Linux®

Universal Testing Machine & Tensile Testing Machine

V-SERIES

UNIVERSAL TESTING MACHINE (MICRO PC)

Model: UTMMPC2LCV

LINUX Computerised Double Column Universal Testing Machine is used for testing of physical, mechanical properties of polymers, plastic films, laminated materials, adhesives, adhesive tapes, adhesive bandages, textiles, paper, protective films, leather, rubber and paper fiber etc.

It can perform the tests of tensile, compression, coefficient of friction, peeling, tearing deformation, heat seal, adhesive, etc.

This multi-functional equipment incorporates imported motor & gearbox, highly accurate load cell and precise ball screws.

Applications:

Plastic, Rubber, Polyurethane, Paper and PaperBoard, Textiles, Spring.

Machine Features:

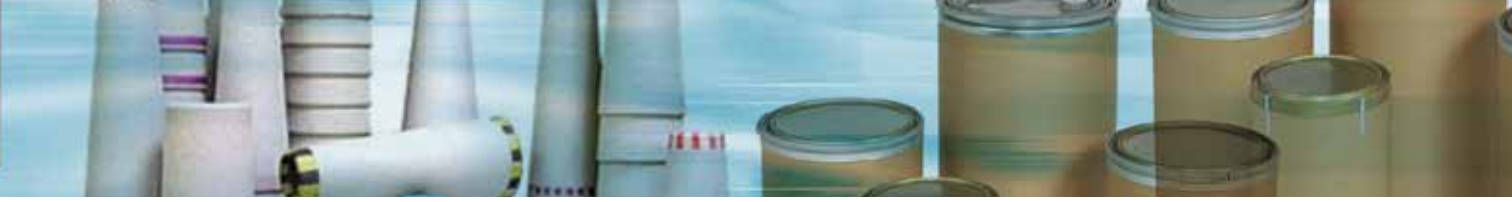
- **Direct Display through Micro Controller:**
  Peak load, Break load, Elongation at peak load, Elongation at break load, Tensile strength at peak load, Tensile strength at break load, % Elongation at peak load, % Elongation at break load, Young's modulus, Yield load, Yield stress.
- The machine is microprocessor controlled – Capable of highly accurate and precise load measurement and rapid data acquisition.
- The integral user interface consists of a control console with large, positive action cap sense keypad, allowing test to be performed at the touch of a button.
- A large, backlit LCD shows the test and setup information.
- High-stiffness and precision alignment from a linear bearing and integrated column design for more accurate results.
- Machine can be operated through PC and Control Panel.
- Digital display for load / Displacement / Extension.
- PC interface with serial port (RS 232) communication.
- Entering input data & taking results from panel facility.
- Tare buttons for load & displacement.
- Uses modern design idea of mechanical and electrical integration.
- Auto Calibration in 5 simple steps.
- Different clamping devices to suit specific test requirement.
- Safety interlock by end limit switches and by overload sensing.

Standards: Conforming to various National and International standards

Tensile : ASTM D828, D638, D882, ISO 1924, TAPPI T494

Peel : ASTM D3330, D1876, D903; **Tear :** ASTM D1938; **Seal :** ASTM F88; **Bond :** ASTM F904; **Compression :** ASTM D695, D2659

Flexural : ASTM D790; **COF :** ASTM D1894, TAPPI T549; **Loop Tack :** ASTM D6195 Method (A)



Software:

The Software Programme for the Tensile Testing Machine is automatic. Once the Test Configuration menu has been programmed, "Start" button is pressed, initiating the test. The results of the test are displayed on the PC in real time. They can then be saved and/or printed for later use.

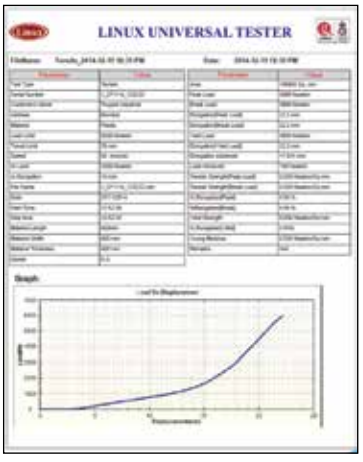
Features:

- High Speed Data Acquisition & Interface Card with RS-232 Serial Communication Port with sufficient speed to acquire data of LOAD, Elongation & Extension.
- Test report with graph is printed using printer connected to computer using single command.
- Results through PC software: Peak load, Break load, Elongation at peak load, Elongation at break load, Tensile strength at peak load,Tensile strength at break load, % Elongation at peak load, % Elongation at break load, Young's modulus, Yield load, Yield stress and Load Vs Elongation graph could be obtained by attaching a printer to the PC.
- Similarly average value and standard deviation could be obtained by merging different tests.
- Results available in various Units. Gives Graph of the required test.
- Windows based advanced software.
- You can recall any test done in history.
- All Test data are automatically stored.

Specification									
Load Capacity	10 kgf	20 kgf	50 kgf	100 kgf	200 kgf	500 kgf	1000 kgf	2500 kgf	5000 kgf
Load least count	0.001 kgf			0.01 kgf			0.5 kgf	1 kgf	
Displacement least count	0.01mm or 0.1 mm								
No. of Load cells	Two								
Maximum speed	500 mm/min								
Minimum speed	10 mm/min								
Crosshead stroke	850 mm								
Measuring Unit	kgf, lbf & N & mm, cm, inch								
Height	1750 mm						2000 mm		2100 mm
Width	1000 mm						1000 mm		1600 mm
Depth	500 mm						850 mm		1100 mm
Net weight	200 kg						600 kgs		800 kgs
Gross weight	325 kg						775 kgs		1100 kgs
Power	220 VAC, 50 Hz, Single Phase								415 VAC, 50 Hz, Three Phase

Sample Test Configuration Screen

Sample Test Screen



Printed Test Report

Notes:

1. Total crosshead travel is calculated without load cells, grips and fixtures. Longer strokes can be accommodated by ordering an extended column frame.
2. Tensile test grips supplied with machine, other attachments at extra cost.
3. Other capacity and size also available on request.
4. **Also available Touch Screen Model.**

TENSILE TESTING MACHINE (Micro PC)

Model: TEN MPC

LINUX Computerised Single Column Tensile Testing Machine is used for testing of physical, mechanical properties of polymers, plastic films, laminated materials, adhesives, adhesive tapes, adhesive bandages, textiles, paper, protective films, leather, rubber and paper fiber etc.

It can perform the tests of tensile, peeling, tearing deformation, heat seal, adhesive, etc.

This multi-functional equipment incorporates imported motor & gearbox, highly accurate load cell and precise ball screws.

Applications:

Plastic, Rubber, Polyurethane, Paper and PaperBoard, Textile, Spring.

Machine Features:

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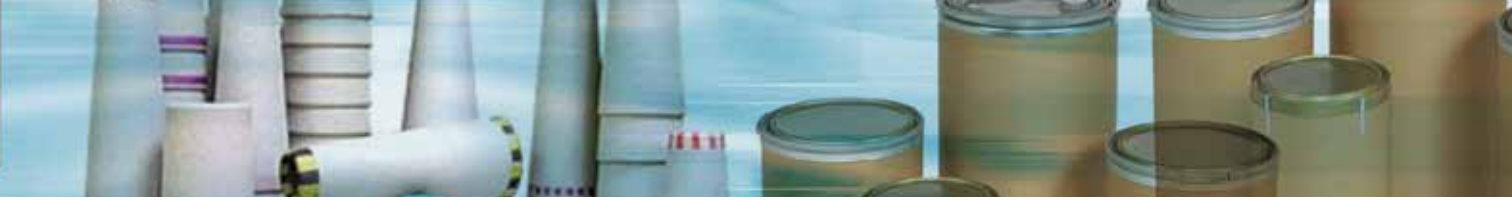
- The integral user interface consists of a control console with large, positive action cap sense keypad, allowing test to be performed at the touch of a button.
- A large, backlit LCD shows the test and set-up information.
- High-stiffness and precision alignment from a linear bearing and integrated column design for more accurate results.
- Machine can be operated through PC and Control Panel.
- Digital display for load / Displacement / Extension.
- PC interface with serial port (RS 232) communication.
- Entering input data & taking results from panel facility.
- Tare buttons for load & displacement.
- Uses modern design idea of mechanical and electrical integration.
- Auto Calibration in 5 simple steps.
- Different clamping devices to suit specific test requirement.
- Safety interlock by end limit switches and by overload sensing.

Standards:

Conforming to various National and International standards

Tensile : ASTM D828, D638, D88 ISO 1924, TAPPI T 494

Peel : ASTM D3330, D1876; **Tear :** ASTM D1938; **Seal :** ASTM F88; **Bond :** ASTM F904



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- Windows based advanced software.
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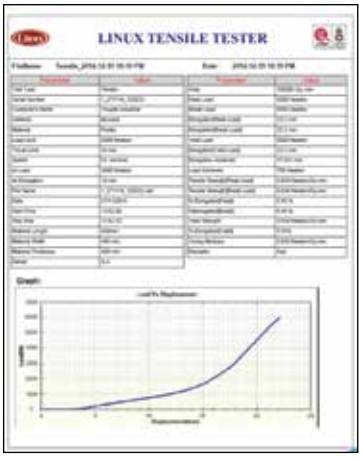
Model	TENMPC10	TENMPC20	TENMPC50	TENMPC100	TENMPC200	TENMPC500
Load Capacity	10 kgf	20 kgf	50 kgf	100 kgf	200 kgf	500 kgf
Load least count	0.001 kgf			0.01 kgf		
Displacement least count	0.01mm or 0.1 mm					
No. of Load cells	One					
Maximum speed	500 mm/min					
Minimum speed	10 mm/min					
Crosshead Stroke	850 mm					
Measuring Unit	kgf, lbf & N & cm, mm, inch					
Height	1750 mm				1875mm	
Width	560 mm				650mm	
Depth	445 mm				550mm	
Net weight	135 kgs				170kgs	
Gross weight	210 kgs				250kgs	
Power	220 VAC, 50 Hz, Single Phase					

Sample Test Configuration Screen

Sample Test Screen



Printed Test Report

Notes:

1. Total crosshead travel is calculated without load cells, grips and fixtures. Longer strokes can be accommodated by ordering an extended column frame.
2. Tensile test grips supplied with machine, other attachments at extra cost.
3. Other capacity and size also available on request.
4. **Also available Touch Screen Model.**

Grips and Fixtures

LINUX offers a full line of grips and fixtures for materials and product testing. The grips and fixtures that we sell support our entire line of new universal testing machines. They can also be used with virtually any manufacturers test frames and with LINUX retrofitted equipment. The grips shown are some of the most common. If you do not see the grips or fixtures you need then please ask us.

Heavy Duty Grips For Polymer and Rubber

Tensile Force	: 20 & 50KN
Opening	: 0-12mm
Clamping Surface Size	: 30x50mm and 50x50mm
Clamping Surface	: Plain, Rubber, Serrated

Universal Grips For Polymer, Thin Plastic, Polyfilm, Textiles, Febrics, Rubber, Tissue, Paper and Paperboard.

Tensile Force	: 0.5, 1, 2, 5 and 10KN
Opening	: 0-6mm or 0-10mm
Clamping Surface Size	: 30x25mm, 50x30mm and 50x50mm
Clamping Surface	: Plain, Rubber, Serrated.

Yarn Grips

Tensile Force	: 500N
Max. Diameter	: 2mm
Max. Width	: 7mm
Diameter Guide Roller	: 20mm

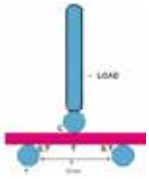
Small Grips for Polyfilm, Tissue, Paper and Paperboard

Tensile Force	: 500N
Opening	: 6mm
Opening	: 25x25mm and 50x25mm
Clamping Surface	: Plain, Rubber, Serrated (any one)

3 Point Bending Fixtures

Capacity	: 5k N
Maximum Span	: 150mm
Support Width	: 30mm Upper Support Radius: 1, 1.5, 2, 3.2, or 5mm
Lower Support Radius	: 1.5mm & 2.5mm, 2mm & 3mm, or 3.2mm & 5mm

Other size on request.



Top Load Test / Compression Strength Test Platen

Platen size	: Up to 400 X 400 mm
Max capacity	: Up to 50kN of forced

180 Degree Peel Fixture

Perform 180 peel tests according to ASTM D3330 and other industry standards using this fixture designed for universal testing machines. Consists of 9" x 2" polished stainless steel plate which is clamped in a lower grip. One end of the sample is adhered to the plate and the other end is clamped in place by the upper grip. The sample is peeled off of the plate and the strength is measured.

90 Degree Peel Fixture

Self adjusting sliding bed for 90 degree peel tests. The test plate moves in a horizontal position and is driven by connections to the moving crosshead in order to maintain a 90 degree peel angle.

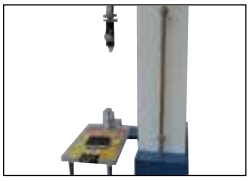
Usable Bed Dimensions: 300 x 80mm.

Loop Tack Fixture

The "Loop Tack" test is used to measure the tack force / strength of a pressure sensitive adhesive (PSA) according to ASTM D6195. Pressure sensitive adhesives are typically applied to films, labels, tapes, and stickers where the initial tack force is an important characteristic of the product. ASTM D6195 describes two ways to perform the test.

Coefficient of Friction Fixtures

To perform ASTM D1894, you will need a special fixture specifically designed to perform Coefficient of Friction tests.
It consists of two main parts, a sliding plane or plate and a slide.
Slide Weight : 200 grams ± 5 grams



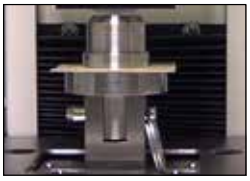
Carton Opening Force Fixture

Used to determine the opening force of flat folded cartons along their score lines. Ideal for numerous applications in the packaging, food and beverage, medical device, consumer products, and many other industries.

Upper Support : 75mm Lower Support : 300mm

Internal Bond Test / Z-Direction Tensile Test Fixture

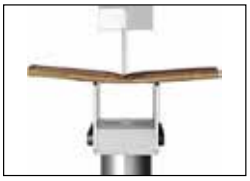
Internal bond strength according to TAPPI T 541. ZDT measurements are an effective tool for monitoring a variety of strength properties which aid in improving printing and coating applications, bonding strength of paper cores, delamination strength, intrinsic fiber bond strength, paperboard and combined board strength and fiber-to-fiber bond strength.



Score Quality Test / Score Bend Test Fixture

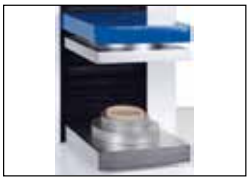
Use this fixture to measure score quality of corrugated containers according to TAPPI T829 when attached to the SQT Score Bend Tester or the V OR S Series Universal Testing Machine. The score quality test evaluates the relative quality of scores in paperboard, corrugated containers, and plastics.

Consists of two parts: **Upper Grip Adapter** = pressure bar, **Lower Grip Adapter** = u-channel wall



Ring Crush Test Fixture

Linux Ring Crush Fixtures utilize precision disk sets to cover calipers from
<.0050" to >.0390" as prescribed in TAPPI Test Methods T-818 and T-822.



Edge Crush Test Fixture

The Edge Crush Test (ECT), conducted according to TAPPI T-811 and similar, is a means to determine the ability of corrugated paperboard to withstand a top load when it is fabricated into a corrugated shipping container. The test involves carefully cutting a sample of material and subjecting it to a top load in the edge down configuration.

Pin Adhesion Test Fixture

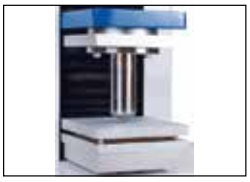
The Pin Adhesion Test measures the bond between the liners and the corrugated medium in a corrugated paperboard structure. It is tested by measuring the force required to separate the facings from the flute tips.

Test Methods TAPPI T-821 / Available fixtures A, B, C Flute

Flat Crush Test Fixtures

Flat Crush Test is designed to measure the resistance of corrugated paperboard to flute crushing. This is a very useful measurement when determining the amount of pressure applied during the printing process for corrugated box.

Test Methods TAPPI T825



Concora Crush Test Fixture

The Concora Crush Tester performs a series of tests to determine the rigidity and crush resistance of corrugated material. It is used in conjunction with the Concora Liner Tester.

We measure CMT in accordance with Tappi T809

Corrugated Crush Test Fixture

Corrugated or 'Concora' Crush Testing measures the edgewise compression strength of a laboratory-fluted strip of a corrugating medium.

We measure CCT in accordance with Tappi T824

An ISO 9001:2008 Company

Instrumental in Your Success

Linux Machines Incorporation
Plot No. 3, Ahad Industrial Complex, Near Bharat Gears Ltd.,
Bholenath Nagar, P. O. Dawla, Mumbra, Thane - 400612
Board Tel. No. : +91 88794 97458/68, 8879147554/56
Email: machines.linux@gmail.com
www.linuxmachines.in