

SUMMERMORE Pty Ltd ABN 42 108 898 433

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Queensland, 4118

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Friday, 14 April 2023

Austratus
150 Toongarra Rd,
Ipswich,
QLD, 4305

**GENERIC STRUCTURAL DESIGN CERTIFICATION (19-15471)
AUSTRATUS SUSPENDED CEILING SYSTEM REVISION B**

We, Summermore Pty Ltd, being Registered Structural and Civil Engineers, hereby certify the design of the Austratus Plastic Ceiling Suspension Clips, Aluminium Rail System and Direct Fix Clip System as detailed on the attached drawings and Spans in accordance with the Provided Span Tables at that it has been designed in accordance with widely accepted engineering principles and the referenced codes of practice.

Reference Codes of Practice and Manuals

AS/NZS 1170.0:2002	Structural Design Actions—General Principles
AS/NZS 1170.1: 2002	Structural Design Actions—Permanent, Imposed & Other Actions
AS1170.4:2007:	Structural Design Actions—Part 4: Earthquake Actions in Australia
AS/NZS 1664.1:1997	Aluminium Structures - Limit State Design
AS/NZS 1664.2:1997	Aluminium Structures - Allowable Stress Design
AS 1720.1:2010	Timber Structures - Design Methods

Reference Design Documents

19-15471-S01–S06 REV-B Generic Design Drawings and Connections
Austratus Span Tables (105 Sheets)
20-21270-Austratus Rail System Seismic Report

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), Registered Engineer Structural NSW (BDC04601).
Director
Summermore Pty Ltd

This Certificate Expires on 01st May 2024.



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)	Summermore Pty Ltd		
Contact person	Ron Bell		
Business phone number	0738000973	Mobile	0438288116
Email address	ron@summermore.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	Friday, 14 April 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

Construction of a new Austratus Suspended Ceiling System in accordance with Austratus Span Table and Generic Engineering Drawings 19-15471-S01—S06 REV-B.

Version of BCA applicable to certificate - 2019

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
19-15471-S01—S06 REV-B	07 MAY 2019	Generic Engineering Drawings REV-B	6	RAB
Austratus Span Tables	27 MAY 2019	Austratus Span Tables	105	RAB
20-21270	12MAY2020	Austratus Rail System Seismic 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/NZS1170.0:2002	Structural Design Actions—General Principles
AS/NZS1170.1: 2002	Structural Design Actions—Permanent, Imposed & Other Actions
AS1170.4:2007	Structural Design Actions—Part 4: Earthquake Actions in Australia
AS/NZS1664.1:1997	Aluminium Structures – Limit State Design
AS/NZS1664.2:1997	Aluminium Structures – Allowable Stress Design
AS1720.1 :2010	Timber Structures – 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: Friday, 14 April 2023

Signature:



This Certification Expires on 01 May 2024

**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 Austratus Plastic Ceiling Suspension Clips, Aluminium Rail System and Direct Fix Clip System as detailed on the attached drawings and Spans in accordance with the Provided Span Tables at that it has been designed in accordance with widely accepted engineering principles and the referenced codes of practice.

DOCUMENTS ATTACHED
Drawing Nos: 19-15471-S01—S06 REV-B (6 Sheets) dated: 07 th MAY 2019
Other: Austratus Span Tables (105 Sheets) dated: 27 th MAY 2019 Austratus Rail System Seismic Report (8 Sheets) dated: 12MAY2020

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		
AS1170.4:2007	Structural Design Actions—Part 4: Earthquake Actions in Australia		
AS/NZS1664.1:1997	Aluminium Structures – Limit State Design		
AS/NZS1664.2:1997	Aluminium Structures – Allowable Stress Design		
AS1720.1:2010	Timber Structures		
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
		Reference height (m):	Varies
$M_{z,cat}$:	Varies	M_s :	Varies
		M_t :	Varies
			V_{des0} Design Wind Speed at reference height (m/s):
Internal Pressure Coefficients ($C_{p,i}$):	N/A		
External Pressure Coefficients ($C_{p,e}$)	Walls	N/A	
	Roof	N/A	
Net Pressure Coefficients: ($C_{p,n}$)	Roof / Walls	N/A	
Imposed Loads, kPa	Floor / Roof	N/A	
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:

CERTIFICATION BY STRUCTURAL ENGINEER			
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: Friday, 14 April 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

Form **35**

To: Owner name
 Address
 Suburb/postcode

Designer details:

Name: Category:
 Business name: Phone No:
 Business address:
 Fax No:
 Licence No: Email address:

Details of the proposed work:

Owner/Applicant Designer's project reference No.
 Address: Lot No:

 Type of work: Building work Plumbing work (X all applicable)

Description of work:
 Construction of a new Austratus Suspended Ceiling System in accordance with Austratus Span Table and Generic Engineering Drawings 19-15471-S01—S06 REV-B.
(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:
 Construction of a new Austratus Suspended Ceiling System in accordance with Austratus Span Table and Generic Engineering Drawings 19-15471-S01—S06 REV-B. for the State of Tasmania

Design documents provided:

The following documents are provided with this Certificate –

Document description:

Drawing numbers:	Prepared by:	Date:
19-15471-S01—S06 (REV-B)	RAB	07 MAY 2019
Austratus Span Tables REV-B	RAB	27 MAY 2019
Austratus Rail System Seismic Report	RAB	12MAY2020
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 2019 AS/NZS1170.0:2002 Structural Design Actions—General Principles AS/NZS1170.1: 2002 Structural Design Actions—Permanent, Imposed & Other Actions AS1170.4:2007 Structural Design Actions—Part 4: Earthquake Actions in Australia AS/NZS1664.1:1997 Aluminium Structures – Limit State Design AS/NZS1164.2:1997 Aluminium Structures – Allowable Stress Design AS1720.1:2010 Timber Structures	

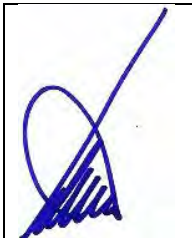
Any other relevant documentation:

Attribution as designer:	
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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		14 April 2023 This certificate expires on 01 MAY 2024
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:

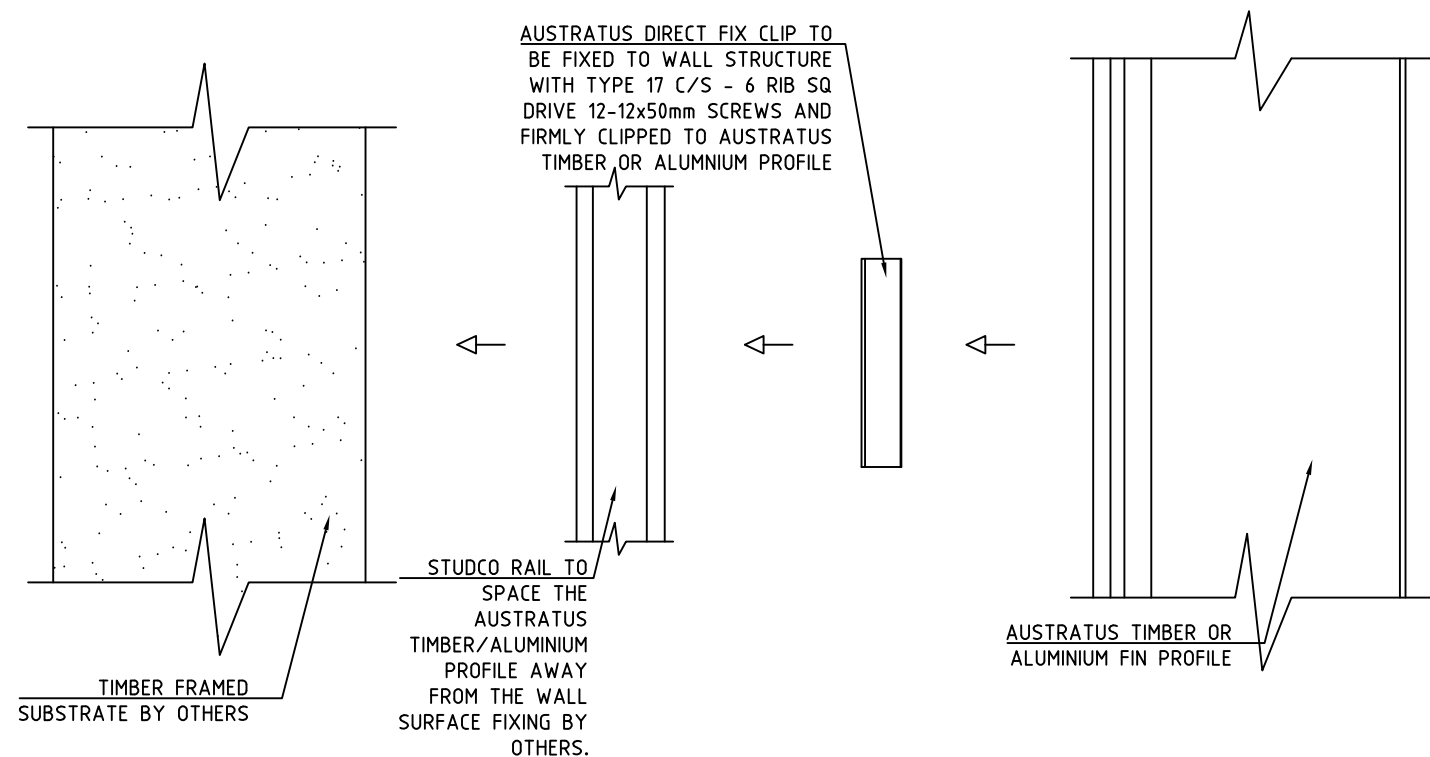
I being responsible for the proposed work, am satisfied that the works described above are not Certifiable Works, as defined within the *Water and Sewerage Industry Act 2008*, that I have answered the above questions with all due diligence and have read and understood the Guidelines for TasWater CCW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

DIRECT FIXING - GENERAL NOTES:

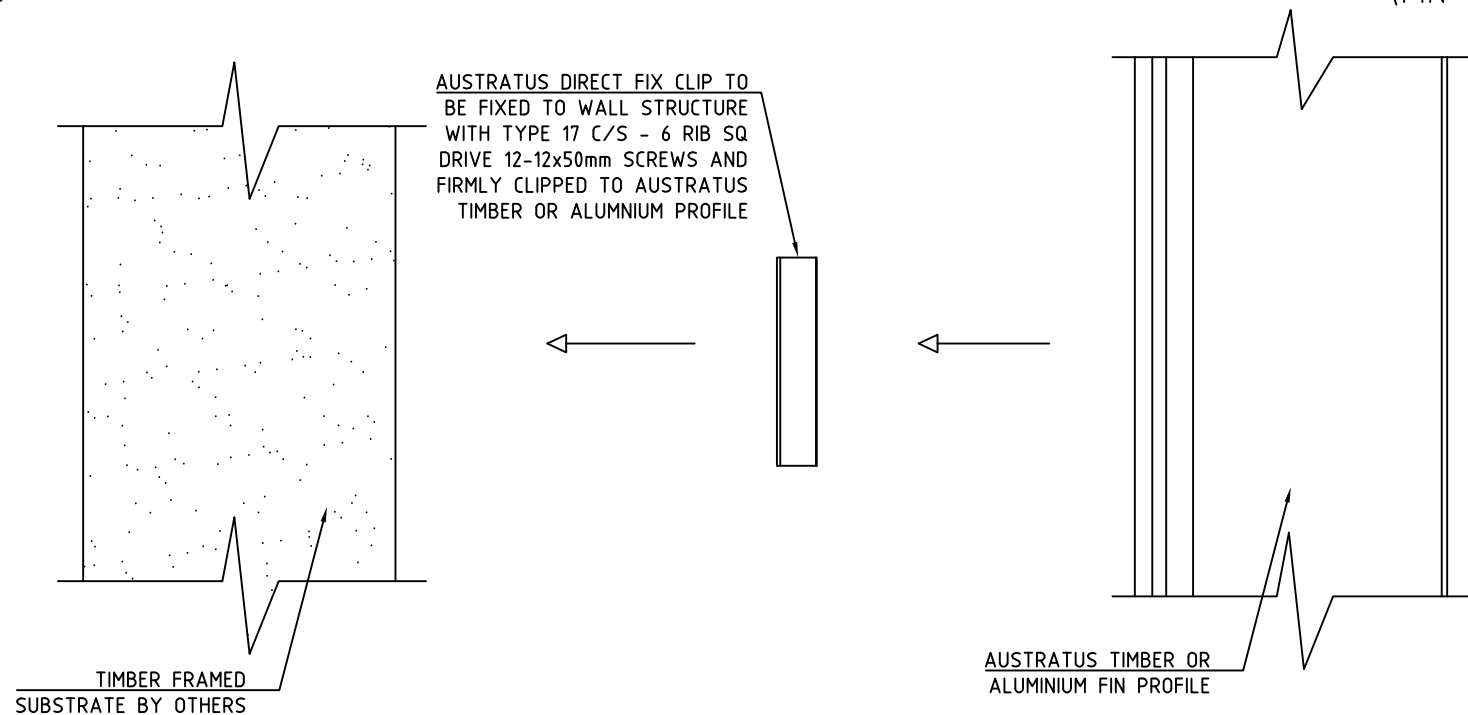
1. ALL DIRECT FIXING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE AUSTRATUS SPAN TABLES 19-15471 REV-B DOCUMENT.
2. THE PROVIDED TABLES ARE NOT SUITABLE FOR ANY PROFILES, SPACINGS OR MATERIALS OUTSIDE OF THOSE SPECIFIED. IF ALTERNATIVE PROFILES, SPACINGS OR MATERIALS ARE REQUIRED OTHER THAN THOSE SHOWN IN THE PROVIDED TABLES, CONTACT SUMMERMORE PTY LTD FOR SITE SPECIFIC LIMITS.
3. THE SPAN TABLES ARE SUITABLE ONLY FOR INTERIOR ENVIRONMENTS WITH WIND LOADING WHERE THE SYSTEM IS DIRECT FIXED TO THE SUBSTRUCTURE (I.E FOYER AREAS).
4. INDIVIDUAL PROFILES ARE NOT TO EXCEED 6000mm IN LENGTH AND ARE TO BE ≤ 10 kg IN WEIGHT.
5. PROFILES INSTALLED IN A VERTICAL ORIENTATION ARE TO BE SUPPORTED/PERMANENTLY FIXED IN PLACE TO PREVENT ANY VERTICAL MOVEMENT ONCE INSTALLED.



TYPICAL ASSEMBLY DIAGRAM - WITH STUDCO RAIL

N.T.S

(FIN PROFILE SYSTEM SHOWN)



TYPICAL ASSEMBLY DIAGRAM - WITHOUT STUDCO RAIL

N.T.S

(FIN PROFILE SYSTEM SHOWN)

DRAWING REVISIONS				REFERENCE DRAWINGS		SIGNED APPROVAL		Summermore Pty Ltd		CLIENT		PROJECT	
REV	DESCRIPTION	BY	DATE	DRAWING NAME	TITLE	APPROVED	07MAY2019	Consulting Engineers	Austratus	150 Toongarra Rd, Ipswich QLD, 4305		Austratus System	
B	REVISED AS PER CLIENTS REQUEST	KJP	MAY2019			RPEQ	6715	ACN: 108 898 433 ABN: 42 108 898 433 ron@summermore.com.au www.summermore.com.au				Typical Direct Fix System Typical Details	
A	REVISED AS PER CLIENTS REQUEST	KJP	FEB2019			REVIEWED		PO Box 1671 Browns Plains BC, QLD, 4118 Phone: 07 3800 0973 Fax: 07 3800 1860				DRAWING NUMBER	REV
-	PRELIMINARY FOR CLIENT APPROVAL	KJP	NOV2018			DESIGNED	RAB					19-15471-S03	B
						DRAWN	KJP						
						SCALE	AS SHOWN						
							ORIGINAL DRAWING SIZE at A3						

AUSTRATUS DIRECT FIX CLIP TO BE FIXED TO WALL STRUCTURE WITH TYPE 17 C/S - 6 RIB SQ DRIVE 12-12x50mm SCREWS AND FIRMLY CLIPPED TO AUSTRATUS TIMBER OR ALUMINIUM PROFILE

STUDCO RAIL TO SPACE THE AUSTRATUS TIMBER/ALUMINIUM PROFILE AWAY FROM THE WALL SURFACE, FIXING BY OTHERS.

TIMBER FRAMED SUBSTRATE BY OTHERS

AUSTRATUS TIMBER OR ALUMINIUM FIN PROFILE

AUSTRATUS TIMBER/ALUMINIUM VERTICAL PROFILES ARE TO BE SUPPORTED/PERMANENTLY FIXED IN PLACE TO PREVENT VERTICAL MOVEMENT ONCE INSTALLED.

TOP VIEW - TYPICAL SYSTEM TO STRAIGHT WALL

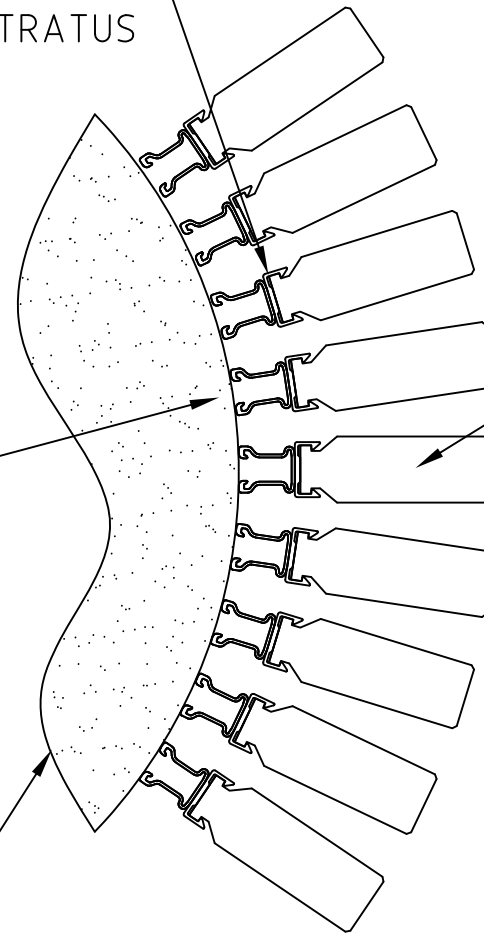
N.T.S (FIN PROFILE SYSTEM SHOWN)

DRAWING REVISIONS				REFERENCE DRAWINGS		SIGNED APPROVAL		Summermore Pty Ltd		CLIENT		PROJECT	
						APPROVED		Consulting Engineers	Austratus		Austratus System		
						RPEQ	6715	ACN: 108 898 433 ABN: 42 108 898 433 ron@summermore.com.au www.summermore.com.au	150 Toongarra Rd, Ipswich QLD, 4305		TITLE Typical Direct Fix System Typical Details		
						REVIEWED		PO Box 1671 Browns Plains BC, QLD, 4118 Phone: 07 3800 0973 Fax: 07 3800 1860			DRAWING NUMBER	REV	
B	REVISED AS PER CLIENTS REQUEST	KJP	MAY2019			DESIGNED	RAB	MAY2019			19-15471-S04	B	
A	REVISED AS PER CLIENTS REQUEST	KJP	FEB2019			DRAWN	KJP	MAY2019					
-	PRELIMINARY FOR CLIENT APPROVAL	KJP	NOV2018			SCALE	AS SHOWN						
REV	DESCRIPTION	BY	DATE	DRAWING NAME	TITLE	ORIGINAL DRAWING SIZE at A3							

AUSTRATUS DIRECT FIX CLIP TO BE FIXED TO WALL
STRUCTURE WITH TYPE 17 C/S - 6 RIB SQ DRIVE
12-12x50mm SCREWS AND FIRMLY CLIPPED TO AUSTRATUS
TIMBER OR ALUMNIUM PROFILE

STUDCO RAIL TO SPACE THE
AUSTRATUS TIMBER/ALUMINIUM
PROFILE AWAY FROM THE WALL
SURFACE, FIXING BY OTHERS.

TIMBER FRAMED
SUBSTRATE BY OTHERS



AUSTRATUS
TIMBER
OR
ALUMINIUM
FIN
PROFILE

AUSTRATUS TIMBER/ALUMINIUM
VERTICAL PROFILES ARE TO BE
SUPPORTED/PERMANENTLY FIXED IN
PLACE TO PREVENT VERTICAL
MOVEMENT ONCE INSTALLED.

TOP VIEW - TYPICAL SYSTEM TO CURVED WALL

N.T.S

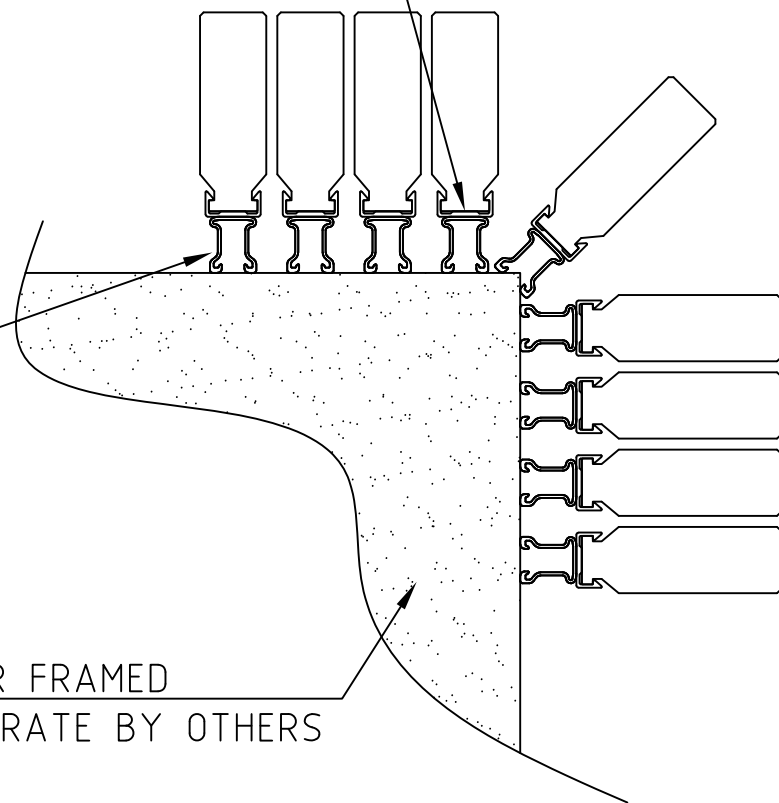
(FIN PROFILE SYSTEM SHOWN)

DRAWING REVISIONS				REFERENCE DRAWINGS		SIGNED APPROVAL		Summermore Pty Ltd		CLIENT		PROJECT	
						APPROVED		Consulting Engineers	Austratus		Austratus System		
						RPEQ	6715	ACN: 108 898 433 ABN: 42 108 898 433 ron@summermore.com.au www.summermore.com.au	150 Toongarra Rd, Ipswich QLD, 4305		TITLE Typical Direct Fix System Typical Details		
						REVIEWED		PO Box 1671 Browns Plains BC, QLD, 4118 Phone: 07 3800 0973 Fax: 07 3800 1860			DRAWING NUMBER	REV	
B	REVISED AS PER CLIENTS REQUEST	KJP	MAY2019			DESIGNED	RAB				19-15471-S05		
A	REVISED AS PER CLIENTS REQUEST	KJP	FEB2019			DRAWN	KJP	MAY2019				B	
-	PRELIMINARY FOR CLIENT APPROVAL	KJP	NOV2018			SCALE	AS SHOWN						
REV	DESCRIPTION	BY	DATE	DRAWING NAME	TITLE	ORIGINAL DRAWING SIZE at A3							

AUSTRATUS DIRECT FIX CLIP TO BE FIXED TO WALL STRUCTURE WITH TYPE 17 C/S - 6 RIB SQ DRIVE 12-12x50mm SCREWS AND FIRMLY CLIPPED TO AUSTRATUS TIMBER OR ALUMINIUM PROFILE

STUDCO RAIL TO SPACE THE AUSTRATUS TIMBER/ALUMINIUM PROFILE AWAY FROM THE WALL SURFACE, FIXING BY OTHERS.

TIMBER FRAMED SUBSTRATE BY OTHERS



AUSTRATUS TIMBER OR ALUMINIUM FIN PROFILE

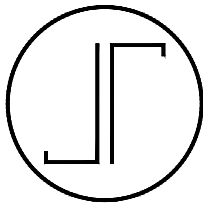
AUSTRATUS TIMBER/ALUMINIUM VERTICAL PROFILES ARE TO BE SUPPORTED/PERMANENTLY FIXED IN PLACE TO PREVENT VERTICAL MOVEMENT ONCE INSTALLED.

TOP VIEW - TYPICAL SYSTEM TO CORNER OF WALL

N.T.S

(FIN PROFILE SYSTEM SHOWN)

DRAWING REVISIONS				REFERENCE DRAWINGS		SIGNED APPROVAL		Summermore Pty Ltd		CLIENT		PROJECT	
						APPROVED		Consulting Engineers	Austratus		Austratus System		
						RPEQ	6715	ACN: 108 898 433 ABN: 42 108 898 433 ron@summermore.com.au www.summermore.com.au	150 Toongarra Rd, Ipswich QLD, 4305		TITLE Typical Direct Fix System Typical Details		
						REVIEWED		PO Box 1671 Browns Plains BC, QLD, 4118 Phone: 07 3800 0973 Fax: 07 3800 1860			DRAWING NUMBER	REV	
B	REVISED AS PER CLIENTS REQUEST	KJP	MAY2019			DESIGNED	RAB	MAY2019			19-15471-S06	B	
A	REVISED AS PER CLIENTS REQUEST	KJP	FEB2019			DRAWN	KJP	MAY2019					
-	PRELIMINARY FOR CLIENT APPROVAL	KJP	NOV2018			SCALE	AS SHOWN						
REV	DESCRIPTION	BY	DATE	DRAWING NAME	TITLE	ORIGINAL DRAWING SIZE at A3							



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

Friday, 13 March 2020

Austratus
150 Toongarra Rd,
Ipswich,
QLD, 4305

AUSTRATUS SPAN TABLES - (20-15471 REV-B)

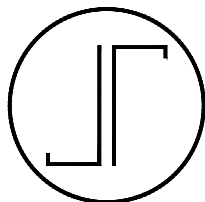
The following tables are to be used in conjunction with Austratus Generic Design Drawings 19-15471 REV-B for the Suspended Rail System and the following Notes.

General Notes:

1. The provided span tables are not suitable for any profiles, spacings or materials outside of those specified. If alternative profiles, spacings or materials are required other than those shown in the provided tables, contact Summermore Pty Ltd for Site Specific Span Limits.
2. The densities of the materials provided in the following tables are to be confirmed prior to the installation of the System. If the densities are greater than those shown within the provided tables contact Summermore Pty Ltd for Site Specific Advice.
3. The span tables are suitable **only for interior environments** where there is to be no wind loading to the system.
4. Individual profiles are **not to exceed 6000mm in Length and are to be <= 10kg in Weight (Refer to Tables on Page 4 for maximum individual profile lengths).**
5. The provided tables **do not take into account** any additional loading from **Acoustic Batts, Insulation or Services**. If any of these systems are required to be supported by the Austratus Rail System please contact Summermore Pty Ltd for Site Specific Advice and Spans.

Direct Fixing Profile Notes:

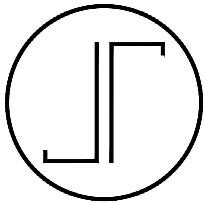
1. The provided tables are not suitable for any profiles, spacings or materials outside of those specified. If alternative profiles, spacings or materials are required other than those shown in the provided tables, contact Summermore Pty Ltd for Site Specific Span Limits.
2. The span tables are suitable **only for interior environments with Wind Load** where the System **is directly fixed to the substructure (i.e Foyer Areas).**
3. Individual profiles are **not to exceed 6000mm in Length and are to be <= 10kg in Weight (Refer to Tables on Page 4 for maximum individual profile lengths).**
4. Profiles installed in a vertical orientation are to be supported/permanently fixed in place to prevent any vertical movement once installed.



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Contents

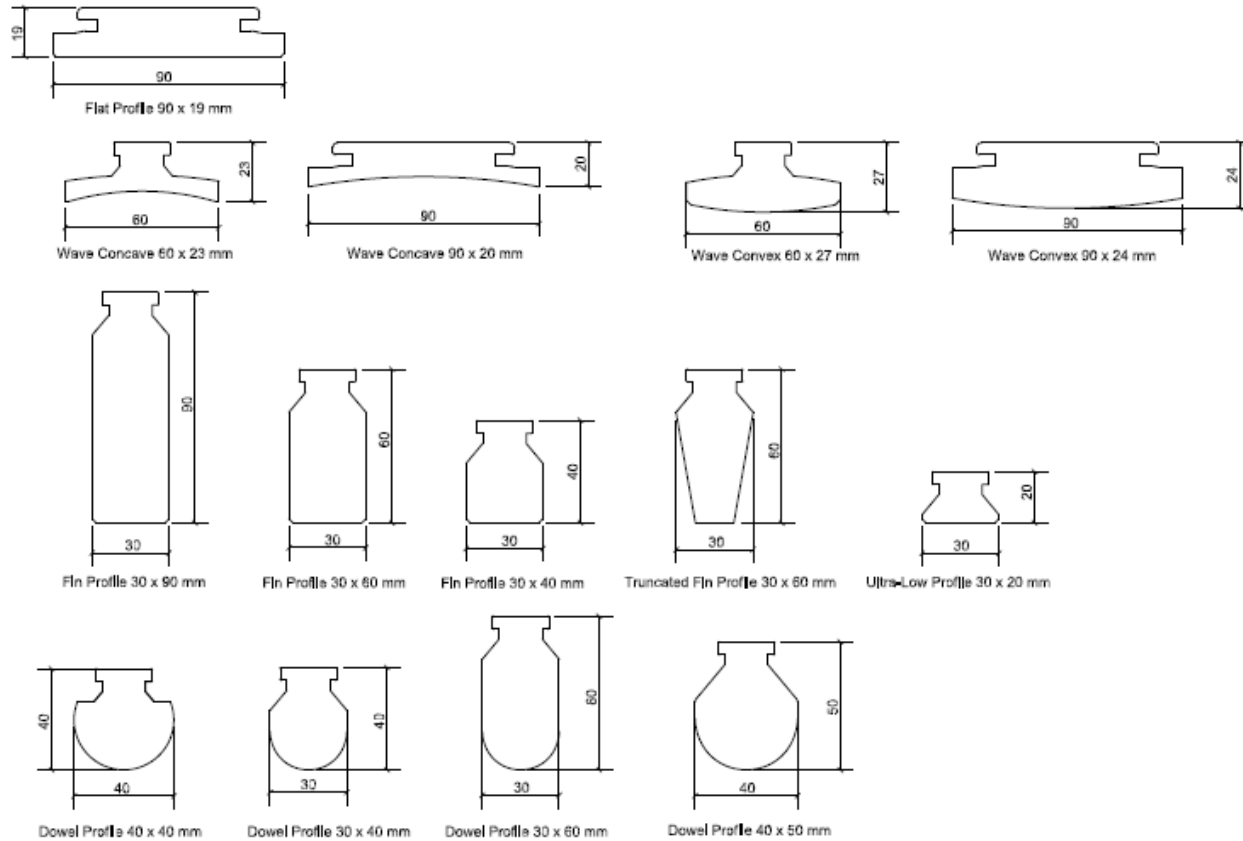
General Notes:.....	1
Direct Fixing Profile Notes:	1
AVAILABLE AUSTRATUS PROFILES	3
Maximum Individual Profile Lengths.....	4
CEDAR SPAN TABLES.....	12
HEMLOCK SPAN TABLES.....	26
TASMANIAN OAK SPAN TABLES.....	40
BLACKBUTT SPAN TABLES	54
ALUMINIUM SPAN TABLES.....	65
THERMALLY MODIFIED HEMLOCK SPAN TABLES	70
SPOTTED GUM SPAN TABLES	84
VALCHROMAT SPAN TABLES	95
DIRECT FIXING SUITABILITY TABLES.....	109



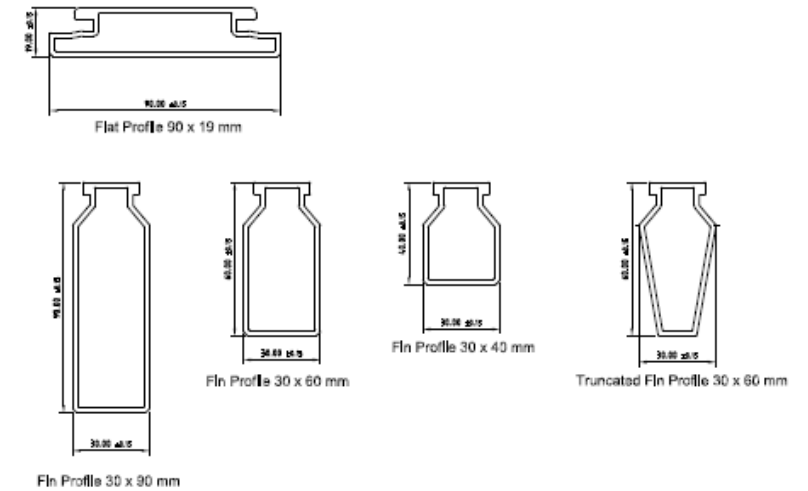
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AVAILABLE AUSTRATUS PROFILES

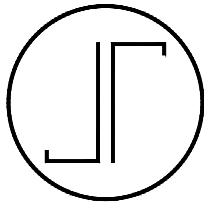
Typical Austratus Timber Profiles



Typical Austratus Aluminium Profiles



NOTE: Austratus Kulture Profile Not Shown but Span Tables for Flat Profile 90x19mm are Suitable.



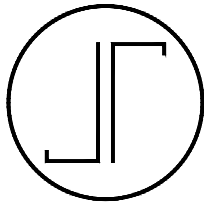
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Maximum Individual Profile Lengths.

Notes Regarding Following Tables:

- Individual profiles are **not to exceed 6000mm in Length and are to be <= 10kg in Weight**

Maximum Profile Length Limited to Either 6m or <=10kg					
Material	Timber Density (kg/m3) @ 15% MC	Profile Designation	Profile Width	Profile Depth	Maximum Overall Profile Length
Cedar	385	Fin	30	90	6000
			30	60	6000
			30	40	6000
		Truncated Fix	30	60	6000
		Flat / Kulture	90	19	6000
		Dowel	40	40	6000
			30	40	6000
			30	60	6000
			40	50	6000
		Ultra Low	30	20	6000
		Wave Concave	60	23	6000
			90	20	6000
		Wave Convex	60	27	6000
			90	24	6000



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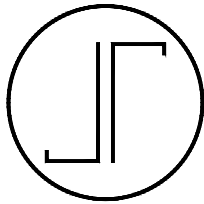
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Maximum Profile Length Limited to Either 6m or <=10kg					
Material	Timber Density (kg/m3) @ 15% MC	Profile Designation	Profile Width	Profile Depth	Maximum Overall Profile Length
Hemlock	575	Fin	30	90	6000
			30	60	6000
			30	40	6000
		Truncated Fix	30	60	6000
		Flat / Kulture	90	19	6000
		Dowel	40	40	6000
			30	40	6000
			30	60	6000
			40	50	6000
		Ultra Low	30	20	6000
		Wave Concave	60	23	6000
			90	20	6000
		Wave Convex	60	27	6000
			90	24	6000



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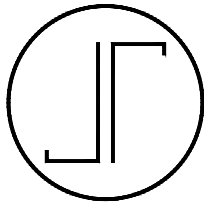
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Maximum Profile Length Limited to Either 6m or <=10kg					
Material	Timber Density (kg/m3) @ 15% MC	Profile Designation	Profile Width	Profile Depth	Maximum Overall Profile Length
Tasmanian Oak	750	Fin	30	90	5210
			30	60	6000
			30	40	6000
		Truncated Fix	30	60	6000
		Flat / Kulture	90	19	6000
		Dowel	40	40	6000
			30	40	6000
			30	60	6000
			40	50	6000
		Ultra Low	30	20	6000
		Wave Concave	60	23	6000
			90	20	6000
		Wave Convex	60	27	6000
			90	24	6000



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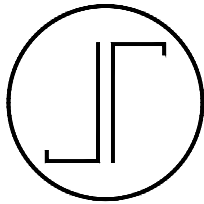
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Maximum Profile Length Limited to Either 6m or <=10kg					
Material	Timber Density (kg/m3) @ 15% MC	Profile Designation	Profile Width	Profile Depth	Maximum Overall Profile Length
Blackbutt	950	Fin	30	90	4110
			30	60	6000
			30	40	6000
		Truncated Fix	30	60	6000
		Dowel	40	40	6000
			30	40	6000
			30	60	6000
			40	50	6000
		Ultra Low	30	20	6000
		Wave Concave	60	23	6000
		Wave Convex	60	27	6000



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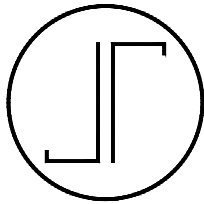
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Maximum Profile Length Limited to Either 6m or <=10kg					
Material	Timber Density (kg/m3) @ 15% MC	Profile Designation	Profile Width	Profile Depth	Maximum Overall Profile Length
Aluminium	2700	Fin	30	90	6000
			30	60	6000
			30	40	6000
		Truncated Fix	30	60	6000
		Flat	90	19	6000
Thermally Modified Hemlock	561	Fin	30	90	6000
			30	60	6000
			30	40	6000
		Truncated Fix	30	60	6000
		Flat / Kulture	90	19	6000
		Dowel	40	40	6000
			30	40	6000
			30	60	6000
			40	50	6000
		Ultra Low	30	20	6000
		Wave Concave	60	23	6000
			90	20	6000
		Wave Convex	60	27	6000
			90	24	6000



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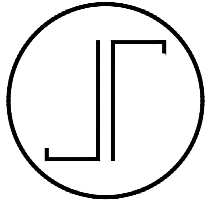
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Maximum Profile Length Limited to Either 6m or <=10kg					
Material	Timber Density (kg/m3) @ 15% MC	Profile Designation	Profile Width	Profile Depth	Maximum Overall Profile Length
Spotted Gum	1100	Fin	30	90	3550
			30	60	5490
			30	40	6000
		Truncated Fix	30	60	6000
		Dowel	40	40	6000
			30	40	6000
			30	60	5820
			40	50	6000
		Ultra Low	30	20	6000
		Wave Concave	60	23	6000
		Wave Convex	60	27	6000



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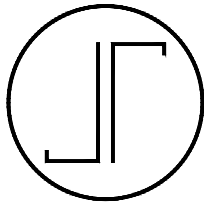
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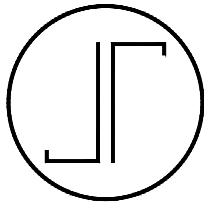
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Maximum Profile Length Limited to Either 6m or <=10kg					
Material	Timber Density (kg/m3) @ 15% MC	Profile Designation	Profile Width	Profile Depth	Maximum Overall Profile Length
Valchromat	750	Fin	30	90	5210
			30	60	6000
			30	40	6000
		Truncated Fix	30	60	6000
		Flat / Kulture	90	19	6000
		Dowel	40	40	6000
			30	40	6000
			30	60	6000
			40	50	6000
		Ultra Low	30	20	6000
		Wave Concave	60	23	6000
			90	20	6000
		Wave Convex	60	27	6000
			90	24	6000



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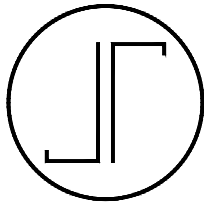
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CEDAR SPAN TABLES

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Cedar	385	Fin	30	90	0	600	1250
					0	900	1090
					0	1200	990
					15	600	1430
					15	900	1250
					15	1200	1140
					18	600	1460
					18	900	1280
					18	1200	1160
					30	600	1570
					30	900	1370
					30	1200	1250
					35	600	1610
					35	900	1410
					35	1200	1280
					45	600	1680
					45	900	1480
					45	1200	1340
					50	600	1720
					50	900	1510
50	1200	1370					
60	600	1780					
60	900	1570					
60	1200	1430					



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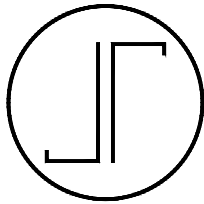
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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Cedar	385	Fin	30	60	0	600	1440
					0	900	1260
					0	1200	1150
					15	600	1640
					15	900	1440
					15	1200	1310
					18	600	1680
					18	900	1470
					18	1200	1340
					30	600	1800
					30	900	1580
					30	1200	1440
					35	600	1850
					35	900	1620
					35	1200	1480
					45	600	1930
					45	900	1700
					45	1200	1550
					50	600	1970
					50	900	1730
50	1200	1580					
60	600	2040					
60	900	1800					
60	1200	1640					



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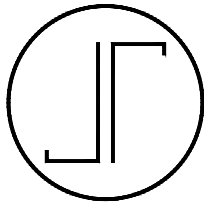
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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Cedar	385	Fin	30	40	0	600	1670
					0	900	1460
					0	1200	1330
					15	600	1890
					15	900	1670
					15	1200	1520
					18	600	1930
					18	900	1700
					18	1200	1550
					30	600	2070
					30	900	1830
					30	1200	1670
					35	600	2120
					35	900	1870
					35	1200	1710
					45	600	2220
					45	900	1960
					45	1200	1790
					50	600	2260
					50	900	2000
50	1200	1830					
60	600	2340					
60	900	2070					
60	1200	1890					



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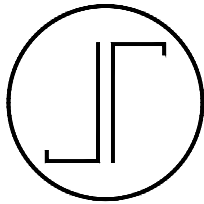
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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Cedar	385	Truncated Fin	30	60	0	600	1540
					0	900	1350
					1	1200	1240
					15	600	1760
					15	900	1540
					15	1200	1410
					18	600	1790
					18	900	1580
					18	1200	1430
					30	600	1920
					30	900	1690
					30	1200	1540
					35	600	1970
					35	900	1740
					35	1200	1580
					45	600	2060
					45	900	1820
					45	1200	1660
					50	600	2100
					50	900	1850
50	1200	1690					
60	600	2180					
60	900	1920					
60	1200	1760					



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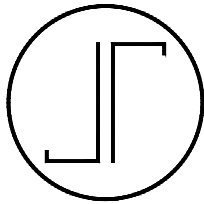
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Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Cedar	385	Flat/Kulture	90	19	0	600	2130
					0	900	1870
					0	1200	1710
					15	600	2230
					15	900	1970
					15	1200	1800
					18	600	2250
					18	900	1980
					18	1200	1810
					30	600	2320
					30	900	2050
					30	1200	1870
					35	600	2350
					35	900	2080
					35	1200	1900
					45	600	2400
					45	900	2130
					45	1200	1940
					50	600	2430
					50	900	2150
50	1200	1970					
60	600	2480					
60	900	2200					
60	1200	2010					



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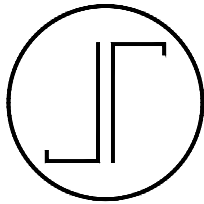
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Cedar	385	Dowel	40	40	0	600	1790
					0	900	1570
					0	1200	1430
					15	600	1980
					15	900	1740
					15	1200	1590
					18	600	2010
					18	900	1770
					18	1200	1610
					30	600	2130
					30	900	1880
					30	1200	1710
					35	600	2180
					35	900	1920
					35	1200	1750
					45	600	2260
					45	900	2000
					45	1200	1820
					50	600	2300
					50	900	2030
50	1200	1860					
60	600	2370					
60	900	2100					
60	1200	1920					



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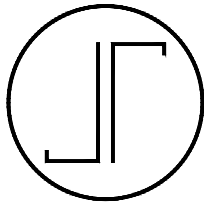
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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Cedar	385	Dowel	30	40	0	600	1720
					0	900	1510
					0	1200	1370
					15	600	1950
					15	900	1720
					15	1200	1560
					18	600	1990
					18	900	1750
					18	1200	1600
					30	600	2130
					30	900	1880
					30	1200	1720
					35	600	2180
					35	900	1930
					35	1200	1760
					45	600	2280
					45	900	2020
					45	1200	1840
50	600	2330					
50	900	2060					
50	1200	1880					
60	600	2410					
60	900	2130					
60	1200	1950					



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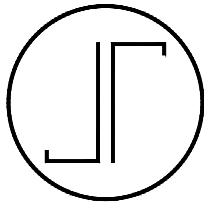
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Cedar	385	Dowel	30	60	0	600	1470
					0	900	1280
					0	1200	1170
					15	600	1670
					15	900	1470
					15	1200	1340
					18	600	1710
					18	900	1500
					18	1200	1360
					30	600	1830
					30	900	1610
					30	1200	1470
					35	600	1880
					35	900	1650
					35	1200	1510
					45	600	1970
					45	900	1730
					45	1200	1580
50	600	2010					
50	900	1770					
50	1200	1610					
60	600	2080					
60	900	1830					
60	1200	1670					



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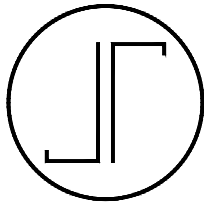
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Cedar	385	Dowel	40	50	0	600	1640
					0	900	1430
					0	1200	1310
					15	600	1810
					15	900	1590
					15	1200	1450
					18	600	1840
					18	900	1620
					18	1200	1470
					30	600	1950
					30	900	1720
					30	1200	1570
					35	600	2000
					35	900	1760
					35	1200	1600
					45	600	2070
					45	900	1830
					45	1200	1670
50	600	2110					
50	900	1860					
50	1200	1700					
60	600	2180					
60	900	1920					
60	1200	1760					



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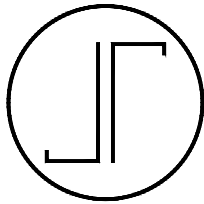
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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Cedar	385	Ultra Low	30	20	0	600	2170
					0	900	1910
					0	1200	1750
					15	600	2450
					15	900	2170
					15	1200	1980
					18	600	2490
					18	900	2210
					18	1200	2020
					30	600	2660
					30	900	2360
					30	1200	2170
					35	600	2720
					35	900	2420
					35	1200	2220
					45	600	2820
					45	900	2520
					45	1200	2320
					50	600	2870
					50	900	2570
50	1200	2360					
60	600	2960					
60	900	2660					
60	1200	2450					



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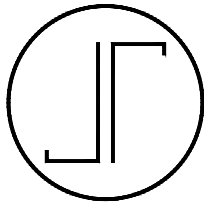
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Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Cedar	385	Wave Concave	60	23	0	600	2380
					0	900	2100
					0	1200	1920
					15	600	2540
					15	900	2250
					15	1200	2060
					18	600	2560
					18	900	2280
					18	1200	2090
					30	600	2670
					30	900	2380
					30	1200	2180
					35	600	2710
					35	900	2410
					35	1200	2220
					45	600	2780
					45	900	2490
					45	1200	2280
					50	600	2820
					50	900	2520
50	1200	2320					
60	600	2890					
60	900	2580					
60	1200	2380					



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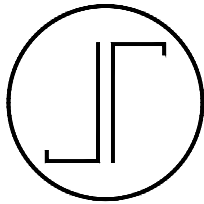
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summertime.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Cedar	385	Wave Concave	90	20	0	600	2340
					0	900	2070
					0	1200	1890
					15	600	2450
					15	900	2170
					15	1200	1980
					18	600	2470
					18	900	2190
					18	1200	2000
					30	600	2540
					30	900	2260
					30	1200	2070
					35	600	2570
					35	900	2290
					35	1200	2090
					45	600	2630
					45	900	2340
					45	1200	2140
					50	600	2660
					50	900	2360
50	1200	2170					
60	600	2710					
60	900	2410					
60	1200	2210					



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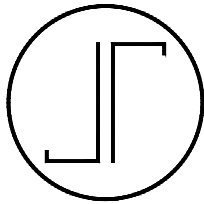
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summertime.com.au

Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Cedar	385	Wave Convex	60	27	0	600	2110
					0	900	1860
					0	1200	1690
					15	600	2250
					15	900	1990
					15	1200	1820
					18	600	2280
					18	900	2020
					18	1200	1840
					30	600	2380
					30	900	2110
					30	1200	1930
					35	600	2420
					35	900	2140
					35	1200	1960
					45	600	2490
					45	900	2210
					45	1200	2020
					50	600	2520
					50	900	2240
50	1200	2050					
60	600	2590					
60	900	2300					
60	1200	2110					



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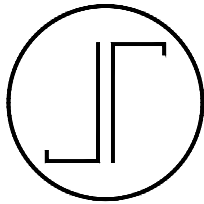
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Cedar	385	Wave Convex	90	24	0	600	1950
					0	900	1710
					0	1200	1560
					15	600	2040
					15	900	1800
					15	1200	1640
					18	600	2060
					18	900	1820
					18	1200	1660
					30	600	2130
					30	900	1880
					30	1200	1710
					35	600	2160
					35	900	1900
					35	1200	1740
					45	600	2210
					45	900	1950
					45	1200	1780
50	600	2230					
50	900	1970					
50	1200	1800					
60	600	2280					
60	900	2010					
60	1200	1840					



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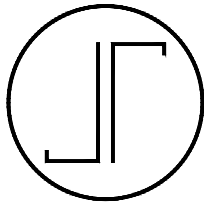
Queensland, 4118

Tel: 07 3800 0973

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HEMLOCK SPAN TABLES

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Hemlock	575	Fin	30	90	0	600	1090
					0	900	960
					0	1200	870
					15	600	1250
					15	900	1090
					15	1200	990
					18	600	1280
					18	900	1120
					18	1200	1020
					30	600	1370
					30	900	1200
					30	1200	1090
					35	600	1410
					35	900	1240
					35	1200	1120
					45	600	1480
					45	900	1290
					45	1200	1180
					50	600	1510
					50	900	1320
50	1200	1200					
60	600	1570					
60	900	1370					
60	1200	1250					



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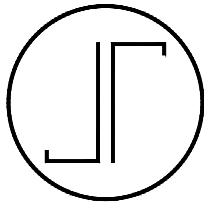
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Hemlock	575	Fin	30	60	0	600	1260
					0	900	1100
					0	1200	1000
					15	600	1440
					15	900	1260
					15	1200	1150
					18	600	1470
					18	900	1290
					18	1200	1170
					30	600	1580
					30	900	1390
					30	1200	1260
					35	600	1620
					35	900	1420
					35	1200	1300
					45	600	1700
					45	900	1490
					45	1200	1360
					50	600	1740
					50	900	1520
50	1200	1390					
60	600	1800					
60	900	1580					
60	1200	1440					



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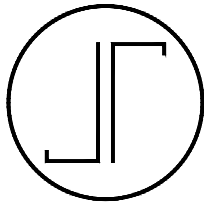
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summertime.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Hemlock	575	Fin	30	40	0	600	1460
					0	900	1280
					0	1200	1170
					15	600	1670
					15	900	1460
					15	1200	1330
					18	600	1700
					18	900	1490
					18	1200	1360
					30	600	1830
					30	900	1610
					30	1200	1460
					35	600	1870
					35	900	1650
					35	1200	1500
					45	600	1960
					45	900	1720
					45	1200	1570
					50	600	2000
					50	900	1760
50	1200	1610					
60	600	2070					
60	900	1830					
60	1200	1670					



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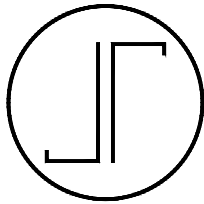
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Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Hemlock	575	Truncated Fin	30	60	0	600	1350
					0	900	1180
					0	1200	1080
					15	600	1540
					15	900	1350
					15	1200	1230
					18	600	1580
					18	900	1380
					18	1200	1260
					30	600	1690
					30	900	1490
					30	1200	1350
					35	600	1740
					35	900	1530
					35	1200	1390
					45	600	1820
					45	900	1600
					45	1200	1460
					50	600	1860
					50	900	1630
50	1200	1490					
60	600	1930					
60	900	1690					
60	1200	1540					



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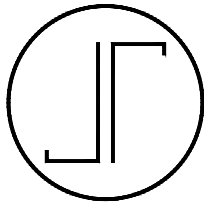
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Hemlock	575	Flat/Kulture	90	19	0	600	1880
					0	900	1650
					0	1200	1500
					15	600	1970
					15	900	1730
					15	1200	1580
					18	600	1990
					18	900	1750
					18	1200	1590
					30	600	2050
					30	900	1810
					30	1200	1650
					35	600	2080
					35	900	1830
					35	1200	1670
					45	600	2130
					45	900	1880
					45	1200	1710
					50	600	2150
50	900	1900					
50	1200	1730					
60	600	2200					
60	900	1940					
60	1200	1770					



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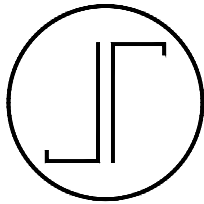
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Tel: 07 3800 0973

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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Hemlock	575	Dowel	40	40	0	600	1570
					0	900	1380
					0	1200	1250
					15	600	1740
					15	900	1530
					15	1200	1390
					18	600	1770
					18	900	1560
					18	1200	1420
					30	600	1880
					30	900	1650
					30	1200	1510
					35	600	1920
					35	900	1690
					35	1200	1540
					45	600	2000
					45	900	1760
					45	1200	1600
50	600	2030					
50	900	1790					
50	1200	1630					
60	600	2100					
60	900	1850					
60	1200	1690					



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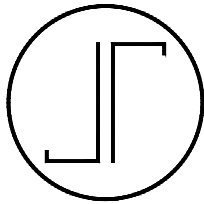
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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Hemlock	575	Dowel	30	40	0	600	1510
					0	900	1320
					0	1200	1200
					15	600	1720
					15	900	1510
					15	1200	1370
					18	600	1750
					18	900	1540
					18	1200	1400
					30	600	1880
					30	900	1650
					30	1200	1510
					35	600	1930
					35	900	1700
					35	1200	1550
					45	600	2020
					45	900	1780
					45	1200	1620
50	600	2060					
50	900	1810					
50	1200	1650					
60	600	2130					
60	900	1880					
60	1200	1720					



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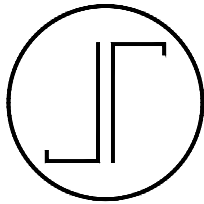
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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Hemlock	575	Dowel	30	60	0	600	1290
					0	900	1130
					0	1200	1020
					15	600	1470
					15	900	1290
					15	1200	1170
					18	600	1500
					18	900	1310
					18	1200	1200
					30	600	1610
					30	900	1410
					30	1200	1290
					35	600	1650
					35	900	1450
					35	1200	1320
					45	600	1730
					45	900	1520
					45	1200	1380
50	600	1770					
50	900	1550					
50	1200	1410					
60	600	1840					
60	900	1610					
60	1200	1470					



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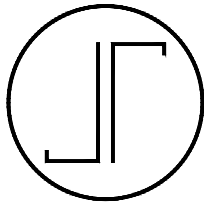
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Hemlock	575	Dowel	40	50	0	600	1440
					0	900	1260
					0	1200	1140
					15	600	1590
					15	900	1400
					15	1200	1270
					18	600	1620
					18	900	1420
					18	1200	1290
					30	600	1720
					30	900	1510
					30	1200	1370
					35	600	1760
					35	900	1540
					35	1200	1410
					45	600	1830
					45	900	1610
					45	1200	1460
					50	600	1860
					50	900	1640
50	1200	1490					
60	600	1930					
60	900	1690					
60	1200	1540					



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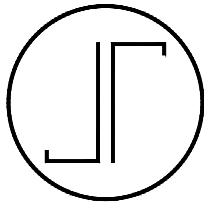
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Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Hemlock	575	Ultra Low	30	20	0	600	1910
					0	900	1680
					0	1200	1530
					15	600	2170
					15	900	1910
					15	1200	1750
					18	600	2210
					18	900	1950
					18	1200	1780
					30	600	2370
					30	900	2090
					30	1200	1910
					35	600	2420
					35	900	2150
					35	1200	1960
					45	600	2530
					45	900	2240
					45	1200	2050
					50	600	2570
50	900	2280					
50	1200	2090					
60	600	2660					
60	900	2370					
60	1200	2170					



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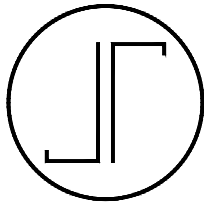
Browns Plains BC

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Tel: 07 3800 0973

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Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Hemlock	575	Wave Concave	60	23	0	600	2110
					0	900	1860
					0	1200	1690
					15	600	2250
					15	900	1990
					15	1200	1820
					18	600	2280
					18	900	2010
					18	1200	1840
					30	600	2380
					30	900	2110
					30	1200	1930
					35	600	2420
					35	900	2140
					35	1200	1960
					45	600	2490
					45	900	2210
					45	1200	2020
					50	600	2520
					50	900	2240
50	1200	2050					
60	600	2590					
60	900	2300					
60	1200	2110					



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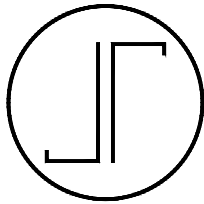
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Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Hemlock	575	Wave Concave	90	20	0	600	2070
					0	900	1820
					0	1200	1660
					15	600	2170
					15	900	1920
					15	1200	1750
					18	600	2190
					18	900	1930
					18	1200	1760
					30	600	2260
					30	900	2000
					30	1200	1820
					35	600	2290
					35	900	2020
					35	1200	1850
					45	600	2340
					45	900	2070
					45	1200	1890
					50	600	2370
					50	900	2090
50	1200	1920					
60	600	2420					
60	900	2140					
60	1200	1960					



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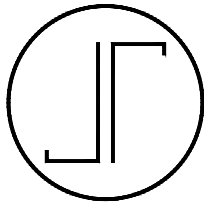
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Tel: 07 3800 0973

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Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Hemlock	575	Wave Convex	60	27	0	600	1860
					0	900	1630
					0	1200	1490
					15	600	1990
					15	900	1750
					15	1200	1600
					18	600	2020
					18	900	1780
					18	1200	1620
					30	600	2110
					30	900	1860
					30	1200	1700
					35	600	2140
					35	900	1890
					35	1200	1730
					45	600	2210
					45	900	1950
					45	1200	1780
50	600	2240					
50	900	1980					
50	1200	1810					
60	600	2300					
60	900	2030					
60	1200	1860					



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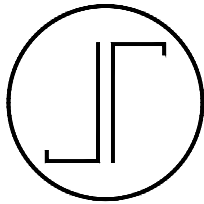
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Tel: 07 3800 0973

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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Hemlock	575	Wave Convex	90	24	0	600	1720
					0	900	1510
					0	1200	1370
					15	600	1800
					15	900	1580
					15	1200	1440
					18	600	1820
					18	900	1600
					18	1200	1450
					30	600	1880
					30	900	1650
					30	1200	1510
					35	600	1900
					35	900	1670
					35	1200	1530
					45	600	1950
					45	900	1720
					45	1200	1560
					50	600	1970
					50	900	1740
50	1200	1580					
60	600	2010					
60	900	1770					
60	1200	1620					



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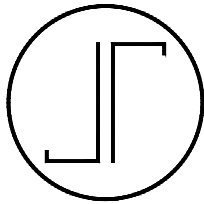
Queensland, 4118

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TASMANIAN OAK SPAN TABLES

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Tasmanian Oak	750	Fin	30	90	0	600	1000
					0	900	880
					0	1200	800
					15	600	1150
					15	900	1000
					15	1200	910
					18	600	1170
					18	900	1020
					18	1200	930
					30	600	1260
					30	900	1100
					30	1200	1000
					35	600	1290
					35	900	1130
					35	1200	1030
					45	600	1360
					45	900	1190
					45	1200	1080
					50	600	1380
					50	900	1210
50	1200	1100					
60	600	1440					
60	900	1260					
60	1200	1150					



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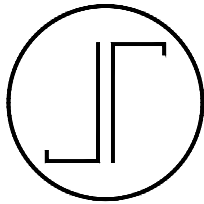
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Tasmanian Oak	750	Fin	30	60	0	600	1160
					0	900	1010
					0	1200	920
					15	600	1320
					15	900	1160
					15	1200	1050
					18	600	1350
					18	900	1180
					18	1200	1070
					30	600	1450
					30	900	1270
					30	1200	1160
					35	600	1490
					35	900	1310
					35	1200	1190
					45	600	1560
					45	900	1370
					45	1200	1240
					50	600	1590
					50	900	1400
50	1200	1270					
60	600	1660					
60	900	1450					
60	1200	1320					



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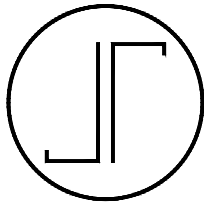
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Tasmanian Oak	750	Fin	30	40	0	600	1340
					0	900	1170
					0	1200	1070
					15	600	1530
					15	900	1340
					15	1200	1220
					18	600	1560
					18	900	1370
					18	1200	1250
					30	600	1680
					30	900	1470
					30	1200	1340
					35	600	1720
					35	900	1510
					35	1200	1380
					45	600	1800
					45	900	1580
					45	1200	1440
					50	600	1840
					50	900	1620
50	1200	1470					
60	600	1910					
60	900	1680					
60	1200	1530					



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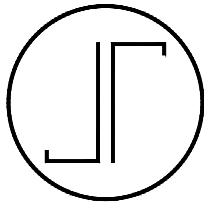
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Tasmanian Oak	750	Truncated Fin	30	60	0	600	1240
					0	900	1090
					0	1200	990
					15	600	1420
					15	900	1240
					15	1200	1130
					18	600	1450
					18	900	1270
					18	1200	1150
					30	600	1560
					30	900	1360
					30	1200	1240
					35	600	1600
					35	900	1400
					35	1200	1270
					45	600	1670
					45	900	1470
					45	1200	1340
					50	600	1710
					50	900	1500
50	1200	1360					
60	600	1770					
60	900	1560					
60	1200	1420					



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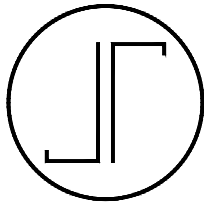
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Tasmanian Oak	750	Flat	90	19	0	600	1720
					0	900	1510
					0	1200	1380
					15	600	1810
					15	900	1590
					15	1200	1450
					18	600	1830
					18	900	1610
					18	1200	1460
					30	600	1890
					30	900	1660
					30	1200	1510
					35	600	1910
					35	900	1680
					35	1200	1530
					45	600	1960
					45	900	1720
					45	1200	1570
50	600	1980					
50	900	1750					
50	1200	1590					
60	600	2030					
60	900	1780					
60	1200	1630					



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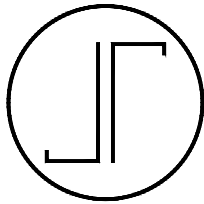
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summertime.com.au

Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Tasmanian Oak	750	Dowel	40	40	0	600	1440
					0	900	1260
					0	1200	1150
					15	600	1600
					15	900	1400
					15	1200	1280
					18	600	1630
					18	900	1430
					18	1200	1300
					30	600	1730
					30	900	1520
					30	1200	1380
					35	600	1770
					35	900	1550
					35	1200	1410
					45	600	1840
					45	900	1620
					45	1200	1470
50	600	1870					
50	900	1650					
50	1200	1500					
60	600	1940					
60	900	1700					
60	1200	1550					



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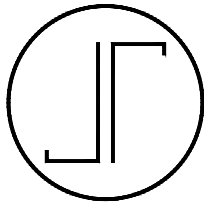
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Tasmanian Oak	750	Dowel	30	40	0	600	1380
					0	900	1210
					0	1200	1100
					15	600	1580
					15	900	1380
					15	1200	1260
					18	600	1610
					18	900	1410
					18	1200	1290
					30	600	1730
					30	900	1520
					30	1200	1380
					35	600	1770
					35	900	1560
					35	1200	1420
					45	600	1860
					45	900	1630
					45	1200	1490
					50	600	1900
					50	900	1670
50	1200	1520					
60	600	1970					
60	900	1730					
60	1200	1580					



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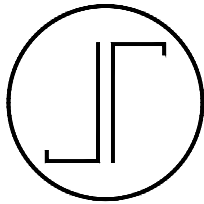
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Tasmanian Oak	750	Dowel	30	60	0	600	1180
					0	900	1030
					0	1200	940
					15	600	1350
					15	900	1180
					15	1200	1070
					18	600	1380
					18	900	1200
					18	1200	1100
					30	600	1480
					30	900	1300
					30	1200	1180
					35	600	1520
					35	900	1330
					35	1200	1210
					45	600	1590
					45	900	1390
					45	1200	1270
					50	600	1620
					50	900	1420
50	1200	1300					
60	600	1690					
60	900	1480					
60	1200	1350					



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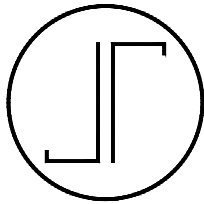
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Tasmanian Oak	750	Dowel	40	50	0	600	1320
					0	900	1150
					0	1200	1050
					15	600	1460
					15	900	1280
					15	1200	1160
					18	600	1490
					18	900	1300
					18	1200	1180
					30	600	1580
					30	900	1380
					30	1200	1260
					35	600	1620
					35	900	1420
					35	1200	1290
					45	600	1680
					45	900	1480
					45	1200	1340
50	600	1710					
50	900	1500					
50	1200	1370					
60	600	1770					
60	900	1560					
60	1200	1420					



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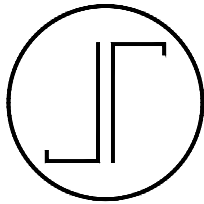
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Tasmanian Oak	750	Ultra Low	30	20	0	600	1760
					0	900	1550
					0	1200	1410
					15	600	2000
					15	900	1760
					15	1200	1610
					18	600	2040
					18	900	1800
					18	1200	1640
					30	600	2190
					30	900	1930
					30	1200	1760
					35	600	2240
					35	900	1980
					35	1200	1810
					45	600	2340
					45	900	2070
					45	1200	1890
					50	600	2380
					50	900	2110
50	1200	1930					
60	600	2470					
60	900	2190					
60	1200	2000					



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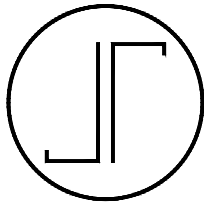
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summertime.com.au

Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Tasmanian Oak	750	Wave Concave	60	23	0	600	1940
					0	900	1710
					0	1200	1550
					15	600	2080
					15	900	1830
					15	1200	1670
					18	600	2100
					18	900	1850
					18	1200	1690
					30	600	2200
					30	900	1940
					30	1200	1770
					35	600	2230
					35	900	1970
					35	1200	1800
					45	600	2300
					45	900	2030
					45	1200	1860
					50	600	2330
					50	900	2060
50	1200	1890					
60	600	2390					
60	900	2120					
60	1200	1940					



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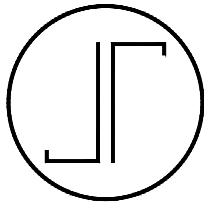
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Tasmanian Oak	750	Wave Concave	90	20	0	600	1910
					0	900	1680
					0	1200	1530
					15	600	2000
					15	900	1760
					15	1200	1610
					18	600	2020
					18	900	1780
					18	1200	1620
					30	600	2090
					30	900	1840
					30	1200	1680
					35	600	2110
					35	900	1860
					35	1200	1700
					45	600	2160
					45	900	1910
					45	1200	1740
					50	600	2190
					50	900	1930
50	1200	1760					
60	600	2230					
60	900	1970					
60	1200	1800					



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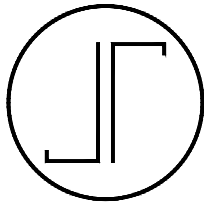
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Tasmanian Oak	750	Wave Convex	60	27	0	600	1710
					0	900	1500
					0	1200	1360
					15	600	1830
					15	900	1610
					15	1200	1470
					18	600	1860
					18	900	1630
					18	1200	1490
					30	600	1940
					30	900	1710
					30	1200	1560
					35	600	1980
					35	900	1740
					35	1200	1580
					45	600	2040
					45	900	1790
					45	1200	1640
					50	600	2070
					50	900	1820
50	1200	1660					
60	600	2120					
60	900	1870					
60	1200	1710					



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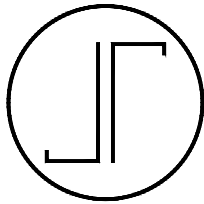
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Tasmanian Oak	750	Wave Convex	90	24	0	600	1570
					0	900	1380
					0	1200	1260
					15	600	1650
					15	900	1450
					15	1200	1320
					18	600	1670
					18	900	1460
					18	1200	1330
					30	600	1730
					30	900	1520
					30	1200	1380
					35	600	1750
					35	900	1540
					35	1200	1400
					45	600	1790
					45	900	1570
					45	1200	1430
					50	600	1810
					50	900	1590
50	1200	1450					
60	600	1850					
60	900	1630					
60	1200	1480					



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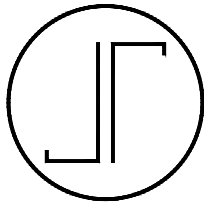
Queensland, 4118

Tel: 07 3800 0973

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BLACKBUTT SPAN TABLES

Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Blackbutt	1100	Fin	30	90	0	600	880
					0	900	770
					0	1200	700
					15	600	1010
					15	900	880
					15	1200	800
					18	600	1030
					18	900	900
					18	1200	820
					30	600	1110
					30	900	970
					30	1200	880
					35	600	1140
					35	900	1000
					35	1200	910
					45	600	1190
					45	900	1040
					45	1200	950
					50	600	1220
					50	900	1070
50	1200	970					
60	600	1270					
60	900	1110					
60	1200	1010					



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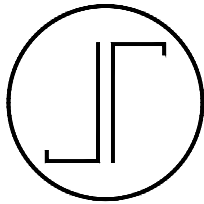
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Blackbutt	1100	Fin	30	60	0	600	1020
					0	900	890
					0	1200	810
					15	600	1170
					15	900	1020
					15	1200	930
					18	600	1190
					18	900	1040
					18	1200	950
					30	600	1280
					30	900	1120
					30	1200	1020
					35	600	1320
					35	900	1150
					35	1200	1050
					45	600	1380
					45	900	1210
					45	1200	1100
					50	600	1410
					50	900	1230
50	1200	1120					
60	600	1460					
60	900	1280					
60	1200	1170					



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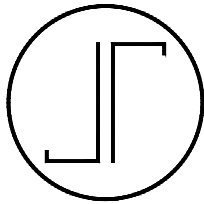
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summertime.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Blackbutt	1100	Fin	30	40	0	600	1180
					0	900	1030
					0	1200	940
					15	600	1350
					15	900	1180
					15	1200	1080
					18	600	1380
					18	900	1210
					18	1200	1100
					30	600	1480
					30	900	1300
					30	1200	1180
					35	600	1520
					35	900	1330
					35	1200	1210
					45	600	1600
					45	900	1400
					45	1200	1270
					50	600	1630
					50	900	1430
50	1200	1300					
60	600	1690					
60	900	1480					
60	1200	1350					



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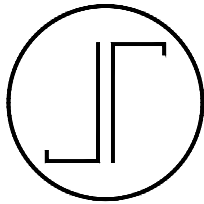
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Queensland, 4118

Tel: 07 3800 0973

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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Blackbutt	1100	Truncated Fin	30	60	0	600	1090
					0	900	960
					0	1200	870
					15	600	1250
					15	900	1090
					15	1200	990
					18	600	1280
					18	900	1120
					18	1200	1020
					30	600	1370
					30	900	1200
					30	1200	1090
					35	600	1410
					35	900	1230
					35	1200	1120
					45	600	1480
					45	900	1290
					45	1200	1180
					50	600	1510
					50	900	1320
50	1200	1200					
60	600	1570					
60	900	1370					
60	1200	1250					



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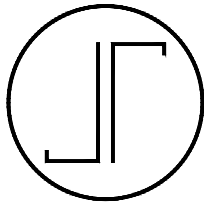
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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Blackbutt	950	Dowel	40	40	0	600	1340
					0	900	1170
					0	1200	1060
					15	600	1480
					15	900	1300
					15	1200	1180
					18	600	1510
					18	900	1320
					18	1200	1200
					30	600	1600
					30	900	1400
					30	1200	1280
					35	600	1640
					35	900	1440
					35	1200	1310
					45	600	1710
					45	900	1500
					45	1200	1360
					50	600	1740
					50	900	1520
50	1200	1390					
60	600	1800					
60	900	1580					
60	1200	1440					



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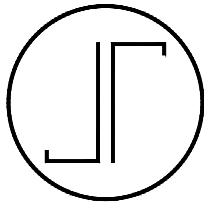
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Blackbutt	950	Dowel	30	40	0	600	1280
					0	900	1120
					0	1200	1020
					15	600	1460
					15	900	1280
					15	1200	1160
					18	600	1490
					18	900	1310
					18	1200	1190
					30	600	1600
					30	900	1410
					30	1200	1280
					35	600	1650
					35	900	1440
					35	1200	1310
					45	600	1720
					45	900	1510
					45	1200	1380
50	600	1760					
50	900	1540					
50	1200	1410					
60	600	1830					
60	900	1600					
60	1200	1460					



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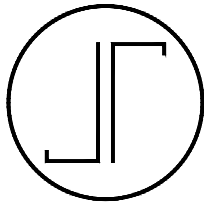
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Blackbutt	950	Dowel	30	60	0	600	1090
					0	900	950
					0	1200	870
					15	600	1250
					15	900	1090
					15	1200	990
					18	600	1270
					18	900	1110
					18	1200	1010
					30	600	1370
					30	900	1200
					30	1200	1090
					35	600	1410
					35	900	1230
					35	1200	1120
					45	600	1470
					45	900	1290
					45	1200	1170
					50	600	1500
					50	900	1320
50	1200	1200					
60	600	1560					
60	900	1370					
60	1200	1250					



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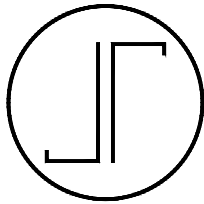
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Blackbutt	950	Dowel	40	50	0	600	1220
					0	900	1070
					0	1200	970
					15	600	1350
					15	900	1180
					15	1200	1080
					18	600	1380
					18	900	1200
					18	1200	1100
					30	600	1460
					30	900	1280
					30	1200	1170
					35	600	1500
					35	900	1310
					35	1200	1190
					45	600	1560
					45	900	1370
					45	1200	1240
50	600	1590					
50	900	1390					
50	1200	1270					
60	600	1640					
60	900	1440					
60	1200	1310					



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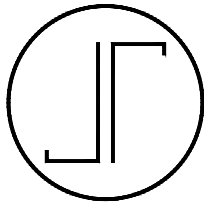
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summertime.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Blackbutt	950	Ultra Low	30	20	0	600	1630
					0	900	1430
					0	1200	1300
					15	600	1860
					15	900	1630
					15	1200	1490
					18	600	1900
					18	900	1670
					18	1200	1520
					30	600	2030
					30	900	1790
					30	1200	1630
					35	600	2080
					35	900	1840
					35	1200	1670
					45	600	2180
					45	900	1920
					45	1200	1750
50	600	2220					
50	900	1960					
50	1200	1790					
60	600	2300					
60	900	2030					
60	1200	1860					



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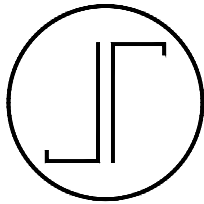
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summertime.com.au

Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Blackbutt	950	Wave Concave	60	23	0	600	1800
					0	900	1580
					0	1200	1440
					15	600	1930
					15	900	1700
					15	1200	1550
					18	600	1950
					18	900	1720
					18	1200	1570
					30	600	2040
					30	900	1800
					30	1200	1640
					35	600	2080
					35	900	1830
					35	1200	1670
					45	600	2140
					45	900	1890
					45	1200	1730
					50	600	2170
					50	900	1920
50	1200	1750					
60	600	2230					
60	900	1970					
60	1200	1800					



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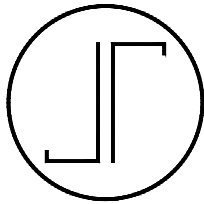
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Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Blackbutt	950	Wave Convex	60	27	0	600	1580
					0	900	1390
					0	1200	1260
					15	600	1700
					15	900	1490
					15	1200	1360
					18	600	1720
					18	900	1510
					18	1200	1380
					30	600	1800
					30	900	1580
					30	1200	1440
					35	600	1830
					35	900	1610
					35	1200	1470
					45	600	1890
					45	900	1660
					45	1200	1520
50	600	1920					
50	900	1690					
50	1200	1540					
60	600	1970					
60	900	1740					
60	1200	1580					



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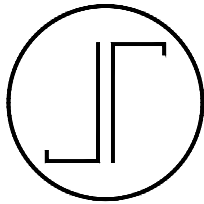
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ALUMINIUM SPAN TABLES

Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Aluminium	2700	Fin	30	90	0	600	1150
					0	900	1000
					0	1200	910
					15	600	1310
					15	900	1150
					15	1200	1040
					18	600	1340
					18	900	1170
					18	1200	1070
					30	600	1440
					30	900	1260
					30	1200	1150
					35	600	1480
					35	900	1300
					35	1200	1180
					45	600	1550
					45	900	1360
					45	1200	1240
					50	600	1580
					50	900	1390
50	1200	1260					
60	600	1640					
60	900	1440					
60	1200	1310					



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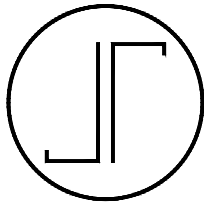
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Aluminium	2700	Fin	30	60	0	600	1270
					0	900	1110
					0	1200	1010
					15	600	1440
					15	900	1270
					15	1200	1150
					18	600	1480
					18	900	1290
					18	1200	1180
					30	600	1590
					30	900	1390
					30	1200	1270
					35	600	1630
					35	900	1430
					35	1200	1300
					45	600	1700
					45	900	1500
					45	1200	1360
					50	600	1740
					50	900	1530
50	1200	1390					
60	600	1810					
60	900	1590					
60	1200	1440					



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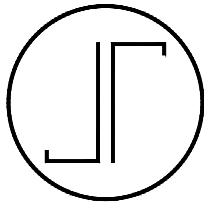
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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Aluminium	2700	Fin	30	40	0	600	1380
					0	900	1210
					0	1200	1100
					15	600	1570
					15	900	1380
					15	1200	1250
					18	600	1600
					18	900	1410
					18	1200	1280
					30	600	1720
					30	900	1510
					30	1200	1380
					35	600	1770
					35	900	1550
					35	1200	1410
					45	600	1850
					45	900	1630
					45	1200	1480
					50	600	1890
					50	900	1660
50	1200	1510					
60	600	1960					
60	900	1720					
60	1200	1570					



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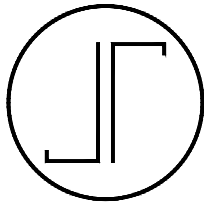
Browns Plains BC

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Tel: 07 3800 0973

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Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Aluminium	2700	Truncated Fin	30	60	0	600	1300
					0	900	1130
					0	1200	1030
					15	600	1480
					15	900	1300
					15	1200	1180
					18	600	1510
					18	900	1320
					18	1200	1200
					30	600	1620
					30	900	1420
					30	1200	1300
					35	600	1670
					35	900	1460
					35	1200	1330
					45	600	1740
					45	900	1530
					45	1200	1390
					50	600	1780
					50	900	1560
50	1200	1420					
60	600	1850					
60	900	1620					
60	1200	1480					



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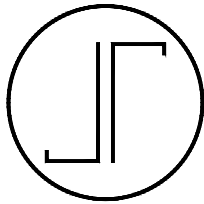
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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Aluminium	2700	Flat	90	19	0	600	1630
					0	900	1430
					0	1200	1300
					15	600	1710
					15	900	1500
					15	1200	1370
					18	600	1730
					18	900	1510
					18	1200	1380
					30	600	1790
					30	900	1570
					30	1200	1430
					35	600	1810
					35	900	1590
					35	1200	1450
					45	600	1850
					45	900	1630
					45	1200	1480
50	600	1870					
50	900	1650					
50	1200	1500					
60	600	1920					
60	900	1680					
60	1200	1540					



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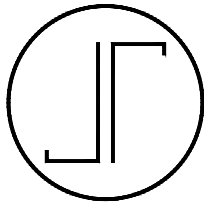
Queensland, 4118

Tel: 07 3800 0973

W: www.summertime.com.au

THERMALLY MODIFIED HEMLOCK SPAN TABLES

Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Thermally Modified Hemlock	561	Fin	30	90	0	600	1910
					0	900	1680
					0	1200	1530
					15	600	2170
					15	900	1910
					15	1200	1740
					18	600	2210
					18	900	1950
					18	1200	1780
					30	600	2360
					30	900	2090
					30	1200	1910
					35	600	2420
					35	900	2140
					35	1200	1960
					45	600	2520
					45	900	2240
					45	1200	2050
					50	600	2570
					50	900	2280
50	1200	2090					
60	600	2650					
60	900	2360					
60	1200	2170					



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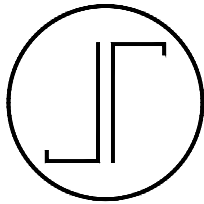
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Thermally Modified Hemlock	561	Fin	30	60	0	600	2090
					0	900	1840
					0	1200	1680
					15	600	2370
					15	900	2090
					15	1200	1910
					18	600	2410
					18	900	2140
					18	1200	1950
					30	600	2570
					30	900	2280
					30	1200	2090
					35	600	2630
					35	900	2340
					35	1200	2150
					45	600	2740
					45	900	2440
					45	1200	2240
50	600	2790					
50	900	2490					
50	1200	2280					
60	600	2870					
60	900	2570					
60	1200	2370					



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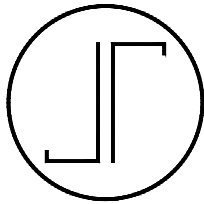
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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Thermally Modified Hemlock	561	Fin	30	40	0	600	2270
					0	900	2000
					0	1200	1830
					15	600	2550
					15	900	2270
					15	1200	2080
					18	600	2600
					18	900	2310
					18	1200	2120
					30	600	2760
					30	900	2470
					30	1200	2270
					35	600	2820
					35	900	2520
					35	1200	2320
					45	600	2930
					45	900	2630
					45	1200	2420
50	600	2980					
50	900	2680					
50	1200	2470					
60	600	3070					
60	900	2760					
60	1200	2550					



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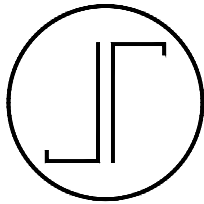
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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Thermally Modified Hemlock	561	Truncated Fin	30	60	12	600	2370
					13	900	2110
					14	1200	1950
					15	600	2420
					15	900	2140
					15	1200	1960
					18	600	2460
					18	900	2180
					18	1200	2000
					30	600	2630
					30	900	2340
					30	1200	2140
					35	600	2690
					35	900	2390
					35	1200	2190
					45	600	2790
					45	900	2490
					45	1200	2290
					50	600	2840
					50	900	2540
50	1200	2340					
60	600	2930					
60	900	2630					
60	1200	2420					



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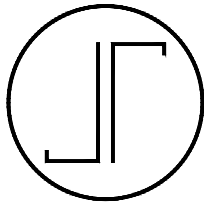
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Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Thermally Modified Hemlock	561	Flat/Kulture	90	19	0	600	1890
					0	900	1660
					0	1200	1520
					15	600	1980
					15	900	1750
					15	1200	1590
					18	600	2000
					18	900	1760
					18	1200	1610
					30	600	2070
					30	900	1820
					30	1200	1660
					35	600	2090
					35	900	1850
					35	1200	1680
					45	600	2140
					45	900	1890
					45	1200	1730
50	600	2170					
50	900	1910					
50	1200	1750					
60	600	2210					
60	900	1950					
60	1200	1790					



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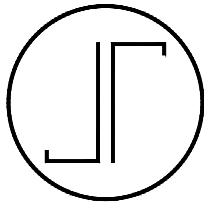
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Tel: 07 3800 0973

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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Thermally Modified Hemlock	561	Dowel	40	40	0	600	1590
					0	900	1390
					0	1200	1260
					15	600	1760
					15	900	1540
					15	1200	1400
					18	600	1790
					18	900	1570
					18	1200	1430
					30	600	1900
					30	900	1670
					30	1200	1520
					35	600	1940
					35	900	1700
					35	1200	1550
					45	600	2010
					45	900	1770
					45	1200	1620
					50	600	2050
					50	900	1810
50	1200	1650					
60	600	2120					
60	900	1870					
60	1200	1700					



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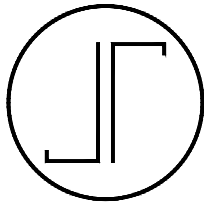
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Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Thermally Modified Hemlock	561	Dowel	30	40	0	600	1520
					0	900	1330
					0	1200	1210
					15	600	1730
					15	900	1520
					15	1200	1380
					18	600	1770
					18	900	1550
					18	1200	1410
					30	600	1900
					30	900	1670
					30	1200	1520
					35	600	1950
					35	900	1710
					35	1200	1560
					45	600	2030
					45	900	1790
					45	1200	1630
50	600	2070					
50	900	1830					
50	1200	1670					
60	600	2150					
60	900	1900					
60	1200	1730					



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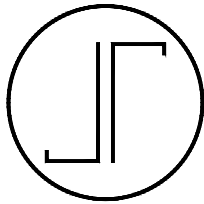
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Thermally Modified Hemlock	561	Dowel	30	60	0	600	1300
					0	900	1140
					0	1200	1030
					15	600	1480
					15	900	1300
					15	1200	1180
					18	600	1510
					18	900	1330
					18	1200	1210
					30	600	1630
					30	900	1430
					30	1200	1300
					35	600	1670
					35	900	1460
					35	1200	1330
					45	600	1750
					45	900	1530
					45	1200	1400
50	600	1780					
50	900	1560					
50	1200	1430					
60	600	1850					
60	900	1630					
60	1200	1480					



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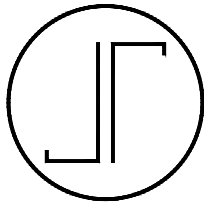
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Thermally Modified Hemlock	561	Dowel	40	50	0	600	1450
					0	900	1270
					0	1200	1150
					15	600	1610
					15	900	1410
					15	1200	1280
					18	600	1630
					18	900	1430
					18	1200	1300
					30	600	1730
					30	900	1520
					30	1200	1390
					35	600	1770
					35	900	1560
					35	1200	1420
					45	600	1840
					45	900	1620
					45	1200	1480
50	600	1880					
50	900	1650					
50	1200	1500					
60	600	1940					
60	900	1710					
60	1200	1560					



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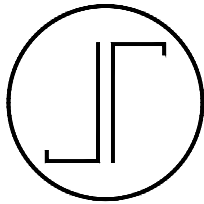
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summertime.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Thermally Modified Hemlock	561	Ultra Low	30	20	0	600	1930
					0	900	1700
					0	1200	1550
					15	600	2190
					15	900	1930
					15	1200	1760
					18	600	2230
					18	900	1970
					18	1200	1800
					30	600	2380
					30	900	2110
					30	1200	1930
					35	600	2440
					35	900	2160
					35	1200	1980
					45	600	2540
					45	900	2260
					45	1200	2070
					50	600	2590
					50	900	2300
50	1200	2110					
60	600	2680					
60	900	2380					
60	1200	2190					



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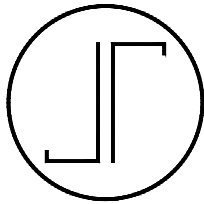
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summertime.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Thermally Modified Hemlock	561	Wave Concave	60	23	0	600	2120
					0	900	1870
					0	1200	1710
					15	600	2270
					15	900	2010
					15	1200	1830
					18	600	2300
					18	900	2030
					18	1200	1860
					30	600	2400
					30	900	2120
					30	1200	1940
					35	600	2430
					35	900	2160
					35	1200	1970
					45	600	2510
					45	900	2220
					45	1200	2040
					50	600	2540
					50	900	2250
50	1200	2070					
60	600	2600					
60	900	2310					
60	1200	2120					



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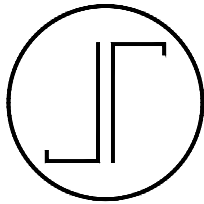
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Thermally Modified Hemlock	561	Wave Concave	90	20	0	600	2090
					0	900	1840
					0	1200	1680
					15	600	2190
					15	900	1930
					15	1200	1760
					18	600	2210
					18	900	1950
					18	1200	1780
					30	600	2280
					30	900	2010
					30	1200	1840
					35	600	2310
					35	900	2040
					35	1200	1860
					45	600	2360
					45	900	2090
					45	1200	1910
					50	600	2380
					50	900	2110
50	1200	1930					
60	600	2430					
60	900	2160					
60	1200	1970					



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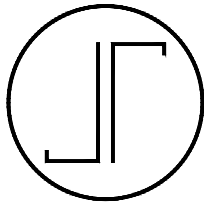
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summertime.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Thermally Modified Hemlock	561	Wave Convex	60	27	0	600	1870
					0	900	1650
					0	1200	1500
					15	600	2010
					15	900	1770
					15	1200	1610
					18	600	2030
					18	900	1790
					18	1200	1630
					30	600	2120
					30	900	1870
					30	1200	1710
					35	600	2160
					35	900	1910
					35	1200	1740
					45	600	2230
					45	900	1970
					45	1200	1800
					50	600	2260
					50	900	1990
50	1200	1820					
60	600	2320					
60	900	2050					
60	1200	1870					



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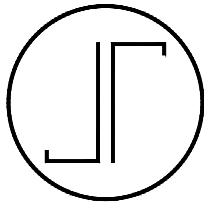
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Thermally Modified Hemlock	561	Wave Convex	90	24	0	600	1730
					0	900	1520
					0	1200	1380
					15	600	1820
					15	900	1590
					15	1200	1450
					18	600	1830
					18	900	1610
					18	1200	1470
					30	600	1890
					30	900	1660
					30	1200	1520
					35	600	1920
					35	900	1690
					35	1200	1540
					45	600	1960
					45	900	1730
					45	1200	1580
					50	600	1990
					50	900	1750
50	1200	1590					
60	600	2030					
60	900	1790					
60	1200	1630					



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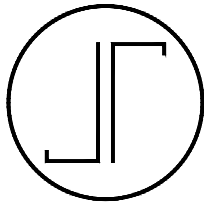
Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

SPOTTED GUM SPAN TABLES

Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Spotted Gum	1100	Fin	30	90	0	600	1540
					0	900	1350
					0	1200	1230
					15	600	1750
					15	900	1540
					15	1200	1400
					18	600	1790
					18	900	1570
					18	1200	1430
					30	600	1920
					30	900	1690
					30	1200	1540
					35	600	1970
					35	900	1730
					35	1200	1580
					45	600	2060
					45	900	1810
					45	1200	1660
					50	600	2100
					50	900	1850
50	1200	1690					
60	600	2180					
60	900	1920					
60	1200	1750					



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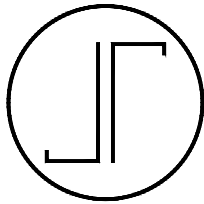
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Spotted Gum	1100	Fin	30	60	0	600	1690
					0	900	1490
					0	1200	1350
					15	600	1930
					15	900	1690
					15	1200	1540
					18	600	1970
					18	900	1730
					18	1200	1580
					30	600	2110
					30	900	1860
					30	1200	1690
					35	600	2160
					35	900	1900
					35	1200	1740
					45	600	2250
					45	900	1990
					45	1200	1820
					50	600	2300
					50	900	2030
50	1200	1860					
60	600	2380					
60	900	2110					
60	1200	1930					



SUMMERMORE Pty Ltd ABN 42 108 898 433

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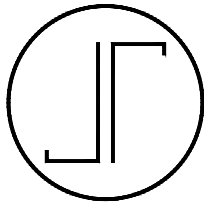
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summertime.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Spotted Gum	1100	Fin	30	40	0	600	1840
					0	900	1620
					0	1200	1470
					15	600	2090
					15	900	1840
					15	1200	1680
					18	600	2130
					18	900	1880
					18	1200	1710
					30	600	2280
					30	900	2010
					30	1200	1840
					35	600	2330
					35	900	2060
					35	1200	1890
					45	600	2430
					45	900	2160
					45	1200	1970
					50	600	2480
					50	900	2200
50	1200	2010					
60	600	2570					
60	900	2280					
60	1200	2090					



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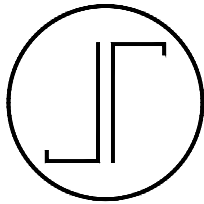
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summertime.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Spotted Gum	1100	Truncated Fin	30	60	12	600	1930
					13	900	1710
					14	1200	1570
					15	600	1970
					15	900	1730
					15	1200	1580
					18	600	2010
					18	900	1770
					18	1200	1610
					30	600	2150
					30	900	1900
					30	1200	1730
					35	600	2210
					35	900	1950
					35	1200	1780
					45	600	2300
					45	900	2040
					45	1200	1860
					50	600	2350
					50	900	2080
50	1200	1900					
60	600	2430					
60	900	2150					
60	1200	1970					



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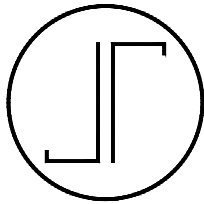
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Spotted Gum	1100	Dowel	40	40	0	600	1270
					0	900	1110
					0	1200	1010
					15	600	1410
					15	900	1240
					15	1200	1130
					18	600	1440
					18	900	1260
					18	1200	1150
					30	600	1530
					30	900	1340
					30	1200	1220
					35	600	1560
					35	900	1370
					35	1200	1250
					45	600	1630
					45	900	1430
					45	1200	1300
					50	600	1660
					50	900	1450
50	1200	1320					
60	600	1710					
60	900	1500					
60	1200	1370					



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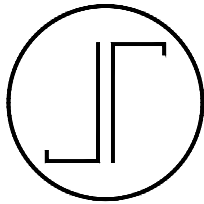
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Spotted Gum	1100	Dowel	30	40	0	600	1220
					0	900	1070
					0	1200	970
					15	600	1390
					15	900	1220
					15	1200	1110
					18	600	1420
					18	900	1250
					18	1200	1130
					30	600	1530
					30	900	1340
					30	1200	1220
					35	600	1570
					35	900	1380
					35	1200	1250
					45	600	1640
					45	900	1440
					45	1200	1310
50	600	1680					
50	900	1470					
50	1200	1340					
60	600	1740					
60	900	1530					
60	1200	1390					



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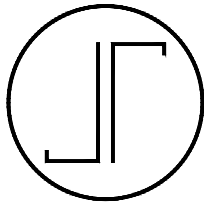
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Spotted Gum	1100	Dowel	30	60	0	600	1040
					0	900	910
					0	1200	820
					15	600	1190
					15	900	1040
					15	1200	940
					18	600	1210
					18	900	1060
					18	1200	960
					30	600	1310
					30	900	1140
					30	1200	1040
					35	600	1340
					35	900	1170
					35	1200	1070
					45	600	1400
					45	900	1230
					45	1200	1120
					50	600	1430
					50	900	1260
50	1200	1140					
60	600	1490					
60	900	1310					
60	1200	1190					



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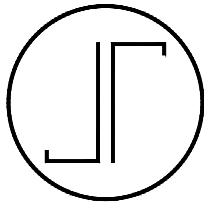
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Spotted Gum	1100	Dowel	40	50	0	600	1160
					0	900	1010
					0	1200	920
					15	600	1290
					15	900	1130
					15	1200	1030
					18	600	1310
					18	900	1150
					18	1200	1040
					30	600	1400
					30	900	1220
					30	1200	1110
					35	600	1430
					35	900	1250
					35	1200	1140
					45	600	1490
					45	900	1300
					45	1200	1180
					50	600	1510
					50	900	1330
50	1200	1210					
60	600	1570					
60	900	1370					
60	1200	1250					



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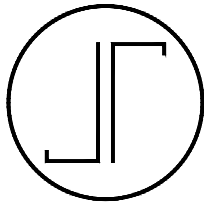
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

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Material	Timber Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Spotted Gum	1100	Ultra Low	30	20	0	600	1560
					0	900	1360
					0	1200	1240
					15	600	1770
					15	900	1560
					15	1200	1420
					18	600	1810
					18	900	1590
					18	1200	1450
					30	600	1940
					30	900	1710
					30	1200	1560
					35	600	1990
					35	900	1750
					35	1200	1600
					45	600	2080
					45	900	1830
					45	1200	1670
50	600	2120					
50	900	1870					
50	1200	1710					
60	600	2200					
60	900	1940					
60	1200	1770					



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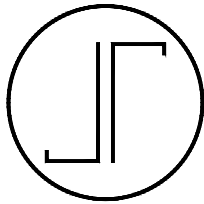
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summertime.com.au

Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Spotted Gum	1100	Wave Concave	60	23	0	600	1720
					0	900	1510
					0	1200	1370
					15	600	1840
					15	900	1620
					15	1200	1480
					18	600	1870
					18	900	1640
					18	1200	1500
					30	600	1950
					30	900	1720
					30	1200	1570
					35	600	1990
					35	900	1750
					35	1200	1590
					45	600	2050
					45	900	1800
					45	1200	1650
					50	600	2080
					50	900	1830
50	1200	1670					
60	600	2130					
60	900	1880					
60	1200	1720					



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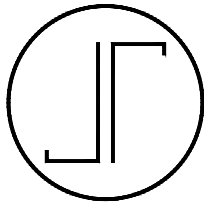
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Material	Timber Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Spotted Gum	1100	Wave Convex	60	27	0	600	1510
					0	900	1320
					0	1200	1200
					15	600	1620
					15	900	1420
					15	1200	1300
					18	600	1640
					18	900	1440
					18	1200	1310
					30	600	1720
					30	900	1510
					30	1200	1370
					35	600	1750
					35	900	1540
					35	1200	1400
					45	600	1810
					45	900	1590
					45	1200	1450
					50	600	1830
					50	900	1610
50	1200	1470					
60	600	1880					
60	900	1660					
60	1200	1510					



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Browns Plains BC

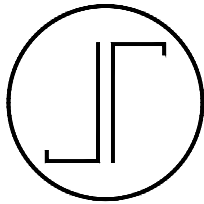
Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

VALCHROMAT SPAN TABLES

Material	Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Valchromat	730	Fin	30	90	0	600	1000
					0	900	880
					0	1200	800
					15	600	1150
					15	900	1000
					15	1200	910
					18	600	1170
					18	900	1020
					18	1200	930
					30	600	1260
					30	900	1100
					30	1200	1000
					35	600	1290
					35	900	1130
					35	1200	1030
					45	600	1360
					45	900	1190
					45	1200	1080
					50	600	1380
					50	900	1210
50	1200	1100					
60	600	1440					
60	900	1260					
60	1200	1150					



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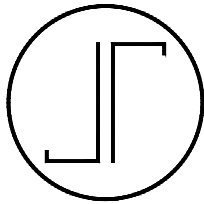
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Material	Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Valchromat	730	Fin	30	60	0	600	1160
					0	900	1010
					0	1200	920
					15	600	1320
					15	900	1160
					15	1200	1050
					18	600	1350
					18	900	1180
					18	1200	1070
					30	600	1450
					30	900	1270
					30	1200	1160
					35	600	1490
					35	900	1310
					35	1200	1190
					45	600	1560
					45	900	1370
					45	1200	1240
					50	600	1590
					50	900	1400
50	1200	1270					
60	600	1660					
60	900	1450					
60	1200	1320					



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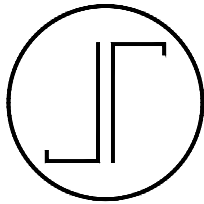
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Material	Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Valchromat	730	Fin	30	40	0	600	1340
					0	900	1170
					0	1200	1070
					15	600	1530
					15	900	1340
					15	1200	1220
					18	600	1560
					18	900	1370
					18	1200	1250
					30	600	1680
					30	900	1470
					30	1200	1340
					35	600	1720
					35	900	1510
					35	1200	1380
					45	600	1800
					45	900	1580
					45	1200	1440
					50	600	1840
					50	900	1620
50	1200	1470					
60	600	1910					
60	900	1680					
60	1200	1530					



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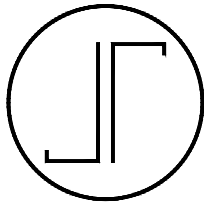
Browns Plains BC

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Material	Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Valchromat	730	Truncated Fin	30	60	0	600	1240
					0	900	1090
					0	1200	990
					15	600	1420
					15	900	1240
					15	1200	1130
					18	600	1450
					18	900	1270
					18	1200	1150
					30	600	1560
					30	900	1360
					30	1200	1240
					35	600	1600
					35	900	1400
					35	1200	1270
					45	600	1670
					45	900	1470
					45	1200	1340
					50	600	1710
					50	900	1500
50	1200	1360					
60	600	1770					
60	900	1560					
60	1200	1420					



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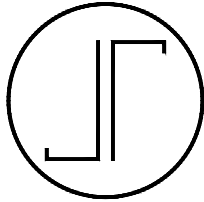
Browns Plains BC

Queensland, 4118

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Material	Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Valchromat	730	Flat	90	19	0	600	1720
					0	900	1510
					0	1200	1380
					15	600	1810
					15	900	1590
					15	1200	1450
					18	600	1830
					18	900	1610
					18	1200	1460
					30	600	1890
					30	900	1660
					30	1200	1510
					35	600	1910
					35	900	1680
					35	1200	1530
					45	600	1960
					45	900	1720
					45	1200	1570
					50	600	1980
					50	900	1750
50	1200	1590					
60	600	2030					
60	900	1780					
60	1200	1630					



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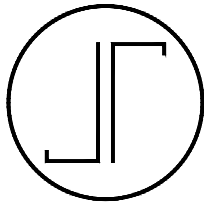
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Material	Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Valchromat	730	Dowel	40	40	0	600	1440
					0	900	1260
					0	1200	1150
					15	600	1600
					15	900	1400
					15	1200	1280
					18	600	1630
					18	900	1430
					18	1200	1300
					30	600	1730
					30	900	1520
					30	1200	1380
					35	600	1770
					35	900	1550
					35	1200	1410
					45	600	1840
					45	900	1620
					45	1200	1470
					50	600	1870
					50	900	1650
50	1200	1500					
60	600	1940					
60	900	1700					
60	1200	1550					



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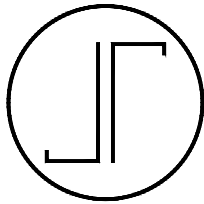
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Material	Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Valchromat	730	Dowel	30	40	0	600	1380
					0	900	1210
					0	1200	1100
					15	600	1580
					15	900	1380
					15	1200	1260
					18	600	1610
					18	900	1410
					18	1200	1290
					30	600	1730
					30	900	1520
					30	1200	1380
					35	600	1770
					35	900	1560
					35	1200	1420
					45	600	1860
					45	900	1630
					45	1200	1490
					50	600	1900
					50	900	1670
50	1200	1520					
60	600	1970					
60	900	1730					
60	1200	1580					



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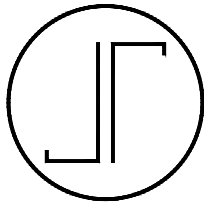
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Material	Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Valchromat	730	Dowel	30	60	0	600	1180
					0	900	1030
					0	1200	940
					15	600	1350
					15	900	1180
					15	1200	1070
					18	600	1380
					18	900	1200
					18	1200	1100
					30	600	1480
					30	900	1300
					30	1200	1180
					35	600	1520
					35	900	1330
					35	1200	1210
					45	600	1590
					45	900	1390
					45	1200	1270
50	600	1620					
50	900	1420					
50	1200	1300					
60	600	1690					
60	900	1480					
60	1200	1350					



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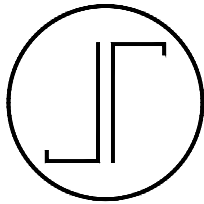
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Material	Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Valchromat	730	Dowel	40	50	0	600	1320
					0	900	1150
					0	1200	1050
					15	600	1460
					15	900	1280
					15	1200	1160
					18	600	1490
					18	900	1300
					18	1200	1180
					30	600	1580
					30	900	1380
					30	1200	1260
					35	600	1620
					35	900	1420
					35	1200	1290
					45	600	1680
					45	900	1480
					45	1200	1340
					50	600	1710
					50	900	1500
50	1200	1370					
60	600	1770					
60	900	1560					
60	1200	1420					



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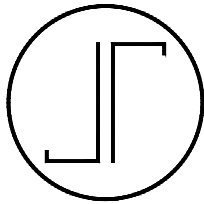
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Material	Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Valchromat	730	Ultra Low	30	20	0	600	1760
					0	900	1550
					0	1200	1410
					15	600	2000
					15	900	1760
					15	1200	1610
					18	600	2040
					18	900	1800
					18	1200	1640
					30	600	2190
					30	900	1930
					30	1200	1760
					35	600	2240
					35	900	1980
					35	1200	1810
					45	600	2340
					45	900	2070
					45	1200	1890
50	600	2380					
50	900	2110					
50	1200	1930					
60	600	2470					
60	900	2190					
60	1200	2000					



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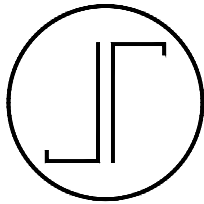
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Material	Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Valchromat	730	Wave Concave	60	23	0	600	1940
					0	900	1710
					0	1200	1550
					15	600	2080
					15	900	1830
					15	1200	1670
					18	600	2100
					18	900	1850
					18	1200	1690
					30	600	2200
					30	900	1940
					30	1200	1770
					35	600	2230
					35	900	1970
					35	1200	1800
					45	600	2300
					45	900	2030
					45	1200	1860
					50	600	2330
					50	900	2060
50	1200	1890					
60	600	2390					
60	900	2120					
60	1200	1940					



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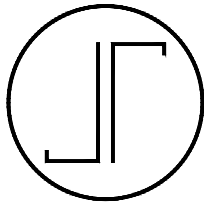
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Material	Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Valchromat	730	Wave Concave	90	20	0	600	1910
					0	900	1680
					0	1200	1530
					15	600	2000
					15	900	1760
					15	1200	1610
					18	600	2020
					18	900	1780
					18	1200	1620
					30	600	2090
					30	900	1840
					30	1200	1680
					35	600	2110
					35	900	1860
					35	1200	1700
					45	600	2160
					45	900	1910
					45	1200	1740
					50	600	2190
					50	900	1930
50	1200	1760					
60	600	2230					
60	900	1970					
60	1200	1800					



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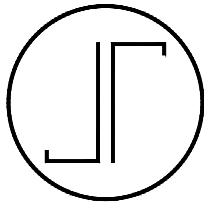
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Material	Density kg/m ³ @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Valchromat	730	Wave Convex	60	27	0	600	1710
					0	900	1500
					0	1200	1360
					15	600	1830
					15	900	1610
					15	1200	1470
					18	600	1860
					18	900	1630
					18	1200	1490
					30	600	1940
					30	900	1710
					30	1200	1560
					35	600	1980
					35	900	1740
					35	1200	1580
					45	600	2040
					45	900	1790
					45	1200	1640
					50	600	2070
					50	900	1820
50	1200	1660					
60	600	2120					
60	900	1870					
60	1200	1710					



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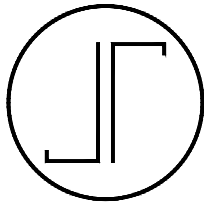
Browns Plains BC

Queensland, 4118

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Material	Density kg/m3 @ 15%MC	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Spacing Between Profiles (mm)	Maximum Rail Spacing (mm)	Maximum Rail Span Between Studco Clips (mm)
Valchromat	730	Wave Convex	90	24	0	600	1570
					0	900	1380
					0	1200	1260
					15	600	1650
					15	900	1450
					15	1200	1320
					18	600	1670
					18	900	1460
					18	1200	1330
					30	600	1730
					30	900	1520
					30	1200	1380
					35	600	1750
					35	900	1540
					35	1200	1400
					45	600	1790
					45	900	1570
					45	1200	1430
					50	600	1810
					50	900	1590
50	1200	1450					
60	600	1850					
60	900	1630					
60	1200	1480					



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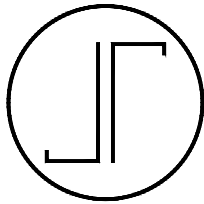
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DIRECT FIXING SUITABILITY TABLES.

Aluminium Profiles				
Wind Region	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Profile Suitable
N1	FIN	30	90	YES
	FIN	30	60	YES
	FIN	30	40	YES
	TRUNCATED FIN	30	60	YES
N2	FIN	30	90	YES
	FIN	30	60	YES
	FIN	30	40	YES
	TRUNCATED FIN	30	60	YES
N3	FIN	30	90	YES
	FIN	30	60	YES
	FIN	30	40	YES
	TRUNCATED FIN	30	60	YES
C1	FIN	30	90	YES
	FIN	30	60	YES
	FIN	30	40	YES
	TRUNCATED FIN	30	60	YES
C2	FIN	30	90	NO
	FIN	30	60	YES
	FIN	30	40	YES
	TRUNCATED FIN	30	60	YES



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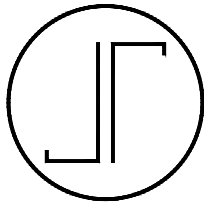
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Cedar Profiles				
Wind Region	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Profile Suitable
N1	FIN	30	90	YES
	FIN	30	60	YES
	FIN	30	40	YES
	TRUNCATED FIN	30	60	YES
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	YES
	DOWEL	40	50	YES
	ULTRA LOW	30	20	YES
N2	FIN	30	90	NO
	FIN	30	60	YES
	FIN	30	40	YES
	TRUNCATED FIN	30	60	YES
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	YES
	DOWEL	40	50	YES
	ULTRA LOW	30	20	YES
N3	FIN	30	90	NO
	FIN	30	60	YES
	FIN	30	40	YES
	TRUNCATED FIN	30	60	YES
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	YES
	DOWEL	40	50	YES
	ULTRA LOW	30	20	YES



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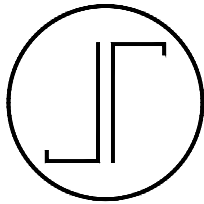
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C1	FIN	30	90	NO
	FIN	30	60	YES
	FIN	30	40	YES
	TRUNCATED FIN	30	60	YES
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	YES
	DOWEL	40	50	YES
	ULTRA LOW	30	20	YES
C2	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	YES
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	NO
	DOWEL	40	50	YES
ULTRA LOW	30	20	YES	



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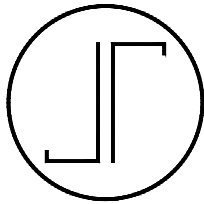
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Hemlock Profiles				
Wind Region	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Profile Suitable
N1	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	NO
	TRUNCATED FIN	30	60	YES
	DOWEL	40	40	NO
	DOWEL	30	40	NO
	DOWEL	30	60	NO
	DOWEL	40	50	NO
	ULTRA LOW	30	20	NO
N2	FIN	30	90	NO
	FIN	30	60	YES
	FIN	30	40	YES
	TRUNCATED FIN	30	60	YES
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	YES
	DOWEL	40	50	YES
	ULTRA LOW	30	20	YES
N3	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	YES
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	NO
	DOWEL	40	50	YES
	ULTRA LOW	30	20	YES



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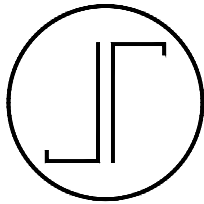
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

C1	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	YES
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	NO
	DOWEL	40	50	YES
	ULTRA LOW	30	20	YES
C2	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	YES
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	NO
	DOWEL	40	50	NO
ULTRA LOW	30	20	YES	



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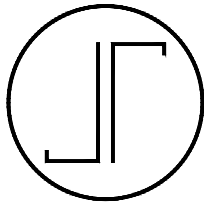
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

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Tasmanian Oak Profiles				
Wind Region	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Profile Suitable
N1	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	NO
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	NO
	DOWEL	30	40	NO
	DOWEL	30	60	NO
	DOWEL	40	50	NO
	ULTRA LOW	30	20	YES
N2	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	NO
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	NO
	DOWEL	30	40	NO
	DOWEL	30	60	NO
	DOWEL	40	50	NO
	ULTRA LOW	30	20	YES
N3	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	NO
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	NO
	DOWEL	30	40	NO
	DOWEL	30	60	NO
	DOWEL	40	50	NO
	ULTRA LOW	30	20	YES



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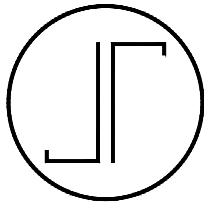
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C1	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	NO
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	NO
	DOWEL	30	40	NO
	DOWEL	30	60	NO
	DOWEL	40	50	NO
	ULTRA LOW	30	20	YES
C2	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	NO
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	NO
	DOWEL	30	40	NO
	DOWEL	30	60	NO
	DOWEL	40	50	NO
ULTRA LOW	30	20	YES	



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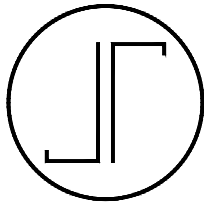
Browns Plains BC

Queensland, 4118

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Blackbutt Profiles				
Wind Region	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Profile Suitable
N1	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	NO
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	NO
	DOWEL	30	40	NO
	DOWEL	30	60	NO
	DOWEL	40	50	NO
	ULTRA LOW	30	20	YES
N2	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	NO
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	NO
	DOWEL	30	40	NO
	DOWEL	30	60	NO
	DOWEL	40	50	NO
	ULTRA LOW	30	20	YES
N3	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	NO
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	NO
	DOWEL	30	40	NO
	DOWEL	30	60	NO
	DOWEL	40	50	NO
	ULTRA LOW	30	20	NO



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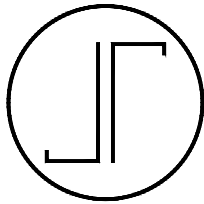
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C1	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	NO
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	NO
	DOWEL	30	40	NO
	DOWEL	30	60	NO
	DOWEL	40	50	NO
	ULTRA LOW	30	20	NO
C2	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	NO
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	NO
	DOWEL	30	40	NO
	DOWEL	30	60	NO
	DOWEL	40	50	NO
ULTRA LOW	30	20	NO	



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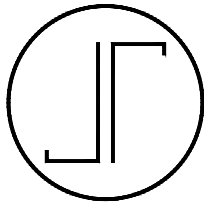
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Thermally Modified Hemlock Profiles				
Wind Region	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Profile Suitable
N1	FIN	30	90	NO
	FIN	30	60	YES
	FIN	30	40	YES
	TRUNCATED FIN	30	60	YES
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	YES
	DOWEL	40	50	YES
	ULTRA LOW	30	20	YES
N2	FIN	30	90	NO
	FIN	30	60	YES
	FIN	30	40	YES
	TRUNCATED FIN	30	60	YES
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	YES
	DOWEL	40	50	YES
	ULTRA LOW	30	20	YES
N3	FIN	30	90	NO
	FIN	30	60	YES
	FIN	30	40	YES
	TRUNCATED FIN	30	60	YES
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	YES
	DOWEL	40	50	YES
	ULTRA LOW	30	20	YES



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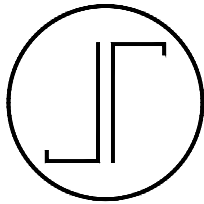
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

C1	FIN	30	90	NO
	FIN	30	60	YES
	FIN	30	40	YES
	TRUNCATED FIN	30	60	YES
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	YES
	DOWEL	40	50	YES
	ULTRA LOW	30	20	YES
C2	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	YES
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	NO
	DOWEL	40	50	NO
ULTRA LOW	30	20	YES	



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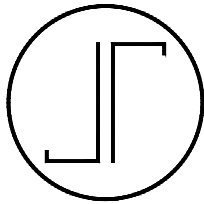
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summertime.com.au

Spotted Gum Profiles				
Wind Region	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Profile Suitable
N1	FIN	30	90	YES
	FIN	30	60	YES
	FIN	30	40	YES
	TRUNCATED FIN	30	60	YES
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	YES
	DOWEL	40	50	YES
	ULTRA LOW	30	20	YES
N2	FIN	30	90	NO
	FIN	30	60	YES
	FIN	30	40	YES
	TRUNCATED FIN	30	60	YES
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	YES
	DOWEL	40	50	YES
	ULTRA LOW	30	20	YES
N3	FIN	30	90	NO
	FIN	30	60	YES
	FIN	30	40	YES
	TRUNCATED FIN	30	60	YES
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	YES
	DOWEL	40	50	YES
	ULTRA LOW	30	20	YES



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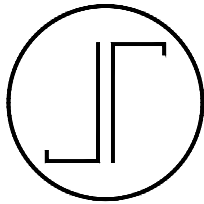
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Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

C1	FIN	30	90	NO
	FIN	30	60	YES
	FIN	30	40	YES
	TRUNCATED FIN	30	60	YES
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	YES
	DOWEL	40	50	YES
	ULTRA LOW	30	20	YES
C2	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	YES
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	YES
	DOWEL	30	40	YES
	DOWEL	30	60	NO
	DOWEL	40	50	YES
ULTRA LOW	30	20	YES	



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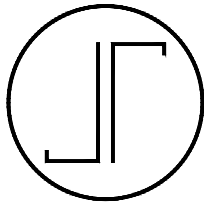
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Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

Valchromat Profiles				
Wind Region	Profile Designation	Profile Width (mm)	Profile Depth (mm)	Profile Suitable
N1	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	NO
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	NO
	DOWEL	30	40	NO
	DOWEL	30	60	NO
	DOWEL	40	50	NO
	ULTRA LOW	30	20	YES
N2	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	NO
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	NO
	DOWEL	30	40	NO
	DOWEL	30	60	NO
	DOWEL	40	50	NO
	ULTRA LOW	30	20	YES
N3	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	NO
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	NO
	DOWEL	30	40	NO
	DOWEL	30	60	NO
	DOWEL	40	50	NO
	ULTRA LOW	30	20	YES



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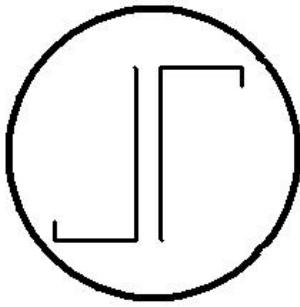
Browns Plains BC

Queensland, 4118

Tel: 07 3800 0973

W: www.summermore.com.au

C1	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	NO
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	NO
	DOWEL	30	40	NO
	DOWEL	30	60	NO
	DOWEL	40	50	NO
	ULTRA LOW	30	20	YES
C2	FIN	30	90	NO
	FIN	30	60	NO
	FIN	30	40	NO
	TRUNCATED FIN	30	60	NO
	DOWEL	40	40	NO
	DOWEL	30	40	NO
	DOWEL	30	60	NO
	DOWEL	40	50	NO
ULTRA LOW	30	20	YES	



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

Tuesday, 12 May 2020

Greg Meyer
Modinex Group
PO Box 3131,
West Ipswich
Qld 4305

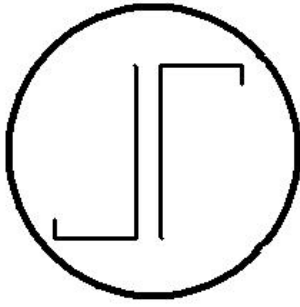
RE: Report on Seismic Capacity of Austratus Rail Cladding System

We have pleasure in presenting the enclosed report and certification to you with respect to the Seismic Capacity of Austratus Rail Cladding System.

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

Yours Faithfully

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

Tuesday, 12 May 2020

Greg Meyer
Modinex Group
PO Box 3131,
West Ipswich
Qld 4305

RE: Report on Seismic Capacity of Austratus Rail Cladding System

The purpose of this letter is to formulate and certify the Seismic Capacity of Austratus Rail Cladding System

Reference Documents:

AS/NZS1170.0:2002: Structural Design Actions—Part 0: General principles
AS1170.4:2007: Structural Design Actions—Part 4: Earthquake Actions in Australia
NZS1170.5:2004: Structural Design Actions—Part 5: Earthquake Actions-New Zealand
AS1720.1:2010 Timber Structures
Austratus Rail Cladding System Design Certification 18-13783

Certification:

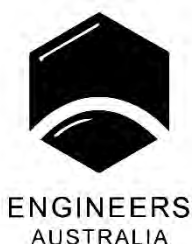
We, Summermore Pty Ltd, being registered Structural and Civil Engineers, hereby confirm that the Austratus Rail Cladding System, when supported by the Studco Rail System and Directly Fixed to a Timber Framed Substrate has a capacity greater than the most extreme seismic loads for New Zealand and Australia

This certificate is limited to the 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 certification. This certificate 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 certificate.

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

Certified by

Ronald Bell
FIEAust (891940), CMEngNZ (1027605), CPEng, NER, APEC Engineer, IntPE(Aus).
Director
Summermore Pty Ltd



REGISTERED
Building Practitioner



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Seismic Capacity of Austratus Rail Cladding System

REPORT

COMPILED FOR



BY SUMMMERMORE PTY LTD

May 2020

1. Introduction

The aim of this report is to investigate the Seismic Capacity of Austratus Rail Cladding System.

1.1. Objectives

The objective of the report is to provide information that will cover the Seismic Capacity of Austratus Rail Cladding System in order to move towards attaining Codemark certification of the product.

1.2. Scope & Limitations

The current work was limited to:

- Seismic Capacity of Austratus Rail Cladding System for New Zealand and Australia.
- Timber and Aluminium 6060-T5 Profiles up to 6000mm in length and $\leq 10\text{kg}$ per piece.
- Direct Fixing only to a Timber Substrate.
- Fixing to the Studco Rail System.

2. Reference Documents for Compliance

The Standards used for reference and analysis are:

AS1170.4:2007: Structural Design Actions—Part 4: Earthquake Actions in Australia

NZS1170.5:2004: Structural Design Actions—Part 5: Earthquake Actions-New Zealand

3. Investigation of NZS1170.5

In order to determine the suitability of the product it is necessary to first determine the most severe load case.

Given that the product is a cladding material it is to be considered as a 'part' and Table 8.1 specifies that the it is Category P.7 with a risk factor $R_p=1.0$ and Limit State SLS1 shall be adopted.

The equation for design response coefficient is given as equation 8.1(1)

$$C_p(T_p) = C(0) C_{Hi} C_i(T_p) \quad \text{Equation 8.2(1)}$$

$$C(0) = 1.33 \text{ (Worst Case)} \quad \text{Table 3.1}$$

$$C_{Hi} = 3.0 \text{ (Worst Case)} \quad \text{Clause 8.3}$$

$$C_i(T_p) = 2.0 \text{ (Worst Case)} \quad \text{Clause 8.4}$$

$$C_p(T_p) = 1.33 * 3.0 * 2.0 = 7.98$$

Horizontal Design Action

$$F_{ph} = C_p(T_p) C_{ph} R_p W_p \leq 3.6 W_p \quad \text{Equation 8.5(1)}$$

$$C_{ph} = 1.0 \quad \text{Clause 8.6}$$

$$R_p = 1.0$$

$$W_p = 0.1 \text{ kN}$$

$$F_{ph} = 7.98 * 1 * 1 * 0.1 = .798 \text{ kN , but}$$

$$3.6 W_p = 0.36 \text{ kN, so}$$

$$F_{ph} = 0.36 \text{ kN}$$

Vertical Design Action

$$F_{pv} = C_{pv} C_{vd} R_p W_p \leq 2.5 W_p \quad \text{Equation 8.5(2)}$$

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$$C_{pv} = 1.0$$

Clause 8.6

$$C_{vd} = 0.7 * 7.98 = 5.59$$

$$R_p = 1.0$$

$$W_p = 0.1 \text{ kN}$$

$$F_{pv} = 1 * 5.59 * 1 * 0.1 = .559 \text{ kN , but}$$

$$2.5 W_p = 0.25 \text{ kN, so}$$

$$F_{ph} = 0.25 \text{ kN}$$

Nett Design Action

$$F_p = \sqrt{(F_{ph}^2 + F_{pv}^2)} = 0.438 \text{ kN}$$

4. Investigation of AS1170.4

In order to determine the suitability of the product it is necessary to first determine the most severe load case.

Given that the product is a cladding material it is to be considered as a 'component' and Clause 8.3 shall be adopted.

The equation for horizontal earthquake force is given as equation 8.3

$$F_c = [k_p Z C_h(0)] a_x [I_c a_c / R_c] W_c, \text{ but } > 0.05 W_c$$

$$I_c = 1.0 \quad \text{Clause 8.2}$$

$$a_c = 1.0 \quad \text{Clause 8.2}$$

$$R_c = 1.0 \quad \text{Clause 8.2}$$

$$W_c = 0.1 \text{ kN}$$

$$k_p = 1.0 \quad \text{Table 3.1}$$

$$Z = 0.6 \text{ (worst case)} \quad \text{Table 3.2}$$

$$C_h(0) = 1.3 \text{ (worst case)} \quad \text{Table 6.4}$$

$$a_x = 3.0 \text{ (worst case)} \quad \text{Clause 8.3}$$

$$F_c = [1.0 * 0.6 * 1.3] * 3.0 * [1.0 * 1.0 / 1.0] * 0.1 = 0.234 \text{ kN}$$

5. Worst Load Case

The worst load case across both standards considered is 0.438kN for a 10kg length of Austratus Rail Cladding System (approximately 6000mm long)

6. Resistance of Design Load

The Austratus Rail Cladding System design certification for the direct fix application requires that the product is fixed at a maximum of 1200 millimetre to a timber substrate with minimum grade of JD5 with Type 17 C/S – 6 Rib SQ Drive #12-12x50mm Screws.

6.1. Fixing to Timber Substrate

The shear value of a #12 screw in JD5 substrate is:

$$N_d = \phi k_1 k_2 k_3 k_4 k_5 k_6 k_7 n Q_k = 0.85 * 1.14 * 1.0 * 1.0 * 1.0 * 1 * 1790 = 1.734 \text{ kN}$$

For the worst possible load case, a profile of up to 6000mm in length with a maximum distance of 1200mm between fixings the provided capacity would be = 6000mm / 1200mm = 5 fixings * 1.734kN = 8.67kN Capacity.

6.2. Fixing to Studco Rail System

Austratus Profile	Type of Profile (Fin/Flat)	Material Used	Maximum Length of Profile (Limited to 10kg/piece and Maximum 6m Length) (m)	Minimum Number of Clips on the Member for Given Rail Spacing		
				600mm Rail Spacing	900mm Rail Spacing	1200mm Rail Spacing
90 x 19	Flat	Hemlock	6.00	10	5	5
		Cedar	6.00	10	5	5
90 x 19 Aluminium	Flat	Aluminium 6060	6.00	10	5	5
30 x 90	Fin	Hemlock	5.02	8	4	4
		Cedar	6.00	10	5	5
30 x 90 Aluminium	Fin	Aluminium 6060	6.00	10	5	5
30 x 60	Fin	Hemlock	6.00	10	5	5
		Cedar	6.00	10	5	5
30 x 60 Aluminium	Fin	Aluminium 6060	6.00	10	5	5
30 x 60 Angled	Fin	Hemlock	6.00	10	5	5
		Cedar	6.00	10	5	5
30 x 60 Angled Aluminium	Fin	Aluminium 6060	6.00	10	5	5
30 x 40	Fin	Hemlock	6.00	10	5	5
		Cedar	6.00	10	5	5
30 x 40 Aluminium	Fin	Aluminium 6060	6.00	10	5	5

For the worst case the smallest number of clips on a member with a maximum weight of 10kg is 4 clips for a 30x90 Profile in Hemlock.

Capacity of Clip = 0.172kN (Hemlock Fin Profile) Austratus Rail Design Certification Ref 17-13783-S01. Plastic Ceiling Clip Capacities

$$4 \text{ Clips} * 0.172\text{kN} = 0.688\text{kN}$$

For the worst case of clips with the lowest strength capacity on a Cedar Fin Profile with a minimum of 5 clips.

Capacity of Clip = 0.103kN (Cedar Fin Profile) Austratus Rail Design Certification Ref 17-13783-S01. Plastic Ceiling Clip Capacities

$$5 \text{ Clips} * 0.103\text{kN} = 0.515\text{kN}$$

7. Design Load Vs Capacity

The Austratus Rail Cladding System, whether supported on the Studco Rail or Direct Fixed to a Timber Substrate has a capacity greater than the most extreme seismic loads for New Zealand and Australia.



Ronald Bell
FIEAust (891940), CMEngNZ (1027605), CPEng, NER, APEC Engineer, IntPE(Aus).
Director
Summermore Pty Ltd