

# LMP 400-401 & 430-431 series

Maximum pressure up to 60 bar - Flow rate up to 740 l/min



# FILTER SIZING

The correct filter sizing have to be based on the variable pressure drop depending by the application. For example, for the return filter the pressure drop have to be in the range 0.4 - 0.6 bar.

The pressure drop calculation is performed by adding together the value of the housing with the value of the filter element. The pressure drop in the housing is proportional to the fluid density ( $\text{kg}/\text{dm}^3$ ); all the graphs in the catalogue are referred to mineral oil with density of  $0.86 \text{ kg}/\text{dm}^3$ .

The filter element pressure drop is proportional to its viscosity ( $\text{mm}^2/\text{s}$ ), the corrective factor Y is related to an oil viscosity different than  $30 \text{ mm}^2/\text{s}$ .

## Sizing data for single cartridge, head at top

$\Delta p_c$  = Filter housing pressure drop [bar]

$\Delta p_e$  = Filter element pressure drop [bar]

**Y** = Multiplication factor Y (see correspondent table), depending on the filter element size, on the filter element lenght and on the filter media

**Q** = flow rate ( $\text{l}/\text{min}$ )

**V1 reference viscosity** =  $30 \text{ mm}^2/\text{s}$  (cSt)

**V2** = operating viscosity in  $\text{mm}^2/\text{s}$  (cSt)

$\Delta p_e = Y : 1000 \times Q \times (V2/V1)$

$\Delta p_{\text{Tot.}} = \Delta p_c + \Delta p_e$

## Calculation examples with HLP Mineral oil Variation in viscosity

**Application data:**

Top tank return filter

Filter with in-line connections

Pressure  $P_{\text{max}} = 10 \text{ bar}$

Flow rate  $Q = 120 \text{ l}/\text{min}$

Viscosity  $V_2 = 46 \text{ mm}^2/\text{s}$  (cSt)

Oil viscosity =  $0.86 \text{ kg}/\text{dm}^3$

Required filtration efficiency =  $25 \mu\text{m}$  with absolute filtration

With bypass valve and  $1 \frac{1}{4}$ " inlet connection

From the working pressure and the flow rate we understand it should be possible using the following top tank return filter series: MPT, MPH and FRI. Let's proceed with MPT series.

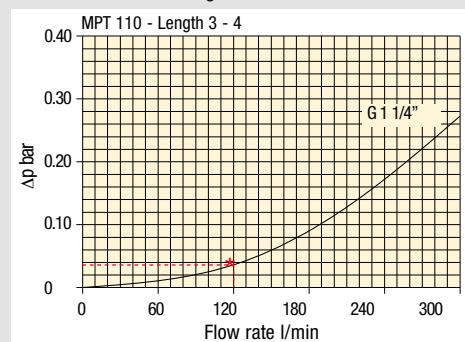
The size 20 doesn't achieve the required flow rate, therefore we have to consider the size 100. The final version of size 100 (101, 104, 110, 120 and 114) will be then defined in function of the mounting characteristics.

$\Delta p_c = 0.03 \text{ bar}$  (★ see graphic below, considering size 100 with the max available lenght to get the lowest pressure drop)

$\Delta p_e = (2.0 : 1000) \times 120 \times (46/30) = 0.37 \text{ bar}$

$\Delta p_{\text{Tot.}} = 0.03 + 0.37 = 0.4 \text{ bar}$

The selection is correct because the total pressure drop value is inside the admissible range for top tank return filters. It is of course possible trying to find a different solution, according to the mounting position or to other commercial need, repeating the previous steps while using a different series or lenght.



## Filter housings $\Delta p$ pressure drop.

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

# Corrective factor

**Corrective factor Y, to be used for the filter element pressure drop calculation.**

**The values depend to the filter size and lenght and to the filter media.**

Reference viscosity  $30 \text{ mm}^2/\text{s}$

## Return filters

Filter element	Absolute filtration H Series					Nominal filtration N Series			
	Type	A03	A06	A10	A16	A25	P10	P25	M25 M60 M90
<b>MF 020</b>	1	74.00	50.08	20.00	16.00	9.00	6.43	5.51	4.40
	2	29.20	24.12	8.00	7.22	5.00	3.33	2.85	2.00
	3	22.00	19.00	6.56	5.33	4.33	1.68	1.44	1.30
<b>MF 030</b> <b>MFX 030</b>	1	74.00	50.08	20.00	16.00	9.00	6.43	5.51	3.40
<b>MF 100</b> <b>MFX 100</b>	1	28.20	24.40	8.67	8.17	6.88	4.62	3.96	1.25
	2	17.33	12.50	6.86	5.70	4.00	3.05	2.47	1.10
	3	10.25	9.00	3.65	3.33	2.50	1.63	1.32	0.96
	4	6.10	5.40	2.30	2.20	2.00	1.19	0.96	0.82
<b>MF 180</b> <b>MFX 180</b>	1	3.67	3.05	1.64	1.56	1.24	1.18	1.06	0.26
<b>MF 190</b> <b>MFX 190</b>	2	1.69	1.37	0.68	0.54	0.51	0.43	0.39	0.12
	1	1.69	1.37	0.60	0.49	0.44	0.35	0.31	0.11
<b>MF 400</b> <b>MFX 400</b>	1	3.20	2.75	1.39	1.33	1.06	0.96	0.87	0.22
	2	2.00	1.87	0.88	0.85	0.55	0.49	0.45	0.13
	3	1.90	1.60	0.63	0.51	0.49	0.39	0.35	0.11
<b>MF 750</b> <b>MFX 750</b>	1	1.08	0.84	0.49	0.36	0.26	0.21	0.19	0.06
<b>CU 025</b>		78.00	48.00	28.00	24.00	9.33	9.33	8.51	1.25
<b>CU 040</b>		25.88	20.88	10.44	10.00	3.78	3.78	3.30	1.25
<b>CU 100</b>		15.20	14.53	5.14	4.95	2.00	2.00	0.17	1.10
<b>CU 250</b>		3.25	2.55	1.55	1.35	0.71	0.71	0.59	0.25
<b>CU 630</b>		1.96	1.68	0.85	0.72	0.42	0.42	0.36	0.09
<b>CU 850</b>		1.06	0.84	0.42	0.33	0.17	0.17	0.13	0.04
<b>MR 100</b>	1	19.00	17.00	6.90	6.30	4.60	2.94	2.52	1.60
	2	11.70	10.80	4.40	4.30	3.00	2.94	2.52	1.37
	3	7.80	6.87	3.70	3.10	2.70	2.14	1.84	1.34
	4	5.50	4.97	2.60	2.40	2.18	1.72	1.47	1.34
	5	4.20	3.84	2.36	2.15	1.90	1.60	1.37	1.34
<b>MR 250</b>	1	5.35	4.85	2.32	1.92	1.50	1.38	1.20	0.15
	2	4.00	3.28	1.44	1.10	1.07	0.96	0.83	0.13
	3	2.60	2.20	1.08	1.00	0.86	0.77	0.64	0.12
	4	1.84	1.56	0.68	0.56	0.44	0.37	0.23	0.11
<b>MR 630</b>	1	3.10	2.48	1.32	1.14	0.92	0.83	0.73	0.09
	2	2.06	1.92	0.82	0.76	0.38	0.33	0.27	0.08
	3	1.48	1.30	0.60	0.56	0.26	0.22	0.17	0.08
	4	1.30	1.20	0.48	0.40	0.25	0.21	0.16	0.08
	5	0.74	0.65	0.30	0.28	0.13	0.10	0.08	0.04
<b>MR 850</b>	1	0.60	0.43	0.34	0.25	0.13	0.12	0.09	0.03
	2	0.37	0.26	0.23	0.21	0.11	0.08	0.07	0.03
	3	0.27	0.18	0.17	0.17	0.05	0.04	0.04	0.02
	4	0.23	0.16	0.13	0.12	0.04	0.03	0.03	0.02

**Corrective factor Y, to be used for the filter element pressure drop calculation.**

The values depend to the filter size and lenght and to the filter media.

Reference viscosity 30 mm<sup>2</sup>/s

### Suction filters

Filter element	Nominal filtration N Series	
	P10	P25
<b>SF 250</b>	65	21

### Return / Suction filters

Filter element	Absolute filtration		
	A10	A16	A25
<b>RSX 116</b>	1   5.12	4.33	3.85
	2   2.22	1.87	1.22
<b>RSX 165</b>	1   2.06	1.75	1.46
	2   1.24	1.05	0.96
	3   0.94	0.86	0.61

### Low & Medium pressure filters

Filter element	Absolute filtration N-W Series					Nominal filtration N Series		
	A03	A06	A10	A16	A25	P10	P25	M25
<b>CU 110</b>	1   16.25	15.16	8.75	8.14	5.87	2.86	2.65	0.14
	2   12.62	10.44	6.11	6.02	4.15	1.60	1.49	0.12
	3   8.57	7.95	5.07	4.07	2.40	1.24	1.15	0.11
	4   5.76	4.05	2.80	2.36	1.14	0.91	0.85	0.05
<b>CU 210</b>	1   5.30	4.80	2.00	1.66	1.32	0.56	0.43	0.12
	2   3.44	2.95	1.24	1.09	0.70	0.42	0.35	0.09
	3   2.40	1.70	0.94	0.84	0.54	0.33	0.23	0.05
<b>DN</b>	016   7.95	7.20	3.00	2.49	1.98	0.84	0.65	0.18
	025   5.00	4.53	1.89	1.57	1.25	0.53	0.41	0.11
	040   3.13	2.66	1.12	0.98	0.63	0.38	0.32	0.08
<b>CU 400</b>	2   3.13	2.55	1.46	1.22	0.78	0.75	0.64	0.19
	3   2.15	1.70	0.94	0.78	0.50	0.40	0.34	0.10
	4   1.60	1.28	0.71	0.61	0.40	0.34	0.27	0.08
	5   1.00	0.83	0.47	0.34	0.20	0.24	0.19	0.06
	6   0.82	0.58	0.30	0.27	0.17	0.22	0.18	0.05
	<b>CU 900</b>   1   0.86	0.63	0.32	0.30	0.21	-	-	0.05
<b>CU 950</b>	2   1.03	0.80	0.59	0.40	0.26	-	-	0.05
	3   0.44	0.40	0.27	0.18	0.15	-	-	0.02
<b>MR 630</b>	7   0.88	0.78	0.36	0.34	0.16	0.12	0.96	0.47

# FILTER SIZING Corrective factor

Corrective factor Y, to be used for the filter element pressure drop calculation.

The values depend to the filter size and lenght and to the filter media.

Reference viscosity 30 mm<sup>2</sup>/s

## High pressure filters

Filter element	Absolute filtration N - R Series					Nominal filtration N Series
	A03	A06	A10	A16	A25	
Type						
<b>HP 011</b>	1 332.71	250.07	184.32	152.36	128.36	-
	2 220.28	165.56	74.08	59.13	37.05	-
	3 123.24	92.68	41.48	33.08	20.72	-
	4 77.76	58.52	28.37	22.67	16.17	-
<b>HP 039</b>	1 70.66	53.20	25.77	20.57	14.67	4.90
	2 36.57	32.28	18.00	13.38	8.00	2.90
	3 26.57	23.27	12.46	8.80	5.58	2.20
<b>HP 050</b>	1 31.75	30.30	13.16	12.3	7.29	1.60
	2 24.25	21.26	11.70	9.09	4.90	1.40
	3 17.37	16.25	8.90	7.18	3.63	1.25
	4 12.12	10.75	6.10	5.75	3.08	1.07
	5 7.00	6.56	3.60	3.10	2.25	0.80
<b>HP 065</b>	1 58.50	43.46	23.16	19.66	10.71	1.28
	2 42.60	25.64	16.22	13.88	7.32	1.11
	3 20.50	15.88	8.18	6.81	3.91	0.58
<b>HP 135</b>	1 20.33	18.80	9.71	8.66	4.78	2.78
	2 11.14	10.16	6.60	6.38	2.22	1.11
	3 6.48	6.33	3.38	3.16	2.14	1.01
<b>HP 320</b>	1 10.88	9.73	5.02	3.73	2.54	1.04
	2 4.40	3.83	1.75	1.48	0.88	0.71
	3 2.75	2.11	1.05	0.87	0.77	0.61
	4 2.12	1.77	0.98	0.78	0.55	0.47
<b>HP 500</b>	1 4.44	3.67	2.30	2.10	1.65	0.15
	2 3.37	2.77	1.78	1.68	1.24	0.10
	3 2.22	1.98	1.11	1.09	0.75	0.08
	4 1.81	1.33	0.93	0.86	0.68	0.05
	5 1.33	1.15	0.77	0.68	0.48	0.04

## Stainless steel high pressure filters

Filter element	Absolute filtration N Series				
	A03	A06	A10	A16	A25
Type					
<b>HP 011</b>	1 332.71	250.07	184.32	152.36	128.36
	2 220.28	165.56	74.08	59.13	37.05
	3 123.24	92.68	41.48	33.08	20.72
	4 77.76	58.52	28.37	22.67	16.17
<b>HP 039</b>	2 70.66	53.20	25.77	20.57	14.67
	3 36.57	32.28	18.00	13.38	8.00
	4 26.57	23.27	12.46	8.80	5.58
<b>HP 050</b>	1 31.75	30.30	13.16	12.3	7.29
	2 24.25	21.26	11.70	9.09	4.90
	3 17.37	16.25	8.90	7.18	3.63
	4 12.12	10.75	6.10	5.75	3.08
	5 7.00	6.56	3.60	3.10	2.25
<b>HP 135</b>	1 20.33	18.80	9.71	8.66	4.78
	2 11.14	10.16	6.60	6.38	2.22
	3 6.48	6.33	3.38	3.16	2.14
Filter element	Absolute filtration H - U Series				
	A03	A06	A10	A16	A25
<b>HP 011</b>	1 424.58	319.74	235.17	194.44	163.78
	2 281.06	211.25	94.53	75.45	47.26
	3 130.14	97.50	43.63	34.82	21.81
	4 109.39	82.25	36.79	29.37	18.40
<b>HP 039</b>	2 70.66	53.20	25.77	20.57	14.67
	3 36.57	32.28	18.00	13.38	8.00
	4 26.57	23.27	12.46	8.80	5.58
<b>HP 050</b>	1 47.33	34.25	21.50	20.50	14.71
	2 29.10	25.95	14.04	10.90	5.88
	3 20.85	19.50	10.68	8.61	4.36
	4 14.55	12.90	7.32	6.90	3.69
	5 9.86	9.34	6.40	4.80	2.50
<b>HP 135</b>	1 29.16	25.33	13.00	12.47	5.92
	2 14.28	11.04	7.86	7.60	4.44
	3 8.96	7.46	4.89	4.16	3.07

Filter element	Absolute filtration N Series					Nominal filtration N Series
	A03	A06	A10	A16	A25	
Type						
<b>HF 320</b>	1 3.65	2.95	2.80	1.80	0.90	0.38
	2 2.03	1.73	1.61	1.35	0.85	0.36
	3 1.84	1.42	1.32	1.22	0.80	0.35

# Selection Software FILTER SIZING

## Step ① Select "FILTERS"



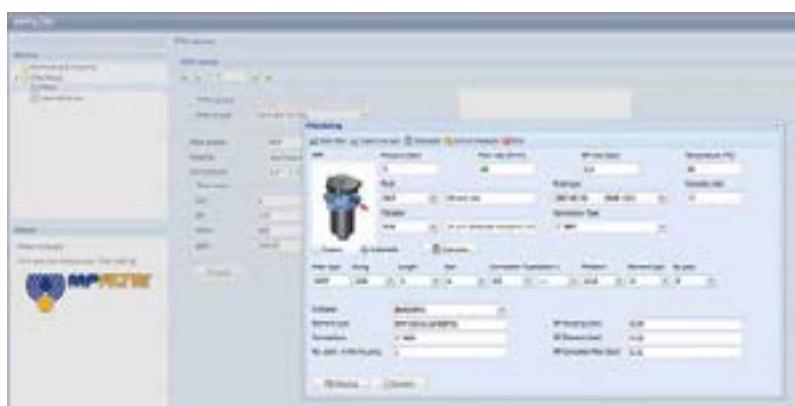
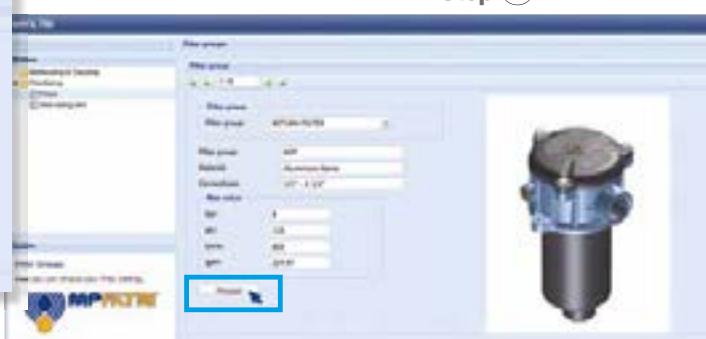
## Step ② Choose filter group (Return Filter, Pressure Filter, etc.)



## Step ③ Choose filter type (MPF, MPT, etc.) in function of the max working pressure and the max flow rate



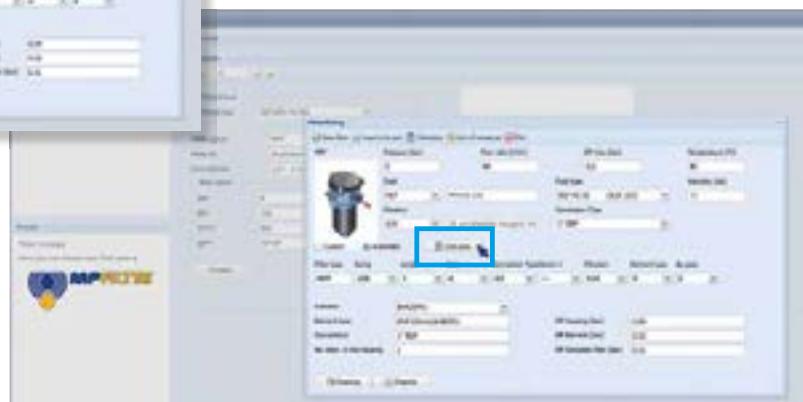
## Step ④ Push "PROCEED"



## Step ⑤

Insert all application data to calculate the filter size following the sequence:

- working pressure
- working flow rate
- working pressure drop
- working temperature
- fluid material and fluid type
- filtration media
- connection type



## Step ⑥

Push "CALCULATE" to have result;  
in case of any mistake, the system  
will advice which parameter is out  
of range to allow to modify/adjust  
the selection



## Step ⑦

Download PDF  
Datasheet "Report.aspx" pushing the button "Drawing"



# LMP 400-401 & 430-431 series

Maximum pressure up to 60 bar - Flow rate up to 740 l/min



## Technical data

**Low & Medium Pressure filters Maximum pressure up to 60 bar - Flow rate up to 740 l/min**

**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 3.5 bar  $\pm 10\%$
- Other opening pressures on request.

 **$\Delta p$  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**

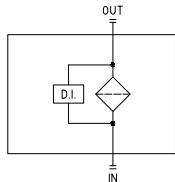
LMP 400 filters  
are provided  
for vertical mounting

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

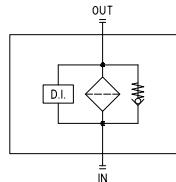
	Weights [kg]					Volumes [dm <sup>3</sup> ]						
	Length	2	3	4	5	6	Length	2	3	4	5	6
<b>LMP 400 - 401 - 430 - 431</b>		7.20	8.10	8.80	11.90	14.40		3.50	5.00	6.50	9.50	13.50

**Hydraulic symbols**

LMP 210-400-900-950  
execution **S**

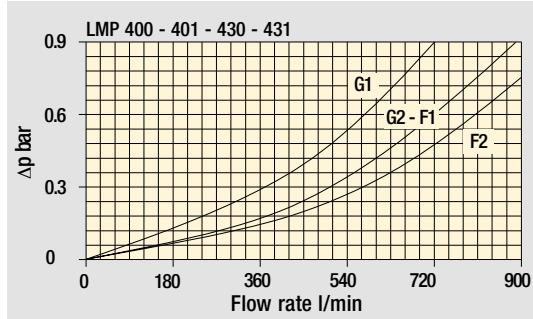


LMP 210-400-900-950  
execution **B**

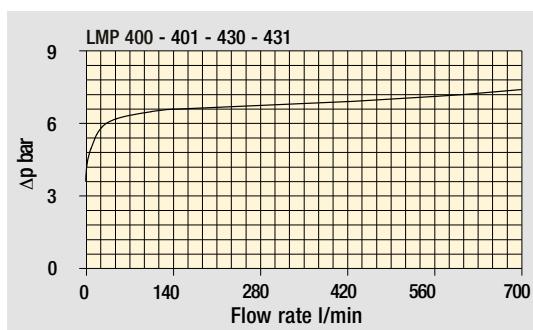


The curves are plotted using mineral oil with density of 0.86 kg/dm<sup>3</sup> in compliance with ISO 3968.  
**Δp varies proportionally with density.**

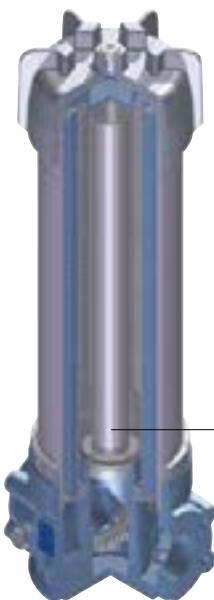
Pressure drop



Filter housings Δp pressure drop



Bypass valve pressure drop

**EXECUTION P2**

Execution P02  
 "Internal tube for reduced flow rate"  
 is recommended for flow rate  
 values below 100/150 l/min.

The use of option P02  
 makes it easier to fill the housing  
 with the operating fluid.

"Internal tube for reduced flow rates"

# LMP400-401

## Designation & Ordering code

### COMPLETE FILTER

<b>Series and size</b>	Configuration example: LMP401   3   B   A   G1   A10   N   P01							
<b>LMP400   LMP401</b>								
<b>Length</b>	2   3   4   5   6							
<b>Bypass valve</b>	S Without bypass	B 3.5 bar						
<b>Filtration rating</b>								
<b>Seals and treatments</b>	Axx	Mxx	Pxx					
A NBR	•	•	•					
V FPM	•	•	•					
W NBR compatible with fluids HFA-HFB-HFC	•	•						
<b>Connections</b>								
G1 G1/2"	F1 2" SAE 3000 psi/M							
G2 G2"	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								
<b>Filtration rating (filter media)</b>								
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							
<b>Element <math>\Delta p</math></b>								
N 20 bar								
<b>Execution</b>								
						Filter length		
						2   3   4   5   6		
P01 MP Filtri standard						•   •   •   •   •		
P02 Maintenance from the bottom of the housing						•   •		
Pxx Customized								

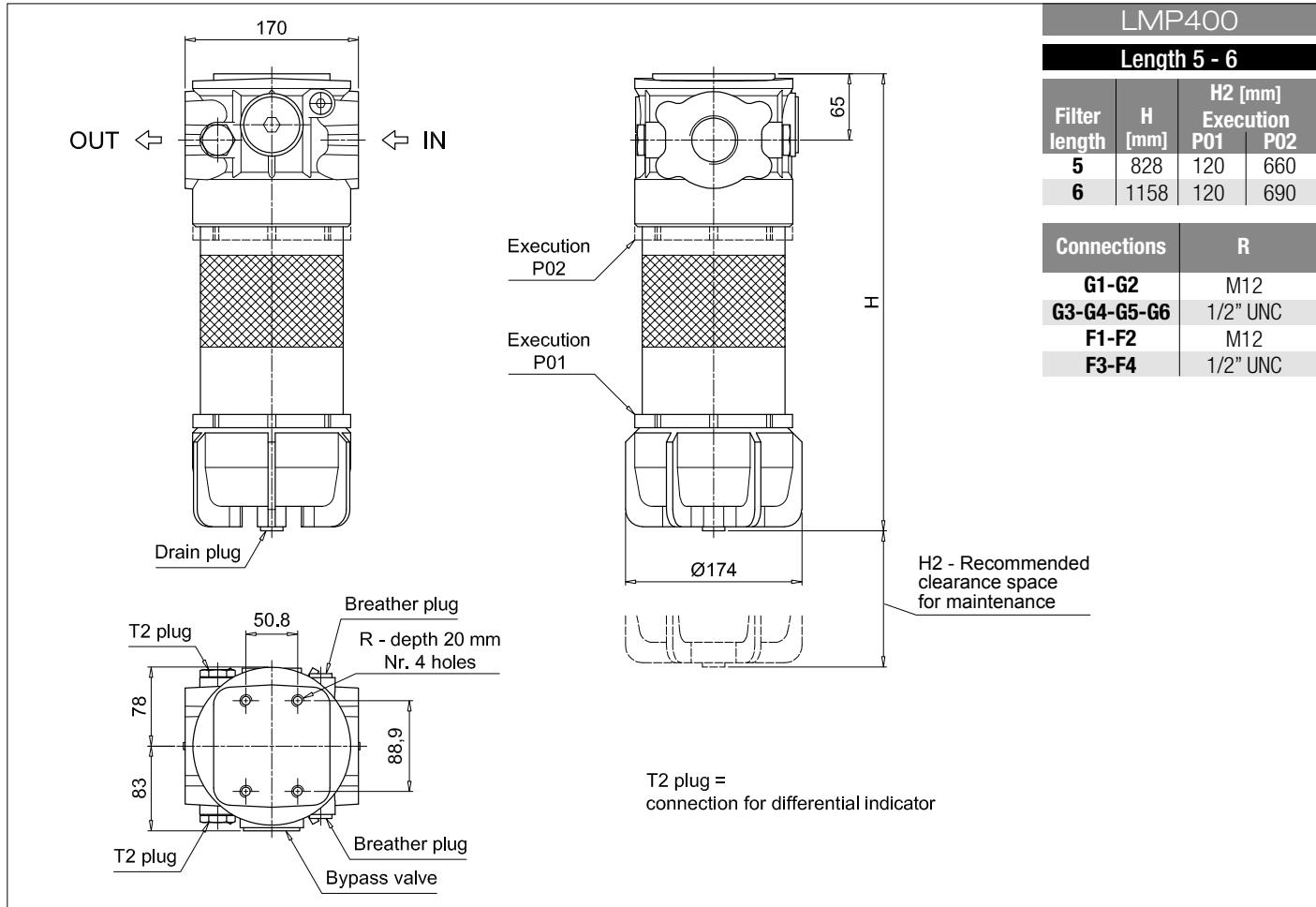
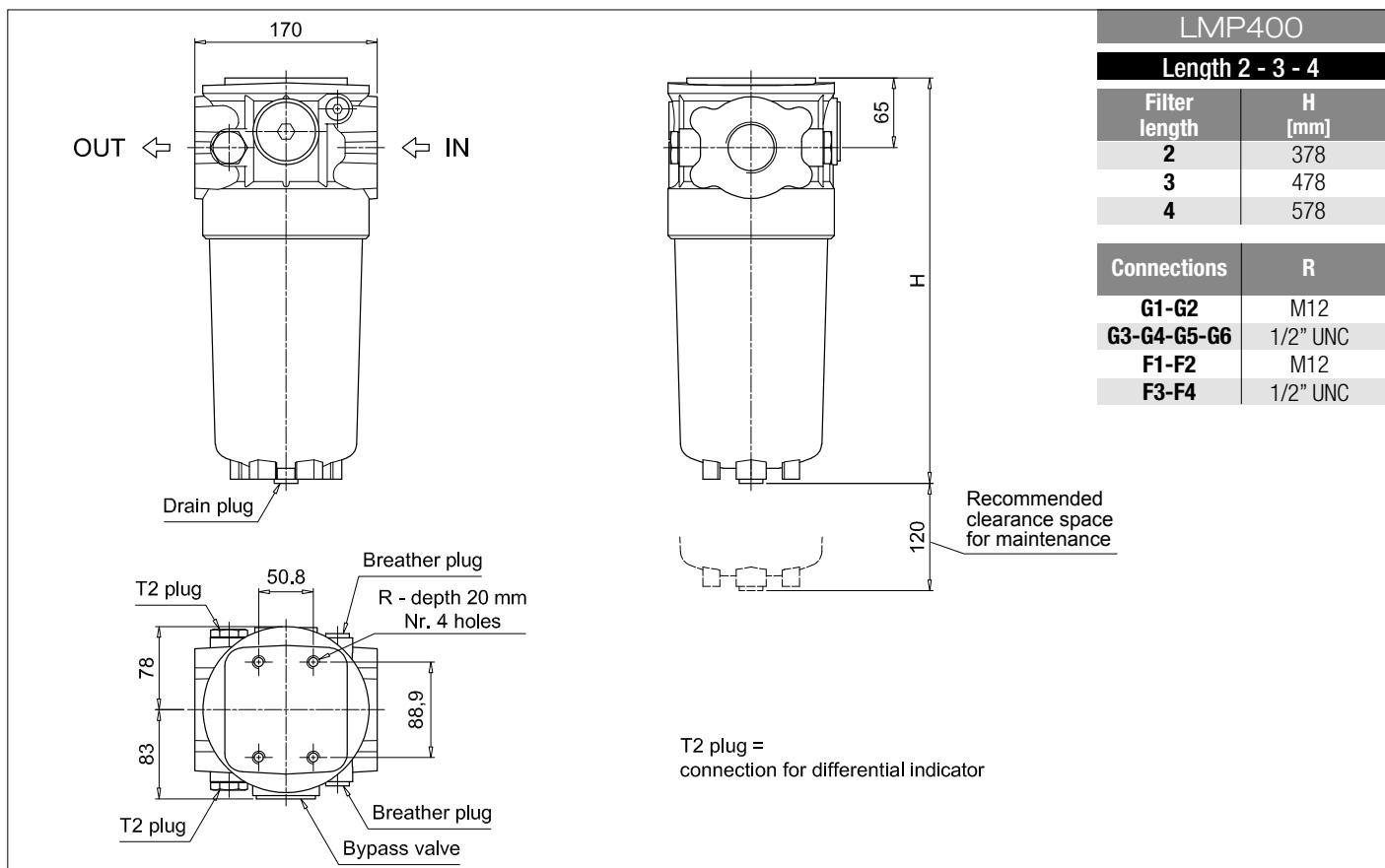
### FILTER ELEMENT

<b>Element series and size</b>	Configuration example: CU400   3   A10   A   N   P01						
<b>CU400</b>							
<b>Element length</b>	2   3   4   5   6						
<b>Filtration rating (filter media)</b>							
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						
<b>Filtration rating</b>							
<b>Seals</b>	Axx	Mxx	Pxx				
A NBR	•	•	•				
V FPM	•	•	•				
W NBR compatible with fluids HFA-HFB-HFC	•	•					
<b>Element <math>\Delta p</math></b>							
N 20 bar							
<b>Execution</b>							
						page	
P01 MP Filtri standard						422	
Pxx Customized							

### ACCESSORIES

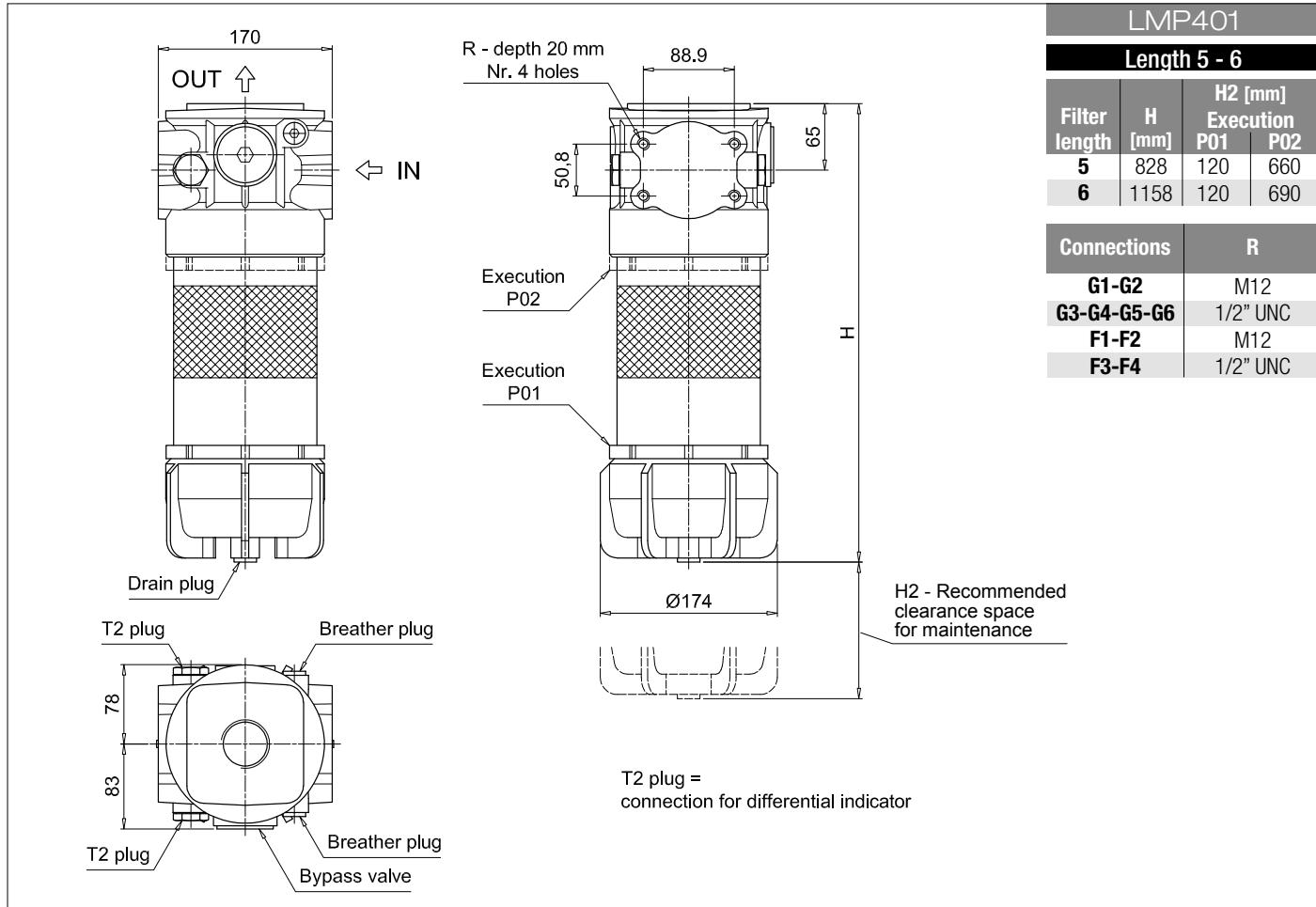
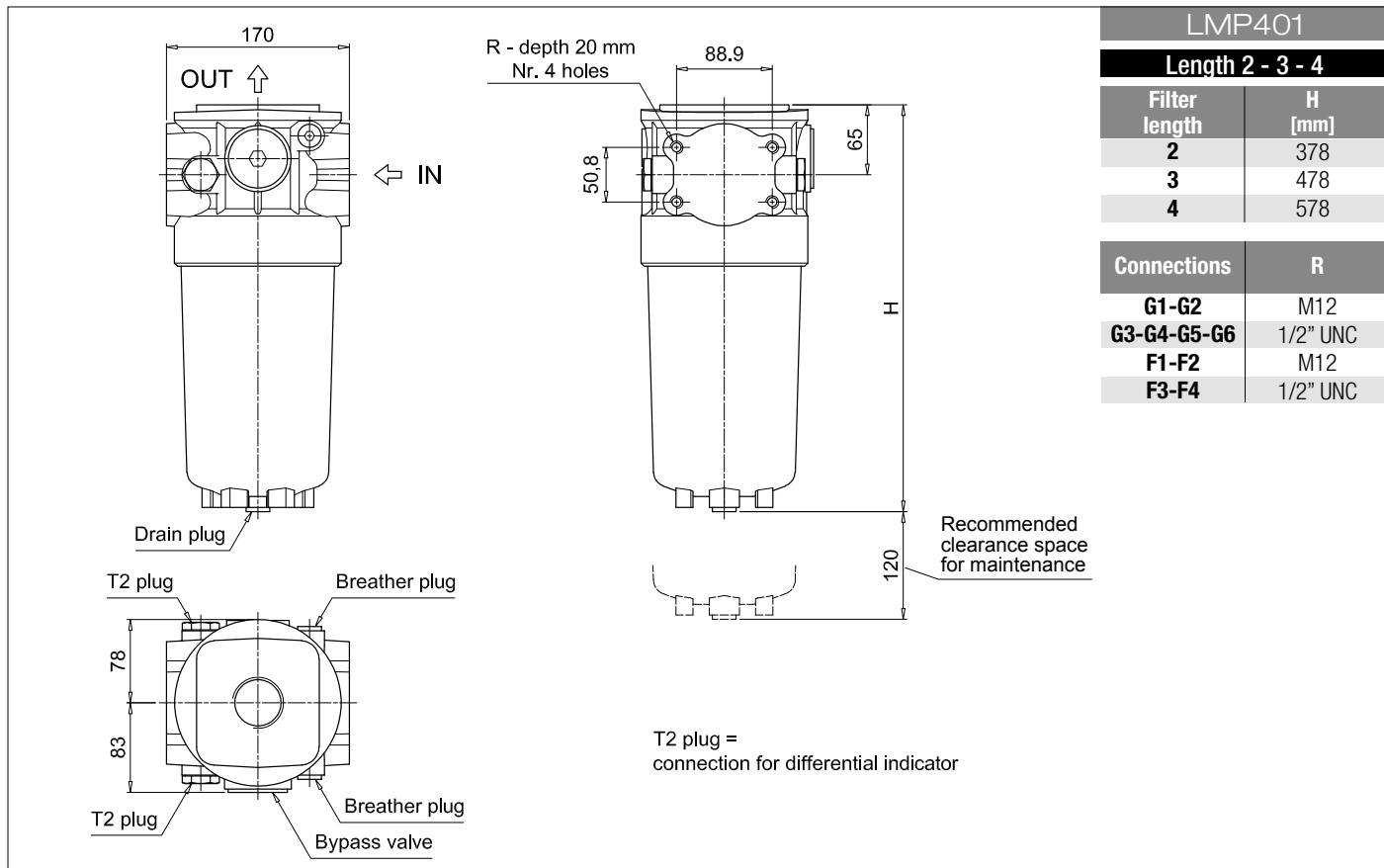
<b>Differential indicators</b>	page
DEA Electrical differential indicator	419
DEM Electrical differential indicator	419-420
DLA Electrical / visual differential indicator	420-421
DLE Electrical / visual differential indicator	421
<b>Additional features</b>	page
T2 Plug	423

<b>DTA</b> Electronic differential indicator	page
DTA Electronic differential indicator	422
<b>DVA</b> Visual differential indicator	page
DVA Visual differential indicator	422
<b>DVM</b> Visual differential indicator	page
DVM Visual differential indicator	422



# LMP400-401

## Dimensions





# LMP430-431

## Designation & Ordering code

### COMPLETE FILTER

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

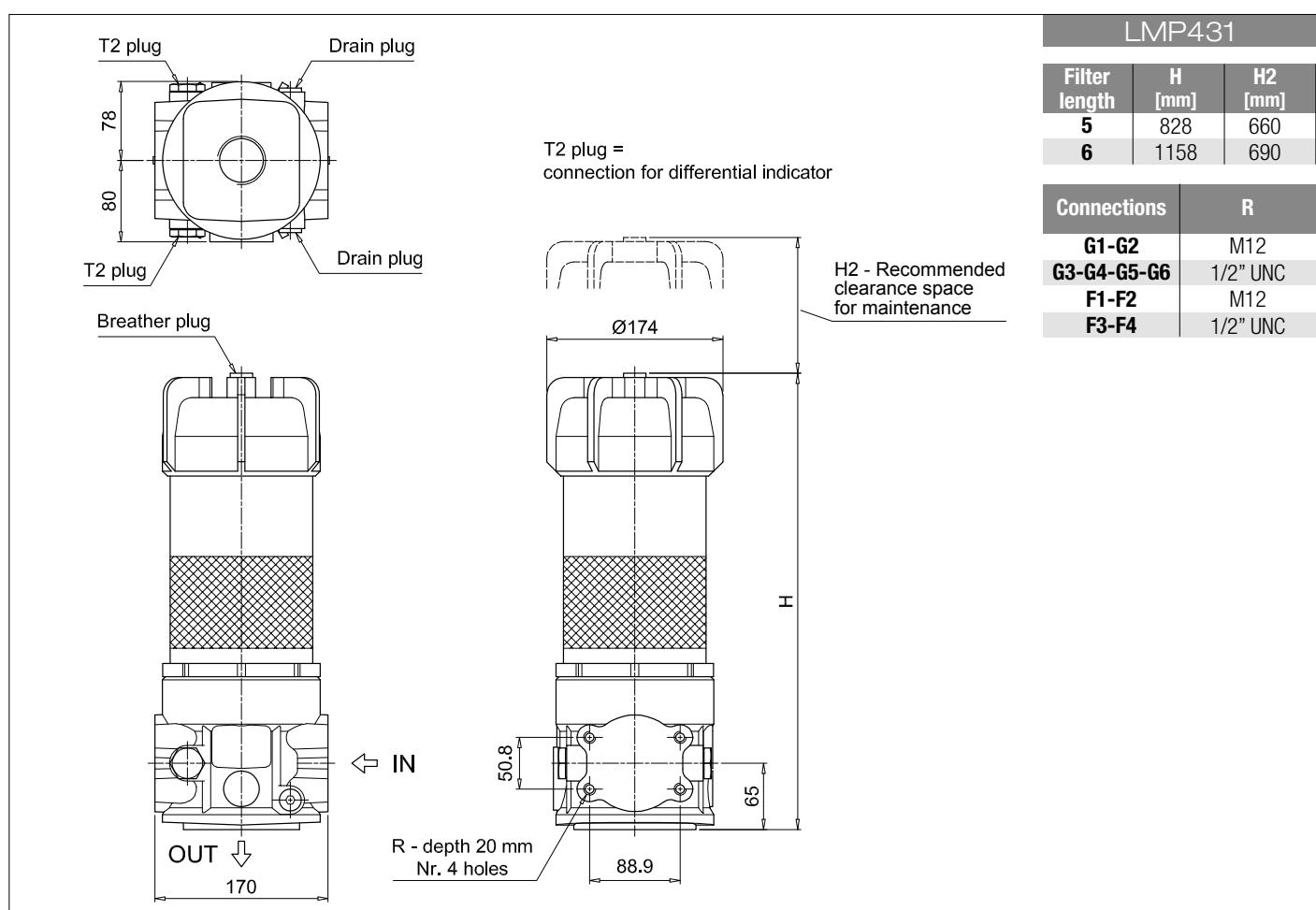
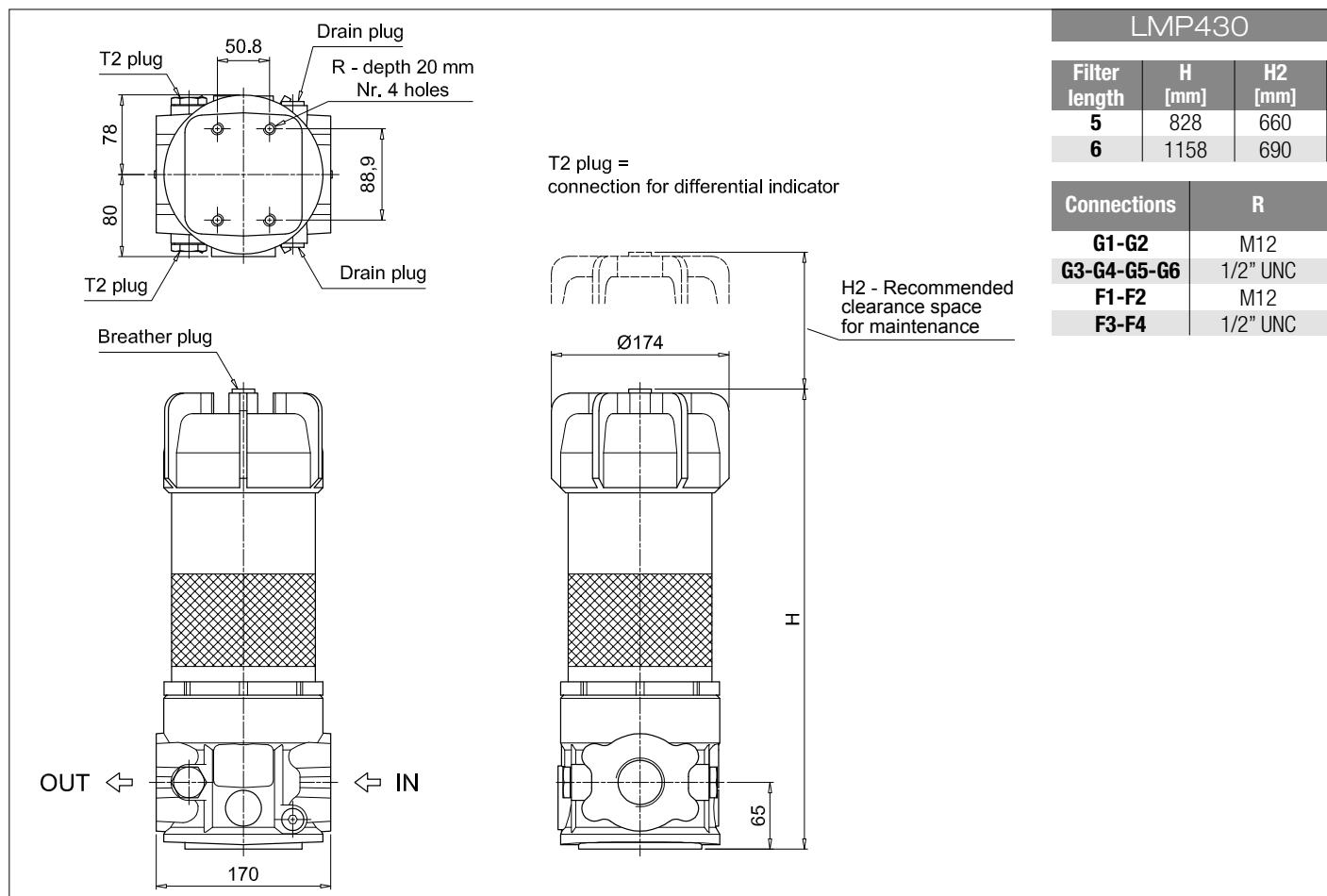
### FILTER ELEMENT

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

### ACCESSORIES

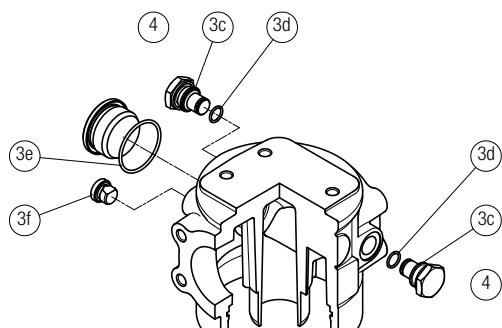
<b>Differential indicators</b>	page
<b>DEA Electrical differential indicator</b>	419
<b>DEM Electrical differential indicator</b>	419-420
<b>DLA Electrical / visual differential indicator</b>	420-421
<b>DLE Electrical / visual differential indicator</b>	421
<b>Additional features</b>	page
<b>T2 Plug</b>	423

<b>DTA Electronic differential indicator</b>	page
<b>DVA Visual differential indicator</b>	422
<b>DVM Visual differential indicator</b>	422

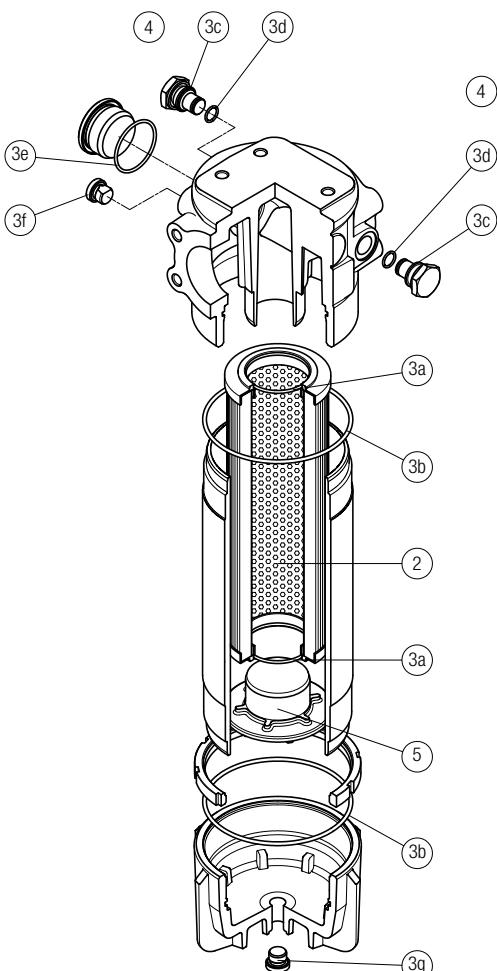


Order number for spare parts

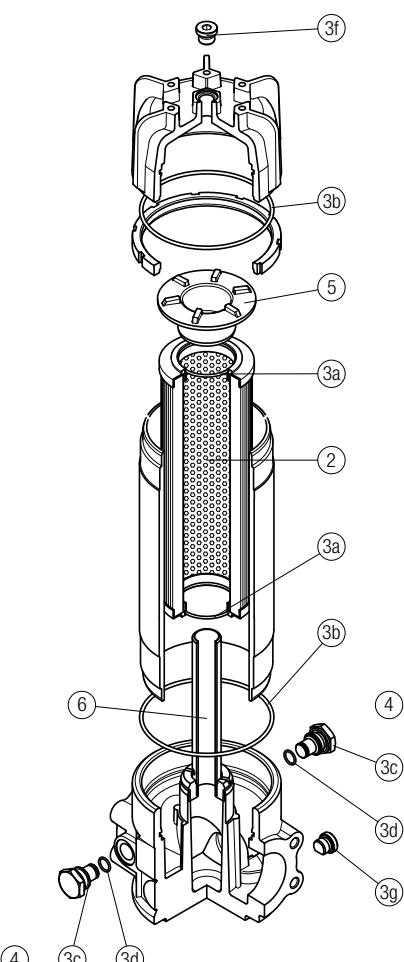
**LMP 400 - 401**  
length 2 - 3 - 4



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



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



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