AUSDECK
PATIOS & ROOFING

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Engineering and Construction Manual

Version 2/08

Building Act 1975 s10 & s50 Building Regulation s46 & s48

Compliance Certificate for building Design or Specification

15

NOTE

A Compliance Certificate states building work complies with the building assessment provisions.
To be used for all classes of building and structures to certify a material, system, method of building or building element complies with the BCA or a provision of the QDC.
RESTRICTION: A building certifier (class B) can only give a compliance certificate about whether building work complies with the BCA or a provision of the QDC. A building certifier (Class B) can not give a certificate regarding QDC boundary clearance and site cover provisions.

1. Property description

This section need only be completed if details of street address and property description are applicable.
EG. In the case of (standard/generic) pool design/shell manufacture and/or patio and carport systems this section may not be applicable.
The description must identify all land the subject of the application.
The lot & plan details (eg. SP / RP) are shown on title documents or a rates notice.
If the plan is not registered by title, provide previous lot and plan details.

Street address *(include no., street, suburb / locality & postcode)*

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX PostcodeXXXXXXXXXXXX

Lot & plan details *(attach list if necessary)*

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

In which local government area is the land situated?

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2. Description of component/s certified

Clearly describe the extent of work covered by this certificate.

Design of roof framing, and brackets, posts, footings and sheeting for the Ausdeck patio system for patio structures in regions compliant with wind ratings of N2, N3, N4, C1, C2 & C3 in accordance with AS4055.

Systems designed include Skillion Patios, Multi Beam Patios, Gables Roof Patios, Simple Beam Patios

This certificate is limited to the structural design only and no responsibility is taken for any loss, damage or failure resulting from the method of construction or wind exceeding the design wind rating nominated

The roofs have been designed as NON TRAFFICABLE. It is recommended that a sign displaying this is located in the vicinity of access points to the roofs

3. Basis of certification

Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications, were relied upon.

AS1170.0-General Design Principles	AS1554.1 & 2-Welding
AS1170.1-Permanent, Imposed and other actions	AS1684-Timber
	AS3600-Concete
AS1170.2-Wind	AS1664-Aluminium
AS4055-Wind loads for housing	AS1163-Hollow Structural Sections
AS4100-Steel	AS/NZS4600-Cold Rolled Steel

4. Reference documentation

Clearly identify any relevant documentation, e.g. numbered structural engineering plans.

Ausdeck Construction Manual version 2/08 pages 1 to 38 (bearing my signature)

5. Building certifier reference number

Building certifier reference number

6. Competent person details

A competent person for building work, means a person who is assessed by the building certifier for the work as competent to practise in an aspect of the building and specification design, of the building work because of the individual's skill, experience and qualifications in the aspect. The competent person must also be registered or licensed under a law applying in the State to practise the aspect.

If no relevant law requires the individual to be licensed or registered to be able to give the help, the certifier must assess the individual as having appropriate experience, qualifications or skills to be able to give the help.

If the chief executive issues any guidelines for assessing a competent person, the building certifier must use the guidelines when assessing the person.

Name *(in full)*

Matthew Stevenson

Company name *(if applicable)*: MD Stevenson & Associates

Contact person: Matthew Stevenson

Phone no. business hours: 07 3272 2120

Mobile no.: 0409 628 783

Fax no.: 07 3273 5627

Email address

Postal address

PO Box 2040 Sunnybank Hills QLD, 4109

Licence or registration number (if applicable)

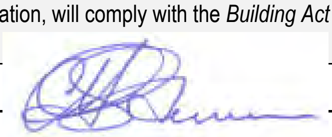
BEng, CPEng, MIEAust, RPEQ-5091

7. Signature of competent person

This certificate must be signed by the individual assessed by the building certifier as competent.

I certify that the item/s described above, if installed or carried out under the certificate, including any referenced documentation, will comply with the *Building Act 1975*.

Signature



Date: 6/3/8

LOCAL GOVERNMENT USE ONLY

Date received		Reference Number/s		Approved form 15 Version 1, 08/06

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Notes

General Notes

1. These tables have been prepared to suit a range of freestanding and attached patios and carports using structural sections and roofing designed and manufactured by Ausdeck Patios and Roofing Pty Ltd.

2. Structural components of the Ausdeck Patio system comply with the following Australian Standards:

• AS1397	Cold – Rolled section (Shurelock Beam)
• AS1163	Square Hollow Section (Post)
• AS1397	Steel Sheet Strip (V Line Roofing)
• AS1110/AS1111	Fastening Bolts
• AS3566	Self Drilling Screws

3. All installation and connection details should be in accordance with the standard Ausdeck details contained in this manual.

4. Minimum roof pitch is 1° (1 in 60). A pitch of 2° or greater is recommended.

5. Footing design as nominated in the span tables should be installed in natural soil; concrete to have a minimum strength of 20 mpa.

6. Connection of new post to existing slab requires erector or owner to confirm that the existing slab is structurally adequate and capable of supporting any additional load.

7. The installer must check that the existing structure to which a patio or carport will be attached has sufficient strength for additional loads. In some cases it may be advisable to engage a structural engineer to determine the suitability of the existing structure.

8. Ausdeck Patios and Roofing Pty Ltd recommend that non trafficable signs be clearly displayed on or around the new structure.

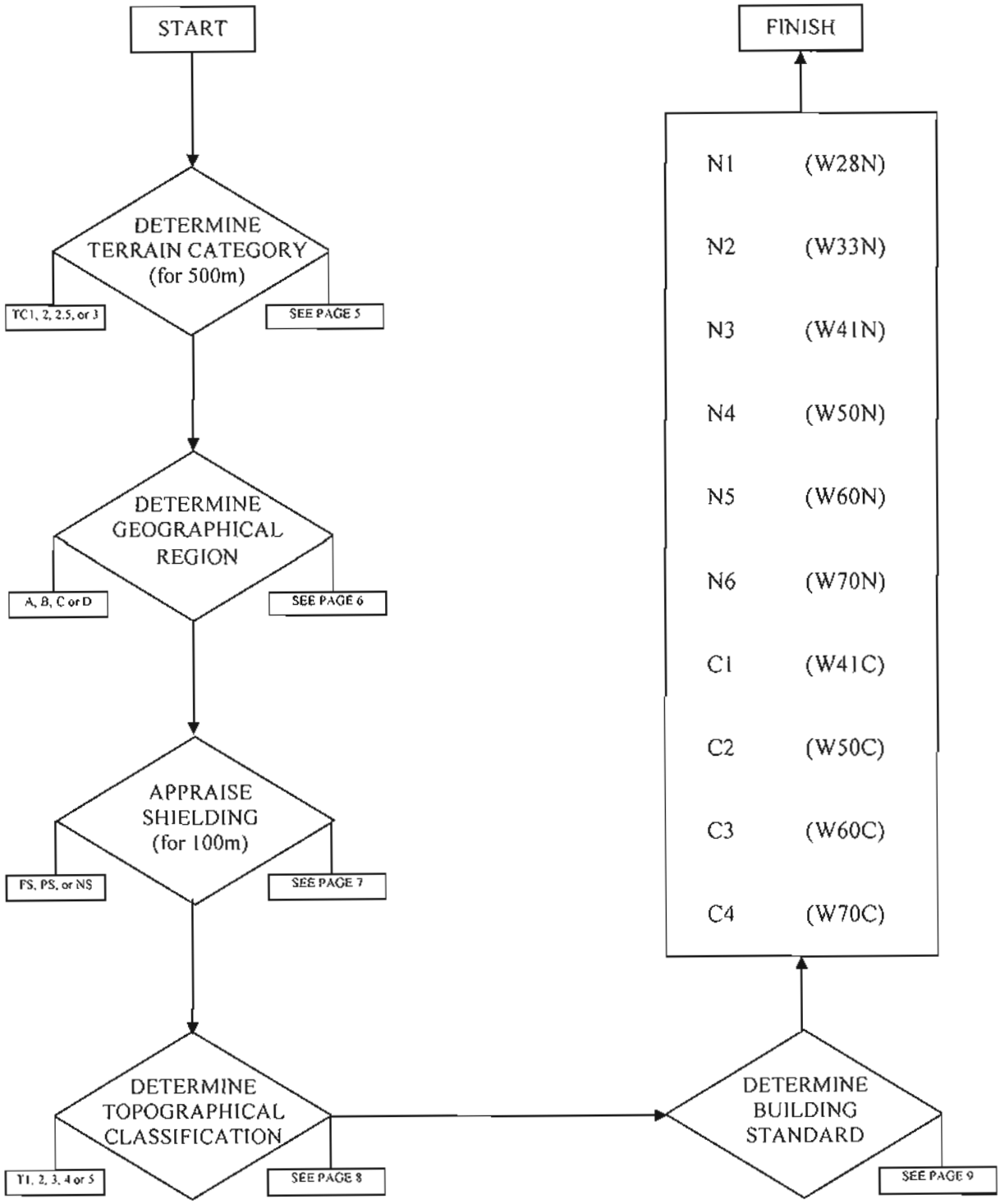
9. A patio or carport is deemed to be freestanding unless it is attached to an existing structure for at least 50% of its shortest side.

10. Flat roofs attached to either one or both sides of gable systems should be treated as individual freestanding structures.

11. Tunnel Brackets and Box Gutter Brackets to be fitted at a maximum of 1800mm centres.

Wind Design

Building Standard Formula



Wind Design

Terrain Classification

Terrain Category (TC) classification is the determination under high wind conditions, of the effective surface roughness, within a radius of 500 metres of the proposed building.

This Manual uses a four step system – **TC1, TC2, TC2.5 and TC3** ranging from the smoothest to the roughest surface environment.

To apply the terrain category classification used in this Manual, the following conditions must apply -

- The terrain category (ground roughness) remains constant in all directions for 500 metres around the site. The lowest TC rating controls the design.
- The terrain is appraised as it is likely to be in five years time.
- In determining the TC, park or open areas up to 150 metres wide can be ignored.

Terrain Category classifications are determined from the following descriptions and diagrams –

TC3 – Terrain Category 3 is terrain with numerous closely spaced house sized obstructions.

These obstructions each have a size of a domestic house or substantial tree (3m to 8.5m high). The terrain roughness must exist for at least 500 metres radially.

The density of houses (and/or trees) in Regions A and B, shall be at least 10 house sized obstructions per hectare – i.e. common 600 – 800 square metre housing allotments.

In Regions C and D (Cyclonic Areas) the terrain must be appraised as if trees are not present, i.e. destroyed by high winds.

TC2.5 – Terrain Category 2.5 is terrain with few trees, isolated obstructions or long grass (600mm).

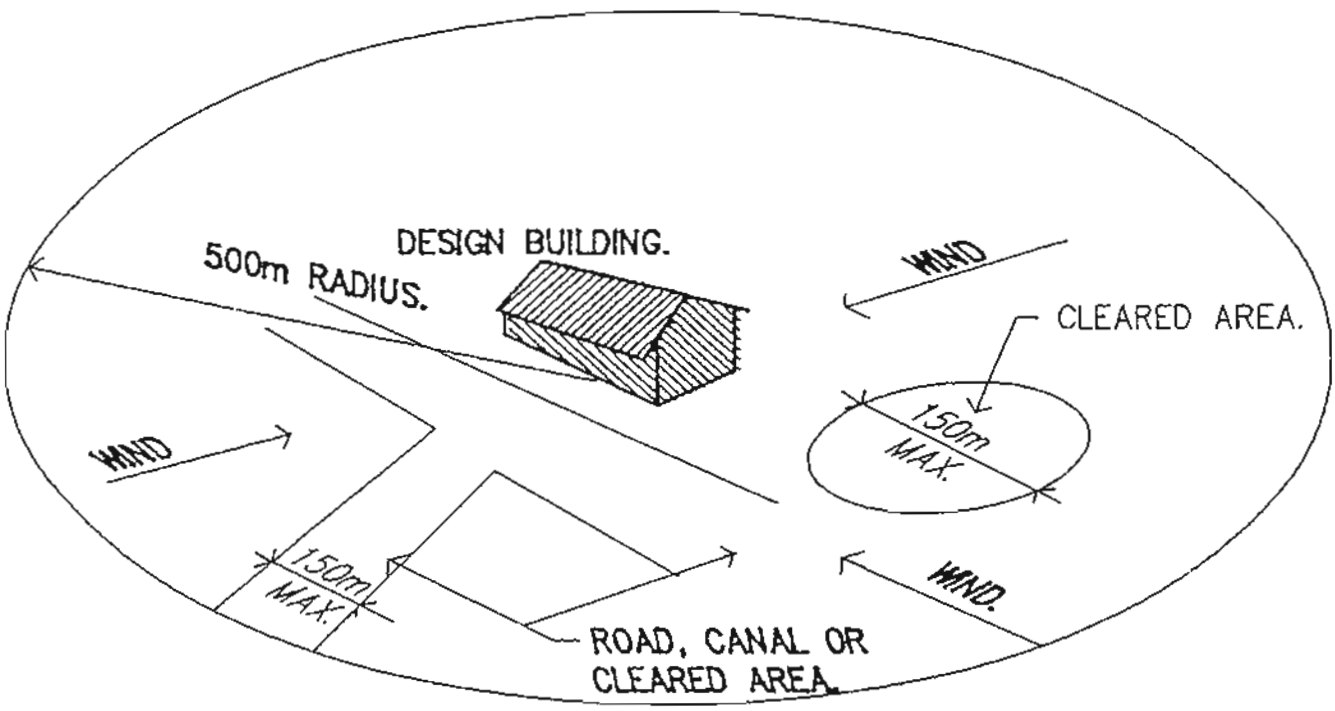
These obstructions shall be at least house sized and have a density of at least 2.5 obstructions per hectare but not exceeding 10 obstructions per hectares.

TC2 – Terrain Category 2 is open terrain.

Areas include the sea coast, airfields and low cut grasslands with few well scattered obstructions (trees 1.5m to 10m high).

TC1 – Terrain Category 1 is exposed open terrain with few or no obstructions.

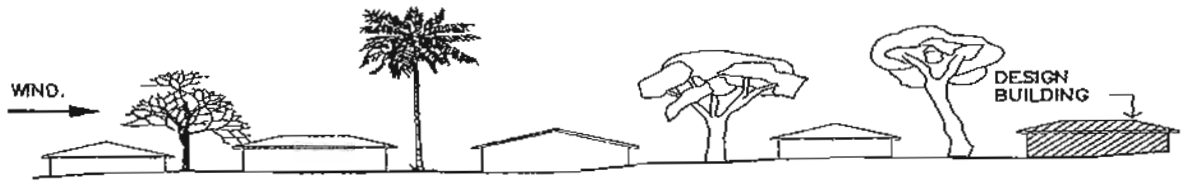
This condition is rare and exists only for isolated buildings in flat treeless plains of at least 10km in width.



Wind Design

Terrain Classification Cont/Geographical Region

TC3 Numerous closely spaced house sized obstructions (normally house or substantial trees)

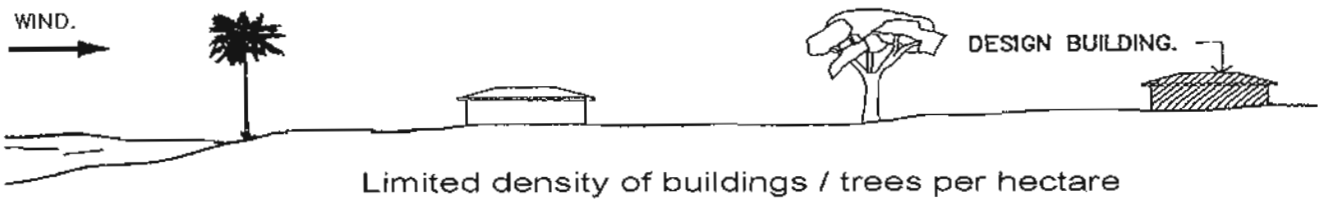


Density of buildings / trees - 10 or more per hectare

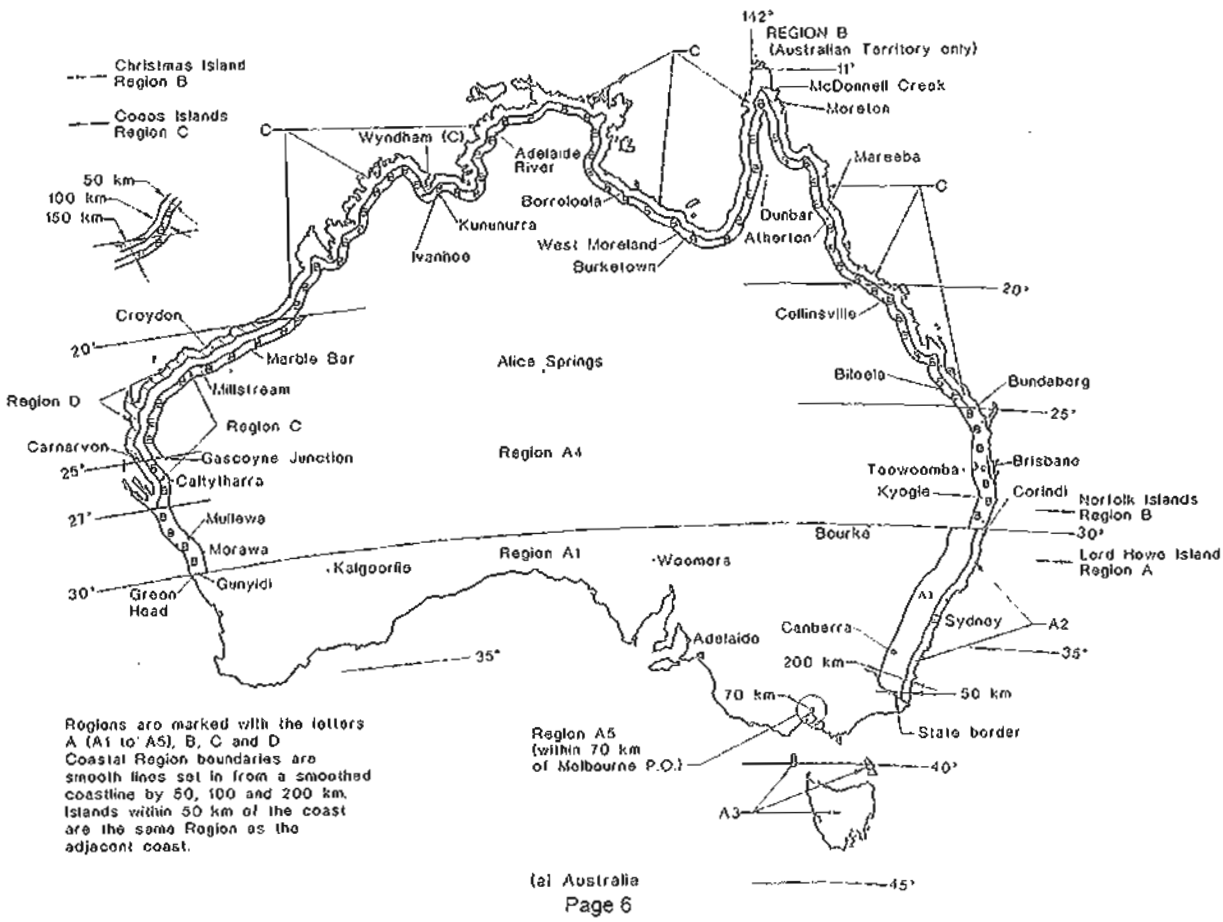
TC2.5 Spaced trees, isolated obstructions or outer suburbs

Density of buildings ./ substantial trees - 2.5 to 10 per hectare

TC2 Coastal areas or isolated trees, grassland, airfields or generally flat land



Limited density of buildings / trees per hectare



Wind Design

Shielding Classification

Shielding classification – **FS, PS** or **NS** accounts for the local "sheltering" effects of wind on a building, where the influences of house sized obstructions, in close proximity, produces "shielding" effects.

The shielding classification of a building is based upon the likely shielding in five years time.

Full shielding is based on the "protection" afforded by two rows of dwellings (100 metres) with a dwelling density for 10 houses or substantial trees per hectare. Shielding must exist for all radial directions.

The effects of roads and other open spaces less than 50 metres wide shall be ignored in determining shielding.
Shielding classifications shall be either –

	Full Shielding	- FS
	Partial Shielding	- PS
or	No Shielding	- NS

Shielding classifications are determined from the following descriptions –

FS – Full Shielding is applicable where at least two rows of houses or similar sized obstructions occur in all directions (within 100 metres) around the dwelling.

The density of houses or similar sized obstructions (in Regions A and B) must be at least 10 per hectare for a **FS** rating to apply.

In Regions C and D, heavily treed areas can only be considered to give a maximum **PS** - Partial Shielding.

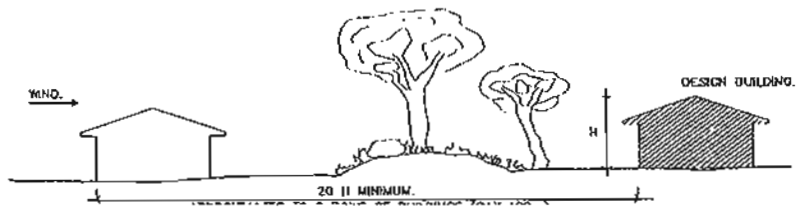
PS – Partial Shielding is applicable to a particular site if the density of housing or similar sized obstructions is greater than 2.5 but less than 10 obstructions per hectare in Region A and B, or greater than 10 obstructions per hectare in Region C and D.

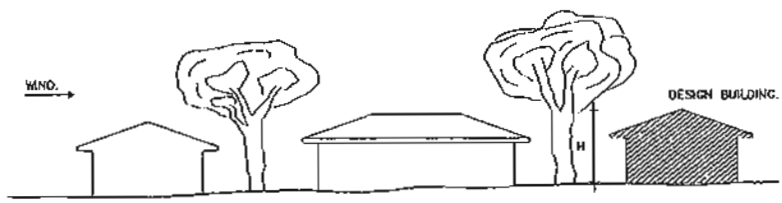
NS – No Shielding is applicable where nil or less than 2.5 houses or house sized obstructions per hectare occur in any direction.

No Shielding – **NS,** is considered appropriate for the two rows of houses immediately adjacent to open parklands, airfields and the like.

FS
Full Shielding

Ten buildings (or trees in region A-B the size of detached dwellings) per hectare, all to be built within 5 years.





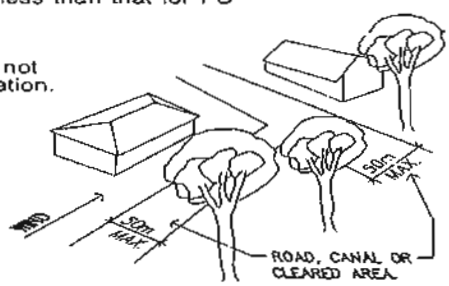
NS
No Shielding

Occurs when shielding is less than that for PS.

NS
No Shielding

Occurs when shielding is less than that for PS

The following does not derate the classification.



Permanent open areas greater than 50 m x 50 m such as parklands, airfields, expanses of water do relate to the classification. These generally give an NS classification.

Wind Design

Topographic Classification

Topographic classification is determined by the additional wind effects on a particular site due to its location on a hill, ridge or escarpment.

This manual uses a five step system – **T1, T2, T3, T4** or **T5** as indicated in the following table.

Several parameters and conditions are required to allow the determination of the Topographic Classification – these include:

Average Slope – ϕ = $\frac{\text{Vertical intercept}}{\text{Horizontal intercept}}$

The average slope is measured by averaging the steepest "slope" and the least "slope" through the top half of the hill, ridge or escarpment. Contour maps will be required.

The "slopes" are determined from the crest or highest point to the mid height contour for the steepest and flattest gradient in 360 degrees (from crest).

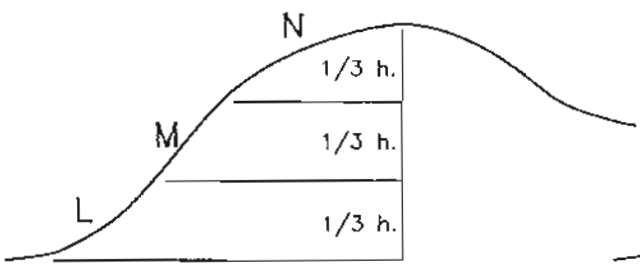
The steepest, average and flattest gradients need not pass through the site under consideration. The slope calculations are then deemed to represent the "average" condition in the region of the site.

TOPOGRAPHIC CLASSIFICATIONS

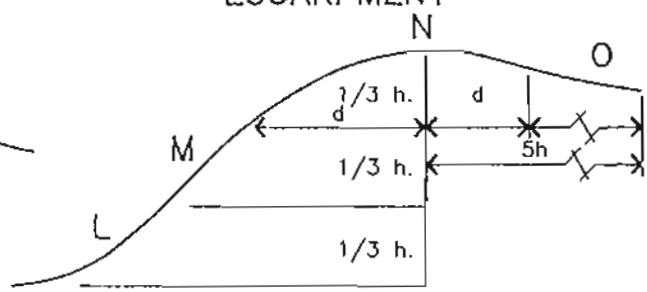
Average Slope	Equivalent Slope Measures		Lower 1/3 of Hill (L)	Mid 1/3 of Hill (M)	Near Top 1/3 of Hill (N)	Over Top (0) Escarpment only
≤ 0.1	≤ 1:10	≤ 5.7°	T1	T1	T1	T1
> 0.1 TO 0.133	> 1:10 to 1:7.5	> 5.7° to 7.5°	T1	T1	T2	T1
> 0.133 TO 0.2	> 1:7.5 to 1:5	> 7.6° to 11.3°	T1	T1	T3	T1
> 0.2 TO 0.333	> 1:5 to 1:3	> 11.3° to 18.4°	T1	T2	T4	T2
> 0.333	> 1:3	> 18.4°	T1	T3	T5	T3

As an approximation to the average slope calculations, the maximum surface slope (in degrees), in the region of the site, divided by three may be used. This measurement may be taken in the field without reference to contour maps.

HILL or RIDGE.



ESCARPMENT



Escarpment - is a step in topography where one slope is less than 1:20 with another slope greater than 1:10.

h – Hill/Ridge/Escarpment height (m)

N – Top one third zone extends for an equal distance "d" either side of the crest of an escarpment. "d" is the horizontal distance at the base of the 1/3 zone. See diagram.

O – "Over top" zone of an escarpment and extends for a distance 5h past the crest of the escarpment.

T1 – applies in addition to the above Table, when -

Maximum Hill/Ridge/ Escarpment Height (m)	Maximum Average Slope ϕ
Any	0.1
25	0.133
20	0.2
15	0.333

Base of hill/ridge/escarpment is the position where the average surface slope is ≤ 1:20 (ϕ = 0.05)

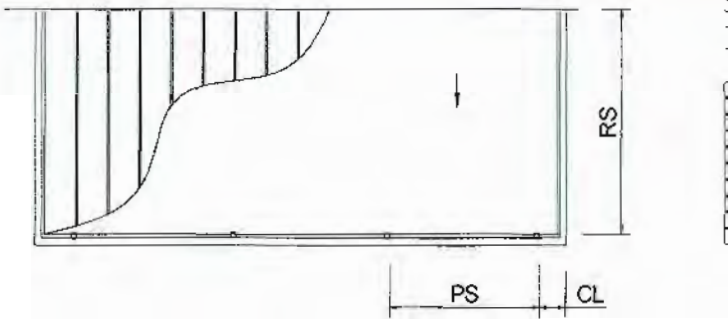
Wind Design

Selection of Building Standard

Geographic Region	Terrain Category for 500 metres all directions	Building Standards/Wind Classifications														
		Topographic Classification														
		T1			T2			T3			T4			T5		
		Shielding														
		FS = Full Shielding						PS = Partial Shielding						NS = No Shielding		
		FS	PS	NS	FS	PS	NS	FS	PS	NS	FS	PS	NS	FS	PS	NS
A	3	N1	N1	N2	N2	N2	N2	N2	N3	N3	N3	N3	N3	N3	N4	N4
	2.5	N1	N2	N2	N2	N3	N3	N2	N3	N3	N3	N4	N4	N3	N4	N4
	2	N2	N2	N3	N3	N3	N3	N3	N3	N4	N3	N4	N4	N4	N5	N5
	1	N3	N3	N3	N3	N4	N4	N4	N4	N4	N4	N5	N5	N5	N5	N6
B	3	N2	N2	N3	N2	N3	N3	N3	N3	N4	N3	N4	N4	N4	N4	N5
	2.5	N2	N3	N3	N3	N3	N4	N3	N4	N4	N4	N4	N5	N4	N5	N5
	2	N3	N3	N3	N3	N4	N4	N4	N4	N4	N4	N5	N5	N5	N5	N6
	1	N3	N4	N4	N4	N5	N5	N4	N5	N5	N5	N6	N6	N6	N6	
C	3	C1	C1	C2	C2	C2	C2	C2	C2	C3	C3	C3	C3	C3	C4	C4
	2.5	C1	C2	C2	C2	C2	C2	C2	C2	C3	C3	C4	C4	C3	C4	C4
	2 & 1	C2	C2	C2	C2	C3	C3	C3	C3	C4	C3	C4	C4	C4	N/A	N/A
D	3	C2	C2	C3	C2	C3	C3	C3	C4	C4	C4	C4	N/A	C4	N/A	N/A
	2.5	C2	C3	C3	C3	C3	C4	C3	C4	C4	C4	N/A	N/A	N/A	N/A	N/A
	2 & 1	C2	C3	C3	C3	C4	C4	C4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

ENGINEERING

Skillion Patio



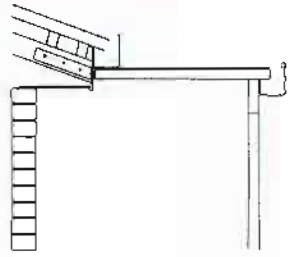
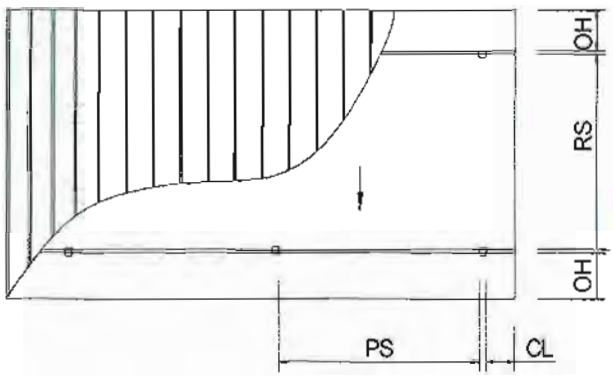
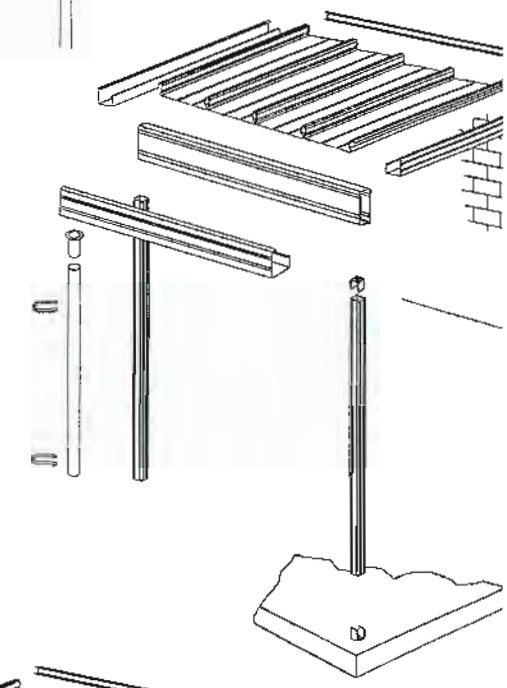
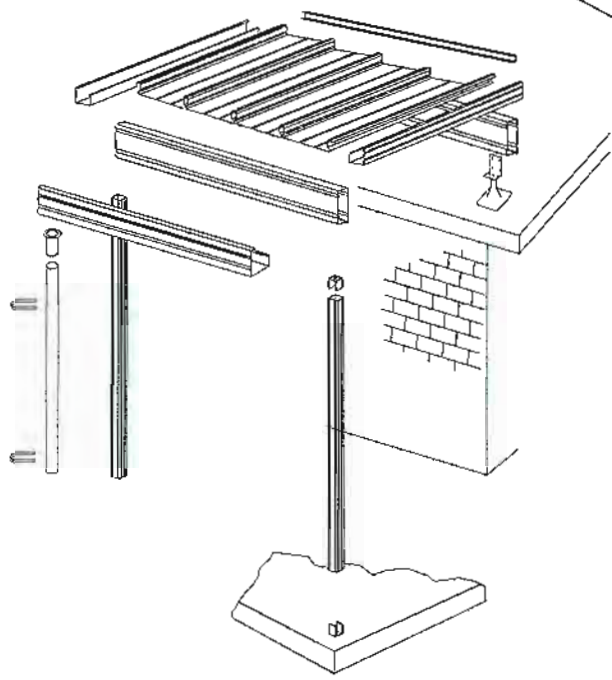


Fig 1





Free Standing Car Port/Patio Fig 2



Note : For Free Standing structures refer to Tables 1.1 or 1.2 in conjunction with table 3.

Note : Extend-a-Brackets can be fitted above existing house roof to manufacturers specification.

MATTHEW STEVENSON
BEng(Hons), CPEng, MIE Aust, RPEQ5091, NPER3

Skillion Patio

0.42 and 0.48 Material

These tables refer to arrangements shown in figures 1 & 2

Open and Partially Enclosed Structures (Table 1.1)

	Roof Span	N2 (W33)			N3 (W41)			N4 (W60)			C1 (W41C)			C2 (W50C)			C3 (W60C)		
		Post Spacing	Footing Type	Post Type	Post Spacing	Post Spacing	Post Spacing	Post Spacing	Footing Type	Post Type	Post Spacing	Footing Type	Post Type	Post Spacing	Footing Type	Post Type	Post Spacing	Footing Type	Post Type
100 x 65	1650	6900	2	1	6400	3	1	5600	3	1	6710	2	1	5990	3	1	5660	3	1
	1950	6600	2	1	6200	3	1	5600	3	1	6460	2	1	5910	3	1	5580	3	1
	2250	6400	2	1	6000	3	1	5500	3	1	6240	2	1	5830	3	1	5440	3	1
	2450	6260	2	1	5870	3	1	5500	3	1	6110	2	1	5770	3	1	5370	3	1
	2550	6200	2	1	5800	3	1	5500	3	1	6050	2	1	5740	3	1			
	2850	6000	2	1	5600	3	1	5200	3	1	5880	2	1	5600	3	1			
	3150	5800	2	1	5400	3	1	5000	3	1	5730	2	1	5400	3	1			
	3220	5750	2	1	5350	3	1	4950	3	1	5690	2	1	5350	3	1			
	3450	5600	2	1	5200	3	1	4800	3	1	5590	2	1						
	3750	5400	2	1	5000	3	1	4600	3	1	5400	2	1						
	4050	5200	2	1	4800	3	1	4400	3	1	5200	2	1						
	4180	5110	2	1	4710	3	1	4310	3	1	5110	2	1						
	4350	5000	2	1	4600	3	1												
	4650	4800	2	1	4400	3	1												
.48 material only	4900	4800	2	1	4200	3	1												
	5150	4400	2	1															
150 x 65	1650	8800	2	1	7500	3	1	6600	4	2	8800	3	1	8600	3	2	7960	4	2
	1950	8600	2	1	7300	3	1	6400	4	2	8600	3	1	8480	3	2	7780	4	2
	2250	8500	2	1	7100	3	1	6200	4	2	8500	3	1	8360	4	2	7590	4	2
	2450	8430	2	1	6960	3	1	6060	4	2	8430	3	1	8270	4	2	7270	4	2
	2550	8400	2	1	6900	3	1	6000	4	2	8400	3	1	8230	4	2			
	2850	8200	2	1	6700	3	1	5800	4	2	8200	3	1	8100	4	2			
	3150	8000	2	1	6500	3	1	5600	4	2	8000	3	1	7970	4	2			
	3220	7950	2	1	6450	3	1	5550	4	2	7950	3	1	7940	4	2			
	3450	7800	2	1	6300	3	1	5400	4	2	7900	3	1						
	3750	7600	2	1	6100	3	1	5200	4	2	7600	3	1						
	4050	7400	2	1	5900	3	1	5000	4	2	7400	3	1						
	4180	7310	2	1	5810	3	1	4910	4	2	7310	3	1						
	4350	7200	2	1	5700	3	1												
	4650	7000	2	1	5500	3	1												
.48 material only	4900	6800	2	1	5300	3	1												
	5150	6600	2	1															
200 x 65	1650	10200	3	1	9100	4	2	8100	4	2	10200	3	1	10200	4	2	9100	4	2
	1950	10000	3	1	8900	4	2	7900	4	2	10000	3	1	10000	4	2	9400	5	2
	2250	9900	3	1	8700	4	2	7700	4	2	9900	3	1	9900	4	2	9180	5	2
	2450	9840	3	1	8560	4	2	7570	5	2	9840	3	1	9840	4	2	9540	5	2
	2550	9800	3	1	8500	4	2	7500	5	2	9800	3	1	9800	4	2			
	2850	9700	3	1	8300	4	2	7300	5	2	9700	3	1	9700	4	2			
	3150	9600	3	1	8100	4	2	7100	5	2	9600	3	1	9600	4	2			
	3220	9580	3	1	8050	4	2	7050	5	2	9580	3	1	9580	4	2			
	3450	9500	3	1	7900	4	2	6900	5	2	9500	3	1						
	3750	9400	3	1	7700	4	2	6700	5	2	9400	3	1						
	4050	9200	3	1	7500	4	2	6500	5	2	9200	3	1						
	4180	9110	3	1	7410	4	2	6410	5	2	9110	3	1						
	4350	9000	3	1	7300	4	2	6300	5	2									
	4650	8800	3	1	7100	4	2	6100	5	2									
.48 material only	4900	8600	3	1	6900	4	2												
	5150	8400	3	1															

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:

Tables to be read in conjunction with notes on page 3.

Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas.

Span is distance between outside lip of back channel and inside edge of beam.

Footing dimensions to be read as length x width x depth in millimeters.

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Skillion Patio

0.42 and 0.48 Material

These figures refer to arrangements shown in figures 1 & 2

Enclosed Structures (Table 1.2)

	Roof Span	N2 (W33)			N3 (W41)			N4 (W60)			C1 (W41C)			C2 (W50C)			C3 (W60C)		
		Post Spacing	Footing Type	Post Type	Post Spacing	Post Spacing	Post Spacing	Post Spacing	Footing Type	Post Type	Post Spacing	Footing Type	Post Type	Post Spacing	Footing Type	Post Type	Post Spacing	Footing Type	Post Type
100 x 65	1400	6300	3	1	5700	3	1	4600	4	2	6.190	3	4						
	1800	6100	3	1	5400	3	1	4400	4	2	5.800	3	4						
	2200	5900	3	1	5100	4	1	4200	4	2	5.500	4	4						
	2600	5700	3	1	4900	4	1	4000	4	2									
	3000	5500	3	1	4700	4	1	3800	4	2									
	3400	5300	3	1	4500	4	1	3600	4	2									
	3800	5100	3	1	4300	4	1	3500	4	2									
	4200	4900	3	1	4200	4	1	3400	4	2									
.48 material only	4400	4700	3	1	4000	4	1												
	4600	4500	3	1															
150 x 65	1400	8000	4	1	6700	4	1	5800	4	2	8.890	4	4						
	1800	7800	4	1	6500	4	1	5600	4	2	8.320	4	5						
	2200	7600	4	1	6300	4	1	5400	5	2	7.880	4	5						
	2600	7400	4	1	6100	4	1	5200	5	2									
	3000	7200	4	1	5900	4	1	5000	5	2									
	3400	7000	4	1	5700	4	1	4800	5	2									
	3800	6800	4	1	5500	4	1	4600	5	2									
	4200	6600	4	1	5300	4	1	4400	5	2									
.48 material only	4400	6400	4	1	5100	4	1												
	4600	6200	4	1															
200 x 65	1400	9500	3	1	8500	4	2	7400	5	2	10.300	4	5						
	1800	9400	4	1	8300	4	2	7200	5	2	10.060	5	5						
	2200	9200	4	1	8100	5	2	7000	5	2	9.840	5	5						
	2600	9100	4	1	7900	5	2	6700	5	2									
	3000	9000	4	1	7700	5	2	6400	5	2									
	3400	8900	4	1	7500	5	2	6100	5	2									
	3800	8700	4	1	7300	5	2	5900	5	2									
	4200	8500	4	1	7000	5	2	5700	5	2									
.48 material only	4400	8300	4	1	6800	5	2												
	4600	8100	4	1															

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:

Tables to be read in conjunction with notes on page 3.
Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas.
Span is distance between outside lip of back channel and inside edge of beam.
Footing dimensions to be read as length x width x depth in millimeters.

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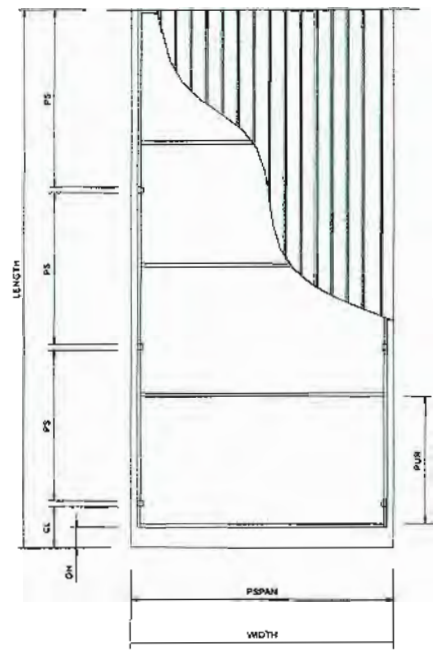
ENGINEERING

Carport / Patio

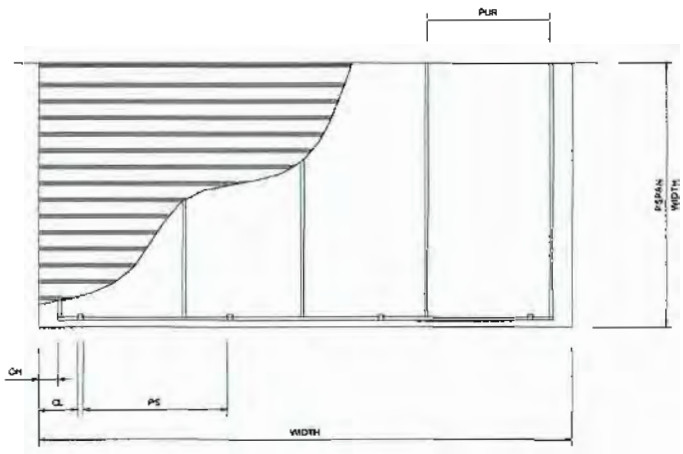
RS - Roof Span
CL - Cantilever
OH - Overhang
PS - Post Spacing
BS - Beam Spacing
PURS - Purlin Spacing
PSPAN - Purlin Span

Attached Car Port/Patio
With Edge Beams Fig 3



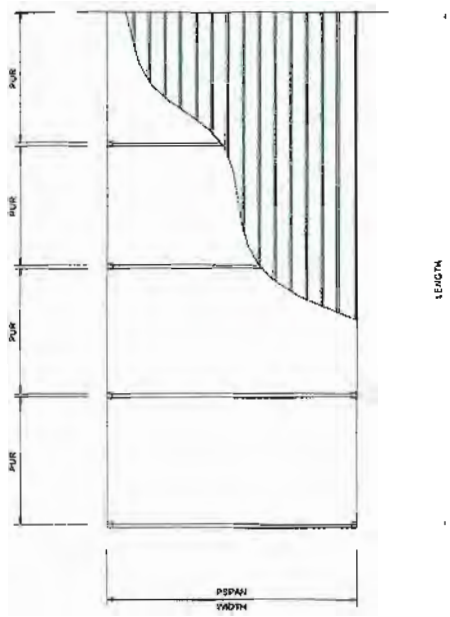
IF $\frac{L}{W}$ > 1.5 COLUMNS SHALL BE AS PER FREE STANDING REQUIRMENTS

Attached Car Port/Patio Fig 4



IF $\frac{L}{W}$ > 1.5 COLUMNS SHALL BE AS PER FREE STANDING REQUIRMENTS

Attached Car Port/Patio
No Edge Beams Fig 5



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Carport/Patio

0.42 and 0.48 Material

These tables refer to arrangements shown in figures 3, 4 & 5

Open Structures (Table 2.1)

	Purlin Span	N2 (W33)				N3 (W40)				N4 (W50)				C1 (W41C)			C2 (W50C)			C3 (W60C)		
		Post Spacing	Purlin Spacing		Footing Type	Post Spacing	Purlin Spacing		Footing Type	Post Spacing	Purlin Spacing		Footing Type	Post Spacing	Purlin Spacing	Footing Type	Post Spacing	Purlin Spacing	Footing Type	Post Spacing	Purlin Spacing	Footing Type
			0.42	0.48			0.42	0.48			0.42	0.48			0.48			0.48			0.48	
100 x 65	3000	5670	4650	5150	1	5060	4600	4900	2	4540	4400	4600	2	3950	2950	2	2680	1850	3	1840	900	3
	3600	5340	4650	5150	1	4760	4600	4900	2	3950	3760	3760	2	3290	2950	2	2240	1850	3	1530	900	3
	4200	5070	4650	4740	1	4520	3360	3360	2	3380	2370	2370	2	2820	2490	2	1920	1720	3		900	3
	4800	4850	3180	3180	2	4320	2250	2250	2	2900	1590	1590	2	2470	1670	2	1680	1150	3		810	3
	5400	4660	2230	2230	2	3840	1580	1580	2	2630	1110	1110	2	2190	1170	2	1490	810	3			
	6000	4500	1630	1630	2	3450	1150	1150	2	2370	810	810	2	1970	850	2						
	6600	4360	1220	1220	2	3140	860	860	2	2150	610	610	2	1790	640	2						
	7200	4240	940	940	2	2880	670	670	2	1970	470	470	2	1640		2						
	7800	4010	740	740	2	2660	520	520	2	1820	370	370	2	1520		2						
	8400	3720	590	590	2	2470	420	420	2	1690	300	300	2	1410		2						
150 x 65	3000	8100	4650	5150	2	7200	4600	4900	2	6430	4400	4600	3	5500	2950	3	3740	1850	3	2560	900	3
	3600	7620	4650	5150	2	6790	4600	4900	3	5500	4400	4600	3	4580	2950	3	3110	1850	3	2130	900	3
	4200	7240	4650	5150	2	6450	4600	4900	3	4710	4400	4600	3	3930	2950	3	2670	1850	3	1830	900	3
	4800	6920	4650	5150	2	6010	4600	4900	3	4120	4400	4600	3	3440	2950	3	2340	1850	3	1600	900	3
	5400	6660	4650	5150	2	5350	4600	4600	3	3670	3240	3240	3	3050	2950	3	2080	1850	3	1420	900	3
	6000	6430	4650	4730	3	4810	3350	3350	3	3300	2360	2360	3	2750	2480	3	1870	1720	3		900	3
	6600	6230	3560	3560	3	4370	2520	2520	3	3000	1760	1780	3	2500	1880	3	1700	1290	3		900	3
	7200	6060	2740	2740	3	4010	1940	1940	3	2750	1370	1370	3	2290	1440	3	1560	990	3		700	3
	7800	5590	2150	2150	3	3700	1530	1530	3	2540	1080	1080	3	2110	1130	3	1440	780	3			
	8400	5190	1730	1730	3	3440	1220	1220	3	2300	860	860	3	1960	900	3		630	3			
200 x 65	3000	10100	4650	5150	2	9000	4600	4900	3	7960	4400	4600	3	6640	2950	4	4510	1850	4	3090	900	4
	3600	9510	4650	5150	2	8470	4600	4900	3	6640	4400	4600	3	5530	2950	4	3760	1850	4	2570	900	4
	4200	9030	4650	5150	3	8050	4600	4900	3	5690	4400	4600	3	4740	2950	4	3220	1850	4	2210	900	4
	4800	7640	4650	5150	3	7260	4600	4900	3	4980	4400	4600	3	4150	2950	4	2820	1850	4	1930	900	4
	5400	8310	4650	5150	3	6450	4600	4900	3	4420	4400	4600	3	3690	2950	4	2510	1850	4	1720	900	4
	6000	8020	4650	5150	3	5810	4600	4900	3	3980	4400	4590	3	3320	2950	4	2260	1850	4	1540	900	4
	6600	7770	4650	5150	3	5280	4600	4890	3	3620	3450	3450	3	3020	2950	4	2050	1850	4	1400	900	4
	7200	7300	4650	5150	3	4840	3770	3770	3	3320	2660	2660	3	2760	2650	4	1880	1820	4			
	7800	6740	4180	4180	3	4470	2960	2960	3	3060	2090	2090	3	2550	2190	4	1730	1520	4			
	8400	6260	3350	3350	3	4150	2370	2370	3	2840	1067	1670	3	2370	1760	4	1610	1220	4			

Free Standing Structures (Table 3)

Roof Area Up To	N2 (W33)		N3 (W40)		N4 (W50)		C1 (W41C)		C2 (W50C)		C3 (W60C)	
	Post Type	Footing Type	Post Type	Footing Type	Post Type	Footing Type	Post Type	Footing Type	Post Type	Footing Type	Post Type	Footing Type
20 m²	65 x 3 SHS	5	65 x 3 SHS	5	65 x 3 SHS	5	65 x 3 SHS	5	90 x 2 SHS	5	90 x 2 SHS	6
40 m²	90 x 2 SHS	5	90 x 2 SHS	6	90 x 3 SHS	7	65 x 3 SHS	6	90 x 3 SHS	7	100 x 3 SHS	8
60 m²	90 x 2 SHS	6	90 x 3 SHS	7	100 x 3 SHS	8	90 x 3 SHS	7	100 x 3 SHS	8	NS	NS

Large Footings:

6. 500 x 500 x 1300
7. 500 x 500 x 1800
8. 500 x 500 x 2600

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:

Tables to be read in conjunction with notes on page 3.
Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas.
Span is distance between outside lip of back channel and inside edge of beam.
Footing dimensions to be read as length x width x depth in millimeters.

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ENGINEERING

Multi Beam

RS - Roof Span
CL - Cantilever
OH - Overhang
PS - Post Spacing
BS - Rafter/Beam Spacing
PURS - Purlin Spacing
PSPAN - Purlin Span

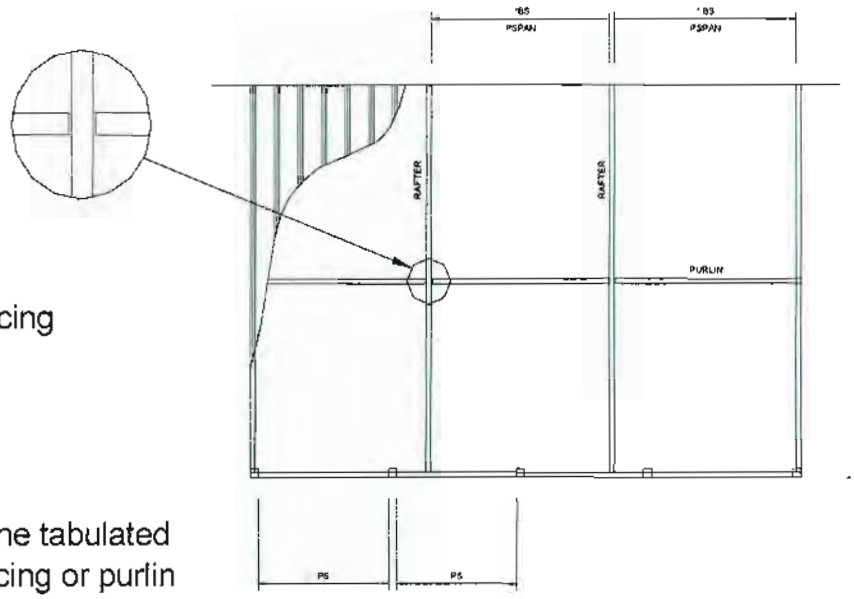
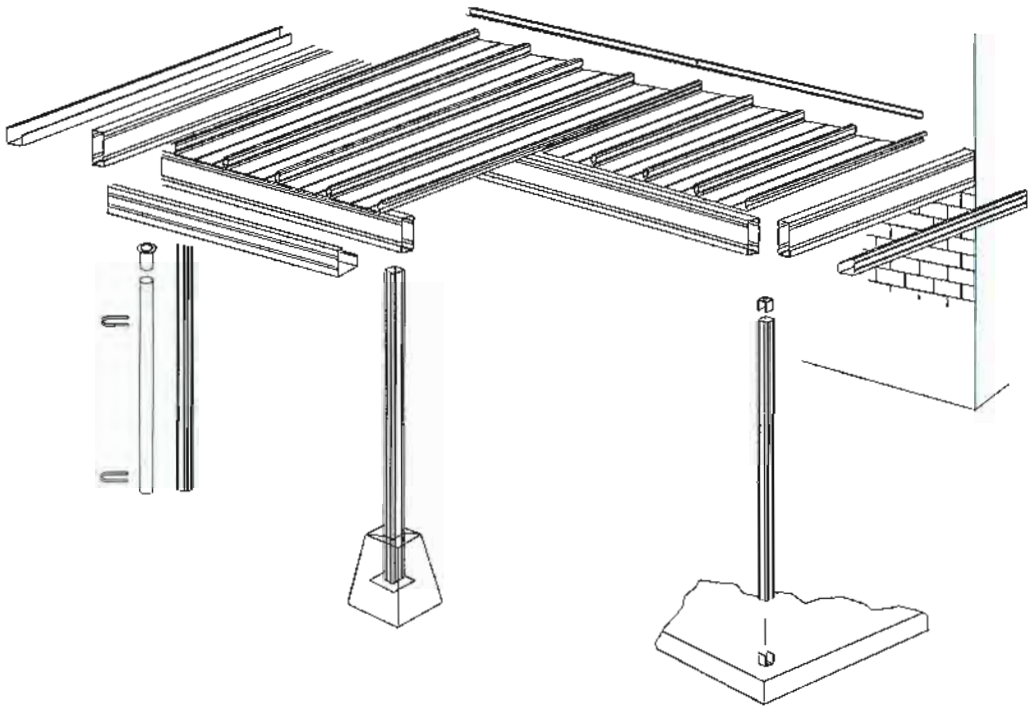


Fig 6

* Shall be the lesser of the tabulated values for the rafter spacing or purlin span.

Member sizes may be mixed to achieve the most economical structure.



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Multi Beam Spacing

Wind Rating – N2 & N3

These tables refer to arrangements shown in figure 6

Open and Partially Enclosed Structures – N2 (Table 4.1.1)

Roof Span	Maximum Spacing of Rafters			No. of Purlins	Maximum Span of Purlins			Maximum Spacing of Columns for Edge Beam		
	100	150	200		100	150	200	100	150	200
4650	4760	6600	7940	1	4760	6600	7940	6840	8850	8880
5050	4100	6090	7330	1	4390	6090	7330	5810	8620	8650
5450	3020	5650	6800	1	4070	5650	6800	4410	8410	8440
5850	2280	5270	6340	1	3800	5270	6340	3390	8210	8230
6250	1750	4940	5940	1	3560	4940	5940	2640	8020	8040
6650	1360	3970	5590	1	3340	4650	5590	2090	7620	7870
7050	1080	3140	5280	1	3160	4390	5280		6440	7700
7450		2520	4890	1	2990	4150	5000		5490	7550
7850		2040	3970	1	2840	3940	4750		4720	7400
8250		1670	3250	1	2700	3760	4520		4090	7260
8650		1390	2690	1	2580	3580	4320		3560	6880
9050		1160	2250	1	2460	3430	4130		3120	6030
9450			1890	2	3530	4900	5900		2760	5320
9850			1600	2	3390	4700	5660		2440	4720

Enclosed Structures – N2 (Table 4.2.1)

Roof Span	Maximum Spacing of Rafters			No. of Purlins	Maximum Span of Purlins			Maximum Spacing of Columns for Edge Beam		
	100	150	200		100	150	200	100	150	200
4650	3860	4360	5270	1	3960	4360	5270	5670	5680	5690
5050	3270	4020	4850	1	3640	4020	4850	5090	5470	5480
5450	2720	3720	4490	1	3370	3720	4490	4070	5290	5290
5850	2200	3460	4180	1	3140	3460	4180	3310	5120	5120
6250	1750	4140	5890	1	2940	4870	5890	2640	4960	4970
6650	1360	3660	5330	1	2760	4580	5530	2090	4820	4830
7050	1080	3140	4740	1	2600	4320	5210		4690	4700
7450		2520	4250	1	2460	4080	4930		4570	4580
7850		2040	3820	1	2340	3870	4680		4070	4470
8250		1670	3250	1	2220	3690	4450		3510	4360
8650		1390	2690	2	3190	3510	4240		3050	4270
9050		1160	2250	2	3040	4480	5420		2670	4180
9450			1890	2	2910	4290	5190		2350	4090
9850			1600	2	2800	4120	4970		2080	4010

Open and Partially Enclosed Structures – N3 (Table 4.1.2)

Roof Span	Maximum Spacing of Rafters			No. of Purlins	Maximum Span of Purlins			Maximum Spacing of Columns for Edge Beam		
	100	150	200		100	150	200	100	150	200
4650	3910	5430	6540	1	3910	5430	6540	5620	6890	6900
5050	3320	5010	6030	1	3600	5010	6030	5420	6710	6720
5450	2850	4640	5590	1	3340	4640	5590	4410	6540	6550
5850	2280	4330	5220	1	3120	4330	5220	3390	6390	6400
6250	1750	4060	4890	1	2920	4060	4890	2640	6240	6250
6650	1360	3710	4600	1	2740	3810	4600	2090	5460	6110
7050	1080	3140	4340	1	2590	3600	4340		4610	5980
7450		2520	4110	1	2450	3410	4110		3930	5860
7850		2040	3880	1	2330	3240	3900		3380	5750
8250		1670	3250	1	2210	3080	3710		2920	5640
8650		1390	2690	1	2110	2940	3540		2550	4930
9050		1160	2250	2	3020	4200	5060		2230	4320
9450			1890	2	2890	4020	4850		1970	3810
9850			1600	2	2780	3860	4650			3370

Enclosed Structures – N3 (Table 4.2.2)

Roof Span	Maximum Spacing of Rafters			No. of Purlins	Maximum Span of Purlins			Maximum Spacing of Columns for Edge Beam		
	100	150	200		100	150	200	100	150	200
4650	2430	4710	6850	1	4410	6540	7850	4000	4490	4500
5050	2060	3990	5810	1	4250	6360	7590	3140	4330	4330
5450	1700	3430	4990	1	4110	6130	7360	2520	4180	4190
5850	1380	2970	4330	1	3900	6680	8030	2040	4050	4050
6250	1130	2600	3790	1	3660	6530	7820		3930	3930
6650		2300	3350	1	3440	6390	7630		3820	3820
7050		2050	2980	1	3250	6230	7450		3460	3720
7450		1830	2670	1	3070	6630	7970		2940	3620
7850		1650	2410	2	4180	6520	7810		2520	3540
8250		1430	2180	2	4090	6400	7650		2180	3450
8650		1240	1980	2	3960	6290	7510		1890	3380
9050		1080	1810	2	3780	6140	7370			3220
9450			1660	2	3630	6510	7800			2840
9850			1530	2	3480	6420	7670			2510

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:

Tables to be read in conjunction with notes on page 3.
Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas.
Span is distance between outside lip of back channel and inside edge of beam.
Footing dimensions to be read as length x width x depth in millimeters.

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Multi Beam Spacing

Wind Rating N4 & C1

These tables refer to arrangements shown in figure 6

Open and Partially Enclosed Structures – N4 (Table 4.1.3)

Roof Span	Maximum Spacing of Rafters			No. of Purlins	Maximum Span of Purlins			Maximum Spacing of Columns for Edge Beam		
	100	150	200		100	150	200	100	150	200
4650	2700	4530	5460	1	3260	4530	5460	4680	5560	5570
5050	2290	4170	5030	1	3000	4170	5030	4510	5410	5420
5450	1960	3810	4660	1	2780	3870	4660	4220	5280	5290
5850	1700	3300	4350	1	2590	3610	4350	3390	5150	5160
6250	1490	2890	4070	1	2430	3380	4070	2640	4660	5040
6650	1320	2560	3720	1	2280	3180	3830	2090	3890	4930
7050	1080	2270	3310	1	2150	3000	3610		3280	4830
7450		2040	2970	1	2040	2840	3420		2800	4730
7850		1840	2670	1	1940	2690	3250		2400	4640
8250		1660	2420	1	1840	2560	3090		2080	4020
8650		1390	2200	2	2630	3660	4410		1810	3510
9050		1160	2010	2	2520	3500	4220			3070
9450			1840	2	2410	3350	4040			2710
9850			1600	2	2310	3220	3880			2400

Enclosed Structures – N4 (Table 4.2.3)

Roof Span	Maximum Spacing of Rafters			No. of Purlins	Maximum Span of Purlins			Maximum Spacing of Columns for Edge Beam		
	100	150	200		100	150	200	100	150	200
4650	1610	3130	3080	1	3890	8710	10930	2580	3660	3660
5050	1370	2650	2610	1	3730	8750	10980	2030	3520	3530
5450	1110	2280	2240	1	3520	8510	10670		3410	3410
5850		1980	1940	1	3280	8560	10740		3300	3300
6250		1730	1700	1	3070	8610	10790		3180	3200
6650		1530	1500	1	2890	8650	10840		2650	3110
7050		1360	1340	2	3860	8680	10880		2240	3030
7450		1220	1200	2	3760	8510	10670		1900	2950
7850		1080	1080	2	3660	8540	10710			2880
8250				2	3480	8580	10760			2740
8650				2	3320	8610	10800			2380
9050				2	3180	8640	10830			2090
9450				2	3050	8500	10660			1840
9850				2	2920	8530	10700			

Open and Partially Enclosed Structures – C1 (Table 4.1.4)

Roof Span	Maximum Spacing of Rafters			No. of Purlins	Maximum Span of Purlins			Maximum Spacing of Columns for Edge Beam		
	100	150	200		100	150	200	100	150	200
4650	3910	5430	6540	1	3910	5430	6540	5280	6890	6900
5050	3320	5010	6030	1	3600	5010	6030	4170	6710	6720
5450	2850	4640	5590	1	3340	4640	5590	3350	6540	6550
5850	2280	4330	5220	1	3120	4330	5220	2730	6390	6400
6250	1750	4060	4890	1	2920	4060	4890	2260	6240	6250
6650	1360	3710	4600	1	2740	3810	4600	1890	5460	6110
7050	1080	3140	4340	1	2590	3600	4340		4610	5980
7450		2520	4110	1	2450	3410	4110		3930	5860
7850		2040	3880	1	2330	3240	3900		3380	5750
8250		1670	3250	1	2210	3080	3710		2292	5640
8650		1390	2690	2	3160	4390	5290		2550	4930
9050		1160	2250	2	3020	4200	5060		2230	4320
9450			1890	2	2890	4020	4850		1970	3810
9850			1600	2	2780	3860	4650			3370

Enclosed Structures – C1 (Table 4.2.4)

Roof Span	Maximum Spacing of Rafters			No. of Purlins	Maximum Span of Purlins			Maximum Spacing of Columns for Edge Beam		
	100	150	200		100	150	200	100	150	200
4650	2430	4360	5270	1	3130	4360	5270	4000	4490	4500
5050	2060	3990	4850	1	2880	4020	4850	3140	4330	4330
5450	1700	3430	4490	1	2670	3720	4490	2520	4180	4190
5850	1380	2970	4180	1	2480	3460	4180	2040	4050	4050
6250	1130	2600	3790	2	3490	4870	5890		3930	3930
6650		2300	3350	2	3280	4580	5530		3820	3820
7050		2050	2980	2	3100	4320	5210		3460	3720
7450		1830	2670	2	2930	4080	4930		2940	3620
7850		1650	2410	2	2780	3870	4680		2520	3540
8250		1430	2180	2	2640	3690	4450		2180	3450
8650		1240	1980	2	2520	3510	4240		1890	3380
9050		1080	1810	3	3220	4480	5420			3220
9450			1660	3	3080	4290	5190			2840
9850			1530	3	2950	4120	4970			2510

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:

Tables to be read in conjunction with notes on page 3.
Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas.
Span is distance between outside lip of back channel and inside edge of beam.
Footing dimensions to be read as length x width x depth in millimeters.

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Multi Beam Spacing

Wind Rating C2 & C3

These tables refer to arrangements shown in figure 6

Open and Partially Enclosed Structures – C2 (Table 4.1.5)

Roof Span	Maximum Spacing of Rafters			No. of Purlins	Maximum Span of Purlins			Maximum Spacing of Columns for Edge Beam		
	100	150	200		100	150	200	100	150	200
4650	2700	4530	5460	1	3260	4530	5460	4680	5560	5570
5050	2290	4170	5030	1	3000	4170	5030	4170	5410	5420
5450	1960	3810	4660	1	2780	3870	4660	3350	5280	5290
5850	1700	3300	4350	1	2590	3610	4350	2730	5150	5160
6250	1490	2890	4070	1	2430	3380	4070	2260	4660	5040
6650	1320	2560	3720	1	2280	3180	3830	1890	3890	4930
7050	1080	2280	3310	2	3220	4480	5400		3280	4830
7450		2040	2970	2	3050	4240	5110		2800	4730
7850		1840	2670	2	2900	4030	4860		2400	4640
8250		1660	2420	2	2760	3840	4620		2080	4020
8650		1390	2200	2	2630	3660	4410		1810	3510
9050		1160	2010	2	2520	3500	4220			3070
9450			1840	2	2410	3350	4040			2710
9850			1600	2	2310	3220	3880			2400

Enclosed Structures – C2 (Table 4.2.5)

Roof Span	Maximum Spacing of Rafters			No. of Purlins	Maximum Span of Purlins			Maximum Spacing of Columns for Edge Beam		
	100	150	200		100	150	200	100	150	200
4650	1610	3130	4560	2	4570	6540	7850	2580	3660	3660
5050	1370	2650	3870	2	4450	6360	7590	2030	3520	3530
5450	1110	2280	3320	2	4330	6130	7360		3410	3410
5850		1980	2880	3	4670	6680	8030		3300	3300
6250		1730	2520	3	4560	6530	7820		3180	3200
6650		1530	2230	3	4460	6390	7630		2650	3110
7050		1360	1980	3	4380	6230	7450		2240	3030
7450		1220	1780	4	4640	6630	7970		1900	2950
7850		1080	1600	4	4550	6520	7810			2880
8250			1450	4	4480	6400	7650			2740
8650			1320	4	4400	6290	7510			2380
9050			1200	4	4340	6140	7370			2090
9450			1100	5	4550	6510	7800			1840
9850			1020	5	4480	6420	7670			

Open and Partially Enclosed Structures – C3 (Table 4.1.6)

Roof Span	Maximum Spacing of Rafters			No. of Purlins	Maximum Span of Purlins			Maximum Spacing of Columns for Edge Beam		
	100	150	200		100	150	200	100	150	200
4650	1860	3620	4550	1	2710	3780	4550	3900	4540	4540
5050	1580	3070	4460	2	3740	5200	6270	3340	4420	4420
5450	1360	2630	3830	2	3470	4830	5810	2730	4310	4310
5850	1180	2280	3330	2	3230	4500	5420	2260	4030	4210
6250	1030	2000	2910	2	3030	4210	5080	1890	3330	4110
6650		1770	2570	2	2850	3960	4770		2780	4020
7050		1570	2290	2	2690	3740	4510		2350	3940
7450		1410	2050	2	2540	3540	4260		2000	3860
7850		1270	1850	3	3210	4470	5390			3330
8250		1150	1670	3	3060	4250	5130			2880
8650		1040	1520	3	2920	4060	4890			2510
9050			1390	3	2790	3880	4680			2200
9450			1270	3	2670	3720	4480			1930
9850			1170	3	2560	3570	4300			

Enclosed Structures – C3 (Table 4.2.6)

Roof Span	Maximum Spacing of Rafters			No. of Purlins	Maximum Span of Purlins			Maximum Spacing of Columns for Edge Beam		
	100	150	200		100	150	200	100	150	200
4650	1090	2110	3080	9	6070	8710	10930		3000	3000
5050		1790	2610	10	6100	8750	10980		2890	2890
5450		1540	2240	10	5930	8510	10670		2800	2800
5850		1340	1940	11	5970	8560	10740		2590	2710
6250		1170	1700	12	6000	8610	10790		2140	2630
6650		1030	1500	13	6020	8650	10840			2550
7050			1340	14	6050	8680	10880			2490
7450			1200	14	5930	8510	10670			2420
7850			1080	15	5960	8540	10710			2130
8250				16	5980	8580	10760			1840
8650				17	6000	8610	10800			
9050				18	6020	8640	10830			
9450				18	5930	8500	10660			
9850				19	5950	8530	10700			

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:

Tables to be read in conjunction with notes on page 3.
Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas.
Span is distance between outside lip of back channel and inside edge of beam.
Footing dimensions to be read as length x width x depth in millimeters.

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ENGINEERING

Gables

GF - Gable Frame - GF1 or GF2 Refer Table
EB - Edge Beam
P - Purlin
RB - Ridge Beam

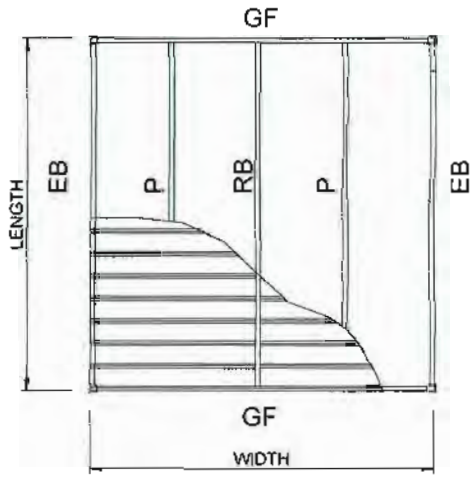
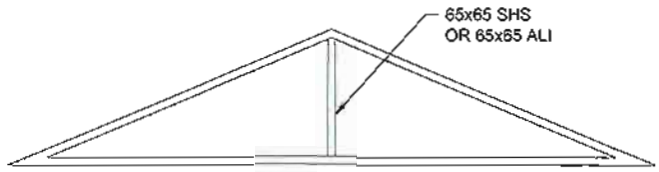
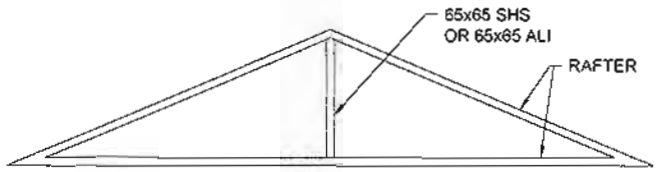


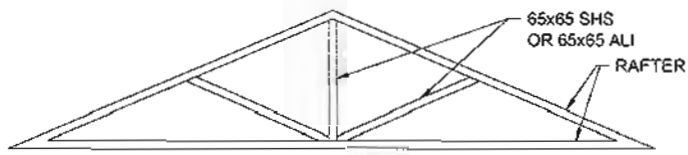
Fig 7



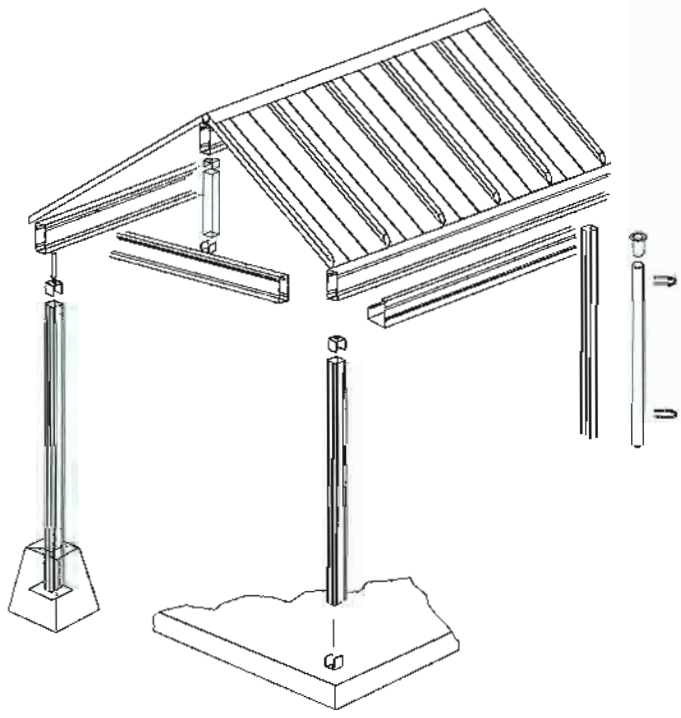
Non - Cyclonic Gable



GF1 GABLE FRAME



GF2 GABLE FRAME



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Gables

Non Cyclonic

These tables refer to arrangements shown in figure 7

Attached or Free Standing Open, Partially Enclosed or Enclosed N2 (W33) and N3 (W41) (Table 5.1)

Length	Width	Side Beam	Ridge Beam	Rafter Beams	Post Attached	Post Freestanding	Footing
Up to 4000	Up To 4000	Gutter Beam or 100 x 65	100 x 65	NIL	65 x 65	90 x 90 x 2 SHS	1
4000 to 6000	4000 to 7000	150 x 65	150 x 65	NIL	65 x 65	100 x 100 x 3 SHS	2
6000 to 8000	7000 to 8500	200 x 65	200 x 65	150 x 65	90 x 90	100 x 100 x 5 SHS	3

N4 (W50) (Table 5.2)

Length	Width	Side Beam	Ridge Beam	Rafter Beams	Post Attached	Post Freestanding	Footing
Up to 4000	Up To 4000	150 x 65	150 x 65	100 x 65	65 x 65	100 x 100 x 3 SHS	2
4000 to 6000	4000 to 7000	200 x 65	200 x 65	150 x 65	65 x 65	100 x 100 x 5 SHS	3

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:

Tables to be read in conjunction with notes on page 3.
Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas.
Span is distance between outside lip of back channel and inside edge of beam.
Footing dimensions to be read as length x width x depth in millimeters.

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Gables

Cyclonic – C1 and C2

These tables refer to arrangements shown in figure 7

Gable Framed Patio Cover Open or Enclosed-Wind Region C1 (Table 5.3)

Width	Length	Purlin	No of Purlins per side	Edge Beam	Ridge Beam	Rafter Beam	Gable Frame Type	Post Attached (enclosed)	Footing Type Attached (enclosed)	Post Free Standing or Attached (not enclosed)	Free Standing Footing
4	4	N/A	N/A	100	100	100	GF1	90 x 2	2	125 x 4	350 x 1250
	5	N/A	N/A	150	150	150	GF1	90 x 2	2	125 x 5	350 x 1500
	6	N/A	N/A	200	200	200	GF1	90 x 2	2	150 x 3	350 x 1500
	7	N/A	N/A	200	200	200	GF1	90 x 2	3	150 x 4	350 x 1500
6	4	100	1	100	100	200	GF2	90 x 2	2	150 x 3	350 x 1500
	5	150	1	150	150	200	GF2	90 x 2	3	150 x 4	350 x 1750
	6	200	1	200	200	200	GF2	90 x 2	3	150 x 5	350 x 1750
	7	200	1	200	200	200	GF2	90 x 2	4	150 x 6	350 x 2000
8	4	100	1	100	100	150	GF2	90 x 2	3	150 x 4	350 x 1750
	5	150	1	150	150	150	GF2	90 x 2	4	150 x 6	350 x 1750
	6	200	1	200	200	200	GF2	90 x 2	4	200 x 5	350 x 1750
	7	200	1	200	200	200	GF2	90 x 2	4	200 x 5	350 x 2000

Gable Framed Patio Cover Open or Enclosed-Wind Region C2 (Table 5.4)

Width	Length	Purlin	No of Purlins per side	Edge Beam	Ridge Beam	Rafter Beam	Gable Frame Type	Post Attached (enclosed)	Footing Type Attached (enclosed)	Post Free Standing or Attached (not enclosed)	Free Standing Footing
4	4	N/A	N/A	150	150	150	GF1	90 x 2	3	150 x 3	350 x 1500
	5	150	1	150	150	200	GF1	90 x 2	3	150 x 4	350 x 1500
	6	200	1	200	200	200	GF2	90 x 2	3	150 x 5	350 x 1750
	7	NS	-	NS	NS	NS	NS	-	-	-	-
6	4	150	1	150	150	200	GF1	90 x 2	3	150 x 5	350 x 1750
	5	200	2	200	200	200	GF1	90 x 2	3	150 x 6	350 x 1750
	6	NS	-	NS	NS	NS	NS	-	-	-	-
	7	NS	-	NS	NS	NS	NS	-	-	-	-
8	4	100	3	100	100	200	GF2	90 x 2	4	200 x 5	350 x 1750
	5	-	-	-	-	-	-	-	-	-	-
	6	-	-	-	-	-	-	-	-	-	-
	7	-	-	-	-	-	-	-	-	-	-

Edge beams and gable trusses of enclosed structures have not been designed to carry wind loads on walls. Bracing bays shall be built into the wall frames to transfer wind loads from walls and roof to ground level as per AS1684.

Footings have been designed based on firm to stiff natural clay.
All hollow section steel shall be Grade 350MPa.
All concrete shall be grade N20.

NS – Not Suitable
N/A – Not Available

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:
Tables to be read in conjunction with notes on page 3.
Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas.
Span is distance between outside lip of back channel and inside edge of beam.
Footing dimensions to be read as length x width x depth in millimeters.

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Gables

Cyclonic – C3

These tables refer to arrangements shown in figure 7

Gable Framed Patio Cover Open or Enclosed-Wind Region C3 (Table 5.5)

Width	Length	Purlin	No of Purlins per side	Edge Beam	Ridge Beam	Rafter Beam	Gable Frame Type	Post Attached (enclosed)	Footing Type Attached (enclosed)	Post Free Standing or Attached (not enclosed)	Free Standing Footing
4	4	100	2	100	100	150	GF1	90 x 2	2	150 x 5	350 x 1750
	5	100	2	100	100	150	GF1	90 x 2	3	150 x 6	350 x 1750
	6	100	2	150	150	200	GF1	90 x 2	3	200 x 3	350 x 2000
	7	NS	NS	NS	NS	NS	NS	-	-	-	-
6	4	100	3	100	100	100	GF2	90 x 2	3	200 x 5	350 x 2000
	5	150	3	150	150	150	GF2	90 x 2	3	200 x 5	350 x 2000
	6	150	3	150	150	150	GF2	90 x 2	4	200 x 5	350 x 2250
	7	NS	NS	NS	NS	NS	NS	-	-	-	-
8	4	100	2	100	100	150	GF2	90 x 2	4	200 x 5	350 x 2000
	5	150	4	150	150	200	GF2	90 x 2	4	200 x 5	350 x 2250
	6	150	4	150	150	200	GF2	90 x 2	4	200 x 6	350 x 2500
	7	NS	NS	NS	NS	NS	NS	-	-	-	-

Edge beams and gable trusses of enclosed structures have not been designed to carry wind loads on walls. Bracing bays shall be built into the wall frames to transfer wind loads from walls and roof to ground level as per AS1684.

Footings have been designed based on firm to stiff natural clay.
All hollow section steel shall be Grade 350MPa.
All concrete shall be grade N20.

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:
Tables to be read in conjunction with notes on page 3.
Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas.
Span is distance between outside lip of back channel and inside edge of beam.
Footing dimensions to be read as length x width x depth in millimeters.

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Insulated Panel

Simple Beam Span

These tables refer to arrangements shown in figure 1

Open and Partially Enclosed Structures (Table 6.1)

Roof Span	Beam Type – 100 x 65						Beam Type – 150 x 65						Beam Type – 200 x 65					
	N2 (W33)	N3 (W41)	N4 (W60)	C1 (W41C)	C2 (W50C)	C3 (W60C	N2 (W33)	N3 (W41)	N4 (W60)	C1 (W41C)	C2 (W50C)	C3 (W60C	N2 (W33)	N3 (W41)	N4 (W60)	C1 (W41C)	C2 (W50C)	C3 (W60C
	Beam Span						Beam Span						Beam Span					
1200	4500	4100	3500				7100	6700	6100				8300	7900	7300			
1600	4400	4000	3400				7000	6600	6000				8200	7800	7200			
2000	4300	3900	3300				6900	6500	5900				8100	7700	7100			
2400	4200	3800	3200				6800	6400	5800				8000	7600	7000			
2800	4100	3700	3100				6700	6200	5700				7900	7500	6900			
3200	4000	3600	3000				6600	6000	5600				7800	7400	6800			
3600	3900	3500					6500	5800					7700	7300				
4000	3800	3400					6400	5700					7600	7200				
4400	3700	3300					6300	5600					7500	7100				
4800	3600	3200					6200	5500					7400	7000				
5200	3500	3100					6100	5400					7300	6900				
5600	3400	3000					6000	5300					7200	6800				
6000	3300						5900						7100					
6400	3200						5800						7000					
6800	3100						5700						6900					
7200	3000						5600						6800					
Footing Type	1	2	3				2	3	4				2	3	4			
Post Type	1	1	1				1	1	2				1	2	2			

Posts:

1. 65 x 65 Aluminum 6063-TS
2. 90 x 90 x 1.6 Duragal

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:

Tables to be read in conjunction with notes on page 3.
Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas.
Span is distance between outside lip of back channel and inside edge of beam.
Footing dimensions to be read as length x width x depth in millimeters.

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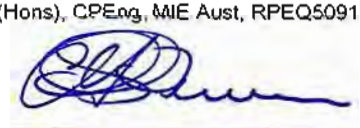

Insulated Panel

Simple Beam Span

These tables refer to arrangements made in figure 1

Enclosed Structures (Table 6.2)

Roof Span	Beam Type – 100 x 65						Beam Type – 150 x 65						Beam Type – 200 x 65					
	N2 (W33)	N3 (W41)	N4 (W60)	C1 (W41C)	C2 (W50C)	C3 (W60C	N2 (W33)	N3 (W41)	N4 (W60)	C1 (W41C)	C2 (W50C)	C3 (W60C	N2 (W33)	N3 (W41)	N4 (W60)	C1 (W41C)	C2 (W50C)	C3 (W60C
	Beam Span						Beam Span						Beam Span					
1350	4100	3800	3400				6100	5800	5400				7100	6800	6400			
1750	4000	3700	3300				6000	5700	5300				7000	6700	6300			
2150	3900	3600	3200				5900	5600	5200				6900	6600	6200			
2550	3800	3500	3100				5800	5500	5100				6800	6500	6100			
2950	3700	3400	3000				5700	5400	5000				6700	6400	6000			
3350	3600	3300					5600	5300					6600	6300				
3750	3500	3200					5500	5200					6500	6200				
4150	3400	3100					5400	5100					6400	6100				
4550	3300	3000					5300	5000					6300	6000				
4950	3200						5200						6200					
5350	3100						5100						6100					
5750	3000						5000						6000					
Footing Type	3	3	4				4	5	5				4	5	5			
Post Type	1	1	1				1	1	2				2	2	2			

Posts:

1. 65 x 65 Aluminum 6063-TS
2. 90 x 90 x 1.6 Duragal

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:

Tables to be read in conjunction with notes on page 3.
Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas.
Span is distance between outside lip of back channel and inside edge of beam
Footing dimensions to be read as length x width x depth in millimeters.

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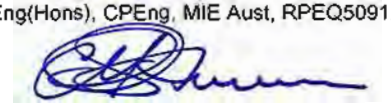

Multi Beam Spacing

Insulated Panel – Shurelock 100mm

These tables refer to the arrangements made in figure 6

Open and Partially Enclosed Structures (Table 7.1)

Rafter Beam	Purlin Beam	Roof Span	Post Type	N2 (W33)			N3 (W41)			N4 (W60)			C1 (W41C)			C2 (W50C)			C3 (W60C)		
				Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type
100 x 65	100 x 65	3000	65 x 65	4400	4400	1	4000	4000	2	3600	3600	3									
		3400	65 x 65	4300	4300	1	3900	3900	2	3000	3500	3									
		3800	65 x 65	4200	4200	1	3800	3800	2	2500	3400	3									
		4200	65 x 65	4100	4100	1	3500	3700	2	2100	3300	3									
		4600	65 x 65	4000	4000	1	3000	3600	2	1800	3200	3									
		5000	65 x 65	3600	3900	1	2600	3500	2	1600	3100	3									
		5400	65 x 65	3200	3800	1	2300	3400	2	1400	3000	3									
		5800	65 x 65	2500	3700	1	2000	3200	2	1200	2700	3									
		6200	65 x 65	1900	3600	1	1800	3000	2	1100	2600	3									

Enclosed Structures (Table 7.2)

Rafter Beam	Purlin Beam	Roof Span	Post Type	N2 (W33)			N3 (W41)			N4 (W60)			C1 (W41C)			C2 (W50C)			C3 (W60C)		
				Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type
100 x 65	100 x 65	3000	65 x 65	4300	4300	3	3900	3900	3	3200	3200	4									
		3300	65 x 65	4200	4200	3	3800	3800	3	3150	3150	4									
		3600	65 x 65	4100	4100	3	3700	3700	3	3100	3100	4									
		3900	65 x 65	4000	4000	3	3600	3600	3	2900	3050	4									
		4200	65 x 65	3900	3900	3	3500	3500	3	2600	3000	4									
		4500	65 x 65	3800	3800	3	3100	3400	3	2300	2900	4									
		4800	65 x 65	3700	3700	3	2800	3300	3	2000	2800	4									
		5100	65 x 65	3500	3600	3	2500	3200	3	1800	2700	4									
		5400	65 x 65	3200	3500	3	2300	3100	3	1700	2600	4									

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:

Tables to be read in conjunction with notes on page 3.

Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas

Span is distance between outside lip of back channel and inside edge of beam.

Footing dimensions to be read as length x width x depth in millimeters.

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Multi Beam Spacing

Insulated Panel – Shurelock 150mm

These tables refer to arrangements shown in figure 6

Open and Partially Enclosed Structures (Table 7.3)

Rafter Beam	Purlin Beam	Roof Span	Post Type	N2 (W33)			N3 (W41)			N4 (W60)			C1 (W41C)			C2 (W50C)			C3 (W60C)		
				Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type
150 x 65	150 x 65	3200	65 x 65	6200	6200	1	5600	5600	2	5000	5000	3									
		3600	65 x 65	6100	6100	1	5500	5500	2	4900	4900	3									
		4000	65 x 65	6000	6000	1	5400	5400	2	4800	4800	3									
		4400	65 x 65	5900	5400	1	5300	5300	2	4600	4700	3									
		4800	65 x 65	5800	4900	1	5200	5200	2	3900	4600	3									
		5200	65 x 65	5700	4500	1	4700	5100	2	3400	4300	3									
		5600	65 x 65	5600	4200	1	4200	5000	2	3000	4000	3									
		6000	65 x 65	5100	3900	1	3700	4900	2	2700	3700	3									
		6400	65 x 65	4600	3600	1	3300	4800	2	2400	3500	3									
		6800	65 x 65	4000	3400	1	3000	4700	2	2100	3300	3									
		7200	65 x 65	3200	3200	1	2700	4600	2	1900	3100	3									

Enclosed Structures (Table 7.4)

Rafter Beam	Purlin Beam	Roof Span	Post Type	N2 (W33)			N3 (W41)			N4 (W60)			C1 (W41C)			C2 (W50C)			C3 (W60C)		
				Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type
150 x 65	150 x 65	3200	65 x 65	6000	6000	3	5100	5100	4	4200	4200	5									
		3600	65 x 65	5900	5900	3	5000	5000	4	4100	4100	5									
		4000	65 x 65	5800	5800	3	4900	4900	4	4000	4000	5									
		4400	65 x 65	5700	5700	3	4800	4800	4	3900	3900	5									
		4800	65 x 65	5600	5600	3	4700	4700	4	3400	3800	5									
		5200	65 x 65	5500	5500	3	4600	4600	4	3000	3700	5									
		5600	65 x 65	5400	5400	3	4200	4500	4	2700	3600	5									
		6000	65 x 65	5100	5100	3	3700	4400	4	2400	3500	5									
		6400	65 x 65	4600	4800	3	3300	4100	4	2100	3400	5									
		6800	65 x 65	4000	4500	3	3000	3800	4	1900	3300	5									

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:

Tables to be read in conjunction with notes on page 3.

Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas.

Span is distance between outside lip of back channel and inside edge of beam.

Footing dimensions to be read as length x width x depth in millimeters.

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Multi Beam Spacing

Insulated Panel – Shurelock 200mm

These tables refer to arrangements shown in figure 6

Open and Partially Enclosed Structures (Table 7.5)

Rafter Beam	Purlin Beam	Roof Span	Post Type	N2 (W33)			N3 (W41)			N4 (W60)			C1 (W41C)			C2 (W50C)			C3 (W60C)		
				Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type
200 x 65	200 x 65	3200	65 x 65	8000	8000	2	7400	7400	2	6800	6800	3									
		3600	65 x 65	7900	7900	2	7300	7300	2	6700	6700	3									
		4000	65 x 65	7800	7800	2	7200	7200	2	6600	6100	3									
		4400	65 x 65	7700	7500	2	7100	6500	2	6500	5500	3									
		4800	65 x 65	7600	7100	2	7000	6000	2	5700	5100	3									
		5200	65 x 65	7500	6600	2	6900	5500	2	5000	4700	3									
		5600	65 x 65	7400	6100	2	6100	5100	2	4400	4400	3									
		6000	65 x 65	7300	5700	2	5400	4800	2	3900	4100	3									
		6400	65 x 65	6700	5400	2	4800	4500	2	3500	3800	3									
		6800	65 x 65	6000	5100	2	4300	4200	2	3100	3600	3									
		7200	65 x 65	5400	4800	2	3900	4000	2	2800	3400	3									
		7600	65 x 65	4900	4500	2	3500	3800	2	2500	3200	3									
		8000	65 x 65	4200	4300	2	3200	3600	2	2300	3100	3									
		8400	65 x 65	3500	4100	2	2900	3400	2	2100	2900	3									
		8800	65 x 65	2900	3900	2	2700	3300	2	1900	2800	3									

Enclosed Structures (Table 7.6)

Rafter Beam	Purlin Beam	Roof Span	Post Type	N2 (W33)			N3 (W41)			N4 (W60)			C1 (W41C)			C2 (W50C)			C3 (W60C)		
				Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type	Beam Spacing	Post Spacing	Footing Type
200 x 65	200 x 65	3200	65 x 65	7600	7600	4	7000	7000	4	6400	6400	5									
		3600	65 x 65	7500	7500	4	6900	6900	4	6200	6300	5									
		4000	65 x 65	7400	7400	4	6800	6800	4	5900	6100	5									
		4400	65 x 65	7300	7300	4	6700	6300	4	5800	5500	5									
		4800	65 x 65	7200	7100	4	6600	6000	4	5600	5100	5									
		5200	65 x 65	7100	6600	4	6500	5500	4	5000	4700	5									
		5600	65 x 65	7000	6100	4	6100	5200	4	4400	4400	5									
		6000	65 x 65	6900	5700	4	5400	4800	4	3900	4100	5									
		6400	65 x 65	6700	5400	4	4800	4500	4	3500	3800	5									
		6800	65 x 65	6000	5100	4	4300	4200	4	3100	3600	5									
		7200	65 x 65	5400	4800	4	3900	4000	4	2800	3400	5									
		7600	65 x 65	4900	4500	4	3500	3800	4	2500	3200	5									
		8000	65 x 65	4200	4300	4	3200	3600	4	2300	3100	5									

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:

Tables to be read in conjunction with notes on page 3.

Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas.

Span is distance between outside lip of back channel and inside edge of beam.

Footing dimensions to be read as length x width x depth in millimeters.

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ENGINEERING

Gables – Insulated Roof

GF - Gable Frame - GF1 or GF2 Refer Table
EB - Edge Beam
P - Purlin
RB - Ridge Beam

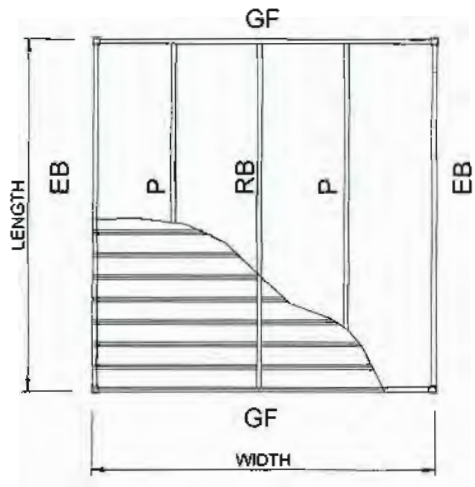
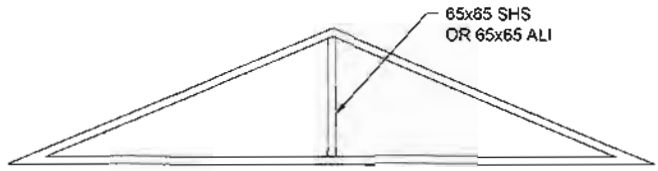
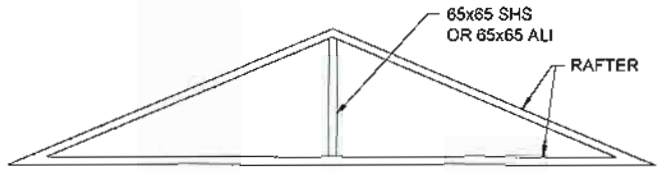


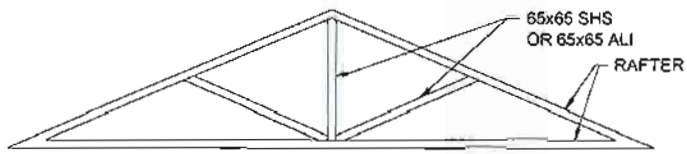
Fig 7



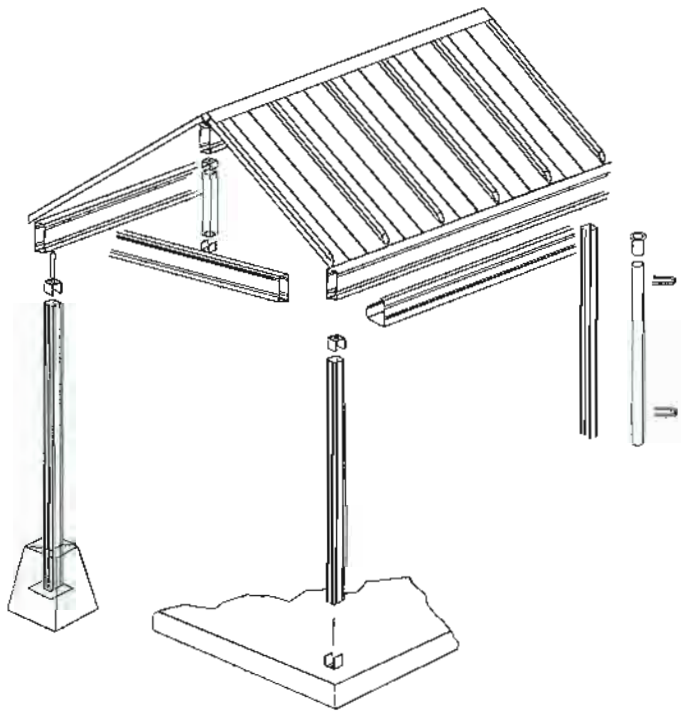
Non - Cyclonic Gable



GF1 GABLE FRAME



GF2 GABLE FRAME



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Gables Insulated Roof

These tables refer to arrangements shown in figure 7

Attached or Free Standing Open, Partially Enclosed or Enclosed N2 (W33) and N3 (W41) (Table 8.1)

Length	Width	Side Beam	Ridge Beam	Rafter Beams	Post Attached	Post Freestanding	Footing
Up to 4000	Up To 4000	100 x 65	100 x 65	NIL	65 x 65	90 x 90 x 2 SHS	1
4000 to 6000	4000 to 7000	150 x 65	150 x 65	100 x 65	65 x 65	100 x 100 x 3 SHS	2
6000 to 8000	7000 to 8500	200 x 65	200 x 65	150 x 65	90 x 90	100 x 100 x 5 SHS	3

N4 (W50) (Table 8.2)

Length	Width	Side Beam	Ridge Beam	Rafter Beams	Post Attached	Post Freestanding	Footing
Up to 4000	Up To 4000	150 x 65	150 x 65	100 x 65	65 x 65	100 x 100 x 3 SHS	2
4000 to 6000	4000 to 7000	200 x 65	200 x 65	150 x 65	65 x 65	100 x 100 x 5 SHS	3

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:

Tables to be read in conjunction with notes on page 3.
Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas.
Span is distance between outside lip of back channel and inside edge of beam.
Footing dimensions to be read as length x width x depth in millimeters.

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Gables Insulated Roof

These tables refer to arrangements shown in figure 7

Gable Framed Patio Cover Open or Enclosed – C1 (W41C) (Table 8.3)

Width	Length	Panel Thickness	Purlin	No. of Purlins per Side	Edge Beam	Ridge Beam	Rafter Beam	Gable Frame Type	Post Attached (enclosed)	Footing Type Attached (enclosed)	Post Free Standing or Attached (not enclosed)	Free Standing Footing
4	4	50	Not Applicable	0	100	100	100	GF1	90 x 2	2	125 x 4	350 x 350 x 1250
	5	50	Not Applicable	0	150	150	150	GF1	90 x 2	2	125 x 5	350 x 350 x 1500
	6	50	Not Applicable	0	150	150	150	GF1	90 x 2	2	150 x 3	350 x 350 x 1500
	7	50	Not Applicable	0	200	200	200	GF1	90 x 2	3	150 x 4	350 x 350 x 1500
6	4	75	Not Applicable	0	100	100	100	GF1	90 x 2	2	150 x 3	350 x 350 x 1500
	5	75	Not Applicable	0	150	150	150	GF1	90 x 2	3	150 x 4	350 x 350 x 1750
	6	75	Not Applicable	0	150	150	150	GF1	90 x 2	3	150 x 5	350 x 350 x 1750
	7	75	Not Applicable	0	200	200	200	GF1	90 x 2	4	150 x 6	350 x 350 x 2000
8	4	50	100	1	100	100	100	GF2	90 x 2	3	150 x 4	350 x 350 x 1750
	5	50	150	1	150	150	150	GF2	90 x 2	4	150 x 6	350 x 350 x 1750
	6	50	150	1	150	150	150	GF2	90 x 2	4	200 x 5	350 x 350 x 1750
	7	50	200	1	200	200	200	GF2	90 x 2	4	200 x 5	350 x 350 x 2000

Gable Framed Patio Cover Open or Enclosed – C2 (W50C) (Table 8.4)

Width	Length	Panel Thickness	Purlin	No. of Purlins per Side	Edge Beam	Ridge Beam	Rafter Beam	Gable Frame Type	Post Attached (enclosed)	Footing Type Attached (enclosed)	Post Free Standing or Attached (not enclosed)	Free Standing Footing
4	4	50	Not Applicable	0	100	100	100	GF1		3	150 x 3	350 x 350 x 1500
	5	50	Not Applicable	0	150	150	150	GF1		3	150 x 4	350 x 350 x 1500
	6	50	Not Applicable	0	150	150	150	GF1		3	150 x 5	350 x 350 x 1750
	7	50	Not Applicable	0	200	200	200	GF1		-	-	-
6	4	50	100	1	100	100	100	GF2		3	150 x 5	350 x 350 x 1750
	5	50	150	1	150	150	150	GF2		3	150 x 6	350 x 350 x 1750
	6	50	150	1	150	150	150	GF2		-	-	-
	7	50	200	1	200	200	200	GF2		-	-	-
8	4	50	100	1	100	100	100	GF2		4	200 x 5	350 x 350 x 1750
	5	50	150	1	150	150	150	GF2		-	-	-
	6	50	150	1	150	150	150	GF2		-	-	-
	7	50	200	1	200	200	200	GF2		-	-	-

Gable Framed Patio Cover Open or Enclosed – C3 (W60C) (Table 8.5)

Width	Length	Panel Thickness	Purlin	No. of Purlins per Side	Edge Beam	Ridge Beam	Rafter Beam	Gable Frame Type	Post Attached (enclosed)	Footing Type Attached (enclosed)	Post Free Standing or Attached (not enclosed)	Free Standing Footing
4	4	75	Not Applicable	0	150	150	150	GF1		2	150 x 5	350 x 350 x 1750
	5	75	Not Applicable	0	150	150	150	GF1		3	150 x 6	350 x 350 x 1750
	6	75	Not Applicable	0	200	200	200	GF1		3	200 x 3	350 x 350 x 2000
	7	50	200	1	200	200	200	GF2		-	-	-
6	4	50	100	1	100	100	100	GF2		3	200 x 5	350 x 350 x 2000
	5	50	150	1	150	150	150	GF2		3	200 x 5	350 x 350 x 2000
	6	50	150	1	150	150	150	GF2		4	200 x 5	350 x 350 x 2250
	7	50	200	1	200	200	200	GF2		-	-	-
8	4	75	100	1	150	150	150	GF2		4	200 x 5	350 x 350 x 2000
	5	75	150	1	150	150	150	GF2		4	200 x 5	350 x 350 x 2250
	6	75	150	1	200	200	200	GF2		4	200 x 6	350 x 350 x 2500
	7	75	200	2	200	200	200	GF2		-	-	-

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:

Tables to be read in conjunction with notes on page 3.
Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas.
Span is distance between outside lip of back channel and inside edge of beam.
Footing dimensions to be read as length x width x depth in millimeters.

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Maximum Contributory Area for Connection Types

AUSDECK PATIOS & ROOFING

Table D1

Connection Type	Detail No	Notes	Open/Partially Enclosed – Maximum Contributing Roof Area (m2) – Wind Classification						Enclosed – Maximum Contributing Roof Area (m2) – Wind Classification					
			N2	N3	N4	C1	C2	C3	N2	N3	N4	C1	C2	C3
Beam to wall bracket		ss – single storey												
450 long type A	1	ss w/out lined soffit	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		ss with lined soffit	4.2	2.7	1.7	2.7	1.7	1.35	2.772	1.782	1.122	1.782	1.122	0.891
		double storey	12	7.7	5.2	7.7	5.2	3.85	7.92	5 082	3.432	5.082	3 432	2.541
900 long type B	1	ss w/out lined soffit	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		ss with lined soffit	9	5.8	3.9	5.8	3.9	2.9	5.94	3.828	2.574	3.828	2.574	1.914
		double storey	12	7.7	5.2	7.7	5.2	3.85	7 92	5.082	3.432	5 082	3.432	2 541
1800 long type C	1	ss w/out lined soffit	11	7	4.7	7	4 7	3.5	7 26	4.62	3 102	4 62	3.102	2 31
		ss with lined soffit	17 1	11.1	7.4	11 1	7.4	5 55	11.286	7.326	4.884	7.326	4.884	3.663
		double storey	12	7.7	5.2	7 7	5.2	3.85	7 92	5.082	3 432	5.082	3.432	2 541
Rafter/Truss Bracket	2		12	7.5	5	7.5	5	3.75	7.92	4.95	3 3	4.95	3.3	2.475
Post/Slab, Internal Bracket	3	D10 Dynabolt	15.9	10 2	6.8	10.2	6.8	5.1	10.494	6.732	4.488	6.732	4.488	3.366
		D12 Dynablot*70EMBE	19 1	12.2	8 2	12.2	8.2	5.6	7.9	5.1	3.4	5.1	3.4	2.3
		M12 Screwin	18	11 5	7.7	11.5	7.7	5.75	11.88	7.59	5.082	7.59	5 082	3.795
Post/Slab Footing Bracket Cyclonic	3	2 x D12 Dynabolts + 2 x M10 Bolts to Post				24.4	16.4	11.15				10.15	6.85	4.65
		2 x M12 Screw Bolts Min Embedment 90 mm				44.4	29.8	20.3				18.5	12 4	8.4
		2 x D16 Dynabolts Min Embedment 75 mm				25.0	16.8	11.4				10.4	7.0	4.7
Post/Slab Base Plate	4	6 pl 4-D12 Dynabolts	Appropriate for all sizes nominated in manual			48.8	32.8	22.3	Appropriate for all sizes nominated in manual			20 3	13.7	9.3
Post Beam, Internal Bracket	5	4-#10 Tek Screws	As Per Beam/ Beam Bracket											
Post Beam Footing Bracket Cyclonic		2 x M12 Bolts To Beam 2 x M12 Bolts To Post				44.4	29.8	20.3				18.5	12 8	8.4
Beam/Beam Bracket (Beam End Cap)	6	4-#10 Tek Screws	13.5	8.5	5.7	8.5	5.7	4.3	8.9	5.6	3.8	5.6	3.8	2.8
		6-#10 Tek Screws	20.3	12 3	8.6	12.8	8.6	6 4	13.4	8.4	5.6	8 4	5.6	4 2
		8-#10 Tek Screws	27.0	17.9	11.4	17.0	11.4	8.6	17.8	11.2	7.5	11.2	7 5	5.6
		10-#10 Tek Screws	33.8	21.3	14.3	21.3	14.3	10.6	22.3	14.0	9.4	14 0	9.4	7.0

Double storey must be full height brick and not blue board above single level brick.

Specialist advice required for anything that does not comply with the above criteria.

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:

Tables to be read in conjunction with notes on page 3.
Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas.
Span is distance between outside lip of back channel and inside edge of beam.
Footing dimensions to be read as length x width x depth in millimeters.

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Maximum Contributory Area for Connection Types Notes

Beam to wall brackets

1. Where beam is not located against the underside of soffit lining, areas without soffit shall be used.
2. Brick work must be continuous ie, no windows or joints at 45 degrees from bottom bolt on beam to wall bracket in an upward direction.

Maximum Beam Cantilever (CL) for Wind Loadings N2, N3, N4, C1, C2 and C3

1. Maximum Cantilever for 100mm beam = 900mm
2. Maximum Cantilever for 150mm beam = 1200mm
3. Maximum Cantilever for 200mm beam = 1500mm

Maximum Height of Posts for Wind Loadings N2, N3, N4, C1, C2 and C3 (Table D2) Attached

Post Size	Post Type	Maximum Height
65 x 1.6 Aluminium	1	3.850
65 x 1.6 SHS Duragal	2	3.950
90 x 2.0 SHS Duragal	3	5.600
100 x 3.0 SHS Duragal	4	5.800
100 x 5.0 SHS Duragal	5	6.000

Freestanding Post Types (Maximum Height 3000 mm) Wind Loadings N2, N3, N4, C1, C2 and C3 (Table D2.1)

Roof Area M2	Post Size for various wind ratings						
	N1	N2	N3	N4	C1	C2	C3
20	65 X 3	65 x 3	65 x 3	65 x 3	65 x 3	90 x 2	90 x 2
40	90 x 2	90 x 2	90 x 2	90 x 3	65 x 3	90 x 3	100 x 3
60	90 x 2	90 x 2	90 x 3	100 x 3	90 x 3	100 x 3	NS

Cyclonic Footing Bracket – Maximum Roof Area Per Post Wall Thickness

Post Wall Thickness	Maximum Roof Area					
	Open Structures			Enclosed Structures		
	C1	C2	C3	C1	C2	C3
1.6	24 8	16.7	11.3	10.3	6.9	4.7
2	30.4	20.4	13.9	12.7	8.5	5.8
3	46.4	31.2	21.2	19.3	13.0	8.4
2-M12 Screw Bolts Min Embedment 90	44.4	29.8	20.3	18.5	12.4	8.4
2-D16 Dynabolts Min 75 Embedment	25.0	16.8	11.4	10.4	7.0	4.7

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:

Tables to be read in conjunction with notes on page 3.
Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas.
Span is distance between outside lip of back channel and inside edge of beam.
Footing dimensions to be read as length x width x depth in millimeters.

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Maximum Contributory Area for Connection Types Notes

Footing Contributory Hold Down for Attached Structures (Table D3)

Footing	Width	Depth	Maximum Roof Area											
			Open & Partially Enclosed						Enclosed					
			N2	N3	N4	C1	C2	C3	N2	N3	N4	C1	C2	C3
1	350	500	10.3	6.6	4.4	6.6	4.4	3.0	5.7	3.7	2.5	3.7	2.5	1.7
2	400	600	16.3	10.4	7.0	10.4	7.0	4.8	9.1	5.8	3.9	5.8	3.9	2.6
3	500	700	26.8	17.2	11.5	17.2	11.5	7.8	14.9	9.5	6.4	9.5	6.4	4.4
4	500	900	35.0	27.7	18.6	27.7	18.6	12.7	24.1	15.4	10.3	15.4	10.3	7.0
5	500	1100	35.0	35.0	28.0	35.0	28.0	19.0	35.0	23.2	15.6	23.2	15.6	10.6
6	500	1300	35.0	35.0	35.0	35.0	35.0	27.2	35.0	33.1	22.2	33.1	22.2	15.1

Designs outside these parameters require individual engineering certification. Contact Ausdeck Patios & Roofing for further details.

Footing Type for Freestanding Structures (Table D3.1) Maximum Height 3000 mm

	Footing type for wind ratings						
Roof Area M2	N1	N2	N3	N4	C1	C2	C3
20	4	5	5	5	5	5	6
40	5	5	6	7	6	7	8
60	5	6	7	8	7	8	NS

Footings:

1. 350 x 350 x 500
2. 400 x 400 x 600
3. 500 x 500 x 700
4. 500 x 500 x 900
5. 500 x 500 x 1100
6. 500 x 1300
7. 500 x 1800
8. 500 x 2600

Notes:

Tables to be read in conjunction with notes on page 3.
Spans allow for maximum roof overhang of 900mm in non cyclonic and 300 mm in cyclonic areas.
Span is distance between outside lip of back channel and inside edge of beam.
Footing dimensions to be read as length x width x depth in millimeters.

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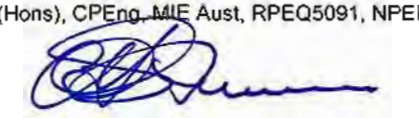


ENGINEERING

Components

FIXING RECOMMENDATION

NON CYCLONIC

1 x 10 - 14 x 16 Self Drilling Tek
or 1 x 6 x 13 mm Ripple Zip, phillips head screw per pan into Back Channel

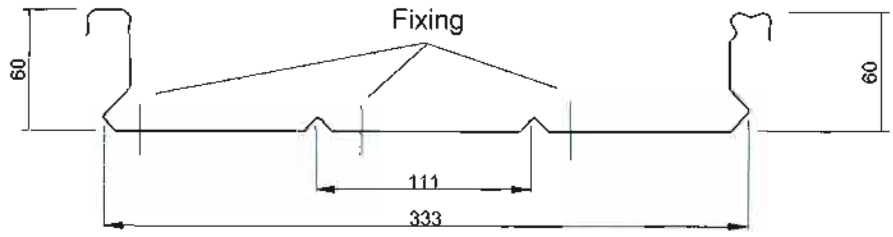
1 x 12 - 14 x 20 mm Self Drilling Tek Screw per pan into Beam.

CYCLONIC

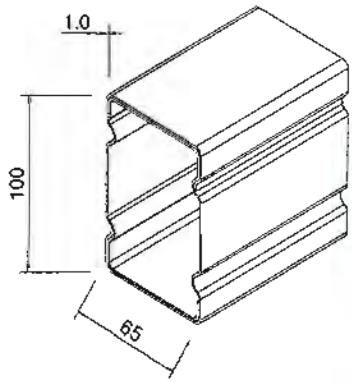
1 x 6 x 13 mm Ripple Zip, Phillips Head screw per pan into Back Channel

PE30 Weatherseal infill (optional)

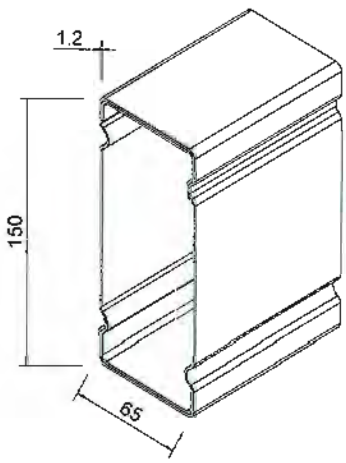
1 x 12 - 14 x 30 mm Self Drilling Tek screw & 25 x 1.2mm Aluminium, EPDM washer per pan into Beam



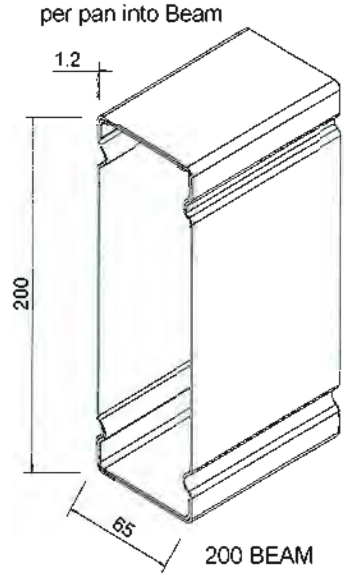
V-LINE ROOF SHEET



100 BEAM

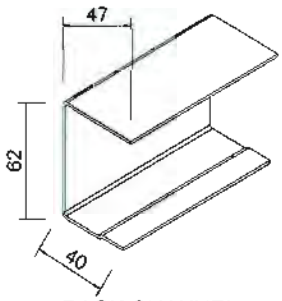


150 BEAM

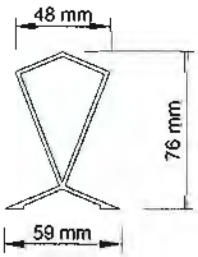


200 BEAM

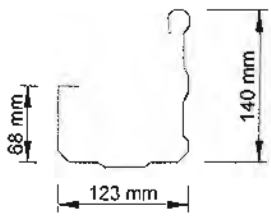
SHURELOCK BEAMS



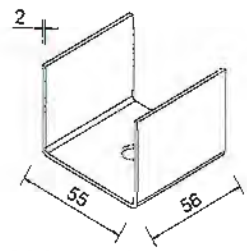
BACK CHANNEL



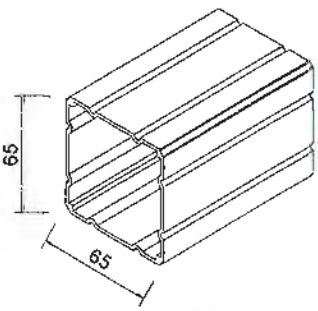
GABLE SECTION



FIT FAST GUTTER



POST BRACKET



65X65 ALI POST

LIGHT STRIP

LIGHT STRIP WITH V LINE ROOF

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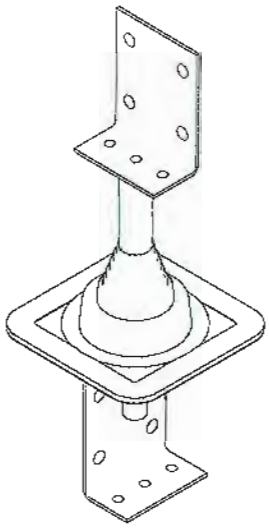
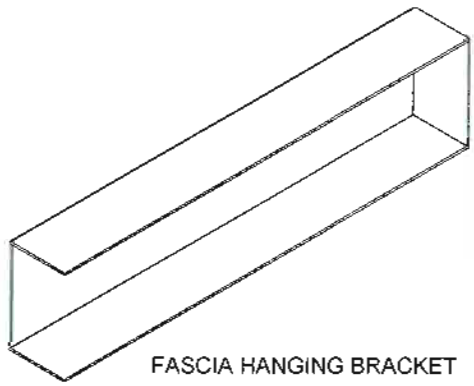
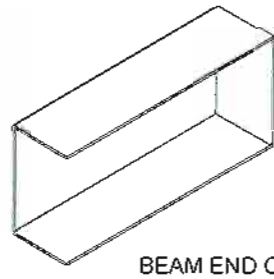
Components



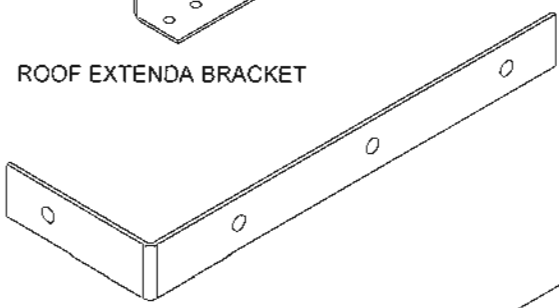
ROOF EXTENDA BRACKET



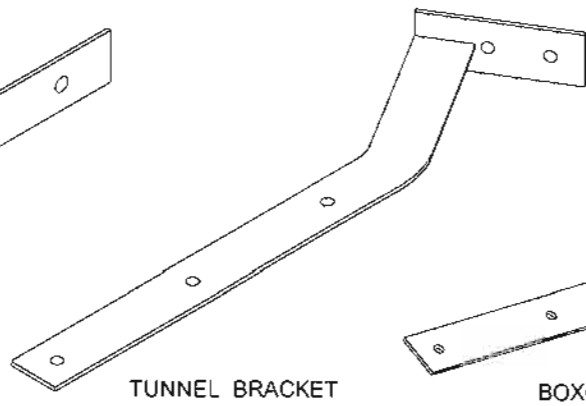
FASCIA HANGING BRACKET



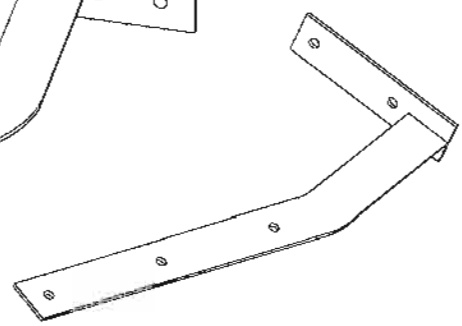
BEAM END CAP



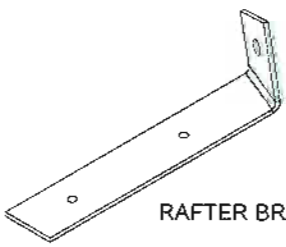
BEAM TO WALL BRACKET



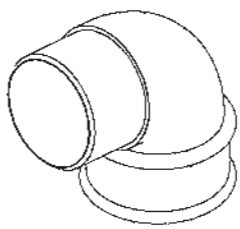
TUNNEL BRACKET



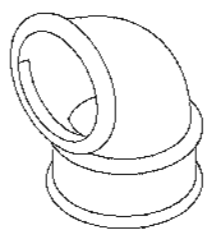
BOXGUTTER BRACKET



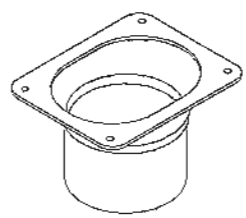
RAFTER BRACKET



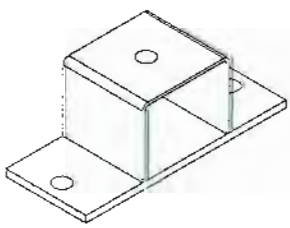
DOWNPIPE BEND 90°



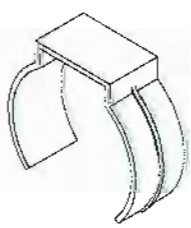
DOWNPIPE SHOE



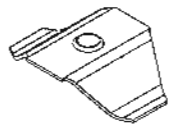
DOWNPIPE DROP



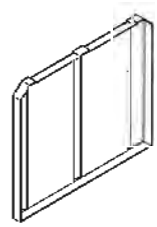
CYCLONIC PLATE



DOWNPIPE CLIP



SCREW PLATE



GUTTER STOP END

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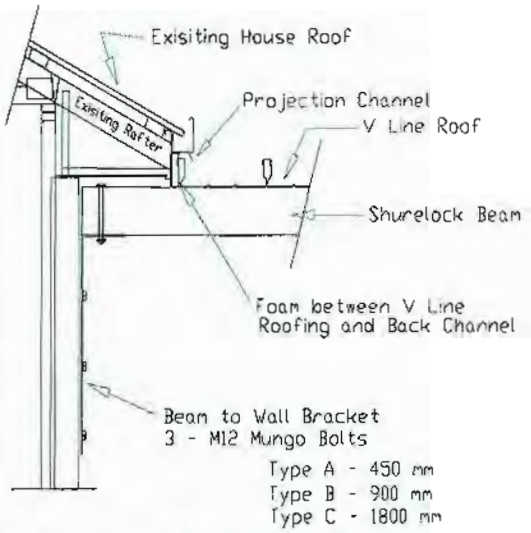
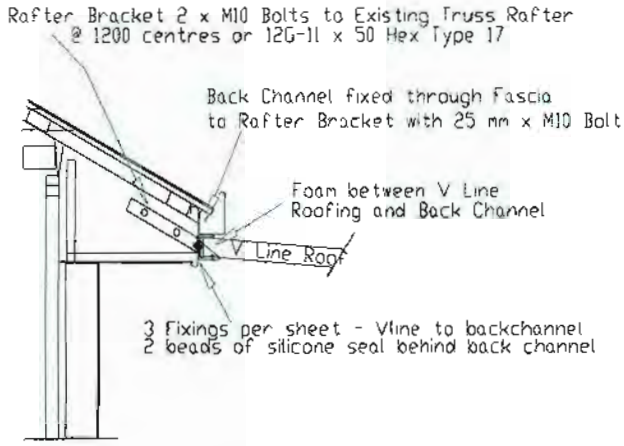
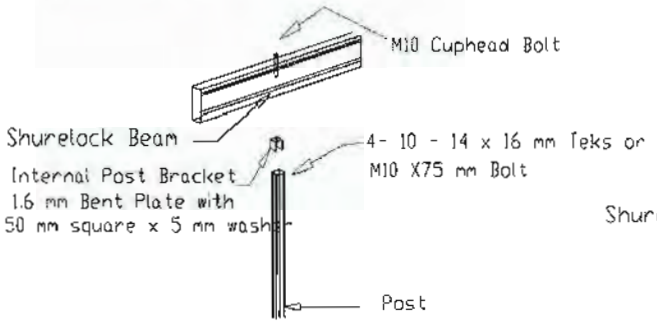
Connection Details



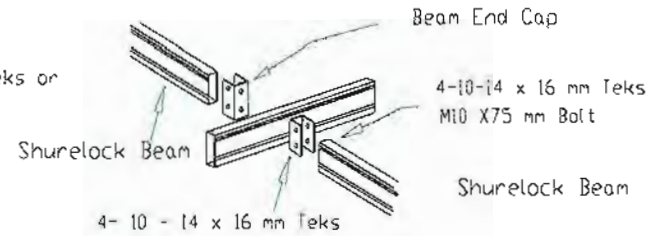
Beam to Wall Bracket Detail
Detail No:. 1



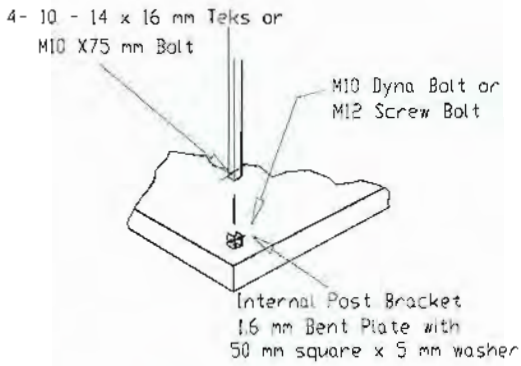
Rafter Bracket to Backchannel Detail
Detail No:. 2



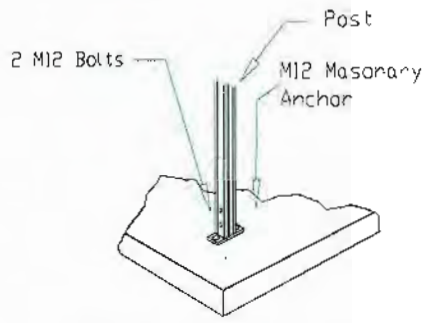
Beam to Post Connection Detail
Detail No:. 5



BEAMS TO INTERNAL BEAM
Detail No:. 6



Internal Footing Bracket
Detail No:. 3
(Not suitable for freestanding)



External Footing Bracket
Detail No:.3B
(not suitable for freestanding)

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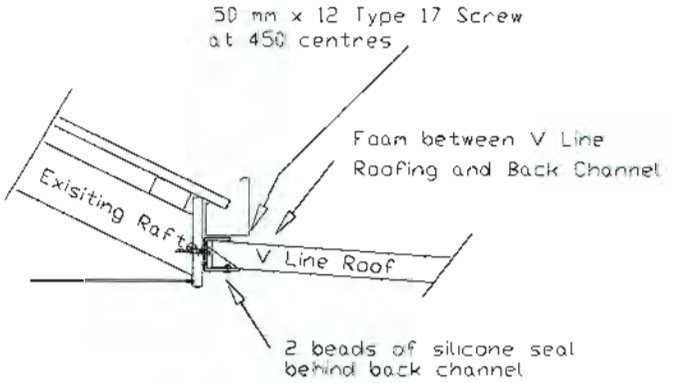
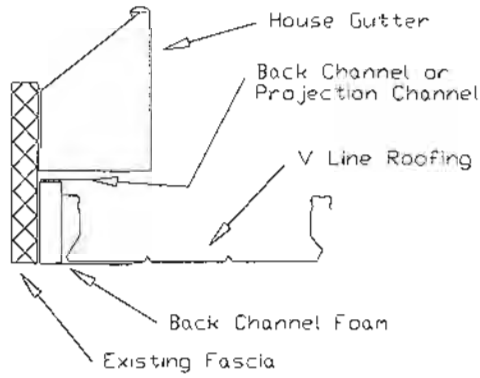
ENGINEERING

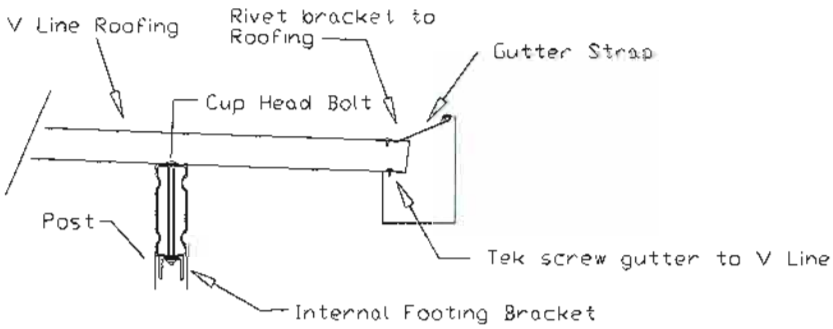
Connection Details



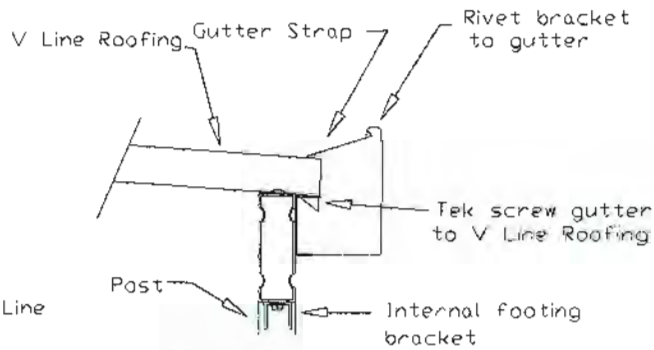
Back Channel to Fascia Detail
Detail No: 7



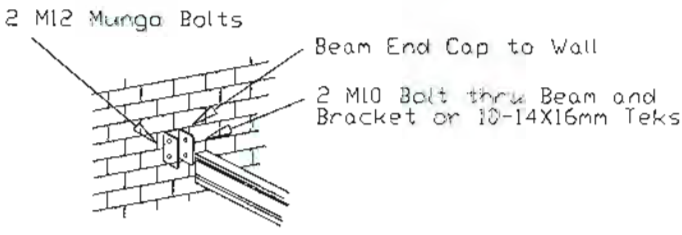
Projection Channel Detail
Detail No: 8



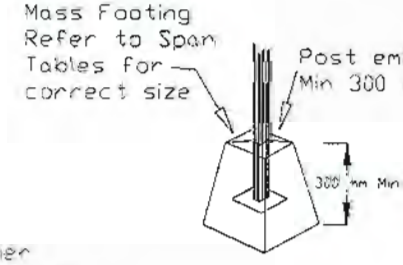
Gutter Attachment With Sheet Overhang
Detail No: 9



Gutter Attachment With No Sheet Overhang
Detail No: 10



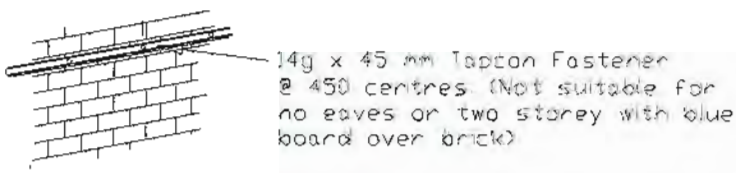
BEAM TO WALL
Detail No: 11



Footing Dimensions

1	350 x 350 x 500
2	400 x 400 x 600
3	500 x 500 x 700
4	500 x 500 x 900
5	500 x 500 x 1100

FOOTING DETAIL
Detail No: 12



BACK CHANNEL TO WALL
Detail No: 13

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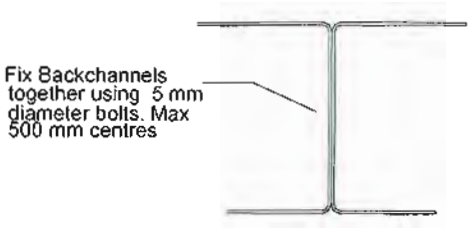
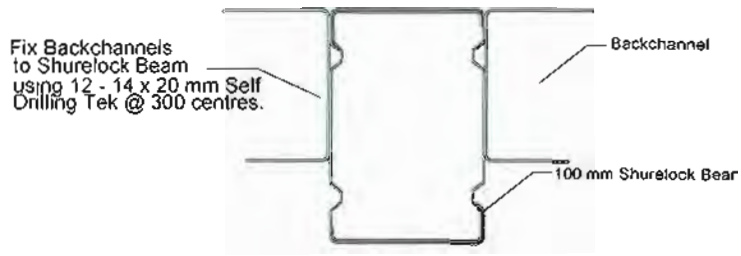
Components

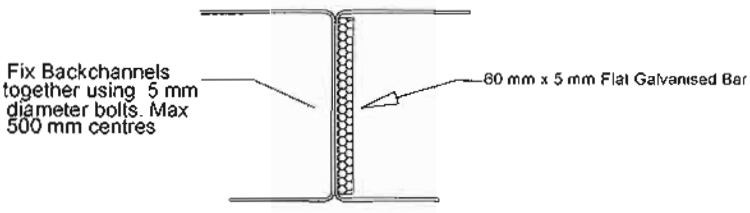
Connection Details



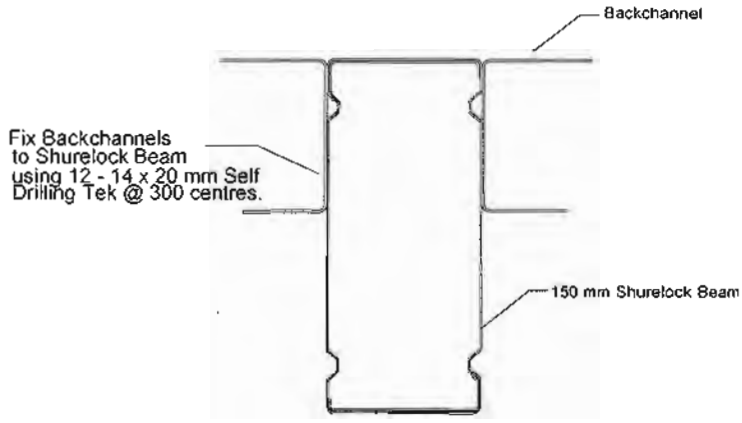
Back to Back Backchannel
Max Span N3 - 3400 mm
Max Span C1 - 3400 mm
Max Span N4&C2 - 2950 mm
Max Span C3 - 2600 mm



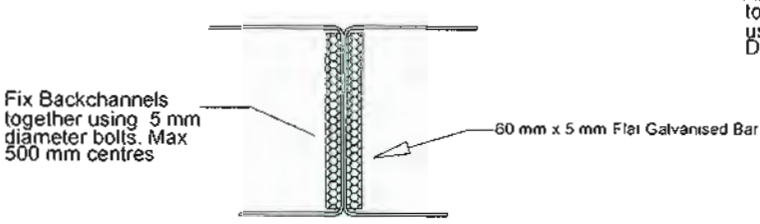
Max Span N3 - 5200 mm
Max Span C1 - 5200 mm
Max Span N4&C2 - 4500 mm
Max Span C3 - 3950 mm



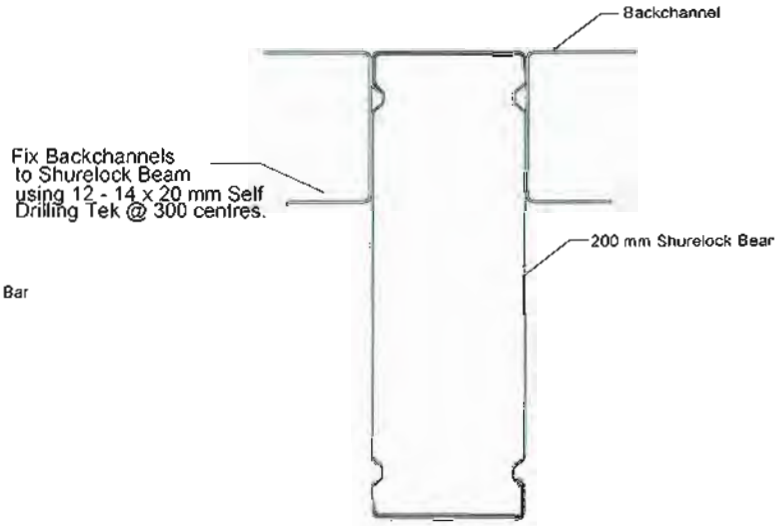
Single Reinforced Back to Back Backchannel
Max Span N3 - 3500 mm
Max Span C1 - 3500 mm
Max Span N4&C2 - 3000 mm
Max Span C3 - 2650 mm



Max Span N3 - 6800 mm
Max Span C1 - 6800 mm
Max Span N4&C2 - 5900 mm
Max Span C3 - 5150 mm



Double Reinforced Back to Back Backchannel
Max Span N3 - 3700 mm
Max Span C1 - 3700 mm
Max Span N4&C2 - 3200 mm
Max Span C3 - 2800 mm



Max Span N3 - 8000 mm
Max Span C1 - 8000 mm
Max Span N4&C2 - 6950 mm
Max Span C3 - 6100 mm

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