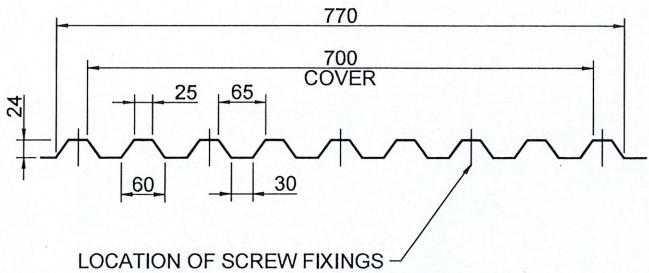


**NORTHERN TERRITORY DEEMED TO COMPLY MANUAL - National Construction Code Volume 2 (Section 3.0.4 Structural resistance of materials in high wind areas)**

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



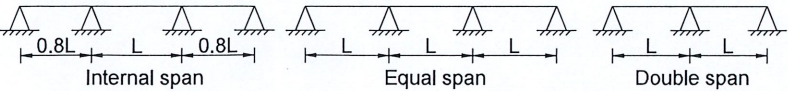
SCREW FIXING TABLE	
TIMBER	14-10x65 T17
0.75 TO 1.0mm STEEL	M6.5-12x55 ROOF ZIPS
1.2 TO 4mm STEEL	14-10x53 HEX HEAD


METROLL METROSPAN ROOF CLADDING - SERVICEABILITY LIMIT STATE DESIGN PRESSURE (kPa)								
Roof Sheet Thickness BMT (mm)	Span Type	Maximum Design Pressure (kPa) for Span L (mm)						
		450	600	750	900	1200	1500	1800
0.42	Internal	5.44	4.18	3.42	2.91	2.28	1.85	1.56
	Equal	4.96	3.81	3.12	2.66	2.08	1.68	1.42
	Double	3.97	3.12	2.56	2.17	1.66	1.36	1.14
0.48	Internal	7.19	5.75	4.88	4.31	3.59	2.52	1.81
	Equal	6.55	5.24	4.45	3.93	3.27	2.30	1.65
	Double	5.24	4.45	3.81	3.31	2.62	1.79	1.32

METROLL METROSPAN ROOF CLADDING - <b>ULTIMATE</b> LIMIT STATE DESIGN PRESSURE (kPa)									
Roof Sheet Thickness BMT (mm)	Cyclone Washer Fitted	Span Type	Maximum Design Pressure (kPa) for Span L (mm)						
			450	600	750	900	1200	1500	1800
0.42	No	Internal	7.68	6.06	5.08	4.43	3.62	2.53	1.81
		Equal	7.00	5.52	4.63	4.04	3.30	2.24	1.65
		Double	5.59	4.62	3.91	3.38	2.64	1.80	1.32
	Yes	Internal	-	-	8.55	7.12	5.34	4.21	3.37
		Equal	-	-	7.79	6.49	4.87	3.81	3.07
		Double	-	-	6.86	5.70	4.00	3.05	2.46
0.48	No	Internal	9.87	7.45	5.99	5.02	3.81	3.00	2.47
		Equal	9.00	6.79	5.46	4.58	3.47	2.74	2.25
		Double	7.20	5.46	4.40	3.68	2.78	2.18	1.80
	Yes	Internal	-	-	-	7.12	5.34	4.27	3.56
		Equal	-	-	-	6.49	4.87	3.90	3.25
		Double	-	-	-	5.71	4.29	3.43	2.86

**NOTES TO TABLES**


- The table values are only valid for use when the supporting steel members are high tensile steel, G450 with thickness greater than or equal to 0.75mm or F17 Hardwood.
- Roof sheeting shall be crest fixed to supports with Class 4 self drilling screws (complying with the screw fixing table) at every second rib in accordance with the manufacturer's recommendations. Length to suit insulation/sarking and 30mm embedment into timber or to maintain a minimum of 3 screw threads protruding on the far side of the steel support. Cyclone washers, where specified, shall be "Roof-lok".
- Side lap fasteners are required on all spans greater than 900mm and shall consist of No.8-18 x 12mm screws at midspan.
- Maximum spans to suit foot traffic are 1800mm for 0.42BMT and 2250mm for 0.48BMT provided that the load is applied to the pans only.
- Descriptions of span types in the tables refer to the following support and geometry configurations:



Where:  denotes a support location. L=span to be used in conjunction with the table.  
- Internal spans shall have both end spans 20% shorter than the values in the span configuration tables.

**Notes covering basis of DTC (relevant test reports etc.)**

- This table has been prepared by LCJ Engineers Pty Ltd. It is based on the Low-High-Low testing completed by the Cyclone Testing Station (CTS), School of Engineering, James Cook University. The results of the testing are outlined in the testing report TS709, TS747a, TS747b, TS791a and TS936 produced by the CTS. Ultimate cyclic wind load strength tests were NATA accredited tests.
- Load testing carried out by James Cook University, Cyclone Testing Station, reports No. TS709, TS747a, TS747b, TS791a and TS936. Product tested to AS 4040.1:1992, AS 4040.3:2018 and Low-High-Low as per Part 3.5.1.0 of the NCC 2019 Building Code of Australia - Volume Two. Tests carried out: cyclonic airbox wind test for strength. Static testing for serviceability.

Checking Engineer  
**LCJ ENGINEERS**  
Name: **DANIEL SAINSBURY**  
Registration Number: **19020 5892**  
Date: **8/11/21**  
Signature:   
Must be an Australian registered structural engineer

Certifying Engineer  
N.T. Consulting Engineers  
Name: Michael Cooper  
NT Registration Number: 21133ES  
Date: 8 November 2021  
Signature:   
Must be a registered structural engineer in the Northern Territory

Product Name  
**METROLL METROSPAN ROOF CLADDING**

Product Description  
Metroll Metrospan - is manufactured from G550 colour coated steel or zinc-aluminum alloy coated (AZ150) steel. In some locations galvanised (Z450) may also be available.

Manufacturer's Details  
Metroll Queensland Pty. Ltd.  
t/as Metroll Darwin  
81 Marjorie Street  
Pinelands NT 0828  
ABN 17 010 035 266



**Design Criteria**


- These tables shall be used in conjunction with wind loads calculated using AS/NZS1170.2:2011 (Incorporating Amendments No's 1, 2, 3, 4 and 5).

**Limitations**

- This Deemed to Comply (DTC) sheet is for roof applications only.
- The values listed in this table are only valid for the Low-High-Low pressure sequence within Part 3.5.1.0 of the NCC 2019 Building Code of Australia - Volume Two.
- The maximum permissible free edge overhang is: 150mm from screw line.
- The maximum permissible stiffened edge overhang is: 300mm from screw line.
- Sheeting span can be limited by maximum batten spacing.
- It is essential that the relevant deemed to comply information for the batten product is used in conjunction with this sheet.

**Accepted for Inclusion in Deemed to Comply Manual**

DTCM drawing number: M/194/01 Sheet 1 of 3

Chairperson Signature: 

Chairperson Name: **Paul Nowland**

Date of Approval: **29/03/2022** Expiry Date: **29/03/2027**



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 Requirements P2.1.1 for structural stability and resistance.

METROLL METROSPAN ROOF CLADDING MAXIMUM SPAN CHART (mm) - Cpe= -0.9

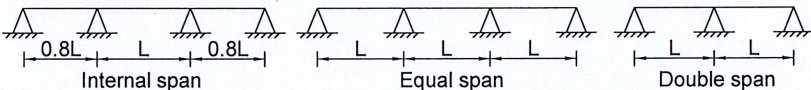
Building Height	Terrain Category	K <sub>t</sub>	Ultimate wind pressure p* (kPa)	Serviceability wind pressure p <sub>s</sub> (kPa)	0.42BMT ROOF SHEETING						0.48BMT ROOF SHEETING					
					WITHOUT CYCLONE WASHERS			WITH CYCLONE WASHERS			WITHOUT CYCLONE WASHERS			WITH CYCLONE WASHERS		
					INTERNAL	EQUAL	DOUBLE	INTERNAL	EQUAL	DOUBLE	INTERNAL	EQUAL	DOUBLE	INTERNAL	EQUAL	DOUBLE
Up to 5 metres high	1	1	-4.59	-1.42	850	750	600	1400	1275	1075	1000	900	725	1400	1275	1125
		1.5	-5.89	-2.01	625	550	N/A	1100	1000	875	750	700	550	1100	1000	N/A
		2	-7.18	-2.59	525	N/A	N/A	900	875	N/A	675	600	475	N/A	N/A	N/A
		3	-9.76	-3.75	N/A	N/A	N/A	N/A	N/A	N/A	600	N/A	N/A	N/A	N/A	N/A
		1.5	-4.00	-1.24	1175	1050	750	1675	1500	1200	1200	1125	900	1750	1500	1400
		1.5	-5.13	-1.75	750	675	525	1300	1175	1025	900	825	650	1300	1175	1050
	2	2	-6.25	-2.25	575	525	N/A	1075	975	850	725	675	525	1075	975	N/A
		3	-8.50	-3.27	N/A	N/A	N/A	900	N/A	N/A	600	600	N/A	N/A	N/A	N/A
		1	-3.45	-1.07	1225	1125	875	1775	1650	1375	1325	1200	975	1800	1700	1475
		1.5	-4.42	-1.51	900	800	625	1425	1325	1125	1050	925	750	1450	1325	1175
		2	-5.39	-1.94	700	625	475	1175	1100	950	825	750	600	1175	1100	950
		3	-7.33	-2.82	525	N/A	N/A	900	875	N/A	675	600	N/A	N/A	N/A	N/A
	2.5	1	-3.15	-0.98	1350	1275	1050	1800	1800	1500	1500	1375	1125	1800	1800	1725
		1.5	-4.04	-1.38	1050	900	725	1550	1425	1175	1125	1050	825	1600	1450	1275
		2	-4.93	-1.78	775	700	550	1300	1175	1025	925	825	675	1300	1175	1050
		3	-6.70	-2.58	525	475	N/A	975	875	750	675	600	475	975	N/A	N/A
		1	-2.87	-1.21	1400	1300	1100	1800	1800	1575	1575	1450	1150	1800	1800	1800
		1.5	-3.68	-1.74	1175	1050	800	1675	1550	1300	1250	1125	900	1750	1600	1400
	3	2	-4.48	-2.26	875	775	625	1425	1300	1100	1025	925	725	1425	1300	1150
		3	-6.10	-2.59	575	525	N/A	1075	975	850	725	675	525	1075	975	N/A
		1	-2.34	-0.99	1575	1450	1300	1800	1800	1800	1800	1725	1400	1800	1800	1800
		1.5	-3.00	-1.42	1350	1275	1050	1800	1800	1525	1500	1375	1125	1800	1800	1725
		2	-3.66	-1.85	1175	1050	800	1675	1550	1300	1250	1125	900	1750	1600	1400
		3	-4.98	-2.11	775	675	525	1300	1175	1025	900	825	650	1300	1175	1050
Up to 10 metres high	1	1	-5.23	-2.21	725	650	500	1225	1125	975	850	775	625	1225	1125	1000
		1.5	-6.70	-3.17	525	475	N/A	975	875	750	675	600	475	975	N/A	N/A
		2	-8.17	-4.12	N/A	N/A	N/A	900	N/A	N/A	600	600	N/A	N/A	N/A	N/A
		3	-11.11	-4.71	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		1	-4.68	-1.98	850	750	600	1400	1275	1075	1000	900	725	1400	1275	1125
		1.5	-6.00	-2.84	625	550	N/A	1100	1000	875	750	700	550	1100	1000	N/A
	2	2	-7.31	-3.69	525	N/A	N/A	900	875	N/A	675	600	N/A	N/A	N/A	N/A
		3	-9.95	-4.22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		1	-4.17	-1.76	1000	850	675	1500	1400	1150	1100	1000	800	1550	1400	1225
		1.5	-5.34	-2.52	700	625	475	1200	1100	950	850	750	600	1200	1100	975
		2	-6.51	-3.29	550	500	N/A	1000	900	775	675	625	500	1000	N/A	N/A
		3	-8.85	-3.76	N/A	N/A	N/A	N/A	N/A	N/A	600	600	N/A	N/A	N/A	N/A
	2.5	1	-3.49	-1.47	1225	1125	875	1775	1650	1375	1325	1200	975	1800	1700	1475
		1.5	-4.47	-2.11	900	800	625	1425	1325	1125	1050	925	750	1450	1325	1175
		2	-5.45	-2.75	700	625	475	1175	1100	950	825	750	600	1175	1100	950
		3	-7.41	-3.14	525	N/A	N/A	900	875	N/A	675	600	N/A	N/A	N/A	N/A
		1	-2.87	-1.21	1400	1300	1100	1800	1800	1575	1575	1450	1150	1800	1800	1800
		1.5	-3.68	-1.74	1175	1050	800	1675	1550	1300	1250	1125	900	1750	1600	1400
	3	2	-4.48	-2.26	875	775	625	1425	1300	1100	1025	925	725	1425	1300	1150
		3	-6.10	-2.59	575	525	N/A	1075	975	850	725	675	525	1075	975	N/A
		1	-2.34	-0.99	1575	1450	1300	1800	1800	1800	1800	1725	1400	1800	1800	1800
		1.5	-3.00	-1.42	1350	1275	1050	1800	1800	1525	1500	1375	1125	1800	1800	1725
		2	-3.66	-1.85	1175	1050	800	1675	1550	1300	1250	1125	900	1750	1600	1400
		3	-4.98	-2.11	775	675	525	1300	1175	1025	900	825	650	1300	1175	1050

NOTES TO TABLES

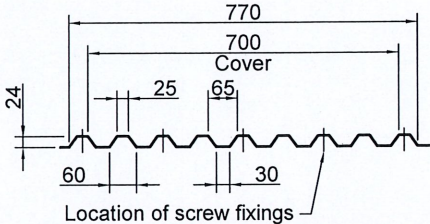
- The table values are only valid for use when the supporting steel members are high tensile steel, G450 with thickness greater than or equal to 0.75mm or F17 Hardwood.
- Roof sheeting shall be crest fixed to supports with Class 4 self drilling screws (complying with the screw fixing table) at every second rib in accordance with the manufacturer's recommendations. Length to suit insulation/sarking and 30mm embedment into timber or to maintain a minimum of 3 screw threads protruding on the far side of the steel support. Cyclone washers, where specified, shall be "Roof-lok".
- Side lap fasteners are required on all spans greater than 900mm and shall consist of No.8-18 x 12mm screws at midspan.
- Maximum spans to suit foot traffic are 1800mm for 0.42BMT and 2250mm for 0.48BMT provided that the load is applied to the pans only.

NOTES TO TABLES CONTINUED

- Descriptions of span types in the tables refer to the following support and geometry configurations:



Where: denotes a support location. L=span to be used in conjunction with the table.  
- Internal spans shall have both end spans 20% shorter than the values in the span configuration tables.



SCREW FIXING TABLE	
TIMBER	14-10x65 T17
0.75 to 1.0mm Steel	M6.5-12x55 Roof Zips
1.2 to 4mm Steel	14-10x53 Hex Head

Product Name

**METROLL METROSPAN ROOF CLADDING**

Product Description

Metroll Metrospan - is manufactured from G550 colour coated steel or zinc-aluminum alloy coated (AZ150) steel. In some locations galvanised (Z450) may also be available.

Manufacturer's Details

Metroll Queensland Pty. Ltd.  
t/as Metroll Darwin  
81 Marjorie Street  
Pinelands NT 0828  
ABN 17 010 035 266



Design Criteria

The following criteria from AS/NZS 1170.2:2011 structural design actions part 2 wind actions (incorporating amendment No. 1,2,3,4&5) have been used to generate the tables.

- Importance level 2 with return period of 500 years
- Strength: Regional wind speed  $V_{500} = 69\text{m/s}$   
Serviceability: Regional wind speed  $V_{25} = 47\text{m/s}$
- $M_s = M_t = M_d = 1.0$
- Combination Factors:  $K_{ce} \text{ \& } K_{ci} = 0.9$
- Dynamic Response Factor:  $C_{dyn} = 1.0$
- Internal Pressure Coefficient:  $C_{p,i} = +0.7$  Strength  
Internal Pressure Coefficient:  $C_{p,i} = +0.2$  Serviceability
- 

HEIGHT (m)	TERRAIN / HEIGHT MULTIPLIER (Mz, cat)				
	1	2	2.5	3	4
< = 5	1.05	0.91	0.87	0.83	0.75
< = 10	1.12	1.00	0.92	0.83	0.75

- External Pressure Coefficients:  
 $C_{p,e} = -0.9$  For  $h/d \leq 0.5$ , and for horizontal distance from windward edge of the roof up to 'h'

Limitations

- This DTC sheet is for roof applications only and the data in this sheet is only applicable to Metroll Metrospan roofing.
- The maximum roof pitch is: 25°.
- Cladding spans are based on the use of screws tested and specified on this data sheet for each support type and thickness.
- Maximum span tables are applicable for timber supports & steel supports 0.75mm BMT or thicker.
- Installation shall be in accordance with Metroll recommendations.
- Maximum span tables are based on maximum roof height = 10m.
- Maximum overhang shall be 150mm from screw line for unstiffened edges and 300mm from screw line for stiffened edge.
- No pre-bored holes permitted.
- Always walk over supports if possible. Generally keep your weight distributed evenly over the soles of your shoes.
- Maximum roof lengths as related to water carrying capacity & roof pitch shall be determined in accordance with Metroll recommendations.
- The maximum batten spacing may be critical and limit the span of the cladding. It is essential that this sheet is read in conjunction with the relevant deemed to comply information for the batten product adopted.

Accepted for Inclusion in Deemed to Comply Manual

DTCM drawing number: M/194/02 SHEET 2 OF 3

Chairperson Signature:

Chairperson Name: Paul Nowland

Date of Approval: 29/03/2022 Expiry Date: 29/03/2027

Notes covering basis of DTC (relevant test reports etc.)

- This table has been prepared by LCJ Engineers Pty Ltd. It is based on the Low-High-Low testing completed by the Cyclone Testing Station (CTS), School of Engineering, James Cook University. The results of the testing are outlined in the testing report TS709, TS747a, TS747b, TS791a and TS936 produced by the CTS. Ultimate cyclic wind load strength tests were NATA accredited tests.
- Load testing carried out by James Cook University, Cyclone Testing Station, reports No. TS709, TS747a, TS747b, TS791a and TS936. Product tested to AS 4040.1:1992, AS 4040.3:2018 and Low-High-Low as per Part 3.5.1.0 of the NCC 2019 Building Code of Australia - Volume Two. Tests carried out: cyclonic airbox wind test for strength. Static testing for serviceability.

Checking Engineer

LCJ ENGINEERS  
Name: DANIEL JOHNSTONE  
Registration Number: APEP 5892  
Date: 8/11/21  
Signature:   
Must be an Australian registered structural engineer

Certifying Engineer

N.T. Consulting Engineers  
Name: Michael Cooper  
NT Registration Number: 21133ES  
Date: 8 November 2021  
Signature:   
Must be a registered structural engineer in the Northern Territory



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 Requirements P2.1.1 for structural stability and resistance.

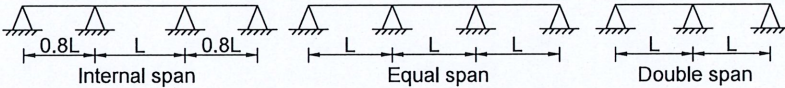
METROLL METROSPAN ROOF CLADDING MAXIMUM SPAN CHART (mm) - Cpe= -1.3																
Building Height	Terrain Category	K <sub>t</sub>	Ultimate wind pressure p* (kPa)	Serviceability wind pressure p <sub>s</sub> (kPa)	0.42BMT ROOF SHEETING						0.48BMT ROOF SHEETING					
					WITHOUT CYCLONE WASHERS			WITH CYCLONE WASHERS			WITHOUT CYCLONE WASHERS			WITH CYCLONE WASHERS		
					INTERNAL	EQUAL	DOUBLE	INTERNAL	EQUAL	DOUBLE	INTERNAL	EQUAL	DOUBLE	INTERNAL	EQUAL	DOUBLE
Up to 5 metres high	1	1	-5.74	-1.94	625	575	N/A	1125	1025	875	775	700	575	1125	1025	N/A
		1.5	-7.61	-2.78	500	N/A	N/A	900	850	N/A	600	575	N/A	N/A	N/A	N/A
		2	-9.47	-3.62	N/A	N/A	N/A	N/A	N/A	N/A	600	N/A	N/A	N/A	N/A	N/A
		3	-10.62	-4.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1.5	1	-5.00	-1.69	750	675	525	1275	1175	1000	900	825	650	1275	1175	1050
		1.5	-6.63	-2.42	550	475	N/A	975	875	775	675	625	500	975	N/A	N/A
		2	-8.25	-3.16	N/A	N/A	N/A	900	N/A	N/A	600	575	N/A	N/A	N/A	N/A
		3	-9.25	-3.61	N/A	N/A	N/A	N/A	N/A	N/A	600	N/A	N/A	N/A	N/A	N/A
	2	1	-4.31	-1.46	925	825	650	1450	1350	1125	1075	950	750	1475	1350	1175
		1.5	-5.71	-2.09	650	575	N/A	1125	1025	875	775	700	575	1125	1025	N/A
		2	-7.12	-2.72	500	N/A	N/A	925	850	N/A	650	575	475	925	N/A	N/A
		3	-7.98	-3.11	N/A	N/A	N/A	900	N/A	N/A	600	575	N/A	N/A	N/A	N/A
	2.5	1	-3.94	-1.33	1075	925	725	1575	1450	1200	1150	1050	825	1625	1475	1300
		1.5	-5.22	-1.91	725	650	500	1225	1125	975	850	775	625	1225	1125	1000
		2	-6.50	-2.49	550	500	N/A	1000	875	775	675	625	500	1000	N/A	N/A
		3	-7.29	-2.84	500	N/A	N/A	900	850	N/A	650	575	N/A	N/A	N/A	N/A
	3	1	-3.59	-1.21	1375	1200	900	1800	1800	1500	1500	1200	1150	1800	1800	1500
		1.5	-4.75	-1.74	825	725	575	1350	1225	1050	950	850	700	1350	1225	1100
		2	-5.92	-2.26	625	550	N/A	1100	1000	875	750	700	550	1100	1000	N/A
		3	-6.64	-2.59	525	475	N/A	975	875	775	675	600	475	975	N/A	N/A
	4	1	-2.93	-0.99	1500	1500	1200	1800	1800	1800	1800	1500	1200	1800	1800	1800
		1.5	-3.88	-1.42	1100	950	750	1600	1475	1225	1175	1075	850	1650	1500	1325
		2	-4.83	-1.85	800	700	550	1325	1200	1050	925	850	675	1325	1200	1075
		3	-5.42	-2.11	725	650	500	1200	1125	975	850	775	625	1200	1125	1000
Up to 10 metres high	1	1	-6.53	-2.21	550	475	N/A	975	875	775	675	625	500	975	N/A	N/A
		1.5	-8.66	-3.17	N/A	N/A	N/A	N/A	N/A	N/A	600	575	N/A	N/A	N/A	N/A
		2	-10.78	-4.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		3	-12.09	-4.71	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1.5	1	-5.85	-1.98	625	550	N/A	1100	1000	875	750	700	550	1100	1000	N/A
		1.5	-7.75	-2.84	N/A	N/A	N/A	900	850	N/A	600	575	N/A	N/A	N/A	N/A
		2	-9.66	-3.69	N/A	N/A	N/A	N/A	N/A	N/A	600	N/A	N/A	N/A	N/A	N/A
		3	-10.83	-4.22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2	1	-5.21	-1.76	750	675	525	1275	1175	1000	900	825	650	1275	1175	1050
		1.5	-6.90	-2.52	500	450	N/A	925	850	N/A	650	575	475	925	N/A	N/A
		2	-8.59	-3.29	N/A	N/A	N/A	N/A	N/A	N/A	600	575	N/A	N/A	N/A	N/A
		3	-9.63	-3.76	N/A	N/A	N/A	N/A	N/A	N/A	600	N/A	N/A	N/A	N/A	N/A
	2.5	1	-4.36	-1.47	925	800	650	1450	1325	1125	1050	950	750	1475	1350	1175
		1.5	-5.78	-2.11	625	575	N/A	1125	1025	875	775	700	575	1125	1025	N/A
		2	-7.19	-2.75	500	N/A	N/A	900	850	N/A	650	575	475	N/A	N/A	N/A
		3	-8.07	-3.14	N/A	N/A	N/A	900	N/A	N/A	600	575	N/A	N/A	N/A	N/A
	3	1	-3.59	-1.21	1375	1200	900	1800	1800	1500	1500	1200	1150	1800	1800	1500
		1.5	-4.75	-1.74	825	725	575	1350	1225	1050	950	850	700	1350	1225	1100
		2	-5.92	-2.26	625	550	N/A	1100	1000	875	750	700	550	1100	1000	N/A
		3	-6.64	-2.59	525	475	N/A	975	875	775	675	600	475	975	N/A	N/A
	4	1	-2.93	-0.99	1500	1500	1200	1800	1800	1800	1800	1500	1200	1800	1800	1800
		1.5	-3.88	-1.42	1100	950	750	1600	1475	1225	1175	1075	850	1650	1500	1325
		2	-4.83	-1.85	800	700	550	1325	1200	1050	925	850	675	1325	1200	1075
		3	-5.42	-2.11	725	650	500	1200	1125	975	850	775	625	1200	1125	1000


NOTES TO TABLES

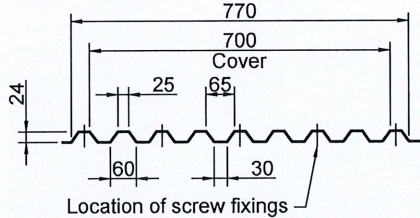
- The table values are only valid for use when the supporting steel members are high tensile steel, G450 with thickness greater than or equal to 0.75mm or F17 Hardwood.
- Roof sheeting shall be crest fixed to supports with Class 4 self drilling screws (complying with the screw fixing table) at every second rib in accordance with the manufacturer's recommendations. Length to suit insulation/sarking and 30mm embedment into timber or to maintain a minimum of 3 screw threads protruding on the far side of the steel support. Cyclone washers, where specified, shall be "Roof-lok".
- Side lap fasteners are required on all spans greater than 900mm and shall consist of No.8-18 x 12mm screws at midspan.
- Maximum spans to suit foot traffic are 1800mm for 0.42BMT and 2250mm for 0.48BMT provided that the load is applied to the pans only.

NOTES TO TABLES CONTINUED

- Descriptions of span types in the tables refer to the following support and geometry configurations:



Where:  denotes a support location. L=span to be used in conjunction with the table.  
- Internal spans shall have both end spans 20% shorter than the values in the span configuration tables.



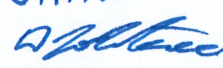
SCREW FIXING TABLE

TIMBER	14-10x65 T17
0.75 to 1.0mm Steel	M6.5-12x55 Roof Zips
1.2 to 4mm Steel	14-10x53 Hex Head


Notes covering basis of DTC (relevant test reports etc.)

- This table has been prepared by LCJ Engineers Pty Ltd. It is based on the Low-High-Low testing completed by the Cyclone Testing Station (CTS), School of Engineering, James Cook University. The results of the testing are outlined in the testing report TS709, TS747a, TS747b, TS791a and TS936 produced by the CTS. Ultimate cyclic wind load strength tests were NATA accredited tests.
- Load testing carried out by James Cook University, Cyclone Testing Station, reports No. TS709, TS747a, TS747b, TS791a and TS936. Product tested to AS 4040.1:1992, AS 4040.3:2018 and Low-High-Low as per Part 3.5.1.0 of the NCC 2019 Building Code of Australia - Volume Two. Tests carried out: cyclonic airbox wind test for strength. Static testing for serviceability.

Checking Engineer

LCJ ENGINEERS  
Name: DANIEL JOHNSTONE  
Registration Number: RPEQ 5892  
Date: 8/11/21  
Signature:   
Must be an Australian registered structural engineer

Certifying Engineer

N.T. Consulting Engineers  
Name: Michael Cooper  
NT Registration Number: 21133ES  
Date: 8 November 2021  
Signature:   
Must be a registered structural engineer in the Northern Territory

Product Name

**METROLL METROSPAN ROOF CLADDING**

Product Description

Metroll Metrospan - is manufactured from G550 colour coated steel or zinc-aluminum alloy coated (AZ150) steel. In some locations galvanised (Z450) may also be available.

Manufacturer's Details

Metroll Queensland Pty. Ltd.  
t/as Metroll Darwin  
81 Marjorie Street  
Pinelands NT 0828  
ABN 17 010 035 266



Design Criteria

The following criteria from AS/NZS 1170.2:2011 structural design actions part 2 wind actions (incorporating amendment No. 1,2,3,4&5) have been used to generate the tables.

- Importance level 2 with return period of 500 years
- Strength: Regional wind speed  $V_{500} = 69\text{m/s}$   
Serviceability: Regional wind speed  $V_{25} = 47\text{m/s}$
- $M_s = M_t = M_d = 1.0$
- Combination Factors:  $K_{ce} \text{ \& } K_{ci} = 0.9$
- Dynamic Response Factor:  $C_{dyn} = 1.0$
- Internal Pressure Coefficient:  $C_{p,i} = +0.7$  Strength  
Internal Pressure Coefficient:  $C_{p,i} = +0.2$  Serviceability

HEIGHT (m)	TERRAIN / HEIGHT MULTIPLIER (Mz, cat)				
	1	2	2.5	3	4
< = 5	1.05	0.91	0.87	0.83	0.75
< = 10	1.12	1.00	0.92	0.83	0.75

- External Pressure Coefficients:  
 $C_{p,e} = -1.3$  For  $h/d \geq 1.0$ , and for horizontal distance from windward edge of the roof up to '0.5h'

Limitations

- This DTC sheet is for roof applications only and the data in this sheet is only applicable to Metroll Metrospan roofing.
- The maximum roof pitch is: 25°.
- Cladding spans are based on the use of screws tested and specified on this data sheet for each support type and thickness.
- Maximum span tables are applicable for timber supports & steel supports 0.75mm BMT or thicker.
- Installation shall be in accordance with Metroll recommendations.
- Maximum span tables are based on maximum roof height = 10m.
- Maximum overhang shall be 150mm from screw line for unstiffened edges and 300mm from screw line for stiffened edge.
- No pre-bored holes permitted.
- Always walk over supports if possible. Generally keep your weight distributed evenly over the soles of your shoes.
- Maximum roof lengths as related to water carrying capacity & roof pitch shall be determined in accordance with Metroll recommendations.
- The maximum batten spacing may be critical and limit the span of the cladding. It is essential that this sheet is read in conjunction with the relevant deemed to comply information for the batten product adopted.

Accepted for Inclusion in Deemed to Comply Manual

DTCM drawing number: M/194/03

SHEET 3 OF 3

Chairperson Signature:

Chairperson Name: Paul Nowland

Date of Approval: 29/03/2022 Expiry Date: 29/03/2027