

# LMP 400-401 & 430-431 series

Maximum working pressure up to 6 MPa (60 bar) - Flow rate up to 780 l/min



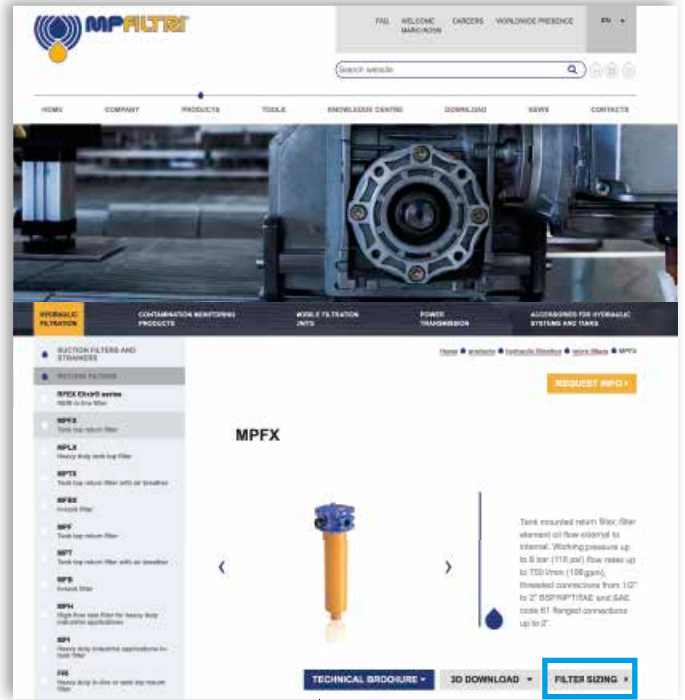
# TYPICAL FILTER SIZING Selection Software

## Step ①

Select "FILTER SIZING SOFTWARE" after login

OR

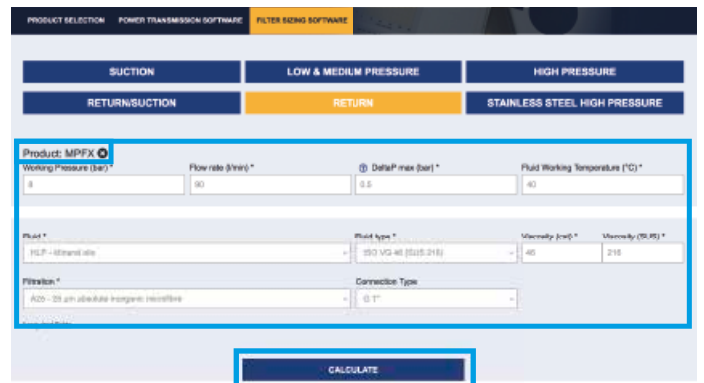
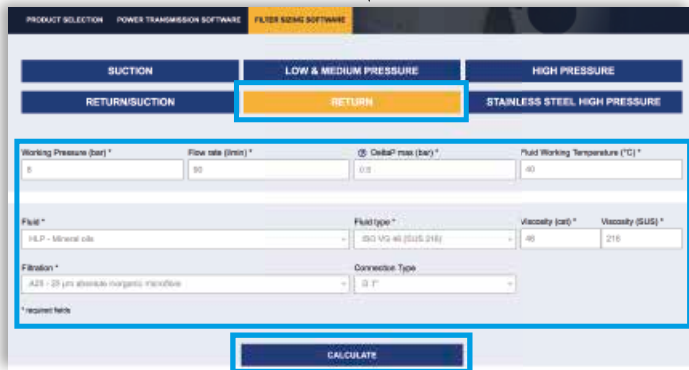
Select "FILTER SIZING" after login from a product page



Choose the type of filter family.  
Enter the main data for sizing the filter  
then push CALCULATE.

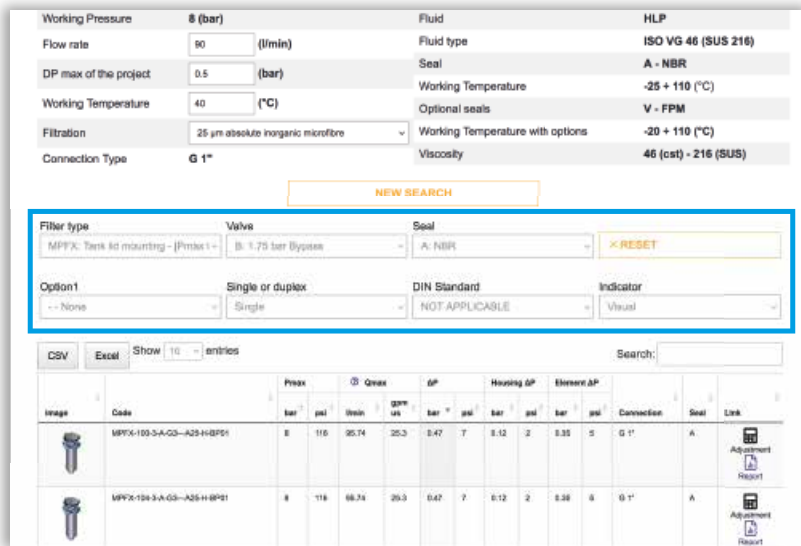
## Step ②

Enter the main data for sizing the filter  
then push CALCULATE.



## Step ③

Select the desired options to choose the appropriate filter type for the application.



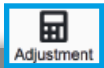
## Step 4

Choose the most suitable filter from the proposed list.

| Image | Code                       | Peak<br>bar | Qmax<br>psi | Qmax<br>m³/min | Qmax<br>gpm us | ΔP<br>bar | ψ | Housing ΔP<br>bar | ψ | Element ΔP<br>bar | ψ | Connection | Seal | Link   |
|-------|----------------------------|-------------|-------------|----------------|----------------|-----------|---|-------------------|---|-------------------|---|------------|------|--|
|       | MPFX-103-3-A-Q3-A25-H-BPST | 8           | 116         | 25.74          | 25.3           | 0.47      | 7 | 0.12              | 2 | 0.33              | 5 | G 1"       | A    | <a href="#">Adjustment</a><br><a href="#">Report</a> |
|       | MPFX-104-3-A-Q3-A25-H-BPST | 8           | 116         | 25.74          | 25.3           | 0.47      | 7 | 0.12              | 2 | 0.33              | 5 | G 1"       | A    | <a href="#">Adjustment</a><br><a href="#">Report</a> |

## Step 5

It is possible to change the filter modifying every parameter.



**A** SAVE YOUR FILTER'S REPORT



**B** MANUAL EDIT



SAVE IN YOUR ARCHIVE  
typing your reference data and then SAVE AS PDF



A new browser window displays the pdf

see **A**

Close the report window



By clicking your WELCOME button, the SHOW REPORTS is displayed: select it to see your filters list.

## Description

## Technical data

### Low & Medium Pressure filters

**Maximum working pressure up to 6 MPa (60 bar)**  
**Flow rate up to 780 l/min**

LMP400 is a range of low pressure filter with large filtration surface mainly suitable for lubrication, off-line filtration of the reservoirs and filtration equipment.

They are directly connected to the lines of the system through the hydraulic fittings.

#### Available features:

- Female threaded connections up to 2" and flanged connections up to 2 1/2", for a maximum flow rate of 740 l/min
- In line or 90° connections, to meet any type of application
- Base-mounting design also available, for ease of the replacement of the filter element
- Fine filtration rating, to get a good cleanliness level into the system
- Water removal elements, to remove the free water from the hydraulic fluid. For further information, see the Contamination Management document and the dedicate leaflet.
- Bypass valve, to relieve excessive pressure drop across the filter media
- Vent ports, to avoid air trapped into the filter going into the system
- Drain ports, to remove the fluid from the housing prior the maintenance work
- Visual, electrical and electronic differential clogging indicators

#### Common applications:

- Off-line filtration of reservoirs
- Filtration systems

#### Filter housing materials

- Head: Anodized Aluminium
- Housing: Anodized Aluminium
- Bypass valve: Steel

#### Pressure LMP 400 length 2 - 3 - 4

- Working pressure: 6 MPa (60 bar)
- Test pressure: 9 MPa (90 bar)
- Burst pressure: 21 MPa (210 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 6 MPa (60 bar)

#### Pressure LMP 400 length 5 - 6

- Working pressure: 5 MPa (50 bar)
- Test pressure: 7.5 MPa (75 bar)
- Burst pressure: 15 MPa (150 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 5 MPa (50 bar)

#### Bypass valve

- Opening pressure 350 kPa (3.5 bar) ±10%
- Other opening pressures on request.

#### Δp element type

- Microfibre filter elements - series N - W: 20 bar
- Fluid flow through the filter element from OUT to IN

#### Seals

- Standard NBR series A
- Optional FPM series V

#### Temperature

From -25 °C to +110 °C

#### Connections

LMP 400 - 430: In-line Inlet/Outlet  
 LMP 401 - 431: 90° Inlet/Outlet

#### Note

LMP 400 filters are provided for vertical mounting



## Weights [kg] and volumes [dm<sup>3</sup>]

| Filter series                    | Weights [kg] |      |      |      |       | Volumes [dm <sup>3</sup> ] |        |      |      |      |      |       |
|----------------------------------|--------------|------|------|------|-------|----------------------------|--------|------|------|------|------|-------|
|                                  | Length       | 2    | 3    | 4    | 5     | 6                          | Length | 2    | 3    | 4    | 5    | 6     |
| <b>LMP 400-401 &amp; 430-431</b> |              | 7.20 | 8.10 | 8.80 | 11.90 | 14.40                      |        | 3.50 | 5.00 | 6.50 | 9.50 | 13.50 |

| Filter series  | Length | Filter element design - N Series |     |     |     |     |                           |     |     |
|----------------|--------|----------------------------------|-----|-----|-----|-----|---------------------------|-----|-----|
|                |        | A03                              | A06 | A10 | A16 | A25 | M25<br>M60<br>M90<br>M250 | P10 | P25 |
| <b>LMP 400</b> | 2      | 205                              | 244 | 370 | 411 | 515 | 720                       | 524 | 556 |
|                | 3      | 280                              | 333 | 474 | 515 | 602 | 760                       | 637 | 660 |
|                | 4      | 347                              | 400 | 535 | 564 | 637 | 769                       | 660 | 688 |
|                | 5      | 459                              | 501 | 610 | 660 | 717 | 781                       | 700 | 721 |
|                | 6      | 504                              | 575 | 676 | 689 | 728 | 783                       | 708 | 727 |
| <b>LMP 401</b> | 2      | 200                              | 236 | 347 | 382 | 468 | 628                       | 475 | 501 |
|                | 3      | 268                              | 315 | 434 | 468 | 537 | 659                       | 565 | 582 |
|                | 4      | 328                              | 373 | 484 | 507 | 565 | 665                       | 582 | 603 |
|                | 5      | 423                              | 456 | 544 | 582 | 626 | 674                       | 613 | 629 |
|                | 6      | 459                              | 516 | 594 | 604 | 634 | 676                       | 619 | 633 |
| <b>LMP 430</b> | 5      | 459                              | 501 | 610 | 660 | 717 | 781                       | 700 | 721 |
|                | 6      | 504                              | 575 | 676 | 689 | 728 | 783                       | 708 | 727 |
| <b>LMP 431</b> | 5      | 423                              | 456 | 544 | 582 | 626 | 674                       | 613 | 629 |
|                | 6      | 459                              | 516 | 594 | 604 | 634 | 676                       | 619 | 633 |

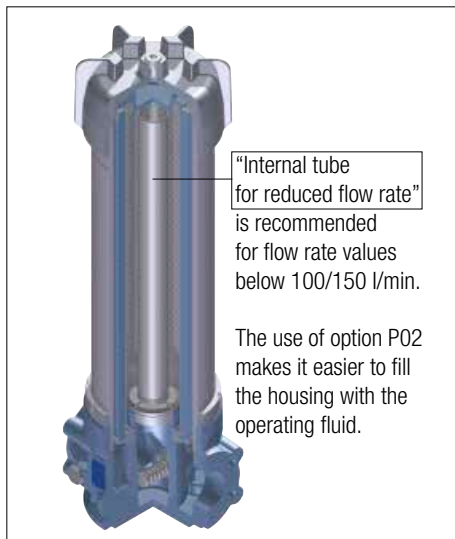
**Maximum flow rate for a complete low and medium pressure filter with a pressure drop  $\Delta p = 0.7$  bar.**

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>.

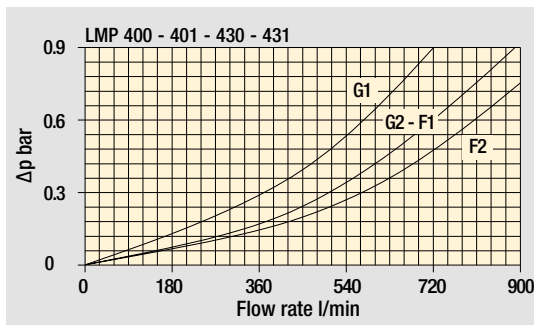
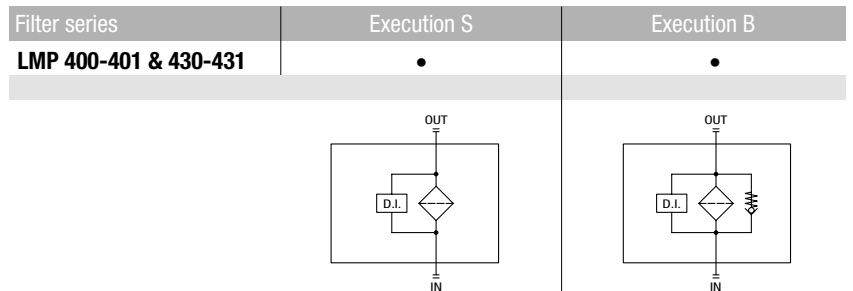
For different pressure drop or fluid viscosity we recommend to use our selection software available on [www.mpfiltri.com](http://www.mpfiltri.com).

You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure. Please, contact our Sales Department for further additional information.

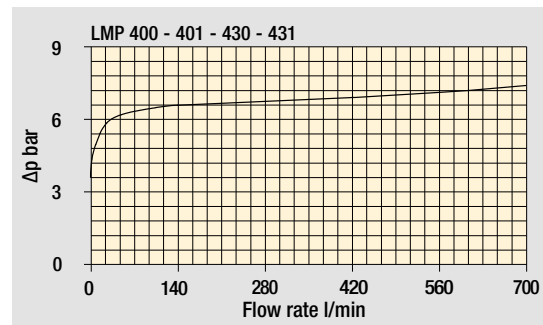
LMP 430-431: execution P02



Hydraulic symbols



Filter housings  $\Delta p$  pressure drop



Pressure drop

Bypass valve pressure drop

The curves are plotted using mineral oil with density of 0.86 kg/dm<sup>3</sup> in compliance with ISO 3968.  $\Delta p$  varies proportionally with density.

# LMP 400-401

## Designation & Ordering code

### COMPLETE FILTER

|  |  |  |     |     |  |  |  |  |  |  |  |
|--|--|--|-----|-----|--|--|--|--|--|--|--|
| Series and size  |  | Configuration example: <b>LMP401</b>   <b>3</b>   <b>B</b>   <b>A</b>   <b>G1</b>   <b>A10</b>   <b>N</b>   <b>P01</b> |     |     |  |  |  |  |  |  |  |
| <b>LMP400</b>   <b>LMP401</b>                          |  |  |     |     |  |  |  |  |  |  |  |
| Length   |  |  |     |     |  |  |  |  |  |  |  |
| 2   3   4   5   6                                      |  |  |     |     |  |  |  |  |  |  |  |
| Bypass valve   |  |  |     |     |  |  |  |  |  |  |  |
| <b>S</b> Without bypass                                |  | <b>B</b> 3.5 bar   |     |     |  |  |  |  |  |  |  |
| Seals and treatments                                   |  | Filtration rating  |     |     |  |  |  |  |  |  |  |
|  |  | Axx  | Mxx | Pxx |  |  |  |  |  |  |  |
| <b>A</b> NBR   |  | •  | •   | •   |  |  |  |  |  |  |  |
| <b>V</b> FPM   |  | •  | •   | •   |  |  |  |  |  |  |  |
| <b>W</b> NBR compatible with fluids HFA-HFB-HFC        |  | •  | •   |     |  |  |  |  |  |  |  |
| Connections  |  |  |     |     |  |  |  |  |  |  |  |
| <b>G1</b> G 1 1/2"                                     |  | <b>F1</b> 2" SAE 3000 psi/M  |     |     |  |  |  |  |  |  |  |
| <b>G2</b> G 2"   |  | <b>F2</b> 2 1/2" SAE 3000 psi/M  |     |     |  |  |  |  |  |  |  |
| <b>G3</b> 1 1/2" NPT                                   |  | <b>F3</b> 2" SAE 3000 psi/UNC  |     |     |  |  |  |  |  |  |  |
| <b>G4</b> 2" NPT                                       |  | <b>F4</b> 2 1/2" SAE 3000 psi/UNC  |     |     |  |  |  |  |  |  |  |
| <b>G5</b> SAE 24 - 1 7/8" - 12 UN                      |  |  |     |     |  |  |  |  |  |  |  |
| <b>G6</b> SAE 32 - 2 1/2" - 12 UN                      |  |  |     |     |  |  |  |  |  |  |  |
| Filtration rating (filter media)                       |  |  |     |     |  |  |  |  |  |  |  |
| <b>A03</b> Inorganic microfiber 3 µm                   |  | <b>M25</b> Wire mesh 25 µm   |     |     |  |  |  |  |  |  |  |
| <b>A06</b> Inorganic microfiber 6 µm                   |  | <b>M60</b> Wire mesh 60 µm   |     |     |  |  |  |  |  |  |  |
| <b>A10</b> Inorganic microfiber 10 µm                  |  | <b>M90</b> Wire mesh 90 µm   |     |     |  |  |  |  |  |  |  |
| <b>A16</b> Inorganic microfiber 16 µm                  |  | <b>P10</b> Resin impregnated paper 10 µm   |     |     |  |  |  |  |  |  |  |
| <b>A25</b> Inorganic microfiber 25 µm                  |  | <b>P25</b> Resin impregnated paper 25 µm   |     |     |  |  |  |  |  |  |  |
| <b>WA025</b> Water absorber inorganic microfiber 25 µm |  |  |     |     |  |  |  |  |  |  |  |
| Element Δp   |  | Execution  |     |     |  |  |  |  |  |  |  |
| <b>N</b> 20 bar  |  | Filter length  |     |     |  |  |  |  |  |  |  |
|  |  | 2   3   4   5   6  |     |     |  |  |  |  |  |  |  |
|  |  | <b>P01</b> MP Filtri standard  |     |     |  |  |  |  |  |  |  |
|  |  | <b>P02</b> Maintenance from the bottom of the housing  |     |     |  |  |  |  |  |  |  |
|  |  | <b>Pxx</b> Customized  |     |     |  |  |  |  |  |  |  |

### FILTER ELEMENT

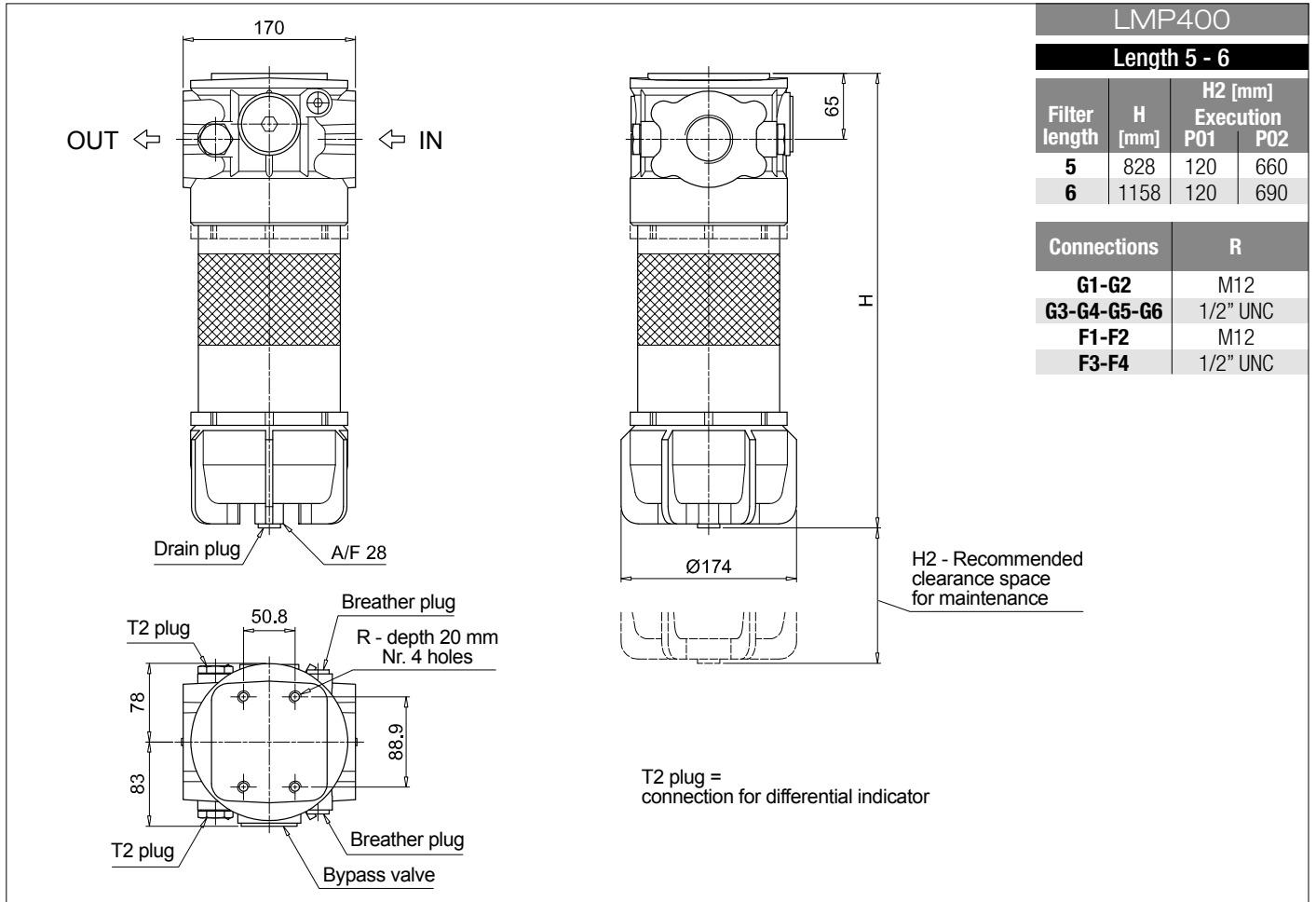
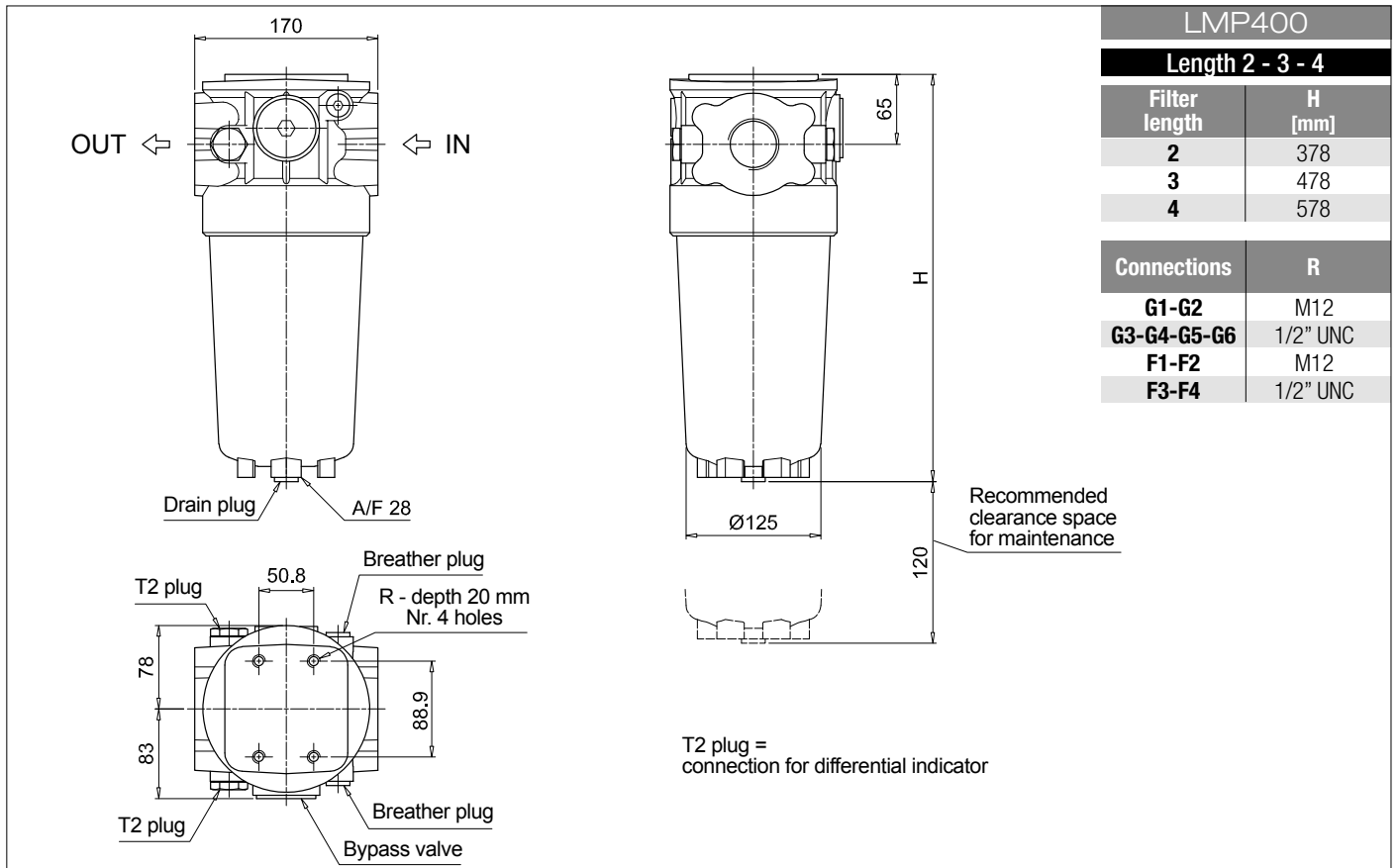
|  |  |  |     |     |  |  |  |  |  |  |  |
|--|--|--|-----|-----|--|--|--|--|--|--|--|
| Element series and size                                |  | Configuration example: <b>CU400</b>   <b>3</b>   <b>A10</b>   <b>A</b>   <b>N</b>   <b>P01</b> |     |     |  |  |  |  |  |  |  |
| <b>CU400</b>   |  |  |     |     |  |  |  |  |  |  |  |
| Element length   |  |  |     |     |  |  |  |  |  |  |  |
| 2   3   4   5   6                                      |  |  |     |     |  |  |  |  |  |  |  |
| Filtration rating (filter media)                       |  |  |     |     |  |  |  |  |  |  |  |
| <b>A03</b> Inorganic microfiber 3 µm                   |  | <b>M25</b> Wire mesh 25 µm   |     |     |  |  |  |  |  |  |  |
| <b>A06</b> Inorganic microfiber 6 µm                   |  | <b>M60</b> Wire mesh 60 µm   |     |     |  |  |  |  |  |  |  |
| <b>A10</b> Inorganic microfiber 10 µm                  |  | <b>M90</b> Wire mesh 90 µm   |     |     |  |  |  |  |  |  |  |
| <b>A16</b> Inorganic microfiber 16 µm                  |  | <b>P10</b> Resin impregnated paper 10 µm   |     |     |  |  |  |  |  |  |  |
| <b>A25</b> Inorganic microfiber 25 µm                  |  | <b>P25</b> Resin impregnated paper 25 µm   |     |     |  |  |  |  |  |  |  |
| <b>WA025</b> Water absorber inorganic microfiber 25 µm |  |  |     |     |  |  |  |  |  |  |  |
| Seals  |  | Filtration rating  |     |     |  |  |  |  |  |  |  |
|  |  | Axx  | Mxx | Pxx |  |  |  |  |  |  |  |
| <b>A</b> NBR   |  | •  | •   | •   |  |  |  |  |  |  |  |
| <b>V</b> FPM   |  | •  | •   | •   |  |  |  |  |  |  |  |
| <b>W</b> NBR compatible with fluids HFA-HFB-HFC        |  | •  | •   |     |  |  |  |  |  |  |  |
| Element Δp   |  | Execution  |     |     |  |  |  |  |  |  |  |
| <b>N</b> 20 bar  |  | Filter length  |     |     |  |  |  |  |  |  |  |
|  |  | 2   3   4   5   6  |     |     |  |  |  |  |  |  |  |
|  |  | <b>P01</b> MP Filtri standard  |     |     |  |  |  |  |  |  |  |
|  |  | <b>Pxx</b> Customized  |     |     |  |  |  |  |  |  |  |

### ACCESSORIES

|                         |  |         |            |                                   |      |
|-------------------------|--|---------|------------|-----------------------------------|------|
| Differential indicators |  | page    |            |                                   | page |
| <b>DEA</b>              | Electrical differential indicator          | 445     | <b>DTA</b> | Electronic differential indicator | 448  |
| <b>DEM</b>              | Electrical differential indicator          | 445-446 | <b>DVA</b> | Visual differential indicator     | 448  |
| <b>DLA</b>              | Electrical / visual differential indicator | 446-447 | <b>DVM</b> | Visual differential indicator     | 448  |
| <b>DLE</b>              | Electrical / visual differential indicator | 447     |            |                                   |      |
| Additional features     |  | page    |            |                                   |      |
| <b>T2</b>               | Plug                                       | 449     |            |                                   |      |

# LMP 400-401

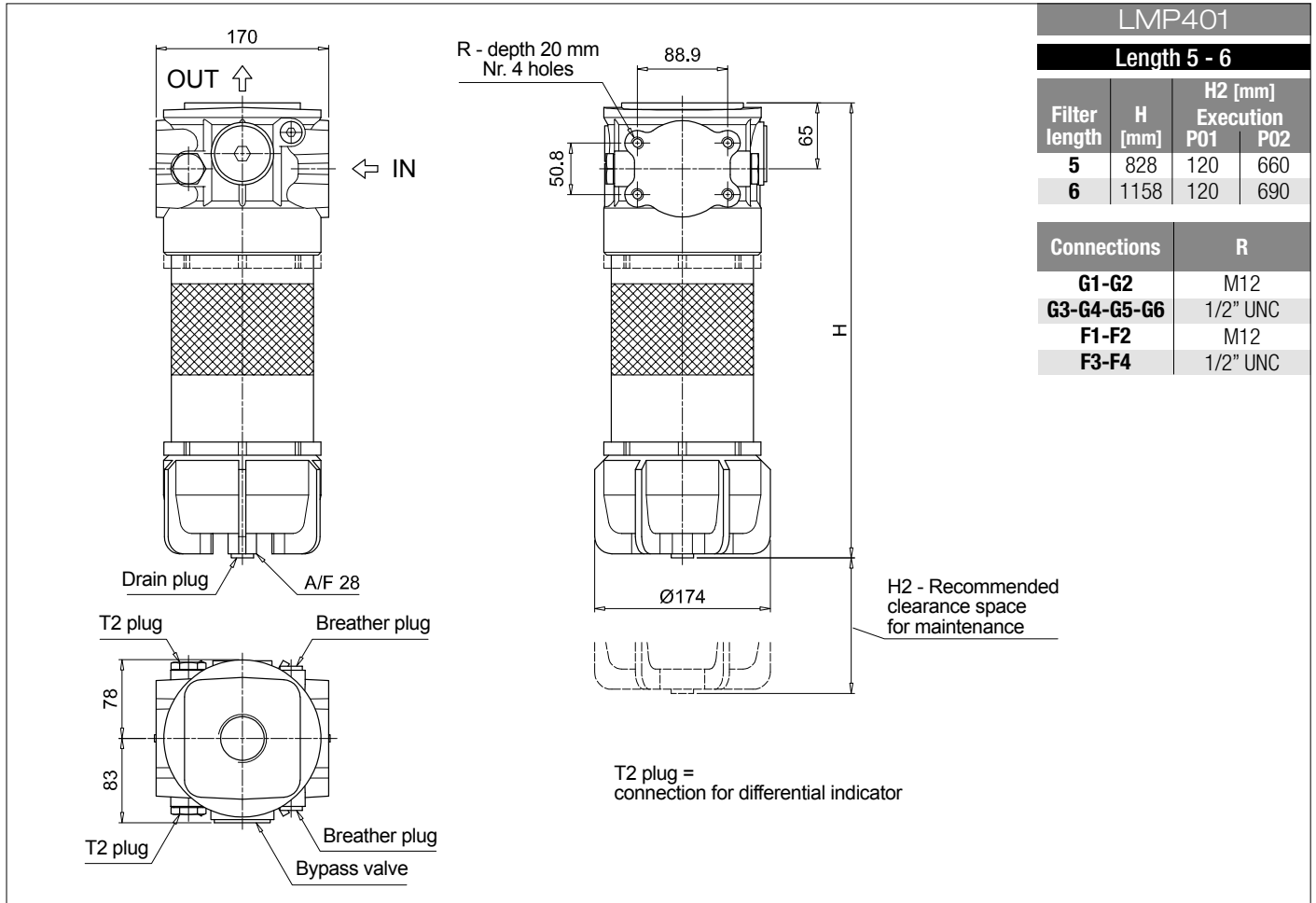
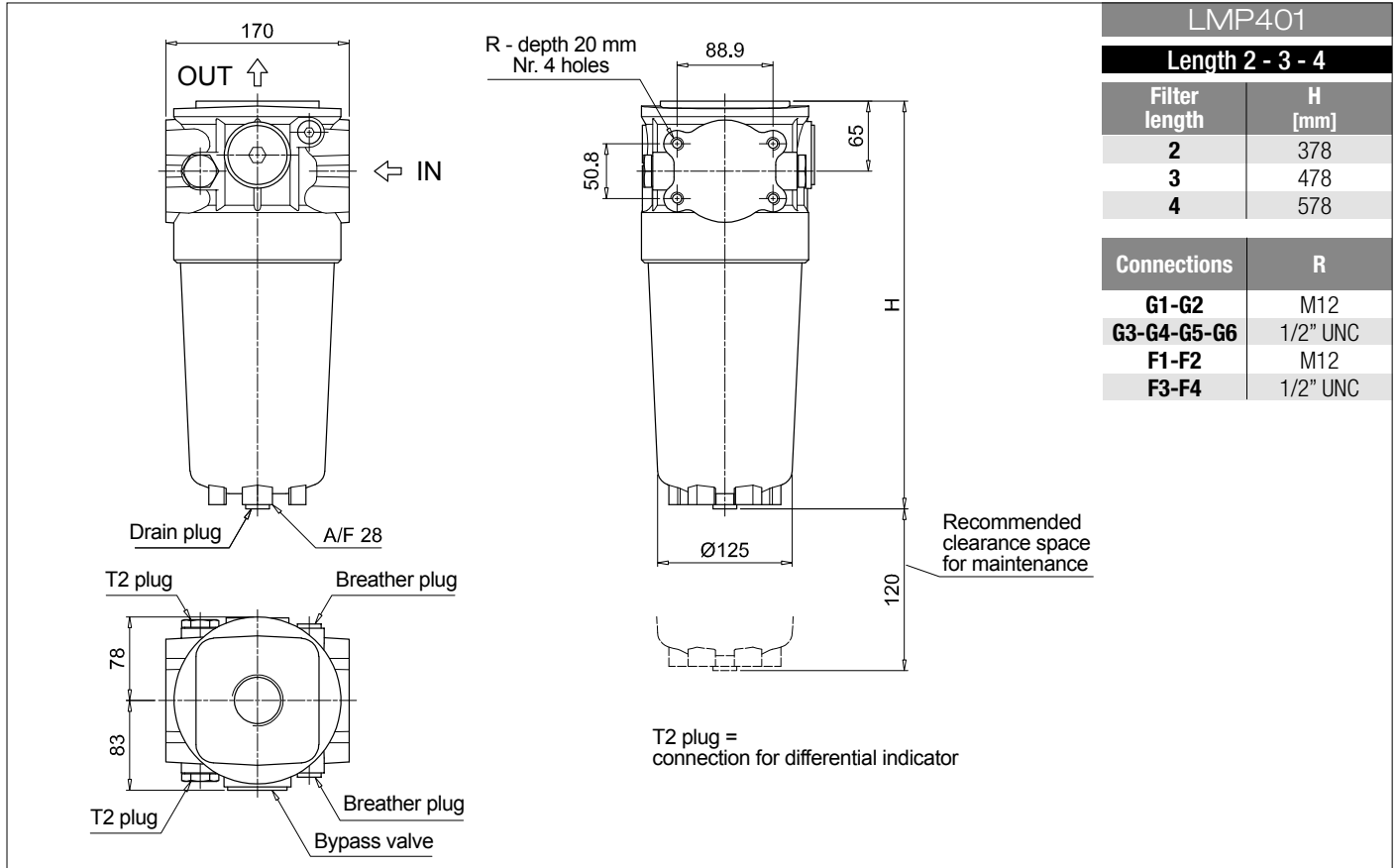
## Dimensions





# LMP 400-401

## Dimensions







# LMP 430-431

## Designation & Ordering code

### COMPLETE FILTER

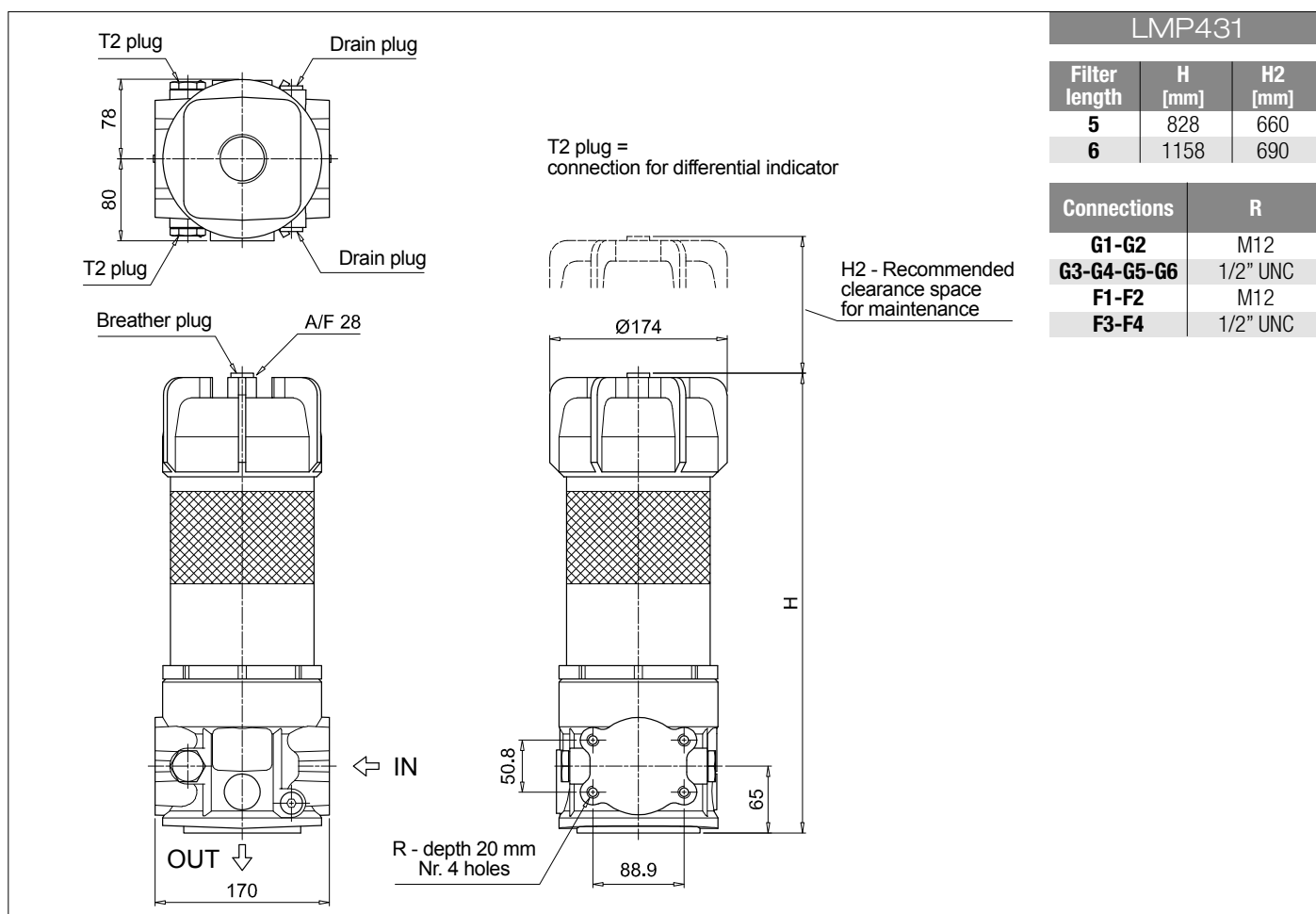
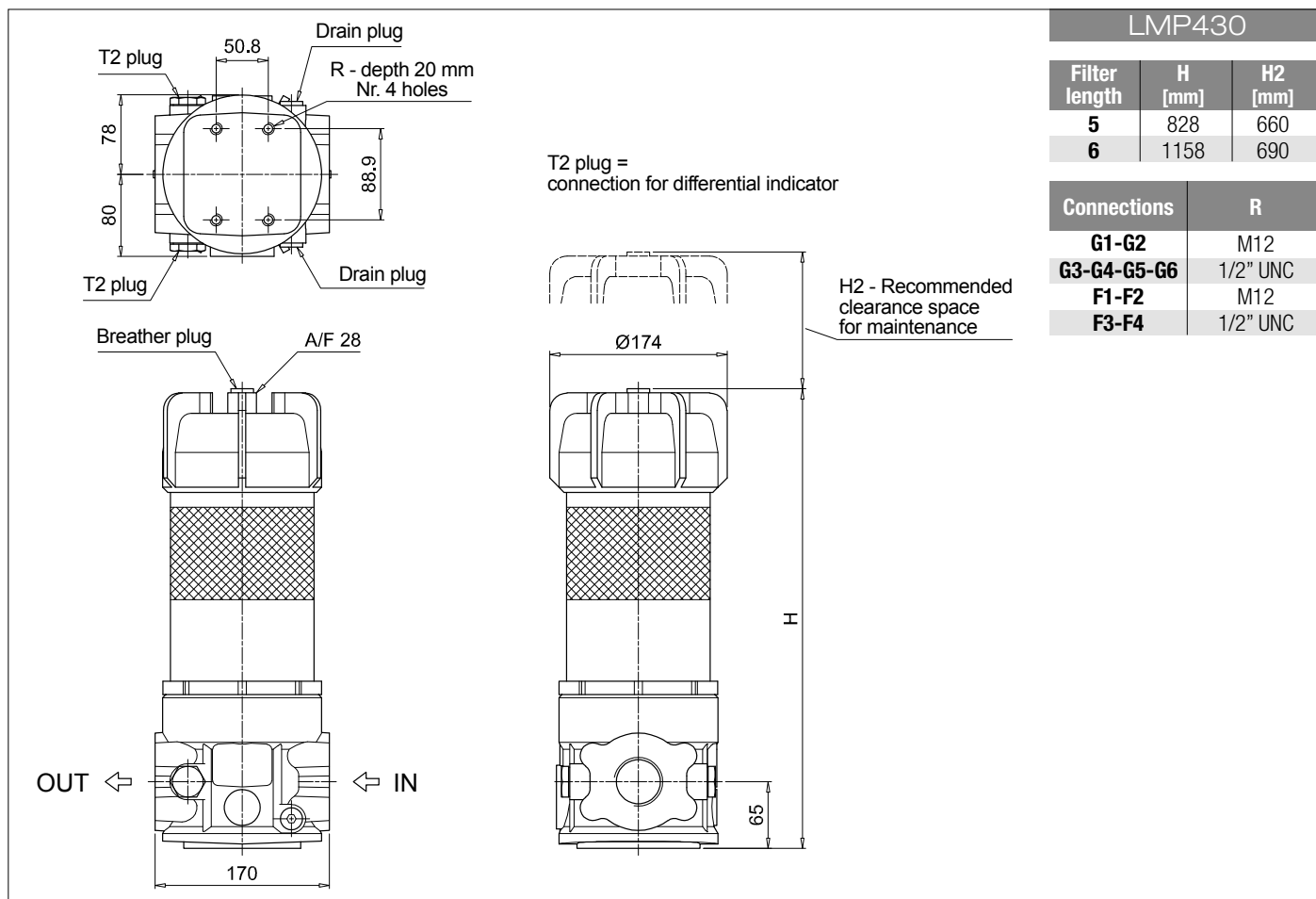
|   |  |  |     |  |  |  |  |  |  |  |  |
|---|--|--|-----|--|--|--|--|--|--|--|--|
| Series and size                                 |  | Configuration example: <b>LMP431</b>   <b>5</b>   <b>B</b>   <b>A</b>   <b>G1</b>   <b>A10</b>   <b>N</b>   <b>P01</b> |     |  |  |  |  |  |  |  |  |
| <b>LMP430</b>   <b>LMP431</b>                   |  |  |     |  |  |  |  |  |  |  |  |
| Length  |  | 5   6  |     |  |  |  |  |  |  |  |  |
| Bypass valve                                    |  | S Without bypass   B 3.5 bar   |     |  |  |  |  |  |  |  |  |
| Seals and treatments                            |  | Filtration rating  |     |  |  |  |  |  |  |  |  |
|   |  | Axx  | Mxx | Pxx  |  |  |  |  |  |  |  |
| A NBR   |  | •  | •   | •  |  |  |  |  |  |  |  |
| V FPM   |  | •  | •   | •  |  |  |  |  |  |  |  |
| W NBR compatible with fluids HFA-HFB-HFC        |  | •  | •   |  |  |  |  |  |  |  |  |
| Connections                                     |  |  |     |  |  |  |  |  |  |  |  |
| G1 G 1 1/2"                                     |  | F1 2" SAE 3000 psi/M   |     |  |  |  |  |  |  |  |  |
| G2 G 2"   |  | F2 2 1/2" SAE 3000 psi/M   |     |  |  |  |  |  |  |  |  |
| G3 1 1/2" NPT                                   |  | F3 2" SAE 3000 psi/UNC   |     |  |  |  |  |  |  |  |  |
| G4 2" NPT                                       |  | F4 2 1/2" SAE 3000 psi/UNC   |     |  |  |  |  |  |  |  |  |
| G5 SAE 24 - 1 7/8" - 12 UN                      |  |  |     |  |  |  |  |  |  |  |  |
| G6 SAE 32 - 2 1/2" - 12 UN                      |  |  |     |  |  |  |  |  |  |  |  |
| Filtration rating (filter media)                |  |  |     |  |  |  |  |  |  |  |  |
| A03 Inorganic microfiber 3 µm                   |  | M25 Wire mesh 25 µm  |     |  |  |  |  |  |  |  |  |
| A06 Inorganic microfiber 6 µm                   |  | M60 Wire mesh 60 µm  |     |  |  |  |  |  |  |  |  |
| A10 Inorganic microfiber 10 µm                  |  | M90 Wire mesh 90 µm  |     |  |  |  |  |  |  |  |  |
| A16 Inorganic microfiber 16 µm                  |  | P10 Resin impregnated paper 10 µm  |     |  |  |  |  |  |  |  |  |
| A25 Inorganic microfiber 25 µm                  |  | P25 Resin impregnated paper 25 µm  |     |  |  |  |  |  |  |  |  |
| WA025 Water absorber inorganic microfiber 25 µm |  |  |     |  |  |  |  |  |  |  |  |
|   |  | Element Δp   |     | Execution                                    |  |  |  |  |  |  |  |
|   |  | N 20 bar   |     | P01 MP Filtri standard                       |  |  |  |  |  |  |  |
|   |  |  |     | P02 With internal tube for reduced flow rate |  |  |  |  |  |  |  |
|   |  |  |     | Pxx Customized                               |  |  |  |  |  |  |  |

### FILTER ELEMENT

|   |  |  |     |                        |  |  |  |  |  |  |  |
|---|--|--|-----|------------------------|--|--|--|--|--|--|--|
| Element series and size                         |  | Configuration example: <b>CU400</b>   <b>5</b>   <b>A10</b>   <b>A</b>   <b>N</b>   <b>P01</b> |     |                        |  |  |  |  |  |  |  |
| <b>CU400</b>                                    |  |  |     |                        |  |  |  |  |  |  |  |
| Element length                                  |  | 5   6  |     |                        |  |  |  |  |  |  |  |
| Filtration rating (filter media)                |  |  |     |                        |  |  |  |  |  |  |  |
| A03 Inorganic microfiber 3 µm                   |  | M25 Wire mesh 25 µm  |     |                        |  |  |  |  |  |  |  |
| A06 Inorganic microfiber 6 µm                   |  | M60 Wire mesh 60 µm  |     |                        |  |  |  |  |  |  |  |
| A10 Inorganic microfiber 10 µm                  |  | M90 Wire mesh 90 µm  |     |                        |  |  |  |  |  |  |  |
| A16 Inorganic microfiber 16 µm                  |  | P10 Resin impregnated paper 10 µm  |     |                        |  |  |  |  |  |  |  |
| A25 Inorganic microfiber 25 µm                  |  | P25 Resin impregnated paper 25 µm  |     |                        |  |  |  |  |  |  |  |
| WA025 Water absorber inorganic microfiber 25 µm |  |  |     |                        |  |  |  |  |  |  |  |
| Seals   |  | Filtration rating  |     |                        |  |  |  |  |  |  |  |
|   |  | Axx  | Mxx | Pxx                    |  |  |  |  |  |  |  |
| A NBR   |  | •  | •   | •                      |  |  |  |  |  |  |  |
| V FPM   |  | •  | •   | •                      |  |  |  |  |  |  |  |
| W NBR compatible with fluids HFA-HFB-HFC        |  | •  | •   |                        |  |  |  |  |  |  |  |
|   |  | Element Δp   |     | Execution              |  |  |  |  |  |  |  |
|   |  | N 20 bar   |     | P01 MP Filtri standard |  |  |  |  |  |  |  |
|   |  |  |     | Pxx Customized         |  |  |  |  |  |  |  |

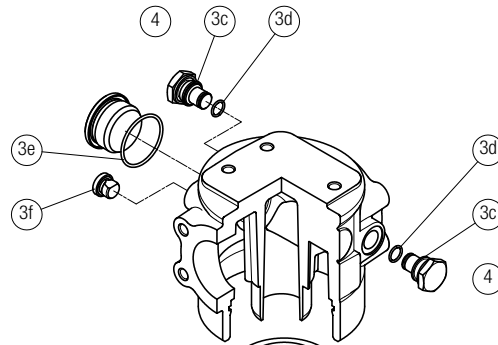
### ACCESSORIES

| Differential indicators                        | page    |                                       | page |
|--|---------|---------------------------------------|------|
| DEA Electrical differential indicator          | 445     | DTA Electronic differential indicator | 448  |
| DEM Electrical differential indicator          | 445-446 | DVA Visual differential indicator     | 448  |
| DLA Electrical / visual differential indicator | 446-447 | DVM Visual differential indicator     | 448  |
| DLE Electrical / visual differential indicator | 447     |                                       |      |
| Additional features                            |         | page                                  |      |
| T2 Plug  | 449     |                                       |      |

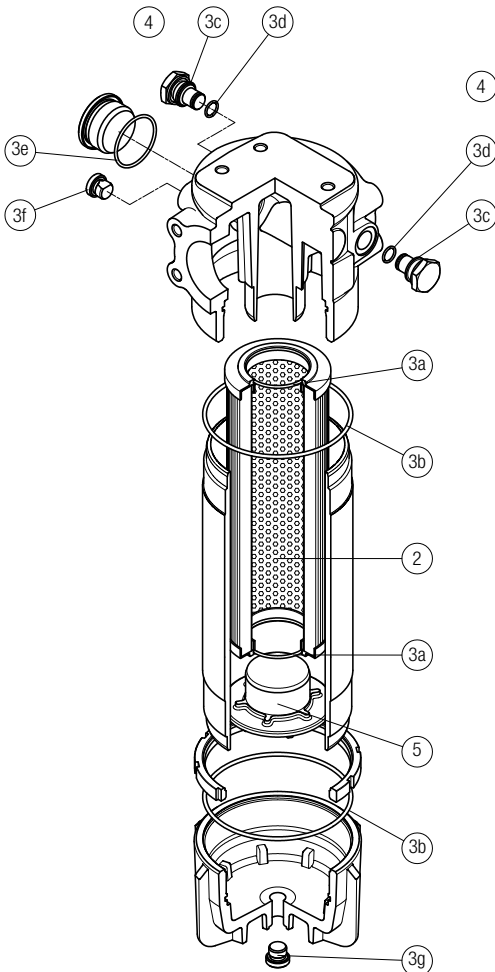


Order number for spare parts

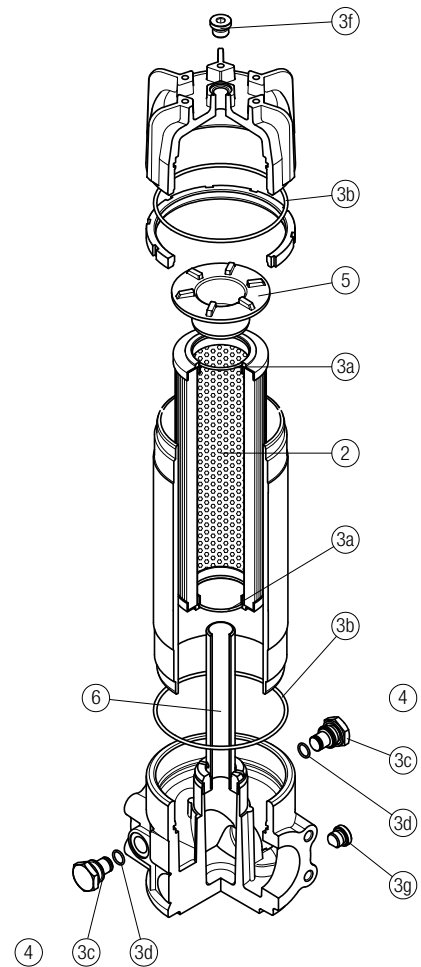
**LMP 400 - 401**  
length 2 - 3 - 4



**LMP 400 - 401**  
length 5 - 6



**LMP 430 - 431**  
length 5 - 6



| Item:                    | Q.ty: 1 pc.     | Q.ty: 1 pc.         | Q.ty: 2 pcs.                            | Q.ty: 2 pcs.                               | Q.ty: 1 pc.                             |
|--------------------------|-----------------|---------------------|---|--|---|
| Filter series            | 2               | 3 (3a ÷ 3g)         | 4                                       | 5  | 6                                       |
| Filter element           | See order table | NBR<br>FPM          | Indicator connection plug<br>NBR<br>FPM | Housing spigot<br>no bypass<br>with bypass | Tube assembly                           |
| LMP 400-401 length 2-3-4 |                 | 02050391   02050392 |   |  |   |
| LMP 400-401 length 5-6   |                 | 02050393   02050394 | T2H   T2V                               | 01044108                                   |   |
| LMP 430-431 length 5-6   |                 | 02050393   02050394 |   | 01044108   02001414                        | Length 5: 02025041   Length 6: 02025042 |