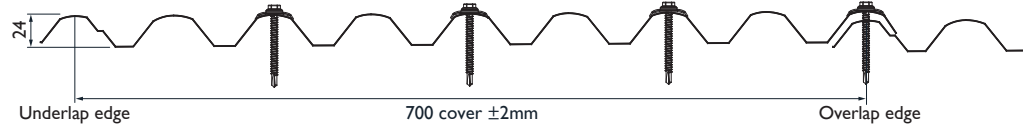




SMARTSPAN® ROOF CLADDING

Region C



Fixing screws to comply to AS3566, I-2002 Self-drilling screws for the building and construction industries - General requirements and mechanical properties.

Product Name
Smartspan® Roof Cladding

Product Description
Stratco Smartspan® Roof Cladding is manufactured from 0.42 or 0.48 BMT G550 steel. Cladding available in colour or zinc/al finish, minimum AM100 coating.

Manufacturer's Name
Stratco (Australia) Pty Ltd
780 Stuart Highway, Berrimah NT 0828. ABN 30 007 528 850

Design Criteria
The following criteria were used in the development of the tables:
 1. Region C with an annual probability of exceedance of 500 years (strength), 25 years (serviceability).
 2. $V_R = F_c \cdot 66 \text{ m/s}$, with $F_c = 1.05$ (strength); $V_R = F_c \cdot 47 \text{ m/s}$, with $F_c = 1$ (serviceability)
 3. $M_s/M_t/M_d = 1.00$
 4. $K_{c,e} = K_{c,i} = 0.9$
 5. Importance Level 2

Fastener Details		
Steel	Minimum 1.5mm (BMT)	Buildex class 4 minimum 14g x 55mm self drilling screw with cyclonic washer assembly.
Timber	Hardwood F11/JD2 or stronger	Buildex class 4 minimum 14g x 70mm self drilling screw with cyclonic washer assembly, embedded at least 35mm into timber.
	Softwood F7/JD4 or stronger	Buildex class 4 minimum 14g x 70mm self drilling screw with cyclonic washer assembly, embedded at least 35mm into timber.

Span (mm)	0.42mm BMT			0.48mm BMT		
	Single	End	Internal	Single	End	Internal
400	10.76	10.76	11.77	12.00	12.00	13.12
1000	6.62	6.62	7.24	7.35	7.35	8.04
1300	5.05	5.05	5.53	5.61	5.61	6.13
1600	3.78	3.78	4.13	4.20	4.20	4.60
1900	2.79	2.79	3.05	3.13	3.13	3.42
2200	2.09	2.09	2.29	2.39	2.39	2.61
2500	1.68	1.68	1.84	1.99	1.99	2.17
2700	1.57	1.57	1.72	1.90	1.90	2.08

Note: For spans > 900mm side lap fixing midspan using an 8x15mm self drilling stitch screw with seal or 3.2mm sealed blind rivet is recommended (maximum 900mm centres). This provides a weather proof seal and secures the overlap.

Height (m)	Terrain/Height Multiplier (Mz,cat)				
	1.0	1.5	2.0	2.5	3.0
≤3	0.99	0.95	0.91	0.87	0.83
≤5	1.05	0.98	0.91	0.87	0.83
≤10	1.12	1.06	1.00	0.92	0.83

Pressure Coefficients:
 Internal $C_{p,i} = +0.7$ (strength), $+0.2$ (serviceability)
 External $C_{p,e} = -0.9$

Design Criteria determined in accordance with AS/NZS 1170.2:2011 Wind Actions.

Maximum Allowable Spans (mm)																						
Terrain Category	KI	3m Maximum Average Roof Height						5m Maximum Average Roof Height						10m Maximum Average Roof Height								
		Pz (kPa)	0.42mm BMT			0.48mm BMT			Pz (kPa)	0.42mm BMT			0.48mm BMT			Pz (kPa)	0.42mm BMT			0.48mm BMT		
			Single	End	Internal	Single	End	Internal		Single	End	Internal	Single	End	Internal		Single	End	Internal	Single	End	Internal
1.0	1.0	4.07	1350	1520	1610	1630	1630	1720	4.57	1350	1400	1490	1510	1510	1600	5.20	1260	1260	1360	1370	1370	1470
	1.5	5.21	1260	1260	1360	1370	1370	1470	5.86	1130	1130	1230	1250	1250	1340	6.67	990	990	1090	1110	1110	1200
	2.0	6.35	1040	1040	1140	1160	1160	1260	7.15	920	920	1010	1030	1030	1130	8.13	780	780	850	890	890	980
	3.0	8.64	700	700	770	830	830	910	9.72	550	550	600	690	690	750	11.06	-	-	-	520	520	570
1.5	1.0	3.74	1350	1600	1690	1710	1710	1800	3.99	1350	1540	1630	1650	1650	1740	4.66	1350	1380	1470	1490	1490	1580
	1.5	4.80	1350	1350	1440	1460	1460	1550	5.11	1280	1280	1380	1390	1390	1490	5.97	1110	1110	1210	1230	1230	1320
	2.0	5.85	1140	1140	1230	1250	1250	1350	6.23	1070	1070	1170	1180	1180	1280	7.28	900	900	980	1010	1010	1110
	3.0	7.96	800	800	880	920	920	1010	8.47	730	730	800	850	850	930	9.91	520	520	570	670	670	730
2.0	1.0	3.44	1350	1690	1780	1800	1800	1890	3.44	1350	1690	1780	1800	1800	1890	4.15	1350	1500	1590	1610	1610	1700
	1.5	4.40	1350	1440	1530	1550	1550	1640	4.40	1350	1440	1530	1550	1550	1640	5.32	1240	1240	1340	1350	1350	1450
	2.0	5.37	1230	1230	1330	1340	1340	1440	5.37	1230	1230	1330	1340	1340	1440	6.48	1020	1020	1120	1140	1140	1240
	3.0	7.30	900	900	980	1000	1000	1100	7.30	900	900	980	1000	1000	1100	8.82	680	680	740	810	810	880
2.5	1.0	3.14	1350	1780	1870	1890	1890	1990	3.14	1350	1780	1870	1890	1890	1990	3.51	1350	1670	1760	1780	1780	1870
	1.5	4.02	1350	1530	1620	1640	1640	1730	4.02	1350	1530	1620	1640	1640	1730	4.50	1350	1420	1510	1530	1530	1620
	2.0	4.91	1330	1330	1420	1440	1440	1530	4.91	1330	1330	1420	1440	1440	1530	5.49	1210	1210	1300	1320	1320	1410
	3.0	6.67	990	990	1090	1100	1100	1200	6.67	990	990	1090	1100	1100	1200	7.46	870	870	950	980	980	1080
3.0	1.0	2.86	1350	1800	1960	1990	1990	2090	2.86	1350	1800	1960	1990	1990	2090	2.86	1350	1800	1960	1990	1990	2090
	1.5	3.66	1350	1630	1710	1730	1730	1830	3.66	1350	1630	1710	1730	1730	1830	3.66	1350	1630	1710	1730	1730	1830
	2.0	4.47	1350	1420	1520	1530	1530	1620	4.47	1350	1420	1520	1530	1530	1620	4.47	1350	1420	1520	1530	1530	1620
	3.0	6.07	1090	1090	1190	1210	1210	1310	6.07	1090	1090	1190	1210	1210	1310	6.07	1090	1090	1190	1210	1210	1310

Note: For roofing applications a local pressure of KI = 3.0 is applicable adjacent roof corners on roofs with a pitch less than 10°.

Accepted for Inclusion

DTCM ref: M/742

Notes covering basis of DTC (Relevant test reports etc)

- Cyclonic Fatigue Testing in accordance with the NCC 2019 BCA Volume Two - Low-High-Low Pressure Testing.
- Cyclonic Testing of Smartspan® Roof Sheeting, Report no. 71 revision A, 05/2014, Stratco Testing Facility, Gepps Cross, South Australia.

***Checking Engineers Certification**
 Name: Trevor John
 Registration Number: 12178ES
 Date: 18/01/2021
 Signature:

***Certifying Engineers Certification**
 Name: MATTHEW MAMMONE
 NT Registration Number: 243090ES
 Date: 15/01/2021
 Signature:

Chairman's Signature:

Chairman's Name: Paul Nowland

Date of Approval: 13/04/2021 **Expiry Date:** 13/04/2026

*registered as a structural engineer in Australia

*registered as a structural engineer in Northern Territory