

# LDP series

Filter element according to DIN 24550

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

# LDP & LDD GENERAL INFORMATION

## Filter element 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: Cataphoretic 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) ±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 [dm<sup>3</sup>]

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

Filter series	Filter element design - N Series									
	A03	A06	A10	A16	A25	M25	M60	M90	P10	P25
<b>LDP 016</b>	83	91	178	198	222	350	353	358	295	309
<b>LDP 025</b>	124	134	227	245	265	357	358	358	319	330
<b>LDP 040</b>	173	191	274	284	311	359	360	361	332	337
<b>LDD 016</b>	68	73	120	130	140	189	190	192	169	174
<b>LDD 025</b>	93	98	142	149	157	191	192	192	178	181
<b>LDD 040</b>	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 mm<sup>2</sup>/s (cSt) and a density of 0.86 kg/dm<sup>3</sup>.

For different pressure drop or fluid viscosity we recommend to use our selection software available on [www.mpfiltri.com](http://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

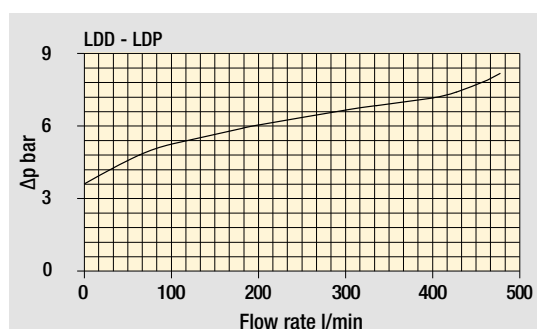
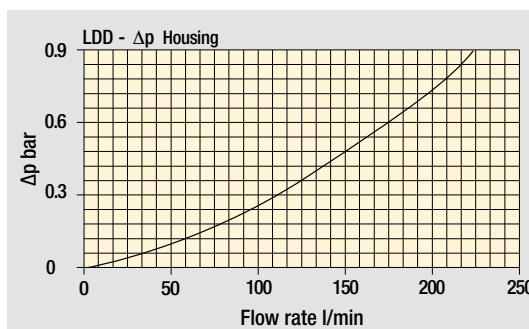
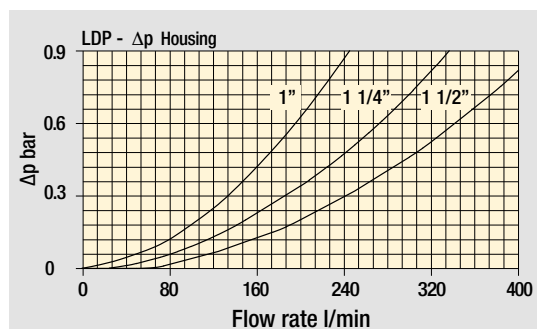
Filter series	Execution S	Execution B	Execution S	Execution B
<b>LDP 016</b>	●	●	-	-
<b>LDP 025</b>	●	●	-	-
<b>LDP 040</b>	●	●	-	-
<b>LDD 016</b>	-	-	●	●
<b>LDD 025</b>	-	-	●	●
<b>LDD 040</b>	-	-	●	●

Filter series	Execution S	Execution B	Execution S	Execution B
<b>LDP 016</b>				
<b>LDP 025</b>				
<b>LDP 040</b>				

#### Pressure drop

Filter housings  $\Delta p$  pressure drop



Bypass valve pressure drop

The curves are plotted using mineral oil with density of 0.86 kg/dm<sup>3</sup> in compliance with ISO 3968.  $\Delta p$  varies proportionally with density.

# LDP Filter element according to DIN 24550

## Designation & Ordering code

### COMPLETE FILTER

Configuration example: **LDP** **025** **B** **A** **D** **6** **A10** **N** **P01**

**Series**  
**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 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

Configuration example: **DN** **025** **A10** **A** **N** **P01**

**Element series**  
**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 686

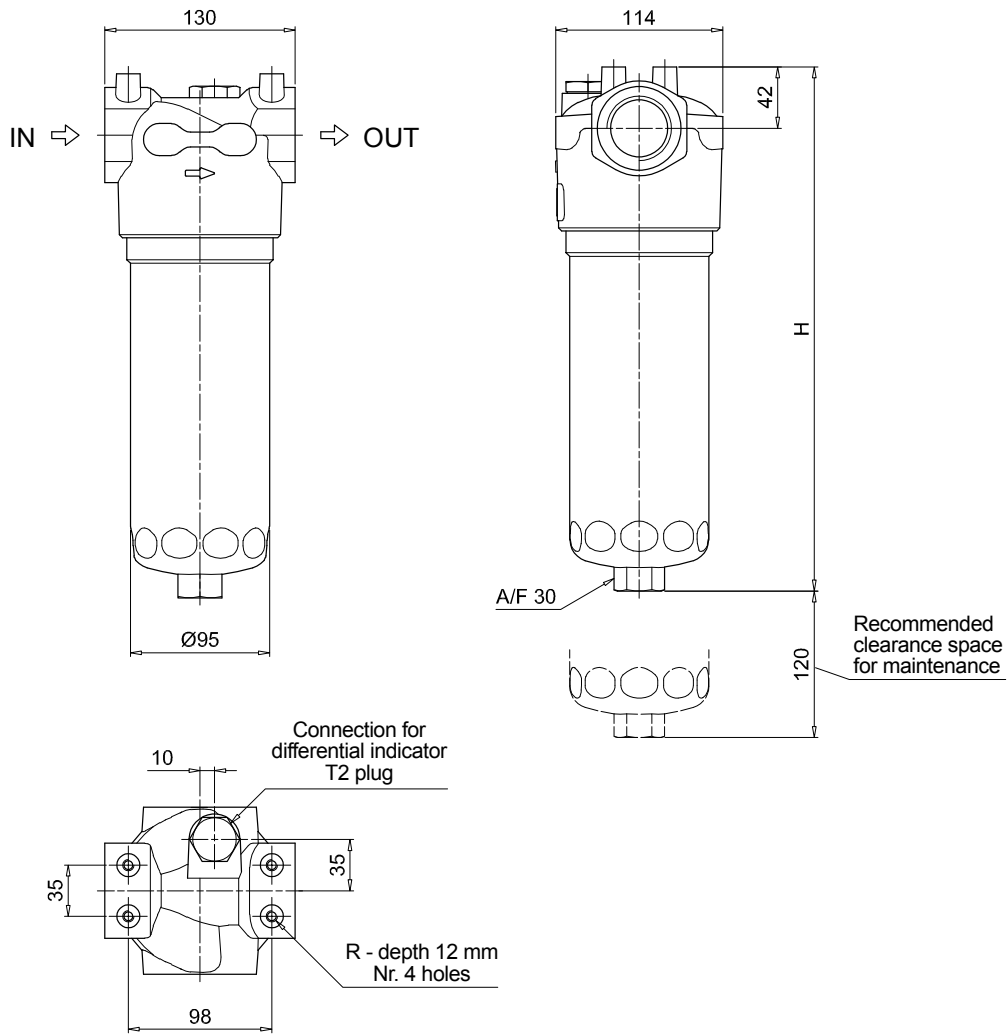
**DEA** Electrical differential indicator  
**DEM** Electrical differential indicator  
**DLA** Electrical / visual differential indicator  
**DLE** Electrical / visual differential indicator

**DTA** Electronic differential indicator  
**DVA** Visual differential indicator  
**DVM** Visual differential indicator

### PLUGS

See page 706

**T2** Differential indicator plug



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

# LDD Filter element according to DIN 24550

## Designation & Ordering code

### COMPLETE FILTER

Series **LDD** Configuration example: **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 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 **DN** Configuration example: **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**

**A** NBR

**V** FPM

**Element Δp**

**N** 20 bar

**Execution**

**P01** MP Filtri standard

**Pxx** Customized

### CLOGGING INDICATORS

See page 686

**DEA** Electrical differential indicator

**DEM** Electrical differential indicator

**DLA** Electrical / visual differential indicator

**DLE** Electrical / visual differential indicator

**DTA** Electronic differential indicator

**DVA** Visual differential indicator

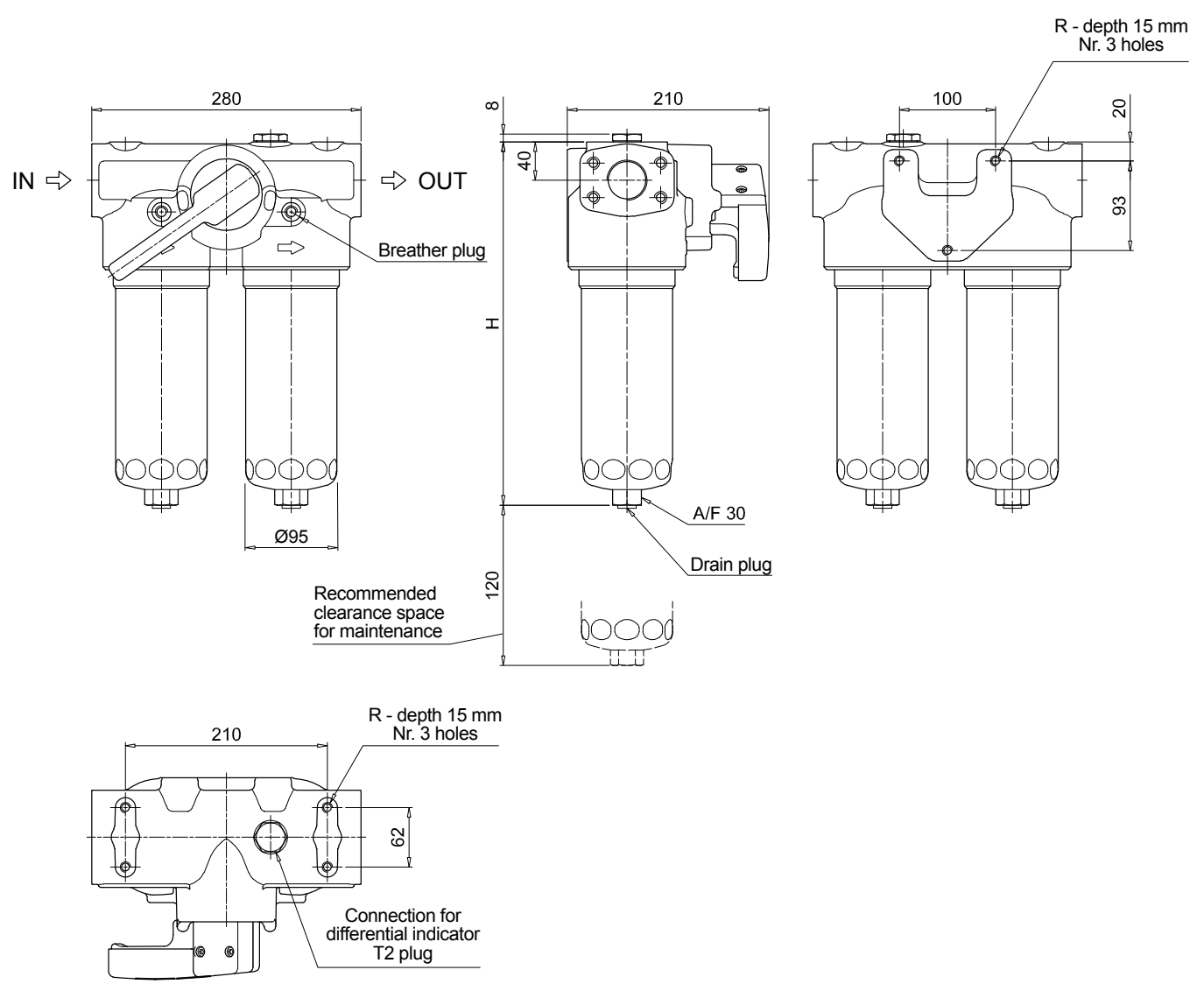
**DVM** Visual differential indicator

### PLUGS

See page 706

**T2** Differential indicator plug

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

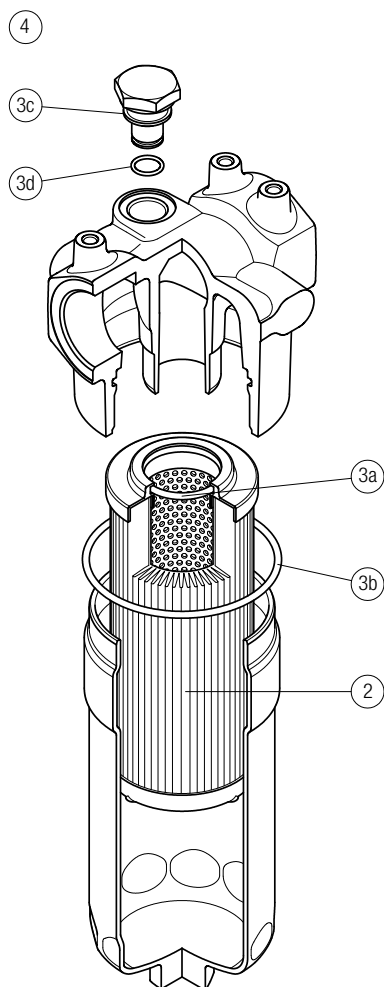


# LDP SPARE PARTS

Filter element according to DIN 24550

Order number for spare parts

LDP

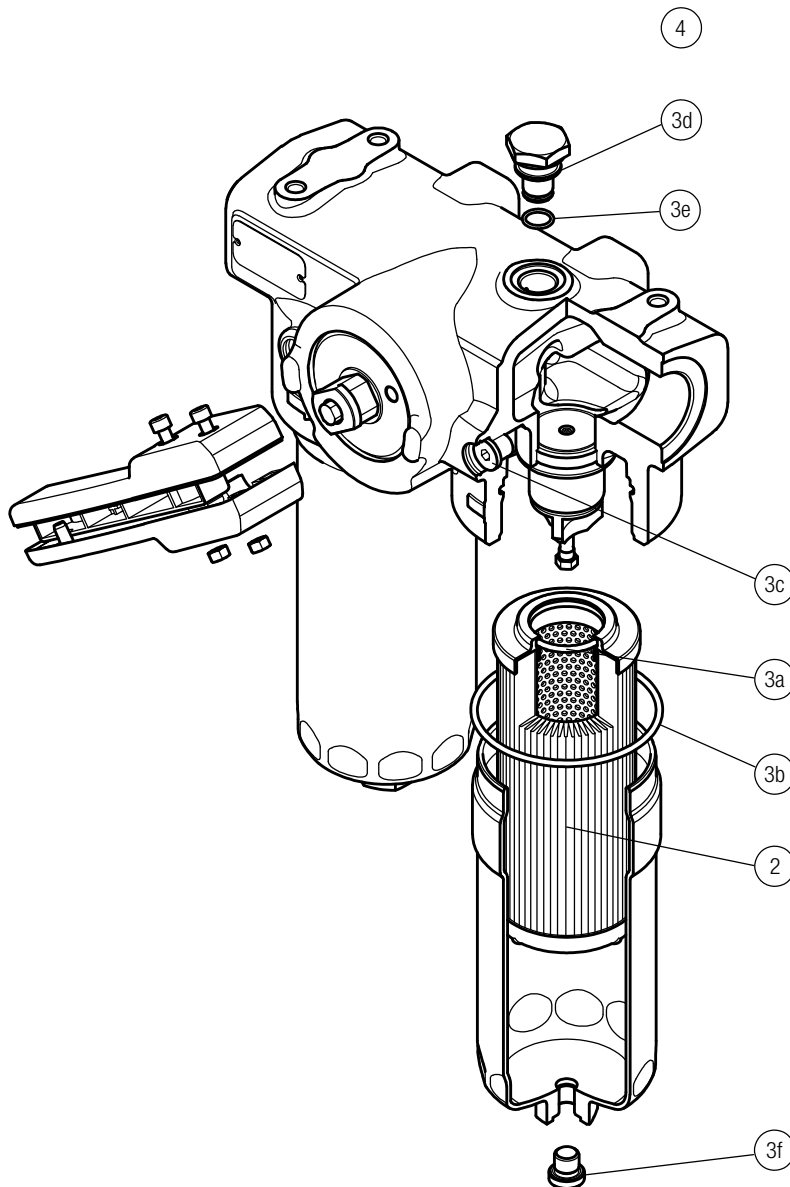


Item:	Q.ty: 1 pc.	Q.ty: 1 pc.		Q.ty: 1 pc.	
Filter series	Filter element	Seal Kit code number		Indicator connection plug	
LDP	See order table	NBR	FPM	NBR	FPM
	<b>2</b>	<b>3</b> (3a ÷ 3d)		<b>4</b>	
		02050435	02050436	T2H	T2V



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	NBR	FPM	NBR	FPM
	<b>2</b>	<b>3</b> (3a ÷ 3i)		<b>4</b>	
		02050671	02050672	T2H	T2V