

GEO-Synthetic & GEO-Textile Testing Instruments

- for*
- Traffic, Water conservancy, Tunnel Construction
 - Road & Bridges Constructions
 - Erosion Control
 - Soil Stabilization
 - Slops Stability
 - Thermal Insulation
 - Filtration, Drainage & Separation Application



EIE INSTRUMENTS PVT. LTD.
(An ISO 9001:2015 Certified Company)



Geotextile Universal Testing Machine (GT-111TSG/GT-111TIG/GT-111THSG/GT-111THIG)

Compliance Standards

ASTM D4632, ASTM D4833, ASTM D6241, ASTM D4533, ASTM D4595

Applications : Used in

- Traffic, Water conservancy, Tunnel Construction
- Road & Bridges Constructions
- Erosion Control
- Soil Stabilization
- Slops Stability
- Thermal Insulation
- Filtration, Drainage & Separation Application

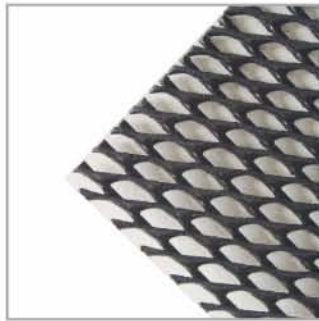
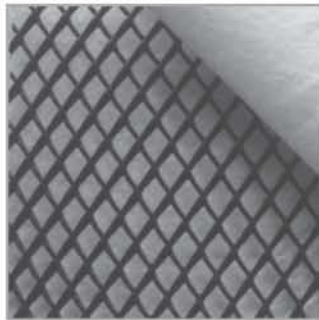


Technical Specifications

Type of System	Servo Controlled Model	Induction Controlled Model
Type of machine	Floor standing model	Floor standing model
Horizontal clearance	400-450 mm	400-450 mm
Vertical clearance	1000 mm	1000 mm
Total cross head travel (Excluding grips)	700 mm	700 mm
Motor	Servo Motor	Induction Motor
Motor capability	3 KW/5 KW	3 KW/5 KW
Speed range	0.001 mm/min to 450 mm/min	10 mm/min to 350 mm/min
Speed variation	Dedicated SERVO DRIVE	Variable AC Frequency drive
No of load cells	02 Nos	02 Nos
Load cell least count	0.01 kn & 0.1 kn respectively	0.01 kn & 0.1 kn respectively
Encoder	Elongation indication, 2500 PPR	Elongation indication, 2500 PPR
Elongation least count	0.01 mm	0.1 mm
Controlling system	PLC Controller & 7" HMI Touch screen	Microprocessor based LCD Controller
Indication parameter	<ul style="list-style-type: none"> • Maximum Load • Current Load • Breaking Load • Maximum Elongation • %Elongation • Elongation @ Break 	<ul style="list-style-type: none"> • Maximum Load • Current Load • Breaking Load • Maximum Elongation • % Elongation • Elongation @ Break
Unit selection	N, KN, KGF, LBF, TONE	N, KN, KGF, LBF, TONE
Exterior structure	<ul style="list-style-type: none"> • High grade steel • Robust machine frame • High stiffness • Column protection over total traverse stroke 	<ul style="list-style-type: none"> • High grade steel • Robust machine frame • High stiffness • Column protection over total traverse stroke
Paint	Powder coating paint	Powder coating paint
Power supply	440 volts, 50 hz, 3-phase, AC Supply	440 volts, 50 hz, 3-phase, AC Supply

Load Cell capacity: Different capacity models are available as per following table. The rigidity and stiffness of design structure of the frame varies based on the load cell capacity. Select the one which best suits to your needs.

Type of model	Load cell capacity	Servo Controlled System Model No.	Induction Controlled System Model No.
Twin column floor standing structure (Two Load Cell Model)	5kn & 50kn	GT-111TSG5/50	GT-111TIG5/50
Twin column floor standing structure (Two Load Cell Model)	5kn & 30kn	GT-111TSG5/30	GT-111TIG5/50
Twin column floor standing structure (Three Load Cell Model)	0.5kn, 30kn & 50kn	GT-111THSG0.5/30/50	GT-111TIG0.5/30/50



Supplied with following Fixtures

- 1 Grab Test fixture
- 2 Index puncture test fixture
- 3 CBR Puncture test fixture (Using 50mm Probe)
- 4 Trapezoid tear test fixture
- 5 Wide width tensile test fixture

- Supplied complete with Dedicated PC Software and RS-232 Interface Cable.
- Available in both-Servo Motor/Induction motor version.





Constant Head Geotextile Permeability Test Apparatus (GT-101C)

Compliance Standards

ASTM D4491, IS : 14324, EN ISO 11058

Applications:

These test methods cover procedures for determining the hydraulic conductivity (water permeability) of Geo Textiles in terms of permittivity under standard testing conditions, in the uncompressed state (No Load condition)

Comprises of Following Parts and accessories

- Main working unit mounted on Table Top Bench with back support
- Upper & Lower unit made of Transparent acrylic material, which are fastened together
- Geo textile specimen holder assembly between Upper & Lower unit
- Inlet and outlet valves with PVC Pipe network
- Head differential measurement arrangement mounted on a stand
- Manual observation of quantity of flow (in case of Constant Head Test) and Head change (In case of Falling Head Test)
- Supplied complete with Calibration disc

Technical Specifications

- Can hold specimen : 50 mm
- Head differential scale : 150 x 0.2mm

List of essential accessories

1. Digital Stop watch
2. Dissolved oxygen meter
3. Low temperature circulating chiller – GT-101CF.1
4. De-Airing System With Vacuum Pump - GT-101CF.2

Falling Head Geotextile Permeability Test Apparatus (GT-101F)

Compliance Standards

ASTM D4491, EN ISO 11058

Governing principle

A column of water is allowed to flow through the geo textile and reading of head changes versus time is taken. The flow rate of water through the GEO textile shall be slow enough to obtain accurate readings.

Comprises of Following Parts and accessories

- Vertical permeability tester with pressure differential method to determine falling head loss.
- Automatic head change determination using continuous Fluid level sensor & Dedicated HMI touch screen controller
- Equipped with solenoid valve at drain for complete automatic operation
- Automatic calculation as per ASTM D4491, EN ISO 11058
- Main working unit mounted on Table Top Bench with back support
- Upper & Lower unit made of Transparent acrylic material, which are fastened together
- GEO-textile specimen holder assembly between Upper & Lower unit
- Inlet and outlet valves with PVC Pipe network



List of Essential Accessories:

1. R.O. Water, having ≤ 6 ppm dissolved oxygen content
2. Dissolved Oxygen Meter
3. Digital Stop Watch
4. De-airing system with Vacuum arrangement

Effective Apparent Opening Size Tester (GT-102RD)

Compliance Standards

ASTM D4751, BS 6906 (Part 2), IS 14294, EN ISO 12956

Purpose

A Geo-Textile specimen is placed in a sieve frame, and sized glass beads are placed on the Geo-Textile surface. The Geo-Textile and frame are shaken laterally so that the jarring motion will induce the beads to pass through the test specimen. The procedure is repeated on the same specimen with various size glass beads until its apparent opening size has been determined.



Details of complete Set-Up

The complete test set up essentially requires

1. Ro-Tap Sieve Shaker (GT-102RD)
2. Spherical Glass Beads (GT-102RD.1)
3. Fine sieves for Glass Beads Separation (GT-102RD.2)
4. Sieve set for supporting Geotextile Fabric (GT-102RD.3)
5. Rubber clamping arrangement for Geotextile Fabric (GT-102RD.4)
6. Electronic Balance

Construction details of Ro-Tap Sieve Shaker

- Robust & Heavy design
- Make process of sieving simpler and quicker
- Doesn't require special foundation
- Shaking in both the direction
- Tapping action from the top

- Accurate & dependable results
- The mechanism for imparting, circular action and tapping action, is permanently lubricated in a tank and is motorized.
- The shaker can accommodate up to 7 Nos Sieves of diameter 200mm (7 nos sieves + 1 set of Lid-Pan).
- Fitted with Digital time switch adjustable from 1-99 minutes.
- Comes with optional "Noise Reduction Cabinet".
- Suitable for operation on 230 volts, 50 Hz, single phase, AC Supply

Physical data of the machine

- Height : 960 mm approximately
- Length : 485 mm approximately
- Width : 610 mm approximately
- Unpacked weight : 151 kg approximately



Spherical Glass Beads (GT-102RD.1)

Compliance Standards

ASTM D4751, BS 6906 (Part 2), IS 14294

Details

- Glass bead for Apparent Opening Size (AOS) Test
 - Covers the ASTM Mesh sizes from #18 to # 140
 - Size in Microns : Each of 2 kgs as per following designation will be supplied.
1. 90 (Passing) - 150 (Retention) microns : 2 kgs
 2. 125 (Passing) - 106 (Retention) microns : 2 kgs
 3. 180 (Passing) - 150 (Retention) microns : 2 kgs
 4. 250 (Passing) - 212 (Retention) microns : 2 kgs
 5. 355 (Passing) - 300 (Retention) microns : 2 kgs
 6. 500 (Passing) - 425 (Retention) microns : 2 kgs
 7. 710 (Passing) - 600 (Retention) microns : 2 kgs

Characteristic Opening Size Apparatus (Wet Sieve Opening Size Tester) (GT-102RW)

Compliance Standards

EN ISO 13433 (2006), BS 6906 (Part 6)

Application

Mainly used to measure the puncture strength as well as the fabric quality to withstand aggregate penetration.

Details

EIE-Cone drop tester specifies a method to determine the resistance of Geosynthetics to penetration by a steel cone dropped from a fixed height. The degree of penetration is an indication of the behaviour of the Geosynthetic, when sharp stones are dropped on its surface. The smaller the hole, the greater the resistance of geosynthetic/geotextile to damage and vice versa. The specimen is clamped between two steel rings. A steel cone (45° tip angle, 1000 g) is dropped from a height of 500 mm onto the centre of the specimen. The degree of penetration is measured by insertion of a graduated cone into the hole. Graduated conical measure will be the part of standard supply.



Technical Specifications

- Internal diameter of Clamping : 150 ± 0.5mm
- Drop Height : 500 ± 2mm
- The angle of Brass cone : 45 degree
- The weight of Brass cone : 1000 ± 5g

Optional Accessories At Extra Cost

Electrical arrangement to release the cone automatically

Cone Drop Test for Geo-Synthetic (Dynamic Perforation Tester) (GT-103)

Compliance Standards

EN ISO 13433 (2006), BS 6906 (Part 6)

Application

Mainly used to measure the puncture strength as well as the fabric quality to withstand aggregate penetration.

Details

EIE - Cone drop tester specifies a method to determine the resistance of Geosynthetics to penetration by a steel cone dropped from a fixed height. The degree of penetration is an indication of the behaviour of the Geosynthetic, when sharp stones are dropped on its surface. The smaller the hole, the greater the resistance of geosynthetic/geotextile to damage and vice versa.

The specimen is clamped between two steel rings. A steel cone (45° tip angle, 1000 g) is dropped from a height of 500 mm onto the centre of the specimen. The degree of penetration is measured by insertion of a graduated cone into the hole. Graduated conical measure will be the part of standard supply.

Technical Specifications

- Internal diameter of Clamping : $150 \pm 0.5\text{mm}$
- Drop Height : $500 \pm 2\text{mm}$
- The angle of Brass cone : 45 degree
- The weight of Brass cone : $1000 \pm 5\text{g}$

Optional Accessories At Extra Cost

Electrical arrangement to release the cone automatically



Dead Weight Type Digital Thickness Gauge-2 KPA

(GT-104DI2)/(GT-104DM2)

Compliance Standards

ASTM D5199, IS 13162 (Part-3), ISO 9863-1

Applications

- Suitable to measure Thickness of Geotextile, Geocomposite, Geonets & HDPE Geomembrane etc.

Simple to operate

- Dead-weight type
- Simple to operate
- Simple mechanism to apply desired foot pressure varying from 0 to 2 kPa
- Surface plate is grounded and is rust free to enable reproducible results.

Salient Features

- Mounting : Self-Standing table top
- Anvil Type : Flat
- Range : 0-10 mm
- Resolution : 0.001 mm (1 micron)
- Accuracy : $\pm 5 \mu\text{m}$
- Tip : Steel/Ceramic
- Dial Type : Digital
- Power : Button cell for digital sensor
- Digital gauge make : INSIZE/MITUTOYO/REPUTED Make
- Lifting Lever : Manual Lifting Lever (Press to open, release to measure)



Sr. No.	Pressure Foot	Applied Load(Kpa)	Application
1	6.35 mm	2 ± 0.01	For Laboratory measurement of Geotextile & Geomembrane
2	10 mm	2 ± 0.01	For Laboratory measurement of HDPE Geomembrane.



Dead Weight Type Digital Thickness Gauge-20 & 200 KPA (GT-104DI200)/(GT-104DM200)

Compliance Standards

ASTM D5199, ASTM D 5199, BS EN 964, ISO 9863, ASTM D1777-99

Applications

- To control the physical properties of Geotextile and Geosynthetic Material.

Salient Features

- Dead-weight type load applicator mechanism
- Makes complex operation simple using Load ratio
- Simple mechanism to apply desired foot pressure varying from 20 to 200 kPa
- Counter weight to maintain the equilibrium

Salient Features

- Mounting : Self-Standing table top
- Anvil Type : Flat
- Range : 0-10 mm
- Resolution : 0.001 mm (1 micron)
- Accuracy : $\pm 5 \mu\text{m}$
- Tip : Steel/Ceramic
- Dial Type : Digital
- Power : Button cell for digital sensor
- Digital gauge make : INSIZE/MITUTOYO/REPUTED Make
- Lifting Lever : Manual Lifting Lever (Press to open, release to measure)

Sr. No.	Pressure Foot	Applied Load (Kpa)	Application
1	56.4 mm	20, 200 \pm 0.1	Shall be used for measurements of Geotextiles, Geo-composite drainage material and Geo-nets.

Color Matching Cabinet (GT-105A)

Salient Features

- Standardized and controlled lightening conditions
- Wide Viewing Area
- High Quality Light sources used.
- Equipped with "Philips" Make - 05 Different light sources
- Supported by "Philips" Electronic Ballast.
- Separate Rocker Switch for each light source
- Also, equipped with "Hour Meter" Which shows total usage of light sources in hours
- Supplied complete with instruction manual
- Standards: ISO 3664, BS 950, ASTM D 1729, DIN 6173

The equipment is fitted with FIVE Light Sources as per CIE International Standards

- D - 65 : Artificial daylight : 02 Nos : 6500 degree K
- TFL : Tungsten Filament : 02 Nos : 2300-2800 degree K
- TL - 84 : Light Point of Sale : 02 Nos : 4000 degree K
- UVB : Ultra Violet : 01 No
- CWF : Cool white fluorescent : 01 No : 4100 degree K
- Angle of viewing booth : 45 degree
- Viewing Booth Material : Wood or Steel



In-Plane Permeability Test Apparatus (Horizontal Permeability) (GT-106)



Compliance Standards

ASTM D4716, BS EN ISO 12958

Principle

To determine horizontal permeability (In-Plane Water flow rate) of Geo-Synthetic Material under constant water flow conditions.

Test Method Summary

The flow rate per unit width is determined by measuring the quantity of water that passes through a test specimen in a specific time interval under a specific normal stress and a specific hydraulic gradient. The hydraulic gradient(s) and specimen contact surfaces are selected by the user either as an index test or as a performance test to model a given set of field parameters as closely as possible. Measurements may be repeated under increasing normal

Details about the Apparatus

- A sturdy metal base with smooth & water tight flat bottom and sides capable of holding a test specimen.
- In flow ACRYLIC/GLASS Reservoir tank of 100-200 liters capacity with provision of maintaining constant water level
- Loading mechanism (Electro-Mechanical) to apply constant normal compressive stress in the range from 10-600 KPA
- Out flow ACRYLIC/GLASS Reservoir tank of 100-200 liters capacity with a rectangular weir
- Refrigerated chiller/waterbath to maintain water temperature at $21 \pm 2^\circ\text{C}$
- De-airing system to supply de-aired water to the entire flow assembly
- Outflow collection tank (Discharge from the specimen collection tank)
- Rubber substrate of adequate thickness and size to model soil adjacent to Geo-synthetic material
- Inlet and outlet Pressure transducer to measure
- Open channel steel calibration block

Technical Specification

- Test specimen thickness : $\leq 50\text{mm}$
- Thickness of rubber sheet : 10, 15, 20, 25mm
- Normal pressure : 0~600Kpa, adjustable
- Normal pressure accuracy : $\pm 2\%$
- Normal pressure resolution : 5Kpa
- Range of head loss : 0~400mm, continuously adjustable
- Accuracy of head loss : $\pm 1\text{mm}$
- Inflow reservoir specification : 805mm height x 370mm in width with the scale of 0~400mm
- Outflow reservoir specification : 165x370mm (HxW)
- Volume of water storage tank : 120 Liters
- Height of Weir : 100 mm

Computerized Digital Direct Shear Test Apparatus for Geotextile (GT-107DPC)

Compliance Standards

ASTM D5321



Applications

This test method covers a procedure for determining the shear resistance of a Geosynthetic against soil, or a Geosynthetic against another Geosynthetic, under a constant rate of deformation.

Salient Features

- Tactfully Designed Computerized model with Stepper/Servo Motor controlled system.
- Hard Chrome Plated essential internal components.
- Shear box made from Complete S.S. Material.
- Linear bearing for minimum horizontal friction.
- Can apply horizontal shear and vertical load capacities of 50 kN.
- Tests large soil, geosynthetic or Soil/Geosynthetic samples unto 12 inches (305 mm) square.
- Built in electronics, Touch screen HMI & PLC Controller to control test and display data in real time.
- Facility to select measurement units i.e. KN, KG
- Pneumatic Loading system for application of vertical load (Shear Load).
- Precisely controls pneumatic piston for vertical application of loads.
- Precise and accurate control through electronic system coupled with PC Software.
- Facility to start or stop the entire experimental process from software itself.
- User can control and vary the strain rate (Motor Speed) from the software itself.
- Easy handling of readings and Graphs data.
- User friendly software guide.
- Suitable for operation on 415 volts, 50Hz, 3 phase, A.C. Supply.

Supplied complete with following hardware

1. Shear Box assembly for square specimen size 30 x 30 x 15 cm - 01 Nos
2. Shear Box housing, large, complete with two ball roller strips - 01 Nos
3. Plain gripper plates - 02 Nos
4. Perforated Gripper Plates - 02 Nos
5. Perforated Spacer Plates - 02 Nos
6. Base Plate - 01 Nos
7. Loading Pad - 01 Nos

Supplied complete with following electronic components

1. Load cell 50 KN capacity (Tension/Compression) - 02 Nos.
2. Displacement transducers ± 100 mm - 02 Nos.
3. A four channel touch screen HMI & PLC Controller - 01 No.
4. Dedicated PC software with RS-485 Communication cable - 01 No

In addition to other components like shear box assembly, Gripper assembly, porous stones, plain grid plates, perforated grid plates, loading pads, specimen cutter, set of weights, shear box housing, loading unit as per the conventional instrument, the Electronic Digital Direct Shear Machine is fitted with following additional electronics components.

Gradient ratio Test Apparatus

ASTM D5101 (GT-108)

Compliance Standards

ASTM D3776, ASTM D5261

Details of apparatus

- Soil Geotextile Permeameter (three piece unit) 100mm Equipped with support stand, Soil Geotextile support screen
- Piping barriers (caulk), clamping brackets, and plastic tubing Fig.2 of ASTM D5101
- Two Constant Water Head Devices, one mounted on a jack stand (adjustable) and one stationary Fig.3 of ASTM D5101
- Soil Levelling Device
- Manometer Board, of parallel glass tubes and measuring rulers
- Two Soil Support Screens, of approximately 5 mm (No. 4) mesh
- Soil Support Cloth, of 150 μ m (No. 100) mesh
- Algae Inhibitor/Micro screen
- 150 μ m Mesh Screen, (No. 100) for manometer ports
- Wooden rod - 20 mm (3/4 in.) dia x 150 mm (6 in) long

Optional accessories at extra cost

1. Thermometer (0 to 50 \pm 1°C)
2. Graduated Cylinder, 100 \pm 1 cm³ capacity
3. Stopwatch
4. Electronic Balance 2 kg x 0.1 Gram
5. Carbon Dioxide, (Co₂), gas cylinder and regulator
6. Water Recirculation System
7. Water De airtng System
8. Soil Sample Splitter
9. Pan, for drying soil
10. Mortar and Pestle, for pulverizing soil



Melt Flow Index Tester (GT-109)

Compliance Standards

ASTM D1238, IS 2530

Applications

The Melt Flow Index Test measures the rate of extrusion of a Thermoplastic material through orifice of Specific Length and Dia under prescribed conditions of temperature and pressure.

Salient Features

- Temperature range : 0 to 400°C
- Temperature resolution : Up to 0.1°C
- Temperature accuracy : \pm 0.1% F.S.D.
- Digital Timer Range : 0 - 999.9 Seconds with buzzer output
- Dead Weights : 1.2, 2.16, 3.8, 5 & 21.6 kg chrome plated weights
- Power supply : 230 volts, 50 Hz, Single Phase, AC Supply
- Standard accessories : Orifice, Piston, Material charger, Barrel Cleaner, Orifice cleaner, Sample cutter

Selection Guide

Type of model	Model No	Sample Cutting	Sample Weighing	Reading Calculations
Basic Model	GT-109MCMW	Manual	Manual	Manual
Advanced Model	GT-109ACMW	Automatic	Manual	Manual
Premium Model	GT-109ACAW	Automatic	Automatic	Automatic

A : Automatic | C: Cutting | M : Manual | W: Weighing

Abrasion Resistance Testing Machine for Geotextile

ASTM D4886 (GT-110)



Compliance Standards

ISO 13427, ASTM D4886, IS 14714, Annex B of IS 16653

Applications

Geotextile Abrasion Resistance Tester is used to determine the resistance of geotextile or geotextile-related products to abrasion using an abrasion tester by Sand Paper/Sliding Block Method. It is only applicable to geotextile, not to geomembranes, geogrids. A predetermining electro-magnetic counter allows the sample to be abraded to the desired number of strokes.

Technical Specification

- Upper/Lower Plate size : 50 × 200 mm
- Stroke length : 90 Cycles/Minute
- Speed of reciprocating plate : 25 ± 1 mm
- Weight (Including the upper plate & dead weight) : 6 ± 0.01 kg
- Counter range : 1~9999, 1~99990, 1~999900 - Settable
- Power Supply : 230 Volts, 50 Hz, Single Phase, AC Supply

Direct Reading GSM Balance (Grammage Tester) (EIE-GSM-203)

Compliance Standards

ASTM D3776, ASTM D5261

Electronic Grammage Tester (Microcontroller Based)

- Digital Quadrant Scale is intended for measuring the GSM of paper and other sheet materials by weighing a small test sample with given dimensions. The GSM of the specimen is being displayed directly on digital panel

Applications:

- To check Transport worthiness of packages
- It simulates the vibrations & jolts subjected to various packages during transportation.

Salient Features:

- Covered with transparent shield
- Stainless Steel tearing templates
- Displays direct weight in GSM in two range : 20 X 25 cm² and 10 X 10 cm² templates
- Accuracy : 0.1 GSM
- Measuring range : 200 gm/m²



GSM Round Cutter for Paper and Fabric (PT-106DIA113)

Compliance Standards

ASTM D3776, ISO 3801, BS 2471, BS 3424, IS 14716

Applications:

- Used to cut the samples in various industries for materials like Acrylic sheets, Aluminum foils, Bags & Luggage of Cotton, Pulp, Paper, Printing, Packaging etc.

Details:

- The equipment consists of Sample cutter with safety catch lock and Long life cutting pads.
- The Sample Cutter has 4 Nos. of German reversible blades. The blades are reversible in design i.e. if one side gets blunt due to continuous usage, the blades can be turned to the other side. In this way, all the four sides of the blades can be used.
- The unit is recommended for yield testing i.e. the determination of weight per unit area. The sample cutter cuts out rapidly and accurately circular specimen of 100 Cm², which is exactly 1/100th of a square meter with the depth of up to 5 mm. The result is grams, multiplied by 100, gives the GSM (Grams per square meter) directly.



Technical Specification

Attribute	Specifications
Sample Area	100 cm ²
Sample Diameter	113 mm
Type of cut	Standard
Blade holders	4 Nos. Stainless Steel
Blades	Heavy duty Reversible Blades
No of Blades	4 Nos
Safety Lock	Fine Brass Lock
Hand wheel (Handle)	Special Bakelite Handle
Cutting pad	New Rubber-Foam Pad



Bursting Strength Tester (PT-101SH/PT-101DH)

Compliance Standards

ASTM D3786, D774, D2738, T810, T403

Salient Features

- Sturdy in construction
- Noise-Less functioning
- Stepper motor with automatic fluid pump
- Logical detection of sample failure
- Capacity : 25kg/cm² or 50kg/cm²
- Display resolution : 0.1 kg/cm² (Only Digital Models)
- Unit selection : kg/cm², PSI
- Stores data upto last five readings
- Also, gives readings for BS (Bursting Strength) & BF (Bursting Factor)
- Reset function to initiate new batch testing

Type of Heads	HMI Touch Screen & PLC Controller based Fully Automatic Model		Microprocessor Based Digital Controller - Economy Model		Manual Bourdon Type Pressure Gauge Model
Single Head	PT-101SH25FA	PT-101SH50FA	PT-101SH25DE	PT-101SH50DE	PT-101SH25M
Dual Head	PT-101DH10/25FA	PT-101DH10/50FA	PT-101DH10/25DE	PT-101DH10/50DE	PT-101DH10/40M

Humidity Test Chamber (Environmental Test Chamber) (EIE-106RP)



Technical Specifications

- Temp. Measurement : By PID Controller.
- Rh Measurement : By capacitance type Rh sensor.
- Temperature Range : 10 °C to 70 °C
- Temperature Accuracy : ± 0.1 °C
- Humidity Range : 40 % RH to 95 % RH
- Humidity Accuracy : ± 3 % RH

Construction Details

- CE Certified.
- Double wall construction.
- Interior fabricated from high grade stainless steel (S.S.304/S.S. 316).
- Exterior body made of Mild steel/stainless steel (S.S.304/S.S. 316).
- Non condensing steam injection type humidity system.
- Water level circuit.
- Castor wheels for easy movement.

Heating & Cooling System

- Long lasting SS tubular heaters.
- Hermetically sealed compressor, CFC free refrigerant (134 A gas).
- Evaporation coil and condenser.

Selection Guide

Working chamber sizes (CM) (H x D x W)	Overall dimensions (CM) (H x D x W)	Volume (Liters)	No of Trays	Power Ratings (KW)	Weight (KG)	Digital Model Numbers (EIE-106RP)
45 x 45 x 45 cm	119 x 74 x 66	92	2	1.5	115	EIE-106RP92
70 x 50 x 50 cm	145 x 76 x 71	175	3	1.5	135	EIE-106RP175
60 x 60 x 60 cm	135 x 84 x 81	216	3	2.0	150	EIE-106RP216
90 x 60 x 60 cm	165 x 84 x 81	324	3	2.0	157	EIE-106RP324
125 x 60 x 60 cm	201 x 84 x 81	450	4	2.5	175	EIE-106RP450

R : Refrigerated | **G** : GMP | **P** : Powder coating

Hot Air Oven (EIE-101)

Salient Features

- Double walled design
- Thick glass wool insulation to prevent heat loss
- Microprocessor based AUTO-TUNE PID Digital Temp Controller cum indicator
- Temperature range : 50 °C-250 °C
- Temperature Accuracy: ± 0.5 °C
- Temperature display : Digital LED Display
- Operates on : 230 Volts, 50 Hz, Single phase, AC supply
- Special heavy duty stainless steel lock and door hinges
- Heavy duty stainless steel trays for sample placement
- Forced air circulation blower for Uniform Temperature Distribution
- Supplied complete with Calibration certificate

Selection Guide

Inner chamber size(cms) (D x W x H)	Overall dimensions (cms) (D x W x H)	No of trays	Chamber capacity (Liters)	Power consumption (Kw)	Approx Weight (Kgs)	Digital Model Numbers (EIE-103DP)	Digital GMP Model Numbers (EIE-101DG)
30 x 30 x 30	52 x 45 x 64	1	27	1	45	EIE-101DP27	EIE-101DG27
35 x 35 x 35	57 x 50 x 72	1	64	1	52	EIE-101DP64	EIE-101DG64
45 x 45 x 45	67 x 60 x 82	2	92	1.5	72	EIE-101DP92	EIE-101DG92
45 x 45 x 60	67 x 60 x 97	2	121	1.5	78	EIE-101DP121	EIE-101DG121
60 x 60 x 60	82 x 75 x 97	3	216	2	110	EIE-101DP216	EIE-101DG216
60 x 60 x 90	82 x 75 x 125	3	324	2.5	148	EIE-101DP324	EIE-101DG324

D : Digital | **T** : Thermostatic | **G** : GMP | **P** : Powder coating Note : Customized sizes are also available



Hot Air Oven (S.S.)

Hot Air Oven (S.S.)

Seal & Peel Tester (PT-115DP50SP)

Compliance Standards

ASTM F88, ASTM F904, ASTM D882

Applications:

- Paper/Kraft Paper tensile strength test
- Polyfilm tensile strength test
- Medical Packaging Tensile strength test
- Seal & Peel test of Adhesive bond of packaging material

Suitable for

- Interlaminar Bond Strength Test (T-Peel Test) - Fixture Included
- Seal Strength Test. - Fixture Included
- Tensile Strength & Elongation Test. - Fixture Included
- Coefficient of Static Friction - (Check optional accessories)
- Coefficient of Kinetic Friction - (Check optional accessories)

Salient Features:

- Bench Top Model
- Fitted with Microprocessor based Programmable Logical controller
- Peak Hold Facility
- Variable Travel speed
- Computer interface through RS-232 Connection
- Equipped with Ball screw for friction less traverse
- Rotary encoder for high accuracy in elongation
- Dedicated PC Software (User will have to arrange PC)
- You can get graph for load v/s elongation (stress v/s strain) and also get a excel sheet with a single click.

Safety Features

- In built Over Load Safety
- In built Over Travel Safety
- Auto Reverse facility
- Auto Break



Technical Specification

Attribute	Specifications
• Type of operation	CRT (Constant rate of Traverse)
• No. of screws	Single screw mechanism driven through motor & gearbox
• Load cell Capacity	50 Kg (500 N) (0.5 KN)
• Load cell	'S Type' load cell of reputed make
• Display	Digital LCD Display
• Vertical Clearance	300-500 mm
• Results displayed on screen	Load, Elongation values, Testing speed and type of test
• Least count for load	2 Grams (0.02 N)
• Least count for elongation	0.01 mm
• Load units	Kg/Newton as per selection
• Speed Range	10mm/min - 300mm/min
• Clamping pressure	Adjustable upto 5 kg/cm ² (In case of Pneumatic Gripping)
• Software	Specially designed Windows based Graphical Software
• Power Supply	230 Volt, 50 Hz, Single Phase, AC Supply
• Data Communication	Through RS-232 Interface

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Our Valuable Clients



NABL LAB & Manufacturing Plant Address :

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