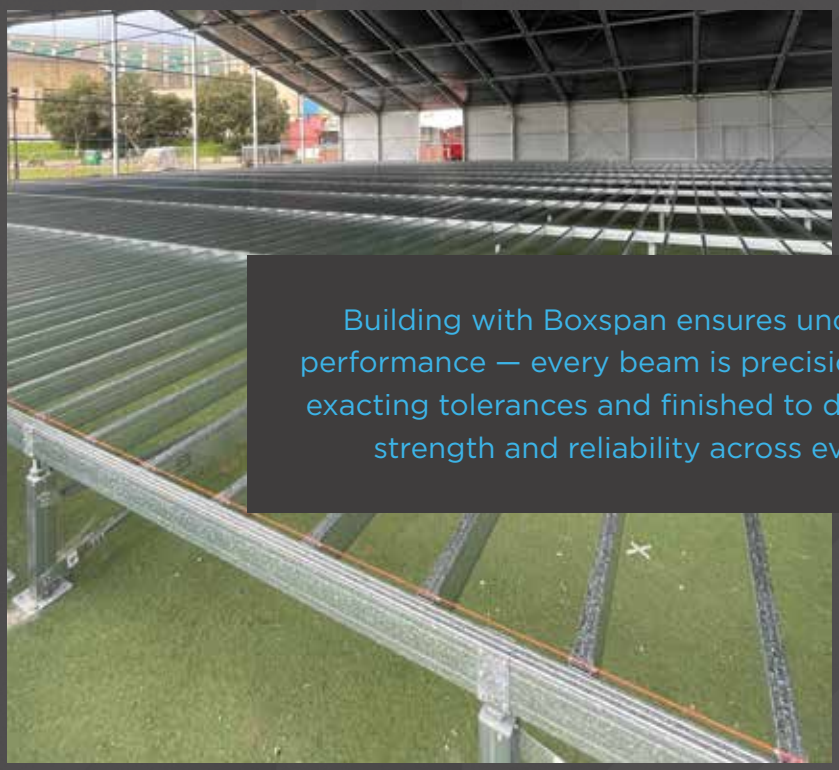
BOXSPAN®

DESIGN GUIDE

Commercial

SPANTEC™

MAKING BUILDING EASY



Building with Boxspan ensures uncompromising performance — every beam is precision engineered to exacting tolerances and finished to deliver consistent strength and reliability across every project.

About us

At Spantec, we believe that building and construction should be an effortless journey.

Established in Australia, we have built our legacy on innovative solutions that redefine the construction industry. With over 30 years of experience, we have transformed countless sub floor, deck and roofing projects into reality, ensuring that each structure is not only strong but beautifully crafted and simple to install.

Our story began with a simple yet powerful vision: to simplify the building process. As we grew, we developed a unique approach that combines cutting edge technology with a deep understanding of the needs of builders and homeowners alike. Our minimal waste and pre-engineered products and systems are designed for efficiency, allowing for faster project completion without compromising on quality.

What sets us apart is our unwavering commitment to customer satisfaction. We pride ourselves on our collaborative spirit, working hand in hand with our clients to deliver solutions that meet their specific requirements. Through residential and commercial projects, our diverse portfolio showcases our adaptability and expertise across various sectors.

At Spantec, our mission is clear, Making Building Easy. We strive to empower builders and specifiers with the tools and support they need to bring their project to life, ensuring a seamless experience from conception to completion.

BOXSPAN

Australian manufactured out of BlueScope steel coil, Boxspan is an innovative, lightweight and highly durable construction material designed to revolutionize the way you build. Whether you're a builder, specifier or a DIY enthusiast, Boxspan beams offers unparalleled versatility across all construction sectors.

Boxspan is manufactured from high tensile Z450 coated steel coil, it provides a beam with exceptional strength to weight ratio that makes it easier to handle and install. Its unique box beam design ensures stability and precision in every application from flooring systems, decks, roofs to structural wall frames. Boxspan adapts to various construction needs with ease.

Supporting Accessories range

- A large range of off-the-shelf brackets for sub floors, decks and roof applications.
- Ezipier, our steel adjustable pier.
- Ezibrace, sub floor and deck cross bracing system.

Peats Bite restaurant — Boxspan sub floor and roof

Metro Tunnel, Martin Place — Boxspan structural wall studs

Battle Kart — 2000m^2 temporary Boxspan sub floor

Contents

Boxspan in action

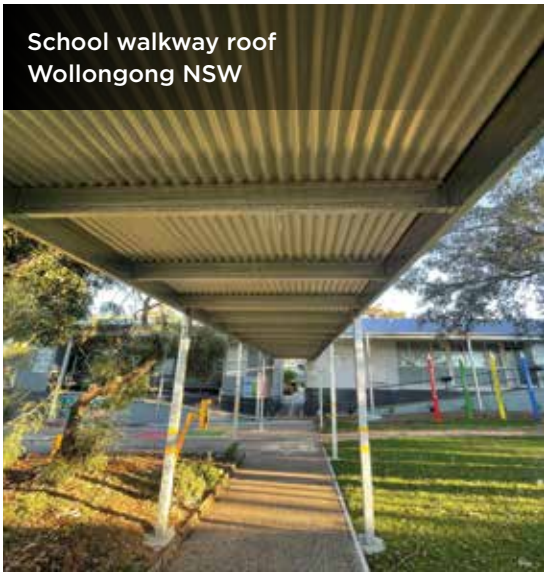
Commercial raised floor
Canberra NSW

Storage floors, industrial fit out
Eaglefarm QLD

Commercial decks and walkways
Zetland NSW

School carpark roof
Dural NSW

School walkway roof
Wollongong NSW



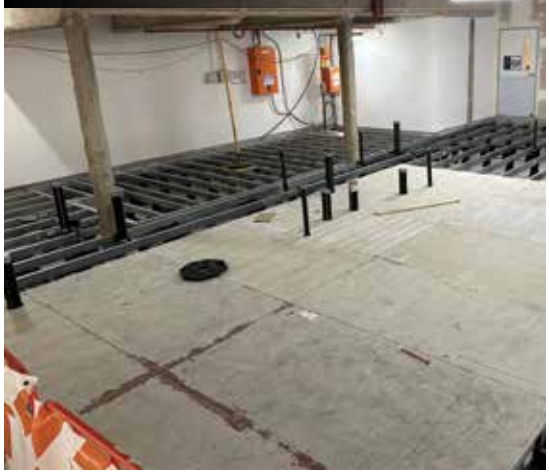
Boxspan purlins, Lone Pine Shopping Centre, Central Coast NSW

Sub floor, Mogo shops
Mogo NSW

Boxspan façade frame, Sydney Fresh, Fivedock NSW

Mezzanine, factory refurbishment
Penrith NSW

Boxspan interior fitout sub floor
Queens Wharf QLD



Solar carpark roof
Mittagong NSW

ENGINEERING CERTIFICATION

HALINA ENGINEERS PTY LTD
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HALINA ENGINEERS

Our Reference **3333-05-SL02_A** *2nd February 2026*

STRUCTURAL DESIGN CERTIFICATION
Structural Assessment of Spantec Boxspan Span Tables
Boxspan Design Guide Commercial Feb 2026 edition

This assessment has been certified by the undersigned for the structural selection programs and span tables as described in Boxspan Design Guide Commercial Feb 2026 edition.

I consider that the guideline complies with the following structural provisions on the National Construction Code of Australia (NCC) 2022:

- Volume One, Structural Provisions, Part B1.4.

The assessment considered the following:

1) The design programs to determine the values of beam load width, beam spacing, member span and connection capacity to calculate the span tables in the publication, comply with generally accepted engineering principles and these following Australian Standards:

- AS1170.0:2002 Structural Design Actions - Part 0: General Principles
- AS1170.1:2002 Structural Design Actions - Part 1: Permanent Imposed and other Actions.
- AS1170.2-2021 Wind Actions.
- AS4600:2018 Cold-Formed Steel Structures.
- AS3566.1-2002 Self Drilling Screws for the Building and Construction Industries - Part 1 General Requirements and Mechanical Properties.
- NASH Standard Residential and Low-Rise Framing Part 2: Design Solutions 2014.
- AS1397: 2011 - Steel Sheet and Strip Hot Dipped Zinc Coated or Aluminium/Zinc Coated.

2) The design capacities of Bending (**Mb**), Shear (**Vv**) and Bearing (**Rb**) have been determined in accordance with engineering calculations, laboratory testing and Australian Standard AS4600 Cold Formed Steel Structures.

3) The ultimate limit strength and serviceability limits of the Boxspan members have been determined using AS1170.0-2002, AS4600-2018 and testing results of Spantec.

4) The wind actions for strength and serviceability limits have been determined using AS1170.2-2021 (Wind Actions).

This certification may be considered as "Evidence of Suitability" under the National Construction Code of Australia (NCC), Volume One Clause A2.2 Performance Solutions. Information in the Spantec Systems Publication not specifically referenced in this certification is outside the scope of this assessment. This certification does not relieve other parties of their duties and responsibilities. The tables describe many different structures and any specific structure should be fully described with geometry and loading.

The span tables are part of a system with included the Spantec Boxspan Brackets and Fixing.

The system can be considered complete for its intended purpose provide that:

- Connections, fixings and details are in accordance with system specifications, documentation and drawings which must be verified by the certifier.
- Supporting structural is stable, able to withstand the wind uplift, beam reactions and separately certified.
- The beams are installed in accordance with the designs and professional building standards.

If you have any further enquiries regarding this matter, please do not hesitate to contact the undersigned.

Yours faithfully
HALINA ENGINEERS PTY LTD

Ha Nguyen
BE(Hons) PhD MIEAust CPEng NER4188792 PE0001349 RPEQ24385
PRE-0000735 DEP-0000876
Principal Structural Engineer/Director

NASH COATING SPECIFICATIONS

Table A1: Protection requirements for steel framing components in various atmospheric environments

DESIGNATION	ATMOSPHERIC CORROSIVITY CATEGORY			
	C1	C2	C3	C4
DESCRIPTION (REFER TO AS 4312 AND ISO 9223) See notes above for full description of category				
APPLICATION				
COMPONENTS INACCESSIBLE FOR MAINTENANCE				
Roof framing system — unventilated	A	A	C	C
Roof framing system — ventilated	NA	B	C	D
Floor bearers & joists including intermediate floors — unventilated	A	A	C	C
Floor bearers & joists — ventilated	NA	B	D	D
Decking/Balcony — Integral (eg cantilevered)	NA	C	D	D
Ceiling Battens		A	C	C
COMPONENTS ACCESSIBLE FOR MAINTENANCE				
Roof Battens	NA	B	C	C
Stumps & piers supporting main building	NA	C	C	C
Decking/Balcony — Independent of main structure	NA	B	C	C
Verandah Beams & Rafters	NA	B	C	D
Verandah Posts & Stumps	NA	B	C	D
Carport Rafters & Beams	NA	C	C	D
Carport Posts	NA	B	C	D
Lower Storey unlined eaves & Pergola Rafters & Beams	A	B	C	D
Pergola Posts	NA	B	C	D

Table A2: Metallic Coating specifications for steel members

METALLIC COATING SPECIFICATIONS						
	HOT DIP METALLIC COATED STRIP AS 1397					
Protection designation (Refer to Table A1)	Zinc	Aluminium/Zinc	Aluminium/ Magnesium/ Zinc	Open Sections Zinc/ Aluminium AS/NZS 4791	Hollow Sections either: Hot Dip Galvanised (ZB, ILG, HDG) or Electroplated (ZE) — Zinc AS/NZS 4792 AS 4750	Post fabrication hot dip galvanised Zinc AS/NZS 4680
A	Z275	AZ150	AM150	IZA75	ZE50/50	HDG320
B	Z275	AZ150	AM150	IZA75	ZB100/100, ILG100	HDG320
C	Z275	AZ150	AM150	IZA75	HDG300, ILG140, ZB135/135	HDG320
D	Z450	AZ150	AM150	IZA75	HDG300	HDG320

NOTES

As highlighted Boxspan is Z450 as standard, Ezipier posts are ZB135/135 as standard with the option of a higher HDG300.
All Ezipier bases and adjustable heads are HDG300 as standard.

DEFINITIONS AND TERMINOLOGY

Construction Systems

The two main types of construction when using Boxspan floors are:

- **Monoplane with simple span joists**
  Monoplane construction has the joists and bearers in the same horizontal plane, so the top of joists and bearers are inline.
- **Conventional with continuous Joists**
  Conventional construction has the joists running continuously over the top of the bearers.

Span tables and beam spans

The tables in this publication refer to three types of spans:

- **Single span** – the beam sits on 2 supports
- **Double span** – the beam sits on 3 supports and is covered by double span in the tables.
- **Triple Span** – the beam sits on 4 supports and is covered by triple span in the tables.

For continuous spanning beams in the tables, the spans can be uneven. Select the biggest individual span and use that in the table for the double or triple span. The smaller span must be greater than 80% of the bigger span.

All ends of beams must be closed using an End Cap Internal bracket (ECI) and all beam joins shall be over a support.

Beam spacing/centres

The floor span tables are determined using their spacing (centre to centre distance) to select their respective spans. Please refer to spacing/centres diagram in the span tables.

Floor performance

Dynamic performance of light steel floor systems can be subjective based on the end user's perception, the following criterion has been chosen:

1 The maximum allowable spans have been designed to meet the strength and serviceability limits specified in AS1170.0:2002 Structural Design Actions – Part 0.

2 In some cases, spans calculated by the above criteria have been reduced based on extensive field testing carried out over more than 25 years.

Should a stiffer floor be required joist spans or joist spacing can be reduced or mid span blocking introduced. It is noted that floor carrying higher distributed loads (such as floor tiles or autoclaved aerated concrete floor panels) or supporting non load bearing walls will be stiffer than floors carrying lower dead loads. The effect of this is to dampen the floor for vibration.

Floors will not reach their peak performance until carrying the dead loads. This includes, in particular, loads applied by internal and external walls including wall lining and (for upper floors) ceilings fixed below.

The span of a beam in floors is based on the strength or deflection (Serviceability) requirements listed below.

Strength

Strength is covered by the following Ultimate Limit State load combinations. The main ones for floors are:

- 1.35 DL
- 1.2 DL + 1.5 LL
- 1.2DL + 1.5PT-LL
- 0.9 DL + 1.0 Wuplift
- 1.2 DL + 1.0 Wdown

Serviceability

Serviceability is covered by deflection requirements. The main ones for floors are:

- 2kN point load with a max. of 2mm deflection
- 1.0 DL Dead load only
- 1.0 DL + 0.4 LL Dead Load and Live load
- 1.0 DL + 1.0 WL Dead Load and Wind/Snow load

COMPLIANCE & STANDARDS

Boxspan™ beams are recognised by Green Building Council of Australia (GBCA) as a Best Practise Product.

Spantec manufactures our Boxspan™ beams from Australian Made BlueScope® Zinc Hi-Ten® Z450 steel coil. This coil is manufactured at the Port Kembla Steel Works, which is an internationally recognised ResponsibleSteel™ certified site. Zinc Hi-Ten® has an associated Environmental Product Declaration (EPD), a combination of these two initiatives means that our Boxspan™ beams are classed as Best Practice Products under the Green Star Responsible Products Framework.

Spantec's Boxspan beams have a Responsible Product Value (RPV) of 15.

For more information on how BlueScope® Steel is recognised by GBCA visit: https://steel.com.au/resources/articles/green-star

EPD documents and ResponsibleSteel™ certification documents are available from Spantec or via the link above.

Boxspan, Manufactured from Zinc Hi Ten Z450 in all sizes and thicknesses.

Contact our office or email us at **sales@spantec.com.au** to received your green star rated EPD documents.

Manufacturing Capability

Spantec's inhouse continuous improvements have allowed us to increase not only our manufacturing ability but our ability to size change across eight varying Boxspan sizes at faster speeds, enhanced by our automated robotic manufacturing lines this allows any size order to be produced and shipped at a rapid rate.

Boxspan Patented Process

The Boxspan Patent revolves around the stitching on the side of the Boxspan Beam and the way that it is manufactured, this beam is stitched and not welded, this unique structural beam is manufactured from twin, roll formed "C" shaped sections that are fixed together by a proprietary post forming process that provides a strong shear connection between the two sections. This creates a lightweight beam that has high torsional strength.

Quality Control Standards

Boxspan manufacturing quality control standards are in place to ensure that every beam that is produced is to the highest standard in tolerance, squareness and bow. These measures are in place to ensure only the highest quality product is delivered.

Code Compliance

All Spantec products manufactured comply with the relevant Australian and Nash standards, all manufactured beams and accessories not only meet but often exceed all relevant Australian standards. Refer certification listed within this span table guide.

Energy

Spantec is committed to reducing the amount of energy needed to manufacture product. Over the last 10 years, through continuous improvement of our process, improving efficiency and eliminating waste we have seen large reduction in the energy used to manufacture each beam or bracket, this has in return resulted in more product being manufactured in a standard shift, 80% of our Boxspan beams are also manufactured to the exact length, therefore reducing cutting waste on building sites and landfill. Our minimal scrap is then recycled.

SECTION PROPERTIES & TECHNICAL SPECIFICATIONS

Identification

Boxspan members are identified by the marking system as follows.

Product Description	Depth of section: mm	Flange Material Gauge: mm x 10
B	150	20

e.g. B150-20

B – Boxspan

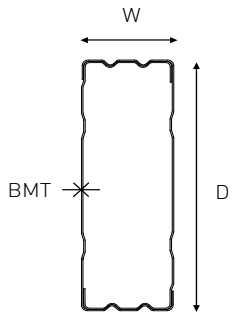
150 – beam depth

20 – beam has a base metal thickness of 1.0mm with double thickness at the flanges.

Other variations of Boxspan beams with prefixes are:

SB – Boxspan Smart Bearer – a bearer with pre-punched pilot holes at the bracket location.

Dimensions



Boxspan Section	Dimensions D x W (mm)	Base Material Thickness BMT (mm)
B100-12	100 x 50	0.60
B100-16	100 x 50	0.80
B150-16	150 x 50	0.80
B150-20	150 x 50	1.00
B150-24	150 x 50	1.20
B200-16	200 x 50	0.80
B200-20	200 x 50	1.00
B250-20	250 x 50	1.00

Boxspan Section Properties

Boxspan Section	Depth	Width	Web Thickness	Mass	Effective Area	Full section modulus	Moment of inertia	Bending moment capacity	Shear capacity
	D	W	BMT	m	Aeff	Zx	Ix	φMb	φVv
	mm	mm	mm	kg/m	mm^2	$mm^3 \times 10^3$	$mm^4 \times 10^6$	kN-m	kN
B100-12	100	50	0.6	2.07	262	8.39	0.420	2.77	21.08
B100-16	100	50	0.8	2.70	342	11.04	0.552	4.37	28.10
B150-16	150	50	0.8	3.32	421	18.83	1.412	6.78	27.73
B150-20	150	50	1.0	4.14	525	23.40	1.755	9.34	42.29
B150-24	150	50	1.2	4.99	632	28.19	2.114	12.59	43.47
B200-16	200	50	0.8	3.96	502	28.22	2.822	9.03	24.02
B200-20	200	50	1.0	4.95	627	34.99	3.499	12.59	32.60
B250-20	250	50	1.0	5.74	727	48.14	6.018	16.92	26.08

NOTES

The section properties are calculated using Thin Wall 2 software developed by Sydney University.

The yield strength of the high strength steel is G550 (550 MPa) for up to and including 1.0mm thick and G500 (500 MPa) for the 1.2mm thick coil. Bending Moment and Shear Capacities have been derived from in-house testing.

DESIGN NOTES

1 These span tables have been prepared for a range of floor, roof and wall frame applications in non-cyclonic wind regions using Boxspan steel beams and brackets produced by Spantec Systems Pty Ltd.

2 This Design notes section shall be read in conjunction with Boxspan span tables.

3 The design of Boxspan and its connection for floor and roof applications complies with the following Australian Standards:

- AS/NZS 1170.0:2002 Structural design actions – Part 0: General principles
- AS/NZS 1170.1:2002 Structural design actions – Part 1: Permanent imposed and other actions
- AS/NZS 1170.2:2021 Structural design actions – Part 2: Wind actions
- AS 4055:2021 Wind loads for Housing
- AS/NZS 4600:2018 Cold-formed steel structures
- AS 1397:2021 Steel sheet and strip – Hot dipped zinc-coated or aluminium/zinc-coated
- AS 3566.1:2002 Self drilling screws
- NASH Standards where applicable

4 The connection details shall be in accordance with the details in this publication. For the complete range of connections please refer to Spantec.com.au website or speak with Spantec's Technical department.

5 The loads used to determine the span tables in this Spantec publication are as follows:

FLOOR LOADS

Dead Loads

- Dead Loads: 0.75kPa (75kg/sqm) includes the weight of either 19mm particle board, insulation and carpet or 10mm tiles on 15mm compressed fibre cement sheeting and includes Boxspan beams.
- Dead Loads: 1.1kPa (110kg/sqm) includes the weight of either 75mm AAC (autoclaved aerated concrete) panel with tiles/carpet or 10mm tiles on 18mm compressed fibre cement sheeting and includes Boxspan beams.

Live Loads

- Live Load: 3.0kPa (300kg/sqm) with 2.7kN concentrated load.
- Live Load: 4.0kPa (400kg/sqm) with 3.6kN concentrated load.
- Live Load: 5.0kPa (500kg/sqm) with 3.6kN concentrated load.
- Live Load: 7.5kPa (750kg/sqm) with 4.5kN concentrated load.

The live loads categories are based on the Australian standard AS1170.1:2002 Section 3.4

ROOF LOADS

Dead Loads

The typical roof dead Load allowance can start at 0.1 kPa (10kg/sqm) which includes the weight of the roof sheeting and Boxspan beams.

Live Loads

For commercial projects, roof live loads are temporary, variable forces on a roof, such as those from maintenance personnel, equipment, or movable objects, that are not part of the structure's permanent weight.

It is the project Engineer's responsibility to ensure the correct live, dead loads and limits are appropriate for the specific project.

Wind Loads

The Wind classification and pressures are in accordance with AS4055:2021 and wind coefficients in accordance AS1170.2:2021 where not covered by AS4055.

The Span tables have been calculated for wind up to and including wind classification N3.

WALL STUDS AND CEILING JOIST

The wall stud and ceiling joist span tables contained in this document can be used for the selection of members to be used in external or internal load bearing or non-load bearing applications in residential, commercial or industrial buildings.

Spantec's products are made from zinc coated light gauge steel with proprietary bracketry which has exception corrosion protection, but where extreme corrosive conditions prevail, extra protection may be required to ensure the working life of the products, consult your Engineer for advice.

The design of Boxspan and its connection for wall frame and ceiling applications complies with the following Australian Standards:

- AS/NZS 1170.0:2002 Structural design actions – Part 0: General principles
- AS/NZS 1170.1:2002 Structural design actions – Part 1: Permanent imposed and other actions
- AS/NZS 1170.2:2021 Structural design actions – Part 2: Wind actions
- AS 4055:2021 Wind loads for Housing
- AS/NZS 4600:2018 Cold-formed steel structures
- AS 1397:2021 Steel sheet and strip – Hot dipped zinc-coated or aluminium/zinc-coated
- AS 3566.1:2002 Self drilling screws
- NASH Standards where applicable
- AS/NZS 2785:2020 Suspended Ceilings – Design & Installation
- AS 1657: 2018 Fixed platforms, walkways, stairways and ladders – Design, construction and installation

Single storey, load bearing and non-load bearing wall studs

The wall studs span charts use a design pressure of 0.25 kPa for serviceability and 0.375 kPa for strength.

The wall stud span charts use the following design parameters:

- Serviceability limits for wind load normal to the wall – H/150, 20mm max. deflection.
- Wall soft body impact limits – H/200, 12mm max. deflection.

- Shelf loading has not been allowed for in these charts.
- NASH limits have been used satisfactorily with brick veneer and ceramic tiled walls.
- Noggings/blocking is NOT required to attain the spans listed in these tables.
- The solutions presented in the span table consider the tributary wall load width equal to the wall stud centres.

The internal wall stud charts are based on the following wall covering dead loads:

- Internal wall plasterboard covering, one side or both sides lined – 10 or 13mm plasterboard (mass = 5.7 or 8.5 kg/m2)
- Internal wall fire rated covering, one side or both sides lined – 13 or 16mm fire rated plasterboard (mass = 10.5 or 12.5 kg/m2)

The external wall stud charts are based on the following wall covering dead loads:

- External face glass reinforced concrete covering – GRC up to 40kg/m2
- Internal face plasterboard covering - 13mm Plasterboard (mass = 10.5 kg/m2)

See the notes under each span chart for more information on the design parameters used to produce these charts.

Wall linings can be fixed either horizontally or vertically, the joins in the lining should be staggered and installed to manufactures specifications.

It is the project Engineer's responsibility to ensure the correct lateral pressures and deflection limits are used for the wall stud design and are appropriate for the specific project.

NON TRAFFICABLE CEILING JOISTS

Boxspan being a box section has the strength, and sectional rigidity which makes it perfect to be used in ceiling grid systems that can support a walking platform and has the versatility to support suspended ceilings and direct fixed ceilings without bridging or blocking.

The ceiling span charts use the following design parameters:

- Strength check 1. Down direction 1.2G+Wu and check 2. Up direction 0.9G+Wu, Wu = 0.375 kPa.
- Serviceability check 1. G, L/500 and check 2. G+Ws, L/200, Ws = 0.25 kPa.
- Seismic was not specified or considered in this design.
- The ceiling live load has been applied to these tables in accordance with AS/NZ 1170.1:2002.
- It is assumed the supporting structures have been independently checked and are load bearing.
- Bridging/blocking is NOT required to attain the spans listed in these tables.

See the notes under each span chart for more information on the design parameters used to produce these charts.

It is the project Engineer's responsibility to ensure the correct design parameters are used for the ceiling design and are appropriate for the specific project before using the span tables in this publication.

6 EXCEPTIONS

The span tables do not consider the design, certification or structural adequacy of any:

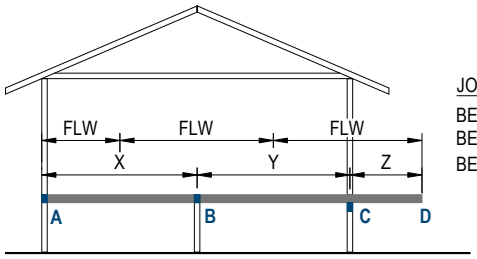
- Subfloor bracing
- Existing or new foundation
- Connection to the foundation
- Connection to the existing structure
- Structural adequacy of the supporting structure (e.g. walls) to carry the additional floor and/or roof loads.

The builder/owner is to ensure that the necessary approvals and certificates are obtained for the structure from a Civil/Structural Engineer or other competent person.

The builder/owner should also ensure the requirements of local authorities and government regulations are addressed.

- Proprietary items supplied by others shall be installed in accordance with the manufacturer's specification.
- The designer shall ensure that the products selected protective coating meets acceptable construction practice, reference NCC Steel Framing which refers to NASH Standard "Residential and Low-Rise Framing" Part 1 and Part 2, the protective coating details are in NASH Part 2 Section 8 Durability.

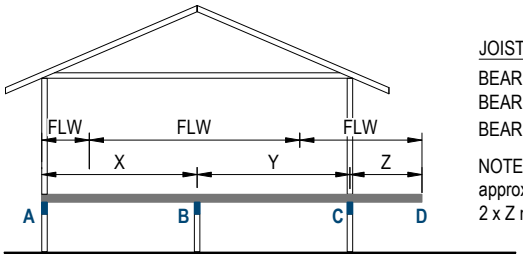
Floor load widths



JOISTS: AB, BD

BEARER **A**: FLW = X/2
BEARER **B**: FLW = X/2 + Y + Z - (Y + Z)² / 2Y
BEARER **C**: FLW = (Y + Z)² / 2Y

1. FLOOR LOAD WIDTH FOR MONOPLANE SYSTEM (JOISTS IN SINGLE SPAN - INTO INTERNAL BEARER)

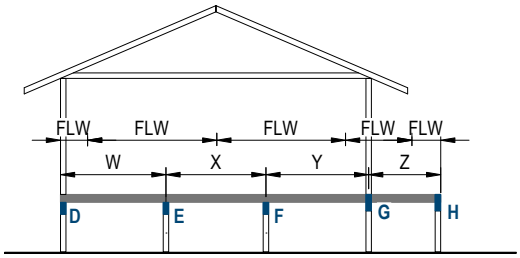


JOIST AD:

BEARER **A**: FLW = 0.4X
BEARER **B**: FLW = 1.25 (X + Y) / 2
BEARER **C**: FLW = 0.5Y + Z

NOTE: Formulae are conservative approximations.
2 x Z minimum Cantilever backspan

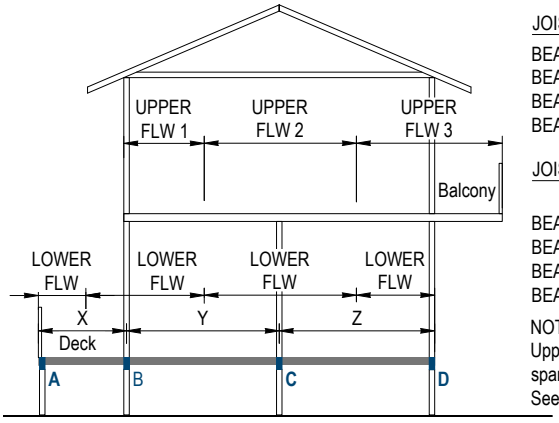
2. FLOOR LOAD WIDTH FOR CONVENTIONAL SYSTEM (JOISTS IN CONTINUOUS DOUBLE SPAN - OVER INTERNAL BEARER)



JOISTS: AG, GH

BEARER **D**: FLW = 0.4 W
BEARER **E**: FLW = 1.1 (W x X) / 2
BEARER **F**: FLW = 1.1 (X x Y) / 2
BEARER **G**: FLW = 0.4Y + Z / 2
BEARER **H**: FLW = Z / 2

3. FLOOR LOAD WIDTH FOR CONVENTIONAL SYSTEM (JOISTS IN CONTINUOUS TRIPLE SPAN - OVER INTERNAL BEARER)



JOISTS: AB, BC, CD MONOPLANE

BEARER **A**: LOWER FLW = X / 2
BEARER **B**: LOWER FLW = UPPER FLW 1 + (X + Y) / 2
BEARER **C**: LOWER FLW = UPPER FLW 2 + (Y + Z) / 2
BEARER **D**: LOWER FLW = UPPER FLW 3 + Z / 2

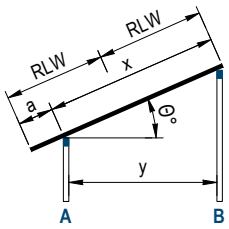
JOISTS: AB SINGLE SPAN & BD CONTINUOUS DOUBLE SPAN

BEARER **A**: LOWER FLW = X / 2
BEARER **B**: LOWER FLW = UPPER FLW 1 + X / 2 + 0.375Y
BEARER **C**: LOWER FLW = UPPER FLW 2 + 1.25 (Y + Z) /2
BEARER **D**: LOWER FLW = UPPER FLW 3 + 0.375 Z

NOTE:
Upper FLW depends on whether beams are single span (Monoplane) or continuous over internal walls.
See Diagrams 1 & 2 for formulae.

4. DOUBLE STOREY - LOWER FLOOR SUPPORTING UPPER FLOOR

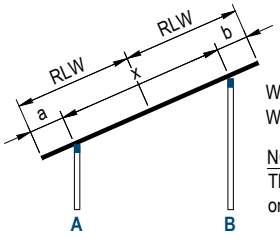
Roof load widths



WALL **A**: RLW = $(a + x)^2 / 2x$
WALL **B**: RLW = $a + x - \underline{(a + x)^2}$

NOTE:
The Roof Load Width depends on the roof slope.
$x = y / \cos \Theta$

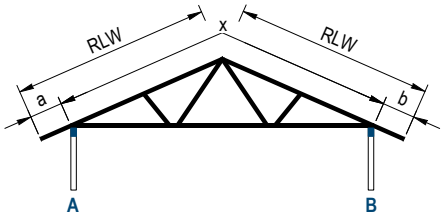
5. SINGLE CANTILEVER RAFTER



WALL **A**: RLW = x / 2 + a
WALL **B**: RLW = x / 2 + b

NOTE:
The Roof Load Width depends on the roof slope.

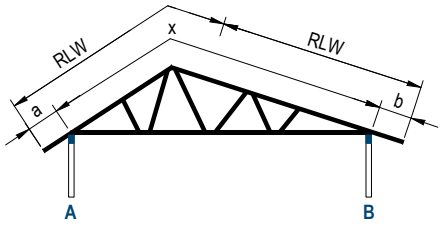
6. TWIN CANTILEVER RAFTER



WALL **A**: RLW = x / 2 + a
WALL **B**: RLW = x / 2 + b

NOTE:
The Roof Load Width depends on the roof slope.

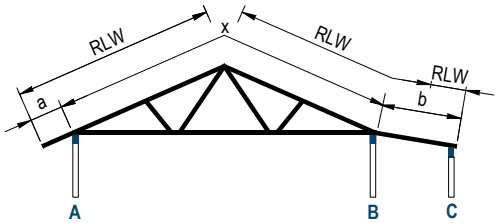
7. SYMMETRICAL TRUSS



WALL **A**: RLW = x / 2 + a
WALL **B**: RLW = x / 2 + b

NOTE:
The Roof Load Width depends on the roof slope.

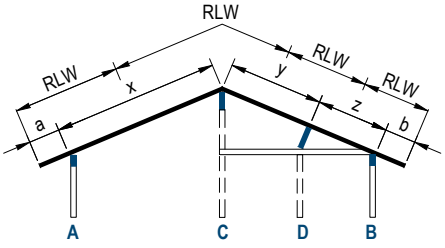
8. ASSYMMETRICAL TRUSS



WALL **A**: RLW = a + x / 2
WALL **B**: RLW = (x + b) / 2
VERANDAH
BEAM **C**: RLW = b / 2

NOTE:
The Roof Load Width depends on the roof slope.

9. TRUSS WITH VERANDAH



RAFTER: AC, CB (CONTINUOUS SPAN)
WALL **A**: RLW = $(a + x)^2 / 2x$
WALL **B**: RLW = 0.375z + b
WALL/BEAM **C**: RLW = 0.5x +0.375y
WALL/BEAM **D**: RLW = 1.25 (y+z) /2

NOTE:
Wall B, C, D based on conservative estimate for small overhang 'a'.
The Roof Load Width depends on the roof slope.

10. CATHEDRAL CEILING & CONTINUOUS RAFTER OVER BEAMS

Boxspan specification

Boxspan material specification

Boxspan light steel beams are made from zinc coated high tensile grade G550 steel complying with AS 1397:2021. Base metal thickness (BMT) of the products is: 0.6, 0.8, 1.0 and 1.2mm.

Boxspan coating specification

Boxspan is rolled from sheet metal with an aluminium/zinc coating of Z450 in accordance with AS 1397:2021.

The National Construction Code (NCC) and the NASH standard provides guidance on the minimum coating class required for cold-formed steel members with regards to the surrounding environmental conditions (i.e. industrial or coastal environments).

Manufacturing tolerances

The tolerances for Boxspan members are within Spantec's stringent manufacturing tolerances in addition to NASH standard Residential and Low-rise Steel Framing Part:1 Design Criteria 2005 appendix D.

Bracket material and coating specification

Spantec Manufactured bracket group:

1.5mm – G250 grade – Z450 coating (Floor, Deck, Flat Roof Brackets FB, AFB, IEC, AB, SB, EC & FB6 holes)

0.9mm – G250 grade – Z275 coating (Joist over bearer brackets, upper floor brackets, TH and Ceiling trimmers)

Purchased bracket group:

1.5mm – G250 Grade – Z275 Coating (Pitched Roof Brackets, AFB Higher Degree Brackets)

1.5mm – G250 Grade – Hot Dip Galvanised (UB50 Rafter bracket)

Bracket coating specification

The manufactured in-house structural brackets are rolled from sheet metal with the zinc coating of Z450 (or equivalent) in accordance with AS 1397:2021.

Lintel

The criteria for lintels above windows and doors are: If the doors are top-hung, in the case of Bi-fold doors, then a maximum deflection of 5mm is used for Dead Load only.

Wind tie-down

Where there is uplift on the roof from the wind, the roof tie down connection to the structure is the builder/owner's responsibility and must be designed by a competent person.

For tie-down details refer to NASH standard Residential and low-rise Steel Framing Part 2: Design solutions 2024 and/or Timber framing code AS1684.

STORAGE AND MAINTENANCE

Coatings, storage, maintenance and corrosion of Spantec products

1 Coatings used

Spantec uses the highest level of corrosion protection for its products, inline with the NASH standards:

- All beams coated to AS/NZS 1397 G550 Z450.
- SHS pre coated to ZB135/135
- HDG available on SHS and brackets to AS/NZS 4680.

2 Choice of product

The protective coating class should be determined by your Project Manager and/or Engineer. The responsibility of determining the correct coating for your environment does not fall onto Spantec.

Please refer to this document, and the NASH Standard – Residential and low-rise steel framing, Part 2: Design solutions, Section 8 Durability. The NASH Publications are referenced in the National Construction code (NCC).

This document references C1-C4 Atmospheric Corrosivity Categories. Refer to NASH Standard – Residential and low-rise steel framing, Part 2: Design solutions, Section 8 Durability.

3 Onsite storage

All Spantec products have a coating to protect against corrosion. The effectiveness of this coating can be compromised by the way it is stored prior to use. Ensuring that each product is dry and has full air flow around the product is critical to ensure the coating retains its integrity. All packs and bags should be opened as soon as possible to ensure all surfaces remain dry.

- Always Store off the ground, ensuring the steel is not in contact with dirt, wet grass etc.
- All packs and bags must be opened within 3 weeks of delivery in C1 and C2 Atmospheric Corrosivity Categories.
- All packs and bags must be opened within 1 weeks of delivery in C3 and C4 Atmospheric Corrosivity Categories.
- During times of high and prolonged humidity extra attention should be paid in ensuring beams are stored with adequate ventilation and should not be stored in direct contact with each other.

4 Maintenance of Boxspan Systems

Where Boxspan® beams are used outside the building envelope good maintenance practice will extend its life.

The first maintenance check would typically involve inspecting the exposed galvanized members for evidence of corrosion. If evidence of corrosion is found, maintenance in the form of cleaning and applying proprietary paint system in accordance with the manufacturer's recommendations will extend the life of the product.

Checks should be performed annually (minimum) or more regularly for C3 and C4 Atmospheric Corrosivity Categories.

NOTE Maintenance is generally not required in applications where the products are enclosed within the building envelope e.g. Floor frames enclosed within a continuous foundation wall or clad subfloor. However, annual checks are still recommended.

Examples of applications requiring maintenance (cleaning) include:

- Verandah and carport beams
- Exposed decks and exposed subfloors in corrosive environments

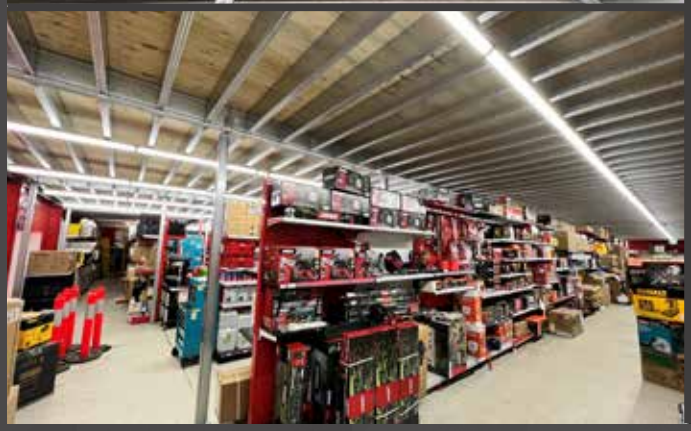
Maintenance required:

C1 and C2 Atmospheric Corrosivity Categories: Exposed product that is not regularly washed by rainwater should be hosed down at least once every six months.

C3 and C4 Atmospheric Corrosivity Categories: Exposed product that is not regularly washed by rainwater should be hosed down at least once every three months.

In cases where the regular maintenance referred to above does not remove all salts that may have adhered to the surface, the following procedure should be carried out:

- Wash the surface with a mild solution of pure soap or mild non-abrasive kitchen detergent in warm water.
- Application should be with a sponge, soft cloth or soft bristle nylon brush, and should be gentle to prevent shiny spots.
- Thoroughly rinse with clean water to remove traces of detergent.
- Never use abrasive or solvent type cleaners e.g. turps, petrol, kerosene, paint thinners etc.



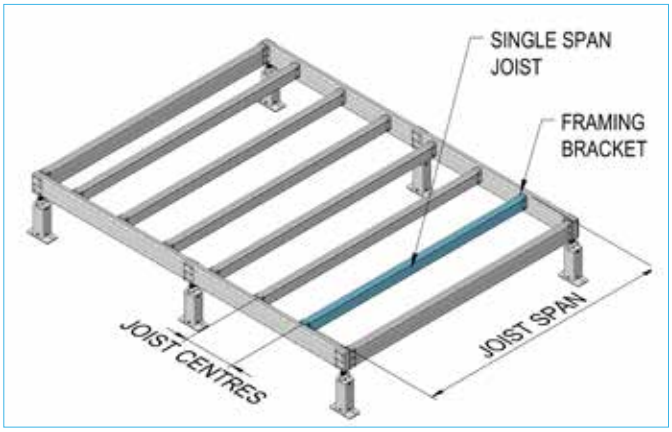
FLOORS & DECKS

FLOORS STANDARD 3kPa LOAD

Joists – standard load

Supporting standard commercial 3kPa floor loads only

- Live Load: 3kPa
- Dead Load: 0.75kPa
- Point Load: 2.7kN
- End Supports: Framing Bracket 4 hole or top bracket
- Mid Supports: Top Hat Bracket or framing bracket



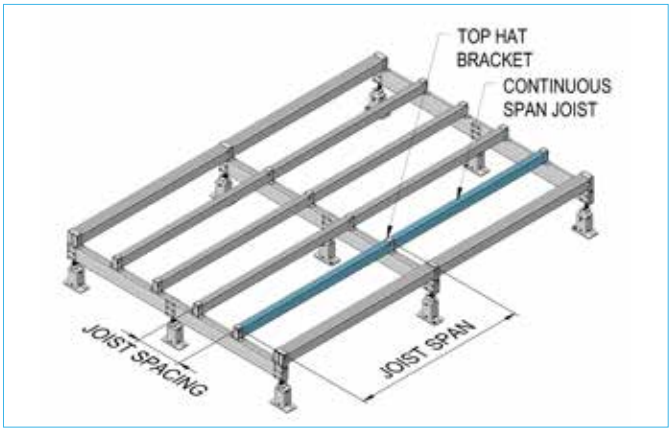


Table 1	MAXIMUM FLOOR JOIST SPAN (mm)								
BOXSPAN SECTION	FLOOR JOIST CENTRES (mm)								
	400	450	600	400	450	600	400	450	600
	SINGLE SPAN			CONTINUOUS DOUBLE SPAN			CONTINUOUS TRIPLE SPAN		
B100-12	2485	2365	2170	2568	2371	1942	2741	2536	2186
B100-16	2770	2626	2395	3020	2780	2474	3078	2822	2505
B150-16	3589	3347	3011	3948	3642	2976	4375	4096	3350
B150-20	3835	3550	3180	4653	4550	3862	4693	4642	3913
B150-24	4185	3850	3430	4815	4802	4034	4857	4844	4087
B200-16	4699	4290	3789	4506	4155	3390	5068	4674	3817
B200-20	5055	4687	4110	5863	5539	4594	5914	5891	5087
B250-20	5921	5750	4915	6309	5823	4767	6945	6550	5365

NOTES

The maximum allowable spans have been designed to meet the strength and serviceability limits specified in AS1170.1 Section 3 Imposed Actions Table 3.1

Internal bearers – standard load

Supporting standard commercial 3kPa floor loads only

- Live Load: 3kPa
- Dead Load: 0.75kPa
- Point Load: 2.7kN
- End Supports: Framing Bracket into Pier Head
- Mid Supports: U Pier Head

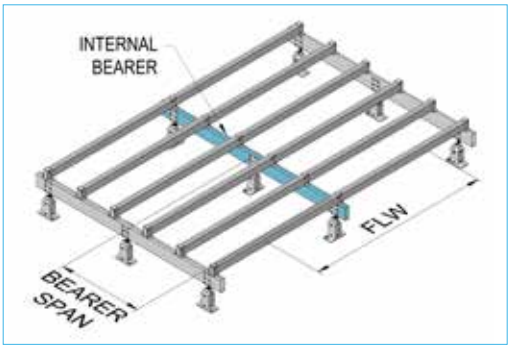
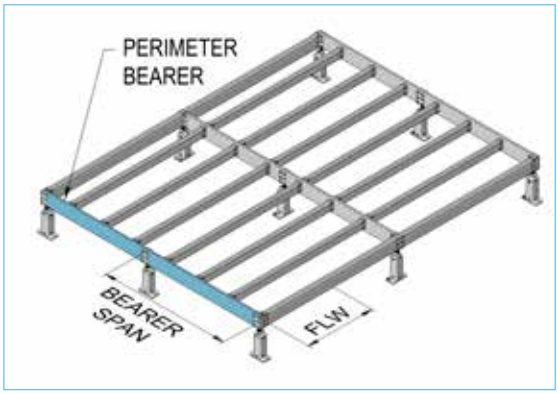


Table 2	MAXIMUM BEARER SPAN (mm)										
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)										
	900	1200	1500	1800	2100	2400	3000	3600	4200	4800	5400
	SINGLE SPAN										
B100-16	2316	2108	1961	1849	1757	1650	1498	1392	1268	1158	1032
B150-16	3154	2869	2590	2383	2211	2052	1825	1665	1545	1450	1362
B150-20	3388	3082	2863	2697	2564	2419	2169	1963	1811	1695	1602
B150-24	3604	3277	3044	2867	2725	2608	2425	2285	2115	1968	1851
B200-16	3861	3347	2992	2722	2521	2366	2086	1742	1497	1313	1170
B200-20	4258	3871	3526	3235	2985	2785	2491	2286	2099	1957	1842
B250-20	5097	4568	4096	3727	3446	3033	2431	2030	1744	1529	1362
2/B100-16	2907	2644	2458	2316	2202	2108	1961	1849	1757	1650	1478
2/B150-16	3965	3605	3349	3154	2998	2869	2590	2277	1955	1714	1526
2/B150-20	4262	3874	3599	3388	3220	3082	2863	2697	2564	2377	2116
2/B150-24	4533	4121	3828	3604	3425	3277	3044	2867	2725	2608	2510
2/B200-16	4989	4535	4212	3624	3110	2724	2184	1824	1567	1374	1224
2/B200-20	5358	4870	4523	4258	4046	3871	3526	3131	2687	2354	2095
2/B250-20	6417	5832	5415	5097	4380	3835	3073	2565	2202	1930	1718
	CONTINUOUS DOUBLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2972	2478	2151	1914	1726	1566	1377	1182	1022	904	813
B150-20	3520	2933	2541	2277	2033	1876	1592	1419	1224	1079	968
B150-24	4096	3405	2949	2623	2368	2162	1867	1624	1414	1244	1113
B200-16	3373	2814	2425	2149	1937	1780	1509	1273	1101	973	872
B200-20	4098	3408	2951	2626	2370	2164	1869	1626	1417	1247	1116
B250-20	4565	3782	3266	2881	2591	2364	1965	1645	1417	1247	1116
2/B100-16	3754	3241	2843	2549	2341	2152	1891	1676	1522	1423	1321
2/B150-16	4645	3965	3475	3129	2842	2621	2299	2027	1861	1688	1558
2/B150-20	5493	4739	4223	3820	3494	3238	2830	2527	2319	2117	1968
2/B150-24	6064	5483	4881	4434	4063	3743	3277	2927	2678	2449	2297
2/B200-16	5288	4498	3926	3518	3209	2938	2551	2290	2047	1796	1591
2/B200-20	6292	5406	4782	4292	3914	3625	3164	2813	2542	2344	2165
2/B250-20	6878	5761	5012	4456	4032	3689	3179	2798	2501	2258	2011
	CONTINUOUS TRIPLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	3331	2779	2401	2127	1914	1757	1493	1317	1133	996	888
B150-20	3938	3286	2846	2523	2293	2076	1812	1561	1368	1199	1070
B150-24	4448	3818	3308	2931	2648	2417	2065	1836	1586	1391	1239
B200-16	3782	3165	2733	2401	2159	1971	1678	1424	1225	1076	960
B200-20	4581	3821	3311	2934	2652	2419	2068	1838	1590	1394	1243
B250-20	5112	4243	3663	3233	2903	2645	2206	1795	1560	1375	1243
2/B100-16	3585	3259	3028	2850	2597	2397	2090	1873	1689	1551	1439
2/B150-16	4897	4436	3888	3486	3190	2924	2545	2287	2049	1882	1740
2/B150-20	5263	4784	4442	4181	3909	3630	3180	2826	2571	2363	2201
2/B150-24	5600	5089	4726	4448	4226	4043	3668	3276	2978	2752	2542
2/B200-16	5880	5028	4396	3935	3596	3291	2712	2259	1933	1689	1497
2/B200-20	6621	6012	5329	4810	4383	4062	3522	3163	2845	2608	2418
2/B250-20	7714	6461	5613	5000	4527	4133	3557	3146	2735	2392	2124

FLOORS STANDARD 3kPa LOAD CONTINUED



Perimeter bearers – standard load

Supporting standard 3kPa commercial floor loads only

- Live Load: 3kPa
- Dead Load: 0.75kPa
- Point Load: 2.7kN
- Supports: U Pier Head

Table 3	MAXIMUM BEARER SPAN (mm)										
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)										
	900	1200	1500	1800	2100	2400	3000	3600	4200	4800	5400
	SINGLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	3154	2869	2590	2383	2211	2052	1825	1665	1523	1336	1190
B150-20	3388	3082	2863	2697	2564	2419	2169	1963	1811	1695	1602
B150-24	3604	3277	3044	2867	2725	2608	2425	2285	2115	1968	1851
B200-16	3861	3347	2992	2722	2521	2366	2106	1915	1762	1633	1465
B200-20	4258	3871	3526	3235	2985	2785	2491	2286	2099	1957	1842
B250-20	5097	4568	4096	3727	3446	3225	2814	2349	2017	1768	1574
	CONTINUOUS DOUBLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	3178	2673	2333	2067	1892	1734	1496	1358	1190	1088	1019
B150-20	3664	3069	2682	2381	2155	1973	1705	1506	1384	1236	1132
B150-24	4248	3578	3115	2778	2502	2313	1979	1765	1571	1448	1319
B200-16	3472	2898	2511	2252	2012	1861	1577	1414	1224	1079	968
B200-20	4179	3498	3038	2720	2440	2255	1927	1698	1522	1365	1220
B250-20	4611	3828	3307	2922	2637	2399	2044	1710	1473	1295	1159
	CONTINUOUS TRIPLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	3538	2972	2590	2319	2094	1918	1659	1463	1358	1202	1105
B150-20	4099	3430	2984	2668	2406	2212	1897	1674	1503	1392	1252
B150-24	4448	3998	3477	3101	2803	2569	2227	1953	1765	1593	1463
B200-16	3889	3247	2812	2494	2276	2054	1779	1547	1368	1199	1070
B200-20	4680	3918	3400	3024	2746	2498	2145	1892	1693	1530	1363
B250-20	5166	4294	3707	3278	2909	2655	2206	1795	1654	1375	1291

Perimeter bearers – standard load

Supporting standard commercial 3kPa floor loads and load bearing walls (single storey – sheet roof)

- Roof Mass: 40 kg/m²
- Wall Height: 0.45kPa @ 2.7m height
- Live Load: 3kPa
- Dead Load: 0.75kPa
- Point Load: 2.7kN
- Supports: U Pier Head

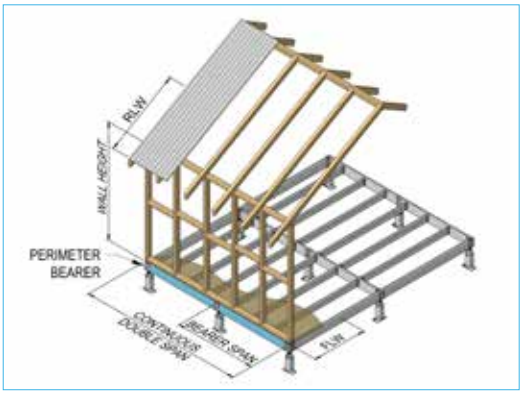
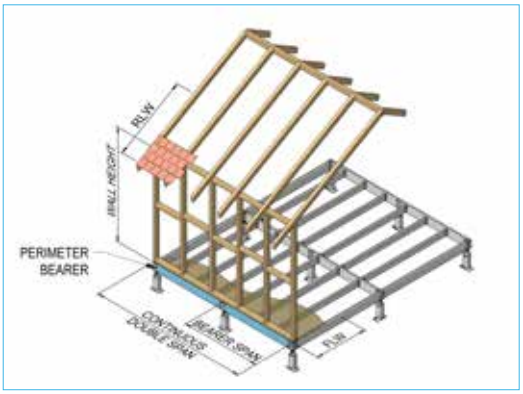


Table 4	MAXIMUM BEARER SPAN (mm)											
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)											
	900	1200	2100	3000	900	1200	2100	3000	900	1200	2100	3000
	ROOF LOAD WIDTH – RLW 2000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2441	2330	1989	1703	2473	2192	1655	1388	2773	2445	1859	1513
B150-20	2623	2503	2241	2009	2851	2510	1903	1545	3200	2812	2118	1724
B150-24	2790	2661	2383	2195	3318	2923	2216	1825	3445	3276	2468	2011
B200-16	3070	2850	2307	1960	2702	2367	1781	1445	3016	2649	1975	1594
B200-20	3297	3145	2702	2336	3253	2858	2147	1755	3648	3208	2401	1949
B250-20	3948	3765	3135	2449	3551	3108	2309	1781	3982	3481	2575	1976
	ROOF LOAD WIDTH – RLW 4500 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2256	2173	1904	1653	2266	2016	1565	1321	2519	2275	1756	1447
B150-20	2425	2335	2130	1944	2590	2325	1813	1486	2901	2593	2002	1652
B150-24	2579	2484	2265	2108	3014	2709	2084	1732	3185	3023	2336	1925
B200-16	2838	2673	2209	1901	2436	2176	1666	1387	2740	2435	1868	1528
B200-20	3048	2935	2593	2270	2945	2636	2024	1670	3305	2949	2284	1871
B250-20	3650	3513	3002	2300	3210	2848	2167	1674	3607	3201	2380	1796
	ROOF LOAD WIDTH – RLW 6000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2169	2097	1858	1626	2140	1934	1520	1280	2394	2159	1694	1420
B150-20	2331	2254	2073	1908	2457	2224	1743	1455	2759	2480	1939	1610
B150-24	2479	2397	2204	2062	2862	2580	2019	1684	3061	2892	2279	1883
B200-16	2728	2585	2152	1868	2318	2073	1610	1339	2589	2327	1824	1485
B200-20	2930	2832	2536	2225	2800	2513	1963	1626	3145	2819	2200	1837
B250-20	3509	3391	2900	2220	3032	2725	2090	1616	3404	3047	2275	1776
	ROOF LOAD WIDTH – RLW 8000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2070	2011	1803	1592	2007	1843	1468	1234	2263	2045	1629	1390
B150-20	2225	2161	2005	1863	2314	2094	1667	1418	2584	2347	1869	1560
B150-24	2367	2298	2132	2007	2693	2440	1944	1628	2923	2744	2173	1838
B200-16	2604	2483	2085	1823	2164	1960	1545	1280	2426	2197	1729	1438
B200-20	2797	2715	2466	2170	2622	2380	1892	1574	2938	2671	2109	1772
B250-20	3350	3251	2733	2121	2835	2558	1984	1545	3189	2874	2199	1741



Perimeter bearers – standard load

Supporting standard commercial 3kPa floor loads and load bearing walls (single storey – tiled roof)

- Roof Mass: 90 kg/m²
- Wall Height: 0.45kPa @ 2.7m height
- Live Load: 3kPa
- Dead Load: 0.75kPa
- Point Load: 2.7kN
- Supports: U Pier Head

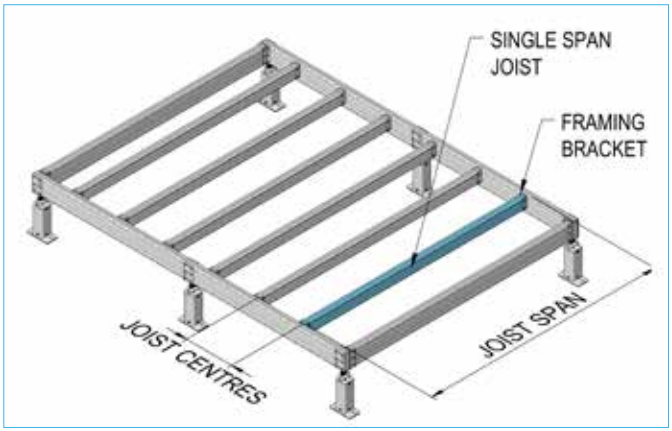
Table 5	MAXIMUM BEARER SPAN (mm)											
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)											
	900	1200	2100	3000	900	1200	2100	3000	900	1200	2100	3000
	ROOF LOAD WIDTH – RLW 2000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2256	2173	1904	1653	2266	2016	1565	1321	2519	2275	1756	1447
B150-20	2425	2335	2130	1944	2590	2325	1813	1486	2901	2593	2002	1652
B150-24	2579	2484	2265	2108	3014	2709	2084	1732	3185	3023	2336	1925
B200-16	2838	2673	2209	1901	2436	2176	1666	1387	2740	2435	1868	1528
B200-20	3048	2935	2593	2270	2945	2636	2024	1670	3305	2949	2284	1871
B250-20	3650	3513	3002	2300	3210	2848	2167	1674	3607	3201	2380	1796
	ROOF LOAD WIDTH – RLW 4500 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1983	1933	1751	1527	1895	1738	1420	1191	2117	1938	1565	1360
B150-20	2131	2077	1942	1820	2169	1983	1598	1378	2430	2231	1812	1513
B150-24	2267	2209	2065	1954	2523	2318	1875	1575	2799	2590	2087	1775
B200-16	2494	2391	2021	1780	2027	1861	1486	1224	2283	2074	1658	1373
B200-20	2679	2610	2399	2117	2459	2259	1824	1525	2763	2521	2022	1702
B250-20	3208	3125	2575	2024	2656	2414	1871	1475	2979	2696	2116	1663
	ROOF LOAD WIDTH – RLW 6000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1870	1830	1679	1425	1735	1601	1340	1134	1938	1810	1474	1262
B150-20	2009	1966	1857	1759	1982	1843	1508	1300	2229	2052	1683	1440
B150-24	2137	2091	1974	1880	2315	2135	1763	1504	2591	2393	1967	1678
B200-16	2352	2257	1932	1717	1857	1707	1408	1143	2074	1910	1557	1282
B200-20	2526	2471	2307	2040	2255	2073	1701	1453	2522	2328	1902	1620
B250-20	3025	2959	2358	1889	2413	2223	1714	1378	2719	2464	1938	1548
	ROOF LOAD WIDTH – RLW 8000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1751	1721	1598	1308	1562	1465	1231	1072	1753	1634	1388	1190
B150-20	1883	1849	1762	1688	1793	1667	1412	1214	2003	1871	1564	1376
B150-24	2003	1967	1874	1797	2081	1944	1629	1426	2337	2180	1837	1579
B200-16	2204	2096	1831	1612	1660	1546	1277	1051	1866	1734	1439	1177
B200-20	2367	2325	2180	1952	2021	1889	1574	1335	2277	2115	1772	1504
B250-20	2835	2735	2121	1733	2160	1986	1543	1266	2427	2218	1743	1389

FLOORS HEAVIER 3kPa LOAD

Joists – heavier load

Supporting heavier commercial 3kPa floor loads only

- Live Load: 3kPa
- Dead Load: 1.1kPa
- Point Load: 2.7kN
- End Supports: Framing Bracket 4 hole or top bracket
- Mid Supports: Top Hat Bracket or framing bracket



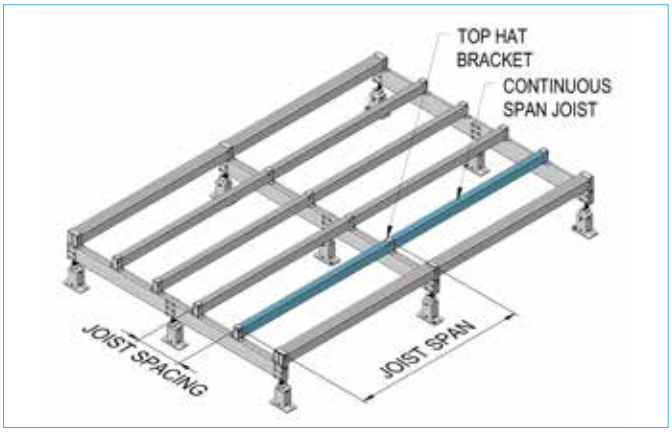


Table 6	MAXIMUM FLOOR JOIST SPAN (mm)								
BOXSPAN SECTION	FLOOR JOIST CENTRES (mm)								
	400	450	600	400	450	600	400	450	600
	SINGLE SPAN			CONTINUOUS DOUBLE SPAN			CONTINUOUS TRIPLE SPAN		
B100-12	2596	2496	2268	2441	2253	1842	2745	2534	2074
B100-16	2845	2735	2485	3107	3075	2542	3134	3126	2725
B150-16	3815	3742	3248	3751	3457	2820	4219	3890	3176
B150-20	4003	3994	3443	4653	4636	3888	4693	4676	4369
B150-24	4292	4280	3726	4815	4802	4541	4857	4844	4621
B200-16	4699	4685	4140	4280	3943	3207	4815	4437	3617
B200-20	5055	5042	4513	5693	5278	4371	5914	5891	4913
B250-20	5921	5906	5479	5996	5531	4519	6744	6222	5088

NOTES

The maximum allowable spans have been designed to meet the strength and servicability limits specified in AS1170.1 Section 3 Imposed Actions Table 3.1

Internal bearers – heavier load

Supporting heavier commercial 3kPa floor loads only

- Live Load: 3kPa
- Dead Load: 1.1kPa
- Point Load: 2.7kN
- End Supports: Framing Bracket into Pier Head
- Mid Supports: U Pier Head

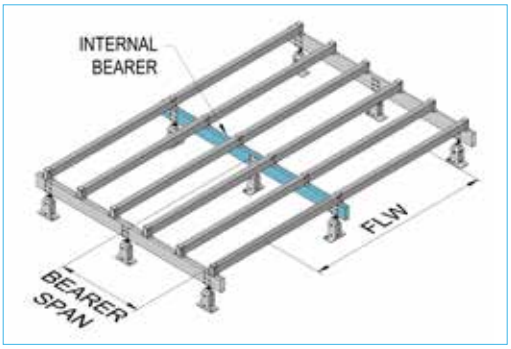


Table 7	MAXIMUM BEARER SPAN (mm)										
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)										
	900	1200	1500	1800	2100	2400	3000	3600	4200	4800	5400
	SINGLE SPAN										
B100-16	2194	1998	1859	1752	1668	1596	1453	1333	1211	1077	–
B150-16	2987	2717	2501	2307	2120	1971	1756	1605	1491	1399	1265
B150-20	3209	2918	2712	2554	2429	2325	2080	1887	1745	1635	1547
B150-24	3412	3103	2883	2716	2581	2471	2298	2164	2030	1894	1779
B200-16	3714	3233	2877	2621	2433	2286	1937	1618	1391	1220	1087
B200-20	4031	3665	3401	3116	2870	2680	2403	2193	2017	1885	1762
B250-20	4825	4386	3938	3588	3215	2816	2258	1886	1620	1420	1265
2/B100-16	2753	2505	2329	2194	2087	1998	1859	1752	1668	1542	1373
2/B150-16	3754	3414	3172	2987	2839	2717	2501	2114	1816	1592	1418
2/B150-20	4035	3668	3408	3209	3050	2918	2712	2554	2429	2208	1965
2/B150-24	4292	3902	3624	3412	3243	3103	2883	2716	2581	2471	2378
2/B200-16	4723	4293	3987	3364	2887	2529	2028	1694	1456	1277	1138
2/B200-20	5072	4611	4282	4031	3830	3665	3401	2907	2495	2186	1946
2/B250-20	6074	5520	5126	4739	4065	3560	2853	2382	2045	1792	1596
	CONTINUOUS DOUBLE SPAN										
B100-16	2841	2371	2042	1837	1631	1495	1290	1101	954	844	762
B150-16	3355	2806	2422	2150	1940	1787	1516	1320	1141	1007	903
B150-20	3896	3255	2816	2488	2268	2047	1770	1526	1316	1160	1038
B150-24	3229	2689	2322	2038	1856	1673	1411	1186	1026	908	816
B200-16	3898	3257	2818	2491	2270	2049	1772	1530	1319	1163	1040
B200-20	4342	3614	3108	2751	2456	2253	1827	1530	1319	1163	1040
B250-20	3625	3104	2738	2439	2248	2049	1824	1595	1464	1374	1239
2/B100-16	4472	3791	3323	2976	2731	2495	2180	1940	1769	1602	1491
2/B150-16	5284	4565	4072	3670	3341	3096	2723	2417	2210	2018	1890
2/B150-20	5740	5216	4693	4239	3870	3591	3143	2805	2540	2348	2176
2/B150-24	5080	4289	3754	3355	3052	2811	2432	2165	1907	1663	1472
2/B200-16	6050	5200	4584	4116	3743	3446	3001	2692	2424	2241	2053
2/B200-20	6568	5500	4768	4238	3827	3503	3006	2656	2377	2097	1869
2/B250-20	6568	5500	4768	4238	3827	3503	3006	2656	2377	2097	1869
	CONTINUOUS TRIPLE SPAN										
B100-16	3191	2649	2299	2021	1841	1661	1424	1225	1054	927	828
B150-16	3761	3155	2730	2401	2161	1975	1685	1476	1271	1115	995
B150-20	4211	3649	3169	2791	2512	2304	1962	1715	1473	1292	1151
B150-24	3624	2994	2581	2296	2049	1873	1583	1323	1138	1000	892
B200-16	4371	3651	3172	2793	2514	2305	1965	1720	1477	1295	1154
B200-20	4872	4054	3477	3068	2725	2456	2010	1720	1477	1295	1154
B250-20	3394	3086	2867	2700	2483	2304	1996	1817	1609	1473	1394
2/B100-16	4635	4213	3718	3333	3032	2793	2429	2157	1953	1823	1652
2/B150-16	4982	4529	4205	3959	3738	3454	3020	2725	2453	2281	2091
2/B150-20	5301	4818	4473	4211	4001	3828	3499	3153	2842	2612	2426
2/B150-24	5656	4807	4203	3760	3414	3146	2516	2094	1792	1564	1386
2/B200-16	6267	5695	5113	4598	4189	3860	3361	2994	2732	2483	2309
2/B200-20	7368	6166	5354	4755	4295	3929	3373	2960	2537	2218	1970
2/B250-20	7368	6166	5354	4755	4295	3929	3373	2960	2537	2218	1970

Perimeter bearers – heavier load

Supporting heavier commercial 3kPa floor loads only

- Live Load: 3kPa
- Dead Load: 1.1kPa
- Point Load: 2.7kN
- Supports: U Pier Head

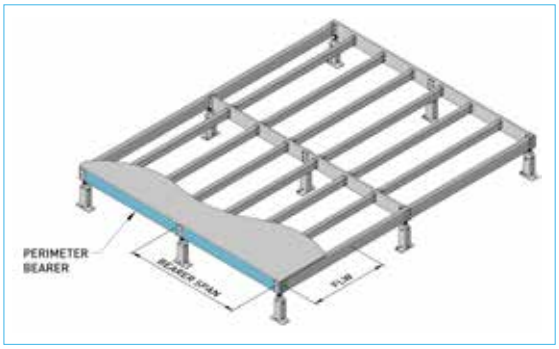
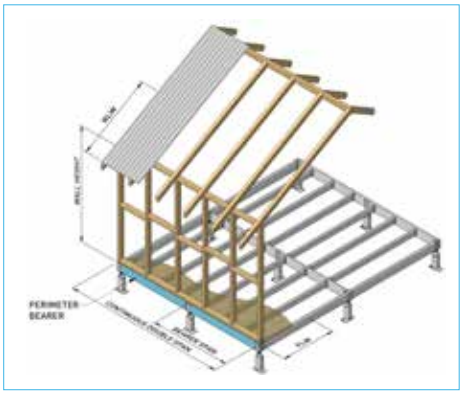


Table 8	MAXIMUM BEARER SPAN (mm)										
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)										
	900	1200	1500	1800	2100	2400	3000	3600	4200	4800	5400
	SINGLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2987	2717	2501	2307	2120	1971	1756	1605	1415	1241	1106
B150-20	3209	2918	2712	2554	2429	2325	2080	1887	1745	1635	1547
B150-24	3412	3103	2883	2716	2581	2471	2298	2164	2030	1894	1779
B200-16	3714	3233	2877	2621	2433	2286	2023	1841	1689	1528	1361
B200-20	4031	3665	3401	3116	2870	2680	2403	2193	2017	1885	1723
B250-20	4825	4386	3938	3588	3319	3104	2613	2181	1873	1642	1462
	CONTINUOUS DOUBLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	3023	2538	2232	1975	1821	1640	1438	1265	1129	1042	977
B150-20	3492	2924	2542	2287	2046	1891	1614	1444	1299	1167	1055
B150-24	4075	3403	2959	2644	2389	2194	1895	1662	1498	1375	1228
B200-16	3315	2777	2397	2123	1922	1764	1503	1320	1141	1007	899
B200-20	3994	3335	2893	2572	2335	2125	1848	1605	1444	1271	1137
B250-20	4393	3658	3159	2787	2495	2259	1899	1590	1346	1207	1080
	CONTINUOUS TRIPLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	3380	2839	2472	2215	1996	1848	1575	1409	1249	1136	1045
B150-20	3909	3274	2846	2531	2303	2095	1830	1587	1430	1303	1171
B150-24	4211	3814	3318	2949	2686	2444	2102	1863	1665	1516	1372
B200-16	3711	3099	2703	2372	2138	1953	1671	1463	1271	1105	925
B200-20	4478	3736	3242	2880	2598	2374	2037	1823	1604	1421	1266
B250-20	4936	4098	3526	3116	2725	2548	2143	1755	1526	1312	1200



Perimeter bearers – heavier load

Supporting heavier commercial 3kPa floor loads and load bearing walls (single storey – sheet roof)

- Roof Mass: 40 kg/m²
- Wall Weight: 0.45kPa @ 2.7m height
- Live Load: 3kPa
- Dead Load: 1.1kPa
- Point Load: 2.7kN
- Supports: U Pier Head

Table 9	MAXIMUM BEARER SPAN (mm)											
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)											
	900	1200	2100	3000	900	1200	2100	3000	900	1200	2100	3000
	ROOF LOAD WIDTH – RLW 2000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2378	2261	1925	1650	2401	2111	1588	1320	2702	2360	1804	1445
B150-20	2555	2429	2160	1941	2770	2425	1839	1485	3095	2731	2030	1648
B150-24	2718	2582	2297	2107	3222	2827	2116	1729	3355	3178	2367	1921
B200-16	2990	2771	2233	1896	2606	2294	1694	1385	2918	2552	1891	1525
B200-20	3212	3051	2620	2264	3157	2767	2054	1667	3527	3092	2310	1868
B250-20	3845	3652	3033	2295	3429	2988	2206	1670	3849	3354	2426	1790
	ROOF LOAD WIDTH – RLW 4500 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2210	2121	1848	1605	2197	1958	1512	1254	2452	2190	1683	1403
B150-20	2375	2279	2063	1882	2517	2260	1731	1435	2821	2512	1924	1581
B150-24	2526	2423	2193	2033	2931	2616	2006	1652	3118	2928	2268	1857
B200-16	2779	2610	2139	1841	2372	2102	1599	1307	2659	2355	1813	1458
B200-20	2985	2863	2522	2192	2865	2548	1951	1596	3216	2858	2182	1812
B250-20	3574	3427	2872	2164	3116	2761	2075	1576	3492	3092	2234	1759
	ROOF LOAD WIDTH – RLW 6000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2129	2052	1807	1579	2084	1885	1473	1222	2336	2098	1634	1383
B150-20	2288	2204	2013	1850	2397	2152	1673	1408	2696	2409	1874	1546
B150-24	2433	2345	2140	1994	2794	2503	1950	1612	3004	2806	2181	1827
B200-16	2678	2529	2089	1809	2261	2011	1551	1265	2521	2271	1736	1402
B200-20	2876	2770	2470	2152	2733	2440	1898	1559	3054	2745	2116	1748
B250-20	3443	3316	2747	2093	2949	2634	1995	1525	3314	2952	2200	1718
	ROOF LOAD WIDTH – RLW 8000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2037	1972	1758	1512	1963	1794	1427	1183	2200	1991	1573	1345
B150-20	2189	2119	1953	1810	2264	2037	1607	1373	2524	2293	1822	1499
B150-24	2329	2253	2076	1945	2626	2377	1885	1565	2875	2667	2098	1756
B200-16	2562	2435	2028	1768	2110	1909	1495	1213	2365	2133	1667	1351
B200-20	2752	2662	2407	2103	2558	2320	1834	1515	2870	2591	2033	1689
B250-20	3295	3187	2596	2004	2769	2484	1886	1462	3106	2788	2133	1645

Perimeter bearers – heavier load

Supporting heavier commercial 3kPa floor loads and load bearing walls (single storey – tiled roof)

- Roof Mass: 90 kg/m²
- Wall Weight: 0.45kPa @ 2.7m height
- Live Load: 3kPa
- Dead Load: 1.1kPa
- Point Load: 2.7kN
- Supports: U Pier Head

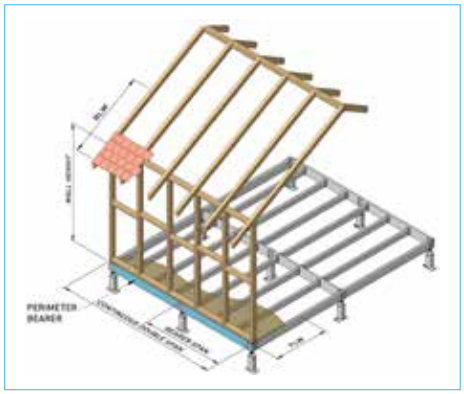


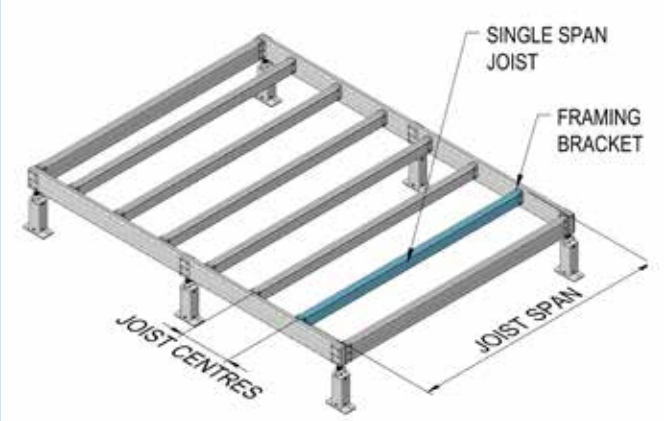
Table 10	MAXIMUM BEARER SPAN (mm)											
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)											
	900	1200	2100	3000	900	1200	2100	3000	900	1200	2100	3000
	ROOF LOAD WIDTH – RLW 2000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2210	2121	1848	1605	2197	1958	1512	1254	2452	2190	1683	1403
B150-20	2375	2279	2063	1882	2517	2260	1731	1435	2821	2512	1924	1581
B150-24	2526	2423	2193	2033	2931	2616	2006	1652	3118	2928	2268	1857
B200-16	2779	2610	2139	1841	2372	2102	1599	1307	2659	2355	1813	1458
B200-20	2985	2863	2522	2192	2865	2548	1951	1596	3216	2858	2182	1812
B250-20	3574	3427	2872	2164	3116	2761	2075	1576	3492	3092	2234	1759
	ROOF LOAD WIDTH – RLW 4500 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1955	1900	1710	1447	1860	1691	1381	1147	2071	1891	1518	1277
B150-20	2101	2041	1896	1771	2120	1936	1547	1320	2376	2166	1731	1453
B150-24	2235	2170	2016	1898	2469	2265	1821	1520	2759	2525	2018	1695
B200-16	2459	2349	1970	1728	1983	1817	1443	1162	2231	2020	1600	1302
B200-20	2641	2565	2346	2055	2407	2196	1755	1473	2711	2457	1956	1638
B250-20	3162	3070	2454	1918	2593	2353	1783	1400	2911	2639	1988	1552
	ROOF LOAD WIDTH – RLW 6000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1848	1803	1644	1355	1700	1565	1293	1097	1902	1757	1434	1220
B150-20	1985	1937	1817	1716	1946	1802	1467	1248	2181	2006	1632	1400
B150-24	2112	2060	1933	1832	2275	2085	1704	1458	2542	2340	1904	1618
B200-16	2324	2219	1889	1670	1824	1665	1358	1089	2033	1869	1508	1220
B200-20	2496	2435	2255	1986	2208	2025	1646	1383	2473	2283	1852	1557
B250-20	2989	2915	2256	1796	2366	2166	1641	1311	2658	2424	1803	1475
	ROOF LOAD WIDTH – RLW 8000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1735	1700	1536	1249	1537	1439	1196	1042	1722	1601	1361	1150
B150-20	1864	1827	1730	1651	1762	1633	1378	1173	1971	1840	1522	1318
B150-24	1983	1943	1840	1756	2046	1908	1583	1382	2301	2135	1787	1529
B200-16	2182	2061	1793	1539	1631	1515	1229	1006	1838	1696	1383	1124
B200-20	2344	2296	2131	1906	1987	1854	1531	1276	2237	2070	1714	1436
B250-20	2807	2655	2038	1655	2121	1928	1484	1211	2374	2185	1675	1340

FLOORS STANDARD 4kPa LOAD

Joists – standard load

Supporting standard commercial 4kPa floor loads only

- Live Load: 4kPa
- Dead Load: 0.75kPa
- Point Load: 3.6kN
- End Supports: Framing Bracket 4 hole or top bracket
- Mid Supports: Top Hat Bracket or framing bracket



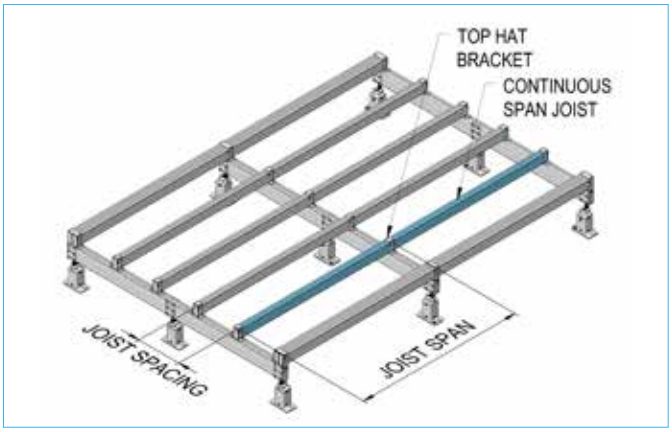


Table 11	MAXIMUM FLOOR JOIST SPAN (mm)								
BOXSPAN SECTION	FLOOR JOIST CENTRES (mm)								
	400	450	600	400	450	600	400	450	600
	SINGLE SPAN			CONTINUOUS DOUBLE SPAN			CONTINUOUS TRIPLE SPAN		
B100-12	2485	2365	2170	2173	2001	1623	2444	2252	1835
B100-16	2770	2626	2395	2971	2750	2265	3078	2822	2505
B150-16	3589	3347	3011	3333	3068	2415	3751	3453	2744
B150-20	3835	3550	3180	4524	4196	3477	4693	4642	3908
B150-24	4185	3850	3430	4815	4802	4034	4857	4844	4087
B200-16	4699	4290	3789	3800	3495	2705	4277	3935	3074
B200-20	5055	4687	4110	5102	4724	3898	5732	5309	4384
B250-20	5921	5750	4915	5334	4912	3942	6001	5528	4479

NOTES

The maximum allowable spans have been designed to meet the strength and serviceability limits specified in AS1170.1 Section 3 Imposed Actions Table 3.1

Internal bearers – standard load

Supporting standard commercial 4kPa floor loads only

- Live Load: 4kPa
- Dead Load: 0.75kPa
- Point Load: 3.6kN
- End Supports: Framing Bracket into Pier Head
- Mid Supports: U Pier Head

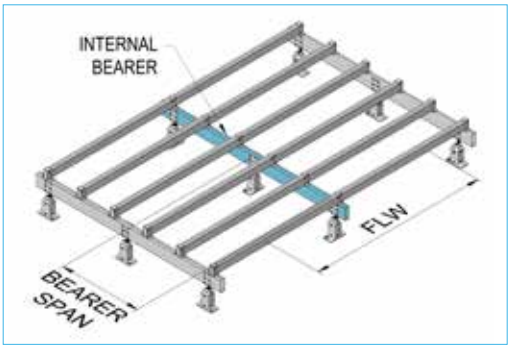


Table 12	MAXIMUM BEARER SPAN (mm)										
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)										
	900	1200	1500	1800	2100	2400	3000	3600	4200	4800	5400
	SINGLE SPAN										
B100-16	2179	1985	1838	1683	1570	1484	1345	1199	1039	–	–
B150-16	2963	2563	2319	2101	1934	1805	1615	1480	1370	1202	1071
B150-20	3186	2898	2687	2466	2305	2142	1899	1730	1607	1510	1432
B150-24	3388	3081	2863	2696	2563	2454	2227	2012	1857	1731	1629
B200-16	3415	2957	2638	2414	2241	2041	1638	1369	1177	1033	–
B200-20	4002	3488	3137	2846	2631	2465	2208	2000	1849	1673	1490
B250-20	4668	4050	3610	3164	2715	2379	1908	1594	1370	1202	1071
2/B100-16	2733	2487	2313	2179	2072	1985	1838	1683	1487	1304	1162
2/B150-16	3728	3390	3149	2963	2736	2563	2140	1787	1535	1346	1200
2/B150-20	4006	3642	3383	3186	3028	2898	2687	2466	2129	1866	1661
2/B150-24	4261	3874	3598	3388	3220	3081	2863	2696	2563	2403	2139
2/B200-16	4689	4190	3404	2841	2439	2137	1714	1433	1232	1081	–
2/B200-20	5036	4578	4251	4002	3729	3488	2942	2455	2108	1848	1645
2/B250-20	6031	5481	4796	4001	3433	3007	2410	2013	1729	1516	1350
	CONTINUOUS DOUBLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2547	2117	1850	1612	1464	1357	1113	940	817	729	657
B150-20	3015	2504	2169	1922	1732	1568	1335	1123	973	861	776
B150-24	3503	2908	2509	2237	1997	1844	1544	1296	1120	989	887
B200-16	2885	2393	2054	1839	1628	1485	1200	1011	877	780	706
B200-20	3506	2910	2511	2240	1999	1846	1548	1299	1123	991	889
B250-20	3888	3223	2771	2429	2184	1923	1548	1299	1123	991	872
2/B100-16	3311	2811	2456	2220	2005	1871	1607	1452	1329	1192	1103
2/B150-16	4075	3427	2999	2705	2440	2272	1953	1745	1564	1449	1361
2/B150-20	4843	4177	3692	3312	3021	2798	2434	2183	1974	1842	1683
2/B150-24	5602	4824	4268	3834	3502	3239	2824	2514	2304	2095	1947
2/B200-16	4606	3872	3379	3019	2756	2514	2185	1876	1601	1394	1231
2/B200-20	5528	4720	4142	3710	3369	3113	2717	2401	2176	1985	1857
2/B250-20	5920	4942	4270	3787	3414	3128	2682	2353	2023	1775	1583
	CONTINUOUS TRIPLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2852	2365	2037	1829	1616	1469	1239	1037	893	788	700
B150-20	3376	2805	2422	2138	1921	1761	1490	1251	1077	946	844
B150-24	3924	3259	2811	2484	2262	2034	1736	1450	1247	1094	977
B200-16	3235	2696	2310	2027	1839	1653	1339	1120	965	848	759
B200-20	3926	3261	2813	2487	2263	2036	1739	1454	1250	1097	979
B250-20	4364	3621	3097	2692	2428	2171	1740	1375	1250	1091	890
2/B100-16	3370	3064	2757	2460	2272	2060	1827	1592	1443	1368	1221
2/B150-16	4554	3837	3357	3004	2745	2508	2176	1930	1751	1592	1466
2/B150-20	4947	4496	4126	3704	3378	3134	2739	2430	2214	2021	1878
2/B150-24	5263	4783	4442	4181	3918	3631	3175	2813	2553	2344	2169
2/B200-16	5147	4339	3787	3380	3033	2653	2120	1763	1507	1313	1161
2/B200-20	6165	5279	4631	4149	3776	3474	3018	2709	2427	2236	2031
2/B250-20	6633	5535	4793	4251	3832	3498	2995	2496	2138	1868	1657

FLOORS STANDARD 4kPa LOAD CONTINUED

Perimeter bearers – standard load

Supporting standard commercial 4kPa floor loads only

- Live Load: 4kPa
- Dead Load: 0.75kPa
- Point Load: 3.6kN
- Supports: U Pier Head

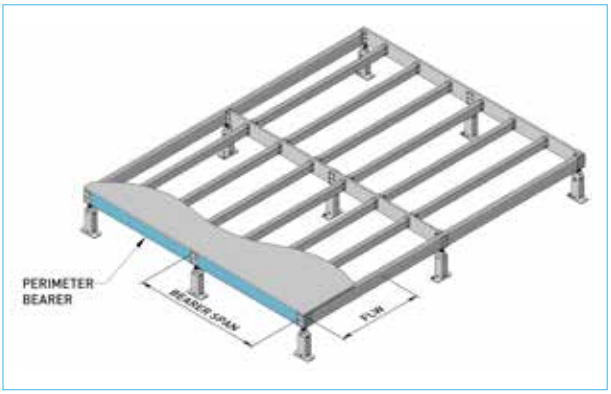


Table 13	MAXIMUM BEARER SPAN (mm)										
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)										
	900	1200	1500	1800	2100	2400	3000	3600	4200	4800	5400
	SINGLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2963	2563	2319	2101	1934	1805	1615	1393	1197	1051	–
B150-20	3186	2898	2687	2466	2305	2142	1899	1730	1607	1510	1432
B150-24	3388	3081	2863	2696	2563	2454	2227	2012	1857	1731	1629
B200-16	3415	2957	2638	2414	2241	2081	1854	1673	1473	1292	1151
B200-20	4002	3488	3137	2846	2631	2465	2208	2000	1849	1637	1457
B250-20	4668	4050	3610	3293	3045	2753	2208	1844	1584	1389	1237
	CONTINUOUS DOUBLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2748	2307	1988	1797	1600	1478	1278	1117	1022	921	836
B150-20	3165	2638	2302	2025	1855	1677	1454	1281	1137	1005	902
B150-24	3672	3066	2669	2367	2134	1953	1677	1484	1327	1169	1046
B200-16	2977	2475	2142	1905	1711	1554	1335	1123	973	861	776
B200-20	3605	2993	2594	2314	2070	1903	1619	1422	1227	1082	970
B250-20	3938	3263	2808	2468	2219	2000	1609	1336	1166	1028	872
	CONTINUOUS TRIPLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	3050	2557	2250	1977	1821	1633	1416	1236	1110	1005	889
B150-20	3522	2942	2552	2286	2043	1874	1600	1418	1258	1113	993
B150-24	4108	3428	2973	2644	2383	2180	1875	1644	1469	1303	1161
B200-16	3337	2777	2392	2117	1903	1736	1475	1251	1077	894	844
B200-20	4034	3354	2902	2572	2323	2116	1833	1585	1371	1203	1073
B250-20	4415	3660	3129	2692	2428	2192	1761	1375	1299	1091	890

Perimeter bearers – standard load

Supporting standard commercial 4kPa floor loads and load bearing walls (single storey – sheet roof)

- Roof Mass: 40kg/m²
- Wall Weight: 0.45kPa at 2.7m Height
- Live Load: 4kPa
- Dead Load: 0.75kPa
- Point Load: 3.6kN
- Supports: U Pier Head

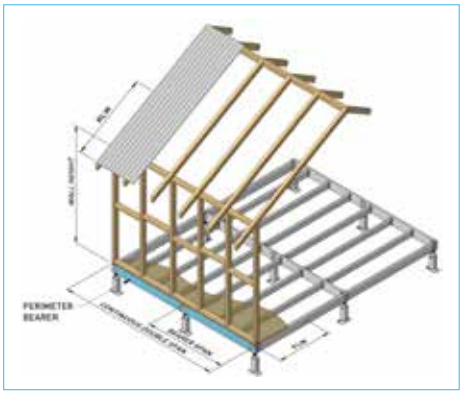
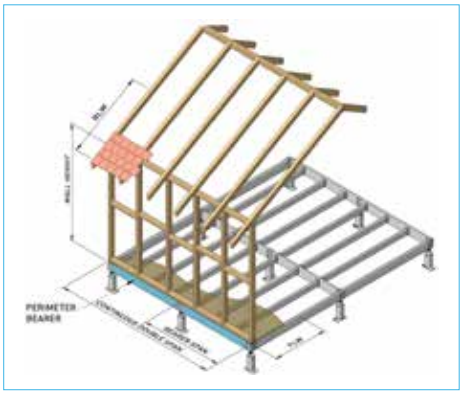


Table 14	MAXIMUM BEARER SPAN (mm)											
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)											
	900	1200	2100	3000	900	1200	2100	3000	900	1200	2100	3000
	ROOF LOAD WIDTH – RLW 2000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2370	2251	1787	1492	2242	1949	1459	1172	2491	2175	1610	1316
B150-20	2546	2419	2117	1795	2560	2248	1649	1365	2870	2497	1855	1480
B150-24	2708	2572	2285	2094	2980	2601	1927	1550	3342	2911	2148	1731
B200-16	2896	2597	2062	1748	2411	2090	1531	1199	2717	2342	1707	1333
B200-20	3200	3038	2443	2081	2913	2533	1878	1502	3266	2839	2084	1672
B250-20	3831	3552	2694	1977	3177	2748	1957	1443	3558	3071	2181	1557
	ROOF LOAD WIDTH – RLW 4500 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2204	2114	1728	1419	2050	1837	1406	1131	2304	2031	1540	1254
B150-20	2368	2271	2039	1751	2361	2081	1573	1299	2641	2333	1769	1433
B150-24	2519	2415	2184	2023	2754	2425	1852	1500	3076	2731	2050	1670
B200-16	2710	2469	1991	1702	2220	1949	1467	1141	2477	2180	1627	1275
B200-20	2976	2853	2368	2027	2687	2367	1794	1447	3003	2650	1988	1610
B250-20	3563	3371	2515	1879	2898	2541	1828	1367	3255	2853	1998	1534
	ROOF LOAD WIDTH – RLW 6000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2124	2046	1696	1378	1963	1760	1375	1109	2199	1957	1498	1230
B150-20	2282	2198	1997	1726	2265	2002	1533	1266	2521	2262	1710	1412
B150-24	2427	2337	2131	1984	2625	2341	1805	1473	2938	2614	1997	1635
B200-16	2617	2404	1952	1677	2109	1880	1433	1109	2363	2094	1582	1239
B200-20	2868	2761	2327	1997	2556	2284	1736	1406	2868	2545	1933	1577
B250-20	3434	3277	2419	1825	2769	2439	1759	1334	3104	2701	1973	1498
	ROOF LOAD WIDTH – RLW 8000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2033	1967	1656	1327	1867	1668	1318	1082	2076	1870	1449	1200
B150-20	2184	2113	1946	1696	2127	1914	1486	1228	2382	2136	1654	1387
B150-24	2323	2247	2068	1937	2476	2233	1731	1440	2779	2490	1928	1591
B200-16	2511	2326	1904	1635	1989	1791	1387	1069	2241	1992	1529	1193
B200-20	2746	2655	2275	1960	2414	2164	1670	1355	2719	2424	1872	1523
B250-20	3288	3165	2302	1758	2601	2324	1674	1285	2920	2599	1825	1375



Perimeter bearers – standard load

Supporting standard commercial 4kPa floor loads and load bearing walls (single storey – tiled roof)

- Roof Mass: 90kg/m²
- Wall Weight: 0.45kPa at 2.7m Max Height
- Live Load: 4kPa
- Dead Load: 0.75kPa
- Point Load: 2.7kN
- End Supports: U Pier Head

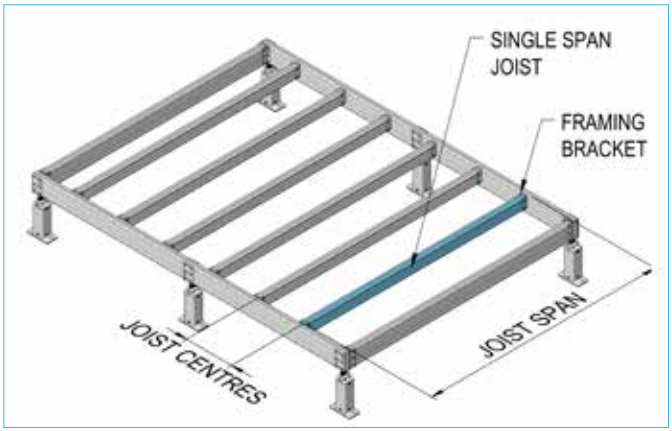
Table 15	MAXIMUM BEARER SPAN (mm)											
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)											
	900	1200	2100	3000	900	1200	2100	3000	900	1200	2100	3000
	ROOF LOAD WIDTH – RLW 2000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2204	2114	1728	1419	2050	1837	1406	1131	2304	2031	1540	1254
B150-20	2368	2271	2039	1751	2361	2081	1573	1299	2641	2333	1769	1433
B150-24	2519	2415	2184	2023	2754	2425	1852	1500	3076	2731	2050	1670
B200-16	2710	2469	1991	1702	2220	1949	1467	1141	2477	2180	1627	1275
B200-20	2976	2853	2368	2027	2687	2367	1794	1447	3003	2650	1988	1610
B250-20	3563	3371	2515	1879	2898	2541	1828	1367	3255	2853	1998	1534
	ROOF LOAD WIDTH – RLW 4500 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1951	1895	1618	1277	1764	1589	1263	1057	1967	1796	1411	1166
B150-20	2097	2036	1890	1665	2010	1833	1442	1192	2268	2035	1596	1355
B150-24	2230	2165	2009	1891	2348	2118	1666	1408	2628	2373	1869	1549
B200-16	2414	2245	1857	1573	1885	1693	1320	1030	2105	1895	1471	1148
B200-20	2636	2558	2212	1923	2290	2056	1610	1305	2558	2312	1823	1466
B250-20	3156	3046	2189	1691	2449	2205	1593	1238	2740	2442	1774	1375
	ROOF LOAD WIDTH – RLW 6000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1845	1799	1531	1205	1621	1487	1194	1021	1829	1659	1360	1119
B150-20	1982	1933	1812	1621	1864	1695	1378	1142	2079	1897	1518	1271
B150-24	2108	2056	1927	1826	2163	1973	1579	1334	2425	2217	1780	1483
B200-16	2278	2118	1786	1484	1731	1570	1226	973	1936	1766	1378	1084
B200-20	2492	2430	2123	1869	2100	1918	1528	1232	2356	2146	1707	1383
B250-20	2984	2799	2031	1596	2256	2032	1479	1170	2525	2232	1668	1311
	ROOF LOAD WIDTH – RLW 8000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1732	1697	1397	1120	1479	1379	1119	980	1653	1526	1246	1067
B150-20	1862	1824	1726	1569	1686	1554	1278	1063	1890	1743	1424	1190
B150-24	1980	1940	1835	1751	1965	1824	1485	1242	2206	2030	1658	1396
B200-16	2115	1983	1704	1380	1563	1445	1120	906	1757	1610	1258	1009
B200-20	2341	2292	2022	1750	1909	1761	1425	1148	2138	1969	1598	1287
B250-20	2780	2470	1852	1484	2018	1794	1351	1089	2238	2011	1522	1220

FLOORS HEAVIER 4kPa LOAD

Joists – heavier load

Supporting heavier commercial 4kPa floor loads only

- Live Load: 4kPa
- Dead Load: 1.1kPa
- Point Load: 3.6kN
- End Supports: Framing Bracket 4 hole or top bracket
- Mid Supports: Top Hat Bracket or framing bracket



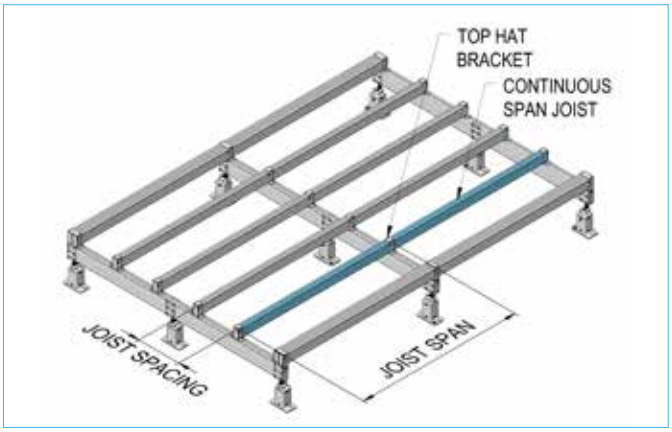


Table 16	MAXIMUM FLOOR JOIST SPAN (mm)								
BOXSPAN SECTION	FLOOR JOIST CENTRES (mm)								
	400	450	600	400	450	600	400	450	600
	SINGLE SPAN			CONTINUOUS DOUBLE SPAN			CONTINUOUS TRIPLE SPAN		
B100-12	2461	2366	2150	2085	1920	1530	2346	2161	1738
B100-16	2697	2593	2356	2858	2644	2175	3134	2972	2447
B150-16	3689	3547	3222	3198	2941	2276	3599	3311	2587
B150-20	3966	3813	3443	4357	4039	3343	4693	4537	3758
B150-24	4220	4058	3686	4815	4802	4052	4857	4844	4552
B200-16	4646	4467	4055	3645	3350	2550	4103	3772	2897
B200-20	4991	4799	4360	4910	4544	3745	5516	5107	4212
B250-20	5921	5750	4963	5119	4711	3715	5760	5303	4222

NOTES

The maximum allowable spans have been designed to meet the strength and serviceability limits specified in AS1170.1 Section 3 Imposed Actions Table 3.1

Internal bearers – heavier load

Supporting heavier commercial 4kPa floor loads only

- Live Load: 4kPa
- Dead Load: 1.1kPa
- Point Load: 3.6kN
- End Supports: Framing Bracket into Pier Head
- Mid Supports: U Pier Head

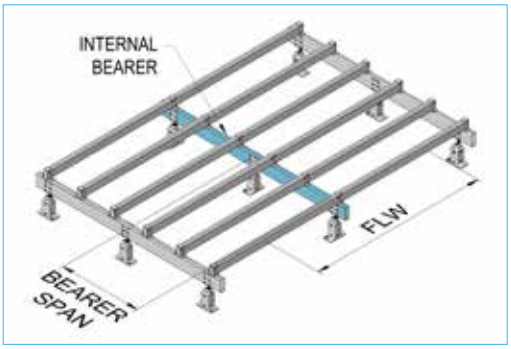


Table 17	MAXIMUM BEARER SPAN (mm)										
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)										
	900	1200	1500	1800	2100	2400	3000	3600	4200	4800	5400
	SINGLE SPAN										
B100-16	2082	1897	1765	1638	1531	1449	1295	1140	–	–	–
B150-16	2833	2494	2253	2034	1875	1751	1569	1439	1293	1134	1011
B150-20	3043	2769	2573	2401	2235	2072	1841	1681	1563	1470	1395
B150-24	3236	2943	2735	2576	2450	2345	2153	1951	1800	1679	1581
B200-16	3321	2867	2561	2348	2168	1925	1545	1292	1111	–	–
B200-20	3822	3391	3037	2762	2556	2397	2137	1941	1788	1578	1406
B250-20	4530	3926	3503	2984	2561	2244	1800	1504	1293	1134	1011
2/B100-16	2611	2377	2210	2082	1981	1897	1765	1633	1403	1231	1097
2/B150-16	3560	3238	3008	2833	2657	2494	2018	1686	1449	1271	1132
2/B150-20	3826	3479	3232	3043	2893	2769	2573	2339	2008	1760	1567
2/B150-24	4069	3700	3437	3236	3076	2943	2735	2576	2450	2267	2018
2/B200-16	4478	4007	3210	2679	2300	2016	1617	1352	1162	1020	–
2/B200-20	4809	4372	4060	3822	3619	3391	2774	2316	1989	1743	1552
2/B250-20	5759	5234	4522	3772	3237	2835	2273	1898	1631	1430	1274
	CONTINUOUS DOUBLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2453	2033	1773	1550	1418	1283	1053	890	777	693	625
B150-20	2903	2413	2078	1859	1653	1510	1262	1063	922	817	739
B150-24	3370	2806	2415	2134	1925	1760	1458	1225	1059	937	841
B200-16	2787	2314	1976	1755	1561	1403	1135	958	832	742	669
B200-20	3372	2808	2417	2137	1926	1763	1462	1228	1062	939	843
B250-20	3743	3093	2657	2340	2069	1815	1462	1228	1062	898	843
2/B100-16	3214	2728	2379	2127	1941	1817	1550	1413	1261	1145	1066
2/B150-16	3924	3312	2894	2591	2362	2170	1891	1668	1509	1407	1286
2/B150-20	4698	4059	3569	3211	2914	2713	2357	2094	1912	1763	1615
2/B150-24	5438	4678	4133	3710	3376	3128	2737	2425	2213	2016	1886
2/B200-16	4448	3740	3266	2908	2647	2423	2092	1766	1507	1311	1155
2/B200-20	5357	4569	3997	3585	3256	2989	2599	2323	2084	1917	1784
2/B250-20	5699	4749	4118	3653	3284	2993	2560	2221	1909	1676	1495
	CONTINUOUS TRIPLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2756	2293	1961	1729	1552	1420	1169	980	844	742	664
B150-20	3252	2723	2330	2052	1857	1679	1411	1180	1016	893	800
B150-24	3780	3157	2724	2385	2143	1951	1637	1368	1176	1033	923
B200-16	3120	2572	2221	1944	1749	1573	1264	1058	912	803	713
B200-20	3782	3160	2726	2388	2145	1954	1641	1372	1179	1036	925
B250-20	4197	3463	2969	2610	2275	2006	1641	1372	1179	925	874
2/B100-16	3219	2927	2658	2371	2157	1989	1726	1536	1406	1267	1170
2/B150-16	4392	3705	3240	2896	2631	2420	2094	1867	1676	1533	1379
2/B150-20	4724	4294	3984	3594	3260	3009	2623	2341	2122	1945	1832
2/B150-24	5026	4568	4242	3993	3782	3486	3039	2732	2458	2280	2087
2/B200-16	4982	4186	3658	3257	2858	2500	1997	1660	1418	1235	1091
2/B200-20	5942	5095	4480	4007	3649	3348	2905	2581	2335	2131	1914
2/B250-20	6395	5331	4611	4095	3684	3359	2824	2352	2014	1759	1560

Perimeter bearers – heavier load

Supporting heavier commercial 4kPa floor loads only

- Live Load: 4kPa
- Dead Load: 1.1kPa
- Point Load: 3.6kN
- Supports: U Pier Head

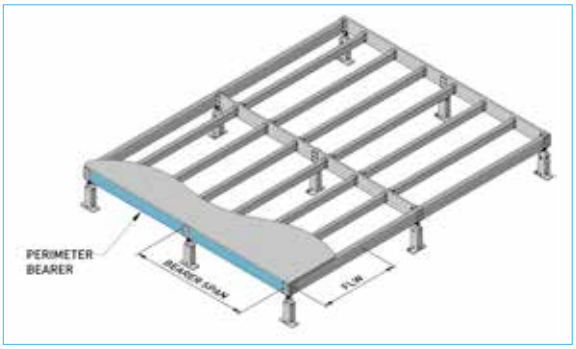
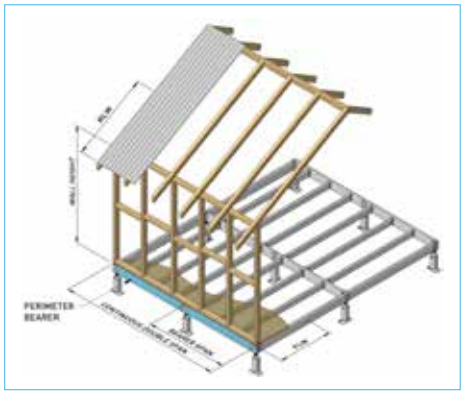


Table 18	MAXIMUM BEARER SPAN (mm)										
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)										
	900	1200	1500	1800	2100	2400	3000	3600	4200	4800	5400
	SINGLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2833	2494	2253	2034	1875	1751	1569	1314	1130	–	–
B150-20	3043	2769	2573	2401	2235	2072	1841	1681	1563	1470	1390
B150-24	3236	2943	2735	2576	2450	2345	2153	1951	1800	1679	1537
B200-16	3321	2867	2561	2348	2168	2017	1795	1618	1390	1220	1087
B200-20	3822	3391	3037	2762	2556	2397	2137	1941	1761	1544	1375
B250-20	4530	3926	3503	3199	2953	2597	2082	1739	1494	1311	1168
	CONTINUOUS DOUBLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2640	2220	1924	1711	1542	1434	1219	1077	992	881	794
B150-20	3035	2532	2209	1953	1781	1607	1409	1220	1077	952	854
B150-24	3536	2947	2556	2292	2047	1888	1606	1435	1254	1105	991
B200-16	2870	2388	2055	1845	1636	1497	1262	1063	910	817	739
B200-20	3459	2882	2491	2224	1990	1841	1554	1343	1161	1024	919
B250-20	3788	3144	2706	2374	2125	1887	1519	1275	1102	898	848
	CONTINUOUS TRIPLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2942	2462	2137	1900	1715	1569	1383	1187	1069	925	865
B150-20	3395	2834	2456	2179	1968	1826	1538	1382	1197	1051	939
B150-24	3954	3304	2865	2540	2304	2093	1824	1575	1402	1230	1097
B200-16	3218	2683	2310	2031	1845	1664	1375	1180	1016	877	800
B200-20	3876	3231	2792	2471	2252	2028	1736	1505	1293	1135	1012
B250-20	4249	3511	3017	2642	2275	2130	1707	1375	1227	925	874



Perimeter bearers – heavier load

Supporting heavier commercial 4kPa floor loads and load bearing walls (single storey – sheet roof)

- Roof Mass: 40kg/m²
- Wall Weight: 0.45kPa at 2.7m height
- Live Load: 4kPa
- Dead Load:1.1kPa
- Point Load: 3.6kN
- End Supports: U Pier Head

Table 19	MAXIMUM BEARER SPAN (mm)											
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)											
	900	1200	2100	3000	900	1200	2100	3000	900	1200	2100	3000
	ROOF LOAD WIDTH – RLW 2000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2314	2191	1742	1416	2174	1900	1421	1130	2427	2113	1557	1251
B150-20	2486	2354	2059	1748	2490	2171	1592	1298	2792	2426	1810	1432
B150-24	2644	2503	2211	2023	2901	2521	1872	1499	3252	2825	2075	1668
B200-16	2833	2540	2007	1698	2350	2026	1484	1140	2625	2286	1648	1273
B200-20	3123	2956	2386	2023	2837	2458	1823	1445	3188	2761	2012	1607
B250-20	3739	3471	2561	1876	3080	2658	1862	1359	3454	2974	2102	1531
	ROOF LOAD WIDTH – RLW 4500 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2161	2067	1688	1350	2003	1786	1370	1094	2262	1979	1488	1215
B150-20	2323	2220	1988	1708	2311	2025	1525	1245	2576	2284	1699	1398
B150-24	2470	2361	2122	1960	2688	2365	1793	1456	3002	2647	1986	1609
B200-16	2659	2422	1942	1656	2159	1901	1427	1088	2418	2120	1572	1214
B200-20	2919	2789	2316	1975	2616	2310	1725	1379	2929	2575	1921	1548
B250-20	3494	3304	2399	1788	2828	2468	1745	1308	3182	2725	1957	1375
	ROOF LOAD WIDTH – RLW 6000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2087	2004	1658	1313	1923	1710	1325	1076	2145	1906	1452	1189
B150-20	2243	2153	1949	1686	2208	1954	1491	1218	2465	2187	1659	1380
B150-24	2385	2290	2075	1925	2562	2288	1738	1432	2874	2548	1933	1578
B200-16	2573	2361	1907	1617	2059	1838	1393	1059	2314	2038	1533	1180
B200-20	2818	2705	2279	1947	2497	2221	1676	1341	2801	2478	1877	1506
B250-20	3374	3216	2312	1739	2705	2376	1682	1273	3027	2657	1803	1375
	ROOF LOAD WIDTH – RLW 8000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2002	1931	1622	1267	1832	1627	1272	1052	2033	1837	1416	1158
B150-20	2151	2075	1899	1658	2081	1874	1449	1185	2335	2085	1603	1344
B150-24	2288	2207	2018	1883	2426	2174	1675	1402	2730	2432	1876	1540
B200-16	2473	2289	1863	1560	1948	1741	1329	1022	2182	1941	1478	1128
B200-20	2704	2607	2219	1913	2366	2109	1618	1295	2652	2363	1830	1453
B250-20	3237	3103	2204	1678	2542	2269	1605	1229	2855	2533	1775	1375

Perimeter bearers – heavier load

Supporting heavier commercial 4kPa floor loads and load bearing walls (single storey – tiled roof)

- Roof Mass: 90kg/m²
- Wall Weight: 0.45kPa at 2.7m height
- Live Load: 4kPa
- Dead Load:1.1kPa
- Point Load: 3.6kN
- End Supports: U Pier Head

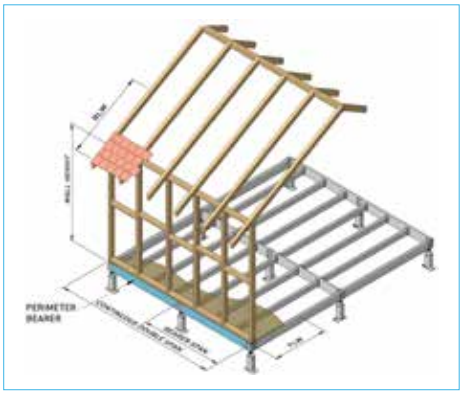


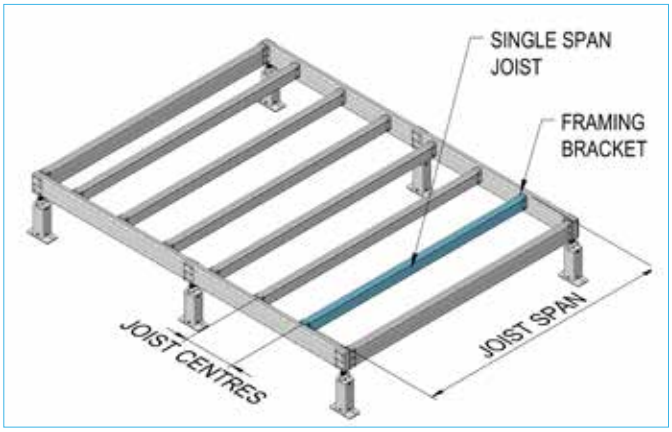
Table 20	MAXIMUM BEARER SPAN (mm)											
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)											
	900	1200	2100	3000	900	1200	2100	3000	900	1200	2100	3000
	ROOF LOAD WIDTH – RLW 2000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2161	2067	1688	1350	2003	1786	1370	1094	2262	1979	1488	1215
B150-20	2323	2220	1988	1708	2311	2025	1525	1245	2576	2284	1699	1398
B150-24	2470	2361	2122	1960	2688	2365	1793	1456	3002	2647	1986	1609
B200-16	2659	2422	1942	1656	2159	1901	1427	1088	2418	2120	1572	1214
B200-20	2919	2789	2316	1975	2616	2310	1725	1379	2929	2575	1921	1548
B250-20	3494	3304	2399	1788	2828	2468	1745	1308	3182	2725	1957	1375
	ROOF LOAD WIDTH – RLW 4500 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1925	1865	1584	1221	1727	1554	1224	1030	1927	1741	1384	1129
B150-20	2069	2003	1848	1630	1973	1790	1409	1153	2216	1990	1551	1285
B150-24	2200	2130	1964	1842	2307	2069	1617	1352	2576	2323	1829	1498
B200-16	2382	2202	1816	1504	1852	1652	1268	987	2062	1857	1425	1098
B200-20	2600	2516	2161	1879	2245	2010	1563	1249	2507	2269	1755	1402
B250-20	3113	2992	2101	1617	2401	2148	1530	1186	2686	2381	1725	1318
	ROOF LOAD WIDTH – RLW 6000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1824	1774	1474	1155	1593	1460	1162	998	1800	1624	1300	1088
B150-20	1960	1907	1777	1589	1834	1659	1339	1096	2042	1863	1472	1227
B150-24	2084	2028	1889	1783	2124	1935	1539	1280	2381	2166	1720	1438
B200-16	2249	2083	1750	1422	1697	1538	1182	935	1901	1722	1326	1039
B200-20	2463	2396	2079	1804	2062	1882	1490	1183	2318	2102	1663	1326
B250-20	2949	2715	1955	1529	2211	1971	1425	1122	2455	2202	1570	1257
	ROOF LOAD WIDTH – RLW 8000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1716	1677	1349	1077	1459	1355	1093	947	1627	1497	1218	1030
B150-20	1844	1802	1697	1541	1659	1526	1243	1024	1864	1708	1397	1144
B150-24	1962	1917	1804	1715	1936	1788	1453	1195	2169	1994	1615	1341
B200-16	2088	1955	1663	1326	1539	1421	1083	873	1726	1580	1215	970
B200-20	2318	2265	1985	1682	1881	1725	1377	1104	2105	1930	1552	1237
B250-20	2718	2404	1789	1426	1973	1747	1305	1048	2211	1978	1470	1172

FLOORS STANDARD 5kPa LOAD

Joists – standard load

Supporting standard commercial 5kPa floor loads only

- Live Load: 5kPa
- Dead Load: 0.75kPa
- Point Load: 3.6kN
- End Supports: Framing Bracket 4 hole or top bracket
- Mid Supports: Top Hat Bracket or framing bracket



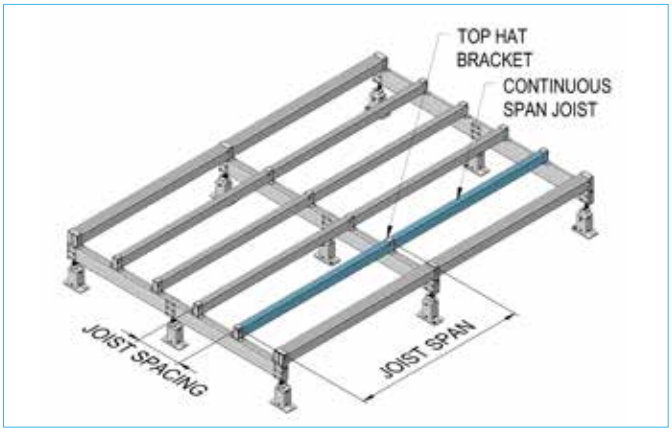


Table 21	MAXIMUM FLOOR JOIST SPAN (mm)								
BOXSPAN SECTION	FLOOR JOIST CENTRES (mm)								
	400	450	600	400	450	600	400	450	600
	SINGLE SPAN			CONTINUOUS DOUBLE SPAN			CONTINUOUS TRIPLE SPAN		
B100-12	2446	2352	2030	1893	1740	1333	2131	1960	1515
B100-16	2680	2577	2342	2609	2410	1976	2933	2710	2224
B150-16	3589	3347	3011	2900	2645	1984	3265	2999	2254
B150-20	3835	3550	3180	3987	3692	3047	4479	4149	3426
B150-24	4185	3850	3430	4809	4462	3703	4857	4844	4087
B200-16	4618	4290	3785	3303	2962	2222	3719	3367	2525
B200-20	4961	4687	4110	4484	4145	3406	5040	4661	3832
B250-20	5921	5715	4325	4645	4269	3238	5229	4807	3679

NOTES

The maximum allowable spans have been designed to meet the strength and serviceability limits specified in AS1170.1 Section 3 Imposed Actions Table 3.1

Internal bearers – standard load

Supporting standard commercial 5kPa floor loads only

- Live Load: 5kPa
- Dead Load: 0.75kPa
- Point Load: 3.6kN
- End Supports: Framing Bracket into Pier Head
- Mid Supports: U Pier Head

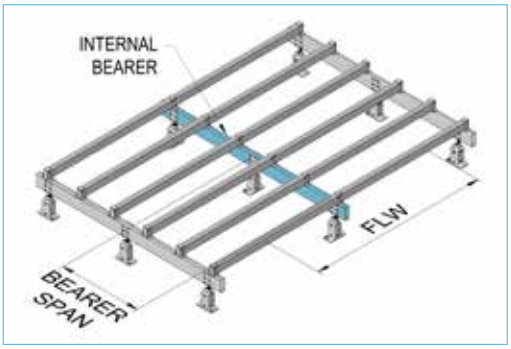
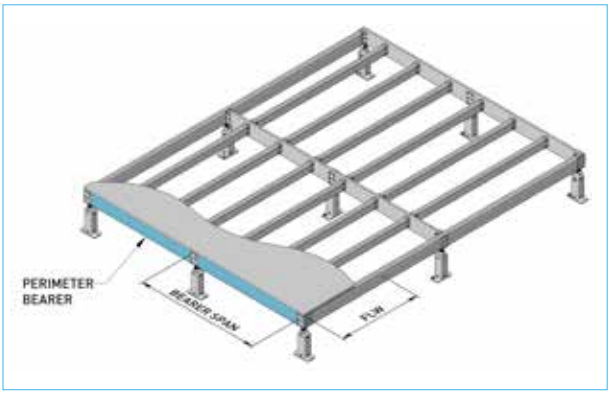


Table 22	MAXIMUM BEARER SPAN (mm)										
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)										
	900	1200	1500	1800	2100	2400	3000	3600	4200	4800	5400
	SINGLE SPAN										
B100-16	2070	1863	1672	1542	1447	1368	1189	–	–	–	–
B150-16	2679	2345	2084	1892	1747	1636	1470	1314	1130	–	–
B150-20	3025	2722	2450	2257	2068	1926	1718	1575	1467	1383	1232
B150-24	3217	2926	2719	2561	2403	2261	1997	1816	1676	1565	1472
B200-16	3107	2672	2398	2188	1917	1681	1349	1129	–	–	–
B200-20	3649	3183	2826	2577	2392	2241	1986	1806	1572	1378	1228
B250-20	4233	3660	3119	2603	2235	1959	1572	1314	1130	–	–
2/B100-16	2596	2363	2196	2070	1969	1863	1672	1426	1226	1076	–
2/B150-16	3539	3218	2940	2679	2489	2196	1762	1472	1265	1110	–
2/B150-20	3803	3458	3212	3025	2875	2722	2444	2041	1753	1537	1369
2/B150-24	4045	3678	3416	3217	3057	2926	2719	2561	2257	1978	1761
2/B200-16	4374	3495	2801	2338	2007	1760	1413	1181	1016	–	–
2/B200-20	4780	4345	4013	3649	3385	3019	2420	2021	1736	1522	1356
2/B250-20	5724	4923	3943	3290	2824	2474	1984	1657	1424	1249	1113
	CONTINUOUS DOUBLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2270	1876	1596	1431	1278	1141	928	788	691	615	560
B150-20	2671	2215	1906	1674	1506	1370	1108	936	814	726	655
B150-24	3093	2555	2211	1944	1754	1582	1278	1076	934	826	747
B200-16	2536	2093	1823	1579	1397	1230	998	844	739	658	596
B200-20	3096	2557	2213	1946	1756	1584	1281	1078	936	828	748
B250-20	3413	2815	2407	2103	1808	1588	1281	1078	897	828	748
2/B100-16	2953	2493	2196	1958	1811	1635	1442	1278	1142	1055	996
2/B150-16	3634	3051	2675	2383	2163	1982	1725	1524	1404	1264	1156
2/B150-20	4377	3744	3286	2942	2704	2471	2160	1929	1757	1594	1486
2/B150-24	5060	4335	3802	3409	3119	2865	2491	2243	2011	1867	1715
2/B200-16	4104	3435	2991	2681	2417	2231	1848	1533	1305	1131	995
2/B200-20	4976	4203	3681	3286	2981	2758	2381	2108	1913	1753	1603
2/B250-20	5226	4345	3753	3319	2984	2735	2321	1940	1669	1467	1310
	CONTINUOUS TRIPLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2510	2074	1815	1569	1417	1272	1023	857	739	653	585
B150-20	2976	2463	2119	1873	1674	1524	1234	1032	889	785	697
B150-24	3459	2864	2461	2169	1945	1782	1430	1195	1029	905	809
B200-16	2841	2343	2007	1784	1567	1374	1105	927	800	680	632
B200-20	3462	2867	2463	2171	1947	1786	1433	1198	1031	907	811
B250-20	3830	3170	2680	2275	2004	1775	1375	1198	925	869	811
2/B100-16	3199	2791	2440	2183	1984	1845	1578	1415	1263	1154	1072
2/B150-16	4069	3410	2976	2669	2414	2233	1912	1693	1529	1351	1195
2/B150-20	4695	4186	3676	3293	3001	2771	2408	2142	1939	1815	1645
2/B150-24	4995	4540	4216	3818	3478	3212	2790	2483	2276	2059	1904
2/B200-16	4585	3848	3350	2906	2490	2177	1738	1443	1230	1069	942
2/B200-20	5531	4706	4117	3679	3340	3068	2669	2357	2126	1876	1665
2/B250-20	5875	4877	4211	3723	3350	3050	2460	2048	1752	1529	1355

FLOORS STANDARD 5kPa LOAD CONTINUED



Perimeter bearers – standard load

Supporting standard commercial 5kPa floor loads only

- Live Load: 5kPa
- Dead Load: 0.75kPa
- Point Load: 3.6kN
- Supports: U Pier Head

Table 23	MAXIMUM BEARER SPAN (mm)										
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)										
	900	1200	1500	1800	2100	2400	3000	3600	4200	4800	5400
	SINGLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2679	2345	2084	1892	1747	1636	1373	1148	–	–	–
B150-20	3025	2722	2450	2257	2068	1926	1718	1575	1467	1364	1215
B150-24	3217	2926	2719	2561	2403	2261	1997	1816	1676	1507	1343
B200-16	3107	2672	2398	2188	2012	1880	1660	1413	1215	1066	–
B200-20	3649	3183	2826	2577	2392	2241	1986	1790	1538	1349	1202
B250-20	4233	3660	3270	2978	2586	2266	1818	1519	1305	1145	1021
	CONTINUOUS DOUBLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2420	2020	1774	1557	1431	1309	1107	1000	878	780	707
B150-20	2794	2334	2007	1808	1603	1475	1265	1094	949	839	758
B150-24	3249	2723	2348	2070	1884	1712	1471	1274	1101	973	873
B200-16	2634	2186	1889	1656	1494	1368	1108	920	814	726	655
B200-20	3188	2645	2296	2011	1836	1651	1402	1179	1020	902	811
B250-20	3460	2854	2444	2152	1847	1651	1327	1120	897	840	774
	CONTINUOUS TRIPLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2728	2282	1958	1739	1565	1434	1225	1080	925	849	760
B150-20	3130	2594	2272	1988	1823	1631	1409	1217	1047	921	823
B150-24	3642	3025	2615	2323	2087	1903	1626	1425	1225	1076	960
B200-16	2940	2437	2095	1859	1659	1509	1234	1032	875	785	654
B200-20	3560	2951	2547	2276	2023	1855	1569	1314	1130	993	886
B250-20	3881	3175	2680	2275	2121	1775	1375	1247	925	869	841

Perimeter bearers – standard load

Supporting standard commercial 5kPa floor loads and load bearing walls (single storey – sheet roof)

- Roof Mass: 40kg/m²
- Wall Weight: 0.45kPa at 2.7m height
- Live Load: 5kPa
- Dead Load: 0.75kPa
- Point Load: 3.6kN
- End Supports: U Pier Head

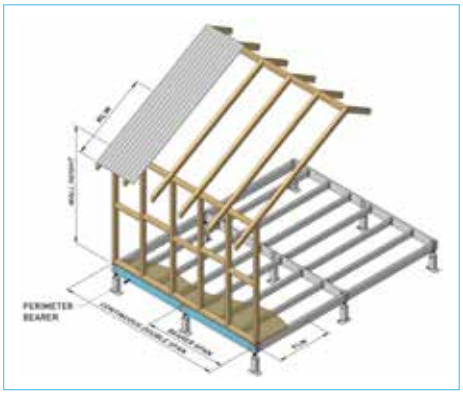
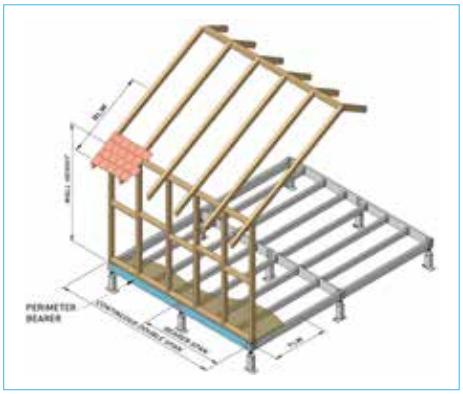


Table 24	MAXIMUM BEARER SPAN (mm)											
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)											
	900	1200	2100	3000	900	1200	2100	3000	900	1200	2100	3000
	ROOF LOAD WIDTH – RLW 2000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2306	2096	1642	1253	2031	1779	1309	1047	2289	1970	1438	1147
B150-20	2478	2345	1931	1646	2343	2016	1477	1175	2613	2277	1637	1322
B150-24	2635	2494	2202	1906	2732	2356	1716	1387	3045	2631	1910	1527
B200-16	2689	2412	1888	1543	2198	1894	1373	1014	2453	2108	1516	1114
B200-20	3113	2839	2252	1898	2660	2302	1655	1282	2972	2562	1859	1436
B250-20	3681	3289	2274	1659	2871	2456	1656	1217	3224	2700	1785	1321
	ROOF LOAD WIDTH – RLW 4500 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2156	1994	1599	1201	1900	1659	1246	1022	2116	1862	1398	1114
B150-20	2316	2213	1874	1613	2173	1906	1428	1139	2430	2124	1572	1264
B150-24	2463	2354	2114	1865	2524	2221	1642	1330	2829	2475	1849	1476
B200-16	2544	2314	1832	1478	2028	1783	1296	973	2287	1981	1450	1080
B200-20	2911	2709	2181	1859	2460	2152	1587	1230	2764	2409	1799	1377
B250-20	3477	3146	2146	1589	2660	2313	1563	1168	2979	2583	1754	1305
	ROOF LOAD WIDTH – RLW 6000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2082	1941	1566	1172	1834	1603	1214	1008	2031	1817	1379	1096
B150-20	2237	2147	1842	1596	2080	1851	1402	1113	2333	2051	1538	1242
B150-24	2380	2283	2068	1841	2425	2138	1603	1298	2730	2393	1819	1451
B200-16	2470	2258	1801	1442	1948	1711	1255	951	2180	1909	1383	1054
B200-20	2811	2641	2142	1828	2366	2075	1551	1201	2650	2329	1735	1343
B250-20	3366	3062	2076	1551	2540	2230	1513	1140	2853	2446	1704	1273
	ROOF LOAD WIDTH – RLW 8000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1998	1877	1501	1135	1734	1538	1177	990	1931	1717	1326	1074
B150-20	2147	2070	1803	1573	1978	1767	1365	1079	2223	1968	1489	1204
B150-24	2283	2201	2012	1811	2314	2044	1556	1258	2582	2301	1743	1411
B200-16	2385	2178	1761	1397	1858	1631	1204	922	2067	1840	1347	1021
B200-20	2698	2560	2094	1771	2254	1986	1507	1164	2513	2239	1680	1301
B250-20	3230	2954	1989	1502	2407	2120	1450	1104	2685	2290	1570	1234



Perimeter bearers – standard load

Supporting standard commercial 5kPa floor loads and load bearing walls (single storey – tiled roof)

- Roof Mass: 90kg/m²
- Wall Weight: 0.45kPa at 2.7m height
- Live Load: 5kPa
- Dead Load: 0.75kPa
- Point Load: 3.6kN
- End Supports: U Pier Head

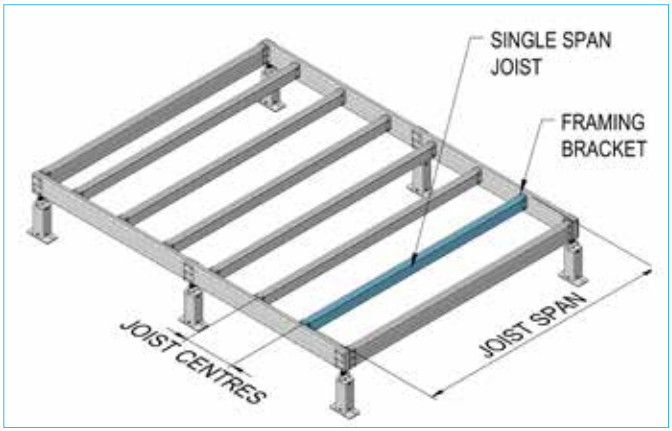
Table 25	MAXIMUM BEARER SPAN (mm)											
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)											
	900	1200	2100	3000	900	1200	2100	3000	900	1200	2100	3000
	ROOF LOAD WIDTH – RLW 2000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2156	1994	1599	1201	1900	1659	1246	1022	2116	1862	1398	1114
B150-20	2316	2213	1874	1613	2173	1906	1428	1139	2430	2124	1572	1264
B150-24	2463	2354	2114	1865	2524	2221	1642	1330	2829	2475	1849	1476
B200-16	2544	2314	1832	1478	2028	1783	1296	973	2287	1981	1450	1080
B200-20	2911	2709	2181	1859	2460	2152	1587	1230	2764	2409	1799	1377
B250-20	3477	3146	2146	1589	2660	2313	1563	1168	2979	2583	1754	1305
	ROOF LOAD WIDTH – RLW 4500 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1922	1817	1437	1098	1643	1479	1141	966	1848	1646	1269	1043
B150-20	2065	1998	1765	1550	1888	1683	1311	1045	2106	1884	1446	1165
B150-24	2196	2125	1958	1781	2195	1960	1512	1219	2455	2198	1686	1366
B200-16	2304	2103	1721	1352	1759	1560	1154	892	1963	1750	1292	988
B200-20	2595	2483	2047	1713	2130	1907	1465	1127	2387	2129	1629	1260
B250-20	3107	2771	1904	1453	2289	2012	1389	1069	2560	2215	1548	1194
	ROOF LOAD WIDTH – RLW 6000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1821	1735	1346	1044	1528	1401	1092	921	1708	1545	1215	1006
B150-20	1957	1903	1710	1517	1752	1575	1241	995	1956	1774	1395	1109
B150-24	2081	2024	1884	1737	2033	1850	1451	1160	2289	2058	1610	1299
B200-16	2173	2001	1658	1286	1621	1466	1081	850	1830	1633	1211	925
B200-20	2459	2379	1979	1630	1975	1792	1374	1073	2220	1995	1546	1198
B250-20	2928	2522	1783	1382	2106	1832	1302	1019	2316	2020	1465	1103
	ROOF LOAD WIDTH – RLW 8000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1714	1645	1241	–	1412	1288	1038	865	1566	1433	1145	961
B150-20	1842	1799	1647	1477	1596	1464	1167	936	1804	1632	1309	1042
B150-24	1959	1914	1800	1684	1869	1701	1373	1090	2087	1904	1522	1221
B200-16	2025	1890	1529	1207	1482	1354	999	800	1658	1507	1117	883
B200-20	2315	2255	1900	1530	1815	1643	1268	1009	2023	1850	1427	1125
B250-20	2569	2252	1645	1298	1866	1637	1203	958	2114	1825	1337	1068

FLOORS HEAVIER 5kPa LOAD

Joists – heavier load

Supporting heavier commercial 5kPa floor loads only

- Live Load: 5kPa
- Dead Load: 1.1kPa
- Point Load: 3.6kN
- End Supports: Framing Bracket 4 hole or top bracket
- Mid Supports: Top Hat Bracket or framing bracket



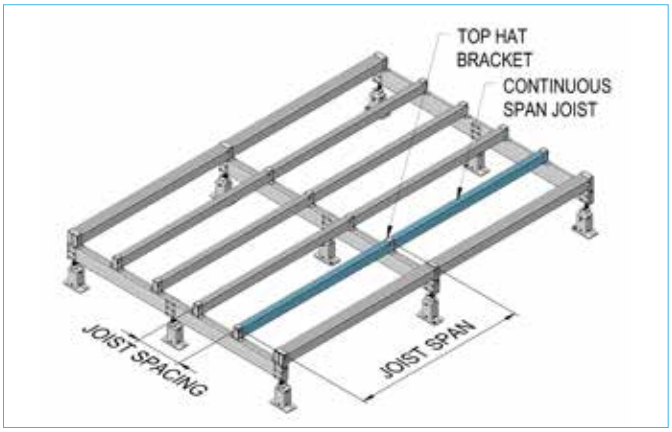
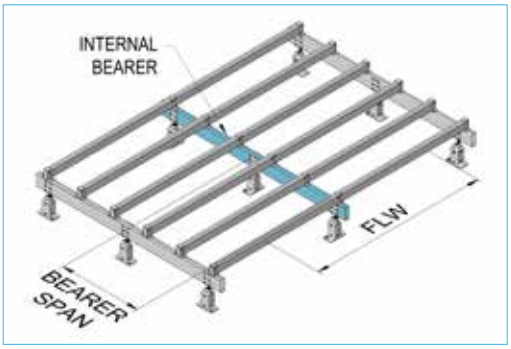


Table 26	MAXIMUM FLOOR JOIST SPAN (mm)								
BOXSPAN SECTION	FLOOR JOIST CENTRES (mm)								
	400	450	600	400	450	600	400	450	600
	SINGLE SPAN			CONTINUOUS DOUBLE SPAN			CONTINUOUS TRIPLE SPAN		
B100-12	2350	2260	2046	1829	1680	1269	2059	1892	1443
B100-16	2575	2476	2250	2525	2331	1910	2839	2622	2150
B150-16	3523	3387	3077	2800	2519	1889	3153	2863	2147
B150-20	3787	3642	3309	3863	3575	2948	4340	4018	3315
B150-24	4030	3875	3521	4663	4325	3586	4857	4792	4030
B200-16	4437	4266	3694	3174	2821	2116	3590	3206	2405
B200-20	4767	4583	4164	4341	4011	3292	4880	4510	3704
B250-20	5711	5492	4119	4486	4111	3083	5051	4641	3504

NOTES

The maximum allowable spans have been designed to meet the strength and serviceability limits specified in AS1170.1 Section 3 Imposed Actions Table 3.1



Internal bearers – heavier load

Supporting heavier commercial 5kPa floor loads only

- Live Load: 5kPa
- Dead Load: 1.1kPa
- Point Load: 3.6kN
- End Supports: Framing Bracket into Pier Head
- Mid Supports: U Pier Head

Table 27	MAXIMUM BEARER SPAN (mm)										
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)										
	900	1200	1500	1800	2100	2400	3000	3600	4200	4800	5400
	SINGLE SPAN										
B100-16	1991	1814	1635	1510	1419	1326	1135	–	–	–	–
B150-16	2616	2297	2029	1845	1705	1597	1436	1252	1077	–	–
B150-20	2908	2645	2397	2193	2014	1877	1678	1540	1436	1319	1175
B150-24	3092	2813	2614	2462	2341	2198	1947	1770	1635	1526	1434
B200-16	3025	2608	2344	2128	1827	1602	1286	1076	–	–	–
B200-20	3561	3099	2756	2516	2338	2181	1937	1744	1498	1314	1171
B250-20	4135	3569	2972	2480	2130	1866	1498	1252	1077	–	–
2/B100-16	2496	2272	2112	1991	1894	1814	1626	1359	1168	1025	–
2/B150-16	3401	3093	2866	2616	2388	2093	1679	1403	1206	1059	–
2/B150-20	3655	3324	3088	2908	2764	2645	2329	1945	1671	1465	1305
2/B150-24	3887	3534	3284	3092	2939	2813	2614	2462	2151	1885	1679
2/B200-16	4273	3329	2668	2228	1913	1677	1346	1126	–	–	–
2/B200-20	4594	4176	3879	3561	3284	2877	2306	1926	1654	1451	1292
2/B250-20	5500	4690	3757	3135	2690	2357	1891	1580	1357	1191	1061
	CONTINUOUS DOUBLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2183	1825	1546	1395	1227	1090	887	755	661	591	540
B150-20	2577	2133	1855	1615	1463	1307	1058	895	780	697	628
B150-24	2989	2472	2128	1888	1685	1511	1220	1028	892	792	717
B200-16	2456	2023	1748	1529	1333	1175	954	809	709	631	574
B200-20	2991	2474	2130	1890	1687	1514	1223	1030	894	794	718
B250-20	3307	2732	2334	2004	1724	1514	1223	1030	875	794	718
2/B100-16	2873	2425	2121	1909	1738	1585	1410	1229	1107	1029	974
2/B150-16	3520	2957	2584	2322	2091	1929	1663	1482	1367	1215	1118
2/B150-20	4268	3651	3204	2861	2609	2403	2088	1880	1691	1546	1449
2/B150-24	4935	4215	3701	3314	3017	2790	2419	2159	1954	1818	1653
2/B200-16	3978	3334	2901	2586	2350	2148	1759	1457	1239	1074	942
2/B200-20	4841	4093	3574	3201	2892	2670	2318	2039	1863	1685	1551
2/B250-20	5071	4210	3643	3220	2885	2634	2212	1850	1592	1400	1250
	CONTINUOUS TRIPLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2434	2008	1723	1520	1382	1212	976	820	704	627	559
B150-20	2885	2383	2047	1830	1615	1463	1175	985	849	746	667
B150-24	3351	2774	2378	2096	1882	1698	1363	1140	982	862	773
B200-16	2760	2285	1938	1701	1494	1310	1054	883	764	669	603
B200-20	3353	2776	2381	2099	1884	1702	1366	1142	984	865	775
B250-20	3707	3045	2603	2220	1942	1702	1366	1104	892	857	775
2/B100-16	3075	2731	2366	2118	1920	1807	1533	1389	1225	1117	1025
2/B150-16	3935	3314	2889	2577	2339	2143	1864	1639	1473	1285	1135
2/B150-20	4512	4084	3580	3208	2912	2712	2336	2077	1884	1721	1590
2/B150-24	4800	4363	4052	3707	3375	3120	2728	2409	2179	1995	1857
2/B200-16	4455	3734	3249	2767	2371	2073	1653	1372	1168	1014	893
2/B200-20	5425	4573	3994	3578	3240	2974	2575	2296	2044	1786	1584
2/B250-20	5686	4723	4086	3618	3239	2930	2343	1949	1667	1455	1288

Perimeter bearers – heavier load

Supporting heavier commercial 5kPa floor loads only

- Live Load: 5kPa
- Dead Load: 1.1kPa
- Point Load: 3.6kN
- Supports: U Pier Head

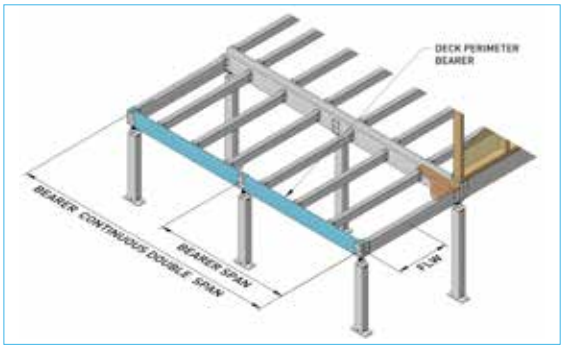
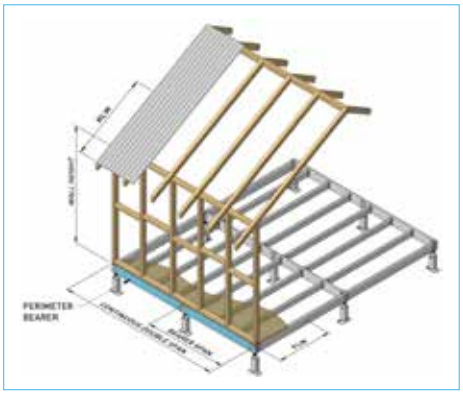


Table 28	MAXIMUM BEARER SPAN (mm)										
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)										
	900	1200	1500	1800	2100	2400	3000	3600	4200	4800	5400
	SINGLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2616	2297	2029	1845	1705	1597	1309	1095	–	–	–
B150-20	2908	2645	2397	2193	2014	1877	1678	1540	1436	1300	1158
B150-24	3092	2813	2614	2462	2341	2198	1947	1770	1635	1437	1280
B200-16	3025	2608	2344	2130	1962	1831	1611	1347	1158	1016	–
B200-20	3561	3099	2756	2516	2338	2181	1937	1706	1466	1286	1145
B250-20	4135	3569	3192	2871	2464	2159	1732	1448	1244	1092	–
	CONTINUOUS DOUBLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2357	1963	1706	1513	1398	1254	1074	968	840	749	676
B150-20	2722	2274	1949	1733	1552	1436	1216	1045	907	804	727
B150-24	3162	2624	2286	2005	1833	1649	1431	1216	1052	931	835
B200-16	2545	2108	1839	1599	1452	1307	1058	894	780	697	628
B200-20	3081	2553	2216	1951	1767	1593	1338	1126	975	862	778
B250-20	3349	2770	2368	2074	1783	1574	1270	1069	875	821	743
	CONTINUOUS TRIPLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2624	2193	1896	1679	1519	1403	1183	1035	891	812	721
B150-20	3023	2514	2172	1920	1731	1576	1380	1159	999	877	786
B150-24	3521	2930	2532	2270	2018	1854	1571	1358	1167	1026	916
B200-16	2850	2357	2025	1802	1579	1422	1175	925	849	746	644
B200-20	3445	2861	2464	2177	1957	1812	1499	1254	1079	935	846
B250-20	3759	3096	2638	2220	1975	1750	1375	1188	892	857	805



Perimeter bearers – heavier load

Supporting heavier commercial 5kPa floor loads and load bearing walls (single storey – sheet roof)

- Roof Mass: 40kg/m²
- Wall Weight: 0.45kPa at 2.7m height
- Live Load: 5kPa
- Dead Load: 1.1kPa
- Point Load: 3.6kN
- End Supports: U Pier Head

Table 29	MAXIMUM BEARER SPAN (mm)											
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)											
	900	1200	2100	3000	900	1200	2100	3000	900	1200	2100	3000
	ROOF LOAD WIDTH – RLW 2000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2256	2050	1609	1199	1986	1725	1262	1022	2237	1916	1408	1113
B150-20	2423	2288	1888	1611	2296	1967	1442	1138	2552	2204	1588	1262
B150-24	2577	2433	2138	1862	2662	2304	1661	1329	2973	2564	1863	1473
B200-16	2639	2368	1847	1476	2138	1852	1317	973	2392	2050	1464	1079
B200-20	3044	2782	2198	1855	2590	2242	1604	1229	2901	2493	1821	1375
B250-20	3612	3226	2180	1587	2803	2392	1588	1167	3143	2660	1760	1302
	ROOF LOAD WIDTH – RLW 4500 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2117	1956	1556	1152	1866	1619	1208	999	2069	1832	1375	1084
B150-20	2275	2168	1835	1582	2123	1868	1398	1095	2375	2072	1530	1222
B150-24	2419	2305	2060	1823	2470	2162	1595	1277	2773	2419	1812	1431
B200-16	2504	2276	1792	1417	1985	1733	1247	936	2236	1929	1375	1036
B200-20	2858	2661	2133	1797	2409	2097	1543	1181	2715	2350	1724	1320
B250-20	3420	3086	2061	1524	2595	2259	1503	1121	2908	2517	1692	1251
	ROOF LOAD WIDTH – RLW 6000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2048	1907	1507	1125	1797	1567	1180	986	1992	1759	1336	1068
B150-20	2201	2106	1806	1565	2038	1813	1370	1070	2294	2005	1493	1192
B150-24	2341	2240	2018	1801	2379	2087	1560	1248	2669	2340	1749	1398
B200-16	2435	2213	1762	1384	1911	1668	1209	914	2133	1870	1345	1012
B200-20	2765	2597	2097	1754	2322	2027	1511	1154	2592	2286	1684	1289
B250-20	3311	3007	1997	1488	2485	2170	1456	1095	2776	2407	1569	1222
	ROOF LOAD WIDTH – RLW 8000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1969	1847	1446	1091	1698	1508	1146	961	1896	1680	1275	1036
B150-20	2116	2035	1769	1544	1943	1724	1320	1039	2173	1922	1451	1156
B150-24	2250	2163	1967	1773	2274	2001	1519	1211	2533	2262	1693	1356
B200-16	2353	2139	1726	1342	1825	1595	1161	887	2026	1808	1300	982
B200-20	2659	2521	2052	1701	2205	1946	1472	1120	2465	2177	1636	1251
B250-20	3183	2861	1916	1443	2362	2070	1398	1063	2650	2240	1549	1185

Perimeter bearers – heavier load

Supporting heavier commercial 5kPa floor loads and load bearing walls (single storey – tiled roof)

- Roof Mass: 90kg/m²
- Wall Weight: 0.45kPa at 2.7m Height
- Live Load: 5kPa
- Dead Load: 1.1kPa
- Point Load: 3.6kN
- End Supports: U Pier Head

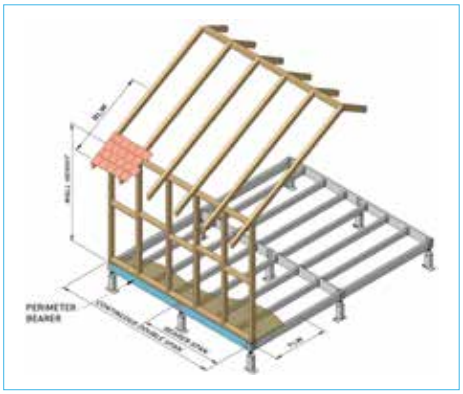


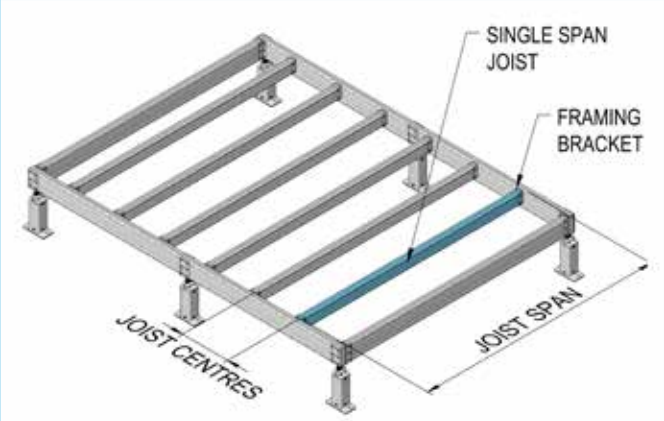
Table 30	MAXIMUM BEARER SPAN (mm)											
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)											
	900	1200	2100	3000	900	1200	2100	3000	900	1200	2100	3000
	ROOF LOAD WIDTH – RLW 2000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2117	1956	1556	1152	1866	1619	1208	999	2069	1832	1375	1084
B150-20	2275	2168	1835	1582	2123	1868	1398	1095	2375	2072	1530	1222
B150-24	2419	2305	2060	1823	2470	2162	1595	1277	2773	2419	1812	1431
B200-16	2504	2276	1792	1417	1985	1733	1247	936	2236	1929	1375	1036
B200-20	2858	2661	2133	1797	2409	2097	1543	1181	2715	2350	1724	1320
B250-20	3420	3086	2061	1524	2595	2259	1503	1121	2908	2517	1692	1251
	ROOF LOAD WIDTH – RLW 4500 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1897	1790	1386	1057	1613	1454	1114	932	1825	1612	1237	1013
B150-20	2038	1968	1733	1523	1859	1647	1272	1007	2068	1853	1417	1121
B150-24	2168	2093	1918	1746	2153	1924	1479	1174	2413	2149	1645	1314
B200-16	2274	2069	1688	1301	1723	1528	1114	860	1925	1708	1247	925
B200-20	2561	2448	2008	1648	2090	1872	1415	1085	2345	2085	1586	1212
B250-20	3067	2689	1837	1398	2246	1952	1342	1031	2468	2188	1509	1148
	ROOF LOAD WIDTH – RLW 6000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1801	1712	1302	1007	1506	1378	1069	889	1682	1519	1184	985
B150-20	1935	1878	1682	1492	1721	1547	1210	961	1923	1732	1374	1070
B150-24	2058	1997	1850	1705	2001	1819	1423	1120	2258	2019	1572	1253
B200-16	2143	1972	1604	1239	1594	1441	1047	822	1802	1601	1171	899
B200-20	2432	2349	1945	1571	1944	1754	1329	1036	2178	1958	1495	1155
B250-20	2858	2454	1725	1332	2069	1783	1261	984	2275	1995	1375	1089
	ROOF LOAD WIDTH – RLW 8000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1698	1626	1203	–	1395	1264	1019	838	1545	1413	1120	929
B150-20	1825	1779	1623	1454	1573	1442	1140	906	1770	1603	1272	1007
B150-24	1941	1892	1771	1653	1845	1671	1332	1055	2057	1875	1484	1178
B200-16	2002	1866	1483	1166	1462	1322	970	776	1633	1479	1084	854
B200-20	2294	2225	1871	1478	1786	1614	1231	976	1994	1825	1383	1088
B250-20	2516	2197	1595	1254	1827	1598	1168	911	2070	1794	1310	1031

FLOORS STANDARD 7.5kPa LOAD

Joists – standard load

Supporting heavier commercial 7.5kPa floor loads only

- Live Load: 7.5kPa
- Dead Load: 0.75kPa
- Point Load: 4.5kN
- End Supports: Framing Bracket 4 hole or top bracket
- Mid Supports: Top Hat Bracket or framing bracket



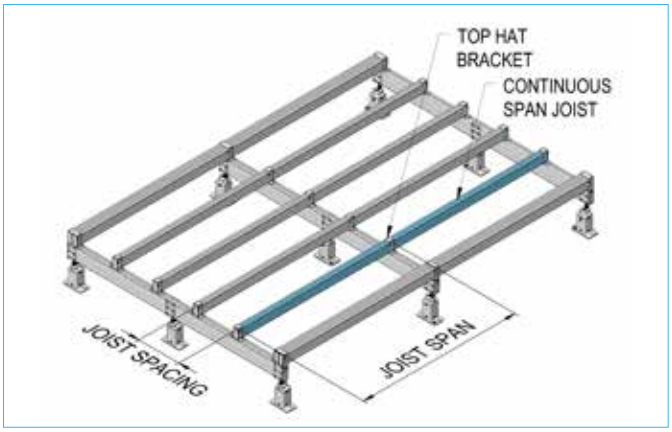


Table 31	MAXIMUM FLOOR JOIST SPAN (mm)								
BOXSPAN SECTION	FLOOR JOIST CENTRES (mm)								
	400	450	600	400	450	600	400	450	600
	SINGLE SPAN			CONTINUOUS DOUBLE SPAN			CONTINUOUS TRIPLE SPAN		
B100-12	1852	1747	1543	1382	1229	921	1571	1396	1047
B100-16	2417	2324	2111	2027	1866	1481	2281	2101	1683
B150-16	3306	3149	2727	2057	1828	1371	2338	2078	1558
B150-20	3555	3418	3105	3123	2883	2359	3511	3242	2656
B150-24	3782	3637	3304	3793	3509	2890	4262	3944	3251
B200-16	3855	3634	3147	2304	2048	1536	2618	2327	1745
B200-20	4474	4292	3676	3493	3218	2611	3929	3621	2951
B250-20	4485	3987	2990	3358	2984	2238	3815	3391	2543

NOTES

The maximum allowable spans have been designed to meet the strength and serviceability limits specified in AS1170.1 Section 3 Imposed Actions Table 3.1

Internal bearers – standard load

Supporting standard commercial 7.5kPa floor loads only

- Live Load: 7.5kPa
- Dead Load: 0.75kPa
- Point Load: 4.5kN
- End Supports: Framing Bracket into Pier Head
- Mid Supports: U Pier Head

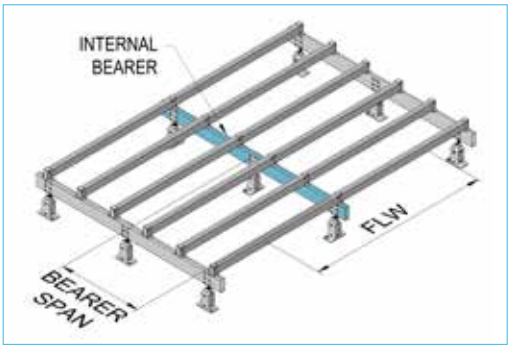


Table 32	MAXIMUM BEARER SPAN (mm)										
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)										
	900	1200	1500	1800	2100	2400	3000	3600	4200	4800	5400
	SINGLE SPAN										
B100-16	1789	1566	1428	1298	1176	1032	–	–	–	–	–
B150-16	2259	1928	1719	1572	1461	1361	1094	–	–	–	–
B150-20	2617	2299	2032	1846	1708	1602	1446	1277	1098	–	–
B150-24	2904	2628	2368	2158	1984	1851	1648	1501	1372	1204	1073
B200-16	2567	2234	1856	1551	1333	1169	–	–	–	–	–
B200-20	3044	2623	2356	2142	1973	1842	1522	1272	1094	–	–
B250-20	3510	2698	2164	1807	1552	1361	1094	–	–	–	–
2/B100-16	2345	2135	1963	1789	1662	1478	1187	–	–	–	–
2/B150-16	3177	2728	2426	2026	1740	1526	1225	1025	–	–	–
2/B150-20	3432	3121	2866	2617	2414	2115	1697	1418	1219	1070	–
2/B150-24	3650	3319	3084	2904	2760	2628	2186	1825	1568	1375	1225
2/B200-16	3222	2423	1943	1623	1395	1224	–	–	–	–	–
2/B200-20	4298	3717	3333	2785	2391	2095	1681	1405	1208	1060	–
2/B250-20	4539	3411	2733	2282	1959	1718	1379	1153	–	–	–
	CONTINUOUS DOUBLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	1778	1459	1243	1057	917	812	670	576	514	–	–
B150-20	2084	1722	1477	1267	1095	968	791	676	593	536	–
B150-24	2421	1989	1707	1464	1263	1113	905	770	674	602	549
B200-16	1981	1620	1354	1139	986	872	719	614	544	–	–
B200-20	2423	1991	1709	1467	1266	1116	907	772	676	603	550
B250-20	2665	2173	1751	1467	1266	1116	882	772	676	–	–
2/B100-16	2383	1998	1760	1554	1433	1320	1118	1012	946	843	762
2/B150-16	2900	2431	2114	1895	1708	1558	1377	1186	1071	965	847
2/B150-20	3578	3009	2639	2361	2140	1967	1711	1517	1401	1260	1154
2/B150-24	4141	3487	3049	2743	2472	2297	1972	1767	1577	1458	1370
2/B200-16	3273	2747	2371	2098	1825	1591	1261	1037	874	742	645
2/B200-20	4008	3356	2920	2606	2364	2165	1879	1645	1487	1326	1205
2/B250-20	4127	3399	2917	2568	2293	2011	1617	1356	1172	1033	928
	CONTINUOUS TRIPLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	1968	1609	1396	1173	1010	888	715	607	528	471	412
B150-20	2335	1913	1635	1417	1219	1070	861	721	630	554	503
B150-24	2729	2249	1900	1644	1412	1239	997	837	719	639	570
B200-16	2231	1834	1518	1269	1092	960	776	652	564	442	419
B200-20	2731	2253	1902	1648	1416	1242	999	839	721	640	572
B250-20	2977	2424	1974	1648	1375	1242	897	839	649	625	437
2/B100-16	2667	2262	1941	1732	1566	1439	1236	1095	986	882	773
2/B150-16	3247	2737	2360	2100	1898	1740	1491	1242	1056	915	803
2/B150-20	3995	3366	2940	2630	2387	2200	1900	1684	1491	1299	1148
2/B150-24	4506	3903	3409	3046	2773	2542	2211	1952	1781	1605	1478
2/B200-16	3666	3013	2410	2006	1716	1497	1188	980	827	706	615
2/B200-20	4495	3762	3270	2913	2639	2418	2077	1727	1476	1286	1136
2/B250-20	4623	3816	3273	2836	2430	2124	1695	1407	1198	1041	917

Perimeter bearers – standard load

Supporting standard commercial 7.5kPa floor loads only

- Live Load: 7.5kPa
- Dead Load: 0.75kPa
- Point Load: 4.5kN
- Supports: U Pier Head

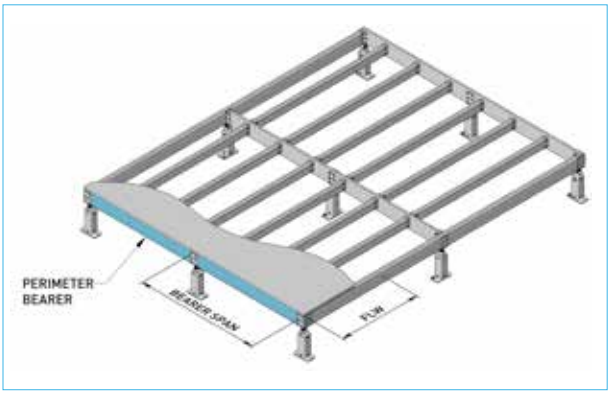


Table 33	MAXIMUM BEARER SPAN (mm)										
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)										
	900	1200	1500	1800	2100	2400	3000	3600	4200	4800	5400
	SINGLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2259	1928	1719	1572	1356	1190	–	–	–	–	–
B150-20	2617	2299	2032	1846	1708	1602	1446	1259	1082	–	–
B150-24	2904	2628	2368	2158	1984	1851	1648	1391	1196	1050	–
B200-16	2567	2234	1979	1799	1649	1464	1176	–	–	–	–
B200-20	3044	2623	2356	2142	1973	1842	1489	1245	1071	–	–
B250-20	3510	3035	2504	2091	1795	1574	1264	1058	–	–	–
	CONTINUOUS DOUBLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	1928	1593	1408	1222	1098	1019	852	728	636	571	–
B150-20	2216	1849	1568	1412	1251	1132	920	782	685	610	557
B150-24	2564	2124	1851	1611	1461	1319	1068	902	787	703	633
B200-16	2060	1702	1465	1267	1095	968	791	676	593	–	–
B200-20	2497	2061	1792	1558	1386	1220	990	837	734	653	592
B250-20	2715	2214	1798	1525	1315	1159	882	798	701	–	–
	CONTINUOUS TRIPLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2142	1813	1534	1358	1217	1105	897	787	655	600	466
B150-20	2462	2035	1759	1542	1401	1252	1014	850	732	648	580
B150-24	2872	2373	2040	1827	1612	1463	1186	994	856	754	673
B200-16	2315	1896	1618	1375	1219	1070	861	721	630	442	419
B200-20	2799	2315	1980	1743	1554	1362	1095	919	794	666	628
B250-20	3024	2424	1985	1714	1375	1291	897	849	649	625	437

Perimeter bearers – standard load

Supporting standard commercial 7.5kPa floor loads and load bearing walls (single storey – sheet roof)

- Roof Mass: 40kg/m²
- Wall Weight: 0.45kPa at 2.7m Height
- Live Load: 7.5kPa
- Dead Load: 0.75kPa
- Point Load: 4.5kN
- End Supports: U Pier Head

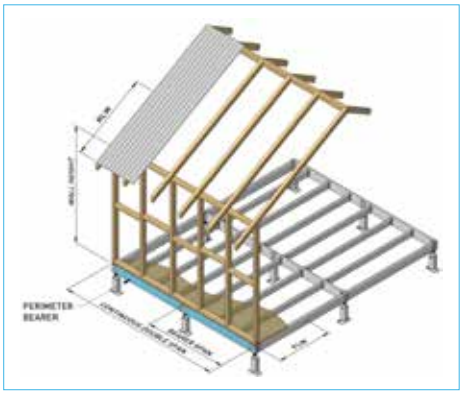
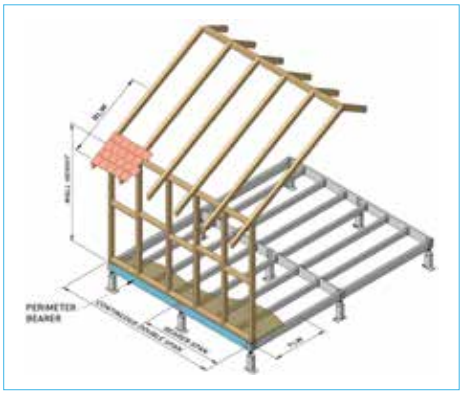


Table 34	MAXIMUM BEARER SPAN (mm)											
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)											
	900	1200	2100	3000	900	1200	2100	3000	900	1200	2100	3000
	ROOF LOAD WIDTH – RLW 2000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	2021	1782	1239	–	1691	1454	1040	802	1887	1604	1137	878
B150-20	2334	2111	1637	1408	1936	1643	1166	864	2159	1850	1302	953
B150-24	2482	2334	1895	1561	2268	1921	1372	1004	2517	2140	1515	1113
B200-16	2339	2057	1525	1103	1823	1526	1003	746	2014	1700	1110	811
B200-20	2745	2438	1888	1396	2195	1872	1268	931	2450	2076	1420	1028
B250-20	3186	2679	1640	1185	2352	1946	1204	860	2631	2178	1316	882
	ROOF LOAD WIDTH – RLW 4500 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1932	1723	1188	–	1593	1402	1016	780	1809	1535	1106	852
B150-20	2205	2034	1606	1370	1843	1567	1128	840	2038	1760	1254	924
B150-24	2345	2224	1854	1514	2124	1847	1316	975	2377	2043	1465	1081
B200-16	2245	1986	1463	1070	1700	1462	963	725	1898	1621	1069	787
B200-20	2629	2363	1848	1355	2062	1786	1217	903	2317	1982	1362	998
B250-20	3046	2502	1572	1150	2214	1819	1156	849	2436	1995	1291	875
	ROOF LOAD WIDTH – RLW 6000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1884	1692	1159	–	1545	1371	1002	767	1725	1493	1089	838
B150-20	2139	1992	1588	1345	1779	1528	1102	826	1976	1704	1230	908
B150-24	2275	2167	1831	1488	2054	1797	1285	958	2309	1991	1441	1062
B200-16	2185	1947	1427	1051	1640	1428	941	713	1847	1577	1043	774
B200-20	2568	2322	1809	1331	1996	1729	1188	888	2255	1926	1329	981
B250-20	2971	2407	1534	1130	2132	1750	1128	843	2298	1970	1260	871
	ROOF LOAD WIDTH – RLW 8000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1826	1653	1123	–	1489	1312	985	751	1657	1445	1067	820
B150-20	2063	1941	1566	1314	1696	1482	1068	808	1895	1649	1191	887
B150-24	2194	2100	1801	1453	1974	1725	1246	937	2217	1922	1397	1037
B200-16	2114	1900	1383	1027	1571	1380	912	698	1767	1525	1011	755
B200-20	2495	2269	1753	1300	1920	1664	1152	868	2144	1867	1288	959
B250-20	2800	2291	1487	1104	2033	1667	1093	826	2221	1803	1221	866



Perimeter bearers – standard load

Supporting standard commercial 7.5kPa floor loads and load bearing walls (single storey – tiled roof)

- Roof Mass: 90kg/m²
- Wall Weight: 0.45kPa at 2.7m Height
- Live Load: 7.5kPa
- Dead Load: 0.75kPa
- Point Load: 4.5kN
- End Supports: U Pier Head

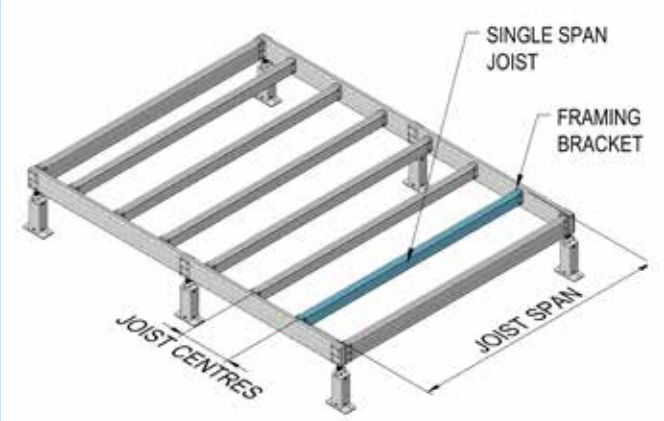
Table 35	MAXIMUM BEARER SPAN (mm)											
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)											
	900	1200	2100	3000	900	1200	2100	3000	900	1200	2100	3000
	ROOF LOAD WIDTH – RLW 2000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1932	1723	1188	–	1593	1402	1016	780	1809	1535	1106	852
B150-20	2205	2034	1606	1370	1843	1567	1128	840	2038	1760	1254	924
B150-24	2345	2224	1854	1514	2124	1847	1316	975	2377	2043	1465	1081
B200-16	2245	1986	1463	1070	1700	1462	963	725	1898	1621	1069	787
B200-20	2629	2363	1848	1355	2062	1786	1217	903	2317	1982	1362	998
B250-20	3046	2502	1572	1150	2214	1819	1156	849	2436	1995	1291	875
	ROOF LOAD WIDTH – RLW 4500 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1772	1615	1087	–	1437	1259	957	735	1589	1408	1035	801
B150-20	1993	1891	1543	1283	1624	1438	1035	790	1834	1591	1153	866
B150-24	2119	2037	1772	1419	1900	1661	1207	915	2121	1864	1352	1013
B200-16	2046	1853	1338	1002	1508	1314	884	681	1684	1467	979	735
B200-20	2425	2207	1697	1269	1849	1605	1116	848	2055	1818	1248	936
B250-20	2634	2179	1439	1077	1913	1586	1059	807	2165	1772	1182	860
	ROOF LOAD WIDTH – RLW 6000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1697	1525	1034	–	1362	1190	912	710	1497	1355	1000	772
B150-20	1898	1821	1511	1236	1528	1375	986	763	1708	1513	1099	835
B150-24	2019	1951	1729	1367	1792	1575	1150	882	1994	1773	1287	977
B200-16	1953	1782	1274	–	1425	1221	842	657	1580	1372	925	670
B200-20	2329	2119	1614	1223	1728	1524	1063	819	1930	1702	1187	902
B250-20	2408	2022	1369	1038	1750	1473	1009	780	1979	1662	1100	851
	ROOF LOAD WIDTH – RLW 8000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1614	1391	–	–	1248	1116	858	677	1401	1243	952	734
B150-20	1796	1741	1471	1179	1428	1274	929	730	1585	1421	1032	798
B150-24	1910	1855	1677	1303	1651	1482	1081	843	1856	1653	1210	933
B200-16	1850	1701	1196	–	1300	1116	794	628	1461	1253	875	660
B200-20	2204	2019	1516	1166	1595	1419	1000	783	1805	1594	1116	860
B250-20	2161	1845	1286	–	1572	1345	950	746	1777	1517	1058	817

FLOORS HEAVIER 7.5kPa LOAD

Joists – heavier load

Supporting heavier commercial 7.5kPa floor loads only

- Live Load: 7.5kPa
- Dead Load: 1.1kPa
- Point Load: 3.6kN
- End Supports: Framing Bracket 4 hole or top bracket
- Mid Supports: Top Hat Bracket or framing bracket



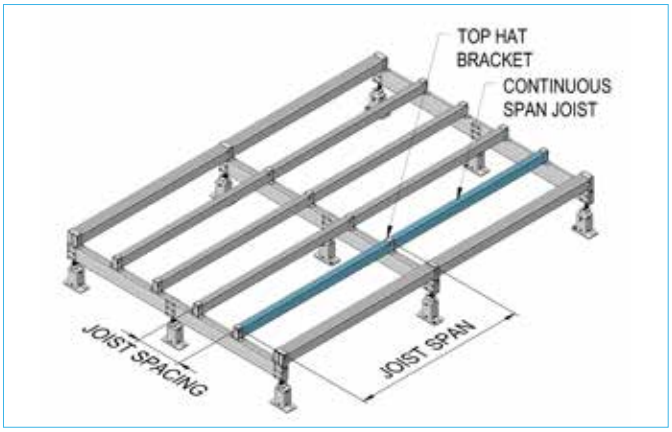
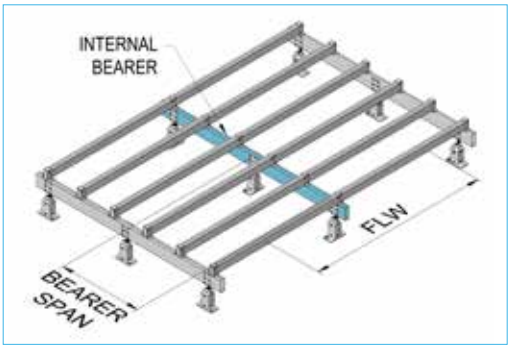


Table 36	MAXIMUM FLOOR JOIST SPAN (mm)								
BOXSPAN SECTION	FLOOR JOIST CENTRES (mm)								
	400	450	600	400	450	600	400	450	600
	SINGLE SPAN			CONTINUOUS DOUBLE SPAN			CONTINUOUS TRIPLE SPAN		
B100-12	1972	1845	1591	1336	1188	891	1518	1350	1012
B100-16	2346	2256	2050	1980	1822	1431	2228	2051	1627
B150-16	3209	3086	2681	1988	1767	1325	2260	2008	1506
B150-20	3450	3318	3014	3052	2816	2303	3432	3168	2592
B150-24	3671	3530	3207	3709	3431	2823	4168	3856	3176
B200-16	3790	3573	3076	2227	1980	1485	2531	2250	1687
B200-20	4343	4175	3553	3411	3142	2524	3838	3536	2868
B250-20	4335	3853	2890	3245	2885	2163	3688	3278	2458

NOTES

The maximum allowable spans have been designed to meet the strength and serviceability limits specified in AS1170.1 Section 3 Imposed Actions Table 3.1

FLOORS HEAVIER 7.5kPa LOAD CONTINUED



Internal bearers – heavier load

Supporting standard commercial 7.5kPa floor loads only

- Live Load: 7.5kPa
- Dead Load: 1.1kPa
- Point Load: 4.5kN
- End Supports: Framing Bracket into Pier Head
- Mid Supports: U Pier Head

Table 37	MAXIMUM BEARER SPAN (mm)										
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)										
	900	1200	1500	1800	2100	2400	3000	3600	4200	4800	5400
	SINGLE SPAN										
B100-16	1759	1543	1409	1270	1138	–	–	–	–	–	–
B150-16	2215	1894	1690	1547	1438	1317	1058	–	–	–	–
B150-20	2575	2260	1995	1813	1680	1577	1424	1235	1062	–	–
B150-24	2820	2566	2333	2118	1949	1818	1620	1474	1327	1165	1038
B200-16	2525	2191	1795	1500	1289	1131	–	–	–	–	–
B200-20	2989	2580	2319	2102	1939	1808	1472	1231	1058	–	–
B250-20	3451	2609	2092	1747	1501	1317	1058	–	–	–	–
2/B100-16	2277	2073	1928	1759	1630	1429	1148	–	–	–	–
2/B150-16	3101	2682	2346	1959	1683	1475	1185	–	–	–	–
2/B150-20	3332	3030	2816	2575	2334	2045	1641	1372	1179	1035	–
2/B150-24	3544	3223	2994	2820	2680	2566	2113	1765	1516	1330	1185
2/B200-16	3116	2343	1879	1570	1349	1184	–	–	–	–	–
2/B200-20	4187	3653	3226	2693	2311	2026	1625	1359	1168	1025	–
2/B250-20	4388	3297	2643	2206	1895	1661	1334	1115	–	–	–
	CONTINUOUS DOUBLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	1728	1432	1210	1024	888	789	650	561	501	–	–
B150-20	2036	1677	1448	1227	1060	938	768	656	578	523	–
B150-24	2371	1947	1661	1417	1223	1078	877	748	654	586	536
B200-16	1940	1582	1310	1103	956	846	698	597	–	–	–
B200-20	2373	1948	1663	1420	1226	1080	879	750	655	587	537
B250-20	2595	2108	1694	1420	1226	1080	868	750	655	–	–
2/B100-16	2342	1961	1714	1524	1411	1280	1095	997	928	816	743
2/B150-16	2845	2385	2066	1862	1665	1526	1343	1158	1050	929	813
2/B150-20	3499	2946	2578	2321	2091	1931	1668	1488	1375	1226	1127
2/B150-24	4067	3414	2982	2682	2423	2247	1934	1718	1543	1432	1327
2/B200-16	3212	2685	2327	2050	1763	1537	1216	998	840	711	618
2/B200-20	3919	3291	2861	2545	2321	2112	1845	1605	1458	1303	1161
2/B250-20	4038	3324	2852	2505	2217	1945	1565	1313	1134	1001	898
	CONTINUOUS TRIPLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	1917	1571	1358	1135	978	859	693	586	513	449	401
B150-20	2295	1875	1595	1371	1178	1035	835	698	610	538	489
B150-24	2654	2173	1864	1589	1366	1198	965	811	696	621	554
B200-16	2163	1790	1467	1227	1056	929	749	634	548	437	410
B200-20	2657	2175	1865	1593	1369	1201	968	813	698	622	555
B250-20	2908	2275	1829	1562	1369	1201	887	813	643	451	431
2/B100-16	2602	2187	1901	1691	1535	1417	1212	1073	972	850	742
2/B150-16	3193	2675	2318	2052	1866	1695	1448	1198	1018	881	772
2/B150-20	3915	3299	2883	2575	2339	2145	1868	1648	1440	1254	1108
2/B150-24	4374	3823	3340	2983	2730	2487	2151	1907	1719	1568	1446
2/B200-16	3602	2913	2329	1938	1657	1446	1146	945	796	678	589
2/B200-20	4390	3684	3210	2850	2578	2360	2007	1669	1425	1241	1097
2/B250-20	4532	3729	3205	2741	2348	2053	1637	1358	1156	1004	883

Perimeter bearers – heavier load

Supporting heavier commercial 7.5kPa floor loads only

- Live Load: 7.5kPa
- Dead Load: 1.1kPa
- Point Load: 4.5kN
- Supports: U Pier Head

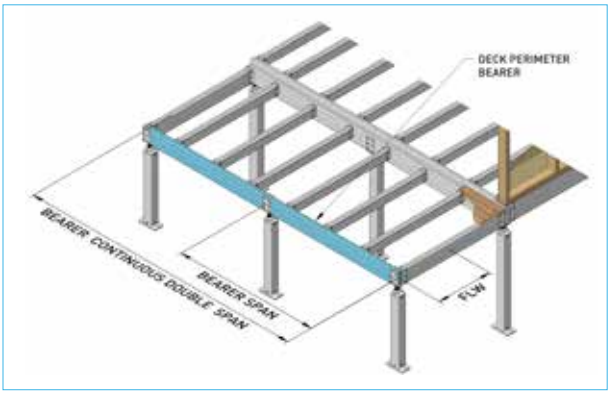


Table 38	MAXIMUM BEARER SPAN (mm)										
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)										
	900	1200	1500	1800	2100	2400	3000	3600	4200	4800	5400
	SINGLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2215	1894	1690	1527	1312	1151	–	–	–	–	–
B150-20	2575	2260	1995	1813	1680	1577	1424	1217	1047	–	–
B150-24	2820	2566	2333	2118	1949	1818	1610	1346	1157	1015	–
B200-16	2525	2191	1945	1765	1615	1416	1138	–	–	–	–
B200-20	2989	2580	2319	2102	1939	1794	1440	1204	1036	–	–
B250-20	3451	2982	2421	2022	1736	1522	1223	1023	–	–	–
	CONTINUOUS DOUBLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	1894	1559	1382	1192	1076	1001	827	708	618	–	–
B150-20	2159	1811	1534	1386	1218	1096	891	759	664	594	543
B150-24	2506	2074	1813	1573	1433	1277	1034	874	764	681	615
B200-16	2014	1658	1437	1227	1060	922	768	656	578	–	–
B200-20	2444	2014	1740	1524	1341	1181	959	813	713	634	576
B250-20	2641	2156	1761	1476	1273	1122	868	775	679	–	–
	CONTINUOUS TRIPLE SPAN										
B100-16	–	–	–	–	–	–	–	–	–	–	–
B150-16	2098	1743	1495	1361	1185	1082	885	762	647	580	440
B150-20	2410	1991	1707	1506	1381	1220	982	824	708	630	562
B150-24	2807	2326	1995	1770	1573	1428	1147	962	830	727	653
B200-16	2278	1861	1569	1371	1178	1035	835	655	610	437	410
B200-20	2749	2278	1930	1695	1502	1317	1060	888	769	658	608
B250-20	2953	2275	1829	1657	1375	1249	887	842	643	451	431

Perimeter bearers – heavier load

Supporting heavier commercial 7.5kPa floor loads and load bearing walls (single storey – sheet roof)

- Roof Mass: 40kg/m²
- Wall Weight: 0.45kPa at 2.7m Height
- Live Load: 7.5kPa
- Dead Load: 1.1kPa
- Point Load: 4.5kN
- End Supports: U Pier Head

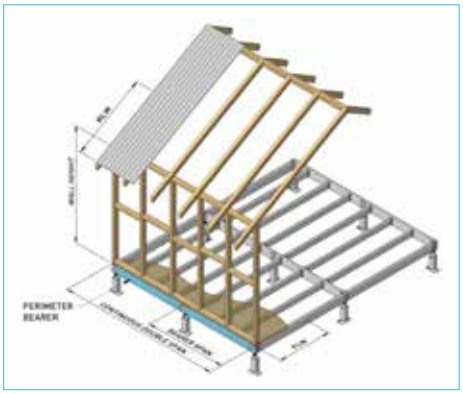


Table 39	MAXIMUM BEARER SPAN (mm)											
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)											
	900	1200	2100	3000	900	1200	2100	3000	900	1200	2100	3000
	ROOF LOAD WIDTH – RLW 2000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1991	1757	1202	–	1657	1432	1023	781	1860	1573	1114	851
B150-20	2292	2077	1613	1368	1905	1610	1140	840	2121	1826	1264	924
B150-24	2437	2286	1865	1513	2219	1889	1331	975	2471	2099	1476	1080
B200-16	2310	2025	1479	1069	1783	1498	975	726	1978	1668	1081	787
B200-20	2706	2405	1858	1353	2149	1840	1231	903	2405	2034	1378	997
B250-20	3139	2603	1590	1149	2311	1891	1169	846	2579	2136	1304	873
	ROOF LOAD WIDTH – RLW 4500 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1906	1701	1154	–	1567	1380	1000	760	1759	1507	1085	828
B150-20	2170	2004	1583	1329	1814	1540	1097	817	2004	1719	1224	896
B150-24	2308	2185	1826	1469	2086	1816	1279	948	2339	2006	1434	1049
B200-16	2212	1958	1420	1038	1668	1439	937	706	1870	1589	1038	764
B200-20	2596	2333	1800	1314	2026	1746	1183	878	2286	1942	1322	969
B250-20	3005	2436	1527	1116	2170	1771	1123	835	2396	1976	1254	867
	ROOF LOAD WIDTH – RLW 6000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1860	1670	1127	–	1522	1341	987	748	1696	1465	1069	815
B150-20	2109	1965	1567	1306	1745	1504	1072	804	1941	1675	1195	881
B150-24	2243	2132	1803	1444	2021	1758	1250	932	2281	1955	1401	1031
B200-16	2155	1921	1387	1020	1612	1407	916	695	1825	1548	1014	749
B200-20	2538	2295	1758	1292	1965	1694	1156	863	2203	1893	1292	953
B250-20	2905	2345	1491	1097	2093	1706	1097	822	2275	1828	1225	863
	ROOF LOAD WIDTH – RLW 8000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1805	1633	1093	–	1469	1285	962	732	1631	1425	1038	797
B150-20	2037	1916	1546	1277	1668	1460	1040	787	1870	1619	1159	862
B150-24	2166	2069	1776	1411	1945	1692	1213	912	2176	1891	1358	1008
B200-16	2087	1876	1345	–	1547	1347	889	679	1731	1494	984	731
B200-20	2468	2237	1705	1263	1893	1634	1122	845	2111	1843	1253	932
B250-20	2737	2235	1446	1072	1987	1626	1065	805	2201	1785	1187	858

Perimeter bearers – heavier load

Supporting heavier commercial 7.5kPa floor loads and load bearing walls (single storey – tiled roof)

- Roof Mass: 90kg/m²
- Wall Weight: 0.45kPa at 2.7m Height
- Live Load: 7.5kPa
- Dead Load: 1.1kPa
- Point Load: 4.5kN
- End Supports: U Pier Head

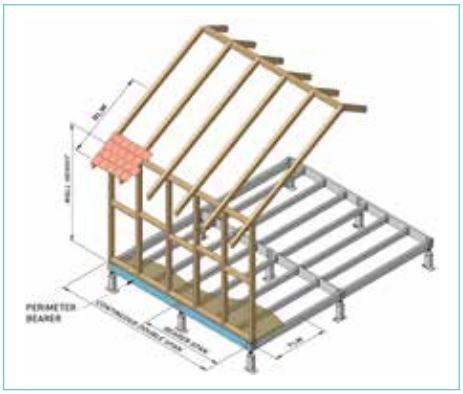
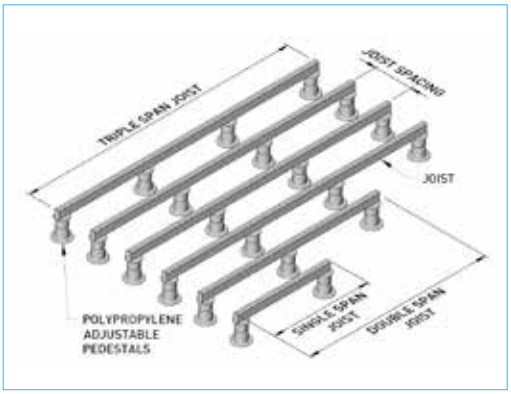


Table 40	MAXIMUM BEARER SPAN (mm)											
BOXSPAN SECTION	FLOOR LOAD WIDTH – FLW (mm)											
	900	1200	2100	3000	900	1200	2100	3000	900	1200	2100	3000
	ROOF LOAD WIDTH – RLW 2000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1906	1701	1154	–	1567	1380	1000	760	1759	1507	1085	828
B150-20	2170	2004	1583	1329	1814	1540	1097	817	2004	1719	1224	896
B150-24	2308	2185	1826	1469	2086	1816	1279	948	2339	2006	1434	1049
B200-16	2212	1958	1420	1038	1668	1439	937	706	1870	1589	1038	764
B200-20	2596	2333	1800	1314	2026	1746	1183	878	2286	1942	1322	969
B250-20	3005	2436	1527	1116	2170	1771	1123	835	2396	1976	1254	867
	ROOF LOAD WIDTH – RLW 4500 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1753	1597	1058	–	1420	1236	934	717	1567	1392	1014	779
B150-20	1970	1868	1525	1247	1600	1419	1009	770	1812	1565	1123	843
B150-24	2095	2010	1748	1379	1876	1632	1176	891	2089	1841	1316	985
B200-16	2023	1830	1303	–	1487	1284	862	664	1660	1444	927	714
B200-20	2401	2178	1651	1233	1825	1578	1087	826	2025	1779	1215	910
B250-20	2578	2128	1401	1047	1873	1550	1033	787	2119	1748	1150	852
	ROOF LOAD WIDTH – RLW 6000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1681	1492	1009	–	1340	1172	890	692	1475	1317	986	750
B150-20	1879	1801	1493	1203	1509	1353	963	745	1685	1486	1071	814
B150-24	1998	1927	1706	1330	1765	1551	1121	860	1969	1738	1255	951
B200-16	1934	1761	1242	–	1408	1195	823	641	1558	1342	900	662
B200-20	2308	2093	1574	1190	1702	1502	1037	799	1904	1677	1157	877
B250-20	2361	1979	1335	1010	1716	1442	985	761	1941	1579	1090	833
	ROOF LOAD WIDTH – RLW 8000 (mm)											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	1600	1364	–	–	1232	1101	839	661	1389	1227	930	714
B150-20	1780	1724	1456	1148	1413	1254	907	714	1565	1405	1008	778
B150-24	1894	1836	1656	1270	1630	1463	1056	823	1838	1629	1180	908
B200-16	1833	1682	1168	–	1278	1094	777	614	1441	1228	855	654
B200-20	2182	1997	1480	1136	1575	1392	978	765	1774	1569	1090	839
B250-20	2123	1809	1256	–	1544	1319	912	729	1745	1487	1033	797

JOIST SPAN



Joist span: 3.0kPa

Supported by polypropylene adjustable pedestals

- 3.0kPa live load
- 0.75kPa dead load
- 2.7kN point load

Table 41	MAXIMUM FLOOR JOIST SPAN (mm)								
BOXSPAN SECTION	JOIST SPACING (mm)								
	400	450	600	400	450	600	400	450	600
	THIS TABLE USES PPAP WITH 7.1 kN MAX. DESIGN AXIAL COMPRESSION CAPACITY AS THE SUPPORT								
	SINGLE SPAN			CONTINUOUS DOUBLE SPAN			CONTINUOUS TRIPLE SPAN		
B100-12	2485	2365	2170	2306	2097	1573	2597	2383	1787
B100-16	2770	2626	2395	2629	2337	1753	2988	2656	1992
B150-16	3589	3347	3011	2629	2337	1753	2988	2656	1992
B150-20	3835	3550	3180	2629	2337	1753	2988	2656	1992
B150-24	4185	3850	3430	2629	2337	1753	2988	2656	1992
B200-16	4699	4290	3789	2629	2337	1753	2988	2656	1992
B200-20	5055	4687	4110	2629	2337	1753	2988	2656	1992
B250-20	5921	5750	4382	2629	2337	1753	2988	2656	1992
	THIS TABLE USES PPAP WITH 10.7 kN MAX. DESIGN AXIAL COMPRESSION CAPACITY AS THE SUPPORT								
	SINGLE SPAN			CONTINUOUS DOUBLE SPAN			CONTINUOUS TRIPLE SPAN		
B100-12	2485	2365	2170	2306	2097	1573	2597	2383	1787
B100-16	2770	2626	2395	3020	2780	2409	3078	2822	2505
B150-16	3589	3347	3011	3718	3419	2641	4184	3850	3002
B150-20	3835	3550	3180	3962	3522	2641	4503	4002	3002
B150-24	4185	3850	3430	3962	3522	2641	4503	4002	3002
B200-16	4699	4290	3789	3962	3522	2641	4503	4002	3002
B200-20	5055	4687	4110	3962	3522	2641	4503	4002	3002
B250-20	5921	5750	4915	3962	3522	2641	4503	4002	3002
	THIS TABLE USES PPAP WITH 21.1 kN MAX. DESIGN AXIAL COMPRESSION CAPACITY AS THE SUPPORT								
	SINGLE SPAN			CONTINUOUS DOUBLE SPAN			CONTINUOUS TRIPLE SPAN		
B100-12	2485	2365	2170	2306	2097	1573	2597	2383	1787
B100-16	2770	2626	2395	3020	2780	2409	3078	2822	2505
B150-16	3589	3347	3011	3743	3443	2685	4212	3877	3051
B150-20	3835	3550	3180	4653	4550	3862	4693	4642	3913
B150-24	4185	3850	3430	4815	4802	4034	4857	4844	4087
B200-16	4699	4290	3789	4267	3923	3007	4803	4417	3418
B200-20	5055	4687	4110	5739	5313	4381	5914	5891	4927
B250-20	5921	5750	4915	5995	5520	4392	6746	6213	4991

NOTES

#Max Rb: denotes maximum compression capacity of the polypropylene pedestal to attain the listed Boxspan spans, reactions loads in kN.
Refer to the polypropylene pedestal manufacturers technical specification for the products allowable compression capacity. Single span – one End reation value listed.
Continuous span – first reaction value is the max. Internal reaction the second value is the End reaction.
Boxspan requires minimum 50mm bearing length from the pedestal support.

Joist span: 5.0kPa

Supported by polypropylene adjustable pedestals

- 5.0kPa live load
- 0.75kPa dead load
- 3.6kN point load

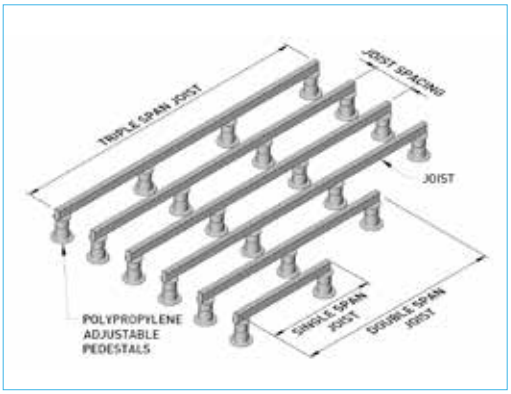
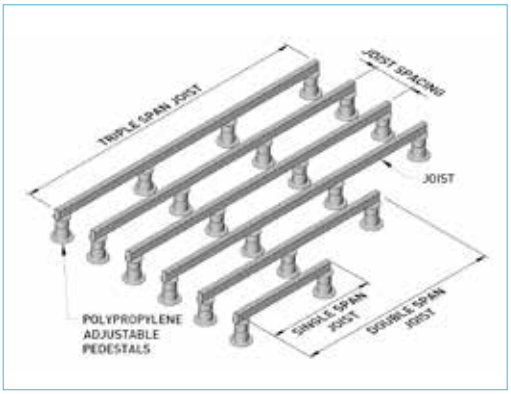


Table 42	MAXIMUM FLOOR JOIST SPAN (mm)								
BOXSPAN SECTION	JOIST SPACING (mm)								
	400	450	600	400	450	600	400	450	600
	THIS TABLE USES PPAP WITH 7.1 kN MAX. DESIGN AXIAL COMPRESSION CAPACITY AS THE SUPPORT								
	SINGLE SPAN			CONTINUOUS DOUBLE SPAN			CONTINUOUS TRIPLE SPAN		
B100-12	2446	2352	2030	1517	1348	1011	1724	1532	1149
B100-16	2680	2577	2342	1690	1502	1126	1920	1707	1280
B150-16	3589	3347	2817	1690	1502	1126	1920	1707	1280
B150-20	3835	3550	2817	1690	1502	1126	1920	1707	1280
B150-24	4185	3756	2817	1690	1502	1126	1920	1707	1280
B200-16	4226	3756	2817	1690	1502	1126	1920	1707	1280
B200-20	4226	3756	2817	1690	1502	1126	1920	1707	1280
B250-20	4226	3756	2817	1690	1502	1126	1920	1707	1280
	THIS TABLE USES PPAP WITH 10.7 kN MAX. DESIGN AXIAL COMPRESSION CAPACITY AS THE SUPPORT								
	SINGLE SPAN			CONTINUOUS DOUBLE SPAN			CONTINUOUS TRIPLE SPAN		
B100-12	2446	2352	2030	1517	1348	1011	1724	1532	1149
B100-16	2680	2577	2342	2347	2157	1624	2643	2429	1845
B150-16	3589	3347	3011	2547	2264	1698	2895	2573	1930
B150-20	3835	3550	3180	2547	2264	1698	2895	2573	1930
B150-24	4185	3850	3430	2547	2264	1698	2895	2573	1930
B200-16	4618	4290	3785	2547	2264	1698	2895	2573	1930
B200-20	4961	4687	4110	2547	2264	1698	2895	2573	1930
B250-20	5921	5661	4246	2547	2264	1698	2895	2573	1930
	THIS TABLE USES PPAP WITH 21.1 kN MAX. DESIGN AXIAL COMPRESSION CAPACITY AS THE SUPPORT								
	SINGLE SPAN			CONTINUOUS DOUBLE SPAN			CONTINUOUS TRIPLE SPAN		
B100-12	2446	2352	2030	1517	1348	1011	1724	1532	1149
B100-16	2680	2577	2342	2347	2157	1624	2643	2429	1845
B150-16	3589	3347	3011	2589	2302	1726	2942	2615	1961
B150-20	3835	3550	3180	3813	3522	2888	4286	3960	3250
B150-24	4185	3850	3430	4302	3968	3242	4839	4464	3650
B200-16	4618	4290	3785	2900	2578	1933	3295	2929	2197
B200-20	4961	4687	4110	4273	3940	3216	4806	4433	3621
B250-20	5921	5715	4915	4235	3764	2823	4812	4278	3208

NOTES

#Max Rb: denotes maximum compression capacity of the polypropylene pedestal to attain the listed Boxspan spans, reactions loads in kN.
Refer to the polypropylene pedestal manufacturers technical specification for the products allowable compression capacity. Single span – one End reation value listed.
Continuous span – first reaction value is the max. Internal reaction the second value is the End reaction.
Boxspan requires minimum 50mm bearing length from the pedestal support.



Joist span: 7.5kPa

Supported by polypropylene adjustable pedestals

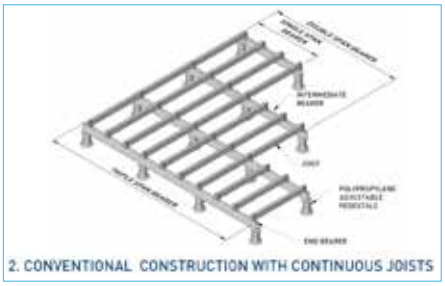
- 7.5kPa live load
- 0.7kPa dead load
- 4.5kN point load

Table 43	MAXIMUM FLOOR JOIST SPAN (mm)								
BOXSPAN SECTION	JOIST SPACING (mm)								
	400	450	600	400	450	600	400	450	600
	THIS TABLE USES PPAP WITH 7.1 kN MAX. DESIGN AXIAL COMPRESSION CAPACITY AS THE SUPPORT								
	SINGLE SPAN			CONTINUOUS DOUBLE SPAN			CONTINUOUS TRIPLE SPAN		
B100-12	1852	1728	1296	–	–	–	–	–	–
B100-16	1944	1728	1296	–	–	–	–	–	–
B150-16	1944	1728	1296	–	–	–	–	–	–
B150-20	1944	1728	1296	–	–	–	–	–	–
B150-24	1944	1728	1296	–	–	–	–	–	–
B200-16	1944	1728	1296	–	–	–	–	–	–
B200-20	1944	1728	1296	–	–	–	–	–	–
B250-20	1944	1728	1296	–	–	–	–	–	–
	THIS TABLE USES PPAP WITH 10.7 kN MAX. DESIGN AXIAL COMPRESSION CAPACITY AS THE SUPPORT								
	SINGLE SPAN			CONTINUOUS DOUBLE SPAN			CONTINUOUS TRIPLE SPAN		
B100-12	1852	1747	1543	–	–	–	–	–	–
B100-16	2417	2324	2111	–	1497	1122	1913	–	1275
B150-16	3306	3149	2727	1761	1565	1174	2001	1779	1334
B150-20	3555	3418	2935	1761	1565	1174	2001	1779	1334
B150-24	3782	3637	2935	1761	1565	1174	2001	1779	1334
B200-16	3855	3634	2935	1761	1565	1174	2001	1779	1334
B200-20	4403	3914	2935	1761	1565	1174	2001	1779	1334
B250-20	4403	3914	2935	1761	1565	1174	2001	1779	1334
	THIS TABLE USES PPAP WITH 21.1 kN MAX. DESIGN AXIAL COMPRESSION CAPACITY AS THE SUPPORT								
	SINGLE SPAN			CONTINUOUS DOUBLE SPAN			CONTINUOUS TRIPLE SPAN		
B100-12	1852	1747	1543	–	–	–	–	–	–
B100-16	2417	2324	2111	–	1497	1122	1913	–	1275
B150-16	3306	3149	2727	1790	1591	1193	2034	1808	1356
B150-20	3555	3418	3105	2963	2727	2163	3334	3070	2458
B150-24	3782	3637	3304	3327	3058	2315	3746	3443	2631
B200-16	3855	3634	3147	2005	1782	1336	2278	2025	1519
B200-20	4474	4292	3717	3301	3030	2273	3717	3415	2583
B250-20	5277	4975	4309	2928	2602	1952	3327	2957	2218

NOTES

#Max Rb: denotes maximum compression capacity of the polypropylene pedestal to attain the listed Boxspan spans, reactions loads in kN.
Refer to the polypropylene pedestal manufacturers technical specification for the products allowable compression capacity. Single span – one End reation value listed.
Continuous span – first reaction value is the max. Internal reaction the second value is the End reaction.
Boxspan requires minimum 50mm bearing length from the pedestal support.

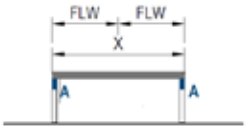
BEARER SPAN


2. CONVENTIONAL CONSTRUCTION WITH CONTINUOUS JOISTS

Bearer span: 3.0kPa

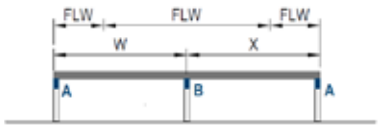
- 3.0kPa live load
- 0.75kPa dead load
- 2.7kN point load

Supported by Pedestal Piers.



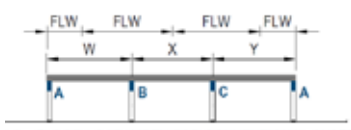
1-1 FLOOR LOAD WIDTH FOR CONVENTIONAL SYSTEM (JOISTS IN SINGLE SPAN)

BEARER A: FLW = X/2



1-2 FLOOR LOAD WIDTH FOR CONVENTIONAL SYSTEM (JOISTS IN CONTINUOUS DOUBLE SPAN - OVER INTERNAL BEARER)

BEARER A: FLW = 0.375 W
BEARER B: FLW = 1.25(W + X) / 2



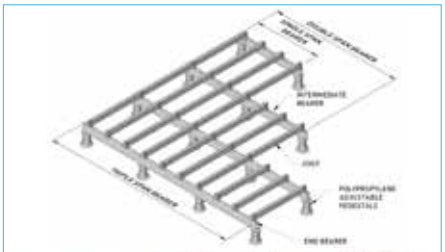
1-3 FLOOR LOAD WIDTH FOR CONVENTIONAL SYSTEM (JOISTS IN CONTINUOUS TRIPLE SPAN - OVER INTERNAL BEARER)

BEARER A: FLW = 0.4 W
BEARER B: FLW = 1.1 (W + X) / 2
BEARER C: FLW = 1.1 (X + Y) / 2

Table 44	MAXIMUM FLOOR INTERNAL BEARER SPAN (mm)											
BOXSPAN SECTION	FLOOR LOAD WIDTH (mm)											
	900	1200	1500	1800	900	1200	1500	1800	900	1200	1500	1800
	THIS TABLE USES PPAP WITH 7.1 kN MAX. DESIGN AXIAL COMPRESSION CAPACITY AS THE SUPPORT											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	2316	2108	1777	1485	1200	918	753	642	1340	1012	818	684
B150-16	2945	2215	1777	1485	1200	918	753	642	1340	1012	818	684
B150-20	2945	2215	1777	1485	1200	918	753	642	1340	1012	818	684
B150-24	2945	2215	1777	1485	1200	918	753	642	1340	1012	818	684
B200-16	2945	2215	1777	1485	1200	918	753	642	1340	1012	818	684
B200-20	2945	2215	1777	1485	1200	918	753	642	1340	1012	818	684
B250-20	2945	2215	1777	1485	1200	918	753	642	1340	1012	818	684
	THIS TABLE USES PPAP WITH 10.7 kN MAX. DESIGN AXIAL COMPRESSION CAPACITY AS THE SUPPORT											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	2316	2108	1961	1849	1706	1292	1047	885	1922	1447	1162	974
B150-16	3154	2869	2590	2225	1782	1349	1092	923	2010	1512	1215	1017
B150-20	3388	3082	2666	2225	1782	1349	1092	923	2010	1512	1215	1017
B150-24	3604	3277	2666	2225	1782	1349	1092	923	2010	1512	1215	1017
B200-16	3861	3326	2666	2225	1782	1349	1092	923	2010	1512	1215	1017
B200-20	4258	3326	2666	2225	1782	1349	1092	923	2010	1512	1215	1017
B250-20	4426	3326	2666	2225	1782	1349	1092	923	2010	1512	1215	1017
	THIS TABLE USES PPAP WITH 21.1 kN MAX. DESIGN AXIAL COMPRESSION CAPACITY AS THE SUPPORT											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	2316	2108	1961	1849	1706	1292	1047	885	1922	1447	1162	974
B150-16	3154	2869	2590	2383	1811	1371	1109	937	2042	1537	1235	1033
B150-20	3388	3082	2863	2697	2968	2425	1966	1646	3333	2734	2220	1853
B150-24	3604	3277	3044	2867	3334	2619	2102	1758	3744	2966	2375	1982
B200-16	3861	3347	2992	2722	2024	1529	1234	1039	2286	1719	1380	1153
B200-20	4258	3871	3526	3235	3309	2572	2064	1727	3715	2912	2332	1946
B250-20	5097	4568	4096	3727	2941	2213	1778	1490	3332	2502	2005	1674

NOTES

#Max Rb: denotes maximum compression capacity of the polypropylene pedestal to attain the listed Boxspan spans, reactions loads in kN.
Refer to the polypropylene pedestal manufacturers technical specification for the products allowable compression capacity. Single span – one End reation value listed.
Continuous span – first reaction value is the max. Internal reaction the second value is the End reaction.
Boxspan requires minimum 50mm bearing length from the pedestal support.

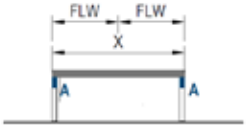


2. CONVENTIONAL CONSTRUCTION WITH CONTINUOUS JOISTS

Bearer span: 5.0kPa

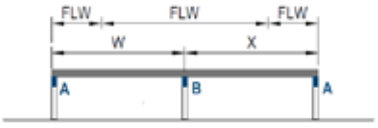
- 5.0kPa live load
- 0.75kPa dead load
- 3.6kN point load

Supported by Pedestal Piers.



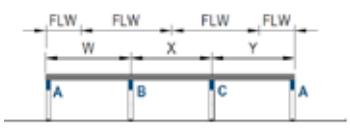
1-1 FLOOR LOAD WIDTH FOR CONVENTIONAL SYSTEM (JOISTS IN SINGLE SPAN)

BEARER A: FLW = X/2



1-2 FLOOR LOAD WIDTH FOR CONVENTIONAL SYSTEM (JOISTS IN CONTINUOUS DOUBLE SPAN - OVER INTERNAL BEARER)

BEARER A: FLW = 0.375 W
BEARER B: FLW = 1.25(W + X) / 2



1-3 FLOOR LOAD WIDTH FOR CONVENTIONAL SYSTEM (JOISTS IN CONTINUOUS TRIPLE SPAN - OVER INTERNAL BEARER)

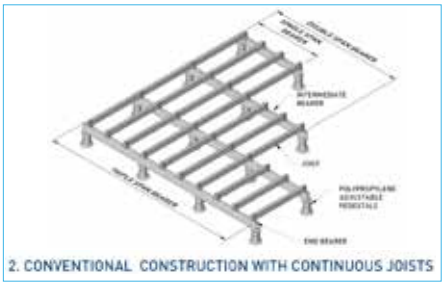
BEARER A: FLW = 0.4 W
BEARER B: FLW = 1.1 (W + X) / 2
BEARER C: FLW = 1.1 (X + Y) / 2

Table 45	MAXIMUM FLOOR INTERNAL BEARER SPAN (mm)											
BOXSPAN SECTION	FLOOR LOAD WIDTH (mm)											
	900	1200	1500	1800	900	1200	1500	1800	900	1200	1500	1800
	THIS TABLE USES PPAP WITH 7.1 kN MAX. DESIGN AXIAL COMPRESSION CAPACITY AS THE SUPPORT											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	1901	1432	1151	–	798	622	523	–	871	662	540	460
B150-16	1901	1432	1151	–	798	622	523	–	871	662	540	460
B150-20	1901	1432	1151	–	798	622	523	–	871	662	540	460
B150-24	1901	1432	1151	–	798	622	523	–	871	662	540	460
B200-16	1901	1432	1151	–	798	622	523	–	871	662	540	460
B200-20	1901	1432	1151	–	798	622	523	–	871	662	540	460
B250-20	1901	1432	1151	–	798	622	523	–	871	662	540	460
	THIS TABLE USES PPAP WITH 10.7 kN MAX. DESIGN AXIAL COMPRESSION CAPACITY AS THE SUPPORT											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	2070	1863	1672	1439	1116	855	706	603	1244	941	760	641
B150-16	2679	2146	1722	1439	1165	891	733	625	1299	982	794	665
B150-20	2854	2146	1722	1439	1165	891	733	625	1299	982	794	665
B150-24	2854	2146	1722	1439	1165	891	733	625	1299	982	794	665
B200-16	2854	2146	1722	1439	1165	891	733	625	1299	982	794	665
B200-20	2854	2146	1722	1439	1165	891	733	625	1299	982	794	665
B250-20	2854	2146	1722	1439	1165	891	733	625	1299	982	794	665
	THIS TABLE USES PPAP WITH 21.1 kN MAX. DESIGN AXIAL COMPRESSION CAPACITY AS THE SUPPORT											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	2070	1863	1672	1542	1116	855	706	603	1244	941	760	641
B150-16	2679	2345	2084	1892	1183	905	743	634	1320	997	806	675
B150-20	3025	2722	2450	2257	2104	1588	1281	1078	2377	1787	1434	1199
B150-24	3217	2926	2719	2561	2249	1697	1368	1150	2544	1912	1533	1282
B200-16	3107	2672	2398	2188	1317	1005	819	701	1476	1113	897	754
B200-20	3649	3183	2826	2577	2209	1667	1343	1130	2497	1877	1506	1259
B250-20	4233	3660	3270	2815	1902	1438	1163	981	2147	1614	1296	1085

NOTES

#Max Rb: denotes maximum compression capacity of the polypropylene pedestal to attain the listed Boxspan spans, reactions loads in kN.
Refer to the polypropylene pedestal manufacturers technical specification for the products allowable compression capacity. Single span – one End reation value listed.
Continuous span – first reaction value is the max. Internal reaction the second value is the End reaction.
Boxspan requires minimum 50mm bearing length from the pedestal support.

BEARER SPAN CONTINUED

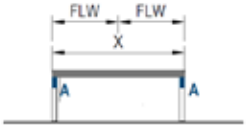


2. CONVENTIONAL CONSTRUCTION WITH CONTINUOUS JOISTS

Bearer span: 7.5kPa

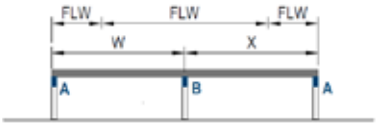
- 7.5kPa live load
- 0.75kPa dead load
- 4.5kN point load

Supported by Pedestal Piers.



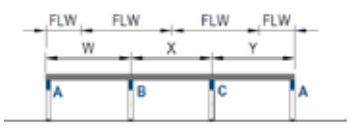
1-1 FLOOR LOAD WIDTH FOR CONVENTIONAL SYSTEM (JOISTS IN SINGLE SPAN)

BEARER A: FLW = X/2



1-2 FLOOR LOAD WIDTH FOR CONVENTIONAL SYSTEM (JOISTS IN CONTINUOUS DOUBLE SPAN - OVER INTERNAL BEARER)

BEARER A: FLW = 0.375 W
BEARER B: FLW = 1.25(W + X) / 2



1-3 FLOOR LOAD WIDTH FOR CONVENTIONAL SYSTEM (JOISTS IN CONTINUOUS TRIPLE SPAN - OVER INTERNAL BEARER)

BEARER A: FLW = 0.4 W
BEARER B: FLW = 1.1 (W + X) / 2
BEARER C: FLW = 1.1 (X + Y) / 2

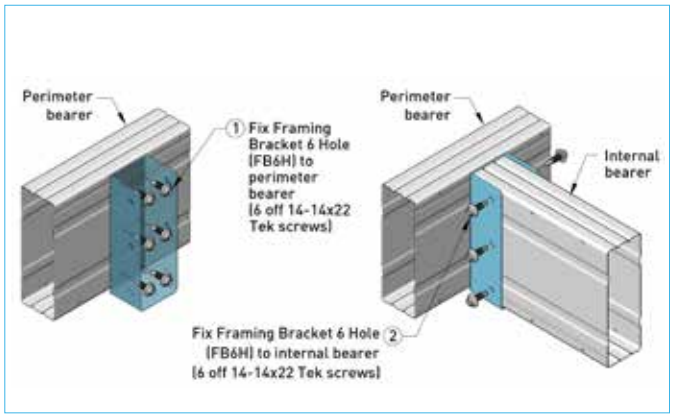
Table 46 — MAXIMUM FLOOR INTERNAL BEARER SPAN (mm)

BOXSPAN SECTION	FLOOR LOAD WIDTH (mm)											
	900	1200	1500	1800	900	1200	1500	1800	900	1200	1500	1800
	THIS TABLE USES PPAP WITH 7.1 kN MAX. DESIGN AXIAL COMPRESSION CAPACITY AS THE SUPPORT											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-16	–	–	–	–	–	–	–	–	–	–	–	–
B150-20	–	–	–	–	–	–	–	–	–	–	–	–
B150-24	–	–	–	–	–	–	–	–	–	–	–	–
B200-16	–	–	–	–	–	–	–	–	–	–	–	–
B200-20	–	–	–	–	–	–	–	–	–	–	–	–
B250-20	–	–	–	–	–	–	–	–	–	–	–	–
	THIS TABLE USES PPAP WITH 10.7 kN MAX. DESIGN AXIAL COMPRESSION CAPACITY AS THE SUPPORT											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	1789	1491	1198	1002	795	620	522	–	–	–	539	457
B150-16	1980	1491	1198	1002	827	644	540	–	907	–	560	480
B150-20	1980	1491	1198	1002	827	644	540	–	907	–	560	480
B150-24	1980	1491	1198	1002	827	644	540	–	907	–	560	480
B200-16	1980	1491	1198	1002	827	644	540	–	907	–	560	480
B200-20	1980	1491	1198	1002	827	644	540	–	907	–	560	480
B250-20	1980	1491	1198	1002	827	644	540	–	907	–	560	480
	THIS TABLE USES PPAP WITH 21.1 kN MAX. DESIGN AXIAL COMPRESSION CAPACITY AS THE SUPPORT											
	SINGLE SPAN				CONTINUOUS DOUBLE SPAN				CONTINUOUS TRIPLE SPAN			
B100-16	1789	1566	1428	1298	795	620	522	–	–	–	539	457
B150-16	2259	1928	1719	1572	839	653	546	–	922	–	568	488
B150-20	2617	2299	2032	1846	1468	1116	907	771	1649	1243	1000	839
B150-24	2904	2628	2339	1953	1567	1190	966	818	1763	1328	1069	895
B200-16	2567	2234	1979	1799	932	723	596	519	1028	–	634	535
B200-20	3044	2623	2339	1953	1540	1169	950	805	1731	1304	1049	879
B250-20	3510	2918	2339	1953	1329	1013	826	707	1490	1123	905	762

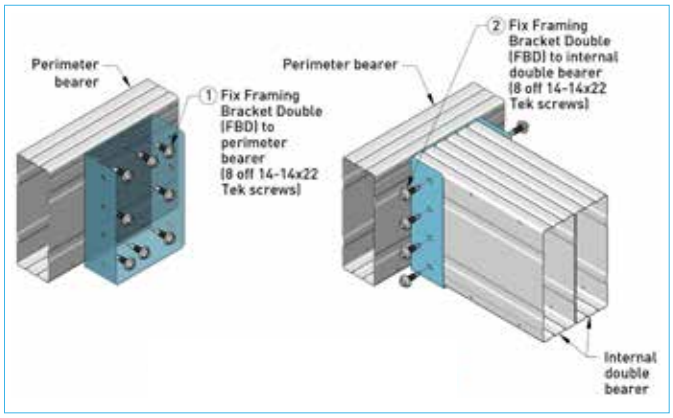
NOTES

#Max Rb: denotes maximum compression capacity of the polypropylene pedestal to attain the listed Boxspan spans, reactions loads in kN.
Refer to the polypropylene pedestal manufacturers technical specification for the products allowable compression capacity. Single span – one End reation value listed.
Continuous span – first reaction value is the max. Internal reaction the second value is the End reaction.
Boxspan requires minimum 50mm bearing length from the pedestal support.

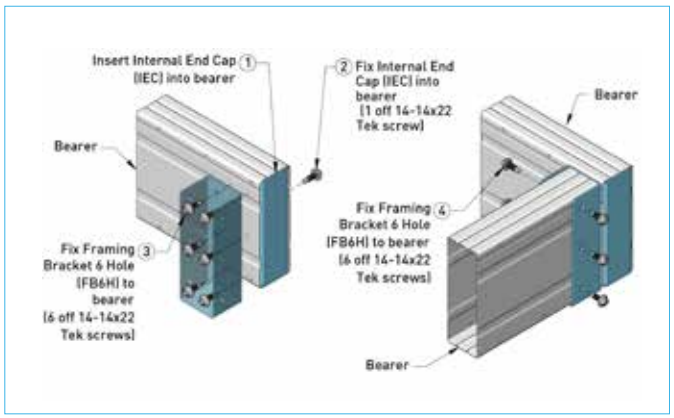
COMMON CONNECTIONS FLOOR FRAMES



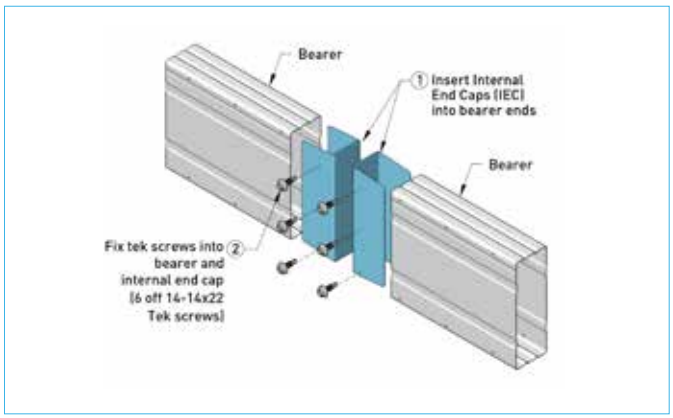
Internal bearer to perimeter bearer connection



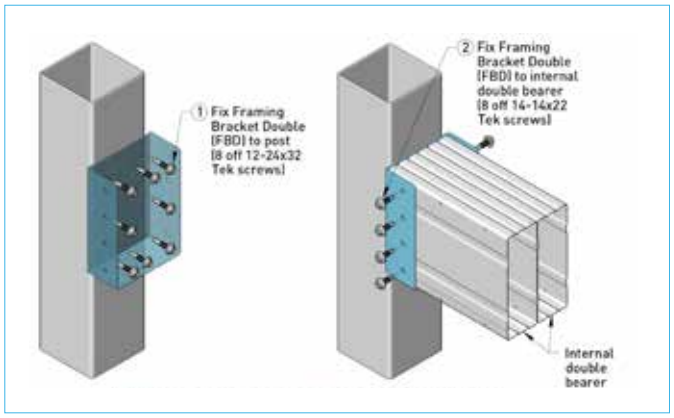
Internal double bearer to perimeter bearer connection



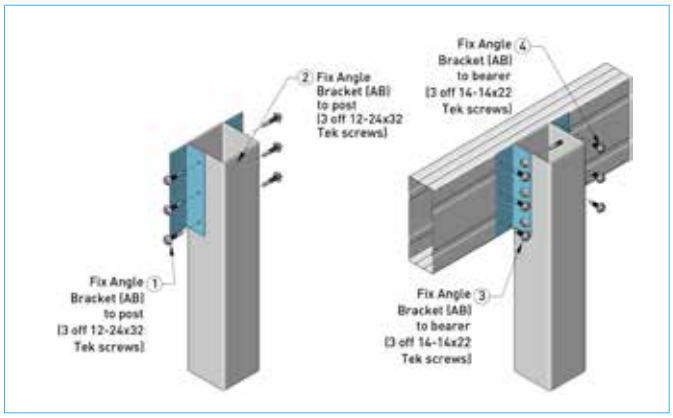
Perimeter bearers connection



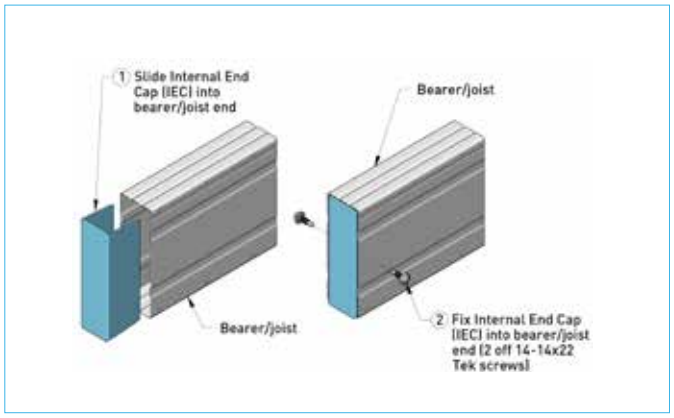
Bearer join connection



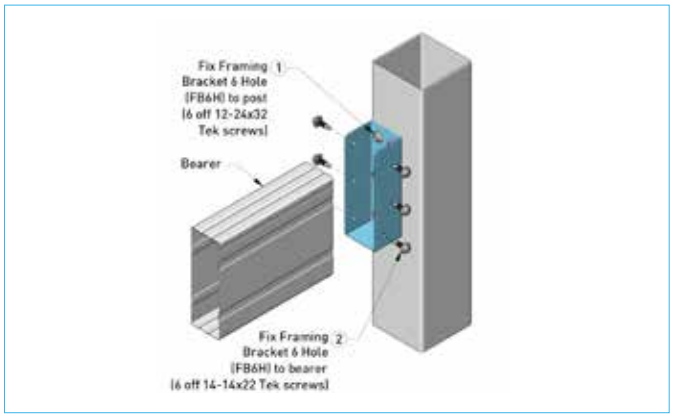
Internal double bearer to post connection



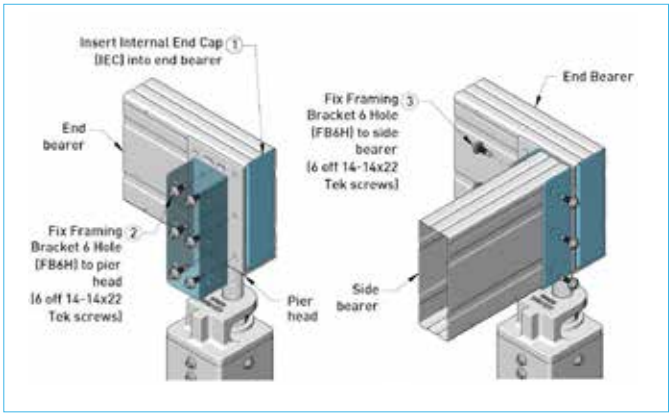
Bearer to post connection with angle brackets



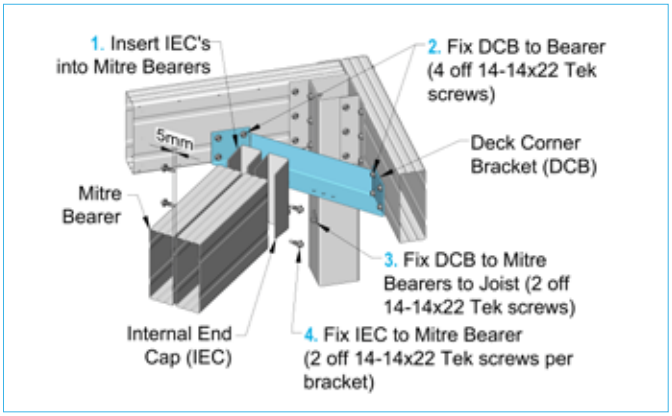
Bearer/joist end connection



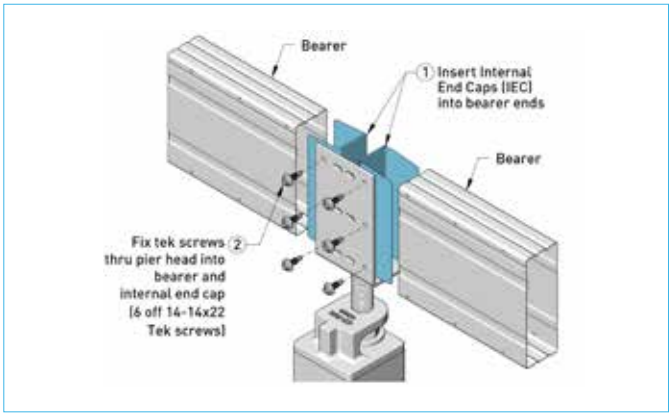
Bearer to post connection with framing bracket 6 hole



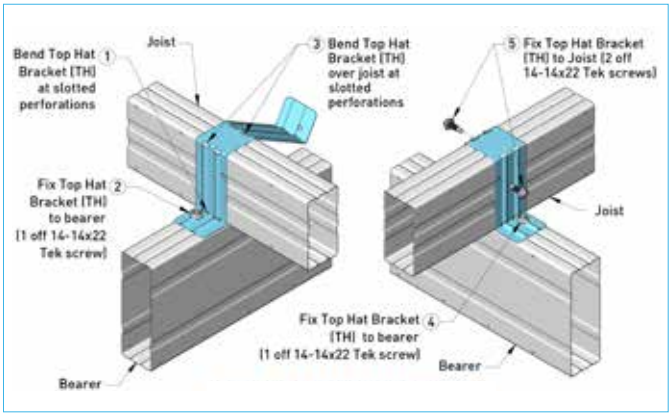
End bearer to side bearer connection



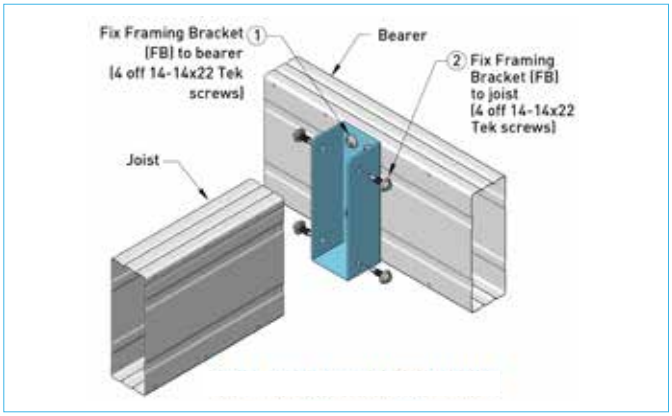
Deck mitre bearers connection



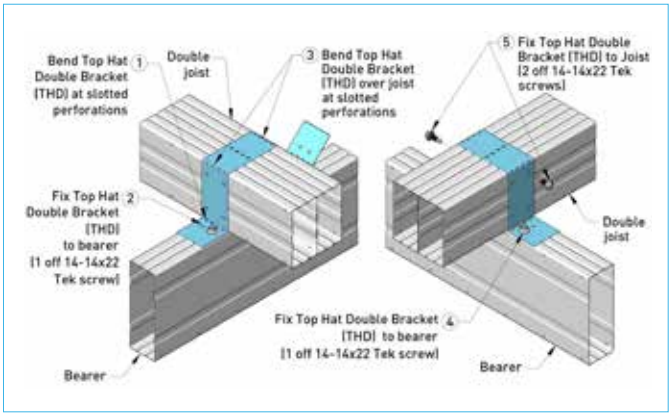
Ezipier bearer join connection



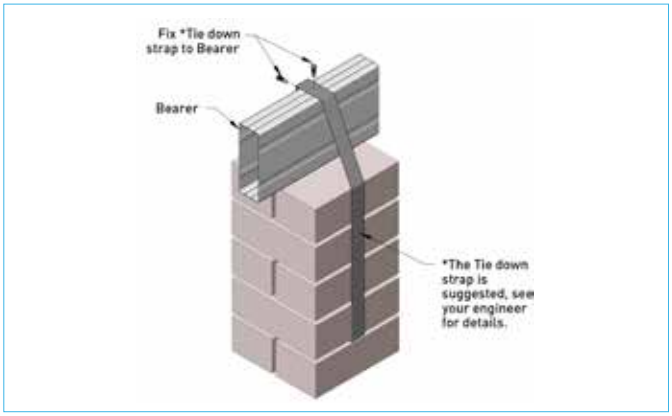
Joist over bearer connection



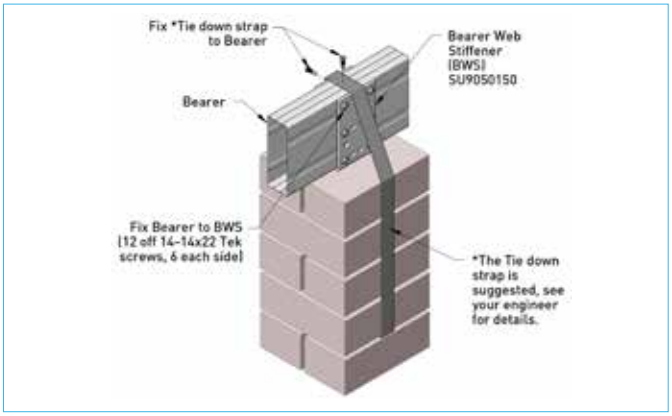
Joist to bearer connection



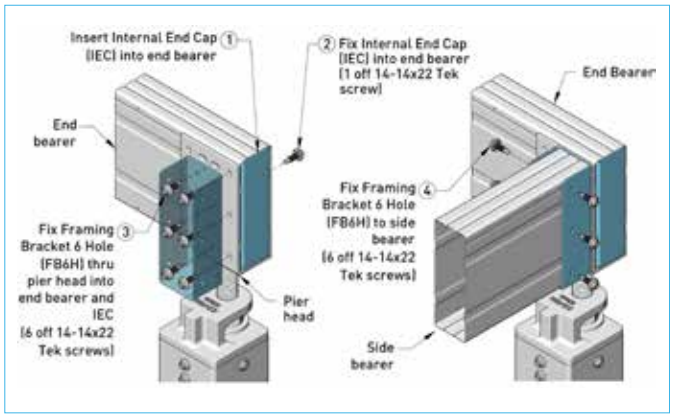
Double joist over bearer connection



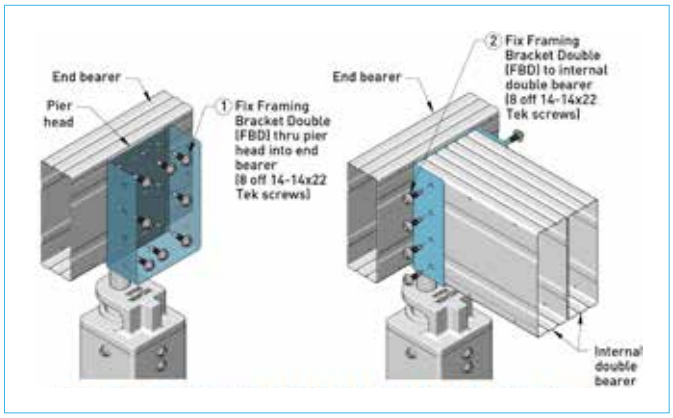
Standard brick pier connection



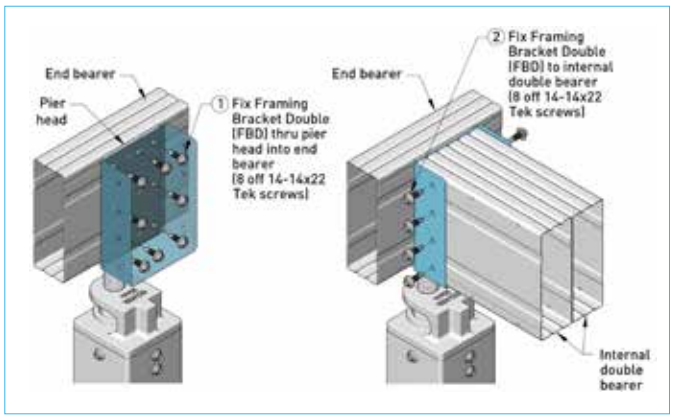
Heavier load brick pier connection



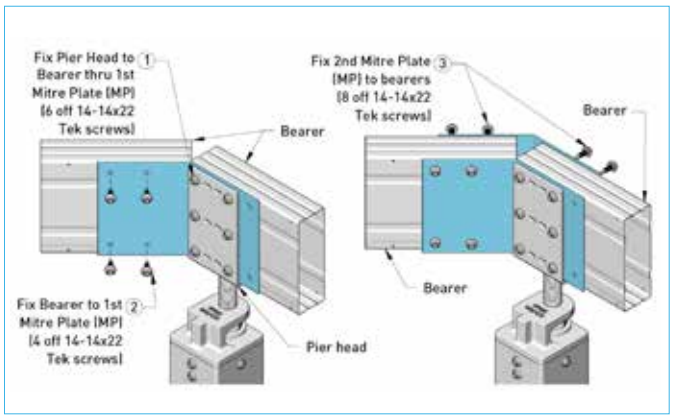
Ezipier end bearer to side bearer connection



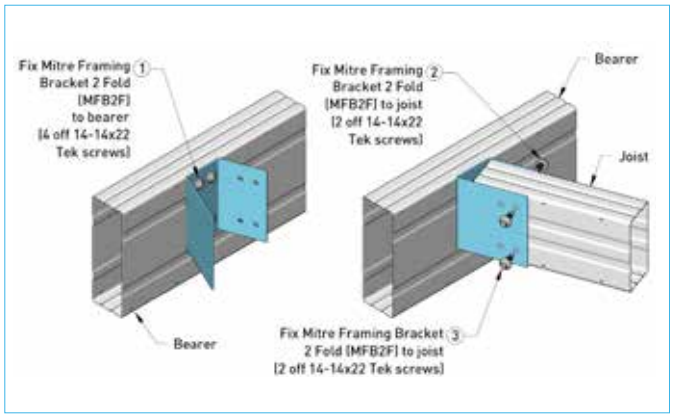
Ezipier internal double bearer to end bearer connection



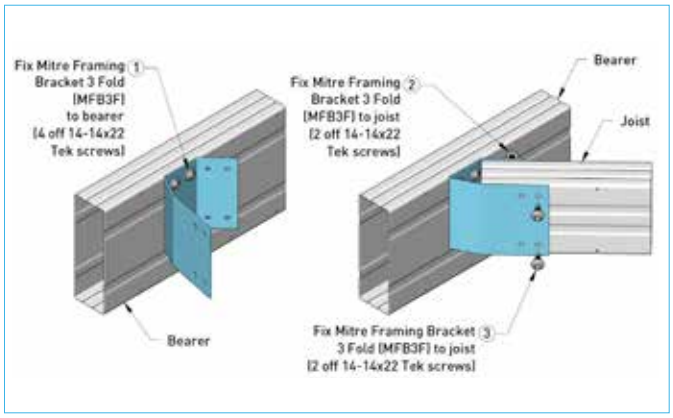
Ezipier internal double bearer to end bearer connection



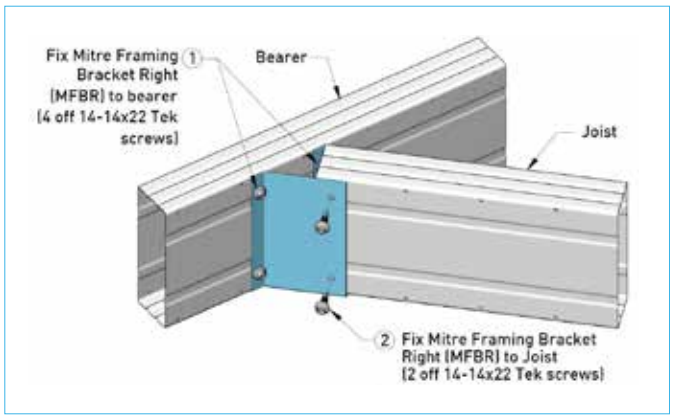
Angled bearer to pier head bearer



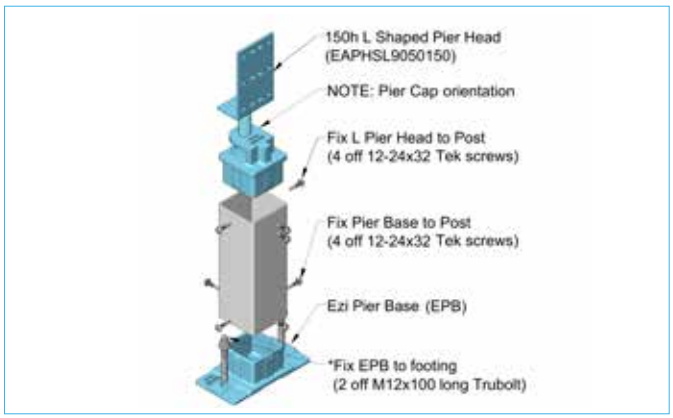
Angled joist to bearer connection (70–135º)



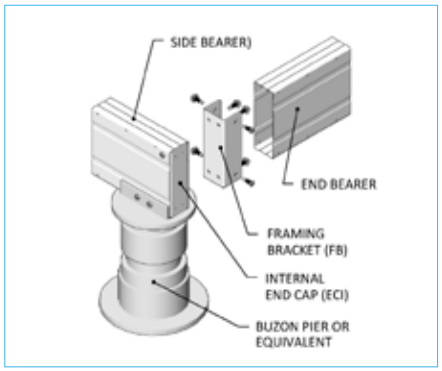
Angled joist to bearer connection (135–175º)



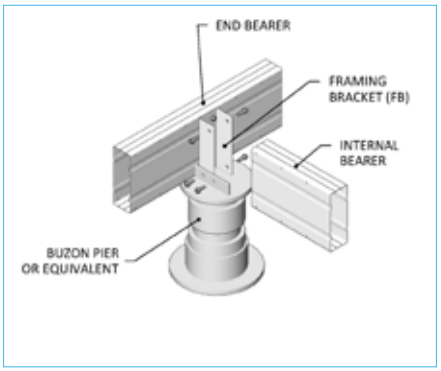
Angled joist to bearer connection



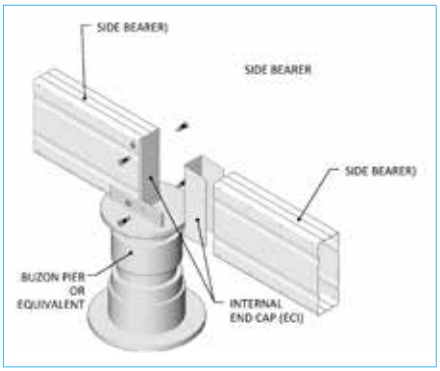
Ezipier assembly (see ezipier.com.au dor technical specs.)



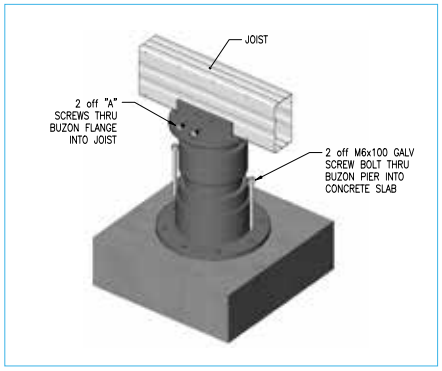
Corner connection



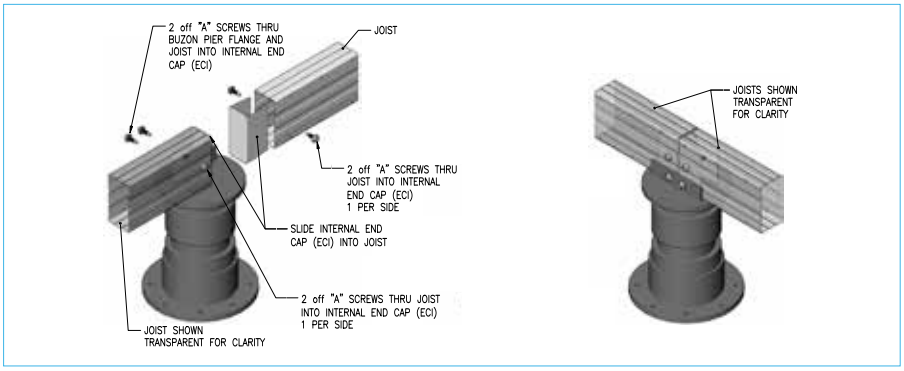
Internal bearer to side bearer connection



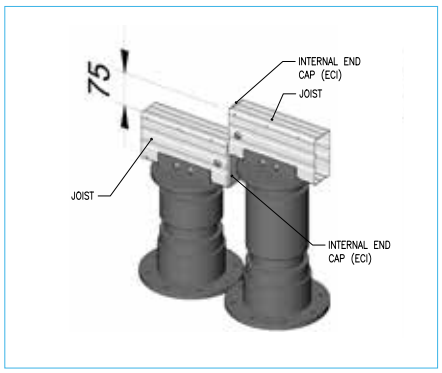
Bearer join connection



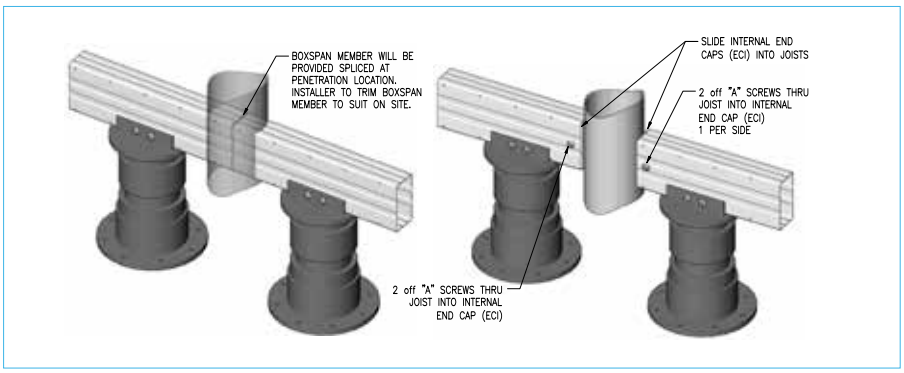
Pier connection



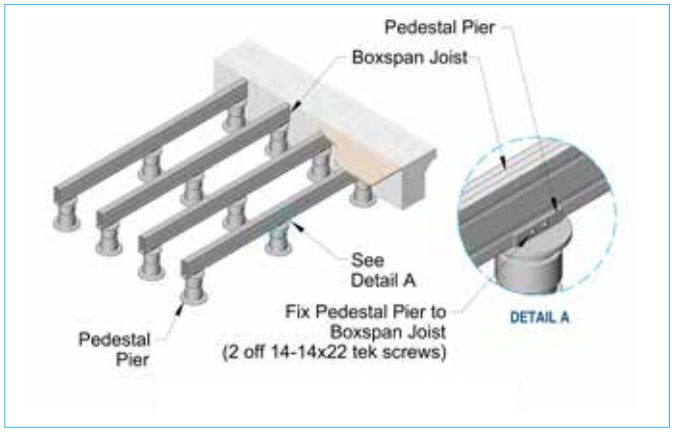
Joist join over pier



75mm setdown

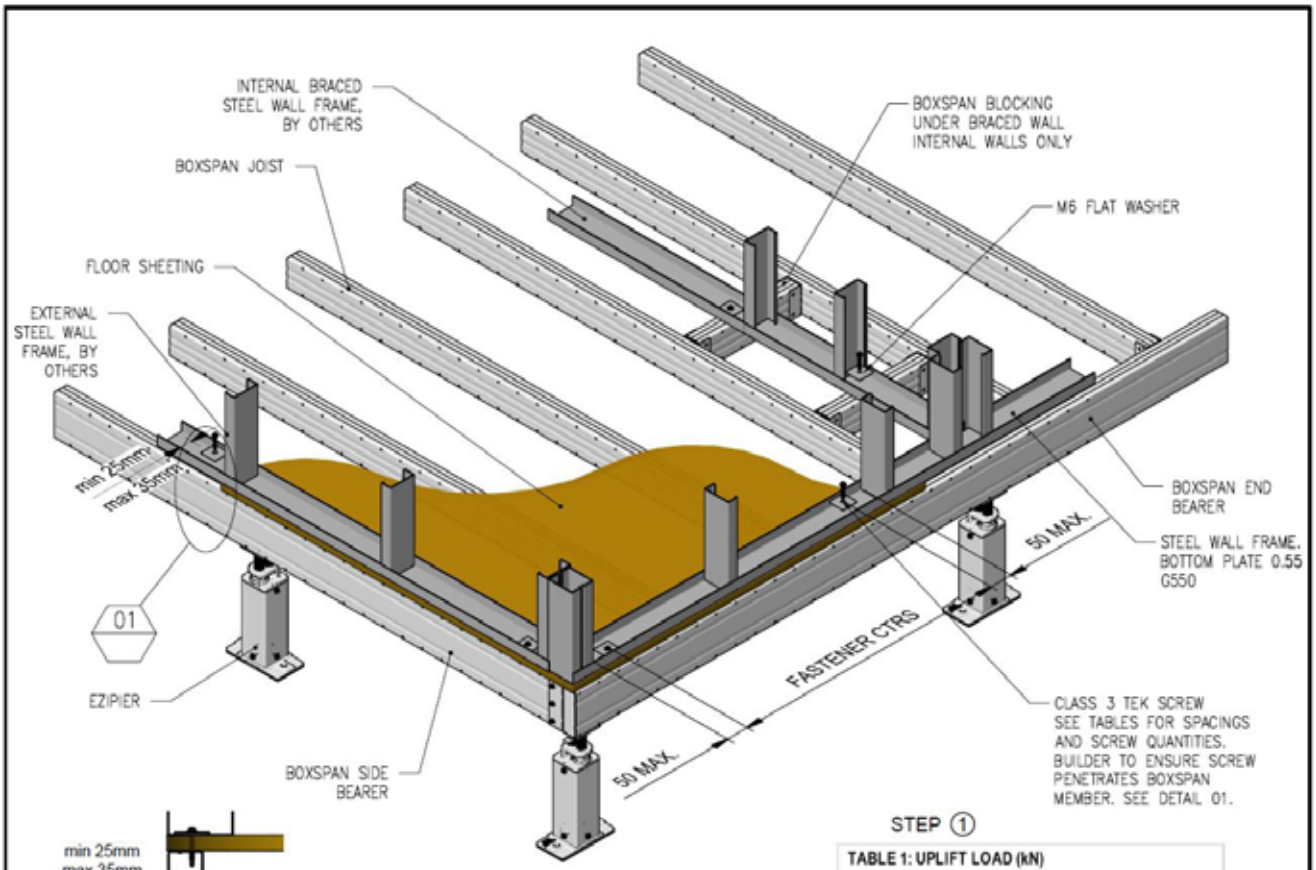


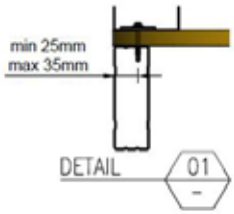
Joist splice for floor penetrations



Pedestal pier connection

Wall frames connection to Steel floor frame





NOTES
ROOF TRIBUTORY WIDTH GREATER THAN 6m TO BE DESIGNED BY OTHERS.
BRACE CONNECTION FORCES NOT CONSIDERED AND NEED TO BE COMBINED WITH TIE DOWN REQUIREMENTS.
NET UPLIFT PRESSURE AS PER TABLE 9.5 AS1684.2 – 2015

FOR FURTHER INFORMATION:
REFER TO NASH STANDARD – RESIDENTIAL AND LOW RISE STEEL FRAMING PART 2 DESIGN SOLUTIONS. PAGES 61–63

STEP ①

TABLE 1: UPLIFT LOAD (kN)

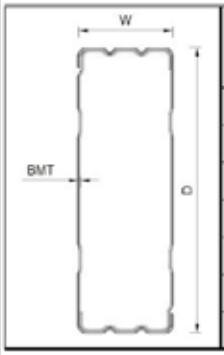
WIND CLASS	ROOFING MATERIAL	FASTENER CENTRES (mm)		
		450	900	1200
N1	SHEET	1.2	2.3	3.0
	TILE	1.2	2.3	3.0
N2	SHEET	1.2	2.3	3.0
	TILE	1.2	2.3	3.0
N3	SHEET	2.9	5.9	7.9
	TILE	1.7	3.3	4.4

NOTE
LOADS BASED ON MAXIMUM TRIBUTARY WIDTH = 6.0m
TILE ROOF VALUES MADE SAME AS SHEET FOR N1 & N2 RATHER THAN USING NOMINAL FIXING

STEP ②

TABLE 2: FASTENER QUANTITY

UPLIFT LOAD (kN)	SCREWS PER CONNECTION		
	B100-12	B100-16	B150-20
		B150-16	B200-20
		B200-16	B250-20
1.2	1 x 10g	1 x 10g	1 x 10g
1.7	2 x 10g	2 x 10g	2 x 10g
2.3	3 x 10g	3 x 10g	2 x 10g
2.9	3 x 10g	3 x 10g	2 x 10g
3.0	3 x 10g	3 x 10g	2 x 10g
3.3	4 x 10g	3 x 10g	2 x 12g
4.4	4 x 14g	4 x 10g	3 x 12g
5.9	4 x 14g	4 x 14g	4 x 12g
7.9	6 x 14g	5 x 14g	5 x 12g



DIMENSION D x W (mm)	BOXSPAN SECTION	MATERIAL THICKNESS BMT (mm)	FLANGE THICKNESS 2xBMT (mm)
100 x 50	B100-12	0.6	1.2
100 x 50	B100-16	0.8	1.6
150 x 50	B150-16	0.8	1.6
150 x 50	B150-20	1.0	2.0
200 x 50	B200-16	0.8	1.6
200 x 50	B200-20	1.0	2.0
250 x 20	B250-20	1.0	2.0

Structural Design Certification By:
barnson
DESIGN . PLAN . MANAGE
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VIC EC2249, NT 11585ES,
Date: 01-04-2019
Reference No: 1684

REV.	DESCRIPTION	DRN.	DATE
A	BARNSON'S CERTIFICATION	MR	13/05/19

SPANTEC™ 17 Drapers Road, Braemar, NSW, 2575
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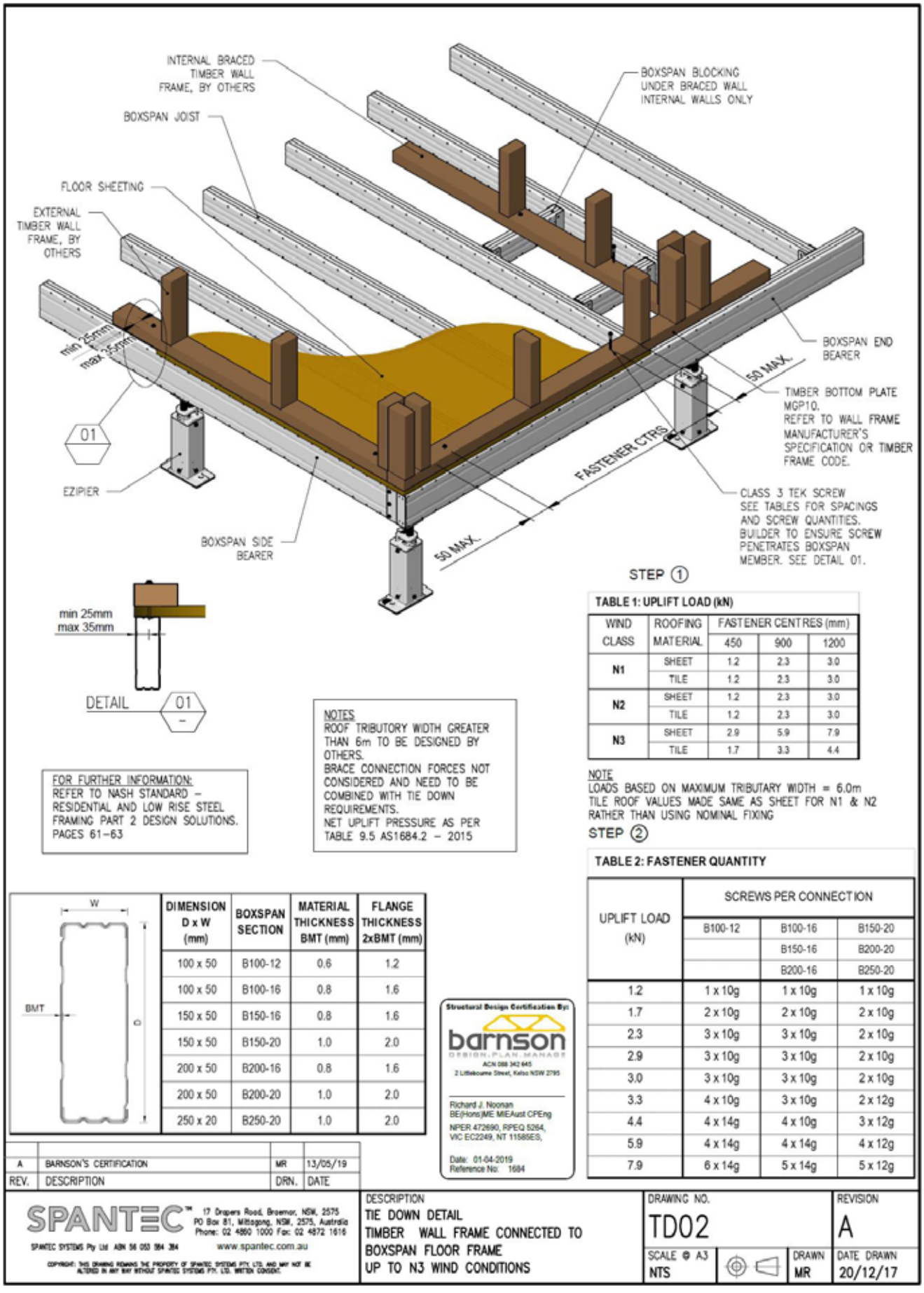
DESCRIPTION
TIE DOWN DETAIL
STEEL WALL FRAME CONNECTED TO BOXSPAN FLOOR FRAME
UP TO N3 WIND CONDITIONS

DRAWING NO.	REVISION
TD01	A

SCALE @ A3		DRAWN	DATE DRAWN
NTS		MR	20/12/17

Wall frames connection to timber floor frame

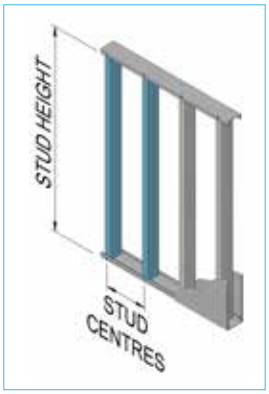


WALL STUDS & CEILING JOISTS

The Boxspan® Wall Framing System is engineered to provide designers and specifiers with a strong, durable and efficient solution that eliminates the need for noggins. Originally developed for bearer and joist applications, Boxspan demonstrates enhanced performance when used in a vertical orientation.

Available in eight sizes, Boxspan can achieve wall stud heights exceeding 10 metres, capable of supporting a wide range of materials – from plasterboard to GRC panels – offering exceptional design flexibility. All span tables and connection details are designed and tested in accordance with relevant Australian Standards, ensuring safety, reliability and compliance across all applications.

INTERNAL WALL STUDS



Standard plasterboard

10mm and 13mm thickness available

Table 47	BOXSPAN INTERNAL NON LOAD BEARING WALL STUD for Standard Plasterboard							
BOX PROFILE	B100-12	B100-16	B150-16	B150-20	B150-24	B200-16	B200-20	B250-20
STUD SIZE mm	100x50		150x50			200x50		250x50
BMT mm	0.6	0.8	0.8	1.0	1.2	0.8	1.0	1.0

LININGS	**SINGLE STUD: 450mm CENTRES** (MAXIMUM HEIGHT SINGLE SPAN mm)							
10mm both sides	4969	5264	7178	7456	7788	8803	9271	11013
13mm both sides	5187	5460	7415	7676	7990	9082	9523	11293
10mm one side	4560	4905	6748	7060	7427	8296	8818	10513
13mm one side	4691	5020	6884	7184	7540	8455	8959	10668

	SINGLE STUD: 600mm CENTRES (MAXIMUM HEIGHT SINGLE SPAN mm)							
10mm both sides	4969	5264	7178	7456	7788	8803	9271	11013
13mm both sides	5187	5460	7415	7676	7990	9082	9523	11293
10mm one side	4560	4905	6748	7060	7427	8296	8818	10513
13mm one side	4691	5020	6884	7184	7540	8455	8959	10668

	SINGLE STUD: 900mm CENTRES (MAXIMUM HEIGHT SINGLE SPAN mm)							
10mm both sides	4969	5264	7178	7456	7788	8673	9017	10260
13mm both sides	5187	5460	7415	7676	7990	8879	9201	10455
10mm one side	4560	4905	6748	7060	7427	8296	8685	9909
13mm one side	4691	5020	6884	7184	7540	8415	8789	10018

	SINGLE STUD: 1200mm CENTRES (MAXIMUM HEIGHT SINGLE SPAN mm)							
10mm both sides	4969	5264	6926	7127	7363	8071	8391	9548
13mm both sides	5187	5460	7097	7283	7506	8262	8562	9729
10mm one side	4560	4905	6613	6841	7106	7720	8082	9221
13mm one side	4691	5020	6712	6931	7186	7831	8179	9323

NOTES

1. NASH strength and serviceability limits used in the calculations for this table.

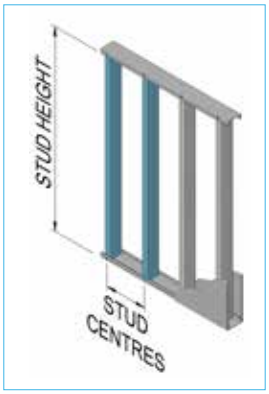
2. NASH limits have been used satisfactorily with brick veneer and ceramic tiled walls.

3. Noggings are NOT required.

4. "Both sides" means one layer of plasterboard on both sides of wall stud. "One side" means one layer of plasterboard on only one side of wall stud.

5. If increasing the stud centres does not change the values in the table then serviceability (soft body impact) governs.Stud height will not change until another load case governs.

INTERNAL WALL STUDS



Fire Rated plasterboard

Fyrchek 13 and 16mm thickness available

Table 48	BOXSPAN INTERNAL NON LOAD BEARING WALL STUD for Fire Rated Plasterboard							
BOX PROFILE	B100-12	B100-16	B150-16	B150-20	B150-24	B200-16	B200-20	B250-20
STUD SIZE mm	100x50		150x50			200x50		250x50
BMT mm	0.6	0.8	0.8	1.0	1.2	0.8	1.0	1.0

LININGS	**SINGLE STUD: 450mm CENTRES** (MAXIMUM HEIGHT SINGLE SPAN mm)							
13mm both sides	5187	5460	7415	7676	7990	9082	9523	11293
16mm both sides	5390	5644	7637	7884	8183	9345	9764	11559
13mm one side	4691	5020	6884	7184	7540	8455	8959	10668
16mm one side	4817	5130	7014	7305	7649	8608	9096	10819

	SINGLE STUD: 600mm CENTRES (MAXIMUM HEIGHT SINGLE SPAN mm)							
13mm both sides	5187	5460	7415	7676	7990	9082	9523	11293
16mm both sides	5390	5644	7637	7884	8183	9345	9764	11559
13mm one side	4691	5020	6884	7184	7540	8455	8959	10668
16mm one side	4817	5130	7014	7305	7649	8608	9096	10819

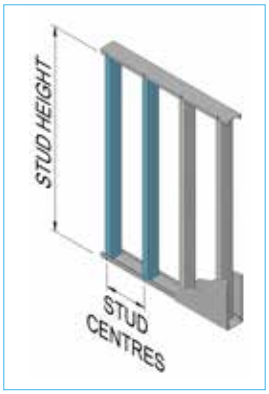
	SINGLE STUD: 900mm CENTRES (MAXIMUM HEIGHT SINGLE SPAN mm)							
13mm both sides	5187	5460	7415	7676	7990	8879	9201	10455
16mm both sides	5390	5644	7637	7884	8183	9071	9374	10639
13mm one side	4691	5020	6884	7184	7540	8415	8789	10018
16mm one side	4817	5130	7014	7305	7649	8529	8889	10124

	SINGLE STUD: 1200mm CENTRES (MAXIMUM HEIGHT SINGLE SPAN mm)							
13mm both sides	5187	5460	7097	7283	7506	8262	8562	9729
16mm both sides	5390	5644	7256	7431	7641	8441	8724	9901
13mm one side	4691	5020	6712	6931	7186	7831	8179	9323
16mm one side	4817	5130	6807	7017	7264	7937	8272	9422

NOTES

1. NASH strength and serviceability limits used in the calculations for this table.
2. NASH limits have been used satisfactorily with brick veneer and ceramic tiled walls.
3. Noggings are NOT required.
4. "Both sides" means one layer of plasterboard on both sides of wall stud. "One side" means one layer of plasterboard on only one side of wall stud.
5. If increasing the stud centres does not change the values in the table then serviceability (soft body impact) governs.Stud height will not change until another load case governs.

EXTERNAL WALL STUDS



Non Load Bearing

- GRC panel up to 40kg per m² external
- 13mm plasterboard internal
- Total dead load 51kg/m²

Table 49a	BOXSPAN EXTERIOR NON LOAD BEARING WALL STUD							
BOX PROFILE	B100-12	B100-16	B150-16	B150-20	B150-24	B200-16	B200-20	B250-20
STUD SIZE mm	100x50		150x50			200x50		250x50
BMT mm	0.6	0.8	0.8	1.0	1.2	0.8	1.0	1.0
STUD HEIGHT	STUD SPACINGS							
2100	3300	5200	8100	11200	15050	10800	13750	13450
2250	2850	4550	7050	9750	13150	9400	12850	12550
2400	2500	4000	6200	8550	11550	8250	11550	11750
2550	2250	3550	5500	7550	10200	7300	10200	11050
2700	2000	3150	4900	6750	9100	6550	9100	10450
2850	1800	2800	4400	6050	8150	5850	8150	9900
3000	1600	2550	3950	5450	7350	5300	7350	9400
3150	1450	2300	3600	4950	6700	4800	6700	8950
3300	1300	2100	3250	4500	6100	4350	6100	8200
3450	1200	1900	3000	4150	5550	4000	5550	7500
3600	1100	1750	2750	3800	5100	3650	5100	6900
3750	1000	1600	2500	3500	4700	3350	4700	6350
3900	950	1500	2350	3200	4350	3100	4350	5850
4050	850	1400	2150	3000	4050	2900	4050	5450
4200	800	1300	2000	2800	3750	2700	3750	5050
4350	750	1200	1850	2600	3500	2500	3500	4700
4500	700	1100	1750	2400	3250	2350	3250	4400
4650	650	1050	1650	2250	3050	2200	3050	4100
4800	600	1000	1550	2100	2850	2050	2850	3850
4950	550	900	1450	2000	2700	1900	2700	3650
5100	550	850	1350	1850	2550	1800	2550	3400
5250	500	750	1300	1750	2350	1700	2400	3200
5400	500	700	1200	1650	2150	1600	2250	3050
5550	450	650	1150	1600	1950	1550	2150	2900
5700	450	600	1100	1500	1800	1450	2000	2750
5850	400	550	1000	1400	1700	1350	1900	2600
6000	400	500	950	1350	1550	1300	1800	2450
6150	350	450	900	1300	1450	1250	1750	2350
6300	350	450	900	1200	1350	1200	1650	2250
6450	350	400	850	1100	1250	1100	1600	2150
6600	300	400	800	1050	1150	1050	1500	2050
6750	300	350	750	1000	1100	1000	1450	1950
6900	300	350	750	900	1000	1000	1350	1850
7050	250	300	700	850	950	950	1300	1800

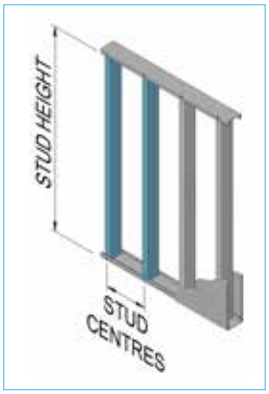
NOTES

1. The table wall frame spans are based on the following wall covering loads:

- *External wall covering – GRC Panel (mass up to = 40 kg/m²)*
- *Internal wall covering – 13mm Fire Rated Plasterboard or FC Sheet (mass up to = 10.5 kg/m²)*

2. Region up to and including A5. 3. Building importance Level 2. 4. Terrain Category 3.

EXTERNAL WALL STUDS CONTINUED



Non Load Bearing

- GRC panel up to 40kg per m² external
- 13mm plasterboard internal
- Total dead load 51kg/m²

Table 49b	BOXSPAN EXTERIOR NON LOAD BEARING WALL STUD (continued)							
BOX PROFILE	B100-12	B100-16	B150-16	B150-20	B150-24	B200-16	B200-20	B250-20
STUD SIZE mm	100x50		150x50			200x50		250x50
BMT mm	0.6	0.8	0.8	1.0	1.2	0.8	1.0	1.0
STUD HEIGHT	STUD SPACINGS							
7200	250	300	650	800	900	900	1250	1700
7350	250	250	650	750	800	850	1200	1650
7500	200	250	600	700	750	800	1150	1550
7650	200	200	550	600	700	800	1100	1500
7800	150	200	500	600	650	750	1050	1450
7950	150	200	450	550	600	750	1000	1400
8100	150	150	450	500	550	700	950	1350
8250	150	150	400	450	500	700	900	1300
8400	100	150	350	400	450	650	800	1250
8550	100	150	350	400	450	650	750	1200
8700	100	100	300	350	400	600	700	1150
8850	100	100	300	350	400	600	650	1100
9000	100	100	300	300	350	550	600	1050
9150	100	100	250	300	350	500	550	950
9300	50	100	250	250	300	450	550	900
9450	50	100	200	250	300	450	500	850
9600	50	50	200	250	250	400	450	800
9750	50	50	200	200	250	400	450	750
9900	50	50	200	200	250	350	400	700
10050		50	150	200	200	350	400	650
10200		50	150	200	200	300	350	600
10350			150	150	200	300	350	600
10500			150	150	200	300	300	550
10650			150	150	150	250	300	500
10800			100	150	150	250	300	500
10950			100	150	150	250	250	450
11100			100	100	150	200	250	450
11250			100	100	150	200	250	400
11400			100	100	100	200	200	400
11550			100	100	100	200	200	350
11700			100	100	100	150	200	350
11850			100	100	100	150	200	350
12000			50	100	100	150	200	300

NOTES

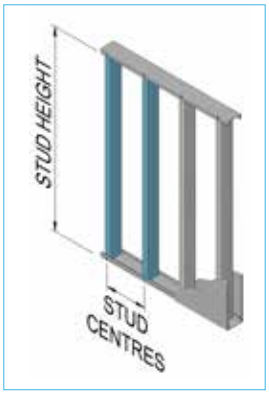
1. The table wall frame spans are based on the following wall covering loads:
- *External wall covering – GRC Panel (mass up to = 40 kg/m²)*
- *Internal wall covering – 13mm Fire Rated Plasterboard or FC Sheet (mass up to = 10.5 kg/m²)*

2. Region up to and including A5.

3. Building importance Level 2.

4. Terrain Category 3.

EXTERNAL WALL STUDS CONTINUED



Supporting 6m Roof Load Width

- GRC panel up to 40kg per m^2 external
- 13mm plasterboard internal
- Total dead load 51kg/m^2

Table 50a	BOXSPAN EXTERIOR NON LOAD BEARING WALL STUD							
BOX PROFILE	B100-12	B100-16	B150-16	B150-20	B150-24	B200-16	B200-20	B250-20
STUD SIZE mm	100x50		150x50			200x50		250x50
BMT mm	0.6	0.8	0.8	1.0	1.2	0.8	1.0	1.0
STUD HEIGHT	STUD SPACINGS							
2100	3300	5200	8100	11200	15050	9100	12950	12350
2250	2850	4550	7050	9750	13150	8500	12050	11500
2400	2500	4000	6200	8550	11550	7950	11300	10800
2550	2250	3550	5500	7550	10200	7300	10200	10150
2700	2000	3150	4900	6750	9100	6550	9100	9600
2850	1800	2800	4400	6050	8150	5850	8150	9100
3000	1600	2550	3950	5450	7350	5300	7350	8650
3150	1450	2300	3600	4950	6700	4800	6700	8200
3300	1300	2100	3250	4500	6100	4350	6100	7850
3450	1200	1900	3000	4150	5550	4000	5550	7500
3600	1100	1750	2750	3800	5100	3650	5100	6900
3750	1000	1600	2500	3500	4700	3350	4700	6350
3900	950	1500	2350	3200	4350	3100	4350	5850
4050	850	1400	2150	3000	4050	2900	4050	5450
4200	800	1300	2000	2800	3750	2700	3750	5050
4350	750	1200	1850	2600	3500	2500	3500	4700
4500	700	1100	1750	2400	3250	2350	3250	4400
4650	650	1050	1650	2250	3050	2200	3050	4100
4800	600	1000	1550	2100	2850	2050	2850	3850
4950	550	900	1450	2000	2700	1900	2700	3650
5100	550	850	1350	1850	2550	1800	2550	3400
5250	500	750	1300	1750	2350	1700	2400	3200
5400	500	700	1200	1650	2150	1600	2250	3050
5550	450	650	1150	1600	1950	1550	2150	2900
5700	450	600	1100	1500	1800	1450	2000	2750
5850	400	550	1000	1400	1700	1350	1900	2600
6000	400	500	950	1350	1550	1300	1800	2450
6150	350	450	900	1300	1450	1250	1750	2350
6300	350	450	900	1200	1350	1200	1650	2250
6450	350	400	850	1100	1250	1100	1600	2150
6600	300	400	800	1050	1150	1050	1500	2050
6750	300	350	750	1000	1100	1000	1450	1950
6900	300	350	750	900	1000	1000	1350	1850
7050	250	300	700	850	950	950	1300	1800

NOTES

1. The table wall frame spans are based on the following wall covering loads:

- *External wall covering – GRC Panel (mass up to = 40 kg/m^2)*
- *Internal wall covering – 13mm Fire Rated Plasterboard or FC Sheet (mass up to = 10.5 kg/m^2)*

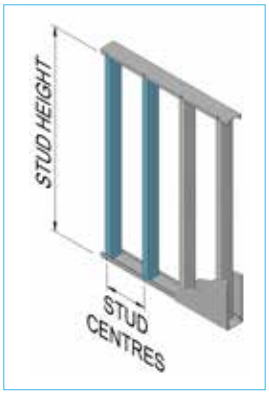
2. Region up to and including A5.

3. Building importance Level 2.

4. Terrain Category 3.

5. Wall frame supports 8m roof load width, 0.4 kPa dead load.

EXTERNAL WALL STUDS CONTINUED



Supporting 6m Roof Load Width

- GRC panel up to 40kg per m^2 external
- 13mm plasterboard internal
- Total dead load 51kg/m^2

Table 50b	BOXSPAN EXTERIOR NON LOAD BEARING WALL STUD							
BOX PROFILE	B100-12	B100-16	B150-16	B150-20	B150-24	B200-16	B200-20	B250-20
STUD SIZE mm	100x50		150x50			200x50		250x50
BMT mm	0.6	0.8	0.8	1.0	1.2	0.8	1.0	1.0
STUD HEIGHT	STUD SPACINGS							
7200	250	300	650	800	900	900	1250	1700
7350	250	250	650	750	800	850	1200	1650
7500	200	250	600	700	750	800	1150	1550
7650	200	200	550	600	700	800	1100	1500
7800	150	200	500	600	650	750	1050	1450
7950	150	200	450	550	600	750	1000	1400
8100	150	150	450	500	550	700	950	1350
8250	150	150	400	450	500	700	900	1300
8400	100	150	350	400	450	650	800	1250
8550	100	150	350	400	450	650	750	1200
8700	100	100	300	350	400	600	700	1150
8850	100	100	300	350	400	600	650	1100
9000	100	100	300	300	350	550	600	1050
9150	100	100	250	300	350	500	550	950
9300	50	100	250	250	300	450	550	900
9450	50	100	200	250	300	450	500	850
9600	50	50	200	250	250	400	450	800
9750	50	50	200	200	250	400	450	750
9900	50	50	200	200	250	350	400	700
10050	50	50	150	200	200	350	400	650
10200	50	50	150	200	200	300	350	600
10350	50	50	150	150	200	300	350	600
10500	50	50	150	150	200	300	300	550
10650	50	50	150	150	150	250	300	500
10800	50	50	100	150	150	250	300	500
10950	50	50	100	150	150	250	250	450
11100		50	100	100	150	200	250	450
11250		50	100	100	150	200	250	400
11400			100	100	100	200	200	400
11550			100	100	100	200	200	350
11700			100	100	100	150	200	350
11850			100	100	100	150	200	350
12000			50	100	100	150	200	300

NOTES

1. The table wall frame spans are based on the following wall covering loads:

- *External wall covering – GRC Panel (mass up to = 40 kg/m^2)*
- *Internal wall covering – 13mm Fire Rated Plasterboard or FC Sheet (mass up to = 10.5 kg/m^2)*

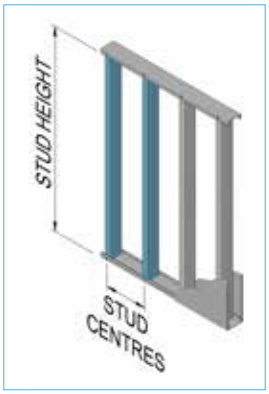
2. Region up to and including A5.

3. Building importance Level 2.

4. Terrain Category 3.

5. Wall frame supports 8m roof load width, 0.4 kPa dead load.

EXTERNAL WALL STUDS CONTINUED



Supporting 8m Roof Load Width

- GRC panel up to 40kg per m^2 external
- 13mm plasterboard internal
- Total dead load 51kg/m^2

Table 51a	BOXSPAN EXTERIOR NON LOAD BEARING WALL STUD							
BOX PROFILE	B100-12	B100-16	B150-16	B150-20	B150-24	B200-16	B200-20	B250-20
STUD SIZE mm	100x50		150x50			200x50		250x50
BMT mm	0.6	0.8	0.8	1.0	1.2	0.8	1.0	1.0
STUD HEIGHT	STUD SPACINGS							
2100	3300	5200	7950	11150	14150	7200	10300	9850
2250	2850	4550	7050	9750	13150	6750	9600	9150
2400	2500	4000	6200	8550	11550	6300	9000	8600
2550	2250	3550	5500	7550	10200	5950	8450	8100
2700	2000	3150	4900	6750	9100	5600	8000	7650
2850	1800	2800	4400	6050	8150	5300	7600	7250
3000	1600	2550	3950	5450	7350	5050	7200	6850
3150	1450	2300	3600	4950	6700	4800	6700	6550
3300	1300	2100	3250	4500	6100	4350	6100	6250
3450	1200	1900	3000	4150	5550	4000	5550	5950
3600	1100	1750	2750	3800	5100	3650	5100	5700
3750	1000	1600	2500	3500	4700	3350	4700	5500
3900	950	1500	2350	3200	4350	3100	4350	5300
4050	850	1400	2150	3000	4050	2900	4050	5100
4200	800	1300	2000	2800	3750	2700	3750	4900
4350	750	1200	1850	2600	3500	2500	3500	4700
4500	700	1100	1750	2400	3250	2350	3250	4400
4650	650	1050	1650	2250	3050	2200	3050	4100
4800	600	1000	1550	2100	2850	2050	2850	3850
4950	550	900	1450	2000	2700	1900	2700	3650
5100	550	850	1350	1850	2550	1800	2550	3400
5250	500	750	1300	1750	2350	1700	2400	3200
5400	500	700	1200	1650	2150	1600	2250	3050
5550	450	650	1150	1600	1950	1550	2150	2900
5700	450	600	1100	1500	1800	1450	2000	2750
5850	400	550	1000	1400	1700	1350	1900	2600
6000	400	500	950	1350	1550	1300	1800	2450
6150	350	450	900	1300	1450	1250	1750	2350
6300	350	450	900	1200	1350	1200	1650	2250
6450	350	400	850	1100	1250	1100	1600	2150
6600	300	400	800	1050	1150	1050	1500	2050
6750	300	350	750	1000	1100	1000	1450	1950
6900	300	350	750	900	1000	1000	1350	1850
7050	250	300	700	850	950	950	1300	1800

NOTES

1. The table wall frame spans are based on the following wall covering loads:

- *External wall covering – GRC Panel (mass up to = 40 kg/m^2)*
- *Internal wall covering - 13mm Fire Rated Plasterboard or FC Sheet (mass = 10.5 kg/m^2)*

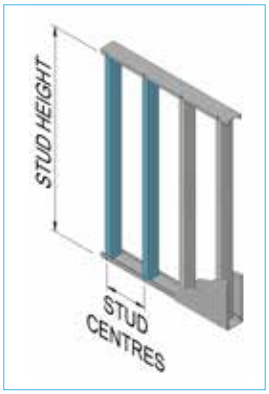
2. Region up to and including A5.

3. Building importance Level 2.

4. Terrain Category 3.

5. Wall frame supports 8m roof load width, 0.4 kPa dead load.

EXTERNAL WALL STUDS CONTINUED



Supporting 8m Roof Load Width

- GRC panel up to 40kg per m^2 external
- 13mm plasterboard internal
- Total dead load 51kg/m^2

Table 51b	BOXSPAN EXTERIOR NON LOAD BEARING WALL STUD							
BOX PROFILE	B100-12	B100-16	B150-16	B150-20	B150-24	B200-16	B200-20	B250-20
STUD SIZE mm	100x50		150x50			200x50		250x50
BMT mm	0.6	0.8	0.8	1.0	1.2	0.8	1.0	1.0
STUD HEIGHT	STUD SPACINGS							
7200	250	300	650	800	900	900	1250	1700
7350	250	250	650	750	800	850	1200	1650
7500	200	250	600	700	750	800	1150	1550
7650	200	200	550	600	700	800	1100	1500
7800	150	200	500	600	650	750	1050	1450
7950	150	200	450	550	600	750	1000	1400
8100	150	150	450	500	550	700	950	1350
8250	150	150	400	450	500	700	900	1300
8400	100	150	350	400	450	650	800	1250
8550	100	150	350	400	450	650	750	1200
8700	100	100	300	350	400	600	700	1150
8850	100	100	300	350	400	600	650	1100
9000	100	100	300	300	350	550	600	1050
9150	100	100	250	300	350	500	550	950
9300	50	100	250	250	300	450	550	900
9450	50	100	200	250	300	450	500	850
9600	50	50	200	250	250	400	450	800
9750	50	50	200	200	250	400	450	750
9900	50	50	200	200	250	350	400	700
10050	50	50	150	200	200	350	400	650
10200	50	50	150	200	200	300	350	600
10350	50	50	150	150	200	300	350	600
10500	50	50	150	150	200	300	300	550
10650	50	50	150	150	150	250	300	500
10800	50	50	100	150	150	250	300	500
10950	50	50	100	150	150	250	250	450
11100		50	100	100	150	200	250	450
11250		50	100	100	150	200	250	400
11400			100	100	100	200	200	400
11550			100	100	100	200	200	350
11700			100	100	100	150	200	350
11850			100	100	100	150	200	350
12000			50	100	100	150	200	300

NOTES

1. The table wall frame spans are based on the following wall covering loads:

- *External wall covering – GRC Panel (mass up to = 40 kg/m^2)*
- *Internal wall covering - 13mm Fire Rated Plasterboard or FC Sheet (mass = 10.5 kg/m^2)*

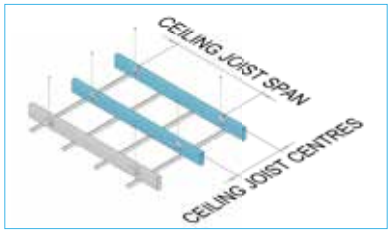
2. Region up to and including A5.

3. Building importance Level 2.

4. Terrain Category 3.

5. Wall frame supports 8m roof load width, 0.4 kPa dead load.

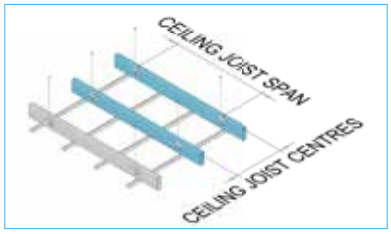
CEILING JOISTS



Non trafficable internal ceiling joist

One layer of plasterboard (10mm, 13mm, 16mm)

Table 52	BOXSPAN NON TRAFFICABLE INTERNAL CEILING JOIST							
BOX PROFILE	B100-12	B100-16	B150-16	B150-20	B150-24	B200-16	B200-20	B250-20
CEILING JOIST mm	100x50		150x50			200x50		250x50
BMT mm	0.6	0.8	0.8	1.0	1.2	0.8	1.0	1.0
ONE LAYER OF 10mm PLASTERBOARD								
JOIST SPACINGS	**SINGLE SPAN** (mm)							
300	6440	7057	9652	10377	11042	12157	13060	13999
400	5851	6412	8770	9428	10032	11045	11866	13999
450	5626	6165	8432	9065	9646	10620	11409	13670
600	5111	5601	7661	8236	8764	9649	10366	12420
900	4465	4893	6692	7195	7656	8429	9055	10850
1200	4057	4445	6080	6537	6956	7658	8227	9858
	CONTINUOUS SPAN (mm)							
300	8627	9453	12930	13901	13999	13999	13999	13999
400	7838	8588	11747	12630	13439	13999	13999	13999
450	7536	8258	11295	12144	12922	13999	13999	13999
600	6847	7503	10262	11033	11740	12925	13886	13999
900	5981	6554	8965	9638	10256	11078	12130	13999
1200	5066	5955	8101	8757	9318	9281	11021	12902
ONE LAYER OF 13mm FIRE RATED PLASTERBOARD								
	SINGLE SPAN (mm)							
300	6214	6809	9313	10013	10654	11730	12602	13999
400	5646	6186	8462	9097	9680	10658	11449	13718
450	5428	5948	8136	8747	9307	10247	11009	13190
600	4932	5404	7392	7947	8456	9310	10002	11984
900	4308	4721	6457	6942	7387	8133	8737	10469
1200	3914	4289	5867	6308	6712	7389	7938	9512
	CONTINUOUS SPAN (mm)							
300	8324	9121	12476	13413	13999	13999	13999	13999
400	7562	8287	11335	12186	12967	13999	13999	13999
450	7271	7968	10898	11717	12468	13727	13999	13999
600	6606	7239	9902	10646	11328	12472	13398	13999
900	5771	6324	8650	9300	9895	10704	11704	13999
1200	4888	5745	7821	8449	8991	8959	10634	12460
ONE LAYER OF 16mm FIRE RATED PLASTERBOARD								
	SINGLE SPAN (mm)							
300	5810	6366	8708	9362	9962	10968	11782	13999
400	5278	5784	7911	8506	9051	9965	10705	12826
450	5075	5561	7607	8178	8702	9581	10293	12333
600	4611	5053	6911	7430	7906	8705	9352	11205
900	4028	4414	6037	6491	6907	7604	8169	9788
1200	3660	4010	5485	5897	6275	6909	7422	8893
	CONTINUOUS SPAN (mm)							
300	7782	8528	11665	12541	13344	13999	13999	13999
400	7071	7748	10598	11394	12124	13348	13999	13999
450	6798	7450	10190	10955	11657	12834	13788	13999
600	6177	6768	9258	9953	10591	11661	12527	13999
900	5396	5913	8087	8695	9252	10186	10943	13112
1200	4651	5372	7348	7900	8406	8529	9942	11869



Non trafficable internal ceiling joist

Two layers of plasterboard (13mm, 16mm)

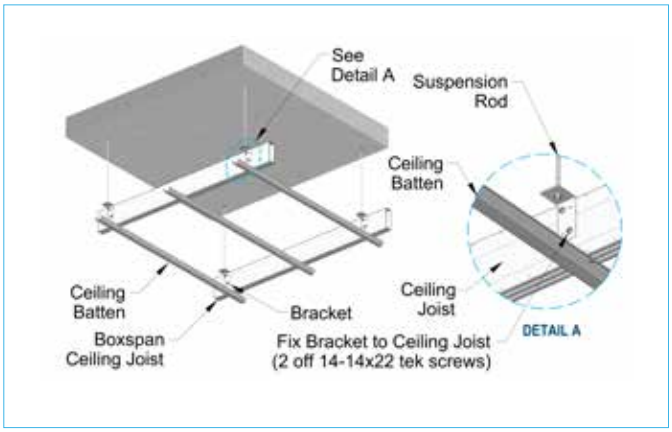
Table 53	BOXSPAN NON TRAFFICABLE INTERNAL CEILING JOIST							
BOX PROFILE	B100-12	B100-16	B150-16	B150-20	B150-24	B200-16	B200-20	B250-20
CEILING JOIST mm	100x50		150x50			200x50		250x50
BMT mm	0.6	0.8	0.8	1.0	1.2	0.8	1.0	1.0
TWO LAYERS OF 13mm PLASTERBOARD								
JOIST SPACINGS	**SINGLE SPAN** (mm)							
300	5466	5989	8192	8808	9372	10318	11085	13281
400	4966	5442	7443	8002	8515	9375	10071	12067
450	4775	5232	7156	7694	8187	9014	9683	11602
600	4338	4754	6502	6991	7438	8189	8798	10541
900	3790	4153	5680	6107	6498	7154	7686	9209
1200	3443	3773	5161	5548	5904	6500	6983	8367
	CONTINUOUS SPAN (mm)							
300	7322	8023	10974	11798	12554	13822	13999	13999
400	6652	7289	9970	10719	11406	12558	13491	13999
450	6396	7009	9586	10307	10967	12074	12971	13999
600	5811	6368	8710	9364	9964	10970	11785	13999
900	5076	5562	7609	8180	8704	9583	10295	12336
1200	4420	5054	6913	7432	7908	8109	9354	11208
TWO LAYERS OF 16mm FIRE RATED PLASTERBOARD								
	SINGLE SPAN (mm)							
300	5012	5493	7513	8077	8595	9462	10165	12180
400	4554	4990	6826	7339	7809	8597	9236	11066
450	4379	4798	6563	7056	7508	8266	8880	10640
600	3978	4359	5963	6411	6821	7510	8068	9667
900	3475	3808	5209	5600	5959	6561	7048	8445
1200	3157	3460	4733	5088	5414	5961	6404	7673
	CONTINUOUS SPAN (mm)							
300	6714	7357	10064	10820	11513	12675	13617	13999
400	6100	6685	9143	9830	10460	11516	12372	13999
450	5865	6427	8791	9452	10057	11073	11896	13999
600	5329	5839	7987	8587	9138	10060	10808	12950
900	4655	5101	6977	7502	7982	8788	9441	11312
1200	4070	4634	6339	6816	7252	7475	8578	10278

NOTES

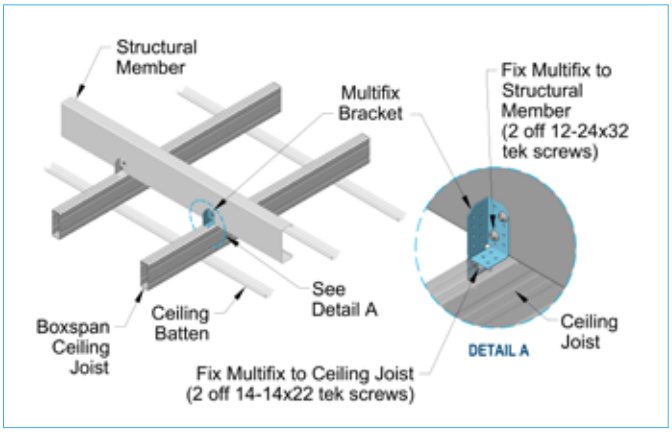
Strength check 1. Down direction 1.2G+Wu and check 2. Up direction 0.9G+Wu, Wu = 0.375 kPa
Serviceability check 1. G, L/500 and check 2. G+Ws, L/200, Ws = 0.25 kPa
This ceiling is non trafficable and live load has not been applied to the ceiling joists.
Boxspan ceiling joists do not require noggins or bridging.

COMMON CONNECTIONS

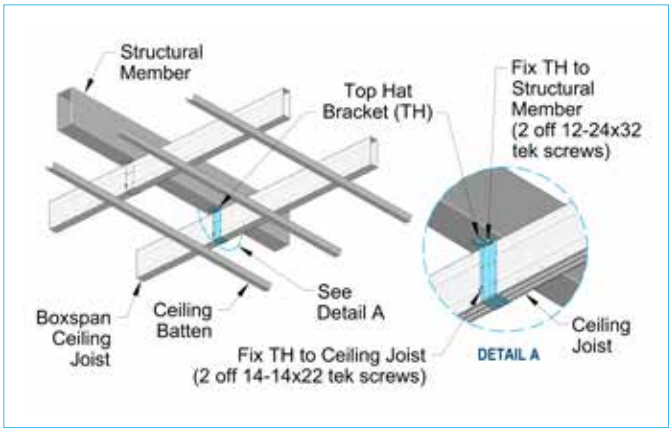
Walls, ceiling joists and pedestal piers



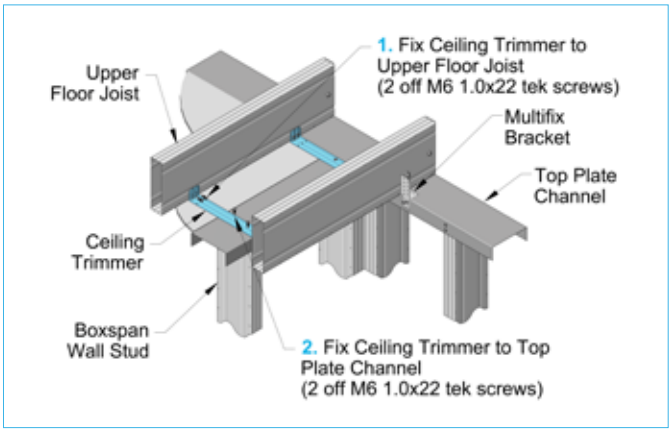
Suspended ceiling joists connection



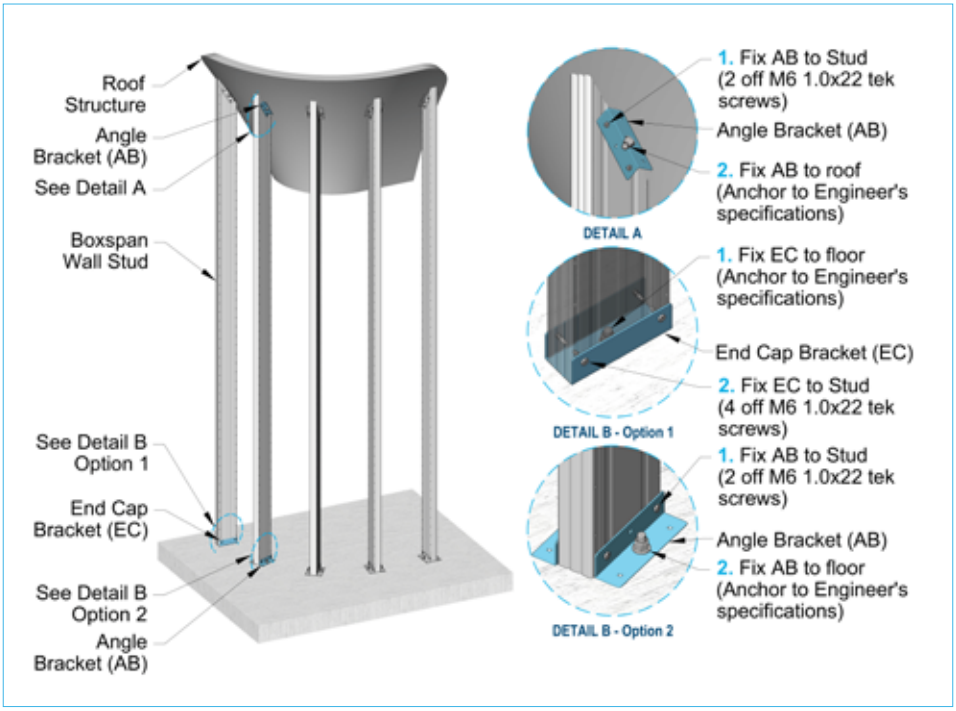
Ceiling joist to structural member connection (multifix bracket)



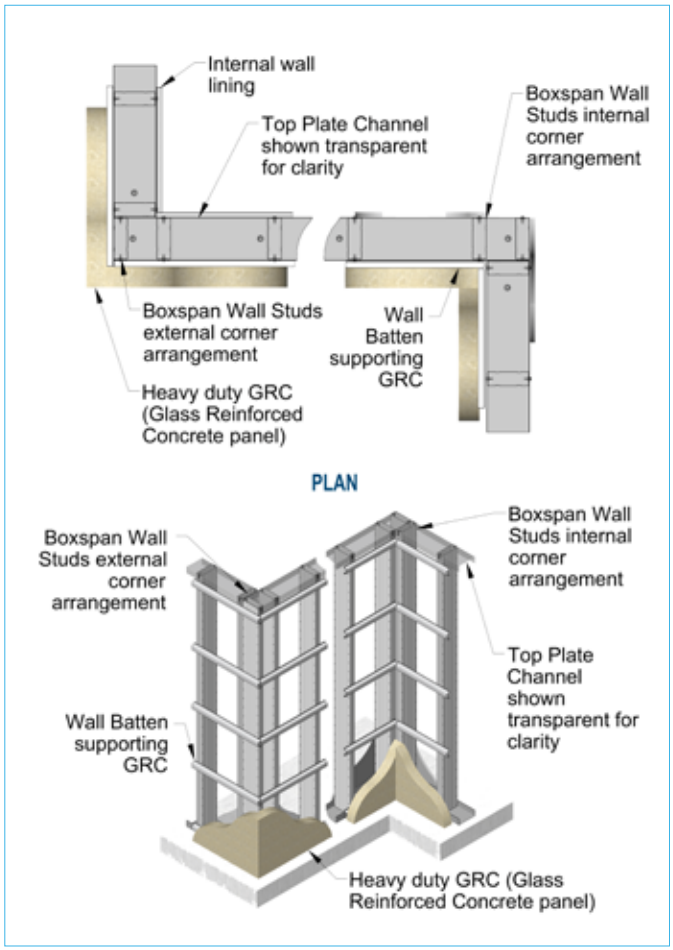
Ceiling joist to structural steel connection (top hat bracket)



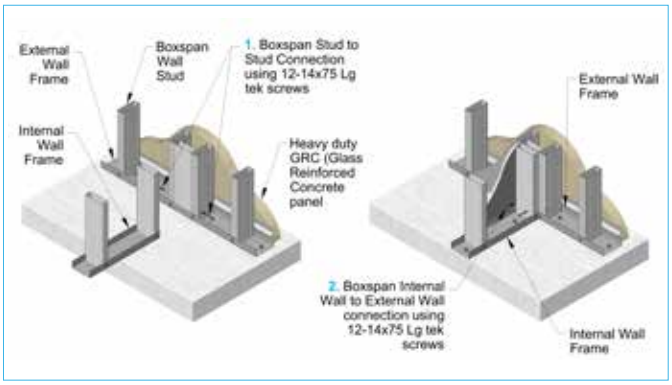
Ceiling trimmer connection



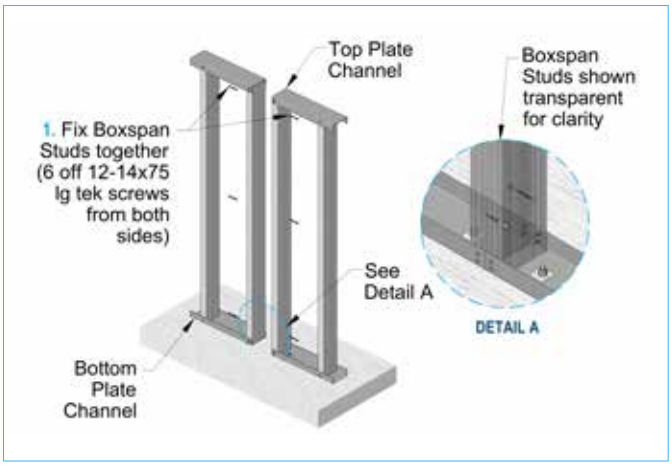
Curved wall connection



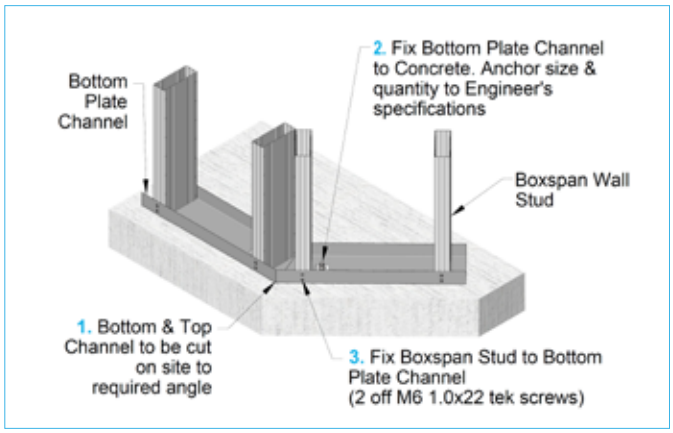
Internal and external corner stud arrangement



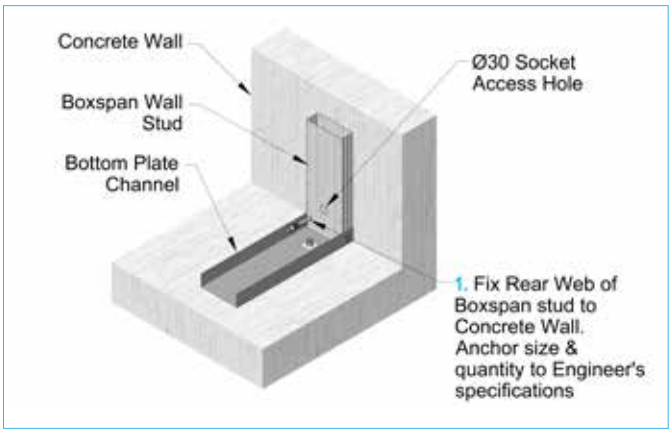
Internal wall to external wall connection



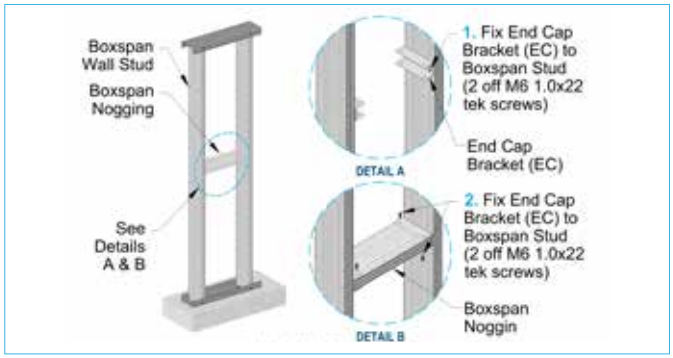
Wall frame end to end connection



Angled wall frame to concrete floor connection



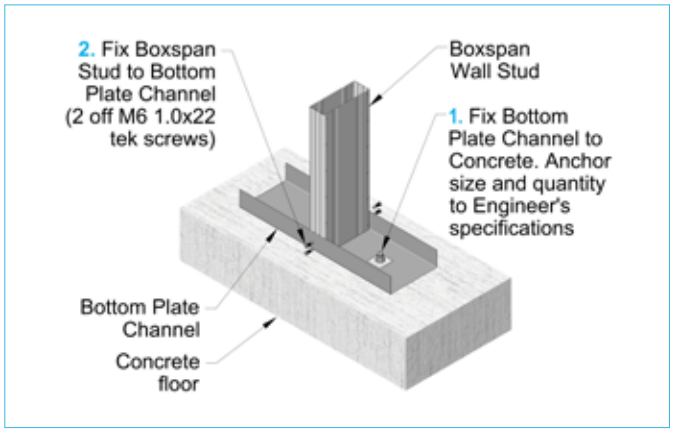
stud to concrete wall connection



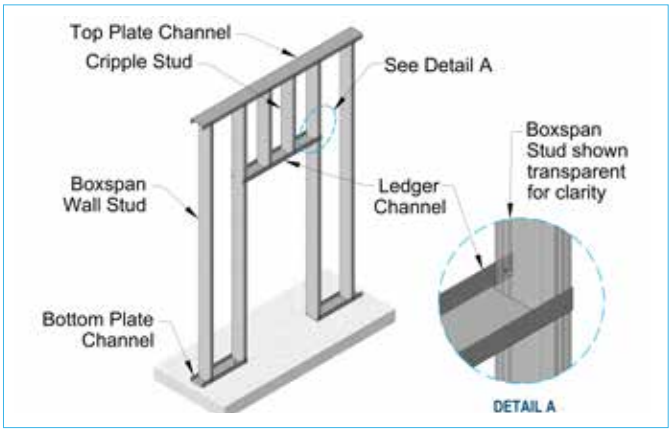
Noggings*

** Boxspan wall studs do not require blocking to attain the listed span chart heights. For circumstances where noggings are required use the connection illustrated.*

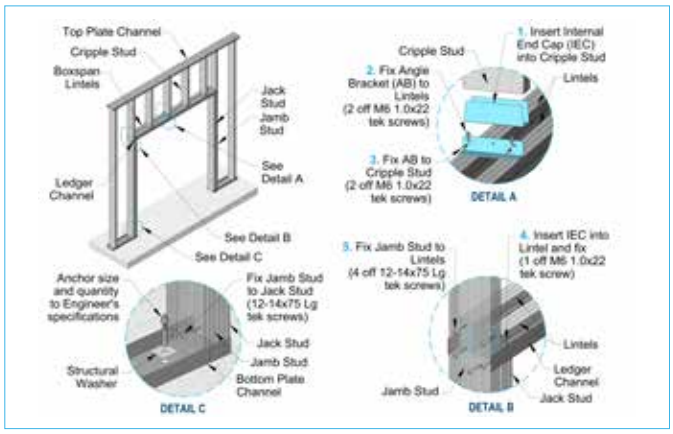
Walls, ceiling joists and pedestal piers



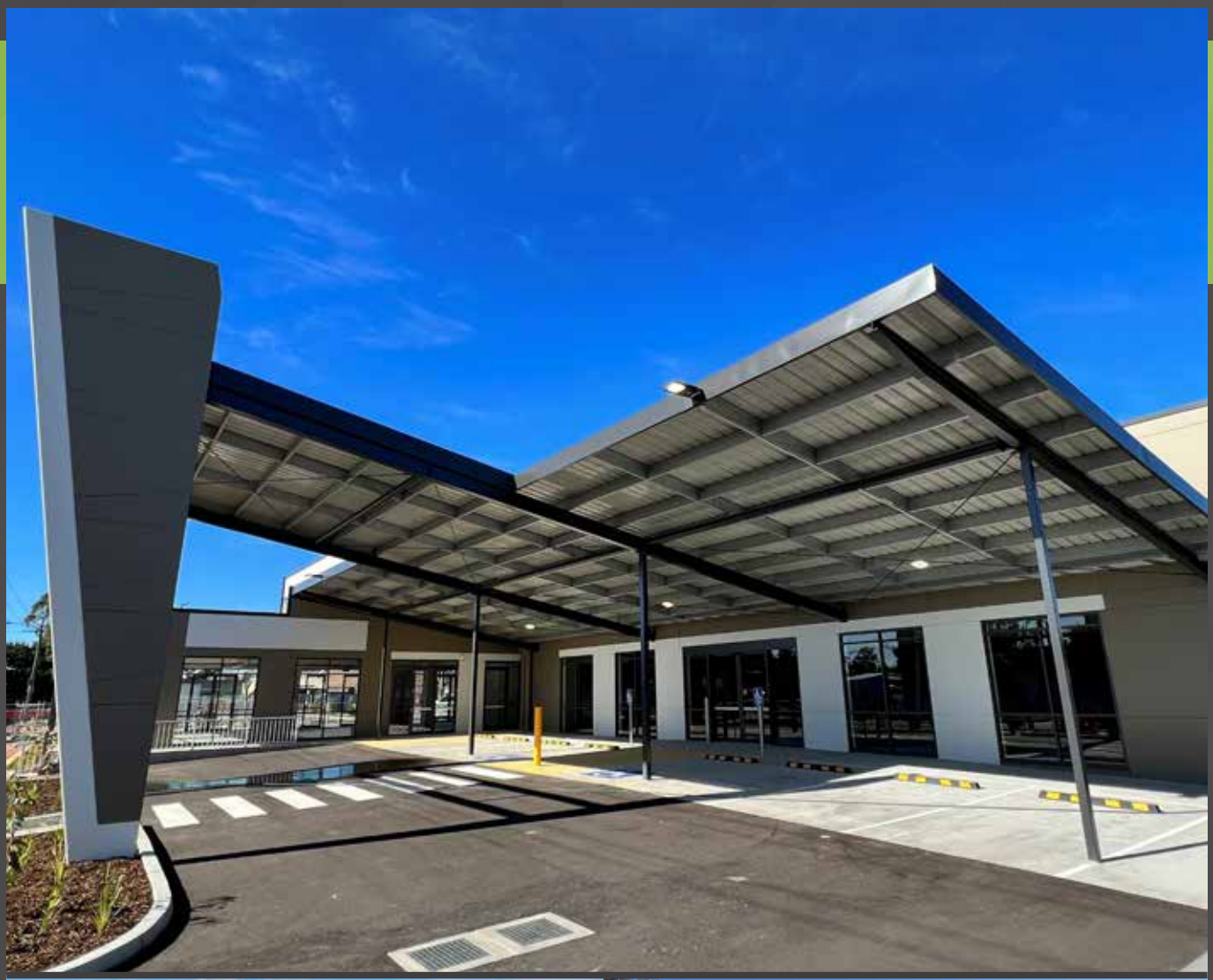
Wall frame to concrete floor connection



Wall frame with large opening – non load bearing wall



Wall frame with large opening – load bearing wall



ROOFS & LINTELS

Rafters: non trafficable

- Wind Class – N3
- Live Load 0.25kpa
- Dead Load 0.4kpa
- First Support: framing bracket
- -Mid Support: triple grip or Double UB50 bracket.

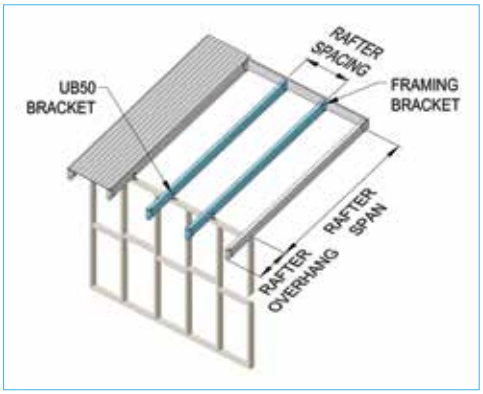


Table 57	ALLOWABLE RAFTER SPAN (mm)											
BOXSPAN SECTION	RAFTER SPACING (mm)											
	450	600	900	1200	1500	1800	450	600	900	1200	1500	1800
	SHEET ROOF & CEILING 40kg/m²											
	NO OVER HANG											
	MAXIMUM SINGLE SPAN						MAXIMUM CONTINUOUS SPAN					
B100-12	3307	3193	3010	2866	2749	2650	4055	3945	3315	2721	2323	1987
B100-16	3734	3595	3376	3206	3068	2953	4594	4457	4232	3730	3214	2837
B150-16	5599	5341	4949	4659	4431	4244	6976	6707	5341	4401	3771	3313
B150-20	6135	5840	5396	5070	4815	4604	7668	7356	6817	5896	5122	4555
B150-24	6631	6300	5736	5338	5048	4823	8309	7903	7142	6646	6162	5497
B200-16	7331	6822	6165	5737	5426	5184	9128	7950	6103	5023	4298	3773
B200-20	7736	7199	6505	6054	5725	5470	9632	8964	7990	6670	5778	5126
B250-20	8860	8245	7450	6933	6557	6265	11031	10266	8530	7040	6039	5312
	500 mm OVER HANG											
	MAXIMUM SINGLE SPAN						MAXIMUM CONTINUOUS SPAN					
B100-12	2784	2706	2580	2480	2398	2329	3298	3223	3097	2770	2381	2060
B100-16	3139	3041	2884	2762	2662	2578	3727	3630	3470	3341	3235	2884
B150-16	4700	4504	4203	3977	3799	3653	5625	5420	5096	4431	3806	3353
B150-20	5151	4924	4579	4323	4122	3958	6177	5937	5562	5279	5052	4584
B150-24	5569	5312	4926	4642	4420	4239	6689	6415	5993	5676	5423	5215
B200-16	6277	5970	5513	5180	4922	4712	7560	7227	6125	5049	4330	3809
B200-20	6857	6507	5991	5618	5330	5098	8274	7892	7317	6690	5801	5152
B250-20	8543	8063	7371	6881	6507	6207	10358	9824	8546	7059	6062	5337
	1000 mm OVER HANG											
	MAXIMUM SINGLE SPAN						MAXIMUM CONTINUOUS SPAN					
B100-12	718	682	–	–	–	–	–	–	–	–	–	–
B100-16	1285	1243	1159	1078	999	925	1456	1406	1307	1213	1124	1041
B150-16	4811	4636	4371	4174	4020	3895	5766	5590	5315	4521	3910	3471
B150-20	5256	5049	4737	4507	4328	4183	6311	6098	5769	5521	5224	4669
B150-24	5668	5431	5075	4815	4614	4450	6817	6569	6189	5904	5680	5497
B200-16	6370	6079	5649	5338	5098	4904	7679	7370	6190	5128	4422	3913
B200-20	6945	6610	6118	5765	5494	5276	8387	8027	7485	6749	5869	5229
B250-20	8619	8151	7479	7005	6644	6356	10456	9940	8592	7116	6128	5413

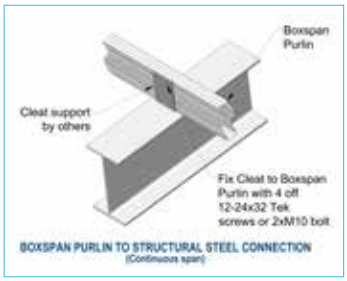
NOTES

higher loads or trafficable roofs can be determined using our in house span program, contact Spantec with for further discussions.

Purlin capacity: Single span

Purlins, used for all commercial structures

- Roof Mass: 90kg/m² sheet roof
- Top Hat: Boxspan B100-12 or equivalent
- Servicability Limit: L/150
- Bridging: Not required with Boxspan Purlins



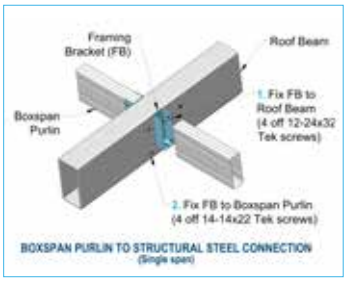


Table 54 — **BOXSPAN BEAM CAPACITY TABLES**

SINGLE SPAN – LOAD CAPACITY (KN/M)

BOXSPAN SECTION	3500		4000		4500		5000		5500		6000	
	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150
B100-12	1.809	1.002	1.385	0.671	1.094	0.471	0.886	0.344	0.733	0.258	0.616	0.199
B100-16	2.854	1.318	2.185	0.883	1.726	0.620	1.398	0.452	1.156	0.340	0.971	0.262
B150-16	4.428	3.373	3.390	2.260	2.679	1.587	2.170	1.157	1.793	0.869	1.507	0.670
B150-20	6.100	4.192	4.670	2.808	3.690	1.972	2.989	1.438	2.470	1.080	2.076	0.832
B150-24	8.222	5.050	6.295	3.383	4.974	2.376	4.029	1.732	3.330	1.301	2.798	1.002
B200-16	5.897	6.739	4.515	4.515	3.567	3.171	2.890	2.312	2.388	1.737	2.007	1.338
B200-20	8.222	8.356	6.295	5.598	4.974	3.931	4.029	2.866	3.330	2.153	2.798	1.659
B250-20	11.050	14.373	8.460	9.629	6.684	6.762	5.414	4.930	4.475	3.704	3.760	2.853
	6500		**7000**		**7500**		**8000**		**8500**		**9000**	
	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150
B100-12	0.524	0.156	0.452	0.125	0.394	0.102	0.346	0.084	0.307	0.070	0.274	0.059
B100-16	0.827	0.206	0.713	0.165	0.622	0.134	0.546	0.110	0.484	0.092	0.432	0.078
B150-16	1.284	0.527	1.107	0.422	0.964	0.343	0.848	0.282	0.751	0.235	0.670	0.198
B150-20	1.769	0.654	1.525	0.524	1.328	0.426	1.168	0.351	1.034	0.293	0.922	0.247
B150-24	2.384	0.788	2.056	0.631	1.791	0.513	1.574	0.423	1.394	0.353	1.243	0.297
B200-16	1.710	1.052	1.474	0.842	1.284	0.685	1.129	0.564	1.000	0.471	0.892	0.396
B200-20	2.384	1.305	2.056	1.044	1.791	0.849	1.574	0.700	1.394	0.583	1.243	0.491
B250-20	3.204	2.244	2.762	1.797	2.406	1.461	2.115	1.204	1.873	1.003	1.671	0.845
	9500		**10000**		**10500**		**11000**		**11500**		**12000**	
	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150
B100-12	0.246	0.050	0.222	0.043	0.201	0.037	0.183	0.032	0.168	0.028	0.154	0.025
B100-16	0.387	0.066	0.350	0.057	0.317	0.049	0.289	0.042	0.264	0.037	0.243	0.033
B150-16	0.601	0.169	0.542	0.145	0.492	0.125	0.448	0.109	0.410	0.095	0.377	0.084
B150-20	0.828	0.210	0.747	0.180	0.678	0.155	0.618	0.135	0.565	0.118	0.519	0.104
B150-24	1.116	0.253	1.007	0.217	0.914	0.187	0.832	0.163	0.762	0.142	0.699	0.125
B200-16	0.800	0.337	0.722	0.289	0.655	0.250	0.597	0.217	0.546	0.190	0.502	0.167
B200-20	1.116	0.418	1.007	0.358	0.914	0.309	0.832	0.269	0.762	0.236	0.699	0.207
B250-20	1.500	0.719	1.354	0.616	1.228	0.532	1.119	0.463	1.024	0.405	0.940	0.357

NOTES

The tables are based on the maximum moment capacity of a member for a given span. The tables give the UDL which can be carried by the member. The load is calculated from the wind classification and wind pressure after applying all appropriate coefficients in AS4055 and AS1170.

The two columns for each span:

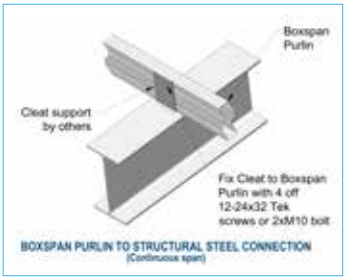
1. Strength — 1 uniformly distributed load which is based on the ultimate limit for strength = phi.Mmax.

2. L/150 — the ultimate serviceability limit load at which the deflection of L/150 is reached.

Purlin capacity: Double span

Purlins, used for all commercial structures

- Roof Mass: 90kg/m² Sheet Roof
- Top Hat: Boxspan B100-12 or Equivalent
- Servicability Limit: L/150
- Bridging: Not required with Boxspan Purlins



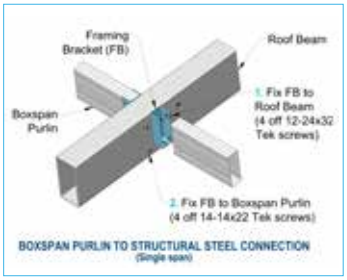


Table 55	BOXSPAN BEAM CAPACITY TABLES											
BOXSPAN SECTION	DOUBLE SPAN – LOAD CAPACITY (KN/M)											
	3500		4000		4500		5000		5500		6000	
	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150
B100-12	1.809	2.413	1.385	1.617	1.094	1.136	0.886	0.828	0.733	0.622	0.616	0.479
B100-16	2.854	3.176	2.185	2.127	1.726	1.494	1.398	1.089	1.156	0.818	0.971	0.630
B150-16	4.428	8.125	3.390	5.443	2.679	3.823	2.170	2.787	1.793	2.094	1.507	1.613
B150-20	6.100	10.098	4.670	6.765	3.690	4.751	2.989	3.463	2.470	2.602	2.076	2.004
B150-24	8.222	12.165	6.295	8.149	4.974	5.724	4.029	4.173	3.330	3.135	2.798	2.415
B200-16	5.897	16.234	4.515	10.876	3.567	7.638	2.890	5.568	2.388	4.184	2.007	3.222
B200-20	8.222	20.128	6.295	13.484	4.974	9.470	4.029	6.904	3.330	5.187	2.798	3.995
B250-20	11.050	34.622	8.460	23.194	6.684	16.290	5.414	11.875	4.475	8.922	3.760	6.872
	6500		7000		7500		8000		8500		9000	
	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150
B100-12	0.524	0.377	0.452	0.302	0.394	0.245	0.346	0.202	0.307	0.168	0.274	0.142
B100-16	0.827	0.496	0.713	0.397	0.622	0.323	0.546	0.266	0.484	0.222	0.432	0.187
B150-16	1.284	1.269	1.107	1.016	0.964	0.826	0.848	0.680	0.751	0.567	0.670	0.478
B150-20	1.769	1.576	1.525	1.262	1.328	1.026	1.168	0.846	1.034	0.705	0.922	0.594
B150-24	2.384	1.899	2.056	1.521	1.791	1.236	1.574	1.019	1.394	0.849	1.243	0.715
B200-16	1.710	2.535	1.474	2.029	1.284	1.650	1.129	1.359	1.000	1.133	0.892	0.955
B200-20	2.384	3.142	2.056	2.516	1.791	2.046	1.574	1.686	1.394	1.405	1.243	1.184
B250-20	3.204	5.405	2.762	4.328	2.406	3.519	2.115	2.899	1.873	2.417	1.671	2.036
	9500		10000		10500		11000		11500		12000	
	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150
B100-12	0.246	0.121	0.222	0.103	0.201	0.089	0.183	0.078	0.168	0.068	0.154	0.060
B100-16	0.387	0.159	0.350	0.136	0.317	0.118	0.289	0.102	0.264	0.090	0.243	0.079
B150-16	0.601	0.406	0.542	0.348	0.492	0.301	0.448	0.262	0.410	0.229	0.377	0.202
B150-20	0.828	0.505	0.747	0.433	0.678	0.374	0.618	0.325	0.565	0.285	0.519	0.251
B150-24	1.116	0.608	1.007	0.522	0.914	0.451	0.832	0.392	0.762	0.343	0.699	0.302
B200-16	0.800	0.812	0.722	0.696	0.655	0.601	0.597	0.523	0.546	0.458	0.502	0.403
B200-20	1.116	1.007	1.007	0.863	0.914	0.745	0.832	0.648	0.762	0.567	0.699	0.499
B250-20	1.500	1.731	1.354	1.484	1.228	1.282	1.119	1.115	1.024	0.976	0.940	0.859

NOTES

The tables are based on the maximum moment capacity of a member for a given span. The tables give the UDL which can be carried by the member. The load is calculated from the wind classification and wind pressure after applying all appropriate coefficients in AS4055 and AS1170.

The two columns for each span:

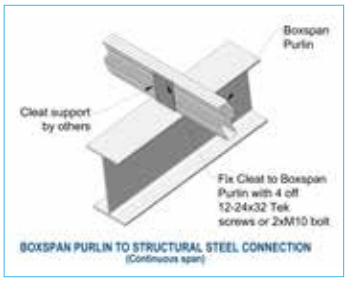
1. Strength — 1 uniformly distributed load which is based on the ultimate limit for strength = phi.Mmax.

2. L/150 — the ultimate serviceability limit load at which the deflection of L/150 is reached.

Purlin capacity: Triple span

Purlins, used for all commercial structures

- Roof Mass: 90kg/m² sheet roof
- Top Hat: Boxspan B100-12 or equivalent
- Servicability Limit: L/150
- Bridging: Not required with Boxspan Purlins



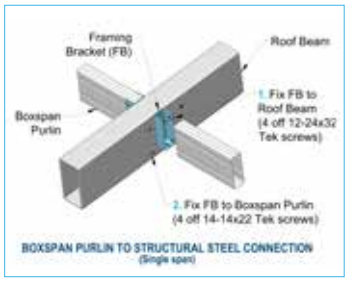


Table 56	BOXSPAN BEAM CAPACITY TABLES											
BOXSPAN SECTION	TRIPLE SPAN – LOAD CAPACITY (KN/M)											
	3500		4000		4500		5000		5500		6000	
	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150
B100-12	2.261	1.891	1.731	1.267	1.368	0.890	1.108	0.649	0.916	0.487	0.769	0.375
B100-16	3.567	2.488	2.731	1.667	2.158	1.170	1.748	0.853	1.445	0.641	1.214	0.494
B150-16	5.535	6.365	4.238	4.264	3.348	2.995	2.712	2.183	2.241	1.640	1.883	1.263
B150-20	7.624	7.910	5.838	5.299	4.612	3.722	3.736	2.713	3.088	2.039	2.594	1.570
B150-24	10.278	9.530	7.869	6.384	6.217	4.484	5.036	3.269	4.162	2.456	3.497	1.892
B200-16	7.371	12.718	5.644	8.520	4.459	5.984	3.612	4.362	2.985	3.277	2.508	2.524
B200-20	10.278	15.768	7.869	10.563	6.217	7.419	5.036	5.408	4.162	4.063	3.497	3.130
B250-20	12.419	27.122	10.575	18.170	8.356	12.761	6.768	9.303	5.593	6.989	4.700	5.384
	6500		7000		7500		8000		8500		9000	
	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150
B100-12	0.656	0.295	0.565	0.236	0.492	0.192	0.433	0.158	0.383	0.132	0.342	0.111
B100-16	1.034	0.388	0.892	0.311	0.777	0.253	0.683	0.208	0.605	0.174	0.540	0.146
B150-16	1.605	0.994	1.384	0.796	1.205	0.647	1.059	0.533	0.938	0.444	0.837	0.374
B150-20	2.211	1.235	1.906	0.989	1.660	0.804	1.459	0.662	1.293	0.552	1.153	0.465
B150-24	2.980	1.488	2.569	1.191	2.238	0.969	1.967	0.798	1.743	0.665	1.554	0.560
B200-16	2.137	1.986	1.843	1.590	1.605	1.293	1.411	1.065	1.250	0.888	1.115	0.748
B200-20	2.980	2.462	2.569	1.971	2.238	1.602	1.967	1.320	1.743	1.101	1.554	0.927
B250-20	4.005	4.234	3.453	3.390	3.008	2.756	2.644	2.271	2.342	1.894	2.089	1.595
	9500		10000		10500		11000		11500		12000	
	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150	Strength	L/150
B100-12	0.307	0.095	0.277	0.081	0.251	0.070	0.229	0.061	0.209	0.053	0.192	0.047
B100-16	0.484	0.124	0.437	0.107	0.396	0.092	0.361	0.080	0.330	0.070	0.303	0.062
B150-16	0.751	0.318	0.678	0.273	0.615	0.236	0.560	0.205	0.513	0.179	0.471	0.158
B150-20	1.035	0.396	0.934	0.339	0.847	0.293	0.772	0.255	0.706	0.223	0.649	0.196
B150-24	1.395	0.477	1.259	0.409	1.142	0.353	1.040	0.307	0.952	0.269	0.874	0.236
B200-16	1.001	0.636	0.903	0.545	0.819	0.471	0.746	0.410	0.683	0.359	0.627	0.316
B200-20	1.395	0.789	1.259	0.676	1.142	0.584	1.040	0.508	0.952	0.445	0.874	0.391
B250-20	1.875	1.356	1.692	1.163	1.535	1.005	1.398	0.874	1.279	0.765	1.175	0.673

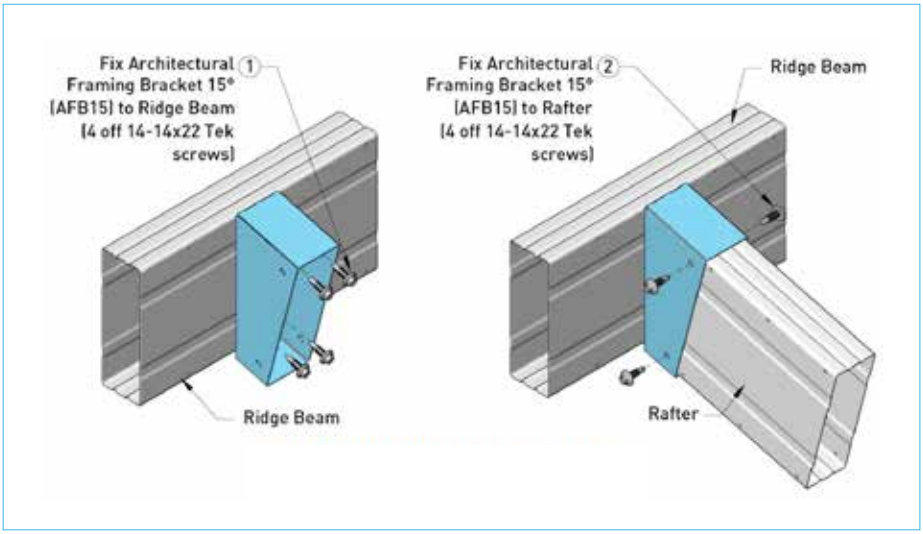
NOTES

The tables are based on the maximum moment capacity of a member for a given span. The tables give the UDL which can be carried by the member. The load is calculated from the wind classification and wind pressure after applying all appropriate coefficients in AS4055 and AS1170.

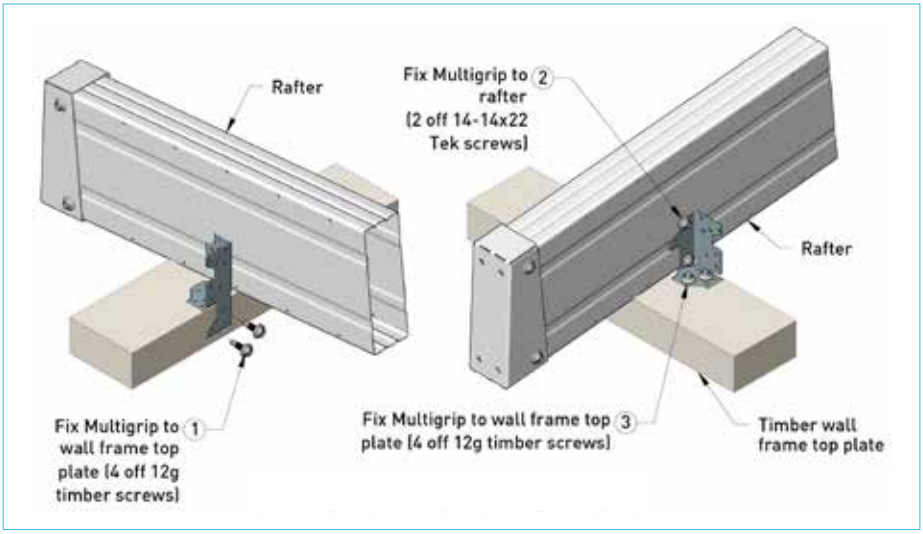
The two columns for each span:

1. Strength — 1 uniformly distributed load which is based on the ultimate limit for strength = phi.Mmax.

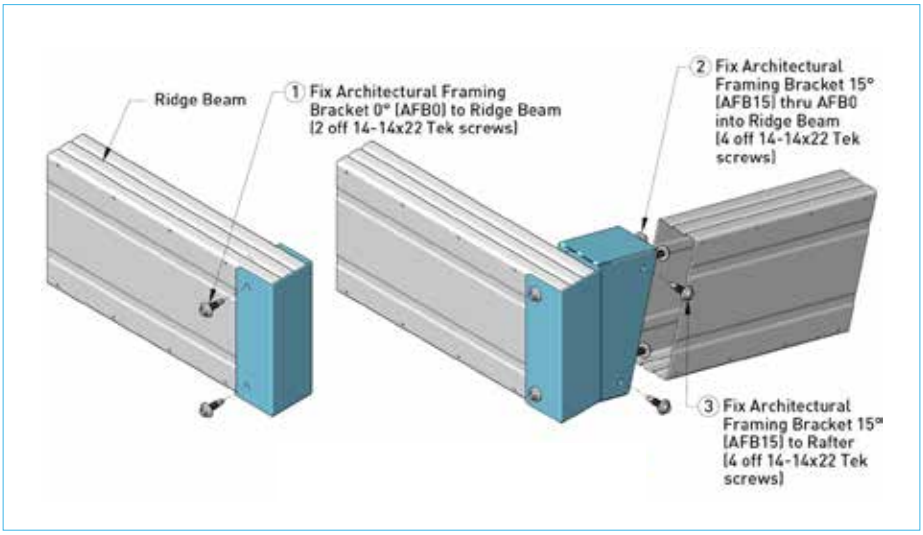
2. L/150 — the ultimate serviceability limit load at which the deflection of L/150 is reached.



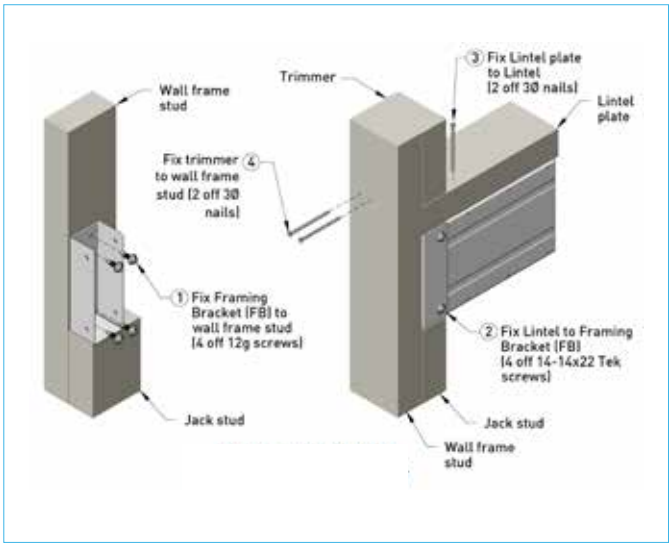
Rafter to ridge and headbeam connection



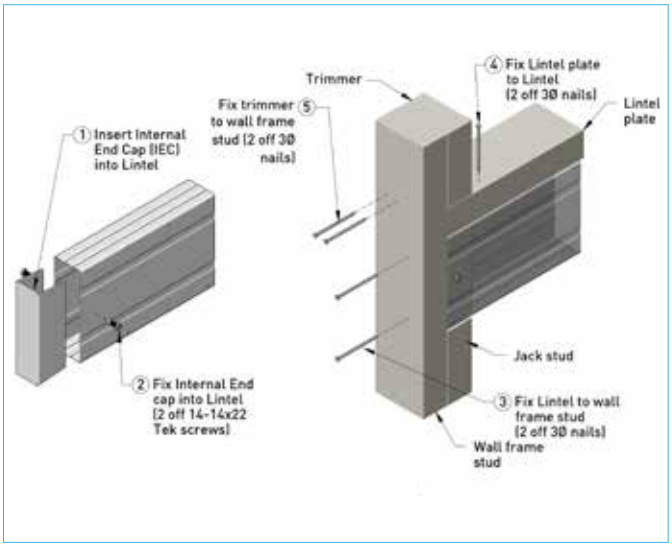
Rafter to top plate connection with multigrip or triplegrip



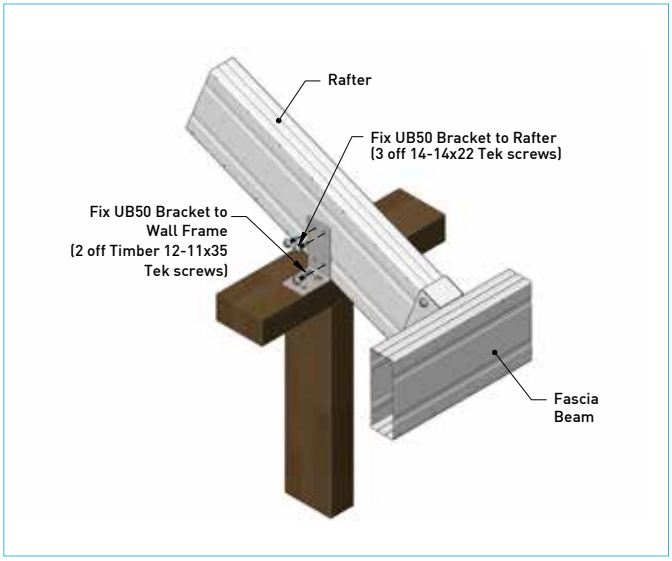
Ridge beam and rafter corner connection



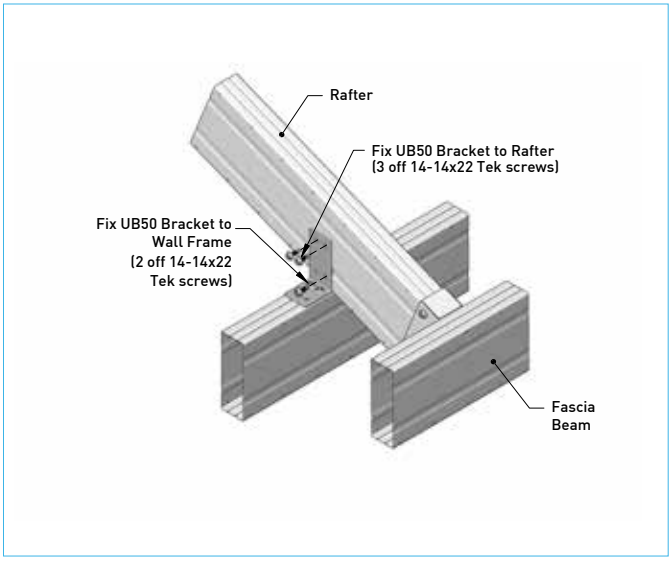
Lintel connection with framing bracket



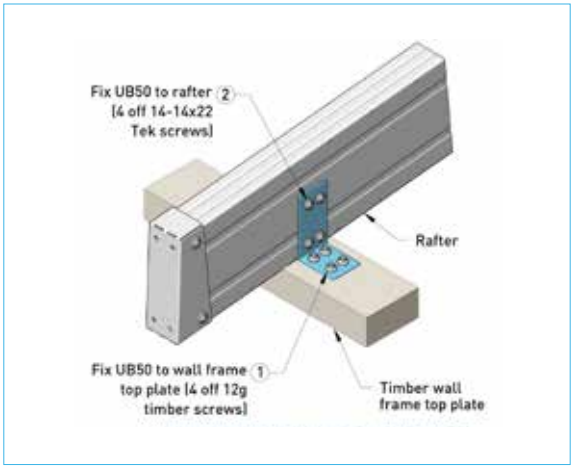
Lintel connection with Internal end cap



UB50 to wall frame connection



UB50 to Boxspan beam



Rafter to top plate connection with UB50 bracket

Your customised solutions partner

Spantec offer a complete, fully-integrated estimating and design service, so if you have a large project we can help you evey step of the way.

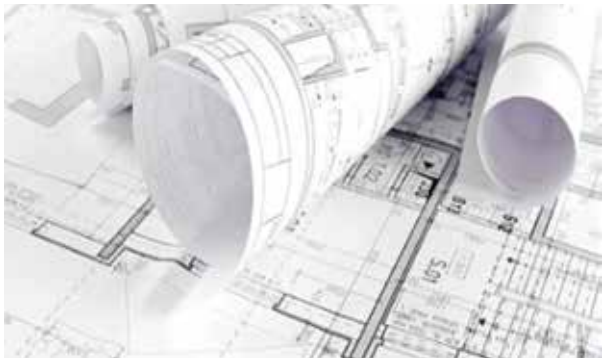
In consultation with our estimating and design teams you receive a full set of construction drawings with 3D modelling upon ordering. Your kit then arrives at your site cut to size and labelled with all of our products combined to form a full and complete customised solution. Spantec offer two distinct ways to order:

Option one

You design and order the products yourself. We can provide resources such as our certified span tables and design guides to help with specifying the correct product, including the supply of BIM models that can be uploaded into your own drawing program.

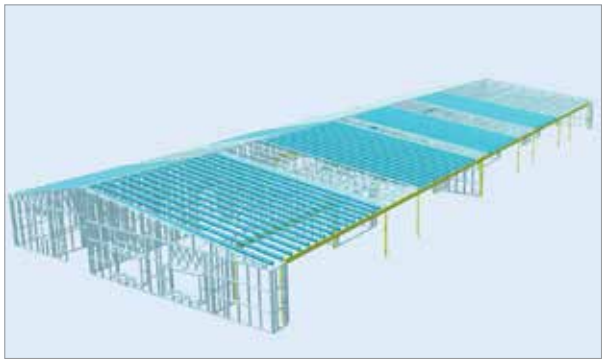
Option two

Spantec will look after the supply, design and engineering process for you. This option is becoming increasingly popular as our custom software links directly to our manufacturing machines, giving you a fully tailored kit system with every component cut to size and labelled. The kit is then delivered directly to your site alongside a full set of construction drawings. A fully integrated system that is customised to suit the site and build of your project. Listed below are our custom design steps.



Project scope

Our technical sales team will scope the project with you and recommend the best way forward. It's at this stage that we determine your requirements and also note any site or build difficulties. This information is then communicated back to our design team.



Design and engineering

Using 3D modelling and your project scope, we complete a detailed 'not for construction' drawing and quote proposal tailored to your exact requirements. Once approved by you we prepare the full construction drawing and engineering package.

Custom steel kit

After the construction drawings are approved the kit system is scheduled to be manufactured. All products are labelled and refer back to the construction drawings, allowing for a fast and simple installation process.

Get in touch

Our consistent innovation, premium quality products, unmatched service and the overall way we conduct business are just a few of things that make Spantec the right choice for your next residential project. For more information on how to get started please contact our office:

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