



# TULSIUM

## CLEAN ROOM PVT LTD

WHERE PRECISION MEETS QUALITY

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## CLEAN ROOM APLICATONS

➤ A cleanroom application refers to any process or environment where controlled conditions are required to minimize contamination by airborne particles, microbes, and chemicals. These applications are vital in industries like pharmaceuticals, biotechnology, electronics, aerospace, and healthcare, where precision and sterility are crucial. The cleanroom environment is carefully regulated in terms of temperature, humidity, and particulate levels, often adhering to strict industry standards like ISO or GMP (Good Manufacturing Practices).

Key examples of cleanroom applications include:

- 1. Pharmaceutical Manufacturing:** Ensures drug production under sterile conditions to prevent contamination, particularly in injectable products.
- 2. Semiconductor Fabrication:** Tiny particles can ruin delicate semiconductor materials, so strict cleanroom environments are necessary to manufacture chips and other electronic components.
- 3. Medical Device Manufacturing:** Devices like implants and surgical tools are often assembled in cleanrooms to ensure sterility.
- 4. Biotechnology Research:** Used for processes involving sensitive biological samples, where contamination could affect the results.
- 5. Aerospace Components:** Cleanrooms help to avoid contaminants that could impair the functionality of sensitive components used in space exploration.
- 6. Electronics:** Clean room environment ensure that delicate electronics don't get contaminated by dust particle or other contaminants.
- 7. Food Processing Industries:** clean room environment is very important in food industries to make their products free from dust and other particles ensuring hygiene and food safety.
- 8. Modular OT for hospitals:** operation theatres are made out of cleanroom panels to Ensures sterile conditions to prevent contamination, particularly during medical operation.



## PRODUCT RANGE >>

### Our Product Range

1. Progressive & Non-Progressive Clean Room Panels
2. Powder Coated Modular Panels (PCGI)
3. Pre-painted Modular Panels (PPGI)
4. Modular walkable & non walkable Ceiling Panel
5. Double Glass View Panel
6. Modular Clean Room Flush Doors
7. Air Risers
8. Coving
9. All kind of door and panel fixtures, hardware & accessories

# Product Descriptions



## 1. Progressive & Non-Progressive Clean Room Panels

Tulsium High-performance cleanroom panels designed to provide superior cleanliness, durability, and flexibility for a range of industries such as pharmaceuticals, electronics, and healthcare. These panels allow for seamless construction, ensuring airtightness and maintaining controlled environments.

### Specifications:

- Material Skin: Skin Pass PCGI, Skin pass PPGI, SS304
- Skin Thickness: 0.5mm to 1mm
- Overall Panel Thickness: 50mm, 80mm, or customizable as per requirements
- Core Materials: PUF, Rockwool, or Honeycomb Core
- Features: Excellent thermal insulation, soundproofing, and fire-resistant options available
- Applications: Cleanrooms, labs, controlled environments

## 2. Powder Coated Modular Panels (PCGI)

These powder-coated modular panels offer a durable and corrosion-resistant surface, perfect for cleanroom environments requiring long-term reliability and aesthetic appeal.

### Specifications:

- Material Skin: Skin Pass PCGI, SS304
- Skin Thickness: 0.5mm to 1mm
- Core Options: PUF, Rockwool, or Honeycomb Core
- Finish: Electrostatic powder coating for smooth, uniform finish
- Properties: Anti-static, fire-resistant, and impact-resistant
- Applications: Cleanrooms, healthcare, and industrial facilities



## 3. Pre-Painted Modular Panels (PPGI)

Pre-painted galvanized iron panels are engineered for environments requiring high durability and easy maintenance. They are cost effective and visually appealing while meeting stringent cleanroom requirements.

### Specifications:

- Material Skin: Skin pass PPGI
- Skin Thickness: 0.5 mm to 0.6 mm
- Overall Panel Thickness: 50mm, 80mm
- Core Materials: PUF, Rockwool, or Honeycomb Core
- Features: Lightweight yet robust, weather-resistant, and antimicrobial properties
- Applications: Pharma, biotech, food processing, and electronics





#### 4. Modular Walkable & Non-Walkable Ceiling Panels

Specialized modular ceiling panels designed for cleanrooms with both walkable (loadbearing) and non-walkable (non-load-bearing) options, ensuring flexibility in cleanroom design.

##### Specifications:

- Material Skin: Skin Pass PCGI, Skin pass PPGI, SS304
- Skin Thickness: 0.5mm to 1mm
- Core Options: PUF, Rockwool, or Honeycomb Core
- Overall Panel Thickness: 50mm
- Load Capacity: Walkable panels support up to 150 kg/m<sup>2</sup>
- Surface Coating: Antimicrobial, anti-static, and powder-coated finishes available
- Applications: Pharmaceuticals, microelectronics, and food processing

#### 5. Double Glass View Panel

Double-glazed view panels are designed to integrate seamlessly into cleanroom walls, ensuring visibility and maintaining aesthetic standards while providing excellent thermal and sound insulation.

##### Specifications:

- Glass Type: 5mm toughened glass on both sides
- Material Frame Skin: Glass with Aluminium frame
- Glass Thickness: 5mm, 6mm
- Features: Argon-filled cavity for insulation and condensation prevention
- Sizes: Customizable to fit modular panels
- Finish: Flush-fitted with silicone sealant for airtightness
- Applications: Monitoring and supervision areas in cleanrooms



#### 6. Modular Clean Room Flush Doors

Cleanroom flush doors are engineered to meet the highest cleanliness standards with a seamless design that prevents contamination. These doors are durable, airtight, and easy to maintain.

##### Specifications:

- Material Skin: PCGI, SS304
- Skin Thickness: 0.8mm to 1mm
- Core Options: PUF or Honeycomb Core
- Overall Door Thickness: 45mm or customizable
- Features: Antimicrobial coating, fire-rated options, and gasketed seals for airtightness
- Accessories: SS hinges, push plates, door closers, and locksets
- Applications: Cleanrooms, laboratories, and controlled environments





## 7. Air Risers

Air risers are critical for efficient air distribution in cleanrooms, ensuring uniform airflow and maintaining positive or negative pressure as required by cleanroom classifications.

### Specifications:

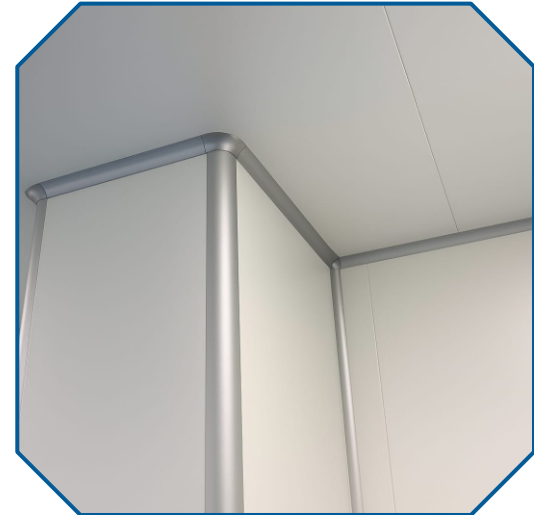
- Material Skin: PCGI or SS304
- Skin Thickness: 0.6 mm to 1mm
- Flow Rate: Customizable based on HVAC design
- Filters: Compatible with HEPA or ULPA filters
- Features: Easy-to-maintain removable sections and rust-proof construction
- Applications: Cleanrooms requiring controlled airflow

## 8. Coving

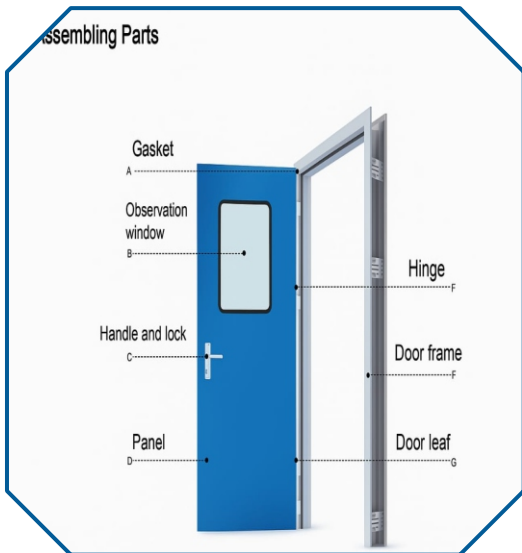
Cleanroom coving ensures smooth and seamless transitions between walls, floors, and ceilings, minimizing particle accumulation and making cleaning easier.

### Specifications:

- Material Skin: Aluminium
- Skin Thickness: 1.5 mm (for aluminium options)
- Finish: Powder-coated or anodized for enhanced durability
- Dimensions: Customizable sizes to fit cleanroom specifications
- Features: Impact-resistant, chemical-resistant, and anti-static properties
- Applications: Cleanrooms and other controlled environments



### Assembling Parts



## 9. All Kinds of Door and Panel Fixtures, Hardware & Accessories

A complete range of high-quality hardware and accessories designed to enhance the functionality and aesthetics of cleanroom panels and doors.

### Specifications:

- Material: Stainless Steel (SS304/316), Aluminium, or Polymer-based materials
- Includes: Hinges, handles, locks, door closers, sealing systems, and more
- Features: Corrosion resistance, easy installation, and cleanroom-grade finishes
- Applications: Compatible with all cleanroom doors and modular panels

# State-of-the-Art Manufacturing Facilities

At we integrate innovation with precision through a world-class manufacturing setup, enabling flawless execution of every cleanroom component.

## Laser Cutting Machine – 3-Axis, 4 Meter

- Precision fiber laser technology for high-accuracy profiles
- Handles stainless steel and pre-coated metals effortlessly
- Ideal for detailed and high-speed sheet metal cutting



## CNC Bending Machine – 100T / 4 Meter, 5-Axis

- Advanced 5-axis control for complex bends
- Suitable for precision forming of cleanroom panel profiles
- High repeatability and smooth finish on all edges



## High-Pressure Puff Filling Machine

- Fully automatic system for uniform core insulation
- Ensures void-free filling and superior bonding
- Accelerated cycle time for consistent panel production

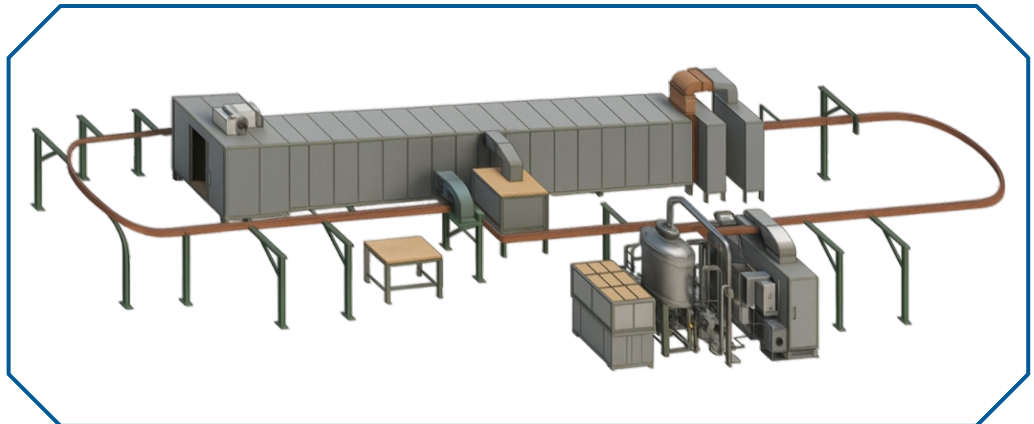
## Hydraulic Press – 4.5 Meter Bed

- Rigid frame for high-pressure pressing of sandwich panels
- Delivers even pressure distribution across panel length
- Essential for bonding PU cores with superior strength



## Fully Automatic Powder Coating Line

- Conveyor-based automated system for continuous operation
- Includes pre-treatment, drying, coating, and curing zones
- Ensures uniform finish with excellent adhesion and durability





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## Contact Us



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" Designing tomorrow together "