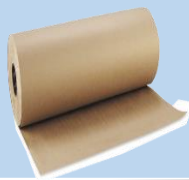
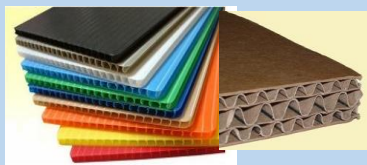


PROCESS CONTROL & QUALITY CONTROL TESTING EQUIPMENTS



Paper



Duplex Board



Corrugated Board



Corrugated Box



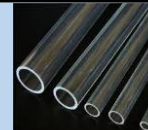
PET



Films & Foils



Tubes



Cones



Drums & Canes



Tapes



Labels



Fiberboard

**Global
Engineering
Corporation**



www.gecpaper.com

Complete testing solutions for sample preparation, surface testing and strength testing. Equipment's are conforming to national standards (IS, FEBM etc.) and international standard (TAPPI, ASTM, BS, AS/NZ, SCAN, DIN etc.)



COMPANY PROFILE

Global Engineering Corporation is an **ISO** certified company having experience of **15** years & engaged in Designing, Manufacturing & Exporting of **Process Control & Quality Testing Instruments** with complete process and Engineering having expertise with full range of services i.e.

- **Quality Testing Equipments used in Corrugation, Pulp, Paper, Printing, Packaging, Converting, Plastics, Rubber, Textile, Adhesives, Chemicals and others.**
- **Consistency Control Loop, Motorised Basis Weight Valve, Auto Guide & Other Paper Mill Spares**
- **Calibration & repairing services with NABL accredited certificate.**
- **Servicing, Repairing, Calibration of any make Equipment's with availability of Spares**
- **Spare parts of Testing equipment's i.e. Calibration Foil & Diaphragm etc.**

Global each product that leaves the factories is thoroughly inspected and tested & comes along with a calibration certificate. Our production facilities are equipped with latest in cutting-edge technology & incorporating some of the most modern production methods supported by professional team. Global Equipment's are a physical expression of the brand they represent, a testimony of the rich experience gained over the years & supported by a dedicated R & D unit to achieve scientifically tangible goals. Global Equipment's strictly adhere to **BS, DIN, ASTM, BIS & ISO** requirements.

TESTING EQUIPMENTS FOR:

- PHYSICAL TESTING EQUIPMENTS
- SPECIMEN PREPARATION EQUIPMENTS
- PULP TESTING EQUIPMENTS
- PACKAGE & PRINTING TESTING EQUIPMENTS
- PLASTIC TESTING EQUIPMENTS
- GENERAL ESSENTIAL LAB EQUIPMENTS
- COATING TESTING EQUIPMENTS
- PROCESS CONTROL EQUIPMENTS
- HANDMADE TESTING EQUIPMENTS
- CONSUMABLE SPARES

PHYSICAL TESTING EQUIPMENTS

- QUADRANT SCALE
- GRAMMAGE TESTER
- COBB SIZING TESTER
- Bursting Strength Tester
- Tearing Resistance Tester
- Paper Electrical Incinerator
- Precision Thickness Micrometer
- Brightness, Opacity & Gloss Tester
- Stiffness Tester
- Tensile Strength Tester
- Internal Ply Bond Tester
- Crush Tester
- Smoothness, Porosity & Softness Tester
- Folding Endurance Tester
- Fluff Tester
- Moisture Meter
- Paper Surface Oil Absorbency Tester
- Oil Penetration Tester
- Print Surface Roughness Smoothness Tester
- Short Span Compression Tester
- Water Absorption Tester

PACKAGE & PRINTING TESTING EQUIPMENTS

- Box Compression Tester
- Tube/Core/Cone Collapsing Tester
- Concura Medium Flutter
- Puncture resistance tester
- Ink Rub Resistance Tester
- Rub Proofness (Scuff) Tester
- Vibration Tester
- Carton Board Creaser
- Tape Tensile Tester /Laboratory Seal/Peal Strength Tester
- Abration Tester
- Drop Tester
- Crease & Board Stiffness Tester
- Carton Opening Pressure Tester

PULP TESTING EQUIPMENTS

- Beating & Freeness Tester
- Consistency Determination Apparatus
- Hand Sheet Former
- Rapid Sheet Dryer
- Sheet Press
- Rotary Digester
- Sheet Drying Cylinder
- Sheet Drying Cabinet
- Pulp Disintegrator
- Fiber Classifier
- Wood Chip Classifier
- Laboratory Valley Beater
- Pulping Unit –Bomb Digester
- Lab Hydrapulper
- Flotation Cell/Deinking Cell
- Lab Scale Chipper/Wood Chipper
- Shieves Analyzer (Somerville Type)
- Research Digester

SPECIMEN PREPARATION EQUIPMENTS

- SAMPLE STRIP CUTTER
- Circular Cutter
- Punch & Dye Cutter

HANDMADE TESTING EQUIPMENTS

- AUTO VAT/ HAND SHEET FORMER
- Hollander Beater
- Paper Calender Machine
- Manual Screw Press (26"x34")
- Rag Chopper
- Semi-Automatic Cutting Mac

GENERAL ESSENTIAL LAB EQUIPMENTS

- Ford Cup
- Brookfield Viscometer
- Laboratory Oven
- Muffle Furnace
- B.O.D Incubator
- Humidity Chamber
- PH Meter
- TDS Meter
- Auto Thermo Bomb Calorimeter
- Conductivity Meter
- AUTOCLAVE
- Turbidity Meter
- COD DIGESTOR
- Digital Dissolved Oxygen Meter
- Dehumidifier
- Moisture Analyzer
- Color Matching Cabinet
- Water Bath
- Hot Plate
- Vacuum Pump

PLASTIC TESTING EQUIPMENTS

- Vacuum Leak Tester
- Torque Tester
- Top Load Tester
- Melt Flow Indexer
- C.O.F TESTER
- Izod Charpy Impact Tester
- Dart Impact Tester
- Salt Spray Chamber

COATING TESTING EQUIPMENTS

- Dennison Standard Test Wax Sticks Kit
- Lab bar Coater/ K Control Coater
- Lab Air Knife Coater
- K & N INK TESTER
- Printability Tester
- Laboratory Calendar

CONSUMABLE SPARES

- Diaphragms For Board Bursting Strength Tester
- Diaphragms For Paper Standard Hydraulic Fluid
- Aluminum Test Foils Blotting Paper
- C Spanner
- MEASURING CYLINDER
- Bursting SS Pressure Gauges
- SS Template (100 X100) MM With Embossing
- SS Template (20 X25) MM With Embossing
- WAX STICK TEMPLATE FOR RUBBER TESTER
- Brookfield Viscosity Standard Fluid
- K & N INKS
- Standard Hydraulic Fluid FOR SPS TESTER
- RUBBER FOR COBB TESTER

PROCESS CONTROL EQUIPMENTS

- Consistency Control Loop
- Digital GSM Valve Controller
- STEAM VALVE CONTROLLER
- Motorised Basis Weight Valve with Controller
- AUTOGUIDE
- PALM SENSOR ASSEMBLY

INDEX

SR. NO	EQUIPMENTS NAME	PAGE NO		SR. NO	EQUIPMENTS NAME	PAGE NO
1	QUADRANT SCALE	8		24	Tensile Strength Tester VERTICAL MODEL	15
2	GRAMMAGE TESTER	8		25	Tensile Strength Tester HORIZONTAL MODEL	16
3	COBB SIZING TESTER	8		26	Internal Ply Bond Tester Manual model	16
4	Bursting Strength CUM GSM Tester (Mullen Type)	9		27	Internal Ply Bond Tester Digital model	16
5	Bursting Strength Tester- (Double Head manual Model)	9		28	Crush Tester	17
6	Bursting Strength Tester-Mullen Type	9		29	Smoothness, Porosity & Softness Tester (Gurley Type)	17
7	Bursting Strength Tester (DIGITAL Type)	10		30	Smoothness, Porosity & Softness Tester (Bendtsen Type with Manual Model)	17
8	Bursting Strength Tester (DIGITAL Type) With Inbuilt Printer	10		31	Smoothness, Porosity & Softness Tester (Bendtsen Type with Electronic Model)	18
9	Bursting Strength Tester (Microprocessor Based Type) (Single Head Pneumatic Clamping Model)	10		32	Folding Endurance Tester (Koehler Molin Type)	18
10	Bursting Strength Tester (Microprocessor Based Type) (Double Head Pneumatic Clamping Model)	11		33	Folding Endurance Tester (Schopper Type)	18
11	Tearing Resistance Tester (Elmendorf Type) MANUAL	11		34	Fluff Tester	19
12	Tearing Resistance Tester (Elmendorf Type) DIGITAL	11		35	Moisture Meter (Imported From Delmhorst, USA)	19
13	Paper Electrical Incinerator	12		36	Moisture Meter (Imported From GANN, Germany)	19
14	Precision Thickness Micrometer	12		37	Paper Surface Oil Absorbency Tester (Patra Type)	20
15	Caliper Thickness Gauge	12		38	Surface Oil Absorbency Tester –Cobb Unger Type	20
16	Brightness, Opacity & Gloss Tester (Photovolt Type)	13		39	Oil Penetration Tester	20
17	Brightness, Opacity & Color Tester (ISO Type)	13		40	Print Surface Roughness Smoothness Tester	21
18	Brightness, Opacity & Color Tester (ISO Type)	13		41	Short Span Compression Tester	21
19	Brightness, Opacity & Color Tester SPECTROPHOTOMETER TYPE	14		42	Water Absorption Tester	21
20	ERIC METER	14		43	Water Drop Tester	22
21	GLOSS METER	14		44	Paper Curl Tester	22
22	Stiffness Tester Taber Type	15		45	Digital Weighing Balance	22
23	Stiffness Tester Electronic Type	15		46	SAMPLE STRIP CUTTER	23

SR. NO	EQUIPMENTS NAME	PAGE NO		SR. NO	EQUIPMENTS NAME	PAGE NO
47	Circular Cutter	23		76	Box Compression Tester	33
48	Punch & Dye Cutter	23		77	Tube/Core/Cone Collapsing Tester	33
49	Punch & DIE CUTTER-MANUAL	24		78	Concura Medium Flutter	33
50	Punch & DIE CUTTER-MANUAL	24		79	Puncture resistance tester	34
51	Punch & Dye Cutter A4-Pneumatic (Guillotine Type)	24		80	Ink Rub Resistance Tester	34
52	Beating & Freeness Tester (Manual Model)	25		81	Rub Proofness (Scuff) Tester	34
53	Beating & Freeness Tester (Pneumatic Model)	25		82	Vibration Tester	35
54	Beating & Freeness Tester (Canadian Type)	25		83	Carton Board Creaser	35
55	Consistency Determination Apparatus	26		84	Tape Tensile Tester /Laboratory Seal/Peal Strength Tester	35
56	Hand Sheet Former (SCA Type)	26		85	Abration Tester	36
57	Hand Sheet Former (KCL Type)	26		86	Drop Tester	36
58	Hand Sheet Former (Semi-Automatic Type)	27		87	Crease & Board Stiffness Tester	36
59	Rapid Sheet Dryer	27		88	Carton Opening Pressure Tester	37
60	Sheet Press (Hydraulic Type)	27		89	Vacuum Leak Tester	37
61	Sheet Press (Pneumatic Type)	28		90	Torque Tester	37
62	Sheet Press (Square Type)	28		91	Top Load Tester	38
63	Rotary Digester	28		92	Melt Flow Indexer-Manual	38
64	Sheet Drying Cylinder	29		93	Melt Flow Indexer –Automatic	38
65	Sheet Drying Cabinet	29		94	C.O.F TESTER	39
66	Pulp Disintegrator	29		95	Izod Charpy Impact Tester	39
67	Fiber Classifier	30		96	Dart Impact Tester	39
68	Wood Chip Classifier	30		97	Salt Spray Chamber	40
69	Laboratory Valley Beater	30		98	Ford Cup	40
70	Pulping Unit –Bomb Digester	31		99	Brookfield Viscometer	40
71	Lab Hydrapulper	31		100	Laboratory Oven	41
72	Flotation Cell/Deinking Cell	31		101	Muffle Furnace	41
73	Lab Scale Chipper/Wood Chipper	32		102	B.O.D Incubator	41
74	Shieves Analyzer (Somerville Type)	32		103	Humidity Chamber	42
75	Research Digestor	32		104	PH Meter	42

SR. NO	EQUIPMENTS NAME	PAGE NO		SR. NO	EQUIPMENTS NAME	PAGE NO
105	TDS Meter	42		129	PALM SENSOR ASSEMBLY	50
106	Auto Thermo Bomb Calorimeter	43		130	AUTO VAT/ HAND SHEET FORMER	51
107	Conductivity Meter	43		131	Hollander Beater	51
108	AUTOCLAVE	43		132	Paper Calender Machine	51
109	Turbidity Meter	44		133	Manual Screw Press (26"x34")	52
110	COD DIGESTOR	44		134	Rag Chopper	52
111	Digital Dissolved Oxygen Meter	44		135	Semi-Automatic Cutting Mac Size 32 inch	52
112	Dehumidifier	45		136	Diaphragms For Board Bursting Strength Tester	54
113	Moisture Analyzer	45		137	Diaphragms For Paper Bursting Strength Tester	54
114	Color Matching Cabinet	45		138	Standard Hydraulic Fluid For Bursting Strength Tester	54
115	Water Bath	46		139	Aluminum Test Foils For Burst Tester	54
116	Hot Plate	46		140	Blotting Paper	54
117	Vacuum Pump	46		141	C Spanner	54
118	Dennison Standard Test Wax Sticks Kit	47		142	MEASRING CYLINDER	54
119	Lab bar Coater/ K Control Coater	47		143	Bursting SS Pressure Gauges	54
120	Lab Air Knife Coater	47		144	SS Template(100 X100)MM With Embossing	54
121	K & N INK TESTER	48		145	SS Template(20 X25)MM With Embossing	54
122	Printability Tester	48		146	WAX STICK	54
123	Laboratory Calendar	48		147	TEMPLATE FOR RUBB TESTER	54
124	Consistency Control Loop	49		148	Brookfield Viscosity Standard Fluid	54
125	Digital GSM Valve Controller	49		149	K & N INKS	54
126	STEAM VALVE CONTROLLER	49		150	Standard Hydraulic Fluid FOR SPS TESTER	54
127	Motorised Basis Weight Valve with Controller	50		151	RUBBER FOR COBB TESTER	54
128	AUTOGUIDE	50				



GEC-P40101-A



GEC-P40101-OB

QUADRANT SCALE

Quadrant Scale measures the Basis Weight of paper by weighing small test samples with given dimensions. Scales are calibrated to precision dead weights.

Specification:

- Its measuring range is 0-1000 g/m².
- Its radius is 30/50 cm.
- Graduation: 0.5-5 g/m²

Standards:

SCAN P6, TAPPI T- 410, ISO 536 CPPA D.3, DIN 53104, BS 3432



**MANUAL
(GEC-P40102-A)**



**DIGITAL
(GEC-P40102-B)**

GRAMMAGE TESTER

GRAMMAGE tester measures basic weights of papers and other materials by measuring a small test sample with given dimensions. Weight of the specimen is directly displayed directly on digital panel meter.

Specification:

- Its measuring range is 0-1500 g/m².
- Auto calibration within +0.5% with auto zero adjustment
- Display accuracy in 0.1 gram/m²

Standards:

SCAN P6, TAPPI T- 410, ISO 536, CPPA D.3, APPITA - P - 405



**AUTOMATIC TYPE
(GEC-P40103-A)**



**TILTING TYPE
(GEC-P40103-B)**

COBB SIZING TESTER

Cobb tester determines the value of the absorption or Cobb value of the paper. Cobb value is the quantity of water in mgs absorbed by surface of 100 cm² of the specimen on one side only in a specified time under a specified head of water.

Specification:

- Test area: 100 cm²
- Level indication: Indication for 100ml on inside of cylinder
- couch roll: Stainless steel roller having a smooth surface width 210mm(8'), diameter 88mm (3.6") weight 10kg +_05kg

Standards:

SCAN P12, TAPPI T- 441, IS 1060 (PART I), BS EN 20535, ASTM D3285-93



Bursting Strength CUM GSM Tester (Mullen Type) (GEC-P40104-A)

Bursting Strength Tester measures Bursting Strength of strong paper and other similar materials by submitting it to increasing uniform hydraulic pressure.

Specification:

- Specimen Clamp-Upper Part: 30.48 mm \pm 0.05.
- Specimen Clamp-Lower Part: 33.07 mm \pm 0.05.
- Pressure Speed: For paper: 95 \pm 10ml/min.

Standards:

TAPPI T-493, ASTM D774, AS/NZ 1301, 403, ISO 2758, CPPA D.8, DIN 53141, SCAN P24



Bursting Strength Tester- (Double Head manual Model) (GEC-P40104-C)

Bursting Strength Tester measures Bursting Strength of strong paper and other similar materials by submitting it to increasing uniform hydraulic pressure.

Specification:

Paper

- Specimen Clamp-Upper Part: 30.50 mm
- Specimen Clamp-Lower Part: 33.10 mm
- Pressure Speed: 95 \pm 5 ml/min
- Motor: 150W, 220V AC Single Phase.

Solid Fiber Board/Corrugated Board

- Specimen Clamp-Upper Part: 31.15 mm
- Specimen Clamp-Lower Part: 31.15 mm \pm 0.1mm.
- Pressure Speed: For paper: 170 \pm 15ml/min.
- Motor: 150W, 220V AC Single Phase.

Standards:

TAPPI T-493, TAPPI T-807, T-810, ASTM D774, ASTM D2529, D738, AS/NZ 1301, 438,403, ISO 2758, CPPA D.8 & ISO 2759, DIN 53141, SCAN P24, SCAN P25.



Bursting Strength Tester-Mullen Type (GEC-P40104-D)

Bursting Strength Tester measures Bursting Strength of strong paper and other similar materials by submitting it to increasing uniform hydraulic pressure.

Specification:

For Paper Model

- Specimen Clamp-Upper Part: 30.50 mm
- Specimen Clamp-Lower Part: 33.10 mm
- Pressure Speed: 95 \pm 5 ml/min
- Motor: 150W, 220V AC Single Phase.

For Solid Fiber Board/Corrugated Board

- Specimen Clamp-Upper Part: 31.15 mm
- Specimen Clamp-Lower Part: 31.15 mm \pm 0.1mm.
- Pressure Speed: For paper: 170 \pm 15ml/min.
- Motor: 150W, 220V AC Single Phase

Standards:

TAPPI T-807, T-810, ASTM D2529, D738, AS/NZ 1301, 438, ISO 2759, SCAN P24, SCAN P25



**Bursting Strength Tester (DIGITAL Type)
(GEC-P40104-E-D)**

Bursting Strength Tester measures Bursting Strength of strong Paper, Solid Fiberboard, Corrugated Board, Film, Tissue, Nonwovens, Textiles, Geotextiles, Tobacco Leaf and other similar materials by submitting it to increasing uniform hydraulic pressure.

Specification:

Specimen Clamp-Upper Part: 30.25 mm

Specimen Clamp-Lower Part: 31.75 mm

Pressure Speed: 95 ± 5 ml/min

Standards:

TAPPI T-493, TAPPI T-807, T-810, ASTM D774, ASTM D2529, D738, AS/NZ 1301, 438,403, ISO 2758, CPPA D.8, ISO 2759, DIN 53141, SCAN P24, SCAN P25



**Bursting Strength Tester (DIGITAL Type)
With Inbuilt Printer (GEC-P40104-E-P-I)**

Bursting Strength of strong Paper, Solid Fiberboard, Corrugated Board, Film, Tissue, Nonwovens, Textiles, Geotextiles, Tobacco Leaf and other similar materials by submitting it to increasing uniform hydraulic pressure.

Digital display/printout of Bursting Strength, Burst Factors & Other parameters.

Specification:

For Paper Model

- Specimen Clamp-Upper Part: 30.50 mm
- Specimen Clamp-Lower Part: 33.10 mm
- Pressure Speed: 95 ± 5 ml/min

For Solid Fiber Board/Corrugated Board

- Specimen Clamp-Upper Part: 31.15 mm
- Specimen Clamp-Lower Part: 31.15 mm \pm 0.1mm.
- Pressure Speed: For paper: 170 ± 15 ml/min.

Standards:

TAPPI T-493, TAPPI T-807, T-810, ASTM D774, ASTM D2529, D738, AS/NZ 1301, 438,403, ISO 2758, CPPA D.8, ISO 2759, DIN 53141, SCAN P24, SCAN P25



**Bursting Strength Tester
(Microprocessor Based Type) (Single
Head Pneumatic Clamping Model) (GEC-
P40104-EIV)**

Bursting Strength Tester measures Bursting Strength of strong Paper, Solid Fiberboard, Corrugated Board, Film, Tissue, Nonwovens, Textiles, Geotextiles, Tobacco Leaf and other similar materials by submitting it to increasing uniform hydraulic pressure.

Specification:

For Paper Model

- Specimen Clamp-Upper Part: 30.50 mm
- Specimen Clamp-Lower Part: 33.10 mm
- Pressure Speed: 95 ± 5 ml/min

For Solid Fiber Board/Corrugated Board

- Specimen Clamp-Upper Part: 31.15 mm
- Specimen Clamp-Lower Part: 31.15 mm \pm 0.1mm.
- Pressure Speed: For paper: 170 ± 15 ml/min.

Standards:

TAPPI T-493, TAPPI T-807, T-810, ASTM D774, ASTM D2529, D738, AS/NZ 1301, 438,403, ISO 2758, CPPA D.8, ISO 2759, DIN 53141, SCAN P24, SCAN P25



Bursting Strength Tester (Microprocessor Based Type) (Double Head Pneumatic Clamping Model) (GEC-P40104-EIII)

Bursting Strength Tester measures Bursting Strength of strong Paper, Solid Fiberboard, Corrugated Board, Film, Tissue, Nonwovens, Textiles, Geotextiles, Tobacco Leaf and other similar materials by submitting it to increasing uniform hydraulic pressure.

Specification:

Paper

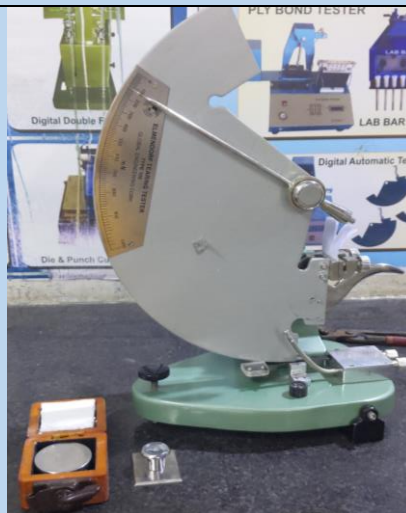
- Specimen Clamp-Upper Part: 30.50 mm
- Specimen Clamp-Lower Part: 33.10 mm
- Pressure Speed: 95 ± 5 ml/min

Solid Fiber Board/Corrugated Board

- Specimen Clamp-Upper Part: 31.15 mm
- Specimen Clamp-Lower Part: 31.15 mm \pm 0.1mm.
- Pressure Speed: For paper: 170 ± 15 ml/min.

Standards:

TAPPI T-493, TAPPI T-807, T-810, ASTM D774, ASTM D2529, D738, AS/NZ 1301, 438,403, ISO 2758, CPPA D.8, ISO 2759, DIN 53141, SCAN P24, SCAN P25



Tearing Resistance Tester (Elmendorf Type) (GEC-P40105-A) MANUAL

Tearing Resistance Tester tests the tear force required to tear samples of paper, film, board and other sheet materials. The equipment is designed to directly read the TF (Tear Force) per one piece. The instrument scale is calibrated to indicate the average force exerted when a certain number of piles are torn together.

Specification:

- Easy to operate and has high accuracy level \pm 1% of readout value and reliability.
- Height: 62mm + 0.2mm, length: 50 + 2.0mm.

Standards:

TAPPI T-414 om-88, IS 4006 (part II) 1972, AS/NZ 1301.400s, DIN 53128, SCAN P11, BS EN 21974, CPPA D9, ISO 6383-2, ISO 1974, ASTM D1424, ASTM D689, TAPPI T414



Tearing Resistance Tester (Elmendorf Type) (GEC-P40105-B) DIGITAL

Tearing Resistance Tester tests the tear force required to tear samples of paper, film, board and other sheet materials. The equipment is designed to directly read the TF (Tear Force) per one piece. Automatic calculations are done through microprocessors and presentation of measured value to ensure accurate and stable results.

Specification:

- Measuring Units: MN/gram force.
- Power consumption: 50 W.
- Power supply: Single Phase 220 V, 50 Hz.

Standards:

TAPPI T-414 om-88, IS 4006 (part II) 1972, AS/NZ 1301.400s, DIN 53128, SCAN P11, BS EN 21974CPPA D9.



**Paper Electrical Incinerator
(GEC-P40106)**

This determines the ash content in the paper and other sheet materials. It is used for quick incineration (machine for burning rubbish) of paper samples. One piece of paper is weight on a balance and given into the ceramic part of the ashes. The paper burns and the ash remains in the tube. The ashes is mover to the balance and the ash is poured-out on the balance-table and weight back.

Specification:

- Power supply: 220 V AC. Single Phase
- Power consumption: 180-200 Watts

Standards:

TAPPI T 211 Om - 93



Precision Thickness Micrometer (Dead Weight Type) (GEC-P40107-C)

Precision Thickness Micrometer is used for rapid and accurate measurement of thickness of paper, board and plastics. The Thickness of sheet is measured as the distance between two circular plane surface under a sturdy pressure 1Kg. / cm².

Specification:

- Test area: 2-10 CM²
- Steady Pressure: 1 Kg/cm² (98.0 Kpa)
- Throat Depth: 75 mm
- Measuring Range: 0-20 mm
- Resolution: PUNCH
- Dead Weight Load: Fixed
- Lowering Speed: Fixed & Controlled

Standards:

TAPPI T 411, T426 M-46, FEFCO No. 3 SCAN P 31, SCAN-P7, SCAN P47, ISO 534, DIN 53105



**Caliper Thickness Gauge
(GEC-P40107-G)**

Caliper Thickness Gauge is an ideal instrument for measuring caliper thickness of LDPE bags, Paper, Paperboard, Corrugated Board, Plastics etc.

Specification:

Model I

- Capacity: 0-10 mm
- Least Count: 0.01 mm

Model II

- Least Count: .001 mm
- Capacity: 0-10 mm

Standards:

TAPPIT-411-om-89, IS-1060, ASTM D 645-92



**Brightness, Opacity & Gloss Tester
(Photovolt Type) (GEC-P40108-A)**

Reflectance Meter is a modern instrument for electronically measuring and digitally presenting the Brightness, Opacity and Gloss of the paper and other material by angular reflectance. It gives precision measurements with less than ± 0.5 % FS deviation between the instruments.

Specification:

- Display System: Digital Direct read out.
- Measurement: Brightness & Opacity
- Measurement Area: 10 mm Dia.
- Light Source: 6V, 1 A. Tungsten Lamp.
- Filters (kinds): Blue, Green, and Amber.
- Sensor: Selenium Photocell.
- Brightness Search Unit: Consist of deep blue gelatin filter #49, between photo voltaic cell, Infrared absorbing glass and source of light.
- Opacity Search Unit: Consist of green filter of the set of tristimulus filters.

Standards:

TAPPI T519, T525, T527, T534, ISO 2469, 2470, 2471, ISO 9416, ISO 5631.1, DIN 53 140, 53 145, 53 146, 53 147, 54 500



**Brightness, Opacity & Color Tester
(ISO Type) (GEC-P40108-B)**

It measures brightness, opacity and other parameters by diffused reflectance according to relevant ISO standards. It is Microprocessor based and gives out instantaneous digital read printout, that shows the worked out details such as CIE Tristimulus values, yellowness, whiteness and colors values of pulp, paper, paperboard, coating agents, filler and other similar materials according to International Standards.

Specification:

- Specimen Area Measured: 30 mm dia.
- Light Source: Quartz Tungsten Halogen Lamps
- Flashes per measurement: 4.0, Lamp Life (No. of measurements): 5, 00,000
- Geometry: Dual Beam / CIE 2°, Photometric Non-Linearity: 0.1%
- Measurement Time: 4 seconds, Illuminator: C Type
- Color Scales: X, Y, Z; R(X), R(Y), R (Z), LUM. X, y, z, Whiteness: ASTM / CIE, Yellowness: ASTM
- Display: 4 line Character LCD Green

Standards:

TAPPI T519, T525, T527, T534, ISO 2469, 2470, 2471, ISO 9416, ISO 5631.1, DIN 53 140, 53 145, 53 146, 53 147, 54 500



**Brightness, Opacity & Color Tester
(ISO Type) (GEC-P40108-C)**

It measures brightness, opacity and other parameters by diffused reflectance according to relevant ISO standards. It is Microprocessor based and gives out instantaneous digital read printout, that shows the worked out details such as CIE Tristimulus values, yellowness, whiteness and colors values of pulp, paper, paperboard, coating agents, filler and other similar materials according to International Standards.

Specification:

- Specimen Area Measured: 30 mm dia.
- Light Source: Quartz Tungsten Halogen Lamps
- Flashes per measurement: 4.0, Lamp Life (No. of measurements): 5, 00,000
- Geometry: Dual Beam / CIE 2°, Photometric Non-Linearity: 0.1%
- Measurement Time: 4 seconds, Illuminator: C Type
- Color Scales: X, Y, Z; R(X), R(Y), R (Z), LUM. X, y, z, Whiteness: ASTM / CIE, Yellowness: ASTM
- Display: 4 line Character LCD Green

Standards:

TAPPI T519, T525, T527, T534, ISO 2469, 2470, 2471, ISO 9416, ISO 5631.1, DIN 53 140, 53 145, 53 146, 53 147, 54 500



**Brightness, Opacity & Color Tester
SPECTROPHOTOMETER TYPE
(GEC-P40108-D)**

Spectral spectrophotometer is a precision instrument for measuring the whiteness, color and color difference of solids. It is widely used in papermaking, printing, textile printing and dyeing, ceramics, building materials, chemical industry, food, salt making and other industries.

Specification:

- Power Supply: AC (100~220)V (50/60)Hz 50W
- Observation Light Source: pulsed xenon lamp, d65 & C light source correction
- Measuring Area/Test Aperture: \varnothing 25MM/ \varnothing 30MM
- Equipped with light absorber to eliminate specular reflection
- Photometer characteristics (linear error) 0.3%
- Bandwidth: 10nm
- Receiver: 128 Unit Photoelectric Array
- Wavelength Range: 400-700 nm
- Measuring Range: 0-200%
- Measuring Time (Typical): 4-20s
- Repeatability: ± 0.05 CIALAB
- Reproducibility(Difference Between Instruments): ± 0.30 CIALAB
- Simulative Light Source: C, D65
- Standard Observer: 2° , 10°
- Spectral Data Interval 10nm
- UV Cut Filter: 395, 420 nm

Standards: TAPPI 452 & TAPPI 519 ISO 2470-2-2008 ISO 2471 ISO 2469



**ERIC METER
(GEC-P40108-E)**

The ERIC measurement has become a paper industry standard for the measurement of residual ink in recycled pulp and paper using recycled pulp. It is ideal testing equipment for paper mills, scientific research, quality inspection agencies and other departments.

Specification:

- Power Supply: AC (100~240)V (50/60)Hz 50W
- Working environment: (10~35) $^\circ$ C, Humidity < 85%
- Sample size: test plate diameter should not be less than 30mm while sample thickness should not exceed 40mm
- Wavelength Range: 950nm \pm 5nm
- Accuracy: 0.1%
- Repetitive Accuracy: 0.05%
- Communication Interface: RS232
- Print: Built in thermal printer

Standards:

TAPPI T480



**GLOSS METER
(GEC-P40108-F)**

Gloss Meter measures Specular Gloss of the paper at 75°

Specification:

- Angle : 75°
- Light Source : Quartz Tungsten Halogen Lamps
- Flashes per measurement :4.0
- Lamp Life (No. of measurements) :5,00,000
- Geometry : Dual Beam / CIE 2°
- Photometric Non-Linearity :0.1%
- Measurement Time : 4 seconds
- Illuminator : C Type
- Display : 4 line Character LCD Green
- Power : 200 Wt, 220 V 50 c/s

Standards:

TAPPI T480



Stiffness Tester

Taber Type (GEC-P40109-A)

Stiffness Tester is designed to evaluate stiffness of paper, plastics, cardboard and other flexible material having comparatively strong bending resistance. One end of the test piece is fastened to the clamp. The maximum force required to bend the test piece to a specific angle is presented on the graduated scale.

Specification:

- Test Range: 0-10,000-stiffness unit.
- Test Material Thickness: 0.004 to 1/8 of an inch.
- (if within load range of instrument)
- Pendulum: Two Directional.
- Specimen Size: 38 X 70 mm (15 X 2.75 inch) for bending distance of 5 cm. 38 X 38 mm (15 X 1.5 inch) for bending distance of 1 cm.
- Load: 5000 unit at 15 degree (standard bending).
- 10000 unit at 7.5 degree (standard bending).
- Roll Diameter: 10.5 mm and 11 mm factory calibrated.
- Accuracy of $\pm 1\%$ full scale in each range.
- Display: 3-1/2 digits.
- Transducer: Angle of rotations measure by imported shaft encoder.
- Drive: By small gear motor rated for 220V AC, 2 rpm, 50 Hz electrical components sealed in housing.

Standards:

TAPPI 489 m-69, ASTM D-747-61-T, JIS P-8185,



Stiffness Tester

Electronic Type (GEC-P40109-B)

Stiffness Tester (Electronic Type) is easy to handle calibrate. It is fast and efficient for paperboard and intended for determining the bending resistance of a wide range of paper grades. The instrument can also be used for determination of the behavior of paper under long-term stress as well as to determine the bending stiffness.

Specification:

- Test Material Thickness: 0.004 to 1/8 of an inch, Pendulum: Two Directional.
- Bending angle: Infinitely variable 5° & 30° and six fixed positions 5° , 7.5° , 15° , 20° , 25° and 30° .
- Bending Length: 5, 10, 15, 20, 15 & 50 mm, Bending Speed: $5^\circ/\text{s}$, Strip Dimensions: Width 38 mm (1.5")
- Thickness max 3 mm, measuring range: 0-5000 MN.
- Accuracy: $\leq \pm 2\%$ of reading but not better than $\pm 1\%$ of load range, Analog Output: 0-10 V.

Standards:

TAPPI T 556, 553, 543, 402, ISO 2493, DIN 53121, BS 3748, NF Q 03-048, SCAN P29



Tensile Strength Tester (Microprocessor Based with Vertical Model) (GEC-P40110-B)

Tensile Strength Tester determines the Tensile Strength, Stretch at break of the Paper, Paperboard, Films, Foils, Rubber, Textiles, Polyesters Yarn plastics etc.

Specification:

- Measuring Result: Individual results of Tensile Strength, Stretch, and Elongation & Breaking Length.
- Capacity: Dual (0-10 Kg & 0-60 Kg)
- Measuring Range: Stretch at break 0-70% at clamping length 100 mm.
- Clamps: 15mm or 25 mm.
- Clamping Length: Selected.
- Pulling Speed: 1-99 mm/ min (0.04-4.0"/min).
- Accuracy: $\pm 1\%$ of reading down to 10% of the load cell capacity.
- Resolutions: 0.025% of nominal load cell range and 0.1 mm in elongation measurement.
- Analog output: Force Value 0-10 V
- Power Supply: 1 Phase.

Standards:

TAPPI T- 404, T- 494, IS 4006 (part II) 1972, ISO 1924/2, SCAN P 38, BS 4415, CPPA D 34



**Tensile Strength Tester (Microprocessor Based with Horizontal Model)
(GEC-P40110-C)**

Tensile Strength Tester determines the Tensile strength (Kg/mm), Breaking Length, Elongation (%), Tensile Energy Absorption (TEA) & Tensile Stiffness at break of the Paper, Paperboard, Films, Foils, Rubber, Textiles, Polyesters Yarn plastics etc.

Specification:

- Pulling Speed infinitely adjustable: 25 to 350 mm/min.
- Load Scale graduation according: to following alternatives: 0-500N
- Elongation scale: 0-100 mm and 0-50% at 180 mm testing lengths.
- Adjustable clamping lengths: 0, 10, 50, 100 & 180 mm
- Stroke: 200 mm.
- Width of specimen: 15 mm.

Standards:

TAPPI T- 404, T- 494, IS 4006 (part II) 1972, ISO 1924/2, SCAN P 38, BS 4415, CPPA D 34



**Internal Ply Bond Tester
Manual model (GEC-P40111-A)**

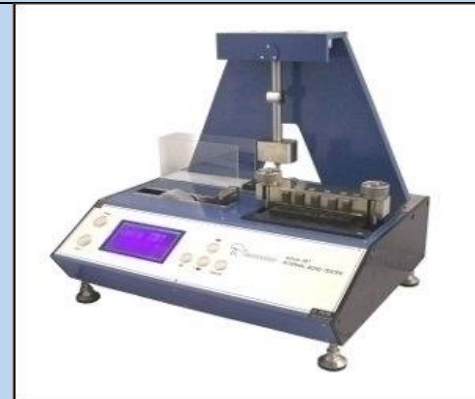
Internal Ply Bond Tester determines the internal bonding Strength of Paper, Paperboard and Laminates, by measuring the average energy in thousands of foot-pound required to delaminate the specimen in two piles.

Specification:

- Security cover and Ball-striking head.
- Measurement scale: 0 to 500 ft.lb
- 3 sets of washers for adjusting the adherence pressure of the sample.
- 5 metal blocks and 5 aluminum angles.
- A pendulum of dual capacity 0-0.25 FT/LB and 0.1-0.5 FT/LB.
- A scale calibrated in thousands of a foot pound in both ranges.

Standards:

TAPPI T- 833, TAPPI: T 569, TAPPI/ANSI T 569



**Internal Ply Bond Tester
Digital model (GEC-P40111-B)**

Internal Ply Bond Tester determines the internal bonding Strength of Paper, Paperboard and Laminates, by measuring the average energy in thousands of foot-pound required to delaminate the specimen in two piles.

Specification:

- Security cover and Ball-striking head.
- Measurement scale: 0 to 500 ft.lb.
- 3 sets of washers for adjusting the adherence pressure of the sample.
- 5 metal blocks and 5 aluminum angles.
- Tape-support, double coated adhesive tape and manual cutting tool.
- A pendulum of dual capacity 0-0.25 FT/LB and 0.1-0.5 FT/LB.
- A scale calibrated in thousands of a foot-pound in both ranges.

Standards:

TAPPI T- 833



**Crush Tester
(GEC-P40112-R)**

Crush Tester is an efficient and easy to use equipment intended for testing paper, corrugated board and its components as well as performing compression tests on small packages.

RCT, ECT, CMT, CCT, PAT and FCT all tests are possible through single machine.

Specification:

- Measuring Results: Breaking Force in Newton's.
- Stroke Length: 76 mm.
- Deformation Speed: Calibrated 12.0 mm/min or variable speed.
- Test Speed / Return Speed: 5-50 mm/min / \approx 100 mm/min.
- Plate Size: 125 X 125 mm.
- Measuring Range: 0 - 10000 N.
- Accuracy: \pm 1% of reading.
- Rupture Sensitivity: 2 - 20 % of the relevant maximum load.
- Power Consumption: 200 W.
- Power Supply: Single Phase, 220 V, 50 c/s.

Standards:

TAPPI T-808, T-809, T-811, T-818, T-821, T-822, T-823, T-824, T-825, SCAN P42, SCAN P27, SCAN P34, SCAN P33, SCAN P32, ISO 7263, ISO 3037, ISO 3085, ISO 13820, DIN 53143, DIN 53134, DIN 53149, FEFCO No.8, FEFCO No.6, FEFCO No.11



**Smoothness, Porosity & Softness Tester
(Gurley Type)
(GEC-P40113-B)**

Smoothness, Porosity & Softness Tester measures average Smoothness, Porosity and Softness of paper and films by determining the time necessary for a certain volume of air to flow through the inserted sample, under a uniform pressure.

Specification:

- Effective area of Porosity: 645.16 mm²
- Contact area of smoothness: 645.16 mm²
- Contact Pressure smoothness: 0.21 Kg/cm²
- Softness contact area: 645.16 mm²
- Steel Plug - Height approx.: 5/100 mm (100cc of air flows out in 10 sec.)

Standards:

TAPPI T479, TAPPI T460, TAPPI T490, SCAN P53, SCAN P19, CPPA P14



**Smoothness, Porosity & Softness Tester
(Bendtsen Type with Manual Model)
(GEC-P40113-C)**

Smoothness, Porosity & Softness Tester is an advanced instrument based on rotameter airflow principle for measuring the smoothness, porosity, softness and air presence of paper and board using the Bendtsen method. Roughness of paper or similar material is defined as the volume of air that forced by a specified pressure difference escapes in unit time by passing between the surface of the specimen and flat metal ring resting on a specimen.

Specification:

- Three rotameter tubes: 5-150 & 50-500 ml/min.
- Contact Pressure: 98 Kpa.
- Air Pressure: 3 Manostat weights of constant pressure (0.75 & 1.5 Kpa).
- Power Supply/Consumption: 220 / 240 V Single Phase 50 Hz. / 50 W.

Standards:

TAPPI UM535, SCAN P21, P60, BS 4420, ISO 5636/3, 8791/2, DIN 53108



**Smoothness, Porosity & Softness Tester
(Bendtsen Type with Electronic Model)
(GEC-P40113-D)**

Smoothness, Porosity & Softness Tester (Microcontroller Model) is a fast and reliable instrument for accurate measurement of surface smoothness and roughness of paper grades. The equipment is supplied with advanced high precision Brooks, U.S.A Mass Flow Meters, which offers remarkably accurate measurement even at small flows. Each result is presented on digital display and documented on the built in printer.

Specification:

- Measuring Range: 0-300ml/min and 0-3000ml/min
- Measuring results: Individual values/Mean values
- Contact Pressure: 98 Kpa
- Air Pressure: 1.47 kPa, Measuring Area: 10 cm²
- Display: Digital with backlit LCD
- Accessories Included: Air Permeance & surface roughness/smoothness measuring Head, Ground glass plate, Additional hardness weight and Sample Holder
- Power Supply/Consumption: 220 / 240 V Single Phase 50 Hz. / 50 W
- Compressed Air: 400 kPa

Standards:

TAPPI UM535, SCAN P21, ISO 5636/3, 8791/2, DIN 53108, DIN 53120



**Folding Endurance Tester
(Koehler Molin Type) (GEC-P40114-A)**

It determines the Folding Endurance of all kinds of paper card board, foil and film and is applicable to the paper up to 0.15 mm in thickness having a tensile strength greater than 1.3 kn/m. Two test samples can be tested simultaneously. The numbers of folds are stored into the counter.

Specification:

- Display: Impulse counter with five figure counters and zero setting
- Folding Angle: 312°
- Folding Speed: 200 ± 10 double folds/min
- Dimension of Test Strip: 15 x 100 mm
- Power Supply/Consumption: 220 / 240 V Single Phase 50 Hz. / 50 W

Standards:

TAPPI/ANSI T 511 om-13, TAPPI T 423



**Folding Endurance Tester
(Schopper Type) (GEC-P40114-B)**

It determines folding endurance for all kinds of paper, cardboard, foil & films up to 0.25 mm & estimates suitability of paper in use to withstand repeated bending folding & creasing.

Specification:

- Working Unit: Two separately working folding units for quicker test
- Testing of Paper: 0.25 mm thickness of paper
- Specimen width: 15 mm, length: 98 mm, Clamping length: 90 mm
- Stretching force: Maximum 9.81 N and Minimum 7.55 N
- Folding Roll Diameter: 6 mm, Distance Between folding rolls: 0.5 mm
- Working speed: 120 strokes /min, Deflection on either side: 10 mm.

Standards:

TAPPI T423, ISO 5626, IS 1060(PART I)



GEC-P40115

Fluff Tester (GEC-P40115)

Fluff Tester enables fluff to be measured easily after simulating the action of printing press using a dry blanket. It is based on the concept of PIRA. The tester is capable of giving reproducible results and the fluff build-up proceeds at a steady rate with a number of sheets.

Specification:

- Nip Pressure: 13.5 Kg
- Blanket cylinder: 10" wide X 6" dia.
- Blanket Material: Can be easily changed
- Measuring Area: One square inch and illuminated with daylight source
- Sheet Feeding System: Manual

Standards:

TAPPI, SCAN, ISO



GEC-P40116-A

Moisture Meter (Imported From Delmhorst, USA) (GEC-P40116-A)

Moisture Meter is especially useful for testing paperboard, corrugated stock, and paper tubes. It is an electrical resistance-type moisture meter, utilizing the relationship between moisture content and electrical resistance. The contact pins mounted on the top of the meter are used for making direct contact with the material.

Specification:

Moisture Range:

- 4.3%-18% for paper.
- 5%-40% for baled scrap paper.
- 0 - 100 arbitrary scale for obtaining relative moisture indications on other material.
- Battery: 9V Alkaline

Standards:

BS 3110, TAPPI, ASTM, ISO



GEC-P40116-B

Moisture Meter (Imported From GANN, Germany) (GEC-P40116-B)

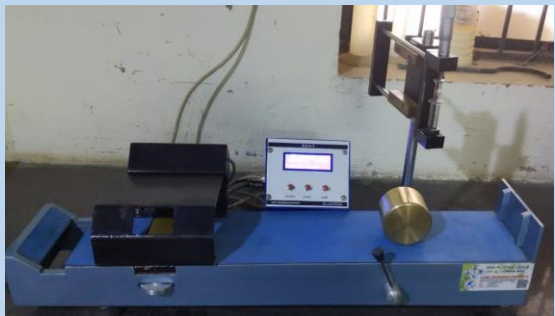
GANN Moisture Meter is an electrical resistance type digital moisture meter. It calculates on the basis of mass of water/ mass of solids. Since the electrical conductivity of paper is considerably effected not only by its moisture content, but also by the paper temperature and various substances contained in the paper, GANN Moisture meter has been designed to take these parameters into consideration to ensure accurate readings.

Specification:

- Measurement of moisture content with a digital readout in % of dry weight.
- Provided with spare pins and protective cap.
- Suitable also to measure wood, normal gypsum & mixed plaster.
- Moisture Range: 5% to 90%

Standards:

BS 3110, TAPPI, ASTM, ISO



Paper Surface Oil Absorbency Tester (Patra Type) (GEC-P40117)

It is used to determine the oil absorption resistance of the surface of paper and paperboard along with photo electric digital timer.

Specification:

- Roller 2.1 Kg, 76 mm diameter and 55 mm wide lined.
- Inclined plane 500 X 100 mm with a 4.5 degree gradient with Neoprene.
- 50 CC Paraffin oil with density of 0.88 and viscosity of 1.28 poise at 25°C.
- Oil-burette delivers 0.02G oil droplet.
- 10 scale division = 0.0015 ml.

Standards:

TAPPI, SCAN, ISO.



Surface Oil Absorbency Tester – Cobb Unger Type (GEC-P40118)

Paper Surface Oil Absorbency Tester is used for determining the absorptive capacity of paper by measuring the amount of fluid (aqueous or non-aqueous, fluids, oils, varnishes) absorbed by the paper surface.

Specification:

- Reservoir Capacity: 250 cm²
- Testing Surface: 100 cm

Standards:

SCAN P 37:77



Oil Penetration Tester (GEC-P40119)

Oil Penetration Tester is designed for determining the penetration time of oil and other liquids through paper and other similar materials by the Surface Resistance.

Specification:

- Temperature Range: Ambient to 1000C
- Penetration Timer: 999 second with 0.1 second

Standards:

T 462 om-01, TAPPI T 462, ASTM,



Print Surface Roughness Smoothness Tester (GEC-P40120)

It measures the roughness / smoothness as per the condition apply in the printing press nip at the moment of printing, by clamping the sample between a precise measuring head and a specially backing assembly with variable clamping pressure.

Specification:

- Measuring Range: 0.9-6 μ
- Contact Pressure: Variable (5/10/20 Kgf / cm²)
- Air Pressure: Regulated from 0 to 3 wg / inches
- Air Requirement: 0-7 kg/cm² Compressed air
- Selection Switch: Rotary

Standards:

ASTM D 3786, ASTM D 774, BS 4768, ISO 1328-2:1999, ISO 2758, ISO 2759, ISO 2960



Short Span Compression Tester (GEC-P40121)

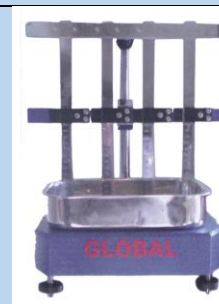
In the short-span compression test (SCT) the compressive strength of paper in compression mode is determined. Because only a very short length of paper (0.7 mm) is used in the test, greater account is taken of the load-bearing fiber portion of the material than with the traditional test methods (ring crush test, corrugated crush test or linear crush test).

Specification:

- Load cell range: 0-500N, GSM range: 100 to 400 g/m²
- Compression length: 0.5 mm, Test span: 0.7 mm
- Clamping force: 2300 \pm 500 N at 500 kPa (75 psi) air pressure.
- Strip dimension: Length 150 mm and width 15 mm
- Accuracy: \pm 1% of reading within 30-300 N.
- Computer output: RS 232 C

Standards:

TAPPI T-826, ISO 9895, SCAN P46, AS/NZ 1301.4SO RP, BS 7325, DIN 54518, EN 54518, UNE 57142.



Water Absorption Tester (Klemm Type) (GEC-P40122)

Water Absorption Tester is designed to measure the degree of water absorption of paper i.e. the capillary rise in millimeters by suspending a specimen in a vat filled with water.

Specification:

- Scale Range: 0 - 150 mm
- 1 div: 1 mm
- Number of specimen holders: 4
- Specimen Size: 15 X 200 mm.
- Size of water bath: 270 X 80 X 26 mm.
- Water Temperature: 15 - 20° C

Standards:

SCAN P13



Water Drop Tester (Surface Wettability Tester) (GEC-P40123) (STFI Type)

Water Drop Tester measures the angle of contact, oil wetting agent & size for corrugated fiber Board when a drop of liquid is applied to the surface of a specimen of paper. Contact angle measurements can be used as a tool for understanding the wetting between a liquid droplet and a substrate. Projection screen of matt glass 160x90mm magnification 25 X is provided.

Specification:

- Power: 115 Volts 60 Hz
- Maximum Temperature: >180oF (82oC)
- Volume: 750 ml

Standards:

TAPPI T558, ASTM D-5725



Paper Curl Tester (GEC-P40124)

Paper Curl Tester is used to measure the Degree of curl when the paper sample exposed to water. Paper curl can be defined as a systematic deviation of a sheet from a flat form. It results from the release of stresses that are introduced into the sheet during manufacture and subsequent use.

Specifications:

- Accuracy Grade: 0.5
- Weight: 0-100Kg
- Dimension: 800x270x200 mm

Standards:

TAPPI T 466, T520



Digital Weighing Balance (GEC-P40125)

Weighing Balance measures basic weights of papers and other materials by measuring a small test sample with given dimensions.

Specifications:

- Capacity: 210 gram
- Readability: 0.001 gram/ 0.0001 gram
- Repeatability: 1mg/ 0.1 mg
- Linearity: ± 0.3 mg
- Weighing Units: gram, mg, ct
- Pan Size (inch/cm): 3.9/10

Standards:

SCAN P6, TAPPI T- 410, ISO 536, CPPA D.3, APPITA - P – 405



SIZE: 15*300MM

Specification:

- Length: 10 cm
- Width: 2.54 cm
- Operation: Manual



A4 SIZE

Specification:

- Length: 300 mm
- Width: 210 mm
- Operation: Manual

**SAMPLE STRIP CUTTER
(GEC-P40201-A)**

Precision sample strip cutter is used for accurate and rapid preparation of test pieces for use in tensile strength tests, folding endurance test, water absorbency test and other similar tests without any deformation and damage.

Standards:

TAPPI, ISO 1924, SCAN P38



**Circular Cutter
(GEC-P40201-B)**

Circular Cutter (Hand Wheel Type) is a manually operated cutter with four knives along the perimeter. The accuracy of the tests results is not only dependent on the accuracy with which the procedure is carried out, but also on the accuracy of cutting the test pieces from the original sample.

Specification:

- Sample Area: 50cm²/100 cm²/150 cm²/200 cm²
- Thickness: Maximum 5 mm
- Application: Circular sample

Standards:

TAPPI, SCAN, ISO, DIN EN 23 035



**Punch & Dye Cutter
(GEC-P40203-A)**

Punch & Dye Cutter is used for accurate and rapid preparation of test pieces for use in tensile strength tests, ring crush tests, folding endurance test, water absorbency test and other similar tests without any deformation and damage. Punch & Dye cutters are designed to eliminate the causes of errors associated with hand-cut samples. The accuracy of test results is not only dependent on the accuracy with which the procedure is carried out, but also on the accuracy of cutting the test pieces (specimens) from the original sample.

Specification:

- Sample Area: 300 * 15 mm/100*15 mm/200 *25 mm (L * W)
- Operation: Manual
- Application: Tensile Strength Tester/Folding Tester/Ply Bond Tester

Standards:

ISO 3035, 7263, 3037, 536, 1924-2 TAPPI
T822, T809, T410, T494



**Punch & DIE CUTTER-MANUAL
(GEC-P40203-B)**

A precision test strip Punch & Die cutters are intended for accurate and fast preparation of test pieces. The Internal Bond sample Preparation station with its adjustable contact pressure and definable pressing time allows for a constantly identical preparation of all test samples for the internal bond test. The PRECISION Test Strip Punch & Die cutters are intended for accurate and rapid preparation of test pieces for use in internal ply bond tester.

Specification:

Electrical connection: 100 – 240 VAC / 50 – 60 Hz / 2 – 1 A

Water connection: No

Compressed air: 6 bar

Cut size: 25x300 (mm), test size 1"*12".

Standards:

TAPPIT-489, SCAN-38, TAPPI T569 om-14, ISO 2493



**Punch & Dye Cutter (Circular)
(GEC-P40203-C)**

Punch & Dye Cutter-Circular is used for accurate and rapid preparation of paper and paperboard samples without any deformation and damage. Punch & Dye cutters are designed to eliminate the causes of errors associated with hand-cut samples.

Specification:

- Sample Area: 100cm²
- Operation: Manual
- Application: Sheet Punch

Standards:

ISO 3035, 7263, 3037, 536, 1924-2 TAPPI T822, T809, T410, T494



**Punch & Dye Cutter A4-Pneumatic
(Guillotine Type)
(GEC-P40203-D)**

Punch & Dye Cutter (Guillotine Type) is used for accurate and rapid preparation of paper and paperboard samples without any deformation and damage. Punch & Dye cutters are designed to eliminate the causes of errors associated with hand-cut samples.

The accuracy of test results is not only dependent on the accuracy with which the procedure is carried out, but also on the accuracy of cutting the test pieces (specimens) from the original sample.

Specification:

- Sample Area : A4
- Operation: Pneumatic –Automatic
- Application: Sheet Punch

Standards:

ISO 3035, 7263, 3037, 536, 1924-2 TAPPI T822, T809, T410, T494



**Beating & Freeness Tester
(Manual Model)
(GEC-P40301-A)**

Beating & Freeness Tester is designed to determine the rate of drainage of a dilute pulp suspension and express it in terms of the Schopper - Riegler ($^{\circ}\text{SR}$) value. The $^{\circ}\text{SR}$ value is the inverse of the volume of water collected (divided by 10). The rate of drainage is related to the work done on the fiber during beating and refining.

Specification:

- Sample: 2 gm. Oven dried
- Consistency: 0.2%
- Reproducibility: approximately 1 $^{\circ}\text{SR}$

Standards:

ISO 5267/1, BS 6035/1, SCAN C19



**Beating & Freeness Tester
(Pneumatic Model)
(GEC-P40301-B)**

Beating & Freeness Tester is designed to determine the rate of drainage of a dilute pulp suspension and express it in terms of the Schopper-Riegler ($^{\circ}\text{SR}$) value. The equipment is intended for long fibered pulps that produce a dense fiber mat on the screen. The $^{\circ}\text{SR}$ value is the inverse of the volume of water collected divided by 10. The rate of drainage is related to the work done on the fiber during beating and refining.

Specification:

- Pulp Sample consistency: 0.20%
- Pulp Temperature adjusted at: $20^{\circ}\text{C} \pm 0.05^{\circ}\text{C}$
- Reproducibility: Within 4%, Pulp Volume: 1000 ml
- Graduation on the discharge collecting cylinder: $^{\circ}\text{SR}$

Standards:

ISO 5267/1, BS 6035/1, SCAN C19



**Beating & Freeness Tester
(Canadian Type)
(GEC-P40301-C)**

Measures the Canadian freeness number which is a measure of the drainage capacity of different pulp types. The drainage rate has been shown to be related to surface conditions and swelling of the fibers. It is also useful index of the amount of mechanical treatment given to the pulp.

Specification:

- Capacity of the cylinder: 1000 ml
- Volume in the bottom section of the cone: 23.5 ± 0.2 ml
- Slope of the main cone: $29^{\circ} \pm 5$ min
- Orifices provided in funnel: two, one at the bottom & other on the side
- Distance between the overflow lip of the tube and bottom of the funnel section: $50.8 \text{ mm} \pm 0.75 \text{ mm}$
- Size of the perforation in the screen plate: 0.50 mm diameter

Standards:

TAPPI T227, ISO 5267/2, AS/NZ 1301, 206s, BS 6035 part 2, CPPA C1



**Consistency Determination Apparatus
(GEC-P40302)**

Consistency Determination Apparatus offers a simple and rapid method of determining the consistency of a pulp suspension in freeness tests. It is more rapid than Bücher funnel and is suitable for use with most types of pulp. The equipment is manufactured in accordance with the second report of the Pulp Evaluation Committee to the Technical Section of British Paper & Board Industry Federation.

Specification:

- Capacity: 1000 ml
- Container: Top easily removable
- Clamping: Rapid action & efficient
- Grid Plate: Fitted with a supporting lattice

Standards:

TAPPI T 240 Om-02



**Hand Sheet Former
(SCA Type)
(GEC-P40303-A)**

For production of circular sheets. It is a stainless steel device produces laboratory sheets to allow the test and evaluation of the physical properties of pulp. Laboratory sheets are used in determining physical properties such as apparent density, tensile index, tear index, folding endurance light scattering coefficient and air resistance.

Specification:

- Sheet size: 165 mm.
- Diameter: 215 cm²
- Trimmed size: 200 cm²
- Suction Height: 800 mm
- Drainage Time: 3.8 ± 0.2 sec., $20 \text{ }^{\circ}\text{C} \pm 1 \text{ }^{\circ}\text{C}$

Standards:

TAPPI T-205, ISO 5269/1, CPPA C.4, SCAN C26, DIN 54358, APPITA P 203



**Hand Sheet Former
(KCL Type)
(GEC-P40303-B)**

Hand Sheet Former is a stainless steel device produces laboratory sheets to allow the test and evaluation of the physical properties of pulp. Laboratory sheets are used in determining physical properties such as apparent density, tensile index, tear index, folding endurance light scattering coefficient and air resistance.

Specification:

- Sheet Size: 165 X 165 mm
- Trimmed Size: 200 cm²
- Wire Screen (upper): 100 mesh (ASTM std.) 150 mesh (TAPPI STD.)
- Wire Screen (support): 20 mesh
- Suction Height: 800 mm
- Stock Container and dewatering vessel: Stainless Steel
- Drainage Time: 3.8 ± 0.2 sec., $20 \text{ }^{\circ}\text{C} \pm 1 \text{ }^{\circ}\text{C}$.

Standards:

TAPPI T-205, ISO 5269/1, CPPA C4, C5, SCAN C26



**Hand Sheet Former
(Semi-Automatic Type)
(GEC-P40303-D)**

Hand Sheet Former (GEC-P40303-D) is a Hand Sheet Former with White Water Re-Circulation System, Pneumatic Sheet Press and Rapid Dryer mounted on base table complete with accessories.

Specification:

- Apparatus has control Cabinet for regulation of filling, air agitation, settling and drainage.
- Complete with switch control box accessories to provide 600 KPA air supply to the sheet former.
- Timer provides timing sequence of each steps may be adjustable in seconds, minutes and hour.
- On completion of pneumatic couching, controls reset for next cycle.
- It is suitable for operation on 220-250 V 50 Hz AC.

Standards:

TAPPI T-205, ISO 5269/M, AS/NZ 1301-2035, CPPA C4, SCANC26



**Rapid Sheet Dryer
(GEC-P40304)**

Rapid Sheet Dryer is used for rapid drying of hand sheets after pressing, prior to evaluation. The uniformly distributed heat from the drying surface reduces the moisture content of paper samples. Rapid Dryer is intended for shortening the drying time of wet pulp or paper samples before determining the dry weight or moisture content.

Specification:

- Sheet size: Max width 250 mm and Max length 300 mm.
- Temperature Range: Maximum 180°C ± 10°C
- Heaters: Flat electrical Elements single phase, 220 V, 400 W each for upper & lower plats.
- Power supply/ Consumption: 220 V, Single phase, 50 Hz/800 W

Standards:

TAPPI T-205, SCAN M-1



**Sheet Press (Hydraulic Type)
(GEC-P40305-A)**

Sheet press is used for pressing and dewatering of the hand sheet, quickly made on standard sheet making apparatus, must be pressed in uniform manner for the distribution of pulp across the area. The specimen is pressed by gradually raising the rubber diaphragm with strokes of piston, pushing up the floating pressure plate.

Specification:

- Working pressure: 3.5 kg/cm²
- Sheet size: 165mm dia. Maximum

Standards:

CPPA C 4, ISO 5269, TAPPI T 205



**Sheet Press (Pneumatic Type)
(GEC-P40305-B)**

Sheet press is used for pressing and dewatering of the hand sheet quickly made on standard sheet making apparatus must be pressed in uniform manner for the distribution of pulp across the area. The sheet press is pneumatically operated by compressed air supply.

Specification:

- Working pressure: 3.5 kg/cm²
- Sheet size: 160/165/200mm dia.
- Power supply: single phase, 220V 50 Hz.

Standards:

TAPPI T-205, CPPA C.4, ISO 5269



**Sheet Press (Square Type)
(GEC-P40305-C)**

Sheet Press is designed for ease of operation and accuracy in forming hand sheets in accordance with TAPPI standards. The Sheet Press is used for pressing and dewatering the sheet quickly made on sheet making machine. The specimen is pressed by gradually raising the rubber diaphragm.

Specification:

- Sheet Size: 350 * 350 mm maximum
- Working Pressure: 7 Kg/cm²
- Pressing Load: 16 KN, Stroke Length: 75 mm
- Traveling: 210 mm
- Power Supply: Single Phase, 220V 50 Hz

Standards:

TAPPI T-205, CPPA C.4 and ISO 5269



**Rotary Digester
(GEC-P40306)**

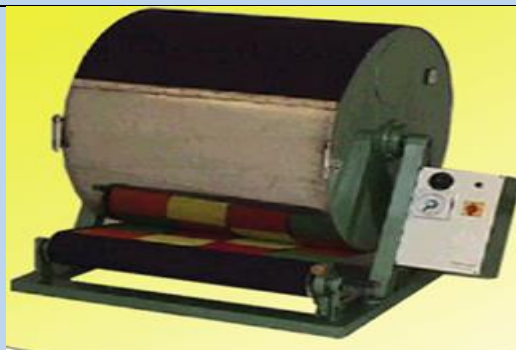
Rotary Digester is designed for producing pulp from various fibrous materials under specified and control condition under pressure, temperature and time. It produces pulp in a manner similar to a commercial digester.

Specification:

- Capacity: 25 Liter, Type: Round Cylindrical
- Digester Body: Made of Acid proof steel
- Raw Material: 3.0 kg. Wood chip
- Temp: 50 – 250°C, Max. Pressure: 15.0 Kg. / cm²
- Rotation Angle: 360° Center, Total Power: 11 KW
- Motor Rating: 3 Phase, 440 V, 1/2 HP
- Read Out: 3-1/2 Digits, Resolving Power: 0.01 Ph. 1MV
- Measuring Range: 0.14 Ph. –1999±1999 MV

Standards:

TAPPI, SCAN, ISO



**Sheet Drying Cylinder
(GEC-P40307)**

Sheet Drying Cylinder is used for drying the lab pulp hand sheets or paper samples as per commercial production in laboratory. The process helps to prevent wrinkling and shrinkage in the dried samples. It also permits convenient and rapid insertion of the sheets.

Specification:

- Drum Diameter: 500 / 800 mm (Manually/ Motorized)
- Drum Width: 600 / 700 mm (Manually/ Motorized)
- Fan Moto: 0.1 HP, Heater Capacity: 2 KW, 220 V AC
- Rotating Speed: 5 R.P.M.
- Working Surface Temperature: 60 °C

Standards:

TAPPI, SCAN, ISO



**Sheet Drying Cabinet
(GEC-P40308)**

Sheet Drying Cabinet is used for faster drying and conditioning the hand sheet after pressing. The hot air passes through the holes in the drying ring to dry and without affecting the surface of the hand sheets. In order to assess the relevant properties of pulp the sheet must dried in the air at same temperature and humidity as applied during the physical test.

Specification:

- Inner Space: 18 nos. drying ring into two stack of nine Inner Chamber
- Temp: Ambient to 850C
- Motor: Single Phase 60 W, 220 V AC
- Heaters: 2 KW, 200V, Single Phase AC
- Accessories: 9 drying rings, 8 drying plates and 1 standard weight

Standards:

TAPPI, SCAN, ISO



**Pulp Disintegrator
(GEC-P40309)**

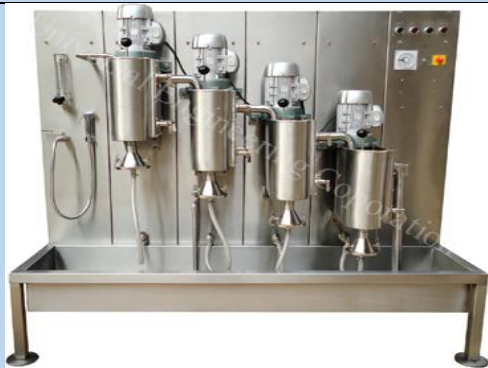
Pulp Disintegrator allows a mechanical treatment of pulp in water so that interlaced fibers which were free in the pulp stock are again separated from one another without appreciably changing their structural properties. It is used for standardized disintegration of pulp to a homogeneous suspension.

Specification:

- Capacity: 2 Liters
- Rotational Frequency (Revolutions): 2975 ± 25 rpm
- Motor: 0.5 KW, 3 Phase, 440V AC
- Safety System: Double Safety System

Standards:

TAPPI T-205, CPPA C.4, ISO 5263, SCAN C18



Fiber Classifier
(GEC-P40310)(BAUER Mc NETT TYPE)

Fiber Classifier is designed for investigating the fiber length distribution in pulp. The Fiber Classifier segregates a fiber sample into groups of different lengths to allow the proportion of each group to be measured, by weight. Uniform operation is assured by a constant flow of water through the stainless steel inlet system.

Specification:

- Flow Speed: 10 / 11.4 liter/min
- Pulp: 10 & 20 g (oven dried)
- Required time for screening: 20 min, RPM: 1400
- Motor: 0.25 HP AC 3 Phase, Air Pressure: 0 - 6 Kg/cm²
- Water Pressure: 11.4 liters per minute
- Interchangeable screens will be given with wire of 16, 30, 50, 100 and 200 standard mesh.

Standards:

TAPPI (T 233), SCAN (M-6)



Wood Chip Classifier
(GEC-P40312)

It is used for rapid, reproducible and accurate classification of wood chips in respect to size and thickness by using standard size screening trays mounted on a shaking mechanism with specified frequency.

Specification:

- Sample size: 8 - 10 liters
- Recommended dry content: 40 - 70%
- Screening time: 10 minutes
- Shaking frequency: 2.7 Hz
- Stroke: 120 mm
- Power Consumption: 1 KW
- Power Supply: 400 V, 50 Hz

Standards:

TAPPI UM 21, SCAN CM 40:88



Laboratory Valley Beater
(GEC-P40313)

Laboratory Valley Beater is used to beat pulp in a uniform, standard and reproducible way to determine the behavior of pulp in laboratory. Beating is a preliminary step to the testing of the physical properties of the pulp.

Specification:

- Beater roll drum speed: 500 rpm
- Width of the bed plate: 159 mm
- Number of bed plate bars: 7 bars, each 3.2 mm thick set in lead 2.4mm apart
- Thickness of fly bar: 4.8 mm

Standards:

ISO 5264/1, TAPPI T200, BS 6094 Part 1, SCANC25



**Pulping Unit –Bomb Digester
(GEC-P40314)**

For faster drying and conditioning the hand sheet after pressing. The hot air passes through the holes in the drying ring to dry and without effecting the surface of the hand sheets.

Specification:

- Heating Chamber: Double Jacked Thermally Insulated Container with easy opening
- Autoclaves: Six in Nos. & capacity 2.5 liter & suitable for 300-350 g bone dry wood rotating in a polyglycol bath
- Heating Elements: 2 Nos. 7.5 Kw each with Thermostat Control
- Temperature Control Range: 50-350°C
- Maximum Working Pressure: 20kg/cm²
- Test Pressure: 20kg/cm²
- Drum Rotation: 2.8 RPM
- Normal Working Temperature: 170°C
- Glycol Volume Required: 90 Liter
- Chemical Recovery: Glycol Recovery System Using Chimney with Cooling Water Recirculation
- Power Supply: 440 Three Phase 15 KW

Standards:

T267-om 85



**Lab Hydrapulper
(GEC-P40315)**

Lab Hydrapulper is used for making pulp, minerals fibers pulp like mica, asbestos etc. It is also used for mechano-chemical pulping.

Specification:

- Container Capacity: 10 / 30 / 50 / 100 Liters
- Consistency : 5% maximum
- Speed: 500 RPM
- Motor: 5 HP 3 phase 440V AC
- Power Supply: 440 V, AC 3 Phase

Standards:

TAPPI, ISO, SCAN



**Flotation Cell/Deinking Cell
(GEC-P40316)**

It is used to study dinking effect of printed recycled paper by floatation method technology. It has Stainless steel container capacity of 10/25 liter with specially designed Aerator with Variable Speed & Digital Revolution Counter. It may be used in conjunction with Laboratory Pulper and Screw Press to conduct extensive testing of recycled fiber system. It is based on Lamort Type Original Kowaleswski Flotation cell method.

Specification:

- Container Capacity: 10/25 Liter Stainless Steel Container with Outlet Valve
- Revolution Counter: 6 Digit Revolution Counter
- Drive: DC Variable Drive
- Power Supply: 220 Single Phase, 50HZ, 200 W

Standards:

TAPPI T272 om-92



**Lab Scale Chipper/Wood Chipper
(GEC-P40317)**

Lab Scale Chipper is used for preparation of chips from wood, bamboo & other similar material for lab & educational purposes. Input tube diameter 80 mm set at an angle of about 50° . Capacity max 500 Kg/h chips. Chipping disc 350 mm diameter, speed 700 rpm.

Specification:

- Quality of chips corresponds closely to that of the factory chips
- Three chipping Knives of special Steel
- Input Tube diameter 80 mm set at an angle of about 50°
- Adjustable Counter cutter
- Quality of chips corresponds closely to that of the factory chips

Standards:

TAPPI ,ISO



**Shieves Analyzer (Somerville Type)
(GEC-P40318)**

A known volume of pulp in aqueous suspension is drained through the screen plate of standard slits to separate fiber and contaminant based on size difference between them. The accept material on the surface of the screen plate may be used for observation or quantification. For determining the shieve content in pulp.

Specification:

- Rectangular Brass Screen Plate : 305 *254 mm
- Screen Slits : Length 45 mm, Width : 0.15 mm \pm 0.05
- Number of Slits : 404 in 4 row
- Rubber Diaphragm actuation: 3.2 \pm 0.1 mm
- Flow Rate : 8.6 litre/min

Standards:

TAPPI 275 sp-12.



**Research Digester
(GEC-P40319)**

Research Digester is a complete pulping unit for producing pulps by cooking wood chips in a manner similar to a commercial digester.

Specification:

Capacity : 20 Liter Capacity

Digester Body : SS 316 Acid Proof Stainless Steel

Temp : 0- 200 $^\circ$ \pm 8 $^\circ$ C PID Type digital Programmable Temperature Indicator cum Controller

Max. Pressure : 20.0 Kg./cm 2

Pump Capacity : 20 Liters/min

Motor: 2 HP, 440 V, 50 c/s

Standards:

TAPPI, ISO, SCAN



LABORATORY BEATER (PFI MILL TYPE) (GEC-P40320)

Laboratory Beater is used in the laboratory for beating of chemical pulps under standardized conditions and also for the defibration of semi-digested raw material fibres. the pulp is taken out of the mill and the °SR value and/or the CSF value is determined.

Specification:

Sample Size : Variable between 5 –40 g. (oven dried pulp)

Sample Consistency : Variable between 5-50%

Beating Pressure : Adjustable 1.0-5.5 N/mm of bar length

Difference in Peripheral speeds between the roll & Bedplate: 6 ± 0.2 mm/s

Power Supply / Power consumption : 440 V, 3 Phase, 50 Hz / 3.0 kW

Electric Motor : With accurate speed control

Standards:

TAPPI T248, ISO 5264/2, SCAN C24, DIN-EN 25264-2



Lab Disc Refiner (GEC-P40321)

Lab Disc Refiner is used for developing pulping processes & strength development studies on raw steamed or semi chemically cooked chips, fully cooked pulp, cooked straw, waste paper and many other materials. The refiner disc are attached with six Allen screw and easily replaceable. It is provided with Grinding disc fitted inside & complete with base, Pulley & water dilution attachment.

Specification:

Refiner Disc Dia : 304 mm in six segment

Speed of Refiner : 1500-3000 rpm

Consistency Range : 3 to 30%

Feeding Arrangement : Manual

Refiner Disc Knives Position : Parallel

Gap Adjustment : 0-20 mm adjustable between disc with a step of 0.025mm

Water Dilution : $\frac{1}{2}$ " copper line fitted at 3 equal distance

Power Supply : From 7.5 KW to 40 KW

Standards:

TAPPI, ISO, SCAN



Wet Web Strength Tester (GEC-P40322)

Wet Web Strength Tester is used for measuring the initial wet web strength and elongation to calculate wet web tensile energy absorption of newsprint strip or pulp intended for other purposes. Wire-covered clamps for 20 mm wide strips

Specification:

Measuring Range : 0-199.999 N

Deformation Speed : 1.5 ± 0.1 mm/s

Clamping Length : 50 & 100 mm

Maximum Stroke : 30 mm

Mechanical Endurance : 100N

Accuracy : $\pm 1\%$ of reading

Standards:

TAPPI, ISO, SCAN



**Box Compression Tester
(GEC-P40401)**

Box Compression Tester is a heavy-duty tester designed to determine the ability of Corrugated or Solid fiber shipping containers to resist external compressive forces during transit & storage.

Specification:

- Capacity: 10 KN (1000 Kgf) to 50 KN (5000 Kgf),
- Test Speed: 5 to 50 mm/min
- Standard Press Platens. Admit between plates: 25mm ~ 1100mm
- Accuracy: $\pm 1\%$ of reading
- Power Supply / Power Requirement: 3 phase, 440 volts, 50 Htz / 1 kW

Standards:

TAPPI T804, ISO 12048, DIN 51221 class 1, ASTM E-4, BS 1610:1985 Grade 0.5
ISO 12048, ASTM D642, ASTM D4169



**Tube/Core/Cone Collapsing Tester
(GEC-P40402)**

Collapsing strength tester is designed in such a manner that gradually increasing force is generated & applied on the surface of carriers. The sharp collapsing point can be easily detected on a dial and a suitable reading can be taken.

Specification:

- Capacity: 1000 Kgf
- Least Count: 9.15
- Accuracy: 2% of full scale
- Test Adopters OD: Upto 100 mm
- Air Pressure: 6 Kg/cm²

Standards:

TAPPI, SCAN, ASTM D 3654



**Concura Medium Flutter
GEC-P40403**

Concura Medium Flutter is used to determine the flat crush resistance/CMT value of a packaging or similar grade of paper.

Specification:

- Flute Type : 'B' Flute Rolls
- Flute Rolls : Two
- Revolutions of Flute Rolls : 4.0 per min
- Force between Rolls : Spring loaded force adjustable to 10 Kgf ± 1
- Number of teeth : 84
- Depth of teeth : 4.75 mm
- Temperature: Adjustable and Thermostatically controlled upto 1800C
- Power Supply : 440 V, 3 Phase 50 Hz

Standards:

ISO 7263, DIN-EN ISO 7263, TAPPI T809, SCAN P27, PAPTAC D29, T 824, ISO 7263, SCAN P42



**Puncture resistance tester
(GEC-P40404)**

Puncture Resistance Tester is designed to measure the energy required to puncture corrugated board and therefore help assess the protective qualities of that board. Resistance to puncture is defined as the energy required to force a puncture head of specific design through a test piece under clearly specified conditions.

Specification:

- Sample Size: 175 * 175 mm
- Clamping Force: Between 25 Kgf – 100 Kgf
- Energy Range / Scale division: Kgf/cm or Nm / Kgf
- Energy Range / Scale division: (0-58.5 / 0.2), (0-200 / 2), (0-400 / 5), (0-800 / 5), (0-1600 / 10)
- Power Supply: 440 V, 3 Phase 50 Hz

Standards:

TAPPI T-803, ISO 3036, SCAN P23 ASTM D-781, DIN 53142



**Ink Rub Resistance Tester
GEC-P40405 (H)**

Rub Tester is professionally designed for the abrasion resistance test of surface coating layers of printed materials, e.g. ink layer or photosensitive (PS) coating. This instrument could effectively analyze the problems of poor abrasion resistance, ink layer falling off and poor hardness of coating layers of printed materials.

Specification:

- No. of discs: Two (2), Test beds diameter: 2" & 4"
- Calibrated pressure weight: ½, 1 & 2 Lbs. / Sq. inch
- Blower: High Speed
- Power Supply: 1 phase, 220 V AC, 50 Hz

Standards:

ASTM D5264



**Rub Proofness (Scuff) Tester
GEC-P40405**

Rub/Scuff Tester measures resistance to rubbing of printed paper or board. It can also be used to measure colour transfer from printed or coated material during rubbing. It evaluates the extent of colour transfer from printed or coated materials due to rubbing - a condition which frequently occurs during the handling and shipment of packaged goods.

Specification:

- No. of discs: Two (2), Test beds diameter: 2" & 4"
- Calibrated pressure weight: ½, 1 & 2 Lbs. / Sq. inch
- Blower: High Speed
- Power Supply: 1 phase, 220 V AC, 50 Hz

Standards:

BS 3110



**Vibration Tester
(GEC-P40406)**

Vibration Tester is carried out to assess the performance of a filled package in terms of its strength or protection that it offers to its contents when subjected to vibration. This test method simulates the transport hazards, to produce an equivalent effect or damage during the test.

Specification:

- Floor Space Requirement: 1200mm x 1500mm (Machine) / 450mm x 450mm (Panel)
- Table Size: 1000 mm x 1000 mm
- Test sample weight: 50 kg (Maximum)
- Railing Guard Height: 300 mm
- Table: Wooden (Laminated)
- Amplitude: Fixed 25 mm
- Frequency: Variable 100 rpm to 400 rpm (1.6 Hz to 666Hz)
- Vibrations: Harmonious : In phase - out of phase (90° & 180°) Random
- Electric Motor: 1 kW, 3 Phase, 750 rpm
- Power Requirement: 1.5 kW 3 Phase+ Neutral

Standards:

TAPPI T-817, ASTM D 999 - 91, IS : 7028 (Part II) - 1973



**Carton Board Creaser
(GEC-P40407)**

Carton Board Creaser is used for testing the reusability of carton board. The relationship between board stiffness and crease recovery (spring back) is an important factor in the performance of cartons. Board stiffness is determined by bending a 50mm (2 in.) length of board through a 150 angle. Crease recovery is determined by holding a formed crease at 90 and measuring the recovery force after 15 seconds.

Specification:

- Board caliper range: 300-1000 Micron (0.012-0.040 inch)
- No. of Channels: 18 creasing channels between 1 –4.06 mm (0.04-0.016 inch)
- Crease Depth: Variable
- Creasing rules: 2PT, 3PT and 4 PT upper chase
- Grooves width: 0.055, 0.075, 0.095 inches
- Width of rules setting: 0.028, 0.042 and 0.056
- Pressing action: Press ram, forward or backward stroke
- Power Requirement: 0.5 kW 1 Phase, 50 Hz

Standards:

BS 6965



**Tape Tensile Tester /Laboratory
Seal/Peel Strength Tester
(GEC-P40408)**

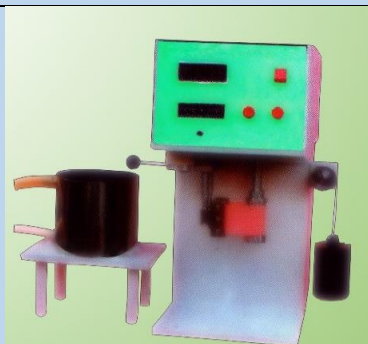
It is a highly specialized quality control instrument specifically developed to evaluate the interfacial adhesion properties of flexible packaging material, coated packaging films and similar materials.

Specification:

- Capacity: 100 Kg
- Least Count: 1 gm
- Test Speed: 100 mm/min / 254 mm/min / 300 mm/min
- Power Requirement: 0.5 kW 1 Phase, 50 Hz

Standards:

TAPPI, SCAN, ISO



**Abrasion Tester
(GEC-P40409)**

Abrasion Tester is designed to determine the wear and durability of paper and board, ceramics, plastic, textile, rubber, flooring, and painted lacquered and electroplated surfaces.

Specification:

- Test Area: 100 cm
- RPM: 70-75 per min
- Type: Twin shaft with two platform
- Abrasive wheel: Dia. 50 mm and 12.75 mm thick
- Counter: Predetermined 6 digit Digital revolution counters
- Dead weight load: 250 & 500 gf

Standards:

TAPPI T476, DIN 53863/1, DIN 53109



**Drop Tester
(GEC-P40410)**

Drop Tester is used to determine the ability of fiber board containers to withstand vertical impact in free drops. The test may be performed as a single test or multiple test to determine and analyses the conditions that occur on a package during handling & transit. It serves as effective equipment for package design and performance analysis before production and use. Essential for quality control and development for consumers of corrugated and solid fiberboard, shipping containers, etc.

Specification:

- Max. Size of the package: 600 x 600 x 600 mm
- Max. Weight of test package: 75 kg
- Drop Heights: 700 – 2000 mm
- Drop heights interval: 75 mm
- Floor Space: 1100 x 880 mm
- Required Height: 2450 mm

Standards:

TAPPI T-802 OS 75, ASTM D 5276 - 92, ISO 2248 method A, IS 7028 (Part VI)



**Crease & Board Stiffness Tester
(GEC-P40411)**

Crease & Board stiffness tester measures board Stiffness and crease recovery. It gives board manufacturers, printers and packing companies the ability to predict the 'run ability' of a sample board or finished carton before committing valuable materials or machine time.

Specification:

- Range: 0-399 gram force
- Display: Digital
- Accuracy: $\pm 2\%$ of reading
- Test Time: 15 seconds
- Power Supply: 220 V AC/50 HZ I Phase

Standards:

BS 6965,3748, ISO 2493, TAPPI T556, DIN 53121, SCAN P29



**Carton Opening Pressure Tester
(GEC-P40412)**

The Carton Opening Pressure Tester, is a bench mounted, electrically operated machine. The machine is designed to measure the opening force of flat stacked cartons. The test determines force per unit width required to open a carton and the percentage deflection at that maximum point. The test is performed using the constant rate of force method.

Specification:

- Travel: - Max. Height 300 mm
- Travel: - Min. Height 25 mm
- Load: - Max. Capacity 5,000 x 1g



**Vacuum Leak Tester
(GEC-P40413)**

Vacuum Leak Tester is designed to comply with International Quality Standards. It ensures a visual check when the integrity of the foiled cups are tested under a vacuum. A defined vacuum is generated in the chamber to measure integrity for the evaluation of the leak-proofness of the foil packaging to assure that the seals are intact.

Specifications:

- Pressure: 0 – 600 mm/Hg
- Least Count: 10mm/Hg
- Size of the desiccators -150 mm, 300mm (Diameter)
- Power 220V AC 50 Hz

Standards:

D4991 - 07(2015), ASTM D3078, F2338 - 09(2013)



**Torque Tester
(GEC-P40414)**

Torque Tester is used to test the opening torque of screwed caps and closures and the breaking strength of pilfer proof (ROPP) caps.

Specification:

- Measuring Range: 50 Kg.cm
- Least count: 0.01 Kg.cm
- Power Supply: 220 V, 1 Phase 50 Hz

Standards:

TAPPI, SCAN, ISO



**Top Load Tester
(GEC-P40415)**

Top Load Tester is used for the measurement of the top load resistance of empty PET bottles and other empty containers. The device measures a container's maximum axial load capacity in Kgf. To perform the test, one PET bottle or other container is placed on the device table and slowly pressed against the upper pressure plate. The upper plate moves down.

Specifications:

- Capacity: 100 kgf
- Test speed: Variable
- Standard pressure platens: 2 parallel (one fixed and one moveable with load cell)
- Admit Between platens: 25mm to 600mm
- Accuracy: $\pm 1\%$ of reading
- Power supply: 220 V, 50HZ, Single phase

Standards:

ASTM D 2412, ASTM D 2659, DIN 55440-1:99



**Melt Flow Indexer-Manual
(GEC-P40416)**

Melt Flow Indexers are used to measure the melt mass-flow rate (MFR), melt volume-flow rate (MVR), as well as Melt density of a wide range of thermoplastic raw materials, polycarbonate, fluoro plastics, as well as polyethylene, polypropylene, ABS, POM etc.

Specifications:

- Temperature accuracy: $\pm 0.1^\circ\text{C}$.
- 100g piston weight to equal ASTM weight requirement
- Temperature range: Up to 400°C . Least count 0.1
- Applied weight: manual
- Main electrical supply: single phase

Standards:

ISO 1133, ASTM D 1238, D 3364, DIN 53735 UNI - 5640 JJB878



**Melt Flow Indexer -Automatic
(GEC-P40417)**

PID based temperature controller with auto-tune facility. It measures the melt characteristics of thermoplastic polymers. Such as melt volume rate and melt density

Specifications:

- Temperature accuracy: $\pm 0.5^\circ\text{C}$.
- Temperature range: up to 400°C ., Timer: Least count 0.1.
- Temperature Digital timer Range up to 999.9 min/ 999.9 sec
- Controller: Range up to 4000°C resolution of 0.10C.
- Specimen Weighing: Automatic up to 60 gm and resolution of 1 mg
- Specimen cutting: Motorized.
- Weights: 1.2 kg, 2.16 kg, 3.8 kg, 5 kg & 21.6 kg weights

Standards:

ASTM D 1238, ISO 1133 and GB/T 3682



**C.O.F TESTER
(GEC-P40418)**

Digital Static and Kinetic Co-efficient of Friction Tester is used to determine the co-efficient of friction of plastic film and sheeting, film to metal and film to glass.

Specification:

- Instrument supply with all the accessories for finds out the COF.
- Maximum travel is up to 300mm with travel resolution 0.01mm with in accuracy of 1% of the full scale.
- Machine load accuracy within 1% of full scale with decimal as well as unit selection facility.
- The speed range from 10 mm to 300mm.
- Machine operates in ideal lab condition or from ambient to 50°C.
- Machine working on screw driven mechanism.
- Machine automatically stops at maximum load value and the same feature also affected for travel.
- Power supply: 230V±10% VAC, 50Hz.

Standards:

ASTM D1894, ASTM D202, ASTM D4918 & DIN 53375



**Izod Charpy Impact Tester
(GEC-P40419)**

The Charpy impact testing holds the sample horizontally with the notch facing away from the pendulum.

Specification:

- Capacity : Up to 25.00 Joules.
- Release angle of pendulum: 150 degree.
- Range of four scales : 0-2.71 Joules, 0-5.42 Joules, 0-10.84 Joules, 0-21.68 Joules and 0-25.00 Joules.
- Minimum resolution on scale : 0.02 Joule, 0.05 Joule, 0.1 Joule, 0.2 Joule and 0.2 Joule respectively.
- Paint : Powder coated.
- Power : 230 Volts, 50 Hz, single phase.
- Direct display through microcontroller : Impact strength in joules/meter and kg-cm/cm.
- **Graphic display and printout through PC** : Impact energy Vs Angular displacement graph and numeric reports consisting of values for impact strength as per ASTM standard, ISO and IS standard in different units could be obtained by attaching a printer to the PC.

Standards:

ASTM D - 256 &, ASTM D 6110, ISO 179 & ISO 180



**Dart Impact Tester
(GEC-P420)**

Dart Impact Tester is used to determine the strength of the packaging material. The instrument consists of a dart placed above the base. It is released on the sample and if it fails to break, new height is determined. It is useful in packaging industry.

Specification:

- A two piece annular specimen clamp having an inside diameter of 127mm.
- Electromagnet withstand 2 Kg. weight.
- Position device is built in two parts. One is for 22cms and 66cms and another is suitable up to 152.4cm

Standards:

ASTM D 1709 BS, DIN, ISO, IS: 2508



**Salt Spray Chamber
(GEC-P40421)**

Salt Spray (Fog) Tester has been designed to assess the ability of rust proofed components to withstand corrosion due to atmospheric conditions.

Specification:

- Temperature Range: Ambient to 45°C
- Temperature Accuracy +/- 2°C
- Temperature Control: Solid State Digital Programmable Temperature Controller cum Indicator with special zero corrosion PT 100 Sensor
- Air Regulator: A moisture cum oil filter and air regulator ranging from 0 to 30 psi is provided.
- Construction: FRP—Fiber Reinforced Plastic

Standards:

ASTM B117, ISO: 3768, JIS Z2371, IS: 6910, IS: 5528, DIN 50 021, IS: 101 pt.5/ sec3/1999.



**Ford Cup
(GEC-P40501)**

Ford Cup is classic testing equipment widely used for the control of the kinematic viscosity of inks, resins, varnishes and any other liquid with Newtonian flow properties. Kinematic viscosity is a measurable physic property form liquids and is caused by the internal friction between infinite microscopic layers present in fluids.

Specification:

- For use in field or laboratory
- Red Anodized handle for easy identification
- ±3% Production Tolerance for cup #3, ±2% Production Tolerance for cup #4, ±3% Production Tolerance for cup #5
- Cup #3 range extends from 29 to 251 centistokes, Cup #4 range extends from 34 to 441 centistokes, Cup #5 range extends from 77 to 1413 centistokes.

Standards:

ASTM 1200 and MB 1117, ANSI/ NCSL Z540-1 or ISO/IEC 17025: 2005, ISO 9001: 2008



**Brookfield Viscometer
(GEC-P40502)**

Brookfield Viscometer is classic testing equipment widely used for the measurement of the viscosity of inks, resins, varnishes and any other liquid with Newtonian flow properties. It is used to predict a material's flow, spray, or pumping behavior by studying shear rate profiles.

Specification:

- Temperature off-set capability to ±5°C
- Senses and displays continuously
- Viscosity (CP or MPa· s), Temperature (°C or °F) (OPTIONAL)
- Torque measurement accuracy: 1% of full scale range
- Repeatability: 0.2% of full scale range
- Choice of 18 rotational speeds

Standards:

TAPPI/ANSI T 230, ASTM D6195-03



**Laboratory Oven
(GEC-P40601)**

Laboratory Oven is used to determine moisture of samples etc. The moisture content of sample or similar material is defined by the loss of weight of a sample, dried under specified conditions to constant weight at a specified temperature and is express as a percentage of the weight of the moist sample.

Specification:

- Inner chamber size: 18" * 18" * 24"/24" * 24" * 36" or as specified
- Temperature range: Ambient to 250°C ± 1° C
- Thermostat accuracy: ± 1 °C
- Heating Elements: Imported KANTHAL wire

Standards:

TAPPI, SCAN, ISO



**Muffle Furnace
(GEC-P40602)**

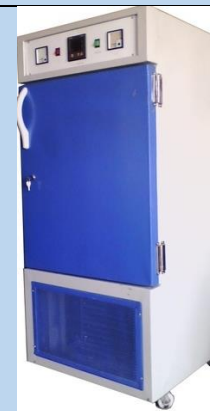
Muffle Furnace is used for incineration of solids. Energy Regulator indicates exact temperature and controls the heat temperature. Complete unit having front panel with two light Indicator, one pyrometer, Thermocouple, Silver Thermal Fuse and one Meter Main load Wire to work on 220- 230 Volts A.C.

Specification:

- Temperature range: Upto 1500°C
- Working Temperature: Upto 1450°C
- Working Chamber size (W * H * D): 4" x 4" x 9"/5"*5"*10"/6"*6"*12"
- Heating Elements: Imported KANTHAL wire.

Standards:

TAPPI, SCAN, ISO



**B.O.D Incubator
(GEC-P40603)**

BOD Incubator is specially recommended to meet the requirement for incubation of Biochemical Oxygen demand on water and sewage. It is used for incubating BOD samples of effluent and others. It is highly suitable for work at temperature below as well as above the ambient.

Specification:

- Temperature range: 5-50°C ± 0.5°C
- Temperature Controller: PID type with digital display
- Accuracy: ± 0.5°C, Sensor: Pt 100
- Cooling: By hermitically sealed compressor
- Air Circulation: Two number forced air fan
- Inner Chamber size: 33" X 20" X 16.5" / 34.5" X 22.5" X 22.5" / 36" X 26" X 23"

Standards:

TAPPI, SCAN, ISO



**Humidity Chamber
(GEC-P40604)**

Humidity Chamber is used for conditioning of the samples before test. It is suitable for conditioning of all type of paper and board before and during testing.

Specification:

- Temperature range: 5-50°C
- Temperature Controller: PID type with digital display
- Accuracy: $\pm 1^\circ\text{C}$
- Sensor: Pt 100
- Humidity range: 40-95%
- Accuracy: $\pm 3\%$
- Inner Chamber size: 18" * 18" * 24" "/24" *24" *36" or as specified
-

Standards:

TAPPI, SCAN P 2, ISO



**PH Meter
(GEC-P40605)**

PH meter is ideal instrument for determination of pH Value of any solution. The measurement range is from 0 to 14 pH with a resolution of 0.01 ph.

Specification:

- Read out : $3\frac{1}{2}$ digits, Resolution : pH: 0.01 MV
- Measuring Range : pH: 0-14 pH MV: ± 1999
- Accuracy: pH: $\pm 0.01\text{pH mV}$: $\pm 1\text{mV}$ Compensation
- Auto : 0 to 100°C, Manual: 0 to 100°C
- Input Impedance : $> 10^{13}$ ohms, Slope Control : 80 to 120%
- Recorder Output : 0 to 10mV/pH 10mV/100mAdjustable
- Sensor : Combined pH electrode

Standards:

SCAN P 15



**TDS Meter
(GEC-P40606)**

Digital Total Dissolve Solid (TDS) Meter is reliable and accurate test instrument for measurement of TDS of aqueous solutions. It measures Conductivity in five ranges. The resolution is 0.1 ppm respectively, in the lowest range. The cell constant is flashed on a digital display & can be adjusted from the front panel. The instruments have the "Check" facility to calibrate the instruments.

Specification:

- Display: $3\frac{1}{2}$ Digit LED
- Measurement: TDS
- Ranges: 0 to 200 ppm, 0 to 2.000 ppt, 0 to 20.00 ppt, 0 to 200.00 ppt, 0 to 1000 ppt
- Accuracy: $\pm 2\%$ FS ± 1 Digit
- Temp. Compensation: Manual: 0 to 50°C
- Cell Constant: Adjustable on Digital Display
- Measuring Cell: Platinum DIP Type
- Resolution: 0.1 ppm, Sensor: T.D.S. Cell

Standards:

TAPPI, SCAN, ISO



**Auto Thermo Bomb Calorimeter
(GEC-P40607)**

Bomb Calorimeter provides a simple and inexpensive method for determination of heat of combustion of organic matter and the calorific value & Sulphur content of solid & liquid fuel. All parts of the outfit have been finished and tested according to the specification laid down by Institute of petroleum and British Standard Institute.

Specification:

- Power supply: 220 V AC
- Frequency: 50 Hz
- Power input: < 1.5 Kw
- System structure: Automated
- Standardization based on:
- Analysis of 1 gm of benzoic acid
- Temperature Measuring Resolution: 0.0001°C
- Precision (RSD %): 0.1
- Analysis Time: (Precision mode) 7- 20 Min
- (Predictive mode) 8 Min

Standards:

FTT EN ISO 1716, TAPPI 41, 669, T
146 TAPPI T12 TAPPI T606 ASTM D2800 EIA
JED24



**Conductivity Meter
(GEC-P40608)**

Digital Conductivity Meter is reliable and accurate test instruments for measurement of conductivity of aqueous solutions. They measure Conductivity in five ranges. The resolution is 0.1 $\mu\text{S/cm}$ respectively, in the lowest range.

Specification:

- Display: 3½ Digit LED, Resolution: 0.1 $\mu\text{S/cm}$
- Measuring Range: 0 to 200 $\mu\text{S/cm}$ / 0 to 2 MS/cm / 0 to 20 MS/cm / 0 to 200 MS/cm / 0 to 1000 MS/cm
- Accuracy: $\pm 1\%$ FS ± 1 Digit
- Temp. Compensation: Auto: 0 to 50°C, Manual: 0 to 50°C
- Cell Constant: Adjustable on Digital Display
- Measuring Cell: Platinum DIP Type
- Sensor: Conductivity Cell
- Power Supply: 220/230 V single phase AC, 50 Hz
- Power Consumption: 50 W

Standards:

TAPPI, SCAN, ISO



**AUTOCLAVE
(GEC-P40609)**

Features:

- High quality materials
- Easy to clean
- Corrosion proof

Specification:

- Application: Laboratory
- Chamber Volume: 5 - 15 L
- Shape: Vertical
- Material: Stainless Steel
- Automation Grade: Semi Automatic, Fully Automatic
- Mount Type: Table Top Autoclave



**Turbidity Meter
(GEC-P40610)**

Turbidity Meter is used for measuring ambient turbidity ranging from 0 to 1000 NTU. An imported versatile sensor is used together with digital circuitry to measure & displaying it on to the 3½ digit LEDS.

Specification:

- Read out : 3½ digits
- Detector : Photocell / Photodiode
- Measuring Range : 0 to 1000 NTU
- Resolution : 1 NTU
- Accuracy: $\pm 3\%$ FS ± 1 digit
- Sample System : 30 mm Clear Glass Test
- Light Source : 6V Tungsten Lamp
- Power Supply : 220/230 V single phase AC, 50 Hz
- Power Consumption : 50 W

Standards:

TAPPI, SCAN, ISO



**COD DIGESTOR
(GEC-P40611)**

COD Digester is the most accepted Thermo reactor for Determination of Chemical Oxygen Demand in Various Substances. Chemical Oxygen Demand (COD) is a Measure of the Capacity of Water to Consume Oxygen during the Decomposition of Organic Matter and the Oxidation of Inorganic Chemicals such as Ammonia and Nitrite.

Specification:

- Provision for 15 samples
- Fitted with a digital Micro Processor PID Controller having a timer for 2 hours and also a buzzer
- Supplied with 15 nos. glass reaction vessels
- Fitted with 15 nos. air condensers
- Supplied complete with a stand which can accommodate 15 vessels



**Digital Dissolved Oxygen Meter
(GEC-P40612)**

Dissolved Oxygen Meter for Laboratories Features: Extended range up to 300%. Extended altitude compensation to 4000m, extended salinity compensation to 40 g/L. Automatic calibration in air PC compatible Data logging and storage of up to 8000 samples.

Specification:

- Range: (DO) 0.00 to 4 5.00 ppm (mg/L), (%Saturation O₂) 0.0 to 300.0%, (Temp) 0.0 to 50.0°C
- Resolution: (DO) 0.01 ppm (mg/L), (%Saturation O₂) 0.1%, (Temp) 0.1°C
- Accuracy (@20°C/68°F): (DO) $\pm 1.5\%$ F.S., (@20°C/68°F): (%Saturation O₂) $\pm 1.5\%$ F.S., (@20°C/68°F): (Temp) $\pm 0.5^\circ\text{C}$
- Environment: 0 to 50°C; RH 95%
- PC Connection: RS232 serial port (opto-isolated)
- Temperature Compensation: automatic, 0.0 to 50.0°C
- DO Calibration: automatic, 1 or 2 points at 0%(with HI 7040 solution) and 100%(in air)

Standards:

SCAN P 15



**Dehumidifier
(GEC-P40613)**

Industrial dehumidifiers control relative humidity and dew point in many industrial applications, from waste and fresh water treatment plants, archive storage facilities, indoor grow rooms and many more where the control of moisture is crucial.

Specification:

- Capacity: 2.0 Ton X 3 No
- Humidity Control: Digital Display Humidity Controller
- Room Requirement: 35-40 %
- Room Area: 2000 cu/ft.
- Type: Water Condensing Type, Vertical Model
- Compressor: Hermetically Sealed Compressor To Operate On 230 Volts A.C. +/- 5% .50 Hertz, +/- 2% , Single Phase
- Power Required: 230 Volts, Single Phase Ac Supply.

Standard:

IS:7098 , IEC 811-2-1



**Moisture Analyzer
(GEC-P40614)**

Moisture analyzer moisture balances incorporate rapid halogen heating with EMFC precision weighing technology to determine moisture content of sample quickly and effectively.

Specification:

- Capacity: 50 gm., Least count: 0.001 gm.
- Pan size: 100 mm.
- Moisture content accuracy: 0.1% for sample above 5g, 0.5% for sample below 5g.
- Resolution: 0.1%
- Moisture measurement: unit- % wet base, % dry base dry weight, % dry to wet weight
- Moisture range: 0.05% to 100%, Power supply: 90-250V, 50/60Hz, 550Watt.
- Operating temperature: 15-45°C

Standards:

TAPPI 550, ISO 287, ASTM D 6980



**Color Matching Cabinet
(GEC-P40615)**

Color Matching Cabinet Spectrum is highly recommended for laboratories and industries where it is important to maintain color consistency and quality. The equipment provides a standardized environment for evaluation and visual assessment of color. Fitted with Electronics Chokes for instant illumination.

Specification:

- D65 – Artificial daylight – 2 Nos.
- INC AA – Incandescent Light – 4Nos.
- TL 84 Light – Point Scale – 1No.
- UVB Light - Ultra Violet – 1 No.
- CWF Light –Cool White Florescent – 1No.
- UL 30 Light – Ultra Loom 30 – 1 No.
- Angle of viewing booth – 45 degree
- Viewing Booth Material – Wood or Steel
- Time Totalizer – upto 99999.9 hours

Standards:

ISO 3664, BS 950, ASTM D 1729, DIN 6173



**Water Bath
(GEC-P40616)**

Our microprocessor-controlled Thermos Scientific water baths provide superior temperature uniformity for your specific applications and offer unique features such as a seamless-stainless steel interior chamber and epoxy-coated exterior which make them resistant to corrosion and chemical damage.

Specification:

- Temperature Range: Ambient to 100°C
- Flow rate steps: 2
- Max. Pressure: 300 mbar
- Pump type: Pressure type
- Heating Capacity: 2kW
- Temperature stability: 0.02°C
- Bath Capacity in liters: 8-15 L
- Temperature display selection feature in °C/°F/K.

Standards:

TAPPI T 441 om-13



**Round Hot Plate
(GEC-P40617-A)**



**Rectangular Hot Plate
(GEC-P40617-B)**

Hot Plate

Hot Plate is used with Energy Regulator to accomplish various tasks & various

Specification:

Round Hot Plate (GEC-P40318-A)			Rectangular Hot Plate (GEC-P40318-B)		
Model	HP: 8"	HP: 12"	Model	HP: 10* 12"	HP: 10*18 "
Size of Hot Plate	20c m dia.	30c m dia.	Size of Hot Plate	25 x 30 cm.	30 x 45 cm.
Temp eratur e Contr ol	Ener gy Regu lator	Ener gy Regu lator	Tempe rature Contro l	Ene rgy Regu lator	Energ y Regula tor
Insula tion	Glas s wool	Glas s wool	Insulat ion	Glas s wool	Glass wool
Input Power	1 kW	1.5 kW	Input Power	1.2 kW	

Standards:

TAPPI T 218, T 428,



**Vacuum Pump
(GEC-P40618)**

Vacuum Pump is of oil immersed rotary van type, where not only complete assembly immersed in oil but shaft seal is also designed in such a way that it totally eliminates possibility of suction of air through it. It is designed to achieve maximum vacuum in a very short time.

Specification:

- Drive: Direct drive with 10-15 HP motor having IP55 protection
- Displacement: 250 m³ h⁻¹ at 50 Hz (minimum)
- Power requirements: 440V, 3 Phase, 50 Hz AC
- Ultimate vacuum: 1.0 x 10⁻³ mbar / 7.7 x 10⁻⁴ Torre (without gas ballast) or better, Noise Level: ≤ 75 dB
- Outlet connection: ISO40 flange center tapped
- Inlet connection: ISO63 blank flange with seal.

Standards:

ISO 3529/2



**Dennison Standard Test Wax Sticks Kit
(GEC-P40701)**

Dennison Standard Wax Sticks are used for determining resistance to surface pick of paper and board. Dennison paper testing waxes are designed for use by paper and coated manufacturers, printer, lithographers and other concerned with the development, inspection and control of paper for coating and printing paper.

Specification:

- A Dennison wax sticks contains one stick of each wax type as listed (2A, 3A, 4A, 5A, 6A, 7A, 8A, 9A, 10A, 11A, 12A, 13A, 14A, 16A, 18A, 20A, 23A) plus an extra 8A, 18 supplied in total in wooden box packaging.
- Area of one wax sticks is 18*18mm.
- Wax sticks no. (2A, 3A, 4A, 5A, 6A, 7A, 8A, 9A, 10A, 11A, 12A, 13A, 14A, 16A, 18A, 20A, 23A) are available in a corrugated box packaging of 8 sticks of any one number.

Standards:

TAPPI T459



**Lab bar Coater/ K Control Coater
(GEC-P40702)**

Lab Bar Coater or K control coater is designed for the application of paints, varnishes, adhesives, liquid printing inks and many other coatings which require sampling under accurately controlled conditions. Special purpose beds, such as vacuum, magnetic and heated can easily be added to the basic unit to provide flexibility in your testing.

Specification:

- Coated rod: 7 no's
- Coated Area : 27 X 15 cm (standard)
- Coating speed: infinitely variable between 2 and 15 mm/min
- Coating thickness range: 4-40 micron
- Coating Pressure : Controlled
- Power supply: 220 V, 1 Phase, 50 Hz

Standards:

TAPPI, SCAN, K101, ISO, K202



**Lab Air Knife Coater
(GEC-P40703)**

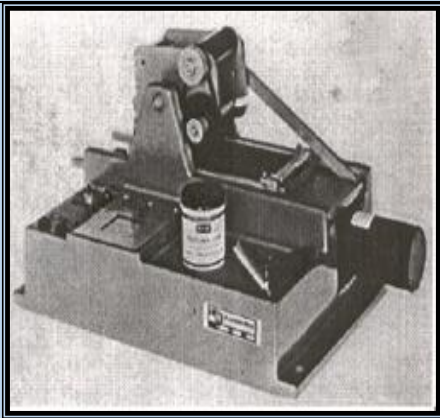
Lab Air Knife Coater is designed for uniform coating of the coating medium on to the test specimen. It is intended to coat the sample sheet materials in 10"X12" size. It is suitable for coating latex, ink, lacquer and plastic dispersion etc. it is an important aid in screening work, when papers pigment, coating and plastic dispersions are tested in lab. The coater consists of welded square shaped frame. Frame consists of a transformer, blower with a manometer.

Specification

- Sheet Material size for coating: 10" X 12"
- Water Pressure: 8-800 mm
- Power Supply: 220V, 1- Phase, 50 Hz

Standards:

TAPPI, SCAN, ISO



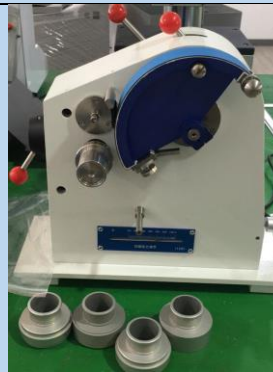
**K & N INK TESTER
(GEC-P40704)**

This tester is used for determining the capacity of paper and board for absorbing Printing Ink. The percentage change in the reflectance value of the K & N Ink. The time for penetration and drying and the pressure, speed and material have been determined in the method for the K & N Tester, thus ensuring a high level of accuracy and reproducibility.

The K & N tester can also be used for determine the drying time of printing ink, the penetration depth of printing inks by means of repeated abrasion, the resistance of the paper to abrasion, the resistance of the paper to abrasion.

Standards:

Scan-P 70:95, ISO 187, ISO 2471 & ISO 2469



**Printability Tester
(GEC-P40705)**

Printability Tester is designed to determine the accurate simulation of offset letter press printing, flexor and gravure printing on laboratory scale. The unit tests the paper surface strength abrasion and dry pick. It is used for laboratory testing of paper and ink in stimulate actual condition as in printing. Printability Tester is used for making numerous tests on different substrates and inks in quality control and research.

Specification

- Printing speed: Constant 0.2 – 5 m/s / increasing 0.5 – 7 m/s
- Printing force: 0 – 1000 N (Adjustable)
- Interval timer: adjustable between 0.014 to 10 sec
- Power supply: 440 V, 3 Phase, 50 Hz

Standards:

TAPPI T-514, ISO 3783



**Laboratory Calendar
(GEC-P40706)**

Laboratory calendar is designed to perform calendar experiments and trial in laboratory environment. The laboratory calendar uses a stack of 3-300mm wide parallel rolls to produce calendared samples for evaluation in the laboratory.

Specification:

- Roller stack: Three (3)
- Machined face width: 300 mm
- Advance speed: 100 mm/sec.
- Feed speed: 100 mm/sec.
- Nip Pressure: Adjustable line pressure with a range of 0-100 kg per linear cm
- Step distance: 0-99 cm (± 0.5 cm)

Standards:

TAPPI, SCAN, ISO



Consistency Control Loop (GEC-P40801)

Micro controller based Consistency Transmitter is based on shear force principal. It is used to control pulp Consistency at wet end to maintain GSM of paper

Specification:

- Consistency range: 0.9% to 6.1%
- Repeatability: 0.25% of reading
- Span: 100g to 2000g
- With automatic temperature controlled compensation
- Processing Temperature: 4° to 60°C
- Input signal: 4-20mA
- Output signal: 4-20mA
- Power supply: 220 V AC

Standard:

TAPPI 240 om-88



Digital GSM Valve Controller (GEC-P40802)

Microprocessor based Motorized Basis weight valve / GSM control valve helps us to control Grammage with time saving to maintain GSM & grade changes in duly manufacturing of paper.

Specification:

- Display: 0-100%
- Input signal: 4-20mA
- Least count: 0.1
- Output: 4-20mA
- Power supply: 220V AC
- Feedback input: 1-5 volt

Standards:

EN 50081 - 1 : 1993 referent standard EN 55022 : 1987



STEAM VALVE CONTROLLER (GEC-P40803)

Segmented ball valve is a ball sector valve with metal to metal or metal to PTFE seating. The segmented ball valve combines the best control characteristics of the ball valve and the butterfly valve.

Specification:

- SIZES: 25mm to 200mm
- Working pressure: upto 10bar
- Steps: 1,000
- Gear Ratio: 1:400



**Motorised Basis Weight Valve with Controller
(GEC-P40804)**

Microprocessor based Motorized Basis weight valve / GSM control valve helps us to control Grammage with time saving to maintain GSM & grade changes in duly manufacturing of paper.

Specification:

Valve body:

- Type of construction: "V" Notch
- Size: 80mm to 200 mm
- Body material: SS 316
- Actuator: aluminum/ Brass/ SS/ cast iron
- Resolution Step: 50,000
- Output torque: 200Nm – 500Nm
- Gear ratio: 1-150(min) 1-500(max)
- Motor supply: 220 V/ 50Hz

Valve controller:

- Display: 0-100%
- Input signal: Pulses /4-20mA
- Pulse width: 5 per milli sec
- Least count: 0.1
- Output accuracy: 0.015%
- Power supply: 220 VAC
- Drive out: 220 VAC



**AUTOGUIDE
(GEC-P40805)**

Felt & Wire-Guides are designed to keep the felt fabric unning properly in the center of the roll over which it travels.pivotine one end of the guide roll in the proper direction corrects the fabric run. This guiding movement is based upon the principal that the fabric will always leave the guide roll perpendicular to its rotational axis.

Features:

- All auto guides are custom designed to match specific bearing housing arrangement.
- Low air consumption & maintenance free operation.
- Minimum fraction time results in accurate tracking.
- Returns to center position in the event of air supply failure. Exhibits high guiding power.
- Suitable for machine speed upto 700 MPM
- Imported bellows ensures performance reliability.
- Can be installed horizontally or vertically and also at an inclination of 45°.
- No air seal presents to ensure long service life.
- Can be used in wet or dry location.
- Very smooth running



**PALM SENSOR ASSEMBLY
(GEC-P40806)**

Palm Sensor Assembly is designed to control the airflow by adding or bleeding air to and from the guide. The movement of Felt-Wire guide is activated by pneumaticcontrol valve with a sensor paddle. The control valve controls the air volume within the air bellows of a pneumatic piston guide. We recommend the following:

Wire section: stainless steel with Ceramic inserts.

Press Section: stainless steel

Dryer Section: stainless steel

Features:

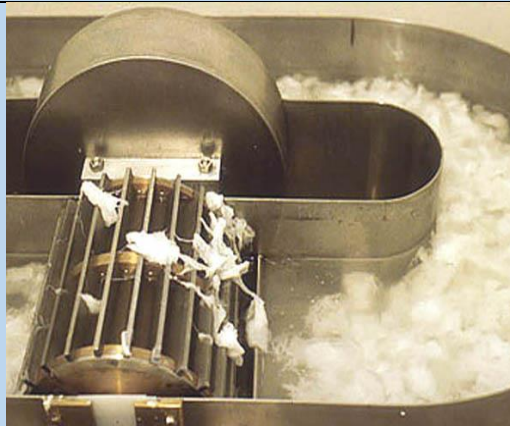
- Suitable for machine speed upto 700 MPM
- Made in Stainless Steel to avoid corrosion.
- Designed to operate pneumatically.
- Minimum fraction time results in accurate tracking.
- Low air consumption & maintenance free operation.
- Exhibits high guiding power.
- It allows a larger wrap angle and gives more design freedom.
- Highly sensitive control valve.
- Travel or movement can be designed as per customer requirements.
- No air seal presents to ensure long service life.
- Can be used in wet or dry location.
- Easy installation and economic in cost.



AUTO VAT/ HAND SHEET FORMER (GEC-P40901)

Auto vat is used for quick preparation of Hand Made Pulp Sheets. The Deckle with frame is submerged in the water filled tank, through a mechanism connected with the foot paddle to form the pulp sheets on the frame fitted with a mesh screen. After forming the pulp sheet, the Deckle is lifted using foot paddle and the frame containing the pulp sheet is removed. The sheet is then transferred to the Muslin Cloth for De-Watering & Uniform Pressing.

- PROVIDED WITH WOODEN FRAME &
- MESH SET (Size: 22"x30")



Hollander Beater (GEC-P40902)

Hollander Beater is used for uniform treatment of pulp under standard condition for producing the pulp as per commercial production. A beater beats and crushes raw material, bruising and driving water inside the fibers and creating thread-like hairs called fibrils, which are still attached to the fiber.

Specification

- Beater roll drum speed: 300 rpm
- Roll: 8" x 8" (20 cm x 20 cm) as per capacity
- Motor: 3/4 HP 50 cycle as per capacity
- Power Supply: 440 V, AC 3 Phase, 5 HP

Standards:

TAPPI T200, ISO 5264/1, SCANC25



Paper Calendar Machine (GEC-P40903)

This modern Calendar Machine is widely used for calendaring the wrinkles of the papers that are caused due to sundry on wet papers. This is designed for removing the paper wrinkles effectively and makes the paper smooth. It can easily work on 10 to 12 sheets at one time.

Size	14" x 40"
Main Body	12mm thick plate of M.S
Rolls	2 nos. chilled casted rolls 14" ϕ x 40" Face length with BRONZE bush.
Lowering & Lifting	The lowering & lifting arrangement with hand wheel & screw.
Gears	2 spur gears as well as 1 pinion.
Reduction gear box	Suitable ratio for attaining 10-12 RPM
Electric motor	7.5 HP Electric Motor x 1440 RPM.

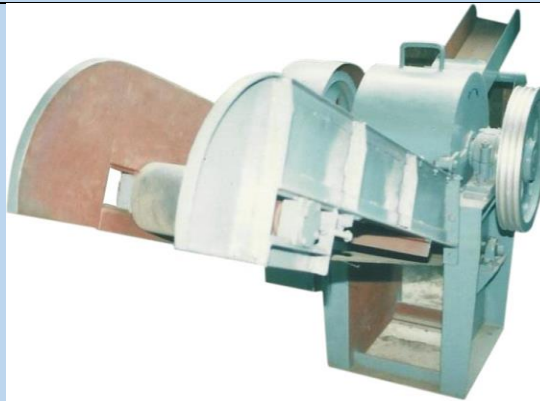


**Manual Screw Press (26"x34")
(GEC-P40904)**

Specifications

- Product Type: Screw Press
- Height: 4750 Millimeter (mm)
- Length: 294 Inch (in)
- Color: Sky Blue
- Voltage: 380 Volt (v)

Centre Screw	4" Dia of 2 T.P.I. Square with thrust bearing
Control	With the help of screw
Material of Plate	Mild steel
Side Supporting Rods	4 Nos. of 50mm Dia M.S. Rod
Plate Size	40" x 42" x 20mm thick (Top & Bottom)









**Rag Chopper
(GEC-P40905)**

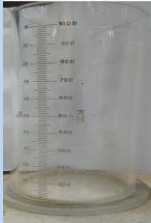




The Machine is used to cut the Rags into small pieces up to ½ x1 length and the Machine is suitable for cutting the Rags PARTICULARS OF RAGS CHOPPER ARE AS UNDER:- BODY: M.S. Fabricated Body ROTOR: Fabricated Rotor suitable for the Knife. M.S. Shaft fitted with bearing and Plumber Block. M. S. ROLL: Drive Rolls and Discharge Conveyor. PULLEY: The Pulley contains V- Section belt drive & other place Flywheel is fitted








**Semi-Automatic Cutting Mac Size 32
inch
(GEC-P40906)**

Automatic Grade	Semi-Automatic
Phase	Single Phase
Voltage(Volt)	220 V
Oil Tank Capacity	40 Ltr.
Warranty	1 Year
Electric Motor	2 hp (single or Three Phase)
Weight of Machine	400 kg. Approx.
Minimum Order Quantity	1 Unit

Diaphragms For Board Bursting Strength Tester	
Diaphragms For Paper Bursting Strength Tester	
Standard Hydraulic Fluid For Bursting Strength Tester	
Aluminum Test Foils For Burst Tester	
Blotting Paper	
C Spanner	

MEASRING CYLINDER	
Bursting SS Pressure Gauges	
SS Template(100 X100)MM With Embossing	
SS Template(20 X25)MM With Embossing	
WAX STICK	

TEMPLATE FOR RUBB TESTER	
Brookfield Viscosity Standard Fluid	
K & N INKS	
Standard Hydraulic Fluid FOR SPS TESTER	
RUBBER FOR COBB TESTER	



GLOBAL ENGINEERING CORPORATION

PROCESS CONTROL EQUIPMENTS & QUALITY CONTROL

EQUIPMENTS FOR



PULP, PAPER, TISSUE, PACKAGING, PRINTING, PLASTIC & CONVERTING ETC. WITH

AMC, SERVICING, REPAIRING, CALIBRATION & CERTIFICATION OF ANY MAKE EQUIPMENTS WITH SPARES REQUIRED

VISIT US : WWW.GECPAPER.COM & WWW.GLOBALENGINEERINGCORPORATION.CO.IN



HEAD OFFICE:

Sankalp Tower,
Office 16, First Floor Plot No. 8,
Near Queens Road Turn, Khatipura Road, Vaishali
Nagar,
Jaipur - 302012, Rajasthan, India
Telephone: +91-141-2240290
Mobile: +91-9351434720
E-mail: sales@gecpaper.com
service@gecpaper.com

FACTORY ADDRESS:

A) H-166, Road No. 9, RIICO Industrial Area
Bindayaka, Near Fire Station Jaipur-302012
Rajasthan
MB: 7073325552

B) 10, Monika Tower, Chandan Park,
Bhayander (East), Mumbai-401105

C) KH No. 1103/2M & 1104/1MM
Gram Salampur, Rajputana Pargana,
Bhagwanpur, Teh. Roorkee-247667,
Dist. Haridwar (U.K)