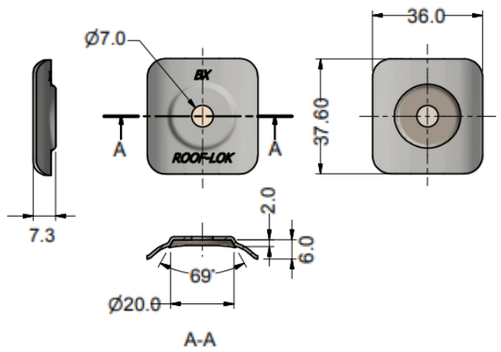
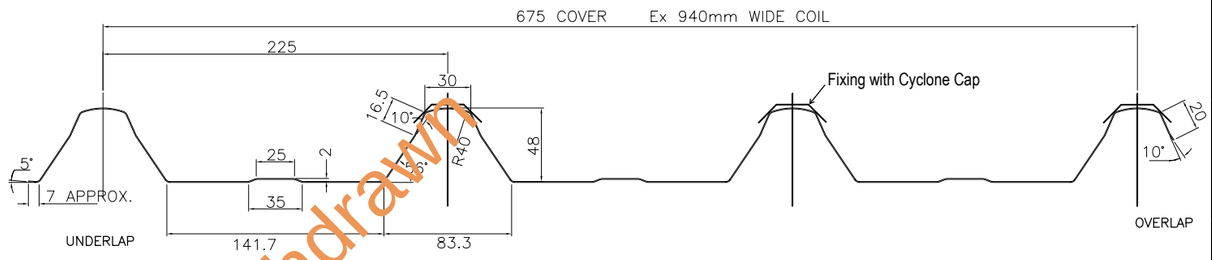
NORTHERN TERRITORY DEEMED TO COMPLY MANUAL – National Construction Code Volume 2 (Section 3.0.4 Structural resistance of materials in high wind areas)

This product has been determined to satisfy NCC Performance Requirement P2.1.1 for structural stability and resistance.



A-A



STEELINE STEELRIB 675 ROOF SHEETING

Plate material: BlueScope Zincalume steel, G300, 1.0 mm BMT thick Coating: Polyester base aluminium top coat on Zincalume (hot dipped aluminium/Zinc / Magnesium alloy)
Suitable for category 5 (C-51 and C-5M) environments according to AS4312-2008
Washer (top / bottom) material: EPDM rubber, thickness as noted.

MATERIAL SPECIFICATION

METAL TYPE	THICKNESS	GRADE	FINISH	COVER
AS1397-1984 G550 / AZ150	0.42mm BMT 0.48mm BMT	550 MPa 550 MPa	ZINCALUME, COLORBOND	675mm + - 4

MINIMUM FIXING REQUIREMENTS

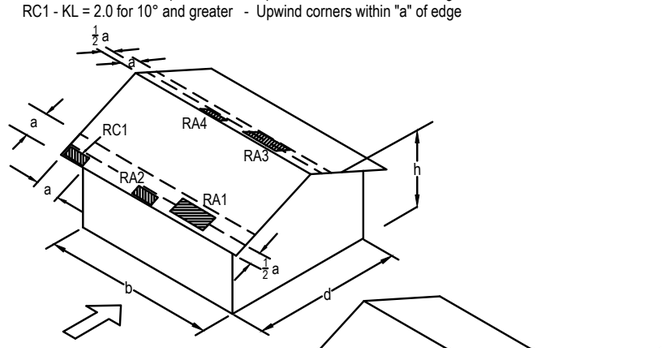
Buildex Fixing Screws	No of Fixing	Cyclone Cap	Batten
14-10x75 mm Hex Head Teks	3	BX Roof - Lok	1.5 mm BMT Steel G450
14-10x100 mm Type 17 Screw	3	BX Roof - Lok	Timber
Cyclone cap shall be used where applicable in the tables.			
All fixing shall have Class 4 protection finish.			
Screws to comply with AS3566.1 - 2002: Self - drilling screws for the building and construction industries - General requirements and mechanical properties.			

MAX. ALLOWABLE ROOF SHEETING SPANS

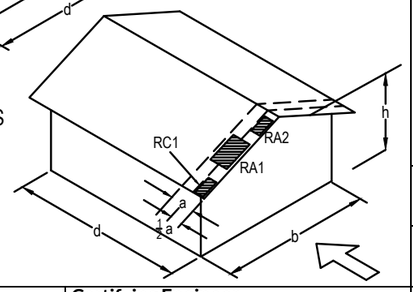
Vsit	qu	Cpe	Cpi	Kc,e = Kc'l	KL Local Factor	Cfig	Design pressure Pe=qu(Cpe,KL)Kc,e+Cpi)Kc,i)	Maximum Allowable span (mm) Three or more spans Cyclone Cap 0.42 BMT	0.48 BMT	Double span Cyclone Cap 0.42 BMT	0.48 BMT
(m/s)	(kpa)						(kPa)	(mm)	(mm)	(mm)	(mm)
76	3.47	0.90	0.70	0.90	1	1.44	4.99	1090	1320	980	1180
					1.5	1.85	6.39	850	1030	760	920
					2	2.25	7.80	700	840	630	750
					3	3.06	10.60	510	620	450	550
70	2.94	0.90	0.70	0.90	1	1.44	4.23	1290	1560	1160	1400
					1.5	1.85	5.42	1000	1210	900	1080
					2	2.25	6.62	820	990	730	890
					3	3.06	9.00	600	730	540	650
66	2.61	0.90	0.70	0.90	1	1.44	3.76	1450	1700	1300	1530
					1.5	1.85	4.82	1130	1370	1010	1230
					2	2.25	5.88	930	1120	830	1000
					3	3.06	8.00	680	820	610	730
63	2.38	0.90	0.70	0.90	1	1.44	3.43	1590	1750	1430	1570
					1.5	1.85	4.39	1240	1500	1110	1350
					2	2.25	5.36	1020	1230	910	1100
					3	3.06	7.29	750	900	670	810
61	2.23	0.90	0.70	0.90	1	1.44	3.21	1700	1840	1530	1650
					1.5	1.85	4.12	1320	1600	1180	1440
					2	2.25	5.02	1090	1310	980	1170
					3	3.06	6.83	800	960	720	860
56	1.88	0.90	0.70	0.90	1	1.44	2.71	1840	2000	1650	1800
					1.5	1.85	3.47	1570	1730	1410	1550
					2	2.25	4.23	1290	1560	1160	1400
					3	3.06	5.76	950	1140	850	1020
50	1.50	0.90	0.70	0.90	1	1.44	2.16	2050	2200	1840	1980
					1.5	1.85	2.77	1800	2000	1620	1800
					2	2.25	3.38	1620	1780	1450	1600
					3	3.06	4.59	1190	1440	1070	1290
45	1.22	0.90	0.70	0.90	1	1.44	1.75	2300	2400	2070	2160
					1.5	1.85	2.24	2000	2150	1800	1930
					2	2.25	2.73	1820	2000	1630	1800
					3	3.06	3.72	1470	1700	1320	1530

Span (mm)	Recommended Ultimate Limit State Capacity (kPa)	
	0.42 BMT SteelRib 675	0.48 BMT SteelRib 675
Three spans of 900	5.62	7.31
Three spans of 1800	3.15	3.81
Three spans of 2700	1.09	N/A
Three spans of 3000	N/A	1.23

RA1 - KL = 1.5 - Upwind leading edges within "a" of the edge
RA2 - KL = 2.0 - Upwind leading edges within "a"/2 of the edge
RA3 - KL = 1.5 - Downwind side of hips and ridges within "a" of the edge - When roof pitch > or = 10°
RA4 - KL = 2.0 - Downwind side of hips and ridges within "a"/2 of the edge - When roof pitch > or = 10°
RC1 - KL = 3.0 for Roof pitch < 10° - Upwind corners within "a" of edge
RC1 - KL = 2.0 for 10° and greater - Upwind corners within "a" of edge



LOCAL PRESSURES ZONES
"a" = Lesser of 0.2b, 0.2d & h



WARNING
Product Approval Withdrawn
March 2026

Notes covering basis of DTC (Relevant test reports etc)

Test Report: The above specification is based on LHL testing Report No TS654 by James Cook University signed April 4, 2007.

Checking Engineer

Name: John L Towler
Registration Number: 24642ES
Date: 15 March 2021
Signature:
Must be an **Australian** registered structural engineer

Certifying Engineer

Name: Wisnu Lim
NT Registration Number: 145651ES
Date: 15 March 2021
Signature:
Must be a registered structural engineer in the **Northern Territory**

Product Name

Steeline SteelRib 675 Sheeting for Roofs

Product Description

SteelRib 675 Screw Fixed Roof Sheeting

Manufacturer's Details

GENERAL ROOFING PRODUCTS PTY LTD
24 Pruen Road, Berrimah, NT, 0828

Design Criteria

- Wind speeds, pressures shall be determined in accordance with AS/NZS1170.2-2011 Amndt 1 - 5, Structural Design Actions - Wind Actions
- $V_{des\theta}$ Design Wind Speed at reference height (m/s):
- Internal Pressure Coefficient Cpi = +0.7
- Cpe = 0.9 for h/d ratios <= 0.5
- Pe = qu x (Cpe x K_L x Kc,e + Cpi x Kc,i)
- Kc,e = Kc,i = 0.9
- "a" = Minimum of 0.2*d or 0.2*b or h
- Site wind speed calculated in accordance with AS/NZS1170.2-2011 Amndt 1 - 5, Structural Design Actions - Wind Acti

Limitations

- Pitch limitation is subject to drainage requirements and shall be checked separately.
- For roof pitch < 10° - note RC1 local zone in roof corners.
- Limited to h/d not greater than 0.5 in tabled spacings.
- Mt = Ms = Md = 1.0
- Maximum overhang - 200mm
- Minimum purlin steel thickness for fixing - 1.5 mm BMT G450
- For h/d>0.5 where Cpe > 0.9 refer to site specific engineer certification with adjusted Pe calculation.
- Installation assumes conventional edge flashing is installed over unlapped edges of sheeting.
- For Buildings not greater than 25m in height
- Always walk over supports if possible, generally keep your weight distributed evenly over the soles of your shoes in the pans.
- Maintain a minimum of 3 screw threads protruding on the far side for steel support and minimum 30 mm embedment depth into timber support.

Accepted for inclusion in Deemed to Comply Manual

DTCM drawing number: M/740

Chairperson Signature:

Chairperson Name: Paul Nowland

Date of Approval: 19/03/2021 Expiry Date: 19/03/2026