LMP 400-401 & 430-431 series

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

Description

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 780 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]

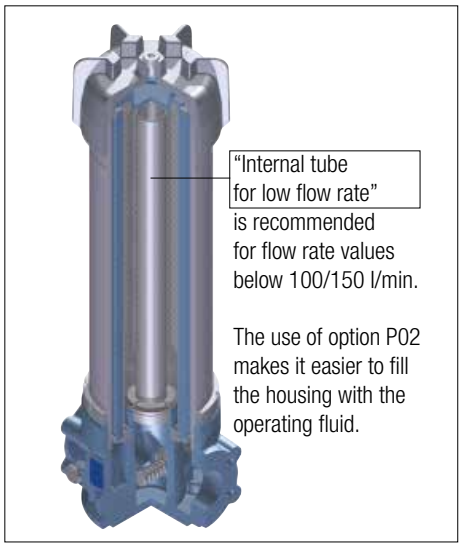
Filter series	Weights [kg]						Volumes [dm³]					
	Length	2	3	4	5	6	Length	2	3	4	5	6
LMP 400-401 & 430-431		7.20	8.10	8.80	11.90	14.40		3.50	5.00	6.50	9.50	13.50

FILTER ASSEMBLY SIZING
Flow rates [l/min]

Filter series	Length	Filter element design - N Series							
		A03	A06	A10	A16	A25	M25 M60 M90	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

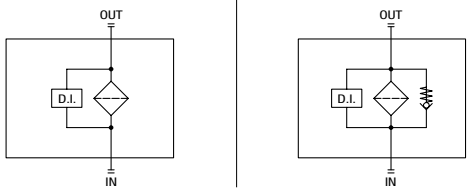
Maximum flow rate for a complete low and medium pressure filter with a pressure drop Δp = 0.7 bar.
The reference fluid has a kinematic viscosity of 30 mm^2/s (cSt) and a density of 0.86 kg/dm^3.
For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.
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



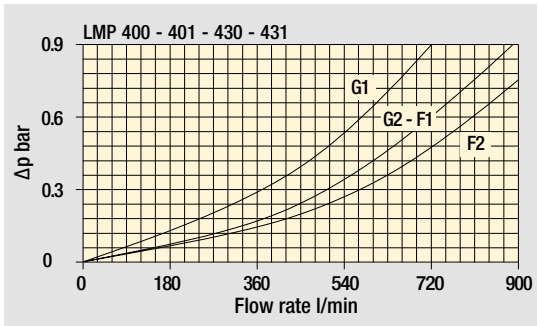
Hydraulic symbols

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

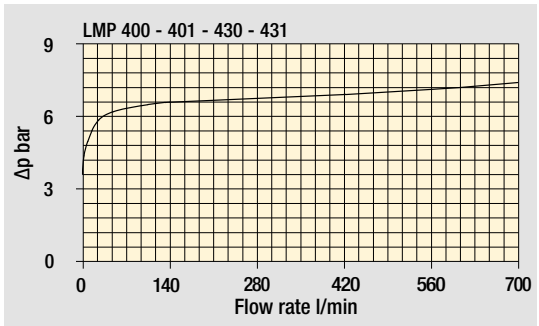


Pressure drop

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 With bypass 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

CLOGGING INDICATORS

See page 686

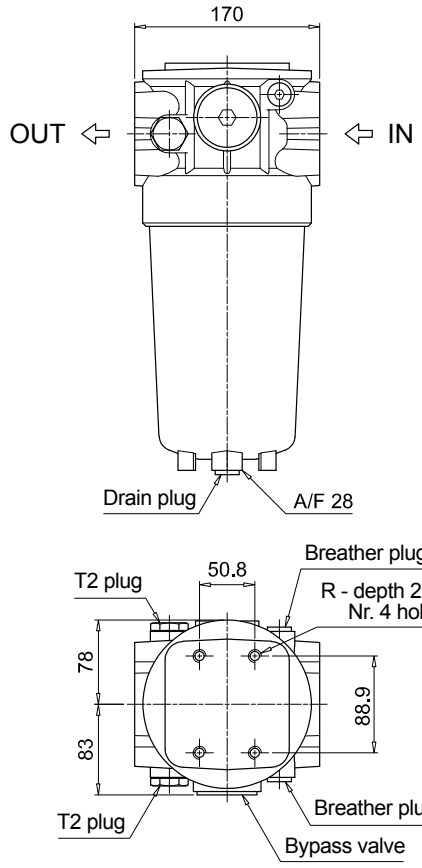
DEA Electrical differential indicator
DEM Electrical differential indicator
DLA Electrical / visual differential indicator
DLE Electrical / visual differential indicator

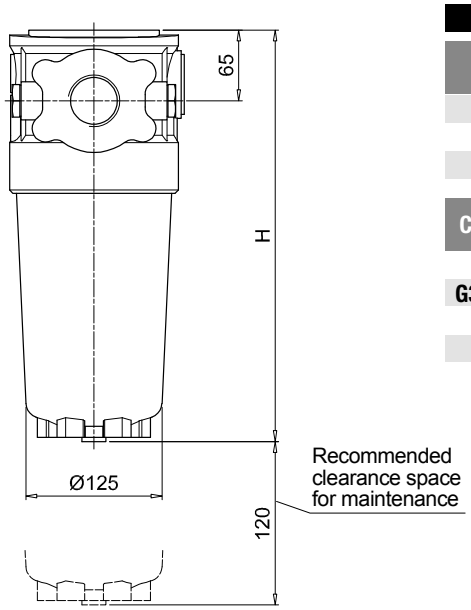
DTA Electronic differential indicator
DVA Visual differential indicator
DVM Visual differential indicator

PLUGS

See page 706

T2 Differential indicator plug





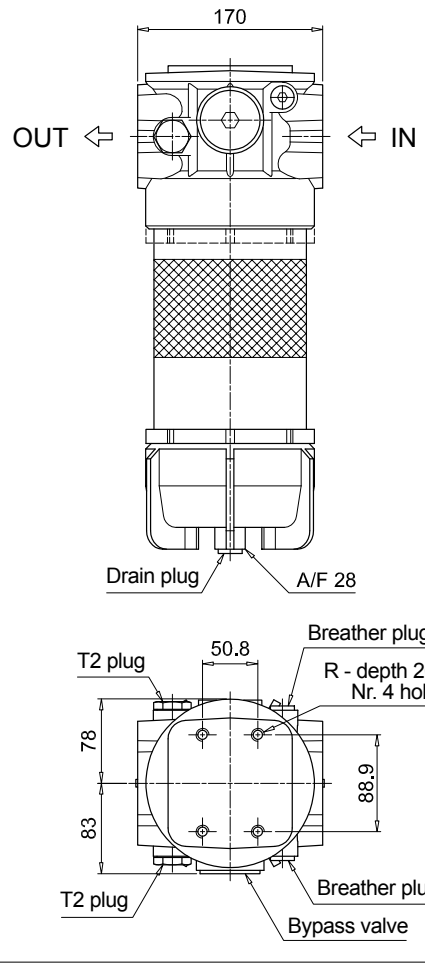
T2 plug =
connection for differential indicator

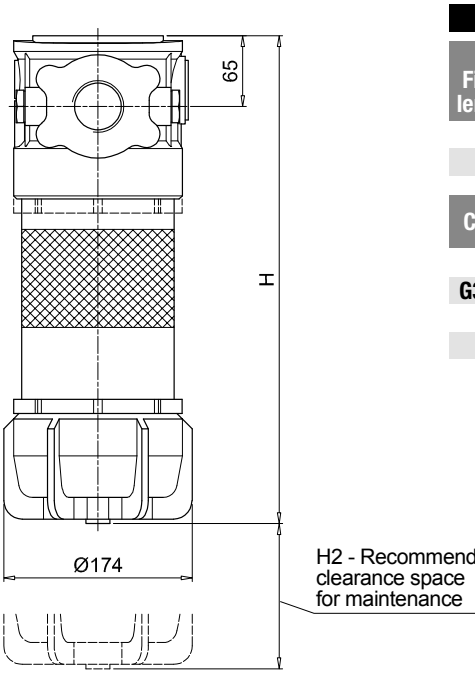
LMP400

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





T2 plug =
connection for differential indicator

LMP400

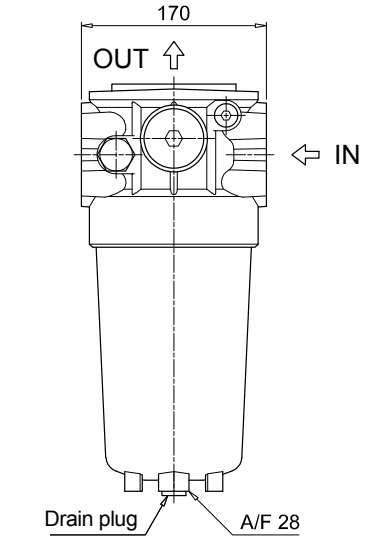
Length 5 - 6

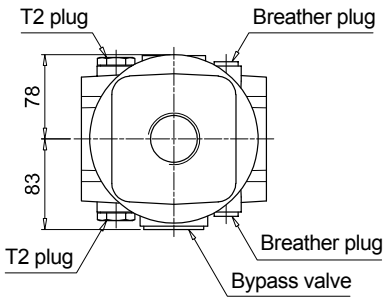
Filter length	H [mm]	H2 [mm] Execution P01	H2 [mm] Execution P02
5	828	120	660
6	1158	120	690

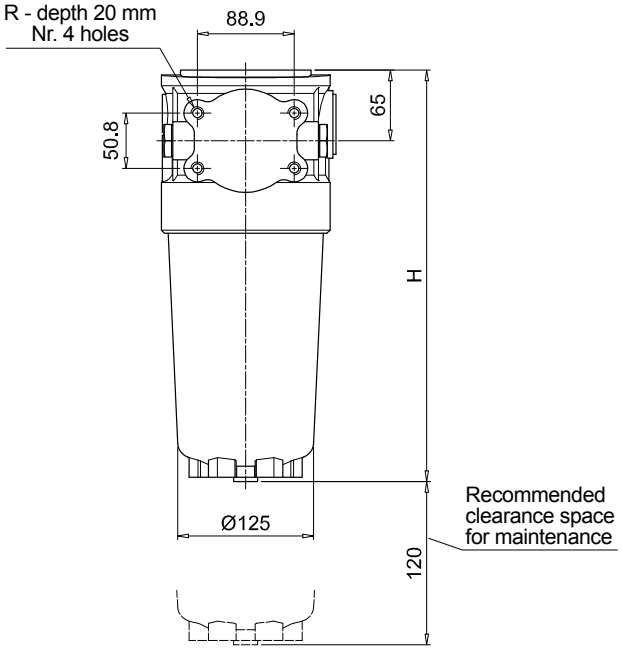
Connections	R
G1-G2	M12
G3-G4-G5-G6	1/2" UNC
F1-F2	M12
F3-F4	1/2" UNC

LMP 400-401

Dimensions







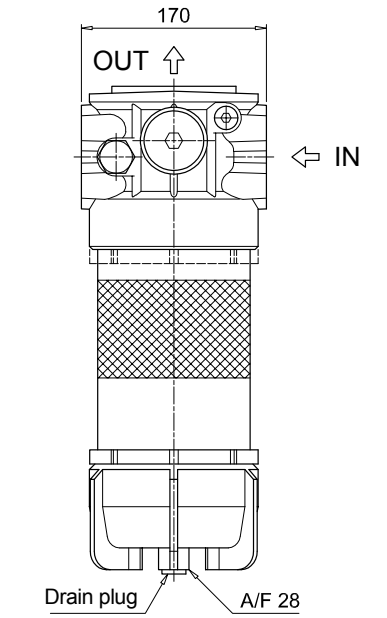
T2 plug =
connection for differential indicator

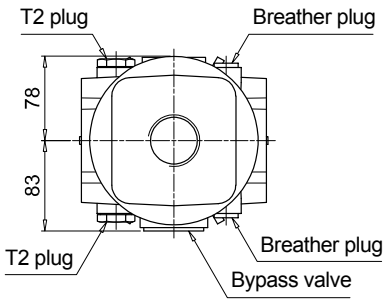
LMP401

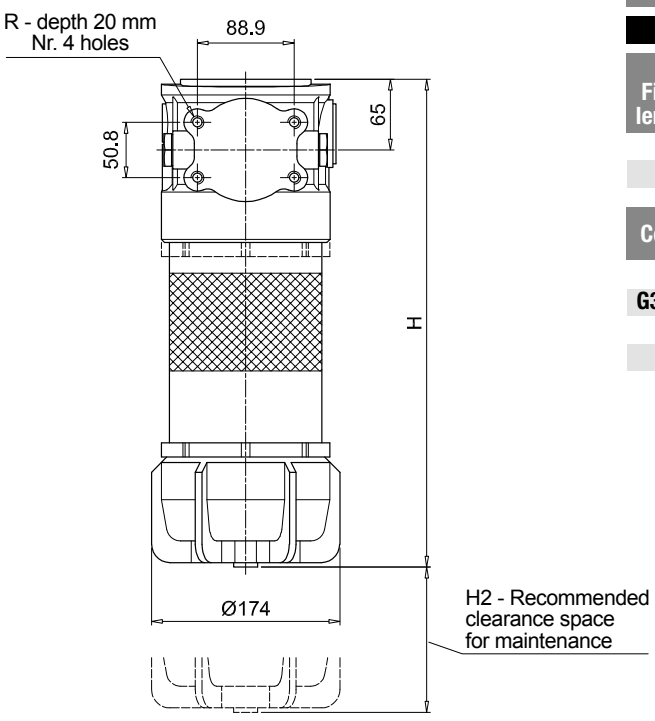
Length 2 - 3 - 4

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

LMP 430-431

Designation & Ordering code

COMPLETE FILTER

Configuration example: LMP431 | 5 | B | A | G1 | A10 | N | P01

Series and size

LMP430 | **LMP431**

Length

5 | **6**

Bypass valve

S	Without bypass	**B**	With bypass 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”	**F1**	2” SAE 3000 psi/M
G2	G 2”	**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		

Filtration rating (filter media)

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

WA025 Water absorber inorganic microfiber 25 µm

Element Δp

N 20 bar

Execution

P01	MP Filtri standard
P02	With internal tube for low flow rate
Pxx	Customized

FILTER ELEMENT

Configuration example: CU400 | 5 | A10 | A | N | P01

Element series and size

CU400

Element length

5 | **6**

Filtration rating (filter media)

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

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

CLOGGING INDICATORS

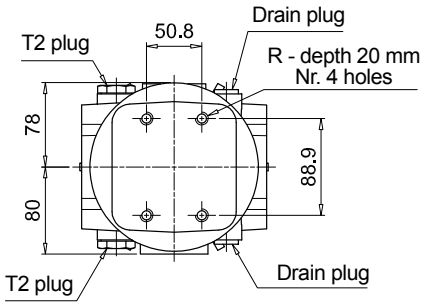
See page 686

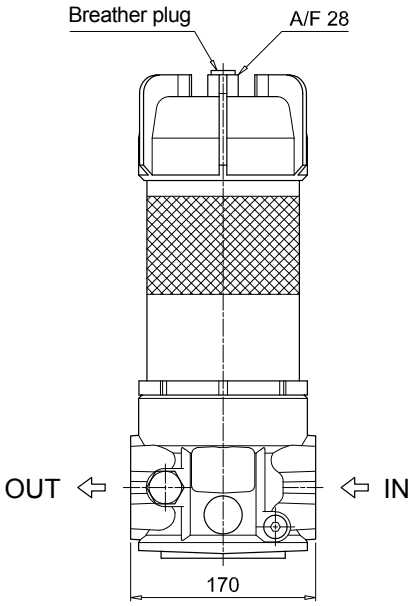
DEA	Electrical differential indicator	**DTA**	Electronic differential indicator
DEM	Electrical differential indicator	**DVA**	Visual differential indicator
DLA	Electrical / visual differential indicator	**DVM**	Visual differential indicator
DLE	Electrical / visual differential indicator		

PLUGS

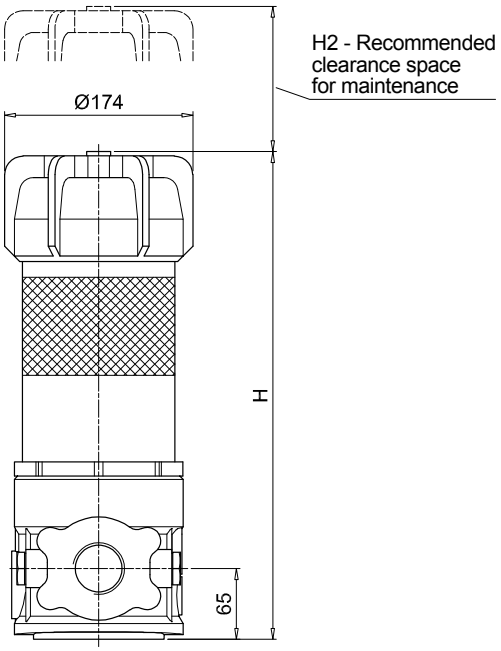
See page 706

T2 Differential indicator plug





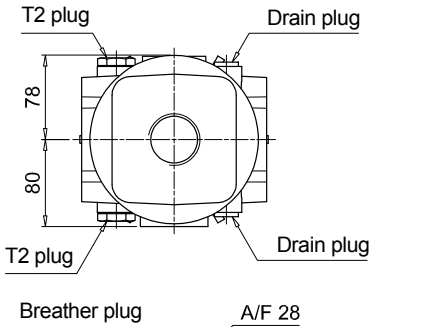
T2 plug =
connection for differential indicator

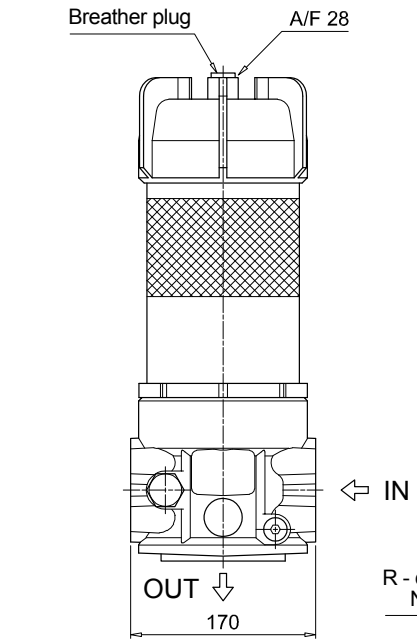


LMP430

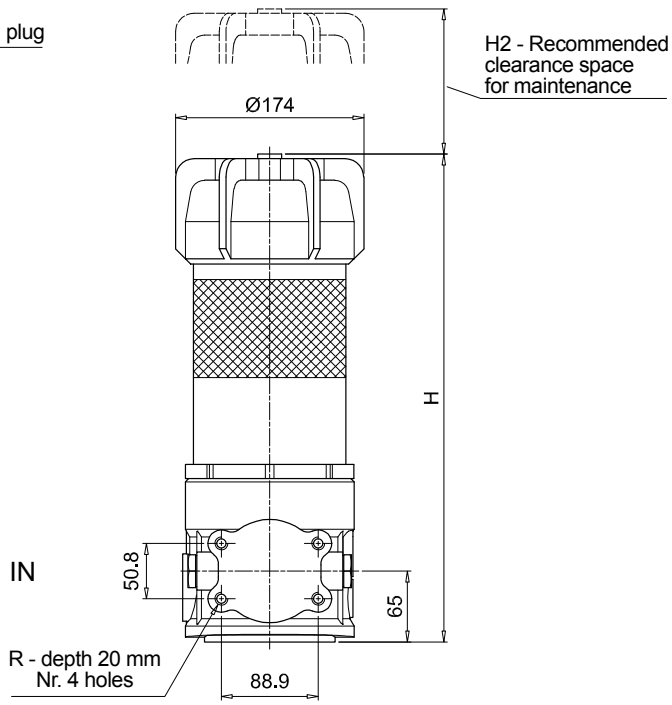
Filter length	H [mm]	H2 [mm]
5	828	660
6	1158	690

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



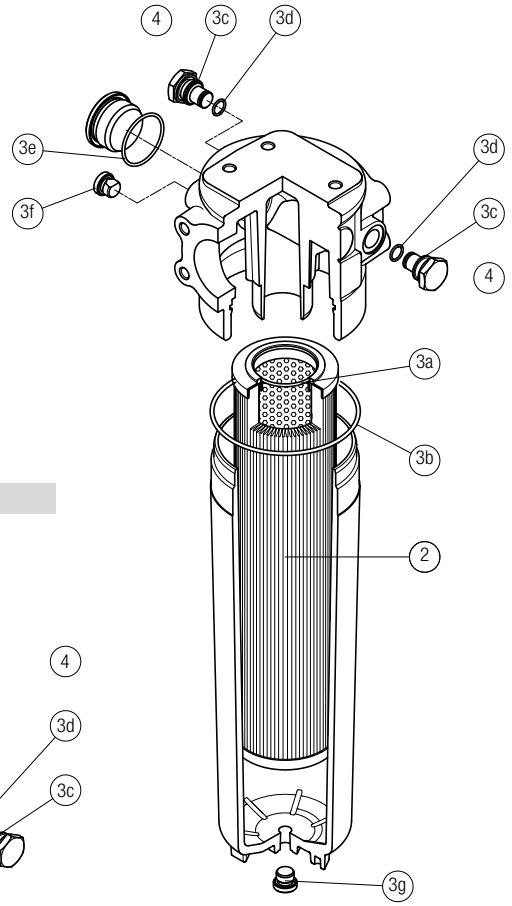
LMP431

Filter length	H [mm]	H2 [mm]
5	828	660
6	1158	690

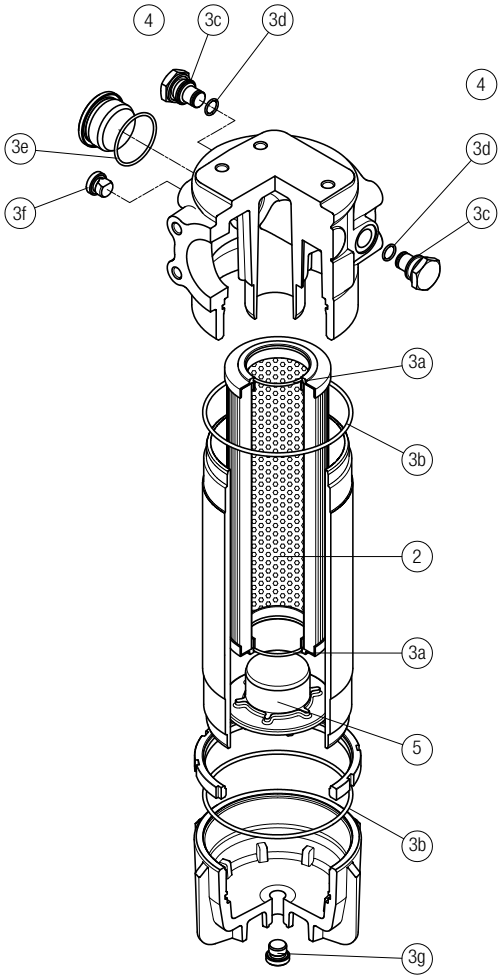
Connections	R
G1-G2	M12
G3-G4-G5-G6	1/2" UNC
F1-F2	M12
F3-F4	1/2" UNC

Order number for spare parts

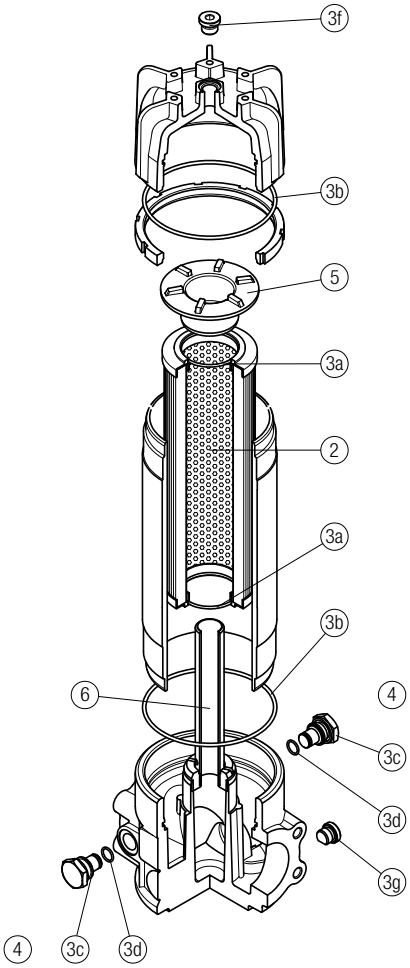
LMP 400 - 401
length 2 - 3 - 4



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**	**Internal tube for low flow rate, execution P02**	
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