

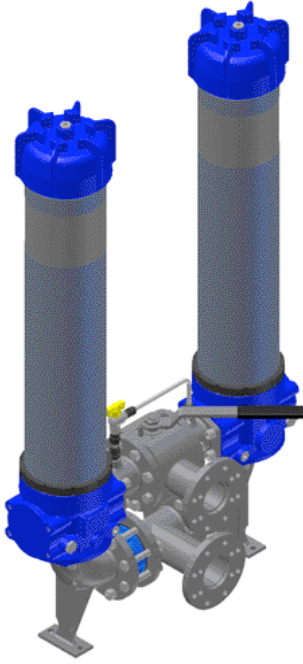
# LMD 951



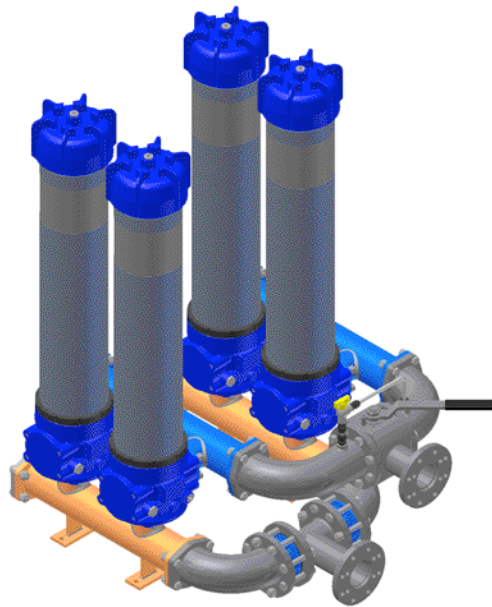
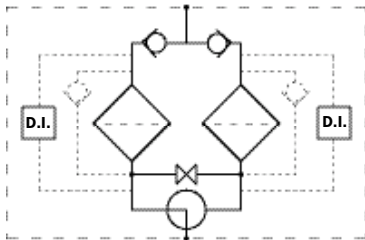
# LMD

# SERIES 951

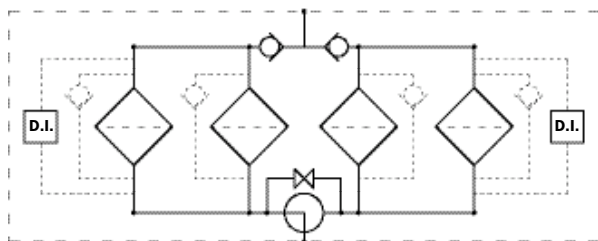
**Working pressure  
16 bar**



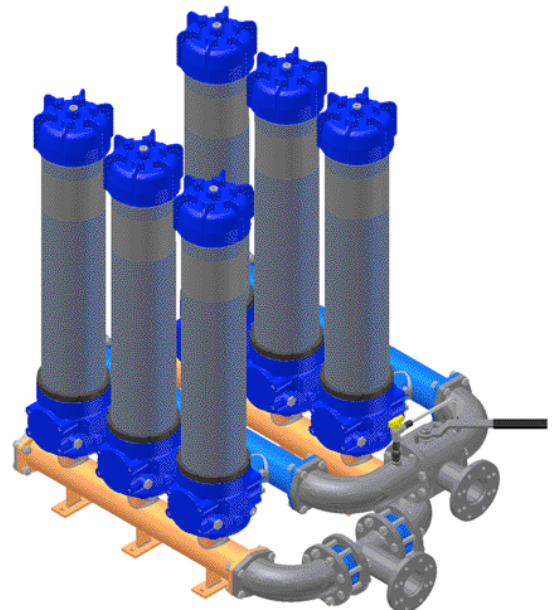
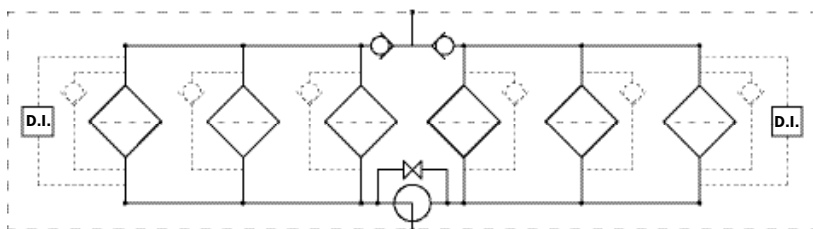
**LMD 951**  
Double filter



**LMD 952**  
Double filter with manifolds for two filters



**LMD 953**  
Double filter with manifolds for three filters



# Technical data

## Filter housing (Materials)

- Head: Anodised Aluminium
- Housing: Anodised Aluminium
- Manifolds: Steel / Painted black
- Bypass valve: Nylon - Steel
- 3-way ball valve:
  - Steel body
  - Stainless steel ball
- Check valve:
  - Cast iron body
  - AISI 304 leaf

## Pressure

- DIN Flange
- 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 ±10%
- Other opening pressures on request.

## Number of filter elements

- LMD 951: 2 filter elements CU950-3
- LMD 952: 4 filter elements CU950-3
- LMD 953: 6 filter elements CU950-3

## Filter elements $\Delta p$

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

## Seals

- Standard NBR series V

## Weights (kg) Length

- LMD951 102 (DN 80) - 130 (DN 100)
- LMD952 207 (DN 80) - 235 (DN 100)
- LMD953 312 (DN 80) - 340 (DN 100)

## Volumes (dm<sup>3</sup>) Length

- LMD951 62
- LMD952 138
- LMD953 232

## Connections

Inlet/Outlet

- Over and under
- In-line

## 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-HFDU
  - To ISO 2943

## Filter Element Area of Working Body/Bodies

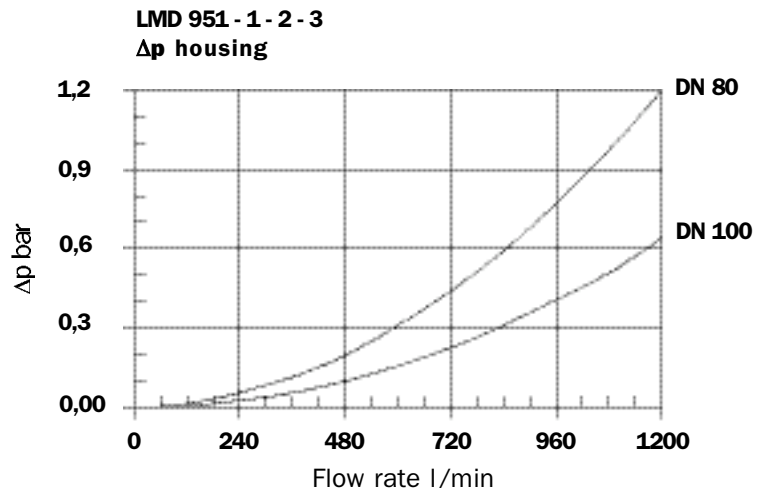
Filter element in stainless steel mesh  
LMD

Tipo	951	952	953
CU950-3	25100	50200	75300
Values expressed in cm <sup>2</sup>			

## Filter housing $\Delta p$ pressure drop

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

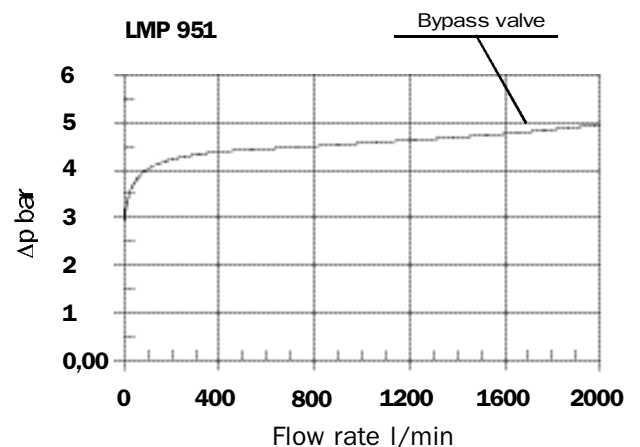
$\Delta p$  varies proportionally with density.



## Valves

### Bypass valve pressure drop

Per individual filter

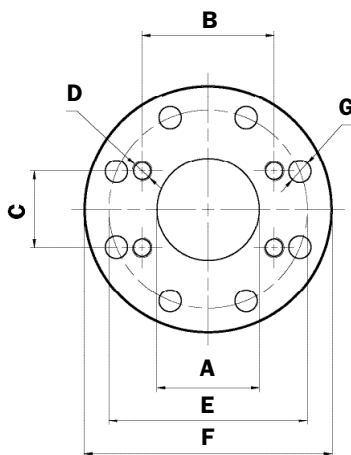


### Recommended maximum flow rate

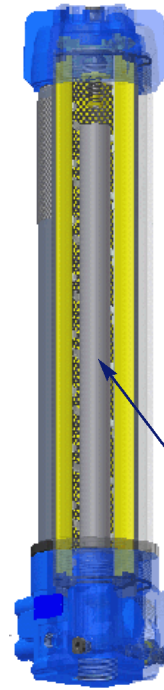
- Pressure drop of filter assembly equal to  $\Delta p$  0.6 bar.
- Oil kinematic viscosity 30 mm<sup>2</sup>/s (cSt).
- Density 0.86 kg/dm<sup>3</sup>.

Filter element type	Flow rate l/min Series N	Filter Type	Flange SAE 3000
A03	625	<b>LMD 951</b>	<b>3"</b>
A06	650		
A10	700		
A16	760		
A25	780		
M25	830		
A03	720	<b>LMD 952</b>	<b>3"</b>
A06	750		
A10	800		
A16	800		
A25	820		
M25	850		
A03	780	<b>LMD 953</b>	<b>3"</b>
A06	800		
A10	800		
A16	850		
A25	850		
M25	880		
A03	780	<b>LMD 951</b>	<b>4"</b>
A06	820		
A10	900		
A16	1000		
A25	1050		
M25	1150		
A03	950	<b>LMD 952</b>	<b>4"</b>
A06	980		
A10	1050		
A16	1100		
A25	1100		
M25	1180		
A03	1000	<b>LMD 953</b>	<b>4"</b>
A06	1050		
A10	1100		
A16	1150		
A25	1150		
M25	1200		

### Flange connection



### Option P02 for LMD 951/952/953



Option P02 "Internal tube for reduced flow rates" is recommended for flow rates lower than:

LMD 951 - 150 l/min

LMD 952 - 300 l/min

LMD 953 - 450 l/min

The use of option P02 allows the operating fluid to fill the filter housing completely.

**P02 "Internal tube for reduced flow rates"**

### Recommended maximum flow rate

The maximum recommended flow rate for the filters installed on lubrication lines, whether return or in-line, is defined by the maximum oil velocity in the connections. For filters installed 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	Connection	
	3"	4"
2,5 m/sec.	750	1200
5 m/sec.	1500	2400

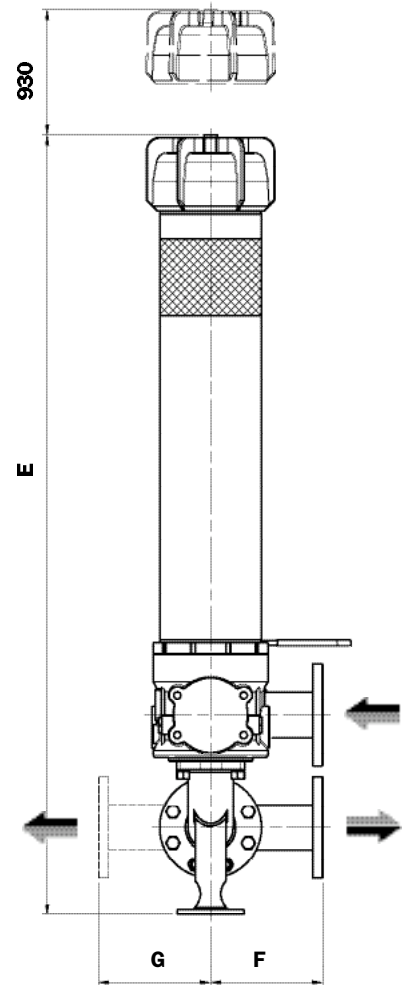
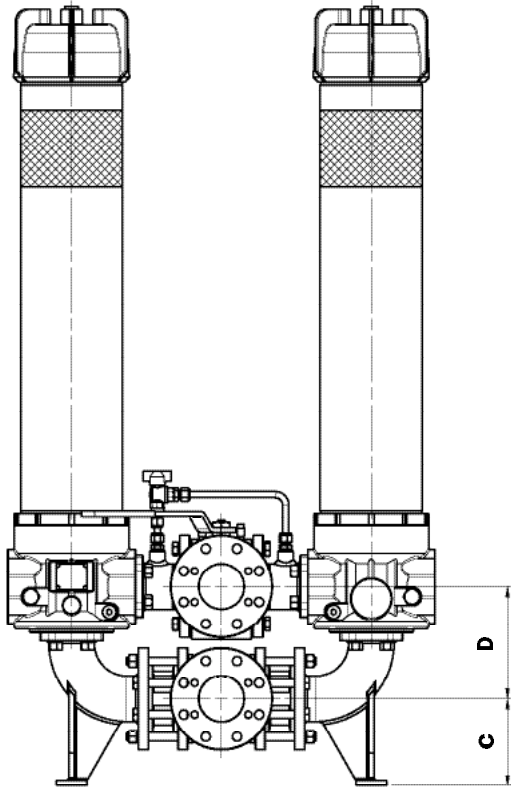
Flow rate l/min

Connection Flange IN-OUT	3"	3"	4"	4"
	SAE 3000 psi/M	SAE 3000 psi/UNC	SAE 3000 psi/M	SAE 3000 psi/UNC
<b>A</b>	73	99	73	99
<b>B</b>	106,38	106,38	130,18	130,18
<b>C</b>	61,93	61,93	77,77	77,77
<b>D</b>	M16	5/8" UNC	M16	5/8" UNC

Connection Flange IN-OUT	DIN PN16 DN80	DIN PN16 DN100
	<b>A</b>	73
<b>E</b>	160	180
<b>F</b>	200	220
<b>G</b>	18	18

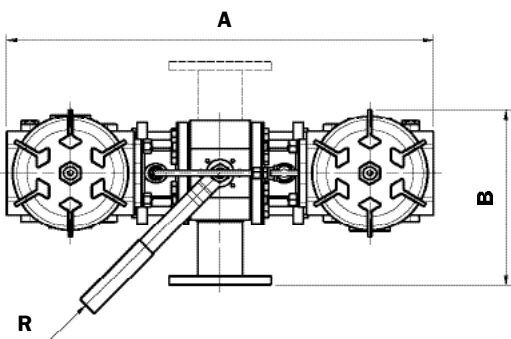
# Dimensions

## LMD 951

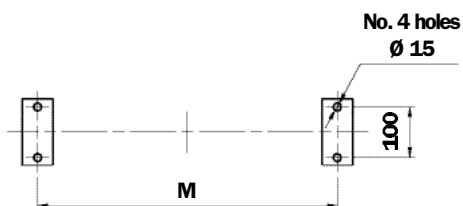


Version: D2 - D4  
F2 - F4

Version: D1 - D3  
F1 - F3

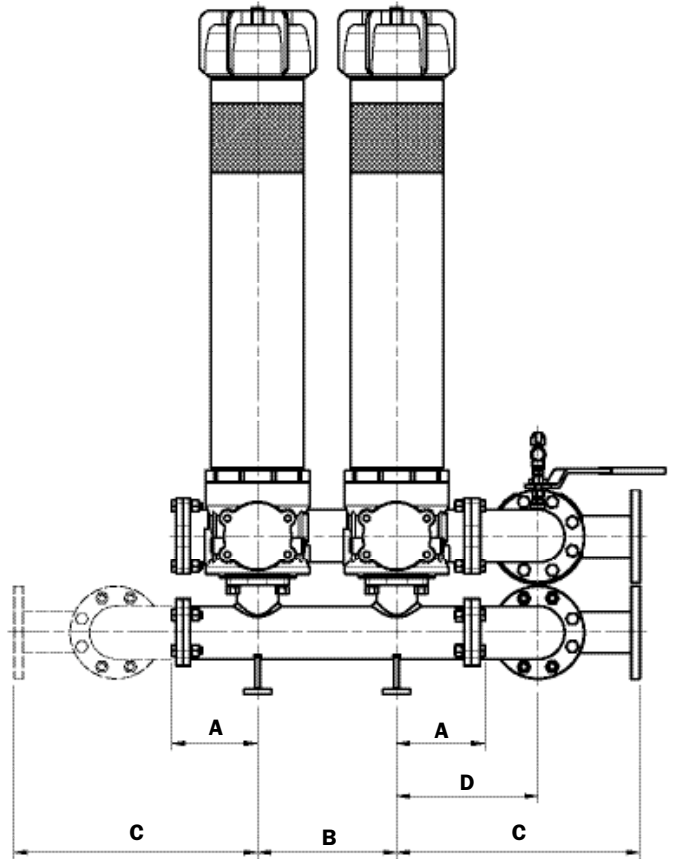
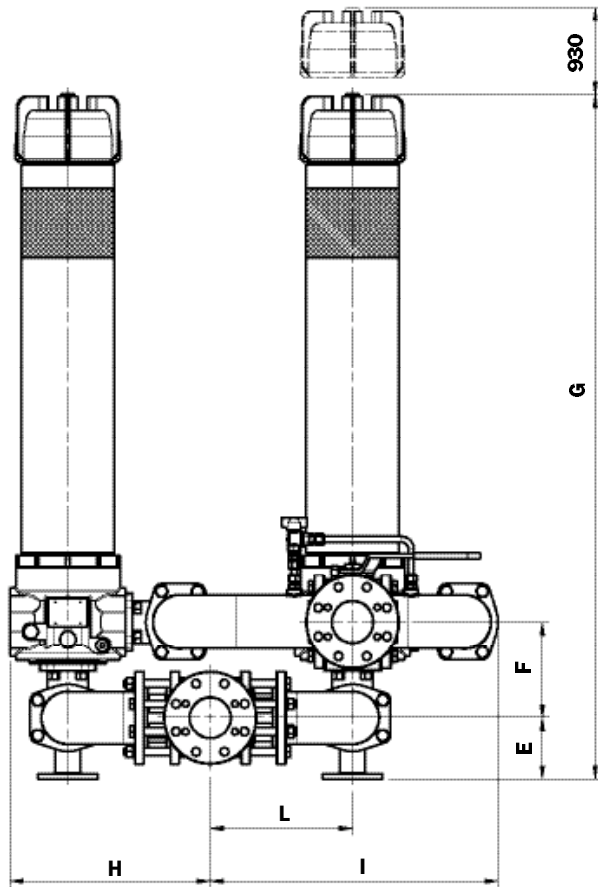


Filter fixing holes



	3" SAE DN 80	4" SAE DN 100
<b>A</b>	838	932
<b>B</b>	346	346
<b>C</b>	170	170
<b>D</b>	221	268
<b>E</b>	1530	1577
<b>F</b>	220	220
<b>G</b>	220	220
<b>M</b>	588	682
<b>R</b>	370	650

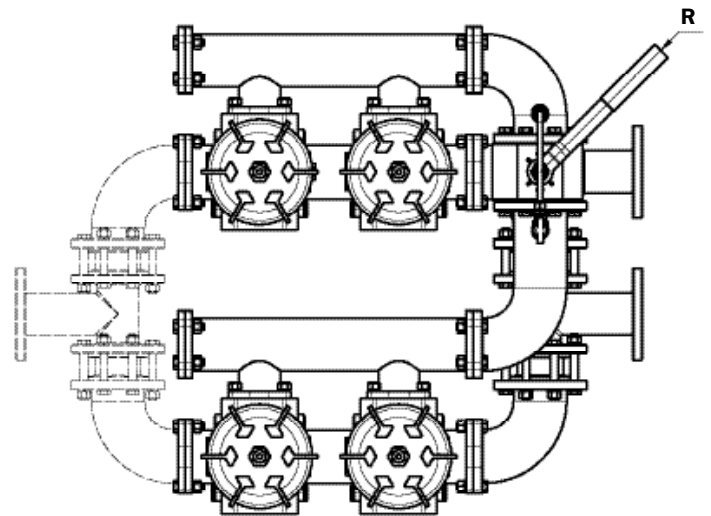
# LMD 952



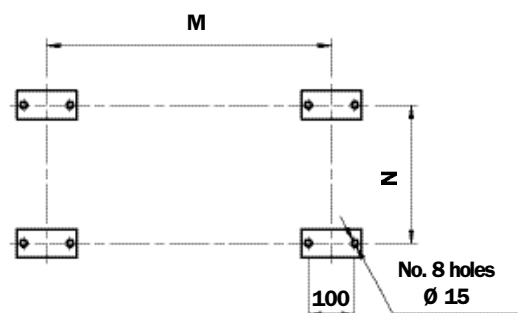
Version:  
D3 - D4  
F5 - F5 - F7 - F8

Version:  
D1 - D2  
F1 - F2 - F3 - F4

	3" SAE DN 80	4" SAE DN 100
A	190	190
B	300	300
C	552	552
D	332	332
E	132	132
F	207	207
G	1478	1478
H	432	456
I	621	647
L	269	278
M	614	662
N	300	300
R	370	650

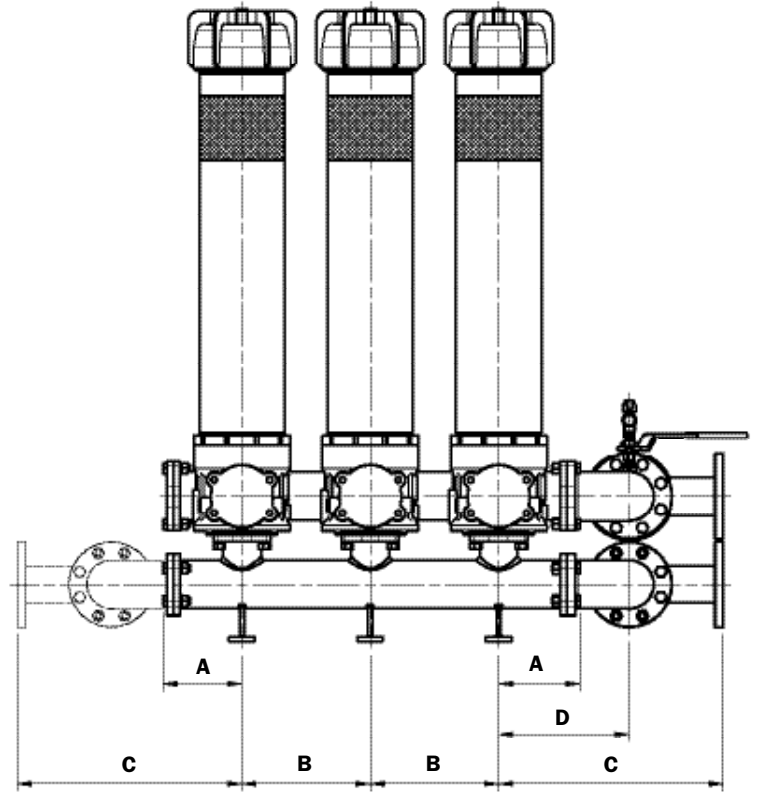
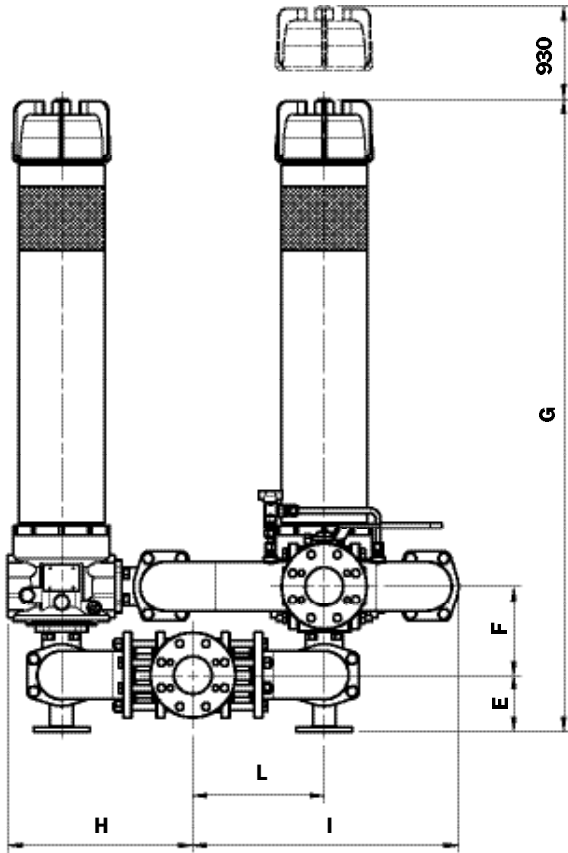


LMD 952 filter fixing holes



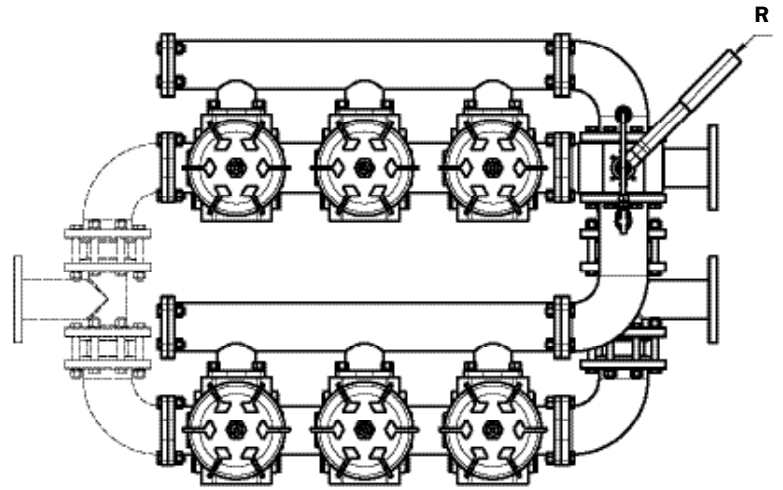
No. 8 holes  
Ø 15

# LMD 953

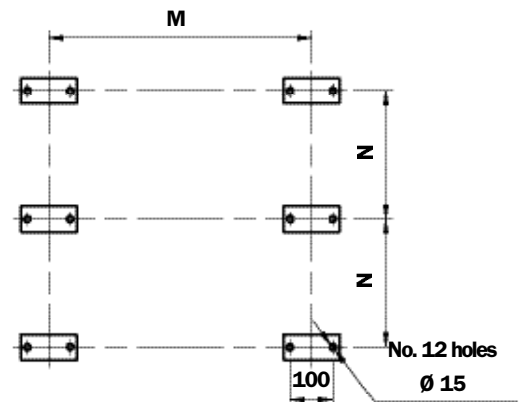


Version:  
D3 - D4  
F5 - F5 - F7 - F8

Version:  
D1 - D2  
F1 - F2 - F3 - F4

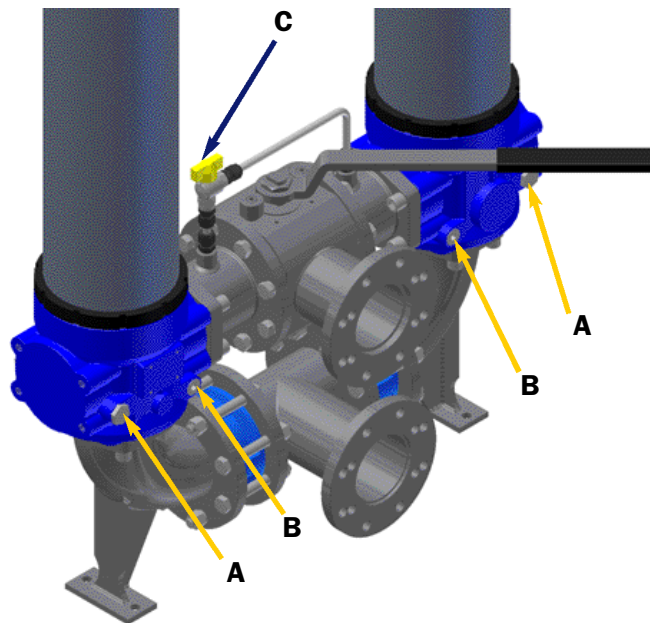


## LMD 953 filter fixing holes



	3" SAE DN 80	4" SAE DN 100
A	190	190
B	300	300
C	552	552
D	332	332
E	132	132
F	207	207
G	1478	1478
H	432	456
I	621	647
L	269	278
M	614	662
N	300	300
R	370	650

# LMD 951



**A** Indicator connection plug T2 Ch. 30

**B** Oil drain plug G 1/2" Ch. 10

**C** Compensation valve

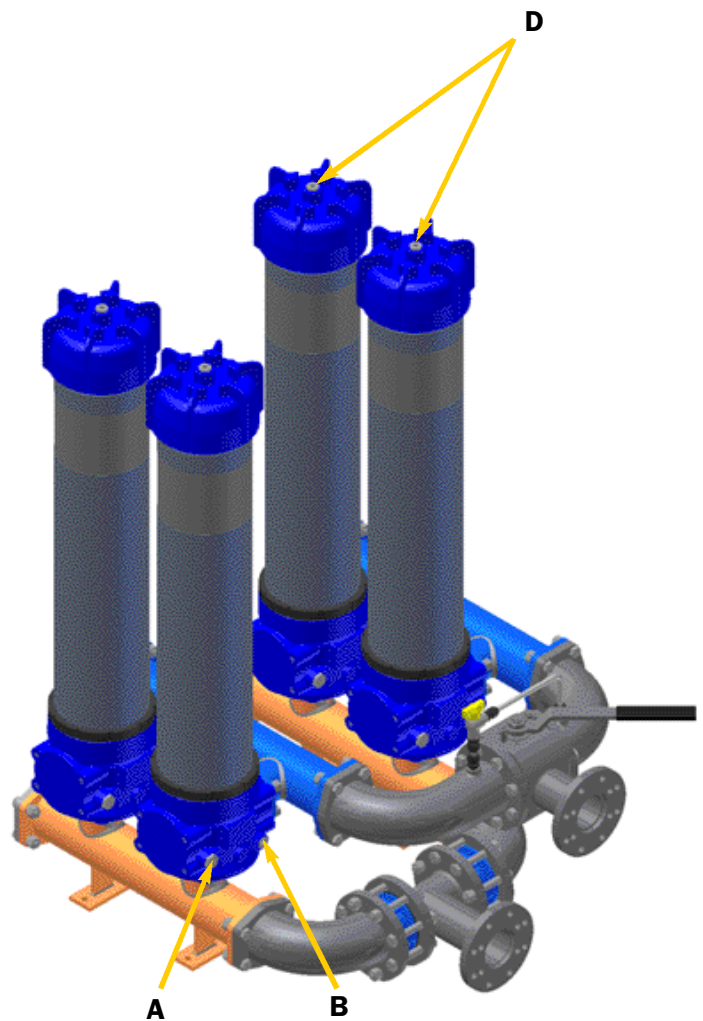
**D** Breather plug G 1/2" Ch. 10

Differential indicator:

**LMD 951** Fit one indicator per filter housing

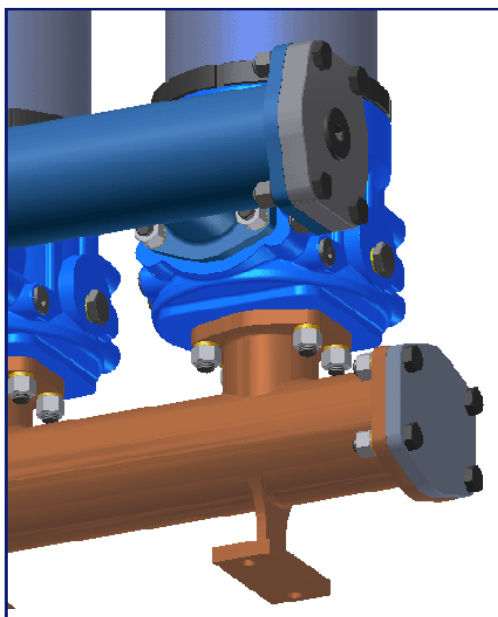
**LMD 952 - 953** Fit one indicator per individual filter assembly

# LMD 952 - 953



## Option

**Flange with oil drain plug for rapid discharge LMD 952 - 953**

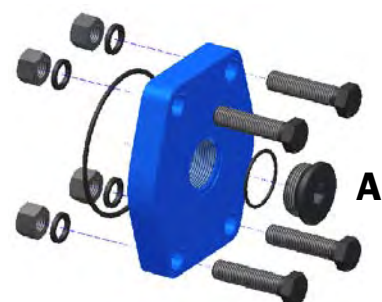


## Order code

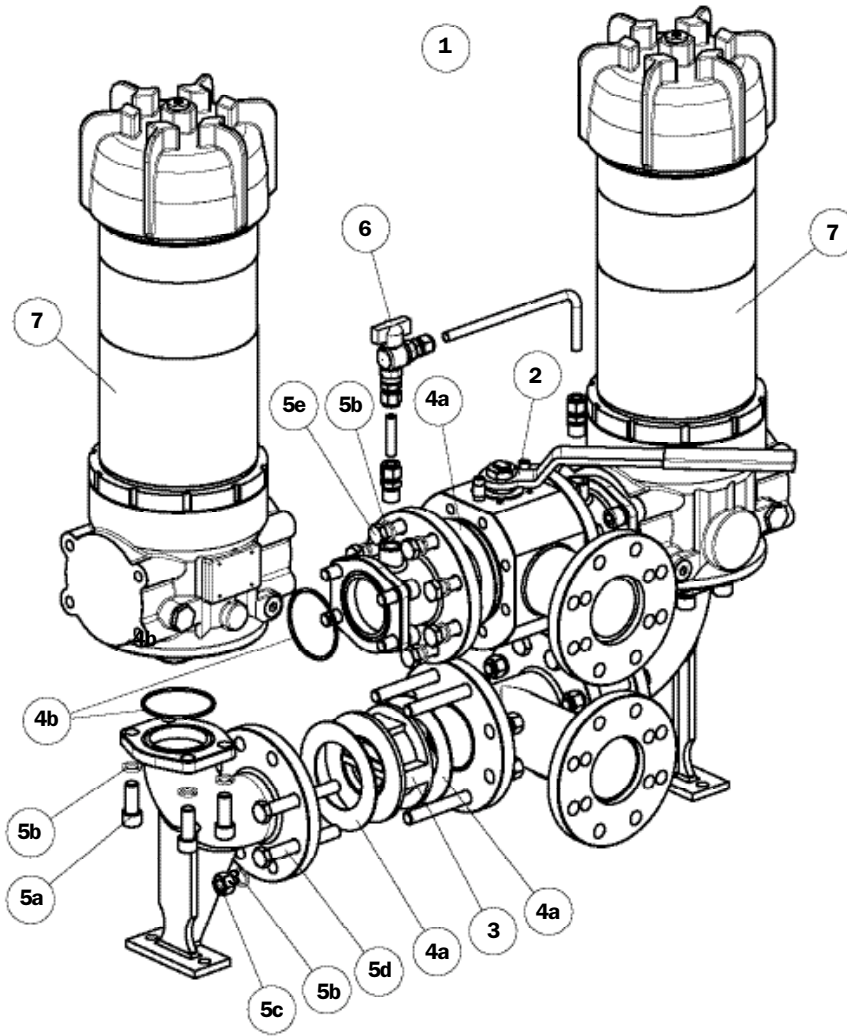
	<b>A</b>
<b>CMV4</b>	<b>G 1 1/4"</b>
<b>CUV4</b>	<b>SAE 20</b>

The order code includes:

- FLANGE
- SCREWS
- NUTS
- SEALS
- OIL DRAIN PLUG

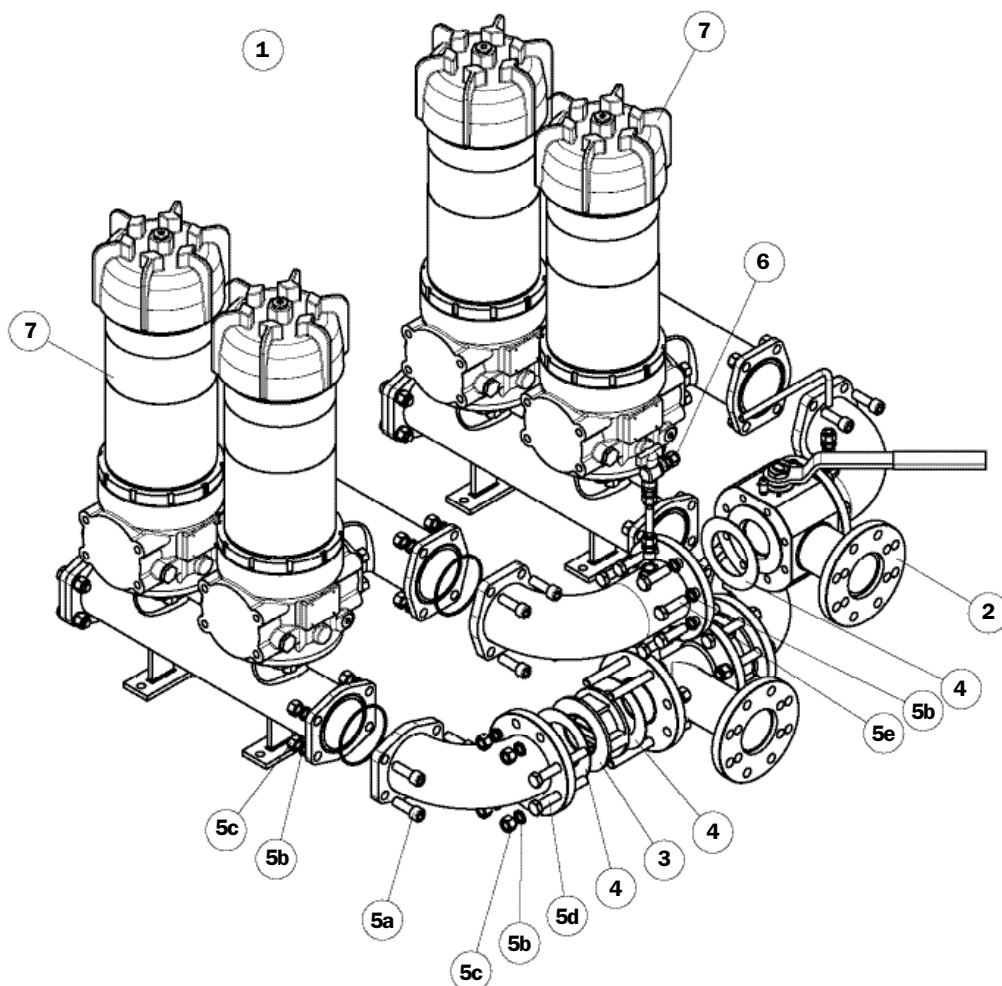


# LMD 951 spare parts



Pos.	Description	Qty	LMD 951 Series Filter	
			F1 - F2 - F5 - F6 / D1 - D3 ( 3" SAE / DIN PN16 DN 80)	F3 - F4- F7 - F8 / D2 - D4 ( 4" SAE / DIN PN16 DN 100)
1	Filter assembly	1	See order table	
2	3-way ball valve PN 16	1	3" SAE 3000 psi/M 02001135 3" SAE 3000 psi/UNC 02001438	4" SAE 3000 psi/M 02001162 4" SAE 3000 psi/UNC 02001439
3	One-way valve	2	02001418	02001419
4	Seals kit	1	02050388	02050389
4a	Flat seal	6	To DN 80	To DN 100
4b	IN-OUT O-Ring	4	O-R 4337 Ø 85,32 x 3,53 FPM	O-R 4437 Ø 110,7 x 3,53 FPM
5	Threaded fasteners kit	1	02049056	02049057
5a	Stud bolts	16	UNI 5931 - M16 x 40 10.9	
5b	Circlips	48	UNI 1751-B 16	
5c	Nuts	16	UNI - EN 24032 - M16 10.9	
5d	Hex screws for flanges- valves pos. 3	16	UNI-EN 24014 - M16 x 120 - 10.9	UNI-EN 24014 - M16 x 130 10.9
5e	Hex screws for flanges- valves pos. 2	16	UNI-EN 24017 - M16 x 55 - 10.9	
6	G 1/2" Ball Valve Kit with straight fittings	1	02025043	
7	Filter	2	See order table LMP9513F.....PO* a pag. 75	
-	Indicators	2	See order table	

# LMD 952-953 spare parts



Pos.	Description	Qty	LMD 952 - 953 Series Filter			
			F1 - F2 - F5 - F6 / D1 - D3 ( 3" SAE / DIN PN16 DN80 )		F3 - F4- F7 - F8 / D2 - D4 ( 4" SAE / DIN PN16 DN 100 )	
1	Filter assembly	1	See order table			
2	3-way ball valve PN 16	1	3" SAE 3000 psi/M 3" SAE 3000 psi/UNC	02001135 02001438	4" SAE 3000 psi/M 4" SAE 3000 psi/UNC	02001162 02001439
3	One-way valve	2	02001418		02001419	
4	Flat seal	6	To DN 80		To DN 100	
5	Threaded fasteners kit	1	02049058		02049059	
5a	Hex screws for fittings - manifolds	16	UNI-EN 5931 - M16 x 55 10.9			
5b	Circlips	48	UNI 1751-B 16			
5c	Nuts	32	UNI-EN 24032 - M16 10.9			
5d	Hex screws for flanges- valves pos. 3	16	UNI-EN 24014 - M16 x 110 10.9		UNI-EN 24014 - M16 x 120 10.9	
5e	Hex screws for flanges- valves pos. 2	16	UNI-EN 24017 - M16 x 55 - 10.9			
6	G 1/2" Ball Valve Kit with straight fittings	1	02025043			
7	Filter	2	See order table LMP9523F.....PO* a pag. 87 See order table LMP9533F.....PO* a pag. 87			
-	Indicators	2	See order table			

# LMD951/2/3 ordering information

## Filter assembly

### LMD

Example: LMD

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8 a</b>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>951</b>	<b>3</b>	<b>B</b>	<b>V</b>	<b>F1</b>	<b>A10</b>	<b>N</b>	<b>P01</b>

### Filter element CU 950

Example: CU950

<b>2</b>	<b>6</b>	<b>4</b>	<b>7</b>	<b>8 b</b>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>3</b>	<b>A10</b>	<b>A</b>	<b>N</b>	<b>P01</b>

## 1 - Sizes

<b>951</b>	1+1 filter elements CU950-3
<b>952</b>	2+2 filter elements CU950-3
<b>953</b>	3+3 filter elements CU950-3

## 2 - Filter length

<b>3</b>
----------

## 3 - Valves

<b>S</b>	Without by-pass
<b>B</b>	With by-pass

## 4 - Seals

<b>V</b>	FPM
----------	-----

## 5 - Connections

Type	Type
<b>D1</b> DIN PN 16 DN 80	<b>F1</b> 3" SAE 3000 psi/M
<b>D2</b> DIN PN 16 DN 100	<b>F2</b> 3" SAE 3000 psi/UNC
<b>D3</b> = D1 In-line connections	<b>F3</b> 4" SAE 3000 psi/M
<b>D4</b> = D2 In-line connections	<b>F4</b> 4" SAE 3000 psi/UNC
	<b>F5</b> = F1 In-line connections
	<b>F6</b> = F2 In-line connections
	<b>F7</b> = F3 In-line connections
	<b>F8</b> = F4 In-line connections

## 6 - Filter element

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

## 7 - Filter element series

<b>N</b>	Δp 20 bar
<b>W</b>	Δp 20 bar (aqueous emulsions - water and glycol)

## 8 - Options

### a - Filters

<b>P01</b>	MP Standard filters
<b>P02</b>	With internal tube for reduced flow rates
<b>Pxx</b>	Customer request

### b - Filter elements

<b>P01</b>	MP Standard filters
<b>Pxx</b>	Customer request

DIFFERENTIAL INDICATORS (see page 12)

## Option exclusively for LMD 952 - 953:

### Flange with rapid oil drain plug

See page 95

**CMV4** G 1 1/4" plug

**CUV4** SAE 20 plug

Order 2 kits per filter

**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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