



## ASTM & AASHTO - AUTOMATIC COMPRESSION TESTING MACHINES

### Product Code

UTC-4601.FPR	600 kN (135000 lbf) Automatic Compression Testing Machines with Ø105 mm Bearing Blocks for Cylinders, ASTM & AASHTO
UTC-4701.FPR	1100 kN (245000lbf) Automatic Compression Testing Machines with Ø105 mm Bearing Blocks for Cylinders, ASTM & AASHTO
UTC-4602.FPR	600 kN (135000 lbf) Automatic Compression Testing Machines with Ø165 mm Bearing Blocks for Cylinders, ASTM & AASHTO
UTC-4702.FPR	1100 kN (245000lbf) Automatic Compression Testing Machines with Ø165 mm Bearing Blocks for Cylinders, ASTM & AASHTO
UTC- 4712.FPR	1500 kN (335000 lbf) Automatic Compression Testing Machines with Ø165 mm Bearing Blocks for Cylinders, ASTM & AASHTO
UTC-4722.FPR	2000 kN (450000 lbf) Automatic Compression Testing Machines with Ø165 mm Bearing Blocks for Cylinders, ASTM & AASHTO
UTC-4732.FPR	3000 kN (670000 lbf) Automatic Compression Testing Machines with Ø165 mm Bearing Blocks for Cylinders, ASTM & AASHTO
UTC-0210	High Precision Pressure Transducer and Electronic
UTC-4680	Pedestal for 600kN (135000 lbf), 1100kN (245000 lbf) and 1500 kN (335000 lbf), Compression Testing Frames with Welded Walls
UTC-4682	Pedestal for 2000 kN (450000 lbf) and 3000 kN (670000 lbf) Compression Testing Frames with Welded Walls



UTC - 4702.FPR

### Standards

ASTM C39; AASHTO T22

Models for 220-240V 50-60 Hz, 1 ph.	UTC-4601.FPR	UTC-4701.FPR	UTC-4602.FPR	UTC-4702.FPR	UTC-4712.FPR	UTC-4722.FPR	UTC-4732.FPR
Models for 110-120V 60 Hz, 1 ph.	UTC-4601.FPR-N	UTC-4701.FPR-N	UTC-4602.FPR-N	UTC-4702.FPR-N	UTC-4712.FPR-N	UTC-4722.FPR-N	UTC-4732.FPR-N

UTC-4701.FPR, UTC-4701.FPR, UTC-4602.FPR, UTC-4702.FPR, UTC-4712, UTC-4722.FPR and UTC-4732.FPR models Automatic Compression Testing Machines are manufactured for compression testing of acc. to ASTM & AASHTO standards. 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 concentric centering line/s of lower bearing block (except Ø105 mm), 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-4680 or UTC-4682 Pedestals that are made of steel to facilitate the user's placement of specimens in the machines for compression test should be ordered separately.

### 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

### 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

### 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.

## U-Touch PRO Control Unit for Automatic Compression / Flexure Testing Machines

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.

## UTEST Software for Automatic Compression / Flexure Testing Machines

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 pages of UTEST Software for Automatic Compression / Flexure Testing Machines.



UTC-4712.FPR or UTC-4680

## ASTM & AASHTO AUTOMATIC COMPRESSION TESTING MACHINES FOR CYLINDERS

Models	UTC-4601.FPR	UTC-4701.FPR	UTC-4602.FPR	UTC-4702.FPR
Capacity	600 kN (135000 lbf)	1100 kN (245000 lbf)	600 kN (135000 lbf)	1100 kN (245000 lbf)
Frame Type	Welded Steel	Welded Steel	Welded Steel	Welded Steel
Lower Bearing Block, Dimensions (D)	Ø 165 mm (6.5")	Ø 165 mm (6.5")	Ø 165 mm (6.5")	Ø 165 mm (6.5")
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	Ø 105 mm (4.13")	Ø 105 mm (4.13")	Ø 165 mm (6.5")	Ø 165 mm (6.5")
Surface Hardness of Bearing Blocks	55 HRC	55 HRC	55 HRC	55 HRC
Flatness Tolerance	0,02 mm / 150 mm (0,001"/"6")	0,02 mm / 150 mm (0,001"/"6")	0,02 mm / 150 mm (0,001"/"6")	0,02 mm / 150 mm (0,001"/"6")
Piston Diameter	150 mm (5,9")	190 mm (7,48")	150 mm (5,9")	190 mm (7,48")
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)	340 mm (13,4")	380 mm (15")	340 mm (13,4")	380 mm (15")
Horizontal Clearance (B)	230 mm (9,06")	270 mm (10,6")	230 mm (9,06")	270 mm (10,6")
For Cylinder Specimens Sizes	Ø100x200 mm (4"x8")	Ø100x200 mm (4"x8")	Ø100x200mm (4x8") Ø150x300mm (6x12") (**)	Ø100x200mm (4x8") Ø50x300mm (6x12") Ø160x320 mm
Power	550 W	550 W	550 W	550 W
Oil Capacity	20 L (0,7 ft3)	20 L (0,7 ft3)	20 L (0,7 ft3)	20 L (0,7 ft3)
Maximum Working Pressure	340 Bar	390 Bar	340 Bar	390 Bar
Dimensions (wxlxh) (Ax dx xF)	640x454x922mm (25,2"x17,87"x36,3")	680x454x1042mm (26,77"x17,87"x41,02")	640x454x922mm (25,2"x17,87"x36,30")	680x454x1042mm (26,77"x17,87"x41,02")
Weight	365 kg (805 lbs)	463 kg (1020 lbs)	376 kg (830 lbs)	474 kg (1045 lbs)
Pedestal (Optional)	UTC-4680	UTC-4680	UTC-4680	UTC-4680

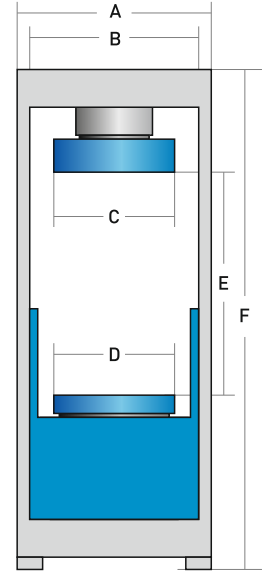
(d\*) Depth (\*\*) Limited by capacity of the frame

The Machines are supplied complete with;

- UTC-4601.FPR and UTC-4602.FPR: 100 mm (3,93"), 50 mm (1,97"), 30 mm (1,2") height x Ø165 mm (Ø 6,5") distance pieces
- UTC-4701.FPR and UTC-4702.FPR: 100 mm (3,93"), 50 mm (1,97") 2 pcs. 30 mm (1,2") mm height x Ø165 mm (Ø6,5") distance pieces
- Removable transparent front and rear safety doors

## ASTM & AASHTO AUTOMATIC COMPRESSION TESTING MACHINES FOR CYLINDERS

Models	UTC-4712.FPR	UTC-4722.FPR	UTC-4732.FPR
Capacity	1500 kN (335000 lbf)	2000 kN (450000 lbf)	3000 kN (670000 lbf)
Frame Type	Welded Steel	Welded Steel	Welded Steel
Lower Bearing Block, Dimensions (D)	Ø 165 mm (6.5")	Ø 165 mm (6.5")	Ø 165 mm (6.5")
Upper Bearing Block, (With Spherically Seating Assembly) Dimensions (C)	Ø 165 mm (6.5")	Ø 165 mm (6.5")	Ø 165 mm (6.5")
Surface Hardness of Bearing Blocks	55 HRC	55 HRC	55 HRC
Flatness Tolerance	0,02mm / 150 mm (0,001"/"6")	0,02mm / 150 mm (0,001"/"6")	0,02mm / 150 mm (0,001"/"6")
Piston Diameter	230 mm (9,06")	250 mm (9,84")	300 mm (11,8")
Piston Stroke	50 mm (1,97")	50 mm (1,97")	50 mm (1,97")
Maximum Vertical Clearance Between Bearing Blocks (E)	380 mm (15")	380 mm (15")	380 mm (15")
Horizontal Clearance (B)	320 mm (12,6")	360 mm (14,17")	415 mm (16,34")
For Cylinder Specimens Sizes	Ø100x200mm (4x8") Ø50x300mm (6x12") Ø160x320 mm	Ø100x200 mm (4"x8") Ø150x300 mm (6"x12") Ø160x320mm	Ø100x200 mm (4"x8") Ø150x300 mm (6"x12") Ø160x320mm
Power	550 W	550 W	550 W
Oil Capacity	20 L (0,7 ft3)	20 L (0,7 ft3)	20 L (0,7 ft3)
Maximum Working Pressure	370 Bar	410 Bar	410 Bar
Dimensions (w×l×h) (A×d×F) (d* depth)	680x451x1104 mm (26,77"x17,76"x43,86")	790x453x1144 mm (31,10"x17,83"x45,04")	845x497x1204mm (33,27"x19,57"x47,4")
Weight	598 kg (1320 lbs)	700 kg (1545 lbs)	922 kg (2030 lbs)
Pedestal (Optional)	UTC-4680	UTC-4682	UTC-4682



The Machines are supplied complete with;

- 100 mm (3,93"), 50 mm (1,97"), 2 pcs. 30 mm (1,2") height x Ø165 mm (Ø 6,5") distance pieces
- Removable transparent front and rear safety doors



UTC - 4722.FPR



UTC - 4732.FPR