

LMP 112 / 123 series

MULTI PORT

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) $\pm 10\%$
- Other opening pressures on request.

Filter element features

Filter LMP 112÷123	Filter element 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 [dm³]				
	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 LMP 119	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 $\Delta p = 0.7$ 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.

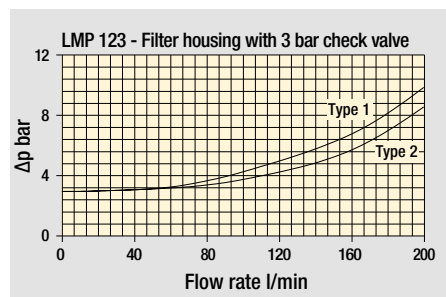
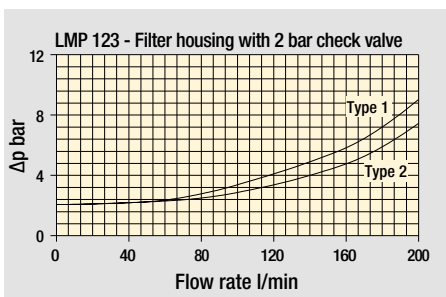
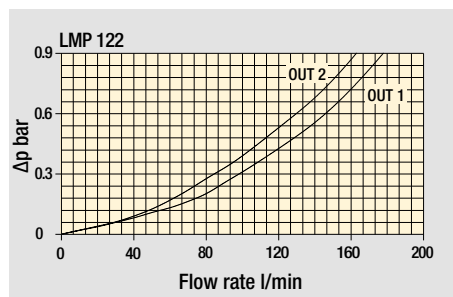
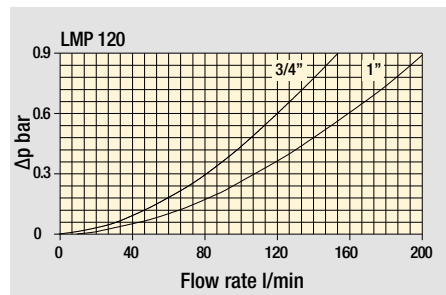
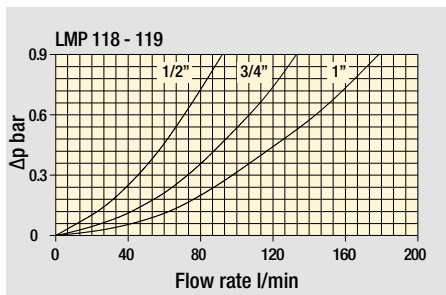
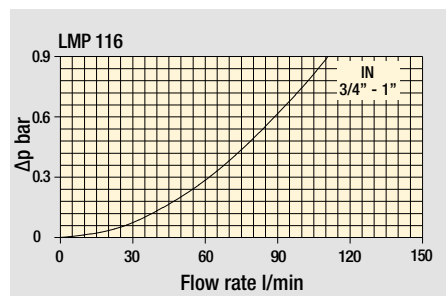
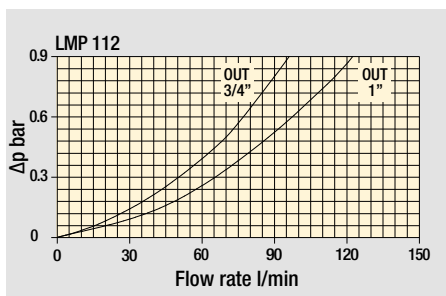
For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.

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.

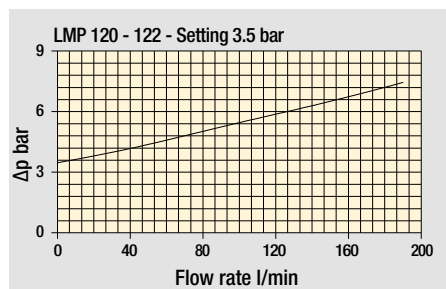
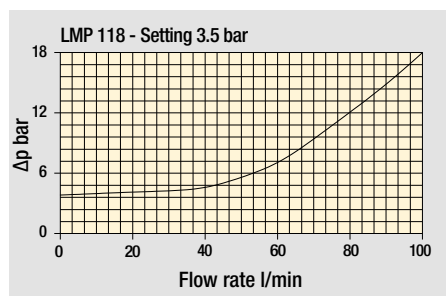
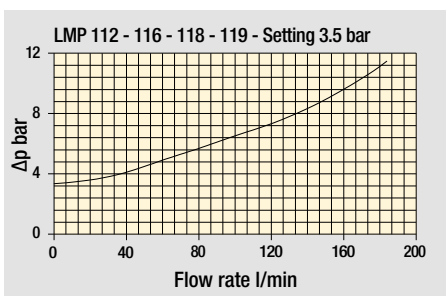
Please, contact our Sales Department for further additional information.

Pressure drop

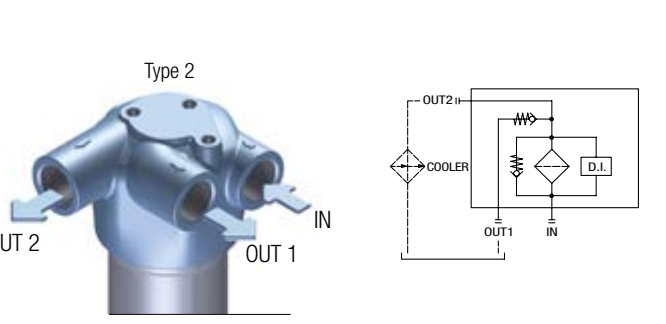
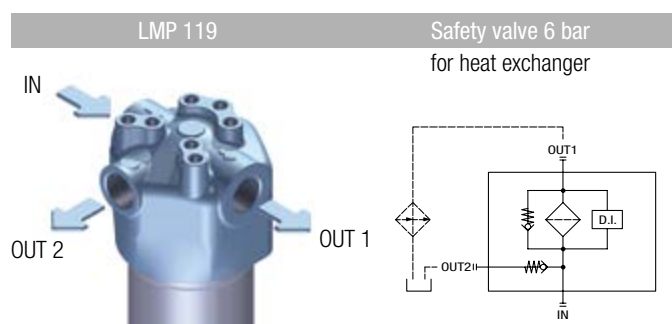
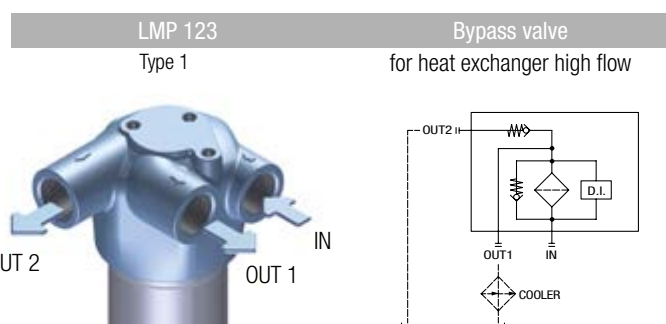
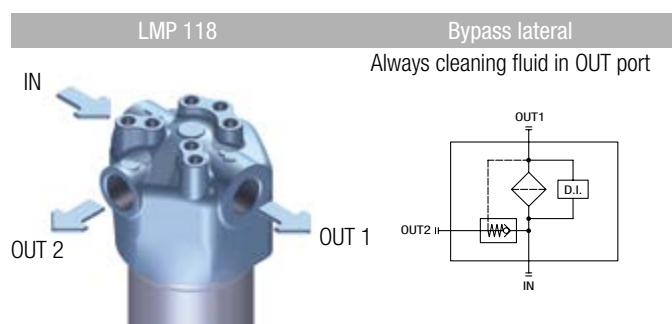
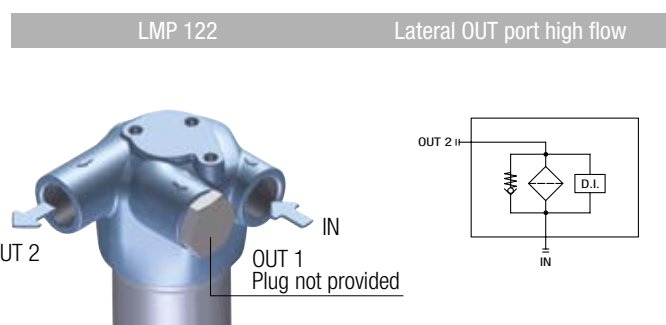
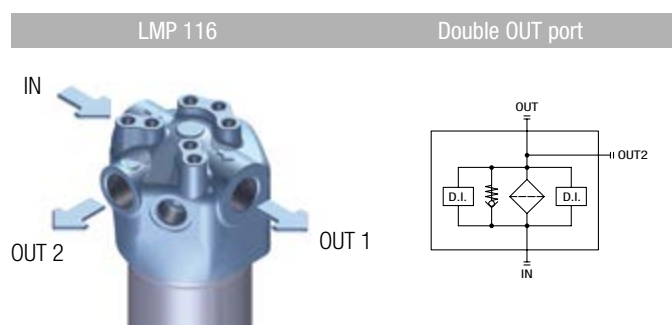
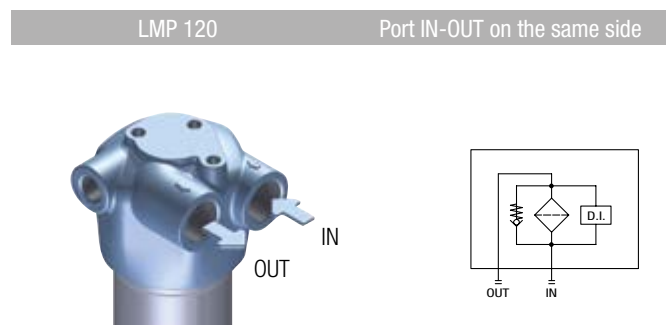
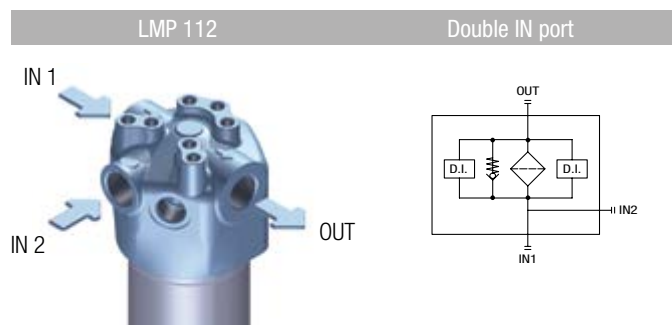
Filter housings Δp pressure drop



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.



Designation & Ordering code

COMPLETE FILTER

Series and size		Configuration example: LMP112									
LMP112		4	B	A	D	1	A10	N	P01		
LMP116											
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									
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											
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				Execution					
		N 20 bar				P01 MP Filtri standard					
						Pxx Customized					

CLOGGING INDICATORS

See page 784

DEA	Electrical differential pressure indicator
DEM	Electrical differential pressure indicator
DEU	Electrical differential pressure indicator
DLA	Electrical / visual differential pressure indicator
DLE	Electrical / visual differential pressure indicator

DTA	Electronic differential pressure indicator
DTI	I-O Link electronic differential pressure indicator
DVA	Visual differential pressure indicator
DVM	Visual differential pressure indicator

PLUGS

See page 807

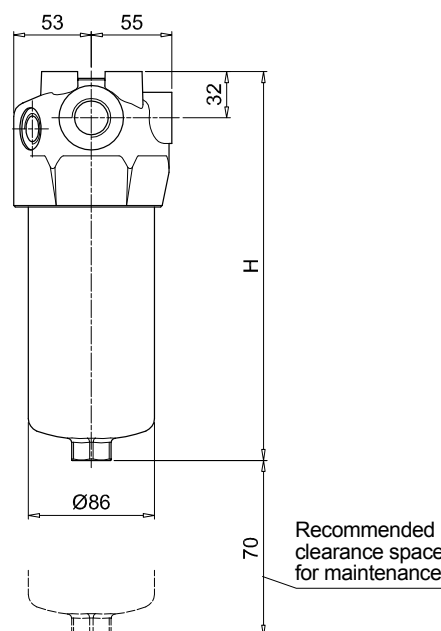
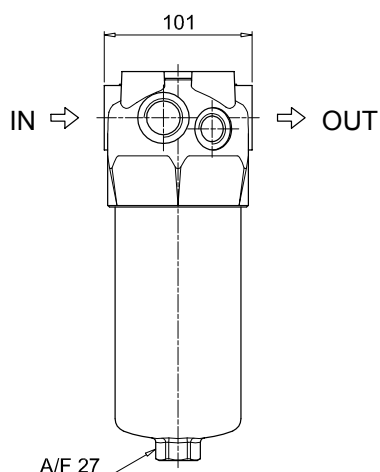
T2	Plug (not included)
----	---------------------

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 and treatments							
A	NBR						
V	FPM						
E	EPDM						
C	CR						
		Element Δp N 20 bar		Execution P01 MP Filtri standard Pxx Customized			

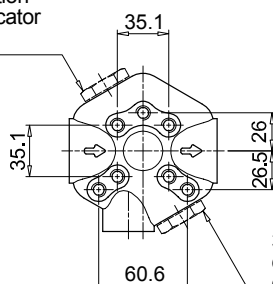
Dimensions

LMP112 - LMP116

Filter length	H [mm]
1	197
2	230
3	280
4	380

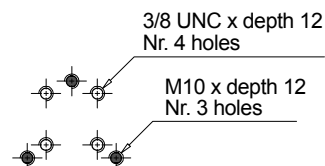


2 - Standard connection for diff. pressure indicator T2 plug not included



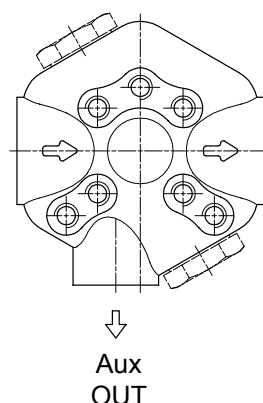
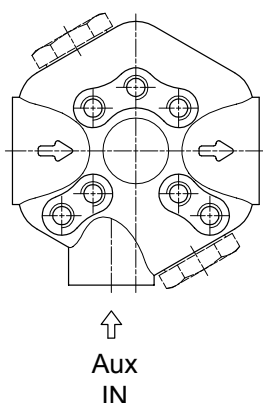
3 - Connection for diff. pressure indicator on the opposite side T2 plug not included

Fixing holes
Option for Metric and UNC screws



LMP 112

LMP 116



Designation & Ordering code

COMPLETE FILTER

Series and size		Configuration example: LMP118									
LMP118		4	B	A	D	1	A10	N	P01		
LMP119											
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										
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		Execution							
		N 20 bar		P01 MP Filtri standard							
				Pxx Customized							

CLOGGING INDICATORS

See page 784

DEA	Electrical differential pressure indicator
DEM	Electrical differential pressure indicator
DEU	Electrical differential pressure indicator
DLA	Electrical / visual differential pressure indicator
DLE	Electrical / visual differential pressure indicator

DTA	Electronic differential pressure indicator
DTI	I-O Link electronic differential pressure indicator
DVA	Visual differential pressure indicator
DVM	Visual differential pressure indicator

PLUGS

See page 807

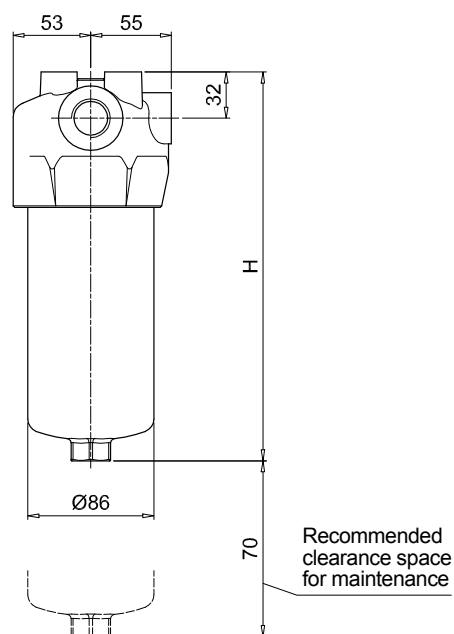
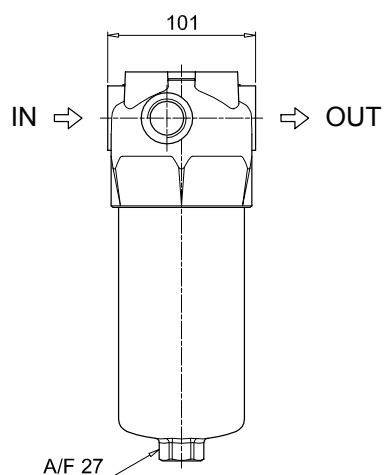
T2	Plug (not included)
----	---------------------

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 and treatments							
A	NBR						
V	FPM						
E	EPDM						
C	CR						
		Element Δp N 20 bar		Execution P01 MP Filtri standard Pxx Customized			

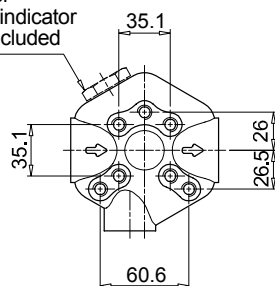
Dimensions

LMP118 - LMP119

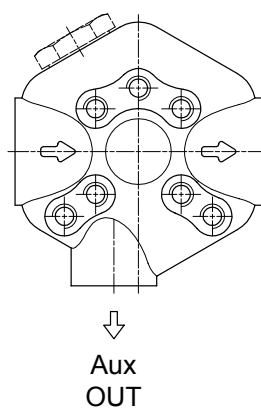
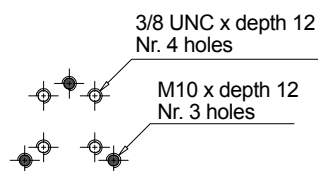
Filter length	H [mm]
1	197
2	230
3	280
4	380



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		Configuration example: LMP120									
LMP120		4	B	A	D	1	A10	N	P01		
LMP122											
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											
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		Execution							
		N 20 bar		P01 MP Filtri standard							
				Pxx Customized							

CLOGGING INDICATORS

See page 784

DEA	Electrical differential pressure indicator
DEM	Electrical differential pressure indicator
DEU	Electrical differential pressure indicator
DLA	Electrical / visual differential pressure indicator
DLE	Electrical / visual differential pressure indicator

DTA	Electronic differential pressure indicator
DTI	I-O Link electronic differential pressure indicator
DVA	Visual differential pressure indicator
DVM	Visual differential pressure indicator

PLUGS

See page 807

T2	Plug (not included)
----	---------------------

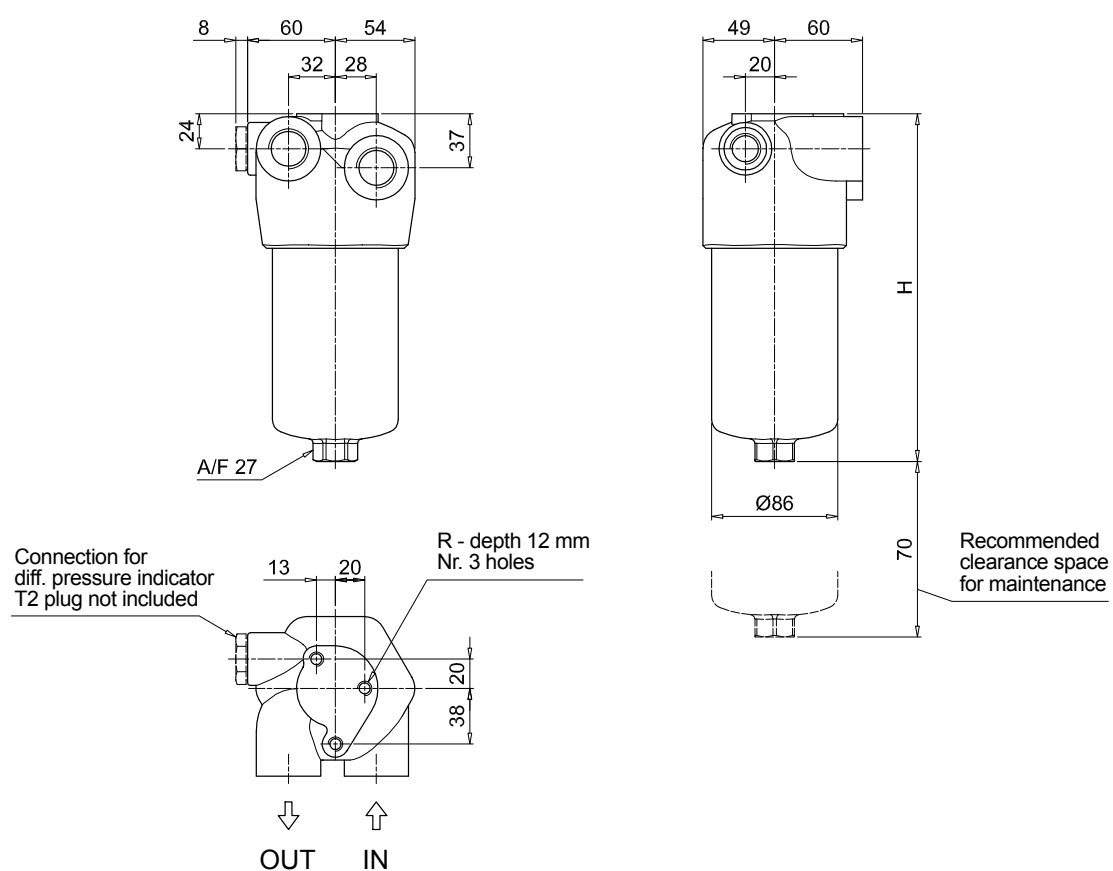
FILTER ELEMENT							
Element series and size CU110		Configuration example: CU110	4	A10	A	N	P01
Element length 1 2 3 4							
Filtration rating (filter media)							
A03	Inorganic microfiber	3 µm					
A06	Inorganic microfiber	6 µm					
A10	Inorganic microfiber	10 µm					
A16	Inorganic microfiber	16 µm					
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 and treatments							
A	NBR						
V	FPM						
E	EPDM						
C	CR						
		Element Δp N 20 bar		Execution P01 MP Filtri standard Pxx Customized			

Dimensions

LMP120

Filter length	H [mm]
1	197
2	230
3	280
4	380

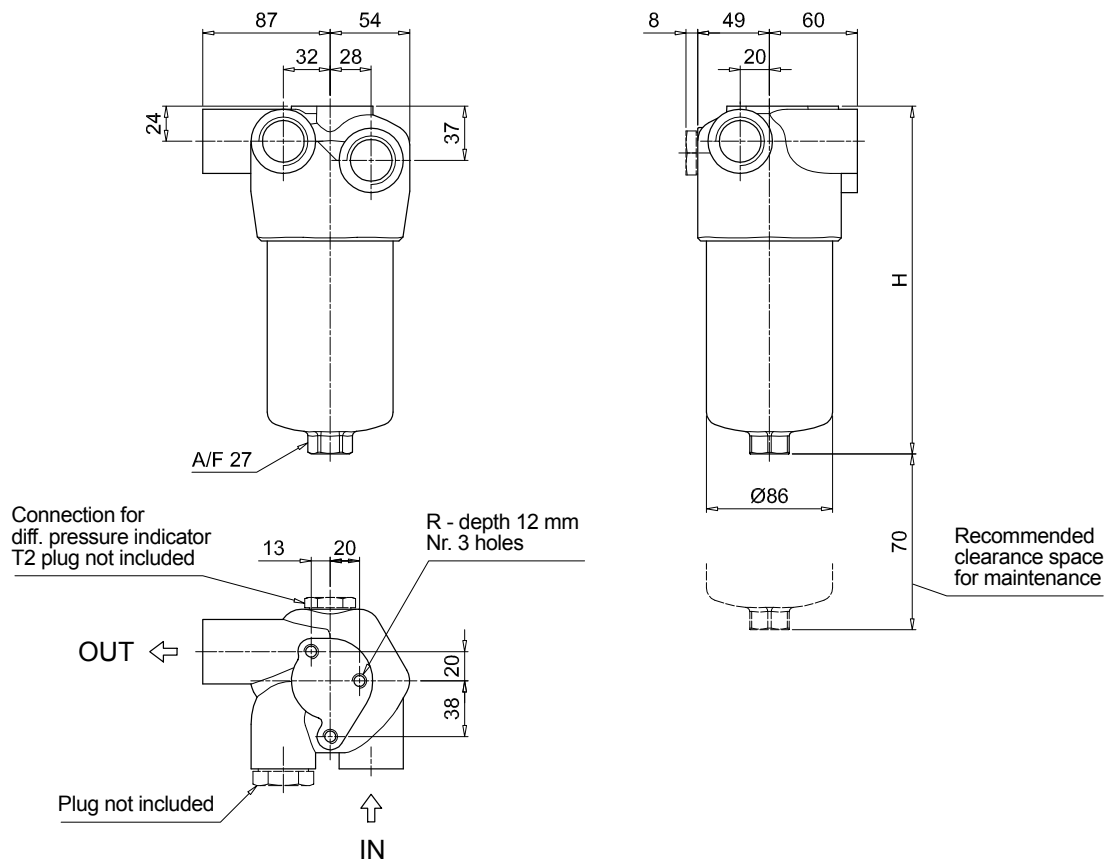
Connections	R
A - B	M10
C - D - E - F	3/8" UNC



LMP122

Filter length	H [mm]
1	197
2	230
3	280
4	380

Connections	R
B	M10
D - F	3/8" UNC



Designation & Ordering code

COMPLETE FILTER

Series and size		Configuration example: LMP123									
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									
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				Execution				
			N 20 bar				P01 MP Filtri standard				
							Pxx Customized				

CLOGGING INDICATORS

See page 784

DEA	Electrical differential pressure indicator
DEM	Electrical differential pressure indicator
DEU	Electrical differential pressure indicator
DLA	Electrical / visual differential pressure indicator
DLE	Electrical / visual differential pressure indicator

DTA	Electronic differential pressure indicator
DTI	I-O Link electronic differential pressure indicator
DVA	Visual differential pressure indicator
DVM	Visual differential pressure indicator

PLUGS

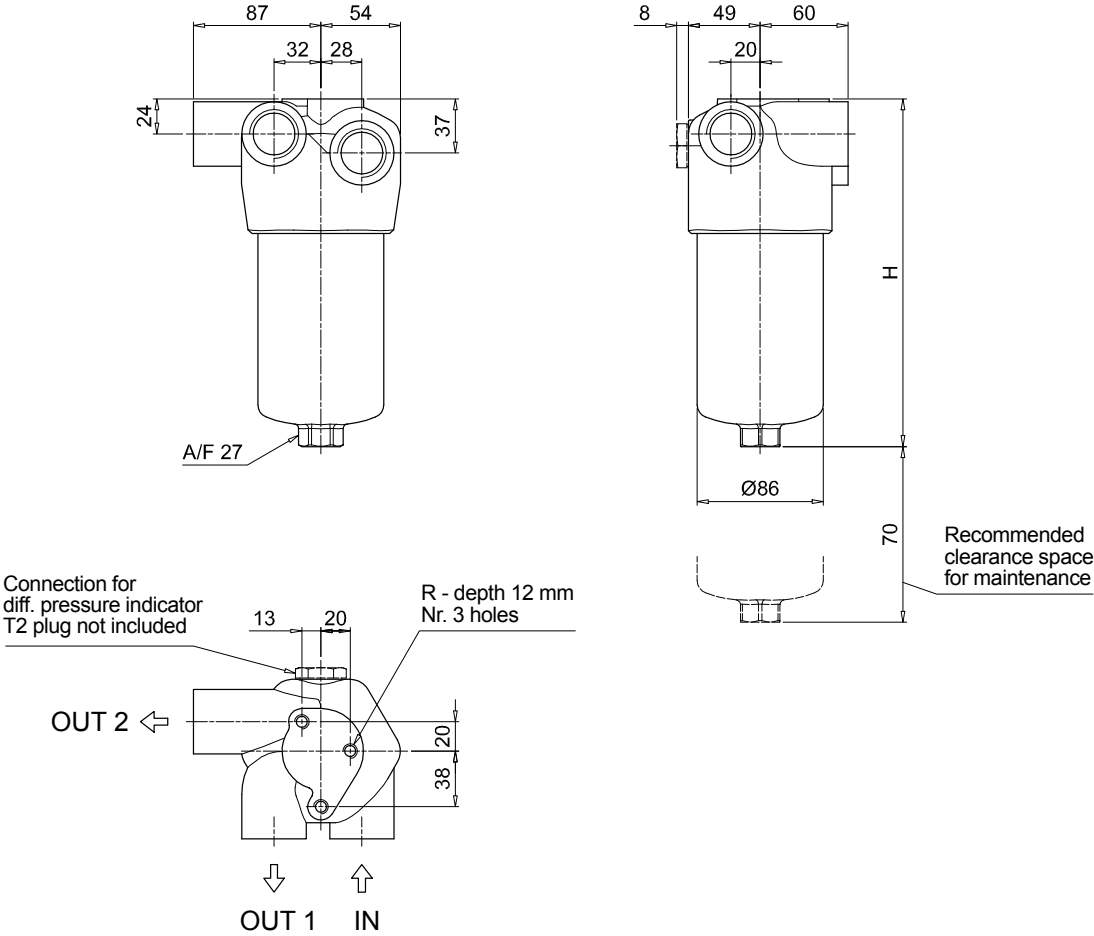
See page 807

T2	Plug (not included)
----	---------------------

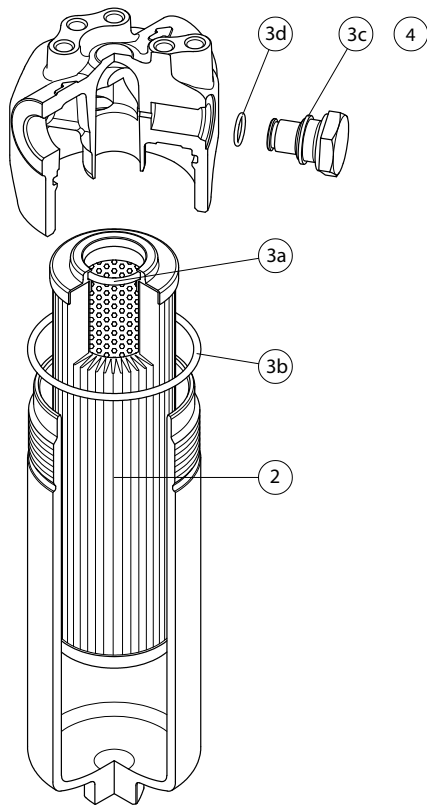
FILTER ELEMENT							
Element series and size CU110		Configuration example: CU110	4	A10	A	N	P01
Element length 1 2 3 4							
Filtration rating (filter media)							
A03	Inorganic microfiber	3 µm					
A06	Inorganic microfiber	6 µm					
A10	Inorganic microfiber	10 µm					
A16	Inorganic microfiber	16 µm					
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 and treatments							
A	NBR						
V	FPM						
E	EPDM						
C	CR						
		Element Δp N 20 bar		Execution P01 MP Filtri standard Pxx Customized			

Dimensions

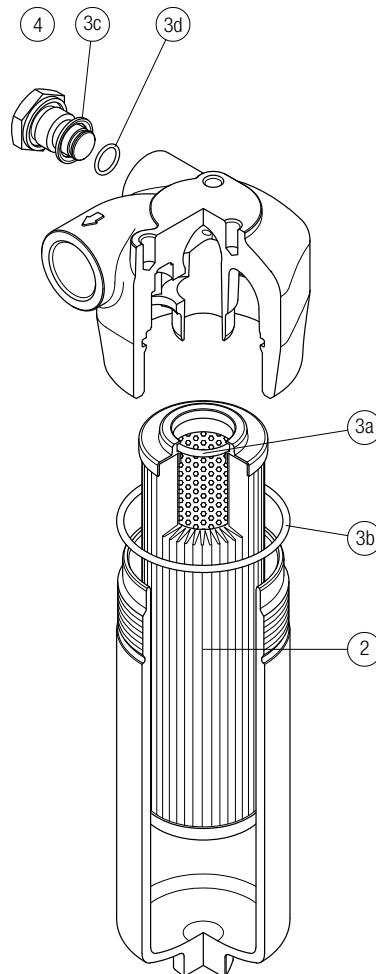
LMP123	
Filter length	H [mm]
1	197
2	230
3	280
4	380
Connections	R
B	M10
F	3/8" UNC



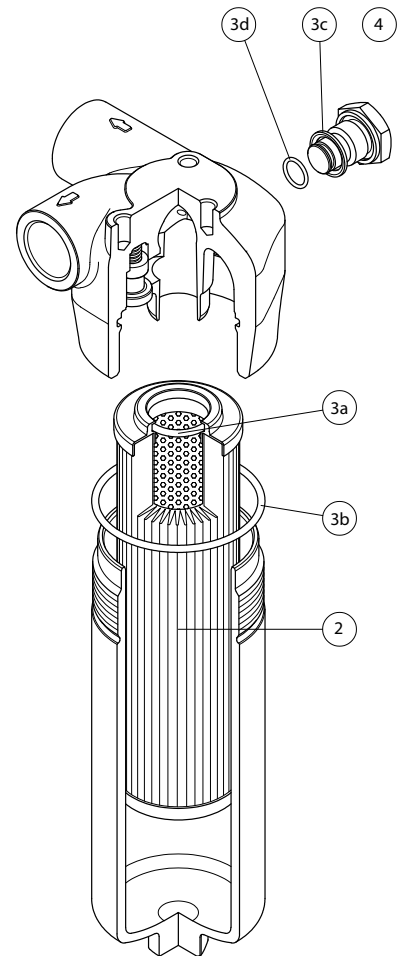
LMP 112 - 116 - 118 - 119



LMP 120



LMP 122 - 123



Item:		Q.ty: 1 pc.		Q.ty: 1 pc.	
		2	3 (3a ÷ 3d)		4
Filter series	Filter element	Seal Kit code number		Indicator connection plug	
		NBR	FPM	NBR	FPM
LMP 112-116 -118-119	See order table	02050478	02050479	T2H	T2V
LMP 120					
LMP 122-123					