



# FULLY AUTOMATIC SERVO CONTROLLED UNIVERSAL TESTING MACHINE - UTM2000SC

Suitable for metallurgy, construction, light industry, aviation, aerospace, materials, colleges and universities, scientific research institutes and other industries / fields to perform a wide range of test methods including tension, compression and bending tests of metals and non-metals, steel rebars, nuts, bolts, wire-strands, concrete, cement and many other construction materials.

PC and servo controlled machines come complete with upper and lower hydraulically operated jaws and high precision load cell providing high accuracy. Servo controlled systems can carry out tension test, compression test, bend test and flexure test by two pace rate type including load control and displacement control. Those two control parameters can be switched during the test. According to the preset condition, the systems can realize constant-rate loading, loading according to preset curve, testing with constant-rate displacement. It displays real-time stress-strain curve, load-deformation curve, load-time curve and other related curves, at the same time, can save, output, print test report and data with customized format.

## Specifications

Model	: UTM2000SC
Capacity max.	: 2000 kN
Measuring range	: 2% - 100% FS (without gear)
Reading accuracy	: Grade 1
Relative error	: $\pm 1\%$
Resolution (F.S.)	: 1 / 200000 F.S.
Column number	: 6
Width between two column	: 580mm
Max tensile space	: 900 mm
Max compression space	: 750 mm
Max bending test distance between two points	: 400 mm
Round specimen clamp diameter	: Small D20 ~ 40mm Big D40 ~ 70mm
Flat specimen clamp thickness	: 0 - 50 mm
Displacement reading relative error	: $\pm 1\%$
Deformation reading relative error	: $\pm 1\%$
Motor capacity	: 3 KW
Main unit dimension	: 1200 x 850 x 2900 mm
Oil source cabinet dimension	: 1150 x 900 x 1270 mm
Weight	: 7100 kg
Power Supply	: 220V 50HZ / 60HZ or 380V 50HZ

## Features

- ▶ Motorized Control Valve.
- ▶ Load accuracy  $\leq \pm 1\%$ .
- ▶ Simple controls for ease of operation.
- ▶ Real Time graph, User friendly software.
- ▶ Printer & PC graphs enable study the behavior of the material.
- ▶ Straining at variable speeds to suit a wide range of materials.
- ▶ Easy change from plain to threaded and screwed specimens.
- ▶ Large effective clearance between columns enables testing of standard specimens as well structures.
- ▶ Motor driven threaded columns for quick effortless adjustment of middle crosshead to facilitate rapid fixing of test specimen.
- ▶ Robust straining frame of an extremely rigid construction.
- ▶ Fully enclosed and protected pressure transducer.

## The kit includes

Extensometer, Laser extensometer, Brinell test Attachment, Bend Test Attachment, Shear Test Attachment and a wide range accessories offered on request at additional cost.

## Standard Configure

### Main unit

- ▶ UTM2000SC main unit with hydraulic clamp & high sealed oil cylinder
- ▶ Load cell Grade 1
- ▶ Displacement sensor
- ▶ Protecting fence

### Standard cabinet

- ▶ Oil tank system
- ▶ servo valve, oil pump, motor, electro-magnetic valve, pressure gauge, joint and tube, oil tank, etc.

### Standard control system

- ▶ PC
- ▶ Printer
- ▶ Testing software (English version)
- ▶ Electronic extensometer (25 / 100)



### Clamp jaws

- ▶ Round specimen (D20 ~ D40mm) 1set (4 pcs)
- ▶ Round specimen (D40 ~ D70mm) 1set (4 pcs)
- ▶ Flat specimen (0 ~ 50mm) 1set (4 pcs)
- ▶ Bending basement for steel bar 1set
- ▶ Compression plate 1set



### Optional Accessories

- ▶ Concrete flextural device
- ▶ Steel bar cold punch head full set





## Software Interface



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