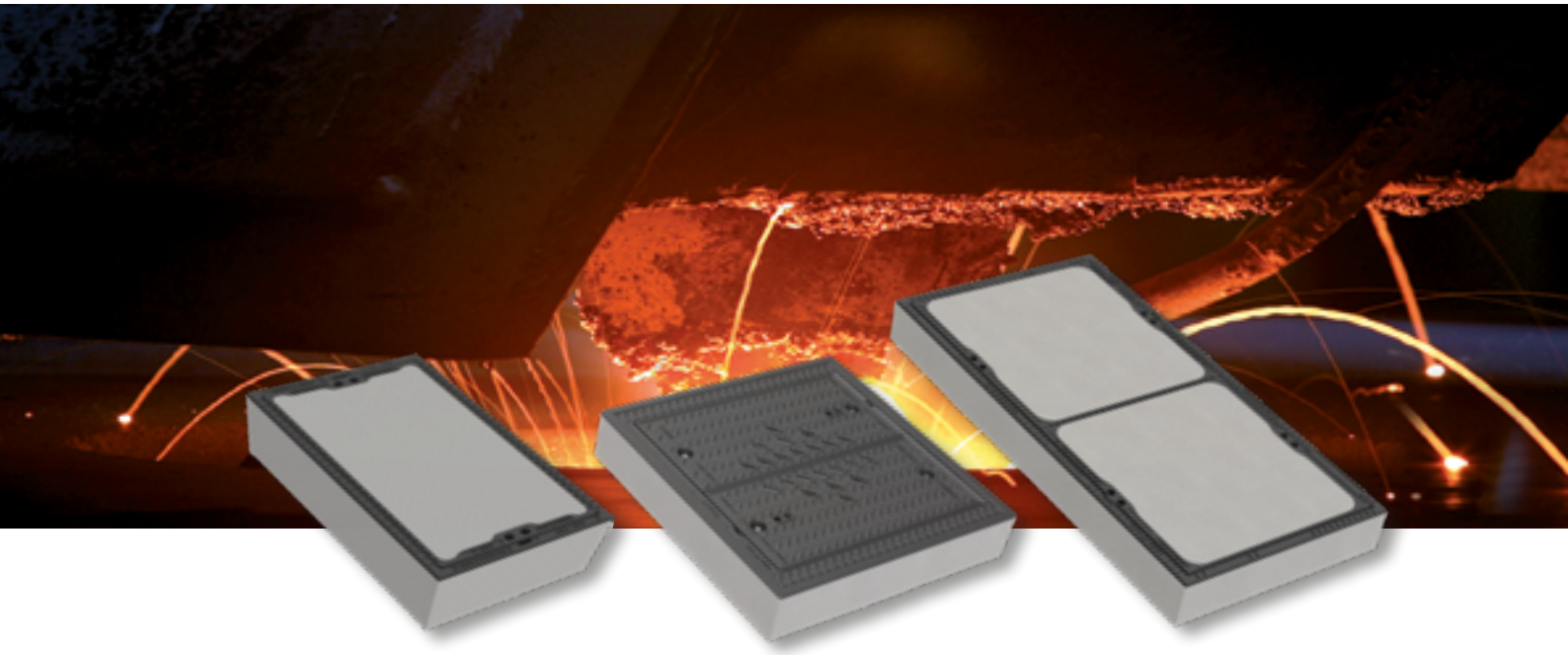
MEIERGUSS



Cable shaft covers
400 x 650 mm to 700 x 1,440 mm

Operating, installation and maintenance instructions

Contents

Please read the entire document before commencing work.
Please hand these operating, installation and maintenance instructions over to the end user.

General information

General information

Cable shaft covers are used for covering shafts in vehicular and pedestrian areas, for example manholes. They are subject to the same loads from traffic as the vehicular and pedestrian areas themselves. Cable shaft covers are deemed as not causing any obstruction or danger to traffic or pedestrians if they comply with the requirements/design features of DIN EN 124.

Technical rules and standards

Observe and adhere to the following rules and engineering regulations in the currently valid version:

■ **RStO**	German guidelines for the standardisation of the superstructure in vehicular and pedestrian areas
■ **VOB part C**	German general technical specifications in construction contracts
■ **ATV DIN 18317**	Road construction – Asphalt surfacings
■ **DIN EN 124 part 1**	Gully tops and manhole tops for vehicular and pedestrian areas – Definitions, classifications, general principles of design, performance requirements and test methods
■ **ATV DIN 18299**	German general rules applying to all types of construction work
■ **ZTV Asphalt-StB**	German additional technical terms of contract and guidelines for the construction of road surfacing made of asphalt
■ **ZTV E-StB**	Supplementary technical conditions of contract and guidelines for earthworks in road construction
■ **ZTV Ew-StB**	Supplementary technical conditions of contract and guidelines for the construction of drainage systems in road construction
■ **ZTV Fug-StB**	Supplementary technical conditions of contract and guidelines for joints in vehicular and pedestrian areas

The planner or company executing the construction work is responsible for the planning of the shaft construction and execution of the construction work itself.

Prior to installation on site, check all construction components and accessories for damage and completeness. Do not install damaged components. Use a suitable lifting tool for loading and unloading. Attach the lifting tool at the frame.

Operating instructions

Please refer to the individual operating instructions to ensure a technically correct function. Perform additional maintenance depending on the amount of traffic and loads.

Carry out the following activities every time the cable shaft cover is opened or closed:

Inspections	Recommended measure
Inspect the general condition of the entire cover.	Replace defective or loose covers.
Inspect the cushioning inserts (if applicable).	Loose, defective or worn elements must be replaced with new ones.
Inspect the functional components such as hinges, screw fasteners, bolts, split pins, locking springs.	Clean the functional components. Replace loose, defective or worn elements. Apply grease to bolts or screw fasteners.
Inspect the traverse bar.	Cleaning the traverse bar and the lid/frame support surfaces. Always apply grease to the sealing surfaces of the traverse bar.
Inspect the support surfaces.	Replace any defective or worn components. Clean and grease moving parts.
In the case of versions with assisted opening with gas springs, check the condition of the mechanics and the gas springs.	Replace any defective or worn components. Clean and grease moving parts.
In the case of surface water-tight/back-pressure proofdesigns, inspect the gaskets and o-rings if applicable.	Replace defective or worn elements. A respective set can be purchased from construction hardware dealers.
Inspection of the integrated reception socket MEISTEP®	Clean the integrated reception socket MEISTEP®, in particular, the bayonet fitting into which the handhold bar engages. If the integrated reception socket is damaged, it is necessary to replace the frame.

Cable shaft covers with loosely inserted lid

Loose/loosened lids are lifted out using a suitable, commercially available shaft cover hook. Please use the holes provided for this purpose.

In the case of versions with the access aid MEISTEP®, you can now insert the provided handhold bar into the integrated reception socket. Ensure that the small pin on the bar engages. To remove the handhold bar, lift it up slightly and unscrew it counter-clockwise.

To close the lid, place it back into the frame. The lid is normally provided with anti-rotation devices that are inserted loosely into the holes of the frame. Ensure that the lid is centred.

Operating instructions

Cable shaft covers with lids and locking devices

(Lid and frame locked by screw fasteners)

To open, turn the bolts counter-clockwise until the screw fastener makes contact with the lid.

Loose/loosened lids are lifted out using a suitable, commercially available shaft cover hook. Please use the holes provided for this purpose.

In the case of versions with the access aid MEISTEP®, you can now insert the provided handhold bar into the integrated reception socket. Ensure that the small pin on the bar engages. To remove the handhold bar, lift it up slightly and unscrew it counter-clockwise.

Before closing, turn the bolts counter-clockwise until the screw fastener makes contact with the lid and reaches the end of the thread (analogue to the opening process). To close the lid, place it back into the frame. The lid is normally provided with anti-rotation devices that are inserted loosely into the holes of the frame. Ensure that the lid is centred. Tighten the bolts by turning clockwise in a cross pattern with a tightening torque of 100 Nm. Products with special locking washers are to be tightened for M16 bolts with a tightening torque of 125 Nm and for M20 bolts with 150 Nm.

Cable shaft covers with lids and screw connections

(Lid and frame directly screwed together)

To open, unscrew the bolts counter-clockwise until they can be removed from the lid. Remove connection elements (bolts, washers if applicable, o-rings etc.) and keep them in a safe place. The lid is now unfastened.

Loose/loosened lids are lifted out using a suitable, commercially available shaft cover hook. Please use the holes provided for this purpose.

In the case of versions with the access aid MEISTEP®, you can now insert the provided handhold bar into the integrated reception socket. Ensure that the small pin on the bar engages. To remove the handhold bar, lift it up slightly and unscrew it counter-clockwise.

To close the lid, place it back into the frame. The lid is normally provided with anti-rotation devices that are inserted loosely into the holes of the frame. Ensure that the lid is centred.

In the case of versions with traverse bar, this can be removed if necessary.

Refit traverse bar (if applicable) and connection elements (bolts, washers if applicable, o-rings etc.). Tighten the bolts by turning clockwise in a cross pattern with a tightening torque of 100 Nm. Products with special locking washers are to be tightened for M16 bolts with a tightening torque of 125 Nm and for M20 bolts with 150 Nm.

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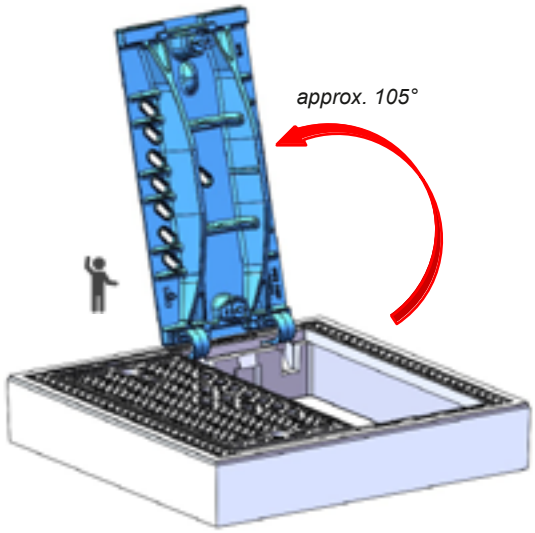
Operating instructions

Cable shaft covers with hinged lids | MEITOP® series

To open, unlock the lid at the screw fasteners, and turn the bolts counter-clockwise until the screw fastener makes contact with the lid. Then open the lid as far as the inspection position (approx. 105°). During opening, the lid is guided by a guide plate into a secured position so that it cannot fall shut.

Inspection position

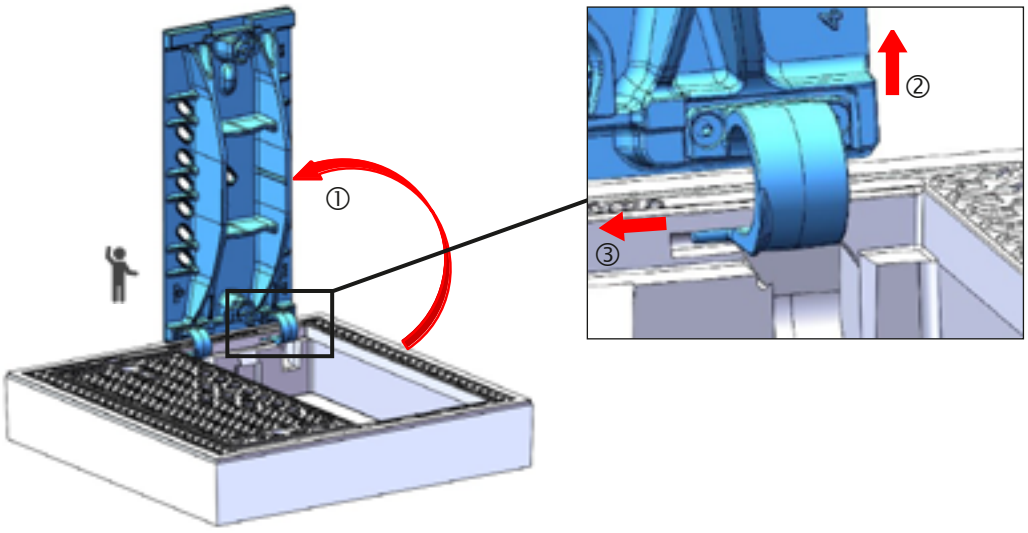
Operator position



The **lid is removed** from the side of the lid facing away from the shaft opening. Move the lid into a vertical position ①, lift slightly ② and push to the right ③.

Removing the lid – steps 1 to 3

Operator position

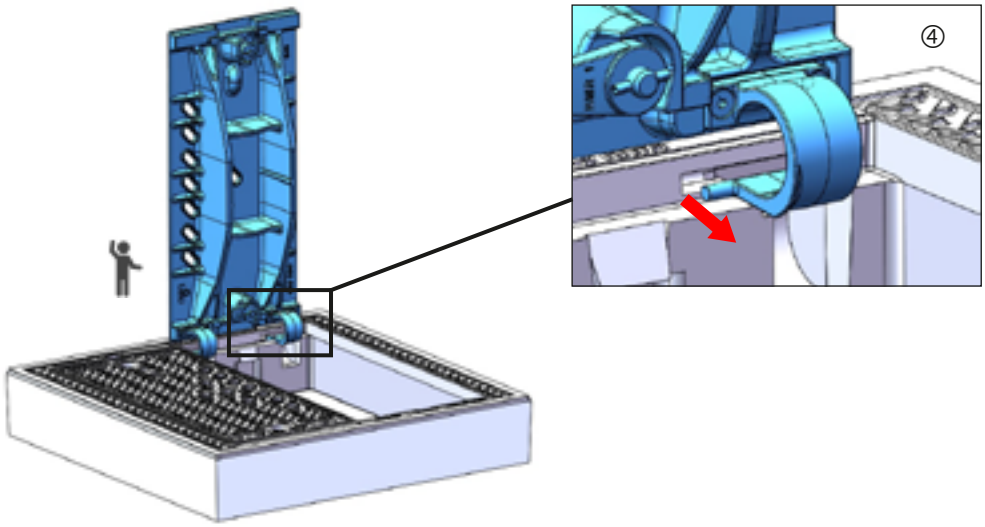


Operating instructions

Then push the lid approx. 30 mm towards the shaft opening and remove ④.

Removing the lid – step 4

Operator position



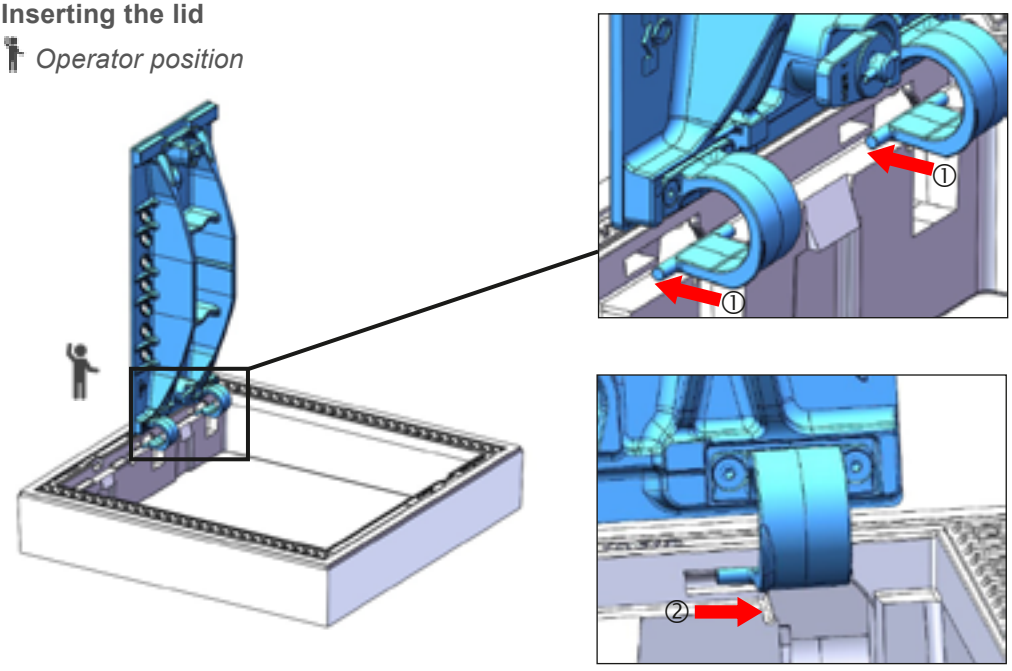
Insert the lid from the side of the lid facing away from the shaft opening.

NOTE: The lids can be inserted in any order.

Insert the lid in a vertical position approx. 30 mm deep into the hinge opening ① and push it to the left as far as the stop ② and into the inspection position (approx. 105°).

Inserting the lid

Operator position

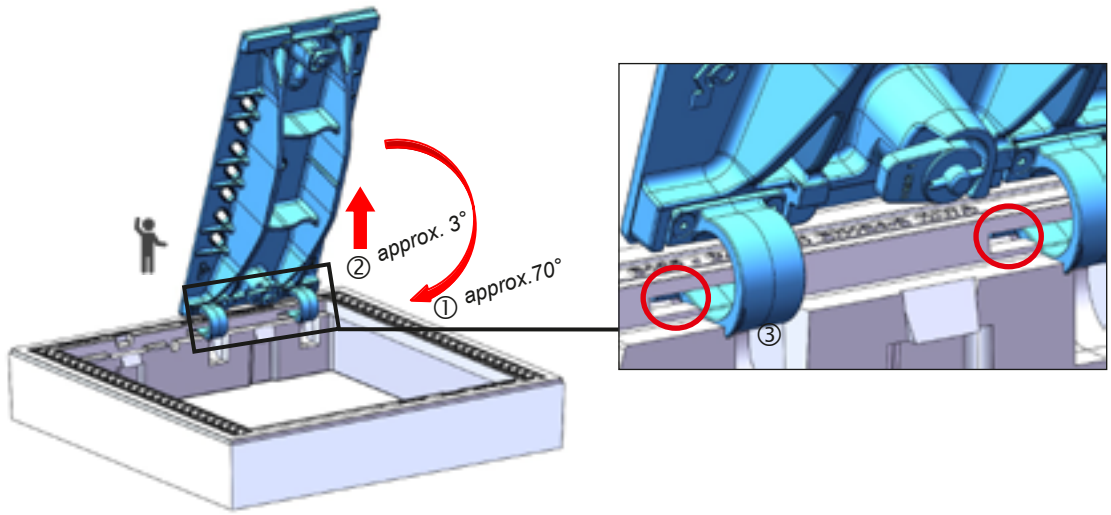


Operating instructions

The lid is closed from the side facing away from the shaft opening. Before closing, turn the bolts counter-clockwise until the screw fastener makes contact with the lid and reaches the end of the thread (analogue to the opening process).
For closing, move the lid from the inspection position (approx. 105°) into the safety position (approx. 70°) ①. Lift the lid by approx. 3° to overcome the safety position ② and push it to the left ③.

Closing the lid – step 1 to 3

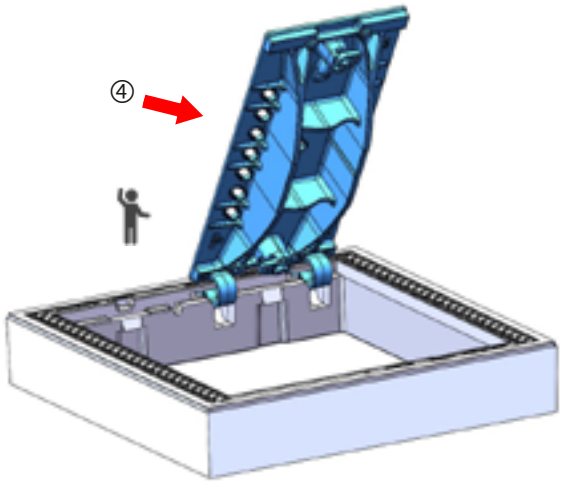
Operator position



Subsequently close the lid in a controlled way ④. After closing, ensure that the lid lies flush inside the frame.

Closing the lid – step 4

Operator position



Securing of the lid

Secure the lid by using the screw fasteners. For this turn the bolts to the right until the screw fastener brace the lid against the frame.

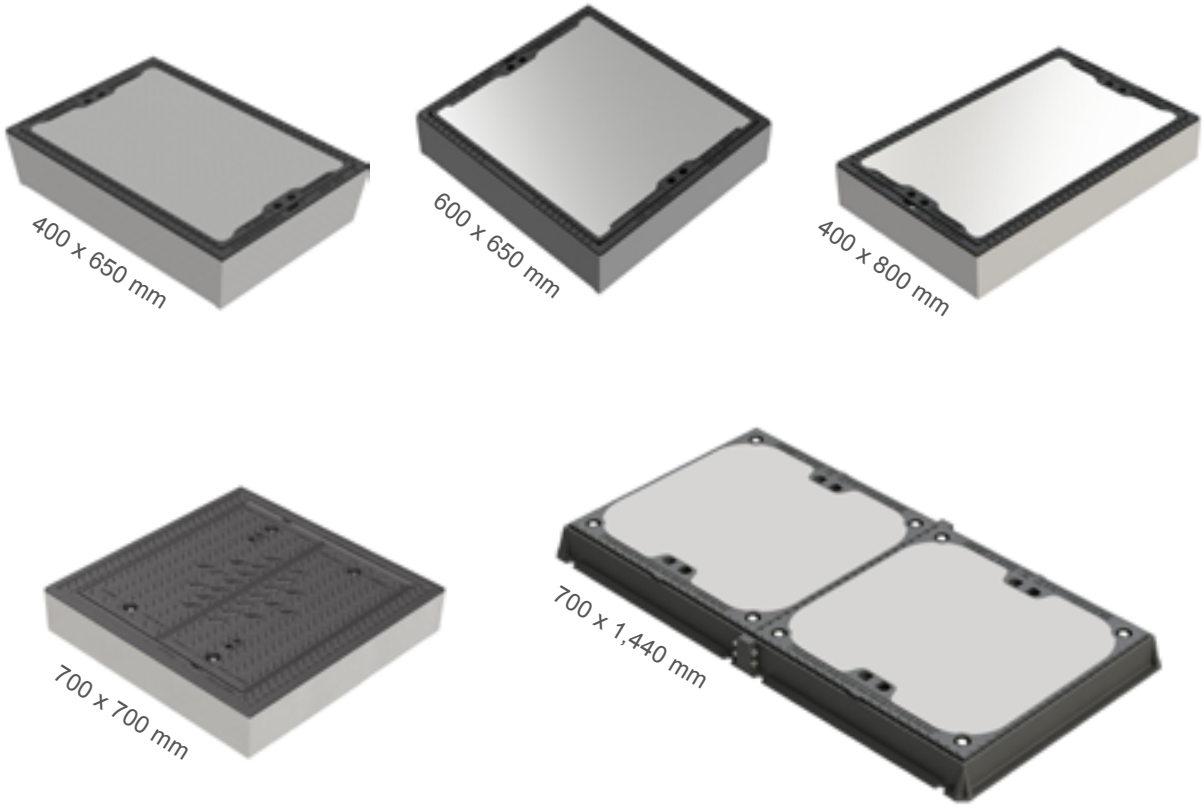
NOTE: Tighten the bolts with the locking washers by turning them clockwise with a tightening torque of 150 Nm.

Installation instructions

The following installation instructions are a recommendation for installing cable shaft covers in vehicular and pedestrian areas.

Cable shaft covers with a clearance width of 400 x 650 mm to 700 x 1440 mm are designed for installation on standard cable shafts, i.e. masonry or suitable in-situ concrete shafts.
Valid for all cable shaft covers with the dimensions 400 x 650 mm, 600 x 650 mm, 400 x 800 mm, 700 x 700 mm and 700 x 1440 mm.

Examples:



On delivery and before installation, always check that the cable shaft covers are in perfect condition. Never install damaged parts.

Also observe the load limits of the cable shaft covers during roadworks on site.

Select the shaft structure such that a component suitable for this construction work forms the transition to the cable shaft cover. It must be ensured that the maximum loads applied to the cable shaft cover are completely transmitted to the chamber/shaft structure. Ensure full surface seating of the entire contact area of the frame of the cable shaft cover.

Installation instructions

Clean and moisten the support surfaces of the bottom of the frame and the top section of the shaft. Position the cable shaft cover in the mortar bed torsion-free.

For cast iron frame versions, we recommend using installation template, article No. 104300, for checking that the frame is installed torsion-free.

If the height compensation in relation to the adjacent surface is made with a load transferring mortar groove, use a normal mortar (NM) of MG III according to DIN 1053 and DIN EN 998-2.

Ensure that the mortar groove thickness does not go below 1 cm and does not exceed 3 cm. If grout or other suitable materials are used, adhere to the respective manufacturer's specifications. If a larger height compensation is required, it is necessary to use formwork around the joint and use grout or concrete. Observe the specified curing times. The correct installation height of the cable shaft cover is 0 to -5 mm beneath the adjacent road level or the adjacent paved surface.

For surface water-tight cable shaft covers, ensure that the connection between the frame and shaft are also constructed so that they are permanently surface water-tight.

The frame of the cable shaft covers made of cast iron in class F900 must be encased in a suitable concrete cornice, a concrete cover slab or a concrete taper shaft ring to ensure permanent load transmission.

In asphalt surfaces, the cable shaft cover represents an “installed object”. For this reason, it must be separated from the adjacent surface by means of a groove according to the German directive ZTV Fug-StB.

Never allow vibratory plates or rollers to pass over the cable shaft cover.

After completion of the work, carry out the following tasks: Clean the support surfaces and check the function units such as cushioning inserts, locking units, screw connections and hinge units.

Ensure that vehicular or pedestrian traffic is not permitted in the area of the finished installation before the respective materials have fully cured. Please observe the curing times specified by the manufacturer.

Maintenance instructions

Please refer to the individual operating instructions to ensure technically correct function (see page 4).

Perform additional maintenance depending on the amount of traffic and loads.

	Cable shaft lids with loosely inserted lid	Cable shaft covers with hinge, screw connection or locking device	Cable shaft covers with gasket (surface water-tight, back pressure proof)
Maximum number of axle loads	every 500,000	every 350,000	every 250,000
but at least	every 12 months	every 9 months	every 6 months

When the maintenance intervals have been reached, carry out the following activities:

Maintenance	**Recommended measure**
Inspect the general condition of the entire cover.	Replace defective or loose covers.
Inspect the cushioning inserts (if applicable).	Replace loose, defective or worn elements.
Inspect the functional components such as hinges, screw fasteners, bolts, split pins, locking springs.	Clean the functional components. Replace loose, defective or worn elements. Apply grease to bolts or screw fasteners.
Inspect the traverse bar.	Clean the traverse bar and lid/frame support surfaces. Always grease the sealing surfaces of the traverse bar before inserting.
Check the support surfaces.	Thoroughly clean the support surfaces including the cushioning insert (if applicable).
In the case of versions with assisted opening with gas springs, check the condition of the mechanics and the gas springs.	Replace any defective or worn components. Clean and grease moving parts.
In the case of surface water-tight/back-pressure proof designs, inspect the gaskets and o-rings if applicable.	Replace defective or worn elements. A respective set can be purchased from construction hardware dealers.
Inspect the integrated reception socket MEISTEP®.	Clean the integrated reception socket MEISTEP®, in particular, the bayonet fitting into which the handhold bar engages. If the integrated reception socket is damaged, it is necessary to replace the frame.

MEIERGUSS
QUALITÄT

MeierGuss sets the benchmark for quality

As a manufacturer and specialist for sewer castings, MeierGuss stands for high quality standards and high-class, ready-to-install cast iron products. Our products are manufactured at three production sites in Germany. Thanks to the consistent high quality of our products and on-time delivery, together with continuous investment, we have achieved market leadership in Germany.

Quality in sewer casting is particularly important, as these products have to meet high safety standards and are subject to increasingly high demands due to steadily increasing traffic. The MeierGuss Group is one of the few suppliers in the area of sewer casting whose distribution company and production sites are certified in accordance with DIN EN ISO 9001, DIN EN ISO 14001 and DIN EN ISO 50001. Through our focus on quality, monitoring by independent certification bodies and the RAL quality mark RAL-GZ 692, we oppose the quality reduction caused by the European harmonisation in accordance with EN 124:2015 and exclusive focus on price during purchasing. Sewer casting products must meet additional important requirements of operational and traffic safety to be given the RAL quality mark RAL-GZ 692. The quality mark therefore helps users come to a decision on which product to purchase.

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You will find our operating, installation and maintenance instructions on the internet at: www.meierguss.de