

LMP 110-120-123 series

MULTIPORT

Maximum working pressure up to 8 MPa (80 bar) - Flow rate up to 175 l/min



Description

Low & Medium Pressure filters

Maximum working pressure up to 8 MPa (80 bar)
Flow rate up to 175 l/min

LMP110 is a range of versatile low pressure filter for transmission, protection of sensitive components in low pressure hydraulic systems and filtration of the coolant into the machine tools.
They are directly connected to the lines of the system through the hydraulic fittings.

Available features:

- Female threaded connections up to 1", for a maximum return flow rate of 200 l/min
- Fine filtration rating, to get a good cleanliness level into the system
- Bypass valve, to relieve excessive pressure drop across the filter media
- Visual, electrical and electronic differential clogging indicators
- Multiport and multifunction schemes, to meet any type of application.
- LMP112: 3/4" additional input port
- LMP116: 3/4" additional output port
- LMP118: 3/4" bypass port, to send the bypass flow to the reservoir instead of the system
- LMP119: 3/4" relief port, to relief the input pressure in the filter, protecting the components downstream the filter against back pressure caused by the pressure drop (cold starts)
- LMP120: connections placed in the same side
- LMP122: connections placed in the same side and 1" additional output port
- LMP123: 2 and 3 bar integrated relief valve

Common applications:

Delivery lines, in any low pressure industrial equipment or mobile machines

Technical data

Filter housing materials

- Head: Aluminium
- Housing: Cataphoresis - Painted Steel
- Bypass valve: Brass - Aluminium

Pressure

- Test pressure: 12 MPa (120 bar)
- Burst pressure:
 - LMP 110: 29 MPa (290 bar)
 - LMP 120/130: 38 MPa (380 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 8 MPa (80 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
- Wire mesh filter elements - series N: 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

Note

LMP MULTIPORT filters are provided for vertical mounting



Weights [kg] and volumes [dm³]

Filter series	Weights [kg]					Volumes [dm³]				
	Length	1	2	3	4	Length	1	2	3	4
LMP 110-112-116-118-119		1.60	1.80	2.10	2.60		0.75	0.81	1.11	1.53
LMP 120-122		1.90	2.10	2.40	2.90		0.75	0.81	1.11	1.53
LMP 123		1.70	1.90	2.20	2.70		0.75	0.81	1.11	1.53

Filter series	Length	Filter element design - N Series							
		A03	A06	A10	A16	A25	M25 M60 M90 M250	P10	P25
LMP 110	1	40	42	65	69	85	163	117	120
	2	49	57	83	83	101	163	136	138
	3	66	70	92	102	124	164	142	144
	4	86	102	118	124	144	165	148	149
LMP 112	1	36	38	55	57	67	105	84	86
	2	44	49	66	66	76	105	93	94
	3	56	58	71	77	87	106	96	97
	4	67	77	85	88	97	106	99	99
LMP 116	1	36	38	54	56	64	96	79	80
	2	43	49	63	64	72	96	86	87
	3	54	57	68	73	82	96	88	89
	4	65	73	79	82	89	96	91	91
LMP 118	1	40	42	65	69	85	163	117	120
	2	49	57	83	83	101	163	136	138
	3	66	70	92	102	124	164	142	144
	4	86	102	118	124	144	165	148	149
LMP 120	1	40	43	66	70	87	172	121	125
	2	50	58	85	85	104	172	142	144
	3	67	71	94	105	129	173	149	151
	4	88	106	122	129	151	174	155	157
LMP 122	1	39	42	64	67	81	146	109	111
	2	49	56	80	80	96	146	124	126
	3	65	68	88	96	114	146	129	130
	4	82	97	110	115	131	147	134	135

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 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.

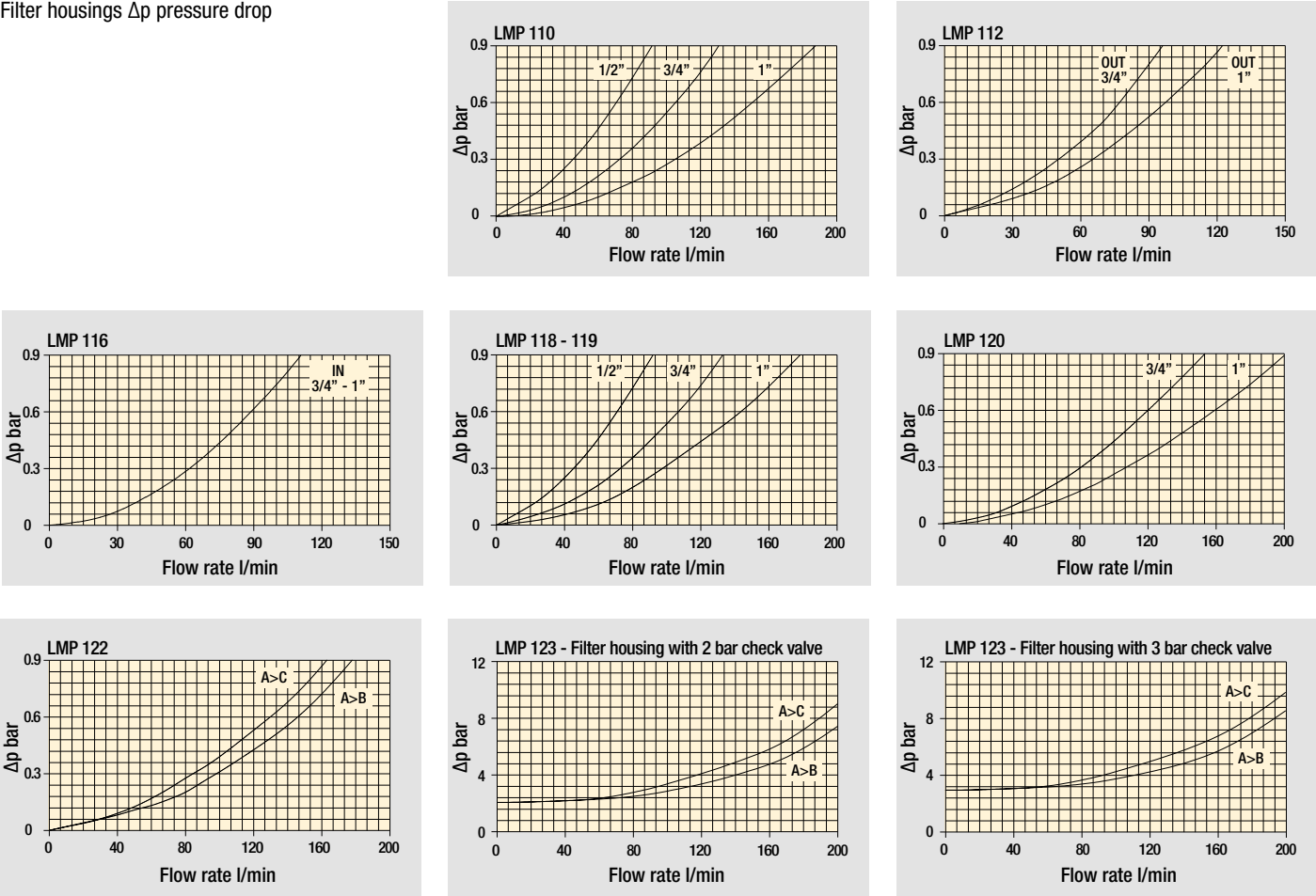
Filter series	Length	Filter element design - N Series							
		A03	A06	A10	A16	A25	M25 M60 M90	P10	P25
LMP 123	1	35	37	50	52	59	83	70	71
	2	41	46	58	58	65	83	76	76
	3	51	53	62	65	72	83	77	78
	4	59	65	70	72	78	83	79	79

Maximum flow rate for a complete low and medium pressure filter with a pressure drop Δp = 2.7 bar.

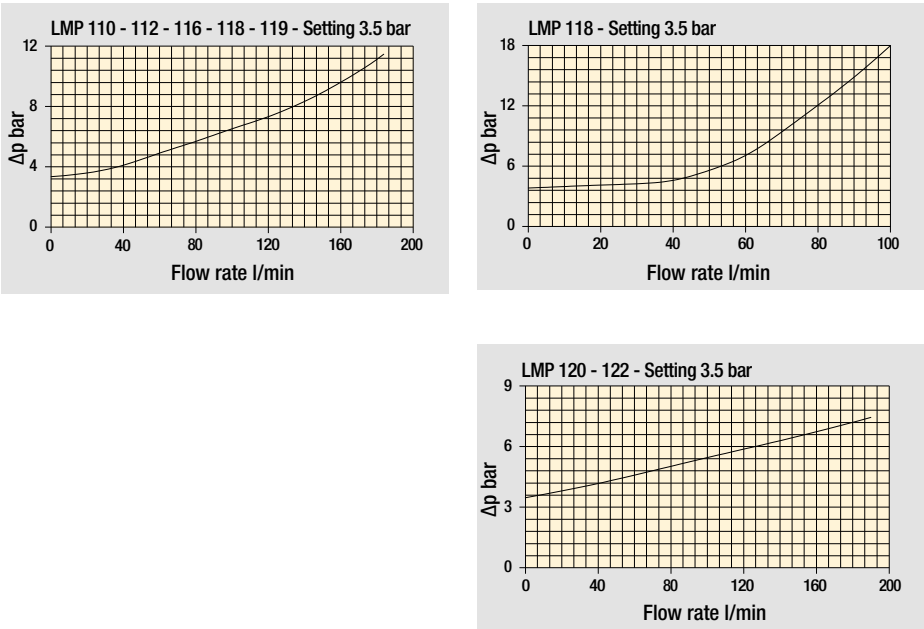
The reference fluid has a kinematic viscosity of 30 mm²/s (cSt) and a density of 0.86 kg/dm³.
For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.
You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure.
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Pressure drop

Filter housings Δp pressure drop

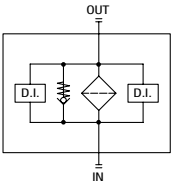


Bypass valve pressure drop

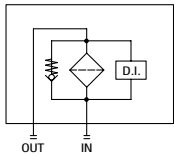


The curves are plotted using mineral oil with density of 0.86 kg/dm³ in compliance with ISO 3968. Δp varies proportionally with density.

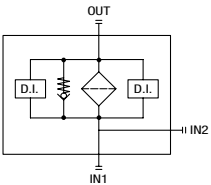
LMP 110In-Line filter



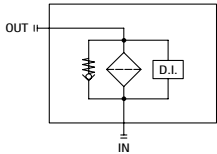
LMP 120Port IN-OUT on the same side



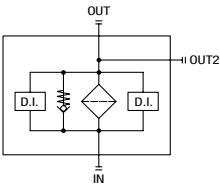
LMP 112Double IN port



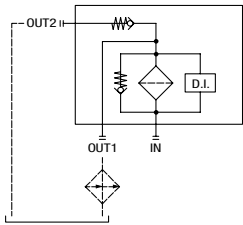
LMP 122Lateral OUT port high flow



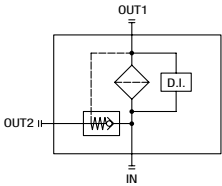
LMP 116Double OUT port



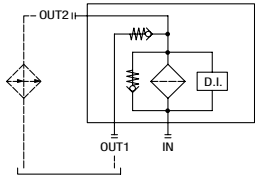
LMP 123Type 1Bypass valve for heat exchanger high flow



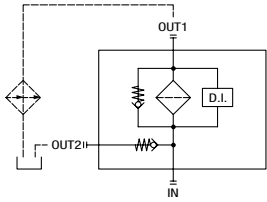
LMP 118Bypass lateralAlways cleaning fluid in OUT port



LMP 123Type 2



LMP 119Safety valve 6 bar for heat exchanger



Designation & Ordering code

COMPLETE FILTER

Series and size

LMP110 | LMP112 | LMP116

Configuration example:

LMP112

4

B

A

D

1

A10

N

P01

Length

1 | 2 | 3 | 4

Bypass valve

S Without bypass

B 3.5 bar

Seals and treatments

AxxMxxPxx

A NBR

V FPM

W NBR compatible with fluids HFA-HFB-HFC

Filtration rating

AxxMxxPxx

A NBR

V FPM

W NBR compatible with fluids HFA-HFB-HFC

Connections

Aux (only LMP 112 - 116)

A G 3/4"

B G 1"

C 3/4" NPT

D 1" NPT

E SAE 12 - 1 1/16" - 12 UN

F SAE 16 - 1 5/16" - 12 UN

Connection for differential indicator

1 Without

2 With standard connection

3 With connection on the opposite side

6 With two connections on both sides

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

Element Δp

N 20 bar

Execution

P01 MP Filtri standard

Pxx Customized

FILTER ELEMENT

Element series and size

CU110

Configuration example:

CU110

4

A10

A

N

P01

Element length

1 | 2 | 3 | 4

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

Seals

AxxMxxPxx

A NBR

V FPM

W NBR compatible with fluids HFA-HFB-HFC

Filtration rating

AxxMxxPxx

A NBR

V FPM

W NBR compatible with fluids HFA-HFB-HFC

Element Δp

N 20 bar

Execution

P01 MP Filtri standard

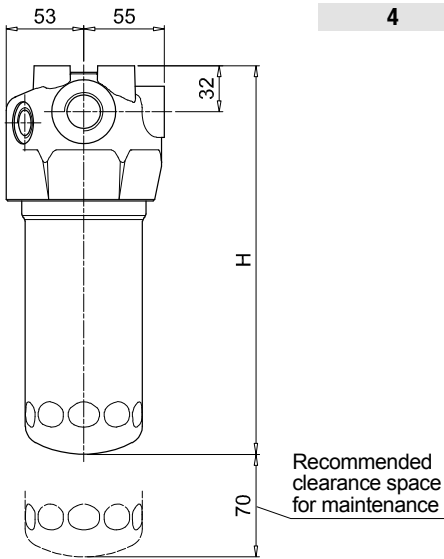
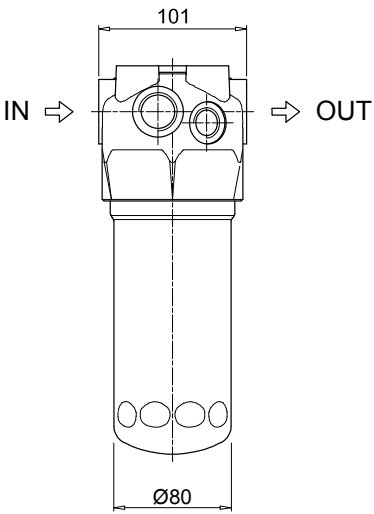
Pxx Customized

ACCESSORIES			
Differential indicators		page	
DEA	Electrical differential indicator	445	DTA Electronic differential indicator 448
DEM	Electrical differential indicator	445-446	DVA Visual differential indicator 448
DLA	Electrical / visual differential indicator	446-447	DVM Visual differential indicator 448
DLE	Electrical / visual differential indicator	447	
Additional features		page	
T2	Plug	449	

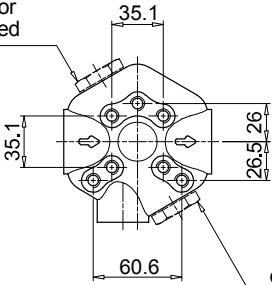


LMP110 - LMP112
LMP116

Filter length	H [mm]
1	182
2	215
3	265
4	365

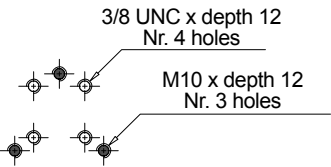


2 - Standard connection for differential indicator
T2 plug not included

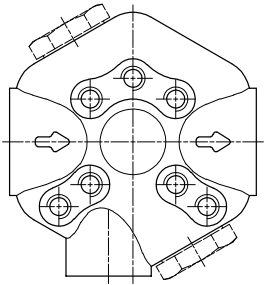


3 - Connection for differential indicator
on the opposite side
T2 plug not included

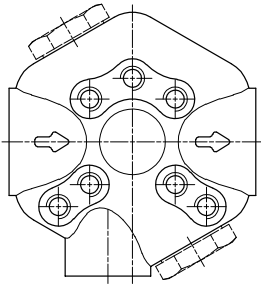
Fixing holes
Option for Metric and UNC screws



LMP 110

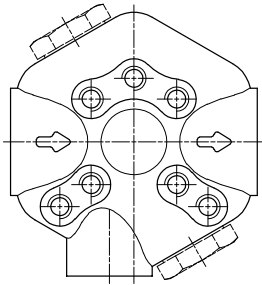


LMP 112



Aux
IN

LMP 116



Aux
OUT

Designation & Ordering code

COMPLETE FILTER

Series and size

LMP118 | LMP119

Configuration example:

LMP118

4

B

A

D

1

A10

N

P01

Length

1 | 2 | 3 | 4 |

Bypass valve

B 3.5 bar

Seals and treatments

A NBR

V FPM

W NBR compatible with fluids HFA-HFB-HFC

Filtration rating

Axx

Mxx

Pxx

Connections

Aux OUT

A G 3/4"

B G 1"

C 3/4" NPT

D 1" NPT

E SAE 12 - 1 1/16" - 12 UN

F SAE 16 - 1 5/16" - 12 UN

Connection for differential indicator

1 Without

2 With standard connection

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

Element Δp

N 20 bar

Execution

P01 MP Filtri standard

Pxx Customized

FILTER ELEMENT

Element series and size

CU110

Configuration example:

CU110

4

A10

A

N

P01

Element length

1 | 2 | 3 | 4 |

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

Seals

A NBR

V FPM

W NBR compatible with fluids HFA-HFB-HFC

Filtration rating

Axx

Mxx

Pxx

Element Δp

N 20 bar

Execution

P01 MP Filtri standard

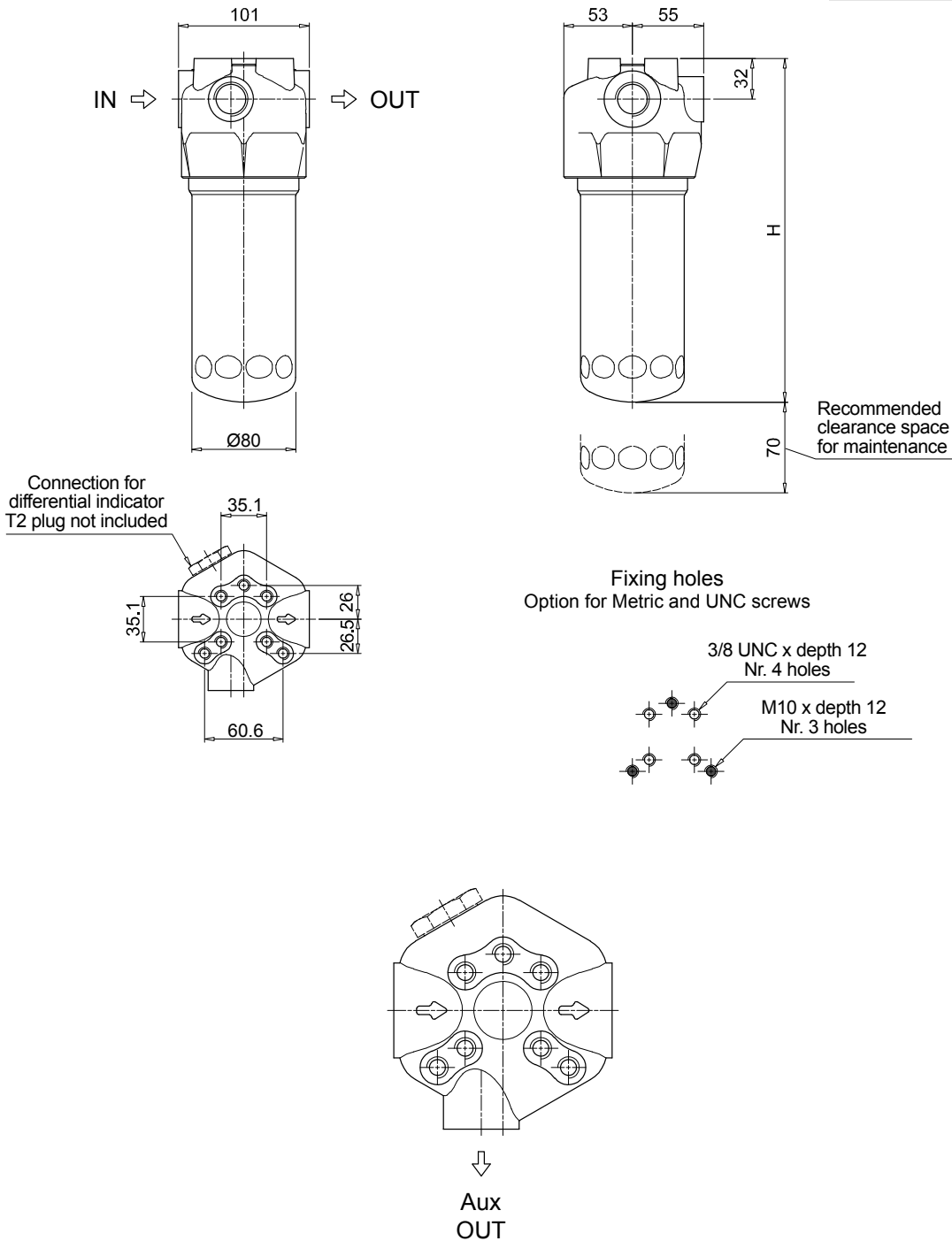
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ACCESSORIES			
Differential indicators		page	
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DLA	Electrical / visual differential indicator	446-447	DVM Visual differential indicator 448
DLE	Electrical / visual differential indicator	447	
Additional features		page	
T2	Plug	449	



LMP118 - LMP119

Filter length	H [mm]
1	182
2	215
3	265
4	365



Designation & Ordering code

COMPLETE FILTER

Series and size

LMP120 | LMP122

Configuration example:

LMP120

4

B

A

D

1

A10

N

P01

Length

1 | 2 | 3 | 4 |

Bypass valve

S Without bypass

B 3.5 bar

Seals and treatments

Axx

Mxx

Pxx

A NBR

V FPM

W NBR compatible with fluids HFA-HFB-HFC

Connections

LMP120

LMP122

A G 3/4"

B G 1"

C 3/4" NPT

D 1" NPT

E SAE 12 - 1 1/16" - 12 UN

F SAE 16 - 1 5/16" - 12 UN

Connection for differential indicator

1 Without

2 With standard connection

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

Element Δp

N 20 bar

Execution

P01 MP Filtri standard

Pxx Customized

FILTER ELEMENT

Element series and size

CU110

Configuration example:

CU110

4

A10

A

N

P01

Element length

1 | 2 | 3 | 4 |

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

Seals

Axx

Mxx

Pxx

A NBR

V FPM

W NBR compatible with fluids HFA-HFB-HFC

Element Δp

N 20 bar

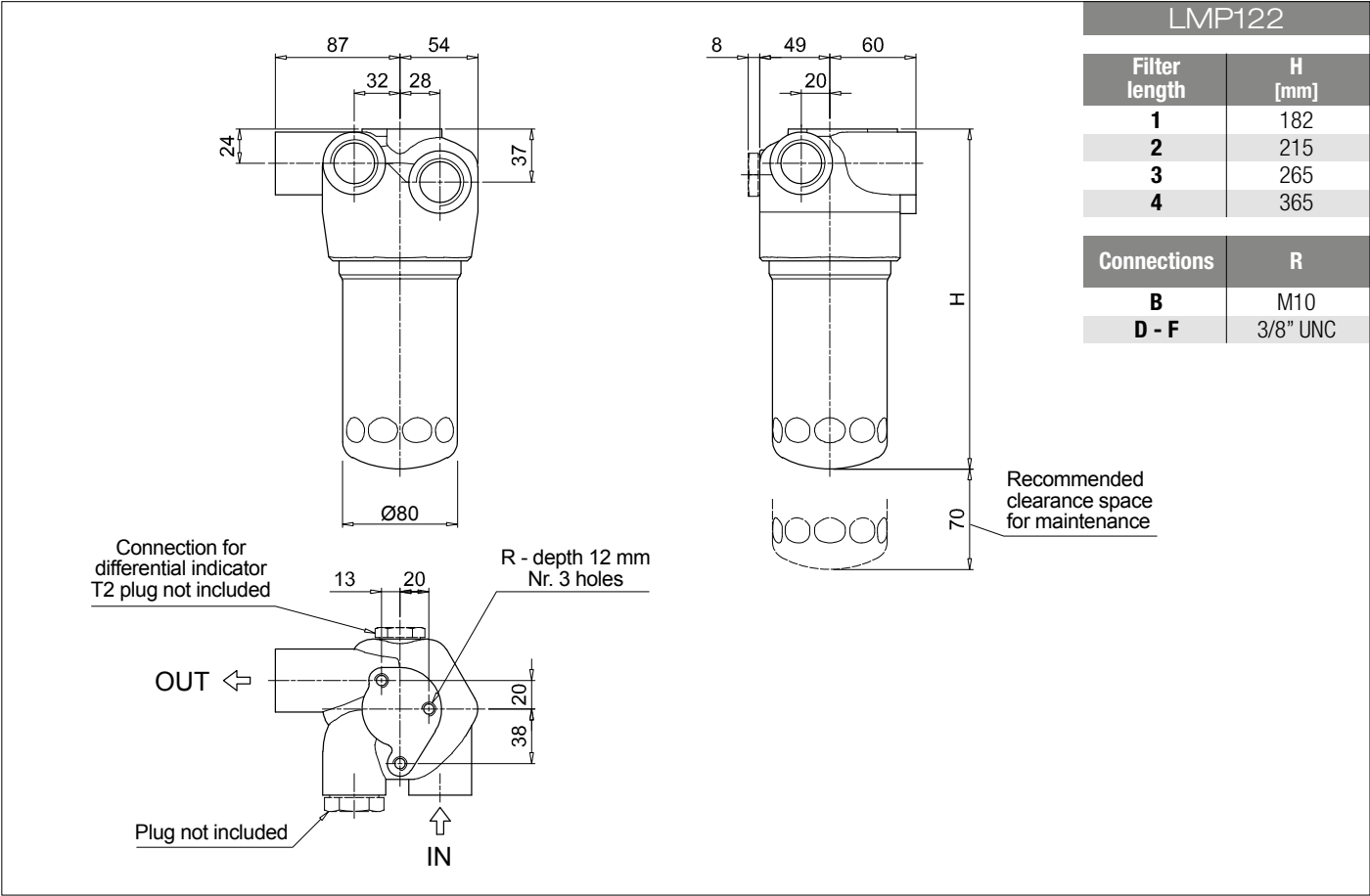
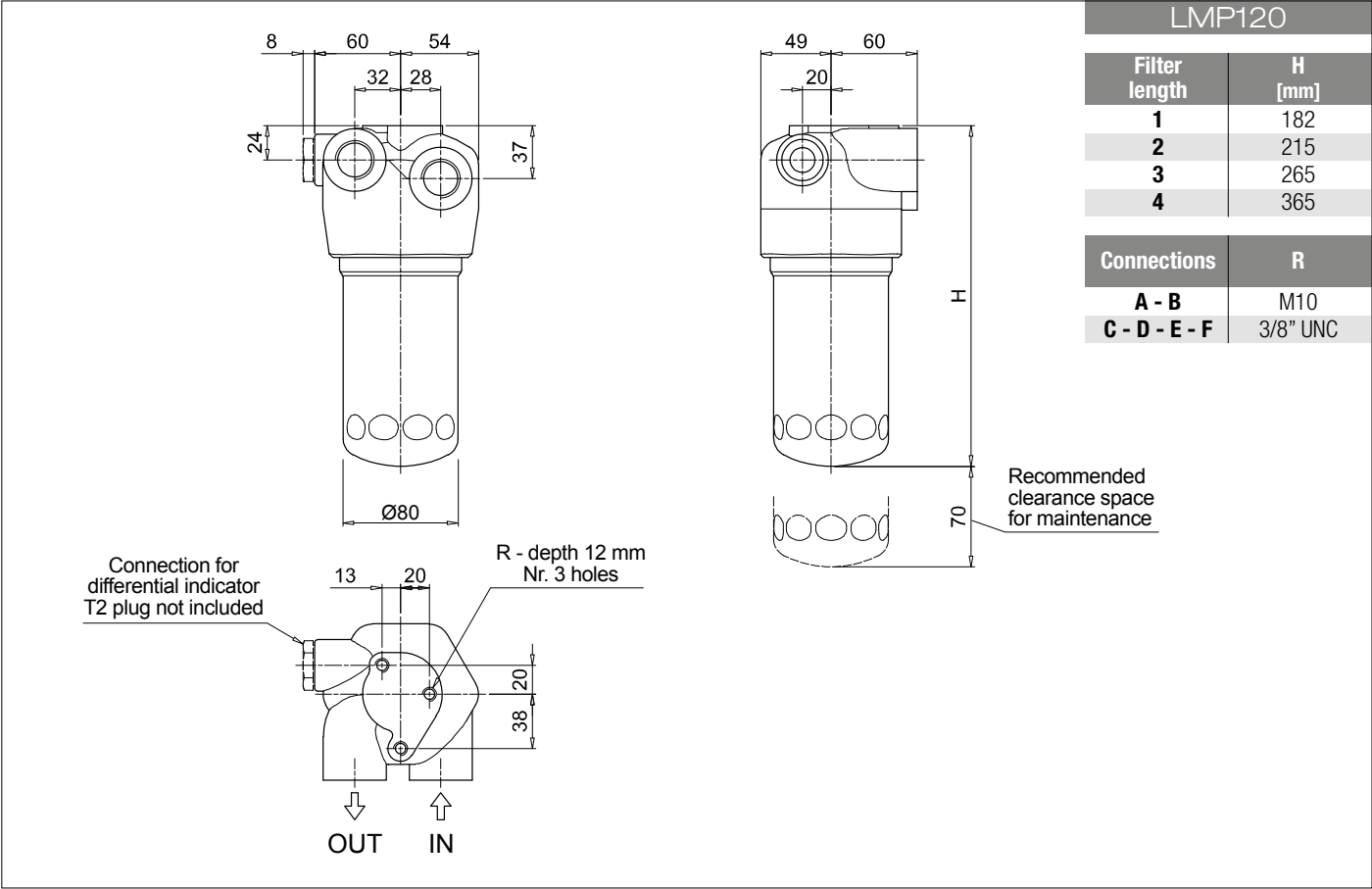
Execution

P01 MP Filtri standard

Pxx Customized

ACCESSORIES			
Differential indicators		page	
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Additional features		page	
T2	Plug	449	





Designation & Ordering code

COMPLETE FILTER

Series and size

LMP123

Configuration example:

LMP123

4

R

A

F

1

A10

N

P01

Length

1234

Valves	Bypass	OUT to cooler	Check valve
C	without	front	2 bar
D			3 bar
G		side	2 bar
H			3 bar
M	3.5 bar	front	2 bar
N			3 bar
Q		side	2 bar
R			3 bar

Seals and treatments

	Axx	Mxx	Pxx
A NBR	•	•	•
V FPM	•	•	•
W NBR compatible with fluids HFA-HFB-HFC	•	•	

Connections

B G 1"

F SAE 16 - 1 5/16" - 12 UN

Connection for differential indicator

1 Without

2 With standard connection

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

Element Δp

N 20 bar

Execution

P01 MP Filtri standard

Pxx Customized

FILTER ELEMENT

Element series and size

CU110

Configuration example:

CU110

4

A10

A

N

P01

Element length

1234

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

Seals

	Axx	Mxx	Pxx
A NBR	•	•	•
V FPM	•	•	•
W NBR compatible with fluids HFA-HFB-HFC	•	•	

Element Δp

N 20 bar

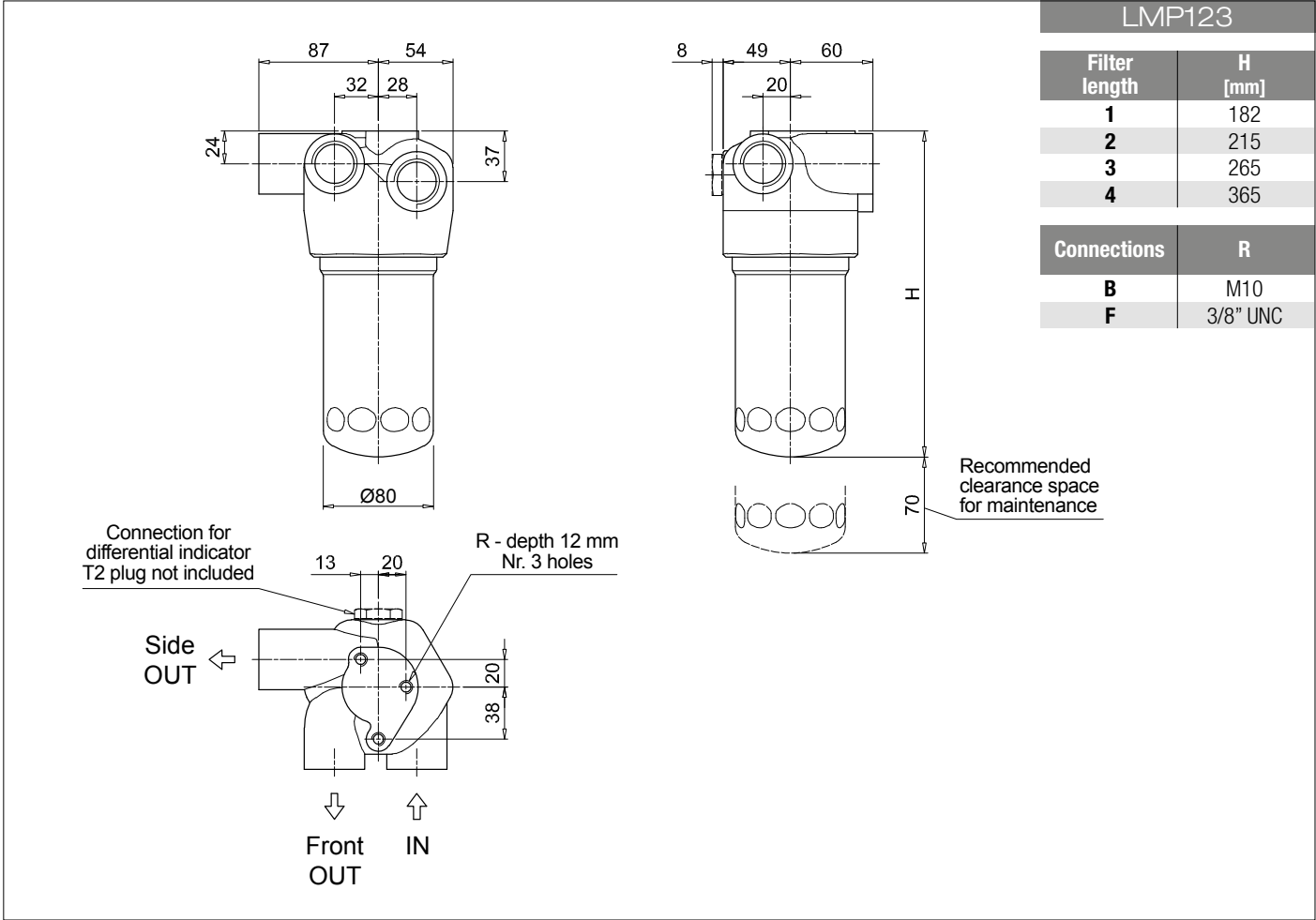
Execution

P01 MP Filtri standard

Pxx Customized

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Additional features			page		
T2	Plug	449			

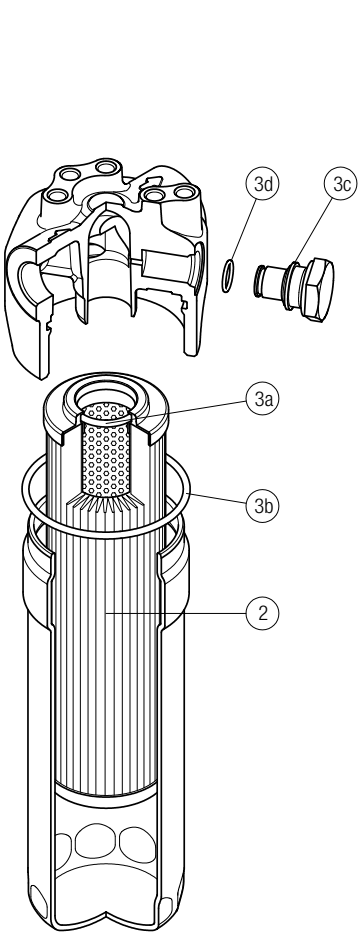
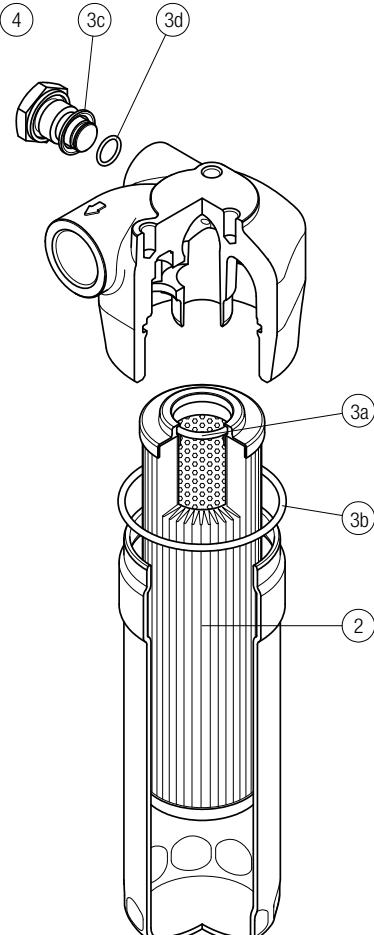
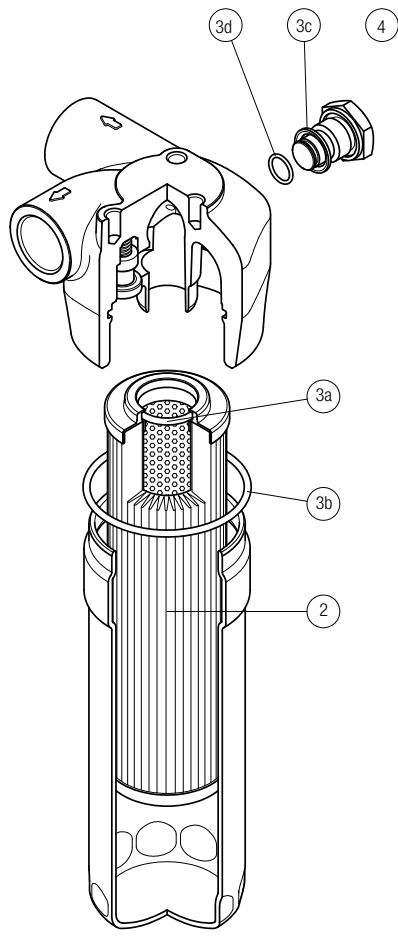




LMP 110-120 SPARE PARTS

MULTIPORT

Order number for spare parts

LMP 110 - 112 - 116 - 118 - 119			LMP 120		LMP 122 - 123	
						
Item:			Q.ty: 1 pc.		Q.ty: 1 pc.	
			2		3 (3a ÷ 3d)	
Filter series			Seal Kit code number		Indicator connection plug	
			NBR		NBR	
			FPM		FPM	
LMP 110-112-116-118-119			See order table		T2H	
LMP 120			02050478		T2V	
LMP 122-123			02050479			