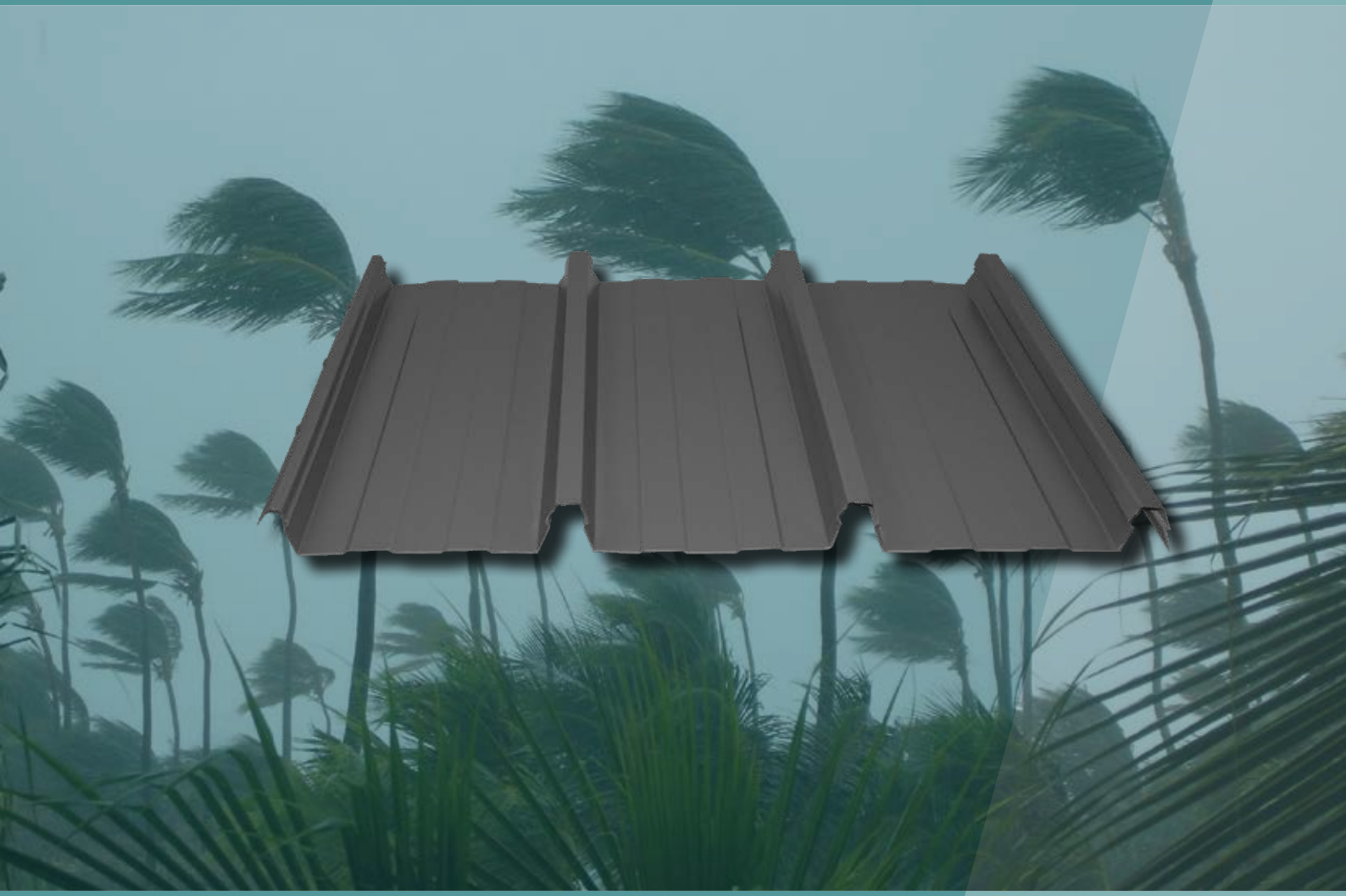
METLOK 700® VG4 CYCLONIC SPECIFICATION

DESIGN & INSTALLATION GUIDE



A Met-TECH™ GUIDE

DECEMBER 2025

Metroll®

BETTER SERVICE • BETTER BUILDING SOLUTIONS

METLOK 700® VG4
CYCLONIC SPECIFICATION

Underlap **Cover: 695mm** **Height: 40mm** **Overlap**

This Metroll Cyclonic Specification provides relevant information for builders, contractors and specifiers who wish to specify or use Metlok 700® VG4 in cyclonic areas.

Metlok 700® VG4 is a concealed fix roof system designed for long run roofing applications. It can also be used for walling. Metlok 700® VG4 is manufactured in a continuous roll form method from 0.42mm and 0.48mm BMT COLORBOND® steel, ZINCALUME® steels and galvanised steel. Metlok 700® VG4 is suitable for use in commercial and industrial applications for roof pitches as low as 1° (1 in 50).

FEATURES & BENEFITS

- Concealed fix
- Ideal for long runs
- Low pitch
- Designed for thermal expansion and contraction
- Easy clip install

METLOK 700® VG4 - ROOFING

BMT mm	Steel Base MPa	Mass CB* kg/m²	Mass Zinc kg/m²	Min. Pitch°
0.42	G550	4.68	4.61	1 (1 in 50)
0.48	G550	5.32	5.24	1 (1 in 50)

METLOK 700® VG4 - WALLING

0.42	G550	4.68	4.61
0.48	G550	5.32	5.24

*CB = Colorbond®

WIND UPLIFT RESISTANCE - LOAD SPAN TABLE
DESIGN WIND PRESSURE (kPa)

Span (mm)	0.42 BMT				0.48 BMT			
	End		Internal		End		Internal	
	Service	Strength	Service	Strength	Service	Strength	Service	Strength
900	1.45	6.07	1.81	7.59	2.25	6.36	2.81	7.95
1200	1.26	4.10	1.57	5.13	2.46	5.24	3.07	6.55
1500	1.23	3.97	1.54	4.96	1.88	4.89	2.35	6.11
1800	1.23	3.82	1.54	4.78	1.31	4.54	1.64	5.68
2100	0.83	2.74	1.04	3.42	1.01	3.17	1.26	3.97
2200	0.74	2.05	0.93	2.56	0.92	2.37	1.15	2.96
2800					0.54	0.90	0.68	1.13

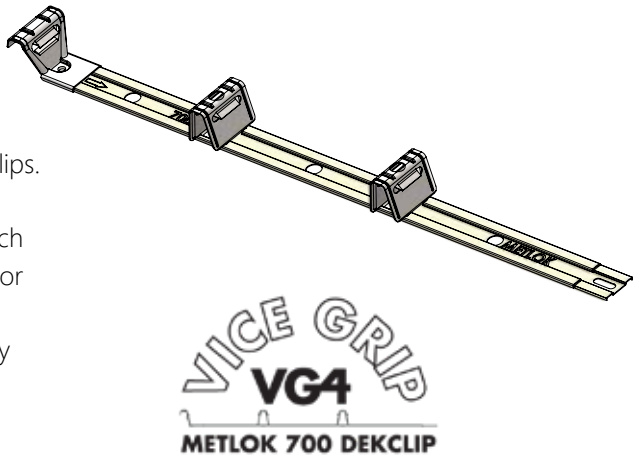
What is Met-TECH™?

Met-TECH™ is Metroll's Technical Resource Centre. It is the one stop shop for all of Metroll's product and technical information. Perfect for builders, contractors and specifiers to source all the information they may require. You can find other Met-TECH™ items on our website **www.metroll.com.au/resources**

LOAD SPAN TABLE - DESIGN WIND PRESSURE (kPa)
METLOK 700® VG4

WIND CLASS	Vsit, 500 m/s	SPAN			
		ROOFING		WALLING	
		0.42 BMT	0.48 BMT	0.42 BMT	0.48 BMT
C1	50	1200	1300	1200	1300
C2	61	1200	1300	1200	1300
C3	74	1200	1300	1200	1300
C4	86	660	660	660	660
Unstiffened Edge		150	150	150	150
Stiffened Edge		600	600	600	600

Roof spans take account of wind pressure and normal maintenance foot traffic.
Wall spans take account of wind pressure only.
Building height ≤ 7000mm.



CLIPS & FASTENERS

Metlok 700® VG4 sheeting is fixed to supports by Metlok 700® VG4 Dekclips. Always face side laps away from the prevailing weather.
Screws are available in a variety of materials, finishes and colours to match COLORBOND® pre-painted steel and design. Use screws to AS 3566.1 (or better). Additional information on fastener finishes is in the BSL technical bulletin TB-16, which provides further guidance as to corrosivity category and fastener selection.

TIMBER SUPPORTS - HARD OR SOFT

ROOFING & WALLING #12 Hex Head Type 17 x 25mm. Add 10mm for softwood.

STEEL SUPPORTS 0.48 to 1.5mm BMT

ROOFING & WALLING M6 x 25mm Hex Head Universal Screw

STEEL SUPPORTS 1.5mm to 4.5mm BMT

ROOFING & WALLING #12 x 25mm Hex Head Self Drilling Screw

NOTE: These fasteners do not make allowance for insulation blanket. In all cases it is important the screw head diameter does not exceed 11.5mm. Self drilling and tapping screws must comply with AS 3566.

SPRING CURVING

BMT mm	CONCAVE		CONVEX		
	Min. Radius	Max. Support Spacing	Min. Radius	Max. Support Spacing	Max. Radius for Drainage
0.42	90m	1200mm	90m	1200mm	220m
0.48	70m	1200mm	70m	1200mm	220m

DRAINAGE & OVERFLOW

Maximum Roof Run (m) for Slopes & Rainfall Intensity

Rainfall Intensity mm/hr	Metlok 700® VG4 Roof Slope					
	1 in 50 1°	1 in 30 2°	1 in 20 3°	1 in 12 5°	1 in 7.5 7.5°	1 in 6 10°
100	316	398	462	567	676	769
150	211	265	308	378	450	513
200	158	199	231	284	338	385
250	127	159	185	227	270	308
300	105	133	154	189	225	256
400	79	99	116	142	169	192

- Rainwater run-off and drainage capacity may place some limitations on the total length of a sheet run and must be considered during the design and construction phase of a project.
- The total length of roof sheeting; which shall include end laps, expansion joints or steps and draining the roof in one direction, shall be considered as a single roof run.
- Thermal expansion must also be considered.
- Maximum production and transport lengths may limit availability.

LENGTH

Metroll supplies Metlok 700® VG4 cut to order as required; depending on load limit regulations set by local transport authorities. Lengths for manufacture need to be site measurements and not taken off plans. Sheet length is obtained by measuring the distance from the ridges to the external edges or fascia and adding a minimum of 50mm for overhang into the gutter.

To prevent damage when lifting long lengths, ensure sheets are lifted with the use of multiple lift point spreader bars.

CLEAN UP

Prior to departing the work site remove all foreign debris, screws, rivets and especially any swarf created by drilling or cutting from the roof surface and/or inside gutters. Failure to do so may result in premature corrosion.

CUTTING

Cut sheets with a method and in a location so that damage is avoided to sheets and other building products. Material should be cut on the ground and not above other materials. Remove all swarf and debris from the work and installation area. Sheets may be cut using a power saw with a steel cutting blade, a power nibbler or with tin snips. Avoid using abrasive discs as these can cause edge and coating damage.

MATERIAL COMPATIBILITY

Never use lead flashings with Metlok 700® VG4 sheeting made from COLORBOND® and ZINCALUME® steels. Avoid drainage from copper roofs onto COLORBOND®, ZINCALUME® or galvanised steel roofing or rainwater products. Lead, copper, bare metal and some chemically treated timbers are not compatible with Metlok 700® VG4.

ADVERSE CONDITIONS

Localised environmental conditions can impact the corrosive nature of a site which may impact on material choice. Conditions that may impact on material choice include; direction of prevailing winds, rainfall intensity, duration of exposure, temperature, shelter and areas not washed by rainfall. Contact your local Metroll branch if you intend to use Metlok 700® VG4 within 1 km of industrial, chemical, marine or corrosive environments.

MATERIAL SPECIFICATION & SCOPE

All roofing and walling should be specified on drawings as Metlok 700® VG4, manufactured by Metroll and installed in accordance with the manufacturers recommendations. Base sheet steel is G550 with specified finish.

AVAILABILITY & DELIVERY

Metlok 700® VG4 is available nationwide. Contact your local Metroll branch for lead times, colours and availability.

Ensuring suitable arrangements are made to assist the unloading of Metroll trucks will help supply material in good order. When lifting long lengths by crane please ensure the load is evenly spread. Where a crane cannot be made available it is the customers responsibility to provide sufficient labour to assist the driver in unloading.

WALKING ON METLOK 700® VG4

When walking on Metlok 700® VG4 roof sheeting always wear flat rubber soled shoes and only walk in sheet pans or near supports. In some applications, such as carports or verandahs, the use of crawl boards are recommended to avoid damage during installation

METLOK 700® VG4 OVERHANGS

The overhangs on Metlok 700® VG4 are limited to the values in the following table. Overhangs have a minimum length of 50mm. Stiffened overhangs incorporate an angle or gutter attached to the sheet end.

	BMT (mm)	Plain (mm)	Stiffened (mm)
ROOFING	0.42	150	450
	0.48	200	500
WALLING	0.42	200	450
	0.48	250	500

- Plain overhangs are limited to 20% of the adjacent end span.
- Stiffened overhangs are limited to 33% of the adjacent end span.

TOLERANCES

Consideration should be given to the following manufacturing tolerances:

Length +0mm, -15mm **Width** ± 4mm

OIL CANNING

Oil canning appears as waviness or rippling in the flat areas of metal panels. It is a characteristic of light gauge cold rolled metal roofing and cladding products. It can occur on all types of metal sheeting and is not considered a defect. Oil canning is a cosmetic issue and does not affect the structural integrity of the product. Oil canning may occur due to installation methods, thermal expansion and contraction and material colour. To minimise the risk of oil canning, avoid twisting or bending the sheets when handling the product. For more information please refer to the Oil Canning Data Sheet on our website.

THERMAL EXPANSION

Change in temperature will cause all metals to expand and contract. There is minimal effect with steel roofing and walling, however care must be taken when long sheet runs and used and high temperature variations occur.

CARE, HANDLING & STORAGE

Care should be taken at all times when handling sheets to preserve the quality of the finish. Keep packs dry, stored clear of the ground and protected from rain and moisture. Any sheets which become wet should be separated, wiped and placed in the open air to dry.

STOP ENDS & LIPS - PITCH BELOW 15°

Turn the pans at the top of the sheets up 90° using a turn-up tool to prevent wind driven water entry.

Turn the pans at the bottom of the sheets down 30° using a turn-down tool to prevent water running back along the underside of the sheet.

ROOF PITCH & FLASHINGS

For roofs with continuous sheets and the minimum roof pitch is 1° (1 in 50). This minimum pitch must be adhered to and all points of the roof to prevent ponding. Allow a minimum of 50mm for projection into gutters.

Flashings must be of a co tible material and 150mm minimum cover.

REFERENCED AUSTRALIAN STANDARDS

AS/NZS 1170.2	SAA Loading Codes - Wind Loads
AS 1397	Sheet & Strip Hot-Dipped Zinc Coated or Aluminium/Zinc Coated
AS 1526	One Part Polysulphide-based Sealing Compounds for the Building Industry
AS 1562.1	Design & Installation of Sheet & Wall Cladding, Part 1: Metal
AS/NZS 2179	Specifications for Rainwater Goods, Accessories & Fasteners - Metal Shape or Sheet Rainwater Goods and Metal Accessories and Fasteners
AS/NZS 2728	Prefinished/Prepainted Sheet Metal Products for Interior/Exterior Building Applications - Performance Requirements
AS 3566	Self-drilling Screws for the Building & Construction Industries

METLOK 700® VG4 INSTALLATION

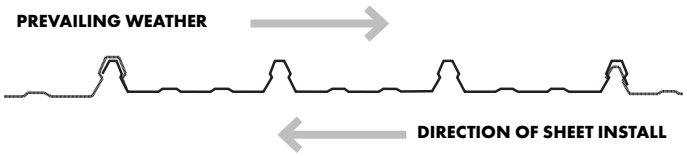
BEFORE COMMENCING INSTALLATION

Ensure cladding support is in the same plane. Ensure sheet overhang does not exceed recommendations. Check roof pitch is within minimum recommendations. For maximum hold, check first and last supports and clips are at least 75mm from the end of the sheet. Ensure set out is correct to avoid complicated post-install rectification.

SHEET PLACEMENT PRIOR TO INSTALL

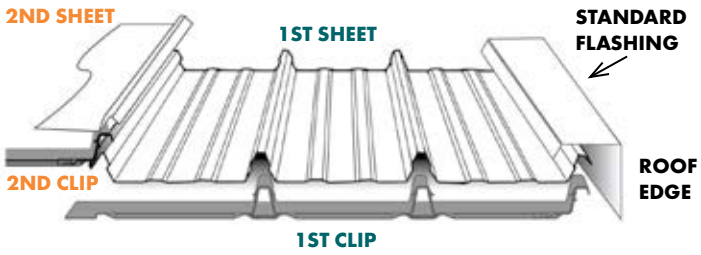
Determine prevailing wind and weather direction for maximum weather tightness. Identify downward direction and start install from that end.

Turn sheets on the ground rather than on the roof, this is easier and safer. Before lifting ensure sheets are the correct way up and the overlapping side is facing the edge of the roof where installation will commence. Position sheet bundles over firm supports, not at mid span of roof members.

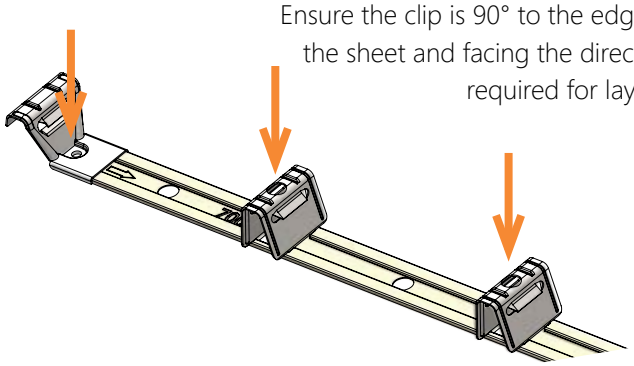


INSTALLATION STEPS

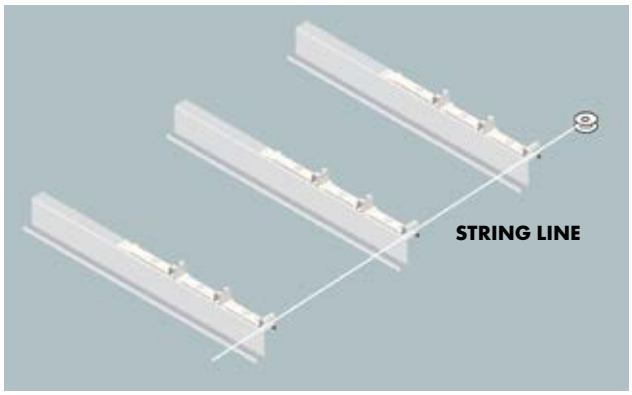
1. Install safety wire and insulation as per manufacturers recommendations.
2. Position the first Metlok clip by fixing to the support member nearest the roof edge.



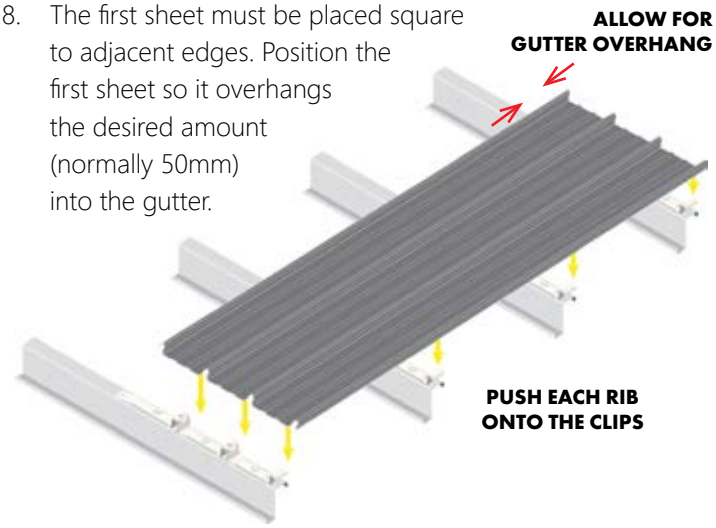
3. Fix the clip as indicated. Ensure the clip is 90° to the edge of the sheet and facing the direction required for laying.



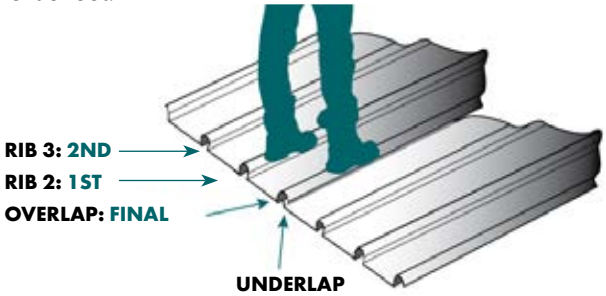
4. Using a string line align the clips using the first sheet as a straight edge. Fix a clip to each support member working towards the high end of the roof.



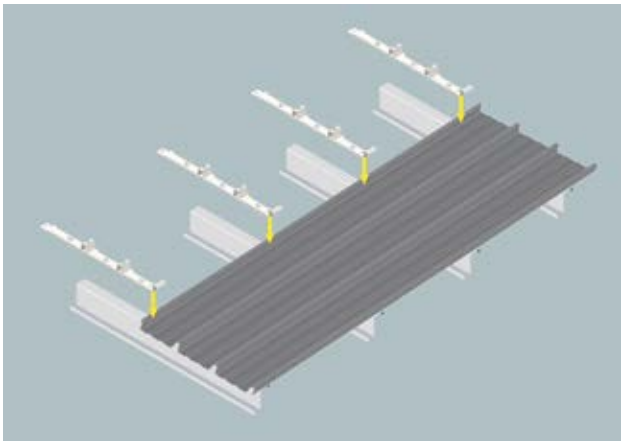
5. In accordance with the manufacturers recommendations, fix the Hex-head fasteners through the top of the clip into the support member.
6. Continue to work along the roof edge ensuring correct alignment at its ends relative to the gutter and ridge, (parapet or transverse wall).
7. Measure the distance from the gutter end of the sheet to the support.
8. The first sheet must be placed square to adjacent edges. Position the first sheet so it overhangs the desired amount (normally 50mm) into the gutter.



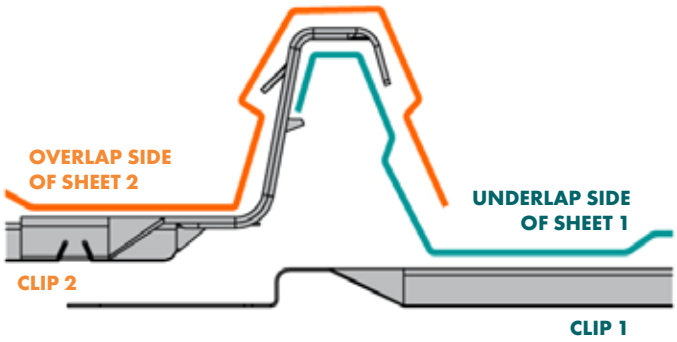
9. The order in which the ribs are snapped into place is important. Start with Rib 2, then the adjacent Rib 3 and move to the next purlin and repeat. Once all 2nd and 3rd ribs have been snapped into place, secure the overlap by walking along the edge and gently engaging the overlap. Ensure the overlap is fully engaged for the entire sheet length before placing the next sheet.



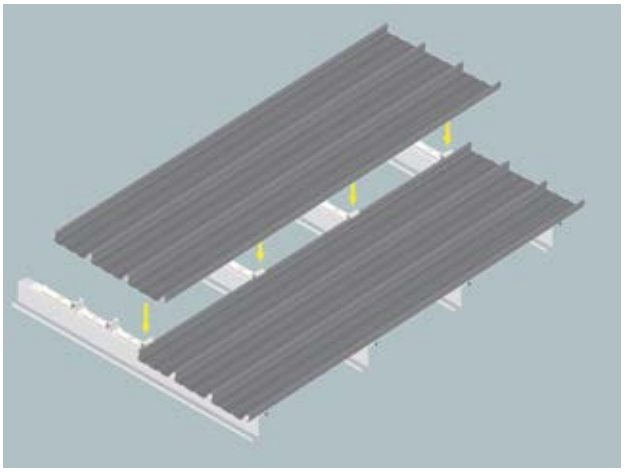
10. Fix the next row of clips to the support members by engaging the front of the clip assembly onto the sheet underlap of the preceding sheet. Ensure the clip is 90° to the edge of the sheet. Second and all following clips are installed with the clip placed over the top of the underlap of the previous sheet.



CLOSE UP OF METLOK 700® VG4 SHEET & CLIP LAP



11. Position the next sheet taking care to ensure it positively engages the full length of the edge of the preceding sheet.



12. Engage all clips and sheets as per Steps 9 - 11.
13. If the final space is less than a full sheet width, the sheet can be cut and clips shortened as required.

ALIGNMENT CHECK DURING INSTALL

From time to time check that sheets continue to be parallel with the first sheet. This is done by taking two measurements across the width of one fixed sheet. Approximately half way through the job, perform a similar check from the finishing line.

INSTALLATION FOR WALL APPLICATIONS

The procedure for walls is similar to roof installation. Sheets can be prevented from sliding downwards by pierce fixing through each sheet beneath the flashing or canopy along the top of the sheets.

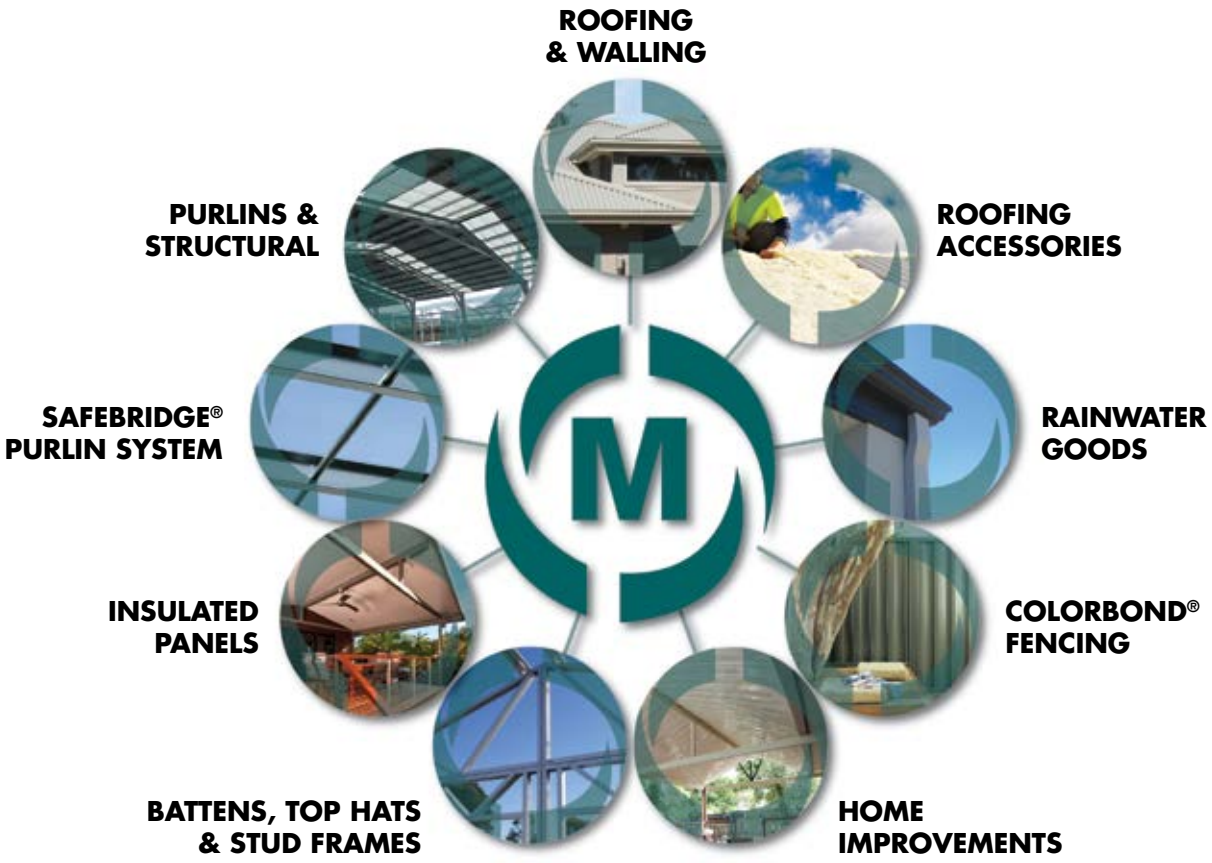
POTENTIAL DISTORTION

Metlok 700® VG4 is a concealed fix roofing profile that is secured by fixing clips attached to the building substrate. The roof sheet is snapped into place over the clips. In some instances slight bulging or distortion may be seen around the fixing clips caused by slight misalignment of the structure or sheet during installation. This poses no issue to the structural integrity of the cladding and will not affect the longevity of, or the warranty for the BlueScope Steel material. To reduce distortion, always follow the recommended installation procedure, use care and attention and do not force the material into place.

INSTALLATION OF METLOK 700® VG4 TRANSLUCENT SHEETS

Translucent sheeting experiences greater thermal expansion. As a consequence cladding should be fixed using oversized holes and sealing washers. Refer to fastener manufacturer for detail. When translucent sheeting is used in conjunction with concealed fixed cladding, ensure the fasteners do not penetrate the steel cladding. Do not exceed maximum span/support distances specified by the translucent sheeting manufacturer.

Can we assist with any additional Steel Building Products?



QLD	
Brisbane	07 3375 0100
Bundaberg	07 4155 5999
Cairns	07 4054 0888
Mackay	07 4968 1255
Rockhampton	07 4920 0900
Sunshine Coast	07 5493 7872
Toowoomba	07 4634 6144
Townsville	07 4779 8266

NSW	
Albury	02 6043 6800
Canberra	02 6298 2777
Dubbo	02 6883 4800
Lismore	02 6622 6677
Newcastle	02 4954 5799
Smithfield	02 9756 5277
Sydney	1300 766 346
Tamworth	02 6765 4799
Wagga Wagga	02 5924 4500

VIC	
Ballarat	03 5335 6416
Geelong	03 5248 2006
Laverton	03 8369 8300
Pakenham	03 8710 9300
Sunshine	03 9480 3744
TAS	
Hobart	03 6335 8555
Launceston	03 6335 8555

NT	
Darwin	08 8935 9555
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