

SUMMERMORE Pty Ltd ABN 42 108 898 433

PO Box 1671

Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Monday, 8 May 2023

Mr Stephen Monty,
Burmon Pty Ltd,
PO Box 3435,
Burleigh Town,
QLD, 4220

Dear Mr Monty

**GENERIC STRUCTURAL DESIGN CERTIFICATION (22-27429)
BURMON 'CYLCONE BRACKET' CAPACITY
THIS CERTIFICATE EXPIRES ON 01ST MAY 2024**

We, Summermore Pty Ltd, being Registered Structural and Civil Engineers, hereby certify the design of the Design Capacity Tables for the Burmon Cyclone Bracket as detailed in the attached Test Report 16-10442 dated 02SEP2016, and the Burmon Cyclone Brackets have been designed in accordance with widely accepted engineering principles and the referenced codes of practice.

Reference Codes of Practice and Manuals

AS/NZS1170.0:2002	Structural Design Actions—General Principles
AS/NZS1170.1: 2002	Structural Design Actions—Permanent, Imposed & Other Actions
AS/NZS1170.2:2021	Structural Design Actions—Wind Actions
AS4055:2021	Wind Loads for Housing
AS1649:2001	Methods of Test for Mechanical Fasteners
AS1720.1:2010	Timber Structures—Part 1: Design Methods

Reference Documentation

Test Report 16-10442 dated 02SEP2016 (8 Sheets)

This certification is limited to the documentation supplied and compliance with the requirements of the published codes of practice listed and should not be used for any other purpose. Summermore Pty Ltd accepts no responsibility for information that has not been expressly identified as part of this assessment. This assessment can only be relied upon by the addressee and cannot be relied upon by any third party. Summermore Pty Ltd accepts no responsibility for any third party that seeks to rely upon this assessment.

If we can be of any further assistance in this matter, please do not hesitate to contact this office.

Yours Faithfully

Ronald Bell
FIEAust (891940), CPEng, NER, APEC Engineer, IntPE(Aus).
Director
Summermore Pty Ltd



**ENGINEERS
AUSTRALIA**



This form is to be used by an appointed competent person for the purposes of section 10 of the *Building Act 1975* and sections 73 and 77 of the Building Regulation 2021 (Design-specification certificate) stating that an aspect of building work or specification will, if installed or carried out as stated in this form, comply with the building assessment provisions.

Additional explanatory information is included in the Appendix at the end of this form.

1. Property description

This section need only be completed if details of street address and property description are applicable.

E.g. 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 and plan details (e.g. 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		XX	
XXX		Suburb/locality	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
State	QLD	Postcode	XXXXXXXXXXXXXXXXXXXXXXXXXXXX

Lot and plan details (attach list if necessary)

[illegible]

Local government area the land is situated in

[illegible]

2. Description of aspect/s certified

Clearly describe the extent of work covered by this certificate, e.g. all structural aspects of the steel roof beams.

Design of the Capacity Tables for the Burmon Cyclone Bracket.

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.

National Construction Code of Australia 2022
AS/NZS1170.0:2002 Structural Design Actions—General Principles
AS/NZS1170.1: 2002 Structural Design Actions—Permanent, Imposed & Other Actions
AS/NZS1170.2:2021 Structural Design Actions—Wind Actions
AS4055:2021 Wind Loads for Housing
AS1649:2001 Methods of Test for Mechanical Fasteners
AS1720.1:2010 Timber Structures—Part 1: Design Methods

4. Reference documentation

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

Test Report 16-10442 date 02SEP2016

5. Building certifier reference number and building development approval number

Building certifier reference number		Building development application number (if available)	
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6. Appointed competent person details

Under Part 6 of the Building Regulation a person must be assessed as a competent for the type of work (design-specification) by the relevant building certifier.

Name (in full)	Ronald Albert BELL		
Company name (if applicable)	Summertime Pty Ltd		
Contact person	Ron Bell		
Business phone number	0738000973	Mobile	0438288116
Email address	ron@summertime.com.au		
Postal address	PO Box 1671 Browns Plains, QLD, 4188.		
		Suburb/locality	
State	Choose an item.	Postcode	
Licence class or registration type (if applicable)	RPEQ		
Licence or registration number (if applicable)	6715		

9. Signature of appointed competent person

This certificate must be signed by the individual assessed and appointed by the building certifier as competent to give design-specification help.

Signature		Date	Monday, 8 May 2023 This certification expires on 01MAY2024
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LOCAL GOVERNMENT USE ONLY

Date received	Click or tap to enter a date.	Reference number/s	
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Building Act 1993
Section 238(1)(a)
Building Regulations 2018
Regulation 126

GENERIC CERTIFICATE OF COMPLIANCE FOR PROPOSED BUILDING WORK

This certificate is issued to:

This certificate is issued in relation to the proposed building work at:
THE STATE OF VICTORIA

Nature of proposed building work

Design Capacity Tables for the Burmon Cyclone Bracket
Version of BCA applicable to certificate - 2022

Building classification

Building – Class – Various

Prescribed class of building work for which this certificate is issued:

Design or part of the design of building work relating to Structural matter

Documents setting out the design that is certified by this certificate

Document no.	Document date	Type of document	Number of pages	Prepared by
16-10442	02 SEP 2016	Test Report	8	RAB

***Performance solution**

A performance solution forms part of the design certified by this certificate. The performance solution complies with the following performance requirements of the NCC.

Relevant performance requirement	Details of Performance Solution Required by Regulation 124

The design certified by this certificate complies with the following provisions of the Building Act 1993, Building Regulations 2018 or Nation Construction Code.

Act, Regulation or NCC	Section, Regulation, Part, Performance Requirement or Other Provision
AS/NZS 1170.0:2002 AS/NZS 1170.1: 2002 AS/NZS 1170.2:2021 AS 4055:2021 AS 1649:2001 AS 1720.1:2010	Structural Design Actions—General Principles Structural Design Actions—Permanent, Imposed & Other Actions Structural Design Actions—Wind Actions Wind Loads for Housing Methods of Test for Mechanical Fasteners Timber Structures—Part 1:Design Methods

*I prepared the design, or part of the design, set out in the documents listed above.

I certify that the design set out in the documents listed above complies with the provisions set out above.

I believe that I hold the required skills, experience and knowledge to issue this certificate and can demonstrate this if requested to do so.

Engineer

Name: Ronald Albert BELL

Address: PO Box 1671, Browns Plains, QLD, 4118.

Email: ron@summermore.com.au

Endorsed building engineer area of engineering: Structural / Civil

Endorsed building engineer registration no.: PE0002564

Date of issue of certificate: Monday, 8 May 2023

This Certification Expires on 01 May 2024

Signature:


**NORTHERN TERRITORY OF AUSTRALIA
BUILDING ACT
SECTION 40 – CERTIFICATE OF COMPLIANCE – STRUCTURAL DESIGN**

All sections must be completed – mark N/A to any question that does not apply

PROPERTY / PROJECT DETAILS			
This is a GENERIC Certification for the Northern Territory of Australia.			
Description of works : We, Summermore Pty Ltd, being Registered Structural and Civil Engineers, hereby certify the design of the Design Capacity Tables for the Burmon Cyclone Bracket as detailed in the attached Test Report 16-10442 dated 02SEP2016, and the Burmon Cyclone Brackets have been designed in accordance with widely accepted engineering principles and the referenced codes of practice.			
DOCUMENTS ATTACHED			
Drawing Nos:			
Other:	Test Report 16-10442	(8 Sheets)	dated: 02 nd September 2016

DESIGN BASIS (please list relevant Standards used in the design)			
AS/NZS1170.0:2002	Structural Design Actions – General Principles		
AS/NZS1170.1:2002	Structural Design Actions – Permanent, Imposed and Other Actions		
AS/NZS1170.2:2021	Structural Design Actions – Wind Actions		
AS4055:2021	Wind loads for Housing		
AS1649:2001	Methods for test for Mechanical Fasteners		
AS1720.1:2010	Timber Structures—Part 1:Design Methods		
Class of Building (BCA): Varies		Type of Construction (BCA volume 1 §C1.1): Varies (eg. Type A fire-resisting construction)	
Building Importance Level (BCA Table B1.2a): Varies		Annual Probability of Exceedance for Wind (BCA Table 1.2b): Varies	
Region: Varies	Regional ultimate wind speed V_R (m/s): Varies		Terrain Category: Varies
$M_{z,cat}$: Varies	M_s : Varies	M_t : Varies	V_{des0} Design Wind Speed at reference height (m/s): Varies
Internal Pressure Coefficients ($C_{p,i}$):		Varies	
External Pressure Coefficients ($C_{p,e}$)		Walls	Varies
		Roof	Varies
Net Pressure Coefficients: ($C_{p,n}$)		Roof / Walls	Varies
Imposed Loads, kPa		Floor / Roof	Varies
Earthquake Design Category, EDC (Table 2.1 of AS 1170.4): N/A			
Annual Probability of Exceedance for Earthquake Actions (BCA Table 1.2b): 1 in N/A			
Importance Level (BCA): N/A		Hazard Factor, Z (Section 3): N/A	
		Class of Sub-Soil (Section 4):	
Safe Foundation Bearing Capacity, kPa: N/A		Site classification (AS2870): N/A	

COMMENTS / EXCLUSIONS (Exclusions to this Certificate must be clearly identified).	
The following items are excluded and shall be certified separately:	
Comments:	

<u>CERTIFICATION BY STRUCTURAL ENGINEER</u>			
Company Name Summermore Pty Ltd		Company NT Registration Number 127239ES	
We certify that reasonable care has been taken to ensure that the structural engineering aspects of the works as described above have been designed in accordance with the requirements of the Building Code of Australia and the Northern Territory Building Regulations.			
Name (print clearly) Ronald Albert Bell	Individual NT Registration Number 60596ES	Signature 	Date: Monday, 8 May 2023 <i>This Certification Expires on the 01st of MAY 2024</i>

SCHEDULE OF STRUCTURAL INSPECTIONS REQUIRED

Inspection of construction is required at all stages indicated below.

- ☐ 1. Completion of site preparation/site filling/excavations for footings prior to placement of any reinforcement or concrete.
 - ☐ 2. Completion of preparations for placing of concrete strip footings including placement of reinforcement.
 - ☐ 3. Completion of preparations for placing concrete slabs including compaction of fill and sand blinding, placement of formwork, reinforcement, starter bars and cast in items.
 - ☐ 4. Completion of preparations for placing of concrete pier footings including reinforcement (if any).
 - ☐ 5. Starter bars and cast in items after placing of concrete and prior to any covering up work.
 - ☐ 6. Reinforcement to walls completed prior to core filling (inspection holes and cleanout cores to be completed).
 - ☒ 7. Structural steelwork and cold formed steelwork completed and prior to any covering up work. Floor framing system completed before floors are laid or underside is lined.
 - ☐ 8. Suspended concrete floor slabs with formwork, reinforcement and cast in items completed, prior to placing of concrete.
 - ☒ 9. Wall framing or blockwork wall core filling completed (with windows fixed in place) and roof framing with connections completed and prior to sheeting or lining.
- Note: ☐ Prior lodgement of truss manufacturer's drawings, details and certification required.
 ☐ Prior lodgement of windows manufacturer's drawings including fixings and certification required.
- ☒ 10. Structural wall linings completed and prior to any covering up work.
 - ☒ 11. Final inspection upon completion of all structural work including fixings of external roof and wall claddings, flashings, barges & vents.
 - ☒ 12. Other Inspections as required by the building permit

Important Information:

- 1) The above inspections are required to be carried out by either the certifying engineer or the building certifier who issued the building permit for the work. (If no inspections are indicated refer to the certifying engineer for advice).
- 2) Where works are prescribed building works under the *NT Building Act*, the building certifier must be provided with a copy of the inspection record and no further works must be carried out by the builder until the building certifier issues a release to proceed with further works.
- 3) Additional non structural inspections may be required during the course of construction before the issue of a Permit to Occupy (refer to building certifier for requirements).
- 4) Failure to obtain inspections may prevent the issue of a Permit to Occupy upon completion of the building works.

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

To: Owner name
 Address
 Suburb/postcode

Form **35**

Designer details:

Name: Ronald Albert BELL Category: Structural Engineer
Business name: Summermore Pty Ltd Phone No: 07 3800 0973
Business address: PO Box 1671
 Browns Plains, QLD 4118 Fax No: 07 3800 1860
Licence No: CC5556 Email address: ron@summermore.com.au

Details of the proposed work:

Owner/Applicant XXXXXXXXXXXXXXXXXXXXXXXXXXXX Designer's project reference No. 27429
Address: XXXXXXXXXXXXXXXXXXXXXXXXXXXX Lot No: XXXXXXXXX
 XXXXXXXXXXXXXXXXXXXX XXXX
Type of work: Building work ☒ Plumbing work ☐ (X all applicable)

Description of work:

Design Capacity Tables for the Burmon Cyclone Bracket

(new building / alteration /
addition / repair / removal /
re-erection
water / sewerage /
stormwater /
on-site wastewater
management system /
backflow prevention / other)

Description of the Design Work (Scope, limitations or exclusions): (X all applicable certificates)

Certificate Type:	Certificate	Responsible Practitioner
	<input type="checkbox"/> Building design	Architect or Building Services Designer
	<input checked="" type="checkbox"/> Structural design	Structural Engineer
	<input type="checkbox"/> Fire Safety design	Fire Engineer
	<input type="checkbox"/> Civil design	Civil Engineer
	<input type="checkbox"/> Hydraulic design	Building Services Designer
	<input type="checkbox"/> Fire service design	Building Services Designer
	<input type="checkbox"/> Electrical design	Building Services Designer
	<input type="checkbox"/> Mechanical design	Building Service Designer
	<input type="checkbox"/> Plumbing design	Plumber
	<input type="checkbox"/> Other (specify)	

Deemed-to-Satisfy: ☒ Performance Solution: ☐ (X the appropriate box)

Other details: Design Capacity Tables for the Burmon Cyclone Bracket for the State of Tasmania

Design documents provided:

The following documents are provided with this Certificate –

Document description:

Drawing numbers:	Prepared by:	Date:
Test Report 16-10442	RAB	02SEP2016
Schedules:	Prepared by:	Date:
Specifications:	Prepared by:	Date:
Computations:	Prepared by:	Date:
Performance solution proposals:	Prepared by:	Date:
Test reports:	Prepared by:	Date:

Standards, codes or guidelines relied on in design process:

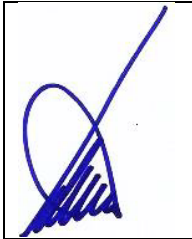
National Construction Code of Australia 2022
AS/NZS1170.0:2002 Structural Design Actions—General Principles
AS/NZS1170.1:2002 Structural Design Actions—Permanent, Imposed & Other Actions
AS/NZS1170.2:2021 Structural Design Actions—Wind Actions
AS4055:2021 Wind Loads for Housing
AS1649:2001 Methods of Test for Mechanical Fasteners
AS1720.1:2010 Timber Structures—Part 1: Design Methods

Any other relevant documentation:**Attribution as designer:**

I, Ronald Albert BELL am responsible for the design of that part of the work as described in this certificate;

The documentation relating to the design includes sufficient information for the assessment of the work in accordance with the *Building Act 2016* and sufficient detail for the builder or plumber to carry out the work in accordance with the documents and the Act;

This certificate confirms compliance and is evidence of suitability of this design with the requirements of the National Construction Code.

	<i>Name: (print)</i>	<i>Signed</i>	<i>Date</i>
Designer:	Ronald Albert BELL		8 May 2023 This certificate expires on 01MAY2024
Licence No:	CC5556		

Assessment of Certifiable Works: (TasWater)

Note: single residential dwellings and outbuildings on a lot with an existing sewer connection are not considered to increase demand and are not certifiable.

If you cannot check ALL of these boxes, LEAVE THIS SECTION BLANK.

TasWater must then be contacted to determine if the proposed works are Certifiable Works.

I confirm that the proposed works are not Certifiable Works, in accordance with the Guidelines for TasWater CCW Assessments, by virtue that all of the following are satisfied:

- ☐ The works will not increase the demand for water supplied by TasWater
- ☐ The works will not increase or decrease the amount of sewage or toxins that is to be removed by, or discharged into, TasWater's sewerage infrastructure
- ☐ The works will not require a new connection, or a modification to an existing connection, to be made to TasWater's infrastructure
- ☐ The works will not damage or interfere with TasWater's works
- ☐ The works will not adversely affect TasWater's operations
- ☐ The work are not within 2m of TasWater's infrastructure and are outside any TasWater easement
- ☐ I have checked the LISTMap to confirm the location of TasWater infrastructure
- ☐ If the property is connected to TasWater's water system, a water meter is in place, or has been applied for to TasWater.

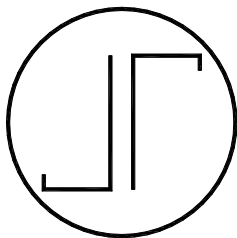
Certification:

I being responsible for the proposed work, am satisfied that the works described above are not Certifiable Works, as defined within the *Water and Sewerage Industry Act 2008*, that I have answered the above questions with all due diligence and have read and understood the Guidelines for TasWater CCW Assessments.

Note: the Guidelines for TasWater Certification of Certifiable Works Assessments are available at: www.taswater.com.au

	<i>Name: (print)</i>	<i>Signed</i>	<i>Date</i>
Designer:	<input type="text"/>	<input type="text"/>	<input type="text"/>

SUMMERMORE Pty Ltd ABN 42 108 898 433
PO Box 1671,
Browns Plains BC,
Queensland, 4118
Tel: 07 3800 0973 Fax: 07 3800 1860



Friday, 2 September 2016

Mr Stephen Monty
Burmon Pty Ltd
PO Box 3435
Burleigh Town
QLD 4220

RE: Report on Burmon 'Cyclone Bracket' Capacity

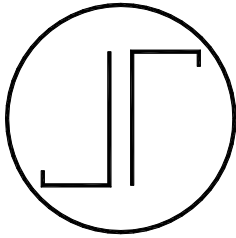
We have pleasure in presenting the enclosed report and certification to you.

Should you have any queries with regard to the contents of the report, please do not hesitate to contact us.

Yours Faithfully

A handwritten signature in blue ink, appearing to be 'Ron Bell', with a large, sweeping loop at the top and several horizontal strokes at the bottom.

Ron Bell
Summermore Pty Ltd



SUMMERMORE Pty Ltd ABN 42 108 898 433
PO Box 1671
Browns Plains BC,
Queensland, 4118
Tel: 07 3800 0973 Fax: 07 3800 1860

Friday, 2 September 2016

Mr Stephen Monty
Burmon Pty Ltd
PO Box 3435
Burleigh Town
QLD 4220

RE: Report on Cyclone Tie Down Bracket Capacity

The purpose of this letter is to certify the capacity of the Cyclone Bracket for 65mm Burmon fixings and timber substrates.

1.0 Description

The Cyclone Bracket is a tie down bracket which will be predominantly used for the tie down of roof trusses.

Certification

We, **Summermore Pty Ltd**, being Registered Structural and Civil Engineers, hereby confirm that the Cyclone Bracket capacities, as shown in the Appendix to this report have been designed in accordance with widely accepted engineering principles and the referenced codes of practice based on the test results provided by Burmon Pty Ltd.

AS/NZS 1170.0:2002	Structural Design Actions Part 0—General Principles
AS/NZS 1170.1:2002	Structural Design Actions Part 1—Permanent, Imposed & Other Actions
AS/NZS 1170.2:2011	Structural Design Actions Part 2—Wind Actions
AS4055:2012	Wind Loads for Housing
AS1649:2001	Methods of Test for Mechanical Fasteners
AS1720.1:2010	Timber Structures—Part 1: Design Methods

Summermore Pty Ltd accepts no responsibility for information that has not been expressly identified as part of this certification.

If we can be of any further assistance in this matter, please do not hesitate to contact this office.

Certified by

Ronald Bell
Grad Cert (Tech Mgt), BEng Civil (Hons), PEng, MIEAust (891940), RPEQ (6715), RBP(Vic) EC27967, RBP(NT)(60596ES), MAIB (9225), JP(Qual).
Director
Summermore Pty Ltd

Cyclone Bracket Capacity Report

COMPILED FOR

Burmon Pty Ltd

BY SUMMMERMORE PTY LTD

13 March 2016

1.0 Introduction:

The Cyclone Bracket is a tie down bracket which will be predominantly used for roof trusses. The aim of this report is to determine the capacity of the Cyclone Bracket for various fixings and substrates.

2.0 Analysis Method:

The bracket and 65mm fixings were analysed along with the test results provided in accordance with the relevant Australian Standards. The capacity of the saddle section and the various fixings were combined to provide the capacity tables contained in the Appendix to this report.

3.0 Table Usage:

The following procedure should be used to determine bracket usage.

- Determine the tie down capacity required.
- Determine the joint group for timber framing and trusses.
- Select the required number of fixings to exceed the required tie down for both the top plate and rafter connection.

4.0 Conclusion:

The Cyclone Bracket is a tie down bracket which will be predominantly used for roof trusses with tie down capacities. The capacities are provided in the appendix.

APPENDIX A

Test Results and Analysis

A1 Test Data

The following table summarises the raw test data along with the statistical values.

Test Number	65mm Screws into Top Plate	2.5mm Load (N)	2.5mm Load (N)	Ultimate Load (N)	Ultimate Load (N) per screw
1	4	13100		15260	3815
2	4	12650			
3	4	12872			
4	4	12250			
5	4	13501			
6	4	12956			
7	4	12666			
8	4	13147			
9	4	11950			
10	4	13003		15398	3849
11	4	13049			
12	4	12723			
13	4	12999			
14	4	13040			
15	4	13325			
16	4	12633			
17	4	12879			
18	4	12546			
19	4	13109			
20	4	12968		16234	4058
Average		12843	3217	15630	3907
Standard Deviation		347		430	
Coefficient of Variation		2.70%		2.75%	
5th Percentile		12235		15273.8	
Category A Fastener					
R _{bw1}		6943			
ULL ₁		3818			
ULL ₂		3126			
ULL ₃		4894			
Min ULL		3126			
R _k (kN / Joint)		11.8			

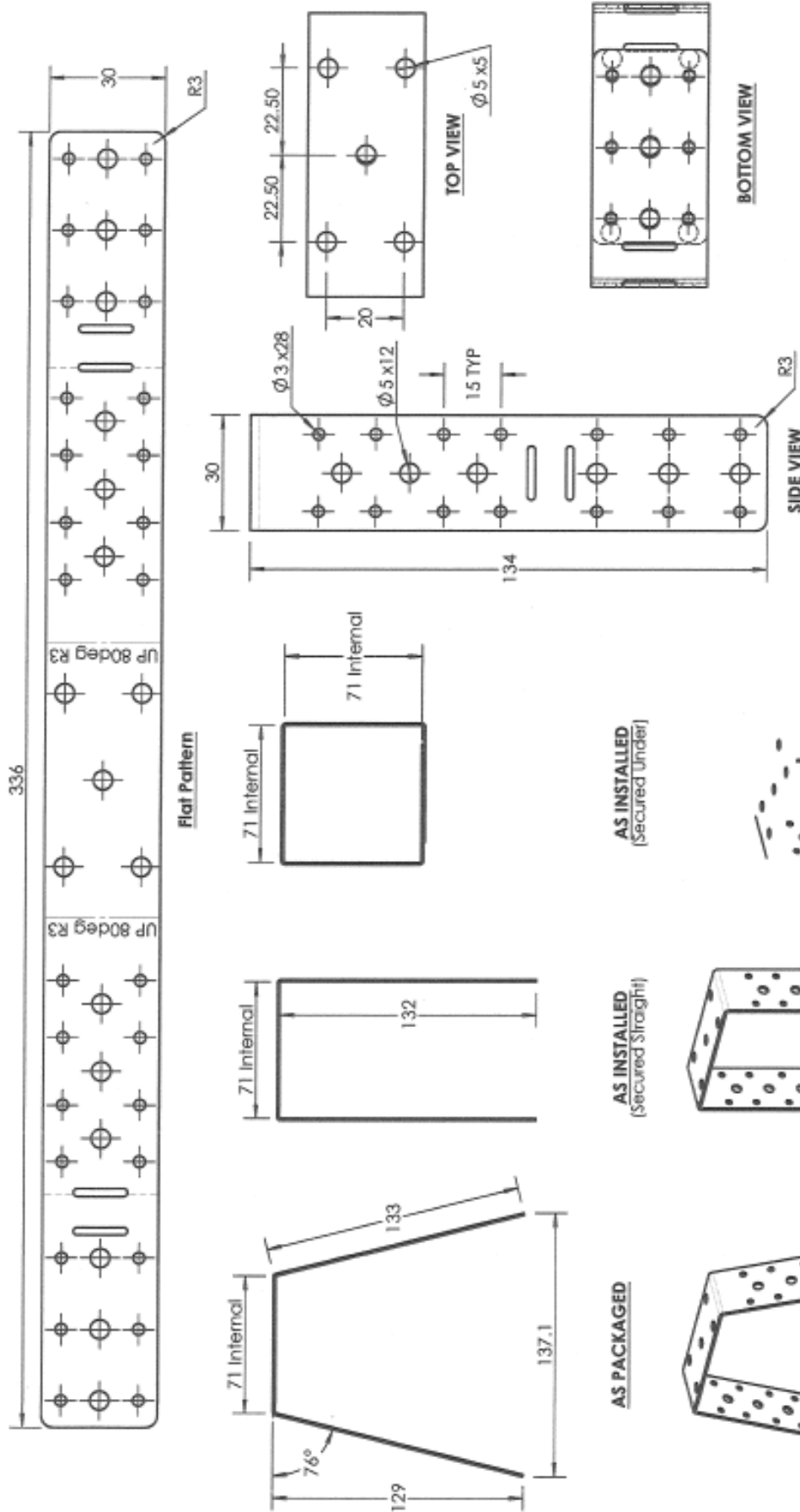
The following table summarises the bracket capacity for various timber joint groups.

Table 1-Wind Uplift Capacity for Screws into Top Plate			
Number of 65mm 10g Burmon Counter Sunk/Pan Head Screws into Top Plate	JD3	JD4	JD5
4	17.5	15.0	11.8
6	26.3	22.5	17.7

Table 2-Wind Uplift Capacity for Screws into Truss or Rafter			
Number of 35mm 12g Burmon Hex Head Screws into Truss or Rafter	JD3	JD4	JD5
4	13.0	9.4	6.6
6	19.5	14.1	9.9



DRAWING SYMBOLS LEGEND (IP = INTERSECTION POINT) (D = DATUM) (TYP = TYPICAL) (// = PARALLEL) (E = EDGE OF HOLE) (LN = UNISH) (80 = BRUSH) (DB = DE-BURR)



DO NOT SCALE WHEN PRINTED ON A4 SHEET

Unless otherwise specified, standard Triple M processing checks apply.

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Hole punching: ± 0.1



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FAX: 07 3807 5315
www.triplem.com.au
AUSTLIP 118 361

Burmon Cyclone Bkt - Overstrap 70mm

NAME	DATE
PM	03/06/2013
NAME	DATE
MF	03/06/2013
NAME	DATE
MF	03/06/2013

MATERIAL: 1.2 Gal

48CO70

REVISION:

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