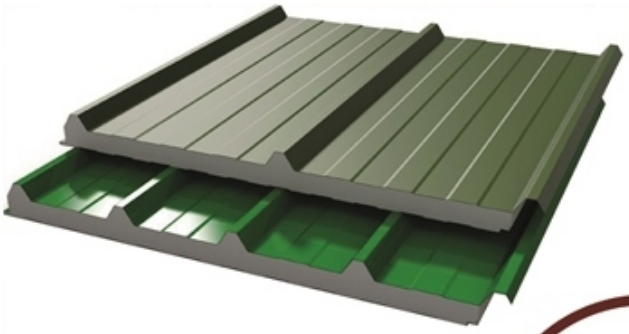
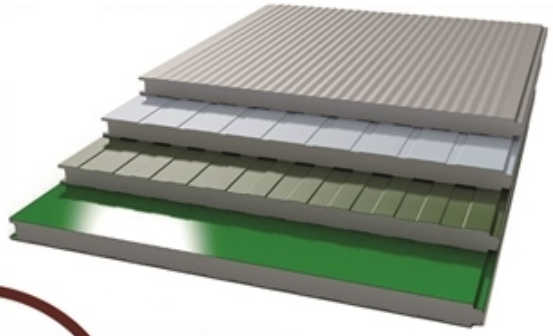




# Elmazoor Steel

**Elmazoor Steel** Company is Considered One Of The Largest CompaniesWorking in The Field Of Colored& Galvanized Sheet & Hot Sheet & Cold Sheet in Egypt. Which was Established in The Year 1952

**Elmazoor Steel** Introduce a new high Quality Products in The Field Of
( Construction Supplies , Cold Storage industry , Insulation Products )

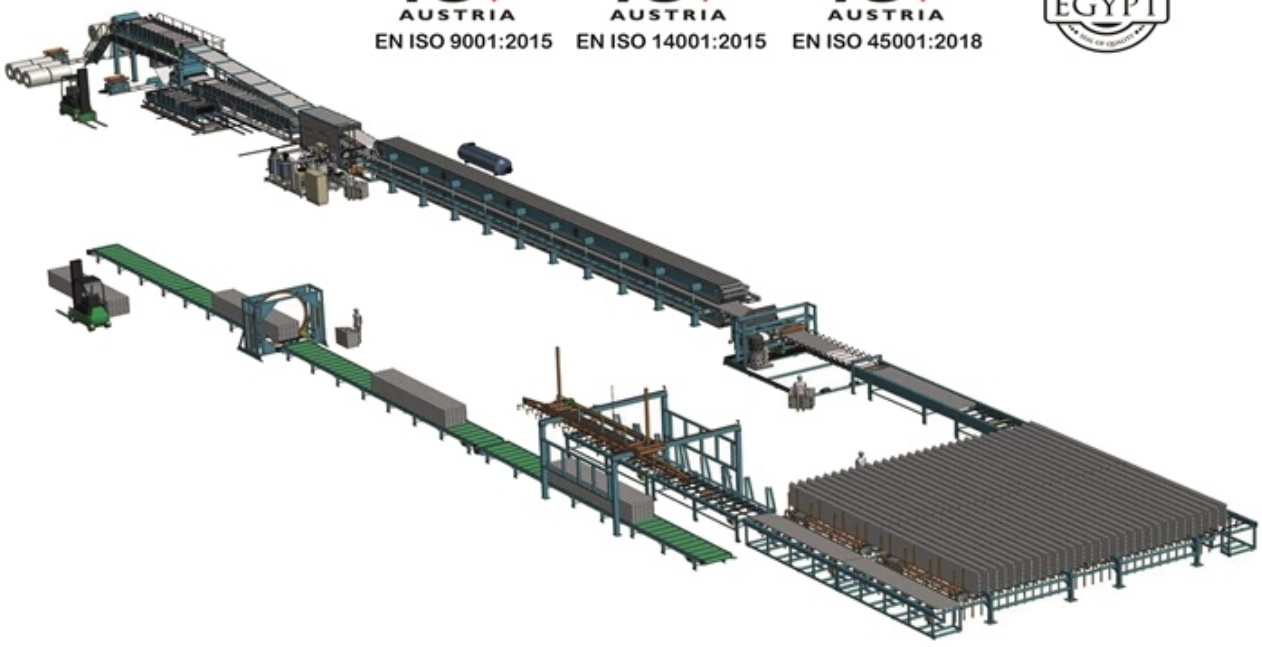
**More than 70 years of experience**

TÜV AUSTRIA EN ISO 9001:2015

TÜV AUSTRIA EN ISO 14001:2015

TÜV AUSTRIA EN ISO 45001:2018

PROUDLY MADE IN EGYPT



# CONTENTS

# Who Are We

ELMAZOOR STEEL is one of the biggest names in Egypt in the field of colorful sheet , galvanized sheet , hot and cold sheet , sandwich panels , caravans , cold storage , construction supplies , making and forming steel pipes.

The company was established in 1952 , more than 70 years ago , providing it with the edge amongst other competitors in the same field , its distinguished reputation is aided by its cooperation with world class companies in the market and adhering to the global standards of quality and safety.

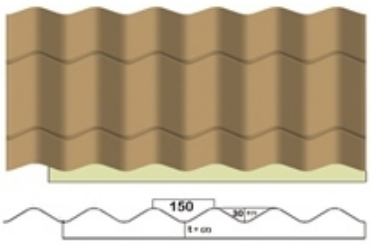
ELMAZOOR STEEL acts as an agent for a lot of providers and suppliers of raw materials , with a big advantage that the company also manufactures and reshapes said materials into multiple products according to the needs of the egyptian market using the latest and the cutting-edge technologies in their production lines and factories.

Other advantage of the company's practice is the accuracy and the speed in handling the customer's orders, this is gained through long years of experience in dealing with entities from both public and private sectors
The company's pricing policy is unmatched amongst its competitors , this combined with other facilities and features makes.

ELMAZOOR STEEL one of the most advanced firms in the field of steel manufacturing and give it the edge within the field.
Finally, we at ELMAZOOR STEEL say it with confidence, we are ready to satisfy the needs of our clients in the most efficient manner, with the best quality, the targeted deadline and the best results overall.

# SANDWICH PANELS

## Products

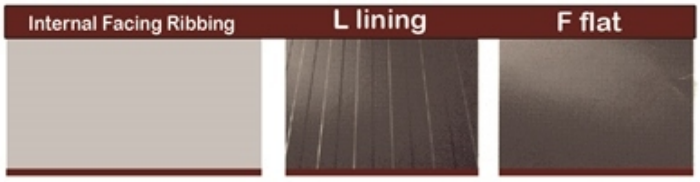



1030 ± (2)

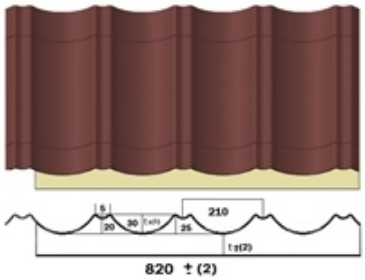
# QARMID ROOF 103 CM

- Best Insulation
- Water Prevention
- Dust Free
- Easy Installation

| Item | Specs |
|---|---|
| **Standards** | **Panels manufacture according to EN 14509** |
| Thicknesses ( mm) | 60 - 70 - 80 - 100 |
| Width (mm) | 1030 |
| Maximum Length (mm) | 12000 (depending on transportation conditions) |
| External Facing Thicnesses (mm) | ( 0.3 - 0.35 - 0.4 - 0.45 - 0.5 - 0.6 - 0.7 ) |
| Enternal Facing Thicnesses (mm) | ( 0.3 - 0.35 - 0.4 - 0.45 - 0.5 - 0.6 - 0.7 ) |
| Zinc Coating | G30-90 gm/m$^2$ G60-180 gm/m$^2$ G40-120 gm/m$^2$ G90-275 gm/m$^2$ |
| Front Face Coats (Microns) | 25 microns nominal (20 microns of polyester paint+5 microns of primer). |
| Back Face Coats | 7 microns of primer |
| Reaction to fire | P U R BS3d0 as per ENI 4509 - EN 13501 |



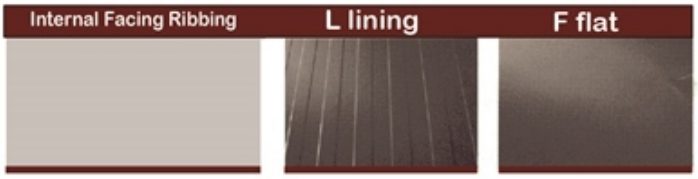

| Thickness (mm) | U Value (w/m$^2$K ) | Sound Reduction | Weight 0.5 + 0.5 ( kg/m$^2$ ) |
|---|---|---|---|
| 60 | 0.34 | 22-28 | 11.18 |
| 70 | 0.29 | 23-29 | 12.18 |
| 80 | 0.26 | 24-30 | 12.58 |
| 100 | 0.20 | 27-35 | 13.38 |



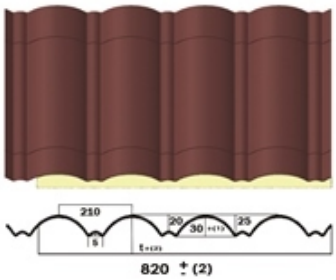

## QARMID ROOF 82 CM

- Best Insulation
- Water Prevention
- Dust Free
- Easy Installation

| Item | Specs |
|---|---|
| **Standards** | **Panels manufacture according to EN 14509** |
| Thicknesses ( mm) | 60 - 70 - 80 - 100 |
| Width (mm) | 820 |
| Maximum Length (mm) | 12000 (depending on transportation conditions) |
| External Facing Thicnesses (mm) | ( 0.3 - 0.35 - 0.4 - 0.45 - 0.5 - 0.6 - 0.7 ) |
| Enternal Facing Thicnesses (mm) | ( 0.3 - 0.35 - 0.4 - 0.45 - 0.5 - 0.6 - 0.7 ) |
| Zinc Coating | G30-90 gm/m$^2$ G60-180 gm/m$^2$ G40-120 gm/m$^2$ G90-275 gm/m$^2$ |
| Front Face Coats (Microns) | 25 microns nominal (20 microns of polyester paint+5 microns of primer). |
| Back Face Coats | 7 microns of primer |
| Reaction to fire | P U R BS3d0 as per ENI 4509 - EN 13501 |



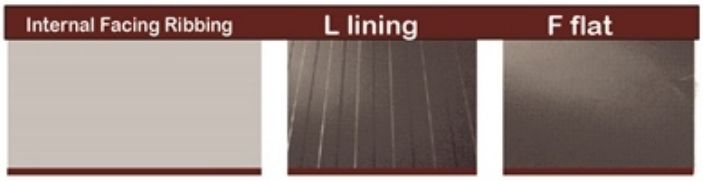

| Thickness (mm) | U Value (w/m$^2$K ) | Sound Reduction | Weight 0.5 + 0.5 ( kg/m$^2$ ) |
|---|---|---|---|
| 60 | 0.34 | 22-28 | 9.70 |
| 70 | 0.29 | 23-29 | 10.05 |
| 80 | 0.26 | 24-30 | 10.40 |
| 100 | 0.20 | 27-35 | 11.10 |



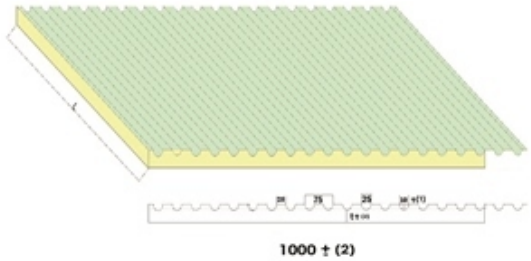

## QARMID ROOF 82 CM

- Best Insulation
- Water Prevention
- Dust Free
- Easy Installation

| Item | Specs |
|---|---|
| **Standards** | **Panels manufacture according to EN 14509** |
| Thicknesses ( mm) | 60 - 70 - 80 - 100 |
| Width (mm) | 820 |
| Maximum Length (mm) | 12000 (depending on transportation conditions) |
| External Facing Thicnesses (mm) | ( 0.3 - 0.35 - 0.4 - 0.45 - 0.5 - 0.6 - 0.7 ) |
| Enternal Facing Thicnesses (mm) | ( 0.3 - 0.35 - 0.4 - 0.45 - 0.5 - 0.6 - 0.7 ) |
| Zinc Coating | G30-90 gm/m$^2$ G60-180 gm/m$^2$ G40-120 gm/m$^2$ G90-275 gm/m$^2$ |
| Front Face Coats (Microns) | 25 microns nominal (20 microns of polyester paint+5 microns of primer). |
| Back Face Coats | 7 microns of primer |
| Reaction to fire | P U R BS3d0 as per ENI 4509 - EN 13501 |



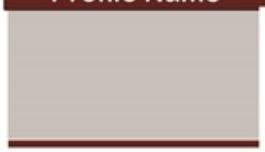
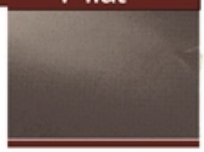

| Thickness (mm) | U Value (w/m$^2$K ) | Sound Reduction | Weight 0.5 + 0.5 ( kg/m$^2$) |
|---|---|---|---|
| 60 | 0.34 | 22-28 | 9.70 |
| 70 | 0.29 | 23-29 | 10.05 |
| 80 | 0.26 | 24-30 | 10.40 |
| 100 | 0.20 | 27-35 | 11.10 |




# ROOF PANELS

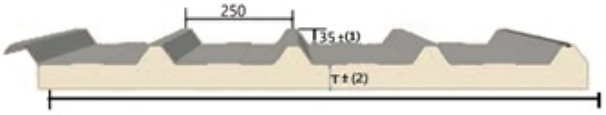
- Best Insulation
- Water Prevention
- Dust Free
- Easy Installation

| Item | Specs |
|---|---|
| **Standards** | **Panels manufacture according to EN 14509** |
| thicknesses ( mm) | 50 - 60 - 70 - 80 - 100 |
| Width (mm) | 1000 |
| Maximum Length (mm) | 3000 (depending on transportation conditions) |
| External Facing Thicnesses (mm) | ( 0.3 - 0.35 - 0.4 - 0.45 - 0.5 - 0.6 - 0.7 ) |
| Enternal Facing Thicnesses (mm) | ( 0.3 - 0.35 - 0.4 - 0.45 - 0.5 - 0.6 - 0.7 ) |
| Zinc Coating | G30-90 gm/m$^2$ G60-180 gm/m$^2$ G40-120 gm/m$^2$ G90-275 gm/m$^2$ |
| Front Face Coats (Microns) | 25 microns nominal (20 microns of polyester paint+5 microns of primer). |
| Back Face Coats | 7 microns of primer |
| Reaction of fire | P U R BS3d0 as per ENI 4509 - EN 13501 |

| Profile Name | L lining | F flat |
|---|---|---|
|  |  |  |

| Thickness (mm) | U Value (w/m$^2$K ) | Sound Reduction | Weight 0.5 + 0.5 ( kg/m$^2$) |
|---|---|---|---|
| 50 | 0.41 | 20-25 | 11.28 |
| 60 | 0.34 | 22-28 | 11.58 |
| 70 | 0.29 | 23-29 | 11.38 |
| 80 | 0.26 | 24-30 | 12.38 |
| 100 | 0.20 | 27-35 | 13.18 |

# MULTI ROOF ( 5 RIBS )

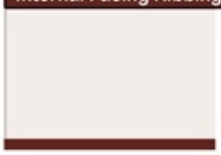



1000 ± (2)

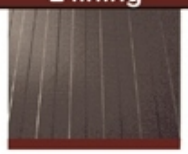
- Best Insulation
- Water Prevention
- Dust Free
- Easy Installation

| Item | Specs | |
|---|---|---|
| **Standards** | Panels Manufacture According To En 14509 | |
| thicknesses ( mm) | 30 - 40 - 50 - 60 - 70 - 80 - 100 | |
| Width (mm) | 1000 | |
| Maximum Length (mm) | 18000 (depending on transportation conditions) | |
| External Facing Thicnesses (mm) | ( 0.3 - 0.35 - 0.4 - 0.45 - 0.5 - 0.6 - 0.7 - 0.8) | |
| Enternal Facing Thicnesses (mm) | ( 0.3 - 0.35 - 0.4 - 0.45 - 0.5 - 0.6 - 0.7 - 0.8) | |
| Zinc Coating | G30-90 gm/m$^2$ G60-180 gm/m$^2$ G40-120 gm/m$^2$ G90-275 gm/m$^2$ | |
| Front Face Coats (Microns) | 25 microns nominal (20 microns of polyester paint+5 microns of primer). | |
| Back Face Coats | 7microns of primer | |
| Reaction to fire | PIR | BS2d0 as per EN 13501-1<br>B1 as per DIN 4102<br>Class 1as per BS476<br>EI 30 for Thickness 80-100 mm |
| Reaction to fire | PUR | BS3d0 as per ENI4509 - EN 13501 |

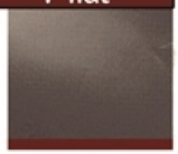
Internal Facing Ribbing



L lining

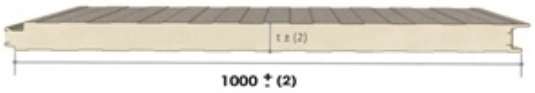


F flat



| Thickness (mm) | U Value (w/m$^2$K ) | Sound Reduction | Weight 0.5 + 0.5 ( kg/m$^2$) |
|---|---|---|---|
| 30 | 0.51 | 15-18 | 10.58 |
| 40 | 0.41 | 17-20 | 10.98 |
| 50 | 0.34 | 20-25 | 11.38 |
| 60 | 0.29 | 22-28 | 11.78 |
| 70 | 0.26 | 23-29 | 12.18 |
| 80 | 0.23 | 24-30 | 12.58 |
| 100 | 0.18 | 27-35 | 13.38 |

# HIDDEN FIX WALL



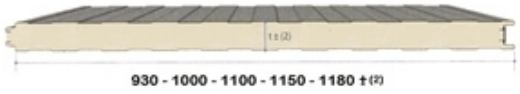

- Best Insulation
- Water Prevention
- Dust Free
- Easy Installation

| Item | Specs | |
|---|---|---|
| **CORE** | **PIR - PUR** | |
| Thicknesses ( mm) | 40 - 50 - 60 - 70 - 80 - 100 | |
| Width (mm) | 1000 | |
| Maximum Length (mm) | 18000 (depending on transportation conditions) | |
| External Facing Thicnesses (mm) | ( 0.3 - 0.35 - 0.4 - 0.45 - 0.5 - 0.6 - 0.7 ) | |
| Enternal Facing Thicnesses (mm) | ( 0.3 - 0.35 - 0.4 - 0.45 - 0.5 - 0.6 - 0.7 ) | |
| Zinc Coating | G30-90 gm/m$^2$ G60-180 gm/m$^2$<br>G40-120 gm/m$^2$ G90-275 gm/m$^2$ | |
| Front Face Coats (Microns) | 25 microns nominal (20 microns of polyester paint+5 microns of primer). | |
| Back Face Coats | 7 microns of primer | |
| Reaction to fire | PIR | BS2d0 as per EN 13501-1<br>B1 as per DIN 4102<br>Class 1as per BS476<br>EI 30 for Thickness 80-100 mm |
| Reaction to fire | PUR | BS3d0 as per ENI 4509 - EN 13501 |

| Profile Name | L lining | F flat |
|---|---|---|
| External Facing Profiling | ● | ● |
| Enternal Facing Profiling | ● | ● |

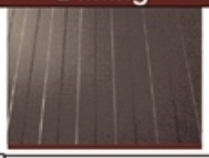
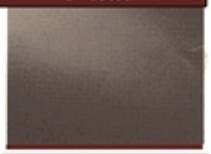
| Thickness (mm) | U Value (w/m$^2$ K ) | Sound Reduction | Weight 0.5 + 0.5 ( kg/m$^2$) |
|---|---|---|---|
| 40 | 0.51 | 17-20 | 10.36 |
| 50 | 0.41 | 20-25 | 10.76 |
| 60 | 0.34 | 22-28 | 11.16 |
| 70 | 0.29 | 23-29 | 11.56 |
| 80 | 0.26 | 24-30 | 11.96 |
| 100 | 0.20 | 27-35 | 12.76 |

## VISIBLE FIX WALL



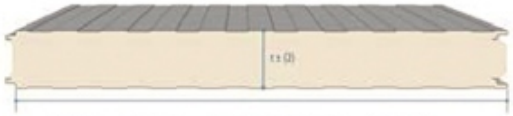

- Best Insulation
- Water Prevention
- Dust Free
- Easy Installation

| Item | Specs | |
|---|---|---|
| **CORE** | **PIR - PUR** | |
| Thicknesses ( mm) | 30 - 40 - 50 - 60 - 70 - 80 | |
| Width (mm) | 930 - 1000 - 1100 - 1150 - 1180 | |
| Maximum Length (mm) | 18000 (depending on transportation conditions) | |
| External Facing Thicnesses (mm) | ( 0.3 - 0.35 - 0.4 - 0.45 - 0.5 - 0.6 - 0.7 - 0.8) | |
| Enternal Facing Thicnesses (mm) | ( 0.3 - 0.35 - 0.4 - 0.45 - 0.5 - 0.6 - 0.7 - 0.8) | |
| Zinc Coating | G30-90 gm/m$^2$ G60-180 gm/m$^2$<br>G40-120 gm/m$^2$ G90-275 gm/m$^2$ | |
| Front Face Coats (Microns) | 25 microns nominal (20 microns of polyester paint+5 microns of primer). | |
| Back Face Coats | 7 microns of primer | |
| Reaction to fire | PIR | BS2d0 as per EN 13501-1<br>B1 as per DIN 4102<br>Class 1as per BS476<br>EI 30 for Thickness 80-100 mm |
| Reaction to fire | P U R | BS3d0 as per ENI 4509 - EN 13501 |

| Profile Name | L lining | F flat |
|---|---|---|
|  |  |  |
| External Facing Profiling | ● | ● |
| Enternal Facing Profiling | ● | ● |

| Thickness (mm) | U Value (w/m$^2$K ) | Sound Reduction | Weight 0.5 + 0.5 ( kg/m$^2$) |
|---|---|---|---|
| 30 | 0.68 | 6-9 | 9.60 |
| 40 | 0.51 | 10-14 | 10.00 |
| 50 | 0.41 | 12-16 | 10.40 |
| 60 | 0.36 | 15-18 | 10.80 |
| 70 | 0.31 | 19-23 | 11.20 |
| 80 | 0.26 | 24-30 | 11.60 |

# COLD STORE PANELS



930 - 1000 - 1100 - 1150 - 1180

- Best Insulation
- Water Prevention
- Dust Free
- Easy Installation

| Item | Specs | |
|---|---|---|
| **CORE** | **PiR - PUR** | |
| Thicknesses ( mm) | 100 - 120 - 150 - 200 | |
| Widths( mm) | 930 - 1000 - 1100 - 1150 - 1180 | |
| Maximum Length (mm) | 18000 (depending on transportation conditions) | |
| External Facing Thicnesses (mm) | ( 0.4 - 0.45 - 0.5 - 0.6 - 0.7 ) | |
| Enternal Facing Thicnesses (mm) | ( 0.4 - 0.45 - 0.5 - 0.6 - 0.7 ) | |
| Zinc Coating | G30-90 gm/m$^2$ G60-180 gm/m$^2$<br>G40-120 gm/m$^2$ G90-275 gm/m$^2$ | |
| Front Face Coats (Microns) | 25 microns nominal (20 microns of polyester paint+5 microns of primer). | |
| Back Face Coats | 7 microns of primer | |
| Reaction to fire | PIR | BS2d0 as per EN 13501-1<br>B1 as per DIN 4102<br>Class 1as per BS476<br>EI 30 for Thickness 80-100 mm |
| Reaction to fire | PUR | BS3d0 as per ENI 4509 - EN 13501 |

| Profile Name | L lining | F flat |
|---|---|---|
| External Facing Profiling | ● | ● |
| Enternal Facing Profiling | ● | ● |

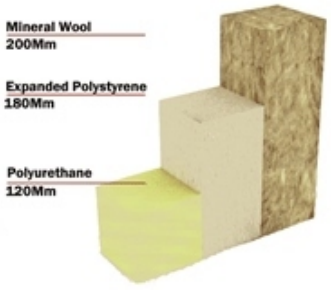
| Thickness (mm) | U Value (w/m$^2$K) | Sound Reduction | Weight 0.5 + 0.5 ( kg/m$^2$) |
|---|---|---|---|
| 100 | 0.21 | 27-35 | 12.40 |
| 120 | 0.17 | 30-38 | 13.20 |
| 150 | 0.14 | 42-48 | 14.40 |
| 200 | 0.10 | 48-60 | 16.40 |

# WHAT ARE OUR SANDWICH PANELS MADE OF ?

**Sandwich panels are assembled roof and wall elements that have excellent insulating characteristics. This is possiple thanks to the integration of the insulating material .They consist of two thin Steel Sheet Facings , which are shear- resistant and are bonded to one another on an insulated core.the insulated cores normally consist of rigid polyurethane foam (PUR ) or polyisocyanurate foam ( PIR ) making them fire resistant. Sandwith panels are manufactured through continuously running production processes. then cut to ordered lengths. the surfaces may be fine ribbed (Linning, Microribbing, Tiangle) or high ribbed (5 ribs trapezoidal) or even without any ribbing, depending on the customers requirement's**


## WHY POLYURETHANE SANDWICH PANELS?

**Comparison of insulating material thickness providing the heat transfer coeffcient value of 0.18 W/m²k**

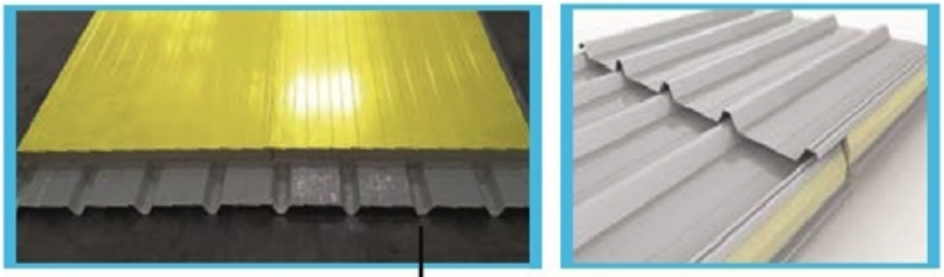



**Sandwich panels give your building an attractive exterior look without compromising on energy saving, sound insulation and fire safety**
**Elmazoor Steel sandwich panels are prefabricated or tailor - made building components that ensure high quality at an affordable cost.**
**A wide selection of profiles gives you the opportunity to design in complete accordance with your needs.**
**The panels are made of steel sheets with a high insulation polyurethane core.**
**we also provide sandwich panels with a fire resistant core of polyisocyanurate.**
**You can use them in an entire wall or roof construction or other exposed places**

# Small Details

## Big Diffrence

THE MAIN ADVANTAGE OF ELMAZOOR STEEL's PANELS IS THEIR HIGHER DURABILITY,AIRTIGHTNESS AND THERMAL INSULATION COMPARING TO OTHER SANDWICH PANELS

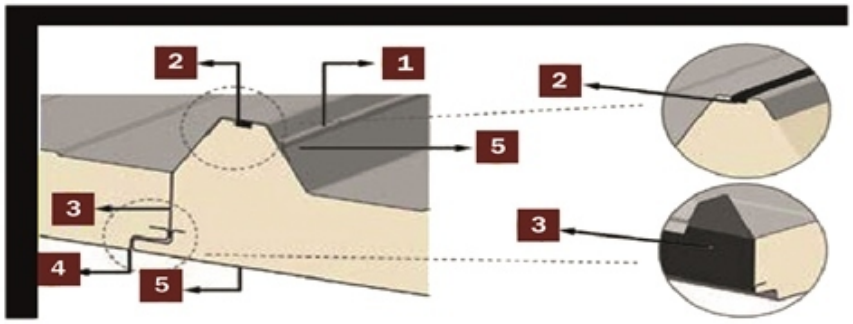


9

OVERLAP DETAIL

High- class joint fightness was achieved by using special connections & seatant with minimal engineering tolerances during the manufacturing process such as:

1. Decompression Zone protects against water penetration due to the capillary property.
2. Additional decompression zone ( extra gutter)to evacuate eventual water that may come above due to strong wind.
3. Continuous foamed sealing tape to prevent dust pentration.
4. ( 1-3mm ) gab to prevent thermal expansion effects ( steel bow - foam cracks )
5. Panelp's external and enternal steel are covered with polyethelene film to protect the sandwich panels from scratches during transportation and installation.
6. Tongue & groove joint to facilitate assemply and provide the best thermal insulation & joint tightness .
7. Auxiliary groove allows the precise assembly.
8. Concealed Panel Fixings ensure Aesthetic Facade Appearance
8. Longitudinal over lap for roof panels with removable tab to remove the foam easily & protects the panel during transportation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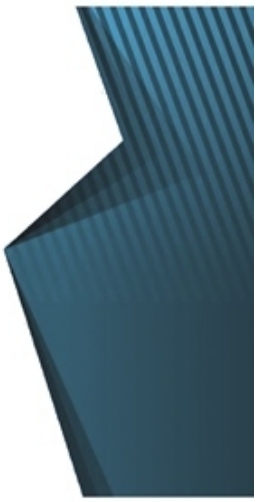

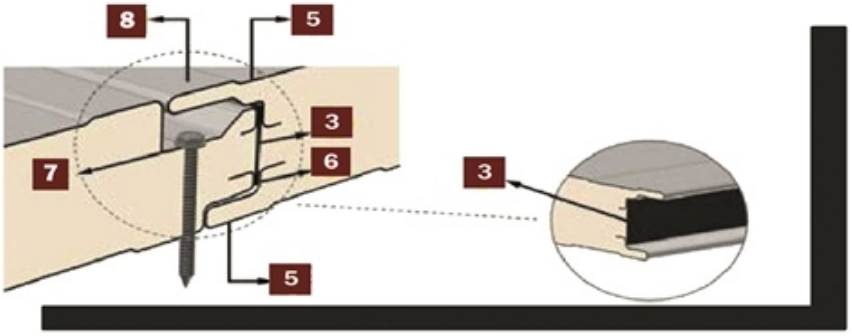
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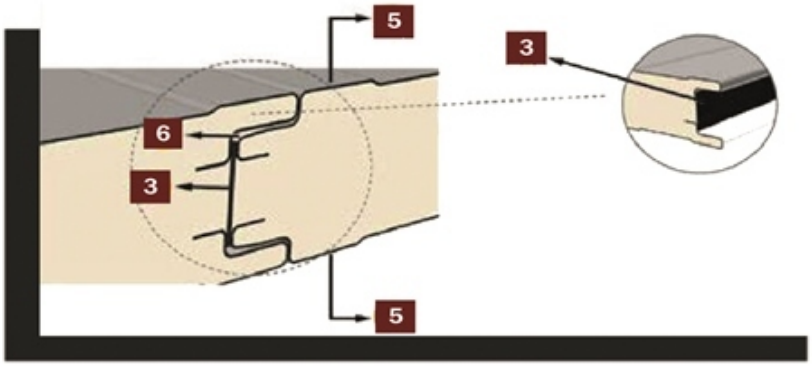
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# 01 RAW MATERIALS

**Elmazoor Steel's MQA system " Quality Assurance & Control" has been implemented to ensure that all raw materials used in sandwich panels fabrication conform to the preset material specifications and that our suppliers are qualified to Provide these Materials With Full Compliance with that specification more over a restricted "Quality Control System" is well established and implemented to check all material parameters compliance upon arrival and before releasing to production**





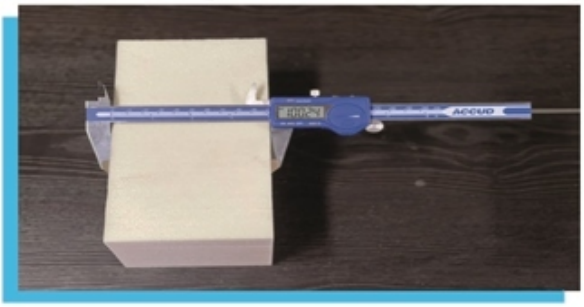
**Quality Inspection takes place through our well-equipped laboratory and by qualified Quality Team that consequently impacted on the quality standard of our sandwich panel.**

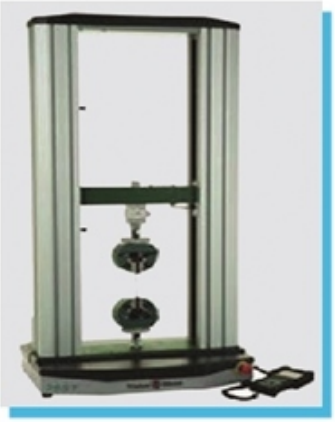
# 02 FINAL PRODUCT

**According to the FPC "Materials Quality Assurance" inspections tests are performed in our laboratory and external accoredited laboratories for polyurethane sandwich panel in accordance to EN standards**

## A MECHANICAL PROPERTIES

- Tensile strength determiend according to EN 1607
- Compressive strength determiend according to EN 826
- Shear strength determiend according to EN 14509





## B PHYSICAL PROPERTIES

- **DENSITY**

**According to the factory process control polyurethane density is tested with respect to EN 14509 standards**

| SANDWICH PANEL DENSITY | | |
|---|---|---|
| Foam Density | 40 (±2) Kg/M$^3$ | EN1602 |

- **DIMENSIONAL CONTROLS**

**Elmazoor Steel is controlling dimensional tolerances as prescribed in EN 14509 PFC**

| DIMENSIONAL TOLERANCES OF ELMAZOOR STEEL SANDWICH PANEL | | | | |
|---|---|---|---|---|
| Length | Width | Thickness | Deviation From Squorness | Deviation From Straightness |
| (±5) mm | (±2)mm | (±2) %(min.2mm) | Max.6mm | Max.5mm |

# TECHNICAL SPECS

## INSULATION MATERIALS

### ADVANTAGES OF PIR

- Superior R-Value and thermal performance.
- Moisture resistance.
- Dimensionally stable.
- Excellent fire test performance.
- Unaffected by commonly used construction adhesives and solvents.

### Polyisocyanurate ( PIR)

Rigid Polyisocyanurate ( PIR) Insulation materials are extensively modifide polyurethane through the incorporation of the much great heat resistant isocyanurate , accodingly sandwich panel PIR foam will gaiv better reaction to fire

### Polyuorethane ( PUR )

Rigid polyuorethane ( PUR) materials are cellular thermosetting insulation materials providing very high degree of thermal insulation compared to other construction materials

| Core | PIR | | PUR | |
|---|---|---|---|---|
| Density ( $Kg/m^3$) | 40 (2±) | | 40 (2±) | |
| Reaction to Fire | Class | Standard | Class | Standard |
| | B1 | Din 4102 | B3 + B2 | Din 4102 |
| | Bs2d0 | EN1350 1-1 | Bs3d0 + Bs2d0 | EN1350 1-1 |
| Precentage Of Closed Cells | 95%Minimum | | 95%Minimum | |
| Thermal Conductivity ($\lambda$) W/mk | 0.0205W/mk | | 0.0205W/mk | |

- **Polyisocyanurate** foams Referred to as PIR . is essentially modified polyurethane (PU)Foam.
- Two advantages of PIR foam are improved fire - resisitance and excellent insulation & machanical properties .
- The proportaion of MDI is higher than of PUR . As a result the MDI will olso react with itself , producing strong chains of isocyanurate
- These chains are stronger than normal bonds in polyurethane and results in a chemically and thermally more stable foam

# PPGI

## SANDWICH PANEL METALLIC FACING

Internal and external facings of a sandwich panel are determined according tO the type of usage of the panels, type of the surronding enviroment and the loods affcting on the sandwich panel. the most common metallic facings of sandwich panels is PPGI (( Pre - Painted Galvenized Iron ))

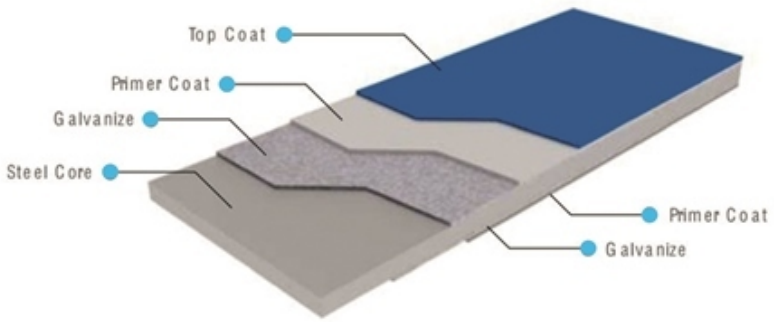
### Properties Of The Steel Sheets

| Steel Coil specc | 1ST grade imported galvanized & prepainted |
|---|---|
| Standerds | ASTM A653 - EN 10143 |
| STEEL Thickness (mm) | ( 0.3 - 0.35 - 0.4 - 0.45 - 0.5 - 0.6 - 0.7- 0.8 - 0.9 - 1.0) |
| Zinc Coating | G30-90 gm/m$^2$ G60-180 gm/m$^2$<br>G40-120 gm/m$^2$ G90-275 gm/m$^2$ |
| Front Face Coats (microns) | 25 microns nominal ( 20microns Of Polyester Paint + 5micron Of Primer ) |
| Back Face Coats | 7 Microns Of Primer |
| Origin | Belgium - China - KSA - Tiwan - UAE - Italy Russia - Mexico - France - Spain - Germany - Turkey According To Available Stock |

NOTE

Other specific atation for PPGI Mettallic facings can be especially imported upen request

All PPGI mettalic facings ere coverd with Polyethylene transparent film ( Thickness 35 μ) for protecion from dust and scratches



# RAL

## Colour Charts

### Standard Colors

**Ral 5012** Light blue Standard

**Ral 9016** Traffic white Standard

**Ral 1015** Light ivory Standard

**Ral 1018** Zinc yellow

**Ral 9002** Grey White

**Ral 3009** Oxide red

**Ral 3000** Flame red

**Ral 6011** Reseda green

**Ral 5014** Pigeon blue

**Ral 9006** White Aluminum

**Ral 6005** Moss green

**Ral 2011** Deep orange

**Ral 7016** Anthracite grey

**Ral 5010** Gentian blue

**Ral 9007** Grey Aluminum

Standard colors are avaliable in stock
Other colors need minimum order of 6000 $m^2$

# Installation

## For Loading, Unloading And Storing

# Handling Information

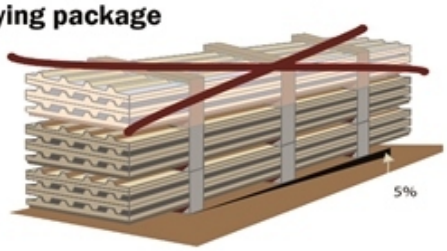
## DELIVERY

- Packages are to be laid up on appropriate pallets or Styroporfaom blocks.
- Packages need to be secured by means of straps be the carrier.
- Spacing blocks between.

## UNLOADING

- Packages are to be unloaded and stored on a suitable unloading vehicle and with adequate unloading tools only

- Unloading with the aid of a lifting beam which is adjusted to the panel lenght and corresponds to common regulations and recommendation ( See Picture )
- Strap tools should be made of textile (Nylon) with a minimum width of 10 cm
- Supporting beams made from wood or plastic with smooth surfaces and support width are recommended.
- There are 2 package budles to be stacked on top of each other at most.
- While stacking, supporting beams need to be placed parallel with the pallets/cardboards of the pelow lying package




## STORING

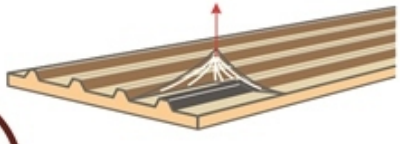
- A minimum slant of 5% has to be guaranteed to avoid backwater while storing outside.
- Before laying the material, it needs to be protected aginst direct solar radiation
- A protective covering is necessary

- Undemeath and on top of package bundles solid Spacers are to be inserted to rule out direct contact of straps with the package (pressure marks, deformations ETC )

**The packages are not to touch the ground directly**

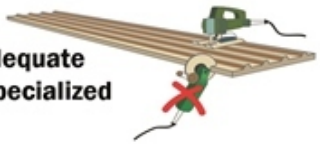
## PROTECTIVEFOIL

- The protective foil has to be removed before installation.
- The protective foil should be removed after 1 month of material supply at the letest because otherwise it will be difficult to pull the foil off.



## CUTTINGS

- The panels should only be cut with adequate tools, bougtht in specialized trade



- Angle grinding is prohibited as otherwise the zinc coating and color will be damaged!

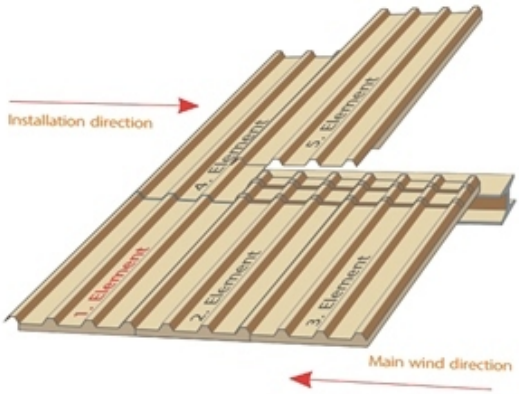
## INSTALLATION OF ROOF PANELS

- Panels which must be installed, must be fixed directly in ready fixed and screwed panels step by step to guarantee a pefect compression of the longitudinal gasket

## DAMAGES

- During installation on roofing, pay attention to damages caused by drilling chips ! After screwing the roof should immediately be clean-swept in order to avoid damages to the paintwork by footprints
- During installation, adequate protective clothing has to be worn ( gloves , work boots ATC ) ding to regulations
- The panels have to be secured against falling

## INSTALLATION OF ROOF PANELS

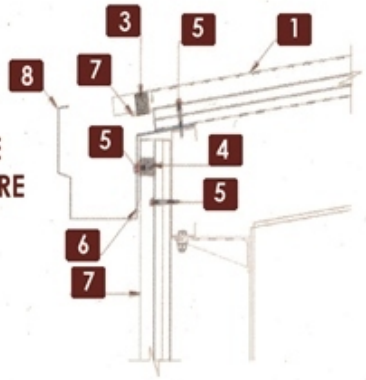


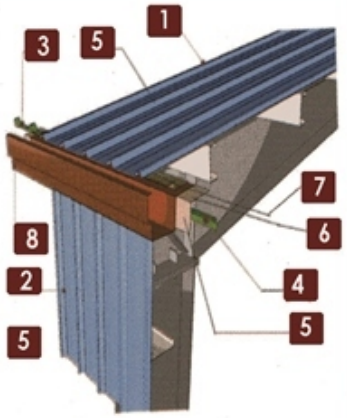

## ACCEPTANCE

- Immediately after laying the building elements and before beginning with succession works (e.g. roof sealing works, outdoor facilities installation of photovoltaic systems etc) an acceptance or partial acceptance should be Realized. At least there should be a mutual inspection with a subsequent protocol. Thus disputes concerning the cause of complaints at a later date can be avoided, because often unreleased Succession works and their partly incorrect handling are rea-son for complaints

# Sandwich Panel Details

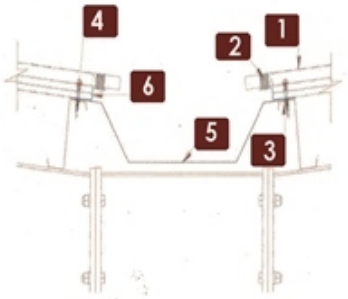
1-ROOF PANEL
2-WALL PANEL
3-INSIDE FOAM CLOSURE
4-OUTSIDE FOAM CLOSURE
5-SELF DEILL SCREWS
6-EAVE TRIM
7-CLOSURE TRIM
8-EAVE GUTTER

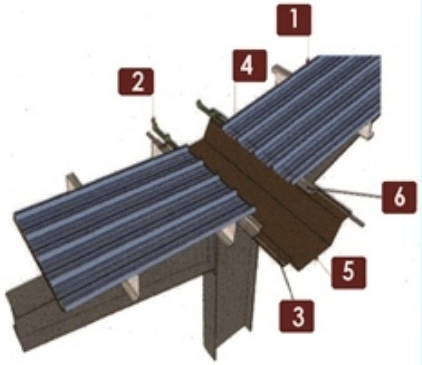



EAVE GUTTER DETAIL

1-ROOF PANEL
2-INSIDE FOAM CLOSURE
3-BEA DMASTIC
4-SELF DEILL SCREWS
5-VALLY GUTTER
6-CLOSURE TRIM

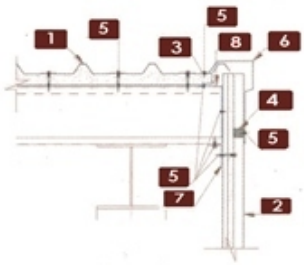



VALLEY GUTTER DETAIL

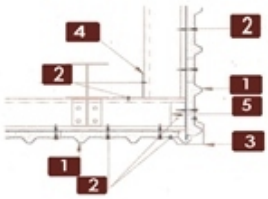
# Sandwich Panel Details

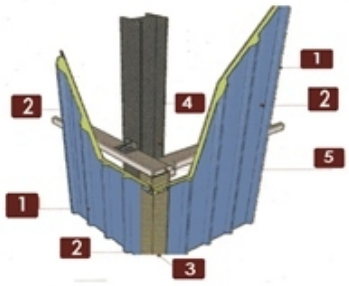
1-ROOF PANEL
2-WALL PANEL
3-BEAD MASTIC
4-OUTSIDE FOAMCLSURE
5-SELF DRILL SCREWS
6-GABLE TRIM
7-SHEETING ANGLE
8-CLOSURE TRIM



GABLE TRIM DETAIL

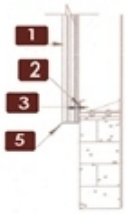
1-ROOF PANEL
2-SELF DRILL SCREWS
3-OUTER CORNER TRIM
4-INNER CORNER TRIM
5-SHEETING ANGLE



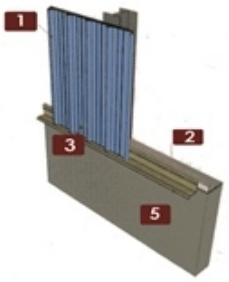


CORNER TRIM DETAIL

1-ROOF PANEL
2-FOAM CLOSURE
3-SELF DRILL SCREWS
4-MASONARY NAIL
5-DRIP TRIM
6-SHEETING ANGLE



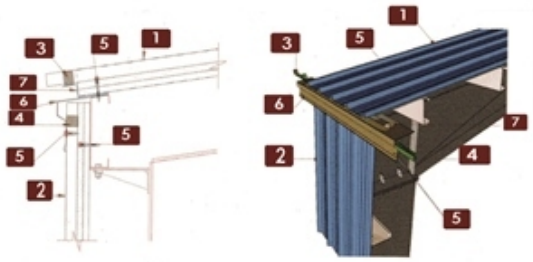
DETAIL AT BLOCK WALL



DRIP TRIM DETAIL

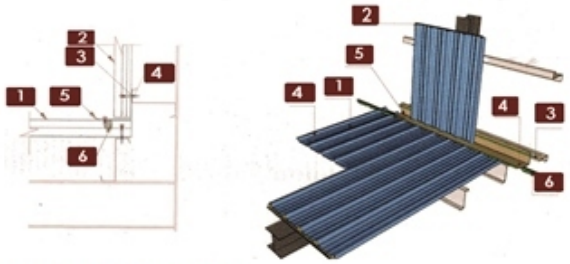
# Sandwich Panel Details

1-ROOF PANEL
2-WALL PANEL
3-INSIDE FOAM CLOSURE
4-OUTSIDE FOAM CLOSURE
5-SELF DRILL SCREWS
6-EAVE TIRM
7-CLOSURE TIRM



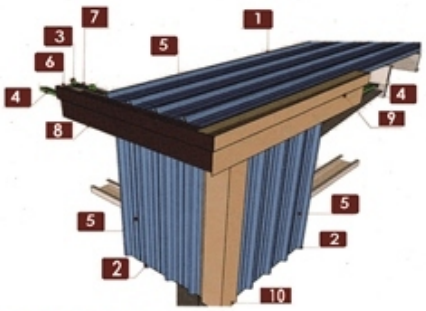
EAVE TRIM DETAIL

1-ROOF PANEL
2-WALL PANEL
3-FOAM CLOSURE
4-SELF DRILL SCREWS
5-TRANSITION TRIM
6-Outside Foam Closure



TRANSITION TRIM DETAIL

1-ROOF PANEL
2-WAAL PANEL
3-INSIDE FOOM CLOSURE
4-OUTSIDE FOOM CLOSURE
5-SELF DRILL SCREWS
6-EAVE Tirm
7-CLOSURE TRIM
8-EAVE GUTTER
9-GABLE TRIM
10-OUTER CORNER TRIM



GABLE TRIM WITH EAVE GUTTER DETAIL

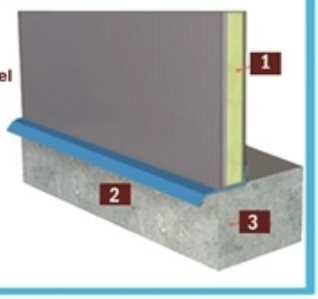
# Sandwich Panel Details

## CORNER CONNECTION

1-Sandwich wall panel
2-Outercorner profile
3-concrete base
4-Inner corner profile
5-Coloumn
6-Base profile

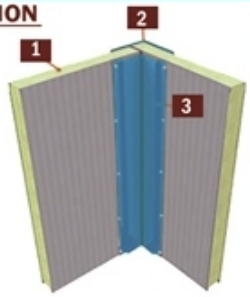

## BASE CONNECTION

1-Sandwich wall panel
2-Base profile
3-Concrete base



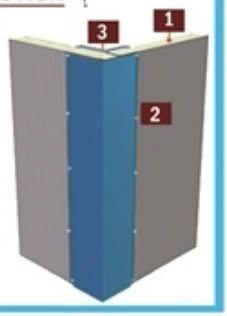

## WALL TO WALL CONNECTION ( IINNER CONNECTION)

1-Sandwich wall panel
2-Outer corner profile
3-Inner corner profile



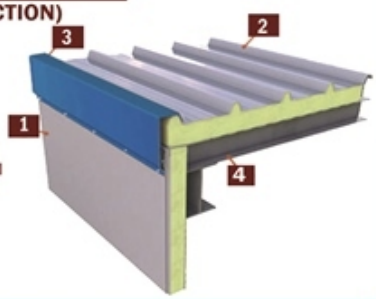

## WALL TO WALL CONNECTION ( OUTER CONNECTION)

1-Sandwich wall panel
2-Outer corner profile
3-Inner corner profile




## ROOF TO WALL CONNECTION ( GABLE CONNECTION)

1-Sandwich wall panel
Sandwich roof panel
3-Gable flashing
4-Roof purlin

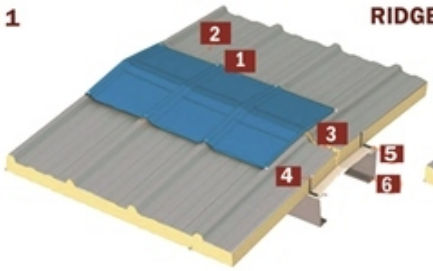



## ROOF TO WALL ( INNER CONNECTION - ZERO SLOPE )

1-Sandwich wall panel
2-Sandwich roof panel
3-Gable angle
4-Outer gable angle
5-PVC Corner profile


## RIDGE CONNECTION 1

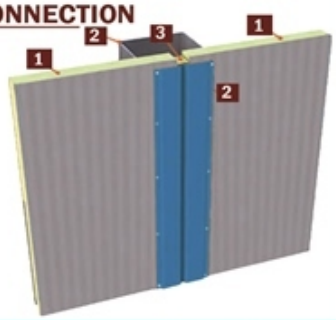
1-Ridge flashing
2-Roof panel
3-Foam
4-Self Drilling Fastener
5-Profile (inner ridge)
6-Roof purlin




## RIDGE CONNECTION 2

# Sandwich Panel Details

## EXPANSION JOINT CONNECTION

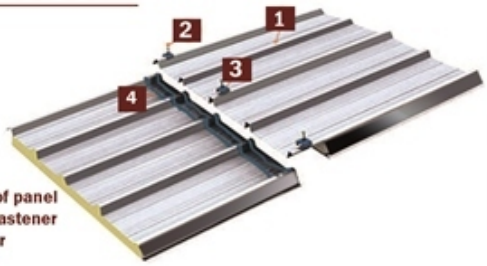



1-Sandwich wall panel
2-Expansion joint flashing
3-Coloumn
4-Foam

## FRAMED OPENING CONNECTION (WINDOW)

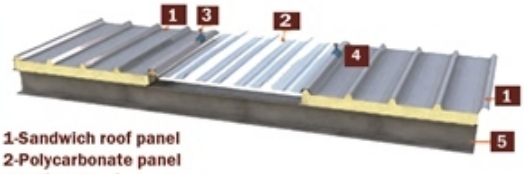

1-Sandwich wall panel
2-Window
3-Framed opening flashing
4-Girt

## Overlap Roof Detail



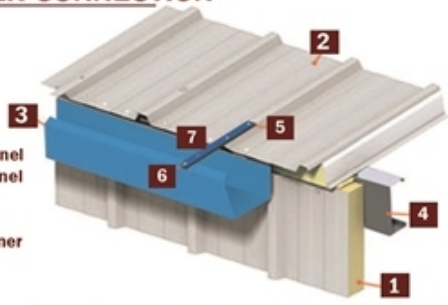

1-Sandwich roof panel
2-Self drilling fastener
3-Storm washer
4-Mastic tape

## POLYCARBONATE PANEL DETAIL



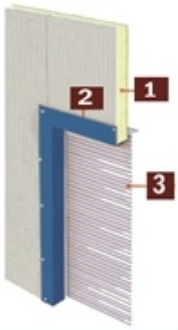

1-Sandwich roof panel
2-Polycarbonate panel
3-Self drilling fastener
4-Storm washer
5-Roof purlin

## RAIN GUTTER CONNECTION




1-Sandwich wall panel
2-Sandwich roof panel
3-Rain gutter
4-Roof purlin
5-Self drilling fastener
6-POP rivit
7-Plate

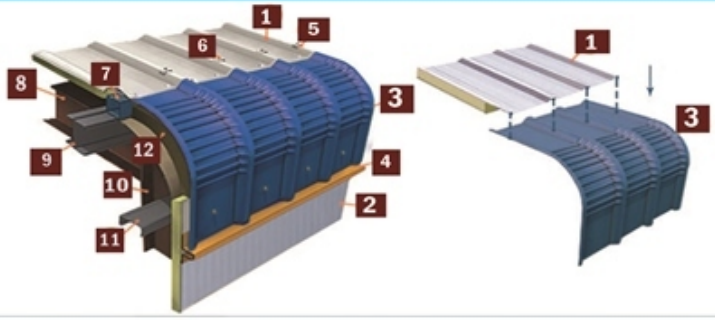
## FRAMED OPENING CONNECTION (DOOR)

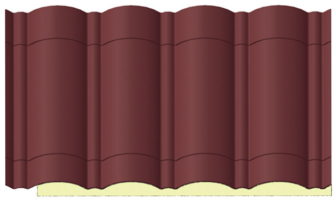
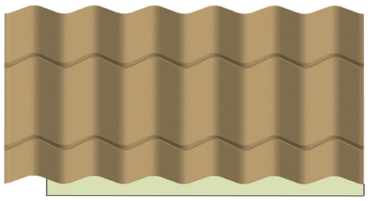
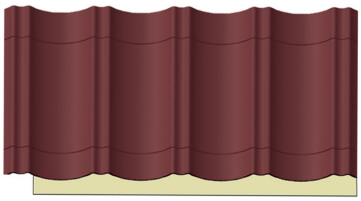



1-Sandwich wall panel
2-Framed opening flashing
3-Door

## ROOF TO WALL CONNECTION
## ( CURVED EAVE CONNECTION)

1-Sandwich roof panel
2-Sandwich wall panel
3-Curved eave flashing
4-Eave flashing
5-Sorm washer
6-Self drilling fastener
7-Box section
8-Beam
9-Roof purlin
10-Coloumn
11-Girt
12-Foam



# Elmazoor Steel

## Factories

Factory 1 :Qalama
Egypt - Alexandria agricultural road , 20 km
Factory 2 : Qalama
Egypt - Alexandria agricultural road , 19 km
Factory 3 : Kafr abu gomaa
Egypt - Alexandria agricultural road , 18 km
Factory 4 : Abu Sunna : slow way .Abu Sunna main street In front of Abu Sunna Post Office
Factory 5 : Meet nama . Ezbet Ayrout next to Ahmed Saeed Refrigerator Basos. alqanatir alkhayrih .Qalyubia
Factory 6 : 10th of ramadan - industrial zone A/1 area 5/6
Factory 7 : 10th of ramadan - industrial zone A/5 area 204
Factory 8 : Zone 146 - ataqa suez

## Branches

NO. 125 Sabtiyah street - bulaq
NO. 3 Masaken street - sabtiyah souq elasr
NO. 78 Sidi said - alsabtiyah square
Qalioub - meet halfa - the slow road
Qalyub : The slow way
In front Eltemsah scale
H.office: villa754 elsheikh zayed hadayek elmohandeseen compound

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PROUDLY MADE IN EGYPT SEAL OF QUALITY