

## When you need a High Quality Opening

### Access Tank Cover - Oval Type LKD

#### Application

The oval Access Tank Cover LKD manhole covers are used on tanks or containers where a closeable means of access to the interior of the vessel is required.

The particular cover has been designed taking into account today's demands for manhole covers which are suitable for CIP cleaning processes and where access to the tank is only necessary for occasional inspection.

#### Working principle

Open the cover by loosening the handle. For inspection purposes the cover can then be turned into the tank. If it is necessary to physically enter the tank, the cover can be removed at the double hinge or swung out of the tank, depending on the model. The seal is hygienically positioned and is not affected by positive or negative pressure in the tank.



Upper. LKD 320 x 440 with hinge and LKD 510 x 410 manhole cover.  
Lower. LKD 450 x 350 with angle-shaped frame and flat frame.

#### Materials

Type	LKD 320x440	LKD 510x410	LKD 450x350
Steel parts	1.4301( 304) or 1.4404 (316L) Cover and frame are supplied with inspection certificat 3.1.B according EN10204	1.4301 (304) or 1.4404 (316L) Cover and casing are supplied with inspection certificate 3.1.B according EN10204	Cover and frame: 1.4301 (304) or 1.4571 (316Ti) supplied with inspection certificate 3.1.B according EN10204. Other steel parts: 1.4301 (304)
Plastic parts	Nylon	Nylon	
Seal	Nitrile (NBR) in a quality approved by the food industry	Nitrile (NBR) in a quality approved by the food industry	Nitrile (NBR)
Finish	Semi bright.	Semi-bright	Semi-bright

#### Technical data

Type	LKD 320x440	LKD 510x410*	LKD 450x350	LKD-P PED approved
Max. static pressure	150 kPa (1.5 bar)	250 kPa (2.5 bar)	200 kPa (2 bar)	300 kPa (3 bar)
Max. positive working pressure	0 kPa (0 bar)	0 kPa (0 bar)	0 kPa (0 bar)	up to 500 kPa (5 bar)
Max. negative working pressure	50 kPa (0.5 bar)	50 kPa (0.5 bar)	50 kPa (0.5 bar)	50 kPa (0.5 bar)
Test pressure	225 kPa (2.25 bar)	375 kPa (3.75 bar)	300 kPa (3 bar)	1.3xmax. working pressure
Test temperature			20°C	20°C
Temperature range	-20°C to +90°C (NBR)	-20°C to +90°C (NBR)	-20°C to +100°C	-20°C to +100°C

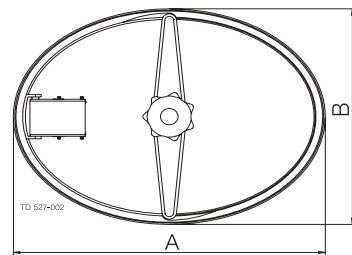
\* The above values apply for non-pressure manhole cover, type LKD and LKDI.

Dimensions (mm)

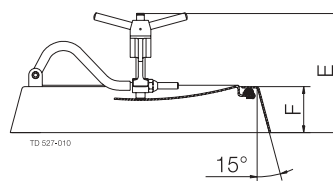
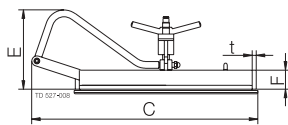
Type	LKD 320x440	LKD 510x410	LKDI 510x410	LKTD 510x410	LKTDI 510x410	LKD flat 450x350	LKD angled 450x350
A	460	534	534	534	534	446	446
B	340	434	434	434	434	346	346
C		665	665	665	665	506	517
D						406	417
E		230	260	230	260	160	220
E							250
E							290
F	48	56	98	56	98		70
F							100
F							140
t	10	12	12	12	12	10	3-4
Sheet thickness of cover		2.5	2.5	10	10	3-4	3-4
Weight (kg)	8	19	24	31	34		

Weights (kg) LKD 450x350

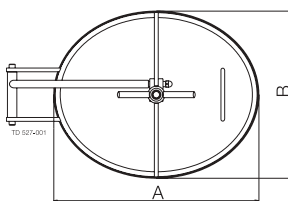
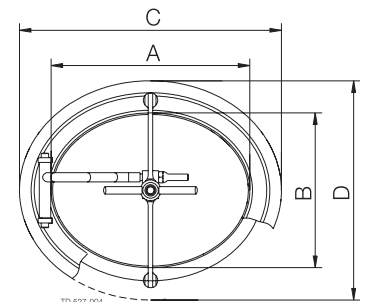
Angle shaped frame	70/3	3.5
Angle shaped frame	70/4	4.6
Angle shaped frame	100/3	3.8
Angle shaped frame	100/4	5.1
Angle shaped frame	140/3	6.0
Angle shaped frame	140/4	8.0
Flat frame	10 x 30	3.0
Cover	3	3.0
Cover	4	4.0
Handle + clamp arm		2.4
Hinge		1.8



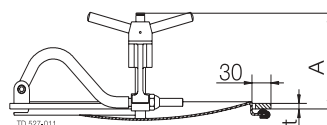
LKD 320x440



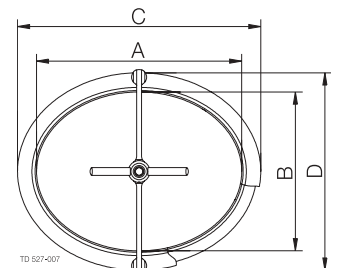
LKD 450x350 angledshaped frame



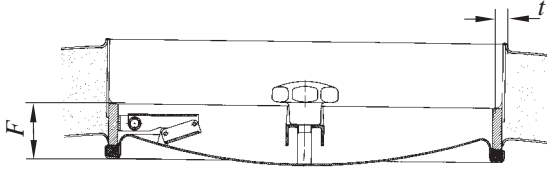
LKD 510x410



LKD 450x350 flat frame



Installation LKD 320x440



Welding of manhole cover LKD 320x440 into insulated tank.

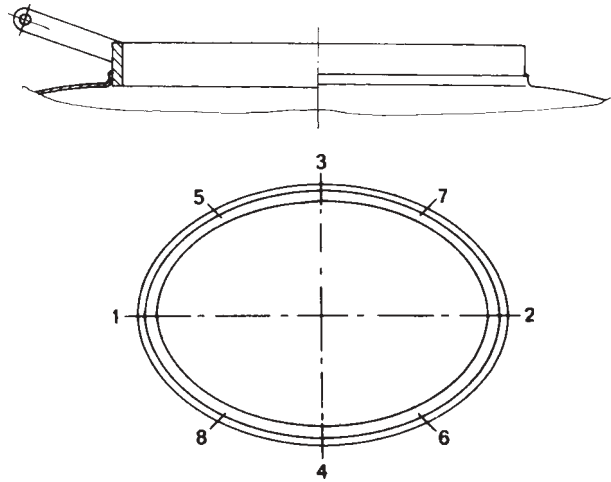
Installation LKD 510x410

In order to obtain a perfect seal and a good function of our manhole covers, it is essential that the welding of the casing is carried out carefully and correctly. If the cover is fitted on a vertical tank wall, the hinge of the casing must always be placed on the lefthand side. For thin-gauged containers, ie. sheet thickness less than 2.5 mm, welding is easier if the hole is marked in such a way that a 10 mm edge can be burred up as sharply as possible.

When the hole is cut and the edge burred up, if applicable, the casing is inserted, and tack-welding is now carried on at points placed opposite each other all the way round, in the sequence shown in fig. 4.

The casing may now be fully welded on both sides. A control should be made by removing the rubber seal, and cover and casing should be assembled loosely to ensure that they fully contact each other over the whole surface.

Any stresses are removed by hammering the sheet around the casing.

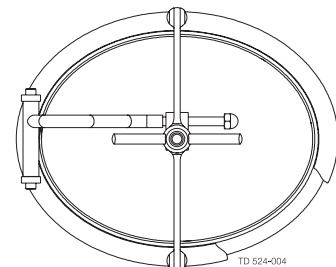
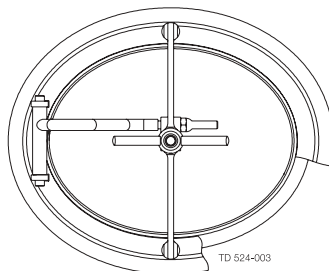
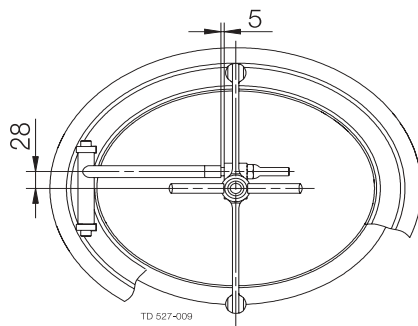


Installation of LKD 510x410

Installation LKD 450x350

1. Remove seal form cover.
2. Fit cover with hinge in frame.  
Please note the dimensions shown.

PED approved version, LKD-P



3. Weld hinge to frame.  
Left-hand hinge to the left and right-hand hinge to the right.

Frame thickness (mm)	Cover (mm)	Max. working pressure (bar) at max. working temperature 100°C	Max. negative working pressure (bar)
3	3	3 bar	0.5
** 4	4	4 bar	0.5
10	3	3 bar	0.5
**10	4	5 bar	0.5

\*\* On request

**Options LKD 320x440**

A) Seal of EPDM rubber.

**Ordering**

Please state the following:

- Cover type.
- Steel part material: 1.4301 (304) or 1.4404 (316L).
- Seal ring material type: Nitrile or EPDM.
- Frame height