

TECHNICO[®]

*A Complete
Laboratory
Solution*



Years

*Excellence in
Science & Technology*

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🌐 www.technicolab.com

PROFILE



Technico Laboratory Products Pvt. Ltd., was established in the year 1984 manufacturing various type of Lab Products which included Lab Equipment, Lab Glassware and Lab Furniture etc., which are ideal for all types of Technical Institutions & Colleges, R & D Centers, Quality Control laboratories, Industrial laboratories etc.

Starting with a 400 Sq. Ft work area, now the company has a total work area of 35, 000 sq. ft. The factory situated in Sidco Industrial Estate, Thirumudivakkam in Chennai, Tamilnadu caters to the scientific community all over India and some exports to a few countries.

'Technico' can be proud to be one of the very few companies to have in-house manufacturing of the 3 ranges of a Laboratory requirement. ie; Lab Equipment, Lab Furniture & Lab Glassware.

The Clients list included Institutions, Colleges, all types of Industries, Atomic Power Plants, Space &, Defense Organizations, Various Government Labs and Private Labs etc.

The Company's Goal, Aim and Effort is supported by a team of dedicated managerial Staff, Technical and Skilled workers.

With 34 years of service in the Industry, the company is well versatile in supporting the needs and requirements of its client and serves as a single source for a multiple product range.

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P. Arunagiri
Managing Director



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CERTIFICATE



Management system as per
ISO 9001 : 2015

In accordance with TÜV INDIA procedures, it is hereby certified that

TECHNICO LABORATORY PRODUCT PVT. LTD.
264, SIDCO Industrial Estate, Thirumudivakkam,
Chennai – 600 044, Tamilnadu,
India



applies a quality management system in line with the above standard for the following scope

**Design, Manufacture and Supply of Laboratory Heating &
Cooling Equipments, Laboratory Modular Furnitures &
Exhaust Systems**

Certificate Registration No. **QM 07 00869**
Audit Report No. **Q 8357/2017**

Valid until **05.12.2020**

Certification Body
at TÜV INDIA PVT. LTD.

Issue **06.12.2017**
Place : **Mumbai**

This certification was conducted in accordance with the TÜV INDIA auditing and certification procedures & shall be valid subject to Surveillance Audit 1 before **27.10.2018**, Surveillance Audit 2 before **27.10.2019** and Re-Certification Audit before **27.10.2020**.

TUV India Pvt. Ltd., 801, Raheja Plaza – 1, L.B.S. Marg, Ghatkopar (W), Mumbai - 400 086, India www.tuv-nord.com/in



GENERAL SPECIFICATIONS

All 'Technico' Work Tables and Island tables are constructed from High Grade Electro Galvanized Sheet Steel of 20 swg with quality Epoxy Powder coating finish in elegant colours.

The sheets are cut with precision Lazer cutting and well fabricated with multiple folding technique and welded together to provide the best load bearing strength to each module. All modules are made with specific dimensions to fit each laboratory design.

The Modules are provided with skirting at the base to create classic look to the finally installed tables. The legs are provided with Plastic Caps to avoid rusting due to any contact with water splash or cleaning medium.

Level jacks are fitted on each leg to adjust the Table level based on uneven floor to ensure the alignment of the work top.

The Drawers are mounted on Telescopic Channels for smooth movement. The Shutters are mounted on spring loaded SS Hinges with 120° opening for easy access inside the cabinets. All the contact points are provided with soft rubber studs for dampening the metallic noise while handling. Boby colour Handle give an added look and easy grip while opening the Shutter and Drawer. Individual Locks are provided for the Drawer and Shutter.

Based on the requirement of the user, Continuous Type or Alternative Type Module are designed. Alternative Type Module are provided with Knee Holes and foot rest and frame support for the granite.

The Work Tops are made of Polished Black Granite of 17mm +/- 2mm thickness with semi-rounded edges with required lapping over the modules.

Sinks made of black moulded Polypropylene (PP) are provided if required on the Tables with elegant Swan Neck Taps, drain pipe etc.

SALIENT FEATURES

- ❖ Modular Type for easy Installation and dismantling for re-arrangement
- ❖ Continuous or Alternative Module with Knee Hole & Foot Rest as required
- ❖ Electro Galvanized Steel Modules with Epoxy Power Coated.
- ❖ High Quality Black Granite Work Tops (17 +/- 2mm)
- ❖ Imported Epoxy Resin Work Tops (only for bulk large qty. Order)
- ❖ Telescopic Channels for the Drawers for smooth working
- ❖ High Quality SS Hinges for the shutter and doors.
- ❖ Polypropylene (Black) Sink for long life
- ❖ High Swan Neck Taps for clear space for washing
- ❖ SS Curved Handles
- ❖ Branded locks
- ❖ Base Skirting & Jacks for level adjustment

Standard Table Dimensions

ISLAND TABLES

Model	Dimension (L x B xH)
TLP - IS / 2400	2400 x 1500 x 900
TLP - IS / 3000	3000 x 1500 x 900
TLP - IS / 3600	3600 x 1500 x 900

WALL TABLES

Model	Dimension (L x B xH)
TLP - WT / 2400	2400 x 750 x 900 / 750
TLP - WT / 3000	3000 x 750 x 900 / 750
TLP - WT / 3600	3600 x 750 x 900 / 750

CHEMISTRY LABS

Most common Lab is the Chemistry Lab in Colleges, Institution, R & D Labs consist of a Central Island Table with Reagent racks and Built-in Sink. The Island table is surrounded or partly surrounded by Wall Side Work Tables / 'L' Shape Tables / 'U' Shape tables and Corner Tables.



CHEMISTRY LABS



Physics LABS

Instrument & Electronic Labs are provided with special Work tables with Power Module attachments for use of Instruments to perform Experiments or Testing Procedures. Elegant Computer Tables with Power Point Module provision, CPU Support shelf, Key Board with Granite Work Top and colour matching base cabinet to project a Classic look for the Lab.



Physics LABS



BIOLOGY LABS

The Botany & Zoology Labs will have mostly Centre Work Tables with Specimen Storage and display Cabinets. The Table will have built-in Sink for utility. The Table Top or Wall Side Display Cabinets will have sliding Doors with Glass for storage of various specimens and other samples.



BIOLOGY LABS



MICRO BIOLOGY LABS

Of the most in Demand Laboratory are the Microbiology, Bio Technology Lab and the Bio Chemistry Lab which now a must in Colleges, Technical Institution, Medical Colleges, Diagnostic Lab, Hotels, Water Treatment Plants, Mineral Water Plants, Food Industries, Import & Export Organizations / Councils, Spices Boards etc.



MICRO BIOLOGY LABS



SCHOOL LABS



SCHOOL LABS



FUME HOOD

It is essential to make the laboratory a safe place to perform various research and testing and offer substantial degree of safety to the user.

Fume hoods are designed specifically to provide ventilation for the protection of lab occupants during chemical manipulations. One of the primary safety devices in a laboratory is a chemical fume hood. A well-designed hood, when properly installed and maintained, can offer a substantial degree of protection to the user, provided that it is used appropriately and its limitations are understood.



FUME HOOD



When is a fume hood necessary

To know if a fume hood is necessary for a particular experiment user should analyze the hazard nature of the planned work as below.

- ❖ Review of Physical Characteristics, Quantity and Toxicity of the Materials to be used;
- ❖ The experimental procedure;
- ❖ The volatility of the materials present during the experiment;
- ❖ The probability of their release;
- ❖ The number and sophistication of manipulations; and
- ❖ The skill and expertise of the individual performing the work.

'Technico' Fume Hood is a primary containment Hood to ensure such safety standards. These Fume Hoods are manufactured as per the guidelines of the standards laid down by the Occupational Safety & Health Act (OSHA), ASHRAE, SEFA, ACGIH for removal and exhaust of Toxic gases / fumes a contained work area.

canopy exhaust hood

Technico Canopy Hood are suitable for stand alone system like AAS, ICP or any other Lab Equipment which may generate fumes. Available in different size and Material of Construction.

Model	DIMENSION (L x B xH) mm
TLP - FH / 4	1200 x 750 x 2400
TLP - FH / 5	1500 x 750 x 2400
TLP - FH / 6	1800 x 750 x 2400

salient features

- ❖ Inner body lined with FRP/PP to handle most corrosive fumes.
- ❖ Well designed aerodynamic Baffle to ensure removal of all toxic fumes
- ❖ Option of Single, 2 and 3 point suction for removal of heavy, medium & light fumes.
- ❖ Slash opening with counter weight
- ❖ Control Panel with Power points, Switches on front fascia.
- ❖ External Blower to provide required suction / Exhaust
- ❖ Ducting of FRP or PVC
- ❖ Built-in Illumination
- ❖ Remote Wet & Dry valve Control (Option)
- ❖ Internal Bulit-in Blower (Option)
- ❖ PP Sink (Option)
- ❖ Imported Air Flow Monitor (Option)
- ❖ Imported Certified Flammable / Corrosive Bottom Storage Cabinet

Sink Unit

A Stand alone Sink Unit give additional advantage in an Lab. This kind of Sink Unit can be positioned any where in the lab as required and is easy to shift to another location at later stage without disturbing the existing Work table arrangements.

SALIENT FEATURES

- ❖ Sink is Polypropylene (Black) which can withstand most of the chemical wash in the lab.
- ❖ Standard sink size and Bigger sink size available
- ❖ Base cabinet is made of Electro galvanized Steel with Epoxy Powder Coating finish.
- ❖ Bottom Storage with Shutter, SS handles and locking arrangement.
- ❖ Dummy Drawer for aesthetic look
- ❖ Swan Neck tap – One way or 2 way or 3 way
- ❖ Top fitted with Black Granite

Model	Dimension (L x B xH)
TLP - SU - 900	900 x 750 x 900
TLP - SU - 1500	1500 x 750 x 900



STORAGE CUPBOARDS / CABINETS

GENERAL STORAGE CUPBOARDS : (SCB)



TLP - SCB

900 x 450 x 1800

The General purpose Storage Cupboard (SCB) is provided with 5 horizontal shelves. The cupboard will have a double door with glass window and is provided with lock and leverhandle.

DOCUMENTS STORAGE CUPBOARD : (SCV)



TLP - SCV

900 x 400 x 1800

The Document /Book / File Storage Cupboard) (SCV) is provided with 4 or 5 horizontal partitions with front shutter slide in / slide out type arrangement with locking facility. Ideal for storage of all types of documents / books etc.,

VERTICAL STORAGE CABINET : (VSC)

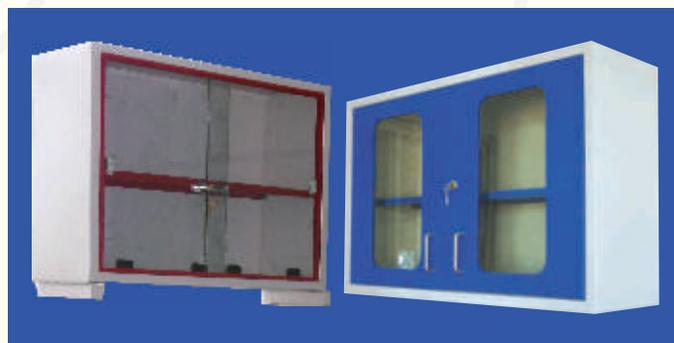


TLP - VSC

900 x 750 x 1800

The Vertical Storage Cabinet (VSC) is a high utility storage cupboard. It has 3 vertical pull out partitions with easy and smooth sliding. Each partition will have 6 horizontal shelves for storage of chemical bottles / samples etc. Each partition is provided with lock and SS handles

WALL CUPBOARDS : (WCS / WCD)



TLP - WCS
900 x 300 x 1800

TLP - WCD
900 x 300 x 600

The Wall mountable Cupboards are most suitable for utilizing the Lab space to increase storage capacity by using the wall space. Number of modules can be mounted in series or in different location above the work tables as required. These Wall cupboards can be provided with sliding Glass shutter or front opening steel shutter with or without glass window

**'TECHNICO' ANTI VIBRATION TABLE (AVT) /
VIBRATION ISOLATION TABLE (VIT)**

In most Industrial laboratories the production / process vibration is generated to the Lab area which makes it difficult to have stable reading from sensitive Instruments. To overcome these problems an Anti Vibration Tables can be used. The generated vibration is dampened by the anti vibration mounts provided in the AVT's / VIT's. 'Technico' has developed a special heavy duty type AVT / VIT which handle most kind of moderate vibrations with variation in the type of Mounts to suit different applications..

SALIENT FEATURES

- ❖ Top is made of multi layer Heavy Thick Black Granite of 100mm
- ❖ 100% Anti Vibration work area
- ❖ Base support is made of Heavy Rectangular Steel Pipe with Epoxy Powder coating finish
- ❖ Anti Vibration mounts provided at 2 stage for double dampening effect.
- ❖ Foot level height adjustment.
- ❖ Special Shore 'D' hardness Rubber used for the Anti Vibration Mounts.
- ❖ All AVT's / VIT's are tested with calibrated Vibration meter.
- ❖ Working Height of Table can be Sitting – 750 mm or Standing – 900 mm



Model	Dimension(L x B xH)
TLP - AVT 600	600 x 600 x 750 / 900
TLP - AVT 900	900 x 600 x 750 / 900
TLP - AVT 1200	1200 x 600 x 750 / 900



industrial laboratories - testing / quality control / r & d

All types of Industries needs to have a Testing Lab, let it be in Food & Beverage, Cement, Paper, Fertilizer, Distilleries & Breweries, Petro Chemicals, Refineries, Sugar, Automobile, Steel, Foundry, RO Plants, Mineral Water Plants, Effluent Treatment Plants, Tanneries etc.

Depending on the types and nature of the Testing Equipment / Quality Control Equipment and the Size of the Laboratory the required furniture and accessories can be fitted. 'Technico' gives support in designing the Labs to suit the user's need. Adding Value and Aesthetic looks, a utility Lab can be created

BELOW ARE SOME OF THE LAB LAYOUTS IN SUCH INDUSTRIES



industrial laboratories - testing / quality control / r & d



Wall SIDE TABLES



Wall SIDE TABLES



TISSUE CULTURE RACKS

Tissue Culture Racks are used in R& D and developing of New and Hybrid variety of Saplings / Plants by Tissue Culture method under In-Door artificial Illumination and Humidity controlled environment.

Material of construction : The structure is made of M.S. Tube Epoxy powder coated or Stainless Steel Tube of and the Racks made of 20 Swg. M.S. Sheet epoxy powder coated or Stainless Steel 304 Sheet

Lighting arrangement : Each Rack is fitted with 2 /3/4 Nos. of Fluorescent tube with electronic choke and Individual control switch in control panel.

Control Panel : Located at the right side of the Rack with the following :

1. Main Switch – 1 nos.
2. Load /Main Lamps
3. On/off switches for each Fluorescent Tube.
4. 999 hours Programmable Timer.
5. Electronic Choke. For each light fitting.

In addition - 2 Nos. Cooling Fans will be provided at the back side of the Control Panel.

Dimension : 1200 mm x 450 mm x 2400 mm ht or as required.

Shelves : 5 or 7 as required



Lab stools

MODEL	DESCRIPTION
TLP-ST-01	Seat made of Stainless Steel of 300 mm Dia seat supported by MS Shaft which can revolve to increase or decrease height between 600 to 750 mm. Standby 3 legs also made of SS.
TLP-ST-02	<ol style="list-style-type: none"> 1. PU foam round seat with diameter 325mm and thickness 35-40mm. Surface top is with Anti-skidding to prevent clothes from moving. 2. Bottom base: steel coated with epoxy resin powder or electroplating. 3. Surface electric resistance: 106~109 ohm. System resistance: 106~109 ohm (conductive casters or conductive foot cup is necessary to be furnished) 4. Up-down gas pole: high quality gas pole 5. Adjustable height: 450mm-600mm (with feet cup), 470-620 (with wheel) 6. Stool feet: 5 stars feet with ring and diameter is 220mm, made of steel coated with chrome. Feet wheels: high strength wear-resistance PA feet wheel. (a wide range of feet wheels or fixed feet cup for your option), metal conductive chain.
TLP-ST-03	<ol style="list-style-type: none"> 1. PU foam round seat with diameter 335mm and thickness 35-40mm. 2. Bottom base: steel coated with epoxy resin powder or electroplating. 3. Surface electric resistance: 106~109 ohm. System resistance: 106~109 ohm (conductive casters or conductive foot cup is necessary to be furnished) 4. Up-down gas pole: high quality gas pole 5. Adjustable height: 470mm-620mm (with wheel), 450-600 (with fixed feet cup) 6. Stool feet: 5 stars feet with ring and diameter is 220mm, made of steel coated with chrome. Feet wheels: high strength wear-resistance PA feet wheel, metal conductive chain.
TLP-ST-04	<ol style="list-style-type: none"> 1. One-time forming PU foam seat with seat 380x380mm and back 350x250mm. Seat and back are with Anti-skid strip. 2. Bottom base: electroplating steel plate. 3. Connection part of bottom base: elastic coated steel pipe with anti-dust cover complying with human engineering. 4. Surface electric resistance: 106~109 ohm. System resistance: 106~109 ohm (conductive casters or conductive foot cup is necessary to be furnished) 5. Up-down gas pole: high quality gas pole 6. Adjustable height: 430mm-580mm (with feet cup), 460-610 (with wheel) 7. Stool feet: 5 stars feet with diameter 260mm, made of steel coated with chrome. Feet wheels: high strength wear-resistance PA feet wheel. (a wide range of feet wheels or fixed feet cup for your option), metal conductive chain.



ST-1



ST-2



ST-3



ST-4

BIO SAFETY CABINET (BSC)



BIOLOGICAL SAFETY CABINETS must be used when additional protection of the user and the environment is also required. Biological safety cabinets come in several classes (I, II, and III) that offer varying levels of protection from hazardous or contagious materials. For all classes of biological safety cabinet, the air is HEPA-filtered before being released as exhaust.

Class I Bio Safety Cabinet - protects the user and the environment, but not the product as air is pulled into the cabinet and exhausted (usually out the top) out away from the user.

Class II Biological Safety Cabinets - fall into four sub categories. Type - A1, A2, B1, B2 - All of which protect the product or specimen, the user and the environment from contamination. This is especially crucial for applications that require sterile or particulate-free conditions - such as cell culture experiments, drug preparations, or in toxicology when working with fumes and gases is required. All types of Class II biological safety cabinet have HEPA filters at their air supply and exhaust points. However, the Class II sub types differ in the amount of air that is re-circulated within the cabinet versus exhausted outward.

Class III Biological Safety Cabinets - also known as Bio glove boxes,, provides maximum protection for work in bio-safety level 4 containment labs. A class III bio safety cabinet is crucial for working with any bio-safety level 4 agents, or other dangerous materials, such as aerosols of pathogens or toxins. Class III bio-safety cabinet has two HEPA filters in the exhaust system for additional environmental protection. Manipulations within the chamber of the Bio glove box are performed with built-in arm-length rubber gloves.

Class type	Contaminated Plenum pressure	Recirculation Air %	Exhaust Air %	Safety Level	Applications
Class I	Positive	0%	100%	User / Environment	Small amount of Toxic chemicals
Class II Type A1	Positive	70%	30%	Product / User / Environment	General microbiological research with low-and moderate-risk agents
Class II Type A2	Negative	70%	30%	Product / User / Environment	Suitable for microbiological research in the absence of volatile or toxic chemicals and radio nuclide
Class II Type B1	Negative	30%	70%	Product / User / Environment	Suitable for microbiological research with minute qty's of volatile or toxic chemicals and radio nuclide
Class II Type B2	Negative	0%	100%	Product / User / Environment	Allow work to be done with toxic chemicals or radio nuclide.
Class III	Negative	0%	100%	Product / User / Environment	Allows work with B4 agents, Infectious aerosols, as well as microbiological contaminants.

Standard Dimensions for all Class

- ❖ Cleanliness under Class 100 / ISO 5
- ❖ HEPA Filter Particle Retention : 0.3 micron
- ❖ Air Velocity : 90 fpm / 0.4572 m/sec +/- 20%
- ❖ Standard Applicable : ISO 14644 -1
- ❖ Imported Magnehelic Dial Pressure Gauge
- ❖ White Light illumination and UV sterilization
- ❖ Work To made of Satin finish Stainless Steel 304
- ❖ Optional – Digital pressure meter

Cabinet Construction

- ❖ Electro Galvanized Steel Epoxy Powder Coated
- ❖ Fully Stainless Steel 304

Model	Dimension(L x B xH)
TLP - BSC/3	900 x 600 x 600
TLP - BSC/4	1200 x 600 x 600
TLP - BSC/6	1800 x 600 x 600

LAMINAR AIR FLOW CABINET



HORIZONTAL AIR FLOW MODEL

LAF cabinet is used to perform certain tasks under a clean environment. The work area inside the LAF is maintained clean by means of forced air flow vertically or horizontally with fresh air made to pass through a pre-filter by a blower then forced through a HEPA filter into the work area. Thus the work area is kept clean and the room air is prevented from entering the cabinet from the front.

This is termed as Product Safety or Work Area Safety. This cannot be used as a User or Environment Safety system. They should never be used when handling cell culture materials or drug formulations, or when manipulating potentially infectious materials.

Laminar flow clean benches come in two types, Vertical and Horizontal offer different advantages depending on how they will be used.

A Vertical Laminar Air Flow Cabinet forces the HEPA-filtered air down across the workspace, and is useful for parts or device assembly, electronics inspection, housing processing equipment, drug preparation, or preparing media etc..

A Horizontal Laminar Flow Cabinet, the work area is bathed by HEPA-filtered horizontal laminar airflow, and is often used for clinical or pharmaceutical applications, or whenever a sterile, particulate-free environment is needed.



VERTICAL AIR FLOW MODEL

- ❖ Cleanliness under Class 100 / ISO 5
- ❖ HEPA Filter Particle Retention : 0.3 micron
- ❖ Air Velocity : 90 fpm / 0.4572 m/sec +/- 20%
- ❖ Standard Applicable : ISO 14644 -1 (replaces US federal 209 E)

HORIZONTAL

Model	Work Area (L x B xH) mm
TLP - LAF H/2	600 x 600 x 600
TLP - LAF H/3	900 x 600 x 600
TLP - LAF H/4	1200 x 600 x 600
TLP - LAF H/6	1800 x 600 x 600

SALIENT FEATURES

- ❖ Horizontal Air Flow OR vertical Air Flow Models
- ❖ Work Top made of Satin finish Stainless Steel 304
- ❖ Foot with Level Jack or Castor wheels
- ❖ White Light illumination and UV sterilization

Cabinet Construction

- ❖ Electro Galvanized Steel Epoxy Powder Coated
- ❖ Fully Stainless Steel 304

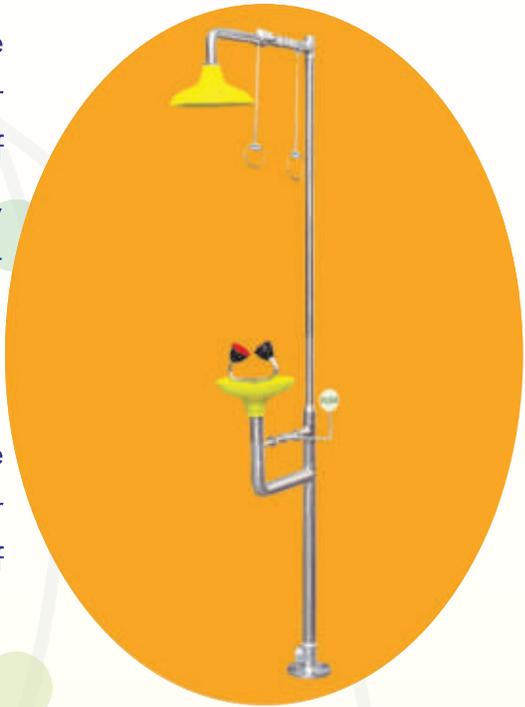
VERTICAL

Model	Work Area (L x B xH) mm
TLP - LAF V/2	600 x 600 x 600
TLP - LAF V/3	900 x 600 x 600
TLP - LAF V/4	1200 x 600 x 600
TLP - LAF V/6	1800 x 600 x 600



EMERGENCY EYE WASH

Material of Construction: Pipe made up of GI (C-Class) heavy grade confirming to IS: 2139 with self closing stainless steel valve. Bowl for Eye Wash, Eye wash Nozzles and Shower Head are made up of Highly Visible anti corrosive plastic / SS 304 Grade. Foot Pedal, Spring and pull chain are made up of MS Galvanized / SS 304 Grade



hAnd / foot operated

Material of Construction: Pipe made up of GI (C-Class) heavy grade confirming to IS: 2139 with self closing stainless steel valve. Bowl for Eye Wash, Eye wash Nozzles and Shower Head are made up of Highly Visible anti corrosive plastic / SS 304 Grade.

peg board

Material of drip rack: high-density PP Type: single face
 Water drainage hole at middle of bottom tray.
 Knock-down peg: it's with lock function which is convenient for use.
 Installation for drain rack: panel mounted/deck mounted



400 L X 550 D X 120 H



700 L X 550 D X 120 H

air curtain

The Air Curtain maintains the interior air Conditioning efficiency to save energy, while preventing entry of dust, harmful insects and Fumes from outside. Automatic switch for operating When opening / closing of door.

Mode No	Size
TLP - 1	1000 x 220 x 320
TLP - 2	1200 x 220 x 230
TLP - 3	1500 x 220 x 230





PP340



PP560



PP800



PP CORNER SINK



2 WAY TAP



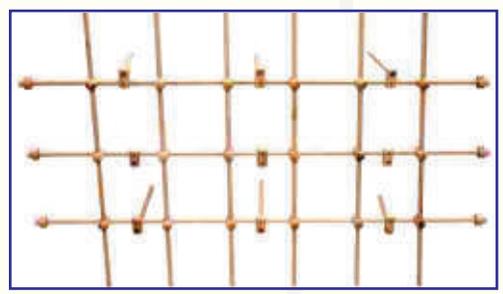
GAS & WATER VALVE'S



3 WAY TAP



POWER MODULE



SCAFFOLDING



SINGLE SWAN WATER L TYPE



TABLE TOP EYE WASH

TLPL 101 - 'TECHNICO' AUTOCLAVE - VERTICAL :

TECHNICO[®]

Technico Vertical Autoclave is a Double walled chamber. The Interior, Perforated Basket and the Doomed Lid are made of polished Stainless steel of 304 grade, argon TIG welded. The outer chamber is also made of 304 Grade Stainless Steel Sheet. The Doom Lid is tightened with wing nuts to ensure pressure tightness. Heating elements are Immersion type Heaters of suitable rating. The Unit is fitted with Sillicon / Neoprene Rubber Gasket to ensure tight sealing. The Unit is incorporated with Pedal Lifting Device for easy opening of the Lid.

Standard accessories supplied with unit are pressure gauge, steam release cock, spring-loaded safety valve, cord and plug.

Technical Specifications:

Pressure Range : 15 psi +/- 3 psi

Inner Temperature : 121°C

Operating Voltage : 230 VAC

Optional Accessories:

1. Digital Temp. Controller with Sensor
2. Automatic low Water Cut off Switch
3. Automatic Pressure Switch
4. Temp Controller in built with Timer
5. Digital PID Controller

Inner Chamber size Diameter x Height	Capacity	Power Rating
250 x 450 mm	22 ltrs	3.0 Kw
300 x 500 mm	40 ltrs	3.0 Kw
350 x 600 mm	50 ltrs	3.0 Kw
450 x 600 mm	100 ltrs	4.5 Kw
450 x 750 mm	125 ltrs	4.5 Kw
550 x 750 mm	150 ltrs	6.0 Kw
750 x 1000 mm	250 ltrs.	7.5 Kw



TLPL 102 - 'TECHNICO' HORIZONTAL AUTOCLAVE - CYLINDRICAL :

Technico Horizontal Autoclave is a Triple walled unit, mounted horizontally on a sturdy heavy mild steel tubular stand. Interior chamber & Boiler are made of SS 316 Grade. Jacket Exterior, Lid ring radial system piping and boiler are made of SS 304 Grade, and the Lid made of polished Stainless steel with leak proof argon TIG welding. The Lid is tightened with radial locking system Self Locking Safety door which cannot be opened while the chamber is under pressure.

Separate valves are provided for injection of steam into the chamber and releasing the steam from the chamber.

Standard Accessories supplied with the unit: Automatic Low Water Level cut off device, Pressure gauge, and steam release cock, Safety valve and Digital Temperature Indicator.

Pressure Range: 15 psi. +/-3 psi

Power : 440 V, 3 Phase

Inner Temperature - 121°C

Diameter x Depth	Capacity (approx)	Power Rating
400 x 600 mm	78 ltrs	6.0 kw
500 x 900 mm	165 ltrs	7.5 kw
550 x 750 mm	152 ltrs	7.5 kw
400 x 1100 mm	162 ltrs	7.5 kw
500 x 1200 mm	221 ltrs	9.0 kw



TLPL 103 - 'TECHNICO' VERTICAL AUTOCLAVE - RECTANGULAR:

TECHNICO[®]

Double walled chamber, Interior, Perforated Basket and the Doomed Lid are made of polished Stainless steel argon arc welded. The Exterior body Rectangular Model also made of Stainless steel sheets. The lid is tightened with wing nut locking system.

Heating elements are Immersion type Heaters

The unit is fitted with Silicon Gasket to ensure tight sealing. The Pedal Lifting device is incorporated in the unit for easy opening of the lid.

Std. Accessories supplied with unit:

- S.S.Basket,
- Pressure Gauge
- Steam release cock
- Spring loaded safety valve,
- Cord and plug.

Optional Accessories:

1. Digital Temp. Controller with Sensor
2. Digital PID controller with sensor
3. Automatic Low water level cut-off
4. Automatic Pressure control switch
5. In Built Timer 0-60 minutes

Inner Chamber size Diameter x Height	Capacity	Power Rating
250 x 450 mm	22 ltrs	3.0 Kw
300 x 500 mm	40 ltrs	3.0 Kw
350 x 600 mm	50 ltrs	3.0 Kw
450 x 600 mm	100 ltrs	4.5 Kw
450 x 750 mm	125 ltrs	4.5 Kw
550 x 750 mm	150 ltrs	6.0 Kw
750 x 1000 mm	250 ltrs.	7.5 Kw



I. Technical Specifications:

Max. Pressure : 15 psi +/-3 psi

Inner Chamber Temp.: 121 °C

Operating Voltage : 230 volts 1 Phase 50 cys. / 415 V 3 Phase

TLPL 104 - 'TECHNICO' VERTICAL AUTOCLAVE WITH RADIAL LOCKING SYSTEM:

Double walled chamber, Interior, Perforated Basket and the Doomed Lid are made of polished Stainless steel argon arc welded. The Exterior also made of Stainless steel sheets. The lid is tightened with Radial locking system.

Heating elements are Immersion type Heaters

The unit is fitted with Silicon Gasket to ensure tight sealing. The Pedal Lifting device is incorporated in the unit for easy opening of the lid.

Std. Accessories supplied with unit:

- S.S.Basket,
- Pressure Gauge
- Steam release cock
- Spring loaded safety valve,
- Cord and plug.

I. Technical Specifications:

Max. Pressure : 15 psi +/-3 psi

Inner Chamber Temp.: 121°C

Operating Voltage : 230 volts 1 Phase 50 cys. / 415 V 3 Phase

Inner Chamber size Diameter x Height	Capacity	Power Rating
250 x 450 mm	22 ltrs	3.0 Kw
300 x 500 mm	40 ltrs	3.0 Kw
350 x 600 mm	50 ltrs	3.0 Kw
450 x 600 mm	100 ltrs	4.5 Kw
450 x 750 mm	125 ltrs	4.5 Kw
550 x 750 mm	150 ltrs	6.0 Kw
750 x 1000 mm	250 ltrs.	9.0 Kw



Optional Accessories: (Nett)

1. Digital Temp. Controller with Sensor
2. Digital PID controller with sensor
3. Automatic Low water level cut-off
4. Automatic Pressure control switch
5. In Built Timer 0-60 minutes

Technico BOD Incubator is a Double walled chamber with interior made of stainless steel of 304 Grade and exterior made of Cold Rolled Mild Steel Sheets finished in Epoxy powder coating. Insulation is by special grade glass wool. Removable stainless steel Trays are provided at adjustable height.

Double door system, with inner Acrylic door for full view of the inner chamber and outer double walled insulated door provided with lock and key arrangement.

Temp. is controlled by a Digital On/off controller with RTD Sensor. A Circulating fan assembly is incorporated in the unit for uniform temperature inside the chamber. Alternatively a Microprocessor based PID controller can be provided

Inside Illumination is provided by fluorescent tube lights.

CFC free Refrigeration System by Emerson-Copeland compressor, air cooled condenser and accessories provided at the bottom of the chamber.

The control panel consists of Digital Temp. controller, indicating lamps, on/off switch etc. is provided at the bottom. The unit is mounted on smooth/free moving 4 nos. castor wheels for easy mobility.

Technical Specifications:

Max. Temp : +5 °C to 60 °C,
 Temp. Accuracy : 1 °C to 2 °C
 Operating Voltage : 230 V Single-Phase 50 cys.



Inner Chamber size	Capacity Cu. Ft	Capacity ltrs	No. of trays	Power Rating
455 x 415 x 610 mm	4	112 ltrs	2	1 Kw
500 x 415 x 800 mm	6	168 ltrs	2	1.5 Kw
570 x 550 x 870 mm	10	280 ltrs	3	1.5 Kw
650 x 550 x 900 mm	12	335 ltrs	3	2 Kw
700 x 650 x 900 mm	15	420 ltrs	3	2.5 Kw

We can supply other BOD sizes like "MINI' OR Extra 'LARGE' as may be required by users.

Optional Extra :

- Automatic Voltage Stabilizer
- Microprocessor based Digital PID controller with SSR out put
- Timer
- Puff Insulation

TLPL 106 - 'TECHNICO' DIGITAL BACTERIOLOGICAL INCUBATOR:

TECHNICO®

Technico Digitally controlled Model Bacteriological Lab Incubator is a Double walled chamber with interior made of stainless steel sheets of 304 Grade and Exterior made of cold rolled mild steel sheet finished in Epoxy powder coating. Inter space in between walls is tightly packed with glass wool to minimize radiation heat loss. The Inner chamber accommodates Stainless steel trays at adjustable height. A Double walled insulated door mounted on heavy-duty hinges and provided with locking arrangements is provided.

Temperature is controlled by a Digital Temperature Controller working in conjunction with PT100 Sensor housed in the hot zone.

Air Circulating Fan Assembly driven by suitable motor is incorporated in the unit for maintaining uniform temperature inside the working chamber. Adjustable Air Ventilator is provided at the top.

Built in front control panel accommodating pilot indicating lamps, on/off switch, Digital Controller etc are located at the Top of the chamber.

Temperature Range : ambient +5 °C to 60°C (37°C to 60°C)

Temperature Accuracy : + / - 1 Degs C

Power Supply : 230 V AC, Single Phase

Optional :

- a) Microprocessor based Digital PID Controller with SSR output for better than + / - 0.5 Deg. C Accuracy
- b) Digital timer

Inner Chamber size (L x B x Ht)	Capacity	Power Rating
300 x 300 x 300 mm	2	150W
350 x 350 x 350 mm	2	150W
450 x 450 x 450 mm	2	200W
450 x 450 x 600 mm	2	200W
600 x 600 x 600 mm	3	400W
600 x 600 x 900 mm	3	400W



TLPL 107 - 'TECHNICO' THERMOSTATIC BACTERIOLOGICAL INCUBATOR :

Technico Thermostatically Controlled Model will be same as above except that the Temperature is controlled by capillary thermostat housed in the hot zone. Adjustable Air Ventilator is provided at the top.

Built in front control panel accommodating pilot indicating lamps, thermostat and energy regulator located at the Top portion of the chamber.

Temperature Range : ambient +5 °C to 60 °C

Temperature Accuracy : + / - 8 to 10 Degs C



Technico C & S Apparatus comprises of :

- (a) Tubular combustion furnace unit,
 - (b) Control panel with thyristor and
 - (c) Glass parts for determination of percentage of Carbon & Sulphur.
- a) The Combustion Furnace, tubular in shape is heated by 3 Nos. Silicon Carbide heating elements suitable for max. temperature 1300 Deg.C. The furnace is designed to accommodate Combustion tube dimensions of 17 mm x 22 mm x 600mm. The furnace is provided with Ceramic fibre blanket insulation.
- b) Control panel with : This is a compact and attractive unit made of cold rolled mild steel sheet and finished with powder metal coating accommodating the following:-
1. Mic PID Controller & Thyristor Control Unit with Potentiometer.
 2. Ammeter range 0-20 Amps.
 3. Volt meter range 0-300 Volts.
 4. Indicating Lamps.
 5. on / off Switches for controller, Heater.
- c) The following Glass Parts of Borosilicate Glass are mounted on an attractive teakwood stand with laminated board as the base.
1. Sulphur Cup.
 2. Sulphur burette, 4 ml or 25 ml.
 3. Coil condenser.
 4. One Litre Reservoir.
 5. 'L' bend Stopcock.
 6. Three way stopcock.
 7. Carbon Burette with a range of 4.5% or 1.05% or 0.5% (To be Specified)
 8. Levelling bottle.
 9. Gas washing bottle.
 10. Absorption vessel.
 11. Dust Trap.
 12. Eye piece.



Standard accessories are supplied along with every complete equipment.

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

Available in Single Burette Model OR Double Burette Model

TLPPL 109 - 'TECHNICO' CIRCULATION WATER BATH WITH COOLING :

TECHNICO[®]

Technico CWB is a Double walled chamber, inner made of stainless steel of 304 grade and outer made of thick gauge cold rolled mild steel sheets and attractively finished in powder coat paint. The inter space in between the walls is tightly packed with puff to avoid thermal losses. The Chamber is provided with top opening lid made of stainless steel and provided with handle.

Evaporating coils are kept inside the inner chamber for faster cooling. The refrigeration system consisting of compressor, air-cooled condenser and accessories is provided at the lower portion of the bath.

The temperature is controlled by Digital ON/OFF temperature controller with an accuracy of 1°C. A FHP circulating pump to re-circulate liquid in the tank to an external source is also provided.

Built in control panel with indicator lights, On/Off switches, Digital ON/OFF controller etc. and is provided on the top portion of bath for operational convenience. The External Source Temp. should be less than 45 °C.

Optional - Stirrer

Capacity (ltrs)	Chamber size	Rating (kw)
12	200 x 220 x 260 mm	1.5
28	300 x 360 x 300 mm	2.0
40	370 x 300 x 400 mm	3.0

Temp Range :- 20°C/30°C/0°C/above ambient
Temp. Accuracy : 1°C
Operating Voltage : 230 Volts



TLPPL 110 - 'TECHNICO' CRYOSTAT (LOW TEMP. BATH) :

Technico Cryo Bath is a Double walled chamber, inner made of stainless steel of 304 Grade and outer made of cold rolled mild steel sheets and attractively finished in powder coat painting. The inter space in between the walls is tightly packed with PUF Insulation. The Chamber is provided with top opening lid made of stainless steel and provided with handle.

Evaporating coils are kept inside the inner chamber for faster cooling. CFC free refrigeration system consisting of hermetically sealed compressor, air-cooled condenser and accessories is provided at the lower portion of the bath.

The temperature is controlled by Digital ON/OFF temperature controller with an accuracy of +/- 1 °C. The unit is fitted with a stirrer to re circulate the liquid in the tank to maintain uniform temperature inside the bath.

Capacity (ltrs)	Chamber size	Rating (kw)
12	200 x 220 x 260 mm	1.5
28	300 x 360 x 300 mm	2.0
40	370 x 300 x 400 mm	3.0

Temperature Range :- 20 °C / -30°C / 0°C / above ambient
Temp. Accuracy : 1 °C.
Operating Voltage : 230 Volts



TLPL 111 - 'TECHNICO' SERIOLOGICAL WATER BATH :

TECHNICO®

Technico SWB is a Double Walled Chamber, inner made of Stainless Steel of 304 Grade and outer made of cold rolled mild steel sheet and finished in powder coating. The inter space in between the wall is tightly packed with special grade glass wool to eliminate radiation heat loss to the minimum. The top doomed lid with plastic knob is provided for the unit. A drain plug is fitted to drain out the used water. The inner chamber fitted with immersion type heating element and covered with perforated removable diffuser tray. A capillary type thermostat controls temperature within the operating range of Ambient + 5 to 90 Deg.C with an accuracy of +/- 5 deg.C. The front panel accommodates all controlling components.

Optional

- Digital Temperature Controller with Sensor
- Microprocessor based PID Controller SSR out put

Inner size	Racks	Capacity
250 x 150 x 185 mm	1	7 ltrs
300 x 250 x 175 mm	2	14 ltrs
330 x 300 x 175 mm	4	18 ltrs
455 x 300 x 175 mm	6	25 ltrs
605 x 300 x 175 mm	8	32 ltrs



TLPL 112 - 'TECHNICO' CONSTANT TEMPERATURE BATH :

Technico CTB is a Double walled chamber, inner made of thick stainless steel sheets of 304 grade and outer made of thick CRCA Sheets duly finished in Epoxy powder coating. Glass Window provided in the front side for an easy inside view. Inter space in between the walls will have air tight insulation. Top Lid is made of stainless steel plate and provided with handle. Heating elements are chromium plated immersion type. Temperature controlled by precision thermostat. A Medium speed stirrer with FHP motor fitted to the unit for continuous stirring and thus maintaining uniform temperature. Built in control panel accommodates indicating lamps, precision thermostat, On/Off switch, located at the top of the chamber.

Optional

- Digital On/Off Temp. Controller with sensor
- PID temperature controller with SSR out put
- Fluorescent Lighting arrangement

Cap. Ltrs	Chamber size	Power Rating
12	220 x 220 x 260 mm	1.5 Kw
28	300 x 360 x 300 mm	3.0 Kw
40	370 x 260 x 350 mm	3.0 Kw



TLPL 113 - 'TECHNICO' WATER BATH (DOUBLE WALLED) :

Technico Water bath is a Double walled, stainless steel of 304 grade inside and outside of Stainless Steel or Mild steel sheet, finished in powder coating. The gap between the outer and inner walls is insulated with special grade glass wool. The top of the bath and concentric rings are also stainless steel.

The temperature is controlled by a thermostat from ambient + 5 to 90 °C with a control accuracy of +/- 5 °C. Built-in front panel is provided with two pilot lamps concentric rings on/off switch, wire and plug to work on 230 VAC.

Chamber size	No of Holes
300 x 250 x 100 mm	(6 holes of Ø 75 mm)
300 x 405 x 100 mm	(12 holes of Ø 75 mm)

Optional

- Digital on / off Controller.
- Digital PID Controller



TLPL 114 - 'TECHNICO' DEEP FREEZER – VERTICAL MODEL:



Technico Upright Deep Freezer Model is a Double walled chamber. The inner chamber is made PP and outer made of thick cold rolled mild steel sheets, attractively finished in Epoxy powder coating. The inter space between the outer and inner chamber will be tightly packed with PUF insulation on all the sides for effective insulation to prevent any temperature loss. The inner chamber accommodates Drawers.

The double walled door in the front, is made as per chamber construction, mounted heavy duty hinges and provided with effective locking arrangements. The door is gasketed along the edges for effective sealing of the door in closed position.

CFC Free Refrigerant system consists of Hermetically Sealed Copeland Compressor, air cooled condenser and heavy duty motor driven fan are provided at the lower portion. Temperature is indicated and controlled by Smart Range of Digital Temp..Controller working in conjunction with PT-100 sensor. The unit is mounted on smooth moving castor wheels for easy movement within the laboratory.

Power : 230 Volts single phase 50cys. Ac
Temperature Range : -20 Deg.C/ -40 Deg.C

Optional
Suitable Voltage Stabilizer



Capacity
110 ltrs
165 ltrs
280 ltrs
325 ltrs

TLPL 115 - 'TECHNICO' DEEP FREEZER – HORIZONTAL MODEL :

Technico Horizontal Model Deep freezer is a Double walled chamber with opening at the top. Top portion of the chamber and top lid are made of MS. The outer chamber is made of cold rolled steel sheets and attractively finished in powder coat finish.

High-class insulation with PUF is provided all the sides between the two walls to minimize the sweating in humid condition. The top lid is provided with gasket seals and locking arrangements.

Evaporating coils are lead soldered and provided at the rear and sides of the inner chamber for faster cooling of the cabinet. CFC Free Refrigerant system consists of Hermetically Sealed Copeland Compressor, air cooled condenser and heavy duty motor driven fan are provided on the right side of the cabinet

The control panel with built in Digital Temperature Controller cum Indicator, indicators, switches etc., provided at the side of the cabinet.

Temperature Range: -20 Deg.C/40 Deg.C

Capacity
110 ltrs
185 ltrs
250 ltrs
360 ltrs



TLPL 116 - 'TECHNICO' ELECTRIC MUFFLE FURNACE (900 – 1100 Deg.C) :

TECHNICO[®]

Technico Muffle Furnace construction comprises of an Outer chamber fabricated out of thick cold rolled mild steel sheets, Rectangular in shape placed horizontally with opening in the front. Refractory Muffle of required size forms the inner chamber. This is surrounded by ceramic fibre blankets on all the four sides and the rear to reduce heat losses to a minimum. The furnace is heated by KANTHAL A1 heating coils wound in spiral form on the muffle embedded in high grade refractory cement and backed by ceramic fibre blankets.

The temperature inside is maintained at any desired level within the operating range by a Digital Automatic Temperature Indicator-cum- controller working in conjunction with a Cr/Al thermocouple housed in the hot zone.

Control panel: Consists of temperature controller, Electronic relay, indicating lamps, Energy Regulator. The furnace is finished in attractive powder coat finish.

Technical Specifications:

Operating Temp : 900 °C, 1000 °C. to 1100 °C

Temp. Accuracy : 1% of Set Temperature

Power supply : 230 volts AC, Single phase.

Optional:

Microprocessor based Digital PID Controller with Thyristor out put for better accuracy of 2 to 3 °C

Inner Chamber size	Power Rating
100 x 100 x 225 mm	3.5 Kw
125 x 125 x 250 mm	3.5 Kw
150 x 150 x 300 mm	4.0 Kw
200 x 200 x 300 mm	4.5 Kw



TLPL 117 - 'TECHNICO' ELECTRIC FURNACE (1200 Deg. C) :

The general design and construction comprises of an Outer chamber fabricated out of thick cold rolled mild steel sheets, Rectangular in shape placed horizontally with opening in the front. Refractory Muffle of required size forms the inner chamber. This is surrounded by ceramic fibre blankets on all the four sides and the rear to reduce heat losses to a minimum. The chamber is provided with a single door with 100mm thick ceramic fibre insulation mounted on heavy duty hinges and provided with latch. The furnace is heated by KANTHAL APM heating coils wound in spiral form on the muffle embedded in high grade refractory cement and backed by ceramic fibre blankets. The temperature inside is maintained at any desired level within the operating range by a Digital Automatic Temperature Indicator-cum- controller working in conjunction with a Cr/Al thermocouple housed in the hot zone.

Control panel: Consists of temperature controller, Electronic relay, indicating lamps, isolator. The furnace is finished in attractive powder coat finish.

Technical Specifications:

Operating Temp : 1200°C

Temp. Accuracy : 1% of the Set temperature

Power supply : 230 volts AC, Single phase.

Optional:

Microprocessor based Digital PID Controller with Thyristor out put for better accuracy of 2 to 3 °C

Inner Chamber size	Power Rating
100 x 100 x 225 mm	3.5 Kw
125 x 125 x 250 mm	3.5 Kw
150 x 150 x 300 mm	4.0 Kw
200 x 200 x 300 mm	4.5 Kw



Note : other bigger Six Furnaces also made by Customer request for Annealing & Heat treatment purpose.

The general design and construction comprises of a Tripple walled chamber, outer made of cold rolled mild steel sheets and finished in powder coating paint. Inner chamber formed by high temperature withstand Zirconia Vacuum board followed by Ceramic fibre blankets on all the sides. Double walled door mounted on heavy-duty hinges in the front is provided with effective locking arrangements. Optionally, the door can be provided with door limit switch to cut off the power supply whenever the door is opened and to restart when the door is closed.

The Furnace will be heated by means of HIGH QUALITY SILICON CARBIDE RODS. Temperature is maintained and controlled by Microprocessor based PID Controller auto tuned with Thyristor Control Device working in conjunction with Pt/Pt/Rh 13% thermocouple.

Control Panel :

A compact control panel accommodating the following will be provided along with the furnace:

- PID / Programmable Controller
- Pilot Indicating lights.
- Thyristor Power Control Device
- Voltmeter
- Ammeter
- Main isolating switch

Technical Specifications

Continuous Operating Temperature: 1350 °C.
 Maximum Temperature : 1400 °C.
 Temp. Accuracy : +/- 1 %.
 Operating Voltage : 230 Volts Single phase 50 cys. / 415 V3 phase

Optional Accessories:

- a. Programmable Controller for Cyclic Program Control



Inner chamber size	Power Rating
100 x 100 x 225 mm	6.0 Kw
125 x 125 x 250 mm	6.0 Kw
150 x 150 x 300 mm	6.0 Kw
200 x 200 x 300 mm	8.0 Kw 3 Phase
300 x 300 x 300 mm	9.0 Kw 3 Phase

TLPL 119 - 'TECHNICO' ELECTRICAL TUBULAR FURNACE: (1000-1150 °C)

TECHNICO[®]

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

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

The furnace is heated by Kanthal A1 heating elements. The temperature is controlled PID. Controller working in conjunction with Cr/Al type thermocouple. The size of the tubes available is 50 to 100 mm OD and with length of 450 mm to 650 mm.

Technical Specifications

Operating Temperature Range : 600 to 1000°C

Maximum Temperature : 1150°C

Temp. Accuracy : +/- 1 Deg.C

Operating Voltage : 230 Volts single

Optional:

- Microprocessor based Digital Programmable Controller with Thyristor out put for better accuracy of 1°C
- End fittings for inert atmosphere purging, Flow Meter.
- Quartz tube with end fitting

Tube size (mm)	Rating
Ø40 x 350 (L)	750 watts
Ø50 x 450 (L)	1000 watts
Ø65 x 650 (L)	1500 watts



TLPL 120 - 'TECHNICO' HIGH TEMPERATURE TUBULAR FURNACE: (1350-1400 °C)

Technico High Temp. Tubular furnace is supplied in vertical or horizontal model, as per request of customers.

Double walled chamber outer chamber made of cold rolled mild steel sheets and finished in powder coating. The Inner chamber is formed by high Alumina tube capable of withstanding temperature up to 1400 °C. The tube will have one end closed or both ends opened as per the requirement of customers. Insulated with high density superior quality ceramic fibre blanket.

The furnace is heated by silicon carbide heating elements. The temperature is controlled Digital Programmable PID Controller. The sensor will be Pt/Pt/Rh type thermocouple. The size of the tubes available is 50 to 100 mm OD and with length of 450 mm to 1000 mm.

Technical Specifications:

Operating Temp : 1350°C

Max. Temp : 1400°C

Temp. Accuracy : +/- 2 to 3 Deg.C

Operating Voltage : 230 Volts

Optional:

- End fittings for Inert Atmosphere purging, Flow Meter.
- Imported Silicon Carbide Rods
- End fittings with water cooling jacket

OTHER WORKING TUBE SIZE ON REQUEST.

For Silicon "O" rings Flow meter and valves for inlet and outlet

Tube size (mm)	Power Rating - Kw
Ø50 x 650 (L)	3
Ø60 / Ø 70 x 750 (L)	3.5



For Temperature of 1500 / 1600 / 1700 °C

Specially designed for specific applications heated by **Molybdenum di-silicide rods** where maximum continuous operating temperature will not exceed **1500 / 1600 / 1700 °C**

Technico furnace is double walled, Box type rectangular in shape with opening in the front, heated by **MOLYBDENUM di silicide rods**. The temperature is controlled by Microprocessor based PID Controller. The power to the heating elements controlled by **Current Limit Feed Back type Thyristor** pack with auto/manual option with control and indication accuracy $\pm 2/3$ deg. C.

The outer chamber is fabricated out of thick C.R.C.A Sheets (1.6 mm), fully reinforced with angle iron frame work to make the equipment mechanically very rigid. The outer shell has air cooling facility to circulate air by a cooling fan to have a cool exterior to make the skin temperature is maintained around 60 / 70 Deg.C.

The furnace chamber will be lined with **Imported CERAMIC BOARDS of 1700 °** This will follow by a layers of Vacuum Forming Zirconia BOARDS of 1500° C. Low mass high grade thermal insulation will be provided to ensure consistent result in efficient heating and cooling of the furnace and to keep the surface temperature within permissible limits.

Double walled door with insulation by Ceramic Boards / Zirconia Fibre Board is provided in the front opening. The door will be mounted on heavy duty hinges to provide perfect seal when the door is in closed position. The door will have simple but effective locking arrangement.

As option a door limit switch is incorporated, to cut off the power supply, when the door is opened during the operation and to re-start again when it is closed.

The temperature inside the chamber is indicated and controlled by a smart range Digital PID Programmable controller which will have Auto/manual control features and other standard control systems. The Controller work in conjunction with B type thermocouple and thyristor power control device.

Due to this arrangement of Current Limit Feed Back arrangement, the Control System is protected from higher current / voltage. The Heating element initially has a lower ohmic value. When we set the required Amperage in the control system, there will be a larger current drawn. Without the current limit option, the higher voltage will damage the system electronics. Hence, we are providing the advantage of the special Thyristor.

A compact control panel accommodating the following will be provided along with the furnace:

- * Microprocessor based Programmable PID Controller. (Make – Honeywell or Shinko or Eurotherm) TAIE
- * Pilot Indicating lights.
- * HRC Fuse units. (L & T)
- * Thyristor Power Control Device.
- * Voltmeter. (AE)
- * Ammeter. (AE)
- * Circuit Breaker (Make Siemens)
- * Main isolating switch.
- * Step down Transformer (Of reputed make)
- * Safety Controller (Make Honeywell or Autonics)



For Temperature of 1500 / 1600 / 1700 °C

Specially designed for specific applications heated by **Molybdenum di-silicide rods** where maximum continuous operating temperature will not exceed **1500 / 1600 / 1700 °C**

Technico Moly Furnace is double walled, rectangular in shape with a inner working chamber made of **HIGH ALUMINA** heated by Imported **MOLYBDENUM di silicide rods**. The temperature is controlled by Microprocessor based programmable PID Controller. The power to the heating elements controlled by **Current Limit Feed Back type Thyristor** pack with auto/manual option with control and indication accuracy $\pm 2/3$ deg. C.

The outer chamber is fabricated out of thick C.R.C.A Sheets and has air cooling facility to circulate air by a cooling fan to have a cool exterior to make the skin temperature is maintained around 60 / 70 Deg.C.

The Working inner chamber is a **99.9 % High Purity Alumina Tube** for required ID and length. The furnace chamber will be lined with **Imported CERAMIC BOARDS of 1700 °** This will follow by a layers of Vacuum Forming Zirconia BOARDS of 1500° C. Low mass high grade thermal insulation will be provided to ensure consistent result in efficient heating and cooling of the furnace and to keep the surface temperature within permissible limits.

The temperature inside the chamber is indicated and controlled by a smart range Digital PID Programmable controller which will have Auto/manual control features and other standard control systems. The Controller work in conjunction with B type thermocouple and thyristor power control device.

Due to this arrangement of Current Limit Feed Back arrangement, the Control System is protected from higher current / voltage. The Heating element initially has a lower ohmic value. When we set the required Amperage in the control system, there will be a larger current drawn. Without the current limit option, the higher voltage will damage the system electronics. Hence, we are providing the advantage of the special Thyristor.

OPTION Gas Purging Fittings : The furnace will be provided with Gas purging end fittings with water cooling arrangement. (Cool water supply not in our scope). The fittings will have double Silicon / Viton 'O' rings with suitable inlets and outlets for gas with a Flow meter . Suitable for Nitrogen and Argon Gas.

A compact control panel accommodating the following will be provided along with the furnace:

- * Microprocessor based Programmable PID Controller. (Make – Honeywell or Shinko or Eurotherm)
- * Pilot Indicating lights.
- * HRC Fuse units. (L & T)
- * Thyristor Power Control Device.
- * Voltmeter. (AE)
- * Ammeter. (AE)
- * Circuit Breaker (Make Siemens)
- * Main isolating switch.
- * Step down Transformer (Of reputed make)
- * Safety Controller (Make Honeywell or Autonics)



TLPL 123 - 'TECHNICO' EGG INCUBATOR WITHOUT HUMIDITY CONTROL :

TECHNICO[®]

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

Temp. ranges from ambient + 5 °C to 70 °C. and is controlled by Digital temp controller with an accuracy of +/- 1 °C. The unit is provided with air circulating fan and a manual tray tilting device, so as to tilt the tray holding the eggs. Supplied with control panel. Designed to work on 220/230 V AC supply.

Capacity	Rating-Kw
50 eggs	50 W
100 eggs	150 W
200 eggs	200 W
250 eggs	200 W



TLPL 124 - 'TECHNICO' EGG INCUBATOR WITH HUMIDITY CONTROL :

Same as above but provided with additional RH / Humidity Control System.

Optional : Microprocessor based digital
PID Temperature controller with Sensor
Automatic fitting with timer



TLPL 125 - 'TECHNICO' FLOCCULATOR (JAR TESTING APPARATUS) :

Technico Flocculator or Jar Testing apparatus consist of a Illuminated base with fluorescent tube mounted below translucent plastic plate to provide diffused cold light through floc samples. Flocculator consists of geared continuous run heavy duty variable speed motor from 50 to 200 RPM with built in speed control.

Stainless steel stirring rods are provided with adjustable spacers to adjust the depth of stirring paddles. The stirring shaft can be removed without disturbing other stirrers. It is supplied with either two or four or six stirrers working on 220 V AC. This unit is supplied with beakers.

Models Available : 2 stirrers x 1 litres or 2 litres
4 stirrers x 1 litres or 2 litres
6 stirrers x 1 litres or 2 litres



Technico Glove Box main Working Chamber will be made of Stainless Steel 304 with Epoxy Powder Coating finish. The chamber will be provided with a Antee/ Mini-pass Chamber to enable transfer of necessary samples into the main chamber.

The Glove Box Chamber will have a front window for clear observation of the inner chamber. If Transparent Acrylic window is required on both sides we can also provide this.

The gloves will be made of **Black Neoprene Rubber** of 30Mil.

Size : 6: cuff x 32" L Or 8" cuff x 32" L

The chamber will be illuminated by tube light provided in the front top side for a clear bright view of the inner chamber.

The main Chamber will be provided with a Vacuum Port, Gas purging port and gas inlet Port with suitable valves arrangement. The vacuum Port will be used to vacuumized the chamber to remove the Air / Atmosphere / Moisture vapours from the chamber. The Chamber under – ve pressure can be now purged with any Inert Gas like Nitrogen etc. to have a working Inert atmosphere inside.

Both the Main Chamber and Antee Chamber can be purged with Inert gas like Nitrogen etc. for having a Inert working atmosphere inside the Glove Box Chamber. The gas from a Cylinder is connected to the Gas inlet below the Moisture Silica Gel Filter.

This will neutralize the –ve pressure and make the chamber slightly above atmospheric pressure. A Dial Gauge is provide to indicate the vacuum and Pressure. The same process can be performed for the Antee Chamber

Note : The Glove Box is not meant to be operated under High Vacuum or High Pressure.

A suitable Vacuum Pump of required capacity will be provided with in-built and fittings with Vacuum Hose connection. A timer will be provided which will cut-off the vacuum system at safety level.

A Control Panel with the Indicating lamp, MCB, Switches, Timer and other Control and Indicating Instruments will be provided on the bottom side of the Glove Box.

OPTIONAL :

- a. Low wattage heater with Digital Controller
- b. RH Humidity Sensor and Indicator
- c. Automatic Pressure Control and Purging
- d. Shelf

Chamber size (L) x (W) x (H)	No of Gloves.
800 X 800 X 800 mm	1 Pair
1000 x 800 x 900 mm	1 Pair
1200 x 900 x 1000 mm	1 Pair or 3 gloves
1500 x 900 x 1000 mm	2 Pair



TLPL 127 - 'TECHNICO' HEATING MANTLE :

TECHNICO[®]

Technico Heating Mantles are single piece and are made of flexible knitted glass fabric to which resistance wire is attached in a coil form. The heating mantle is housed in a housing made of mild steel sheets with powder coating finish. Each mantle is fitted with Built-in Energy Regulator & pilot lamps. Designed for operation on 230 V single-phase 50 cys. A/C. Suitable for heating applications using round bottom borosilicate glassware.

Optional : Digital Temperature Controller with Sensor.

Capacity (ml)	100	250	500	1000	2000	3000	5000	10000	20000	50000
Rating (watts)	60	150	200	300	500	750	800	1000	2000	3000



TLPL 128 - 'TECHNICO' HOT PLATE

Technico Hot Plates are available in two models – Round and Rectangular shape with **MS.Top or stainless steel top.** This is a heavy duty heating plate with a removable MS plate / Stainless Steel Plate at the top. The housing is made of mild steel sheet and finished in powder coat paint.

A heat control switch for low, medium and high heat and two nos. indicating lamps are provided on the front panel. The unit is designed for operating on 230V Single phase 50 C/S. mains.

Size	Rating
8"	1.5 Kw
10"	2.0 Kw
12"	2.0 Kw

Size	Rating
10" x 12"	1.5 Kw
10" x 16"	1.5 Kw
12" x 18"	2.0 Kw
12" x 24"	3.0 Kw
18" x 24"	3.0 Kw

Optional:

- Digital temperature controller
- Microprocessor based PID Controller
- Top made of Stainless Steel
- Fully made of Stainless Steel

TLPL 129 - 'TECHNICO' ELECTRIC BUNSEN :

Electrically operated, Body made of stainless steel. The Unit is fitted with built in energy regulator and indicating lamp. Suitable for heating crucibles with samples.

- Power Supply : 230 V single-phase 50 cys. A/C.
- Temperature Range : Ambient + 5 to 600 Deg.C
- Power Rating : 300 watts



Round model / Square model



For Rectangular Model



TLPL 130 - 'TECHNICO' HOT AIR OVEN (DIGITAL MODEL)

TECHNICO[®]

Technico HOT AIR OVEN is Sturdy double walled on the back and two sides with interior walls made of Stainless 304 sheets and exterior made of M.S. sheets. The doors will be double walled and seals against atmospheric infiltration gasket. The doors will be mounted in heavy duty hinges for easy opening and closing.

Inter space in between the outer and inner wall is tightly packed with special grade glass wool. The outside skin temperature will be around 20 to 30 degs C above ambient. The Oven will be provided with required number of adjustable Trays.

Suitable heater is provided which will have much longer life. The Heating system will be designed for max. 250 degs C operation with uniform temperature all over the Oven chamber.

An Air Circulation Fan with a suitable motor mounted at the back for ensuring uniform temperature throughout the heating chamber. The temperature inside the chamber is controlled by a Digital Temperature Indicator cum Controller which will work in conjunction with a Thermocouple.

A control panel with Digital On/Off cum controller, Air circulating fan Switch, Electronic Relay, Indicator lamps for line and load, etc is provided at top.

Technical specifications:

Temperature Range. : Ambient + 5 °C to 250 °C

Temperature Accuracy : +/- 2 to 3 °C.

Operating Voltage : 230 Voltage

Options :

- a) Timer in built.
- b) Fully Made of Stainless Steel
- c) Microprocessor based PID Controller with SSR

Chamber Size	Trays	Power rating kw
300 x 300 x 300	2	1.0
355 x 355 x 355	2	1.0
455 x 455 x 455	2	1.5
455 x 455 x 605	2	2.0
605 x 605 x 605	3	2.0
910 x 605 x 605	3	3.0



TLPL 131 - 'TECHNICO' HOT AIR OVEN (THERMOSTAT MODEL)

Technico Hot Air Oven – Thermostat Model is a Double walled chamber, inner made of stainless steel sheets and outer made of cold rolled mild steel sheets duly finished in powder coating. Inter space in between the walls is tightly packed with special grade glass wool.

Inner chamber accommodates perforated stainless steel trays at adjustable heights. Insulated double walled door in the front is provided with locking arrangements. Heating is by Kanthal A1 heaters evenly distributed on the three sides. **Temperature is controlled by precision thermostat** within the operating range. Built in control panel accommodating all Thermostat, 3 Heat Switch, Indicating lamps, electrical/electronic accessories is provided at the top of the chamber.

Technical specifications:

Temperature Range. : Ambient + 5 °C to 250 °C

Temperature Accuracy : 10 °C.

Operating Voltage : 230 Voltage single phase 50 cys. AC



Technico Industrial type Oven is a Triple walled chamber, inner made of stainless steel sheets and outer made of cold rolled mild steel sheets duly finished in powder coating. Inter space in between the walls is tightly packed with special grade glass wool. The middle wall will be made of Electro Galvanized Steel.

Inner chamber accommodates stainless steel trays at adjustable heights. Insulated double walled door in the front is provided with locking arrangements. Heating is done by Kanthal A1 heating coils, which are evenly distributed on the two sides /two sides and the bottom portion of the chamber for uniform heating. .

Temperature is indicated and controlled by Digital temperature indicator cum controller working in conjunction with FEK sensor within the operating range. Air Circulating Fan assembly is incorporated in the unit for maintaining uniform temperature inside the working chamber.

Built in control panel accommodating all electrical/electronic accessories is provided at the side of the chamber

Technical Specifications:

Temperature Range : Ambient + 5 °C to 300 - 400 °C
 Temp. Accuracy : 5 °C

Chamber size (mm)	Trays	Power rating kw
455 x 455 x 455	2	4.5 Kw
455 x 455 x 605	2	4.5 Kw
605 x 605 x 605	3	6.0 Kw
605 x 455 x 910	3	6.0 Kw
605 x 605 x 905	3	9.0 Kw



Options :

- a) **Microprocessor based PID Controller with Thyristor Control**
- b) **Microprocessor based Programmable Controller with Thyristor Control**
- c) **Timer**
- d) **Fully Made of Stainless Steel**

OTHER BIGGER SIZES CAN BE GIVEN ON REQUEST

The Industrial Type Oven can be provided with Trolley, Exhaust Systems

Technico Tray Drier consist of a Triple walled chamber. The inner chamber fabricated out of Mild Steel OR 304 Grade Stainless steel sheet. The Middle and outer chamber is made of Mild Steel. The inter space in between the walls is tightly packed with special grade Glass wool insulation to eliminate radiation heat loss to a minimum.

The chamber is provided with a double walled door double door made of mild steel or SS 304 in the front with Glass wool insulation in between. The door mounted on heavy duty hinges and provided with wing nut lock.

The heating elements used will be Air heaters distributed in both sides of the Drier and the terminals are neatly brought and terminated in the junction box outside the chamber. The heating elements can be easily replaced and due care is taken for easy maintenance.

To achieve uniform temperature all over the inner chamber, the unit is incorporated with continuously rated powerful motor along with blower assembly the blower assembly will be fitted on the sides or Top of the oven. The Drier will be provided with adjustable opening at the top to vent moisture vapours produced during processing.

The temperature inside is maintained at any desired level within the operating range by a On/Off Digital temperature controller working in conjunction with RTD / Thermocouple placed in the hot zone.

The Drier will accommodates required number of Trays . The Trays are fabricated out of 304 Grade stainless steel sheets. The trays will be of Stainless Steel Trays with SS bracket runners.

A compact control panel accommodating, Pilot indicating lamps, On/Off switch, On/Off Digital temperature controller, MCB, Starter, units, etc., is provided at one side of the chamber for operational convenience.

Standards Models :

**12 Trays / 24 Trays / 48 Trays / 72 Trays / 96 Trays or as required.
Dimension of the inner chamber will be designed and offered as required by you**

Options :

- a. Microprocessor based PID Controller**
- b. Microprocessor based Programmable Controller with Thyristor Control**
- c. Timer**
- d. Trolley with Trays / baskets for Bigger Driers.**
- e. Fully Stainless Steel 304 or 316 for Food applications / GMP Standard**



NON STANDARD SIZE CAN BE OFFERED ON REQUEST



Technico Humidity Test Chamber is a double walled chamber. The inner chamber is made of 304 Stainless Steel material with mirror finish. The outer wall is made of Mild Steel with Powder coating finish or alternatively Stainless Steel 304 with or without epoxy powder coating finish for excellent looks.

The chamber is provided with a double walled Door with a toughened glass viewing window which allows inspection of samples without disturbing the temperature inside the chamber. The door is mounted on heavy duty plate hinges with effective locking arrangement and seals against atmospheric infiltration by resilient magnet gasket. A second door made of clear Acrylic will be provided mounted on SS hinges and with magnetic catch to enable full visibility of the inner chamber keeping minimum loss of the test process condition.

The inner space in between the inner and outer wall is insulated and tightly packed with 'PUF' to ensure effective thermal sealing.

Heating elements are made from imported nichrome wires evenly distributed at the back side of the chamber.

Forced Air Circulation fan assembly is incorporated inside the chamber to maintain uniform temperature inside the working chamber.

The cooling stage of temperature is achieved by incorporating heavy duty sealed CFC free compressor of Emerson Copeland make having condenser reservoir, cooling fan assembly and filled with suitable refrigerant gas which will be circulated throughout the inner chamber for effective uniform temperature up to 20 degs C. Cooling system is provided at the bottom portion of the chamber.

The RH / Humidity can be controlled from 45% RH to 95% RH in the temperature range of 20 to 60 degs C The RH is control within the range by a Smart Microprocessor base PID controller with RH sensor.

SPECIFICATIONS :

- No. Trays : 2 or 3
- MOC of Trays : SS 304
- Temp . Contoller : Microprocessor based PID Type
- RH Contoller : Microprocessor based PID Type
- Power Supply : 230 VAC, Single Phase.
- Temperature Range : 15 to 60 degs C +/- 1 degs C
- Humidity Range : 45% to 95% +/- 3 % RH
- Temp. range for RH Operation : 20 to 60 Degs C only

Options :

Timer, Voltage Stabilizer, Programmable Controller, Recorder, PC Interface
Small & bigger sizes also available based on request.

Standard Chamber size	Power Rating
455 x 455 x 710 mm	3.0 kw
605 x 605 x 605 mm	4.5 kw
605 x 605 x 910 mm	4.5 kw



TLPL 135 - 'TECHNICO' ENVIRONMENTAL / STABILITY CHAMBER :

Technico Environmental / Stability Chamber is a double walled chamber. The inner chamber is made of 304 Stainless Steel material with mirror finish. The outer wall is made of Mild Steel with Powder coating finish or alternatively Stainless Steel 304 with or without epoxy powder coating finish for excellent looks.

This is a Double walled construction, interior made of thick gauge stainless steel sheets of 304 Grade and exterior made of cold rolled mild steel sheets finished in powder coat. Inter space in between the walls is packed with puff. The door is double walled having toughened glass window and seals against atmospheric infiltration by rubber gasket. The Inner chamber accommodates stainless steel trays at adjustable height.

Heating elements are made of Nichrome heating coils evenly distributed at the back side of the chamber. Forced Air Circulation Fan assembly is incorporated to maintain uniform temperature inside the working chamber.

Temperature below ambient is achieved by Refrigeration System consists of evaporator coils, compressor, condenser, fan motor and accessories.

Humidity is attained by the mist of water that is circulated inside the chamber for maintaining 40% to 95% humidity. A water reservoir will be provided with Auto low-level water cut off device and alarm.

Humidity is controlled by a Microprocessor based PID humidity controller, with sensitivity of 3%. Temperature is controlled by Microprocessor based PID Temperature Controller from + 10 to 60 °C with an accuracy of 1 °C.

A compact control panel with switches, Indicating lamps, Digital Timer, Digital PID controllers etc, is located at the side or top of the chamber for operational convenience.

Illumination is provided with Fluroscnt lamps with cyclic timer

No. Trays	:	2 or 3
MOC of Trays	:	SS 304
Temp . Controller	:	Microprocessor based PID Type
RH Controller	:	Microprocessor based PID Type
Power Supply	:	230 V AC, Single Phase / 415 V, 3 Phase, 50 Cys.
Temperature Range	:	15 to 60 degs C +/- 1 degs C
Temp. range for RH Operation	:	20 to 60 Degs C only
Humidity Range	:	45% to 95% +/- 3 % RH

Standard Chamber size	Power Rating
455 x 455 x 710 mm	3.0 kw
605 x 605 x 605 mm	4.5 kw
605 x 605 x 910 mm	4.5 kw



TLPPL 136 - 'TECHNICO' SALT SPRAY / CORROSION TEST CHAMBER :

Technico Salt Spray Test Chamber entire chamber is constructed by thick Polypropylene or Acrylic sheet body. The Top Lid Door will be made of transparent Acrylic. The solution reservoir is separated externally in a cylindrical vessel and fixed to the side of the main chamber. The solution is sprayed inside the chamber by means of compressed air (Air Compressor not in our scope) and its level is controlled by float valve.

The main Chamber is provided with transparent Acrylic cover lid mounted on fabricated acrylic hinges. The top lid closes the entire chamber without fog leakage. The saturation tower and the control panel are attached with the sidewall of the main chamber. The Control panel is made of FRP material. Solution and water drain out tap are also provided. Suitable specimen holders and job holding devices are furnished inside the chamber.

Technical specifications :

Chamber temp.	:	35 C
Control accuracy	:	3 C
Saturation tower temp.	:	40 C to 45 C
Controller type	:	PT-100 (RTD type)
Temperature Controller :		
Size	:	48 x 48 mm
Type	:	Digital
Humidity Indicator :		
Size	:	48 x 48 mm
Type	:	Digital
Digital Timer:		
Make	:	
Size	:	48 mm x 48 mm
Hours	:	999.9 hrs.
Pressure gauge:		
Range	:	0 - 4.2 kg/cm ²
Range	:	1 kg/cm ² (SATURATION TOWER)



SOLUTION TANK : 5% of the sodium chloride (100 lit) is prepared and poured in the chamber reservoir. It is passed to the spray tower through the mechanical float through which is maintaining the water level in the tower.

POWER SUPPLY : The chamber's plug pin should be connected to the power supply and the timer should be set according to the testing hours.

PRESSURE REGULATOR WITH GAUGE :

The compressed air enters to the solenoid valve. It is controlled by the help of pressure regulator (15 lbs) in pressure gauge.

When the testing specimen or components are loaded to the chamber the drain out valve is kept open because the condensed fog water should not touch the specimens.

Standard Size ; 600 x 600 x 600 H OR 600 x 600 x 900 H

TLPL 137 - 'TECHNICO' WATER BATH ORBITAL SHAKER :

Inner is made of Stainless steel 304 and outer fabricated out of cold rolled mild steel sheets with powder coating. The pyramidal lid is made of stainless steel prevents falling of condensed water droplets on the specimens. The inter space between the two walls is tightly packed with special grade glass wool in order to prevent thermal losses. Heated by Energy efficient heaters and controlled by Microprocessor based Digital Controller with LED display with RTD Sensor.

The Bath is provided with an oscillating tray riding on rollers oscillated through a PMDC motor for continuous operation. The shaking tray can either hold test tubes or Erlenmeyer flasks of capacity 25 ml or 50 ml or 100 ml or 250 ml or 500 ml or 1000 ml as ordered by the users. Electronically controlled shaking mechanism provides quit reciprocating motion and precise speed control. The unit is fitted with DC drive for speed range from 20 to 200 cycles per minute.

Built in front control panel accommodating all the controlling devices located at the side of the bath for operational convenience .

Cooling Option : CFC Free Refrigeration system provided at the lower portion for controlling the temperature from 0 to 100 Deg.C.

Supplied complete with one shaking tray for holding 9nos x 250 ml flasks and cord and plug.

Technical Specifications:

Inner Chamber size	:	405 x 300 x 150 mm
Holding Capacity	:	250 ml x 9 Nos Conical Flasks
Temperature range	:	0 to 100 deg.C. +/- 0.5 Deg.C
Shaking speed	:	40 to 140 cycles/per minute
Power Rating	:	2.5 Kw (approx)
Operating Voltage	:	220- 230 Volts single phase 50 cys

Optional

Spare Shaking Tray for holding : 12 Nos. x 100 ml Concial Flask or
 9 Nos. x 250 ml Conical Flask or
 5 Nos. x 500 ml Conical Flask or
 35 Nos. x 25 mm dia Test tubes



TLPL 138 - 'TECHNICO ORBITAL SHAKER (OPEN TYPE) :

Designed for continuous shaking of solutions in Erlenmeyer Flasks . It is a compact bench type table top model, counter balanced drive mechanism for high stability and dependability for continuous operation. Platform fitted on ball bearing crank shafts for giving an orbital motion to the flasks within a diameter of approx. 25 mm. Platform provided with lotus clamps for holding the flasks. A geared variable speed DC Motor with variable speed control, mounted on a heavy and sturdy angle iron frame. The speed indicated by Digital RPM Indicator . Designed to work on 220/230 Volts A/C supply.

Platform Size	Holding capacity
1. 35 x 50 cm	9 Flasks x 500 ml
	16 Flasks x 250 ml
2. 60 x 60 cm	25 Flasks x 500 ml
	36 Flasks x 500 ml
3. 90 x 90 cm	49 Flasks x 500 ml
	81 Flasks x 250 ml



TLPL 139 - 'TECHNICO' ORBITAL SHAKING INCUBATOR HEATING BENCH MODEL :

Designed for continuous shaking of solutions in Erlenmeyer flasks. It is a compact bench type table top model with platform fitted with lotus clamps mounted on a ball bearing crank shafts to give an orbital motion to the flasks with in a diameter of 25mm. A see-through acrylic window provided on the Front Door..

Heating system with air circulation is also provided. Temperature controlled by Digital Temperature Controller and fitted to Air circulating fan for temperature uniformity.

The DC motor with variable speed control is coupled by means of a V-belt with pitch pulley and is mounted on a heavy and sturdy angle iron frame. The speed is indicated in RPM Indicator. . Designed to work on 220/230 volts AC supply.

Technical specifications:

Temperature Range : Ambient + 5 to 60 °C

Accuracy : +/- 1 to 2 °C

Optional

- Timer
- Additional platform

Microprocessor based Digital PID Controller with SSR out put for better accuracy

Platform size	Holding Capacity
355 x 500 mm	250 ml x 12 nos
455 x 455 mm	250 ml x 16 nos
600 x 600 mm	250 ml x 25 nos



TLPL 140 - 'TECHNICO' FLOOR INCUBATOR ORBITAL SHAKER :

The inner chamber accommodates one no. easily removable Stainless Steel tray at adjustable height and is also provided with a shaking platform with threaded holes for mounting stainless steel clamps for holding conical flasks from 250 ml to 1000 ml capacity. Illumination inside the working chamber is provided by Fluorescent tubes.

An outer double door with inner full view acrylic door permits inspection of specimens. Heating is by Kanthal A1 coils. Temp. is controlled by a Digital Indicator cum controller working in conjunction with PT 100 sensor. Powerful air circulator creates positive airflow through the incubator.

Evaporating coils are placed at the rear side of the inner chamber. CFC free Refrigeration System includes Emerson Copeland Make hermetically sealed compressor air cooled condenser unit and accessories. Refrigeration System is provided at the lower portion of the chamber.

The shaker is driven by a variable DC motor with variable speed control. The speed is indicated RPM Indicator for digital display of speed with preset facility. The control panel accommodating, digital controller, pilot indicating lamps, on/off switches, digital RPM Indicator, etc., will be provided at the top of the unit. Supplied Complete With One No. Shaking Platform

Technical Specification:

Chamber size : 600 x 600 x 600 mm

Platform Holding Capacity : 9 Nos. x 1000 ml or 16 Nos. x 500 ml or 25 Nos. x 250 ml

Temperature range : +5 °C to 60 °C

Temperature accuracy : ± 1 Deg.C

Shaking speed : 50 to 250 rpm

Operating Voltage : 230 volts single phase 50 cys. AC

Optional

1. Cyclic Timer
2. Chamber illumination by Fluorescent lamp or UV Lamp
3. Spare Platform for holding flasks
4. Microprocessor based Digital PID Controller with SSR out put for better accuracy.



TLPPL 141 - 'TECHNICO' CYLINDRICAL VACUUM OVEN :

Double walled chamber, outer chamber rectangular in shape made of thick mild steel sheets. The inner chamber is CYLINDRICAL in shape made of stainless steel sheets with provision for vacuum pump and the vacuum gauge is provided at the top of unit. The inner chamber accommodate one no. Stainless steel tray at adjustable height.

The oven is insulated with special grade glass wool to reduce the radiation heat loss to the minimum. The door is of stainless steel plate with a specially designed Mechanism having alignment. A perfect seal is obtained by a positive screw specially designed for tightening the lid. A glass window is provided in the centre for viewing without opening the door.

A set of band heaters is wrapped around the vacuum chamber for fast response and maximum uniformity of heat. The temperature is indicated and controlled by a microprocessor based PID Temperature indicator cum controller working in conjunction with RTD sensor

A compact model control panel accommodating, Pilot Indicating lamps, PID Temperature controller, will be fitted on the side of the oven for easy operation.

Chamber size (diameter x Depth) mm	200 x 200	250 x 250	250 x 300	300 x 300
Maximum temperature ° C	200	200	200	200



TLPPL 142 - 'TECHNICO' RECTANGLE VACUUM OVEN :

Double walled chamber, outer chamber rectangular in shape made of thick mild steel sheets. The inner chamber is **RECTANGLE** in shape made of stainless steel sheets with provision for vacuum pump and the vacuum gauge is provided at the top of unit. The inner chamber accommodate one no. Stainless steel tray at adjustable height.

The oven is insulated with special grade glass wool to reduce the radiation heat loss to the minimum. The door is of stainless steel plate with a specially designed Mechanism having alignment. A perfect seal is obtained by a positive screw specially designed for tightening the lid.

A set of band heaters is wrapped around the vacuum chamber for fast response and maximum uniformity of heat. The temperature is indicated and controlled by a Microprocessor based PID Temperature indicator cum controller working in conjunction with a RID sensor.

A compact model control panel accommodating, Pilot Indicating lamps, PID Temperature controller, will be fitted on the side of the oven for easy operation.

Chamber size (diameter x ht) mm	300 x 300 x 350
Maximum temperature ° C	200

Optional:

Belt driven / Direct drive Vacuum pump,
Analog / Gas ballast and KF couplings.



TLPL - 143 'TECHNICO' VACUUM PUMP :

These Rotary oil-sealed pumps are quite operating and vibration less designed for continuous working and tested to assured satisfactory performance of the pump. Mechanism is contained in a metal case with oil level sight gauge and drain plug at base. Motor driven pumps are completely mounted on rectangular base plate and are furnished with V belt & Motor. Supplied with non-return Valve & Vacuum gauge.

Stage	Single stage				Double stage			
Pumping speed ltr	50	100	150	200	50	100	150	200
Motor speed (RPM)	550	550	550	550	550	550	550	550
Motor power (H.P)	1/4	1/4	1/2	1/2	1/4	1/4	1/2	1/2

Optional Extra: Vacuum Gauge (Dial type with regulator)



TLPL 144 - 'TECHNICO' VACUUM PUMP – DIRECT DRIVE

Direct Drive Rotary High vacuum Pump have fast evacuation, extremely light and portable, Low Noise & Vibration & Low current consumption.

These Pumps are Direct Drive, Double Stage, Oil Sealed, Rotary High vacuum Pump with state of art being adopted to ensure proper alignment and fine setting of each and every component.

The main components are made of high quality raw material consisting of specially treated Cast iron and Steel.

The Pump is coupled directly to the motor shaft without using any additional coupling to ensure the compactness of the pump and the noiseless powerful positive drive.

An inbuilt forced lubrication system is provided in the pump to make sure that the lubrication is made available all over the pump including the bearings and vacuum sealing surface. This not only works to De-Vacuum the system during the stop mode, but also acts as NRV to check the oil rise into the connected system.

An incorporated Baffle arrests the Oil Mist coming out of the exhaust nozzle. A closed type silencer cum exhaust nozzle is fitted to prevent any dust going into the Pump.

Free Air Displacement LPM	Power HP	Oil Charge in lts.
50	1/4	0.30
100	1/3	0.30
150	1/2	1.25
250	3/4	1.55
300	1	2.50
500	1	3.00



TLPPL 145 - 'TECHNICO' KJELDHAL DIGESTION UNIT:

This is very useful for estimation of nitrogen content in the substance by digestion for 300 or 500 ml. Capacity flasks provided with LEAD FUME DUCT and pair of hangers. The unit works on 220 / 230 v A. C. supply.

Model : Mantle type - 3 Test

Rating : 200 watts x 3 - 600 watts

Model : Mantle type - 6 Test

Rating : 500 watts x 6 - 3000 watts



TLPPL 146 - 'TECHNICO' KJELDHAL DISTILLATION UNIT:

This is very useful for distillation purpose for 300 ml or 500 ml.

The unit is provided with condenser rack. The unit works on 220 / 230 v A.C. supply.

Model : Mantle type - 3 Test

Rating : 200 watts x 3 - 600 watts

Model : Mantle type - 6 Test

Rating : 500 watts x 6 - 3000 watts



TLPPL 147 COD - 'TECHNICO' C.O.D. APPARATUS :

The apparatus comprises of one row of independently heated and controlled, heating mantles. The mantles are designed to accommodate Round Bottom flasks. Each heating mantle has independent energy regulator and indicating lamp to indicate the working of individual heating mantle.

The heating mantles are mounted on a common frame made of mild steel tubular structure finished in powder coating. The openings of the flasks are inserted into the matching clamp type stand. Each Round bottom flask accommodates a coil condenser. The C.O.D apparatus are available in 3-test model, 4-test model and 6-test model.

Capacity: 100 ml R.B.Flask, 250 ml R.B Flasks and 500 ml R.B. Flask



TLPPL 148 - 'TECHNICO' SOXHLET EXTRACTION UNIT :

The equipment comprises of one row of independently heated and controlled heating mantles. The mantles are designed to accommodate Flat Bottom/Round / Bottom Flasks.

Each Flask accommodates suitable Extractor and suitable

Allihn Condenser fitted above the extractor.

Supplied complete with connecting tubes and rods.

Supplied with Glass Parts or without Glass parts as per customers' request



Capacity	Model
250 ml	3 Test
250 ml	4 Test
250 ml	6 Test
500 ml	3 Test
500 ml	4 Test
500 ml	6 Test
1000 ml	3 Test
1000 ml	4 Test
1000 ml	6 test

TLPL 149 - 'TECHNICO' WATER DISTILLATION PLANT :

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

Capacity (ltrs/hr)	Power in Kw
2	1.5
4	3
6	4.5
8	6
10	7.5

Note; Up to 6 Lts..Capacity - Wall Mounted type
From 8 Lts. - Floor Mounted type



TLPL 150 - 'TECHNICO BARNSTEAD TYPE WATER DISTILLATION UNIT :

Electrically operated. (Improved model) double walled: inner and outer body and boiling condenser also made of stainless steel. (a) This method of producing distilled water is designed specially to meet the needs of the Hospital and Research Laboratories. For Pyrogen free distilled water.

- Tank is double walled inner & outer made of Stainless Steel.
- Condenser is also made of Stainless Steel.
- High Quality ISI marked Kettle elements (Heaters).
- Capacity : 2 Ltr./ hr. to 20 Ltr. / hr.

Optional:

Low water level cut off Electronic Circuit for safety against Dry run of Heaters.

APPROX. OUT PUT / HRS.	RATING	SUPPLY
2 ltrs	2 KW	230
4 ltrs	3 KW	230
10 ltrs	8 KW	440
15 ltrs	10 KW	440
20 ltrs	14 KW	440



TLPL 151 - 'TECHNICO' PASS BOX :

Pass Box are used for transfer of material from contaminated room to Clean / Sterile Rooms with reducing the chance of contaminating the Clean Room.

Pass Box can be of two basic Models.

1. Static Pass Box
2. Dynamic Pass Box

Technico Pass Box can be made of Electro Galvanized Steel with powder coating finish outer and Stainless Steel inner OR Fully of Stainless Steel material.

Options Available :

- a) UV Light for Sterilizing
- b) White Illumination
- c) Without Door Inter Locking
- d) With Door Interlocking
- e) Push Button Operation for Door Interlock
- f) Digital Display Operation for Door Interlock
- g) Dynamic / Positive Pressure with Blower
- h) Dynamic -Ve Pressure with Filter and Blower
- i) Vacuum Pump option

Standard Dimensions : (Inner Working Space)

450mm x 450mm x 450mm
600mm x 600mm x 600mm
800mm x 800mm x 800mm

Other sizes can be given.



Note :

We are also having facility for manufacturing specially designed equipments like Ball Mill, R & D based Equipments, Mixers / Blenders, as per Customer request & Specifications.

TECHNICO

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