



# AMI

- 
- CORRUGATED SHEET
  - PURLINS
  - POLYURETHANE SANDWICH PANELS
  - DECKING PANELS
  - FLASHING
  - INSULATED GUTTER
  - STRUCTURAL STEEL



AI MANA METAL INDUSTRIES W.L.L  
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**AMI**

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**AMI**

# ABOUT THE COMPANY



Al Mana Metal Industries (**AMI**) is a company under the prestigious group Al Mana International Holding which was established in 1952 in Qatar.

Al Mana Metal Industries (**AMI**) is a production facility in Qatar, which specializes in manufacturing insulated panels, corrugated sheets and its accessories, Z & C purlins, Decking panels.

**AMI** also manufactures expanded metal products like the Angle beads, Plaster stop beads, block work mesh etc. which is used for the reinforcement purposes and plaster embracing in addition to give better finishing and stronger edges resulting to the increased life time of any building. We do manufacture the wall tie which is used to firmly fix the block to block or block to column etc.

**AMI** is also producing Galvanized Iron lintels which is a substitute for the RCC Lintels. By using our GI Lintels the customers can save time, money, energy etc. Another area of our manufacturing is in the field of ceiling suspension and wall partitioning system, which is extensively used in the gypsum ceiling and dry wall partitioning.

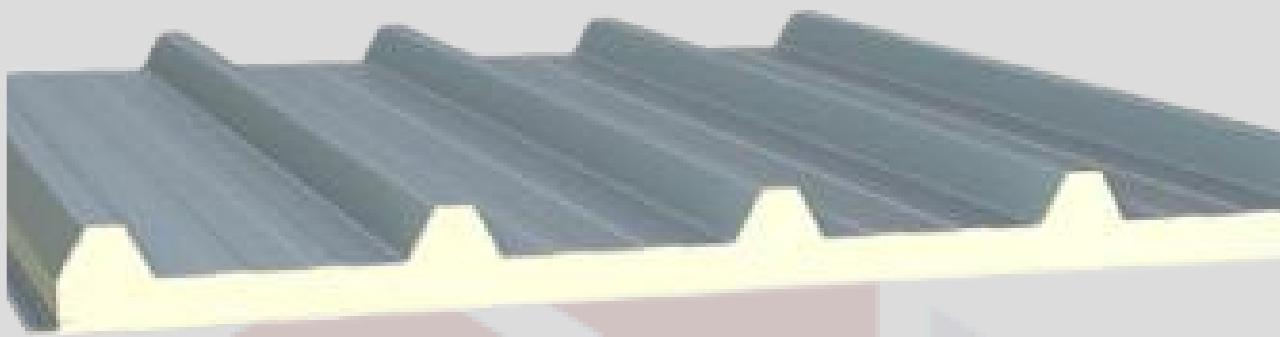
Recently we have added Insulated gutters, Tee grade system, Structural Steels, Hanex, Skylight, Aluminium Profile ( Shadow Gap ) in our products lineup.

**AMI** emphasises on quality products catering for today's competitive and demanding business environment Using advanced technology supplement with stringent quality control systems, we ensure that our high production standards are met. Furthermore, with depth knowledge of our manufacturing systems capability ties, our products have achieved a very high-quality standard in this industry.

At **AMI**, the study, production and sale of our products takes place in total respect of the environment surrounding us. The protection of the health of our customers is our main concern. The quality of work is identified in the correctness between employees, the well-being of the working environment and the enthusiasm of all the personnel involved in the production cycle. **AMI** believes in prompt delivery, uncompromising commitment to customers satisfaction and in excellence in all what we do.



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# POLYURETHANE SANDWICH PANEL

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Sandwich panel is a system that protects the buildings from external factors and provides the utmost convenient and economical solution for them to have a powerful stand. As modern, light and durable construction elements, sandwich panels are used to clad roofs and external walls of the buildings as well as achieving insulated internal walls and cold storages.

Sandwich panels are protecting the buildings against the external factors on all sides of your building. Sandwich panels are produced by filling in a thick and low-density insulation material between two thin and high-density metal surfaces. These ready-assembled building elements, which have a high load carrying capacity despite their own low weight, are produced on continuous lines.

Different insulation materials should be chosen according to the needs of the buildings. Sandwich panel production is made in different insulation types including PUR, PIR. You can decide which type of sandwich panel is suitable for your building/project by taking into consideration the thermal, humidity, sound insulation and fire resistance needs of thereof. Surface sheet thickness of sandwich panels ranges from 0.300 mm to 0.700 mm.

**AMI's** roof type sandwich panels are available in various core thickness range from 10 mm – 150 mm.

**AMI's** wall type sandwich panels are available in various core thickness range from 40 mm – 150 mm.

Sandwich panels are generally used in industrial facilities, commercial buildings, cold storages, residential buildings, power plants as well as buildings for agricultural and husbandry.

Customers can choose either double face or single face option according to their requirement. In double face option both the sides will be metal sheets and in the middle portion will be filled with the kind of insulation required by the customer.

In single face option one side will be metal sheet and the other side will be aluminium foil or paper and in the middle portion will be filled with the kind of insulation required by the customer.



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## ALMANA METAL PIR SANDWICH PANELS

Almana metal PIR sandwich panel is a structural insulated panel made of three layers: a low-density core of Polyisocyanurate PIR and a rigid thin skin layer bonded to each side.

PIR sandwich panel has a good R-value per inch, therefore, the highest insulation performance can be achieved with the PIR sandwich panel. The thermal resistance is mainly due to the Polyisocyanurate (PIR) core insulating properties, metal steel sheets and airtight design which forms an effective thermal barrier against extreme temperatures, while it eliminates air infiltration and thermal bridging. Besides, Polyisocyanurate is typically produced as foam and used as rigid thermal insulation, given its strong chemical bonds and molecular structure, Polyisocyanurate (PIR) has greater stiffness and strength than other insulation materials like Polyurethanes (PU), these characteristics make them thermally resistant and chemically stable.

PIR sandwich panels are widely used for building applications where a combination of high structural rigidity and weight-saving are essential, these lightweight PIR prefabricated structural components are also ideal for space optimization and where minimum thickness and high thermal resistance are required. These characteristics make them preferred for various applications including:

- . Residential building
- . Commercial building
- . industrial buildings
- . Agriculture buildings
- . Temperature controlled buildings
- . Sports buildings
- . Community buildings

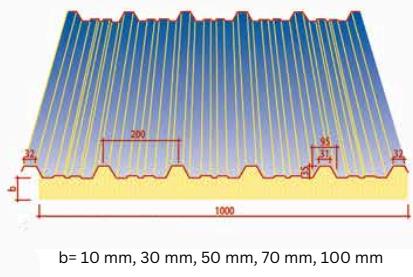
PIR sandwich panels have become the first choice for real estate developers, architects, and general contractors from all over the world, thanks to the attractive and durable material which offers various benefits including:

- . Heat insulation
- . Energy-efficiency
- . Water proof
- . Rigidity and lightweight
- . Environmentally-friendly
- . Quick installation

AMI PIR Panel has been tested according to the standards EN 1364-1 and ASTM E84

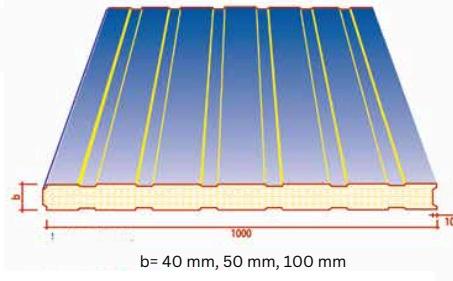


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b= 10 mm, 30 mm, 50 mm, 70 mm, 100 mm

**AM 35 / 200 RP**



b= 40 mm, 50 mm, 100 mm

**AM WALL PANEL MF**

## A. Material Specifications

<b>Core</b>	: Rigid Polyurethane ( PUR, PIR)
<b>Density</b>	: (30 – 45) kg/m <sup>3</sup>
<b>Skin Thickness</b>	: Aluzinc / PPGI ( 0.30mm - 0.70mm ), Aluminium (0.40mm - 0.70mm)
<b>Type</b>	: Single Skin / Double Skin
<b>Shear Resistance</b>	: 2.00 kg/m <sup>2</sup>
<b>Conductivity</b>	: 0.024 w/ mk
<b>Core Thickness</b>	: AM 35/200 RP→( 10mm-100mm ), AM Wall Panel MF→ ( 40mm-100mm )
<b>Effective Width</b>	: (1.00 mtr)
<b>Flame Spread Index</b>	: 25 & 20
<b>Classification</b>	: Self extinguishing type as per ASTM D 1692 / 68 norms : 1-hour fire resistance according to the test EN-1364-1 ( Achieved with PIR foam insulation ) : Class A against ASTM E84 (Archived with PIR foam insulation ) (flame spread index: 0-25, smoke develop index: <450)

## B. General Feature

### B1. Mechanical Characteristic of the Foam at Overall Density of 40 kg/m<sup>2</sup>

<b>Tensile Stress</b>	: 4.00 kg/cm <sup>2</sup>
<b>Compression resistance</b>	: 2.60 kg/cm <sup>2</sup>
<b>Shear resistance</b>	: 100 kpa

### B2. Insulation capacity

K value ( Thermal conductivity of PU ) 0.024 W/m-k

Tolerance +/- 0.002

Polyurethane Core Thickness (mm)	T=30	T=50	T=70	T=100
Overall Heat Transfer Coefficient "U" Value	W/M <sup>2</sup> °C	0.560	0.384	0.275
	KCAL/M <sup>2</sup> h °C	0.4816	0.334	0.236
	BTU/Ft <sup>2</sup> h °F	0.09912	0.0679	0.0486



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### C. Water Absorption of the foam

After 24 hours	: 1.0% of volume
Close cells	: >90
Self extinguishing type	: as per ASTMD 1962/68 norms

### D. Tolerances

D1. Substrate	: Cold Rolled Coil, JISG3302, SGCC
Thickness	: $\pm 0.03$ mm (TCT)
Width	: 0/+3 mm
Length	: 0.05/+0.10%
Liner Sheet Length	: +0.10%
Squareness	: +3 mm
D2. Sandwich Panel	: +2 mm

### E. Panel Weight

#### E1. Pre-painted Galvanized

PU Insulation Thickness (mm)	Weight (kg/m <sup>2</sup> )
30	8.100
50	8.862
70	9.70
100	10.862

Note: Corrugated sheet thickness: 0.400 mm/ Liner sheet thickness: 0.350 mm

#### E 2. Pre-painted Aluminium

PU Insulation Thickness (mm)	Weight (kg/m )
30	5.200
50	6.000
70	8.000

Note: Corrugated sheet thickness: 0.700 mm/ Liner sheet thickness: 0.500 mm



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## Technical Data Sheet

### Aluminium

(t) Panel Core Thickness (mm)	I x (cm <sup>3</sup> ) for 1m width	z top for 1m width cm <sup>3</sup>	z bottom for 1m width cm <sup>3</sup>	Moment kN m Top	Moment kN m Bottom
50	35	9	28	1.08	3.28
75	85	18	30	2.09	3.52
100	174	31	40	3.56	4.62

Based on 0.7 mm external and 0.5 mm internal Aluminium skin

(t) Panel Thickness (mm)	Allowable Uniform Loads kN/m <sup>2</sup>																	
	1.0 m		1.5 m		2.0 m		2.5 m		3.0 m		3.5 m		4.0 m		4.5 m		5.0 m	
	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D
50	8.63	13.52	3.84	4.00	2.16	1.69	1.38	0.86	0.96	0.50	0.70	0.32	0.54	0.21	0.43	0.15	0.35	0.11
75	16.71	32.71	7.42	9.69	4.18	4.09	2.67	2.09	1.86	1.21	1.36	0.76	1.04	0.51	0.82	0.36	0.67	0.26
100	28.45	66.86	12.65	19.81	7.11	8.36	4.55	4.28	3.16	2.48	2.32	1.56	1.78	1.04	1.41	0.73	1.14	0.53

f<sub>y</sub> Al 170 N/mm<sup>2</sup> permissible span - deflection ratio = 100

### Steel

(t) Panel Thickness (mm)	I x (cm <sup>3</sup> ) for 1m width	z top for 1m width cm <sup>3</sup>	z bottom for 1m width cm <sup>3</sup>	z top for 1m width cm <sup>3</sup>	Moment kN m Bottom
50	27	7	25	1.17	4.26
75	71	14	29	2.37	4.93
100	148	24	39	4.05	6.63

Based on 0.5mm GI External and 0.5mm Internal Skin

(t) Panel Thickness (mm)	Allowable Uniform Loads kN/m <sup>2</sup>																	
	1.0 m		1.5 m		2.0 m		2.5 m		3.0 m		3.5 m		4.0 m		4.5 m		5.0 m	
	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D
50	9.39	30.48	4.17	9.03	2.35	3.81	1.50	1.95	1.04	1.13	0.77	0.71	0.59	2.48	0.46	0.33	0.38	0.24
75	18.94	79.51	8.42	23.56	4.74	9.94	3.03	5.09	2.10	2.94	1.55	1.85	1.18	1.24	0.94	0.87	0.76	0.64
100	32.37	166.60	14.39	49.36	8.09	20.82	5.18	10.66	3.60	6.17	2.64	3.89	2.02	2.60	1.60	1.83	1.29	1.33

Permissible span-deflection ratio = 100

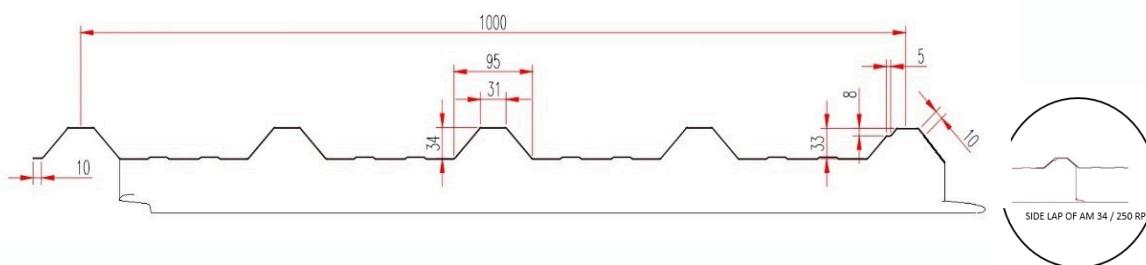
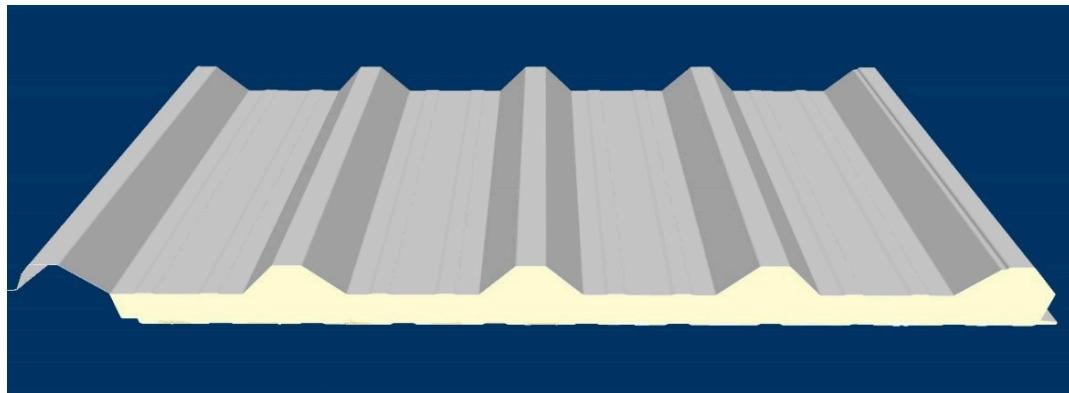
f<sub>y</sub> GI 250 N/mm<sup>2</sup>

T = Thickness S = Strength D = Deflection



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## AM 34/250 RP



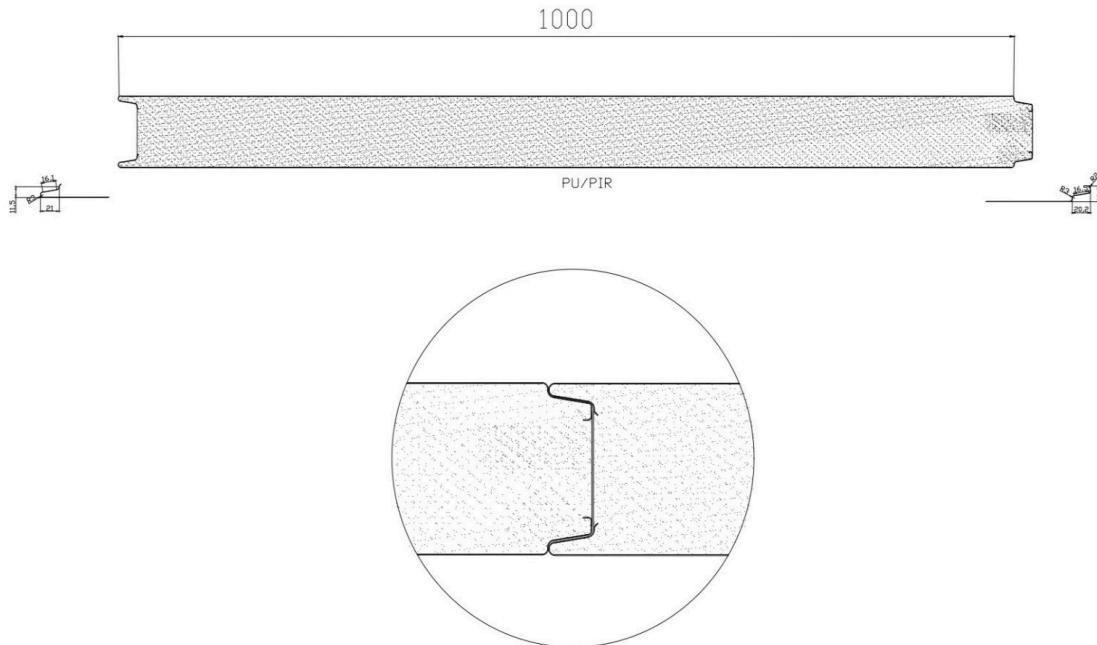
## Product Specifications

<b>Dimensions (mm)</b>	Covering Width: 1,000 mm	Profile Pitch: 250 mm
	Crown: 31 mm	Profile Depth: 34 mm
	Valley: 140 mm	Rib Width: 95 mm
<b>Core thickness</b>	30 mm – 150 mm	
<b>Length of the panel</b>	According to customer request (Max & Min length applicable)	
<b>Width of the panel</b>	1000 mm	
<b>Profiling</b>	Top: Trapezoidal design with rib (34 / 250) Bottom: Soft line ( Low rib)	



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## AM WALL PANEL TG



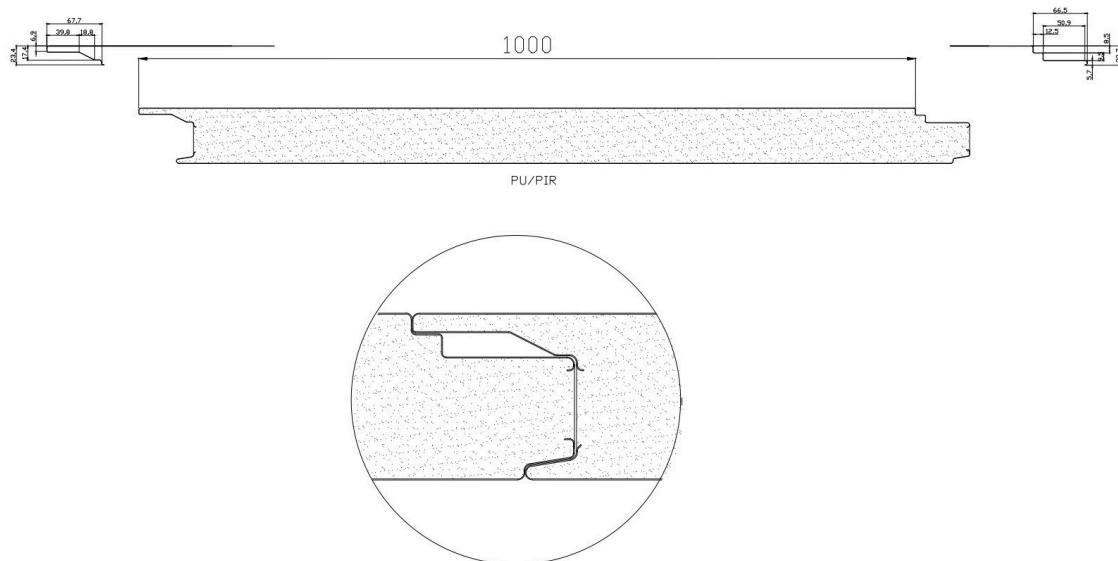
## Product Specifications

<b>Effective width</b>	1000 mm
<b>Overall width</b>	1020 mm
<b>Profiling</b>	Soft line ( Low rib) , plain
<b>Core thickness</b>	50 mm – 150 mm
<b>Lock system</b>	Tongue and groove joint (Male - female)
<b>Length of the panel</b>	According to customer request (Max & Min length applicable)



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## AM WALL PANEL HS



## Product Specifications

<b>Effective width</b>	1000 mm
<b>Overall width</b>	1065 mm
<b>Core thickness</b>	50 mm – 150 mm
<b>Profiling</b>	Soft line ( Micro rib ) , plain
<b>Lock system</b>	Concealed fixation joint (Hidden screw)
<b>Length of the panel</b>	According to customer request (Max & Min length applicable)



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General properties			
Usage		✓ Roofing	
Material Type	Aluzinc	Aluminum	PPGI
Material Thickness		(Aluzinc , PPGI): 0.300 mm – 0.700 mm	
Colors		Standard RAL Colors. Special colors on request; min. order applied	
Coating /Finish		Mill- finish	Pre-painted polyester PVDF (Upon request)
Core thickness		30 mm – 150 mm	
Density		30 – 45 kg/m <sup>3</sup>	
Core types		PUR, PIR	
Mechanical	Tensile stress	150 kpa	
Characteristic	Compression resistance	100 kpa	
	Shear resistance	100 kpa	
Key features			
Insulation capacity		K value (Thermal conductivity of PU) - 0.022 W/mK (Tolerance +/- 0.002)	
Water absorption of the foam		1.0 % of volume	
Closed sells		93%	
Classification		<ul style="list-style-type: none"> <li>. Self extinguishing type as per ASTM D 1692 / 68 norms</li> <li>.1-hour fire resistance according to the test EN-1364-1 ( Achieved with PIR foam insulation )</li> <li>.Class A against ASTM E84 (Archived with PIR foam insulation ) (flame spread index: 0-25, smoke develop index: &lt;450)</li> </ul>	



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## **U – VALUE & R -VALUE DATA SHEET FOR SANDWICH PANELS**

**Table for standard dimension (mm) & U value for 26g double skin wall panels**

<b>SIZE (mm)</b>	<b>U Value (W/m<sup>2</sup> °k)</b>	<b>R VALUE (m<sup>2</sup>K/W)</b>
50	0.4036	2.4777
75	0.3030	3.7071
100	0.2025	4.9359

**Table for standard dimension (mm) & U value for 26g double skin Roof panels**

<b>SIZE (mm)</b>	<b>U Value (W/m<sup>2</sup> °k)</b>	<b>R VALUE (m<sup>2</sup>K/W)</b>
50	0.3845	2.6010
70	0.2752	3.6330
100	0.1929	5.1817

**Table for standard dimension (mm) & U value for 26g single skin Roof panels**

<b>SIZE (mm)</b>	<b>U Value (W/m<sup>2</sup> °k)</b>	<b>R VALUE (m<sup>2</sup>K/W)</b>
30	0.6716	1.4889
50	0.4044	2.4722

**Note: - Dimensional & U value tolerance is ±5**



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## Technical Data Sheet

### SP 34/250 Insulated Roof & Wall Sandwich Panel

#### Technical Data Sheet

##### SECTION PROPERTIES (PER METER WIDTH) BASE METAL: STEEL / ALUZINC

Thickness (T) (mm)	Cover Width (mm)	Nominal Weight (kg/m <sup>2</sup> )	Area (cm <sup>2</sup> )	Full Sect. Ix (cm <sup>4</sup> )	Elastic Modulus (E) (kN/cm <sup>2</sup> )	Top in Compression				Bottom in Compression			
						Ixet (cm <sup>4</sup> )	Sx-Top (cm <sup>3</sup> )	Sx-Bot (cm <sup>3</sup> )	Ma <sub>bx</sub> (kNm)	Ixeb (cm <sup>4</sup> )	Sx-Top (cm <sup>3</sup> )	Sx-Bot (cm <sup>3</sup> )	Ma <sub>bx</sub> (kNm)
0.40	1000	3.83	4.84	14.66	20300	11.20	3.40	9.03	0.46	10.82	4.45	5.12	0.60
0.50	1000	4.79	6.05	18.32	20300	15.66	4.95	11.28	0.67	14.18	5.65	6.95	0.77
0.70	1000	6.70	8.47	25.65	20300	24.85	8.52	15.92	1.12	21.21	8.08	10.91	1.10

##### ALLOWABLE UNIFORM LOADS (kN/m<sup>2</sup>): BASE METAL: STEEL / ALUZINC

Nominal Thickness (T) (mm)	No. of Spans	Load Case	Span (m)								
			1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00
0.40	1	D + L	3.68	2.36	1.64	1.20	0.92	0.73	0.59	0.49	0.41
		WS	4.80	3.07	2.13	1.57	1.20	0.95	0.77	0.61	0.47
	2	D + L	4.00	2.71	1.95	1.47	1.14	0.91	0.74	0.62	0.52
		WS	3.28	2.18	1.55	1.15	0.89	0.71	0.58	0.48	0.40
	3	D + L	4.69	3.24	2.35	1.78	1.39	1.12	0.91	0.76	0.64
		WS	3.92	2.64	1.89	1.42	1.10	0.88	0.71	0.59	0.50
0.50	1	D + L	5.36	3.43	2.38	1.75	1.34	1.06	0.86	0.71	0.59
		WS	6.16	3.94	2.74	2.01	1.54	1.22	0.99	0.76	0.59
	2	D + L	5.64	3.72	2.63	1.95	1.50	1.19	0.97	0.80	0.68
		WS	5.01	3.28	2.31	1.71	1.32	1.04	0.85	0.70	0.59
	3	D + L	6.82	4.54	3.23	2.41	1.86	1.48	1.21	1.00	0.84
		WS	6.10	4.03	2.85	2.12	1.63	1.30	1.05	0.87	0.74
0.7	1	D + L	8.96	5.73	3.98	2.93	2.24	1.77	1.42	1.07	0.82
		WS	8.80	5.63	3.91	2.87	2.20	1.74	1.41	1.07	0.82
	2	D + L	8.45	5.49	3.84	2.83	2.18	1.72	1.40	1.16	0.97
		WS	8.59	5.58	3.91	2.88	2.22	1.75	1.42	1.18	0.99
	3	D + L	10.39	6.78	4.76	3.52	2.71	2.15	1.74	1.44	1.21
		WS	10.56	6.90	4.84	3.58	2.76	2.19	1.77	1.47	1.24

##### Notes:

\*D+L = Dead + Live Load

\*\*WS= Wind Suction

Deflection Limits - Span / 180

Assume bond with insulation ensures that lateral sliding of sheet does not occur, and insulation don't have significant compression



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### AM 34/250 Insulated Roof & Wall Sandwich Panel

#### Technical Data Sheet

##### SECTION PROPERTIES (PER METER WIDTH) BASE METAL: STEEL /ALUZINC

Thickness (T) (mm)	Cover Width (mm)	Nominal Weight (kg/m <sup>2</sup> )	Area (cm <sup>2</sup> )	Full Sect. Ix (cm <sup>4</sup> )	Elastic Modulus (E)(kN/cm <sup>2</sup> )	Top in Compression				Bottom in Compression			
						Ixet (cm <sup>4</sup> )	Sx-Top (cm <sup>3</sup> )	Sx-Bot (cm <sup>3</sup> )	Ma <sub>bx</sub> (kNm)	Ixeb (cm <sup>4</sup> )	Sx-Top (cm <sup>3</sup> )	Sx-Bot (cm <sup>3</sup> )	Ma <sub>bx</sub> (kNm)
0.50	1000	10.070	6.05	120.00	20300	80.00	12.10	32.00	1.67	58.00	14.50	11.60	1.60
0.40	1000	10.070	4.30	120.00	20300	80.00	12.10	32.00	1.67	58.00	14.50	11.60	1.60

##### ALLOWABLE UNIFORM LOADS (kN/m<sup>2</sup>): BASE METAL: STEEL /ALUZINC

Nominal Thickness (T) (mm)	No. of Spans	Load Case	Span (m)										
			1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50
0.5 + 0.4	1	*D + L	8.22	6.58	5.48	4.36	3.34	2.64	2.14	1.77	1.48	1.26	1.09
		**WS	8.22	6.58	4.18	4.18	3.20	2.53	2.05	1.69	1.42	1.21	1.05
	2	D + L	5.85	4.43	3.47	2.79	2.29	1.91	1.62	1.38	1.19	1.04	0.91
		WS	5.90	4.48	3.53	2.85	2.34	1.96	1.66	1.42	1.23	1.07	0.94
	3	D + L	6.30	4.83	3.84	3.13	2.60	2.19	1.87	1.61	1.40	1.23	1.09
		WS	6.34	4.88	3.89	3.18	2.65	2.24	1.91	1.65	1.44	1.26	1.12

##### ALLOWABLE UNIFORM LOADS (kN/m<sup>2</sup>): BASE METAL: STEEL /ALUZINC

Thickness (T) (mm)	Cover Width (mm)	Nominal Weight (kg/m <sup>2</sup> )	Area (cm <sup>2</sup> )	Full Sect. Ix (cm <sup>4</sup> )	Elastic Modulus (E)(kN/cm <sup>2</sup> )	Top in Compression				Bottom in Compression			
						Ixet (cm <sup>4</sup> )	Sx-Top (cm <sup>3</sup> )	Sx-Bot (cm <sup>3</sup> )	Ma <sub>bx</sub> (kNm)	Ixeb (cm <sup>4</sup> )	Sx-Top (cm <sup>3</sup> )	Sx-Bot (cm <sup>3</sup> )	Ma <sub>bx</sub> (kNm)
0.70	1000	12.70	8.07	158.10	20300	110.83	16.90	45.24	1.76	84.92	19.48	17.06	1.81
0.40	1000	12.70	5.14	158.10	20300	110.83	16.90	45.24	1.76	84.92	19.48	17.06	1.81

##### ALLOWABLE UNIFORM LOADS (kN/m<sup>2</sup>): BASE METAL: STEEL /ALUZINC

Nominal Thickness (T) (mm)	No. of Spans	Load Case	Span (m)										
			1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50
0.7 + 0.4 <sup>a</sup>	1	*D + L	11.77	8.21	6.28	4.61	3.53	2.79	2.26	1.87	1.57	1.34	1.09
		**WS	12.06	8.42	6.43	4.73	3.62	2.86	2.32	1.91	1.61	1.36	1.09
	2	D + L	7.89	6.18	5.09	3.94	3.13	2.54	2.10	1.76	1.50	1.29	1.12
		WS	7.80	6.10	5.01	3.87	3.07	2.49	2.06	1.73	1.47	1.26	1.10
	3	D + L	8.81	7.04	5.90	4.63	3.72	3.04	2.53	2.14	1.82	1.58	1.37
		WS	8.74	6.96	5.82	4.56	3.65	2.99	2.48	2.09	1.79	1.54	1.32

##### Notes:

- Design of sheeting is based on AISI -2007 (ASD-Allowable Stress Design)
- D+L - Dead + Live Load    WS- Wind Suction
- Deflection Limits - Span / 180
- Nominal Thickness refers to Base Metal Thickness
- Assume bond with insulation ensures that lateral sliding of sheet doesn't occur, and insulation don't have significant compression

Note <sup>a</sup>: as a conservative approach, may use the same load table for following situations: (integrity governs, not only thickness)

1. when profile thickness is over 0.70mm for top sheet, and 0.40mm for liner, or 2. when PU/PIR insulation thickness is over 50mm.



**AMI**

## AM 34/250 Insulated Roof & Wall Sandwich Panel

### Technical Data Sheet

#### SECTION PROPERTIES (PER METER WIDTH) BASE METAL: STEEL / ALUZINC

Thickness (T) (mm)	Cover Width (mm)	Nominal Weight (kg/ m <sup>2</sup> )	Area (cm <sup>2</sup> )	Full Sect. Ix (cm <sup>4</sup> )	Elastic Modulus ( E )(kN/ cm <sup>2</sup> )	Top in Compression				Bottom in Compression			
						Ixet (cm <sup>4</sup> )	Sx-Top (cm <sup>3</sup> )	Sx-Bot (cm <sup>3</sup> )	Ma <sub>bx</sub> (kNm)	Ixeb (cm <sup>4</sup> )	Sx-Top (cm <sup>3</sup> )	Sx-Bot (cm <sup>3</sup> )	Ma <sub>bx</sub> (kNm)
0.70	1000	13.50	8.07	158.10	20300	110.83	16.90	45.24	1.76	84.92	19.48	17.06	1.81
0.50	1000	13.50	5.14	158.10	20300	110.83	16.90	45.24	1.76	84.92	19.48	17.06	1.81

#### ALLOWABLE UNIFORM LOADS (kN/m<sup>2</sup>): BASE METAL: STEEL / ALUZINC

Nominal Thickness (T) (mm)	No. of Spans	Load Case	Span (m)										
			1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50
0.7 + 0.5 <sup>a</sup>	1	*D + L	11.77	8.21	6.28	4.61	3.53	2.79	2.26	1.87	1.57	1.34	1.09
		**WS	12.06	8.42	6.43	4.73	3.62	2.86	2.32	1.91	1.61	1.36	1.09
	2	D + L	7.89	6.18	5.09	3.94	3.13	2.54	2.10	1.76	1.50	1.29	1.12
		WS	7.80	6.10	5.01	3.87	3.07	2.49	2.06	1.73	1.47	1.26	1.10
	3	D + L	8.81	7.04	5.90	4.63	3.72	3.04	2.53	2.14	1.82	1.58	1.37
		WS	8.74	6.96	5.82	4.56	3.65	2.99	2.48	2.09	1.79	1.54	1.32

#### Notes:

- Design of sheeting is based on AISI -2007 (ASD-Allowable Stress Design)
- D+L - Dead + Live Load WS- Wind Suction
- Deflection Limits - Span / 180
- Nominal Thickness refers to Base Metal Thickness
- Assume bond with insulation ensures that lateral sliding of sheet doesn't occur, and insulation don't have significant compression

Note <sup>a</sup>: as a conservative approach, may use the same load table for following situations: (integrity governs, not only thickness)

- when profile thickness is over 0.70mm for top sheet, and 0.40mm for liner, or 2. when PU/PIR insulation thickness is over 50mm.

Note <sup>b</sup>: as a conservative approach, may use the same load table for following situations: (integrity governs, not only thickness)

- when profile thickness is over 0.70mm for top sheet, and 0.50mm for liner, or 2. when PU/PIR insulation thickness is over 50mm.



# AMI

## SECTION PROPERTIES (PER METER WIDTH) BASE METAL: ALUMINUM

Thickness (T) (mm)	Cover Width (mm)	Nominal Weight (kg/m <sup>2</sup> )	Area (cm <sup>2</sup> )	Full Sect. Ix (cm <sup>4</sup> )	Elastic Modulus (E)(kN/cm <sup>2</sup> )	Top in Compression				Bottom in Compression			
						Ixet (cm <sup>4</sup> )	Sx-Top (cm <sup>3</sup> )	Sx-Bot (cm <sup>3</sup> )	Ma <sub>bx</sub> (kNm)	Ixeb (cm <sup>4</sup> )	Sx-Top (cm <sup>3</sup> )	Sx-Bot (cm <sup>3</sup> )	Ma <sub>bx</sub> (kNm)
0.40	1000	1.33	4.84	14.66	6900	9.52	2.73	9.00	0.24	9.44	4.26	4.06	0.35
0.50	1000	1.67	6.05	18.32	6900	13.37	3.98	11.23	0.35	12.67	5.41	5.73	0.47
0.70	1000	2.33	8.47	25.65	6900	22.21	7.04	15.70	0.61	19.12	7.76	9.07	0.68

## ALLOWABLE UNIFORM LOADS (kN/m<sup>2</sup>): BASE METAL: ALUMINUM

Nominal Thickness (T) (mm)	No. of Spans	Load Case	Span (m))								
			1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00
0.4	1	D + L	1.92	1.23	0.85	0.63	0.48	0.38	0.28	0.21	0.16
		WS	2.80	1.79	1.24	0.81	0.54	0.38	0.28	0.21	0.16
	2	D + L	1.84	1.32	0.99	0.77	0.61	0.49	0.41	0.34	0.29
		WS	1.51	1.04	0.76	0.57	0.45	0.36	0.29	0.24	0.21
	3	D + L	2.06	1.51	1.15	0.90	0.72	0.59	0.48	0.39	0.30
		WS	1.75	1.23	0.90	0.69	0.54	0.44	0.34	0.25	0.19
0.5	1	D + L	2.80	1.79	1.24	0.91	0.67	0.47	0.35	0.26	0.20
		WS	3.76	2.41	1.60	1.01	0.67	0.47	0.35	0.26	0.20
	2	D + L	2.96	2.04	1.48	1.12	0.87	0.70	0.57	0.48	0.40
		WS	2.42	1.62	1.16	0.87	0.67	0.54	0.44	0.36	0.31
	3	D + L	3.42	2.40	1.77	1.35	1.06	0.86	0.65	0.49	0.38
		WS	2.86	1.95	1.41	1.06	0.83	0.62	0.45	0.34	0.26
0.7	1	D + L	4.88	3.12	2.17	1.41	0.94	0.66	0.48	0.36	0.28
		WS	5.44	3.48	2.24	1.41	0.94	0.66	0.48	0.36	0.28
	2	D + L	5.03	3.30	2.33	1.73	1.33	1.06	0.86	0.71	0.60
		WS	4.57	2.99	2.11	1.56	1.20	0.95	0.77	0.64	0.50
	3	D + L	6.09	4.04	2.87	2.14	1.65	1.25	0.91	0.69	0.53
		WS	5.57	3.68	2.60	1.93	1.33	0.93	0.68	0.51	0.39

Nominal Thickness (T) (mm)	No. of Spans	Load Case	Span (m)										
			1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00		
0.7 + 0.5	1	*D + L	14.82	9.49	6.59	4.84	3.71	2.93	2.37	1.96	1.65	1.40	1.14
		**WS	15.20	9.73	6.76	4.96	3.80	3.00	2.43	2.01	1.69	1.42	1.14
	2	D + L	9.94	7.14	5.35	4.14	3.29	2.67	2.21	1.85	1.58	1.36	1.18
		WS	9.83	7.04	5.27	4.07	3.23	2.62	2.16	1.81	1.54	1.33	1.15
	3	D + L	11.10	8.14	6.20	4.86	3.90	3.19	2.66	2.24	1.92	1.65	1.44
		WS	11.01	8.04	6.11	4.79	3.84	3.14	2.61	2.20	1.88	1.62	1.39

**Notes:**

- Design of sheeting is based on AISI -2007 (ASD-Allowable Stress Design)
- D+L - Dead + Live Load      WS- Wind Suction
- Deflection Limits - Span / 180
- Nominal Thickness refers to Base Metal Thickness  
Assume bond with insulation ensures that lateral sliding of sheet doesn't occur,
- Nominal Thickness refers to Base Metal Thickness



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## **Handling & Lifting of sandwich panels**

Panels are delivered in bundles, each of them consisting of a certain number of piled-up panels.

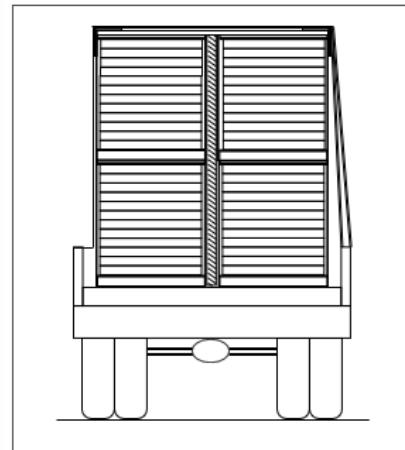
The number of panels per bundle is defined taking into consideration:

- Panel's type
- Panel's thickness
- Panels'length
- Type of transportation means
- Optimization of loading plan

Each bundles are supported by protective layer at downside for secure lifting operation. Bundles are packed with packing strip & tight with buckles .After that bundles are wrap with plastic cover . Necessary information (identification mark , no of pcs , length of the panel instructions, etc.) are labelled on bundle before loading.

## **Transportation**

Loading and off-loading bundles by crane or fork-lift should be carried out with care to avoid damage to the outermost sheets or panels in the bundle. Never off-load with chains, use only wide soft slings for lifting. Use lifting beams, if recommended by the manufacturer. Loading and off-loading bundles by crane or fork-lift should be carried out with care to avoid damage to the outermost sheets or panels in the bundle. Some sheets and panels are supplied with a protective plastic film on the weather face to help prevent minor damage to the coating. This must be removed as soon as possible after the cladding has been installed because if it is left in place for long periods the film will be come very difficult to remove.



## **Handling**

Panels bundle handling (unloading and movement) and storage at project site is a delicate phase during which panels might get damaged. For this reason, the following instructions should be thoroughly observed:



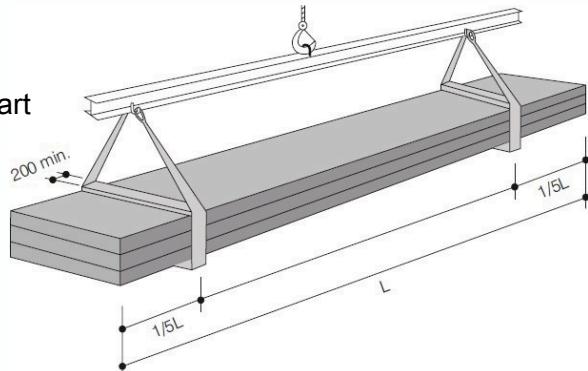
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## Unloading with forklift

- Recommended only for short (<6.00m) and light packages, and only in case of levelled and smooth terrain.
- Forks should be longer than bundle width.
- Forks should be spread apart as much as possible.
- Forks' upper surface should be clean and smooth,in order to avoid damages on panels' surface.
- Never unload more than one bundle at a time.

## Unloading with crane

- Lift the bundles with at least 2 straps/belts.
- Make sure straps are not twisted .
- Make sure straps remain at their position (one apart from the other) by using a spreading truss of adequate length.
- Protect panels' edges (tongue and groove joint configuration) from getting damaged by the straps.
- Never unload more than one bundle at a time.



## Lifting

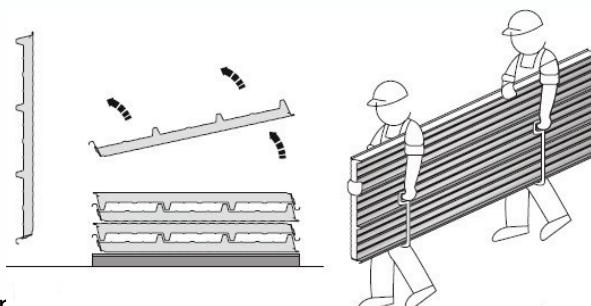
The manual handling of the single element must be made by at least two persons, and held on their side as illustrated.

The handling must be done by using appropriate protective equipment ( gloves, safety shoes, coveralls, etc), in conformity with the applicable standard.

The manual handling of the single element must be done by elevating the element without slithering it on the lower one and turning it sideways beside the panel.

Handling equipment's, like gloves, should be cleaned to not cause damage to the panels.

For panel of certain dimension ( over 6 meters for a 70 - 100 mm thick panel), the handling must be done with a special hoist or crane ( as the excessive weight of the panel makes it impossible for manual handling).





**AMI**

## General Notes

### Quality and Durability

Al Mana Metal Industries Insulated Panels are manufactured from the highest quality materials, using state of the art production equipment to rigorous quality control standards, ensuring long term reliability and service Life.

### Construction Details

#### Flashing

All external flashing to be made from 0.500 mm thick coated steel or the same specifications as the outer sheet of the panel.

All flashing to be weather sealed at laps and along the full Length.

All internal flashing to be made from 0.400 mm thick steel substrate or the same specification as the liner sheet of the panel.

### Panel Length

Exact lengths to be determined by the cladding contractor from the steelworks drawing.

### Panel End Cut Back (Over-Lap)

The recommended cut back for panel end lapping is 150 mm Panel which require a cut back can be provided, but will be charged at full length cost plus cutting cost.

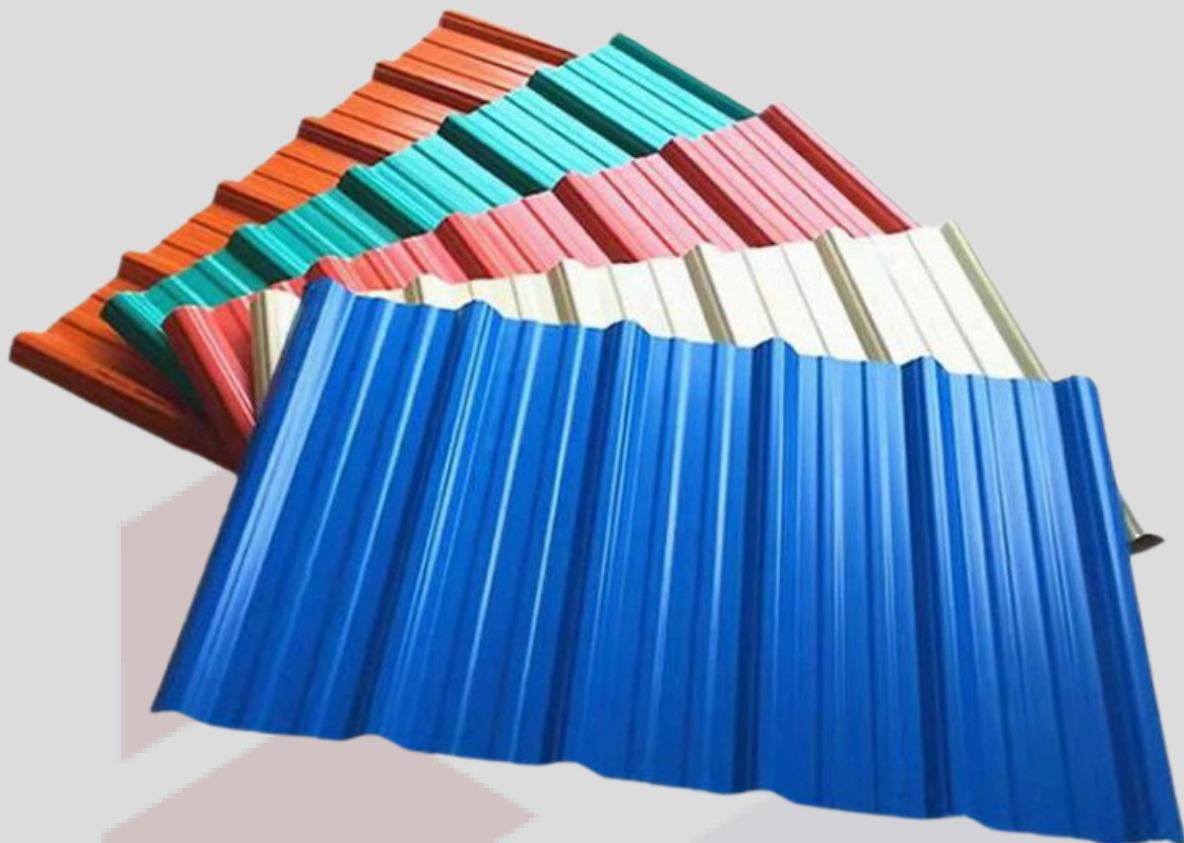
### Fasteners/Screws

All fasteners must be the ugh threaded type manufactured from carbon steel, anti corrosion coated, and fitted with bonded stainless steel washer and integral colour match heads.

All fasteners to be Located through every valley of the profile.



**AMI**



## **CORRUGATED SHEET**



# AMI

## Corrugated Sheet

Corrugated steel sheet is used for roof coverage and siding of building or open shelters with a high demand for watertightness. economy and speedy construction where there is no need for heat insulation.

AMI's corrugated sheet are quiet and easy to install, the edges have innovative design to ensure complete watertightness even in very large support spans. The trapezoidal profile of the exterior coated steel sheet with intermediate minor ribbing ensures high strength in the usual range of load bearing areas.

Corrugated steel sheet is one of the most common types of fences.

**Sheets are designed to have trapezoidal with rib that have an industrial look to them and make for a unique looking fence.**

AMI's trapezoidal steel sheet is available in a wide range of thickness and colours.

## Advantages

- They are inexpensive.
- Made to site measurement, eliminating wastage and installation problems.
- Designed to conciliate high static characteristic with reduced weight.
- Allows rapid and rational execution.
- Requires minimum labour for execution.
- Can be easily dismantled for building transformations.
- Modifications or Extensions can be done at any time.

## Specification

**Materials :** Aluzinc , Pre-painted galvanized iron , Pre-painted Aluminium

**Thickness :** Aluzinc , Pre-painted galvanized iron →( 0.30 mm – 0.70 mm )  
Pre-painted Aluminium →(0.40 mm – 0.70 mm)

**Material finish :** Mill finished, polyester coated 20–25 microns paint thickness ,PVDF (upon request)

**Effective width :** 1000 mm

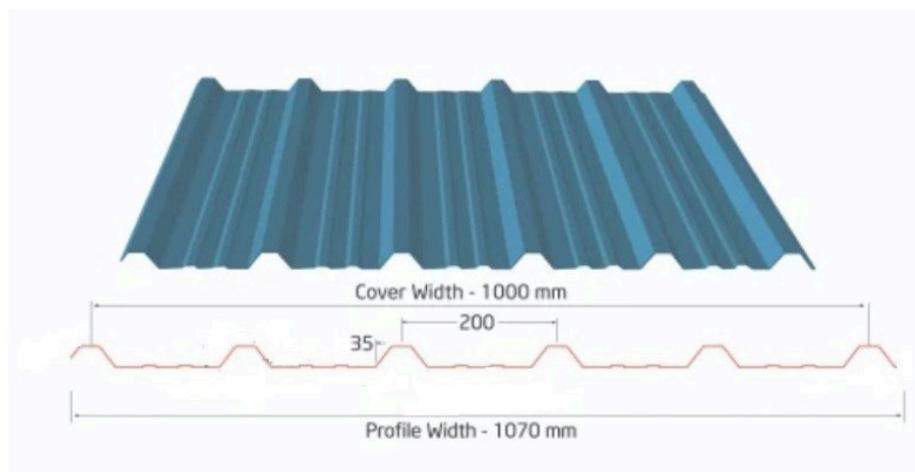
**Colors :** Standard RAL colors



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## AMIC CORRUGATED SHEET PROFILES

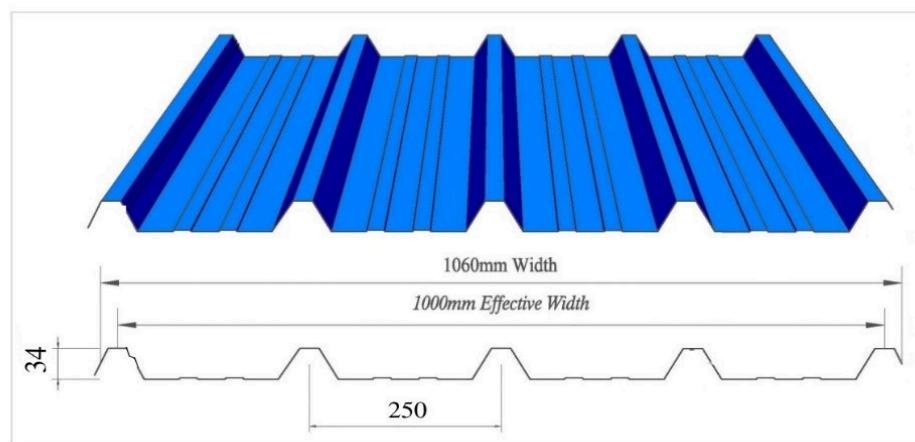
- CS 35 / 200



Depth of corrugation : 35 mm

Pitch of corrugation : 200 mm

- CS 34/250



Depth of corrugation : 34 mm

Pitch of corrugation : 250 mm



**AMI**

## Technical Data Sheet (CS 35 / 200)

### ( Base metal : Steel /Aluzinc )

Section Properties (per meter of coverage width)											
Thickness mm	Weight Kg/m <sup>2</sup>	Area cm <sup>2</sup>	Top in Compression				Bottom in Compression				Shear Va KN
			Ix cm <sup>4</sup>	Sx Top cm <sup>3</sup>	Sx Bottom cm <sup>3</sup>	Ma KN-m	Ix cm <sup>4</sup>	Sx Top cm <sup>3</sup>	Sx Bottom cm <sup>3</sup>	Ma KN-m	
0.40	3.82	4.88	7.00	2.83	6.63	0.94	6.83	3.78	3.96	1.26	11.51
0.46	4.40	5.61	8.64	3.60	7.65	1.20	8.06	4.38	4.77	1.46	17.55
0.50	4.78	6.10	9.80	4.16	8.33	1.38	8.90	4.79	5.32	1.59	22.52
0.60	5.73	7.31	12.64	5.54	10.04	1.84	11.05	5.79	6.76	1.93	33.36
0.70	6.69	8.53	15.24	6.77	11.77	2.25	13.25	6.80	8.29	2.26	38.70

Allowable Uniform Load Capacities (KN/m <sup>2</sup> )											
Thickness mm	No. of Spans	Load Case	Span in Meters								
			1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00
0.40	upto 2 spans	D + L	6.08	3.11	1.80	1.13	0.76	0.53	0.39	0.29	0.23
		Uplift	8.89	4.55	2.63	1.66	1.11	0.78	0.57	0.43	0.33
	3 or more spans	D + L	9.42	5.87	3.40	2.14	1.43	1.01	0.73	0.55	0.42
		Uplift	12.58	8.05	4.97	3.13	2.10	1.47	1.07	0.81	0.62
0.46	upto 2 spans	D + L	7.50	3.84	2.22	1.40	0.94	0.66	0.48	0.36	0.28
		Uplift	10.50	5.37	3.11	1.96	1.31	0.92	0.67	0.50	0.39
	3 or more spans	D + L	11.97	7.25	4.19	2.64	1.77	1.24	0.91	0.68	0.52
		Uplift	14.58	9.33	5.87	3.70	2.48	1.74	1.27	0.95	0.73
0.50	upto 2 spans	D + L	8.51	4.36	2.52	1.59	1.06	0.75	0.54	0.41	0.32
		Uplift	11.59	5.93	3.43	2.16	1.45	1.02	0.74	0.56	0.43
	3 or more spans	D + L	13.84	8.22	4.76	3.00	2.01	1.41	1.03	0.77	0.59
		Uplift	15.91	10.18	6.48	4.08	2.73	1.92	1.40	1.05	0.81
0.60	upto 2 spans	D + L	10.97	5.62	3.25	2.05	1.37	0.96	0.70	0.53	0.41
		Uplift	14.38	7.36	4.26	2.68	1.80	1.26	0.92	0.69	0.53
	3 or more spans	D + L	18.42	10.60	6.13	3.86	2.59	1.82	1.32	1.00	0.77
		Uplift	19.26	12.33	8.04	5.06	3.39	2.38	1.74	1.30	1.00
0.70	upto 2 spans	D + L	13.22	6.77	3.92	2.47	1.65	1.16	0.85	0.64	0.49
		Uplift	17.25	8.83	5.11	3.22	2.16	1.51	1.10	0.83	0.64
	3 or more spans	D + L	22.49	12.77	7.39	4.66	3.12	2.19	1.60	1.20	0.92
		Uplift	22.61	14.47	9.64	6.07	4.07	2.86	2.08	1.56	1.21

- Notes:**
1. Design of Sheeting is based on equations of AISI-2001 (ASD-Allowable stress design).
  2. D+L = Dead + Live Load (Deflection Limitation: Span / 180)
  3. Wind Uplift (Deflection Limitation: Span / 120)

### ( Base metal : Aluminium)

Section Properties (per meter of coverage width)											
Thickness mm	Weight Kg/m <sup>2</sup>	Area cm <sup>2</sup>	Top in Compression				Bottom in Compression				Shear Va KN
			Ix cm <sup>4</sup>	Sx Top cm <sup>3</sup>	Sx Bottom cm <sup>3</sup>	Ma KN-m	Ix cm <sup>4</sup>	Sx Top cm <sup>3</sup>	Sx Bottom cm <sup>3</sup>	Ma KN-m	
0.50	1.65	6.09	8.85	3.60	8.24	0.39	8.25	4.66	4.68	0.50	5.10
0.70	2.31	8.53	14.56	6.36	11.59	0.69	12.30	6.62	7.28	0.71	12.81

Allowable Uniform Load Capacities (KN/m <sup>2</sup> )											
Thickness mm	No. of Spans	Load Case	Span in Meters								
			1	1.25	1.5	1.75	2	2.25	2.5	2.75	3
0.50	upto 2 spans	D + L	3.11	1.99	1.38	1.75	0.78	0.61	0.49	0.37	0.28
		Uplift	4.02	2.57	1.78	1.01	1.00	0.79	0.64	0.52	0.40
	3 or more spans	D + L	3.88	2.48	1.73	1.31	0.97	0.77	0.62	0.51	0.43
		Uplift	5.02	3.21	2.23	1.27	1.26	0.99	0.80	0.66	0.56
0.70	upto 2 spans	D + L	5.48	3.51	2.44	1.99	1.37	1.08	0.81	0.61	0.48
		Uplift	5.71	3.66	2.54	1.79	1.43	1.13	0.91	0.76	0.59
	3 or more spans	D + L	6.85	4.38	3.04	1.87	1.71	1.35	1.10	0.91	0.76
		Uplift	7.14	4.57	3.17	2.24	1.79	1.41	1.14	0.94	0.79



**AMI**

## Technical Data Sheet (CS 34/250)

### ( Base metal : Steel /Aluzinc)

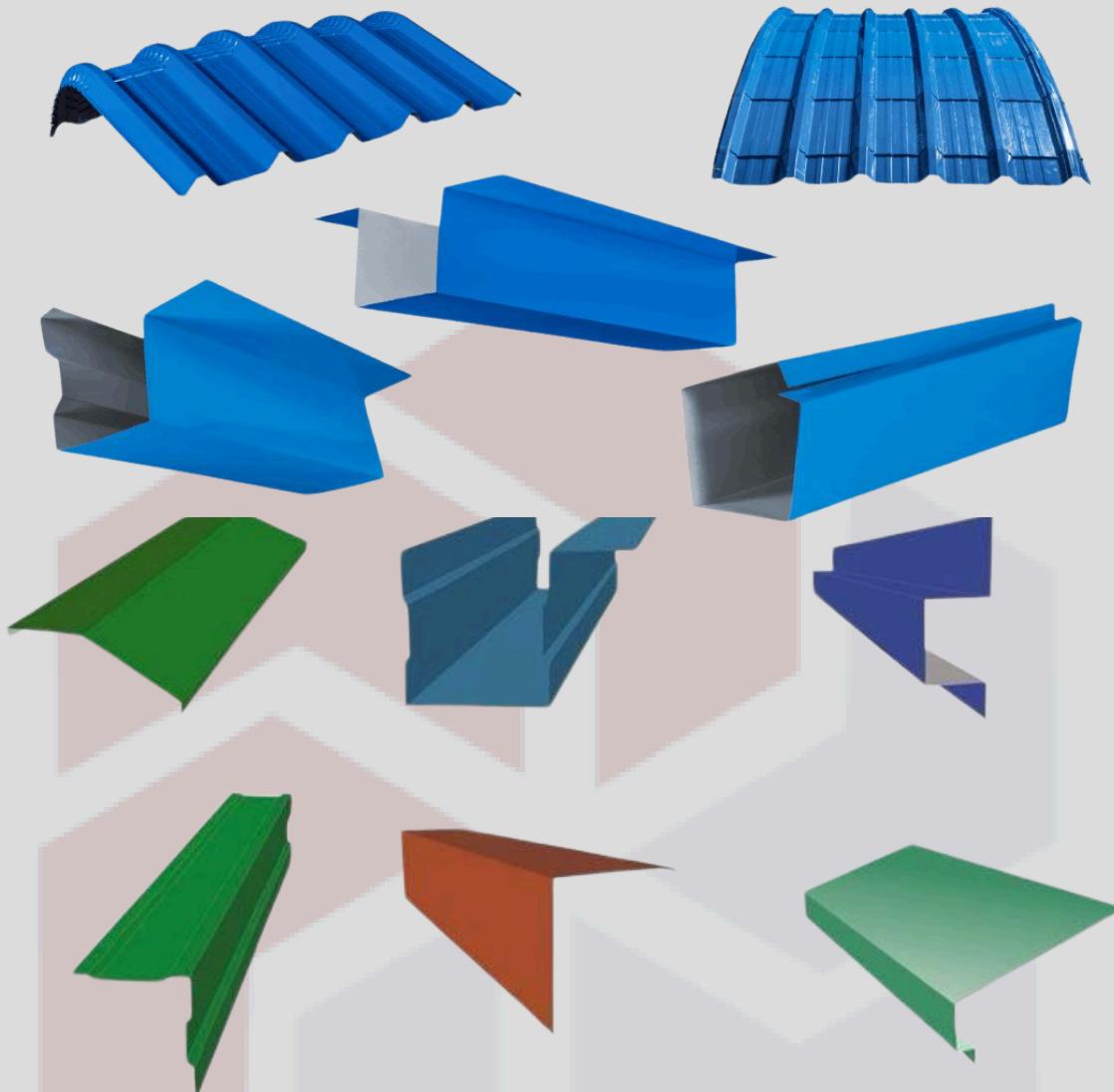
#### Specifications

		Uniform Distributed Unfactored Load in KN/M									
		Maximum Recommended Span									
	Thickness	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	
Single Span	0.35	2475	2163	1968	1757	1545	1441				
Double Span		2677	2160	1890	1789	1687	1537				
Multi Span		2705	2364	2146	1948	1749	1622				
	0.40	2561	2238	2035	1834	1632	1523	1413			
		2827	2288	1997	1876	1754	1608	1461			
		2798	2445	2220	2029	1838	1709	1579			
	0.45	2647	2313	2103	1911	1919	1604	1489	1373	1258	
		2978	2416	2199	1963	1821	1679	1536	1393	1250	
		2892	2527	2285	2112	1929	1796	1664	1531	1399	
	0.50	2733	2388	2170	1988	1806	1685	1564	1482	1399	
		3128	2544	2211	2050	1888	1750	1611	1527	1442	
		2985	2608	2369	2194	2019	1884	1748	1656	1564	
	0.55	2819	2463	2238	2065	1893	1766	1640	1553	1467	
		3279	2672	2318	2137	1955	1821	1686	1595	1504	
		3079	2690	2444	2276	2109	1971	1833	1736	1640	
	0.60	2905	2538	2305	2143	1980	1848	1715	1625	1534	
		3429	2800	2425	2224	2022	1892	1761	1664	1566	
		3172	2771	2518	2359	2199	2058	1917	1816	1715	
	0.70	3057	2671	2427	2274	2120	1986	1852	1754	1656	
		3704	3024	2619	2379	2138	2014	1890	1796	1701	
		3339	2917	2650	2483	2316	2193	2070	1961	1852	

**Note :** TDS ( Aluminium) , Section properties provide upon request



**AMI**



## **PROFILE CAPS , FLASHING, GUTTERS AND OTHER BENDED ACESSORIES**



# AMI

## Ridge Caps

Single skin Ridge caps are used to cap the ridge of a roofing system with sandwich panels or corrugated surface.

It acts as a protective barrier against water infiltration and preventing leaks.



It also helps to maintain the structural integrity of the roof by keeping the underlying materials secure.

AMI also provides end cap & side cap according to sheet arrangement.



## Specifications

Materials : Aluzinc , Pre-painted galvanized iron , Pre-painted Aluminium

Thickness : Aluzinc , Pre-painted galvanized iron ( 0.30 mm – 0.70 mm )

Pre-painted Aluminium (0.40 mm – 0.70 mm)

Profile types : CS 34 / 250 , CS 35 / 200

Effective length : 1000 mm

Standard width : 250 mm x 250 mm ,300 mm x 300 mm ,500 mm x 500 mm ,1000 mm x 1000 mm

(Other dimension will be provided according to customer request )

Colors : Standard RAL colors

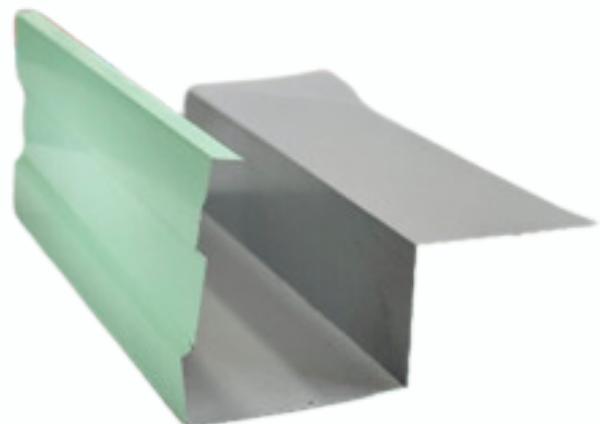


**AMI**

## Flashing & Gutters

Gutters and flashings are important components of a building's roofing & wall cladding that play a crucial role in protecting the structure from water leakage.

They work together to direct rainwater away from the roof and the building's foundation, preventing water intrusion and damage to the building's structural integrity.

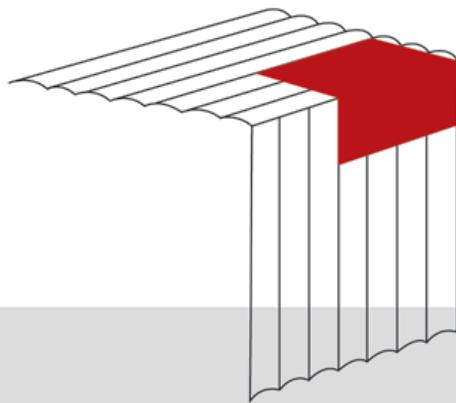


**AMI's** Gutters and flashing are available in various shapes, thickness, colours with different material options Aluzinc, Galvanized iron, Pre-painted Aluminum, Pre-painted galvanized iron etc.

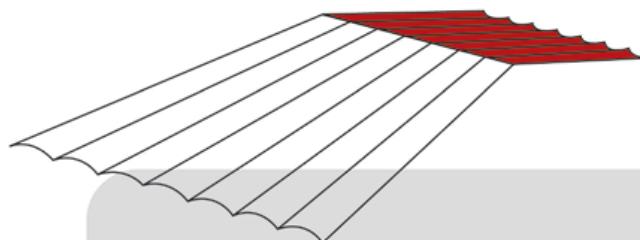




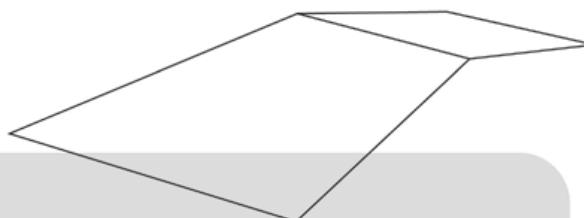
**AMI**



Gable Flashing



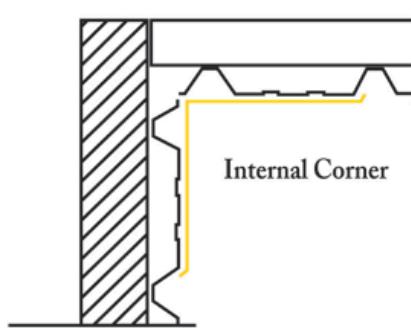
Profile Ridge Cap



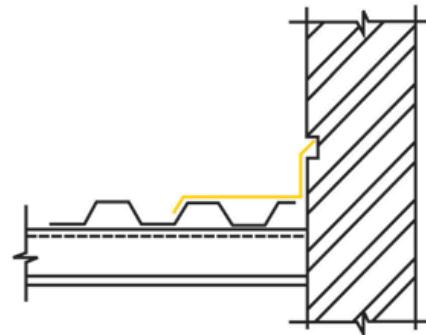
Plain Ridge Flashing



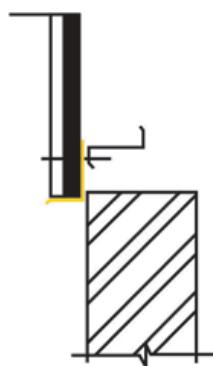
**AMI**



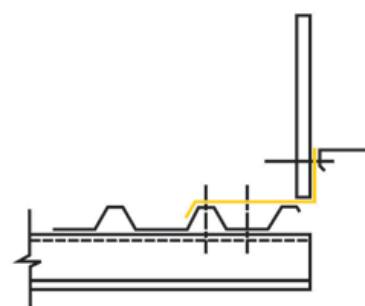
CORNER FLASHING



ENDWALL FLASHING - 1



DRIP FLASHING

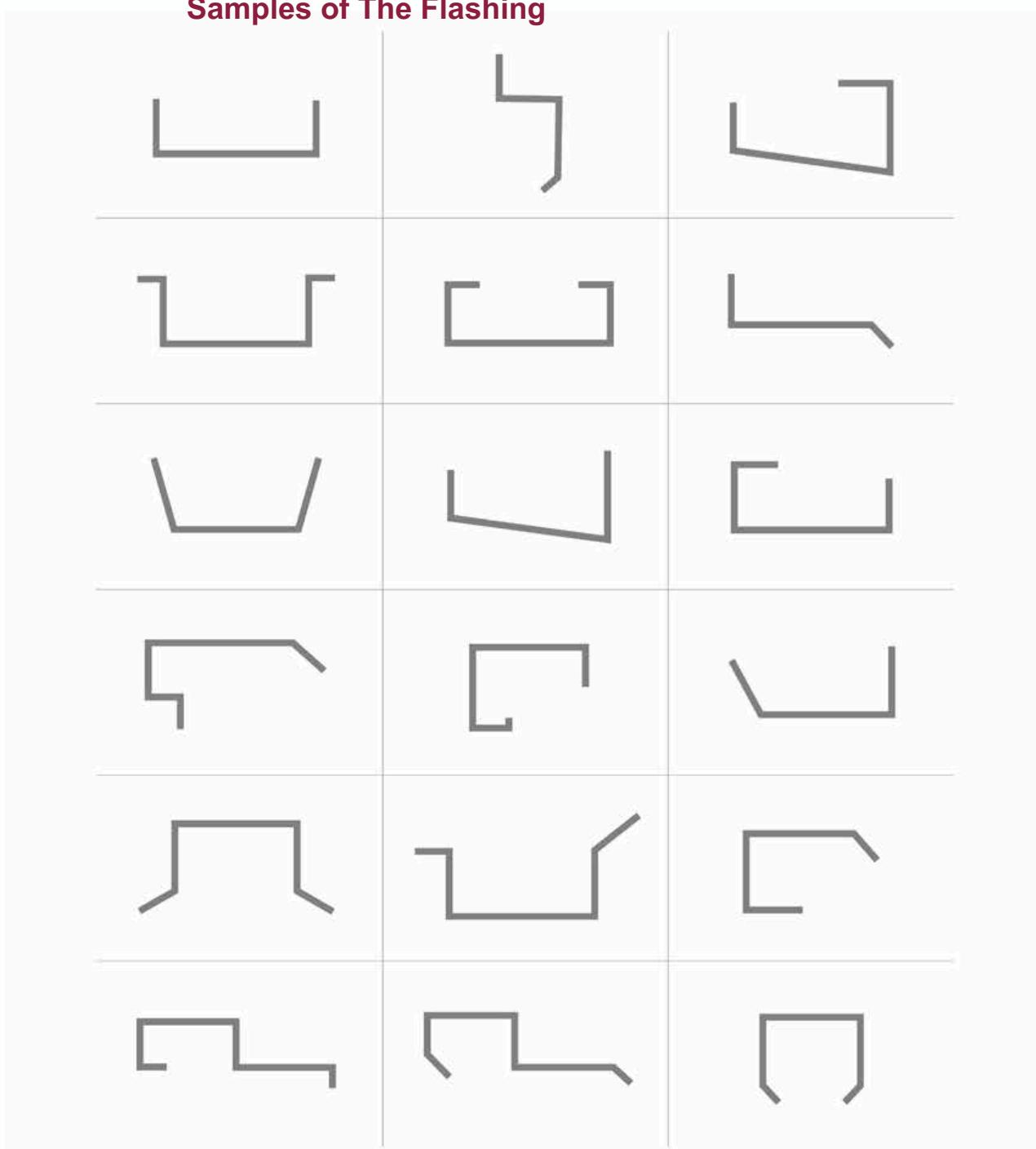


ENDWALL FLASHING - 2



**AMI**

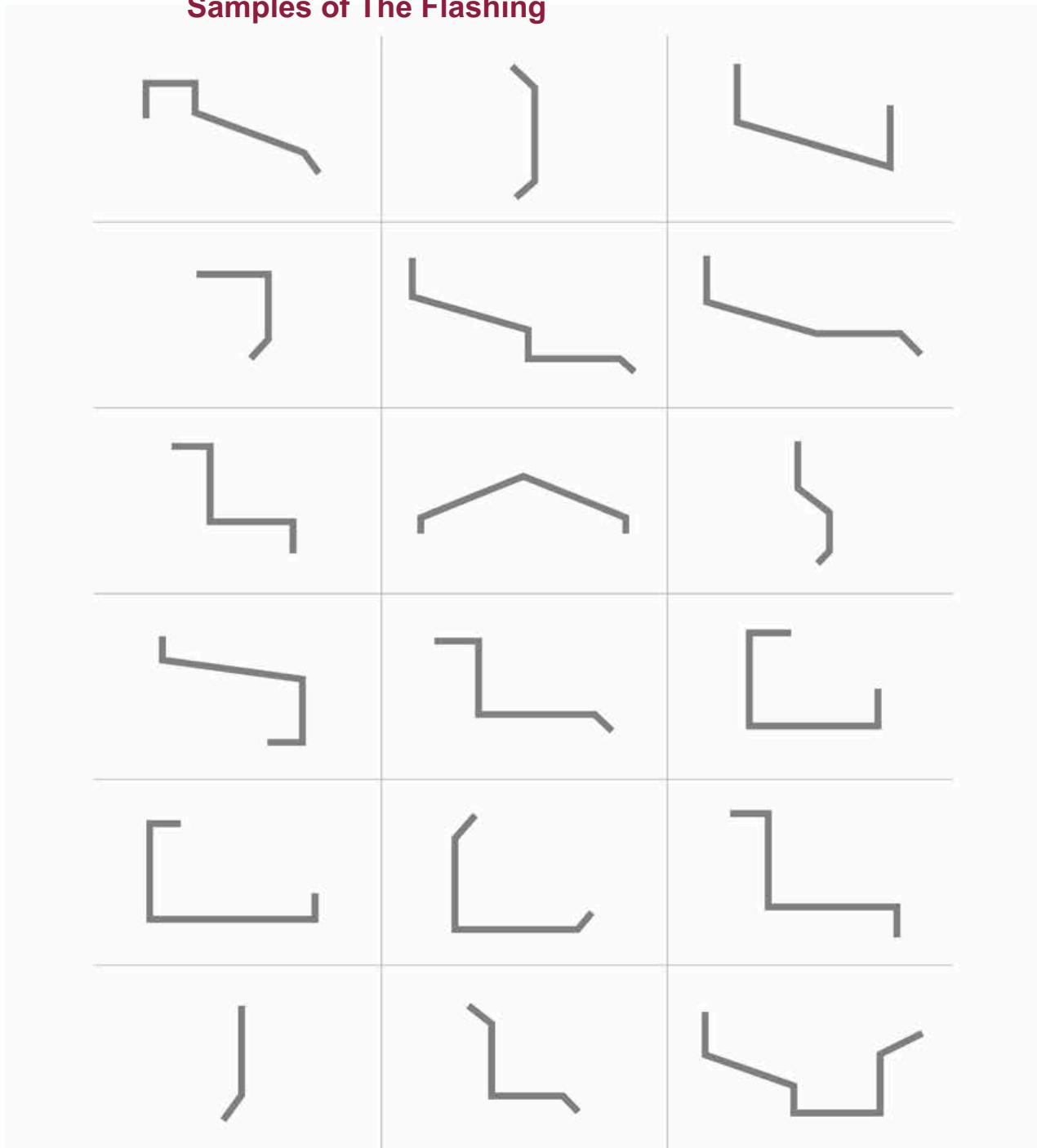
### Samples of The Flashing





**AMI**

### Samples of The Flashing





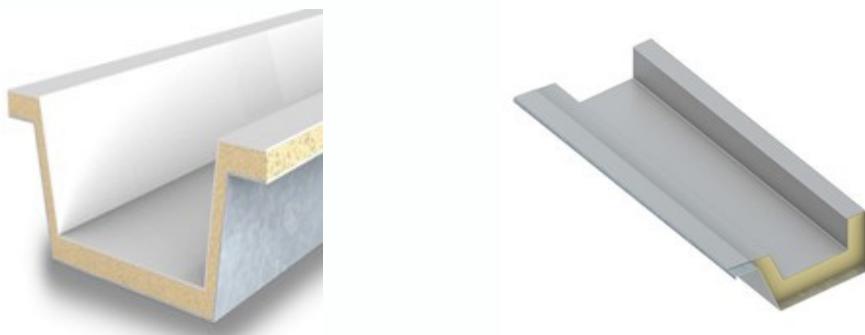
**AMI**



## **INSULATED GUTTERS**



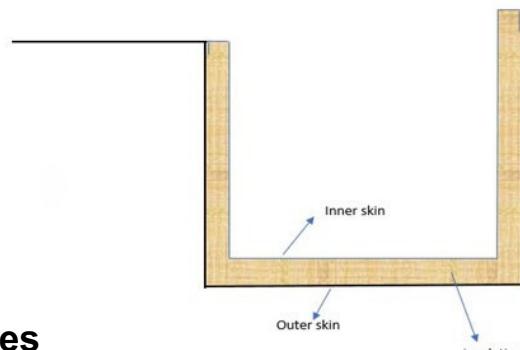
**AMI**



**AMI** recently introduce insulated gutters to our product line.

**AMI** insulated gutters are the ideal solution for rainwater management. Gutters are the critical elements in the weather proofing of a building, especially gutters classed as internal such as valley or boundary wall gutters.

If these leaks, the roof system has failed and the building occupants and operation is put at risk. Insulated Gutters are composed by filling insulation material between the metal surfaces. Insulation material will be either PIR or PUR. Thickness of insulation depend upon the requirements.



## General properties

### Outer & Inner skin Specification

**Material** : Aluzinc , GI , Aluminium

**Thickness** : Minimum 0.50 mm (Thickness Above 0.50 mm will be provided upon the request)

**Length of inner gutter** : 2.90 Mtr

**Length of outer gutter** : 3.00 Mtr

**Overlap length** : 10 cm

### Insulation specification

**Insulated material** : PIR or PUR

**Insulation thickness** : 10 mm– 50 mm ( Other thickness will be provided upon request)



**AMI**



## PURLINS

تليفون: 44604888 فاكس: 44422840-44604777 . س.ت: 134614 . ص.ب: 3655 . الدوحة قطر

Tel: 44604777 - 44422840 Fax: 44604888. C.R.No: 134614. P.O.Box: 3655. DOHA - QATAR

E-mail: [info@amicqatar.com](mailto:info@amicqatar.com), [sales@amicqatar.com](mailto:sales@amicqatar.com). [www.amicqatar.com](http://www.amicqatar.com)



# AMI

**AMI's Purlins** are galvanized steel beams that allow you to safely attach roof and wall cladding sheets to buildings. The combination of our Z purlins and C section purlins provides a strong and sturdy complete structural solution ready for roofing and side cladding.

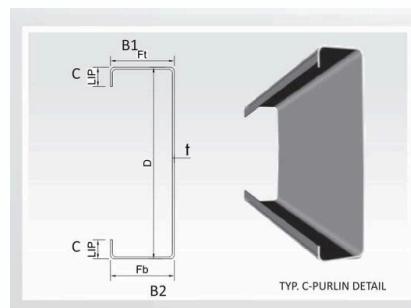
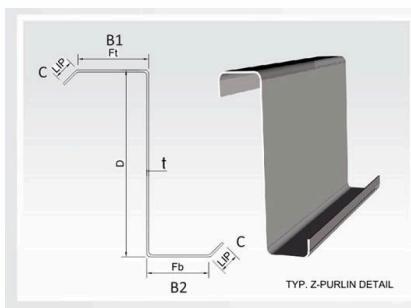
Purlins thickness range available from (1.20 mm - 2.50 mm) with different height range from 100 mm to 300 mm.

HOLES – holes will be provided according to customer requirement.

**Z Purlins** are designed to form the roof and wall joists of a building shell structure. They sit between the steel sheets and the building, acting as a support for the sheets to ensure it is firmly attached and safely in place.



**C Purlins** are designed to form the walls and floor joists of a building shell structure and are ideal for support beams for mezzanine flooring. They can also be used for door framing, roof trimming, window trimming, parapet rails and side rails.



Standard depth (D) : 100 mm ,140 mm ,150 mm ,180 mm ,200 mm ,250 mm ,300 mm

Flange ( B1 ) , ( B2 ) : 50 mm

Lip ( C ) : 15 mm – 20 mm

**Note:** Customized depth (D) sizes can be fabricated according to customers requirement from 100 mm to 300 mm range .



**AMI**

## Technical Data Sheet

### Load Table - Z Purlin

Roof Purlin Z Section	Span (m)	Total Working UDL (kN)	Working Loads								Ultimate U.D.L. in kN / span					
			Allowable loading in kN/sq m Purlin centers in millimeters						Span Deflection 180	Gravity Load	Uplift - metal cladding Number anti sag rods			0	1	2
			1000	1200	1500	1800	2000	2400			0	1	2			
<b>3.50m</b>																
14016	3.5	11.17	3.19	2.66	2.13	1.77	1.6	1.33	13.99	16.76	10.59	16.24	16.76			
14018	3.5	13.71	3.92	3.26	2.61	2.18	1.96	1.63	15.69	20.57	12.64	19.35	20.57			
14020	3.5	16.22	4.63	3.86	3.09	2.57	2.32	1.93	17.36	24.32	14.68	22.38	24.32			
<b>4.00m</b>																
14016	4	9.78	2.44	2.04	1.63	1.36	1.22	1.02	10.71	14.66	8.48	12.99	14.66			
14018	4	12	3	2.5	2	1.67	1.5	1.25	12.01	17.99	10.17	15.43	17.99			
14020	4	13.29	3.32	2.77	2.21	1.85	1.66	1.38	13.29	21.28	11.86	17.81	21.28			
17516	4	12.96	3.24	2.7	2.16	1.8	1.62	1.35	15.78	19.44	11.79	18.25	19.44			
17518	4	16.14	4.04	3.36	2.69	2.24	2.02	1.68	17.71	24.21	14.2	21.91	24.21			
17520	4	19.29	4.82	4.02	3.22	2.68	2.41	2.01	19.61	28.94	16.61	25.47	28.94			
<b>4.50m</b>																
14016	4.5	8.46	1.88	1.57	1.25	1.04	0.94	0.78	8.46	13.03	7.03	10.58	13.03			
14018	4.5	9.49	2.11	1.76	1.41	1.17	1.05	0.88	9.49	16	8.47	12.56	16			
14020	4.5	10.5	2.33	1.94	1.56	1.3	1.17	0.97	10.5	18.92	9.9	14.5	18.92			
17516	4.5	11.52	2.56	2.13	1.71	1.42	1.28	1.07	12.47	17.28	9.71	14.93	17.28			
17518	4.5	13.99	3.11	2.59	2.07	1.73	1.55	1.3	13.99	21.52	11.74	17.86	21.52			
17520	4.5	15.5	3.44	2.87	2.3	1.91	1.72	1.43	15.5	25.72	13.78	20.73	25.72			
20016	4.5	13.81	3.07	2.56	2.05	1.71	1.53	1.28	15.22	20.72	11.48	17.69	20.72			
<b>5.00m</b>																
14016	5	6.86	1.37	1.14	0.91	0.76	0.69	0.56	6.86	11.73	5.99	8.79	11.71			
14018	5	7.69	1.54	1.28	1.02	0.85	0.77	0.64	7.69	14.4	7.24	10.43	13.97			
14020	5	8.51	1.7	1.42	1.13	0.95	0.85	0.71	8.51	17.03	8.49	12.06	16.18			
17516	5	10.1	2.02	1.68	1.35	1.12	1.01	0.88	10.1	15.55	8.21	12.4	15.55			
17518	5	11.33	2.27	1.89	1.51	1.26	1.13	0.94	11.33	19.37	9.98	14.83	19.37			
17520	5	12.55	2.51	2.09	1.67	1.39	1.26	1.05	12.55	23.15	11.74	17.21	22.98			
20016	5	12.33	2.47	2.05	1.64	1.37	1.23	1.03	12.33	18.65	9.72	14.68	18.65			
20018	5	13.84	2.77	2.31	1.84	1.54	1.38	1.15	13.84	23.24	11.8	17.54	23.24			
20020	5	15.33	3.07	2.56	2.04	1.7	1.53	1.28	15.33	27.79	13.87	20.35	27.32			
<b>5.50m</b>																
14016	5.5	5.67	1.03	0.86	0.69	0.56	0.49	0.41	5.67	10.66	5.21	7.43	10.03			
14018	5.5	6.35	1.15	0.96	0.77	0.64	0.56	0.48	6.35	13.09	6.31	8.84	11.94			
14020	5.5	7.03	1.28	1.07	0.85	0.71	0.62	0.53	7.03	15.48	7.42	10.24	13.79			
17516	5.5	8.35	1.52	1.26	1.01	0.85	0.71	0.62	8.35	14.13	7.1	10.47	14.02			
17518	5.5	9.37	1.7	1.42	1.14	0.95	0.85	0.71	9.37	17.61	8.66	12.52	16.89			
17520	5.5	10.37	1.89	1.57	1.26	1.05	0.94	0.79	10.37	21.05	10.21	14.55	19.68			
20016	5.5	10.19	1.85	1.54	1.23	1.03	0.93	0.77	10.19	16.95	8.4	12.38	16.66			
20018	5.5	11.44	2.08	1.73	1.39	1.16	1.04	0.87	11.44	21.13	10.24	14.81	20.06			
20020	5.5	12.67	2.3	1.92	1.54	1.28	1.15	0.96	12.67	25.26	12.08	17.19	23.35			
<b>6.00m</b>																
14018	6	5.34	0.89	0.74	0.61	0.52	0.44	0.36	5.34	12	5.6	7.62	10.28			
14020	6	5.91	0.98	0.82	0.69	0.59	0.51	0.43	5.91	14.19	6.59	8.84	11.87			
17516	6	7.01	1.17	0.97	0.82	0.68	0.58	0.49	7.01	12.96	6.25	8.97	12.17			
17518	6	7.87	1.31	1.09	0.87	0.73	0.62	0.53	7.87	16.14	7.64	10.75	14.61			
17520	6	8.72	1.45	1.21	0.97	0.81	0.73	0.61	8.72	19.29	9.04	12.51	16.98			
20016	6	8.56	1.43	1.19	0.95	0.79	0.71	0.62	8.56	15.54	7.4	10.61	14.44			
20018	6	9.61	1.6	1.33	1.07	0.89	0.8	0.7	9.61	19.37	9.04	12.71	17.32			
20020	6	10.65	1.77	1.48	1.18	0.99	0.89	0.74	10.65	23.16	10.69	14.78	20.12			
20025	6	13.2	2.2	1.83	1.47	1.22	1.1	0.92	13.2	32.46	14.81	19.91	26.88			
23016	6	11.48	1.91	1.59	1.28	1.06	0.96	0.8	11.48	18.26	8.13	12.47	17.1			
23018	6	12.89	2.15	1.79	1.43	1.19	1.07	0.9	12.89	23.13	9.99	15	20.78			
23020	6	12.18	2.03	1.69	1.35	1.13	1.01	0.85	12.18	25.82	10.54	15.14	21.12			
<b>6.50m</b>																
17518	6.5	6.71	1.03	0.86	0.69	0.56	0.48	0.41	6.71	14.9	6.84	9.37	12.72			
17520	6.5	7.43	1.14	0.95	0.76	0.63	0.54	0.46	7.43	17.81	8.1	10.92	14.77			
20016	6.5	7.29	1.12	0.94	0.75	0.62	0.53	0.45	7.29	14.35	6.61	9.22	12.59			
20018	6.5	8.19	1.26	1.05	0.84	0.7	0.61	0.53	8.19	17.88	8.09	11.07	15.07			
20020	6.5	9.07	1.4	1.16	0.93	0.78	0.7	0.62	9.07	21.38	9.58	12.9	17.49			
20025	6.5	11.24	1.73	1.44	1.15	0.96	0.86	0.72	11.24	29.96	13.32	17.45	23.35			
23016	6.5	9.78	1.5	1.25	1	0.84	0.75	0.65	9.78	16.85	7.19	10.76	14.96			
23018	6.5	10.99	1.69	1.41	1.13	0.94	0.85	0.7	10.99	21.35	8.87	12.97	18.1			



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## Technical Data Sheet

Roof Purlin Z Section	Span (m)	Total Working UDL (kN)	Working Loads						Ultimate U.D.L. in kN / span				
			Allowable loading in kN/sq m Purlin centers in millimeters						Span Deflection 180	Gravity Load	Uplift - metal cladding Number anti sag rods		
			1000	1200	1500	1800	2000	2400			0	1	2
<b>7.01m</b>													
23018	7.5	8.25	1.1	0.92	0.73				8.25	18.51	1.24	10.05	13.99
23020	7.5	9.15	1.22	1.02	0.81	0.68			9.15	22.37	8.64	11.78	16.29
23025	7.5	11.35	1.51	1.26	1.01	0.84	0.76		11.35	31.89	12.15	16.07	21.87
26018	7.5	11.06	1.47	1.23	0.98	0.82	0.74		11.06	21.96	8.49	11.75	16.36
26020	7.5	12.26	1.63	1.36	1.09	0.91	0.82	0.68	12.26	26.55	10.13	13.77	19.05
26025	7.5	15.23	2.03	1.69	1.35	1.13	1.02	0.85	15.23	37.87	14.23	18.77	25.55
<b>8.00m</b>													
20025	8	7.42	0.93	0.77					7.42	24.35	10.25	12.6	16.22
23016	8	6.46	0.81	0.67					6.46	13.69	5.33	7.42	10.33
23018	8	7.25	0.91	0.76					7.25	17.35	6.63	9	12.42
23020	8	8.04	1.01	0.84	0.67				8.04	20.98	7.92	10.56	14.46
23025	8	9.98	1.25	1.04	0.83	0.69			9.98	29.89	11.18	14.46	19.44
26018	8	9.72	1.21	1.01	0.81	0.67			9.72	20.59	7.78	10.52	14.53
26020	8	10.78	1.35	1.12	0.9	0.75	0.67		10.78	24.89	9.29	12.35	16.91
26025	8	13.39	1.67	1.39	1.12	0.93	0.84	0.7	13.39	35.51	13.09	16.89	22.71
<b>8.50m</b>													
23020	8.5	7.12	0.84	0.7					7.12	19.74	7.32	9.56	12.94
23025	8.5	8.84	1.04	0.87	0.69				8.84	28.14	10.35	13.13	17.42
26018	8.5	8.61	1.01	0.84	0.68				8.61	19.37	7.18	9.5	12.99
26020	8.5	9.55	1.12	0.94	0.75				9.55	23.43	8.59	11.18	15.12
26025	8.5	11.86	1.39	1.16	0.93	0.77	0.7		11.86	33.42	12.13	15.34	20.34
<b>9.00m</b>													
23025	9	7.88	0.88	0.73					7.88	26.57	9.63	12.01	15.72
26018	9	7.68	0.85	0.71					7.68	18.3	6.66	8.65	11.69
26020	9	8.52	0.95	0.79					8.52	22.13	7.98	10.19	13.62
26025	9	10.58	1.18	0.98	0.78				10.58	31.56	11.29	14.04	18.36
30020	9	13.46	1.5	1.25	1	0.83	0.75		13.46	25.62	10.03	14.05	19.61
30025	9	16.75	1.86	1.55	1.24	1.03	0.93	0.78	16.75	38.67	14.68	19.76	27.2
<b>9.50m</b>													
26020	9.5	7.64	0.8	0.67					7.64	20.96	7.46	9.36	12.35
30020	9.5	12.08	1.27	1.06	0.85	0.71			12.08	24.27	9.31	12.78	17.75
30025	9.5	15.03	1.58	1.32	1.05	0.88	0.79		15.03	36.63	13.67	18.05	24.62
<b>10.00m</b>													
30020	10	10.9	1.09	0.91	0.73				10.9	23.05	8.68	11.71	16.15
30025	10	13.56	1.36	1.13	0.9	0.75	0.68		13.56	34.8	12.79	16.6	22.41



**AMI**

## Technical Data Sheet

### Load Table - C Purlin

SECTION (REFERENCE)	WEIGHT	WORKING U.D.L KN FOR A DEFLECTION NOT EXCEED SPAN
		300
<b>SPAN 3.5 m</b>		
140 C 15	3.33	6.10
170 C 15	3.85	10.02
<b>SPAN 4.0 m</b>		
140 C 15	3.38	4.67
170 C 15	4.59	7.67
200 C 16	4.21	11.13
<b>SPAN 4.5 m</b>		
170 C 15	3.85	6.06
200 C 15	4.21	8.79
200 C 20	5.56	11.68
230 C 15	4.79	13.03
<b>SPAN 5 m</b>		
170 C 20	5.08	6.46
200 C 20	5.56	9.38
230 C 20	6.34	13.93
<b>SPAN 5.5 m</b>		
200 C 20	5.56	7.75
230 C 15	4.79	8.73
230 C 23	7.26	13.16
<b>SPAN 6.00 m</b>		
230 C 15	4.79	7.33
230 C 20	6.34	9.67
250 C 20	6.92	13.28
260 C 25	8.59	16.44



# AMI

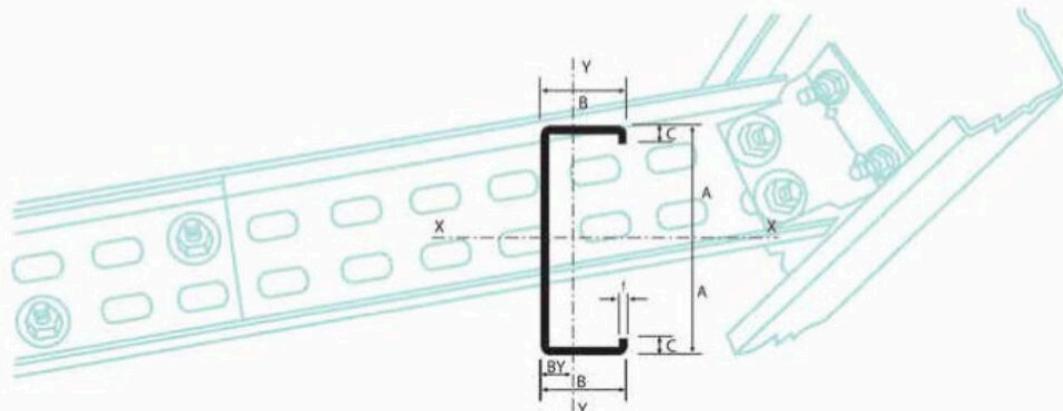
## C - Purlins Properties

Purlin Type	A (mm)	B (mm)	C (mm)	Area (mm <sup>2</sup> )	Mass per unit length kg/m	Full Section Properties			
						Second Moment of Area Ix 10 <sup>6</sup> (mm <sup>4</sup> )	Iy 10 <sup>6</sup> (mm <sup>4</sup> )	Section Modulus Zx (mm <sup>3</sup> )	Zy (mm <sup>3</sup> )
C 100 15	100	50	15	331	2.45	0.5235	0.1114	10.440	3.338
C 140 15	140	50	15	391	2.92	1.3730	0.2445	19.550	5.592
C 180 15	180	50	15	451	3.39	2.4590	0.2651	27.230	5.750
C 200 15	200	50	18	490	3.70	3.5450	0.2857	33.480	5.908
C 100 20	100	50	15	436	3.27	0.6180	0.1060	12.118	3.530
C 140 20	140	50	15	515	3.89	1.7990	0.3167	25.710	7.286
C 180 20	180	50	15	596	4.52	3.2300	0.3435	35.850	7.493
C 200 20	200	50	18	648	4.93	4.6390	0.3655	44.220	7.589
C 100 25	100	50	15	537	4.08	0.9500	0.2200	18.560	7.010
C 140 25	140	50	15	637	4.87	2.7000	0.4200	35.900	9.152
C 180 25	180	50	15	737	5.65	3.9760	0.4172	44.260	9.440
C 200 25	200	50	18	802	6.16	5.7980	0.4589	55.280	9.823

### Steel Quality Specification

High Tensile Galvanized Steel/ Fy=450 MPa Minimum Yield Stress

Zinc Coating Thickness Conforms With ASTM G90

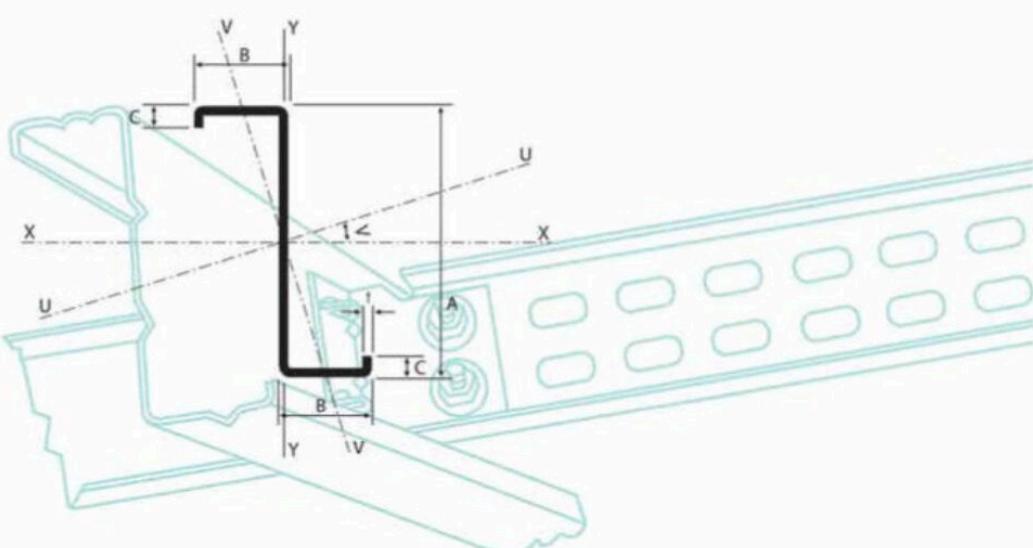




# AMI

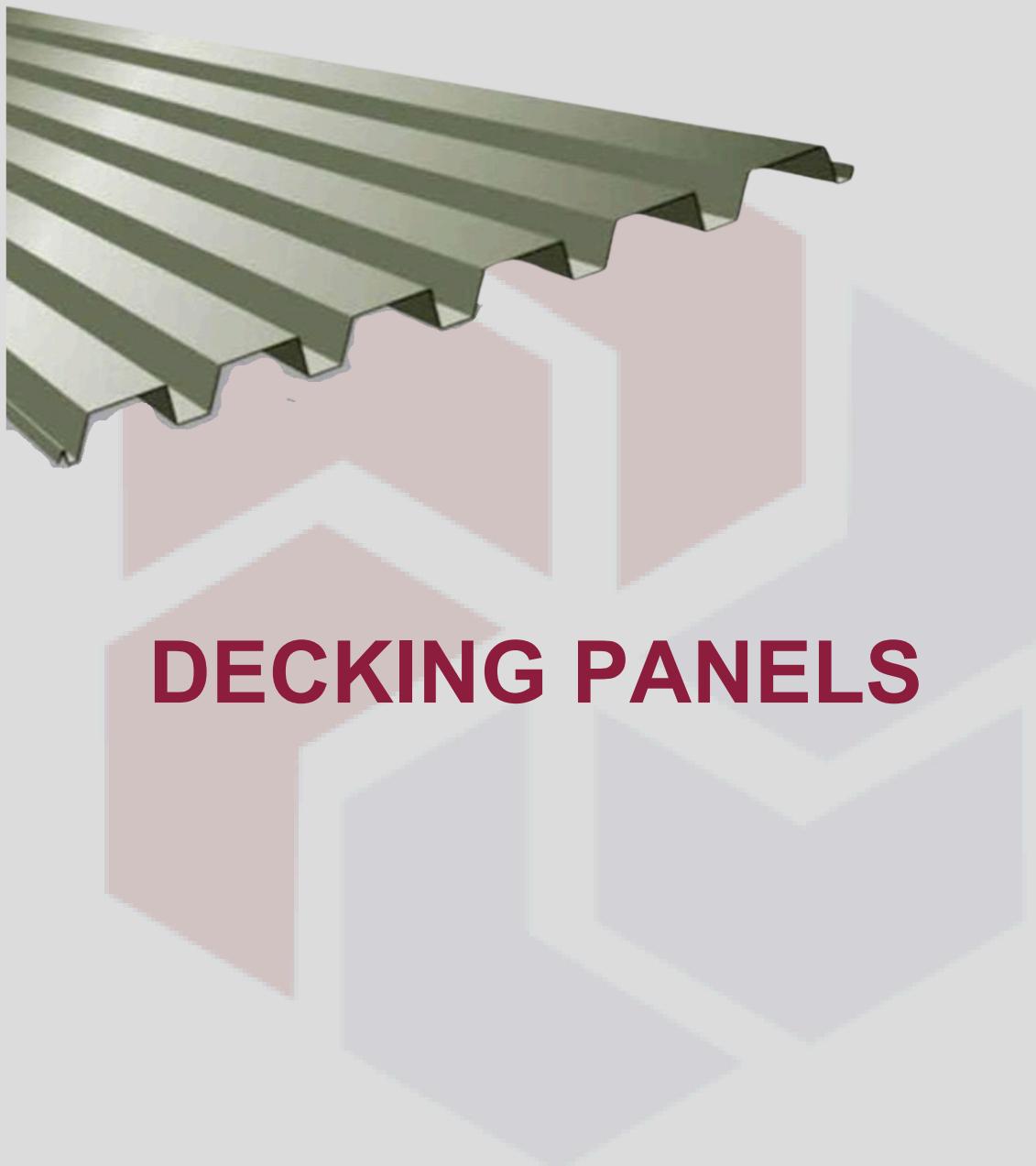
## Z - Purlins Properties

Purlin Type	A (mm)	B (mm)	C (mm)	Area (mm <sup>2</sup> )	Mass per unit length kg/m	Full Section Properties			
						Second Moment of Area		Section Modulus	
						I <sub>x</sub> 10 <sup>6</sup> (mm <sup>4</sup> )	I <sub>y</sub> 10 <sup>6</sup> (mm <sup>4</sup> )	Z <sub>x</sub> (mm <sup>3</sup> )	Z <sub>y</sub> (mm <sup>3</sup> )
Z 100 15	100	50	15	331	2.45	0.6532	0.0659	10.020	2.469
Z 140 15	140	50	15	391	2.92	1.6390	0.1491	18.550	4.256
Z 180 15	180	50	15	451	3.39	2.7010	0.1734	26.000	4.615
Z 200 15	200	50	18	490	3.70	3.7630	0.1980	33.500	4.975
Z 100 2.0	100	50	15	436	3.27	0.6220	0.1890	11.797	4.085
Z 140 2.0	140	50	15	515	3.89	2.1420	0.1933	24.420	5.554
Z 180 2.0	180	50	15	596	4.52	3.5410	0.2248	34.270	6.021
Z 200 2.0	200	50	18	648	4.93	4.9410	0.2471	42.680	6.444
Z 100 2.5	100	50	15	537	4.08	0.360	0.2206	16.840	7.380
Z 140 2.5	140	50	15	637	4.87	2.206	0.3500	29.200	7.740
Z 180 2.5	180	50	15	737	5.65	4.352	0.2732	42.340	9.440
Z 200 2.5	200	50	18	802	6.16	6.176	0.3089	53.340	8.055





**AMI**

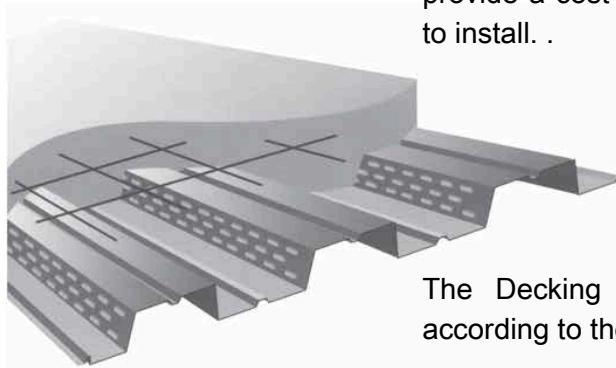


## **DECKING PANELS**



# AMI

Decking sheets are used on mezzanine beams for flooring. The lightweight steel decking panel reduces concrete usage to provide a cost-effective and alternative floor solution that is easy to install. .



GI decking sheet is provided for the suitable load on the floor and covered with form concrete.

The Decking Sheet is available with a galvanized coating according to the standard ASTM A 653M

Nominal thickness are 0.70 mm ( 0.030 in ), 0.90 mm ( 0.036 in ) and 1.20 mm ( 0.048 in ).

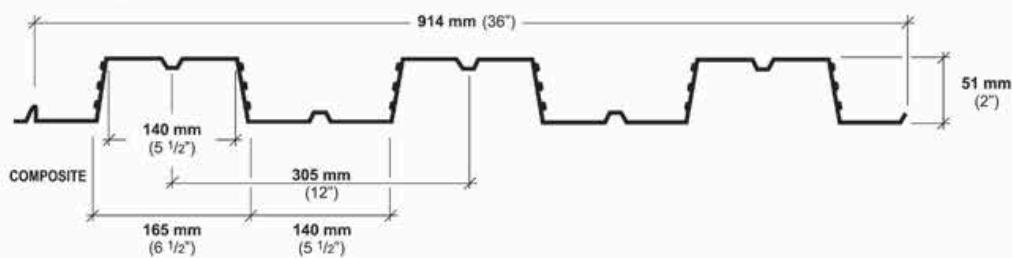
The flutes are 51 mm ( 2 in ) deep and are spaced at 305 mm ( 12 in ) centre to centre.

The deck can be rolled to lengths from 1800 mm ( 6 ft ) to 12200 mm ( 40 ft ).

The wide flutes provide enough space to weld headed studs through the deck to the top of beams or joists that will act in composite action with the concrete slab.

Standard steel grade conforms to ASTM A 653M SS Grade 230 with a yield strength of 230 MPa ( 33 ksi )

## Dimensions





**AMI**

## Physical Properties

Type	Normal Thickness mm (in)	Design Thickness mm (in)	Overall Depth mm (in)	Weight Kg/m <sup>2</sup> (lb/ft <sup>2</sup> )	Section Modulus M <sup>+</sup> mm <sup>3</sup> in <sup>3</sup>	Section Modulus M <sup>-</sup> mm <sup>3</sup> in <sup>3</sup>	Moment of Inertia mm <sup>4</sup> (in <sup>4</sup> )	Steel area Mm <sup>2</sup> (in <sup>2</sup> )	Centre of Gravity Mm (in)
22	0.70 (0.030)	0.70 (0.030)	50.8 (2.00)	8.50 (1.74)	15 350 (0.2855)	15 350 (0.2855)	430 932 (0.3156)	1 016 (0.480)	25.40 (1.00)
20	0.90 (0.036)	0.90 (0.036)	51.0 (2.01)	10.07 (2.06)	19 473 (0.3622)	19 473 (0.3622)	532 353 (0.3898)	1 212 (0.573)	25.47 (1.00)
18	1.20 (0.048)	1.20 (0.048)	51.3 (2.02)	13.26 (2.72)	27 996 (0.5207)	27 996 (0.5207)	717 655 (0.5207)	1 622 (0.766)	25.63 (1.01)

- Effective properties are based on a unit width of 1 000 mm (S.I.units) or 12 in (imperial units)
- Material according to ASTM A 653M SS Grade 230. yield strength of 230 MPa (33 ksi)
- Tables are calculated according to CAN/CSA-S136-01 standard



**AMI**

### Factored Resistance Table of Composite Slab (kPa)

Slab Thick. (mm)	Deck Thick. (mm)	Maximum Unshored Span			Self Weight (kPa)	Comp. Mom. of inertia (10 <sup>6</sup> mm <sup>4</sup> )	SPAN (mm)													
		Single (mm)	Double (mm)	Triple (mm)			1 500	1 650	1 800	1 950	2 100	2 250	2 400	2 550	2 700	2 850	3 000	3 150	3 300	
100		0.70	2 280	2 460	2 530	184	5.718	20.00	18.78	16.05	13.91	12.20	10.80	9.65	8.68	7.87	7.17	6.57	6.05	5.59
		0.90	2 670	2 920	3 015	185	6.080	20.00	20.00	20.00	17.40	15.25	13.50	12.05	10.84	9.82	8.94	8.19	7.54	6.97
		1.20	3 115	3 485	3 575	188	6.772	20.00	20.00	20.00	20.00	18.28	16.17	14.44	12.98	11.75	10.71	9.80	9.02	8.34
125		0.70	2 035	2 035	2 120	2.43	10.841	20.00	20.00	20.00	18.58	16.29	14.42	12.88	11.59	10.51	9.58	8.77	8.08	7.47
		0.90	2 425	2 675	2 765	2.44	11.498	20.00	20.00	20.00	20.00	20.00	18.02	16.09	14.48	13.11	11.94	10.94	10.07	9.31
		1.20	2 845	3 195	3 265	2.47	12.758	20.00	20.00	20.00	20.00	20.00	20.00	19.29	17.35	15.71	14.31	13.10	12.05	11.14
140		0.70	1 855	1 855	1 930	2.78	15.050	20.00	20.00	20.00	20.00	18.74	16.59	14.82	13.34	12.09	11.02	10.10	9.29	8.59
		0.90	2 310	2 550	2 640	2.80	15.938	20.00	20.00	20.00	20.00	20.00	20.00	18.52	16.66	15.09	13.74	12.59	11.59	10.71
		1.20	2 720	3 050	3 125	2.82	17.647	20.00	20.00	20.00	20.00	20.00	20.00	19.96	18.08	16.46	15.08	13.87	12.82	
150		0.70	1 750	1 750	1 825	3.02	18.390	20.00	20.00	20.00	20.00	18.04	16.12	14.51	13.14	11.98	10.98	10.11	9.34	
		0.90	2 245	2 420	2 525	3.03	19.456	20.00	20.00	20.00	20.00	20.00	20.00	18.11	16.40	14.94	13.69	12.60	11.64	
		1.20	2 650	2 965	3 040	3.06	21.511	20.00	20.00	20.00	20.00	20.00	20.00	19.66	17.90	16.39	15.08	13.94		
165		0.70	1 615	1 615	1 685	3.37	24.277	20.00	20.00	20.00	20.00	20.00	20.00	18.06	16.25	14.72	13.42	12.30	11.32	10.47
		0.90	2 155	2 235	2 330	3.38	25.643	20.00	20.00	20.00	20.00	20.00	20.00	20.00	18.38	16.74	15.34	14.11	13.05	
		1.20	2 555	2 850	2 930	3.41	28.288	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	18.37	16.90	15.62		
190		0.70	1 430	1 430	1 395	3.96	36.664	20.00	20.00	20.00	20.00	20.00	20.00	19.16	17.36	15.82	14.50	13.35	12.34	
		0.90	1 980	1 980	2 065	3.97	38.628	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.74	18.08	16.64	15.38		
		1.20	2 425	2 680	2 770	4.00	42.447	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.94	18.42			

- The table is based on concrete density of 2 400 kg/m<sup>3</sup> and minimum compressive resistance (f'c) equal to 20 MPa at 28 days.
- During construction, the steel deck must support itself, the concrete and a construction uniform load of 1 kPa or a transverse load of 2 kN/m as specified by the Canadian Sheet Steel Building institute.
- The Maximum unshored spans shown in the table are established for bending under the slab self-weight and the construction loads, for web crippling and for the deflection under wet concrete to be less than the span over 180 (L/180). The web crippling resistance is calculated assuming the end bearing length equal to 51 mm and the interior bearing length equal to 127 mm.
- If the bearing length is shorter, the design engineer must verify the web crippling factored resistance with the reaction produced by wet concrete and construction factored loads.
- Shaded values indicate that the deck should be shored at mid-span during the pour and the curing of concrete for those spans and concrete thickness conditions. Shaded values correspond to the maximum unshored span values shown at the left of the table.
- The design engineer is responsible for specifying size and location of the wire mesh in the concrete slab in order to respect current concrete practices.



# AMI

## Example

Triple span of 2 400 mm, total slab thickness of 125 mm with 74 mm of concrete cover on top of 51 mm deck profile.

Once the concrete is cured, the composite slab will have to support these loads:

<b>Dead Load</b>	=1.50 kPa
<b>Service Live load</b>	= 4.80 kPa

According to the table of maximum unshored span above, we need to use a deck with a nominal thickness of 0.91mm for a triple span condition.

Deck and concrete weight are 2.44 kPa (shown in the table!)

### Total Factored Load:

$$W_f = 1.25 \times (2.44 + 1.50) + 1.5 \times 4.80 = 12.13 \text{ kPa}$$

### Factored resistance

$W_r = 16.09 \text{ kPa}$  for a span of 2400 mm, with a 125 mm slab and a 0.91 mm thick deck

### $W_r > W_f$

Service Load  $w = 4.80 \text{ kPa}$

Composite moment of inertia is  $11.498 \times 10^6 \text{ mm}^4$  (From the table)

Deflection=

$$= 0.9 \text{ mm} < 6.7 \text{ mm} \quad \text{OK}$$

## Standards

This AMI steel deck catalog presents Load tables based on the recent edition of the standard CAN/CSA-S136-01 North American Specification for the Design of Cold-formed Steel Structural Members.

Design shall be made under Limit States Design Principles For this reason, the uniform Loads shown in the tables are the maximum factored Loads that the deck can support.

The Canadian Sheet Steel Building institute (CSSBI) specifies rules for steel deck practices.

AMI applied those rules in the calculations for this catalog.



# AMI

## Warning

Although every effort was made to ensure that all date in this catalog is factual and that the numerical values are accurate to a degree consistent with cold- formed design standards. **AMI** does not assure responsibility for errors or oversights that may result From the use of the information contained herein. Anyone making use of the contents of this catalog assumes all Liability arising from such use, All suggestions for improvements to this publications will receive full considerations for future printings.

## Grade and Resistance

The Latest version or the ASTM A 653M standard recognizes 7 different structural quality steels with their chemical composition and mechanical properties. The sheet steels normally used to form **AMI** steel deck profiles correspond to ASTM A 653M SS Grade 230 They have a yield strength of 230 MPa (33 ksi) and a tensile strength of 310 MPa (45 ksi). Steel with higher yield strength or different ASTM designation can be used to meet specific needs.

## Thickness

CAN/CSA-S136-01standard for the design of cold-formed steel structural members indicated that the thickness supplied shall not be less than 95% of the design thickness used the generally accepted thickness of the zinc coating of a Z275(G90I) finish is approximately 0.040mm(0.0015 in).

## Concentrated Loads

The loads indicated in the tables are uniformly distributed anti must not be used as the equivalent of point loads or linear loads. Proper analysis should be done by an engineer to verify the effects of those concentrated loads on the deck or composite deck-slab.

For example:

- The wheel load of rolling equipment on the steel deck during roofing material Installation.
- The Large spacing between attachments of roofing materials to steel deck under uplift conditions.
- The footprint or a concentrated Load on a slab.

Concentrated loads shall be analyzed to ensure they do not overstress the steel deck or the composite deck- slab locally.



**AMI**



## **LINER SHEET**

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# AMI

The wide cover and low rib height of Liner sheet makes for near-flat usage suitable for a range of applications.

Its longitudinal flutes provide rigidity and strength along the length of the sheet while retaining full flexibility across the width.

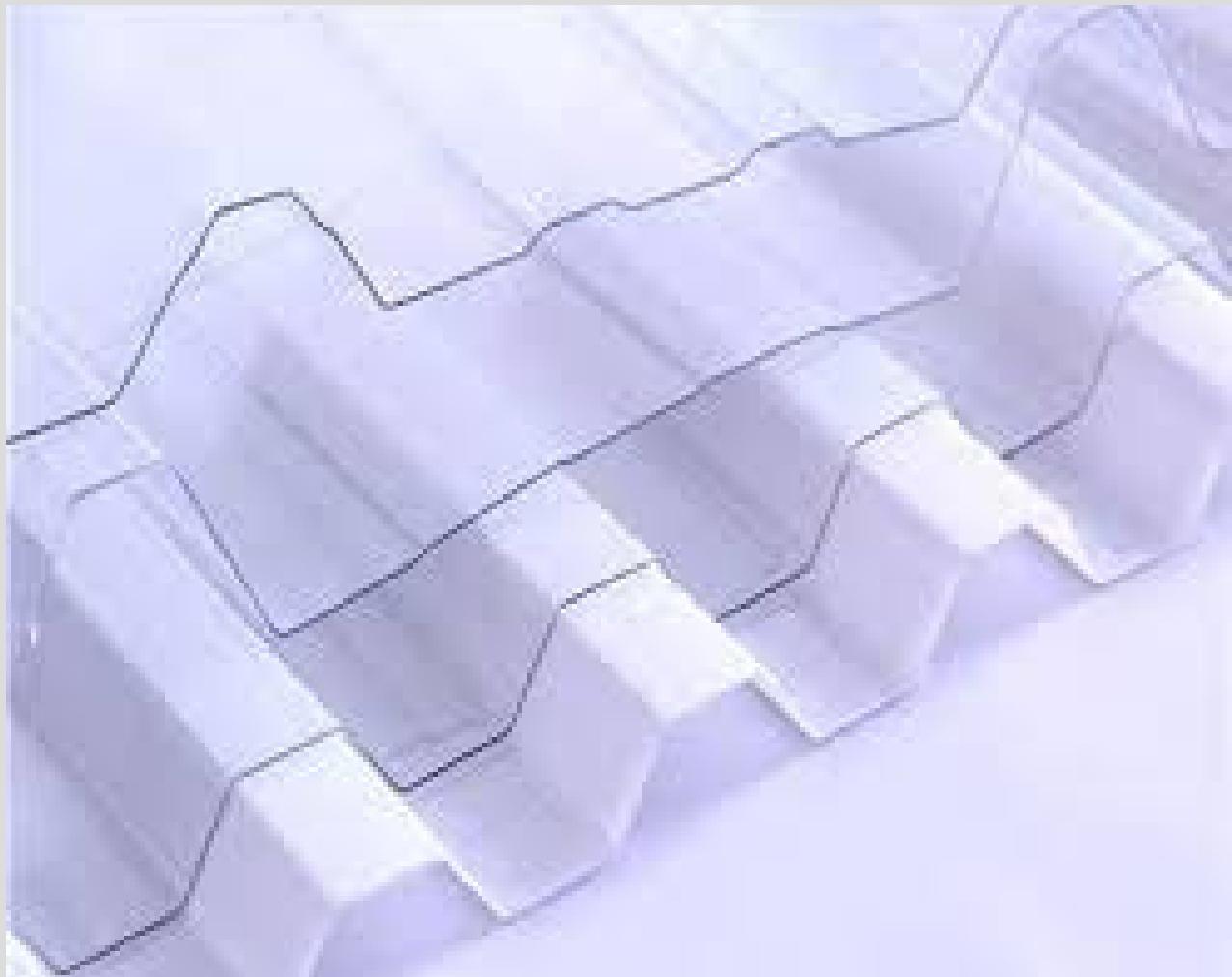


## Specifications

<b>Materials :</b>	Aluzinc , Pre-painted galvanized iron , Pre-painted Aluminium .
<b>Profile :</b>	Soft line ( Low rib).
<b>Thickness :</b>	Aluzinc , Pre-painted galvanized iron →( 0.30 mm – 0.70 mm ). Pre-painted Aluminium →(0.40 mm – 0.70 mm).
<b>Effective width :</b>	1220 mm.
<b>Length :</b>	According to customer request ( min & max limit applicable).
<b>Colors :</b>	Standard RAL colors.



**AMI**



## **SKYLIGHT**

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Tel: 44604777 - 44422840 Fax: 44604888. C.R.No: 134614. P.O.Box: 3655. DOHA - QATAR

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# AMI

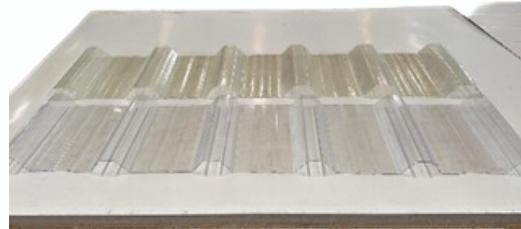
Skylight is an optimal appliance to enable daylight to the interior of the building.

This applies especially to long span roofs, where skylights are one of the way to effectively fulfil requirements of even daylight spread inside the Building.



Skylight panels are laid at the roof surface level. There is different type of skylights available according to light transmission capacity.

AMI provides Clear and faded types sky lights to fit profile of sandwich panels and corrugated sheets.



Main advantage of skylight is in commercial buildings such as warehouses or factories, where natural lighting can reduce the need for artificial lighting and lower energy costs.

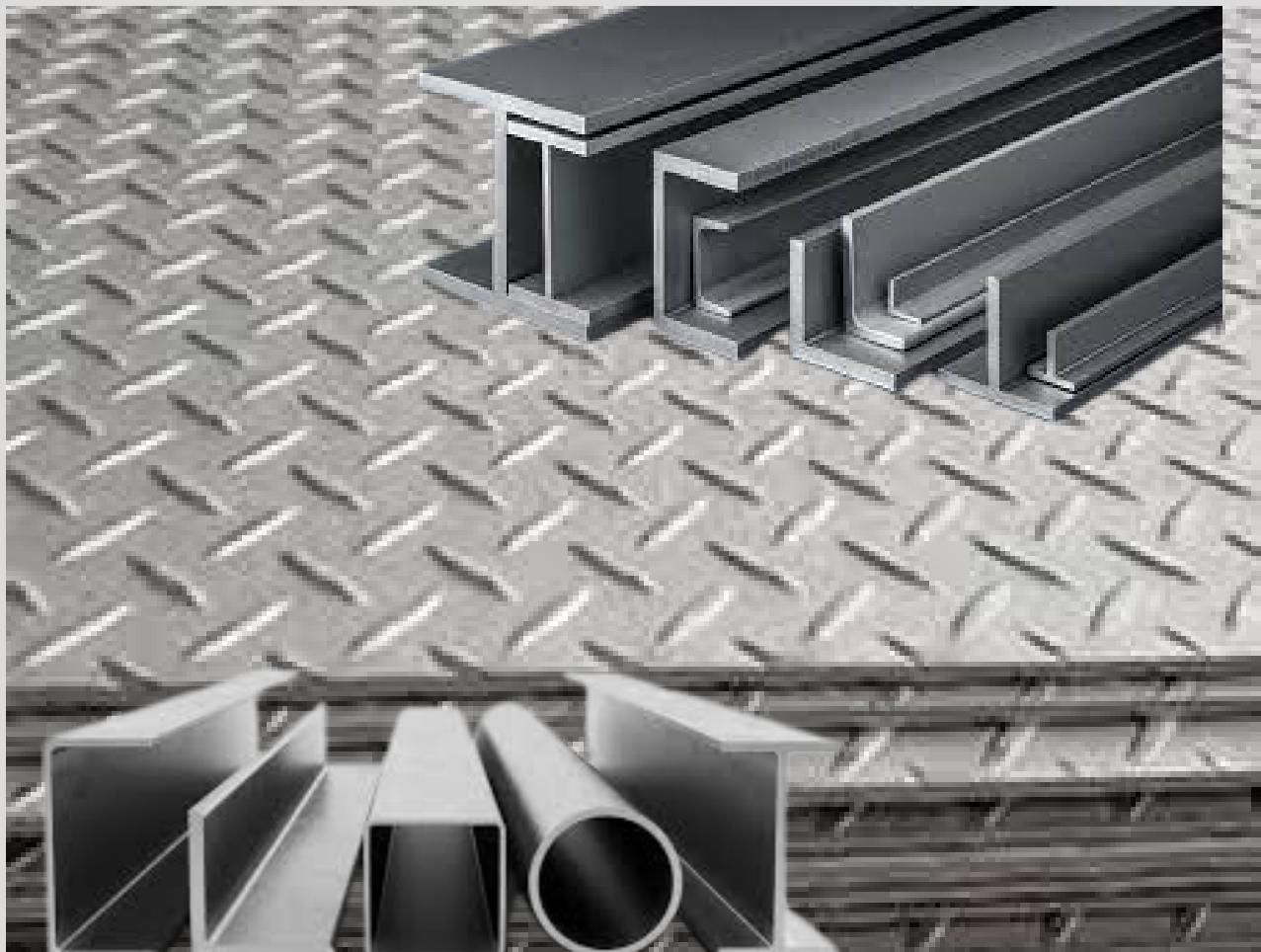


## Specifications

<b>Materials :</b>	Poly carbonate , GRP
<b>Profile :</b>	Almana roof profiles
<b>Thickness :</b>	1.00 mm – 2.00 mm
<b>Effective width :</b>	1000 mm
<b>Surface Type :</b>	Clear , Faded



**AMI**



## **STRUCTURAL STEEL**

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# AMI

Structural steel is a type of steel that is commonly used in the construction industry for structures such as buildings and other PEB structures.

Structural steel is available in various shapes and sizes, including I-beams, H-beams, angles, channels, and tees.

It has a high strength-to-weight ratio, which makes it suitable for use in structures that require high strength and stability.

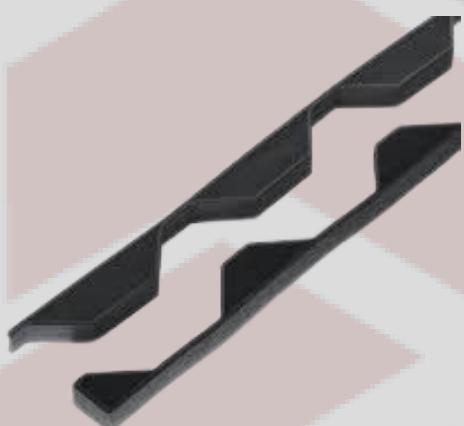


#### **AMI have wide range of stock for following structural steel components:**

- . Beams & Columns
- . Channels
- . Equal angles
- . Flat bars , Square bars , Round bars
- . Hot rolled steel plates
- . Hollow sections (Tubes , Pipes)
- . GI Gratings
- . Chequered plate



AMI



## FIXING ACCESSORIES



# AMI

## Screw

Screws have many uses when it comes to securing cladding work for building. This include sheet installation, Gutter installation, flashing installation, and more. They can also be used for attaching ridge caps and other accessories to your roof structure securely. The type of screw you choose will depend on the material you're working with as well as the environment they'll be exposed.



## Silicon sealant

Sealant is a substance used to block the passage of fluids through openings in materials, a type of mechanical seal.

When it comes to roof coatings, silicone sealant is the go-to material for many roofing contractors. Not only is this resilient material used for fixing roof leaks, but it's also strong enough to resist the toughest weather conditions.



## Butyl tape /sealant tape

Butyl tape is made of synthetic rubber, it is solvent free and uncured for lifetime. Excellent age resistant, it has a good adhesion on various substrates like concrete, masonry, timber, steel, PE, PVC etc.



## Foam closure /Filler block

fillers are designed to seal roofing and cladding profiles against dust, water and water vapour ingress.



## Typical Applications

- sealing eaves and ridge
- sealing hips and valleys
- sealing roof lights



# AMI

## Rivets

Specific types of blind rivets are commonly used for metal roof installations.

Pop Rivets are popular for roofing because they are inexpensive and allow for speedy installation. They create a solid fastening for light to medium duty applications.

**AMI also provide other fixing accessories Fisher plugs with screws  
Screw cap, saddle washers according to customer request.**

## Cord strap trolley

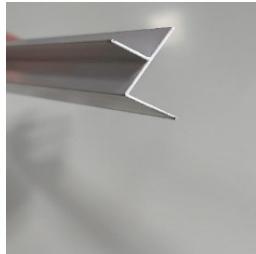
AMI have a range of stock for bundling & packaging purpose





**AMI**

## Other Products in Our Lineup



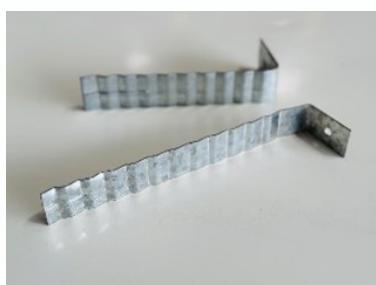
- ALUMINIUM F PROFILE (SHADOW GAP)



- HANEX



- LINTEL



- WALL TIE



- BRICK MESH



**AMI**



- ANGLE BEAD
- PLASTER STOP BEAD
- ARCHITRAVE BEAD

## **CEILING SUSPENSION**



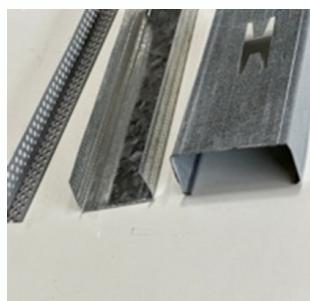
- WALL ANGLE
- MAIN CHANNEL
- FURING CHANNEL

## **TEE GRADE SUSPENSION**



- MAIN TEE
- CROSS TEE (SHORT, LONG)
- PPGI WALL ANGLE

## **DRY WALL PARTITION**



- STUD
- TRACK
- DRY WALL ANGLE BEAD
- J TRIM / L TRIM



**AMI**



**AL MANA METAL INDUSTRIES WLL**

**المانع للصناعات المعدنية ذ م م**

# GET IN TOUCH

## CONTACT US :



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