



# HECTRA ENVIRO SYSTEMS

## Proficient Cleanrooms @ Perfection, Pride & Reasonably Priced !



# ABOUT US

The cleanroom industry is constantly changing, becoming increasingly complex and demanding innovative answers to the contamination free environment. HECTRA Enviro Systems offers a spectrum of products & services right from conceptualization to commissioning for both turnkey and partial projects. Our team of professionals specially mastered to evaluate in cleanroom design and execution by using latest CGMP guidelines, National and International accreditation agencies i.e., FDA, US FDA, ISO, and EUGMP standards. The result provides customized designed layouts to accomodate the specific demands of client's environmental requirements within budgets and time schedules.

Our experienced project management staff closely reviews equipment specifications and oversee all aspects of the design, reliability of products, materials used, and the effectiveness of the systems installed. This level of attention guarantees the facilities that meet our client's expectations.

we also do periodical service on contract basis to preserve the equipments efficiency and see that no major breakdowns causes and effects the systems.

## **Our Vision**

To become a best solution provider for contamination free environment by introducing the latest products and services at affordable prices.

## **Our Mission**

To maintain client satisfaction at all the times with superior workmanship, services, quality products and on time delivery schedules.





### **HECTRA Offers**

- Conceptual Study & design
- Heating Ventilation and Air-Conditioning Systems (HVAC)
- Modular Panelling
- Cleanroom Equipment
- Validation & Documentation
- Turnkey Projects

### **We serve for the following verticals**

#### **Life Sciences**

Pharmaceuticals | Bio Technology | Medical Device Manufacturing Companies  
Hospitals & Healthcare Centres

#### **Laboratory & Research**

Industrial Labs | Nanotech | Electronics | Robotics etc.



Cleanroom is a controlled environment with a low level of environmental pollutants such as dust, airborne microbes, aerosol particles, and chemical particles. Eliminating sub-micron airborne contamination is really a process of control. The only way to control contamination is to control the total environmental air flow rates, direction, pressurization, temperature and humidity. The sources of these particles need to be controlled or eliminated wherever possible. Cleanroom should be planned and manufactured using strict protocol methods. Cleanroom design will vary for different line of production facilities like Pharmaceutical, Bio-pharmaceutical, Electronics, Medical device industries and other critical manufacturing environments.



### **Conceptual Study & Design**

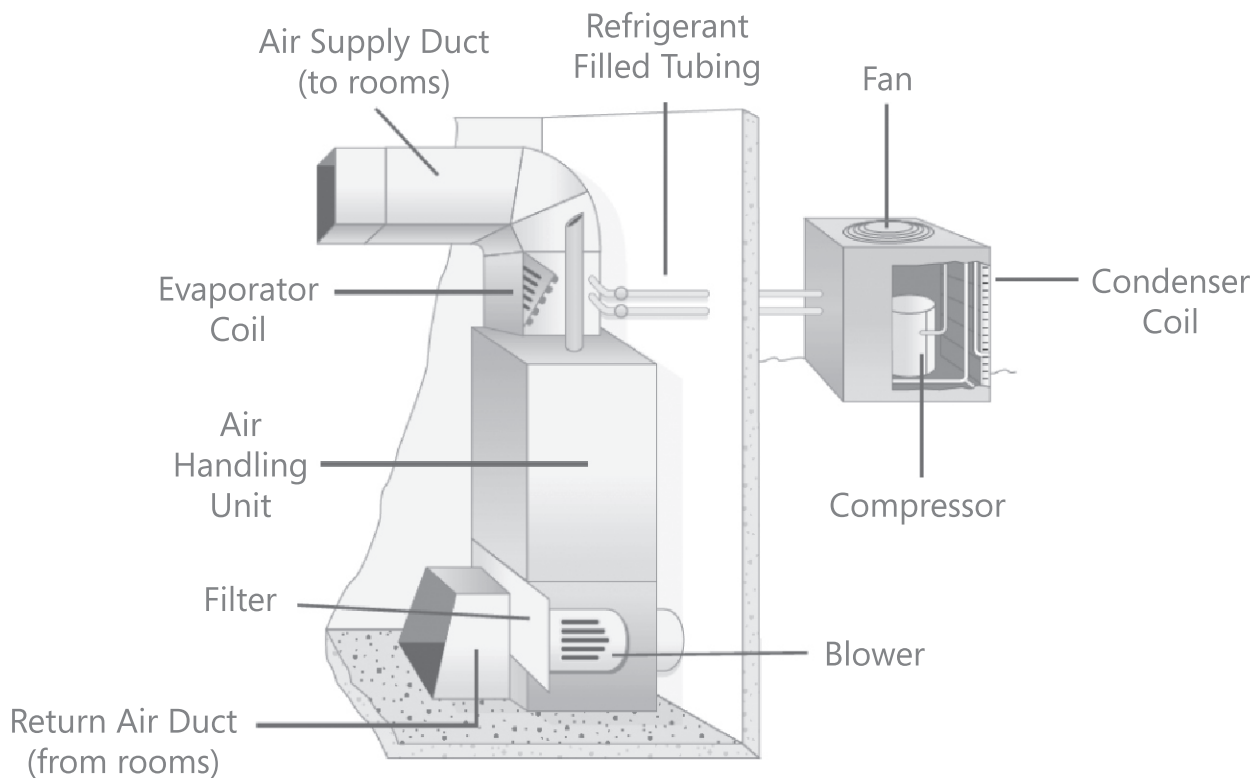
HECTRA Enviro Systems majorly concentrates on conceptual study of the cleanroom projects and design accordingly. This method helps the initial cost reduction as well as maintenance cost too. Suitable cleanroom planning will reduce the space and electrical usage for HVAC components. Our complete design will follow the latest CGMP guidelines, national and international accreditation agencies i.e., FDA, US FDA, ISO and EUGMP standards.



## Heating Ventilation and Air Conditioning Systems (HVAC)

HVAC is the system which is used to provide heating, ventilation, and air-conditioning for a controlled environment. HVAC systems play a vital role in contamination control for cleanroom projects. The major components used in cleanroom air distribution are Air Handling Units, Filter Modules, Raisers, Grills, Volume Control Dampers, Fire Dampers, Ducting, Condensing Units, and perfect insulation. While designing and manufacturing of clean air distribution components, we follow the latest guidelines and standards of ASHRAE, ISHRAE, SMACNA, and ARI.

## HVAC Diagram



### Conceptual Study & Design

1. AHU
2. Ducting
3. Insulations
4. HEPA Modules
5. Return Raisers
6. Grills & Lowers
7. Volume Control Raisers
8. Fire Dampers
9. Chilled Water & DX Systems
1. HVAC Electrification

**Air Handling Unit (AHU)** is a device used to circulate air as part of a heating, ventilating, and Air-Conditioning System. An air handler is usually a large metal box containing a blower along with motor arrangement, cooling and heating coils, different types of filter chambers, and volume control dampers. Air handlers usually connect to duct distribution system that distributes the conditioned air through the building and returns it to the AHU.

HECTRA offers wide range of Air handling units suitable for cleanroom and comfort applications. Air handling units are custom made only. We are offering thermal and non thermal Brake Air handling units also. The AHU panel thickness is available in 50mm and 25mm as per client's requirements

### **HETRA offers wide range of Air Handling Units**

1. Floor Mounted Air Handling Units
2. Ceiling Suspended Air Handling Units
3. Double Skin Air Handling Units
4. Single Skin Air Handling Units
5. Recirculation Air Handling Units
6. Ventilation Air Handling Units
7. Heat Recovery Ventilator (HRV) Air Handling Units



### **Features**

- The anodized aluminum sections are corrosion free from multiple environments. Aluminum profiles available in thermal brake and non thermal brake
- The in fill material of panels is polyurethane foam up to  $38 \pm 2$  Kg/cum densities. This will give you low heat transfer rate from atmosphere to AHU inside conditioned air. So that power consumption will go down
- Cooling and Heating coils material of construction is copper. This coil withstand for long run
- Available in 50mm and 25mm thick panel construction



## Modular Cleanroom Panels

**HECTRA** Modular wall panel system have several unique features to build State-of-the-Art Cleanrooms and other controlled environments for various applications. Self-bearing wall provided in modular units consisting of:

- Flush surfaces for easy cleaning and for complying with cGMP requirements
- Practically no maintenance ■ Good stability due to advanced architectural design
- Attractive appearance ■ Custom designed solutions from a single room to complete departments ■ Full modularity ■ Easy to assemble and dismantle

### Products

1. Wall Panels
2. Ceiling Panels
3. Covings
4. Doors
5. View Glasses
6. Return Raisers

### Material Of Construction

- High pressure laminate
- Powder coated/pre-painted
- Stainless steel



**Available in infill material of PUF/EPS/Rockwool**

**Ceiling panels available in walkable and non walkable**

**Types of panels available:** 1. Progressive 2. Non progressive

**Modular panel available thickness:** 50, 60, 80, 100, 125, 150mm

Modular cleanroom's accessories supports the cleanroom by providing control over the contaminations, micro organisms and humidity etc.

Our accessories include Aluminum Powder Coated / Anodized Covings, PVC Covings, 90° and 180° bends and room corner pieces etc. which are designed with CGMP guidelines.

## Hermitically sealed Metal Doors

The hermetically sealed metal doors have been specifically designed for the areas where hygiene and the control of air leakage is critical. The doors offered by us are extremely durable & are hermitically sealed for proper air tightness. The door has a unique wrap around frame with a neoprene seal incorporated which enables the door to seal perfectly. Our cleanroom doors are extremely durable and are available in different models for cleanrooms, and other special purposes.

### HECTRA offers the following types of Doors

1. GI powder coated Metal Doors
2. Stainless Steel (SS) Doors
3. High Pressure Laminated Doors
4. Automatic/ Semi automatic/Sliding Doors
5. Fire Proof Doors

### Special Features

- Highly durable and smooth functioning
- Attractive designer outlook
- Easily cleanable
- Hermitically sealed
- Safety assured



### Civil Wall Window and Modular Double Glazed View Panels

**HECTRA** Civil Wall Window Double Glazed View Panels are fit flush with both surfaces of the wall panel system. Each unit is constructed with two panels of 3+3 mm double layered and fixed with toughened safety glass. The two panels sit within a structured framework and air fills the space between the two panels. The window system is especially designed for the cleaning needs of the cleanroom system. It is completely silicone sealed and includes a micro-perforation profile with an integral silica gel moisture absorption system designed to eliminate fogging.



### Special Features

- Flush mounted to the walls
- Moisture adsorption facility
- Cleanroom compatible
- Available toughened
- Easily cleanable



## Floorings

**HECTRA's** Epoxy and PVC floorings are pretty attractive and are available in shiny or rough texture with protection film against water and so on. Epoxy flooring are technical floors which resists to chemicals, mechanical and stress factors. The great advantage is that they are hygienic and easy to clean.



Epoxy Flooring



PVC Flooring

## Special Features

- Highly survives to chemicals & stress factors
- Highly hygienic
- Lowest Life cycle cost
- Low slippage
- Seamless and non porous
- Available in antistatic
- Easy to clean

### HECTRA offers the following Cleanroom Equipments

1. Pass Boxes (Pass Thru)
2. Laminar Flow Units (LAFU)
3. Biological Safety Cabinets
4. Sampling and Dispensing Units
5. Air showers

### Other Cleanroom Related Products

1. Dress Cabinets
2. Cross over benches
3. Fume Cupboards
4. Lockers etc.,

**Pass Boxes (Pass Thru)** Our specially designed pass boxes are very well suitable for various industries like Pharmaceutical, Electronic, Bio-Technology, Nanotech industries and Hospitals. The advantage of our Pass Boxes are bacteria free, virus killing applications, indication alarm CE approved interlock systems. So that we have to prevent both doors from being opened at the same time. UV light and CFL light also interlocked with door magnets. If the both doors are in closed condition UV light switch on and CFL in off condition. If any door open CFL will on UV will switch off. For dynamic Pass Boxes laminar air flow arrangement with blower, motor and HEPA filters.

### **HECTRA range of Pass Boxes**

1. Static Pass Boxes
2. Dynamic Pass Boxes
3. Stainless Steel(SS). SS304, Ss316
4. Galvanised Iron (GI) Powder coated

### **Features**

- Robust in construction ■ Good finish
- Coving provided inside the body. So that easily cleanable
- Electromagnetic interlocks are "CE" approved and long lasting
- Ultra violet lights protection for sterility
- Available in standard and custom made pass boxes
- Food grade neoprene gasket arrangement for air tightness



## **Laminar Flow Units (LAFU)**

**HECTRA** range of Laminar Flow Units are good quality in construction, low level of operating noise and optimum product protection. The unit is easily disassembled and assembled for free movement from one place to other. Air is drawn through a H14 type HEPA filter and blown in a very smooth. Laminar flow units are UV lamps protection for sterilize the interior and contents when not in use. Laminar Flow Units are used at medical, pharmaceutical, electronic and industrial sectors. Laminar flow is only for product protection not for personal protection. Maghenelec Guage/ digital alarm type HEPA filter status arrangement.

### **HECTRA Range of Laminar Flow Units**

1. Vertical Laminar Flow Units
2. Horizontal Laminar Flow Units
3. Stainless Steel(SS).SS304, Ss316
4. Galvanized Iron (GI) Powder Coated

### **HETRA LAFU Features**

- High performance direct driven centrifugal blowers
- Noise level is low ■ Excellent finish
- HEPA Filters are long life ■ HEPA filters status indication system
- Power consumption is low
- Feather touch On Off screen with indicators





## Biological Safety Cabinets

HECTRA range of Bio-safety cabinets are good quality in construction, low level of operating noise and optimum personnel product and environmental protection from Bio hazards. HECTRA offers wide variety of Bio safety cabinets as per industry norms.

### HECTRA Range of Bio Safety Cabinets

1. Class II, Type A2 BSC CABINETS 2. Class II, Type B2 BSC CABINETS

### HECTRA LAFU Features

- Good quality and high performance Bio-safety cabinets
- Low power consumption ■ Noise level is low
- High protection for personnel product and environment. Total system is interlocked with micro processed base logic control
- Supply and exhaust HEPA filters are long life



### Sampling and Dispensing Units

We hold expertise in offering a wide range of sampling and dispensing units. Our designs are with open front containment systems with built-in scavenging arrangement. This unit is designed and made with stainless steel for providing safety to the operator and the surrounding environment. This booth (RLAF Unit) is equipped with a three stage filtration method, for providing excellent efficiency to the customers.

### Specifications

- Cleanliness : Class 100 ■ Particle retention : 0.3 micron ■ Standard : FED 209E
- Velocity : 100FPM + 20% ■ Illumination : 4 ft. 40w with diffuser
- Noise level : 60-65 decibels ■ Nozzles : Adjustable SS ■ Power supply : 220v single phase

## Air showers

HECTRA's Cleanroom Air Shower Systems play vital role in removing surface particles from personnel and material prior to entering and exiting from a controlled environmental area. These air showers are installed before the entrance to cleanrooms and other controlled environments perfectly suitable for semi-conductors, pharmaceuticals, spray painting, microelectronics, paint shop and packaging etc.

### Features

- Completely self-contained, adjustable nozzles to remove surface contaminants
- Versatile design allows you position the Air Shower inside or outside the cleanroom
- Dual HEPA filters remove 99.99% of particles > 0.3 microns from the air stream
- Equipped with interlocking doors, automatically released when power fails
- Emergency stop buttons on both doors immediately disengage interlocks and halt air shower
- Light weight and modular design enables easy shipping and transfer of the unit





## HECTRA offers Validation & Documentation for complete Cleanroom facilities

1. Filter Integrity Test
2. Particle Count
3. Air Velocity
4. Illuminous
5. DB Level
6. Air Flow Pattern Test

**We offer AMC and periodical services for new & existing cleanroom facilities.**

### *Key drivers from HECTRA*

- To complete each project regardless of size or value with dedication
- Budgetary quotation during the planning stage with value engineered alternatives followed by firm predetermined prices
- Perfect coordination with customers through the entire process from pre-construction to commissioning and beyond
- Adopting new initiatives and modern methods over products and installations
- Promoting delivery through frameworks
- Replacement spares/services available

**Note:** Images appearing in this brochure are meant for conceptual purpose only. Products are subject to availability.



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