

Semi-Automatic Compression Test Machines

Semi-Automatic Compression Machines are used to determine compression, split and flexural strengths, usually applied to materials of high compression but low tensile strength in which the specimen is subjected to increasing compressive forces until failure occurs.

These compression testers are produced as a result of endless research studies to enhance the machines with the latest technologies to conform with the latest standards.

These machines also meet the requirements of CE norms with respect to the health and safety of the operator and their user-friendly design enables an inexperienced operator to complete the tests.

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Applications

- Early age unconfined compression strength test
- Unconfined flexural and splitting tests by using proper accessories
- Mortar (Cement) compression tests by using proper accessories
- Unconfined core testing

Safety Features

- Maximum pressure valves to avoid machine overloading
- Piston travel limit switch
- Frontal and rear transparent durable Plexiglas guards

Accessories

- An additional flexural frame can be connected to the hydraulic control system. Load rating are 100 kN, 200 kN and 300 kN. Switching between frames only requires switching a valve and selecting the alternative calibration table from the digital readout.
- Optional part list for special tests and specimens; Block test platens, splitting tensile and distance pieces

Applicable Standards

- AS 1012
- EN 12390-3/12390-4
- BS 1881
- ASTM C39

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Components

A complete compression test machine comprises the following components:

Compression Frame - These are a heavy duty welded frame. The frames also include the platens as well as distance pieces to adjust the system for different sample sizes.

Semi-Automatic Power Pack - The motorised power pack is controlled by a pressure rate control valve to supply oil to the compression load frame. The operator can then vary the pace rate to suit the testing standard in use.

Digital Readout - the readout is designed for use with the load frames pressure transducer, it offers a realtime view of load and load pressure with peak hold capability and multi point calibration.

Other Available Systems

Manual and Automatic hydraulic power packs are also available. UTEST also produce a range of advanced servo controlled Automatic Power Pack with proportional valves.

Technical Specifications

Model	UTC-4010	UTC-4110	UTC-6221	UTC-6321
Capacity	600 kN	1500 kN	2000 kN	2000 kN
Roughness of Platens	≤3.2 μm			
Platen Dimensions	∅ 165 mm	∅ 216 mm	∅ 370 mm	∅ 370 mm
Max Vertical Clearance	340 mm	370 mm	370 mm	370 mm
Piston Diameter	150 mm	230 mm	250 mm	300 mm
Maximum Piston Movement	50 mm			
Horizontal Clearance	230 mm	320 mm	360 mm	425 mm
Oil Capacity	12 L		20 L	
Max Working Pressure	34 MPa	36.2 MPa	41 MPa	
Dimensions (mm)	590 x 500 x 800	680 x 500 x 930	740 x 500 x 970	805 x 540 x 1050
Weight	385 kg	590 kg	760 kg	1060 kg

About PCTE

PCTE have over 30 years' experience in the measurement and testing of construction materials. PCTE can provide more than just the equipment, they can provide expert training. PCTE have a service centre in Sydney in which they can provide calibration, repairs and warranty repairs.

Other Equipment

PCTE supply three main ranges: NDT, Lab and Geotech Instrumentation.

NDT includes: Rebound Hammers, Covermeters, Ultrasonics, GPR, Corrosion Testing, Coating Testing and Foundation Testing

Lab includes equipment for: Concrete, Cement, Aggregate, Soil, Asphalt and Metal

Geotech Instrumentation includes: Strain Gauges, Piezometers, Inclometers, Extensometers, Tiltmeters, Load Cells and Dataloggers