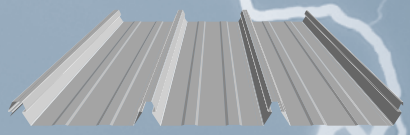
Stramit® Patio Roofing
Cyclonic Span Tables

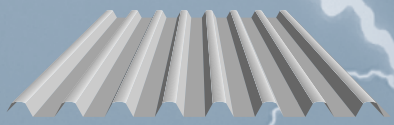
Stramit
Building Products

Stramit® Patio Roofing Profiles

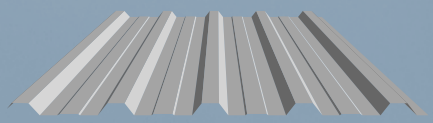
Stramit Sunset® Patio Roof Panel



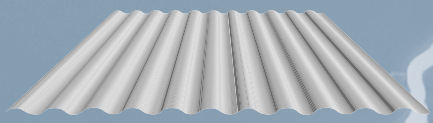
Stramit Speed Deck Ultra®
Concealed Fixed Decking



Stramit Longspan® Cladding



Stramit Monoclad® Cladding



Stramit® Corrugated Cladding

Cyclonic Patio Span Tables

This brochure includes roofing span tables for domestic patios in all cyclonic areas.

For non-cyclonic regions contact Stramit Building Products for a copy of the standard patio spans brochure or visit the Stramit website.

www.stramit.com.au

How to use the tables

Step 1

Determine whether the patio is monoslope or pitched.

If attached to a house, determine the average height of the roof above ground (h) and the height of the attached patio (hc) in metres.

Step 2

Based on the intended usage, determine whether the patio will be “blocked under” or “empty under”. If in doubt, assume “blocked under”.

Empty Under: Goods or materials stored under the patio blocking less than 50% of the cross-sectional area exposed to the wind.

Blocked Under: Goods or materials stored under the patio blocking more than 75% of the cross-sectional area exposed to the wind.

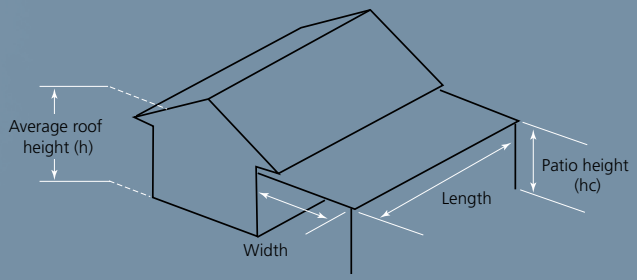
Moveable items such as vehicles also contribute to the blocked area.

Step 3

By referring to the selection tables, determine which of the span tables A to K is appropriate.

Step 4

Using the appropriate span table (A to K) and the AS4055 wind classification for the location and topography, determine the span (spacing between supports) for the selected roofing profile and thickness.



Stramit® Patio Roofing Selection Tables

For attached patios, use the selection tables below to choose the appropriate span table. For free-standing canopies of any height up to 3.2m, use the span table marked below with an asterisk (*).

Monoslope – empty under

	Average Roof Height (h)		
Patio Height (hc)	3 ≤ h < 4	4 ≤ h ≤ 5	5 < h ≤ 6.5
hc ≤ 2.3	D*	A	A
2.4 ≤ hc < 2.8	F	C	A
2.8 ≤ hc ≤ 3.2	G	E	B

Monoslope – blocked under

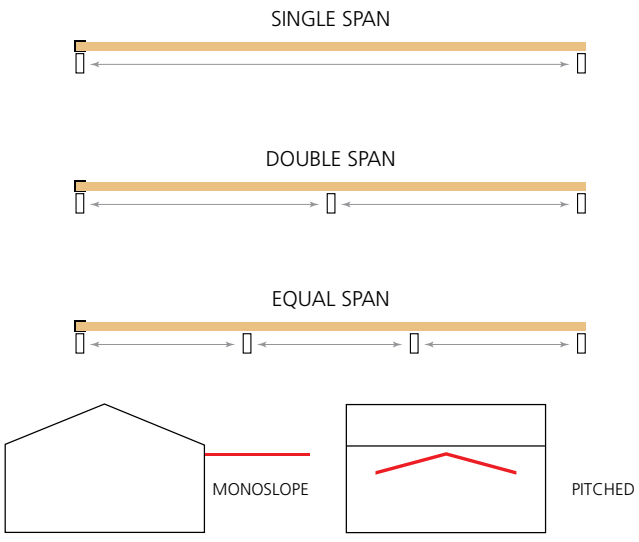
	Average Roof Height (h)		
Patio Height (hc)	3 ≤ h < 4	4 ≤ h ≤ 5	5 < h ≤ 6.5
hc ≤ 2.3	H*	H	H
2.4 ≤ hc < 2.8	H	H	H
2.8 ≤ hc ≤ 3.2	H	H	H

Pitched Roof – empty under

	Average Roof Height (h)		
Patio Height (hc)	3 ≤ h < 4	4 ≤ h ≤ 5	5 < h ≤ 6.5
hc ≤ 2 .3	J*	J	J
2.4 ≤ hc < 2.8	F	J	J
2.8 ≤ hc ≤ 3.2	G	E	J

Pitched Roof – blocked under

	Average Roof Height (h)		
Patio Height (hc)	3 ≤ h < 4	4 ≤ h ≤ 5	5 < h ≤ 6.5
hc ≤ 2.3	K*	K	K
2.4 ≤ hc < 2.8	K	K	K
2.8 ≤ hc ≤ 3.2	K	K	K



Stramit Building Products manufactures a range of roofing profiles for patio applications, offering a wide choice of styles and a high quality finish.

Stramit® patio roofing makes it easy to create elegant verandas, patios, barbecue areas and carports.

Now Stramit has issued technical data tested to Australian Standards to accompany these products.

The span tables in this guide are for domestic applications in all cyclonic areas. Span tables are also available for non-cyclonic regions. For commercial applications, contact Stramit for further information.

Design Notes

- Span tables are based on patio height and average roof heights as specified in the empty under and blocked under selection tables. For heights outside these ranges, contact Stramit for further information.
- Maximum patio height (hc) is 3.2m.
- Average roof height between 3m and 6.5m (3m ≤ h ≤ 6.5m).
- Patio height (hc) must always be less than roof height (h).
- Patio width is no less than 2.1m and length is no less than 3.5m.
- Maximum roof slope is 5° for monoslope and 22.5° for pitched roof.
- The number of supports (beams or purlins) affects the allowable span length. Data is given in each table for:
  Single Span: Two supports, one at each end
  Double Span: Three equi-spaced supports
  Equal Spans: Four or more equi-spaced supports.
- See page 7 for table of fixing details and fastener types for each patio roofing profile.

Reading the span tables

Example

Step 1

For a pitched patio roof attached to a house, take measurements of the average roof height of the house 'h' and height of the patio 'hc'.

Assume that: h = 5m
hc = 2.5m

Step 2

Assume that the patio will be used as an outdoor entertainment area and that the cross-sectional blockage will be less than 50%. Therefore, the "Empty Under" table is applicable.

Step 3

Reading off the "Empty Under" table, with h = 5m, hc = 2.5m, span table J will be used to determine the spans.

Pitched – empty under

	Average Roof Height (h)		
Patio Height (hc)	3 ≤ h < 4	4 ≤ h ≤ 5	5< h ≤ 6.5
hc ≤ 2.3	J	J	J
2.4 ≤ hc < 2.8	F	J	J
2.8 ≤ hc ≤ 3.2	G	E	J

Step 4

Assume the wind classification for the area is C1 and the roofing profile is Stramit® Speed Deck Ultra concealed fixed decking in 0.42mm BMT thickness, with a double span configuration. From span table J, the maximum allowable double span is 1800mm.

J

	THICKNESS BMT (mm)	FASTENERS PER SHEET	MINIMUM SLOPE	MAXIMUM SP				
				SINGLE		DOUBLE		
								WIND CLA
				C1	C2	C1	C2	C3
Stramit Sunset®	0.42	3	1°	2600	1990	2230	–	–
Stramit Speed Deck Ultra®	0.42	1 clip & 3 Screws	1°	–	–	1800	1740	1410
	0.48	1 clip & 3 Screws	1°	–	–	1800	1800	1370
Stramit Longspan®	0.42	5 with caps	3°	–	–	2100	1800	1450
	0.48	5 with caps	3°	–	–	2100	2100	1700
Stramit Monoclad®	0.42	4 with caps	2°	–	–	1800	1800	1340
	0.48	4 with caps	2°	–	–	2100	2100	1710
Stramit® Corrugated	0.42	5 with caps	5°	–	–	1800	1680	1310
	0.48	5 with caps	5°	–	–	2100	1880	1640

Stramit® Patio Roofing Span Tables

A

	THICKNESS BMT (mm)	FASTENERS PER SHEET	MINIMUM SLOPE	MAXIMUM SPAN LENGTH (mm)									
				SINGLE		DOUBLE				EQUAL			
				WIND CLASSIFICATION									
				C1	C2	C1	C2	C3	C4	C1	C2	C3	C4
Stramit Sunset®	0.42	3	1°	3600	2620	3600	2260	–	–	–	–	–	–
Stramit Speed Deck Ultra®	0.42	1 clip & 3 Screws	1°	–	–	1800	1800	1750	1520	1800	1800	1740	1510
	0.48	1 clip & 3 Screws	1°	–	–	1800	1800	1800	1480	1800	1800	1800	1470
Stramit Longspan®	0.42	5 with caps	3°	–	–	2100	2100	1840	1550	2100	2100	1830	1540
	0.48	5 with caps	3°	–	–	2100	2100	2100	1870	2100	2100	2100	1860
Stramit Monoclad®	0.42	4 with caps	2°	–	–	1800	1800	1800	1420	1800	1800	1800	1420
	0.48	4 with caps	2°	–	–	2100	2100	2100	1810	2100	2100	2100	1800
Stramit® Corrugated	0.42	5 with caps	5°	–	–	1800	1800	1710	1400	1800	1800	1660	1390
	0.48	5 with caps	5°	–	–	2100	2100	1900	1700	2100	2060	1790	1620

B

	THICKNESS BMT (mm)	FASTENERS PER SHEET	MINIMUM SLOPE	MAXIMUM SPAN LENGTH (mm)									
				SINGLE		DOUBLE				EQUAL			
				WIND CLASSIFICATION									
				C1	C2	C1	C2	C3	C4	C1	C2	C3	C4
Stramit Sunset®	0.42	3	1°	3170	2370	3050	1910	–	–	–	–	–	–
Stramit Speed Deck Ultra®	0.42	1 clip & 3 Screws	1°	–	–	1800	1800	1650	1370	1800	1800	1640	1370
	0.48	1 clip & 3 Screws	1°	–	–	1800	1800	1680	1330	1800	1800	1680	1320
Stramit Longspan®	0.42	5 with caps	3°	–	–	2100	2100	1700	1410	2100	2100	1690	1410
	0.48	5 with caps	3°	–	–	2100	2100	2080	1640	2100	2100	2070	1630
Stramit Monoclad®	0.42	4 with caps	2°	–	–	1800	1800	1650	1310	1800	1800	1630	1300
	0.48	4 with caps	2°	–	–	2100	2100	2020	1670	2100	2100	2020	1670
Stramit® Corrugated	0.42	5 with caps	5°	–	–	1800	1800	1530	1280	1800	1780	1520	1270
	0.48	5 with caps	5°	–	–	2100	2060	1790	1610	2100	1970	1720	1520

C

	THICKNESS BMT (mm)	FASTENERS PER SHEET	MINIMUM SLOPE	MAXIMUM SPAN LENGTH (mm)									
				SINGLE		DOUBLE				EQUAL			
				WIND CLASSIFICATION									
				C1	C2	C1	C2	C3	C4	C1	C2	C3	C4
Stramit Sunset®	0.42	3	1°	2890	2180	2640	1510	–	–	–	–	–	–
Stramit Speed Deck Ultra®	0.42	1 clip & 3 Screws	1°	–	–	1800	1800	1550	1230	1800	1800	1550	1220
	0.48	1 clip & 3 Screws	1°	–	–	1800	1800	1520	1190	1800	1800	1520	1180
Stramit Longspan®	0.42	5 with caps	3°	–	–	2100	2090	1580	1290	2100	2070	1580	1290
	0.48	5 with caps	3°	–	–	2100	2100	1920	1450	2100	2100	1910	1450
Stramit Monoclad®	0.42	4 with caps	2°	–	–	1800	1800	1450	1190	1800	1800	1450	1190
	0.48	4 with caps	2°	–	–	2100	2100	1860	1540	2100	2100	1850	1540
Stramit® Corrugated	0.42	5 with caps	5°	–	–	1800	1780	1420	1180	1800	1720	1420	1170
	0.48	5 with caps	5°	–	–	2100	1980	1730	1500	2100	1880	1650	1450

D

	THICKNESS BMT (mm)	FASTENERS PER SHEET	MINIMUM SLOPE	MAXIMUM SPAN LENGTH (mm)									
				SINGLE		DOUBLE				EQUAL			
				WIND CLASSIFICATION									
				C1	C2	C1	C2	C3	C4	C1	C2	C3	C4
Stramit Sunset®	0.42	3	1°	2760	2090	2490	1250	–	–	–	–	–	–
Stramit Speed Deck Ultra®	0.42	1 clip & 3 Screws	1°	–	–	1800	1790	1500	1160	1800	1790	1500	1160
	0.48	1 clip & 3 Screws	1°	–	–	1800	1800	1460	1140	1800	1800	1450	1140
Stramit Longspan®	0.42	5 with caps	3°	–	–	2100	1980	1530	1230	2100	1970	1520	1230
	0.48	5 with caps	3°	–	–	2100	2100	1840	1400	2100	2100	1830	1390
Stramit Monoclad®	0.42	4 with caps	2°	–	–	1800	1800	1410	1160	1800	1800	1400	1150
	0.48	4 with caps	2°	–	–	2100	2100	1790	1480	2100	2100	1780	1470
Stramit® Corrugated	0.42	5 with caps	5°	–	–	1800	1760	1380	1150	1800	1690	1380	1140
	0.48	5 with caps	5°	–	–	2100	1940	1700	1440	2100	1840	1610	1420

E

	THICKNESS BMT (mm)	FASTENERS PER SHEET	MINIMUM SLOPE	MAXIMUM SPAN LENGTH (mm)								
				SINGLE	DOUBLE				EQUAL			
				WIND CLASSIFICATION								
				C1	C1	C2	C3	C4	C1	C2	C3	C4
Stramit Sunset®	0.42	3	1°	2230	1630	–	–	–	–	–	–	–
Stramit Speed Deck Ultra®	0.42	1 clip & 3 Screws	1°	–	1800	1570	1150	–	1800	1560	1150	760
	0.48	1 clip & 3 Screws	1°	–	1800	1550	1140	–	1800	1540	1130	850
Stramit Longspan®	0.42	5 with caps	3°	–	2100	1600	1220	–	2100	1600	1220	960
	0.48	5 with caps	3°	–	2100	1950	1390	1100	2100	1940	1380	1090
Stramit Monoclad®	0.42	4 with caps	2°	–	1800	1470	1150	–	1800	1460	1150	930
	0.48	4 with caps	2°	–	2100	1890	1470	1130	2100	1880	1460	1120
Stramit® Corrugated	0.42	5 with caps	5°	–	1800	1440	1140	–	1730	1430	1140	930
	0.48	5 with caps	5°	–	2000	1730	1430	1110	1900	1650	1420	1100

F

	THICKNESS BMT (mm)	FASTENERS PER SHEET	MINIMUM SLOPE	MAXIMUM SPAN LENGTH (mm)							
				SINGLE	DOUBLE				EQUAL			
				WIND CLASSIFICATION							
				C1	C1	C2	C3		C1	C2	C3	C4
Stramit Sunset®	0.42	3	1°	1860	–	–	–	–	–	–	–	–
Stramit Speed Deck Ultra®	0.42	1 clip & 3 Screws	1°	–	1670	1290	–	–	1670	1280	820	–
	0.48	1 clip & 3 Screws	1°	–	1720	1250	–	–	1710	1240	900	–
Stramit Longspan®	0.42	5 with caps	3°	–	1720	1350	–	–	1720	1340	990	730
	0.48	5 with caps	3°	–	2100	1510	1130	–	2100	1500	1120	820
Stramit Monoclad®	0.42	4 with caps	2°	–	1710	1240	–	–	1700	1240	950	730
	0.48	4 with caps	2°	–	2060	1600	1160	–	2050	1590	1160	820
Stramit® Corrugated	0.42	5 with caps	5°	–	1570	1220	–	–	1560	1210	960	740
	0.48	5 with caps	5°	–	1800	1560	1140	–	1730	1480	1130	850

G

	THICKNESS BMT (mm)	FASTENERS PER SHEET	MINIMUM SLOPE	MAXIMUM SPAN LENGTH (mm)							
				SINGLE	DOUBLE			EQUAL			
				WIND CLASSIFICATION							
					C1	C2		C1	C2	C3	C4
Stramit Sunset®	0.42	3	1°	–	–	–	–	–	–	–	–
Stramit Speed Deck Ultra®	0.42	1 clip & 3 Screws	1°	–	1550	1120	–	1540	1110	–	–
	0.48	1 clip & 3 Screws	1°	–	1520	1110	–	1520	1110	–	–
Stramit Longspan®	0.42	5 with caps	3°	–	1580	1190	–	1580	1190	860	–
	0.48	5 with caps	3°	–	1860	1440	–	1910	1350	980	–
Stramit Monoclad®	0.42	4 with caps	2°	–	1450	1130	–	1450	1130	840	–
	0.48	4 with caps	2°	–	1860	1440	–	1850	1430	1000	–
Stramit® Corrugated	0.42	5 with caps	5°	–	1420	1120	–	1420	1120	850	–
	0.48	5 with caps	5°	–	1720	1390	–	1640	1390	990	730

H

	THICKNESS BMT (mm)	FASTENERS PER SHEET	MINIMUM SLOPE	MAXIMUM SPAN LENGTH (mm)							
				SINGLE	DOUBLE			EQUAL			
				WIND CLASSIFICATION							
					C1	C2		C1	C2	C3	C4
Stramit Sunset®	0.42	3	1°	–	–	–	–	–	–	–	–
Stramit Speed Deck Ultra®	0.42	1 clip & 3 Screws	1°	–	1530	1090	–	1520	1090	–	–
	0.48	1 clip & 3 Screws	1°	–	1490	1090	–	1480	1090	–	–
Stramit Longspan®	0.42	5 with caps	3°	–	1560	1170	–	1550	1170	840	–
	0.48	5 with caps	3°	–	1880	1330	–	1870	1330	960	–
Stramit Monoclad®	0.42	4 with caps	2°	–	1430	1110	–	1430	1110	820	–
	0.48	4 with caps	2°	–	1830	1410	–	1820	1400	970	–
Stramit® Corrugated	0.42	5 with caps	5°	–	1400	1100	–	1400	1100	830	–
	0.48	5 with caps	5°	–	1700	1370	–	1620	1360	960	700

J

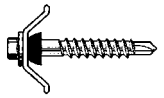
	THICKNESS BMT (mm)	FASTENERS PER SHEET	MINIMUM SLOPE	MAXIMUM SPAN LENGTH (mm)									
				SINGLE		DOUBLE				EQUAL			
				WIND CLASSIFICATION									
				C1	C2	C1	C2	C3	C4	C1	C2	C3	C4
Stramit Sunset®	0.42	3	1°	2600	1990	2230	–	–	–	–	–	–	–
Stramit Speed Deck Ultra®	0.42	1 clip & 3 Screws	1°	–	–	1800	1740	1410	1070	1800	1730	1400	1060
	0.48	1 clip & 3 Screws	1°	–	–	1800	1800	1370	1080	1800	1800	1360	1070
Stramit Longspan®	0.42	5 with caps	3°	–	–	2100	1800	1450	1160	2100	1790	1440	1150
	0.48	5 with caps	3°	–	–	2100	2100	1700	1310	2100	2100	1690	1310
Stramit Monoclad®	0.42	4 with caps	2°	–	–	1800	1800	1340	1100	1800	1800	1330	1100
	0.48	4 with caps	2°	–	–	2100	2100	1710	1390	2100	2100	1700	1380
Stramit® Corrugated	0.42	5 with caps	5°	–	–	1800	1680	1310	1090	1800	1640	1300	1090
	0.48	5 with caps	5°	–	–	2100	1880	1640	1340	2050	1780	1550	1340

K

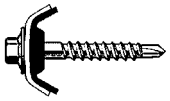
	THICKNESS BMT (mm)	FASTENERS PER SHEET	MINIMUM SLOPE	MAXIMUM SPAN LENGTH (mm)						
				SINGLE	DOUBLE			EQUAL		
				WIND CLASSIFICATION						
					C1	C2		C1	C2	C3
Stramit Sunset®	0.42	3	1°	–	–	–	–	–	–	–
Stramit Speed Deck Ultra®	0.42	1 clip & 3 Screws	1°	–	1510	1060	–	1500	1060	–
	0.48	1 clip & 3 Screws	1°	–	1460	1070	–	1460	1070	–
Stramit Longspan®	0.42	5 with caps	3°	–	1530	1150	–	1530	1150	820
	0.48	5 with caps	3°	–	1850	1310	–	1840	1300	930
Stramit Monoclad®	0.42	4 with caps	2°	–	1410	1100	–	1410	1090	810
	0.48	4 with caps	2°	–	1790	1380	–	1790	1370	940
Stramit® Corrugated	0.42	5 with caps	5°	–	1380	1090	–	1380	1080	810
	0.48	5 with caps	5°	–	1690	1340	–	1610	1330	930

FIXING DETAILS FOR STRAMIT® PATIO ROOFING – CYCLONIC AREAS			
FOR FIXING TO STEEL SUPPORTS 1.5mm OR THICKER ONLY			
	Stramit® Sheeting	**Fastener Per Sheet**	**Roofing Screws**
Crest Fixing	Monoclad**	4	No 14 – 10 x 50mm with Buildex cyclone caps or equivalent
	Longspan**	5	No 14 – 10 x 50mm with Buildex cyclone caps or equivalent
	Corrugated**	5	No 14 – 10 x 42mm with Buildex cyclone caps or equivalent
Clip Fixing	Speed Deck Ultra	1 clip & 3 screws	No 12 – 14 x 30mm
Pan Fixing	Sunset*	3	M5.5 – 14 x 39mm AutoTek with 14g 25mm x 1.2mm bonded aluminium washer with EPDM seal.

All fastening screws must conform to AS3566 – Class 3 (Class 4 for severe marine environment). Screws used for external roofing applications must be used with sealing washers.
All steel supports should be minimum 1.5mm thick.
All screws should be hex-head self drilling & threading screws.
* A 1mm thick Stramit® receiver channel can be used at one end of the roof. This channel must be attached to a steel support at least 1.5mm thick.
** Roof sheeting spans over 900mm should have No 8 – 15 x 15mm sidelap fasteners at midspan.



Cyclone cap for corrugated cladding profiles



Cyclone cap for square rib cladding profiles

Note: Where a patio is attached to an existing structural system, additional loads will be imposed that may require strengthening of the rafters or wall, etc. Suitability and adequacy of the existing structural systems to carry the induced loads must be confirmed by an engineer.

Prices

Prices of Stramit® cladding and accessories can be obtained from your nearest Stramit location or distributor of Stramit® products. As Stramit does not provide an installation service, ask your tradesperson for a supply and fix price. Contact your nearest Stramit location for the names of tradespersons in your area.

Length

Stramit® cladding is supplied cut-to-length. When designing or transporting long products ensure that the length is within the limit of the local transport authority regulations. The manufacturing tolerance on the length of product supplied is +0, –15mm.

Ordering

Stramit® cladding can be ordered directly, through distributors, or supplied and fixed by a roofing contractor.

Delivery/Unloading

Delivery can normally be made within 48 hours, subject to the delivery location, quantity and material availability, or can be at a pre-arranged date and time. Please ensure that suitable arrangements have been made for truck unloading, as this is the responsibility of the receiver. Pack mass may be up to one tonne. When lifting Stramit® cladding, care should be taken to ensure that the load is spread to prevent damage.

Handling/Storage

Stramit® cladding should be handled with care at all times to preserve the product capabilities and quality of the finish. Packs should always be kept dry and stored above ground level while on site. If the sheets become wet, they should be separated, wiped and placed in the open to promote drying.

Additional Information

As well as our standard range of Technical Manuals, Installation Leaflets, Case Studies and other promotional literature, Stramit has a series of Guides to aid design. These include:

- Roof Slope Guide
- Foot Traffic Guide
- Concealed Fixed Decking
- Bullnosing, Curving and Crimping
- Acoustic Panels
- Cyclonic Areas
- Spring Curving Guide

Please contact your nearest Stramit location or visit www.stramit.com.au to download Stramit literature.

Other Products

Stramit offers a wide range of building products, including:

- Purlins and girts
- Formwork decking
- Roof and wall sheeting
- Lightweight structural sections
- Truss components
- Gutters and downpipes
- Fascia
- Custom flashing
- Insulating products
- Fasteners

For additional and comprehensive information on individual roofing products refer to Stramit's technical literature, available from any Stramit Building Products branch or the Stramit website:

www.stramit.com.au

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Sydney	(02) 9834 0900
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Orange	(02) 6361 0444
Albury	(02) 6041 7600
Newcastle	(02) 4954 5033
Coffs Harbour	(02) 6652 6333

Northern Territory

Darwin	(08) 8947 0780

South Australia

Adelaide	(08) 8262 4444

Western Australia

Perth	(08) 9493 8800

Queensland

Brisbane	(07) 3803 9999
Maryborough	(07) 4121 2433
Rockhampton	(07) 4936 2577
Mackay	(07) 4942 3488
Townsville	(07) 4779 0844
Cairns	(07) 4045 3069

Victoria

Melbourne	(03) 9237 6300
Bendigo	(03) 5448 6400
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Tasmania

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