

SERIES



LMP 211 - 210

LDP DIN 24550



Maximum pressure 60 bar
Maximum flow to 330 l/min



Technical data

Filter housing (Materials)

- Head: Aluminium
- Bowl: Cataphoresis Painted Steel
- Bypass valve: AISI 304 - Nylon

Pressure

- Working pressure: 60 bar (6 MPa)
- Test pressure: 90 bar (9 MPa)
- Burst pressure: 210 bar (21 MPa)
- Pulse pressure fatigue test: 1.000.000 cycles with pressure from 0 to 60 bar (6 MPa)

Temperature

- From -25 °C to +110 °C

Bypass valve

- Opening pressure 3.5 bar $\pm$ 10%
- Other opening pressures on request.

Δp Elements type

- Microfibre 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

LMP MULTIPOINT FILTERS ARE PROVIDED FOR VERTICAL MOUNTING

Weights (kg)

Length	1	2	3
• LMP210-211	3.10	4.80	6.40
• LDP016	2.90		
• LDP025	3.10		
• LDP040	4.90		

Volumes (dm³)

Length	1	2	3
• LMP210-211	1.60	2.10	2.80
• LDP016	1.10		
• LDP025	1.60		
• LDP040	2.30		

Connections

- LMP 210/211 - LDP: Inlet/Outlet In-Line

Compatibility (to ISO 2943)

- Housings compatible with:
Mineral oils, synthetic fluids, aqueous emulsions, water and glycol.
(series W required)
- The filter elements are compatible with:
Mineral oils, synthetic fluids.
Aqueous emulsions, water and glycol.
(series W required)
- NBR seals series A, compatible with:
Mineral oils, synthetic fluids, aqueous emulsions and water and glycol.
- FPM seals series V, compatible with:
Synthetic fluids type HS-HFDR-HFDS-HFDU

Recommended maximum flow rate

- Pressure drop of filter assembly equal to Δp 0.6 bar.
- Oil kinematic viscosity 30 mm²/s (cSt).
- Density 0.86 kg/dm³.
- Connections of filter under test G 1 1/2" SAE 3000 PSI/M.

Filtration

Leng.	A03	A06	A10	A16	A25	P10	P25	M25
LMP 210	1	98	110	190	200	220	250	300
	2	140	155	225	235	260	275	290
	3	175	200	245	250	270	290	300

Flow rate l/min

Filtration

Leng.	A03	A06	A10	A16	A25	P10	P25	M25
LMP 211	1	100	110	190	210	230	275	290
	2	140	155	230	245	270	290	300
	3	175	210	250	260	285	310	320

Flow rate l/min

Filtration

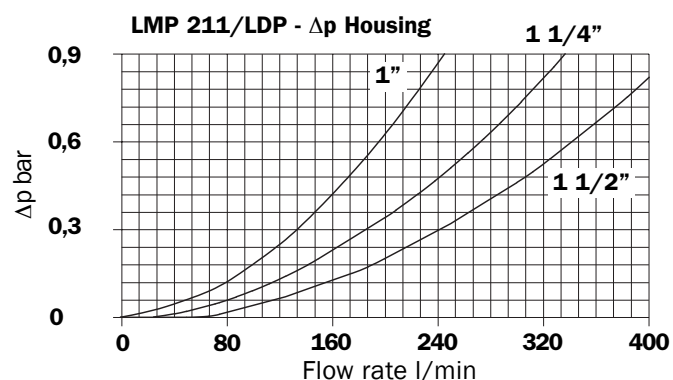
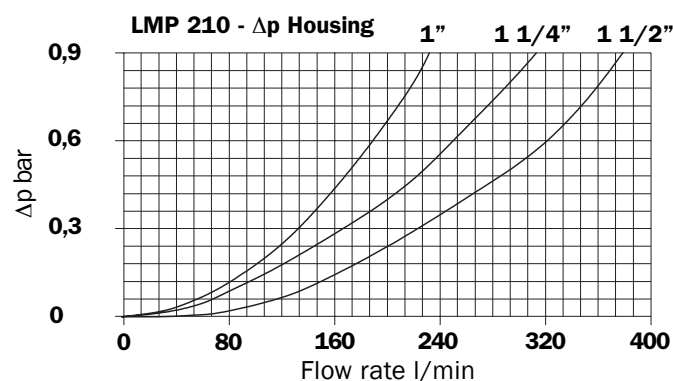
Leng.	A03	A06	A10	A16	A25	P10	P25	M25
LDP	016	70	750	150	165	200	255	300
	025	100	115	195	210	230	280	295
	040	150	165	235	250	275	295	305

Flow rate l/min

Filter housings Δp pressure drop

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

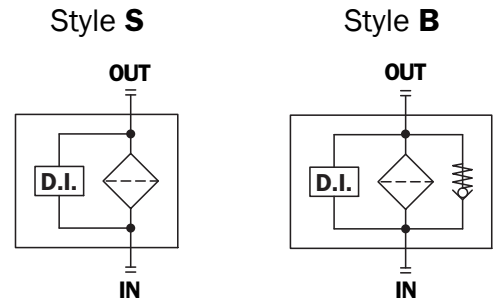
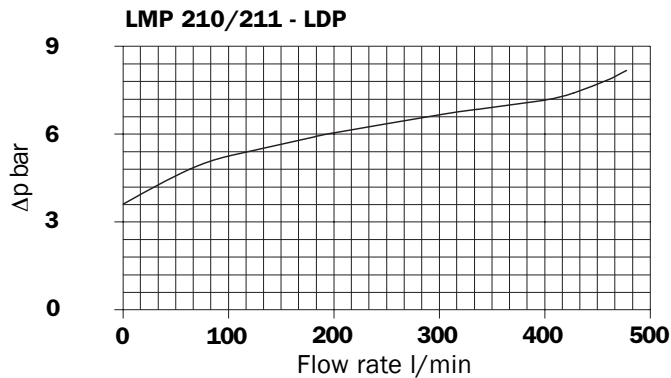
Δp varies proportionally with density.



Valves

Bypass valve pressure drop

Hydraulic symbols



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
	N - W Series					N Series		N Series
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 210 1	5,3	4,8	2,0	1,66	1,32	0,56	0,43	0,12
2	3,44	2,95	1,24	1,09	0,7	0,42	0,35	0,09
3	2,4	1,7	0,94	0,84	0,54	0,33	0,23	0,05
DN								
016	7,95	7,20	3,00	2,49	1,98	0,84	0,65	0,18
025	5,00	4,53	1,89	1,57	1,25	0,53	0,41	0,11
040	3,13	2,66	1,12	0,98	0,63	0,38	0,32	0,08

Filter sizing

Sizing data for single cartridge, head at top

Δp Tot.

Δpc Filter housing

Δpe Filter element

Y Multiplication factor (see above)

Q l/min = flow rate

V1 = reference viscosity 30 mm²/s (cSt)

V2 = operating viscosity in mm²/s (cSt)

Δp Tot. = Δpc + Δpe

Δpe = Y : 1000 x Q x (V2/V1)

Calculation example with HLP Mineral Oil Variation in viscosity

Data:

Filter with in-line connections

Pressure = 60 bar

Flow rate = 200 l/min

Viscosity = 46 mm²/s (cSt)

Density = 0,86 Kg/dm³

Filtration = 10 μ absolute

With bypass valve

Practical example

Δpe Filter housing

Q = 200 l/min

V₂ = 46 mm²/s (cSt)

Pmax = 60 bar

Filtration = 10 μ absolute

Δp Tot. max = 0,6 bar (max. recommended value)

Δpe = (0,94 : 1000) x 200 x (46/30) = 0,29 bar

Δpc Filter housing = 0,24 bar

Δp Tot. max 0,6 bar = Δpc + Δpe

Δp Tot. = 0,29 + 0,24 = 0,53 bar

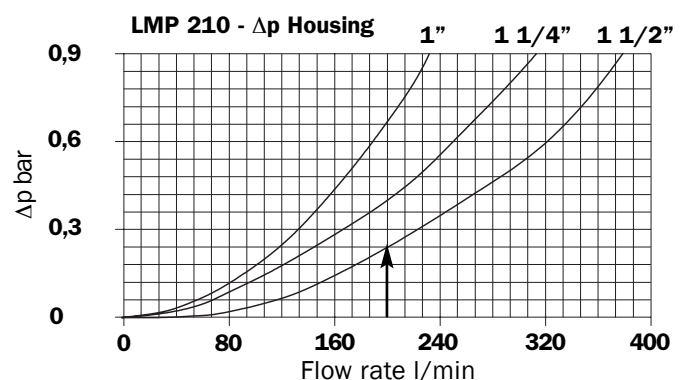
Sized filter type:

LMP 210 3 B A F6 A10 N P01

Filter housings Δp pressure drop

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

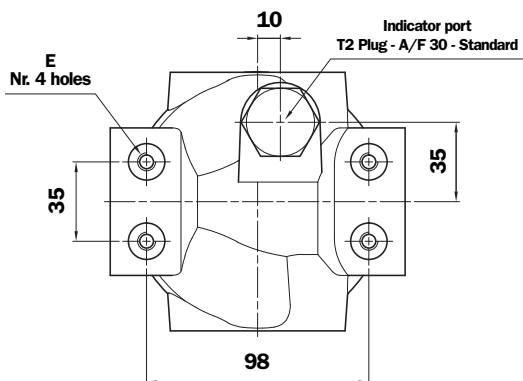
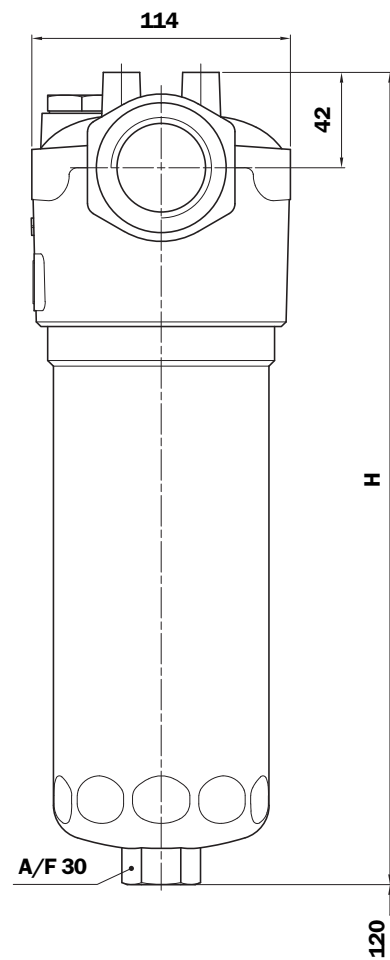
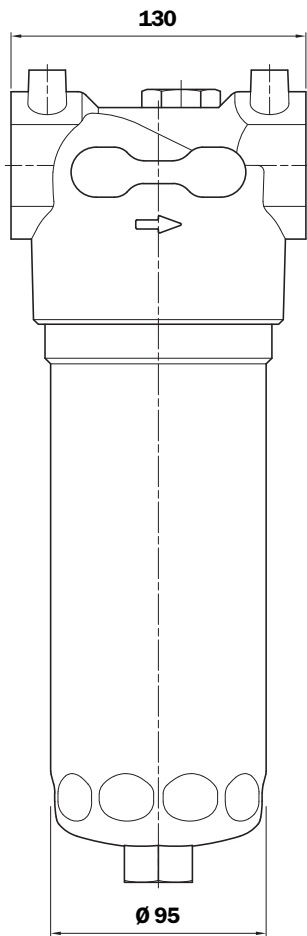
Δp varies proportionally with density.



LMP 211

LDP DIN 24550

Threaded connections



LMP 211

Length Filter	H mm
1	357
2	487
3	625

LDP - DIN 24550

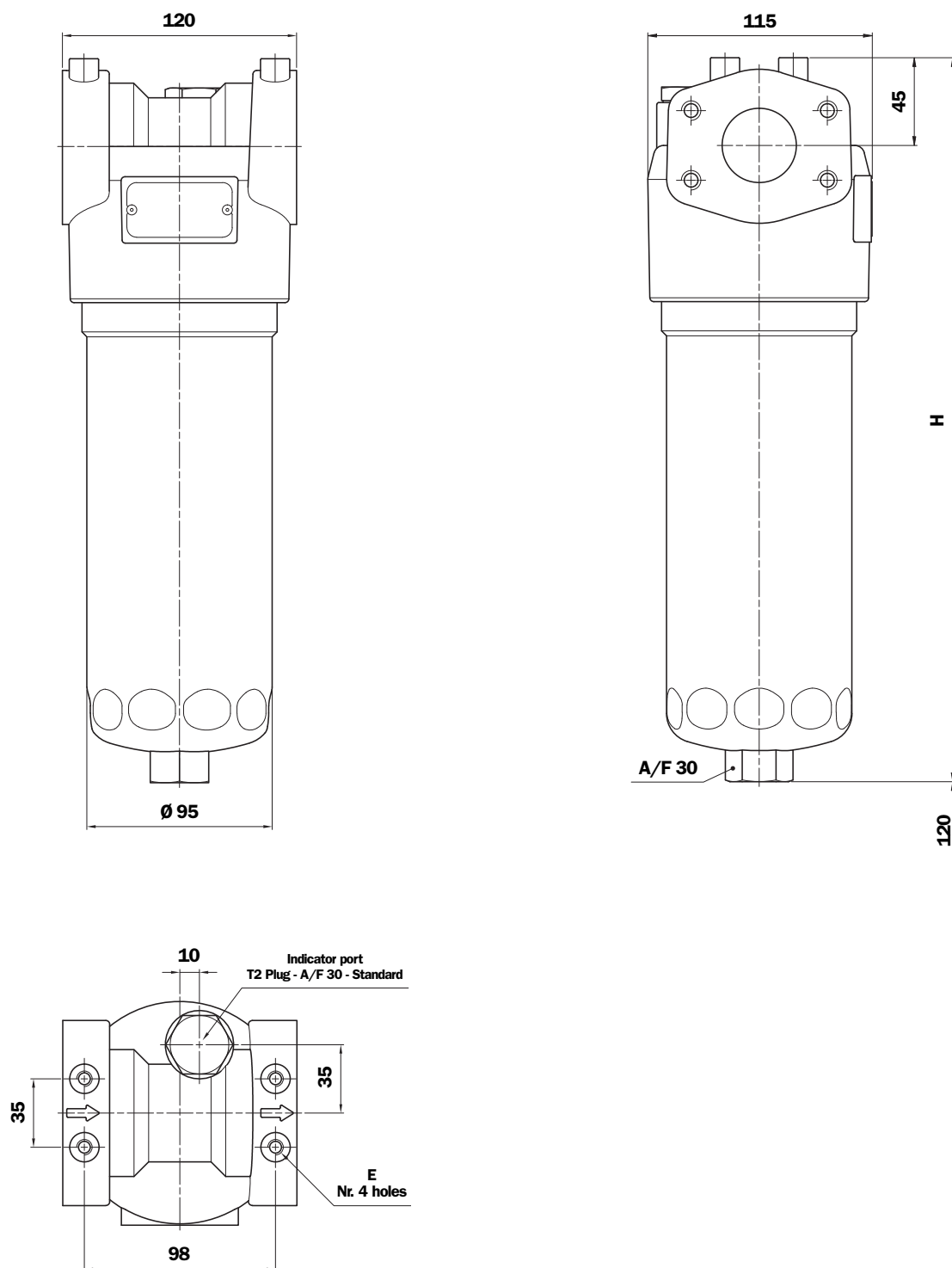
Length Filter	H mm
016	267
025	357
040	507

LMP 211 - LDP Thread connections

Type	Size	E Depth 12 mm
A	G 1"	M8
B	G 1 1/4"	M8
C	G 1 1/2"	M8
D	1" NPT	5/16" UNC
E	1 1/4" NPT	5/16" UNC
F	1 1/2" NPT	5/16" UNC
G	SAE 16 - 1 5/16" - 12 UN	5/16" UNC
H	SAE 20 - 1 5/8" - 12 UN	5/16" UNC
I	SAE 24 - 1 7/8" - 12 UN	5/16" UNC

LMP 210

Flanged connections



LMP 210

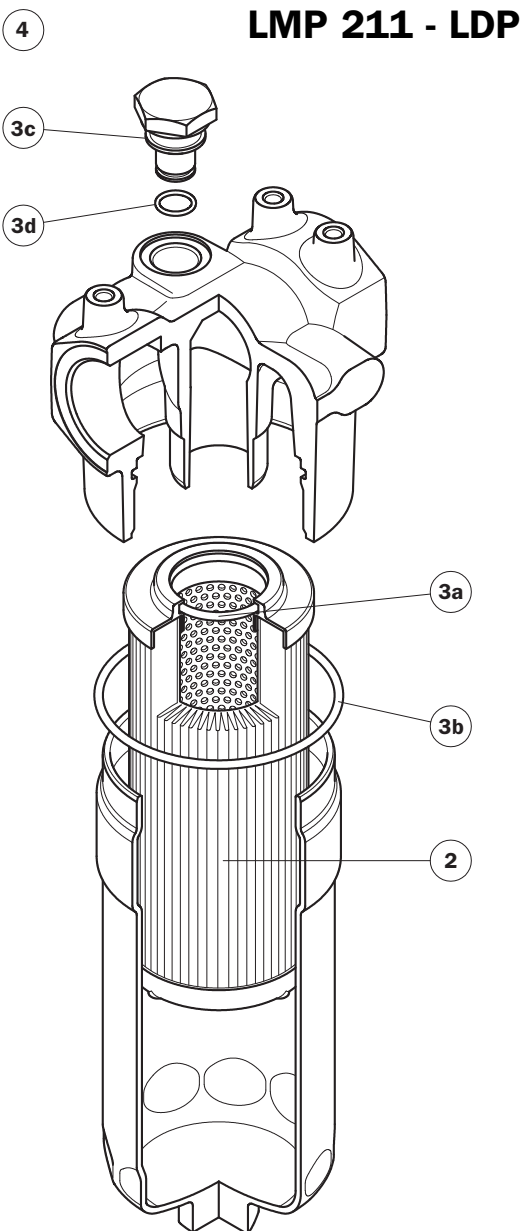
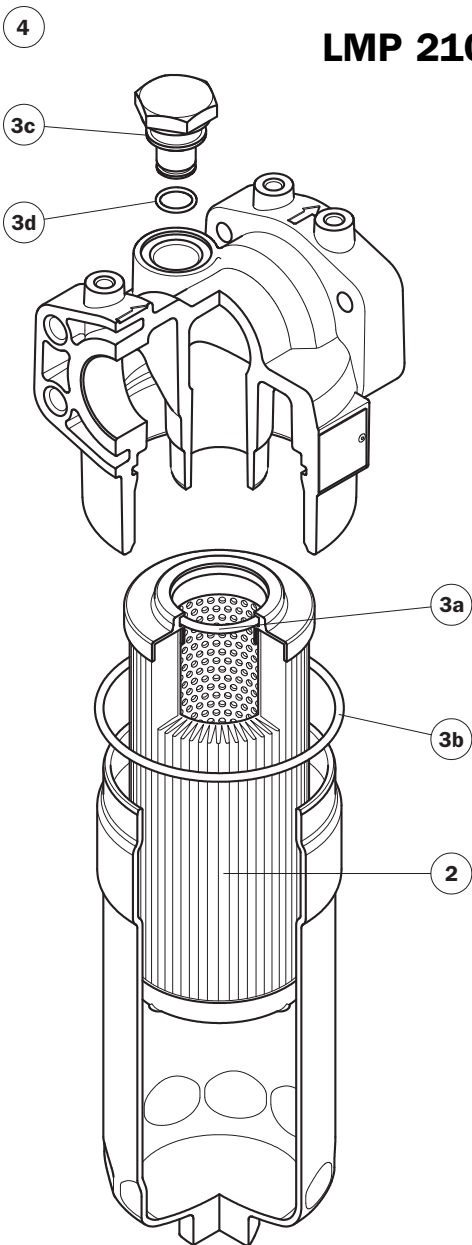
Length Filter	H mm
1	360
2	492
3	630

LMP 210

Flange connections

Type	Size	E Depth 12 mm
F1	1" SAE 3000 psi/M	M8
F2	1 1/4" SAE 3000 psi/M	M8
F3	1 1/2" SAE 3000 psi/M	M8
F4	1" SAE 3000 psi/UNC	5/16" UNC
F5	1 1/4" SAE 3000 psi/UNC	5/16" UNC
F6	1 1/2" SAE 3000 psi/UNC	5/16" UNC

Spare parts



Item	Description	Q.ty	FILTER Series LMP 210/211 - LDP	
1	Filter assembly	1	See order table	
2	Filter element	1	See order table	
3	Seal Kit	1	NBR 02050435	FPM 02050436
3a	O-Ring filter element	1	O-R 144 Ø 39,69 x 3,53	
3b	O-Ring housing	1	O-R 4375 Ø 94,84 x 3,53	
3c	Seal for indicator	1	NBR 01030058	FPM 01030046
3d	O-Ring for indicator	2	O-R 2050 Ø 12,42 x 1,78	
4	Indicator connection plug	1	T2H	T2V
-	Indicator	1	See order table	

Ordering information LMP 210-211

Filter assembly

LMP

	1	2	3	4	5	6	7	8	9
	☐	☐	☐	☐	☐	☐	☐	☐	☐
Example 1: LMP	210	2	B	A	F1	-	A10	N	P01
Example 2: LMP	211	2	B	A	A	6	A10	N	P01

Filter element

CU

	1	2	7	4	8	9
	☐	☐	☐	☐	☐	☐
Example 1: CU	210	2	A10	A	N	P01
Example 2: CU	210	2	A10	A	N	P01

1 - Style

Filter	Filter element
☐ 210	☐ 210
☐ 211	☐ 210

2 - Filter length

☐ 210	☐ 1	☐ 2	☐ 3
☐ 211	☐ 1	☐ 2	☐ 3

3 - Valves

☐ S	Without bypass
☐ B	With bypass Opening pressure: 3,5 bar
☐	With bypass Opening pressure: on request

4 - Filter seals

☐ A	NBR
☐ V	FPM
☐	On request

5 - Connections

Flange

LMP 210

Type	Size
F1	1" SAE 3000 psi/M
F2	1 1/4" SAE 3000 psi/M
F3	1 1/2" SAE 3000 psi/M
F4	1" SAE 3000 psi/UNC
F5	1 1/4" SAE 3000 psi/UNC
F6	1 1/2" SAE 3000 psi/UNC

Threaded

LMP 211

Type	Size
A	G 1"
B	G 1 1/4"
C	G 1 1/2"
D	1" NPT
E	1 1/4" NPT
F	1 1/2" NPT
G	SAE 16 - 1 5/16" - 12 UN
H	SAE 20 - 1 5/8" - 12 UN
I	SAE 24 - 1 7/8" - 12 UN

6 - Indicator port (only for LMP 211)

☐ 6	With plugged indicator port
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7 - Filter element

☐ A03	Inorganic microfibre 3 μ	Absolute filtration βx (c) ≥ 1000
☐ A06	Inorganic microfibre 6 μ	
☐ A10	Inorganic microfibre 10 μ	
☐ A16	Inorganic microfibre 16 μ	
☐ A25	Inorganic microfibre 25 μ	
☐ M25	Wire mesh	Nominal Filtration
☐ M60	Wire mesh	
☐ M90	Wire mesh	
☐ P10	Resin impregnated paper	Nominal Filtration
☐ P25	Resin impregnated paper	

8 - Max filter element differential pressure

☐ N	Δp 20 bar
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9 - Option

☐ P01	MP Filtri standard
☐ Pxx	Customer request

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Filter assembly LDP

Example: LDP

1	2	3	4	5	6	7	8
016	B	A	A	6	A10	N	P01

Filter element DN

Example: DN

1	6	3	7	8
016	A10	A	N	P01

1 - Style

Filter

016

025

040

Filter element

016 Filter element in according to:
DIN 24550 - T3 DN160

025 Filter element in according to:
DIN 24550 - T3 DN250

040 Filter element in according to:
DIN 24550 - T3 DN400

2 - Valves

S	Without bypass
B	With bypass Opening pressure: 3,5 bar
	With bypass Opening pressure: on request

3 - Filter seals

A	NBR
V	FPM
	On request

4 - Connections

Threaded

LDP

Type	Size
A	G 1"
B	G 1 1/4"
C	G 1 1/2"
D	1" NPT
E	1 1/4" NPT
F	1 1/2" NPT
G	SAE 16 - 1 5/16" - 12 UN
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I	SAE 24 - 1 7/8" - 12 UN

5 - Indicator port

6	With plugged indicator port
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6 - Filter element

A03	Inorganic microfibre 3 μ	Absolute filtration βx (c) ≥ 1000
A06	Inorganic microfibre 6 μ	
A10	Inorganic microfibre 10 μ	
A16	Inorganic microfibre 16 μ	
A25	Inorganic microfibre 25 μ	
M25	Wire mesh	Nominal Filtration
M60	Wire mesh	
M90	Wire mesh	
P10	Resin impregnated paper	Nominal Filtration
P25	Resin impregnated paper	

7 - Max filter element differential pressure

N	Δp 20 bar
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8 - Option

P01	MP Filtri standard
Pxx	Customer request



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