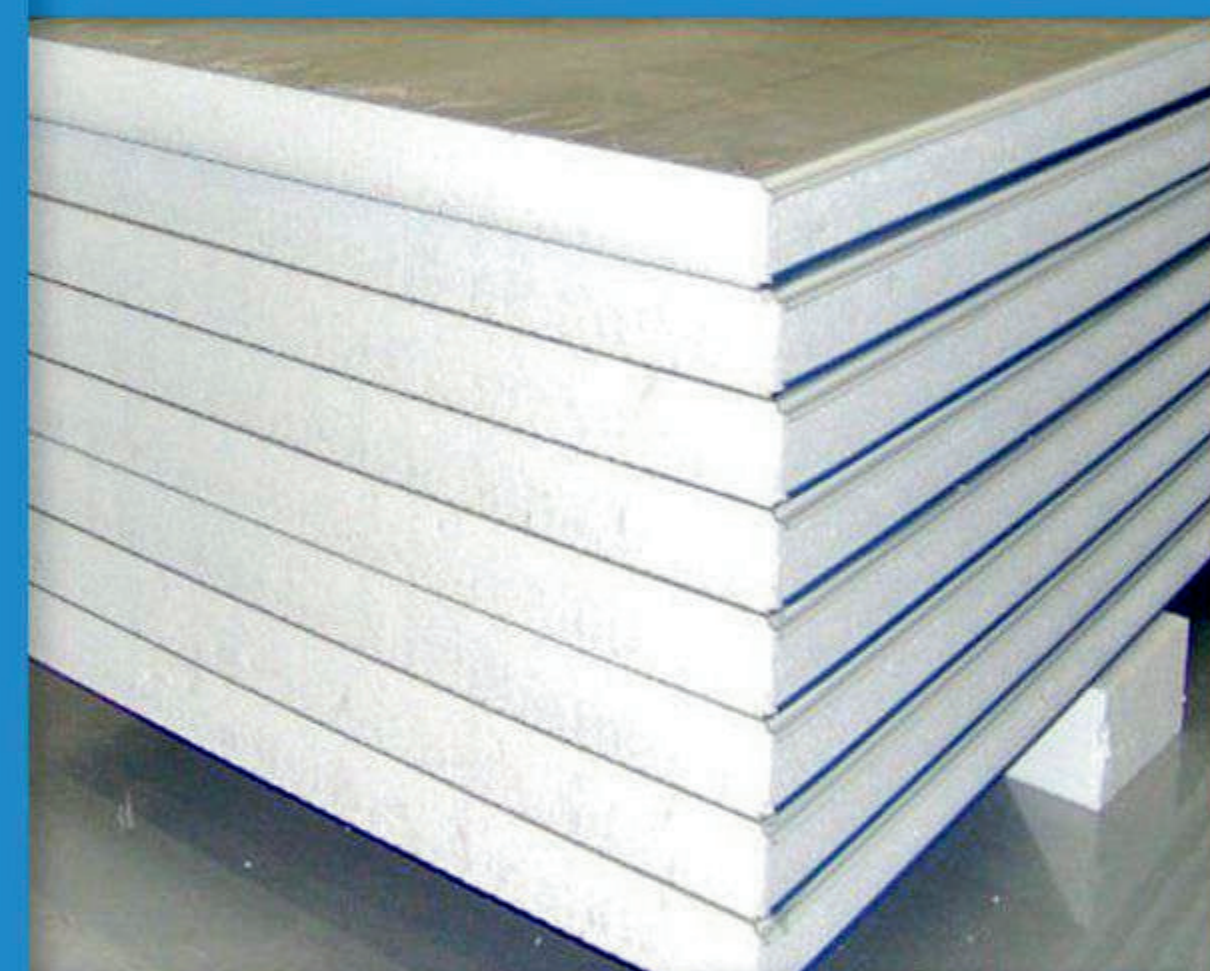




**PHOENIX
REFRIGERATION**



PHOENIX REFRIGERATION PVT. LTD.

(An ISO 9001:2015 & ISO 45001:2018 Certified Company)
(CIN : U74900PN204PTC15o908)



Weather Tight



Thermally Efficient



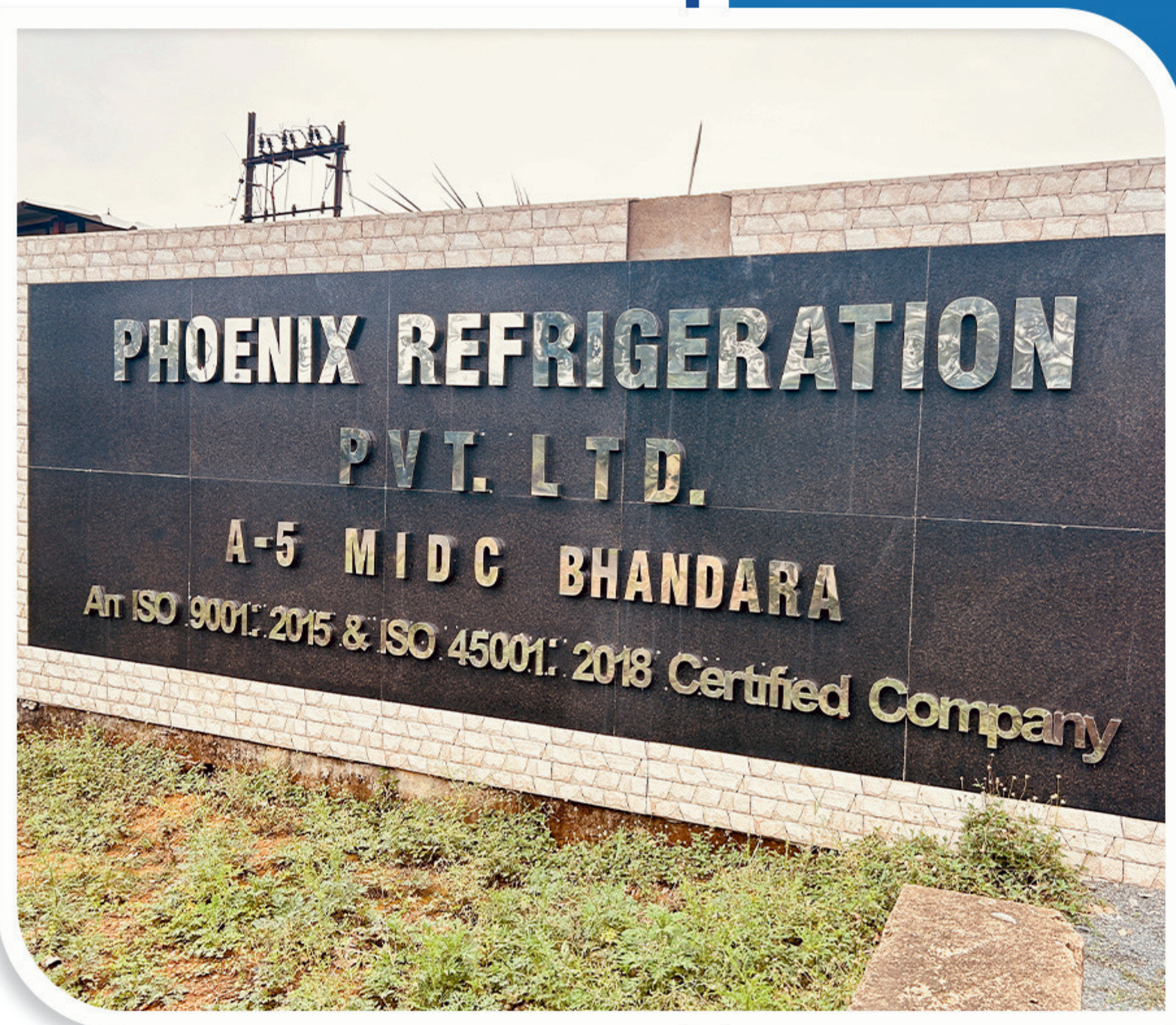
Structural



Internal Liner



Light Weight



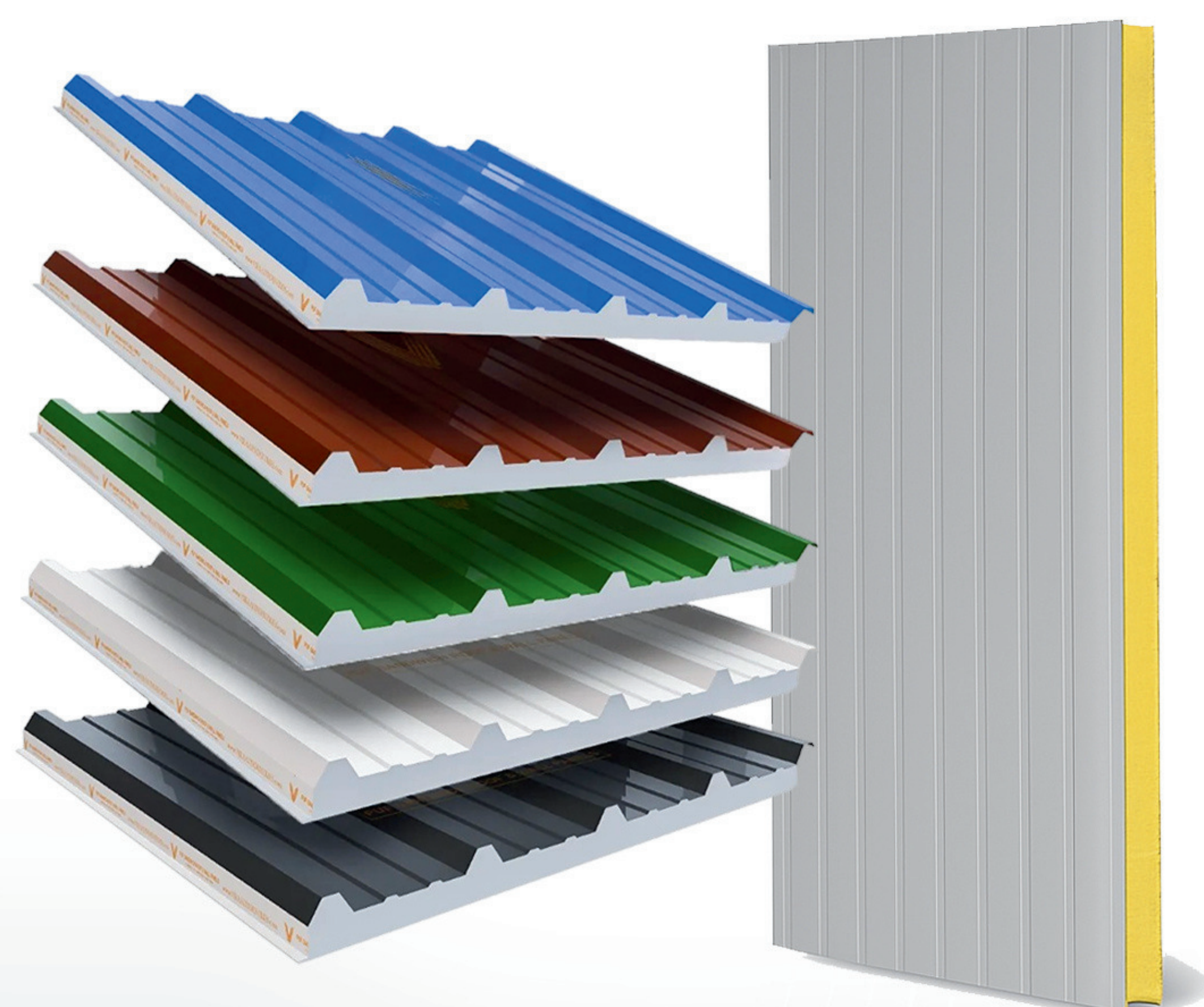
Phoenix Refrigeration Pvt Ltd is a leading manufacturer of PUF panels, clean rooms, and insulated doors. Our products are used in many industries such as pharmaceuticals, food and beverages, ice-cream and dairy plants, frozen storage, hospitals, offices, central homes, meat and fish processing, horticulture and prefab buildings.

We also provide solutions for cold storages, warehouses, research labs, agriculture, and logistics where temperature control and hygiene are most important.

With a strong focus on quality, durability, and energy efficiency, Phoenix Refrigeration continues to provide solutions that industries can rely on, today and in the future.

Our company is consists of experts with disciplines in all area of PUF Panel designing, engineering and installation. Our team can support customers step by step throughout the project starting from early stage to the end. This proven manner is a key to achieve success and customer satisfaction.

Our R&D department is working endlessly and putting all efforts to develop new technology and know-how in order to serve the most challenging and fast changing industry.



BASIC CONCEPT OF PANEL SYSTEM DESIGN

- | | | | |
|---------------------|--------------------|------------------|------------------|
| ✓ Airtight | ✓ Heat insulation | ✓ Durability | ✓ Clean ability |
| ✓ Water proof | ✓ Cost effective | ✓ Fire resistant | ✓ Chemical proof |
| ✓ Easy to dismantle | ✓ Energy efficient | ✓ Restarting | |

WALL SYSTEMS

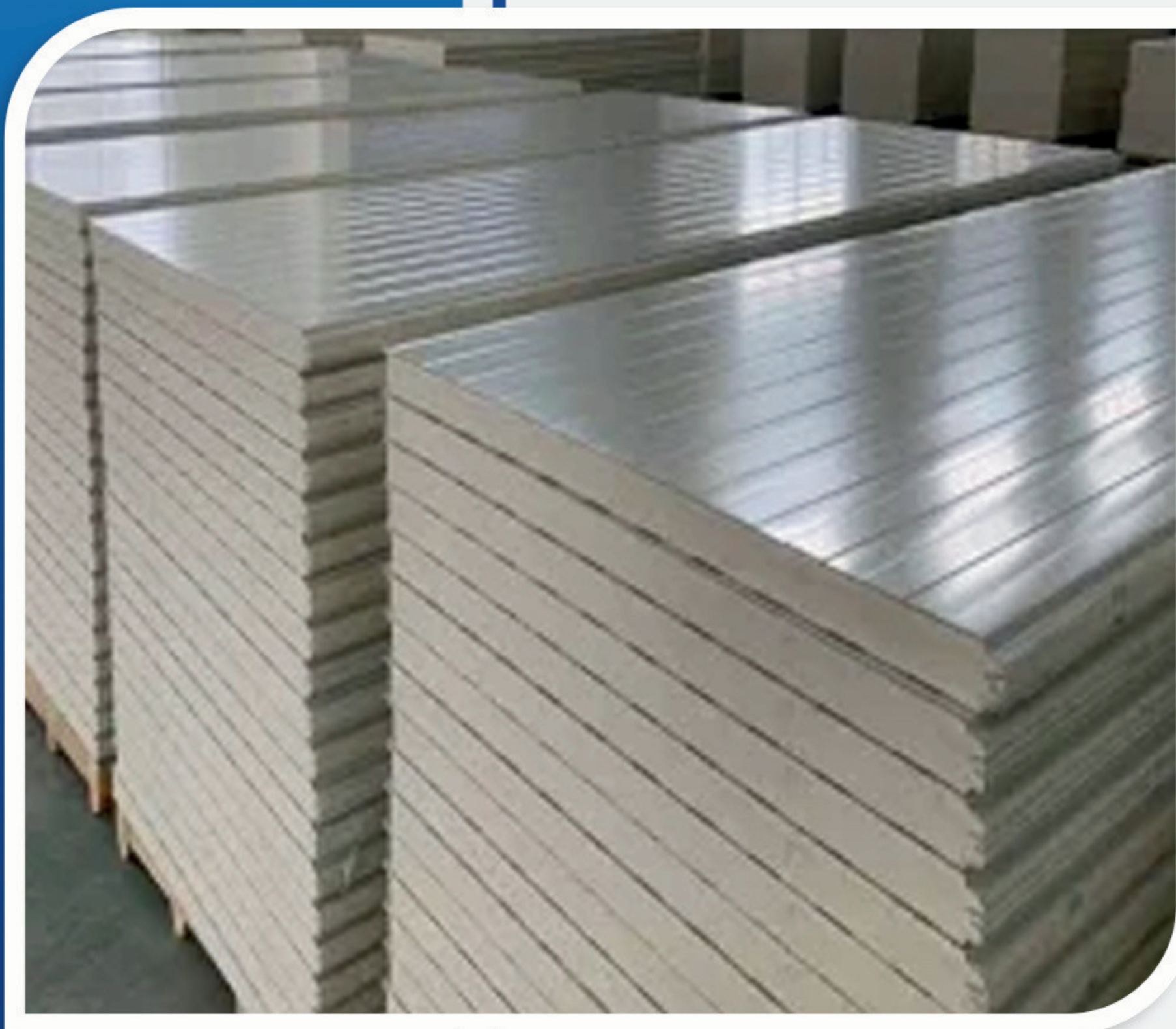
- | | |
|--|--|
| ✓ Fast & easy installation | ✓ Accommodate changes in clean room layout and future expansion |
| ✓ Prefabricated panel with concealed electrical wiring | ✓ Available either external or built-in panel return air riser including washable prefilter & removable grille |
| ✓ Self-supporting, dismountable system | ✓ Single piece wall round corner |
| ✓ Flush surface and corner coving finishing | |

PUF/ PIR PANEL:

Description:

Phoenix PUF Sandwich Panels combine superior thermal insulation, high strength, and durability in a lightweight design. Ideal for cold storage, clean rooms, modular buildings, and temperature-controlled environments, our panels ensure energy efficiency, quick installation, and long-lasting performance.

PUF (Polyurethane Foam) Panels are advanced insulated sandwich panels designed for modern construction. Built with high-quality metal sheets and a rigid polyurethane foam core, these panels deliver superior thermal insulation, durability, and cost efficiency.



ATTRIBUTE	DETAILS
Thermal Insulation	Low conductivity (~0.024-0.028 W/m-K); Cuts heating/ cooling loads; Ideal for cold storage, temp-controlled buildings
Structural Strength	PU foam core between PPGI/ PCGI/ SS sheets; High load capacity
Lightweight	Lighter than concrete/ brick; Easy transport & install
Fire Resistance	Fire retardant; Up to 2 hrs rating (special panels)
Moisture Resisitance	Closed-cell PU resists water; Sealed against leakage
Sound Insulation	Good acoustic control due to foam density
Corrosion Resistance	Coated facings (polyester/ PVC) prevent rust
Durability	15-25+ years lifespan; Pest, Fungi & M old resistant
Quick Installation	Pre-fab panels for fast construction
Eco-friendly	Saves energy, CFC-free & recyclable

SPECIFICATIONS:

Panel Thickness	40/50/60/80/100/120/150 mm
Sheet Thickness	0.4 to 0.8 mm PPGI/ PCGI/ SS
Surface Coating	Pre Painted/ Powder Coated/ Stainless Steel
Insulation material	PUF/ PIR/ ROCKWOOL Upto 600mm
Width	1200 mm As per Requirements

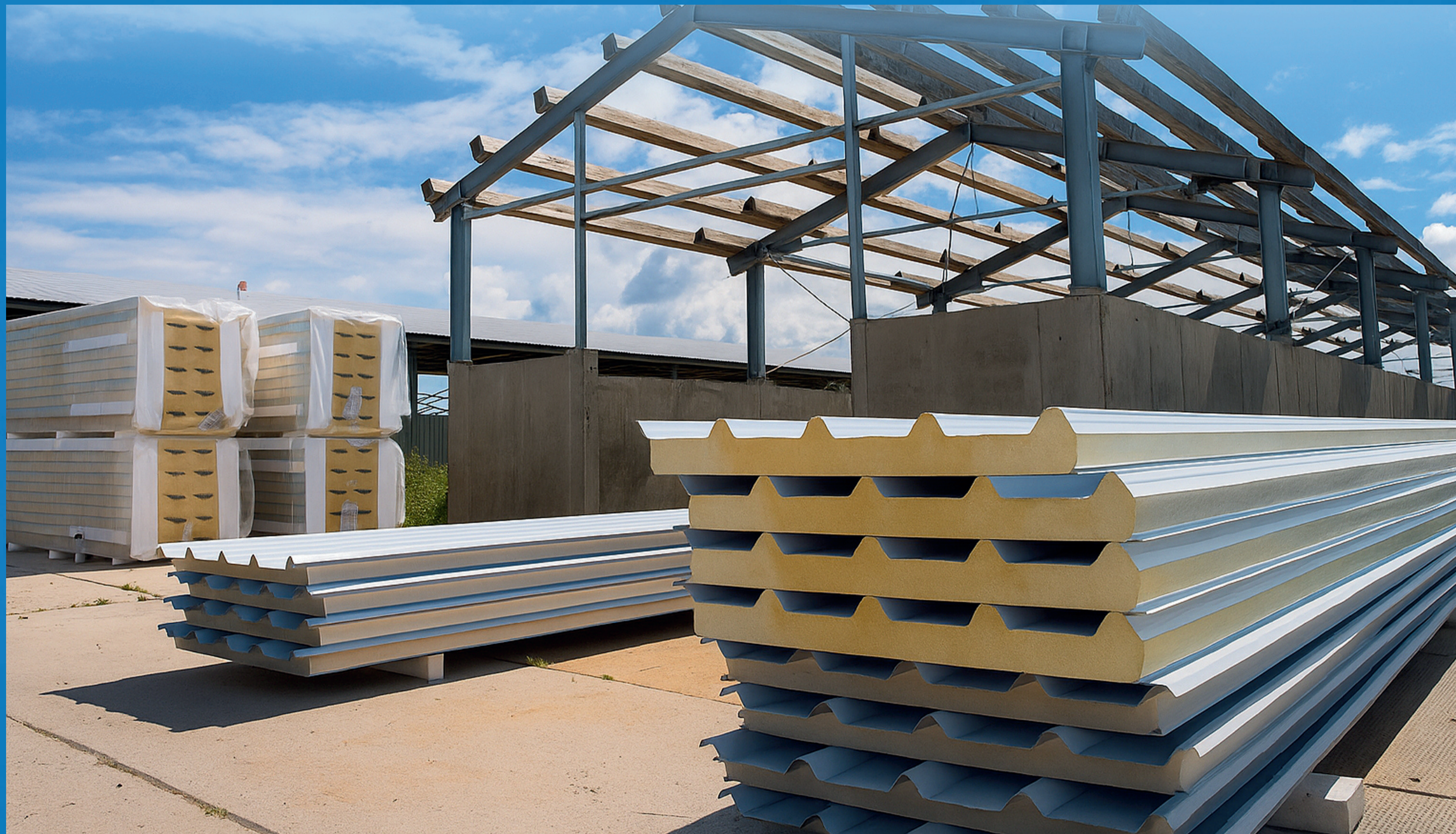
COMMON APPLICATIONS:

- ✔ Cold storage rooms
- ✔ Clean rooms and laboratories
- ✔ Prefabricated buildings and shelters
- ✔ Wall and roof cladding
- ✔ HVAC / AHU

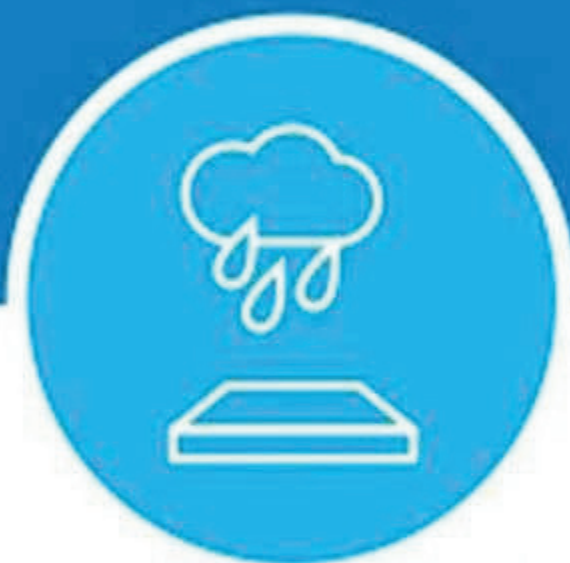
1. PUF PANELS FOR ROOFING

PUF panel rooms and cabins are strong, insulated, and ready-to-install structures ideal for homes, resorts, site offices, and remote shelters. These cabins provide long-lasting comfort and low electricity bills due to their excellent insulation.

With a wide range of different colors cut-to-length in our factory and supplied ready-to-install, our modern building products fare well in highly economic weather-independent conditions and fast modular building process.



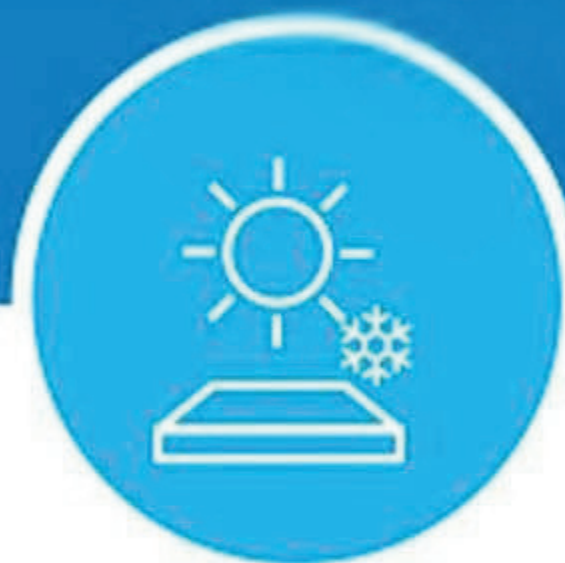
Our PUF Panel Features



**Weather
Tight**



**Thermally
Efficient**



Structural



**Internal
Linear**

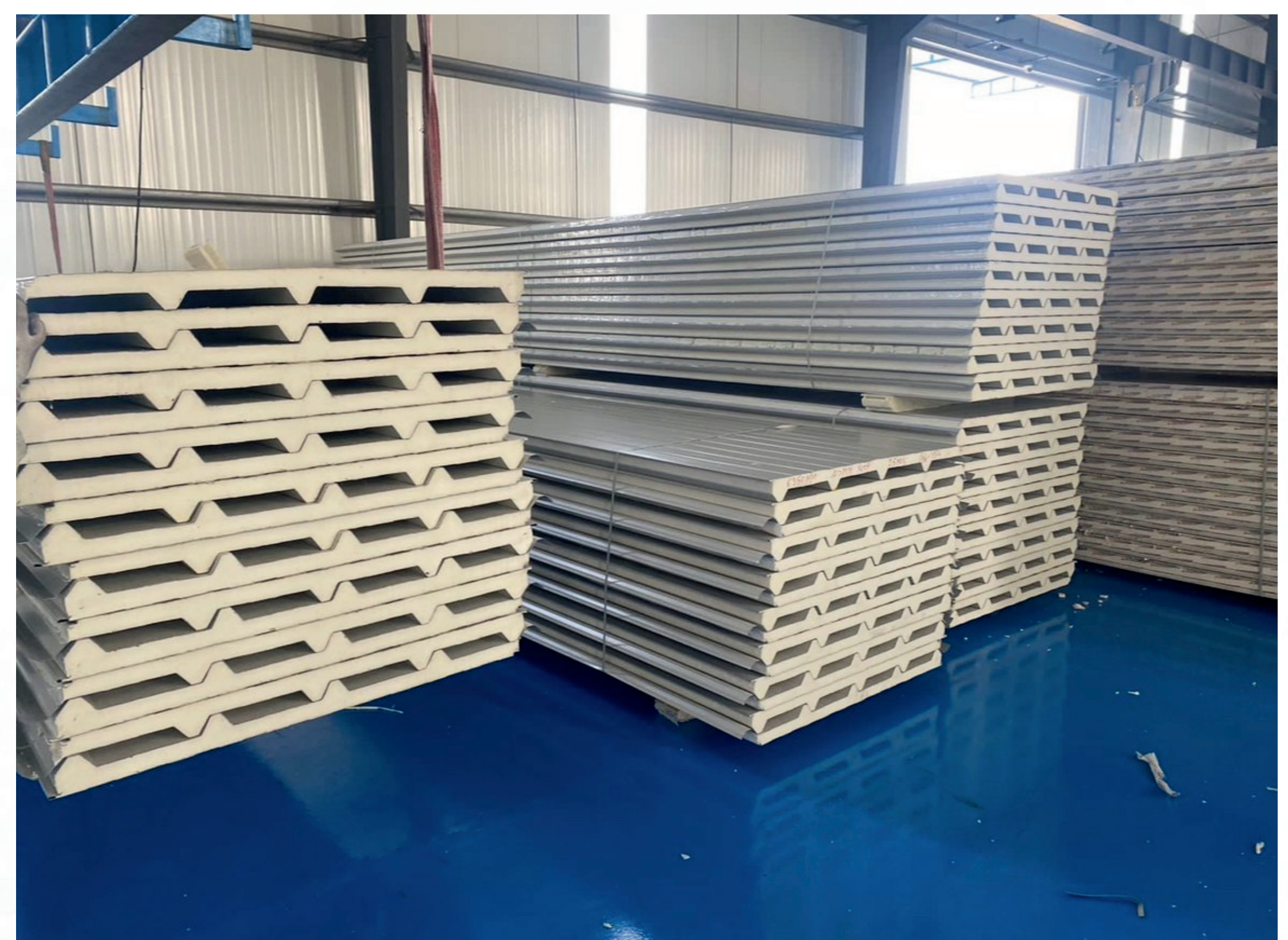


**Light
Weight**

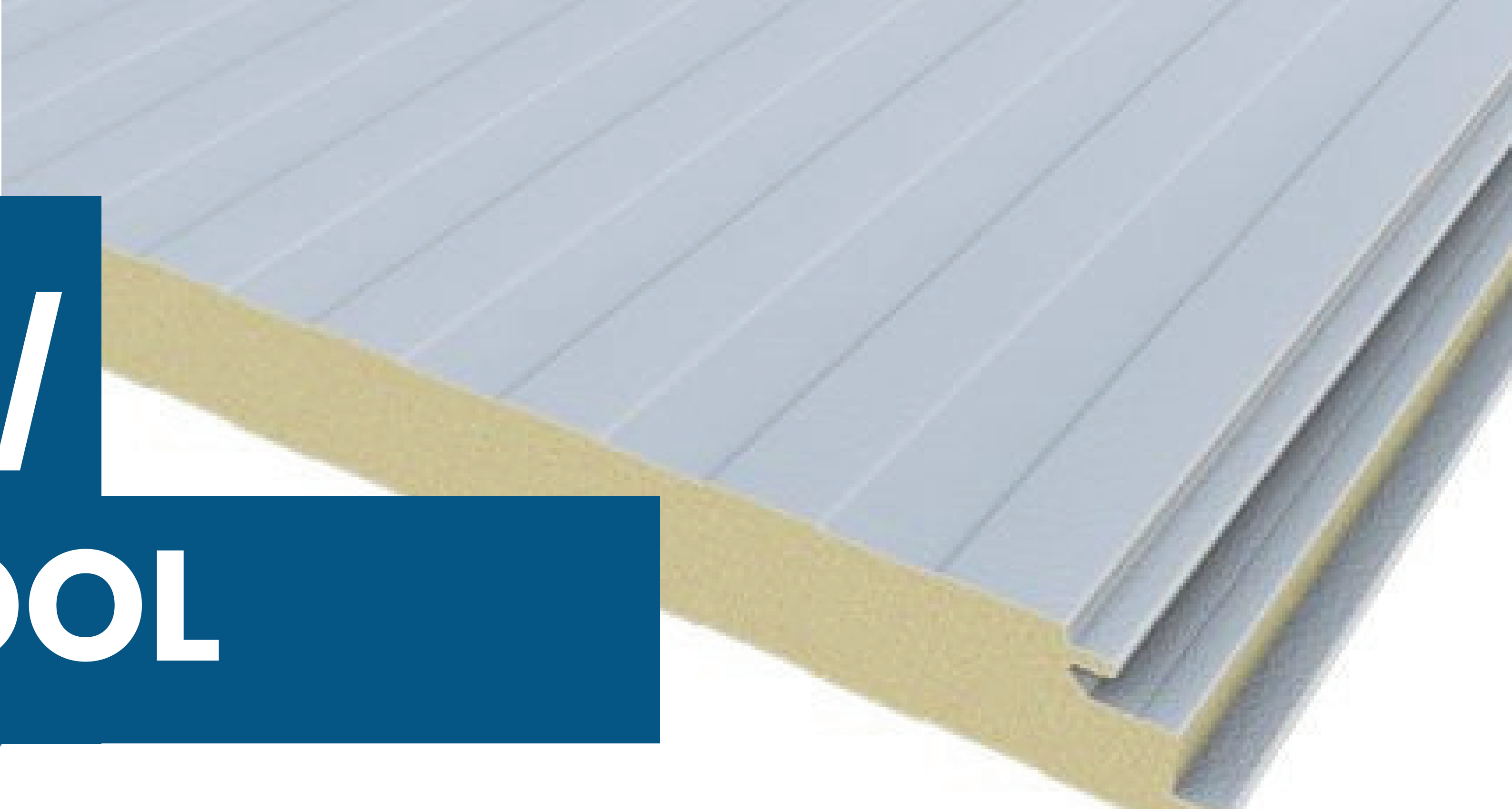
2. ROCKWOOL SANDWICH PANEL

KEY ATTRIBUTES:

- ✓ Excellent Mechanical Performance.
- ✓ Rockwool panel are light in weight.
- ✓ Designed to aid quick installation with minimum efforts.
- ✓ Rockwool Panel are effectively heat and sound insulated.
- ✓ Long term sustainable and durable.
- ✓ Rockwool Sandwich Panel are eco-friendly and save energy costs.
- ✓ Negligible maintenance cost.



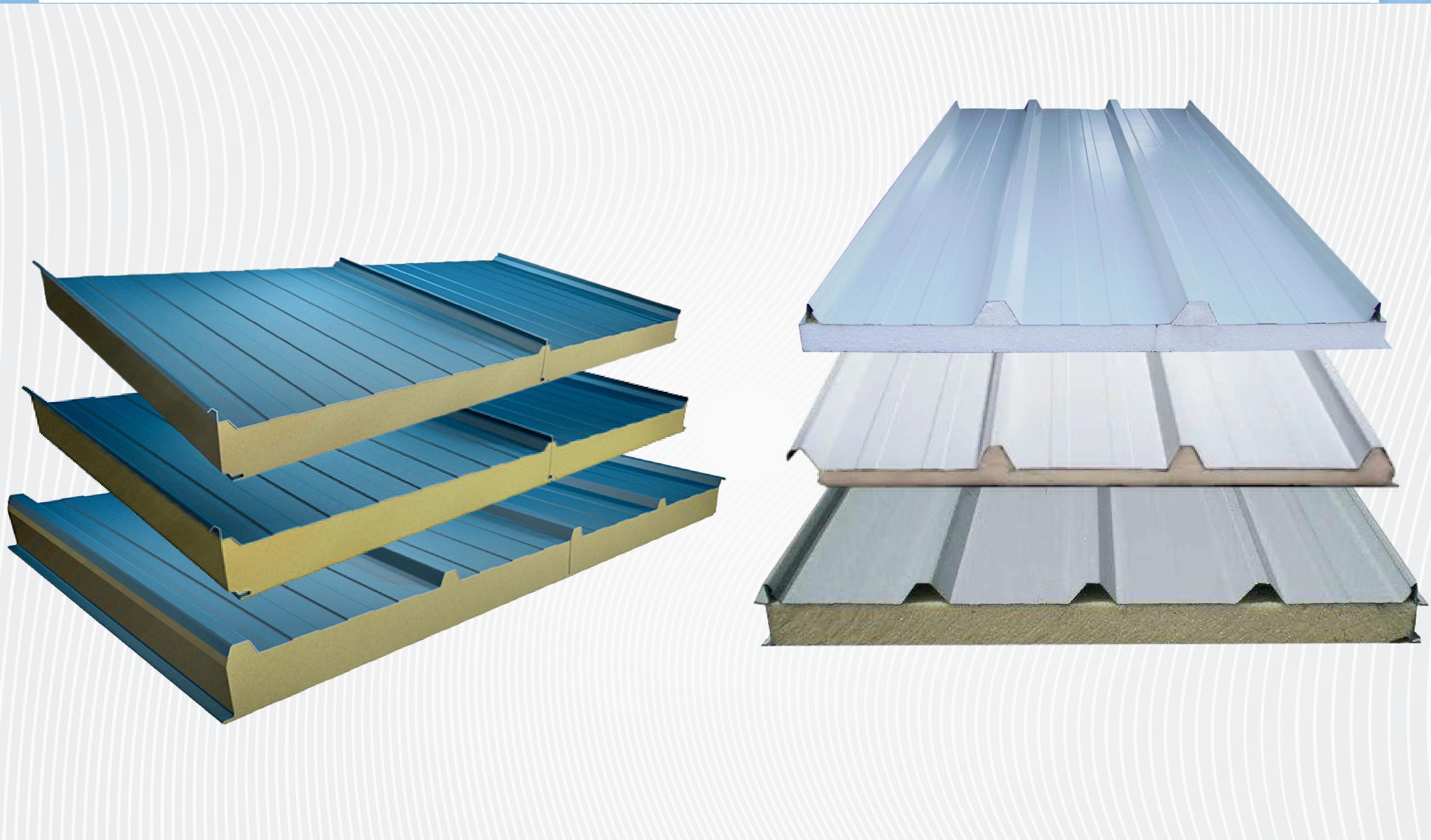
PUF / PIR / ROCKWOOL



Puff Rockwool Sandwich Panel Solutions are available at industry competent rates.
Send us an inquiry to know more about Rockwool, Sandwich Panel price and specifications.

COMPLETE TECHNICAL SPECIFICATION FOR PUF / PIR / ROCKWOOL

	UNIT	PUF/ PIR	Rockwool
Density	KG/M3	40 to 48	42 to 100
Thickness	MM	40/50/60/80/100/120/150	50/60/80/100/120/150
Water absorption	%	Less than 1%	Less than 2%
Skin type		PPGI/ PCGI/ Stainless Steel	PPGI/ PCGI/ Stainless Steel
Skin thickness	MM	0.4 to 0.8mm	0.4 to 0.8mm
Connecting mechanism		Cam Locks/ Tongue and Groove	Tongue and Groove



3. Clean Room Panels / Operation Theater PUF Panel

Description:

These panels are used in pharma, biotech, hospitals, and labs. They maintain hygiene and prevent bacteria or dust from entering. Used in manufacturing units, operation theaters, ICUs, and sterile environments.

Made using high-density polyurethane foam core sandwiched between two pre-coated galvanized iron (PPGI) sheets, these panels provide excellent insulation, easy maintenance, and superior air-tightness. The seamless construction and anti-bacterial coating help maintain sterility and minimize contamination risks.



Clean Room Panels Features:



High Thermal
Insulation



Air-Tight
Construction



Smooth &
Washable Surfaces



Fire-Resistant
Options Available



Modular &
Customizable

CLEAN ROOM ADVANTAGES:

- ✓ Flame retardant and anti-fungal surfaces
- ✓ Clean edge finish with aluminum coving and air-tight joints
- ✓ Easy to wash and sterilize
- ✓ Fulfills GMP and ISO standards for clean rooms
- ✓ Fast and modular installation



4. Cold Room / Cold Storage

PUF insulated cold rooms are ideal for storing fruits, vegetables, dairy, meat, icecream, medicines, vaccines, and chemicals. They maintain the required temperature and save energy.

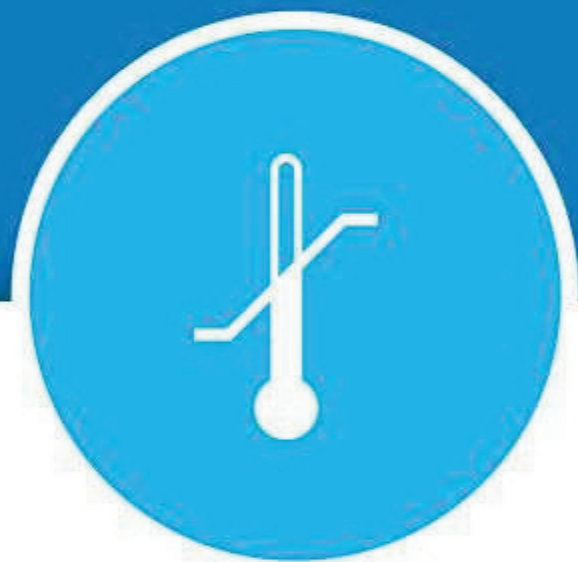
These systems are essential for industries requiring a consistent, low-temperature environment to maintain product quality, safety, and extended shelf life. Built to withstand harsh environmental conditions and intensive usage, Cold Room Panels offer easy installation, low maintenance, and excellent thermal performance.



Cold Room / Cold Storage Features:



Superior Thermal Insulation



Temperature Range Support



Hygienic & Easy to Clean



Durable & Weather-Resistant



Modular & Customizable

COLD ROOM ADVANTAGES:

- ✓ Leak-proof camlock joining system
- ✓ Hygienic and food-grade panel skins (SS or GI)
- ✓ Compatible with sliding/hinged insulated doors
- ✓ Supports digital temperature control systems



5. Modular Office / Clinic / Porta Cabins

Description:
Portable, insulated, ready-to-use structures for site offices, clinics, and security cabins.

These portable cabins are factory-fabricated, transported in ready-to-install form, and assembled quickly at the site – ensuring minimal disruption, faster deployment, and cost savings compared to conventional construction.



Modular Office Panels Features:



High Thermal Insulation



Air-Tight Sealing



Corrosion & Impact Resistant



Smooth Operation



Optional Accessories

MODULAR OFFICE ADVANTAGES:

- ✓ Fully insulated to save energy and increase comfort
- ✓ Lightweight but durable – ideal for portable use
- ✓ Waterproof and leak-proof construction



6. Doors:

Cold Room door

Here is a general Cold Room Door Specification that can be tailored depending on the type of cold room (chiller), usage, and temperature range. Contact us if you want a version suited for food storage, pharma, or industrial use.



COLD ROOM DOOR SPECIFICATION-	
Category	Specification
Type of Door	Hinged (for small rooms/ personnel), Sliding (for large/ high-traffic openings) Options: Automatic Sliding, Double Leaf, Vertical Lift
Dimensions	Hinged: 800x1800 mm → 1200×2000 mm Sliding: 1000×2000 mm → 2000×2500 mm Custom sizes on request
Temperature Range	Chiller: +2°C to +8°C Freezer: -18°C to -25°C (or lower)
Door Panel Core	PUF /PIR / HONEYCOMB/ ROCKWOOL
Hardware	Heavy-duty lift-off hinges Lockable handle with emergency internal release
Heating System (Freezer)	Frame & threshold heater to prevent ice build-up 24V/ 230V heating strip with thermostat control

7. Clean Room door

Clean rooms are controlled environments that keep air free from contaminants. Clean room doors ensure airtight sealing, hygiene, and stable conditions for critical industries.



CLEAN ROOM DOOR SPECIFICATION-	
Category	Specification
Type of Door	Swing (Single/Double Leaf) or Sliding (Manual/Automatic)
Dimensions	Single Leaf: 900×2100 mm Double Leaf: 1500×2100 mm Custom sizes available
Door leaf core	Rockwool / puf/ PIR
Surface Material	PPGI / PCGI/ SS
Leaf thickness	30 to 100 mm
Performance	Airtight sealing to maintain positive/negative pressure Controls humidity, temperature, and particle count Withstands frequent cleaning with disinfectants Rust, corrosion & surface degradation resistant
Hygiene features	Flush vision panels, gaskets, and frames to prevent dust accumulation

8. Fire Doors (Sliding, Steel, Glazed)

Fire doors are specialized doors designed to prevent the spread of fire and smoke between different compartments of a building, helping ensure safe evacuation and limiting property damage.

Our Fire-Rated Doors are specially engineered to provide maximum safety during fire emergencies. Designed with high-quality materials and certified to international standards, these doors ensure fire resistance, durability, and reliable performance in critical situations.



TECHNICAL BENEFITS OF FIRE DOORS-

1. Fire Resistance & Compartmentalization:

- ✔ Effectively prevents fire and smoke from spreading between rooms or zones, allowing safe evacuation time.
- ✔ Maintains fire-rated compartments as per building codes (30, 60, 90, 120 minutes).
- ✔ Minimizes heat transfer, keeping escape routes safer during a fire.
- ✔ Constructed with high-performance materials such as galvanized steel and fire-rated glass.
- ✔ Engineered for high-traffic and harsh environments without compromising fire integrity.

2. APPLICATION-BASED RECOMMENDATIONS

Application	Outer Surface	Recommended Mineral Wool Density
Office / Residential	30-60 mins	100-120 kg/m3
Commercial/Hospital	60-90 mins	120-140 kg/m3
Industrial/High-Risk Zones	90-120 mins	140-160+ kg/m3



9. Hospital Trolleys - Technical Specifications

Hospital trolleys are mobile units used for the transportation of medical supplies, instruments, medications, and sometimes patients within clinical or surgical environments. Designed for durability, hygiene, and maneuverability

CATEGORY	DETAILS
Type	Instrument Trolley
Frame Material	Stainless Steel (SS) / Powder-coated MS / Aluminum
Shelves / Trays	2-4 tiers, stainless steel
Top Shelf	Guard rails / raised edges to prevent spillage
Castors/Wheels	100-150 mm dia., 360° swivel, 2 with brakes
Load Capacity	100-150 kg (depending on design)
Handles	Ergonomic push handle, anti-bacterial coating
Typical Dimensions	650 x 450 x 900 mm (customizable)
Finish	Brushed/ matte stainless steel, corrosion-resistant



DESIGN BUILD SERVICES WE PROVIDE

- Complete project design build for Cold Rooms, Cold Storages, PUF Panels, Insulated Doors & Clean Rooms
- Approval drawings for Puf Panel work scopes and doors
- Comprehensive review of architecture details for panel and door
- Recommendations and corrections for thermal envelope details
- Value engineering as pertains to limits of proper design
- Preliminary budget costing
- Overall Project Reviews
- Consultancy services
- Energy Management Services (Energy Audits)

OUR CLIENTS



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