

ACME-01 LABORATORY PULVERIZER

The Laboratory Pulverizer is a disc type grinder designed for grinding material to produce a fine mesh sample in one operation. It is a self-contained grinder furnished with a rotating disc having a planetary movement in a vertical plane. This feature gives added life to the wearing parts and delivers a product to uniform fineness. The pulverizer will reduce 1 pound sample of quartz type material to 100 meshes in 1 minute. Maximum feed size is 1/4 inch. Grinding is done between two discs, one of which is stationary and the other revolving eccentrically at high speed. The apparatus is supplied with heat-treated disc of 7 inches in diameter. Adjustment for size of product may be made by use of a convenient hand wheel while the machine is in operation or at rest. A self-locking device holds the hinged grinding chamber in place and affords easy and quick access to the grinding chamber for removal of ground samples and for cleaning. The pulverizer is supplied complete with a 3 H.P. motor, starting switch, V-belt pulley drive and mounting. Electrical requirements are: 440 volts, 3 phase AC.



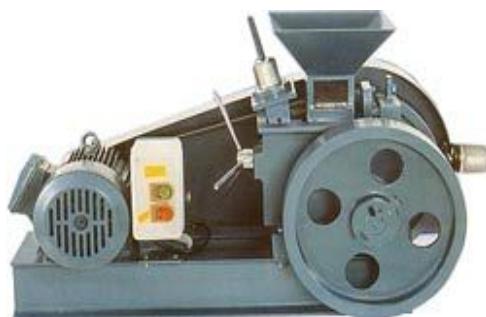
ACME-01

ACME-02 LABORATORY JAW CRUSHER

Useful to crush chemical lumps, minerals, aggregate, rock etc. to fine powders.

A The crusher has manganese steel jaws. The opening of the jaws is adjustable from 1 1/4" to 3/4". The capacity is 200 kg per hour. The crusher is made of steel. The jaws have forward and downward strokes with sufficient rocking action to throw the crusher material down the jaws. A hopper is provided at the top for pouring material. Output is 200 kg per hour. The crusher is supplied complete with 3 H.P. motor 400 volts, 3 phase A.C. supply, triple V-belt pulley drive.

B Same as above but suitable for 400 kg per hour, fitted with 5 H.P. electric motor, suitable to operate on 440 volts A.C. Mains, 3 phase.



ACME-02

ACME-03 TORSION TESTING MACHINE

Torsion Testing Machine consists of two independent chucks where the specimen can be placed, one of which is rotated by means of an electric motor and the speed is reduced through a suitable reduction gear. The twist is communicated through

the test piece to the other jaw on which a weighted pendulum is attached. The resistance to deflection of pendulum causes a torque to be applied to the test piece and the angles of deflection of pendulum is the measure of Torque. A scale with pointer is fixed on the frame which enables measurement of torque. The machine is built for maximum twisting movement at about 50 Kgm. It is equipped with jaws for accommodating test pieces of 10 mm, 20 mm size either square or circular with square shoulders.

The machine can be operated by hand in case of power failure.

Suitable of 230 V, A.C., single phase.



ACME-03



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Material Testing

ACME-04 TENSILE TESTING MACHINE

Tensile Testing Machines are used for wide variety of materials for their tensile strength and elongation. The materials include wires, cables, plywood, conductors, ferrous and non ferrous materials, cloth, fibers etc. The machines are manufactured in various capacities and tests can be performed on these machines by simply incorporating appropriate traverse speeds and using suitable grips in conformity with ASTM, DIN, ISO, BIS, BS standards.

These machines are fitted with over-travel safety switches suitable for 230 VAC supply.

	250	500	1000	2500	5000
Cap.(Kgf) Ranges	0-50kgf X 100gms.	0-100kgf X 200gms.	1 -1000kgfX 2kgs	0-2500kgfX 5kgf.	0-5000kgfX 10kgf
	0-1 00kgf X 2009ms.	0-250kgf X 500 gms.	0-500kgfX 1 kgf	0-1000kgfX 2kgt	0-2500kgfX 5kgf
	0-250kgfX 5009ms.	0-500kgfX 1 kgf	0-250kgf X 500gms.	0-500kgfX 1 kgf	0-1 000kgf X 2kgt.
Traverse Speed (mm/min.)or as per speed Grip	500 & 100	100	100	100	100
Separation Minimum Maximum	25mm 1000mm	25mm 1000mm	25mm 750mm	25mm 750mm	25mm 750mm
Power Requirement	3ph 440V 50c/s AC	3ph 440V 50c/s AC	3ph 440V 50c/s AC	3ph 440V 50c/s AC	3ph 440V 50c/s AC
Load Elongation Recorder	Included wherever necessary	Included wherever necessary	Included wherever necessary	Included wherever necessary	Included wherever necessary



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Note: Tensile Testing Machines of higher capacities up to 1000 kgf can also be manufactured.

Accessories:

1. Special grips as per IS: 1998.
2. Cross Braking attachment as per IS:1998.
3. Compression attachment as per IS:1 998.
4. Shearing attachment as per iS: 1998.



ACME-05 PENDULUM IMPACT TESTING MACHINE

Pendulum Impact Testers are used for determining the impact strength of notched and un-notched metal bars of different sections and different length according to the Charpy (Beam) method. The machine is meant for making Charpy, Izod and tension impact Tests.

The hammer, of carefully chosen weight, when dropped from a pre-determined height, strikes the test bar laid between supports in the base of the machine, and thereby breaks it. Part of the kinetic energy is spent in causing the hammer to rise on the other side of the machine and from the height of this residual swing, the energy used in breaking the specimen can be determined. On the impact testing machines this is directly indicated in Kgm. The height of the drop of hammer can be varied within very wide limits. It must however be chosen so high that the specimen is fractured in one single blow, because only then can the energy sent be ascertained with the true accuracy.

The striking edge of the hammer is at the centre of percussion, so that there is practically no vibration of the pendulum when the hammer strikes the bar, and consequently little or none of the energy of the blow is lost in the pendulum.

A rope, attached at one end to the hammer and wound round a spindle over which it can freely slide under the action of a weight attached to the other end, prevents the hammer from falling back after its residual swing, without in any way affecting its free movement until then. Immediately the hammer has hit the specimen, it is caught by the brake and afterwards slowly drops back into its vertical position.

Type of test	IZOD	CHARPY
Pendulum Impact energy	0.42 kgm	1.4 kgm
Angle of fall of pendulum	120°C	120 °C
Effective weight of pendulum	1.3725 kgs	4.575 kgs
Minimum Graduation	0.005 kgm	0.01 kgm
Striking velocity of pendulum	2.4502 m/sec	2.44m.lsec
Distance of axis of pendulum rotation to the point of test piece hit by the hammer.	204 mm	204 mm



ACME-05

Optional :

- 1) Specimen gauges.
- 2) Specimen for Tension Impact Test.
- 3) Gauge for Tension Impact Test Specimen.
- 4) Specimen for IZOD Impact Test.
- 5) Gauge for IZOD Impact Specimen.
- 6) Specimen for CHARPY Impact Test.
- 7) Gauge for CHARPY Impact Test Specimen.

ACME-06 UNIVERSAL TESTING MACHINE (Analog & Digital Model)

This machine is used to perform tensile, compression, bending and shear tests on most widely varying materials, both in form of test pieces and as finished products. Hardness test on metals can also be performed. The equipment is calibrated in accordance with BS 1610 and IS 1828-1993. UTM comply with grade 'A' of BS 1610: 1964 and grade 1.0 of IS 1928-1993

Salient Features

- o Loading Accuracy as high as $\pm 1\%$
- o Straining rate to cover a wide range of materials
- o Continuous roll type load elongation recorder
- o High reading accuracy due to large size and design of dial
- o Simple controls to facilitate ease of operation
- o Fully enclosed and protected load measuring system
- o Wide range of standard and special accessories including load stabilizer
- o Robust straining frame
- o Suitable for standard specimen and also structures.
- o Motorized UP / DOWN movement of lower crosshead to enable easy and rapid fixing of test specimen.
- o Auto load selection facility.

The machine consists of Straining Unit, Control panel (Power pack, complete with drive motor and an oil tank, control valve, a pendulum dynamometer, a load indicator system and an autographic recorder



ACME-06

ACME-07 Spring Testing Machine (Analog & Digital Model)

It has become recognized that in Testing Laboratory the best performance can only be obtained if all the springs of a uniform type possess the same mechanical properties. Special testing machines for dealing with tension and Compression Springs of helical pattern are to be made use of the machines of very simple designs used for statically tests on springs cannot be used for Compression and Tensile tests. Spring Testing Machine is an earnest effort in this direction. Machines enable load deflection tests of tension and compression springs to be carried out accurately and quickly. The Cabinet contains the hydraulic unit the hand wheel of the pump and the release valve handle are outside the cabinet for easy operation. This compact base carrier two fixed upright and four horizontal plates. The first and the third plates with two small uprights from an adjustable frame. The second and the fourth plates are fixed. A square threaded wheel arrangements provided for adjusting the height of the springs. 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. The machine is capable of accommodating 8" length 1/2" dia. rod up to 4" dia. springs for tension, 6" length 1/2" dia. rod, 4" springs for compression. Scale graduations are made up to 15 cm.



ACME-07