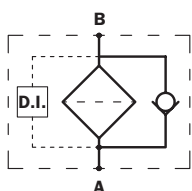
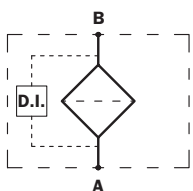


# LMP 400 - 401 430 - 431



Style S

Style B



**Maximum pressure 60 bar**  
**Flow rates to 740 l/min**

## Filter housing (Materials)

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

## Pressure

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

- Working pressure: 60 bar (6 MPa)
- Test pressure: 90 bar (9 MPa)
- Burst pressure: 180 bar (18 MPa)
- Pulsed pressure fatigue test: 1.000.000 cycles with pressure from 0 to 60 bar (6 MPa)

### LMP 400 length: 5 - 6

- Working pressure: 50 bar (5 MPa)
- Test pressure: 75 bar (7,5 MPa)
- Burst pressure: 150 bar (15 MPa)
- Pulsed pressure fatigue test: 1.000.000 cycles with pressure from 0 to 50 bar (5 MPa)

## Temperature

- From -25°C to +110°C

## Bypass valve

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

## $\Delta p$ Elements type

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

## Seals

- Standard NBR series A
- Optional FPM series V

## Weights (kg)

	Length
• LMP400 -2	7.2
• LMP400 -3	8.1
• LMP400 -4	8.8
• LMP400 -5	11.9
• LMP400 -6	14.4

## Volumes (dm<sup>3</sup>)

	Length
• LMP400 -2	3.5
• LMP400 -3	5
• LMP400 -4	6.5
• LMP400 -5	9.5
• LMP400 -6	13.5

## Connections

In-Line Inlet-Outlet LMP 400 - 430  
 90° Inlet-outlet LMP 401 - 431

## 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

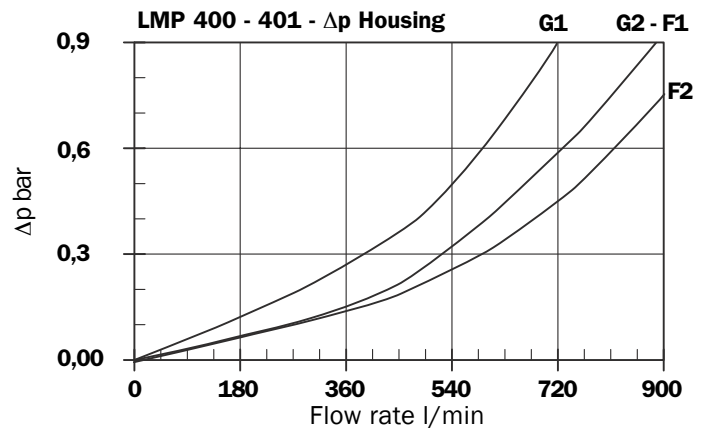
Filter element in stainless steel mesh

Type	Length				
	2	3	4	5	6
CU 400	3300	4950	6550	10200	15300
Values expressed in cm <sup>2</sup>					

## Filter housing $\Delta p$ pressure drop

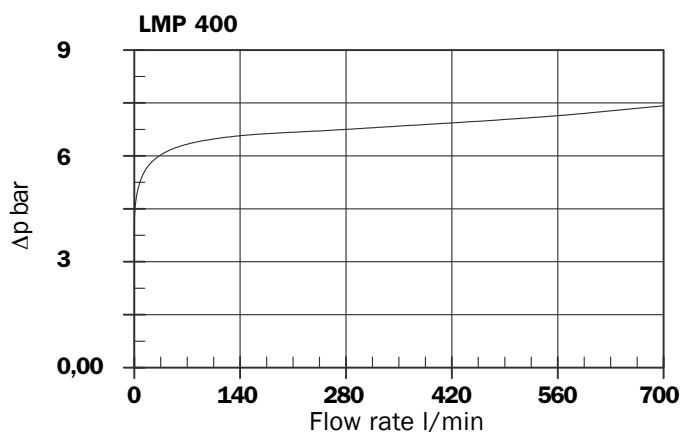
The curves are plotted utilising mineral oil with density of 0.86 kg/dm<sup>3</sup> to ISO 3968.

$\Delta p$  varies proportionally with density.



## Valves

### Bypass valve pressure drop



## Option P02 for LMP 430 - 431



Option 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.

**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.

Oil velocity	Connections		
	1 1/2"	2"	2 1/2"
2,5 m/sec.	120	300	500
5 m/sec.	240	600	1000

**Flow rate l/min**

Off-Line filter, filter element recommended maximum pressure drop must be equal to  $\Delta p$  0.2 ÷ 0.3 bar.

### Recommended maximum flow rate

- Pressure drop of filter assembly equal to  $\Delta p$  0.6 bar.
- Oil kinematic viscosity 30 mm<sup>2</sup>/s (cSt).
- Density 0.86 kg/dm<sup>3</sup>.
- Connections of filter under test G 2 1/2".

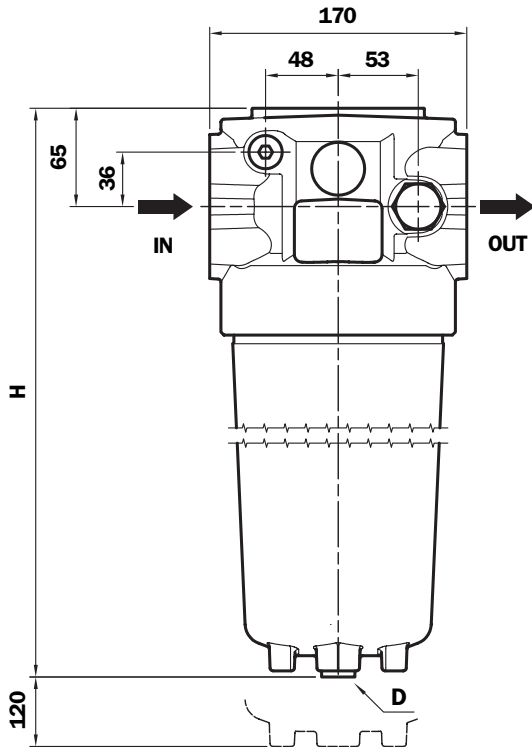
### Filtration

	Length	A03	A06	A10	A16	A25	P10	P25	M25
<b>LMP 400 - 401</b>	2	180	215	325	360	460	470	500	660
<b>430 - 431</b>	3	245	295	420	460	540	580	600	700
	4	305	350	480	510	575	600	630	720
	5	405	445	550	600	660	640	670	740
	6	450	520	610	630	670	650	670	740

**Flow rate l/min**

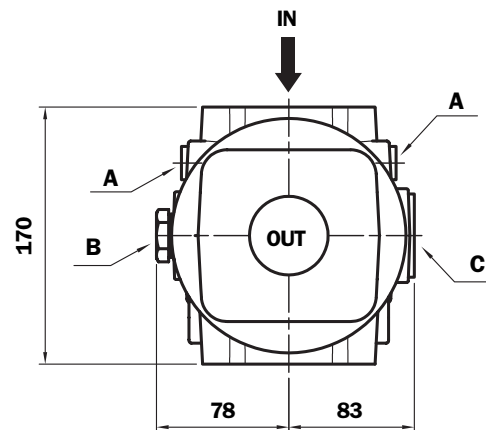
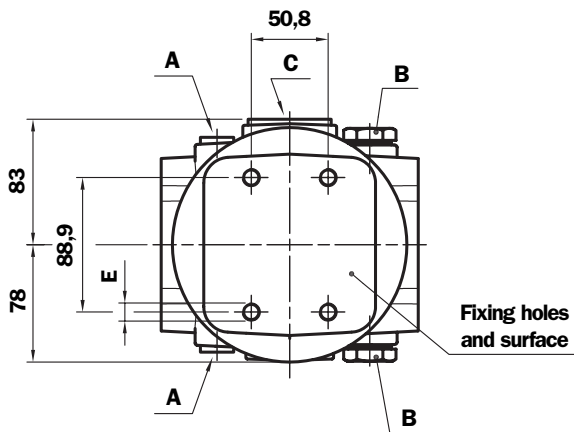
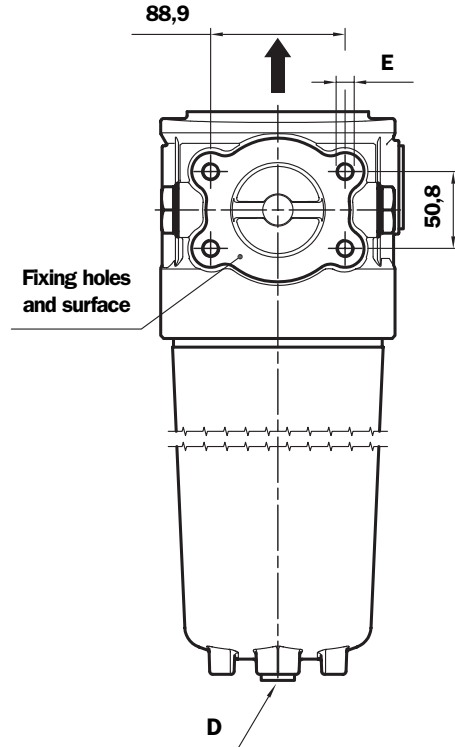
## LMP 400

Length 2 - 3 - 4



## LMP 401

Length 2 - 3 - 4



**A** - Breather plug - G 3/8" - A/F 8

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

**C** - Bypass valve - A/F 17

**D** - Oil drain plug - G 3/8" - A/F 8

### LMP 400 - 401

Length Filter	H mm
2	378
3	478
4	578

### Flanged IN - OUT connections

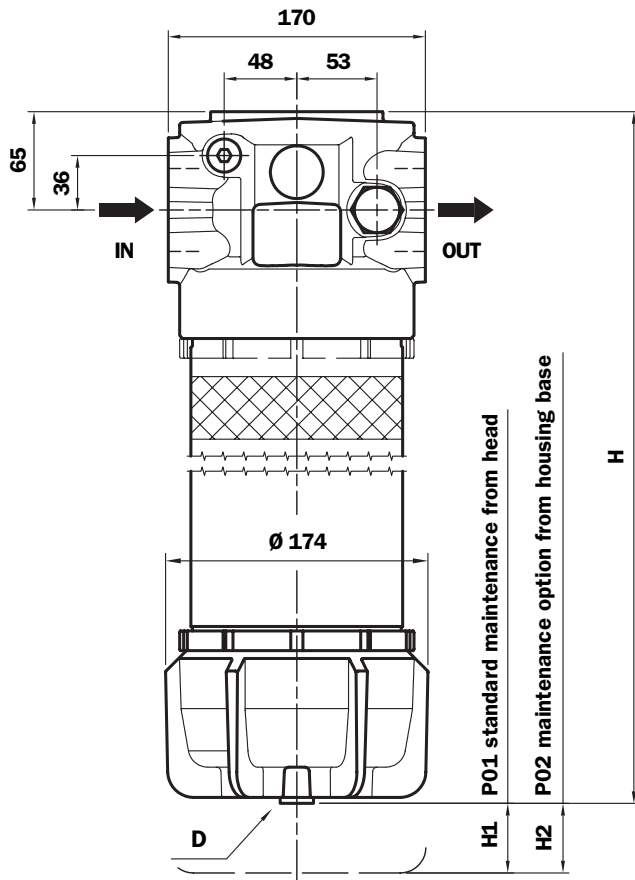
St.	A	E Depth 20 mm
F1	2" SAE - 3000 psi/M	M12
F2	2 1/2" SAE - 3000 psi/M	M12
F3	2" SAE - 3000 psi/UNC	1/2" UNC
F4	2 1/2" SAE - 3000 psi/UNC	1/2" UNC

### Thread IN - OUT connections

St.	A	E Depth 20 mm
G1	G 1 1/2"	M12
G2	G 2"	M12
G3	1 1/2" NPT	1/2" UNC
G4	2" NPT	1/2" UNC
G5	SAE 24 - 1 7/8" - 12 UN	1/2" UNC
G6	SAE 35 - 2 1/2" - 12 UN	1/2" UNC

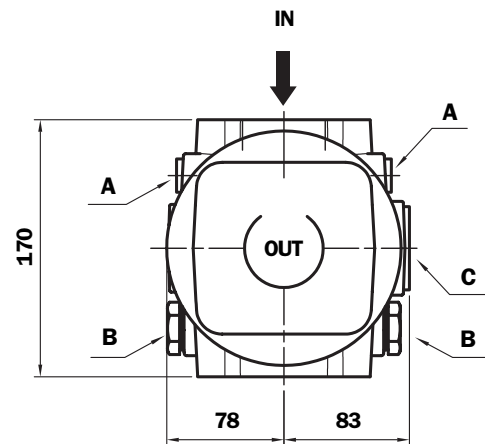
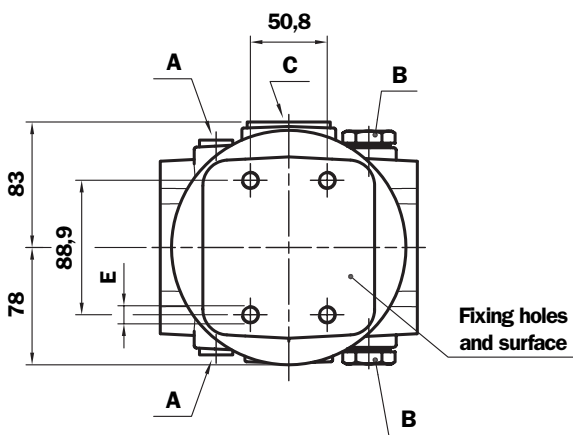
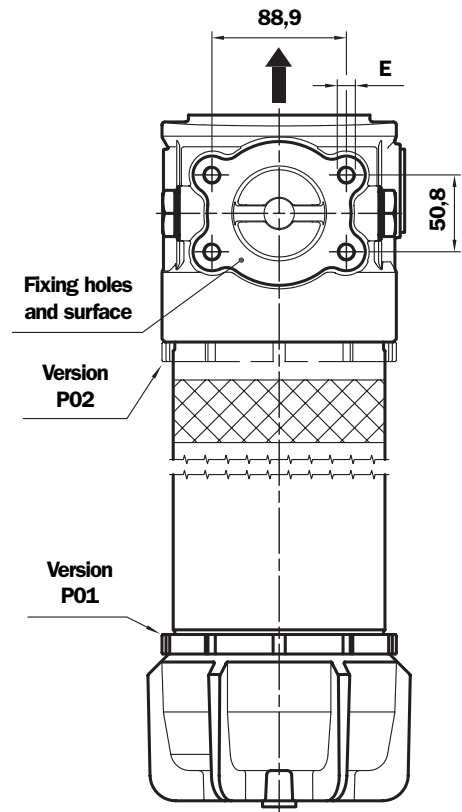
# LMP 400

Length 5 - 6



# LMP 401

Length 5 - 6



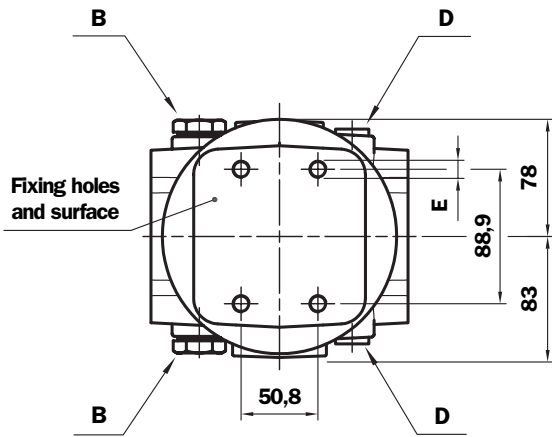
## LMP 400 - 401

Length Filter	H mm	H1 mm	H2 mm
5	828	120	660
6	1158	120	990

- A** - Breather plug - G 3/8" - A/F 8
- B** - Indicator connection - Plug T2 - A/F 30
- C** - Bypass valve - A/F 17
- D** - Oil drain plug - G 3/8" - A/F 8

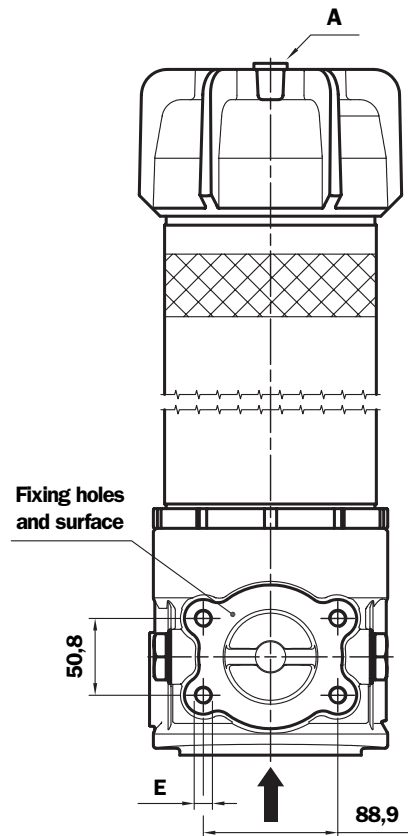
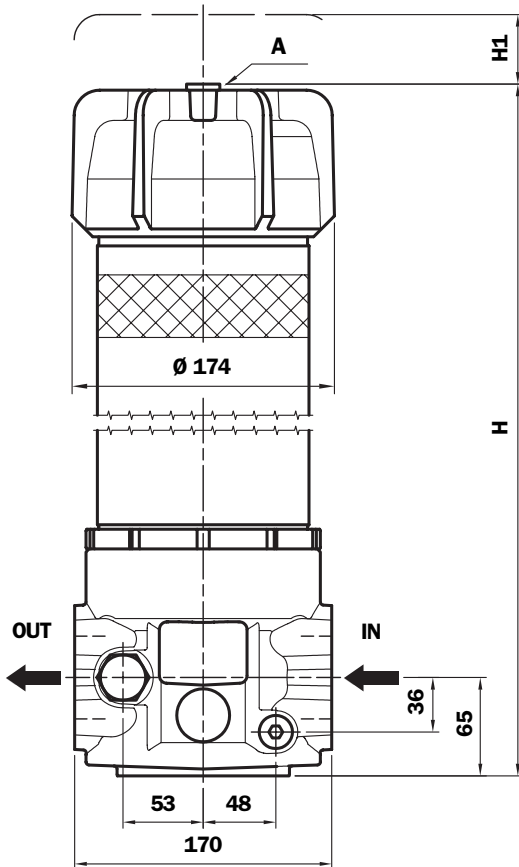
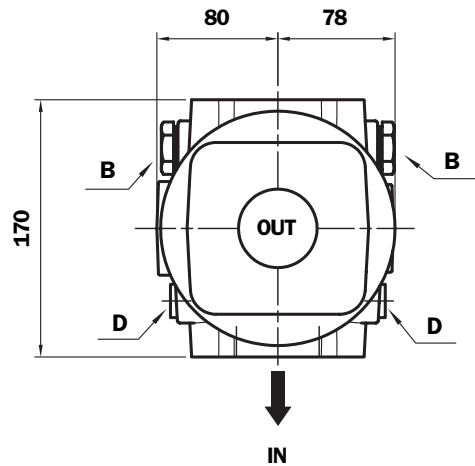
# LMP 430

Length 5 - 6



# LMP 431

Length 5 - 6



**A** - Breather plug - G 3/8" - A/F 8

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

**D** - Oil drain plug - G 3/8" - A/F 8

## LMP 430 - 431

Length Filter	H mm	H1 mm
5	828	660
6	1158	990

## Flanged IN - OUT connections

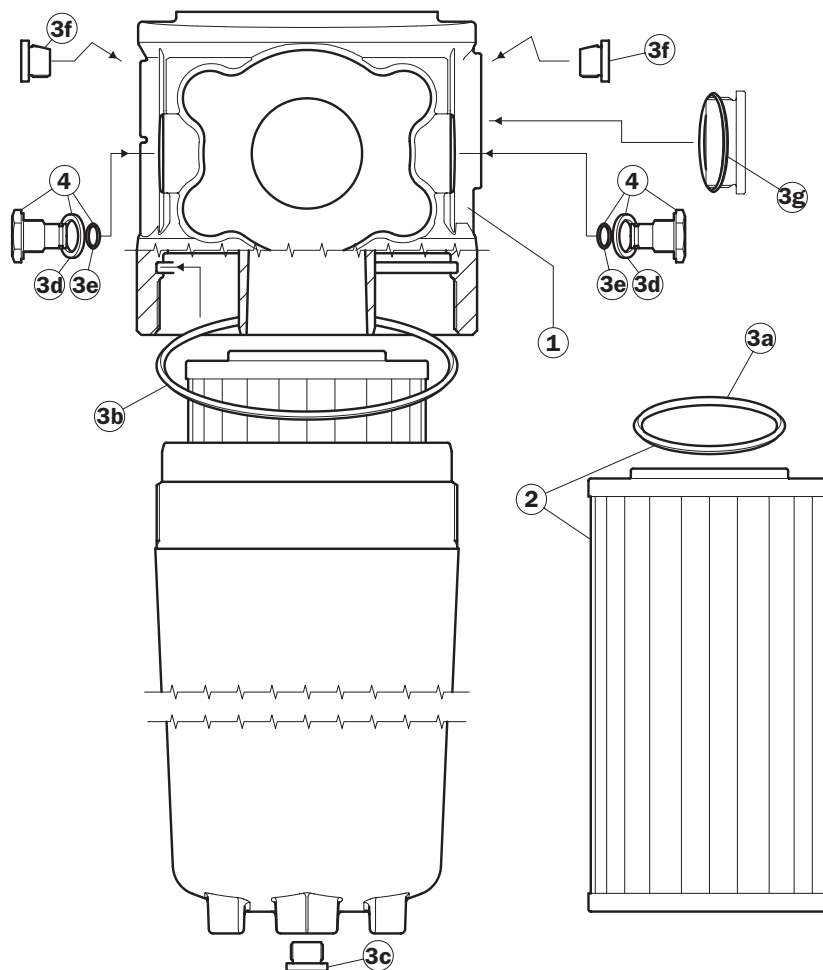
St.	A	E Depth 20 mm
F1	2" SAE - 3000 psi/M	M12
F2	2 1/2" SAE - 3000 psi/M	M12
F3	2" SAE - 3000 psi/UNC	1/2" UNC
F4	2 1/2" SAE - 3000 psi/UNC	1/2" UNC

## Thread IN - OUT connections

St.	A	E Depth 20 mm
G1	G 1 1/2"	M12
G2	G 2"	M12
G3	1 1/2" NPT	1/2" UNC
G4	2" NPT	1/2" UNC
G5	SAE 24 - 1 7/8" - 12 UN	1/2" UNC
G6	SAE 35 - 2 1/2" - 12 UN	1/2" UNC

# Spare parts

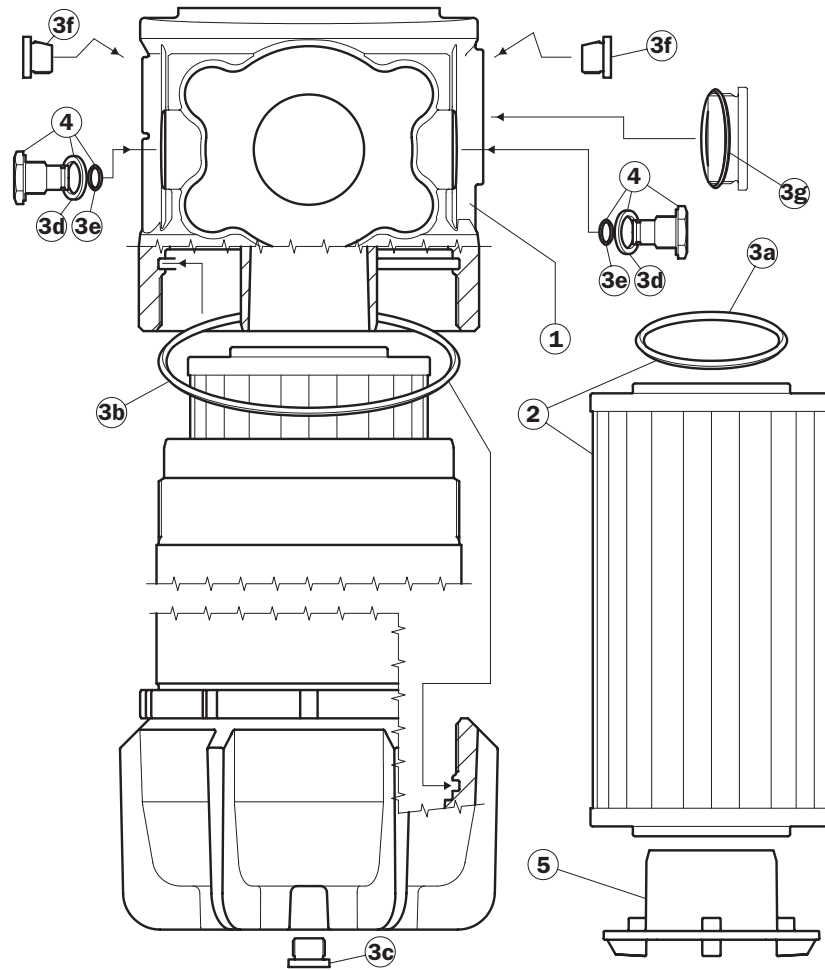
## Length 2 - 3 - 4



Item	Description	Q.ty	FILTER Series LMP 400 - 401	
<b>1</b>	Filter assembly	1	See order table	
<b>2</b>	Filter Element	1	See order table	
<b>3</b>	Seals kit	1	NBR 02050391	FPM 02050392
<b>3a</b>	Filter element O-Ring	1	O-R 3237 Ø 59,99 x 2,62	
<b>3b</b>	O-Ring for housing	1	O-R 4525 Ø 132,95 x 3,53	
<b>3c</b>	Oil drain plug	1	G 3/8" with seal	
<b>3d</b>	Bonded seal for indicator	2	01030058	01030046
<b>3e</b>	O-Ring for indicator	2	O-R 2050 Ø 12,42 x 1,78	
<b>3f</b>	Breather plug	2	01029436	
<b>3g</b>	By-pass plug O-Ring	1	O-R 3193 Ø 48,90 x 2,62	
<b>4</b>	Indicator connection plug	2	T2H	T2V
-	Indicators	1	See order table	

# Spare parts

## Length 5 - 6

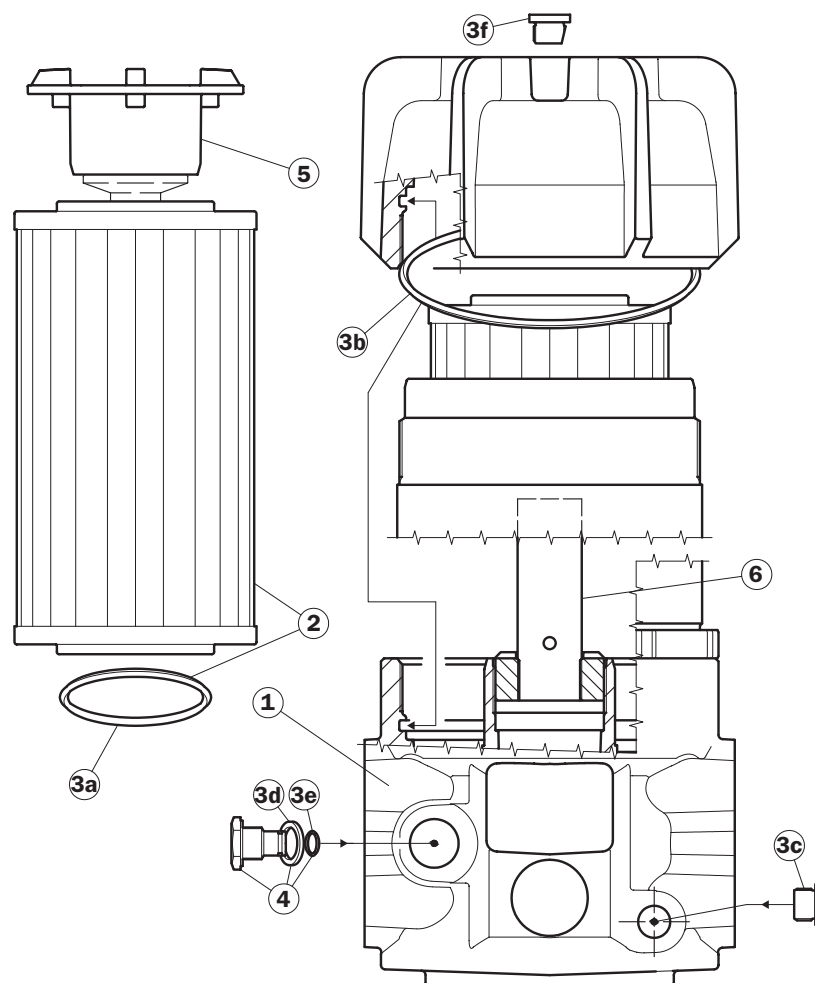


Item	Description	Q.ty	FILTER Series LMP 400 - 401	
<b>1</b>	Filter assembly	1	See order table	
<b>2</b>	Filter Element	1	See order table	
<b>3</b>	Seals kit	1	NBR 02050393	FPM 02050394
<b>3a</b>	Filter element O-Ring	2	O-R 3237 Ø 59,99 x 2,62	
<b>3b</b>	O-Ring for housing	2	O-R 4525 Ø 132,95 x 3,53	
<b>3c</b>	Oil drain plug	1	G 3/8" with seal	
<b>3d</b>	Bonded seal for indicator	2	01030058	01030046
<b>3e</b>	O-Ring for indicator	2	O-R 2050 Ø 12,42 x 1,78	
<b>3f</b>	Breather plug for indicator	2	01029436	
<b>3g</b>	By-pass plug O-Ring	1	O-R 3193 Ø 48,90 x 2,62	
<b>4</b>	Indicator connection plug	2	T2H	T2V
<b>5</b>	Housing spigot	1	01044108	
-	Indicators	1	See order table	



# Spare parts

## Length 5 - 6



Item	Description	Q.ty	FILTER Series LMP 430 - 431	
1	Filter assembly	1	See order table	
2	Filter Element	1	See order table	
3	Seals kit	1	NBR 02050393	FPM 02050394
3a	Filter element O-Ring	2	O-R 3237 Ø 59,99 x 2,62	
3b	O-Ring for housing	2	O-R 4525 Ø 132,95 x 3,53	
3c	Oil drain plug	2	G 3/8" with seal	
3d	Seal for indicator	2	01030058	01030046
3e	O-Ring for indicator	2	O-R 2050 Ø 12,42 x 1,78	
3f	Breather plug	1	01029436	
4	Indicator connection plug	2	T2H	T2V
5	Housing spigot	2	Spigot no by-pass 01044108 Spigot with by-pass 02001414	
6	Tube assembly	1	Length 5 - 02025041 Length 6 - 02025042	
-	Indicators	1	See order table	

# Ordering information LMP 400 - 431

<b>Filter assembly</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8a</b>
<b>LMP</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Example: LMP</b>	<b>400</b>	<b>4</b>	<b>B</b>	<b>A</b>	<b>G3</b>	<b>A10</b>	<b>N</b>	<b>P01</b>

<b>Filter element</b>	<b>2</b>	<b>6</b>	<b>4</b>	<b>7</b>	<b>8b</b>
<b>CU400</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Example: CU400</b>	<b>4</b>	<b>A10</b>	<b>A</b>	<b>N</b>	<b>P01</b>

## 1 - Style

<b>Filter</b>	<b>Filter element</b>
<input type="checkbox"/> <b>400</b>	<input type="checkbox"/> <b>400</b>
<input type="checkbox"/> <b>401</b>	<input type="checkbox"/> <b>400</b>
<input type="checkbox"/> <b>430</b>	<input type="checkbox"/> <b>400</b>
<input type="checkbox"/> <b>431</b>	<input type="checkbox"/> <b>400</b>

## 2 - Filter length

<input type="checkbox"/> <b>2</b>	} LMP 430 - 431 excluded
<input type="checkbox"/> <b>3</b>	
<input type="checkbox"/> <b>4</b>	
<input type="checkbox"/> <b>5</b>	
<input type="checkbox"/> <b>6</b>	

## 3 - Valve

<input type="checkbox"/> <b>S</b>	Without by-pass
<input type="checkbox"/> <b>B</b>	With bypass
<input type="checkbox"/>	With by-pass Opening pressure: on request

## 4 - Filter seals

<input type="checkbox"/> <b>A</b>	NBR
<input type="checkbox"/> <b>V</b>	FPM
<input type="checkbox"/> <b>W</b>	NBR (Compatible with fluid HFA, HFB, HFC)
<input type="checkbox"/>	On request

## 5 - Connections

### Threaded

Type	LMP 400 - 431
<b>G1</b>	<b>G 1 1/2"</b>
<b>G2</b>	<b>G 2"</b>
<b>G3</b>	<b>1 1/2" NPT</b>
<b>G4</b>	<b>2" NPT</b>
<b>G5</b>	<b>SAE 24 - 1 7/8" - 12 UN</b>
<b>G6</b>	<b>SAE 32 - 2 1/2" - 12 UN</b>

### Flanged

Type	LMP 400 - 431
<b>F1</b>	<b>2" SAE 3000 psi/M</b>
<b>F2</b>	<b>2 1/2" SAE 3000 psi/M</b>
<b>F3</b>	<b>2" SAE 3000 psi/UNC</b>
<b>F4</b>	<b>2 1/2" SAE 3000 psi/UNC</b>

## 6 - Filter element

<input type="checkbox"/> <b>A01</b>	Inorganic microfibre* 1 µ	} Absolute filtration βx (c) ≥ 1000
<input type="checkbox"/> <b>A03</b>	Inorganic microfibre 3 µ	
<input type="checkbox"/> <b>A06</b>	Inorganic microfibre 6 µ	
<input type="checkbox"/> <b>A10</b>	Inorganic microfibre 10 µ	
<input type="checkbox"/> <b>A16</b>	Inorganic microfibre 16 µ	
<input type="checkbox"/> <b>A25</b>	Inorganic microfibre 25 µ	

\* On request

<input type="checkbox"/> <b>M25</b>	Wire mesh	} Nominal Filtration
<input type="checkbox"/> <b>M60</b>	Wire mesh	
<input type="checkbox"/> <b>M90</b>	Wire mesh	

<input type="checkbox"/> <b>P10</b>	Resin impregnated paper	} Nominal Filtration
<input type="checkbox"/> <b>P25</b>	Resin impregnated paper	

## 7 - Max filter element differential pressure

<input type="checkbox"/> <b>N</b>	Δp 20 bar
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## 8 - Option

### a - Filter

<input type="checkbox"/> <b>P01</b>	MP Filtri standard
<input type="checkbox"/> <b>P02</b>	LMP 400 - 401 Maintenance from base housing (only length 5 and 6)
<input type="checkbox"/> <b>P02</b>	LMP 430 - 431 With internal tube for reduced flow rate
<input type="checkbox"/> <b>Pxx</b>	Customer request

### b - Filter element

<input type="checkbox"/> <b>P01</b>	MP Filtri standard
<input type="checkbox"/> <b>Pxx</b>	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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