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Measurement of Beam Deflection and Toughness

Typical configuration

General description

This test is performed to assess the flexural performance and the residual resistance characteristics of fiber reinforced concrete (FRC) and shortcrete. This test has to be performed with a suitable flexural frame having proper stiffness and capacity as, for instance, our models 50-C15xx/FR or 50-C17xx/FR, and a control console capable of applying load in displacement control as our model MCC or Automax Multitest.
The complete set includes a frame suitable for proper positioning of transducers on the beam specimen, two high precision displacement transducers and an electric mean device (not required for Automax Multitest control console).

Mean device P0331/2 (see Accessories) shall be used with MCC control console only. See **Techincal Specifications**.

Standards

- ASTM C1609
- ASTM C1018

Specifications

Confirguration needed to ASTM C1609

50-C1500/5
Auxiliary testing frame for the measurement of deflection of beams

82-P0331/C High accuracy displacement transducer 10mm travel (2 PCS needed)

82-P0331/2 Electric mean device for displacement transducer 82-P0331/C
Note: not required for Automax Multitest control console

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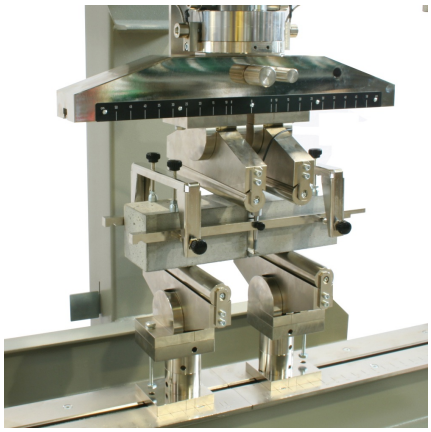
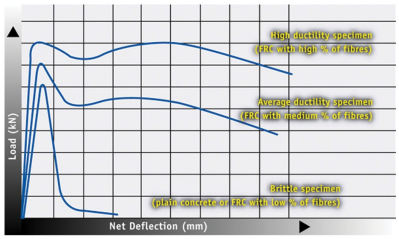


Beam deflection test in the C1601/FR testing frame

82-P0331/2 Electric mean device



Typical diagram for a FRC beam subjected to flexure test. The absorbed energy is the area under the load/deflection curve. The use of fibres in the concrete mix increases its capacity to absorb energy and hence its ductility.

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Beam deflection test arrangement including two high precision displacement transducers and supporting frame

Products

50-C1500/5

Auxiliary testing frame for measurement of deflection of FRC beams to EN 14651, ASTM C1609

82-P0331/C

High precision displacement transducer LVDT type 10 mm travel

Accessories and consumables

82-P0331/2

Electric mean device for 2 or 3 displacement transducers mod. P0331/A /B /C