

# ESKYDECK

EPS CONCRETE FORMING SYSTEMS

FLEXIBILITY IN FORMING WITH EPS

## Installation Manual

### Insulated Suspended Structural Slab

Residential

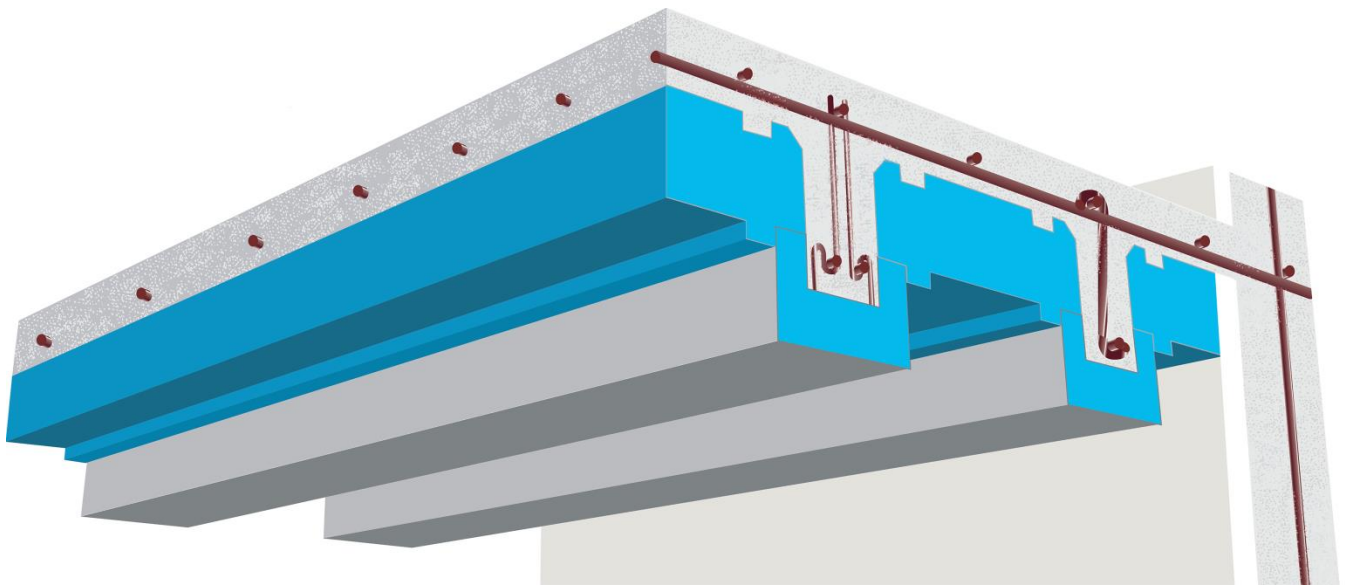
■ Floor

■ Deck

Commercial

■ Roof

■ Green Roof



Superior strength, flexibility, safety and value.

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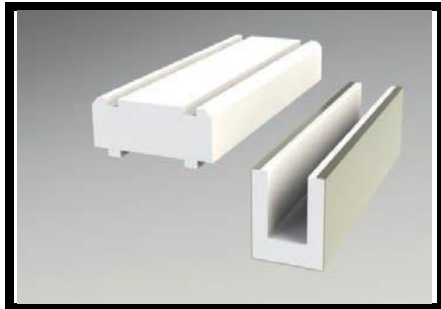
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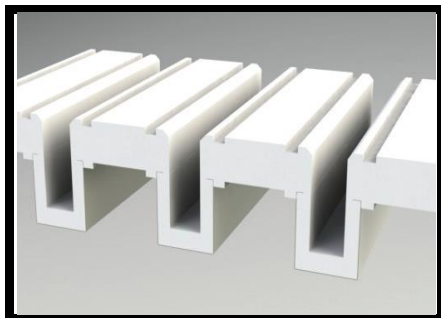
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Eskydeck components



Eskydeck components assembled



Eskydeck is a stay-in-place concrete forming system used to create suspended concrete floor and roof slabs for all types of structures, while providing excellent insulation value.

Two components make up the Eskydeck; Floor Panels and Beam Forms. The Floor Panels are manufactured with EPS (expanded polystyrene). The Beam Forms are also manufactured with EPS, but wrapped with a sheet metal jacket. This metal jacket provides rigidity to the form system during installation and concrete placement, as well as providing plenty of attachment surfaces for utility installation and underside finishes.

The Floor Panels bridge the gap between the Beam Forms, which are typically spaced at 600 mm on centre, and span in one direction.

When assembled the Floor Panels and Beam Forms provide the form work for a suspended insulated concrete slab. The components remain in place to provide superior insulation with a 100 percent thermal break.

The components are available in several size variations allowing engineers and designers the freedom to choose the configuration that best suits their application of various spans and loading conditions.

## 1.1 - INTRODUCING THE ESKYDECK SYSTEM CONTINUED

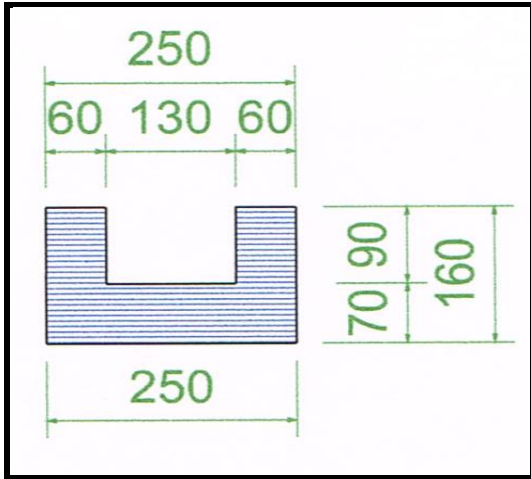


The structural capabilities when using Eskydeck are not provided by the form system. But rather, the concrete and reinforcement which is placed on the form work becomes a structural one way slab with integral beams.

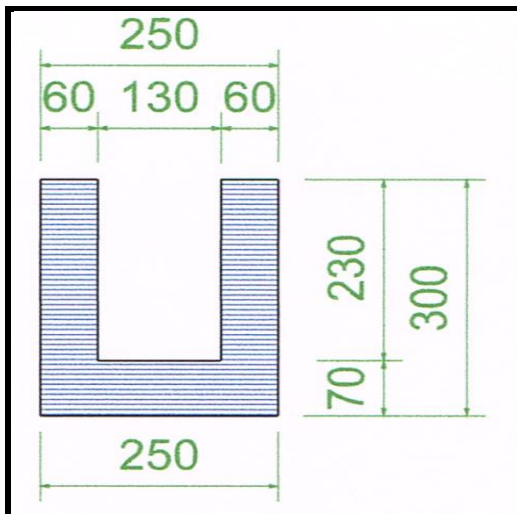
Some other applications and key features of Eskydeck include:

- Compatible with insulated concrete forms, cast-in-place concrete, precast concrete, structural steel, masonry and wood-framed walls.
- Provides a safe working deck for utility and rebar placement prior to concrete placement.
- The Floor Panels and Beam Forms provide excellent insulation, which is ideal for slabs with radiant heat.
- Designed to be light weight, quick and easy to install without the need for heavy equipment or tools, saving costs in labour and construction time.
- Creates a reinforced concrete joist and deck that's familiar to construction trades, which reduces the learning curve for new installers.
- Contributes to a healthy environment and energy efficient building by providing excellent insulation; EPS and concrete are nontoxic, does not give off gas, and provides no nutrient source for mould or pests.

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160 EPS Beam Form



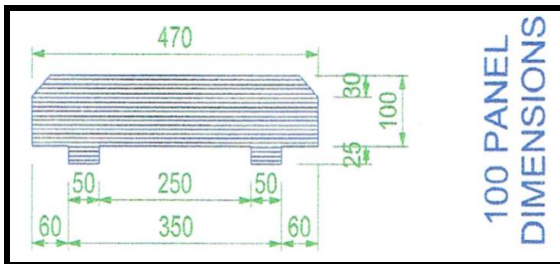
300 EPS Beam Form

There are two principle components to the Eskydeck; the Beam and Panel. Both components are available in various sizes allowing a wide range of slab thicknesses and beam depths. (See drawings 2 - 6 in Dimension and Specifications for Architects and Designers) The Beam Forms when assembled, create a floor system with beams spaced at 600 mm on centre.

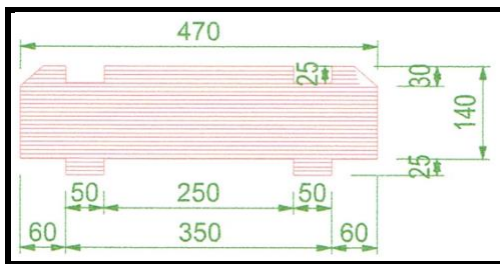
**BEAM COMPONENT**

The Beam Form is available in two depths, 160 mm and 300 mm, each with 70 mm of EPS thickness in the form bottom.

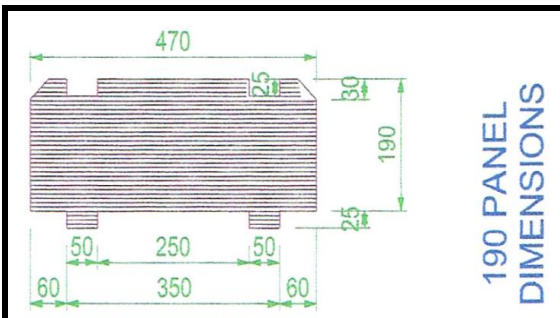




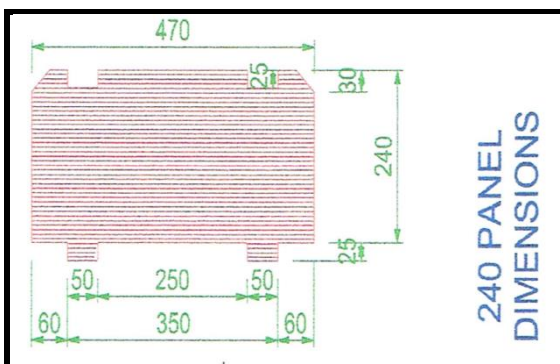
100 PANEL DIMENSIONS



140 PANEL DIMENSIONS



190 PANEL DIMENSIONS

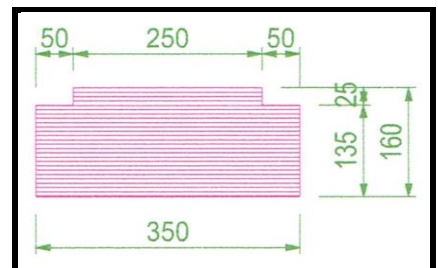


240 PANEL DIMENSIONS

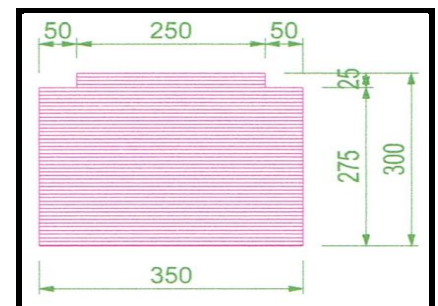
**PANEL COMPONENT**

The Panel is the second component and is available in four depths and two configurations; the Standard Panel and the Blockout Panel.

The Blockout Panels have additional EPS, which is flush with the bottom of the Beam Form, and can be used for the entire floor, or just at the ends of each beam to close the space between the beam ends and the interior face of the walls. The Blockout Panel also prevents concrete from spilling out between Beam Forms at slab edges.



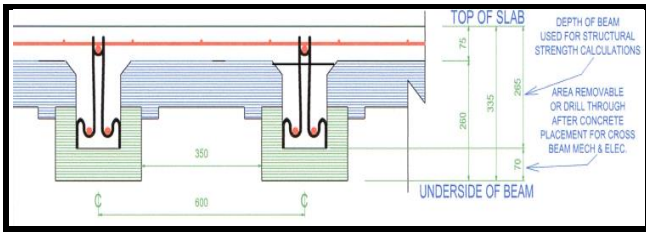
160 BLOCK OUT



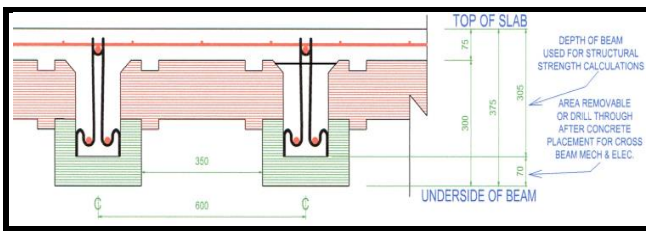
300 BLOCK OUT



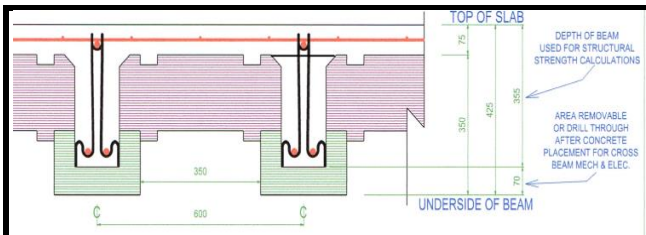




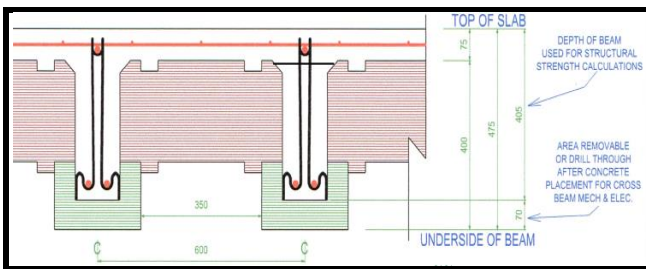
TRIPLE CHAIR 100 PANEL



TRIPLE CHAIR 140 PANEL



TRIPLE CHAIR 190 PANEL



TRIPLE CHAIR 240 PANEL

**CONCRETE PLACEMENT**

Another key feature of the Eskydeck is having the choice to place concrete in the beam and slab at the same time (monolithic pour) or in two separate operations (two pour system).

In many cases, it's advantageous to conduct a two-pour system. The first pour consists of filling the Beam Forms up to the top of the Floor Panel. With the structural reinforcement contained primarily in the beam voids it is possible to pour the structural portion of the floor without the slab portion. This allows projects to maintain tight schedules by grouping all work for each trade to a single site visit.

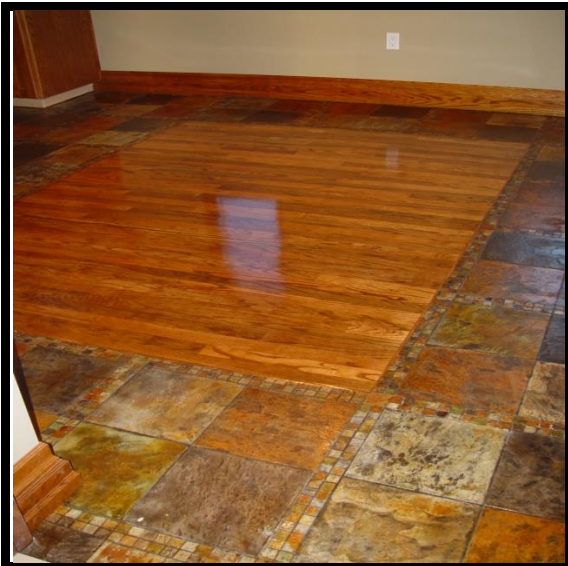
Eskydeck installed with ICF or cast-in-place concrete wall systems can benefit from placing concrete in both the wall and floor forms at the same time.

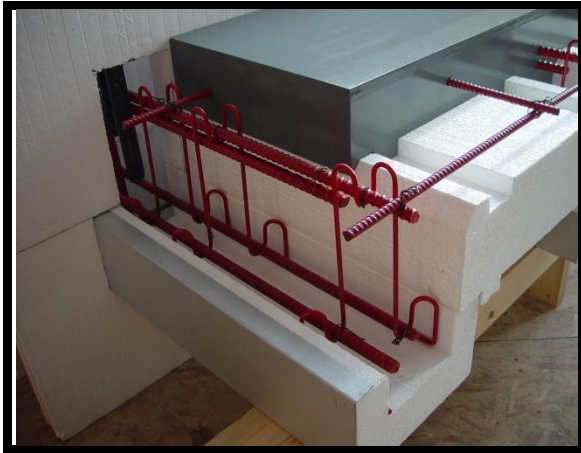
When only the beams need to be placed for structural integrity, projects are not delayed while waiting to schedule trades for rough-in work before concrete placement can be carried out. The EPS deck can be used as a work platform to proceed with building construction once the concrete has been placed in the Beam Forms. This allows multiple floors to be built without subtrades required to rough-in-prior to progressing to the next level.





Even with concrete block, precast, steel and wood frame wall systems it can be advantageous to delay concrete placement between the beam and slab. Most suspended concrete slabs have additional floor coverings such as tile, hardwood, etc. Eskydeck is especially suited for decorative concrete finishes. Slabs requiring special finishes can now be placed inside, sheltered from the environment, after sub trade rough-in reducing both placement difficulties and sub trade damage.





Engineering is to be reviewed by the project engineer or a third party engineer, including shoring requirements.

Eskydeck is a forming system not a structural system. Eskydeck provides standard details for reinforcement placement as well as design tables for span limitations at various design loads. Detail drawings for connection of the Eskydeck to various wall or support systems are also provided to aid in the installation.

It is the responsibility of the project engineer to decide which details are applicable for each project or provide specific details for each installation. Various drawings are provided in this guide to aid in the design and installation process. Every project must have a licensed engineer design the structural concrete slab and support wall based system on the loads and forces which will be imposed upon it in its end use. Although Eskydeck provides generic span tables and connection details, it is still the responsibility of the builder to make sure each application has been reviewed and approved by a structural engineer licensed to practice in the jurisdiction of the project.