



Concept... Design... Execution...



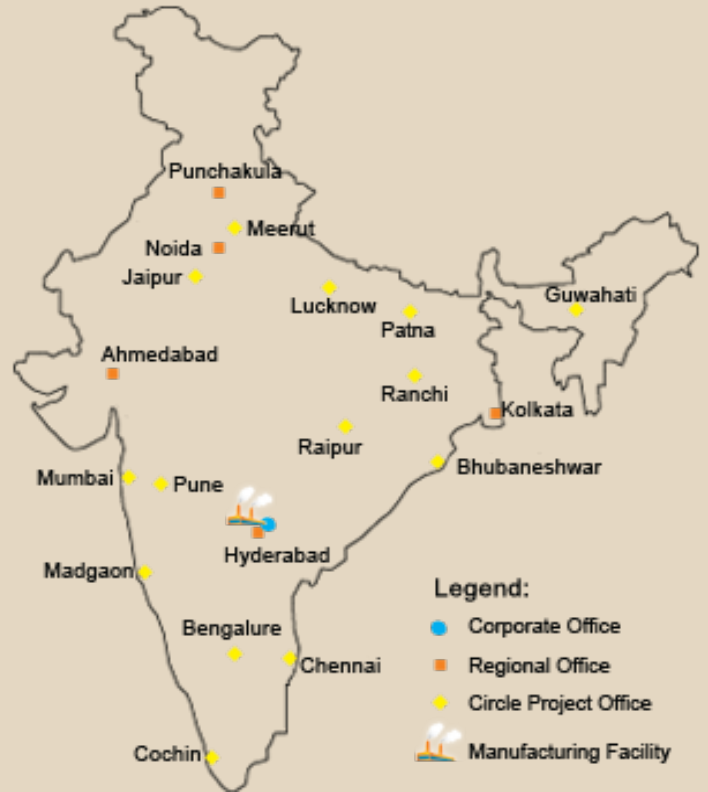
*...for healthy environments!!!*

## The Company

Established in 1998, ASTER is a dynamic organization focused on Telecom, Power, Wind Energy, Broadcast, Monopoles and Lighting, Pre Engineered Buildings and Poly Engineering Systems globally.

In keeping with its quest for innovation and meeting marketing needs, Aster is offering Clean Room Modular Panels, Clean Room Doors, Walk-in-Cold Rooms, Freezer Rooms with Refrigeration Systems and Vertical Refrigeration Systems for Hotel and Pharmaceutical Industries.

## Our Reach



# Designing



## Our Strength

- Experienced in Manufacturing, Installation of Pre-engineered, Pre-fabricated Sandwich Panels & Structures
- Capability to successfully execute the projects from CONCEPT TO COMMISSIONING
- Complete Factory warehouse with several lines of stock material to accommodate your project specifications
- Production line offers complete in-house laminating, product fabrication and assembly
- Offices in all major cities of the country, which enables it to serve in an efficient manner
- Committed to Maintain World Class standards in terms of quality, Delivery and Efficient Service



## Designing

All production facilities are located in-house thereby cutting down on costs and increasing quality. Sheet metal fabrication, condensing evaporation coils, powder coating, PU panels, control panels; all the critical components are manufactured under strict control. The control panels are customized as every system has a different algorithm.

## Installation & Validation

The installation procedure is handled onsite by a full team of qualified engineers and technicians. The client's team is made to undergo exhaustive training to fully acquaint them with the working of the system and machinery. Each system is checked for all possible functioning parameters to the complete satisfaction of the client. No assignment is complete till the pre-decided parameters are fulfilled and Validation of the system is completed. In addition to the above, a fully functional after sales department takes care of regular servicing and component replacement. This in-house service cuts down significantly on the response time thereby saving the client valuable resources.

## Our Commitment

*At every step, from design to installation and through commissioning, a Project Team is there to assist YOU. Our commitment is to give you the Best service and products available assuring your total satisfaction.*

# Clean Rooms



*Thinking of building a new Production Plant?  
Expanding or upgrading an existing one?*

**We can offer you an integrated solution!!!**

## **From Concept to Construction and Validation Solutions – Clean Rooms**

A clean room is a controlled environment where products are manufactured. It is a room in which the concentration of airborne particles is controlled to specified limits. Eliminating sub-micron airborne contamination is really a process of control. These contaminants are generated by people, process, facilities and equipment. They must be continually removed from the air.

The only way to control contamination is to control the total environment. Air flow rates and direction, pressurization, temperature, humidity and specialized filtration all need to be tightly controlled. Clean rooms are planned and manufactured using strict protocol and methods. They are frequently found in electronics, pharmaceutical, biopharmaceutical, medical device industries and other critical manufacturing environments.

At Aster, it's our focus to provide you with the best product, service, and delivery to suit your goal. Proper equipment, financial strength, and a sound management approach assure you a quality project that is completed on schedule and on budget.



## Applications

- Pharmaceuticals
- Biotech
- Electronic Industries
- R&D Laboratories
- Hospitals
- Food Processing Industries



## Advantages of Modular Panels & Doors

- Easy and speedy fabrication and erection
- High Level Aesthetics
- Excellent Insulating property
- Smooth and easy to clean
- Coving becomes to be integral part of panels
- No hassles of cracks filling and re-painting
- Panels are perfectly airtight, hence no problem in pressure balancing and cross contamination
- Load Bearing Ceiling Panels
- Doors compatible with panel materials
- Size and specification to be customized as per the site requirement

## Specifications

### Wall Construction

- Wall height up to 6 m
- Wall thickness – 50 to 200 mm
- Core – PUF, Rockwool or honeycomb (Paper or Aluminum)
- Skins – Powder Coated, Pre-painted GI, Plain GI, SS

### Ceiling System

- Walkable / Non-walkable
- Mounting Hardware
- Snap Fit Covings for Floor-wall-ceilings
- Service Panels for Utilities
- Cutouts for Hepa Filters, Lights Fixtures, Diffusers Etc.,
- Exposed and Concealed Return Air Risers

### Doors

- Single / Double Doors
- Std. Hardware
- Civil / panel Doors
- Fire Proof Doors

### Support Structure

- Load bearing walls
- Structural supports
- Corrugated steel roof deck
- Seismic design & construction required

### Windows

- Single / Double Glazing
- Civil / Panel View Windows

# Cold Rooms

## Cold Rooms

### Applications

- Pharmaceuticals
- Super Markets
- Hospitality
- Processed Food Industry
- Fisheries
- Floriculture
- Tissue Culture
- Agriculture



## Panels for Walk-in-cooler & Freezers

### Features

We apply the latest streamline production technique in cold room insulation panel manufacturing in order to offer you the best panel features:

- State-of-the-art import high pressure polyurethane foam machine ensures the maximum insulation for the sandwich panel
- Polyurethane panel's uniform density is over 40 kg/m<sup>3</sup>, which provides structural rigidity and dimensional stability
- Different Standard Dimension of the cold room Length, Width, Heights are available
- Cam action-joining mechanism with tongue and groove edges offers ease and flexibility of a strong unit construction
- Aesthetic, efficient, heavy-duty flush-fit doors with Formod Hinges, Heavy Duty Handles for easy access
- Airtight, Heavy-duty sealing vinyl gaskets below the door remain flexible at any temperature
- The concealed heater wire circuit inside the door frame prevents condensation and frost formation at the edges of door and frame
- Digital Thermostat of the cold room chamber gives precise temperature control and display



## Panel Specifications

Panel Finish	PPGI / SS / PLAIN GI
Thickness	50 – 200 mm
PUF Density	40 +/- 2 kg/cm
Panel Width	200 – 1170 mm
Panel Length	6,000 mm
Sheet Thickness	0.6 – 1.5 mm
Panel Joints	T & G Cam locks
Operating Temp.	- 50 to + 60 °C
Thermal Conductivity	10 W/m.K
Flooring Options	Vinyl Flooring / Al. Chequered Sheet

## Refrigeration



## System

Our pursuit of excellence is evidenced nowhere than the application of world famous brand refrigeration components. COPELAND, BITZER, TECUMSEH, DANFOSS refrigeration equipments, which are safe, reliable and energy-saving.

### Features

- For Chilling and Freezing Applications
- Designed for 46 °C Ambient
- For Wide range of Temperatures (Positive & Negative)
- CFC Free Refrigerant
- Air Cooled / Water Cooled
- Split type Refrigeration Systems

### Evaporating Units

- Powder Coated Body / Stainless Steel Body
- Corrosion Resistance
- Axial Fans have low noise levels
- Removable Side Panels for easy Service
- In-Built Defrost Heaters for Low Temperature units

### Condensing Units

- High Efficiency Heat Transfer & Low power consumption
- Sleek Design
- UV & Corrosion Resistance
- Inner Grooved copper tubes & aluminum fins for superior heat transfer
- Safety and control devices protect system
- Weather-proof polyester powder coated canopy

### Technical Details for Positive Temperature Rooms

Description / Model	ATSM-10-15	ATSM-20-28	ATSM-62-75	ATSM-16-24
Condensing Units	ATSM-10-15-C	ATSM-20-28-C	ATSM-62-75-C	ATSM-16-24-C
Compressor Type	COPELAND / DANFOSS	COPELAND / DANFOSS	COPELAND / DANFOSS	COPELAND / DANFOSS
Compressor HP	1.5	3.2	6.5	3
Refrigerant	R-22 / R-134A	R-22 / R-134A	R-22 / R-134A	R-22 / R-134A
Power Supply	230 V, 50 Hz, 1 Ph, AC	415 V, 50 Hz, 3 Ph, AC	415 V, 50 Hz, 3 Ph, AC	415 V, 50 Hz, 3 Ph, AC
Compressor Dimensions WxDxH mm	710x425x575	1570x425x575	1660x505x780	1020x450x525
Weight (kgs)	63	120	130	80
Evaporators	ATSM-10-15-E	ATSM-20-28-E	ATSM-62-75-E	ATSM-16-24-E
No. of Evaporators	1	1	1	1
Air Flow (CFM)	1,600	3,200	9,324	1,600
Evaporator Dimensions WxDxH mm	1245x380x380	2210x380x380 - 1 No. or 1245x380x380 - 2 Nos.	1965x515x715	930x430x480
Cooling Cap. 4 °C	10,000 BTU/h	20,000 BTU/h	62,100 BTU/h	16,000 BTU/h
Cooling Cap. 8 °C	15,000 BTU/h	28,000 BTU/h	75,100 BTU/h	24,300 BTU/h

All technical details given are approximate and subject to technical alterations and improvements.

## Technical Details for Negative Temperature Rooms

Description / Model	ATSL-08-07	ATSL-11-09	ATSL-16-14	ATSL-07-05
Condensing Units	ATSL-08-07-C	ATSL-11-09-C	ATSL-16-14-C	ATSL-07-05-C
Compressor Type	COPELAND / DANFOSS	COPELAND / DANFOSS	COPELAND / DANFOSS	COPELAND / DANFOSS
Compressor HP	2	3	4	1.5
Refrigerant	R-404A	R-404A	R-404A	R-404A
Power Supply	415 V, 50 Hz, 3 Ph, AC	415 V, 50 Hz, 3 Ph, AC	415 V, 50 Hz, 3 Ph, AC	230 V, 50 Hz, 1 Ph, AC
Compressor Dimensions WxDXH mm	710x425x575	1570x425x575	1660x505x780	1020x450x525
Weight (kgs)	63	120	130	80
Evaporators	ATSL-08-07-E	ATSL-11-09-E	ATSL-16-14-E	ATSL-07-05-E
No. of Evaporators	1	1	1	1
Air Flow (CFM)	1,600	3,200	9,324	1,600
Evaporator Dimensions WxDXH mm	1245x380x380	2210x380x380 - 1 No. or 1245x380x380 - 2 Nos.	1965x515x715	930x430x480
Cooling Cap. -20 °C	8,200 BTU/h	11,000 BTU/h	16,000 BTU/h	7,000 BTU/h
Cooling Cap. -25 °C	7,000 BTU/h	9,000 BTU/h	14,000 BTU/h	5,090 BTU/h

All technical details given are approximate and subject to technical alterations and improvements.

## What is Phase Change Material (PCM)?

Phase Change Material (PCM) are substances which store and release huge amount of energy, while solidifying and melting at certain temperatures. This stored energy can be used for Thermal Backup of many systems.

## Phase Change Material (PCM) for Cold Storage Facilities

Aster has developed a range of Phase Change Material (PCM) that helps provide cost-effective, energy-efficient, integrated, passive infrastructure solutions, for Thermal Backup during power offs or power failure up to a certain extent of time. Our R&D Team is developing new formulations for Phase Change Material (PCM) for various temperature ranges from -25 to +10 °C. We have our own laboratory equipped with sophisticated synthesizing, testing and characterizing equipments.



Sample Phase Change Material Panel used for Telecom Shelters

## Few advantages of using Phase Change Material (PCM)

- **Economic benefits:** Aster's Phase Change Material (PCM) provides a good thermal backup for the equipments and electronics inside the shelter during power failure zeroing the DG expenses
- **Reliability:** It is highly reliable Phase Change Material (PCM) with large thermal cycling and life span
- **Environment friendly:** It doesn't produce smoke and noise unlike DG sets hence saves environment pollution
- **Safe to handle:** It is safe to use being non-toxic and non-flammable



**Aster Private Limited**  
Poly Engineering Systems - Cold & Clean Rooms

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