

INSTALLATION GUIDELINES

One Part Square or Rectangular Units

The following information is provided to give guidance only as all installations are not identical. Please contact your GATIC representative for additional information if required.

Correct installation is essential for a GATIC® unit to operate satisfactorily and give a long service life for which it has been designed.

Incorrect methods of installation may cause:

- Movement or rocking under load
- Excessive wear and reduced life
- Damage and/or failure under load
- Poor sealing between cover and frame seatings

General Requirements

Forming of Pit or Slab Openings

The guidelines for installation outlined are for installing GATIC® units in rebates formed in pit or floor slab openings.

As an alternative, units can be supplied with frames bolted to covers for installation directly into pit or floor openings

during the actual forming of the pit or floor opening (contact your nearest GATIC® office for details).

Cover to Frame Matching

GATIC® covers and frames are mated individually during the machine process and are, therefore, not always interchangeable. A cover from one frame will not necessarily fit another frame. Covers in multiple units are marked and designated individually to particular locations in the frame.

Cover Orientation

The direction in which a cover can be slid out of its frames is indicated by the position of the cover edge with two or four keyholes. If a wall or other obstacle abuts the opening, ensure that the cover is installed so that the direction of removal is parallel to or away from the obstacle.

Concrete Infill and Curing

With the exception of solid top covers, all covers and frames must be filled with structural grade concrete (refer to AS3996 for additional information) This is essential if the full-strength potential of these covers is to be realized. Concrete infill must be poured and allowed to cure with covers installed in frames.

Careful Handling Essential

Frames may suffer twisting and damage to joints if subjected to shocks or heavy blows.

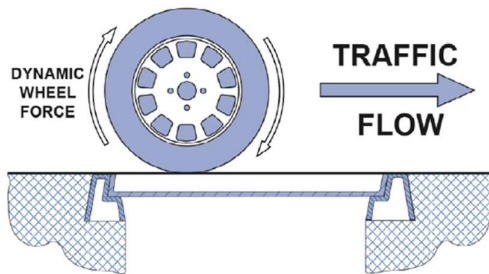
Cover to Frame Sealing

The application of GATIC® MANHOLE SEALING COMPOUND is recommended for all cover to frame seatings.

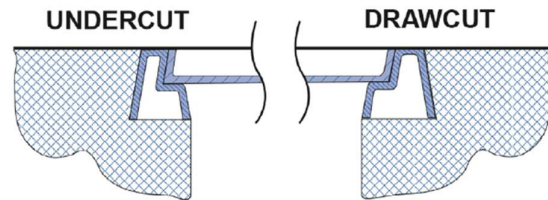
Lubricating greases are not recommended as they melt, dry out and cause deterioration of seating surfaces.

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Square Cover Installation Notes



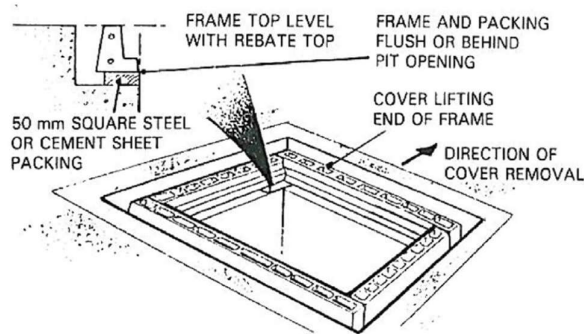
To prevent covers lifting, position covers such that traffic flow direction is from undercut to drawcut.



Part 1 – One Part Square or Rectangular Units

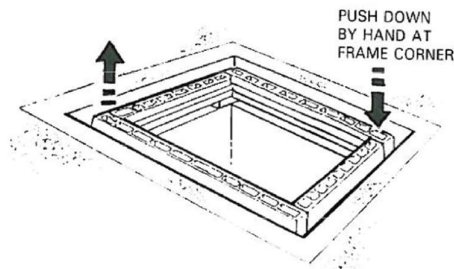
STEP 1 – Form a rebate in the pit opening

STEP 2 – Remove the cover from the frame



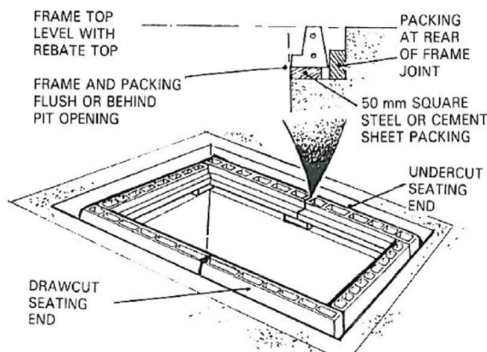
STEP 4 – SET UP THE INTERNAL FORMWORK

Ensure that the formwork does not project above the horizontal seating surface of the frame (otherwise the cover cannot be seating prior to concrete infill).



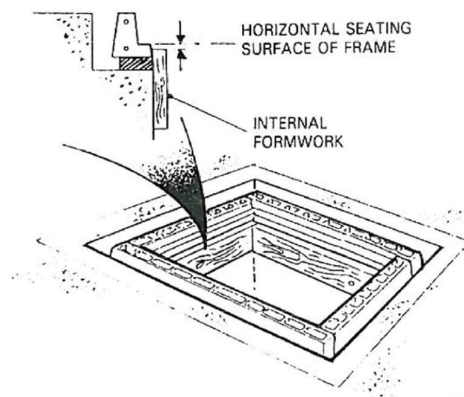
STEP 3 – Locate and level the frame in the rebate

- Ensure that the frame is correctly oriented for the required direction of cover removal.
- Pack under each corner joint of the frame to raise and level the frame top with the rebate top.
- Ensure that the packing and frame do not protrude into the pit opening.



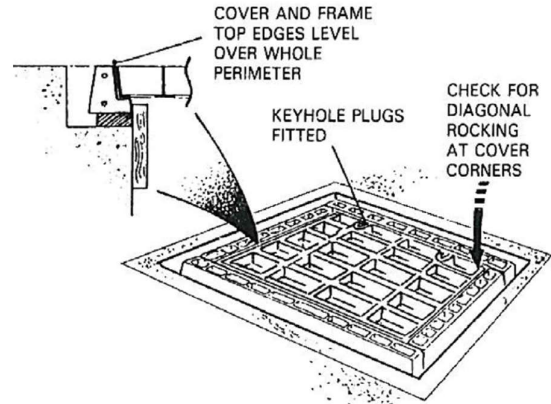
STEP 5 – Clean the cover and frame seatings

All cover and frame seating surfaces must be free of dirt or dust to ensure the correct seating of the cover in the frame.



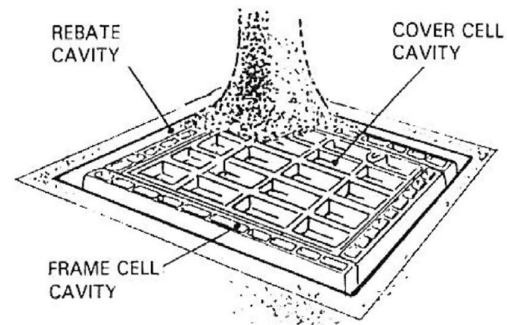
STEP 6 – Place the cover in the frame

- Ensure that the cover is correctly oriented in the frame according to the mark or tag (see STEP 1).
- Ensure that keyhole plugs are fitted.
- Check for any diagonal rocking movement between the cover and the frame and adjust the frame packing if necessary.
- Run a finger along the top edges of the cover and the frame and check that the edges are level over the whole perimeter of the unit (if not level, dirt may be present in the seating surfaces or the frame may be distorted due to rough handling).

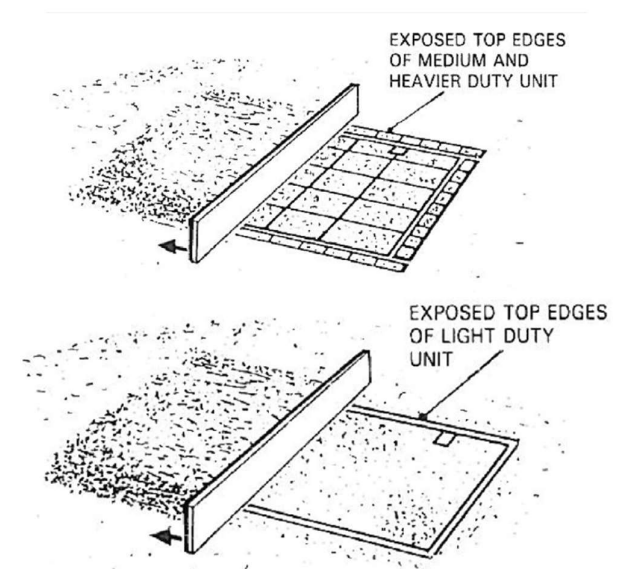


STEP 7 – Pour the concrete infill

Pour the concrete and tamp down to ensure all cavities in rebate and cover, and frame cells are completely filled.

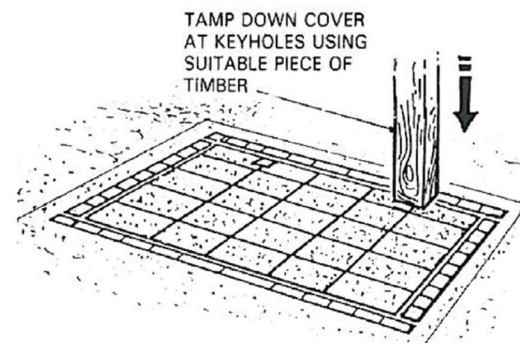


Trowel or screed off excess concrete to expose all top frame and cover edges. Do not remove covers for 74 hours.



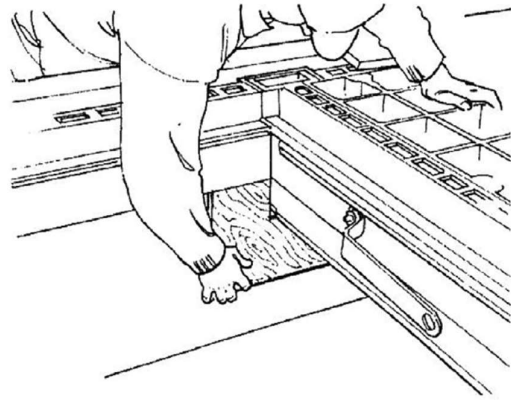
STEP 8 – SEAL THE UNIT FOR OPERATION

- Remove the cover and internal formwork.
- Clean all cover and frame seating surfaces
- Apply GATIC® SEALING COMPOUND liberally to all vertical and horizontal seating surfaces of frame
- Install the cover in the frame and tamp down the cover at the keyholes until the top edge of the cover is level with the top edge of the frame.



STEP 9 – Preparation for concrete filling

- Access to the underside of the cover is required so that the formwork can be placed inside the pit. This is done by removing one or more of the covers from the centre row.
- Pay attention to the formwork around the wallbox locations to prevent concrete from entering wallboxes.
- Ensure that there is no debris in the rebate recess prior to concrete pouring.
- Check that all plastic keyhole plugs are firmly in place in the lifting slots. This prevents concrete entering the slots during pouring.



STEP 10 – Concrete pour

The minimum required grade of concrete is 32mPa with a maximum of 12mm aggregate.

- Ensure that the cellular bar frames are completely filled by vibration or by tamping the concrete in place.
- When finishing the concrete rebate junction between rebate and slab do not finish with edging tool but finish flush with adjacent surface.

STEP 11 - Sealing covers and beam location boxes for operational use

Ensure concrete is cured a minimum of 74 hours.

- Remove covers and beams from the frame.
- Clean all mating surfaces.
- Apply sealant to the top 50mm of the beam location wallboxes.
- Lower beams back into position ensuring that sealant is not removed accidentally by contact with the bottom edge of the beam.
- Place all covers into position without sealant.
- Clean the top surface of the unit further removing any debris.
- Remove the undercut cover of any row. Check the seating of the covers and frames for any debris. Clean if necessary.
- Sealant is to be placed on the vertical and horizontal seating surfaces of frames only. A thickness of 3mm build up is required.
- Lower cover into frame and tamp to top of the covers into position until covers are flush.
- Clean excess sealant that is squeezed out through the remaining gaps.

NOTE - IMPORTANT

Do not slide covers along the frame into their final positions as this causes removal of the sealing compound from the mating surfaces.

- Remove the next cover and apply sealant to both side frames and the rear of the first cover.
- Repeat this sequence as described to remaining covers.
- Check all keyhole/lifter points to ensure all plastic plugs are in place.