

ASTM & AASHTO - AUTOMATIC COMPRESSION TESTING MACHINES

ASTM AUTOMATIC COMPRESSION TESTING MACHINES FOR BLOCKS

Product Code

UTC-4706.FPR	1100 kN (245000 lbf) Automatic Compression Testing Machines for Blocks, ASTM
UTC-4716.FPR	1500 kN (335000 lbf) Automatic Compression Testing Machines for Blocks, ASTM
UTC-4726.FPR	2000 kN (450000 lbf) Automatic Compression Testing Machines for Blocks, ASTM
UTC-4736.FPR	3000 kN (670000 lbf) Automatic Compression Testing Machines for Blocks, ASTM
UTC-0210	High Precision Pressure Transducer and Electronic
UTC-4680	Pedestal for 600kN (135000 lbf) and 1100kN (245000 lbf) Compression Testing Frames
UTC-4682	Pedestal for 1500 kN (335000 lbf), 2000 kN (450000 lbf) and 3000 kN (670000 lbf) Compression Testing Frames

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

UTC-4706.FPR	UTC-4716.FPR	UTC-4726.FPR	UTC-4736.FPR
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Models for 110-120V 60 Hz, 1 ph.

UTC-4706.FPR-N	UTC-4716.FPR-N	UTC-4726.FPR-N	UTC-4736.FPR-N
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Standards

ASTM C39, C140, C1314

UTC-4726.FPR and UTC-4736.FPR models Automatic Compression Testing Machines have been designed for testing both blocks and cylinders specimens with the same frame according to ASTM standards. These machines also meet the requirements of CE norms with respect to the health and safety of the operator.

The frames of the machines have a rectangular and a circular bearing platen set (each consists of a lower and a spherically-seated upper platen). Depending on the type of specimen to be tested, the bearing platens set can be easily switched with otherset with help of UTC-4525 by users.

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 concentric centering lines of lower bearing 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 - 4726.FPR for UTC-4682 Pedestal

Main Features

- Pace Rate control between 1 kN to 25 kN
- Accuracy Class A acc. to E74 starting from with the 5% of the machine capacity (Special calibration option Class A starting from 1% of the full range with UTC-0210)
- Supplied with factory calibration certificate for load measurement
- 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 with 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

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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 UTC-4930.FPR" for details of the properties



UTEST Software

UTEST 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 USOFT-4930.FPR (The UTEST Software for Automatic Compression / Flexure Testing Machines with UTC-4830FPR Hydraulic Power Pack) pages.

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.

ASTM AUTOMATIC COMPRESSION TESTING MACHINES FOR BLOCKS

Models	UTC-4706.FPR	UTC-4716.FPR	UTC-4726.FPR	UTC-4736.FPR
Capacity	1100 kN (245000 lbf)	1500 kN (335000 lbf)	2000 kN (450000 lbf)	3000 kN (670000 lbf)
Frame Type	Welded Steel	Welded Steel	Welded Steel	Welded Steel
Bearing Platens Dimensions (D)	310x410x90mm (12.2"x16.1"x3.5")	310x410x90mm (12.2"x16.1"x3.5")	310x410x90mm (12.2"x16.1"x3.5")	310x410x90mm (12.2"x16.1"x3.5")
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	310x410x90mm (12.2"x16.1"x3.5")	310x410x90mm (12.2"x16.1"x3.5")	310x410x90mm (12.2"x16.1"x3.5")	310x410x90mm (12.2"x16.1"x3.5")
Surface Hardness of Bearing Blocks	60 HRC	60 HRC	60 HRC	60 HRC
Flatness Tolerance	0,025 mm/150 mm (0,001"/6")	0,025 mm/150 mm (0,001"/6")	0,025 mm/150 mm (0,001"/6")	0,025 mm/150 mm (0,001"/6")
Piston Diameter	230 mm (9,06")	230 mm (9,06")	250 mm (9,84")	250 mm (9,84")
Piston Stroke	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")
Maximum Vertical Clearance Between Bearing Blocks (E)	250 mm (9,84")	250 mm (9,84")	250 mm (9,84")	250 mm (9,84")
Horizontal Clearance (B)	320 (12,6")	320 (12,6")	360mm(14,17")	415 mm (16,34")
Power	550 W	550 W	550 W	550 W
Oil Capacity	20 L	20 L	20 L	20 L
Maximum Working Pressure	390 Bar	370 Bar	410 Bar	410 Bar
Dimensions (wxlxh) (Axd*xF)	750x451x1104mm (29,53"x17,76"x43,86")	750x451x1104mm (29,53"x17,76"x43,86")	790x453x1144 mm (31,1"x17,83"x45,04")	845x497x1204mm (33,27"x19,57"x47,4")
Weight	808 kg (1780 lbs)	808 kg (1780 lbs)	895 kg (1975 lbs)	1117 kg (2465 lbs)
Pedestal (Optional)	UTC-4680	UTC-4682	UTC-4682	UTC-4682

[d*] Depth

[**] Limited by capacity of the frame

The machines for block are supplied complete with;

- Ø100 mm (3,93"), 50 mm (1,97"), 2 pcs. 30 mm (1,2"), 15 mm (0,59") height x Ø165 mm (Ø6,5") distance pieces
- Lifting Device for Lower Bearing Platen (UTC-4629)
- Removable transparent front and rear safety doors