

FA SERIES – 25/250kN

Dual Mode Automatic Compression Testers



The Model TO-309E-FA-ET Automatic Compression Tester has a maximum testing capacity of 250kN. It is a dual range testing machine with the availability of a 25kN low capacity load frame as standard that extends the test capability of the machine for low strength compression or flexural testing.

The FA Series features highly robust frames for exceptional stability when testing cylinders or cubes and are made up of three core pieces: the heavy duty load frame, hydraulic pump, and control and display systems.

The large lower bearing block includes a bellows to prevent leaks caused by dust and debris getting into the loading piston. The other advantage of the large bearing block is that it allows for a 10in horizontal entrance opening and plenty of ready access for loading and removing specimens. Additionally, an optional chute enables quick removal of completed specimens and rapid cleaning of the test area.

This series also includes a rapid change platen system to quickly and easily change accessories, switching between cube and beam specimen testing.

The digital display has a straightforward design using a touchscreen LCD display to let operators select the test parameters simply and efficiently. A pace bar graph on the display allows operators to finely tune the loading during the test and, as a further convenience, the display stores up to 200 tests.

The FA series are microprocessor-controlled and the pace rate is automatically controlled by the controller/display; operator control is restricted to starting the test from a PC, if desired.

Because the FA series can communicate with a computer through a bidirectional RS485 and RS232, test start, test data recording, load release at the end of the test and presentation of the test data in graphical form is possible on the supplied software.



Features and benefits

- Dual range – maximum 250kN capacity frame with 25kN low capacity frame.
- Meets or exceeds BS EN ISO 7500-1; ASTM E4 specifications.
- Tests cement, mortar, concrete, lime and fly ash.
- Tests a wide variety of specimen sizes.
- Automatic pace rate control.
- Automatic stress determination and display.
- Interlocked safety doors with mesh window as standard.
- Overload and over-travel safety protection.
- Self-aligning platen with fast accessory change capability.
- Menu-driven interface.
- Automatic data logging.
- Data storage for 200 runs.
- Peak load capture and recording.

Specifications



MODEL TO-309E-DG-ET SPECIFICATIONS

Capacity	56,000lbf/250kN/25,000kgf	5600lbf/25kN/2500kgf
Maximum horizontal clearance	10in/260mm	9in/230mm
Maximum vertical clearance	15in/390mm	9in/230mm
Platen size	5.5in/140mm	5.5in/140mm
Display resolution	0.01 (kN or lbf)	0.01 (kN or lbf)
Specimen size	40mm, 50mm and 70.6mm cubes	40mm cubes & 40 x 40 x 160mm prisms

Notes:

1. Appropriate brick platens can be supplied as an option.
2. A set of spacers to suit stated specimen sizes are supplied with the machine.
3. These models conform to all relevant European CE Health and Safety Directives EN 50081-1, 580081-1, 73/23/EEC, EN 61010-1.
4. Specifications are subject to change without notice.

OPTIONS AND ACCESSORIES

- **TO-320-5500** Platen set for 6 x 12in concrete cylinders
- **TO-320-5502** Platen set for 4 x 8in concrete cylinders
- **TO-320-5504** Platen set for 3 x 6in concrete cylinders
- **TO-320-5510** Platen set for 2in cubes
- **TO-320-5512** Platen set for 6in cubes
- **TO-320-5518** Platen set for blocks up to 12in
- **TO-320-5519** Cylindrical specimen caps – two caps per set
- **TO-320-5520** Rubber insert for 6in cap with 60 shore A hardness (bag of 10)
- **TO-320-5521** Compression frame jig assembly (without platens)
- **TO-320-5521/01** 50mm square platen set for TO-320-5521
- **TO-320-5521/02** 2in square platen for TO-320-5521
- **TO-320-5521/03** 40mm square platens
- **TO-320-5522** Flex jig/attachment 40 x 40 x 160mm
- **TO-320-5524** Cylindrical specimen cap, 4in diameter – two per set
- **TO-320-5525** Rubber insert for 4in cap with 60 shore A hardness (bag of 10)
- **TO-320-5528** Tensile split strength test attachment
- **TO-320-5529** RS232, nine-pin cable
- **TO-320-5532** Rectangular platen set for prisms, 475 x 250mm
- **TO-320-5534** Platen set, 165mm dia, with concentric rings in upper platen
- **TO-31727-1** Strain measurement attachment
- **TO-33101-BS** Flexural test frame, 100kN, no pump, using CTM two-way valve
- **TO-33101-ASTM** Flexural test frame, 100kN, no pump, using CTM two-way valve
- **TO-314-LU-SPL** 1000kN loading frame for testing hollow prisms-3 stack max.
- **TO-320-LU-SPL** Prism/block test frame 3000kN, no pump, uses CTM valve
- **TO-343** Mold in cast iron for 100mm cube
- **TO-344** Mold in cast iron for 150mm cube
- **TO-344-20** Mold in cast iron for 200mm cube
- **TO-414** Mold in steel for 70.6mm cube
- **TO-417** Mold in cast iron for 50mm cube
- **TO-417-CI** Three-gang mold in cast iron for 50mm cube
- **TO-417-3-NB** Three-gang mold in Navy Brass for 50mm cubes-per ASTM

SOFTWARE

- **21001104** Civil Engineering (CTM) Primary platform for Horizon software

SUPPLIED AS STANDARD

- RS232, nine-pin cable
- Five spacers (142, 142, 45, 30 and 20mm)
- Lower platen (150mm diameter)
- Spherical seat with upper platen

ORDERING INFORMATION

- **TO-309E-FA-01-ET** Automatic compression tester, dual mode, 25/250kN capacity, configured for 110VAC, 60Hz
- **TO-309E-FA-02-ET** Automatic compression tester, dual mode, 25/250kN capacity, configured for 220VAC, 60Hz
- **TO-309E-FA-03-ET** Automatic compression tester, dual mode, 25/250kN capacity, configured for 220VAC, 50Hz