

UNIVERSAL TESTING MACHINE DIGITAL CUM COMPUTERIZED



Tensile, compression, shear strength, bending strength and elongation are the prime characteristics of most of the raw materials, whether they are metals: or non-metals: such as Rubber, textiles, plastic, and paper: or finished products such as rods, wires, ropes, yarns, belts etc.

These properties very often play the major role in determining the suitability of any raw material for any specific application. It is therefore, of utmost importance to determine these characteristics accurately, conveniently, and quickly.

The **“PRC” Universal Testing Machine** provides a relatively inexpensive way for determining the Tensile, compression, shear strength and elongation of variety of raw materials such as rubber, leather, fabric, plastics, Belts, wires etc.

They are based on constant rate of traverse principle in which one end of the test specimen is held in a stationary grip, (or place on the compression plate) while the other end is made to move at a known fixed speed with the help of motor, two gear boxes and dual screws arrangement. The load exerted on the stationary grip is sensed by a load cell and elongation by the distance between the grips both are indicated by a digital indicator and also indicated with graph on the monitor of the computer (only in comprised model) . The controller is microprocessor based and has the facility of over load protection, peak hold, stop the machine when the sample is break and auto calibration. The load directly indicated in kilograms or Newton.

The frame of the tester fabricated from heavy mild steel sections to give the required rigidity and strength. Various built in safety arrangements such as over travel protection are provided.

The Machine is finished in metallic painting and bright chrome| zinc plating to give the apparatus a corrosion resistant finish. It is supplied complied which electrical, which include micro switches, Push buttons, and contactors for safe and convenient operation

Technical Specifications:

Capacity Range	:	200 Kg to 20000 Kg
Least Count	:	0.02 Kg to 2 Kg
Speed Variable	:	50 & 500 mm/min (Other speed are also available on request or requirement with extra cost).
Traverse	:	25mm to 900mm.
Motor	:	½ Hp, 1425rpm induction motor
Power Supply	:	220 VAC, 1500 W, Single phase

PRC also offers Computerization of all types of Testing Machines i.e. Universal Testing Machines, Compression Testing Machines, Tensile Testing Machines, Wood Testing Machines, Yarn & Fabric Testing Machines with indigenously developed advance software and reliable transducers i.e. Load cell, Pressure Transmitters or Rotary Encoders.

The following tests can be conducted precisely and graphs can be plotted with the computerized model,

- ✚ Tensile Test,
- ✚ Compression Test,
- ✚ Shear Test &
- ✚ Bending Test
- ✚ Flexural or 3Point bend Test
- ✚ Peel Test
- ✚ S. Bending Test

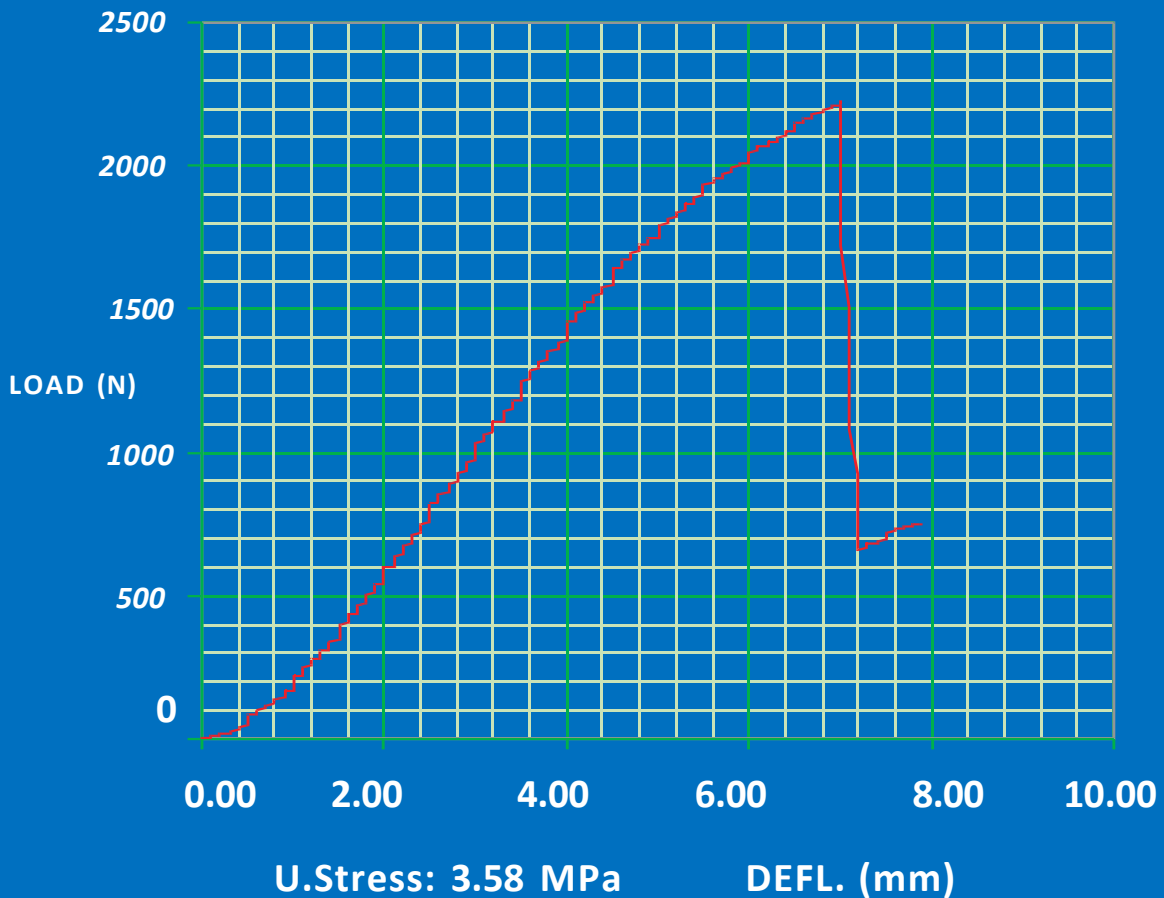
The salient features of this version are,

- ✚ Unit Conversion,
- ✚ Statistical Report up to 10 Tests with Mean Value
- ✚ Standard Deviation & Co-efficient of Variation.
- ✚ Bar graph facility & Printer Port.
- ✚ Pre-Load setting,
- ✚ Auto Breaking,
- ✚ Auto Calibration for Load & Displacement
- ✚ Over Load and Over Travel Protection
- ✚ Drives Interfacing facility for Speed control

Computerized Test Report

Company Name	SPM Testing Lab	Nature of Test	Bending
Test No.	26	Maximum Load	2232.974 N
Date	07-10-2022	Max Displacement	7.000 mm
Time	02:30:29	Deflection	7.000 mm
Ref. No.	06/22035	Proportional Load	226.300 N
Code No.	01	MOR	48.310 N/mm ²
Sample Name	Wooden	MOE	1111.147 N/mm ²
Sample No.	06/22/025	Cross Section Area	624.000 mm ²
Span	108 mm	Duration	100.186 Sec
Width	52.000 mm	Peak Time	89.596 Sec
Thickness	12.000 mm	Temperature	25 Deg C
Humidity	65 RH	Proportional Strength	48.013 N/mm ²
Speed	5.000 mm/min	Proportional Work	0.012 N/mm ²

LOAD vs DEFL



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We also manufacture:

- ✓ Design & Development of Customized requirements
- ✓ Microcontroller Based Systems for Load, Pressure, Torque, Displacement, Temperature, Multifunction Digital Indicators, Batching Systems, Data Acquisition Systems, Air Leakage Testing System, Light Testing System, Computerization of Materials Testing Machines, Timers, Counters, Production Counter, Impact Tester, Hardness Tester.