



Maximum pressure 80 bar
Flow rates to 200 l/min



LMP 110



Maximum pressure 80 bar

Flow rates to 160 l/min

Technical data

LMP 110

Filter housing (Materials)

- Head: Aluminium
- Housing: Cataphoresis painting
- Bypass valve: Brass/Aluminium

Pressure

LMP 110 length: 1 - 2 - 3 - 4

- Working pressure: 80 bar (8 MPa)
- Test pressure: 120 bar (12 MPa)
- Burst pressure: 290 bar (29 MPa)
- Pulse pressure fatigue test: 1.000.000 cycles with pressure from 0 to 80 bar (8 MPa)

Temperature

- From -25°C to +110°C

Bypass valve

- Opening pressure 3.5 bar ±10%
- Other opening pressures on request.

Δp Elements type

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

Seals

- Standard NBR series A
- Optional FPM series V

Weights (kg)

Length

- LMP110 - 1 1,6
- LMP110 - 2 1,8
- LMP110 - 3 2,1
- LMP110 - 4 2,6

Volumes (dm³)

Length

- LMP110 - 1 0,75
- LMP110 - 2 0,81
- LMP110 - 3 1,11
- LMP110 - 4 1,53

Connections

- Inlet/Outlet in Line LMP 110
- Inlet/Outlet in Line + second inlet port 90° LMP 112
- Inlet/Outlet in Line + second outlet port 90° LMP 116
- Inlet/Outlet in Line + outlet bypass port 90° LMP 118

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

Filter element in stainless steel mesh

Length

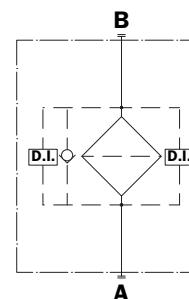
Type	1	2	3	4
CU 110	1302	1764	2464	3864

Values expressed in cm²

LMP 110



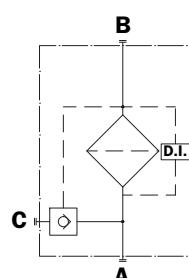
Style LMP 110



LMP 118



Style LMP 118

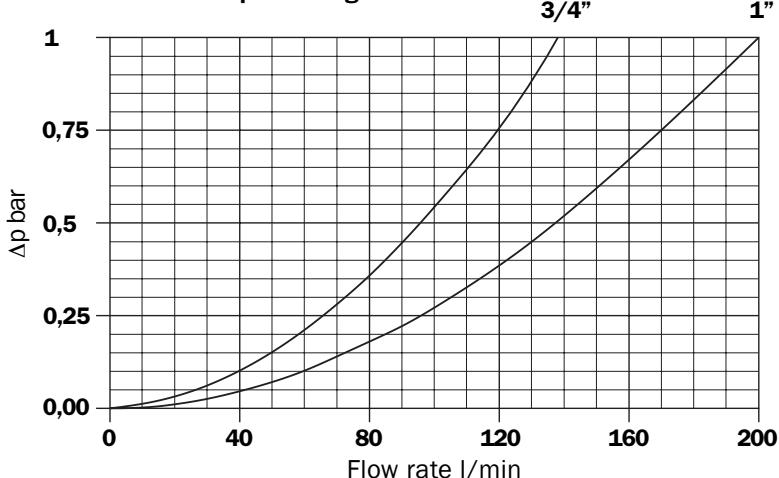


Filter housings Δp pressure drop

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

Δp varies proportionally with density.

LMP 110 - Δp Housing

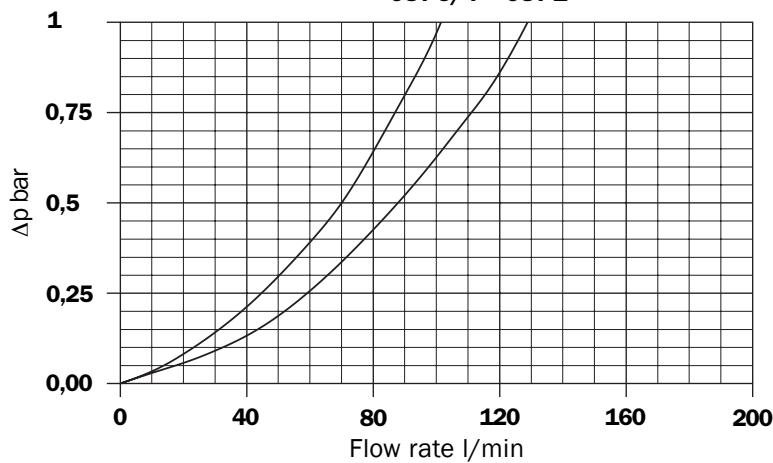
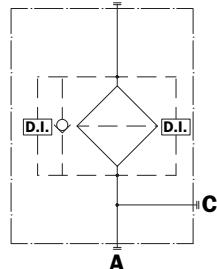
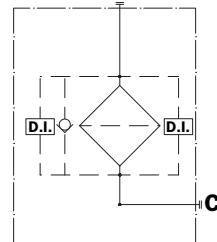


LMP 112**LMP 112**
(plug not included)**LMP 116**

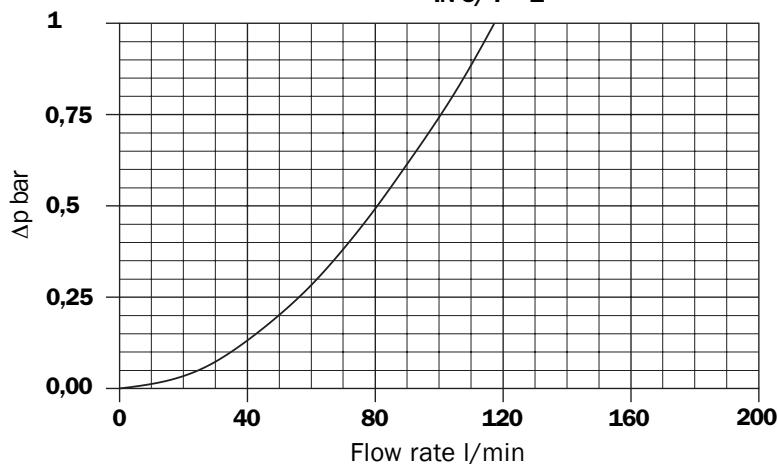
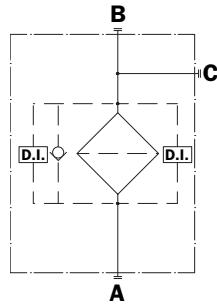
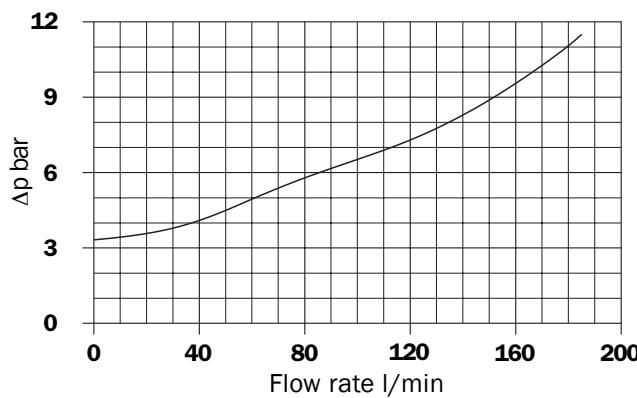
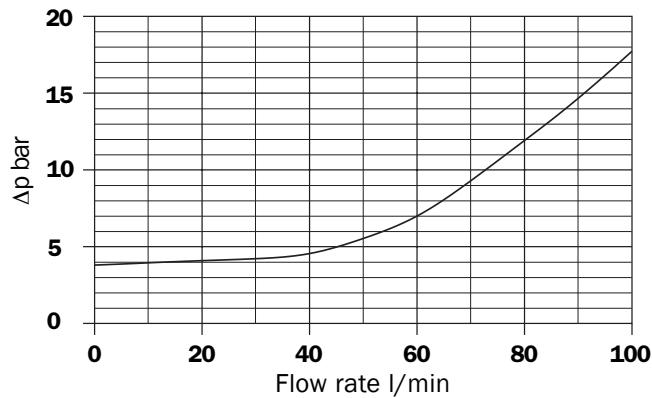
(plug not included)

**LMP 112 - Δp Housing**

OUT 3/4" OUT 1"

Style
LMP 112Style
LMP 112**LMP 116 - Δp Housings**

IN 3/4" - 1"

Style
LMP 116**Valves****Bypass valve pressure drop****LMP 110 - LMP 112 - LMP 116****Valves****Bypass valve pressure drop****LMP 118**

Filter Sizing

Correct sizing of the filter must be based on a variable pressure drop depending on the application:

- return filter Δp from 0.4 to 0.6 bar
- filter on lubrication lines Δp from 0.3 to 0.5 bar
- off-line fluid power plants Δp from 0.3 to 0.4 bar
- off-line filter test benches Δp from 0.1 to 0.3 bar
- over-boost filter Δp from 0.4 to 0.6 bar

The pressure drop calculation is performed by adding together the value for the housing and the value for the filter element.

The pressure drop in the housing is proportional to the fluid density kg/dm³; all the graphs in the catalogue are referred to mineral oil with density of 0.86 kg/dm³.

The filter element pressure drop value is proportional to viscosity mm²/s, the Y values in the catalogue are referred to viscosity of 30 mm²/s.

Sizing data for single cartridge, head at top

Δp Tot.

Δp_c Filter housing

Δp_e Filter element

Y Multiplication factor (see below)

Q l/min = flow rate

V1 = reference viscosity 30 mm²/s (cSt)

V2 = operating viscosity in mm²/s (cSt)

Δp Tot. = $\Delta p_c + \Delta p_e$

$\Delta p_e = Y : 1000 \times Q \times (V2/V1)$

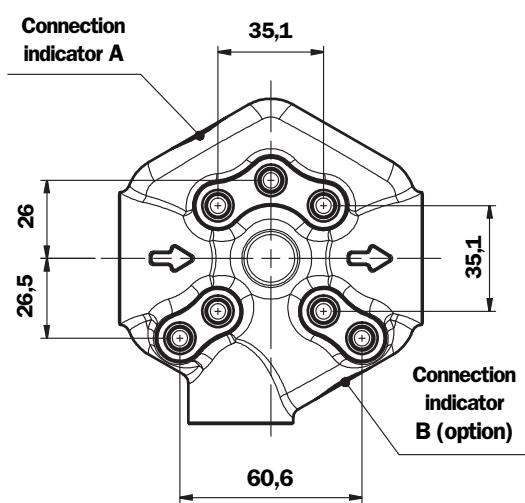
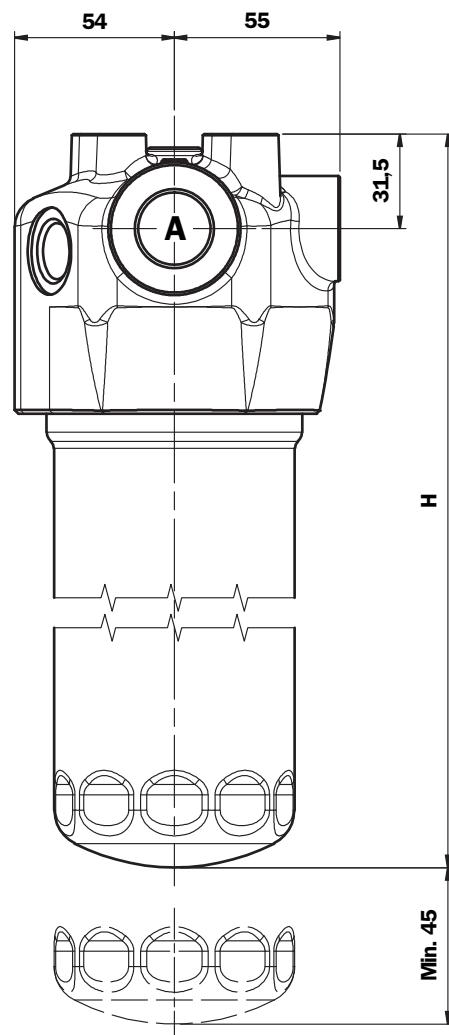
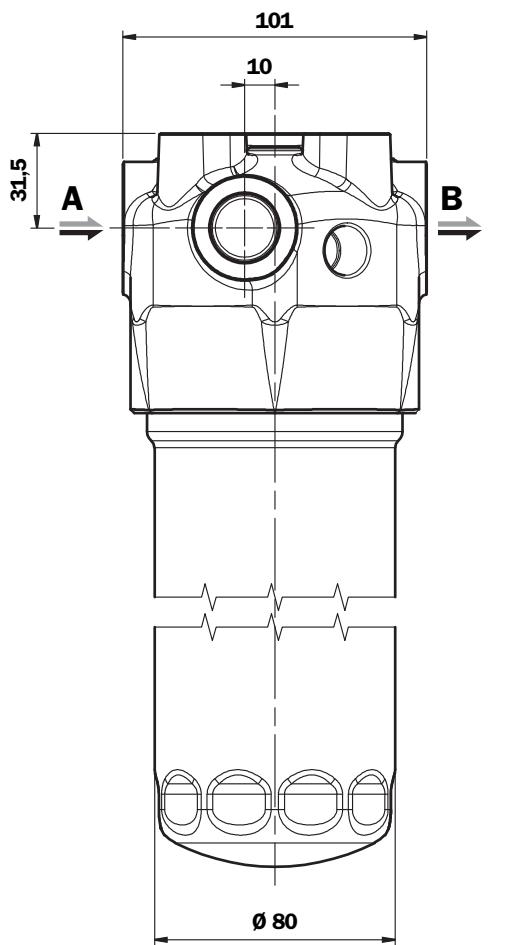
Multiplication factor "Y" for definition of the pressure drop of filter elements.

Reference viscosity 30 mm²/s

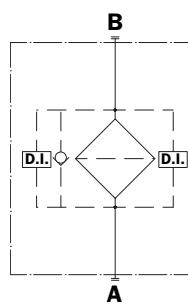
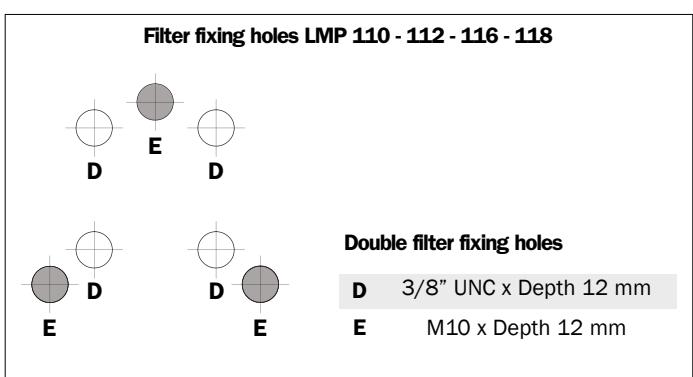
Filter Element	Absolute Filtration					Nominal Filtration		Nominal Filtration	
	Series N					Series N		Series N	
Type	A 0 3	A 0 6	A 1 0	A 1 6	A 2 5	P 1 0	P 2 5	M 2 5	
CU 110 1	16,25	15,16	8,754	8,142	5,875	2,862	2,651	0,1431	
	2	12,62	10,44	6,111	6,024	4,155	1,598	1,486	
	3	8,571	7,951	5,066	4,066	2,397	1,242	1,153	
	4	5,759	4,051	2,798	2,358	1,142	0,9072	0,8491	

Dimensions

LMP 110

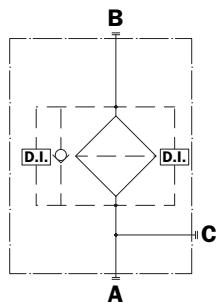
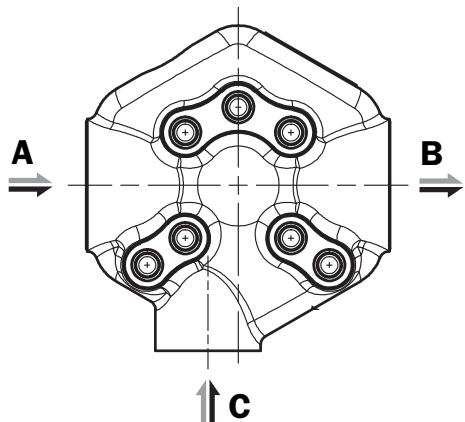


Length Filter	H mm
1	182
2	215
3	265
4	365

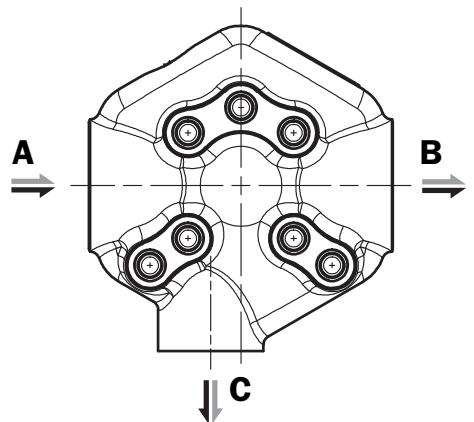


Connections	
A - B	A - C
A G 3/4"	
B G 1"	
C 3/4" NPT	
D 1" NPT	
E SAE 12	
F SAE 16	

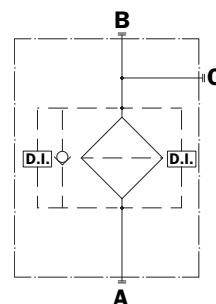
LMP 112



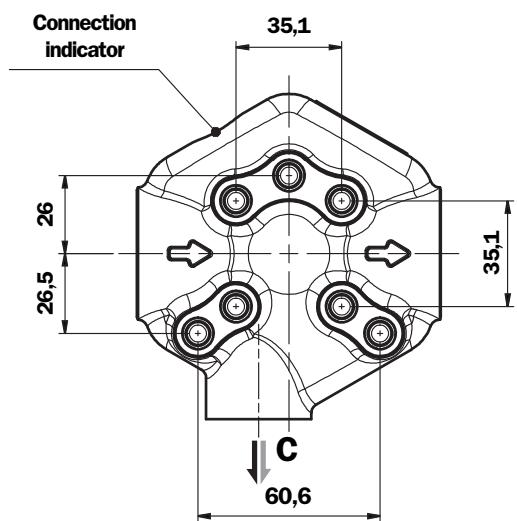
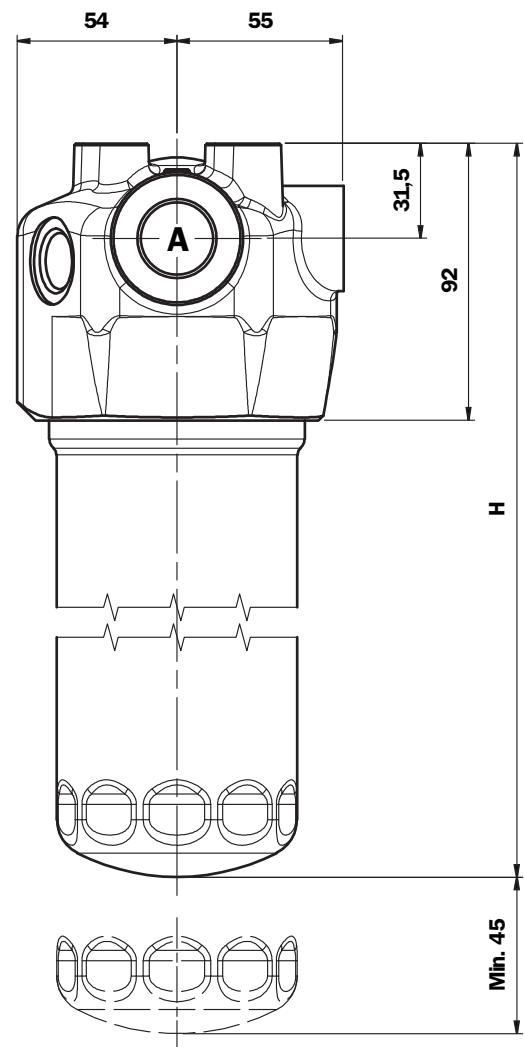
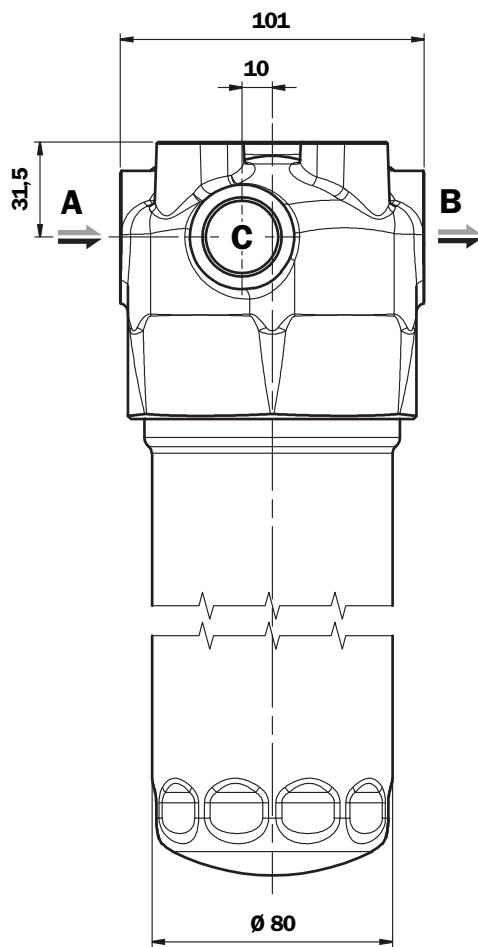
LMP 116



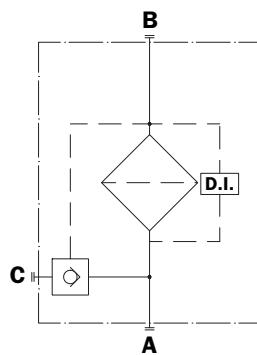
	Connections A - B	Lateral connections C
A	G 3/4"	G 3/4"
B	G 1"	G 3/4"
C	3/4" NPT	3/4" NPT
D	1" NPT	3/4" NPT
E	SAE 12	SAE 12
F	SAE 16	SAE 12



LMP 118



Length Filter	H mm
1	182
2	215
3	265
4	365



Connections	Lateral connections
A - B	C
A G 3/4"	G 3/4"
B G 1"	G 3/4"
C 3/4" NPT	3/4" NPT
D 1" NPT	3/4" NPT
E SAE 12	SAE 12
F SAE 16	SAE 12

Ordering information LMP110-118

Filter assembly

LMP

	1	2	3	4	5	6	7	8	9
Example: LMP	110	2	B	A	B	3	A10	N	P01

Filter element

CU 110

	2	7	4	8	9
Example: CU110	2	A10	A	N	P01

1 - Style

110
112
116
118

2 - Filter length

1
2
3
4

3 - Valves

S
B

Without bypass valve
(excluded LMP 118)
With bypass valve
Opening pressure: 3,5 bar
With bypass valve
Opening pressure: on request

4 - Seals

A

NBR
On request

5 - Connection

Type
A
B
C
D
E
F

G 3/4"
G 1"
3/4" NPT
1" NPT
SAE 12
SAE 16

6 - Indicator port

1	No
2	A
3	B (excluded LMP 118)
6	A + B (excluded LMP 118)

7 - Filter element

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

Absolute filtration
Inorganic
microfibre
 $\beta_{x(c)} \geq 1000$

M25	25 µm
M60	60 µm
P10	10 µm
P25	25 µm

Nominal Filtration
Metal mesh

P10	10 µm
P25	25 µm

Nominal Filtration
Cellulose

8 - Collapse pressure

N	Δp 20 bar
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9 - Options

P01	MP Filtri standard
Pxx	Customer request

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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LMP 120



Maximum pressure 80 bar

Flow rates to 200 l/min

Technical data

LMP 120

Filter housing (Materials)

- Head: Aluminium
- Housing: Cataphoresis painting
- Bypass valve: Brass/Aluminium

Pressure

LMP 120/122/123 length: 1 - 2 - 3 - 4

- Working pressure: 80 bar (8 MPa)
- Test pressure: 120 bar (12 MPa)
- Burst pressure: 380 bar (38 MPa)
- Pulse pressure fatigue test: 1.000.000 cycles with pressure from 0 to 80 bar (8 MPa)

Temperature

- From -25°C to +110°C

Bypass valve

- Opening pressure 3.5 bar ±10%
- Other opening pressures on request.

Δp Elements type

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

Seals

- Standard NBR series A
- Optional FPM series V

Weights (kg)

Length

- LMP120 - 1 1,9
- LMP120 - 2 2,1
- LMP120 - 3 2,4
- LMP120 - 4 2,9

Volumes (dm³)

Length

- LMP120 - 1 0,75
- LMP120 - 2 0,81
- LMP120 - 3 1,11
- LMP120 - 4 1,53

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

Filter element in stainless steel mesh
Length

Type	1	2	3	4
CU 110	1302	1764	2464	3864

Values expressed in cm²

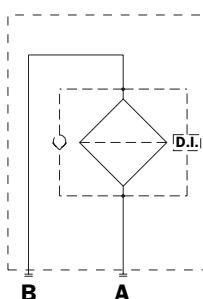
LMP 120



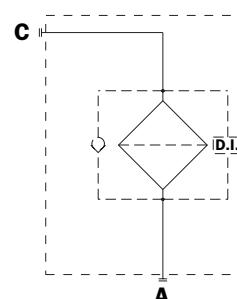
LMP 122



Style
LMP 120



Style
LMP 122

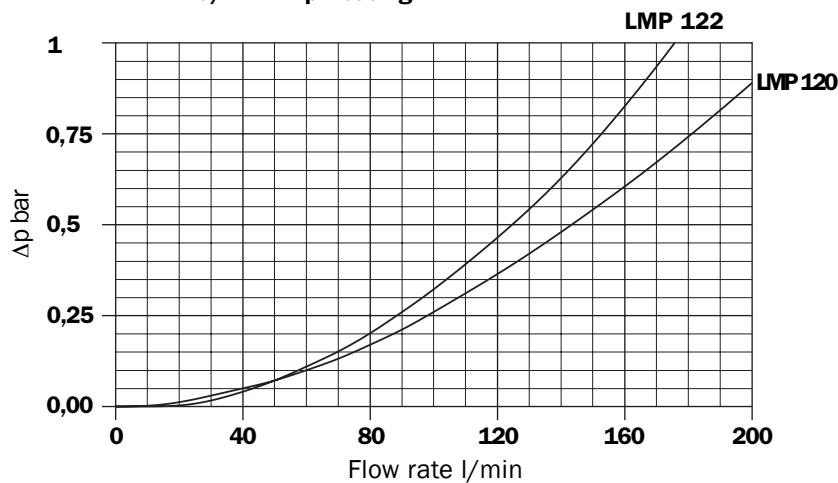


Filter housings Δp pressure drop

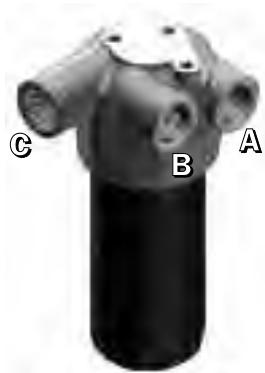
The curves are plotted utilising mineral oil with density of 0.86 kg/dm³ to ISO 3968.

Δp varies proportionally with density.

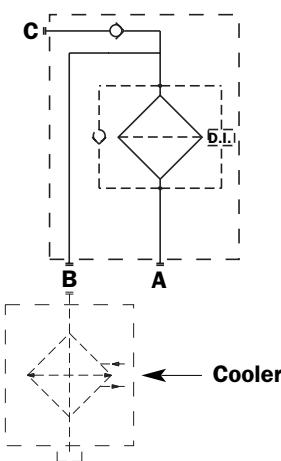
LMP 120/122 - Δp Housing



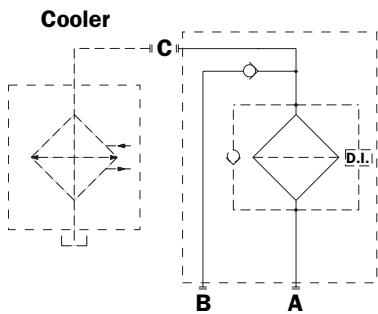
LMP 123 Type 1



Style
LMP 123
Type 1



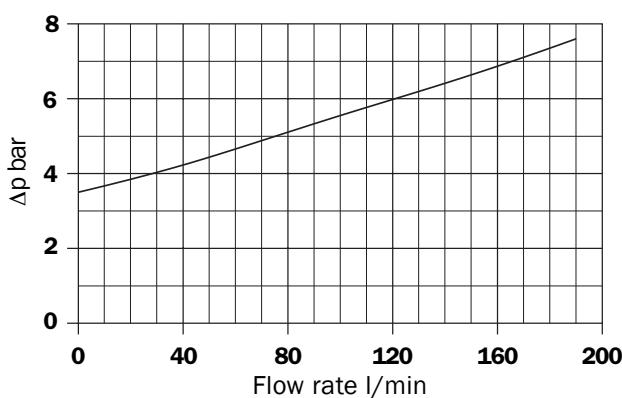
Style
LMP 123
Type 2



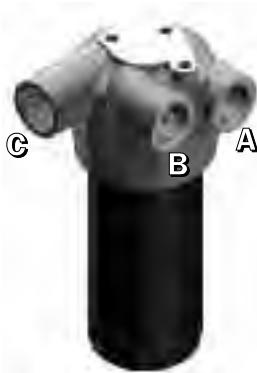
Valves

Bypass valve pressure drop

LMP 120/LMP 123



LMP 123 Type 2

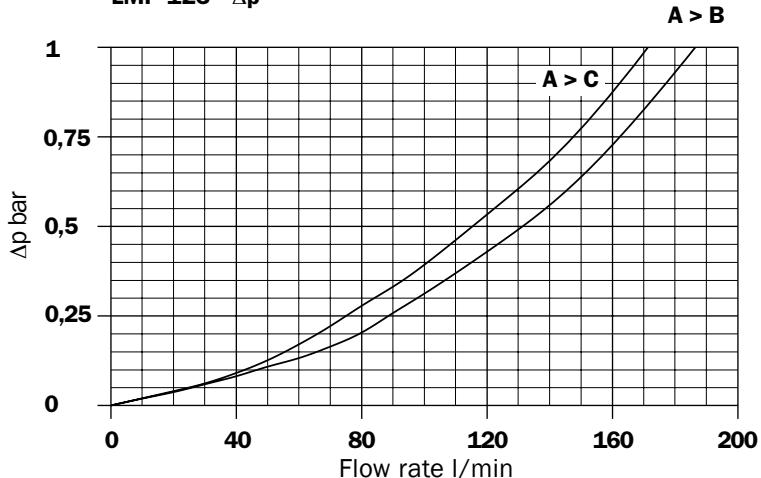


Filter housings Δp pressure drop

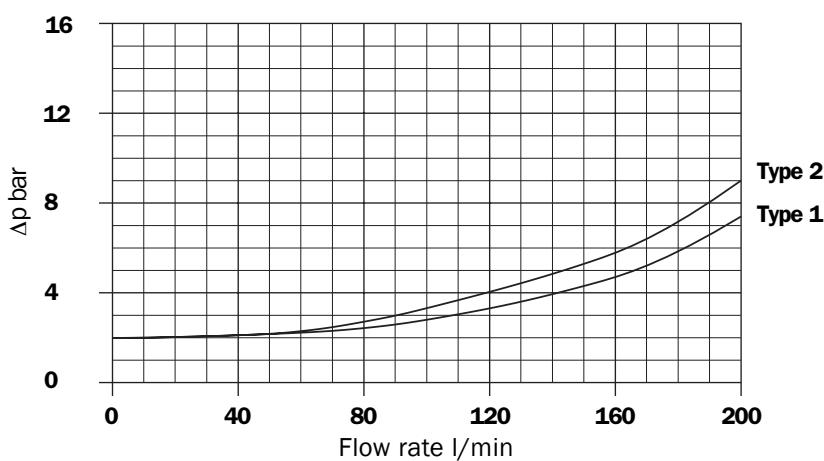
The curves are plotted utilising mineral oil with density of 0.86 kg/dm³ to ISO 3968.

Δp varies proportionally with density.

LMP 123 - Δp

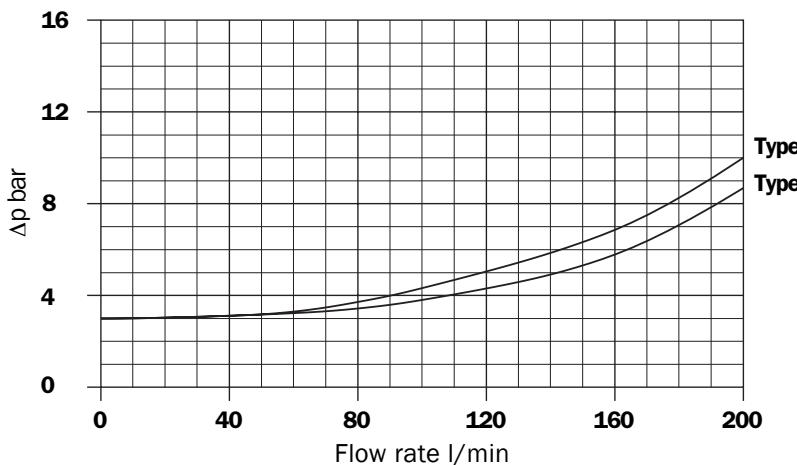


LMP 123 - Δp Housing with check valve 2 bar setting



Type 2
Type 1

LMP 123 - Δp Housing with check valve 3 bar setting



Type 2
Type 1

Filter sizing

Correct sizing of the filter must be based on a variable pressure drop depending on the application:

- return filter Δp from 0.4 to 0.6 bar
- filter on lubrication lines Δp from 0.3 to 0.5 bar
- off-line fluid power plants Δp from 0.3 to 0.4 bar
- off-line filter test benches Δp from 0.1 to 0.3 bar
- over-boost filter Δp from 0.4 to 0.6 bar

The pressure drop calculation is performed by adding together the value for the housing and the value for the filter element.

The pressure drop in the housing is proportional to the fluid density kg/dm³; all the graphs in the catalogue are referred to mineral oil with density of 0.86 kg/dm³.

The filter element pressure drop value is proportional to viscosity mm²/s, the Y values in the catalogue are referred to viscosity of 30 mm²/s.

Sizing data for single cartridge, head at top

Δp Tot.

Δp_c Filter housing

Δp_e Filter element

Y Multiplication factor (see below)

Q l/min = flow rate

V1 = reference viscosity 30 mm²/s (cSt)

V2 = operating viscosity in mm²/s (cSt)

Δp Tot. = $\Delta p_c + \Delta p_e$

$\Delta p_e = Y : 1000 \times Q \times (V2/V1)$

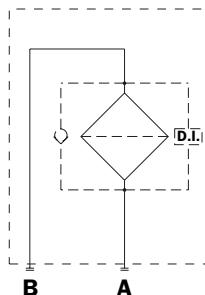
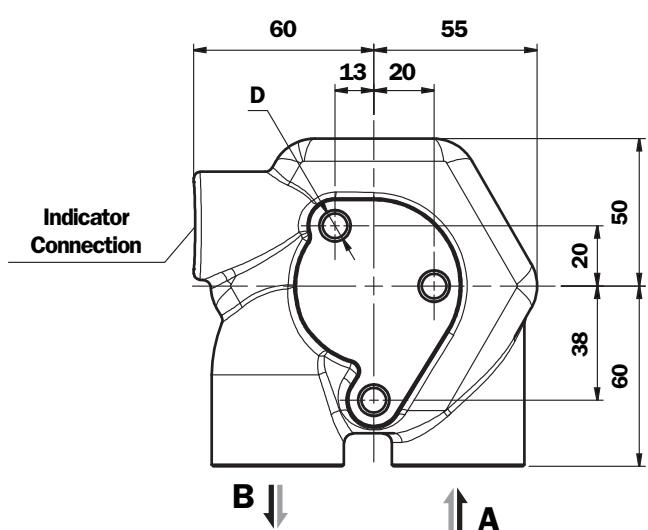
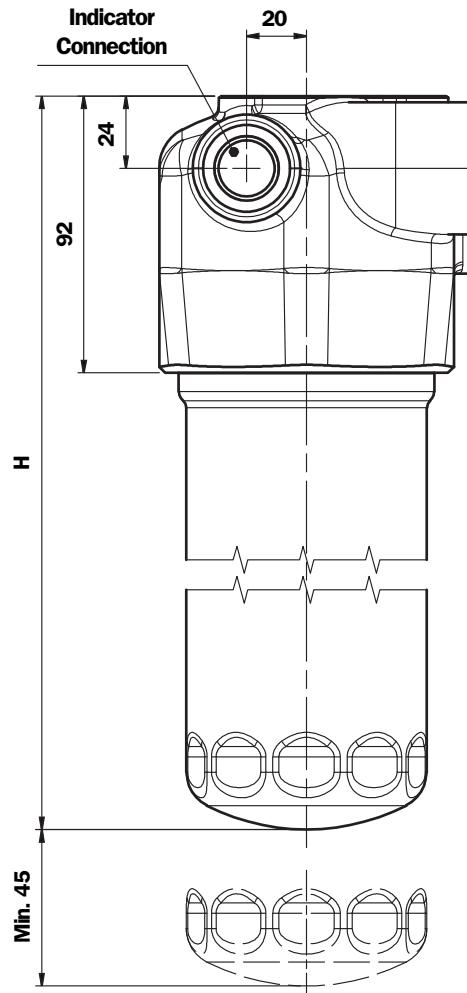
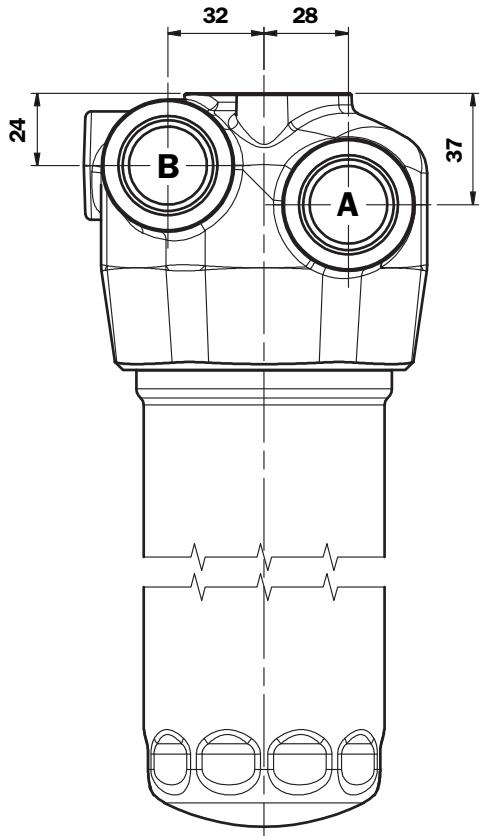
Multiplication factor "Y" for definition of the pressure drop of filter elements.

Reference viscosity 30 mm²/s

Filter Element	Absolute Filtration					Nominal Filtration		Nominal Filtration	
	Series N					Series N		Series N	
Type	A 0 3	A 0 6	A 1 0	A 1 6	A 2 5	P 1 0	P 2 5	M 2 5	
CU 110 1	16,25	15,16	8,754	8,142	5,875	2,862	2,651	0,1431	
2	12,62	10,44	6,111	6,024	4,155	1,598	1,486	0,1253	
3	8,571	7,951	5,066	4,066	2,397	1,242	1,153	0,1067	
4	5,759	4,051	2,798	2,358	1,142	0,9072	0,8491	0,0558	

Dimensions

LMP 120



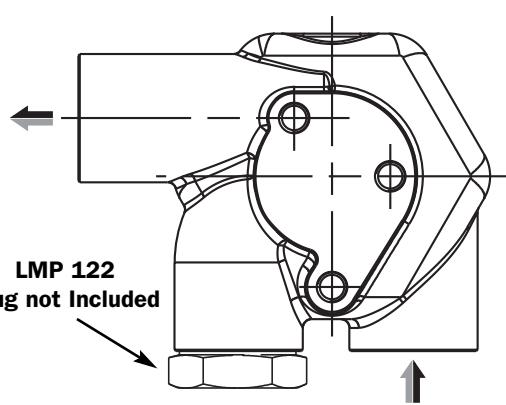
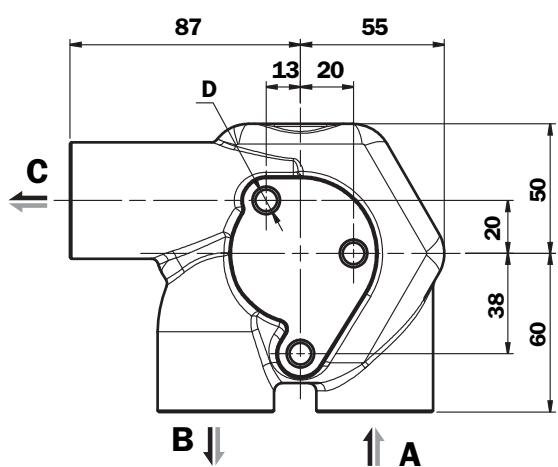
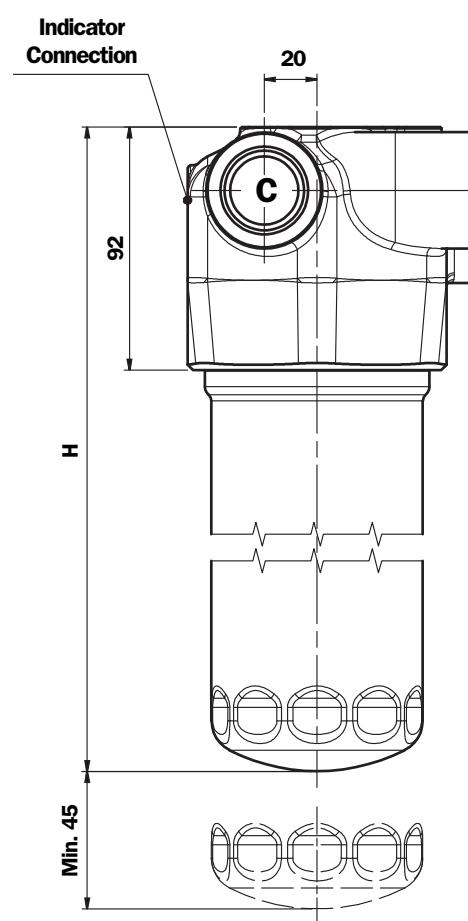
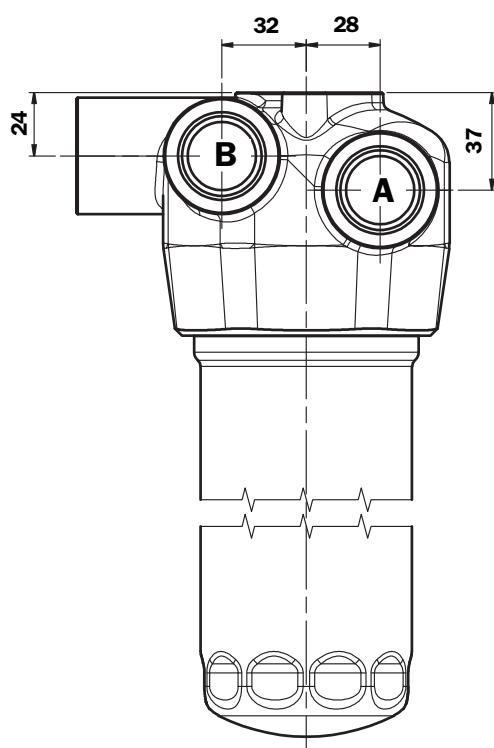
Length Filter	H mm
1	182
2	215
3	265
4	365

Connections A - B

A	G 3/4"	M10 x Depth 12 mm
B	G 1"	M10 x Depth 12 mm
C	3/4" NPT	3/8" UNC x Depth 12 mm
D	1" NPT	3/8" UNC x Depth 12 mm
E	SAE 12	3/8" UNC x Depth 12 mm
F	SAE 16	3/8" UNC x Depth 12 mm

Fixing holes D

LMP 122/123



Length Filter	H mm
1	182
2	215
3	265
4	365

Connections
A - B - C

B	G 1"	M10 x Depth 12 mm
D	1" NPT	3/8" UNC x Depth 12 mm
F	SAE 16	3/8" UNC x Depth 12 mm

Fixing holes
D

Ordering Information LMP120/122

Filter assembly

LMP

Example: LMP

<input type="checkbox"/>								
122	2	B	A	B	2	A10	N	P01

Filter element

CU 110

Example: CU110

<input type="checkbox"/>				
2	A10	A	N	P01

1 - Style

<input type="checkbox"/>	120
<input type="checkbox"/>	122

2 - Filter length

<input type="checkbox"/>	1
<input type="checkbox"/>	2
<input type="checkbox"/>	3
<input type="checkbox"/>	4

3 - Valves

<input type="checkbox"/>	Without bypass
<input type="checkbox"/>	With bypass valve Opening pressure: 3,5 bar
<input type="checkbox"/>	With bypass valve Opening pressure: on request
<input type="checkbox"/>	

4 - Seals

<input type="checkbox"/>	NBR
<input type="checkbox"/>	On request

5 - Connections

Type

<input type="checkbox"/>	G 3/4" (not for LMP 122)
<input type="checkbox"/>	G 1"
<input type="checkbox"/>	3/4" NPT (not for LMP 122)
<input type="checkbox"/>	1" NPT
<input type="checkbox"/>	SAE 12 (not for LMP 122)
<input type="checkbox"/>	SAE 16

6 - Indicator port

<input type="checkbox"/>	Without indicator port
<input type="checkbox"/>	With indicator port

7 - Filter element

<input type="checkbox"/>	A03	3 µm	Absolute filtration Inorganic microfibre $\beta_{x(c)} \geq 1000$
<input type="checkbox"/>	A06	6 µm	
<input type="checkbox"/>	A10	10 µm	
<input type="checkbox"/>	A16	16 µm	
<input type="checkbox"/>	A25	25 µm	
<input type="checkbox"/>	M25	25 µm	Nominal Filtration Metal mesh
<input type="checkbox"/>	M60	60 µm	
<input type="checkbox"/>	P10	10 µm	Nominal Filtration Cellulose
<input type="checkbox"/>	P25	25 µm	

8 - Collapse pressure

<input type="checkbox"/>	Δp 20 bar
--------------------------	-----------

9 - Options

<input type="checkbox"/>	P01	MP Filtri standard
<input type="checkbox"/>	Pxx	Customer request

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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Ordering Information LMP123

Filter assembly

LMP

1	2	3	4	5	6	7	8	9
<input type="checkbox"/>								

Example: **LMP**

123 2 C A B 2 A10 N P01

Filter element

CU 110

2	7	4	8	9
<input type="checkbox"/>				

Example: **CU110**

2 A10 A N P01

1 - Style

123

2 - Filter length

1
2
3
4

3 - Valves

Type 1 - Without bypass valve

C	Check valve 2 bar
D	Check valve 3 bar

Type 2 - Without bypass valve

G	Check valve 2 bar
H	Check valve 3 bar

Type 1 - With bypass valve

M	Check valve 2 bar
N	Check valve 3 bar

Type 2 - With bypass valve

Q	Check valve 2 bar
R	Check valve 3 bar

4 - Seals

A	NBR
	On request

5 - Connections

Type

B	G 1"
F	SAE 16

6 - Indicator port

1	Without indicator port
2	With indicator port

7 - Filter element

A03	3 µm	Absolute filtration Inorganic microfibre $\beta_{x(c)} \geq 1000$
A06	6 µm	
A10	10 µm	
A16	16 µm	
A25	25 µm	
M25	25 µm	Nominal Filtration Metal mesh
M60	60 µm	
P10	10 µm	Nominal Filtration Cellulose
P25	25 µm	

8 - Collapse pressure

N	Δp 20 bar
----------	-------------------

9 - Options

P01	MP Filtri standard
Pxx	Customer request

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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LMP 124

In-Line Suction and Return Filter



Maximum pressure 80 bar

Flow rates to 160 l/min

Technical data

LMP 124

Filter housing (Materials)

- Head: Aluminium
- Housing: Cataphoresis painting
- Bypass valve: Brass/Aluminium

Pressure

LMP 124 length: 1 - 2 - 3 - 4

- Working pressure: 80 bar (8 MPa)
- Test pressure: 120 bar (12 MPa)
- Burst pressure: 380 bar (38 MPa)
- Pulse pressure fatigue test: 1.000.000 cycles with pressure from 0 to 80 bar (8 MPa)

Temperature

- From -25°C to +110°C

Bypass valve

- Opening pressure 2.5 bar ±10%
- Other opening pressures on request.

Δp Elements type

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

Seals

- | | |
|----------------|----------|
| • Standard NBR | series A |
| • Optional FPM | series V |

Weights (kg)

length

- | | |
|--------------|-----|
| • LMP124 - 1 | 1,7 |
| • LMP124 - 2 | 1,9 |
| • LMP124 - 3 | 2,2 |
| • LMP124 - 4 | 2,7 |

Volumes (dm³)

length

- | | |
|--------------|------|
| • LMP124 - 1 | 0,75 |
| • LMP124 - 2 | 0,81 |
| • LMP124 - 3 | 1,11 |
| • LMP124 - 4 | 1,53 |

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

Filter element in stainless steel mesh

Length

Type	1	2	3	4
CU 110	1302	1764	2464	3864

Values expressed in cm²

LMP 124

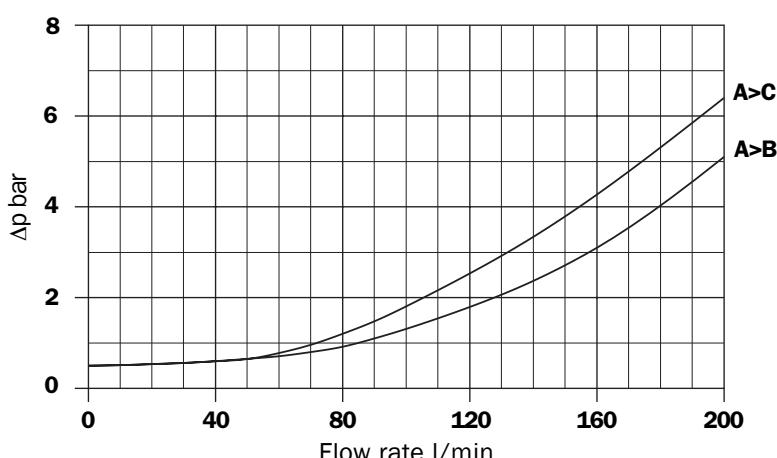


Filter housings Δp pressure drop

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

Δp varies proportionally with density.

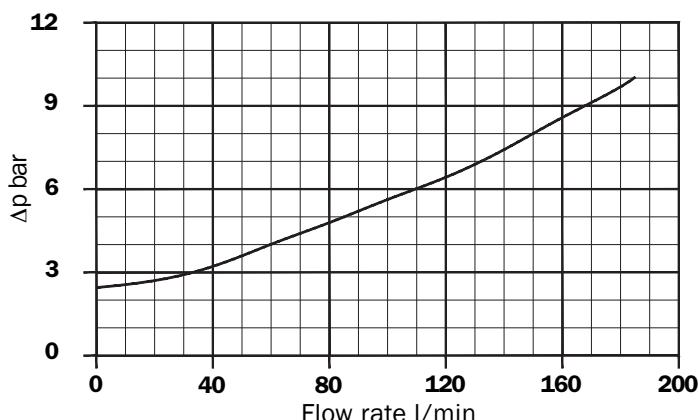
LMP 124 - Δp Housing



Valves

Bypass valve pressure drop

LMP 124



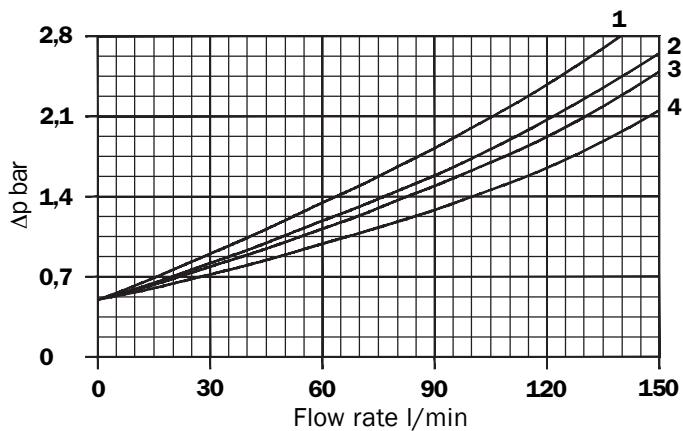
Style

C - D - E - F

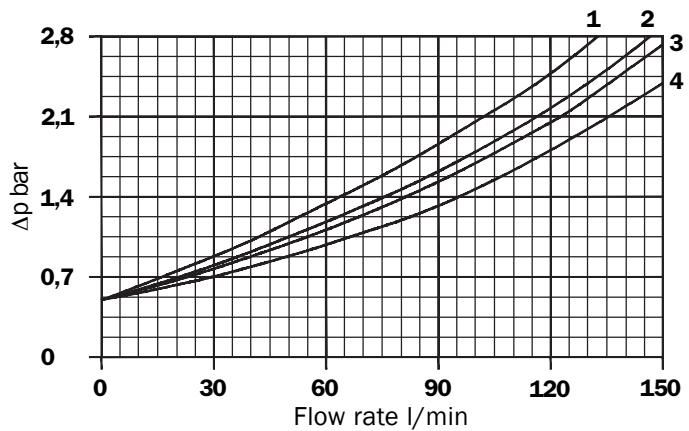
Style

G - H

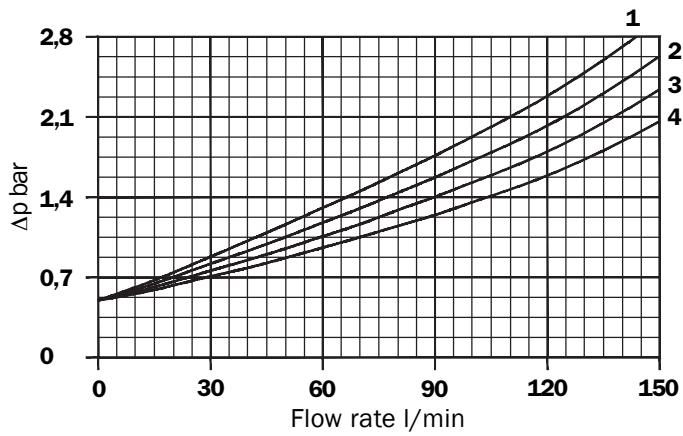
Absolute filtration A10



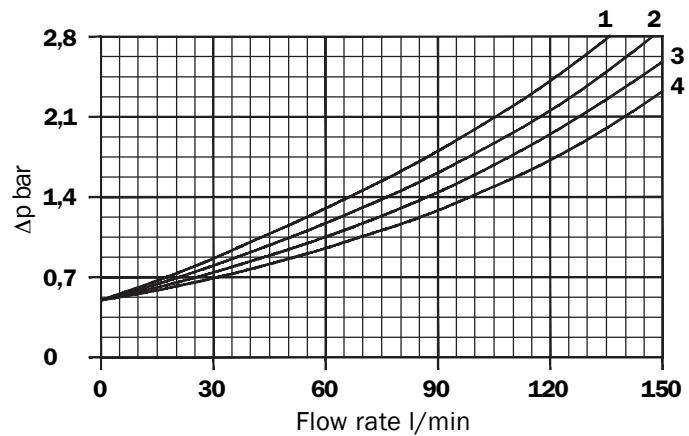
Absolute filtration A10



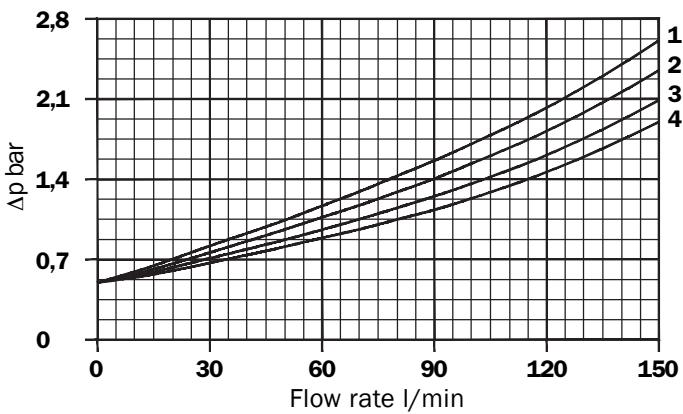
Absolute filtration A16



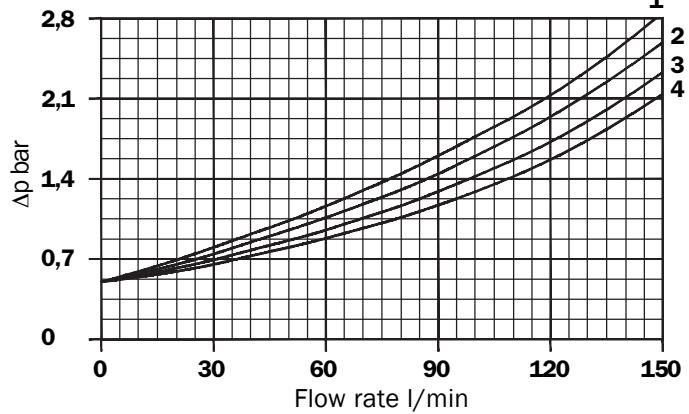
Absolute filtration A16



Absolute filtration A25



Absolute filtration A25



Filter length

1
2
3
4

LMP 124

Style C - D - E - F



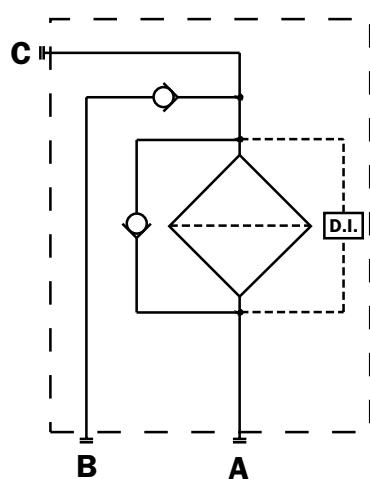
LMP 124

Style G - H

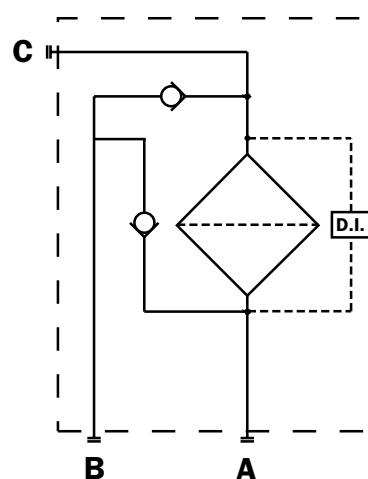


Symbols

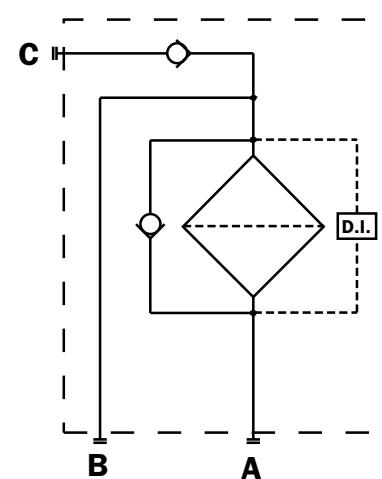
**Style C
LMP 124**



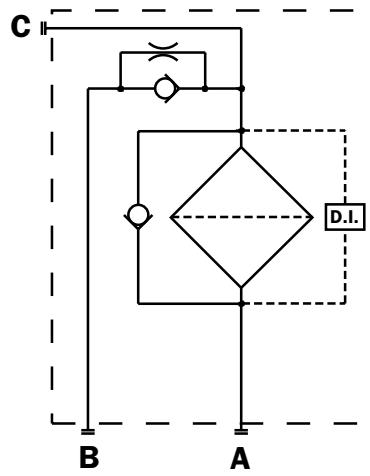
**Style E
LMP 124**



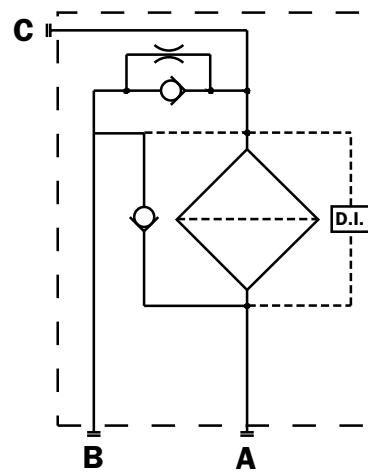
**Style G
LMP 124**



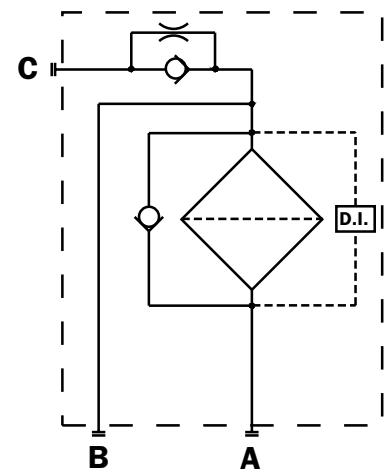
**Style D
LMP 124**



**Style F
LMP 124**



**Style H
LMP 124**



Filter sizing

Correct sizing of the filter must be based on a variable pressure drop depending on the application:

- return filter Δp from 0.4 to 0.6 bar
- filter on lubrication lines Δp from 0.3 to 0.5 bar
- off-line fluid power plants Δp from 0.3 to 0.4 bar
- off-line filter test benches Δp from 0.1 to 0.3 bar
- over-boost filter Δp from 0.4 to 0.6 bar

The pressure drop calculation is performed by adding together the value for the housing and the value for the filter element.

The pressure drop in the housing is proportional to the fluid density kg/dm³; all the graphs in the catalogue are referred to mineral oil with density of 0.86 kg/dm³.

The filter element pressure drop value is proportional to viscosity mm²/s, the Y values in the catalogue are referred to viscosity of 30 mm²/s.

Sizing data for single cartridge, head at top

Δp Tot.

Δp_c Filter housing

Δp_e Filter element

Y Multiplication factor (see below)

Q l/min = flow rate

V1 = reference viscosity 30 mm²/s (cSt)

V2 = operating viscosity in mm²/s (cSt)

Δp Tot. = $\Delta p_c + \Delta p_e$

$\Delta p_e = Y : 1000 \times Q \times (V2/V1)$

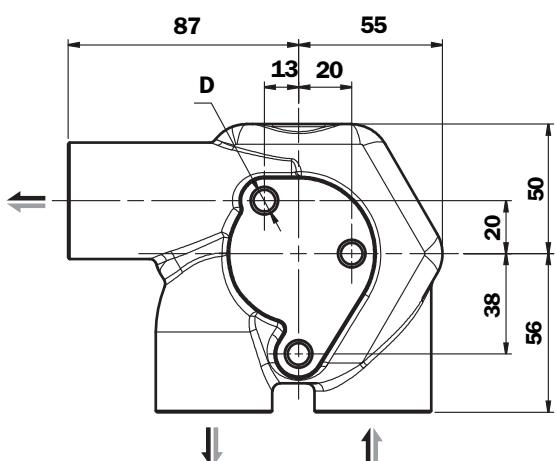
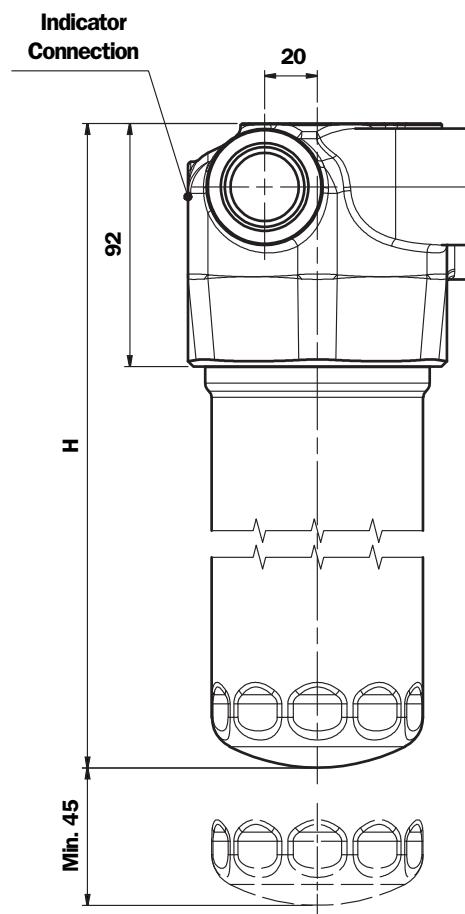
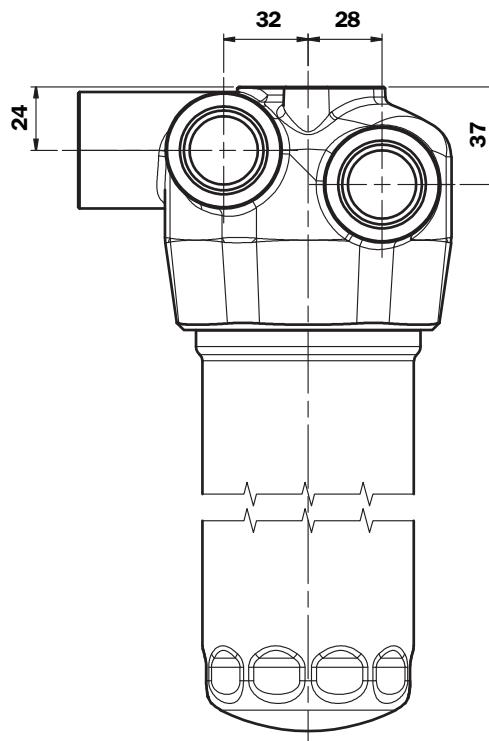
Multiplication factor "Y" for definition of the pressure drop of filter elements.

Reference viscosity 30 mm²/s

Filter Element	Absolute Filtration Serie N					Nominal Filtration Serie N		Nominal Filtration Serie N	
	A 0 3	A 0 6	A 1 0	A 1 6	A 2 5	P 1 0	P 2 5	M 2 5	
CU 110 1	16,25	15,16	8,754	8,142	5,875	2,862	2,651	0,1431	
2	12,62	10,44	6,111	6,024	4,155	1,598	1,486	0,1253	
3	8,571	7,951	5,066	4,066	2,397	1,242	1,153	0,1067	
4	5,759	4,051	2,798	2,358	1,142	0,9072	0,8491	0,0558	

Dimensions

LMP 124



Length Filter	H mm
1	182
2	215
3	265
4	365

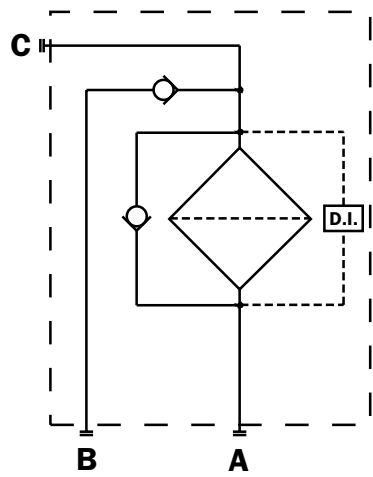
Threaded Connections
A - B - C

B	G 1"	M10 x Depth 12 mm
F	SAE 16	3/8" UNC x Depth 12 mm

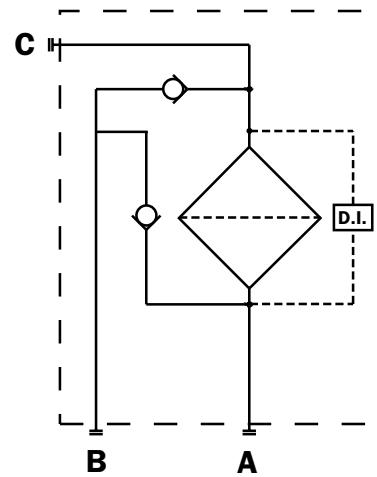
Fixing holes
D

Symbols

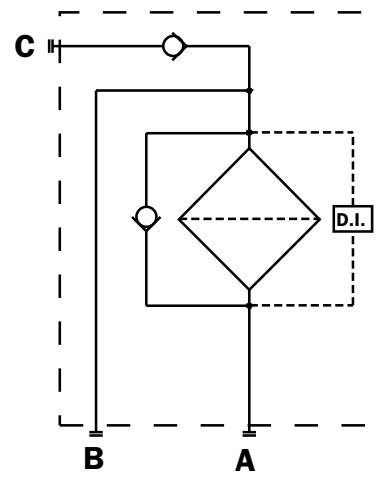
Style C
LMP 124



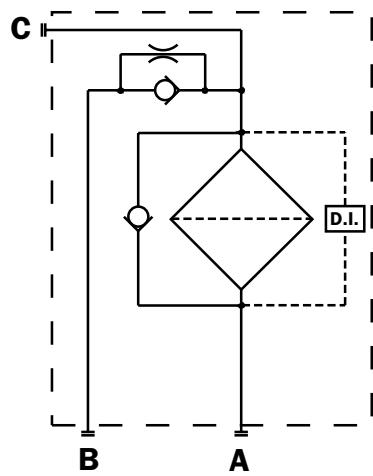
Style E
LMP 124



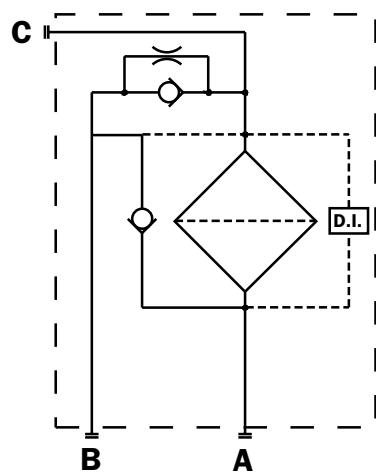
Style G
LMP 124



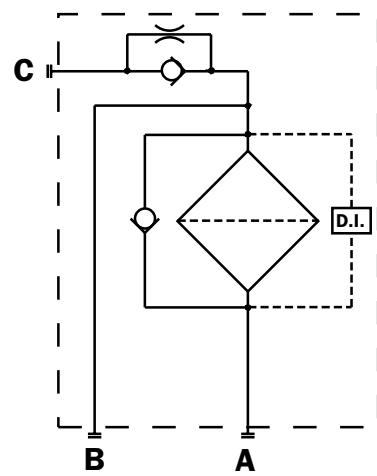
Style D
LMP 124



Style F
LMP 124



Style H
LMP 124



Ordering information LMP124

Filter assembly

LMP

1	2	3	4	5	6	7	8	9
<input type="checkbox"/>								

Example: **LMP**

124 2 C A B 2 A10 N P01

Filter element

CU 110

2	7	4	8	9
<input type="checkbox"/>				

Example: **CU110**

2 A10 A N P01

1 - Style

124

2 - Filter length

**1
2
3
4**

3 - Valves

**c
d
e
f
g
h**

see "SYMBOLS" (ref. to pages 21 and 24)

4 - Seals

A	NBR
V	FPM

5 - Connections

Type

B	G 1"
F	SAE 16

6 - Indicator port

1	No
2	Port G 1/8" For pressure switch
3	Port G 1/4" For pressure switch
4	Differential indicator port

7 - Filter element

A10	10 µm	Absolute filtration Inorganic microfibre
A16	16 µm	
A25	25 µm	$\beta_{x(c)} \geq 1000$

8 - Collapse pressure

N	Δp 20 bar
----------	-------------------

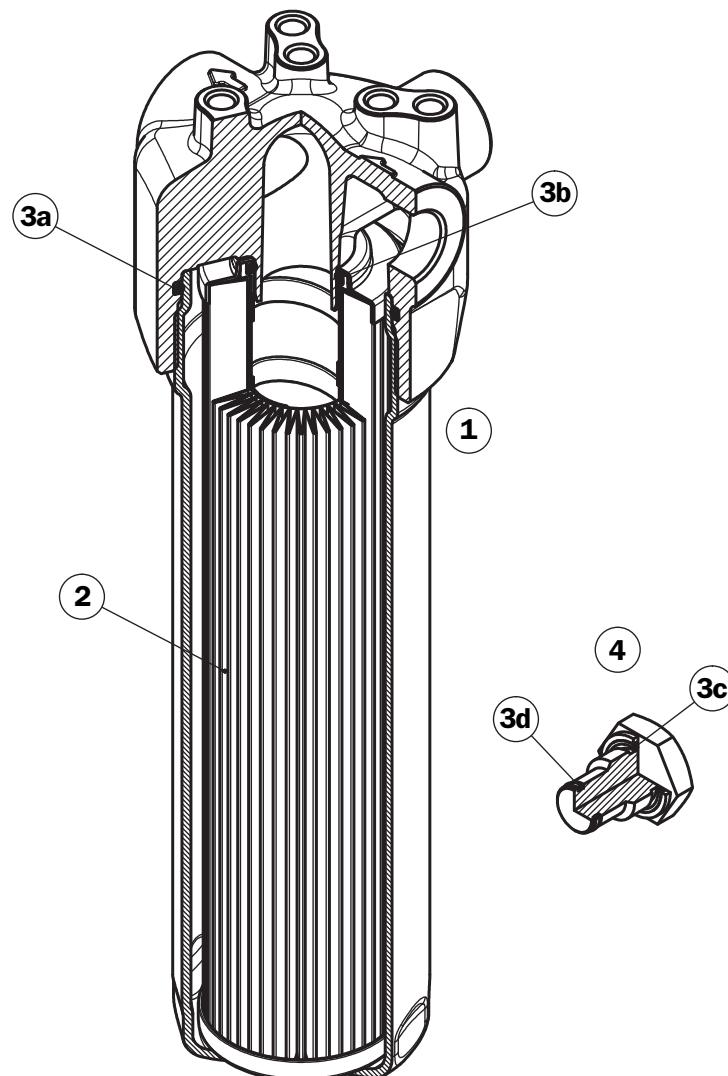
9 - Option

P01	MP Filtri standard
Pxx	Customer request

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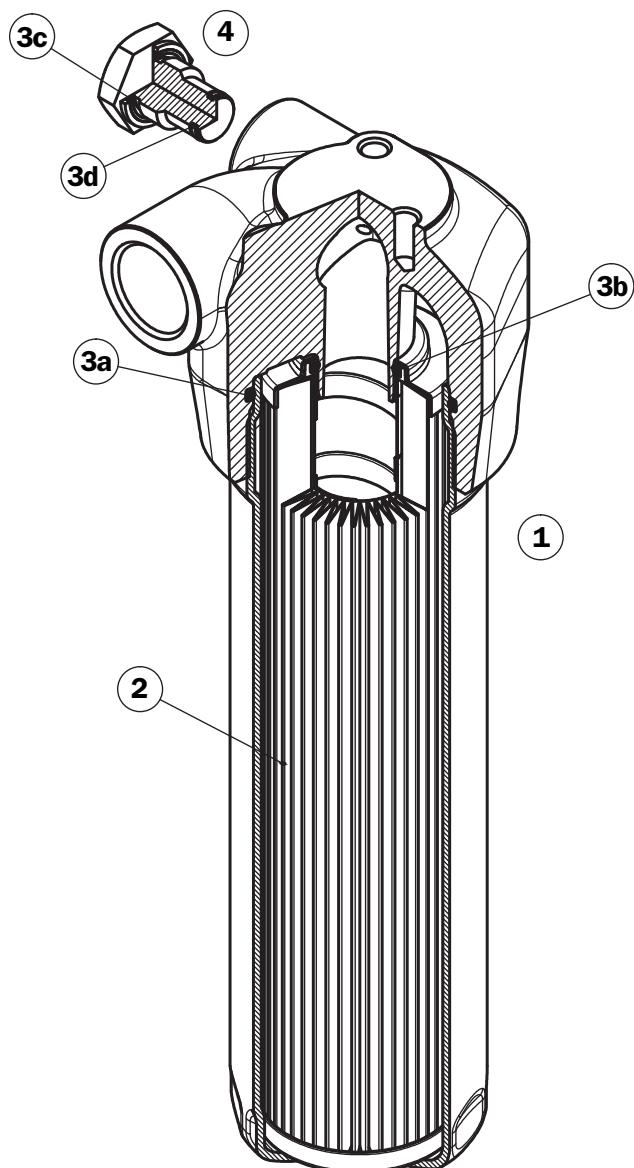
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Spare parts



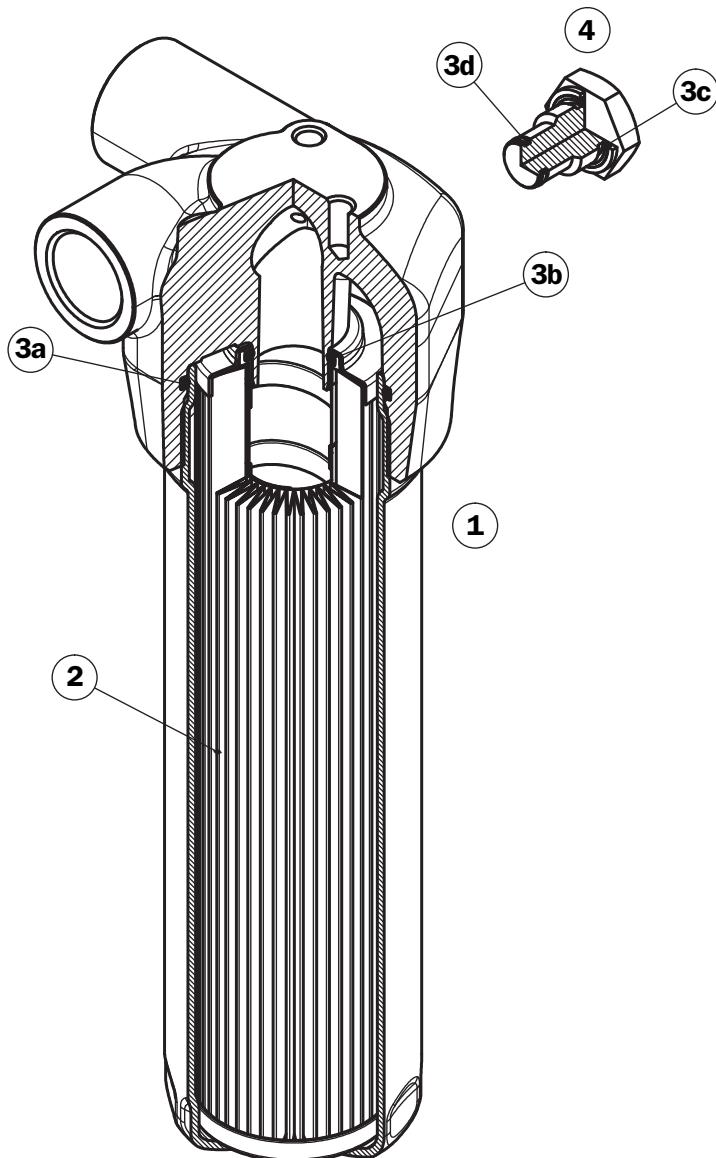
Pos.	Description	Qty	FILTER Series	
			LMP 110 - 112 - 116 - 118	
1	Filter assembly	1	See order table	
2	Filter element	1	See order table	
3	Seals Kit	1	NBR 02050478	FPM 02050479
3a	O-Ring for housing	1	O-R 4312 Ø 78,97 x 3,53	
3b	O-Ring for filter element	1	O-R 4125 Ø 31,34 x 3,53	
3c	Gasket for indicator	1	NBR 01030058	FPM 01030046
3d	O-Ring for indicator	1	O-R 2050 Ø 12,42 x 1,78	
4	Indicator Plug	1	T2H	T2V
-	Indicators	1	See order table	

Spare parts



Pos.	Description	Qty	FILTER Series LMP 120	
1	Filter assembly	1	See order table	
2	Filter element	1	See order table	
3	Seals Kit	1	NBR 02050478	FPM 02050479
3a	O-Ring for housing	1	O-R 4312 Ø 78,97 x 3,53	
3b	O-Ring for filter element	1	O-R 4125 Ø 31,34 x 3,53	
3c	Gasket for indicator	1	NBR 01030058	FPM 01030046
3d	O-Ring for indicator	1	O-R 2050 Ø 12,42 x 1,78	
4	Indicator Plug	1	T2H	T2V
-	Indicators	1	See order table	

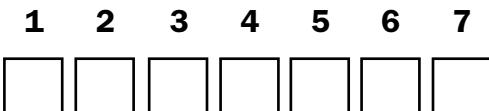
Spare parts



Pos.	Description	Qty	FILTER Series LMP 122 - 124	
1	Filter assembly	1	See order table	
2	Filter element	1	See order table	
3	Seals Kit	1	NBR 02050478	FPM 02050479
3a	O-Ring for housing	1	O-R 4312 Ø 78,97 x 3,53	
3b	O-Ring for filter element	1	O-R 4125 Ø 31,34 x 3,53	
3c	Gasket for indicator	1	NBR 01030058	FPM 01030046
3d	O-Ring for indicator	1	O-R 2050 Ø 12,42 x 1,78	
4	Indicator Plug	1	T2H	T2V
-	Indicators	1	See order table	

Differential indicators

Order code



Example: NM 7 H A 11 P01

1 - Styles

NR	Electrical
KR	Electrical-Visual
NM	Electrical IP 67
Z	Visual
U	Visual

2 - Differential trip pressure

6	2 bar \pm 10% (with bypass filter)
7	5 bar \pm 10% (without bypass filter)

3 - Power supply voltage

(only for style KR - only voltage DC)

1	24 Volt
2	110 Volt

4 - Seals

H	HNBR Standard
V	FPM
x	Others on request

5 - Thermostat (only for style NM)

A	Without
C	50°

6 - Electrical connector (only for style NM)

11	Connector AMP superseal series 1.5
21	Connector AMP timer
31	Connector DEUTSCH DT 04-2-P
32	Connector DEUTSCH DT 04-3-P
41	Length electrical cable 0,5 m

7 - Option

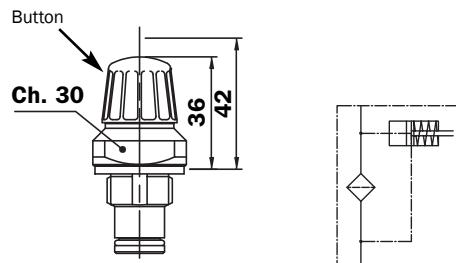
P01	MP standard
------------	-------------

Pressure:

Working pressure 420 bar

Pulse pressure fatigue test: 1.000.000 cycles
with pressure from 0 to 420 bar (42 MPa)

SERIES Z VISUAL



Visual indicator with manual reset.

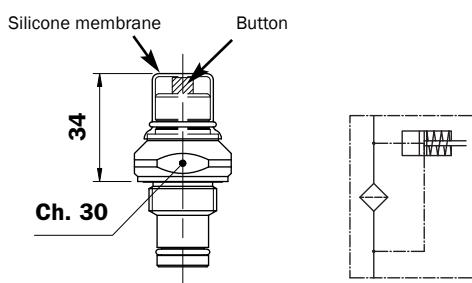
Nylon signalling button.

Button depressed position = cartridge clean.
Button raised position, Red = cartridge clogged.

Weight: 118 gr.

Tightening torque: 60 Nm.

SERIES U VISUAL



"U" indicator provide to accurate view indication of filter element condition.

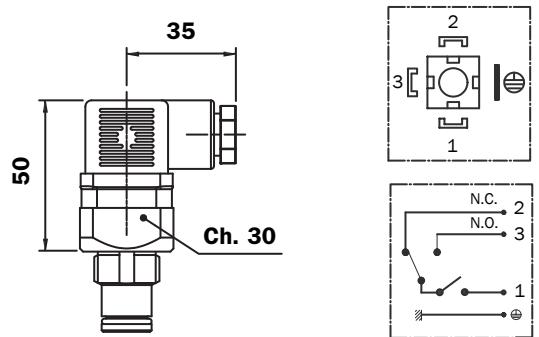
Visual signal Red button down: clean cartridge
Red button up: clogging cartridge

Button depressed position = cartridge clean.
Button raised position = cartridge clogged.

Connection G 1/2"
Tightening torque: 65 Nm
Weight: 128 gr

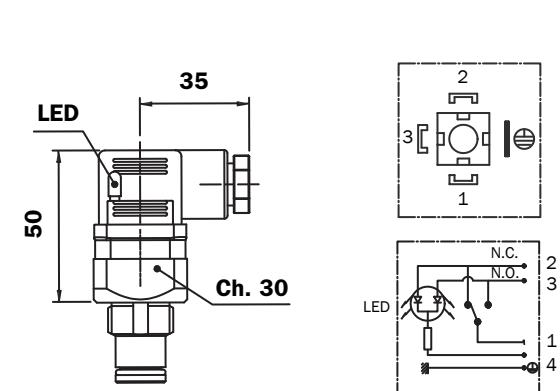
SERIES NR ELECTRICAL

Connector EN 175301-803 A/ISO 4400



Switching type	N/O or N/C contacts (change over Contact)	Switching type	N/O or N/C contacts (change over Contact)
Max. contact rating	0,8 A / 24 Vdc 0,17 A / 115 Vdc	Max. contact rating	0,8 A / 24 Vdc 0,17 A / 115 Vdc
Max power supply voltage	230Vac	Max power supply voltage	24Vdc - 115 Vdc/ac - 230 Vac
Electrical connection	EN 175301-803	Electrical connection	EN 175301-803
Cable gland	PG 9	visual indicator by LED	GREEN LED = Clean element. RED LED= Blocked element.
Protection rating	IP 65	Cable gland	PG 9
Connection	G 1/2"	Protection rating	IP 65
Tightening torque:	65 Nm	Connection	G 1/2"
Weight:	123 gr	Tightening torque:	65 Nm
		Weight:	123 gr

SERIES KR ELECTRICAL/VISUAL



SERIES NM ELECTRICAL

32	41	11																						
21	31	Length indicator NM A																						
		<table border="1"> <thead> <tr> <th>Without thermostat</th><th>With thermostat</th></tr> </thead> <tbody> <tr> <td>NM - 11</td><td>40</td></tr> <tr> <td>NM - 21</td><td>60</td></tr> <tr> <td>NM - 31</td><td>75</td></tr> <tr> <td>NM - 32</td><td>40</td></tr> <tr> <td>NM - 41</td><td>40</td></tr> <tr> <td></td><td>50</td></tr> <tr> <td></td><td>70</td></tr> <tr> <td></td><td>85</td></tr> <tr> <td></td><td>50</td></tr> <tr> <td></td><td>50</td></tr> </tbody> </table>	Without thermostat	With thermostat	NM - 11	40	NM - 21	60	NM - 31	75	NM - 32	40	NM - 41	40		50		70		85		50		50
Without thermostat	With thermostat																							
NM - 11	40																							
NM - 21	60																							
NM - 31	75																							
NM - 32	40																							
NM - 41	40																							
	50																							
	70																							
	85																							
	50																							
	50																							
Switching type	N/O contacts N/O thermostat	Protection rating	IP 67																					
Max. contact rating	0,8 A / 24 Vdc 0,17 A / 115 Vdc	Connection	G 1/2"																					
Max power supply voltage	Max. 120Vdc	Tightening torque:	65 Nm																					
Electrical connection	11 Connector AMP supeseal series 1.5 21 Connector AMP timer 31 Connector DEUTSCH DT 04-2-P 32 Connector DEUTSCH DT 04-3-P 41 Length electrical cable 0,5 m	Weight:	125 gr																					

Recommended maximum flow rate

- Pressure drop of filter assembly equal to Δp 0,7 bar.
- Oil kinematic viscosity 30 mm²/s (cSt).
- Density 0,86 kg/dm³.

LMP	110/118	112	116	120	122	
Filtration	Flow rate l/min	Filter length				
A03	40	36	36	39	42	1
A06	42	37	37	42	44	
A10	63	55	53	66	70	
A16	68	57	56	69	74	
A25	83	65	64	87	92	
M25	111	83	77	126	132	
P10	114	85	80	129	137	
P25	153	112	95	187	205	
A03	49	43	43	48	52	2
A06	57	49	47	57	61	
A10	80	65	64	86	90	
A16	82	67	65	88	91	
A25	97	75	72	108	115	
M25	128	93	86	150	159	
P10	130	94	87	153	163	
P25	155	114	96	187	205	
A03	45	54	55	67	72	3
A06	69	58	56	72	77	
A10	88	70	67	97	100	
A16	98	76	73	110	113	
A25	118	87	83	136	141	
M25	133	95	88	158	169	
P10	135	96	89	161	173	
P25	158	115	97	188	208	
A03	66	66	63	88	93	4
A06	98	76	72	108	113	
A10	112	87	79	128	133	
A16	117	88	83	135	143	
A25	136	96	87	162	172	
M25	140	98	90	168	178	
P10	140	98	92	170	180	
P25	160	115	98	190	215	

**New Headquarters:****MP FILTRI S.p.A. Italy**

Via 1° Maggio, n. 3
20060 Pessano con Bornago
(Milano) Italy
Tel. +39.02/95703.1
Fax +39.02/95741497-95740188
email: sales@mpfiltri.com
<http://www.mpfiltri.com>

GREAT BRITAIN**MP FILTRI U.K. Ltd.**

Bourton Industrial Park
Bourton on the Water
Gloucestershire GL54 2HQ UK
Phone: +44.01451-822522
Fax: +44.01451-822282
email: sales@mpfiltri.co.uk
<http://www.mpfiltri.com>

GERMANY**MP FILTRI D GmbH**

Am Wasserturm 5
D-66265 Heusweiler/Holz
Phone: +49.06806-85022.0
Fax: +49.06806-85022.18
email: service@mpfiltri.de
<http://www.mpfiltri.com>

FRANCE**MP FILTRI FRANCE Sas**

Parc d'activités des Chanteraines
8 rue du Commandant d'Estienne
d'Orves, Immeuble D3
92396 Villeneuve la Garenne - France
Phone: +33(0)1.40.86.47.00
Fax: +33(0)1.40.86.47.09
e-mail: sales@mpfiltrifrance.com
<http://www.mpfiltri.com>

USA**MP FILTRI USA Inc.**

2055 Quaker Pointe Drive
Quakertown, PA 18951
Phone: +1.215-529-1300
Fax: +1.215-529-1902
email: sales@mpfiltriusa.com
<http://www.mpfiltriusa.com>

CANADA**MP FILTRI CANADA Inc.**

380 Four Valley Drive Concord
Ontario Canada L4K 5Z1
Phone: +1.905-303-1369
Fax: +1.905-303-7256
email: mail@mpfiltricanna.com
<http://www.mpfiltricanna.com>

**RUSSIAN FEDERATION
MP FILTRI RUSSIA**

Phone/Fax: +7(495)220-94-60
P.O. Box 44 127562 Moscow, Russia
email: mpfiltrirussia@yahoo.com
<http://www.mpfiltri.ru>

CHINA**MP FILTRI (Shanghai) Co. Ltd.**

1280 Lianxi Road, 8 Bld - 2 Floor
Shanghai, Pudong
201204 P.R. China
Phone: + 86.21-58919916
Fax: + 86.21-58919667
email: sales@mpfiltrishanghai.com
<http://www.mpfiltri.com>

INDIA & UAE**MP FILTRI INDIA & UAE**

Phone: +91.9945599899
e-mail: s.mishra@mpfiltri.com
<http://www.mpfiltri.com>