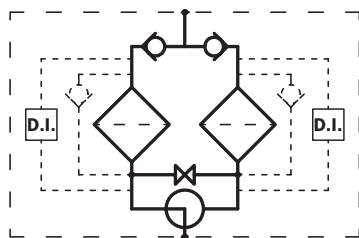


LMD 400 - 401 - 431



LMD 400 - 401 - 431
Double filter



Maximum pressure 16 bar
Flow rates to 590 l/min

Filter housing (Materials)

- Head: Anodised Aluminium
- Housing: Anodised Aluminium
- Manifolds: Steel - Painted black
- Bypass valve: Steel
- 3-way ball valve: Steel housings - Stainless Steel ball
- Valve: Phosphated Steel - Stainless Steel

Pressure

- Working pressure: 16 bar (1.6 MPa)
- Test pressure: 25 bar (2.5 MPa)

Temperature

- From -25 °C to +110 °C

Bypass valve

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

Δp Elements type

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

Seals

- Standard FPM series V

Weights (kg)

Length

- LMD400 - 401 4 60
- LMD400 - 401 5 65
- LMD400 - 401 6 72
- LMD431 5 68
- LMD431 6 75

Volumes (dm³)

Length

- LMD400 - 401 - 431 4 18
- LMD400 - 401 - 431 5 24
- LMD400 - 401 - 431 6 32

Connections

Inlet-Outlet

- Twin vertically mounted (excluded version LMD 400)
- In-Line

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

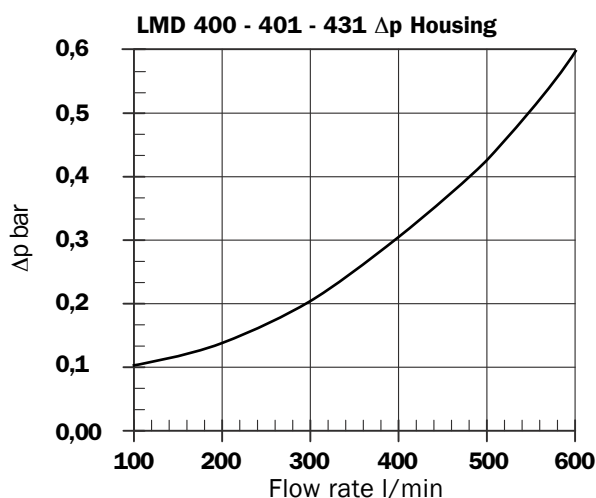
Type	Length		
	4	5	6
CU 400	6550	10200	15300

Values expressed in cm²

Filter housing Δp pressure drop

The curves are plotted utilising mineral oil with density of 0.86 kg/dm³ to ISO 3968.

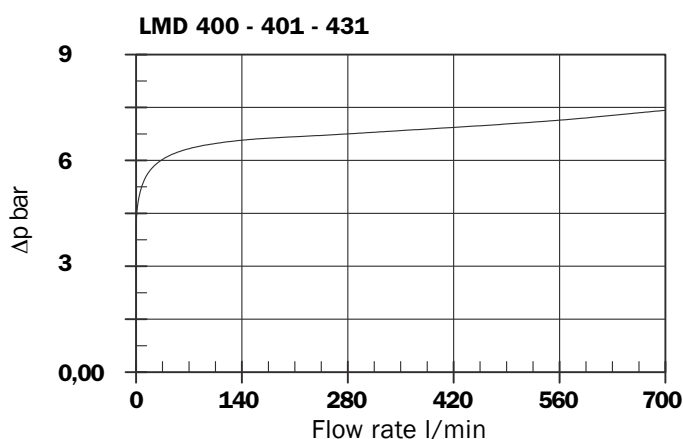
Δp varies proportionally with density.



Valves

Bypass valve pressure drop

For individual filter body



Option P02 for LMD 431



Option P02 “Internal tube for reduced flow rate” is recommended for flow rate values below: 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.

Connections	
Oil velocity	2 1/2"
2,5 m/sec.	500
5 m/sec.	1000
Flow rate l/min	

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

Recommended maximum flow rate

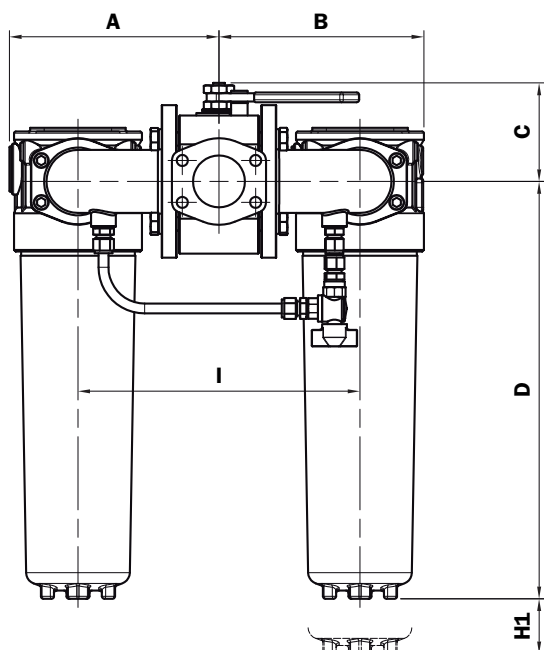
- Pressure drop of filter assembly equal to $\Delta p\ 0.6$ bar.
- Oil kinematic viscosity 30 mm²/s (cSt).
- Density 0.86 kg/dm³.

		Filtration							
	Length	A03	A06	A10	A16	A25	P10	P25	M25
LMD 400 - 401	4	265	310	410	430	485	500	520	570
431	5	355	385	465	500	540	530	540	580
	6	390	440	510	520	560	540	555	590

Flow rate l/min

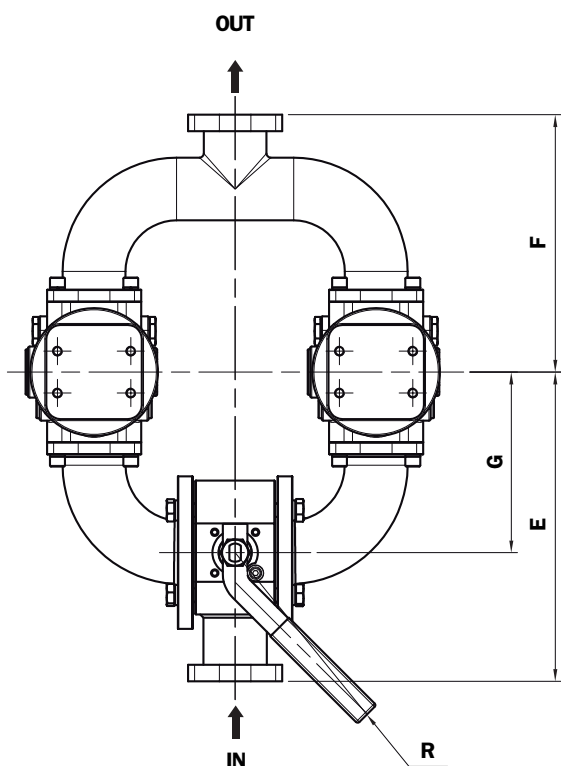
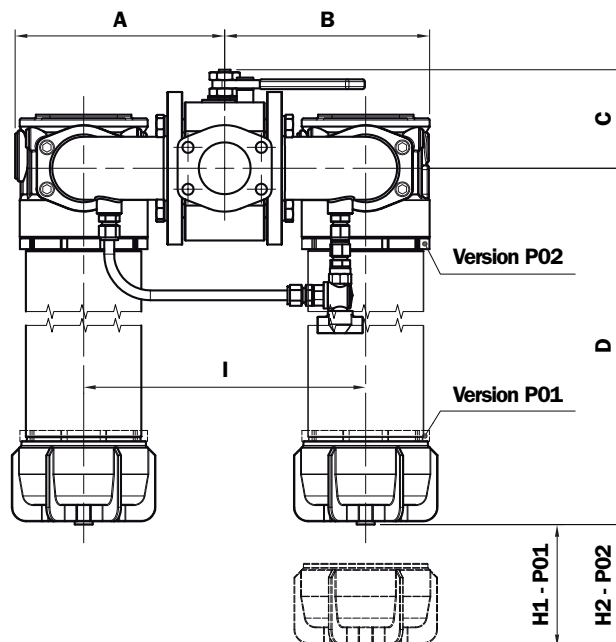
LMD 400

Length 4



LMD 400

Length 5 - 6



Filter fixing holes LMD 400

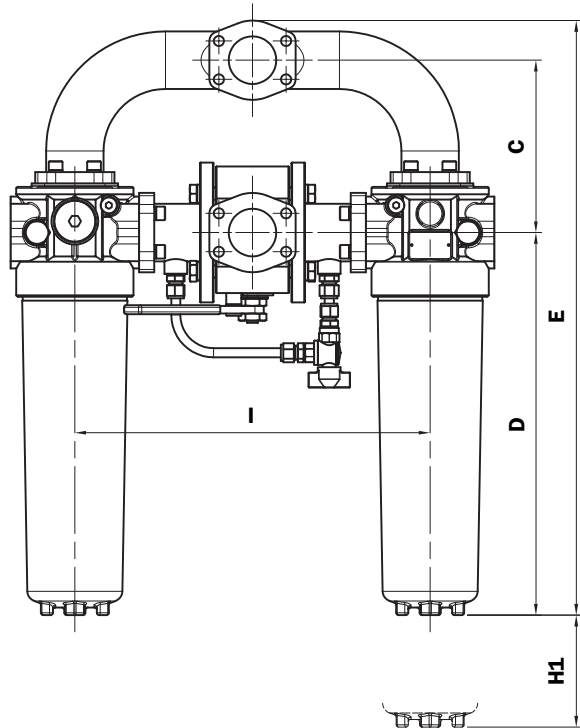


LMD 400

Length Filter	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H1 mm	H2 mm	I mm	R mm
4	255	255	120	513	351	285	195	120	-	342	255
5	255	255	120	765	351	285	195	120	660	342	255
6	255	255	120	1095	351	285	195	120	990	342	255

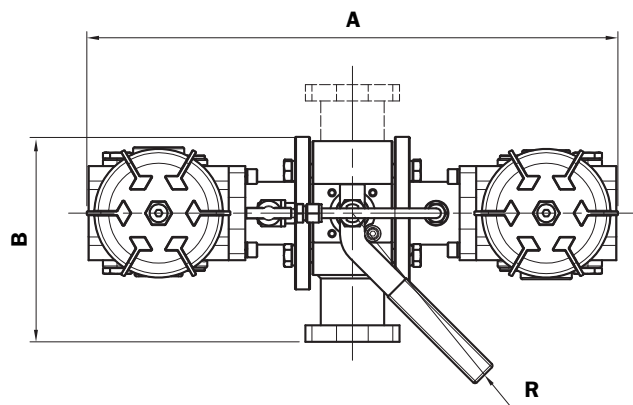
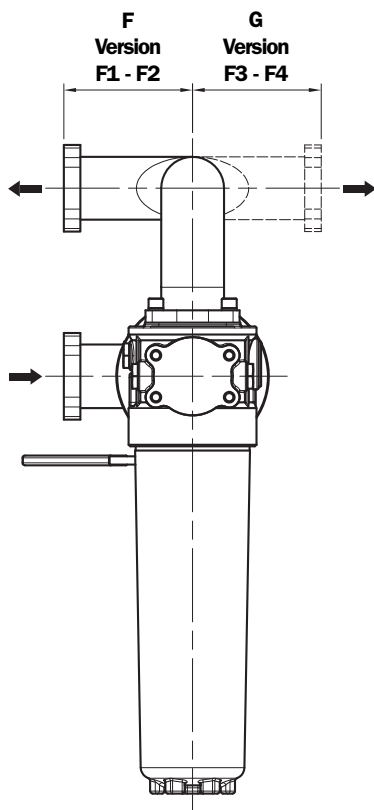
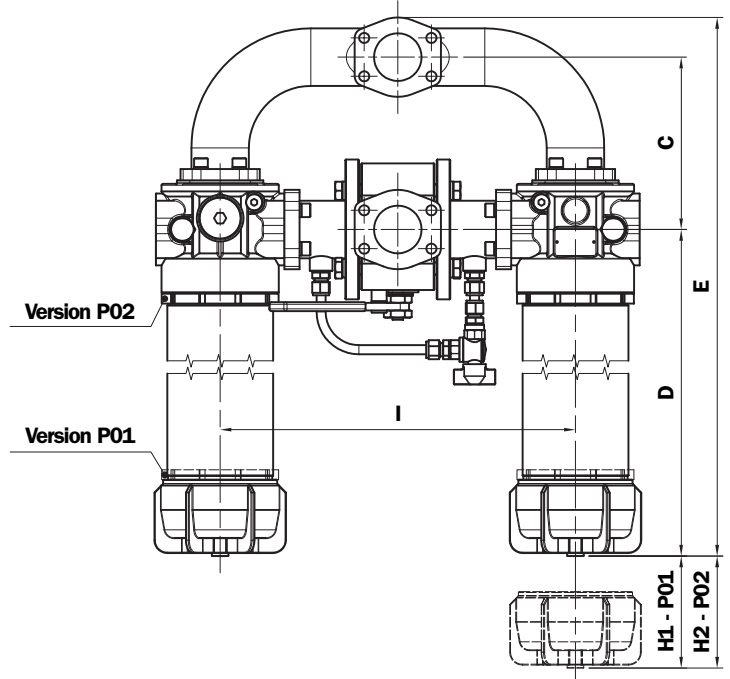
LMD 401

Length 4



LMD 401

Length 5 - 6

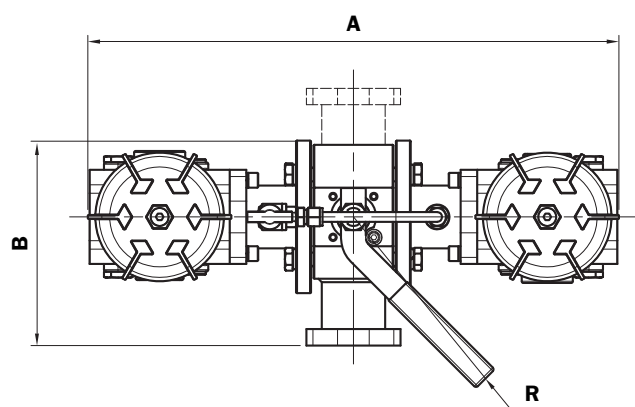
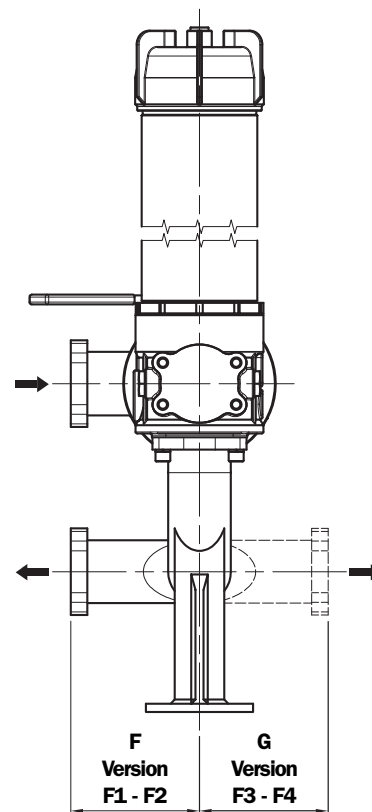
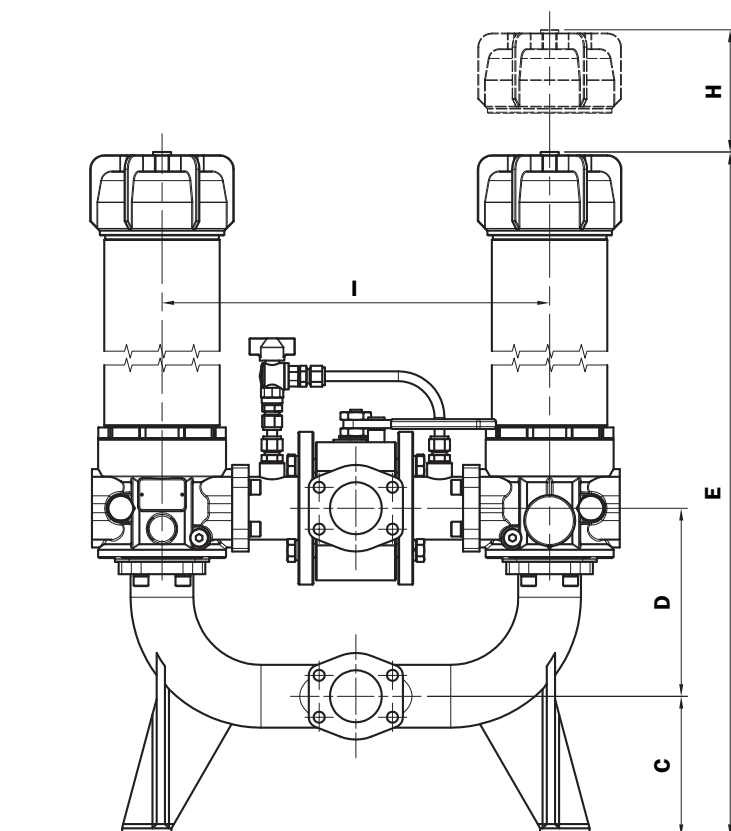


LMD 401

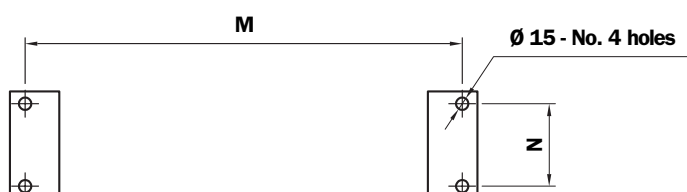
Length Filter	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H1 mm	H2 mm	I mm	R mm
4	640	250	228	513	796	156	156	120	-	470	255
5	640	250	228	765	1048	156	156	120	660	470	255
6	640	250	228	1095	1378	156	156	120	990	470	255

LMD 431

Length 5 - 6



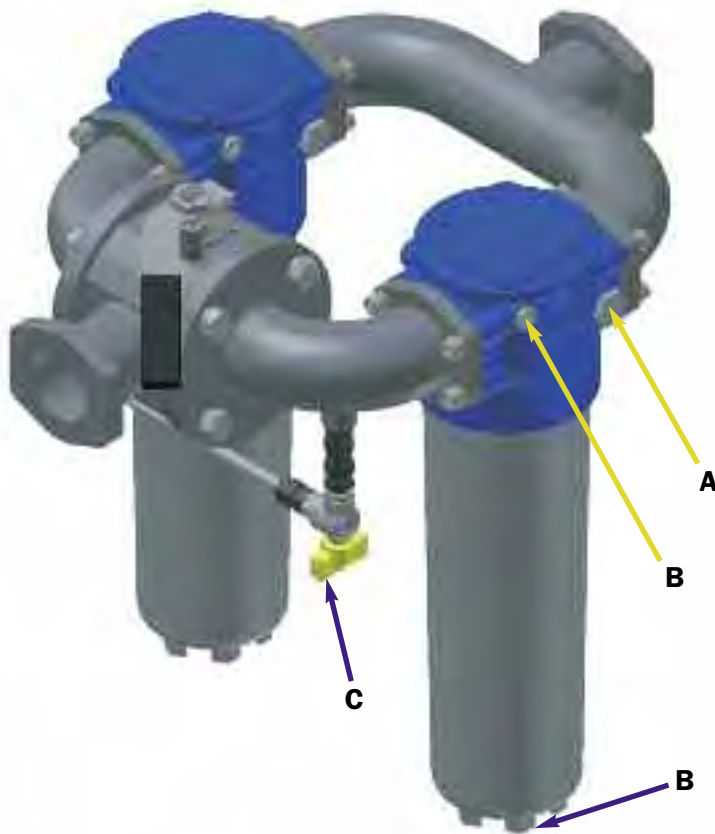
Filter fixing holes LMD 431



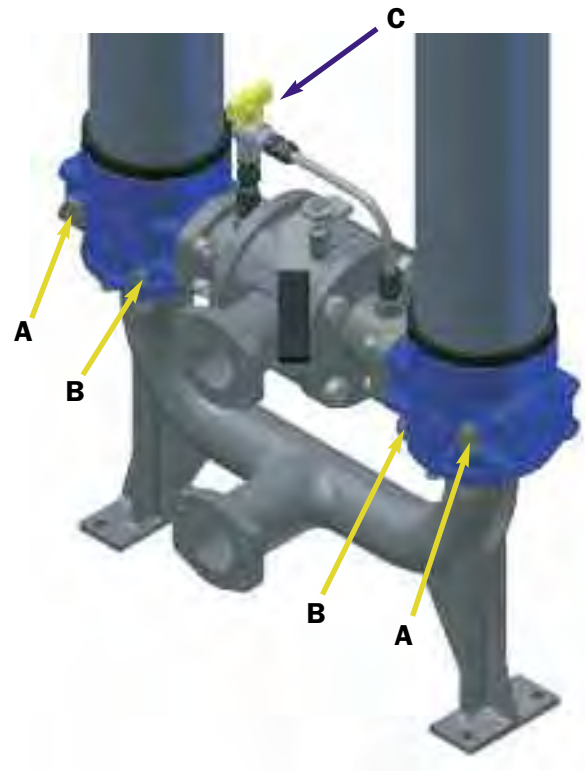
LMD 431

Length Filter	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	M mm	N mm	R mm
5	640	250	170	228	1165	156	156	660	470	530	100	255
6	640	250	170	228	1495	156	156	990	470	530	100	255

LMD 400



LMD 431



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

B - Oil drain plug - G 1/2" - A/F 10

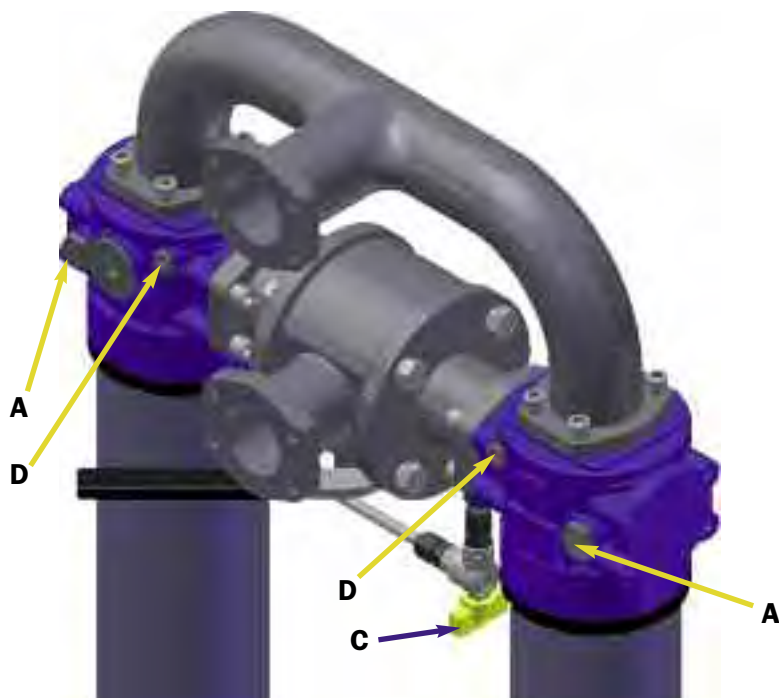
C - Compensation valve

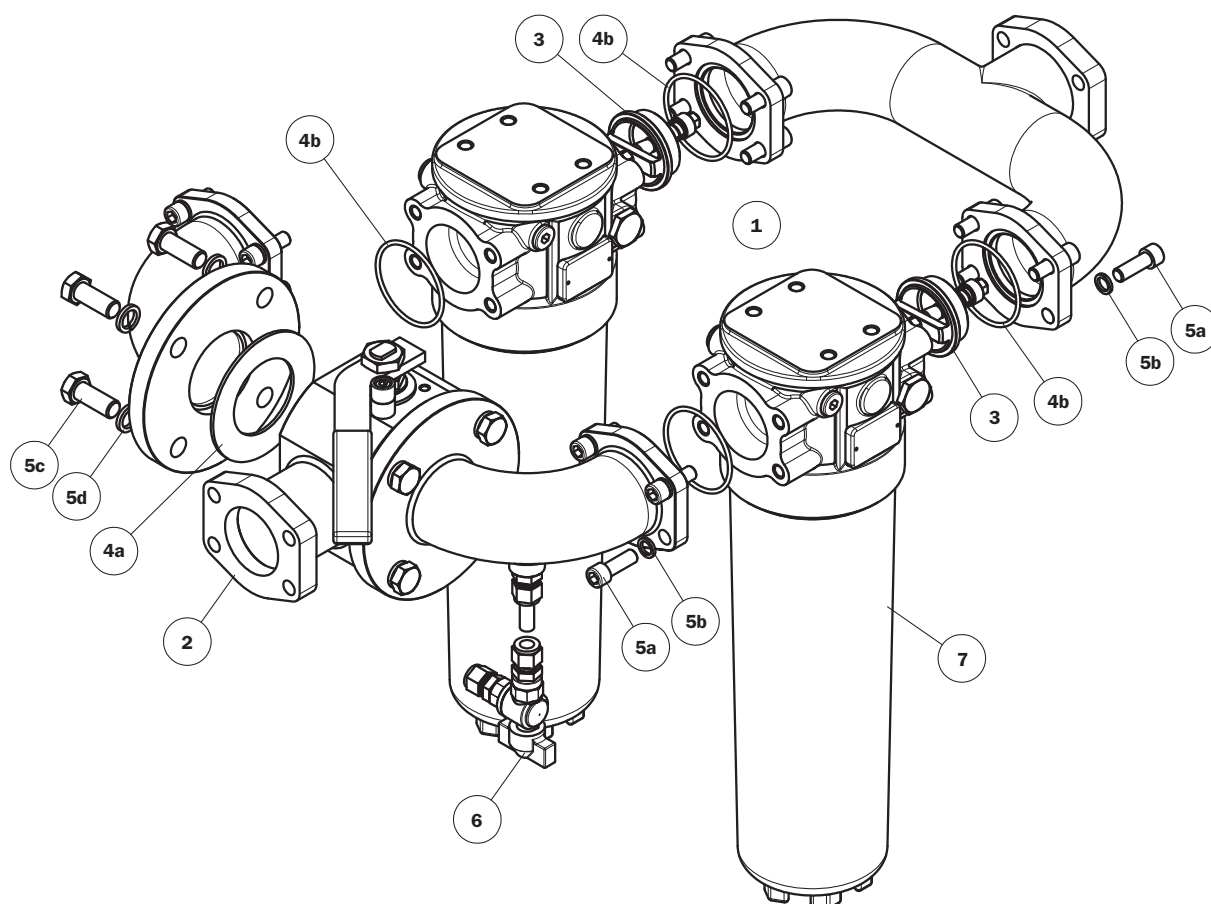
D - Breather plug - G 1/2" - A/F 10

Differential indicator:

LMD 400 - 401 - 431 - Fit one indicator for individual filter assembly

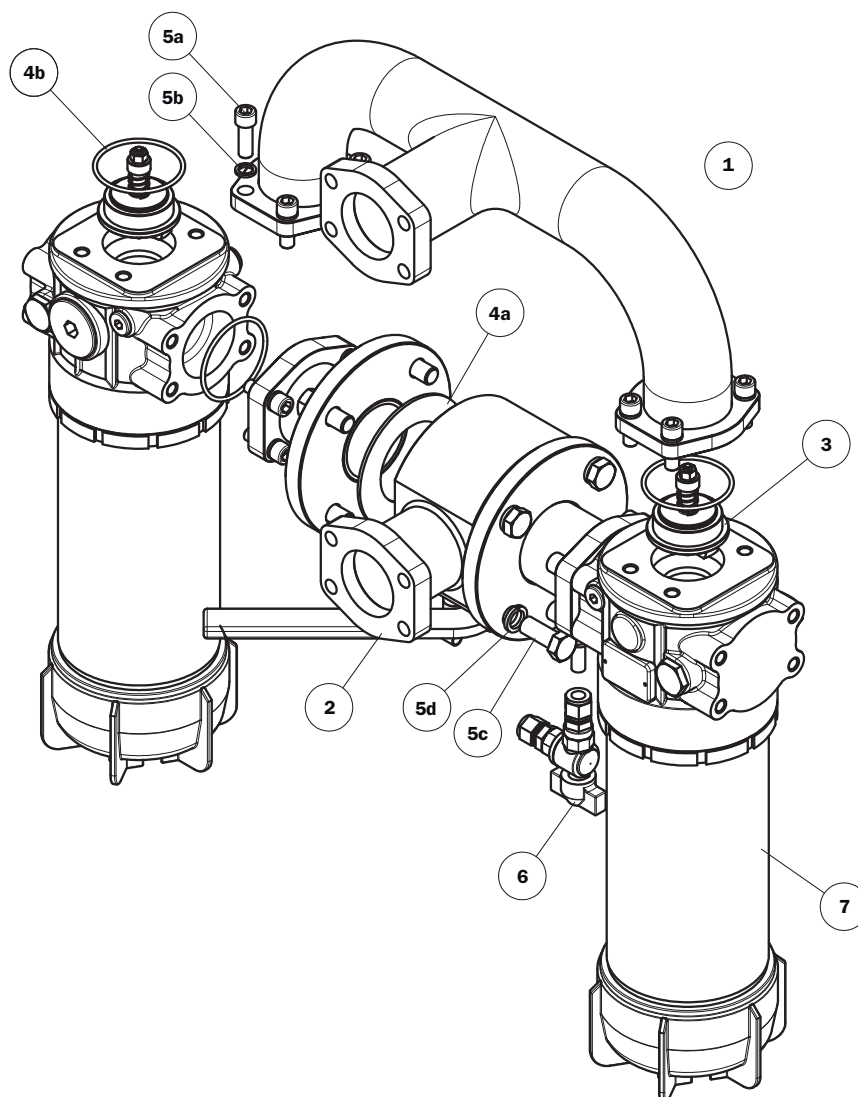
LMD 401



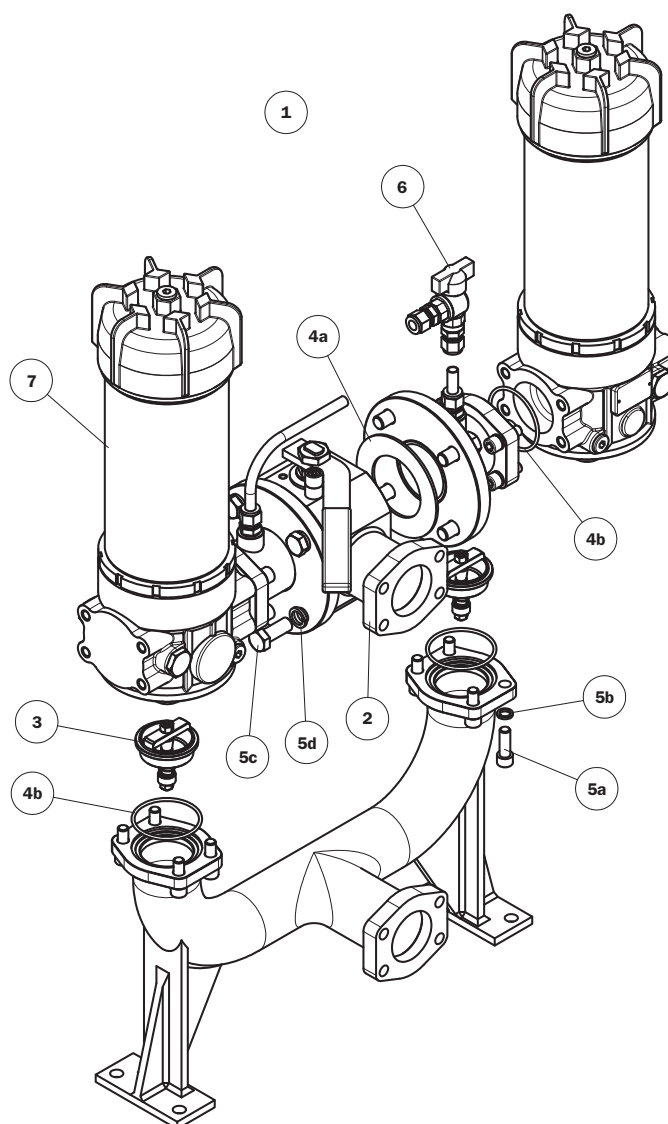


Item	Description	Q.ty	FILTER Series LMD 400
1	Filter assembly	1	See order table
2	3-way ball valve PN 16	1	2 1/2" SAE 3000 psi/M 02001440 2 1/2" SAE 3000 psi/UNC 02001441
3	One-way valve	2	02001429
4	Seal kit	1	02050399
4a	Flat seal	2	In according to DN65
4b	IN-OUT O-Ring	4	O-R 4287 Ø 72,62 x 3,53
5	Threaded fasteners kit	1	02049062
5a	Hexagon socket screws	16	UNI 5931 - M12 x 35 - 10.9
5b	Spring washers	16	UNI 1751-B 12
5c	Exagon bolt screws	8	UNI EN 24017 - M16 x 40 - 10.9
5d	Spring washers	8	UNI 1751-B 16
6	Kit ball valve with hose fitting	1	02025043
7	Filter	2	See order table LMP400xF2..... page 51
-	Indicators	2	See order table

Spare parts



Item	Description	Q.ty	FILTER Series LMD 401
1	Filter assembly	1	See order table
2	3-way ball valve PN 16	1	2 1/2" SAE 3000 psi/M 02001440 2 1/2" SAE 3000 psi/UNC 02001441
3	One-way valve	2	02001429
4	Seal kit	1	02050399
4a	Flat seal	2	In according to DN65
4b	IN-OUT O-Ring	4	O-R 4287 Ø 72,62 x 3,53
5	Threaded fasteners kit	1	02049062
5a	Hexagon socket screws	16	UNI 5931 - M12 x 35 - 10.9
5b	Spring washers	16	UNI 1751-B 12
5c	Exagon bolt screws	8	UNI EN 24017 - M16 x 40 - 10.9
5d	Spring washers	8	UNI 1751-B 16
6	Kit ball valve with hose fitting	1	02025043
7	Filter	2	See order table LMP401xF2..... page 51
-	Indicators	2	See order table



Item	Description	Q.ty	FILTER Series LMD 431
1	Filter assembly	1	See order table
2	3-way ball valve PN 16	1	2 1/2" SAE 3000 psi/M 02001440 2 1/2" SAE 3000 psi/UNC 02001441
3	One-way valve	2	02001429
4	Seal kit	1	02050399
4a	Flat seal	2	In according to DN65
4b	IN-OUT O-Ring	4	O-R 4287 Ø 72,62 x 3,53
5	Threaded fasteners kit	1	02049062
5a	Hexagon socket screws	16	UNI 5931 - M12 x 35 - 10.9
5b	Spring washers	16	UNI 1751-B 12
5c	Exagon bolt screws	8	UNI EN 24017 - M16 x 40 - 10.9
5d	Spring washers	8	UNI 1751-B 16
6	Kit ball valve with hose fitting	1	02025043
7	Filter	2	See order table LMP431xF2..... page 51
-	Indicators	2	See order table

Ordering information LMD 400 - 401 - 431

Filter assembly LMD

	1	2	3	4	5	6	7	8a
	☐	☐	☐	☐	☐	☐	☐	☐
Example: LMD	400	5	B	V	F1	A10	N	P01

Filter element CU400

	2	6	4	7	8b
	☐	☐	☐	☐	☐
Example: CU400	5	A10	A	N	P01

1 - Style

Filter	Filter element
☐ 400	☐ 400
☐ 401	☐ 400
☐ 431	☐ 400

2 - Filter length

☐ 4	LMD 431 excluded
☐ 5	
☐ 6	

3 - Valve

☐ S	Without by-pass
☐ B	With bypass
☐	With by-pass Opening pressure: on request

4 - Filter seals

a - Filter

☐ V	FPM
☐ W	FPM (Compatible with fluid HFA, HFB, HFC)

b - Filter element

☐ A	NBR
☐ W	NBR (Compatible with fluid HFA, HFB, HFC)
☐	On request

5 - Connections

Flanged

Type	LMD 400 - 401 - 431
F1	2 1/2" SAE 3000 psi/M
F2	2 1/2" SAE 3000 psi/UNC
F3	= F1 In-Line connections (only LMD 401 - 431)
F4	= F2 In-Line connections (only LMD 401 - 431)

6 - Filter element

☐ A01	Inorganic microfibre* 1 µ	Absolute filtration βx (c) ≥ 1000
☐ A03	Inorganic microfibre 3 µ	
☐ A06	Inorganic microfibre 6 µ	
☐ A10	Inorganic microfibre 10 µ	
☐ A16	Inorganic microfibre 16 µ	
☐ A25	Inorganic microfibre 25 µ	

* On request

☐ M25	Wire mesh	Nominal Filtration
☐ M60	Wire mesh	
☐ M90	Wire mesh	

☐ P10	Resin impregnated paper	Nominal Filtration
☐ P25	Resin impregnated paper	

7 - Max filter element differential pressure

☐ N	Δp 20 bar
☐ W	FPM (Compatible with fluid HFA, HFB, HFC)

8 - Option

a - Filter

☐ P01	MP Filtri standard
☐ P02	LMD 400 - 401 Maintenance from base housing (only length 5 and 6)
☐ P02	LMD 431 With internal tube for reduced flow rate
☐ Pxx	Customer request

b - Filter element

☐ P01	MP Filtri standard
☐ Pxx	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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