

Certificate of Compliance

We hereby declare that the technical file of product Confirms with the requirement of the Council Directives Vitro Diagnostic Medical Device (IVD) (98/79/EC)

Certificate No.: - QPCS-2025-CE-21498

Manufacturer
Name : KHOSLA SCIENTIFIC INSTRUMENTS
Address : C - 39, SWAMI DAYA NAND COLONY, SARAI ROHILLA, DELHI - 110007 (INDIA)
Product Description : SCIENTIFIC INSTRUMENTS
Product List : "AS PER APPENDIX ATTACHED / PROCESSED"
<ul> <li>The Certification body has performed an audit of the above testing and verified the design system, Manufacture and final inspection of the certified product. The Product specification has been Assessed, approved and is subject to continuous surveillance according to the Directive on Vitro Diagnostic Medical Device (IVD) (98/79/EC)</li> <li>This certificate is issued under the following condition: <ol> <li>Fulfilled standard requirements as per implementation of suggested Standards.</li> <li>The certificate remains valid until the manufacturing conditions are changed.</li> <li>The certificate validity is conditioned by positive results or surveillance audits.</li> <li>The CE mark as shown can be used, under the responsibility of the manufacturer, After completion of a EU Declaration of conformity and compliance with all Relevant EU Directive. The statement is based on a single evaluation of one sample Of above-mentioned product. It does not imply an assessment of the whole Production.</li> </ol> </li> </ul>
Validity of this certificate can be verified <u>www.gbqac.uk</u>
Date of Certification: 21 <sup>st</sup> Jan 2025 1 <sup>st</sup> Surveillance Due: 20 <sup>th</sup> Jan 2026
Date of Recertification: 20th Jan 2028 (Subject to the company maintaining its System To the required standard) 2nd Surveillance Due: 20th Jan 2027
Authorized Signatory
Validity of this Certificate is subject to Annual Surveillance audits done successfully This certificate remains the property of QPCS and must be returned whenever demanded QPCS is an independent system product and personal assessment body QPCS is accredited by Global Board of Quality Accreditation and Certification (GBQAC) UK Office: Lilestone St, Marylebone, London NW8 88S, United Kingdom





APPENDIX-1

Compliance Certificate of

APPENDIX - KHOSLA SCIENTIFIC INSTRUMENTS

Certificate No.: - QPCS-2025-CE-21498

Product List: -

AUTOCLAVES	EGG INCUBATOR
CLEAN AIR BENCHES	<ul> <li>SHAKER INCUBATOR</li> </ul>
DEEP FREEZERS	SOXHLET EXTRACTION UNIT
ENVIRONMENT/GROWTH CHAMBER	KJELDAHL DIGESTION UNIT
FURNACES	UV CABINET
HOT & COLD CHAMBER, REPRICERATORS	ENVIRONMENTAL CHAMBER
INCUBATORS	IBGH VACUUM PUMP
OIL BATH	<ul> <li>STEAM STERILISER</li> </ul>
OVENS	MAGNETIC STIRRER WITH HOT PLAT
SEED GERMINATOR	HOT AIR OVEN
SHAKERS	LAMINAR AIR FLOW
WATER BATH	FUME HOOD
HORIZONTAL AUTOCLAVE	WATER DISTILLATION UNIT
RIO SAFETY	RECIPROCAL SHAKER
HUMIDITY CHAMBER	<ul> <li>ROTARY SHAKER</li> </ul>
MUFFLE FURNACE	WATER BATH SHAKER
TUBULAR MUFFLE FURNACE	<ul> <li>LABORATORY INCURATOR</li> </ul>
VACUUM OVEN	<ul> <li>ORBITAL SHAKER INCUBATOR.</li> </ul>
VACUUM PUMP	<ul> <li>LABORATORYSTIRRER</li> </ul>
SIEVE SHAKER	<ul> <li>HEATED DISPLAY HOT CASE</li> </ul>
ROTARY EVAPORATOR	VERTEX MIXER
BOD INCUBATOR	INDUSTRIAL CHILLER
LABORATORY DEEP FREEZER	DRY HEATING BLOCK INCUBATOR
RECIRCULATING CHILLER	CEMENT AUTOCLAVE
PLANT GROWTH CHAMBER	ULTRASONICATOR SYSTEM
STABILITY CHAMBER	MORTUARY
ULTRA LOW DEEP FREEZER	LYOPHILIZER
LABORATORY HOT PLATE	. THEF SHOP







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APPENDIX-1

Compliance Certificate of

APPENDIX - KHOSLA SCIENTIFIC INSTRUMENTS

Certificate No.: - QPCS-2025-CE-21498

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Product List: -

A ATTONY AVES	. EVY INVERTIGATION
CLEAN ARE RENOTES	· SHAFTE INCLUSION
DEEP FREEZERS	SOMILET EXTRACTION UNIT
ENVIRONMENT/GROWTH CHAMBER	KIELDAHL DIGESTION UNIT
INTENACES	UVCABINET
BOT & COLD CHAMBER REPRICERATORS	ENVIRONMENTAL CHAMBER
INCUBATORS	IDGH VACUUM PUMP
OIL BATH	STEAM STERILISER
OVENS	MAGNETIC STURRER WITH HOT PLATE
SEED GERMINATOR	HOT AIR OVEN
SHAKERS	LAMINAR AIR FLOW
WATER BATH	FUME HOOD
HORIZONTAL AUTOCLAVE	WATER DISTILLATION UNIT
RIO SAFETY	RECIPROCAL SHAKER
HUMIDITY CHAMBER	ROTARY SHAKER
MUFFLE FURNACE	WATER BATH SHAKER
TUBULAR MUFFLE FURNACE	LABORATORY INCURATOR
VACUUMOVEN	<ul> <li>ORBITAL SHAKER INCUBATOR.</li> </ul>
VACUUM PUMP	<ul> <li>LABORATORY STIRRER</li> </ul>
SIEVE SHAKER	<ul> <li>HEATED DISPLAY HOT CASE</li> </ul>
ROTARY EVAPORATOR	VERTEX MIXER
BOD INCUBATOR	INDUSTRIAL CHILLER
LABORATORY DEEP FREEZER	DRY HEATING BLOCK INCUBATOR
RECIRCULATING CHILLER	CEMENT AUTOCLAVE
PLANT GROWTH CHAMBER	ULTRASONICATOR SYSTEM
STABILITY CHAMBER	MORTUARY
ULTRA LOW DEEP FREEZER	LYOPHILIZER
LABORATORY HOT PLATE	TEST SIEVE



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APPENDIX-2

Certificate d Compliance

APPENDIX - KHOSLA SCIENTIFIC INSTRUMENTS

Certificate No.: - QPCS-2025-CE-21498

Product List: -

SEMI-MICRO ANALYTICAL BALANCE	VISIBLE SPECTROPHOTOMETER
ANALYTICAL BALANCE	UV/VIS SPECTROPHOTOMETER     MANUAL
MOISTURE ANALYZER	UV/VIS SPECTROPHOTOMETER
• SMART MOISTURE ANALYZER	DOUBLE BEAM UV/VIS     SPECTROPHOTOMETER
ACCESSORIES FOR MOISTURE     ANALYZER	VORTEX MIXER
PRECISION BALANCE	<ul> <li>MINI VORTEX MIXER</li> </ul>
STANDARD WEIGHT SET AS PER OML	<ul> <li>SMART VORTEX MIXER</li> </ul>
ACCESSORIES FOR BALANACES	<ul> <li>MINI CENTRIFUGE MACHINE</li> </ul>
PH METER	<ul> <li>SMART MINI CENTRIFUGE</li> </ul>
TDS/CONDUCTIVITY METER	IBGH SPEED MICRO-CENTRIFUGE
MULTIPARAMETER TESTER	DIGITAL VERNIER CALIPER &     MICROMETER
<ul> <li>PH/ION METER</li> </ul>	COATING THICKNESS GAUGE
DISSOLVED OXYGEN METER	METAL HARDNESS TESTER
TURBIDITY METER (WITH ISS MODE)	GLOSS METER
PROBES FOR ELECTROCHEMICAL     TESTERS	SURFACE ROUGHNESS TESTER
DIGITAL ABBE REFRACTOMETER	<ul> <li>ELECTROPHORESIS APPARATUS</li> </ul>
DIGITAL PORTABLE REFRACTOMETER	CENTRIFUGE
<ul> <li>ULTRASONIC CLEANER</li> </ul>	<ul> <li>MINI CENTRIFUGE</li> </ul>
ULTRASONIC BATH (PROFESSIONAL)	MEDICAL CENTRIFUGE
ULTRASONIC PROBE SONICATOR	CONDUCTIVITY METRE WEIGHTING BALANCE
REFRIGERATED CIRCULATING BATH	<ul> <li>CYCLING CHAMBER</li> </ul>
PH MITTER + STIRRER COMBO	<ul> <li>DIGITAL HOT PLATE MAGNETIC STURKER</li> </ul>
DIGITAL CERAMIC HOT PLATE MAGNETIC STURRER	DEHUMIDIFIER
<ul> <li>ICE FLAKER MACHINE</li> </ul>	
<ul> <li>DIGITAL ROTATIONAL VISCOMETER</li> </ul>	<ul> <li>ACCESSORIES FOR VISCOMETER.</li> </ul>



Authorized Signatory



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Certificate d Sompliance

This is to certify that

### KHOSLA SCIENTIFIC INSTRUMENTS

at C - 39, SWAMI DAYA NAND COLONY, SARAI ROHILLA, DELHI - 110007 (INDIA)

Has been assessed and found working satisfactorily as per the norms of:

### **Good Manufacturing Practice (GMP)**

For the following scope:

"MANUFACTURER, TRADER & SERVICES PROVIDER OF SCIENTIFIC INSTRUMENTS"

Certificate Number: QPCS-2025-RNLS-21497

To verify this certificate please visit www.gbqac.uk

Date of Certification: 21st Jan 2025

1st Surveillance Due: 20th Jan 2026

Date of Recertification: 20th Jan 2028 (Subject to the company maintaining its System to the required standard)

2nd Surveillance Due: 20th Jan 2027





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## Khosla Scientific Instruments



Certificate of Registration

This is to certify that

### KHOSLA SCIENTIFIC INSTRUMENTS

at c - 39, swami daya nand colony, sarai rohilla, delhi - 110007 (india)

Has been assessed by QPCS and found to be Compliant with the requirements of:

### ISO 13485:2016

"Medical Device Quality Management System"

For the following scope: "MANUFACTURER, TRADER & SERVICES PROVIDER OF SCIENTIFIC INSTRUMENTS"

Certificate Number: QPCS-2025-HSEN-21496

To verify this certificate please visit at www.gbqac.uk

Date of Certification: 21st Jan 2025

1st Surveillance Due: 20th Jan 2026

Date of Recertification: 20th Jan 2028 (Subject to the company maintaining its System to the required standard) 2nd Surveillance Due: 20th Jan 2027







Validity of this Certificate is subject to Annual Surveillance audits done successfully This certificate remains the property of QPCS and must be returned whenever demanded QPCS is an independent system product and personal assessment body QPCS is accredited by Global Board of Quality Accreditation and Certification (GBQAC) UK Office: Lilestone St, Marylebone, London NW8 8SS, United Kingdom





### **KHOSLA SCIENTIFIC INSTRUMENTS**

C - 39, SWAMI DAYA NAND COLONY, SARAI ROHILLA, DELHI - 110007, INDIA.

has been assessed by RAPL and found to comply with the requirements of

### ISO 9001: 2015 Quality Management Systems

For the following activities: "MANUFACTURER, TRADER & SERVICES PROVIDER OF SCIENTIFIC INSTRUMENTS.

Certificate Number: E20250117232 Date of certification: 21/01/2025 Ist Surveillance on or before: 20/01/2026 IInd Surveillance on or before: 20/01/2027 Certification Valid Until: 20/01/2028





Accredited QMS Certification CAB# 119012

Director (Certification) Royal Assessments Pvt. Ltd.

623 A, Tower-B, iThum, Plot No. A - 40, Sector - 62, Noida 201301, India. www.royalapl.com, info@royalapl.com Phone : +91 120 4251329 This Certificate can be verified at www.iafcertsearch.org

This Certificate is an endorsement of certified clients contification status but remains the property of Royal Assessmente Pvt. Ltd. Certificate must be returned on RAPL's request or if certificate is withdrawn. Validity of certificate is subject to successful completion of surveillance audits. RAPL is accredited by EGAC, Egypt. EGAC is member of international Accreditation Forum (IAF) and signatory of MLA.

## Khosla Scientific Instruments

प्रारूप आरजी - 2 Form RG - 2		900 a 200		INTELECTUAL PROPERTY INDIA Parata Dia United Inteleventia
	۲۱ معتد Trac	भारत सरकार overnment of India व्यापार चिन्ह रजिस्ट्री ade Marks Registry गर चिन्ह अधिनियम, 1999 de Marks Act. 199	9	क्रमांक No. 2688371
Carri	व्यापार चिन्ह के रजिस्ट्रे	ोकरण का प्रमाणपत्र, धारा 23	(2), नियम 56 (1)	n
ट्यापार विन्दु संख्या / Trade Mark	ncale of Registratio	Raito /Date 28/07/202	on 25 (2), Rule 50 (1 )	ा संख्या/J. No. 1970
यह प्रमाणित किया जाता है कि जिस के बारे में दिनांक Certified that Trade Mark / a repr ASHISH KHOSLA, C-39, SW Firm)	प्रकार चिन्ह की समाकृति इसके सा esentation is annexed hereto, ha AMIDAYA NAND COLONY	व संलग्न है, वह s been registered in the name(s) of :- , SARAI ROHLLA, DELH–1100	নাদ से रजिस्ट्रीवृत 07 ( INDIA ), SOLE PROPRI	त हो चुका है  ETORSHIP, (Single
In Class 9	Under No. 45	585251 as of the date	28 July 2020 in respect	of
	Go	ods and service as annexed		
К	HOSLA SCIEN	NTIFIC INSTRU	MENTS (KSI)	
मेरे निर्देश पर आज के	मास के	वे दिन को इस पर मुद्रा लगायी गई		
Sealed at my direction, this 30	<sup>h</sup> dayof March, 202		z.	
व्यापार चिन्ठ रजिस्ट्री Trade Marks Registry MU	JMBAI		ब्तापार विन्ड रजिस्ट्रार Registrar of Tradem	narks
रहिक्ट्रीकरण आहेदन की जारीक हो रू वर्ष के जि Registration is for 10 years from the date of यह प्रसारपण हिक्ति करनेवाड़ियां में प्रयोग के सिर This certificate is not for use in legal proce हिष्पणी - इस स्वाप्तर हिफ के स्वाप्तिज में कोई Note: Upon any change of ownership of this	र है और तदोगरांत वह t+ वर्ष की कालवायि i application and may then be renewed for at fibte में रजिन्द्रीकरण आधिवाज करन के dings of for obtaining Registration abroas oftenine gibt पर, वा कारोवार के मुख्य स्थान Trademark, or change in address, of the	b तिर और प्रत्येक १० वर्ष की कामायरि के अवस्था raperiod of 10 years and also at the expiration तिर नहीं है के फो में या मारत में नामीज के लिए भी में परिवा principal place of business or address for service	দে কট নারীফীকুল কিম্বা ভা জালায় of each period of 10 years. নি ক্রীনী মহে মহিয়ালিক কি জিয় এলাইচেল জুবঁল কিন in India a request should AT ONCE be ma	ग आमा थाहिए. ade to register the change.



Page2 of 2

Print : Udyam Registration Certificate



\* In case of graduation (upward/reverse) of status of an enterprise, the benefit of the Government Schemes will be availed as per the provisions of Notification No. S.O. 2119(E) dated 26.06.2020 issued by the M/o MSME. Disclaimer: This is computer generated statement, no signature required. Printed from https://idynniegethubion.govin & Date of printing-13/01/2022

For any assistance, you may contact:

1. District Industries Centre: DELHI (DELHI)

2. MSME-DI: DELIU (DELIU)



https://udyamregistration.gov.in/PrintApplication.aspx?fudm=X/hjHWTRkJvPx0wYq9rRvw==

Print : Udyam Registration Certificate







Print : Udyam Registration Certificate

#### भारत सरकार Government of India सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय Ministry of Micro, Small and Medium Enterprises



Udyam Registration Number : UDYAM-DL-04-0012831

Type of Enterprise	MICRO	Major Activity	Manufacturing
Type of Organisation	Proprietary	Name of Enterprise	KHOSLA SCIENTIFIC INSTRUMENTS
Owner Name	SHRI ASHISH KHOSLA	PAN	BCGPK6172A
Do you have GSTIN	Yes	Mobile No.	9811028260
Email Id	khoslascientificinstrument25@gmail.com	Social Category	General
Gender	Male	Specially Abled(DIVYANG)	No
Date of Incorporation	19/09/2017	Date of Commencement of Production/Business	12/12/2012

#### **Bank Details**

Bank Name	IFS Code	Bank Account Number	
PUNJAB NATIONAL BANK	PUNB0062000	0620002100030686	

#### **Employment Details**

Male	Female	Other	Total
2	1	0	3

#### Investment in Plant and Machinery OR Equipment (in Rs.)

S.No.	Financial Year	Enterprise Type	Written Down Value (WDV)	Exclusion of cost of Pollution Control, Research & Development and Industrial Safety Devices	Net Investment in Plant and Machinery OR Equipment[(A)- (B)]	Total Turnover (A)	Export Turnover (B)	Net Turnover [(A)-(B)]	ls ITR Filled?	ITR Type
1	2019-20	Micro	2400000.00	0.00	2400000.00	2068825.00	0.00	2068825.00	Yes	ΠR - 4

#### Unit(s) Details

SN	Unit Name	Flat	Building	Village/Town	Block	Road	City	Pin	State	District
1	KHOSLA SCIENTIFIC INSTRUMENTS	C- 39	KHOSLA SCIENTIFIC INSTRUMENTS	SARAI ROHILLA	с	SWAMI DAYANAND COLONY	DELHI	110007	DELHI	NORTH

#### **Official address of Enterprise**

Flat/Door/Block No.	C-39	Name of Premises/ Building	KHOSLA SCIENTIFIC INSTRUMENTS
Village/Town	SARAI ROHILLA	Block	C
Road/Street/Lane	SWAMI DAYANAND COLONY	City	DELHI
State	DELHI	District	NORTH . Pin : 110007
Mobile	9811028260	Email:	khoslascientificinstrument25@gmail.com

#### National Industry Classification Code(S)

SNo.	Nie 2 Digit	Nic 4 Digit	Nie 5 Digit	Activity
1	23 - Manufacture of other non-metallic mineral products	2310 - Manufacture of glass and glass products	23104 - Manufacture of laboratory or pharmaceutical glassware	Manufacturing
2	26 - Manufacture of computer, electronic and optical products	2651 - Manufacture of measuring, testing, navigating and control equipment	26516 - Manufacture of laboratory analytical instruments and miscellaneous laboratory apparatus for measuring and testing such as scales, balances, incubators etc.	Manufacturing
3	26 - Manufacture of computer, electronic and optical products	2651 - Miniufacture of measuring, testing, navigating and control equipment	26517 - Manufacture of industrial process control equipment	Manufacturing
ġ	26 - Manufacture of computer, electronic and optical products	2651 - Manufacture of measuring, testing, navigating and control equipment	26519 - Manufacture of other measuring n.c.c.	Manufacturing
5	28 - Manufacture of machinery and equipment i.e.c. 2815 - Manufacture of ovens, furnaces and furnace burners		28150 - Manufactore of ovens, formaces and formace burners	Manufacturing
6	32 - Other manufacturing	3250 - Manufacture of medical and dental instruments and supplies	32502 - Manufacture of laboratory apparatus (laboratory ultrasonic cleaning machinery, laboratory sterilizers, laboratory type distilling apparatus, laboratory centrifuges etc.)	Manufacturing
7	72 - Scientific research and development	7210 - Research and experimental development on natural sciences and engineering	72100 - Research and experimental development on natural sciences and engineering	Services

 Are you interested to get registered on Government e-Market (GeM) Portal
 Yes

 Are you interested to get registered on TReDS Portals(one or more)
 No

https://udyamregistration.gov.in/PrintApplication.aspx?fudm=X/hjHWTRkJvPx0wYq9rRvw==



1/13/22, 5.53 PM	Print : Udyam Registration Certificate
District Industries Centre	DELHI ( DELHI )
MSME-DI	DELHI ( DELHI )
Date of Udyam Registration	13/01/2022
Date of Printing	13/01/2022



## **STERILIZATION** Autocave Vertical) - KSI



- Our portable Autoclaves are most ideal for doctors, nursing homes, laboratories, dentists, etc.
- Most ideal for general laboratory requirement where samples in small batches are required to be sterilized.
- Hydraulically tested up to 40psi for user safety.
- Spring-loaded safety valve for pressure adjustment and a dead weight valve works as a safety device.
- Economy at your fingertips with low power consumptions.
- A seamless (joint less) body for single-walled units provides a sturdy and safe operation for the user.
- Low sterilization process time accounts for a higher number of batches accounting for the economy and faster results.
- Body, lid & heater cover made of Single-Walled Stainless Steel (SS-304).
- Simple and easy "Press & turn" system of the closing lid for single-walled units. Lid is fitted with Pressure Gauge, Safety Valve, Manual Exhaust Valve.
- Vacuum breaker-cum-purge valve works as a safety device. Moulded neoprene rubber gasket.



Heater cover stand made of stainless steel (SS-304)

Industrial grade energy efficient heaters reduce power bills drastically





Table Top Autoclave Fully Automatic-KSI

### Features

Designed fully in accordance with international standards.

Front loading tabletop units are fully automatic high-speed sterilizers.

Essentially for reducing sterilizing cycle time. (A 20 minute cycle time at 1210C takes only 7 minutes at 1340C).

Digitally microprocessor controlled fully automatic systems enable reliable, rapid and total destruction of living microorganisms





- ✓ Our portable Autoclaves are most ideal for doctors, nursing homes, laboratori∈s, dentists, etc.
- Most ideal for general laboratory requirement where samples in small batches are required to be sterilized.
- ✓ Hydraulically tested up to 40psi for user safety.
- Spring-loaded safety valve for pressure adjustment and a dead weight valve works as a safety device.
- Economy at your fingertips with low power consumptions.
- A seamless (joint less) body for single-walled units provides a sturdy and safe operation for the user.
- Low sterilization process time accounts for a higher number of batches accounting for the economy and faster results.
- ✓ Body, lid & heater cover made of Single-Walled Stainless Steel (SS-304).
- ✓ Simple and easy "Press & turn" system of the closing lid for single-walled units.
- ✓ Lid is fitted with Pressure Gauge, Safety Valve, Manual Exhaust Valve.
- Vacuum breaker-cum-purge valve works as a safety device. Moulded neoprene rubber gasket.
- Heater cover stand made of stainless steel (SS-304)
   Industrial grade energy efficient heaters reduce power bills drastically

### Khosla Scientific Instruments





- KSI Semi Automatic Digital Autoclaves are most ideal for critical applications requiring assured and reliable total destruction of all living micro-organisms.
- These are semi automatic models requiring tighter control of temperature and sterilizing time, thus eliminating any chances of under or over exposure of media/ samples with respect to temperature and hold time.
- Inner chamber and outer chamber are made of stainless steel (SS-304 grade).
   Heaters cover stand and carrier/bucket are made of Stainless Steel.
- Lid made of thick machined Stainless Steel plate.
- Radial locking lid ensures user safety and safe locking.
- Lid is fitted with Pressure Gauge, Spring Loaded Safety Valve, extra Safety Valve, Manual Exhaust Valve, Vacuum Breaker-cum-Purge Valve as a safety device and water level indicator.
- V Drain Valve facilitates easy cleaning of the chamber.
- Moulded jointless silicon rubber gasket.
- All internal joints are argon arc welded, ground and polished to give crevice free internals.
- V μProcessor based Controller with time and temperature settable by user.
- Operating range from 15 to 22 psi pressure. (adjustable)
   Class 'A' Platinum (Pt-100) sensor, enabling precise and accurate monitoring in 0.1OC resolution and + 1OC accuracy.



- ✓ Miniature Circuit Breaker for MAINS On/Off plus safety of control panel.
- ✓ Industrial grade energy efficient heaters reduce power bills drastically.
- ✓ Fitted with low water cut-off for general safety of heating elements.
- ✓ Used for sterilization under saturated steam pressure at any selected point between 15 to 22 p.s.i. (adjustable).
- These double walled units have inner chamber (Boiler) made of 16 S.W.G. stainless steel (SS-304 grade).
   Outer wall is covered with stainless steel sheet.
- Thick stainless steel lid is tightened by radial locking system and can be lifted through a pedal lifting device for user comfort Fitted with joint less neoprene rubber gasket.
- ✓ Systems are hydraulically tested up to 40 p.s.i., as a Safety Measure.
- All autoclaves are fitted with standard accessories such as water indicator, pressure gauge, steam release cock, spring loaded safety valve, pedal lifting device and heating element.
- ✓ Space between boiler and outer shell works as air insulation.
- ✓ Supplied complete with S.S. basket, cord and plug.
- Supplied with cord and plug to work on 220/230 volts A.C. Supply.





- Fully Automatic Vertical Autoclave are most ideal for critical applications requiring assured and reliable total destruction of all living micro-organisms.
- These are fully automatic models requiring no human intervention till a full sterilization cycle is over.
- ✓ Inner chamber and outer chamber are made of stainless steel (SS-304 grade).
- Heaters cover stand and carrier/bucket are made of Stainless Steel.
- Lid made of thick machined Stainless Steel plate.
- Radial locking lid ensures user safety and safe locking.
- Lid is fitted with Pressure Gauge, Spring Loaded Safety Valve, extra Safety Valve, Manual Exhaust Valve, Vacuum Breaker-cum-Purge Valve as a safety device and water level indicator.
- Drain Valve facilitates easy cleaning of the chamber.
- Moulded jointless silicon rubber gasket.
- All internal joints are argon arc welded, ground and polished to give crevice free internals.
- ✓ µProcessor based Controller with time and temperature programmable by user.
- Class 'A' Platinum (Pt-100) sensor, enabling precise and accurate monitoring.
- Low water level alarm and cut off for safety of heater.





- Sensor open alarm and display.
- End of cycle buzzer to alert the user and auto reset.
- ✓ Miniature Circuit Breaker for MAINS On/Off plus safety of control panel.
- Fitted with low-water level cut-off device.
- Solenoid Valve for automatic purging and exhaust (user settable).
- ✓ Industrial grade energy efficient heaters reduce power bills drastically.
- ✓ µProcessor Based Fully Automatic Fuzzy Logic Control System
- 16×2 line Alphanumeric Digital LCD with backlet display with Set Value (SV) and Process Value (PV)
- Fitted with AUTOMATIC DIGITAL MINUTE TIMER which starts automatically when set/desired value of temperature is achieved. When the set time period is over the heaters
- get switched off automatically with alarm for cycle end















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- KSI Semi Automatic Digital Autoclaves are most ideal for criti cal applications requiring assured and reliable total destruction of all living micro-organisms.
- These are semi automatic models requiring tighter control of temperature and sterilizing time, thus eliminating any chances of under or over exposure of media/ samples with respect to temperature and hold time.
- Inner chamber and outer chamber are made of stainless steel (SS-304 grade).









- Drain Valve facilitates easy cleaning of the chamber.
- Moulded jointless silicon rubber gasket.
- All internal joints are argon arc welded, ground and polished to give crevice free internals.
- μProcessor based Controller with time and temperature settable by user.
- Operating range from 15 to 22 psi pressure. (adjustable)
   Class 'A' Platinum (Pt-100) sensor, enabling precise and accurate monitoring in 0.1OC resolution and + 1OC accuracy
- End of cycle buzzer to alert the user.
- ✓ Miniature Circuit Breaker for MAINS On/Off plus safety of control panel.
- ✓ Industrial grade energy efficient heaters reduce power bills drastically.
- Fitted with low water cut-off for general safety of heating elements.

Used for sterilization under saturated steam pressure at any selected point between 15 to 22 p.s.i. (adjustable).

These triple walled units have inner chamber and steam jacket made of stainless steel (SS-304grade).

Outer wall is covered with stainless steel sheet.

Thick stainless steel lid is tightened by radial locking system and can be lifted through a pedal lifting device for user comfort

Fitted with joint less neoprene rubber gasket.

Systems are hydraulically tested up to 40 p.s.i., as a Safety Measure.

All autoclaves are fitted with standard accessories such as water indicator, pressure gauge, steam release cock, spring loaded safety valve, pedal lifting device and heating element.

Space between boiler and outer shell works as air insulation.

Supplied complete with S.S. basket, cord and plug.

Supplied with cord and plug to work on 220/230 volts A.C. Supply.





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Fully Automatic Autoclave (Vertical - Triple Walled) -REW-T201





## Khosla Scientific Instruments









## Electric Supply

### AC 230V, 50/60Hz

 Fermenter Vessel made of stainless steel is ideal for doing fermentation in large volume.

- Fermenter Vessel is low cost options for general Fermentation- ideal for R&D labs etc, Agriculture, Pharmaceutical, and Food &
- Complete Assembly constructed from S. S. 304 Grade.
- Heated through steam heating system by immersion type (ISI Marked) Heating Element.

Fitted with pressure gauge

Fitted with Pressure release valve disable at 17 psi pressure.

Provided with Inlet & Outlet for cold water.

Having opening lid on the top of vessel for easy





### Autoclave (Horizontal)-KSI

#### **Features**



KSI Horizontal Triple Walled Autoclaves are most ideal for critical applications requiring assured and reliable total destruction of all living micro-organisms.

- All ideal tool for Laboratories, hospitals, nursing home, R&D labs, etc.
- The inner chamber, steam jacket, outer chamber, and boiler are made of heavy gauge stainless steel with leak-proof argon arc welding.
- Lid is made of thick machined Mild Steel plate lined with stainless steel from inside
- The space between the outer chamber and steam jacket is filled with glass wool to minimize thermal losses.
- Hydraulically tested to withstand 2.5 times the working pressure.
  - Steam boiler is fitted with water level indicator, pressure gauge, low water cut-off device, and automatic pressure control device.
- Fitted with safety valve as a safety device.



- Drain valve is fitted at the side bottom for easy draining/cleaning.
- The unit is provided with a positive self-locking safety door which cannot be opened while the chamber is under pressure and disengages automatically when the chamber is exhausted.
- This affords complete safety to the working personnel against the explosive opening.



Two separate valves are provided for evacuating steam from inner chamber and jackets as and when desired.



- An automatic vacuum breaker is fitted to all "KSI" units as a standard accessory, in order to break vacuum in case of steam condensation.
- The flange immersion-type heating element made from very high-grade material provides the fast formation of pressure in the system and are protected through an electric low water level cut-off device.
- All KSI Sterilizers are provided with triple safety features, through a "PIEZOSTAT" (Automatic Pressure Control System) and a spring-loaded safety valve fitted to the boiler/steam generator. The chamber is fitted with spring-loaded safety valve and a dead weight release valve.

Highly accurate temperature indicator is fitted for monitoring temperature.

To work on 440Volts, 3phase, 50Hz AC supply.

#### Available in following capacities

Size Litter Capacity Load 350mmX550mm 52 Litters 6 Kw 400mmX600mm 75 Litters 9 kw 400mmX1100mm 138 Litters 12 kw 450mmX600mm 95 Litters 9 kw 500mmX1200mm 235 Litters 12 kw









### Autoclave Fully Automatic (Horizontal)-REW-F202

#### **Features**

- KSI Horizontal Triple Walled Autoclaves are most ideal for critical applications requiring
- assured and reliable total destruction of all living micro-organisms.
- All ideal tool for Laboratories, hospitals, nursing home, R&D labs, etc.
- The inner chamber, steam jacket, outer chamber, and boiler are made of heavy gauge stainless steel with leak-proof argon arc welding.
- 🖌 Lid is made of thick machined Mild Steel plate lined with stainless steel from inside
- The space between the outer chamber and steam jacket is filled with glass wool to minimize thermal losses.
- Hydraulically tested to withstand 2.5 times the working pressure.
- Steam boiler is fitted with water level indicator, pressure gauge, low water cut-off device, and automatic pressure control device.
- Fitted with safety valve as a safety device. Drain valve is fitted at the side bottom for easy draining/cleaning.
- The unit is provided with a positive self-locking safety door which cannot be opened while the chamber is under pressure and disengages automatically when the chamber is exhausted.
  - This affords complete safety to the working personnel against the explosive opening.
Two separate valves are provided for evacuating steam from inner chamber and jackets as andwhen desired.

The chamber discharge line is fitted with a moisture trap to absorb the condensate automatically thus preventing moistening of the loaded material to be sterilized.

An automatic vacuum breaker is fitted to all "KSI" units as a standard accessory, in order to break vacuum in case of steam condensation.

The flange immersion-type heating element made from very high-grade material provides the fast formation of pressure in the system and are protected through an electric low water level cut-off device.

All "KSI" Sterilizers are provided with triple safety features, through a "PIEZOSTAT" (Automatic Pressure Control System) and a spring-loaded safety valve fitted to the boiler/steam generator. The chamber is fitted with spring-loaded safety valve and a dead weight release valve.

Highly accurate temperature indicator is fitted for monitoring temperature.

✓ To work on 440Volts, 3phase, 50Hz AC supply.

✓ CONTROLLED FEATURES

PLC Controller with Automatic Digital Minute Timer and alarm for end of cycle. It enables automatic purging of state air, sterilizing hold time for sterilizing period and cycle and with automatic exhaust of pressure. With Digital Pressure Indicator displayed directly to main control panel.

Display process and set values simultaneously.

PROPLUS series has the touch screen graphical Programmable Logic Controller which delivers exceptional management with progressive notifications.

✓ 7" TFT (TOUCH SCREEN) HMI AND PLC (PROGRAMMABLE LOGIC CONTROL)

Integrated unit with graphic devices which continuously monitors and records dates, time of day, load identification number and operating parameters

✓ Data can be transferred via EPROM port through a pen drive

Can easily by transferred to any PC/Desktop.

✓ User settable alphanumeric batch number and operator name

Built-in user settable sterilizing modes

Power failure restore

- ✓ 3 Level password protection
- ✓ User settable alphanumeric batch no. with operator
- ✓ Auto purging and exhaust
- ✓ Offline PC connectivity
- ✓ Service and Calibration reminders
- ✓ Dual pressure scales in psi and kPA
- Printing in smart tabular format with date, time, batch number, operator name and status
- Enables authentic documenting of every Autoclave cycle

✓ Available in following capac	ities	
Size	Litter Capacity	Load
350mmX550mm	52 Litters	6 Kw
400mmX600 mm	75 Litters	9 kw
400mmX1100mm	138 Litters	12 kw
450mmX600mm	95 Litters	9 kw
500mmX1200mm	235 Litters	12 kw
600mmX1200mm	340 Litters	15 kw



#### **De-Humidifier-REW-245**

- REW Horizontal Triple Walled Autoclaves are most ideal for critical applications requiring assured and reliable total destruction of all living micro-organisms.
- ✓ All ideal tool for Laboratories, hospitals, nursing home, R&D labs, etc.
- The inner chamber, steam jacket, outer chamber, and boiler are made of heavy gauge stainless steel with leak-proof argon arc welding.
- Lid is made of thick machined Mild Steel plate lined with stainless steel from inside
- The space between the outer chamber and steam jacket is filled with glass wool to minimize thermal losses.
- ✓ Hydraulically tested to withstand 2.5 times the working pressure.
- ✓ Steam boiler is fitted with water level indicator, pressure gauge, low water cut-off device, and automatic pressure control device.
- ✓ Fitted with safety valve as a safety device.
- ✓ Drain valve is fitted at the side bottom for easy draining/cleaning.
- The unit is provided with a positive self-locking safety door which cannot be opened while the chamber is under pressure and disengages automatically when the chamber is exhausted.
- This affords complete safety to the working personnel against the explosive opening.
- Two separate valves are provided for evacuating steam from inner chamber and jackets as and when desired.

The chamber discharge line is fitted with a moisture trap to absorb the condensate automatically thus preventing moistening of the loaded material to be sterilized.



An automatic vacuum breaker is fitted to all "KSI" units as a standard accessory, in order to break vacuum in case of steam condensation.

The flange immersion-type heating element made from very high-grade material provides the fast formation of pressure in the system and are protected through an electric low water level cut-off device.

All "KSI" Sterilizers are provided with triple safety features, through a "PIEZOSTAT" (Automatic Pressure Control System) and a spring-loaded safety valve fitted to the boiler/steam generator. The chamber is fitted with spring-loaded safety valve and a dead weight release valve.

Highly accurate temperature indicator is fitted for monitoring temperature.

To work on 440Volts, 3phase, 50Hz AC supply.

Available in following capacities

Size	Litter Capacity	Load
450mmX600mmX900mm	240 Litters	18 kw
600mmX600mmX1200mm	435 Litters	24 kw
600mmX900mmX1500mm	810 Litters	24 kw
900mmX900mmX1500mm	1215 Liters	36 kw
1200mmX1200mmX2100mm	3000 Liters	48 kw









#### Horizontal Fully Automatic Rectangular Steam Steriliser-REW-R202

#### **Features**

- KSI Horizontal Triple Walled Autoclaves are most ideal for critical applications requiring assured and reliable total destruction of all living micro-organisms.
- All ideal tool for Laboratories, hospitals, nursing home, R&D labs, etc.
- The inner chamber, steam jacket, outer chamber, and boiler are made of heavy gauge stainless steel with leak-proof argon arc welding.
- ✓ Lid is made of thick machined Mild Steel plate lined with stainless steel from inside
- The space between the outer chamber and steam jacket is filled with glass wool to minimize thermal losses.
- Hydraulically tested to withstand 2.5 times the working pressure.
- Steam boiler is fitted with water level indicator, pressure gauge, low water cut-off device, and automatic pressure control device.
- Fitted with safety valve as a safety device.
- Drain valve is fitted at the side bottom for easy draining/cleaning.
  - The unit is provided with a positive self-locking safety door which cannot be opened while the chamber is under pressure and disengages automatically when the chamber is exhausted.
  - This affords complete safety to the working personnel against the explosive opening.
  - Two separate values are provided for evacuating steam from inner chamber and jackets as and when desired.

An automatic vacuum breaker is fitted to all "KSI" units as a standard accessory, in order to break vacuum in case of steam condensation.



All "KSI" Sterilizers are provided with triple safety features, through a "PIEZOSTAT" (Automatic Pressure Control System) and a spring-loaded safety valve fitted to the boiler/steam generator. The chamber is fitted with spring-loaded safety valve and a dead weight release valve.

- Highly accurate temperature indicator is fitted for monitoring temperature.
  - To work on 440Volts, 3phase, 50Hz AC supply.
- CONTROLLED FEATURES
- PLC Controller with Automatic Digital Minute Timer and alarm for end of cycle. It enables automatic purging of state air, sterilizing hold time for sterilizing period and cycle and with automatic exhaust of pressure. With Digital Pressure Indicator displayed directly to main control panel.
- Display process and set values simultaneously.
- PROPLUS series has the touch screen graphical Programmable Logic Controller which delivers exceptional management with progressive notifications.
- ✓ 7" TFT (TOUCH SCREEN) HMI AND PLC (PROGRAMMABLE LOGIC CONTROL)
- Integrated unit with graphic devices which continuously monitors and records dates, time of day, load identification number and operating parameters
- Data can be transferred via EPROM port through a pen drive
- Can easily by transferred to any PC/Desktop.
- User settable alphanumeric batch number and operator name
- Built-in user settable sterilizing modes
  - Power failure restore
- 3 Level password protection
- ✓ User settable alphanumeric batch no. with operator
  - Auto purging and exhaust





- ✓ Dual pressure scales in psi and kPA
- Printing in smart tabular format with date, time, batch number, operator name and status
- Enables authentic documenting of every Autoclave cycle
- Available in following capacities

Size	Litter Capacity	Load
350mmX550mm	52 Litters	6 Kw
400mmX600mm	75 Litters	9 kw
400mmX1100mm	138 Litters	12 kw
450mmX600mm	95 Litters	9 kw
500mmX1200mm	235 Litters	12 kw
600mmX1200mm	340 Litters	15 kw





#### Medical Waste Sterilizer-REW-MW202

#### Features

- REW Horizontal Triple Walled Autoclaves are most ideal for critical applications requiring assured and reliable total destruction of all living micro-organisms.
- All ideal tool for Laboratories, hospitals, nursing home, R&D labs, etc.
- The inner chamber, steam jacket, outer chamber, and boiler are made of heavy gauge stainless steel with leak-proof argon arc welding.
- Lid is made of thick machined Mild Steel plate lined with stainless steel from inside
- The space between the outer chamber and steam jacket is filled with glass wool to minimize thermal losses.
- ✓ Hydraulically tested to withstand 2.5 times the working pressure.
- Steam boiler is fitted with water level indicator, pressure gauge, low water cut-off device, and automatic pressure control device.
- Fitted with safety valve as a safety device.
- Drain valve is fitted at the side bottom for easy draining/cleaning.
- The unit is provided with a positive self-locking safety door which cannot be opened while the chamber is under pressure and disengages automatically when the chamber is exhausted.
- This affords complete safety to the working personnel against the explosive opening.
  - Two separate valves are provided for evacuating steam from inner chamber and jackets as and when desired.

The chamber discharge line is fitted with a moisture trap to absorb the condensate automatically thus preventing moistening of the loaded material to be sterilized.



An automatic vacuum breaker is fitted to all "REW" units as a standard accessory, in order to break vacuum in case of steam condensation.

 $\checkmark$ 

The flange immersion-type heating element made from very high-grade material provides the fast formation of pressure in the system and are protected through an electric low water level cut-off device.

 $\checkmark$ 

All "REW" Sterilizers are provided with triple safety features, through a "PIEZOSTAT" (Automatic Pressure Control System) and a spring-loaded safety valve fitted to the boiler/steam generator. The chamber is fitted with spring-loaded safety valve and a dead weight release valve.



Highly accurate temperature indicator is fitted for monitoring temperature.

To work on 440Volts, 3phase, 50Hz AC supply

 Purpose:- Equipment is designed for sterilization of regulated biomedical waste generated from hospital for destruction of bacteria and related organism (Spores).

Design:– The sterilizer equipment to treat medical waste is designed for following parameters.

#### for gravity flow autoclave

The temperature of not less than 121°C and pressure of not less than 1.02 K.G./CM2 and autoclave residence time not less than 60 minutes.

The temperature of not less 135°C and pressure of not less than 2.1 K.G./CM2 and autoclave residence time not less than 45 minute.

The temperature of not less than 149°C and pressure of not less than 3.5 K.G./CM2 and autoclave residence time not less than 30 minute.

#### for vacuum autoclaving with pre vac & purgesystem.

The temperature of not less than 121°C and pressure of not less than 1.02 K.G./CM2 and autoclave residence time not less than 45 minutes with one or more pre vacuumpulse.

The temperature of not less than 135°C and pressure of not less than 2.1 K.G./CM2 and autoclave residence time not less than 30 minutes with one or more pre vacuumpulse.

#### Construction:

**Shape:** Either cylindrical/rectangular. Chamber is made of boiler grade sheet/AISI 304/AISI 316 thick sheet having one or two nos. pivoted door mounted on a sturdy structural stand dully insulated & covered either by S.S. or M.S. Sheet. Pit mounted design is also available as per the customer requirement for easy loading & unloading. The door will be provided with automatic safety door looking / unlocking mechanism. Valves are provided for operation safety steam inlet, drainage etc.

#### Control and Monitoring System:

Microprocessor based computer system and printer is provided for controlling and monitoring the sterilizing cycle with the following feature

Fully programmable microprocessor based unit with no volatile memory and with different program combinations.

Automatic operation of the sterilizer.

Self diagnostic system gives fault massage to the operator.

Manual operation facility for stand by program in case of control failure.

Cycle progress and information indicating any error massage is displayed and recorded on the printer. The printer shall also record data time, day load identification no. and operating parameters such as temperature of the steam in chamber, steam pressure, vacuum time and temperature of steam condensate after cooling throughout the entire length of autoclave cycle.

#### Cylindrical Model :

400 (Dia) × 600 mm (Depth)

500 (Dia) × 1200 mm (Depth)

Rectangular Model :

600 (H) × 600 (W) × 1200 mm(D)

900 (H) × 600 (W) × 1500 mm(D)

### Other custom built sizes are also available.





Provided with in line filter for sterile in coming & out goingair.

Inoculation pot & sampling pots are fitted with one pot fitted with TemperatureGauge

- Whole assembly is covered with steam jacket.
- Steam jacket if fitted with safety valve.
- Operating Voltage: 220 Volts AC (50 Hz)

Overall Capacity	Working Capacity
15 Ltr.	10 Ltr.
70 Ltr.	50 Ltr.
140 Ltr.	100 Ltr.
280 Ltr.	200 Ltr.





#### COOLING

#### **B.O.D. Incubator Automatic-KSI**

#### **APPLICATIONS**

- "KSI" brings the ultra-high-tech Triple walled Microprocessor controlled, solid-state heating/cooling incubator (BOD Incubator) down to earth.
- Specially designed for incubation of Biochemical Oxygen demand on water and sewage; can be used as environmental study and growth chamber by incorporating lighting and humidification system.
- Used in various applications for microbiology, cell cultivation of animals, plants & food studies- where experiments requiring low temperature conditions.
- Used for microorganism or activation, good storage and desalting process of enzyme extracts and for preservation of vaccines, insulin, level extracts, a\* 15°C for serological and complement fixation tests for enzymatic digestion process

#### SALIENT FEATURES & CONSTRUCTION

- Robust construction outer chamber is made of Mild Steel duly pre treated & finished with powder coated paint for lasting finish.
- Inner chamber made of STAINLESS STEEL SHEET (304Grade).
- Fitted with durable coaxial blower for forced air circulation at triple walled back to maintain temperature uniformity in the chamber.

- Outer front double walled door is insulated and is fitted with magnetic tape for air tight closing for no temperature loss, provided with lock and key arrangement
- Door operated illumination lamp is fitted inside the chamber for easy visibility.
- A full view inner plexi-glass door enables in spection and monito ring of inner chamber specimens without disturbing the processt emperature.
- High grade PUF INSULATION between outer and inner chamber for minimal thermal losses.
- Cooling is done by finned tube evaporator lie in the air circulation path by ISI marked Compressor/Condensing Units CFC free & R-134a eco friendly refrigerant.
- Heating elements areplace din the path of movin gairduly insulated from the body.
- Inner chamber has ribs for placing the shelves at convenient levels.
  Supplied with 2 or 3 removables helves.
- Control panel havingall control sand circuitry are housed at thet opfitted with Temperature controller cumIndicator Micro processor based with LED display for Set Value (SV) & ProcessValue (PV) toselect any desired temperatureprovided with Voltmeter on the panel to read the incoming voltage.
- Casterwheelmountedforeasyportability.
- Supplied with cordand plug.
- OperatingVoltage:220VoltsAC(50Hz)

Usable Space in MM	405x405x 405	610 x 450 x 410	845 x 570x 560	870 x 570 x 560	900 x 650 x 570	700 x 900 x 650	
Capacity	2cu.ft	4cu.ft	6cu.ft	10cu. ft	12cu.Ft	15cu.Ft	
Approx Volume(Ltr)	60ltrs	113ltrs	173ltrs	282ltrs	342ltr	421ltr	
No. of Shelves	2	2	2	2	2	2	
Temperature Range	5°C above ambient to 60°C (Resolution 0.1°C)						
Temp. Controller	By Microprocessor Based PID Digital Temperature Indicator cum Contr						
Temp. Accuracy	+0.5°C						
Display	LED Display for Set Value(SV) and Process Value (PV)						
Relay		Solid state electronic relay with protective heat s					

Auto Tuning System	System is compatible with auto tuning
Air Circulation	By forced convection system
Insulation	By High density PUF insulation
Operations	Nearly silent operation with ultra-low vibration
Voltage Indicator	By Digital Volt Meter fitted on Panel
High Voltage Protection	Through automatic voltage stabilizer (Optional)
Electric Supply	220/230V AC, 50/60H









#### **APPLICATIONS**

- "KSI" brings the ultra-high-tech Triple walled Microprocessor controlled, solid-state heating/cooling incubator (BOD Incubator) down to earth
- Specially designed for incubation of Biochemical Oxygen demand on water and sewage; can be used as environmental study and growth chamber by incorporating lighting and humidification system.
- Used in various applications for microbiology, cell cultivation of animals, plants & food studies- where experiments requiring low temperature conditions.
- Used for microorganism or activation, good storage and desalting process of enzyme extracts and for preservation of vaccines, insulin, level extracts, a\* 15°C for serological and complement fixation tests for enzymatic digestion process

#### **SALIENT FEATURES & CONSTRUCTIO**

- Robust construction Inner & Outer chamber complete made of Stainless Steel. Fitted with durable coaxial blower for forced air circulation at triple walled back to maintain temperature uniformity in the chamber.
- Outer front double walled door is insulated and is fitted with magnetic tape for air tight closing for no temperature loss, provided with lock and key arrangement.
- Door operated illumination lamp is fitted inside the chamber for easy visibility. A full view inner plexi-glass door enables inspection and monitoring of inner chamber specimens without disturbing the process temperature.
- High grade PUF INSULATION between outer and inner chamber for minimal thermal losses.
- Cooling is done by finned tube evaporator lie in the air circulation path by ISI marked Compressor/Condensing Units CFC free & R-134 a eco friendly refrigerant.

- Heating elements are placed in the path of moving air duly insulated from thebody.
- Inner chamber has ribs for placing the shelves at convenient levels. Supplied with 2 or 3 removableshelves.
- Control panel having all controls and circuitry are housed at the top fitted with Temperature controller cum Indicator Microprocessor based with LED display for Set Value (SV) & Process Value (PV) to select any desired temperature provided with Volt meter on the panel to read the incoming voltage.
- Caster wheel mounted for easy portability.
- Supplied with cord and plug. Operating Voltage: 220 Volts AC (50 Hz)

Usable Space in MM	405x405x 405	610 x 450 x 410	845 x 570x 560	870 x 570 x 560	900 x 650 x 570	700 x 900 x 650		
Capacity	2cu.ft	4cu.ft	6cu.ft	10cu. ft	12cu.Ft	15cu.Ft		
Approx Volume(Ltr)	60ltrs	113ltrs	173ltrs	282ltrs	342ltr	421ltr		
No. of Shelves	2	2	2	2	2	2		
Temperature Range		5°	°C above ambient to 60	°C (Resolution 0.1°C)				
Temp. Controller		By Microproce	essor Based PID Digital <sup>-</sup>	Femperature Indicator	cum Contr			
Temp. Accuracy			+0.5°	c				
Display		LED Display for Set Value(SV) and Process Value (PV)						
Relay	Solid state electronic relay with protective heat sink							
Auto Tuning System	System is compatible with auto tuning system							
Air Circulation	By forced convection system							
Insulation	By High density							
Operations		Nearly silent operation with ultra-low vibration						
Voltage Indicaton		By Digital Volt Meter fitted on Panel						
High Voltage Protection		Through automatic voltage stabilizer (Optional)						
Electric Supply		220/230V AC, 50/60Hz						







#### **APPLICATIONS**

- "KSI" brings the ultra-high-tech Microprocessor controlled, solid-state Low Temperature Cabinet (Vertical Models) with micro control and CFC free refrigeration system.
- to meet various standard applications in diverse industrial applications such as medical, agricultural institutions, bio- chemical industrial and research laboratories.
- It is ideal laboratory freezer to provide a perfect freezing environment for the preservation of vaccines, blood plasma, test samples, specimens at desired temperature (Available in 3 Models i.e. -20 oC, -40C, -80C.) Also used for preservation of red blood plasma, white blood cell, skin,bone, bacteria, semen, biomedical product in small medium and large blood centres.

Suitable for hospitals, drugstore, pharmaceuticals factories, sanitation and anti-epidemic stations and

#### **SALIENT FEATURES & CONSTRUCTIO**

- "KSI" brings the ultra-high-tech Microprocessor controlled, solid-state Low Temperature Cabinet (Vertical Models) with micro control and CFC free refrigeration system.
- to meet various standard applications in diverse industrial applications such as medical, agricultural institutions, bio- chemical industrial and research laboratories.
- It is ideal laboratory freezer to provide a perfect freezing environment for the preservation of vaccines, blood plasma, test samples, specimens at desired temperature (Available in 3 Models i.e. -20 oC, -40C, -80C.)
- Also used for preservation of red blood plasma, white blood cell, skin,bone, bacteria, semen, biomedical product in small medium and large blood centres.

 Suitable for hospitals, drugstore, pharmaceuticals factories, sanitation and anti-epidemic

Usable Space in MM	405x405x 405	610 x 450 x 410	845 x 570x 560	870 x 570 x 560	900 x 650 x 570	700 x 900 x 650		
Capacity	2cu.ft	4cu.ft	6cu.ft	10cu. ft	12cu.Ft	15cu.Ft		
Approx Volume(Ltr)	60ltrs	113ltrs	173ltrs	282ltrs	342ltr	421ltr		
No. of Shelves	2	2	2	2	2	2		
Temperature Range		5°	°C above ambient to 60	°C (Resolution 0.1°C)				
Temp. Controller		By Microproce	ssor Based PID Digital <sup>-</sup>	Temperature Indicator of	cum Contr			
Temp. Accuracy			+0.5°	с				
Display		LED Display for Set Value(SV) and Process Value (PV)						
Relay	Solid state electronic relay with protective heat sink							
Auto Tuning System	System is compatible with auto tuning system							
Air Circulation	By forced convection system							
Insulation		By High density						
Operations	Nearly silent operation with ultra-low vibration							
Voltage Indicaton	By Digital Volt Meter fitted on Panel							
High Voltage Protection	Through automatic voltage stabilizer (Optional)							
Electric Supply		220/230V AC, 50/60Hz						











#### **APPLICATIONS**

- "KSI" brings the ultra-high-tech Triple walled Microprocessor controlled, solid-state heating/cooling incubator (BOD Incubator) down to earth.
- Specially designed for incubation of Biochemical Oxygen demand on water and sewage; can be used as environmental study and growth chamber by incorporating lighting and humidification system.
- Used in various applications for microbiology, cell cultivation of animals, plants & food studies- where experiments requiring low temperature conditions. Used for microorganism or activation, good storage and desalting process of enzyme extracts and for preservation of vaccines, insulin, level extracts, a\* 15°C for serological and complement fixation tests for enzymatic digestion process.

#### **SALIENT FEATURES & CONSTRUCTION**

- ✓ Robust construction Inner & Outer chamber complete made of Stainless Steel.
- itted with durable coaxial blower for forced air circulation at triple walled back to maintain temperature uniformity in the chamber.
- Outer front double walled door is insulated and is fitted with magnetic tape for air tight closing for no temperature loss, provided with lock and key arrangement.
- ✓ Door operated illumination lamp is fitted inside the chamber for easy visibility.
- ✓ A full view inner plexi-glass door enables inspection and monitoring of inner chamber specimens without disturbing the process temperature.
- High grade PUF INSULATION between outer and inner chamber for minimal thermal losses.

- Cooling is done by finned tube evaporator lie in the air circulation path by ISI marked Compressor/Condensing Units CFC free & R-134 a eco friendly refrigerant.
- Heating elements are placed in the path of moving air duly insulated from the body.
- Inner chamber has ribs for placing the shelves at convenient levels. Supplied with 2 or 3 removableshelves.
- Control panel having all controls and circuitry are housed at the top fitted with Temperature controller cum Indicator Microprocessor based with LED display for Set Value (SV) & Process Value (PV) to select any desired temperature provided with Volt meter on the panel to read the incoming voltage.
- ✓ Caster wheel mounted for easy portability.
- ✓ Supplied with cord and plug.
- ✓ Operating Voltage: 220 Volts AC (50 Hz).

Usable Space in MM	405 x 405 x 405	610 x 450 x 410	845 x 500 x 400	870 x 570 x 560	900 x 650 x 570	700 x 900 x 650
Capacity	2 cu. ft	4 cu. ft	6 cu. ft	10 cu. ft	12 cu. ft	15 cu. ft
Approx Volume (Ltr)	60 Itrs	113 Itrs	173 Itrs	282 Itrs	342 Itr	421 ltrs
No. of Shelves	2	2	2	2	2	2
Temperature Range		5°C abov	ve ambient to	60°C (Resolut	tion 0.1°C)	
Temp. Controller	By Microp	processor Bas	ed PID Digital	Temperature	Indicator cum	Controller.
Temp. Accuracy			+0.	5°C		
Display	LED Display for Set Value(SV) and Process Value (PV)					
Relay	Solid state electronic relay with protective heat sink.					
Auto Tuning System	System is compatible with auto tuning system					
Air Circulation	By forced convection system					
Insulation	By High density PUF insulation					
Operations	Nearly silent operation with ultra-low vibration					
Voltage Indicator	By Digital Volt Meter fitted on Panel					
High Voltage Protection	Through automatic voltage stabilizer (Optional)					
Electric Supply			220/230V A	C, 50/60Hz		





#### **APPLICATIONS**

- "KSI" brings the ultra-high-tech Microprocessor controlled, solid-state Low Temperature Cabinet (Vertical Models) with micro control and CFC free refrigeration system. to meet various standard applications in diverse industrial applications such as medical, agricultural institutions, bio- chemical industrial and research laboratories.
- It is ideal laboratory freezer to provide a perfect freezing environment for the preservation of vaccines, blood plasma, test samples, specimens at desired temperature (Available in 3 Models i.e. -20oC, -40C, -80C.)
- Also used for preservation of red blood plasma, white blood cell, skin, bone, bacteria, semen, biomedical product in small medium and large blood centres.
- Suitable for hospitals, drugstore, pharmaceuticals factories, sanitation and anti-epidemic stations and clinics.

#### **SALIENT FEATURES & CONSTRUCTION**

- Robust construction Outer chamber is made of Mild Steel duly pre treated & finished with powder coated paint for lasting finish.
- ✓ Inner chamber made of STAINLESS STEEL SHEET (304 Grade).
- Outer front double walled door is insulated and is fitted with magnetic tape for air tight closing for no temperature loss, provided with lock and key arrangement.
- Door operated illumination lamp is fitted inside the chamber for easy visibility.
- ✓ A full view inner plexi-glass door enables inspection and monitoring of inner chamber specimens without disturbing the process temperature.

- High grade PUF INSULATION between outer and inner chamber for minimal thermal losses.
- ✓ Direct cooling system for stable temperature control by ISI marked Compressor/Condensing Units CFC free & R-134 a eco friendly refrigerant.
- Control panel having all controls and circuitry are housed at the top fitted with Temperature controller cum Indicator Microprocessor based with LED display for Set Value (SV) & Process Value (PV) to select any desired temperature provided with Volt meter on the panel to read the incoming voltage.
- ✓ Caster wheel mounted for easy portability.
- Supplied with cord and plug.
- ✓ Operating Voltage: 220 Volts AC (50 Hz).

#### **TECHNICAL SPECIFICATIONS & ORDERING INFORMATIONS**

Approx Volume (Ltr)	112	170	285		
Capacity Cu.ft.	4 Cu.ft.	6 Cu.ft.	10 Cu.ft.		
No. of Shelves	2	2	2		
Chamber Size in MM	610 x 450 x 410	845 x 500 x 400	870 x 570 x 560		
Temperature	Available	e in 3 Models i.e20ºC, -30	0°C, -40°C.		
Temp. Controller	By Microprocessor Based PID Digital Temperature Indicator cum Controller.				
Temp. Accuracy	+1°C				
Display:	LED Display for Set Value(SV) and Process Value (PV)				
Relay	Solid state electronic relay with protective heat sink.				
Insulation	By High density PUF insulation				
Operations	Nearly silent operation with ultra-low vibration				
High Voltage Protection	Through automatic voltage stabilizer (Optional)				
Electric Supply		220/230V AC, 50/60Hz			









#### **APPLICATIONS**

- "KSI" brings the ultra-high-tech Microprocessor controlled, solid-state Low Temperature Cabinet (Horizontal Models- Chest Opening type) micro control and CFC free refrigeration system. to meet various standard applications in diverse industrial applications such as medical, agricultural institutions, bio-chemical industrial and research laboratories.
- It is ideal laboratory freezer to provide a perfect freezing environment for the preservation of vaccines, blood plasma, test samples, specimens at desired temperature (Available in 3 Models i.e. -20C, -30C, -40C.)
- Also used for preservation of red blood plasma, white blood cell, skin, bone, bacteria, semen, biomedical product in small medium and large blood centres.
- Suitable for hospitals, drugstore, pharmaceuticals factories, sanitation and anti-epidemic stations and clinics.

#### **SALIENT FEATURES & CONSTRUCTION**

 Robust construction Outer chamber is made of Mild Steel duly pre treated & finished with powder coated paint for lasting finish.

Inner chamber made of STAINLESS STEEL SHEET (304 Grade).

- Outer front double walled door is insulated and is fitted with magnetic tape for air tight closing for no temperature loss, provided with lock and key arrangement.
- ✓ Door operated illumination lamp is fitted inside the chamber for easy visibility.
- ✓ A full view inner plexi-glass door enables inspection and monitoring of inner chamber specimens without disturbing the process temperature.
- High grade PUF INSULATION between outer and inner chamber for minimal thermal losses.

- Direct cooling system for stable temperature control by ISI marked Compressor/Condensing Units CFC free & R- 134 a eco friendly refrigerant.
- Control panel having all controls and circuitry are housed at the top fitted with Temperature controller cum Indicator Microprocessor based with LED display for Set Value (SV) & Process Value (PV) to select any desired temperature provided with Volt meter on the panel to read the incoming voltage.
- ✓ Caster wheel mounted for easy portability.
- Supplied with cord and plug.

Approx Volume (Ltr)	112	170	285		
Capacity Cu.ft.	4 Cu.ft.	6 Cu.ft.	10 Cu.ft.		
No. of Shelves	2	2	2		
Chamber Size in MM	610 x 450 x 410	845 x 500 x 400	870 x 570 x 560		
Temperature	Available	in 3 Models i.e200C, -30	00C, -400C.		
Temp. Controller	By Microprocessor Based PID Digital Temperature Indicator cum Controller.				
Temp. Accuracy	+1°C				
Display:	LED Display for Set Value(SV) and Process Value (PV)				
Relay	Solid state electronic relay with protective heat sink.				
Insulation	By High density PUF insulation				
Operations	Nearly si	lent operation with ultra-lov	v vibration		
High Voltage Protection	Through a	automatic voltage stabilizer	r (Optional)		
Electric Supply		220/230V AC, 50/60Hz			





#### **APPLICATIONS**

- "KSI" brings the ultra-high-tech Triple walled Microprocessor controlled, solid-state Plant Growth/ Environmental Chamber used to study and contemplate the effects of different environmental parameters such as humidity, temperature and light in various applications tests involving micro-organisms, plants, in tissue culture applications, enzyme reaction studies, growth observation studies, and fermentation analysis.
- Also Used for forestry research works propagation of seeds, and incubation that requires a controlled environment (hot/cold cycles and light dark operations). It provides the necessary light, enclosed humid atmosphere and warmth for successful plant growth suitable for investigation in the eftect of day light on flowering cycle, growth rate etc. & have a variety of usage in R&D laboratories and research studies.

#### **SALIENT FEATURES & CONSTRUCTION**

- It offers unsurpassed accuracy and reliability in the control of temperature, humidity and lighting. energy efficient lighting systems, culminating in plant growth chambers with a wider performance range, greater control of conditions and with unequalled reliability and durability.
- Programmable to enable true dawn/dusk simulation reduces light shock
- Reduce heating effects on plant materials.
- Enable easy cleaning and servicing.
- Ensure constant light output by maintaining lamps at their maximum operating temperature.
- Robust construction outer chamber is made of Mild Steel duly pre treated & finished with powder coated paint for lasting finish.
- ✓ Inner chambers are made of STAINLESS STEEL SHEET (304 Grade).
- Outer front double walled door is insulated and is fitted with magnetic tape for air tight closing for no temperature loss, provided with lock and key arrangement.
- A full view inner plexi-glass door enables inspection and monitoring of inner chamber specimens without disturbing the process temperature.
- Door operated illumination lamp is fitted inside the chamber for easy visibility.
- Exterior illumination with the help of fluorescent lamps/tubes accounts for artificial daylight conditions.
- Energy efficient high frequency fluorescent lighting uses up to 25% less energy than ordinary fluorescentlamps
- Light regulation allows user to select exactly the desired lighting level between approximately 10 to 100% output- provides maximum lighting uniformity at low light levels.
- Fitted with durable coaxial blower for forced air circulation at triple walled back to maintain temperature uniformity in the chamber.
- Inner chamber has ribs for placing the shelves at convenient levels.
- Heating elements are placed in the path of moving air duly insulated from the body.
- Cooling is done by finned tube evaporator lie in the air circulation path by ISI marked Compressor/Condensing Units CFC free & R-134 a eco friendly refrigerant.
- High grade Glass Wool / Puf Insulation between outer and inner chamber for minimal thermal losses.
- Fitted with Control Panel with advanced micro-processor based technology housed at the top fitted with Temperature controller cum Indicator Microprocessor based with LED display for Set Value (SV) & Process Value (PV) to select any desired temperature provided with Volt meter on the panel to read the incoming voltage. With illumination and humidity controls according to requirements.
- ✓ Safety Thermostate to prevent over heating.
- Caster wheels mounted for easy portability.

Usable Space in MM	610 x 450 x 410	845 x 500 x 400	870 x 570 x 560	900 x 650 x 570	700 x 900 x 650	
Capacity	4 Cu.ft.	6 cu. ft	10 cu. ft	12 cu. ft	15 cu. ft	
Approx Volume (Ltr)	113 Itrs	170 ltrs	284 Itrs	340 ltrs	425 Itrs.	
No. of Shelves	2	2	2	3	3	
Temperature Range		5°C above am	bient to 60°C (Re	esolution 0.1°C)		
Temp. Controller	By Micropro	By Microprocessor Based PID Digital Temperature/Humidity Indicator cum Controller.				
Temp. Accuracy		+1°C				
Humidification	By steam injection process.					
Humidity Range	5% above ambient from 40% to 95% RH at cool temperatures.					
Humidity Accuracy	+ 5% RH					
Display:	LED Display for Set Value(SV) and Process Value (PV)					
Relay	Solid state electronic relay with protective heat sink.					
Air Circulation	By forced convection system					
Safety	By safety thermostat to prevent overheating					
Illumination	Exterior illumination with fluorescent tubes/lamps.					
Insulation	By High density PUF insulation					
Operations	Nearly silent operation with ultra-low vibration					







#### B.O.D. Incubator Automatic-KSI

#### **APPLICATIONS**

- "KSI" brings the high-tech double walled microprocessor controlled, solid-state cooling MortuaryChamber.
- Specially designed for storing cadaverous under cool condition to prevent decomposition. These are latest
- development in Mortuary technology offering space saving advantage over the conventional type together with greater hygiene.
- Highly recommended & Useful for Hospitals, Railway, Airports, Defenceetc

- Robust construction Corrosion free exterior is powder coated/painted for lasting finish & interior chamber is made of Stainless Steel (304 grade).]
- The outer panels of all our mortuary chambers are made of galvanized sheets having a superior bacteria resistance film coating for greater hygiene (Optional).
- The inner chamber is made of heavy gauge stainless steel sheet of SS-304 grade or G.I. (as per the customer's requirements).
- Thus making it easier to clean and ensure greater stability and life
- Fitted with durable coaxial blower for forced air circulation to maintain temperature uniformity in thechamber.
- Outer front double walled door is insulated and are connected by very sturdy chrome plate hinges and fitted with hard chrome plated lubricated latches for opening the door and are fitted with high quality neoprene rubber gaskets for air tight fittings

- The floor of mortuary chambers is constructed out of hardened and reinforced steel sheets for easy cleaning and hygiene.
- ✓ Door operated illumination lamp is fitted inside the chamber for easyvisibility.
- ✓ Supplied with adjustable trays used for storing cadaverous placed onrollers.
- High grade PUF INSULA TION between outer and inner chamber for minimal thermal losses. Designed for long storage of cadaverous.
- Cooling is done by finned tube evaporator lie in the air circulation path by ISI marked Compressor/Condensing Units CFC free & R-134 an eco friendly refrigerant.
- Control panel having all controls and circuitry are housed at the top fitted withtemperature controller cum
- Indicator fitted with audio visual alarm for high & low temperature with LED display to select any desired temperature provided with Volt meter on the panel to read the incomingvoltage.
- ✓ Caster wheel mounted for easy portability.
- Supplied with cord and plug.
- ✓ Operating Voltage: 220 Volts AC (50 Hz).

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Capacity	Single Body	Double Bodies	Three Bodies	Four Bodies	Six Bodies	
T temperature Range			–2°C to 5°C			
T temperature controller	By Micropro	By Microprocessor Based PID Digital T temperature Indicator cum Controller.				
Readability	0.1°C					
Deviation in T emp.	0 1°C					
Display.	LED Display					
Relay	Solid state electronic relay with protective heat sink.					

Temperature Sensor	PT-100
Condenser	Efficient Condenser with automatic evaporating system (condensate)
Refrigerant	R 134 Non CFC
Air Circulation	By forced convection system
Insulation	By High density PUF insulation
Operations	Nearly silent operation with ultra-low vibration
Voltage Indicator	By Volt Meter fitted on Panel
High V voltage Protection	Through automatic voltage stabilizer (Optional)
Electric Supply	220/230V AC, 50/60Hz











- "KSI" brings the high-tech double walled microprocessor controlled, solid-state cooling Mortuary Chamber.
- Specially designed for storing cadaverous under cool condition to prevent decomposition. These are latest development in Mortuary technology offering space saving advantage over the conventional type together with greater hygiene.
- ✓ Highly recommended & Useful for Hospitals, Railway, Airports, Defence etc.

- Robust construction Corrosion free exterior is powder coated/painted for lasting finish & interior chamber is made of Stainless Steel (304 grade).
- The outer panels of all our mortuary chambers are made of galvanized sheets having a superior bacteria resistance film coating for greater hygiene (Optional).
- The inner chamber is made of heavy gauge stainless steel sheet of SS-304 grade or G.I. (as per the customer's requirements). Thus making it easier to clean and ensure greater stability and life.
- Fitted with durable coaxial blower for forced air circulation to maintain temperature uniformity in thechamber.
- Outer front double walled door is insulated and are connected by very sturdy chrome plate hinges and fitted with hard chrome plated lubricated latches for opening the door and are fitted with high quality neoprene rubber gaskets for air tight fittings

- The floor of mortuary chambers is constructed out of hardened and reinforced steel sheets for easy cleaning and hygiene.
- Door operated illumination lamp is fitted inside the chamber for easy visibility.
- Supplied with adjustable trays used for storing cadaverous placed on rollers. High grade PUF INSULA TION between outer and inner chamber for minimal thermal losses. Designed for long storage of cadaverous.
- Cooling is done by finned tube evaporator lie in the air circulation path by ISI marked Compressor/Condensing Units CFC free & R-134 an eco friendly refrigerant.
- Control panel having all controls and circuitry are housed at the top fitted with T temperature controller cum Indicator fitted with audio visual alarm for high & low temperature with LED display to select any desired temperature provided with Volt meter on the panel to read the incoming voltage.
- Caster wheel mounted for easy portability.
- ✓ Supplied with cord and plug.
- ✓ Operating Voltage: 220 Volts AC (50 Hz).













- "REW" ICE flakers machines are conceptualized and designed to meet the challenging to all the microbiology, biochemistry, biotechnology and genetic
- engineering laboratories that have a continuous requirement of ice to store their biological samples along with transportation to other facilities.
- ✓ ICE flakers are a compact model and occupy a small space in any laboratory.
- It is advantageous over normal practice of procuring ice and crushing it manually or with crusher to make small ice pieces.
- These flakes suit variety of applications in, food/ Hotels/ Laboratories for various purposes where readymade ice flakes are required for day to day work.

- ✓ Type of ice: flakes.
- ✓ Reliable, energy efficient and light weight.
- ✓ Capacity per 24 Hrs. Approx. Bin cap: 60-70 Kg.
- Easy Extraction system.
- Flake size approx.: 2 mm(L) x 3 mm(B) x 2 mm(Thick). Tiny irregular pieces of ice.
- Our ICE flakier machines are made of corrosion free metal components with advance poly uretherane insulation ensuring maximum thermal efficiency and durability.
- ✓ Designed for continuous production of ice throughout the day

- A well balanced CFC-free air cooled refrigeration system with hermetic sealed compressor, condenser, fan motor assembly & refrigerant to cool the crusher assembly for producing ice.
- High grade PUF INSULATION between outer and inner chamber for minimal thermal losses.
- Automatic controller for compressor, motor and water level. Machine gets automatically cut off when the collecting bin is full of ice flakes through the controller. Auto cut off in case of no water supply. Overload protector for motor and refrigeration system
- Ice flaking machine is designed in such a manner that flakes are extruded just below 0° Celsius enhancing
- Stainless steel evaporator which maximizes the heat exchange between the refrigerant and the water.
- ✓ Caster wheel mounted for easy portability.
- ✓ Supplied with cord and plug.
- ✓ Operating Voltage: 220 Volts AC (50 Hz).

				. 3V4	
Capacity	Single Body	Double Bodies	Three Bodies	Four Bodies	Six Bodies
Temperature Range			-15°C to -20°C		
Temperature controller	By Micropro	cessor Based PID I	Digital T temperatu	re Indicator cum	Controller.
Readability			0.1°C		
Deviation in Temp.			1°C		
Display			LED Display		
Relay	Solid state electronic relay with protective heat sink.				
Temperature Sensor	PT-100				
Condenser	Efficient	Condenser with au	tomatic evaporatin	g system (conde	nsate)





### **APPLICATIONS**

- "KSI" brings the ultra-high-tech Triple walled Microprocessor controlled, solid-state Plant Growth/ Environmental Chamber used to study and contemplate the effects of different environmental parameters such as humidity, temperature and light in various applications tests involving micro-organisms, plants, in tissue culture applications, enzyme reaction studies, growth observation studies, and fermentation analysis.
- ✓ Also Used for forestry research works propagation of seeds, and incubation that requires a controlled environment (hot/cold cycles and light dark operations).
- ✓ It provides the necessary light, enclosed humid atmosphere and warmth for successful plant growth suitable for investigation in the effect of day light on flowering cycle, growth rate etc. & have a variety of usage in R&D laboratories and research studies.

- It offers unsurpassed accuracy and reliability in the control of temperature, humidity and lighting. energy efficient lighting systems, culminating in plant growth chambers with a wider performance range, greater control of conditions and with unequalled reliability and durability.
- Programmable to enable true dawn/dusk simulation reduces light shock
- Reduce heating effects on plant materials.
- Enable easy cleaning and servicing.
- Ensure constant light output by maintaining lamps at their maximum operating temperature.
- Robust construction outer chamber is made of Mild Steel duly pre treated & finished with powder coated paint for lasting finish.

- ✓ Inner chambers are made of STAINLESS STEEL SHEET (304 Grade).
- Outer front double walled door is insulated and is fitted with magnetic tape for air tight closing for no temperature loss, provided with lock and key arrangement.
- ✓ A full view inner plexi-glass door enables inspection and monitoring of inner chamber specimens without disturbing the process temperature.
- ✓ Door operated illumination lamp is fitted inside the chamber for easy visibility.
- Exterior illumination with the help of fluorescent lamps/tubes accounts for artificial daylight conditions.
- Energy efficient high frequency fluorescent lighting uses up to 25% less energy than ordinary fluorescent lamps
- Light regulation allows user to select exactly the desired lighting level between approximately 10 to 100% output- provides maximum lighting uniformity at low light levels.
- ✓ Fitted with durable coaxial blower for forced air circulation at triple walled back to maintain temperature uniformity in the chamber.
- Inner chamber has ribs for placing the shelves at convenient levels.
- Heating elements are placed in the path of moving air duly insulated from the body.
- Cooling is done by finned tube evaporator lie in the air circulation path by ISI marked Compressor/Condensing Units CFC free & R-134 a eco friendly refrigerant.













- "KSI" brings the ultra-high-tech Triple walled Microprocessor controlled, solid-state Seed Germinator used for normal germination applications and for various other tests involving micro-organisms, plants, tissues, electronic components etc.
- Used for plant growth, biological studies, forestry research works propagation of seeds, and incubation that requires a controlled environment (hot/cold cycles and light dark operations).

- Robust construction outer chamber is made of Mild Steel duly pre treated & finished with powder coated paint for lasting finish.
- ✓ Inner chamber made of STAINLESS STEEL SHEET (304 Grade).
- Chamber has stainless steel water reservoir at bottom is heated through immersion type heaters generates the steam thus creating humid condition inside the chamber.
- Humidity from 90 to 95% plus minus 3 % (not adjustable. Bottom reservoir location and interior drain replenishes water supply, reducing the need for technician to monitor water level.
- Outer front double walled door is insulated and is fitted with magnetic tape for air tight closing for no temperature loss, provided with lock and key arrangement.
- ✓ A full view inner plexi-glass door enables inspection and monitoring of inner chamber specimens without disturbing the process temperature.
- Door operated illumination lamp is fitted inside the chamber for easy visibility.

- Fitted with durable coaxial blower for forced air circulation at triple walled back to maintain temperature uniformity in the chamber.
- Inner chamber has ribs for placing the shelves at convenient levels.
- Heating elements are placed in the path of moving air duly insulated from the body.
- Cooling is done by finned tube evaporator lie in the air circulation path by ISI marked Compressor/Condensing Units CFC free & R-134 a eco friendly refrigerant. (Optional).
- High grade Glass Wool / Puf Insulation between outer and inner chamber for minimal thermal losses.
- ✓ Fitted with Control Panel with advanced micro-processor based technology housed at the top fitted with Temperature controller cum Indicator Microprocessor based with LED display for Set Value (SV) & Process Value (PV) to select any desired temperature provided with Volt meter on the panel to read the incoming voltage.
- Safety Thermostat to prevent overheating.
- Caster wheel mounted for easy portability.
- Supplied with cord and plug.
- ✓ Operating Voltage: 220 Volts AC (50 Hz).

Norkable Chamber Size	900 x 500 x 600 mm
Approx Volume (Ltr)	310 ltrs
No. of Trays	14 Aluminium Perforated Trays
Temperature Range	5°C above ambient to 60°C
Temperature Range	5°C to 60°C in Cooling Models (Optional)
Temp. Controller	By Microprocessor Based PID Digital Temperature Indicator cum Controller.
Temp. Accuracy	+1°C
Display:	LED Display for Set Value(SV) and Process Value (PV)
Humidity (Not Adjustable)	Created in a S.S. water reservoir fitted at the bottom to provide 90% to 95% $\pm 3$ % RH
Relay	Solid state electronic relay with protective heat sink.
Air Circulation	By forced convection system



#### Insulation

Operations

Voltage Indicator

**Electric Supply** 

By Glass Wool / PUF Insulation (High density) Nearly silent operation with ultra-low vibration By Volt Meter fitted on Panel 220/230V AC, 50/60Hz





- "KSI" brings the ultra-high-tech Triple walled Microprocessor controlled, solid-state Seed Germinator (Dual Chamber) used for normal germination applications and for various other tests involving micro-organisms, plants, tissues, electronic components etc.
- Used for plant growth, biological studies, forestry research works propagation of seeds, and incubation that requires a controlled environment (hot/cold cycles and light dark operations).

- Robust construction outer chamber is made of Mild Steel duly pre treated & finished with powder coated paint for lasting finish.
- ✓ Inner chambers are made of STAINLESS STEEL SHEET (304 Grade).
- Each chamber has stainless steel water reservoir at bottom is heated through immersion type heaters generates the steam thus creating humid condition inside the chamber. Humidity from 90 to 95% plus minus 3 % (not adjustable. Bottom reservoir location and interior drain replenishes water supply, reducing the need for technician to monitor water level.
- One chamber is fitted with sealed compressor for cooling and the second one with heaters forheating.
- Outer front double walled door is insulated and is fitted with magnetic tape for air tight closing for no temperature loss, provided with lock and key arrangement.
- ✓ A full view inner plexi-glass door enables inspection and monitoring of inner chamber specimens without disturbing the process temperature.

- Door operated illumination lamp is fitted inside the chamber for easy visibility.
- Fitted with durable coaxial blower for forced air circulation at triple walled back to maintain temperature uniformity in the chamber.
- Inner chamber has ribs for placing the shelves at convenient levels.
- Heating elements are placed in the path of moving air duly insulated from the body.
- Cooling is done by finned tube evaporator lie in the air circulation path by ISI marked Compressor/Condensing Units CFC free & R-134 a eco friendly refrigerant.
- High grade Glass Wool / Puff Insulation between outer and inner chamber for minimal thermal losses.
- Fitted with Control Panel with advanced micro-processor based technology housed at the top fitted with Temperature controller cum Indicator Microprocessor based with LED display for Set Value (SV) & Process Value (PV) to select any desired temperature provided with Volt meter on the panel to read the incoming voltage.
- Safety Thermostat to prevent overheating.
- Caster wheel mounted for easy portability.
- Supplied with cord and plug.
- ✓ Operating Voltage: 220 Volts AC (50 Hz).

Workable Chamber Size	900 x 500 x 600 mm
Approx Volume (Ltr)	310 ltrs
No. of Trays	14 Aluminium Perforated Trays
Temperature Range	5°C to 60°C in Cooling Models
Temp. Controller	By Microprocessor Based PID Digital Temperature Indicator cum Controller.
Temp. Accuracy	+1°C

Display:	LED Display for Set Value(SV) and Process Value (PV)
Humidity (Not Adjustable)	Created in a S.S. water reservoir fitted at the bottom to provide 90% to 95% $\pm$ 3 % RH
Relay	Solid state electronic relay with protective heat sink.
Air Circulation	By forced convection system
Insulation	By Glass Wool / PUF Insulation (High density)
Operations	Nearly silent operation with ultra-low vibration
Voltage Indicator	By Volt Meter fitted on Panel
Electric Supply	220/230V AC, 50/60Hz

#### **APPLICATIONS**

- "KSI" brings the ultra-high-tech Stability Chamber Microprocessor controlled designed as per ICH GUIDELINES for various stability and shelf life tests on Pharmacy, Bulk Drugs, Drug Substances, Biomedical, Healthcare, Food Products, Biotech etc.
- These are widely used for confirmatory studies for direct comparison of drug substance under controlled environmental conditions.

- Robust construction outer chamber is made of Mild Steel duly pre treated & finished with powder coated paint for lasting finish.
- ✓ Inner chamber made of ST AINLESS STEEL SHEET (304 Grade).
- Fitted with durable coaxial blower for forced air circulation at triple walled back to maintain temperature uniformity in the chamber.
- Outer front double walled door is insulated and is fitted with magnetic tape for air tight closing for no temperature loss, provided with lock and key arrangement.

- Inner chamber has SS angels for placing the shelves at convenient levels.
  Supplied with 2 or 3 removable shelves.
- A full view inner plexi-glass door enables inspection and monitoring of inner chamber specimens without disturbing the process temperature.
- High grade PUF INSULA TION between outer and inner chamber for minimal thermal losses.
- Cooling is done by finned tube evaporator lie in the air circulation path by ISI marked Compressor/Condensing Units CFC free & R-134 a eco friendly refrigerant.
- Heating is done by indirect heating system by air heaters made of stainless steel placed in the path of moving air in the chamber.
- Temperature Range. Temperature ranges of our Stability Chamber models are 200C to 600C.
- Temperature controlled by microprocessor based temperature controller having LED display with an accuracy of +10C fitted with PT-100 sensor (Resolution 0.10C)
- Humidity System: Humidity is generated by steam injection system consist of boiler tank, placed below the chamber fitted with boiler heater.
- ✓ Humidity Range: 50% of 90% & controlled by mean of an electronic humidity controller cum indicator with an accuracy of + 3 to 5%RH.
- Control panel having all controls and circuitry are housed at the top fitted with T temperature controller cum Indicator Microprocessor based with LED display for Set Value (SV) & Process Value (PV) to select any desired temperature & humidity controller cum indicator provided with Volt meter on the panel to read the incoming voltage.
- ✓ Caster wheel mounted for easy portability.
- ✓ Supplied with cord and plug.
- ✓ Operating Voltage: 220 Volts AC (50 Hz).

Usable Space in mm	610 X 450 X 410	845 x 500 x 400	870 x 570 x 560		
Capacity	4 Cuft.	6 Cuft.	10 Cuft.		
Approx Volume	113	173	282		
No. of Shelves	2	2	3		
Temperature Range	20°	C to 60°C (Resolution 0.1°	C)		
Temperature Controller	By Microprocess	or Based PID Digital Temp	erature Indicator		
Temp. Accuracy		±1°C			
Humidity Range	50% to 90% at cool temperature				
	±3 to 5%RH.				
Humidity Accuracy		±3 to 5%RH.			
Humidity Accuracy Display		±3 to 5%RH. LED Display			
Humidity Accuracy Display Relay	Solid state el	±3 to 5%RH. LED Display ectronic relay with protecti	ve heat sink.		
Humidity Accuracy Display Relay Air Circulation	Solid state el E	±3 to 5%RH. LED Display ectronic relay with protectively forced convection system	ve heat sink. n		
Humidity Accuracy Display Relay Air Circulation Insulation	Solid state el E By	±3 to 5%RH. LED Display ectronic relay with protection y forced convection system / High density PUF insulation	ve heat sink. n on		
Humidity Accuracy Display Relay Air Circulation Insulation Operations	Solid state el E By Nearly sil	±3 to 5%RH. LED Display ectronic relay with protection by forced convection system r High density PUF insulation ent operation with ultra-low	ve heat sink. n on <sup>y</sup> vibration		
Humidity Accuracy      Display      Relay      Air Circulation      Insulation      Operations      Voltage Indicator	Solid state el E By Nearly sil	±3 to 5%RH. LED Display ectronic relay with protection by forced convection system of High density PUF insulation ent operation with ultra-low By Volt Meter fitted on Pane	ve heat sink. n on vibration		
Humidity Accuracy      Display      Relay      Air Circulation      Insulation      Operations      Voltage Indicator      High Voltage Protection	Solid state el E By Nearly sil E Through a	±3 to 5%RH. LED Display ectronic relay with protection by forced convection system r High density PUF insulation ent operation with ultra-low by Volt Meter fitted on Pane utomatic voltage stabilizer	ve heat sink. n on vibration el (Optional)		
Humidity Accuracy      Display      Relay      Air Circulation      Insulation      Operations      Voltage Indicator      High Voltage Protection      Electric Supply	Solid state el E By Nearly sil E Through a	±3 to 5%RH. LED Display ectronic relay with protection by forced convection system of High density PUF insulation ent operation with ultra-low By Volt Meter fitted on Pane utomatic voltage stabilizer 220/230V AC, 50/60Hz	ve heat sink. n on vibration el (Optional)		

Usable Space in mm	610 X 450 X 410	845 x 500 x 400	870 x 570 x 560		
Capacity	4 Cuft.	6 Cuft.	10 Cuft.		
Approx Volume	113	173	282		
No. of Shelves	2	2	3		
Temperature Range	20°	C to 60°C (Resolution 0.1°	C)		
Temperature Controller	By Microprocess	or Based PID Digital Temp	erature Indicator		
Temp. Accuracy		±1°C			
Humidity Range	50% to 90% at cool temperature				
	±3 to 5%RH.				
Humidity Accuracy		±3 to 5%RH.			
Humidity Accuracy Display		±3 to 5%RH. LED Display			
Humidity Accuracy Display Relay	Solid state el	±3 to 5%RH. LED Display ectronic relay with protecti	ve heat sink.		
Humidity Accuracy Display Relay Air Circulation	Solid state el E	±3 to 5%RH. LED Display ectronic relay with protection by forced convection system	ve heat sink. n		
Humidity Accuracy Display Relay Air Circulation Insulation	Solid state el E By	±3 to 5%RH. LED Display ectronic relay with protection y forced convection system / High density PUF insulation	ve heat sink. n on		
Humidity Accuracy Display Relay Air Circulation Insulation Operations	Solid state el E By Nearly sil	±3 to 5%RH. LED Display ectronic relay with protection by forced convection system r High density PUF insulation ent operation with ultra-low	ve heat sink. n on <sup>y</sup> vibration		
Humidity Accuracy      Display      Relay      Air Circulation      Insulation      Operations      Voltage Indicator	Solid state el E By Nearly sil	±3 to 5%RH. LED Display ectronic relay with protection by forced convection system of High density PUF insulation ent operation with ultra-low By Volt Meter fitted on Pane	ve heat sink. n on vibration		
Humidity Accuracy      Display      Relay      Air Circulation      Insulation      Operations      Voltage Indicator      High Voltage Protection	Solid state el E By Nearly sil E Through a	±3 to 5%RH. LED Display ectronic relay with protection by forced convection system r High density PUF insulation ent operation with ultra-low by Volt Meter fitted on Pane utomatic voltage stabilizer	ve heat sink. n on vibration el (Optional)		
Humidity Accuracy      Display      Relay      Air Circulation      Insulation      Operations      Voltage Indicator      High Voltage Protection      Electric Supply	Solid state el E By Nearly sil E Through a	±3 to 5%RH. LED Display ectronic relay with protection by forced convection system of High density PUF insulation ent operation with ultra-low By Volt Meter fitted on Pane utomatic voltage stabilizer 220/230V AC, 50/60Hz	ve heat sink. n on vibration el (Optional)		





- "KSI" brings the ultra-high-tech Stability Chamber Microprocessor controlled designed as per ICH GUIDELINES for various stability and shelf life tests on Pharmacy, Bulk Drugs, Drug Substances, Biomedical, Healthcare, Food Products, Biotech etc.
- These are widely used for confirmatory studies for direct comparison of drug substance under controlled environmental conditions.

- Robust construction outer & inner chamber is made of ST AINLESS STEEL SHEET (304 Grade).
- Fitted with durable coaxial blower for forced air circulation at triple walled back to maintain temperature uniformity in the chamber.
- Outer front double walled door is insulated and is fitted with magnetic tape for air tight closing for no temperature loss, provided with lock and key arrangement.
- Inner chamber has SS angels for placing the shelves at convenient levels. Supplied with 2 or 3 removable shelves.
- ✓ A full view inner plexi-glass door enables inspection and monitoring of inner chamber specimens without disturbing the process temperature.
- High grade PUF INSULA TION between outer and inner chamber for minimal thermal losses.
- Cooling is done by finned tube evaporator lie in the air circulation path by ISI marked Compressor/Condensing Units CFC free & R-134 a eco friendly refrigerant.

- Heating is done by indirect heating system by air heaters made of stainless steel placed in the path of moving air in the chamber.
- Temperature Range. Temperature ranges of our Stability Chamber models are 200C to 600C.
- Temperature controlled by microprocessor based temperature controller having LED display with an accuracy of +10C fitted with PT-100 sensor (Resolution 0.10C)
- Humidity System: Humidity is generated by steam injection system consist of boiler tank, placed below the chamber fitted with boiler heater.
- ✓ Humidity Range: 50% of 90% & controlled by mean of an electronic humidity controller cum indicator with an accuracy of + 3 to 5%RH.
- Control panel having all controls and circuitry are housed at the top fitted with Temperature controller cum Indicator Microprocessor based with LED display for Set Value (SV) & Process Value (PV) to select any desired temperature & humidity controller cum indicator provided with Volt meter on the panel to read the incoming voltage.
  - Caster wheel mounted for easy portability.
  - Supplied with cord and plug.
  - Operating Voltage: 220 Volts AC (50 Hz).

Usable Space in mm	610 X 450 X 410	845 x 500 x 400	870 x 570 x 560	
Capacity	4 Cuft.	6 Cuft.	10 Cuft.	
Approx Volume	113	173	282	
No. of Shelves	2	2	3	
Temperature Range	20°	C to 60°C (Resolution 0.1	°C)	
Temperature Controller	By Microprocess	or Based PID Digital Tem	perature Indicator	
Temp. Accuracy		±1°C		
Humidity Range	50%	6 to 90% at cool temperat	ure	
Humidity Accuracy		±3 to 5%RH.		
Display		LED Display		
Relay	Solid state el	ectronic relay with protect	ive heat sink.	
Air Circulation	B	y forced convection system	m	
Insulation	By High density PUF insulation			
Operations	Nearly silent operation with ultra-low vibration			
Voltage Indicator	В	y Volt Meter fitted on Pan	el	
High Voltage Protection	Through automatic voltage stabilizer (Optional)			
Electric Supply		220/230V AC, 50/60Hz		











- The unit serves the dual purpose i. e. it can be used as a standalone unit. As well as, a part or subsystem of some bigger system. Temperature Range 50C to 900C controlled by Microprocessor based Digital Temperature Controller cum Indicator.
- General laboratory cooling applications.

- ✓ A compact refrigerated/heating circulator.
- ✓ Double walled construction.
- ✓ Inner Tank made of Stainless Steel (SS-304 grade).
- Outer chamber is made of Mild Steel duly powder coated.
- Heating by immersion heaters
- Cooling by sturdy refrigeration unit done by ISI mark compressor / Condensing Units CFC free & R-134 a eco friendly refrigerant.
- ✓ Temperature range 50C to 90C







Internal Dimensions (L X W ) D)
Approx. Capacity
Approx. Heating Load
Top Lid
Temperature
Temperature Range
Temperature Accuracy
Temperature Display
Temperature Sensor

250 x 250 x 250mm	500 x 250 x 250mm			
17 Ltr.	32 Ltr.			
2.0 KW	2.5 KW			
Double walled insulated				
Controlled by microprocessor based digital temperature indicator cum controller.				
5°C to 90°C				
± 1°C.				
Digital LED with set value (SV) & process value (PV).				
RTD (Pt-100)				





- "KSI" brings the ultra-high-tech Triple walled Microprocessor controlled, solid-state Orbital Shaking Incubator down to earth..
- Specially designed for Orbital Shaking under controlled Incubations / Temperature required for Tissue Cultures Fermentation Studies, & Ageing Tests., Life science applications & growth studies.

- Robust construction outer chamber is made of Mild Steel duly pre treated & finished with powder coated paint for lasting finish.
- ✓ Inner chamber made of STAINLESS STEEL SHEET (304 Grade).
- Fitted with durable coaxial blower for forced air circulation at triple walled back to maintain temperature uniformity in the chamber.
- Outer front double walled door is insulated and is fitted with magnetic tape for air tight closing for no temperature loss, provided with lock and key arrangement.
- Fitted with Universal Platform to accommodate interchangeable clamps of assorted sizes for different capacity of flasks..
- Stationery shelves made of Stainless Steel (SS-304) for use of the unit as a standard B.O.D. Incubator, can be supplied at extra cost..
- ✓ Door operated illumination lamp is fitted inside the chamber for easy visibility.
- ✓ A full view inner plexi-glass door enables inspection and monitoring of inner chamber specimens without disturbing the process temperature.
- High grade PUF INSULATION between outer and inner chamber for minimal thermal losses.
- Cooling is done by finned tube evaporator lie in the air circulation path by ISI marked Compressor/Condensing Units CFC free & R-134 a eco friendly refrigerant.
- Heating elements are placed in the path of moving air duly insulated from the body.
- Control panel having all controls and circuitry are housed at the top fitted with Temperature controller cum Indicator Microprocessor based with LED display for Set Value (SV) & Process Value (PV) to select any desired temperature provided with Volt meter on the panel to read the incoming voltage.
- ✓ Caster wheel mounted for easy portability.
- ✓ Supplied with cord and plug.
- ✓ Operating Voltage: 220 Volts AC (50 Hz).

	The second se
Usable Space in MM	600 X 600 X 600
Capacity	8 cu. Ft
Approx Volume (Ltr)	230
No. of Shelves	2
Temperature Range	5°C to 60°C (Resolution 0.1°C)
Temp. Controller	By Microprocessor Based PID Digital Temperature Indicator cum Controller.
Shaking amplitude	25 mm.
RPM Display	Digital
Shaking Speed	Variable speed from 20 RPM to 250 RPM
Temp. Accuracy	+1°C
Temp. Display:	LED Display for Set Value(SV) and Process Value (PV)
Relay	Solid state electronic relay with protective heat sink.
Air Circulation	By forced convection system
Insulation	By High density PUF insulation
Operations	Nearly silent operation with ultra-low vibration
High Voltage Protection	Through automatic voltage stabilizer (Optional)
Electric Supply	220/230V AC, 50/60Hz















- "KSI" brings the ultra-high-tech Triple walled Microprocessor controlled, solid-state BLOOD STORAGE CABINET.
- Specially designed for storing the blood bags/bottles of capacity up to 450 ml., in an automatically controlled temperature of 4°C to 6°C for small medium and large blood centres
- Suitable for hospitals, drugstore, pharmaceuticals factories, sanitation and anti-epidemic stations and clinics.

- Robust construction Outer chamber is made of Mild Steel duly pre treated & finished with powder coated paint for lasting finish.
- ✓ Fitted with Durable coaxial blower for forced air circulation at triple walled back to maintain temperature uniformity in the chamber.
- Outer front double walled door is insulated and is fitted with magnetic tape for air tight closing for no temperature loss, provided with lock and key arrangement.
- ✓ Door operated illumination lamp is fitted inside the chamber for easy visibility.
- ✓ A full view inner plexi-glass door enables inspection and monitoring of inner chamber specimens without disturbing the process temperature.
- High grade PUF INSULATION between outer and inner chamber for minimal thermal losses.

- Cooling is done by finned tube evaporator lie in the air circulation path by ISI marked Compressor/Condensing Units CFC free & R-134 a eco friendly refrigerant
- Temperature is controlled by Electronic Digital Temperature Indicator Cum Controller fitted With Audio Visual Alarm incorporated with battery back which triggers in the event of fluctuation exceeding permitted tolerance. Unit is also fitted with Door Operated Alarm and Power Supply Failure Alarm, as a safety device. to prevent the spoilage of stored blood bags.
- ✓ Drawers are provided for accommodating blood bottles or Blood bags.
- Caster wheel mounted for easy portability.
- ✓ Supplied with cord and plug.
- ✓ Operating Voltage: 220 Volts AC (50 Hz).

Approx Volume (Ltr)	40 ltrs	85 ltrs	165 ltrs	215 ltrs			
Blood Bags Capacity	24	50	110	200			
No. of Shelves	2	2	3	3			
Chamber		Inner Chamber	Made of Stainless Steel				
Temperature		Prese	t at 4°C ± 1°C				
Temp. Controller	By Microprocessor facility Fitted with s	By Microprocessor Based PID Digital Temperature Indicator cum Controller withalarm facility Fitted with specially designed deviation alarm from the preset temperature, door open alarm and power failure alarm.					
Temperature Alarm	High 60C & low 20C, Audio Visual Alarm						
Display:		LED Display					
Relay	S	Solid state electronic relay with protective heat sink.					
Battery Backup		Facility is provided					
Illumination		By 8 watts	Fluorescent Lamp				
Air Circulation		By forced	convection system				
Insulation		By High der	nsity PUF insulation				
Operations		Nearly silent opera	tion with ultra-low vibratio	n			
High Voltage Protection		Through automatic	voltage stabilizer (Optiona	al)			
Electric Supply		220/230	0V AC, 50/60Hz				



#### **APPLICATION ADVANTAGE**

- Heat sensitive biological materials may be freeze-dried without affecting their potency. The dried materials may be stored for years at room temperature without loss of their original characteristics.
- The freeze-dried material may be transported and shipped in small containers, and no provision is necessary for refrigeration enrooted.
- Bacterial growth and enzyme action do not take place in freeze-dried products and proteins do not coagulate.
- Oxidation of many materials such as haemoglobin and vaccines is completely prevented when drying and sealing is done under high vacuum.

#### WHAT IS FREEZE DRYING

Freeze drying is the process of removing the moisture from a biological product while maintaining the integrity of the biological products, chemical structure and activities. Freeze drying technology is used in particular for removal of moisture from the products usually of biological origin without causing any noticeable change in the original characteristics. Freeze drying is also the preferred process in the field of Pharmacy, Chemistry and in conservation of Food

#### **CONSTRUCTION & SALIENT FEATURES**

- All "APS" units are provided with following basic requirements:-
- A Drying Chamber or Manifold on/in which the containers with pre-frozen samples are connected/placed.
- A high Vacuum double stage pumping system with gas ballast with ultimate vacuum of less than 50 microns in the original characteristics. Freeze drying is also the preferred process in the field of Pharmacy, Chemistry and in conservation of Food

#### WHAT IS FREEZE DRYING

- ✓ A low temp. Condenser to trap the moisture vapour and allow the non- condensable vapours to go to the pump for release to the atmosphere.
- ✓ Housed in a super structure steel frame it is mounted on swivel casters.
- ✓ Complete with Perspex see through lid, gasket and control instruments i.e.
- Microprocessor Based Digital Temperature Controller for measurement of Temp. & Electronic digital Vacuum Indicator.
- The unit made out of hermetically sealed compressor and can be optionally fitted with 100 litters/ min directmotor drive rotary vane type vacuum pump of double stage with Air ballast having ultimate vacuum of 1x10-3 torr on pump head.
- High grade PUF INSULATED between outer and inner chamber for minimal thermal losses.
- Condenser Trap: All non-magnetic stainless steel fabricated, argon welded, dished-bottom for complete effluent removal.
- Refrigeration coils made of copper bonded to outside of condenser heavily insulated. Temp. up to (-)400 C at ambient temperature of 200 C is maintained through a MICROPROCESSOR BASED DIGITAL TEMPERATURE INDICATOR -CUM - CONTROLLER.
- Vacuum Drum has 6 or 12 port manifold (Main drying chamber) made of stainless steel non-magnetic grade with Perspex top cover. (CFC FREE AND PUFF INSULATED).

TECHNICAL SPECIFICA	ATIONS & ORDERING INFORMATIONS
MODEL	
Osnasitu	
Capacity	3.25 Litters
Vacuum Drying Drum S	22.5cm (dia) x 25.5cm (ht)
MOC (Body)	CPC duly powder costed on caster wheels
	Cite duly powder coaled on caster wheels.
MOC (Main Drving Chan	nber)
	Stainless Steel (Non Magnetic)
Temperature Range	Up to -400C (at ambient temperature of 200C)
Controller	Niemene and a District Terra and the
Vacuum Probe	Microprocessor Based Digital Temperature Controller
	Electric vacuum transducer
Vacuum Indicator	Digital vacuum indicator
Vacuum Seals	
Ultra Ultimate Vacuum (	(Pump Head)
	1 x 10-3 torr
No. of Drying Ports	6
Heat Deals (Outline)	
neat Rack (Option)	(Tray, Petri Dishes, Beakers etc) (Adoptable to the main drying chamber)
Vacuum Pump (Option)	00 litters/ min direct motor drive rotary vane type vacuum pump of double stage
High Voltage Protection	(Option)
Through outomatic voltage	e stabilizer







 "KSI" brings the ultra-high-tech Triple walled Microprocessor controlled Humidity & Temperature Control Cabinet (Refrigerated) forced convention type.

Specially designed for carrying out different quality control test under con trolled conditions of temperature and humidity for motors, various electrical fittings, electronic circuits and components, cloth and paper etc. & in various research labs.

- Robust construction outer chamber is made of Mild Steel duly pre treated & finished with powder coated paint for lasting finish.
- ✓ Inner chamber made of ST AINLESS STEEL SHEET (304 Grade).
- Fitted with durable coaxial blower for forced air circulation at triple walled back to maintain temperature uniformity in the chamber.
- Outer front double walled door is insulated and is fitted with magnetic tape for air tight closing for no temperature loss, provided with lock and key arrangement.
- Inner chamber has SS angels for placing the shelves at convenient levels. Supplied with 2 or 3 removable shelves.
- A full view inner plexi-glass door enables inspection and monitoring of inner chamber specimens without disturbing the process temperature.

- High grade PUF INSULA TION between outer and inner chamber for minimal thermal losses.
- Cooling is done by finned tube evaporator lie in the air circulation path by ISI marked Compressor/Condensing Units CFC free & R-134 a eco friendly refrigerant.
- Heating is done by indirect heating system by air heaters made of stainless steel placed in the path of moving air in the chamber.
- ✓ Temperature ranges of our humidity cabinet models are 100C to 600C.
- Temperature controlled by microprocessor based temperature controller having LED display with an accuracy of +10C fitted with PT-100 sensor (Resolution 0.10C)
- Humidity System: Humidity is generated by steam injection system consist of boiler tank, placed below the chamber fitted with boiler heater.
- ✓ Humidity Range: 50% of 90% & controlled controlled by mean of an electronic humidity controller cum indicator with an accuracy of + 3 to 5%RH
- Control panel having all controls and circuitry are housed at the top fitted with Temperature controller cum Indicator Microprocessor based with LED display for Set Value (SV) & Process Value (PV) to select any desired temperature & humidity controller cum indicator provided with Volt meter on the panel to read the incoming voltage.
- Caster wheel mounted for easy portability
- ✓ Supplied with cord and plug.
- ✓ Operating Voltage: 220 Volts AC (50 Hz).

Usable Space in mm( W x H x D)	450 x 450 x 700	600 x 600 x 600	600 x 600 x 900				
Capacity	5.2 Cuft	8 Cuft	12 Cuft				
Approx V oulme	150 Ltr.	227 Ltr.	340 Ltr				
No. of Shelves	2	2	3				
Temperature Range	10°C to 60°C (Resolution 0.1°C)						
Temp. Controller	By Microprocessor Based PID Digital T emperature Indicator cum Controlle						
Temp. Accuracy	±1 °C						
Humidity Range	50% to 90% at cool temperature						
Humidity Accuracy	+ 3 to 5%RH						
Display	LED Display fo	r Set V alue(SV) and Proc	ess V alue (PV)				
Relay	Solid state e	lectronic relay with protect	ive heat sink.				
Air Circulation	В	y forced convection system	n				
Insulation	Ву	High density PUF insulation	on				
Operation	Nearly silent operation with ultra-low vibration						
Voltage Indicator	By Volt Meter fitted on Panel						
High Voltage Protection	Through automatic voltage stabilizer (Optional)						
Electric Supply		220/230V AC, 50/60Hz					



















#### **APPLICATIONS**

- ✓ Double Walled Oven Universal (Memmert Type) is elegantly designed in various applications for microbiology, cell cultivation of animals and plants, food studies; general heating, drying, sterilizing, baking, to perform: material tests, ageing of computer chips, run complex experiments with highly sensitive loads, drying or tempering electronic components, hardening plastic resin. Our U universal oven stands for unparalleled precise, even and gentle temperature control
- Double Walled Oven Universal (Memmert Type) is low cost options for heatingfor various experiments in, industries, R&D labs, Pharmaceutical, Food & Beverage Industries and Institutions- in the field of Medical, Agricultural and Industrial Research.

- ✓ Outer chamber is made of Mild Steel duly powder coated.
- ✓ Inner chamber made of ALUMINIUM or STAINLESS STEEL (304) sheet.
- Forced convection system by motor & blowers fitted ensures good mixing, strong dispersion and maintains higher temperature uniformity inside the chamber & no cross contamination.
- Thermal loss is prevented by filling mineral wool (Insulation) in space between the outer body & Innerchamber.
- Door Gasket fixed on the double walled door for proper sealing.
- Fitted with heavy hinges with a ball catcher, spring loaded door closing device. Door is duly insulated.

- Cooling is done by finned tube evaporator lie in the air circulation path by ISI marked Compressor/Condensing Units CFC free & R-134 a eco friendly refrigerant
- Temperature is controlled by Electronic Digital Temperature Indicator Cum Controller fitted With Audio Visual Alarm incorporated with battery back which triggers in the event of fluctuation exceeding permitted tolerance. Unit is also fitted with Door Operated Alarm and Power Supply Failure Alarm, as a safety device. to prevent the spoilage of stored blood bags.
- Drawers are provided for accommodating blood bottles or Blood bags.
- ✓ Caster wheel mounted for easy portability.
- ✓ Supplied with cord and plug.
- ✓ Operating Voltage: 220 Volts AC (50 Hz).
- ✓ Adjustable two ventilation slides control inner air / vapour circulation.
- Beaded heating elements made of high quality Nichrome/Kanthal wire are placed in ribs, at bottom and sides for uniform heat distribution.
- Inner chamber has ribs for placing the shelves at convenient levels. Supplied with 2 or 3 removableshelves.
- ✓ Temperature is controlled by electronic digital temperature indicator cum controller from 50°C to 250°C ± 1°C. Fitted on the front panel for easy operations.
- Different programme functions can be designed for a wide variety of applications, and even whenused
- Temperature is displayed by Digital LED with SV and PV display at front of the oven.
- Front Panel is provided with ON/OFF switch, temperature controller and indicators
- Supplied with cord and plug.
- ✓ Operating Voltage: 220 Volts AC (50 Hz).

Inner Chamber in MM (W x H x D)	300x300x3 00	355x355x3 55	455x455x4 55	455x455x6 05	455 x 605 x 605	605x605x6 05	605x455x9 10	605x910x6 05		
Inches Conversio n	12 x 12 x 12	14 x 14 x 14	18 x 18 x 18	18 x 18 x 24	18 x 24 x 24	24 x 24 x 24	24 x 18 x 36	24 x 24 x 36		
Capacity	28 ltrs	43 ltrs	90 ltrs	105 ltrs	120 Itr	215 ltrs	240 ltrs	325 ltrs		
Heating Load	1.0 0 KW	1.00 KW	1.50 KW	1.50 KW	2.0 0 KW	2. 50 KW	2.50 KW	3.00 KW		
No. of Shelves	2	2	2	2	2	2	3	3		
Temperatu re Range		50°C to 250°C								
Temp. Controller	I	By Microproce	essor Based P	ID Digital Ten	nperat	ure Indicator o	cum Controller			
Temp. Sensitivity		+1°C.								
Air Circulation		By forced convection system								
Relay		So	olid state elect	tronic relay wi	th prot	ective heat si	nk.			
Auto Tuning System			System is co	mpatible with	auto t	uning system				











- Inner chamber has support for placing the shelves at convenient levels. Supplied with 2 or 3 removable shelves.
- Temperature is controlled by electronic digital temperature indicator cum controller from 50°C to 350°C ± 3°C. Fitted on the front panel for easy operations.
- Temperature is displayed by Digital LED with SV and PV display at front of the oven.
- Front Panel is provided with ON/OFF switch, temperature controller and indicators
- ✓ Supplied with cord and plug.
- ✓ Operating Voltage: 220 Volts AC (50 Hz).

Inner Chamber in MM (W x H x D)	300x300x300	355x355x355	455x455x455	455 x 605 x 605	605x605x605	605x910x455	605x910x605			
Inches Conversion	12 x 12 x 12	14 x 14 x 14	18 x 18 x 18	18 x 24 x 24	24 x 24 x 24	24 x 36 x 18	24 x 36 x 24			
Capacity	28 ltrs	43 ltrs	90 ltrs	120 Itr	215 ltrs	240 ltrs	325 ltrs			
No. of Shelves	2	2	2	2	2	3	3			
Temperature Range	50°C to 350°C									
Temp. Controller	By I	Microprocessor	Based PID Digi	tal Tei	mperature Indic	ator cum Contro	oller.			
Display	Digital LED with SV and PV display.									
Temp. Sensitivity	+3°C.									
Air Circulation			By forced c	onvec	tion system					



- High Temperature Deluxe Oven is elegantly designed in various applications for microbiology, cell cultivation of animals and plants, food studies; drying at High Temperature sterilizing,: material tests with highly sensitive loads, drying or tempering electronic components,. Our High Temperature Oven stands for unparalleled precise, even and gentle temperature control.
- Triple Walled High Temperature Oven is best options for heating at high temperature- for various experiments in, industries, R&D labs, Pharmaceutical, Food & Beverage Industries and Institutions- in the field of Medical, Agricultural and Industrial Research.

- Outer chamber is made of Mild Steel duly powder coated.
- Inner chamber made of STAINLESS STEEL (304) sheet.
- Forced convection system by motor & blowers fitted ensures good mixing, strong dispersion and maintains higher temperature uniformity inside the chamber & no cross contamination.
- Thermal loss is prevented by filling mineral wool (Insulation) / Silicone Fiber blanket in approximate space of (100mm) between the outer body & Inner chamber.
- Door Gasket fixed on the double walled door for proper sealing.
- Fitted with heavy hinges with a ball catcher, spring loaded door closing device. Door is dulyinsulated.





#### **APPLICATIONS**

- Double Walled Oven Universal (Memmert Type) is elegantly designed in various applications for microbiology, cell cultivation of animals and plants, food studies; general heating, drying, sterilizing, baking, to perform: material tests, ageing of computer chips, run complex experiments with highly sensitive loads, drying or tempering electronic components, hardening plastic resin. Our U universal oven stands for unparalleled precise, even and gentle temperature control.
- Double Walled Oven Universal (Memmert Type) is low cost options for heatingfor various experiments in, industries, R&D labs, Pharmaceutical, Food & Beverage Industries and Institutions- in the field of Medical, Agricultural and Industrial Research.

- Outer & Inner chamber is made of STAINLESS STEEL.
- Forced convection system by motor & blowers fitted ensures good mixing, strong dispersion and maintains higher temperature uniformity inside the chamber & no cross contamination.
- Thermal loss is prevented by filling mineral wool (Insulation) in space between the outer body & Innerchamber.
- ✓ Door Gasket fixed on the double walled door for proper sealing.
- Fitted with heavy hinges with a ball catcher, spring loaded door closing device. Door is dulyinsulated.
- ✓ Adjustable two ventilation slides control inner air / vapour circulation.
- Beaded heating elements made of high quality Nichrome/Kanthal wire are placed in ribs, at bottom and sides for uniform heat distribution.

- Inner chamber has ribs for placing the shelves at convenient levels. Supplied with 2 or 3 removableshelves.
- Temperature is controlled by electronic digital temperature indicator cum controller from 50°C to 250°C ± 1°C. fitted on the front panel for easy operations.
- Different programme functions can be designed for a wide variety of applications, and even when used
- Temperature is displayed by Digital LED with SV and PV display at front of the oven.
- Front Panel is provided with ON/OFF switch, temperature controller and indicators
- ✓ Supplied with cord and plug.
- ✓ Operating Voltage: 220 Volts AC (50 Hz).

					6	-				
Inner Chamber in MM (W x H x D)	300x300x3 00	355x355x3 55	455x455x4 55	455x455x6 05	455 χ ουວ χ 605	605x605x6 05	605x455x9 10	605x910x6 05		
Inches	12 x 12 x	14 x 14 x	18 x 18 x	18 x 18 x	18	24 x 24 x	24 x 18 x	24 x 24 x		
Conversio n	12	14	18	24	x 24 x 24	24	36	36		
Capacity	28 ltrs	43 ltrs	90 ltrs	105 ltrs	120 Itr	215 ltrs	240 ltrs	325 ltrs		
Heating Load	1.0 0 KW	1.00 KW	1.50 KW	1.50 KW	2.0 0 KW	2. 50 KW	2.50 KW	3.00 KW		
No. of Shelves	2	2	2	2	2	2	3	3		
Temperatu re Range	50°C to 250°C									
Temp. Controller	By Microprocessor Based PID Digital Temperature Indicator cum Controller.									
Temp. Sensitivity	+1°C.									
Air Circulation			By fo	orced convect	ion sys	stem				
Relay		So	olid state elect	tronic relay wit	th prot	ective heat si	ık.			







 Triple Walled Industrial Drying Oven (Tray Drier) is Suitable for heat treatment, baking and drying applications in industries, or Institutes engaged in the production of vaccines. Tablets, Bottle Sterilizing Drying Chemicals, PCB Processing, Armature Windings, Soaking electronic components like Yoke, Coils, EHT Coils, Transformersetc.

- Triple walled construction on heavy iron angle, inner chamber made of Mild steel painted with temp. resistant paint and outer finished with hammer tone paint
- Forced convection system by motor & blowers fitted ensures good mixing, strong dispersion and maintains higher temperature uniformity inside the chamber & no cross contamination.
- Air circulation is provided by heavy duty blower with ventilators are provided on the top of Oven.
- Thermal loss is prevented by filling mineral wool (Insulation) in space between the outer body & Innerchamber.
- Door Gasket fixed on the double walled door for proper sealing.
  Fitted with heavy hinges with a ball catcher, spring loaded door closing device.
  Door is dulyinsulated.
- Tubular Air heaters made of SS are placed at bottom and sides for uniform heat distribution.
- Temperature is controlled by electronic digital temperature indicator cum controller from 50°C to 250°C ± 5°C. Fitted on the front panel for easy operations.

- Temperature is displayed by Digital LED with SV and PV display at front of the oven.
- ✓ Front Panel is provided with ON/OFF switch, temperature controller and
- ✓ Supplied with other accessories but without trays & trolley.
- ✓ Operating Voltage: 440 Volts three phase AC supply.

Inner Chamber in MM	900x600x 600	900x900x 900	1200x900 x900	1500x900 x900	1800x900 x600	1800x900 x900	2400x900 x900	2400x1200x 1200	
Feet Conversi on	3 x 2 x 3	3 x 3 x 3	4 x 3 x 3	5 x 3 x 3	6 x 3 x 2	6 x 3 x 3	8 x 3 x 3	8 x 4 x 4	
Trays Capacity	12 ltrs	18ltrs	24 ltrs	24 ltrs	36 ltr	48 ltrs	60 ltrs	96 ltrs	
Heating Load	5.0 0 KW	6.00 KW	7.00 KW	10.00 KW	10.00 KW	15.00 KW	15.00 KW	18.00 KW	
Temperat ure Range	50°C to 250°C								
Temp. Controlle r	By Microprocessor Based PID Digital Temperature Indicator cum Controller.								
Temp. Sensitivit y	+5°C.								
Air Circulati on	By forced convection system								
Relay		Soli	d state electi	ronic relay wi	th protective	heat sink / Co	ontractor		

















- Bacteriological Incubator (Memmert Type) Double walled is elegantly designed in various applications for microbiology, cell cultivation of animals and plants, food studies. Our Incubators stands for unparallel precise, even and gentle temperature control
- ✓ Double Walled Incubators (Memmert Type) is low cost options for various experiments in, industries, R&D labs, Pharmaceutical, Food & Beverage Industries and Institutions- in the field of Medical, Agricultural and Industrial Research used for Drying of slides, paraffin embedding, tissue culture work, incubation of antibody test, excellent for Microbiological determinations, crystallization studies and Incubation of hydroxyl steroids

- ✓ Outer chamber is made of Mild Steel duly powder coated.
- ✓ Inner chamber made of ALUMINIUM or STAINLESS STEEL (304) sheet.
- Forced convection system ensures good mixing, strong dispersion and maintains higher temperature uniformity inside the chamber.
- Door has double viewing window to observe the sample placed inside the chamber without disturbing the thermal condition.
- Thermal loss is prevented by filling mineral wool (Insulation) in space between the outer body & Inner chamber.
- ✓ Door Gasket fixed on the double walled door for proper sealing.
- Fitted with heavy hinges with a ball catcher, spring loaded door closing device. Door is duly insulated.

- ✓ Adjustable two ventilation slides control inner air / vapour circulation.
- Beaded heating elements made of high quality Nichrome/Kanthal wire are placed in ribs, at bottom and sides for uniform heat distribution.
- Inner chamber has ribs for placing the shelves at convenient levels. Supplied with 2 or 3 removable shelves.
- Temperature is controlled by electronic digital temperature indicator cum controller from 50°C to100°C ± 1°C. fitted on the front panel for easy operations.
- Different programme functions can be designed for a wide variety of applications, and even when used
- Temperature is displayed by Digital LED with SV and PV display at front of the oven.
- Front Panel is provided with ON/OFF switch, temperature controller and indicators
- ✓ Supplied with cord and plug.
- ✓ Operating Voltage: 220 Volts AC (50 Hz).

#### **TECHNICAL SPECIFICATIONS & ORDERING INFORMATIONS**



Model No.	INE 1	INE 2	INE 3	INE 4	IN E 5	INE 6	INE 7	INE 8
Inner Chamber in MM (W x H x D)	300x300x 300	355x355x 355	455x455x 455	455x605x 455	455 6Ŏ5 x 605	605x605x 605	605x910x 455	605x910x 605
Inches Conversi on	12 x 12 x 12	14 x 14 x 14	18 x 18 x 18	18 x 24x 18	18 x 24 x 24	24 x 24 x 24	24 x 36 x 18	24 x 36 x 24
Capacity	28 ltrs	43 ltrs	90 ltrs	105 ltrs	120 Itr	215 ltrs	240 Itrsq	325 ltrs
Heating Load	0.50 KW	0.50 KW	1.00 KW	1.00 KW	1.5 0 KW	1. 50 KW	1.50 KW	2.00 KW
No. of Shelves	2	2	2	2	2	2	3	3
Temperat ure Range	5°C above ambient to 70°C							
Temp. Controlle r	By Microprocessor Based PID Digital Temperature Indicator cum Controller.							
Temp. Sensitivit y				+1°C.				
Air Circulatio n			By fo	rced convec	tion sy	rstem		
Relay		Soli	d state electi	ronic relay w	ith pro	tective heat s	sink.	
Auto Tuning System		s	System is cor	npatible with	auto t	uning systen	1	
Controlling	g of Tempera	ature	Ву	Profile (Mic	ro Prog	grammable C	controller)	
Audio A	Alarm Syster	n		Activates	at end	of cycle Buz	zer.	
Tim	er Facility		Ca	an be in built	with D	igital Electro	nic Timer	
Commu	inication Po	rt		RS - 485 wit	h Wind	low based so	oftware	
PLC Ba	ased Control ystems	v	/ith Touch Sc	reen Display	with [	Direct Therma	al / Dot Matrix	k Printer.








- Double Walled High Temperature Oil Bath having wide range of application, such as oxidation stability test on oils, greases, etc, or any other test requiring high temperature control having high thermal efficiency.
- Double Walled High Temperature Oil Bath is low cost options for heating- ideal tool for Laboratories, Pharmaceutical, petroleum Industries and Institutions.

- The Oil bath offered by us is basically designed to tolerate high temperatures with ease.
- ✓ Inner Tank and lid made of Stainless Steel (SS-304 grade).
- ✓ Outer chamber is made of Mild Steel duly powder coated.
- Thermal loss is prevented by filling mineral wool (Insulation) in space between the outer body & stainless steel tank.
- Heating elements are positioned in the floor and side walls & a natural mixing of the medium arises, providing better temperature distribution in the bath
- ✓ Temperature range 500C to 2500C.
- ✓ Operating Voltage: 220 Volts AC (50 Hz)

## Khosla Scientific

Internal Dimensions (L X B X D)

#### Approximate Capacity Heating Load

Temperature

Temperature Range

Temperature Accuracy

Heater Protection

Stirring Arrangement

**Stirring Speed** 

250 x 250 x 250mm300 x 300 x 250mm350 x 350 x 250mm15 Ltr.22 Ltr.32 Ltr.2.5 KW3.5 KW4.5 KWControlled by microprocessor based digital temperature indicator cum<br/>controller

500C to 250°C

± 3°C.

By Stainless Steel Perforated cover

By F. H. P. stirrer fitted with stainless steel shaft.

Can be regulated by speed regulator.





- Double Walled Water Bath generally used for evaporating liquids for boiling thematerial.
- Single Walled Water Bath is low cost options for heating / boiling ideal tool for Laboratories, Pharmaceutical, Food & Beverage Industries and Institutions

- ✓ Single walled made of heavy gauge stainless steel.
- ✓ Provided with concentric rings (Removable) of 75mm hole.
- Concentric rings can be removed to accommodate containers of various sizes.
- Heating by immersion heaters.
- ✓ Temperature range ambient up to 90oC.
- ✓ Operating Voltage: 220 Volts AC (50 Hz)

Internal dimensions (LX W X D)	300 x 250 x100mm	350 x 400 x100mm
Capacity	8 Ltr	15 Ltr
No. of Holes	6	12
	75 mm	75 mm
Heating Load	1.0 KW	2.0 KW







- Double Walled Serological water bath is a versatile equipment to handle any clinical procedure, Incubation,
- Inactivation, Agglutination & Biomedical procedures. Double Walled Serological Water Bath is low cost options for Biotechnology, Clinical, Environmental, Medical, Petroleum, Pharmaceutical, Milk or Industrial Applications.

- ✓ Double walled construction.
- Inner Tank and lid made of Stainless Steel (SS-304 grade).
- Outer chamber is made of Mild Steel duly powder coated.
- ✓ Flat Stainless Steel Lid prevents Evaporation.
- Heating by immersion heaters.
- Temperature Ambient range up to 90oC.
- Controls temperature within an accuracy of ±1°C.
- Thermal loss is prevented by filling mineral wool (Insulation) in space between the outer body & stainless steel tank.
- ✓ Fitted with drain plug for easy cleaning.
- ✓ To work on 220/230V AC supply.









- Double Walled Serological water bath is a versatile equipment to handle any clinical procedure, Incubation, Inactivation, Agglutination & Biomedical procedures.
- Double Walled Serological Water Bath is low cost options for Biotechnology, Clinical, Environmental, Medical, Petroleum, Pharmaceutical, Milk or Industrial Applications.

- Triple walled construction on heavy iron angle, inner chamber made of Mild steel painted with temp. resistant paint and outer finished with hammer tone paint
- Forced convection system by motor & blowers fitted ensures good mixing, strong dispersion and maintains higher temperature uniformity inside the chamber & no cross contamination.
- Air circulation is provided by heavy duty blower with ventilators are provided on the top of Oven.
- Thermal loss is prevented by filling mineral wool (Insulation) in space between the outer body & Innerchamber.
- Door Gasket fixed on the double walled door for proper sealing.
- Fitted with heavy hinges with a ball catcher, spring loaded door closing device.
   Door is duly insulated.
- Tubular Air heaters made of SS are placed at bottom and sides for uniform heat distribution

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### SIZE OF TRAY 16"X32"X1<sup>1</sup>/<sub>4</sub>

SIZEINFEET	CAPACITY OFTRAYS
3″X3″X2″	12
4″X3″X3″	24
5″X3″X3″	48
8″X4″X4″	96

# Khosla Scientific

#### **APPLICATIONS**

- In Double Walled Vacuum Oven the thermal process occur in airtight chamber under desired level of vacuum and maintained temperature. It can help in the prevention of surface reactions (such as oxidation), decontaminating samples (removing lubricants for example) as well as for speeding up the out gassing process
- Double Walled Vacuum Oven is low cost options for Moisture Determination, Out Gassing Solids, Aging Tests, Plating, Chemical Resistance Studies, Drying of Paper, Rubber, and Textiles, Desiccating, Dry Sterilization, Out Gassing Liquids, Vacuum Storage, Electronic Process Control.

Vacuum Ovens are used for various experiments in, industries, R&D labs, Pharmaceutical, Food & Beverage Industries and Institutions- in the field of Medical, Agricultural and Industrial Research

- ✓ Outer & Inner Chamber is made of STAINLESS STEEL.
- Thermal loss is prevented by filling mineral wool (Insulation) in space between the outer body & Innerchamber.
- Provided with Door Gasket for proper sealing.
- ✓ Fitted with heavy hinges & door closing device.
- See through transparent window of toughened glass is provided at the front.
- Adjustable two air controlling valves are fitted for creation of vacuum in the chamber & release.
- Heating elements are made of high quality Nichrome/Kanthal wire are embedded around the chamber

Supplied with 1 or 2 removable shelves.

Temperature is controlled by electronic digital temperature indicator cum controller from 50°C to 130°C ± 2°C. Fitted on the front panel for easy operations.

Temperature is displayed by Digital LED with SV and PV display at front of the oven.

Front Panel is provided with ON/OFF switch, temperature controller and indicators

Supplied with cord and plug.

Operating Voltage: 220 Volts AC (50 Hz).

Sizes in mm	250 x 300mm	300 x 300mm	300 x 600mm	250x250x250mm
Inches Conversion	10 x 12	12 x 12	12 x 24	10 x 10 x 10
Heating Load	2.00 KW	2.00 KW	2.50 KW	2.50 KW
No. of Shelves	1	1	2	1
Temperature Range	50°C to 130°C			
Temp. Controller	By Microprocessor Based PID Digital Temperature Indicator cum Controller.			
Temp. Sensitivity	+2°C.			
Vacuum	By Compatible Rotary oil sealed or noise free vacuum pump			
Relay	Solid state electronic relay with protective heat sink.			













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- Double Walled Vacuum Oven is low cost options for Moisture Determination, Out Gassing Solids, Aging Tests, Plating, Chemical Resistance Studies, Drying of Paper, Rubber, and Textiles, Desiccating, Dry Sterilization, Out Gassing Liquids, Vacuum Storage, Electronic Process Control.
- Vacuum Ovens are used for various experiments in, industries, R&D labs, Pharmaceutical, Food & Beverage
   Industries and Institutions- in the field of Medical, Agricultural and Industrial
   Research.

- ✓ Outer Chamber made of M.S. Powder Coated
- ✓ Inner chamber is made of STAINLESS STEEL (304 grade).
- Thermal loss is prevented by filling mineral wool (Insulation) in space between the outer body & Innerchamber.
- Provided with Door Gasket for proper sealing.
- ✓ Fitted with heavy hinges & door closing device.
- See through transparent window of toughened glass is provided at the front.
- Temperature is controlled by electronic digital temperature indicator cum con-

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- Double Walled Vacuum Oven is low cost options for Moisture Determination, Out Gassing Solids, Aging Tests, Plating, Chemical Resistance Studies, Drying of Paper, Rubber, and Textiles, Desiccating, Dry Sterilization, Out Gassing Liquids, Vacuum Storage, Electronic Process Control.
- Vacuum Ovens are used for various experiments in, industries, R&D labs, Pharmaceutical, Food & Beverage Industries and Institutions- in the field of Medical, Agricultural and Industrial Research.

Sizes in mm	250 x 300mm	300 x 300mm	300 x 600mm	250x250x250mm	300x300x300mm	455x455x455mm	
Inches Conversion	10 x 12	12 x 12	12 x 24	10 x 10 x 10	12 x 12 x 12	18 x 18 x 18	
Heating Load	2.00 KW	2.00 KW	2.50 KW	2.50 KW	2.50 KW	3.00 KW	
No. of Shelves	1	1	2	1	1	2	
Temperature Range	50°C to 130°C						
Temp. Controller	By Microprocessor Based PID Digital Temperature Indicator cum Controller.						
Temp. Sensitivity	+2°C.						
Vacuum	By Compatible Rotary oil sealed or noise free vacuum pump						
Relay	Solid state electronic relay with protective heat sink.						















- "REW" brings the ultra-high-tech Triple walled Microprocessor controlled Humidity & Temperature Control Cabinet (Refrigerated) forced convention type.
- Specially designed for carrying out different quality control test under controlled conditions of temperature and humidity for motors, various electrical fittings, electronic circuits and components, cloth and paper etc. & in various research labs

- Robust construction outer chamber is made of Mild Steel duly pre treated & finished with powder coated paint for lasting finish.
- ✓ Inner chamber made of ST AINLESS STEEL SHEET (304 Grade).
- Fitted with durable coaxial blower for forced air circulation at triple walled back to maintain temperature uniformity in the chamber.
- Outer front double walled door is insulated and is fitted with magnetic tape for air tight closing for no temperature loss, provided with lock and key arrangement.
- Inner chamber has SS angels for placing the shelves at convenient levels. Supplied with 2 or 3 removable shelves.
- A full view inner plexi-glass door enables inspection and monitoring of inner chamber specimens without disturbing the process temperature.
- High grade PUF INSULA TION between outer and inner chamber for minimal thermal losses.

- Cooling is done by finned tube evaporator lie in the air circulation path by ISI marked Compressor/Condensing Units CFC free & R-134 a eco friendly refrigerant.
- Heating is done by indirect heating system by air heaters made of stainless steel placed in the path of moving air in the chamber.
- Temperature Range. Temperature ranges of our humidity cabinet models are 10C to 60C.
- Temperature controlled by microprocessor based temperature controller having LED display with an accuracy of +10C fitted with PT-100 sensor (Resolution 0.10C)
- Humidity System: Humidity is generated by steam injection system consist of boiler tank, placed below the chamber fitted with boiler heater.
- Humidity Range: 50% of 90% & controlled controlled by mean of an electronic humidity controller cum indicator with an accuracy of + 3 to 5%RH.
- Control panel having all controls and circuitry are housed at the top fitted with Temperature controller cum Indicator Microprocessor based with LED display for Set V alue (SV) & Process V alue (PV) to select any desired
- temperature & humidity controller cum indicator provided with Volt meter on the panel to read the incoming voltage.

Usable Space in mm( W x H x D)	450 x 450 x 700	600 x 600 x 900			
Capacity	5.2 Cuft	8 Cuft	12 Cuft		
Approx V oulme	150 Ltr.	340 Ltr			
No. of Shelves	2	3			
Temperature Range	10°C to 60°C (Resolution 0.1°C)				
Temp. Controller	By Microprocessor Based PID Digital Temperature Indicator cum Controller.				
Temp. Accuracy	±1 °C				
Humidity Range	50% to 90% at cool temperature				
Humidity Accuracy	+ 3 to 5%RH				
Display	LED Display for Set Value(SV) and Process Value (PV)				
Relay	Solid state electronic relay with protective heat sink.				
Air Circulation	By forced convection system				
Insulation	By High density PUF insulation				
Operation	Nearly silent operation with ultra-low vibration				
Voltage Indicator	By Volt Meter fitted on Panel				
High Voltage Protection	Through automatic voltage stabilizer (Optional)				
Electric Supply	220/230V AC, 50/60Hz				











- "KSI" Rectangular Muffle Furnace is elegantly designed in various applications for R&D labs, Chemical Industries, Pharmacy & Foundries for making ash for chemical analysis
- Low Cost option for heating the material on high temperature.

- Outer casing is made of thick Mild Steel duly powder coated.
- Light weight with ceramic fibre wool insulation (instead of Brick insulation).
- ✓ Heating elements are made of KANTHAL "A-1" wire.
- Thermal loss is prevented by ceramic fibber insulation in space between the outer body & heating chamber.
- Fitted with heavy hinges & door is duly insulated.
- Maximum working temperature range up to 900°C is fitted with wounded muffle.
- ✓ Maximum Temperature is 1000°C and working temp. 900°C.
- ✓ Fitted with thermocouple & silver fuse for protection of chamber.
- Temperature is controlled by energy regulator with display of temperature on pyrometer fitted on panel with an accuracy of + 5%.
- Temperature is controlled by electronic digital temperature indicator cum controller from 50°C to 900°C, + 50C fitted on the front panel for easy operations. (Optional).

Temperature is displayed by Digital LED with SV and PV display at front of the Furnace (Optional).

Front Panel is provided with ON/OFF switch, sun Vic energy regulator, pyrometer and indicators.

Supplied with cord and plug.

Operating Voltage: 220 Volts AC (50 Hz).









- "KSI" Rectangular Muffle Furnace is elegantly designed in various applications for R&D labs, Chemical Industries, Pharmacy & Foundries for making ash for chemical analysis.
- Low Cost option for heating the material on high temperature.

- ✓ Outer casing is made of thick Mild Steel duly powder coated.
- Light weight with ceramic fibre wool insulation (instead of Brick insulation).
- Heating elements are made of KANTHAL "A-1" wire.
- Thermal loss is prevented by ceramic fibre insulation in space between the outer body & heating chamber.
- ✓ Fitted with heavy hinges & door is duly insulated.
- Maximum working temperature range up to 1150°C are fitted with wounded muffle.
- ✓ Maximum Temperature is 1200°C and working temp. 1 150°C.
- ✓ Fitted with thermocouple & silver fuse for protection of chamber.
- Temperature is controlled by energy regulator with display of temperature on pyrometer fitted on panel with an accuracy of + 5%.
- Temperature is controlled by electronic digital temperature indicator cum 0 controller from 50°C to 1150°C, + 5 C fitted on the front panel for easy operations. (Optional).

- Temperature is displayed by Digital LED with SV and PV display at front of the Furnace (Optional).
- ✓ Front Panel is provided with ON/OFF switch, sun Vic energy regulator, pyrometer and indicators.
- ✓ Supplied with cord and plug.
- ✓ Operating Voltage: 220 Volts AC (50 Hz).

Inner Chamber in mm (W x H x D)	100 x 100x225	125 x 125x250	150x 150x300	125 x 175x475	175x175x475	200 x 200 x 300	
Inches Conversion	4x4x9	5x5x10	6x6x 12`	5x7x 19	7x7x19	8x8x 12	
Rating in KW	2.0	2.5	3.0	4.0	4.5	5.0	
Temperature Range	Μ	Maximum Temperature is 1200°C and working temp. 1150°C					
Heating	By Embedded heater run around the chamber						
Temp. Controller	By energy regulator for furnace fitted with pyrometer						
Inner Chamber in mm (W x H x D)	100 x 100x225	125 x 125x250	150x 150x300	125 x 175x475	175x175x475	200 x 200 x 300	
Inches Conversion	4x4x9	5x5x10	6x6x 12`	5x7x 19	7x7x19	8x8x 12	
Rating in KW	2.0	2.5	3.0	4.0	4.5	5.0	
Temperature Range	Maximum Temperature is 1200°C and working temp. 1150°C						
Heating	By Embedded heater run around the chamber						
Temp. Controller	By energy regulator for furnace fitted with pyrometer						







- "KSI" Rotary Shaker Heavy Duty is used in various Research Lab & Industries for Shaking the Liquid in Conical Glass Flask from 100 to 1000 ml capacity.
- Rotary Flask shakers are ideal for mixing and development of cultures, chemicals, solvents, and assays etc. in Microbiological, Cell Culture & Life Science laboratories.
- It is continuous-duty device designed for the agitation of solid phase peptide synthesis flasks and other similar glassware.

- ✓ Heavy Duty Model for continuous operation.
- ✓ Fitted with DC HEAVY DUTY CONTINUOUS RATING MOTOR.
- Compact counter balanced drive mechanism ensures high stability and reliability even in continuous operation & uneven load distribution
- ✓ Speed range is 50 250 RPM. (Approximate).
- ✓ Fitted with Digital RPM /Speed meter.
- Complete body is mounted on heavy mild steel angle iron frame making it rigid and sturdy for smooth operations.
- Mild steel powder coated platform fitted with rubber discs to hold conical flasks from 100ml to 1000ml capacity.
- Mounted on ball bearing crankshafts to give an orbital circular motion to the flasks.
- The diameter of the orbit is approximately 2".

- Speed is controlled through a SMPS based DC DRIVE UNIT speed control knob or through a VARIAC (AUTO TRANSFORMER).
- ✓ Fitted with ON/OFF timer for shaking time control.
- Supplied complete with cord & plug to work on Single Phase 220 / 230 volts A.C. supply.

#### ADDITIONAL ACCESSORIES

Adaptor 12" Dia to accommodate sieves of 12" Dia.

Plate Form Size (in CM)	60 x 60	90 x 90	120 x 120	
Flask Capacity (in	100	100	100	
	250	250	250	
BAL N	500	500	500	
WL)	1000	1000	1000	
Can Accommodation	49	100	144	
	36	64	100	
	25	49	100	
	16	36	64	
Speed Range`	50 - 250 RPM (Approximate)			
Speed Control	Speed is controlled through a SMPS based DC DRIVE UNIT speed control knob or through a VARIAC (AUTO TRANSFORMER)			
Operations	Nearly silent operation with ultra-low vibration			
Electric Supply	220/230V AC, 50/60Hz			







- "KSI" Shaker is used in various Lab & Industries, Pathological work for Shaking the Liquid in Conical Glass Flask from 25 to 1000 ml capacity.
- Rotary Flask shakers are ideal for mixing and development of cultures, chemicals, solvents, and assays etc. in Microbiological, Cell Culture & Life Science laboratories.

It is continuous-duty device designed for the agi tation of solid phase peptide synthesis flasks and other similar glassware.

- It is a compact bench top model unit
- The shaker is mounted on ball bearing crankshafts to give an orbital circular motion to the flasks.
- The diameter of the orbit is approximately 2".
- Compact counter balanced drive mechanism ensures high stability and reliability even in continuous operation & uneven load distribution.
- ✓ Speed range is 50 200 RPM.
- Fitted with heavy duty motor having variable speed.
- Speed can be controlled through variable speed regulator knob or by mechanical speed controller.
- Complete body is mounted on heavy mild steel angle iron frame making it rigid and sturdy for smooth operations.

- Available in stainless steel platform fitted with stainless steel lotus type clamps to hold flasks,
- Mild steel painted platform fitted with rubber discs to hold conical flasks from 50 ml to 1 000 ml capacity.
- Supplied complete with cord & plug to work on Single Phase 220 / 230 volts A.C. supply.

Platform Size in cm	30 x 30	45 x 45	60 x 60	90 x 90	120x120
Flask Capacity in ml	25	25	25	25	25
	50	50	50	50	50
	100	100	100	100	100
	250	250	250	250	250
	500	500	500	500	500
	100	1000	1000	1000	1000
	18	36	64	144	225
	18	36	64	144	225
Oran Arrowsidetter	16	25	49	121	200
Can Accomidation	9	16	36	81	144
	-	16	25	64	121
	-	9	16	36	81
Speed Range	50 - 200 RPM				
Speed Control	By variable speed regulator knob or by mechanical speed controller				
Operations	Nearly silent operation with ultra-low vibration				
Electric Supply	220/230V AC, 50/60Hz				








## APPLICATIONS

- Double Walled Water Bath Incubator Shaker (Desktop Model) is a versatile equipment to study on tissue metabolism, Enzymes and Protein Coagulation or other experiments requiring shaking of subject matter at constant speed under controlled temperature environment.
- Double Walled Water Bath Incubator Shaker is low cost options for Biotechnology, Clinical, Environmental, Micro Biology, Medical, or Industrial Applications.

## **SALIENT FEATURES & CONSTRUCTION**

- Double walled construction.
- Inner Tank and lid made of Stainless Steel (SS-304 grade).
- ✓ Outer chamber is made of Mild Steel duly powder coated.
- Heating by immersion heaters.
- ✓ Temperature range up to 900C.
- Controls temperature within an accuracy of ±1°C by microprocessor based digital temperature indicator cum controller.
- Thermal loss is prevented by filling mineral wool (Insulation) in space between the outer body & stainless steel tank.
- Shaking mechanism comprises of variable speed motor fixed on the left side and coupled to the oscillating tray riding on ball rollers oscillated through a geared variable speed motor. Tray shakes in linearly to and fro is with Minimum Noise and Vibration.

- Available in stainless steel platform fitted with stainless steel lotus type clamps to hold flasks,
- Mild steel painted platform fitted with rubber discs to hold conical flasks from 50 ml to 1 000 ml capacity.
- Supplied complete with cord & plug to work on Single Phase 220 / 230 volts A.C. supply.

Platform Size in cm	30 x 30	45 x 45	60 x 60	90 x 90	120x120
Flask Capacity in ml	25	25	25	25	25
	50	50	50	50	50
	100	100	100	100	100
	250	250	250	250	250
	500	500	500	500	500
	100	1000	1000	1000	1000
Can Accomidation	18	36	64	144	225
	18	36	64	144	225
	16	25	49	121	200
	9	16	36	81	144
	-	16	25	64	121
	-	9	16	36	81
Speed Range	50 - 200 RPM				
Speed Control	By variable speed regulator knob or by mechanical speed controller				
Operations	Nearly silent operation with ultra-low vibration				
Electric Supply	220/230V AC, 50/60Hz				

Shaking motion of tray is controlled by speed regulator fitted at the panel.

Fitted with PMDC heavy duty motor for continuous operation.

Shaking tray can either hold test tubes or Erlenmeyer flasks of 25 ml or 50ml or 100 ml or 250 ml or 1000ml, as ordered by the user

Supplied complete with one shaking tray as a standard accessory.

Supplied with GABLED DOME LID for dripping of all condensate into the bath inside periphery.

Fitted with THYRISTOR BASED DC DRIVE for speed range from 40 to 140 cycles per minute

To work on 220/230V AC supply.

Internal Dimensions (L X W X D)	275 x 275 x 150mm	400 x 300 x 150mm		
Approx. Capacity	12 Ltr.	18 Ltr.		
Approx. Heating Load	2.0 KW	2.5 KW		
Top Lid	GABLED DOME LID made of Stainless Steel			
Temperature	Controlled by microprocessor based digital temperature indicator cum controller.			
Temperature Range	From ambient to 90°C			
Temperature Accuracy	± 1°C.			
Temperature Display	Digital LED with set value (SV) & process value (PV).			
Temperature Sensor	RTD (Pt-100)			
Shaking Speed	40 to 140 cycles/min.			
Shaking Speed	Controlled by speed regulator			
Shaking Tray	Can either hold test tubes or Erlenmeyer flasks of 25ml or 50 ml or 250 ml or 1000 ml as ordered by the users			





## Laboratory Stirrers-REW-230

Mini stirrer fitted with 1/50 HP motor 1200 R.P.M without controller, complete on adjustable stand.

Lab stirrer with 1/20 HP motor 4000 R.P.M with speed regulator.



## Bio safety Cabinet Class II A2 –REW-A2231

1. 30% air exhaust

2. 70% air recirculation

HEPA-filtered exhaust air in Type A2 cabinet may be recirculated into the room or exhausted to the outdoors through a canopy exhaust connection.
HEPA-filtered down flow air is a portion of mixed down flow and inflow air from a common plenum.

5. Negative Pressure air surrounding all biological contaminated ducts and plenums.

6. Negative pressure surrounds the work area with double wall plenums for protection.

7. Air drawn through pre-filter is made to pass through highly effective HEPA (High Efficiency Particular Air) filters. The Prefilter fitted extends the life of HEPA filter drastically. Fitted with HEPA Filter made from water resistant, fire retardant, imported micro fine glass fiber media; conforms to EU – 14 Grade, with an efficiency rating better than 99.999% for 0.3 these filters are designed to accommodate higher air flow volume.

8. Prefilter are made from Non-Woven Synthetic with HDPE mesh and Al expanded mesh on air leaving side; conforms to EU – 4 / G-4 Grade, with an efficiency of down to 10 micron. These filters can be cleaned by compressed air & also washable.

9. Mounted on heavy tubular stand with lockable castors.

10. Aerodynamic airflow grills maintain safety and prevent blockage

11. U.V and fluorescent interlock available

12. Ergonomic and comfortable 10 degrees sloped front window for comfortable head and elbow rest position, thus reducing fatigue.

13. The sash is counterbalanced for smooth and lightweight operation with the standard opening of 200mm ±10 mm for easier access to work zone and enhanced user safety.