

ITS-beams

Use and technical conditions

Scope of application:

Precast reinforced concrete beams are mainly used for bridging openings in building structures. The beams required are selected according to the gauge of the beam cross-section, the opening to be bridged, and the load on the beam.

Standards:

The beams must be designed in accordance with: EVS-EN 1992-1-1:2005+NA:2007

The beams must be manufactured in accordance with: EVS-EN 13225:2013

Storage and transport:

Mountable reinforced concrete beams to be assembled are stored on a tight horizontal substrate. A supportive squared timber is placed under each end of the beam (e.g. 100 × 100 mm). The maximum distance of the supportive squared timber from the beam ends is 300 mm. The beams are transported and stored in a single layer.

Lifting:

Mountable reinforced concrete beams may only be lifted from hooks designed for this purpose. Both traverse and slinging devices can be used for lifting. When lifting with slinging devices, care must be taken to ensure that the angle of inclination of the slinging devices, measured from the horizontal surface of the beam, is not less than 60° and not greater than 90°.

Montage:

Mountable reinforced concrete beams are supported horizontally on the structures. The beams have their own fixed lower surface and upper surface. The nominal length of beams for supporting structures shall be at least 300 mm. The beams are supported on a layer of liquid mortar to achieve an even support surface.

Environmental conditions:

Mountable reinforced concrete beams are designed to work in dry or permanently wet conditions. Environmental class XC1 – concrete for indoor use with low humidity; concrete that is constantly submerged. When storing beams outdoors in sub-zero temperatures, the environmental class is XF1 – moderately saturated with water, without antifreeze.

Loads:

Mountable reinforced concrete beams to be assembled are designed to take on vertical loads applied onto the beams. The beams are designed to work according to a single span simple beam scheme. The use of beams as cantilever beams is prohibited. The load bearing capacities of the beams have been designed considering that permanent loads represent 70% and variable loads 30% of the total loads on the beams.

Chief engineer:

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