# LDP & LDD series

**Filter element according to DIN 24550**

**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 330 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 330 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 - Nylon

**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 [dm³]

| Filter series | Weights [kg] | Volumes [dm³] |
|---|---|---|
| **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 |

## Filter element according to DIN 24550

### FILTER ASSEMBLY SIZING
Flow rates [l/min]

| | Filter element design - N Series | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Filter series | A03 | A06 | A10 | A16 | A25 | M25 | M60 | M90 | M250 | P10 | P25 |
| **LDP 016** | 83 | 91 | 178 | 198 | 222 | 350 | 353 | 358 | 359 | 295 | 309 |
| **LDP 025** | 124 | 134 | 227 | 245 | 265 | 357 | 358 | 358 | 359 | 319 | 330 |
| **LDP 040** | 173 | 191 | 274 | 284 | 311 | 359 | 360 | 361 | 362 | 332 | 337 |
| **LDD 016** | 68 | 73 | 120 | 130 | 140 | 189 | 190 | 192 | 192 | 169 | 174 |
| **LDD 025** | 93 | 98 | 142 | 149 | 157 | 191 | 192 | 192 | 192 | 178 | 181 |
| **LDD 040** | 118 | 126 | 161 | 165 | 175 | 192 | 192 | 193 | 193 | 182 | 184 |

**Maximum flow rate for a complete low and medium pressure filter with a pressure drop Δp = 0.7 bar.**

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

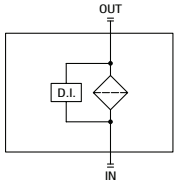
For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.

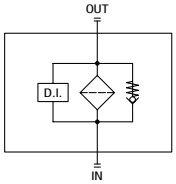
You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure.

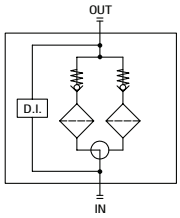
Please, contact our Sales Department for further additional information.

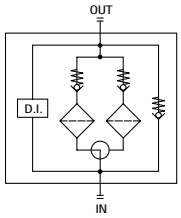
### Hydraulic symbols

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



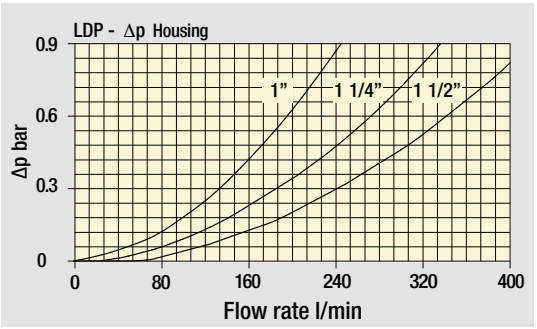



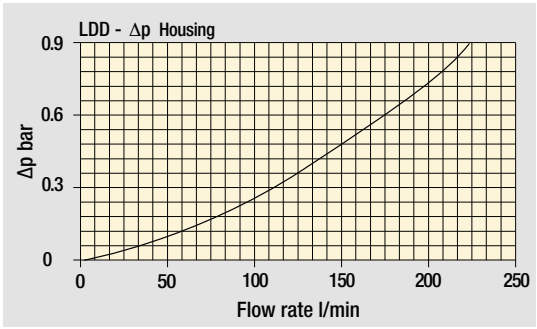



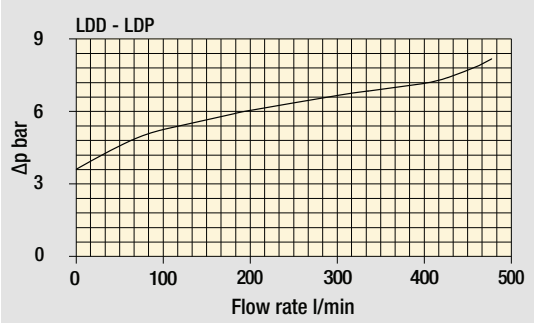

### Pressure drop

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.

# LDD Filter element according to DIN 24550

## Designation & Ordering code

### COMPLETE FILTER

Configuration example: LDD | 025 | B | A | C | 6 | A10 | N | P01

**Series**

**LDD**

**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** 3.5 bar

**Seals and treatments**

| | | Filtration rating Axx | Mxx | Pxx |
|---|---|---|---|---|
| **A** | NBR | • | • | • |
| **V** | FPM | • | • | • |
| **W** | NBR compatible with fluids HFA-HFB-HFC | • | • | |

**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
**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

**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
**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

**WA025** Water absorber inorganic microfiber 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**

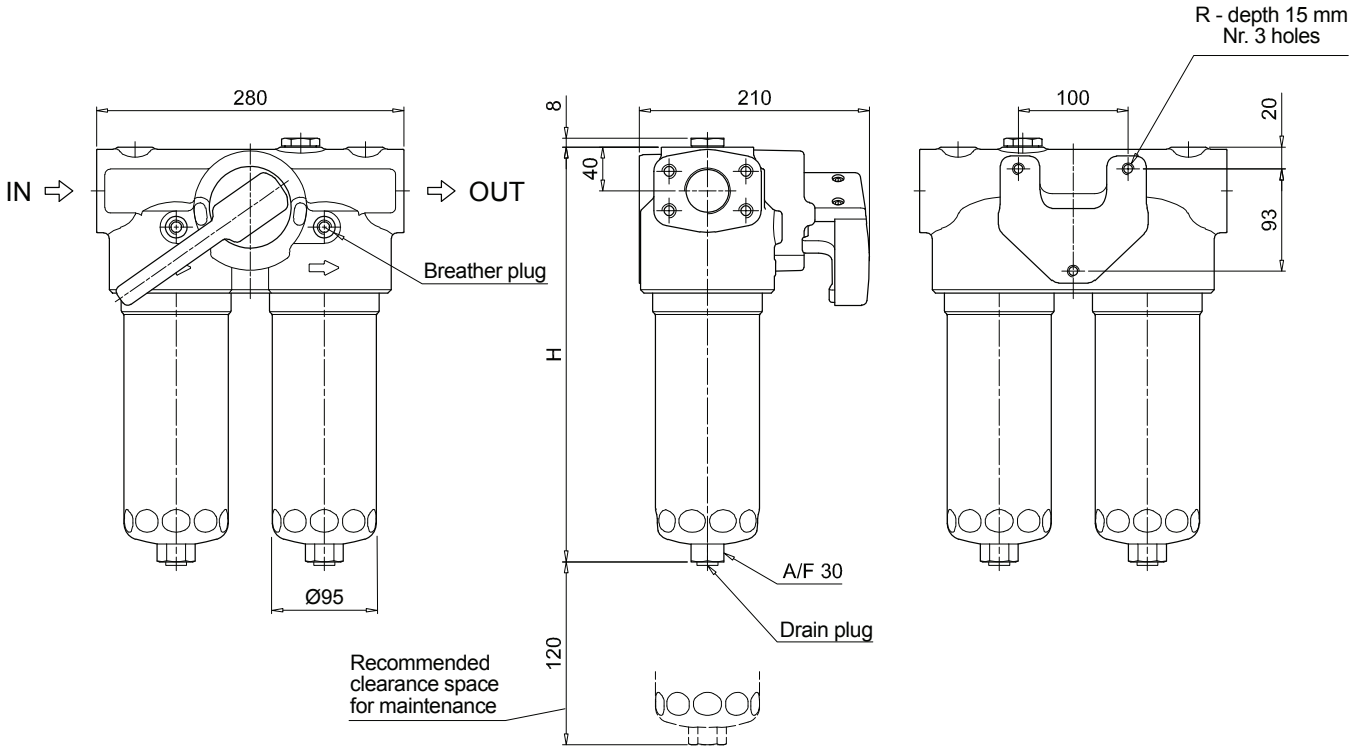
| | | page |
|---|---|---|
| **DEA** | Electrical differential indicator | 445 |
| **DEM** | Electrical differential indicator | 445-446 |
| **DLA** | Electrical / visual differential indicator | 446-447 |
| **DLE** | Electrical / visual differential indicator | 447 |
| **DTA** | Electronic differential indicator | 448 |
| **DVA** | Visual differential indicator | 448 |
| **DVM** | Visual differential indicator | 448 |

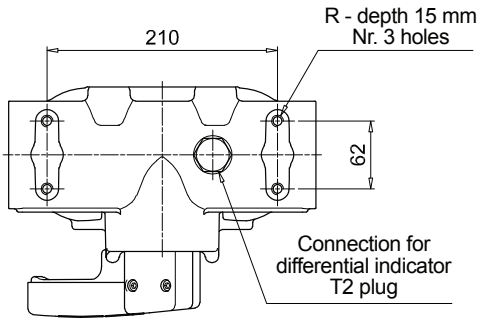
**Additional features**

| | | page |
|---|---|---|
| **T2** | Plug | 449 |

| 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 |

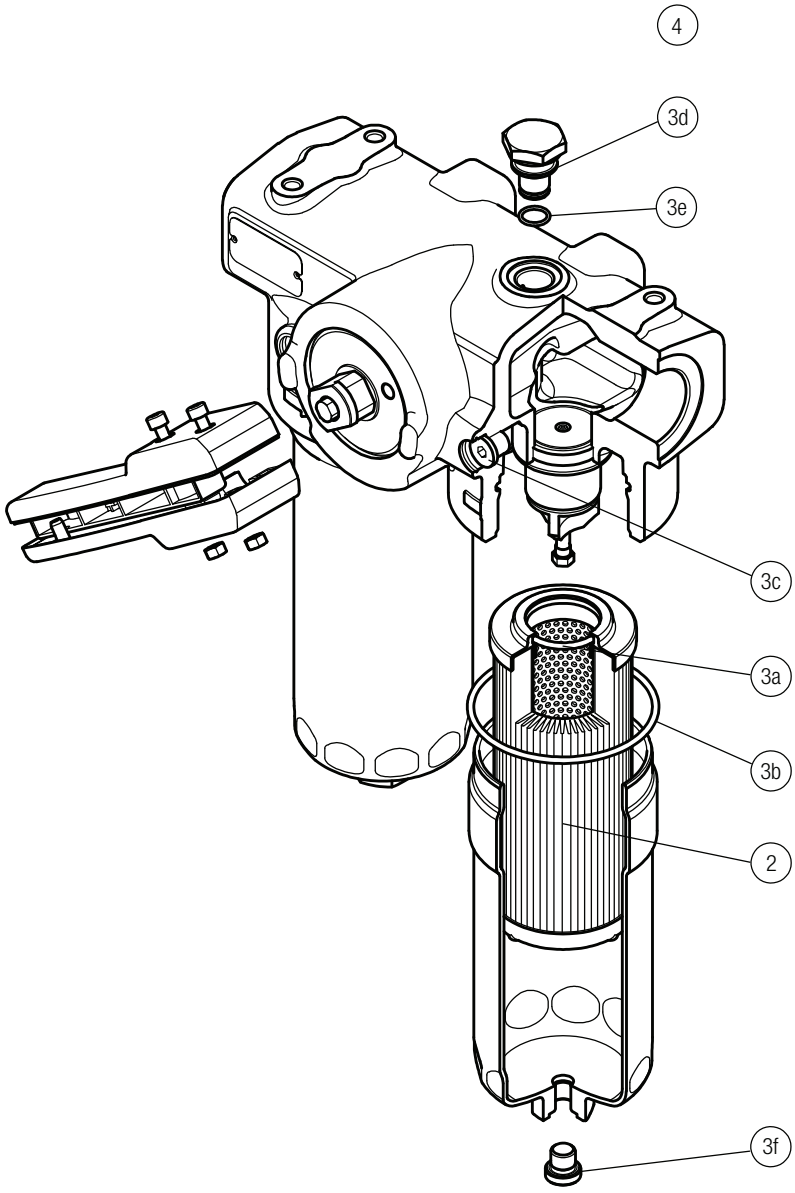


## Filter element according to DIN 24550

Order number for spare parts

**LDD**




| Item: | Q.ty: 1 pc. 2 | Q.ty: 1 pc. 3 (3a ÷ 3i) | | Q.ty: 2 pc. 4 | |
|---|---|---|---|---|---|
| Filter series | Filter element | Seal Kit code number NBR | Seal Kit code number FPM | Indicator connection plug NBR | Indicator connection plug FPM |
| **LDD** | See order table | 02050671 | 02050672 | T2H | T2V |