



RAJ SCIENTIFIC COMPANY

"A Trusted Name That Stands For Quality"

Manufactures, Importers & Suppliers of
Scientific & Laboratory Testing Instruments



www.rajscientific.com

Flow Cups

Flow Cups are simple and easy to use instruments that permit the flow time of a known liquid solution passing through an orifice located at the bottom. It is made up of brass with or without a stainless steel nozzle. It is used for measuring the consistency/viscosity of paints, varnishes, oils, solvents, and similar products. The measured viscosity is expressed in seconds(s) which can be converted into centistokes(cSt). There are two types of flow cups : Most commonly used B4 flow cup according to IS 101 (Part 1/ Sec. 5) - 1989 and Cylindrical B4 flow cup according to IS 3944 - 1982.

Viscosity cups are supplied with stands for proper level adjustment. Stand consists of a base, rod, holder and a glass plate. Base and holder of the Stand is made up of Mild Steel with durable powder coating and the rod is made up of stainless steel. We also supply inbuilt spirit level .

Standard: IS 101 (Part 1/ Sec.5) - 1989, IS 3944 - 1982, ISO 2431, ASTM D 5125

Raj Make

Technical Specifications:

Ref No.	Flow Cup	Orifice Diameter (mm)	Viscosity Range (cSt)	Flow Time (Sec.)
146/2	B2	2.38	38 - 71	30 - 300
146/3	B3	3.17	38 - 147	30 - 300
146/4	B4	3.97	71 - 455	30 - 300
146/5	B5	4.76	299 - 781	30 - 300
146/6	B6	7.12	781 - 1650	30 - 300

Ordering Informations:

Ref No. 146/2 Flow cup B2 Ref No. 146/5 Flow cup B5

Ref No. 146/3 Flow cup B3 Ref No. 146/6 Flow cup B6

Ref No. 146/4 Flow cup B4

Standard As per IS 3944 - 1982, ISO 2431, ASTM D 5125

Ref No.	Flow Cup	Orifice Diameter (mm)	Viscosity Range (cSt)	Flow Time (Sec.)
147/3	B3	3	7 - 42	30 - 100
147/4	B4	4	35 - 135	30 - 100
147/5	B5	5	91 - 325	30 - 100
147/6	B6	6	188 - 684	30 - 100
147/8	B8	8	600 - 2000	30 - 100



Accessories required for testing:

- Spatula, Stopwatch
- Thermometer 110°C, Glass Beaker

Package Includes :

Flow cup, base, rod, holder, glass plate, manual and calibration certificate.

Ordering Informations:

Ref No. 147/3 Flow cup B3 Ref No. 147/5 Flow cup B5

Ref No. 147/4 Flow cup B4 Ref No. 147/6 Flow cup B6

HSN Code: 90279090 Ref No. 147/8 Flow cup B8

Din Cups

Din Cups are simple gravity instruments that permit the measurement of flow time of a known liquid solution passing through an orifice located at the bottom. It is available in anodised aluminium with a stand. Stand consists of a base, rod, holder and a glass plate. Base and holder of the Stand is made up of Mild Steel with durable powder coating and the rod is made up of stainless steel. We also supply with an inbuilt spirit level .

Din cups are also available in dip type. Dip type din cups are made up of anodised aluminium with an attached handle, it is easy to dip the din cup into the solution for measuring the viscosity. Din cups are used to measure the viscosity of paints, varnish, lacquers, oil and other similar products.

Standard: DIN 53211

Raj Make

Technical Specifications:

Ref No.	Din Cup No.	Orifice Diameter (mm)	Viscosity Range (cSt)	Flow Time (Sec.)
718/2	No.2 Stand	2 mm	15 - 30	25 - 150
718/3	No.2 Dip in Type	2 mm	15 - 30	25 - 150
718/4	No.4 Stand	4 mm	112 - 685	25 - 150
718/5	No.4 Dip in Type	4 mm	112 - 685	25 - 150
718/6	No.6 Stand	6 mm	550 - 1500	25 - 150
718/7	No.6 Dip in Type	6 mm	550 - 1500	25 - 150
718/8	No.8 Stand	8 mm	1200 - 3000	25 - 150
718/9	No.8 Dip in Type	8 mm	1200 - 3000	25 - 150

Accessories required for testing:

- Spatula
- Stopwatch
- Thermometer 110°C
- Glass Beaker

Package Includes :

Din cup, base, rod, holder, glass plate, manual and calibration certificate.

Ordering Informations:

Ref No. 718/2 Din cup no.2 with stand

Ref No. 718/3 Din cup no.2 Dip type

Ref No. 718/4 Din cup no.4 with stand

Ref No. 718/5 Din cup no.4 Dip type

HSN Code: 90279090



Ref No. 718/6 Din cup no.6 with stand

Ref No. 718/7 Din cup no.6 Dip type

Ref No. 718/8 Din cup no.8 with stand

Ref No. 718/9 Din cup no.8 Dip type

Ford Cups

Ford Cup is used for determination of viscosity of Newtonian or Near Newtonian paints, varnishes, lacquers and similar products. It is made up of brass. Ford cups are supplied with stands for proper level adjustment. Stand consists of a base, rod, holder and a glass plate. Base and holder of the Stand is made up of Mild Steel with durable powder coating and the rod is made up of stainless steel. We also supply an inbuilt spirit level.

Standard: ASTM D 1200

Raj Make

Technical Specifications:

Ref No.	Ford Cup No.	Orifice Diameter (mm)	Viscosity Range (cSt)	Flow Time (Sec.)
149/1	1	1.90	10 - 35	55 - 100
149/2	2	2.53	25 - 120	40 - 100
149/3	3	3.40	49 - 220	30 - 100
149/4	4	4.12	70 - 370	30 - 100
149/5	5	5.20	200 - 1200	30 - 100



Accessories required for testing:

- Spatula, Stopwatch
- Thermometer 110°C, Glass Beaker

Package Includes:

Ford cup, base, rod, holder, glass plate, manual and calibration certificate.

Ordering Informations:

Ref No. 149/1 Ford cup no.1
 Ref No. 149/2 Ford cup no.2
 Ref No. 149/3 Ford cup no.3
 Ref No. 149/4 Ford cup no.4
 Ref No. 149/5 Ford cup no.5

HSN Code: 90279090

Zahn Cup

Zahn Cup is a small cup attached from a U - shaped looped handle. This Instrument is ideal for measuring the consistency/viscosity of paints, varnishes, ink, lacquer during application or production period. There is an orifice in the centre at the bottom of the cup. It is made up of brass with a plating, a long loop handle is attached with the brass cup so that we can simply dip into the liquid container, lift it out and measure how long time it takes for the contents to empty through the orifice.

Standards: ASTM D 4212, ASTM D 1084

Raj Make

Technical Specifications:

Ref No.	Zahn Cup No.	Orifice Diameter (mm)	Viscosity Range (cSt)	Flow Time (Sec.)
148/1	1	2.0	5 - 60	35 - 80
148/2	2	2.7	20 - 250	20 - 80
148/3	3	3.8	100 - 800	20 - 80
148/4	4	4.3	200 - 1200	20 - 80
148/5	5	5.3	400 - 1800	20 - 80



Accessories required for testing:

- Spatula, Stopwatch
- Thermometer 110°C, Glass Beaker

Package Includes :

Zahn cup, manual and calibration-certificate.

Ordering Informations:

Ref No. 148/1 Zahn cup no.1

Ref No. 148/2 Zahn cup no.2

Ref No. 148/3 Zahn cup no.3

Ref No. 148/4 Zahn cup no.4

Ref No. 148/5 Zahn cup no.5

HSN Code: 90278090

Digital Stormer Viscometer

The Digital Stormer Viscometer is for measuring the viscosity of Non-Newtonian liquid such as paints, resins etc. The stormer viscometer is based on the principle of rotational viscometry. It measures the viscosity by using a weight - driven rotating paddle to sense the paint viscosity at a constant 200 rpm. The device consists of a mixer standardised with two paddles that are immersed in the fluid and rotated by applying weight. The measuring unit is in grams.

The conversion between these units is gms to cP & KU is done with the help of a conversion chart. In advanced Digital Stormer Viscometer gms, cP, KU will display on digital screen automatically. The properties of liquid and their resistance to shear of flow can be accurately measured. The rotational viscometers are determined in accordance with ASTM D 562.

Standard: ASTM D 562, IS 101 (Part 1 / Sec. 5)

Raj Make

Features:

- Easy to use control panel.
- The rotation at 200 rpm with audio and visual indication.
- Rapid and accurate measurement of viscosity in krebs unit and centipoise.
- Digital Display of RPM.
- Simple to install paddle spindle.
- Traceable to NABL calibration certificate.
- Range : 115 - 4836 cP
46 - 141 KU

Accessories required for testing:

- Thermometer 110°C
- Spatula for homogeneous mixing.

Package Includes:

Stormer Viscometer, spindle, glass beaker, weights, power cable, manual, calibration certificate & spares.

Ordering Informations:

Ref No. 248/1 Stormer Viscometer

Ref No. 248/2 DSV - II

HSN Code: 90278010



Penetrometer

Penetrometer is an instrument used to measure the viscosity of a stiff sample in terms of DOP (division of penetrometer). It consists of a circular dial with DOP (division of penetrometer) scale, plunger, a cone assembly with specific dimensions, weights and a cup. Sample gets penetrated through the gravitational force and the depth of penetration after a fixed time is measured. Penetrometer is used to measure the viscosity of stiff paints, distemper, waxes, greases, soil etc.

Standard: IP 50, ISO 2137, ASTM D 937, ASTM D 217, IS 1448 (P:60)

Raj Make

Ref No.	Description
140/1	Penetrometer is supplied with standard accessories and geared arrangement in which the dial and cone is operated manually. The least count of dial reading is 1 mm. (Indian Dial)
140/2	Penetrometer is supplied with standard accessories, geared arrangement and automatic digital timer. This instrument is automatically operated just by pressing the start key. The least count of dial reading is 1 mm. (Indian Dial with Digital Timer)
140/3	Penetrometer is supplied with standard accessories, in which the dial and cone is operated manually. The Mitutoyo Japanese dial is used for better accuracy having least count is 0.01 mm

Technical Specifications:

Dial Range	: 0 - 400 DOP (1mm = 1DOP)
Timer (only for digital penetrometer)	: 1-9 seconds
Cup	: 55 mm x 55 mm (height x diameter), 100 mm x 100 mm (optional)
Weight	: 50 & 100 gms
Cone	: 102 gms

Accessories required for testing:

- Stopwatch
- Thermometer 110°C
- Spatula

Package Includes:

Penetrometer, cup, cone, weights, dial, calibration certificate, manual and spares.

Ordering Informations:

Ref No. 140/1 Penetrometer (Indian Dial)

Ref No. 140/2 Penetrometer with Timer (Indian Dial)

Ref No. 140/3 Penetrometer (Mitutoyo Japanese Dial)

HSN Code: 90279090



Film Applicator / Bar Applicator

Single Sided Film Applicator is also known as a Bar film applicator. It is designed for the application of uniform films of paints, varnishes, lacquers, adhesives on a plane substrate for eg. charts, cards, etc.

This applicator is suitable for the use of both aqueous acid and alkaline samples. It is made up of high grade non corrosive stainless steel. These applicators are designed to be convenient for handling, easy to use / clean and ideal for the paint and coating industry, cosmetic industry, steel and fabrication industry etc.

Standard: ASTM D 823

Raj Make

Range: 25, 50, 75, 100, 150, 200, 250, 300, 500, 625, 800, 1000µm

Coating Width: 90 mm

Total Length : 110 mm

Accessories required for testing:

- Test Charts, Glass Plate
- Glass Beaker, Glass Rod
- Spatula
- Impression Pad

Package Includes:

Bar applicator and manual.

Ordering Informations:

Ref No. 112/1	Range 25µm	Ref No. 112/7	Range 250µm
Ref No. 112/2	Range 50µm	Ref No. 112/8	Range 300µm
Ref No. 112/3	Range 75µm	Ref No. 112/9	Range 500µm
Ref No. 112/4	Range 100µm	Ref No. 112/10	Range 625µm
Ref No. 112/5	Range 150µm	Ref No. 112/11	Range 800µm
Ref No. 112/6	Range 200µm	Ref No. 112/12	Range 1000µm

HSN Code: 90318000



4 - Side Film Applicator / Bird Applicator

Four Sided film applicators have a flat edges prismatic body making them suitable for applying four sided applications with pre-defined thickness for a flat and relatively strong substrate.

This applicator is suitable for the use of both aqueous acid and alkaline samples. It is made up of high grade non corrosive stainless steel. These applicators are designed to be convenient for handling, easy to use / clean and ideal for the paint and coating industry, cosmetic industry and steel industry.

Standard: ASTM D 823

Raj Make

Ref No.	Range (µm)
113/1	30, 60, 90, 120
113/2	25, 50, 75, 100
113/3	50, 100, 150, 200
113/4	5, 10, 15, 20
113/5	100, 200, 300, 400



Coating Width: 90 mm

Total Length : 110 mm

Accessories required for testing:

- Test Charts, Glass Plate
- Glass Beaker
- Spatula
- Impression Pad

Package Includes:

4-Side film applicator and manual.

Ordering Informations:

Ref No. 113/1 Range 30, 60, 90, 120 μm

Ref No. 113/2 Range 25, 50, 75, 100 μm

Ref No. 113/3 Range 50, 100, 150, 200 μm

Ref No. 113/4 Range 5, 10, 15, 20 μm

Ref No. 113/5 Range 100, 200, 300, 400 μm

HSN Code: 90318000

Box Film Applicator

Box film applicator has four application sides for applying paint film with four different pre-defined thickness. It is designed for the application of uniform films of paints, varnishes, lacquers, adhesives.

This applicator is suitable for the use of both aqueous acid and alkaline samples. It is made up of high grade non corrosive stainless steel. These applicators are designed to be convenient for handling, easy to use / clean and ideal for the paint and coating industry, cosmetic industry and steel industry.

Standard: ASTM D 823

Raj Make

Technical Specifications:

Ref No.	Range (μm)
153/1	25, 50, 75, 100
153/2	30, 60, 90, 120
153/3	50, 100, 150, 200
153/4	100, 200, 300, 400
153/5	300, 400, 500, 600



Coating Width: 70 mm

Total Length : 90 mm

Accessories required for testing:

- Test Charts, Glass Plate
- Glass Beaker, Glass Rod
- Spatula
- Impression Pad

Package Includes:

Box film applicator and manual.

Ordering Informations:

Ref No. 153/1 Range 25, 50, 75, 100 μm

Ref No. 153/2 Range 30, 60, 90, 120 μm

Ref No. 153/3 Range 50, 100, 150, 200 μm

Ref No. 153/4 Range 100, 200, 300, 400 μm

Ref No. 153/5 Range 300, 400, 500, 600 μm

HSN Code: 90318000

Cube Applicator

Cube Applicator is a small applicator suitable for parallel strips or films. It is designed for the application of uniform films. This applicator is suitable for the use of both aqueous acid and alkaline samples. It is made up of high grade non corrosive stainless steel. These applicators are designed to be convenient for handling, easy to use / clean and ideal for the paint and coating industry, cosmetic industry, steel industry..

Standard: ASTM D 823

Raj Make

Technical Specifications:

Ref No.	Range (µm)	Film Width (mm)
155	37 & 75	25



Package Includes:

Cube applicator and manual.

Ordering Informations:

Ref No. 155 Cube Applicator

HSN Code: 90318000

Sag Index Applicator

Sag Index applicator is used to determine the level of wet film thickness of a paint film. This applicator will help us to evaluate the sag resistance of the coating visually. It is widely used in laboratories for quality control of various coatings like paints, inks, and cosmetics Industry. The total film width of the sag index applicator is 90 mm and is equally divided into 8-10 gaps increment in depth of 25µm, 100µm or 200µm according to the range.

The sag index can be determined by the first track which does not sag on to the next track below. This applicator is suitable for the use of both aqueous acid and alkaline samples. It is made up of high grade non corrosive stainless steel. These applicators are designed to be convenient for handling, easy to use / clean and ideal for the paint and coating industry, cosmetic industry, steel industry

Standard: ASTM D 4400

Raj Make

Technical Specifications:

Ref No.	Range (µm)
111/1	25, 50, 75, 100, 125, 150, 175, 200
111/2	200, 400, 600, 800, 1000, 1200, 1600, 1800, 2000
111/3	100, 200, 400, 600, 800, 1000
111/4	200, 400, 600, 800, 1000, 1200, 1400



Coating Width: 90 mm

Total Length : 110 mm

Package Includes:

Sag index applicator and manual.

Ordering Informations:

Ref No. 111/1 Range 25, 50, 75, 100, 125, 150, 175, 200 µm

Ref No. 111/2 Range 200, 400, 600, 800, 1000, 1200, 1600, 1800, 2000 µm

Ref No. 111/3 Range 100, 200, 400, 600, 800, 1000 µm

Ref No. 111/4 Range 200, 400, 600, 800, 1000, 1200, 1400 µm

HSN Code: 90318000

Adjustable Micrometer Film Applicator

Adjustable Micrometer Film Applicator is used to draw the film according to requirement by adjusting the micrometer head. It is made up of an aluminium frame and blade. The stainless steel blades are easy to install, calibrate and clean. It enhances the accuracy in the thickness of the film. The blade of this applicator can be adjusted with the help of two micrometer heads from 0 - 10,000 microns with an increment of 10 μm and its least count is 10 μm . The drawn down film width is upto 100 mm.

This instrument is suitable for highly viscous solution and thick fluid on a flat surface. It is made up of high grade non corrosive anodised aluminium. These applicators are designed to be convenient for handling, easy to use / clean and ideal for the paint and coating industry, cosmetic industry and steel industry.

Standard: ASTM D 823

Raj Make

Technical Specifications:

Ref No.	Film Width (mm)	Range (μm)	Least count & Increment
150	100 mm	0 - 10 mm	10 μm

Package Includes:

Adjustable micrometer film applicator and manual

Ordering Informations:

Ref No. 150 Adjustable micrometer film applicator

HSN Code: 90318000



Wire Bar Coater

Wire bar Coater provides an economical way to ensure the uniformity of thickness of very thin films. Wire Bar Coater are cylindrical in shape with tightly wound stainless steel wire around them. The diameter of these stainless steel wire determines the thickness of the coatings. This applicator is easy to use/clean and made up of high grade non corrosive stainless steel. This applicator is suitable for Paint, Inks and similar products. It is suitable for flexible material such as paper, cardboard, charts, foils etc. It is Ideal for both manual and automatic film applicators.

Standard: ASTM D 4147

Raj Make

Technical Specifications:

Ref No.	Film Width (cm)	Wire Bar Coater (μm)
115/1	12	6, 10, 15, 25, 40, 50, 70, 80, 100, 150 μm No.(0, 1, 2, 3, 4, 5, 6, 7, 8, 9)
115/2	22	6, 10, 15, 25, 40, 50, 70, 80, 100, 150 μm No.(0, 1, 2, 3, 4, 5, 6, 7, 8, 9)



Ordering Informations:

Ref No. 115/1 Film width (12cm), range (6,10,15, 25, 40, 50, 70, 80,100, 150 μm)

Ref No. 115/2 Film width (22cm), range (6,10,15, 25, 40, 50, 70, 80,100,150 μm)

HSN Code: 90318000

Impression Pad

Rubber on top : 8" x 5" , 12" x 8"

Glass on rubber : 8" x 5" , 12" x 8"

Ordering Informations:

Ref No. 115/3 Impression pad rubber on top (8" x 5" , 12" x 8")

Ref No. 115/4 Impression pad glass on rubber (8" x 5" , 12" x 8")

Package Includes:

Wire Bar Coaters(selected) / Pad (Selected) and manual.

HSN Code: 90318000



Rubber on top



Glass on Rubber

Testing Charts

Drawdown charts are used for testing paints and coatings by preparation of wet film application on chart through film applicator or wire bar coater. With the help of drawdown cards we can analyse shade, uniformity, opacity, flow, coverage and levelling properties of the paint and coating liquid sample after curing.

It is a very useful product in different industrial sectors like architectural, industrial, R & D labs, QC labs, automotive, ink, cosmetics, paint and coating industries, etc. It will be useful in both water and solvent borne paints.

We provide quality drawdown cards which are easy to use and inexpensive in cost because with the help of drawdown card film application we can short out the defects if found in the batch. Here are the variety of cards used for drawdown for the testing purpose.

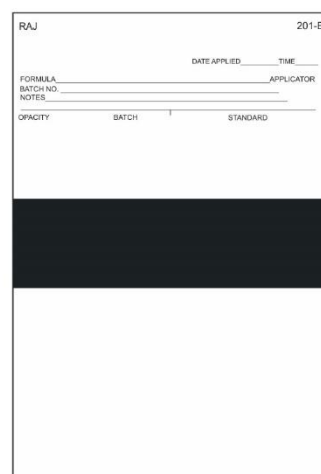
Standard: ASTM D 2805, ASTM D 344, ASTM D 2846, ASTM D 4213, ISO 2814

Raj Make

Draw Down Charts

In the draw down card/chart black strip found in the center of the card/chart.

Chart No./ Ref No.	Size	Chart Type
201 - A	6" x 4"	Glossy
301 - A	6" x 4"	Matt
201 - E	10" x 6"	Glossy
301 - E	10" x 6"	Matt
201 - G	10" x 8"	Glossy
301 - G	10" x 8"	Matt

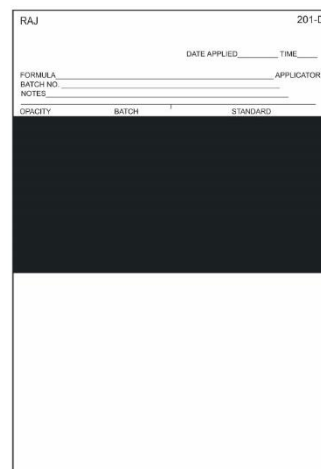



Opacity Charts

Opacity charts are used to analyse the hiding power (Opacity) of the prepared paint and coatings.

We provide two types of opacity charts which are given below in the table.

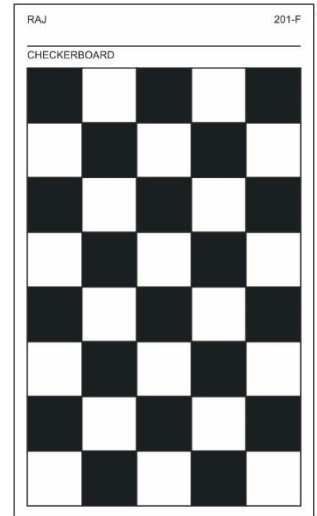
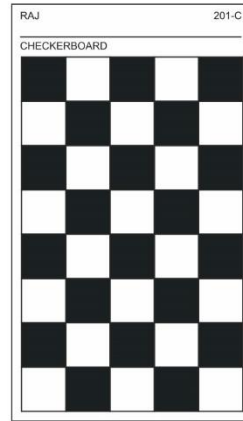
Chart No./ Ref No.	Category	Size	Chart Type
201 - B	Black on Bottom	6" x 4"	Glossy
301 - B	Black on Bottom	6" x 4"	Matt
201 - D	Black on Top	10" x 6"	Glossy
301 - D	Black on Top	10" x 6"	Matt

Checker Board

Checker board is used to analyse the opacity, hiding power, spreading area/rate etc of the paint film. It is made up of high quality material which is reliable in performance. Checker board cards are also provided in two types which is given below in the table.

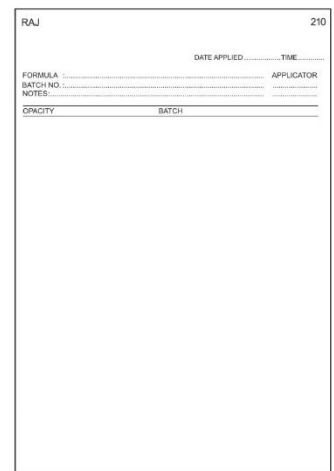
Chart No./ Ref No.	Size	Chart Type
201 - C	10" x 6"	Glossy
301 - C	10" x 6"	Matt
201 - F	10" x 8"	Glossy
301 - F	10" x 8"	Matt



Plain White Charts

Plain white charts are used to produce true colour samples without any interference of black substrate. We provide plain white charts in three types which are given below in the table .

Chart No./ Ref No.	Size	Chart Type
210	10" x 6"	Glossy
211	10" x 4"	Glossy
310	10" x 6"	Matt

RAJ 210

DATE APPLIED: _____ TIME: _____

FORMULA: _____

BATCH NO.: _____ APPLICATOR: _____

NOTES: _____

OPACITY: _____ BATCH: _____

A plain white rectangular chart with a form for recording test data.

Checker Stickers

Checker stickers are used to conduct and analyse the test of opacity, hiding power, spreading area/rate of the prepared paint sample film and to provide their customer for various reference purposes.

Chart No./ Ref No.	Size	Chart Type
212	25 mm x 25 mm	Glossy



Ink Test Charts

Ink Test Charts are used to analyse the hiding power (opacity), shade, etc of ink and its relatable products.

Chart No./ Ref No.	Size	Chart Type
214	7.5" x 5"	Glossy



U.V Coating Charts

U.V coating charts are used to conduct the test after application and curing of the paint film which are related to U.V. related.

Chart No./ Ref No.	Size	Chart Type
501 - G	10" x 8"	Glossy



Scrub Test Panel / chart

Scrub resistance panel is an ideal substrate for abrasion testing of coatings. Scrub test panels are used to conduct the scrub resistance of paint coatings after curing with the help of Wet Abrasion Scrub tester. It has a smooth & matt finish. It complies with ISO 11998, ASTM D 2846 & ASTM D 4213. It is made up of imported black plastic

Chart No./ Ref No.	Size	Chart Type
213	432 x 165 x 0.25 mm	Smooth and Matt Surface

Ordering Informations:

Draw Down Charts (201-A, 301-A, 201-E, 301-E, 201-G, 301-G)

Opacity Charts (201-B, 301-B, 201-D, 301-D)

Checker Board (201-C, 301-C, 201-F, 301-F)

Plain White Charts (210, 211, 310)

Ink Test Charts (214)

Checker Stickers (212)

U.V Coating Charts (501-G)

HSN Code : 49119990

Scrub Test Panel / chart(213)

HSN Code : 3926



Dry Film Thickness

Dry Film Thickness is the thickness of the coating which is measured above the substrate after full curing of the coatings. There are coating inspection tools which are used at every stage of the coating process to meet the proper thickness according to specification.

These inspection tools are known as Digital Coating Thickness Gauge. It is the most commonly used instrument for the measurement of the coatings on the metal substrate. The techniques which are used for the measurement of dft with the help of these instruments are eddy current and magnetic and electromagnetic induction techniques. All the DFT Meter are widely used in Paints, Coating and adhesives industries, Pipe, Steel and fabrication industry etc.

We provide a variety of electronic digital coating thickness gauge or according to the requirement of the customer. These DFT Meter are designed to measure accurate and reliable results for metallic and non metallic substrates. DFT Meter are available with an inbuilt measuring probe or with a separate measuring probe. There are different types of dft meters according to the tested method which are given below.

Standard: ASTM D 1005, ASTM D 1400, BS 3900, ISO 2808

Raj Make

Digital Coating Thickness Gauge

Ferrous Model (Model - F)

This instrument is used to measure the thickness of non-magnetic coating on the magnetic base after drying. It is a ferrous model. Auto off and calibration facility is provided.

Technical Specifications:

Make	: Raj - Elecoat.
Instrument Type	: Ferrous(F)
Base	: Magnetic Stainless Steel
Coating	: Zinc, gold, copper, tin, chrome, lead and hard chrome plating, paint and powder coating. Non Magnetic coating on Magnetic base.
Range	: 0 - 2000 μ m
Resolution	: 0.1 / 1 μ m
Accuracy	: 1-2 %
Minimum base thickness	: 0.3 mm
Min. Measuring area	: 6 mm

Package Includes:

DFT Meter, base, standard foils for calibration, manual, battery and calibration certificate.

Ordering Informations:

Ref No. 104 DFT Meter Model - F

HSN Code: 90318000



Digital Coating Thickness Gauge

Non - Ferrous Model (Model - C)

This instrument is used to measure the thickness of non-conductive coating on the conductive base after drying. It is a non-ferrous model. Auto off and calibration facility is provided.

Technical Specifications:

Make	: Raj - Elecoat
Instrument Type	: Non-Ferrous(C)
Base	: Aluminium , brass or copper
Coating	: Paint, Powder Coating, Teflon etc.
	: Non Conductive coating on Conductive base
Range	: 0 - 1500 μm
Resolution	: 0.1 / 1 μm
Accuracy	: 1-2 %
Minimum base thickness	: 0.3 mm
Min. Measuring area	: 6 mm

Package Includes:

DFT Meter, base, standard foils for calibration, manual, battery and calibration certificate.

Ordering Informations:

Ref No.105 DFT Meter Model - C

HSN Code: 90318000



DIGITAL COATING THICKNESS GAUGE

Ferrous & Non-Ferrous Model (Model - CF)

This instrument is used to measure the thickness of both ferrous and non ferrous bases after drying. It is a ferrous and non - ferrous model. It consists of two probes, ferrous and non ferrous. Auto off and calibration facility is provided.

Technical Specifications:

Make	: Raj - Elecoat
Instrument Type	: F-Ferrous, C-Conductive, CF- Combined
Probe Ferrous(F) Model	: Non magnetic coating on magnetic base.
	: Base:- Magnetic Stainless Steel
	: Coating:- Zinc, Paint and Powder Coating, Gold, Copper, Tin, chrome, lead and hard chrome plating.
Probe Non-Ferrous(C) Model	: Non Conductive coating on Conductive base.
	: Base:- Aluminium, Brass, Copper.
	: Coating:- Paint, Powder Coating, Teflon.
Range	: 0-1500 μm
Resolution	: 0.1 / 1 μm
Accuracy	: 1-2 %
Minimum base thickness	: 0.3 mm
Min. Measuring area	: 6 mm

Package Includes:

DFT Meter, ferrous and non ferrous bases, standard foils for calibration, manual, battery and calibration certificate.

Ordering Informations:

Ref No.106 DFT Meter Model - CF

HSN Code: 90318000



Digital Coating Thickness Gauge (Model - FNF)

This instrument is used to measure the thickness of a non-magnetic coating on a magnetic substrate and non conductive coating on non - ferrous substrate after drying. It is a type of ferrous and non - ferrous model. Auto off and calibration facility is provided.

Technical Specifications:

Model	: FNF
Probe (F)	: Base:- Magnetic Stainless Steel. : Coating:- Zinc, Paint and Powder Coating, Gold, Copper, Tin, chrome, lead and hard chrome plating.
Probe (N)	: Base:- Aluminium, Brass, Copper. : Coating:- Paint, Powder Coating, Teflon.
Range	: 0 - 1200 μ m
Resolution	: 1 μ m
Accuracy	: 1% \pm 2 μ m
Memory	: 100 readings.
Display	: LCD
Surface Curvature	: convex 5mm and concave 5mm.
Minimum Test Surface	: 10 mm.
Minimum Test Thickness	: 0.4 mm.
Statistics Display	: Mean, Minimum, Maximum and Standard Deviation.
Calibration Facility	: Auto
Data Transfer	: USB interface
Indication	: Low battery and Error

Package Includes:

DFT Meter, ferrous and non ferrous bases, standard foils for calibration, manual, battery and calibration certificate.

Ordering Informations:

Ref No.108 DFT Meter model - FNF

HSN Code: 90318000



Digital Coating Thickness Gauge - Inbuilt Probe

This instrument is used to measure the thickness of a non-magnetic coating on a magnetic substrate and non conductive coating on non - ferrous substrate after drying. It is a type of ferrous and non - ferrous model. Auto off and calibration facility is provided.

Technical Specifications:

Model	: DFT 222
Probe (F)	: Base:- Magnetic Stainless Steel. : Coating:- Zinc, Paint and Powder Coating, Gold, Copper, Tin, chrome, lead and hard chrome plating.
Probe (N)	: Base:- Aluminium, Brass, Copper. : Coating:- Paint, Powder Coating, Teflon.

Technical Specifications:

Range	: 0 - 2000 μm
Resolution	: 1 μm
Accuracy	: 2.5 % \pm 1 μm
Surface Curvature	: convex 5mm and concave 5mm.
Statistics Display	: No. of readings, Mean, Minimum, Maximum and Standard Deviation.
Calibration Facility	: Auto
Data Transfer	: USB interface
Indication	: Low battery

Package Includes:

DFT Meter, calibration block, USB cable, standard foils, battery and manual.

Ordering Informations:

Ref No. 222 DFT Meter

HSN Code: 90318000



Pencil Thickness Gauge

Pencil thickness gauge as used to measure dft after drying or curing. It comprises a magnet base with pointer and holder. It will measure non-magnetic coatings on a magnetic base. It is widely used in paint, coatings, adhesives and ink industry, Steel & Fabrication industry etc. It is available in two ranges.

Technical Specifications:

Ref No.	Range (μm)
101/1	0 - 250
101/2	50 - 800

Package Includes:

Pencil thickness gauge and manual.

Ordering Informations:

Ref No. 101/1 Range (0 - 250 μm)

Ref No. 101/2 Range (50 - 800 μm)

HSN Code: 90318000



Wet Film Thickness Gauge

Wet Film Thickness (WFT) gauges are designed to measure the thickness of a liquid base coating when applied on a substrate. Measure the wet film thickness in wet condition, immediately after application.

The gauge measures the thickness of almost all types of organic coatings such as paints, varnishes, lacquers, resins, powder, gels etc. It is widely used in the Paint & Coating Industry, Steel & Pipe Industry, Fabrication Industry, etc.

It is made up of high grade non corrosive stainless steel or anodised aluminium. It is suitable for aqueous acid and alkaline samples. The gauge is designed with high precision, accuracy, easy to use/clean and its compact size makes it convenient to handle for the user to measure WFT during application without any effort.

Standard: ASTM D 1212, ASTM D 4414, BS 3900, ISO 2808

Raj Make

Wet Film Thickness Gauge (Comb Type)

The comb type WFT gauge is rectangular in shape. It has a range of teeth in an increasing depth on each side. Place the gauge immediately after application on the substrate. The teeth which come in contact with the film, when touched on the substrate, are taken as the reading for WFT.

Technical Specifications:

Ref No.	Range (μm)	Material	Least count (μm)
166/100	5 - 100	Stainless Steel	5
166/500	25 - 500	Stainless Steel	25
166/2000	25 - 2000	Stainless Steel	25,50,100,150,200
168/2000 A	25 - 2000	Aluminium	25,26,50,51,127,254
168/3000 A	25 - 3000	Aluminium (Hexagonal Shape)	25,50,100,200

- Aluminium comb type WFT gauge should not be cleaned with highly inflammable solvent and also rub gently to remove wet coatings.

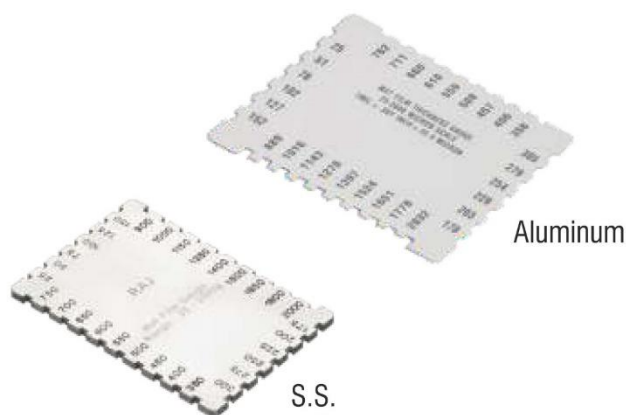
Package Includes:

Wet film thickness gauge and manual.

Ordering Informations:

- Ref No. 166/100 Range 5-100 μm (Stainless Steel)
 Ref No. 166/500 Range 25-500 μm (Stainless Steel)
 Ref No. 166/2000 Range 25-2000 μm (Stainless Steel)
 Ref No. 168/2000 A Range 25-2000 μm (Aluminium)
 Ref No. 168/3000 A Range 25-3000 μm (Aluminium)

HSN Code: 90318000



Wet Film Thickness Gauge (Wheel Type)

The wheel type WFT gauge consists of three circles. The middle circle is of a smaller diameter and two eccentric outer circles. Equipped with a precision roller bearing for a smooth rolling over the wet coating. The outer wheels are notched with a firm grip to prevent it from slipping. The point at which the central circle surface touches the coating, the scale which is abbreviated on the outer circles in microns, indicates the reading of WFT.

Technical Specifications:

Ref No.	Range (μm)	Material	Least count (μm)
167/100	0 - 100	Stainless Steel	5
167/200	0 - 200	Stainless Steel	10

Package Includes:

Wet film thickness gauge and manual.

Ordering Informations:

- Ref No. 167/100 Range (0 -100 μm)
 Ref No. 167/200 Range (0 -200 μm)

HSN Code: 90318000



Pencil Hardness Tester

Pencil Hardness tester is designed according to the Wolff Wilborn. It is used to evaluate the scratch hardness of the coating. To perform the test use graphite pencils of different hardness grades varying from 8B to 9H. The pencil is maintained at a constant angle of 45° and is moved smoothly over the surface with a constant force, while making a scratch. Pencils should be used according to the standards method to conduct the test. Pencils Steadler and Mitsubishi available.

Standard: ASTM D 3363, IS 101 (Part 5 / Sec.1), ISO 15184, BS 3900 E 19

Raj Make

Technical Specifications:

Ref No.	Standard	Pencil Set
122/10	IS	2B to 6H
122/14	ASTM	6B to 6H
122/20	Full Set	8B to 9H

Accessories required for testing:

- M.S. Panels 150 x 100 mm

Package Includes:

Pencil guide, Set of pencils, eraser, sharpener, abrasive paper, level block.

Ordering Informations:

Ref No. 122/10 Pencil set (2B to 6H) (IS Standard)

Ref No. 122/14 Pencil set (6B to 6H) (ASTM Standard)

Ref No. 122/20 Pencil set (8B to 9H) (Full Set)

HSN Code: 90248091



Scratch Hardness Tester

Scratch Hardness is the ability of a material surface to resist usually by scratch and abrasion. It used to determine the hardness of a material and its ability to resist scratching. When testing the surface of the coating, by scratch hardness a necessary force is applied to cut through the film to the substrate.

Standard: IS 101 (Parts 5/ Sec. 2), ISO 1518, BS 3900 E2, ASTM D 5178, ASTM D 2197.

Raj Make

Scratch Hardness Testers available into two models.

Automatic Scratch Hardness Tester.

Hand Operated Scratch Hardness Tester.

Automatic Scratch Hardness Tester

It is used for evaluating the resistance of coatings on the substrate by scratching with specific weight and needle. A one side coated panel is clamped at the platform of the automatic scratch tester, specified weight is applied on the weight holding rod and the needle is scratched on the coated surface at a constant speed 30 to 40 mm/s automatically.

The voltmeter indicates the contact between the needle and the metallic surface with the help of light and buzzer simultaneously. It also produces the beep noise as indication when the needle and the metallic surface contact with each other. It means that the needle scratched the coating and touched the surface of the substrate.

The Automatic Scratch Hardness Tester is made up of Mild Steel with durable powder coating, sliding plate is made up of mild Steel and the needle is made up of hard stainless steel with a hemispherical ball Ø1mm made up of Tungsten Carbide. It is widely used in paint and coating industries, pipe, steel and fabrication industries etc.

Technical Specifications:

Scratch Speed	: 30 to 40 mm/s
Needle or Stylus	: Hard Stainless Steel with hemispherical ball Ø1mm (Tungsten Carbide)
Scratch Length	: 60 mm
Panel Size	: 150 x 75 x 1 mm
Load Capacity	: 1.5 Kg / 5 Kg

Package Includes:

Automatic scratch hardness tester, weights, two needles, spares, manual and calibration certificate.

In 1.5 kg supplying weights of 100 gm, 200 gm, 200 gm and 1000 gm.

In 5.0 kg supplying weights of 100 gm, 200 gm, 200 gm, 500 gm, 1000 gm, 1000 gm and 2000 gm.

Ordering Informations:

Ref No. 132/1 Capacity 1.5 Kg

Ref No. 132/5 Capacity 5 Kg

HSN Code: 90248099



Hand Operated Scratch Hardness Tester

Hand operated scratch tester is an instrument used for evaluating the resistance of coating on the substrate by scratching with weights and needles manually. A one side coated panel is clamped at the platform of the hand operated scratch tester, specified weight is applied on the weight holding rod and the needle is scratched on the coated surface with the help of movable sliding surface by hand. When the needle scratch the coating and needle tip come in contact with the metallic surface buzzer will produce beep noise for indication.

The Hand Operated Scratch Hardness Tester is made up of Mild Steel with durable powder coating, base plate is made up of mild Steel and the needle is made up of Tungsten Carbide. It is widely used in paint and coating industries, pipe, steel and fabrication industries etc.

Technical Specifications:

Scratch Speed	: Manually
Needle or Stylus	: Hard Stainless Steel with hemispherical ball Ø1mm(Tungsten Carbide)
Scratch Length	: 60 mm
Panel Size	: 150 x 50 x 1 mm
Load Capacity	: 1.5 Kg / 3 Kg

Ordering Informations:

Ref No. 133/1 Capacity 1.5 Kg

Ref No. 133/3 Capacity 3 Kg

Accessories required for testing:

- MS panel size :- 150 x 75 x 1 mm (AST)
- MS panel size :- 150 x 50 x 1 mm (HOST)

HSN Code: 90248099



Conical Mandrel

Conical Mandrel is a laboratory apparatus used to determine the flexibility, adhesion, elasticity and elongation by bending the fully cured coated M.S. Panel or specimen over a conical shape mandrel. The specimen can be bent on part or along the entire length of the mandrel and the resulting cracks corresponding to different test diameters can be observed in a single operation.

The frame has a bending lever with a roller that pivots on the conical mandrel with a diameter from 3 mm to 38 mm. A graduation indicates the mandrel diameter in mm. Mandrel is tapered from 1 ½" to 1/8" along its length and has markings from 37 mm to 6 mm in diameter on the flat scale of the mandrel. It consists of a bending lever, clamping lever, and roller frame with mild steel bending cone. Its base and flat scale is made up of a good quality mild steel body with powder coatings for durability. M.S. Panel or Specimen is clamped in front of dia which requires and bends the panel with the help of a bending lever by rotation of the roller frame and observes the panel for any defects on a coated film.

Standard: ASTM D 522, BS 3900 E 11, IS 101 (Part 5 / Sec. 2), ISO 6860

Raj Make

Technical Specifications:

Larger end	: 38 mm
Smaller end	: 3.0 mm
Cone length	: 203 mm

Accessories required for testing:

- M.S. Panel 150 x 75 x 1 mm.

Package Includes:

Conical mandrel, manual, spares and calibration certificate.

Ordering Informations:

Ref No.116/1 Conical Mandrel - Normal Quality

Ref No.116/2 Conical Mandrel - Superior Quality

HSN Code: 90248091



Cylindrical Mandrel

Cylindrical Mandrel is a robust bend tester used to determine the flexibility, adhesion, elasticity and elongation by bending the fully cured coated M.S. Panel or Specimen over a cylindrical mandrel. It consists of a frame which has a bending lever with height adjustment sliding vise and panel fixing knob. Mandrels and knobs are made up of Stainless steel or harden material and rest parts are made up of high quality mild steel with powder coated for durability.

M.S. Panel or Specimen is clamped after adjusting the height and fixed with panel fixing knob and it bent over a mandrel about 180° and observed for deterioration of film in terms of flexibility, adhesion, elasticity, elongation etc. The instrument can be adjusted to a different diameter of the mandrel by changing it. The mandrels are easily changeable.

Raj produces 12 mandrel sets with sliding vise and knobs for fixing the specimen or panels properly. Always conduct the test from high size mandrel to lower size mandrel for proper observation of the result.

Standard: ASTM D 522, DIN - 53152, IS 101 (Part 5 / Sec.2), ISO 1519

Raj Make

Ref No.	Mandrel dia (mm)
118	2, 3, 4, 5, 6, 8, 10, 12, 16, 20, 25, 32

Accessories required for testing:

- M.S. panels (150 x 50 x 1 mm), Tin panel (150 x 50 x 0.3 mm).

Package Includes:

Cylindrical mandrel, 12 set mandrel, manual, spares and calibration certificate.

Ordering Informations:

Ref No.118/1 Cylindrical Mandrel - Normal Quality

Ref No.118/2 Cylindrical Mandrel - Superior Quality

HSN Code: 90318000



Cupping Test Apparatus

The cupping test apparatus is designed to test the elongation and deformability of lacquers and protective coatings applied to metal substrate. The test apparatus is based upon the Erichsen Principle which is used to perform a cupping test on a coated steel panel having a thickness of 0.8 - 2 mm to define the resistance of paints, varnishes and related products to cracking. This test is determined on a coated steel panel by testing to a specified depth at which coating fails.

Standard: DIN 53156, IS 101 (Part 5 / Sec.2), IS 10175 (Part 1), ISO 8490, ISO R149, ISO 1520

Raj Make

Features:

- Easy to use.
- Low effort in operation.
- Zero point calibration.
- Ergonomic and compact design.
- Two handled crank for ease of operation.
- Minimal manual force is required due to inbuilt gear box.
- The apparatus also has a magnifier to accurately view the fissures, tears and cracks

Technical Specifications:

Punch diameter	: 20 mm
Die diameter	: 27 mm
Panel thickness	: 0.8 mm to 2 mm
Maximum width of panel	: up to 90 mm
Mechanical Dial Gauge (Least Count)	: 0.01 mm.
Digital Dial (Least Count)	: 0.01 mm

Cupping Tester is available in two models :

- Analog Dial Indicator.
- Digital Dial Indicator.

Accessories required for testing:

- MS panel : 150 x 75 x 1 mm

Package Includes:

Cupping tester, magnifier, gauge, manual, calibration certificate & spares.

Ordering Informations:

Ref No.750/1 Analog Model

Ref No.750/2 Digital Model

HSN Code: 90241000



Tubular Impact Tester

Tubular Impact Tester is used to determine the impact and flexibility of coatings. The coated specimen is placed between top of a die and intender. On the specimen a hemispherical punch is produced by an intender, when it allows it to fall from a specific height.

The specimen is removed from the tester and the damage of the coating caused by the rapid deformation of the metal is evaluated through observation. The Impact Tester is heavy duty in construction. It is useful for the paint and coating, cosmetic, pipe, and steel industry.

Base is made of mild steel duly power coated. The Impact Tester is provided with aluminium tube duly powder coated. Inches and cms is abbreviated on the tube. Standard height of the tube is 40 inch. Different weights and dia of intender are available.

Standard: ASTM D 2794, IS 101 (Part 5 / Sec. 3), ISO 6272-1, ISO 6272-2

Raj Make

Technical Specifications:

Ref No.	134/1 IS	134/2 ASTM	134/3 ISO	134/4 ISO
Guide Tube 40 inch height	●	●	●	●
Intender Dia				
12.7 mm		●		●
15.9 mm		●		●
20.0 mm	●		●	
Base Die				
16.3 mm		●		●
27.0 mm	●		●	
Intender Weight				
2 lb		●		●
4 lb		●		●
1 kg	●		●	
2 kg	●		●	

Accessories required for testing:

- M.S. Panel size : 150 x 100 x 1 mm

Package Includes:

Tubular Impact Tester base, tubular impact tester tube, base die, intender & spares.

Ordering Informations:

Ref No. 134/1 Tubular Impact Tester (IS Standard)

Ref No. 134/2 Tubular Impact Tester (ASTM D 2794 Standard)

Ref No. 134/3 Tubular Impact Tester (ISO 6272 -1 Standard)

Ref No. 134/4 Tubular Impact Tester (ISO 6272 -2 Standard)

HSN Code: 90248099



Wedge Bend Tester

Wedge Bend Tester is used to measure both flexibility and impact resistance of sheet metal coating in a single operation and assess the deformity of a fully cured coated sheet after a sudden bending stress. The Impact folding test simulates common sheet metal processing movements, such as punching, folding, flanging, bending crimping.

Wedge Bend Tester has a parallel guide impact hammer with a weight of 2300 ± 100 gms and with a drop height of 650 ± 5 mm. There is also a bending mandrel of 5 mm diameter on the base plate, on which the sample sheet for the impact folding test can be pre-bent. It is made up of mild steel with powder coated for durability. It is used in the coating, steel and fabrication industry.

Standard: ASTM D 3281

Raj Make

Technical Specifications:

Intender Weight	: 2300 ± 100 gms
Intender Height	: 650 ± 5 mm
Panel Size	: 150 x 50 mm
Panel Thickness	: 0.10 - 0.4 mm

Accessories required for testing:

- Tin Panel size 150 X 50 x 0.3 mm

Package Includes:

Wedge bend tester, manual, spares and calibration certificate.

Ordering Informations:

Ref No.138 Wedge Bend Tester

HSN Code: 84622910



Dupont Impact Tester

Dupont Impact Tester determines the endurance of coating material, by analysing the impact of a falling known weight from a specific height on the coatings. The purpose of the test is to see whether test specimens can resist the effect of rapid impact testing or not.

Dupont Impact Tester has been designed to evaluate the resistance of a dry film of paint, varnish or related products when it is subjected to a deformation caused by a falling weight dropped under standard conditions after curing. It is widely used in the paint, coating, steel, pipe and fabrication industry.

Standard: ISO 6272, JIS K 5400

Raj Make

Technical Specifications:

Dropping Height	: 0 - 500 mm
Dropping Weight	: 100, 300, 500, 1000 gm
Intenders	: Having spherical ends with radii of 1.6, 3.2, 4.8, 6.35, 12.7 mm
Impact Receiver Block	: Having spherical dents of radii of 2.8, 4.4, 6.0, 7.55, 13.9 mm
Holding pin	: To hold the weight at a particular height

Accessories required for testing:

- MS Panel size 150 x 100 mm

Package Includes:

Dupont impact tester, manual, weight, indenters, spares and calibration certificate.

Ordering Informations:

Ref No.135 Dupont Impact Tester

HSN Code:- 9024



Falling Block Impact Tester

Falling Block Impact Tester is used to conduct the test of coating resistance from impact when it is dropped from a certain height. It is designed according to BS 3900 E3. The Block is allowed to fall from a certain height and the damage caused on the coating is evaluated on the basis of adhesion, flexibility, deformability after impact testing. The Falling block impact tester is used in Automobile, Steel & Pipe, Paints and coating Industry etc.

Standard: BS 3900 E3

Raj Make

Technical Specifications:

Block Weight	: 4750 gm
Maximum Height	: 572 mm
Intender Diameter	: 14.3 mm
Receiver Diameter	: 19 mm

Accessories required for testing:

- MS Panel size 150 x 100 mm

Package Includes:

Falling block impact tester, manual, spares and calibration certificate.

Ordering Informations:

Ref No.277 Falling Block Impact Tester

HSN Code: 9024



Cross Hatch Cutter

Cross Hatch Cutter is used to conduct the adhesion test of coatings after full curing of paint film. It provides an instant assessment of the quality of the bond between the coatings and the substrate.

Test is carried out by performing cross cuts at right angles. Clean the test area with a brush after that adhesive tape is pasted by pressing with your thumb and pulling it off. Then observe for any adhesion failure. If the film does not remove from the substrate then it means that the adhesion test is passed by the coating.

These cross hatch cutters are used in paint and coating, pipe, automobile, steel and cosmetic industries for adhesion tests.

Cross hatch cutters are available according to IS , ISO, ASTM standards. Thickness of the coating determines which type of cross hatch cutter is to be used for conducting the test.

Coating Thickness	Range	No. of teeth	Gap between each teeth (mm)
Upto 60 μm	1 mm	11	1
From 60 - 120 μm	2 mm	6	2
Above 120 - 250 μm	3 mm	6	3

Standard: ASTM D 3359, IS 101 (Part 5 /sec.2), ISO 2409

Raj Make



ISO STANDARD



IS STANDARD

Salt Spray Cabinet

Salt Spray Cabinet is a triangular shaped model made for the testing of corrosion resistant properties of the coatings applied on the substrate. In the cabinet temperature is maintained according to the Indian Standard in order to check the coating and its resistive properties. The cabinet is made from minimum 6mm thick imported perspex sheets. It contains a thermostatically controlled microprocessor temperature controller.

Standard: IS 101 (Part 6 / Sec.1)

Raj Make

Features:

- Digital PID Temperature & Timer Controller with built in memory backup.
- Spraying Nozzles.
- Suitable tray for panel arrangement as per standard and rod/bar for hanging arrangement.
- Fog collection apparatus - Measuring cylinder (100 ml)
Funnel (8 cm diameter)
- Water level sensor as a safety feature for low reservoir alarm with buzzer.
- A heater SS 316 to reach the set temperature with one spare heater.
- Pt-100 sensor for the temperature.
- A plastic pipe for excess fog removal.

Technical Specifications:

Ref No.	Chamber Size (L x W x H) mm	Working Size (L x W x H) mm	Capacity (litres)	Numbers of panel / Sample
223/1	450 x 300 x 300	280 x 300 x 300	34	8
223/2	680 x 420 x 410	410 x 410 x 410	70	16
223/3	900 x 520 x 370	550 x 520 x 370	105	24
223/4	900 x 600 x 600	560 x 600 x 600	200	48



Control Panel

Accessories required for testing:

- Sodium chloride salt
- Distilled water
- M.S. panels
- Knife or stencils for X-CUT corrosion test
- Wax and gum tape for masking
- Compressor

Package Includes:

Salt spray cabinet, measuring cylinder, funnel, hose clamp, manual and calibration certificate.

Ordering Informations:

Ref No. 223/1 Salt spray cabinet, (capacity 34 ltr)

Ref No. 223/2 Salt spray cabinet, (capacity 70 ltr)

Ref No. 223/3 Salt spray cabinet, (capacity 105 ltr)

Ref No. 223/4 Salt spray cabinet, (capacity 200 ltr)

HSN Code: 90248099

Salt Spray Cabinet

Salt Spray Cabinet is made according to ASTM B 117 and very useful for conducting the salt spray test according to ASTM B 117. It comprises FRP Double wall chamber, PU painted outer surface with built in salt solution and water reservoir in form of tank for humidification system. Automatic water level restoring system & temperature controlled water heater is given to the equipment. Main fog Spray Nozzle made of SS 316 L Grade is installed which is suitable for ASTM Tests. Pressure Regulator & Pressure gauge for Nozzle Air Pressure is provided to the instrument.

Digital Time Totalizer, Digital temperature controller Relative Humidity (RH) Range : 0 to 100% and digital pH Indicator is provided to the control panel. Dome Lifting Control with Buzzer, Air pressure Low Indicator Buzzer and Auto Filling Humidifier Tank is optional. Sample hanging rod & panel rack holder is given for conducting the test. ASTM B117 based salt spray cabinet is very useful in paint and coating industry, pipe, steel, automobile, testing laboratories etc

Standard: ASTM B -117

Raj Make

Technical Specifications:

Chamber Temperature	: $35 \pm 2^{\circ}\text{C}$.
Humidity Temperature	: $45 \pm 2^{\circ}\text{C}$
pH Value	: 6.5 to 7.2
RH Value	: $95 \pm 3\%$
Salt Solution Tank	: 60 ltr (In built capacity)
Fog Collocation	: 1 to 2 ml / hr.
Air Pressure	: 0.7 to 1.7 kg/cm ² (i.e 12 - 16 psi)

It is available in different size and dimension

Ref No.	Chamber Size (L x W x H) mm	Capacity (litres)	Numbers of panel
225/1	450 x 450 x 500	100	16
225/2	600 x 600 x 550	200	30
225/3	1000 x 700 x 600	400	50
225/4	1000 x 1000 x 600	600	70
225/5	1500 x 1000 x 600	800	100
225/6	1800 x 1000 x 1000	1000	120



Control Panel



Inner Chamber



Package Includes:

Salt spray cabinet, measuring cylinder, funnel, hose clamp, manual and calibration certificate.

Accessories required for testing:

- Sodium chloride salt
- Distilled water
- M.S. panels
- Knife or stencils for X-CUT corrosion test
- Wax and gum tape for masking
- Compressor

Ordering Informations:

Ref No. 225/1 capacity 100 ltr
 Ref No. 225/2 capacity 200 ltr
 Ref No. 225/3 capacity 400 ltr
 Ref No. 225/4 capacity 600 ltr
 Ref No. 225/5 capacity 800 ltr
 Ref No. 225/6 capacity 1000 ltr

HSN Code: 90248099

Paint Corrosion Cabinet

Paint corrosion cabinet is used for the determination of humidity resistance under continuous condensation. It also covers methods on neutral and artificial salts spray tests. This test is carried out by keeping the painted panel vertically after a specified period of drying in a corrosion cabinet maintained at 100 % relative humidity with a temperature cycle of 42°C to 48°C for a specified period and examining it for any signs of deterioration of the painted metal surface.

Paint corrosion cabinet consists of a stainless steel inner body and mild steel with duly powder coated outer body. Water immersion stainless steel heater is fitted at the bottom of the instrument. Solid State Relay (SSR) circuit is provided to control the heat rate. The digital PID temperature controller is provided to observe and control the temperature. Temperature rotates from 42°C to 48°C in 45 to 75 minutes respectively with 100% humidity to complete one cycle. The air in the cabinet shall be circulated by means of a fan, in such a way that the temperature in any part of the air space does not differ by more than 1°C at any given moment. Low water indicator with a buzzer is also given in the cabinet for the indication of water level.

Standard: IS 101 (Part 6 / Sec.1)

Raj Make

Technical Specifications:

Ref No.	Inner Dimension (Inch)	Outer Dimension (Inch)	Volume (Litres)	Suitable for panel
710/1	14 x 14 x 14	20 x 34 x 36	40	8
710/2	18 x 18 x 18	25 x 38 x 38	90	16
710/3	18 x 18 x 24	25 x 38 x 44	120	24
710/4	18 x 24 x 24	25 x 44 x 44	127	78

Accessories required for testing:

- M.S. Panels : 150 x 100 mm
- Wax /Normal Tape for masking.

Package Includes:

Paint Corrosion Cabinet, manual and calibration certificate.

Ordering Informations:

Ref No. 710/1 Suitable for 8 panel
 Ref No. 710/2 Suitable for 16 panel
 Ref No. 710/3 Suitable for 24 panel
 Ref No. 710/4 Suitable for 48 panel

HSN Code: 84178090



Humidity Cabinet

A humidity cabinet is used for sample testing at different set points, by maintaining controlled humidity and temperature. A humidification cabinet is used in paint, coating, pharmaceuticals, plastic, rubber industries etc for quality assurance. Temperature and humidity testing helps to determine the behaviour of the components in several test conditions and environment. Humidity cabinet helps to create a climate of set temperature and humidity which is required for testing purposes in the cabinet. It is very useful for testing by creating the required condition for electronic devices, household appliances, rubber, plastic, metals, oils, paints.

It is made up of a double walled body of which the outside is made up of mild steel duly powder coated and the inner side is made up of stainless steel. Two stainless steel trays are provided for testing purposes. Digital controller is provided for setting desired temperature and humidity. Accurate control of heating and cooling systems ensure homogeneity of temperature and humidity distribution over the entire cabinet. Air is circulated for uniform temperature in case of cooling models with a hermetically sealed compressor. Water reservoir pot and foot valve is provided along with a buzzer in order to maintain the level of water in the reservoir pot and humidity.

Our humidity cabinet is designed for its accuracy and durability as it is powder coated and with high quality controller system installation. It is manufactured by keeping the customer's safety and satisfaction in mind.

Standard: ASTM D 2247

Raj Make

Technical Specifications:

Temp Range	: 10°C to 60°C
Temp Accuracy	: ± 1°C
Humidity Range	: 40 to 95 %
Humidity Accuracy	: ± 3 % RH
Direct RH controller sensor range	: 40 - 100 %
Suitable with stabilisers.	

Ref No.	Inner Chamber Size (L x W x H) mm	Capacity (litres)
444/1	450 x 450 x 450	91
444/2	700 x 500 x 500	175
444/3	900 x 550 x 550	288
444/4	900 x 600 x 600	342
444/5	900 x 700 x 700	441



Package Includes:

Humidity cabinet, manual and calibration certificate.

Ordering Informations:

Ref No. 444/1 Capacity 91 litres
 Ref No. 444/2 Capacity 175 litres
 Ref No. 444/3 Capacity 288 litres
 Ref No. 444/4 Capacity 342 litres
 Ref No. 444/5 Capacity 441 litres

HSN Code: 85044040

Weight Per Litre Cup / Specific gravity cup

Weight Per Litre Cup / Specific gravity cup/ Gallon cup are used to determine the density of the liquid paints, varnish lacquers, coatings and pastes. Density cups are precisely designed for maximum accuracy and made from corrosion resistant stainless steel.

Density cups are cylindrical in shape which provides a large opening for easy filling lid/cover with an orifice in the centre, allowing excess of sample liquid to be expelled without trapping air bubbles. It is available in the following ranges.

Standard: BS 3900, ASTM D 1475, DIN 53217, ISO 2811, IS 101 (Part 1 / Sec.7)

Raj Make

Technical Specifications:

Ref No.	Capacity / Volume
120/10	10 cc
120/25	25 cc
120/50	50 cc
120/100	100 cc

Ordering Informations:

Ref No. 120/10 Capacity 10 cc

Ref No. 120/25 Capacity 25 cc

Ref No. 120/50 Capacity 50 cc

Ref No. 120/100 Capacity 100 cc

HSN Code: 90318000

Accessories required for testing:

- Spatula, Glass Beaker
- Balance (least count 1g)
- Thermometer 110°C

Package Includes:

Weight per litre cup , manual and calibration certificate.



Hegman Gauge

Hegman Gauge or Grinding Gauge is used to determine the fineness or the size of the particles present in a sample. It has a very significant role in controlling the quality during production. It is very useful in the paints and coating industry, cosmetic, ceramic, food, pharmaceuticals industry.

Hegman gauge consists of a flat steel block with a scrapper. On the surface of the Hegman Gauge are two flat bottomed grooves varying uniformly in depth from maximum at one end of the block to all the way zero in the other end of the block. The grooves depth is graduated in microns and Hegman scale. It is manufactured by hardened stainless steel having corrosion resistance properties.

Standard: ASTM D 1210, BS 3900, IS 101 (Part 3 / Sec.5), ISO 1524

Raj Make

Technical Specifications:

Ref No.	Range (µm)
130/10	0 - 10
130/25	0 - 25 [8 - 6 Hg]
130/50	0 - 50 [8 - 4 Hg]
130/100	0 - 100 [8 - 0 Hg]

Package Includes:

Hegman gauge, scrapper, manual and calibration certificate.

Ordering Informations:

Ref No. 130/10 Range (0-10 µm)

Ref No. 130/25 Range (0-25 µm)

Ref No. 130/50 Range (0-50 µm)

Ref No. 130/100 Range (0-100 µm)

HSN Code: 90261090



Wet Abrasion Scrub Tester

The Abrasion, Scrub and Washability Tester is also known as Wet Scrub Abrasion Tester. It is used to test the resistance of coatings by scrubbing and washing through nylon brush or sponge brush with a specific load. The observation to be done for removal of coating, loss of colour, fadeness, gloss after completion of the test. The test is either used as a "passed or failed" by testing to a specified number of strokes at which the coating fails by checking at a regular interval of time.

The Washability Tester is driven by a digital preset counter which allows precise and steady speed of stroke at a uniform length. It is made up of high quality aluminium with powder coating for durability. It consists of a glass bed, stainless steel collection tray, and inlet & outlet pipe tubes. It is widely used in the paint and coating industry, floor tiles and furniture surfaces.

Standard: ASTM D 2486, DIN 53778, ISO 11998, BS 3900

Raj Make

Features:

- Double channel scrub arm with ability to test different samples at the same time.
- Rapid interchangeable tools can make the system ideal for wide use of tests.
- Easy to use control panel with counter preset digital counter for counting the number of cycles in display.
- Accurately designed for durable and stable tests allowing repeatable results.
- Heavy Duty Motor and Peristaltic Pump is installed.
- Easy to remove, clean and install the tray and glass bed for the test procedures.

Technical Specifications:

Stroke rate	: 37 ± 1 cycles per minute.
Stroke length	: 240 ± 2 mm.
Nylon Bristle Brush	: 454 ± 10 g (Total Weight)
Panel Size	: $432 \times 165 \times 0.25$ mm.
Power Supply	: 240 V AC Supply.

Accessories required for testing:

- Black plastic panel.
- Nylon bristles brush and sponge brush.
- Washing agent (Scrub Media).
- Film Applicator 150 microns.

Package Includes:

Wet abrasion scrub tester, two nylon bristles brushes, two sponge brushes, two glass plates, 500 ml Scrub Media, SS weights, manual, calibration certificate and spares.

Ordering Informations:

Ref No. 136 Wet Abrasion Scrub Tester

HSN Code: 90318000



Abrasion Tester

Taber Abrasion is an standard used to determine wear and tear of the coatings. It is used to determine the abrasion resistance of organic coatings produced on a plane, rigid surface. The sample is applied to a plane rigid panel. Sample panel shall be a disk of 4 inch (100 mm) in diameter or square (100 x 100 mm) with rounded corners. A hole of 6.3 mm should be located at the centre of each panel. The weighted specimen is mounted on a turntable disc and place the abrasive wheel on the test film. The result varies according to the load applied on the wheel. Taber Abrasion is used for quality & process control, research & development and material evaluation. It is widely used in coating, textile, leather, rubber, plastic, wood, glass, paper, lamination, ceramics.

Standard: ASTM D 4060, ISO 9352

Raj Make

Features:

- Easy to use control panel with Total Count and Batch Count controller in display.
- A vacuum pump system with suction hose for direct flow between the hose and rotating disc.
- A Release Wheel Hub allows for quick wheel mounting without the need of extra tools for locking.
- Compacted and balanced calibration arms, wheel mounts with high quality & precise weight.

Technical Specifications:

Platform Speed	: 60 ± 2 rpm
Auxiliary weights	: 250 gm, 500gm and 1000 gm (Two set, one for each arm)
Counterweights	: 125 gm and 175 gm (Two set, one for each arm)
Taber Abrasive Wheels	: CS 10, CS 17 USA Taber make (anyone)
Material	: Mild Steel body with durable powder coating, Holding arms, counter & auxiliary weights, base disc are made up of stainless steel.

Package Includes:

Abrasion taber, auxiliary weights & counterweights, taber abrasive wheel CS10, vacuum pump with suction hose, manual, calibration certificate and spares.

Ordering Informations:

Ref No.137 Abrasion Tester

HSN Code: 90249000



Automatic Digital Pigment Muller

Automatic Digital Pigment Muller is used to evaluate the pigment resin/linseed oil paste for evaluation of shade, mass tone, reduction tone or tint tone, opacity and strength of pigment. It is a basic laboratory equipment for paint, colour and pigment related industries. It is used to assess quality control for measurement of colour strength and pigment strength under identical test conditions. It is widely used in the paint and coating industry, ink industry, cosmetic industry, plastic electronic and chemical industry and laboratory.

Standard: ASTM D 387, ASTM D 332, ASTM D 2745, ISO 787-13/16/24

Raj Make

Features :

- Easy to use control panel with Digital Counter and RPM indicator in display.
- Robust design to use over a long period of time with zero maintenance.
- Precise spring load cartridge system for applying pressure on glass plates.
- Centric disc ensures an evenly distribution of force on the glass plate.
- Smooth rotating lever for applying grinding force, easy to release pressure and locking arrangement.
- Stainless steel body.

Technical Specifications:

Speed	: 70 ± 2 rpm
Glass diameter	: 185 mm
Adjustable grinding force	: upto 100 kgf / 220 Lbf.
Electrical Supply	: Single Phase 220 volts, 50 Hz

Accessories required for testing pigments:

- Spatula for mixing and paste preparation.
- Pipette for measuring oil for making paste.
- Shade / Draw down card for shade matching.
- Bar Coater / Bar Applicator according to requirements for film application.
- Glass Beaker.

Package Includes:

Automatic digital pigment muller, two set glass plate, handle, spares, manual and calibration certificate.

Ordering Informations:

Ref No.780 Automatic Digital Pigment Muller

HSN Code: 84485900



Digital Laboratory Hot Air Oven

Digital hot air oven is used to determine the moisture and solid content of paste, paint, powder, etc. It is also used for curing the stoving paint and powder coating after application on panels. It widely used in paint and coating industries, pharmaceuticals and cosmetic industries etc

There are two types of Digital Laboratory Hot Air Oven :

Digital Laboratory Hot Air Oven

Digital Memmert Hot Air Oven

Digital Laboratory Hot Air Oven

Raj Make

Hot Air oven is made up of mild steel with powder coated for durability. The gap between the inner and outer chamber wall is filled with glass wool or puf insulation to avoid the heat loss.

Heating elements are made up of high quality chrome plated nichrome wire and it is placed on the bottom side of the oven and Air circulation fan is given on bottom for maintaining the temperature. Control switches are and lamps are placed on the front of the panels at bottom.

Technical Specifications:

Temperature Range	: Ambient to 250°C
Accuracy	: $\pm 2 - 3^{\circ}\text{C}$
Sensor	: Pt-100
Material	: Outer Mild Steel body & Inner Stainless Steel

Ref No.	Chamber Size (L X W X H)	Watt
701/0	12" x 12" x 12"	750
701/1	14" x 14" x 14"	1000
701/2	18" x 18" x 18"	1500
701/3	18" x 18" x 24"	1800
701/4	24" x 24" x 24"	2200
701/5	24" x 24" x 36"	2500

Package Includes:

Digital laboratory hot air oven, manual and calibration certificate.

Ordering Informations:

Ref No. 701/0	Chamber Size 12" x 12" x 12"
Ref No. 701/1	Chamber Size 14" x 14" x 14"
Ref No. 701/2	Chamber Size 18" x 18" x 18"
Ref No. 701/3	Chamber Size 18" x 18" x 24"
Ref No. 701/4	Chamber Size 24" x 24" x 24"
Ref No. 701/5	Chamber Size 24" x 24" x 36"

HSN Code: 84179000



Digital Memmert Hot Air Oven

Raj Make

Memmert heating and drying ovens are used in research industry and pharmaceutical lines in a variety of applications such as heating, drying, ageing, sterilisation, curing conditioning, stoving, etc. It is made from mild steel with powder coated for durability. The gap between the walls is filled with glass wool or puf insulation to avoid the loss of heat.

Heating elements are made up of high quality chrome plated nichrome wire and it is placed at the right and left side of the inner chamber. Air ventilation is placed on top to remove the hot gases and fumes.

Temperature is controlled by a Digital PID controller. Air circulation fan is given on top for maintaining the uniformity of temperature inside the chamber. Stainless Steel tray is provided for sample arrangement. Control panel is installed on the top of the oven for easy operations.

Technical Specifications:

Temperature Range	: Ambient to 250°C
Accuracy	: $\pm 1^{\circ}\text{C}$
Sensor	: Pt-100
Material	: Outer Mild Steel body & Inner Stainless Steel

Dimension is available in different sizes:

Ref No.	Chamber Size (L X W X H)	Watt
701/6	12" x 12" x 12"	750
701/7	14" x 14" x 14"	1000
701/8	18" x 18" x 18"	1500
701/9	18" x 18" x 24"	1800
701/10	24" x 24" x 24"	2200
701/11	24" x 24" x 36"	2500

Package Includes:

Digital memmert hot air oven,
manual and calibration certificate.

Ordering Informations:

Ref No. 701/6 Chamber Size 12" x 12" x 12"
Ref No. 701/7 Chamber Size 14" x 14" x 14"
Ref No. 701/8 Chamber Size 18" x 18" x 18"
Ref No. 701/9 Chamber Size 18" x 18" x 24"
Ref No. 701/10 Chamber Size 24" x 24" x 24"
Ref No. 701/11 Chamber Size 24" x 24" x 36"

HSN Code: 84179000



Muffle Furnace

Muffle Furnace is used for high temperature testing applications such as determination of ash content of chemicals, quenching test for high quality heat resistant paints, loss on ignition, etc. It is made up of high quality heavy gauge mild steel with powder coating for durability. Gap between the two walls is filled with glass wool or puf insulation to avoid the heat loss. Chamber of the muffle furnace is made up of high temperature insulating material. Temperature is controlled by Digital PID temperature controller cum indicator. Heating elements are made up of kenthal wire.

Raj Make

Technical Specifications:

Ref No.	Chamber Size (L X W X H)	Working Temperature range
705/1	9" x 4" x 4"	200°C to 1130°C
705/2	10" x 5" x 5"	2 kw
705/3	12" x 6" x 6"	2.5 kw
705/4	18" x 9" x 9"	3.5 kw
		7 kw

Package Includes:

Muffle furnace, manual and calibration certificate.

Ordering Informations:

Ref No. 705/1 Chamber Size 9" x 4" x 4"

Ref No. 705/2 Chamber Size 10" x 5" x 5"

Ref No. 705/3 Chamber Size 12" x 6" x 6"

Ref No. 705/4 Chamber Size 18" x 9" x 9"

HSN Code: 85141000



Gel Time Apparatus

Gel Time Apparatus is used to determine the gel time of powder coating or sample at which time it turns into gel on a polished metal surface at specific temperature. Gel time is the time at which the sample turns into gel from solid and it is not able to be used further. Gel time apparatus is made from non corrosive material. The top plate is made up of aluminium and it is provided with a sensor. It has a long lasting heating coil, temperature controller and digital timer display. It is widely used in plastic industries, powder coating.

Standard: ASTM D 4217 , DIN 55 990 : P8

Raj Make

Technical Specifications:-

Temperature Range	: Ambient to 300°C
Resolution	: 1°C
Surface Temperature with uniformity	: $\pm 1 - 2^\circ\text{C}$
Plate size	: 200 x 35 mm
Temperature Controller with Time	
Time Totalizer	

Package Includes:

Gel time apparatus, manual and calibration certificate

Ordering Informations:

Ref No. 401 Gel Time Apparatus

HSN Code: 90318000



Hot Plate

Hot Plate is an instrument with a flat surface and internal electric heating system. It is used for heating and melting the samples during testing periods in the lab. It is widely used in research and laboratories, oil industry, coating industry, pharmaceuticals industry.

We provide Hot Plates in two shapes.

Round Hot Plate

Rectangular Hot Plate.

Raj Make

Round Hot Plate

Round Hot Plate body is made up of MS with powder coating for durability. A round thick cast iron/m.s plate is provided on top with thermostatic control. With the help of a regulator we can increase or decrease the rate of heat during operation time. It is available in the following ranges.

Ref No.	Size	Rating	Temp. Range
654/1	8" Dia	1.5 kw	40°C - 300°C
654/2	9" Dia	1.6 kw	40°C - 300°C
654/3	12" Dia	2.0 kw	40°C - 300°C



Rectangular Hot Plate

Ref No.	Size	Rating	Temp. Range
654/4	10" x 12"	1.5 kw	40°C - 300°C
654/5	10" x 16"	1.5 kw	40°C - 300°C
654/6	12" x 18"	2.0 kw	40°C - 300°C
654/7	18" x 24"	3.0 kw	40°C - 300°C

Optional: Digital Temperature Controller with Timer also available

Ordering Informations: Round

Ref No. 654/1 8" Dia

Ref No. 654/2 9" Dia

Ref No. 654/3 12" Dia

Ordering Informations: Rectangular

Ref No. 654/4 10" x 12"

Ref No. 654/5 10" x 16"

Ref No. 654/6 12" x 18"

Ref No. 654/7 18" x 24"

HSN Code: 85143090



Heating Mantle

Heating Mantle is an instrument used to apply heat to containers. Glassware containers placed in direct contact with heating mantle for heating without increasing the risk of glassware shattering. Heating mantle with the regulator is made up of mild steel with powder coating for durability. It is used for heating organic liquid placed in glass containers like round bottom flask reaction vessels. We provide heating mantle from 100 ml to 50 ltr with a regulator. Temperature range of the heating mantle is ambient to 450°C. It is widely used in the research and development industry, coating industry, oil and wax industry, pharmaceuticals etc.

Raj Make

Volume Capacity: 100 ml, 250 ml, 500 ml
1, 2, 5, 10, 20, 50 litres

Ordering Informations:

Ref No. 656 Heating Mantle

HSN Code: 84799090



Permeability Cup

Permeability cup is used to determine the water vapour transmission of paints, varnishes, lacquers, coatings. It is made of non-corrosive anodised aluminium. It consists of a cup, seal ring and cover ring. After drying a coated permeable material is cut out to form a disc and tightened by the cup is filled with distilled water. Full permeability is weighed and placed into a dessicator at 38°C for 24 hrs. After that it is again measured which indicates the loss of water that has permeated through the film. It is widely used in paint, steel, paper industry, ceramic industry and construction Sites.

Standard: ASTM D 1653, ISO 7783

Raj Make

Technical Specifications:

Ref No	Capacity
402/1	10 cm ²
402/2	25 cm ²



Accessories required for testing:

- Dessicator.
- Silicon Paper.

Package Includes:

Permeability cup, manual and calibration certificate.

Ordering Informations:

Ref No. 402/1 Capacity 10 cm²

Ref No. 402/2 Capacity 25 cm²

HSN Code: 90279000

Thermometer

Thermometers are used to measure temperature of samples, instruments etc. in a wide range of activities such as manufacturing, testing, research and medical practices, etc

Digital and electronic thermometers are the quickest and most accurate way to measure temperature.

Digital Temperature Indicator:

Imported Make

Battery operated with 12" long probe and one meter wire with temperature sensor.

Range : - 50 to 1300°C

Temperature sensors are available in two types.

- Rod type
- Bead type

Ordering Informations:

Ref No. 601 Thermometer

HSN Code: 90258090



Magnetic Thermometer

Imported UK make

Surface temperature display on magnetic surface (Dial Type)

Range : 0 - 120°C

Range : 32 - 250°F

Ordering Informations:

Ref No. 602 Temperature range 0 - 120°C (32-250°F)

HSN Code: 90251990



Infrared Thermometer

Infrared thermometers are used to measure the temperature of a job or instrument from a distance. It is very beneficial in situations where it is difficult to reach the object for recording the temperature. It is very useful in recording the temperature of very hot surfaces on which we cannot take reading physically with normal thermometers. It is available in types based on range, accuracy and distance/ spot ratio which is given below.

Technical Specification:

Ref No.	Range	Accuracy	Resolution	Distance/ Spot Ratio
603/1	-18°C to 400°C	± 2°C or ± 2%	1°C	8 : 1
603/2	-50°C to 550°C	± 2°C or ± 2%	0.1°C	10 : 1
603/3	-50°C to 1150°C	> ± 1.5°C or ± 1.5%	± 1 % or ± 1°C	20 : 1
603/4	-200°C to 1650°C	> ± 1.5°C or ± 1.5%	± 1 % or ± 1°C	50 : 1

Ordering Informations:

Ref No. 603 /1 Temperature range -18°C to 400°C

Ref No. 603 /2 Temperature range -50°C to 550°C

Ref No. 603 /3 Temperature range -50°C to 1150°C

Ref No. 603 /4 Temperature range 200°C to 1650°C

HSN Code: 90258090



Colour Reader (colour Muse)

Colour Muse works with an app on your mobile phone to scan and match colours. All you need to do is place the colour muse on the surface and press the scan button on the app. The app is free and will show a list of the best colour matches. It can match any colour oriented product. It is very useful for designers, colour professionals, and technicians due to its portability and accuracy for providing a seamless colour communication tool in colour sensing technology. The Colour Muse is designed to fit in your pocket or bag.

Standard: ASTM D 2244, ISO 7724

Raj Make

Features:

- Scan a colour for LAB, LCH, RGB, HSB, CMYK values.
- Compare colour & shades with ΔE value.
- View & Export facility via text message, email or media.
- Battery Capacity 280 mAh (5,000 Scans) per charge.
- Compatible with Android or IOS operating systems.
- Highly accurate and inbuilt bluetooth module.
- Auto calibration when turned on
- Create and save your own colour palettes.
- Repeatability $0.10\Delta E$
- Measurement Size 4mm

Package Includes:

Colour Muse, USB cable, manual.

Ordering Informations:

Ref No. 780 Colour Reader

HSN Code: 90278090



Colour Comparator

Colour Comparator is used to match the colour of the liquid samples in a day light illuminating unit against glass standard built in the test disc. The discs are known as Gardner discs having 18 colours with number (1-18). It is widely used in the oil & solvent industry, paint industry, cosmetic pharmaceuticals and chemical industry. It is very easy to use for visual observation. Just rotate the discs for matching the colour of the liquid sample.

It has two nos. of discs

Gardner Discs A Range 1 - 9

Gardner Discs B Range 10 - 18

ASTM Discs A Range 0.5 - 4.0

ASTM Discs B Range 4.5 - 8.0

Tubes are used to fill the samples for colour matching.

Standard: ASTM D 1544, ASTM D 6166, ASTM D 1500, ISO 2049

Package Includes:

Colour comparator apparatus, Discs, gardner empty tubes and manual.

Ordering Informations:

Ref No. 779/1 Colour Comparator with Gardner Disc A, B

Ref No. 779/2 Colour Comparator with ASTM Disc A, B

Ref No. 779/3 Lovibond (U.K make) Comparator with Gardner Disc A, B or ASTM Disc A, B

HSN Code: 90278090



Colour Matching Cabinet

Colours look different under various lighting conditions. Therefore, it is difficult to match shade according to standard specimens or samples. Hence, our colour matching cabinet is useful to analyse shades of different colours for matching with standard specimens under standard light source visually. Colour Matching Cabinet is used to assess shade matching that can ensure the appearance is precise under different sources of light. It comes with distinct light sources that mimic various kinds of real-life lighting conditions. When observed under such standard illumination, the user can ensure that one specific colour remains the same.

Colour Matching has an important role in a wide range of industries such as paint, coating, automotive, ceramics, cosmetics, furniture, textile, plastic, packaging, printing inks, all have a great demand of colour matching consistency and quality. Colours make the first appearance of the product. It helps in establishing the primary link between the customer and the product. The cabinet is equipped with 6 different sources of standard lights which covers the global illumination standards. It is specifically designed as per international standards and has high accuracy in test procedures for a wide variety of products. The Cabinet allows the user to place the specimen to be tested on a particular platform that is at an inclination of 45 degrees. This particular angular platform ensures the correct reflection of light and hence, the correct viewing angle for human eyes.

Standard: ASTM D 1729, ASTM D 4086, ISO 3664

Raj Make

Technical Specifications:

- | | |
|--|---------|
| 1.Daylight D 65 (6500 K) | – 1 No. |
| 2.Incandescent 2856 K (A) | – 1 No. |
| 3.D 50 (5000 K) (CDL) | – 1 No. |
| 4.Ultraviolet (UV) | – 1 No. |
| 5.TL 84 | – 1 No. |
| 6.Cool White fluorescent (CWL) – 1 No. | |

Inner Dimension: 26" x 20" x 12"

Package Includes:

Colour matching cabinet, power cable, panel mounting tray, manual.

Ordering Informations:

Ref No. 945 Colour Matching Cabinet

HSN Code: 90248010



Shade Cards

Shade cards are like a mirror to a product which we are going to manufacture or buy for the application on various types of jobs. It is widely used in the paint & coating industry, for the purpose of choosing shades and colours to decorate houses, building and shopping complexes, steel, pipe and fabrication industries for preventing rust by coating paints or powder coating after choosing the proper shades to provide long life to the substrate. Shade cards are used by both manufacturers and buyers for reference and verification of proper shades to avoid the confusion.

IS Shade card

IS covers 104 colours for ready mixed paints and enamels grouped under Blue; Green; Yellow, Cream and Buti, Brown and Pink; Red and Orange; Grey; and Violet. This standard defines the colour of given terms in the Annex A. Paints, Colours, Coatings & Enamels are prepared according to Indian standards for matching of different shades and their contrast.

Standard: IS 5

Ordering Informations:

Ref No. 338 IS Shade Card

HSN Code: 49119900



PANTONE Shade card

Pantone has been the universal industry standard for colours. It consists of 1825 shades which are arranged in order. It also provides a universal language of colours and shades by providing unique names and numbers to each shade and colour.

The Pantone formula guide has coated and uncoated editions for each colour formula.

Ordering Informations:

Ref No. 340 PANTONE Shade Card

HSN Code: 49119900



Ral Shade Card.

RAL colour standards & shade cards are used by professionals in construction, industry, manufacturing, architecture and design. RAL Shade Cards are of immense use in India and especially in the paints industry. RAL includes four ranges of colour which are internationally recognised.

RAL Classics

The RAL Classic colour system was established to provide industry with accurate colour specification. It includes *RAL K7, RAL K5 Semi Matte & Gloss Colour & RAL K1.*

RAL Design

A huge selection of 1,625 RAL Design colours following the internationally recognised system. The most important *RAL Design Shade Cards include the RAL D2 Colour and the RAL D4.*

RAL Effect

The RAL Effects colour range consists of 70 metallic and 420 solid colours, many of which are from the RAL Classic range. Solid colours are based on waterborne paint systems whilst the metallic colours are based on acrylic paints. It includes *RAL E3 & RAL E4.*

Ref No.	Type	Size of shade to measure / match	Finish
339/1	RAL K1	5.2 x 1.5 cm	Glossy
339/5G	RAL K5	5 x 15 cm	Glossy
339/5M	RAL K5	5 x 15 cm	Semi Matt
339/7	RAL K7	2 x 5 cm	Glossy
339/2	RAL D2	5 x 2.5 cm	Semi Matt
339/3	RAL E3	5 x 2 cm & 5 x 3.8 cm	Semi Matt
339/4	RAL E4	5 x 13 cm	Glossy

Ordering Informations:

Ref No. 339/1 For RAL K1

Ref No. 339/5G For RAL K5 - Glossy

Ref No. 339/5M For RAL K5 - Semi Matt

Ref No. 339/7 For RAL K7

Ref No. 339/2 For RAL D2

Ref No. 339/3 For RAL E3

Ref No : 339/4 For RAL E4

HSN Code: 49119900



Gloss Meter

Gloss is an important attribute of surface appearance. It changes our perception of colours and shapes and influences our overall visual experience. Gloss meter has been the unsurpassed industry standard in the measurement of gloss for many years. The smart functions and intuitive menu operations make gloss measurement an easy task.

Gloss is measured by directing a constant intensity light beam at a fixed angle onto a surface and then by monitoring the amount of reflected light at the same angle. Gloss is a measure of how well the surface functions as a mirror.

Standard: IS 101 (Part 4/ Sec.4), ISO 2813, ASTM D523, ASTM D2457, DIN 67530

Raj Make

Digital Gloss Meter 20° / 45° / 60°

Make AIMIL

Features:

- Portable Gloss Meter with a Micro-controller base display and rechargeable batteries.
- High and Low points calibration are enabled for high accuracy.
- Hold facility makes reading fixed ven after removing the unit from the sample.
- The unit is small and light in weight making it compact and portable.
- The unit is supplied with a standard calibration plate and charger.
- It is available in 20, 45, 60 (anyone).

Technical Specifications:

Range	: 1 to 100 GU
Accuracy	: ± 1 GU
Repeatability	: ± 1 GU
Resolution	: 0.1 GU
Display	: LED
Detector Sealed	: Silicon Photocell
Power	: NiMH Rechargeable Battery.



Package Includes:

Gloss meter, calibrated standard plate (Hi and Low), charger and manual.

Ordering Informations:

Ref No : 224/20 For High Gloss 20°

Ref No : 224/45 For Medium Gloss 45°

Ref No : 224/60 For Medium Gloss 60°

HSN Code: 90275090

Digital Gloss Meter 60°

Features:

- 60° angle for semi gloss.
- Concise appearance, feel good.
- Display 3 sets of measurement data, good for comparison.
- Built-in lithium ion rechargeable battery.
- Basic model measurement can meet basic glossiness testing requirements..
- Comply with international standards.
- Stable performance, easy to read data.



Technical Specifications:

Measuring Angle	: 60°
Measuring Area	: 9 x 15 mm
Measuring Range	: 0~200 GU
Division Value	: 1 GU
Measurement	: Range 0 - 200 GU
Repeatability	: ± 1GU
Reproducibility	: ± 1GU
Measuring Time	: 1.0s
Battery	: 3.7V, 3200mAh Li-ion Battery
Display	: TFT 3.5 inch

Package Includes:

Gloss meter, power adapter, USB cable, calibration plate and manual.

Ordering Informations:

Ref No. 225/60 Gloss Meter

HSN Code: 90275090

TRI GLOSS METER 20°, 60° and 85°
Features:

- Measurement range 20°, 60° and 85°.
- Single button for all angles measurement.
- Display 5 readings for measurement data and good for comparison.
- Connect to PC for more extended functions with GQC6 Quality Control Software.
- Large screen display for easy operation.
- Ergonomics design with good appearance.
- Good man-machine communication interface.
- Powerful functions to meet many different requirements.
- Large storage to save over 1000 data.
- Built-in lithium ion rechargeable battery.


Technical Specifications:

Measuring Angle	: 20°/60°/85°		
Measuring Area	: 20°	60°	85°
	10 x10mm	9 x15mm	5 x36mm
Measuring Range	: 20°	60°	85°
	0~1000GU	0~1000GU	0~160GU
Resolution	: 0.1GU		
Repeatability	: 20°	60°	85°
	± 0.1GU	± 0.2GU	± 0.2%GU
Measuring Time	: 1.0s		
Battery	: 3.7V, 3200mAh Li-ion Battery		
Display	: TFT 3.5 inch, capacitive screen		
Interface	: USB/RS-232		
Storage	: 1000 readings		
Software	: GQC6 Quality Control Software		

Package Includes:

Gloss meter, power adapter, USB cable, manual, CD, calibration plate.

Ordering Informations:

Ref No. 226/T Tri Gloss Meter

HSN Code: 90275090

Constant Water Bath

Constant water bath is a thermostatic water bath. It is used to analyse the sample at a specific constant temperature for a specific period. It is used to heat the water in a chamber at a desired set temperature and maintain uniformity with the help of a high speed stirrer installed in the instrument. Constant water bath consists of Heating Unit, Water Chamber, and a high speed stirrer for circulation.

Its inner body and lid is made of stainless steel and outer body is made of either with stainless steel or mild steel with powder coated for durability. The gap between the two bodies is filled with high grade glass wool to minimise the heat loss. It is widely used in paint and coating industry, laboratories for incubation of samples, medical and agriculture sector.

Standard: ASTM D 870

Raj Make

Technical Specifications:

Microprocessor PID temperature controller with a timer is provided.

Inner Chamber : Stainless Steel
 Temperature Range : Ambient to 99°C
 Temperature Accuracy : $\pm 1^{\circ}\text{C}$

Chamber Size (L X W X H)	Rating (kw)
12" x 10" x 8"	1.5 kw
14" x 12" x 10"	2 kw
18" x 14" x 12"	2.5 kw
20" x 20" x 20"	3.5 kw

Package Includes:

Constant water bath, manual and calibration certificate.

Ordering Informations:

Ref No. 407/1 Chamber size 12" x 10" x 8" Inner SS & Outer chamber is mild steel
 Ref No. 407/2 Chamber size 12" x 10" x 8" Inner & Outer chamber is stainless steel
 Ref No. 407/3 Chamber size 14" x 12" x 10" Inner SS & Outer chamber is mild steel
 Ref No. 407/4 Chamber size 14" x 12" x 10" Inner & Outer chamber is stainless steel
 Ref No. 407/5 Chamber size 18" x 14" x 12" Inner SS & Outer chamber is mild steel
 Ref No. 407/6 Chamber size 18" x 14" x 12" Inner & Outer chamber is stainless steel
 Ref No. 407/7 Chamber size 20" x 20" x 20" Inner SS & Outer chamber is mild steel
 Ref No. 407/8 Chamber size 20" x 20" x 20" Inner & Outer chamber is stainless steel

HSN Code: 90230090



Low Temperature Water Bath

Low temperature water bath is an instrument which retains water at constant temperature. Heater and high speed stirrer is provided to maintain the uniform temperature. Hermetically sealed compressor is provided for cooling the chamber.

Microprocessor PID temperature controller cum indicator with a timer is given for maintaining the temperature of the chamber. Its inner body and lid is made up of stainless steel whereas outer body is made up of stainless steel /mild steel with powder coating for durability. The gap between the two chambers is filled with glass wool or puf insulation to minimise the heat loss. It is widely used in R&D laboratories, paint and coating industries for durability tests, pharmaceuticals industries for incubation, and the agriculture sector for seed analysis.

Raj Make

Technical Specifications:

Ref No	Temp Range	Accuracy	Bath Opening (cm)	Capacity (litres)
406/1	0°C to 50°C	± 2°C	25 x 25	25
406/2	- 20°C to 50°C	± 2°C	25 x 25	25
406/3	- 40°C to 50°C	± 2°C	25 x 25	25

Package Includes:

Low temperature water bath ,
manual and calibration certificate.

Ordering Informations:

Ref No. 406/1 Temp range (0°C to 50°C)

Ref No. 406/2 Temp range (- 20 °C to 50°C)

Ref No. 406/3 Temp range (- 40°C to 50°C)

HSN Code: 90230090



Oil Bath

An oil bath is a heated bath used in a laboratory. It is used to heat the oil according to desired temperature. Mineral oil or silicone oil is typically used for oil baths. It is used in research laboratories, oil refineries, oil industries, for reactions whose temperature is up to 200°C.

Its outer body is made up of mild steel with powder coated for durability and its inner body is made up of stainless steel. Two heaters are installed in the bath for heating. Microprocessor PID temperature controller cum indicator with timer is provided

Raj Make

Technical Specifications:

Temperature range : 5°C above ambient to 200°C

Accuracy : 1 - 2°C

Working Size : 12" x 12" x 8" (L x W x H)

Capacity : 18 ltr

Package Includes:

Oil Bath and manual.

Ordering Informations:

Ref No. 408 Working size 12" x 12" x 8"

HSN Code: 90230090



ASTM Solvent Distillation Apparatus

ASTM Solvent Distillation Apparatus is used to separate the mixture of liquid solvent and petroleum products. With the help of this unit we can determine initial boiling point, final boiling point, dry point, and % of residue remains and % of material recovered. It consists of a water bath inner chamber made of stainless steel with condenser tube, heating unit with regulator for controlling the temperature, measuring cylinder, flask with IP standard and thermometer -10°C to 360°C. Its body is made up of mild steel with powder coating for durability. In this method the sample is evaporated and condensed under controlled conditions observations are of the temperature at various percentages when recovered. It is widely used in paint and coating industries, oil and solvent, other liquid mixture

Standard: IS 1448 (P-18), IP 123, ASTM D 86

Raj Make

Package Includes:

ASTM distillation apparatus, flask, measuring cylinder 100 ml, manual and thermometer (-10°C to 360°C)

Ordering Informations:

Ref No. 778 ASTM Distillation App.

HSN Code: 90279090



Flash Point Apparatus

The temperature at which oil or solvent gives off sufficient vapour to ignite in air is known as flash point. Flash point apparatus is used to determine the flash point of oil and solvent so that we can store that oil or solvent by creating and maintaining such an environment in which vapour does not form.

There are three types of flash point apparatus.

- Abel Flash Point Apparatus
- Pensky Marten Flash Point Apparatus (Closed Type)
- Cleveland Open Flash Point Apparatus

Abel Flash Point Apparatus

Abel flash point apparatus is used to determine the flash point of petroleum products, solvent, oil and mixtures. Abel flash point apparatus consists of one brass cup fitted with a test flame arrangement. Stirrer is placed in the brass cup for maintaining the uniform temperature of the sample by stirring it. The outer jacket of the water bath is fitted with a stand. Electricity heated apparatus of 500 watt heater is fitted to the stand which can be controlled by an energy regulator. This apparatus is applicable for the products having flash points below 70°C. It is widely used in paint and coating industry, petroleum industry etc

Standard: IP 33, IP 170, IS 1448 (P-20)

Raj Make

Package Includes:

Abel flash point apparatus, thermometer range of -35°C to 70°C (IP 74) and range of -30°C to 80°C (IP 75) and manual.

Ordering Informations:

Ref No. 510 Abel Flash Point App.

HSN Code: 90318000



Pensky Marten Flash Point Apparatus (Closed Type)

To determine the flash point of the sample whose flash point is between **40°C to 360°C**. It is widely used to determine the flash point of lubricating oil, bitumen fuel oil, asphalts except cutback bitumen having flash point, biodiesel fuel etc. The apparatus consists of a cast iron stove fitted with a polished brass cover. Brass cup also contains a stirrer for homogenous mixing to maintain the sample temperature. Heater with a suitable energy regulator is provided to the apparatus.

Standard: IP 34, ASTM D 93, IS 1448 (P-21), ISO 2719
Raj Make

Package Includes:

Pensky marten flash point apparatus ,
thermometer range of -5°C to 110°C (IP 15) and
range of 90°C to 370°C (IP 16) and manual.

Ordering Informations:

Ref No.515 Pensky Marten Flash Point App.

HSN Code: 90318000



Cleveland Open Cup Flash Point Apparatus

Cleveland open cup flash point apparatus is to determine the flash point of a petroleum product whose flash point is above **79°C**. The apparatus consists of a cast iron stove on which an open cup is fitted on top and a heater with an energy regulator is provided to the apparatus. Open cup is provided to perform the test. It is widely used in the oil and petroleum industry to determine the flash or fire point whose temperature range is between **79°C to 400°C**.

Standard: IP 36, ASTM D 92, IS 1448 (P-69), ISO 2592
Raj Make

Package Includes:

Cleveland open cup flash point apparatus, thermometer
according to range -10°C to 110°C & -10°C to 360°C,
manual and calibration certificate.

Ordering Informations:

Ref No. 520 Cleveland Open Cup Flash Point App.

HSN Code: 90278090



pH Meter

Pen type pH – Meter is used to determine the hydrogen ion concentration of liquid samples. It indicates the alkalinity or acidity of solution according to hydrogen ion concentration. It is widely used in chemical and agricultural laboratory, hospitals, oil and water based coating industry, other industries where boiler and cooling towers are planted, water supply department, etc.

Portable Model

Features:

- Auto off calibration
- Data hold function
- Low battery indicator
- Automatic temperature compensation.

Technical Specifications:

Parameter	Specification
Range	0 - 14 pH
Resolution	0.1 pH
Accuracy	± 0.2 pH
Calibration	Automatic Calibration (One Point)



Ordering Informations:

Ref No. 170/1 pH Meter (PH-80)

HSN Code: 90278090

Digital pH meter - Table Top Model

Features:

- Measure electrical conductivity and temperature
- Manual temperature adjustment
- Digital calibration

Technical Specifications:

Parameter	Specification
Range	0 - 14 pH
Resolution	0.01 pH
Accuracy	± 0.01 pH



Accessory required for testing:

Beaker, buffer solution for calibration 4.0, 7.0, 9.0 pH, thermometers

Packages Include:

Digital pH – Meter , electrode, electrode stand, manual and solutions for calibration.

Ordering Informations:-

Ref No. 170/2 pH Meter (Model pHCal)

HSN Code: 90278090

Conductivity Meter

Conductivity meter is used to determine the level of conductivity in a solution. Conductivity is an ability of material to pass an electric current. It is based on eddy's current method. It is widely used in research and engineering, aquaculture, paint manufacturing and coating industry, etc.

Portable Model

Features:

- Measures electrical conductivity (EC) and temperature
- Automatic Temperature compensation (ATC)
- Water resistant housing
- Digital push button calibration
- Auto off function
- Data hold function
- Low battery indicator

Technical Specifications:

Parameter	Specification
EC Range	0 - 9999 μ s
Temperature Range	0 - 80°C / 30 -170°F
Resolution	1 μ s
Accuracy	\pm 0.2 %
Calibration	Automatic Calibration by push button

Packages Include:

Conductivity meter and manual.

Ordering Informations:

Ref No. 171 Conductivity Meter

HSN Code: 90279090



TDS Meter

A TDS Meter is an instrument which is used to measure the total dissolved solids in a solution, usually water. Total dissolved solids (TDS) refers to a measure of all inorganic solids dissolved in the water. It is widely used in the water packaging industry, Industries where cooling towers and boilers are used to avoid scaling, rusting, and laboratories, etc.

Features:

- Auto off calibration
- Data hold function
- Low battery indicator

Technical Specification:

Parameter	Specifications
Display	34 mm x 17 mm
TDS Range	0 - 5000 ppm
Temperature Range	0 - 80°C
Accuracy	\pm 2%

Packages Include:

TDS meter and manual.

Ordering Informations:

Ref No.722 TDS Meter, Range 0 - 5000 ppm

HSN Code: 90279090



Digital Moisture Meter

This type digital moisture meter consists of two or four pin probes directly attached with the instrument. It is suitable for both wood and building moisture. It is widely used in construction sites, wood industry, packaging industries etc. We have to just simply penetrate the two or four pin probe to take the reading.

Features:

- It is handy sized with two or four pin probe
- Easy to read.
- It show low battery indication

Technical Specifications:

Range	5% to 40%
Resolution	1 %
Accuracy	± 2% of moisture content

Ordering Informations:

Ref No. 620 Digital Moisture Meter

HSN Code: 90318000



Digital Moisture Meter

ETI U.K. Make

Moisture Meter are designed to check the moisture content of the material. It measures the moisture content in percent and displays on a digital indicator. It is widely used in construction sites, wood industry, packaging industries etc. We have to just simply penetrate the pin probe to take the reading.

Features:

- It is handy sized with two pin probe
- Easy to read.
- It show low battery indication
- One meter PVC lead with BNC connector

Technical Specifications:

Scale	Moisture Content	Wet Basis Percentage range
1	Wood 1 (W1)	6 - 40 %
2	Wood 2 (W2)	8 - 40 %
3	Plaster WME (P1WME)	6.5 - 25 %
4	Concrete WME (C1WME)	3.9 - 17 %
5	Linear/Reference (Lin)	0 - 1000 (Reference scale)

Parameter	Specification
Model	ETI 7200 WME
Resolution	0.1 % or 1 (Linear Scale)
Accuracy	± 1% of moisture content
Display	12 mm LCD



Ordering Informations:

Ref No. 621 Digital Moisture Meter

HSN Code: 90318000

Refractive Index

Refractometer

A refractometer is an instrument used to measure the concentration of aqueous solutions. It requires only a few drops of solution to measure. It is widely used in food, agriculture, chemical and manufacturing industries.

The concentration of the solution is measured in the Refractive Index or brix % scale. The Brix scale is calibrated to the number of grams of sugar cane contained in 100 mL of water hence the Brix % reading equals actual sugar Concentration.

We supply two types of refractometer

Hand refractometer

Abbe refractometer

Hand Refractometer

It is a precision optical instrument which provides direct reading on the scales.

With the help of this instrument we can easily know the concentration or refractive index of liquids.

Features:

- Easy and very convenient to use
- High quality and accurate testing results

Range:

0 - 32% Brix

28 - 62% Brix

45 - 82% Brix

58 - 90% Brix

58 - 92% Brix



Ordering Informations:-

Ref No. 624/1 Brix Range 0-32%

Ref No. 624/2 Brix Range 28-62%

Ref No. 624/3 Brix Range 45-82%

Ref No. 624/4 Brix Range 58-90%

Ref No. 624/5 Brix Range 58-92%

HSN Code: 90275020

Abbe Refractometer

It is a simplified fast operating instrument for measuring refractive index and sugar percentage. The prism assembly is mounted in a horizontal position.

It is used for measuring refractive index and sugar percentage directly. It is widely used in food, agriculture, chemical and manufacturing industries.

Standard: ASTM D 1218

Range	: Refractive Index	: 1.3 - 1.7 nD
	: Sugar Percent	: 0 - 95%
Accuracy	: Refractive Index	: 0.001 direct and 0.0001 by estimate.
	: Sugar Percentage	: 10 on scale and 0.10 by estimate

Packages Includes:

Abbe refractometer, manual and standard plate or solution.

Ordering Informations:

Ref No. 622 Refractive Index

HSN Code: 90275020



Spatula

Flexible Spatula Made of SS with Wooden Handle

Knife Pattern 4"
 Knife Pattern 6"
 Knife Pattern 8"
 Knife Pattern 10"
 Knife Pattern 12"
 Ref No: 713



Push Knife with Wooden Handle Flexible Spatula Made of Stainless Steel

Push Knife 2"
 Push Knife 3"
 Push Knife 4"
 Push Knife 5"
 Ref No: 714



Flexible Spatula Made of S. S. with Plastic Handle

Taper Palette Knife 3"
 Taper Palette Knife 4"
 Taper Palette Knife 5"
 Taper Palette Knife 6"
 Ref No: 715



Flexible Spatula Made of Fully Stainless Steel

Flexible Spatula 6"
 Flexible Spatula 8"
 Flexible Spatula 12"
 Ref No: 716



S.S. Spatula one side spoon and one side Flat

Size 8"

Size 10"

Size 12"

RefNo: 719

Ordering Informations:

Ref No.713 Knife Pattern (4", 6", 8", 10", 12")

Ref No.714 Push Knife (2", 3", 4", 5")

Ref No.715 Taper Palette Knife (3", 4", 5", 6")

Ref No.716 Flexible Spatula (6", 8", 12")

Ref No.719 S.S Spatula (8", 10", 12")

HSN Code: 84199090**Thermo Hygrometer**

Thermo hygrometer is used to measure the temperature and humidity of the environment. It has a dual digital LCD display each showing humidity and temperature. It consists of two keys with the help of which we can set temperature and humidity with the help of MAX/MIN and RESET is used to attain an already set temperature and humidity. Timer and alarm facility is also provided in the instrument. Wall hanging and table top facility is also given.

Temperature Range : - 10 to 50°C

Humidity Range : 25 - 95 % RH

Ordering Informations:

Ref No. 720/1 Thermo Hygrometer - Normal display

Ref No. 720/2 Thermo Hygrometer - Jumbo display

HSN Code: 90258090**Magnifier**

A magnifier is a device used for magnification. It helps us to zoom the object which we have to observe and helps us to view a bigger and clear picture of the object. It helps us to analyse the object without any doubt for making decisions.

Features:

- Magnifiers are supplied with battery
- It has magnification range from 8x - 30 x with artificial illumination.
- Magnifier without illumination is also available.

Ordering Informations:

Ref No. 177/1 (Magnification range :- 8x - 30 x) with illumination.

Ref No. 177/2 (Magnification range :- 8x - 30 x) without illumination.

HSN Code: 90138090

Film Thickness Gauge

Film thickness gauge to measure thickness of film, paper, foil, sheet metals etc.

"MITUTOYO" Japan Make.

Range : 0 - 10 mm

Accuracy : 0.01 mm (10 μ m)

Ref No: 405 / 1

Range : 0 - 1 mm

Accuracy : 0.001 mm (10 μ m)

Ref No: 405 / 2

Optional : Digital Model

Ordering Informations:

Ref No. 405/1 Range (0 - 10 mm)

Ref No. 405/2 Range (0 - 1 mm)

HSN Code: 90173029



Surface Profile Gauge

Surface profile gauge is a battery operated model, which measures peak valley height of a blast cleaned surface. Average reading of measurement provides an indication of the surface roughness

Standard: ASTM D 4417

Digital Model

Range : 0 - 1 mm

Accuracy : 1 micron (0.001 mm)

Ref No: 404/1

Range : 0 - 10 mm

Graduation : 1 micron (0.001 mm)

Ref No: 404/2

Ordering Informations:-

Ref No. 404/1 Surface Profile Gauge range (0 - 1 mm)

Ref No. 404/2 Surface Profile Gauge range (0 - 10 mm)

HSN Code: 9031



Sieves Shaker and Sieves

Sieve shaker is an instrument which helps to pass the particle movement through stacks of sieves for accurate particle size separation according to their size through vibration and agitation. With the help of a sieve shaker we can easily do analysis of particle size of the powder, salt, etc. It is designed for dry and wet sieving in accordance with relevant standards. Its body is made up of mild steel with powder coated for durability. It consists of a base, a metal cradle for holding sieves. It has horizontal support which moves freely around the higher ends.

Sieves frames are made up of brass and without any joint in it. Uniform fabrication of test sieves permits easy and smooth – nesting on each other's. It is flat, uniform and has permanent tension around the whole circumference. Sieves Shaker and Sieves are widely used in paint, pigment and coating industry, pharmaceuticals industry, where particle size analysis is necessary.

Standard: IS 101 (Part 8/Sec. 1)

Features:

- Easy to operate
- All kinds of materials are tested for particle size analysis
- It has uniform motion
- Diameter of mesh is 8"

Ref No:- 660

Mesh (BSS 410 – 1969)	Aperture in μm
4	4750
5	3350
6	2800
7	2400
8	2000
10	1680
12	1400
14	1200
16	1000
18	850
22	710
25	600
30	500
36	425



Mesh (BSS 410 – 1969)	Aperture in μm
44	355
52	300
60	250
72	210
85	180
100	150
120	125
150	106
170	90
200	75

Mesh (BSS 410 – 1969)	Aperture in μm
240	63
300	53
350	45
400	38
500	25
600	20
700	15
800	10
1000	5

Ordering Informations:

Ref No. 660 Test Sieves, mesh no. 4, 5, 6, 7, 8, 10, 12, 14, 16, 18, 22, 25, 30, 36, 44, 52, 60, 72, 85, 100, 120, 150, 170, 200, 240, 300, 350, 400, 500, 600, 700, 800, 1000

Ref No. 173 Sieve Shaker

Lid and Receiver:

HSN Code: 90249000

Sieve Shaker

HSN Code: 84799000

Test Sieve

HSN Code: 96040000