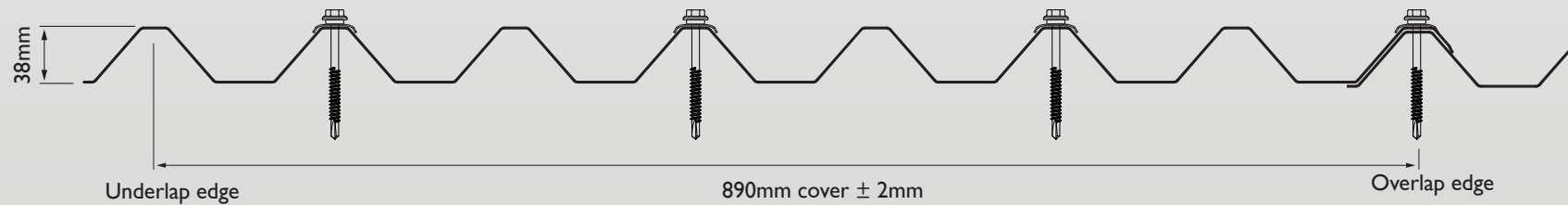


S7 ROOFING IN REGIONS A & W - with load spreading washers

0.40mm BMT G550 AZ150


Maximum Allowable Internal Spans (mm) - Wind*

Terrain Category	5m Maximum Height					10m Maximum Height				
	KI	Region A		Region W		KI	Region A		Region W	
		End	Internal	End	Internal		End	Internal	End	Internal
1.0	1.0	2050	2930	1800	2580	1.0	1940	2780	1690	2420
	1.5	1770	2530	1500	2150	1.5	1650	2370	1380	1980
	2.0	1540	2210	1260	1810	2.0	1420	2040	1130	1620
	3.0	1190	1700	860	1240	3.0	1050	1510	710	1020
1.5	1.0	2100	3000	1910	2740	1.0	2030	2910	1790	2560
	1.5	1880	2690	1630	2330	1.5	1750	2510	1490	2130
	2.0	1670	2390	1400	2000	2.0	1530	2190	1240	1780
	3.0	1330	1900	1020	1460	3.0	1170	1680	840	1210
2.0	1.0	2100	3000	2040	2920	1.0	2100	3000	1890	2700
	1.5	2000	2870	1750	2510	1.5	1850	2650	1590	2280
	2.0	1790	2570	1530	2190	2.0	1630	2340	1350	1940
	3.0	1470	2100	1170	1680	3.0	1280	1840	980	1400
2.5	1.0	2100	3000	2100	3000	1.0	2100	3000	2030	2900
	1.5	2070	2970	1830	2620	1.5	1990	2850	1750	2500
	2.0	1860	2670	1610	2310	2.0	1780	2550	1520	2180
	3.0	1550	2220	1260	1810	3.0	1460	2090	1160	1670
3.0	1.0	2100	3000	2100	3000	1.0	2100	3000	2100	3000
	1.5	2100	3000	1910	2730	1.5	2100	3000	1910	2730
	2.0	1940	2780	1700	2430	2.0	1940	2780	1700	2430
	3.0	1630	2340	1350	1940	3.0	1630	2340	1350	1940

Note: All end spans shall not exceed 70% of the maximum allowable internal span.

Values shown in bold shall be reduced for both 'Unrestricted Roof Access' and 'Restricted Access' requirements.

Values shown in shaded italics shall be reduced for 'Unrestricted Roof Access' requirements.

*Not to Exceed Maximum Allowable Spans as Specified Based on Access Requirements

Fastener Details		
Steel	Minimum 1.5mm (BMT)	M6-14 x 65mm self drilling screws with load spreading washers.
Timber	Hardwood (F17)	14-10 gauge timber fixing screws with load spreading washer and minimum 35mm embedment depth.
	Softwood (F7)	14-10 gauge timber fixing screws with load spreading washer and minimum 35mm embedment depth.

Spans exceeding 1200mm require side lap fixing mid-span with lap fastener spacing not greater than 1500mm. Lap fasten with 10 gauge self drilling screws.

Note: All fasteners shall be minimum class 4 and require neoprene seals.

Design Pressures (kPa)

Span (mm)	Serviceability	Strength
	Internal	Internal
900	3.90	8.20
1200	3.28	7.12
1500	2.72	6.15
1800	2.22	5.30
2100	1.78	4.56
2400	1.41	3.93
2700	1.10	3.41
3000	0.85	3.00

Installation Requirements

Stratco S7 sheets should be laid into the prevailing wind within the maximum allowable spans allocated subject to the design criteria. Alternatively, a suitably qualified engineer may assess spans in accordance with the design pressures. The S7 profile shall be installed to maintain a minimum 3° roof pitch. Refer to Stratco if any criteria is outside that as nominated on this detail sheet.

Maintenance Requirements

The performance of Stratco S7 over time depends on its correct application and maintenance. Maintenance should be performed as often as is required to remove any dirt, salt and pollutants. Where S7 is used in corrosive environments, cleaning should be performed more often. It is important that screws have the same life expectancy as the S7 cladding specified. Packs of S7 should always be kept dry and stored above ground level on site. If sheets become wet, they should be separated, wiped and placed in the open to dry. Refer to the Stratco "Selection, Use and Maintenance" brochure for more detailed information about the correct use and maintenance of this product.

Roof Access

Unrestricted roof access allows for maintenance foot traffic to a maximum weight of 110kg to be applied at any point on the roof without congregation.

Restricted roof access allows for maintenance foot traffic to a maximum weight of 110kg to be applied within 300mm of sheet supports only with weight evenly distributed over at least two roof crests.

No Access applies to roof surfaces with a pitch greater than 35° due to slope being unsafe to walk on.

Snow loads

0.4mm BMT S7 Roofing has been tested to sustain a maximum 2kPa snow load with no permanent deformation at 1800mm maximum continuous span. Appropriate design snow loading shall be determined by a suitably qualified engineer.

Maximum Allowable Spans (mm) - Access

Access	End	Internal
Unrestricted	840	1200
Restricted	1400	2000
No Access	2100	3000

Design Criteria

The following criteria were used in the development of the tables:

- Region A & W with a design return period of 500 years for Strength Limit State and 25 years for Serviceability Limit State.
- Region A: $V_R = 45\text{m/s}$ strength, 37m/s serviceability
Region W: $V_R = 51\text{m/s}$ strength, 43m/s serviceability
- $M_s/M_t/M_d = 1.0$
- $K_{c,e} = K_{c,i} = 0.9$

Height (m)	Terrain/height Multiplier ($M_{z,cat}$)				
	1.0	1.5	2.0	2.5	3.0
≤ 5.0	1.05	0.98	0.91	0.87	0.83
≤ 10.0	1.12	1.06	1	0.92	0.83

Pressure Coefficients for Roofing of Enclosed Building:

Internal, $C_{p,i} = +0.2$

External, $C_{p,e} = -0.9$

Allocated spans do not allow for Lee Zones, for areas within these zones, utilise the wind capacity tables to calculate spans based on the relevant allowance for Lee Multipliers.

Limitations

- Design pressures and maximum allowable spans are based on crest fixing with four screws per sheet per support. All screws require load spreading washers.
- If fixing over insulation, screw length should be increased to ensure sufficient penetration of the fastener.
- Maximum overhang is 200mm for Stratco S7 Roofing with the back-span to be minimum 1.5 x the deck overhang. Overhangs are not to be walked on.
- Refer AS/NZS 1170.2 for definition of local pressure (KI) zones. KI=3.0 is only applicable in the upwind corner of roofs with a pitch less than 10°.

Notes

- Design criteria determined in accordance with AS/NZS 1170.2:2012 Wind Actions.
- If roof access requirements are unknown or in doubt, maximum allowable spans specified as 'Unrestricted' should be adopted.
- In all cases when accessing roof for maintenance requirements, care should be taken to avoid roof damage. Walking should be 'flat' footed with weight distributed over at least two sheet crests. It is strongly recommended, for 0.4mm BMT material, crawl boards are utilized for load distribution whenever roof is being traversed.