



**XIEEPL**  
*Enriching Technical Education*



**PRODUCT CATALOGUE  
FOR SOM / MATERIAL / MOS LAB EQUIPMENT**

## CEMENT-CONCRETE-AGGREGATE LAB EQUIPMENT

| Item No | Item Name                           | Item No | Item Name                           |
|---------|-------------------------------------|---------|-------------------------------------|
| 001     | Blaine's Air Permeability Apparatus | 024     | Tile Flexure Testing Machine        |
| 002     | Cement Sampler                      | 025     | Cube Moulds                         |
| 003     | VICAT Needle Apparatus              | 026     | Tile Abrasion Testing Machine       |
| 004     | Le-Chatelier Mould                  | 027     | Needle Vibrator                     |
| 005     | Le Chatelier Flask                  | 028     | Tensile (Briquette) Strength Tester |
| 006     | VEE BEE Consistometer               | 029     | G.I. Frame Coarse Sieves            |
| 007     | Slump Test Apparatus                | 030     | Brass Frame Fine Sieves             |
| 008     | Compaction Factor Apparatus         | 031     | Cylindrical Moulds                  |
| 009     | Kelley Ball Penetration Apparatus   | 032     | Beam Moulds                         |
| 010     | Mortar Mixer                        | 033     | Shrinkage Bar Moulds                |
| 011     | Water bath                          | 034     | Aggregate Crushing Value Apparatus  |
| 012     | Flow Table                          | 035     | Aggregate Impact Testing Machine    |
| 013     | Flow Table - Motorised              | 036     | Sieve Shaker Machine                |
| 014     | Laboratory Concrete Mixer           | 037     | Bulk Density Apparatus              |
| 015     | Laboratory Pan Mixer                | 038     | Specific Gravity Of Aggregates      |
| 016     | Laboratory Cement Autoclave         | 039     | Los Angeles Abrasion Testing        |
| 017     | Rapid Chloride Penetration Test     | 040     | Elongation Index & Flakiness Index  |
| 018     | Length Comparator                   | 041     | Cone Penetrometer For Mortar        |
| 019     | Vibrating Table                     | 042     | Rebound Hammer                      |
| 020     | Vibrating Machine / Mould Vibrator  | 043     | Digital Concrete Test Hammer        |
| 021     | Flexure Testing Machine             | 044     | Ultrasonic Pulse Velocity Tester    |
| 022     | Flexure Testing Machine -Motorised  | 045     | General Instruments                 |
| 023     | Concrete Permeability Apparatus     |         |                                     |

## GEOTECH (SOIL) TESTING LAB EQUIPMENT

| Item No | Item Name                        | Item No | Item Name                     |
|---------|----------------------------------|---------|-------------------------------|
| 046     | Plastic Limit Set                | 059     | Proctor Needles (Spring Type) |
| 047     | Shrinkage Limit Set              | 060     | Rapid Moisture Meter          |
| 048     | Liquid Limit Device              | 061     | Consolidation Test Apparatus  |
| 049     | Soil Cone Penetrometer           | 062     | Direct Shear Apparatus        |
| 050     | Semi Automatic Cone Penetrometer | 063     | Soil Permeability Apparatus   |
| 051     | Sand Pouring Cylinder            | 064     | Unconfined Compression Test   |
| 052     | Sand Density Cone Apparatus      | 065     | Hydraulic Sample Extractor    |
| 053     | Core Cutter                      | 066     | Triaxial Shear Test Apparatus |
| 054     | Standard Proctor Test Apparatus  | 067     | Swell Test Apparatus          |
| 055     | Relative Density Apparatus       | 068     | Point Load Index Tester       |
| 056     | Pycnometer                       | 069     | CBR Apparatus                 |
| 057     | Relative Density Bottles         | 070     | Vane Shear Test Apparatus     |
| 058     | Pocket Penetrometer              | 072     | General Instruments           |

## MATERIAL TESTING / STRENGTH OF MATERIAL LAB EQUIPMENT

| Item No | Item Name                           | Item No | Item Name                            |
|---------|-------------------------------------|---------|--------------------------------------|
| 073     | Universal Testing Machine           | 079     | Rockwell Cum Brinell Hardness Tester |
| 074     | Compression Testing Machine         | 080     | Vickers Hardness Tester              |
| 075     | Charpy, Izod Impact Testing Machine | 081     | Mechanical Extensometer              |
| 076     | Torsion Testing Machine             | 082     | Fatigue Testing Machine              |
| 077     | Spring Testing Machine              | 083     | Cantilever & Simply Supported Beam   |
| 078     | Poldi Hardness Tester               | 084     | Jominy End Quench Hardenability      |

## ASPHALT /BITUMEN TESTING LAB EQUIPMENT

| Item No | Item Name                         | Item No | Item Name                              |
|---------|-----------------------------------|---------|--|
| 085     | Ring & Ball Apparatus             | 092     | Benkelman Beam                         |
| 086     | Automatic Standard Penetrometer   | 093     | Thin Film Oven                         |
| 087     | Ductility Testing Apparatus       | 094     | Cleveland Flash & Fire Point Apparatus |
| 088     | Bitumen Centrifuge Extractor      | 095     | Pensky Marten Flash Point Apparatus    |
| 089     | Bituminous / Asphalt Mixer        | 096     | Saybolt Viscometer                     |
| 090     | Marshall Stability Test Apparatus | 097     | Standard Tar Viscometer                |
| 091     | Automatic Bituminous Compactor    | 098     | Stripping Value Apparatus              |

## ENVIRONMENTAL / PUBLIC HEALTH ENGINEERING LAB EQUIPMENT

| Item No | Item Name                        | Item No | Item Name                         |
|---------|----------------------------------|---------|-----------------------------------|
| 099     | Muffle Furnace                   | 105     | C.O.D Digestion Apparatus         |
| 100     | Hot Air Oven                     | 106     | Laboratory Hot Plate              |
| 101     | Glass Water Distillation Unit    | 107     | Respirable Dust Sampler           |
| 102     | Digital Weighing Balance         | 108     | Humidity / Stability Test Chamber |
| 103     | BOD Incubator                    | 109     | Analytical Testing Instruments    |
| 104     | Jar Test Apparatus (Flocculator) |         |                                   |

## 110. SURVEYING LAB EQUIPMENT

## AS PER IS: 1828 & BS 1610.

**Introduction:** Universal Testing Machine is designed for testing metals and other materials under tension, compression bending, transverse and shear loads. Hardness test on metals can also conducted.

Operation of the machine is by hydraulic transmission of load from the test specimen through pressure transducer to a separately house load indicator. The system is ideal since it replaces transmission of load through levers and knife edges, which are prone to wear and damage due to shock on rupture of test pieces.

Load is applied by a hydrostatically lubricated ram. Main cylinder pressure is transmitted to the pressure transducer housed in the control panel. The transducer gives the signal to the electronic display unit corresponding to the load exerted by the main ram. Simultaneously the digital electronic fitted on the straining unit gives the mechanical displacement to the electronic display unit. Both the signals are processed by the microprocessor and load and displacement is displayed on the digital readouts simultaneously.

### Electronic Control Unit : Consists of

- ◆ Microprocessor based panel incorporating state of art technology with following features.
- ◆ Front panel membrane type key board for machine operation with numeric keys for data entry.
- ◆ Data entry with numeric keyboard of test parameters including speeds, rupture % peak, preload, modulus data, test data & specimen data etc.
- ◆ 20 input data set storage, 50 results storage maintains data results during power off.
- ◆ Batch test facility for generating batch & statistic result using same data set.
- ◆ RS 232C serial port, Optional windows based software available for.
- ◆ On line graph on PC. Data analysis, statistics, point tracing superimposing graphs to compare with standard, zooming graph etc.
- ◆ Printer port for printer interface with.
  - Graph & result printout. Test certificate printout .
  - Batch Certificate printout .Simple statistic printout.



### Specifications:

| Model   | Units  | UTE-10            | UTE-20            | UTE-40            | UTE-60                  | UTE-100                      | UTE-200                      | UTE-300                      |
|---|--------|-------------------|-------------------|-------------------|-------------------------|------------------------------|------------------------------|------------------------------|
| Maximum Capacity  | kN     | 100               | 200               | 400               | 600                     | 1000                         | 2000                         | 3000                         |
| Measuring Range   | kN     | 0-100             | 0-200             | 0-400             | 0-600                   | 0-1000                       | 0-2000                       | 0-3000                       |
| Load Resolution (20,000 counts full scale)                        | N      | 5                 | 10                | 20                | 30                      | 50                           | 100                          | 150                          |
| Load Range with Accuracy of measurement ± 1.0%                    | kN     | 2 to 100          | 4 to 200          | 8 to 400          | 12 to 600               | 20 to 1000                   | 40 to 2000                   | 60 to 3000                   |
| Resolution of piston movement (Displacement)                      | mm     | 0.1               | 0.1               | 0.1               | 0.1                     | 0.1                          | 0.1                          | 0.1                          |
| Clearance for tensile at fully descended working piston.          | mm     | 50-700            | 50-700            | 50-700            | 50-800                  | 50-850                       | 50-900                       | 50-900                       |
| Clearance for compression test at fully descended working piston. | mm     | 0-700             | 0-700             | 0-700             | 0-800                   | 0-850                        | 0-900                        | 0-900                        |
| Clearance between columns.  | mm     | 500               | 500               | 500               | 600                     | 750                          | 850                          | 850                          |
| Ram Stroke  | mm     | 150               | 200               | 200               | 250                     | 250                          | 300                          | 300                          |
| Straining/piston speed (at no load)                               | mm/min | 0-300             | 0-150             | 0-150             | 0-100                   | 0-80                         | 0-45                         | 0-50                         |
| <b>Connected Load</b>   |        |                   |                   |                   |                         |                              |                              |                              |
| Power (W)   | kW     | 1.0               | 1.0               | 1.7               | 1.9                     | 2.6                          | 4.9                          | 6.4                          |
| Voltage (V)   |        | 400-440           | 400-440           | 400-440           | 400-440                 | 400-440                      | 400-440                      | 400-440                      |
| Phase (Ø)   |        | 3                 | 3                 | 3                 | 3                       | 3                            | 3                            | 3                            |
| Weight (approx.)  | kg-    | 1500              | 1500              | 2500              | 3500                    | 5500                         | 9500                         | 15,000                       |
| <b>Standard Accessories</b>                                       |        |                   |                   |                   |                         |                              |                              |                              |
| For Tension Test  |        |                   |                   |                   |                         |                              |                              |                              |
| • Clamping jaws for round specimens of Diameters.                 | mm     | 10-20<br>20-30    | 10-20<br>20-30    | 10-25<br>25-40    | 10-25<br>25-40<br>40-55 | 10-25<br>25-45<br>45-70      | 20-40<br>40-60<br>60-80      | 25-50<br>50-70<br>70-90      |
| • Clamping jaws for flat specimens of thickness.                  | mm     | 0 - 10<br>10 - 20 | 0 - 10<br>10 - 20 | 0 - 15<br>15 - 30 | 0 - 15<br>15 - 30       | 0 - 22<br>22 - 44<br>44 - 65 | 0 - 20<br>20 - 45<br>45 - 70 | 0 - 25<br>25 - 50<br>50 - 75 |
| Width   | mm     | 50                | 50                | 65                | 70                      | 70                           | 90                           | 100                          |
| For Compression Test  |        |                   |                   |                   |                         |                              |                              |                              |
| Pair of compression plates of dia.                                | mm     | 120               | 120               | 120               | 120                     | 160                          | 220                          | 220                          |
| For Transverse Test   |        |                   |                   |                   |                         |                              |                              |                              |
| Table with adjustable rollers width of rollers.                   | mm     | 160               | 160               | 160               | 160                     | 160                          | 200                          | 200                          |
| Diameter of Rollers   | mm     | 30                | 30                | 30                | 50                      | 50                           | 70                           | 70                           |
| Maximum clearance between supports                                | mm     | 500               | 500               | 500               | 600                     | 800                          | 900                          | 1000                         |
| Radius of punch tops.   | mm     | 6, 12             | 6, 12             | 12, 16            | 16, 22                  | 16, 22                       | 30, 40                       | 50, 75                       |

### NOTE:

Since research and development is an on going activity, the specifications mentioned herein are subject to change without notice. Photographs / Illustrations are only indicative in nature and will change with the exact model / specifications of the client.

## 074 : COMPRESSION TESTING MACHINE

**AS PER IS: IS-516, B.S.S. 1610, 1881.**

**Introduction:** Strength of Concrete is a very important aspect during construction. Strength of concrete is obtained by crushing the specimen in form of cubes or cylinders. Concrete is carefully designed for a particular compressive strength by the Engineers and specimen is tested by applying load in a compression Testing Machine. Range of Compression Testing Machines from **10 Tons to 300 Tones** in different models. Portable models are very convenient and useful for site use where carrying frequently the specimens for testing in a standard laboratory is inconvenient and uneconomical. With special attachments the machines can also be used for bricks, hollow or solid concrete blocks, using appropriate capacity machine. In general a Compression Testing Machine consists of a Load Frame with suitable platens and a Pumping Unit with Pressure Gauge, either **hand operated or electrically cum- hand operated or Digital or Computerized**. Load Frame and Pumping unit are connected by pressure pipe.



### Specifications:

**PILLAR TYPE LOAD FRAME:** There are two/ Four pillar type of load frames. Two solid pillars are vertically fixed to a sturdy base and at other end is fixed across-head. The height of the cross head is also slightly adjustable. A lead screw passes through the center of cross-head. To the lower end of this lead screw is fixed upper platen with a spherical seat for self alignment. At the center of the base plate is fixed a jack, on the top of which the lower platen with the help of a centering pin is kept. The distance between the upper end platen is variable by means of the lead screw. A spacer block is also supplied with the load frame. This spacer block which can be fitted on the top of the jack and below the lower platen by means of centering pins helps reduce the distance between the two platens. The platens are well machined, polished and hardened. The lower platen has concentric grooves to centrally place the specimen.

**ELECTRICALLY CUM HAND OPERATED PUMPING UNIT:** This is a separate console housing an oil tank, electric motor, relay etc. A drain Plug to remove oil is fitted at the base of the tank. The pumping unit has on its front panel a slow-fast lever to control the rate of loading, a release valve and a slit to enable a rod to be inserted in the hand pump to operate the pumping unit manually. A pressure gauge is fitted in front at a convenient angle. The pumping unit works on 230 V A.C. or 415 V, 3 supply. This pumping unit is connected to the load frame by means of pressure pipes.

**Note:** Digital versions of electrically operated Compression Testing Machines can also be supplied. The digital versions have 0.5% accuracy

## 075 : CHARPY, IZOD IMPACT TESTING MACHINE

**AS PER IS: 1598-1997, 1757-1973, 1499-1977, 3766-1977, BS: 131-Part 1, 2, 3 & 4- 1972 .**

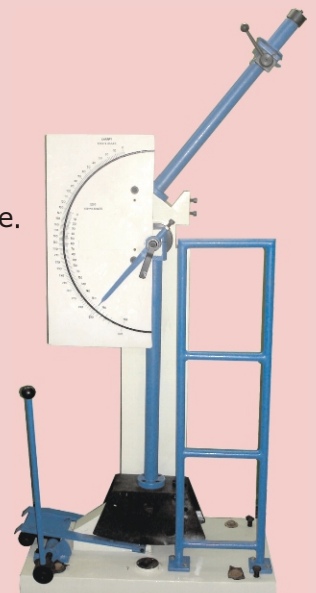
**Introduction:** Pendulum Impact Tester is designed for conducting Izod and Charpy test. The pendulum is mounted on antifriction bearings. It has two starting positions, the upper one for Charpy and the lower one for Izod testing. On release, the pendulum swings down to break the specimen and the energy absorbed in doing so is measured as the difference between the height of drop before rupture and the height of rise after rupture of the test specimen and is read from the position of maximum pointer on the dial scale.

The machine will have following features:

- ◆ Capacity : 300 Joules
- ◆ Resolution : 2 Joules for Charpy Test, 2 Joules for Izod Test
- ◆ Accuracy : Within 0.5 %
- ◆ Release of Pendulum by Hand operation.
- ◆ Safety guards for Protection.
- ◆ Assembly to hold standard Izod and Charpy Specimens.
- ◆ Braking Arrangement provided to arrest swing of pendulum after specimen rupture.
- ◆ Standard size specimens of Izod Impact and Charpy 2 nos for each.

### Specifications:

|   | CHARPY TEST,                | IZOD TEST    |
|---|-----------------------------|--------------|
| Pendulum drop angle   | 140°                        | 85°21'       |
| Pendulum effective weight   | 20.996 kg.                  | 22.059 kg.   |
| Striking velocity of pendulum   | 5.3466 m/sec.               | 3.857 m/sec. |
| Pendulum Impact energy  | 300 J                       | 164 J        |
| Min. Scale graduation   | 2 J                         | 2 J          |
| Distance of axis of pendulum rotation centre of specimen/to the point of specimen hit by pendulum | 825 mm                      | 825 mm       |
| Max. Permissible loss by friction & windage etc.  | 0.5% of max. Impact energy. |              |



## 076 : DIGITAL TORSION TESTING MACHINE

**Introduction:** Torsion Testing Machine is designed for conducting Torsion and Twist Tests on various metal wires, tubes, sheet materials. Torque measurement is by Pendulum Dynamometer System. Torque ranges can be adjusted. Torque can be applied to specimen by geared motor through gear box. Autographic recorder can be provided to know the relation between torque and angle of twist on specific request. The Accuracy of the torque indication + 1% of the true torque.

**Features:** The **electronic control panel** is built using microprocessor which incorporates state of the art technology with following features -

- ◆ Front Panel membrane type key board for test setup.
- ◆ Digital display of load displacement/extension.
- ◆ Printer port interface (OPTIONAL).
- ◆ Serial port communication with PC (OPTIONAL).
- ◆ Storage of important parameters such as peak load & maximum Displacement after test.
- ◆ Preload selection to take care of initial slippage.
- ◆ Real time graph & PC software. (OPTIONAL).

**Technical Data:**

| Models                            | Unit | TTE-50 | TTE-100 |
|-----------------------------------|------|--------|---------|
| Max. Torque Capacity              | Nm   | 500    | 1000    |
| Least Count                       | Nm   | 0.05   | 0.01    |
| Torsion Speed                     | RPM  | 0.5    | 0.5     |
| Clearance between Grips           | mm   | 0-500  | 0-600   |
| Grips for Round specimens         | mm   | 10-17  | 10-18   |
|                                   |      | 17-24  | 18-26   |
|                                   |      | 24-30  | 26-34   |
| Grips for flat Specimens width mm | mm   | 5-12   | 5-15    |
|                                   |      | 40     | 50      |
| Motor (440 V, 3 Ø & 50 Hz.)       | HP   | 0.5    | 1.0     |



## 077 : SPRING TESTING MACHINE

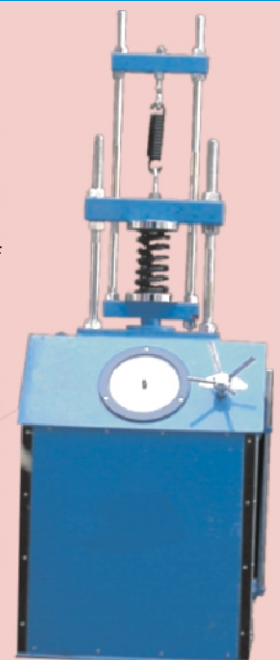
**AS PER IS: 18281 BS:1610.**

**Introduction:** Springs are normally manufactured for a specific purpose. Spring reliability equals to product reliability. Hence, a spring manufacturer should ensure that the spring manufactured by him will meet his customer specification by testing with a suitable spring testing machine. Most spring tests require the measurement of a load at a specific height. This requires the testing machine to measure load and height simultaneously to achieve the accurate and meaningful result. The accuracy, precision, repeatability and reproducibility of test results depend on the features and performance of the load testing machine.

**Specifications:** The unit consists of a cabinet housing the hydraulic assembly, the hand wheel of the pump and the release valve handle are outside the cabinet for easy operation. This compact base carries two fixed upright and four horizontal plates. The first and third plate with two small upright from an adjustable frame. The second and the fourth plates are fixed. The machine is capable of accommodating 20cm length 12mm diameter, rod up to 100mm diameter springs for tension and 150mm length 12mm springs for compression. Scale graduations are made up to 15cm.

A Bourdon type Gauge is fixed for direct load measurements. One fixed upright is graduated to denote the deflections or tension of the springs for direct readings. A thimble with an arrow mark is provided to facilitate the readings.

**OPTIONAL:** Digital Type Spring Testing Machine also available.



## 078 : POLDI HARDNESS TESTER

| Specifications:       |  |  |
|-----------------------|--|--|
| MATERIAL              | ALLOY STEEL EN-8 OR EN-9                     |  |
| DIA                   | 30 MM  |  |
| LENGTH                | 85 MM  |  |
| TUNGSTON CARBIDE BALL | 10 MM DIA                                    |  |
| MATERIAL              | ALOY STEEL EN-8 OR EN-9 OR CARBEN STEEL- WPS |  |
| SIZE                  | 12mm x 12mm x 150mm                          |  |
| EYE PIECE             | 8 X  |  |
| BRINELL MICROSCOPE    | 25 X (OPTIONAL AT EXTRA COST)                |  |



## 082 : FATIGUE TESTING MACHINE

### AS PER IS: 5075-1969.

**Introduction:** This machine is used to test the fatigue strength of materials and to draw S-N diagram by research institute, laboratories, material manufacturers and various industries. This is rotating beam type machine in which load is applied in reversed bending fashion. The standard 8 mm dia specimen is held in special holders at its ends and located such that it experiences a uniform bending moment. The specimen is rotated at 4200 rpm by a motor. A complete cycle of reversed stresses in all fibres of the specimen is produced during each revolution.

The bending moment is applied with the lever system and can be easily changed by moving a weight over the lever. Total number of revolution at which the specimen fails are recorded by a mechanical counter. An interlocking system puts off the motor at specimen failure.

Electronic counter instead of mechanical counter can be supplied at additional price. Machine with maximum bending moment up to 400 Kg. cm can be offered on request.

#### Features:

- ◆ Table model, no need of foundation.
- ◆ Simple lever system for changing load.
- ◆ Calibration in Nm available on request.
- ◆ Light weight, Simple design, Compact Size.

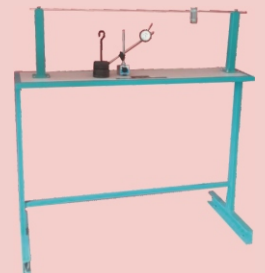
#### Specifications:

|  |                  |
|--|------------------|
| Max. bending moment (Kg. cm)                         | 200              |
| Bending moment adjustable (Kg.cm)                    | 25 - 200         |
| Ranges : 1 - Kg.cm II - Kg.cm                        | 25- 125 125-200  |
| Gripping dia of specimen (mm)                        | 12               |
| Testing dia of specimen (mm)                         | 8                |
| Rotating speed in RPM                                | 4200             |
| Accuracy of applied bending moment                   | ±1%              |
| Mechanical Counter: No. of digits Multiplying factor | 6 3              |
| Power required in HP                                 | 0.5              |
| Main Supply  | 3ph 440v 50hz    |
| Overall size (mm)                                    | 1000LX500WX600 H |
| Weight (Kg)  | 120              |



## 083 : CANTILEVER & SIMPLY SUPPORTED BEAM APPARATUS

**Introduction:** It consists of a Well Polished Wooden beam one meter long resting on two knife edge end supports. A central knife edge with hanger rests on the beam at the top of which a pin is provided. Complete with slotted weight set having two weights of 1 Kg., two weights of 500 gms. and a hanger. Supplied with dial gauge (Accuracy 0.01mm & Capacity 10mm) & magnetic stand. The whole system mounted on a MS Fabricated powder coated stand.



## 084 : JOMINY END QUENCH HARDENABILITY APPARATUS

**Introduction:** This apparatus is used for determining the Hardenability of steel by an experiment called Quench Test. This experiment will enable the student of know about the Hardenability characteristics of different alloying element. Quick transfer of specimen to quenching fixture within specific time with the special tong.

Quenching Fixture designed strictly as per BS / SAE with specifications like 45 degree angle of top plate, quenching distance, jet stopper release just before quenching etc.

Motorised Water Circulation with storage & test tank



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## 079 : ROCKWELL CUM BRINELL HARDNESS TESTER

**AS PER IS: 1586- 2000 for Rockwell test, IS:2281, BS:240 & ASTM-E-1 0 for Brinell test.**

**Introduction:** The Hardness Testers have been designed and manufactured strictly conforming to IS, BS, ASTM, ISO and DIN Standards. Since 1966 for most exacting test requirements in the Laboratories and Workshops etc. These testers are designed and manufactured for measuring hardness of metals and alloys of all types, hard or soft, flat, round, tubular or irregular in shape. The testers are simple in design, easy to operate, yet very reliable and accurate.

Manually operated. Suitable for testing hardness of metals and alloys of all kinds, hard or soft, whether flat, round or irregular shape. Conforms to IS:1586-2000, BS:891 (Part 1 & 2) ASTM E-18 for Rockwell test. IS: 2281-2005, BS:240, ASTM E-10 for Brinell test.

Rockwell cum Brinell hardness tester, automatic load selection with automatic zero setting dial gauge. Facility for brinell test with 187.5 kgf load with 2.5mm ball indenter, additional load of 250 kgf with 5mm ball indenter for testing hardness of non ferrous metal

### TECHNICAL DATA:

- ◆ Loads : 60, 100, 150, 187.5, 250 kgf
- ◆ Initial load : 10 kgf
- ◆ Max. test height : 230mm
- ◆ Depth of throat : 133mm
- ◆ Supplied complete with All Necessary accessories.



## 080 : VICKERS HARDNESS TESTER

**AS PER IS: 1754 and ISO 6507-2.**

**Introduction:** These testers are suitable for measuring the hardness of precision metallic parts with wide testing range from soft to hard and their accurate results are widely acclaimed. Vickers Hardness Tester is a simple and accurate means to produce and measure the diamond indentation.

### Features :

- ◆ Testing range is very wide, from soft metal such as lead, upto the hardest, like hardness steel.
- ◆ Same hardness number is obtained on the same specimen, regardless of the load applied.
- ◆ The indication is tiny and allows testing of a precision finished part.
- ◆ Loading and unloading cycle is motorised.
- ◆ Thin sheet metal is perfectly tested because the load applied is very small.
- ◆ Built-in projection screen to get accurate results.

### Specifications:

|                                     |                          |
|-------------------------------------|--------------------------|
| Test Loads                          | 5,10,20,30,50 kg         |
| Magnification of optical projection | 70X                      |
| Max. Test Height (mm)               | 200                      |
| Scale least count (mm)              | 0.001                    |
| Depth of throat (mm)                | 133                      |
| Dimensions of Machine (mm)          | L 585 x W 290 x H 860    |
| Weight (Approx)                     | 70 kg                    |
| Power Supply                        | 220 V AC, 50 Hz, 1-Phase |

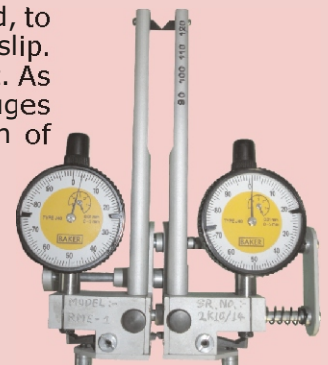


## 081 : MECHANICAL/ANALOG EXTENSOMETER

**Introduction:** It is essential to measure the elongation of test specimen under load, to have it's mechanical properties. So that the knife edges bite the specimen to avoid any slip. The upper edges are adjustable to provide different gauges lengths for measurement. As deformation takes place the lower knife edges transfer the movement to the dial gauges and the deformation of specimen is shown on dials, so that the change in length of specimen by 1/10mm, equals to one division of the graduation on dial.

### Specifications:

|                                   |                           |
|-----------------------------------|---------------------------|
| Measuring Range                   | 0 to 3 mm                 |
| Least Count                       | 1/10 mm                   |
| Gauge Length (Adjustable)         | 30 to 120 mm              |
| Thickness or diameter of specimen | 1 to 20 mm                |
| Dimensions - B x D x H            | 120 x 50 x 150 mm Approx. |
| Net Weight                        | 0.3 kg Approx.            |



## OUR OTHER PRODUCT RANGE



### Mechanical Engineering Department

- ☞ Fluid Mechanics Lab
- ☞ Hydraulic Machinery
- ☞ Thermal Engineering Lab
- ☞ Refrigeration & Air Conditioning Lab
- ☞ Heat Transfer Lab
- ☞ Theory Of Machine Lab
- ☞ Control Engineering Lab
- ☞ Instrumentation Lab
- ☞ Mechatronics Lab
- ☞ Vibration Lab
- ☞ Metallurgy Lab
- ☞ Metrology & Quality Control
- ☞ Oil, Petroleum & Paint Testing
- ☞ Manufacturing Process Lab

### Automobile Engineering Department:

- ☞ IC Engine Test Rig Lab
- ☞ Auto Electrical & Electronics System
- ☞ Automobile Engine Systems
- ☞ Automobile Transmission Systems
- ☞ Autotronics
- ☞ Automobile Air Conditioning
- ☞ Automobile Systems and Body Engineering
- ☞ Vehicle Layout and Transmission System

### Electrical Engineering Department:

- ☞ Electrical AC Machine Lab
- ☞ DC Machine & Transformer Lab
- ☞ High Voltage Lab
- ☞ Test & Measuring Instruments

### Electronics & Telecom. Engineering

- ☞ Analog Electronic Lab
- ☞ Digital Electronic Lab
- ☞ Microprocessor & Micro-controller Lab
- ☞ Analog Communication LAB
- ☞ Digital Communication LAB
- ☞ Fiber Optic and Laser Communication Lab
- ☞ Audio & Video Engineering Lab
- ☞ Consumer Electronics Lab
- ☞ Antennas, Microwaves and Radar Lab
- ☞ Computer Hardware Lab
- ☞ Computer Communication Network Lab
- ☞ Mobile Communication
- ☞ Wireless Communication and Networks Lab
- ☞ Satellite Communication and Network Lab
- ☞ Power Electronics Lab
- ☞ Instrumentation and Measurements Lab
- ☞ Automobile and Mechatronics Lab
- ☞ Bio-Medical Instrumentation Lab
- ☞ Robotics Lab
- ☞ Control Theory Lab

### Technical Training Academy or Courses

- ☞ PLC , SCADA, HMI Automation Training
- ☞ Embedded System Training
- ☞ Robotics Automation Training

### PUNE TEST HOUSE\*

- ☞ Construction Material Testing Lab
- ☞ \* Up-coming Project







**X E E P L**  
*Enriching Technical Education*

## Enriching Technical Education

we are one of the pioneers in the field of Manufacturing of various Civil, Mechanical, Automobile, Electronics, Electrical, Instrumentation, Engineering equipment. We take a great pleasure to introduce ourselves as an organization in Manufacturing of sophisticated technical training test rigs/ Demonstration kits to various Diploma & Degree Engineering colleges as well as research Institutes all over India.  
Also we do setup Civil material testing lab.

- Since research development is on going activity the specification mentioned here in subject to change without notice.
- Photographs / illustrations are only indicative in nature & will change with the exact Model / Specifications of the client

### **Xtreme Engineering Equipment Pvt. Ltd.**

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