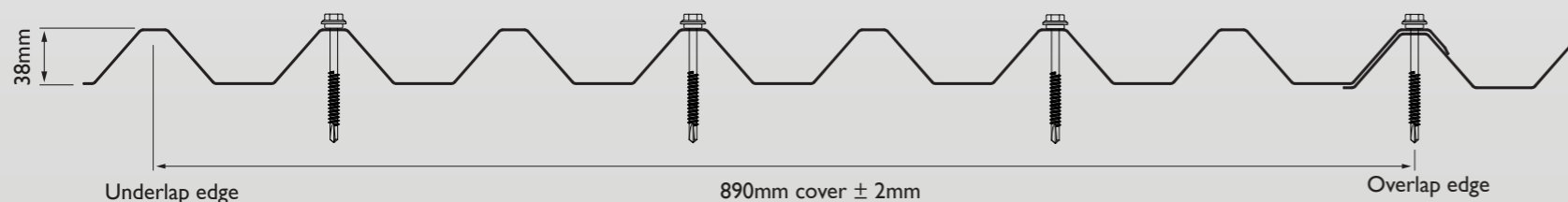


# S7 ROOFING IN REGIONS A & W - without load spreading washers

## 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	1400	2000	1300	1860	1.0	1400	2000	1190	1710
	1.5	1260	1810	1010	1450	1.5	1160	1660	890	1280
	2.0	1050	1500	780	1120	2.0	930	1340	660	950
	3.0	720	1030	-	-	3.0	-	-	-	-
1.5	1.0	1400	2000	1400	2000	1.0	1400	2000	1280	1840
	1.5	1380	1980	1130	1620	1.5	1250	1790	990	1420
	2.0	1160	1670	910	1300	2.0	1030	1480	770	1100
	3.0	840	1210	-	-	3.0	700	1000	-	-
2.0	1.0	1400	2000	1400	2000	1.0	1400	2000	1380	1980
	1.5	1400	2000	1250	1790	1.5	1350	1930	1090	1570
	2.0	1290	1850	1040	1490	2.0	1130	1620	870	1250
	3.0	980	1400	700	1010	3.0	810	1160	-	-
2.5	1.0	1400	2000	1400	2000	1.0	1400	2000	1400	2000
	1.5	1400	2000	1330	1900	1.5	1400	2000	1240	1780
	2.0	1370	1960	1120	1600	2.0	1280	1830	1020	1470
	3.0	1050	1510	790	1130	3.0	960	1380	690	990
3.0	1.0	1400	2000	1400	2000	1.0	1400	2000	1400	2000
	1.5	1400	2000	1400	2000	1.5	1400	2000	1400	2000
	2.0	1400	2000	1190	1710	2.0	1400	2000	1190	1710
	3.0	1130	1620	870	1250	3.0	1130	1620	870	1250

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

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 1.0mm (BMT)	M6-14 x 65mm self drilling screws.
Timber	Hardwood (F17)	14-10 gauge timber fixing screws with minimum 35mm embedment depth.
	Softwood (F7)	14-10 gauge timber fixing screws with 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	2.60	7.00
1200	2.08	5.56
1500	1.64	4.34
1800	1.28	3.34
2100	1.00	2.56
2400	0.79	2.00
2700	0.67	1.67
3000	0.62	1.55

### 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/No Access	1400	2000

### 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, utilize 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.
- 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.