LMP 400-401 & 430-431 series

Maximum working pressure up to 6 MPa (60 bar) - Flow rate up to 740 l/min



Description

Low & Medium Pressure filters

Maximum working pressure up to 6 MPa (60 bar)
Flow rate up to 740 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

Technical data

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 [dm³]

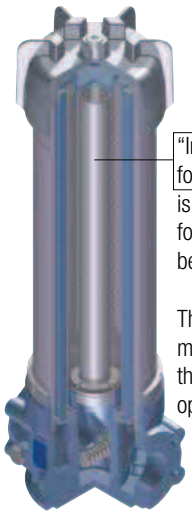
Filter series	Weights [kg]						Volumes [dm³]					
	Length	2	3	4	5	6	Length	2	3	4	5	6
LMP 400-401 & 430-431		7.20	8.10	8.80	11.90	14.40		3.50	5.00	6.50	9.50	13.50

FILTER ASSEMBLY SIZING
Flow rates [l/min]

Filter series	Length	Filter element design - N Series							
		A03	A06	A10	A16	A25	M25 M60 M90 M250	P10	P25
LMP 400	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
LMP 401	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
LMP 430	5	459	501	610	660	717	781	700	721
	6	504	575	676	689	728	783	708	727
LMP 431	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 Δp = 0.7 bar.
The reference fluid has a kinematic viscosity of 30 mm^2/s (cSt) and a density of 0.86 kg/dm^3.
For different pressure drop or fluid viscosity we recommend to use our selection software available on 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

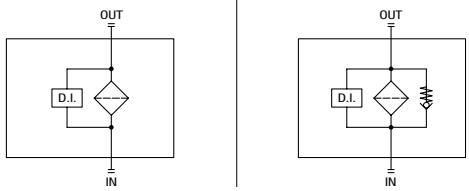


"Internal tube for reduced flow rate" is recommended for flow rate values below 100/150 l/min.

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

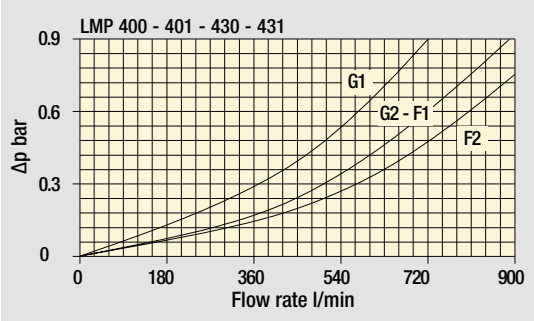
Hydraulic symbols

Filter series	Execution S	Execution B
LMP 400-401 & 430-431	•	•

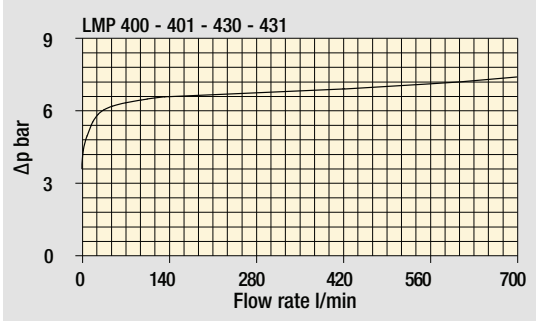


Pressure drop

Filter housings Δp pressure drop



Bypass valve pressure drop



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

LMP 400-401

Designation & Ordering code

COMPLETE FILTER

Configuration example: LMP401 | 3 | B | A | G1 | A10 | N | P01

Series and size

LMP400 | **LMP401**

Length

2 | **3** | **4** | **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”
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

Filtration rating (filter media)

A03 Inorganic microfiber 3 µm
A06 Inorganic microfiber 6 µm
A10 Inorganic microfiber 10 µm
A16 Inorganic microfiber 16 µm
A25 Inorganic microfiber 25 µm

M25 Wire mesh 25 µm
M60 Wire mesh 60 µm
M90 Wire mesh 90 µm
P10 Resin impregnated paper 10 µm
P25 Resin impregnated paper 25 µm

WA025 Water absorber inorganic microfiber 25 µm

Element Δp

N 20 bar

Execution	Filter length 2	3	4	5	6
P01 MP Filtri standard	•	•	•	•	•
P02 Maintenance from the bottom of the housing				•	•
Pxx Customized					

FILTER ELEMENT

Configuration example: CU400 | 3 | A10 | A | N | P01

Element series and size

CU400

Element length

2 | **3** | **4** | **5** | **6**

Filtration rating (filter media)

A03 Inorganic microfiber 3 µm
A06 Inorganic microfiber 6 µm
A10 Inorganic microfiber 10 µm
A16 Inorganic microfiber 16 µm
A25 Inorganic microfiber 25 µm

M25 Wire mesh 25 µm
M60 Wire mesh 60 µm
M90 Wire mesh 90 µm
P10 Resin impregnated paper 10 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

N 20 bar

Execution

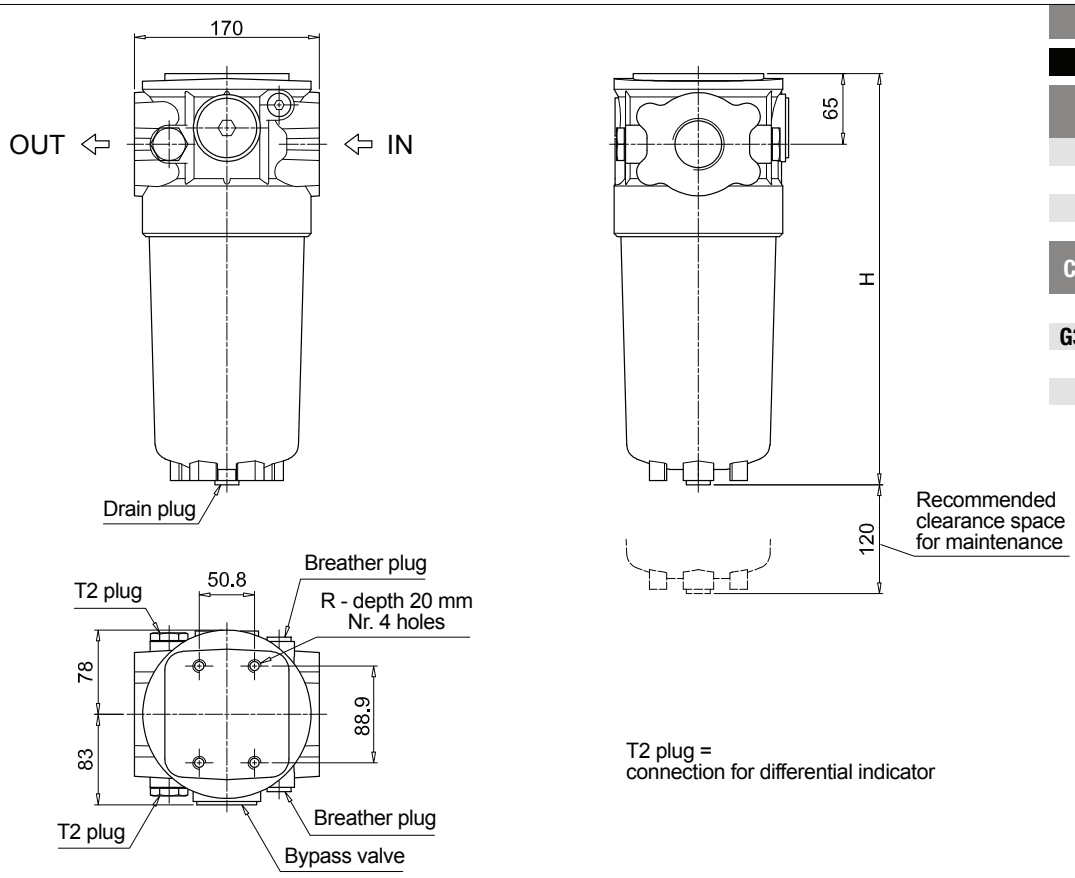
P01 MP Filtri standard
Pxx Customized

ACCESSORIES

Differential indicators	page
DEA Electrical differential indicator	445
DEM Electrical differential indicator	445-446
DLA Electrical / visual differential indicator	446-447
DLE Electrical / visual differential indicator	447

	page
DTA Electronic differential indicator	448
DVA Visual differential indicator	448
DVM Visual differential indicator	448

Additional features	page
T2 Plug	449

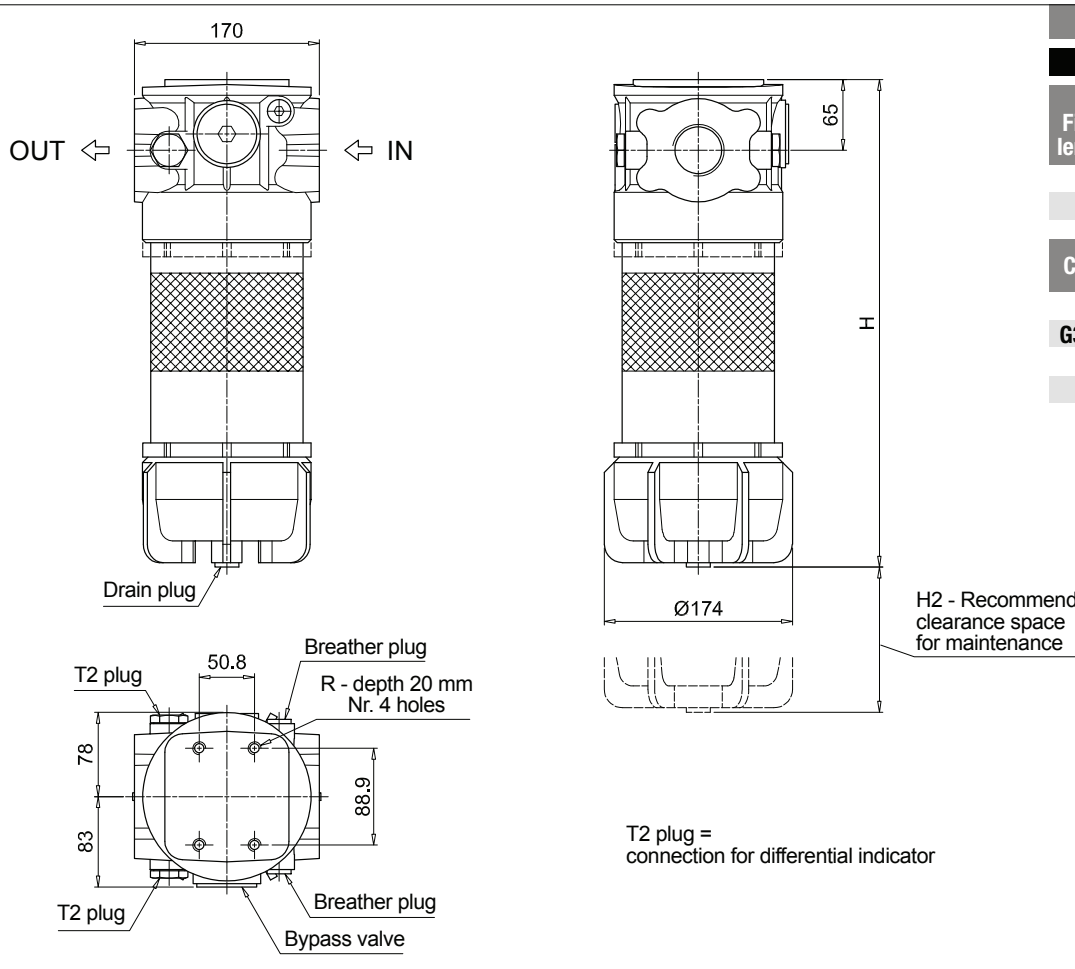


LMP400

Length 2 - 3 - 4

Filter length	H [mm]
2	378
3	478
4	578

Connections	R
G1-G2	M12
G3-G4-G5-G6	1/2" UNC
F1-F2	M12
F3-F4	1/2" UNC



LMP400

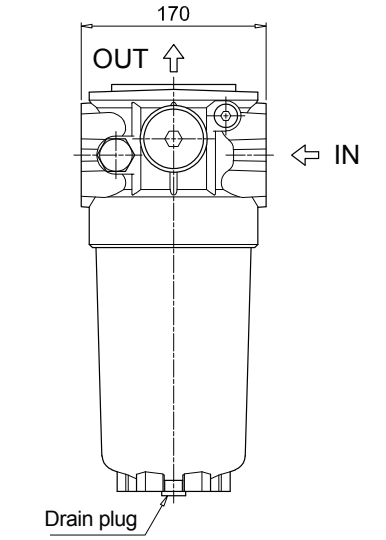
Length 5 - 6

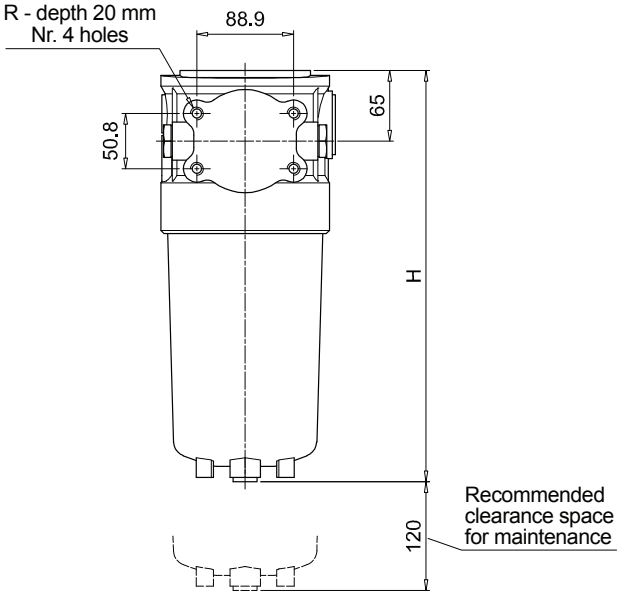
Filter length	H [mm]	H2 [mm] Execution P01	H2 [mm] Execution P02
5	828	120	660
6	1158	120	690

Connections	R
G1-G2	M12
G3-G4-G5-G6	1/2" UNC
F1-F2	M12
F3-F4	1/2" UNC

LMP 400-401

Dimensions





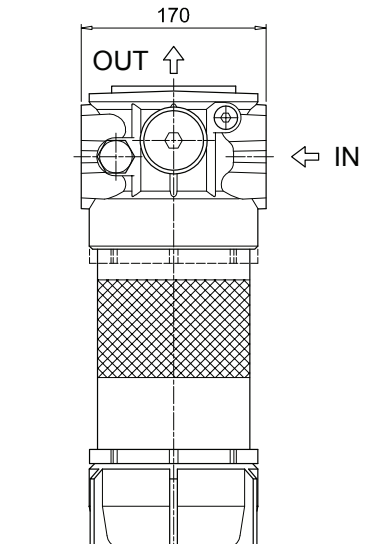
T2 plug =
connection for differential indicator

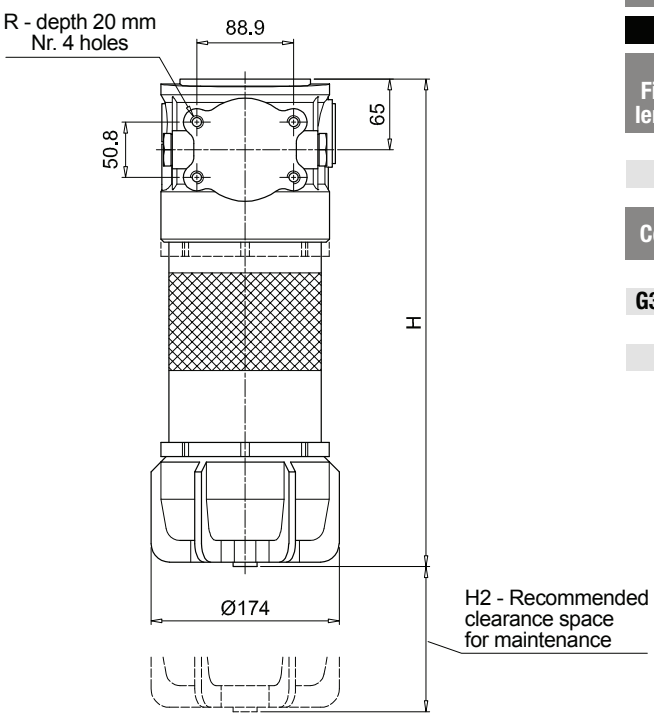
LMP401

Length 2 - 3 - 4

Filter length	H [mm]
2	378
3	478
4	578

Connections	R
G1-G2	M12
G3-G4-G5-G6	1/2" UNC
F1-F2	M12
F3-F4	1/2" UNC





T2 plug =
connection for differential indicator

LMP401

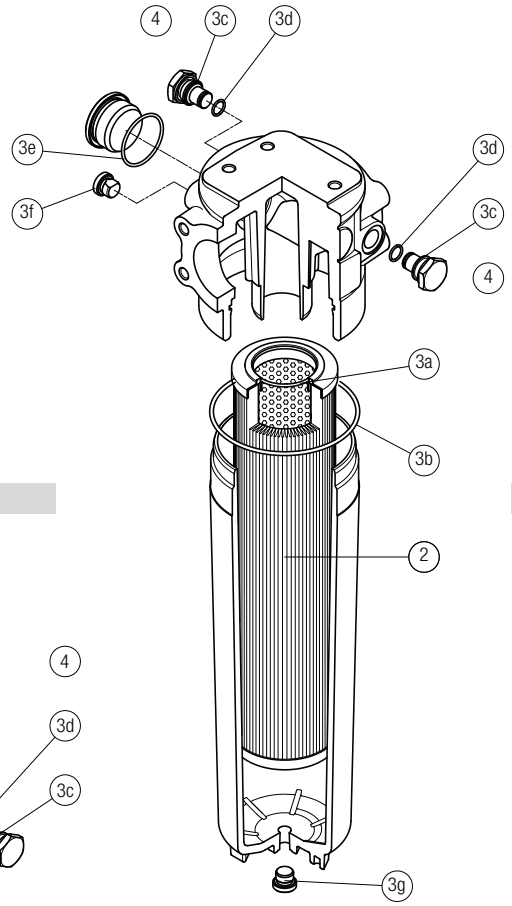
Length 5 - 6

Filter length	H [mm]	H2 [mm] Execution P01	H2 [mm] Execution P02
5	828	120	660
6	1158	120	690

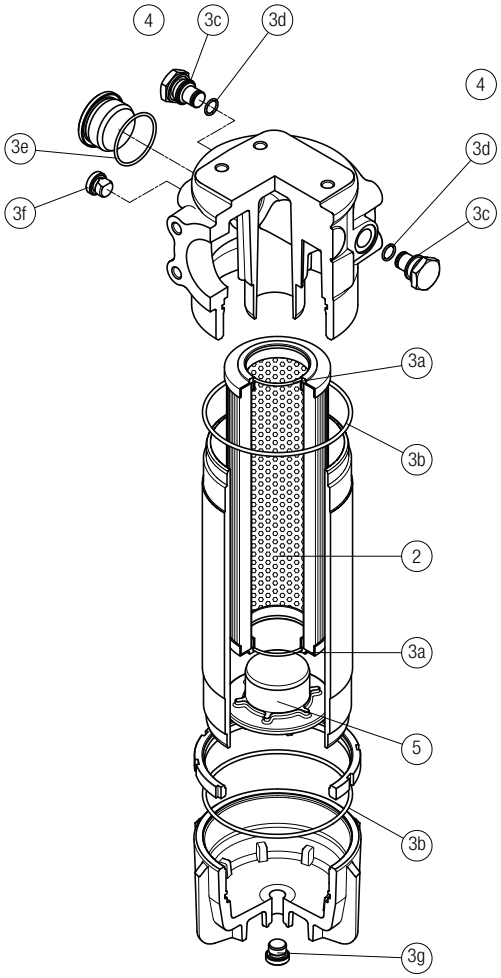
Connections	R
G1-G2	M12
G3-G4-G5-G6	1/2" UNC
F1-F2	M12
F3-F4	1/2" UNC

Order number for spare parts

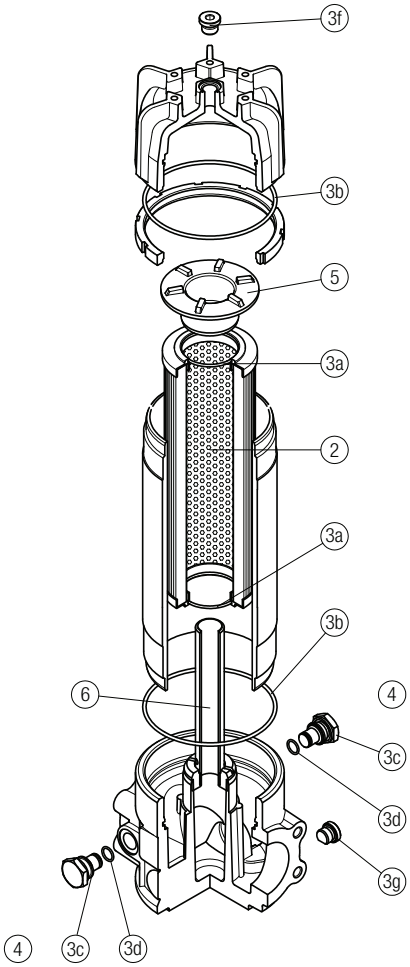
LMP 400 - 401
length 2 - 3 - 4



LMP 400 - 401
length 5 - 6



LMP 430 - 431
length 5 - 6



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