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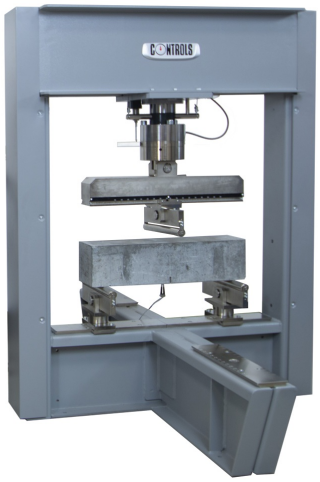
DATA SHEET

High Stiffness Flexural Frame, 350 kN Cap., DUPLEX



Testing FRC beams to EN 14651 with 350kN high stiffness frame 50-C1701/FR. See Additional Information

General description

This high stiffness flexural frame has been designed to have a double testing mode: **parallel and orthogonal.**

Parallel mode is meant to be used for displacement controlled testing on advanced construction materials, e.g. fiber reinforced concrete (FRC) and sprayed concrete.
These tests are significantly affected by the actual frame stiffness therefore the relevant international Standards state stiffness limits which are exceeded by this new model (better than 200 kN/mm).
This remarkable result comes from the frame sections but it is also derived from the particular layout which keeps the specimen aligned with the frame crossbeams maximizing structural rigidity.

Orthogonal mode is meant to be used to test long specimens having more than 880mm length.

The horizontal daylight accommodates large specimens (slab, flagstones), concrete beams and kerbs long up to 880 mm.

The frame is fitted with high precision load cell (recommended for FRC testing), with piston travel limit switch and connection kit to the control console. Bearers not included. See accessories.

The frame includes two rulers, two additional rulers are available on request. Rulers with graduations in inches are available on request.

Main features

- **High rigidity (200 kN/mm), especially suitable for testing FRC and sprayed concrete**
- **Double testing mode: parallel and orthogonal**
- **For testing different kind of specimens (beams, flagstones, slab)**
- **Suitable for testing Round panel dia.800 mm to ASTM C1550**
- **Max span between lower rollers: 1.5m**
- **Load measurement by high precision load cell**
- **Piston return by counterweights**
- **Piston travel limit switch included**

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Standards

- EN 14488-5
- EN 14651
- ASTM C1550
- EN 12390-5
- ASTM C293
- ASTM C78
- EN 1339
- EN 1340
- ASTM C1609
- ASTM C1550

Specifications

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Models 50-	Duplex C1701/FR(1)
Max capacity kN	350
Horizontal clearance, mm	900
Max. vertical clearance, mm*, with	
- 50-C1700/1	260
- 50-C1500/2	180
- 50-C1500/2+C1500/3	245
- 50-C1500/2+C1500/4	215
- 50-C1500/6	165
- 50-C1500/7	405
- 50-C1700/7	100
Distance between upper rollers, adjustable, mm	From 100 to 500 or single roller
Distance between lower rollers- Parallel testing mode, adjustable mm,	From 150 to 800
Distance between lower rollers- Orthogonal testing mode, adjustable mm,	From 850 to1500
Piston travel, mm	130
Overall dimensions (l x w x h) mm	1150 x 1600 x 1550
Weight approx., kg	520

* The vertical daylight can be reduced by using the distance pieces already included useful to reduce the daylight by: 50mm, 100mm and 150mm. Additional distance pieces are available as Accessories.

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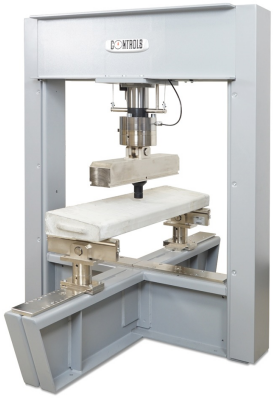
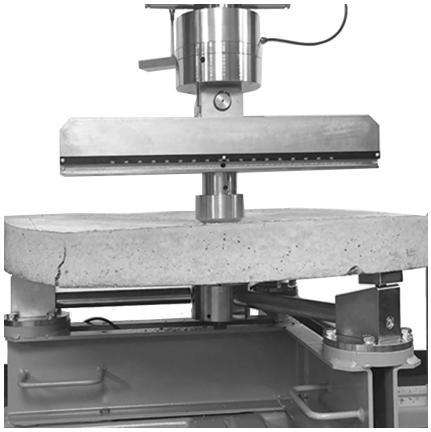


Testing kerbs



Flexure testing on FRC round panel to ASTM C1550 with high stiffness frame 50-C1701/FR.

Detail of CMOD testing to EN 14651 with 200kN high stiffness frame 50-C1701/FR. See Additional Information

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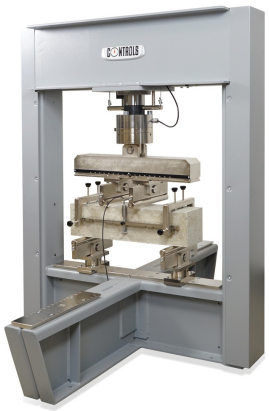
Energy absorption test to EN 14488-5 with 350kN high stiffness frame 50-C1701/FR. See Additional Information



Testing FRC beams to ASTM C1609 with 350kN high stiffness frame 50-C1701/FR. See Additional Information

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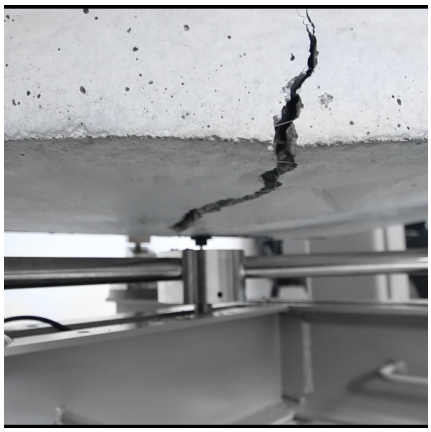

Detail of round slab test to ASTM C1550

Products

50-C1701/FR

DUPLEX - Parallel and orthogonal testing mode - High stiffness 350 kN cap. flexure frame with loadcell and connection kit for separate control console. Upper and lower rollers not included.

Accessories and consumables

50-C1500/6

Accessory for 50-C15xx/FR and 50-C17xx/FR flexure frames for testing concrete slab to EN 14488-5. Including supporting square frame and spherically seated loading element. To be completed with displacement transducers 50-C1500/9 and 50-C1500/8.

50-C1500/8

LDT displacement transducer for 50-C15xx/FR and 50-C17xx/FR flexure frames, 50mm travel, for underneath displacement measurement of sprayed concrete slab.

50-C1500/9

100mm LDT displacement transducer for 50-C15xx/FR and 50-C17xx/FR flexure frames for measuring piston travel. Complete with mounting adaptors

50-C1700/7

Accessory for flexure frames 50-C17xx/FR and 50-C1601/FR for testing sprayed concrete slab to ASTM C1550. Includes: 3-points supporting base and spherically seated loading element.

50-C1700/8

Displacement transducer for FRC slab central deflection, 60 mm travel

50-C1500/2

Set including 2 bearers and 1 loading roller 50-C15xx/FR and 50-C17xx/FR flexure frames for flagstones (paving slab) testing to EN 1339. Roller dimensions: 40 mm dia x 620 mm.

50-C1500/3

Upper loading swivel joint 40 mm dia for 50-C15xx/FR and 50-C17xx/FR flexure frames for kerbs stones testing to EN 1340. Lower bearers notincluded. It shall be used in combination with accessory 50-C1500/2.

50-C1500/50

Distance piece 50mm thickness for flexure frame

50-C1500/7

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Set of spherically seated 165 mm dia. lower and upper platens for 50-C15xx/FR and 50-C17xx/FR flexure frames for compression test.
50-C1500/80

Distance piece 80mm thickness for flexure frame
50-C1700/1

Upper and lower roller assembly for 50-C1701/FR flexure frame for centre and third point testing of concrete beams up to h. 250mm, conforming to EN12390-5, ASTM C78, C293, C1018, EN 14651. Roller dimensions: 30 mm dia. x 310 mm long
50-C1700/4

Upper loading rollers for third and center point flexure test, including two loading rollers 310 mm x 40 mm dia. To be used with support bearers of 50-C1500/2.

50-C1700/R

Two additional rulers with graduation in mm for 50-C1701/FR.

50-C1700/R1

Replacement of the standard rulers with rulers with graduation in inches for 50-C1711/FR.

50-C1700/R2

Replacement of the standard rulers with rulers with graduation in inches for 50-C1701/FR.