

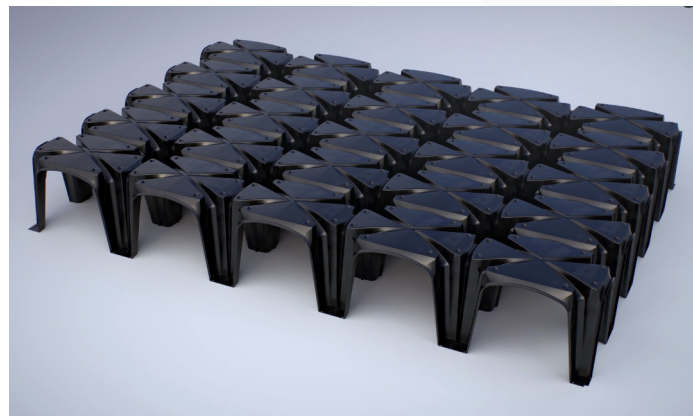
Non-recoverable formwork Instalalation Manual

Non-recoverable formwork for the fitting of flooring and sanitary slabs

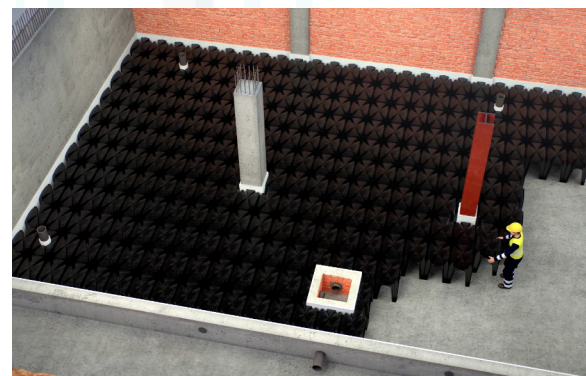
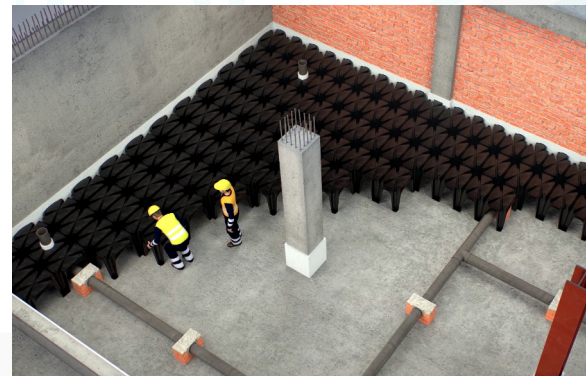
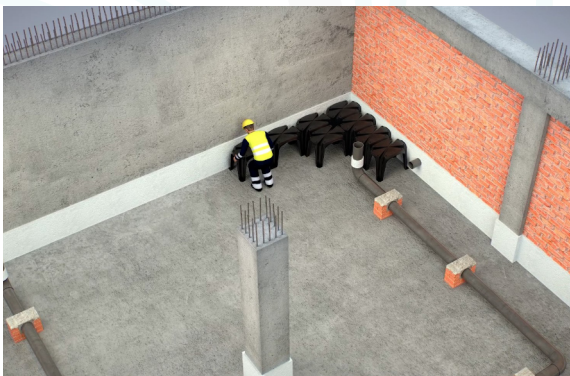
Projects in which the construction system of slabs with precast Cavity modules is used must take into account a range of installation criteria.

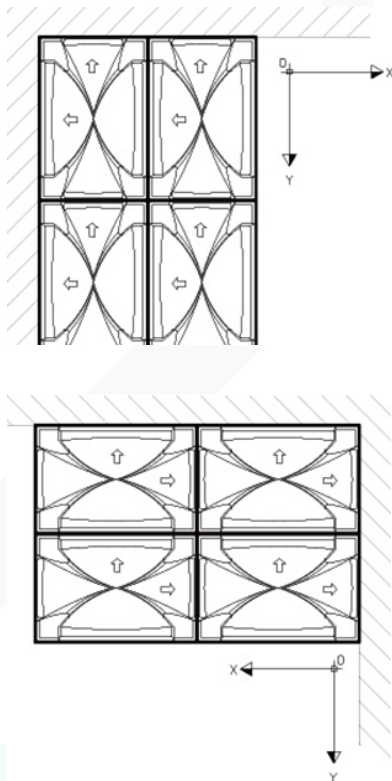
- Firstly, the proper seating of the parts must be duly planned, meaning that the planimetry of the support must be taken into account. A layer of cleaning concrete is usually defined.
- Secondly, when there are facilities in place, whether sanitation networks or electrical installations, the layout of the same and that of the pillars of the Cavity system will have to be borne in mind.
- Thirdly, the perimeters and encounters with existing vertical elements on site must be similarly considered.

In cases where either due to peculiarities of the work, low load-bearing capacity of the ground or high static or dynamic loads, the Cavity Technical Department can assess the structure based on the regulations in force, system tests and specific values of the case study (permissible ground voltage, level of finished pavement, use for which this slab will be intended along with usage overloads).



Instalalation video 





Positioning

The first piece is placed, based on the layout, in the correct position according to the orientation marked by the indicative arrows located in the module's dome.

In this way and maintaining the same direction of these arrows in all the pieces, they are then machined together, self-aligning the pillars and thus ensuring proper assembly. The placement will always be performed from left to right, in rows. Keeping this sequence, the rest of the pieces can then be placed.

Different treatment must solely be given to encounters with other structural elements or not, where the CAVITI pieces will have to be cut. These cuts are made with a radial, jigsaw or hand saw, to adapt the parts to the geometry of the existing element.

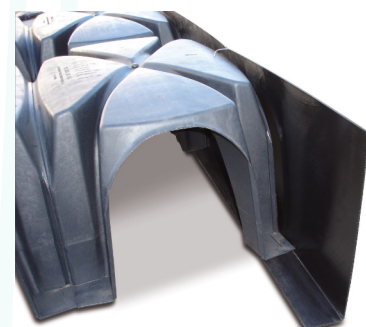
Between the CAVITI pieces and the existing vertical elements on site, 2 or 3 cm thick expanded polystyrene must be placed as a concrete joint to act as a breaking point of thermal bridges.

Perimeters

A perimeter profile made from polypropylene and variable dimensions depending on the height of the CAVITI piece has been fitted, whose purpose is to act as a raiser, avoiding the loss of concrete.

The use of this element is only worthwhile when both the CAVITI screed and an adjacent solid area (should there be one) are concreted.

This profile is fixed at the top of the piece, piercing the formwork in those cases where it is necessary





Mesh

Electro-welded meshes shall be used that meet the technical requirements prescribed in UNE 36092:96, with the designation B-500T of dimensions ME 15x15, ME 15x20, ME 20x20, ME 15x30 or ME 20x30 and diameters 6, 8, 10 and 12 mm.

The Technical Department of Caviti may be consulted on the replacement of said reinforcement with polypropylene fibres.

Depending on the loads, both static and dynamic, the placement, grid's dimensions and bar's diameter will be defined.

The reinforcement in the Caviti type screeds is used to prevent the retraction of the most superficial areas of the concrete.

Concrete pouring

The concreting can be carried out by pouring via a pump or bucket. The concrete must be deposited onto the dome of the modules so that it falls into the pillars. Pouring the concrete directly into the pillars must be avoided, since the pressure at which it is projected can cause the formwork to separate, resulting in the corresponding loss of concrete material. For heights greater than C45, concrete with fluidity not exceeding cone 16 must be used.

When Caviti perimeter profiles have been used, the concreting of the solid areas must be carried out in layers. Concrete must not be projected directly against the profiles, since the outlet pressure of the concrete can produce deformations in them.

In periods under high temperatures, the concrete surface must be moistened to foster the concrete's proper curing.



Vibration

Vibration is an indispensable process, which will prevent coking inside the pillars and facilitate the setting and hardening process.

The vibrator must not be kept too long inside the pillars; indeed, this must be perforated quickly to prevent the formwork from opening and concrete seepage.