

LMP 110-120-123 series

MULTI-PORT

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: Cathaphoresis - 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 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 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 $\Delta p = 0.7$ 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.

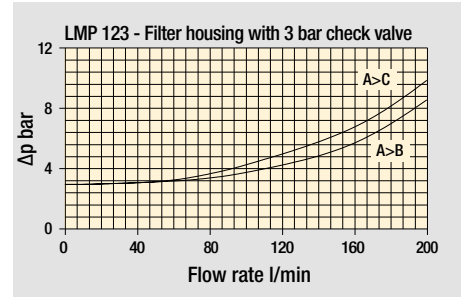
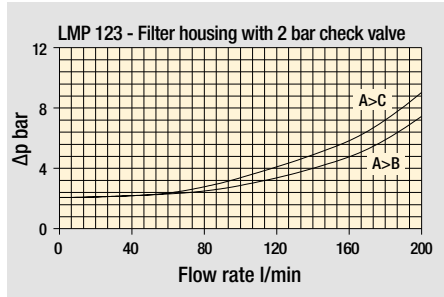
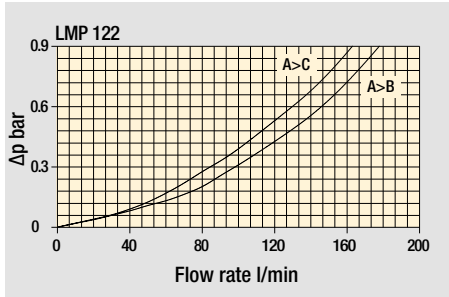
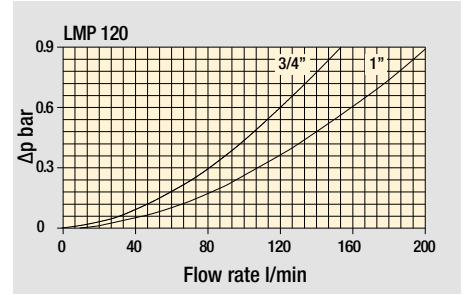
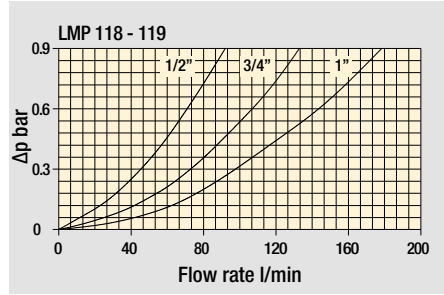
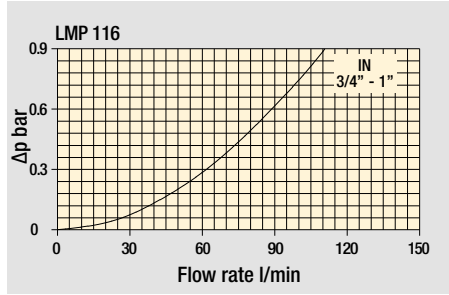
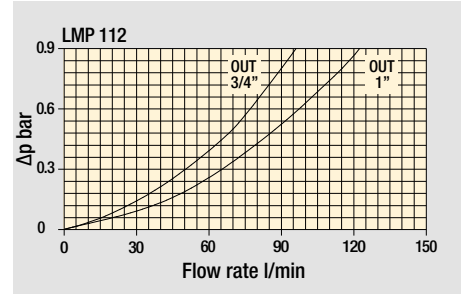
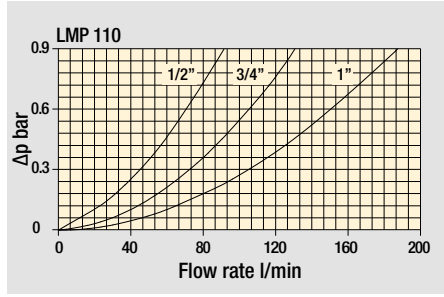
For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.

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.

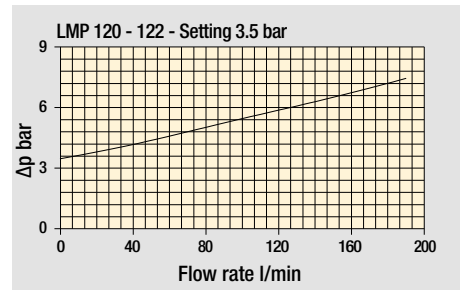
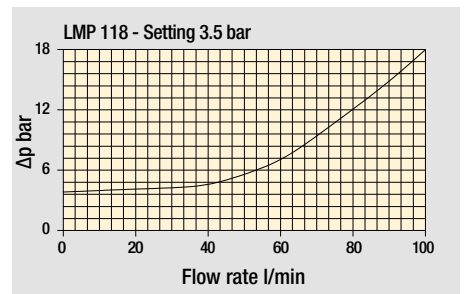
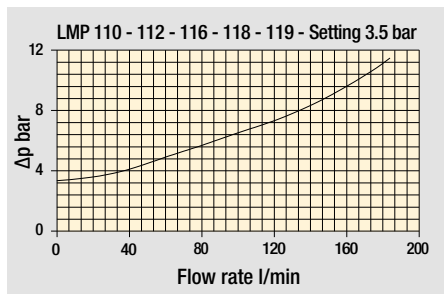
Please, contact our Sales Department for further additional information.

Pressure drop

Filter housings Δp pressure drop


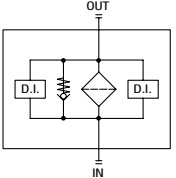


Bypass valve pressure drop


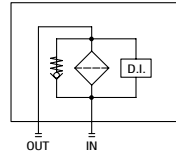


The curves are plotted using mineral oil with density of 0.86 kg/dm^3 in compliance with ISO 3968. Δp varies proportionally with density.


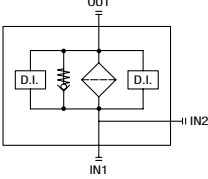
LMP 110 In-Line filter


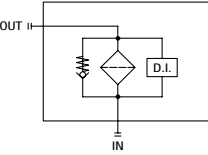
LMP 120 Port IN-OUT on the same side


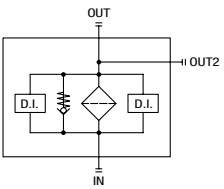
LMP 112 Double IN port


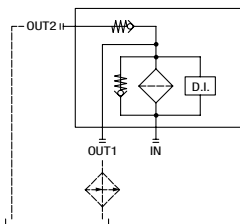
LMP 122 Lateral OUT port high flow


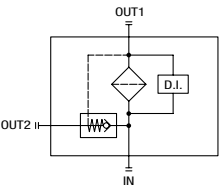
LMP 116 Double OUT port


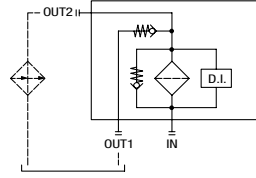
LMP 123 Bypass valve for heat exchanger high flow
Type 1


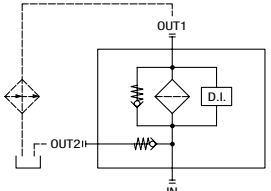
LMP 118 Bypass lateral
Always cleaning fluid in OUT port

LMP 123 Bypass valve for heat exchanger high flow
Type 2

LMP 119 Safety valve 6 bar for heat exchanger

Designation & Ordering code

COMPLETE FILTER

Series and size		Configuration example: LMP112 4 B A D 1 A10 N P01																		
LMP110 LMP112 LMP116																				
Length		1 2 3 4																		
Bypass valve		S Without bypass B 3.5 bar																		
Seals and treatments		Filtration rating																		
		Axx	Mxx	Pxx																
A NBR		•	•	•																
V FPM		•	•	•																
W NBR compatible with fluids HFA-HFB-HFC		•	•																	
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 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)		<table border="0"> <tr> <td>A03 Inorganic microfiber 3 µm</td> <td>M25 Wire mesh 25 µm</td> </tr> <tr> <td>A06 Inorganic microfiber 6 µm</td> <td>M60 Wire mesh 60 µm</td> </tr> <tr> <td>A10 Inorganic microfiber 10 µm</td> <td>M90 Wire mesh 90 µm</td> </tr> <tr> <td>A16 Inorganic microfiber 16 µm</td> <td>P10 Resin impregnated paper 10 µm</td> </tr> <tr> <td>A25 Inorganic microfiber 25 µm</td> <td>P25 Resin impregnated paper 25 µm</td> </tr> </table>									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
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A16 Inorganic microfiber 16 µm	P10 Resin impregnated paper 10 µm																			
A25 Inorganic microfiber 25 µm	P25 Resin impregnated paper 25 µm																			
		Element Δp			Execution															
		N 20 bar			P01 MP Filtri standard Pxx Customized															

FILTER ELEMENT

Element series and size		Configuration example: CU110 4 A10 A N P01																		
CU110																				
Element length		1 2 3 4																		
Filtration rating (filter media)		<table border="0"> <tr> <td>A03 Inorganic microfiber 3 µm</td> <td>M25 Wire mesh 25 µm</td> </tr> <tr> <td>A06 Inorganic microfiber 6 µm</td> <td>M60 Wire mesh 60 µm</td> </tr> <tr> <td>A10 Inorganic microfiber 10 µm</td> <td>M90 Wire mesh 90 µm</td> </tr> <tr> <td>A16 Inorganic microfiber 16 µm</td> <td>P10 Resin impregnated paper 10 µm</td> </tr> <tr> <td>A25 Inorganic microfiber 25 µm</td> <td>P25 Resin impregnated paper 25 µm</td> </tr> </table>									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
A03 Inorganic microfiber 3 µm	M25 Wire mesh 25 µm																			
A06 Inorganic microfiber 6 µm	M60 Wire mesh 60 µm																			
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A16 Inorganic microfiber 16 µm	P10 Resin impregnated paper 10 µm																			
A25 Inorganic microfiber 25 µm	P25 Resin impregnated paper 25 µm																			
Seals		Filtration rating																		
		Axx	Mxx	Pxx																
A NBR		•	•	•																
V FPM		•	•	•																
W NBR compatible with fluids HFA-HFB-HFC		•	•																	
		Element Δp			Execution															
		N 20 bar			P01 MP Filtri standard Pxx Customized															

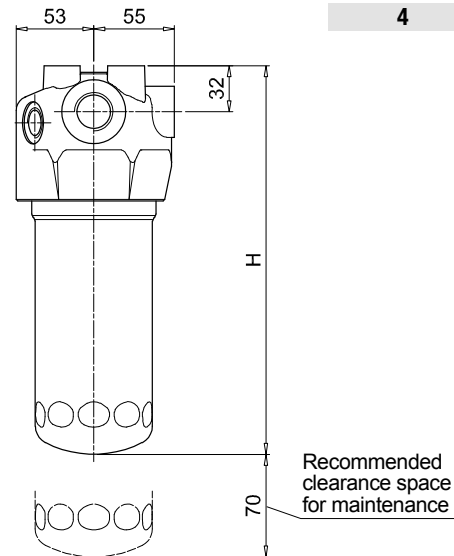
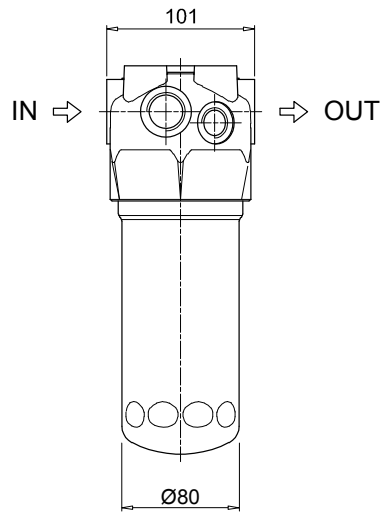
ACCESSORIES

Differential indicators		page			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			

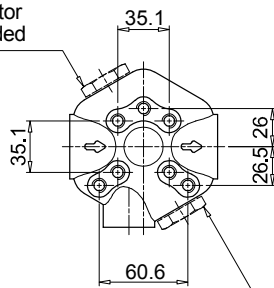
Additional features		page
T2 Plug		449

LMP110 - LMP112
LMP116

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

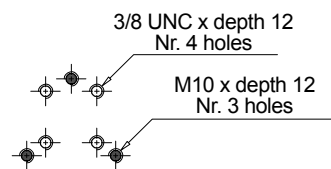


2 - Standard connection for differential indicator
T2 plug not included

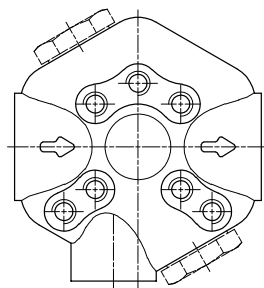


3 - Connection for differential indicator
on the opposite side
T2 plug not included

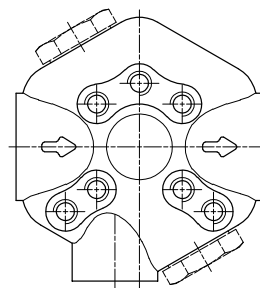
Fixing holes
Option for Metric and UNC screws



LMP 110

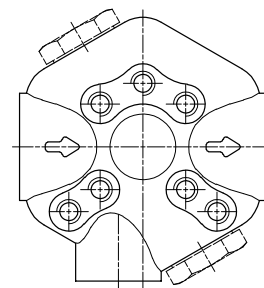


LMP 112



↑
Aux
IN

LMP 116



↓
Aux
OUT

Designation & Ordering code

COMPLETE FILTER

Series and size		Configuration example: LMP118 4 B A D 1 A10 N P01									
LMP118 LMP119											
Length											
1 2 3 4											
Bypass valve											
B 3.5 bar											
Seals and treatments		Filtration rating									
		Axx	Mxx	Pxx							
A NBR		•	•	•							
V FPM		•	•	•							
W NBR compatible with fluids HFA-HFB-HFC		•	•								
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 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		Execution							
		N 20 bar		P01 MP Filtri standard							
				Pxx Customized							

FILTER ELEMENT

Element series and size		Configuration example: CU110 4 A10 A N P01									
CU110											
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		Filtration rating									
		Axx	Mxx	Pxx							
A NBR		•	•	•							
V FPM		•	•	•							
W NBR compatible with fluids HFA-HFB-HFC		•	•								
		Element Δp		Execution							
		N 20 bar		P01 MP Filtri standard							
				Pxx Customized							

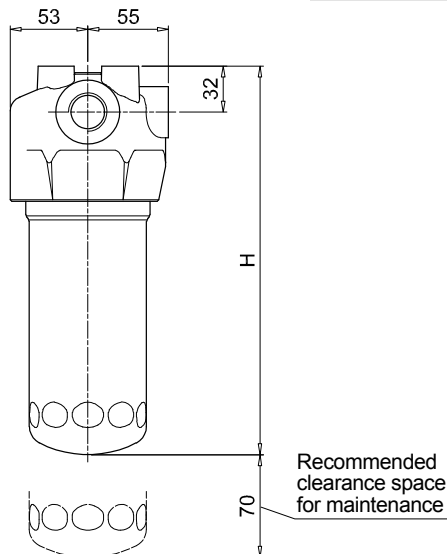
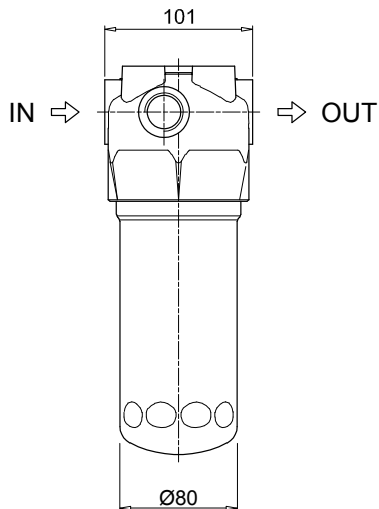
ACCESSORIES

Differential indicators		page			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			

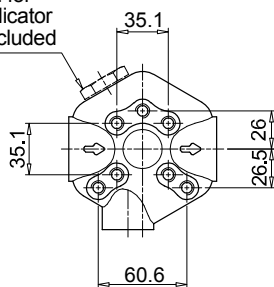
Additional features		page
T2	Plug	449

LMP118 - LMP119

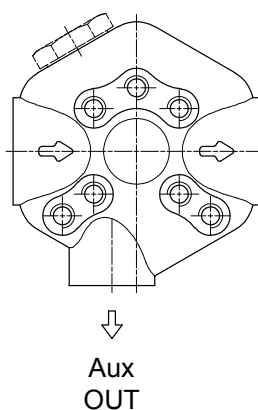
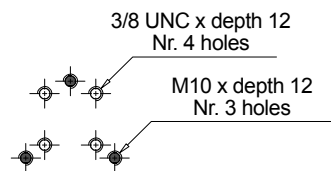
Filter length	H [mm]
1	182
2	215
3	265
4	365



Connection for differential indicator
T2 plug not included



Fixing holes
Option for Metric and UNC screws



Designation & Ordering code

COMPLETE FILTER

Series and size		Configuration example: LMP120 4 B A D 1 A10 N P01									
LMP120 LMP122											
Length											
1 2 3 4											
Bypass valve											
S Without bypass		B 3.5 bar									
Seals and treatments		Filtration rating									
		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		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		Execution					
				N 20 bar		P01 MP Filtri standard					
						Pxx Customized					

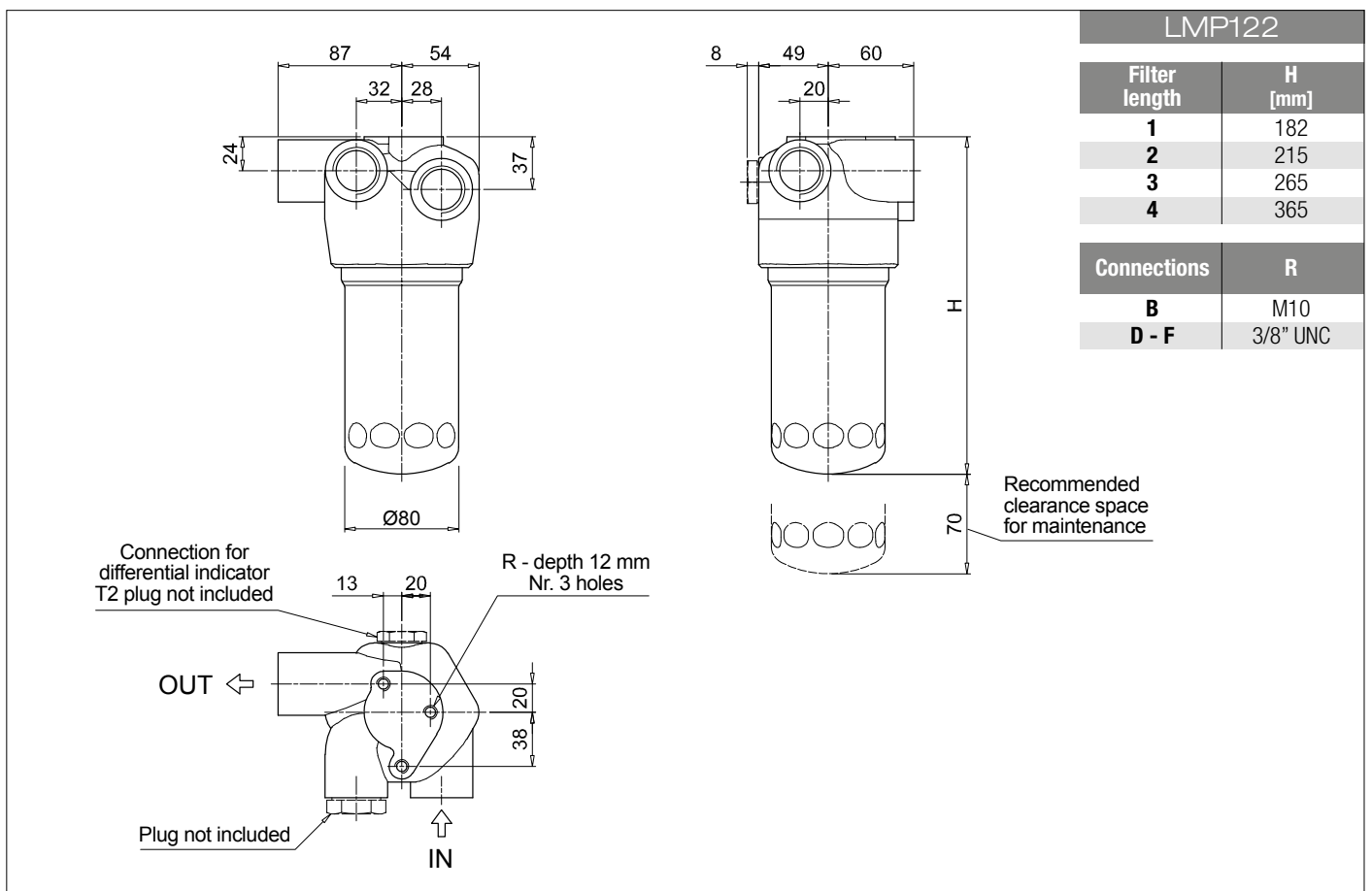
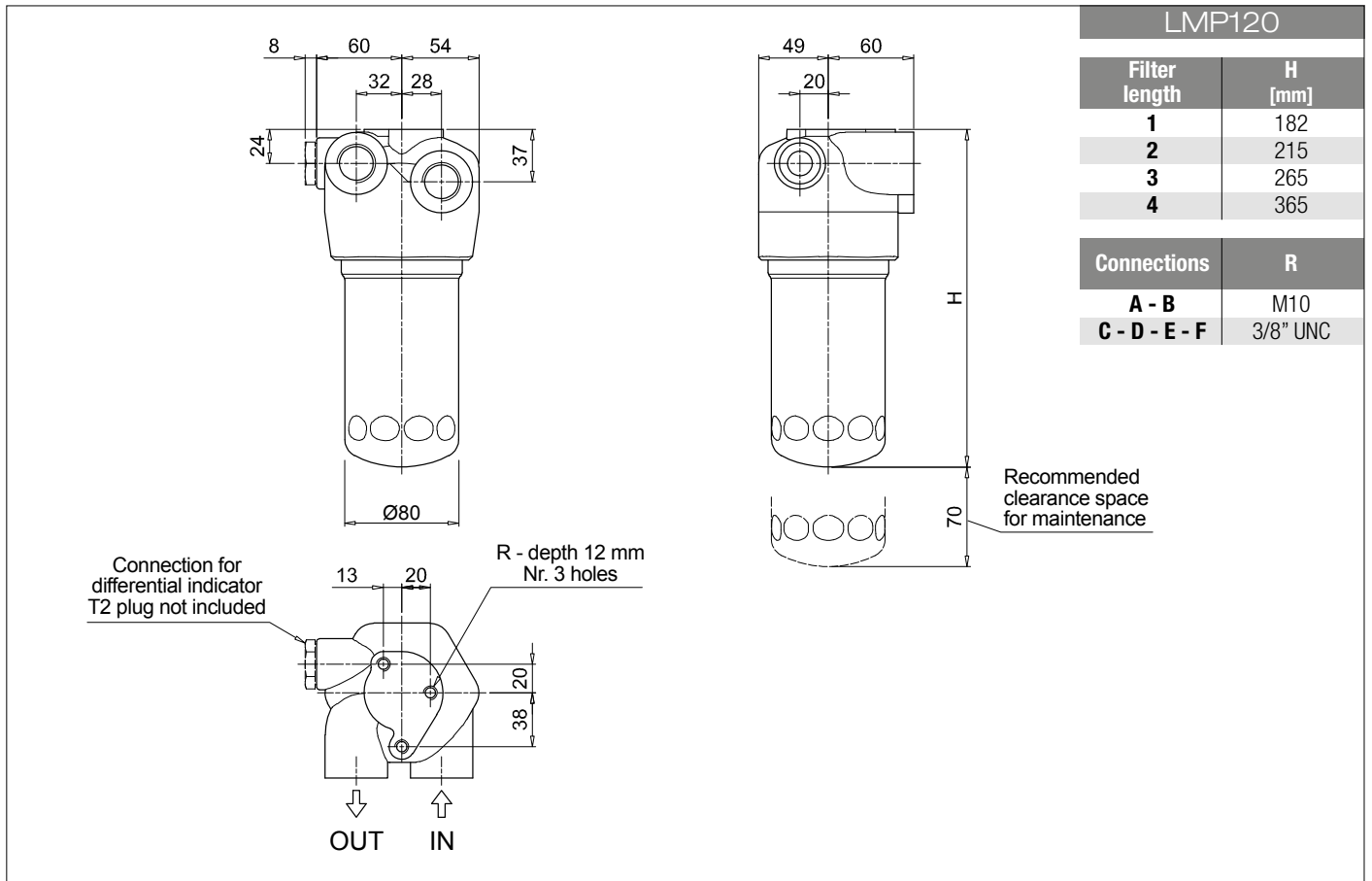
FILTER ELEMENT

Element series and size		Configuration example: CU110 4 A10 A N P01									
CU110											
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		Filtration rating									
		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			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



Designation & Ordering code

COMPLETE FILTER

Series and size		Configuration example: LMP123 4 R A F 1 A10 N P01										
LMP123												
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	3.5 bar	front	2 bar									
N			3 bar									
Q		side	2 bar									
R			3 bar									
Seals and treatments		Filtration rating										
A	NBR	Axx	Mxx	Pxx								
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	Element Δp					Execution	
A06	Inorganic microfiber	6 µm	M60	Wire mesh	60 µm	N					P01	
A10	Inorganic microfiber	10 µm	M90	Wire mesh	90 µm	20 bar					MP Filtri standard	
A16	Inorganic microfiber	16 µm	P10	Resin impregnated paper	10 µm						Pxx Customized	
A25	Inorganic microfiber	25 µm	P25	Resin impregnated paper	25 µm							

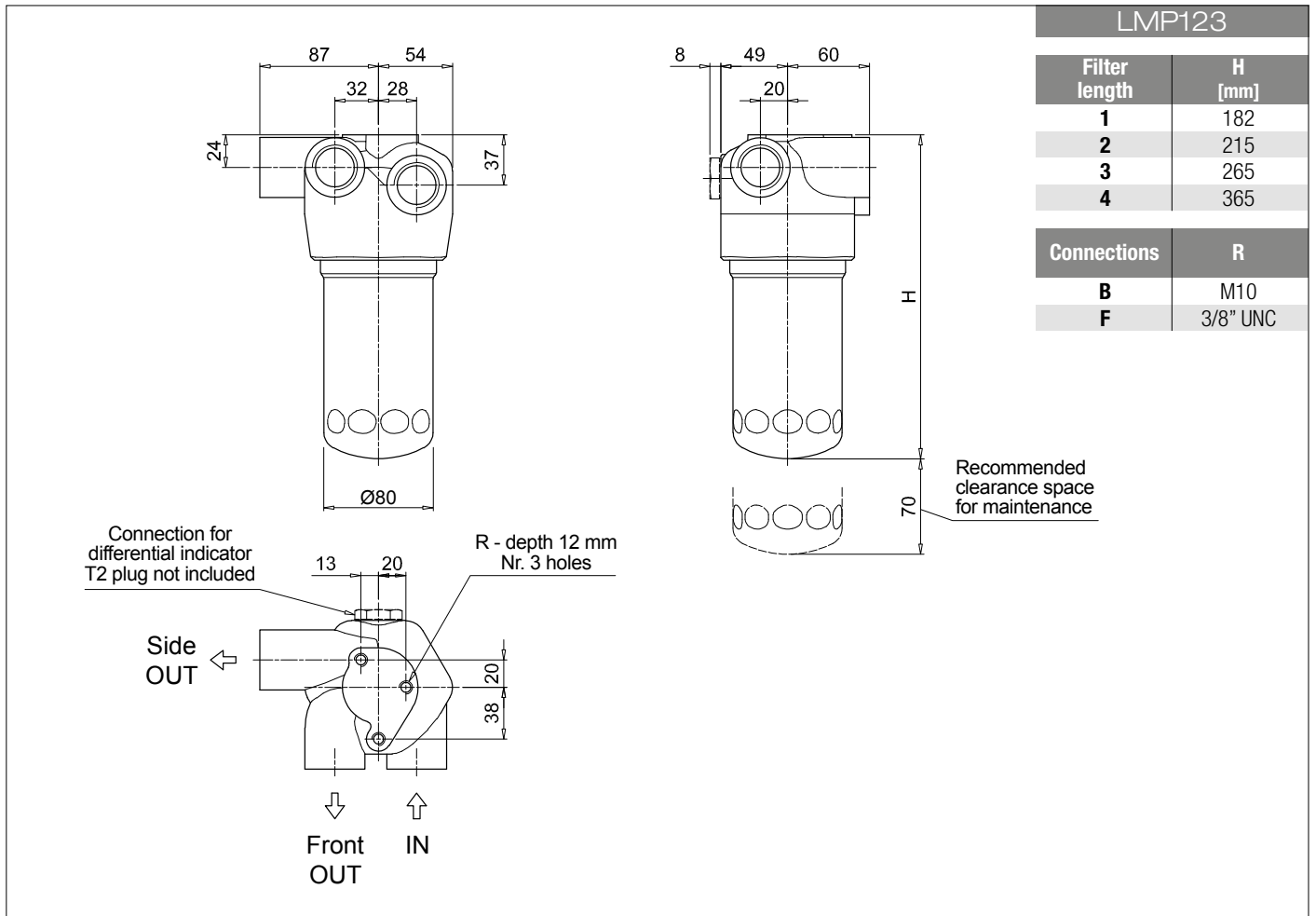
FILTER ELEMENT

Element series and size		Configuration example: CU110 4 A10 A N P01										
CU110												
Element length		1 2 3 4										
Filtration rating (filter media)												
A03	Inorganic microfiber	3 µm	M25	Wire mesh	25 µm	Element Δp					Execution	
A06	Inorganic microfiber	6 µm	M60	Wire mesh	60 µm	N					P01	
A10	Inorganic microfiber	10 µm	M90	Wire mesh	90 µm	20 bar					MP Filtri standard	
A16	Inorganic microfiber	16 µm	P10	Resin impregnated paper	10 µm						Pxx Customized	
A25	Inorganic microfiber	25 µm	P25	Resin impregnated paper	25 µm							
Seals		Filtration rating										
A	NBR	Axx	Mxx	Pxx								
V	FPM	•	•	•								
W	NBR compatible with fluids HFA-HFB-HFC	•	•									

ACCESSORIES

Differential indicators		page		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



LMP 110-120 SPARE PARTS

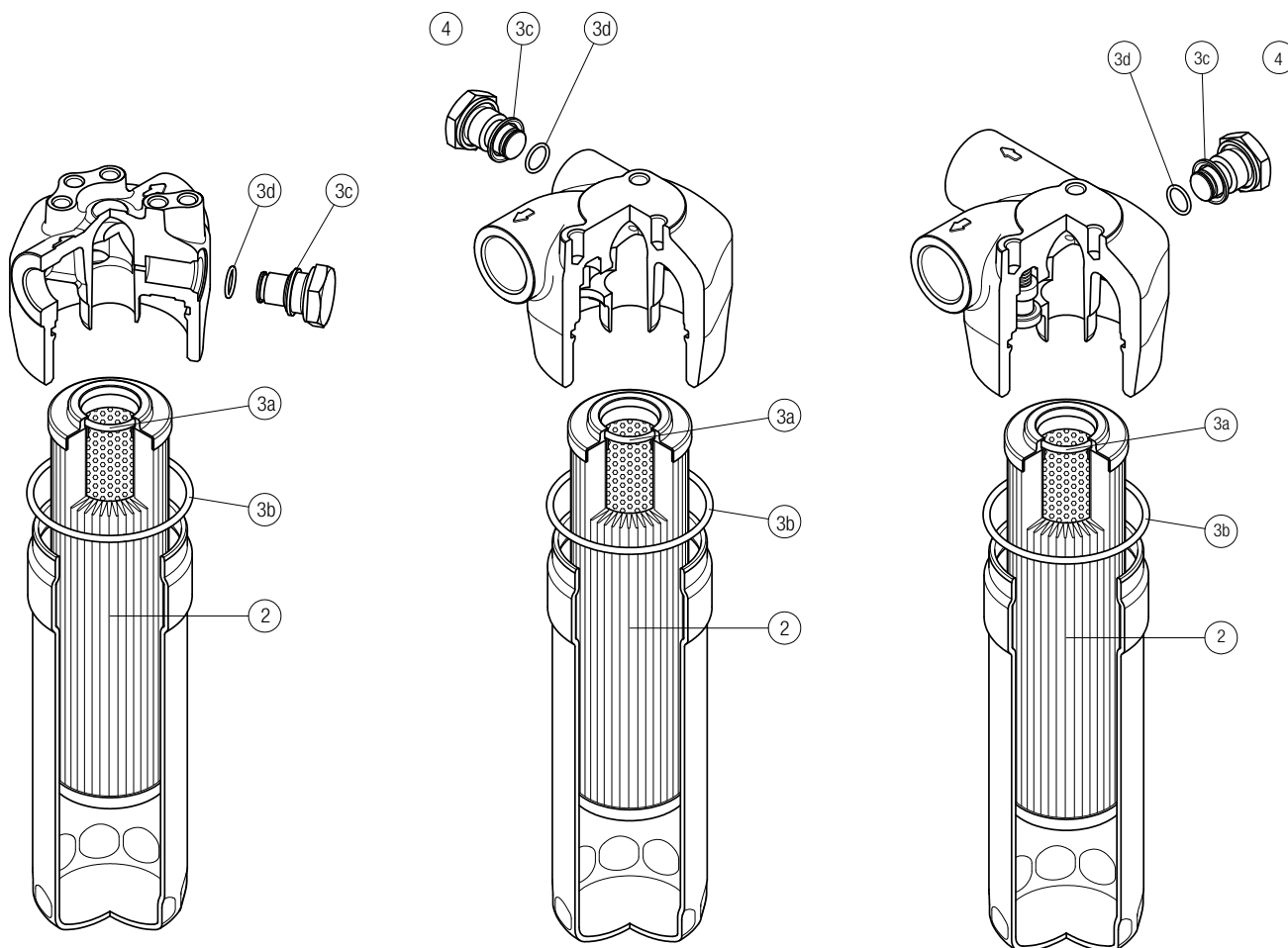
MULTIPOINT

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.		Q.ty: 1 pc.	
Filter series	Filter element	Seal Kit code number		Indicator connection plug		
LMP 110-112-116-118-119	See order table	NBR	FPM	NBR	FPM	
LMP 120		02050478	02050479	T2H	T2V	
LMP 122-123						