

Universal, open structure flexural frame, 300 kN cap.

A unique flexural frame combining high accuracy and stiffness, high load capacity and easy specimen loading

EN 1339 | EN 1340 | EN 12390-5 | ASTM C78 | ASTM C293 | ASTM C1550 | EN 14651 | EN 14488-3 | EN 14488-5 | ASTM C1609 | ASTM C1018

MAIN FEATURES

- High flexibility universal flexural frame, 300 kN cap.
- C-shaped open structure for easy specimen loading,
- Vertical rod hydraulically controlled to compensate frame deformation during the test
- Load measurement by high precision load cell
- Large testing space for a wide range of accessories for conventional and tests under control of displacement and strain rate.
- For connection to suitable control consoles (ADVANTEST, MCC MULTITEST)

GENERAL DESCRIPTION

UNIFLEX 300 flexural frame has been designed to satisfy the stringent requirements prescribed by the standards concerning, above all, the determination of deformability and ductility index of sprayed concrete and fiber reinforced concrete. The “C” shaped open structure allows an easy and practical front loading but, once the specimen is in the loading position, the structure is closed by a vertical rod hydraulically clamped and controlled to compensate frame deformation during the test thus ensuring high rigidity. Fitted with high precision strain gauge load cell for accurate and reliable test results. The frame has to be connected to a control console and completed with the suitable testing accessories depending on the test to be performed. The tests under control of displacement and strain rate can only be performed with the [ADVANTEST 9, Servo-hydraulic control console](#) or [MCC, multifunctional control console](#)

TECHNICAL SPECIFICATIONS

- Max. load capacity: 300 kN
- Load sensor: high precision load cell
- Piston travel: 110 mm
- Max. Vertical daylight (without accessories): 546 mm
- Max. vertical daylight with accessories:
 - 50-C1601/1: 263 mm
 - 50-C1601/1B: 285 mm
 - 50-C1601/2: 263 mm
 - 50-C1601/3: 221 mm
 - 50-C1601/4: 350 mm
 - 50-C1601/6: 128 mm
 - 50-C1601/7: 110 mm
- Horizontal daylight (between uprights) : 900 mm
- Min./Max. distance between lower bearers: adjustable from 80 to 1500 mm
- Min./Max. distance between upper bearers: adjustable from 80 to 500 mm
- Overall dimensions (lxwxh) : 1700x1266x1512 mm
- Weight approx. : 605 kg

Note: Using the accessories 50-C1601/1B, 50-C1601/2, 50-C1601/3, 50-C1601/4, the accessory 50-C1601/KIT must be used. See accessories.

ORDERING INFO

50-C1601/FR

UNIFLEX 300, Universal open structure flexural frame, 300 kN cap., complete with connection kit for separate control console.

ACCESSORIES

50-C1601/1

Upper and lower roller assembly for centre and third point test of concrete beams up to 200x200x800 mm, conforming to EN 12390-5 and ASTM C78, C1609, C1018, EN 14488-3.

Bearers dimensions: 40 mm dia x 300 mm long

Weight approx: 52 kg

50-C1601/1B

Upper and lower roller assembly for centre and third point test of concrete beams up to 200x200x800 mm, conforming to EN 12390-5 and ASTM C78, C1609, C1018, EN 14488-3, EN 14651.

Bearers dimensions: 30 mm dia x 300 mm long

Weight approx: 52 kg

50-C1601/2

Set of one upper and two lower roller assembly for testing paving flags, conforming to EN 1339

Bearers dimensions: 40 mm dia. x 620 mm long

Weight approx: 66 kg

50-C1601/3

Swivel jointed loading pad for testing kerbs, conforming to EN 1340. To be used with support bearers of 50-C1601/2.

Weight approx: 5 kg

50-C1601/4

Set of lower platen and upper platen spherically seated, 165 mm dia., for compression tests on small and low strength specimens. This accessory can also be used to perform the splitting test on paving blocks with the accessory 50-C9070.

Weight approx: 19 kg

50-C1601/6B

Accessory for testing sprayed concrete slab to EN 14488/5. Including supporting square base and spherically seated loading element. To be completed with displacement transducers 50-C1500/9 and 50-C1500/8.

Weight approx: 78 kg

50-C1601/7

Accessory for testing round slabs of fiber reinforced concrete to ASTM C1550.

To be completed with displacement transducers 50-C1500/9 and 50-C1500/8.

Weight approx: 59 kg

50-C1500/8

Displacement transducer with 50mm travel for reading displacement of sprayed concrete slab centre under concentrated load.

50-C1500/9

100mm displacement transducer for measuring the piston travel. Complete with attachments.

Weight approx: 1 kg

50-C1601/KIT

Set of 4 distance pieces dia. 68x42 mm high and 2 base plates for adjusting the vertical daylight.

Weight approx: 10 kg

ADDITIONAL INFORMATION

TEST SETS

Measurement of beam deflection and toughness to EN 14448-3, ASTM C1609

50-C1601/FR UNIFLEX 300

50-C1601/KIT Set of 4 distance pieces

50-C1500/9 100mm piston travel displacement transducer

50-C1601/1B Set of 2 supports and 2 loading rollers

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

Displacement transducer for measurement of crack opening to EN 14651

50-C1601/FR UNIFLEX 300

50-C1601/KIT Set of 4 distance pieces

50-C1500/9 100mm piston travel displacement transducer

50-C1601/1B Set of 2 supports and 2 loading rollers

82-P0331/E High precision displacement transducer to measure Crack Tip Opening Displacement (CTOD) and Crack Mouth Opening Displacement (CMOD).

Energy absorption test on slabs

50-C1601/FR UNIFLEX 300

50-C1500/9 100mm piston travel displacement transducer

to ASTM C1550

50-C1601/7 accessory for FRC round, slabs, 800 mm dia. x 75 mm thick

50-C1500/8 Displacement transducer with 50mm travel

to EN 14488-5

50-C1601/6B accessory for FRC square slabs, 600mmx600mmx100mm

50-C1500/8 Displacement transducer with 50mm travel

UPGRADING

Special calibration procedure

50-C0050/CAL

Special calibration of load digital readout unit assuring class 1 from 1% of testing machine full scale (maximum load)

The above upgrading is suitable if the frame is connected to automatic testing machines or control consoles.



300kN UNIFLEX frame (50-C1601/FR) with bearers (50-C1601/1)



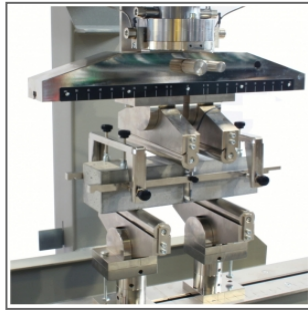
Easy specimen loading with fork lift



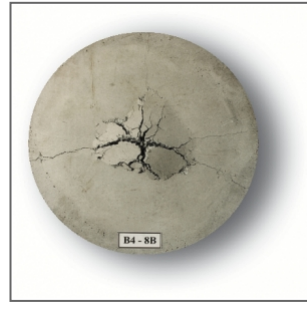
300kN UNIFLEX frame (50-C1601/FR) fitted with accessory for energy absorption tests on square slab (50-C1601/6B)



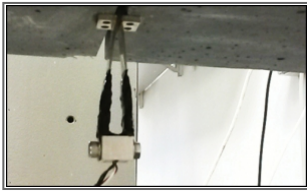
300kN UNIFLEX frame (50-C1601/FR) fitted with accessory for energy absorption tests on round slab (50-C1601/7)



Beam deflection and toughness test, detail of auxiliary frame (50-C1200/5) fitted with two displacement transducers (P0331/C)



Energy absorption test, detail of dia.800mm slab



CMOD test, detail of clip gauge transducer (82-P0331/E)



300kN UNIFLEX frame (50-C1601/FR) fitted with accessories for flags testing (50-C1601/2 and 50-C1601/KIT)



300kN UNIFLEX frame (50-C1601/FR) fitted with accessories for kerbs testing (50-C1601/2, 50-C1601/3, 50-C1601/KIT)



300kN UNIFLEX frame (50-C1601/FR) fitted with accessory for compression tests (50-C1601/4 and 50-C1601/KIT)

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