



MP Filter
LMP 112-123
Series



 HYDRAULIC
COMPONENTS
& FLUID CONTAMINATION
CONTROL

LMP 112 / 123 series

MULTIPOINT

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



INSTALLATION, SERVICE AND MAINTENANCE MANUAL AND SAFETY INSTRUCTIONS



Please scan or click the QR codes to get updated electronic version of the related document:



LMP112



LMP116



LMP118



LMP119



LMP120



LMP122



LMP123

For all the QR codes: Scan or click me!

Description

Low & Medium Pressure filters

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

LMP MULTIPOINT filters 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 175 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)
- Min. Burst pressure 24 MPa (240 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 8 MPa (80 bar)

Bypass valve

- Opening pressure 0.35 MPa (3.5 bar) ±10%
- Other opening pressures on request.

Filter element features

Filter		Filter element	
LMP 112÷123		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
<i>Please see ordering code tables to check element Δp series availability based on filter features.</i>			
Flow direction 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 MULTIPOINT filters are provided for vertical mounting

Weights [kg] and volumes [dm³]

Filter series	Weights [kg]				Volumes [dm ³]					
	Length	1	2	3	4	Length	1	2	3	4
LMP 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

Flow rates [l/min]

Filter series	Length	Filter element design - N Series							
		A03	A06	A10	A16	A25	M25 M60 M90	P10	P25
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
LMP 119	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 $\Delta p = 0.7$ 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.

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 $\Delta p = 2.7$ bar.

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

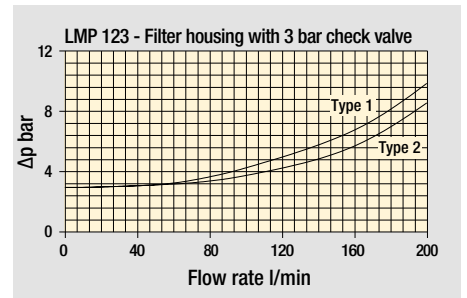
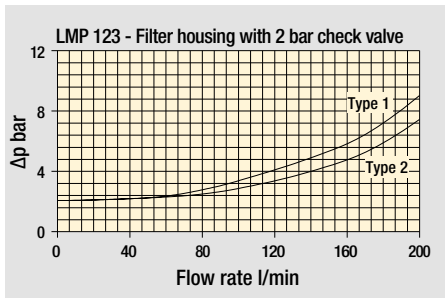
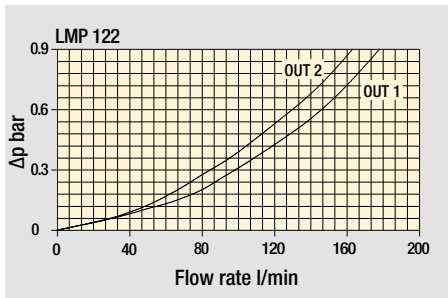
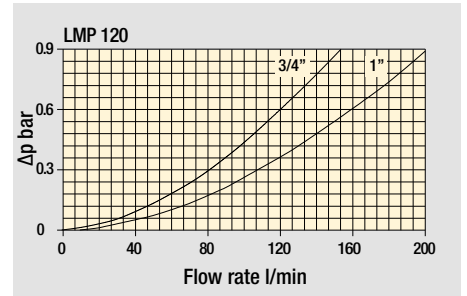
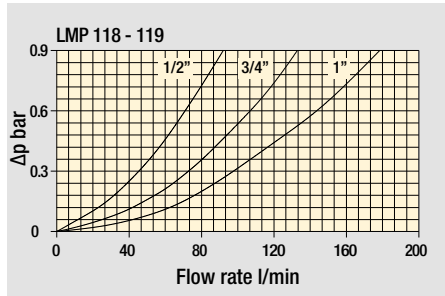
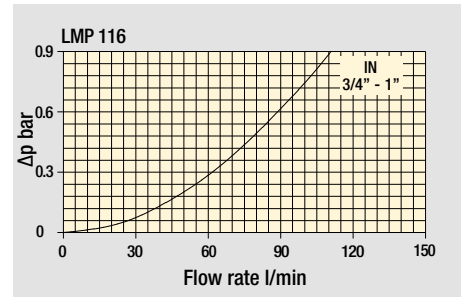
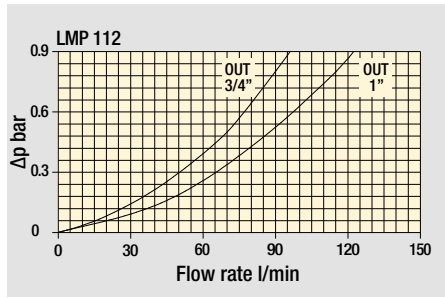
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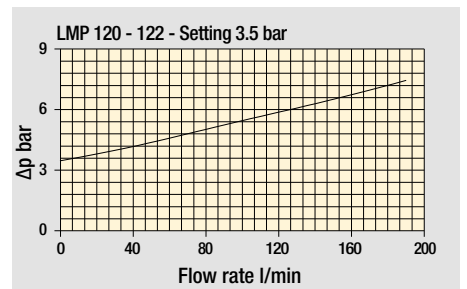
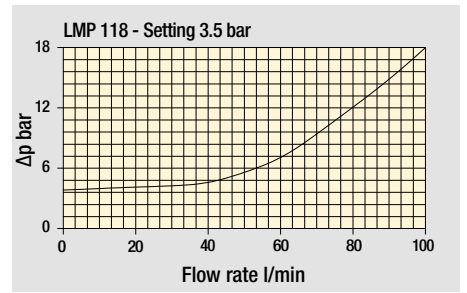
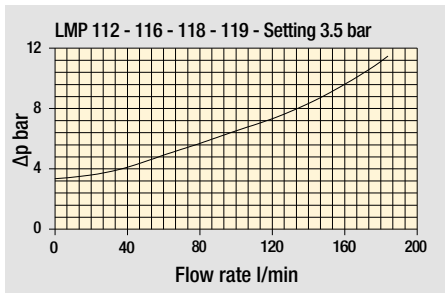
Please, contact our Sales Department for further additional information.

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 112 Double IN port

LMP 120 Port IN-OUT on the same side

LMP 116 Double OUT port

LMP 122 Lateral OUT port high flow

LMP 118 Bypass lateral
Always cleaning fluid in OUT port

LMP 123 Bypass valve
Type 1 for heat exchanger high flow

LMP 119 Safety valve 6 bar
for heat exchanger

LMP 123 Type 2

Designation & Ordering code

COMPLETE FILTER

Series and size **LMP112 | LMP116** Configuration example: **LMP112** **4** **B** **A** **D** **1** **A10** **N** **P01**

Length **1** | **2** | **3** | **4** |

Bypass valve
S Without bypass **B** With bypass 3.5 bar

Seals and treatments
A NBR **E** EPDM
V FPM **C** CR

Connections

	Aux (only LMP 112 - 116)
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 - 1 1/16" - 12 UN	SAE 12 - 1 1/16" - 12 UN
F SAE 16 - 1 5/16" - 12 UN	SAE 12 - 1 1/16" - 12 UN

Connection for differential pressure 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 **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 **1** | **2** | **3** | **4** |

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 and treatments
A NBR **E** EPDM
V FPM **C** CR

Element Δp
N 20 bar

Execution
P01 MP Filtri standard
Pxx Customized

CLOGGING INDICATORS

See page 720

DEA Electrical differential pressure indicator	DLE Electrical / visual differential pressure indicator
DEM Electrical differential pressure indicator	DTA Electronic differential pressure indicator
DEU Electrical differential pressure indicator	DVA Visual differential pressure indicator
DLA Electrical / visual differential pressure indicator	DVM Visual differential pressure indicator

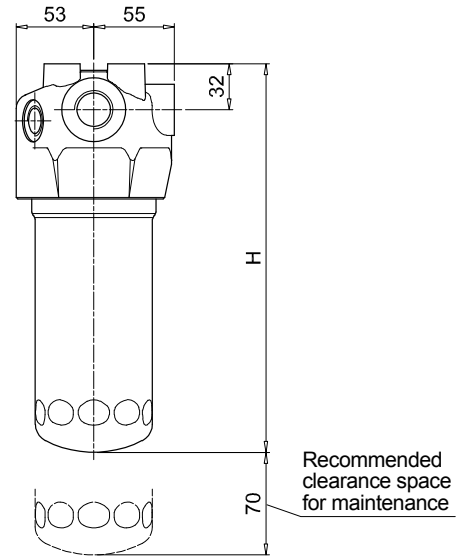
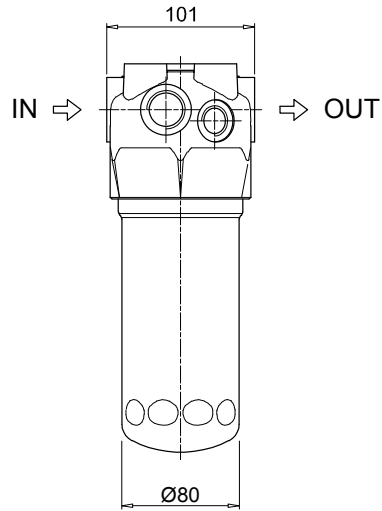
PLUGS

See page 741

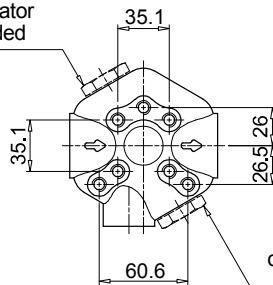
T2 Plug (not included)

LMP112 - LMP116

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

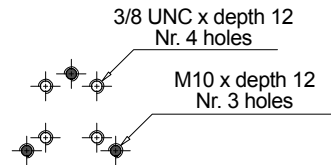


2 - Standard connection for diff. pressure indicator
T2 plug not included

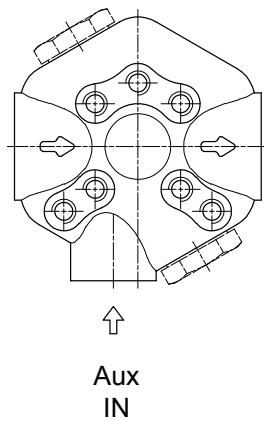


3 - Connection for diff. pressure indicator on the opposite side
T2 plug not included

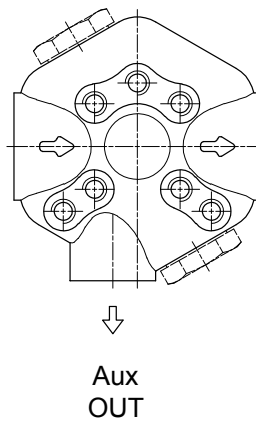
Fixing holes
Option for Metric and UNC screws



LMP 112



LMP 116



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 With bypass 3.5 bar

Seals and treatments
A NBR **E** EPDM
V FPM **C** CR

Connections

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

Connection for differential pressure 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
1 | 2 | 3 | 4

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 and treatments
A NBR **E** EPDM
V FPM **C** CR

Element Δp
N 20 bar

Execution
P01 MP Filtri standard
Pxx Customized

CLOGGING INDICATORS

See page 720

DEA Electrical differential pressure indicator	DLE Electrical / visual differential pressure indicator
DEM Electrical differential pressure indicator	DTA Electronic differential pressure indicator
DEU Electrical differential pressure indicator	DVA Visual differential pressure indicator
DLA Electrical / visual differential pressure indicator	DVM Visual differential pressure indicator

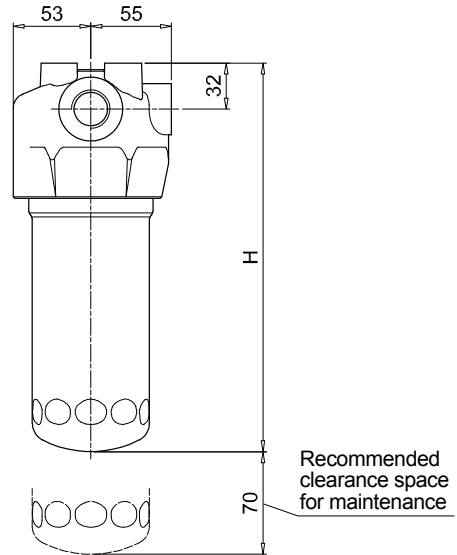
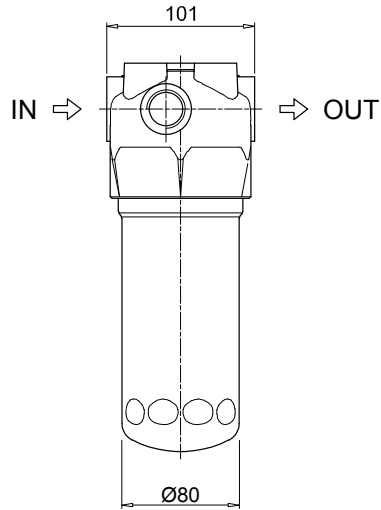
PLUGS

See page 741

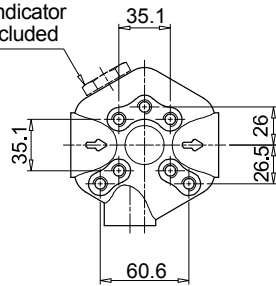
T2 Plug (not included)

LMP118 - LMP119

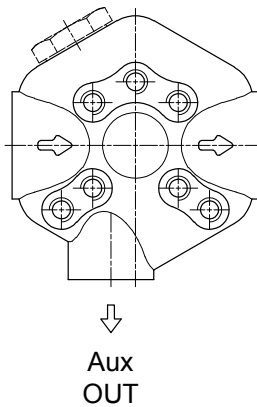
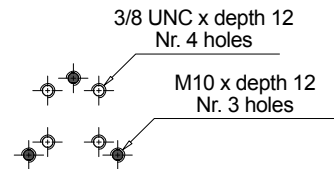
Filter length	H [mm]
1	182
2	215
3	265
4	365



Connection for diff. pressure indicator
T2 plug not included



Fixing holes
Option for Metric and UNC screws



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** With bypass 3.5 bar

Seals and treatments
A NBR | **E** EPDM
V FPM | **C** CR

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 pressure 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
1 | 2 | 3 | 4

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 and treatments
A NBR | **E** EPDM
V FPM | **C** CR

Element Δp
N 20 bar

Execution
P01 MP Filtri standard
Pxx Customized

CLOGGING INDICATORS

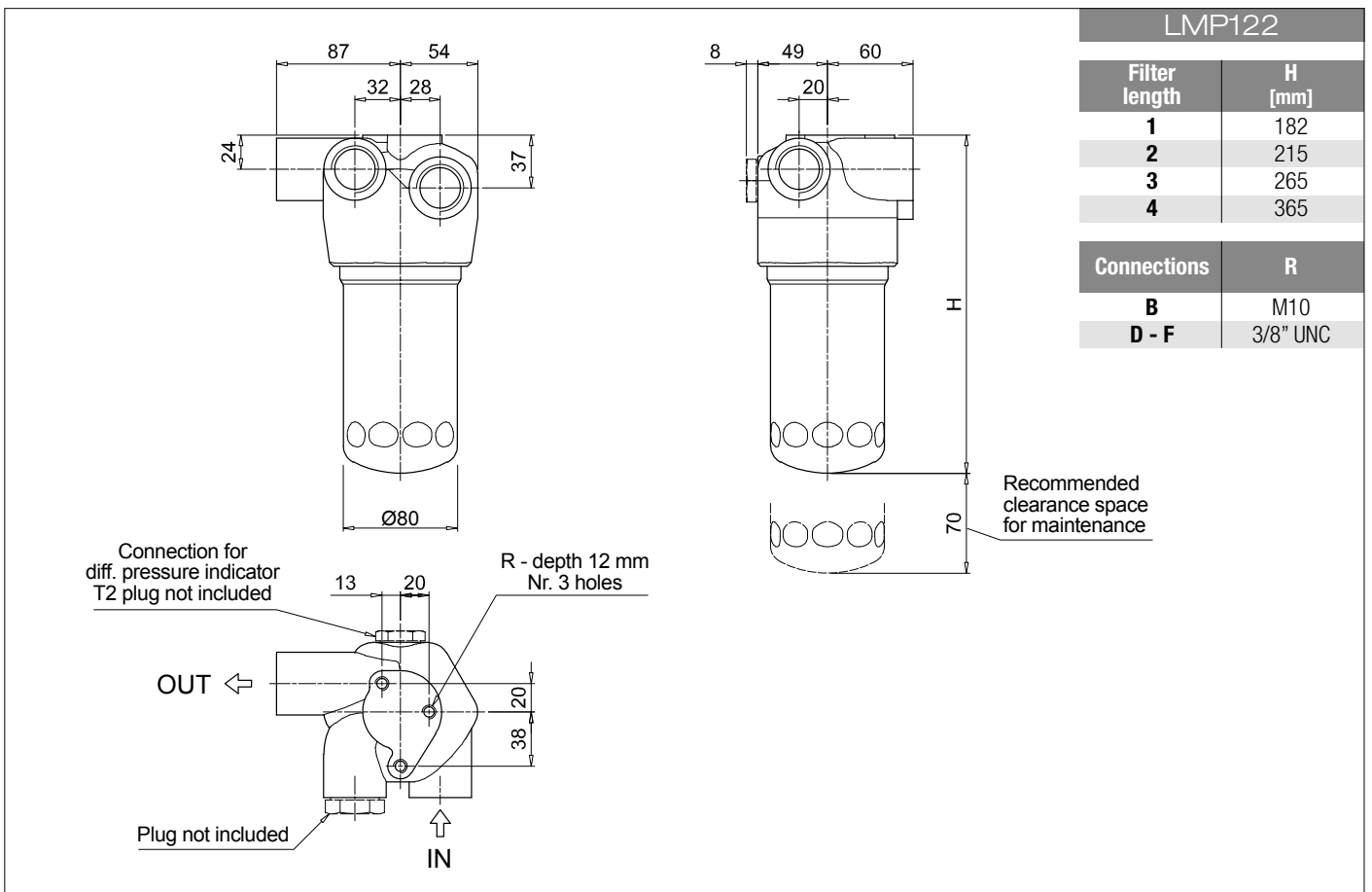
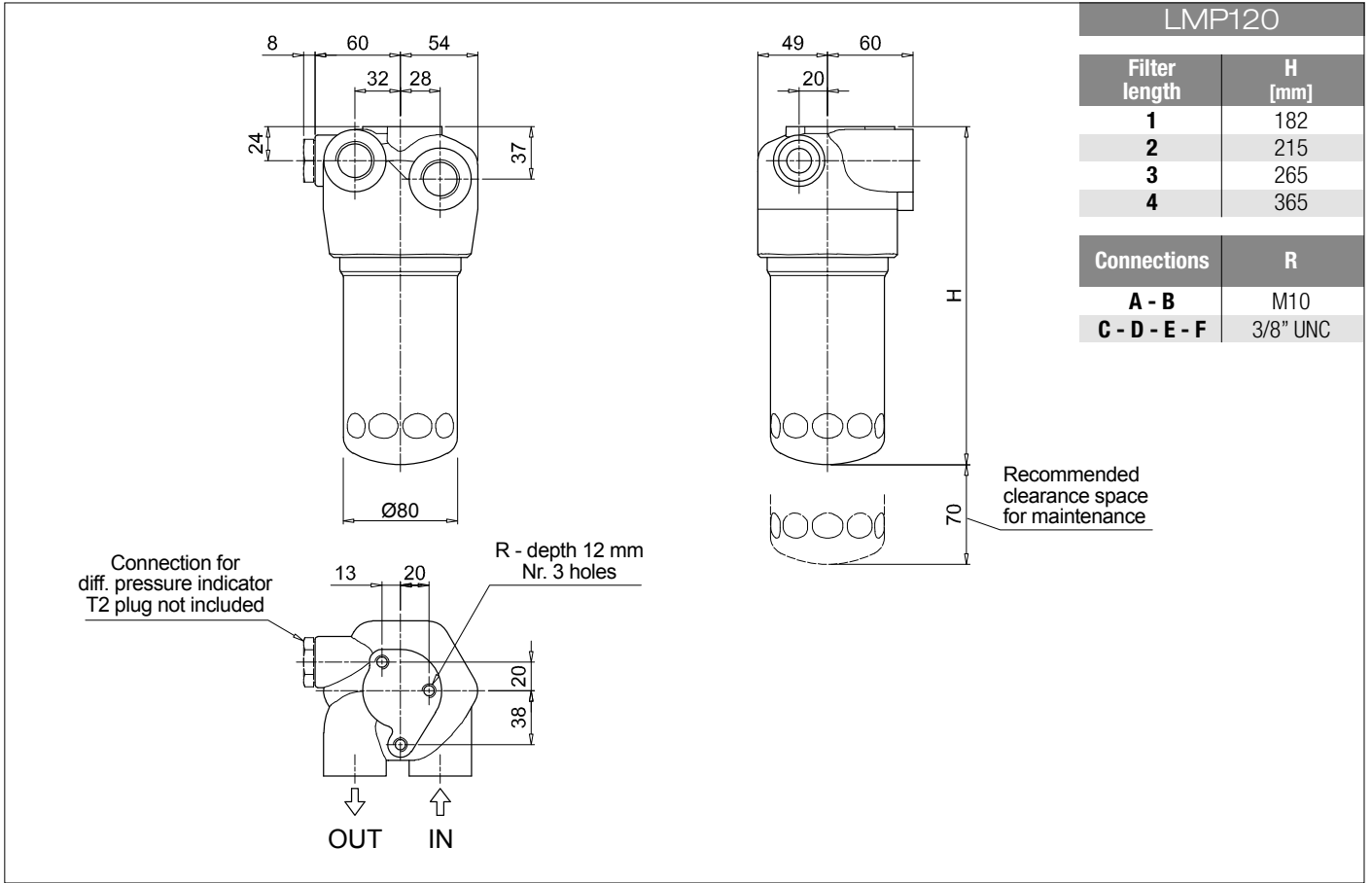
See page 720

DEA Electrical differential pressure indicator	DLE Electrical / visual differential pressure indicator
DEM Electrical differential pressure indicator	DTA Electronic differential pressure indicator
DEU Electrical differential pressure indicator	DVA Visual differential pressure indicator
DLA Electrical / visual differential pressure indicator	DVM Visual differential pressure indicator

PLUGS

See page 741

T2 Plug



Designation & Ordering code

COMPLETE FILTER

Series and size **LMP123** Configuration example: **LMP123** **4** **R** **A** **F** **1** **A10** **N** **P01**

Length **1** | **2** | **3** | **4** |

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

Seals and treatments

A NBR	E EPDM
V FPM	C CR

Connections

B G 1"

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

Connection for differential pressure 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 **1** | **2** | **3** | **4** |

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 and treatments

A NBR	E EPDM
V FPM	C CR

Element Δp **N** 20 bar

Execution **P01** MP Filtri standard
Pxx Customized

CLOGGING INDICATORS

See page 720

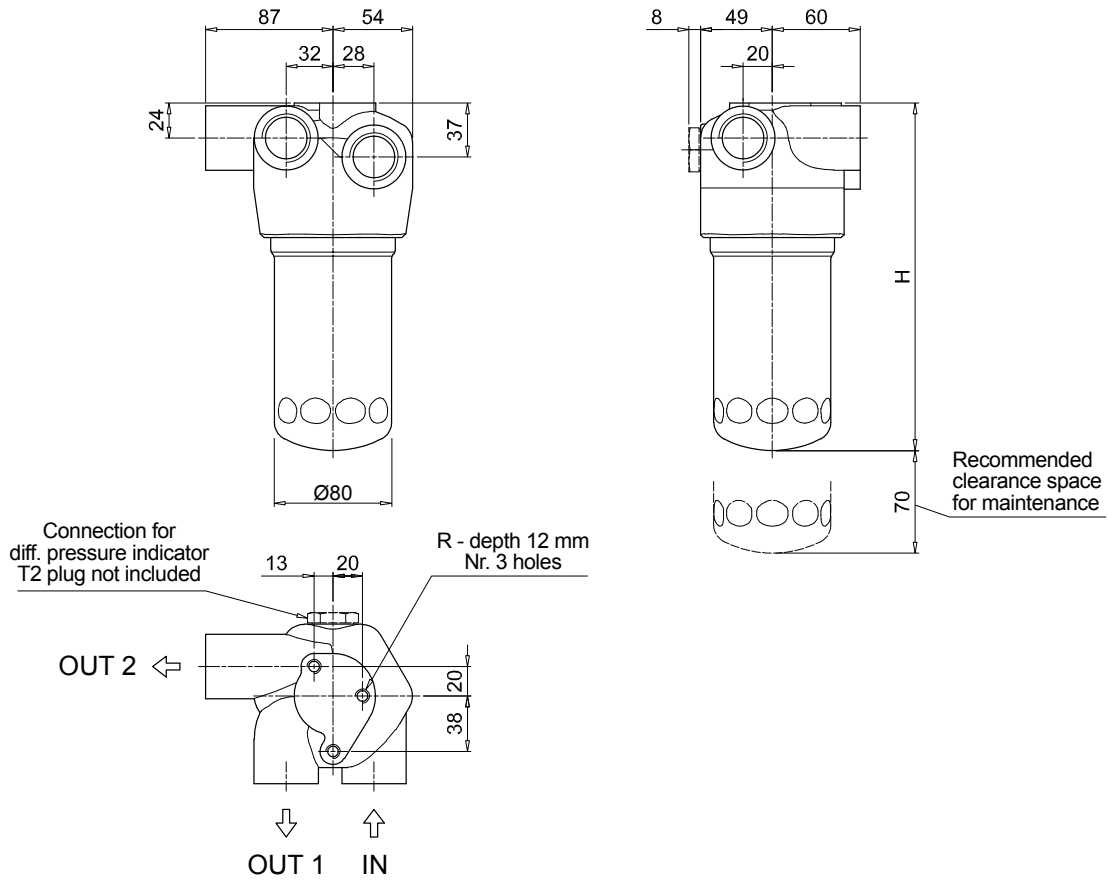
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DEM Electrical differential pressure indicator	DTA Electronic differential pressure indicator
DEU Electrical differential pressure indicator	DVA Visual differential pressure indicator
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PLUGS

See page 741

T2 Plug

LMP123	
Filter length	H [mm]
1	182
2	215
3	265
4	365
Connections	R
B	M10
F	3/8" UNC

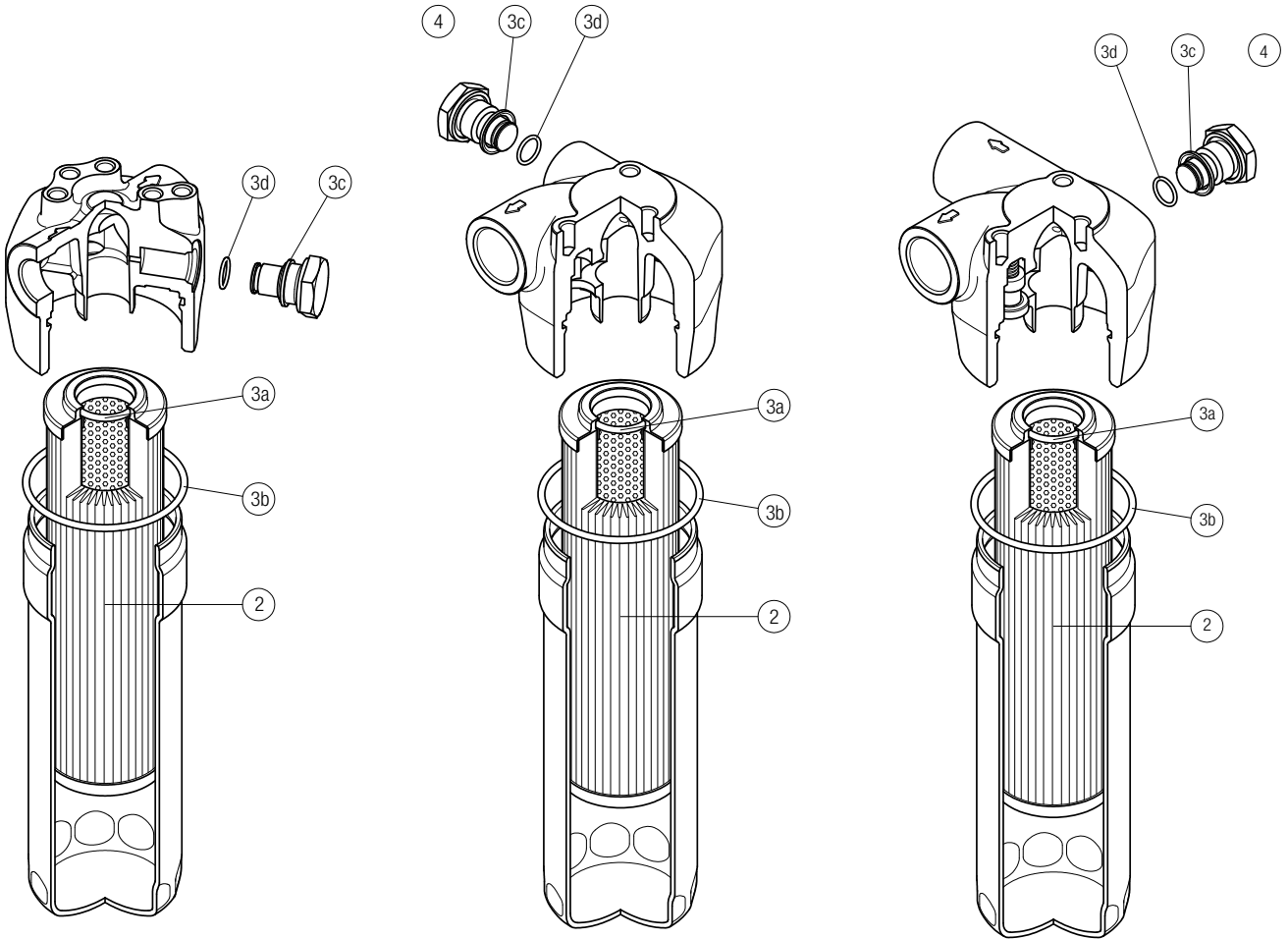


Order number for spare parts

LMP 112 - 116 - 118 - 119

LMP 120

LMP 122 - 123



Item:	Q.ty: 1 pc.		Q.ty: 1 pc.		Q.ty: 1 pc.	
Filter series	Filter element	Seal Kit code number		Indicator connection plug		
LMP 112-116 -118-119	See order table	NBR	FPM	NBR	FPM	
LMP 120		02050478	02050479	T2H	T2V	
LMP 122-123						

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