

Prestressed Slabs

Applications



Half Slabs



Filigree Slabs



Solid Slabs

PRESTRESSED SLABS



FIELD APPLICATIONS
RESIDENTIAL, SOCIAL, COMMERCIAL

PRODUCED BY
SLIPFORMER *sf* - WET CASTING *wf*

ELEMENT DIMENSIONS
CAN BE CUSTOMISED

SLIPFORMER *sf*



WET CASTING *wf*



Prestressed slabs are prestressed concrete elements that have a constant cross section. They are manufactured using high tensile strength prestressed strands or single wire which are embedded within the element.

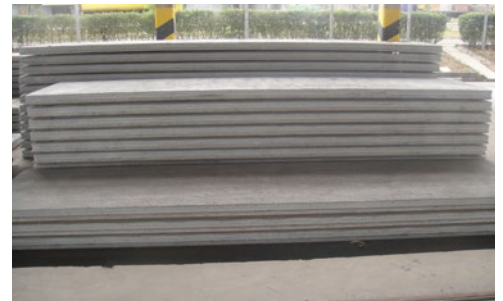
The production of these elements is achieved using our Slipformer or Wet Casting machines that cast an element continuously on a long production bed without the need of any formworks.



HALF SLABS



FILIGREE SLABS



SOLID SLABS

BENEFITS

- Using these elements floors can be quickly and easily constructed because the element itself works as a formwork. With only 3-4 workers it is possible to install more than 500-600 m² of floor per day
- The lower surface of the element is smooth having been produced on a steel casting bed. Generally this surface can be left as seen or can be simply painted. In residential applications only a final smoothing is required thus greatly reducing costs
- The concrete elements are semi self supporting requiring only minimal support during installation
- Through the choice of the different thicknesses of the lower part of the element, floors can be produced with a high fire resistance
- By eliminating some in-fill blocks it is possible to obtain resistant ribs in an orthogonal direction to the floor and fill the section to create solid ends to increase the shear strength
- Rigidity during the loading, unloading, lifting and installation. When compared to other non prestressed elements of the same height these products offer more rigidity and less deformation under load and consequently are less likely to suffer surface cracking
- Large production volumes with uniform cross sections even with different cable reinforcement configurations. Once the concrete elements have been produced they can be removed from the casting beds after just 6-8 hours
- Assured quality by using specific equipment for the manufacture of the concrete elements combined with a high end quality control system
- The ability to change the dimensions of the concrete elements and the prestressed steel wire configuration according to the element technical specifications required. It is a simple and quick operation to change the necessary parts of the forming insert of the casting machine to vary the height and the thickness of the concrete elements
- The use of high tensile strength prestressed strands, wires or single wire means that the prestressed elements have smaller cross sections using concrete more efficiently and thus achieving elements of a high quality. Smaller cross sections mean lighter panels reducing the cost of transport and allowing easy handling both on-site and in the production plant.
- The produced elements have high load resistances thanks to a low water/cement ratio of concrete from 0.32 to 0.38. In fact to produce the same profiles using traditional methods would require higher water/cement ratios and need expensive formworks. Even though the low water/cement ratio employed makes the concrete hard to work, NORDIMPIANTI's machines have no difficulty producing complex element profiles with a high level of reliability
- The Slipformer technologies produce elements with guaranteed fire resistances. This is realised by the ability of the machines to work a concrete mix with a low water/cement ratio. The quality of the casting machines guarantees a high compaction level and impermeability combined with high mechanical resistance



Prestressed Slabs

produced by the best quality
casting machines available

HALF SLABS



FIELD APPLICATIONS

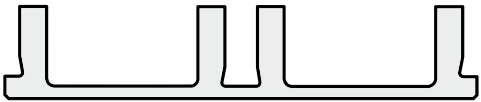
RESIDENTIAL, SOCIAL, COMMERCIAL

PRODUCED BY

SLIPFORMER **sf** - WET CASTING **wf**

ELEMENT DIMENSIONS

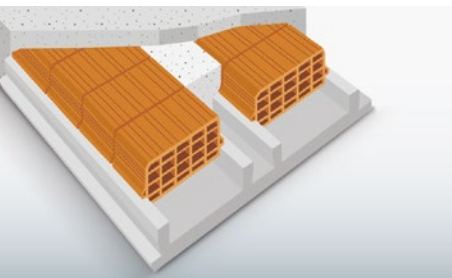
width 1200 mm • Overall slab height 120-250 mm
height of lower part 40-65 mm



Half slabs are used as covering elements in residential, social and commercial construction. Half slabs are used in construction projects that have high loading and/or large spans.

A floor is usually made of half slabs with hollow blocks (concrete or clay) or polystyrene in-fills. The concrete and clay in-fill blocks can be laid in two layers. The in-fills keep the weight of the floor to a minimum and are then covered with in-situ concrete to form the ribs and the floor slab.

As well as the prestressed wire reinforcement the half slabs have steel mesh embedded in the lower part to further increase the element strength.



To ensure adequate fire resistance the slab can be manufactured with a different thickness of the lower part to give a greater concrete covering of the steel reinforcement .

Overall Slab height (mm)	H 120		H 160		H 200		H 250	
Height of lower part (mm)	40	65	40	65	40	65	40	65
Weight (Kg/m ²)	141	185	164	207	186	228	213	256
CAN BE ADAPTED ACCORDING TO CUSTOMER REQUIREMENTS								



PRESTRESSED SLABS | HALF SLABS



The dimensions of the concrete elements and the prestressed steel wire configuration can be changed according to the element technical specifications required.

These are used in many applications. Concrete elements can be produced up to 13 m long



Assured quality by using specific equipment for the manufacture of the concrete elements combined with a high end quality control system



The combination of half slabs with clay in-fills or polystyrene insulation allows the construction of various floor thicknesses.



FILIGREE SLABS

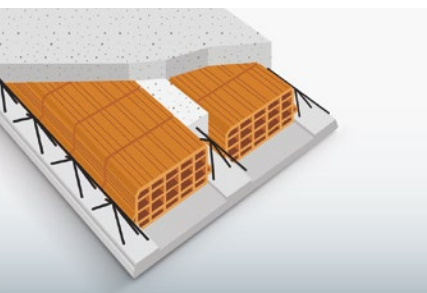


FIELD APPLICATIONS
RESIDENTIAL, SOCIAL

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SLIPFORMER *sf* - WET CASTING *wf*

ELEMENT DIMENSIONS
width 1200 mm • Overall slab height 250 mm
height of lower part 40-65 mm

Slabs with steel lattice are used as covering elements in residential and social construction. A floor is usually made of Filigree slabs with hollow blocks (concrete or clay) or



Overall Slab height (mm)	H 250	
Height of lower part (mm)	40	65
Weight (Kg/m²)	96	156
CAN BE ADAPTED ACCORDING TO CUSTOMER REQUIREMENTS		



polystyrene in-fills. The in-fill blocks can be mounted in 2 steps. The in-fills keep the weight of the floor to a minimum and are then covered with in-situ concrete to form the ribs and the floor slab.

As well as the prestressed wire reinforcement the Filigree slabs have steel mesh embedded in the lower part to further increase the element strength.

To ensure adequate fire resistance the slab can be manufactured with a different thickness of the lower part to give a greater concrete covering of the steel reinforcement.



Filigree slabs with clay in-fill blocks



The combination of Filigree slabs with clay in-fills or polystyrene insulation allows the construction of various floor thicknesses.

Filigree slabs with polystyrene in-fill blocks



SOLID SLABS



FIELD APPLICATIONS
RESIDENTIAL, SOCIAL, COMMERCIAL

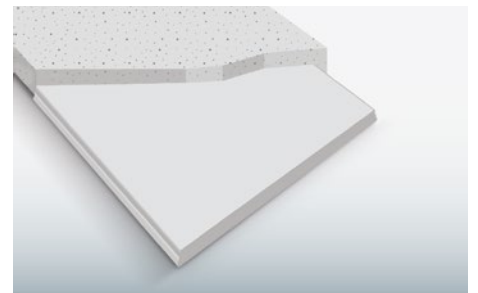
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ELEMENT DIMENSIONS
width 1200 mm • height 100 mm

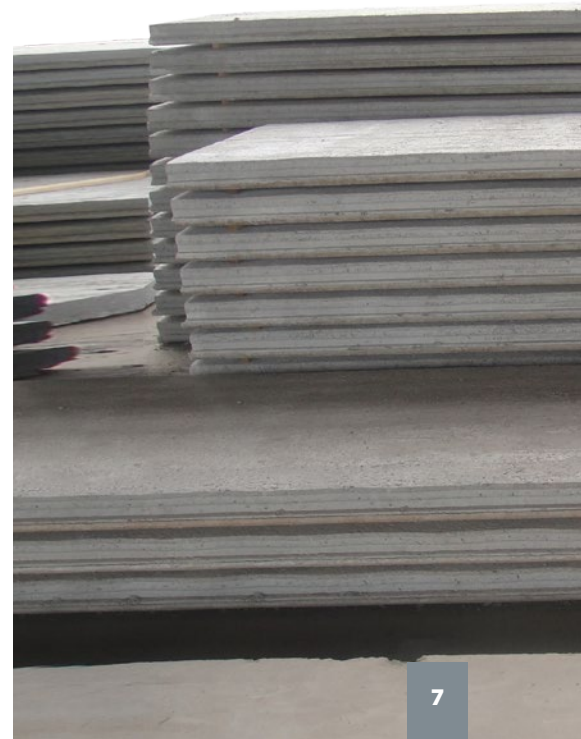


Solid slabs are used as floor elements in residential, social and commercial construction which require a slab with a high level of loading, high fire resistance and good acoustic and thermal insulation.

To ensure adequate fire resistance the slab can be manufactured with a different configuration of the lower part to give a greater concrete covering of the steel mesh.



Slab height (mm)	H 100
Weight (Kg/m²)	234
CAN BE ADAPTED ACCORDING TO CUSTOMER REQUIREMENTS	





Prestressed Slabs

Applications



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