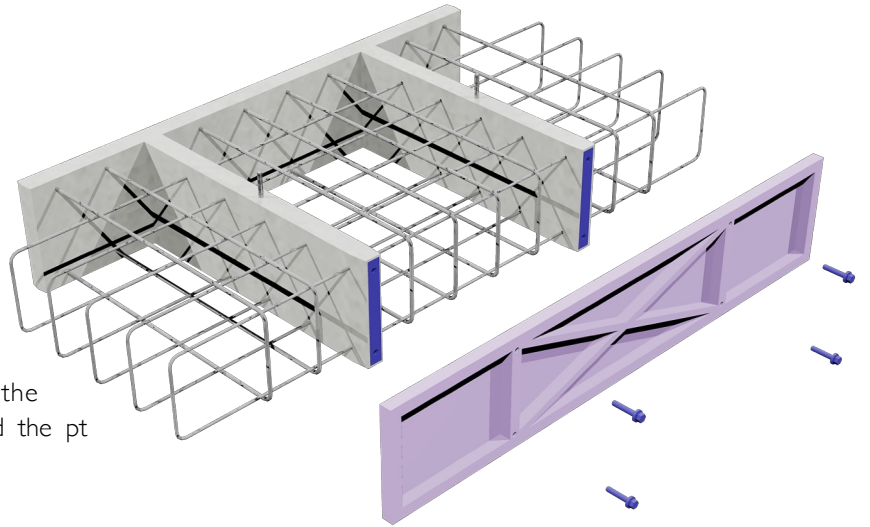




## Precast Foundation for double walls

“Precast Foundation”:

The precast foundation is a reinforced concrete element made up of a tied rebar beam cage incorporated within a semi-precast concrete element which acts as formwork. The geometric dimensions and the steel area are established through static calculations elaborated according to the distributed of loads  $N$ ,  $M_x$ ,  $T_x$ ,  $M_y$ ,  $T_y$  and the  $p_t$  pressure admissible on the terrain.

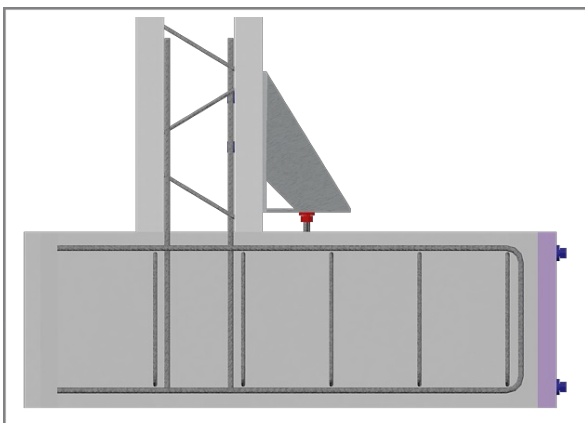
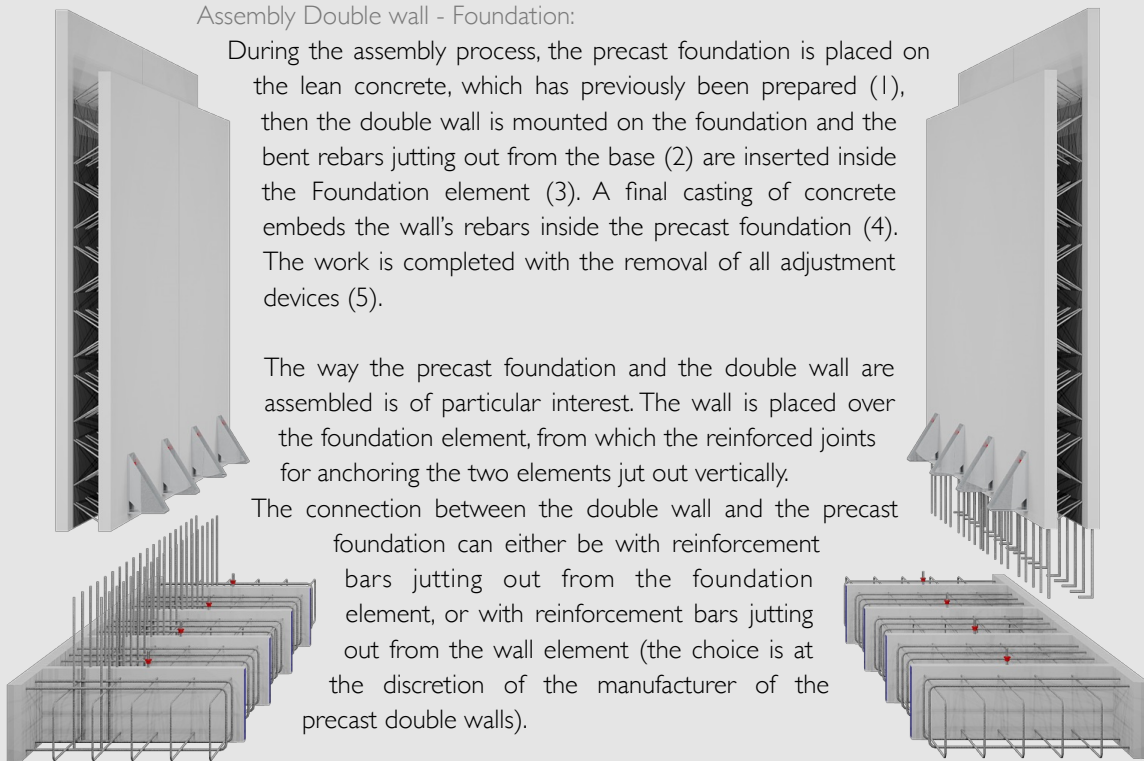


### Assembly Double wall - Foundation:

During the assembly process, the precast foundation is placed on the lean concrete, which has previously been prepared (1), then the double wall is mounted on the foundation and the bent rebars jutting out from the base (2) are inserted inside the Foundation element (3). A final casting of concrete embeds the wall's rebars inside the precast foundation (4). The work is completed with the removal of all adjustment devices (5).

The way the precast foundation and the double wall are assembled is of particular interest. The wall is placed over the foundation element, from which the reinforced joints for anchoring the two elements jut out vertically.

The connection between the double wall and the precast foundation can either be with reinforcement bars jutting out from the foundation element, or with reinforcement bars jutting out from the wall element (the choice is at the discretion of the manufacturer of the precast double walls).



For the assembly and alignment of the double wall, adjusting devices are used. These allow an easy, fast and precise installation.

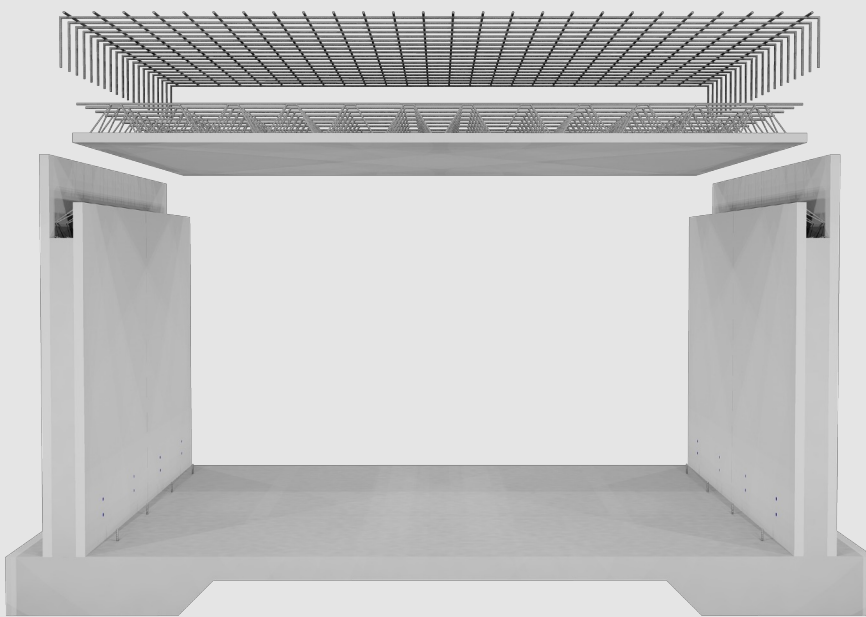
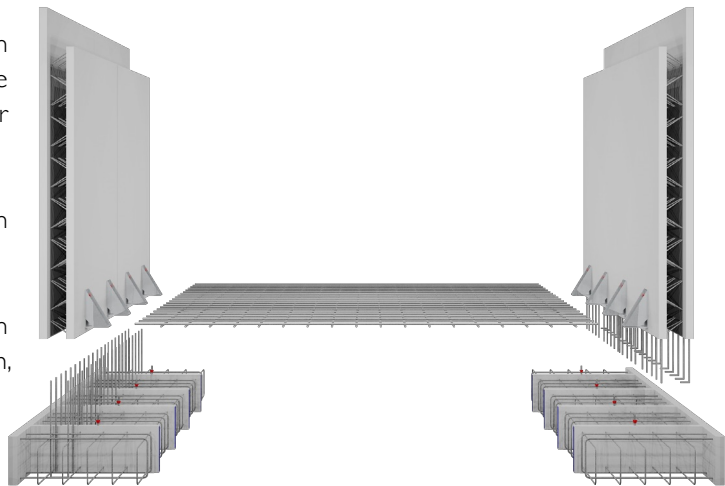
During the production phase of the Precast Foundation, two anchor bolts are left within its central concrete walls, while the double wall is equipped with four threaded couplers. The adjusting devices are fixed to the anchor bolts using nuts and to the double wall using bolts.

This system not only allows the precast double wall to be aligned with pinpoint precision, but also eliminates any kind of shoring during assembly.

The two adjusting devices will be dimensioned in relation to the weight and other strains to which the double wall is subject and are used merely for assembling the elements.

When the concrete inside of the precast foundation has cured, all the adjusting devices are removed.

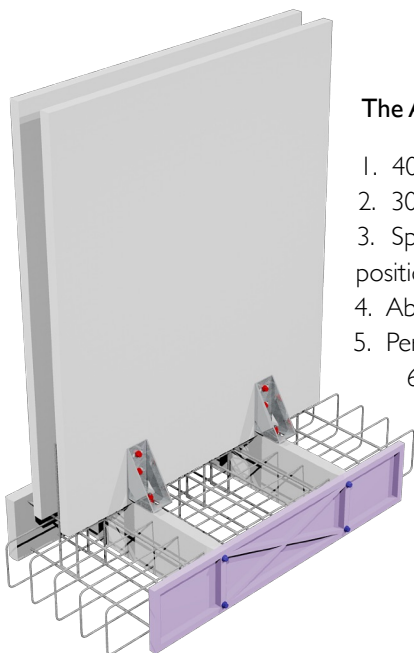
Thanks to the technology with which it has been designed, the two precast structures manage to form, after the final pour of concrete, a perfect monolithic structure without any connection joints.



#### Precast floor slab:

Having completed the pouring of concrete within the foundation and the walls, the next step is to assemble the precast floor slab and the placing of finishing rebar. The work is finished with a single pour of concrete so as to obtain a monolithic structure.

The system guarantees protection from damp and the static stability of the structure.



#### The Advantages of the Precast Foundation

1. 40% savings on completion times.
2. 30% savings on total work costs.
3. Speed with which the work is terminated without the need for skilled labor for the positioning of reinforcement rods.
4. Absence of connection joints between the double wall and the foundation.
5. Perfect damp-proofing.
6. Speed of assembly and adjustment of the precast foundation element and the double walls.
7. Millimetric precision in the adjustment of the elements.
8. No need of props.