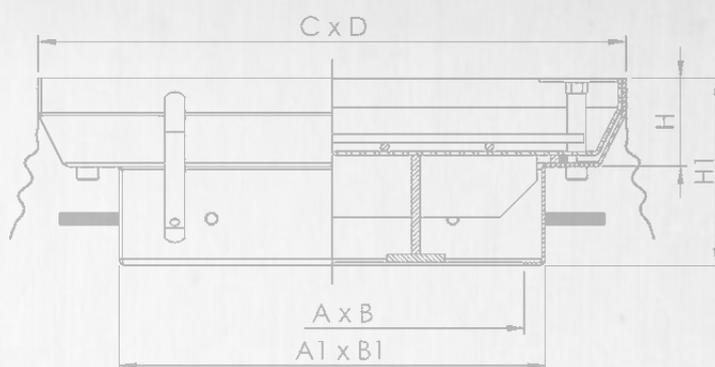
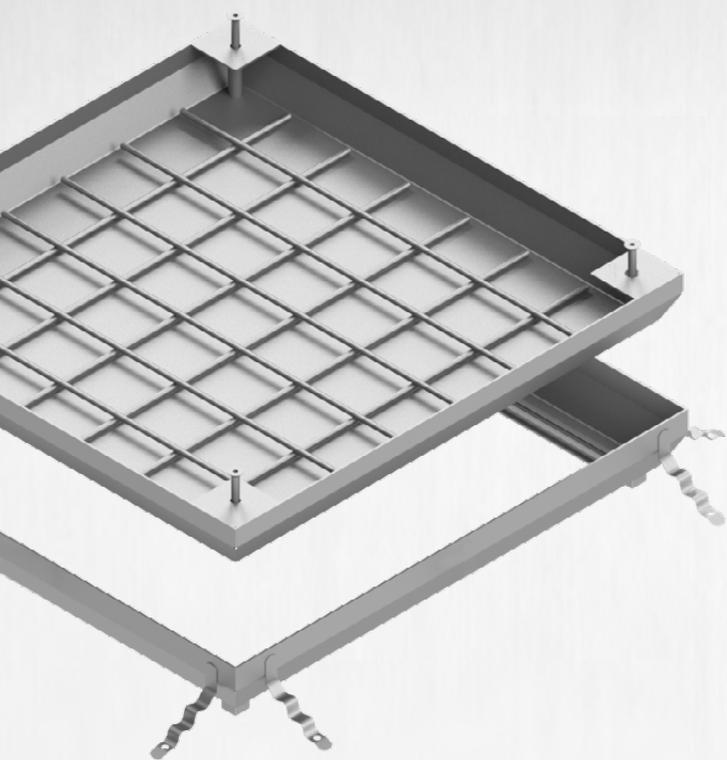


Manhole Covers

Assembly instruction



This instruction is a basic compendium of knowledge about the assembly of ATT manhole covers.

In case of question or doubts - contact us. All contact data can be found on our webpage.

www.attinox.com



Instruction of assembly and use of the manhole covers



- Read the instruction carefully before the start of assembly.



- Assembly should be carried out by qualified personnel.



- Use proper personal protection equipment during the installation.



- Follow the local safety rules at the installation place.



- Use tools designed for stainless steel.

Content

1. Good assembly practice
2. Technical specification of the manhole cover
3. Installation of the manhole cover
 - a) Standard gas tight manhole cover
 - b) Manhole cover with gas lifters
4. Opening and closing of the cover
 - a) Manhole cover with gas lifters
 - b) Standard gas tight manhole cover
5. Maintenance and use of the hatch

Attention

This document is a set of guidelines useful for installation companies and users of the gastight hatches produced by ATT. The guidelines are the general information and don't release the installation company or the user of the hatch from observing the local assembly rules at the installation place and the rules of using the cover. The installer and user of the manhole cover remain the only responsible for their work and observing of safety rules during the use and the execution of assembly works.

1 Good assembly practice

- Follow the safety rules at the place of assembly.
- Use the proper personal protection equipment.
- Use the proper tools.
- Read the instruction carefully before the installation.
- Check dimension of the frame and cover.
- Check the levelling of the hatch.
- Let enough time for concrete to set before pedestrians and vehicle traffic is open.

2 Technical specification of the manhole cover

Revision hatches allow the access to under floor installations. They are available in various types and dimensions. They can be used for both external and internal applications. The hatches are widely used at industrial facilities and public areas e.g.: shops, exhibition halls, restaurants, workshops, warehouses.

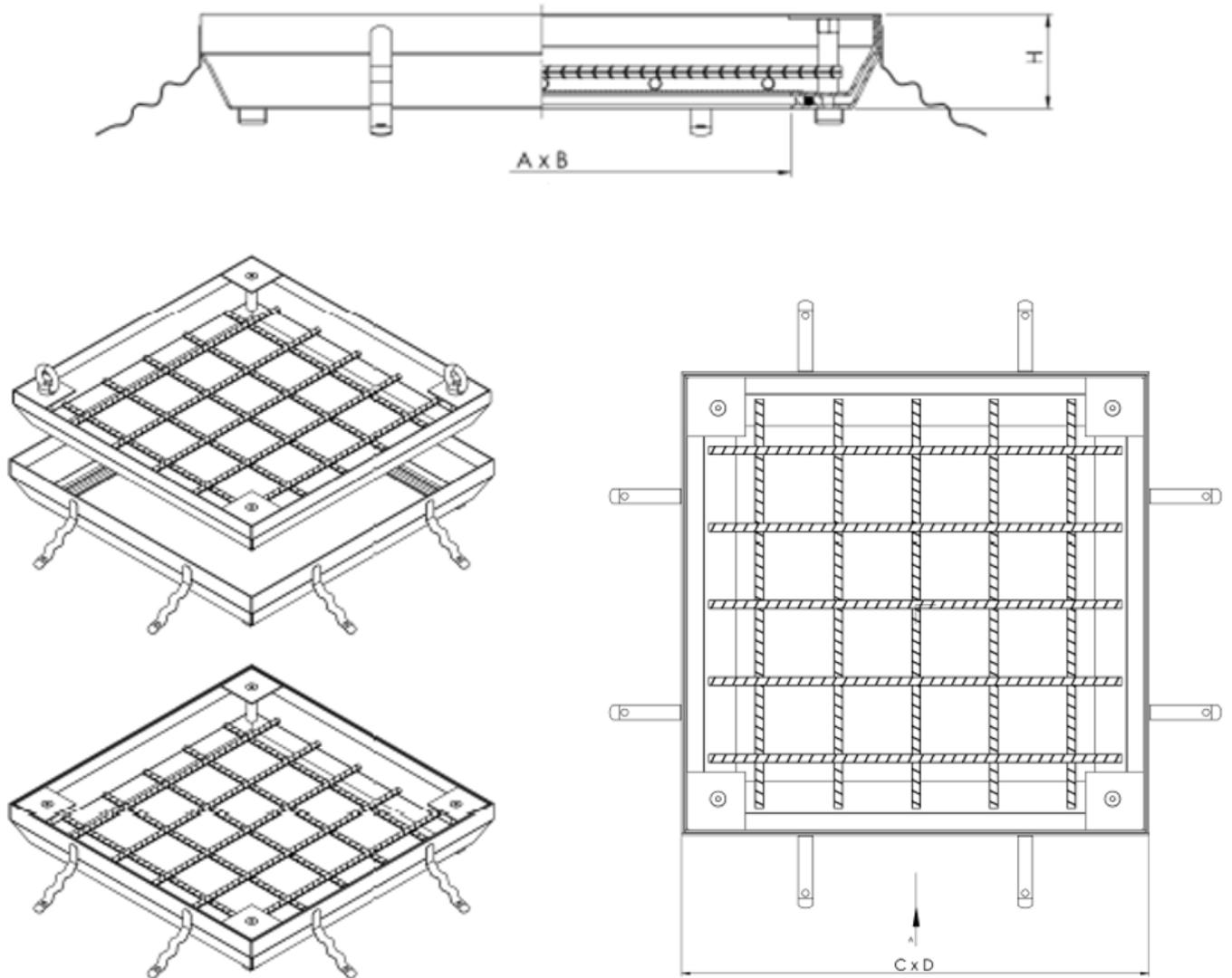
Concrete of B30 and higher class is used for filling up the cover. The upper part can also be filled with pavement bricks, epoxy, flooring tiles, smooth or checker plate of stainless steel.

The covers are made of AISI304 or AISI316L stainless steel, that allows to use them at places with the highest hygienic requirements.

Standard gastight manhole covers consist of the cover, frame, O-ring gasket, screw fixing and reinforcement mesh made of B500SP steel.

Gastight manhole covers with gas lifters are additionally equipped with hinges and gas lifters, which help while opening and closing of the hatch.

1.1 Gastight manhole cover cross section.



Type	A x B [mm]	C x D [mm]	H [mm]
K3x3	300x300	460x460	85
K4x4	400x400	560x560	85
K5x5	500x500	660x660	85
K6x6	600x600	760x760	85
K7x7	700x700	880x880	100
K8x8	800x800	980x980	100
K9x9	900x900	1080x1080	100
K10x10	1000x1000	1180x1180	100

Each manhole cover is checked by ATT quality department for dimensions, fitting of each components and completeness.

3 Installation of the manhole cover

a) Standard gastight cover

Step 1.

Connect the frame and cover together with the available screws to avoid deformation of the frame, which can damage the cover.

Step 2.

Place the distance spacers between the edges of the frame and cover.

Step 3.

Secure the upper edge and area of screw fixings with tape.

Step 4.

Place the manhole cover at the installation area on the concrete mortar layer.

Step 5.

Level the hatch.

Step 6.

Apply mortar regularly in a way, which guarantees the proper fixing of the frame.

Step 7.

Fill the cover with B30 or higher class concrete.

b) Gastight manhole cover with gas lifters

Step 1.

Screw the frame and cover together with the available screws.

Step 2.

Place the hatch at the installation place on the mortar layer.

Step 3.

Level the hatch.

Step 4.

Open the hatch and then - if necessary - make a formwork inside.

Step 5.

Close the hatch. Connect the frame and cover with the screws in order to avoid deformation of the frame, which can damage the cover.

Step 6.

Place the distance spacers between the edges of the frame and cover. Then secure the upper edge and area of screw fixings with tape.

Step 7.

Apply mortar regularly in a way, which guarantees the proper fixing of the frame (it's advisable to carry out the concrete vibration).

Step 8.

Fill the cover with B30 or higher class concrete.

Step 9.

Open the hatch in a secure way.

Step 10.

Embed the hatch. Remove the formwork (if executed).

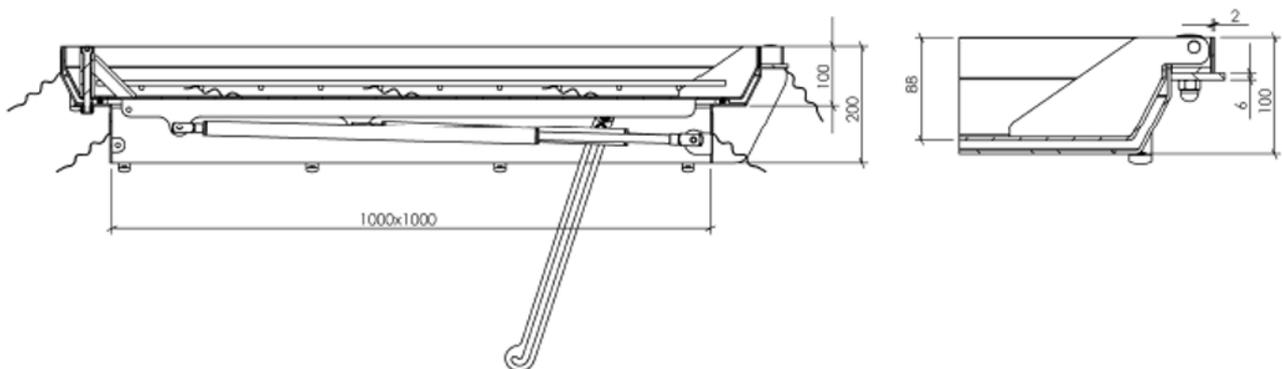
Step 11.

Install gas lifters.

CAUTION: Install the lifter body onto the cover and the piston onto the frame.

4 Opening and closing of the cover

a) Manhole cover with gas lifters



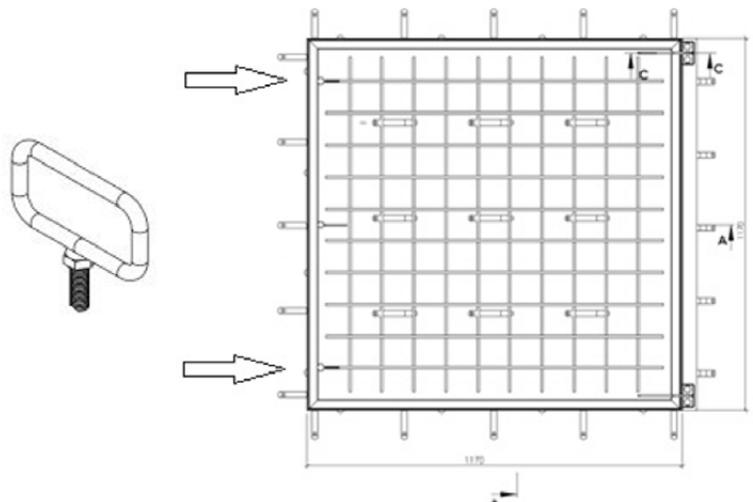
1.2 Cross section of the gastight cover with gas lifters and hinges.

Step 1.

Remove the fixing screws with inbus wrench (not incl.).

Step 2.

Screw in the handle in the dedicated places (see picture).



Step 3.

Pull the handle and lift the cover. The opening process is supported by the gas lifters. After the full opening of the cover, please make sure that the security system has blocked the hatch in a secure position.

Step 4.

Release the blockade of security system and close the hatch.

CAUTION: remove all the dirt and rubbish from frame and cover before closing the hatch.

Check the gaskets.

Step 5.

Remove the handles and install the fixing screws.

b) Standard gastight manhole covers**Step 1.**

Remove the fixing screws with inbus wrench (not incl.).

Step 2.

Screw in the handles on the opposite corners of the hatch at the designated places.

Step 3.

Lift the cover.

CAUTION: By larger dimensions of the cover (weight > 20kg) carry out the operation with ATT hand lifting tool (see next page) or other tool available at installation place.

Step 4.

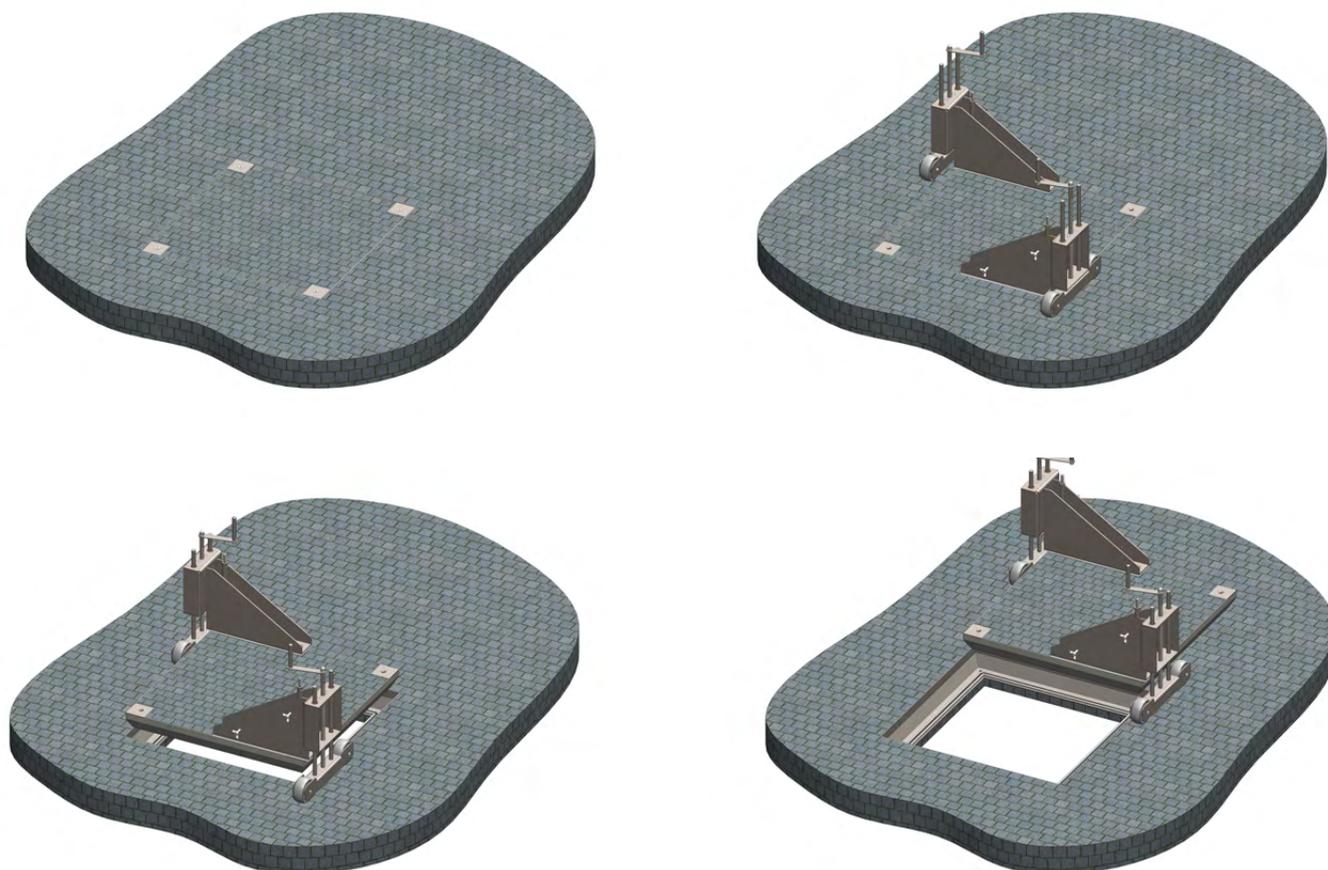
Close the cover – remove the handles and fix the screws.

CAUTION: remove all the dirt and rubbish from frame and cover before closing the hatch. Check the gaskets.

The installer and user of the manhole cover remain the only responsible for their work and observing of safety rules during the use and the execution of assembly works.

In case of heavier covers it's recommended to use dedicated ATT lifting tool to avoid injuries or damage of the manhole cover.

ATT hand lifting tool enables the quick and secure embedding of the hatch in the dedicated place.



5 Maintenance and use of the hatch

Avoid pollutions (dust, sand) of leading threads and fixing screws. Threads and hinges must be secured with copper lubricant.

Open the hatch and clean the frame, gasket and cover with water at least twice a year (if the manhole cover is installed in demanding environment conditions, it is advised to maintain the product more frequently).

Secure the screws and gasket with dedicated lubricants.