

## EN 12390-4 AUTOMATIC FOUR COLUMN COMPRESSION TESTING MACHINES FOR CUBES AND CYLINDERS

### Product Code

**UTC-6727.FPR** 2000 kN EN 12390-4 Automatic Four Column Compression Testing Machines for Cubes and Cylinders

**UTC-6737.FPR** 3000 kN EN 12390-4 Automatic Four Column Compression Testing Machines for Cubes and Cylinders

**UTC-6748.FPR** 4000 kN EN 12390-4 Automatic Four Column Compression Testing Machines for Cubes and Cylinders

**UTC-6758.FPR** 5000 kN EN 12390-4 Automatic Four Column Compression Testing Machines for Cubes and Cylinders

**UTC-0210** High Precision Pressure Transducer and Electronic UTC- 4684 Pedestal for 2000 kN and 3000 kN Compression Testing Frames with Four Column

**UTC-4686** Pedestal for 4000kN and 5000 kN Compression Testing Frames with Four Column

#### Models for 220-240V 50-60 Hz, 1 ph.

UTC-6727.FPR	UTC-6737.FPR	UTC-6747.FPR	UTC-6757.FPR
--------------	--------------	--------------	--------------

#### Models for 110-120V 60 Hz, 1 ph.

UTC-6727.FPR-N	UTC-6737.FPR-N	UTC-6747.FPR-N	UTC-6757.FPR-N
----------------	----------------	----------------	----------------

### Standards

EN 12390-4, EN 12390-3

UTC-6727.FPR, UTC-6737.FPR UTC-6747.FPR and UTC-6757.FPR models Automatic Four Column Compression Testing Machines are manufactured for compression testing of cubes and cylinders acc. to EN. These machines also meet the requirements of CE norms with respect to the health and safety of the operator. The machines allow inexperienced operators to perform the test. Once the machine has been switched on and the specimen is positioned and centered by the help of fixtures or/and concentric centering lines of lower loading platen, the only required operations are;

Setting test parameters, including pace rate (only required when the specimen type is changed).

Pressing the START button on the control unit.

The machine automatically starts the rapid approach, when the specimen touches the upper platen the rapid approach is ended and starts loading at the pace rate that selected by user and stops once the specimen fails.

Automatically saves the test parameters and test results.

The Machines consist of a welded steel frame (see table) and UTC- 4830FPR automatic hydraulic power pack with U-Touch PRO Control Unit.

UTC-4684 and UTC-4686 Pedestals that are made of steel to facilitate the user's placement of specimens in the machines for compression test should be ordered separately.



UTC-6748 with UTC-4682

### Main Features

- Pace Rate control between 1 kN to 25 kN
- Accuracy Class 1 starting from with the 5% of the machine capacity, (Special calibration option Class 1 starting from 1% of the full range with UTC-0210)
- Supplied with factory calibration certificate for force transfer stability and the self-alignment of the upper loading platen conforming to EN 12390-4
- Tests automatically with closed loop control
- The tests can be performed by controlling the machine either on U-Touch PRO control unit (UTC-4930.FPR) or on a computer with using free UTEST Software (USOFT-4830.FPR) which is provided free of charge with the machines.
- Load measurement with a pressure transducer
- Hydraulic pump with dual stage for rapid approach
- Welded steel walled frame a single acting piston
- Piston return at the end of test automatically

### Safety Features

- Maximum pressure valves to avoid machine overloading
- Limit switch for piston stroke
- Emergency stop button
- Removable transparent front and rear safety doors
- Software controlled maximum load value



### U-Touch PRO Control Unit

U-Touch PRO Control Unit UTC-4930.FPR is designed to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonry units/blocks by controlling the Utest automatic compression / flexure testing machines.

All the operations of U-Touch PRO are controlled from the front panel touch screen display.

U-Touch PRO Control Unit has easy to use menu options. It displays all menu option listings simultaneously, allowing the operator to access the required option in a seamless manner to activate the option or enter a numeric value to set the test parameters. Digital graphic display is able to draw real-time "Load vs. Time", or "Stress vs. Time" graphics.

PLEASE see the pages of "U-Touch PRO Control Unit for Automatic Compression/Flexure Testing Machines" for details of the properties.

### UTEEST Software

UTEEST software USOFT-4830.FPR provides to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonry units/blocks by controlling the Utest automatic compression / flexure testing machines. The advantages of performing tests on computer with using UTEST Software, such as reporting, graphical output, etc. can be seen in detail at the pages of UTEST Software for Automatic Compression / Flexure Testing Machines.

### Optional Additional Frame

For compression and especially flexural testing, additionally second testing frame should be ordered separately. In this case, the machines provide load control of two separate testing frames with closed-loop P.I.D control with automatic test procedure by using selecting test channel And additional selector valve.

Models	UTC-672	UTC-737.FPR	UTC-6748.FPR	UTC-6758.FPR
Capacity	2000 kN	3000 kN	4000 kN	5000 kN
Frame Type	Four Column	Four Column	Four Column	Four Column
Lower Bearing Block, Dimensions (D)	Ø 300 mm	Ø 300 mm	Ø 360 mm	Ø 360 mm
Upper Bearing Block, (With Spherically Seating Assembly ) Dimensions (C)	Ø 300 mm	Ø 300 mm	Ø 360 mm	Ø360 mm
Surface Hardness of Bearing Blocks	53 HRC	53 HRC	53 HRC	53 HRC
Flatness Tolerance	0,03 mm	0,03mm	0,03mm	0,03mm
Piston Diameter	300 mm	350mm	400mm	450mm
Piston Stroke	50 mm	50 mm	100mm	100mm
Maximum Vertical Clearance Between Bearing Blocks (E)	350 mm	350 mm	520 mm	520 mm
Horizontal Clearance (B)	200 mm (**)	200 mm (**)	200 mm	200 mm
For Cylinder Sizes	Ø160x320 mm	Ø160x320 mm	Ø250x500 mm (**)	Ø250x500 mm (**)
Power	750 W	750 W	750 W	750 W
Oil Capacity	20 L	20 L	20 L	20 L
Maximum Working Pressure	410 Bar	410 Bar	410 Bar	410 Bar
Dimensions (wxhx) (Axd*xF)	960x560x1100 mm	1050x690x1150 mm	1145x825x1540 mm	1145x825x1570 mm
Weight	1020 kg	1520 kg	2570 kg	2540 kg
Pedestal (UTC-4684 or UTC-4686)	UTC-4684	UTC-4684	UTC-4684	UTC-4684

(d\*) Depth (\*\*) Limited by capacity of the frame

The machines for cubes and cylinders are supplied complete with;

- 100mm, 50mm, 30mm height x Ø205 mm distance pieces (two pcs. each for UTC-6748 and UTC-6758)
- UTC-4622E - Fixture for Centering Specimens, compatible with Ø300 mm lower loading platen for 100 mm and 150 mm cubes, Ø100 mm and Ø150 mm cylinders (for UTC-6727 and UTC-6737)
- UTC-4624E - Fixture for centering specimens, compatible with Ø360 mm lower loading platen for 150mm and 250 mm cubes, Ø150 mm and 250 mm cylinders (for UTC-6748 and UTC-6758)
- Removable transparent front and rear safety doors
- The front safety doors have an automatic safety device to stop the machine if the door is opened during a test

Appropriate distance distance piece/s for the cylinder and cube specimens with the height of lower than 150mm should be ordered separately for UTC-6727 and UTC-6737.