

**Trust us for the perfect test.
FINETECH Testing equipments
for Plastics, Rubber and Paper
Industries**

DISCOVER THE
FINETECH
ADVANTAGE

FINETECH ENGINEERING

Better quality.
For bigger profit

COMPANY PROFILE

Finetech Engineering is a distinguished company that specializes in the manufacturing of high-precision testing equipment. With a focus on customer satisfaction, Finetech Engineering ensures that each piece of equipment is crafted with meticulous attention to detail, ensuring reliability and accuracy. Established by a visionary team of technocrats, Finetech Engineering has carved a niche for itself in the industry with its commitment to innovation.



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Universal Testing machine (Single Column)

A UTM or universal testing machine is referred to as universal because it can be used to perform a variety of static tests, including tensile tests and compression tests, as well as flexure test, peel test, tear test and other mechanical test. It can run a wide variety of standard-compliant tests on an even larger number of materials for many different applications in essentially every industry.

A typical UTM machine consists of a load cell, crosshead, extensometer, specimen grips, electronics, and a drive system. It is controlled by testing software used to define machine and safety settings, and store test parameters defined by North American and international test standards such as ASTM and ISO. The amount of force

applied to the machine and the elasticity and compressive fracture properties (compression direction), or elongation properties (tensile direction) of the specimen are recorded throughout the test.

Measuring the compressive or tensile strength of materials helps designers and manufacturers predict how materials will perform when implemented for their intended purpose.



Universal Testing machine (DualColumn)

Finetech universal testing systems, can be adapted to meet specific customer requirements based on testing capacity, types of material, applications, and industry standards such as ASTM E8 / ISO 6892-1 and ISO 6892-2 for metals, ASTM D638 / ISO 527 for plastics, ASTM D412 for tensile tests on rubber and elastomers, ASTM D575 for compression tests on rubber, and many more.

Finetech also offers several universal testing machines specifically designed for special applications. In addition to overall system safety and reliability, Finetech designs and builds every universal material testing machine with a focus on providing:

- A high level of flexibility through ease of operation
- Simple adaptations to customer- and standard-specific requirements
- Future-proof expansion capabilities to grow with your needs

SPECIFICATION OF UNIVERSAL TESTING MACHINE(Single Column)

Model	FT-UTM-100-I	FT-UTM-100-S	FT-UTM-500-I	FT-UTM-500-S
Structure	Single Column	Single Column	Single Column	Single Column
Max. Capacity	100 kgf	100kgf	500 kgf	500kgf
Force resolution	1/10000	1/10000	1/10000	1/10000
Travel resolution	0.05mm	0.05mm	0.05mm	0.05mm
Speed	MAX - 500mm/min MIN 5% of Max	1-500mm/min	MAX - 500mm/min MIN 5% of Max	1-500mm/min
Motor power	180w	180w	400w	400w
Speed accuracy	±0.5%	±0.5%	±0.5%	±0.5%
Throat depth	70mm	70mm	100mm	100mm
Motor style	Induction motor	AC servo motor	Induction motor	AC servo motor
Testing Space	140mm	140mm	140mm	140mm
Dimension	500x550x>1450	500x550x>1450	550x550x>1520	550x550x>1520
Weight	100 kg	100 kg	180 kg	180 kg
Power supply	220vac	220vac	220vac	220vac
PC-Port	USB	USB	USB	USB
Stroke(w/o grips)	800mm>	800mm>	800mm>	800mm>

SPECIFICATION OF UNIVERSAL TESTING MACHINE(Dual Column)

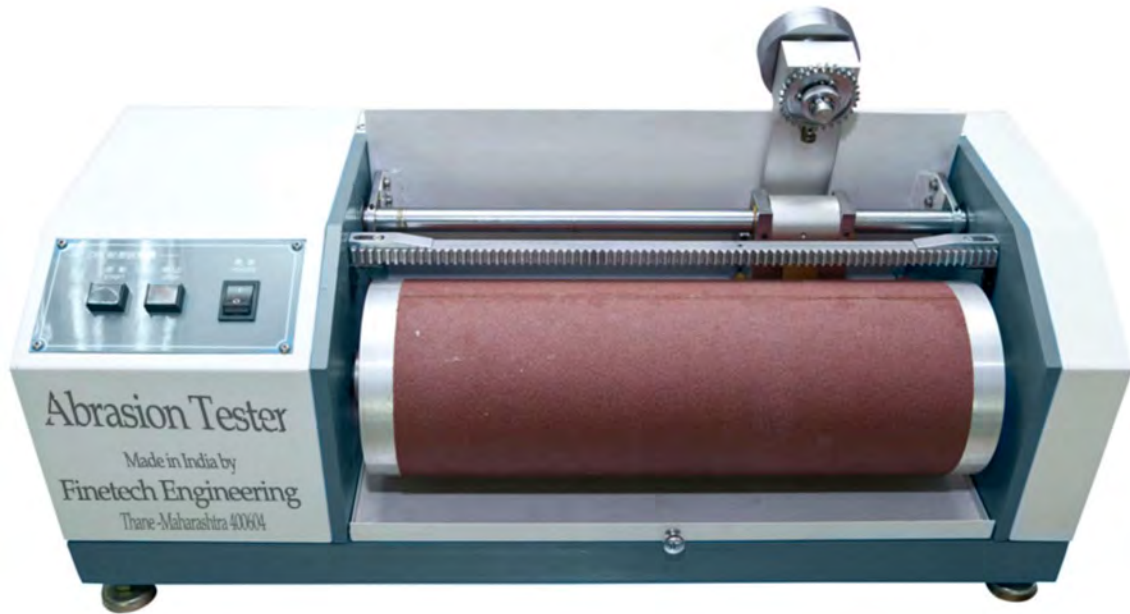
Model	FT-UTM-1000-I	FT-UTM-1000-S	FT-UTM-5000-I	FT-UTM-5000-S
Structure	Dual Column	Dual Column	Dual Column	Dual Column
Max. Capacity	1000 kgf	1000 kgf	5000 kgf	5000 kgf
Force resolution	1/10000	1/10000	1/10000	1/10000
Travel resolution	0.05mm	0.05mm	0.05mm	0.05mm
Speed	25-500 mm/min	1-500MM/min	25-500 mm/min	1-500MM/min
Motor power	750W	750W	1500W	1500W
Speed accuracy	±0.5%	±0.5%	±0.5%	±0.5%
Motor style	Induction motor	AC servo motor	Induction motor	AC servo motor
Testing Space	420mm	420mm	420mm	420mm
Dimension	820x820x>1820	820x550x>1820	920x550x>1920	920x580x>1920
Weight	250 kg	250 kg	350 kg	350 kg
Power supply	220vac	220vac	220vac	220vac
PC-Port	USB	USB	USB	USB
Stroke(w/o grips)	800 mm>	800 mm>	800 mm>	800 mm>
Optional Accessories	Grip, Extensometer ,PC	Grip, Extensometer ,PC	Grip, Extensometer ,PC	Grip, Extensometer, PC

**Wedge grip****Pneumatic Grip****Rubber O-Ring Testing****Roller Grip
(for rubber)****Self Tightening Grip**

All Cutting Dies (Dumbbell, Tear, rectangular ,round) are made of imported tool steel Material ,Spring loaded ejectors are standard features .Cutters are available as per



Specimen cutters & Dies



Din Abrasion Tester

DIN Abrasion Tester – DIN Abrader is a rotary drum abrasion tester to test abrasion resistance of rubber products on specified grade abrasive paper under certain pressure. DIN abrasion standard includes ISO 4649, DIN 53516, ASTM D5963, etc.

DIN Abrader consists of a rotating drum whose surface would be stick with sandpaper 60. DIN Abrasion is one of the most common rubber abrasion test methods. Equipped with a rotational block, Finetech DIN abrasion machine can do both rotating and non-rotating tests. Clamp the rubber sample on the specimen holder, the DIN abrasion machine would rub the sample on the drum under a certain inclination and a certain load. Then to measure the sample volume loss after rubbed for a certain distance.

Specification

Model	FT-DAB-01
Size(mm)	850*350*300
Fixture load	5N
Weight load	5N
Drum diameter	150mm
Wheel length	500mm
Abrasion speed	0.32m/sec
Fixture lateral displacement	4.2mm/wheel each lap
Rotational frequency of drum	40rpm

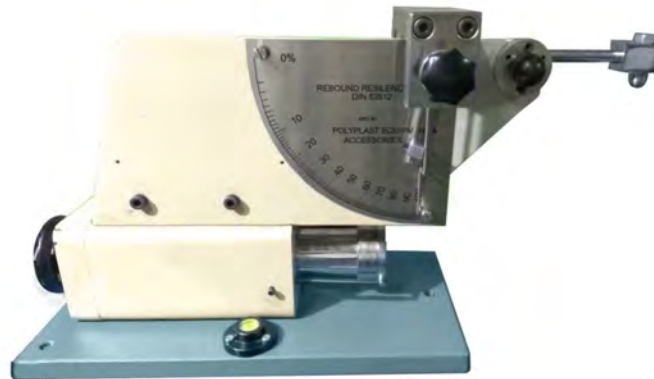


Demattia flex tester

DE MATTIA FLEX TESTER (as per IS 3400 (Part 7, 8) 1977 IS 7016) is an electrically driven tester that determines the resistance of vulcanised rubber compounds, coated and treated fabrics against breaking when flexed. Crack development at the part of the surface where stresses are formed during flexing, or in the part of the surface that already had a crack, leads the crack to extend in the direction perpendicular to stress. This test also determines the endurance of the material. The equipment tests six samples at a time.

Specification

Model	FT -DFT-02
Display	Digital
Size(mm)	490 x 300 x 530 mm
Weight	38 kg
Power Supply	220 Voltage, 50 Hz, 1 PH
Testing Speed	Adjustable from 60 - 300 cycles/minute
Clamping Distance	100 mm



Pendulum Rebound Resilience

Rubber Rebound Resilience Tester is designed to determine the rebound resilience of rubber, flexible cellular materials, thermoplastics, elastomers, soft elastic foams subjected to impact by a pendulum from a specified height, to obtain the optimum applicability, the quality differentiation of various materials, and changes of characteristics after the aging test, etc. The rebound resistance test is an effective method to get quality assurance during the rubber production process or on the finished products.

When the elastomer is struck by an external force, an energy input is involved, some of which is returned when the rubber returns to its original state. The rest energy which is not returned is dissipated as heat in the elastomer. The ratio of the energy returned to the energy exerted is called resilience.

Test Principle

A test piece with the plane and parallel surfaces clamped into the rebound resilience testing machine is impacted on one surface by a pendulum with a spherical end from a defined height. The rebound resilience is evaluated by measuring the energy of the impacting mass immediately

Specification

Model	FT -PRT-01
Length of Pendulum	200m
Impact Energy	0.5 J, 0.2 J
Range of Display	0~100%
Impact Speed	1.4~2.04 m/sec
Hemisphere dia	15 mm
Size(mm)	200 X 250 X 570 mm
Resolution	0.1 %
Weight	33 kg
Power Supply	220 VAC
Adjustment For Specimen Thickness	0 ... 60 mm
Angle of Incidence	90°



Ross flex tester

The Ross Flex Tester, also known as the Ross Flexing Tester, is a device designed to determine the resistance of vulcanized or synthetic elastomers to cut growth. This is done under continuous bend flexing at a 90° angle.

The test is based on the ASTM D1052 standard, which covers a method for measuring the cut growth in rubber vulcanizates subjected to repeated bend flexing. The test gives an estimate of the ability of rubber vulcanizates to resist crack growth of a pierced specimen when subjected to bend flexing.

The Ross Flexing Tester is suitable for testing materials such as rubber, sole, PU, and others. It is equipped with 06 grips and can test 06 specimens at the same time. The bending speed is 100 ± 3 CPM. The tester is also equipped with a digital system that has a memory function¹.

Specification

Model	FT-RFT-01
Fixture	6 set can test 12 pcs sample at the same time
Specimen Holder	06 nos
Bending Angle	$90^\circ \pm 2^\circ$
Bending Speed	(100 ± 3) cpm for test standard of ASTM-D1052
Specimen Dimension	150 x 25 x 5 mm (ASTM-D1052) or 152 x 25 x 6.35 mm (SATRA TM60, ISO 5423, BS5131-2.1, GB/T 20265 ISO 20344-8.5, ISO 4643, HG/T2411)
Size(mm)	610 X 500 X 550mm
Weight	40 kg
Power Supply	AC 220 V, 1 phase



Compression set(ASTM D395)

Test Method B—Compression Set Under Constant Deflection in Air is a method used to measure the ability of elastomeric materials to maintain their elastic properties after prolonged compressive stress¹². This test is particularly useful for applications in which elastomers would be in a constant pressure/release state².

Here's a brief description of the process:

- The thickness of the original specimen is measured.
- The specimen is then placed between spacers and in the compression device.
- The specimen is compressed to 75% of its original height, using spacers to accurately measure the compression.
- Within two hours of assembly, the compression device is placed in an oven at a specified temperature for the suggested time periods of 22 hours and 70 hours.

- After removing the sample from the oven, the specimen is allowed to cool for 30 minutes before measuring the final thickness.

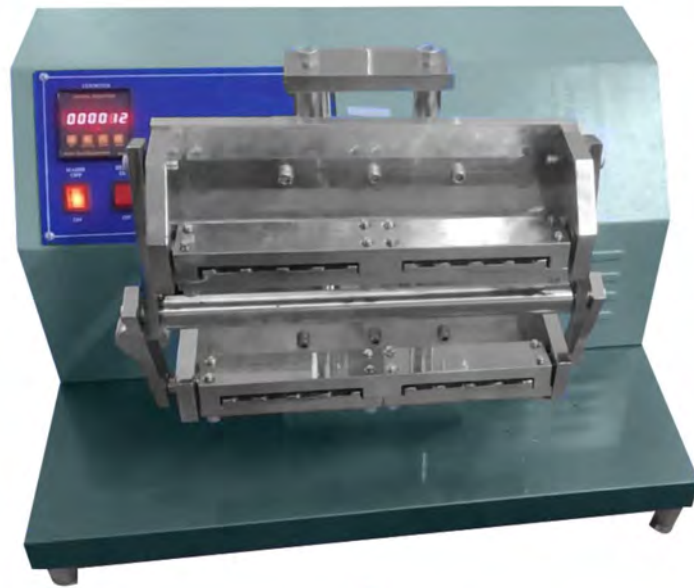
The compression set is expressed as a percentage of the original deflection. The formula used is:

$$CB = \frac{(t_o - t_n)}{(t_o - t_i)} \times 100$$

where:

CB is the Compression set

- t_o is the Original thickness of the specimen
- t_i is the Final thickness of the specimen
- t_n is the thickness of the space bars used.



Bennewart Flex Tester

The Bennewart Flex Tester is a device used to test the flexing resistance of outsoles. It is designed to flex the outsole at a certain speed and angle, aiming to check the effect of sole materials and surface patterns on cut growth¹. This tester is used to meet the standards of ISO 20344, ISO 17707 and DIN 53543

Here's a brief description of the test process:

- The heel is removed from the outsole and the outsole is clamped according to the standard.
- The outsole is fully flexed in the right position.
- A cut is made on the sample with an equipped chisel (cutting cool) to the required length, the cut should be parallel to the bennewart flex machine.
- The machine is pre-set to run 30,000 cycles.
- After it finishes the pre-set cycles, the cut growth and any change of the outsole are checked.

Specification

Model	FT-BFT-01
Frequency	60 Hz
Voltage	230 V
Material	Mild Steel
Brand	Finetech
Surface Finish	Powder Coating
Display Type	Digital



Vertical Rebound Tester

Vertical Rebound Tester is suitable for vertical resilience testing of elastic materials such as rubber. Unuo Vertical Rebound Resilience Tester is designed and applicable according to ASTM D2632. Here for more rubber testing machines.

Principle:

Vertical Rebound Resilience Tester tests the elasticity of rubber materials in a free fall weight method. First adjust the horizontal position of the instrument, then raise the drop weight to a certain height. When placing the test piece, pay attention to make the drop point 14mm from the edge of the test piece. The first three trials were not used and the average of the fourth, fifth and sixth rebound heights was recorded.

Finetech Vertical Rebound Tester Specification

Model	FT -VRT-01
Standard	ASTM-D2632
Stroke	400mm
Hammer Mass	28±0.5g
Sample Thickness	12.5mm
Brand	Finetech

Experience the Future of Testing

As technology continues to advance, the need for precise and reliable testing equipment becomes increasingly critical. At Finetech Engineering , we are at the forefront of this evolution, constantly pushing the boundaries of what's possible. We invite you to join us on this journey and experience the future of testing.

Thank you for considering Finetech Engineering as your trusted partner in testing solutions. We look forward to the opportunity to work with you, providing the tools you need to achieve excellence in your industry.

For inquiries, demonstrations, or further information, please don't hesitate to contact us. Your success is our success, and we are excited to be part of your journey.



 +91 93241 37971

 info@finetechengineer.com

 www.finetechengineer.com

 Finetech Engineering C-1.T.M.C Complex,
New Kalwa(TMC) Industries Prem.Co-Op
Soc Ltd.,Jai Bhavani Nagar.Road no 32,Wagle Estate Thane(W)
400604.Maharashtra