

# LMP 400 - 401 430 - 431

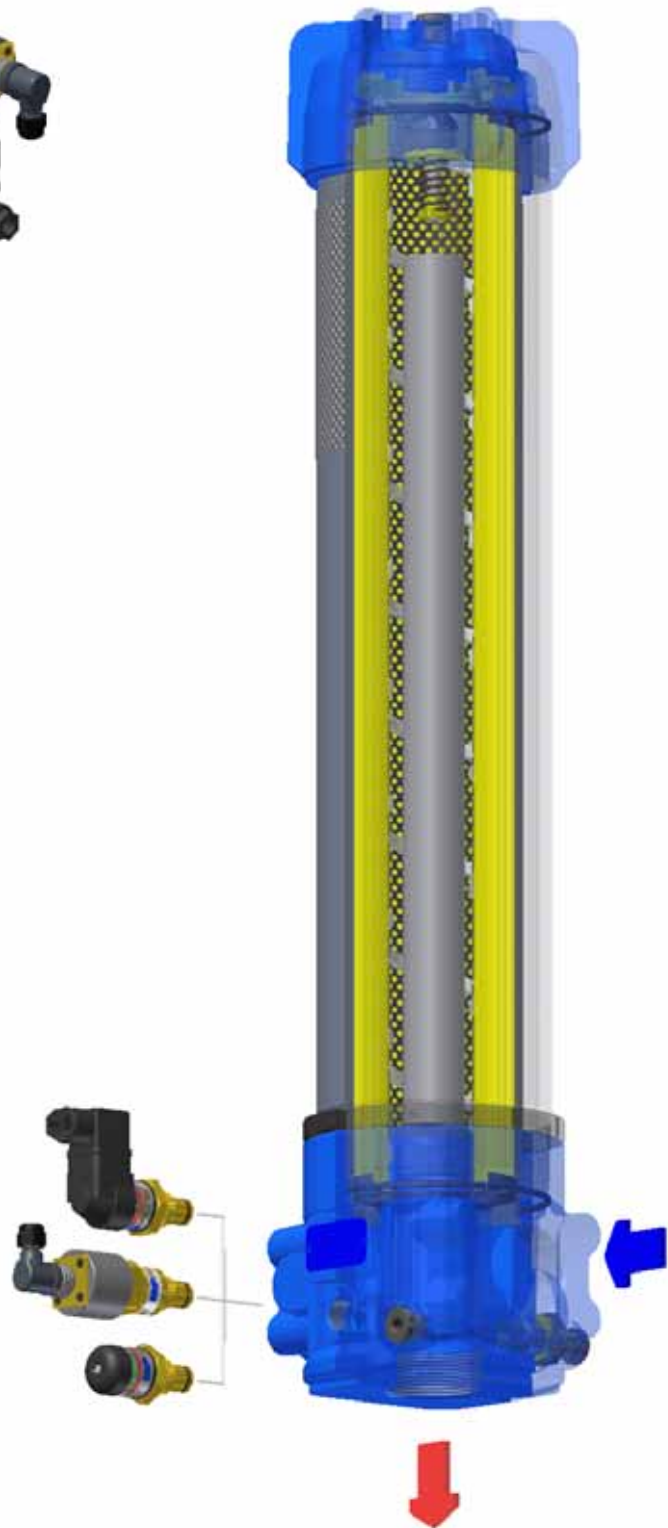
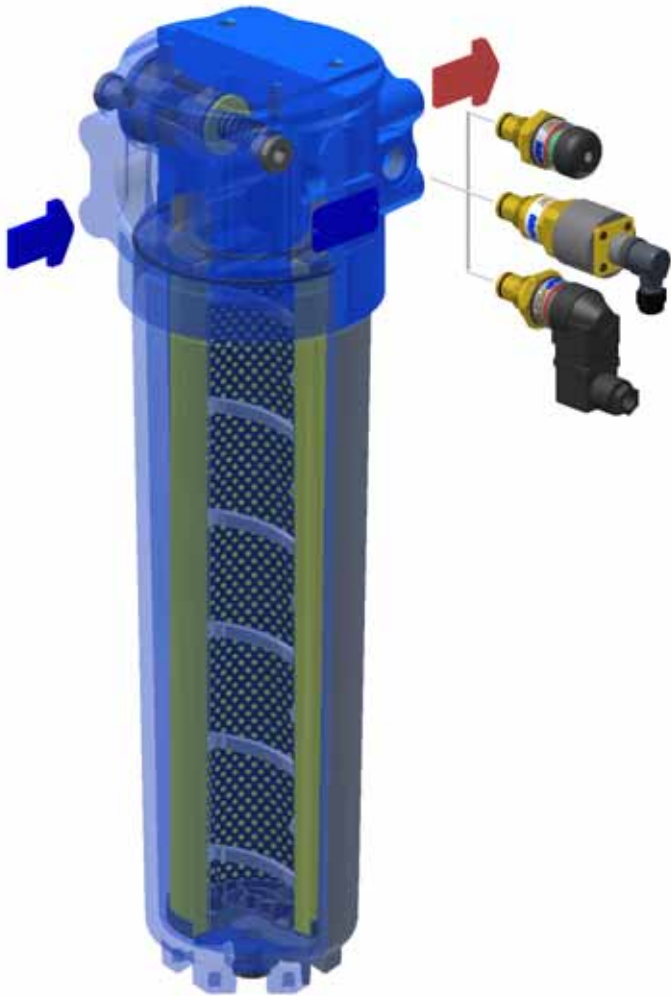


# LMP

SERIES

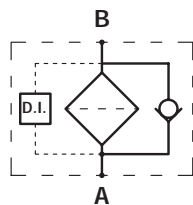
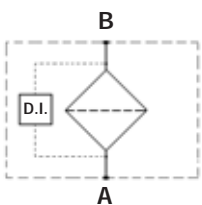
400 - 401  
430 - 431

*Working pressure  
60/50 bar*



Style S

Style B



# Technical data

## 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 6.7
- LMP400 -3 7.3
- LMP400 -4 8.1
- LMP400 -5 11.3
- 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

- Housings compatible with:  
Mineral oils to ISO 2943 - aqueous emulsions  
synthetic fluids, water and glycol.

- The filter elements are compatible with:  
Mineral oils to ISO 2943, Synthetic fluids  
Aqueous emulsions, water and glycol  
(series W required).
- NBR seals series A, compatible with:  
Mineral oils to ISO 2943 - aqueous emulsions  
synthetic fluids, water and glycol.
- V series FPM seals, compatible with:  
Synthetic fluids type HS-HFDR-HFDS-HF DU  
To ISO 2943

## Filter Element Area

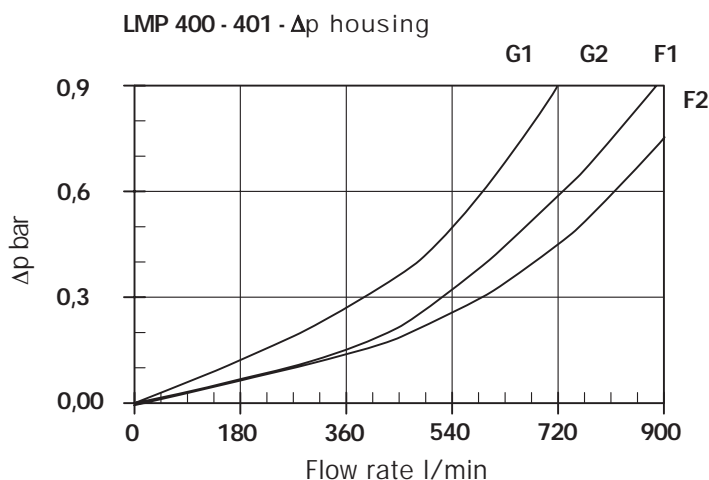
Filter element in stainless steel mesh  
Length

Type	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

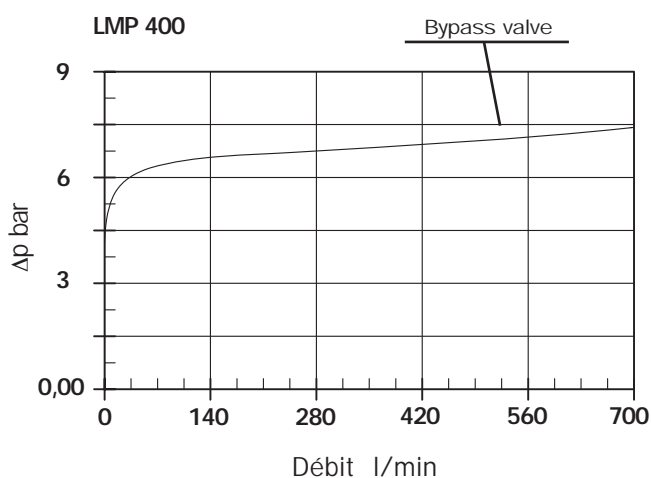
The curves are plotted utilising mineral oil with density of 0.86 kg/dm<sup>3</sup> to ISO 3968.

$\Delta p$  varies proportionally with density.

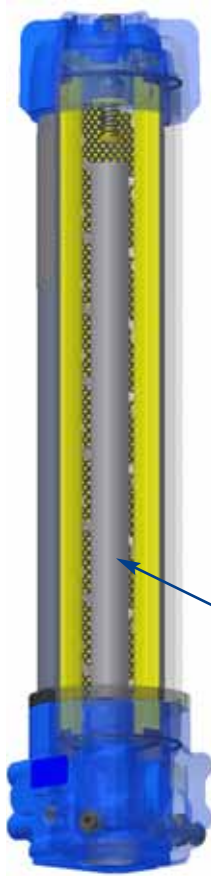


## Valves

### 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.

### 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".

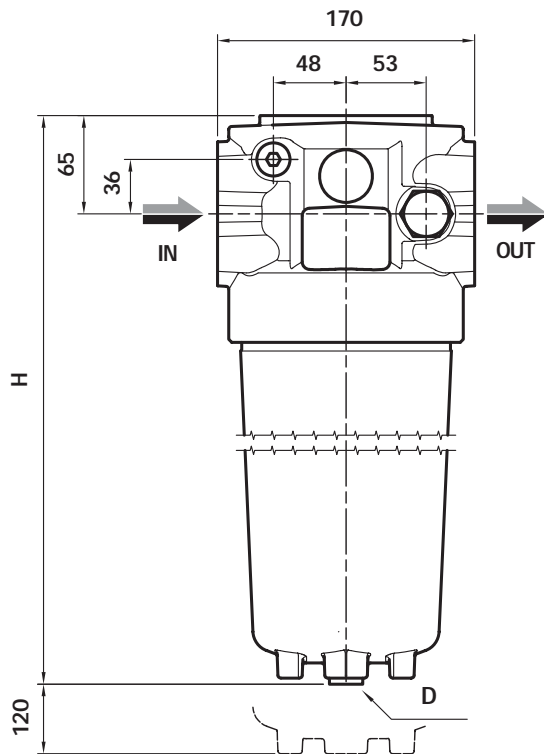
Filter element type	Flow rate l/min Series N	Filter length
A03	180	2
A06	215	
A10	325	
A16	360	
A25	460	
M25	660	
P10	470	
P25	500	
<hr/>		
A03	245	3
A06	295	
A10	420	
A16	460	
A25	540	
M25	700	
P10	580	
P25	600	
<hr/>		
A03	305	4
A06	350	
A10	480	
A16	510	
A25	575	
M25	720	
P10	600	
P25	630	
<hr/>		
A03	405	5
A06	445	
A10	550	
A16	600	
A25	660	
M25	740	
P10	640	
P25	670	
<hr/>		
A03	450	6
A06	520	
A10	610	
A16	630	
A25	670	
M25	740	
P10	650	
P25	670	

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

# Dimensions

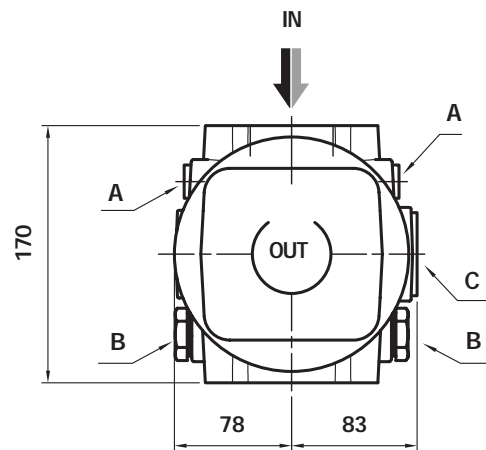
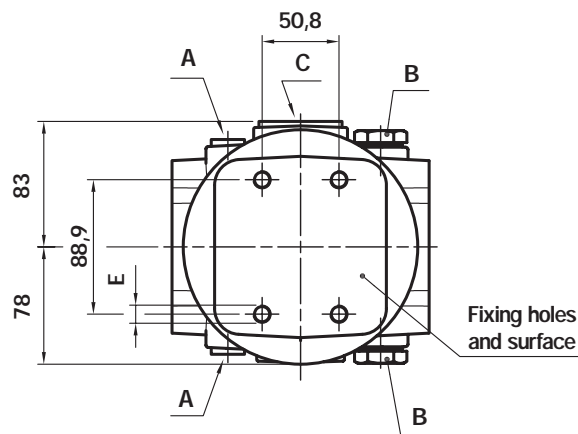
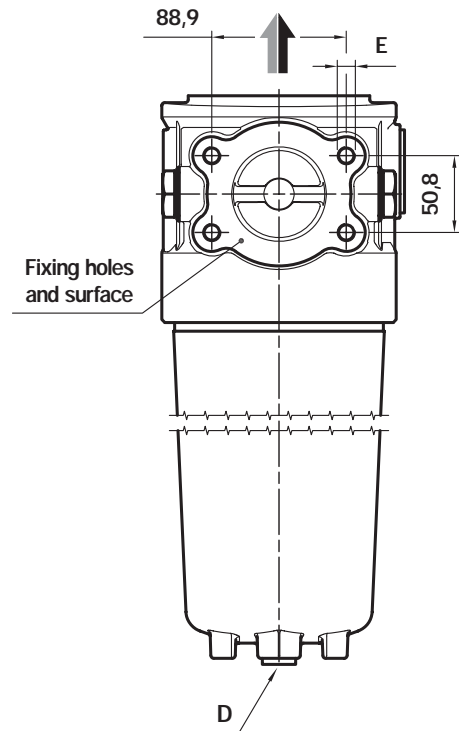
## LMP 400

Length 2-3-4



## LMP 401

Length 2-3-4



**Flanged IN/OUT connections**

**E**  
Depth 20 mm

**Threaded IN/OUT connections**

**E**  
Depth 20 mm

**Length Filter**

**H**  
mm

2" SAE  
3000 psi/M

M12

G 1 1/2"

M12

2

378

2 1/2" SAE  
3000 psi/M

M12

G 2"

M12

3

478

2" SAE  
3000 psi/UNC

1/2" UNC

1 1/2" NPT

1/2" UNC

4

578

2 1/2" SAE  
3000 psi/UNC

1/2" UNC

2" NPT

1/2" UNC

SAE 24 - 1 7/8" - 12 UN

1/2" UNC

SAE 32 - 2 1/2" - 12 UN

1/2" UNC

**A** Breather plug - G 3/8" - Ch. 8

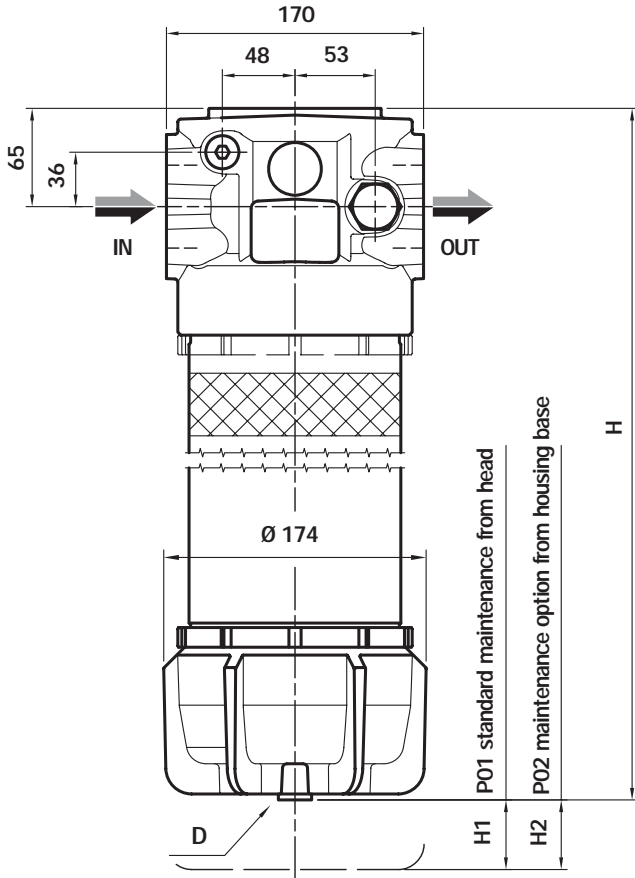
**B** Indicator connection - Plug T2 - Ch. 30

**C** Bypass valve - Ch. 17

**D** Oil drain plug - G 3/8" - Ch. 8

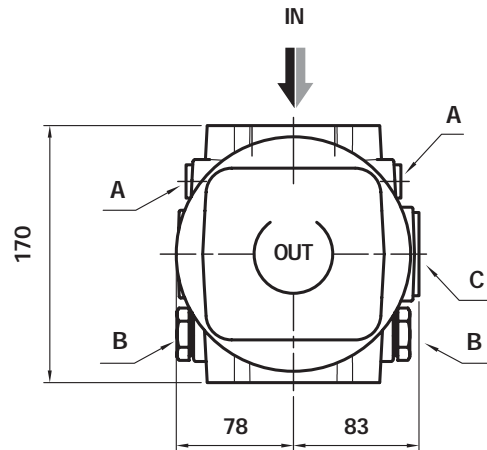
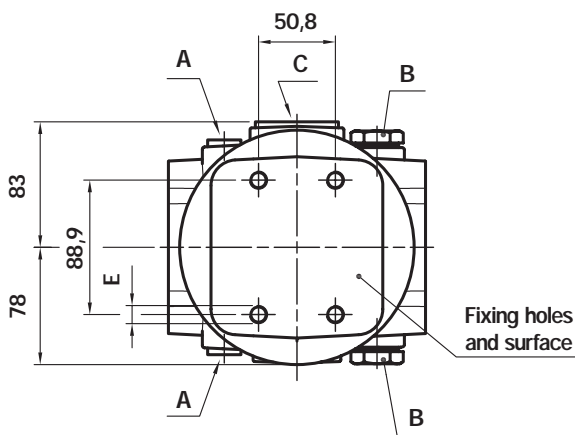
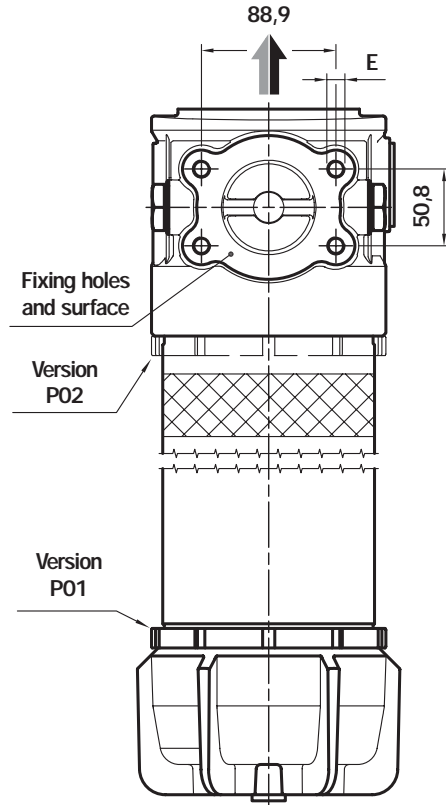
# LMP 400

Length 5 - 6



# LMP 401

Length 5 - 6

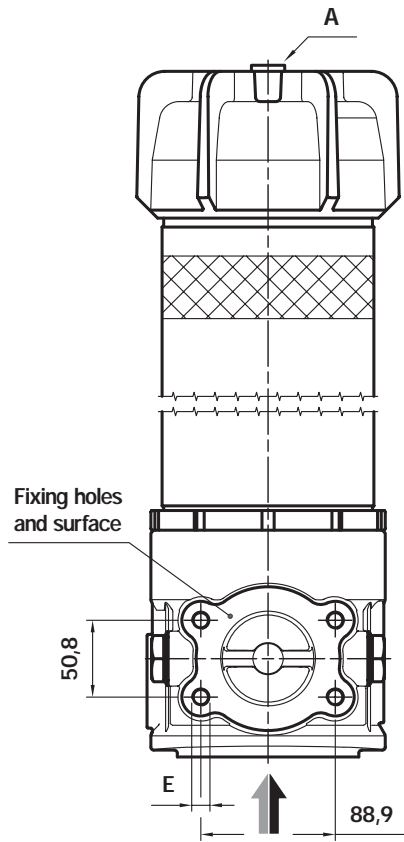
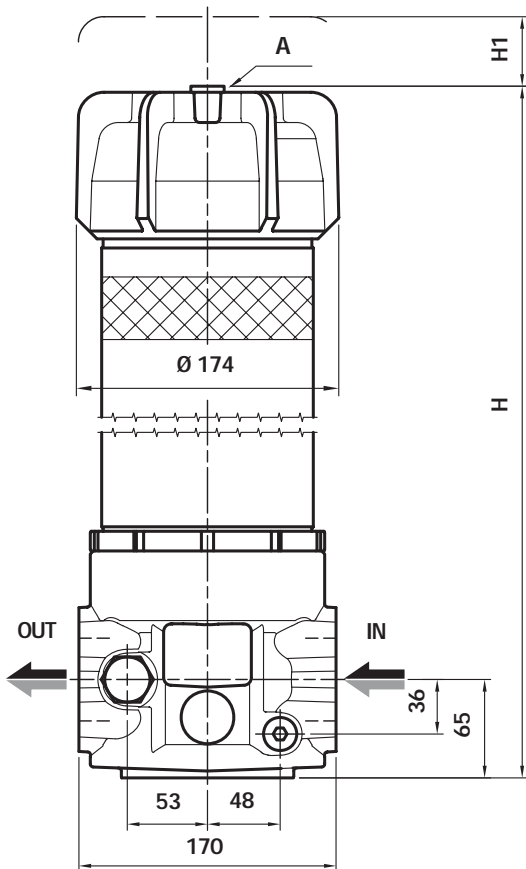
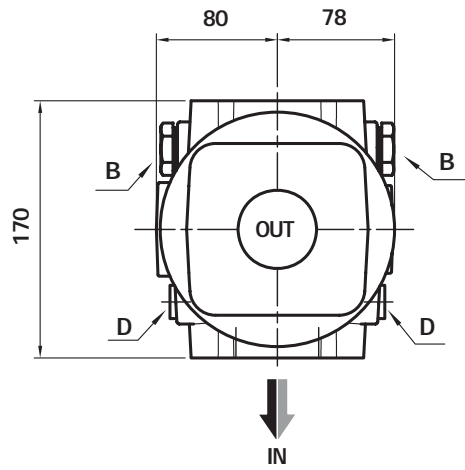
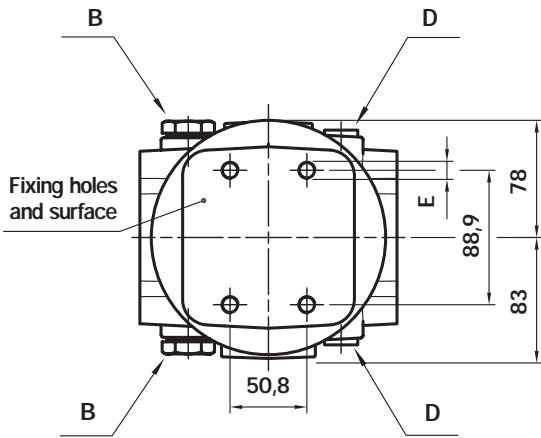


Length Filter	H mm	H1 mm	H2 mm
5	828	120	660
6	1158	120	990

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

# LMP 430

Length 5 - 6



Flanged IN/OUT connections	E Depth 20 mm
2" SAE 3000 psi/M	M12
2 1/2" SAE 3000 psi/M	M12
2" SAE 3000 psi/UNC	1/2" UNC
2 1/2" SAE 3000 psi/UNC	1/2" UNC

Flanged IN/OUT connections	E Depth 20 mm
G 1 1/2"	M12
G 2"	M12
1 1/2" NPT	1/2" UNC
2" NPT	1/2" UNC
SAE 24 - 1 7/8" - 12 UN	1/2" UNC
SAE 32 - 2 1/2" - 12 UN	1/2" UNC

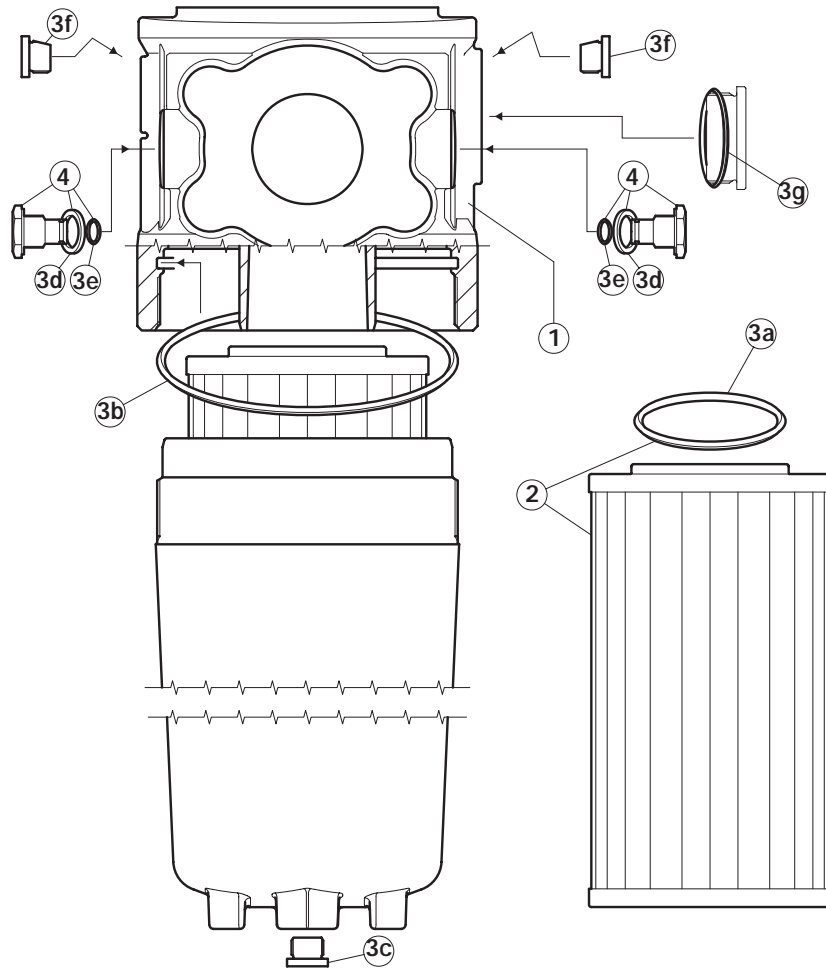
- A Breather plug - G 3/8" - Ch. 8**
- B Indicator connection - Plug T2 - Ch. 30**
- D Oil drain plug - G 3/8" - Ch. 8**

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



# LMP400/401 spare parts

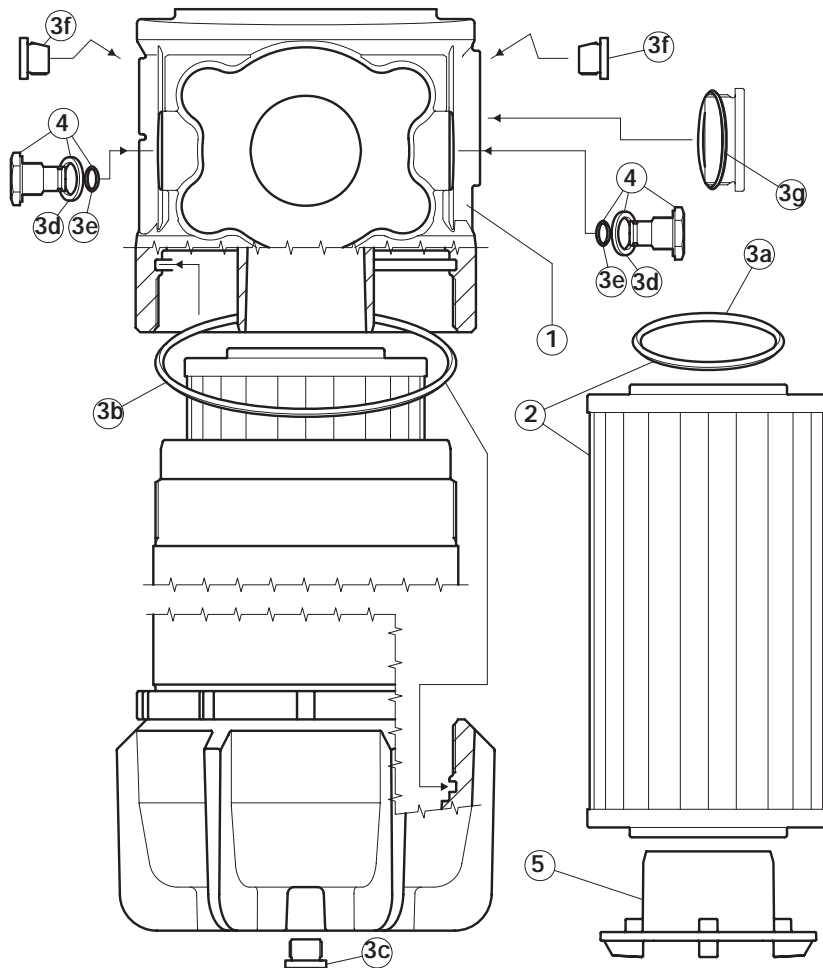
## Length 2, 3, 4



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

# LMP 400/401 spare parts

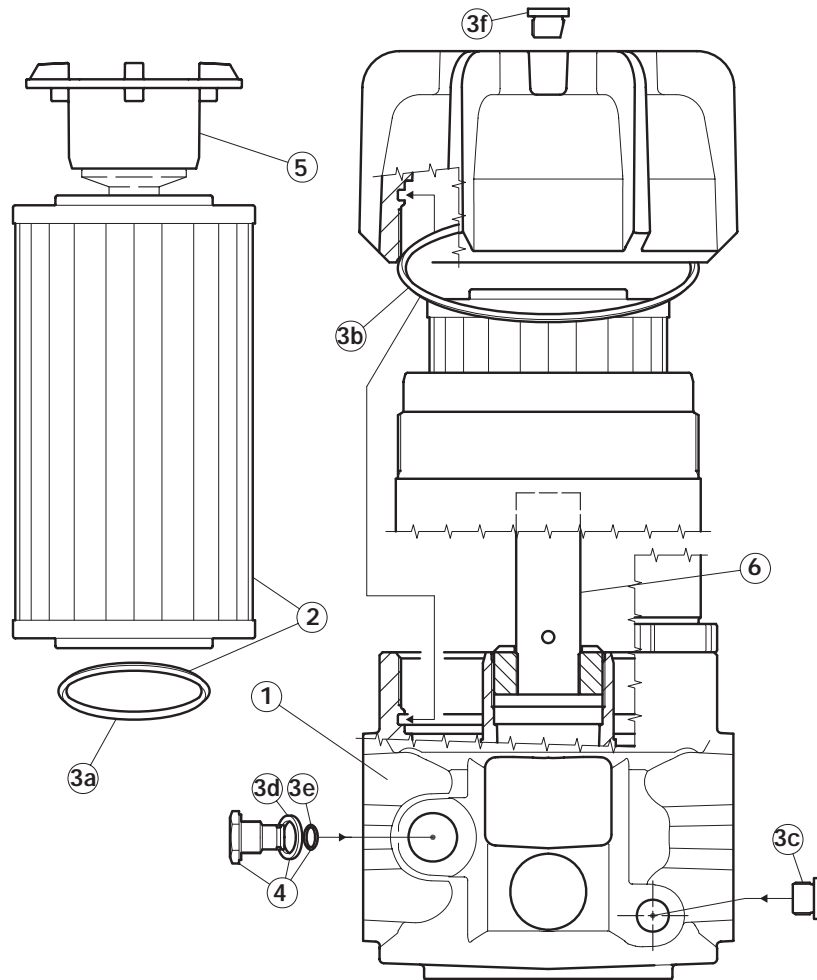
## Length 5, 6



Pos.	Description	Qty	FILTER Series LMP 400/401 5 - 6	
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	1	G 3/8" with seal	
3d	Bonded seal	2	01030058	01030046
3e	O-Ring	2	O-R 2050 Ø 12,42 x 1,78	
3f	Breather plug	2	01029436	
3g	By-pass plug O-Ring	1	O-R 3193 Ø 48,90 x 2,62	
4	Indicator connection plug	2	T2H	T2V
5	Housing spigot	1	01044108	
-	Indicators	1	See order table	

# LMP430/431 spare parts

## Length 5, 6



Pos.	Description	Qty	FILTER Series LMP 430/431 5 - 6	
1	Filter assembly	1	See order table	
2	Filter Element	1	See order table	
3	Seals kit	1	NBR 02050395	FPM 02050396
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	Bonded seal	2	01030058	01030046
3e	O-Ring	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	1	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 LMP400÷431

## Filter assembly LMP

Example: LMP

1	2	3	4	5	6	7	8 a
<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	4	B	A	G3	A10	N	P01

## Filter Element CU 400

Example: CU400

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

### 1 - Sizes

400	430
401	431

### 2 - Filter length

2	LMP 430 - 431 excluded
3	
4	
5	
6	

### 3 - Valves

S	Without by-pass
B	With by-pass

### 4 - Seals

A	NBR
V	FPM (series P10 - P25 filter elements excluded)

### 5 - Connections

Type	
G1	G 1 1/2"
G2	G 2"
G3	1 1/2" NPT
G4	2" NPT
G5	SAE 24 (1 7/8" 12 UN)
G6	SAE 32 (2 1/2" 12 UN)
F1	2" SAE 3000 PSI/M
F2	2 1/2" SAE 3000 PSI/M
F3	2" SAE 3000 PSI/UNC
F4	2 1/2" SAE 3000 PSI/UNC

### 6 - Filter element

A03	3 µm	A16	16 µm	Absolute filtration Inorganic microfibre βx (c) ≥ 1000 see page 9
A06	6 µm	A25	25 µm	
A10	10 µm			
M25	25 µm	M90	90 µm	Nominal Filtration Metal mesh see page 9
M60	60 µm			
P10	10 µm			Nominal Filtration Cellulose see page 9
P25	25 µm			

### 7 - Filter elements series

N	Δp 20 bar
W	Δp 20 bar (aqueous emulsions - water and glycol, not available for series P10 - P25 filter elements)

### 8 - Options

#### a - Filter

P01	MP Standard filters
P02	LMP 400 - 401 Maintenance from base of housing (lengths 5 and 6 only)
P02	LMP 430 - 431 With internal tube for reduced flow rate
Pxx	Customer request

#### b - Filter elements

P01	MP Standard filters
Pxx	Customer request

DIFFERENTIAL INDICATORS (see page 12)

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