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## INTRODUCTION

Emirates Industrial Panel (EIP) was established in 2007 in Dubai to meet the ever-growing market demand for high-quality insulated sandwich panels.

Through our state-of-the-art German continuous production line, we are able to manufacture roof & wall facade cladding, internal partitioning, and cold store panels of the highest quality.

Our panels are customizable, locally certified, FM approved, and have been used in over 55 countries worldwide.



## **PRODUCTION TECHNOLOGY**

EIP's state-of-the-art German continuous production line has a production capacity of over 3 million square meters of panels per annum.

The production system features multiple stations, including: a profiling section, a foam application station, a special cut-to-length system, a curing zone, and an automatic stacking & packaging unit. The fully automated line requires minimum operator intervention, maximizing quality and efficiency.

The plant proudly operates using environmentally friendly blowing agents that meet international standards.



## **APPLICATIONS**

#### EIP panels are used for an array of different applications in various industries.

From pharmaceutical centers to vertical farms, EIP panels are designed for temperature-sensitive applications that require optimal hygiene standards and safety.

Our panels are suitably made for different construction designs such as:

- Single-external-box
- Box-in-a-box
- Rack-supported cladding systems

- Distribution Centers
- ✓ Cold Stores
- ✓ Fruit & Vegetable Storage
- Pharmaceuticals
- Leisure & Recreation
- Fish & Meat Processing
- ✓ Vertical Farming
- Dairy Processing Plants



#### **DESIGN & ENGINEERING SERVICES**



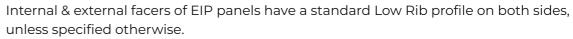
At EIP, our experts are prepared to provide you with detailed engineering and technical advice at any stage of your project.

#### Some of the services that EIP provides are:

- Panel estimation based on project drawings
- ✓ Preparation of shop drawings, including detail solutions
- ✓ Final BOQ that includes panels, flashings & accessories
- Preparation of drawings to guide the installation team
- ✓ Site supervisor to guide the installation team
- ✓ Assistance in selecting an EIP-certified contractor for the installation of sandwich panels

All or a combination of the above services are available upon assessing the requirement of each project.

### SURFACE PROFILES





LOW RIB

#### **AVAILABLE UPON REQUEST**





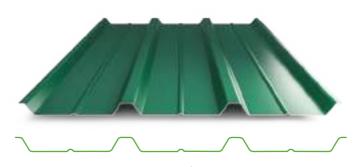


MICROLINE

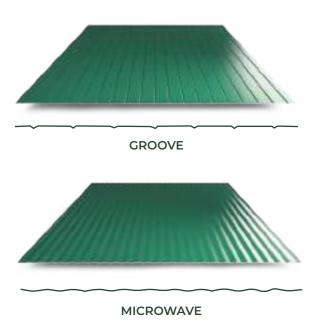
#### SURFACE PROFILES - ROOF & WALL

TRP 40/333 and 45/150 panels have 40/333 corrugated and 45/150 corrugated profiles on the external side respectively, and have a Low Rib profile on the internal side.

HFW and TFW panels have Low Rib profiles as the standard on both sides.



TRP 40/333





TRP 45/150

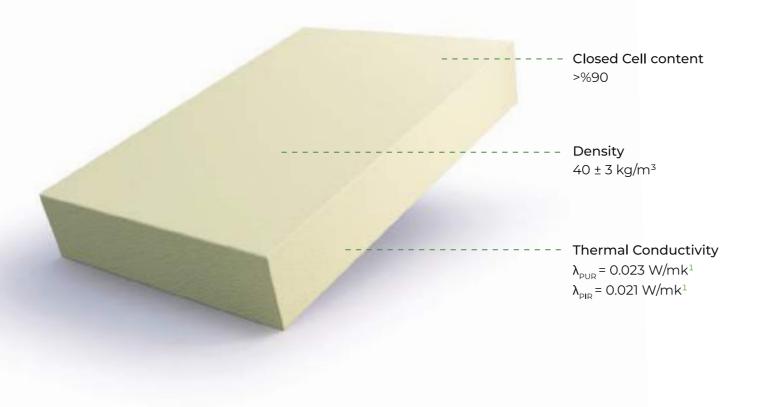
## **INSULATION CORE**

The core of an EIP panel is rigid insulated foam, available as:

- ✓ FM Approved, fire resistant Polyisocyanurate (PIR) foam
- ✓ Fire Reaction (PIR) B1 class
- ✓ Fire Reaction (PUR or PIR) B2 class
- ✓ Polyurethane (PUR) B3 class

The blowing agent used in EIP panels is environmentally-friendly pentane gas, with:

- ✓ Zero Ozone Depletion Potential (OPD)
- Low Global Warming Potential (GWP)
- ✓ Zero CFC and HCFC



# METAL FACERS

The standard substrate for internal and external facers is pre-painted & hot-dip galvanized steel.

Thickness	0.50 mm
Steel Grade	DX51D
Zinc Coating	Z275/Z200/AZ150
Top Coat	Polyester, PES, 25 micron
Colour	RAL 9002 Off-white
Surface Protection	Polyethylene (PE) film

Variations are possible in the surface material specifications to suite a wide range of specialized applications:

Thickness Options	0.40 mm to 0.80 mm
Substrate Options	Aluzinc-coated steel, Sta
Colour Options	Any colour from the RAL

#### TOP COAT OPTIONS

HDP (High Durable Polyester) coating is suitable for increased resistance against corrosion and harsh cleaning agents.

**PVDF (Polyvinylidene Difluoride)** coating is effective for external applications where higher resistance against corrosion, colour fading, and harsh environment conditions is required.

**Plastisol** coating is highly chemical resistant. This tough coating is suitable in internal applications for non-contact level food safety.

Food Safe coating has anti-microbial properties, which is ideal in internal applications such as kitchens for contact-level food safety.

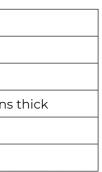
#### **EIP PANEL BENEFITS**

- ✓ LIGHT WEIGHT
- ✓ HIGH RIGIDITY
- ✓ SUPERIOR INSULATION
- ✓ FIBER-FREE CORE
- CLOSED CELL FOAM

- ✓ EFFECTIVE FIRE RESISTANCE
- ✓ RESISTANCE TO ADVERSE WEATHER
- ✓ AIR-TIGHT, FIRE RATED JOINT
- ✓ HYGIENIC SURFACE (AS PER HACCP)
- ✓ ZERO ODP, LOW GWP

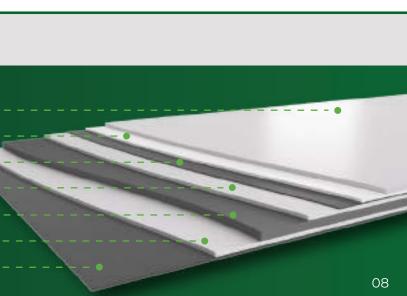
#### **STEEL FACER DETAILS**

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ainless steel (SS 304 or 316), Aluminium

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## **QUALITY ASSURANCE**

EIP is committed to providing clients with high-quality products and services.

Our team of experts operate a well-equipped laboratory to manage our effective Quality Management System. They use advanced technology to ensure our products are continually tested and meticulously reviewed. Numerous checks are routinely conducted on incoming raw materials, unfinished panels, and final products.

EIP's Quality System meets the requirements of ISO 9001:2008, and is regularly audited by four bodies:

- Peers Quality Assurance Limited
- Dubai Central Laboratories
- FM Approvals













## **EIP FIRE SHIELD**

Reliable fire resistance is necessary in the developing world of construction materials. Standard polyurethane and polystyrene insulated panels are vastly inefficient against fire, unlike the truly fire-resistant sandwich panels that utilize EIP Fire Shield technology.

#### **PIR Insulation Core**

EIP Fire Shield panels contain a high grade polyisocyanurate (PIR) insulation core, which provides superior fire-resistance when compared to most alternative standard insulation materials. PIR is a thermosetting material, which means that it will permanently become hard and rigid when heated, and will not melt or drip when exposed to fire. The foam core forms a strong carbonaceous char, creating a protective layer from flames. With these properties, EIP Fire Shield PIR panels have been proven to help reduce the risk of critical building loss.

#### **Double Tongue & Groove Fire-Rated Joint**

A specially-designed joint protects the core from flame ingress. This enables the panel to maintain its structural integrity when exposed to fire.

#### When exposed to a real fire situation, EIP Fire Shield Panels:

- Do not contribute to the fire or act as a fuel to it
- Do not spread flames on their surface
- ✓ Give off minimal smoke
- Preserve their insulation properties<sup>1</sup>
- Preserve their structural integrity<sup>1</sup>
- Self-extinguish when the fire source is removed

#### CERTIFICATIONS

EIP Fire Shield panels have received FM Approval as Class 1 insulated panels with no height restriction in accordance with FM Approvals standards 4880, 4881, 4882, and 4471.

FM 4880	Overall Fire Performance
FM 4881	External Wall Panels
FM 4882	Suitability for Smoke-Se
FM 4471	Roof Panels
EN 13501-1	Reaction-to-Fire Classifi
EN 13501-2	Fire Resistance of Non-L
ASTM E84 (NFPA 255)	Surface Burning Charac
NFPA 285	Fire Propagation Charac
ASTM E108	Standard Test Methods
ASTM D1929	Standard Test Method fo

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Load Bearing Elements

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cteristics of Exterior Non-Load Bearing Walls

for Fire Tests of Roof Coverings

or Determining Ignition Temperature of Plastics



### **EIP CSP: COLD STORE PANEL**

## **COLD STORE PANEL WALL & CEILING SPAN GUIDE**

EIP's Cold Store Panel (CSP) is perfect for walls, ceilings, partitions, and roof applications with waterproofing; offering superior insulation, durability, and easy installation for temperature-controlled environments.



Thermal Performance & Weight									
t: Core Thickness (mm)	55	80	100	120	140	150	170	200	
Weight (kg/m²)1	10.40	11.40	12.20	13.00	13.80	14.20	15.00	16.20	
U value - PIR (W/m²K)²	0.38	0.26	0.21	0.17	0.15	0.14	0.12	0.10	

<sup>1</sup> Based on 0.50mm thick outer facers

<sup>2</sup> As per foam laboratory values

\* Consult EIP's technical team for updated values with different foam systems.

#### **CSP JOINT SYSTEM**

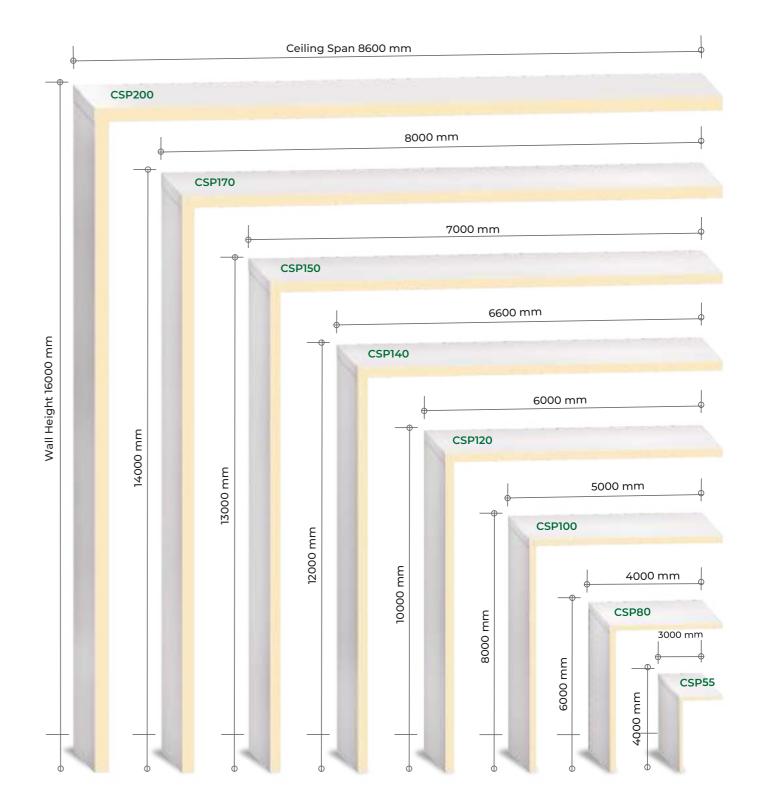
A double tongue-and-groove edge ensures that the panels precisely interlock with utmost ease.

This eliminates the risk of thermal bridging and provides an air-tight joint between the panels.

The extended steel edges within the joint system provide additional strength and protection against fire by prolonging the amount of time flames take to reach the panel's core.

Panel lengths can vary from 2000mm to 18000mm. This span table is based on panels with the standard 0.50mm steel thickness for internal and external facers.

While using CSP panels as self-standing partition panels, the following wall and ceiling span guide will show the maximum panel lengths for different thicknesses.



\* Span table is based on panels with 0.50mm thick steel internal and external facers \* Wall panel length goes up to 18000mm with additional support

## **COLD STORE PANEL HEAT TRANSMISSION TABLE**

## **COLD STORE PANEL INSTALLATION DETAILS**

04

- 02

The maximum heat gain by conduction in a cold store should be limited to  $10 \text{ W/m}^2$ . This table shows the optimal insulation thickness to be selected for various temperature differentials (TD).

Panel Thickness (mm)	55	80	100	120	140	150	170	200	
Thermal Energy Transmission (W/m² K)	0.41	0.28	0.23	0.19	0.16	0.15	0.13	0.11	
Temperature Differential (TD)									
10°C	4.181	2.875	2.300	1.916	1.642	1.533	1.352	1.150	
15°C	6.271	4.312	3.450	2.874	2.463	2.299	2.028	1.725	
20°C	8.362	5.750	4.600	3.832	3.284	3.066	2.704	2.300	
25°C	10.452	7.187	5.750	4.790	4.105	3.832	3.380	2.875	
30°C	12.543	8.625	6.900	5.748	4.926	4.599	4.056	3.450	
35°C	14.633	10.062	8.050	6.706	5.747	5.365	4.732	4.025	
40°C	16.724	11.500	9.200	7.664	6.568	6.132	5.408	4.600	
45°C	18.814	12.937	10.350	8.622	7.389	6.898	6.084	5.175	
50°C	20.905	14.375	11.500	9.580	8.210	7.665	6.760	5.750	
55°C	22.995	15.812	12.650	10.538	9.031	8.431	7.436	6.325	
60°C	25.086	17.250	13.800	11.496	9.852	9.198	8.112	6.900	
65°C	27.176	18.687	14.950	12.454	10.673	9.964	8.788	7.475	
70°C	29.267	20.125	16.100	13.412	11.494	10.731	9.464	8.050	
75°C	31.357	21.562	17.250	14.370	12.315	11.497	10.140	8.625	
80°C	33.448	23.000	18.400	15.328	13.136	12.264	10.816	9.200	

03

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01. (	Wall	- Floor	Detail
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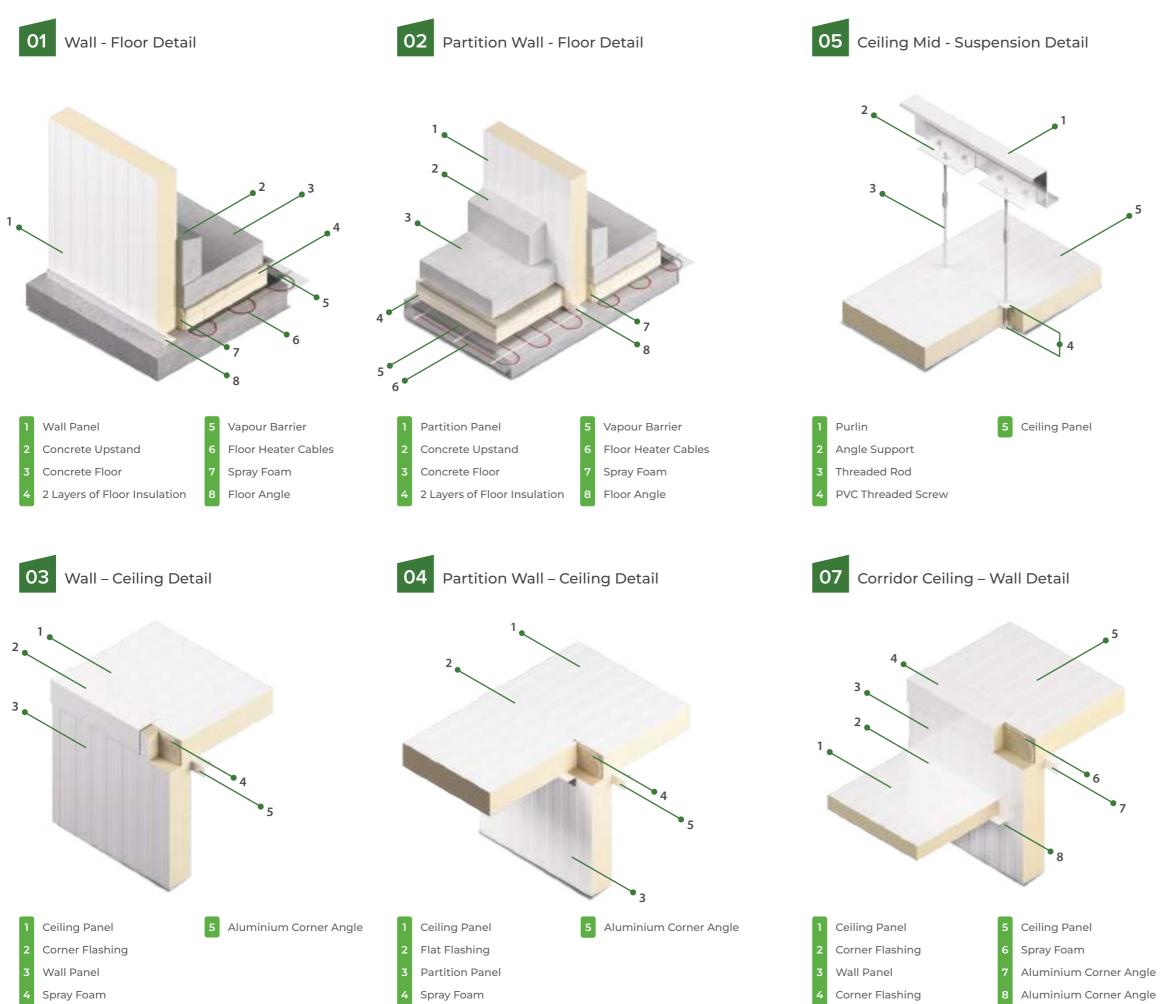
- Partition Wall Floor Detail
- Wall Ceiling Detail
- Partition Wall Ceiling Detail 04.
- Ceiling Mid-Suspension Detail
- 06. Ceiling T-Suspension Detail
- Corridor Ceiling Wall Detail
- 08. Wall Corner Detail

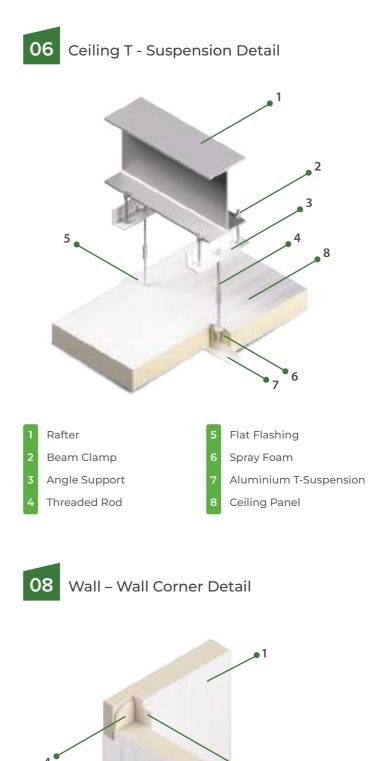
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### **COLD STORE PANEL INSTALLATION DETAILS**

#### **COLD STORE PANEL INSTALLATION DETAILS**





5 Aluminium Corner Angle



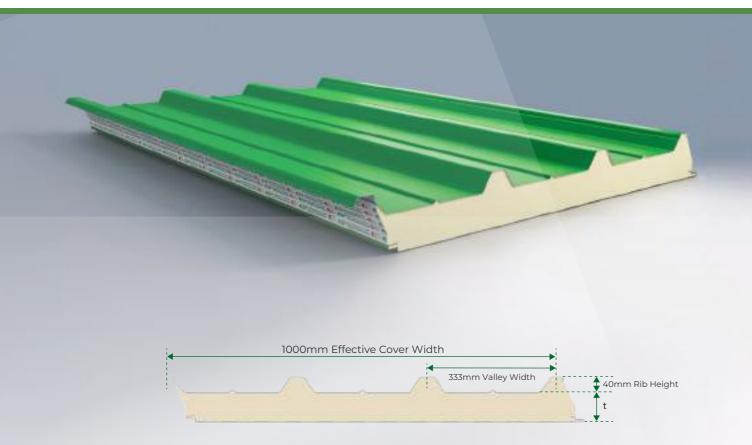
## **EIP TRP: TRAPEZOID ROOF PANEL 40/333**

### **EIP TRP: TRAPEZOID ROOF PANEL 40/333**

The TRP 40/333 is a trapezoid formed roof panel, through-fixed on the side-lap joints. The name '40/333' indicates the rib height (40mm) and valley width (333mm) of this panel.

40mm high ribs provide improved strength and water-resistance against turbulent weather conditions. This is an all-rounder roof cladding suitable for use in all buildings with roof slopes as low as 3.5° (6.0%)<sup>1</sup>.

Note that all EIP TRP panels can be installed as roof or wall fixtures.



TRP 40/333's minimum length is 2000mm and maximum length is 18000mm.

Thermal Performance & Weight										
t: Core Thickness (mm) 40 50 60 75 100 150										
Weight - Steel (kg/m²)²	10.30	10.70	11.10	11.70	12.70	14.70				
Weight - Aluminum (kg/m²)³	5.40	5.80	6.20	6.80	7.80	9.80				
U value - PIR (W/m²K)4	0.43	0.36	0.31	0.25	0.19	0.13				
U value - PUR (W/m²K)4	0.47	0.40	0.34	0.28	0.21	0.14				

<sup>1</sup> Contact EIP's technical team for assistance with selecting the correct design for your required slope.

<sup>2</sup> Based on 0.50mm thick outer facers

<sup>3</sup> Based on 0.70mm thick outer facers

<sup>4</sup> As per foam laboratory values

\* Consult EIP's technical team for improved values with different foam systems.



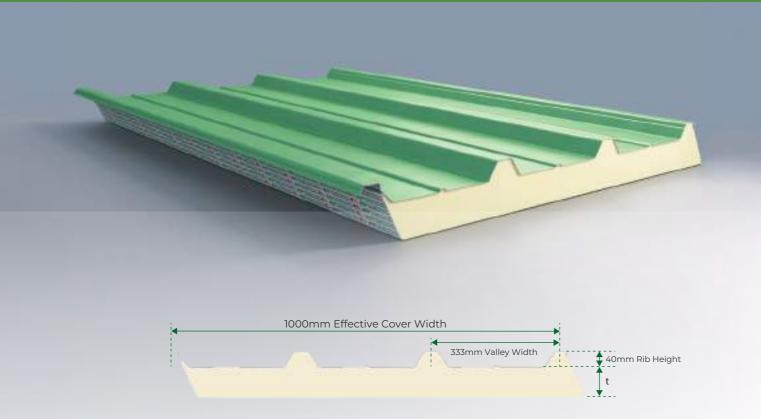
## **EIP TRP: TRAPEZOID ROOF PANEL 40/333 FLEX**

# EIP TRP: TRAPEZOID ROOF PANEL 40/333 FLEX

The TRP 40/333 Flex is a lighter variant of the TRP 40/333, with the same trapezoid form but featuring aluminium foil as the inner sheet of the panel. This panel is through-fixed on the side-lap joints.

This is an all-rounder roof cladding suitable for use in all buildings with roof slopes not less than 5° (8.75%)<sup>1</sup>.

It is a functional and economic option to clad the roofs of buildings effectively.



TRP 40/333 Flex's minimum length is 2000mm and maximum length is 10000mm.

Thermal Performance & Weight						
t: Core Thickness (mm)	50	75				
Weight - Steel (kg/m²)²	6.70	7.70				
Weight - Aluminum (kg/m²)³	4.40	5.40				
U value - PIR (W/m²K) <sup>4</sup>	0.36	0.25				
U value - PUR (W/m²K) <sup>4</sup>	0.40	0.28				

<sup>1</sup> Contact EIP's technical team for assistance with selecting the correct design for your required slope.

<sup>2</sup> Based on 0.50mm thick outer facers

<sup>3</sup> Based on 0.70mm thick outer facers

<sup>4</sup> As per foam laboratory values

\* Consult EIP's technical team for improved values with different foam systems.

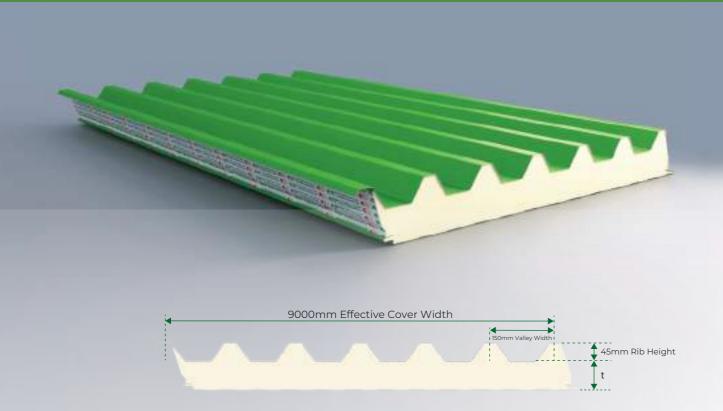


## **EIP TRP: TRAPEZOID ROOF PANEL 45/150**

# EIP TRP: TRAPEZOID ROOF PANEL 45/150

The TRP 45/150 is a trapezoid formed roof panel, through-fixed on the side-lap joints. The name '45/150' indicates the rib height (45mm) and valley width (150mm) of this panel. This panel is suitable for use in all buildings with roof slopes as low as 3.5° (6.0%)<sup>1</sup>.

The height and number of ribs on this roof panel provide superior strength, longer distance spanning capability, and effective water resistance. This improved strength model is designed to withstand demanding conditions.



TRP 45/150's minimum length is 2000mm and maximum length is 18000mm.

Thermal Performance & Weight									
t: Core Thickness (mm) 45 50 70 95 145									
Weight - Steel (kg/m²)²	11.30	11.50	12.30	13.30	15.30				
Weight - Aluminum (kg/m²)³	6.00	6.20	7.00	8.00	10.00				
U value - PIR (W/m²K) <sup>4</sup>	0.38	0.35	0.26	0.20	0.13				
U value - PUR (W/m²K) <sup>4</sup>	0.42	0.38	0.29	0.22	0.14				

<sup>1</sup> Contact EIP's technical team for assistance with selecting the correct design for your required slope.

<sup>2</sup> Based on 0.50mm thick outer facers

- <sup>3</sup> Based on 0.70mm thick outer facers and 0.50mm thick inner faces
- <sup>4</sup> As per foam laboratory values
- \* Consult EIP's technical team for improved values with different foam systems.



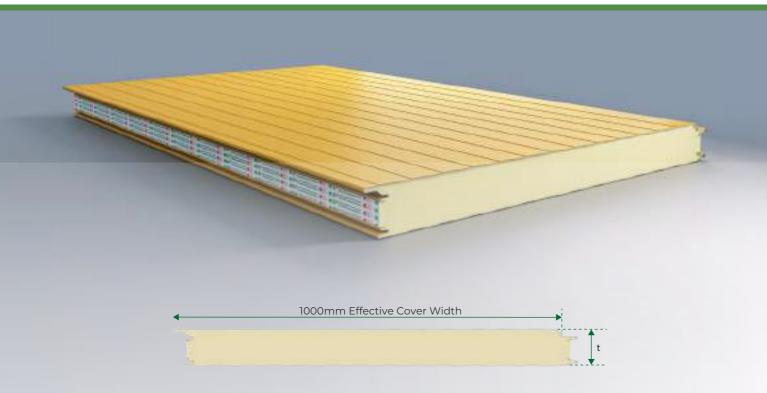
## **EIP HFW: HIDDEN-FIX WALL (ARCHITECTURAL)**

The HFW is an architectural wall panel with a hidden-fix joint system.

This system conceals the fasteners used to install the panels, providing a smooth, aesthetic look to the building's façade.

It can be installed horizontally or vertically on any building with positive internal temperatures.

The top choice of architects, HFW panels can easily be cut and modified to satisfy different needs without sacrificing the beauty of a façade.



HFW panel's minimum length is 2000mm and maximum length is 18000mm.

Care must be shown while selecting longer lengths for HFW panels. Mishandling during unloading and installation can cause damage. EIP's technical department will be available to provide additional guidance.

Thermal Performance & Weight									
t: Core Thickness (mm) 50 75 100 120 150									
Weight - Steel (kg/m²)1	10.30	11.60	12.60	12.40	14.90				
Weight - Aluminum (kg/m²)²	5.50	6.60	7.60	8.00	10.40				
U value - PIR (W/m²K) <sup>3</sup>	0.42	0.28	0.21	0.17	0.14				
U value - PUR (W/m²K) <sup>3</sup>	0.46	0.30	0.23	0.19	0.15				

<sup>1</sup> Based on 0.50mm thick facers

<sup>2</sup> Based on 0.70mm thick outer facers and 0.50mm thick inner facers

<sup>3</sup> As per foam laboratory values

\* Consult EIP's technical team for improved values with different foam systems.



## **EIP TFW: THROUGH-FIX WALL & PARTITION**

The TFW is a double tongue-and-groove joint wall panel. This standard panel is through-fixed onto structures. It can be installed horizontally or vertically on any type of building.

Thanks to their design, EIP's TFW panels can be used as self-standing internal partition walls and suspended ceilings.



TFW panel's minimum length is 2000mm and maximum length is 18000mm.

Care must be shown while selecting longer lengths for TFW panels. Mishandling during unloading and installation can cause damage. EIP's technical department will be available to provide additional guidance.

Thermal Performance & Weight										
t: Core Thickness (mm)	55	80	100	120	140	150	170	200		
Weight - Steel (kg/m²)¹	10.40	11.40	12.20	13.00	13.80	14.20	15.00	16.20		
Weight - Aluminum (kg/m²)²	5.60	6.60	7.40	8.20	9.00	9.40	10.20	11.40		
U value - PIR (W/m²K)³	0.38	0.26	0.21	0.17	0.15	0.14	0.12	0.10		
U value - PUR (W/m²K)³	0.41	0.28	0.23	0.19	0.16	0.15	0.13	0.11		

<sup>1</sup> Based on 0.50mm thick facers

<sup>2</sup> Based on 0.70mm thick outer facers and 0.50mm thick inner facers

<sup>3</sup> As per foam laboratory values

\* Consult EIP's technical team for improved values with different foam systems.

## **EIP TFW: THROUGH-FIX WALL & PARTITION**



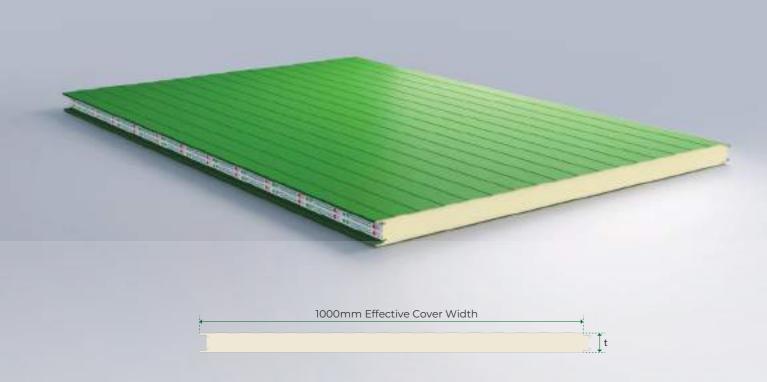
## **EIP SWP: STANDARD WALL PANEL**

### **EIP SWP: STANDARD WALL PANEL**

The SWP has an economic design for low-rise buildings.

This panel features a slip-joint and is through-fixed onto a structure.

It can be installed horizontally or vertically, and is predominantly used in agricultural or modular prefabricated buildings.



SWP's minimum length is 2000mm and maximum length is 12000mm.

Thermal Performance & Weight								
t: Core Thickness (mm)	40	50						
Weight - Steel (kg/m²)1	10.00	10.40						
Weight - Aluminum (kg/m²)²	5.70	6.10						
U value - PIR (W/m²K)³	0.53	0.42						
U value - PUR (W/m²K)³	0.58	0.46						

<sup>1</sup> Based on 0.50mm thick facers

<sup>2</sup> Based on 0.70mm thick outer facers and 0.50mm thick inner facers

<sup>3</sup> As per foam laboratory values

 $^{\ast}$  Consult EIP's technical team for improved values with different foam systems.

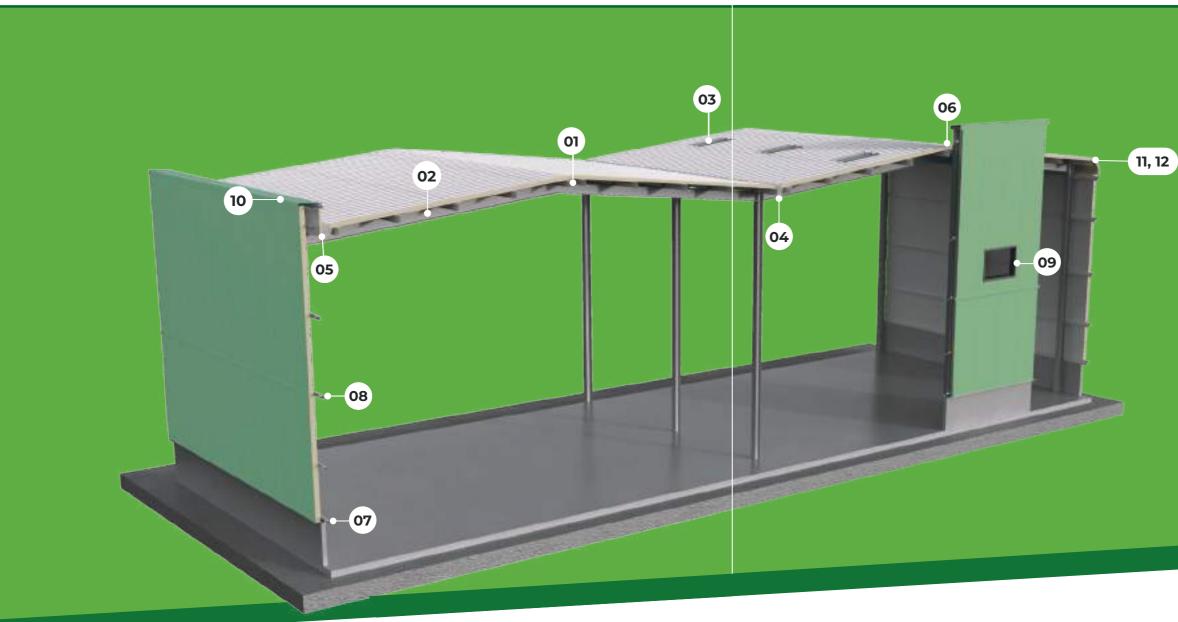






### **ROOF & WALL PANELS INSTALLATION DETAILS**

## **ROOF & WALL PANELS INSTALLATION DETAILS**



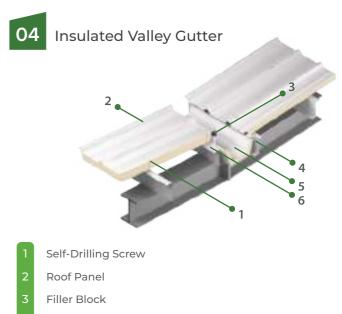


#### 01. Roof Ridge Detail

02. Roof Panel Overlap Detail

#### 03. Skylight Detail

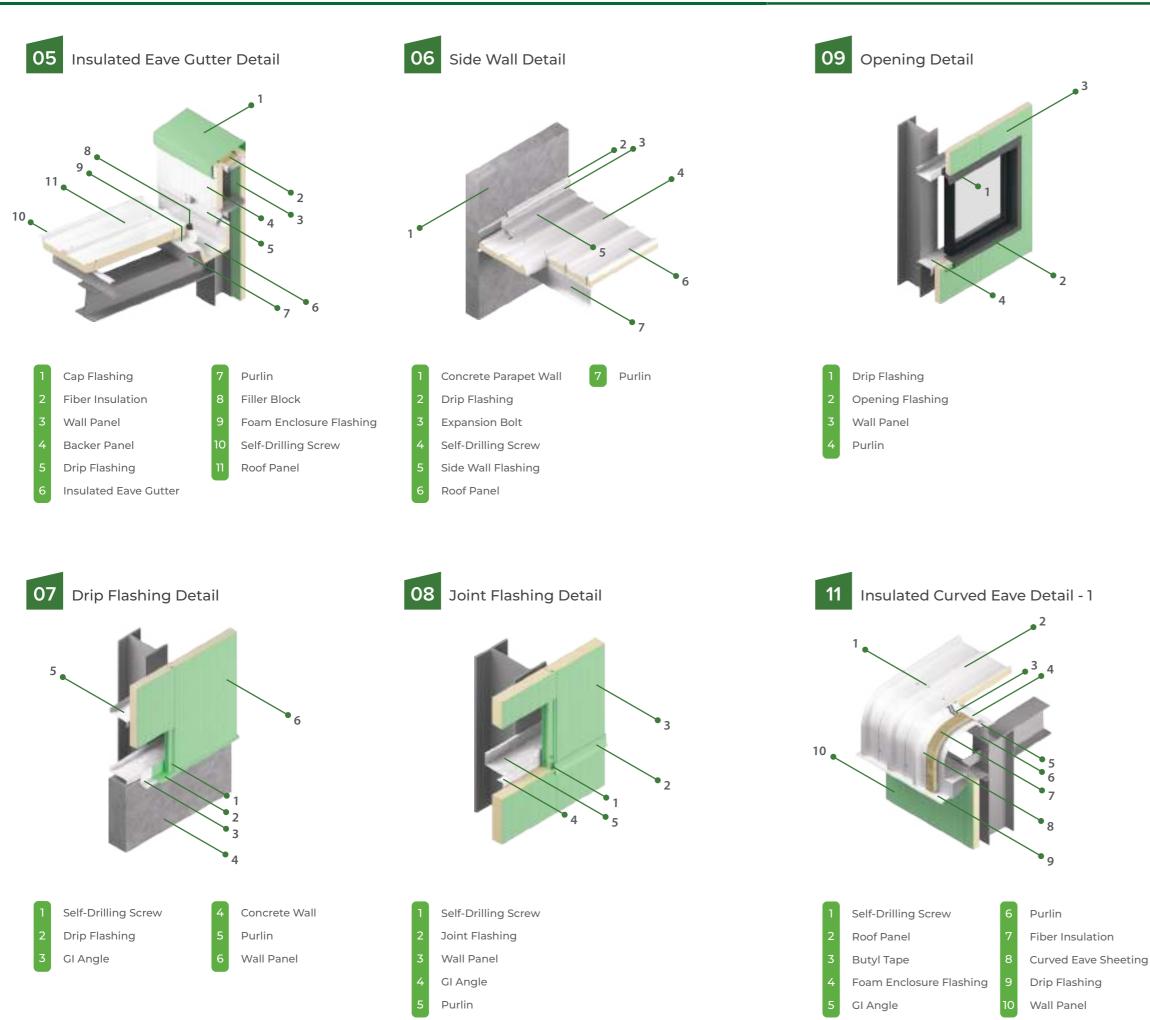
- 04. Insulated Valley Gutter Detail
- 05. Insulated Eave Gutter Detail
- 06. Side Wall Detail
- 07. Drip Flashing Detail
- 08. Joint Flashing Detail
- 09. Opening Detail
- 10. Gable Detail
- 11. Insulated Curved Eave Detail 1
- 12. Insulated Curved Eave Detail 2

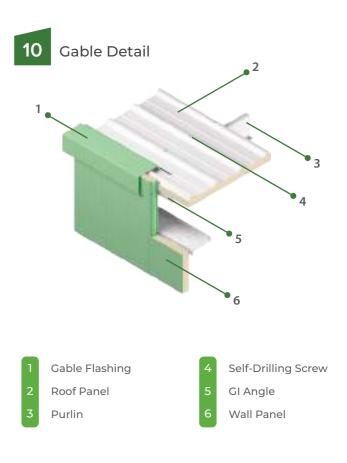


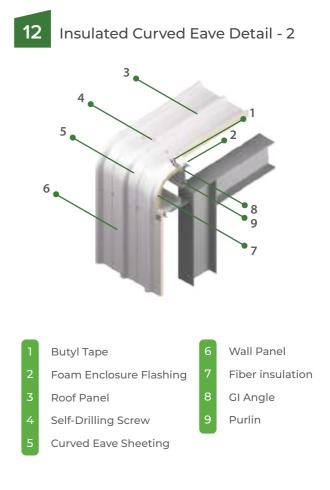
- Purlin
- Insulated Valley Gutter
- Foam Enclosure Flashing

### **ROOF & WALL PANELS INSTALLATION DETAILS**

## **ROOF & WALL PANELS INSTALLATION DETAILS**







## **DELIVERY, HANDLING & STORAGE**

### **DELIVERY, HANDLING & STORAGE**

EIP panels will arrive at your premises packed in bundles. Each bundle will contain a number of panels wrapped together with transparent polyethylene (PE) film. The bottom of these panels will also be supported by multiple polystyrene blocks. Each individual panel will have protective film on its surface to prevent scratches.

Every transport vehicle can take four rows of EIP panels, even with different panel counts in each bundle for different panel types. Land and sea freight vehicle capacities differ due to the vehicle dimensions.

Please contact EIP to get more details about the number of panels per bundle to expect based on your project's specifications.



#### **Special Packaging**

Certain destinations may require special packing. Upon request, we can create reinforced packing using extra wrapping, timber elements, or crates. Additional charges will apply.

#### Handling



Panel stacks are carefully loaded & strapped at our factory to ensure clients receive their panels in optimum condition. It is critical to correctly handle the panels while unloading or moving.

All EIP panel bundles have instruction sheets taped on them to outline the handling, transportation, and storage guidelines that should be followed.



#### **Unloading at Site**

Extreme care is advised when unloading the panels at site. A forklift or a crane equipped with a spreader beam must be used to avoid pressure on the panel edges, which can damage the joints and warp the panel surface.

#### Storage



Panels should be stored in a shaded area, on a clean & flat surface, with no more than two bundles on top of each other. If no covered area is available, panels should be covered with a cloth material to protect the panels from dust and rain, but also allow for air circulation underneath the cover.

#### **Protective Film**



If the panels are not installed immediately and are kept in a packed condition for an extended period, the protective foil may affect the surface quality of the panels. It should be removed with care as soon as possible. Please contact EIP for additional instructions in case you face this.

Avoid prolonged storage times. Panels should be installed soon after they

are received. Remove the surface protection film after installation.





## DOORS

A range of doors are offered by EIP to suit a wide variety of applications for industrial & commercial projects:

- Hinged doors
- Manual horizontal sliding doors
- ✓ Automatic horizontal sliding doors
- ✓ Automatic vertical sliding doors
- ✓ Rapid access doors for chiller & freezer rooms

Door features:

- Off-white RAL 9002 door leaves as standard.
  Other RAL colours are available upon request.
- An internal safety release for added security.
- Door and floor heating for low-temperature applications.
- A range of thicknesses.

Stainless Steel (S.S.) hinged & sliding doors are available upon request.









# CRAFTED FOR **BEAUTY.** BUILT FOR **PERFORMANCE.**







#### **Head Office**

P.O.Box: 115408, Plot No: 598-1106 Dubai Investment Park, Dubai United Arab Emirates

Tel: +971 (0)4 885 9600 Email: info@emiratespanel.com



emiratespanel.com