

Installation Instruction For Manhole Cover

Installation Instructions

The construction of the Manhole Cover should be carried out strictly in accordance with relevant standards. Read and follow all instructions, precautions and warnings contained in this document before using the product. Failure to comply with all instructions, precautions and warnings may result in personal injury or property damage. FCST Group does not assume any responsibility for damage caused by misuse of the product.



Step 1 - Prepare



Ensure:

- The clear area of the frame is the same or larger than the chamber opening.
- The frame is aligned with the opening.
- The top of the chamber is sufficiently rough to 'key' with the foundation mortar.
- An area of at least 50mm all around the outside of the base of the frame at the chamber top opening is clean, dry and clear of any loose debris.

Step 2 - Measure

Depth to the chamber from the base of the frame

- $\geq 85\text{mm}$ = Lay another course of bricks or proprietary shaft section.
- $\geq 30\text{mm}$ = Use Uniform adjustment units and mortar.
- $\leq 30\text{mm}$ = Use Unipak mortar.

Step 3 - Installation

Any necessary adjustment units shall be placed on and interleaved with bedding mortar and tamped to the required level leaving room for the top layer of mortar.

Lay a top layer of mortar about 50mm wider than the frame in one even pass. If this is not achievable, then wedges should be used, and mortar packed under and around the frame by hand.

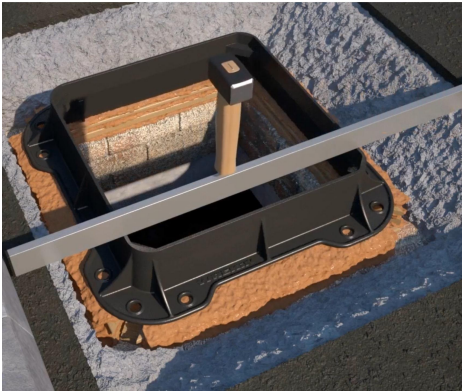
The final mortar course for setting the frame should be all one mix.

Installation Instruction For Manhole Cover

Step 4 - Bedding

Place the frame and fill any remaining under-frame gaps with bedding mortar.

Step 5 - Tamp



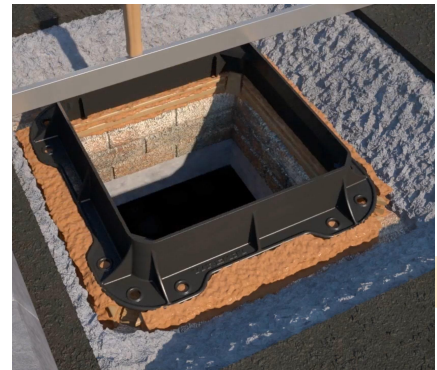
Gently tamp the frame into the mortar to align the top edge of the frame within 5mm of the expected finished surface level, wearing course or pavement.

Step 6 - Encapsulate

Add additional bedding mortar on top of the frame flange in order to completely envelope it to a minimum depth of 10mm.

Hand-pack this layer of mortar using suitable gloves until it completely merges with the mortar extruded around the frame and through any apertures in the frame flange.

Note: 10mm is the minimum depth of mortar layer to be laid under and above the frame.



Step 7 - Key



The final layer of bedding mortar should be compacted and NOT be trowelled smooth but should receive a brushed finish so that it has sufficient texture to ensure it will mechanically key to subsequent road-fill materials.

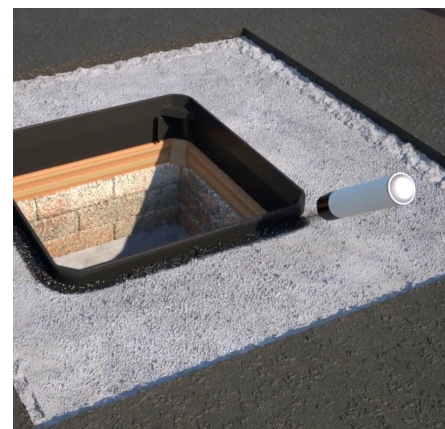
Note: If frame fixing anchors are to be used in conjunction with a bedding mortar, drilling or hole-forming to receive anchors should only occur when the bedding mortar has fully cured. Ensure any fixing location is appropriate to receive the fixings and expected loads. Our covers are not supplied with fixing anchors.

Installation Instruction For Manhole Cover

Step 8 - Seal

Before backfilling with proprietary road fill materials, heavily coat the outside face of the frame and the inside face of the road surface with a suitable bitumen-based cold joint sealer and ensure that the bedding mortar has cured

Note: The application of a cold joint sealer to the vertical face of the frame is particularly important if the frame is to be located in a concrete road or pavement.



Step 9 - Surface



Install the remaining road fill and wearing course/pavement materials. If using flowable materials such as concrete, form a barrier over hinge apertures to prevent ingress of surfacing. Take care not to disturb the frame, particularly where mechanical equipment is employed.

Step 10 - Complete

Apply overbanding to the joint between the new surfacing material and the existing surface. It's important to cover any saw cuts that extend beyond the reinstated area in accordance with manufacturer's instructions.

Attention: Ensure that trafficking of the finished installation does not occur before the bedding mortar and surrounding surfacing materials have fully cured. Overbanding is applicable to bitumen-based road surfacing only, not concrete pavements or similar.



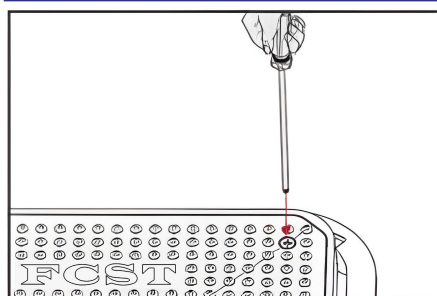
Step 11 - Protect

In situations where the final wearing course is to be installed at a later date, apply a ramp around the projecting frame to ensure public safety and protect the frame from impact.

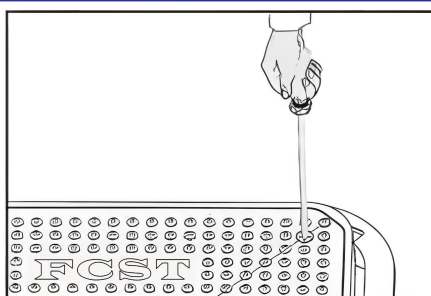
Attention: Ensure that trafficking of the finished installation does not occur before the bedding mortar and surrounding materials have fully cured.

Installation Instruction For Manhole Cover

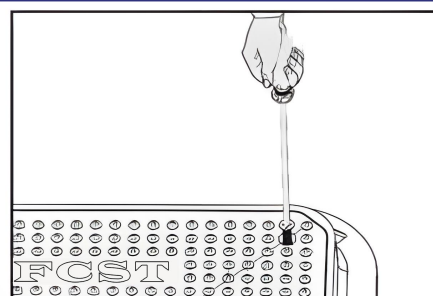
Operating Instructions



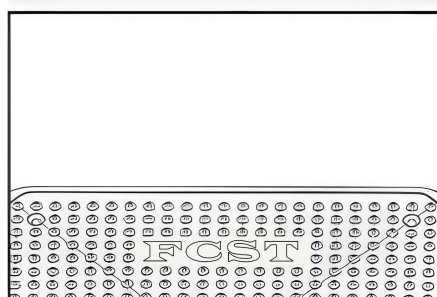
1: Use a cross screwdriver to fix bolts



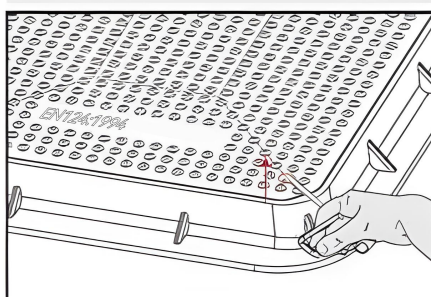
2: Screw Off bolts



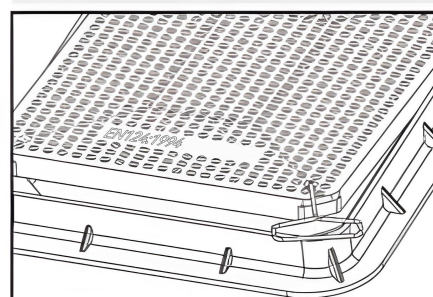
3: get bolts off



4: Unscrew other bolts in turn by the same operation from 1 to 3 procedure.



5: insert lifting keys into hole, lift and pry up the cover.



6: Cover is opened.

Check And Maintain Manhole Cover

Routine Inspection

Periodically (at least once a week) check the position of the manhole cover is normal, whether there is displacement, loosening or warping phenomenon. If the location of the manhole cover is abnormal, it should be adjusted and repaired in time.

Check the surface of the well cover for damage, such as cracks, breakage, depression, etc. For the composite manhole cover, it is also necessary to check whether there is aging phenomenon, such as discoloration and brittleness.

Check whether there is water and debris accumulation around the well cover. Water may be a signal that the drainage pipe is blocked, and the accumulation of debris may affect the normal opening and closing of the manhole cover.

Scheduled Maintenance

According to the material and use environment of the manhole cover, clean the manhole cover regularly (such as every 3-6 months). For cast iron manhole covers and ductile iron manhole covers, tools such as wire brushes can be used to clean the rust and dirt on the surface, and then apply protective paint to enhance its corrosion resistance.

Installation Instruction For Manhole Cover

For composite manhole covers, care should be taken to avoid long-term exposure to sunlight or chemical environments. If the manhole cover is found to have signs of aging, replace it promptly.

Check whether the opening and closing device of the manhole cover is normal, such as whether the wrench hole is blocked and whether the bolt is loose. If the problem is found, it should be repaired or replaced in time.

Safety Precautions

Operation Safety

When opening and installing the manhole cover, the operator must strictly follow the operation procedure to avoid injury due to improper operation.

When multiple people cooperate to operate the manhole cover, it is necessary to maintain good communication to ensure that the operation is synchronized and safe.

Traffic And Pedestrian Safety

Set up obvious warning signs around the operation area of the manhole cover, such as warning cones, warning belts, etc., to prevent vehicles and pedestrians from approaching.

Try to choose a time when there is less traffic, such as off-peak hours or at night (and make sure there is adequate lighting).

If the manhole cover operation takes a long time, in addition to setting warning signs, it is also necessary to arrange special personnel to be responsible for channeling traffic and reminding pedestrians to pay attention to safety.





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