

Product Code

UTCM-6321	250 kN Semi-Automatic (Motorized) Cement Compression Testing Machine, 220-240 V 50-60 Hz
UTCM-6321/110	250 kN Semi-Automatic (Motorized) Cement Compression Testing Machine, 110 V 60 Hz
UTCM-6421	15/250 kN Semi-Automatic (Motorized) Cement Flexure Compression Testing Machine, 220-240 V 50-60 Hz
UTCM-6421/110	15/250 kN Semi-Automatic (Motorized) Cement Flexure Compression Testing Machine, 110 V 60 Hz
UTCM-0116	Upper Loading Platen with Ball Seating Assembly Ø:165 mm and Lower Loading Platen, Ø:165 mm
UTCM-0120/A	Flexure Jig Assembly to test 40x40x160 mm mortar prisms, ASTM
UTCM-0120/E	Flexure Jig Assembly to test 40x40x160 mm mortar prisms, EN
UTCM-0121/A	Compression Jig Assembly to test 50 mm (2") mortar cubes
UTCM-0121/E	Compression Jig Assembly to test portions of 40x40x160 mm mortar prisms, EN
UTCM-0122	Compression Jig Assembly BS, to test 70,7 mm mortar cubes

Standards

EN 196-1, 459-2, 1015-11, 13454-2; ASTM C109, C348, C349; BS 3892-1, 4551-1

The UTEST Semi-Automatic (Motorized) range of single testing chamber and double testing chamber compression and flexure testing machines have been designed for reliable and consistent testing of mortar samples. These compression and flexure testers are the results of continuous applications and research studies to upgrade the machines with the latest technologies and conform with current standards EN 196-1, 459-2, 1015-11, 13454-2; ASTM C 109, C348, C349 and BS 3892-1, 4551-1 in terms of its technical properties taking into account client requirements by using suitable accessories. These testers also meet the requirements of CE norms for safety and health of the operator.

The UTEST Semi-Automatic cement compression and flexure testing machines allow operators who have minimal experience to perform the tests.

The UTEST Semi-Automatic cement compression and flexure testing machines consist of a very rigid two column single or double chamber frame, hydraulic power pack and data acquisition system LPI.

Compression and flexure jigs, distance pieces, and also removable transparent front-rear safety doors (should be factory installed) should be ordered separately.

Power Pack

The UTC-4820 Motorized (Semi-Automatic) Power Pack, controlled by a pressure rate control valve, is designed to supply the required oil to the load frames for loading. The power pack can load different frames with required pace rates. A rapid approach pump is supplied as standard. The power pack is equipped with a safety valve (maximum pressure valve) to avoid machine overloading.

Dual Stage Pump

- Low pressure gear pump
- High pressure durable variable output pump

On the dual stage pump, high delivery low pressure gear pump is used for rapid approach, while low delivery high pressure durable variable output pump is used for test execution. Rapid approach property of the machine shortens the time interval from the piston starts moving until the upper platen touches to the specimen and helps to save a great amount of time in case of numerous specimens are going to be tested.

Motor

- Dual pump is driven by an AC motor
- 220 V (110 V), 50-60 Hz single phase and 0.55 kW

UTEST
MATERIAL TESTING EQUIPMENT



UTCM-6321



UTCM-6421



UTC-4820

Distribution Block

A distribution block is used to control the oil flow direction supplied by the dual stage pump which has the safety valve and pressure relief valve mounted upon it.

- Safety valve (maximum pressure valve)
- Pressure relief valve

Oil Tank

The tank (20 L capacity) includes enough oil to fill the mechanism which pushes the ram during the test. The level and oil temperature can be seen on the indicator fitted to the tank. Hydraulic motor oil number 46, must be used in the tank.

LPI

LPI Battery Operated Digital Readout Unit has been designed to use with load cells or pressure transducers on different material test applications.

- Real time numeric display of load and load rate
- 1 channel with two different calibration table (can be used for 2 sensors)
- Peak hold property
- Can operate with 2 x AA batteries
- Multi-point calibration
- Easy preload zeroing
- Serial port for PC or printer
- 7 keys keyboard

Safety Features

- Maximum pressure valves to avoid machine overloading
- Piston travel limit switch

Data Acquisition & PC Software

UTEST Testing Software for LPI read out unit can be used with semi-automatic concrete compression and flexural testing machines for data acquisition and reporting. This software provides data acquisition and management for compression, flexure and splitting tensile test throughout the test execution. The advanced functions for data base management provide an easy navigation of all saved data. The test results certificate includes all descriptive information. Test parameters can be set and details about the test carried out, such as names and the Company details, test type, specimen type, user info and other information required can be entered and printed out as well as the test report and graph. Also, all minor revisions can be implemented upon request. Please find information about software on page 155-156.

Technical Specifications

Model	UTCM-6321	UTCM-6421	
Test Type	Compression	Flexure	Compression
Capacity	250 kN	15 kN	250 kN
Class 1 Measuring Range	2.5 to 250 kN	0.5 to 15 kN	2.5 to 250 kN
The roughness value for texture of loading and auxiliary platens	$\leq 3.2 \mu\text{m}$	$\leq 3.2 \mu\text{m}$	$\leq 3.2 \mu\text{m}$
Lower Platen Dimensions	165 mm	165 mm	165 mm
Upper Platen Dimensions	165 mm	165 mm	165 mm
Maximum Vertical Clearance Between Platens	263 mm	263 mm	263 mm
Piston Diameter	160 mm	80 mm	160 mm
Maximum Piston Movement	50 mm	50 mm	50 mm
Horizontal Clearance	300 mm	200 mm	300 mm
Power	550 W	550 W	
Oil Capacity	20L	20L	
Maximum Working Pressure	125 bar	30 bar	125 bar
Rapid Approach Rate	50 mm/min	80 mm/min	50 mm/min
Dimensions (WxLxH)	760x500x1650 mm	980x500x1650 mm	
Weight	250 kg	395 kg	



UTC-4920

The Maximum horizontal clearance for placing the sample is limited by the border of the platens. Sample must be placed such that its ends will not overlap the ends of platens and it must be centered perfectly.

The suitable vertical clearance for the specimen can be adjusted using the distance pieces.