



K-TEST SERIES

COMPUTERISED UNIVERSAL TESTING MACHINE

Kalpak Computerised Universal Testing Machines are ideal for quality control, R&D and Process troubleshooting. Wide range of tests can be conducted as per latest ASTM/BS/ISO/DIN standards making them essential for Material Test Laboratories of ISO certified companies.



- Features**
- Load Capacity :** wide choice from 100Kgf/1000Kgf/10Ton models.
 - Mechanical tests supported :** Tensile, Compression, Tear, Shear, Peel, Puncture, Friction, Flexure, Insertion, Bend, Extraction, Adhesion
 - Load accuracy :** 0.2% of full scale
 - Loading frame :** powder coated with compact footprint with Table mount/floor mount option.
 - Drive mechanism :** Ball screw driven by variable speed Drive for zero back lash.
 - Testing area :** dual space with interchangeable load cells.
 - Control mechanism :** through PC
 - Safety features :** Emergency Stop Button, Upper & Lower Limit switches with Over Travel protection & load cell Overload protection.
 - Software :** Kalpak's proprietary user friendly software
 - Display :** LCD Monitor
 - Options :** Wedge Grips for Tensile test, Compression plates, Fixtures for 180 & 90 degree Peel test & Flexure tests.



Typical Applications Auto Components, Rubber & Elastomers, Plastic & Metals, Cords & Textiles, Non Woven Materials, Packing Materials, Adhesives, Electronics, Medical

Kalpak UTM-C Test Software

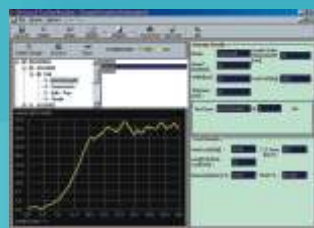
Kalpak UTM-C Test Software is designed for user friendly Control of Kalpak Computerised Universal Testing Machine. Online Data Acquisition to PC as well as Data Analysis.

Key Features include :

- ▶ Real time display of data, Test curves
- ▶ Test results can be generated Providing Accept/ Reject Status as per defined norms.
- ▶ Online/ Off line generation of Graphs of Load Versus Length, Load versus Displacement Load Vs Elongation, Stress Vs Strain with a scaling feature.
- ▶ Comparative study of various test results using features like Multi Graphs, Bar Graphs.
- ▶ Software password protection.
- ▶ Easily accessible file system to retrieve and view stored data.
- ▶ Automatic Calculation of Parameters like Percentage Elongation, Peak load, Break load, Displacement, Peak Elongation, Peak tensile Strength, Break tensile strength, Proof stress, Strain, Young's modulus.



Main Screen :
For setting Sample Details
Machine Parameters & Test
Parameters.



Graph View Screen :
Test Screen showing Graphical
Display of Test Data alongside
Sample details & Test results.



Multi Graph View Screen :
For Comparing Multiple Tests by
viewing as superimposed Graphs
as well as Tabular analysis of each
test result.

Parameter	Value	Unit
Sample Length	100	mm
Sample Width	10	mm
Sample Thickness	2	mm
Sample Area	200	mm ²
Sample Weight	10	g
Sample Density	2.0	g/cm ³
Sample Modulus	200000	N/mm ²
Sample Yield Strength	100	N/mm ²
Sample Tensile Strength	200	N/mm ²
Sample Elongation	10	%
Sample Break Load	1000	N
Sample Break Displacement	10	mm
Sample Break Elongation	10	%
Sample Break Tensile Strength	200	N/mm ²
Sample Proof Stress	10	N/mm ²
Sample Strain	0.01	mm/mm
Sample Young's Modulus	200000	N/mm ²

Test Configuration Screen

SPECIFICATIONS

MODEL



MODEL NO.	KIC -1-XXX -C	KIC -2-XXX -C	KIC -2-XXXX -C
Maximum Capacity options	10N, 50 N, 100N, 250N, 500 N, 1000N	2.5KN, 5 KN, 10KN, 20KN, 30 KN	50 KN, 75 KN, 100 KN
No of Load Cells available	Up to 16	Up to 16	Up to 16
Ball Screw Arrangement	Single Ball Screw covered with bellows	Double Ball Screw based covered with bellows	Double Ball Screw based covered with bellows
Mounting	Table Mount	Free Stand	Free Stand
Loading Test Spaces	Two	Two	Two
Load Resolution	0.01%	0.01%	0.01%
Load Accuracy	+/-0.5% of Reading		
Length Resolution	For Crosshead Travel 0.01mm		
Length Accuracy	0.1mm		
Operating /Test Modes	Tensile, Compression, Tear, Shear, Peel, Puncture, Friction, Flexure, Insertion, Bend, Extraction, Adhesion, Cyclic		
Cross head Speed	Up to 1000 mm/min	Up to 1000 mm/min.	Up to 100 mm/min.
Cross head Speed Resolution	Min. upto 0.01mm		
Cross head Travel	350/500/800/1000 mm	500/800/1000	500/800 mm
Minimum Distance between Grips	0 mm	0 mm	0 mm
Side Clearance	Unlimited	At Least 400 mm	At least 400 mm
Front to back clearance	80 mm	unlimited	unlimited
Actuator Drive	Digital AC Servo Drive with Servo Motor		
Control Mechanism	Computerized Controller based with dedicated software, add on cards, Provides control in both Auto & Manual mode		
PC Configuration	Pentium IV 2.6 GHz, LCD Monitor with 52X GD R/RW, , 256MB RAM, 40GB HDD. Mouse, Keyboard, 1 SERIAL COM port, 2 USB ports, 1 printer port, with WINDOWS XP professional preloaded or equivalent configuration		
Units	Metric, Imperial & SI User Programmable		
Power Supply	220 Vac, 50 Hz, 500 VA	220 Vac,50 Hz, 1500 VA	220 Vac,50 Hz,1500 VA
Size	1250(H) x 550(W) x 450(D) mm nominal	1750(H)X650(W)X550(D)mm nominal	1800(H)X750(W) X550(D) mm nominal

Optional Accessories



Fixtures:

Spring Loaded Wedge grip for tensile test, compression plate for compression test. Also fixtures available for peel (90 degree / 180 degree), Flexure, tear, bending test.

Electronic Extensometer :

Direct Extension measurement sensors suitable for extension measurement. Reduction in width measurement, deformation measurement in compression and Flexure tests, designed as per requirement.

KALPAK

Universal Testing Machine with Hot air circulation chamber

To test at elevated temperatures.

Size : As per the user requirement.

Range : Up to 250° C
Hot air circulation by Blower



KALPAK INSTRUMENTS & CONTROLS

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