



GUIDELINE FOR HOLLOW-CORE INSTALLATION

(Safely and Efficiently)

Expocrete's makes all the effort to assure delivering high quality and cost effective projects to their customer. Please follow the following procedures for Hollow-Core installation process:

1. Organization

- Be sure to provide the sequence of installation to Expocrete before the Hollow-Core production commences, this will ensure that slabs are produced and stockpiled in the appropriate order.

2. Before Requesting Site Delivery

- Verify that the site dimensions and details are in accordance with Expocrete drawing. Always read Expocrete drawing in conjunction with Architectural and Structural drawings.
- Ensure that bearing surfaces are smooth and level and that they are within $\pm 6\text{mm}$ in 6m.
- Be sure that all the other materials that are required for the installation process of the Hollow-Core are available.
- Obtain from the engineer of record approval of the stability of the supporting structure.

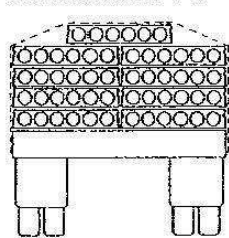
3. Delivery Notice

- Always provide seven (7) working days delivery notice to the shipper.
- Provide the shipper with a list of mark numbers in the sequence of installation.

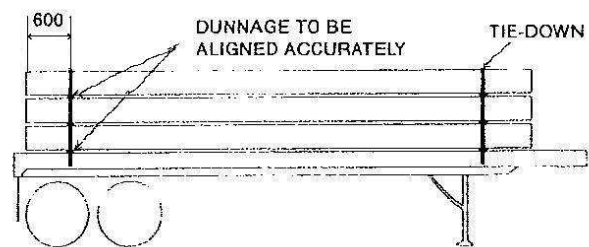
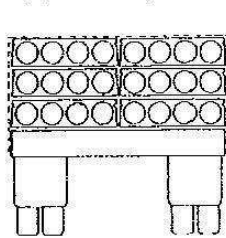
4. Transportation

- The diagram below shows the maximum loading pattern on high-bed trailers. Load may also be governed by legal trailer capacity and slab geometry. Offloading sequence may differ slightly from the shipping list due to the slab geometry. Irregular slabs are placed on top of the load.

203 mm Hollow-Core



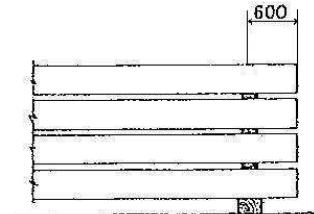
305 mm Hollow-Core



- Prior to unloading, the installer should inspect each shipment. Any damage not specifically reported on delivery slips and/or not reported to the project engineer becomes the responsibility of the installer.



- Stockpiling at the site may be necessary. Use full width 4"x4" dunnage placed on stable level ground. Separate the slab with dull width 2"x4" dunnage. Maximum stockpile for 203 mm Hollow-Core is 6 slabs, and for 305 mm is 4 slabs.
- Keep the dunnage accurately aligned from slab to slab.

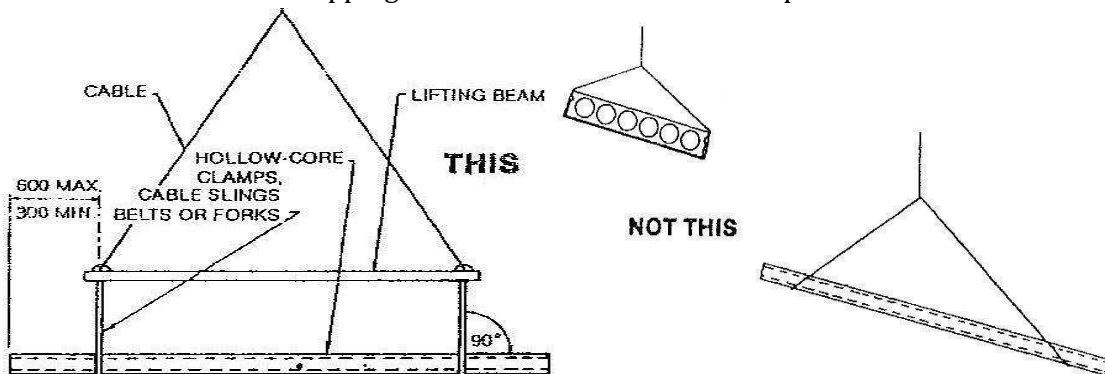


5. Installation

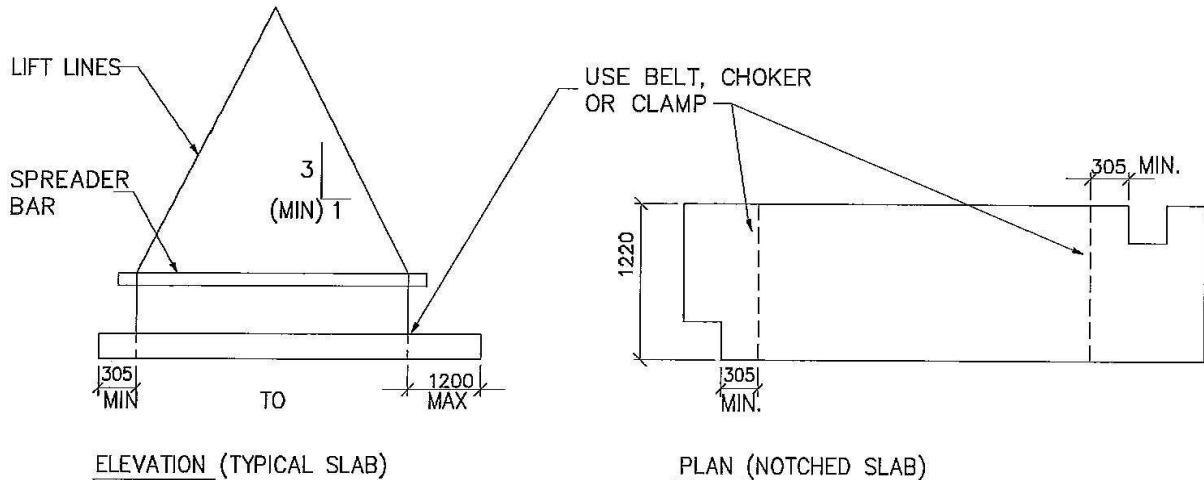
- Hollow-Core slabs are to be located and installed in accordance with Expocrete drawing.
- Minimum end bearing is 75mm unless specified otherwise on drawings.
- Keep slab joint widths uniform.
- If there is a possibility of trapping water in the cores, each core should be tapped near the end to provide drainage.

6. Hoisting

- Use lifting devices (clamps, belts, chokers, forks) of adequate capacity with minimum safety factor 5:1.
- Clamps should be used only with spreader bar. The slab shall be lifted with lines vertical. If this cannot be accomplished, then belts or chokers should be used instead of clamps.
- On slabs less than 4 feet wide, use belts or chokers; **do not** use clamps.
- Balance load to avoid slipping and to eliminate twist on clamps or belts.



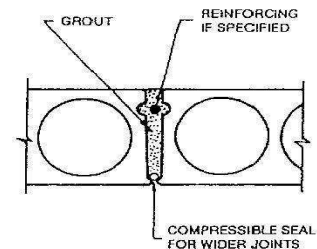
- When using clamps, check that clamp edges fit properly against sound concrete grooves in sides of slab, after crane has taken load but before hoisting.
- Blocking for stockpile, same location as lifting.
- Refer to shop tickets for slab weight.



- Hoist only one slab at a time.
- Always use safety slings when hoisting with clamps or forks.
- Never use Hollow-Core as a platform for hoisting people or materials.
- Never hoist slabs by hooking into cores.
- Never turn slabs on edge or upside-down.
- Hand Trap; never put hands in cores or between slabs. Handle only from top surface or with lifting gear.
- For special conditions or concerns of safety, contact Expocrete concrete products limited before hoisting.

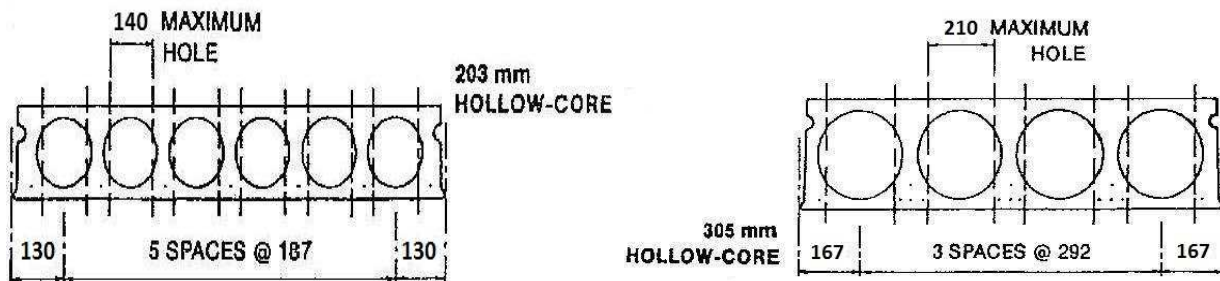
7. Grouting

- Remove all debris from joints.
- Grouting Materials; unless specified otherwise, consist of sand/cement mix. Minimum 28 days strength is 25MPa with an air content of 3% to 6%.
- Camber may occur in Hollow-Core slab and will vary with slabs age and loading conditions. Different camber can be minimized by shoring slabs prior to grouting by others.
- Cold weather grouting procedures to be in accordance with CSA A23.1. Until the grout has reached adequate strength, full load capacity may not be assumed.



8. Field Cut Openings

- Round holes in the location and the maximum sizes are showing in the diagrams below may be cut in the field.



- Approved must be obtained from Expocrete if:
 - 1) More than 3 holes are to be placed across the slab in one location through core space .
 - 2) The holes are larger than showing in the diagrams
 - 3) The holes are within 1/5 of the slab length measured from the bearing point.
 - 4) Webs must be cut to accommodate openings.
- Core-drilling is recommended for all the holes.

9. Contact Us

Please contact Expocrete if:

- 1) The Hollow-Core is damaged
- 2) The Hollow-Core does not fit
- 3) Modification is required
- 4) If you have any other related questions.