Stravifloor Jackup-E
Installation Manual

stravifloor
by CDM Stravitec

Installation Tools and Components

- Stanley knife
- Marking spray
- Pocket tape measure
- Cross line laser (optional)
- Impact wrench (and eventual extensions or adaptors)
- Adhesive spray and tape (if the perimeter isolation is done with a material different than the self-adhesive CDM Stravitec's Perimeter Strip)
- Grease (supplied)
- Manual cartridge gun (+ elastic sealant)
- Personal protective equipment

1 / Supporting Floor & System Components

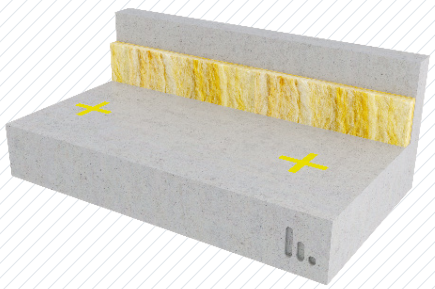
Prior to installation the area should be watertight and the supporting floor clean and dry.

Stravifloor Jackup-E system requires a flat and level structural floor to be specified. All Stravifloor Jackup-E mounts are a fixed height, so the countour of the structural floor controls the flatness and levelness of the finished floated sla. Note to be specified: F_F 25 as minimum - meaning a single 1/4'' (6 mm) deflect across 10-feet (3 m).

2 / Box Location & Perimeter Isolation

Using the installation plans supplied, mark out the location of the centre of each box across the whole floor.

All walls, columns and service penetrations through the floating floor should be isolated using strips of perimeter isolation. The height of this isolation should be the distance between the supporting floor and the finished level of the floating floor.



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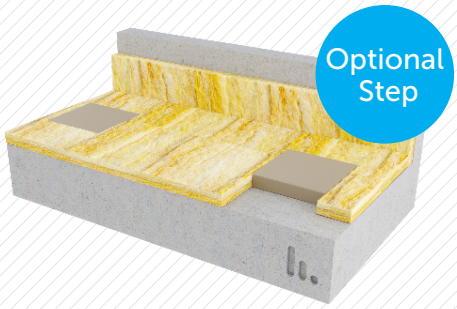
3 / Absorption Layer (optional)

Technical note: to avoid a standing wave in the air void (which may cause noise breakthrough at high frequencies) the use of an absorption layer in between the boxes is recommended.

At the locations where the boxes will be installed make a cut-out in the absorption material at the size of the housing and/or overheight material

If an absorption layer is specified for the system, the height of the boxes should be adjusted (by the same thickness as the absorption layer) by mounting them onto a layer of Fibrecement or equivalent.

Overheight can be used for reasons other than the need to add an absorption layer, such as the need to adjust the floating slab thickness.

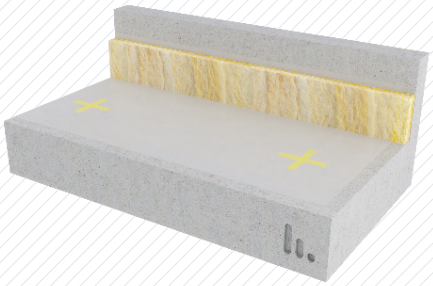


4 / Protection Layer

A protection layer of building grade polythene sheeting should be installed over the whole floor and continued up the wall to cover the perimeter isolation strip.

All overlaps should be a minimum of 4'' (100 mm) and then sealed using a 2'' (50 mm) (minimum) wide industrial grade self-adhesive tape.

Ensure the polythene is fitted neatly into the corner areas of the floor to avoid any pocketing which could result in a reduction of slab thickness in these areas.



5 / Installing the Boxes

Place the boxes on the markings, per floor submittal, and make sure that the pad is positioned correctly to ensure that there are no gaps where leakage could occur.

When installing the boxes, double-check that each box contains a rubber pad. Once the concrete is poured, the boxes can no longer be accessed.

Make sure that the gaps between the housings and the structure are minimal, otherwise concrete could seep in.

The distance between the center of each box and the edge of the floor should be a maximum of 11-13/16'' (300 mm) to limit the cantilever effect and a minimum of 8'' (200 mm) to allow concrete pouring, unless otherwise stated in the shop drawings.

If the floating slab is no more than 3-5/16'' (85 mm) thick, the box extension piece (PVC-tube) is not needed. Simply seal of the box opening with the plastic lid provided.

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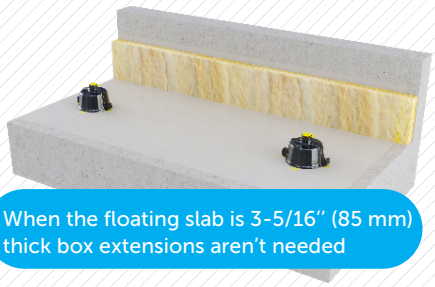
6 / Box Extensions

The height of the Stravifloor Jackup-E boxes is fixed.

If the floating slab is thicker than the height of the boxes 3-5/16'' (85 mm), an extension piece (PVC-tube) and plastic lid need to be added. Make sure there are no gaps between the extension and the neck of the box where concrete leakage could occur. If not delivered with the correct dimension, the top of the box extension should trim to the finished floor height.

The contour/levelness of the structural slab determines the same for the lift/floating slab.



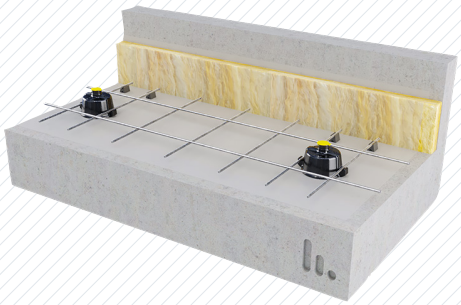
When the floating slab is 3-5/16'' (85 mm) thick box extensions aren't needed

7 / Reinforcement Grid

Install the appropriate grade of reinforcement mesh (the grade will be predetermined by the project structural engineer).

The external positioning lugs as well as the indentations on the top of the box can be used as spacers/supports for the rebar grid.

If any accidental tears occur in the polythene sheeting they must be securely repaired using additional polythene sections and industrial grade self-adhesive tape.



8 / Concrete Pour

Once you have ensured that all boxes are adequately closed and sealed the concrete can be poured to the required height.

> **!** Attention: be careful when pouring the concrete so that none of it leaks into the boxes as this will damage the product and create an acoustical bridge.

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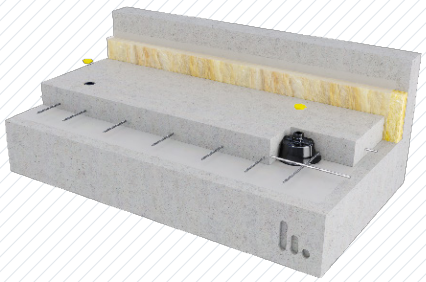
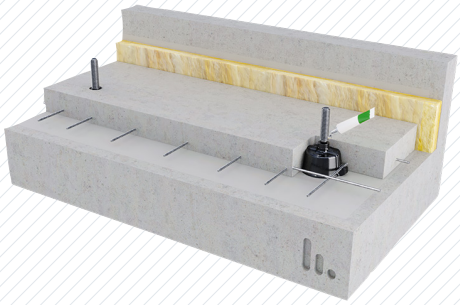
9 / Remove the Plugs

When the concrete has cured to the required strength – 14 and 28 day concrete cube tests are recommended to determine the strength – remove the plugs.



10 / Insert the Bolt

Before introducing the bolt, it's recommended to lubricate it, using the provided grease, and level it.

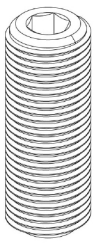


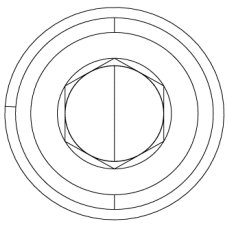
! Bolt length: the lower limit is set by a minimum thread engagement in the housing, the upper limit by the necessity for the bolt end to be below the top of the floating slab (when 3-5/16" (85 mm) slab, this is coincident with the top of the housing) when the floor is jacked up, to ensure a minimum thickness of the elastic caulk [≥ 3/16" (5 mm)].

As per the design team's default consideration, the bolt adhering to the lower limit rule described above is preferred. Consequently, the lifting process should only be deemed complete when the lifting tool makes contact with the housing, and further lifting cannot proceed.

If a different bolt length is being contemplated, the distance between the top of the bolt and the upper level of the floating floor is indicated on the shop drawings, and the lifting tool should be marked accordingly.

! Please note that the bolt is a hexagon socket bolt with a headless end (inner size 3/8" (10 mm)).





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11 / Jack Up the Floor

Always start the jacking up process in a corner of the floor and gradually move line by line across the floor (in a zigzag pattern).

For more complex room geometries, CDM Stravitec should be consulted about the order of the jack-up boxes. This info will then be added to the shop drawings.

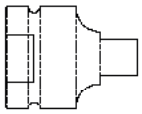
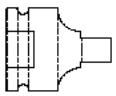
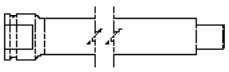
Apply a small amount of grease to the bolt inside the box and start jacking up the floor in phases – no more than two rotations at a time for each phase. If the required height is not reached in the first phase repeat the process again following the same sequence. Note that the minimum jack-up height is 6/8'' (20 mm).

During the jacking up process ensure that no unnecessary loads are placed on the floor.

> **!** Note: following any other procedure for lifting the floating slab may damage the concrete or the support (housing and isolator). Jacking up the floor slab by more than 2 turns at a time must first be approved by the manufacturer.

Use an impact wrench (e.g. Bosch GDS 30 Professional, Milwaukee IPWE 400 RQ) to lift the slab.

Depending on the thickness of the slab, the length of the bolt and the tool reception, machine extensions and/or adapters can be necessary.

Tool with bit holder of 1" external square	Tool with bit holder of 3/4" external square	Tool with bit holder of 1/2" external square	
Transition part 1" - 3/4"	Transition part 3/4" - 1/2"	Extension 1/2"	Transition part 1/2" to 10 hex driver
			
Example: Stahwille ref. 36030005	Example: Stahwille ref. 35030003	Example: 50 mm: Stahwille ref. 33010001 127 mm: Stahwille ref. 33010002 150 mm: Action ref. DO64524150 255 mm: Stahwille ref. 33010003	Example: Action ref. DO696310A Stahwille ref. 23050010

Note: if using other accessories be sure they fit the housing extension (PVC-tube) since this has only 1-1/3" (34 mm) as inner diameter.

12 / Trim the Perimeter

Trim the perimeter isolation to the finished floor height using a stanley knife.

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13 / Caulk the Perimeter

Seal the perimeter with a suitable elastic caulk.

14 / Caulk the Slab Openings

Once the perimeter is sealed with a suitable elastic caulk, the openings in the slab (where the PVC-tubes have been cut or the housing opening itself) need to be sealed as well. This can be done, using the same elastic sealant or grout.

15 / Finish

As soon as the elastic sealant or grout has dried, the floor is ready for use.

> **!** Note: when using a rigid type of floor covering, make sure the floor covering is completely decoupled from walls or any other vertical elements to avoid acoustic bridging.

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