

OP-DECK® is a lightweight insulated floor system. The advantages of steel decking/concrete composite floors and reinforced in-situ concrete have been combined in this unique patented flooring system. The OP-DECK®/concrete composite concrete flooring system is based upon a traditional in-situ concrete process but incorporating optimal design and installation flexibility.

The system

An OP-DECK® floor can be laid on supporting structures of steel, concrete, brickwork, timber, etc. The OP-DECK® sandwich floor panels function as permanent shuttering for a relatively thin reinforced concrete floor with a free span of up to 10 metres maximum.

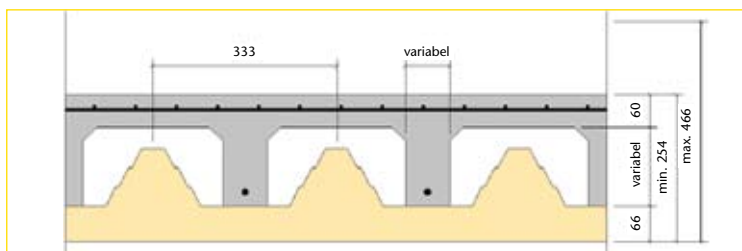
Much lighter than PCC or in-situ concrete floor systems, OP-DECK® comprises of a sandwich panel made from thin profiled steel sheets with PIR foam insulation. EPS profile block used in conjunction with the sandwich panel ensure further weight reduction and turn the floor into a



concrete floor based upon a T-beam principle (concrete rib floor). Both components, the sandwich panels and the EPS profile blocks are installed on site. The end result after fixing the reinforcement and pouring concrete is a lightweight, fully insulated floor

with a large free span, small floor zone height and a smooth white under side soffit ceiling.

Under floor heating and complete energy management systems are easily incorporated within an OP-DECK® floor.



The system elements

- OP-DECK® sandwich floor panel: flat under sheet 0.7 mm + core thickness PIR 66 mm + profiled top sheet 0.9 mm.
- OP-DECK® EPS profile blocks.
- Detailed rebars and anti-crack mesh.
- Concrete C28/35, liquidity class F5.



Identifying properties

- Finished floor depths from 250 mm
- Low weight (from 190 kg/m²)
- Free span up to 10 m¹
- High permissible load (Prep)
- High bearing capacity at point load (Prep)
- Design flexibility
- Fire-resistance ≥ 60 minutes
- Highly insulated (Rc > 4 [m².K/W])
- Strut-free installation (max. 5.5 m¹)
- Simple and fast installation
- Easy logistics at the building site



Application possibilities

- Car parking roof decks
- Insulated concrete roofs
- Insulated (ground) floors
- Cantilever floors
- Terraces and roof gardens
- Long-span concrete floors/roofs
- ICF projects
- Renovation
- Adding extra floors to buildings
- Modular construction



Design software

OP-DECK® design software has been specially developed for the system to provide details of the optimum cross section based upon performance and design details provided by the client. Apart from providing a load bearing structural floor an OP-DECK® floor provides up to 60% reduction in weight against other concrete floor systems. As a result the total cost of the project can be considerably reduced.



Installation

OP-DECK® sandwich floor panels and EPS profiled blocks are quite simple to install – fixing details are available upon request. If required, installation can be provided by nominated specialist contractors.

Calculations / Drawings

Will be produced by Reppel but must be signed off by the project engineer.

Specification service

OP-DECK® specification details are available from Reppel or can be downloaded from the RIBA NBS Plus website.

Service and advice

If you have any questions you may contact our technical consultants. They are available to answer any question or query and will provide detailed advice regarding the suitability, use and installation of the OP-DECK® flooring system.

Technical data for OP-DECK® floor system

Width of sandwich floor panel	:	1,000 mm
Height of sandwich floor panel	:	173 mm
Sandwich floor panel in custom lengths	:	up to max. 16,000 mm
Nominal steel thickness of under sheet	:	0.7 mm
Standard coating (incl. protective foil)	:	interior coating white*
Nominal steel thickness of top sheet	:	0.9 mm
Standard coating	:	interior coating white*
Weight of sandwich floor panel	:	approx. 18 kg/m ²
Height of EPS profile blocks (dependent on floor design)	:	min. 138 mm

* Other coating systems and colours are available on request.



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