

Strength of Material Lab

Mechanical Engineering Lab Equipment

DIGITAL UNIVERSAL TESTING MACHINE

FEATURE:

- Loading accuracy: As high as + 1 %
- Speeds: Straining at variable speeds to suit wide range of materials
- Facilities for tests: Motor-driven threaded columns for quick and convenient adjustment of lower crosshead to facilitate rapid fixing of test specimen.
- Autographic recorder: Simultaneous roll autographic recorder supplied as standard to enable study of the behaviors of materials.
- Ideal Dia: High reading accuracy due to large size ideal design of dial.
- Large columns: Large effective clearance between columns enables testing of standard specimen as well as structures.
- Easy changeability: Easy change from plain to threaded and screwed specimens
- Simple & Safe: Simple to operate.
- Robust construction
- Chrome plated metal components
- Wide range of standard and special attachments accessories available.



COMPUTERIZED UNIVERSAL TESTING MACHINE

APPLICATION SYSTEM:

- Peak Load along with on line load
- Maximum elongation with online elongation
- Ultimate Tensile Strength
- Graphical Display of load vs. time
- Graphical Display of elongation vs. time
- Graphic Display of load vs. elongation
- Graphic Display of stress vs. strain
- Complete Statistical Analysis
- Data report management

SAFETY FEATURES:

- Machine stops after specimen failure
- Safety against over travel of piston
- Surge protector
- Auto machine diagnosis





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Technical Specifications:

Model	Units	EnTek 10	EnTek 10E	EnTek 20	EnTek 20E	EnTek 40	EnTek 40E	EnTek 60	EnTek -60E	EnTek 100	EnTek 100E	EnTek 200	EnTek 200E
Max. Capacity		100		200		400		600		1000	2000		
1st Measuring Range Resolution	KN	0-100 0.20	0.01 KN	0-200 0.40	0.02 KN	0-400 0.80	0.05 KN	0-600 1.00	0.05 KN	0-1000 2.000	0.10 KN	0-2000 4.00	0.20 KN
2nd Measuring Range Resolution	KN	0-50 0.10		0-100 0.20		0-200 0.40		0-300 0.50		0-500 1.00		0-1000 2.00	
3rd Measuring Range Resolution	KN	0-25 0.05		0-50 0.10		0-100 0.20		0-120 0.20		0-250 0.50		0-500 1.00	
4th Measuring Range Resolution	KN	0-10 0.02		0-20 0.04		0-40 0.08		0-60 0.10		0-100 0.20		0-200 0.40	
Max. Clearance for Tensile Test	mm	50-700		50-700		50-700		50-800		50-850	50-900		
Max. Clearance for Compression Test	mm	0-700		0-700		0-700		0-800		0-850	0-900		
Clearance between Columns	mm	500		500		500		600		750	850		
R.A.M. Stroke	mm	150		200		200		250		250	300		
Straining/Piston Speed at no load	mm mm	0-300		0-150		0-150		0-100		0-80	0-45		
Electric Supply	kw	1.0		1.0		1.75		1.9		2.6	3.00		

Standard Accessories

For Tension Test: Clamping Jaws for round specimen	Mm	10-20 20-30	10-20 20-30	10-25 25-40	10-25 25-40 40-55	10-20 25-40 45-70	20-40 40-60 60-80
Clamping Jaws for Flat specimen	Mm	0-10 10-20	0-10 10-20	0-15 15-30	0-15 15-30	0-22 22-44 44-65	0-20 20-45 45-70
Width	Mm	50	50	65	70	70	100
For Compression Test: Pair of compression plate of diameter	Mm	120	120	120	120	160	220

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IMPACT TESTING MACHINE

The machine strictly conforms to the relevant IS Standards and is designed for conducting IZOD & CHARPY TESTS on metals and alloys. The machine is supplied complete with strikers for conducting IZOD and CHARPY TESTS The impact energy is observed on a mechanical against a pointer. Least count 0.2 Kgm

1. Pendulum Drop Angle

Charpy Test : 140° Izod Test : 85°

2 Pendulum effective weights

Charpy Test : 20 to 21 kg Izod Test : 21 to 22 kg

3 Pendulum speed

Charpy Test : 5, 3- 5.35 m/s Izod Test : 3.95/3.99 m/s

4 Pendulum impact energy

Charpy Test : 300J Izod Test : 170J

5 Accuracy : +/-0.5 %

6 Distance of axis of pen 24 mm from Centre of specimen/point of specimen

Hit by pendulum : 815-825 mm

7 Maximum permissible losses by friction

& windage : 0.5 % of Impact Energy

8 Striking edge angle

Charpy Test : 30° Izod Test : 75°



TORSION TESTING MACHINE

The machine is designed for conducting TORSION and TWIST tests on various metal wires, tubes, sheet materials. Torque measurement by Pendulum Dynamometer System. Torque is applied to the specimen by geared motor through gear box. The accuracy of torque indication is +/- 1% of true torque and the twist indication is 0.5 degrees.

CAPACITY: 50 K.G.M



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SPRING TESTING MACHINE

The machine is designed for testing Tension and Compression springs. The machine is supplied complete with contraption for holding tension springs and a pair of compression platens for holding compression springs.

CAPACITY 2000 K.G.F



FATIGUE TESTING MACHINE

For metals: Reverse Bending, supplied complete with jigs and fixtures mounted on a table with motor, weights, etc. An electronic Digital Revolution Counter registers the number of revolutions taken by the sample to break. The machine automatically stops after the rupture of the specimen.



ROCKWELL HARDNESS TESTER

Enriched by vast industry experience; we are able to manufacture, supply and export excellent quality **Rockwell Hardness Tester**. The hardness tester offered by us is designed using high grade raw material with the aid of latest technology. Our hardness tester is highly appreciated for its salient features like excellent performance, minimal maintenance and longer service life. We offer this **Rockwell Hardness Tester** in various specifications so as to address the varied industrial demands.



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Technical Specifications:

Model	Entek 5A-5B	Entek5C	Entek 5D	Entek 5E	AMT 5F
Max. load (kgf)	150	187.5	250	45	150
Load range (kgf)	60, 100, 150	60, 100, 150, 187.5	60, 100, 150, 187, 5, 250	15, 30, 45	15, 30, 45, 60, 100, 150
Initial load range (kgf)	10	10	10	-	3.10
Max. test height (mm)	216	216	290	-	290
Depth of throad (mm)	133	133	148	148	148
Size of base (mm)	171x445	171x445	210x510	210x510	210x510
Machine height (mm)	635	635	845	845	845
Nett. weight (Approx.) kg.	77	77	137	137	137
Test performed	Rockwell	Rockwell & Brinell	Rockwell & Brinell	Superficial	Rockwell & Superficial

BRINELL HARDNESS TESTER

With the years of experience in this domain, we have emerged as on of the leading manufacturers, suppliers and exporters of high grade **Brinell Hardness Tester**. Premium quality raw material, sourced from reliable vendors is used in manufacturing of this machine. Owing to its robust construction, reliable results and longer service life, our hardness tester is highly demanded in the market. Moreover, our **Brinell Hardness Tester** comes with control circuit and hydraulic power pack, which makes the entire loading & unloading operation efficient & effortless.

Other details: The machine is designed with a hydraulic power pack and control circuit for effortless loading unloading operation. A dial gauge in from measures depth of ball penetration. This facilitates production testing within tolerance limits by comparison method.



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Standards Accessories:

Model	Entek 3000
Testing table 200mm â^ ...	1 pc.
Testing table 200mm â^ ... with 'V' grovefor round jobs-10 to 80mm dia.	1 pc.
Ball holder 5mm	1 pc.
Ball holder 10mm	1 pc.
Test block HB-5/750	1 pc.
Test block HB-10/3000	1 pc
Brinell Microscope	1 pc.
Allen spanner	1 pc.
Telescopic cover for elevating screw protection	1 set
Instruction	1 book

VICKER HARDNESS TESTER

Vickers Hardness of steel and other metals. These machines are designed and manufactured for very high accuracy, reliability and ease of operation. The selection of load is effected with the push button control system. The measurements of diagonal/diameter of indentation is done with the help of built-in optical system with graduated readout with Micrometer. After taking indentation on the work piece, the objective lens is automatically swivelled into position and image of indentation appears on the focusing screen fitted in front of the machine. A push button is provided for starting the loading cycle and unloading is accomplished through hand lever. This machine conforms to IS 1754-1986 for Vickers Test.



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TENSILE TESTING MACHINE

Ours is a remarkable firm, which is involved in manufacturing, supplying and exporting high quality **Tensile Testing Machine**. As our machine is manufactured using premium quality stainless steel, it has high strength and optimal corrosion resistance. Owing to its excellent results and high performance, our device is highly demanded in the market. **Tensile Testing Machine** is extensively being used for tensile, compression & elongation strength measurement of materials like wires, cable and ferrous & non ferrous metals.

Other details:

Tensile Testers are electrically operated machines for testing tensile strength and elongation of materials like plywood, wires, cables, conductors, ferrous and non-ferrous materials.

Brand Tensile Testers are manufactured in various capacities and tests can be conducted on these machines by simply incorporating appropriate traverse speeds and using suitable grips in conformity with the adopted BIS, BS, ASTM, DIN and ISO standards.

ENTEK Brand Tensile Testers are quite capable of conducting. Compression and Bending tests a parts from performing tensile and elongation tests.

Brand Tensile Testers are extra elegant, best quality, durable and accurate with matchless perfection.

Tensile Testers are also offered on specific requirements with load graduation in Kilograms Newton Electronic up based and computerized tensile testers can also be manufactured on specific requirements. Besides a wide range of accessories depending upon the individual requirements, for the rests involved, of the user and a prompt and reliable after-sales service facilities are also available.



ERICHSEN CUPPING TESTING MACHINE

Erichsen cupping tests on metals, these machines are developed in adherence with the international quality standards. Equipped with clamps for faster and smooth functioning, these machines are manually operated. For the diverse requirements of our clients, we offer our range in varied specifications that meet their business needs.

Specifications:

Width of sample: 70-90 mm, Thickness of sample: 0.1-2 mm, Least count: 0.01 m,
 Overall Dimensions (approx.): 450x500x500 mm, Net weight (approx.): 20 kg





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