

- 1. **GSM TESTER**



GSM is an acronym for **grams per square metre**. It is a measurement used in the packaging industry to quantify the mass or density of a material.

DIGITAL AUTOMATIC GSM TESTER WITH 10X10 CM STEEL TEMPLATE.

With selectable sample size 5x5 cm , 10x10cm, 20x20 cm and 25x25 cm

Specification: EMFC TECHNOLOGY BASED HIGH ACCURACY SYSTEM

POWER REQ.: 90-250V,50/60HZ, 10 WATT , 1 Phase

Display : LCD BRIGHT DISPLAY

CAPACITY: 220 GRAM

READABILITY:0.001g or 1mg

Repeatability:0.001g

Linearity : 0.001g

PAN SIZE: 100MM

Taring Range: Up to full Capacity

Response Time: 3 seconds

Operating Temperature: 15 to 45 Deg C

ACCESSORIES WITH MACHINE: Adaptor, weighing pan assembly and 10 x10 CM Template.

CERTIFICATION:CALIBRATION CERTIFICATE WITH NABL TRACEBILITY FOR 1 YEAR .

Unique Features: IDEAL LAB ENGINEERS High Precision Balances incorporate advanced Electro Magnetic Force Compensation (EMFC) technology for offering unmatched accuracy and reliability, coupled with unique ADC circuit with inbuilt temperature compensation to offer a very high stability upto a resolution of 6 million counts. All adjustment parameters are programmable to take care of any minor mismatch of different sub assemblies & Balances are configured with these parameters.

WARRANTY : 1YEAR WARRANTY

- 2. **COEFFICIENT OF FRICTION TESTER (C.O.F TESTER)(STATIC & DYNAMIC/KINETIC FRICTION TESTER)**



A packaging film's “**coefficient of friction**” (COF) provides a relative indication of frictional characteristics. Controlling COF gives processors the ability to optimize performance and avoid problems in forming, transporting, and storing of packages.

ASTM D1894 is a testing standard employed for determining the friction of plastic film and sheeting. Using this test, the static coefficient of friction and the kinetic coefficient of friction of the test material can be measured.

Specification:

Type of Test CAN PERFORM : FILM /FILM AND FILM /METAL

- **Load Capacity** : Up to 9.999 kg.

Resolution/Accuracy: 001 grams

- **Direct display** : Static and kinetic/Dynamic friction values, Peak Load, Average load On screen.
- **Speed** : 150mm/minute.
- **Weight of sled** : 200+_ 5 grams.
- **Accessories** : Three nos. of S.S sample cutting templates.
- **Paint** : Powder coated.
- **Power** : 230 Volts, 50Hz, single phase.

ACCESSORIES WITH MACHINE: SLED, S.S TEMPLATE 3 NOS,4 LEGS , COMMUNICATION CABLE (ONLY FOR COMPUTERISED MACHINE)

CERTIFICATION:CALIBRATION CERTIFICATE WITH NABL TRACEBILITY FOR 1 YEAR .

Unique Features: IDEAL LAB COF TESTER is a Digital Automatic Instruments, No need to feed any data in Digital Machine its basic Parameter is already programed in its Controller. After Test Result will be calculate Automatically and Display will show in the form of STATIC FRICTION (SF) AND Dynamic Friction (DF), PEAK LOAD(PL) , AVERAGE LOAD (AL).

SOFTWARE (OPTIONAL) is help full to analysis/share/save/print of Result which is in the form of Graph curve Between LOAD vesus Displacment and details of Test and samples.

WARRANTY : 1YEAR WARRANTY

- **3.OPACITY TESTER**



IDEAL LAB ENGINEERS Opacity Tester ,used to determine optical characteristics of plastics films/pipe/paper. Procedure based on transmission of light through the specimen.

To check the opaqueness of plastic samples as per IS 4985 and IS 12235 (Part 3).

Specification:

- **Range :** 0 - 99.9 % opaque.
- **Direct display :** % opaque.
- **Paint :** Powder coated.
- **Power :** 230 Volts, 50Hz, single phase.

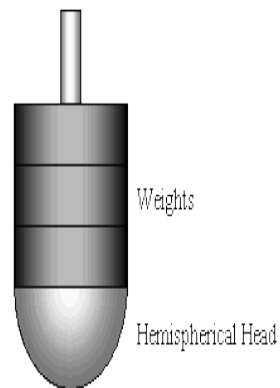
ACCESSORIES WITH MACHINE: ROUND TEMPLATE ,4 LEGS .

CERTIFICATION:CALIBRATION CERTIFICATE WITH NABL TRACEBILITY FOR 1 YEAR .

UNIQUE FEATURES: THIS MACHINE CHECKING OPACITY OF POLYFILM/PIPES/PAPER etc .Result will be diplay Directly on LED Screen in the form of OPACITY OR TRANSPANCY (OPTIONAL).VERY EASY TO HANDLE , ALL PROGRAME DEFAULT FACTORY SETTING NO NEED TO SET ANY PARAMETER.

WARRANTY : 1YEAR WARRANTY

- 4.DART IMPACT TESTER



The Dart Drop Test, also referred to as Falling Dart Impact Test or Free Falling Dart Method, is a **conventional method to evaluate the impact strength or the toughness of a polymer film**. A dart with a variable weight falls from a defined height on a crease-free and fixed film.

Specification :

- Dart 2 nos. 50 g and 300g as per STANDARDS Method A &B.
- Mechanism: Electromagnetic(Actuator).
- Maintenance free ,simple and accurate working.
- Vacuum Gauge and Digital Counter.
- Vacuum Creation: single stage Oil Vacuum pump.
- Paint: Powder Coated
- Power supply:220/230 V , 50Hz

CERTIFICATION:CALIBRATION CERTIFICATE WITH NABL TRACEABILITY FOR 1 YEAR .

Warranty: 1 year warranty

ACCESSORIES WITH MACHINE: Vacuum Pump, Plumb line, Test weight (27nos.),Dart 50g, 300g for Method A & B .

UNIQUE FEATURES: This machine is very sophisticated and easy to operate, Counter should be count nos. of sample tested. Electromechanical System for dart holding and push button for Releasing dart .

5 UNIVERSAL TENSILE MACHINE(TENSILE/ELONGATION/PEAK LOAD/AVERAGE LOAD/PEEL/BOND TESTER) ASTM D882 AND OTHER INTERNATIONAL STANDARD



To express the **maximum force the film can withstand when it is pulled** (tensile strength) and the amount it stretches (tensile elongation).

The peel adhesion test is **used to determine the force required to de-bond two components joined by an adhesive**. The test result, also known as bond strength, is generally represented as N (force to de-bond) / 25mm or 50mm (depending on specimen). Angle 180 degree and 90 Degree.

The seal or **bond strength testing** determines the mechanical strength, force, or stress required to break a **bond** /seal.

Specification: Load Frame a) Tabletop model with single test area, max. capacity 5kN

- b) Dual column design with low-backlash Lead screws
- c) Precise AC motor
- d) Adjustable limit switches
- e) Emergency stop on the load frame
- f) In-built digital controller
- g) High frame stiffness preferred (50 KN/mm or better)
- h) Data acquisition at PC: 100 kHz or better
- i) crosshead travel-(no grips): 900mm or better
- j) Horizontal opening: 450 mm or better
- k) Test speed range: 0.5 to 500 mm/min or better
- l) Jog speed range: 0.5 to 500 mm/min or better
- m) Return speed range: 0.5 to 500 mm/min or better
- n) Speed resolution: 0.5mm/min
- o) Speed accuracy: $\pm 0.5\%$ of set speed or better
- p) Automatic motor drive alarm system to monitor over/under voltage, current and temperature
- q) Power requirement: 220-240V/50Hz, single phase

Data Acquisition System and Software: a) Latest control, acquisition and analysis software with

following features:

- i. Compatibility with latest computer technology
- ii. Real-time display of data and curves
- iii. Data regeneration mode to recalculate missing or all Results
- iv. Automatic Report generation for every test
- v. Multiple graphs like Stress Vs. Strain, Force Vs. Time, Stress Vs. Time, Load Vs Time etc. on single screen and single report
- vi. In-built results like tensile strength, tensile strength at Modulus 100% elongation at break etc
- vii. Multi-segment programmable tests
- viii. Recall mode to see historic data
- ix. Auto and manual data backup to secure location
- x. Free software upgrades for 5 years
- xi. Cross-check functionality to setup test methods correctly
- xii. In-built tutorials and user manual

Load and Elongation Measurement: a) Load measurement: interchangeable strain-gage type load cells

of 5kN and 500N capacity — 01 each

- i. Auto identification, scaling and calibration
- ii. Measurement range: 2% to 100% of the capacity
- iii. Accuracy: $\pm 0.5\%$ of applied force
- iv. Resolution: 0.1% of the capacity
- v. Mechanical overload protection: 150% or better
- vi. Digital load tare: 20% or better maintaining full load cell capacity

b) Elongation measurement: Optical encoder

- i. Accuracy: 0.01mm or better
- ii. Resolution: 0.01mm or better

Grips: a) Set of Double Roller grips - 1kN or Higher Capacity(Including Easy changeability of grips 25 mm wide, suitable for 0.1 TO 8.00MM Specimen Thickness)

Accessories: Communication cable 5mter , Software, Grips 1 set,Manual, 4 legs, 25x150MM Template for sample cutting.

CERTIFICATION:CALIBRATION CERTIFICATE WITH NABL TRACEBILITY FOR 1 YEAR.

Warranty: 1 year warranty.

- 6 **HEAT SEALER**



To Determine Suitable Scaling Parameters Of Films

Specification :

- Temperature zone : Two.
- Controller : Auto tuned PID controller with temperature range up to 200°C having resolution of 0.1°C.
- Clamping Jaws : One fixed and second movable by pneumatic action.
- Timer: 0.1 Seconds to 999 seconds
- Sealing dimensions : Length 150 mm x Width 20 mm.
- Mounting : Table top.
- Power requirement : 230 Volts, 60 Hz, Single phase - 15 ampere.



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CERTIFICATION: CALIBRATION CERTIFICATE WITH NABL TRACEABILITY FOR 1 YEAR.

Warranty: 1 year warranty.

- **7.HOT AIR OVEN**



This instrument is basic requirement of all polymer industries for heating samples or conditioning in specified Temperature.

Specification :

Temperature Controller

DIGITAL MICROPROCESSOR BASED PID CONTROLLER ,

RTD (PT-100) SENSOR .ACCURACY +/- 1 C.

Inbuilt Blower for circulation air inside chamber to achieve Uniform heating in all its Racks.

- Size of the working chamber : 12 X 12 inch , 14x14 inch , 18x18 inch , 24x24 inch(OPTIONAL)
- Material of construction : OUT SIDE M.S AND INSIDE S.S
- Temperature range : Ambient to 250°C
- Paint : Powder coated.

- Power : 230 Volts, 50Hz, single phase.

CERTIFICATION:CALIBRATION CERTIFICATE WITH NABL TRACEBILITY FOR 1 YEAR.

Warranty: 1 year warranty

UNIQUE FEATURES: Using High accuracy PID Controller with LED bright display. Air circulation system carefully designed to achieve maximum Temperature stability in all racks. Mains Power indication bulb and Heating Bulb indicating show its working status. MCB Switches for Power ON/OFF.

- 8 **PEEL/BOND TESTER**



PEEL / BOND TESTER

To check the adhesive strength between two samples

Specification :

- Load capacity : Up to 5 kg.*
- No. of load cell : One.
- Cross Travel : Up to 250 mm*
- Speed : 300 mm/minute.
- Direct display : Peak load.
- Paint : Powder coated.
- Power : 230 Volts, 50 Hz, single phase

CERTIFICATION:CALIBRATION CERTIFICATE WITH NABL TRACEBILITY FOR 1 YEAR.



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Warranty: 1 year warranty.

- **9 Film Shrinkage Tester**

Determine Scaling Parameter Of Poly Film



Thermal shrinking performance is one important property of plastic films. Basically, there are three test methods for film shrinkage testing: Oil Bath Method (ASTM D2732), Drying Oven Method and Air Heating Method (ISO 14616).

Specifications: Power 230v ,50HZ, 1 PHASE

Working size: 300x300x200MM

Controller: Digital PID Controller

Temp. Range : ambient To 300C

Sensor: RTD(PT-100)SENSR

Acuraccy: +-0.2 C

Inbuilt Motor for starring Oil to make uniform Temp. inside bath Tank.

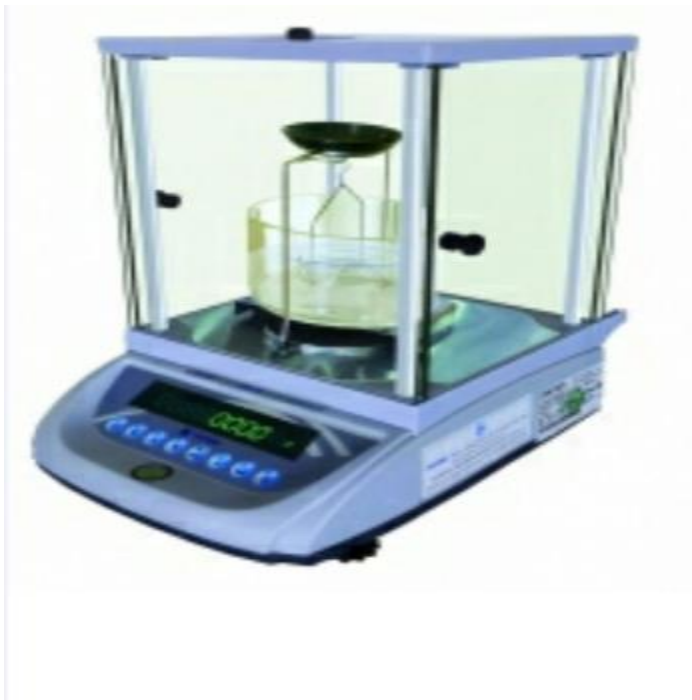
Inside: s.s and Out side MS with powder coated Paint.

CERTIFICATION: CALIBRATION CERTIFICATE WITH NABL TRACEBILITY FOR 1 YEAR.

Warranty: 1 year warranty.

10. Specific Gravity/Density Test Apparatus

As per ASTM D792 and Other Standards



This is basic Requirement of all Polymer Industry to find out Material Density. which effect most of Its Parameters and Quality of products. Such as Mixing with Other agent , Flow, shining, straingth, Tensile and Modulus Properties etc.

If the density increases, the material becomes less ductile and full pails will crack when dropped. In most polymers, you can improve impact performance by selecting a higher molecular-weight material grade without detracting from the rest of the property

Specification: EMFC TECHNOLOGY BASED HIGH ACCURACY SYSTEM

POWER REQ.: 90-250V,50/60HZ, 10 WATT , 1 Phase

Display : LCD BRIGHT DISPLAY

CAPACITY: 220 GRAM

READABILITY:0.001g or 1mg

Repeatability:0.001g

Linearity : 0.001g

PAN SIZE: 100MM

Taring Range:Up to full Capacity

Response Time: 3 seconds

Operating Temperature: 15 to 45 Deg C

CERTIFICATION:CALIBRATION CERTIFICATE WITH NABL TRACEBILITY FOR 1 YEAR.

Warranty: 1 year warranty.

ACCESSORIES WITH MACHINE: Adaptor, weighing pan assembly, stainless steel base for beaker, glass beaker, sinker .

Unique Features: IDEAL LAB ENGINEERS High Precision Balances incorporate advanced Electro Magnetic Force Compensation (EMFC) technology for offering unmatched accuracy and reliability, coupled with unique ADC circuit with inbuilt temperature compensation to offer a very high stability upto a resolution of 6 million counts. All adjustment parameters are programmable to take care of any minor mismatch of different sub assemblies & Balances are configured with these parameters.

Density Determination Kit for Raw Material Example. Granules form OR cutting Parts/ Piece of Plastic Products. one to be mounted on the pan and the other type is with attachment for weigh below the balance. Density Determination Kit consists density weighing pan assembly, stainless steel base for beaker, glass beaker, sinker for testing materials having density less than water or more than water ,Remaining work will be done by automatic software (program) for density determination.



Facility for programming density of liquid (other than water) and temperature of water.
In case of multiple samples, storage of all the sample weights in air first and then in water,
viewing of density of individual samples one by one on the display.

- 11 **Auto Melt Flow Indexer (MFI) TESTER**



1.

The Melt Flow Index Tester measures the rate of extrusion of a Thermoplastic Material through orifice of Specific Length and Diameter under prescribed conditions of temperature and pressure.

MFI being a very essential gate way for most of the polymer industry, this models delivers accurate results at economical budget

Specification :

- Temperature controller:

- Micro processor based auto tuned PID controller with temperature range from ambient to 400°C, resolution of 0.1°C and accuracy of $\pm 0.1^\circ\text{C}$.
- Timer : Digital presettable with a range up to 999 seconds.
- Sample cutting : Automatic
- Weights : 1.2 kg, 2.16 kg, 3.8 kg & 5 kg. ,10.0kg ,21.6kg
- Accessories :Standard accessories*
- Paint : Powder coated.
- Power : 230 Volts, 50 Hz, single phase.
- Standard accessories includes Orifice, Piston, Spanner, Spirit Level, Material charger, Tweezer, Orifice cleaner, Barrel cleaner and inbuilt Accessory stand.

Digital Melt flow index tester as per method A of ASTM D 1238/ISO1133 with auto cutting facility. The equipment has accurate PIDcontroller and digital Timer.

CERTIFICATION: NABL TRACEABILITY CALIBRATION CERTIFICATE WITH 1 YEAR VALIDITY WITH INSTRUMENTS.

Warranty: 1 year warranty.

Unique Features

Digital Melt flow index tester as per method A of ASTM D 1238/ISO1133 with auto cutting facility. This model is first choice of industry because of its easy operation and suitable to work in any industrial atmosphere . Polymer Resercher and developer prefer this model due to its high accuracy , zero chance of Human error, very safe and suitable in all electrical condition. Based on this sample collection using a separate weighing scale the results can be calculated.

12. MELT FLOW INDEX TESTER (MANUAL CUTTER)



The Melt Flow Index Tester measures the rate of extrusion of a Thermoplastic Material through orifice of Specific Length and Diameter under prescribed conditions of temperature and pressure.

Specification :

- Temperature controller:
- Micro processor based auto tuned PID controller with temperature range from ambient to 400°C, resolution of 0.1°C and accuracy of $\pm 0.1^\circ\text{C}$.
- Timer : Digital Timer with Buzzer indication sound, range up to 999 seconds.
- Sample cutting : Manual



- Weights : 1.2 kg, 2.16 kg, 3.8 kg & 5 kg. ,10.0kg ,21.6kg
- Accessories :Standard accessories
- Paint : Powder coated.
- Power : 230 Volts, 50 Hz, single phase.
- Standard accessories includes Orifice, Piston, Sample Cutting Tool,Spanner, Spirit Level, Material charger, Tweezer, Orifice cleaner, Barrel cleaner and inbuilt Accessory stand.

CERTIFICATION:CALIBRATION CERTIFICATE WITH NABL TRACEBILITY FOR 1 YEAR.

Warranty: 1 year warranty.

Digital Melt flow index tester as per method A of ASTMD 1238/ISO1133 with Manual cutting facility. The equipment has accurate PID controller and digital Timer.

MFI being a very essential gate way for most of the polymer industry, this model since it delivers accurate results.

Unique Features

Digital Melt flow index tester as per method A of ASTM D 1238/ISO1133 with Manual cutting facility. This model is very easy to operation and suitable to work in any industrial atmosphere . this model is very safe and suitable in all electrical condition. sample collection using a separate weighing scale the results can be calculated.

- 3. ASH CONTENT TESTER/FILLER TESTER



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ASH CONTENT TESTER/FILLER TESTER: This is basic Requirement of all polymer industry to find out percentage % of Impurities/ filler mixed in polymer this parameter directly effect the Quality of Polymer and its products.

Specification :

Temperature Controller

DIGITAL MICROPROCESSOR BASED PID CONTROLLER ,

K-TYPE SENSOR .ACCURACY +/- 1 C.

HEATER: A CLASS KANTHAL HEATER.

With radial air circulation and auto shut facility.

- Size of the working chamber : 4 X 4 X 9 inch , 6x6x12 inch
- Material of construction : M.S.
- Temperature range : Ambient to 1100°C
- Paint : Powder coated.
- Power : 230 Volts, 50Hz, single phase.
- To determine Percentage of ash in polymers.
- Furnace with other sizes can also be offered

ACCESSORIES WITH MACHINE:

- I) 8 “DESICATOR WITH ½ KG SILICAGEL
- II) 1 TOUNGE AND SAFETY GLOVES 2 NOS.
- III) 1 HIGH TEMP. CRUCIBLE(75ML)
- IV) S O P

CERTIFICATION:CALIBRATION CERTIFICATE WITH NABL TRACEBILITY FOR 1 YEAR .

Warranty: 1 year warranty.

Unique Features

This Machine is designed for accurate and stable temperature inside Heating chamber and provided windows for releasing Smoke from backside . front window to observe sample and inside chamber. **Temp. Range: ambient To 800 Reach in 30-35 Min.** sample collection using a separate weighing scale the results can be calculated.