



UNIVERSAL TESTING SYSTEMS

Automatic Tension & Compression Testing Machine

Hydraulic Universal Testing Machine

Servo Hydraulic Universal Testing Machine, Servo Valve

Servo Hydraulic Universal Testing Machine, Servo Proportional Valve

Servo Controlled Wide Test Space Electromechanical Universal Test Machine, 50 kN

Electromechanical Universal Test Machine

Motorized Pendulum Impact Tester

Multiplex Machine with Servo Motor and BC100 TFT Graphics Data Acquisition and Control System, 50 kN

Multiplex Machine with Servo Motor and LCD Control

Cold Test Bending Machine

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Servo Hydraulic Universal Testing Machines

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Servo Hydraulic Universal Testing Machine, Servo Proportional Valve

Product Code



Contact Us





- 600 kN, 380 V, 50-60 Hz, 3 Ph
- UTM-7000** Hydraulic Universal Testing Machine, Servo Controlled, 1000 kN,
 - UTM-7001** Universal Testing Machine Frame, 1000 kN, 380 V, 50-60 Hz, 3Ph
 - UTM-8000** Hydraulic Universal Testing Machine, Servo Controlled, 2000 kN,
 - UTM-8001** Universal Testing Machine Frame, 2000 kN, 380 V, 50-60 Hz, 3 Ph
 - UTM-0500** Extensometer for Universal Testing Machine, 50 mm Gauge Length, 25 mm Travel (Accuracy 0.01 mm)
 - UTM-0510** Extensometer for Universal Testing Machine, 100 mm Gauge Length, 50 mm Travel (Accuracy 0.01 mm)
 - UTM-0520** Extensometer for Universal Testing Machine, 50 mm Gauge Length (Accuracy 0.001 mm)

Standards

EN ISO 6892-1, EN ISO 15630-1, EN ISO 7500-1

GENERAL DESCRIPTION

UTM-6000, UTM-7000 and UTM-8000 computer controlled servo hydraulic machines are suitable to test various metallic and non-metallic materials at tension, compression, flexural and bending tests. The capacity of UTM-6000 is 600kN, UTM-7000 is 1000kN and UTM-8000 is 2000kN. On all models load cell is used for load measurement to achieve best load accuracy during test. The load accuracy is down to 2% of the full capacity. Strain measurements are done by transducers built in the machine. Displacement or strain measurement can be done by external extensometer fitted to the specimen. The accuracy of the strain measurement is 12.5 microns.

UTM-6000, UTM-7000 and UTM-8000 systems are guaranteed to meet EN ISO 15630-1, EN ISO 7500-1, ISO 679, ISO 1920-4, ASTM E 290. Servo hydraulic systems can carry out tension test, compression test, bend test and flexure test 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



the machine can be widely used in ultimate R&D department, Universities Quality control and Inspection department, calibration centers/laboratories and

LOAD FRAME

Load frames used on Hydraulic Universal Testing Machines has a motor driven distance between grips for test set up has a rugged six column construction for frame rigidity. All models feature two test spaces for tension test and compression/bending test. User can quickly change between tension and compression/flex testing without having to remove heavy fixtures. This flexible design also helps reduce operator effort and improves productivity. The distance between the grip motor driven hand set system for different specimens. With an open front hydraulic user can change jaw faces and load specimen easily.

All frames are supplied complete with jaw faces, compression platens and bend

POWER PACK

Servo controlled hydraulic power packs with proportional valve and advanced used on UTM-6000, UTM-7000 and UTM-8000 to perform tests under load and controls. The frequency of the P.I.D controller and data acquisition is 1000 Hz. designed to supply the required oil to the load frames for loading, unloading, dynamic testing and also hydraulic grips.

All the operations of Data Acquisition and Controls System can be controlled on screen front panel of a 240x320 LCD display or computer. There are extra channels for sensors such as Load Cells, Pressure Transducers, LVDT's extensometers etc. built in the system, and one TTL displacement transducer for frame displacement measurement. Additional two analogue channels can be optionally ordered for different type of applications.

Power packs can be connected to the computer through Ethernet port for advanced data acquisition and reporting. The modulus of elasticity, Poisson's ratio parameters are easily and properly evaluated by attaching extensometer to the sample. All the calibration values of the transducers and also all the test parameters are automatically stored on the control unit. Power pack incorporates a pressure relief valve for each frame separately with a cooling unit.

FIRMWARE

2 extra analogue channels

Instrumentation amplifiers for sensor excitation and amplification





Free of charge PC software for test control and advanced report printout
Factory install English and Turkish languages

EXTENSOMETER

Different types of extensometers with accuracy of $\pm 0.1\%$ of indicated value are : depending on requirements. Extensometer can directly measure deformation or either measures separately thermal expansion strain of specimens or eliminate expansion to avoid effecting deformation of specimen.

All type of machines are supplied with;

- Jawfaces for round specimens (respect to machine capacity)
- Compression platens
- Bending Fixture

Data Acquisition & PC Software

The Universal Testing machine can be controlled (Start, Stop commands) by a c software (given free of charge by UTEST). This software provides data management for compression, tensile and splitting tensile test throughout th The advanced functions for data base management provide an easy navigation The test results certificate includes all descriptive information. Therefore, test p set and details about the test carried out such as client details, test type, spe info and other information required can be entered and printed out as well a graph.

Following tests can be done with the UTEST software.

STANDARDS	Description
EN 15630-1 and EN ISO 6892-1	Tensile Test of Reinforcing Ribbber
EN ISO 6892-1	Tensile Test of Metallic Mat

Universal Test Software is developed for testing tensile strength of Reinforci Bars and Welded fabric for the Reinforcement and Prestressing of Concre includes control of machine, data acquisition, saving them and preparing repo prepare his own report and also can send the results to Microsoft Excel e software accepts sample's weigth, length, diameter and gauge length as input, a can give start test command to the machine. The samples calculated diamet perspective about the density of rebar prior to the test. The software con





The user can zoom on the graph for further inspection Break elongatic synchronized with the manual measurement after the test has been completed do not use extensometer.

Foreign Language Support and Customizable User Interface

All contents of experimental data and additional information can be organized t can be performed in x different languages.

Capability to Save 24 test results of different specimens in one test folder

Test results, graphics and properties of 24 different specimens can be saved in c test folders can be reviewed and be edited easily. Advanced Graphic User Interf

Graphical data on the screen is refreshed simultaneously during test proced

Load values can be monitored in high resolution graphics at every 100 millis highlight all 24 different specimen curves or preferred ones in different colors Zooming in-out and dragging can be done easily by mouse. Peak values c marked on the graphics and user can get load value of any point on the resolution.

Able to save frequently used texts in memory and recall them when necessa

Frequently used information like name and location of the laboratory, type ar mostly used specimens are held in memory and can be written automatically b information boxes and selecting frequently used text in menu.

Capable to Access and use previously done test data

User can access any data of previously completed tests and use in his/ her most of the tests have same structure and properties.

Able to edit test parameters of the testing equipment through Soft



All test parameters supported by testing equipment can be changed remotely test parameters specified by user are downloaded to the device before i procedure. By this way predefined device parameters will not cause errors in te

Graphical outputs and reports can be saved as a MS Excel worksheet

Test result parameters and graphics are transferred to MS Excel worksheet pro a chance to edit any data and graph easily.





TECHNICAL SPECIFICATION			
	UTM-6000	UTM-7000	UTM-80
Maximum Load	600kN	1000kN	
Load Measurement Accuracy	1% from 2% of max capacity	1% from 2% of max capacity	1% from 2% of max capacity
Deformation Measurement Resolution	12.5µm	12.5µm	
Control Mode (Pace Rate Type)	Displacement Control, Load Control, Stress Control	Displacement Control, Load Control, Stress Control	Displacement Control, Load Control, Stress Control
Max Vertical Test Space Between Grips	750 mm	750mm	
Max Vertical Test Space Between Platens	620 mm	620 mm	
Max Horizontal Test Space	475 mm	565 mm	
Piston Stroke	250 mm	250 mm	
Testing Speed	0-50 mm/min (Displacement)	0-50 mm/min (Displacement)	0-50 mm/min (Displacement)
Crosshead Speed	200 mm/min	200 mm/min	200 mm/min
Grips for Flat Specimen (2 set)	Thickness 0-30 mm	Thickness 0-40 mm	Thickness 0-50 mm
Grips for Round Specimen (2 set)	Diameter 13-40 mm	Diameter 20-60 mm	Diameter 25-75 mm
Compression Platen Size	128 mm diameter	148 mm diameter	200 mm diameter
Power Supply	380 V AC, 50 Hz, 2.5 kW Frame 220 V AC 50 Hz Power pack	380 V AC, 50 Hz, 3.5 kW 220 V AC 50 Hz Power pack	380 V AC, 50 Hz, 5.5 kW 220 V AC 50 Hz Power pack
Load Frame Dimensions	770x600x2150 mm	900x650x2400 mm	1300x650x2400 mm
Power Pack Dimensions	570x800x1020 mm	570x800x1020 mm	570x800x1020 mm
Weight Frame/ Power pack	2600 kg / 250 kg	3700 kg / 250 kg	4800 kg / 250 kg

The Company Products Service



About Us	Aggregate	Activities	Service	Caddesi No:18	USA OFFICE
Mission Vision and Values	Cement	Fairs	Spare Part	06935	3400 McIntosh
Quality Policy	Concrete		User Manuels	Sincan/ANKARA	Road. Building F.
Occupational Health and Safety Policy	Universal Testing Systems		Warranty Conditions	P: +90 312 394	Bay 19.
Environmental Policy	Asphalt		DOCUMENT	38 75	Fort Lauderdale
Sales Regions	Bitumen		Product Catalogs	F: +90 312 394	FI
Human Resources	Rock			38 77	P: 754-465-4584
	Special Testing Systems			<i>info</i>	
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