

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

- Working pressure: 6 MPa (60 bar)
- Test pressure: 9 MPa (90 bar)
- Min. Burst pressure: 18 MPa (180 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 6 MPa (60 bar)

Pressure LMP 400-401 length 5 - 6

- Working pressure: 5 MPa (50 bar)
- Test pressure: 7.5 MPa (75 bar)
- Min. 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 0.35 MPa (3.5 bar) ±10%
- Other opening pressures on request.

Filter element features

Filter LMP 400-401	Filter element CU		
Δp Element type			
Element media	Construction	Δp Series	Δp
A - Microfiber	Standard	N	20 bar
M - Wire mesh	Standard	N	20 bar
P - Paper	Standard	N	20 bar
Please see ordering code tables to check element Δp series availability based on filter features.			
Flow direction through the filter element:			
From OUT to IN			

Seals

- Standard NBR series A
- Optional FPM series V

Connections

LMP 400: In-line Inlet/Outlet
 LMP 401: 90° Inlet/Outlet

Temperature

From -25 °C to +110 °C

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		7.20	8.10	8.80	11.90	14.40		3.50	5.00	6.50	9.50	13.50

Flow rates [l/min]

		Filter element design - N Series							
Filter series	Length	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

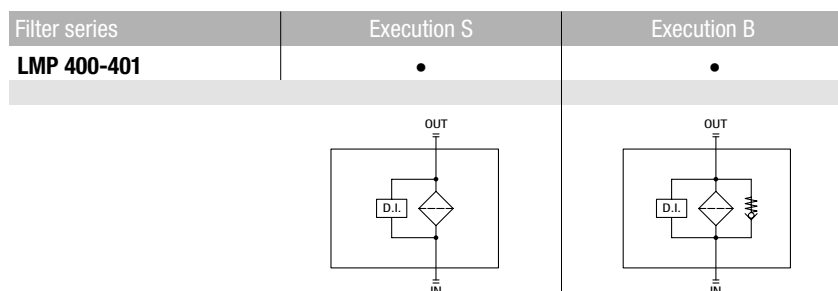
Maximum flow rate for a complete low and medium pressure filter with a pressure drop $\Delta p = 0.7$ bar.

The reference fluid has a kinematic viscosity of 30 mm²/s (cSt) and a density of 0.86 kg/dm³.

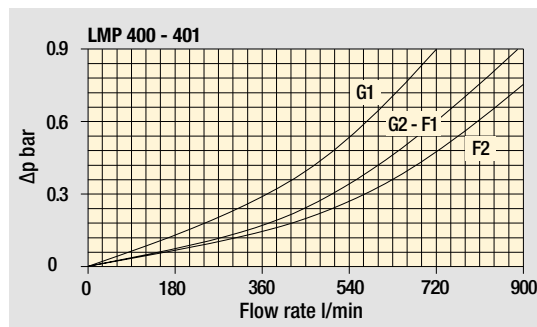
For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.

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.

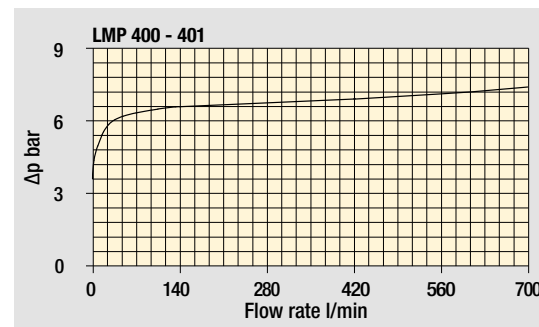
Hydraulic diagram



Pressure drop

Filter housings Δp pressure drop


Bypass valve pressure drop


The curves are plotted using mineral oil with density of 0.86 kg/dm³ in compliance with ISO 3968. Δp varies proportionally with density.

LMP 400-401

Designation & Ordering code

COMPLETE FILTER

Series and size		Configuration example: LMP401									
LMP400 LMP401		3	B	A	G1	A10	N	P01			
Length											
2 3 4 5 6											
Bypass valve											
S Without bypass		B With bypass 3.5 bar									
Seals and treatments		Filtration rating									
A NBR		Axx Mxx Pxx									
V FPM											
W NBR with surface-treatment on filter element's tube											
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		Filter length									
N 20 bar		2 3 4 5 6									
Execution		P01 MP Filtri standard									
P02 Maintenance from the bottom of the housing											
Pxx Customized											

FILTER ELEMENT

Element series and size		Configuration example: CU400						
CU400		3	A10	A	N	P01		
Element length								
2 3 4 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						
A NBR		Axx Mxx Pxx						
V FPM								
W NBR with surface-treatment on tube								
Element Δp		Execution						
N 20 bar		P01 MP Filtri standard						
Pxx Customized								

CLOGGING INDICATORS

See page 784

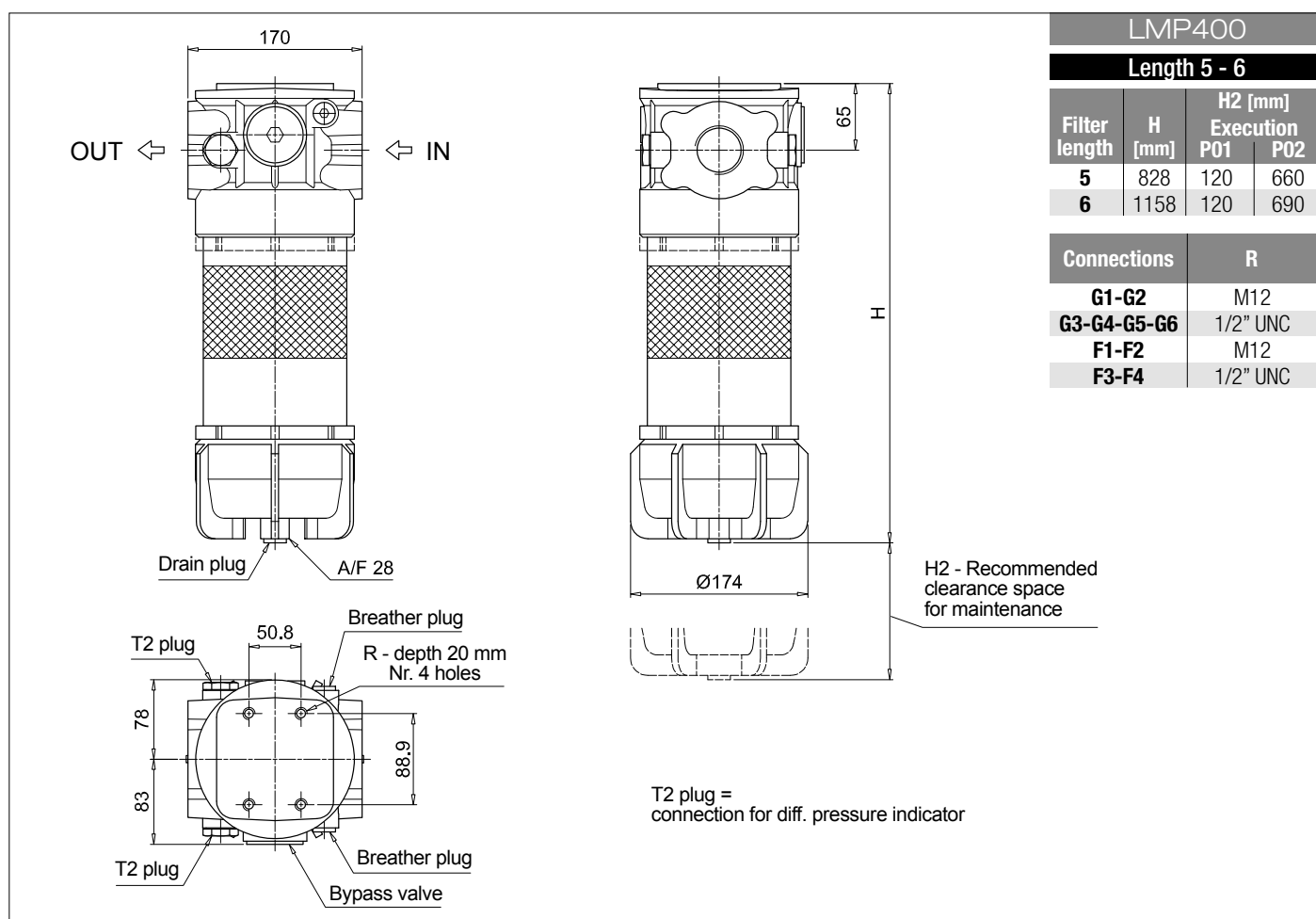
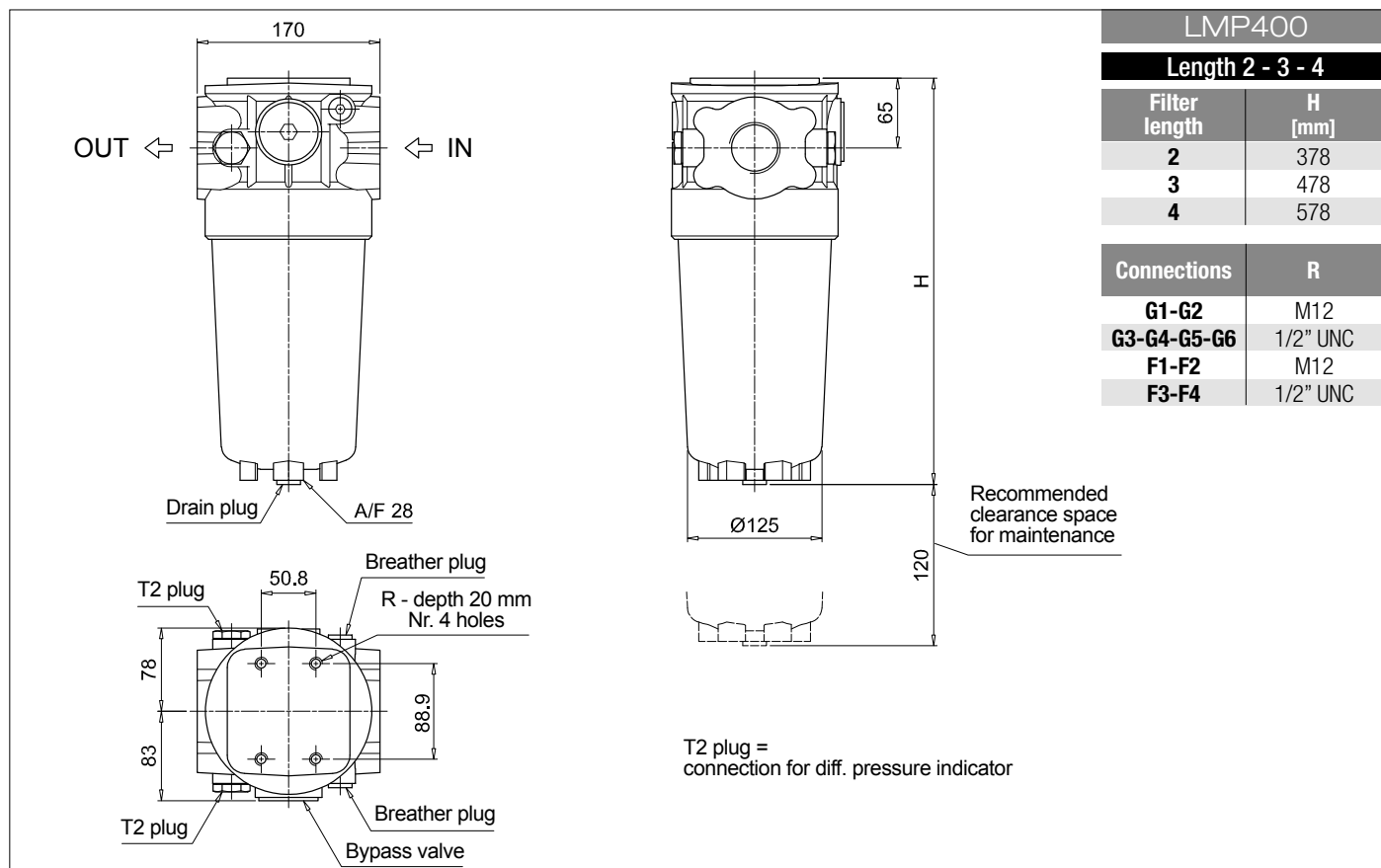
DEA	Electrical differential pressure indicator
DEM	Electrical differential pressure indicator
DEU	Electrical differential pressure indicator
DLA	Electrical / visual differential pressure indicator
DLE	Electrical / visual differential pressure indicator

DTA	Electronic differential pressure indicator
DTI	I-O Link electronic differential pressure indicator
DVA	Visual differential pressure indicator
DVM	Visual differential pressure indicator

PLUGS

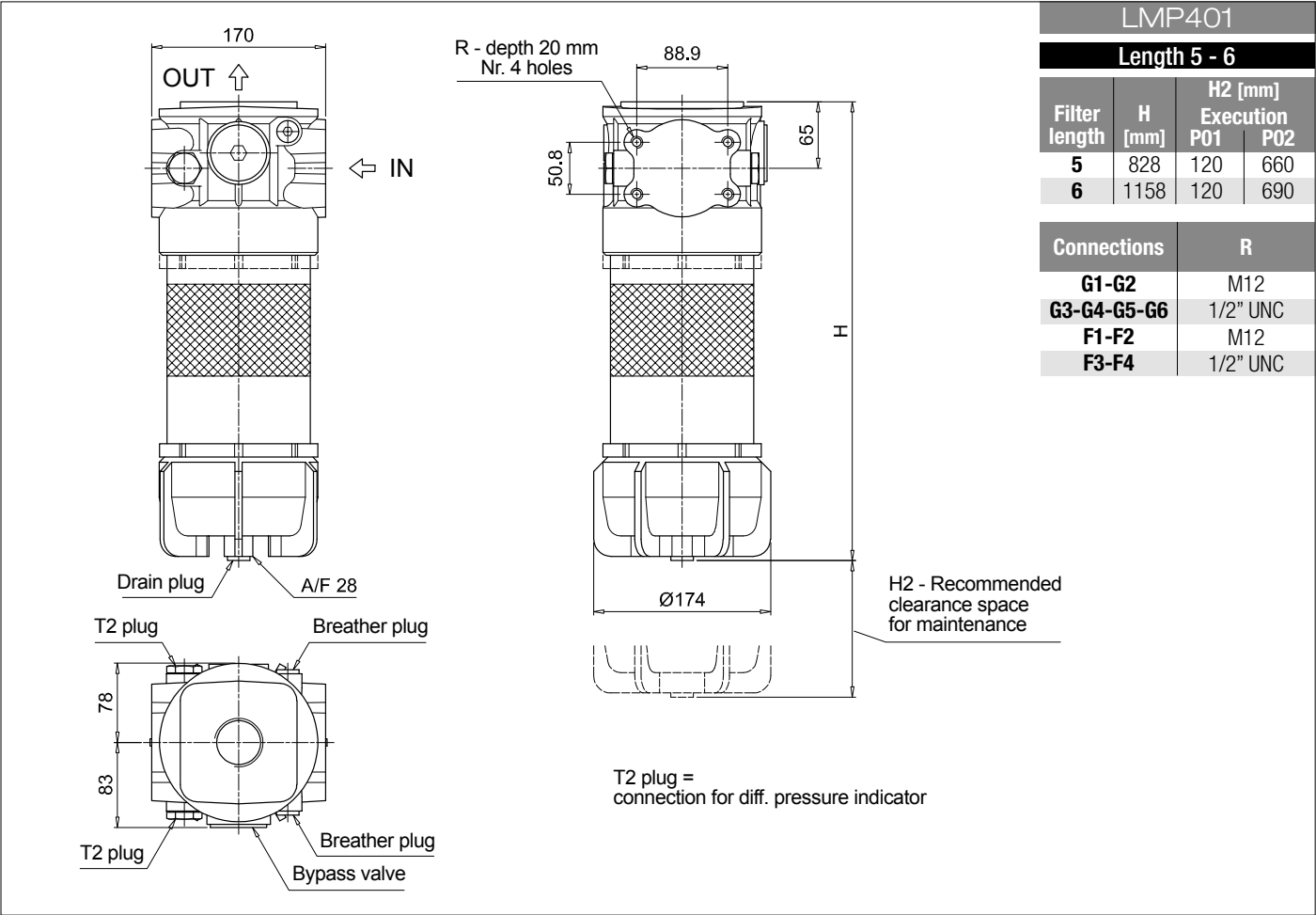
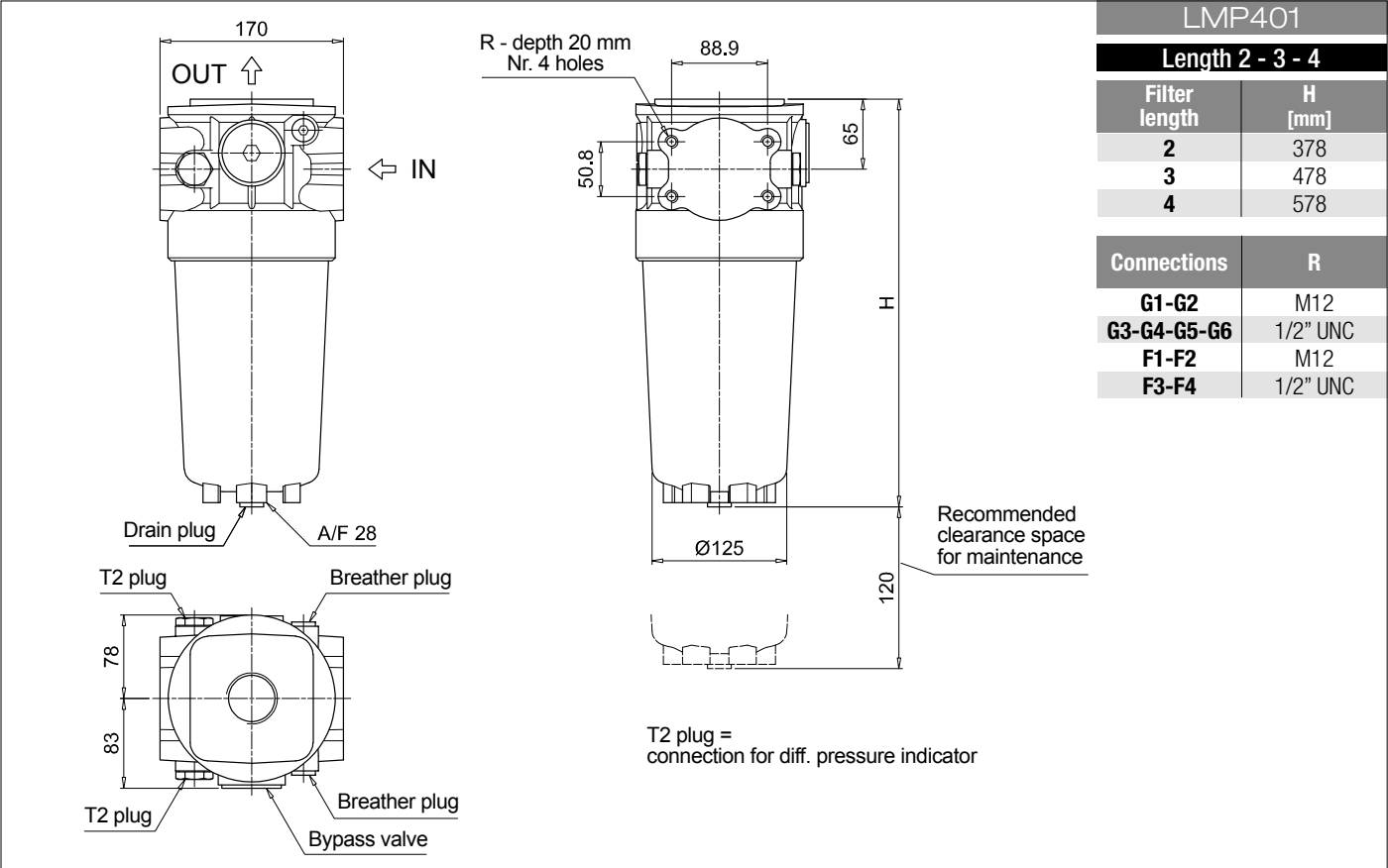
See page 807

T2	Plug
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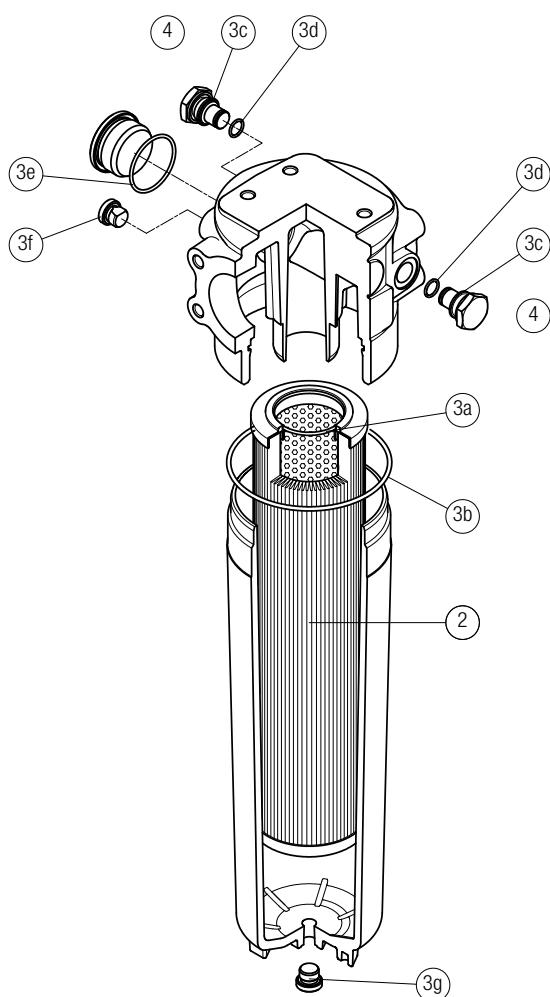
LMP 400-401

Dimensions

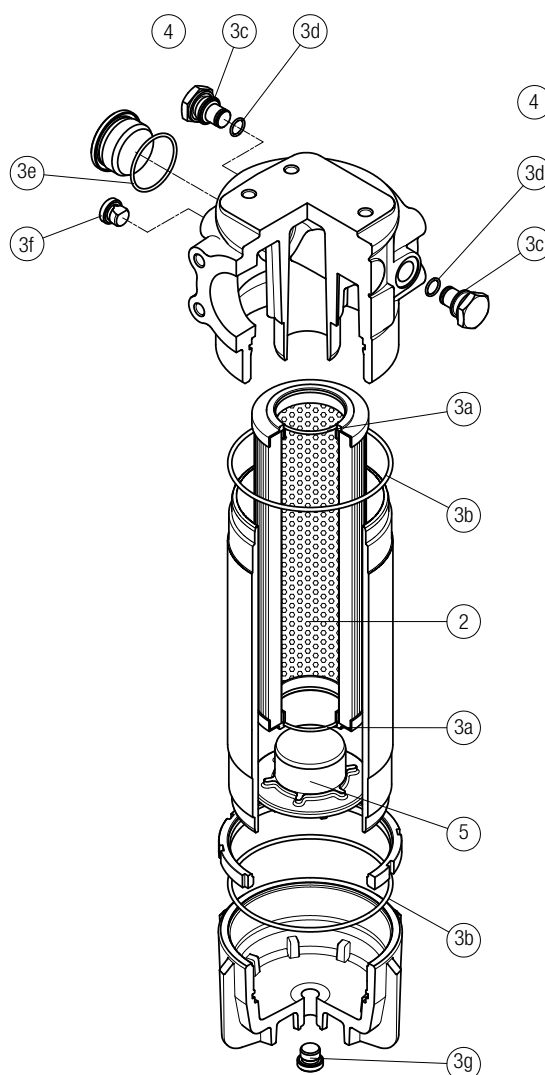


LMP 400 - 401

length 2 - 3 - 4



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
Filter series	Filter element	Seal Kit code number NBR FPM	Indicator connection plug NBR FPM	Housing spigot no bypass
LMP 400-401 length 2-3-4	See order table	02050391 02050392	T2H T2V	-
LMP 400-401 length 5-6		02050393 02050394		01044108