

## **LIST OF TESTING AND PACKAGING EQUIPMENT'S REQUIRED FOR A LAB**

### **1). A. Bursting Strength Tester: (Economy)**

For testing bursting strength of corrugated board, duplex board, & aluminium foil. The machine is completely covered in Mild steel , powder coated cover, with 2 gauges, one for low pressure and high accuracy 1 kg/cm<sup>2</sup> to 14 kg/cm<sup>2</sup> (least count 0.1 kg/cm<sup>2</sup> for checking of craft paper, and thin aluminium foil less than 5micron), and one for high pressure, with capability of reading from 1 kg/cm<sup>2</sup> to 40 kg/cm<sup>2</sup>(least count 0.5 kg/cm<sup>2</sup> for checking of duplex board & corrugated board up to 7 ply and thin aluminium foil up to 10 micron). The machine has a 'illuminated ON/OFF switch, a push button switch to pressurize the test area for bursting the sample. When the test is done on releasing the test button the burst area automatically gets depressurized.



### **B). Bursting Strength Tester: (Standard)**

For testing bursting strength of corrugated board, duplex board, & aluminium foil. The machine is completely covered in Mild steel , powder coated cover, with 2 gauges, one for low pressure and high accuracy 1 kg/cm<sup>2</sup> to 14 kg/cm<sup>2</sup> (least count 0.1 kg/cm<sup>2</sup> for checking of craft paper, and thin aluminium foil less than 5micron), and one for high pressure, with capability of reading from 1 kg/cm<sup>2</sup> to 40 kg/cm<sup>2</sup>(least count 0.5 kg/cm<sup>2</sup> for checking of duplex board & corrugated board up to 7 ply and thin aluminium foil up to 10 micron). The machine has a 'illuminated ON/OFF switch, a push button switch to pressurize the test area for bursting the sample. When the test is done on releasing the test button the burst area automatically gets depressurized.



## **C). Bursting Strength Tester: (Deluxe)**

For testing bursting strength of corrugated board, duplex board, & aluminium foil. The machine is completely covered in stainless steel buffed cover, with 2 gauges, one for low pressure and high accuracy 1 kg/cm<sup>2</sup> to 14 kg/cm<sup>2</sup> (least count 0.1 kg/cm<sup>2</sup> for checking of craft paper, and thin aluminium foil less than 5micron), and one for high pressure, with capability of reading from 1 kg/cm<sup>2</sup> to 40 kg/cm<sup>2</sup>(least count 0.5 kg/cm<sup>2</sup> for checking of duplex board & corrugated board up to 7 ply and thin aluminium foil up to 10 micron). The machine has a 'illuminated ON/OFF switch, a push button switch to pressurize the test area for bursting the sample. When the test is done on releasing the test button the burst area automatically gets depressurized.



## **D). Bursting Strength Tester: (Pneumatic Digital)**

Bursting strength tester, for testing bursting strength of craft paper, corrugated board, duplex board, and aluminium foil up to 15micron. Completely covered in stainless steel. Microprocessor based, with digital L.E.D. display. With auto peak hold, and also with inbuilt pressure transducer with an accuracy of 0.1 kg/cm<sup>2</sup> and a maximum pressure reading of 50 kg/cm<sup>2</sup>. The machine has a 'pressurize' indicator, a power indicator, a push button switch, and a master switch for safety. The test sample is clamped in the test area by an automatically operated pneumatic cylinder. (RS 232 port optional if required @ extra charge).



## **E). Bursting Strength Tester: (Digital)**

Bursting strength tester, for testing bursting strength of craft paper, corrugated board, duplex board, and aluminium foil up to 15micron. Completely covered in stainless steel. Microprocessor based, with HMI and PLC With auto peak hold, and also with inbuilt pressure transducer with an accuracy of 0.1 kg/cm<sup>2</sup> and a maximum pressure reading of 50 kg/cm<sup>2</sup>. The machine has a 'pressurize' indicator, a power indicator on the HMI display, a push button switch, and a master switch for safety. The test sample is clamped in the test area by an automatically operated pneumatic clamping device. With SCADA output.



## **2). A. Rub Resistance / Rub Proofness Tester :(Economy)**

With digital indicator counter to counter number of rubs elapsed. Also provided are 3 Mild Steel and Hard Chrome Plated weights of ½, 1 and 2 p.s.i, respectively. With low hp Synchronous Motor.

The machine will be constructed of Mild Steel Powder coated.



## **B). Rub Resistance / Rub Proofness Tester: (Standard)**

With analogue revolution counter to count number of rubs elapsed. Also provided are 3 stainless steel weights of ½, 1 and 2 p.s.i, respectively.

The machine will be constructed of mild steel powder coated. A wooden box Stand is provided under the machine for the said above weights to be placed in. a soft cover for the machine is also provided.



## **C). Rub Resistance / Rub Proofness Tester: (Deluxe)**

With analogue revolution counter to count number of rubs elapsed. Also provided are 3 stainless steel weights of ½, 1 and 2 p.s.i, respectively. The machine construction is complete stainless steel body, buffed.

A wooden box stand is provided under the machine for the said above weights to be placed in. a soft cover for the machine is also provided.



## **D). Rub Resistance / Rub Proofness Tester: (Digital)**

With digital presentable counter (999 rubs), with 'set' and 'reset' buttons to allow the machine to run for the desired preset number of rubs. Also provided are 3 stainless steel weights of ½, 1 and 2 p.s.i, respectively.

The machine construction is complete stainless steel body, buffed. A wooden box stand is provided under the machine for the said above weights to be placed in. A soft cover for the machine is also provided.



## **3. A). Bond Strength Tester/ Peel Tester (Analogue):**

Peel tester for measuring the peeling strength of materials like laminates and laminated sheets. The machine will consist of an analogue dial indicator to measure the peel/ bond strength in grams, with a minimum reading of 10 grams. & maximum 1Kg. The indicator also has a peak pointer, to indicate the peak value generated during the test. The machine consists of a fixed-speed motor, with clamps, to pull the sample. The machine works on 230volts a.c. (normal three pin plug), 5 amps.



## **B). Bond Strength Tester/ Peel Tester (Digital):**

Peel tester for measuring the peeling strength of materials like laminates and laminated sheets. The machine will consist of a load cell and digital indicator with peak hold button on the indicator to measure the peel/ bond strength in grams, with a minimum reading of 2 grams up to 3Kgs. The peak hold button on the indicator when pressed before the test, indicates the peak value generated during the test. The machine consists of a fixed-speed motor, with clamps, to pull the sample. The machine works on 230 volts a.c. (normal three pin plug), 5 amps.



## **4. Tube Bursting Strength Tester:**

With wooden body  
Sound deflection safety switch, 3 adaptors as per your thread size.  
2-digit preset timer.



## **5). Tube Bursting Strength Tester (Digital)**

Pressure Indicator.

Sensor Indicator.

Pneumatic Clamping Switch (On/Off).

Three Digits Preset table Timer.

LP Pressure Regulator.

HP Pressure Regulator.

Flow Controller (Needle Valve) (2 Nos.). Direction Controller Solenoid (2 Nos.).

NRV With 'T' (2 Nos.).

Final Electrical Solenoid Valve.

Mini Rota meter With Needle Valve.

Tube Sample Holding Threaded Headers (4 Nos.). Sponge Sheet (For Sound Dampening).

Tube end clamping jig.

Safety Switch & Circuitry.

Body Fabrication in Aluminium & Polycarbonate Sheet Covering. P. U. Coil Pipe.

Pneumatic Fitting with Hoses.

Double Acting Pneumatic Cylinder

Actuator with Electrical Solenoids.

Three Position Switch with 2 Nos. Contacts.

Two Position Switch.



## **6). A. Digital Cohesion Value Meter (C. V. Meter)**

- Calibrated top and bottom discs of stainless steel 316, removable for washing purpose.
- Lower shaft of Teflon, in a stainless steel guide, with a spring loaded disengagement lever.
- Geared motor of constant r.p.m. to move lower shaft.
- Digital load cell, with overload protectors.

Digital indicator with l.e.d digit display, to indicate C.V. in gms. With auto peak hold of up to 2 kgs, and accuracy of 2 Gms



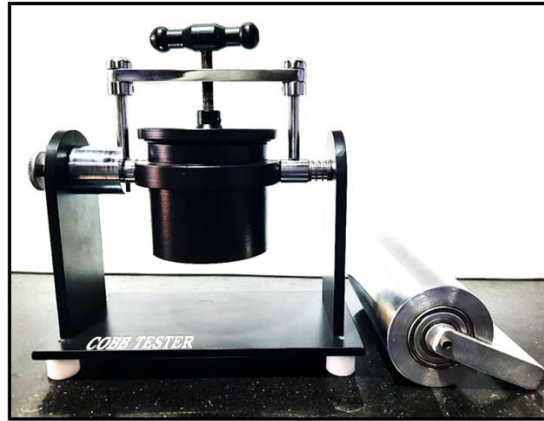
## **B. Analog Cohesion Value Meter (C. V. Meter):•**

Analog Load Indicator Range: 1 kg. And accuracy of  $\pm 20$  gm.,  
L.C:  $\pm 5$  gm. MOC: M.S Powder coated.



## **7). COBB Tester**

with Roller Cobb tester for testing the moisture absorbency of papers and boards (tilt able type) with a roller weighing 10 kg. The complete machine will be powder coated and the roller diameter will be plated.



## **8). Ink Proofing Kit:**

For checking ink.



## **9). Dyne Value Pen:**

30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48, 50, 52, 54, 56



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## **10). Hot Air Oven:**

With an internal sizes of 12" x 12" x 12", 14" x 14" x 14" and 21" x 21" x 21".  
with digital temperature indicator and controller. The outside body will be M. S. Powder coated and inside will be stainless steel with shelves. (With Blocking Test Kit).



## **11). A. Weighing/GSM Scale**

**Model: JM300 (Standard)**

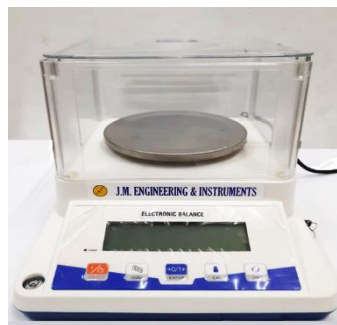
Range: 0.01 to 300 grams, Make: JMEI



## **B. Weighing/GSM Scale**

**Model: JMF300 (High Precision)**

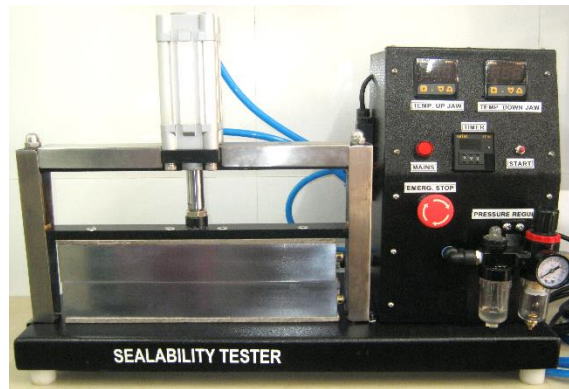
Range: 0.01 to 300 grams Make: JMEI



## **12). Sealability Tester:**

For testing the Sealability of lami –tubes (tooth pastes tubes, cream tube, etc.) Complete with presetable digital timer, pre settable pneumatic clamp pressure by pressure regulator, Q. R. C., and two separate P. I. D. Digital temperature controllers for upper lower jaw temperature control. Jaw breadth will be 12”. Sealing breadth to be specified by you, up to half inch.

Sealing profile to be specified by you, at the time of order.



## **13). Bar Coater No 0, 1, 2**



## **14). Bar Coater Pad**



## **15). Hot Plate**



## **16). Dart Impact Tester:**

Dart Impact Tester: Dart impact tester with electrically operated solenoid activation & vacuum pump.



## **17). A). Coefficient Of Friction Tester/ Static Friction Tester: (Super Economy Model)**

Coefficient of friction tester/ static friction tester (Digital), for checking the static friction generated between 2 laminates / laminated sub strait by placing a pressure (weight), on both sub straits, on a tilting bed mechanism to get tangential readings directly in digital form on a Scale with a lazy hand pointer.

The machine will be motorized with a mini geared stepper motor for tilting the flat bed.

Controls will include “RESET” Button and a “TEST” button on the digital indicator,

With the help of a provided sensor, once the weight moves on the sample due to high angle the machine will automatically return to “flat” position.

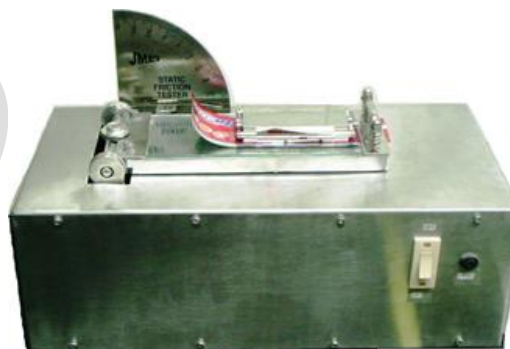
The machine works on 230volts A.C. (normal three pin plug), 5 amps.

The weight will be constructed of stainless steel and tilting bed will be constructed of mild steel and powder coated on which will be provided a glass tane.



## **B). Coefficient Of Friction Tester/ Static Friction Tester (S.S.):**

Coefficient of friction tester/ static friction tester (analogue), for checking the static friction generated between 2 laminates / laminated sub strait by placing a pressure (weight), on both sub straits, on a tilting bed mechanism to get tangential readings directly in analogue form on a scale with a lazy hand pointer. The machine will be motorised with a 10 Kg capacity. Motor for tilting the flat bed. Controls will include “on/ off” switch and a “tilt” switch. With the help of a provided sensor, once the weight moves on the sample due to high angle the machine will automatically return to “flat” position. The machine works on 230volts A.C. (normal three Pin plug), 5 amps. The tilting bed and weight will be constructed of stainless steel 304 and buffed. Excluding the tilting bed the internals will be covered in a buffed S.S. cover.



## **C). Coefficient Of Friction Tester/ Static Friction Tester (M.S.):**

Coefficient of friction tester/ static friction tester (analogue), for checking the static friction generated between 2 laminates / laminated substrat by placing a pressure (weight), on both sub straits, on a tilting bed mechanism to get tangential readings directly in analogue form on a Scale with a lazy hand pointer. The machine will be motorised with a 10 Kg capacity. Motor for tilting the flat bed. Controls will include “on/ off” switch and a “tilt” switch. With the help of a provided sensor, once the weight moves on the sample due to high angle the machine will automatically return to “flat” position. The machine works on 230volts A.C. (normal three pin plug), 5 amps. The weight will be constructed of stainless steel and tilting bed will be constructed of mild steel and powder coated. Excluding the tilting bed the internals cover.

Sample platen size: 10” Breadth x 18”Long.



## **18). Digital Box compression Tester:**

The machine will consist of two horizontal platens of size 600 m.m. x 600 m.m. with a gap of 700 m.m. between them, to house the sample carton / box to be tested.

The bottom plate will sense compressive force while the top plate is a moveable motorized plate.

The sample to be tested has to be placed between the two plates. The indication of the amount of force the sample can take before destruction is indicating on a digital indicator with auto peak hold facility.

The machine can register compression value of upto 600 kgs. With a least count of 1 kg. and an accuracy of +/-1 kg.

The machine works on a single phase power supply (220 v a/c).

**Test capacity:** 24” breadth x 24” length x 24” height /stroke.



## **19). Digital Opacity Tester:**

Opacity meter digital model, for measuring opacity of packaging materials.



## **20). Digital Glosso Meter**

Single Angle 60°



## **21). Stiffness Tester**

With HMI of 1 mili Newton, least count and full range of 2000 mili newton with auto peak hold facility

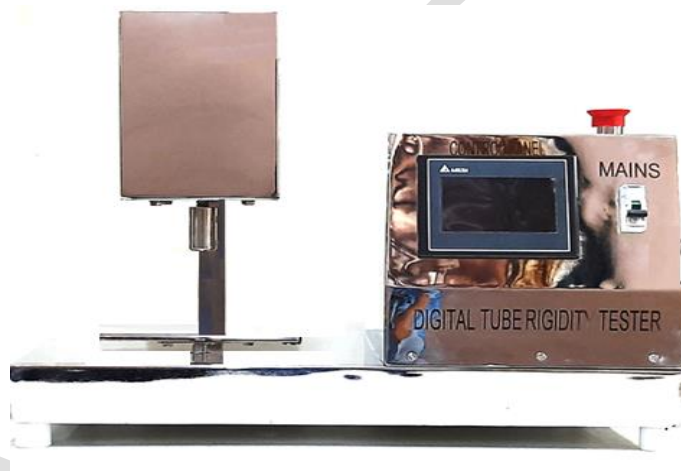
Digital Board Bending/Stiffness Tester (Taber Type), with HMI and PLC with auto peak hold facility. Load cell based. Preset lengths of board, of size 25 m.m. breadth x 50 m.m. length, can be tested. The machine is completely covered with a stainless-steel cover, with matt / mirror finish.

The machine has a fixed speed synchronous motor to bend the test sample.



## **22). Digital Tube Rigidity Tester:**

The machine consists of a constant r.p.m. synchronous motor connected to a crown & pinion gear box, which will then be connected to a thread screw and nut arrangement to further reduce the speed of the plunger to 10 m.m. per minute. The length moved by the plunger will be indicated digitally on a zero pre settable indicator. Below the plunger will be a semi-circular holder to house different sizes of tubes to be tested horizontally. The tube holder will be mounted on a pressure / load sensor. The load sensor will be connected to a digital load indicator with peak hold facility. The sensor will be able to indicate the pressure resistance (rigidity) of the tube to the pressure applied. The least count of the indicator will be 0.1 gm., and the accuracy will be  $\pm 1$ gm. The maximum pressure register able will be 2kg. All contact parts will be constructed of stainless steel. All contact parts will be constructed of stainless steel and powder coated. The machine will have a spirit level mounted on it and below it will be adjustable legs.



## **23). Smoothness Tester/ Porosity Tester (Air Pass Model):**

Smoothness tester (air pass model) for checking surface smoothness.

A pneumatic pressure gauge will be provided on line to a sensing head, to sense the roughness of flattened samples. A S.S. clamping mechanism will be provided to clamp the samples to ensure they are perfectly flat. Various weights of 100, 00 500, and 1000 gms. Will be provided for tests to be performed on low smoothness materials. Pneumatic pressure line to be provided by you.



## **24). Digital Moisture Meter:**

Up to 0 to 40% (destructive type), with probe. For checking the moisture of boards.

Stainless steel contact points



## **25). Viscosity/B4- Ford cup with stand:**

Ford Cup with stand (With Stop watch)



## **26). Bulk Density Tester:**

Making of Bulk Density Tester in S. S. 316 to measure the bulk density of powders @ 1 Ltr.

1 Ltr. Stainless Steel Tray will be provided.

The machine will also have a waste collecting plastic tray below it.



## **27). Tensile Strength Tester (Mini UTM ) (Digital):**

Tensile tester digital with stepper motor and drive connected to a ball screw and gear box.

The machine will have Mechanical clamps to hold samples.

A Human Machine Interface with auto peak hold will be provided to read in extension & compression modes.

The machine will have a tripper switch, a forward and reverse switch and adjustable limit switches.

The machine will be covered in a Mild steel cover and will be powder coated.

Reading range up to 500 kgs, with 250 grammes least count. Four preset speeds will be provided by rotary knob & one up & down high speed will be provided for JOG of moving clamp.

### **• The machine will be able to perform various test with the following attachments:**

Attachments for ECT & RCT, Ring Crush Test, Edge Crush Test, Peeling Strength Test, Tensile Strength Test, and Bottle Crush Test.

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**Two ball screw**



**Single Screw**

