MEHROTRA®

Biotech

Smart Technology. Trusted Protection.

Manufacturer of Laboratory Equipment / Custom Solutions

WHAT WE DO?

Mehrotra Biotech Pvt Ltd has been established with an aim to contribute to the enhancement of medical-hospital, pharmaceutical, biotechnological, and general laboratory services through the provision of high-quality innovative solutions, ensuring an improved quality of life and well-being for society at large.

Our primary objective is to deliver customized solutions that precisely align with the unique requirements of our customers. To achieve this, our dedicated functions including engineering, R&D, manufacturing, and customer service are focused on each technology within Mehrotra Biotech's area of expertise:

- We offer solutions and equipment for clean air technology, encompassing both horizontal and vertical laminar flow cabinets, biological safety cabinets, and laminar flow systems.
- Our portfolio includes solutions and equipment for advanced sterilization utilizing Autoclaves, Ovens, and incubators.
- We specialize in solutions and equipment employing biological containment technology, such as containment isolators and sterile isolators.
- Additionally, we provide solutions and equipment utilizing freeze drying and vacuum drying technology, ranging from laboratory freeze dryers to GMP freeze dryers.

By offering these comprehensive solutions, we aim to continually improve and advance the various sectors we serve, ensuring the highest standards of quality, safety, and efficiency in medical and laboratory practices.

"Our aim is to provide tailor-made solutions in strict accordance to the needs of customers."

OUR MISSION

Our mission is to empower individuals and communities through innovative solutions and exceptional service. We are committed to providing high-quality products and services that address the needs of our customers and contribute to advancements in scientific and medical research. Guided by our core values of integrity, collaboration, and social responsibility, we strive to make a positive impact on society, while prioritizing environmental sustainability and community healthcare. Through our dedication to excellence and the expertise of our team, we aim to be a trusted partner in shaping a healthier and more prosperous future for all.

OUR VISION

Our vision is to be a leading innovator and catalyst for positive change, creating solutions that transform lives and shape a better future. With a commitment to excellence, creativity, and social impact, we strive to revolutionize Biomedical research & Pharmaceutical industry through cutting-edge design, forward-thinking strategies, and meaningful collaborations.

OUR CERTIFICATIONS

CDSCO

ISO 13485

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BIOSAFETY CABINET CLASS II TYPE A2

The Mehrotra Biotech make Biosafety Cabinet Class II Type A2, designed in compliance with NSF49 and certified by EN12469, provides enhanced reliability and operational convenience. It incorporates Automatic Air Flow Compensation technology, which continuously monitors the real-time health of the filters (ADA Compliant), ensuring a consistent airflow that safeguards the product, personnel, and environment.

KEY FEATURES

- 5" MICROPROCESSOR TOUCHSCREEN CONTROLLER WITH DISPLAY OF FILTER HEALTH, AIR FLOW MONITORING,BLOWER, UV, POWER SOCKET & LED STATUS.
- OUT OF RANGE PARAMETER, DOOR POSITION & DOOR OPEN ALERT.
- AUTOMATIC AIR FLOW COMPENSATION WITH REALTIME FILTER HEALTH MONITORING SYSTEM.
- ECONOMY MODE REDUCES ENERGY CONSUMPTION IN STANDBY.
- HERMETICALLY SEALED SASH OPENING WITH SILICON DOOR GASKET
- SMOOTH VERTICAL SASH SLIDING SYSTEM
- SEAMLESS & ROUND SS304 CHAMBER
- FRAGMENTED SS304 AUTOCLAVABLE WORKTOP
- INTEGRATED WITH DUAL DC BLOWERS
- LIQUID SPLASH PROOF INTERNAL POWER SOCKETS
- LIQUID SPLASH PROOF INTERNAL POWER SOCKETS
- PASSWORD PROTECTED ACCESS CONTROL
- SPECIALLY DESIGNED ANGULAR SHAPED AIR INTAKE VENT TO PREVENT BLOCKAGE
- PROGRAMMABLE UV TIMER WITH DATA LOGGER
- SS304 SPILLAGE TRAY WITH DRAIN PORT.

CUTTING-EDGE CONTROLLER

Precise Control, Intelligent Monitoring, Seamless Connectivity

Precision Control
Real-time analog, digital & RS-based control with multi I/O flexibility

Smart Logic
Maintains stable airflow and system accuracy

Touch Interface
5" High-resolution TFT display with intuitive navigation

Auto Compensation
Dynamic airflow adjustment as per the filter clogging status

Intelligent Alerts
Audio-visual alarms for airflow deviation, door status & filter clogging

Connectivity Ready
Ethernet & RS232 support for BMS integration

Data Logging
USB-enabled storage for monitoring and analysis

Energy Effi cient
Optimized fan control for reduced power consumption.

SAFETY FIXTURES

LIQUID SPLASH PROOF ELECTRICAL SOCKETS

SILICON SASH GASKET

GAS/LIQUID EXTERNAL VALVE

ENERGY EFFICIENT BACKWARD CURVED DC ECM BLOWER

- Latest technology DUAL DC ECM motor that is more efficient than any other legacy motors or VFD's
- Consumes 65% less energy than AC motor
- Consistent Air flow despite power fluctuations.

SUPERIOR QUALITY THERMOANEMOMETRIC AIR FLOW SENSOR

- Ensures Precise monitoring of air flow regardless of temperature and pressure

MICROPROCESSOR TOUCHSCREEN CONTROLLER

- State-of-the-art microprocessor based controller with 5" TFT Color display.
- Automatic Air Flow Compensation with real time filter loading information

- On-screen display for real-time monitoring of airflow, filter health, and fan speed.
- User-friendly control buttons for managing lighting, UV light, timer settings, and power
- Energy-saving eco-mode during standby
- Built-in data logging with USB port for easy data transfer and analysis.

HERMETICALLY SEALED SASH OPENING

- The Workspace is provided with silicon door gasket from all sides to prevent escape of contaminated air.
- Provided with specially designed air vent to prevent blockage of inflow air during working

SS304 INTERIOR

- All round SS304 seamless Internal Chamber for easy cleaning.
- Fragmented autoclavable worktop

DOUBLE LAYERED 6MM TOUGHENED GLASS

TECHNICAL SPECIFICATIONS

Model	CBS900	CBS1200	CBS1800
External Dimension(LxWxH)	1067x787x1372 mm	1372x787x1372 mm	1980X787X1372 mm
Internal Dimension(LxWxH)	900x600x650 mm	1210x600x650 mm	1820X600X650mm
Display	5" Full Color TFT Display with Touchscreen interface		
Cleanliness Level	CLASS 10 in accordance with ISO CD 14644-1		
Controller	5" TFT Touch Screen Controller with on-screen control buttons		
Filter (Downflow/Exhaust)	H14 HEPA Filter η99.999% @0.3µm as per EN1822		
Noise	<58 dB ±5%		
Sensor	European engineered Thermo-anemometric air velocity sensor		
Alarms	Door open, Door Position, In adequate air flow, filter clogging.		
Sterilization	15W 254nm UV Tube	30W 254nm UV Tube	30W 254nm UV Tube
Blower	3200rpm energy efficient DC ECM blowers		
InFlow/Downflow Velocity	0.51 m/s / 0.35m/s +/- 0.02m/s		
Air Flow Volume (CFM) In/D	195/300	330/400	389/600
Air Flow Volume (CFM) Exh	110	172	295
Illumination	24W LED	36W LED	2 Nos. 24WLED
Light Intensity(LUX)	>1000	>1200	>1500
Front Sash	6.5 mm Double layered laminated & Toughened glass for UV protection		
Workspace	AISI SS304 Stainless steel Fragmented easy to remove worktop.		
Standard Service Port	2 Nos 6Amp Socket with IP56 liquid splash proof Indian /EU type 1 Nos Gas nozzle with shutoff valve.		
Sash Opening	8in (203.2mm) as per standard (Max upto 18inch/ 470mm)		
Rated Voltage	220V -240V /50hz		
Rated Power	195 W	340W	510W
Standard Accessory	Powder Coated MS Base Stand with Castors		
Optional Accessory	Thimble duct connection with accessories, External exhaust for duct , USB/RS232/LAN Communication Port, Automatic Sash, Single Piece Worktop, Pre Filter, ULPA, Filter		

Standard Cabinet

Customizations

We offer complete customization in our Biosafety Cabinets to meet diverse laboratory requirements. Options are available for external and internal dimensions, filtration systems, software integration, and a wide range of accessories. This flexibility ensures that every unit is tailored to specific applications,

Customized Cabinet

BIOSAFETY CABINET CLASS II TYPE B2

MBPL's Class II Type B2 Biosafety Cabinet is designed for applications requiring 100% exhaust with zero air recirculation, ensuring maximum safety in critical environments.

Engineered to handle both hazardous chemicals and biological agents, including moderate to high-risk microorganisms, it provides enhanced protection for the operator, product, and environment.

Equipped with high-efficiency DC motors and an advanced automatic airflow compensation system, the cabinet continuously monitors and maintains precise airflow in both exhaust and downflow, ensuring a stable and controlled working environment.

Independently tested and compliant with EN 12469 standards, the system guarantees reliable performance with complete personnel, product, and environmental safety

KEY FEATURES

Enhanced Protection
Advanced safety for both operator and environment during hazardous handling

TFT Controller
High-precision monitoring and control with state-of-the-art TFT interface

HEPA Filtered Exhaust
Ensures effective removal of contaminants for a clean and safe workspace

Thimble Connection
Easy integration with external exhaust/ventilation systems

Hermetically Sealed Sash
All-round sealing minimizes air leakage and enhances containment

Automatic Airflow Compensation
Maintains consistent airflow in exhaust and downflow for optimal performance

Dual Motor System
Independent control with DC motor (downflow) and VFD-controlled AC motor (exhaust)

Operator Comfort
Ergonomic design for improved usability and reduced fatigue

Standards Compliance
Meets Class II Type B2 biosafety requirements and industry standards

Versatile Applications
Ideal for hospitals, laboratories, and research environments

TECHNICAL SPECIFICATIONS

Model	CBSB900	CBSB1200	CBSB1800
External Dimension(LxWxH)	1067x787x1372 mm	1372x787x1372 mm	1980X787X1372 mm
Internal Dimension(LxWxH)	900x600x650 mm	1210x600x650 mm	1820X600X650mm
Display	5" TFT Touch Screen Display Controller		
Cleanliness Level	Class 100(Class II Type B2)		
Filter	Downflow: 900/1200/1800x450x69mm HEPA H14 Filter η99.999% @0.3µm Pre-filter: 300x300x69mm HEPA G3 Filter Exhaust : 550x 390x 69mm HEPA H14 Filter (as per EN1822)		
Air Flow Mechanism	100% Exhaust through heavy duty Blower placed outside (VFD Controlled) DC Blower for Downflow		
Air Flow Volume(CFM) DF/ Exh.	300/511	400/672	600/833
Noise	<65dB ±5%		
Sensor	European engineered Thermo-anemometric air velocity sensor		
Sterilization	15W 254nm UV Tube	30W 254nm UV Tube	30W 254nm UV Tube
Blower (DF /Exhaust)	DC ECM blower for downflow/ backward curved auto-speed controlled AC blower		
Flow Velocity	Inflow Min: 0.51 m/s ; Down flow Min: 0.35m/s		

BIOSAFETY CABINET CLASS II CYTOTOXIC

The Mehrotra Biotech make Cytotoxic Cabinet is a

- ✔ Specialized containment unit for hazardous drugs and cytotoxic agents
- ✔ Ensures high protection for both operator and product
- ✔ Utilizes advanced HEPA filtration and controlled airflow
- ✔ Provides a sterile and contamination-free work environment
- ✔ Designed for safe handling of high-risk substances
- ✔ Ideal for laboratories, pharmaceutical, and healthcare settings

Principle Of Working

The Mehrotra Biotech Cytotoxic cabinet is fitted with additional V-shaped HEPA filters located beneath the work surface. These filters purify the in-flow air, ensuring that the internal structure of the cabinet remains free from contamination, thereby providing maximum safety for high-risk applications. The V-shaped HEPA filters can be safely replaced while the operator remains protected by the inflow air.

KEY FEATURES

Triple HEPA Filtration System

- ISO Class 5 air quality
- 99.999% efficiency at 0.3µm
- Three-stage filtration: supply, downflow, exhaust

Safe Handling of Hazardous Drugs

- Ideal for cytotoxic/antineoplastic drug preparation
- Fully compliant with DIN 12980 & EN 12469

Negative Pressure Containment

- Prevents contamination leakage
- Full negative pressure with HEPA exhaust

Ergonomic User-Friendly Design

- Sloped front sash & armrests
- Low noise & minimal vibration

Intelligent Monitoring & Alarms

- Real-time airflow sensors
- Audio-visual alerts & filter life display

UV Sterilization System

- Built-in UV light for automated sterilization
- Timer-controlled with safety lockout

Optional Add-Ons

- Data logging, printer output
- Motorized sash, LED lighting, pass-through chambers

TECHNICAL SPECIFICATIONS

Model	CBSB1200-CYTO
External Dimension(LxWxH)	1372x800x2100 mm
Internal Dimension(LxWxH)	1210x600x650 mm
MoC (Internal)	Stainless Steel SS304
MoC (External)	Epoxy Coated Cold Rolled Steel Sheet with a layer of antimicrobial coating
Display	5” Full Color TFT Display with Touchscreen interface
Cleanliness Level	CLASS 10 in accordance with ISO CD 14644-1
Controller	5” TFT Touch Screen Controller with on-screen control buttons
Filter Downflow	ULPA Filter η99.9997% @0.12µm as per EN1822
Filter Exhaust	Primary : ULPA Filter η99.9997% @0.12µm as per EN1822 Secondary : HEPA H14 Filter η99.999% @0.3µm as per EN1822

VERTICAL LAMINAR AIR FLOW CABINET

Mehrotra Biotech make Vertical Laminar Air Flow Cabinet is engineered specifically for handling non-hazardous materials that require a particle free environment. These cabinets offer the highest product protection.

Engineered body design with 10 Degree Sloped front sash offers user comfort while 30 percent air recirculation and automatic air flow compensation technology provides consistent air flow during the procedure and increases the life of HEPA Filter. Available in Digital & Microprocessor Touchscreen control panels.

TECHNICAL SPECIFICATIONS

Model	CAV900	CAV1200	CAV1800
External Dimension(LxWxH)	1067x787x1372 mm	1372x787x1372 mm	1980X787X1372 mm
Internal Dimension(LxWxH)	900x600x650 mm	1210x600x650 mm	1820X600X650mm
Display	3.5" LCD digital Display Micro-Controller.		
Filter	Downflow 900/1200/1800 x 450x69mm HEPA Filter η 99.999% @0.3µm as per EN1822 ; Pre-filter: 450x300x69mm G3 type with η 90% @ 10µ		
Cleanliness	Class 10 as per ISO 14644-1		
Noise	<58dB ±5%		
Pressure Gauge	Digital Differential Pressure Gauge with accuracy ±4%,15 PSI(1.03bar)		
Sensor	Digital Air Flow Velocity Sensor (Optional)		
Sterilization	15W 254nm UV Tube	30W 254nm UV Tube	30W 254nm UV Tube
Blower	High Efficiency Centrifugal Blower		
Flow Velocity	0.45 m/s / 90FPM / 45 Air Changes Per Min (Settable in m/s only)		
Illumination	2 Nos. 18W LED Batten		2 Nos. 40W LED Batten
Front Sash	Double layered laminated glass for UV protection counter balanced at back		
Workspace	Brushed finished AISI 304 Stainless steel with removable fragmented worktop.		
Standard Service Port	1 Nos 15 Amp Socket with switch 1 Nos Gas nozzle with shutoff valve.		
Sash Opening	8in (203.2mm) adjustable to user requirement		
Rated Voltage	220V –240V /50hz		
Rated Power	155	350W	500W
Standard Accessory	Powder Coated MS Base Stand with Lockable Castors.		
Optional Accessory	Additional Power Sockets, Air Flow Monitoring , Air flow control		

-86°C ULTRA LOW TEMPERATURE FREEZER

TARGETED REFRIGERATION

The new generation of ultra-low temperature refrigeration system can ensure fast refrigeration and was awarded with the Second Prize under State Technological Invention Award.

FIVE MAGIC WEAPONS FOR ENERGY SAVING

Imported high-efficiency compressor + separated evaporator + composite heat exchanger + optimized fractional condensation & separation system + high-efficiency thermal insulation system can save energy and reduce power consumption of the freezer by 40%.

LOW NOISE DESIGN

Low-noise direct cooling circuit + suspension frame & sound absorbing compartment & low-noise fan can reduce noise generated by the entire freezer to the largest extent.

THREE-DIMENSIONAL THERMAL INSULATION

The six sides of the cabinet are made from high-efficiency VIP vacuum thermal insulation plate, and the thermal insulation design of the inner door made from foaming material and the outer door system was awarded with multiple patents, which can improve the thermal insulation performance of the freezer.

OPTIONAL ACCESSORY(WIFI/BLUETOOTH PRINTER/MECHANICAL LOCK/SWIPE CARD/FINGERPRINT)

Connect Wi-Fi to upload data to the cloud space, monitor the device, check the status of the refrigerator faster, and ensure the safety of the samples;

Optional Bluetooth printer, real-time export temperature data, temperature graph, setting operation and other data, to understand the freezer operating status;

Optional functions such as card unlocking, fingerprint unlocking, and facial recognition unlocking are available to facilitate quick access to samples.

7" HD Intelligent Screen Control System

·7-inch HD intelligent display touch screen, user-friendly interface and more accurate temperature control, with Bluetooth, Wi-Fi and other functions, more convenient operation and more comprehensive functions.

·Can add multiple user accounts to log in and record usage/operation records.

·The high-precision microcomputer control system and platinum resistor sensors enable users to set.

temperature inside the cabinet within a range from -40 to -86°C.

·Optional functions such as card unlocking, fingerprint unlocking, and facial recognition unlocking are available to facilitate quick access to samples.

Remote alarm contact, RS485

Equipped with RS485 and remote alarm interface to realize remote observation of freezer operation status, real-time reception of product operation information, and ensure the storage safety of samples.

Data Storage

The temperature data recorded by the system can be exported, the operating data of the system settings, the alarm data, and the temperature data can be recorded in 5 minutes, and the data can be recorded for up to 10 years, which can effectively record the running status of the product for you for a long time.

Thermal Insulation System

·2-layer heat insulating foamed door with inner and outer door seal and the insulation design of the outer door system with multiple patents can prevent loss of refrigerating capacity in an effective way;

·The 6 sides of the cabinet are made from high-performance VIP: Vacuum Insulation Panel material, improving thermal insulation performance to a large extent.

Refrigeration System

·The imported high-efficiency compressor and EBM fan are energy-saving and highly efficient.

·The large finned condenser with a space between fins≤2mm, providing effective heat dissipation.

·With twin- compressor, if one is damaged, the other one could keep the temperature at -70°C stably.

·Standard with VIP board for high efficiency cooling performance. Door with hot gas pipe surrounding for defrost.

Supplies for Cryopreservation

Freezer racks/boxes for cryopreservation are optional.

Security System

·The perfect audible & visual alarm system : high and low temperature ,sensor failure ,power failure ,low battery ,door ajar ,main board communication error, high ambient temperature etc.

·Equipped with alarm self-recovery function, it reminds users of unhandled alarm problems in freezer many times.

·The compressor start delay and stopping interval protection can ensure reliable operation.

·The touch screen controller has password protection which can prevent any adjustment of operation without permission.

Human-oriented

·The new designed assisting handle and vacuum release port let the freezer be operated singlehanded to open and close the outer door

·The newly added file box makes recording easier and more convenient

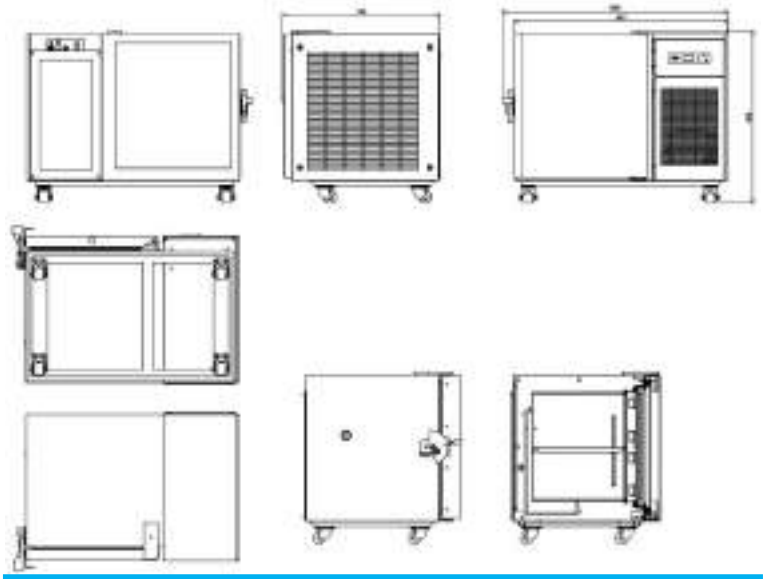
·The liner made from Stainless steel for medical use is low- temperature tolerant and corrosion-resistant, which has a long service life and is easy to clean

·The universal casters and leveling feet design are more convenient for movement and fixation.

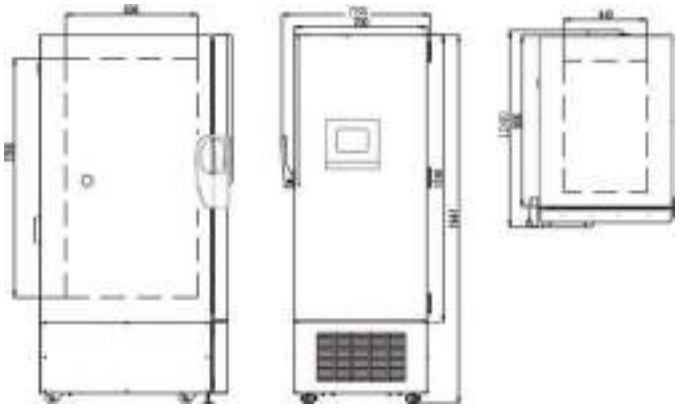
Scope of Application

Suitable for use in blood banks, hospitals, health and disease prevention systems, research institutions, colleges & universities, the electronic industry, biological engineering, laboratories in colleges & universities, military enterprises, deep-sea fishing companies, etc

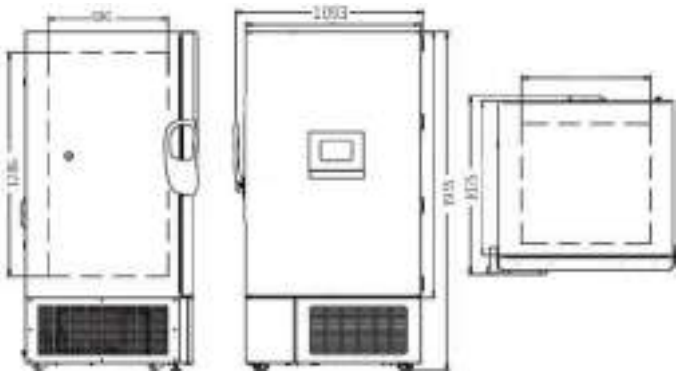
GENERAL ASSEMBLY DRAWINGS



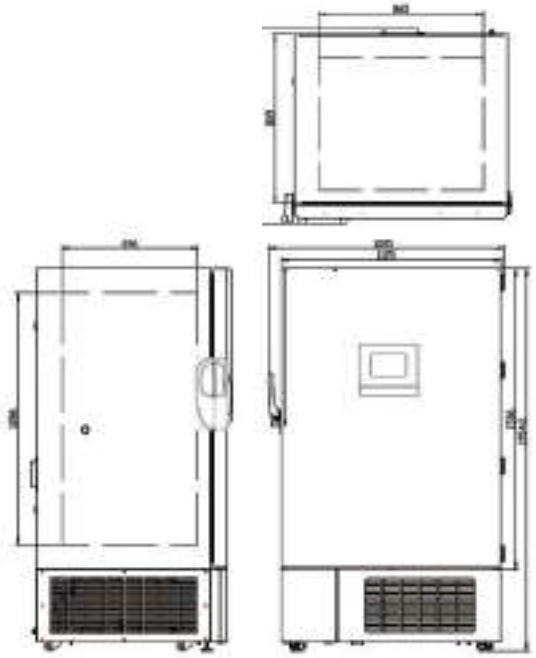
MDF86V100



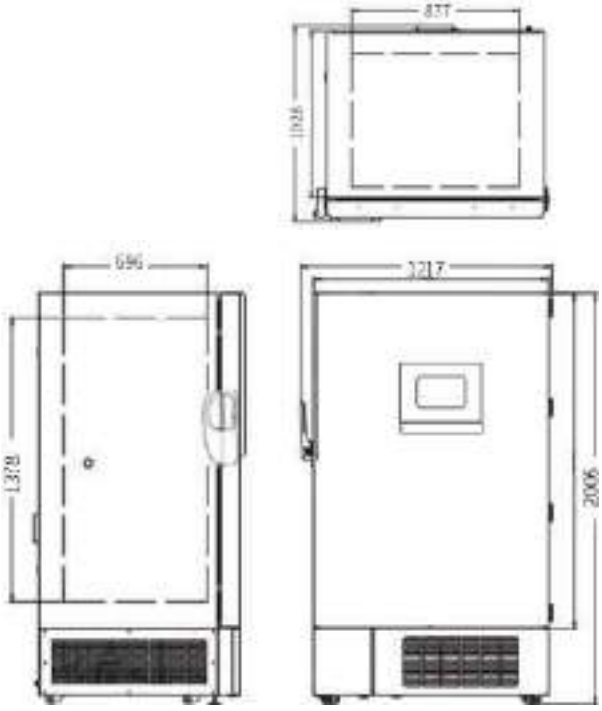
MDF86V528



MDF86V678



MDF86V778



MDF86V858

TECHNICAL SPECIFICATION

MODEL	MDF86V100	MDF86V528	MDF86V678T	MDF86V778T	MDF86V858T
CABINET TYPE	UPRIGHT	UPRIGHT	UPRIGHT	UPRIGHT	UPRIGHT
CAPACITY	100L	528L	678L	778L	858L
INTERNAL SIZE(mm)	450x450x514	585x696x1266	750x696x1286	865x696x1286	877x696x1378
EXTERNAL SIZE(mm)	1066x742x820	931x1040x1947	1093x1025x1955	1205x1025x1955	1220x1028x1994
PACKAGE SIZE	1200x863x991	1035x1165x2158	1203x1155x2171	1320x1155x2171	1330x1155x2176
N W/GW(KG)	145/189	273/317	336/383	359/403	390
PERFORMANCE					
TEMP RANGE	-40°C—86°C				
AMBIENT TEMP	16°C—32°C				
COOLING	-86°C				
CLIMATE CLASS	N				
CONTROLLER	DIGITAL	DIGITAL/MICROPr.	MICROPROCESSOR		
DISPLAY	LED	LED/TFT TOUCH	HD INTELLIGENT TOUCH SCREEN		
REFRIGERATION					
COMPRESSOR	1 No	1/2 NOs	2 NOs		
COOLING METHOD	DIRECT COOLING				
DEFROST MODE	MANUAL				
REFRIGERANT	MIXTURE GAS				
INSULATION THICK	130MM				
CONSTRUCTION					
EXT. MATERIAL	COLD ROLLED STEEL SHEET				
INNER MATERIAL	STAINLESS STEEL				
SHELVES	1 NO. SS	3 Nos SS	3 Nos SS		
DOOR LOCK	YES				
PADLOCK	YES				
ACCESS PORT	1 No Ø25MM	2 Nos Ø25MM	3 Nos Ø25MM		
CASTERS	4+(2 LEVELLING FEET)				
DATA LOGGING	USB/RECORD EVERY 5 MIN / 10 YEARS				
BATTERY BACKUP	YES				
ALARM					
TEMPERATURE	HIGH/LOW TEMPERATURE, HIGH AMBIENT TEMPERATURE				
ELECTRICAL	POWER FAILURE, LOW BATTERY				
SYSTEM	SENSOR FAILURE, MAIN BOARD COMMUNICATION ERROR, CONDENSOR OVERHEATING, DOOR AJAR				
ELECTRICAL					
POWER SUPPLY	AC 220-240V/ ~50HZ				
RATED CURRENT	5.57A	10.97A	12.1 A	11.81A	11.46A
ACCESSORIES					
STANDARD	RS485, REMOTE ALARM CONTACT				
OPTIONAL	CHART RECORDER, CO2 BACKUP SYSTEM, Biometric Access System, Bluetooth Printer, Wifi etc				

-20°C ~-40°C ULTRA-LOW TEMPERATURE FREEZER
DUAL CHAMBER | INDEPENDENT TEMP CONTROL

- ☑ Two compressors for temperature control separately
- ☑ Environmentally friendly Freon-free refrigeration system
- ☑ Dustproof door gasket can be easily cleaned
- ☑ High-precision microcomputer temperature control
- ☑ Audible & visual security system

This Ultra-low temperature freezer is designed with two compressors and two chambers, which allows you to control the upper chamber and lower chamber independently. And the high-precision microcomputer temperature control system has the ability to set the temperature inside the cabinet in the range of -20°C ~-40°C. The built-in door gasket can perfect maintain a constant inside temperature and is easy to clean. The Ultra-low temp freezer is best for storage of various medical and scientific materials, including reagent, and more.

Environmentally Friendly Refrigeration System

The environmentally friendly Freon-free refrigerant and high-efficiency enclosed compressor supplied by a famous brand can ensure energy saving and low noise. The condenser installed on the bottom ensures temperature stability and system reliability.

High-precision Temperature Control

The high-precision computerized temperature control system ensures an adjustable temperature within a range from -20 to -40℃ inside the cabinet. The freezer is equipped with two compressors, so independent control of the upper chamber and lower chamber can be realized.

Audible & visual Security System

The well-developed audible & visual alarm system (sensor failure alarm, door ajar alarm, high temperature/ low temperature alarm, comunication failure etc.) makes it safer for storage; The turn-on delay and stopping interval protection function can ensure reliability in running.

Human-oriented Structure Design

The arc angle-shaped door frame and cabinet design makes its appearance more attractive. The built-in door gasket is dustproof and easy to clean. Each of the refrigerating chamber and the freezing chamber is equipped with 6 drawers, which are convenient for storage of things.

TECHNICAL SPECIFICATIONS

Model	DFS-450
Cabinet type	Upright
Capacity(L)	450
Internal size(W*D*H)mm	(650*570*627)*2
External size(W*D*H)mm	810*735*1960
Package size(W*D*H)mm	895*820*2135
NW/GW(Kgs)	144/172
Performance	
Temperature range	-20～-40°C
Ambient temperature	16~32°C
Cooling performance	-40°C
Climate class	N
Controller	Microprocessor
Display	Digital display
Refrigeration	
Compressor	2 nos
Cooling method	Direct cooling
Defrost mode	Manual
Refrigerant	R290
Insulation thickness(mm)	L/R:80, B:80
Construction	
External material	PCM
Inner material	Aluminum plate with spraying
Shelves	6*2(ABS)
Door lock with key	Yes
Door	2
Access port	2 nos. Ø 25 mm
Casters	4 (2 casters with brake)
Data logging/Interval/Memory capacity	USB/Record every 10 minutes / 1000,000data
Backup battery	Yes
Alarm	
Temperature	High/Low temperature, High ambient temperature
Electrical	Power failure, Low battery
System	Sensor failure, Built-in USB data-log, Door ajar, communication error
Accessory	
Standard	RS485,Remote alarm contact

-40°C DEEP FREEZER

MDF40V528 SOLID DOOR

1.8 °C
Temp. uniformity

3.62 KWh
Daily Consumption

0.58 H
Temp. recovery after door opened for 1 min

**Typical freezer data based on internal testing with freezer set point at -40°C and ambient temperature at 25°C.*

Features

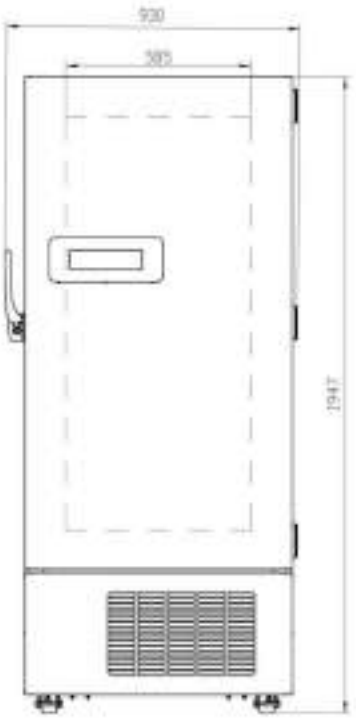
- CE certificate
- Dual cooling
- Hydrocarbon refrigerant
  Environment-friendly natural gas
- Stainless steel shelves
  3 Stainless steel shelves
- Temperature control system
  Display temp. in 0.1°C increments
- Alarms system
  Multiple alarm functions

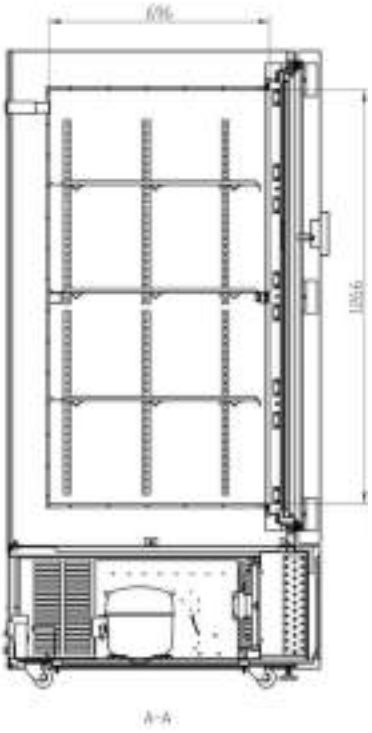
Structure

Specifications

MODEL	MDF40V528
CABINET TYPE	UPRIGHT
CAPACITY	528L
INTERNAL SIZE(mm)	585X696X1266mm
EXTERNAL SIZE(mm)	930X1040X1947mm
PACKAGE SIZE	1020X1166X2132mm
N W/GW(KG)	236/305
PERFORMANCE	
TEMP RANGE	-20°C ~ -40°C
AMBIENT TEMP	16°C~ 45°C
COOLING	-40°C
CLIMATE CLASS	N
CONTROLLER	Microprocessor
DISPLAY	Digital Display
REFRIGERATION	
COMPRESSOR	1 No
COOLING METHOD	DIRECT COOLING
DEFROST MODE	MANUAL
REFRIGERANT	R290
INSULATION THICK	High Density PU D:100, L/R:130, B:130
CONSTRUCTION	
EXT. MATERIAL	COLD ROLLED STEEL SHEET
INNER MATERIAL	STAINLESS STEEL
SHELVES	3 NO. SS
DOOR LOCK	YES
PADLOCK	YES
ACCESS PORT	2 No Ø25MM
CASTERS	4+2
DATA LOGGING	USB/RECORD EVERY 10MIN / 100000 data
BATTERY BACKUP	YES
ALARM	
TEMPERATURE	HIGH/LOW TEMPERATURE, HIGH AMBIENT TEMPERATURE
ELECTRICAL	POWER FAILURE, LOW BATTERY
SYSTEM	SENSOR FAILURE, MAIN BOARD COMMUNICATION ERROR, CONDENSOR OVERHEATING, DOOR AJAR
ELECTRICAL	
POWER SUPPLY	AC 220-240V/ ~50HZ
RATED CURRENT	4.45A
ACCESSORIES	
STANDARD	RS485, REMOTE ALARM CONTACT
OPTIONAL	7 days pressure sensitive inkless CHART RECORDER, CO2 BACKUP SYSTEM, 2.5kVA Servo Voltage Stabilizer recommended
Cool Down Time	2hrs 30min to reach –40°C from ambient of 25°C
Hold Over time	At full load takes 10hrs to rise above –20°C from –40°C and 35hrs above –5°C
Battery Backup	12V 7Ah x 1 Nos for Controller & Chart recorder backup only with 13.2V regulated constant current DC supply for charging.

Dimensions





LAB REFRIGERATOR +2°C to +8°C

Temperature variations can reduce the shelf life and effectiveness of vaccines, medications, reagents, and other temperature-sensitive materials. Choosing a high-performance refrigerator or freezer is essential for laboratory and clinical environments.

Mehrotra Biotech's PR Series Lab Refrigerator offers:

- Reliable microprocessor-based temperature control
- Built-in data logger with non-editable printing
- Password-protected access control
- Remote monitoring for enhanced performance.

OUR CUTTING EDGE CONTROLLER TECHNOLOGY

Our advanced microprocessor controller offers a host of features designed to provide precise temperature control and comprehensive monitoring capabilities. It features :

-a large 5-inch touchscreen color display for easy navigation.

-The controller ensures precise temperature control, with out-of-range parameter warnings and alerts for door open, power failure, and low battery conditions.

-User Access Controls: The software allows administrators to define user roles and permissions, ensuring that only authorized personnel can access and modify parameters .

-The in-built data logger records temperature and system performance data, with the ability to download it to a USB device.

Data Integrity: The software ensures that data remains unaltered by providing mechanisms such as password protected access, audit trails, and data encryption.

-Remote monitoring is enabled through LAN connection, with data recorded in tabular and graphical formats. Furthermore, The PC software incorporates printing functionality, ensuring data integrity and compliance with 21CFR Part 11 guidelines.

KEY FEATURES

Double layered toughened glass door : Provides insulation and visibility of the contents inside the refrigerator while maintaining temperature control.

Adjustable shelves : Allows flexibility in organizing the storage space based on the size and quantity of items being stored.

Dual FAN : to prevent freezing: Ensures even distribution of cold air throughout the refrigerator, preventing freezing and maintaining consistent temperature levels.

Silent operation : Operates quietly, minimizing noise disturbances in the lab environment.

Energy efficient : Designed to consume less energy, reducing electricity costs and environmental impact.

Precise temperature control : Offers accurate temperature settings to maintain specific storage requirements for different samples or substances.

Inbuilt LED illumination : Provides bright and uniform lighting inside the refrigerator for easy visibility of the stored items.

Battery backup to controller :Ensures continuous operation and temperature recording even during power outages, preventing spoilage of stored samples or substances.

Alternative Options

The previously cited models of laboratory refrigerators are also obtainable with digital controllers featuring restricted capabilities, such as solely providing door open alerts and high/low temperature alarms.

TECHNICAL SPECIFICATIONS

MODEL FEATURES	PR 360	PR 450	PR 600	PR 1000
Material of Construction (I/O)	Galvanized metal sheets			
Dimensions (Internal) (WxDxH)	476 x 531 x 1311 mm	492 x 540 x 1664 mm	655 x 540 x 1664 mm	941 x 644 x 1581 mm
Dimensions (External) (WxDxH)	572 x 686 x 1854mm	600 x 730 x 1986mm	750 x 686 x 2070mm	1029 x 724 x 2032mm
Set point	+4^0 C			
Capacity (L)	360	448	597	941
Door Type	Glass door			
Door Closing	Automatic			
Weight (kg)	83	101	115	187
Circulation	Forced air circulation			
Shelves	4 (Adjustable)	5 (Adjustable)	5 (Adjustable)	10 (Adjustable)
Display	5" TFT Touch Screen			
Refrigerant	R134a			
Alarm	Power failure, Low Battery, Temperature variation, Open door			
Battery backup	12 hours			
Voltage supply	230V, 50Hz.			
Power Consumption	330 W	450 W	550 W	660 W
Chart Recorder	Optional			
USB Port	Yes			
Door Lock	Yes			

DEEP FREEZER –20°C

Mehrotra Biotech brings to you DFS Series laboratory deep freezers –20°C for pharmaceutical, hospital, medical and laboratory uses, where these units are used for long-term storage and quality assurance. Our high-performance deep freezers combined with advanced temperature control with high-quality cabinet construction and alarm systems. Uniform temperature distribution inside the cabin is designed to maintain temperature uniformity to protect important medical and pharmaceutical-products as well as laboratory media, reagents and more. Our Laboratory Deep Freezers comply with valid ISO, CE, IQ, OQ & PQ certifications.

KEY FEATURES

1. Precise temperature control: The deep freezer is equipped with a reliable and accurate temperature control system, ensuring consistent and stable temperature conditions for the stored contents.

2. High storage capacity: Designed with ample space, the deep freezer provides generous storage capacity to accommodate a significant quantity of samples, specimens, vaccines, o other materials that require deep freezing.

3. Effi cient insulation: The deep freezer is constructed with high-quality insulation materials that minimize temperature fluctuations and heat transfer, enhancing energy efficiency and reducing operational costs.

4. Advanced cooling system: The deep freezer incorporates a robust cooling system capable of rapidly achieving and maintaining the desired -20 degrees Celsius temperature, ensuring efficient freezing and

preservation of contents.

5. Alarm and monitoring features: The deep freezer includes built-in alarms and monitoring systems that alert users in case of temperature deviations or power failures, helping to protect valuable samples and maintain their integrity.

6. User-friendly interface: The deep freezer is designed with an intuitive and user-friendly interface, allowing easy programming, temperature adjustment, and monitoring of the freezer's status.

7. Safety features: The deep freezer is equipped with safety features such as door locks or access control systems to prevent unauthorized access and ensure the security of stored items.

8. Easy maintenance: The deep freezer is designed for ease of maintenance, with features such as removable shelves, easy-to-clean interiors, and accessible components for periodic maintenance and cleaning.

9. Long-term storage capabilities: The deep freezer is specifically designed for long-term storage requirements, allowing items to be preserved at -20 degrees Celsius for extended periods without compromising their quality or integrity.

10. PC monitoring compatibility: The deep freezer can be connected to a computer for convenient monitoring and control. Users can access real-time temperature data, adjust settings, and receive alerts directly on their computer, enabling efficient management and maintenance.

11. Data logging and retrieval: The deep freezer includes data logging, enabling users to record and retrieve temperature data over time for analysis and quality control purposes.

TECHNICAL SPECIFICATIONS

FEATURES	DFS450 SOLID DOOR	DFS450 GLASS DOOR	DFS600 GLASS DOOR	DFS700 Solid DOOR
Temperature range(°C)	Upto –25°C			Upto -35°C
External Dimensions (mm)	595x595x2050	595x595x2050	672 x 690 x 2046	780x762x2150
Net/ Gross volume (L)	344/365	344/365	441/500	640L/700L
Net/ Gross Weight (kg)	94/102	96/106	124/150	96/106
MoC (Exterior)	Powder Coated GI			
MoC(Interior)	Food Grade ABS		GI	GI/SS304
Controller	Microprocessor with 5" TFT TouchScreen			
Data Connectivity	USB2.0 & Ethernet (Optional)			
Door Type	Solid door	Glass door	Glass Door	Solid Door
Shelves/ baskets	6 Shelves	6 Shelves	5 Shelves	5 Shelves
Insulation	85 mm	85 mm	60mm	85mm
Type of cooling	Static	Static	Static/Forced	Forced
Power Supply (V/Hz)	230/50 Hz	220-230/50 Hz	220-230/50Hz	220-230/50Hz
Energy consumption	0.798 kWh /24 h	13.40 kWh/24 h	14.98kWh/24h	5.11kWh/24h
Refrigerant	R600a	R404A/R290	R290	R290

Alternative Options

The previously cited models of Deep Freezers are also obtainable with digital controllers featuring restricted capabilities, such as solely providing door open alerts and high/low temperature alarms.

VACUUM FREEZE DRYER

Freeze-drying is a drying technique that utilizes the principle of sublimation. It involves rapidly freezing the material to be dried at low temperatures and then, under the right vacuum conditions, allowing the frozen water molecules to directly sublime into water vapor and escape. The material remains in a low-temperature (frozen) state throughout the drying process, with ice crystals evenly distributed throughout. The sublimation process does not lead to concentration due to dehydration, thus avoiding side effects such as foaming and oxidation caused by water vapor. The dried material retains a porous, sponge-like structure with virtually unchanged volume and dissolves easily in water to revert to its original state. This process minimizes the denaturation of the material in terms of physicochemical and biological properties to the greatest extent possible.

Application Fields

Control System

☑ One-click operation for speed and simplicity

A 5.4-inch LCD touch screen displays important parameters simultaneously, with numerical values color-coded to correspond to their respective statuses, making it clear at a glance.

☑ Thermal electromagnetic overcurrent short circuit protection

Ensures safer and more stable equipment operation.

☑ Proactive reminders

Equipment maintenance time, vacuum pump oil change time, and ambient temperature monitoring alerts.

☑ Make freeze-drying more scientific

Optional co-crystallization point detection devices and endpoint judgment detection systems can be equipped.

Drying Chamber

☑ **Detachable drying chamber**

Significantly reduces the probability of damage caused by the overall chamber weight being too heavy.

☑ **The upper cover is made of anodized aluminum with corrosion-resistant**

High-transparency acrylic drying chamber, which has good thermal radiation conduction and reserved 6/12 external valve interfaces.

☑ **316L Stainless T-Frame**

24 independent exhaust ports, individually controlled, suitable for multiple users, and improve usage efficiency.

Cold Trap & Condenser Coils

☑ Large opening and passage design

Gases can quickly pass through the condenser coils to be captured. The condenser coils are placed inside the cold trap, increasing the condensation area and effectively preventing external dew formation.

☑ Standard equipment with Teflon anti-corrosion coating

316L stainless steel, fully equipped with Teflon anti-corrosion coating, capable of freeze-drying organic solvents and various corrosive samples.

Sample Shelves

☑ Taking and Placing in Layers, More Convenient

Each shelf can be placed and taken freely without manual work. The height of each shelf can be adjusted freely.

☑ Special Hole Position for Centrifuge Tubes

Conductive to the drying of samples in centrifuge tube containers.

☑ Freeze-Drying Organic Solvent

316L stainless steel stackable sample shelves, capable of freeze-drying organic solvent and various corrosive solvents.

Refrigeration System

☑ Efficient Refrigeration System

- Secop compressor for reliable and powerful cooling performance.
- Copper plate heat exchanger maximizes heat dissipation efficiency.
- Advanced refrigeration technology enables the cold trap temperature to drop from ambient to below -80°C within 2 minutes.
- Class A temperature sensor ensures high accuracy and minimal error.
- Comprehensive detection and alarm system alerts in case of high pressure, refrigeration failure, or abnormal operation, ensuring safe and stable performance.

Vacuum System

✔ **Pirani Vacuum Sensor**

Equipped with an automatic temperature compensation control unit, the Pirani Vacuum Sensor ensures precise detection even in low-temperature environments.

✔ **CKD High Vacuum Electromagnetic Control Valve**

Features low heat generation, minimal noise, and exceptional long-term durability.

✔ **Stainless Steel Flexible Vacuum Tube**

Corrosion-resistant and designed for longevity, ensuring consistent performance over time.

✔ **Fully Automatic Pressure Relief and Drainage**

Prevents damage to samples and sensors by eliminating unstable manual pressure relief airflow.

Laboratory Freeze Dryer T Series

Laboratory Freeze Dryer T Series, feature a compact structure that can effectively save laboratory space, offering a small footprint with great capacity.

Model No	MBFD-T 7003	MBFD-T 7006	MBFD-T 9006
Ice Condenser Capacity	3 kg	6 kg	6 kg
Ice Condenser Temperature	–70 °C	–70 °C	–90 °C
Cold Trap Volume	5 L	10 L	10 L
Freeze-Dried Chamber	Bell shape (standard configuration)	Multi-manifold type	T-shaped frame type
Sample Shelf	**Φ200** mm, single layer area 0.03 m² (3–5 layers available)	**Φ260** mm, single layer area 0.055 m² (3–10 layers optional)	• Electric heating/manual capping optional
Vacuum Pump	Extreme vacuum 5×10□² mbar with pumping capacity of 8 m³/h	Optional pump of various types	Optional pump of various types
Oil Mist Filter	Standard configuration	Standard configuration	Standard configuration
Vacuum Pump Connection Pipe	Single forming stainless steel flexible pipe	DN16 ISO-KF	DN16 ISO-KF
Anti-Corrosive Treatment	Cold trap, condensing coil all equipped with PTFE anti-corrosion treatment as standard. Suitable for freeze-drying organic solvents.	Same	Same
External Valve	6 pieces / optional	12 pieces / optional	24 pieces / optional
Eutectic Point Detection System	Support / Optional	Support / Optional	Support / Optional
Data Output Analysis	Support / Optional	Support / Optional	Support / Optional
Power	0.6 kW	1.1 kW	1.5 kW
Size (W×D×H)	420×545×455 mm	510×570×500 mm	—
Net Weight	50 kg	55 kg	65 kg
Voltage	220 V, 50/60 Hz	220 V, 50/60 Hz	220 V, 50/60 Hz

Laboratory Freeze Dryer F Series, with high water vapour capture capacity, offer efficient freeze drying.

Model No	MBFD-F 7009	MBFD-F 9009	MBFD-F 7012	MBFD-F 9012
Ice Condenser Capacity	9kg		12kg	
Ice Condenser Temperature	–70 °C	–90 °C	-70 °C	-90 °C
Cold Trap Volume	15L		20 L	
Freeze-Dried Chamber	Bell shape (standard configuration) Multi-manifold type T-shaped frame type			
Sample Shelf	**Φ260** mm, single layer area 0.055 m² (3–10 layers optional) • Electric heating/manual capping			
Vacuum Pump	Extreme vacuum 5×10□3 mbar with pumping capacity of 8 m³/h / Optional pump of various			
Oil Mist Filter	Standard configuration			
Vacuum Pump Connection Pipe	Single forming stainless steel flexible pipe / DN16 ISO-KF			
Anti-Corrosive Treatment	Cold trap, condensing coil all equipped with PTFE anti-corrosion treatment as standard. Suitable for freeze-drying organic solvents.			
External Valve	12 pieces / 24 pieces			
Eutectic Point Detection System	Support / Optional			
Data Output Analysis	Support / Optional			
Power	0.9 kW	1.5 kW	1 kW	1.6kW
Size (W×D×H)	525x570x1080mm			
Net Weight	80 kg	85 kg	82 kg	87kg
Voltage	220 V, 50/60 Hz			

WATER BATH

Mehrotra Biotech make Water bath WB series provides precise temperature control to create a stable temperature environment for a variety of applications. Easy to use and maintain, leakproof stainless steel chamber available with a digital control system. Used in Ideal for warming reagents, bacteriological examinations, microbiological assays, sample thawing, coliform determinations and environmental and food technology applications.

TECHNICAL SPECIFICATIONS

Model	WB05	WB8	WB12	WB20	WB30
Capacity	5L	8L	12L	20L	30L
Temp Range	RT+5°C to 99°C				
Temp Stability	±1.5°C				
Temp Accuracy	±0.5°C				
MOC(Inner)	Stainless Steel AISI304				
MOC(Inner)	Stainless Steel AISI304				
Concentric Ring (Optional)	-	2 Rows, 4 Holes	2 Rows, 6 Holes	2 Rows, 8 Holes	2 Rows, 10 Holes
Ext Dimension(LxWxH) in	15x12x12	15x14x12	17x 14x13	22x15x13	22x10x15
Sensor	PTS100				
Controller	Dual LED Display programmable controller				
Power	500W	750W	1000W	2000W	2500W
Power Supply	220V, 50/60Hz 220V, 50/60Hz				
Note: Product is customizable as per user requirement.					

REFRIGERATED WATERBATH

A refrigerated water bath is a laboratory device designed to precisely control temperature for various cooling and incubation applications. Equipped with advanced refrigeration technology, it provides a stable and uniform temperature environment, making it ideal for handling temperature-sensitive samples and reactions. This versatile equipment is widely used in biological, chemical, and industrial laboratories for procedures that require cooling below ambient temperatures, such as enzyme reactions, protein crystallization, and cell culture.

TECHNICAL SPECIFICATIONS

MODEL	WB20R
Dimensions External (WXDXH)	850mmx 375mmx350mm
Chamber Dimensions (WxDxH)	400mm x 300mmx200mm
MoC (Inner / Outer)	SS304 Brushed Finish
Temp Range	+5°C to +70°C
Vial Storage Capacity	180 vials of 6ml & 10Ml
Controller	5" HMI touch screen PID controller
Safety Alarms	Overshoot and undershoot temp, Power Failure , Battery Low , Door Open
Cooling Method	Hermetically sealed compressor with ecofriendly refrigerant
Heating Method	Immersion SS Heater
Power Rating	230V, 6A
Note : Customization available according to the size and features required by user.	

STEAM STERILIZER/VERTICAL AUTOCLAVE

Over a short period of time Mehrotra Biotech has achieved an expertise in design & manufacturing of flawless & world class standardized as well as customized models of different types of vertical autoclaves specially designed to meet the challenging demands of scientists, doctors and specialized research applications. Mehrotra Biotech has been established as a reliable manufacturer of vertical autoclaves in India. We are supplying our Autoclaves catering to variety of customers ranging from research laboratories, hospitals, educational institutions and various R&D laboratories of leading national and multination companies.

TECHNICAL SPECIFICATIONS

Model	VA40	VA60	VA80	VA120	VA150	VA180
Ext Dim (LXWXH)	22x35x36 in	31x32x48 in	31x32x48 in	31x32x54 in	40x32x54 in	40x32x54 in
Material of Cons.	AISI 304 SS Chamber & MS POWDER COATED OUTER FRAME BODY or SS304					
Chamber Dim (DxH)	12 x 20 inch	16 x 20inch	16 x 28 inch	16 x 29 inch	20 x 24in	22 x 28in
Volume	40L	60L	90L	120L	150L	180L
Temp Range	121°C					
Max. Pressure	1Bar /15psi					
Power Cons.	2KW	3.0KW	3.0 KW	4KW	6KW	6KW
Controller	PID/ON-OFF digital controller or Full Color TFT display with data logger					
Safety Devices	Dial Type Pressure Gauge Auto Cut-off Pressure valve Low water alarm with cutoff			Solenoid Pressure Release Valve Thermostatic Temp control		
Temp. Sensor	PT100					

CLASS B AUTOCLAVE (TABLE TOP)

The Mehrotra Biotech make Class B Autoclave is a technologically advanced sterilization system designed for medical, dental, and laboratory applications. It ensures complete sterilization of instruments by utilizing saturated steam under high pressure, with a typical cycle duration of approximately 20 minutes. Operating at chamber temperatures of up to 134°C, it provides reliable elimination of harmful microorganisms and infectious agents.

Key Highlights

- Advanced Sterilization Technology – Designed for medical, dental, and laboratory applications.
- High-Pressure Steam Sterilization – Operates with saturated steam at high pressure for approx. 20 minutes.
- High-Temperature Performance – Chamber temperature reaches up to 134°C for complete sterilization.
- Pre- & Post-Vacuum Technology – Integrated vacuum pump ensures thorough removal of air before and after the cycle.
- Ensures Dry Sterilized Instruments – Prevents presence of cold air or wet steam, ensuring dry packs and instruments.
- No Wet Bags – Specially effective for dressing packs, surgical tools, and wrapped instruments, avoiding wet bag issues.
- Inactivation of Infectious Agents – Utilizes superheated water and pasteurized steam for complete neutralization of potentially infectious microorganisms.
- Reliable & Consistent Performance – Provides safe, repeatable sterilization cycles suitable for routine healthcare use.

TECHNICAL SPECIFICATIONS

Model No.	MB23BA
Inner Dimensions	Φ246x450
Outside Dimensions	715x513x425
Volume	23L
Inner Material	SS304
Working Pressure	210kpa-230kpa
Pressure Accuracy	0.1kpa
Working Temperature	121-134 Degree Celsius Adjustable
Process Time	1 Hour Settable
Record	Built-in thermal printer, real-time print out data USB port available for historical data download

PROGRAMS

Program	Temperature	Sterilization Time(Min)	Total Time(Min)
SOLID	134°C	4	18-30
WRAPPED	134°C	6	30-40
PRION	134°C	18	45-70
B&D TEST	134°C	3.5	22-35

HORIZONTAL AUTOCLAVE

HY series pulsating vacuum sterilizers use saturated steam as the sterilization medium. By utilizing the physical property of saturated steam to release a large amount of latent heat and moisture during condensation, the items are exposed to a highly heated and humid state.
After a defined heat preservation period, sterilization is achieved. The system removes cold air using pulsating vacuum exhaust, and drying is completed through vacuum dehumidification combined with a jacket system.
These sterilizers are mainly used in:

- Central Sterile Supply Departments (CSSD)
- Third-party disinfecting supply centers
- Operating rooms

Suitable for sterilizing:

- Medical devices
- Dressings
- Rubber items
- Lumen devices
- Implantable devices
- Liquids

Key Features

- Body of the Sterilizer
- Designed and manufactured as per:
- IS 2825 (Pressure Vessel)
- ISO 14937 (General sterilization requirements)
- PED 2014/68/EU (Europe) – Pressure Equipment Directive
- Rectangular chamber with European ring-type jacket and reinforcing ribs
- Pneumatically sealed doors with interlocking system
- Contact parts made of S304/316L stainless steel
- Life: 10 years / 20,000 cycles
- Optional 316L stainless steel
- Life: 15 years / 30,000 cycles
- Gear rack and teeth: S304 stainless steel
- Jacket: IS 2002 (Grade I / II) pressure vessel grade material
- GMP authentication interface included

Piping System

- 304 stainless steel sanitary piping with clamp joints
- Components:
- GEMU pneumatic valves (Germany)
- AirTAC solenoid valves (Taiwan)
- SPECK vacuum pump (Germany)

Optional:
Smart automatic drainage system
Noise reduction system
Pipeline insulation

General Specifications

- Designed Pressure (Inner Chamber): -0.1 / 0.3 MPa
- Designed Pressure (Jacket): 0.3 MPa
- Designed Temperature: 150°C
- Maximum Working Temperature: 139°C
- Maximum Working Pressure: 0.23 MPa
- Vacuum Leakage Rate: ≤ 0.13 kPa/min
- Ultimate Vacuum: -97 kPa

Safety & Performance

- Safety Valve Pressure (Chamber): 0.28 MPa
- Temperature Control Precision: ±2°C
- Temperature Uniformity: ±1°C
- Pulsation Vacuum:
  - Amplitude: -80 kPa
  - Times: 1–99
- Positive Pressure Pulses: 1–3 times

Control System

- Siemens PLC with color touchscreen interface
- Real-time process data printing
- Multiple safety and alarm systems
- Communication interface for quality tracing systems
- Optional remote monitoring and maintenance
- Double pulsation system:
- Better air removal
- Improved drying performance
- Increased equipment life

Technical Features

Model	Volume (L)	Steam Consumption (Kg/Cycle)	Water Consumption (Kg/Cycle)	Power
MB-HYPV 0.25	250	18	120	2 kW
MB-HYPV 0.36	360	22	180	2 kW
MB-HYPV 0.6	600	35	320	3 kW
MB-HYPV 0.8	800	47	400	3.5 kW
MB-HYPV 1.0	1000	55	500	3.5 kW

HORIZONTAL AUTOCLAVE VACCUUM PULSE TYPE

At Mehrotra Biotech, we are specialized in design & manufacturing of standardized as well as customized models specially designed to meet the challenging demands of scientists, doctors and specialized research applications. Over a short period of time Mehrotra Biotech has been established as a reliable manufacturer of horizontal auto- clave in India. We are supplying our Autoclave catering to variety of customers ranging from research laboratories, hospitals, educational institutions and various R&D laboratories of leading national and multination companies.

FEATURES

- Automatically controls the sterilizing process, easy to operate.
- With three or more pulsating vacuums, it is suitable for all kinds of packaged, unpackaged, and porous instruments with internal pipelining systems.
- The sterilizer is equipped with a steam generator and a set of mobile sterilization trays.
- The inner chamber of the sterilizer has a circular double-layer design, composed of a sterilization chamber and a jacket, and is capable of deep drying.
- With a printing function, the printer can record the whole sterilization process.
- With Bowie & Dick test function for steam penetration testing. Automatic fault detection is also enabled, which is convenient for self-maintenance.
- Equipped with over-temperature and over-pressure auto-protection.
- The door cannot be opened until the pressure in the chamber is reduced to 0.027 MPa, and the unit cannot be started if the door is not properly closed.

- The safety valve will open automatically when the internal pressure exceeds 0.24 MPa, and the steam will be exhausted into the water tank.
- Automatically cuts off power in case of water shortage, while triggering an alarm at the same time.
- Sealed doors: Doors are opened and closed manually using the radiation rod turntable type, equipped with secondary self -locking safety devices.
- Single-door design (double-door design optional), with a pressure safety interlocking device.
- The chamber of the sterilizer is made of stainless steel 304.

TECHNICAL SPECIFICATIONS

MODEL NO	MB-PV100V	MB-PV150V	MB-PV200V	MB-PV300V
Sterilizing Volume	100L	150L	200L	300L
Chamber Size	Φ440x670mm	Φ440x1000mm	Φ515x1000mm	Φ600x1080mm
Working Pressure	0.22MPa			
Max Working Temp	134°C			
Temperature Adjust Range	115-135°C			
Time for Sterilization	0-99min			
Time for Drying	0-99min			
Heat Average	≤±2°C			
Vacuum Limit	-0.08Mpa			
Power	10KW/AC380V 50Hz			13KW/AC380V 50Hz
Dimension (mm)	1400x660x1640	1400x660x1640	1400x750x1740	1520x850x1850
Transport Dimensions	1560x820x1820	1560x820x1860	1560x910x1880	1680x1080x2100
Gross Wt/Net Wt	430kg/376kg	458kg/404kg	505kg/440kg	613kg/528kg

ULTRASONIC CLEANING BATH

FEATURES:

- Switch mode technology.
- Automatic frequency tuning for maximum output
- Low transducer losses permit maximum cleaning action.
- Protection against short circuit, over voltage and over temperature.
- Micro controller base digital timer.
- Rugged and easy to clean stainless steel housing.
- Extensively protected electronics circuits for longer and safe operation.

GENERAL SPECIFICATION:

- Material of construction: Stainless steel grade AISI 304.
- Digital Timer 60 minutes with Settable Ultrasonic.
- Ultrasonic Generator With latest MOSFET based Technology
- Temp. Controller: Digital Temp. controller cum indicator and PT100 sensor
- Ultrasonic Frequency: 33 +/-3 kHz
- Display: Digital LED display.
- Input Supply: 230VAC 50hz.
- Water Outlet: ½ inch ball valve for cleaning the tank.
- Puff solution covered outside of the tank to safeguard the transducer & maintains the water temperature.

TECHNICAL SPECIFICATIONS

MODEL	OUTER DIMENSION (WxDxH)	CAPACITY	USB POWER	HEATER POWER
UCB 3.3 L	230x150x100 mm	3.3 L	100W	250W
UCB 4.5 L	230x135x150 mm	4.5 L	100W	250W
UCB 7.5 L	230x135x150 mm	7.5 L	150 W	250W
UCB 10 L	305x230x150mm	10 L	250W	500W
UCB 15 L	380x280x150mm	15 L	350 W	500 W
UCB 20 L	355x305x200mm	20 L	400 W	500 W
UCB 30L	385x385x200mm	30 L	450 W	800 W

OPTIONAL ACCESSORIES : Stainless Steel Gable Lid

BOD INCUBATOR

BOD incubator engineered by Mehrotra Biotech is designed to efficiently maintain desired temperatures varying from +5°C to +70°C. It is suitable for applications in Pharmaceutical, Agricultural and biomedical research including but not limited to micro organism cell culture, serum studies, immunological activities, livestock research etc.

Easy to clean stainless steel interior design and forced air circulation system ensures temperature uniformity inside the chamber.

The Equipment is available as a tailor made solution to cater to the various specific needs of our clients.

KEY FEATURES

- Microprocessor temperature Controller with PID Heating with Large 5" touch display having inbuilt data logger with printer, USB & LAN Support.
- Double walled body structure with 65 mm glass wool insulation between the gap.
- Easy to clean Stainless Steel SS304 Interior chamber
- Triple walled back with 2 air circulation fans for maintaining temp uniformity
- Adjustable Stainless Steel Shelves
- Efficient ISI marked compressor with highest accuracy of cooling control.
- Door Operated Illumination lamp inside the chamber.
- Full view inner glass door permits inspection of specimens, without disturbing the same
- Floor Standing Model with lockable Castors on Front
- Available with or without Circular Chart Recorder
- Floor Standing model with lockable castors.
- Certified with CE, ISO 9000 & ISO 13485
- GMP Models are also available.

TECHNICAL SPECIFICATIONS

Model No	MBI200	MBI400
Storage Capacity (Ltr)	198	380
Product Dimensions(WxDxH)	660mmx 850mmx 1350mm	900x800x1820mm
Chamber Dimensions	450mmx650mmx680mm	680x900x800mm
Inner Door Material	Clear Transparent Acrylic	
Temperature Range	+5°C to +70°C	
Temperature Accuracy	±1°C	
Temperature Stability	±1°C	
No of Shelves	4	
Illumination	15W LED illumination	
Material Of Construction	Powder Coated Mild Steel outer/ Stainless Steel SS304 Stainless Steel AISI 304 Inner @ 1.1mm	
Power Rating	550W	800W
Power Supply	220V, 50/60Hz	
Insulation material	Glass Wool	
Weight	88-96Kg	120Kg
Optional Accessories	Circular Chart Recorder, Additional Shelves, TFT Controller,	

LAB INCUBATOR

Mehrotra Biotech make MI series direct heating Lab Incubators offers an economical incubation method to a variety of micro-organism cultures. As a standard feature, all incubators are equipped with high tech micro processor controllers that maintains accurate temperature control (PID) of the chamber in the range of ambient+5°C to +70°C with an accuracy of ±0.1°C. A user friendly digital controller allows easy setting and fast readout of temperature.

TECHNICAL SPECIFICATIONS

FEATURES	MI30	MI60	MI 90	MI150	MI200	MI300
MOC (external)	MS POWDER COATED or AISI SS304 (as optional)					
MOC (internal)	AISI SS304					
Temp Range	Ambient + 5°C to +70°C					
Sensitivity	±0.1 °C					
Alarm	Over temperature protection alarm					
Capacity	28L	60L	91L	150	216L	300L
Door (inner)	Viewing Window		8mm Glass Door			
Int Dim (WxDxH) in	12x12x12	16X16X16	18x18x18	20x20x24	24x24x24	28x27x24
Ext Dim (WxDxH) in	18x15x15	19x19x24	24x22x22	28x24x28	32x30x30	34x33x30
Shelves	2	2	3	3	3	4
Display (standard)	7 Segment Dual LED Digital Display					
Display (OPTIONAL)	5" TFT Touch screen with Stability of ±1 °C with datalogger & A/V alarms					
Heating Method	Direct heating with SS air heaters on 3 sides / Forced Heating (Optional)					
Insulation Material	Glass Wool					
Insulation Thickness	Upto 3 Inches					
Power consumption	250 W	300W	400W	700W	900 W	1500W
Power supply	230V, 50 Hz					

HOT AIR OVEN

MBPL make MO series oven features a triple-walled, fully insulated design that delivers superior thermal stability and energy efficiency compared to conventional dual-walled systems. The three-layer body with high-density insulation minimizes heat loss, ensures faster heat-up, maintains highly uniform temperatures, and keeps the outer surface cool-to-touch. This advanced construction provides precise temperature control, reduced power consumption, and exceptional performance even under demanding laboratory conditions.

TECHNICAL SPECIFICATIONS

Standard Features	MO90	MO120	MO150	MO200	MO300
MOC (external)	MS POWDER COATED				
MOC (internal)	SS AISI 304				
Temp Range	Ambient +5°C to 250°C				
Temp Acc/Stab.	±0.5°C				
Net Capacity	90L	120L	150L	216L	295L
Int Dim (WxDxH)	450x450x500	450x450x600	500x500x600	600x600x600	650X650X700
Ext Dim (WxDxH)	525x525x650	525x525x750	800x750x675	750X750X900	800X750X800
Shelves	2	2	3	4	4
Shelves Material	Perforated Stainless Steel adjustable shelves				
Controller	PID Microcontroller with Touchscreen or Digital Display				
Printing Facility	Can be provided on request				
Heater	Tubular Air heaters on all three sides for uniform air heating				
Power consumption	2KW	2KW	3.5KW	4KW	6KW
Power supply	220V	220V	220V	220V	220V
Customized Options					
Controller	HMI Controller with Touchscreen Display with data logging facility				
Audio Visual Alarm	Over Temperature Protection & Sensor Failure Alarm				
Heating System	Fan Forced Heating with Tubular Air Heater				
MOC	Also available in Inner Outer SS304				

BIO-SHAKE PRO

REFRIGERATED INCUBATED ORBITAL SHAKER

The BIO-SHAKE PRO is a premium refrigerated incubated orbital shaker designed for high-precision, temperature-controlled shaking applications. Built with robust SS 304 interiors and an epoxy-coated MS exterior, the shaker ensures reliability in demanding laboratory environments. Its digital interface and alarm systems provide safety, ease of use, and exceptional reproducibility.

KEY FEATURES

Sturdy Construction
MS powder-coated exterior with SS304 stainless steel inner chamber ensures hygiene, corrosion resistance, and durability.

Counterbalanced Orbital Mechanism
Low-noise, vibration-dampening system for stable high-speed performance.

TFT Touchscreen Controller (5")
Sleek and intuitive display with simple navigation of parameters.

User Authentication
Multi-user password-protected access to secure program settings.

Data Logging with USB Export
Export operational data directly via USB for compliance and analysis.

Hermetically Sealed Compressor
Energy-efficient cooling down to desired temperatures with minimal noise.

Stainless Steel Air Heater
Ensures uniform heating throughout the chamber.

Telescopic Mount Slide Tray
Smooth pull-out for easy flask loading and removal.

Floor Standing Model

Table Top Model

Applications

Biotechnology & Life Sciences: Cell culture, protein expression
Pharmaceutical R&D: Drug development, stability testing
Environmental Studies: Microbial incubation, sample preservation
Food & Beverage: Fermentation studies, quality control

TECHNICAL SPECIFICATIONS

Parameter	Specification
Model	IS100R
Temperature Range	4°C to 60°C
Speed Range	30 to 300 RPM
Display	5" TFT Touchscreen
Chamber Material	SS304 Stainless Steel
Outer Body	Powder-Coated Mild Steel
Tray System	Telescopic Mount Easy Slide Flask Holder Tray
Cooling	Hermetically Sealed Compressor
Heating	SS Air Heater
Data Logging	Yes, with USB Export
Security	Password-Protected User Access
Outer Dimensions (W x D x H)	660x 850 x 1150 mm
Chamber Dimensions (W x D x H)	500 x 500 x 400 mm
Platform Dimensions (W x D x H)	450 x 450 x 450 mm
Power Supply	230V AC, 50Hz

Note: Specifications and features are subject to change without notice as part of continuous product improvement.

Custom configurations and sizes are available upon request.

PCR WORKSTATION

Advanced bench-top PCR cabinet providing aseptic conditions for a variety of biomedical and biochemical procedures. The large capacity stainless steel UV cabinet with additional space for equipment and accessories allows more comfortable and convenient working in PCR working. With dual UV lamp protection.

- Robust construction with large working area
- Timer based UV decontamination with 25W UV lamp, automatic switches off when sash is opened. Timer operates only when sash is closed.
- Convenient, easy to use microprocessor based controller for accurate control of UV exposure
- Dual built-in power sockets
- Quiet operation and low energy consumption.
- Front slide opening sash with adjustable positions.

TECHNICAL SPECIFICATIONS

MODEL NO	PCR700
EXTERIOR DIMENSIONS (WxDxH)mm	762x609x900
INTERNAL DIMENSIONS (WxDxH)mm	748X600X585
EXTERIOR CONSTRUCTION	POWDER COATED MILD STEEL
INTERIOR CONSTRUCTION	FORMED AISI 304 STAINLESS STEEL WITH GLASS/ACRYLIC TRANSPARENT SIDE WALLS
FILTERS	PRE-FILTER+HEPA FILTER (Optional)
CONTROLLER	CONVENIENT, EASY TO USE MICRO-CONTROLLER FOR ACCURATE CONTROL OF UV EXPOSURE & AIR FLOW
UV LAMP	UVC GERMICIDAL LAMP, 254nm
ILLUMINATION	15W BRIGHT LED LAMP
FRONT DOOR	GLASS/CLEAR PERSPEX SHEET VERTICAL SLIDING
EXHAUST BLOWER	SINGLE PHASE, 1400RPM, 0.25hp MOTOR CAPABLE OF DELIVERING 100FPM
STANDARD ACCESSORIES	GAS/LIQUID HOSE, DUAL 16A POWER PORT
POWER RATING	220V,50-60Hz, 350W
CERTIFICATION	CONFORMS TO EN61010-1 & IEC 60601-1
PROTECTION CLASS	IN ACCORDANCE WITH EN60529

CO_2 INCUBATOR

OPTIMIZED CELL GROWTH THROUGH ADVANCED DESIGN AND TECHNOLOGY

Elevate your cell culture results with the CO_2 Incubator by Mehrotra Biotech – designed to create a pristine, stable, and precisely controlled environment for reliable and reproducible growth. With advanced CO_2 regulation, uniform temperature distribution, and contamination-free performance, it's the trusted choice for modern research and biotechnology labs.

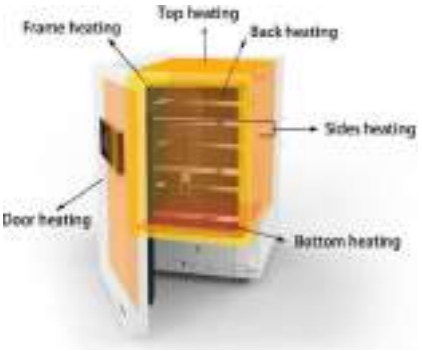
Features

Thrive Active Airflow

Automatic air volume regulation more efficient and accurate control of temperature,humity,CO_2 concentration , and cleanliness.

Remote Monitoring & Data Logging

Optional monitoring system for remote monitoring of events, alarms, incubator conditions and customized tasks.

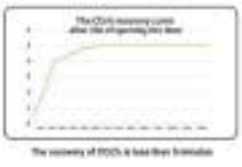


Direct Heat & Air Jacketed

- Rapid temperature recovery in the chamber and reduce ambient temperature interference.
- 9 heating units in 4 temperature control zones are intelligently controlled by microprocessors to ensure temperature uniformity and minimum fluctuation in the chamber.

Rapid Recovery of CO_2

Accurate & fast-response CO2 sensor, advanced microprocessor-controlled intake valve and independently controlled heating system to achieve no overshoot, ensuring rapid gas circulation after opening and closing the door, making the CO2 concentration recovered quickly and remained constant .



Safety Ensured

- Operation record
- Low water level alarm
- Ambient temp. alarm
- Door ajar alarm
- Chamber temp. alarm
- Shortage alarm
- CO2% alarm
- HEPA expiration alarm

Cleanliness Guaranteed

Complete contamination control

- All gases entering the incubator are filtered through a 0.2 μm filter to remove airborne biological and particulate contaminants.
- The gas filter is easily replaceable on site.

HEPA air filtration for air purity

- In-chamber HEPA airfow system flters entire chamber with ISO Class 5 (Class 100) cleanroom air quality within five minutes after door opening.
- The particle retention efficiency of the HE**PA** filter is up 99.995%.

Cyclic high temperature sterilization

- 180°C dry heat cycle sterilization.
- The complete process of sterilization takes 12 hours only.
- No need to take out any accessories during sterilization except H**EPA**

Technical Specification

Model			MBCI170
Type			Air Jacket
Construction	Chamber Volume		170(L)
	Interior Chamber		Stainless Steel
	Exterior Chamber		Cold-rolled Steel Powder Coated
	Access Port		35mm Diameter
	Data Outputs		Remote Alarm Port, RS485, USB
	Filter		HEPA Filter at 99.995%
Control	Display		7" LCD Touch Screen
	Controller		PID Microprocessor
Electrical	Rated Voltage Power Supply		220V/50Hz
	Nominal Consumption	kw/24h	1.01 /1.05
CO2	Control		±0.1%
	Range		0-20%
	Alarm Range		±0.5%
	Inlet Pressure		≤0.1mpa
	Gas Purity		Min 99.5% or Medical Quality
	Sensor Type		IR / TC
	Recovery Time at 5vol.-%CO2 for 30s door Opening		≤5min
	CO2 Inlet Filter		≤0.2μm
O2 (Optional Tri-gas Type)	Control		±1%
	Range		1-20.7%
	Alarm Range		±0.5%
	Inlet Pressure		≤0.1mpa
	Gas Purity		Min 99.5%
	Sensor Type		Zirconia
	Recovery Time at 5vol.-%CO2 for 30s door Opening		50mins at 1.0% O2, 25mims at 5.0% O2
	O2 Inlet Filter		≤0.2μm
Temperature	Control/Display Accurancy	°C	±0.1
	Control Range	°C	Range 5°C Above Ambient to 55°C
	Uniformity	°C	≤0.3
	Ambient Range	°C	18~ 34
	Sensor		PT100
	Recovery Time at 37°C for 30s door Opening(min)	min	≤10
Humidity	Relative Humidity		91% at Low RH mode, 94% at High RH mode
	Humidity Reservior		Max. 3L/Min. 0.5L
Alarms	High/Low Temperature		Y
	Remote Alarm		Y
	Excessive Co2/O2 Concentration		Y
	Water Shortage		Y
	Door Ajar		Y

ADVANCED PROTECTION. TRUSTED PERFORMANCE

Step into a world of uncompromising safety with Mehrotra Biotech. Our Ducted Fume Hoods are meticulously designed to exceed industry standards, ensuring unmatched protection for laboratory personnel and critical research operations.

Engineered for Excellence

- Precision Design: Crafted with state-of-the-art engineering to ensure optimal containment of hazardous fumes, vapors, and particulates.
- Unparalleled Effi ciency: Ideal for chemical analysis, pharmaceutical research, and industrial testing applications.
- Maximum Safety: Delivers a controlled environment, minimizing exposure to harmful substances.

FEATURES

Experience unmatched performance and reliability with our meticulously engineered ducted fume hood, tailored to meet the demanding needs of modern laboratories.

1. Advanced Baffl e System: Our ducted fume hood boasts a cutting-edge baffle system that ensures uniform airflow distribution, maximizing containment efficiency and minimizing turbulence during experiments.

2. Chemical Resistant Lining: Crafted with premium-grade materials, our fume hood's interior is structured with a chemical -resistant lining, offering unparalleled protection against corrosive substances and extending the lifespan of the equipment.

3. Durable Granite Worktop: The fume hood is equipped with a durable granite worktop, providing a robust and resilient surface for conducting experiments. Its non-porous nature ensures easy cleaning and maintenance, ideal for rigorous laboratory use.

4. Laboratory Grade Accessories: We provide laboratory-grade accessories including taps, sinks, and nozzles, meticulously designed to meet the highest standards of quality and functionality. These accessories facilitate smooth workflow and enhance user convenience.

5. External Power Sockets: To accommodate various laboratory instruments and equipment, our fume hood features strategically placed external power sockets, providing convenient access to electricity without compromising safety.

6. Digital Microprocessor Controller: With an integrated digital microprocessor controller, our fume hood offers precise control over airflow velocity, sash position, and other essential parameters. This intuitive interface ensures effortless operation and allows for customizable settings to suit specific experimental requirements.

7. Enhanced Safety Features: In addition to its advanced functionality, our fume hood is equipped with enhanced safety features such as audible alarms, sash sensors, and emergency shut-off mechanisms, providing an extra layer of protection for laboratory personnel.

8. Energy Effi ciency: Designed with energy efficiency in mind, our fume hood utilizes state-of-the-art technology to optimize airflow patterns and reduce power consumption, contributing to sustainability efforts and cost savings over time.

Advanced Baffl e System ensures uniform airflow distribution, maximizing containment efficiency and minimizing turbulence during experiments.

Chemical Resistant Inner Lining to ensure long term resistivity

Laboratory Grade Accessories

TECHNICAL SPECIFICATIONS

Model Type	Ducted Fumehood
MoC(Inner/Outer)	Chemical Resistant inner Lining/ Mild steel with epoxy coating
Controller	Manual Switch Operation/ Digital Controller
External Blower	Single phase or Three Phase As per ducting length
Power Rating	230V, 15A
Noise Level	<58dB
Air Flow Velocity	Preset at 0.51m/s
Illumination	LED Fluorescent Lamp
Standard Accessories	Gas Valve, Vacuum & Water Tap, Sink, Electrical Outlets, Granite Worktop, Stand, PVC Ducting upto 10ft
Optional	Storage Cabinet, Additional Valve & Electrical Outlets, Digital Microprocessor Controller

Customizable Configurations:
We offer customizable configurations to meet the specific requirements of different laboratory settings. Whether it's size, airflow capacity, or additional accessories, our fume hoods can be tailored to suit individual needs.

DUCTED CHEMICAL FUMEHOOD

Modular Frame Construction – Rigid, scalable, and easy to maintain

Auto Sliding Sash System – Sensor-based opening/closing for hands-free operation

Energy Effi cient Operation – Reduced exhaust air volume lowers power consumption

Optimized Airfl ow Design – Engineered front frame, airfoil, and rear flow system

Superior Containment Performance – Enhanced backflow control for operator safety

Explosion Pressure Relief – Built-in safety mechanism for hazardous conditions

Compliance Ready Design – Conforms to EN 14175 and SGS quality standards

APPLICATIONS

Chemical Handling & Reactions – Safe containment of hazardous fumes, vapors, and gases during experiments
Pharmaceutical Laboratories – Drug formulation, solvent handling, and API processing
Quality Control (QC) Labs – Sample preparation and chemical analysis
Petrochemical & Industrial Labs – Handling corrosive and flammable substances
Biotechnology Labs – Work involving chemical agents and reagents (non-biological containment)

Model No.	MBSF1200	MBSF1500	MBSF1800
Ext. Dim. (LxWxH) mm	1247x800x2450	1547x800x2450	1847x850x2400
Int. Dim. (LxWxH) mm	987x560x700	1287x560x700	1587x560x700
Max Opening	740mm		
Work Surface Height	820mm		
Control System	Microprocessor controller with LCD display, display the operating status of each function		
Air Velocity	0.3~0.8 m/s, speed adjustable		
Main Material	1.0mm/1.2mm Thick Cold rolled steel with epoxy resin powder coating		
Structure	Split Up and down		
Coating	Epoxy Electrostatic Surface spray		
Inner Material	Anti-fold special board/ ceramic fiberboard		
Worktop	Trespa Panel/Ceramics/Epoxy Resin		
Colour	White/grey/blue/customized		
Illumination	900 Lux		
Sound Emission	≤68dB		
Standard Accessory	1. Base Cabinet 2. LED Lamp 3. Waterproof Socket 4. Water Tap 5. Gas Tap 6. Gas & Water Remote Control Valve 7. PP Water sink 8. Work Table: Solid physio-chemical, resistant to acid and alkali 9. PP Centrifugal Blower 10. .10m PVC aluminum foil composite exhaust duct, Diameter: 250mm		
Optional Accessory	1. PP Work Table, epoxy resin board 2. Active Carbon filter		
Gross Weight (Main Body) Base Cabinet	155 99	180 114	206 140
Power Supply	220V, 50-60Hz		
Power Consumption	450W	450W	450W

DUCTLESS FUMEHOOD

Ductless fume hoods offer several features that make it advantageous for various laboratory settings. Here are some of the features commonly found in ductless fume hoods:

Portable Design: Mehrotra Biotech's ductless fume hood is designed to be portable, allowing for easy relocation within a laboratory or between different facilities.

No Need for External Ducting: Our ductless fume hood eliminates the need for external ducting, providing flexibility in placement within a laboratory setting.

Advanced Carbon Filtration System: Equipped with an advanced carbon filtration system, Mehrotra Biotech's ductless fume hood effectively captures and neutralizes a wide range of harmful fumes and vapors.

HEPA Filtration: In addition to carbon filters, our fume hood has customization to include HEPA filtration to remove particulate matter and ensure clean air within the hood.

Variable Fan Speed Control: The ductless fume hood features variable fan speed control, allowing users to adjust airflow rates for optimal containment and filtration efficiency.

Alarm Systems: Integrated alarm systems alert users to issues such as filter saturation, airflow disruptions, or other safety concerns, ensuring a safe working environment.

Easy Maintenance: Designed for easy maintenance, our fume hood features accessible filter compartments and straightforward replace-

ment procedures to minimize downtime and ensure consistent performance.

Compliance with Safety Standards: Manufactured to comply with relevant safety standards and regulations, Mehrotra Biotech's ductless fume hood provides effective containment and protection for laboratory personnel and the environment.

CARBON CODE	FILTER SPECIFICATION
AC	General Organic Compounds (Iodine, Solvents, odours, etc)
ACID	Acidic Compounds (and general purpose organics)
ACR	Alkali Compounds (and general purpose organics)
AMM	Ammonia & Amine Compounds (and general purpose organics)
CYN	Cyanide Compounds (and general purpose organics)
ETHER	Ether Compounds (and general purpose organics)
FORM	Aldehydes (and general purpose organics)
SUL	Sulphur Compounds (and general purpose organics)
MCH	Special Blend of upto 4 of the above carbon types
ED	Tri Layered Filter for schools (Organic, acid & alkali)

Customization Options: Mehrotra Biotech offers customization options to tailor the ductless fume hood's specifications to meet the specific requirements of our customers, including size, filtration capabilities, and additional features.

TECHNICAL SPECIFICATIONS

Model Type	Ductless Fumehood
MoC (Inner/Outer)	SS304 or Chemical Resistant (PVC/Phenolic Resin) / Mild Steel with epoxy coated
Controller	Manual Switch Operation/ Digital Controller
Blower	Suitable configuration of AC/DC ECM blowers
Power Rating	230V, 15A
Noise Level	<58dB
Primary Filter	Activated Carbon Filter
Air Flow Velocity	Preset at 0.51m/s
Illumination	LED Fluorescent Lamp
Standard Accessories	Gas Valve, Water Tap, Sink, Electrical Outlets, Granite Worktop, Stand
Optional	Storage Cabinet, Additional Valve & Electrical Outlets, Digital Microprocessor Controller

ULTRASONIC PROBE SONICATOR

Ultrasonic Cell Disruptor series is designed for applying a cavitation effect in a liquid by means of ultrasonic waves.it can be used to disintegrate cells of various of animals and plants, viruses, bacteria, tissues as well as to reshape inorganic substances. It can also be used in emulsification ,separation ,distribution ,collection cleaning and nanomaterial preparation, dispersion acceleration of chemical reactions. etc. It has wide application in teaching, researching, and manufacturing in many fields such as biology, microbiology ,physics, zoology, agriculture and pharmacology and been used by some labs.

Advantage

- 4.7 inch large screen LCD touch screen display.
- Microcomputer control, which can store 20 sets of work data.
- Ultrasonic time, ultrasonic power can be set.
- Automatic detection of ultrasonic power to prevent the change of ultrasonic power as the temperature of the sample is changed.
- Integrated temperature control to prevent sample overheating.
- Automatic frequency tracking, automatic fault alarm.
- Single ultrasound time: 0.1-99.9S
- Single interval time: 0.1-99.9S
- Total working time: 1S-99H59M59S（touch type to 99hours）
- Mode of work: clearance or continuity
- frequency: 19.5-20.5KHz
- Can select computer online function

Model	Ultrasonic Frequency (KHz)	Maximum Power	Optional Probe (Φmm)	Crusher Capacity	Sample Temperature Monitor
MB-S100	20-25	0-150 W	2,3,6	0.1-150 ml	yes
MB-S200I	20-25	0-250 W	2,3,6,8	0.1-250 ml	yes
MB-S500	20-25	0-500 W	2,3,6,8,10	0.1-400 ml	yes
MB-S1000	19.5-20.5	0-1200 W	3,6,10,15,20,22	5-1000 ml	yes
MB-S1500I	19.5-20.5	0-1800 W	15,20,22,25	50-1500 ml	yes
MB-S1800	19.5-20.5	0-2000 W	15,20,22,25	50-1800 ml	yes

CENTRIFUGE

At Mehrotra Biotech, we bring you precision-engineered centrifuges designed for reliability and efficiency in any laboratory or industrial setting. Our centrifuges are built to deliver consistent, accurate separations with user-friendly interfaces and advanced safety features. Whether handling routine lab tasks or high-throughput processes, our centrifuges offer the performance and flexibility you need. Trust Mehrotra Biotech for innovative solutions that support your research and production with precision and confidence.

FEATURES

Advanced Control System, Excellent separation

- 10 acceleration and 10 deceleration rates (0 to 9) options, self-defining centrifugal parameters, to achieve the most optimized centrifugation
- Hold-on and transient centrifuging, convenient for diversified centrifugation
- Proprietary SCT speed control technology to achieve precise centrifugation
- Proprietary SBT soft brake technology reduces resuspension and convenient for sampling, ensuring maximum specimen.
- European compressor unit, proprietary temperature control technology, high accuracy of temperature control, to ensure sample activity
- Timing control, centrifugal time can be freely selected in minute or second to achieve optimal centrifugation

High safety, rest assured to use

- Automatic rotor identification system, no need to worry about selecting the wrong rotor number, prevent over-speed running.
- Safety device of over-speed, door lid open protection, imbalance protection and Emergency door open device, sound and light alarm prompts, ensure the safety of operator, centrifuge machine and samples.
- Steel body, stainless steel centrifugal chamber, steel protective sleeve, prevent accidents.
- Optional bio-safety rotor, the rotor can be sterilized by high temperature and high pressure, prevent biological pollution.

Intuitive interface, good user experience

- LCD, LED multi-screen display, program group, Accel/Decel, RPM/ RCF, time, temperature and other parameters are independently displayed with one-key setting, easy to operate
- Microcomputer control, automatic memory of operating parameters, RCF can be directly started, 40 programs can be stored and recalled, reducing repeated operations

- Three-stage damping, low vibration and low noise

Good parts, Reliable and Durable

- Brushless frequency converter motor, European super speed bearing and Freon-free compressor, high quality.
- Aviation damping rubber, ultra-hard aluminum alloy rotor thick film hard oxidation, corrosion resistance, prolong the life of the whole machine.

Universal, multifunctional

- Not only support angle rotor at high speed, but also support swing rotor for big capacity & low speed, suitable for multi-field research, production.

TECHNICAL SPECIFICATIONS

Model	Max Speed	Max RCF	Max Capacity		Temp. Range	Temp. Ac
MBCF01A	4000r/min	2180×g	120ml		-	-
MBCF 05RF	6000r/min	5640×g	3000ml		-20°C-+40°C	±1°C
MBCF05A	20500r/min	29600xg	3000ml		-	-
MBCF12M	12000r/min	14800×g	12/24 ×0.25~1ml） Capillary tube		-	-
MBCF19A	16600r/min	19560×g	600ml		-	-
MBCF20A	18600r/min	24560×g	600ml		-	-
MBCF30R-II	21000r/min	31300×g	Angle Rotor: 600ml,	Swing Rotor: 3000ml	-20°C to +40°C	±1°C
MBCF4B	4000r/min	2370×g	12/16×(0.1~4)ml	Slides	-	-
MBCF20R	16600r/min	19560×g	600ml		-20°C to +40°C	±1°C
MBCF22R	18600r/min	24560×g	300ml		-10°C to +40°C	±1°C
MBCF6M	6000r/min	5120×g	300ml		-	-
TD5G	5000r/min	3550×g	300ml		-	-

MBCF01A

MBCF05

MBCF19A & MBCF20A

MBCF12M

Note:

- Rotor options are available; please refer to the separate product catalog for details.
- The centrifuge is also available in refrigerated models.
- Both TFT and LCD display options are offered.

curacy	Speed	Time Range	Power Supply	Noise	Dimension (mm)	Weight
	±10r/min	1-999min/999s	220V, 5A	≤60dB	350×420×270	18kg
	±10r/min	1-999min/999s	220V, 16A	≤65dB	760x630x920	190kg
	+10r/min	1-999min/999s	220V, 10A	≤65dB	570x480x400	68kg
	±50r/min	0-99min	220V, 5A	≤60dB	280×380×230	12kg
	±10r/min	0-999min/999s	220V, 10A	≤60dB	440×350×320	30kg
	±10r/min	0-999min/999s	220V, 10A	≤60dB	440×350×320	30kg
	±10r/min	1-999min/999s	220V , 10A	≤65dB	-	98kg
	-	0-999min/sec	220V, 5A	≤65dB	350×420×270	25kg
	±10r/min	1-999min/999s	220V ,10A,	≤60db	585×540×350	70kg
	±10r/min	1-999min/999s	220V, 10A	≤65dB	350×625×370	53kg
	±20r/min	0-999min/s	220V, 8A	≤60dB	340×400×270	20kg
	±20r/min	0-999min/s	220V, 8A	≤60dB	340×400×270	20kg

MBCF30R-II

MBCF4B

MBCF20R & MBCF22R

MBCF5G & MBCF6G

Precision control system

High precision Microcomputer control with touch screen display.
Parameters can be modified at any time during the running without stopping the machine. Furnished with special key for display of centrifugal force to observe the centrifugal force at any time.

Ergonomic design

MB-6000R optional rotors and adapters
Electric door lock to ensure safe running, which automatically locks once the motor is started. All-steel construction with double steel plate protection.

Stepless speed regulation

Driven by brushless AC frequency conversion motor with quiet and clean running.
Up to max. 30g unbalanced eccentric weight without the need of special trimming by weighing.

Key Features

- Microcomputer control, LCD display
- Driven by AC frequency conversion motor
- Imported refrigeration compressor
- Speed, centrifugal synchronous display
- Magnetic induction door lock, electric door
- Full steel structure, Stainless steel centrifugal cavity

TECHNICAL SPECIFICATIONS

Parameter	Details
Model No.	MB6000R
Max speed	4200 rpm
Max RCF	5116 × g
Swing rotor capacity	6 × 1000 ml
Speed accuracy	±10 rpm
Speed control system	Microprocessor, Frequency control of motor speed
Temperature range	-20 ~ +30°C
Temperature accuracy	±1°C
Noise	< 60 dB
Timer range	1 ~ 99 min / continuation
Power supply	AC 220V 50Hz
Power	2.0 KVA
Weight	260 kg
Construction	All-steel, stainless steel centrifuge chamber
Dimensions (L×W×H)	760 × 890 × 930 mm

OPTIONAL ROTORS

No.	Model	Capacity	Max Speed	RCF	Note
1	Swing bucket rotor	6 × 1000 ml	4200 rpm	5116 × g	Round hanging cup
2	Swing bucket rotor	6 × 1000 ml	4200 rpm	5116 × g	Ellipse hanging cup

Closed Loop Circulating Chiller

Precision Cooling & Heating | Continuous Operation | Lab & Industry Ready

- Closed Loop System
- ±0.5°C Precision Control
- Smart TFT Interface
- SS304 Corrosion resistant Inner and Out-
- Auto Cut-Off to prevent damage to pump & Heat-

Core Design Highlights

☑ 1. Compact & Portable Design

- Rugged, space-saving frame ideal for lab or pilot plant use.
- Mounted on lockable caster wheels for easy mobility. Ergonomic handle for maneuvering.

☑ 2. Closed-Loop Heating & Cooling System

- Continuous temperature regulation between +5°C to +70°C.
- Completely sealed loop prevents evaporation, contamination, and fluid degradation.

Designed for 24/7 operation in sensitive applications (fermenters, reactors, diagnostics, etc.)

Control & Interface

☑ 3. Microprocessor-Based TFT Touchscreen Controller

- 5" TFT display with intuitive UI.
- Real-time temperature monitoring with data logging.
- Adjustable temperature setpoints and PID control for heating.
- Data logging and recall up to 5 years.
- Password-protected settings for process security.

User Access control to prevent unauthorized access to controller settings

Safety & Protection

☑ 4. Embedded Safety Features

- Temp Deviation Alarm: User-definable high/low thresholds.
- Sensor Failure Detection: On-screen alert

Visual & audible alarms with logging for fault analysis.

☑ 5. Auto Cut-Off on No Flow

- Integrated flow sensor halts operation if liquid circulation fails.

Protects pump and heater from dry run or overheating damage.

Pumping & Circulation

☑ 6. Dual Pump Configuration

- Separate suction and delivery pumps for flexible plumbing.
- Ideal for systems requiring both draw and push (e.g., jacketed vessels, remote process lines).

Pumps with overload protection and variable speed control (optional).

Durability & Construction

☑ 7. Full Stainless Steel SS304 Body

- Inner and outer surfaces made from SS304 for corrosion resistance.
- Withstands harsh lab chemicals and high-moisture environments.

Smooth welds and rounded edges for easy cleaning and hygiene compliance.

Connectivity & Data Handling

☑ 8. USB Data Interface

- Quick access to logged process data via USB export.
- Compatible with pdf for GLP/GMP documentation.

Option for RS485 or Ethernet port for BMS integration.

Technical Features

Model	RC15
Temp Range	+5 to +70 degree Celsius
Temp Fluctuation	±0.5 degree Celsius
Tank Capacity	15Liters
Flow Rate	15L/min
Port Size	½"
Power	5A, 230V AC

GMP Model Washer Disinfector

Ultimate Hygiene | Unmatched Compliance

Designed for Regulatory Compliance and Performance

The GMP Model Washer Disinfector is a high-performance, automated cleaning and disinfection system developed for critical cleaning processes in pharmaceutical, biotech, healthcare, and laboratory environments. It ensures validated and repeatable results for the cleaning of glassware, instruments, utensils, and product-contact parts.

Built in adherence to cGMP and GLP standards, this washer disinfector features advanced PLC-based control, hygienic construction with SS 316L interiors, crevice-free design, and full process documentation for regulatory compliance.

Alkaline Detergent for Washer–Disinfectors

- Low-foaming formulation for automated washer–disinfectors
- Effective removal of proteins, oils, grease, and organic residues
- Strong alkaline system for reliable cleaning performance
- Compatible with stainless steel and common lab materials with corrosion protection

Key Features & Benefits

- cGMP-Compliant Design: SS 316L chamber with smooth welds, sloped floors, and no dead legs to prevent microbial growth and ensure total drainability.
- Automated Water Inlet with Measuring Sensor: Equipped with a sensor-based water inlet system that automatically controls and measures the exact volume of water required for each cycle, ensuring consistency, efficiency, and reduced wastage.
- Fully Automated Cycles: Microprocessor based control with HMI interface, programmable recipes, real-time cycle display, and error diagnostics.
- Customizable Racks & Load Supports: Modular racks, nozzles, and spray arms to accommodate various item sizes and shapes.
- Validated Cleaning Performance: Configurable temperature, chemical dosing, and spray patterns to ensure consistent results batch after batch.
- Spray System
  - High-pressure rotary spray arms mounted on multiple levels for uniform coverage
  - 360° spray pattern ensuring all surfaces are reached, even in complex load geometries
  - Removable and easily cleanable spray nozzles to prevent clogging or contamination
  - Independent top, middle, and bottom wash zones with dedicated spray manifolds
- Water Heating System
  - Dual-mode heating system: Electric heaters or external steam source
  - PID-controlled temperature regulation up to 95°C for consistent thermal performance
  - Quick heat-up times and energy-efficient operation
  - Over-temperature safety cut-off and insulation for energy conservation
- Cleaning Agents & Dosing
  - Automated multi-channel chemical dosing system for:
  - Detergents (alkaline/neutral)
  - Neutralizers
  - Disinfectants or rinse aids
  - Built-in peristaltic pumps with flow calibration for precise dosing

- Secure chemical containers with low-level alarms and interlocks
- Compatible with pharma-grade and lab-safe cleaning agents

- Auto Drain System
  - Fully sloped chamber floor for complete water evacuation
  - Sensor-based auto-drain function after each cycle to avoid stagnation
  - Drain valve with thermal insulation and CIP (Clean-in-Place) capability
  - Drain line equipped with temperature monitoring and safety shut-off
  - Integrated Drying System: HEPA-filtered hot air drying module with adjustable temperature and flow control to ensure rapid and clean drying.
  - Integrated Thermal Disinfection: Ensures effective microbial elimination by maintaining a final rinse temperature of 93°C, meeting GMP and hygiene compliance standards without the need for chemical disinfectants.
- Safety Features: Door interlock, emergency stop, auto-shutdown, thermal protection, and low water-level detection.
- Cycle Data Logging: Automatically records detailed cycle parameters including temperature, duration, water usage, and disinfection status, providing traceability, validation support, and compliance with GMP and audit requirements and cycle recording for compliance with regulatory bodies.

Typical Applications

- Cleaning of glassware in QC and microbiology labs
- Cleaning of manufacturing parts (SS scoops, spatulas, trays)
- Sterile area transfer utensils and components
- R&D lab cleaning and sterilization
- Medical and surgical tool disinfection
- Cleanroom equipment cleaning prior to sterilization

Industries Served

- Pharmaceuticals & Biopharma
- Research & Development
- Hospitals & Diagnostics
- Medical Device Manufacturing
- Food & Beverage (hygienic applications)
- Chemical & Agrochemical Labs

Technical Specifications

Parameter	Specification
Model No	WDI250
Chamber Material	SS 316L
External Body	SS 304
Chamber size	600x600x600mm
Chamber Volume	216 Liters
Number of Doors	Single downward swing
Cleaning Cycles	Pre-Wash, Wash, Rinse, Final Rinse, Disinfection, Drying.
Drying	Integrated HEPA Hot Air Dryer
Temperature Range	Ambient to 95°C
Detergent Dispensing	Auto-dosing with calibration
Neutralizer Dispensing	Auto-dosing with calibration
Cycle Control	Microprocessor with 5" Touchscreen HMI
Power Supply	230V / 415V, 50Hz, 3 Phase
Heating Type	Electrical / Steam (Optional)
Dosing Pump	DC Peristaltic Pump
Main Pump Motor	0.75Hp, Single Phase, Chemical Resistant Impeller & Head
Noise Level	< 70 dB
Drainage	Fully sloped base with auto drain sensor

Validation & Documentation

Complete Validation Support: IQ / OQ / PQ protocols included with every unit

Compliance Certifications: CE, ISO 9001:2015, ISO 13485 (upon request), cGMP adherence

Software & Controls:

cGMP compliant design

Digital report generation and cycle data backup

Benefits of Our GMP Washer Disinfector

Reduces manual handling and cross-contamination risk

Saves time with fast, programmable cycles

Lowers utility consumption with intelligent water and energy optimization

Ensures batch-to-batch consistency

Increases compliance and audit-readiness

MBRE100-Pro

Digital Rotary Evaporator

It is highly used in chemical industries, pharmaceutical Industries and also higher learning institutions

FEATURES

- Digital LCD display of both rotation speed and heating temperature allows optimal control of all distillation processes.
- Automatic motor lift releases the evaporating flask to a safe position in case of power failure.
- 5 L heating bath with wide temperature range from room temperature to 180 °C. Water/oil heating mode can be changed only through a switch.
- Overheating protection temperature at 220 °C.
- Boil-dry protection — automatically powers off if heating without water/oil in the heating bath.
- Speed range from 20 to 280 rpm, with interval operation in clockwise and anticlockwise directions for drying processes.
- Condenser (cooling surface 1700 cm^2) with excellent cooling effect.
- Ejection mechanism ensures easy removal of the evaporating flask.
- Double-spring sealing ring made of PTFE provides excellent sealing performance.
- Optional glassware with explosion-proof film available.

Parameter	Specification
Motor type	Brushless DC motor
Speed range	20 – 280 rpm
Display	LCD (speed, temperature, time)
Rotation direction	Clockwise / counter-clockwise
Heating temperature range	Room temp to 180 °C
Temperature control accuracy	Water: ±1 °C Oil: ±3 °C
Maximum evaporation capacity (H_2O)	1.5 L / h
Heating power	1300 W
Lift stroke	Motorized 150 mm
Timer range	1 – 999 min
Dimensions (W × D × H)	465 × 457 × 583 mm
Weight	15 kg
Permissible ambient temperature	5 – 40 °C
Permissible relative humidity	≤ 80 % RH
Protection class	IP 20
USB interface	Yes
Voltage / frequency	220–240 V / 50–60 Hz or 110–120 V / 50–60 Hz
Power consumption	1400 W
Evaporating flask volume	50 – 5000 mL (optional thickened glass axis compatible with 5 L flask)

MBRE100-S

LED Digital Rotary Evaporator

MBRE100-S LED Digital Rotary Evaporator is a reliable, basic laboratory instrument suitable for evaporation, distillation, and separation of chemicals. It can be configured as a multifunctional system when combined with a vacuum pump, vacuum controller, and low-temperature circulator, providing an excellent distillation solution for various laboratory applications.

FEATURES

- 5 L heating bath with a wide temperature range (room temperature to 180 °C). Independent temperature control allows it to be used separately.
- Water/oil heating mode can be switched easily.
- Manual lift combined with auxiliary lift for precise glassware positioning.
- PID temperature control ensures high accuracy at ±1 °C (water).
- Overheating protection temperature: 220 °C.
- Boil-dry protection — automatically powers off the heater when operating without liquid.
- Speed range: 20 – 280 rpm, with interval operation in clockwise and anticlockwise directions for drying.
- Condenser (cooling surface 1200 / 1700 cm^2 available) offers fast liquid condensation with excellent cooling efficiency.
- Ejection mechanism ensures easy exchange of evaporating flasks.
- Adjustable immersion angle for improved distillation efficiency.
- Double-spring sealing ring made of PTFE ensures an excellent airtight seal.
- Compatible with the entire range of MBRE100-Pro glassware.
- Optional explosion-proof glassware available.
- High-temperature warning when bath exceeds 180 °C

Chemical resistance

Overheating protection

Compatible with wide range of glassware

Parameter	Specification
Motor type	Brushless DC motor
Speed range	20 – 280 rpm
Display	LED (speed, temperature, time)
Rotation direction	Clockwise / Counter-clockwise
Heating temperature range	Room temp to 180 °C
Temperature control accuracy	Water: ±1 °C Oil: ±3 °C
Max. evaporation capacity (H_2O)	1.5 L / h
Heating power	1300 W
Lift stroke	Manual 110 mm + Auxiliary 120 mm
Interval timer range	1 – 999 s
Dimensions (W×D×H)	Main unit: 465 × 457 × 583 mm Bath: 285 × 285 × 240 mm
Weight	Main unit 7 kg Bath 3 kg
Permissible ambient temperature	5 – 40 °C
Permissible relative humidity	≤ 80 % RH
Protection class	IP 20
USB interface	Yes
Voltage / frequency	220 – 240 V / 110 – 120 V 50 / 60 Hz
Power	1400 W
Evaporating flask volume	50 – 5000 mL (compatible with 5 L flask and thickened glass axis)

Optional Add-ons

Distillation System Connections (for MBRE100-Pro & MBRE100-S)

Diaphragm Vacuum Pump (C series)

Model: C410 Chemistry Design Diaphragm Pump

Specifications:

- Maximum vacuum: 13 mbar
- Work mode: Continuous operation
- Nozzle size: 8 mm
- Power: 95W
- Motor speed: 1450 rpm
- Noise : 50dB
- Flow rate:

Mbar	1000	880	750	600	480	280
L/min	25	22	20	12	7.5	5

Description	Material / Size	Remarks	
Vacuum seal	PTFE + Viton	High durability and chemical resistance	
Evaporation flask clip (Red)	NS 29/32	Standard 1 L–3 L flasks	
Evaporation flask clip (Green)	NS 24/29	Small flasks	
Evaporation flask clip (Black)	NS 45/40	For 5 L / 3 L flasks	
Evaporation bottle spring	Stainless steel	Used with MBRE100 series evapora-	
Cooling water silicone hose line	Silicone	Compatible with condensers	
Secondary condenser component	Glass + PTFE	Enhances cooling capacity	
Rotary evaporator protective shield (MBRE100-Pro)	Polycarbonate	Explosion-resistant safety shield	
Rotary evaporator protective shield (MBRE100-S)	Polycarbonate	Ensures operator safety	

Regulator / Moisture Trap

Material: PVDF, PTFE, ABS, Borosilicate Glass, Stainless Steel
Provides chemical resistance and long service life in harsh lab environments.

DISTILLING

VERTICAL

Glassware type	Volume	Cooling Surface
Evaporating flask (NS29/32) Receiving Flask(KS35/20)	1000mL	1700cm²
Evaporating flask (NS24/40) Receiving Flask(KS35/20)	1000mL	1700cm²
(Coated) Evaporating flask (NS29/32)	1000mL	1700cm²
(Coated) Evaporating flask (NS24/40)	1000mL	1700cm²
Evaporating flask (NS29/32) Receiving Flask(KS35/20)	1000mL	1200cm²
Evaporating flask (NS24/40) Receiving Flask(KS35/20)	1000mL	1200cm²

DIAGONAL

Glassware type	Volume	Cooling Surface
Evaporating flask (NS29/32) Receiving Flask(KS35/20)	1000mL	1700cm²
Evaporating flask (NS24/40) Receiving Flask(KS35/20)	1000mL	1700cm²
(Coated) Evaporating flask (NS29/32) Receiving Flask(KS35/20)	1000mL	1700cm²
(Coated) Evaporating flask (NS24/40) Receiving Flask(KS35/20)	1000mL	1700cm²

HEATING BATH

Item	Description	Volume
Heating bath for MBRE100-Pro	220 V / 110 V, stainless steel construction	5L
Heating bath lid for MBRE100-S	Improves distillation efficiency and prevents liquid splash	5L
LED heating bath	220–240 V / 110–120 V, 50 / 60 Hz	5L
Heating Bath Lid	Heating Bath lid for MBRE100-S, improve distillation efficiency & ensure personnel safety from liquid splash	

GLASSWARE

EVAPORATING FLASK

Volume	Size
50mL	NS 29/32
100 mL	NS 29/32
250 mL	NS 29/32
500 mL	NS 29/32
1000 mL	NS 29/32
2000 mL	NS 29/32
3000 mL	NS 29/32
50mL	NS 24/40
100 mL	NS 24/40
250 mL	NS 24/40
500 mL	NS 24/40
1000 mL	NS 24/40
2000 mL	NS 24/40
3000 mL	NS 24/40

RECEIVING FLASK

Volume	Size
100 mL	KS 24/29
250 mL	NS 24/29
500 mL	NS 24/29
1000 mL	NS 29/32
2000 mL	NS 29/32
3000 mL	NS 45/40

CONNECTOR

Volume	Size
-	NS 29/32 , NS 24/29
-	NS 29/32 , NS 19/26
-	NS 29/32 , NS 14/23
-	NS 24/40 , NS 19/22
-	NS 24/40 , NS 14/20
-	NS 24/40 , NS 29/42

DISTILLING SPIDER WITH 5 FLASK (WITHOUT FLASK)

Volume	Size
-	NS 29/32 , NS 24/29
-	NS 29/42, NS 24/40

FOAM BRAKE

Volume	Size
250mL	NS 29/32
250mL	NS 24/40

GLASS AXIS

Description	Size
Glass Axis	NS 29/32 , NS 24/40
Thickened	NS 24/40 , NS 29/32

HORIZONTAL LAMINAR AIR FLOW

Precision Protection for Sensitive Applications

The Horizontal Laminar Air Flow Cabinet, also known as a Tissue Culture Hood, is engineered to provide a clean and controlled environment for handling particle-sensitive materials such as biological samples and semiconductor wafers.

- HEPA-Filtered Airflow: Delivers ultra-clean air through a high-efficiency particulate air (HEPA) filter to ensure a sterile workspace.
- Smooth Laminar Flow: Ensures consistent, unidirectional airflow across the work surface, minimizing turbulence and contamination.
- Sample Protection: The horizontal airflow effectively shields your samples from external contaminants, including the user.
- Application-Specific Design: Ideal for microbiology, tissue culture, electronics, and other contamination-sensitive tasks.

TECHNICAL SPECIFICATIONS

Model No	HLF900	HLF 1200
Working area (Feet)	3x2x2	4x2x2
Direction of flow	Horizontal	
Velocity	100 FPM +/- 20%	
Noise level	<65 db A +/- 5%	
Material of construction	Outer material: MS Powder coated, Inner material made up of Stainless steel	
Working table	Made of perforated stainless AISI 304 grade.	
Front door	Protected acrylic door front window with dual hinged opening	
HEPA filter / Inflow and exhaust	H-14 filter present; Particle retention: 0.3 micron; grade with efficiency of 99.999% as per EN 1822 standards; Pressure drop: 23mm WG. Pre-Filter: G3 Washable Prefilter with upto 10 microns particle retention	
Blower assembly	Single phase, 2600 RPM Motor, directly coupled with a pair of aluminum centrifugal impeller.	
UV Management	Programmable UV Decontamination	
Control	Micro-processor controlled or Manual Operating	
Ultra violet lamp	3 feet, 30 watt (If Required)	
Illumination	LED 24W Internal Lighting	
Standard accessories	Base stand, Magnehelic differential pressure gauge, additional power points and wire chord.	
Power supply	220V, single phase, 50Hz.	
Sash Options	Acrylic Folding Glass or Vertical Roll Up	
Side Walls	8mm thick Glass	

REVERSE LAMINAR AIR FLOW CABINET

Reverse Laminar Air Flow System is designed to provide highest level of safe and effective removal of work generated airborne contaminants & to provides Class 10 protection for the operator and the nearby environment.

RLAF is a kind of partial cleanroom equipment for filling, refilling, weighing and sampling of raw material and compounds. Air is extracted via the back of the laminar flow booth through a full rear plenum space and is designed to give a laminar pull of air, with a speed of 0.5 m/s across the open front face of the laminar flow booth. This creates a non-turbulent airflow and extracts any product emissions from the work area and operator's breathing zone.

KEY FEATURES

Superior Operator Protection
Reverse airflow design minimizes direct exposure to hazardous particles.

Effective Contamination Control
Prevents cross-contamination by directing air away from the work zone.

HEPA Filtered Clean Air
High-efficiency filtration ensures removal of fine particulates.

Uniform Airflow Distribution
Maintains consistent and stable airflow across the working area.

Ideal for Powder Handling Applications
Perfect for dispensing, sampling, and weighing operations.

Low Noise & Energy Efficient
Designed for quiet operation with optimized power consumption.

TECHNICAL SPECIFICATIONS

MODEL	R-CAV1200	R-CAV1500	R-CAV2600
DIMENSION(External) WXDXH	1400X1990X2300	1800X2290X2300	2630X2650X2300
DIMENSION(Internal) WXDXH	1220X1220X1920	1525X1525X1920	2450X1880x1920
Dispensing Filter	H14 HEPA Filter with @ 99.999% down to 0.3µ		
Suction Filter	1. G3 Pre-filter (Filter class EN779:2012) Eq. to EU5 rating 2. H13 HEPA Filter @ efficiency 99.99%		
Air Velocity	0.45m/s ±15%		
Material Of Construction	AISI304 Stainless Steel Inner & Outer		
Illumination	18W 4Nos >1200Lux		18W 6Nos >1200Lux
Control System	Micro-controller with 16x4 LCD Display to control Blower, LED light & programmable UV lamp ON/OFF.		
Blower	Heavy Duty high efficiency Dual Centrifugal blowers.		
Audio/Visual Alarm	A/V alarm function for differential pressure variation & blower tripping		
Optional Features	2 Nos. Sodium Vapour lamp 35W each PVC Antistatic Transparent Curtain SS Door with magnetic or manual interlocking system 2 Nos UV Lamp for Sterilization Refrigeration unit for temperature control.		
Note : Customization available according to the size and features required by user.			

CEILING SUSPEND LAMINAR AIR FLOW UNIT

EXPERIENCE THE DIFFERENCE OF CLEAN AIR

Ceiling suspended laminar airflow (CSLA) systems are designed to provide a clean, controlled environment for critical applications in healthcare, pharmaceutical, and other industries. By delivering a gentle, downward flow of HEPA-filtered air, CSLA systems effectively remove airborne contaminants, creating a safe and healthy workspace.

BENEFITS OF CSLA SYSTEMS

Improved air quality: CSLA systems remove up to 99.97% of airborne particles, including bacteria, viruses, and dust.
Reduced risk of infection: CSLA systems help to protect patients, staff, and products from airborne contaminants.
Enhanced comfort: CSLA systems provide a uniform, comfortable airflow that can help to reduce heat stress.
Energy effi ciency: CSLA systems are designed for low energy consumption.

FEATURES THAT ELEVATE CSLA SYSTEMS TO THE APEX OF CLEAN AIR SOLUTIONS

HEPA-Filtration Excellence: HEPA (High-Efficiency Particulate Air) filters are the heart of CSLA systems. Advanced HEPA filters capture even the most minute particles, ensuring exceptional air quality. . These filters are designed to remove up to 99.999% of airborne particles, including bacteria, viruses, and dust

Prefilters are used to protect the HEPA filters from larger particles, such as dust, lint, and hair. This extends the life of the HEPA filters and helps to ensure that the CSLA system is operating at peak performance

Plenum Design for Unobtrusive Effi ciency: The plenum design ensures a uniform distribution of airflow, maximizing coverage and minimizing air turbulence.

•Energy-effi cient blowers are used to draw air through the HEPA filters and distribute it throughout the workspace. These blowers are designed to minimize energy consumption while still providing the necessary airflow to maintain a clean environment.

•A magnehelic gauge is used to measure the pressure difference between the upstream and downstream sides of the HEPA filters. This pressure difference is an indication of the amount of airflow passing through the filters.

•Stainless Steel Construction: CSLA systems are typically made of stainless steel, which is a durable and easy-to-clean material. Stainless steel is also resistant to corrosion and other damage, making it a good choice for use in critical environments.

A WIDE RANGE OF APPLICATIONS FOR DIVERSE INDUSTRIES

CSLA systems are the cornerstone of clean air solutions across a variety of industries:
Healthcare: Operating rooms, patient care areas, pharmaceutical cleanrooms
Laboratories: Microbiological labs, research and development facilities
Electronics: Semiconductor manufacturing, cleanroom environments
Animal Research: Animal housing areas, research facilities

Why Choose CSLA Systems?

When it comes to protecting your critical environment, safeguarding health, and promoting productivity, Mehrotra Biotech make CSLA systems are the unequivocal choice. With their unparalleled air filtration, infection prevention, energy-efficient operation, and wide range of applications, CSLA systems provide the ultimate clean air solution.

If you are looking for a clean air solution for your critical application, contact us today to learn more about CSLA systems.

TECHNICAL SPECIFICATIONS

MODEL NO.	CLAF1500
OUTER DIMENSIONS (LxHxD)	1630 x 1330 x 700mm
MATERIAL OF CONSTRUCTION	STAINLESS STEEL SS304
MAIN LAMINAR FLOW FILTER	H14 HEPA FILTER ≥ 99.999% @0.3µm as per EN1822
PREFILTER	G3 TYPE upto 10µm FILTERATION
MAIN FILTER SIZE	1500x1200x69mm
BLOWER	DIRECT DRIVE 3 PCS ENERGY EFFICIENT BACKWARD CURVED AC BLOWER
CONTROLS	MANUAL ON OFF BUTTONS FOR FAN & TUBELIGHT
GUAGE	DIFFERENTIAL PRESSURE MAGNEHELIC GUAGE
ILLUMINATION	2X 36WATT LED BATTEN

M LAB

TURNKEY SOLUTIONS

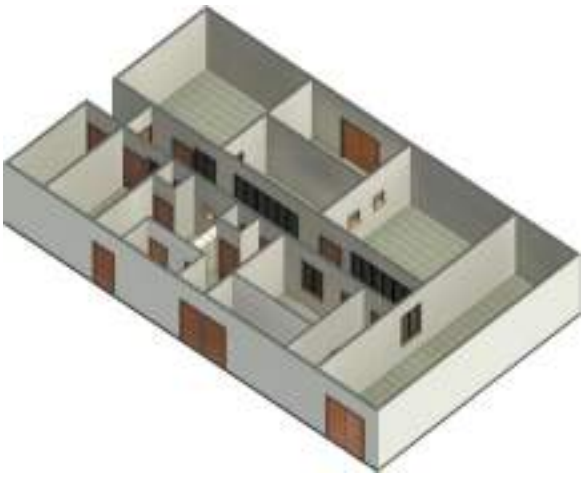
Microbiological labs deal with harmful and infectious agents. Facilities dealing with hazardous pathogens must take extreme precautions to prevent infection of microbiologists and lab technicians. Adequate precautions are also necessary to limit the contamination of the work environment and the community at large.

Under the name of MLAB, we set-up BSL Lab facility which is designed according to the highest standards of Quality, Biological safety, Reliability and Usability

Services Offered Under the MLAB

- Designing architectural and engineering layouts, including plumbing, electrical, HVAC, fire and safety systems, and waste disposal.
- Project commissioning & Installation of essential services.
- Supply & Installation of HVAC and Fire Safety systems
- Supply & Installation of Laboratory Furniture.
- Supply & Installation of Laboratory Equipment's including indigenous equipment's and imported equipment's.

Layout Planning



Creating Walkthroughs and 3D Layout

Commissioning of Project from initial phase

Installation of Panels & HVAC

Key Features offered under MLAB

1. Biosafety Measures

- Containment Levels: Designated containment measures for each BSL level (1-4), ensuring protection against infectious agents and pathogens.
- Controlled Access: Restricted entry with biometric or keycard systems, allowing only authorized personnel to access different lab zones.
- HEPA Filtration Systems: Multi-stage air filtration with HEPA filters to prevent contaminants from exiting the lab environment.
- Negative Air Pressure: Prevents contaminated air from leaving the lab by maintaining lower pressure inside the containment areas.

2. Engineering Controls

- Effi cient HVAC System: Ensures proper air circulation, temperature control, and pressure differentials to maintain a safe environment.
- Fume Hoods and Biological Safety Cabinets: Installed for handling hazardous materials and ensuring containment of infectious agents.
- Automated Controls: Real-time monitoring and automation systems for environmental parameters like humidity, airflow, and temperature.

3. Safety Protocols

- Emergency Eyewash and Shower Stations: Strategically placed to provide immediate decontamination if exposure occurs.
- Advanced Fire Safety Systems: Including alarms, sprinkler systems, and fire-retardant materials specific to lab needs.
- Autoclaves for Waste Disposal: Ensures sterilization of infectious waste, maintaining safety in disposal.

4. Lab Equipment and Layout

- Dedicated Lab Zones: Separation of clean and contaminated areas to prevent cross-contamination.
- Redundant Power and Backup Systems: Uninterruptible power supplies (UPS) and generators to maintain essential functions during power outages.
- Ergonomic and Modular Design: Allows for flexible lab configurations and safe, efficient workflows.

5. Data and Monitoring Systems

- Real-Time Monitoring and Reporting: For environmental parameters and access control logs, ensuring compliance with safety protocols.

6. Compliance and Quality Control

- Certification and Compliance Checks: Regular validation and certification in line with regulatory standards (e.g., WHO, CDC, and NIH guidelines).
- Regular Audits and Maintenance: Routine inspections and equipment servicing to maintain compliance and operational efficiency.
- Employee Training Programs: Ongoing training in biosafety protocols, handling hazardous materials, and emergency response.

State-of-the-Art BMS System

Touchscreen Controller with automatic Controlling of Temperature, Pressure & Humidity

Introducing our advanced Building Management System (BMS) for BSL labs, designed to ensure precise control and monitoring of critical environmental conditions. This comprehensive system seamlessly manages temperature, negative pressure, and humidity levels within the lab, creating a controlled and safe environment essential for sensitive research.

- Equipped with intuitive PC software, this BMS can be accessed and managed remotely via a LAN connection, providing real-time monitoring from any secure location within the network.
- The software is designed with a user-friendly interface that allows lab personnel to adjust settings, view current conditions, and review historical data at any time.
- One of the standout features is its data recording capability, which logs all parameter changes and trends, enabling thorough analysis and compliance with regulatory standards.
- To enhance lab safety, the BMS includes an alert system that immediately notifies personnel if any parameter goes out of the defined safe range.
- This system ensures a fully compliant and optimized environment, minimizing risks and enhancing the operational efficiency of the BSL lab.

With our BMS, BSL labs can maintain the rigorous standards required for research, confidently supported by a system designed for reliability, safety, and ease of use.

OUR CLIENTS

Government Institutions

- Central Drug Research Institute, Lucknow.
- Central Institute of Medicinal and Aromatic Plants, Lucknow.
- Indian Vetnary Research Institute, Bareilly.
- Indian Institute of Toxicology Research, Lucknow.
- Institute of Nuclear Medicine and Allied Sciences, Delhi.
- HPCL, Bangalore.
- King George Medical University, Lucknow.
- Sanjay Gandhi Post Graduate Institute of Medical Sciences, Bareilly.
- Post Graduate Institute of Medical and Research, Chandigarh.
- All India Institute of Medical Sciences New Delhi
- AIIMS RISHIKESH
- NBRI Lucknow
- National Institute of Virology , Pune
- FIND Delhi
- Karnataka Medical Supplies Corporation.
- Regional Forensic Science Lab New Delhi
- Institute Of Food Security, Food Corporation Of India, Haryana
- AIIMS Raipur
- CSIR- Bharteeya Petroleum Sansthan, Dehradun
- AIIMS Bhubneshwar
- AIIMS Raebareli
- Gujrat Forensic Science University
- IIT Ropar
- IIT BHU
- IIT Kanpur
- Banaras Hindu University
- HPCL-Mittal Energy Limited
- Maharashtra Pollution Control Board
- Darbhanga Medical College
- Many More.....

Private Institutions

- Dr, Reddy's Laboratories Hyderabad.
- NATCO Pharma, Hyderabad.
- Syngene International Bangalore
- FDC India Mumbai
- Bharat Serum
- CADILA
- CIPLA
- ACTREC, Mumbai
- Sysmax Laboratories Mumbai
- Reliance Life Science Mumbai
- LVPEI Hyderabad
- MSN Laborotories Hyderabad
- Larsen and Toubro Limited
- Siemens Healthcare
- Avaca Pharma
- Glochem Industries
- Pinnacle Lifescience
- Raghav Lifecsiences Hyderabad
- Abro Pharma
- Sun Pharma
- Gland Pharma Hyderabad
- Macleods Pharma
- Pannacea
- Lupin Limited
- Meyer Organics
- Sucantis
- Indian Immunologicals Ltd., Hyderabad
- Swati Spentos
- Mankind Pharma
- India Pesticides Ltd, Lucknow
- Quest Pharma, Nepal
- Many More.....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