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 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 [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

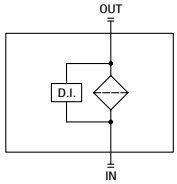
FILTER ASSEMBLY SIZING
Flow rates [l/min]

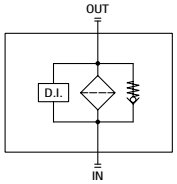
	Filter element design - N Series									
Filter series	A03	A06	A10	A16	A25	M25	M60	M90	P10	P25
LDP 016	83	91	178	198	222	350	353	358	295	309
LDP 025	124	134	227	245	265	357	358	358	319	330
LDP 040	173	191	274	284	311	359	360	361	332	337
LDD 016	68	73	120	130	140	189	190	192	169	174
LDD 025	93	98	142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

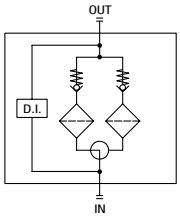
Maximum flow rate for a complete low and medium pressure filter with a pressure drop Δp = 0.7 bar.
The reference fluid has a kinematic viscosity of 30 mm^2/s (cSt) and a density of 0.86 kg/dm^3.
For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.
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.

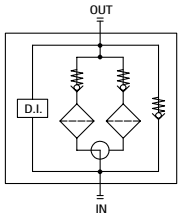
Hydraulic symbols

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



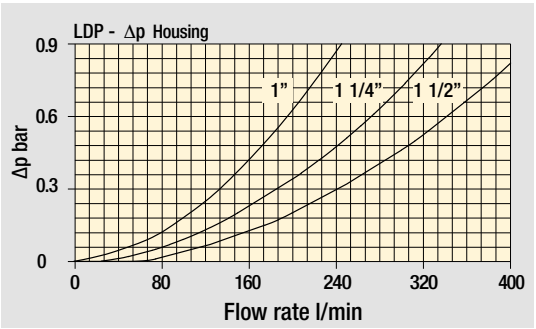


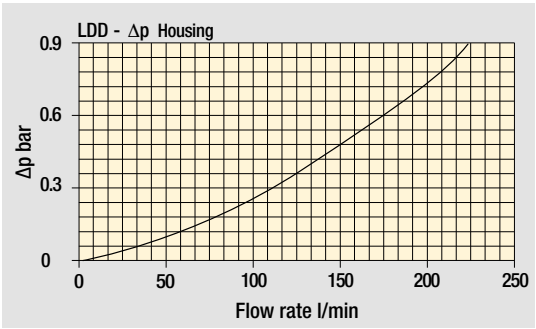




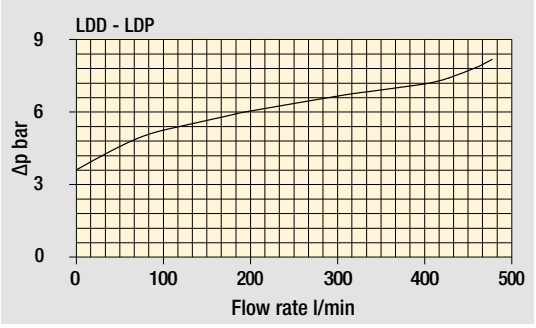
Pressure drop

Filter housings Δp pressure drop





Bypass valve pressure drop



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

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”
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

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 and treatments
A NBR
V FPM

Element Δp
N 20 bar

Execution
P01 MP Filtri standard
Pxx Customized

CLOGGING INDICATORS

See page 686

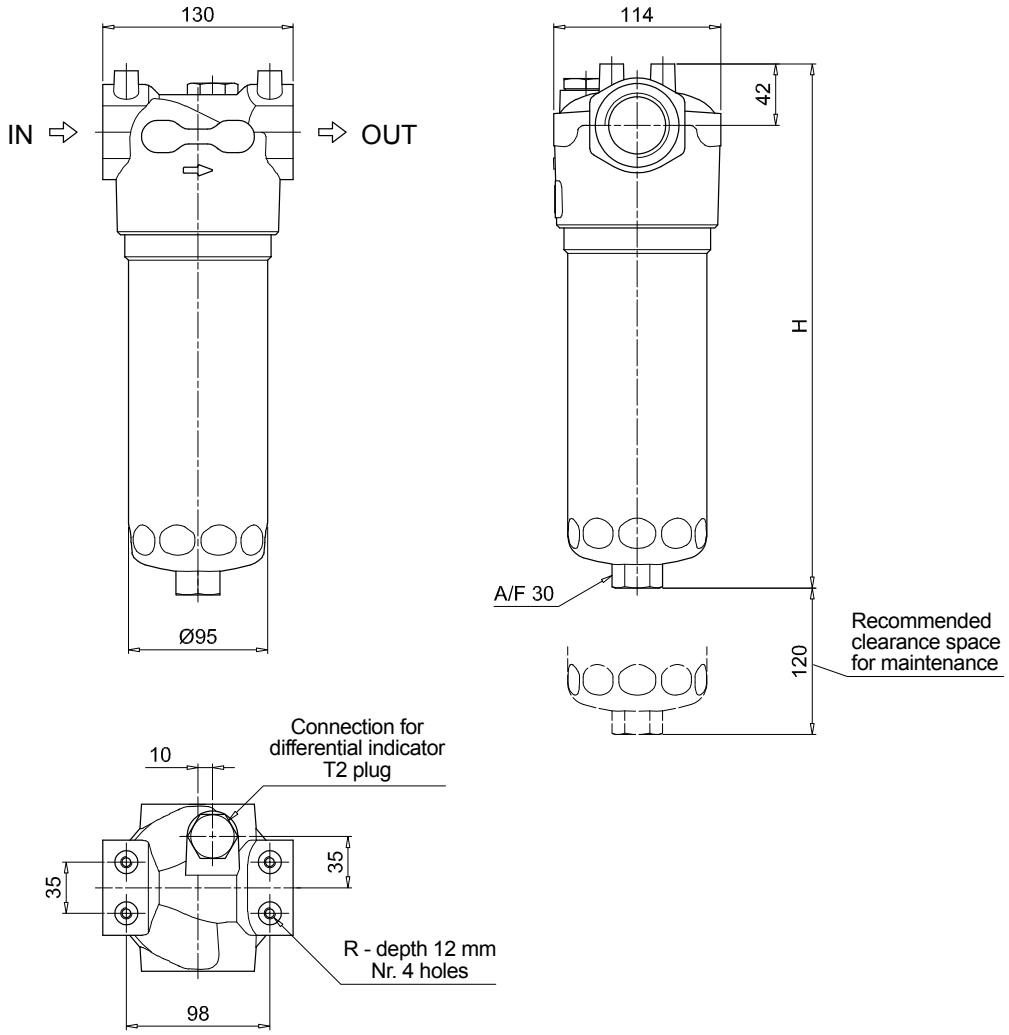
DEA Electrical differential indicator
DEM Electrical differential indicator
DLA Electrical / visual differential indicator
DLE Electrical / visual differential indicator
DTA Electronic differential indicator
DVA Visual differential indicator
DVM Visual differential indicator

PLUGS

See page 706

T2 Differential indicator plug

Dimensions



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

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 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
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 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

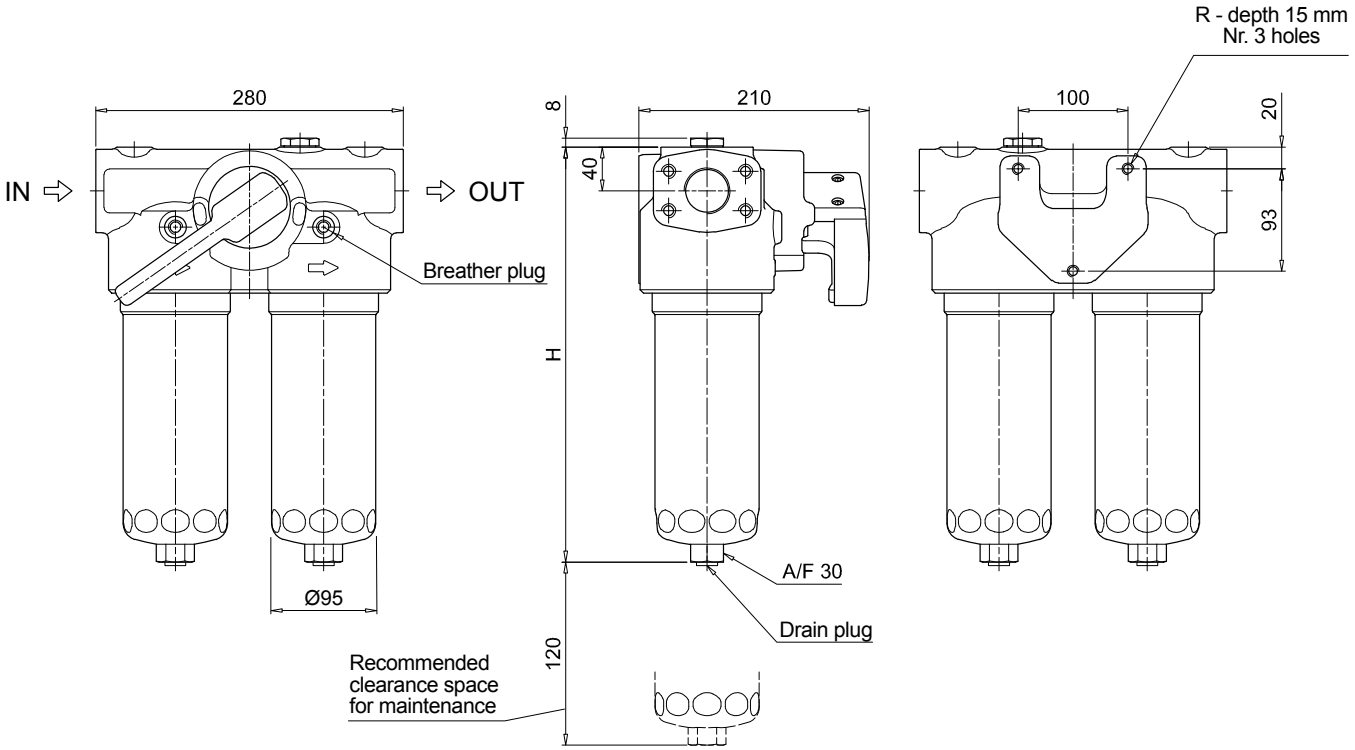
PLUGS

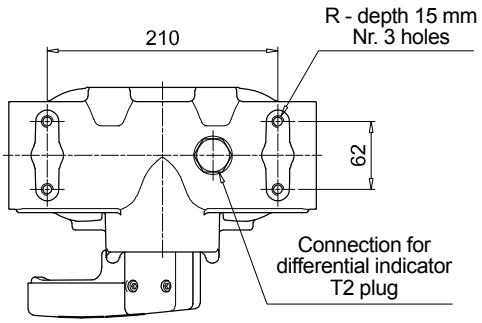
See page 706

T2 Differential indicator plug

LDD	
Filter size	**H [mm]**
016	293
025	383
040	533

Connections	**R**
C	M10
F - I	3/8" UNC
L	M10
M - N	3/8" UNC

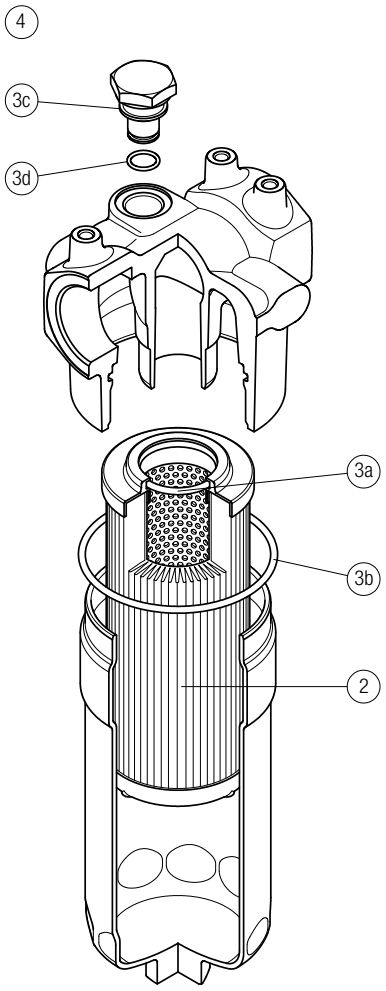




Filter element according to DIN 24550

Order number for spare parts

LDP

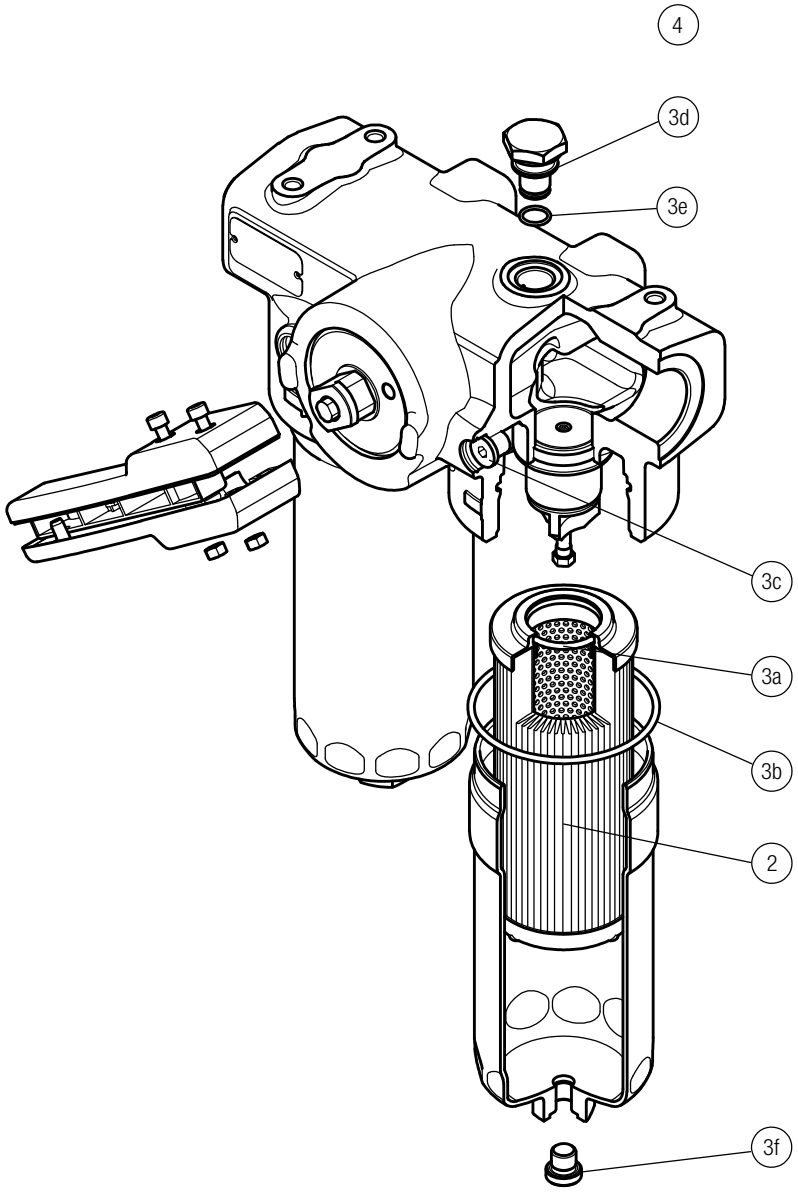


Item:	Q.ty: 1 pc. 2	Q.ty: 1 pc. 3 (3a ÷ 3d)		Q.ty: 1 pc. 4	
Filter series	Filter element	Seal Kit code number NBR	Seal Kit code number FPM	Indicator connection plug NBR	Indicator connection plug FPM
LDP	See order table	02050435	02050436	T2H	T2V

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**	**FPM**	**Indicator connection plug NBR**	**FPM**
LDD	See order table	02050671	02050672	T2H	T2V