FULLY AUTOMATIC FLEXURAL TESTING MACHINE FOR FIBRE-REINFORCED CONCRETE 300kN

Standard: BS EN 14651 / ASTM C1609

Compression And Flexural

Specially designed for precise displacement-controlled on measuring the flexural tensile strength of Fiber Reinforced Concrete (FRC) of 150x150x500 to 700mm dimensions This method of FRC testing allows for the calculation of a set of residual flexural tensile strength values as well as the limit of proportionality correspond to the CMOD (crack mouth opening displacement) & deflection measurement.

Coupled with professionaly developed software for the modern FRC industry, this cutting-edge small footprint machine is a perfect solution for FRC & related components manufacturer to simulate the actual performance of FRC on structures. By eliminating the use of conventional hydraulic system, this machine provides the ultimate perfomance for reliable testing of FRC.

FEATURES:-
- Oversized rugged main frame & solid flexural attachment for super-stable loading
- Oil-free long lasting electromechanical servo-controlled motor for long hours operation
- Easy click automatic test execution according to BS & ASTM with required test data & curve
- High accuracy & repeatability imported load cell with overload protection
- Automatic save required test data & curve & home position after upon completion
- Rapid up / down positioning by software or remote control with over-travel protection
- High precision low speed real-time control according to standard requirement
- Small footprint with big results, space-saving ergonomic design for modern testing laboratories & FRC industries

Main Technical Parameter :

Model Number	NL 4054 X / 001
Max Test Force	300kN
Structure Type	Twin Rigid Column with Twin High Precision Ball Screw
Trailing Space	950 mm (exclude fixtures)
Width Space	440 mm
Test Force Accuracy	±0.5%
Test Speed Range	0.1 - 250 mm/min
Load Resolution	1/100 000
Displacement Resolution	1/1000
Displacement Accuracy	≤0.5%
Resolution of Metal Extenders	1/1000
Accuracy of Metal Extenders	≤0.5%
Accuracy of Extenders	±1 mm
Measuring Range	0.5% - 100% Full Scale
Load Unit	Gf, kgf, N, kN, Lbf, etc.
Curve Display	**Selectable Axial Parameters:** **Y-axis** - time, load, displacement, deformation, stress, strain. **X-axis** - time, load, displacement, deformation, stress, strain.
Data Display	Max. Force, Speed, Specimen Detail, Strength (Kpa, Mpa, N/mm, Nmm)
Main Drive Unit	Precision Servo Drive & Servo Motor
Safety Feature	Emergency Stop, Overload Protection, Upper & Lower Limit Switch Load Sensor with Auto Retreat
Power Source	220 ~ 240 V, 5500 W, 25 A, 1 Ph, 50 / 60 Hz, 7 Hp
Dimension	910(L) x 480(W) x 2000(H) mm
Approx Weight	780 kg

Unit Consists Of :

Model Number	Parts Description	Qty
NL LC – 300kNC	300kN High Precision Load Cell (Cell Type)	1 Unit.
NL 4054 X / 001 – P001	300kN Flexural Attachment, 3 & 4 Point Bending	1 Unit.
NL 6ST – HC1	Handheld Magnetic Control Unit	1 Unit.
TT 6ST – PC1	Desktop Computer Unit c/w Operation and the Software	1 Unit.
NL 4054 X / 001 – P002	Sample Feeder	1 Unit.

*1 Copy of Manual Instruction

Sample Feeder

Accessories :

BS EN 14654	Parts Description
NL 4054 X / 001 – A001	CMOD Fork Transducer 12 x 0.001mm
NL 4054 X / 001 – A002	Datum Pieces With Sharp Edge (per pair)
NL 4054 X / 001 – A003	Displacement Transducer 20 x 0.001mm
NL 4054 X / 001 – A004	Auxiliary Frame
ASTM C1609	**Parts Description**
NL 4054 X / 001 – A003	Displacement Transducer 20 x 0.001mm (2 units)
NL 4054 X / 001 – A004	Auxiliary Frame

Optional Accessories :

Model Number	Accessories Description
NL 4054 X / 002 – A 001	Epsilon CMOD Clip-On Transducer
For Notch Cutting (BS EN 14651) :	
NL 4054 X / 001 – A005	Guide Frame with Lock
NL 4054 X / 001 – A006	Cutting Machine with 2 mm Thick Blade

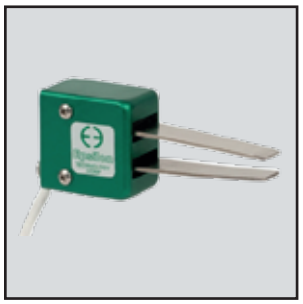
BS EN 14651 Setup

ASTM C1609 Setup

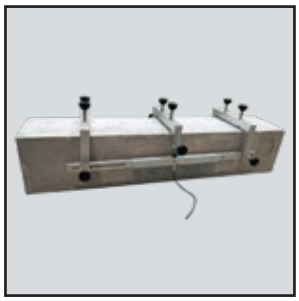
Fork Transducer

Displacement Transducer

Datum Pieces With Sharp Edge



Epsilon CMOD Transducer



Auxiliary Frame

Guide Frame

Cutting Machine With 2mm Blade