



**EQUIPMENT FOR
TESTING AS PER OECD
CIPAC AND OTHER
SIMILAR TEST
STANDARDS.**



**REACH COMPLIANCE
TEST EQUIPMENT**

DESIGNED & MANUFACTURED BY:

**Culture Instruments India LLP,
BANGALORE.**

INNOVATION WITH VALUE



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EXPLOSIVE PROPERTIES - BY FLAME THERMAL SENSITIVITY - KONEN TUBE

APPLICATION :

To study the reaction of solids and liquids to intense heating under partial confinement.

COMPLIANCES

- * UN Transport of Dangerous Goods recommendations, Manual of Tests and Criteria and to the European Classification, Packaging and Labeling of Dangerous Substances in the European Union guidelines.
- * European Commission Directive 92/69/EEC, method A14: Explosive properties

STANDARD ACCESSORIES/PARTS

25002-00	A Heavy and Sturdy 4 side closed enclosure	1 No.
25002-01	Bunsen Burners with tubing	4 Nos.
25002-02	Propane Flowmeter stand with valves	1 No
25002-03	Closing device (Consumable)	1 Set.
25002-04	Orifice Plate 6mm (Consumable)	1 No.
25002-05	Orifice Plate 2mm (Consumable)	1 No.
25002-06	Steel test tubes (Consumable)	1 No.
25002-13	Safety cutoff switch with solenoid valve	1 Set

OPTIONAL ACCESSORIES & SPARES

25002-07	Orifice Plate 1mm	1 No.
25002-08	'K' type sensor 1mm dia	1 No.
25002-09	Temperature logger with sensor and software	1 Set
25002-10	Calibration chemical(Di-butylthelate)	1 No.(500ml)
25002-11	Lubricant	1 Tube
25002-12	Digital Propane flow controller	1 Set

PRE-INSTALLATION ON-SITE REQUISITES

Space : A separate room/enclosure of minimum
7' x 7' x 10'

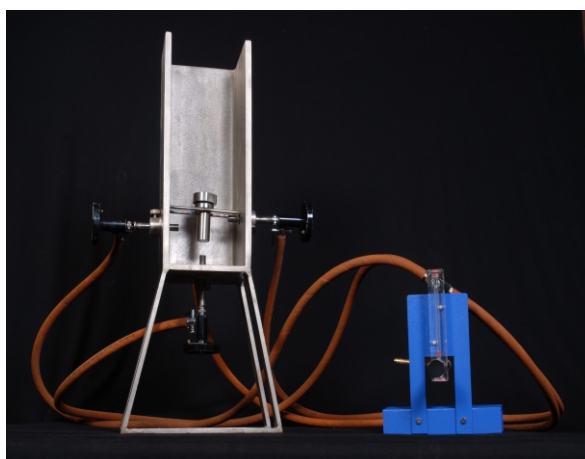
Power: 5A plug point with 230V, 50Hz, 1 Ph Ac
or 110v

LPG : Industrial LPG cylinder outside the room

Weight: 20 Kg.

The test enclosure should be grouted to the floor

The system should face a wall for safety reasons.





EXPLOSIVE PROPERTIES - BY SHOCK BAM FALL HAMMER

APPLICATION :

To study the impact sensitivity of solids and liquids.
Impact sensitivity is one of the most important characteristics of energetic materials defining their safety in handling, processing or transportation

COMPLIANCES :

- * The UN Transport of Dangerous Goods recommendations, Manual of Tests and criteria
- * EN 13631-4:2002 Explosives for civil uses. High explosives Part 4: Determination of sensitiveness to impact of explosives
- * STANAG4489: Explosives, Impact Sensitivity Tests
- * European Commission Directive 92/69/EEC, method A14: Explosive properties

STANDARD ACCESSORIES/PARTS

25001-00	A Heavy and Sturdy Base with 1 Meter graduated scale cum guiding system		1 set
25001-01	Anvil 100 x 70		1 set
25001-02	Locating Plate		1 No
25001-03	Intermediate Anvil		1 No.
25001-04	Locating Ring with orifice	(Consumable)	1 No.
25001-05	Impactors	(Consumable)	1 set
25001-06	Guide Ring	(Consumable)	1 No.
25001-07	'O' ring for liquid samples	(Consumable)	1 No.
25001-08	Manual Release device		1 set
25001-09	5Kg. Falling weight		1 No.
25001-10	10Kg. Falling weight		1 No.

OPTIONAL ACCESSORIES & SPARES

25001-11	0.5Kg. Falling Weight		
25001-12	1Kg. Falling Weight		
25001-13	2Kg. Falling Weight		
25001-14	Wooden Protective Case		
25001-15	Sampling Scoop		
25001-16	Rebound Latch		
25001-17	Impact head		
25001-18	Pneumatic release device with remote operation console.		
09127-18	Test sieve of 0.5mm		
09127-22	Test seive of 1.0mm		





PRE-INSTALLATION ON-SITE REQUISITES

Space : W x L x H: 450 x 450 x 1800 mm;
Weight: 340 kg
Concrete block with dimensions of
700 x 700 x 600 mm for placing the instrument

FULLY AUTOMATIC MODEL 25001-20

Consists of the system with programmable energy level. The system is controlled through a touch screen console with data logging. The energy is varied by a servo controlled system for automatic movement of the fall hammer to the required height and drop.

FEATURES

- * WITH COLOUR TOUCH SCREEN USER INTERFACE
- * AUTOMATIC CALCULATION OF WEIGHT TO BE PLACED AND DROP HEIGHT AS PER USER SET ENERGY VALUE.
- * AUTOMATIC LIFTING OF WEIGHT TO THE REQUIRED HEIGHT
- * LIVE ON SCREEN PROMPTING TO THE USER ABOUT NEXT STEP
- * LOGGING OF ENTIRE TEST RUN WITH TIME STAMP
- * USB/SERIAL BASED PRINTER INTERFACE FOR RESULT PRINTING
- * ACCURACY OF MOVEMENT IS BETTER THAN 0.1CM
- * INCREASED ACCURACY AND REPEATIBILITY DUE TO PRECISE REPETATIVE POSITIONING OF THE DROP WEIGHT
- * DISPLAY OF PRECISE ACTUAL ENERGY DISCHARGED AS THE SYSTEM MONITORS AND RECORDS VELOCITY OF FALL THERE BY ELEMENATING ERRORS DUE TO FRICTIONAL FORCES
- * VELOCITY DETERMIATION BY MEANS OF NON-CONTACT OPTICAL SENSOR(S)
- * REDUCED TRAINING COST AND TIME
- * WITH MANUAL OVER-RIDE CAPABILITY FOR USAGE SIMILAR TO A BASIC SYSTEM
- * LAN ENABLED SYSTEM FOR REMOTE OPERATION AND DIAGNOSISTICS
- * Remotely operated release device

Operation on 230 or 110V Ac and also requires compressed air of upto 10 bar.



EXPLOSIVE PROPERTIES - BY FRICTION

APPLICATION :

To examine the sensitivity of solids and pastes to sliding (frictional) contact.

COMPLIANCES :

* UN Transport of Dangerous Goods recommendations, Manual of Tests and Criteria

* European Commission Directive 92/69/EEC, method A14: Explosive properties

STANDARD ACCESSORIES/PARTS

25003-00	Motorised carriage with cantilever loading	01 No.
25003-01	Porcelain Peg (Consumable)	10 No.
25003-02	Porcelain Plate (Consumable)	10 No.
25003-03	Loading Rod 4 Kg with weight	1 Set.
25003-04	Loading Rod 8 Kg with weight	1 Set.
25003-05	Counter weight with Rod	1 Set.

OPTIONAL ACCESSORIES

25003-06	Loading calibration/test jig	1 Set.
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FULLY AUTOMATIC MODEL : 25003-10

Stepless drive motor with variable speed and programable load with Touchscreen interface and recording.

FEATURES

Touch Screen based programming console with data logging of speed and load

Automatic loading of the peg by a servo controlled system for very accurate loading with digital display.

Operation on 230 or 110V Ac.

PRE-INSTALLATION ON-SITE REQUISITES

A sturdy platform or table

Power : 5A, 3 pin power supply





SELF IGNITION TEST APPARATUS

APPLICATION :

Useful as a preliminary screening test for solid substances. In view of the complex nature of the ignition and combustion of solids, the self-ignition temperature determined according to this test method should be used for comparison purposes only.

COMPLIANCE :

- * European Commission Directive 92/69/EEC, method A16:
- * NF T 20-036 (September 85). Chemical products for industrial use. Determination of the relative temperature of the spontaneous flammability of solids

MODELS

25004-00 - Basic
25004-01 - Automatic

25004-00 Self-Ignition Temperature Apparatus - Basic

It consists of an explosion proof all SS oven with provision to suspend a mesh cube containing the powder sample with 2 temperature sensors to monitor and record sample and oven temperature. The temperature is monitored using an external datalogger and analysed post the test time period.

25004-00 Self-Ignition Temperature Apparatus - Automatic

It consists of all the above, but instead of an external datalogger, the system it is provided with a 5", user friendly Colour touch screen integrated controller cum high speed data acquisition.

The various advantages of this system are as below

01. 5" Colour touch screen with user friendly interface
02. Automatic shutdown at end of test
03. Automatic detection of Self ignition temperature- regular
04. Automatic shutdown if sample melts without ignition
05. Software free, hence no issues of licensing..
06. Automatic Report generation
07. High speed Data acquisition
08. 100% GLP compliance
09. Automatic Sensor(s) failure detection
10. LAN Enabled, hence does not require a dedicated PC



STANDARD ACCESSORIES/PARTS

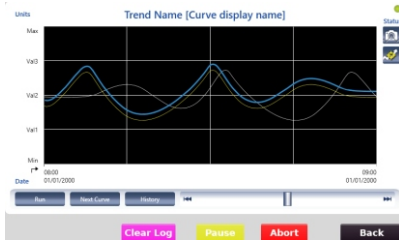
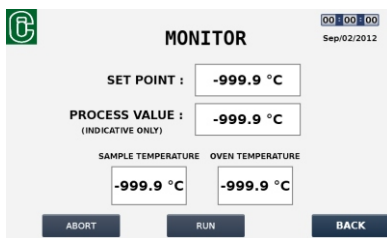
25004-00	All SS Heavy duty Oven with slow heating rate upto 400°C	01 Set
25004-02	2 Channel Data logger with Sensors	01 Set
25004-03	SS Mesh sample holder	01 No.

OPTIONAL ACCESSORIES

25004-04	Spare Heater	01 Set
25004-06	Spare Chamber Sensor	01 No.

PRE-INSTALLATION ON-SITE REQUISITES

A sturdy platform or table
Power : 15A, 3 pin power supply



25004-01



25004-00



AUTO-IGNITION TEMPERATURE APPARATUS

APPLICATION :

For determination of hot or cool flame ignition of solids, liquids, gases or their mixtures at atmospheric pressure. Ignition temperature is a measure of the tendency of the substance to ignite when in contact with hot surfaces in air.

COMPLIANCES :

* ASTM E-659 ; * DIN-51794

MODEL(S)

25012-11 Auto-Ignition Apparatus - Automatic

It consists of a vertical tube furnace with a high precision temperature controller, a Test Round bottom flask, with holder assembly. An adjustable mirror for visual determination if required. 3 sensors for monitoring of flask external temperatures and 1 sensor to monitor the sample temperature. It is provided with a 5" , user friendly Colour touch screen based integrated profile controller cum high speed data acquisition system.

Supplied complete with a syringe for liquid sample dosing, hot air gun for cleaning and interface cables.

The various advantages of this system are as below

01. 5" Colour touch screen with user friendly interface
02. Automatic profile setting
03. Automatic determination of Hot flame ignition point
04. Automatic determination of Ignition delay
05. On-line graph plotting
06. Automatic Report generation
07. Barometric pressure Indication (optional)
08. 100% GLP compliance
09. Automatic Heater failure detection
10. Automatic Sensor(s) failure detection
11. LAN Enabled, hence does not required a dedicated PC
12. Software free, hence no issues of licensing.



STANDARD ACCESSORIES/PARTS

25012-00	Digital Vertical Tube Furnace	01 No.
25012-01	Viewing Mirror	01 No.
25012-02	Data Logger	01 No.
25012-03	500ml Glass flask (Consumable)	01 No.
25012-05	Outer sensors (Consumable)	03 No.
25012-06	Inner sensor (Consumable)	01 No.
25012-07	Syringe	01 No.
25012-08	Flask holder cum lid	01 Set

OPTIONAL ACCESSORIES

25012-09	Calibration Certificate for logger with sensors
25012-04	250ml Glass flask
25012-10	Spare heater
25012-05	Outer sensors
25012-06	Inner sensor
25012-08	Flask holder cum lid
25012-12	Inert gas purging system

PRE-INSTALLATION ON-SITE REQUISITES

A sturdy platform or table
A Dark Room
Power : 15A, 3 pin power supply
Aluminum Foil



ONLINE GRAPH

REPORT
Sep/02/2012

SAMPLE NAME : OPERATOR NAME :

SAMPLE BATCH :

AMBIANT TEMPERATURE : BAROMETRIC PRESSURE :

HOT FLAME AUTO IGNITION TEMPERATURE :

IGNITION DELAY TIME :

Tested By : Approved By :

BACK

AUTOMATIC REPORT



TIME/PRESSURE TEST APPARATUS

APPLICATION :

To examine the effect of an ignition on substances under confinement, the possibility that ignition might lead to a pressure rise with explosive violence

COMPLIANCES :

- * European Commission Directive 92/69/EEC, method A21
- * UN Transport of Dangerous Goods recommendations, Manual of Tests and Criteria

25007-00 Time Pressure Apparatus - Basic

It consists of mains 2 parts. First, a SS pressure vessel with a high precision, high speed pressure sensor with holding stand and Second, a Control unit, with the power source, logger and pressure indicator. The pressure sensor is connected to a data acquisition system with either a usb interface or direct pc interface as per customers requirement to record only pressure vs time.

Supplied complete with a electrode and bursting disk

25007-01 Time Pressure Apparatus - Automatic

It is supplied with a tool free, easy operating, quick fit test vessel, along with a 5" , user friendly Colour touch screen based integrated controller cum high speed data acquisition system for more accurate, fully automated and faster testing.

The various advantages of this system are as below

01. 5" Colour touch screen with user friendly interface
02. Automatic Leak test
03. Automatic Coil break detection - Helps reduce test timing.
04. The pressure vessel is of tool free, quick couple design
05. On-line graph plotting
06. Automatic Report generation
07. Recording and reporting of current delivery
08. 100% GLP compliance
09. Automatic Sensor(s) failure detection
10. High speed Data acquasation
11. LAN Enabled, hence does not required a dedicated PC
12. Software free, hence no issues of licensing.



STANDARD ACCESSORIES/PARTS

25007-01/10	Test Vessel		01 Set.
25007-02	Control Box with power supply and logger		01 No.
25007-03	Pressure sensor		01 No.
25007-04	Ignition coil with sleeve	(Consumable)	02 No.
25007-05	Washers	(Consumable)	02 No.
25007-06	Connecting Terminals		01 Set.
25007-07	Bursting disk	(Consumable)	02 No.

OPTIONAL ACCESSORIES/SPARES

25007-01	Spare Test Vessel	
25007-10	Spare Test Vessel (for Automatic model only)	
25007-03	Spare Pressure sensor	
25007-04	Ignition coil with sleeve (Pack of 30)	
25007-06	Connecting Terminals	
25007-07	Bursting disk (Pack of 30)	
25007-09	Bursting disk (Aluminium) (Pack of 100)	

PRE-INSTALLATION ON-SITE REQUISITES

A sturdy platform or table

A partially enclosed space, or Fume hood

Power : 15A, 3 pin power supply





OXIDISING OF SOLIDS / FLAMEABILITY

APPLICATION :

For determination rate of flame mitigation/traverse

COMPLIANCES :

- * European Commission Directive 92/69/EEC,
- * OECD A17

OPTIONAL ACCESSORIES/SPARES

Coil ignition power supply
Platinum heating coil



VISCOSITY TESTING

APPLICATION :

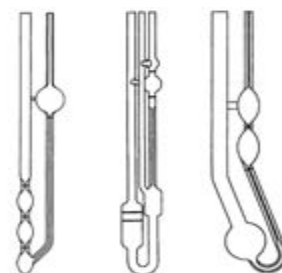
For determination of viscosity of fluids. by 'U' tube/capillary method

COMPLIANCES :

- * European Commission Directive 92/69/EEC, meth
- * ASTM D445
- * IP 71
- * ISO 3104
- * DIN 51550
- * FTM 791-305

OPTIONAL ACCESSORIES/SPARES

- | | |
|-------------|---|
| 11009-20/27 | Viscometers - Ostwald forward |
| 11009-28/38 | Viscometers - Ostwald reverse, |
| 11009-39/48 | Viscometers - Canonfensky forward |
| 11009-49/58 | Viscometers - Canonfensky reverse |
| 11009-15 | Viscometer Tray |
| 11009-16 | Viscometer Holder |
| 11009- | Viscometer Stand |
| 11009-17 | Lighting Attachment |
| 11009-18 | Bath Media(for Temp. upto 120°C) |
| 11009-04 | Refrigerated system for below ambient temp. |



PRE-INSTALLATION ON-SITE REQUISITES

Power : 15A, 3 pin power supply
Bath Media.



SURFACE TENSION

APPLICATION :

Based on DU-NUOY principle. Used for the determination of Surface and Interfacial tension of liquids.

COMPLIANCES :

- * IS:6104/1972
- * ASTM-D-971, 1590, 1331
- * European Commission Directive 92/69/EEC, method A5

STANDARD ACCESSORIES/PARTS

11053-00	BASIC INSTRUMENT
11053-11/12	PLATINUM RING
11053-16	CARRYING CASE
11053-15	SAMPLE DISH

FEATURES

Digital Display
Quick & Easy change of torsion wire and hassle free re-calibration.
Strain free eye and back operation, due to LED based parallax indication
Reduced errors due to avoidance of parallax viewing.

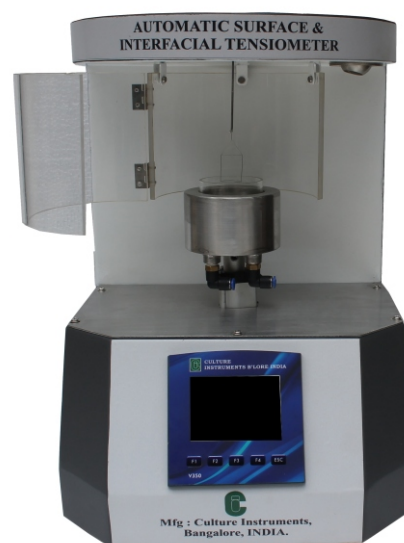
FULLY AUTOMATIC SURFACE & INTERFACIAL TENSIO METER

FEATURES

Colour Touch Screen user interface
Fully Automatic measurement and correction of value
Automatic movement of stage provided High Repeatability and Reproducibility
Reduced Test time
With inbuilt clear window to prevent air draft
Graphical display of testing and next step to be taken for easier and comfortable user experience
With PC/Printer interface for direct printing of report

PRE-INSTALLATION ON-SITE REQUISITES

Power : 5A, 3 pin, 230V Ac
Double Distilled Water
Calibrated Fractional Weight Box
Forceps
Tissue Paper





AITRATION RESISTANCE TEST

APPLICATION :

For testing of granular material for retention of shape or coating after rolling friction with glass beads.

COMPLIANCES :

* CIPAC M178

Consists of a motorised drive roller and a frictionless idle roller, with variable speed from 30 to 150RPM. Provided with digital RPM indicator and counter.

MODELS

25009-00 Single test system
25009-01 Dual test system
25009-02 Tripple Test system

OPTIONAL ACCESSORIES/SPARES

09127-10 125u Test Sieve
500ml 'DURAN' glass bottle

PRE-INSTALLATION ON-SITE REQUISITES

Power : 5A, 3 pin, 230V ac
Test Sample
500ml Glass bottle 'DURAN'
Glass beads



DUST TEST

APPLICATION :

To test the dustiness of a granular product.

COMPLIANCES :

* CIPAC MT171

STANDARD ACCESSORIES

25008-00 TEST CHAMBER WITH FLOWMETER

OPTIONAL ACCESSORIES

25002-00 VACUUM PUMP - SINGLE STAGE
21058-XX FILTER PAPER
16002-XX DIGITAL WEIGHING BALANCE

PRE-INSTALLATINO ON-SITE REQUIREMENTS

Power : 5A, 3 pin, 230V AC
Forceps





FLASH & FIRE POINT

PENSKY MARTEN CLOSED CUP

APPLICATION :

For Determination of Flammability/ Flash & Fire point of liquid samples from 49°C to 400°C

COMPLIANCES :

- * European Commission Directive 92/69/EEC, method A9
- * IS:1448,
- * ASTM D93,D3934,D3941,
- * IP304,404
- * BS3900,6664,
- * ISO-1516,1523,2719,
- * DIN51 758
- * CIPAC MT 12.3

MODELS :

- 11011-02 Semi-automatic Pensky
- 11011-03 Pensky Automatic with flash detection
- 11011-04 Pensky Automatic advanced with touch screen and recording.

STANDARD ACCESSORIES/PARTS

- 11011-04 Reducing socket with regulator,
- 11011-12 Cup lid with shutter mechanism

OPTIONAL ACCESSORIES/SPARES

- 15005-00 Test Thermometer
- 11011-05 Precise regulator with socket
- 11011-06 Spare cup
- 11011-07 Spare Heater
- 11011-09 Stirrer Speed Indicator
- 11011-11 Open clip
- 11011-12 Cup lid with shutter mechanism
Digital Barometer





FLASH & FIRE POINT

ABEL CLOSED CUP

APPLICATION :

For Determination of Flammability/ Flash & Fire point of liquid samples below 49°C

COMPLIANCES :

- * European Commission Directive 92/69/EEC, method A9
- * CIPAC MT 12.1
- * IP 170

MODELS :

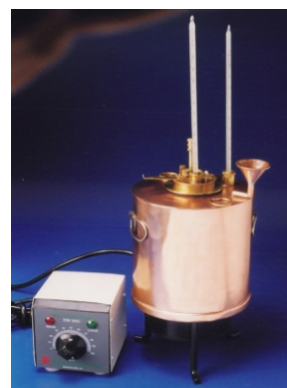
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|----------|---------------------------------------|
| 11012-02 | Abel flash point with digital control |
| 11012-03 | Refrigerated Abel flash point |
| 11012-07 | Automatic Abel flash point tester |

STANDARD ACCESSORIES/PARTS

- | | |
|----------|------------------|
| 11012-05 | Cup with shutter |
|----------|------------------|

OPTIONAL ACCESSORIES/SPARES

- | | |
|----------|---|
| 15001-00 | Water Bath Test Thermometer |
| 15002-00 | Sample Test Thermometer |
| 11012-04 | Reducing socket with regulator, |
| 11012-05 | Spare cup with shutter |
| 11012-06 | Multi step multi program controller |
| 12029-00 | Refrigerated Constant Temp. Bath circulator |



PRE-INSTALLATION ON-SITE REQUISITES

A Fume Hood with regulated air draft

Power : 15A, 3 pin power supply

LPG supply/ cylinder





AUTOMATIC CLOUD & POUR POINT TEST APPARATUS

APPLICATION

The cloud point test examines the precipitation of solids by detecting the temperature at which a cloud of wax crystals first occurs. The pour point test measures the fluidity, the lowest temperature at which a sample is still able to flow.

COMPLIANCE

- * ASTM D 2386,
- * ISO 3013
- * CIPAC MT 1
- * IP 16

MODELS :

11015-00	MANUAL SYSTEM - 1 TEST
11015-01	MANUAL SYSTEM - 4 TEST
11015-02	Refrigerated upto -30°C - 4 TEST
11015-03	Refrigerated upto -70°C - 4 TEST

OPTIONAL ACCESSORIES & SPARES

11015-04	AUTOMATIC FCLOUD POINT DETECTION SYSTEM - 4 TEST
11015-05	POUR POINT ATTACHMENT FOR 1 TEST + CLOUD POINT FOR 4 TEST
11015-06	Touch Screen interface with PC software and Lan connectivity. interface with PC software and Lan connectivity.

PRE-INSTALLATION ON-SITE REQUISITES

Power : 15A, 3 pin power supply
Bath media as per temp. range - 20Ltr





AUTOMATIC FREEZING POINT APPARATUS

APPLICATION

To determine the temperature at which a liquid begins to solidify.

COMPLIANCE

CIPAC MT-1
IP-16

FEATURES :

4 Line Alpha numeric Backlit LCD display
11015-01 is a liquid free bath whereas 02/03 requires liquid media(in your scope). Operation on 230V, 50Hz, 1 ph Ac. Supplied with suitable number of glass sample containers and copper jackets with insulators.

MODELS :

11015-00	Manual System with digital display - 1 TEST
11015-01	Automatic upto -20°C - 1 TEST
11015-02	Automatic upto -70°C - 1 TEST

OPTIONAL ACCESSORIES & SPARES

11015-04	Serial Printer for 11015-01/02/03
11015-05	Touch Screen user interface with PC software and Lan connectivity.

PRE-INSTALLATION ON-SITE REQUISITES

Power : 15A, 3 pin power supply
Bath media as per temp. range : 20Ltr



11015-01



11015-00



MODIFIED HARTMAN'S TUBE

APPLICATION :

Used to determine whether a powder or dust will explode when exposed to an ignition source when in the form of a dust cloud. It is a preliminary test, to be followed with more intensive testing.

SPECIFICATION:

- Automatic dispersion of sample and initiation of spark
- Backlit LCD display with direct display of st-0, st-1 or st-2 condition
- Provision to connect to a printer for automatic report generation
- Independent connections for Calibration of energy dissipation.

STANDARD ACCESSORIES/PARTS

25014-00	1.2Litre Glass Test Vessel	01 No.
25014-01	Safety Enclosure	01 No.
25014-02	Top Lid assembly with flap and sensor	01 Set.
25014-03	Sparking Power Supply	01 No.
25014-04	Sparking Electrodes (Consumable)	02 No.
25014-05	Electrode connecting leads	02 No.
25014-06	Electrode Holder	02 No.
25014-07	Electrode Holder 'O'	04 No.
25014-08	Air release system with atomiser and sample holder	01 Set
25014-09	Position calibration Block	01 No.

OPTIONAL ACCESSORIES/SPARES

25014-09	Glowing coil (Consumable)	02 No.
25014-10	Glowing coil holder (Consumable & Optional)	01 No.
25014-11	Glowing coil Power Supply(Optional)	01 No.
25014-12	Spare flap	01 No.
25014-13	Spare position sensor	01 No.
25014-14	Spare Pressure sensor	01 No.
25014-15	Spare Solenoid Valve	01 No.
12010-00	Vacuum Oven	01 No.
09127-	Test sieve	01 No.
	Digital Moisture Balance	01 No.

PRE-INSTALLATION ON-SITE REQUISITES

A Fume Hood with regulated air draft

Power : 15A, 3 pin power supply

Clean dry and regulated air supply Min. 8 Bar.





MINIMUM IGNITION ENERGY

APPLICATION :

To determine the exact and precise energy and concentration at which a dust cloud is combustible or will ignite.

COMPLIANCE : ASTM E2019 ; IEC-61241-2-3; EN-13821

FEATURES

- a. Energy Range : 1mJ to 2000mJ
- b. Dispersion pressure : 7Bar (0.7mpa)
- c. Automatic setting of required Voltage, Current and time
- d. Colour Touch screen user interface
- e. LAN Enabled system
- f. Automatic Pre-run to determine the exact energy delivered
- g. Digital Display of all parameters on the touch screen controller
- h. Auto-detection of ignition by means of a thermal sensor
- i. Recording of all parameters like Required Energy, Actual Dissipated energy, air Pressure, Voltage, Current, sample weight, Concentration ambient temperature, humidity and Result
- j. Can be operated as a stand alone or via PC
- k. Integrated into a fume cupboard for easy connection to your ventilation
- l. Can be interfaced to a balance to record sample weight (**OPTIONAL**)
- m. 100% GLP compliant with password protection at every level and data + event log of all parameters and functions.
- n. Remote diagnostic and support (**OPTIONAL**)
- o. Quick connection/setup design for fast and easy operation.



- p. Can be programmed to auto run with preset energy raise and can also instruct the user to place a certain amount of sample for ignition, hence controlling the concentration. Saving costly skilled manpower. (Available only with balance option)
- q. Provision to calibrate all parameters and sensors connected to the system.
- r. Test vessel made of Borosilicate Glass.

OPTIONAL ACCESSORIES/SPARES

- * Balance with communication cable
- * Remote diagnostic capability and function
- * Calibration of all parameters and sensors
- * Spare Pressure sensor
- * Spare Solenoid Valve
- * Spare Electrode Holder
- * Spare Electrodes
- * Vacuum Oven
- * Test sieve

PRE-INSTALLATION ON-SITE REQUISITES

Ventilation system to connect to the fume hood

Power : 15A, 3 pin power supply

Clean dry and regulated air supply Min. 8 Bar.





LAYER IGNITION TEMPERATURE (LIT)

APPLICATION :

The Layer ignition temperature test apparatus permits the determination of minimum ignition temperature of a given thickness of powder deposited on a hot surface. The method is used for the specification of the "T" temperature rating of electrical equipment for use in hazardous areas (dusty atmospheres).

COMPLIANCES :

- * IEC 61241-2
- * EN 50281-2-1
- * ASTM E2021

STANDARD ACCESSORIES/PARTS

25013-00	Digital Hotplate 8"dia	01 No.
25013-01	15mm forma	01 No.
25013-02	12.5mm forma	01 Set.
25013-03	5mm forma	01 No.
25013-04	Data Logger with software	01 No.
25013-05	Temperature sensor	01 No.

PRE-INSTALLATION ON-SITE REQUISITES

A sturdy platform or table

Power : 15A, 3 pin power supply

PARTICLE SIZE /SIEVE ANALYSIS

APPLICATION :

For quantitative analysis of powder size.

COMPLIANCES :

- * CIPAC 58

FEATURES :

- * Digital Display of RPM.
- * Digital timer.





VAPOUR PRESSURE

APPLICATION :

The vapour pressure of a substance is defined as the saturation pressure above a solid or liquid substance. At the thermodynamic equilibrium, the vapour pressure of a pure substance is a function of temperature only

COMPLIANCES :

* European Commission Directive 92/69/EEC, method A4. Gas saturation Method.

STANDARD FEATURES

- * Measurement Range : 10^{-3} to 1^{-10}
- * Touch screen user interface
- * Automatic recording of flow and recording of inlet pressure, flow rate and pressures *
- * Automatic Flow control of minimum 3 test and expandable to control upto 8 station x 3 samples each
- * 100% GLP Compliance
- * LAN enabled system
- * Cylinder change prediction

OPTIONAL ACCESSORIES

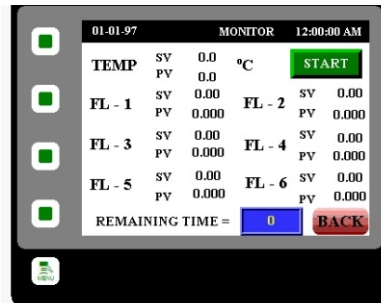
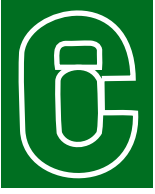
- a. Calibrated bubble flow meter for flow calibration.
- b. Spare Glass test assemblies
- c. Spare Gas temperature stabilisers.
- d. Multi-stage precise pressure regulator for cylinder Pressure control.
- e. Other Spares available on request.

PRE-INSTALLATION ON-SITE REQUISITES

Power : 15A, 3 pin power supply

Regulated Nitrogen gas supply with Max. 1.5Bar

Ethernet hub/port to connect to Lan or PC





THERMAL STABILITY CHAMBER

APPLICATION :

For long duration stability test or storage of samples at a constant and precisely controlled temperature.

FEATURES :

Chamber Design : Double walled/Triple walled

Inner Chamber : Inner chamber made of Stainless Steel 304 Grade.

Outer Chamber : Outer chamber made of Steel powder coated or S.S.

Insulation : Min. 65mm Insulation between inner and outer chamber.

Mobility : The unit is mounted on a sturdy steel frame with casting wheels (nylon) with brakes for easy mobility
(for higher capacity only.)

Conditioning system : A continuous duty Air Circulation Fan Motor provided at the back of the instrument, to maintain uniform temperature, CFC free refrigeration system and S.S Sheated heaters to achieve set temperatures.

View window : A Double walled glass view window is provided on the Door.

Outer Door : Inner stainless steel and Outer made of Steel or Stainless Steel or powder coated CR sheet, Silicon gasket and latch for door.

Trays : Perforated removable and adjustable Stainless Steel trays at the OR Rod mesh trays.

Temperature Range : Standard 10°C to 60°C or As per user requirement

Temperature Controller : PID temperature controller with dual LED display
(Process value and set value),

Temperature Resolution : 0.1°C

Temperature Accuracy : ± 0.5°C.

Temperature Uniformity : ± 3°C.

Power Supply 230 Volts Single Phase 50Hz, AC supply.





MODEL	CODE	SIZE	TRAYS
TC- 80	12016-01	350x400x600mm	2
TC-165	12016-02	500x400x900mm	2
TC-265	12016-03	600x500x900mm	2
TC-330	12016-04	600X550X1000mm	3
TC-500	12016-05	600X850X1000mm	3
TC-1000	12016-06	1000x1000x1000mm	3

OPTIONAL ACCESSORIES:

- * Data Logger for Chamber temperature vs time
- * Timer
- * All SS construction
- * Access port
- * 100% GLP system with touch screen user interface
- * Extra Trays

Temp. Ranges Available

- +10°C to 60°C
- 0°C to 60°C
- 10°C to 60°C
- 20°C to 60°C
- 20°C to 130°C





HUMIDITY CABINET / ENVIRONMENTAL CHAMBER

CODE: 12017

APPLICATIONS:

PRODUCT CONDITIONING, PERFORMANCE TESTING, ENVIRONMENTAL SIMULATION, STORAGE, EVALUATION, SEED GERMINATION, etc.,

USED IN : PHARMACEUTICALS, COSMETICS INDUSTRY, DEFENCE AND AEROSPACE, CHEMICAL INDUSTRY, PAINT COATING & PRINTING INDUSTRY, RUBBER INDUSTRY, PLASTIC INDUSTRY, PACKAGING INDUSTRY ETC.

These chambers are available in two models, Basic and Refrigerated

STANDARD FEATURES :

- Chamber Design : Double / Triple Walled construction.
- Inner Chamber : Made of thick Gauge, Matt finished SS 304/316.
- Outer Body : CR sheet, Powder coated / S.S. Matt finish.
- Door : With Double glass or Vacuum sealed View window.
- Lock : Latch type lock & Polyimide Handle.
- Controller : Programmable Microprocessor based temperature cum humidity controller.
- Sensor Type : RTD sensor (wet and dry principle).
- Trays : Adjustable Rod mesh or Perforated Trays.
- Illumination : Internal illumination provided.

Air Circulation : Convective Air flow by dynamically balanced SS blower with continuous Duty TEFC motor at the rear for uniformity in the chamber.

Insulation : Low 'K' factor Thick Ceramic Wool/Puff insulation

Heaters : Special SS air heaters.
Gasket : Silicone Gasket for leak proof operations.

Wheels : Castor wheels for easy mobility.

Refrigeration : CFC free air cooled compressor system.





Temp. Range	: Ambient to 65°C (BASIC MODEL) : 10°C to 65°C (REFRIGERATED MODEL) : -10°C to 130°C (REFRIGERATED MODEL) : -30°C to 130°C (REFRIGERATED MODEL)
Temp. Resolution	: 0.1°C
Accuracy	: ± 1°C
Humidity Range	: ± 5% above amb. to 98% RH (BASIC MODEL) : 30% TO 98% RH (OPTIONAL with REFRIGERATED MODEL)
Humidity Resolution	: 0.1% RH
Accuracy	: ± 5%
Operation	: 230V 50Hz, single phase/3 phase.

MODEL	CODE	SIZE	TRAYS
HC- 80	12017-01	350x400x600mm	2
HC-165	12017-02	500x400x900mm	2
HC-265	12017-03	600x500x900mm	2
HC-330	12017-04	600X550X1000mm	3
HC-500	12017-05	600X850X1000mm	3
HC-1000	12017-06	1000x1000x1000mm	3

*** CUSTOM BUILT SIZES AVAILABLE ON REQUEST**

OPTIONAL ACCESSORIES

- ✍ PROGRAMMABLE DIGITAL TIMER.
- ✍ DATA RECORDING SYSTEM (USB BASED)
- ✍ AUTOMATIC BOILER WATER LEVEL CONTROL & ALARM
- ✍ AUTOMATIC WATER LEVEL CONTROL FOR WET BULB SENSOR RESERVOIR
- ✍ 100% GLP SYSTEM WITH TOUCH SCREEN BASED CONTROL
- ✍ SPARE TRAYS/RACKS
- ✍ ACCESS PORT AT THE SIDE (50mm).
- ✍ DE-HUMIDIFICATION SYSTEM FOR RH UPTO 30%
- ✍ DOOR LOCK
- ✍ DOOR OPEN SENSOR





OTHER TEST EQUIPMENT FOR OECD & CIPAC TESTING

- * 20-LITRE SPHERE
- * POWDER RESISTIVITY TESTER
- * LIQUID RESISTIVITY TESTER
- * MINIMUM IGNITION ENERGY,
BOILING POINT
- * AUTOMATIC MELTING POINT
- * SPECIFIC GRAVITY & DENSITY
- * TAP DENSITY APPARATUS
- * BULK DENSITY APPARATUS

OTHER SPECIAL PURPOSE TESTING SYSTEMS CAN BE DESIGNED AND DEVELOPED AS PER REQUIREMENT OR AS PER REQUIRED STANDARDS.

NOTE : DUE TO CONTINUOUS DEVELOPMENT DESIGN(S) SUBJECT TO CHANGE WITHOUT PRIOR INTIMATION.

DESIGNED & MANUFACTURED BY:



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