ASTINO®

The Symbol Of Quality

PRODUCT CATALOG

Our Long Trusted Companion

CSC STEEL

www.astino.com.my

ASTINO GROUP
OF COMPANIES

corporate profile

ASTINO BERHAD was incorporated in the year 2000 as a holding company of Astino Group of Companies which currently comprises:

ASTINO®

The Symbol Of Quality

The listing of **ASTINO BERHAD** on Bursa Malaysia Securities Berhad in the year 2003 has further strengthened the foundation of the Group and set the path to achieve further corporate growth and expansion.

Under the brand name of **ASTINO**, the company has established itself as one of the leading industrial enterprise in the field of building products with seven major manufacturing plants located at strategic locations in Peninsular Malaysia. The group has weathered the economy storm successfully and continues to record impressive profit achievement and capital growth. The average turnover growth of the group was about 15%. With expansion plans to be gradually implemented in coming years, the group's turnover and profitability are expected to further enhance.

The successes of **ASTINO BERHAD** were built on the company's commitment to strive for continuous improvement on quality product and excellence in services. The Group is innovative and focuses in its drives to be corporation of distinction for the sustained well-being of its customers, shareholders and employees.

since
1987

Astino Metal Industries Sdn. Bhd. (PG)

OUR QUALITY OBJECTIVES

- To Enhance The Quality Improvements Towards Professionalism In Reliable Roofing Solutions.
- To Recommend Total Quality Management Program For All Employees.
- To Enhance Delivery Management By Providing On Time Delivery To Customers.
- To Source For Quality Raw Materials From Reliable and Stable Suppliers In Supporting The Internal and External Demand.

our QUALITY POLICY

A Reliable roofing & other building materials provider, our commitment to strive for continuous improvement on quality products and excellence in services.

our CORPORATE VISION

A preferred supplier of roofing and other building material products.

our CORPORATE MISSION

To supply our customers with TOP QUALITY and innovative products at reasonable cost, in line with the nation's aspiration of zero inflation and satisfying customer requirements through personalized, efficient and reliable service, and establishing a mutually rewarding relationship.

TABLE OF CONTENTS

CSC STEEL

CSC Malaysia is a leading steel coil manufacturer in Malaysia and was successfully listed on the main market of Bursa Malaysia in Dec 2004.

The main products of **CSC Malaysia** includes pickled and oiled steel coils (PO), cold rolled steel coils (CR), galvanized steel coils (GI) and pre-painted steel coils (PPGI). CSCM is actively shaping its brands, namely realzinc™ and realcolor® .

realZINC™ Enhance realZINC™

1. REALZINC™ & REALZINC™ ENHANCE

Minimum Zinc Coating 120G/M² - 350G/M²	
COIL WIDTH	**THICKNESS (BMT)**
914 MM – 1250 MM	0.176 MM – 2.00 MM
REALZINC™ Typical Properties For Salt Spray Test 100 Hours < 5% white rust	
REALZINC™ ENHANCE Typical Properties For Salt Spray Test 250 Hours < 5% white rust	
Warranty* up to 50 years	

Cahaya realcolor®

2. REALCOLOR® CAHAYA

Minimum Zinc Coating 80G/M²	
COIL WIDTH	**THICKNESS (BMT)**
914 MM – 1250 MM	0.176 MM – 0.30 MM
Warranty* against perforation by corrosion for up to 5 years	

CahayaPlus realcolor®

3. REALCOLOR® CAHAYA PLUS

Minimum Zinc Coating 120G/M²	
COIL WIDTH	**THICKNESS (BMT)**
914 MM – 1250 MM	0.176 MM – 0.33 MM
Warranty* against perforation by corrosion for up to 10 years	

**Terms & Conditions Apply*

Primero realcolor®

4. REALCOLOR® PRIMERO

Minimum Zinc Coating 180G/M²	
COIL WIDTH	THICKNESS (BMT)
914 MM – 1250 MM	0.35 MM – 1.20 MM
Warranty* against perforation by corrosion for up to 20 years	
Warranty* against color fading up to 10 years	

Thermoshield realcolor®

5. REALCOLOR® THERMOSHIELD

Minimum Zinc Coating 275G/M²	
COIL WIDTH	THICKNESS (BMT)
914 MM – 1250 MM	0.35 MM – 1.20 MM
Warranty against perforation by corrosion for up to 30 years	
Warranty* against color fading up to 12 years	
Warranty* against dirt staining for up to 5 years	

Supreme realcolor®

6. REALCOLOR® SUPREME (PVDF)

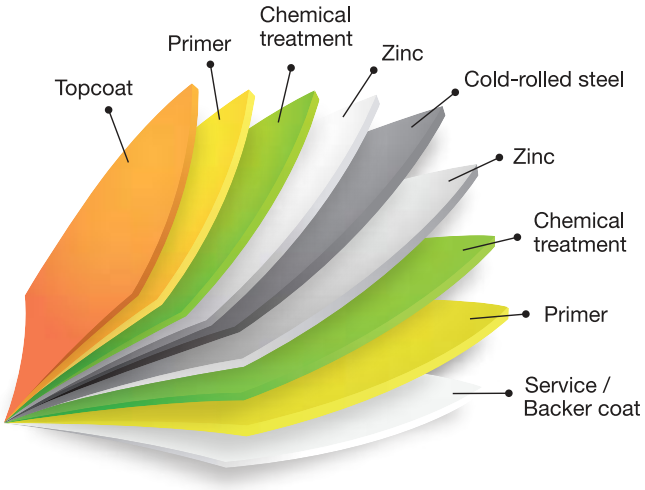
Minimum Zinc Coating 275G/M²	
COIL WIDTH	THICKNESS (BMT)
914 MM – 1250 MM	0.42 MM – 1.20 MM
Warranty against perforation by corrosion for up to 30 years	
Warranty* against color fading up to 15 years	

**Terms & Conditions Apply*

END USAGES

It is generally used in exterior architectural structures such as roofing, wall cladding, fencing, panels and advertising boards.

realcolor®



SECTIONAL VIEW OF COATED STEEL

Pre-painted galvanised steel (PPGI) is a type of colour-coated steel that is generally used in exterior architectural structures and building materials such as roofing, wall cladding, fencing, wall panels and advertising boards.

TYPICAL PROPERTIES

Test	Result	Method/Remark
T-Bend	5T max	
Pencil Hardness	F-2H	Mitsubishi-uni
Cross-Hatch	100/100	
Solvent Resistance	≥ 100DR	For MEK DR
Erichsen Cupping Test	30mm for SQ, 50mm for CQ	
Reverse Impact	10 Joules	No loss of adhesion
Salt Spray Test	1000 hrs	MS 133 : Part H8, Part E6, Part H2 Undercut at scribes lines/ loss of adhesion/blistering, 2-S3/ corrosion at base metal
QUV-A	1000 hrs	Gloss retention > 80% Average colour change not more than 2 dE units (CIELab)

SPECIFICATIONS

Standard	Steel Grade
MS 2383	01, 250, 280, 320, 350, 550
JIS G3312	CGCH, CGCC, CGC340, CGC400, CGC440, CGC570

CERTIFICATES


CERTIFICATE


IQNet

CERTIFICATE


SIJIL BARANGAN TERSENARAI

Product Listing Certificate


CIDB

PERAKUAN PEMATUHAN STANDARD

(BAHAN BINAAN)


SIJIL PEPASANGAN KESELAMATAN KEBAKARAN

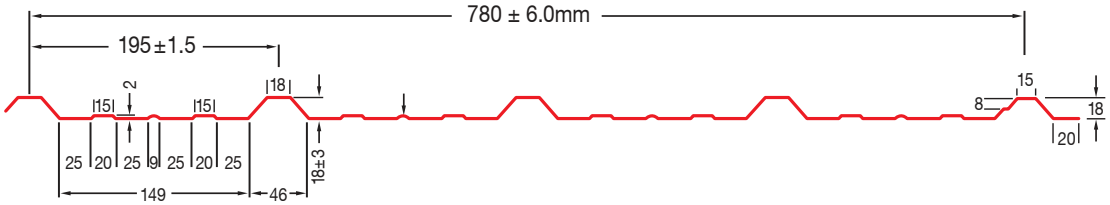

LESEN PENSIJILAN BARANGAN

Product Certification Licence

Astino® Bendec

An Attractive Solution to Wall Cladding

Astino® Bendec is the most popular profile used for hoarding, fencing, cabin and temporary roofing or walling for building. It is cost effective with effective coverage area of 780mm and 18mm rib height.



PRODUCT SPECIFICATIONS

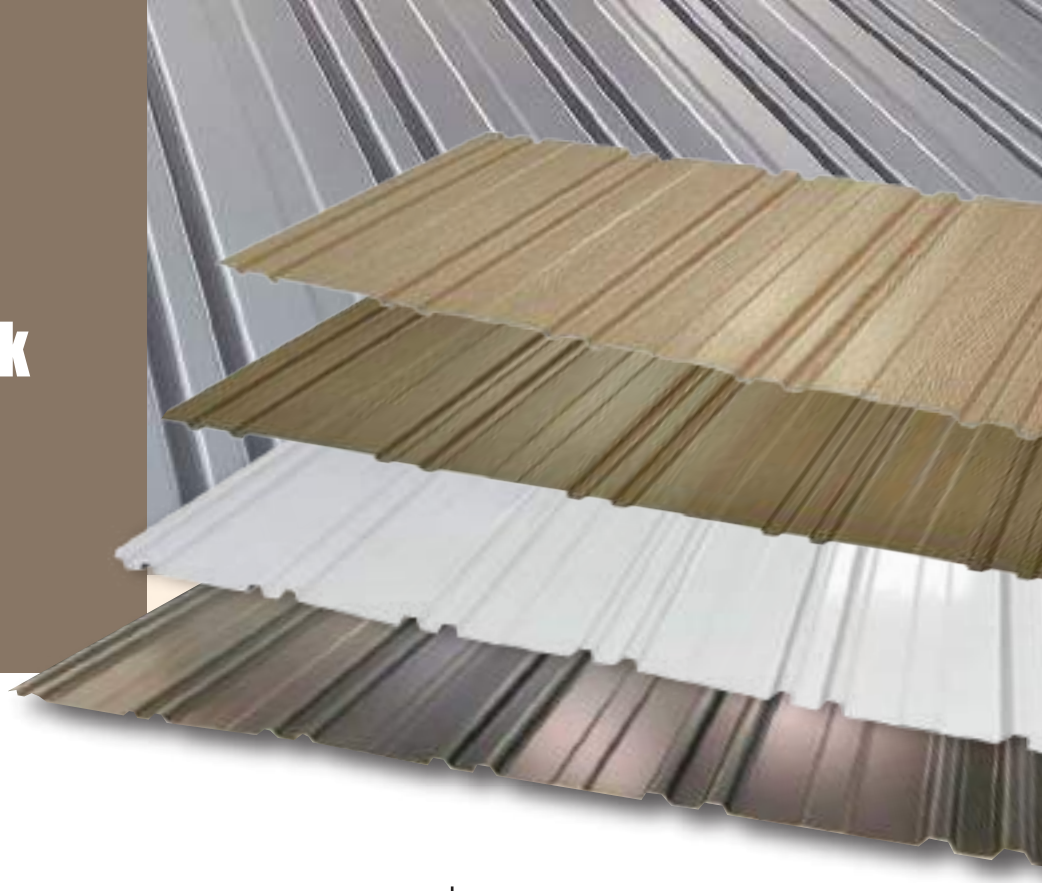
ITEM	SPECIFICATION
Effective Width	780mm
Rib Height	18mm
Recommended Minimum Roof Pitch	5°
Tolerance	Length ±5mm, Width ±5mm, Thickness ±0.03mm

THICKNESS AVAILABLE

Thickness BMT	Thickness TCT	Weight	
		(kg/m)	(kg/m²)
0.18	0.22	1.51	1.98
0.25	0.30	1.90	2.49
0.30	0.35	2.32	3.02

Bendec

Astino® Wall Deck



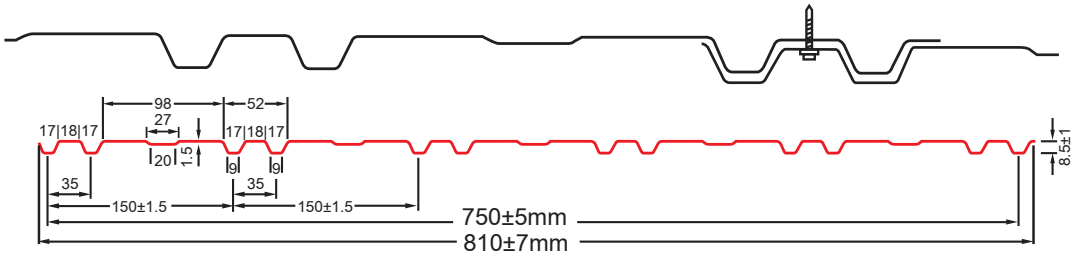
Wall Deck is the elegant designed profile with attractive appearance for the interior and exterior used as ceiling, partition or wall cladding. It can be installed immediately by screwing in vertically or horizontally to allow great and attractive appearance. Its unique profile is ideal for wide range of application such as hotels, petrol kiosks, showrooms, residential building, business premises, agricultural building, public building, school and hospital.

Available Length

Custom cut length available according to order.

Product Tolenrances

Length: ±5mm
Width : ±5mm
Thickness: ±0.03mm



PRODUCT SPECIFICATIONS

Physical Properties

Base Metal Thickness (mm) (BMT)	Total Coated Thickness (mm) (TCT)	Total Width (mm)	Effective Width (mm)	Maximum Support Spacing (mm)
0.26	0.30	810	750	914
0.30	0.35	810	750	1200
0.35	0.40	810	750	1200
0.40	0.47	810	750	1200

Wood Grain

0.30	0.35	810	750	1200

Wall Deck

Astino® Ceiling Panel

- **DECORATIVE DESIGN**
  AST ceiling panel has a shining and attractive appearance thus it is fit for office and public place decoration.

- **ECONOMICAL & CUSTOM MADE**
  AST ceiling panel can be custom made to fit to any size or structure as customer preferred.

- **DURABILITY**
  AST ceiling panel is made of finest pre-painted galvanized steel sheet which guarantees its durability in all weather, including indoor and outdoor.

- **FAST & EASY INSTALLATION**
  It can be installed immediately by screwing and the screws are hidden from sight, maintaining a great appearance of the ceiling or partition.

- **VERSATILITY**
  It can be used as ceiling panel, partition or wall fronts and can be placed vertically or horizontally. It can be even bended to the half circle or wave shape to make the ceiling more dimensional.

- **WIDE RANGE OF APPLICATION**
  It is widely used in hotels, petrol kiosks, showrooms, restaurants, residential building, business premises, agricultural building, public building, school and hospital especially for decoration purposes.

PRODUCT SPECIFICATIONS

Physical Properties

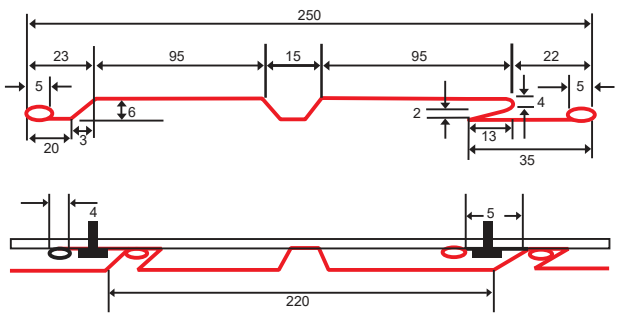
Base Metal Thickness (mm) (BMT)	Total Coated Thickness (mm) (TCT)	Total Width (mm)	Effective Width (mm)	Maximum Support Spacing (mm)
0.26	0.30	250	220	914
0.30	0.35	250	220	1200
0.35	0.40	250	220	1200
0.40	0.47	250	220	1200

WOOD GRAIN

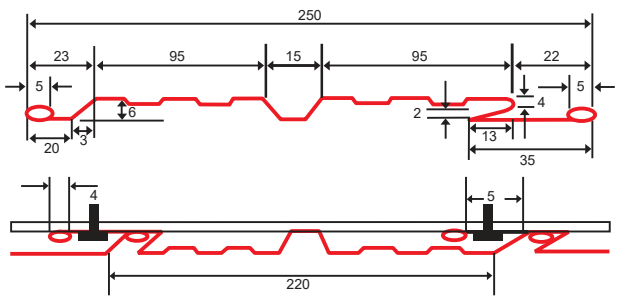
0.30	0.35	250	200	1200

Ceiling Panel

Ceiling Panel Without Step

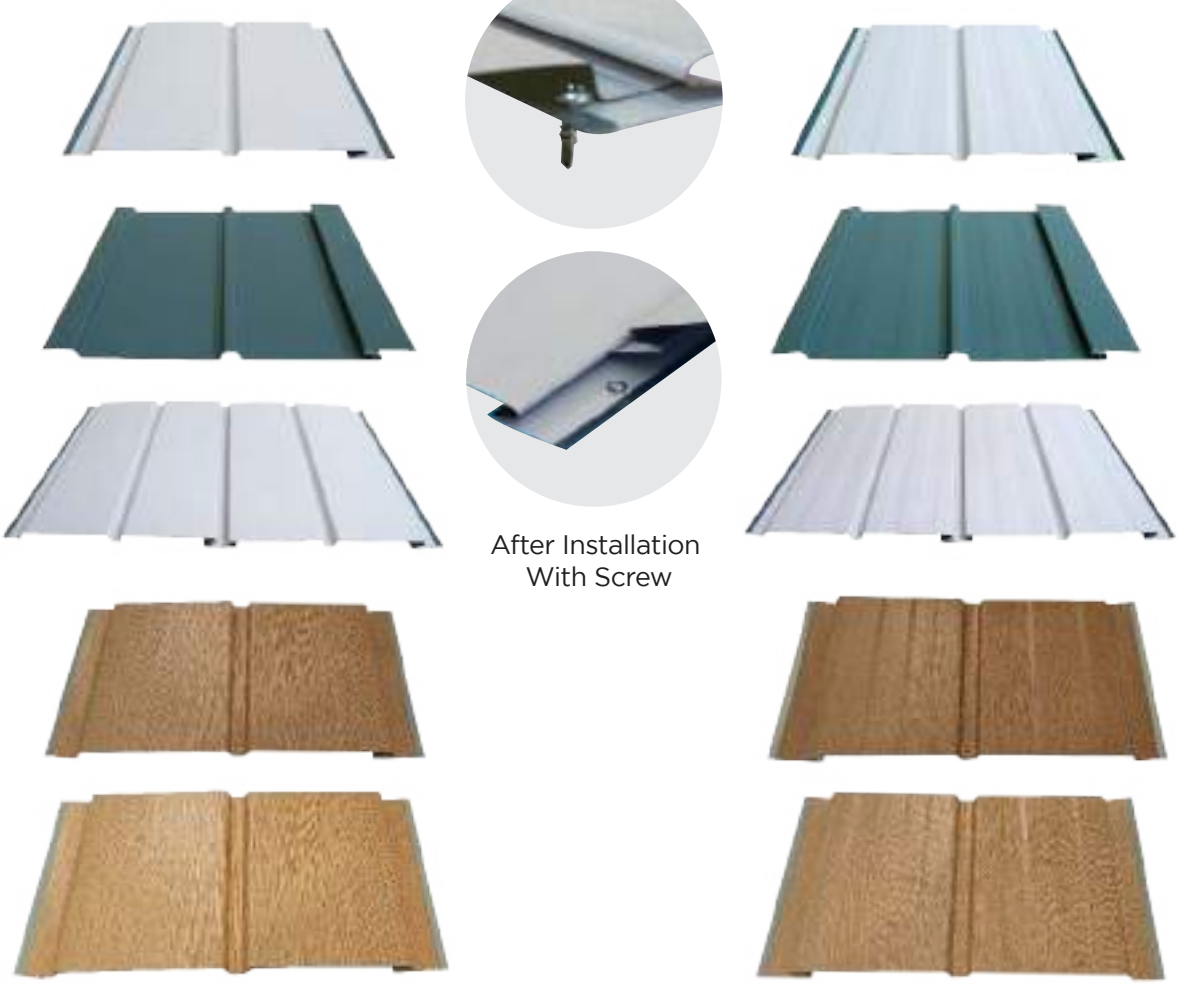


Ceiling Panel With Step

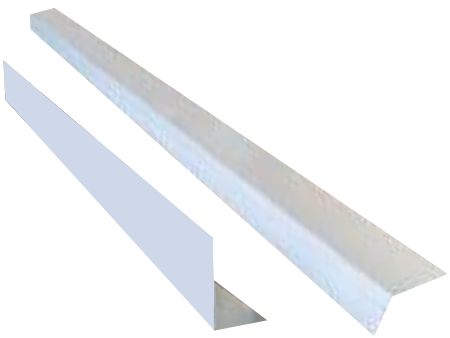


advance

After Installation
With Screw



ACCESSORIES



Ceiling Panel

FOR SIGNAGE

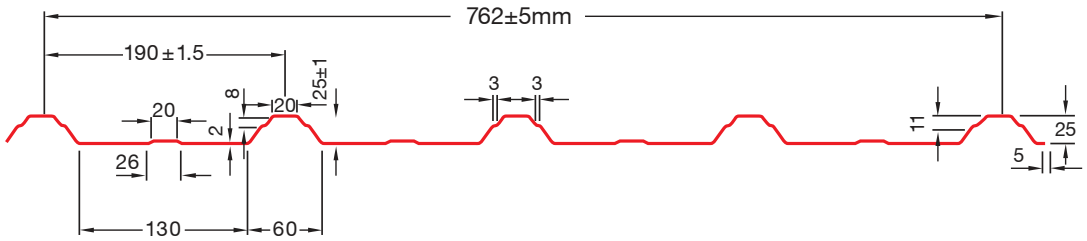
FOR CEILING

Ceiling Panel

Astino® New Sunroof

Designed and Engineered to the Highest Standard

Astino® New Sunroof is the most popular profile used for roofing and walling. It is widely used for industrial and commercial buildings such as housing, high rise building, factories, warehouses, school, complex and etc. This profile is durable and cost effective.



PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	762mm
Rib Height	25mm
Recommended Minimum Roof Pitch	5°
Tolerance	Length ±5mm, Width ±5mm, Thickness ±0.03mm

THICKNESS AVAILABLE

Thickness BMT	Thickness TCT	Weight	
		(kg/m)	(kg/m²)
0.18	0.22	1.52	2.00
0.25	0.30	1.91	2.51
0.30	0.35	2.32	3.04
0.35	0.40	2.70	3.53
0.40	0.47	3.18	4.18
0.48	0.53	3.79	4.97

New Sunroof Series

WIND CAPACITY LOAD SPAN TABLE

Thickness BMT (mm)	Thickness TCT (mm)	Uniformly Distributed Load (kN/m²) Span L (m)					
		0.6	0.9	1.2	1.5	1.8	2.1
0.30	0.35	9.09	2.68	1.12	0.56	0.31	0.19
0.35	0.40	10.67	3.14	1.31	0.66	0.37	0.22
0.40	0.47	12.94	3.81	1.59	0.80	0.45	0.27
0.48	0.53	15.54	4.58	1.91	0.96	0.54	0.33

MAXIMUM RECOMMENDED SUPPORT SPACING

Thickness BMT (mm)	Thickness TCT (mm)	Roof		Wall		Overhang (mm)
		Internal Span (mm)	End Span (mm)	Internal Span (mm)	End Span (mm)	
0.30	0.35	1500	1300	1750	1550	100
0.35	0.40	1600	1400	1850	1700	100
0.40	0.47	1650	1450	1900	1750	150
0.48	0.53	1850	1600	2150	1900	250

RECOMMENDED MAXIMUM ROOF LENGTH (M)

Rainfall (mm/h)	Slope in Degree				
	3°	5°	7°	10°	15°
150	50	60	80	101	138
200	39	50	60	76	102
250	31	40	48	61	82
300	26	30	40	49	67
400	8	10	11	13	16

DETAILS TO SPEC IN BQ

[Thickness], "[Brand]", [Profile], [Material]

Example:

0.35mm TCT "Astino" New Sunroof Long Run in Cahaya Z120 metal roofing sheet with approved colors; fixed to Astino GI Purlin (measured seperately) including all fixing accessories, capping, flashing and other fittings; all in accordance with Architect's / Engineers drawing, manufacturer's instruction and specification. (Up to 5 years warranty on perforation by corrosion).

** Term & Condition apply*

Material	Coating	Thickness BMT	Warranty (Up to Years)			
			Perforation	Color Fade	Dirt Staining	Peel/Flake
CSC Realcolor Cahaya	Z080	≤ 0.300	5			
CSC Realcolor Cahaya Plus	Z120	≤ 0.349	10	5		
CSC Realcolor Primero	Z180	≥ 0.350	20	10		
CSC Realcolor Thermoshield	Z275	≥ 0.350	30	12	5	
CSC Realcolor Supreme	Z275	≥ 0.420	30	15		
BLUESCOPE Prima Maju	AZ100	≥ 0.350	15	5		5
BLUESCOPE Clean Colorbond Series	AZ150/AZ200	≥ 0.350	25	15	10	
BLUESCOPE Zincalume	Z150	≥ 0.350	25			

Astino® New Sunroof 3 in 1

Designed and Engineered to the Highest Standard

Astino® New Sunroof 3 in 1 is a combination of metal roofing, XLPE (Cross-Linked polyethylene) foam and aluminium foil. It is moulded into single layer. Astino® New Sunroof 3 in 1 is a replacement product for conventional type of roofing. It shortens the installation lead time and provides good heat-resistant.

New Sunroof Series

PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	762mm
Rib Height	25mm
Recommended Minimum Roof Pitch	5°
New Sunroof 3 in 1	New Sunroof + XLPE Foam + Aluminium Foil
Tolerance	Length ±5mm, Width ±5mm, Thickness ±0.03mm

THICKNESS AVAILABLE

Thickness BMT	Thickness TCT	Weight	
		(kg/m)	(kg/m²)
0.25	0.30	2.01	2.64
0.30	0.35	2.42	3.17
0.35	0.40	2.80	3.67
0.40	0.47	3.28	4.31
0.48	0.53	3.89	5.10

WIND CAPACITY LOAD SPAN TABLE

Thickness BMT (mm)	Thickness TCT (mm)	Uniformly Distributed Load (kN/m²) Span L (m)					
		0.6	0.9	1.2	1.5	1.8	2.1
0.30	0.35	9.09	2.68	1.12	0.56	0.31	0.19
0.35	0.40	10.67	3.14	1.31	0.66	0.37	0.22
0.40	0.47	12.94	3.81	1.59	0.80	0.45	0.27
0.48	0.53	15.54	4.58	1.91	0.96	0.54	0.33

MAXIMUM RECOMMENDED SUPPORT SPACING

Thickness BMT (mm)	Thickness TCT (mm)	Roof		Wall		Overhang (mm)
		Internal Span (mm)	End Span (mm)	Internal Span (mm)	End Span (mm)	
0.30	0.35	1500	1300	1750	1550	100
0.35	0.40	1600	1400	1850	1700	100
0.40	0.47	1650	1450	1900	1750	150
0.48	0.53	1850	1600	2150	1900	250

DETAILS TO SPEC IN BQ

[Thickness], "[Brand]", [Profile], [Material]

Example:

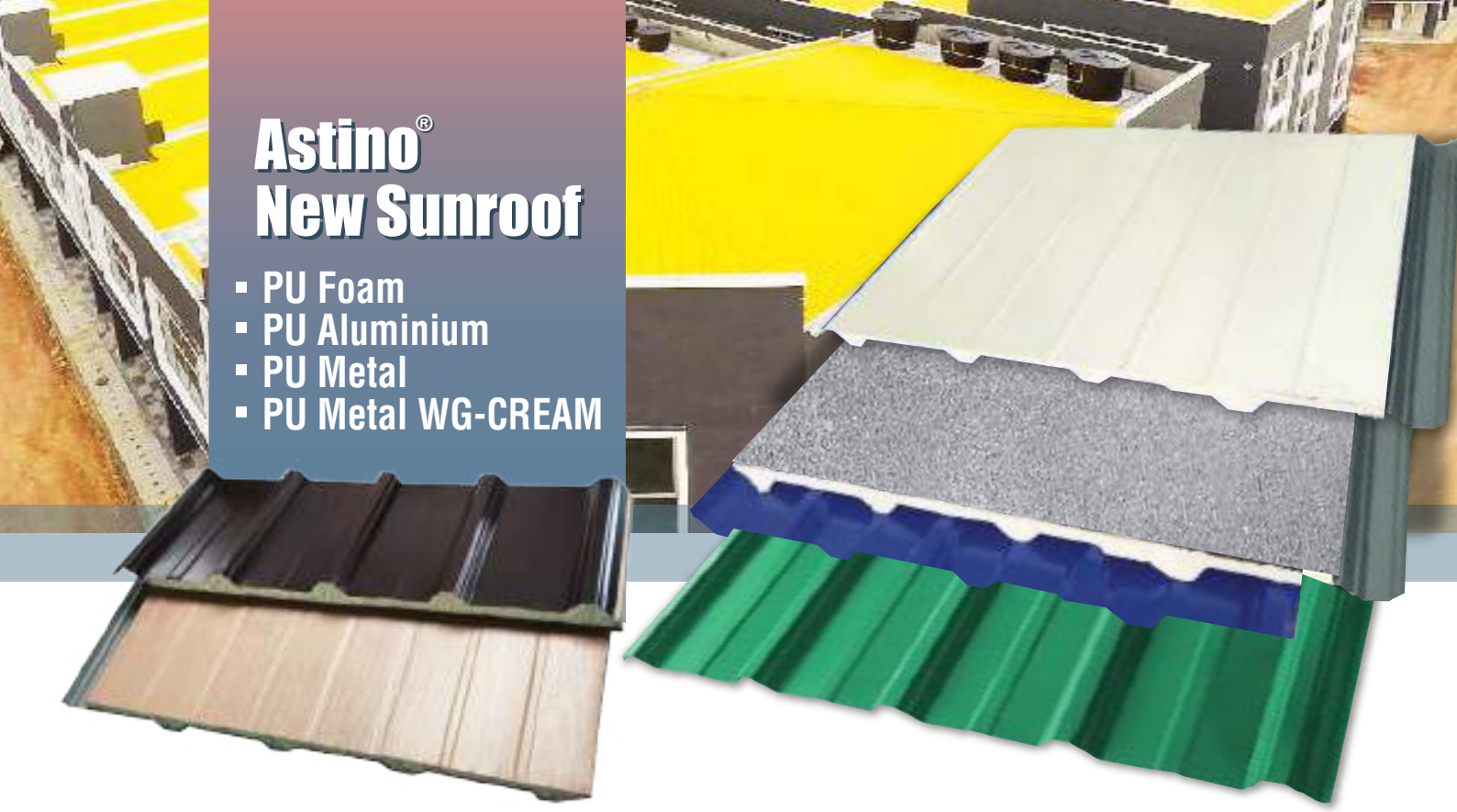
0.47mm TCT "Astino" New Sunroof 3in1 in Realcolor Primero Z180 metal roofing sheet with approved colors; fixed to Astino GI Purlin (measured seperately) including all fixing accessories, capping, flashing and other fittings; all in accordance with Architect's / Engineers drawing, manufacturer's instruction and specification. (Up to 20 years warranty on perforation by corrosion).

** Term & Condition apply*

Material	Coating	Thickness BMT	Warranty (Up to Years)			
			Perforation	Color Fade	Dirt Staining	Peel/Flake
CSC Realcolor Cahaya	Z080	≤ 0.300	5			
CSC Realcolor Cahaya Plus	Z120	≤ 0.349	10	5		
CSC Realcolor Primero	Z180	≥ 0.350	20	10		
CSC Realcolor Thermoshield	Z275	≥ 0.350	30	12	5	
CSC Realcolor Supreme	Z275	≥ 0.420	30	15		
BLUESCOPE Prima Maju	AZ100	≥ 0.350	15	5		5
BLUESCOPE Clean Colorbond Series	AZ150/AZ200	≥ 0.350	25	15	10	
BLUESCOPE Zincalume	Z150	≥ 0.350	25			

Astino® New Sunroof

- PU Foam
- PU Aluminium
- PU Metal
- PU Metal WG-CREAM



New Sunroof Series

Astino® New Sunroof PU Foam / PU Aluminium / PU Metal / PU Metal WG-CREAM is a complete insulated roofing panel with outstanding thermal efficiency. It is factory manufactured by bonding CFC-Free Rigid Polyurethane (PU) Foam between exterior profiled metal roofing sheet and interior PVC lamination / Aluminium Foil / Flat Profiled Metal.

Astino® New Sunroof PU Foam / PU Aluminium / PU Metal / PU Metal WG-CREAM is a substitute product for conventional type of roofing. It provides excellent heat resistance and good sound absorption. It helps to reduce your building temperature with great savings on electricity. It reduces installation lead time, expenditures on labor cost, transportation cost and storage cost.

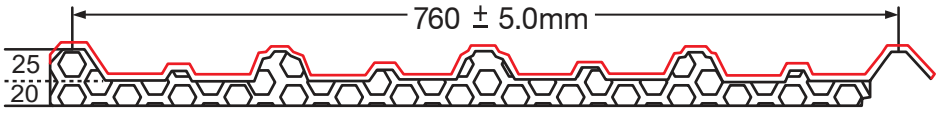
Astino® New Sunroof PU Foam / PU Aluminium / PU Metal / PU Metal WG-CREAM is closed-cell. Closed cell foam is good in prevent water leakage especially due to the nail fatique. Astino® New Sunroof PU Foam / PU Aluminium / PU Metal / PU Metal WG-CREAM has very low water absorption (<0.20%).

PRODUCT SPECIFICATIONS

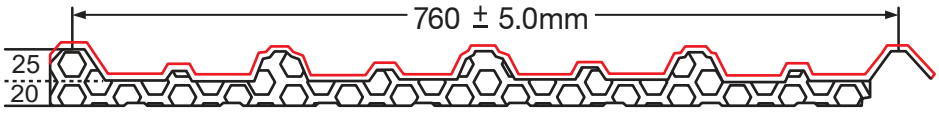
ITEM	SPECIFICATION
Effective Width	762mm
Rib Height	25mm
Recommended Minimum Roof Pitch	5°
New Sunroof PU Foam	New Sunroof + Polyurethane Foam + PVC Sheet
New Sunroof PU Aluminium	New Sunroof + Polyurethane Foam + Aluminium Foil
New Sunroof PU Metal	New Sunroof + Polyurethane Foam + Flat Profiled Metal
PU Foam Thickness	20mm / 25mm / 30mm
PU Foam Inner Layer Finishing	Waterproof PVC Paper 0.15mm
PU Aluminium Inner Layer Finishing	Aluminium Foil 0.08mm
Insulation Density	35 - 40 Kg/m^3
Insulation Grade	Closed- Cell, CFC-Free
* **Thermal Conductivity (K-value)**	0.028 W/mK
* **Thermal Resistance (R-value)**	0.98 m^2K/W
* **Thermal Transmittance (U-value)**	1.021 W/m^2K
Tolerance	Length ±5mm, Width ±5mm, Thickness ±0.03mm PU Thickness ±3mm

**Values tested according to MS ISO 8302:2003 by SIRIM*

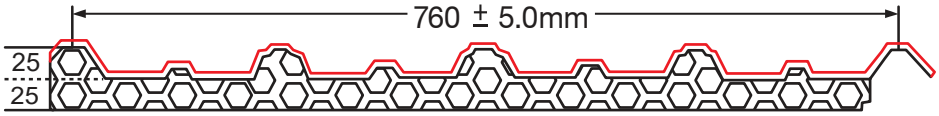
SPECIFICATION DRAWING



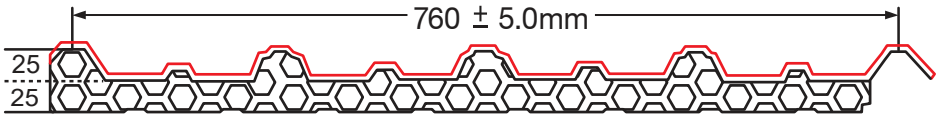
Astino® New Sunroof PU Foam / PU Aluminium 20mm



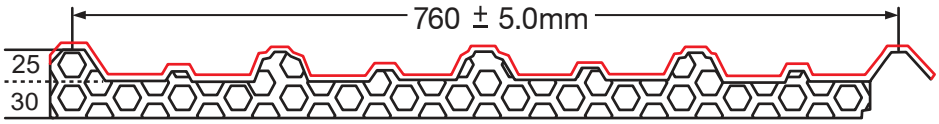
Astino® New Sunroof PU Metal 20mm



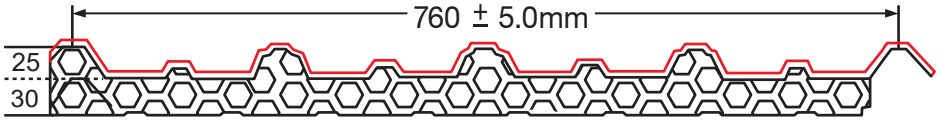
Astino® New Sunroof PU Foam / PU Aluminium 25mm



Astino® New Sunroof PU Metal 25mm



Astino® New Sunroof PU Foam / PU Aluminium 30mm



Astino® New Sunroof PU Metal 30mm

INSTALLATION

Astino® New Sunroof PU Foam / Aluminium / Metal Installation

WIND CAPACITY LOAD SPAN TABLE

Thickness BMT (mm)	Thickness TCT (mm)	Uniformly Distributed Load (kN/m^2) Span L (m)					
		0.6	0.9	1.2	1.5	1.8	2.1
0.30	0.35	9.09	2.68	1.12	0.56	0.31	0.19
0.35	0.40	10.67	3.14	1.31	0.66	0.37	0.22
0.40	0.47	12.94	3.81	1.59	0.80	0.45	0.27
0.48	0.53	15.54	4.58	1.91	0.96	0.54	0.33

MAXIMUM RECOMMENDED SUPPORT SPACING

Thickness BMT (mm)	Thickness TCT (mm)	Roof		Wall		Overhang (mm)
		Internal Span (mm)	End Span (mm)	Internal Span (mm)	End Span (mm)	
0.30	0.35	1500	1300	1750	1550	100
0.35	0.40	1600	1400	1850	1700	100
0.40	0.47	1650	1450	1900	1750	150
0.48	0.53	1850	1600	2150	1900	250

DETAILS TO SPEC IN BQ

[Thickness], "[Brand]", [Profile], [Material]

Example:

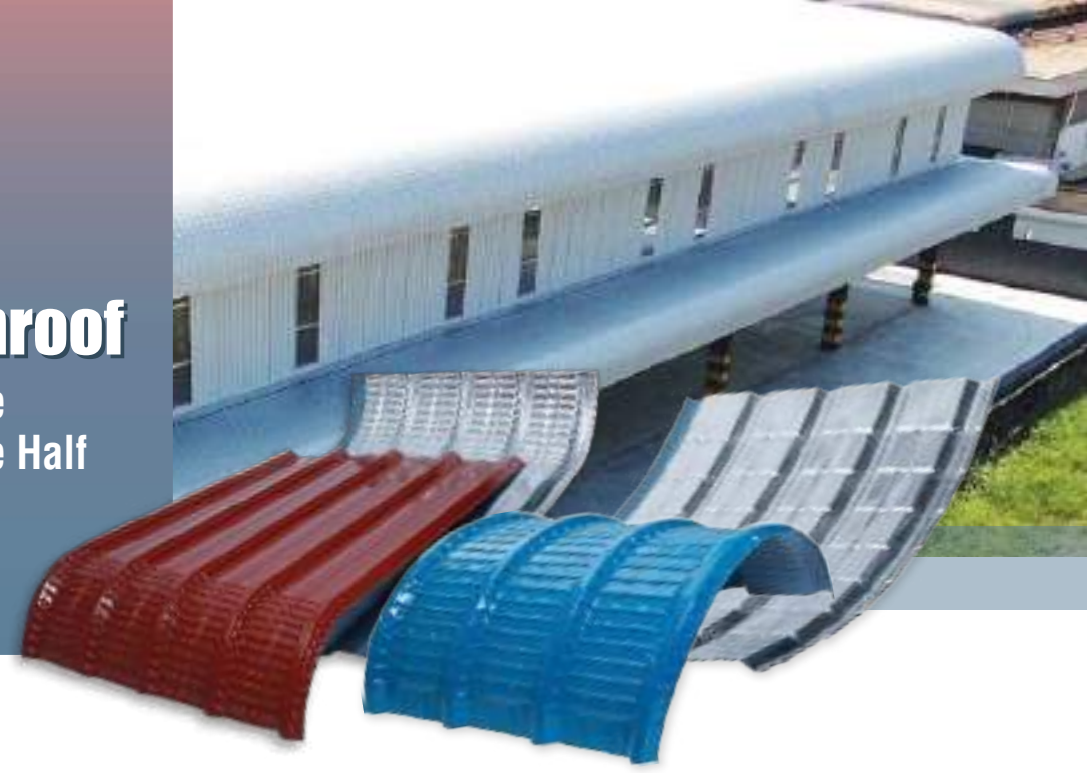
0.47mm TCT "Astino" New Sunroof PU Foam / PU Aluminium / PU Metal in Realcolor Primero Z180 metal roofing sheet with approved colors; fixed to Astino GI Purlin (measured seperately) including all fixing accessories, capping, flashing and other fittings; all in accordance with Architect's / Engineers drawing, manufacturer's instruction and specification. (Up to 20 years warranty on perforation by corrosion).

** Term & Condition apply*

Material	Coating	Thickness BMT	Warranty (Up to Years)			
			Perforation	Color Fade	Dirt Staining	Peel/Flake
CSC Realcolor Cahaya	Z080	≤ 0.300	5			
CSC Realcolor Cahaya Plus	Z120	≤ 0.349	10	5		
CSC Realcolor Primero	Z180	≥ 0.350	20	10		
CSC Realcolor Thermoshield	Z275	≥ 0.350	30	12	5	
CSC Realcolor Supreme	Z275	≥ 0.420	30	15		
BLUESCOPE Prima Maju	AZ100	≥ 0.350	15	5		5
BLUESCOPE Clean Colorbond Series	AZ150/AZ200	≥ 0.350	25	15	10	
BLUESCOPE Zincalume	Z150	≥ 0.350	25			

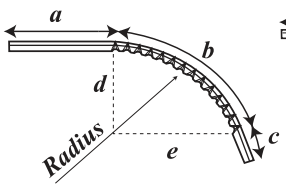
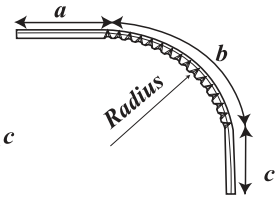
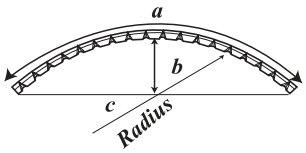
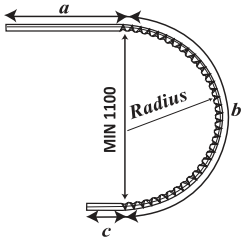
Astino® New Sunroof

- Crimp Curve
- Crimp Curve Half Round



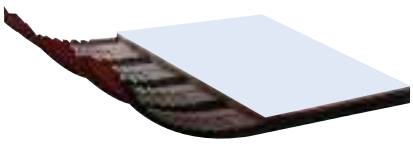
Astino ® New Sunroof Crimp Curve / Crimp Curve Half Round are usually used for bus stand, taxi stand, car porch, walkway, building canopy and jack roof. We have Sunroof crimp Curve, Sunroof crimp curve 3 in 1 and Sunroof crimp curve PU Foam.

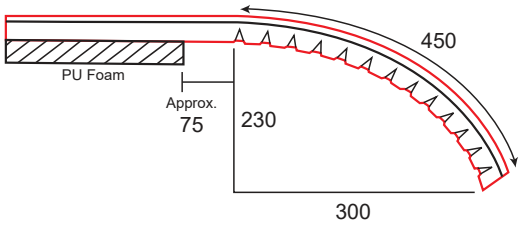
TYPES OF CRIMP CURVE & HALF ROUND

CRIMP CURVED A	CRIMP CURVED B	CRIMP CURVED HALF ROUND A	CRIMP CURVED HALF ROUND B
			

ASTINO® NEW SUNROOF CRIMP CURVE PU FOAM SPECIFICATION DRAWING

ASTINO® NEW SUNROOF PU FOAM CRIMP CURVE





** All units are measured in mm*

PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	762mm
Rib Height	25mm
Recommended Minimum Roof Pitch	5°
Minimum Radius	300mm
Tolerance	Length ±5mm, Width ±5mm, Thickness ±0.03mm

THICKNESS AVAILABLE

Thickness BMT	Thickness TCT	Weight	
		(kg/m)	(kg/m²)
0.25	0.30	1.90	2.50
0.30	0.35	2.32	3.06
0.35	0.40	2.70	3.53
0.40	0.47	3.18	4.18
0.48	0.53	3.77	4.95

WIND CAPACITY LOAD SPAN TABLE

Thickness BMT (mm)	Thickness TCT (mm)	Uniformly Distributed Load (kN/m²) Span L (m)					
		0.6	0.9	1.2	1.5	1.8	2.1
0.30	0.35	9.09	2.68	1.12	0.56	0.31	0.19
0.35	0.40	10.67	3.14	1.31	0.66	0.37	0.22
0.40	0.47	12.94	3.81	1.59	0.80	0.45	0.27
0.48	0.53	15.54	4.58	1.91	0.96	0.54	0.33

MAXIMUM RECOMMENDED SUPPORT SPACING

Thickness BMT (mm)	Thickness TCT (mm)	Roof		Wall		Overhang (mm)
		Internal Span (mm)	End Span (mm)	Internal Span (mm)	End Span (mm)	
0.30	0.35	1500	1300	1750	1550	100
0.35	0.40	1600	1400	1850	1700	100
0.40	0.47	1650	1450	1900	1750	150
0.48	0.53	1850	1600	2150	1900	250

DETAILS TO SPEC IN BQ

[Thickness], "[Brand]", [Profile], [Material]

Example:

0.47mm TCT "Astino" New Sunroof Crimp Curve in Realcolor Primero Z180 metal roofing sheet with approved colors; fixed to Astino GI Purlin (measured seperately) including all fixing accessories, capping, flashing and other fittings; all in accordance with Architect's / Engineers drawing, manufacturer's instruction and specification. (Up to 20 years warranty on perforation by corrosion).

** Term & Condition apply*

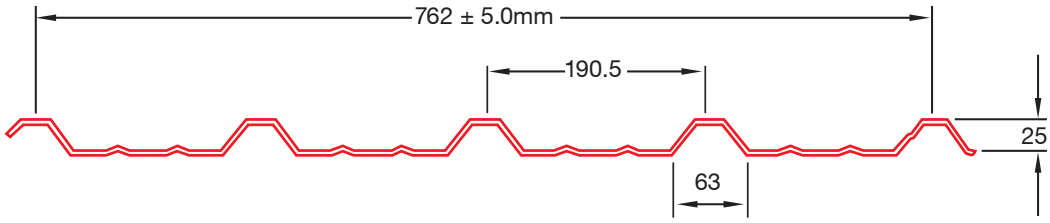
Material	Coating	Thickness BMT	Warranty (Up to Years)			
			Perforation	Color Fade	Dirt Staining	Peel/Flake
CSC Realcolor Cahaya	Z080	≤ 0.300	5			
CSC Realcolor Cahaya Plus	Z120	≤ 0.349	10	5		
CSC Realcolor Primero	Z180	≥ 0.350	20	10		
CSC Realcolor Thermoshield	Z275	≥ 0.350	30	12	5	
CSC Realcolor Supreme	Z275	≥ 0.420	30	15		
BLUESCOPE Prima Maju	AZ100	≥ 0.350	15	5		5
BLUESCOPE Clean Colorbond Series	AZ150/AZ200	≥ 0.350	25	15	10	
BLUESCOPE Zincalume	Z150	≥ 0.350	25			

Astino® Cooldec 260

A Unique Combination of Efficient Coverage and Striking Profile

Astino®Cooldec 260 is the most popular primer quality profiled metal roofing and cladding sheets in Malaysia to date. A unique combination of efficient coverage and striking profile bring out the best in any building project. It offer economical as well as attractive solution for roofing and wall cladding needs of commecial, industrial and residential applications.

Its excellent strength and case of assembly allow for long economical spans leading to cost saving in any building projects. Its special anti-capillary features along side lap leading to a leak-proof performance.



PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	762mm
Rib Height	25mm
Recommended Minimum Roof Pitch	5°
Tolerance	Length ±5mm, Width ±5mm, Thickness ±0.03mm

THICKNESS AVAILABLE

Thickness BMT	Thickness TCT	Weight	
		(kg/m)	(kg/m²)
0.18	0.22	1.52	2.00
0.25	0.30	1.91	2.51
0.30	0.35	2.32	3.04
0.35	0.40	2.70	3.53
0.40	0.47	3.18	4.18
0.48	0.53	3.79	4.97

Cooldec 260

WIND CAPACITY LOAD SPAN TABLE

Thickness BMT (mm)	Thickness TCT (mm)	Uniformly Distributed Load (kN/m²) Span L (m)					
		0.6	0.9	1.2	1.5	1.8	2.1
0.30	0.35	12.97	3.83	1.60	0.81	0.46	0.28
0.35	0.40	15.36	4.53	1.90	0.96	0.54	0.33
0.40	0.47	18.62	5.49	2.30	1.16	0.66	0.40
0.48	0.53	22.36	6.60	2.76	1.40	0.79	0.48

MAXIMUM RECOMMENDED SUPPORT SPACING

Thickness BMT (mm)	Thickness TCT (mm)	Roof		Wall		Overhang (mm)
		Internal Span (mm)	End Span (mm)	Internal Span (mm)	End Span (mm)	
0.30	0.35	1550	1350	1800	1600	100
0.35	0.40	1650	1450	1900	1750	100
0.40	0.47	1800	1550	2100	1850	150
0.48	0.53	1950	1700	2250	2050	250

RECOMMENDED MAXIMUM ROOF LENGTH (M)

Rainfall (mm/h)	Slope in Degree				
	3°	5°	7°	10°	15°
150	50	60	80	101	138
200	39	50	60	76	102
250	31	40	48	61	82
300	26	30	40	49	67
400	8	10	11	13	16

DETAILS TO SPEC IN BQ

[Thickness], "[Brand]", [Profile], [Material]

Example:

0.40mm TCT "Astino" Cooldec Long Run in Realcolor Cahaya Plus Z120 metal roofing sheet with approved colors; fixed to Astino GI Purlin (measured seperately) including all fixing accessories, capping, flashing and other fittings; all in accordance with Architect's / Engineers drawing, manufacturer's instruction and specification. (Up to 10 years warranty on perforation by corrosion).

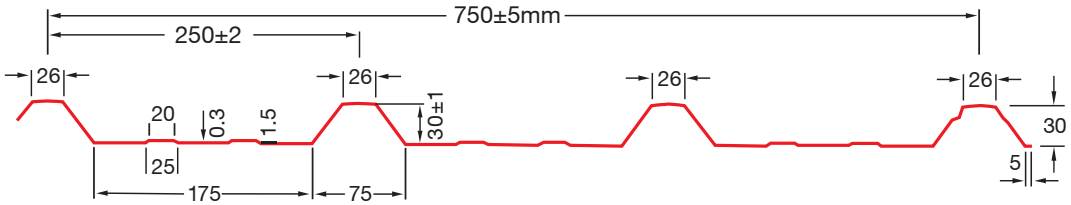
** Term & Condition apply*

Material	Coating	Thickness BMT	Warranty (Up to Years)			
			Perforation	Color Fade	Dirt Staining	Peel/Flake
CSC Realcolor Cahaya	Z080	≤ 0.300	5			
CSC Realcolor Cahaya Plus	Z120	≤ 0.349	10	5		
CSC Realcolor Primero	Z180	≥ 0.350	20	10		
CSC Realcolor Thermoshield	Z275	≥ 0.350	30	12	5	
CSC Realcolor Supreme	Z275	≥ 0.420	30	15		
BLUESCOPE Prima Maju	AZ100	≥ 0.350	15	5		5
BLUESCOPE Clean Colorbond Series	AZ150/AZ200	≥ 0.350	25	15	10	
BLUESCOPE Zincalume	Z150	≥ 0.350	25			

Astino® High Rib 30

Water and Smoke Resistant

Astino® High Rib 30 profile is designed to ensure wide spanning capability and excellent water-discharge capacity. The high rib designed is good for low pitch roof and for long length site forming.



PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	750mm
Rib Height	30mm
Recommended Minimum Roof Pitch	2°
Tolerance	Length ±5mm, Width ±5mm, Thickness ±0.03mm

THICKNESS AVAILABLE

Thickness BMT	Thickness TCT	Weight	
		(kg/m)	(kg/m²)
0.25	0.30	1.91	2.55
0.30	0.35	2.32	3.09
0.35	0.40	2.70	3.60
0.40	0.47	3.19	4.25
0.48	0.53	3.79	5.05

WIND CAPACITY LOAD SPAN TABLE

Thickness BMT (mm)	Thickness TCT (mm)	Uniformly Distributed Load (kN/m²) Span L (m)					
		0.6	0.9	1.2	1.5	1.8	2.1
0.30	0.35	17.57	5.19	2.18	1.10	0.63	0.39
0.35	0.40	20.70	6.11	2.56	1.30	0.74	0.46
0.40	0.47	25.07	7.41	3.11	1.57	0.90	0.55
0.48	0.53	30.08	8.88	3.73	1.89	1.08	0.66

MAXIMUM RECOMMENDED SUPPORT SPACING

Thickness BMT (mm)	Thickness TCT (mm)	Roof		Wall		Overhang (mm)
		Internal Span (mm)	End Span (mm)	Internal Span (mm)	End Span (mm)	
0.30	0.35	2150	1800	2500	2150	150
0.35	0.40	2200	1850	2550	2200	150
0.40	0.47	2450	2000	2800	2400	200
0.48	0.53	2650	2300	3050	2750	250

RECOMMENDED MAXIMUM ROOF LENGTH (M)

Rainfall (mm/h)	Slope in Degree					
	2°	3°	5°	7°	10°	12°
200	69	75	88	104	125	137
250	62	68	80	94	113	124
300	51	56	66	79	94	103
350	44	49	57	67	81	88
400	38	42	50	59	70	77

DETAILS TO SPEC IN BQ

[Thickness], "[Brand]", [Profile], [Material]

Example:

0.47mm TCT "Astino" High Rib Long Run in Realcolor Primero Z180 metal roofing sheet with approved colors; fixed to Astino GI Purlin (measured seperately) including all fixing accessories, capping, flashing and other fittings; all in accordance with Architect's / Engineers drawing, manufacturer's instruction and specification. (Up to 20 years warranty on perforation by corrosion).

** Term & Condition apply*

Material	Coating	Thickness BMT	Warranty (Up to Years)			
			Perforation	Color Fade	Dirt Staining	Peel/Flake
CSC Realcolor Cahaya	Z080	≤ 0.300	5			
CSC Realcolor Cahaya Plus	Z120	≤ 0.349	10	5		
CSC Realcolor Primero	Z180	≥ 0.350	20	10		
CSC Realcolor Thermoshield	Z275	≥ 0.350	30	12	5	
CSC Realcolor Supreme	Z275	≥ 0.420	30	15		
BLUESCOPE Prima Maju	AZ100	≥ 0.350	15	5		5
BLUESCOPE Clean Colorbond Series	AZ150/AZ200	≥ 0.350	25	15	10	
BLUESCOPE Zincalume	Z150	≥ 0.350	25			

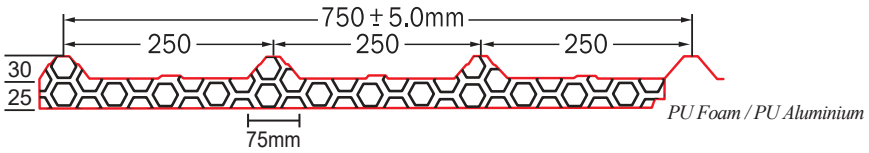
Astino® High Rib 30

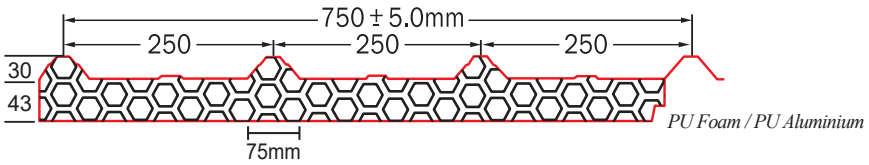
- PU Foam
- PU Aluminium

Astino® High Rib 30 PU Foam / PU Aluminium is a solid insulated roofing panel which combines of High Rib Profiled metal, CFC-Free Rigid Polyurethane (PU) Foam and PVC lamination or Aluminium Foil.

Astino® High Rib 30 PU Foam / PU Aluminium provide excellent heat resistance and good sound absorption. It reduces your buildings temperature with great savings on electricity. It reduces installation lead time, expenditures on labor cost, transportation cost as well as storage cost.

Astino® High Rib 30 PU Foam is closed-cell. Closed cell foam water absorption is <0.20%.





PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	750 mm
Rib Height	30 mm
Recommended Minimum Roof Pitch	2°
High Rib 30 PU Foam	High Rib 30 + Polyurethane Foam + PVC Sheet
High Rib 30 PU Aluminium	High Rib 30 + Polyurethane Foam + Aluminium Foil
PU Foam Thickness	25mm, 43mm
PU Foam Inner Layer Finishing	Waterproof PVC Paper 0.15mm
PU Aluminium Inner Layer Finishing	Aluminium Foil 0.08mm
Insulation Grade	Closed- Cell, CFC-Free
Insulation Density	35 - 40 Kg/m^3
* Thermal Conductivity (K-value)	0.028 W/mK
* Thermal Resistance (R-value)	0.98 m^{2}K/W
* Thermal Transmittance (U-value)	1.021 W/m^{2}K
Tolerance	Length ±5mm, Width ±5mm, Thickness ±0.03mm PU Thickness ±3mm

**Values tested according to MS ISO 8302:2003 by SIRIM*

THICKNESS AVAILABLE

Thickness BMT	Thickness TCT	Weight	
		(kg/m)	(kg/m²)
0.25	0.30	2.99	3.99
0.30	0.35	3.40	4.53
0.35	0.40	3.78	5.04
0.40	0.47	4.27	5.69
0.48	0.53	4.87	6.49

WIND CAPACITY LOAD SPAN TABLE

Thickness BMT (mm)	Thickness TCT (mm)	Uniformly Distributed Load (kN/m²) Span L (m)					
		0.6	0.9	1.2	1.5	1.8	2.1
0.30	0.35	17.57	5.19	2.18	1.10	0.63	0.39
0.35	0.40	20.70	6.11	2.56	1.30	0.74	0.46
0.40	0.47	25.07	7.41	3.11	1.57	0.90	0.55
0.48	0.53	30.08	8.88	3.73	1.89	1.08	0.66

MAXIMUM RECOMMENDED SUPPORT SPACING

Thickness BMT (mm)	Thickness TCT (mm)	Roof		Wall		Overhang (mm)
		Internal Span (mm)	End Span (mm)	Internal Span (mm)	End Span (mm)	
0.30	0.35	2150	1800	2500	2150	150
0.35	0.40	2200	1850	2550	2200	150
0.40	0.47	2450	2000	2800	2400	200
0.48	0.53	2650	2300	3050	2750	250

DETAILS TO SPEC IN BQ

[Thickness], "[Brand]", [Profile], [Material]

Example:

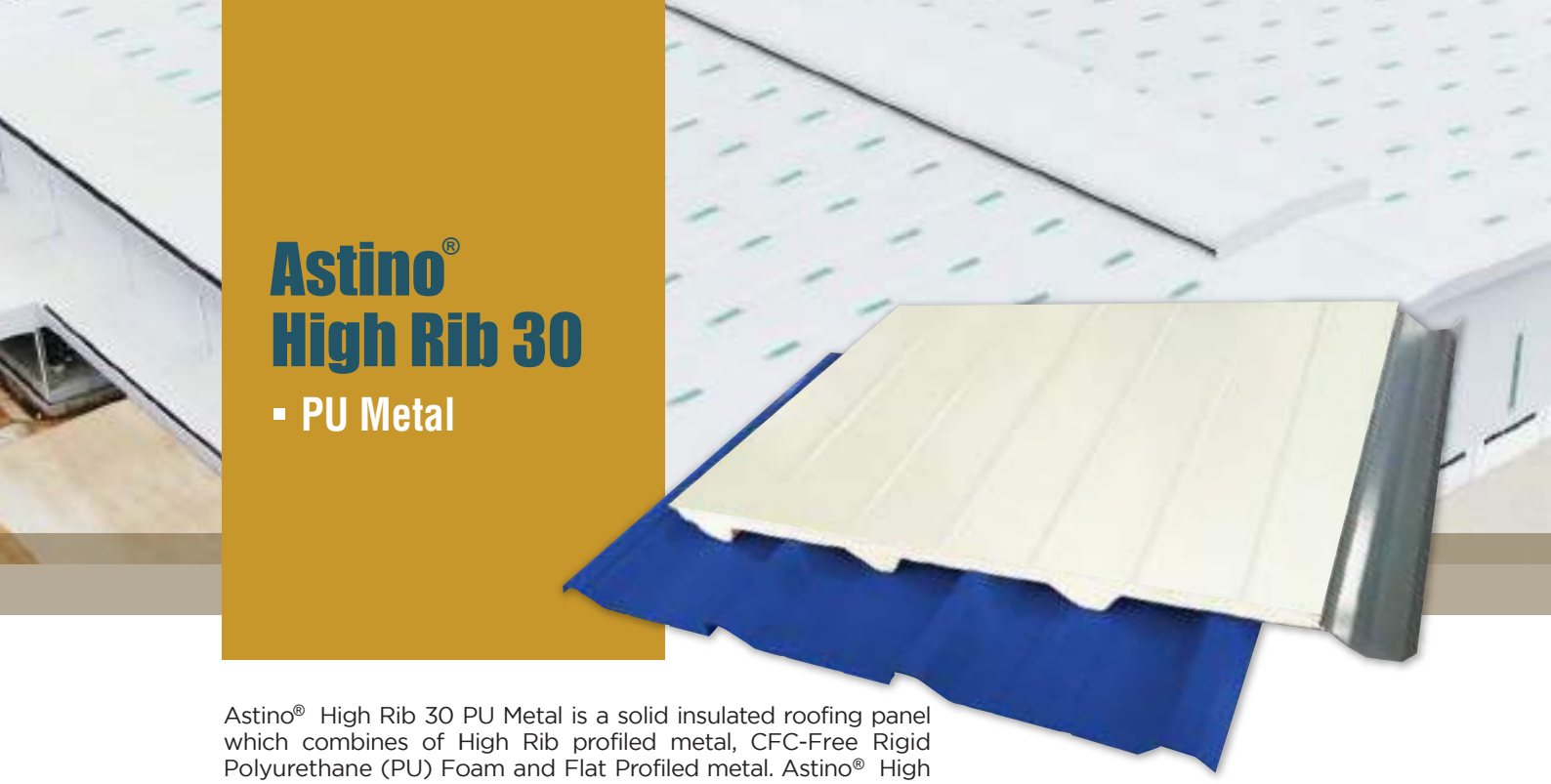
0.47mm TCT "Astino" High Rib PU Foam / PU Aluminium in Realcolor Primero Z180 metal metal roofing sheet with approved colors; fixed to Astino GI Purlin (measured seperately) including all fixing accessories, capping, flashing and other fittings; all in accordance with Architect's/Engineers drawing, manufacturer's instruction and specification. (Up to 20 years warranty on perforation by corrosion).

** Term & Condition apply*

Material	Coating	Thickness BMT	Warranty (Up to Years)			
			Perforation	Color Fade	Dirt Staining	Peel/Flake
CSC Realcolor Cahaya	Z080	≤ 0.300	5			
CSC Realcolor Cahaya Plus	Z120	≤ 0.349	10	5		
CSC Realcolor Primero	Z180	≥ 0.350	20	10		
CSC Realcolor Thermoshield	Z275	≥ 0.350	30	12	5	
CSC Realcolor Supreme	Z275	≥ 0.420	30	15		
BLUESCOPE Prima Maju	AZ100	≥ 0.350	15	5		5
BLUESCOPE Clean Colorbond Series	AZ150/AZ200	≥ 0.350	25	15	10	
BLUESCOPE Zincalume	Z150	≥ 0.350	25			

Astino® High Rib 30

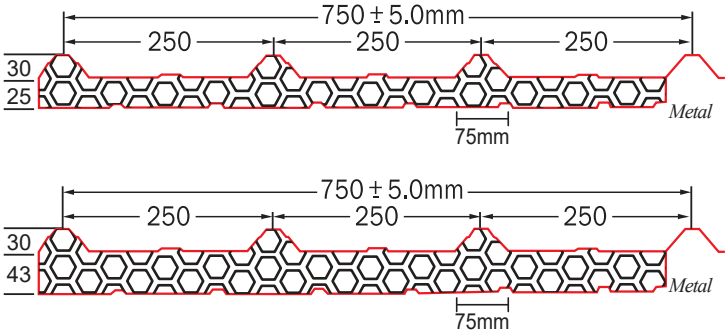
- PU Metal



Astino® High Rib 30 PU Metal is a solid insulated roofing panel which combines of High Rib profiled metal, CFC-Free Rigid Polyurethane (PU) Foam and Flat Profiled metal. Astino® High Rib 30 PU Metal is fire retardant and complies with bomba requirement.

Astino® High Rib 30 PU Metal eliminates unnecessary multiple construction processes of laying insulations and roofing sheets. These help in great reduction of construction expenditure in term of installation cost, transportation, storage and purchasing costs.

Astino® High Rib 30 PU Metal is widely used for F&B factories, warehouses, workshops, multipurpose halls, poultry farms, hawker Centre, schools, houses, showrooms and more of others.



PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	750 mm
Rib Height	30 mm
Recommended Minimum Roof Pitch	2°
High Rib 30 PU Metal	High Rib 30 + Polyurethane Foam + Flat Metal Sheet
PU Foam Thickness	25mm, 43mm
Insulation Density	35 - 40 g/m^3
Inner Layer Finishing	Flat Metal Sheet 0.25mm TCT
Insulation Grade	Closed- Cell, CFC-Free
* Thermal Conductivity (K-value)	0.024 W/mK
* Thermal Resistance (R-value)	1.04 m^{2}K/W
* Thermal Transmittance (U-value)	0.96 W/m^{2}K
Tolerance	Length ±5mm, Width ±5mm, Thickness ±0.03mm PU Thickness ±3mm

**Values tested according to MS ISO 8302:2003 by SIRIM*

THICKNESS AVAILABLE

Thickness BMT	Thickness TCT	Weight	
		(kg/m)	(kg/m^2)
0.25	0.30	4.03	5.38
0.30	0.35	4.46	5.95
0.35	0.40	4.82	6.43
0.40	0.47	5.32	7.09
0.48	0.53	5.91	7.88

WIND CAPACITY LOAD SPAN TABLE

Thickness BMT (mm)	Thickness TCT (mm)	Uniformly Distributed Load (kN/m^2) Span L (m)					
		0.6	0.9	1.2	1.5	1.8	2.1
0.30	0.35	17.57	5.19	2.18	1.10	0.63	0.39
0.35	0.40	20.70	6.11	2.56	1.30	0.74	0.46
0.40	0.47	25.07	7.41	3.11	1.57	0.90	0.55
0.48	0.53	30.08	8.88	3.73	1.89	1.08	0.66

MAXIMUM RECOMMENDED SUPPORT SPACING

Thickness BMT (mm)	Thickness TCT (mm)	Roof		Wall		Overhang (mm)
		Internal Span (mm)	End Span (mm)	Internal Span (mm)	End Span (mm)	
0.30	0.35	2150	1800	2500	2150	150
0.35	0.40	2200	1850	2550	2200	150
0.40	0.47	2450	2000	2800	2400	200
0.48	0.53	2650	2300	3050	2750	250

DETAILS TO SPEC IN BQ

[Thickness], "[Brand]", [Profile], [Material]

Example:

0.47mm TCT "Astino" High Rib PU Metal in Realcolor Primero Z180 metal roofing sheet with approved colors; fixed to Astino GI Purlin (measured seperately) including all fixing accessories, capping, flashing and other fittings; all in accordance with Architect's / Engineers drawing, manufacturer's instruction and specification. (Up to 20 years warranty on perforation by corrosion).

** Term & Condition apply*

Material	Coating	Thickness BMT	Warranty (Up to Years)			
			Perforation	Color Fade	Dirt Staining	Peel/Flake
CSC Realcolor Cahaya	Z080	≤ 0.300	5			
CSC Realcolor Cahaya Plus	Z120	≤ 0.349	10	5		
CSC Realcolor Primero	Z180	≥ 0.350	20	10		
CSC Realcolor Thermoshield	Z275	≥ 0.350	30	12	5	
CSC Realcolor Supreme	Z275	≥ 0.420	30	15		
BLUESCOPE Prima Maju	AZ100	≥ 0.350	15	5		5
BLUESCOPE Clean Colorbond Series	AZ150/AZ200	≥ 0.350	25	15	10	
BLUESCOPE Zincalume	Z150	≥ 0.350	25			

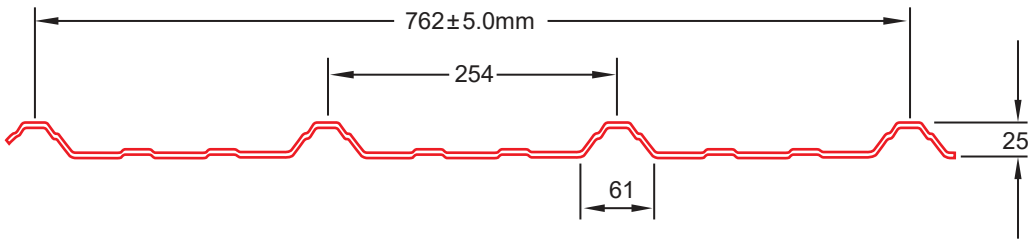
Astino® Superior Rib

Water and Smoke Resistant

Astino® Superior Rib is an attractive, lightweight roofing solution for your buildings. Its combined architectural style lines with structural performances make it ideal for roofing and wall cladding. Its attractive profile and load handling capabilities make it equally well-suited for commercial, industrial or residential applications.

Its special anti-capillary features alongside lap make it suited for severe weather condition.

Astino® Superior Rib excellent strength and easy of assembly allow for long economical spans leading to cost saving in any building project.



PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	762mm
Rib Height	25mm
Recommended Minimum Roof Pitch	5°
Tolerance	Length ±5mm, Width ±5mm, Thickness ±0.03mm

THICKNESS AVAILABLE

Thickness BMT	Thickness TCT	Weight	
		(kg/m)	(kg/m²)
0.30	0.35	2.32	3.04
0.35	0.40	2.70	3.53
0.40	0.47	3.19	4.18
0.48	0.53	3.79	4.97

WIND CAPACITY LOAD SPAN TABLE

Thickness BMT (mm)	Thickness TCT (mm)	Uniformly Distributed Load (kN/m²) Span L (m)					
		0.6	0.9	1.2	1.5	1.8	2.1
0.30	0.35	10.57	3.11	1.30	0.65	0.37	0.22
0.35	0.40	12.46	3.67	1.53	0.77	0.44	0.26
0.40	0.47	15.11	4.46	1.86	0.94	0.53	0.32
0.48	0.53	18.15	5.35	2.24	1.13	0.64	0.39

MAXIMUM RECOMMENDED SUPPORT SPACING

Thickness BMT (mm)	Thickness TCT (mm)	Roof		Wall		Overhang (mm)
		Internal Span (mm)	End Span (mm)	Internal Span (mm)	End Span (mm)	
0.30	0.35	1700	1450	1950	1750	100
0.35	0.40	1800	1500	2050	1800	100
0.40	0.47	2050	1700	2350	2050	150
0.48	0.53	2700	2350	3100	2800	200

RECOMMENDED MAXIMUM ROOF LENGTH (M)

Rainfall (mm/h)	Slope in Degree				
	3°	5°	7°	10°	15°
150	50	60	80	101	138
200	39	50	60	76	102
250	31	40	48	61	82
300	26	30	40	49	67
400	8	10	11	13	16

DETAILS TO SPEC IN BQ

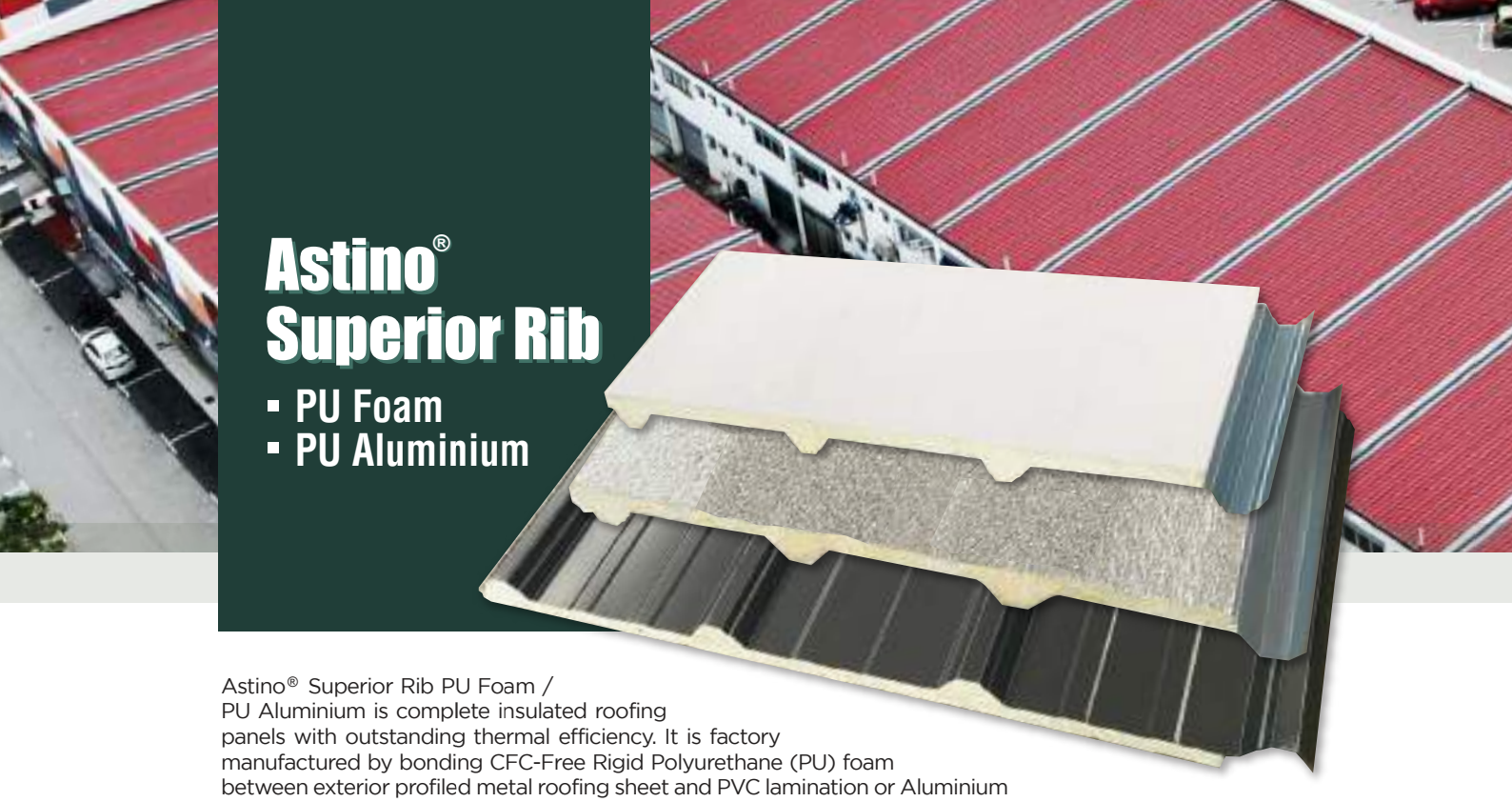
[Thickness], "[Brand]", [Profile], [Material]

Example:

0.40mm TCT "Astino" Superior Rib Long Run in Realcolor Cahaya Plus Z120 metal roofing sheet with approved colors; fixed to Astino GI Purlin (measured seperately) including all fixing accessories, capping, flashing and other fittings; all in accordance with Architect's / Engineers drawing, manufacturer's instruction and specification. (Up to 10 years warranty on perforation by corrosion).

** Term & Condition apply*

Material	Coating	Thickness BMT	Warranty (Up to Years)			
			Perforation	Color Fade	Dirt Staining	Peel/Flake
CSC Realcolor Cahaya	Z080	≤ 0.300	5			
CSC Realcolor Cahaya Plus	Z120	≤ 0.349	10	5		
CSC Realcolor Primero	Z180	≥ 0.350	20	10		
CSC Realcolor Thermoshield	Z275	≥ 0.350	30	12	5	
CSC Realcolor Supreme	Z275	≥ 0.420	30	15		
BLUESCOPE Prima Maju	AZ100	≥ 0.350	15	5		5
BLUESCOPE Clean Colorbond Series	AZ150/AZ200	≥ 0.350	25	15	10	
BLUESCOPE Zincalume	Z150	≥ 0.350	25			



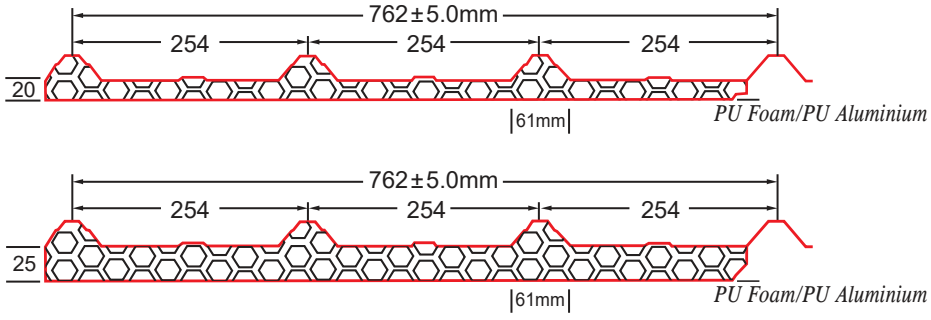
Astino® Superior Rib

- PU Foam
- PU Aluminium

Astino® Superior Rib PU Foam / PU Aluminium is complete insulated roofing panels with outstanding thermal efficiency. It is factory manufactured by bonding CFC-Free Rigid Polyurethane (PU) foam between exterior profiled metal roofing sheet and PVC lamination or Aluminium Foil. These insulated metal roofing panels are distinguished by a combination of high insulation characteristic and low weight. The interior lamination is glossy and textured create an aesthetically attractive appearance.

Astino® Superior Rib PU Foam / PU Aluminium provides excellent heat resistance, good sound absorption, mechanical and dimensional stability of roof assembly. Water resistant materials which will not be spoilt by rain water. PU Foam is smoke resistant as well. The interior lamination colour is white which enhance reflectivity, durability and require low maintenance. The overall result is roofing systems that maintain your buildings cool all day long with great saving on electricity.

Astino® Superior Rib PU Foam / PU Aluminium eliminates unnecessary multiple construction process of laying insulations and roofing sheets into one off fast and easy way of installation course. These result in great reduction of construction expenditure in term of labour usage, transportation, storage and purchasing costs.



PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	762mm
Rib Height	25mm
Recommended Minimum Roof Pitch	5°
Superior Rib PU Foam	Superior Rib + Polyurethane Foam + PVC Sheet
Superior Rib PU Aluminium	Superior Rib + Polyurethane Foam + Aluminium Foil
PU Foam Thickness	20mm / 25mm / 43mm
PU Foam Inner Layer Finishing	Waterproof PVC Paper 0.15mm
PU Aluminium Inner Layer Finishing	Aluminium Foil 0.08mm
Insulation Density	35 - 40kg/m³
Insulation Grade	Closed-Cell, CFC-Free
* Thermal Conductivity (K-value)	0.024 W/mK
* Thermal Resistance (R-value)	1.04 m²K/W
* Thermal Transmittance (U-value)	0.96 W/m²K
Tolerance	Length ±5mm, Width ±5mm, Thickness ±0.03mm PU Thickness ±3mm

THICKNESS AVAILABLE

Thickness BMT	Thickness TCT	Weight	
		(kg/m)	(kg/m²)
0.30	0.35	3.40	4.46
0.35	0.40	3.78	4.96
0.40	0.47	4.27	5.60
0.48	0.53	4.87	6.39

WIND CAPACITY LOAD SPAN TABLE

Thickness BMT (mm)	Thickness TCT (mm)	Uniformly Distributed Load (kN/m²) Span L (m)					
		0.6	0.9	1.2	1.5	1.8	2.1
0.30	0.35	10.57	3.11	1.30	0.65	0.37	0.22
0.35	0.40	12.46	3.67	1.53	0.77	0.44	0.26
0.40	0.47	15.11	4.46	1.86	0.94	0.53	0.32
0.48	0.53	18.15	5.35	2.24	1.13	0.64	0.39

MAXIMUM RECOMMENDED SUPPORT SPACING

Thickness BMT (mm)	Thickness TCT (mm)	Roof		Wall		Overhang (mm)
		Internal Span (mm)	End Span (mm)	Internal Span (mm)	End Span (mm)	
0.30	0.35	1700	1450	1950	1750	100
0.35	0.40	1800	1500	2050	1800	100
0.40	0.47	2050	1700	2350	2050	150
0.48	0.53	2700	2350	3100	2800	200

DETAILS TO SPEC IN BQ

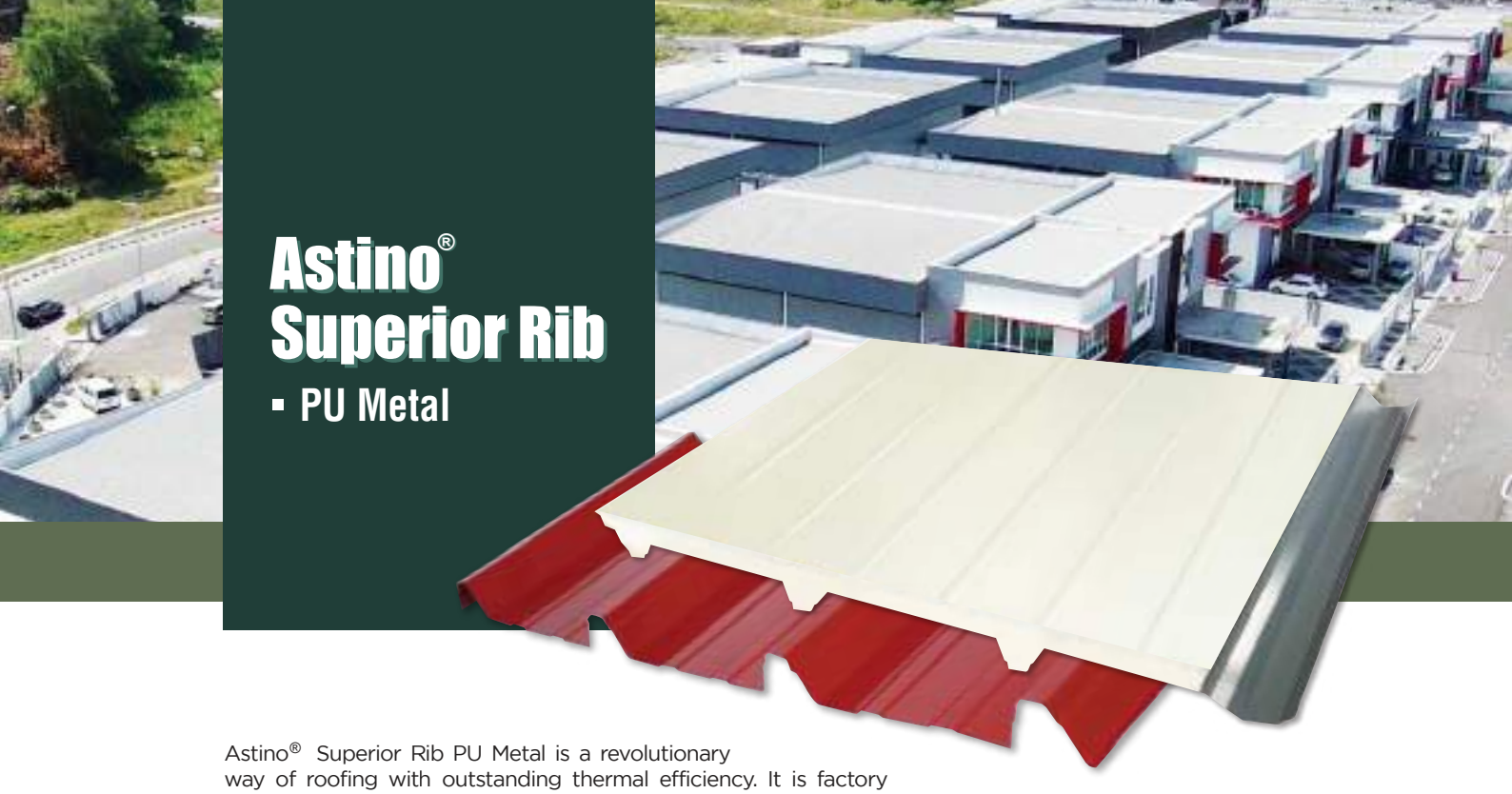
[Thickness], "[Brand]", [Profile], [Material]

Example:

0.40mm TCT "Astino" Superior Rib PU Foam / PU Aluminium in Realcolor Cahaya Plus Z120 metal roofing sheet with approved colors; fixed to Astino GI Purlin (measured seperately) including all fixing accessories, capping, flashing and other fittings; all in accordance with Architect's/Engineers drawing, manufacturer's instruction and specification. (Up to 10 years warranty on perforation by corrosion).

** Term & Condition apply*

Material	Coating	Thickness BMT	Warranty (Up to Years)			
			Perforation	Color Fade	Dirt Staining	Peel/Flake
CSC Realcolor Cahaya	Z080	≤ 0.300	5			
CSC Realcolor Cahaya Plus	Z120	≤ 0.349	10	5		
CSC Realcolor Primero	Z180	≥ 0.350	20	10		
CSC Realcolor Thermoshield	Z275	≥ 0.350	30	12	5	
CSC Realcolor Supreme	Z275	≥ 0.420	30	15		
BLUESCOPE Prima Maju	AZ100	≥ 0.350	15	5		5
BLUESCOPE Clean Colorbond Series	AZ150/AZ200	≥ 0.350	25	15	10	
BLUESCOPE Zincalume	Z150	≥ 0.350	25			



Astino® Superior Rib

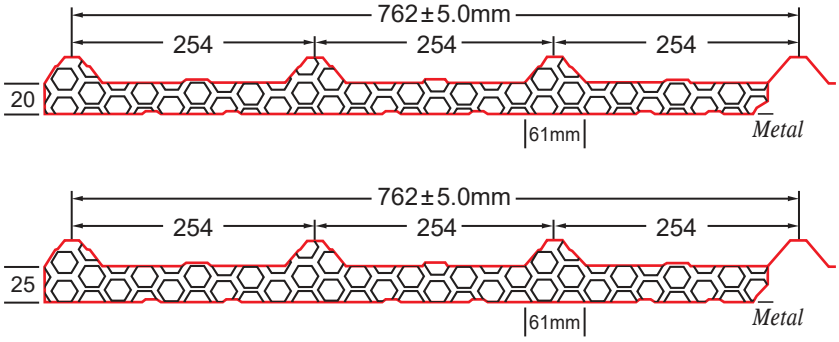
- PU Metal

Astino® Superior Rib PU Metal is a revolutionary way of roofing with outstanding thermal efficiency. It is factory manufactured by bonding CFC-Free Rigid Polyurethane (PU) foam between exterior and interior skin of profiled metal roofing sheets.

These insulated metal roofing panels provides excellent heat resistance, good sound absorption, mechanical and dimensional stability of roof assembly. The overall result is roofing systems that maintain your buildings cool all day long with great saving on electricity.

Astino® Superior Rib PU Metal eliminates unnecessary multiple construction processes of laying insulations and roofing sheets into one off fast and easy way of installation course. These resulted in great reduction of construction expenditure in term of labour usage, transportation, storage and purchasing costs.

It is water resistant materials which will not be spoilt by rain water. Astino® Superior Rib PU Metal is smoke resistant as well. The interior lamination colour is white which enhance reflectivity, durability and require low maintenance.



PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	762mm
Rib Height	25mm
Recommended Minimum Roof Pitch	5°
Superior Rib PU Metal	Superior Rib + Polyurethane Foam + Flat Metal Sheet
PU Foam Thickness	20mm / 25mm / 43mm
Insulation Density	35 - 40kg/m³
Inner Layer Finishing	Flat Metal Sheet 0.25mm TCT
Insulation Grade	Closed-Cell, CFC-Free
*** Thermal Conductivity (K-value)**	0.024 W/mK
*** Thermal Resistance (R-value)**	1.04 m²K/W
*** Thermal Transmittance (U-value)**	0.96 W/m²K
Tolerance	Length ±5mm, Width ±5mm, Thickness ±0.03mm PU Thickness ±3mm

THICKNESS AVAILABLE

Thickness BMT	Thickness TCT	Weight	
		(kg/m)	(kg/m²)
0.30	0.35	4.46	5.85
0.35	0.40	4.82	6.33
0.40	0.47	5.32	6.98
0.48	0.53	5.91	7.76

WIND CAPACITY LOAD SPAN TABLE

Thickness BMT (mm)	Thickness TCT (mm)	Uniformly Distributed Load (kN/m²) Span L (m)					
		0.6	0.9	1.2	1.5	1.8	2.1
0.30	0.35	10.57	3.11	1.30	0.65	0.37	0.22
0.35	0.40	12.46	3.67	1.53	0.77	0.44	0.26
0.40	0.47	15.11	4.46	1.86	0.94	0.53	0.32
0.48	0.53	18.15	5.35	2.24	1.13	0.64	0.39

MAXIMUM RECOMMENDED SUPPORT SPACING

Thickness BMT (mm)	Thickness TCT (mm)	Roof		Wall		Overhang (mm)
		Internal Span (mm)	End Span (mm)	Internal Span (mm)	End Span (mm)	
0.30	0.35	1700	1450	1950	1750	100
0.35	0.40	1800	1500	2050	1800	100
0.40	0.47	2050	1700	2350	2050	150
0.48	0.53	2700	2350	3100	2800	200

DETAILS TO SPEC IN BQ

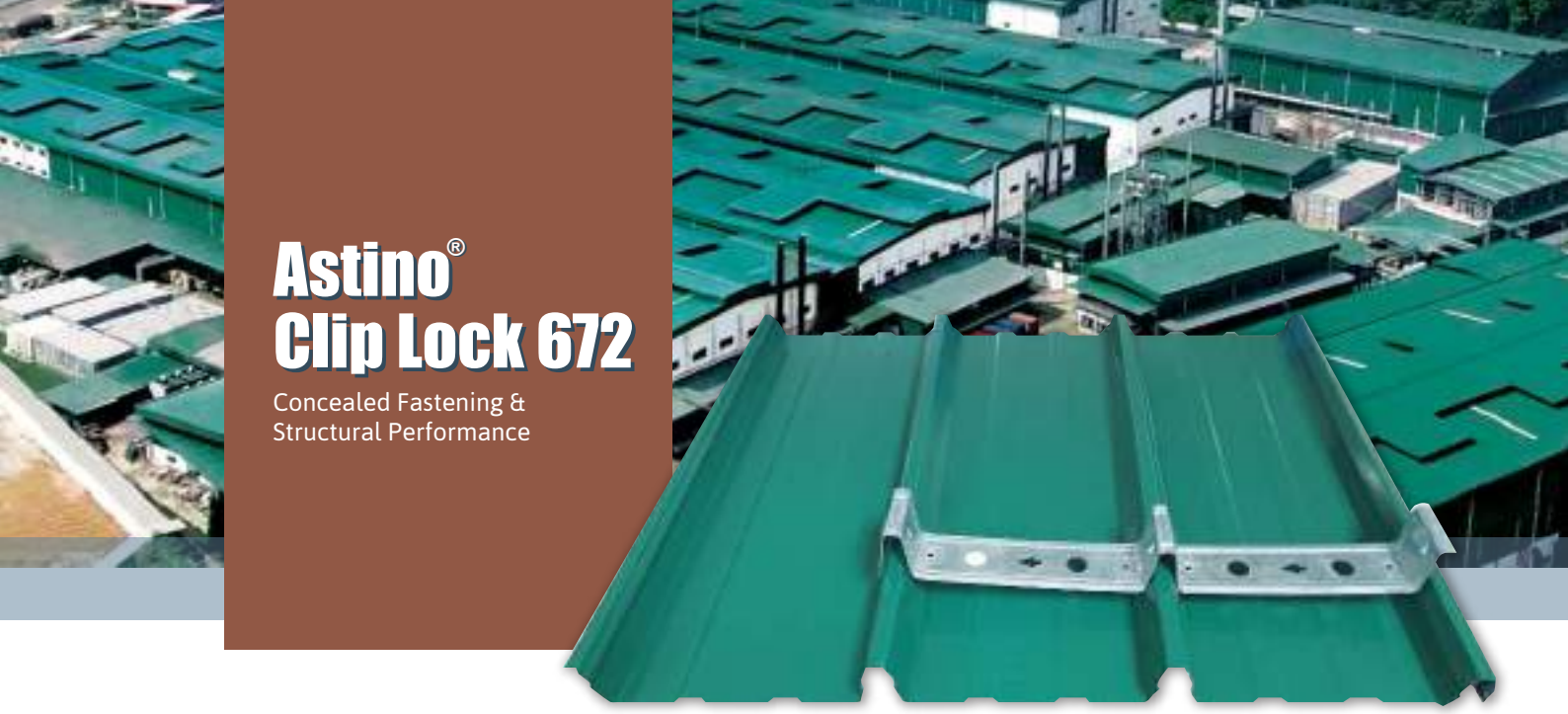
[Thickness], "[Brand]", [Profile], [Material]

Example:

0.40mm TCT "Astino" Superior Rib PU Metal in Realcolor Cahaya Plus Z120 metal roofing sheet with approved colors; fixed to Astino GI Purlin (measured seperately) including all fixing accessories, capping, flashing and other fittings; all in accordance with Architect's / Engineers drawing, manufacturer's instruction and specification. (Up to 10 years warranty on perforation by corrosion).

** Term & Condition apply*

Material	Coating	Thickness BMT	Warranty (Up to Years)			
			Perforation	Color Fade	Dirt Staining	Peel/Flake
CSC Realcolor Cahaya	Z080	≤ 0.300	5			
CSC Realcolor Cahaya Plus	Z120	≤ 0.349	10	5		
CSC Realcolor Primero	Z180	≥ 0.350	20	10		
CSC Realcolor Thermoshield	Z275	≥ 0.350	30	12	5	
CSC Realcolor Supreme	Z275	≥ 0.420	30	15		
BLUESCOPE Prima Maju	AZ100	≥ 0.350	15	5		5
BLUESCOPE Clean Colorbond Series	AZ150/AZ200	≥ 0.350	25	15	10	
BLUESCOPE Zincalume	Z150	≥ 0.350	25			



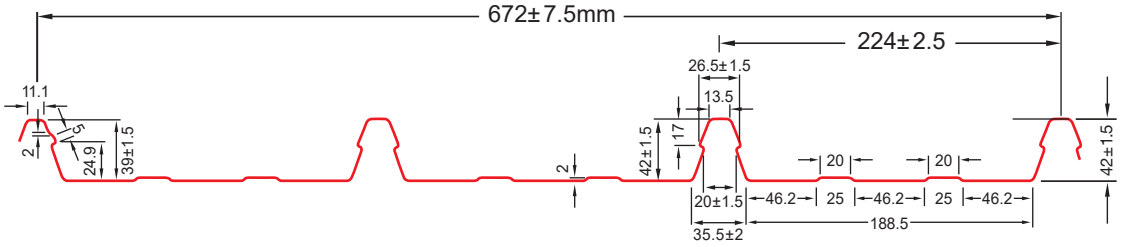
Astino® Clip Lock 672

Concealed Fastening & Structural Performance

Astino® Clip Lock is a premier profile that combines concealed fastening features with structural performance. No exposed fasteners are used thereby eliminating leakage occurrences and provide years of worry free performance.

The distinctive appearance make Astino® Clip Lock ideal for a wide range of applications from low pitched roofs to vertical ribbed cladding and well suited for commercial, industrial and residential roofing applications.

The specially designed Astino® Clip interlocking delivers a guaranteed and reliable performance. It is usually a preferred profiled by architect and consultant and for long length site forming purposes.



PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	672 mm
Rib Height	42 mm
Recommended Minimum Roof Pitch	1°
Tolerance	Length ±5mm, Width ±5mm, Thickness ±0.03mm

THICKNESS AVAILABLE

Thickness BMT	Thickness TCT	Weight	
		(kg/m)	(kg/m²)
0.40	0.47	3.18	4.75
0.48	0.53	3.79	5.65

WIND CAPACITY LOAD SPAN TABLE

Thickness BMT (mm)	Thickness TCT (mm)	Uniformly Distributed Load (kN/m²) Span L (m)					
		0.6	0.9	1.2	1.5	1.8	2.1
0.40	0.47	43.65	12.91	5.43	2.79	1.59	0.99
0.48	0.53	52.43	15.51	6.52	3.32	1.91	1.19

MAXIMUM RECOMMENDED SUPPORT SPACING

Thickness BMT (mm)	Thickness TCT (mm)	Roof		Wall		Overhang (mm)
		Internal Span (mm)	End Span (mm)	Internal Span (mm)	End Span (mm)	
0.40	0.47	2300	1900	3000	2500	150
0.48	0.53	2400	2000	3100	2600	200

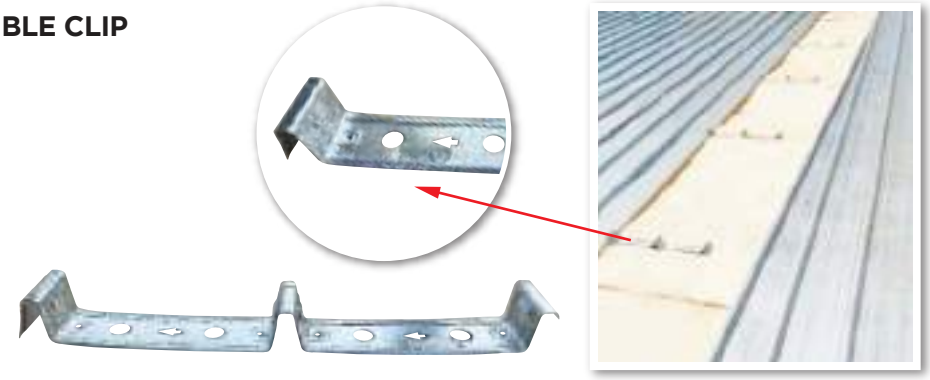
FIXING CLIP CALCULATION

Purlin Spacing	Fixing Clip Qty
1.0 M	1.70 pcs / m^2
1.2 M	1.50 pcs / m^2
1.5 M	1.30 pcs / m^2

RECOMMENDED MAXIMUM ROOF LENGTH (M)

Rainfall (mm/h)	Slope in Degree						
	1°	2°	3°	4°	5°	7°	7.5°
200	156	201	236	290	291	349	350
250	147	190	224	277	274	329	328
300	124	161	187	226	231	277	279
400	96	112	136	175	173	208	209
500	76	96	113	140	140	167	167

DOUBLE CLIP



DETAILS TO SPEC IN BQ

[Thickness], "[Brand]", [Profile], [Material]

Example:

0.47mm TCT "Astino" Clip Lock in Realcolor Primero Z180 metal roofing sheet with approved colors; fixed to Astino GI Purlin (measured seperately) including all fixing accessories, capping, flashing and other fittings; all in accordance with Architect's/Engineers drawing, manufacturer's instruction and specification. (Up to 20 years warranty on perforation by corrosion).

** Term & Condition apply*

Material	Coating	Thickness BMT	Warranty (Up to Years)			
			Perforation	Color Fade	Dirt Staining	Peel/Flake
CSC Realcolor Cahaya	Z080	≤ 0.300	5			
CSC Realcolor Cahaya Plus	Z120	≤ 0.349	10	5		
CSC Realcolor Primero	Z180	≥ 0.350	20	10		
CSC Realcolor Thermoshield	Z275	≥ 0.350	30	12	5	
CSC Realcolor Supreme	Z275	≥ 0.420	30	15		
BLUESCOPE Prima Maju	AZ100	≥ 0.350	15	5		5
BLUESCOPE Clean Colorbond Series	AZ150/AZ200	≥ 0.350	25	15	10	
BLUESCOPE Zincalume	Z150	≥ 0.350	25			

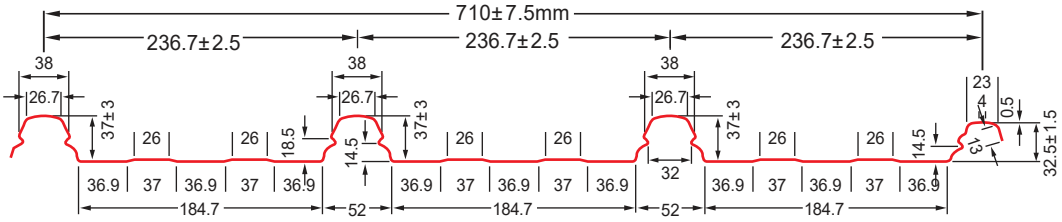
Astino® Clip Lock 710

Concealed Fastening & Structural Performance

Astino® Clip Lock is a premier profile that combines concealed fastening features with structural performance. No exposed fasteners are used thereby eliminating leakage occurrences and provide years of worry free performance.

The distinctive appearance make Astino® Clip Lock ideal for a wide range of applications from low pitched roofs to vertical ribbed cladding and well suited for commercial, industrial and residential roofing applications.

The specially designed Astino® Clip interlocking delivers a guaranteed and reliable performance. It is usually a preferred profiled by architect and consultant and for long length site forming purposes.



PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	710 mm
Rib Height	37 mm
Recommended Minimum Roof Pitch	1°
Tolerance	Length ±5mm, Width ±5mm, Thickness ±0.03mm

THICKNESS AVAILABLE

Thickness BMT	Thickness TCT	Weight	
		(kg/m)	(kg/m²)
0.40	0.47	3.18	4.48
0.48	0.53	3.77	5.33

WIND CAPACITY LOAD SPAN TABLE

Thickness BMT (mm)	Thickness TCT (mm)	Uniformly Distributed Load (kN/m²) Span L (m)					
		0.6	0.9	1.2	1.5	1.8	2.1
0.40	0.47	30.83	9.11	3.83	1.94	1.11	0.69
0.48	0.53	37.00	10.94	4.59	2.33	1.33	0.83

MAXIMUM RECOMMENDED SUPPORT SPACING

Thickness BMT (mm)	Thickness TCT (mm)	Roof		Wall		Overhang (mm)
		Internal Span	End Span	Internal Span	End Span	
		(mm)	(mm)	(mm)	(mm)	
0.40	0.47	1300	1200	3000	2500	150
0.48	0.53	1400	1300	3100	2600	200

Clip Lock Series

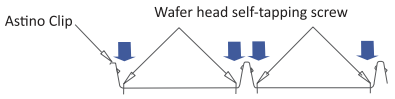
FIXING CLIP CALCULATION

Purlin Spacing	Fixing Clip Qty
1.0 M	1.60 pcs/m²
1.2 M	1.40 pcs/m²
1.5 M	1.20 pcs/m²

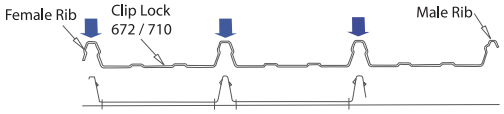
RECOMMENDED MAXIMUM ROOF LENGTH (M)

Rainfall (mm/h)	Slope in Degree						
	1°	2°	3°	4°	5°	7°	7.5°
200	111	143	167	206	206	247	247
250	104	135	159	196	194	233	232
300	88	114	132	160	163	196	198
400	68	79	96	124	122	148	148
500	54	68	80	99	99	119	118

Installation Procedure

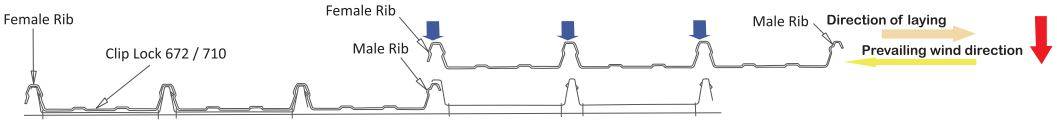


STEP 1 Fasten Astino Clip with wafer head self tapping screw

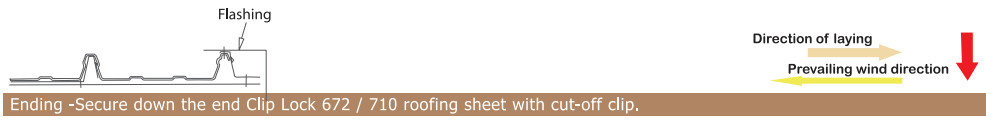


STEP 2 Install first Clip Lock 672 / 710 roofing sheet at its ribs onto the clip

STEP 3 Place the next Astino Clip over the male rib of the frist Clip lock 672 / 710 roofing sheet. Fasten the clip with wafer head self tapping screw

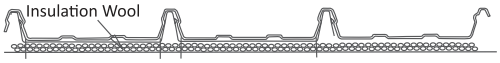


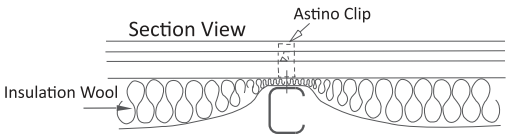
STEP 4 Place the succeeding Clip lock 672 / 710 roofing sheet with female rib cover the clip and male rib of the previous roofing sheet.



STEP 5 Ending -Secure down the end Clip Lock 672 / 710 roofing sheet with cut-off clip.

CLIP LOCK 672 / 710 FASTENING METHOD ON INSULATION WOOL





DETAILS TO SPEC IN BQ

[Thickness], "[Brand]", [Profile], [Material]

Example:

0.53mm TCT "Astino" Clip Lock in Realcolor Primero Z180 metal roofing sheet with approved colors; fixed to Astino GI Purlin (measured seperately) including all fixing accessories, capping, flashing and other fittings; all in accordance with Architect's / Engineers drawing, manufacturer's instruction and specification. (Up to 20 years warranty on perforation by corrosion).

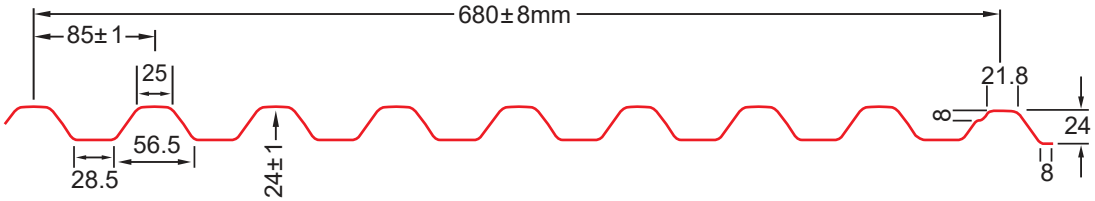
** Term & Condition apply*

Material	Coating	Thickness BMT	Warranty (Up to Years)			
			Perforation	Color Fade	Dirt Staining	Peel/Flake
CSC Realcolor Cahaya	Z080	≤ 0.300	5			
CSC Realcolor Cahaya Plus	Z120	≤ 0.349	10	5		
CSC Realcolor Primero	Z180	≥ 0.350	20	10		
CSC Realcolor Thermoshield	Z275	≥ 0.350	30	12	5	
CSC Realcolor Supreme	Z275	≥ 0.420	30	15		
BLUESCOPE Prima Maju	AZ100	≥ 0.350	15	5		5
BLUESCOPE Clean Colorbond Series	AZ150/AZ200	≥ 0.350	25	15	10	
BLUESCOPE Zincalume	Z150	≥ 0.350	25			

Astino® Spandec 680

Strong Visual Appearance &
Bold Shaped Profile

Astino® Spandec 680 is one of the most popular stylish roofing and wall profile. The signature criteria of this profile is natural sprung curve. The minimum radius of curvature of steel structure is 18m.



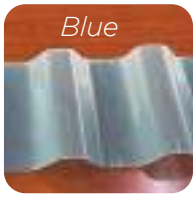
PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	680 mm
Rib Height	24 mm
Recommended Minimum Roof Pitch	3°
Natural Sprung Curve	Minimum 18m Radius
Tolerance	Length ±5mm, Width ±5mm, Thickness ±0.03mm

THICKNESS AVAILABLE

Thickness BMT	Thickness TCT	Weight	
		(kg/m)	(kg/m²)
0.25	0.30	1.91	2.81
0.30	0.35	2.32	3.41
0.35	0.40	2.70	3.97
0.40	0.47	3.19	4.69
0.48	0.53	3.79	5.57

Translucent Sheet
FRP (FIBREGLASS REINFORCED POLYMER)



Vermax® Lite premier FRP
1.5mm (2400 GSM) / 1.2mm (1800 GSM)

Transparent sheet
POLYCARBONATE (PC)

Vermax® Polycarbonate
2.0mm / 1.5mm clear transparent

Spandec 680

WIND CAPACITY LOAD SPAN TABLE

Thickness BMT (mm)	Thickness TCT (mm)	Uniformly Distributed Load (kN/m²) Span L (m)					
		0.6	0.9	1.2	1.5	1.8	2.1
0.30	0.35	12.48	3.68	1.54	0.78	0.44	0.27
0.35	0.40	14.71	4.34	1.82	0.92	0.52	0.32
0.40	0.47	17.83	5.26	2.20	1.11	0.63	0.38
0.48	0.53	21.40	6.31	2.64	1.33	0.76	0.46

MAXIMUM RECOMMENDED SUPPORT SPACING

Thickness BMT (mm)	Thickness TCT (mm)	Roof		Wall		Overhang (mm)
		Internal Span (mm)	End Span (mm)	Internal Span (mm)	End Span (mm)	
0.30	0.35	1600	1400	1850	1700	100
0.35	0.40	1700	1500	1950	1800	100
0.40	0.47	1900	1650	2200	2000	150
0.48	0.53	2000	1750	2300	2300	250

RECOMMENDED MAXIMUM ROOF LENGTH (M)

Rainfall (mm/h)	Slope in Degree				
	3°	5°	7°	10°	15°
150	52	62	83	105	144
200	41	52	62	79	106
250	31	42	50	64	88
300	27	31	42	52	70
400	8	10	11	14	18

DETAILS TO SPEC IN BQ

[Thickness], "[Brand]", [Profile], [Material]

Example:

0.40mm TCT "Astino" Spandec 680 in Realcolor Cahaya Plus Z120 metal roofing sheet with approved colors; fixed to Astino GI Purlin (measured seperately) including all fixing accessories, capping, flashing and other fittings; all in accordance with Architect's / Engineers drawing, manufacturer's instruction and specification. (Up to 10 years warranty on perforation by corrosion).

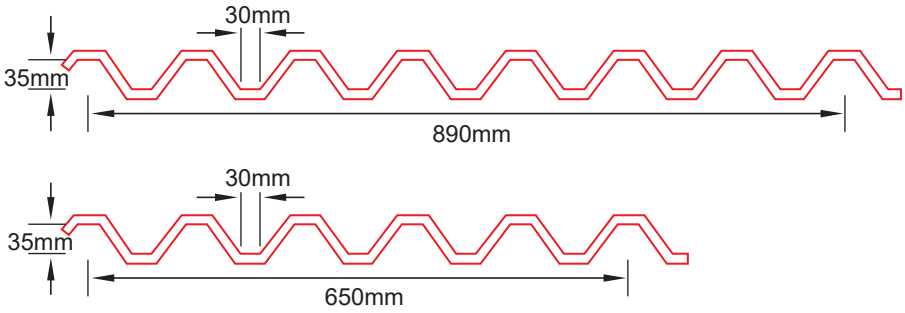
** Term & Condition apply*

Material	Coating	Thickness BMT	Warranty (Up to Years)			
			Perforation	Color Fade	Dirt Staining	Peel/Flake
CSC Realcolor Cahaya	Z080	≤ 0.300	5			
CSC Realcolor Cahaya Plus	Z120	≤ 0.349	10	5		
CSC Realcolor Primero	Z180	≥ 0.350	20	10		
CSC Realcolor Thermoshield	Z275	≥ 0.350	30	12	5	
CSC Realcolor Supreme	Z275	≥ 0.420	30	15		
BLUESCOPE Prima Maju	AZ100	≥ 0.350	15	5		5
BLUESCOPE Clean Colorbond Series	AZ150/AZ200	≥ 0.350	25	15	10	
BLUESCOPE Zincalume	Z150	≥ 0.350	25			

Astino® Spandec 35-650

Astino® Spandec 35-650 is a pierce-fastened roofing and walling system that is suitable for classical or modern architecture. It can be rollformed to fit building designs that are either pitched or sprung curved. Astino® Spandec 35-650 can also be sprung curved to accommodate large span roofs.

The high rib of Astino® Spandec 35-650 provides excellent stiffness and hence, optimises the purlins spanning capacity while reducing the amount of purlins used. Its on site rollforming option enables ease of installation and allows longer length to be produced and together with its fast and easy to installed therefore providing saving in construction time and installation coast.



PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	650 mm
Rib Height	35 mm
Recommended Minimum Roof Pitch	3°
Natural Sprung Curve	Minimum 18m Radius
Tolerance	Length ±15mm, Width ±5mm, Thickness ±0.03mm

THICKNESS AVAILABLE

Thickness BMT	Thickness TCT	Weight	
		(kg/m)	(kg/m²)
0.40	0.47	3.19	4.69
0.48	0.53	3.79	5.57

TABLE 1 - MAXIMUM ROOF SUPPORT SPACING

Type of Span	TCT (mm)	
	0.47	0.53
Single	Not suitable	1200
End Span	1500	1700
Internal Span	1900	2200
Unstiffened Overhang	130	150
Stiffened Overhang	250	300

TABLE 2 - MAXIMUM WALL SUPPORT SPACING

Type of Span	TCT (mm)	
	0.47	0.53
Single	3200	3200
End Span	3500	3500
Internal Span	4000	4000

* the above tables are based on supports of 1mm
* 0.53mm (TCT) are non-standard thickness
* these spacing may vary for particular, or areas of high wind speeds

TABLE 3 - WIND PRESSURE CAPACITIES (kPa)

Thickness TCT (mm)	Type of Span	Fasteners Per Sheet Per Support	Limit States	Span (mm)												
				900	1200	1500	1800	2100	2400	2700	3000	3300	3600	3900	4200	3300
0.47	Single	4	Serviceability Strength	3.84 5.90	3.20 4.90	2.60 4.10	2.06 3.10	1.58 2.40	1.20 1.85	0.90 1.45	0.70 1.25	0.54 1.10	0.41 1.08	- -	- -	- -
	End	4	Serviceability Strength	4.23 6.50	3.62 5.15	3.05 4.05	2.51 3.30	2.02 2.52	1.62 2.05	1.28 1.71	1.03 1.53	0.83 1.44	0.67 1.39	0.54 1.35	- -	- -
	Internal	4	Serviceability Strength	5.50 7.29	4.70 6.16	3.99 5.13	3.27 4.18	2.62 3.37	2.08 2.79	1.66 2.38	1.34 2.20	1.11 2.07	0.94 1.98	0.81 1.80	0.71 1.57	0.62 1.35

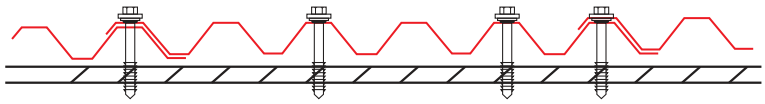
Thickness TCT (mm)	Type of Span	Fasteners Per Sheet Per Support	Limit States	Span (mm)												
				900	1200	1500	1800	2100	2400	2700	3000	3300	3600	3900	4200	3300
*0.53	Single	4	Serviceability Strength	4.27 6.60	3.56 5.50	2.89 4.60	2.29 3.50	1.76 2.70	1.33 2.10	1.00 1.65	0.77 1.40	0.60 1.25	0.46 1.20	- -	- -	- -
	End	4	Serviceability Strength	4.70 7.30	4.03 5.75	3.39 4.50	2.79 3.55	2.25 2.80	1.80 2.30	1.43 1.90	1.15 1.70	0.93 1.60	0.75 1.55	0.60 1.50	- -	- -
	Internal	4	Serviceability Strength	6.20 8.10	5.31 6.85	4.44 5.70	3.64 4.65	2.92 3.75	2.32 3.10	1.85 2.65	1.49 2.45	1.24 2.30	1.05 2.20	0.90 2.00	0.79 1.75	0.69 1.50

TABLE 4 - MAXIMUM ROOF RUN (in meter) FOR ROOF SLOPES AND RAINFALL INTENSITIES

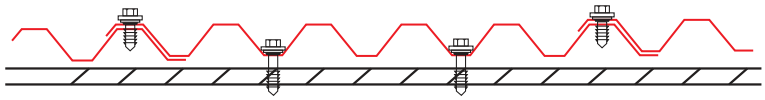
Rainfall (mm/h)	Span (mm)					
	2°	3°	4°	5°	7.5°	10°
150	120	140	155	172	187	210
200	90	105	117	129	140	170
250	72	83	93	103	112	130
300	60	70	78	86	93	110
400	45	51	58	64	70	80

* Depends on material availability

INSTALLATION PROCEDUCE



Crest Fastening (recommended for roofing)



Trough - Valley Fastening (recommended for walling)

DETAILS TO SPEC IN BQ

[Thickness], "[Brand]", [Profile], [Material]

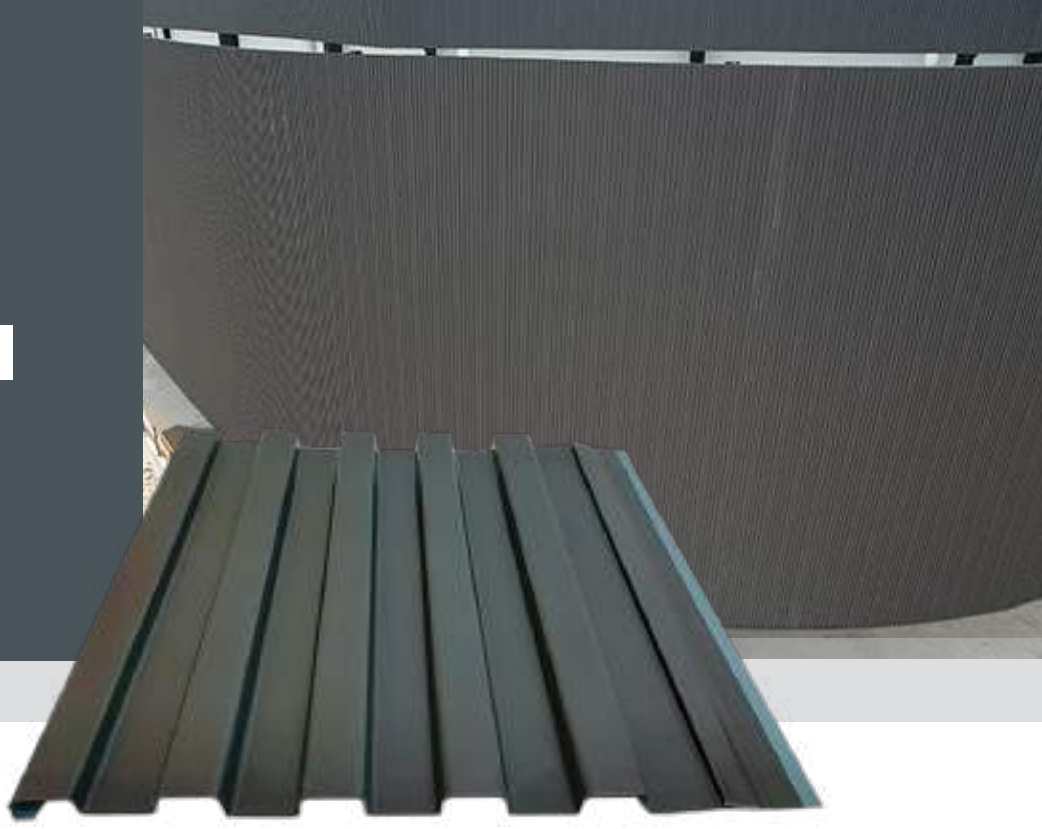
Example:

0.47mm TCT "Astino" Spandec 35-650/35-890 in Realcolor Primero Z180 metal roofing sheet with approved colors; fixed to Astino GI Purlin (measured seperately) including all fixing accessories, capping, flashing and other fittings; all in accordance with Architect's / Engineers drawing, manufacturer's instruction and specification. (Up to 20 years warranty on perforation by corrosion).

** Term & Condition apply*

Material	Coating	Thickness BMT	Warranty (Up to Years)			
			Perforation	Color Fade	Dirt Staining	Peel/Flake
CSC Realcolor Cahaya	Z080	≤ 0.300	5			
CSC Realcolor Cahaya Plus	Z120	≤ 0.349	10	5		
CSC Realcolor Primero	Z180	≥ 0.350	20	10		
CSC Realcolor Thermoshield	Z275	≥ 0.350	30	12	5	
CSC Realcolor Supreme	Z275	≥ 0.420	30	15		
BLUESCOPE Prima Maju	AZ100	≥ 0.350	15	5		5
BLUESCOPE Clean Colorbond Series	AZ150/AZ200	≥ 0.350	25	15	10	
BLUESCOPE Zincalume	Z150	≥ 0.350	25			

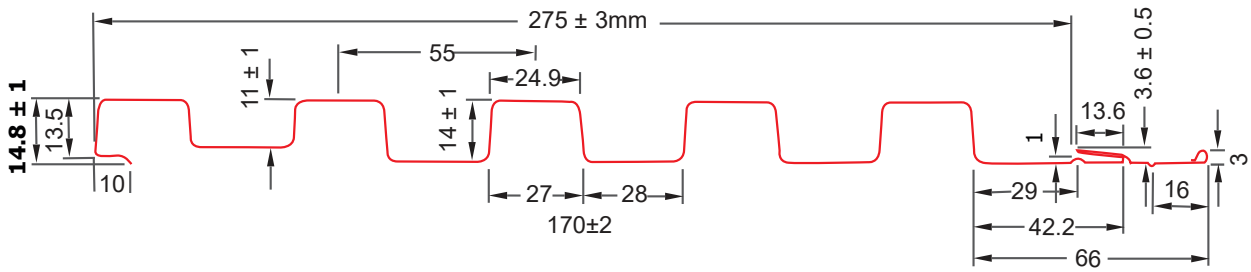
Astino®
AST Panel 275

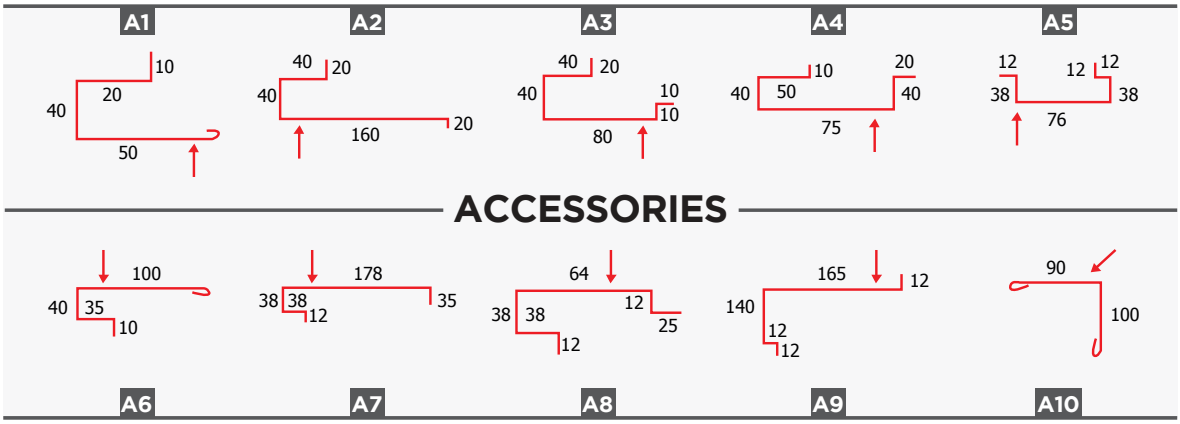


An Extremely Stylish Decorative Profile, Which Fits To Modern Design Application For Both Commercial And Residential Decoration Use. Our Ast Panel 275 Is An Excellent Choice To Enhance The Overall Appearance Which Can Be Installed Easily By Screwing In Vertically Or Horizontally And The Screws Are Hidden From Sight For Maintaining A Very Great Appearance. With Various Design Ideas And Applications, The Unique And Textured Appearance Of Ast Panel 275 Can Transform Your Working Or Living Spaces Into Sophisticated And Trendy Environments.

AST PANEL 275 offers a wider range of choice to our customers. Offering quality, enhancing the interior of a building to achieve a healthier and more aesthetically pleasing environment.

AST Panel 275





*All units are measured in mm

Stone Grey Texture

Off White

Volcanic Grey

PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	275mm
Rib Height	14.8mm
Finishing	Realcolor Cahaya, Realcolor Texture
Tolerance	Length ±2mm, Width ±3mm, Thickness ±0.03mm

THICKNESS AVAILABLE

Thickness BMT (mm)	Thickness TCT (mm)	Weight (kg/meter)
0.30	0.35	1.19
0.35	0.42	1.37

RECOMMENDED INSTALLATION SPECIFICATION

Thickness TCT (mm)	Recommended Max. Length (m)	Recommended Span (mm)
0.35	6.0	1200
0.42	10.00	1500

FEATURES

LIGHT WEIGHT

COST EFFECTIVE

EASY TO INSTALL

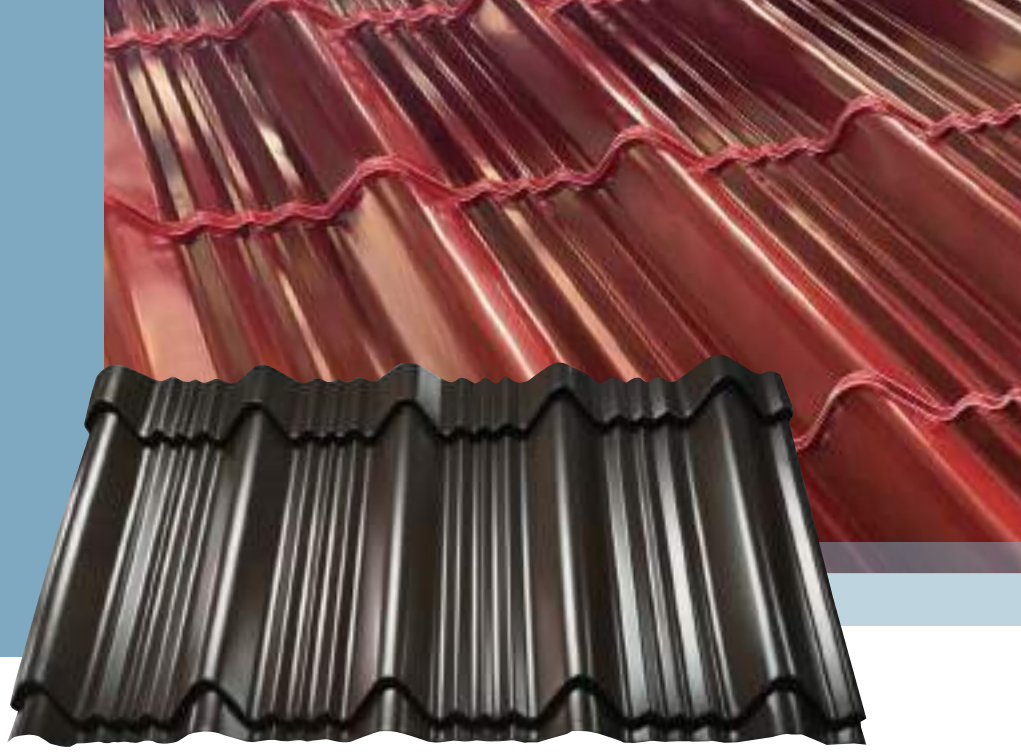
LOW MAINTENANCE

DURABILITY & STRENGHT

AST Panel 275

Astino® Rexy Bond

The Best Replacement for Traditional Clay Tiles



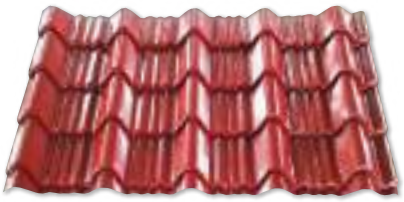
Astino® Rexy Bond is steel tile-shaped roofing profile that are elegantly beautifully designed which offer unsurpassed good looking to your building. It is extremely popular option in the market and ideally suited as the best replacement for traditional clay tites. Astino® Rexy Bond provides economical and attractive solution to your roofing needs that will transform the appearance of your buildings.

Astino® Rexy Bond is protected with corrosion inhibitive treatments and coating designed to provide broad spectrum of performance which minimized maintenance and extend durability.

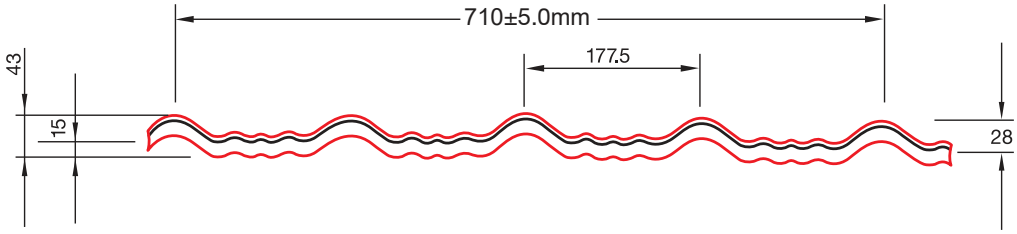
Astino® Rexy Bond can be manufactured according to the desired lengths, spans continuous from ridge to eave. Multiple end laps are eliminated thus no potential leakage and reduce materials wastage at end laps.

Astino® Rexy Bond

Rexy Bond Awning	***(4" / Step)***
Rexy Bond Fascia	***(8" / Step)***
Rexy Bond Step Roofing	***(12" / Step)***



Astino® Rexy Bond Awning



PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	710 mm
Rib Height	28 mm
Recommended Minimum Roof Pitch	15°
Tolerance	Length ±5mm, Width ±5mm, Thickness ±0.02mm

Rexy Bond

THICKNESS AVAILABLE

Thickness BMT	Thickness TCT	Weight	
		(kg/m)	(kg/m²)
0.25	0.30	2.195	3.09
0.30	0.35	0.578	3.63
0.35	0.40	3.125	4.40
0.40	0.47	3.429	4.83
0.48	0.53	3.877	5.46

RECOMMENDATIONS

The minimum recommended roof pitch is 15°

Batten Spacing:
Internal Support - 610mm Max
End Support - 305 Max

AVAILABLE LENGTH

Custom cut length available according to order.

PACKING

Astino step roofing sheets are stacked sheet to sheet. The top and bottom are protected with timbers. The number of sheets in each pack depends on roofing thickness and length. Quantities per pack are reduced for exceptional long roofing sheets. Maximum pack weight is 1500kg or to the maximum of 150 sheets per pack.

-The table below show as a guide of packing.

NO OF SHEET PER PACK (Max)

Thickness TCT (mm)	Slope in Degree										
	10	12	14	16	18	20	22	24	26	28	30
0.30	60	60	60	60	60	60	60	50	50	50	50
0.35	60	60	60	60	60	60	60	50	50	50	50
0.40	40	40	40	40	40	40	40	40	40	40	40
0.47	40	40	40	40	40	40	40	40	40	40	40
0.53	35	35	35	35	35	35	35	35	35	35	35

Special packing with hard cover paper or polyethylene sheet available upon requested.

DETAILS TO SPEC IN BQ

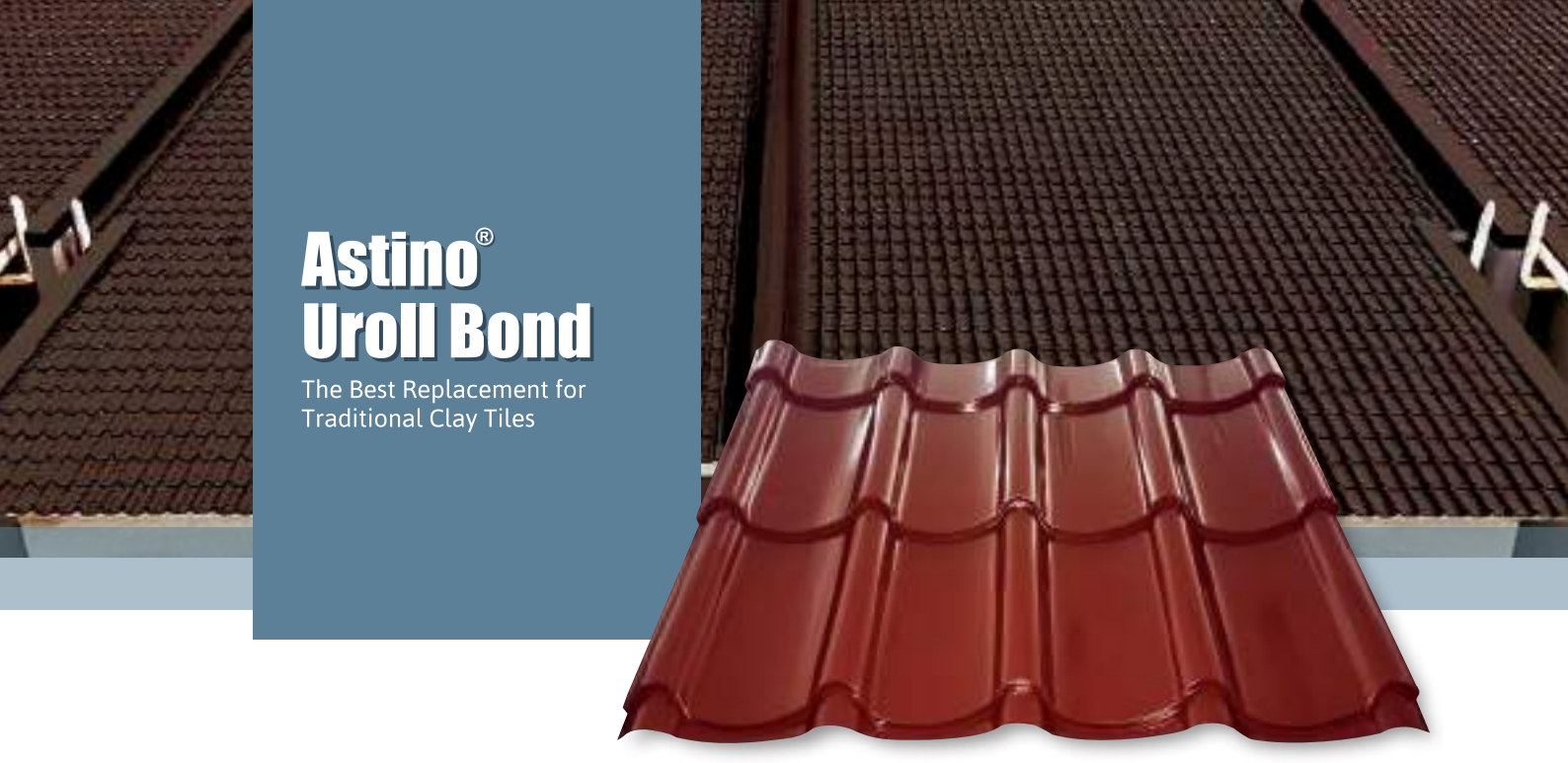
[Thickness], "[Brand]", [Profile], [Material]

Example:

0.47mm TCT "Astino" Rexy Bond in Realcolor Primero Z180 metal roofing sheet with approved colors; fixed to Astino GI Purlin (measured seperately) including all fixing accessories, capping, flashing and other fittings; all in accordance with Architect's / Engineers drawing, manufacturer's instruction and specification. (Up to 20 years warranty on perforation by corrosion).

** Term & Condition apply*

Material	Coating	Thickness BMT	Warranty (Up to Years)			
			Perforation	Color Fade	Dirt Staining	Peel/Flake
CSC Realcolor Cahaya	Z080	≤ 0.300	5			
CSC Realcolor Cahaya Plus	Z120	≤ 0.349	10	5		
CSC Realcolor Primero	Z180	≥ 0.350	20	10		
CSC Realcolor Thermoshield	Z275	≥ 0.350	30	12	5	
CSC Realcolor Supreme	Z275	≥ 0.420	30	15		
BLUESCOPE Prima Maju	AZ100	≥ 0.350	15	5		5
BLUESCOPE Clean Colorbond Series	AZ150/AZ200	≥ 0.350	25	15	10	
BLUESCOPE Zincalume	Z150	≥ 0.350	25			



Astino® Uroll Bond

The Best Replacement for Traditional Clay Tiles

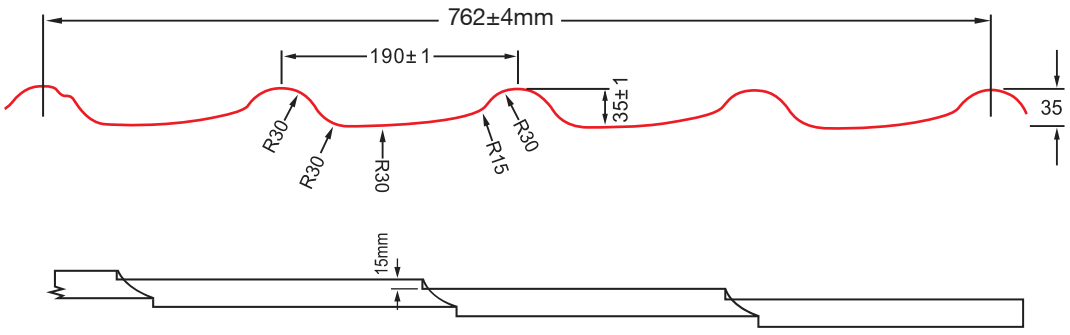
Astino® Uroll Bond is an architect and designer recognizes steel-tiled roofing as a way to enhance the aesthetic appearance of any commercial or residential projects. It is ideally suited as the best replacement for traditional clay tiles.

Astino® Uroll Bond can be manufactured according to desired lengths spans continuous from ridge to eave. Multiple end laps are eliminated thus no potential leakage and reduce materials wastage at end laps.

Astino® Uroll Bond

Uroll Bond Awning	***(4" / Step)***
Uroll Bond Fascia	***(8" / Step)***
Uroll Bond Step Roofing	***(12" / Step)***

Astino® Uroll Bond Awning



PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	762 mm
Rib Height	35 mm
Recommended Minimum Roof Pitch	15°
Tolerance	Length ±5mm, Width ±5mm, Thickness ±0.03mm

Uroll Bond Series

THICKNESS AVAILABLE

Thickness BMT	Thickness TCT	Weight	
		(kg/m)	(kg/m²)
0.25	0.30	1.91	2.51
0.30	0.35	2.32	3.04
0.35	0.40	2.70	3.54
0.40	0.47	3.18	4.18

WIND CAPACITY LOAD SPAN TABLE

Thickness BMT (mm)	Thickness TCT (mm)	Uniformly Distributed Load (kN/m²) Span L (m)					
		0.6	0.9	1.2	1.5	1.8	2.1
0.30	0.35	3.46	2.05	0.90	0.40	0.32	0.26
0.35	0.40	3.99	2.53	1.38	0.88	0.61	0.45
0.40	0.47	4.57	3.11	1.96	1.46	0.76	0.59

MAXIMUM RECOMMENDED SUPPORT SPACING

Thickness BMT (mm)	Thickness TCT (mm)	Roof		Wall		Overhang (mm)
		Internal Span (mm)	End Span (mm)	Internal Span (mm)	End Span (mm)	
0.30	0.35	1150	1000	1850	1500	50
0.35	0.40	1320	1120	2010	1800	50
0.40	0.47	1900	1400	3200	2450	125

DETAILS TO SPEC IN BQ

[Thickness], "[Brand]", [Profile], [Material]

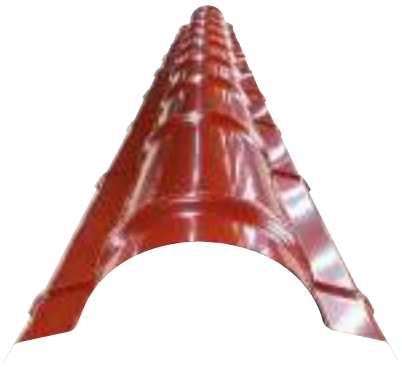
Example:

0.47mm TCT "Astino" Uroll Bond in Realcolor Primero Z180 metal roofing sheet with approved colors; fixed to Astino GI Purlin (measured seperately) including all fixing accessories, capping, flashing and other fittings; all in accordance with Architect's / Engineers drawing, manufacturer's instruction and specification. (Up to 20 years warranty on perforation by corrosion).

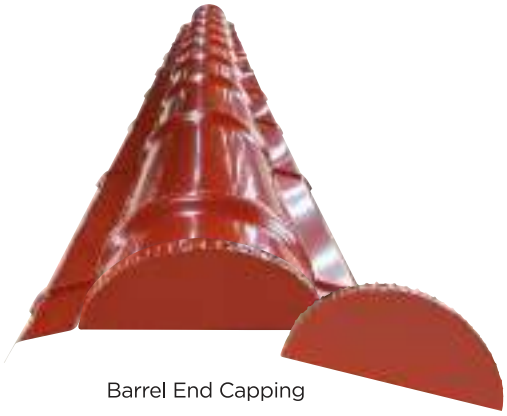
** Term & Condition apply*

Material	Coating	Thickness BMT	Warranty (Up to Years)			
			Perforation	Color Fade	Dirt Staining	Peel/Flake
CSC Realcolor Cahaya	Z080	≤ 0.300	5			
CSC Realcolor Cahaya Plus	Z120	≤ 0.349	10	5		
CSC Realcolor Primero	Z180	≥ 0.350	20	10		
CSC Realcolor Thermoshield	Z275	≥ 0.350	30	12	5	
CSC Realcolor Supreme	Z275	≥ 0.420	30	15		
BLUESCOPE Prima Maju	AZ100	≥ 0.350	15	5		5
BLUESCOPE Clean Colorbond Series	AZ150/AZ200	≥ 0.350	25	15	10	
BLUESCOPE Zincalume	Z150	≥ 0.350	25			

ACCESSORIES



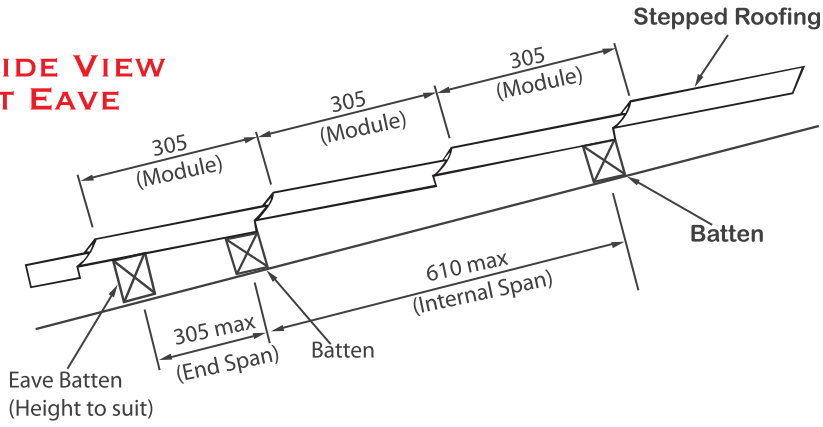
Barrel Ridge Capping



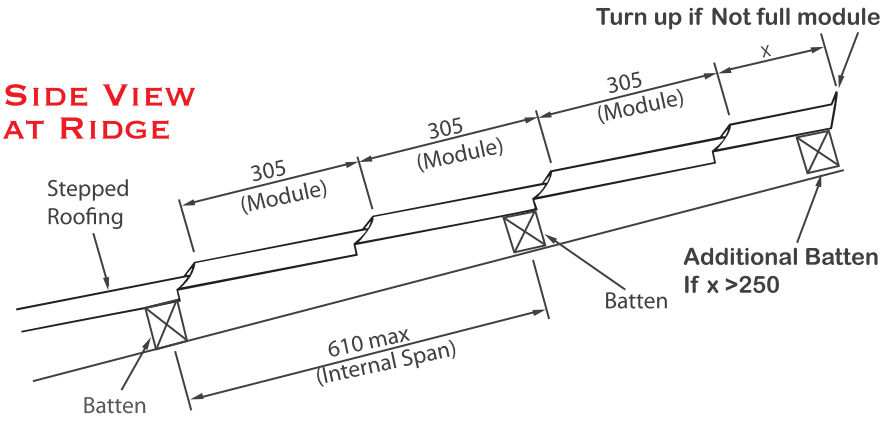
Barrel End Capping

SECTIONAL DRAWINGS

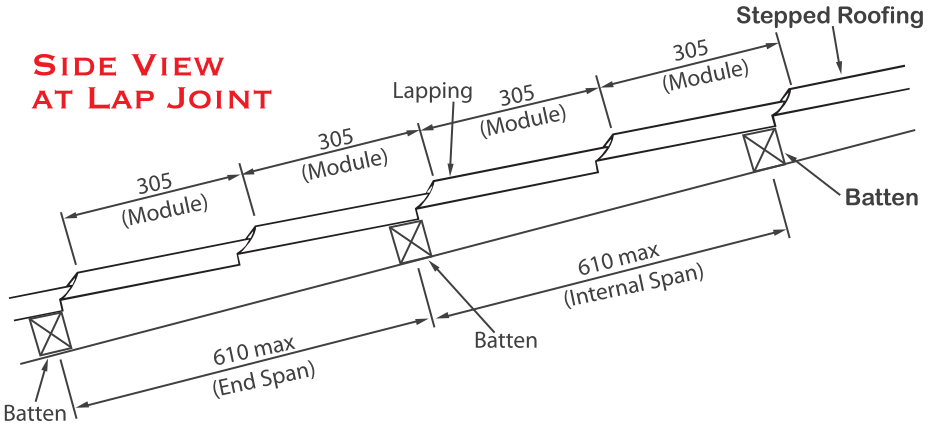
SIDE VIEW AT EAVE



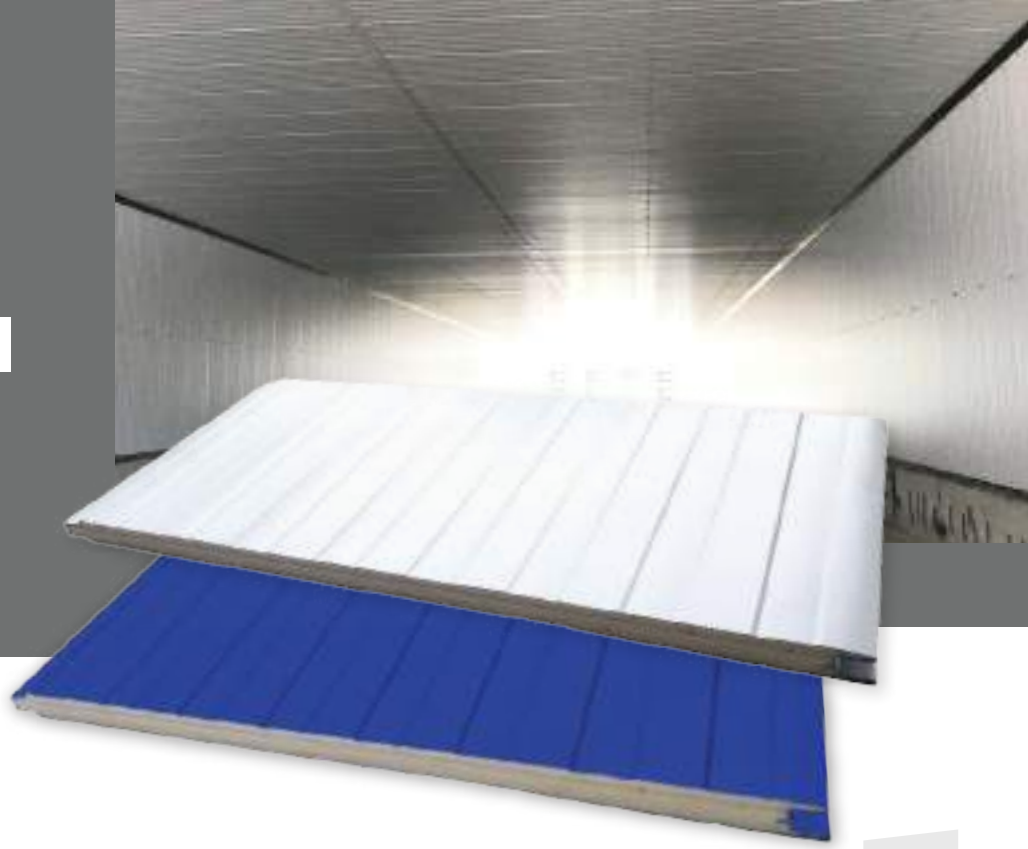
SIDE VIEW AT RIDGE

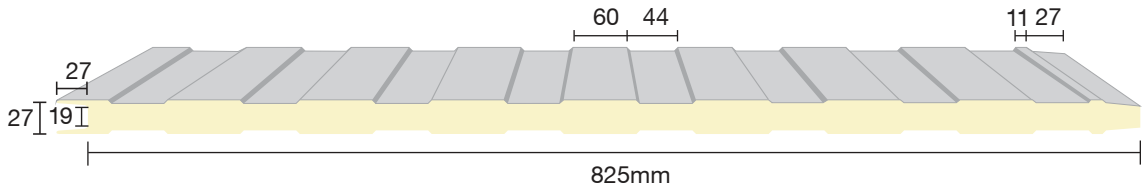


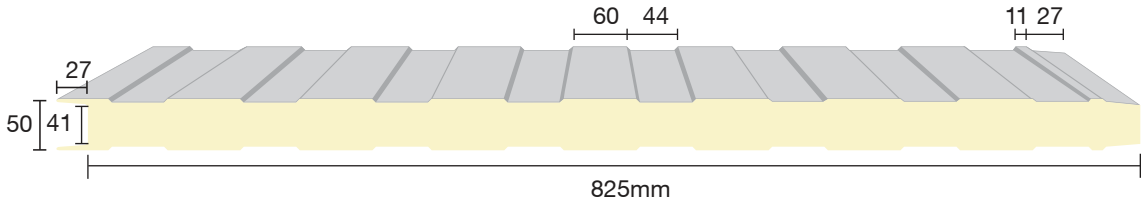
SIDE VIEW AT LAP JOINT



Astino® Wall Panel







**All units are measured in mm*

PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	825mm
PU Foam Thickness	27mm / 50mm
Standard Length	Minimum Length 1.2m / Maximum Length 9m
Overall Density	38 - 42kg/m³
Thermal Conductivity	0.025 - 0.027 W/mK@20°C
Closed Cell Content	>90%
Tolerance	Length ±5mm, Width ±5mm, Thickness ±0.03mm PU Thickness ±3mm

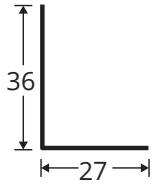
THICKNESS AVAILABLE

Thickness TCT			
0.30	0.35	0.40	0.47

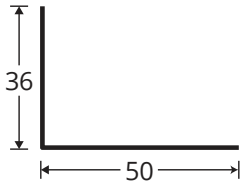
Wall Panel/Ceiling Panel

ACCESSORIES

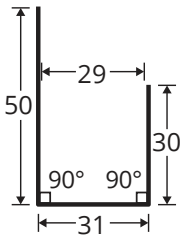
L Capping - Wall Panel 27mm



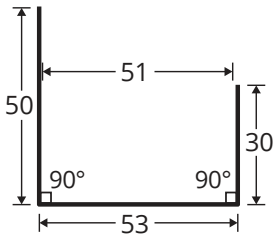
L Capping - Wall Panel 50mm

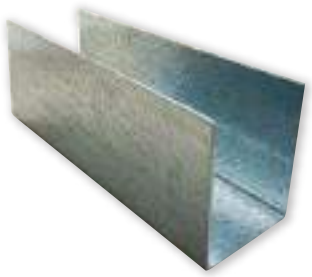


U Capping - Wall Panel 27mm



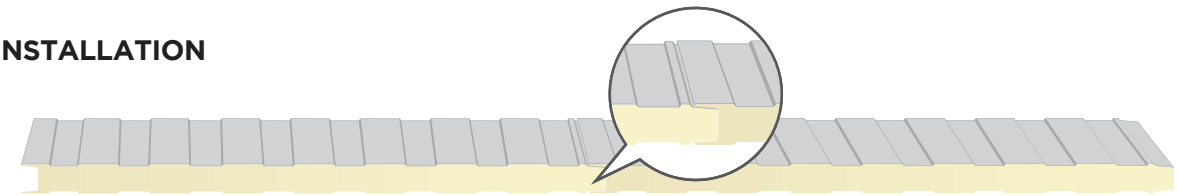
U Capping - Wall Panel 50mm



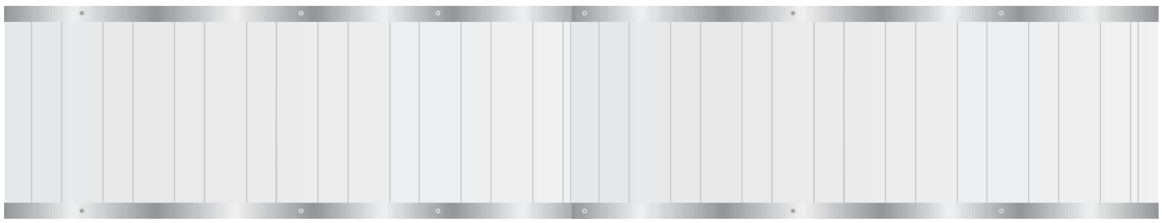


** All units are measured in mm*
** Any special sizes will customize on request*

INSTALLATION



by side view



by front view

Wall Penal/Ceiling Panel

Astino® Bondeck 680

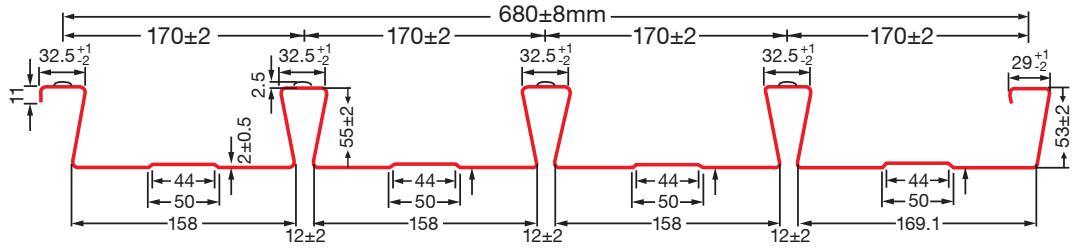
Astino® Bondeck 680 Structural steel decking is an efficient, versatile and robust structural decking and ceiling system for concrete slabs. It is a highly regarded formwork product offering efficiency and speed of construction. The steel conforms to AS 1397 and grade G550.

The features and advantages of using Bondeck 680 are:

- Quick and easy construction
- Safe working platform
- High structural efficiency due to high strength steel used
- Stiffens supporting frame in tall steel buildings
- Excellent spanning capacities for greater strength and less deflection
- Acts as a permanent formwork with minimal propping and no stripping of formwork face is required
- Works as composite slab saving on concrete and reinforcement costs
- Advanced design for fire resistance
- Can be used on steelwork, concrete, block work and masonry structures
- Backed by supplier's warranty

BONDECK 680 is recommended to be used for:

- Concrete frame building
- Residential construction
- Multi-level car parks and multi-storey building
- Commercial building
- Shopping Centre
- Storage Levels



Bondeck 680

MATERIAL SPECIFICATIONS

ITEM	SPECIFICATION
Steel Grade	AS 1397
Yield Stress	Minimum 550 Mpa
Zinc Coating	120g/m² / 275g/m² coating mass (including both sides)

PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION
Effective Width	680mm
Rib Height	55mm
Yield Stress	550 Mpa
Tolerance	Length ±5 mm, Width ±5 mm, Thickness ±0.03 mm

THICKNESS AVAILABLE

Thickness (mm)	Weight (kg/m²)
0.75	12.11
0.80	12.92
1.00	16.15
1.20	19.37

SLAB THICKNESS (mm)		IMPOSED LOAD, Q											
		0.75mm			0.80mm			1.00mm			1.20mm		
		3.50	5.00	10.00	3.50	5.00	10.00	3.50	5.00	10.00	3.50	5.00	10.00
Single Span	100	1.90	2.00	2.00	1.90	2.10	2.10	2.20	2.20	2.20	2.60	2.50	2.40
	120	1.90	1.90	1.90	2.00	2.00	2.00	2.10	2.10	2.10	2.50	2.30	2.30
	130	1.90	1.90	1.90	2.00	2.00	2.00	2.10	2.10	2.10	2.40	2.30	2.20
	150	1.90	1.90	1.90	2.00	1.90	1.90	2.00	2.00	2.00	2.30	2.30	2.20
	200	1.80	1.80	1.80	1.90	1.90	1.90	1.90	1.90	1.90	2.20	2.00	2.00
	240	1.70	1.70	1.70	1.80	1.80	1.80	1.90	1.90	1.90	2.00	1.90	1.90
Double Span	100	2.00	2.00	2.00	2.10	2.10	2.10	2.50	2.50	2.50	2.90	2.80	2.60
	120	1.90	1.90	1.90	2.00	2.00	2.00	2.40	2.40	2.40	2.70	2.60	2.50
	130	1.90	1.90	1.90	2.00	2.00	2.00	2.30	2.30	2.30	2.60	2.60	2.50
	150	1.90	1.90	1.90	1.90	1.90	1.90	2.20	2.20	2.20	2.50	2.50	2.40
	200	1.80	1.80	1.80	1.90	1.90	1.90	2.00	2.00	2.00	2.30	2.30	2.20
	240	1.70	1.70	1.70	1.80	1.80	1.80	1.90	1.90	1.90	2.20	2.10	2.10
Single Span (1 PROP)	100	2.80	2.60	2.10	2.90	2.70	2.20	3.00	2.90	2.40	3.20	3.00	2.50
	120	2.70	2.50	2.10	2.80	2.60	2.20	2.90	2.80	2.30	3.10	2.90	2.50
	130	2.70	2.50	2.10	2.80	2.60	2.20	2.90	2.80	2.30	3.10	2.90	2.50
	150	2.70	2.50	2.00	2.80	2.60	2.10	2.90	2.70	2.20	3.00	2.90	2.40
	200	2.60	2.30	2.00	2.70	2.40	2.10	2.80	2.60	2.20	2.90	2.80	2.40
	240	2.50	2.30	2.00	2.60	2.40	2.10	2.60	2.50	2.20	2.80	2.70	2.30
Double Span (1 PROP)	100	3.10	2.90	2.30	3.20	2.90	2.40	3.50	3.10	2.60	3.80	3.30	2.80
	120	3.00	2.80	2.30	3.10	2.90	2.40	2.40	3.00	2.60	3.70	3.30	2.70
	130	3.00	2.80	2.30	3.10	2.90	2.40	2.40	2.90	2.50	3.60	3.20	2.70
	150	2.90	2.70	2.30	3.00	2.80	2.40	2.30	2.90	2.50	3.50	3.20	2.70
	200	2.80	2.60	2.20	2.90	2.70	2.30	2.20	2.80	2.40	3.30	3.00	2.60
	240	2.70	2.50	2.10	2.80	2.60	2.30	2.10	2.70	2.40	3.10	2.90	2.50

SPECIFICATIONS

Thickness (mm)	G.I Coating	Weight (km/m^2)	Steel Area	Second Moment of Area, Ixx (mm^4/m)	Elastic Modulus, Zxx (mm^3/m)
0.75	275.00	12.11	1320.43	$59.16x10^4$	$15.25x10^3$
0.80	275.00	12.92	1408.58	$63.09x10^4$	$16.25x10^3$
1.00	275.00	16.15	1760.25	$78.80x10^4$	$20.23x10^3$
1.20	275.00	19.37	2111.74	$94.50x10^4$	$24.17x10^3$

FORMWORK/SHUTTERING/SLAB SPAN TABLE

Bondeck 680 sheets continuous over single span slab
Formwork deflection limit L/240 (or<30mm) visual appearance important

Slab Depth D (mm)	0.75 BONDECK 680 No of Props per span			0.80 BONDECK 680 No of Props per span			1.00 BONDECK 680 No of Props per span			1.20 BONDECK 680 No of Props per span		
	0	1	2	0	1	2	0	1	2	0	1	2
100	2250	6350	8850	2300	6400	8900	2500	7000	9250	2600	7600	10100
110	2250	6300	8600	2300	6350	8650	2350	6850	9100	2500	7400	9850
120	2100	6050	8350	2150	6100	8400	2350	6600	9000	2500	7100	9600
130	2100	5850	8250	2150	5900	8300	2250	6500	8750	2350	7000	9350
140	2000	5750	8000	2050	5800	8000	2250	6350	8600	2350	6850	9250
150	2000	5600	7750	2050	5650	7800	2100	6250	8250	2250	6750	8850
160	1850	5500	7500	1900	5550	7550	2100	6100	8100	2250	6500	8750
170	1850	5500	7350	1900	5550	7400	2000	6000	7850	2100	6350	8500
180	1750	5350	7100	1800	5400	7150	2000	5850	7750	2100	6250	8250
190	1750	5100	7000	1800	5150	7000	1850	5750	7500	2000	6100	8000
200	1750	5000	6850	1800	5050	6900	1850	5600	7350	2000	6000	7850
210	1600	4850	6750	1650	4900	6800	1750	5500	7250	1850	5850	7750
220	1600	4850	6500	1650	4900	6550	1750	5500	7100	1850	5850	7600
230	1600	4750	6350	1650	4800	6400	1600	5250	7000	1750	5500	7500
240	1600	4600	6250	1650	4650	6300	1600	5250	6850	1750	5500	7350
250	1500	4500	6100	1550	4550	6150	1600	5100	6750	1750	5500	7250

Bondeck 680 sheets continuous over single span slab
Formwork deflection limit L/130 (or<30mm) visual appearance not important

Slab Depth D (mm)	0.75 BONDECK 680 No of Props per span			0.80 BONDECK 680 No of Props per span			1.00 BONDECK 680 No of Props per span			1.20 BONDECK 680 No of Props per span		
	0	1	2	0	1	2	0	1	2	0	1	2
100	2750	6400	9600	2800	6500	9650	3000	8350	10850	3250	9000	11600
110	2600	6300	9500	2650	6350	9550	2850	8100	10850	3000	8750	11600
120	2600	6150	9250	2650	6250	9300	2850	8000	10750	3000	8600	11500
130	2500	5800	9100	2550	5900	9150	2750	7750	10750	2850	8250	11500
140	2000	5750	8850	2550	5800	8900	2750	7500	10600	2850	8000	11350
150	2350	5750	8600	2400	5800	8650	2600	7350	10500	2750	7850	11250
160	2350	5550	8350	2400	5600	8400	2600	7250	10250	2750	7750	11050
170	2350	5400	8250	2400	5500	8300	2500	7100	10000	2600	7500	10800
180	2250	5400	8100	2300	5500	8150	2500	7000	9850	2600	7500	10600
190	2250	5250	7850	2300	5300	7900	2350	6750	9750	2500	7250	10500
200	2100	5100	7750	2150	5150	7800	2350	6600	9600	2500	7100	10250
210	2100	5000	7750	2150	5050	7800	2350	6600	9500	2500	7100	10100
220	2100	4850	7500	2150	4900	7550	2250	6500	9350	2350	6850	10000
230	2100	4850	7350	2150	4900	7400	2250	6350	9250	2350	6850	9850
240	2000	4750	7250	2050	4800	7300	2250	6250	9100	2350	6600	9750
250	2000	4750	7250	2050	4800	7300	2250	6100	9000	2350	6500	9600

FORMWORK/SHUTTERING/SLAB SPAN TABLE

Bondeck 680 sheets continuous over two slab
Formwork deflection limit L/240 (or<30mm) visual appearance important

Slab Depth D (mm)	0.75 BONDECK 680 No of Props per span			0.80 BONDECK 680 No of Props per span			1.00 BONDECK 680 No of Props per span			1.20 BONDECK 680 No of Props per span		
	0	1	2	0	1	2	0	1	2	0	1	2
100	2850	6000	9000	2900	6050	9050	3250	6750	10100	3500	7250	10850
110	2750	5900	8850	2800	5950	8900	3100	6500	9750	3350	7000	10500
120	2750	5750	8600	2800	5800	8650	3100	6350	9600	3350	6850	10350
130	2600	5500	8350	2650	5550	8400	3000	6100	9250	3100	6500	9850
140	2600	5350	8250	2650	5400	8300	2850	6000	9100	3000	6350	9750
150	2500	5250	8000	2550	5300	8050	2750	5850	8850	2850	6250	9500
160	2500	5100	7750	2550	5150	7800	2750	5750	8600	2850	6100	9250
170	2350	5000	7500	2400	5050	7550	2600	5600	8250	2750	6000	8850
180	2250	4850	7350	2300	4900	7400	2600	5500	8250	2750	5850	8850
190	2250	4750	7250	2300	4800	7300	2500	5250	8000	2600	5600	8600
200	2100	4600	7000	2150	4650	7050	2500	5250	7850	2600	5600	8500
210	2100	4500	6850	2150	4550	6900	2500	5000	7750	2600	5250	8250
220	2100	4500	6750	2150	4550	6800	2350	5000	7500	2500	5250	8000
230	2100	4350	6600	2150	4400	6650	2350	4850	7500	2500	5150	8000
240	2000	4350	6500	2050	4400	6550	2250	4850	7250	2350	5150	7750
250	2000	4250	6350	2050	4300	6400	2250	4750	7250	2350	5000	7750

Bondeck 680 sheets continuous over two slab
Formwork deflection limit L/130 (or<30mm) visual appearance not important

Slab Depth D (mm)	0.75 BONDECK 680 No of Props per span			0.80 BONDECK 680 No of Props per span			1.00 BONDECK 680 No of Props per span			1.20 BONDECK 680 No of Props per span		
	0	1	2	0	1	2	0	1	2	0	1	2
100	3100	6350	9600	3150	6400	9650	3850	8000	10850	4100	8600	11750
110	3100	6250	9500	3150	6300	9550	3750	7750	10850	4000	8250	11750
120	3000	6100	9100	3050	6150	9150	3600	7600	10850	3850	8100	11750
130	2850	5850	9000	2900	5900	9050	3500	7350	10850	3750	7850	11750
140	2850	5850	8750	2900	5900	8800	3500	7250	10850	3750	7750	11750
150	2750	5750	8500	2800	5800	8550	3350	7100	10750	3600	7600	11500
160	2750	5500	8350	2800	5550	8400	3350	7000	10500	3600	7500	11250
170	2600	5500	8250	2650	5550	8300	3250	6850	10350	3500	7350	11250
180	2600	5350	8100	2650	5400	8150	3250	6750	10100	3500	7250	10850
190	2500	5250	7850	2550	5300	7900	3100	6600	10000	3350	7100	10750
200	2500	5100	7750	2550	5150	7800	3100	6500	9850	3350	7000	10600
210	2500	5100	7750	2550	5150	7800	3100	6350	9600	3350	6850	10350
220	2350	5000	7500	2400	5050	7550	3000	6250	9600	3100	6750	10350
230	2350	5000	7350	2400	5050	7400	3000	6250	9500	3100	6750	10250
240	2350	4850	7250	2400	4900	7300	3000	6100	9250	3100	6500	9850
250	2350	4750	7250	2400	4800	7300	2850	6100	9100	3000	6500	9750

FORMWORK/SHUTTERING/SLAB SPAN TABLE

Bondeck 680 sheets continuous over three or more slab span
Formwork deflection limit L/240 (or<30mm) visual appearance important

Slab Depth D (mm)	0.75 BONDECK 680 No of Props per span			0.80 BONDECK 680 No of Props per span			1.00 BONDECK 680 No of Props per span			1.20 BONDECK 680 No of Props per span		
	0	1	2	0	1	2	0	1	2	0	1	2
100	3100	6000	9100	3150	6050	9150	3500	6750	10000	3750	7250	10850
110	3100	5850	8850	3150	5900	8900	3350	6500	9750	3600	7000	10500
120	3000	5750	8600	3050	5800	8650	3250	6350	9600	3500	6850	10350
130	2850	5500	8350	2900	5550	8400	3250	6100	9250	3500	6500	9850
140	2850	5500	8250	2900	5550	8300	3100	6000	9100	3350	6350	9750
150	2750	5250	8000	2800	5300	8050	3100	5850	8850	3350	6250	9500
160	2600	5100	7750	2650	5150	7800	3000	5750	8600	3100	6100	9250
170	2600	5000	7500	2650	5050	7550	3000	5600	8350	3100	6000	9000
180	2500	4850	7350	2550	4900	7400	2850	5500	8250	3000	5850	8850
190	2500	4750	7250	2550	4800	7300	2850	5350	8000	3000	5750	8600
200	2350	4600	7100	2400	4650	7150	2750	5250	7850	2850	5600	8500
210	2350	4500	6850	2400	4550	6900	2600	5100	7750	2750	5500	8250
220	2250	4500	6750	2300	4550	6800	2600	5000	7500	2750	5350	8000
230	2250	4350	6600	2300	4400	6650	2500	5000	7500	2500	5350	8000
240	2250	4250	6500	2300	4300	6550	2500	4850	7250	2500	5250	7750
250	2250	4250a	6350aav	2300	4300	6400	2500	4750	7250	2500	5000	7750

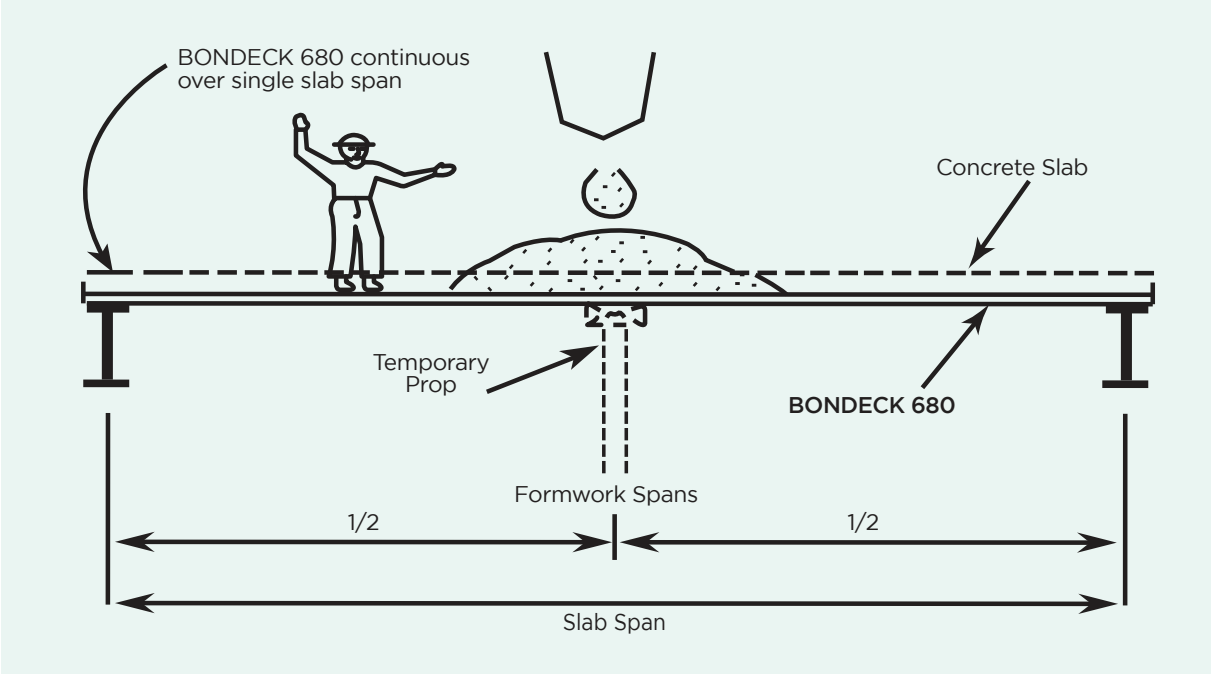
Bondeck 680 sheets continuous over three or more span slab
Formwork deflection limit L/130 (or<30mm) visual appearance not important

Slab Depth D (mm)	0.75 BONDECK 680 No of Props per span			0.80 BONDECK 680 No of Props per span			1.00 BONDECK 680 No of Props per span			1.20 BONDECK 680 No of Props per span		
	0	1	2	0	1	2	0	1	2	0	1	2
100	3050	5950	9050	3100	6000	9100	3450	6700	9950	3700	7200	10750
110	3050	5800	8800	3100	5850	8850	3300	6450	9700	3550	6950	10400
120	2950	5700	8550	3000	5750	8600	3200	6300	9550	3450	6800	10250
130	2800	5450	8300	2850	5500	8350	3200	6050	9200	3450	6450	9800
140	2800	5450	8200	2850	5500	8250	3050	5950	9050	3300	6300	9700
150	2700	5200	7950	2750	5250	8000	3050	5800	8800	3300	6200	9450
160	2550	5050	7700	2600	5100	7750	2950	5700	8550	3050	6050	9200
170	2550	4950	7450	2600	5000	7500	2950	5550	8300	3050	5950	8950
180	2450	4800	7300	2500	4850	7350	2800	5450	8200	2950	5800	8800
190	2450	4700	7200	2500	4750	7250	2800	5300	7950	2950	5700	8550
200	2300	4550	7050	2350	4600	7100	2700	5200	7800	2800	5550	8450
210	2300	4450	6800	2350	4500	6850	2550	5050	7700	2700	5450	8200
220	2200	4450	6700	2250	4500	6750	2550	4950	7450	2700	5300	7950
230	2200	4300	6550	2250	4350	6600	2450	4950	7450	2450	5300	7950
240	2200	4200	6450	2250	4250	6500	2450	4800	7200	2450	5200	7700
250	2200	4200	6300	2250	4250	6350	2450	4700	7200	2450	4950	7700

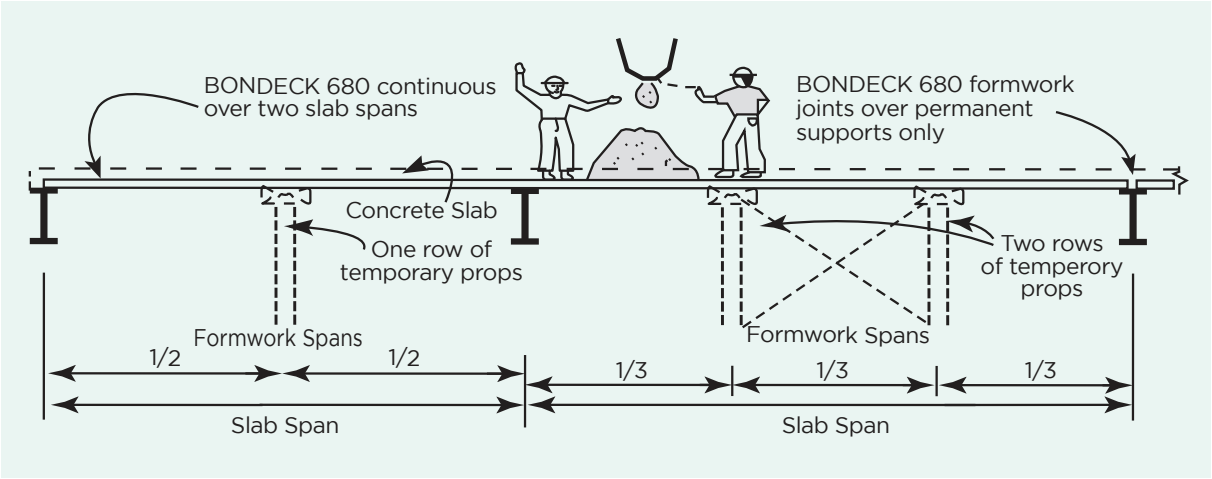
NOTE: The spanning table above are based on the following assumptions and constraints:

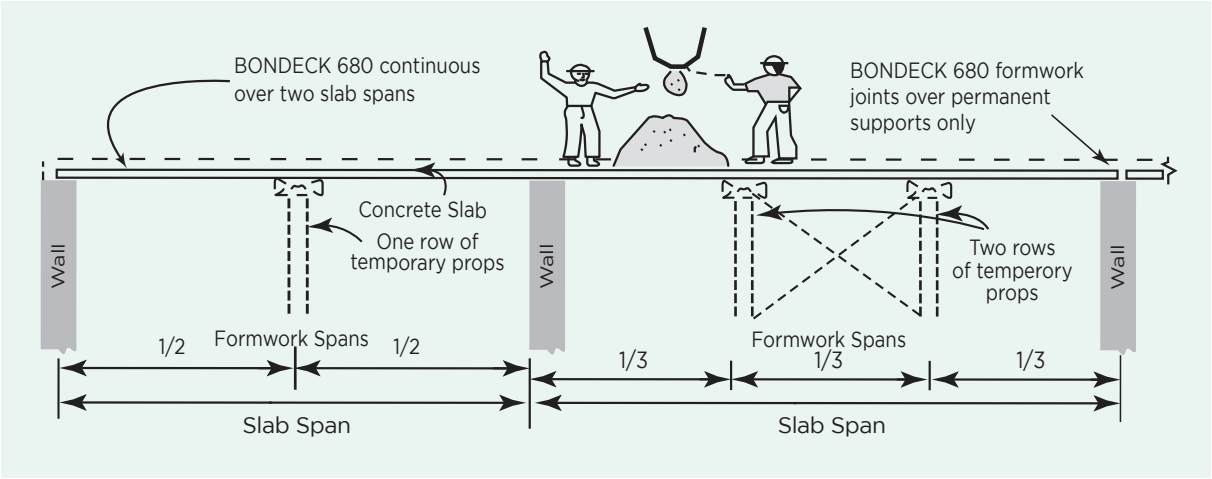
1. Density of concrete is assumed at 2400kg/m³.
2. The sheets shall be fully supported across the full width and shall have a minimum bearing 50mm at the end of the sheets and 100mm at intermediate support over which sheeting is continuous.
3. Construction load of 1.5kPa is assumed.
4. Deflection limit of Span/130.

Bondeck 680 sheets continuous over single slab span.



BONDECK 680 sheets continuous over 2 slab spans.



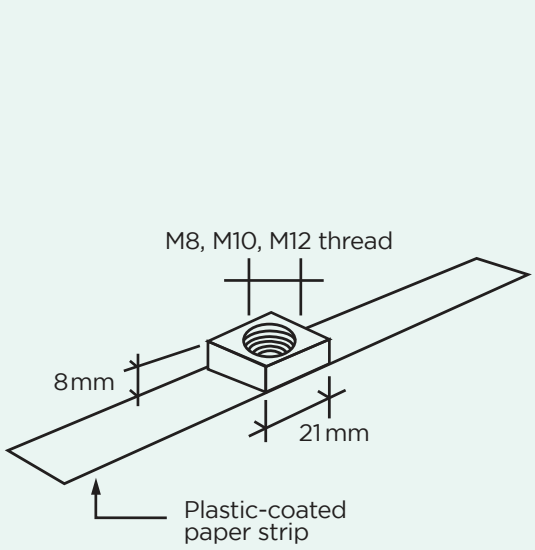


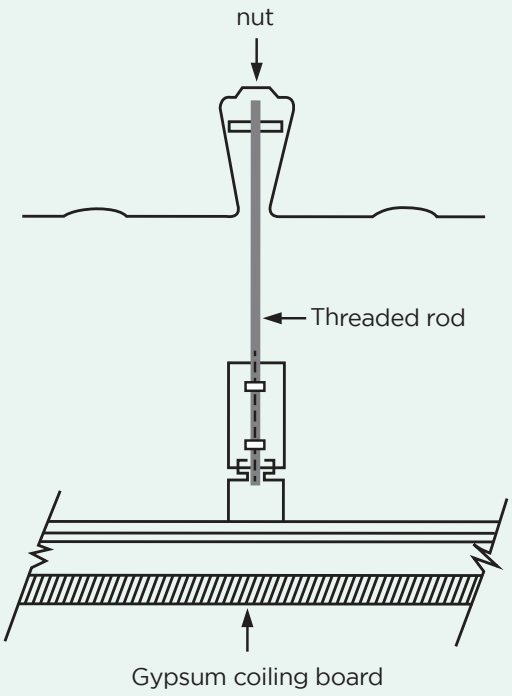
CEILING SUSPENSION SYSTEM

A heavy duty square nut adhered to a paper strip to allow easy insertion from below into Astino Bondeck 680. Threaded rods may be then screws into Bondeck 680 and locked into position.

The nut is available in three convenient thread sizes (M8, M10 and M12), and may be used to support threaded rods for various services and suspended ceilings.

BONDECK 680 (mm)	Service Load (Kn)
0.75	4.0
0.80	4.3
1.00	6.5
1.20	7.5





Bondeck 680

SAFETY

Bondeck 680 is available in long length, so large areas can be quickly and easily covered to form a safe working platform during construction. This formwork gives immediate protection from weather, and safe to people working on the floor below.

PROPPING

Temporary propping may be needed between the slab supports to prevent excessive deflections or collapse of the formwork.

Bondeck 680 formwork is normally placed directly on prepared propping. Props must stay in place during the laying of Bondeck 680 formwork, the placement of the concrete, and until the concrete has reached the strength of 20 MPa.

Propping generally consists of substantial timber or steel bearers supported by vertical props. The bearers must be continuous across the full width of Bondeck 680 formwork.

INTERLOCKING THE SHEETS

Overlapping ribs of Bondeck 680 sheeting are interlocked. Either of two methods can be used in most situations, though variations may also work.

In the first method, lay adjacent sheets loosely in place. Place the female lap rib overlapping the male lap rib of the previous sheet and apply foot pressure, or a light kick, to the female lap rib.

In the second method, offer a new sheet at an angle to one previously laid, and then simply lower it down, through an arc. If sheets don't interlock neatly (perhaps due to some damage or distortion from site handling or construction practices) use screws to pull the laps together tightly.

FASTENERS AND LOCATIONS

Bondeck 680 sheeting must be positively fixed to the supporting structure in order to avoid movement and excessive deflection during the pouring of concrete.

When fixing to a steelwork support structure, spot welds, shot fired pins or self-drilling/ tapping fasteners should be used.

STORAGE AND HANDLING

Bondeck 680 panels are delivered to site in straped bundles. Bundles should be neatly stacked with a slight slope to allow drainage of water and protected by waterproof covers if not immediately used. Ensures no water to be trapped between panels.

CONCRETE PLACING

Concrete should be poured in the same direction as the span of the decking and placed first over the supports where the decking is continuous, followed by the mid span region and finally the areas above the end supports.

When concrete is being poured transversely to the decking ribs, it should be placed first at the edge where a decking sheet is supported by the under lap of an adjacent sheet. This will ensure the longitudinal seams between sheets remain closed.

When a steel deck composite slab is to be poured in conjunction with a band beam, Contractors need to ensure that the temporary ply is positioned.

LAYING

Bondeck 680 must be laid with the sheeting ribs aligned in the direction of the designed spans. Other details include the following:

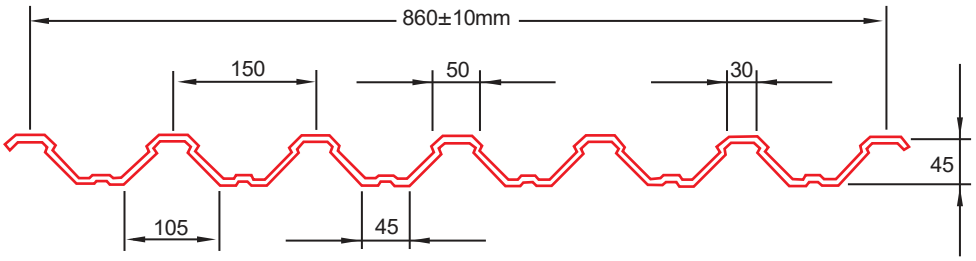
- The slab supports must be prepared for bearing and slip joints as required.
- Lay Bondeck 680 sheets continuously over each slab span without any intermediate splicing or jointing.
- Lay Bondeck 680 sheets end to end. Centralise the joint at the slab supports. Where jointing material iss required the sheets may be butted against the jointing material.
- Support Bondeck 680 sheets across their full width at the slab support lines and at the propping support lines.
- For the supports to carry the wet concrete and construction loads, the minimum bearing is 50mm for ends of Bondeck 680 sheets, and 100mm for intermediate supports over which the sheeting is continuous.
- In exposed applications, treat the end and edges of the Bondeck 680 sheets with a suitable edge treatment to prevent entry of moisture.

Astino® Super Power Floor Deck

The New Benchmark for Shallow Slab Construction

Astino® Super Power Floor Deck is a new generation of steel composite decking that offers minimized concrete volumes, and set new benchmarks for shallow slab construction efficiencies.

Astino® Super Power Floor Deck is structurally efficient profile providing an excellent composite union between steel and concrete to maximize the load carrying capacity. The efficient shape of the deck make it an excellent choice for composite slab construction.



QUICKER INSTALLATION

No temporary supports are required under most condition.

PROVEN ECONOMICAL CONSTRUCTION

Super Power Floor Deck is fast to construct, lightweight, and provides a safe working platform so that the building process can continue without delay.

REDUCED SLAB DEPTH AND CONCRETE USAGE

The slab depth required is minimized by the profile design. Concrete usage is further reduced by the profile shape. Reduced slab depth and concrete volumes result in lower concrete weight on the structure and foundations, and saving on the total cost the building structure.

TOLERANCES

Astino Super Power Floor Deck are produced within the following tolerances:

Length : ±10mm
Cover : ±10mm
Thickness : ±0.02mm

MATERIAL SPECIFICATIONS

High tensile steel, with minimum yield strenght of 550Mpa and a zinc coating mass of 120g/m² / 275g/m² (including both sides).

EMBOSSMENTS

Raised pigeon tail pattern embossments on each face of the web provides the mechanical connection between the steel and the hardened concrete.

FLOOR DECK CONSTRUCTION ADVANTAGES

- Simplified process
- Increase construction speed
- Time saving on site
- No premature formwork removal and better floor quality
- Do not need formwork support. Consecutive floor level can be carried out immediately
- Reduce wooden materials stacking on job site
- Better job site safety
- Concrete volume saving

PACKING

Floor Deck is packed into bundle of up to 15 sheets may weight up to 2 ton depending on sheet length. The sheets are secured with metalband.

FLOOR OPENING

Opening can be accommodated readily in composite slab by boxing up prior to pouring concrete and cutting out the deck after the concrete has cured.
Small opening less than 300mm² do not normally required additional reinforcement. Openings greater than 300mm² must be designed with extra reinforcement place around the opening.

SPECIFICATIONS

Thickness (mm)	G.I Coating	Weight		Steel Area	Second Moment of Area (cm⁴/m)	Height to Neutral Axis (mm)
	(g/m²)	(kg/m)	(kg/m²)	(mm²)		
0.75	275	7.78	9.05	940.3	27.92	21.90
1.00	275	10.35	11.90	1253.5	37.21	22.00
1.20	275	12.31	14.15	1504.0	44.65	22.10

NORMAL WEIGHT CONCRETE

		Slab Depth (mm)	Floor Deck Thickness (TCT)								
			0.75 mm			1.0 mm			1.2 mm		
			Total Applied Load (kN/m²)								
			3.5 kN/m²	5 kN/m²	10 kN/m²	3.5 kN/m²	5 kN/m²	10 kN/m²	3.5 kN/m²	5 kN/m²	10 kN/m²
No Temporary Props	Single Span	100	2.2	2.2	2.2	2.4	2.4	2.4	2.8	2.7	2.6
		120	2.1	2.1	2.1	2.3	2.3	2.3	2.7	2.6	2.5
		130	2.1	2.1	2.1	2.3	2.3	2.3	2.6	2.5	2.4
		150	2.0	2.0	2.0	2.2	2.2	2.2	2.5	2.5	2.4
		200	1.9	1.9	1.9	2.1	2.1	2.1	2.4	2.2	2.2
		240	1.8	1.8	1.8	2.0	2.0	2.0	2.2	2.1	2.1
	Double Span	100	2.2	2.2	2.2	2.7	2.7	2.7	3.1	3.0	2.8
		120	2.1	2.1	2.1	2.6	2.6	2.6	2.9	2.8	2.7
		130	2.1	2.1	2.1	2.5	2.5	2.5	2.8	2.8	2.7
		150	2.0	2.0	2.0	2.4	2.4	2.4	2.7	2.7	2.6
		200	1.9	1.9	1.9	2.2	2.2	2.2	2.5	2.5	2.4
		240	1.8	1.8	1.8	2.1	2.1	2.1	2.4	2.3	2.3
1 Line Temporary Props	Single Span	100	3.0	2.8	2.3	3.3	3.1	2.6	3.5	3.3	2.7
		120	2.9	2.7	2.3	3.2	3.0	2.5	3.4	3.2	2.7
		130	2.9	2.7	2.3	3.2	3.0	2.5	3.4	3.2	2.7
		150	2.9	2.7	2.3	3.1	2.9	2.5	3.3	3.1	2.6
		200	2.7	2.5	2.2	3.0	2.8	2.4	3.1	3.0	2.6
		240	2.6	2.5	2.2	2.8	2.7	2.4	3.0	2.9	2.5
	Double Span	100	3.4	3.1	2.5	3.8	3.4	2.8	4.1	3.6	3.0
		120	3.3	3.0	2.5	3.6	3.3	2.8	4.0	3.6	2.9
		130	3.3	3.0	2.5	3.6	3.2	2.7	3.9	3.5	2.9
		150	3.2	2.9	2.5	3.5	3.2	2.7	3.8	3.5	2.9
		200	3.0	2.8	2.4	3.3	3.0	2.6	3.6	3.3	2.8
		240	2.9	2.7	2.3	3.2	2.9	2.6	3.4	3.2	2.7

LIGHT WEIGHT CONCRETE

MAXIMUM SPAN (m)

		Slab Depth (mm)	Floor Deck Thickness (TCT)								
			0.75 mm			1.0 mm			1.2 mm		
			Total Applied Load (kN/m²)								
			3.5 kN/m²	5 kN/m²	10 kN/m²	3.5 kN/m²	5 kN/m²	10 kN/m²	3.5 kN/m²	5 kN/m²	10 kN/m²
No Temporary Props	Single Span	100	2.3	2.3	2.3	2.5	2.5	2.5	3.0	2.9	2.7
		120	2.2	2.2	2.2	2.4	2.4	2.4	2.8	2.7	2.6
		130	2.2	2.2	2.2	2.4	2.4	2.4	2.7	2.7	2.5
		150	2.1	2.1	2.1	2.3	2.3	2.3	2.6	2.6	2.5
		200	2.0	2.0	2.0	2.2	2.2	2.2	2.6	2.4	2.3
		240	1.9	1.9	1.9	2.1	2.1	2.1	2.3	2.3	2.2
	Double Span	100	2.3	2.3	2.3	2.8	2.8	2.8	3.2	3.1	2.9
		120	2.2	2.2	2.2	2.7	2.7	2.7	3.1	3.0	2.8
		130	2.2	2.2	2.2	2.6	2.6	2.6	3.0	2.9	2.8
		150	2.1	2.1	2.1	2.5	2.5	2.5	2.9	2.8	2.7
		200	2.0	2.0	2.0	2.4	2.4	2.4	2.7	2.6	2.5
		240	1.9	1.9	1.9	2.3	2.3	2.3	2.5	2.5	2.4
1 Line Temporary Props	Single Span	100	3.1	2.8	2.4	3.4	3.1	2.6	3.6	3.3	2.8
		120	3.0	2.8	2.3	3.3	3.1	2.6	3.5	3.3	2.7
		130	3.0	2.8	2.3	3.3	3.0	2.6	3.5	3.2	2.7
		150	2.9	2.7	2.3	3.2	3.0	2.5	3.4	3.2	2.7
		200	2.8	2.6	2.2	3.1	2.9	2.5	3.3	3.1	2.6
		240	2.7	2.5	2.2	3.0	2.8	2.4	3.2	3.0	2.6
	Double Span	100	3.5	3.1	2.6	3.9	3.4	2.8	4.3	3.7	3.0
		120	3.4	3.1	2.5	3.8	3.4	2.8	4.1	3.7	3.0
		130	3.4	3.0	2.5	3.7	3.3	2.8	4.1	3.6	3.0
		150	3.3	3.0	2.5	3.6	3.3	2.8	4.0	3.6	2.9
		200	3.1	2.9	2.4	3.4	3.1	2.7	3.8	3.4	2.9
		240	3.0	2.8	2.4	3.3	3.1	2.6	3.6	3.3	2.8

TYPICAL END DETAIL

BUTT JOINT

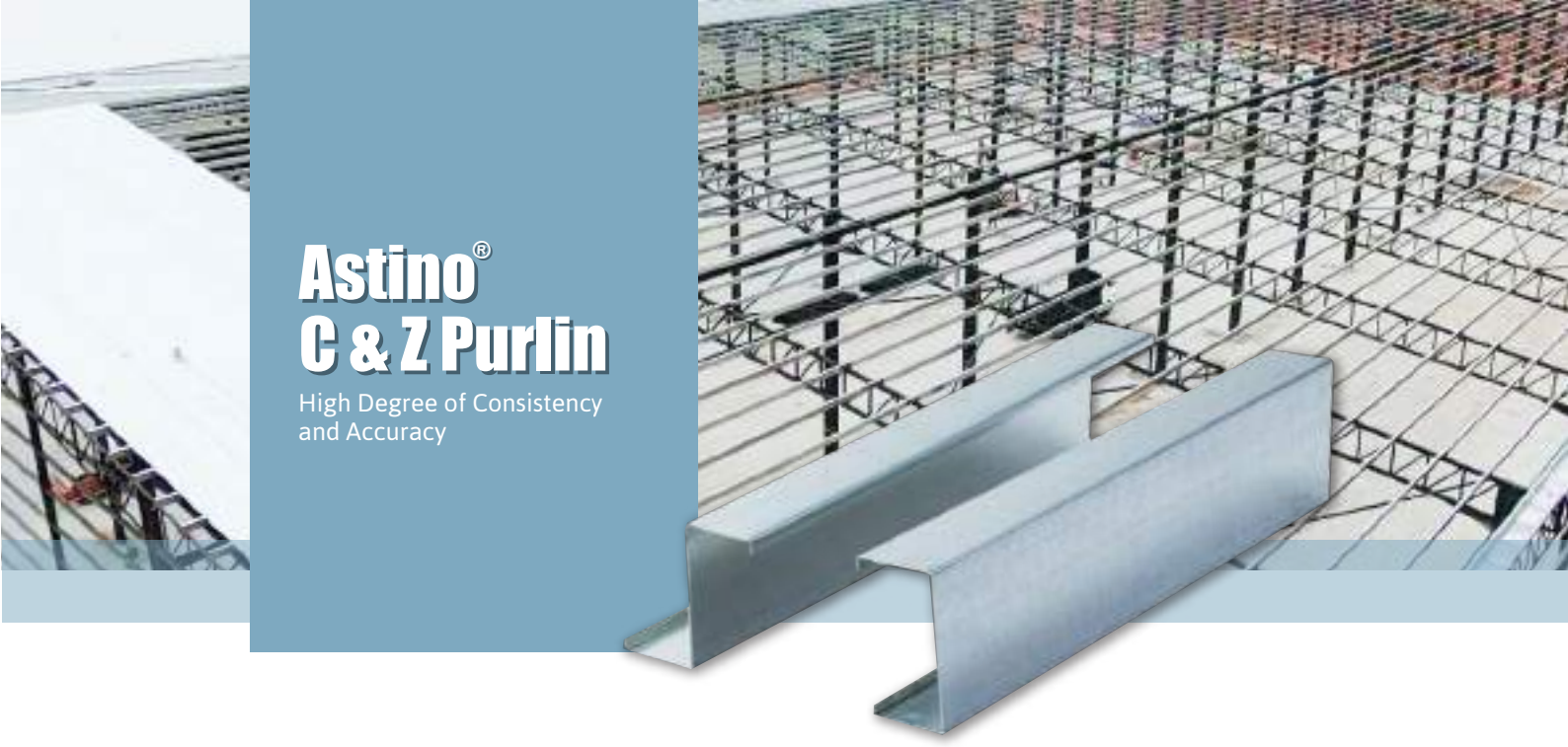
TYPICAL END CANTILEVER

SUPER POWER FLOOR CONSTRUCTION DETAILS
TYPICAL SIDE DETAIL

Super Power Floor Deck

Astino® C & Z Purlin

High Degree of Consistency and Accuracy



Astino® produces a wide range of C and Z-Purlins. All C and Z-Purlins are roll-formed from high-tensile zinc coated steel. The cold roll forming process ensures a high degree of consistency and accuracy in the dimension of the sections. The C and Z-Purlins are supplied according to length and pre-punched holes either round or elongated on the webs, thus enabling immediate installation at site.

MATERIAL SPECIFICATIONS

Material	Hot Dip Galvanised Steel
Steel Grade	JIS G 3302 / AS 1397
Tensile	High Tensile
Min Yield Strength (Mpa)	450
Min Tensile Strength	480
Zinc Coating	120g/m^2 to 275g/m^2
Available Thickness (mm)	1.60, 2.00, 2.50, 3.00

FIRE RATING

Class "O" fire rating according to BS 476: Part 6: 1989 "Method of Test for Fire Propagation for Products" & BS 476: Part 7: 1997 "Fire tests on building materials and structures. Method of test to determine the classification of the surfaces spread of flamed of products".

TOLERANCES

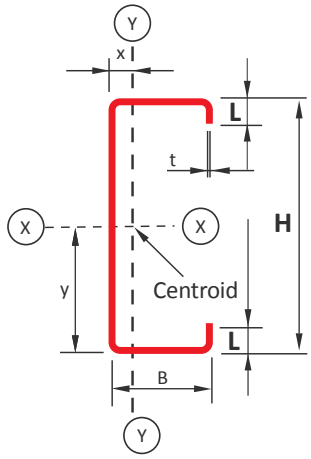
Astino C-Purlins are produced within the following tolerances:

- Length : ±5mm
- Web (Dim. H) : ±3mm
- Flange (Dim. B) : ±3mm
- Hole centres : ±2mm
- Thickness : ±0.18mm

QUALITY ASSURANCE

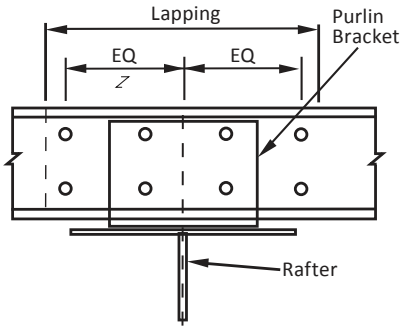
- Quality Assurance, Competitive Price, On Time Delivery
- Quality Product With Proven Supply Records
- High Degree Of Accuracy And Consistency In Dimensions
- Different Thickness Availability To Suit Customer's Needs
- High Tensile Steel ; Low Weight
- Pre-punched Holes And Custom Cut Length
- Greater Stiffness And Straighter Cladding Lines

C-PURLIN SPECIFICATIONS AND SECTION PROPERTIES

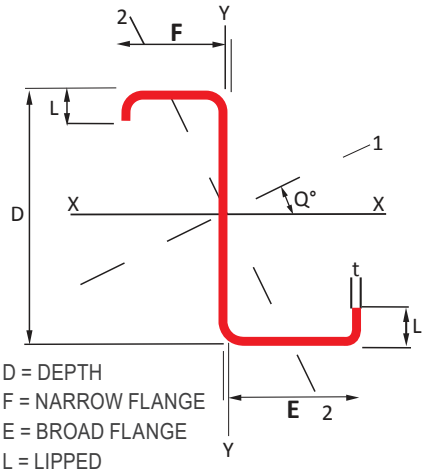


Code No.	Exact Dimension				Mass/L (kg/m)	Area mm²	I_{xx} (x10³mm⁴)	I_{yy} (x10³mm⁴)	r_{xx} (mm)	r_{yy} (mm)	Z_{xx} (x10³mm³)	Z_{yy} (x10³mm³)	J (mm⁴)	C_w (x10⁶mm⁶)	e_x (mm)	e_y (mm)
	H(mm)	B(mm)	L(mm)	T(mm)												
ACP 7516	75	45	11	1.60	2.46	299.20	295.15	90.70	31.41	17.41	7.87	3.14	246.58	94.45	15.48	22.13
ACP 7520	75	45	11	2.00	3.08	374.00	368.94	113.38	31.41	17.41	9.84	3.93	477.33	112.70	15.28	21.86
ACP 7525	75	45	11	2.50	3.88	467.50	461.17	141.72	31.41	17.41	12.30	4.91	921.88	132.83	15.03	21.53
ACP 7530	75	45	11	3.00	4.65	561.00	553.41	170.07	31.41	17.41	14.76	5.89	1575.00	150.19	14.79	21.19
ACP 10016	100	50	16	1.60	2.80	371.20	624.74	145.40	41.02	19.79	12.49	4.50	308.02	294.32	17.04	25.24
ACP 10020	100	50	16	2.00	3.45	464.00	780.93	181.75	41.02	19.79	15.62	5.62	597.33	354.31	16.84	24.97
ACP 10025	100	50	16	2.50	4.40	580.00	976.16	227.19	41.02	19.79	19.52	7.03	1156.25	422.36	16.60	24.65
ACP 10030	100	50	16	3.00	5.35	696.00	1171.39	272.63	41.02	19.79	23.43	8.43	1980.00	483.13	16.36	24.32
ACP 12516	125	50	16	1.60	3.10	411.20	1038.59	156.68	50.26	19.52	16.62	4.60	342.15	462.07	15.32	23.76
ACP 12520	125	50	16	2.00	3.82	514.00	1298.23	195.85	50.26	19.52	20.77	5.75	664.00	557.82	15.14	23.51
ACP 12525	125	50	16	2.50	4.89	642.50	1622.79	244.81	50.26	19.52	25.96	7.19	1286.46	667.34	14.91	23.18
ACP 12530	125	50	16	3.00	6.10	771.00	1947.35	293.77	50.26	19.52	31.16	8.63	2205.00	766.12	14.68	22.86
ACP 15016	150	65	16	1.60	3.85	499.20	1850.93	305.39	60.89	24.73	24.68	6.82	417.25	1254.12	19.57	29.81
ACP 15020	150	65	16	2.00	4.73	624.00	2313.66	381.74	60.89	24.73	30.85	8.52	810.67	1524.20	19.38	29.55
ACP 15025	150	65	16	2.50	5.89	780.00	2892.08	477.17	60.89	24.73	38.56	10.65	1572.92	1839.06	19.15	29.23
ACP 15030	150	65	16	3.00	7.89	936.00	3470.49	572.61	60.89	24.73	46.27	12.78	2700.00	2129.65	18.92	28.90
ACP 17516-65	175	65	16	1.60	4.15	539.20	2631.77	320.51	69.86	24.38	30.08	6.92	451.38	1752.30	18.08	28.52
ACP 17520-65	175	65	16	2.00	5.10	674.00	3289.72	400.64	69.86	24.38	37.60	8.65	877.33	2132.62	17.90	28.27
ACP 17525-65	175	65	17	2.50	6.35	842.50	4112.14	500.80	69.86	24.38	47.00	10.82	1703.13	2577.64	17.68	27.95
ACP 17530-65	175	65	17	3.00	7.96	1011.00	4934.57	600.97	69.86	24.38	56.40	12.98	2925.00	2990.15	17.45	27.64
ACP 17516-75	175	75	16	1.60	4.41	571.20	2876.77	449.37	70.97	28.05	32.88	8.56	478.69	2458.67	21.84	33.36
ACP 17520-75	175	75	16	2.00	5.42	714.00	3595.97	561.71	70.97	28.05	41.10	10.70	930.67	2998.92	21.65	33.10
ACP 17525-75	175	75	17	2.50	6.75	892.50	4494.96	702.14	70.97	28.05	51.37	13.37	1807.29	3634.90	21.42	32.78
ACP 17530-75	175	75	17	3.00	8.42	1071.00	5393.95	842.57	70.97	28.05	61.65	16.04	3105.00	4228.67	21.18	32.45
ACP 20016	200	75	16	1.60	4.76	611.20	3901.12	468.26	79.89	27.68	39.01	8.67	512.82	3301.74	20.38	32.11
ACP 20020	200	75	16	2.00	5.90	764.00	4876.39	585.32	79.89	27.68	48.76	10.84	997.33	4031.39	20.20	31.86
ACP 20025	200	75	18	2.50	7.39	955.00	6095.49	731.65	79.89	27.68	60.95	13.55	1937.50	4892.64	19.97	31.54
ACP 20030	200	75	18	3.00	9.55	1146.00	7314.59	877.99	79.89	27.68	73.15	16.26	3330.00	5699.26	19.75	31.22
ACP 22516	225	75	16	1.60	5.15	651.20	5116.46	484.83	88.64	27.29	45.48	8.77	546.95	4296.13	19.10	30.97
ACP 22520	225	75	16	2.00	6.42	814.00	6395.57	606.04	88.64	27.29	56.85	10.96	1064.00	5249.68	18.93	30.72
ACP 22525	225	75	16	2.50	7.98	1017.50	7994.47	757.54	88.64	27.29	71.06	13.70	2067.71	6377.52	18.71	30.40
ACP 22530	225	75	16	3.00	10.30	1221.00	9593.36	909.05	88.64	27.29	85.27	16.44	3555.00	7436.35	18.49	30.09
ACP 25016-75	250	75	16	1.60	5.38	691.20	6535.30	499.48	97.24	26.88	52.28	8.85	581.09	5447.81	17.97	29.91
ACP 25020-75	250	75	16	2.00	6.59	864.00	8169.13	624.35	97.24	26.88	65.35	11.07	1130.67	6661.13	17.81	29.66
ACP 25025-75	250	75	17	2.50	8.35	1080.00	10211.41	780.44	97.24	26.88	81.69	13.83	2197.92	8098.52	17.60	29.36
ACP 25030-75	250	75	17	3.00	10.88	1296.00	12253.69	936.52	97.24	26.88	98.03	16.60	3780.00	9450.47	17.39	29.05
ACP 25016-100	250	100	20	1.60	6.07	784.00	7931.87	1066.67	100.58	36.89	63.45	14.93	660.28	11989.85	27.93	43.31
ACP 25020-100	250	100	20	2.00	7.58	980.00	9914.83	1333.33	100.58	36.89	79.32	18.67	1285.33	14720.43	27.75	43.05
ACP 25025-100	250	100	20	2.50	9.48	1225.00	12393.54	1666.67	100.58	36.89	99.15	23.33	2500.00	17990.09	27.52	42.73
ACP 25030-100	250	100	20	3.00	11.37	1470.00	14872.25	2000.00	100.58	36.89	118.98	28.00	4302.00	21104.25	27.29	42.41
ACP 30016-75	300	75	20	1.60	6.28	784.00	10256.53	567.09	114.38	26.89	68.38	9.88	660.28	9150.63	17.03	29.47
ACP 30020-75	300	75	20	2.00	7.67	980.00	12820.67	708.86	114.38	26.89	85.47	12.35	1285.33	11205.23	16.87	29.23
ACP 30025-75	300	75	20	2.50	9.68	1225.00	16025.83	886.08	114.38	26.89	106.84	15.44	2500.00	13648.66	16.67	28.93
ACP 30030-75	300	75	20	3.00	11.50	1470.00	19231.00	1063.30	114.38	26.89	128.21	18.53	4302.00	15957.19	16.48	28.63
ACP 30016-100	300	100	20	1.60	6.64	864.00	12056.53	1125.93	118.13	36.10	80.38	15.20	728.54	18016.26	25.31	41.00
ACP 30020-100	300	100	20	2.00	8.35	1080.00	15070.67	1407.41	118.13	36.10	100.47	19.00	1418.67	22140.13	25.13	40.75
ACP 30025-100	300	100	20	2.50	10.26	1350.00	18838.33	1759.26	118.13	36.10	125.59	23.75	2760.42	27089.79	24.92	40.44
ACP 30030-100	300	100	20	3.00	13.50	1620.00	22606.00	2111.11	118.13	36.10	150.71	28.50	4752.00	31816.78	24.70	40.13
ACP 35016-100	350	100	20	1.60	8.11	944.00	17261.20	1175.14	135.22	35.28	98.64	15.41	761.81	25527.29	23.13	38.95
ACP 35020-100	350	100	20	2.00	10.08	1180.00	21576.50	1468.93	135.22	35.28	123.29	19.26	1552.00	31390.98	22.97	38.71
ACP 35025-100	350	100	20	2.50	12.37	1475.00	26970.63	1836.16	135.22	35.28	154.12	24.07	3020.83	38440.30	22.76	38.40
ACP 35030-100	350	100	20	3.00	15.40	1770.00	32364.75	2203.39	135.22	35.28	184.94	28.89	5202.00	45184.98	22.56	38.10

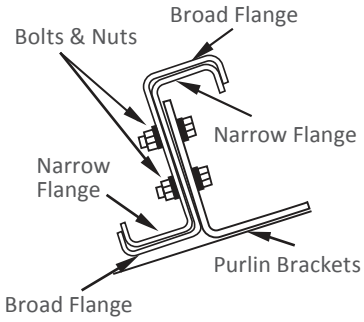
Z-PURLIN SPECIFICATIONS AND SECTION PROPERTIES



Z Purlin Overlapping



D = DEPTH
F = NARROW FLANGE
E = BROAD FLANGE
L = LIPPED
t = THICKNESS



Section View

Code No.	Dimension					Mass/L (kg/m)	Area mm²	I_{xx} (x10⁶mm⁴)	I_{yy} (x10⁶mm⁴)	Z_{xx} (x10³mm³)	Z_{yy} (x10³mm³)	r_{xx} (mm)	r_{yy} (mm)	J (mm⁴)	C_w (x10⁹mm⁶)
	D (mm)	E (mm)	F (mm)	L (mm)	T (mm)										
AZP 10016	100	55	49	15	1.60	2.80	378.33	0.63	0.24	12.99	4.76	40.80	25.39	304.19	0.46
AZP 10020	100	55	49	15	2.00	3.45	469.03	0.77	0.30	15.95	5.80	40.60	25.12	588.93	0.57
AZP 10025	100	55	49	15	2.50	4.40	580.22	0.95	0.36	19.50	7.02	40.36	24.78	1137.61	0.71
AZP 10030	100	55	49	15	3.00	5.35	688.97	1.11	0.41	22.88	8.14	40.11	24.43	1943.92	0.86
AZP 12516	125	55	49	16	1.60	3.10	418.33	1.05	0.24	17.29	4.76	50.11	24.15	338.32	0.74
AZP 12520	125	55	49	16	2.00	3.82	519.03	1.29	0.30	21.28	5.80	49.90	23.88	655.60	0.93
AZP 12525	125	55	49	16	2.50	4.89	642.72	1.58	0.36	26.08	7.02	49.64	23.54	1267.81	1.16
AZP 12530	125	55	49	16	3.00	6.10	763.97	1.86	0.41	30.68	8.14	49.38	23.20	2168.92	1.39
AZP 15016	150	71	64	16	1.60	3.85	507.93	1.88	0.49	25.52	7.33	60.76	31.02	414.78	2.02
AZP 15020	150	71	64	16	2.00	4.73	631.03	2.31	0.60	31.49	8.97	60.56	30.75	804.93	2.52
AZP 15025	150	71	64	16	2.50	5.89	782.72	2.85	0.72	38.73	10.92	60.30	30.40	1559.48	3.15
AZP 15030	150	71	64	16	3.00	7.89	931.97	3.36	0.84	45.72	12.75	60.04	30.05	2672.92	3.78
AZP 17516	175	80	74	16	1.60	4.41	578.33	2.90	0.70	33.81	9.14	70.78	34.69	474.85	3.86
AZP 17520	175	80	74	16	2.00	5.42	719.03	3.58	0.85	41.79	11.20	70.58	34.41	922.27	4.83
AZP 17525	175	80	74	17	2.50	6.75	892.72	4.41	1.04	51.51	13.67	70.32	34.06	1788.65	6.04
AZP 27530	175	80	74	17	3.00	8.42	1063.97	5.22	1.21	60.94	16.01	70.06	33.71	3068.92	7.25
AZP 20016	200	80	73	16	1.60	4.76	616.73	3.92	0.68	39.86	9.05	79.71	33.32	507.62	5.13
AZP 20020	200	80	73	16	2.00	5.90	767.03	4.85	0.84	49.30	11.09	79.50	33.05	986.27	6.41
AZP 20025	200	80	73	18	2.50	7.39	952.72	5.98	1.02	60.82	13.54	79.22	32.70	1913.65	8.01
AZP 20030	200	80	73	18	3.00	9.55	1135.97	7.08	1.19	72.02	15.85	78.95	32.35	3284.92	9.61
AZP 22516	225	80	73	16	1.60	5.15	656.73	5.14	0.68	46.46	9.05	88.50	32.29	541.75	6.67
AZP 22520	225	80	73	16	2.00	6.42	817.03	6.37	0.84	57.51	11.09	88.28	32.02	1052.93	8.33
AZP 22525	225	80	73	16	2.50	7.98	1015.22	7.86	1.02	71.00	13.54	87.99	31.68	2043.86	10.42
AZP 22530	225	80	73	16	3.00	10.30	1210.97	9.32	1.19	84.15	15.85	87.71	31.33	3509.92	12.50
AZP 25016	250	80	73	16	1.60	5.38	696.73	6.57	0.68	53.39	9.05	97.14	31.35	575.89	8.43
AZP 25020	250	80	73	16	2.00	6.59	867.03	8.14	0.84	66.13	11.09	96.91	31.08	1119.60	10.54
AZP 25025	250	80	73	17	2.50	8.35	1077.72	10.06	1.02	81.70	13.54	96.61	30.74	2174.06	13.17
AZP 25030	250	80	73	17	3.00	10.88	1285.97	11.93	1.19	96.89	15.85	96.31	30.41	3734.92	15.80
AZP 30016-80	300	80	73	18	1.60	6.28	786.33	10.27	0.74	69.41	9.76	114.30	30.65	652.35	13.60
AZP 30020-80	300	80	73	18	2.00	7.67	979.03	12.73	0.90	86.04	11.98	114.05	30.39	1268.93	17.00
AZP 30025-80	300	80	73	20	2.50	9.68	1217.22	15.75	1.10	106.44	14.63	113.74	30.07	2465.73	21.25
AZP 30030-80	300	80	73	20	3.00	11.50	1453.97	18.71	1.29	126.40	17.15	113.43	29.74	4238.92	25.50
AZP 30016-100	300	100	93	20	1.60	6.64	872.73	12.07	1.58	81.42	16.50	117.59	42.53	726.07	27.21
AZP 30020-100	300	100	93	20	2.00	8.35	1087.03	14.97	1.94	101.03	20.33	117.36	42.27	1412.93	34.01
AZP 30025-100	300	100	93	24	2.50	10.26	1352.72	18.54	2.38	125.13	24.97	117.08	41.93	2746.98	42.52
AZP 30030-100	300	100	93	24	3.00	13.50	1615.97	22.05	2.80	148.77	29.44	116.80	41.60	4724.92	51.02
AZP 35016-100	350	100	93	20	1.60	8.11	952.73	17.31	1.58	100.02	16.50	134.79	40.71	794.34	38.21
AZP 35020-100	350	100	93	20	2.00	10.08	1187.03	21.49	1.94	124.18	20.33	134.56	40.45	1546.27	47.76
AZP 35025-100	350	100	93	24	2.50	12.37	1477.72	26.64	2.38	153.91	24.97	134.26	40.12	3007.40	59.70
AZP 35030-100	350	100	93	24	3.00	15.40	1765.97	31.69	2.80	183.12	29.44	133.96	39.79	5174.92	71.64

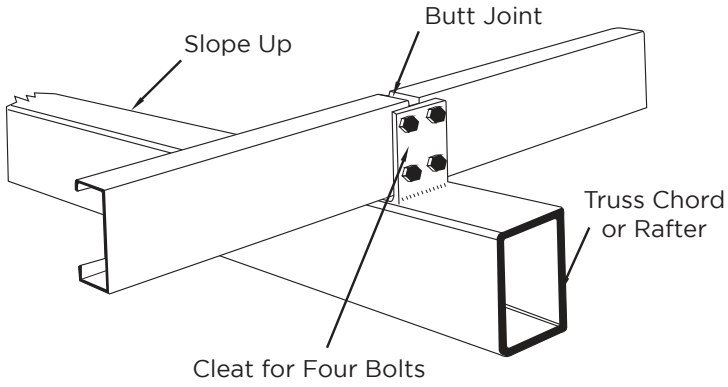
RECOMMENDED LAP LENGTH

Nominal Section Size (mm)	Span (mm)	Lap Length (mm)
100mm, 125mm	≤6000 >6000	600 900
150mm, 175mm, 200mm, 225mm, 250mm	≤9000 >9000 ≤12000	900 1200 1800
300mm, 350mm	≤9000 >9000 ≤12000 >12000 ≤18000 >18000	900 1200 1800 2400

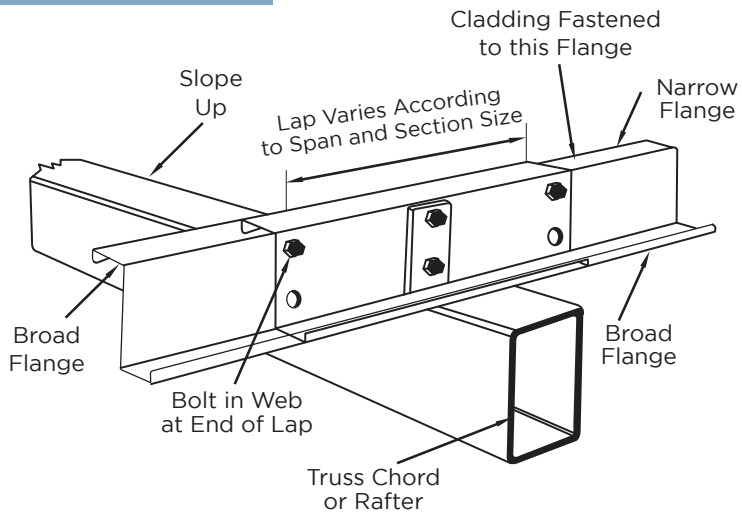
*Load capacities for these spans are not covered in this publication.

C-PURLIN AND Z-PURLIN SUPPORT DETAILS

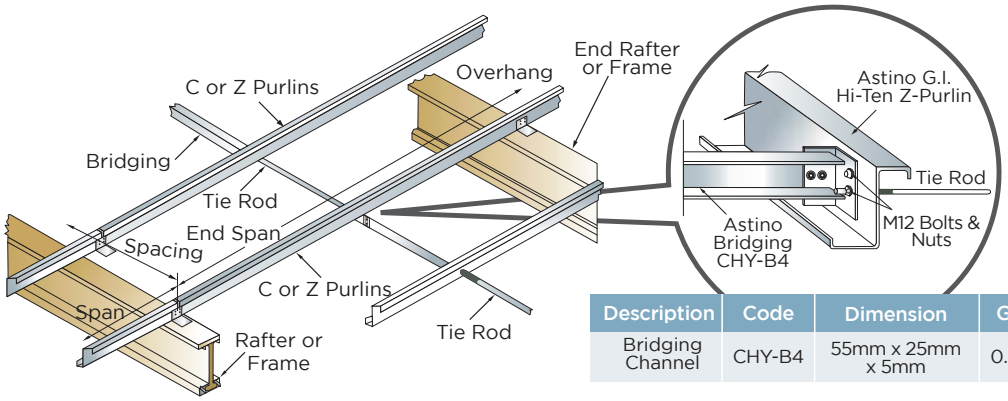
C-PURLIN Simple Span Support Details



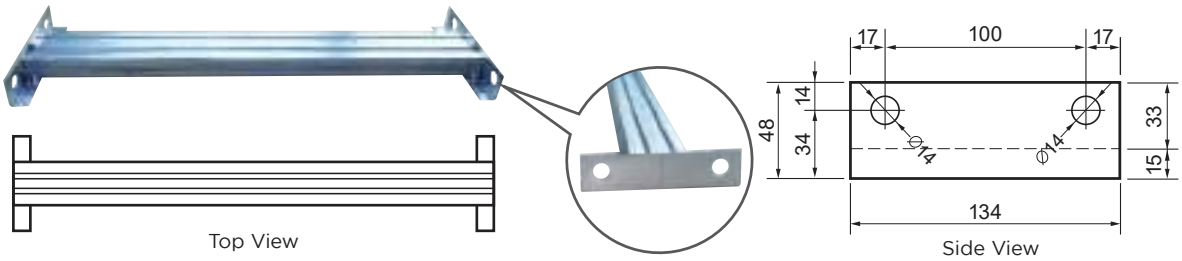
Z-PURLIN Lapping Details At Support



Alternate Bridging And Tie Rods



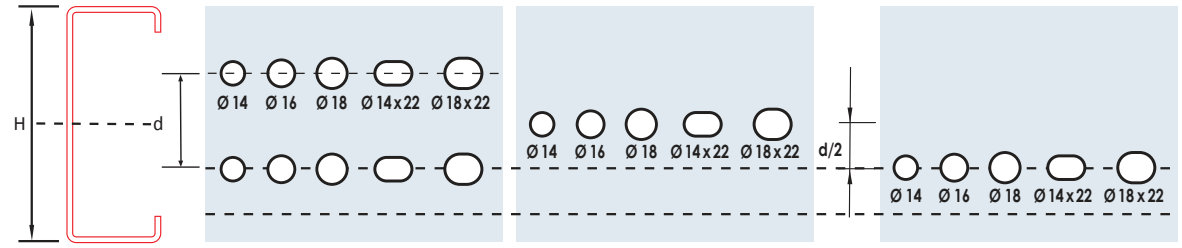
Description	Code	Dimension	Gauge
Bridging Channel	CHY-B4	55mm x 25mm x 5mm	0.75mm



C & Z Purlin

PRE-PUNCHED HOLE ARRANGEMENT AND OPTIONS

Astino Galvanized C and Z-Purlins are manufactured in custom cut lengths. It can be supplied either with or without punched holes. If punched holes are required, the following are prepunched holes arrangements and option.



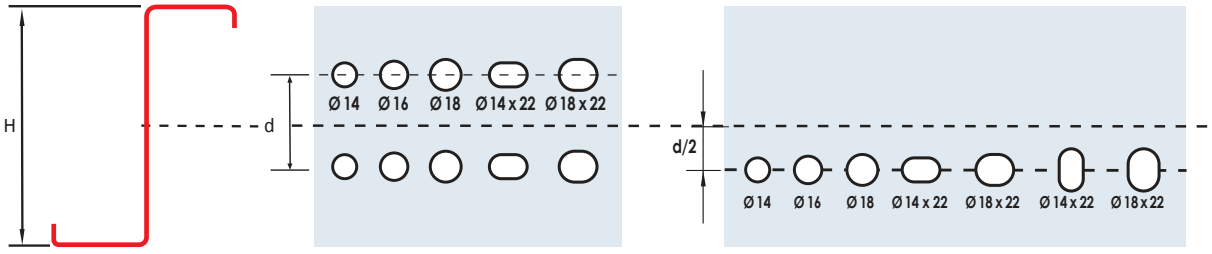
Double Holes Offset | Single Hole Centre | Single Hole Offset

Height H(mm)	Ø 14mm		Ø 16mm		Ø 18mm		Ø 14 x 22mm		Ø 18 x 22mm	
	d(mm)	d/2(mm)	d(mm)	d/2(mm)	d(mm)	d/2(mm)	d(mm)	d/2(mm)	d(mm)	d/2(mm)
100	50	25	50	25	50	25	50	25	50	25
125	50	25	50,70	25,35	50,60	25,30	50,55,60	25,27.5	50	25
150	50,80	25,40	50,70,100	25,35,50	50,60,100	25,35,50	50,60,100	25,27.5,50	50	25
175	50,80	25,40	50,70,100	25,35,50	50,60,100	25,35,50	50,60,100	25,27.5,50	50	25
200	50,80	25,40	50,70,100	25,35,50	50,60,100	25,35,50	50,60,100	25,27.5,50	50	25
250	50,80	25,40	50,70,100	25,35,50	50,60,100	25,35,50	50,60,100	25,27.5,50	50	25
300	50,80	25,40	50,70,100	25,35,50	50,60,100	25,35,50	50,60,100	25,27.5,50	50	25
350	50,80	25,40	50,70,100	25,35,50	50,60,100	25,35,50	50,60,100	25,27.5,50	50	25

The following are prepunched holes arrangement and option available from KL Branch.

Height H(mm)	Ø 14mm		Ø 16mm		Ø 18mm		Ø 14 x 22mm		Ø 18 x 22mm	
	d(mm)	d/2(mm)	d(mm)	d/2(mm)	d(mm)	d/2(mm)	d(mm)	d/2(mm)	d(mm)	d/2(mm)
100	40,50	20,25	40,50	20,25	40,50	20,25	40,50	20,25	40,50	20,25
125	40,75	25,37.5	40,75	25,37.5	40,75	25,37.5	40,75	25,37.5	40,75	20,37.5
150	40,100	20,50	40,100	20,50	40,100	20,50	40,100	20,50	40,100	20,50
175	40,125	20,62.5	40,125	20,62.5	40,125	20,62.5	40,125	20,62.5	40,125	20,62.5
200	40,150	20,75	40,150	20,75	40,150	20,75	40,150	20,75	40,150	20,75
250	80,200	40,100	80,200	40,100	80,200	40,100	80,200	40,100	80,200	40,100
300	80,200	40,100	80,200	40,100	80,200	40,100	80,200	40,100	80,200	40,100
350	80,200	40,100	80,200	40,100	80,200	40,100	80,200	40,100	80,200	40,100

Note : The minimum distance from the edge of C-Purlin to the centre of the first set pre-punched holes is 25mm.



Double Holes Offset | Single Hole Centre

Standard Pre-Punched Holes Distance

Height H(mm)	Ø 14mm		Ø 16mm		Ø 18mm		Ø 14 x 22mm		Ø 18 x 22mm	
	d(mm)	d/2(mm)	d(mm)	d/2(mm)	d(mm)	d/2(mm)	d(mm)	d/2(mm)	d(mm)	d/2(mm)
100	50	25	50	25	50	25	50	25	50	25
125	50,75	25,37.5	50,75	25,37.5	50,75	25,37.5	50,75	25,37.5	50,75	25,37.5
150	50,100	25,50	50,100	25,50	50,100	25,50	50,100	25,50	50,100	25,50
175	50,125	25,62.5	50,125	25,62.5	50,125	25,62.5	50,125	25,62.5	50,125	25,62.5
200	50,150	25,75	50,150	25,75	50,150	25,75	50,150	25,75	50,150	25,75
250	50,200	25,100	50,200	25,100	50,200	25,100	50,200	25,100	50,200	25,100
300	50,200	25,100	50,200	25,100	50,200	25,100	50,200	25,100	50,200	25,100
350	50,200	25,100	50,200	25,100	50,200	25,100	50,200	25,100	50,200	25,100

Note : The minimum distance from the edge of Z-Purlin to the centre of the first set pre-punched holes is 25mm.

MAXIMUM ALLOWABLE SPAN (M) VS SOLAR PANEL WEIGHT

The purlin load table are derived in a accordance to BS5950 : Part 5 : 1987 "Code of Practice for Design of Cold Formed Section" with roofing and solar panel distributed load 20kg/m².

Size	Purlin Spacing					
	0.90	1.20	1.50	1.80	2.10	2.40
75 x 45 x 1.60	3.70	3.20	2.90	2.65	2.45	2.30
75 x 45 x 2.00	4.20	3.65	3.30	3.00	2.80	2.65
75 x 45 x 2.50	4.80	4.20	3.75	3.45	3.20	3.00
75 x 45 x 3.00	5.35	4.70	4.20	3.85	3.60	3.35
100 x 50 x 1.60	5.15	4.50	4.00	3.70	3.40	3.20
100 x 50 x 2.00	5.75	5.00	4.50	4.15	3.85	3.60
100 x 50 x 2.50	6.45	5.65	5.05	4.65	4.30	4.05
100 x 50 x 3.00	7.10	6.20	5.60	5.15	4.80	4.50
125 x 50 x 1.60	5.85	5.10	4.60	4.20	3.90	3.65
125 x 50 x 2.00	6.50	5.70	5.15	4.70	4.35	4.10
125 x 50 x 2.50	7.25	6.35	5.75	5.25	4.90	4.60
125 x 50 x 3.00	7.90	6.95	6.25	5.75	5.35	5.05
150 x 65 x1.60	8.60	7.55	6.75	6.20	5.75	5.40
150 x 65 x 2.00	9.30	8.30	7.50	6.90	6.40	6.00
150 x 65 x 2.50	10.00	9.10	8.30	7.60	7.10	6.65
150 x 65 x 3.00	10.65	9.65	8.95	8.25	7.65	7.20
175 x 65 x 1.60	8.95	8.30	7.45	6.85	6.35	5.95
175 x 65 x 2.00	10.40	9.15	8.25	7.55	7.05	6.60
175 x 65 x 2.50	11.25	10.05	9.10	8.35	7.75	7.30
175 x 65 x 3.00	11.95	10.85	9.80	9.05	8.40	7.90
175 x 75 x 1.60	10.00	9.10	8.45	7.85	7.30	6.85
175 x 75 x 2.00	10.75	9.80	9.10	8.55	8.10	7.60
175 x 75 x 2.50	11.60	10.50	9.80	9.20	8.75	8.35
175 x 75 x 3.00	12.35	11.20	10.40	9.80	9.30	8.90
200 x 75 x 1.60	11.05	10.05	9.20	8.45	7.85	7.35
200 x 75 x 2.00	11.90	10.85	10.05	9.45	8.75	8.25
200 x 75 x 2.50	12.85	11.65	10.85	10.20	9.70	9.10
200 x 75 x 3.00	13.65	12.40	11.50	10.85	10.25	9.80
225 x 75 x 1.60	12.10	10.65	9.60	8.80	8.20	7.70
225 x 75 x 2.00	13.05	11.85	11.00	10.15	9.45	8.85
225 x 75 x 2.50	14.05	12.80	11.85	11.15	10.40	9.75
225 x 75 x 3.00	14.95	13.60	12.60	11.85	11.20	10.55
250 x 75 x 1.60	12.55	11.00	9.95	9.10	8.45	7.95
250 x 75 x 2.00	14.15	12.85	11.80	10.80	10.05	9.45
250 x 75 x 2.50	15.25	13.85	12.85	11.90	11.10	10.40
250 x 75 x 3.00	16.20	14.70	13.70	12.80	11.95	11.20
250 x 100 x 1.60	13.00	11.40	10.30	9.45	8.80	8.25
250 x 100 x 2.00	15.10	13.75	12.70	11.70	10.90	10.25
250 x 100 x 2.50	16.25	14.80	13.75	12.90	12.25	11.75
250 x 100 x 3.00	17.30	15.70	14.60	13.75	13.05	12.45
300 x 75 x 1.60	13.20	11.60	10.50	9.65	8.95	8.40
300 x 75 x 2.00	16.45	14.50	13.15	12.10	11.25	10.55
300 x 75 x 2.50	17.75	16.10	14.85	13.70	12.75	12.00
300 x 75 x 3.00	18.85	17.15	15.90	14.75	13.75	12.95
300 x 100 x 1.60	13.50	11.90	10.75	9.90	9.20	8.65
300 x 100 x 2.00	16.90	14.95	13.55	12.45	11.60	10.90
300 x 100 x 2.50	18.70	16.85	15.75	14.85	14.10	13.40
300 x 100 x 3.00	19.90	18.10	16.80	15.80	15.00	14.35
350 x 100 x 1.60	13.60	12.05	10.90	10.00	9.35	8.75
350 x 100 x 2.00	17.40	15.45	14.00	12.95	12.05	11.35
350 x 100 x 2.50	21.10	19.10	17.40	16.05	15.00	14.15
350 x 100 x 3.00	22.45	20.35	18.90	17.80	16.90	16.15

MAXIMUM ALLOWABLE SPAN (M)

The purlin load table are derived in a accordance to BS5950 : Part 5 : 1987 "Code of Practice for Design of Cold Formed Section" with roofing distributed load 6.55kg/m².

Size	Purlin Spacing					
	0.90	1.20	1.50	1.80	2.10	2.40
75 x 45 x 1.60	4.25	3.75	3.35	3.05	2.85	2.65
75 x 45 x 2.00	4.85	4.25	3.80	3.50	3.25	3.05
75 x 45 x 2.50	5.40	4.85	4.35	4.00	3.70	3.50
75 x 45 x 3.00	5.75	5.25	4.85	4.50	4.15	3.90
100 x 50 x 1.60	5.95	5.20	4.65	4.25	3.95	3.70
100 x 50 x 2.00	6.45	5.80	5.20	4.80	4.45	4.15
100 x 50 x 2.50	6.95	6.35	5.85	5.40	5.00	4.70
100 x 50 x 3.00	7.40	6.70	6.25	5.85	5.55	5.20
125 x 50 x 1.60	6.75	5.95	5.35	4.90	4.55	4.25
125 x 50 x 2.00	7.50	6.60	5.95	5.45	5.05	4.75
125 x 50 x 2.50	8.25	7.30	6.60	6.10	5.65	5.30
125 x 50 x 3.00	8.75	7.95	7.25	6.65	6.20	5.80
150 x 65 x1.60	8.65	7.85	7.25	6.85	6.50	6.20
150 x 65 x 2.00	9.30	8.45	7.85	7.35	7.00	6.70
150 x 65 x 2.50	10.00	9.10	8.45	7.95	7.55	7.20
150 x 65 x 3.00	10.65	9.65	8.95	8.45	8.00	7.65
175 x 65 x 1.60	9.70	8.80	8.20	7.70	7.30	6.90
175 x 65 x 2.00	10.45	9.50	8.80	8.30	7.90	7.55
175 x 65 x 2.50	11.25	10.25	9.50	8.95	8.50	8.10
175 x 65 x 3.00	11.95	10.85	10.10	9.50	9.00	8.60
175 x 75 x 1.60	10.00	9.10	8.45	7.95	7.55	7.20
175 x 75 x 2.00	10.75	9.80	9.10	8.55	8.10	7.75
175 x 75 x 2.50	11.60	10.55	9.80	9.20	8.75	8.35
175 x 75 x 3.00	12.35	11.20	10.40	9.80	9.30	8.90
200 x 75 x 1.60	11.05	10.05	9.35	8.80	8.35	7.95
200 x 75 x 2.00	11.90	10.85	10.05	9.45	9.00	8.60
200 x 75 x 2.50	12.85	11.65	10.85	10.20	9.70	9.25
200 x 75 x 3.00	13.65	12.40	11.50	10.85	10.30	9.85
225 x 75 x 1.60	12.10	11.00	10.20	9.60	9.15	8.75
225 x 75 x 2.00	13.05	11.85	11.00	10.35	9.85	9.40
225 x 75 x 2.50	14.05	12.80	11.85	11.15	10.60	10.15
225 x 75 x 3.00	14.95	13.60	12.60	11.85	11.25	10.75
250 x 75 x 1.60	13.15	11.95	11.10	10.45	9.80	9.20
250 x 75 x 2.00	14.15	12.85	11.95	11.25	10.65	10.20
250 x 75 x 2.50	15.25	13.85	12.85	12.10	11.50	11.00
250 x 75 x 3.00	16.20	14.75	13.70	12.85	12.20	11.70
250 x 100 x 1.60	14.05	12.75	11.85	10.95	10.20	9.55
250 x 100 x 2.00	15.10	13.75	12.75	12.00	11.40	10.90
250 x 100 x 2.50	16.30	14.80	13.75	12.90	12.25	11.75
250 x 100 x 3.00	17.30	15.70	14.60	13.75	13.05	12.45
300 x 75 x 1.60	15.05	13.35	12.05	11.10	10.35	9.75
300 x 75 x 2.00	16.45	14.95	13.90	13.05	12.40	11.85
300 x 75 x 2.50	17.75	16.10	14.95	14.10	13.35	12.80
300 x 75 x 3.00	18.85	17.15	15.90	14.95	14.20	13.60
300 x 100 x 1.60	15.45	13.65	12.40	11.40	10.65	10.00
300 x 100 x 2.00	17.40	15.80	14.65	13.80	13.10	12.55
300 x 100 x 2.50	18.70	17.00	15.80	14.85	14.10	13.50
300 x 100 x 3.00	19.90	18.10	16.80	15.80	15.00	14.35
350 x 100 x 1.60	15.45	13.75	12.50	11.55	10.75	10.15
350 x 100 x 2.00	19.60	17.55	16.00	14.80	13.85	13.05
350 x 100 x 2.50	21.10	19.15	17.80	16.75	15.90	15.20
350 x 100 x 3.00	22.45	20.40	18.90	17.80	16.90	16.15

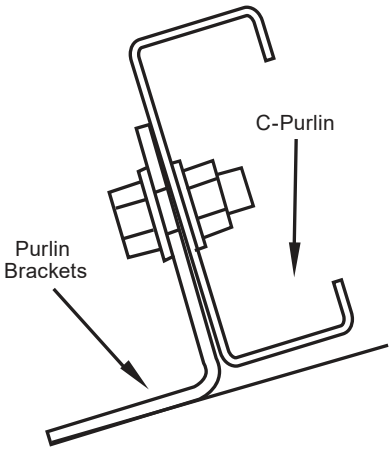
PRECAUTIONS

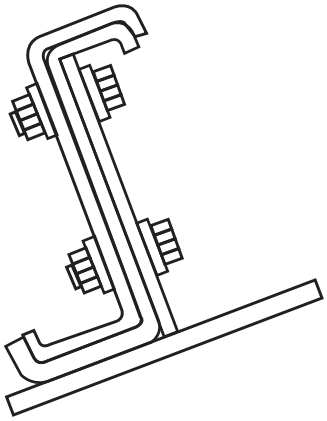
Contact between galvanized steel and incompatible materials (e.g. copper tube) must be avoided as premature corrosion could happen. Purlins should be stored of the ground on a slightly sloped position.

DELIVERY, STORAGE AND HANDLING

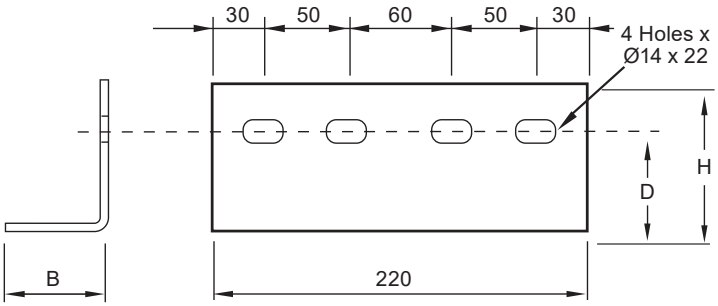
- Upon delivery, exercise care in unloading, stacking, moving, storing and erecting to prevent twisting, bending, scratching, or denting.
- Store it in a safe, dry enviroment under a waterproof covering.
- Allow adequate ventilation to prevent condensation.
- Purlins should be stored off the ground on a slightly sloped position.

PURLIN ACCESSORIES



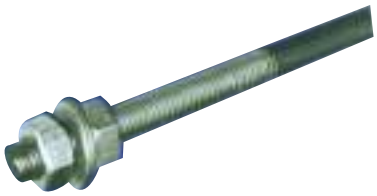


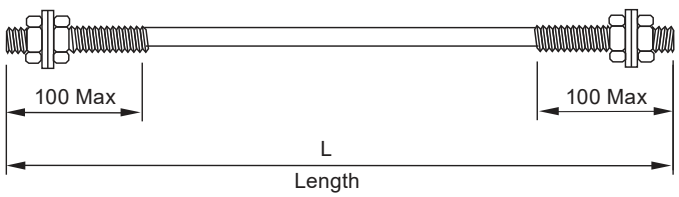
PURLIN BRACKET



Purlin Height	Base B (mm)	Height H (mm)	Hole Distance D (mm)	Thickness (mm)	Weight (kg)	Materials
100	59	81	56	4.0	0.862	Mild Steel
125	68	92	67	4.0	1.000	Mild Steel
150	76	104	79	4.0	1.142	Mild Steel
200	90	130	105	4.0	1.418	Mild Steel

TIE ROD

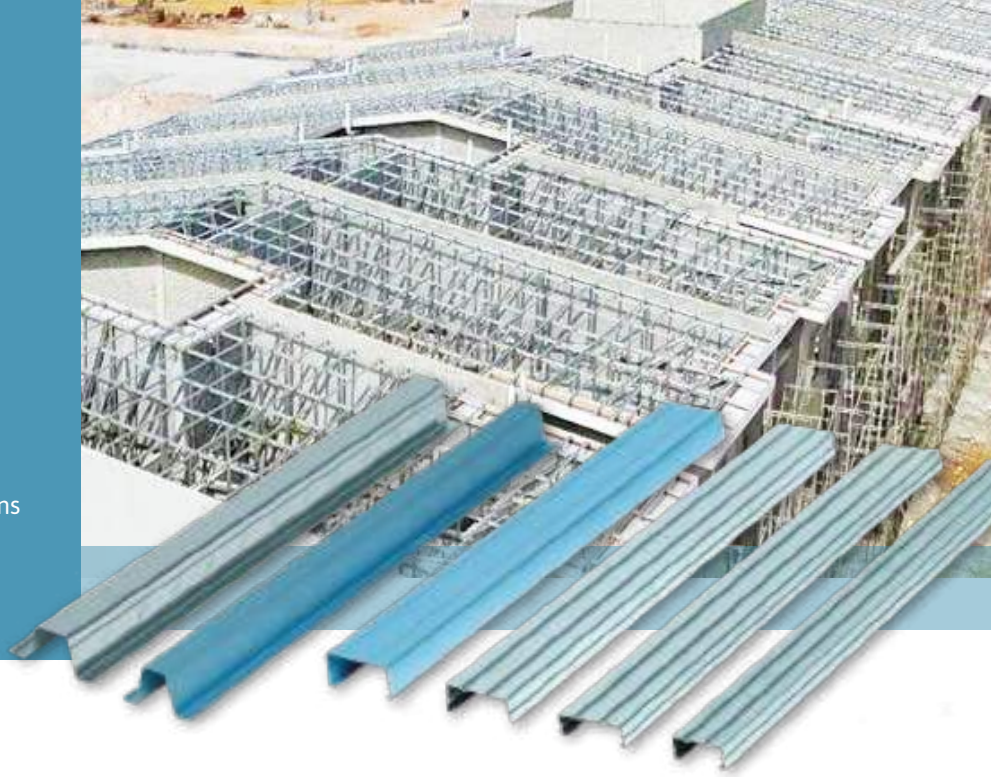




Size	Thread Length (mm)	Total Length (mm)
12mm	100 Max	L

Astino® Multi Truss & Batten

High Degree of Accuracy
and Consistency in Dimensions



Astino® Multi Truss and Battens are cold-rolled forming from structure grade galvanized steel, TOC, Aluzinc and Truecore. Astino provides technical support for roof truss layout design and roof frame detailing services with load test analysis according to BS 5950 Part 5. The C-Section can be box-up for wider spans and extra strength.

MATERIAL SPECIFICATIONS

Material	Hot Dip Galvanised Steel / TOC / Aluzinc / Truecore
Steel Grade	JIS G 3302 / ASTM A792 / MS 2384
Tensile	High Tensile
Min Yield Strength (Mpa)	550
Min Tensile Strength	570
Zinc Coating	120 g/m² to 275 g/m²
Available Thickness (mm)	0.42, 0.45, 0.48, 0.50, 0.55, 0.75, 0.80, 1.00

FIRE RATING

Class "O" file rating according to BS 476:Part 6:1989 "Method of Test for Fire Propagation For Products."

BS 476:Part 7:1997" Fire Tests on Building Materials and Structures. Method of test to determine the classification of the surface spread of flame of products.

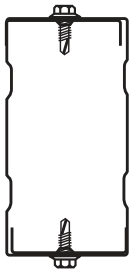
TOLERANCES

Astino Multi Trusses are produced within the following tolerance:

- Length : ±5mm
- Web (Dim. H) : ±1mm
- Flange (Dim. B) : ±2mm
- Thickness : ±0.05mm

BOX UP

The C-shaped steel truss sections box-up bringing extra strength, design flexibility and wider spans.



FEATURE & BENEFITS

- Quality assurance, competitive price, on time delivery
- Quality product with proven supply records
- High degree of accuracy and consistency in dimensions
- Different thickness availability to suit customer's needs
- High tensile steel ; light weight
- Detailed design with shop drawings accomplished with state-of-the-art software

PRECAUTIONS

Contact between galvanized steel and incompatible materials (e.g. Coppertube) must be avoided as premature corrosion could happen.

DELIVERY, STORAGE AND HANDLING

Upon delivery, exercise care in unloading, stacking, moving, storing and erecting to prevent twisting, bending, scratching or denting.

Store it in a safe, dry environment under a waterproof covering. Allow adequate ventilation to prevent condensation.

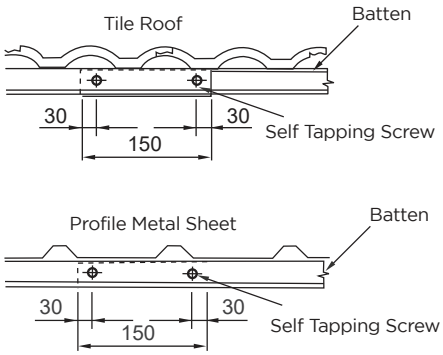
Trusses should be stored off the ground on a slightly sloped position.

TECHNICAL SUPPORT

Using the latest technology, Astino offers an unrivalled design and support package. Each project is individually designed and tailored to provide a cost effective solutions that meet performance requirements of the clients. Detailed layout design and roof truss assembly drawings plus build quantity calculations allow installations quickly and easily.

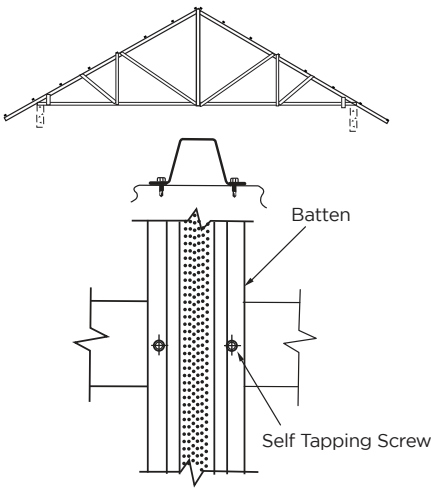
Each truss frame designs are evaluated with load test analysis according to BS 5950:Part 5.

OVERLAPS



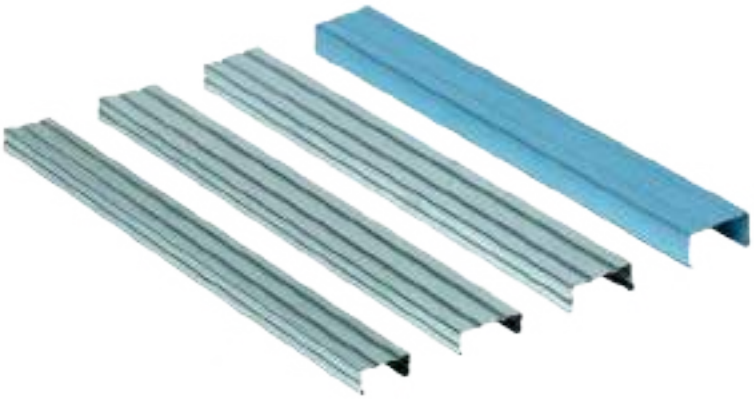
Batten overlaps are recommended to be 150mm in length.

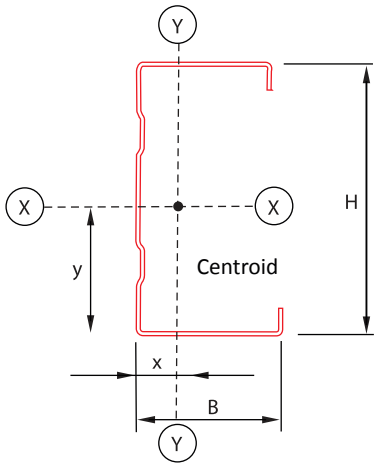
FIXINGS

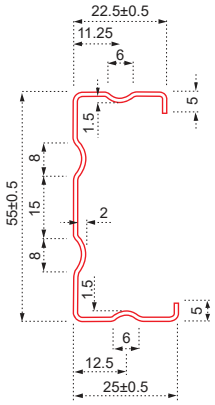


Pairs of screw must be fixed in line. Offset must be avoided.

C-SECTION SPECIFICATIONS

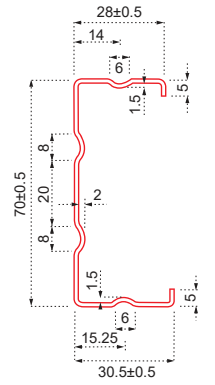






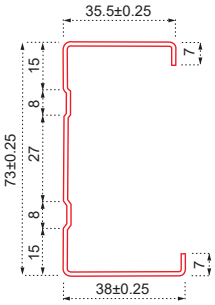
C-SECTION 110

Thickness (mm)	Area (mm^2)	Weight (kg/m)	Ixx $10^4(mm^4)$	Iyy $10^4(mm^4)$	Zxx $10^3(mm^3)$	Zyy $10^3(mm^3)$	Rxx (mm)	Ryy (mm)	x (mm)	y (mm)
0.75	82.7	0.72	3.853	0.558	1.371	0.313	21.6	8.2	7.2	26.9
0.80	88.1	0.77	4.096	0.591	1.458	0.332	21.6	8.2	7.2	26.9
1.00	110.0	0.95	5.051	0.721	1.798	0.405	21.5	8.1	7.2	26.9



C-SECTION 135

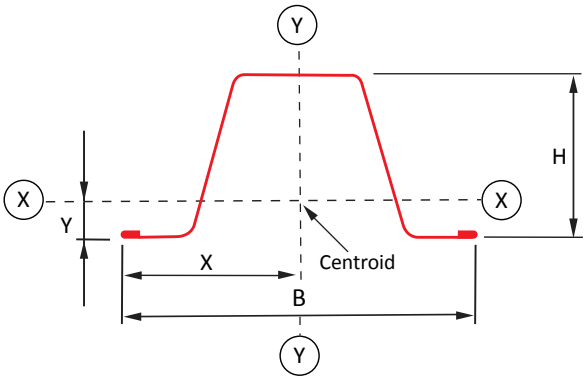
Thickness (mm)	Area (mm^2)	Weight (kg/m)	Ixx $10^4(mm^4)$	Iyy $10^4(mm^4)$	Zxx $10^3(mm^3)$	Zyy $10^3(mm^3)$	Rxx (mm)	Ryy (mm)	x (mm)	y (mm)
0.75	102.4	0.89	7.776	1.023	2.178	0.461	27.6	10.0	8.3	34.3
0.80	109.1	0.94	8.272	1.085	2.317	0.489	27.6	10.0	8.3	34.3
1.00	135.7	1.18	10.226	1.328	2.864	0.598	27.5	9.9	8.3	34.3

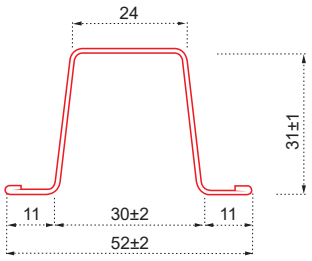


C-SECTION 153

Thickness (mm)	Area (mm^2)	Weight (kg/m)	Ixx $10^4(mm^4)$	Iyy $10^4(mm^4)$	Zxx $10^3(mm^3)$	Zyy $10^3(mm^3)$	Rxx (mm)	Ryy (mm)	x (mm)	y (mm)
0.75	116.9	0.99	10.187	2.012	2.738	0.756	29.5	13.1	11.4	35.8
0.80	124.6	1.05	10.840	2.137	2.914	0.803	29.5	13.1	11.4	35.8
1.00	155.1	1.30	13.421	2.628	3.608	0.988	29.4	13.0	11.4	35.8

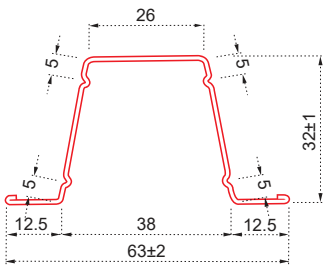
BATTEN SPECIFICATIONS





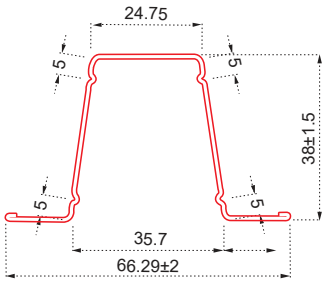
BATTEN 110

Thickness (mm)	Area (mm²)	Weight (kg/m)	Ixx 10⁴(mm⁴)	Iyy 10⁴(mm⁴)	Zxx 10³(mm³)	Zyy 10³(mm³)	Rxx (mm)	Ryy (mm)	x (mm)	y (mm)
0.42	45.24	0.41	0.713	1.002	0.45	0.37	12.55	14.88	26	15.11
0.45	48.47	0.44	0.769	1.080	0.48	0.40	12.60	14.93	26	15.11
0.48	51.70	0.47	0.827	1.159	0.52	0.43	12.64	14.97	26	15.11
0.50	53.85	0.49	0.865	1.212	0.54	0.45	12.67	15.00	26	15.11
0.55	59.24	0.54	0.963	1.346	0.61	0.50	12.75	15.08	26	15.11



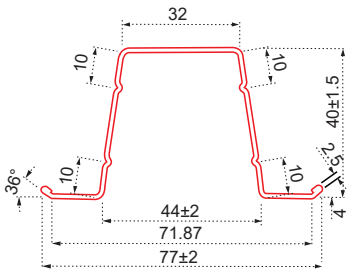
BATTEN 121

Thickness (mm)	Area (mm²)	Weight (kg/m)	Ixx 10⁴(mm⁴)	Iyy 10⁴(mm⁴)	Zxx 10³(mm³)	Zyy 10³(mm³)	Rxx (mm)	Ryy (mm)	x (mm)	y (mm)
0.42	51.70	0.45	0.829	1.678	0.512	0.533	12.7	18.0	31.5	15.8
0.45	55.35	0.48	0.887	1.795	0.530	0.570	12.7	18.0	31.5	15.8
0.48	59.00	0.51	0.946	1.911	0.584	0.607	12.7	18.0	31.5	15.8
0.50	61.40	0.53	0.985	1.988	0.608	0.631	12.7	18.0	31.5	15.8
0.55	67.50	0.59	1.082	2.181	0.672	0.692	12.7	18.0	31.5	15.9



BATTEN 135

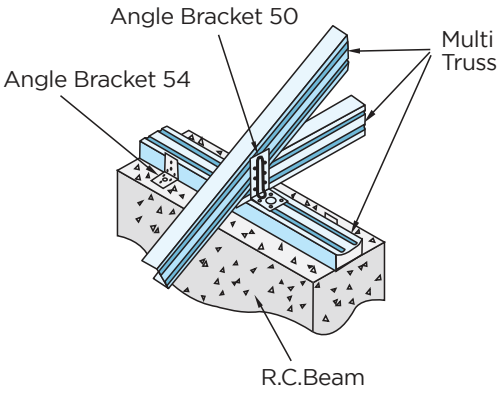
Thickness (mm)	Area (mm²)	Weight (kg/m)	Ixx 10⁴(mm⁴)	Iyy 10⁴(mm⁴)	Zxx 10³(mm³)	Zyy 10³(mm³)	Rxx (mm)	Ryy (mm)	x (mm)	y (mm)
0.42	58.4	0.50	1.286	1.904	0.640	0.579	14.8	18.1	33.1	17.9
0.45	62.5	0.53	1.377	2.036	0.690	0.620	14.8	18.0	33.1	17.9
0.48	66.6	0.57	1.468	2.169	0.730	0.654	14.8	18.0	33.1	17.9
0.50	69.3	0.59	1.528	2.257	0.760	0.680	14.8	18.0	33.1	17.9
0.55	76.2	0.65	1.679	2.477	0.835	0.746	14.8	18.0	33.1	17.9

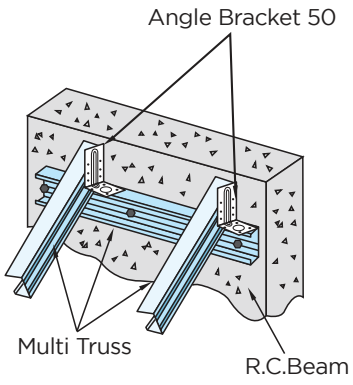


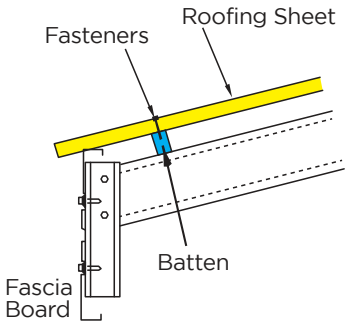
BATTEN 152

Thickness (mm)	Area (mm²)	Weight (kg/m)	Ixx 10⁴(mm⁴)	Iyy 10⁴(mm⁴)	Zxx 10³(mm³)	Zyy 10³(mm³)	Rxx (mm)	Ryy (mm)	x (mm)	y (mm)
0.42	63.20	0.57	1.584	3.034	0.765	0.786	15.8	21.9	38.4	19.3
0.45	67.65	0.60	1.696	3.244	0.820	0.840	15.8	21.9	38.4	19.4
0.48	72.10	0.64	1.808	3.455	0.878	0.895	15.8	21.9	38.4	19.4
0.50	75.00	0.67	1.882	3.595	0.914	0.931	15.8	21.9	38.4	19.4
0.55	82.40	0.74	2.068	3.943	1.004	1.022	15.8	21.9	38.4	19.4

TRUSS ACCESSORIES

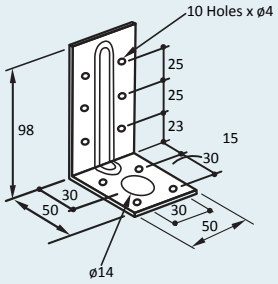






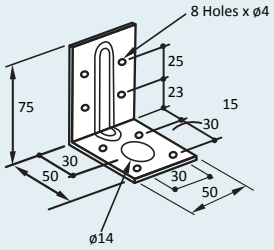
Angle Bracket 50 (Big)

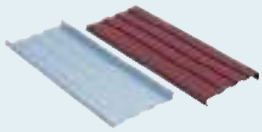
Size (mm)	Thickness (mm)	Weight (kg)	Material
98 x 50 x 50	1.6	0.087	G.I



Angle Bracket 50 (Small)

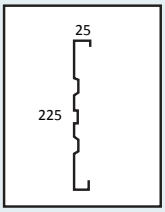
Size (mm)	Thickness (mm)	Weight (kg)	Material
75 x 50 x 50	1.6	0.065	G.I





Fascia Board

Size (mm)	Available Thickness (mm)
225	0.47
225	0.40



Prima Plank

Size (mm)	Thickness (mm)	Length (mm)	Surface Texture
230	7.50	3660	Smooth
230	9.00	3660	Smooth

DS516HO
#10-16T X 5/8" HEX HEAD
SELF DRILLING SCREW
HARDEN ZINC
1 CTN: 12,000PCS

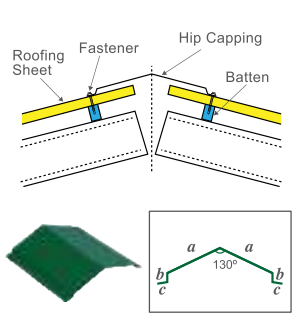
DS520HO
#10 X 3/4" HEX HEAD
SELF DRILLING SCREW
HARDEN ZINC
1 CTN: 12,000PCS

DS520HOR
#10 X 3/4" HEX HEAD
SELF DRILLING SCREW
RUSPERT GREY COLOUR COATING
@1000 HOURS
1 CTN: 8,000PCS

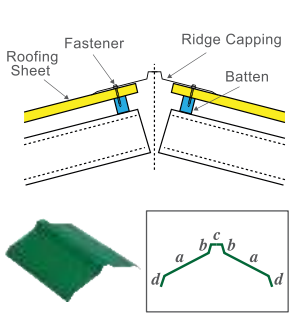
ROOFING ACCESSORIES

Standard Girth (mm) x Length (Feet) :	300mm x 8ft	450mm x 8ft	600mm x 8ft	900mm x 8ft

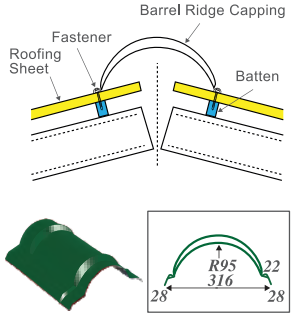
HIP CAPPING



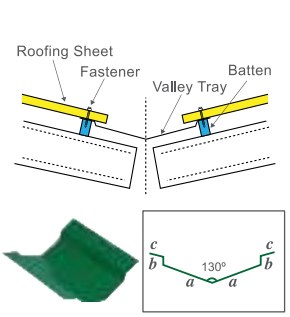
RIDGE CAPPING



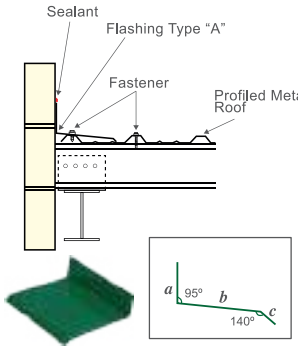
BARREL RIDGE CAPPING



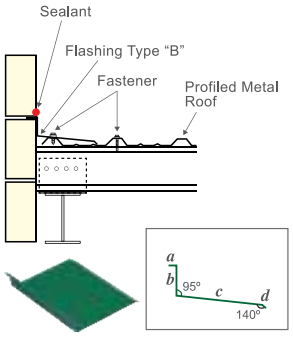
VALLEY TRAY



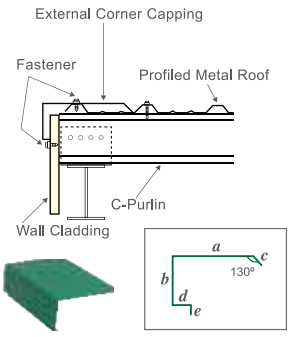
FLASHING TYPE A - FLASHING



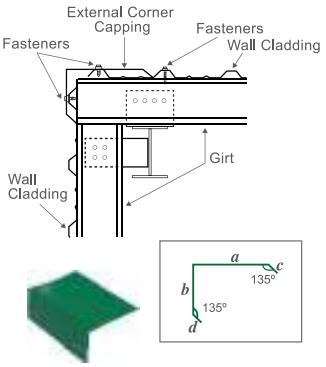
FLASHING TYPE B - STEP FLASHING

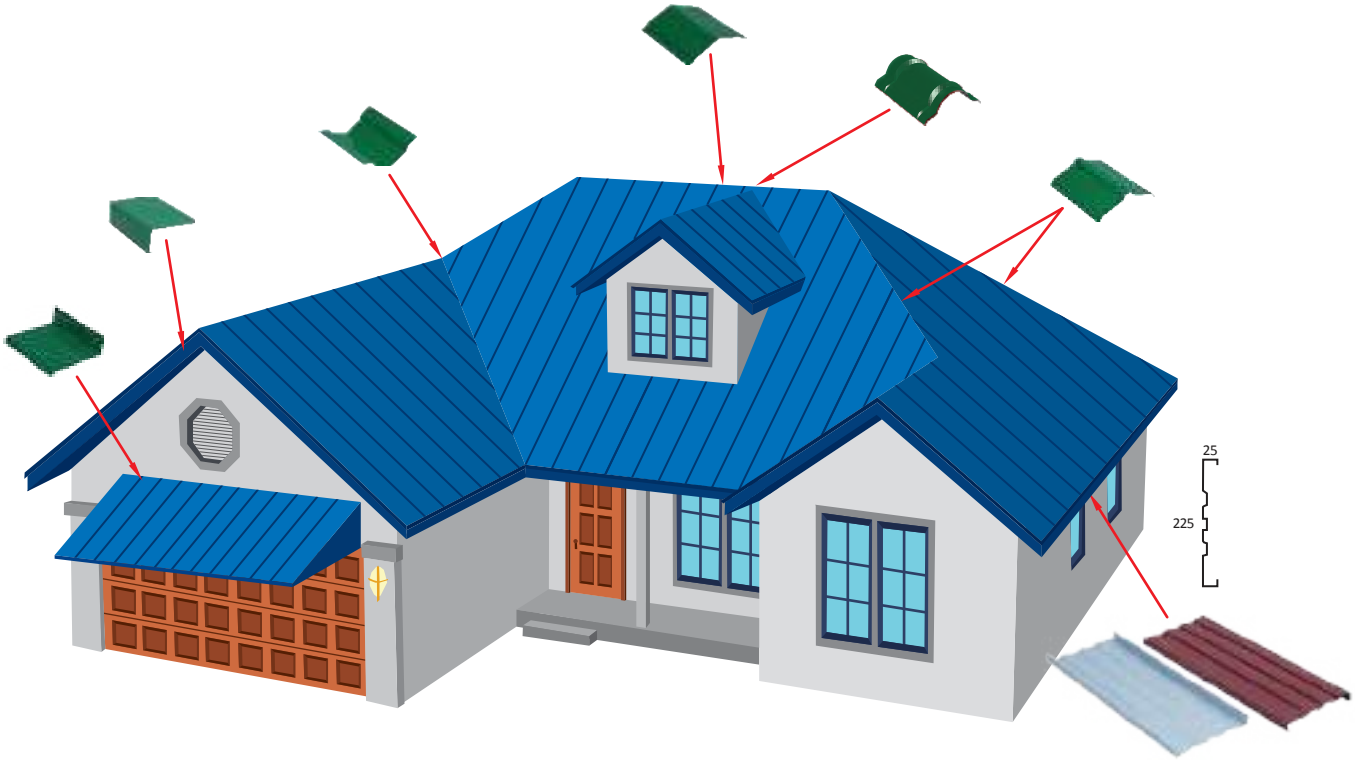


CORNER CAPPING (A)

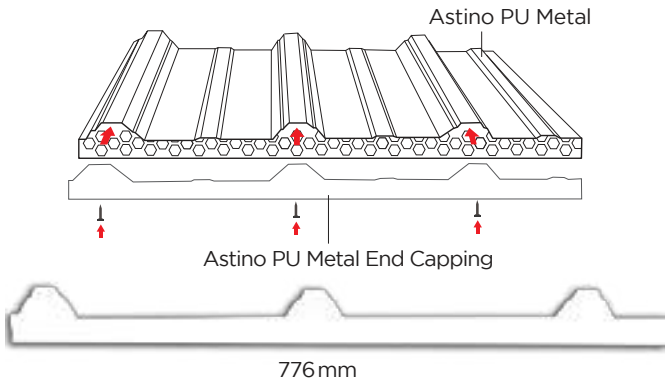


CORNER CAPPING (B)





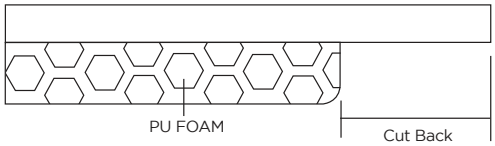
ASTINO PU METAL END CAPPING INSTALLATION



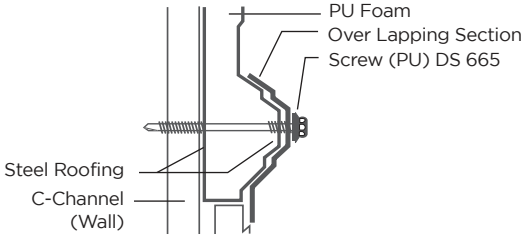
PANEL END CUT BACK

For installation of insulated metal roof, the following measures are recommended

Cut back at end laps - 150mm

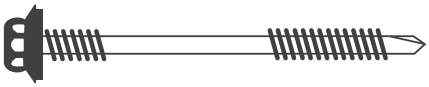


INSTALLATION DETAILS

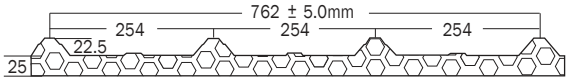


RECOMMENDED SCREW

PU Foam Thickness	PU Screw	
PU Foam 20mm	DS 665	(2 1/2")
PU Foam 25mm	DS 690	(3 1/2")
PU Foam 43mm	DS 6100	(4")



ROOF PITCH



FIRE RATING

BS 476:Part 6:1989 “Method of Test for Fire Propagation For Products.”

BS 476:Part 7:1997” Fire Tests on Building Materials and Structures. Method of test to determine the classification of the surface spread of flame of procucts.

FEATURE & BENEFITS

- Services promise-quality, competitively priced, on time delivery.
- Quality products and proven manufacturing and supply records.
- High degree of accuracy and consistency in dimensions.
- Thickness options for economical design.
- High tensile steel - high strength and low weight.
- Lightweight and easily handles on-site.
- Layout, detailed design, and fabrication drawings accomplished with state-of-the-art software.

TECHNICAL SUPPORT

Using the latest technology, Astino offers an unrivalled design and support package. Each project is individually designed and tailored to provide a cost effective solutions that meet performance requirements of the clients. Detailed layout design and roof truss assembly drawings plus build quantity calculations allow installations quickly and easily.

Each truss frame designs are evaluated with load test analysis according to BS 5950:Part 5.

DELIVERY, STORAGE AND HANDLING

Upon delivery, exercise care in unloading, stacking, moving, storing, and erecting to prevent twisting, bending, scratching or denting.”

Store it in a safe, dry environment under a waterproof covering. Allow adequate ventilation to prevent condensation.

Trusses should be stored off the ground on a slightly sloped position.

ADVANTAGES

ECONOMICAL AND HIGH INVESTMENT RETURN
… Saving on overall long term investment cost.

LIGHT WEIGHT & DURABLE
… Saving on transportation and replacement cost.

EASY & FAST INSTALLATION
… Saving on installation and time costs.

QUIET
… Saving on sound insulation cost.

LOW MAINTENANCE, HYGIENIC AND GOOD SANITARY CONDITION
… Saving on maintenance cost.

PEST & TERMITE PROOF
… Saving on repair cost.

GOOD INSULATION
... Saving on heat insulation cost.

AESTHETIC ASSET
... Saving on up keep and maintenance costs.

SAFE ENVIRONMENT
… Saving on lumbering activity expenses.

To ensure Astino roofing product last it's lifetime. Astino encourage debris free while & after installation such as:

- Welding particles.
- Extra unused or used fasteners that exposed on metal roofing.
- Cutting particles, hole opening for air ventilator or drain pipe.
- Metal sheets stack on top of roofing.
- Any others metal objects.

Should be clear from the roofing immediately, touch up & clean up if there are scratches or debris occur.

Cleaning the area with mineral spirits, rinse completely with water and allow to dry. Using paint supplies from the manufacturer, apply a minimum amount of paint to cover the effected area.

Failing to do so will corrode the metal roofing and void the warranty.

ASTINO PROJECT PHOTO

Batu Kawan Project | Site A

DHL EXPRESS (M) SDN. BHD.
Aluzinc AZ150 0.47mm TCT Clip Lock 710

Aluzinc AZ150 0.47mm TCT High Rib Longrun

DENKO IPC SDN. BHD.
Aluzinc AZ150 0.47mm TCT High Rib Longrun

Aluzinc AZ150 0.47mm TCT Clip Lock 672

Prima Maju AZ150 0.47mm TCT Clip Lock 710 in Prima Kekabu

ECLIPSE AUTOMATION MALAYSIA
Realcolor Primero 0.47mm TCT High Rib PU Foam 25mm in Volcanic Grey

WESTINGHOUSE ELECTRIC CORPORATION
Aluzinc AZ150 0.47mm TCT Clip Lock 710

Aluzinc AZ150 0.47mm TCT Superior Rib Longrun

Aluzinc AZ150 0.47mm TCT Superior Rib Longrun

HUAYA PRECISION MANUFACTURING SDN BHD
Realcolor Cahaya Plus 0.40mm TCT Superior Rib PU Metal 20mm in Volcanic Grey

ASTINO PROJECT PHOTO

Batu Kawan Project | Site B

RONCELLI PLASTICS SDN. BHD.
Aluzinc AZ150 0.47mm TCT Cooldec Longrun

Aluzinc AZ150 0.47mm TCT High Rib PU Foam 25mm

Aluzinc AZ150 0.47mm TCT High Rib PU Foam 25mm

FedEx - FEDERAL EXPRESS SERVICES (M) SDN. BHD.
Aluzinc AZ150 0.47mm TCT Clip Lock 672

Zincalume AZ150 0.53mm TCT Clip Lock 672

Thermoshield Z27 0.53mm TCT Clip lock 710 in Apen Green

Zinalume AZ150 0.53mm TCT Clip Lock 672

KOIKE (M) SDN. BHD. (BATU KAWAN)
Aluzinc AZ150 0.47mm TCT Clip Lock 710

GREATECH BK II
Zincalume AZ150 0.53mm TCT Clip Lock 672

ASTINO PROJECT PHOTO

Batu Kawan Project | Site C

Realcolor Primero 0.47mm TCT
Superior Rib PU Metal G26 in Volcanic Grey

LANCO INTEGRATED MALAYSIA
Realcolor Primero 0.40mm TCT
High Rib Pu Aluminium 25mm in Safari Beige

SUNPAQ SDN. BHD.
Aluzinc AZ150 0.53mm TCT
High Rib PU Aluminium 25mm

ASCENTEC ENGINEERING SDN. BHD.
Aluzinc AZ150 0.47mm TCT
High Rib PU Foam 25mm

G POWER GENERATION SDN. BHD.
Zincalume AZ150 0.53mm TCT
High Rib PU Metal 25mm

EDM HOLDINGS SDN. BHD.
Realcolor Primero 0.47mm TCT
High Rib Longrun in Tropical Green

SPEN INDUSTRIES SDN. BHD.
Aluzinc AZ150
0.35mm TCT
Superior Rib
PU Aluminium 25mm

Aluzinc AZ150 0.47mm TCT Cooldec Longrun

Realcolor Primero 0.47mm TCT
High Rib PU Aluminium 25mm in Brick Red

INEO TECH SDN BHD
Aluzinc AZ150 0.47mm TCT New Sunroof Longrun

INDIUM CORPORATION (M) SDN. BHD.
Aluzinc AZ150 0.47mm TCT High Rib Longrun

LEAPCO SDN. BHD.
Realcolor Primero 0.47mm TCT Clip Lock 672
in Pearl Grey

CG SOLUTIONS ENTERPRISE SDN. BHD.
Realcolor Primero 0.40mm TCT
Superior Rib PU Metal 20mm
in Volcanic Grey

ASTINO PROJECT PHOTO

OSR MALAYSIA SDN. BHD.
Aluzinc AZ150 0.47mm TCT High Rib PU Foam 25mm

K.K. METAL PROCESSING SDN. BHD
Realcolor Primero 0.47mm TCT High Rib PU Foam 25mm color in Fina Blue

Batu Kawan Project | Site D

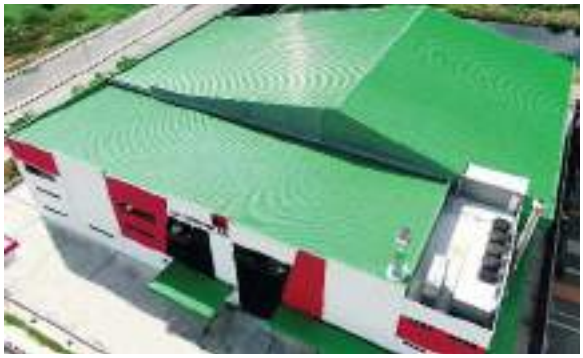
IN-TECH
Aluzinc AZ150 0.47mm TCT Clip Lock 672

ASHRAE
Realcolor Primero 0.47mm TCT Superior Rib PU Metal 25mm in Horizon Blue

ASTINO PROJECT PHOTO

STRAITS ORTHOPAEDICS SCIENCE PARK
Aluzinc AZ150 0.47mm TCT Superior Rib Longrun

Aluzinc AZ150 0.47mm TCT High Rib PU Metal 25mm



ALPS COATING SDN. BHD.
Realcolor Primero 0.47mm TCT Clip Lock 672 in Tol Green

LUMSON BINA ENGINEERING SDN. BHD.
Realcolor Primero 0.47mm TCT Superior Rib PU Metal 25mm in Charcoal Brown

SF METAL SDN. BHD.
Aluzinc AZ150 0.47mm TCT High Rib PU Metal 25mm

HNK ENGINEERING SDN. BHD.
Aluzinc AZ150 0.47mm TCT Superior Rib PU Aluminium 20mm

NINJA VAN MALAYSIA
Realcolor Primero 0.47mm TCT High Rib LR in Pearl Grey

Science park
Bukit Minyak Project

STRAITS ORTHOPAEDICS - SCIENCE PARK
Aluzinc AZ150 0.47mm TCT Clip Lock 710

Realcolor Primero 0.47mm TCT Cooldec Longrun in Pearl Grey

DSV SOLUTION SDN. BHD.
Aluzinc AZ150 0.47mm TCT
High Rib PU Aluminium 25mm

SEA ASIA PACIFIC SDN. BHD.
Aluzinc AZ150 0.40mm TCT
High Rib PU Metal 25mm

Aluzinc AZ150 0.40mm TCT Cooldec Longrun

ASTINO PROJECT PHOTO

Aluzinc AZ150 0.47mm TCT High Rib PU Metal 25mm

IMR (MALAYSIA) SDN. BHD.
Realcolor Primero 0.47mm TCT Clip Lock 710 in Safari Beige

STREETS FOOD PRODUCTS SDN. BHD.
Realcolor Primero 0.47mm TCT Superior Rib PU Metal 25mm in Pearl Grey

UNIIFOOD - UNIQUE FROZEN FOOD (M) SDN. BHD.
Realcolor Primero 0.47mm TCT Superior Rib PU Metal 25mm in Safari Beige

Science park

Bukit Minyak Project

Aluzinc AZ150 0.47mm TCT Superior Rib PU Metal 20mm

0.47mm TCT Superior Rib PU Foam 20mm in Fina Blue

Zincalume AZ150 0.53mm TCT Clip Lock 672

0.53mm TCT Clip Lock 710 in Fina Blue

SMJK JIT SIN II SPS

SEKOLAH JENIS KEBANGSAAN (C) TRUE LIGHT

PANTAI HOSPITAL PENANG

JABATAN BELIA DAN SUKAN NEGERI PULAU PINANG

ASTINO Project Photo

ICONIC POINT, SIMPANG AMPAT

GS PAPERBOARD & PACKAGING SDN. BHD.

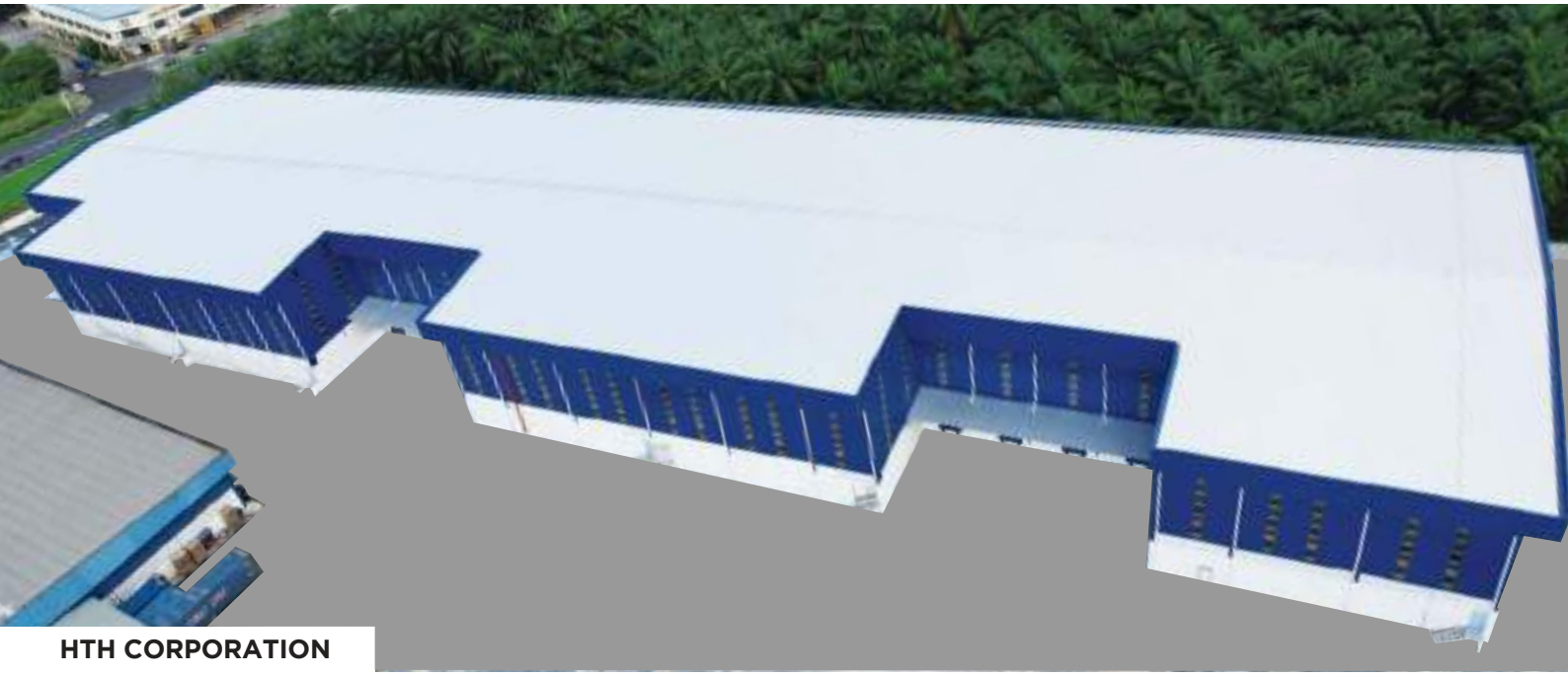
INARI TECHNOLOGY SDN. BHD. (P34)

INOKOM CORPORATION SDN. BHD.

EVERBEST SOYA BEAN PRODUCT SDN. BHD.

VOLVO CARS VCDR CENTER - IROLL IPOH

ASTINO Project Photo



HTH CORPORATION

ROYALE INFINITY

MASJID - SEBEARANG PERAI, PENANG

MASJID - PERINDUSTRIAN SEBEARANG PERAI, PENANG

ASTINO Project Photo (Perak)

HONDA TIAN SIANG BP - IPOH

SEKOLAH MENENGAH SHEN JAI

LIAN CHOON HUAT METAL INDUSTRIES SDN. BHD.

ASTINO Project Photo - Roll on site

GREATECH BKII - BATU KAWAN

BUTTERWORTH LIGHT INDUSTRIES


ACCELERATE THE FUTURE


GREATECH
BK IV

ASTINO Project Photo - Roll on site

SC60 Shoring System Erection Procedure

Position jack base on the load distribution sole plates, at the intervals determined by the horizontal member.

Fit the starter member into the jack base. Fit the first plan braces, rings downwards.

Clamp the first horizontal member. Insert and lock the first lift of triangle.

Check the structure is level and plump.

Still working from the ground, fit the second lift of triangle, so that they face the opposite way. The triangle should be obligatorily pinned together.

Position temporary erection platforms and the definitive platforms and ladder in the access lift of towers every 2 metres. Check that the structure is plump using the sighting device provided on each triangle sleeve. The upper and lower tubes should be in contact at each leg.

Erection must be carried out from inside the towers.

Fit the triangle at lift 3, observing the safety regulations, protected by the temporary platforms from lift 1 are moved to lift 2.

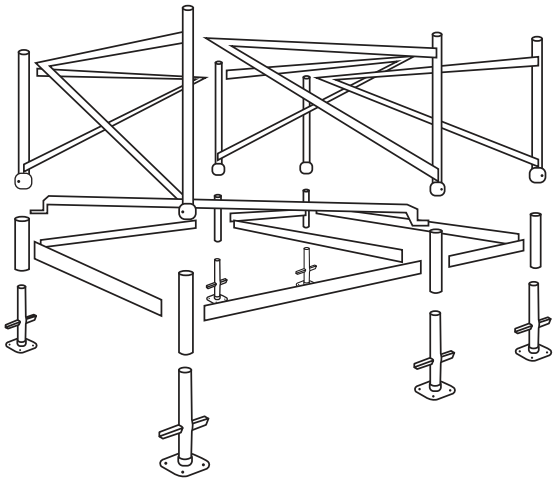
Fit triangle at lift 4, still working safety from the second platform. Reverse the direction of the triangle.

Position the new access platform and its ladder. Still working in safety from lift 3, protected by the triangle of lift 4, insert the standard or triangle frame.

Link up the standard or triangle frame with the horizontal member; Fit U-head.

Complete the service platform for fitting main bearer and secondary runner, wall pieces and formwork panels. This platform should remain in position to allow inspection of the slab underside, as well as leveling, removing formwork and dismantling.

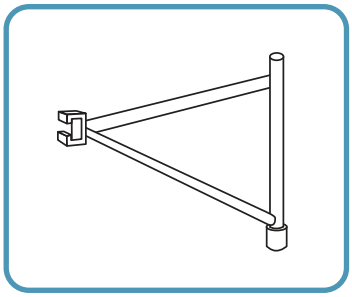
SC60* Shoring System Components List



SC60 is heavy duty Shoring system.

To support all types of structures:

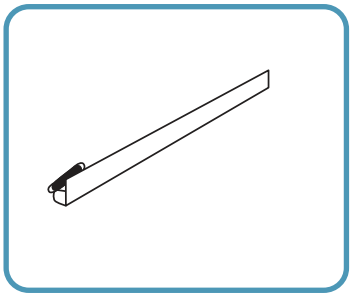
- Transfer Beam / Slab
- Bridges
- High Structure
- Tableform



Triangular Frame

Item Code	Height (M)
SC60-20107	1.00 x 0.7
SC60-20115	1.00 x 1.5

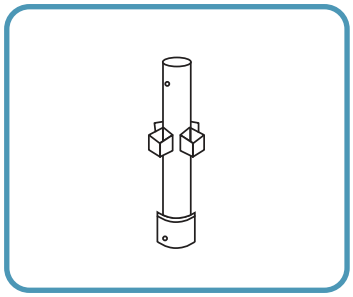
Produces one tower stage, after lifting components together vertically with SC60 locking at the end of the Horizontal member. The vertical member is equipped with 3 SC60 stirups. One end of the horizontal member is provided with a wedge clamp.



Horizontal Member

Item Code	Length (M)
SC60-20203	0.35
SC60-20205	0.5
SC60-20207	0.7
SC60-20210	1.0
SC60-20215	1.5
SC60-20218	1.8
SC60-20220	2.0
SC60-20225	2.5
SC60-20230	3.0

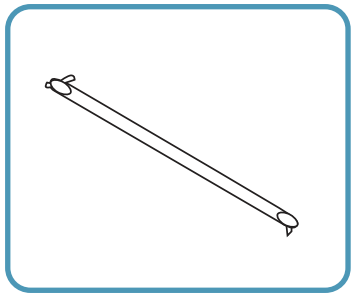
Made of 48mm diameter tube, it has a wedge clamp at each end.



Vertical Member

Item Code	Height (M)
SC60-20503	0.3
SC60-20505	0.5
SC60-20507	0.75
SC60-20510	1.0
SC60-20520	2.0

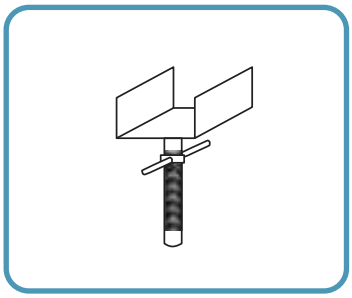
Used to produce narrow cells in conjunction with the triangles. They can be attached to a tower where there is a substantial load concentration.



Diagonal Brace

Item Code	H(M)	W(M)	L(M)
SC60-204205	0.5	2.00	1.97
SC60-204071	1.00	0.70	1.17
SC60-204101	1.00	1.00	1.35
SC60-204151	1.00	1.50	1.72
SC60-204201	1.00	2.00	2.15
SC60-204251	1.00	2.50	2.60
SC60-204072	2.00	0.70	2.09
SC60-204102	2.00	1.00	2.19
SC60-204152	2.00	1.50	2.45
SC60-204182	2.00	1.80	2.64
SC60-204202	2.00	2.00	2.76
SC60-204252	2.00	2.50	3.13
SC60-204302	2.00	3.00	3.53

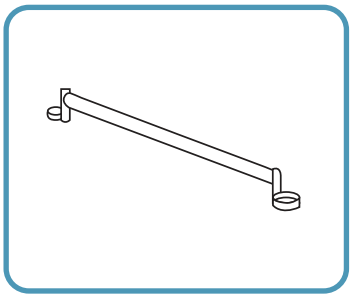
Made of 38mm diameter tube, fitted with a wedge locking bolt at each end. It is used for vertical bracing of structures; when duplicated it allows large working areas on brackets. It is defined by the height and length of the cell it braces.



U-Head

Item Code	Height (M)
SC60-U01	600mm

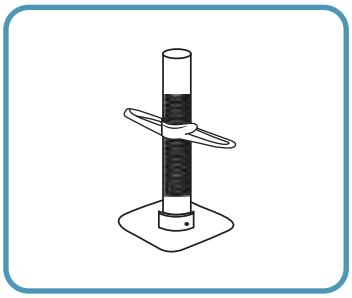
It enables to accommodate main bearer or timbers edge on sections. It allows the mould bottoms to be adjusted.



Plan Brace

Item Code	Length (M)
SC60-20307	0.7 x 0.7
SC60-20315	0.7 x 1.5
SC60-203115	1.5 x 1.5

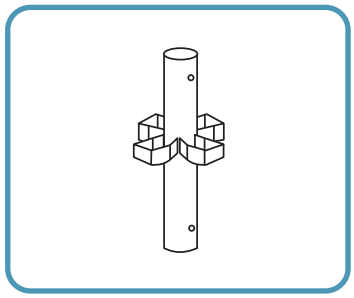
Prevents deformation of towers. Fitted to alternate stages.



Jack Base

Item Code	Length (M)
SC60-J01	600mm

Used on ground. Sole Plate to be placed if required.



Starter Member

Item Code	Length (M)
SC60-206	0.3

Used after placing of Jack Base to facilitate the erection with Triangular Frame or Vertical Member.

COLOUR CHART

Volcanic Grey **N17000**

Pearl Grey **N10000**

Charcoal Brown **N16000**

Off White **N11000**

Lily White **N14000**

Safari Beige **N5000**

*Tol Green **N2000**

*Tropical Green **N8000**

*Royal Yellow **N13000**

*Melon Orange **N12000**

Cultural Red **N15000**

Brick Red **N6000**

Horizon Blue **N7000**

Fina Blue **N9000**

Aluzinc **N4000**

realZINC™

GI

Enhance realZINC

Realzinc

Zincalume®

Zincalume

Non-Standard

COLOUR CHOICES

RECYCLING

DURABILITY / SECURITY

THERMAL EFFICIENCY

DESIGN FLEXIBILITY

TERMITE PROOF

HI-TECH PRODUCTION

WARRANTY

CSC STEEL

The Best Products that Come from a Reliable Source

The excellent product range of Astino is tailored from the renowned coated steel coil manufacturer, known as CSC Malaysia. Astino and CSC Malaysia have been building more than 15 years of relationship by supplying steel products with the latest advanced technology and meeting the expectation of top-notch quality products together.

CSC Malaysia is known as one of the raw material suppliers that produce and deliver the best steel products for an extensive range of applications from different industries. The steel producer is actively shaping its brands, namely realzinc™ and realcolor®, to further expand its market share. CSC Malaysia has always building on their strength by meeting current and future needs of the customers with innovative products that comes with antimicrobial function, compliance of the highest anti-corrosion rating-C-5M, and etc.

For years to come, Astino and CSC Malaysia are determined in leading the construction industry with their expertise and continue providing the best solution to the customers.

CSC STEEL SDN. BHD.

VISION

A preferred supplier of roofing and other building material products.

MISSION

To supply our customers with top quality and innovative products.

POLICY

To strive for continuous improvement on quality products and excellence in services.

ASTINO GROUP OF COMPANIES

Ooi Joo Kee & Brothers Sdn. Bhd.

Astino Metal Industries Sdn. Bhd.

Astino (M) Colour Steel Sheet Sdn. Bhd.

Astino Southern Sdn. Bhd.

Astino Netting Sdn. Bhd.

Astino Scaffolding Sdn. Bhd.

Astino Agro-House Multi System Sdn. Bhd.

CIDB MALAYSIA

MS SIRIM

QUALITY SYSTEM SIRIM

Buatan Malaysia Product of Malaysia

ASTINO®

The Symbol Of Quality