

# MODEL TO-317E-STD-FA

## Automatic Standard Compression Testing Machine, 2000kN capacity



The Model TO317E-STD-FA has a maximum testing capacity of 450,000lbf or 2000kN. This machine is primarily designed for the testing of 100mm (4in) and 150mm (6in) cubes, and concrete cylinders with a diameter of 100mm (4in) and 150mm (6in).

Digital Compression Testers in the series are made up of three core pieces: 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 is that the block allows for a wide horizontal entrance opening and plenty of ready access for loading and removing specimens.

The series also includes the rapid change platen system with which operators can quickly and easily change accessories, quickly switching between cylinder, block, cube and beam specimen testing.

The hydraulic pumping system is attached to the loadframe and connected to the piston by high pressure hydraulic hose. The rate of loading and piston return on test completion is managed automatically by the controller.

While these machines are ideally positioned to test cubes and cylinders, you can take your testing to another level by adding a flexure testing attachment that will work with the pumping unit in the TO317E-STD-FA frame.



The installation of a simple manual valve system enables the flexural strength of concrete beams to be tested, up to 100kN (22,000lbf) maximum load.

Alternatively, a different attachment for testing compression of hollow prisms can be added to the main test frame. This attachment, model TO314-LU-SPL, can test up to three stacks of hollow prisms.

The FA series features front and rear doors for easy loading of cylinders and also brushing out of broken specimens to the rear. The rear also features a debris chute that doubles as protection for the hydraulic hose and valve connections.

Further safety features include physical limit switches, electronic limit switches and emergency panic button to ensure your investment lasts for years of testing.

The FA Series comes with three controllers:

- EDI, a straightforward design using a membrane keypad and an LCD display to let operators select the test parameters simply and efficiently.
- A more advanced system with 10in TFT resistive touchscreen display. Easy to read and operate, it features simple and logical input screens and displays a real-time graph of test load vs time.
- Horizon software – see below left.

### Applicable standards

- ASTM C39, AASHTO T22, EN 12390-3, -4, -5, and other ASTM, BS and EN specifications, depending on platens and accessories chosen.

### Horizon software

The FA series of machines can be connected to a PC running Tinius Olsen's Horizon software via a USB port. This software gives users far more control and reporting capabilities and features:

- An intuitive, simple graphical user interface.
- A database of tests and results along with other information about the sample such as age, sample number and batch name.
- Real-time graph of load vs time.
- Automatic display of a breaking load at the end of the test.
- A sophisticated reporting tool that can be used to generate reports for individual samples with data in graphical or tabular form.
- Load vs time plot.
- Stress vs time plot.
- Batch summary report.



### Key features

- Meets or exceeds key ASTM, EN, AASHTO standards.
- Manual 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.
- Peak load capture and recording.

# Specifications



## MODEL TO-317E-STD-FA SPECIFICATIONS

Capacity	450,000lbf/2000kN/200,000kgf
Horizontal clearance	13.4in/340mm
Maximum clearance between platens	13.4in/340mm
Piston stroke	2in/50mm
Platen size	8.75in/222mm
Display resolution	0.01 (kN or lbf)
Specimen size	100mm and 150mm cubes or 100mm and 150mm cylinders

### Notes

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

## SUPPLIED AS STANDARD

- USB cable
- Four spacers
- Lower platen
- Spherical seat with upper platen

## ORDERING INFORMATION

- **TO-317E-STD-FA-01** Automatic Standard Compression Testing Machine, 2000kN capacity, 110V, 60Hz
- **TO-317E-STD-FA-02** Automatic Standard Compression Testing Machine, 2000kN capacity, 220V, 60Hz
- **TO-317E-STD-FA-03** Automatic Standard Compression Testing Machine, 2000kN capacity, 220V, 50Hz

### Controller options



## OPTIONAL 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 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
- **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-320-5523** BS EN 12390 stability compliant oil filled ball seat, platens
- **TO-320-5527** BS EN 12390 stability compliant oil filled retrofit ball seating
- **TO-320-5528** Tensile split strength test attachment
- **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-320-5535** Self-centering 220mm square lower 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-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-417** Mold in cast iron for 50mm cube
- **TO-414** Mold in steel for 70.6mm 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**21001104** Civil Engineering primary platform for Horizon software
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