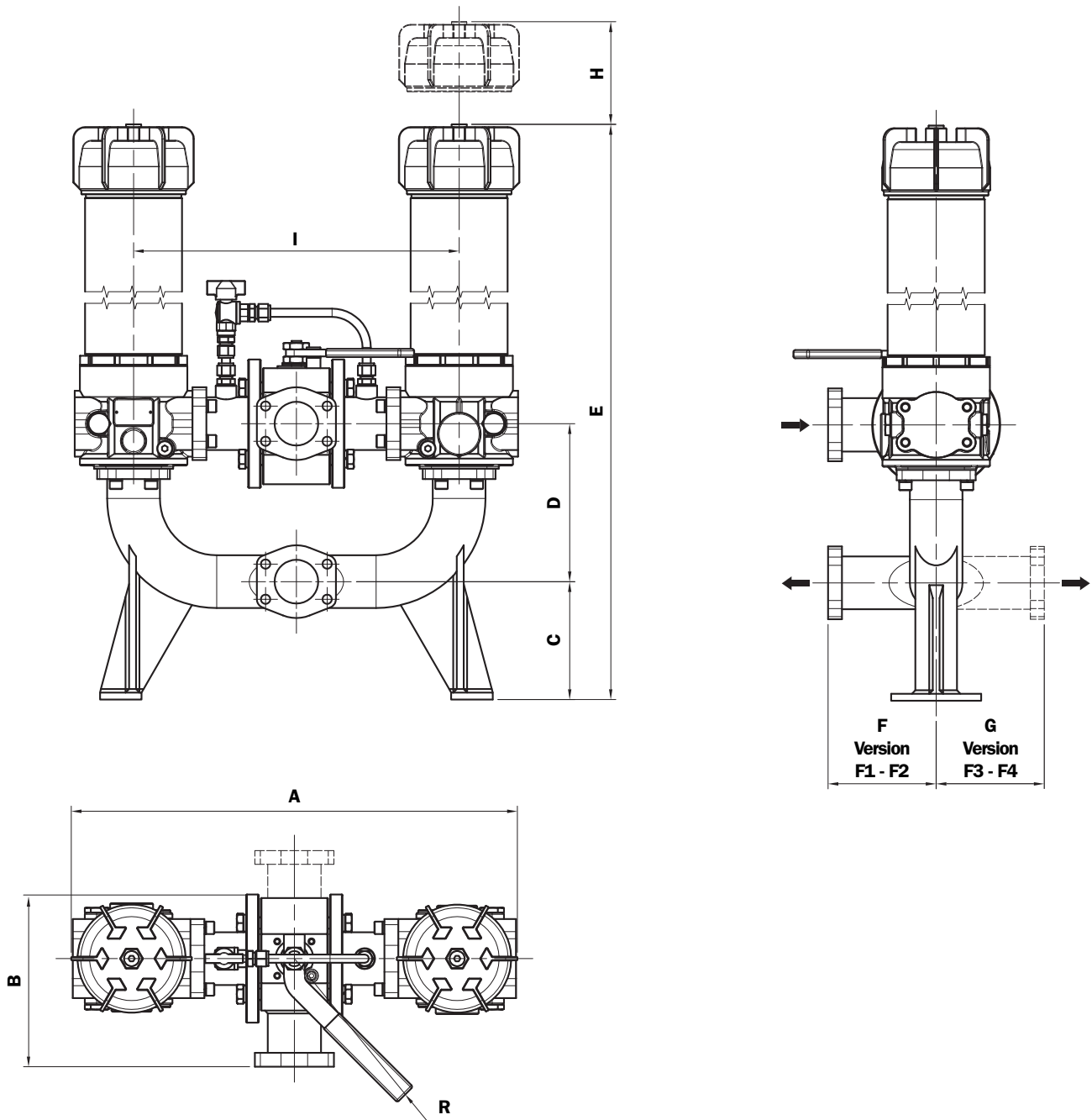


LMD 401

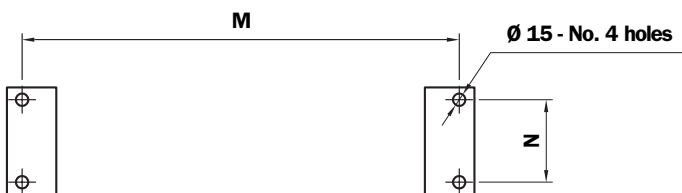
| Length Filter | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H1 mm | H2 mm | I mm | R mm |
|---------------|------|------|------|------|------|------|------|-------|-------|------|------|
| 4 | 640 | 250 | 228 | 513 | 796 | 156 | 156 | 120 | - | 470 | 255 |
| 5 | 640 | 250 | 228 | 765 | 1048 | 156 | 156 | 120 | 660 | 470 | 255 |
| 6 | 640 | 250 | 228 | 1095 | 1378 | 156 | 156 | 120 | 990 | 470 | 255 |

LMD 431

Length 5 - 6



Filter fixing holes LMD 431

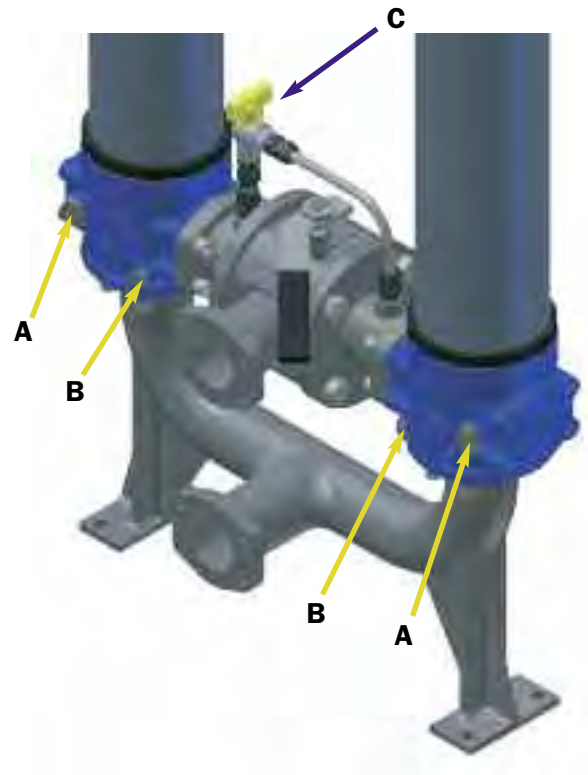
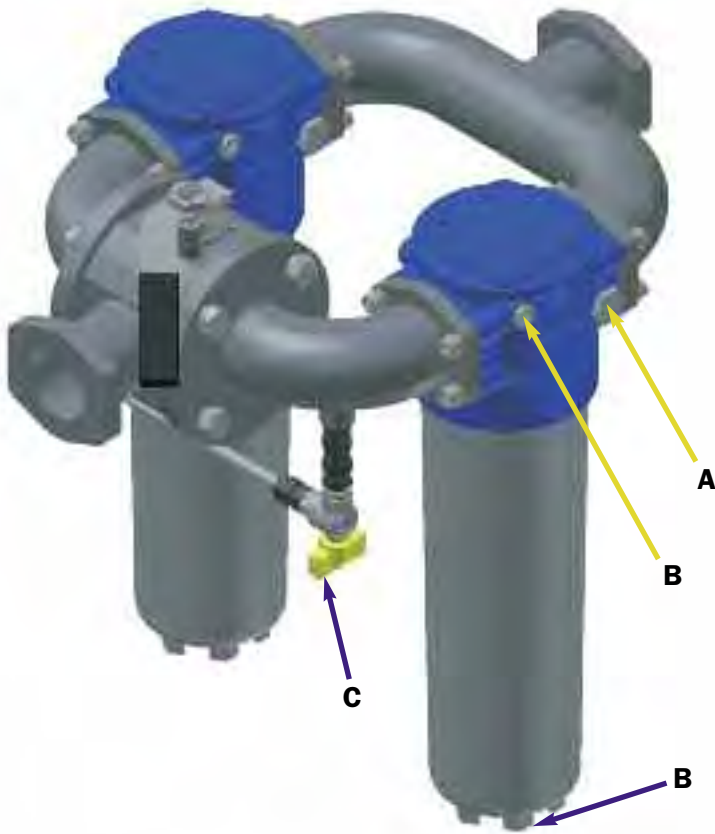


LMD 431

| Length Filter | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | M mm | N mm | R mm |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|
| 5 | 640 | 250 | 170 | 228 | 1165 | 156 | 156 | 660 | 470 | 530 | 100 | 255 |
| 6 | 640 | 250 | 170 | 228 | 1495 | 156 | 156 | 990 | 470 | 530 | 100 | 255 |

LMD 400

LMD 431



A - Indicator port - Plug T2 - A/F 30

B - Oil drain plug - G 1/2" - A/F 10

C - Compensation valve

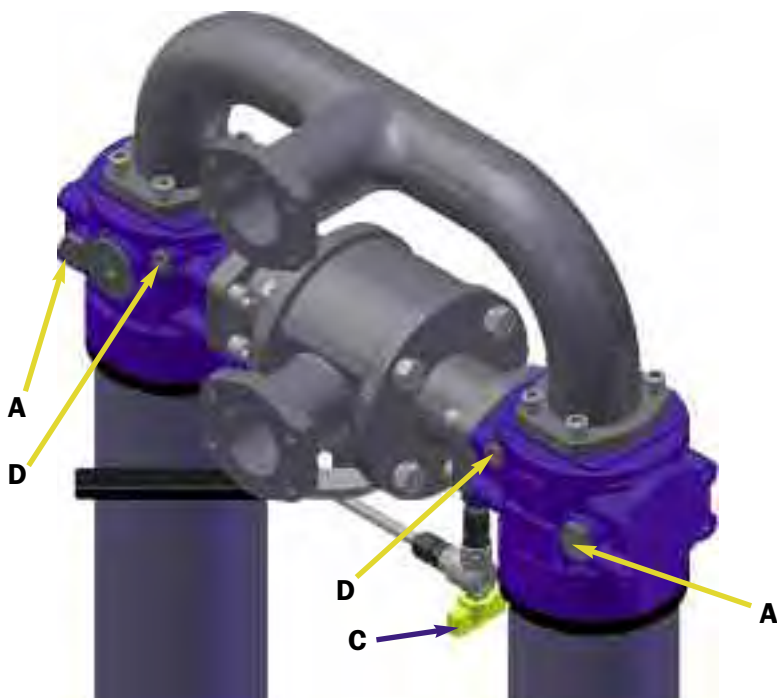
D - Breather plug - G 1/2" - A/F 10

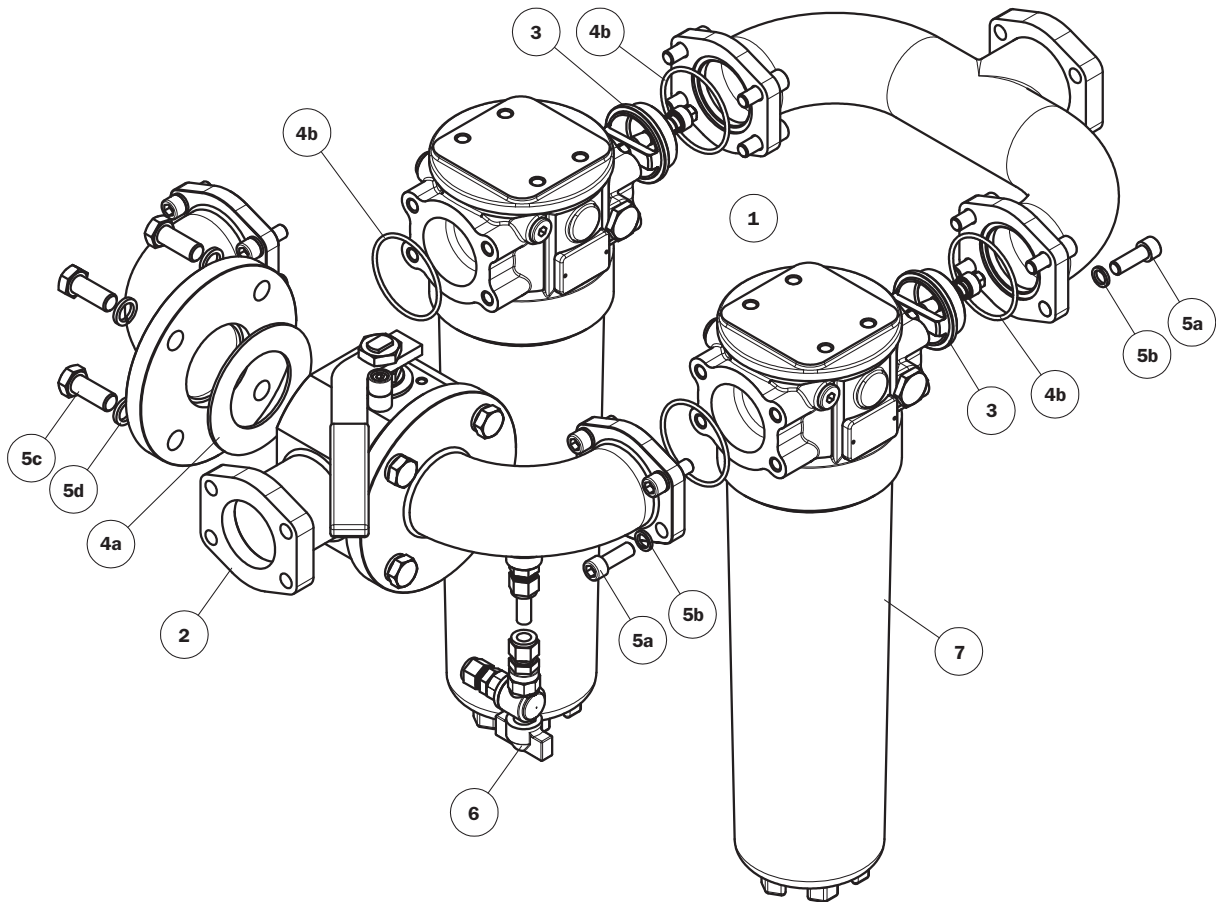
Differential indicator:

LMD 400 - 401 - 431 - Fit one indicator for individual filter assembly



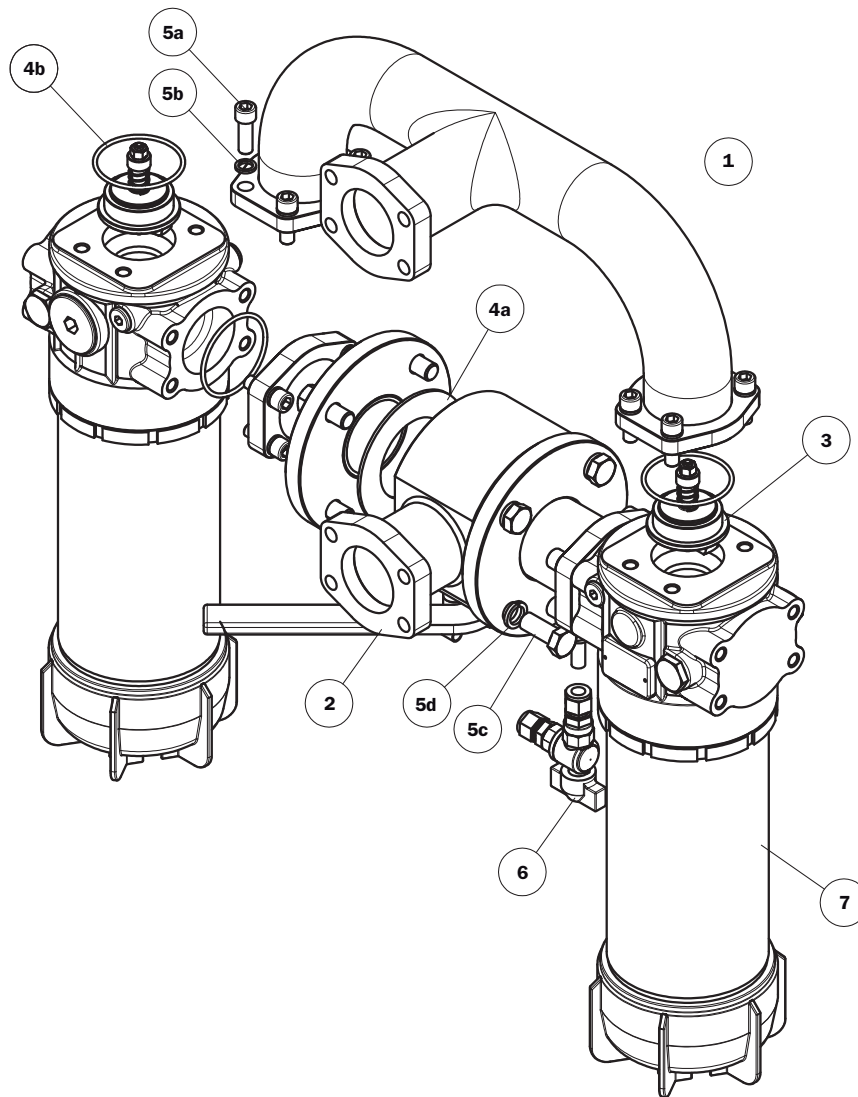
LMD 401



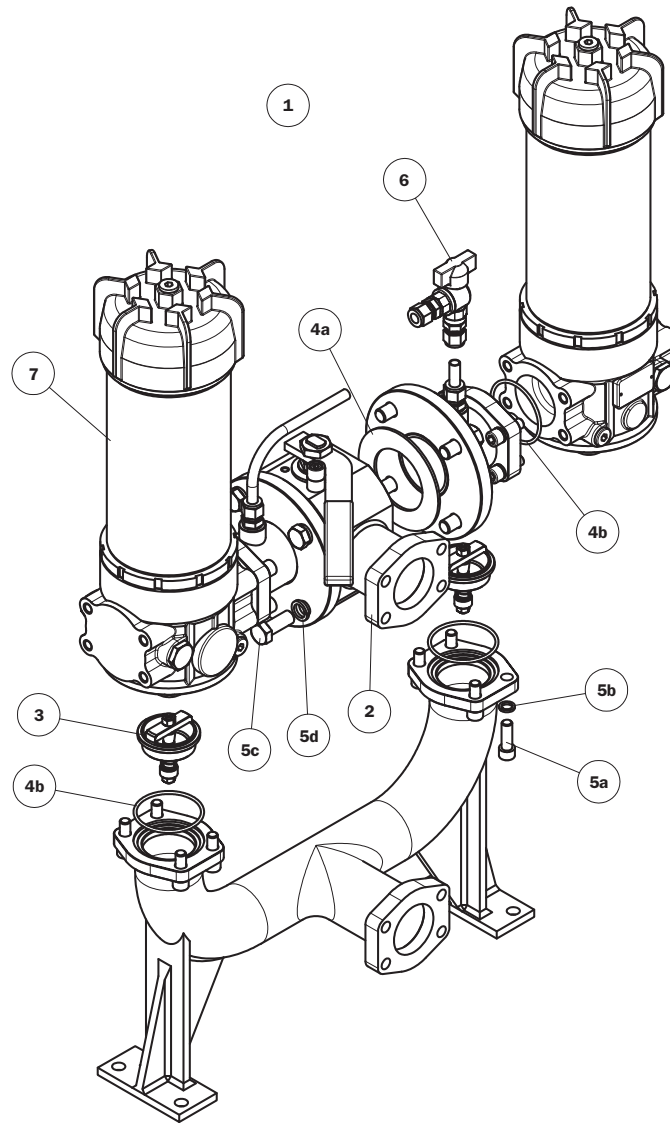


| Item | Description | Q.ty | FILTER Series LMD 400 |
|-----------|----------------------------------|------|--|
| 1 | Filter assembly | 1 | See order table |
| 2 | 3-way ball valve PN 16 | 1 | 2 1/2" SAE 3000 psi/M 02001440 2 1/2" SAE 3000 psi/UNC 02001441 |
| 3 | One-way valve | 2 | 02001429 |
| 4 | Seal kit | 1 | 02050399 |
| 4a | Flat seal | 2 | In according to DN65 |
| 4b | IN-OUT O-Ring | 4 | O-R 4287 Ø 72,62 x 3,53 |
| 5 | Threaded fasteners kit | 1 | 02049062 |
| 5a | Hexagon socket screws | 16 | UNI 5931 - M12 x 35 - 10.9 |
| 5b | Spring washers | 16 | UNI 1751-B 12 |
| 5c | Exagon bolt screws | 8 | UNI EN 24017 - M16 x 40 - 10.9 |
| 5d | Spring washers | 8 | UNI 1751-B 16 |
| 6 | Kit ball valve with hose fitting | 1 | 02025043 |
| 7 | Filter | 2 | See order table LMP400xF2..... page 51 |
| - | Indicators | 2 | See order table |

Spare parts



| Item | Description | Q.ty | FILTER Series LMD 401 |
|-----------|----------------------------------|------|--|
| 1 | Filter assembly | 1 | See order table |
| 2 | 3-way ball valve PN 16 | 1 | 2 1/2" SAE 3000 psi/M 02001440 2 1/2" SAE 3000 psi/UNC 02001441 |
| 3 | One-way valve | 2 | 02001429 |
| 4 | Seal kit | 1 | 02050399 |
| 4a | Flat seal | 2 | In according to DN65 |
| 4b | IN-OUT O-Ring | 4 | O-R 4287 Ø 72,62 x 3,53 |
| 5 | Threaded fasteners kit | 1 | 02049062 |
| 5a | Hexagon socket screws | 16 | UNI 5931 - M12 x 35 - 10.9 |
| 5b | Spring washers | 16 | UNI 1751-B 12 |
| 5c | Exagon bolt screws | 8 | UNI EN 24017 - M16 x 40 - 10.9 |
| 5d | Spring washers | 8 | UNI 1751-B 16 |
| 6 | Kit ball valve with hose fitting | 1 | 02025043 |
| 7 | Filter | 2 | See order table LMP401xF2..... page 51 |
| - | Indicators | 2 | See order table |



| Item | Description | Q.ty | FILTER Series LMD 431 |
|-----------|----------------------------------|------|--|
| 1 | Filter assembly | 1 | See order table |
| 2 | 3-way ball valve PN 16 | 1 | 2 1/2" SAE 3000 psi/M 02001440 2 1/2" SAE 3000 psi/UNC 02001441 |
| 3 | One-way valve | 2 | 02001429 |
| 4 | Seal kit | 1 | 02050399 |
| 4a | Flat seal | 2 | In according to DN65 |
| 4b | IN-OUT O-Ring | 4 | O-R 4287 Ø 72,62 x 3,53 |
| 5 | Threaded fasteners kit | 1 | 02049062 |
| 5a | Hexagon socket screws | 16 | UNI 5931 - M12 x 35 - 10.9 |
| 5b | Spring washers | 16 | UNI 1751-B 12 |
| 5c | Exagon bolt screws | 8 | UNI EN 24017 - M16 x 40 - 10.9 |
| 5d | Spring washers | 8 | UNI 1751-B 16 |
| 6 | Kit ball valve with hose fitting | 1 | 02025043 |
| 7 | Filter | 2 | See order table LMP431xF2..... page 51 |
| - | Indicators | 2 | See order table |

Ordering information LMD 400 - 401 - 431

Filter assembly

LMD

Example: LMD

| | | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8a |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 400 | 5 | B | V | F1 | A10 | N | P01 |

Filter element

CU400

Example: CU400

| | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2 | 6 | 4 | 7 | 8b |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | A10 | A | N | P01 |

1 - Style

Filter

| |
|------------|
| 400 |
| 401 |
| 431 |

Filter element

| |
|------------|
| 400 |
| 400 |
| 400 |

2 - Filter length

| |
|----------|
| 4 |
| 5 |
| 6 |

LMD 431 excluded

3 - Valve

| |
|--------------------------|
| S |
| B |
| <input type="checkbox"/> |

Without by-pass

With bypass

With by-pass

Opening pressure: on request

4 - Filter seals

a - Filter

| |
|----------|
| V |
| W |

FPM

FPM (Compatible with fluid HFA, HFB, HFC)

b - Filter element

| |
|--------------------------|
| A |
| W |
| <input type="checkbox"/> |

NBR

NBR (Compatible with fluid HFA, HFB, HFC)

On request

5 - Connections

Flanged

| Type | LMD 400 - 401 - 431 |
|-----------|--|
| F1 | 2 1/2" SAE 3000 psi/M |
| F2 | 2 1/2" SAE 3000 psi/UNC |
| F3 | = F1 In-Line connections (only LMD 401 - 431) |
| F4 | = F2 In-Line connections (only LMD 401 - 431) |

6 - Filter element

| |
|------------|
| A01 |
| A03 |
| A06 |
| A10 |
| A16 |
| A25 |

Inorganic microfibre* 1 µ

Inorganic microfibre 3 µ

Inorganic microfibre 6 µ

Inorganic microfibre 10 µ

Inorganic microfibre 16 µ

Inorganic microfibre 25 µ

Absolute filtration

$\beta_x(c) \geq 1000$

* On request

| |
|------------|
| M25 |
| M60 |
| M90 |

Wire mesh

Wire mesh

Wire mesh

Nominal Filtration

| |
|------------|
| P10 |
| P25 |

Resin impregnated paper

Resin impregnated paper

Nominal Filtration

7 - Max filter element differential pressure

| |
|----------|
| N |
| W |

Δp 20 bar

FPM

(Compatible with fluid HFA, HFB, HFC)

8 - Option

a - Filter

| |
|------------|
| P01 |
| P02 |
| P02 |
| Pxx |

MP Filtri standard

LMD 400 - 401

Maintenance from base housing (only length 5 and 6)

LMD 431

With internal tube for reduced flow rate

Customer request

b - Filter element

| |
|------------|
| P01 |
| Pxx |

MP Filtri standard

Customer request

DIFFERENTIAL INDICATORS (see page 120)

MP Filtri - The filter functions as described in this bulletin are valid exclusively for original MP Filtri filter elements and replacement parts. All rights reserved

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