

# LMP 400-401 & 430-431 series

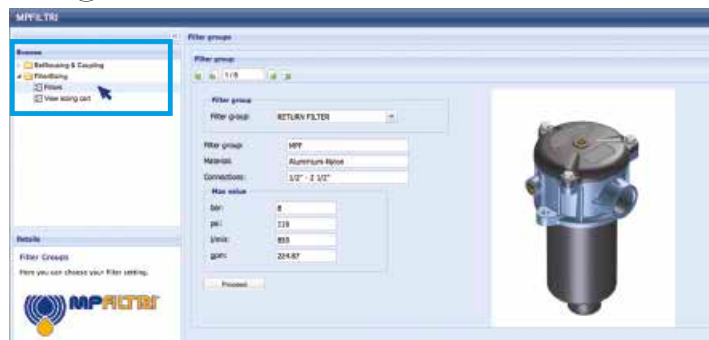
Maximum working pressure up to 6 MPa (60 bar) - Flow rate up to 780 l/min



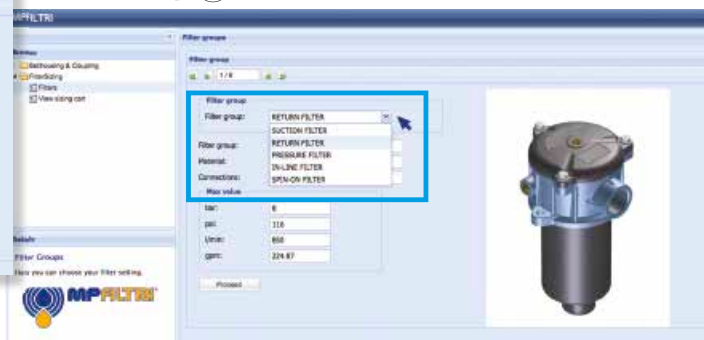


# TYPICAL FILTER SIZING Selection Software

**Step 1** Select "FILTERS"



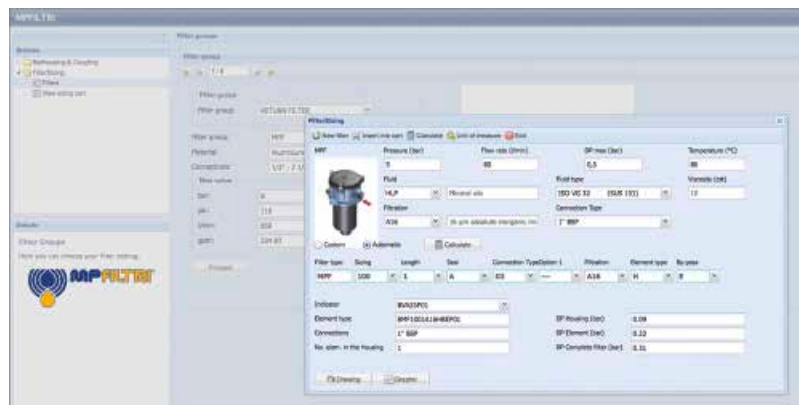
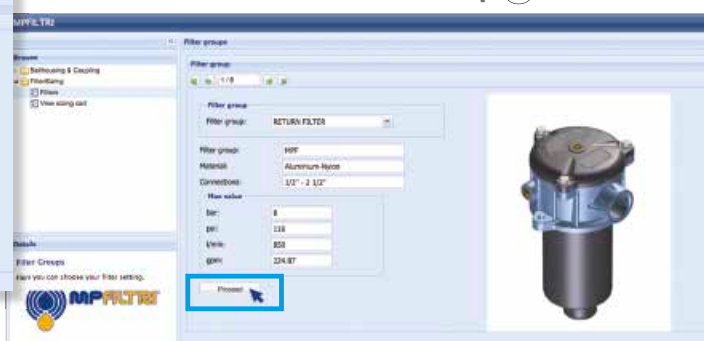
**Step 2** Choose filter group (Return Filter, Pressure Filter, etc.)



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



**Step 4** Push "PROCEED"



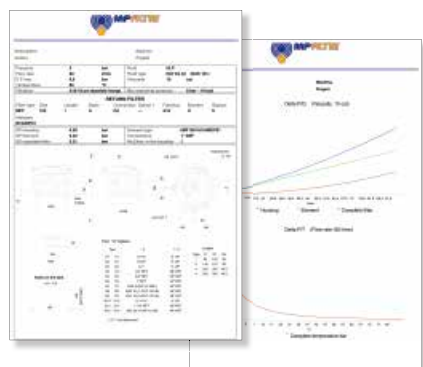
**Step 5**

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"



## 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 M60 M90 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

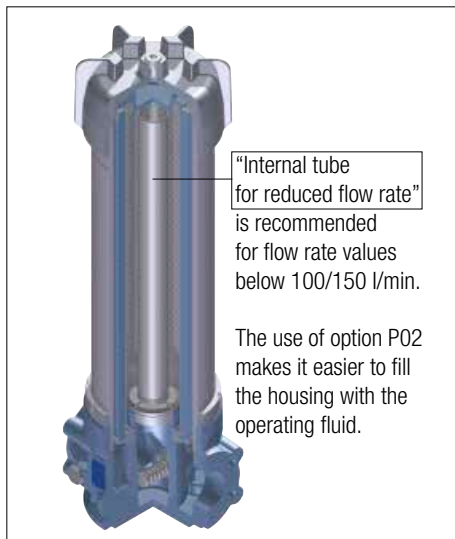
**Maximum flow rate for a complete low and medium pressure filter with a pressure drop  $\Delta p = 0.7$  bar.**

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>.

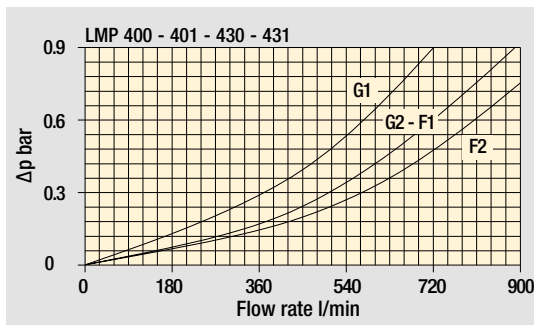
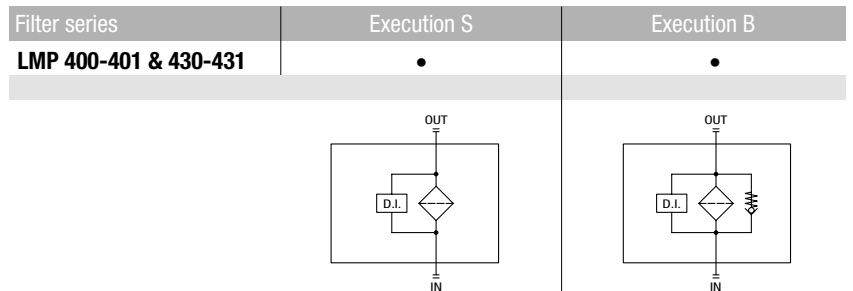
For different pressure drop or fluid viscosity we recommend to use our selection software available on [www.mpfiltri.com](http://www.mpfiltri.com).

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.

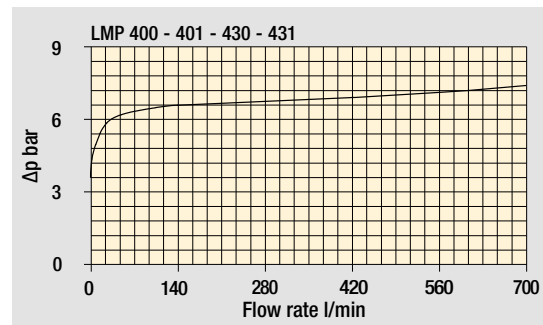
LMP 430-431: execution P02



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

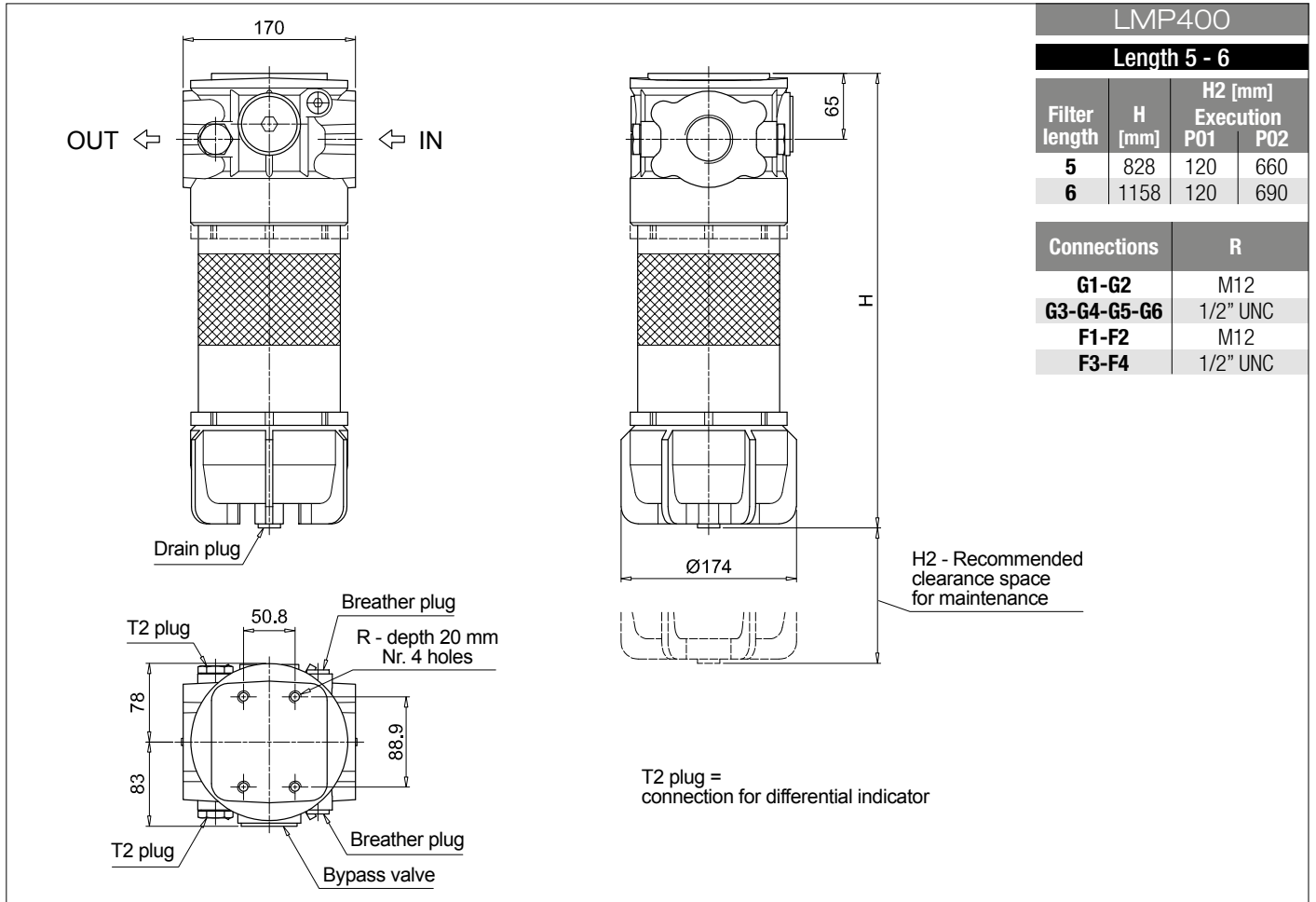
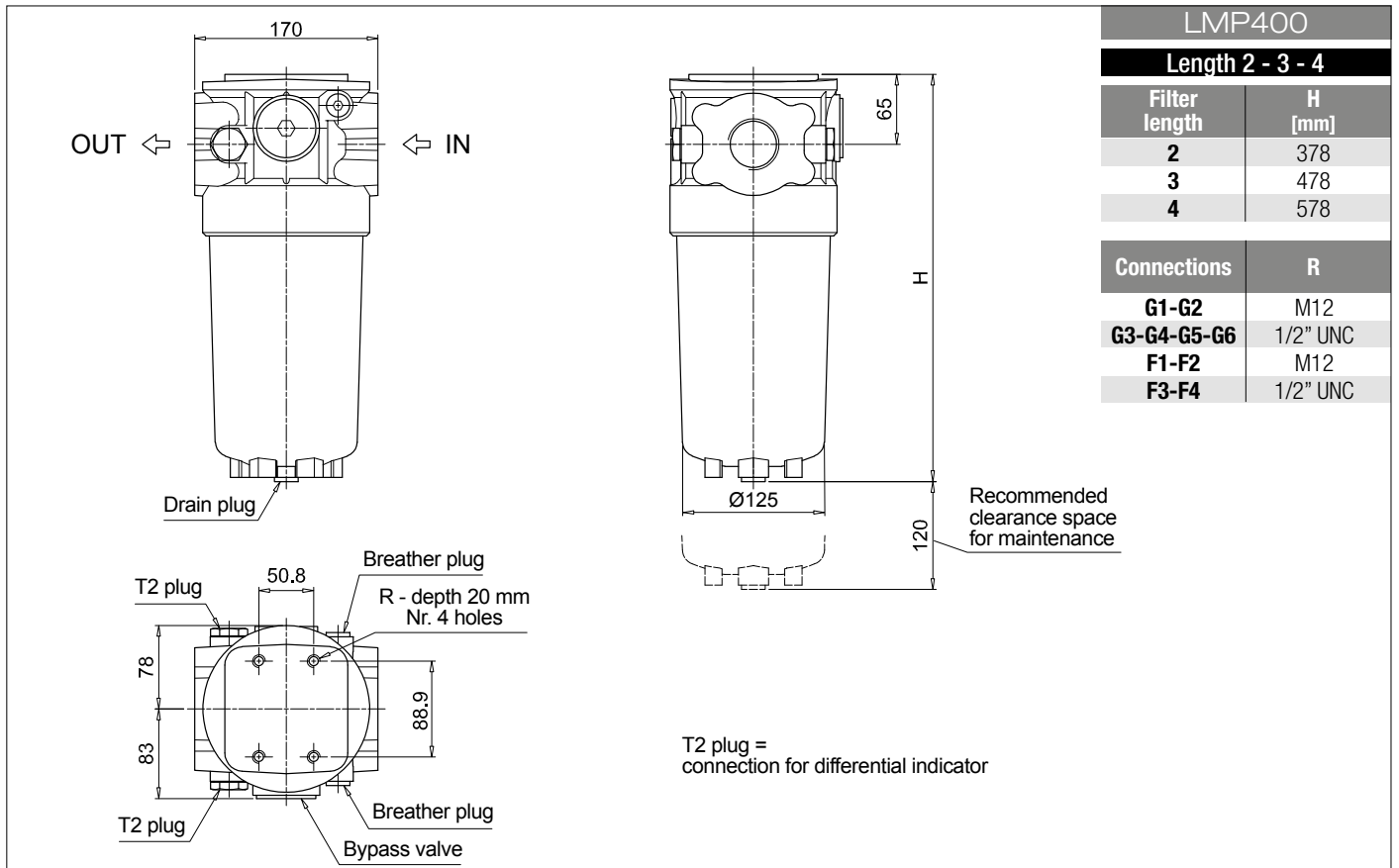
Series and size <b>LMP400</b>   <b>LMP401</b>		Configuration example: <b>LMP401</b>   <b>3</b>   <b>B</b>   <b>A</b>   <b>G1</b>   <b>A10</b>   <b>N</b>   <b>P01</b>									
Length <b>2</b>   <b>3</b>   <b>4</b>   <b>5</b>   <b>6</b>											
Bypass valve <b>S</b> Without bypass   <b>B</b> 3.5 bar											
Seals and treatments		Filtration rating									
		<b>Axx</b>	<b>Mxx</b>	<b>Pxx</b>							
<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 <b>N</b> 20 bar		Execution		Filter length							
				<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>			
		<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 <b>CU400</b>		Configuration example: <b>CU400</b>   <b>3</b>   <b>A10</b>   <b>A</b>   <b>N</b>   <b>P01</b>									
Element length <b>2</b>   <b>3</b>   <b>4</b>   <b>5</b>   <b>6</b>											
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									
		<b>Axx</b>	<b>Mxx</b>	<b>Pxx</b>							
<b>A</b> NBR		•	•	•							
<b>V</b> FPM		•	•	•							
<b>W</b> NBR compatible with fluids HFA-HFB-HFC		•	•								
Element Δp <b>N</b> 20 bar		Execution		Filter length							
				<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>			
		<b>P01</b> MP Filtri standard		•	•	•	•	•			
		<b>Pxx</b> Customized									

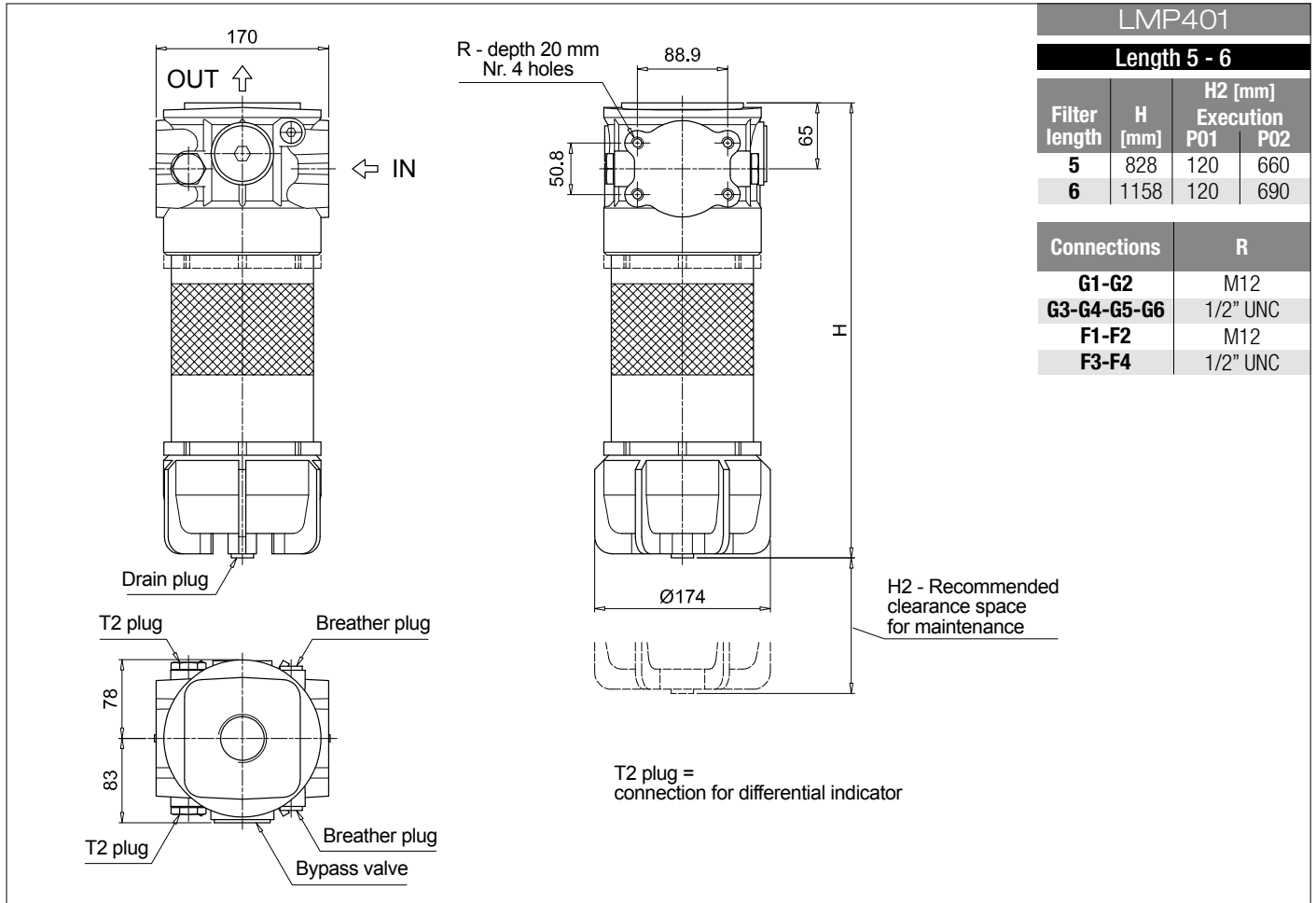
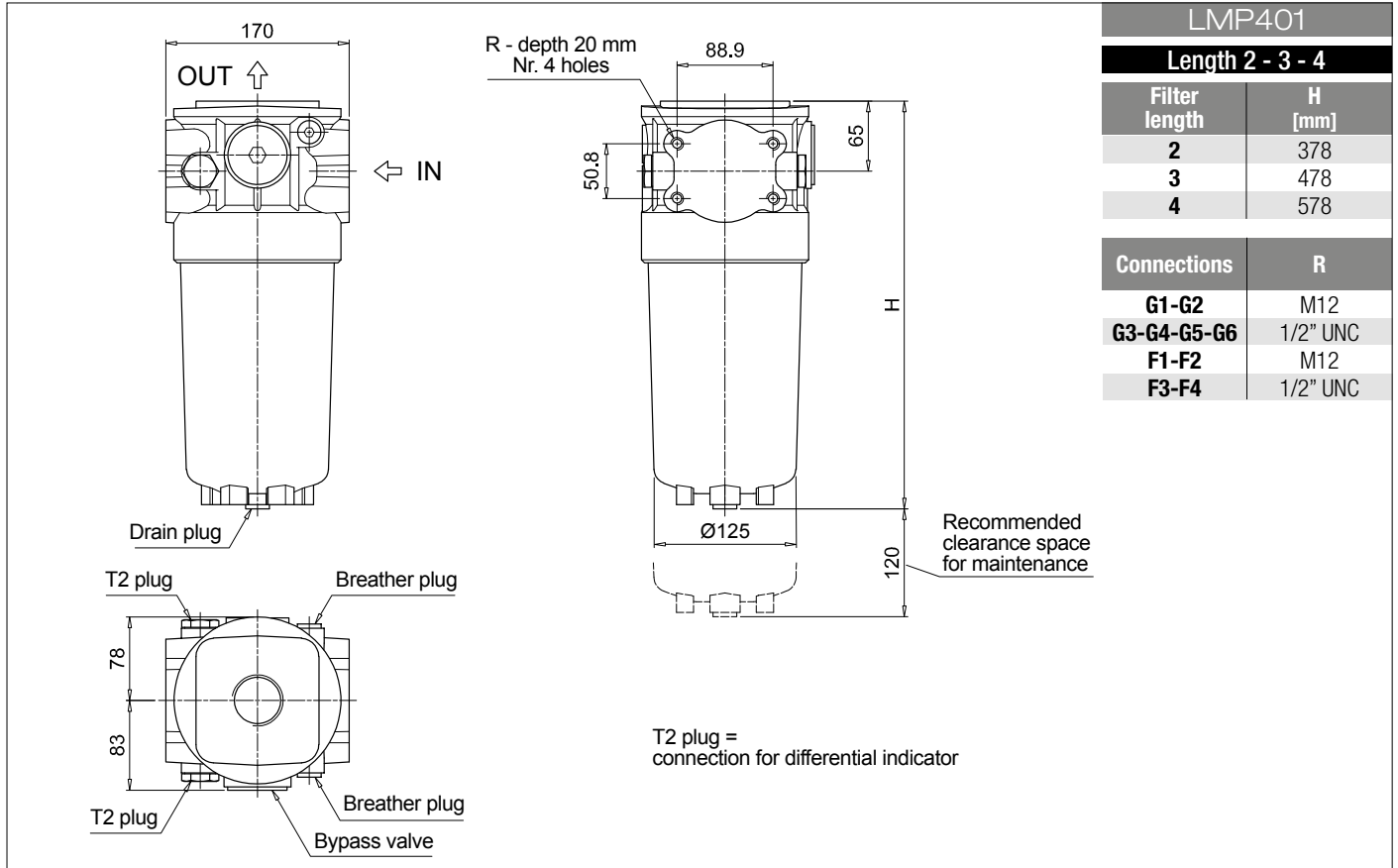
### ACCESSORIES

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 430-431

## Designation & Ordering code

### COMPLETE FILTER

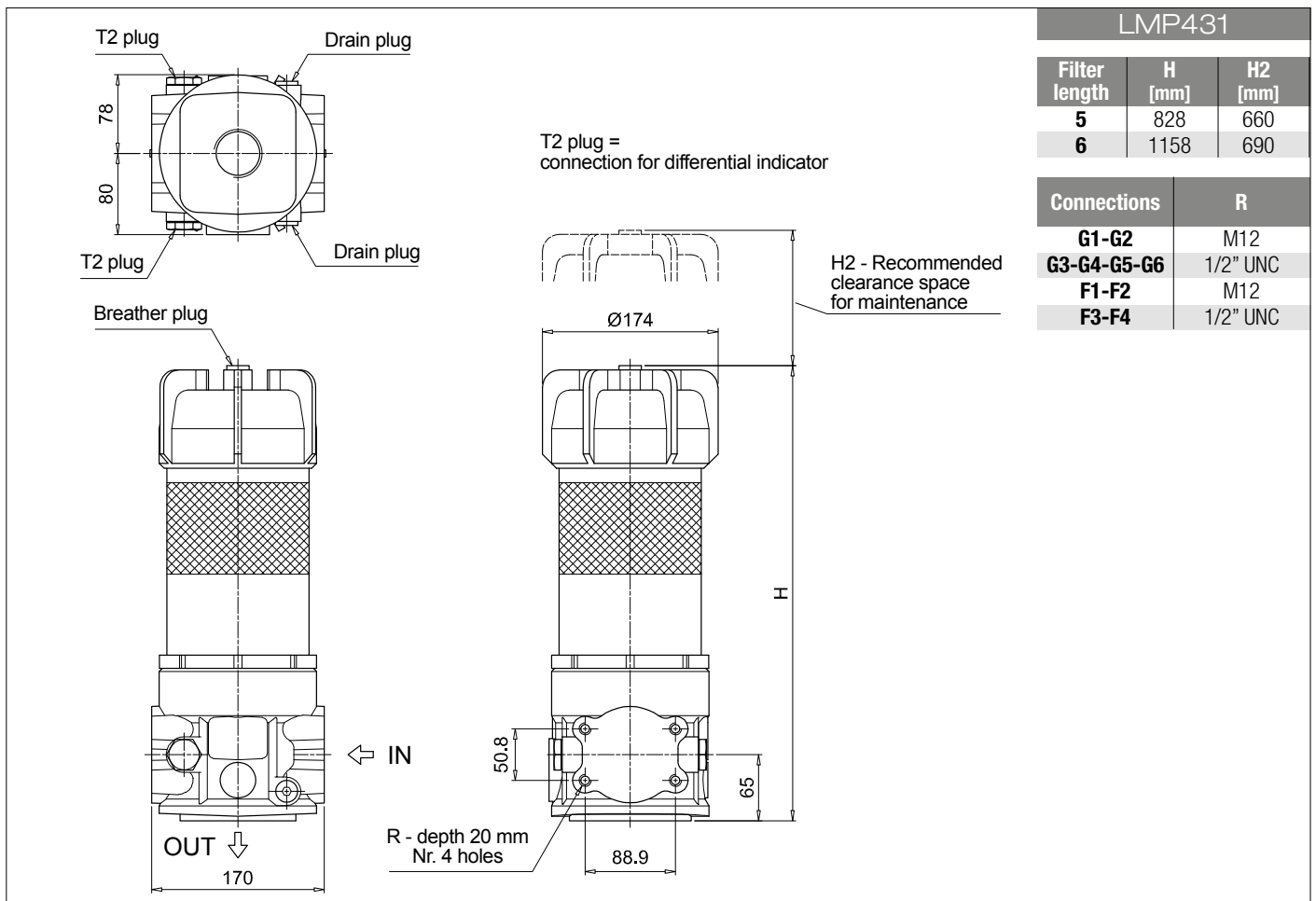
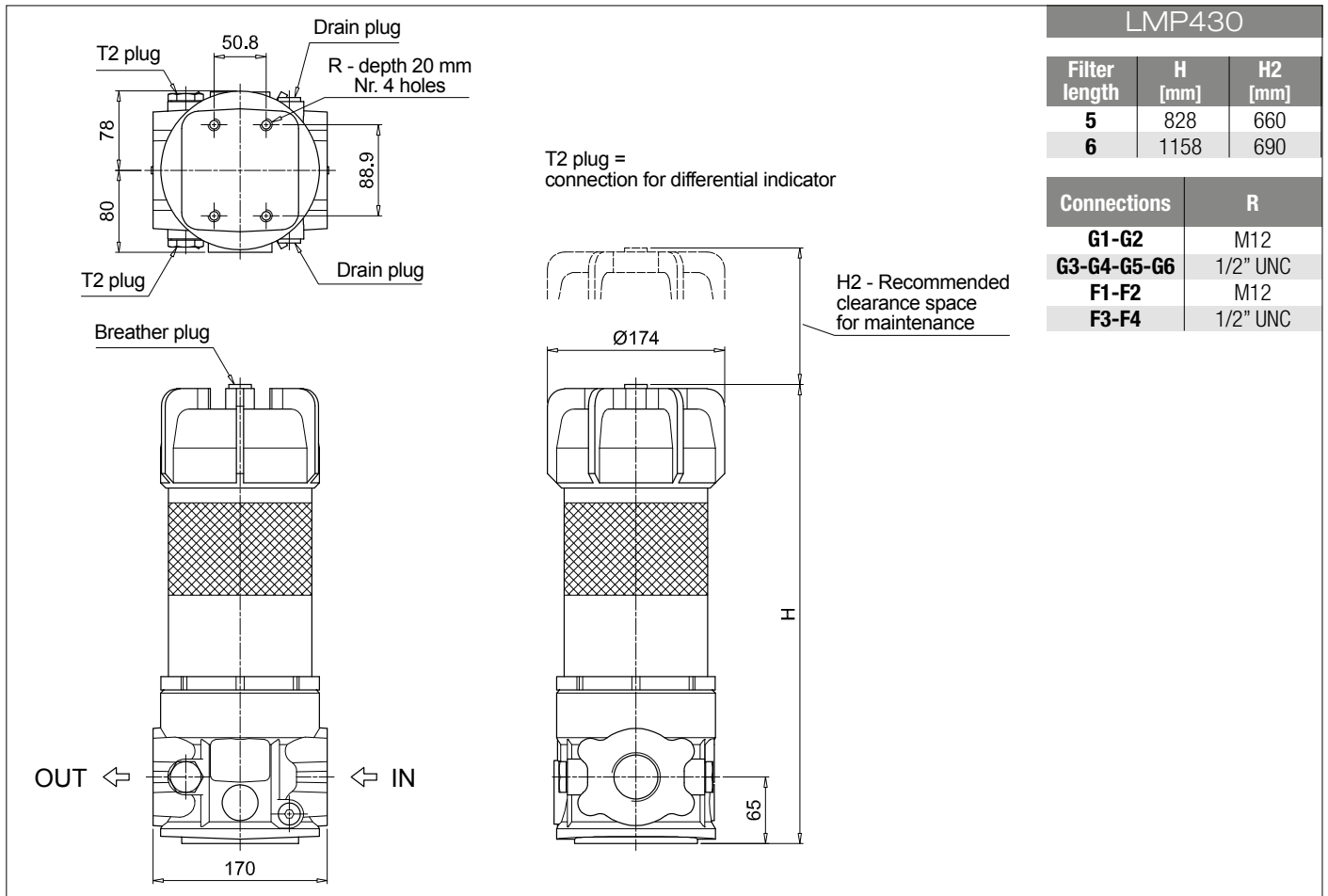
Series and size		Configuration example: <b>LMP431</b>   <b>5</b>   <b>B</b>   <b>A</b>   <b>G1</b>   <b>A10</b>   <b>N</b>   <b>P01</b>									
<b>LMP430</b>   <b>LMP431</b>											
Length											
<b>5</b>   <b>6</b>											
Bypass valve											
<b>S</b> Without bypass		<b>B</b> 3.5 bar									
Seals and treatments		Filtration rating									
		<b>Axx</b>	<b>Mxx</b>	<b>Pxx</b>							
<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		<b>P01</b> MP Filtri standard									
		<b>P02</b> With internal tube for reduced flow rate									
		<b>Pxx</b> 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											
<b>5</b>   <b>6</b>											
Filtration rating (filter media)											
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<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									
		<b>Axx</b>	<b>Mxx</b>	<b>Pxx</b>							
<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		<b>P01</b> MP Filtri standard									
		<b>Pxx</b> Customized									

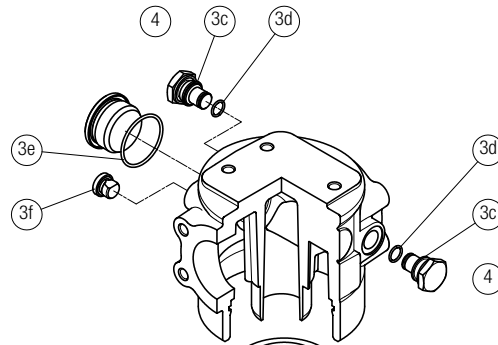
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<b>DEM</b> Electrical differential indicator	445-446	<b>DVA</b> Visual differential indicator	448
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<b>DLE</b> Electrical / visual differential indicator	447		
Additional features		page	
<b>T2</b> Plug	449		

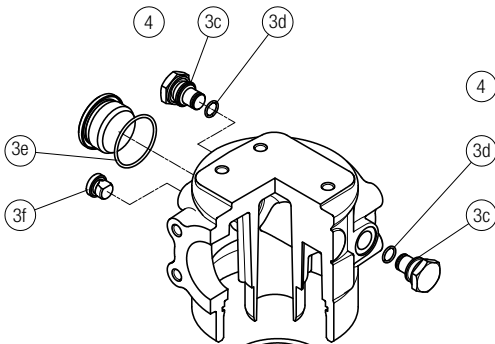


Order number for spare parts

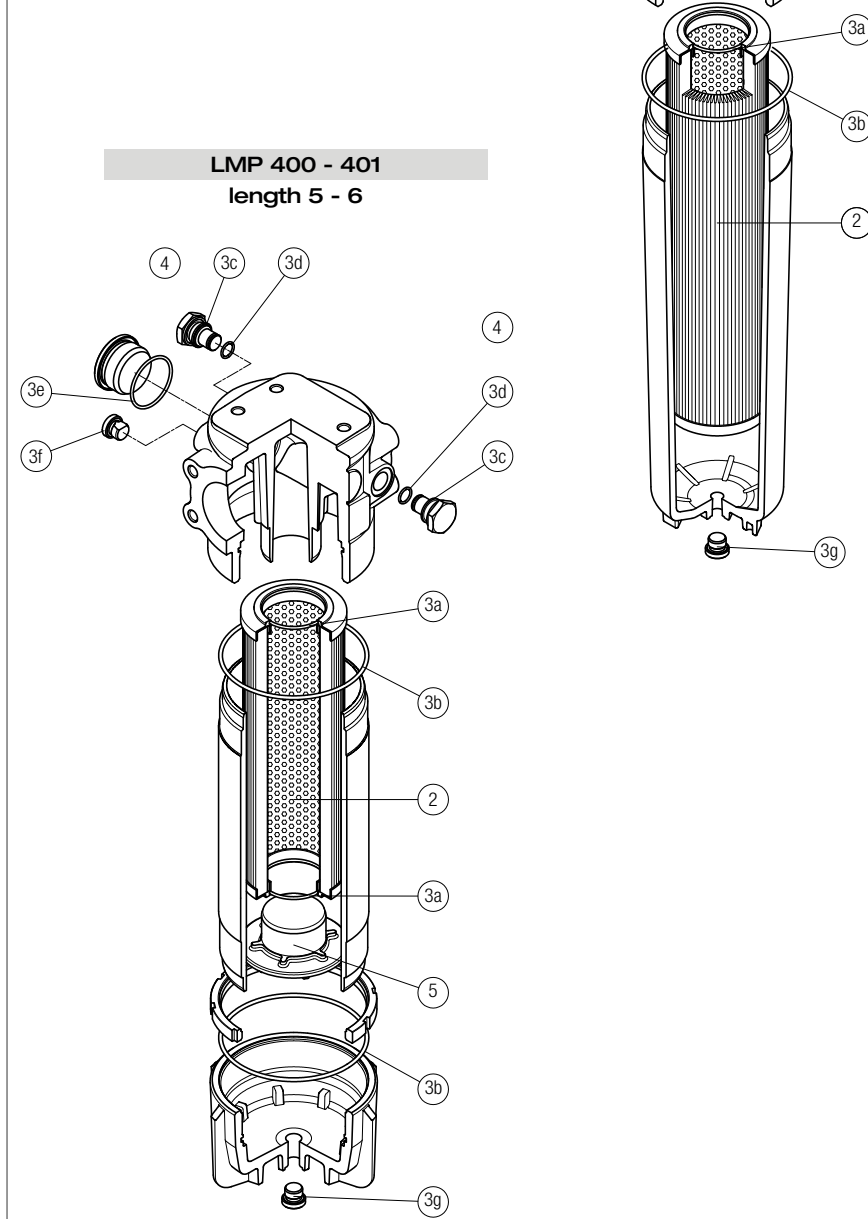
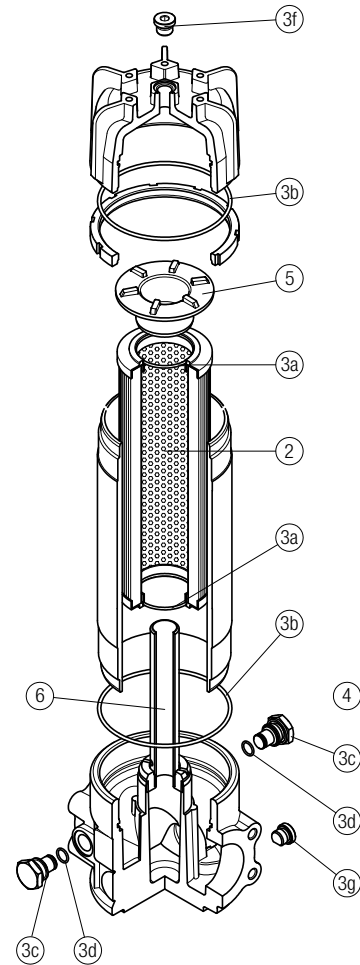
**LMP 400 - 401**  
length 2 - 3 - 4



**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				
Seal Kit code number		NBR FPM	Indicator connection plug	Housing spigot	Tube assembly
Series			NBR FPM	no bypass with bypass	
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