



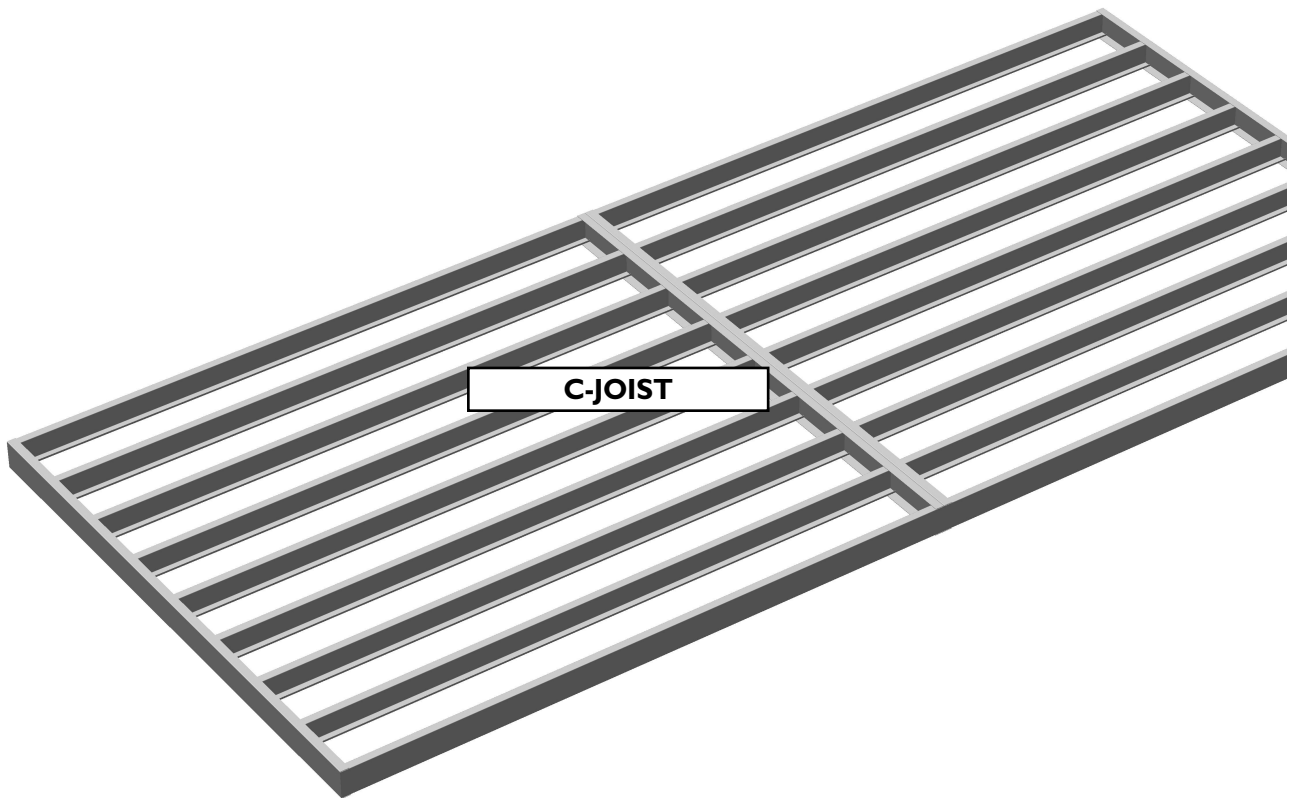
STRAMIT[®]
RESIDENTIAL FLOOR
FRAMING SYSTEM

p r o d u c t t e c h n i c a l m a n u a l



STRAMIT[®] RESIDENTIAL FLOOR FRAMING SYSTEM

A suspended floor design solution for both single and two storey residential construction.



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INTRODUCTION

The **Stramit**[®] Residential Floor Framing system is designed to address the needs of domestic house construction.

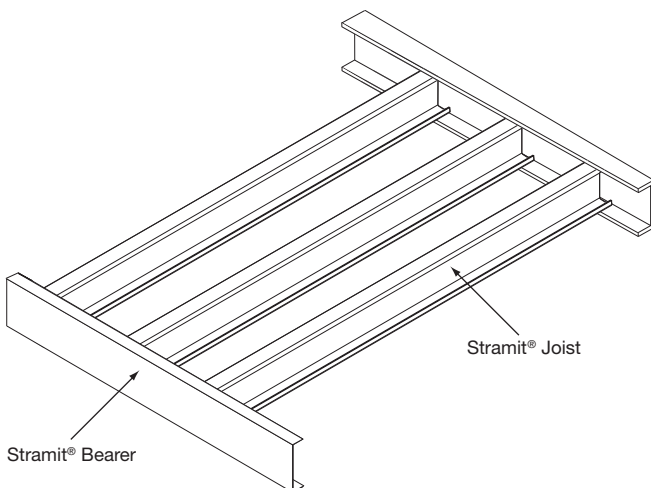
A wide range of section sizes provides freedom in designing floor joists, bearers for most locations. The **Stramit**[®] Residential Floor Framing System can easily be adapted to a variety of house designs.

In addition, the **Stramit**[®] Residential Floor Framing system has extended bearer options to provide larger span design possibilities.

The **Stramit**[®] Residential Floor Framing System offers

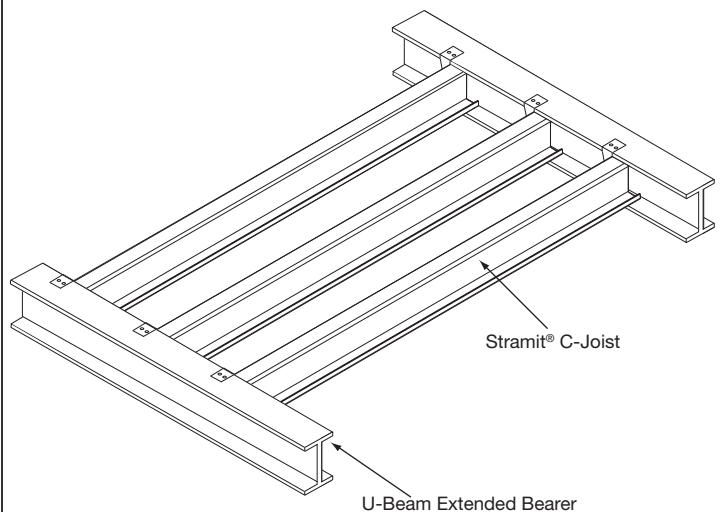
- joist spans at 450mm centres (1.5 – 6.5metres)

Stramit[®] C-Joist and Bearer



- extended bearer spans available up to 8 metres

Stramit[®] C-Joist with (U-Beam shown) Extended Bearer



The **Stramit**[®] Residential Floor Framing System is only suitable for use in residential home construction. It is not intended, nor suitable, for use in any form of mezzanine commercial, institutional, industrial, agricultural or any other form of non-residential construction. If in any doubt contact Stramit to confirm the suitability of a given application.

SELECTION AND SPECIFICATION

- Termite resistant
- Non combustible components
- Lightweight and easy to install
- Ideal for flat or sloping sites
- Fast track construction with engineered components
- Pre-cut and prefabricated components enable speedy construction, even on sloping sites
- Suitable for use on standard industry pier systems
- Dimensional stability
- Achieve 'true lines' without warping
- Economical in materials and construction
- Delivers a finish without shrinkage cracks
- Will not warp or twist and remains stable for the life of the building

Dimensions and Mass

Table 1

STRAMIT® C-Joist & Bearer Dimensions & Mass						
member	section	depth D* mm	width W mm	lip L mm	thickness t mm	mass kg/m
C Joist	J11510	115	45	11.8	1.0	1.70
	J11512	115	45	12.3	1.2	2.10
	J11515	115	45	13.1	1.5	2.60
	J11519	115	45	14.1	1.9	3.30
	J18210	182	51	12.3	1.0	2.38
	J18212	182	51	12.8	1.2	2.78
	J18215	182	51	13.6	1.5	3.48
	J18219	182	51	14.7	1.9	4.41
	J18224	182	51	16.0	2.4	5.57
	J23512	235	64	10.8	1.2	3.60
	J23515	235	64	11.6	1.5	4.50
	J23519	235	64	15.2	1.9	5.65
	J23524	235	64	16.5	2.4	7.09
	J28319	283	64	16.2	1.9	6.37
J28324	283	64	17.5	2.4	8.04	
C Bearer	B11519	116*	52	-	1.9	3.30
	B18219	183*	58	-	1.9	4.41
	B18224	183*	58	-	2.4	5.57
	B23519	236*	72	-	1.9	5.65
	B23524	236*	72	-	2.4	7.09
	B28319	283*	72	-	1.9	6.37
B28324	283*	72	-	2.4	8.04	

* Depth D refers to overall depth of section for joists and clear distance between top and bottom flange for bearers. To determine overall depth of bearers, add twice the thickness to value of D.

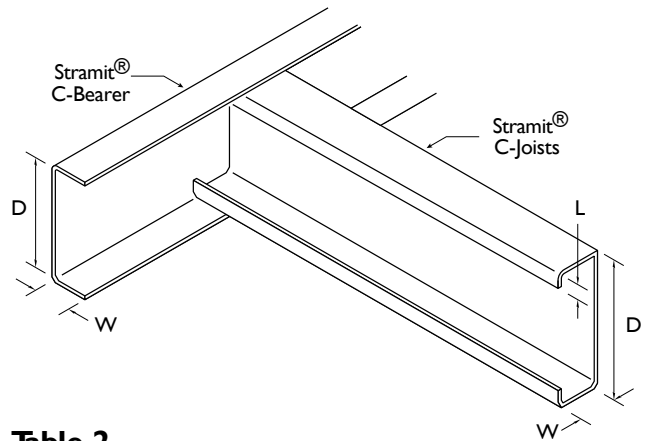


Table 2

STRAMIT® Extended Bearer Range Dimensions & Mass				
Member	Sections*	Depth D (mm)	Width W (mm)	Mass (kg/m)
RHS	200x100x4.0 RHS	200	100	17.9
	200x100x6.0 RHS	200	100	26.2
	250x150x5.0 RHS	250	150	29.9
UB	200UB18.2	198	99	18.2
	200UB22.3	202	133	22.3
	250UB25.7	248	124	25.7
	310UB32.0	298	149	32

* sections supplied by others

Materials

Stramit® C-Joist and Bearers are cold rolled formed sections manufactured from high strength steel in material thickness ranging from 1.0mm (G550 grade, 550 MPa minimum yield stress material) to 2.4mm (G450 grade, 450MPa minimum yield stress material), with Z350 zinc coating (350grams per square metre minimum coating mass) in accordance with Australian Standard AS1397.

Other **Stramit®** accessories, such as FCB3 brackets, extended bearer brackets and lateral end restraints, are made from 300 MPa or 450MPa steel with a minimum galvanised coating of 275 grams per square metre.

Tolerances

Stramit® C-Joists and Bearers are supplied with a length tolerance of +0-10mm.

Performance

The **Stramit®** Residential Floor Framing System has been designed to NASH Residential and Low-Rise Steel Framing manual - Part I (Design Criteria) to meet the performance requirement of the NCC. Use of these provisions reduces the uncomfortable bounce and vibration that may be present in other systems.

The product range can be used for both single and two storey construction. Internal bearers or joists do not support any load bearing walls. Deflections under service loads are limited to a minimum of span/500 and 12mm.

Durability

Ground clearance requirements – **Stramit**[®] steel flooring is not intended for use in applications where the clearance above the ground is less than 400mm. A reduction of ground clearance is possible in small localised areas on sloping sites to a minimum of 150mm within 2m of a ventilated external wall. In all cases the subfloor ventilation

details should meet the requirements of Part 3.4.1 of the National Construction Code, Volume 2.

For application requirements regarding location, product, finish, ventilation – refer to table 3.

Table 3

STRAMIT[®] RESIDENTIAL FLOOR SYSTEM – DURABILITY CRITERIA			
One of the following applicable criteria must be adhered to ensure satisfactory performance of the floor system. The standard system is not suitable for applications closer than 300m to calm still coastal water or closer than 1km to rough active surf.			
Application	>10km from the coast & not in a heavy industrial area.	<10km but > 1km from the coast & not in a heavy industrial area.	< 1km but > 300m from calm still coastal water & not in a heavy industrial area.
Ground Floor	<ul style="list-style-type: none"> Sub-floor can be completely open 	<ul style="list-style-type: none"> Sub-floor should be enclosed and incorporate ventilators, or Sub-floor painted with etch primer plus water-based acrylic top coat. 	<ul style="list-style-type: none"> Sub-floor must be enclosed & incorporate ventilators, or Sub-floor painted with high build epoxy mastic based system
Upper Floor of Two Storey Building	<ul style="list-style-type: none"> No ceiling lining required 	<ul style="list-style-type: none"> If fully enclosed building, no ceiling lining required, or If not fully enclosed, sub-floor painted with etch primer plus water based acrylic top coat 	<ul style="list-style-type: none"> If fully enclosed building, no ceiling lining required, or If not fully enclosed, sub-floor painted with high build epoxy mastic system
Balcony / Verandah	<ul style="list-style-type: none"> Provide weather tight top cover protection, or For open deck or strip flooring sub-floor painted with etch primer plus water-based acrylic top coat 	<ul style="list-style-type: none"> Provide weather tight top cover protection & complete encapsulation, or Sub-floor painted with etch primer plus water-based acrylic top coat 	<ul style="list-style-type: none"> Provide weather tight top cover protection & complete encapsulation, or Sub-floor painted with high build epoxy mastic system

Notes: The information above is current at the time of publication. Please check the NCC and BlueScope website for the latest information and guidance. If uncertain about the use of the system in an aggressive environment, please contact your nearest Stramit office for advice.

DESIGN AND CONSTRUCTION

Consideration of house plans is required when designing the floor system.

The **Stramit**[®] C-Joist system has the extended bearer option. Extended bearers provide design flexibility and allow for large spans to be achieved in areas such as above garages, rumpus, living rooms and balconies.

Design Load Criteria

The Limit State Method has been used throughout this brochure. Minimum design load and load combinations are generally as per NASH Standard Part 1.

Load allowances

Floor live load:	1.5 kPa 2.0 kPa - for balcony areas.
Concentrated load:	1.8kN
Dead load:	Self-weight plus partition loads , plus weight of flooring, roof, and walls if applicable.

Static and Dynamic serviceability

- Deflection, $\Delta_1 \leq L/500$ and $\Delta_1 < 12\text{mm}$
load combination: dead load + 100% live load.
- Deflection, $\Delta_2 < 2\text{mm}$
load :1kN.

Assumptions

Tile roof mass:	92kg/m ² .
Metal roof mass:	40.7kg/m ² .
Ceiling mass:	10.5kg/m ² .
Wall mass:	29.5kg/m ² .

Definitions

balcony: an external area, one or more metres above ground. All load data has been based on using 18mm fibre cement sheeting as the flooring material; this provides substantial cross bracing whilst maintaining the 2.0kPa live loading requirement.

partition loads: weight of non-load bearing walls, floor underlays and floor coverings, ceilings, services through floors, are assumed to be a maximum of 0.5kPa.

joist spans: the distance between the end supports of a joist, which is usually the webs of the bearers to which the joist is attached.

bearer spans: the centre distance between the piers or posts supporting the bearer. Single-span bearers only have two supports, one at each end, even if there are a series of such bearers in line. Continuous-span bearers have more than two equally-spaced supports.

Design Limitations

The **Stramit**[®] C-Joist System is suitable for suspended floor framing in single occupancy buildings which come within the scope of a Class 1a dwelling as defined by NCC. The building should conform to all limitations as set out in Clause 1.2 of AS 4055.

Floor live load exceeding 1.5kPa (2.0kPa for balconies) requires engineering calculations.

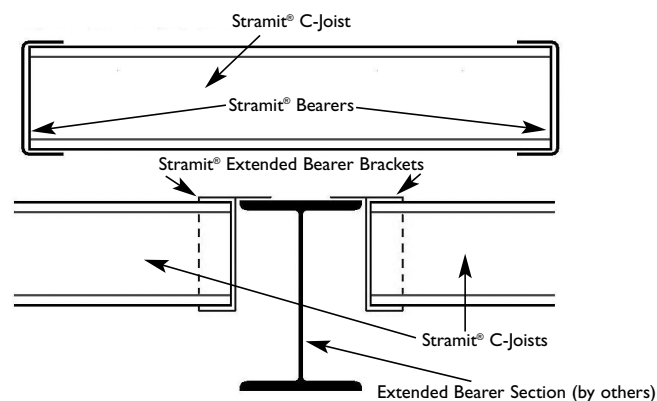
Floor concentrated load of more than 1.8kN requires engineering calculations.

May not be suitable for heavy items such as water beds, water tanks, large plants or aquariums, heavy gym equipment or pianos etc. Seek engineering advice for such applications.

Not suitable for applications closer than 1km to aggressive environments.

Connections between extended bearers and the structural elements of the building are the responsibility of the building designer.

Stramit[®] C-Joists must be used between bearers, as an in-plane system shown below. The information in this brochure is applicable only to the in-plane system. The use of the products in a joist on bearer configuration can lead to an undesirable transfer of movement-related vibration within and between rooms and is not recommended.



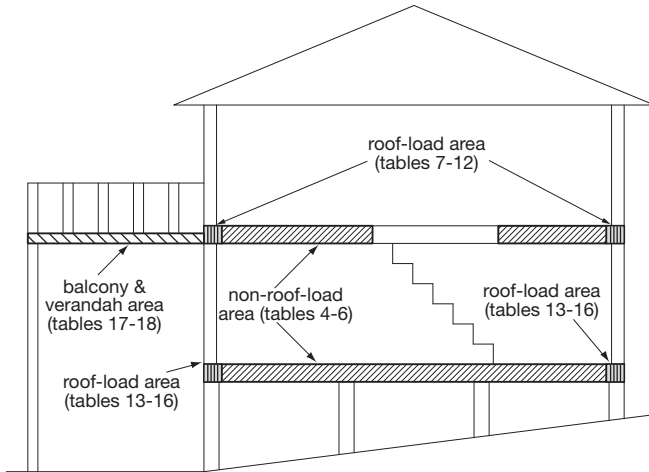
Applied Standards

AS/NZS 4600 Cold-formed steel structures.

NASH Standard, Residential and Low-rise Steel Framing, Part 1 Design Criteria, 2005.

The design tables include both single and continuous span configurations.

Load Areas



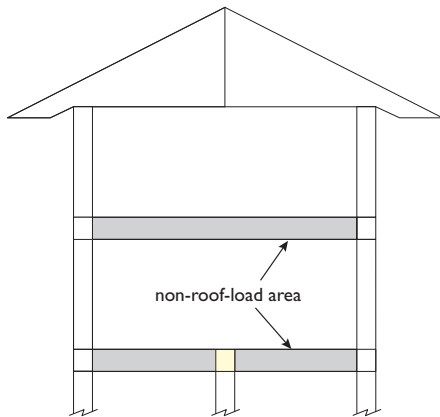
Design Tables

Data for the design of members can be found in Tables 4 to 18 and for connections and supports in Tables 19 to 24.

Non-Roof-Load Areas

These are defined as any floor areas within the internal confines of a residential building structure that supports 1.5 kPa live load, 0.5 kPa partition loading and are not supporting load-bearing walls or large concentrated loads (greater than 1.8kN). Internal areas can include bearers or joists at the sides of openings (eg. stairwell)

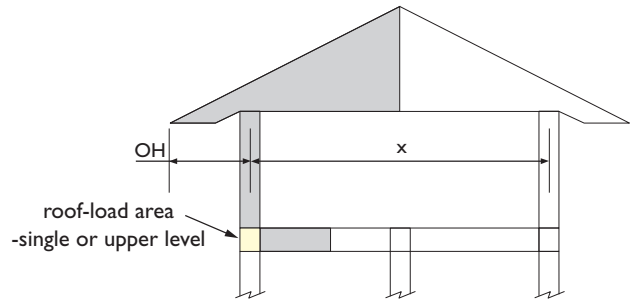
NON-ROOF-LOAD AREA	
Any Floor level	
Single span bearer - Tables 4 & 5	Continuous span bearer - Table 6



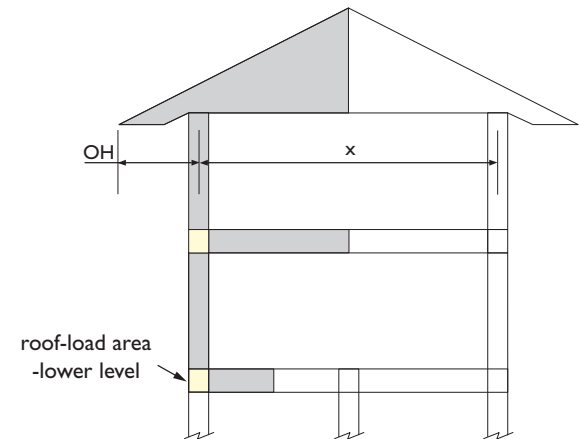
Roof-Load Areas

These are defined as areas that support combined roof, wall and floor loads within the residential building structure. They work as the combined load system of roof and floor areas.

ROOF-LOAD AREA	
Single or Upper Level of Two Storey	
Single span bearer - Tables 7 to 10	Continuous span bearer - Tables 11 & 12



ROOF-LOAD AREA	
Lower Level of Two Storey	
Single span bearer - Tables 13 & 14	Continuous span bearer - Tables 15 & 16



Balcony & Verandah Areas

These are defined as floor areas that are external to the habitable building structure, and are located one or more metres above the ground.

BALCONY AND VERANDAH NON-ROOF-LOAD AREA	
All Levels	
Single span bearer - Table 17	Continuous span bearer - Table 18

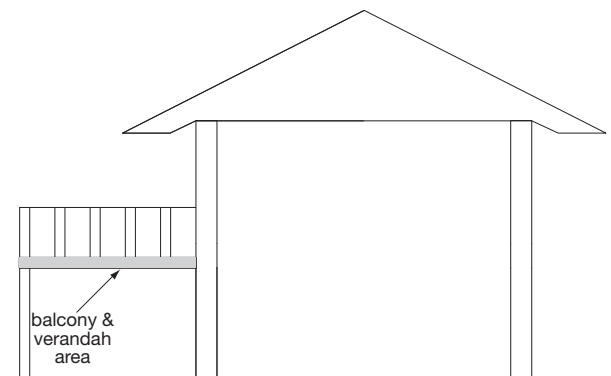


Table 4

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Non-Roof-Load Areas															
Maximum Joist Span (m)															
bearer span (m)	1.9mm thick SINGLE SPAN bearers														
	B11519				B18219					B23519				B28319	
	J11510	J11512	J11515	J11519	J18210	J18212	J18215	J18219	J18224	J23512	J23515	J23519	J23524	J28319	J28324
<1.2*	2.31	2.44	2.63	2.82	3.49	3.69	3.97	4.28	4.59	4.73	5.08	5.43	5.71	6.07	6.37
1.4	2.23	2.36	2.54	2.72	3.45	3.66	3.93	4.24	4.55	4.71	5.05	5.41	5.68	6.05	6.35
1.6	2.09	2.22	2.38	2.55	3.40	3.60	3.87	4.17	4.48	4.67	5.02	5.38	5.65	6.03	6.32
1.8	1.86	1.97	2.11	2.26	3.32	3.52	3.78	4.08	4.37	4.62	4.96	5.34	5.60	5.99	6.28
2.0	1.34	1.42	1.52	1.62	3.21	3.40	3.65	3.93	4.22	4.55	4.88	5.30	5.53	5.94	6.22
2.2					3.04	3.22	3.45	3.72	3.98	4.45	4.77	5.20	5.43	5.86	6.14
2.4					2.78	2.94	3.15	3.39	3.63	4.31	4.62	5.00	5.29	5.77	6.03
2.6					2.34	2.47	2.65	2.84	3.02	4.11	4.41	4.80	5.10	5.64	5.88
2.8										3.83	4.11	4.40	4.70	5.48	5.70
3.0										3.42	3.66	3.90	4.00	5.28	5.28
3.2										2.70	2.87	3.05	3.22	4.76	4.65
3.4														4.20	4.13
3.6														3.08	3.16
3.8															
4.0															
bearer span (m)	2.4mm thick SINGLE SPAN bearers														
	B18224					B23524					B28324				
	J18210	J18212	J18215	J18219	J18224	J23512	J23515	J23519	J23524	J28319	J28324				
<1.4*	3.47	3.68	3.95	4.26	4.57	4.72	5.07	5.42	5.70	6.06	6.37				
1.6	3.43	3.64	3.91	4.21	4.52	4.69	5.04	5.40	5.67	6.04	6.35				
1.8	3.38	3.58	3.84	4.14	4.44	4.66	5.00	5.36	5.63	6.02	6.31				
2.0	3.29	3.49	3.75	4.04	4.33	4.60	4.94	5.32	5.58	5.98	6.27				
2.2	3.17	3.37	3.61	3.89	4.17	4.53	4.86	5.26	5.50	5.93	6.21				
2.4	3.00	3.18	3.41	3.67	3.93	4.43	4.75	5.14	5.40	5.85	6.13				
2.6	2.74	2.91	3.11	3.35	3.58	4.29	4.60	4.98	5.27	5.77	6.03				
2.8	2.32	2.46	2.63	2.81	2.99	4.10	4.40	4.75	5.10	5.65	5.90				
3.0						3.84	4.12	4.44	4.76	5.50	5.73				
3.2						3.46	3.71	3.99	4.26	5.33	5.52				
3.4						2.85	3.03	3.24	3.43	5.07	5.27				
3.6										4.57	4.86				
3.8										3.78	3.97				
4.0															
4.2															

Notes: only for joists at 450mm centres
suitable for 19mm or 22mm thick particleboard floors
not suitable for roof loading
not suitable to support load bearing walls, or large concentrated load
not suitable for balcony areas
(*) for bearer of less than that span, or bearers sitting along the span on a bearing wall.
extrapolation not permitted
deflection $\leq L/500$ and 12mm

Table 5

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Non-Roof-Load Areas															
Maximum Joist Span (m)															
SINGLE SPAN extended range bearers															
200 UB 18															
bearer span (m)	J11510	J11512	J11515	J11519	J18210	J18212	J18215	J18219	J18224	J23512	J23515	J23519	J23524	J28319	J28324
2.6	2.31	2.44	2.63	2.82	3.40	3.60	3.87	4.17	4.47	4.58	4.92	5.29	5.55	5.88	6.16
2.8	2.28	2.41	2.59	2.78	3.35	3.55	3.81	4.11	4.41	4.52	4.85	5.23	5.48	5.80	6.08
3.0	2.24	2.37	2.54	2.73	3.29	3.49	3.75	4.03	4.33	4.44	4.76	5.15	5.40	5.72	5.98
3.2	2.18	2.31	2.48	2.66	3.22	3.41	3.66	3.94	4.23	4.33	4.65	5.03	5.30	5.60	5.84
3.4	2.12	2.24	2.41	2.58	3.12	3.30	3.55	3.82	4.09	4.20	4.51	4.87	5.18	5.47	5.68
3.6	2.03	2.15	2.31	2.48	2.99	3.17	3.41	3.66	3.92	4.04	4.33	4.67	5.01	5.30	5.49
3.8	1.92	2.03	2.18	2.34	2.83	3.00	3.22	3.46	3.70	3.82	4.09	4.41	4.72	5.08	5.26
4.0	1.77	1.87	2.01	2.15	2.62	2.77	2.97	3.19	3.40	3.52	3.77	4.05	4.34	4.70	4.98
4.2	1.55	1.64	1.76	1.88	2.30	2.43	2.60	2.79	2.97	3.10	3.30	3.54	3.77	4.10	4.34
4.4	1.14	1.21	1.30	1.38	1.75	1.84	1.96	2.08	2.17	2.36	2.49	2.62	2.71	3.02	3.09
4.6															
bearer span (m)	J11510	J11512	J11515	J11519	J18210	J18212	J18215	J18219	J18224	J23512	J23515	J23519	J23524	J28319	J28324
200 UB 22															
2.8	2.31	2.45	2.62	2.82	3.40	3.60	3.87	4.16	4.47	4.58	4.91	5.28	5.54	5.87	6.15
3.0	2.28	2.41	2.59	2.78	3.35	3.56	3.82	4.11	4.41	4.52	4.85	5.23	5.48	5.80	6.08
3.2	2.24	2.38	2.55	2.74	3.30	3.50	3.75	4.04	4.34	4.45	4.77	5.16	5.40	5.72	5.98
3.4	2.19	2.33	2.49	2.68	3.23	3.43	3.68	3.96	4.24	4.35	4.67	5.05	5.31	5.62	5.86
3.6	2.13	2.26	2.43	2.61	3.14	3.33	3.58	3.85	4.13	4.24	4.54	4.92	5.20	5.50	5.71
3.8	2.06	2.19	2.34	2.52	3.04	3.22	3.45	3.71	3.98	4.09	4.39	4.74	5.08	5.34	5.54
4.0	1.97	2.09	2.24	2.40	2.90	3.07	3.29	3.54	3.79	3.90	4.18	4.52	4.84	5.24	5.34
4.2	1.84	1.95	2.09	2.25	2.72	2.88	3.09	3.32	3.55	3.66	3.92	4.23	4.52	4.90	5.08
4.4	1.68	1.78	1.90	2.04	2.48	2.63	2.81	3.01	3.21	3.33	3.56	3.83	4.09	4.44	4.72
4.6	1.42	1.51	1.61	1.72	2.12	2.24	2.39	2.55	2.71	2.85	3.03	3.24	3.42	3.74	3.94
4.8															
bearer span (m)	J11510	J11512	J11515	J11519	J18210	J18212	J18215	J18219	J18224	J23512	J23515	J23519	J23524	J28319	J28324
250 UB 25															
3.2	2.31	2.44	2.62	2.81	3.39	3.60	3.86	4.16	4.47	4.58	4.91	5.28	5.54	5.87	6.15
3.4	2.28	2.41	2.59	2.78	3.36	3.56	3.82	4.11	4.42	4.53	4.86	5.23	5.48	5.81	6.08
3.6	2.25	2.38	2.56	2.74	3.31	3.51	3.77	4.06	4.35	4.46	4.79	5.18	5.42	5.74	5.99
3.8	2.21	2.34	2.51	2.70	3.25	3.45	3.70	3.99	4.28	4.39	4.71	5.09	5.34	5.65	5.89
4.0	2.16	2.29	2.46	2.64	3.18	3.37	3.62	3.90	4.18	4.29	4.61	4.98	5.25	5.54	5.78
4.2	2.11	2.23	2.39	2.57	3.10	3.28	3.53	3.80	4.07	4.18	4.48	4.84	5.14	5.42	5.64
4.4	2.03	2.15	2.31	2.48	3.00	3.17	3.41	3.67	3.93	4.04	4.33	4.68	5.00	5.28	5.48
4.6	1.95	2.06	2.21	2.37	2.87	3.04	3.26	3.51	3.75	3.87	4.14	4.47	4.79	5.10	5.28
4.8	1.84	1.94	2.09	2.23	2.71	2.87	3.08	3.30	3.53	3.65	3.90	4.21	4.50	4.88	5.06
5.0	1.69	1.79	1.92	2.05	2.50	2.64	2.83	3.04	3.24	3.36	3.59	3.90	4.10	4.50	4.80
5.2	1.48	1.56	1.68	1.79	2.20	2.32	2.49	2.66	2.82	2.96	3.15	3.37	3.58	3.90	4.11
5.4	1.10	1.16	1.25	1.32	1.70	1.78	1.90	2.00	2.09	2.28	2.41	2.52	2.60	2.91	2.95
5.6															
bearer span (m)	J11510	J11512	J11515	J11519	J18210	J18212	J18215	J18219	J18224	J23512	J23515	J23519	J23524	J28319	J28324
310 UB 32															
4.0	2.27	2.41	2.58	2.78	3.34	3.55	3.81	4.10	4.40	4.51	4.84	5.21	5.46	5.78	6.05
4.2	2.24	2.38	2.55	2.74	3.30	3.50	3.76	4.05	4.34	4.45	4.78	5.16	5.40	5.72	5.98
4.4	2.21	2.34	2.51	2.70	3.25	3.45	3.70	3.98	4.27	4.38	4.70	5.09	5.32	5.64	5.88
4.6	2.17	2.30	2.47	2.65	3.19	3.39	3.63	3.91	4.19	4.30	4.62	4.99	5.24	5.54	5.78
4.8	2.12	2.25	2.41	2.59	3.12	3.31	3.55	3.82	4.10	4.21	4.51	4.88	5.15	5.45	5.66
5.0	2.06	2.19	2.34	2.52	3.04	3.22	3.46	3.72	3.98	4.09	4.39	4.75	5.04	5.32	5.53
5.2	1.99	2.11	2.27	2.43	2.94	3.11	3.34	3.59	3.85	3.96	4.24	4.58	4.91	5.17	5.37
5.4	1.91	2.02	2.17	2.33	2.82	2.99	3.20	3.44	3.68	3.79	4.06	4.38	4.69	5.02	5.17
5.6	1.81	1.91	2.05	2.20	2.66	2.82	3.03	3.25	3.47	3.59	3.84	4.14	4.42	4.80	4.96
5.8	1.67	1.77	1.90	2.04	2.47	2.62	2.80	3.01	3.21	3.33	3.56	3.83	4.08	4.43	4.71
6.0	1.49	1.58	1.69	1.81	2.21	2.34	2.50	2.68	2.84	2.98	3.17	3.40	3.60	3.93	4.15
6.2															

Notes: only for joists at 450mm centres
 suitable for 19mm or 22mm thick particleboard floors
 not suitable for roof loading
 not suitable to support load bearing walls, or large concentrated load
 not suitable for balcony areas
 extrapolation not permitted
 deflection ≤ L/500 and 12mm

Table 6

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Non-Roof-Load Areas															
Maximum Joist Span (m)															
bearer span (m)	1.9mm thick CONTINUOUS SPAN bearers														
	B11519				B18219					B23519				B28319	
	J11510	J11512	J11515	J11519	J18210	J18212	J18215	J18219	J18224	J23512	J23515	J23519	J23524	J28319	J28324
<1.2*	2.35	2.49	2.67	2.87	3.51	3.71	3.99	4.30	4.62	4.74	5.09	5.44	5.72	6.08	6.39
1.4	2.31	2.45	2.63	2.82	3.49	3.70	3.97	4.28	4.60	4.73	5.08	5.43	5.71	6.07	6.38
1.6	2.25	2.38	2.56	2.74	3.46	3.67	3.94	4.25	4.56	4.71	5.06	5.42	5.70	6.06	6.37
1.8	2.15	2.27	2.44	2.62	3.42	3.63	3.90	4.20	4.51	4.69	5.03	5.41	5.68	6.05	6.35
2.0	1.99	2.10	2.26	2.42	3.37	3.57	3.83	4.13	4.43	4.65	4.99	5.38	5.65	6.03	6.33
2.2	1.72	1.82	1.95	2.09	3.29	3.48	3.74	4.03	4.32	4.60	4.94	5.34	5.61	6.00	6.29
2.4	1.06	1.12	1.20	1.27	3.18	3.36	3.61	3.89	4.17	4.53	4.86	5.26	5.56	5.96	6.25
2.6					3.02	3.20	3.44	3.70	3.96	4.44	4.76	5.15	5.39	5.91	6.19
2.8					2.80	2.96	3.18	3.42	3.57	4.32	4.63	4.72	4.65	5.85	6.09
3.0					2.46	2.60	2.79	2.99	3.11	4.16	4.20	4.13	4.02	5.42	5.28
3.2					1.81	1.91	2.04	2.16	2.27	3.70	3.67	3.60	3.53	4.76	4.65
3.4										3.29	3.25	3.21	3.14	4.20	4.13
3.6										2.93	2.90	2.87	2.80	3.74	3.67
3.8										2.47	2.59	2.55	2.52	3.36	3.29
4.0														3.04	2.97
4.2														2.76	2.69
4.4															
4.6															
bearer span (m)	2.4mm thick CONTINUOUS SPAN bearers														
	B18224					B23524					B28324				
	J18210	J18212	J18215	J18219	J18224	J23512	J23515	J23519	J23524	J28319	J28324				
<1.4*	3.50	3.71	3.98	4.29	4.61	4.74	5.08	5.44	5.72	6.08	6.38				
1.6	3.48	3.69	3.96	4.27	4.58	4.72	5.07	5.43	5.71	6.07	6.38				
1.8	3.45	3.66	3.93	4.23	4.54	4.70	5.05	5.42	5.69	6.06	6.36				
2.0	3.41	3.61	3.88	4.18	4.48	4.68	5.02	5.40	5.67	6.04	6.35				
2.2	3.35	3.55	3.81	4.11	4.41	4.64	4.98	5.37	5.64	6.02	6.32				
2.4	3.27	3.47	3.72	4.01	4.30	4.59	4.92	5.33	5.60	5.99	6.29				
2.6	3.16	3.35	3.60	3.87	4.15	4.52	4.85	5.25	5.55	5.96	6.25				
2.8	3.01	3.20	3.43	3.69	3.95	4.43	4.76	5.15	5.48	5.91	6.20				
3.0	2.81	2.98	3.19	3.43	3.67	4.32	4.64	5.02	5.39	5.86	6.13				
3.2	2.50	2.65	2.84	3.04	3.25	4.18	4.48	4.84	5.20	5.79	6.05				
3.4	1.97	2.09	2.22	2.37	2.50	3.98	4.27	4.61	4.89	5.70	5.95				
3.6						3.73	3.99	4.31	4.37	5.60	5.84				
3.8						3.37	3.60	3.88	3.91	5.35	5.21				
4.0						2.81	2.99	3.19	3.37	4.82	4.72				
4.2										4.37	4.26				
4.4										3.98	3.88				
4.6										2.90	2.94				
4.8															

Notes: only for joists at 450mm centres

suitable for 19mm or 22mm thick particleboard floors

not suitable for roof loading

not suitable to support load bearing walls, or large concentrated load

not suitable for balcony areas

(*) for bearer of less than that span, or bearers sitting along the span on a bearing wall.

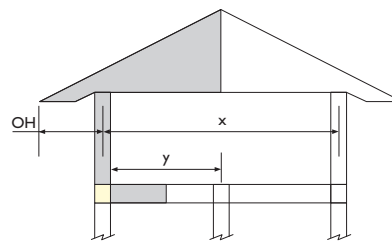
extrapolation not permitted

deflection $\leq L/500$ and 12mm

Table 7

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Single/Upper Storey		Tiled Roof				Single Span Bearers			
RLW (m)	B11519								
	joist span (m)								
	nom	1.5	2.0	2.5	2.8				
2.00	1.88	1.79	1.72	1.65	1.62				
5.00	1.56	1.51	1.47	1.44	1.42				
6.00	1.49	1.45	1.42	1.39	1.37				
7.00	1.43	1.40	1.37	1.34	1.33				
8.00	1.38	1.35	1.33	1.31	1.29				
RLW (m)	B18219								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	4.6		
2.00	2.84	2.70	2.59	2.50	2.42	2.28	2.21		
5.00	2.35	2.29	2.23	2.18	2.13	2.04	2.00		
6.00	2.25	2.20	2.15	2.10	2.06	1.98	1.94		
7.00	2.16	2.12	2.07	2.03	2.00	1.93	1.89		
8.00	2.09	2.05	2.01	1.97	1.94	1.88	1.85		
RLW (m)	B18224								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	4.6		
2.00	3.07	2.93	2.81	2.71	2.62	2.47	2.40		
5.00	2.55	2.48	2.41	2.36	2.30	2.21	2.16		
6.00	2.44	2.38	2.32	2.27	2.23	2.15	2.10		
7.00	2.34	2.29	2.24	2.20	2.16	2.09	2.05		
8.00	2.26	2.22	2.18	2.14	2.10	2.04	2.00		
RLW (m)	B23519								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	5.7	
2.00	3.62	3.46	3.31	3.19	3.09	2.92	2.78	2.69	
5.00	3.01	2.92	2.85	2.78	2.72	2.61	2.52	2.44	
6.00	2.88	2.81	2.74	2.68	2.63	2.54	2.44	2.36	
7.00	2.76	2.70	2.65	2.60	2.55	2.47	2.36	2.28	
8.00	2.67	2.62	2.57	2.52	2.48	2.39	2.28	2.22	

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Single/Upper Storey		Tiled Roof				Single Span Bearers			
RLW (m)	B23524								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	5.7	
2.00	3.92	3.74	3.59	3.46	3.34	3.16	3.00	2.91	
5.00	3.25	3.16	3.08	3.01	2.94	2.83	2.73	2.66	
6.00	3.11	3.04	2.97	2.90	2.85	2.74	2.65	2.60	
7.00	2.99	2.93	2.87	2.81	2.76	2.67	2.59	2.54	
8.00	2.89	2.83	2.78	2.73	2.69	2.60	2.53	2.48	
RLW (m)	B28319								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	6.4
2.00	4.20	4.01	3.84	3.70	3.58	3.38	3.16	2.96	2.88
5.00	3.49	3.39	3.30	3.22	3.14	2.94	2.77	2.63	2.58
6.00	3.33	3.25	3.18	3.09	2.99	2.82	2.67	2.54	2.49
7.00	3.21	3.14	3.05	2.95	2.87	2.71	2.58	2.46	2.42
8.00	3.09	3.01	2.92	2.83	2.75	2.61	2.49	2.39	2.35
RLW (m)	B28324								
	joist span (m)								
	nom	1.5	2.0	2.0	3.0	4.0	5.0	6.0	6.4
2.00	4.55	4.33	4.16	4.01	3.88	3.66	3.48	3.33	3.28
5.00	3.77	3.67	3.57	3.49	3.41	3.28	3.16	3.06	3.02
6.00	3.61	3.52	3.44	3.37	3.30	3.18	3.08	2.98	2.95
7.00	3.47	3.39	3.32	3.26	3.20	3.09	3.00	2.92	2.89
8.00	3.35	3.28	3.22	3.17	3.11	3.02	2.93	2.86	2.83



$$RLW = \text{Roof Load Width} = \left(\frac{x}{2} + OH\right)$$

joist span = y

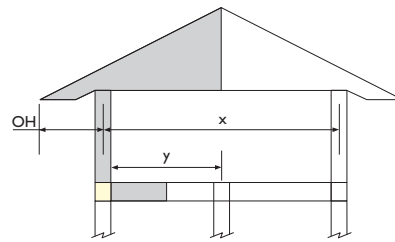
Notes: only for joists at 450mm centres with 19mm or 22mm thick particle board floors
 not suitable to support other load bearing walls, or large concentrated loads
 not suitable for balcony areas
 "nom" in table above refers to a floor load width less than 500mm
 linear interpolation is permitted
 extrapolation not permitted
 deflection ≤ L/500 and 12mm

Table 8

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Single/Upper Storey		Metal Roof				Single Span Bearers			
RLW (m)	B11519								
	joist span (m)								
	nom	1.5	2.0	2.5	2.8				
2.00	2.09	1.96	1.86	1.78	1.73				
5.00	1.85	1.76	1.70	1.64	1.60				
6.00	1.79	1.71	1.65	1.60	1.57				
7.00	1.73	1.67	1.61	1.56	1.54				
8.00	1.69	1.63	1.58	1.53	1.51				
RLW (m)	B18219								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	4.6		
2.00	3.17	2.97	2.81	2.69	2.58	2.41	2.32		
5.00	2.79	2.67	2.56	2.47	2.40	2.26	2.20		
6.00	2.70	2.59	2.50	2.42	2.34	2.22	2.16		
7.00	2.62	2.52	2.44	2.36	2.30	2.19	2.13		
8.00	2.55	2.46	2.38	2.32	2.26	2.15	2.10		
RLW (m)	B18224								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	4.6		
2.00	3.43	3.21	3.05	2.91	2.79	2.60	2.51		
5.00	3.02	2.89	2.78	2.68	2.59	2.45	2.38		
6.00	2.93	2.81	2.70	2.62	2.54	2.41	2.34		
7.00	2.84	2.73	2.64	2.56	2.49	2.37	2.30		
8.00	2.76	2.67	2.58	2.51	2.44	2.33	2.27		
RLW (m)	B23519								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	5.7	
2.00	4.05	3.79	3.59	3.43	3.29	3.07	2.90	2.80	
5.00	3.57	3.41	3.28	3.16	3.06	2.89	2.76	2.67	
6.00	3.45	3.31	3.19	3.09	3.00	2.84	2.71	2.64	
7.00	3.35	3.22	3.12	3.02	2.94	2.79	2.67	2.60	
8.00	3.26	3.15	3.05	2.96	2.88	2.75	2.63	2.57	

Notes: only for joists at 450mm centres with 19mm or 22mm thick particle board floors
not suitable to support other load bearing walls, or large concentrated loads
not suitable for balcony areas
"nom" in table above refers to a floor load width less than 500mm
linear interpolation is permitted
extrapolation not permitted
deflection $\leq L/500$ and 12mm

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Single/Upper Storey		Metal Roof				Single Span Bearers			
RLW (m)	B23524								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	5.7	
2.00	4.38	4.11	3.89	3.71	3.57	3.33	3.14	3.03	
5.00	3.86	3.69	3.55	3.42	3.31	3.13	2.98	2.89	
6.00	3.74	3.58	3.45	3.34	3.24	3.07	2.94	2.85	
7.00	3.63	3.49	3.37	3.27	3.18	3.02	2.89	2.81	
8.00	3.53	3.40	3.30	3.20	3.12	2.97	2.85	2.78	
RLW (m)	B28319								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	6.4
2.00	4.69	4.40	4.17	3.98	3.82	3.56	3.36	3.12	3.03
5.00	4.14	3.95	3.80	3.66	3.55	3.35	3.13	2.93	2.86
6.00	4.00	3.84	3.70	3.58	3.47	3.29	3.07	2.88	2.81
7.00	3.88	3.74	3.61	3.50	3.40	3.22	3.00	2.83	2.76
8.00	3.78	3.65	3.53	3.43	3.34	3.15	2.95	2.78	2.72
RLW (m)	B28324								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	6.4
2.00	5.08	4.76	4.51	4.30	4.13	3.86	3.64	3.47	3.41
5.00	4.48	4.28	4.11	3.97	3.84	3.63	3.46	3.31	3.26
6.00	4.33	4.15	4.00	3.87	3.76	3.56	3.40	3.27	3.22
7.00	4.20	4.05	3.91	3.79	3.68	3.50	3.35	3.23	3.18
8.00	4.09	3.95	3.82	3.71	3.61	3.45	3.31	3.18	3.14



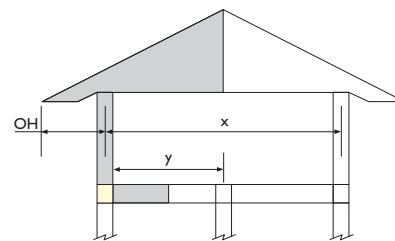
$$RLW = \text{Roof Load Width} = \left(\frac{x}{2} + OH \right)$$

$$\text{joist span} = y$$

Table 9

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Single/Upper Storey		Tile Roof				Single Span Bearers			
RLW (m)	200x100x4.0 RHS								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	4.60	4.39	4.21	4.05	3.92	3.70	3.52	3.37	
5.00	3.82	3.71	3.62	3.53	3.45	3.32	3.20	3.09	
6.00	3.65	3.56	3.48	3.41	3.34	3.22	3.11	3.02	
7.00	3.51	3.43	3.36	3.30	3.24	3.13	3.04	2.95	
8.00	3.39	3.32	3.26	3.20	3.15	3.05	2.97	2.89	
RLW (m)	200x100x6.0 RHS								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	5.15	4.91	4.71	4.54	4.39	4.14	3.94	3.78	
5.00	4.27	4.15	4.05	3.95	3.87	3.71	3.58	3.46	
6.00	4.09	3.99	3.90	3.81	3.74	3.60	3.48	3.38	
7.00	3.93	3.84	3.77	3.69	3.63	3.50	3.40	3.30	
8.00	3.79	3.72	3.65	3.59	3.53	3.42	3.32	3.23	
RLW (m)	250x150x5.0 RHS								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	6.44	6.14	5.89	5.68	5.49	5.18	4.93	4.73	
5.00	5.35	5.20	5.07	4.95	4.84	4.64	4.48	4.33	
6.00	5.11	4.99	4.87	4.77	4.68	4.51	4.36	4.23	
7.00	4.92	4.81	4.71	4.62	4.54	4.38	4.25	4.13	
8.00	4.75	4.65	4.57	4.49	4.41	4.28	4.15	4.05	
RLW (m)	200UB18.2								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	5.06	4.82	4.62	4.46	4.31	4.07	3.87	3.71	
5.00	4.19	4.08	3.97	3.88	3.79	3.64	3.51	3.40	
6.00	4.01	3.91	3.83	3.74	3.67	3.54	3.42	3.32	
7.00	3.86	3.77	3.70	3.63	3.56	3.44	3.34	3.24	
8.00	3.72	3.65	3.58	3.52	3.46	3.35	3.26	3.18	

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Single/Upper Storey		Tile Roof				Single Span Bearers			
RLW (m)	200UB22.3								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	5.56	5.30	5.08	4.90	4.74	4.47	4.26	4.08	
5.00	4.61	4.48	4.37	4.27	4.17	4.01	3.86	3.74	
6.00	4.41	4.30	4.21	4.12	4.03	3.89	3.76	3.65	
7.00	4.24	4.15	4.06	3.99	3.91	3.78	3.67	3.57	
8.00	4.09	4.01	3.94	3.87	3.81	3.69	3.58	3.49	
RLW (m)	250UB25.7								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	6.62	6.31	6.05	5.83	5.64	5.32	5.07	4.85	
5.00	5.49	5.34	5.20	5.08	4.97	4.77	4.60	4.45	
6.00	5.25	5.12	5.01	4.90	4.80	4.63	4.48	4.34	
7.00	5.05	4.94	4.84	4.75	4.66	4.50	4.37	4.25	
8.00	4.87	4.78	4.69	4.61	4.53	4.39	4.27	4.16	
RLW (m)	310UB32.0								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	8.03	7.65	7.34	7.07	6.84	6.46	6.15	5.89	
5.00	6.66	6.47	6.31	6.16	6.02	5.78	5.58	5.40	
6.00	6.37	6.21	6.07	5.94	5.83	5.61	5.43	5.27	
7.00	6.12	5.99	5.87	5.75	5.65	5.46	5.30	5.15	
8.00	5.91	5.79	5.69	5.59	5.49	5.33	5.18	5.04	



$$RLW = \text{Roof Load Width} = \left(\frac{x}{2} + OH\right)$$

joist span = y

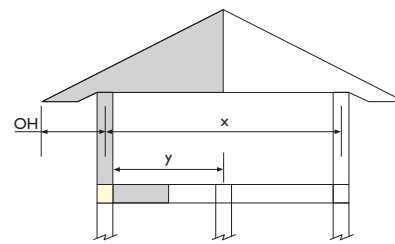
Notes: only for joists at 450mm centres with 19mm or 22mm thick particle board floors
 not suitable to support other load bearing walls, or large concentrated loads
 not suitable for balcony areas
 "nom" in table above refers to a floor load width less than 500mm
 linear interpolation is permitted
 extrapolation not permitted
 deflection ≤ L/500 and 12mm

Table 10

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Single/Upper Storey		Metal Roof				Single Span Bearers			
RLW (m)	200x100x4.0 RHS								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	5.14	4.82	4.56	4.36	4.18	3.90	3.69	3.51	
5.00	4.53	4.33	4.16	4.01	3.88	3.67	3.50	3.35	
6.00	4.38	4.20	4.05	3.92	3.80	3.61	3.44	3.31	
7.00	4.25	4.09	3.96	3.83	3.73	3.54	3.39	3.26	
8.00	4.14	3.99	3.87	3.76	3.66	3.49	3.34	3.22	
RLW (m)	200x100x6.0 RHS								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	5.75	5.39	5.11	4.88	4.68	4.37	4.13	3.93	
5.00	5.07	4.85	4.66	4.49	4.35	4.11	3.92	3.75	
6.00	4.91	4.71	4.54	4.39	4.26	4.04	3.86	3.70	
7.00	4.76	4.58	4.43	4.29	4.17	3.97	3.80	3.65	
8.00	4.63	4.47	4.33	4.21	4.09	3.90	3.74	3.61	
RLW (m)	250x150x5.0 RHS								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	7.19	6.74	6.39	6.10	5.86	5.47	5.16	4.92	
5.00	6.35	6.06	5.82	5.62	5.44	5.14	4.90	4.70	
6.00	6.14	5.89	5.68	5.49	5.33	5.05	4.82	4.63	
7.00	5.96	5.73	5.54	5.37	5.22	4.96	4.75	4.57	
8.00	5.79	5.59	5.42	5.26	5.12	4.88	4.68	4.51	
RLW (m)	200UB18.2								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	5.65	5.29	5.01	4.79	4.60	4.29	4.05	3.86	
5.00	4.98	4.76	4.57	4.41	4.27	4.03	3.84	3.69	
6.00	4.82	4.62	4.45	4.31	4.18	3.96	3.78	3.64	
7.00	4.67	4.50	4.35	4.21	4.10	3.90	3.73	3.59	
8.00	4.55	4.39	4.25	4.13	4.02	3.83	3.68	3.54	

Notes: only for joists at 450mm centres with 19mm or 22mm thick particle board floors
 not suitable to support other load bearing walls, or large concentrated loads
 not suitable for balcony areas
 "nom" in table above refers to a floor load width less than 500mm
 linear interpolation is permitted
 extrapolation not permitted
 deflection $\leq L/500$ and 12mm

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Single/Upper Storey		Metal Roof				Single Span Bearers			
RLW (m)	200UB22.3								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	6.21	5.82	5.51	5.26	5.05	4.72	4.45	4.24	
5.00	5.47	5.23	5.02	4.85	4.69	4.44	4.23	4.05	
6.00	5.30	5.08	4.90	4.74	4.60	4.36	4.16	4.00	
7.00	5.14	4.95	4.78	4.63	4.50	4.28	4.10	3.94	
8.00	5.00	4.82	4.67	4.54	4.42	4.21	4.04	3.89	
RLW (m)	250UB25.7								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	7.39	6.93	6.56	6.27	6.02	5.61	5.30	5.05	
5.00	6.52	6.23	5.98	5.77	5.59	5.28	5.03	4.83	
6.00	6.31	6.05	5.83	5.64	5.47	5.19	4.95	4.76	
7.00	6.12	5.89	5.69	5.52	5.36	5.10	4.88	4.70	
8.00	5.95	5.74	5.56	5.41	5.26	5.02	4.81	4.64	
RLW (m)	310UB32.0								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	8.96	8.40	7.96	7.60	7.29	6.81	6.43	6.12	
5.00	7.90	7.55	7.25	7.00	6.78	6.41	6.10	5.85	
6.00	7.65	7.33	7.07	6.84	6.63	6.29	6.01	5.77	
7.00	7.42	7.14	6.90	6.69	6.50	6.18	5.92	5.69	
8.00	7.22	6.97	6.75	6.55	6.38	6.08	5.83	5.62	



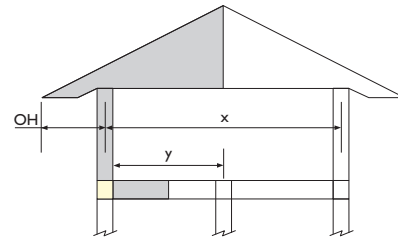
$$RLW = \text{Roof Load Width} = \left(\frac{x}{2} + OH\right)$$

$$\text{joist span} = y$$

Table II

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Single/Upper Storey		Tile Roof				Continuous Span Bearers			
RLW (m)	B11519								
	joist span (m)								
	nom	1.5	2.0	2.5	2.8				
2.00	2.32	2.21	2.12	2.04	2.00				
5.00	1.92	1.87	1.82	1.78	1.76				
6.00	1.84	1.80	1.76	1.72	1.70				
7.00	1.77	1.73	1.70	1.66	1.64				
8.00	1.71	1.68	1.64	1.62	1.60				
RLW (m)	B18219								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	4.6		
2.00	3.51	3.35	3.21	3.09	2.99	2.82	2.74		
5.00	2.91	2.83	2.76	2.69	2.63	2.53	2.47		
6.00	2.78	2.72	2.65	2.60	2.55	2.45	2.37		
7.00	2.68	2.62	2.56	2.52	2.47	2.36	2.29		
8.00	2.58	2.53	2.49	2.44	2.40	2.28	2.21		
RLW (m)	B18224								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	4.6		
2.00	3.80	3.62	3.47	3.35	3.24	3.06	2.96		
5.00	3.15	3.06	2.99	2.92	2.85	2.74	2.68		
6.00	3.01	2.94	2.87	2.81	2.76	2.66	2.60		
7.00	2.90	2.83	2.78	2.72	2.67	2.58	2.54		
8.00	2.80	2.74	2.69	2.64	2.60	2.52	2.48		
RLW (m)	B23519								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	5.7	
2.00	4.48	4.27	4.10	3.95	3.82	3.50	3.24	3.09	
5.00	3.72	3.62	3.47	3.33	3.21	3.01	2.84	2.73	
6.00	3.56	3.41	3.28	3.17	3.06	2.88	2.73	2.64	
7.00	3.36	3.23	3.12	3.02	2.93	2.77	2.64	2.55	
8.00	3.19	3.08	2.99	2.90	2.82	2.68	2.55	2.48	

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Single/Upper Storey		Tile Roof				Continuous Span Bearers			
RLW (m)	B23524								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	5.7	
2.00	4.85	4.63	4.44	4.28	4.14	3.90	3.72	3.60	
5.00	4.02	3.91	3.81	3.72	3.64	3.50	3.37	3.29	
6.00	3.85	3.76	3.67	3.59	3.52	3.39	3.28	3.21	
7.00	3.70	3.62	3.55	3.48	3.42	3.30	3.20	3.14	
8.00	3.57	3.50	3.44	3.38	3.32	3.22	3.13	3.07	
RLW (m)	B28319								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	6.4
2.00	5.20	4.96	4.69	4.42	4.19	3.82	3.54	3.31	3.22
5.00	4.14	3.95	3.79	3.64	3.51	3.28	3.10	2.94	2.88
6.00	3.88	3.73	3.58	3.46	3.35	3.15	2.98	2.84	2.79
7.00	3.67	3.53	3.41	3.30	3.20	3.03	2.88	2.75	2.71
8.00	3.48	3.37	3.26	3.17	3.08	2.92	2.79	2.67	2.63
RLW (m)	B28324								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	6.4
2.00	5.62	5.36	5.14	4.96	4.79	4.52	4.31	4.12	4.06
5.00	4.66	4.54	4.42	4.32	4.22	4.05	3.90	3.70	3.63
6.00	4.46	4.35	4.25	4.16	4.08	3.93	3.75	3.58	3.51
7.00	4.29	4.20	4.11	4.03	3.96	3.81	3.63	3.46	3.40
8.00	4.14	4.06	3.99	3.92	3.85	3.68	3.51	3.36	3.31



$$RLW = \text{Roof Load Width} = \left(\frac{x}{2} + OH\right)$$

joist span = y

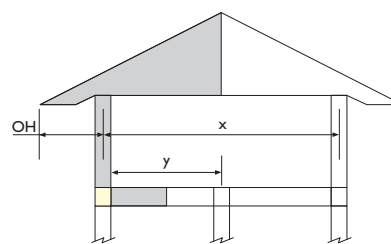
Notes: only for joists at 450mm centres with 19mm or 22mm thick particle board floors
 not suitable to support other load bearing walls, or large concentrated loads
 not suitable for balcony areas
 "nom" in table above refers to a floor load width less than 500mm
 linear interpolation is permitted
 extrapolation not permitted
 deflection ≤ L/500 and 12mm

Table I2

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Single/Upper Storey		Metal Roof				Continuous Span Bearers			
RLW (m)	B11519								
	joist span (m)								
	nom	1.5	2.0	2.5	2.8				
2.00	2.59	2.43	2.30	2.20	2.14				
5.00	2.28	2.18	2.10	2.02	1.98				
6.00	2.21	2.12	2.04	1.98	1.94				
7.00	2.14	2.06	1.99	1.93	1.90				
8.00	2.09	2.01	1.95	1.89	1.86				
RLW (m)	B18219								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	4.6		
2.00	3.92	3.67	3.48	3.32	3.19	2.98	2.87		
5.00	3.46	3.30	3.17	3.06	2.96	2.80	2.72		
6.00	3.34	3.21	3.09	2.99	2.90	2.75	2.67		
7.00	3.24	3.12	3.02	2.92	2.84	2.70	2.63		
8.00	3.15	3.05	2.95	2.87	2.79	2.66	2.59		
RLW (m)	B18224								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	4.6		
2.00	4.24	3.98	3.77	3.60	3.45	3.22	3.11		
5.00	3.74	3.57	3.43	3.31	3.21	3.03	2.94		
6.00	3.62	3.47	3.35	3.24	3.14	2.98	2.89		
7.00	3.51	3.38	3.27	3.17	3.08	2.93	2.85		
8.00	3.42	3.30	3.19	3.10	3.02	2.88	2.81		
RLW (m)	B23519								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	5.7	
2.00	5.01	4.69	4.45	4.24	4.07	3.76	3.44	3.26	
5.00	4.41	4.22	4.05	3.91	3.79	3.46	3.21	3.06	
6.00	4.27	4.10	3.95	3.82	3.68	3.38	3.14	3.00	
7.00	4.14	3.99	3.85	3.74	3.58	3.30	3.08	2.95	
8.00	4.03	3.89	3.77	3.64	3.48	3.22	3.02	2.89	

Notes: only for joists at 450mm centres with 19mm or 22mm thick particle board floors
 not suitable to support other load bearing walls, or large concentrated loads
 not suitable for balcony areas
 "nom" in table above refers to a floor load width less than 500mm
 linear interpolation is permitted
 extrapolation not permitted
 deflection $\leq L/500$ and 12mm

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Single/Upper Storey		Metal Roof				Continuous Span Bearers			
RLW (m)	B23524								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	5.7	
2.00	5.42	5.08	4.81	4.59	4.41	4.12	3.89	3.75	
5.00	4.78	4.57	4.39	4.23	4.10	3.87	3.69	3.58	
6.00	4.62	4.43	4.27	4.13	4.01	3.80	3.63	3.53	
7.00	4.48	4.32	4.17	4.04	3.93	3.74	3.58	3.48	
8.00	4.36	4.21	4.08	3.96	3.86	3.68	3.53	3.44	
RLW (m)	B28319								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	6.4
2.00	5.80	5.44	5.15	4.87	4.57	4.10	3.76	3.48	3.39
5.00	5.12	4.89	4.61	4.35	4.13	3.78	3.50	3.28	3.20
6.00	4.95	4.73	4.45	4.22	4.02	3.69	3.43	3.22	3.14
7.00	4.80	4.55	4.30	4.09	3.91	3.60	3.36	3.16	3.09
8.00	4.66	4.39	4.17	3.97	3.80	3.52	3.29	3.11	3.04
RLW (m)	B28324								
	joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	6.4
2.00	6.28	5.89	5.58	5.32	5.11	4.77	4.50	4.29	4.21
5.00	5.54	5.29	5.08	4.90	4.75	4.49	4.28	4.10	4.03
6.00	5.36	5.14	4.95	4.79	4.65	4.41	4.21	4.04	3.96
7.00	5.20	5.00	4.84	4.69	4.56	4.33	4.15	3.98	3.89
8.00	5.06	4.88	4.73	4.59	4.47	4.26	4.09	3.91	3.82



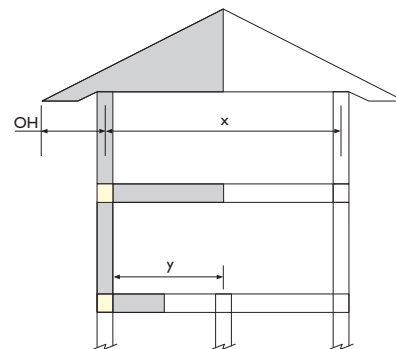
$$RLW = \text{Roof Load Width} = \left(\frac{x}{2} + OH \right)$$

$$\text{joist span} = y$$

Table I3

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Lower Level of 2 Storey	Tile Roof								Single Span Bearers
RLW (m)	200x100x4.0 RHS								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	4.31	4.14	3.99	3.86	3.75	3.55	3.40	3.26	
5.00	3.67	3.58	3.49	3.41	3.34	3.22	3.11	3.01	
6.00	3.53	3.45	3.37	3.31	3.24	3.13	3.03	2.95	
7.00	3.40	3.33	3.27	3.21	3.15	3.05	2.96	2.88	
8.00	3.29	3.23	3.18	3.12	3.07	2.98	2.90	2.83	
RLW (m)	200x100x6.0 RHS								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	4.82	4.63	4.46	4.32	4.19	3.98	3.80	3.65	
5.00	4.11	4.00	3.91	3.82	3.74	3.60	3.48	3.37	
6.00	3.95	3.86	3.78	3.70	3.63	3.51	3.40	3.30	
7.00	3.81	3.73	3.66	3.59	3.53	3.42	3.32	3.23	
8.00	3.69	3.62	3.56	3.50	3.44	3.34	3.25	3.17	
RLW (m)	250x150x5.0 RHS								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	6.03	5.79	5.59	5.41	5.25	4.98	4.76	4.57	
5.00	5.14	5.01	4.89	4.78	4.68	4.51	4.36	4.22	
6.00	4.94	4.83	4.72	4.63	4.54	4.39	4.25	4.13	
7.00	4.77	4.67	4.58	4.49	4.42	4.28	4.15	4.04	
8.00	4.62	4.53	4.45	4.37	4.30	4.18	4.06	3.96	
RLW (m)	200UB18.2								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	4.73	4.54	4.38	4.24	4.12	3.91	3.73	3.59	
5.00	4.03	3.93	3.84	3.75	3.68	3.54	3.42	3.31	
6.00	3.88	3.79	3.71	3.63	3.56	3.44	3.33	3.24	
7.00	3.74	3.66	3.59	3.53	3.47	3.36	3.26	3.17	
8.00	3.62	3.55	3.49	3.43	3.38	3.28	3.19	3.11	

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Lower Level of 2 Storey	Tile Roof								Single Span Bearers
RLW (m)	200UB22.3								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	5.20	5.00	4.82	4.66	4.53	4.29	4.10	3.94	
5.00	4.43	4.32	4.22	4.13	4.04	3.89	3.76	3.64	
6.00	4.26	4.16	4.08	3.99	3.92	3.78	3.67	3.56	
7.00	4.11	4.03	3.95	3.88	3.81	3.69	3.58	3.49	
8.00	3.98	3.91	3.84	3.77	3.71	3.60	3.51	3.42	
RLW (m)	250UB25.7								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	6.20	5.95	5.74	5.55	5.39	5.11	4.89	4.69	
5.00	5.28	5.15	5.02	4.91	4.81	4.63	4.47	4.34	
6.00	5.07	4.96	4.85	4.76	4.67	4.51	4.36	4.24	
7.00	4.90	4.80	4.70	4.62	4.54	4.39	4.26	4.15	
8.00	4.74	4.65	4.57	4.49	4.42	4.29	4.17	4.07	
RLW (m)	310UB32.0								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	7.51	7.21	6.96	6.73	6.54	6.20	5.92	5.69	
5.00	6.40	6.24	6.09	5.96	5.83	5.61	5.43	5.26	
6.00	6.15	6.01	5.88	5.77	5.66	5.46	5.29	5.14	
7.00	5.94	5.82	5.70	5.60	5.50	5.33	5.17	5.03	
8.00	5.75	5.64	5.54	5.45	5.36	5.20	5.06	4.93	



$$RLW = \text{Roof Load Width} = \left(\frac{x}{2} + OH\right)$$

upper level joist span = x

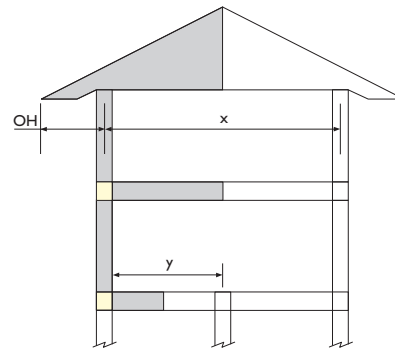
lower level joist span = y

Notes: only for joists at 450mm centres with 19mm or 22mm thick particle board floors
not suitable to support other load bearing walls, or large concentrated loads
not suitable for balcony areas
"nom" in table above refers to a floor load width less than 500mm
linear interpolation is permitted
extrapolation not permitted
deflection ≤ L/500 and 12mm

Table I4

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Lower Level of 2 Storey	Metal Roof								Single Span Bearers
RLW (m)	200x100x4.0 RHS								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	4.70	4.46	4.27	4.10	3.96	3.72	3.53	3.38	
5.00	4.25	4.09	3.95	3.82	3.71	3.53	3.37	3.24	
6.00	4.14	3.99	3.86	3.75	3.65	3.47	3.33	3.20	
7.00	4.03	3.90	3.78	3.68	3.58	3.42	3.28	3.17	
8.00	3.94	3.82	3.71	3.61	3.52	3.37	3.24	3.13	
RLW (m)	200x100x6.0 RHS								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	5.26	5.00	4.78	4.59	4.43	4.17	3.96	3.78	
5.00	4.76	4.58	4.42	4.28	4.16	3.95	3.78	3.63	
6.00	4.63	4.47	4.32	4.20	4.08	3.89	3.73	3.59	
7.00	4.51	4.36	4.23	4.12	4.01	3.83	3.68	3.54	
8.00	4.41	4.27	4.15	4.04	3.94	3.77	3.63	3.50	
RLW (m)	250x150x5.0 RHS								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	6.59	6.25	5.98	5.74	5.54	5.21	4.95	4.73	
5.00	5.96	5.73	5.53	5.36	5.20	4.94	4.73	4.54	
6.00	5.79	5.59	5.41	5.25	5.11	4.86	4.66	4.49	
7.00	5.65	5.46	5.30	5.15	5.02	4.79	4.60	4.43	
8.00	5.52	5.34	5.19	5.06	4.93	4.72	4.54	4.38	
RLW (m)	200UB18.2								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	5.17	4.91	4.69	4.51	4.35	4.09	3.89	3.71	
5.00	4.67	4.49	4.34	4.20	4.08	3.88	3.71	3.57	
6.00	4.55	4.38	4.24	4.12	4.01	3.82	3.66	3.52	
7.00	4.43	4.28	4.16	4.04	3.94	3.76	3.61	3.48	
8.00	4.33	4.19	4.07	3.97	3.87	3.70	3.56	3.44	

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Lower Level of 2 Storey	Metal Roof								Single Span Bearers
RLW (m)	200UB22.3								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	5.68	5.39	5.16	4.96	4.78	4.50	4.27	4.08	
5.00	5.14	4.94	4.77	4.62	4.49	4.26	4.08	3.92	
6.00	5.00	4.82	4.67	4.53	4.41	4.20	4.02	3.87	
7.00	4.87	4.71	4.57	4.44	4.33	4.13	3.97	3.83	
8.00	4.76	4.61	4.48	4.36	4.26	4.07	3.92	3.78	
RLW (m)	250UB25.7								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	6.77	6.42	6.14	5.90	5.69	5.36	5.09	4.86	
5.00	6.12	5.88	5.68	5.50	5.34	5.08	4.86	4.67	
6.00	5.95	5.74	5.55	5.39	5.25	5.00	4.79	4.61	
7.00	5.80	5.61	5.44	5.29	5.15	4.92	4.72	4.55	
8.00	5.67	5.49	5.33	5.19	5.07	4.85	4.66	4.50	
RLW (m)	310UB32.0								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	
2.00	8.20	7.79	7.44	7.15	6.91	6.49	6.17	5.90	
5.00	7.42	7.13	6.89	6.67	6.48	6.16	5.89	5.66	
6.00	7.22	6.96	6.74	6.54	6.36	6.06	5.81	5.59	
7.00	7.04	6.80	6.60	6.41	6.25	5.97	5.73	5.52	
8.00	6.87	6.66	6.47	6.30	6.15	5.88	5.65	5.46	



$$RLW = \text{Roof Load Width} = \left(\frac{x}{2} + OH\right)$$

upper level joist span = x

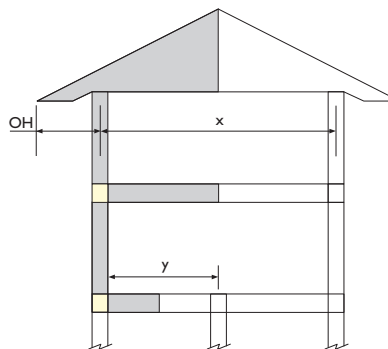
lower level joist span = y

Notes: only for joists at 450mm centres with 19mm or 22mm thick particle board floors
not suitable to support other load bearing walls, or large concentrated loads
not suitable for balcony areas
"nom" in table above refers to a floor load width less than 500mm
linear interpolation is permitted
extrapolation not permitted
deflection ≤ L/500 and 12mm

Table 15

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Lower Level of 2 Storey	Tile Roof					Continuous Span Bearers			
RLW (m)	B11519								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	2.8				
2.00	2.17	2.09	2.01	1.95	1.91				
5.00	1.85	1.80	1.76	1.72	1.70				
6.00	1.78	1.74	1.70	1.67	1.65				
7.00	1.72	1.68	1.65	1.62	1.60				
8.00	1.66	1.63	1.60	1.57	1.56				
RLW (m)	B18219								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	4.6		
2.00	3.29	3.15	3.04	2.94	2.86	2.71	2.64		
5.00	2.80	2.73	2.66	2.60	2.55	2.45	2.37		
6.00	2.69	2.63	2.57	2.52	2.47	2.36	2.29		
7.00	2.60	2.54	2.49	2.45	2.40	2.28	2.21		
8.00	2.51	2.47	2.42	2.38	2.32	2.20	2.14		
RLW (m)	B18224								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	4.6		
2.00	3.56	3.41	3.29	3.19	3.09	2.93	2.85		
5.00	3.03	2.95	2.88	2.82	2.76	2.66	2.60		
6.00	2.91	2.85	2.78	2.73	2.68	2.59	2.54		
7.00	2.81	2.75	2.70	2.65	2.60	2.52	2.48		
8.00	2.72	2.67	2.62	2.58	2.54	2.46	2.42		
RLW (m)	B23519								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	5.7	
2.00	4.20	4.03	3.89	3.76	3.60	3.31	3.08	2.95	
5.00	3.58	3.43	3.30	3.18	3.07	2.88	2.73	2.63	
6.00	3.38	3.25	3.14	3.03	2.94	2.77	2.64	2.55	
7.00	3.21	3.10	3.00	2.91	2.82	2.68	2.55	2.47	
8.00	3.06	2.96	2.88	2.80	2.72	2.59	2.47	2.40	

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Lower Level of 2 Storey	Tile Roof					Continuous Span Bearers			
RLW (m)	B23524								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	5.7	
2.00	4.54	4.36	4.21	4.07	3.95	3.75	3.58	3.48	
5.00	3.87	3.77	3.68	3.60	3.53	3.39	3.28	3.21	
6.00	3.72	3.63	3.56	3.49	3.42	3.30	3.20	3.13	
7.00	3.59	3.52	3.45	3.38	3.33	3.22	3.13	3.07	
8.00	3.48	3.41	3.35	3.29	3.24	3.14	3.06	3.00	
RLW (m)	B28319								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	6.4
2.00	4.87	4.62	4.35	4.13	3.93	3.61	3.36	3.16	3.09
5.00	3.91	3.75	3.60	3.47	3.35	3.15	2.98	2.83	2.78
6.00	3.69	3.55	3.43	3.31	3.21	3.03	2.88	2.75	2.70
7.00	3.50	3.38	3.27	3.17	3.08	2.92	2.79	2.67	2.62
8.00	3.34	3.24	3.14	3.05	2.97	2.83	2.70	2.59	2.55
RLW (m)	B28324								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	6.4
2.00	5.27	5.06	4.87	4.72	4.58	4.34	4.15	3.98	3.88
5.00	4.49	4.37	4.27	4.17	4.09	3.93	3.75	3.57	3.50
6.00	4.31	4.21	4.12	4.04	3.96	3.81	3.62	3.46	3.40
7.00	4.16	4.07	4.00	3.92	3.85	3.68	3.51	3.36	3.30
8.00	4.03	3.95	3.88	3.82	3.74	3.56	3.40	3.26	3.21



$$RLW = \text{Roof Load Width} = \left(\frac{x}{2} + OH\right)$$

upper level joist span = x

lower level joist span = y

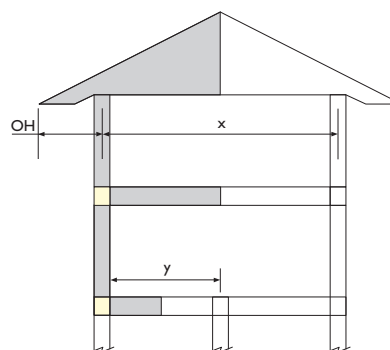
Notes: only for joists at 450mm centres with 19mm or 22mm thick particle board floors
not suitable to support other load bearing walls, or large concentrated loads
not suitable for balcony areas
"nom" in table above refers to a floor load width less than 500mm
linear interpolation is permitted
extrapolation not permitted
deflection ≤ L/500 and 12mm

Table 16

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Lower Level of 2 Storey Metal Roof Continuous Span Bearers									
RLW (m)	B11519								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	2.8				
2.00	2.37	2.25	2.15	2.07	2.02				
5.00	2.14	2.06	1.99	1.93	1.89				
6.00	2.09	2.01	1.95	1.89	1.86				
7.00	2.03	1.97	1.91	1.85	1.82				
8.00	1.99	1.92	1.87	1.82	1.79				
RLW (m)	B18219								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	4.6		
2.00	3.59	3.40	3.25	3.13	3.02	2.84	2.75		
5.00	3.24	3.12	3.01	2.92	2.83	2.69	2.62		
6.00	3.16	3.04	2.94	2.86	2.78	2.65	2.58		
7.00	3.08	2.97	2.88	2.80	2.73	2.61	2.54		
8.00	3.00	2.91	2.83	2.75	2.69	2.57	2.51		
RLW (m)	B18224								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	4.6		
2.00	3.88	3.69	3.52	3.39	3.27	3.07	2.98		
5.00	3.51	3.38	3.26	3.16	3.07	2.91	2.83		
6.00	3.42	3.29	3.19	3.09	3.01	2.87	2.79		
7.00	3.33	3.22	3.12	3.04	2.96	2.82	2.75		
8.00	3.25	3.15	3.06	2.98	2.91	2.78	2.72		
RLW (m)	B23519								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	5.7	
2.00	4.58	4.35	4.16	4.00	3.86	3.53	3.25	3.09	
5.00	4.14	3.99	3.85	3.73	3.56	3.28	3.05	2.92	
6.00	4.03	3.89	3.76	3.63	3.47	3.21	3.00	2.87	
7.00	3.93	3.80	3.68	3.53	3.38	3.14	2.94	2.82	
8.00	3.84	3.72	3.59	3.44	3.30	3.08	2.89	2.78	

Notes: only for joists at 450mm centres with 19mm or 22mm thick particle board floors
not suitable to support other load bearing walls, or large concentrated loads
not suitable for balcony areas
"nom" in table above refers to a floor load width less than 500mm
linear interpolation is permitted
extrapolation not permitted
deflection $\leq L/500$ and 12mm

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Roof-Load Areas Maximum Bearer Span (m), for bearers supporting roof load									
Lower Level of 2 Storey Metal Roof Continuous Span Bearers									
RLW (m)	B23524								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	5.7	
2.00	4.96	4.71	4.50	4.33	4.17	3.93	3.73	3.61	
5.00	4.49	4.31	4.16	4.03	3.92	3.72	3.56	3.46	
6.00	4.36	4.21	4.07	3.95	3.85	3.66	3.51	3.42	
7.00	4.25	4.11	3.99	3.88	3.78	3.61	3.46	3.37	
8.00	4.15	4.02	3.91	3.81	3.71	3.55	3.42	3.33	
RLW (m)	B28319								
	upper level joist span + lower level joist span (m)								
	nom	1.0	2.0	2.5	3.0	4.0	5.0	6.0	6.4
2.00	5.31	5.04	4.78	4.49	4.24	3.85	3.55	3.31	3.23
5.00	4.81	4.54	4.29	4.07	3.89	3.58	3.34	3.13	3.06
6.00	4.66	4.39	4.16	3.96	3.79	3.50	3.27	3.08	3.01
7.00	4.49	4.24	4.03	3.85	3.69	3.43	3.21	3.03	2.97
8.00	4.34	4.12	3.92	3.76	3.61	3.36	3.15	2.98	2.92
RLW (m)	B28324								
	upper level joist span + lower level joist span (m)								
	nom	1.5	2.0	2.5	3.0	4.0	5.0	6.0	6.4
2.00	5.75	5.46	5.22	5.01	4.84	4.55	4.32	4.13	4.06
5.00	5.20	5.00	4.83	4.67	4.54	4.31	4.13	3.95	3.86
6.00	5.06	4.88	4.72	4.58	4.46	4.24	4.07	3.88	3.79
7.00	4.93	4.77	4.62	4.49	4.38	4.18	4.01	3.81	3.73
8.00	4.81	4.66	4.53	4.41	4.31	4.12	3.96	3.75	3.68



$$RLW = \text{Roof Load Width} = \left(\frac{x}{2} + OH\right)$$

upper level joist span = x

lower level joist span = y

Table 17

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Non-Roof - BALCONY Loads															
Maximum Joist Span (m)															
single bearer span (m)	1.9mm thick SINGLE SPAN bearers														
	B11519				B18219					B23519				B28319	
	J11510	J11512	J11515	J11519	J18210	J18212	J18215	J18219	J18224	J23512	J23515	J23519	J23524	J28319	J28324
<1.2*	2.09	2.22	2.38	2.56	3.19	3.38	3.63	3.91	4.20	4.33	4.65	5.05	5.37	5.70	5.99
1.4	1.99	2.11	2.27	2.44	3.15	3.34	3.59	3.86	4.15	4.31	4.62	5.02	5.36	5.70	5.97
1.6	1.82	1.93	2.07	2.22	3.09	3.27	3.52	3.78	4.07	4.27	4.58	4.97	5.32	5.68	5.94
1.8	1.48	1.57	1.68	1.81	2.99	3.17	3.41	3.66	3.94	4.21	4.51	4.90	5.26	5.63	5.90
2.0					2.85	3.01	3.24	3.48	3.74	4.12	4.42	4.80	5.15	5.56	5.83
2.2					2.63	2.78	2.99	3.21	3.44	4.00	4.29	4.65	4.99	5.48	5.76
2.4					2.26	2.38	2.56	2.74	2.94	3.82	4.09	4.44	4.76	5.36	5.64
2.6					1.37	1.43	1.53	1.60	1.66	3.56	3.82	4.14	4.13	5.22	5.42
2.8										3.18	3.40	3.60	3.57	4.76	4.68
3.0										2.50	2.66	2.86	3.02	4.13	4.05
3.2														3.63	3.57
3.4														2.67	2.77
3.6															
3.8															
4.0															

single bearer span (m)	2.4mm thick SINGLE SPAN bearers											
	B18224					B23524				B28324		
	J18210	J18212	J18215	J18219	J18224	J23512	J23515	J23519	J23524	J28319	J28324	
<1.4*	3.20	3.39	3.65	3.93	4.22	4.34	4.67	5.06	5.38	5.70	6.01	
1.6	3.17	3.36	3.61	3.89	4.19	4.32	4.64	5.03	5.35	5.72	6.00	
1.8	3.13	3.31	3.56	3.83	4.12	4.29	4.61	5.00	5.33	5.68	5.96	
2.0	3.06	3.24	3.48	3.75	4.03	4.25	4.56	4.95	5.30	5.65	5.93	
2.2	2.95	3.13	3.36	3.62	3.89	4.18	4.49	4.87	5.24	5.61	5.89	
2.4	2.80	2.97	3.19	3.43	3.69	4.09	4.40	4.76	5.12	5.53	5.84	
2.6	2.58	2.73	2.93	3.15	3.38	3.97	4.26	4.61	4.96	5.48	5.75	
2.8	2.20	2.33	2.50	2.68	2.87	3.79	4.07	4.41	4.73	5.37	5.63	
3.0	1.29	1.35	1.43	1.50	1.54	3.55	3.81	4.12	4.42	5.25	5.46	
3.2						3.19	3.42	3.69	3.95	5.00	5.30	
3.4						2.58	2.76	2.96	3.14	4.66	4.99	
3.6										4.15	4.44	
3.8										3.32	3.51	
4.0												
4.2												

Notes: only for joists at 450mm centres
 suitable for 15mm thick fibre-cement flooring.
 not suitable for roof loading
 not suitable to support load bearing walls, or large concentrated load
 (*) for bearer of less than that span, or bearers sitting along the span on a bearing wall.
 extrapolation not permitted
 deflection ≤ L/500 and 12mm

Table I8

STRAMIT® RESIDENTIAL FLOOR SYSTEM - Non-Roof- BALCONY Loads															
Maximum Joist Span (m)															
bearer span (m)	1.9mm thick CONTINUOUS SPAN bearers														
	B11519				B18219					B23519				B28319	
	J11510	J11512	J11515	J11519	J18210	J18212	J18215	J18219	J18224	J23512	J23515	J23519	J23524	J28319	J28324
<1.2*	2.14	2.27	2.43	2.62	3.21	3.40	3.66	3.94	4.23	4.35	4.67	5.07	5.40	5.73	6.03
1.4	2.09	2.22	2.38	2.56	3.19	3.38	3.63	3.91	4.21	4.34	4.65	5.05	5.39	5.70	6.00
1.6	2.02	2.13	2.29	2.46	3.16	3.34	3.60	3.87	4.16	4.31	4.63	5.03	5.36	5.69	5.99
1.8	1.89	2.00	2.15	2.31	3.11	3.29	3.54	3.81	4.10	4.28	4.60	4.99	5.34	5.67	5.97
2.0	1.68	1.78	1.90	2.05	3.04	3.22	3.47	3.73	4.01	4.24	4.55	4.94	5.30	5.65	5.95
2.2	1.24	1.31	1.41	1.51	2.95	3.12	3.35	3.61	3.87	4.18	4.48	4.86	5.23	5.63	5.93
2.4					2.81	2.97	3.19	3.43	3.69	4.10	4.39	4.77	4.86	5.60	5.87
2.6					2.60	2.75	2.96	3.18	3.14	3.98	4.23	4.20	4.13	5.53	5.42
2.8					2.29	2.42	2.60	2.76	2.72	3.70	3.67	3.60	3.57	4.76	4.68
3.0					1.68	1.77	1.90	2.02	2.14	3.21	3.18	3.14	3.11	4.13	4.05
3.2										2.83	2.80	2.76	2.72	3.63	3.57
3.4										2.48	2.48	2.44	2.41	3.21	3.18
3.6										2.07	2.19	2.16	2.16	2.87	2.83
3.8														2.59	2.55
4.0														2.34	2.27
4.2															
4.4															
4.6															
bearer span (m)	2.4mm thick CONTINUOUS SPAN bearers														
	B18224					B23524				B28324					
	J18210	J18212	J18215	J18219	J18224	J23512	J23515	J23519	J23524	J28319	J28324				
<1.4*	3.20	3.40	3.65	3.93	4.23	4.34	4.67	5.06	5.38	5.71	6.01				
1.6	3.18	3.37	3.62	3.90	4.19	4.33	4.65	5.04	5.36	5.70	6.00				
1.8	3.14	3.33	3.58	3.86	4.15	4.30	4.62	5.01	5.34	5.69	5.99				
2.0	3.09	3.28	3.52	3.79	4.08	4.27	4.59	4.97	5.32	5.68	5.97				
2.2	3.02	3.20	3.44	3.71	3.98	4.23	4.54	4.92	5.29	5.66	5.95				
2.4	2.92	3.10	3.33	3.58	3.85	4.16	4.47	4.85	5.21	5.64	5.93				
2.6	2.79	2.96	3.17	3.41	3.67	4.08	4.39	4.75	5.11	5.60	5.87				
2.8	2.59	2.75	2.95	3.17	3.40	3.98	4.27	4.63	4.97	5.54	5.82				
3.0	2.30	2.44	2.61	2.80	3.00	3.84	4.12	4.46	4.79	5.47	5.74				
3.2	1.78	1.88	2.01	2.14	2.27	3.65	3.91	4.24	4.23	5.32	5.66				
3.4						3.39	3.64	3.81	3.74	5.11	5.03				
3.6						3.02	3.23	3.39	3.36	4.55	4.47				
3.8						2.40	2.56	2.73	2.89	4.09	4.02				
4.0										3.67	3.63				
4.2										3.36	3.29				
4.4															
4.6															
4.8															

Notes: only for joists at 450mm centres

suitable for 15mm thick fibre-cement flooring.

not suitable for roof loading

not suitable to support load bearing walls, or large concentrated load

(*) for bearer of less than that span, or bearers sitting along the span on a bearing wall.

extrapolation not permitted

deflection $\leq L/500$ and 12mm

Framing connections and Support

C-Joist/C-Bearer System

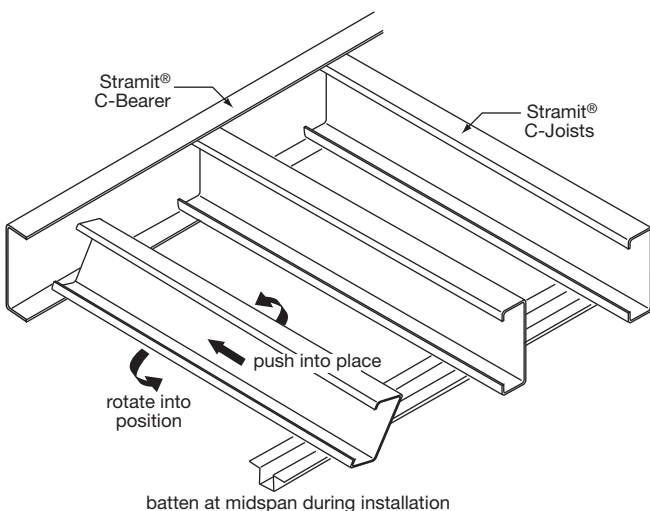
The system uses simple installation procedures and basic tools. **Stramit**® C-Bearers are simply positioned and fixed into place, either through the section web or flange. Joists are pushed into, then rotated into place between bearers and fixed using the techniques given below.

C-Joist to C-Bearer connections can be made in one of two ways, Type 1 or Type 2. Both have been designed to withstand the required loading.

Generally, the floor is divided into rectangular segments each containing two bearers and a series of intermediate joists. Where bearers are back to back, they are simply screwed together using two No.10 x 16mm hex head self drilling screws between each joist. If required, floor levels at different heights can be arranged by using different sized joist/bearer systems or by offsetting the height of the different floors.

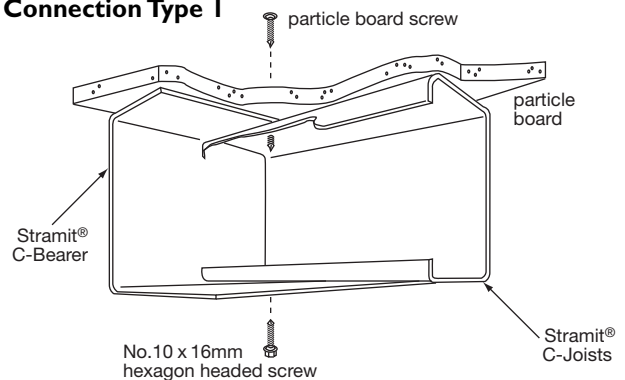
Screw fix a **Stramit**® ceiling batten midspan, using two No.10 x 16mm hexagon head self drilling screws per joist to the underside of the joist prior to installing the particle board flooring. This batten helps to prevent joist roll caused by installers working above, particularly when used in longer span installations. Once the floor lining is complete, the batten may be replaced by ceiling linings if required. Ceiling linings or midspan battens are required for bracing.

For upper level floors, Stramit recommends that ceiling battens be fixed to the underside of the **Stramit**® C-Joists. As well as simplifying height adjustment to keep ceiling sight lines even, the battens provide a path for wiring or other services to be easily installed.



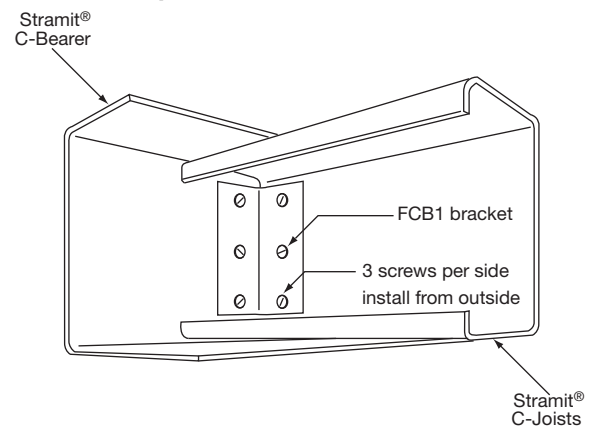
Stramit® C-Bearers are attached to the supporting structure as directed by the building designer, or using conventional methods such as bolts. The supporting structure may be a lower storey frame, brick piers or wall, steel or concrete posts etc, sourced from other suppliers. **Stramit**® C-Bearers may be fixed through the bottom flange or the web of the section. Standard purlin hole punching is available to reduce on-site work if specified at the time of order.

Connection Type 1



Stramit® C-Joist to **Stramit**® C-Bearer connections are usually made with easy to use self drilling screws, placed through top and bottom flanges. This connection (Type 1) does not require any additional brackets or bolts. The floor sheeting screw also holds the bearer and joist in position, and may replace the standard fastener. The minimum standard fastening screw size is a No.10 x 16mm hex head self drilling screw. The top flange may be temporarily held in positions prior to the floor sheet installation by wafer head screw or a 4.5mm pop rivet as required.

Connection Type 2



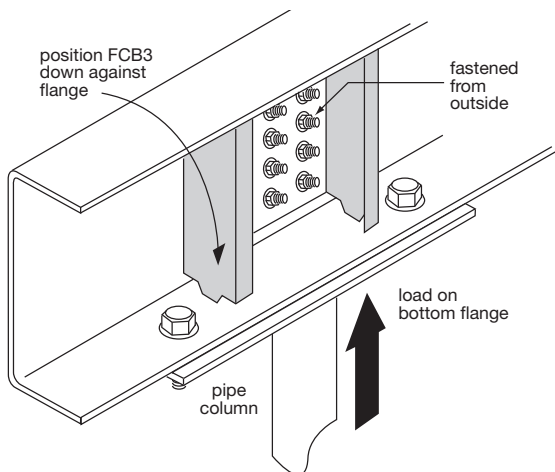
When the bottom flange is not accessible to enable a fixing screw connection, a simple angle bracket (FCB1) is required to fix the joist to the bearer (Type 2). The bracket is held by six No.10 x 16mm (minimum size) hex head self drilling screws which can be screwed from any direction although it is always preferable to fix towards the thicker material being connected. This can be achieved by initially fastening from the inside using the pilot holes, then fasten from the outside by replacing the initial screw. Please note that three screws per side are required and they should be equally spaced on the brackets.

FCB3 Bracket

Whenever **Stramit**® C bearers pass over a supporting wall or post, concentrated loads occur. The FCB3 bracket is used to transmit these forces into the web of the section.

The bracket must touch the bottom flange of the bearer.

Refer to tables 19 and 20 for relevant FCB3 selection tables. Examples are provided on page 25.



If a C-Joist coincides with the post position attach the FCB3 bracket to the C-Bearer on the closest side of the C-Joist.

Note: Post or other support loads must not be transferred through C-Joists.

Table 19

STRAMIT® Bearer Loading (kN/m)							
METAL	SINGLE STOREY OR UPPER LEVEL OF TWO STOREY						
	Upper level joist span² (m)						
RLW (m)	nom	2	3	4	5	6	7
0.0'	2.5	4.1	5.7	7.4	9.0	10.6	12.2
2.0	3.5	5.1	6.8	8.4	10.0	11.6	13.3
5.0	5.1	6.7	8.3	9.9	11.6	13.2	14.8
6.0	5.6	7.2	8.8	10.4	12.1	13.7	15.3
7.0	6.1	7.7	9.3	11.0	12.6	14.2	15.8
8.0	6.6	8.2	9.9	11.5	13.1	14.7	16.3
TILE	Upper level joist span² (m)						
RLW (m)	nom	2	3	4	5	6	7
0.0'	2.5	4.1	5.7	7.4	9.0	10.6	12.2
2.0	4.7	6.4	8.0	9.6	11.2	12.9	14.5
5.0	8.1	9.8	11.4	13.0	14.6	16.2	17.9
6.0	9.3	10.9	12.5	14.1	15.7	17.4	19.0
7.0	10.4	12.0	13.6	15.3	16.9	18.5	20.1
8.0	11.5	13.1	14.8	16.4	18.0	19.6	21.3
METAL	LOWER LEVEL OF DOUBLE STOREY						
RLW (m)	Upper level joist span + Lower level joist span² (m)						
	6	7	8	9	10	11	12
0.0'	11.5	13.1	14.7	16.3	18.0	19.6	21.2
2.0	12.5	14.1	15.7	17.4	19.0	20.6	22.2
5.0	14.0	15.7	17.3	18.9	20.5	22.2	23.8
6.0	14.6	16.2	17.8	19.4	21.0	22.7	24.3
7.0	15.1	16.7	18.3	19.9	21.6	23.2	24.8
8.0	15.6	17.2	18.8	20.5	22.1	23.7	25.3
TILE	Upper level joist span + Lower level joist span² (m)						
RLW (m)	6	7	8	9	10	11	12
0.0'	11.5	13.1	14.7	16.3	18.0	19.6	21.2
2.0	13.7	15.3	17.0	18.6	20.2	21.8	23.5
5.0	17.1	18.7	20.3	22.0	23.6	25.2	26.8
6.0	18.2	19.9	21.5	23.1	24.7	26.3	28.0
7.0	19.4	21.0	22.6	24.2	25.9	27.5	29.1
8.0	20.5	22.1	23.7	25.4	27.0	28.6	30.2

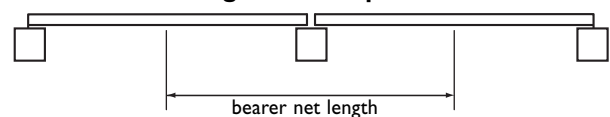
Notes: 1. A roof load width (RLW) of 0.0m relates to non-roof-bearing areas inside the building perimeter

Table 20

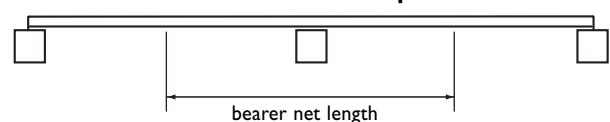
STRAMIT® FCB3 Brackets				
Bearers Maximum Concentrated Load capacity (kN)				
Bearer	no FCB3	number of screws¹ with FCB3		
		4	6	8
B11519	5.4	28.5	37.5	37.5
B18219	4.6	28.0	34.4	34.4
B18224	8.2	38.4	53.4	64.0
B23519	4.2	26.4	26.4	26.4
B23524	7.7	37.9	52.8	53.2
B28319	3.9	21.8	21.8	21.8
B28324	7.2	37.4	44.0	44.0

* Size 10g screws.

single bearer spans



continuous bearer spans



Example 1

data:

single storey (footings: piers), with metal roof.
 continuous span bearer(B23519), 2.8m span
 RLW = 5m + 0.5mOH = 5.5m
 Joist span perpendicular to wall direction:3.4m

bearer net length:

2.8m

from Table 19:

9.2kN/m

total concentrated load:

9.2kN/m x 2.8m = 25.8kN

from Table 20

we need a **FCB3** bracket with **4 screws**
 = 26.4kN > 25.8 ✓OK

Example 2

data:

double storey(footings: piers), with roof tiles.
 continuous span bearer(B28324), 1.8m span.
 RLW = 6.5m +0.5mOH = 7.0m
 Joist Spans = 3.5m lower level + 5.5m upper level = 9.0m

bearer net length:

1.8m

from Table 19:

24.25kN/m

total concentrated load:

24.25kN/m x 1.8m = 43.7kN

from Table 20,

we need a **FCB3** bracket with **6 screws** =44.0kN
 44.0kN > 43.7kN ✓ OK

Extended Bearer

Extended Bearers are used to span large internal openings, they can be designed to support roof load provided they are supported at both ends by load bearing walls, or other load bearing means.

Connections between the extended bearer and the structural elements of the building are the responsibility of the building designer.

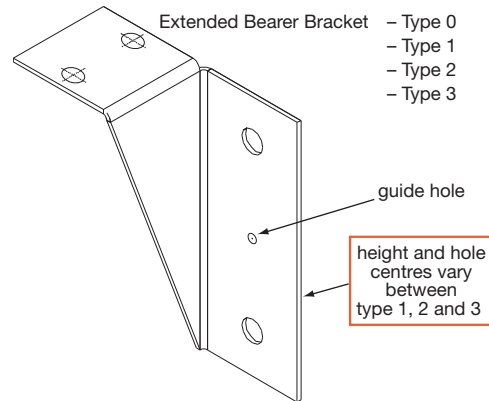
The extended bearers consist of standard hot rolled sections, all applicable sizes are given within the Stramit extended bearer range table 2.

For **Stramit® C-Joist** Extended Bearer options there are three types of brackets, each differing in height.

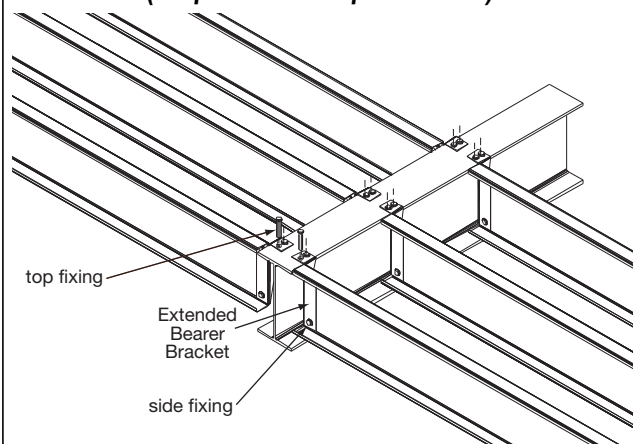
Selection of Bracket and Fasteners – C-Joist

Stramit® C-Joist	Extended Bearer Bracket	Side Fixing 2 req.	Top Fixing 2 req.
J115	Type 0	M12 x 30mm Nut & Bolt GR4.6 plus 1x No.12 x 20 hex head self drilling screw	No.12 x 32mm Extended Point Screws
J182	Type 1		
J235	Type 2		
J283	Type 3		

Ensure the Extended Bearer Brackets are bolted to the joist first. This allows the joist to be supported on the bearer for easier fixing. Once the joist/bracket assemblies are screwed in place onto the bearers use the bolts to align the upper surface to the joists. Finally tighten the bolts fully and use tek screws at each bracket to prevent future movement using the guide hole provided.



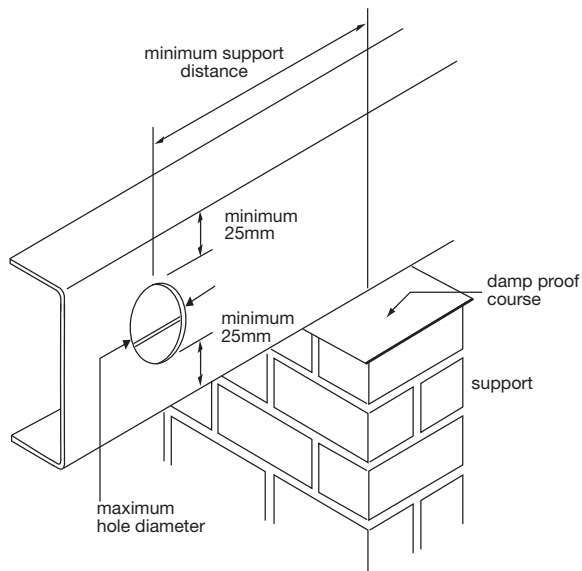
Stramit® C-Joist with U-Beam Extended Bearers (roof and non-roof load areas)



Hole Cutting

Holes may be cut into the webs of **Stramit®** C-Bearer and joists to allow plumbing and other service installations. Circular holes cut with hole saws are preferable. Holes should not be closer than 25mm to either flange nor positioned closer than shown in the table below to any support or concentrated load. Holes in **Stramit®** C-Bearer webs should be positioned centrally between **Stramit®** C-Joist. Minimum hole spacing along the C-Bearer/Joist is equal to 3 times the hole diameter (centre to centre).

Flanges should never be drilled or cut as this leads to loss of performance.



Stramit® C-Joist size	Max Hole diameter	Minimum Support distance
115mm	50mm	250mm
182mm	90mm	370mm
235mm	115mm	470mm
283mm	140mm	570mm

Cantilevers

Cantilevered **Stramit®** C-Bearers may be allowed when the cantilever length is limited to 10% of the adjacent span. The cantilevered **Stramit®** C-Bearers must be continuous and supported by FCB3 bracket over the last support, but must not be part of the lower level of a double storey.

Lateral End Support

Roof, wall and floor framework needs to be able to resist horizontal forces and to provide a system to transfer those forces to the foundation.

The floor system is capable of transferring loads to the structural system below, be it a wall or footing.

The **Stramit®** C-Joist and Bearer System has an integrated lateral restraint capacity as given in table 21.

Table 21

STRAMIT® C-Bearer Lateral End Racking Capacity (kN/m)	
Stramit® C-Joist and Bearer System	Racking Resistance Capacity (kN/m)
Stramit® Bearer	
B11519	21
B18219	21
B23519	21
B28319	21
B18224	44
B23524	44
B28324	44

Tie Downs

Structural Tie Down requirements for all domestic buildings should conform to the following connection types with the applicable fastener capacities listed.

Standard Tie Down

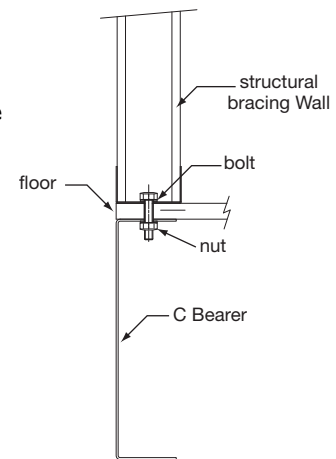


Table 22

STRAMIT® Floor System Tie Down Capacities (kN)			
bearer thickness	bolts	washers	capacity (kN)
1.9mm	M8, M10	standard	2.2
	M8, M10	structural	9.7
	M12	standard	4.9
	M12	structural	10.3
2.4mm	M8, M10	standard	2.8
	M8	structural	11.1
	M10	structural	12.3
	M12	standard	6.2
	M12	structural	13.0

Note: washers: standard: round commercial washers
structural: 50 x 80 x 5mm plate

• Refer to table 24 for tie downs applicable for cyclonic conditions.

Tie Down at FCB3 Connection

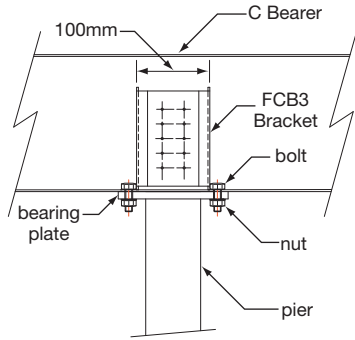


Table 23

STRAMIT® Floor System FCB3 Tie Down details			
Number of Screws	Bolt	Min. Recommended Bearing Plate Thickness	Washer
6-8	M8 & M10	8	Standard
10	M12 & M16	10	50 x 50 x 5
12	M20	12	65 x 65 x 8

Tie Downs for Cyclonic Conditions

All designs in cyclonic areas must be verified by a qualified engineer or building designer.

Stramit® C-Joist and Bearer System Cyclonic Tie Down

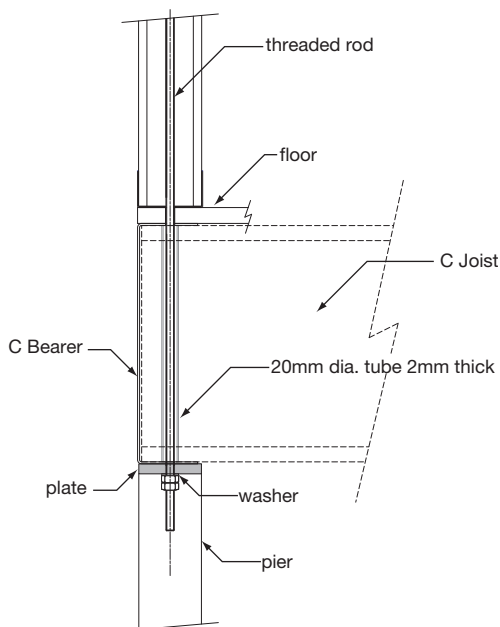


Table 24

STRAMIT® C-Joist & Bearer Cyclonic Tie Down details		
Threaded Bolt	Plate	Tube
M16	50 x 80 x 10	20mm dia. x 2mm thick
M20	50 x 80 x 12	25mm dia. x 2mm thick

Fasteners

All screw fasteners must comply to Australian Standard AS3566, Class 2 - sheet flooring screws (internal use only), or Class 3 - connection screws. Generally any suitable No.10 or No.12 sized fasteners will connect the flooring components detailed in this brochure, sizes indicate the minimum fasteners required.

Fasteners must not be positioned within 15mm of any metal edge. All particle board - or other floor sheeting - fasteners should follow the recommendations of the board manufacturer. Stramit recommend to glue and screw all sheet floors.

Flooring

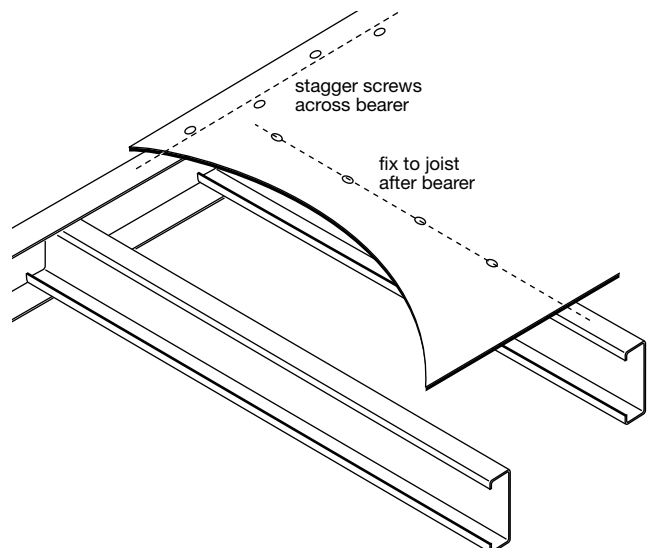
Particle board or plywood structural sheet flooring in accordance with NCC is used as the floor surface, although other floor materials with similar properties (eg. Min. modulus of elasticity E=3GPa) can be used.

Please consult the floorboard manufacturer for details of sheet flooring, fasteners and adhesives that comply with NCC requirements for metal floor joist support systems.

Typical board flooring requirements are:

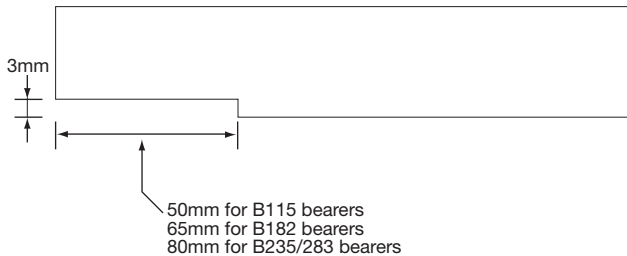
Floor joist centres	Particle board (Internal)		Fibre cement (Balcony)	
	Thk.	Mass	Thk.	Mass
450mm	19mm	13.2kg/m ²	18mm	34kg/m ²

For wet areas with fibre cement sheeting use balcony data



When using **Stramit**® C-Joist and Bearers attach the particle board to the bearers first using suitable adhesive and, preferably using a staggered pattern, fasten with No.10 x 45mm wing tipped screws. This will allow a smooth transition over the thickness step between the C-bearer and C-joist.

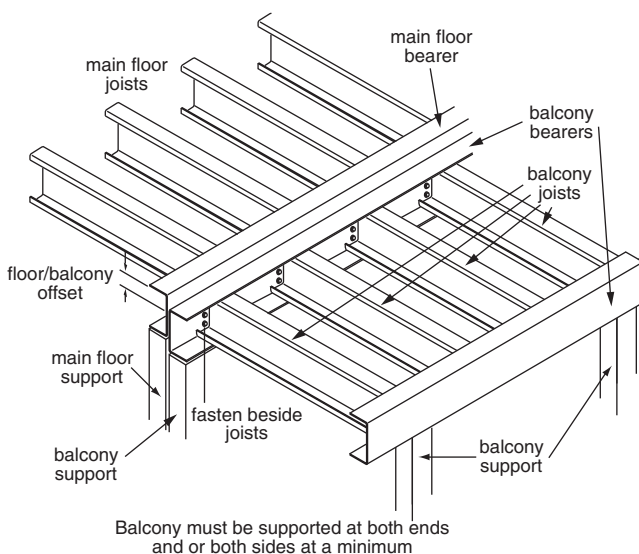
Alternatively, the edge of the board may be rebated as shown below.



Balconies and Verandahs

Balconies and verandahs usually incorporate a drop in height below the main floor level and must be designed with higher floor loadings. This is easily accomplished by treating the balcony or verandah as a separate floor section.

Balconies must be constructed with joists spanning between two bearers, both supported. Joists must not be cantilevered. Balconies and verandahs must not support any load bearing walls or non-load bearing walls. Roof loads must be supported independently of balconies and verandahs, ie. directly by column support to the ground.

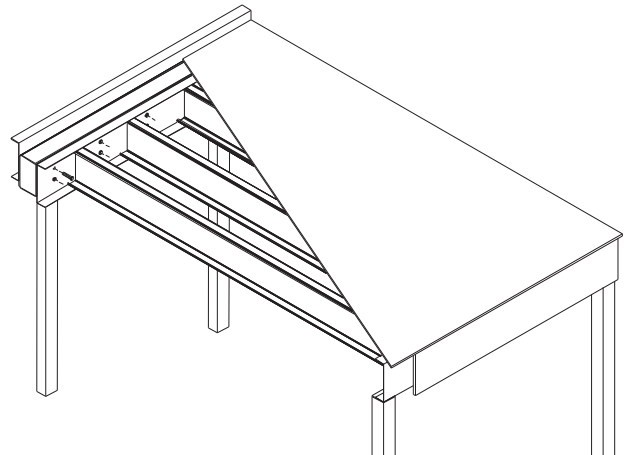


Slope

It is recommended that flooring used in balcony and verandah applications be assembled with fall away from the attached structure to enable water to run clear.

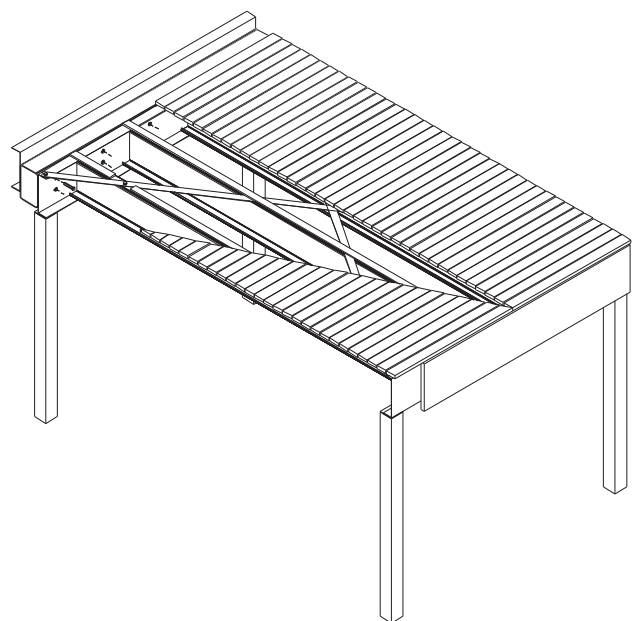
Floor Surface Options

Fibre Cement Flooring – Stramit® C-Joist and Bearer



Shot Edge Strip Flooring

An option for using shot edge strip flooring is provided but all load data and cross bracing will be subject to verification by the design engineer. Durability of **Stramit**® flooring, when used with shot edge strip flooring, may be reduced through contact with some acidic or treated timbers. All such materials including CCA treated timber should be separated from the **Stramit**® C-Joists and Bearers by a neutral packing material such as thick rubber strip placed along the joists.

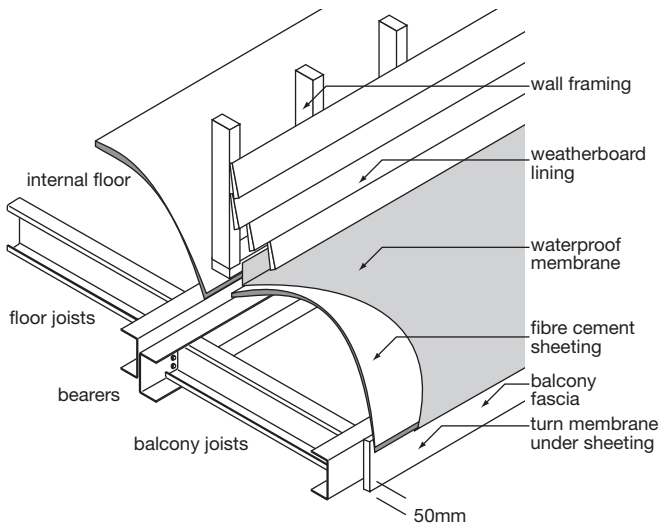


Weather Proofing

Detailed weather proofing alternatives for various locations are given in table 3 on page 5.

For improved durability, external floor areas such as balconies, require that the floor system be protected from rainwater runoff. The floor sheeting must be durable eg. fibrous cement and suitable flashings must be used to protect the structure.

Similar provisions apply to those areas where the floor system is exposed to the elements eg. below a timber weatherboard wall. The use of a waterproof membrane over the exterior floor, with materials meeting the relevant provisions of BCA is recommended.



Post/Piers and Bracing

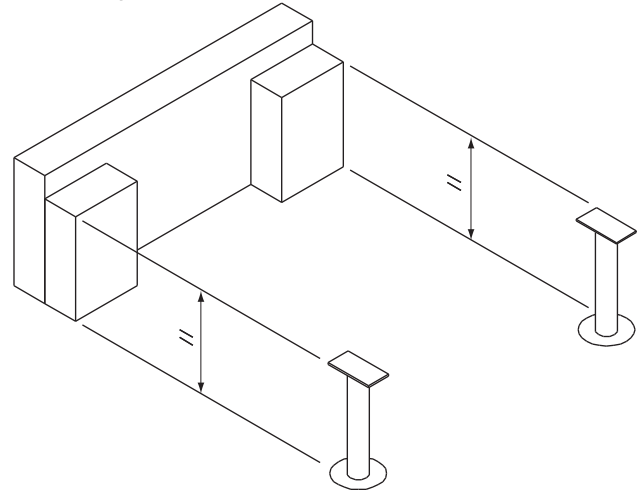
The use of any type of piercing or post construction method may provide considerable environmental and cost benefit on a sloping site compared to cut and fill for slab on ground construction.

- Minimum site disturbance
- White ant problems reduced without the use of hazardous chemicals
- Suitable for difficult sites
- Reduces excavation and landfill requirements
- Reduced site disturbance – site runoff

Selection

There are many systems available including concrete posts, screw piles and the more conventional metal piers. The major metal pier systems are adjustable in height by typically 200mm at each pier, have different load area ratings and range in height from 200mm up to 4000mm. Site soil conditions and applicable wind loading all have to be considered carefully prior to selection of pier type and spacing. It is advisable that a suitably qualified engineer be involved in the selection of sub – flooring systems.

It is crucial before ordering piers that the distance from the top of each footing to the underside of each bearer is correctly measured as shown.

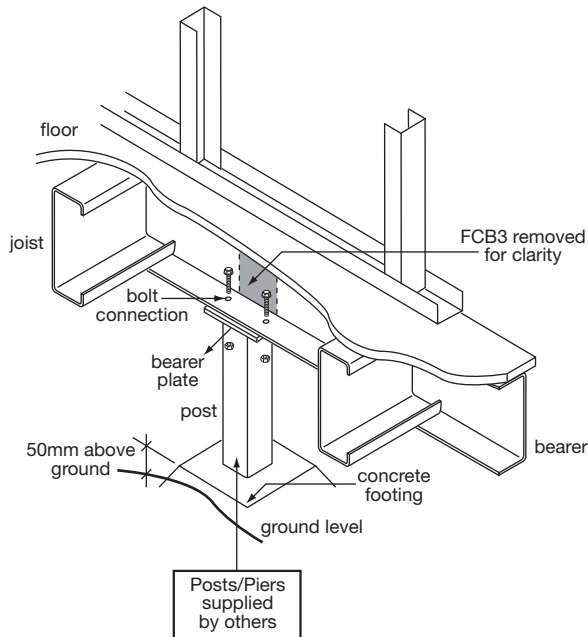


Connections

All connections used to connect the **Stramit®** Residential Floor Framing System to the rest of the structure should be capable of withstanding the required gravity, lateral, wind and all other applicable loads and actions.

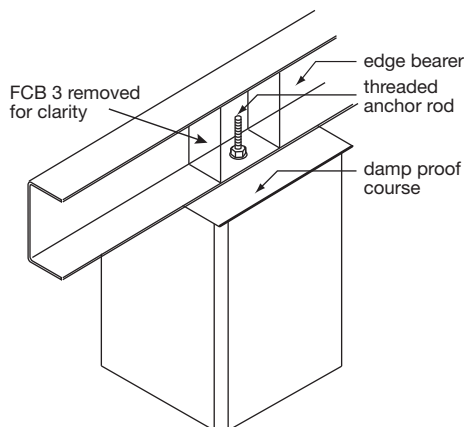
Posts or piers, supplied by others, must comply with the BCA and relevant standards, and are connected to the floor system using conventional bolted connections.

Typical Bearer Connection to Post



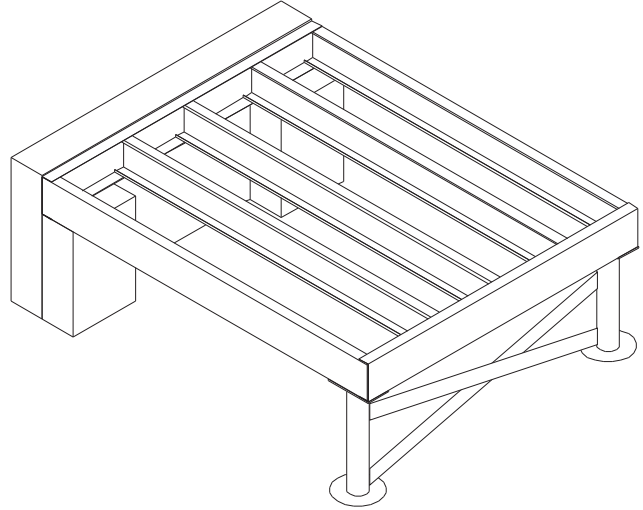
Connections directly into the bottom of the bearer offer the quickest and easiest solution. Posts or piers must not be connected to joists, they must always be connected to bearers.

Typical Bearer Connection to Pier



Bracing

Bracing of posts/piers must not be connected to joists or bearers. Bracing, designed by others, will be required subject to post design, spacing and relevant loads.



INSTALLATION

Components

Use the sections, brackets, fixings etc specified by the designer based on the preceding data within this technical manual. Take particular note of the number, size and specification of fasteners.

Method

Install as indicated throughout the Framing Connections and Support section of this manual.

Safety

Always follow regulatory practice when handling and installing Stramit® Floor Framing System components. Use cut-resisting gloves and cover all exposed limbs. When cutting or using power tools wear appropriate PPE.

Earthing

Steel framing must be temporarily earthed during construction and then permanently earthed in compliance with applicable regulations.

PROCUREMENT

Components

The **Stramit**[®] flooring system comprises:

- The standard range of **Stramit**[®] C-Joists & Bearers (see page 4)
- The standard range of **Stramit**[®] C-Joist and Bearer connectors
- The range of Extended Bearer design options (see table 2 on page 4)
- The **Stramit**[®] range of Extended Bearer brackets

Availability

The **Stramit**[®] range of C-Joists, Bearers and brackets are available nationally. The Extended Bearer U-Beams need to be sourced through local steel distributors.

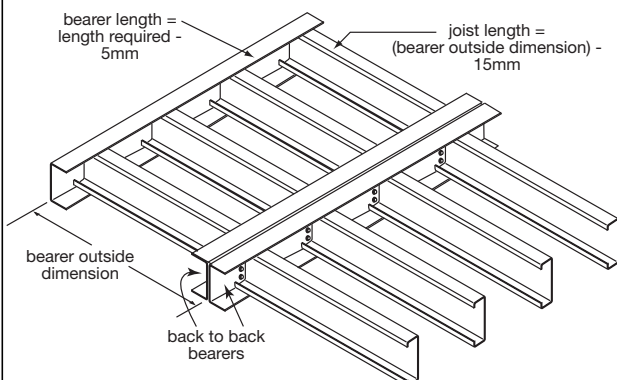
Prices

Prices of **Stramit**[®] Residential Floor Framing Systems can be obtained from your nearest Stramit location, or distributor of **Stramit**[®] products.

Lengths

Flooring lengths can be supplied to any nominated length as long as it falls within the joist and bearer span range. The tolerance on lengths supplied is +/- 10mm for C-Joists and Bearers.

All **Stramit**[®] C-Joist and Bearers are available custom cut to suit the installation requirements. To ensure easy installation, bearers should be ordered 5mm short and joists 15mm shorter than the bearer outside dimension, this will provide adequate clearance for internal radii and production and installation tolerances.



Orders

Stramit[®] Residential Floor Framing system components can be ordered directly from Stramit, or through distributors. Check with your local **Stramit**[®] office for availability of sections and sizes.

All Extended Bearer and RHS sections must be ordered through local steel distributors.

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:

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

Other Products

Stramit offers a wide range of building products, including:

- Formwork decking
- Roof and wall sheeting
- Lightweight structural sections
- Truss components
- Gutters and downpipes
- Fascias
- Custom flashings
- Insulating products
- Fasteners

REFERENCES

In preparing this document reference has been made to:

- National Construction Code NCC
- BlueScope Steel - Technical Bulletin TB-17 (Selection Guide for Galvanised Steel Purlin Products)
- BlueScope Steel - Technical Bulletin TB-34 (Steel House Frames)



The Stramit web page can be found at:

www.stramit.com.au

Details of many **Stramit**® products can also be seen on the AIA site 'Product Selector' at:

www.selector.com.au

Building Products

		prices	availability	general	technical
contact numbers for information			products coating colours	other	advice product data
SYDNEY	phone	(02) 9834 0909		(02) 9834 0900	
Site A 33-83 Quarry Road, Erskine Park NSW 2759	fax	(02) 9834 0988		(02) 9834 0988	
CANBERRA	phone	(02) 6297 3533			
4 Bass Street, Queanbeyan NSW 2620	fax	(02) 6297 8089			
COFFS HARBOUR	phone	(02) 6656 3800		(02) 4954 5033	
6 Mansbridge Drive, Coffs Harbour NSW 2450	fax	(02) 6656 3808		(02) 4954 5856	
NEWCASTLE	phone	(02) 4954 5033			
17 Nelson Road, Cardiff NSW 2285	fax	(02) 4954 5856			
ORANGE	phone	(02) 6361 0444			
51 Leewood Drive, Orange NSW 2800	fax	(02) 6361 9814			
MELBOURNE	phone	(03) 9237 6300		(03) 9237 6200	
2/1464 Ferntree Gully Road, Knoxfield VIC 3180	fax	(03) 9237 6399		(03) 9237 6299	
ALBURY	phone	(02) 6041 7600			
18 Ariel Drive, Albury NSW 2640	fax	(02) 6041 7666			
BENDIGO	phone	(03) 5448 6400			
Ramsay Court, Kangaroo Flat VIC 3555	fax	(03) 5447 9677			
MILDURA	phone	(03) 5018 4800			
19 - 23 Adams Street, Mildura VIC 3500	fax	(03) 5021 0557			
TASMANIA	phone	(03) 6263 5536		(03) 6263 5536	
57 Crooked Billett Drive, Brighton TAS 7030	fax	(03) 6263 6950		(03) 6263 6950	
ADELAIDE	phone	(08) 8262 4444		(08) 8262 4444	
11 Stock Road, Cavan SA 5094	fax	(08) 8262 6333		(08) 8262 6333	
BRISBANE	phone	(07) 3803 9999			
57-71 Platinum Street, Crestmead QLD 4132	fax	(07) 3803 1499			
TOWNSVILLE	phone	(07) 4779 0844			
402-408 Bayswater Road, Garbutt QLD 4814	fax	(07) 4775 7155			
CAIRNS	phone	(07) 4045 3069			
53 Vickers Street, Edmonton QLD 4869	fax	(07) 4045 4762			
MACKAY	phone	(07) 4942 3488		(07) 3803 9999	
6 Brickworks Court, Glenella QLD 4740	fax	(07) 4942 2343		(07) 3803 1499	
MARYBOROUGH	phone	(07) 4121 2433			
10 Activity St, Maryborough QLD 4650	fax	(07) 4123 3139			
ROCKHAMPTON	phone	(07) 4936 2577			
41 Johnson St, Parkhurst QLD 4702	fax	(07) 4936 4603			
DARWIN	phone	(08) 8947 0780			
55 Albatross Street, Winnellie NT 0820	fax	(08) 8947 1577			
PERTH	phone	(08) 9493 8800			
605-615 Bickley Road, Maddington WA 6109	fax	(08) 9493 8899			

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