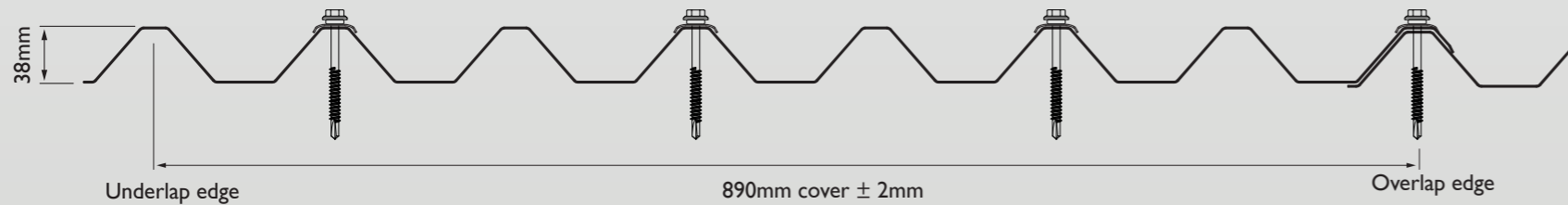


S7 ROOFING IN REGIONS A & W - with load spreading washers

0.55mm 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	2350	3360	2030	2910	1.0	2210	3170	1900	2720
	1.5	1990	2850	1670	2390	1.5	1850	2650	1520	2180
	2.0	1720	2460	1370	1970	2.0	1580	2260	1210	1740
	3.0	1290	1850	900	1290	3.0	1130	1620	-	-
1.5	1.0	2500	3580	2180	3120	1.0	2330	3330	2010	2880
	1.5	2130	3050	1820	2600	1.5	1970	2820	1650	2360
	2.0	1860	2670	1540	2200	2.0	1700	2430	1350	1940
	3.0	1450	2080	1080	1550	3.0	1260	1810	870	1250
2.0	1.0	2680	3830	2330	3340	1.0	2450	3510	2140	3060
	1.5	2280	3270	1980	2830	1.5	2090	2990	1770	2540
	2.0	2030	2900	1700	2440	2.0	1820	2610	1490	2130
	3.0	1630	2330	1270	1820	3.0	1410	2020	1030	1480
2.5	1.0	2810	4020	2430	3480	1.0	2660	3810	2320	3320
	1.5	2380	3410	2070	2960	1.5	2280	3260	1960	2810
	2.0	2120	3030	1800	2580	2.0	2010	2880	1690	2420
	3.0	1720	2470	1380	1980	3.0	1610	2310	1260	1800
3.0	1.0	3030	4330	2540	3630	1.0	3030	4330	2540	3630
	1.5	2490	3560	2170	3100	1.5	2490	3560	2170	3100
	2.0	2210	3170	1900	2720	2.0	2210	3170	1900	2720
	3.0	1820	2610	1490	2140	3.0	1820	2610	1490	2140

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 washers and minimum 35mm embedment depth.
	Softwood (F7)	14-10 gauge timber fixing screws with load spreading washers 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
1200	3.35	8.60
1500	2.87	7.52
1800	2.43	6.54
2100	2.04	5.66
2400	1.70	4.89
2700	1.40	4.22
3000	1.15	3.65
3300	0.94	3.19
3600	0.77	2.82
3900	0.65	2.56
4200	0.58	2.41
4500	0.55	2.35

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

0.55mm BMT S7 Roofing has been tested to sustain a maximum 2kPa snow load with no permanent deformation at 2700mm maximum continuous span. Appropriate design snow loading shall be determined by a suitably qualified engineer.

Maximum Allowable Spans (mm) - Access

Access	End	Internal
Unrestricted	1680	2400
Restricted	2520	3600
No Access	3150	4500

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 300mm 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.