

Integrated Cleanroom Technologies Pvt. Ltd.

iCLEAN[®]

(TTE GROUP COMPANY)



CLEANROOM EQUIPMENT

Cleanroom Equipment

- ◆ Pass Box
- ◆ Laminar Airflow Unit
- ◆ Mist Shower
- ◆ Sterile Trolley
- ◆ Bio-Safety Cabinet
- ◆ Dispensing & Sampling Booth

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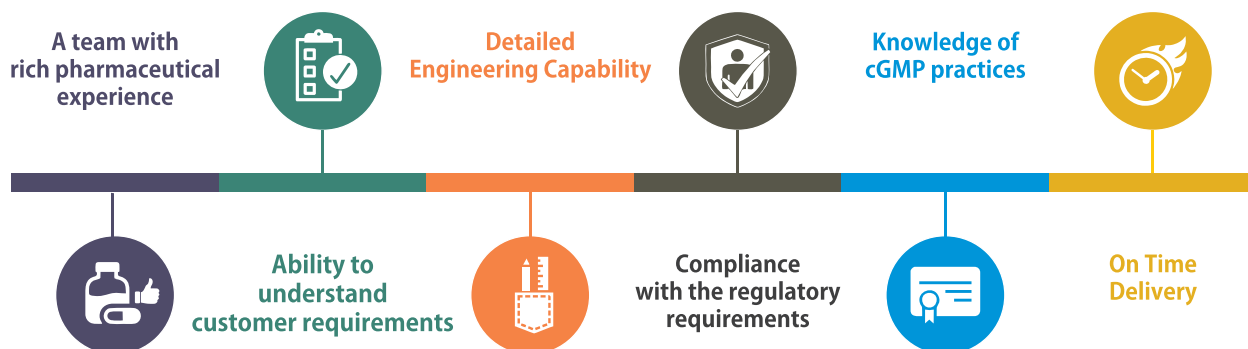
About **iCLEAN**

Integrated Cleanroom Technologies Private Limited (iCLEAN) was established in 2003 primarily to serve the cleanroom requirements of customers, which were until then serviced through imports. As pioneers in this field, the solutions from iCLEAN were readily accepted by the customers. Since then iCLEAN with its unflinching focus on customer requirements evolved into the largest cleanroom partition manufacturers in India.

The state-of-the-art manufacturing facilities equipped with CNC machinery, top class powder coating line and in-situ high pressure foaming with a manufacturing capacity of 1200 Units/Annum enabling iCLEAN to meet the divergent requirements and specifications and services of the customers. Branch offices operating from Mumbai, Delhi, Chennai, Ahmedabad and Bangalore ensure faster reach to our customers.

iCLEAN's committed and motivated team of experts with vast experience in the Pharmaceutical and Electronics industry keeps itself updated with the ever changing needs of the industries being served by us. iCLEAN products are designed to meet operational flexibility and confirm to stringent quality norms as per cGMP standards.

Our **CORE STRENGTHS**



CLEANROOM EQUIPMENTS

iCLEAN offers Cleanroom equipment within the Cleanroom for Pharmaceuticals, Biotech, Microelectronics, Semiconductor, Laboratory and Hospitals. iCLEAN provide tailor made solutions and design cleanroom equipments for specific use. The equipments are designed with durability, ease of use, compactness and aesthetics in focus. iCLEAN design engineers have incorporated many small features that differentiates our products. iCLEAN product standardization ensures the deliveries are faster and also enables easy access to the spares of each equipment. iCLEAN design engineers have also worked to ensure these equipments integrate easily with our cleanroom partitions.



PASS BOX



AIR FLOW UNIT



AIR SHOWER



MIST SHOWER



BIO-SAFETY CABINET



DISPENSING & SAMPLING BOOTHS

PASS BOX

iCLEAN manufactures Static and Dynamic pass boxes meeting the customer specific requirements and to the highest standards.

In pharmaceuticals manufacturing facilities, it is essential to minimise man / material movement and avoid cross contamination between different classified areas to achieve desired classification and to maintain integrity of products and processes. Pass Box is designed to allow material transfer without much personnel movement. It also aids controlling ingress of particulate contaminants into cleanroom from different classified/unclassified areas.

iCLEAN also manufacture the units with flameproof constructions as per end user requirements



AIR FLOW UNIT

Air flow unit offers proven protection for samples and processes. The work area is continuously supplied with positive pressure.

Unidirectional Air Flow Units are designed for offering highest product protection by providing ISO Class 5 work area for handling critical process.

The work area is continuously supplied with positive pressure HEPA filtered Vertical/Horizontal air flow. The laminarity of the flow prevents cross contamination between the items handled in the working space.

Horizontal LAFU

Vertical LAFU

Mobile LAFU

Ceiling LAFU



Static Pass Box

- Double Walled Construction
- Electro-magnetic Interlocking Doors
- Mechanical / Pneumatic interlocking (Optional)

Dynamic Pass Box

- Two Stage filtration
- Statically & Dynamically balanced Motor-Blower assembly
- Electro-magnetic Interlocking Doors

AIR SHOWER

Air Shower is designed to supply Class 100 HEPA filtered air at high velocity to remove particulate matter from the person entering into the CleanRoom.

Air shower is a self-contained air chamber installed at the entrance to cleanrooms in order to minimize the amount of particulate contaminants entering the cleanroom. Personnel move through the air shower while particulate contaminants are washed off with high velocity HEPA-filtered air jets. The high air velocity of 6000 FPM ensures efficient scrubbing action necessary to remove particulate matter. Contaminated air is then taken through the bottom of the unit, filtered, and re-circulated into the chamber.

Two stage filtration- EU6 and EU 14

SS 304 doors with double walled flush glass view doors & door closer

**Air cleanliness
ISO Class 5 (ISO 14644-1:1999 (E))**

Air Velocities- 6000 fpm

Vibration Level - Minimum

Noise Level - Less than 70 dB





MIST SHOWER

Mist Showers are used for the control and containment of Hazardous Powders & Potent Compounds

The Misting Shower provides a fine atomized fog to affix any loose powders on the user garments to prevent the powders from becoming airborne or migrating outside of the containment during de-gowning. The additional feature of airjet cycle will be provided optionally to remove water droplets from the gowning. The contaminated water droplets will be collect at bottom of shower.

BIO-SAFETY CABINETS

All Class II cabinets are designed for work involving microorganisms assigned to bio safety levels 1, 2 and 3.

Bio-safety cabinets are designed to provide personnel, environmental and product protection. Air flow is drawn around the operator into the front grille of the cabinet which provides personnel protection. Additionally, the downward laminar flow of HEPA-filtered air provides product protection by minimizing the chance of cross-contamination along the work surface of the cabinet. Because cabinet air passes through the exhaust HEPA filter, it is contaminant-free (environmental protection). All Class II cabinets are designed for work involving microorganisms assigned to bio safety levels 1, 2 and 3. Class II cabinets provide the microbe-free work environment necessary for cell culture propagation, and also may be used for the formulation of non-volatile antineoplastic or hemotherapeutic drugs. Bio safety cabinets are available in powder coated Galvanized Steel, SS 304 / SS 316 or a combination of both.

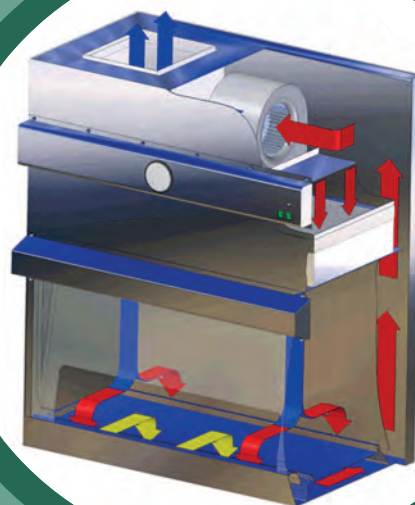
Two stage filtration- EU6 and EU 14

Double walled flushed Glass Side Panels

Sealed Fluorescent Lights with Milky White Diffuser

Clean Down Timer with Operation HOLD indicator

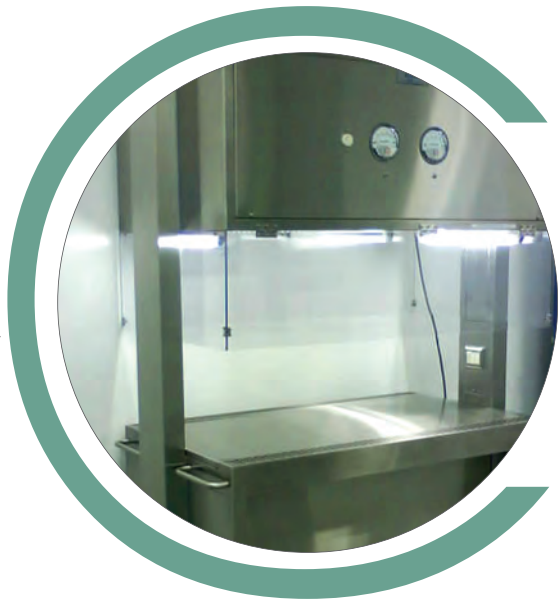
Single piece fully openable sliding toughened glass front door with counterweight arrangement



Alarm triggers in case front door is raised more than 150mm

STERILE TROLLEY

- Two stage filtration- EU6 and EU 14
- Statically&Dynamically balanced Motor-Blower assembly
- Battery back-up with inverter for 30 mins
- PU coated Lockable Castor Wheels
- SS 304 removable Shelves
- Differential Pressure Gauge



DISPENSING & SAMPLING BOOTHS

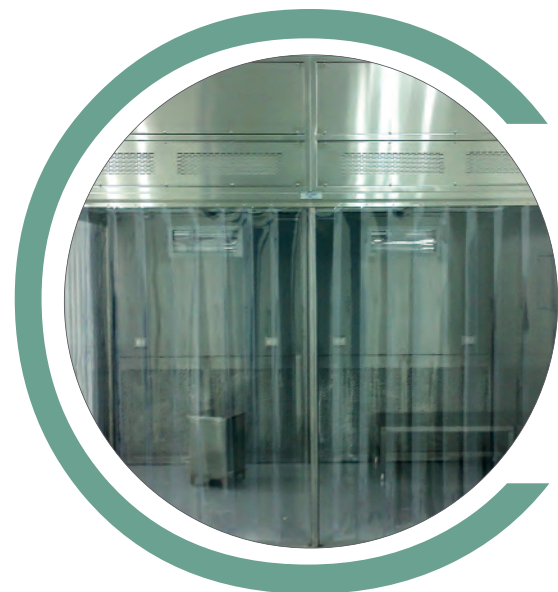
Protection from airborne contaminants generated during powderhandling operations such as sampling, charging and dispensing.

Reverse Laminar Air Flow Unit provides

- Operator Protection
- Product Protection
- Environment Protection

The downflow booth operates on a recirculatory airflow principle providing containment by air movement. A clean, constant, laminar downflow of ISO class5 air is supplied in work area suppressing any dust clouds generated during open powder processing, removing and capturing airborne particles from the operator's breathing zone. The Prefilters at the base of the rear wall, capture the airborne contaminants generated. Intake velocity at prefilters increases to ensure scavenging effect. A small percentage of air is discharged from the booth through the bleed exhaust HEPA filter to maintain the working space under negative pressure. RLAF is available in GI powder coated / SS304 / SS316 or combination.

iCLEAN also manufacture the units with flameproof constructions as per end user requirements



Three stage filtration- EU4, EU4 & Eu14

Double walled flushed Glass Side Panels

Statically & Dynamically balanced Motor

Double skin puff filled side panels

Internal covings at base

Differential pressure gauges

Global Presence



WORLDWIDE EXPORTS
to 15 Countries in
5 Continents

EXPERIENCE
of over 14 Years in
Mfg. & Management

850+ INSTALLATIONS
across the globe

900+ TEAM MEMBERS
Skilled & Committed



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As ISO 900: 2008 & 14001: 2004; BS OHSAS 18001: 2007 Certified Company.

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iClean reserves the right to change specifications without notice due to continuous product improvements.
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