



# KAVIN SCIENTIFIC PRODUCTS



# KL - 101 - AUTOCLAVE VERTICAL



Vertical Autoclave, high pressure electrically heated steam sterilizer is used for sterilization of hospital surgical instruments, dressing material, linen, rubber, plastic materials by mean of saturated steam under pressure of 20 psi. Autoclave is also used in all scientific laboratories, educational institutions and industries.

## CONSTRUCTION:

Double walled construction with boiler made of stainless steel thick sheet. Inner and Outer chamber is fully made of Stainless Steel Sheet. Lid is made of stainless steel thick plate and is tightened all-round by wing nut locking system. Sterilizer is hydraulically tested upto 40 psi as safety measures and fitted with Neoprene Rubber Gaskets to ensure tight sealing.

Autoclaves are fitted with pressure gauge, steam release cock, spring-loaded safety valve that can set at any selected point from 15 psi to 20 psi +/- 3 psi and drain outlet. An ISI marked immersion type suitable rating heating element heats the water and steam to desired temperature and pressure.

Supplied complete unit with PEDAL LIFTING DEVICE, Perforated S.S. Basket, Wing Nut opener, Cord and plug to work on 220 Volts, 50 Hz AC supply

Maximum Pressure : 30 psi | Regular working pressure : 15 psi

Inner Chamber Dia & Depth	Load
250 x 450 mm	2.0 kw
300 x 500 mm	3 kw
350 x 600 mm	3 kw
450 x 600 mm	4 kw
550 x 750 mm	5 kw
750 x 1000 mm	6.5 kw

## OPTIONAL ACCESSORIES FOR THE ABOVE AUTOCLAVES EXTRA COST

1. Water level indicator, (to indicate water position inside the boiler)
2. Automatic low water level cut of switch
3. Automatic pressure Control cut/off switch
4. Digital temp. Controller-cum-indicator with Sensor
5. Digital temp. Controller-cum-indicator with Sensor with Timer
6. Radial Locking System





# KL-102 - BACTERIOLOGICAL INCUBATOR – (LAB MODEL)

K-LAB Incubator reliable day-to-day operation in variety of uses. Drying and staining of slides, paraffin embedding, tissue culture work, incubation of antibody test, excellent for Microbiological determinations etc.

## CONSTRUCTION:

Bacteriological Incubator is sturdy, double walled with doors, Inner chamber made of Stainless steel. Door fitted with Double glass window and heavy stainless steel hinges facilitate inspection of samples without opening the door. Transparent glass door let viewing the specimen inside without disturbing chamber temperature. The outer body is of thick mild steel sheet with attractively finished in powder coating for durable operation. Inner space in between the walls is filled with 2.5" fine glass wool insulation to minimize the heat loss between the walls.

The temperature is controlled by a capillary thermostat variable from +5 deg above ambient upto 80 deg with a sensitivity of +/- 2 deg C. Inner chamber accommodates easily removable stainless steel perforated trays adjustable height, adjustable Air ventilator is provided at the top.

Supplied complete with trays, air ventilators, pilot lamps indicating Lamps on/off switch, Thermostat & Cord and plug. Suitable to operate on 220 volts 1 Phase, 50 Hz AC supply.

Available in following chamber sizes:

Inner Chamber W x H x D	No. of Shelves	Rating
350 x 350 x 350 mm	1 No.	300 W
450 x 450 x 450 mm	2 Nos.	500 W
450 x 600 x 450 mm	2 Nos.	600 W
600 x 600 x 600 mm	3 Nos.	750 W
600 x 900 x 600 mm	3 Nos.	1000 W

OPTIONAL ACCESSORIES: SUITABLE FOR THE ABOVE MODEL

1. Digital Temperature Indicator-cum-Controller with RTD Sensor
2. Air Circulating Fan Assembly – (Size: Up to 450 x 450 x 450mm)
3. Air Circulating Fan Assembly – (Size: Up to 450 x 600 x 450mm and Above)
4. Timer range 0-9999 min.



# KL-103 -BACTERIOLOGICAL INCUBATOR (MEMMERT TYPE - UNIVERSAL MODEL)



K-LAB Incubator reliable day-to-day operation in variety of uses. Drying and staining of slides, paraffin embedding, tissue culture work, incubation of antibody test, excellent for Microbiological determinations etc.

## CONSTRUCTION:

Bacteriological Incubator is sturdy, Triple walled with doors, Inner chamber made of Stainless steel. Door fitted with Double glass window and heavy stainless steel hinges facilitate inspection of samples without opening the door. Transparent glass door let viewing the specimen inside without disturbing chamber temperature. The outer body is of thick mild steel sheet with attractively finished in powder coating for durable operation. Inner space in between the walls is filled with 3" fine glass wool insulation to minimize the heat loss between the walls.

The temperature is controlled by a Capillary Thermostat variable from +5 deg above ambient upto 80 deg with a sensitivity of +/- 2 to 3 deg C temperature is achieved by putting nichrome wire heater inside the ribs at bottom and vertical sides of the chamber to uniform temperature. Inner chamber accommodates easily removable stainless steel perforated trays adjustable height, adjustable Air ventilator is provided at the top. Incubator is fitted with a suitable Air Circulating Fan assembly (Optional)

Supplied complete with trays, air ventilators, pilot lamps indicating Lamps on/off switch, Thermostat & Cord and plug. Suitable to operate on 220 volts 1 Phase, 50 Hz AC supply.

Available in following chamber sizes:

Inner Chamber W x H x D	No. of Shelves	Rating
350 x 350 x 350 mm	1 No.	300 W
450 x 450 x 450 mm	2 Nos.	500 W
450 x 600 x 450 mm	2 Nos.	600 W
600 x 600 x 600 mm	3 Nos.	750 W
600 x 900 x 600 mm	3 Nos.	1000 W

OPTIONAL ACCESSORIES FOR THE ABOVE AUTOCLAVES EXTRA COST

1. Digital Temperature Indicator-cum-Controller with RTD Sensor
2. Air Circulating Fan Assembly – (Size: Up to 450 x 450 x 450mm)
3. Air Circulating Fan Assembly – (Size: Up to 450 x 600 x 450mm and Above)
4. Timer range 0-9999 min.







# KL-104 -B.O.D. INCUBATOR SUPER DELUXE TYPE WITH DIGITAL TEMPERATURE CONTROLLER CUM INDICATOR

The BOD incubator is most versatile and highly reliable low temperature incubator to make Biochemical Oxygen Demand determinations and for preservation of vaccines, insulin, level extracts, chemicals etc.

## CONSTRUCTION:

Double walled robust cabinet, wheel mounted, Insulated with 3" mm super glass wool between the intermediate and exterior walls, which forms the main structure. Outer chamber is made of mild steel attractively finished with powder coating for durable operation. Inner Chamber made of Stainless steel interior walls has supports allowing wide range of shelf positions and spacing. Door fitted with Double glass window and heavy stainless steel hinges facilitate inspection of samples without opening the door. Transparent glass door let viewing the specimen inside without disturbing chamber temperature. Lock arrangements is provided in the double walled outer door. Unit fitted with a door-operated lamp of illumination inside the chamber.

Supplied complete with 2 or 3 shelves of Stainless Steel as per chamber, Cord and plug Suitable to work on 220V, 1 Phaze, 50 Hz, AC supply. The unit is provided with 4 Nos. wheels for easy movements.

### OPTIONAL ACCESSORIES:

1. Automatic Digital Timer range 0-24 hrs (0-9999)
2. Stabilizer 1 KVA

## TEMPERATURE CONTROL

B.O.D. Incubator is the excellent and reliable Digital temp. Controller – cum – Indicator with RTD Sensor control range from 5 deg C to 60 deg C +/- 1 deg C. Hermetically sealed high performance Kirloskar-Copeland compressor, air cooled condenser works efficiently to lower the inside chamber temperature & accessories provided at the bottom of the chamber. Heating elements made of Nichrome wires are placed in the inner back side of the BOD Incubator. Cooling coils are distributed all round the chamber and lie in the air circulation path. Air is circulated by a fan to keep the temp uniform throughout inner chamber.

## CONTROL PANEL

All controls and circuitry are housed at the top of the incubator & therefore protected from spillage. Separate indicator lamps for mains, heating and cooling are fitted. Temperature setting knob allows the user to select and set any desired temp.

Inner Chamber W x H x D	Capacity Cu. Ft.	No. of Shelves	Power Rating
455 x 610 x 410 mm	4.0 Cu. Ft.	2 Nos.	1.0 KW
505 x 830 x 415 mm	6.0 Cu. Ft.	2 Nos.	1.5 KW
565 x 865 x 550 mm	10.0 Cu. Ft.	3 Nos.	1.5 KW
650 x 900 x 580 mm	12.0 Cu. Ft.	3 Nos.	2.0 KW
700 x 900 x 650 mm	15.0 Cu. Ft.	3 Nos.	2.5 KW



# KL-105 BUNSEN BURNER

Electrically operated, Body made of Stainless Steel and the base made of Stainless sheet. Unit is fitted with built-in Energy Regulator & indicating lamps. Supplied with plug & cord. Available with/without Pyrometer. Suitable for heating crucibles with samples. **Temp. Range:** 600 deg. C  
**Type of Power Rating:** 350 Watts (With regulator)



# KL-106 CARBON & SULPHUR DETERMINATION APPARATUS

The furnace is designed to accommodate combustion tubes of dimensions 17mm x 22mm x 600 mm. Tubular combustion furnace unit, heated by 2 Nos. Silicon Carbide heating elements suitable for 1300 deg C. Control panel with a step down indicating the Digital Temperature, volt meter and Ammeter thyristor based control panel range of upto 1400°C. Indicating lamps & coarse and fine control etc.

The following Glass Parts of Borosilicate Glass are mounted on an attractive teak wood stand with laminated board as the base.

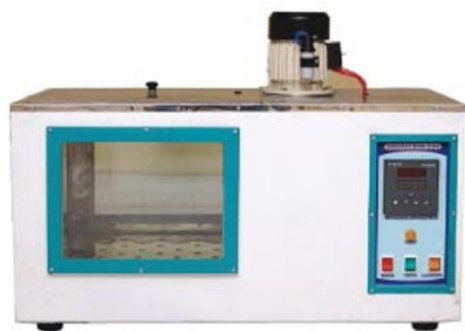
1. Sulphur Cup
2. Sulphur burette 4 ml or 25 ml
3. Coil condenser
4. One Liter Reservoir
5. 'L' bend stopcock
6. Three ways stopcock
7. Carbon Burette with a range of 4.5% or 1.5% or 0.5% (Please indicate the range required while ordering)
8. Leveling bottle
9. Gas washing bottle
10. Absorption vessel
11. Dust Trap, 12. Eye Piece

In addition to the above, the following standard accessories are supplied along with every equipment.

1. Kanthal scoop for handling the combustion boat - 1 No.
2. Instruction manual with pressure temperature correction chart - 1 Set.
3. Combustion tubes - 2 Nos.
4. Clamps for heating elements - 4 Nos.
5. Rubber tube - 10 Mtrs.
6. Combustion Boats - 50 Nos.

1. Single Burette Model with Cr./Al. Thermocouple
  2. Double Burette Model with Cr./Al Thermocouple
- Option Extra :** Pt/Pt/Rh Model Thermocouple





## KL-107 CONSTANT TEMPERATURE BATH

Double walled chamber, inner made of thick stainless steel sheets and outer made of mild steel sheets duly finished in powder coating. Glass Window provided in the front side for an easy inside view.

Inner space in between the walls tightly packed with special grade glass wool. Top Lid is made of stainless steel sheet plate and provided with handle. Heating elements are chromium plated immersion type. Temperature controlled by precision thermostat. A medium speed stirrer with 1/20 HP motor is fitted to the unit for continuous stirring and thus maintaining uniform temperature throughout the working chamber. Built in control panel accommodates indicating lamps, precision thermostat, On/Off switch, speed regulator to control speed of the stirrer. Designed to work on 220/230 volts a/c supply.



**TEMPERATURE RANGE:** Ambient +5 deg C to 100 deg C +/- 2 deg C

Capacity Volume	Chamber size
20 Litres	200 x 250 x 320 mm
24 Litres	220 x 250 x 320 mm
40 Litres	370 x 260 x 350 mm

# KL-108 CRYOSTAT BATH (ULTRA)



Double walled chamber, inner made of stainless steel and outer made of mild steel sheets and attractively finished in powder coat paint. The inner space in between the walls is tightly packed with special grade glass wool to avoid thermal losses.



The chamber is provided with top opening lid made of stainless steel and provided with handle. Evaporating coils are kept inside the inner chamber for faster cooling.

The refrigeration system consisting of compressor, air cooled condenser and accessories is provided at the lower portion of the bath.

The temperature is controlled by digital ON / OFF temperature controller with an accuracy of  $\pm 2^{\circ}\text{C}$ . The unit is fitted with a stirrer to re-circulate the liquid in the tank to maintain uniform temperature inside the bath. Built in control panel with indicator lights, On/off switches, digital temperature controller are provided at the side of the bath.

**TEMPERATURE RANGE:** -  $20^{\circ}\text{C}$  to  $90^{\circ}\text{C} \pm 2^{\circ}\text{C}$  /  $-30^{\circ}\text{C}$  to  $90^{\circ}\text{C}+2\text{C}$

Capacity Volume	Chamber size
12 Litres	220 x 220 x 260 mm
28 Litres	300 x 360 x 300 mm
40 Litres	370 x 300 x 400 mm

## OPTIONAL

a) PID temperature controller for  $<1$  deg C accuracy







# KL-109 DEEP FREEZER (HORIZONTAL)

K-LAB Deep Freezer are reliable day-to-day operation in variety of uses in the field of Medical R&D unit, Agriculture, Industries, Educational Institutions etc.

## CONSTRUCTION:

Double walled chamber with opening at the top. Top portion of the chamber and top lid are made of thick stainless steel well polished and fusion welded. The Outer chamber is made of M.S. Sheet and attractively finished in powder coated finish. Inner chamber is made of Stainless Steel.

## INSULATION:

High class insulation with combination of special grade glass wool and PUF insulation is provided at the sides between to two walls to minimize the sweating in humid conditions.

The top lid is provided with gasket seals and locking arrangements. Evaporating coils are lead soldered and fixed in the back side of the inner chamber. Temperature maintained and controlled by Digital Temperature controller working in conjunction with PT 100 sensor. Refrigerant system consists of compressor, air cooled condenser and heavy duty motor driven fan are provided at the bottom. The Control panel with built in Digital Temp. Controller cum Indicator, indicating lamp with switches etc. are provided.

**TEMPERATURE RANGE** : Ambient 5 deg C. to  $-20^{\circ}\text{C} \pm 40^{\circ}\text{C}$

**POWER SUPPLY** : 220/240 Volts 1 Phaze, 50 Hz AC Supply

Capacity Volume	Chamber size
110 Litres	550 x 400 x 650 mm
165 Litres	800 x 400 x 650 mm
280 Litres	1200 x 400 x 650 mm



# KL-110 DEEP FREEZER (VERTICAL)



K-LAB Deep Freezer are reliable day-to-day operation in variety of uses in the field of Medical R&D unit, Agriculture, Industries, Educational Institutions etc.

## CONSTRUCTION:

Double walled chamber. Inner chamber made of Stainless steel well polished and fusion welded. The outer is made of M.S. Sheets attractively finished in powder coating for durable operation. The inner chamber accommodates Stainless Steel Trays at adjustable height.

## INSULATION:

High grade glass wool or PUF insulation is provided at the sides between to two walls to minimize the sweating in humid conditions.

Evaporating coils are lead soldered and fixed in the back side of the inner chamber. Double walled door in front provided with magnetic gasket for perfect sealing and provided with heavy duty latching arrangement. Temperature maintained and controlled by Digital Temperature controller working in conjunction with PT 100 sensor. Door operated illumination lamp is provided inside the chamber. Refrigerant system consists of compressor, air cooled condenser and heavy duty motor driven fan provided at the bottom while the control panel with built in digital temp. Controller cum indicator, indicating lamp with switches etc. provided on the top of the cabinet.

**TEMPERATURE RANGE :** Ambient 5 deg C. to -20 Deg. C/ -40 Deg. C

**POWER SUPPLY** : 250 Volts 1 Phaze, 50 Hz AC Supply

Capacity Volume	Inner Chamber size
110 Litres	425 x 400 x 680 mm
165 Litres	500 x 415 x 825 mm
280 Litres	580 x 500 x 1000 mm





## KL-111 – DRYBATH (TUBE HEATING BLOCK)



This block is composed of an outer case with heater and thermostat, fitted with aluminium blocks drilled to accept test tubes of 25mm dia. Temperature control by means of thermostat. Outside painted in epoxy powder coating. Outer case is insulated and ventilated. **Temperature range 90°C to 300°C.**

The chamber has 40 holes to accept 25 mm dia. Test tubes

### OPTIONAL:

- (i) Digital Temp controlled-cum-indicator
- (ii) The above chamber with 40 holes to accept 13 and 19mm test tubes.

## KL-112 EGG INCUBATOR

Double walled chamber, Outer made up of M.S. Sheet, finished in powder coating & inside made of stainless steel sheets. The inter space between inner & outer wall is packed with high – grade mineral glass wool.

Temperature range from ambient + 5 C to 70 C. and is controlled by capillary type thermostat with an accuracy of +/- 3 C.

The unit is provided with air circulating fan and a manual tray tilting device, so as to tilt the tray holding the eggs. Supplied with control panel. Designed to work on 220/230 VAC supply.

The egg incubator is available in capacities ranging from 50 eggs, 100 eggs, 300 eggs, 500 eggs, and 1000 eggs.

### AVAILABLE:

- a . Without humidity Control
- b. With Humidity Control



Capacity Volume	Without humidity control Rs.
50 eggs	23,000-00
100 eggs	30,000-00
200 eggs	40,000-00
300 eggs	50,000-00



# KL - 113 - ELECTRICAL FURNACE GROOVED MUFFLE



Double walled chamber inner made of 4 nos. siliminite refractory slabs and outer made of cold rolled mild steel sheet finished in powder coating. Insulation by Ceramic fibre blankets to minimize radiation heat loss. Double walled insulated door mounted on heavy-duty hinges is provided with effective locking arrangements. Heating elements will be Kanthal A1 coils suspended in the grooves of the refractory.



Temperature is maintained and controlled by Digital temperature controller working in conjunction with Cr/Al thermocouple placed in the hot zone. Supplied complete with control panel.

Light weight with ceramic wool insulation. Suitable to work on 220V, single phase 50 Hz, AC supply.

**Operating Temperature** : Ambient +5 to 930°C/1100°C

**Max. Temperature** : 1150 Deg. C

Muffle Size (inside)	Rating
100 x 100 x 225 mm (4"x4"x9")	1.5 kw
125 x 125 x 250 mm (5"x5"x10")	2.5 kw
150 x 150 x 300 mm (6"x6"x12")	3.5 kw
200 x 200 x 300 mm (8"x8"x12")	5.0 kw
300 x 300 x 300 mm (12"x12"x12")	7.5 kw





# KL-114 " " ELECTRICAL TUBULAR FURNACE 1150°C

The furnace is supplied in vertical or horizontal model, as per request of customers.

Double walled chamber outer chamber made of cold rolled mild steel sheets and finished in powder coating. The Inner chamber is formed by high Alumina tube capable of withstanding temperature up to 1200°C. The tube will have one end closed or both ends opened as per the requirement of customers. Insulation with high-density superior quality ceramic fibre blanket.

The furnace is heated by KANTHAL heating elements. The temperature is controlled by Digital PID Controller with S.S.R. output. The sensor will be Cr/Al type thermocouple. The size of the tubes available are 40 to 100mm ID and with length of 350mm to 650mm.



**Temperature range :** 600 - 1150°C

**Power supply :** 230 volts, single phase

**OPTIONAL ACCESSORIES**

- 60-70 ODMM X 600MM Length

Tube size (mm)	Rating
Ø40x350 (L)	750 watts
Ø50x450 (L)	1000 watts
Ø65x650 (L)	1500 watts



# KL- 115 " FUME EXHAUST HOOD



Laboratory fumes hoods are one of the most important components used to protect laboratory personnel from exposure to hazardous chemicals and agents used in the laboratory. When used properly, they exhaust toxic, offensive or flammable materials when the containment of an experiments or procedures fails and vapors or dust escape from the apparatus being used.

## CONSTRUCTION:

Cabinets is made of Thick Ply Board / M.S. Duty Powder coated / Stainless steel (304). Interiors coated with Asbestos / Lead sheets and further coated with fire proof epoxy paint.

Working table upto 2 feet is covered with glazed ceramic Acid Resistant tiles. Working table is covered with Granite / Tiles / S.S. 304.

## DOOR

Front door is made of 6mm clear Toughened glass. Counter weight balance Front Door. Vertical sliding facility & the front door can be stopped at any point.

## EXHAUST SYSTEM

Exhaust blower consists of single phase motor which is enclosed in a wooden casing connected with a PVC Exhaust Ducting.

### Working Area Size

2' x 2' x 2'

3' x 2' x 2'

4' x 2' x 2'

5' x 2' x 2'

6' x 2' x 2'



## KL-116 -" FLOCCULATOR (JAR TESTING APPARATUS)



Illuminator base consists of fluorescent tube mounted below translucent plastic to provide diffused cold light through floc samples. Flocculator consists of geared continuous run heavy duty 1/20 H.P. variable speed motor from 50 to 100 RPM with built in speed control.

Stainless steel stirring rods are provided with adjustable spacers to adjust the depth of stirring paddles. The stirring shaft can be removed without disturbing other stirrers. It is supplied with stirrers (2, 4, or 6 depending upon order). Suitable to operate on 220 Volt, 50Hz, 1 Phase, AC supply. The units are supplied with beakers.

### SIZE

TWO STIRRER  
FOUR STIRRER  
SIX STIRRER

### OPTIONAL ACCESSORIES

• DIGITAL RPM

## KL-117 GLASS BEAD STERILIZER

An alternative to traditional methods of sterilizing, once switched 'ON' the units are ready to use within 30 minutes and ensure that destruction of all micro-organisms within seconds. Preset temp of 230°C-250°C, incorporated with a thermostat with an accuracy of +1-2°C of the preset range.

These are compact enough to be placed on any Laminar Air Flow bench or any other work side tables in a clean room.

### Crucible size (Dia x Depth)

2" dia x 2" depth  
2" dia x 6" depth



# KL-118-HEATING BATHS

## FEATURES:

- Compact and space saving
- Powerful pump
- Low level cut off (advance model)
- Over Temperature cut off (advance model)
- Top of SS
- Inner tank of SS , outer body powder coated MS



## TECHNICAL SPECIFICATIONS :

Model	Temperature Range °C	Bath volume (litres)	Pump type	Pump Pressure (mbar)	Flow Rate (max) LPM	Bath opening W x D x H (cms)	Overall dimensions W x D x H
KL-WB5	RT + 5 to 100	5	force	300	12	13 x 12 x 15	24 x 45 x 38
KL-WB10	RT + 5 to 100	9	force	300	12	15 x 23 x 15	24 x 45 x 38
KL-WB20	RT + 5 to 100	20	force	300	12	28x 35 x 15	32 x 52 x 38



# KL-119 " HOT PLATE (CIRCULAR)

This is heavy duty heating plate with a removable MS/SS plate at the top. The housing is made of mild steel sheet and finished in powder coat paint. A heat control switch for low, medium and high heat and two nos. indicating lamps are provided on the front panel

The hot plate has a maximum power consumption of 3.0 Kw. The unit is designed for operating on 230 V, 1 phase, 50 Hz AC supply.

Standard size	Rating
8" Dia	1.5 kw
10" Dia	2.0 kw
12" Dia	2.0 kw





## KL-120 HOT PLATE (RECTANGULAR)

Tube size (mm)	Rating
10" x 12" Dia	1.5 kw
10" x 16" Dia	1.5 kw
12" x 18" Dia	1.5 kw
12" x 24" Dia	2.0 kw
18" x 24" Dia	3.5 kw

## KL-121 HUMIDITY CHAMBER

Double walled construction, interior made of thick gauge stainless steel sheets and exterior made of cold rolled mild steel sheets finished in powder coat. Inner space in between the walls is packed with special grade glass wool.

The door is double walled having toughened glass window and seals against atmospheric infiltration by rubber gasket. The Inner chamber accommodates stainless steel trays at adjustable height.

Heater and blower are fitted in the rear side of the interior for above ambient temperature. For achieving below ambient temperature evaporator coils, compressor, condenser and fan motor are provided. Humidity is attained by the mist of water that is circulated inside the chamber for maintaining 40% to 95% humidity. A water reservoir will be provided with Auto low-level water cut off device and alarm.

Compact control panels with switches, Indicating lamps, Temperature controllers are fixed at the side of the chamber for operational convenience.



### Chamber size

455 x 455 x 710 mm

605 x 605 x 605 mm

605 x 605 x 910 mm

# KL-122 " HIGH TEMPERATURE FURNACE 1400°C

High temperature Muffle Furnaces are designed to meet the requirements of varies customers in Industries, Educational Research fields etc.



## CONSTRUCTION:

Double walled chamber, outer made of cold rolled mild steel sheets and finished in powder coating paint. Inner chamber formed by high temperature withstand Zirconia Vacuum Board followed by Ceramic fibre blankets on all the sides.

Double walled door mounted on heavy-duty hinges in the front is provided with effective locking arrangements. Heating elements will be Silicon Carbide Rods. Further the door is provided with door limit switch to cut off the power supply whenever the door is opened and to restart when the door is closed.

Temperature is maintained and controlled by Digital PID Temperature controller with Thyristor Control Device working in conjunction with Cr/A1 Thermocouple. Supplied complete with control panel.

**Continuous Operating Temperature** : 1350 Deg. C

**Maximum Temperature** : 1400 Deg. C

Suitable to work on 220V, single phase 50 Hz, AC supply.

Muffle size (inside)	Rating
100 x 100 x 225 mm (4"x4"x9")	1.8 kw
125 x 125 x 250 mm (5"x5"x10")	2.5 kw
150 x 150 x 300 mm (6"x6"x12")	3.5 kw
200 x 200 x 300 mm (8"x8"x12")	5.0 kw
300 x 300 x 300 mm (12"x12"x12")	7.5 kw





# KL-123 " " HOT AIR OVEN (LABORATORY MODEL)

## TEMPERATURE CONTROL

The temperature is controlled by a capillary thermostat variable from 5 deg. C above ambient to 250 deg.C with a sensitivity of +/- 2 deg C.

## VENTILATION

Air ventilators are provided at top as well as at the bottom to ventilate gases and fumes if any.

## CONTROL PANEL

The equipment is provided with a panel which is just below the door having a Capillary type Thermostat, thermostat control known knob, On/Off switch, two pilot lamps and provision for fixing the Timer.

## POWER REQUIREMENT

Supplied with cord and plug, Suitable to operate on 220V as per indicator single phase, 50 Hz AC supply.

OPTIONAL ACCESSORIES: SUITABLE FOR THE ABOVE MODEL

1. Digital Temperature Indicator-cum-Controller with RTD Sensor
2. Air Circulating Fan Assembly – (Size: Up to 450 x 450 x 450mm)
3. Air Circulating Fan Assembly – (Size: Up to 450 x 600 x 450mm and Above)
4. Timer range 0-9999 min.

## CONSTRUCTION

It is double walled construction. Inner chamber made of Stainless steel. Outer chamber is made of mild steel attractively finished in powder coating for durable operation. Inner chamber is fabricated with ribs to adjust trays to any convenient height. Oven supplied with removable perforated trays 2 or 3 depending on sizes. Trays are made of Stainless Steel

## INSULATION

It insulated by 2.5" gap between the walls is filled with special grade glass wool for proper insulation and to avoid heat losses.

## DOOR

It is double walled inner Stainless Steel and outer chamber mild steel with powder coated paint fitted with heavy stainless steel hinges with spring loaded lock.

## HEATING ELEMENTS

Heating elements are made of high-grade Nichrome wire, which are put inside the porcelain beads and placed at the bottom for uniform temperature all over the space.

Inner Chamber W x H x D	No. of Shelves	Power Rating
350 x 350 x 350 mm	1 No.	1.2 kw
450 x 450 x 450 mm	2 Nos.	1.8 kw
450 x 600 x 450 mm	3 Nos.	2.5 kw
600 x 600 x 600 mm	3 Nos.	3.0 kw
600 x 900 x 600 mm	3 Nos.	4.0 kw

# KL-124 " HOT AIR OVEN (DELUXE TYPE - MEMMERT MODEL)

## CONSTRUCTION

It is triple walled construction. Inner chamber made of Stainless steel. Outer chamber is made of mild steel attractively finished in powder coating for durable operation. Inner chamber is fabricated with ribs to adjust trays to any convenient height. Oven supplied with removable perforated trays 2 or 3 depending on sizes. Trays are made of Stainless Steel

## TEMPERATURE CONTROL

The temperature is controlled by a capillary thermostat variable from 5 deg. C above ambient to 250 deg.C with a sensitivity of +/- 2 deg C.

## VENTILATION

Air ventilators are provided at top as well as at the bottom to ventilate gases and fumes if any.

## CONTROL PANEL

The equipment is provided with a panel which is just below the door having a Capillary type Thermostat, thermostat control knob, On/Off switch, two pilot lamps and provision for fixing the Timer.

## POWER REQUIREMENT

Supplied with cord and plug, Suitable to operate on 220V as per indicator single phase, 50 Hz AC supply.

OPTIONAL ACCESSORIES: SUITABLE FOR THE ABOVE MODEL

1. Digital Temperature Indicator-cum-Controller with RTD Sensor
2. Air Circulating Fan Assembly – (Size: Up to 450 x 450 x 450mm)
3. Air Circulating Fan Assembly – (Size: Up to 450 x 600 x 450mm and Above)
4. Timer range 0-9999 min.



## INSULATION

It is insulated by 3" gap between the walls is filled with special grade glass wool for proper insulation and to avoid heat losses.

## DOOR

It is double walled inner Stainless Steel and outer chamber mild steel with powder coated paint fitted with heavy stainless steel hinges with spring loaded lock.

## HEATING ELEMENTS

Heating elements are made of high-grade Nichrome wire, which are put inside the porcelain beads and placed at the bottom and two vertical sides for uniform temperature all over the space.

Inner Chamber W x H x D	No. of Shelves	Power Rating
350 x 350 x 350 mm	1 No.	1.2 kw
450 x 450 x 450 mm	2 Nos.	1.8 kw
450 x 600 x 450 mm	3 Nos.	2.5 kw
600 x 600 x 600 mm	3 Nos.	3.0 kw
600 x 900 x 600 mm	3 Nos.	4.0 kw





# KL-125 " HIGH TEMPERATURE HOT AIR OVEN (INDUSTRIAL TYPE)

The oven designed and fabricated to suit various applications in the field of Medical, Agriculture, Rubber molding and Industrial Research Organization etc. Application of dry heat with temperature ranging 5 deg C above ambient to 400 deg C.

## CONSTRUCTION

It is triple walled construction all the chambers are made out of mild steel sheet. The outer chamber with attractively finished in powder coating paint. The inner and middle chamber heat resident aluminium paint. The 75mm gap between the walls is filled with special grade glass wool for proper insulation and to avoid heat losses on all sides including door.

## HEATING ELEMENTS

Heating elements are made by spring type Kanthal A1 heating coil, which are evenly distributed on the bottom portion of the chamber.

Suitable to work on 220/240 volts, 1 phase, 50 Hz, AC supply.

Inner Chamber W x H x D	No. of Shelves	Power Rating
350 x 350 x 350 mm	1 No.	1.2 kw
450 x 450 x 450 mm	2 Nos.	1.8 kw
450 x 600 x 450 mm	3 Nos.	2.5 kw
600 x 600 x 600 mm	3 Nos.	3.0 kw
600 x 900 x 600 mm	3 Nos.	4.0 kw

## TEMPERATURE CONTROL

A power selection switch which permits selection of High, Medium and Low wattage, assures quick stabilizing of working temperature inside the chamber. Temperature from above ambient +5 deg C. to 350 / 400 deg. C +/-3 deg C is controlled by Digital Temperature controller-cum-Indicator working in conjunction with FEK sensor within the operating range.

## VENTILATION

Air ventilators are provided at top as well as at the bottom to ventilate gases and fumes if any. Unit fitted with an Air Circulation Fan

## CONTROL PANEL

The equipment is provided with a panel which is having two indicators, rotary switch for low, medium and high wattage with off position, two expanded metal shelves are provided.

### OPTIONAL ACCESSORIES:

1. Digital Timer

# KL-126 "HEATING MANTLE WITH REGULATOR

Aluminium Housing with powder coat finish. The heating elements are made out of Kanthal wire on helically wound coil form safety insulated by fibre glass sleeveings which in turn is attached to knitted glass fabric, to give flexible support to the flask and controlled by a simmerstat.



**Temperature range:** 5 deg.C above ambient to 400 deg. C

Capacity	Rating
100 ml	60
250 ml	150
500 ml	200
1 Litres	300
2 Litres	500
5 Litres	800
10 Litres	1000
20 Litres	1500





# KL-127 " INDUSTRIAL DRYING OVEN (TRAY DRIER)

Industrial Tray Driers suitable for heat treatment, baking and drying applications in Industries or Institutes engaged in the production of Vaccines, Tablets, Bottle Sterilizing, Baking of Breads or Biscuits, Drying Chemicals PCB Processing, Electrical or electronic components etc. Application of dry heat with temperature ranging between 50 deg C to 300 deg C.

## CONSTRUCTION

Triple walled construction on sturdy angle iron frame with both inner and outer walls of thick PCRC sheet, which is duly decreased, and primer painted to prevent rusting. The inner wall is painted with aluminium paint to withstand long duration heating cycles normally required in Industrial applications.

The 100mm gap between the walls is filled with special grade glass wool for proper insulation and to avoid heat losses thereby saving energy. Air is constantly circulated by heavy-duty blower to maintain the inside temperature constant with a minimum temperature gradient throughout the working chamber.

## HEATING ELEMENTS

Heating is done by constantly circulating the air with heavy duty blower which are interlocked with Strip type heating elements placed equidistantly on the inner chamber. A ventilator with adjustable opening on the top facilities flowing away of any fumes or vapors produced during the process.

## POWER

Suitable to work on 400/440 Volt 3 phase 50 Hz AC mains.

## TEMPERATURE CONTROL

A power selection switch which permits selection of working temperature inside the chamber. Temperature from 50 deg C to 300 deg. C +/- 3 deg C is controlled by Automatic Digital temperature controller-cum-Indicator.

## VENTILATION

Air ventilators are provided at top as well as the bottom to ventilate gases and fumes if any.

## CONTROL PANEL

The equipment is provided with a panel which is having Mains on/off switch 1 No., heater on/off switch 1 no., mains indicating lamps 3 Nos., heater indicating lamps 1 no., motor starter 1 no., (push to on/push to off) ammeters 3 nos., volt meter with selector switch 1 no., heater selector switch 1 no., etc., fitted rights side of the oven itself.

Inner Chamber W x H x D	No. of Shelves	Power Rating
3' x 3' x 2'	12 Trays	5 kw
3' x 4' x 3'	24 Trays	8 kw
3' x 6' x 3'	48 Trays	12 kw
4' x 8' x 3'	96 Trays	22 kw



# KL-128 INOCULATION HOOD (U.V. STERILE CHAMBER)



Worktable made of polished stainless steel or melamine laminated ply. Door made of clear acrylic & provided with acrylic see-through window. One number UV lamp & one number fluorescent tube will be provided. Provided with vent holes on top of the chamber. Available in standard & custom-built size.

## Chamber Size

2 x 2 feet

3 x 2 feet

4 x 2 feet





# KL-129 INCINERATOR

To destroy the infected waste materials generated at health care facilities. Unit comprises of chamber to dump waste, Digital temp. Controlled electronic system to achieve 900 deg. C and an emission chimney which fulfills emission standards as laid down by pollution control board.

**Maximum Temperature** : 1000 Deg. C

**Regular Working Temperature** : 900 Deg. C

## CONSTRUCTION

The incinerator body is fabricated made out of M.S. Iron angle frame with welded and screw joints. The inner working chamber made out of 304/316 heavy grade stainless steel material with stainless steel TIG welding to avoid heat loss from working chamber. The Incinerator consists of dual chamber, Primary (burning chamber), and Secondary Chamber where the temperature of primary chamber is 850 deg C and the Secondary chamber 1050 Deg C.

The Heating chamber of the Incinerator is lined with High Quality Siliminite grooved refractories to hold the heating elements. Heating is accomplished by aid of Kanthal A-1 heating element coil form & provided on all four sides distributed the heat through the inner chamber uniformly & is easily accessible & re-changeable.

## DOOR

Double door system are provided for burning chamber and Ash collecting chamber, Flame proof and easy feeding charge door is provided. Size of the door 150 x 150 mm made out of stainless steel damper for avoiding the flame coming out when charging waste. The door also constructed at 30 degree inclination to feed the waste easily. Unit provided with wing nut door locking systems and fibre handle.

## SUPPORT STRUCTURES

The whole plant will be mounted in one supporting stand made of M.S. Iron Angle of 2 feet height with attractive colour finished paint.

## ASH SLING

The ash will be collected at the chamber bottom automatically. No manual handling is required to collect ash. By opening the door, the collected ash can be carried to ash tray. Size of the ash door 150 x 150 mm it will be made out of thick gauge M.S. with heat resistant aluminium paint.

## CHIMNEY WITH RAIN HOOD

The chimney is provided with 75mm (3" Dia) of 5 meters height also supplied along with the incinerator.

## CONTROL PANEL

The separate control panel box is provided any one side of the incinerator consists of the following necessary Electrical accessories:-

- 2 Nos. Automatic Digital Temp. Indicating controller with Cr/Al Thermocouple for control & indicate primary & secondary chamber temperature
- On/Off switch 2 nos
- Heavy duty Indicating lamps for Main and Heater
- Air Break magnet contactor

## POWER SUPPLY

Suitable to work on 220/230 Volt, 1 Ph, (OR) 400/440 Volts, 3 Phase, 50Hz AC supply.

Models	Capacity Per Hour
Electrical Operated	3 kg
	5 kg
	10 kg

## HIGHER CAPACITY & OPTIONAL MODELS

- a) Gas fired model with LPG Gas Burner
- b) Diesel fired model with diesel burner



# KL-130 " INCUBATOR SHAKER

Double walled chamber, inner made of polished stainless steel sheets and outer made of cold rolled mild steel sheets with powder coat finish. The wall is insulated with special grade glass wool.

The inner chamber accommodates one no. easily removable stainless steel tray at adjustable height and is also provided with a shaking platform with threaded holes for mounting stainless steel clamps for holding conical flasks from 50 ml to 1000ml capacity.

An outer double door with inner full view acrylic door permits inspection of specimens. Heating is by imported nichrome wires Temp. is controlled by a Digital Indicator cum controller working in conjunction with PT 100 sensor. Powerful air circulator creates positive airflow through the incubator.

The shaker is driven by a variable DC motor with variable speed control. The control panel accommodating, Digital controller, pilot indicating lamps, on/of switches etc, will be provided at the top of the unit.



## SPECIFICATION:

Chamber size	: 600x600x600mm
Temperature range	: 5°C to 60°C
Temperature accuracy	: ± 0.5°C
Shaking speed	: 50 to 250 rpm

## Platform holding capacity

16 Conical flasks x 500 ml
24 Conical flasks x 250 ml

Custom built sizes can also be provided on request.

# KL-131 "KJELDHAL DIGESTION UNIT (WITHOUT GLASS PARTS)



Capacity	Watts	Type
300 ml	900	6T x 6R
500 ml	1200	6T x 6R
800 ml	1800	6T x 6R





# KL-132 " LAMINAR FLOW CABINETS HORIZONTAL & VERTICAL MODELS

HASTHAS offers a comprehensive range of high performance Horizontal, Vertical Laminar Flow Clean air Cabinets. These are designed to meet the filtration, illumination, and noise & vibration requirements, providing particle free air to meet class 100 conditions of US Federal Standard.

## CONSTRUCTION

All Laminar Flow Cabinets are basically constructed out of DURO BOARD teak wood, which is termite and insect proof, fire and weather resistant. Front, back, top and exterior surfaces are covered with white DECOLAM or FORMICA. Interior are epoxy painted. Work table is made of mica top (optional) S.S. top and side panels of 6mm thick transparent flexi glass duly framed.

## AIR FLOW AND FILTRATION

Laminar flow principle involves double filtration of air. Atmospheric air is drawn through pre filter and is made to pass through highly effective HEPA (High Efficiency Particular Air) filters having efficiency rating as high as 99.99% with cold DOP and 99.97% with hot DOP, thus retaining all air-borne particles of size 0.3 micron and larger. Double filtered air blow in laminar flow through the work table at designed velocity of 90 ft/min +/- 20%.

## BLOWER MOTOR ASSEMBLY

Statically and dynamically balanced, direct drive, sized to provide adequate air flow volume over the entire surface of HEPA filter. Fitted with 1/4 HP motor and operates with minimum noise level i.e. lower than 65 db on scale and Vibration less than 2.5 um. (0.0001 deg).

## LIGHTING

Work area properly illuminated by diffused, glare free fluorescent light supplied with Gas inlet, Front Door, Manometer, Wheel for easy movement, UV Lamp.

## POWER REQUIREMENT

230V, Single phase, 50 Hz AC supply

Model	HL-22/VL-22	HL-32/VL-32	HL-42/VL-42	HL-62/VL-62
Working Area	2' x 2' x 2'	3' x 2' x 2'	4' x 2' x 2'	6 x 2' x 2'
Size of HEPA Filter	2' x 2' x 6"	3 x 2' x 6"	4 x 2' x 6"	3 x 2' x 6"
No.of HEPA Filter	1	1	1	2
No.of Pre Filter	1	2	2	3
Illumination	1x20w	1x20w	2x40w	2x40w

# KL-133 "LOW TEMPERATURE BATH

Hasthas Low temperature Baths are reliable day-to-day operation in variety of uses in the field of Medical, R & D units, Processing Industries etc.

Unit is sturdy with Double walled chamber. Inner chamber made of stainless steel and Outer chamber made of cold rolled M.S. Sheets attractively finished in powder coating for durable operation.



## Temperature Range

-10°C to 90°C

-20°C to 90°C

-30 °C to 90°C

Higher size  
capacity prize on request.

- Insulation : 70 mm P.U.F. Insulation between two walls.
- Heating element : 'U' type tubular immersion heater
- Cooling : Refrigeration system attached
- Circulation : Circulation pump for uniform temperature
- Control : Digital proportional temperature controller with P1 100



# KL-134 MELTING POINT APPARATUS

TYPE	Watts
With Energy Regulator	250
With Solid State Control	250
With Digital Temp. Control	250





# KL-135 MORTURAY CHAMBER

## CONSTRUCTION

The chamber will be constructed of cold rolled mild steel outer wall with powder coat finish or fully Stainless Steel. The inner chamber made of 304 grade stainless steel sheets to avoid any corrosion. Inner and the outer wall will be insulated with High grade glass wool to maintain low temperature.

Individual cabinet type drawers with proper balancing will be provided. Each cabinet can be drawn separately as required. The drawers will be provided with roller mechanism for smooth movement and provided with locking arrangement. The base of the cabinet drawer (stretcher) will also be made of stainless steel of 304 grades.

## DOOR

The door will also be insulated with leak proof gasket along the edges and mounted on heavy duty hinges provided with heavy duty handle and locking arrangement.

Specially designed evaporator coil with forced air circulation fan assembly will be provided for faster cooling and maintaining uniform temperature inside the chamber.

## COOLING SYSTEM

The cooling of the chamber will be performed by means of hermetically sealed cooling compressors.

## TEMP. CONTROLLER

The temperature control is by Digital Temperature Indicating Controller working in conjunction with PT 100 sensor.

## CONTROL PANEL

The control panel accommodates the Digital Temperature controller, Main MCB switch, Fuse, Indicating Lamps.

## CAPACITY

3 & 6 Bodies model is available.

## TEMPERATURE

4 Deg C for short terms storage and -10 Deg C for long terms storage.

### No. of Cabinets

3

6

## KL-136 "OIL BATH (RECTANGULAR)

Double walled chamber, inside made of stainless steel and outside made of cold rolled mild steel sheet and finished in powder coating. Inner space in between wall is in tightly packed with special grade glass wool in all the sides. The inner chamber accommodates perforated and removable diffuser shelf. The lid is also made of stainless steel and provided with handle.



Inner Chamber Size	Rating
250 x 250 x 250 mm	2.0 kw
300 x 300 x 300 mm	3.0 kw
355 x 355 x 355 mm	4.0 kw

Heating is achieved by immersion heaters and the temperature is controlled Digital Temperature Controller from Ambient to 300° C with an accuracy of  $\pm 1^{\circ}\text{C}$ . The unit is fitted with high speed stirrer with speed regulator for speed control. Built in control panel is provided at the side of the chamber. Instruments supplied without Oil.



## KL-137 "OIL BATH (CYLINDRICAL)

Double walled chamber, inside made of polished stainless steel and outside made of cold rolled mild steel sheet and finished in powder coating. Inner space in between wall is in tightly packed with special grade glass wool in all the sides.

Air heaters are provided for heating and a thermostat controls the temperature. Control panel accommodating pilot lamp and thermostat will be attached to the side of the bath. Supplied complete with plug and cord.

**Temperature Range :**  
Ambient +5 Deg. C to 250 Deg. C

Capacity	Rating
1000 ml	750 watts
2000 ml	1000 watts
3000 ml	1500 watts
5000 ml	1500 watts
10 Litres	2000 watts
20 Litres	2500 watts





## KL-138 "ORBITAL SHAKER

These shakers are ideal for mixing and development of culture, chemical, solvent and various other applications.

The orbital shaker is assembled in heavy duty mild steel angle and sheet section. The drive has Single Excenter and 3 pin.

Platform size	Holding capacity
450 mm x 450 mm	16 Flasks x 500 ml 16 Flasks x 250 ml
600 mm x 600 mm	25 Flasks x 500 ml 36 Flasks x 250 ml
900 mm x 900 mm	49 Flasks x 500 ml 81 Flasks x 250 ml

### OPTIONAL EXTRA

Digital RPM Indicator with suitable sensor Rs. 4,500-00

## KL-139 PARAFFIN WAX DISPENSER

It is double walled unit with both inner and outer made of Stainless Steel. The gap between the two walls is fitted with high grade glass wool to avoid thermal loss. Temperature from ambient to 70°C is controlled by hydraulic type thermostat. Tap system is provided for the outlet of molten paraffin wax.



# KL – 140 REFRIGERATED CIRCULATORS



## FEATURES

- Compact and space saving
- Robust cooling
- Powerful pump
- Low level cut off (advance model)
- Over Temperature cut off (advance model)
- Top of SS
- Inner tank of SS , outer body powder coated MS

## TECHNICAL SPECIFICATIONS

Model	Temperature Range °C	Bath volume (litres)	Cooling Capacity @ 20 0 C	Pump type	Pump Pressure	Flow Rate (max ) LPM	Bath opening W x D x H	Overall dimensions WxDxH(cms)
KL201-Z	0 to 50	5	300	force	300	12	13 x 12 x 15	13 x 12 x 15
KL201- J	-10 to 100	5	300	force	300	12	13 x 12 x 15	13 x 12 x 15
KL201- T	-20 to 100	5	300	force	300	12	13 x 12 x 15	13 x 12 x 15
KL-201-CH	-25 to 100	5	300	Force	300	12	13 x 12 x 15	13 x 12 x 15
KL201- BJ	-10 to 100	9	800	force	300	12	20 x 12 x 15	20 x 12 x 15
KL201- O20	-10 to 100	20	500	force	300	12	28 x 35 x 15	28 x 35 x 15
KL201- BT	-28 to 100	9	500	force	300	12	20 x 12 x 15	20 x 12 x 15
KL201- K3	-35 to 100	9	800	force	300	12	17 x 10 x 15	17 x 10 x 15
KL201- K4	-40 to 100	9	600	force	300	12	17 x 10 x 15	17 x 10 x 15
KL201- K5	-47 to 100	9	600	force	300	12	17 x 10 x 15	17 x 10 x 15





## KL-141 SEED GERMINATOR SINGLE CHAMBER (GROWTH CHAMBER)

Designed for conducting various experiments on variety of seeds under different parameters of temperature, humidity etc. Atmospheric environment is simulated within the laboratory to perform different experiments without going into the field.

### CONSTRUCTION

Double walled inner chamber made of stainless steel has S.S. Water reservoir at the bottom to provide 90% to 95% fixed humidity. Outer chamber is made of M.S. sheets and finished with powder coating.

Temperature from 5 Deg C to 50 deg. C is controlled by Digital Temp. Controller-cum-Indicator Electronic +/-1 deg.C. Side panel is fitted with pilot lamps, switches.

Supplied complete with S.S. perforated trays, cord and plug to operate on 220 volts, 1 Ph, 50 Hz, AC supply.

A push type switch for illumination lamp will be provided in the chamber. The plant chamber will be mounted on wheels.

The chamber is provided with cooling system by sealed Kirlosker Copeland Compressor with all accessories and fan cooled condenser fitted at the bottom of the working chamber. Evaporating coils are lead soldered around the outer of inner chamber.

Inner Chamber W x H x D	Capacity	No. of Trays Stainless steel
500 x 810 x 500 mm	6 cu.ft.	6
650 x 900 x 550 mm	12 cu.ft	12

# KL-142 SEED GERMINATOR DUAL CHAMBER (COMBINED)



Inner Chamber W x H x D	Capacity	No. of Trays Stainless steel
500 x 810 x 500 mm	6 cu.ft.	6
650 x 900 x 550 mm	12 cu.ft	12



## KL-143 SAND BATH – ELECTRICALLY OPERATED THERMOSTAT CONTROL (RECTANGULAR TYPE)

This is heavy duty heating plate with a removable MS plate at the top. The housing is made of mild steel sheet and finished in powder coated paint. A heat control switch for low, medium and high heat 2 nos. of indicating lamp are provided on the front panel.

Temperature controlled by Capillary type Thermostat from ambient to 300 Deg.C

Standard Size	Rating
10 " x 12 "	1.0 kw
10" x 16"	1.5 kw
12" x 18"	2.0 kw
12" x 24"	2.5 kw
18" x 24"	3.5 kw

The hot plate a maximum power consumption of 3.5 KW. The unit is designed for operating on 220/230 volts, 1 phase, 50 Hz, AC supply.



# KL-144 "SOXHLET EXTRACTION MANTLE (C.O.D) (WITHOUT GLASS PARTS)



Capacity	Watts	Type
100 ml to 350 ml	450	3T x 3R
100 ml to 350 ml	600	4T x 4R
100 ml to 350 ml	900	6T x 6R
500 ml	600	3T x 3R
500 ml	800	4T x 4R
500 ml	1200	6T x 6R
1000 ml	1800	6T x 6R



## KL-145 – UV CHROMATOGRAPHY INSPECTION CABINET

Chromatogram Viewing Cabinet combines both long wave and short wave ultraviolet and also white in a compact table top unit. This self contained unit is designed for easy viewing and marking of chromatograms and also for general influorescent studies.



# KL-146 VACUUM OVEN

Vacuum oven is reliable to-day-to operation in variety of uses in the filed of Medical, Industries etc.

## CONSTRUCTION

Unit is study with Double walled chamber. Inner chamber is cylindrical in shape made of Stainless steel with provision for vacuum and the vacuum gauge is provided at the top of unit and outer chamber rectangular in shape made of thick M.S. Sheets attractively finished in powder coating for durable operation.

A glass-viewing window is provided in the centre of the chamber for viewing the specimen inside without disturbing / opening the door. The Oven is filled with superior grade pure white thick glass wool insulation to reduce the radiation heat loss to the minimum. The Inner Chamber accommodates stainless steel trays at adjustable height. The door is of stainless steel plate with specially designed mechanism having alignment. A positive screw specially designed for tightening the lid obtains a perfect seal.

A seal of band heaters is wrapped round the vacuum chamber for fast response and maximum uniformity of heat. The temperature is indicated and controlled by a Digital Temperature Indicator cum controller working in conjunction with a FEK thermocouple.

A compact model control panel-accommodating, pilot indicating lamps, Main Switch, Fuses, Digital Temperature Indicator cum controller working in conjunction with a FEK thermocouple will be fitted on the side of the Oven for easy operation.

Supply 3-core wire and plug. Suitable to operate on 220 volts 1 Phase, 50 Hz AC supply.

Chamber Size	Temperature Range
200 mm Dia x 200 mm Depth	200 Deg.C
250 mm Dia x 250 mm Depth	200 Deg.C
250 mm Dia x 300 mm Depth	200 Deg.C
300 mm Dia x 300 mm Depth	200 Deg.C
300 mm Dia x 450 mm Depth	200 Deg.C
300 mm Dia x 500 mm Depth	200 Deg.C
300 mm Dia x 550 mm Depth	200 Deg.C
300 mm Dia x 600 mm Depth	200 Deg.C



# KL-147 VACUUM PUMP



K-LAB Vacuum pump gives a high efficient Performance. The design has been evolved by the team of expert who have a rich experience of about 20years in the field of vacuum technology. This has helped to optimize the design to get much better performance than those pumps available in the market today. They have noiseless and trouble free operation.

Guaranteed Compliments with K-LAB make high performance rotary pumps:

- \* Reduced Noise performance
- \* Smooth in operation.
- \* Compact and sturdy design
- \* Guaranteed ultimate Pr.
- \* Advanced Lubricating system
- \* Effective gas ballast.
- \* High water tolerance
- \* Easy maintenance

TYPE – SINGLE STATE	MOTOR CAPACITY
50 Litres	0.25 H.P.
100 Litres	0.50 H.P.
200 Litres	0.50 H.P.
325 Litres	1.00 H.P.
600 Litres	1.50 H.P.

TYPE – DOUBLE STATE	MOTOR CAPACITY
50 Litres	0.25 H.P.
100 Litres	0.50 H.P.
200 Litres	0.50 H.P.
325 Litres	1.00 H.P.
600 Litres	1.50 H.P.



# KL-148-VACUUM PUMPS (DIAPHRAGM TYPE)

Diaphragm Vacuum pumps / Compressors are completely oil less with continuously rated built in motor. These are preferred due to their minimal maintenance & compact size as compared to sliding vane type vacuum pumps and reciprocating piston type air compressors.

## FEATURES

- No lubrication required hence oil free.
- Portable & light weight due to Die-cast Aluminium construction
- Low noise level.
- Can be offered with Teflon coated or with PP wetted parts
- for chemical resistive application (CRP models).
- Double head models can be easily connected in either series or parallel connection to give higher vac/pressure or higher flow.
- Available in stainless steel construction (SS316/316L/ 304).
- Available with special diaphragm options (Teflon coated, viton etc.)

Model No.	Max/Flow Ltrs/min	Max. Vacuum Inches.Hg	Max.Pressure PSIG	Motor HP	Weight Approx.
DVP-15	15	22	25	1/20	2.7
DVP-25	15	27	35	1/18	4.1
DVP-25P	25	22	25	1/16	4.2
DVP-45	45	22	35	1/8	6.2
DVP-75	45	27	55	¼	9.0
DVP-75P	75	22	35	¼	9.0
DVP-45 CRP	28	22	10	1/6	5.8
DVP-75 CRP	38	27	10	¼	8.7



# KL-149 WATER BATH-LAB TYPE (6 HOLES RECTANGULAR)



Double walled chamber, Inner SS, Outer M.S. / S.S. with powder coat finish, immersion heater, thermostat control, Concentric rings, Glass wool insulation.

**Temperature Range** : 5 Deg C ambient to 90 Deg. C.

**Size** : 350 x 250 x 100mm (6 Holes)

Chamber Size	Watts
Single Walled with Thermostat	1000
Double Walled with Thermostat (Outer M.S)	1000
Double Walled with Thermostat (Full S.S)	1000

# KL-150 WATER BATH LAB TYPE (12 HOLES RECTANGULAR)



Double walled chamber, Inner SS, Outer M.S. / S.S. with powder coat finish, immersion heater, thermostat control, Concentric rings, Glass wool insulation.

Chamber Size
Single Walled with Thermostat
Double Walled with Thermostat (Outer M.S)
Double Walled with Thermostat (Full S.S)

**Temperature Range** : 5 Deg C ambient to 90 Deg. C.

**Size** : 400 x 300 x 100mm (12 Holes)

**OPTIONAL: NO DISCOUNT**

Digital Temp. Controller-cum-Indicator at extra cost



# KL-151 WATER BATH (SEROLOGICAL)

Serological Water baths are versatile enough to handle any clinical procedure, Incubation, Inactivation, Agglutination, as well as most serological pharmaceutical, biomedical procedure.

## CONSTRUCTION

Double wall construction. Complete inner chamber made of HIGHLY POLISHED STAINLESS STEEL. Outer Chamber is made of Mild Steel Sheet, finished with power coating. Gap between the walls is filled with special grade glass wool for proper insulation to avoid heat losses.

The Water Bath is provided with a drain plug to facilitate easy emptying and cleaning of the inner chamber whenever necessary. Pyramidal shaped cover and perforated removable diffuser are standard accessories.

## OPTIONAL ACCESSORIES

1. Stirrer with 1/20 hp Motor with S.S. rod & blade
2. Digital temperature Controller

## HEATING ELEMENTS

Immersion heating elements made of high grade materials are fitted at bottom with different rating for different sizes.

## TEMPERATURE CONTROL

Temperature is generally controlled by Capillary thermostat from 5 deg. ambient to 90 deg.C +/- 1 deg.C.

## CONTROL PANEL

The equipment is provided with a panel having a thermostat. ON/OFF switch, two pilot lamps. Supplied with cord and plug.

## POWER

Suitable to operate on 220V, Single Phase, 50 Hz, AC supply.

Chamber Size	Load
250 x 175 x 175 mm for 2 racks	1 KW
350 x 250 x 175 mm for 4 racks	1.5 KW
450 x 250 x 175 mm for 6 racks	2 KW
600 x 300 x 175 mm for 8 racks	3 KW



# KL-152 WATER BATH SHAKER

Double walled chamber, inner chamber made of stainless steel and outer fabricated out of cold rolled mild steel sheets duly finished in attractive powder coat point. The pyramid-cal lid is also made of stainless steel prevents falling of condensed water droplets on the specimens, the inner space between the two walls is tightly packed with special grade glass wool in order to prevent thermal losses.

Heating is achieved by immersion type heater & the temperature is controlled by hydraulic type thermostat within the operating range from Ambient +5 Deg.C to 95°C.

The bath is provided with an oscillating tray riding on ball rollers oscillated through a gear variable speed motor. Shaking speed range is between 40 to 140 cycles per minutes. The shaking tray can either hold test tubes or conical flasks of 25 ml to 1000 ml as ordered by the users. Supplied complete with one shaking tray and cord and plug. Designed to work on 220 / 230 volts AC.

Temp. Range: Ambient + 5 Deg.C to 90 Deg.C



## Shaking Platform Size

275 x 275 x 150mm  
405 x 300 x 150mm

## Shaking Water bath Size

375 x 300 x 225 mm  
500 x 325 x 225 mm

For the platform size 275 x 275 x 150mm

No. of flasks /Test tubes	Capacity of flasks /Test tubes
16 nos.	25ml conical flask
12 nos.	50ml conical flask
9 nos.	100ml conical flask
5 nos.	250ml conical flask
4 nos.	500ml conical flask
2 nos.	1000ml conical flask
25 nos.	Dia 25mm test tube

For the platform size 400 x 300 x 150mm

No. of flasks /Test tubes	Capacity of flasks /Test tubes
20 nos.	25ml conical flask
16 nos.	50ml conical flask
12 nos.	100ml conical flask
9 nos.	250ml conical flask
6 nos.	500ml conical flask
4 nos.	1000ml conical flask
35 nos.	Dia 25mm test tube

### Optional Extra:

- Shaking platform made of S.S.
- Digital Temperature Controller
- Timer 0 to 60 Minutes



## KL-153 WATER BATH (DYE POTS)

Double walled with Inner chamber S.S. and Thermostatically controlled. Supplied with S.S. Dye Pots.

Capacity	No. of Dye Pots	Watts
250 ml	6	1000
250 ml	12	1500

## KL-154 WATER DISTILLATION UNIT - SINGLE

Wall mounting type. The entire fabrication is made of Stainless steel and supplied in highly polished finish. The unit comprises of a main boiling chamber with a high dome lid and provided with water sealing arrangement and a tubular condensing column with an automatic water level arrangement to maintain the water level inside the chamber always constant.



Capacity (Ltrs/hr)	Power in KW
2	2
4	3
6	4.5
8	6
10	8





# KAVIN SCIENTIFIC PRODUCTS

## KAVIN SCIENTIFIC PRODUCTS

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