

Product Code

| | |
|--------------|-----------------------------------------------------------------------------|
| UTC-4221 | 2000 kN Semi-Automatic Compression Testing Machine EN, 220-240 V 50-60 Hz |
| UTC-6221 | 2000 kN Semi-Automatic Compression Testing Machine ASTM, 220-240 V 50-60 Hz |
| UTC-6221/110 | 2000 kN Semi-Automatic Compression Testing Machine ASTM, 110 V 60 Hz |
| UTC-4321 | 3000 kN Semi-Automatic Compression Testing Machine EN, 220-240 V 50-60 Hz |
| UTC-6321 | 3000 kN Semi-Automatic Compression Testing Machine ASTM, 220-240 V 50-60 Hz |
| UTC-6321/110 | 3000 kN Semi-Automatic Compression Testing Machine ASTM, 110 V 60 Hz |
| UTC-0210 | High Precision Pressure Transducer and Electronic |

Standards

ASTM C39; AASHTO T22; ISO EN 7500, EN 12390-4



UTC - 4321



UTC - 4221

The UTEST Semi-Automatic (Motorized) range of 2000 kN and 3000 kN capacity compression testing machines have been designed for reliable and consistent testing of a wide range of specimens. These compression testers are manufactured as a result of continuous research studies to upgrade the machines with the latest technologies to conform with the latest standards EN 12390-3, 12390-4, BS 1881 and ASTM C39 in terms of its technical properties taking into account the client requirements. These machines also meet the requirements of CE norms with respect to the health and safety of the operator. And their user-friendly design enable an inexperienced operator to perform the test.

Exceeding of the ASTM C-39 standard provisions (starts with the 10% of the machine capacity), the UTC-4221, UTC-4321, UTC-6221 and UTC-6321 are supplied in Class 1 starting from 50 kN. This unique performance enables the machines to be used for a considerable number of applications including:

- Early age compression strength tests
- Flexural tests by using proper accessories
- Mortar (Cement) compression tests by using proper accessories
- Core with low diameter compression tests

The compression machines consist of a heavy duty welded frame, hydraulic power pack with data acquisition system LPI.

UTC-4221 and UTC-4321 Testing Machine is supplied complete with;

- Ø 205x90 mm, Ø 205x50 mm and Ø 205x30 mm distance pieces
- UTC-4513 Upper Platen (with ball seating assembly) Ø300 mm, Lower Platen Ø300 mm.

UTC-4510, UTC-4511, UTC-4512 and UTC-4515 upper and lower platen sets can also be used with UTC-4221 and UTC-4321 testing machines.

UTC-6221 and UTC-6321 Compression Testing Machines are supplied complete with;

- Ø 165x90 mm, Ø 165x50 mm and 2 pcs Ø 165x30 mm distance pieces
- UTC-4511 Upper Platen (with ball seating assembly) Ø165 mm, Lower Platen Ø165 mm.

UTC-4510, UTC-4512 and UTC-4515 upper and lower platen sets can also be used with UTC-6221 and UTC-6321 Compression Testing Machines.

Safety Features

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

| Model | UTC-4221 | UTC-4321 | UTC-6221 | UTC-6321 |
|------------------------------------------------------------------|----------------|-----------------|----------------|-----------------|
| Capacity | 2000 kN | 3000 kN | 2000 kN | 3000 kN |
| Standard | EN | EN | ASTM | ASTM |
| The roughness value for texture of loading and auxiliary platens | ≤ 3.2µm | ≤ 3.2µm | ≤ 3.2µm | ≤ 3.2µm |
| Lower platens dimensions | Ø300 mm | Ø300 mm | Ø165 mm | Ø165 mm |
| Upper platens dimensions | Ø300 mm | Ø300 mm | Ø165 mm | Ø165 mm |
| Maximum vertical clearance between platens | 340 mm | 340 mm | 370 mm | 370 mm |
| Piston diameter | 250 mm | 300 mm | 250 mm | 300 mm |
| Maximum piston movement | 50 mm | 50 mm | 50 mm | 50 mm |
| Horizontal clearance | 360 mm | 425 mm | 360 mm | 425 mm |
| Power | 550 W | 550 W | 550 W | 550 W |
| Oil capacity | 20 L | 20 L | 20 L | 20 L |
| Maximum working pressure | 410 Bar | 410 Bar | 410 Bar | 410 Bar |
| Dimensions (w×l×h) | 740x500x970 mm | 805x540x1050 mm | 740x500x970 mm | 805x540x1050 mm |
| Weight | 780 kg | 1080 kg | 760 kg | 1060 kg |

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

The suitable vertical clearance for specimen can be adjusted with distance pieces (see next page).

110V, 50 Hz models are available upon request. The only difference is the input voltage.

Product Code

| | |
|----------|------------------------------|
| UTC-4630 | Distance Pieces, Ø 165x15 mm |
| UTC-4631 | Distance Pieces, Ø 165x30 mm |
| UTC-4633 | Distance Pieces, Ø 165x50 mm |
| UTC-4634 | Distance Pieces, Ø 165x90 mm |
| UTC-4636 | Distance Pieces, Ø 205x30 mm |
| UTC-4638 | Distance Pieces, Ø 205x50 mm |
| UTC-4639 | Distance Pieces, Ø 205x90 mm |

Standards

EN 12390-3, 12390-4; BS 1881; ASTM C39

Distance pieces are used to reduce the amount of vertical clearance between the upper platen and the lower platen. 2000 kN , 3000 kN and 4000 kN machines are supplied with 205 mm dia. distance pieces and 600 kN and 1500 kN machines are supplied with 165 mm dia. distance pieces to lower the minimum distance between upper and lower platens down to required height.

Big size distance pieces are equipped with handles.



Loading Cylinder Assembly and
Limit Switch



Distance Pieces



Distance Pieces

| | Dimensions | Weight (approx.) |
|----------|---------------|------------------|
| UTC-4630 | 165x165x15 mm | 2,5 kg |
| UTC-4631 | 165x285x30 mm | 5 kg |
| UTC-4633 | 165x285x50 mm | 8 kg |
| UTC-4634 | 165x285x90 mm | 14 kg |
| UTC-4636 | 205x290x30 mm | 8 kg |
| UTC-4638 | 205x290x50 mm | 13 kg |
| UTC-4639 | 205x290x90 mm | 22 kg |



Loading Cylinder Assembly

LOADING CYLINDER ASSEMBLY

All frames have a single acting up stroking ram. The diameter of the piston is designed to work with the load capacity.

The maximum ram movement is 50 mm. The pressure transducer is used for load measurements. There is a low friction coaxial PTFE seal between the cylinder and the piston fitted to the cylinder.