



We are a leading name in the manufacturing of Bio & Medical research Laboratory instruments. Highly appreciated for unbeatable quality and accuracy, our range of Hot Air Ovens, Steam sterilizers (Vertical, Horizontal, cylindrical, etc.) BOD Incubator, Bacteriological Incubators, Lab furnaces, boiling Water Bath, is at par with superior industry norms.

Further, we also have dealership of instruments such as High Precision / Analytical Balances, Moisture Balance, UV Visible Spectrophotometers, Refractometer, Viscometer, Ion/pH meter, Ultrasonic Cleaner, Ice flaker, Hot plate Magnetic Stirrer etc.

Our high performing instruments fulfil the needs of Chemical Engineering, Biochemistry, Microbiology, Biotechnology, Botany, Zoology, Foundries, Metallurgical dept., Pharmaceutical, Food research & number of Research Laboratories and Institutions.

We are promoted by experienced technical and commercial group. Semicosys serves a number of reputed laboratories with avant-garde scientific lab instruments, laboratory equipment and similar products. Our adherence to strict delivery schedules as well as welcoming the feedback and suggestions of our clients, have paid us rich dividends. The company has created a benchmark for its quality products, all delivered at competitive prices.



OUR BIO & MEDICAL LAB EQUIPMENTS RANG
Steam sterilizer / Autoclave ( Vertical, Horizontal,
Rectangular, Cylindrical)
Hot Air drying oven / Tray dryer
Bacteriological Incubator
BOD Incubator
Lab Furnace
Water Bath /Boiling water Bath
High precision / Analytical balance
UV / VIS spectrophotometer (Double beam, Single beam)
Bench top pH/mV/°C Meter
Bench top ION/pH/mV/°C Meter
Bench top Conductivity /°C Meter
Precision Dissolved Oxygen Meter
Digital Automatic Polarimeter
Digital ABBE Refracto meter
Gradient Thermal Cycler PCR
Digital Rotational Viscometer
Probe Sonicator
Desktop Ice Maker
Ice Flaker
Hotplate Magnetic Stirrer

NOTE: Features & Specifications are subject to change due to continuous Improvement of Technology.





### **AUTOCLAVES / STEAM STERILIZERS**







Autoclaves or sterilizers are vessels that use pressurized steam to eradicate micro-organisms by creating thermal stress. To achieve a sufficient sterilization, it is necessary to raise the temperature such that even the most thermo-tolerant organisms are inactivated, hence the classic 121°C at 1.2Kg/cm for 15 minutes.

# PSM Range of Autoclave Models

Vertical autoclave, Horizontal autoclave with built in heaters, Horizontal autoclave with separate steam boiler, Horizontal sterilizer with steam jacket-double/single door, High pressure, temperature autoclaves for OT, High pressure, autoclaves for metal testing and cement autoclave.

#### **FEATURES**

The Equipment is very versatile in construction and safe for use in Research Laboratories, Hospitals, Pharmaceuticals Labs, Pesticide Lab, and Micro biology, Cell Biology, Biochemistry and Bio-Technology. The inner Chamber, loading bucket, flange and lid all made of S.S. Complete with automatic temperature, pressure and time control and display with all safety parameters including safety valve and release valve etc.

- Automatic control of pressure, temperature and time.
- Suitable for continuous operation up to 2-3 hours at one stretch.
- Stainless steel inner chamber sturdy construction with argon arc welding joints.
- Built -in temperature indication and control as an additional safety along with pressure control and mechanical safety
- Temperature Range from 1210C to 1350C.
- Available in different sizes.

MODEL	DIMENSION	CAPACITY	POWER LOAD
PSM/VA-1	12"dia x 22"h	40ltr	02 KW
PSM/VA-2	14"dia x 24"h	60ltr	04 KW
PSM/VA-3	16"dia x 28"h	90ltr	04 KW
PSM/VA-4	18"dia x 30"h	120ltr	06 KW
PSM/VA-5	22"dia x 30"h	175ltr	06 KW
PSM/VA-6	22"dia x 36"h	210ltr	06 KW
PSM/VA-7	24"dia x 36"h	250ltr	09 KW

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# HOT AIR DRYING OVEN / TRAY DRYER









The ovens are sturdy and rugged constructions are of inner chamber with SS. Evenly distributed heaters are totally concealed and produce maximum heat to the chamber with ceramic reflector. Clean working area with dust free gasket. Balanced arrangement for fresh air and ventilation. Well ventilated sturdy arrangement of trays and shelves. Temperature range :RT+50C to 2500C (Above 2500C on request). Gravity convection ovens, Universal ovens, Forced air ovens, Industrial ovens, Precision ovens, Vacuum ovens, Humidity ovens, Programmable ovens, Baking ovens, Hybridization ovens, Ageing ovens and Tray driers.

#### **SALIENT FEATURES**

- Sturdy and rugged construction with thicker gauge sheet of stainless steel 304 grade non- magnetic quality.
- Heaters are totally concealed, easy replaceable, placed at bottom and on either side to produce maximum reflect heat to the chamber with ceramic reflector.
- Clean working area with dust free gasket, heavy duty hinges and locking devices.
- Temperature uniformity and control accuracy are within specified limit.
- Balanced arrangement for fresh air and ventilation.
- Well ventilated sturdy arrangement of trays and Trolleys.
- Forced air circulation built-in-with heavy duty blower fixed one on top and two at back for vertical and horizontal circulation of hot air and for better uniformity.
- Minimum heat loss with glass wool insulation as per latest technology.
- Non-corrosive, Easy to operate High performance Tray Dryers.
- Low maintenance cost, Uniform heating system.

STANDARD SIZE (WXDXH)	NO. OF SHELVES
12" x12"x 12"	2
14"x14"x14"	2
18"x18"x18"	2
18"x18"x24"	3
24"x24"x24"	3
24"x24"x36"	4

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#### **INCUBATOR**



BACTERIOLOGICAL INCUBATOR (TEMP. RANGE RT+50C TO +600C)



BOD Incubator (TEMP. RANGE +50C TO +500C)

The Incubator is of double door construction with inner being glass door & outer metallic with good quality Magnetic Gasket. Important features of our incubator are prevention of sample desiccation and evaporation of media, prevention of contamination, energy efficiency, variable oxygen control, and temperature and humidity control.

#### **SALIENT FEATURES**

Interior body with stainless steel and exterior with MS powder coated.

Specially designed Electronic circuit for precise temperature control.

Better insulation for minimizing heat loss.

Powerful air circulation system for temperature uniformity.

Control panel on the top for easy operation.

Full view glass door for observation.

Cooling is effected by means of mechanical refrigeration comprised hermetically sealed compressor, Condenser, Evaporator etc.

Operating Voltage 230V, 50 Hz, AC Single Phase.

#### **VACUUM OVENS**



Vacuum ovens are designed to dry the samples under low pressure, temperature and in an Oxygen free zone. Many substances are very much susceptible to high temperature. In such cases the boiling point of the solvent can be reduced by vacuum and can be dried without any chemical or structural change of the substance.

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#### LABORATORY FURNACE



Construction: Outer made of thick Gauge M.S. built in with fume exhaust with sing out door.

**Insulation**: High quality insulation Ceramic fiber board/ Ceramic wool Blanket all round.

Paint: Gray Hammer tone.

Element Carrier: High alumina Embedded on outer

surface of the Muffle.

**Heat:** Heating is affected by thick gauge Kanthal A1 Spiral heating coil for Temp up to 10500C and Silicon carbide rod for temp. up to 14000C built in with heavy SS terminal to avoid loose contact.

#### INDUSTRIAL HEATING FURNACE



These are extensively used for multiple functions in various industries around the world. Our industrial furnaces are light in weight yet strong in constructions. Industrial heating furnaces offered by us provide trouble free long life service to users. Muffle Furnace are widely used for mineral analysis Ash-determination, Heat treatment, Propitiate drying, Ignition and fusion and the like. Angle Iron structure with heavy gauge M.S. sheet covering. Swing out door. Temperature indication and control High quality insulation bricks 8" to 10 "/ Ceramic wool all round.

#### **AIR FLOW SYSTEMS**



This Laminar Air flow work station is ideal for Micro-Biological manipulations, bio-technical Multiplication, Tissue Culture and also for any work that demands clean dust free working condition and sterile air flow. Laminar Air Flow principles involve double filtration of air. Hepa filter efficiency 99.99%. Particle Size: 0.3 Microns. The Design has taken care for air filtration and sterilization, illumination, low noise &minimum vibration levels. It meets the Federal standard 209(BS 529) specifications for providing Particle free Vertical / horizontal air flow. The entire unit combines aesthetic appeal functional, utility, efficiency and working comfort.

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BIO & MEDICAL LAB EQUIPMENTS | ONLINE/OFFLINE UPS | BATTERIES | INVERTERS | SOLAR UPS | SERVO STABILIZERS SEMICOSYS ELECTRONICS & IT PVT. LTD #867/A, 1<sup>ST</sup> FLOOR, ADITHYA COMPLEX, 2<sup>ND</sup> CROSS,







#### **FERMENTOR**



Fermentation process is essential for the healthy growth of mammalian and microbial cells under controlled conditions of aeration, Co2, dissolved oxygen, PH and temperature. Controlled stirring is provided as Mammalian cells require very slow stirring speed and microbial cells require slightly higher rate of stirring. Provision for connecting measurement devices for dissolved oxygen, carbon dioxide and PH is incorporated. Precise temperature control and pressure gauge indication are also provided. The FERMENTOR is fabricated of stainless steel and buffed and polished on the inside face. Suitable drain is provided for the outer jacket to remove condensed Steam if any. View port and illumination port is also provided. Provision for connecting measurement devices for dissolved oxygen, carbon dioxide and PH is incorporated. Precise temperature control and pressure gauge indication are also provided.

#### **OIL & WATER BATHS**

We are engaged in offering extensive assortments of **Oil & Water Bath.** The offered range supplied is made from quality assured raw materials and modern techniques. Our offered array is available in cost effective rates. Features: High Quality, Durable, Matt finish, High performance.

**Water Bath**: SS 304 grade water bath with Thermostatic control, digital display, concentric rings with double walled body having 40mm insulation and outer MS powder coated, 2kW industrial immersion heater. Sidewise control panel. Serological water bath With stirring, Pyramid type covering lid arrangement.



**WATER BATH** 



**SEROLOGICAL WATER BATH** 



OIL BATH

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#### **HEATING MANTLE**



Heating mantles generally distribute heat evenly over the surface of the flask and exhibit fewer tendencies to generate harmful hotspots.

### HOT PLATE WITH STIRRER/WITHOUT STIRRER



#### **SALIENT FEATURES**

- 1. Temperature displayed in °C.
- 2. Digital set-point and read-out of actual temperature.
- 3. PID microprocessor controller provides precise temperature regulation
- 4. Temperature range: above ambient to 300°C
- 5. SS 316 top plate, easy to clean.
- 6. Excellent heat conduction distributes the heat evenly & uniformity over the entire heating surface.
- 7. Panel Board with Energy regulator, Pilot lamp and Temperature display.

#### **DISTILLED WATER STILL**



- The unit is recommended for making pyrogen free distilled water for routine laboratory requirements. Made out of Stainless Steel (SS-304 grade) sheet
- Capacity: 4 to 5ltrs. (Price Against Enquiry).

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#### **ANALYTICAL BALANCE**



- Based on Electro Magnetic Force Compensation Technology
- A built in under hook for below weighing
- Density measurement for solid & liquid (Optional)
- RS232C Interface, Percentage (%) Weighing
- Tare range up to max. Capacity, Multiple Weighing
- Animal Weighing Function, Counting Weighing model
- LCD display

Model	Capacity	Readability
MAB 220 (Internal Calibration)	220 g	0.1 mg
MAB 182(Dual Range)	30 / 180 g	0.01 / 0.1 mg
DAB 220 (External calibration)	220 g	0.1 mg

#### HIGH PRECISION BALANCE



- Based on Electro Magnetic Force Compensation Technology,
- RS232C Interface,
- A built in under hook for below weighing
- Density measurement (Optional), Automatic **External Calibration**
- Tare range up to max. Capacity of the Balance
- High Resolution, Quick Weighing, Accurate Result, VFD display
- Multifunction Weighing Units, Counting Weighing Mode
- S.S. Weighing Pan, Level Indicator, Adjustable Fit.

Model	Capacity	Readability
HPB 220	220 g	0.001 g
HPB 510	510 g	0.001 g
НРВ 1000Н	1000 g	0.001 g

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#### **HIGH PRECISION TABLE TOP BALANCE**



- Built in rechargeable battery for continues use
- Rust Proof Stainless Steel Platter, Auto Power Off, Battery Indicator
- Fast Weighing response time, Overload Protection Design
- LED display, RS232C Interface (Optional)

Model	Capacity	Readability
TTB 10 H	10 kg	0.1 g
TTB 20 HH	20 kg	0.1 g
TTB 30 HH	30 kg	0.1 g

#### **DENSITY DETERMINATION KIT**



According to the Archimedean Principle, Solid Body immersed in a liquid apparently loses as much of its own weight as the weight of the liquid it has displaced. This makes it possible to determine the unknown value. Depending on whether the body in quotient is liquid or solid. **Specification:** For solid density determination, Suitable for MAB, DAB, HPB & PGB Series, Can use for other weighing balance also.

Model	Capacity	STANDARD ACCESSORIES: Beaker
WDK-250	Density Determination Kit	Base, Beaker, PAN stand, Pans suspension, Thermometer, Upper pan stand.

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#### **MOISTURE BALANCE – HALOGEN LAMP**



Moisture Balance based on Electro Magnetic Force Compensation sensor and its working on the principle of thermal force. From the percentage between the weight when the sample is dry and the weight when the sample is moist. We can get the value of moisture.

#### Salient Features

- Based on E.M.F.C. Technology
- Halogen Heating System, Temperature Range 50
   C ~ 200 C
- RS232 C Interface , VFD display,
- Display: % moisture, time, temp, weight
- Testing mode: Auto / timing / manual.

Model	Capacity	Readability
HMB 100	100 g	1 mg
HMB 50 H	50 g	0.1 mg

#### THERMAL PRINTER



#### **Specifications**

- Printing method: direct thermal
- Printing paper width: 58mm, Valid printing width: 48mm
- Resolution 8 /mm( 203dpi), Printing speed:60 mm/S
- Printing density: 8 dots/mm, 384 dots/line
- Printing speed: approx. 70mm/ sec. or 20 lines/sec.
- RS232 / USB Interface, DB25 socket (female), supports RTS/CTS protocol, Power Supply - DC7.5V.

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#### **UV/VIS DOUBLE BEAM BASIC**



Quantitative, kinetics, Multi-wavelength, wave length scan, DNA / Protein test.

#### **VISIBLE SINGLE BEAM - PROFESSIONAL**



- Spectral Bandwidth 2nm, can save 200 groups of curve equation.
- Auto setting wavelength, auto zero and blank
- Tungsten & deuterium lamp can be turned on/off individually to extend shelf life
- Large LCD display, all parameter can be set by Numerical key.

#### **VISIBLE SINGLE BEAM - PROFESSIONAL**



- LMSP-V320 : Manual wavelength setting,
- LMSP-V325: Automatic wavelength setting,
   Memory store up to 200 results, Transmittance,
   Absorption, Concentration modes.

#### **TOUCH SCREEN - DIGITAL AUTOMATIC POLARIMETER**



- Measuring Mode: Optical Rotation, Specific Rotation and Sugar Concentration.
- Automatic repetition measurement for 6 times, and calculation of average value.
- Touch screen display ADP-89 with Peltier principle to control the temperature.

NOTE: Features & Specifications are subject to change due to continuous Improvement of Technology.







#### **DIGITAL AUTOMATIC POLARIMETER**



- Measuring range 450 to +450, -1200~
   +1200,
- Measuring optical rotation and sugar degree.
- Measurement of dark colored sample.
   Calculation of average values.

#### **DIGITAL REFRACTOMETER - TOUCHSCREEN AUTOMATIC**



- Measuring range 1.30000 1.70000.
- Display temperature of the sample.
- Measure the Brix of sugar solution, Reading time 2 seconds
- Touchscreen display. Memory up to 1024 results

#### **DIGITAL ABBE REFRACTOMETER**



- Measuring range 1.3000 1.7000.
- Measure the Brix of sugar solution. LCD display.
- Measurement of Refractive index nD of transparent of translucent liquid and solid substances.Rs232 printer interface for direct data output.

#### **PH METER - 5 POINT CALIBRATION**



- Resolution 0.001, 0.01, 0.1 pH (selectable), USA, NIST, DIN & User Buffer.
- Calibration 5 point, Hold and Stable Indicator.
- Memory up to 500 Data, Push button calibration.

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#### pH METER



- Simultaneous display of pH & temp. Calibration 2 points
- Auto Buffer recognition, Automatic temperature compensation.

#### **CONDUCTIVITY METER**



- Auto ranging , Automatic temperature compensation
- Adjustable temperature coefficient and cell constant
- Simultaneous display of conductivity & temp.

#### **MULTI PARAMETER**



- pH /ORP(Oxidation-Reduction Potential)/ Conductivity/ TDS/ Salinity/ Resistivity/ 0C
- 5 point calibration for pH & Conductivity
- Adjustable temp. coefficient and cell constant
- Memory up to 500 Data, USA, NIST, DIN & User Buffer
- Push button calibration

#### **ION METER**



- Resolution 0.001, 0.01, 0.1 pH (Selectable)
- 5 point Calibration for Ion &Ph., USA, NIST, DIN & User Buffer
- Memory up to 500 Data, Hold and Stable Indicator.
- Push button calibration.

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#### ION SELECTIVE ELECTRODES WITH ISAB & STANDARD SOLUTION 500 ML EACH.





- Above ISEs are also Compatible with other make Ion/pH meter
- Solid State i.e. No membranes or replacement modules.
- No reference electrode needed, No maintenance, Fast Response.

#### **DISSOLVED OXYGEN METER**



- Resolution 0.01, 0.1, ppm (selectable)
- 1 or 2 points auto calibration (100% in air or 0% in zero oxygen solution), Memory up to 500 Data
- Hold and Stable Indicator, Calibration due reminder.

#### PROBE SONICATOR WITH SOUND PROOF ENCLOSURE





- Auto-tuning, frequency, variable power output, 10 operation programs.
- Microprocessor controlled and completely programmable.
- Digital LCD display with time setting, temperature Indicator and controller.

#### PCR(POLYMERASE CHAIN REACTION) GRADIENT THERMAL CYCLER



- Touch screen color LCD with graphical display
- Advance technology window operating system
- 4 Independent temperature control sensors and 8
   Peltier heating unit.
- Built in 11 standard program, Internal Flash memory for 10000 typical PCR Files.

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#### **ROTATIONAL VISCOMETER - DIGITAL DIRECT READING**



 Auto range function, Direct viscosity reading and temperature display. Selectable Speed, RS232 Interface. LCD display with Backlight.

#### **VISCOMETER ACCESSORIES**



- Small Sample Adaptor
- Sample temperature can be controlled by using thermostatic water bath, 25 to 30 ml sample is needed for test.

#### **CERAMIC HOT PLATE MAGNETIC STIRRER**



- Digital LCD display with back light, Real temperature & speed display on the screen simultaneously
- Two sensors, outside PT 100 sensor controls the liquid temperature, inside K type sensor control the hot plate temperature, selectable
- Max volume 5000ml, Temp.300 C, Speed 1600 rpm.

#### **ULTRASONIC CLEANER ALL WITH BASKET**





- Ultrasonic frequency 40 KHz for effective cleaning with low noise
- Stainless Steel Outer & Inner Tank
- Deep drawn tank. Digital Timer, Heater, Drain Valve
- Basket & Lid Standard Accessories, Capacity: 6 liters to 25 liters.

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#### **ICE FLAKER**



- Fully Automatic Microprocessor control
- Stainless Steel Construction
- Continuous Ice Flakes Output
- **CNC Free compressor**
- Low water level indication

#### **ICE MAKER - LABMAN**



- 3 different size Ice cubes
- Add water indicator & Power Indicator
- "Ice Full" Indicator, CFC free compressor
- Ice Basket & Scoop for ice cube removal

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