

LDD series

Filters featuring filter elements designed according to DIN 24550

Maximum working pressure up to 6 MPa (60 bar) - Flow rate up to 360 l/min

LDP & LDD GENERAL INFORMATION

Filters featuring filter elements designed according to DIN 24550

Descriptions

Low & Medium Pressure filters

Maximum working pressure up to 6 MPa (60 bar)

Flow rate up to 360 l/min

LDP 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 also suitable for the off-line filtration of small reservoirs.

They are directly connected to the lines of the system through the hydraulic fittings.

Available features:

- Female threaded connections up to 1 1/2", for a maximum return flow rate of 360 l/min
- Filter element designed in accordance with DIN 24550 regulation
- Fine filtration rating, to get a good cleanliness level into the system
- Water removal elements, to remove the free water from the hydraulic fluid. For further information, see the Contamination Management document and the dedicate leaflet.
- Bypass valve, to relieve excessive pressure drop across the filter media
- Visual, electrical and electronic differential clogging indicators

Common applications:

Delivery lines, in low pressure industrial equipment or mobile machines

LDD is a range of versatile low pressure duplex filter with integrated changeover function to allow the filter element replacement without the system shut-down.

They are directly connected to the lines of the system through the hydraulic fittings.

Available features:

- Female threaded connections up to 1 1/2" and flanged connections up to 1 1/2", for a maximum flow rate of 360 l/min
- Filter element designed in accordance with DIN 24550 regulation
- Fine filtration rating, to get a good cleanliness level into the system
- Water removal elements, to remove the free water from the hydraulic fluid. For further information, see the Contamination Management document and the dedicate leaflet.
- Balancing valve integrated in the changeover lever, to equalize the housing pressure before the switch
- Bypass valve, to relieve excessive pressure drop across the filter media
- Vent ports, to avoid air trapped into the filter going into the system
- Drain ports, to remove the fluid from the housing prior the maintenance work
- Optional sampling ports, to get samples of fluid or to connect additional instrument to the system
- Visual, electrical and electronic differential clogging indicators

Common applications:

- Systems where shut-down causes high costs
- Systems where shut-down causes safety issues

Technical data

Filter housing materials

- Head: Aluminium
- Bowl: Cathaphoretic painted steel
- Bypass valve: AISI 304 - Polyamide

Pressure

- Test pressure: 9 MPa (90 bar)
- Burst pressure: 21 MPa (210 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 6 MPa (60 bar)

Bypass valve

- Opening pressure 350 kPa (3.5 bar) $\pm 10\%$
- Other opening pressures on request.

Δp element 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

Temperature

From -25° C to +110° C

Connections

Inlet/Outlet In-Line

Note

LDP - LDD filters are provided for vertical mounting

Weights [kg] and volumes [dm³]

Filter series	Weights [kg]	Volumes [dm ³]
LDP 016	2.0	1.2
LDP 025	3.0	1.6
LDP 040	5.0	2.2
LDD 016	9.3	3.6
LDD 025	9.5	4.1
LDD 040	11.3	4.8

GENERAL INFORMATION LDP & LDD

Filters featuring filter elements designed according to DIN 24550

Flow rates [l/min]

Filter series	Filter element design - N Series									
	A03	A06	A10	A16	A25	M25	M60	M90	P10	P25
LDP 016	83	91	178	198	222	350	353	358	295	309
LDP 025	124	134	227	245	265	357	358	358	319	330
LDP 040	173	191	274	284	311	359	360	361	332	337
LDD 016	68	73	120	130	140	189	190	192	169	174
LDD 025	93	98	142	149	157	191	192	192	178	181
LDD 040	118	126	161	165	175	192	192	193	182	184

Maximum flow rate for a complete low and medium pressure filter with a pressure drop $\Delta p = 0.7$ bar.

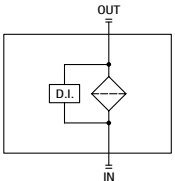
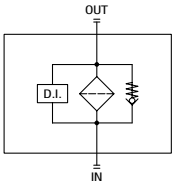
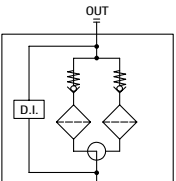
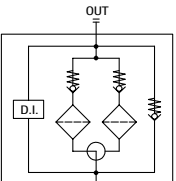
The reference fluid has a kinematic viscosity of 30 mm²/s (cSt) and a density of 0.86 kg/dm³.

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.

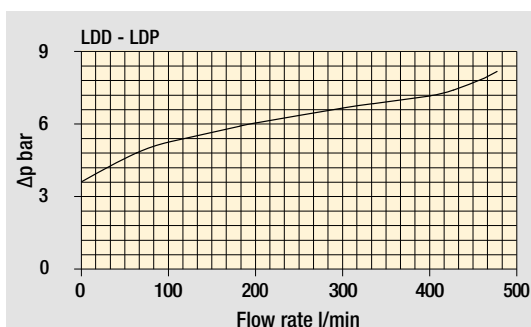
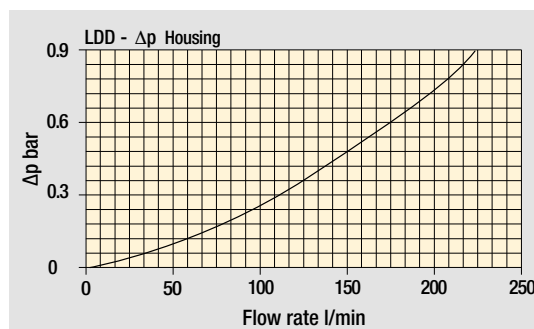
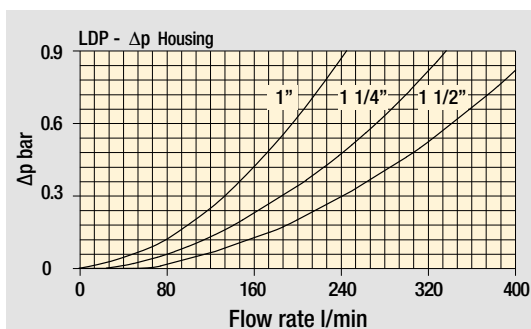
Hydraulic symbols

Filter series	Execution S	Execution B	Execution S	Execution B
LDP 016	•	•	-	-
LDP 025	•	•	-	-
LDP 040	•	•	-	-
LDD 016	-	-	•	•
LDD 025	-	-	•	•
LDD 040	-	-	•	•

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	Configuration example: LDP 025 B A D 6 A10 N P01										
LDP											
Size											
016	Element according to DIN 24550 - T3 DN160										
025	Element according to DIN 24550 - T3 DN250										
040	Element according to DIN 24550 - T3 DN400										
Bypass valve											
S	Without bypass					B	With bypass 3.5 bar				
Seals and treatments											
A	NBR										
V	FPM										
Connections											
A	G 1"					F	1 1/2" NPT				
B	G 1 1/4"					G	SAE 16 - 1 5/16" - 12 UN				
C	G 1 1/2"					H	SAE 20 - 1 5/8" - 12 UN				
D	1" NPT					I	SAE 24 - 1 7/8" - 12 UN				
E	1 1/4" NPT										
Connection for differential pressure indicator											
6	With plugged 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				
WA025	Water absorber inorganic microfiber 25 µm										
Element Δp	N					20 bar					
Execution	P01					MP Filtri standard					
Pxx	Customized										

FILTER ELEMENT

Element series	Configuration example: DN 025 A10 A N P01										
DN											
Element size											
016	Element according to DIN 24550 - T3 DN160										
025	Element according to DIN 24550 - T3 DN250										
040	Element according to DIN 24550 - T3 DN400										
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				
WA025	Water absorber inorganic microfiber 25 µm										
Seals and treatments	A					NBR					
V	FPM										
Element Δp	N					20 bar					
Execution	P01					MP Filtri standard					
Pxx	Customized										

CLOGGING INDICATORS

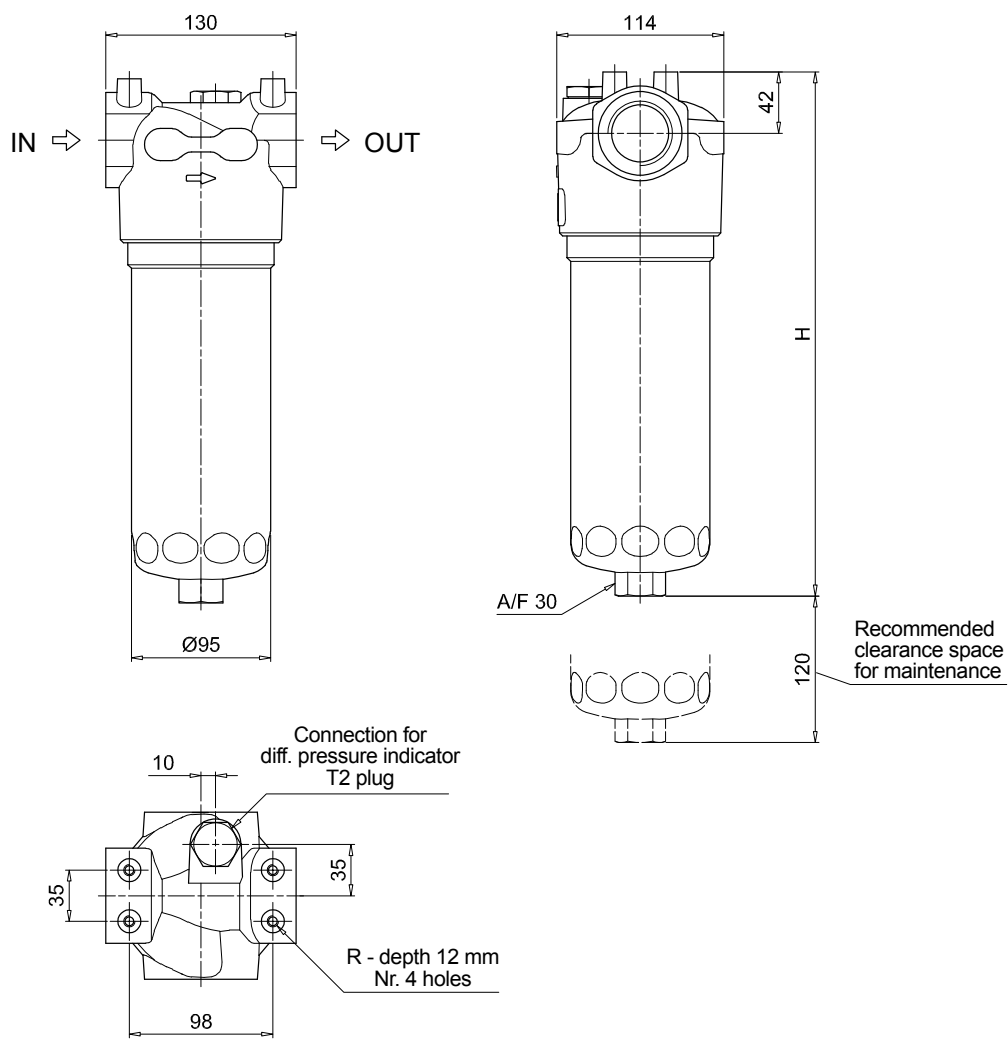
See page 726

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 747

T2	Plug
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LDP	
Filter size	H [mm]
016	268
025	358
040	508
Connections	R
A-B-C	M8
D-E-F-G-H-I	5/16" UNC

Designation & Ordering code

COMPLETE FILTER

Series	Configuration example:									
LDD	LDD	025	B	A	C	6	A10	N	P01	
Size										
016	Element according to DIN 24550 - T3 DN160									
025	Element according to DIN 24550 - T3 DN250									
040	Element according to DIN 24550 - T3 DN400									
Bypass valve										
S	Without bypass		B	With bypass 3.5 bar						
Seals and treatments										
A	NBR									
V	FPM									
Connections										
C	G 1 1/2"									
F	1 1/2" NPT									
I	SAE 24 - 1 7/8" - 12 UN									
L	1 1/2" SAE 3000 psi/M + G 1 1/4"									
M	1 1/2" SAE 3000 psi/UNC + 1 1/4" NPT									
N	1 1/2" SAE 3000 psi/UNC + SAE 20 - 1 5/8" UN									
Connection for differential pressure indicator										
6	With plugged 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						
WA025	Water absorber inorganic microfiber 25 µm									
			Element Δp			Execution				
			N 20 bar			P01 MP Filtri standard				
						Pxx Customized				

FILTER ELEMENT

Element series		Configuration example:								
DN		DN	025	A10	A	N	P01			
Element size										
016		Element according to DIN 24550 - T3 DN160								
025		Element according to DIN 24550 - T3 DN250								
040		Element according to DIN 24550 - T3 DN400								
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	
WA025		Water absorber inorganic microfiber 25 μm								
Seals and treatments		Element Δp		Execution						
A		NBR		N		20 bar		P01		MP Filtri standard
V		FPM						Pxx		Customized

CLOGGING INDICATORS

See page 726

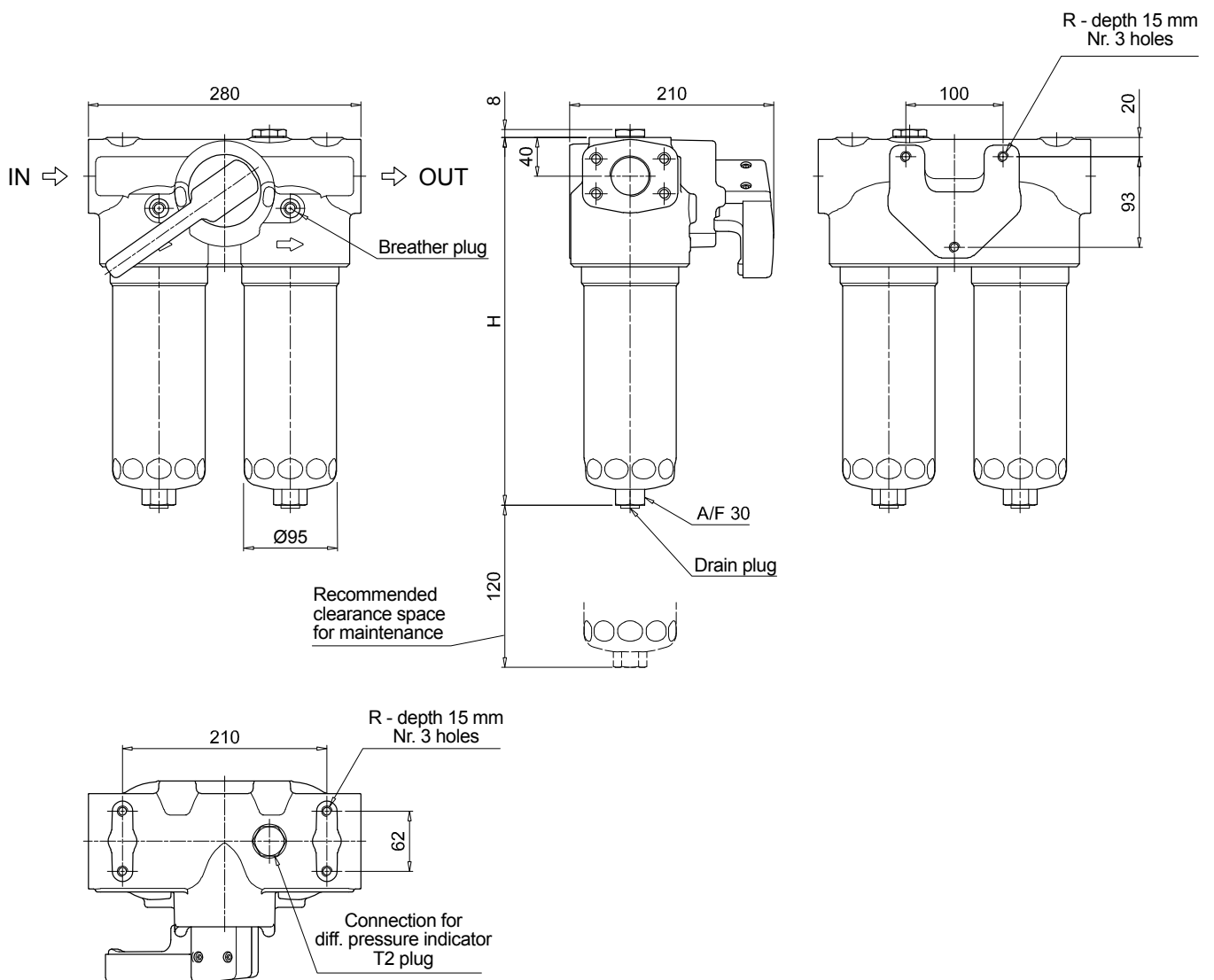
DEA Electrical differential pressure indicator	DLE Electrical / visual differential pressure indicator
DEM Electrical differential pressure indicator	DTA Electronic differential pressure indicator
DEU Electrical differential pressure indicator	DVA Visual differential pressure indicator
DLA Electrical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

PLUGS

See page 747

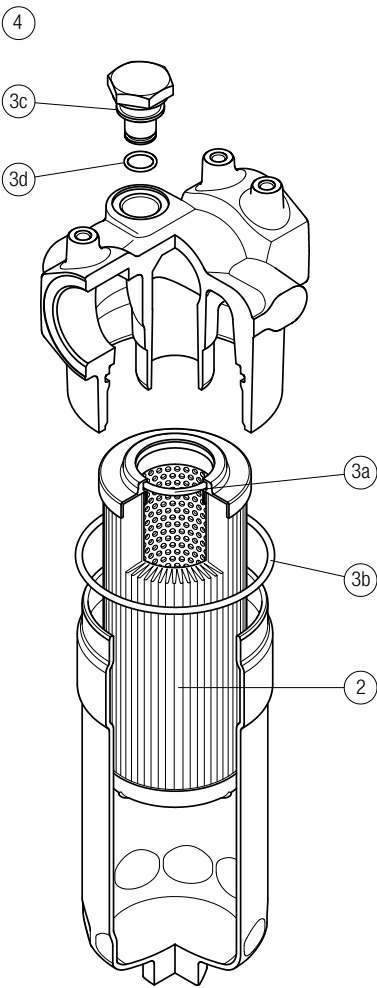
T2 Plug

LDD	
Filter size	H [mm]
016	293
025	383
040	533
Connections	R
C	M10
F - I	3/8" UNC
L	M10
M - N	3/8" UNC



Order number for spare parts

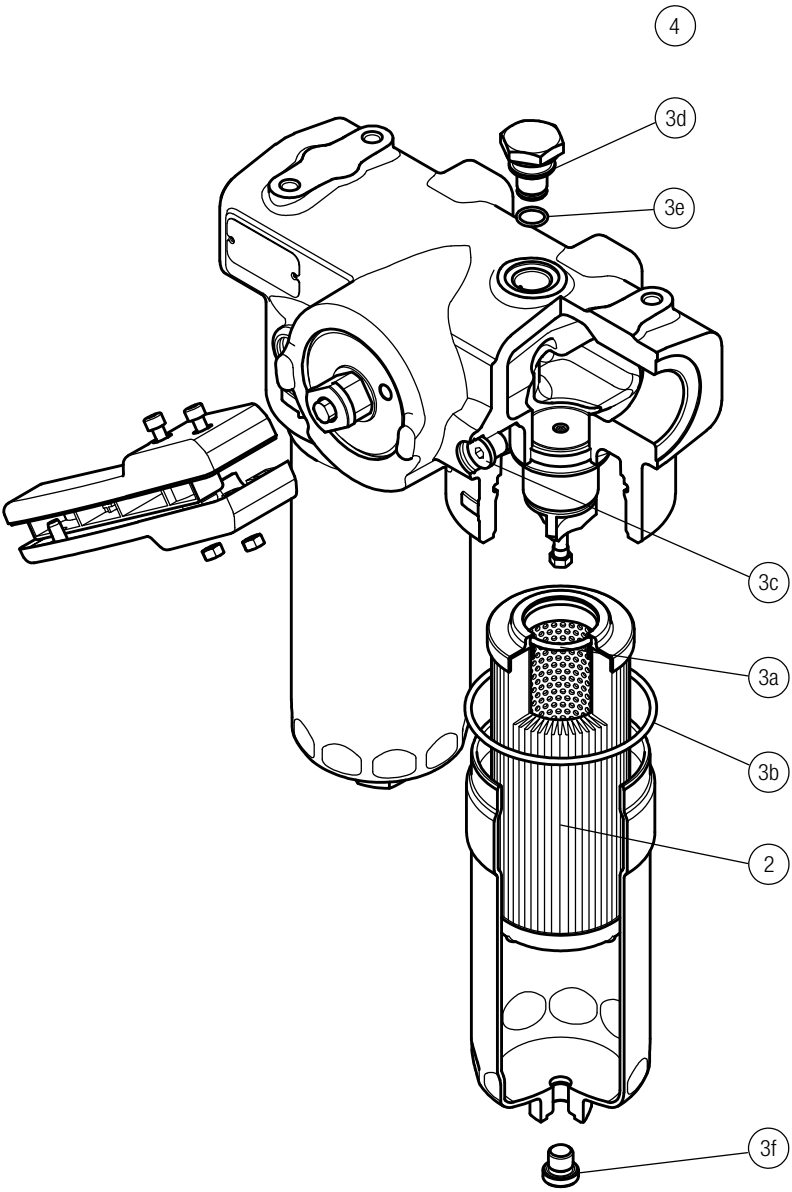
LDP



Q.ty: 1 pc.		Q.ty: 1 pc.		Q.ty: 1 pc.	
Item: 2		3 (3a ÷ 3d)		4	
Filter series	Filter element	Seal Kit code number		Indicator connection plug	
		NBR	FPM	NBR	FPM
LDP	See order table	02050435	02050436	T2H	T2V

Order number for spare parts

LDD



Item:	Q.ty: 1 pc.	Q.ty: 1 pc.	Q.ty: 2 pc.
Filter series	Filter element	Seal Kit code number	Indicator connection plug
LDD	See order table	02050671	T2H
		02050672	T2V

CLOGGING INDICATORS LOW & MEDIUM PRESS. FILTERS

Designation & Ordering code

DIFFERENTIAL PRESSURE INDICATORS

Series											Configuration example 1:	
DE Electrical differential pressure indicator											DE	M
DL Electrical/Visual differential pressure indicator											20	H
DT Electronic differential pressure indicator											F	50
DV Visual differential pressure indicator											P01	
Type											Configuration example 2:	
A Standard type											DE	U
M With wired electrical connection											50	V
U Standard type 210 bar, UL certified											A	50
E For high power supply											P01	
S Compact version											UL	
Pressure setting											Configuration example 3:	
12 1.2 bar											DL	E
20 2.0 bar											50	V
25 2.5 bar											A	71
40 4.0 bar											P01	
50 5.0 bar											DT	A
Seals											Configuration example 4:	
H HNBR											20	H
V FPM											F	70
Thermostat											Configuration example 5:	
A Without thermostat											DV	M
F With thermostat											50	V
Electrical connections												
10 Connection AMP Superseal series 1.5												
20 Connection AMP Timer Junior												
30 Connection Deutsch DT-04-2-P												
35 Connection Deutsch DT-04-3-P												
50 Connection EN 175301-803												
51 Connection EN 175301-803, transparent base with lamps 24 Vdc												
52 Connection EN 175301-803, transparent base with lamps 110 Vdc												
70 Connection IEC 61076-2-101 D (M12)												
71 Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc												
80 Connection Stud #10-32 UNF												
Option												
P01 MP Filtri standard												
Pxx Customized												
Certifications												
Without												
UL UL certification												

PLUGS

Series			Configuration example	
T2 Plug			T2	H
T4 Plug				
Seals				
A NBR				
H HNBR				
V FPM				