

The Formwork Experts.

Doka beam I tec 20

Data Sheet



The Composite formwork beam I tec 20 is a solid-web beam pursuant to DIBT (German Institute of Building Technology) building-industry approval with a special structure and innovative polyurethane end reinforcement for low material quantities and extended service life.

Basic design concept

- Solid-web beam made of wood and wood-based materials pursuant to national technical approval n° Z-9.1-773.
- Spruce- and birchwood-ply web; plies sorted by visual inspection and 100 % tested by the tensile loading test method (proof-loading). Plastic sheet on the broad faces of the flanges.
- Poplar-plywood web with grey web coating.
- Polyurethane end reinforcement
- 2 system holes at each beam end

Glue-bonding

Glues/adhesives used are tested and approved systems for load-bearing applications indoors and outdoors.

Surfaces

- Yellow varnish without wood preservatives.
- Grey plastic sheet on the broad faces of the flanges.
- Grey web coating.

Technical data

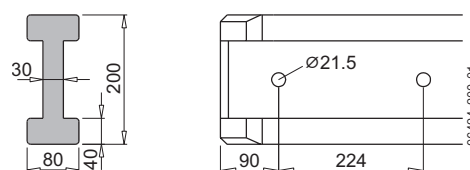
Note:

All values in the tables are based on a wood moisture content of $12 \pm 2\%$ on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the beam.

Doka beams I tec 20 are designed for loading in the direction of the height of the beam.

Dimensions:



Figures given in mm

Lengths:

Length [m]	
1.80 - 5.90	with end reinforcement
> 5.90 - 12.00	trimmed off straight with ends sealed

For details, see article list.

Tolerances:

	Tolerance
Height	± 1.0 mm
Length up to 6 m	+ 0 / - 3,0 mm
Length > 6 m	± 3.0 mm

Weight: 5,6 kg/lin.m

Mechanical properties (in accordance with Approval n° Z-9.1-773):

Permitted shear force Q [kN]	20.0
Permitted moment M [kNm]	9.0
Flexural stiffness EI [kNm²]	640

These values allow for a $\gamma_F = 1.5$, a k_{mod} of 0.9 and a $\gamma_M = 1.3$. Under different conditions of use and/or with moisture content > 20%, the values have to be modified accordingly.

Use

- For use in wall-formwork and slab-formwork systems, tunnel formwork, automatic climbing formwork, etc.
- These beams have the same dimensions as Doka beams H20 but are approximately 80 % stronger, so the reduction in material quantities in slab and wall formwork is considerable.
- Together with the plastic sheet on the broad faces of the flanges, the polyurethane end reinforcement contributes to prolonging service life.
- Beam-flange markings in a 50 cm grid for Dokaflex and Dokaflex 30 tec systems.

Notes on use

This formwork beam is intended for use in load-bearing towers and formwork.

- Prudent handling is important in order to achieve maximum service life, and this applies in particular when stripping out slabs.
- Protect stacked beams from extreme climatic influences such as exposure to sunshine or moisture by roofing them over or covering them with breathable tarpaulins. This reduces cracking, fungal attack and mould.
- Only cover them – never envelope them completely.
- If the ends of beams are square-cut at Doka branches or at jobsites, they must be treated with I tec 20 beam-end sealant in order to ensure the full lifespan of the beam.

General information

The data stated here are guide values.

Note:

Follow the directions in the 'Composite formwork beams' User Information booklet!
You can download it here:



www.doka.com/composite-formwork-beams