



NZ DESIGN GUIDE

# **CONNECTORS & TIE-DOWNS**

**2024**

## PRYDA BUILDING GUIDE OVERVIEW

Pryda has developed this guide to accommodate New Zealand building practices. It is important that designers, engineers, builders, inspectors and building authorities are familiar with the benefits and critical requirements of the system. Pryda timber connectors, trusses and beams comply with the New Zealand Building Code, Section B1 Structure and B2 Durability, having been designed in accordance with sound and widely accepted engineering principles to comply with NZS3604:2011.

The capacities reported in this publication are limit state design capacities and not characteristic strengths thereby allowing direct comparison with design reactions reported in Pryda design software and Pryda design reports. This document supersedes and replaces all the previous publications of Builder's Guide.

For further design advice or engineering support regarding the Pryda products discussed in this publication please phone us at **0800 88 22 44** or visit our website - **[www.pryda.co.nz](http://www.pryda.co.nz)**.

The Pryda Design Guide features a Building Consent Documentation Reference for many connection details. This is aimed to encourage designers to align details in the building consent documentation with useful information for easy reference for builders and building officials at the time of inspection. The process is illustrated on the following page. It should be recognised that this is not a requirement, and fabricators may choose to present information in various formats.

The **Building Consent Documentation Reference** should not be confused with the Pryda product code.

### The Company

Pryda New Zealand is an autonomous division of USA-based Illinois Tool Works Inc. a Fortune 200 diversified manufacturing company with almost 100 years of history. Other successful ITW brands include Paslode, ITW Proline, Ramset and Reid Construction Systems. Pryda also gains valuable benefits in product, fabrication machinery and software development from its association with other ITW software and truss connector suppliers from around the world.

### Who is Pryda?

Pryda was born in Napier, New Zealand in 1964. Pryda has remained an integral part of the building industry in New Zealand for over 50 years, particularly in timber truss and

frame solutions with the development of a diverse range of timber connectors and structural brackets. Today Pryda remains a trusted New Zealand brand on building sites, in trade stores and in offices of architects, engineers and designers.

Pryda utilises world-class technology to provide a total system package to its licensed truss and frame plants, including fully integrated software and production systems, access to world leading manufacturing equipment and the highest levels of technical support.

### Our Philosophy

Pryda develops solutions to common construction challenges on the philosophy, "**safer, faster, smarter, easier**".

Pryda's philosophy is a unique method of looking at the total business needs of its licensed truss and frame fabricators and providing cost effective solutions that not only meet current requirements but also identify and satisfy long term goals.

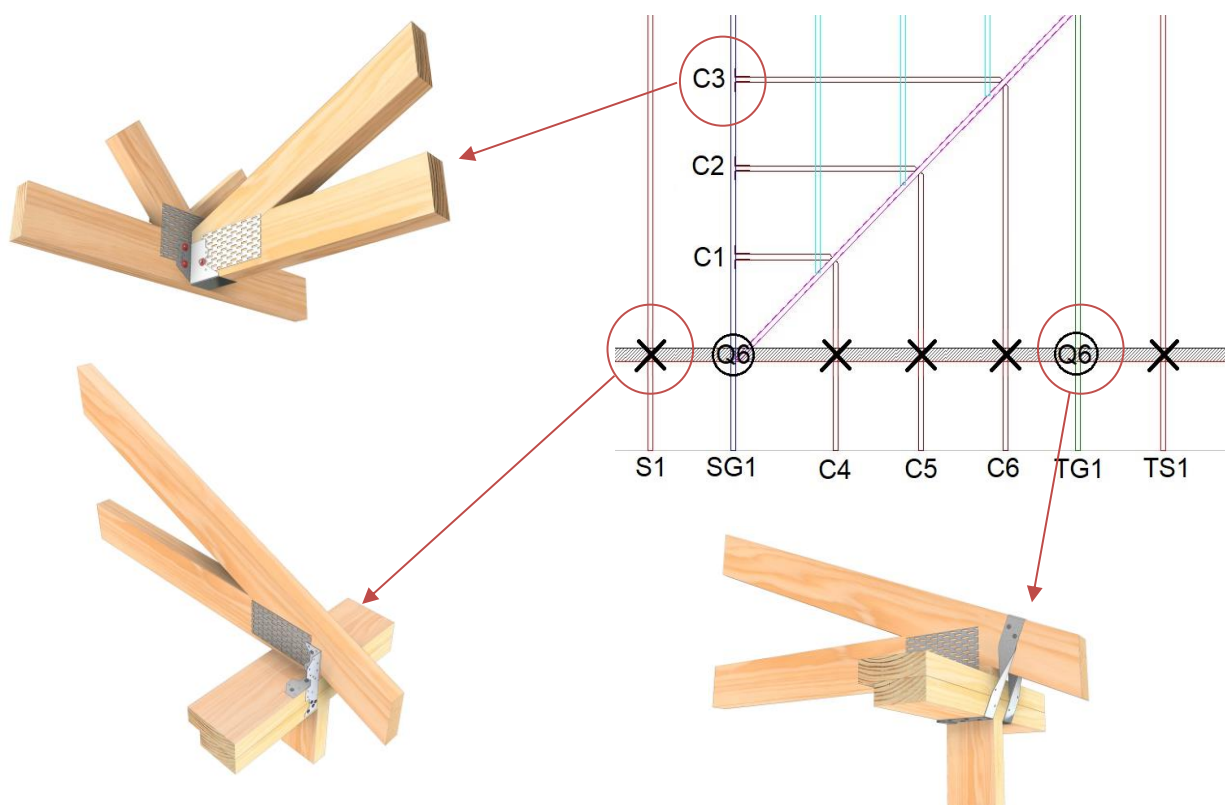
## BUILDING CONSENT DOCUMENTATION REFERENCE INDEX

FOUNDATION & SUBFLOOR	Subfloor Fixing	P6	6kN Pile Bearer Kit
		P12	12kN Pile Bearer Kit
	Foundation Strengthening	LB1	10kN Load Foundation slab strengthening
		LB2	20kN Load Foundation slab strengthening
		LB3	30kN Load Foundation slab strengthening
WALL	Bottom Plate Fixing	BP1	Sheet Brace Strap 6kN
		BP2	Sheet Brace Strap 12kN
		BP3	Stud Anchor 6kN
		BP4	Stud Anchor 12kN
		BP6	Bottom Plate Anchor
	Timber Lintel Fixing system	L1	1.4kN lintel fixing
		L2	2.8kN lintel fixing
		L3	8.0kN lintel fixing
		L4	14.0kN lintel fixing
	Top Plate to Stud Connection	TPO	0.7kN Top Plate to Stud
		TP1	1.7kN Top Plate to Stud
		TP2	2.5kN Top Plate to Stud
		TP3	4.7kN Top plate to Stud
	Claw Beam Connection System	L9	Claw Beam Lintel Fixing Various
		L10	Claw Beam Lintel Fixing Various
		L11	Claw Beam Lintel Fixing Various
		L12	Claw Beam Lintel Fixing Various
		L13	Claw Beam Lintel Fixing Various
		L14	Claw Beam Lintel Fixing Various
		L15	Claw Beam Lintel Fixing Various
ROOF FRAMING	Roof Component Tie Down Connection	Z	2 / Z nails ZL or ZR
		U	2 / U nails
		CP9	2 / CPH190 Ceiling Purlin /Hanger
		X	1 / MGL (Multigrip long)
		2X	2 / MGL
		NC4	1 / NPPC4 Concealed Purlin Cleat
		NC6	1 / NPPC6 Concealed Purlin Cleat

ROOF FRAMING	Roof Component Tie Down Connection	NC8	1 / NPPC8 Concealed Purlin Cleat
		Q6	1 / MPQHS6 Cyclone Strap
		Q9	1 / QHS9 Cyclone Strap
		Q6*	1 / MPQHS6 Cyclone Strap, wrap legs under support member
		Q9*	1 / QHS9 Cyclone Strap, wrap legs under support member
	Roof Component to Roof Component Connection	VS	Variable Skew Hanger
		MG	Multigrip
		MGL	Multigrip Long
		A	MPFB4590 Joist Hanger
		B	MPFB45120 Joist Hanger
		C	MPFB45180 Joist Hanger
		D	FB94/152 Joist Hanger
		NC8	2 / NPPC8
		NPA	2 / Nail-on Angle

## BUILDING CONSENT DOCUMENTATION REFERENCE

The Pryda Builders Guide features **building consent documentation references** for many connection details. This is aimed to encourage designers to align details in the building consent documentation with useful information in the Pryda Builders Guide for easy reference for builders and building officials at the time of inspection. The process is illustrated below.



# FRAME & TRUSS MANUFACTURERS ASSOCIATION CODE OF PRACTICE

## 1 The Code of Practice

### 1.1 Purpose

The FTMA Code of Practice is intended to provide a means of assurance to consumers, specifiers, and Building Consent Authorities (BCAs) by way of publishing the standards and procedures that members agree to. In this way there is a basis for comparison with non-members as well as an industry-based benchmark from which expectations can be managed.

### 1.2 Intention

It is intended that:

- Adherence to the Code of Practice will enable a qualifying fabricator to certify and mark their product as compliant to the Code of Practice.
- After a period of implementation and review adherence to the Code of Practice will be audited by a third-party auditor.
- That adherence to the Code of Practice will be required for membership of FTMA.

### 1.3 Content

The Code of Practice includes:

- Section 2 - Truss Documentation

## 2 Truss documentation

### 2.1 Introduction

The intention of this section is to describe the documentation required to be produced by a fabricator of nail-plated timber trusses for use by its customer. The information contained in the document may be used by a Building Consent Authority (BCA) to satisfy the provisions of the Building Act 2004 and reasonable BCA processes in the issuing of a Building Consent or Code Compliance Certificate (CCC).

For practical purposes, the production of the documentation is a two-stage process. The first stage is to provide documentation to support the issuing of a building consent.

This can be achieved by providing:

- a 'Buildable' truss layout.
- Fabricator Design Statement.
- a Producer Statement – Design.

These documents show that trusses have been designed by an accredited fabricator<sup>1</sup>, licensed to use specific design software, applying the appropriate loads, and using the appropriate materials to ensure compliance with the NZ Building Code (NZBC) as well as giving notification of any resultant loads that may affect the supporting structure.

This documentation is intended to be provided to the “design lead”<sup>2</sup> to then consider when completing the structural design before providing it to the BCA as part of a building consent application. The BCA may then issue a building consent that is subject to receiving further documentation.

The second stage is to support the issuing of the CCC and is required prior to on-site inspection by the BCA.

This can be achieved by providing:

- an 'As Built' truss layout.
- a Fabricator Design Statement.
- a Producer Statement – Design.
- a Manufacturing Statement.

This is similar documentation to that provided for the first stage but ensures that the final construction details of the manufactured trusses accurately reflect what was built, which can then be recorded by the BCA as part of the project documentation. Such further documentation then satisfies the conditions on which the consent had been issued. The documentation is intended to be provided to the builder on-site and to the customer who should make it available to the BCA prior to on-site inspection.

When producing an 'As Built' truss layout and final truss detailing for supply, it is expected that a fabricator shall give consideration to any 'Buildable' truss layout that has been consented by a BCA. The fabricator shall consider any structural implications that may result from a different layout to that consented and if any changes are to be made then these shall be communicated to the customer to pass on to their design team for consideration and approval before proceeding with supply. It is not expected that fabricators should have to follow exactly a consented layout, particularly when a competitive party may have provided it. However, a fabricator will have to produce an 'As Built' truss layout as per 2.3.1. This two stage process is reflected in section 7.5 of the guidance document "Guide to applying for a building consent" published by the Department of Building and Housing. Acknowledgement and support for the COP Section 2 – Truss Documentation is also outlined in the publication from DBH Codewords issue 044. Both publications are available online at [www.dbh.govt.nz](http://www.dbh.govt.nz).

While it is expected that the documentation is going to be provided to assist a BCA in the consent or CCC process it should be noted that the contractual relationship is between a fabricator and its customer and that the responsibility to provide this information to a BCA rests with the applicant for a building consent.

#### Notes:

1. An accredited fabricator is a company that has a formal agreement with a nail-plate manufacturer to use their products in the manufacture of trusses. The nail-plate manufacturer in turn licenses the fabricator to use specific design software supplied and underwritten by the nail-plate manufacturer.
2. A design lead refers to the architect or draftsman responsible for the overall design of the building.

## PRODUCER STATEMENT PRYDA TIMBER CONNECTORS

**August 2024**

This Producer Statement is issued by Pryda NZ to cover the use, installation, and durability of Pryda Timber Connectors for both structural application and durability as required by the New Zealand Building Code clauses B1 & B2, respectively.

### Description

The Pryda timber connectors are manufactured from either Z275 or Z600 galvanised coil. Some brackets are also available in hot dipped galvanised or stainless steel for use in certain exposed and covered situations.

### Application

Pryda timber connectors are designed for specific connections of timber to timber, primarily, as well as masonry, concrete, and steel. Please contact Pryda should you require assistance relating to these connectors.

### Installation

Pryda timber connectors should be installed without damage to the finished surfaces. Storage prior to use to be in dry moisture free conditions that would not affect the future durability of the product.

### Design Capacity

As timber grades vary the design capacity is derived using the methods in NZS AS1720.2022 and is mostly dependent on the shear values of the nails, screws, and bolts in timber. Most commonly used Timber Connectors have published limit state design strengths published in our literature.

### Durability

The durability of Pryda timber connectors is in accordance with the acceptable solutions contained in Table 4.1 and Table 4.2 of NZS3604:2011 to achieve a 50 year life expectancy for the connectors where applicable. Alternative solutions and direct applications are to be found elsewhere in this publication.



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Dr. Kristopher Orlowski

BSc (Eng), MEng, DR-PHILENG, CPEng AUS (4125476), CPEng NZ (2001879)

**STRUCUTRAL ENGINEER**

**Pryda**

**ITW Construction, Asia Pacific**

41 Poland Rd, Glenfield, 0629

PO Box 100303, North Shore 0757, Auckland.

Tel: 0800 88 22 44

Email: [info@prydaanz.com](mailto:info@prydaanz.com)



## PRODUCER STATEMENT STRUCTURAL BRACKETS

### Pryda Structural Brackets

#### August 2024

This Producer Statement is issued by Pryda NZ to cover the use, installation, and durability of Pryda Structural Brackets for both structural application and durability as required by the New Zealand Building Code clauses B1 & B2, respectively.

#### Description

Pryda Structural Brackets are fabricated from flat bar steel. They are mostly available in hot dipped galvanised finish with a selection also available in stainless steel for use as an architectural feature or in certain exposed and covered situations as covered in NZS3604:2011. The zinc coating is applied in accordance with AS/NZS 4680:2006. The remaining Pryda Structural Brackets are finished in electro galvanised.

#### Application

Pryda Structural Brackets are designed to connect timber to masonry, concrete, and steel. The brackets are designed for specific connections of timber to other materials. Please contact Pryda technical service should you require assistance with your intended application.

#### Installation

The Pryda Structural Brackets should be installed without damage to the finished surfaces. Storage prior to use to be in dry moisture free conditions that would not affect the durability of the product.

#### Characteristic Strength

When used with timber, the characteristic strength is derived by the verification method in accordance with the NZBC standard NZS3603:1993. The withdrawal strength of the bracket varies with the type of substrate it is installed in, hence the limit state design capacities shall be determined by the design engineer taking into consideration the above point.

#### Durability

The durability of the Pryda Structural Brackets is more than the acceptable solutions contained in Table 4.1 of NZS3604:2011 in order to achieve a 50-year life expectancy for the brackets. Pryda Structural Brackets are hot-dipped galvanised to a level equal to or exceeding 500g/m<sup>2</sup>. Depending on the environmental conditions and exposure to marine conditions, the surface of the stainless-steel brackets can be affected by tea staining. However, tea staining does not affect the structural integrity of the fitting.



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Dr. Kristopher Orlowski  
BSc (Eng), MEng, DR-PHILENG, CPEng AUS (4125476), CPEng NZ (2001879)  
**STRUCTURAL ENGINEER**  
Pryda  
ITW Construction, Asia Pacific

#### Pryda New Zealand

A division of ITW New Zealand Ltd 41 Poland Rd, Glenfield, 0629  
PO Box 100303, North Shore 0757 Auckland  
Tel: 0800 88 22 44  
Email: [info@prydaanz.com](mailto:info@prydaanz.com)



## ENVIRONMENT DEFINITIONS & PRODUCT SELECTION

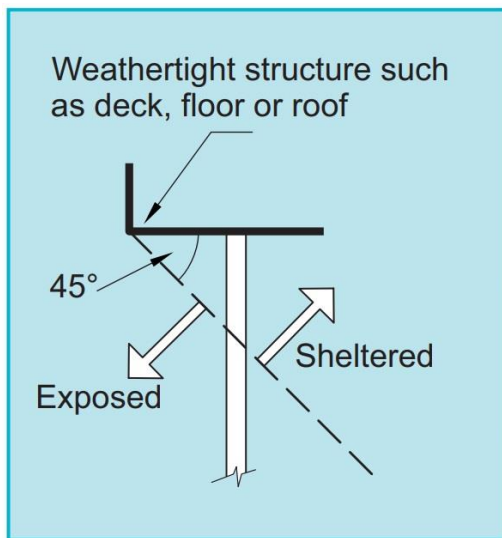
### Alternative solution to Table 4.1 NZS3604:2011

Under the building code, **Clauses B2 Durability**, requirements for steel fasteners are:

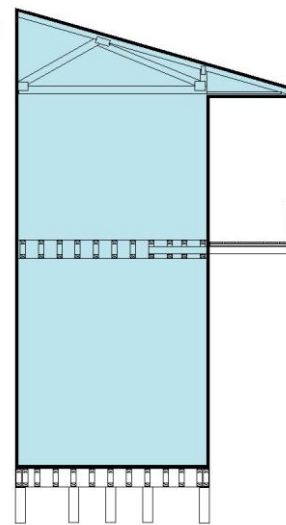
- For structural steel fasteners with difficult access and replacement - 50 years or nominated period
- For structural steel fasteners with moderate ease of access and replacement - 15 years or nominated period

### Environment Definitions

#### Exposed/Sheltered



#### Closed



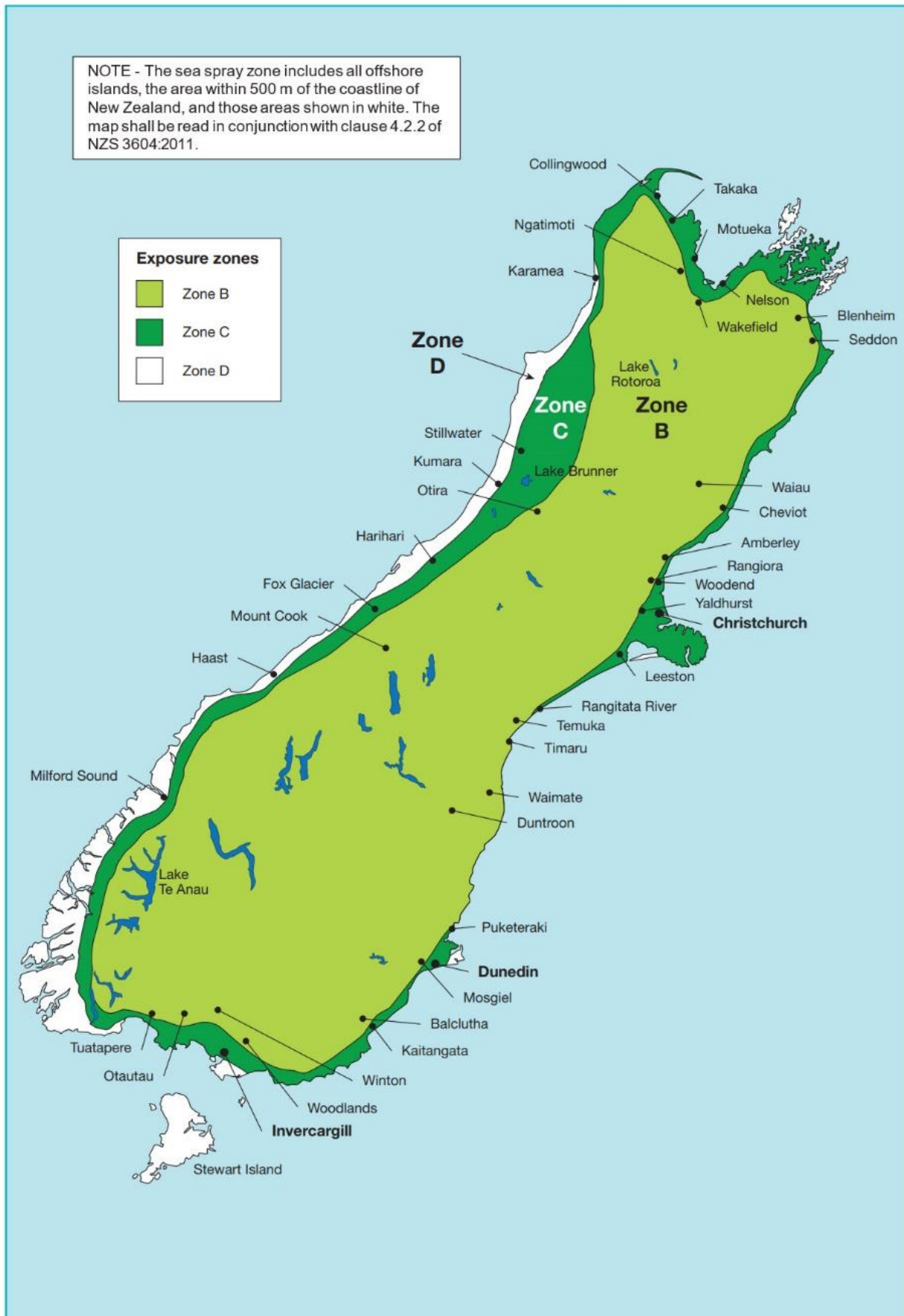
Zone	Location		Environment	Product
All Zones	Fully enclosed walls, floors & roof spaces		Closed	Pryda Zinc Coated Products
Zones B & C	All subfloor fastenings more than 600mm above the ground	Vented 7000mm <sup>2</sup> /m <sup>2</sup> or LESS	Sheltered	Pryda Stainless Steel Products
		Vented MORE than 7000mm <sup>2</sup> /m <sup>2</sup>	Exposed	Pryda Stainless Steel Products
	All subfloor fastenings within 600mm of the ground	Sheltered and exposed		Pryda Stainless Steel Products
	All other structural fixings	Sheltered		Pryda Stainless Steel Products
		Exposed		Pryda Stainless Steel Products Pryda SBK HDG Brackets
Zones D	All structural fittings	Sheltered and exposed		Pryda Stainless Steel Products

Notes: All Pryda galvanised products comply with NZS3604:2011 Table 4.2

## EXPOSURE ZONES

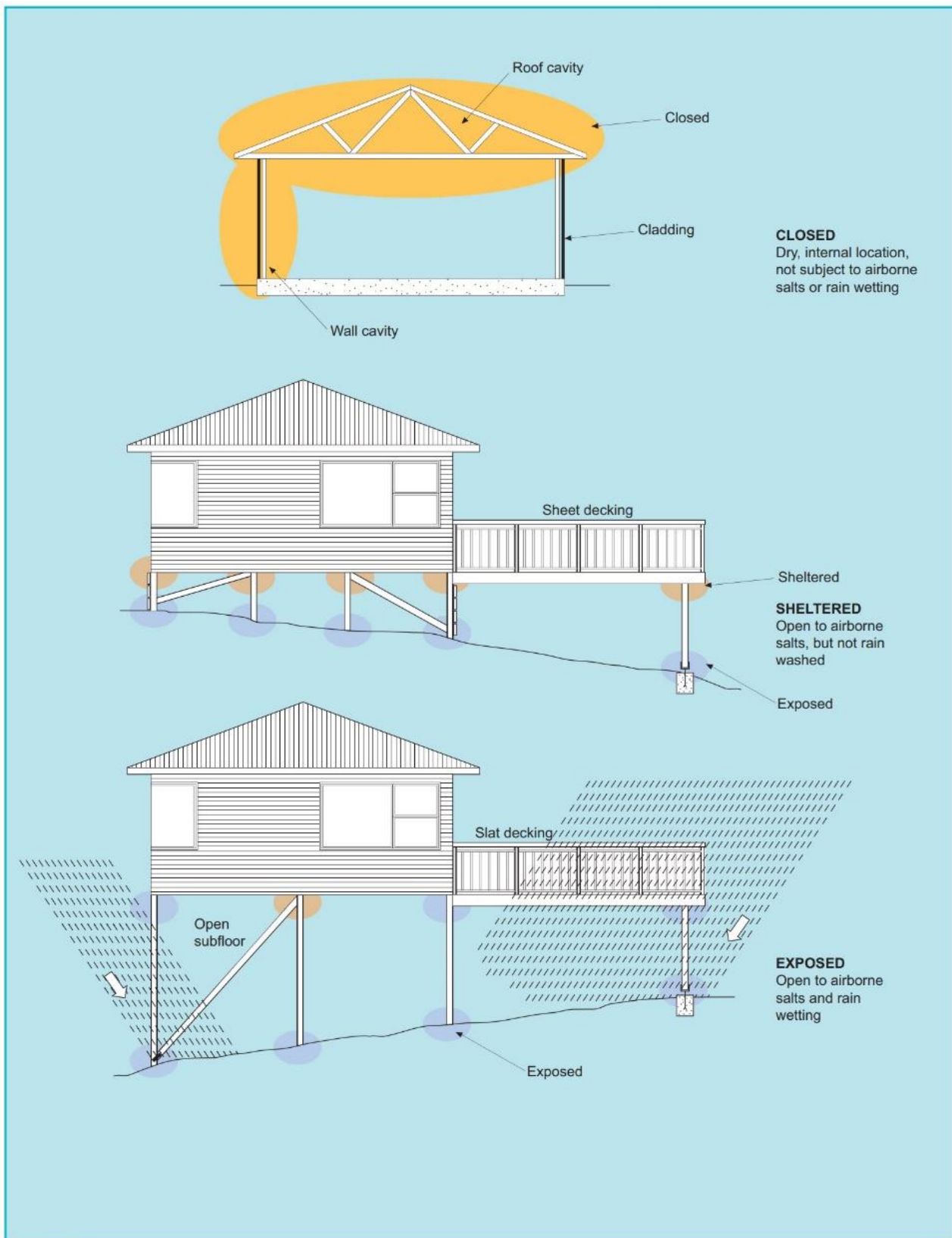


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## EXPOSURE DEFINITIONS



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# NZ CEILING AND PURLIN HANGER

**CodeMark**   
CMNZ-10029

A simple and economical connection between timber members crossing at right angles.

## FEATURES AND BENEFITS

**SIMPLE:** Easy to use for numerous right-angle connections.

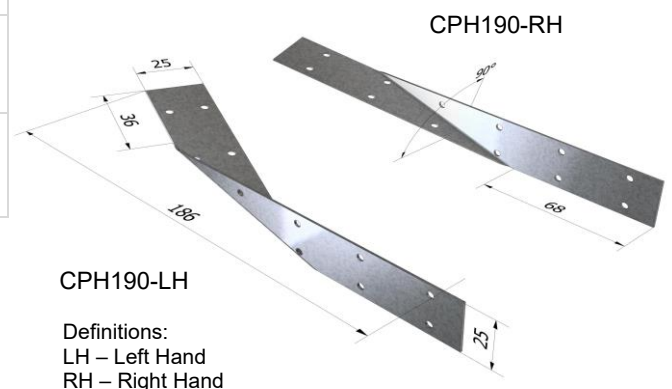
**FAST:** Can be used as a tie-down and hanging connector using nail fasteners.

**DURABLE:** Made from G300 Z275 steel or Stainless Steel 304.

## SPECIFICATIONS

<b>PRODUCT CODE</b>	CPH190-LH, CPH190-RH, CPH190-LH/S, CPH190-RH/S
<b>STEEL</b>	G300 or Stainless Steel 304
<b>THICKNESS</b>	1mm
<b>CORROSION RESISTANCE</b>	Z275 or Stainless Steel 304
<b>FASTENER</b>	Pryda Timber Connector Nails 35 x 3.15mm

At the time of print, this product is NOT subject to any known warnings and bans found in Building Act 2004.



\*All dimensions shown are in "mm".

## CEILING AND PURLIN HANGER

PRODUCT CODE	MATERIAL	THICKNESS (mm)	LENGTH (mm)
CPH190-LH	G300 Z275	1	186
CPH190-RH		1	186
CPH190-LH/S	STAINLESS STEEL 304	1	186
CPH190-RH/S		1	186

## DURABILITY

The following table provides an easy guide when selecting a Pryda product corrosion protection finish that will meet and exceeds NZS 3604:2011 Table 4.1.

ZONE	LOCATION		ENVIRONMENT	PRODUCT
All Zones	Fully enclosed walls, floors, and roof spaces		Closed	Pryda Zinc Coated Products Z275
Zones B and C	All subfloor fastenings more than 600mm above the ground	Vented 7000mm <sup>2</sup> /m <sup>2</sup> or LESS	Sheltered	Pryda Stainless Steel 304 Products <sup>(3)</sup>
		Vented MORE than 7000mm <sup>2</sup> /m <sup>2</sup>	Exposed	Pryda Stainless Steel 304 Products <sup>(3)</sup>
	All subfloor fastenings within 600mm of the ground	Sheltered and Exposed		Pryda Stainless Steel 304 Products <sup>(3)</sup>
	All other structural fixings	Sheltered		Pryda Stainless Steel 304 Products <sup>(3)</sup>
		Exposed		Pryda Stainless Steel 304 Products <sup>(3)</sup>
Zone D	All structural fixings	Sheltered and Exposed		Pryda Stainless Steel 304 Products <sup>(3)</sup>

Notes:

1.All Pryda galvanised products comply with NZS3604:2011 Table 4.2.

2.Refer to NZS3604:2011 for all environment definitions.

3.Routine inspection and cleaning using soap and fresh warm water is an integral part of the ongoing care and maintenance of stainless steel to preserve its appearance.

## STORAGE AND HANDLING

Prior to use, the Pryda products shall be stored in a weatherproof environment and protected from moisture. Care must be taken to avoid any damage to the surface of the product protective galvanised coating and profile that may impact the performance.

## COMPLIES WITH THE FOLLOWING PROVISIONS OF THE NEW ZEALAND BUILDING CODE (NZBC)

**Clause B1 STRUCTURE:** Performance B1.3.1, B1.3.2 and B1.3.4. Loads arising from self-weight, imposed gravity loads arising from use, earthquake, snow, and wind. (i.e., B1.3.3 (a), (b), (f), (g), and (h)). Only some may apply for a specific use of the component.

**Clause B2 DURABILITY:** Performance B2.3.1 (a) not less than 50 years and B2.3.2.

**Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1.

## DESIGN CAPACITIES

Design Loads are for a PAIR of Hangers CPH190-LH and CPH190-RH

NAILS PER LEG (EACH END)	DESIGN CAPACITY ( $\phi N_j$ ) (kN) FOR TIMBER JOINT GROUP (CPH190-LH, CPH190-RH)
	JD5
2	5.3
3	8
4	10.7

Notes:

1. Design values are based on SG8 timber and for timber which meets minimum JD5 timber as defined in AS/NZS 1720.
2. Limit State Design capacities are shown in table to resist Wind Uplift.
3. Use Pryda 35 x 3.15mm Timber Connector Nails.

Design Loads are for a PAIR of Stainless Steel Hangers CPH190-LH/S and CPH190-RH/S

NAILS PER LEG (EACH END)	DESIGN CAPACITY ( $\phi N_j$ ) (kN) FOR TIMBER JOINT GROUP (CPH190-LH/S, CPH190-RH/S)
	JD5
2	3.6
3	5.5
4	7.3

Notes:

1. Design values are based on SG8 timber and for timber which meets minimum JD5 timber as defined in AS/NZS 1720.
2. Limit State Design capacities are shown in table to resist Wind Uplift.
3. Use Pryda Stainless Steel 35 x 3.15mm Timber Connector Nails.

## APPLICATION AND SCOPE OF USE

Pryda Ceiling and Purlin Hangers are simple tie-down connectors with a variety of uses in the building.

Pryda Ceiling and Purlin Hangers are certified when used and installed in accordance with the product datasheet shown connection details. Pryda fasteners approved for the installation form an integral part of the connection and therefore should be used with all Pryda products installation unless otherwise approved by a certified structural Engineer. Only use the product for its intended applications and the selected product material type within the specified environmental condition as outlined in NZS 3604:2011 Table 4.1. (Refer to Durability section for more details). Fastener material type shall match the selected Pryda product. i.e., Galvanised fasteners with galvanised products. Stainless Steel fasteners with stainless steel products.



## INSTALLATION FOR CEILING JOIST CROSSING PERPENDICULAR TO BEAM CONNECTION

### STEP 1



- Ensure the crossing members are plumb and crossing perpendicular to each other. Position the short leg of the Ceiling and Purlin Hanger to the supported member (ceiling joist), making sure the hanger leg is laying flat on the timber face.
- The long leg of the Ceiling and Purlin Hanger should also lay flat to the supporting member timber face.
- Fix each leg with the same number of nails according to the capacity table. 3 x Pryda 35 x 3.15mm Timber Connector Nails option shown, fixed to each leg.

### STEP 2A



- The Ceiling and Purlin Hangers are to be installed in PAIRS at each support.
- Avoid positioning the hanger where nails are too close to the timber edge. Timber at the connection point must be free from any timber defects such as knots, waness, and splits.
- Left Hand (LH) and Right Hand (RH) shown.

Pryda.com.au, Pryda.co.nz DECEMBER 2023 - V1.02 CHECK PRYDA REGION WEBSITE FOR MOST CURRENT VERSION

For more information call 1300 657 052 (Australia), 0800 88 22 44 (New Zealand) or email [info@pryda.com.au](mailto:info@pryda.com.au)

**STEP 2B**

- Ceiling and Purlin Hangers installed on opposing corners using 2 x LH, fixed with 3 nails option to each leg per hanger. Hanger installed in PAIRS.

**Contact details**

Manufacture location	New Zealand
Legal and trading name of manufacturer	Fairfit Engineering
Legal and trading name of supplier	Pryda New Zealand -a Division of ITW New Zealand
Supplier address for service	23-29 Poland Road, Wairau Valley, Auckland, 0627, New Zealand
Supplier website	Pryda.co.nz
Supplier email	info@prydaanz.com
Supplier phone number	0800 88 22 44
Supplier NZBN	9429039833129

# NZ CONCEALED PURLIN CLEATS

**CodeMark** >>>  
CMNZ-10031

Strong and rigid connection frequently used to connect trusses/rafters to beams and wall plates.

## FEATURES AND BENEFITS

**SIMPLE:** Can also be used to connect wall plates to studs.

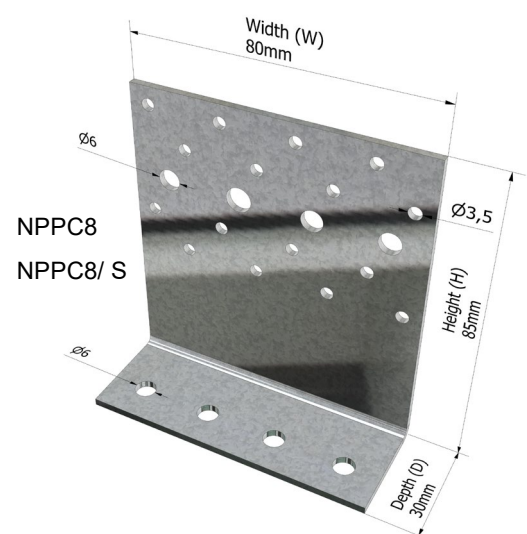
**FAST:** Can be fixed with nails or screws.

**DURABLE:** 2mm G300 Z275 Galvanised Steel or Stainless Steel 304.

## SPECIFICATIONS

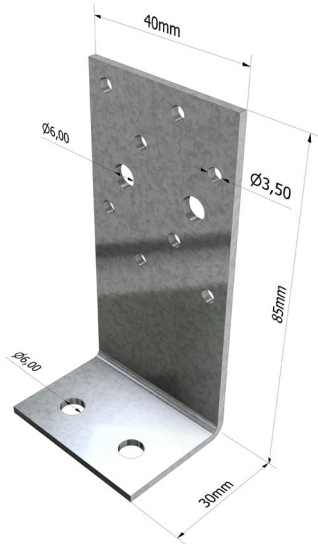
<b>PRODUCT CODE</b>	NPPC4, NPPC6, NPPC8, NPPC4/S, NPPC6/S, NPPC8/S
<b>STEEL</b>	G300 or Stainless Steel 304
<b>THICKNESS</b>	2mm and 1.5mm for Stainless Steel
<b>CORROSION RESISTANCE</b>	Z275 or Stainless Steel 304
<b>FASTENERS REQUIRED</b>	Pryda 12G x 35mm Timber Connector Screws. Pryda 35 x 3.15mm Timber Connector Nails. 14G x 75mm Type 17 Hex Head Screws.
<b>HEIGHT</b>	85mm
<b>WIDTH</b>	40mm, 60mm, 80mm
<b>DEPTH</b>	30mm

At the time of print, this product is NOT subject to any known warnings and bans found in Building Act 2004.

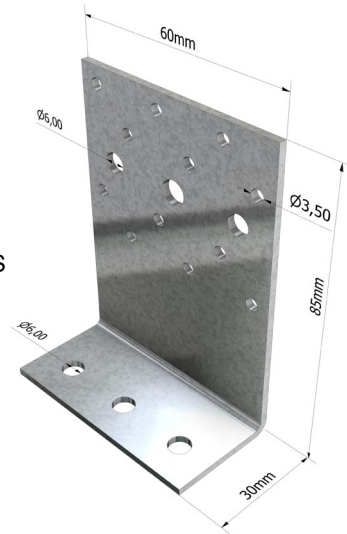


\*All dimensions shown are in "mm."

NPPC4  
NPPC4/S



NPPC6  
NPPC6/S



## NZ CONCEALED PURLIN CLEATS

PRODUCT CODE	MATERIAL	THICKNESS mm	WIDTH (W) mm	HEIGHT (H) mm	DEPTH (D) mm
NPPC4	G300 Z275 Galvanised Steel	2	40	85	30
NPPC6		2	60	85	30
NPPC8		2	80	85	30
NPPC4/S	Stainless Steel 304	1.5	40	85	30
NPPC6/S		1.5	60	85	30
NPPC8/S		1.5	80	85	30

## DURABILITY

The following table provides an easy guide when selecting a Pryda product corrosion protection finish that will meet and exceeds NZS 3604:2011 Table 4.1.

ZONE	LOCATION		Environment	Product
All Zones	Fully enclosed walls, floors, and roof spaces		Closed	Pryda Zinc Coated Products Z275
Zones B and C	All subfloor fastenings more than 600mm above the ground	Vented 7000mm <sup>2</sup> /m <sup>2</sup> or LESS	Sheltered	Pryda Stainless Steel 304 Products <sup>(3)</sup>
		Vented MORE than 7000mm <sup>2</sup> /m <sup>2</sup>	Exposed	Pryda Stainless Steel 304 Products <sup>(3)</sup>
	All subfloor fastenings within 600mm of the ground	Sheltered and Exposed		Pryda Stainless Steel 304 Products <sup>(3)</sup>
	All other structural fixings	Sheltered		Pryda Stainless Steel 304 Products <sup>(3)</sup>
		Exposed		Pryda Stainless Steel 304 Products <sup>(3)</sup>
Zone D	All structural fixings	Sheltered and Exposed		Pryda Stainless Steel 304 Products <sup>(3)</sup>

Notes:

1.All Pryda galvanised products comply with NZS3604:2011 Table 4.2.

2.Refer to NZS3604:2011 for all environment definitions.

3.Routine inspection and cleaning using soap and fresh warm water is an integral part of the ongoing care and maintenance of stainless steel to preserve its appearance.

## STORAGE AND HANDLING

Prior to use, the Pryda products shall be stored in a weatherproof environment and protected from moisture. Care must be taken to avoid any damage to the surface of the product protective galvanised coating and profile that may impact the performance.

## COMPLIES WITH THE FOLLOWING PROVISIONS OF THE NEW ZEALAND BUILDING CODE (NZBC)

**Clause B1 STRUCTURE:** Performance B1.3.1, B1.3.2 and B1.3.4. Loads arising from self-weight, imposed gravity loads arising from use, earthquake, snow, and wind. (i.e., B1.3.3 (a), (b), (f), (g), and (h)). Only some may apply for a specific use of the component.

**Clause B2 DURABILITY:** Performance B2.3.1 (a) not less than 50 years and B2.3.2.

**Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1.

## APPLICATION AND SCOPE OF USE

Pryda Concealed Purlin Cleats (NPP) are certified when used and installed in accordance with the product datasheet connection details. Pryda fasteners approved for the installation form an integral part of the connection and therefore should be used with all Pryda products installation unless otherwise approved by a certified structural Engineer. Only use the product for its intended applications and the selected product material type within the specified environmental condition as outlined in NZS 3604:2011 Table 4.1. (Refer to Durability section for more details). Fastener material type shall match the selected Pryda product. i.e., Galvanised fasteners with galvanised products, and stainless steel fasteners with stainless steel products.

## DESIGN CAPACITIES

For truss tie-down application, it is assumed that the wall plate, and its fixings to studs, are adequate in its own right, to resist design loads given in the table. Minimum single plate thickness 35mm. Minimum double plate thickness 70mm.

### NPPC8 SHORT FLANGE FIXING:

Double 45mm wall plates – 4 x 14G x 75mm Type 17 Hex Head Screws (Galvanised or Stainless Steel)

### NPPC8 LONG FLANGE – NAIL AND SCREW OPTIONS

Using 12 x Pryda 35 x 3.15mm Timber Connector Nails. Code: OSNGB (Galvanised) or OSNBCI/SS (Stainless Steel)

OR

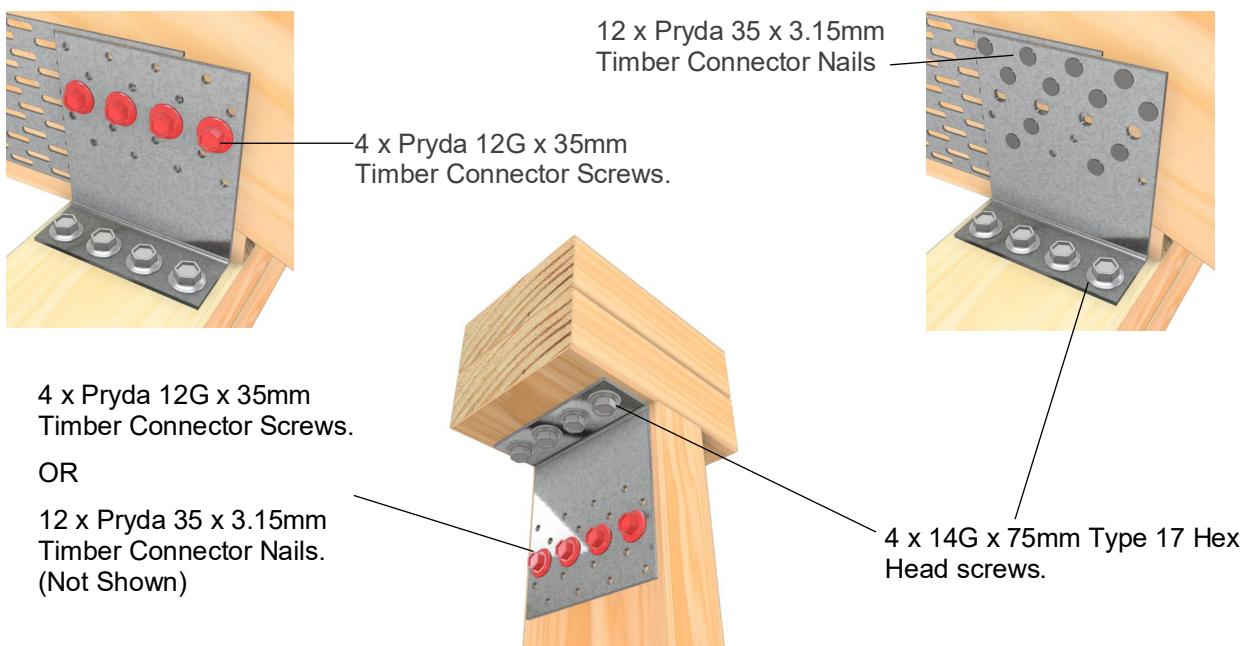
Using 4 x Pryda 12G x 35mm Timber Connector Screws. Code: TCS12-35(Galvanised) or HH1235SS (Stainless Steel)

NPPC8 (Galvanised)		
JOINT GROUP OF TRUSS CHORD OR STUD	UPLIFT CAPACITY (kN) FOR A SINGLE CLEAT	
	12 x Pryda Timber Connector Nails	4 x Pryda Timber Connector Screws
JD5	3.75	6.8
PAIR OF NPPC8 (Galvanised)		
JD5	7.5	13.6

NPPC8/S (Stainless Steel)		
JOINT GROUP OF TRUSS CHORD OR STUD	UPLIFT CAPACITY (kN) FOR A SINGLE CLEAT	
	12 x Pryda Timber Connector Nails	4 x Pryda Timber Connector Screws
JD5	3.75	5.3
PAIR OF NPPC8/S (Stainless Steel)		
JD5	7.5	10.6

#### Notes:

- 1.Design values are based on SG8 timber and for timber which meets minimum JD5 timber as defined in AS/NZS 1720.
- 2.Limit State Design capacities are shown in table to resist Wind Uplift.
- 3.Fastener material type shall match the selected Pryda product. i.e., Galvanised fasteners with galvanised products, and stainless steel fasteners with stainless steel products.





### NPPC6 SHORT FLANGE FIXING:

Double 45mm wall plates - 3 x 14G x 75mm Type 17 Hex Head Screws. (Galvanised or Stainless Steel)

### NPPC6 LONG FLANGE – NAIL OPTION

Using 12 x Pryda 35 x 3.15mm Timber Connector Nails. Code: OSNGB (Galvanised) or OSNBCI/SS (Stainless Steel)

OR

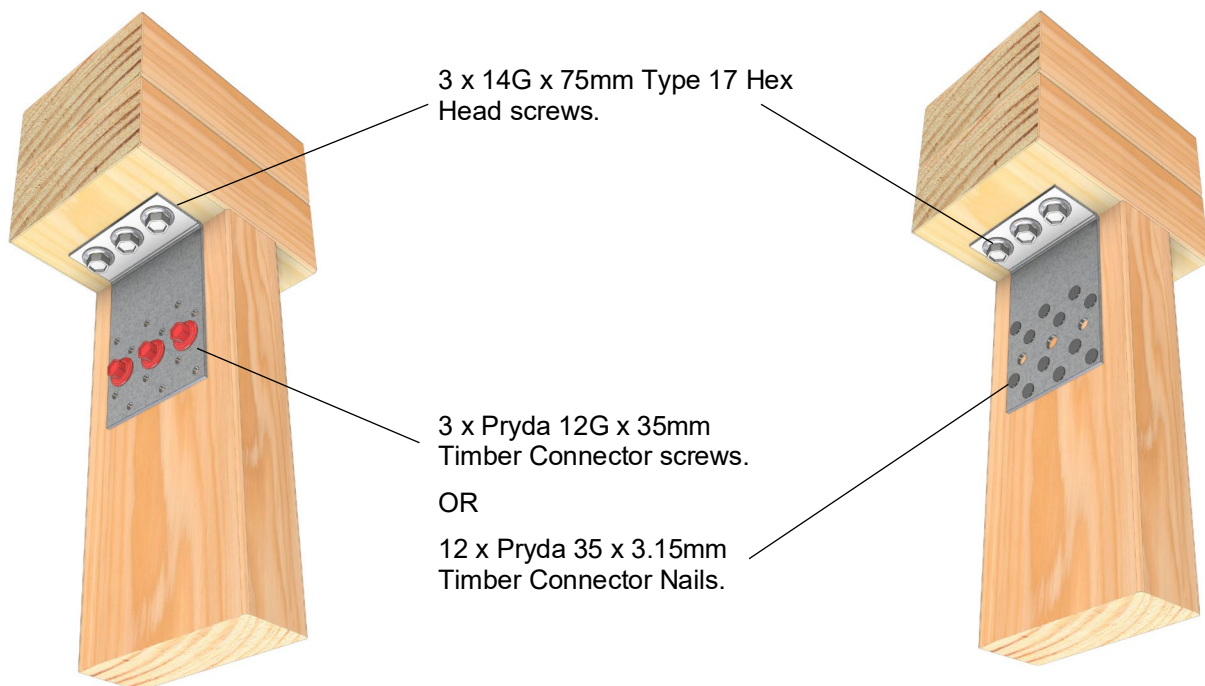
Using 3 x Pryda 12G x 35mm Timber Connector Screws. Code: TCS12-35(Galvanised) or HH1235SS (Stainless Steel)

NPPC6 (Galvanised)		
JOINT GROUP OF TRUSS CHORD OR STUD	UPLIFT CAPACITY (kN) FOR A SINGLE CLEAT	
	12 x Pryda Timber Connector Nails	3 x Pryda Timber Connector Screws
JD5	3.75	5.8
PAIR OF NPPC6 (Galvanised)		
JD5	7.5	11.6

NPPC6/S (Stainless Steel)		
JOINT GROUP OF TRUSS CHORD OR STUD	UPLIFT CAPACITY (kN) FOR A SINGLE CLEAT	
	12 x Pryda Timber Connector Nails	3 x Pryda Timber Connector Screws
JD5	3.75	4.7
PAIR OF NPPC6/S (Stainless Steel)		
JD5	7.5	9.5

#### Notes:

- 1.Design values are based on SG8 timber and for timber which meets minimum JD5 timber as defined in AS/NZS 1720.
- 2.Limit State Design capacities are shown in table to resist **Wind Uplift**.
- 3.Fastener material type shall match the selected Pryda product. i.e., Galvanised fasteners with galvanised products, and stainless steel fasteners with stainless steel products.





### NPPC4 SHORT FLANGE FIXING:

Double 45mm wall plates - 2 x 14G x 75mm Type 17 Hex Head Screws. (Galvanised or Stainless Steel)

### NPPC4 LONG FLANGE – NAIL OPTION

Using 8 x Pryda 35 x 3.15mm Timber Connector Nails. Code: OSNGB (Galvanised) or OSNBCI/SS (Stainless Steel)

OR

Using 2 x Pryda 12G x 35mm Timber Connector Screws. Code: TCS12-35(Galvanised) or HH1235SS (Stainless Steel)

NPPC4 (Galvanised)		
JOINT GROUP OF TRUSS CHORD OR STUD	UPLIFT CAPACITY (kN) FOR A SINGLE CLEAT	
	8 x Pryda Timber Connector Nails	2 x Pryda Timber Connector Screws
JD5	2.5	3.3
PAIR OF NPPC4 (Galvanised)		
JD5	5	6.5

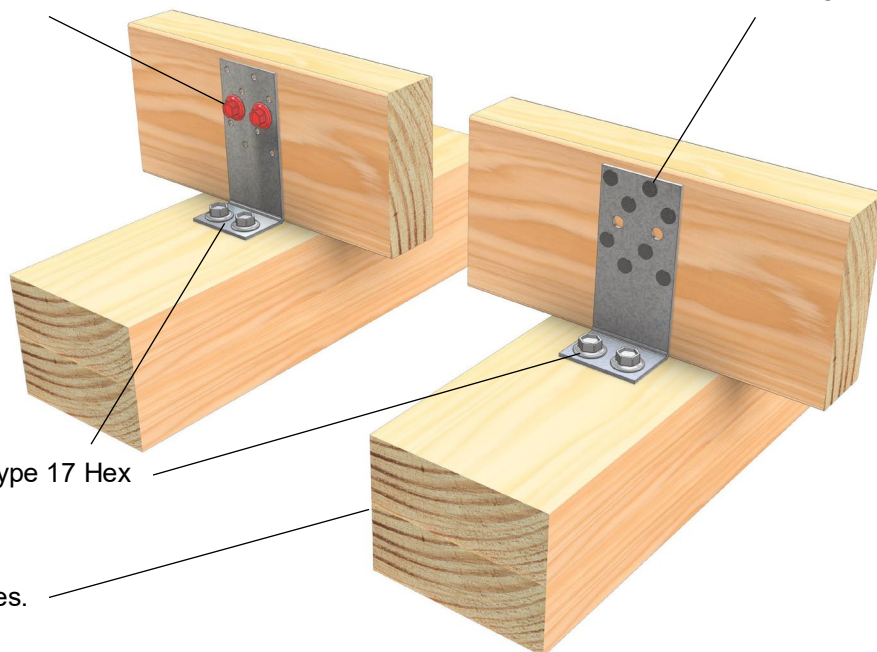
NPPC4/S (Stainless Steel)		
JOINT GROUP OF TRUSS CHORD OR STUD	UPLIFT CAPACITY (kN) FOR A SINGLE CLEAT	
	8 x Pryda Timber Connector Nails	2 x Pryda Timber Connector Screws
JD5	2.5	3.2
PAIR OF NPPC4/S (Stainless Steel)		
JD5	5	6.4

#### Notes:

- 1.Design values are based on SG8 timber and for timber which meets minimum JD5 timber as defined in AS/NZS 1720.
- 2.Limit State Design capacities are shown in table to resist Wind Uplift.
- 3.Fastener material type shall match the selected Pryda product. i.e., Galvanised fasteners with galvanised products, and stainless steel fasteners with stainless steel products.

2 x Pryda 12G x 35mm  
Timber Connector Screws.

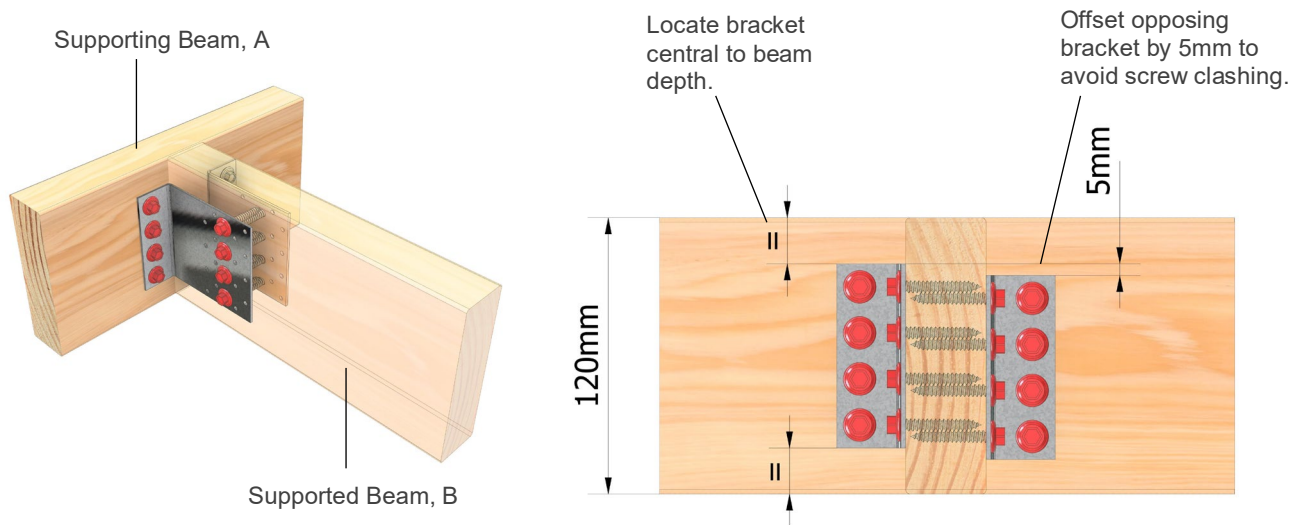
8 x Pryda 35 x 3.15mm  
Timber Connector Nails.



2 x 14G x 75mm Type 17 Hex  
Head screws.

Double 45mm plates.

## PAIR OF NPPC8 AS JOIST / RAFTER SUPPORT



NPPC8 ALWAYS USED IN PAIRS	
LOAD CASE	DESIGN CAPACITIES ( $\Phi N_j$ ) IN kN PER PAIR OF BRACKETS
	PRYDA 12G x 35mm Timber Connector Screws
	8 screws to Supporting Beam A 8 screws to Supported Beam B
	JD5
1.35G	3.4
1.2G + 1.5Qf	4.2
1.2G + 1.5Qr	4.6
1.2G + Wd or Wind uplift	6.9

### Notes:

- Beam A (Supporting Beam) and Beam B (Supported Beam) must be a minimum 120mm deep to achieve above screw capacities.
- NPPC8 must be used in PAIRS.
- Supported joist must be supported on both ends. Connection is not suitable for cantilever support.
- Brackets supports variable widths. The designer should limit width to prevent eccentric loading on the bracket.
- Design capacities applies for dry (maximum moisture content of 18%) Radiata Pine and Douglas Fir timber grade SG8 and for timber which meets JD5 timber as defined in AS/NZS 1720 for both supporting and supported beam.
- Multiple Laminated Supporting Beams:** Fasteners with longer lengths are required when NPPC8 brackets are fixed into a multiple laminated supporting beam. For double 45mm laminates, use 14G x 75mm Type 17 Hex Head long screws. Alternatively, for double or triple laminated supporting beams, additional fixings may be provided at hanger locations to laminate plies. Seek advice from the consulting project Engineer.  
  
Pryda CODEMARK certificate CMNZ10031 certifies Pryda NPPC8 with use of NZ Pryda Timber Connector Nails. Other fixing methods are outside the scope of the CODEMARK.
- Gap between Supported and Supporting Beams.** A maximum gap of 3mm is permitted without impeding on the design capacities. Seek advice from a Pryda engineer for treatment of larger gaps.

Contact Details	
Manufacture location	New Zealand
Legal and trading name of manufacturer	Fairfit Engineering
Legal and trading name of importer	Pryda New Zealand -a Division of ITW New Zealand
Importer address for service	23-29 Poland Road, Wairau Valley, Auckland, 0627, New Zealand
Importer website	<a href="http://pryda.co.nz">pryda.co.nz</a>
Importer email	<a href="mailto:info@prydaanz.com">info@prydaanz.com</a>
Importer phone number	0800 88 22 44
Importer NZBN	9429039833129

# NZ CYCLONE STRAPS

**CodeMark** >>>  
CMNZ-10029

Strong tie down suitable for connecting purlins to roof trusses or roof trusses to the wall frame.

## FEATURES AND BENEFITS

**SIMPLE:** Quick and easy to install.

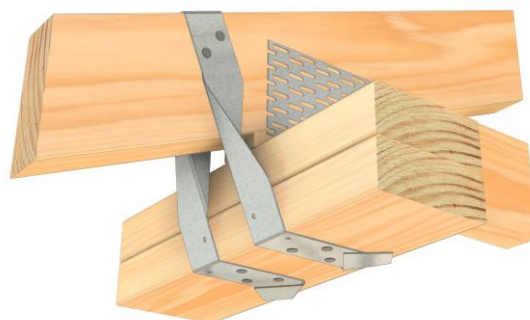
**FAST:** Multiple lengths and can be doubled up for even more capacity.

**DURABLE:** Made from G300 Z275 steel.

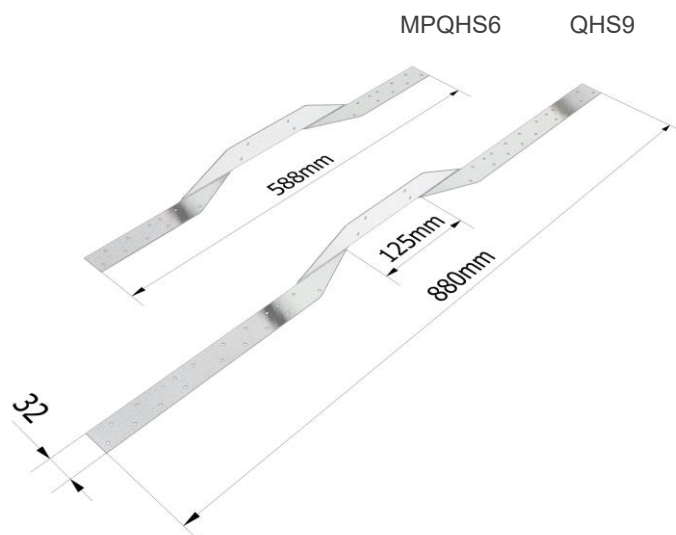
## SPECIFICATIONS

<b>PRODUCT CODE</b>	MPQHS6, QHS9
<b>STEEL</b>	G300
<b>THICKNESS</b>	0.95mm
<b>CORROSION RESISTANCE</b>	Z275
<b>FASTENER</b>	Pryda 35 x 3.15mm Timber Connector Nails
<b>PRODUCT DIMENSION</b>	588mm and 880mm

At the time of print, this product is NOT subject to any known warnings and bans found in Building Act 2004.



QHS6 shown with fold facing inwards. Outward facing is also acceptable.



\*All dimensions shown are in "mm".

## CYCLONE STRAPS

PRODUCT CODE	MATERIAL	THICKNESS (mm)	LENGTH (mm)	QUANTITY
MPQHS6	G300 Z275 Galvanised Steel	0.95	588	80
QHS9			880	25

## DURABILITY

The following table provides an easy guide when selecting a Pryda product corrosion protection finish that will meet and exceeds NZS 3604:2011 Table 4.1.

Pryda Cyclone Straps are only available in Z275, therefore suitable for “Closed” environment.

ZONE	LOCATION		ENVIRONMENT	PRODUCT
All Zones	Fully enclosed walls, floors, and roof spaces		Closed	Pryda Zinc Coated Products Z275
Zones B and C	All subfloor fastenings more than 600mm above the ground	Vented 7000mm <sup>2</sup> /m <sup>2</sup> or LESS	Sheltered	Pryda Stainless Steel 304 Products <sup>(3)</sup>
		Vented MORE than 7000mm <sup>2</sup> /m <sup>2</sup>	Exposed	Pryda Stainless Steel 304 Products <sup>(3)</sup>
	All subfloor fastenings within 600mm of the ground	Sheltered and Exposed		Pryda Stainless Steel 304 Products <sup>(3)</sup>
	All other structural fixings	Sheltered		Pryda Stainless Steel 304 Products <sup>(3)</sup>
		Exposed		Pryda Stainless Steel 304 Products <sup>(3)</sup>
Zone D	All structural fixings	Sheltered and Exposed		Pryda Stainless Steel 304 Products <sup>(3)</sup>

Notes:

1.All Pryda galvanised products comply with NZS3604:2011 Table 4.2.

2.Refer to NZS3604:2011 for all environment definitions.

3.Routine inspection and cleaning using soap and fresh warm water is an integral part of the ongoing care and maintenance of stainless steel to preserve its appearance.

## STORAGE AND HANDLING

Prior to use, the Pryda products shall be stored in a weatherproof environment and protected from moisture. Care must be taken to avoid any damage to the surface of the product protective galvanised coating and profile that may impact the performance.

## COMPLIES WITH THE FOLLOWING PROVISIONS OF THE NEW ZEALAND BUILDING CODE (NZBC)

**Clause B1 STRUCTURE:** Performance B1.3.1, B1.3.2 and B1.3.4. Loads arising from self-weight, imposed gravity loads arising from use, earthquake, snow, and wind. (i.e., B1.3.3 (a), (b), (f), (g), and (h)). Only some may apply for a specific use of the component.

**Clause B2 DURABILITY:** Performance B2.3.1 (a) not less than 50 years and B2.3.2.

**Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1

## DESIGN CAPACITIES – WIND UPLIFT

NAILS PER LEG	DESIGN CAPACITY (fNJ) (kN) FOR TIMBER JOINT GROUP USING ANY CYCLONE STRAP FOR FACE FIX CONNECTION (Fig 1)
	JD5 <sup>(4)</sup>
2	4.8
3	7.3
4	9.7
<b>INCREASED CAPACITIES FOR STRAPS THAT ARE WRAPPED AROUND; MINIMUM 4 NAILS PER LEG <sup>(2)</sup> (Fig 2 or Fig 3)</b>	
QHS6, QHS9	13

Notes:

1. These design capacities apply to Pryda Cyclone Straps fixed at both ends with Pryda 35 x 3.15mm Timber Connector Nails or equivalent. For machine driven nails, refer to section "Fastening Cyclone Straps"

Pryda CODEMARK certificate CMNZ10029 certifies Pryda Cyclone Straps with use of NZ Pryda Timber Connector Nails. Other fixing methods are outside the scope of the CODEMARK.

2. When the strap is wrapped around the wall plate or other timber member and fixed with 4 nails per leg driven into the underside of the top plate, the capacity is limited by the steel. Tests have proven that bending the legs of Cyclone Straps around the timber increases the ultimate load the strap can carry.

3. Limit State Design capacities are shown in table to resist Wind Uplift.

4. Design values are based on SG8 timber and meets minimum JD5 timber as defined in AS/NZS 1720.

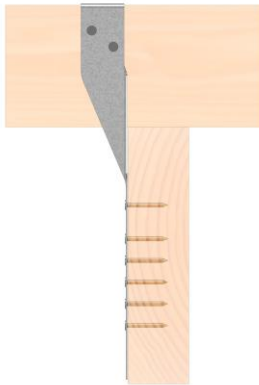


Figure 1

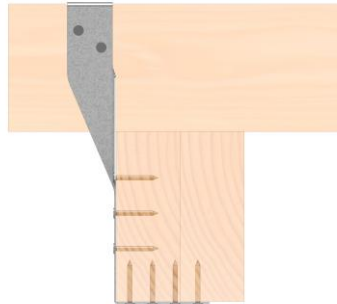


Figure 2

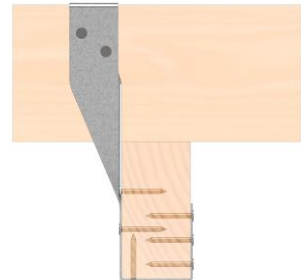
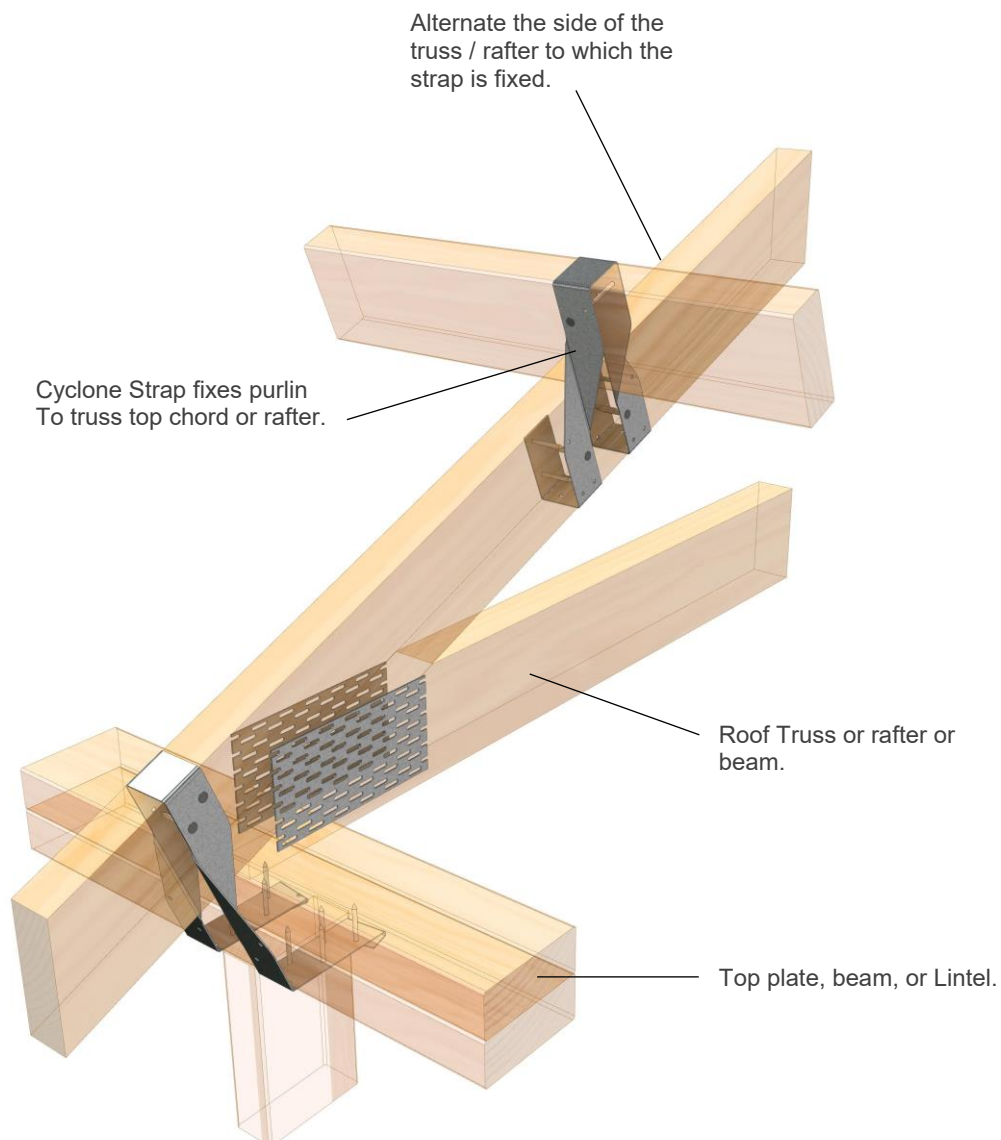


Figure 3

## APPLICATION AND SCOPE OF USE

Strong tie down suitable for connecting purlins to roof trusses or roof trusses to the wall frame.

Pryda Cyclone Straps are certified when used and installed in accordance with the product datasheet shown connection details. Pryda fasteners approved for the installation form an integral part of the connection and therefore should be used with all Pryda products installation unless otherwise approved by a certified structural Engineer. Only use the product for its intended applications and the selected product material type within the specified environmental condition as outlined in NZS 3604:2011 Table 4.1. (Refer to Durability section for more details).





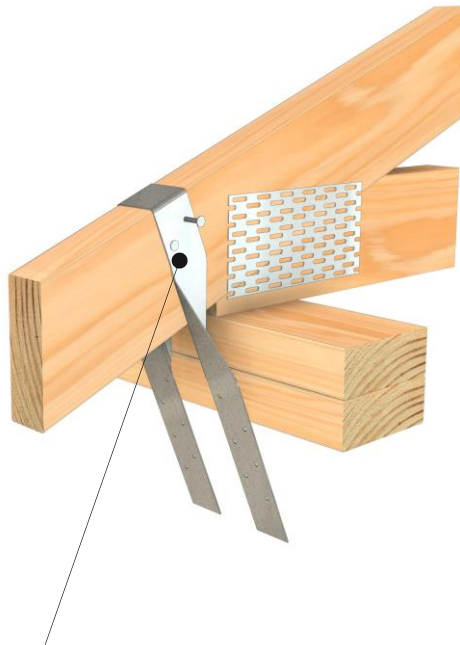
## INSTALLATION OF CYCLONE STRAPS FOR TRUSS TIE DOWN TO TOP PLATE

### STEP 1

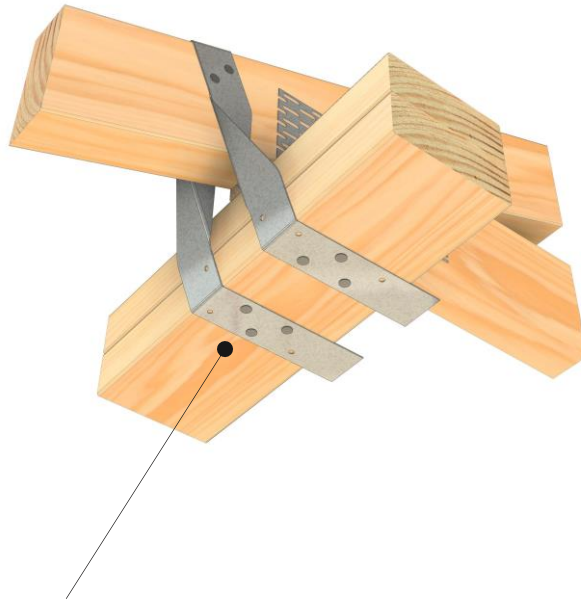


Position the centre of the Cyclone Strap over the Truss and bend each side down at the same time, ensuring each leg is equal length. Fold facing inward shown, fold facing outward is also acceptable.

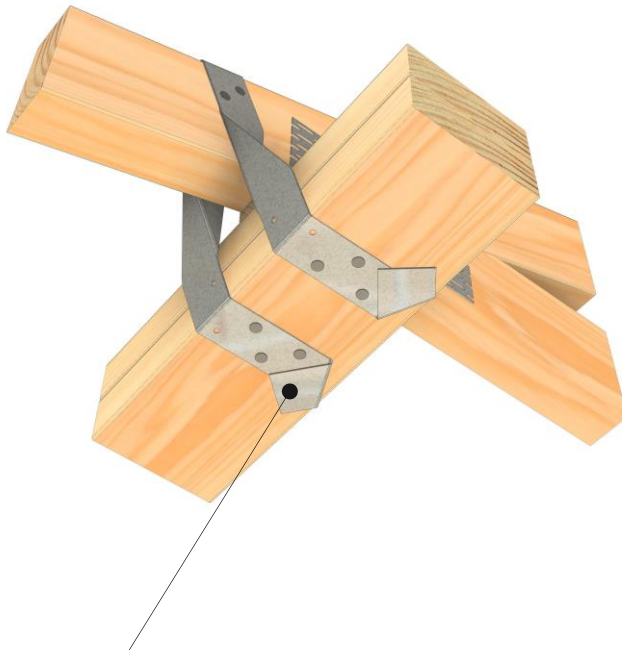
### STEP 2



Install 2 x Pryda 35 x 3.15mm Timber Connector nails into each leg on both sides of the truss.

**STEP 3**

Wrap the two legs under the top plate and fix off with Pryda Timber connector nails per leg to suit QHS selection length and tie down requirement. 3 nails to each leg shown for demonstration purposes only. Higher capacities can be achieved if four nails are used (MPQHS6, QHS9).

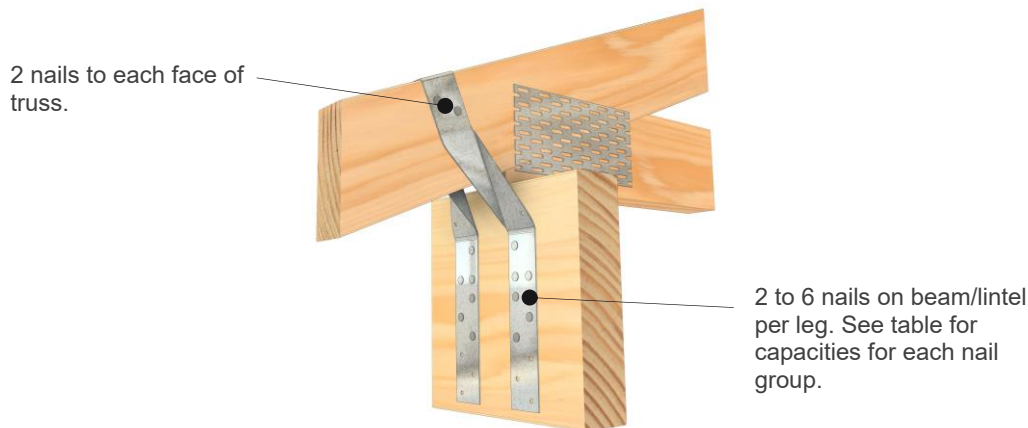
**STEP 4**

Fold overhanging legs over itself and flatten. Do not leave overhanging legs extending outside the frame.

## INSTALLATION OF CYCLONE STRAPS FOR TRUSS TIE DOWN TO BEAM/LINTEL

Fixing to a beam or lintel is the same as above however instead of wrapping under the top plate, the cyclone strap legs are fastened to the face of the beam as shown below.

Note this is not as strong a connection as wrapping under the top plate and the number of nails into the face of the beam will dictate the capacity as shown in the design capacity table.



## FASTENING CYCLONE STRAPS

### BUILD WITH CONFIDENCE

Where possible, hand nailing with Pryda Timber Connector nails is always preferred, why?

- Pryda Timber Connector Nails are forged in one piece, unlike clouts that are two pieces soldered together, meaning the head can pop off.
- Pryda Nails are the correct diameter, ensuring a tight fit in prepunched holes = a stronger connection.
- Design values and testing have all been conducted using Pryda Timber Connector Nails.

**PRYDA CODEMARK CERTIFICATE CMNZ10029 CERTIFIES PRYDA CYCLONE STRAP WITH USE OF NZ PRYDA TIMBER CONNECTOR NAILS. OTHER FIXING METHODS ARE OUTSIDE THE SCOPE OF THE CODEMARK.**

**Paslode's PPN-Master** (Positive Placement Nailer) replicates the accuracy of hand nailing by using a probing tip to fire nails through holes in the connector. Pryda supports the use of the PPN-Master for these products. Unlike traditional nailing tools, no design capacity reduction is required when using the PPN-Master.

### USING PASLODE MACHINE DRIVEN NAILS

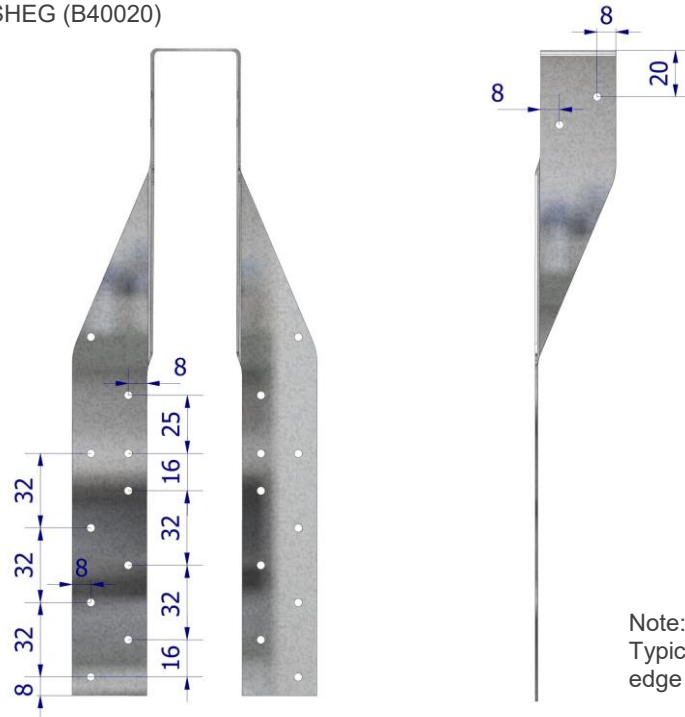
32 x 2.3 mm Duo-Fast C SHEG (i.e.: screw hardened electro galvanized) machine driven nails (code D40810) or equivalent may be used instead of the specified 35 x 3.15 mm Pryda Timber Connector Nails to fix selected Pryda connectors provided that the following requirements are strictly adhered to:

- **Design capacities shall be reduced by 20%** using the same number of nails as specified for the connectors and
- Nails shall be driven at nail spacings and edge distances closely following the selected Cyclone Strap hole pattern.

**Extreme care must be taken when using machine driven nails as the prevailing installation practices tend to inhibit compliance with the above requirements.**

Screw hardened, electro galvanised Paslode nails that are appropriate include:

- Duo-Fast C SHEG 32 x 2.3mm (D40810)
- Paslode 32 x 2.5mm (B25110)
- Duo-Fast 32 x 2.5mm (D41060)
- Pas Coil 32 x 2.5mm SHEG 2 Pack (B25250)
- Impulse 32 x 2.5mm SHEG (B40020)



Note: MPQHS6 shown.  
Typical hole spacing and edge distance.

#### Contact details

Manufacture location	Overseas
Legal and trading name of manufacturer	Pryda Australia -a Division of ITW Australia PTY LTD
Legal and trading name of importer	Pryda New Zealand -a Division of ITW New Zealand
Importer address for service	23-29 Poland Road, Wairau Valley, Auckland, 0627, New Zealand
Importer website	Pryda.co.nz
Importer email	info@prydaanz.com
Importer phone number	0800 88 22 44
Importer NZBN	9429039833129

## NZ EZI STUD TIES

Stud ties connect top and bottom plates to studs or lintels to resist wind uplift.

**CodeMark** >>>  
CMNZ-10029

### FEATURES AND BENEFITS

**EASY:** A quick and effective connector between studs and wall plates or lintels.

**FAST:** Built-in Claw-nails remove the reliant on the position of top plate fixing nails to achieve desired strength.

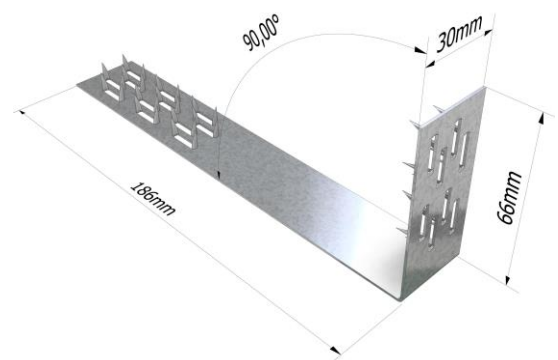
**DURABLE:** G300 Z275 Steel with Pryda proprietary Claw-nails for superior holding strength.

### SPECIFICATIONS

<b>PRODUCT CODE</b>	SST
<b>STEEL</b>	G300
<b>THICKNESS</b>	0.95mm
<b>CORROSION RESISTANCE</b>	Z275
<b>FASTENER</b>	Preformed Claw nails
<b>PRODUCT DIMENSION</b>	186 x 66 x 30mm

The Pryda Ezi Stud Tie - SST has been designed to exceed the requirement of table 8.18 NZ3604:2011 – “Fixing of top plate of wall to supporting members such as studs and lintels at 600mm centers”.

At the time of print, this product is NOT subject to any known warnings and bans found in Building Act 2004.



\*All dimensions shown are in “mm.”

## STUD TIES

PRODUCT CODE	MATERIAL	TYPE	FASTENERS
SST	G300 Z275 Galvanised Steel	Single	Pre-punched nails

**Pryda Stud Ties** greatly improve the jointing of top and bottom plates to studs compared to the common nail fixing, i.e.:

- Easy to install
- No checking of timber required
- Can be fitted after top plate packer has been attached
- Prevent to ensure correct placement on site
- Smaller top plate connection – Quicker and easier to fix
- Less cumbersome – Smaller but effective
- Easily installed using just a hammer
- Easily inspected

## DESIGN CAPACITIES (Wind Uplift)

STUD TIES	DESIGN CAPACITY $\Phi_{NJ}$ (KN) PER STUD TIE FOR TIMBER JOINT GROUP
	JD5
SST <sup>(1)(2)</sup>	4.6

Notes:

1. Design values are based on SG8 timber and for timber which meets minimum JD5 timber as defined in AS/NZS 1720.

2. Limit State Design capacities are shown in table to resist Wind Uplift.

## DURABILITY

The following table provides an easy guide when selecting a Pryda product corrosion protection finish that will meet and exceeds NZS 3604:2011 Table 4.1.

Pryda Ezy Stud Tie is only available in Z275, therefore suitable for “Closed” environment.

ZONE	LOCATION		ENVIRONMENT	PRODUCT
All Zones	Fully enclosed walls, floors, and roof spaces		Closed	Pryda Zinc Coated Products Z275
Zones B and C	All subfloor fastenings more than 600mm above the ground	Vented 7000mm <sup>2</sup> /m <sup>2</sup> or LESS	Sheltered	Pryda Stainless Steel 304 Products <sup>(3)</sup>
		Vented MORE than 7000mm <sup>2</sup> /m <sup>2</sup>	Exposed	Pryda Stainless Steel 304 Products <sup>(3)</sup>
	All subfloor fastenings within 600mm of the ground	Sheltered and Exposed		Pryda Stainless Steel 304 Products <sup>(3)</sup>
	All other structural fixings	Sheltered		Pryda Stainless Steel 304 Products <sup>(3)</sup>
		Exposed		Pryda Stainless Steel 304 Products <sup>(3)</sup>
Zone D	All structural fixings	Sheltered and Exposed		Pryda Stainless Steel 304 Products <sup>(3)</sup>

Notes:

1. All Pryda galvanised products comply with NZS3604:2011 Table 4.2.

2. Refer to NZS3604:2011 for all environment definitions.

3. Routine inspection and cleaning using soap and fresh warm water is an integral part of the ongoing care and maintenance of stainless steel to preserve its appearance.

## STORAGE AND HANDLING

Prior to use, the Pryda products shall be stored in a weatherproof environment and protected from moisture. Care must be taken to avoid any damage to the surface of the product protective galvanised coating and profile that may impact the performance.

## COMPLIES WITH THE FOLLOWING PROVISIONS OF THE NEW ZEALAND BUILDING CODE (NZBC)

**Clause B1 STRUCTURE:** Performance B1.3.1, B1.3.2 and B1.3.4. Loads arising from self-weight, imposed gravity loads arising from use, earthquake, snow, and wind. (i.e., B1.3.3 (a), (b), (f), (g), and (h)). Only some may apply for a specific use of the component.

**Clause B2 DURABILITY:** Performance B2.3.1 (a) not less than 50 years and B2.3.2.

**Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1.

## APPLICATIONS AND SCOPE OF USE

The Pryda Ezi Stud Tie is an alternative solution to the fixing type B in Table 8.18 in NZ3604:2011. The Pryda Ezi Stud Tie exceeds the required capacity without relying on the additional 0.7kN contribution of the 2/90 x 3.15mm nails, top plate to stud.

Pryda Ezi Stud Tie is certified when used and installed in accordance with the product datasheet shown connection details. Pryda fasteners approved for the installation form an integral part of the connection and therefore should be used with all Pryda products installation unless otherwise approved by a certified structural Engineer. Only use the product for its intended applications and the selected product material type within the specified environmental condition as outlined in NZS 3604:2011 Table 4.1. (Refer to Durability section for more details).

## INSTALLATION EZI STUD TIE

### STEP 1



- Locate the Ezi Stud Tie on the external corner of the wall plate.
- Ensure Ezi Stud Tie is centrally located on the stud. While holding the tie in place at corner, systematically hammer in the claw-nail, starting from inner nail cluster to outer. Evenly hammer in all the claw-nails into stud.

### STEP 2



- Fasten the top of the Ezi Stud Tie into the top plate. In a similar manner, while holding the Ezi stud tie firmly against top plate corner, systematically hammer the claw-nails from inner clusters to outer claw-nail clusters. Avoid using excessive force and ensure Ezi stud tie is lying flat on both stud and top plate surfaces.



Contact details	
Manufacture location	Overseas
Legal and trading name of manufacturer	Exim Engineering Pty Ltd
Legal and trading name of importer	Pryda New Zealand -a Division of ITW New Zealand
Importer address for service	23-29 Poland Road, Wairau Valley, Auckland, 0627, New Zealand
Importer website	Pryda.co.nz
Importer email	info@prydaanz.com
Importer phone number	0800 88 22 44
Importer NZBN	9429039833129

## NZ MULTIGRIPS

Multi-purpose metal connectors for timber construction.

**CodeMark** >>>  
CMNZ-10029

### FEATURES AND BENEFITS

**SIMPLE:** Each of the tabs can bent in or out to 90° or other angles to suit the application.

**FAST:** Suitable for high load applications such as a tie-down connector. Along with being used as a strong tie-down connection, can also be used in numerous right-angle connection applications.

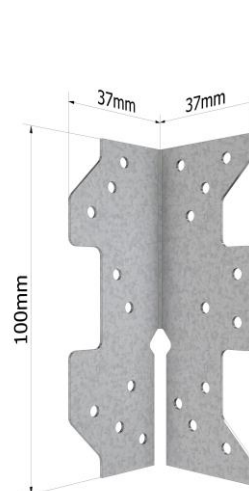
**DURABLE:** 1mm thick G300 Z275 or Stainless Steel 304.

### SPECIFICATIONS

<b>PRODUCT CODE</b>	MPMG, MG/S, MPMGL
<b>STEEL</b>	G300
<b>THICKNESS</b>	1mm
<b>CORROSION RESISTANCE</b>	Z275 or Stainless Steel 304
<b>FASTENERS REQUIRED</b>	<p>Pryda 35 x 3.15mm Timber Connector Nails</p> <p>OR</p> <p>Pryda 12G x 35mm Timber Connector Screws – Painted Red Head</p> <p>Ensure the corrosion resistance of the fastener matches the product, i.e., galvanised nails for a galvanised bracket or stainless nails for a stainless bracket</p>
<b>HEIGHT</b>	100mm, 132mm
<b>WIDTH</b>	37mmx37mm

One Multigrip fits all applications, no left, and right required. Bending slots ensure accurate bends on site. Ideal for fixing Rafters and trusses to top plate.

At the time of print, this product is NOT subject to any known warnings and bans found in Building Act 2004.



MPMG, MG/S



MPMGL

\*All dimensions shown are in "mm".

## MULTIGRIPS

PRODUCT CODE	MATERIAL	SIZE	QUANTITY
MPMG	G300 Z275 Galvanised Steel	100 x 37 x 37mm	100
MG/S	Stainless Steel 304	100 x 37 x 37mm	20
MPMGL	G300 Z275 Galvanised Steel	132 x 37 x 37mm	100

## DURABILITY

The following table provides an easy guide when selecting a Pryda product corrosion protection finish that will meet and exceeds NZS 3604:2011 Table 4.1.

ZONE	LOCATION		ENVIRONMENT	PRODUCT
All Zones	Fully enclosed walls, floors, and roof spaces		Closed	Pryda Zinc Coated Products Z275
Zones B and C	All subfloor fastenings more than 600mm above the ground	Vented 7000mm <sup>2</sup> /m <sup>2</sup> or LESS	Sheltered	Pryda Stainless Steel 304 Products <sup>(3)</sup>
		Vented MORE than 7000mm <sup>2</sup> /m <sup>2</sup>	Exposed	Pryda Stainless Steel 304 Products <sup>(3)</sup>
	All subfloor fastenings within 600mm of the ground	Sheltered and Exposed		Pryda Stainless Steel 304 Products <sup>(3)</sup>
	All other structural fixings	Sheltered		Pryda Stainless Steel 304 Products <sup>(3)</sup>
		Exposed		Pryda Stainless Steel 304 Products <sup>(3)</sup>
Zone D	All structural fixings	Sheltered and Exposed		Pryda Stainless Steel 304 Products <sup>(3)</sup>

Notes:

1.All Pryda galvanised products comply with NZS3604:2011 Table 4.2.

2.Refer to NZS3604:2011 for all environment definitions.

3.Routine inspection and cleaning using soap and fresh warm water is an integral part of the ongoing care and maintenance of stainless steel to preserve its appearance.

## STORAGE AND HANDLING

Prior to use, the Pryda products shall be stored in a weatherproof environment and protected from moisture. Care must be taken to avoid any damage to the surface of the product protective galvanised coating and profile that may impact the performance.

## COMPLIES WITH THE FOLLOWING PROVISIONS OF THE NEW ZEALAND BUILDING CODE (NZBC)

**Clause B1 STRUCTURE:** Performance B1.3.1, B1.3.2 and B1.3.4. Loads arising from self-weight, imposed gravity loads arising from use, earthquake, snow, and wind. (i.e., B1.3.3 (a), (b), (f), (g), and (h)). Only some may apply for a specific use of the component.

**Clause B2 DURABILITY:** Performance B2.3.1 (a) not less than 50 years and B2.3.2.

**Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1.

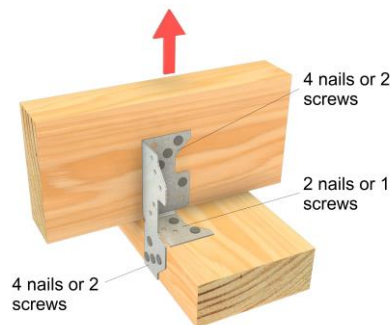
## APPLICATION AND SCOPE OF USE

Pryda Multigrips can serve a multitude of tie-down needs due to its ability to have either left or right leg fold to suit on-site connection setup. It can also be used as a light duty support cleat when used in PAIRS.

Pryda Multigrips are certified when used and installed in accordance with the product datasheet shown connection details. Pryda fasteners approved for the installation form an integral part of the connection and therefore should be used with all Pryda products installation unless otherwise approved by a certified structural Engineer. Only use the product for its intended applications and the selected product material type within the specified environmental condition as outlined in NZS 3604:2011 Table 4.1. (Refer to Durability section for more details). Fastener material type shall match the selected Pryda product. i.e., Galvanised fasteners with galvanised products. Stainless Steel fasteners with stainless steel products.

## MPMG DESIGN CAPACITIES AND APPLICATIONS

### MPMG, MG/S, LOAD DIRECTION 1



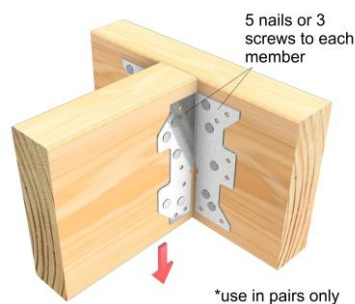
MPMG, MG/S LOAD DIRECTION 1

LOAD CASE	DESIGN CAPACITY $\Phi$ NJ (kN) FOR A <u>SINGLE MULTIGRIP</u> FOR TIMBER JOINT GROUP	
	JD5	
1.2G + Wd or Wind Uplift	2.7	

Notes:

- 1.Design values are based on SG8 timber and for timber which meets minimum JD5 timber as defined in AS/NZS 1720.
- 2.Limit State Design capacities are shown in table to resist Wind Uplift.

### MPMG LOAD DIRECTION 2 (ALWAYS USE AS PAIRS)



MPMG LOAD DIRECTION 2

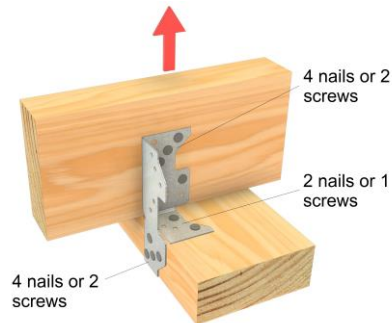
LOAD CASE	DESIGN CAPACITY $\Phi$ NJ (kN) FOR A <u>PAIR OF MULTIGRIPS</u> FOR TIMBER JOINT GROUP	
	JD5	
1.35G	4.6	
1.2G + 1.5Qr	6.2	
1.2G + Wd or Wind Uplift	9.1	

Notes:

- 1.Design values are based on SG8 timber and for timber which meets minimum JD5 timber as defined in AS/NZS 1720.
- 2.Limit State Design capacities are shown in table to resist Wind Uplift.

## MG/S DESIGN CAPACITIES AND APPLICATIONS

### MG/S LOAD DIRECTION 1



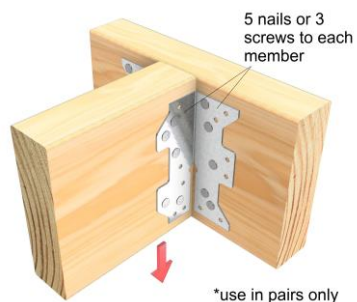
MPMG, MG/S LOAD DIRECTION 1

LOAD CASE	DESIGN CAPACITY $\Phi$ NJ (kN) FOR A <u>SINGLE MULTIGRIP</u> FOR TIMBER JOINT GROUP
	JD5
1.2G + Wd or Wind Uplift	2.7

Notes:

- 1.Design values are based on SG8 timber and for timber which meets minimum JD5 timber as defined in AS/NZS 1720.
- 2.Limit State Design capacities are shown in table to resist Wind Uplift.

### MG/S LOAD DIRECTION 2 (ALWAYS USE AS PAIRS)



MG/S LOAD DIRECTION 2

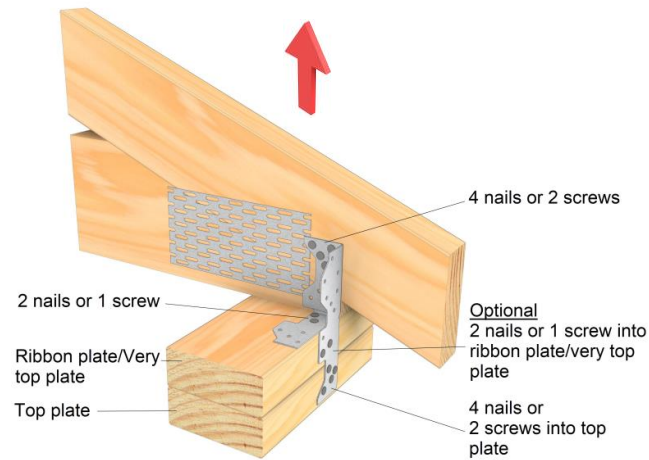
LOAD CASE	DESIGN CAPACITY $\Phi$ NJ (KN) FOR A <u>PAIR OF MULTIGRIPS</u> FOR TIMBER JOINT GROUP
	JD5
1.35G	3.1
1.2G + 1.5Qr	4.2
1.2G + Wd or Wind Uplift	6.1

Notes:

- 1.Design values are based on SG8 timber and for timber which meets minimum JD5 timber as defined in AS/NZS 1720.
- 2.Limit State Design capacities are shown in table to resist Wind Uplift.

## MPMGL DESIGN CAPACITIES AND APPLICATIONS

### MPMGL LOAD DIRECTION 1



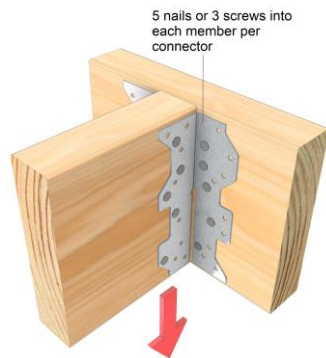
### MPMGL LOAD DIRECTION 1

LOAD CASE	DESIGN CAPACITY $\Phi N_J$ (kN) FOR A <u>SINGLE MULTIGRIP</u> FOR TIMBER JOINT GROUP
	JD5
1.2G + Wd or Wind Uplift	4.6

Notes:

- 1.Design values are based on SG8 timber and for timber which meets minimum JD5 timber as defined in AS/NZS 1720.
- 2.Limit State Design capacities are shown in table to resist Wind Uplift.

### MPMGL LOAD DIRECTION 2 (ALWAYS USE AS PAIRS)



### MPMGL LOAD DIRECTION 2

LOAD CASE	DESIGN CAPACITY $\Phi N_J$ (kN) FOR A <u>PAIR OF MULTIGRIPS</u> FOR TIMBER JOINT GROUP
	JD5
1.35G	3.5
1.2G + 1.5Qr	4.7
1.2G + Wd or Wind Uplift	6.9

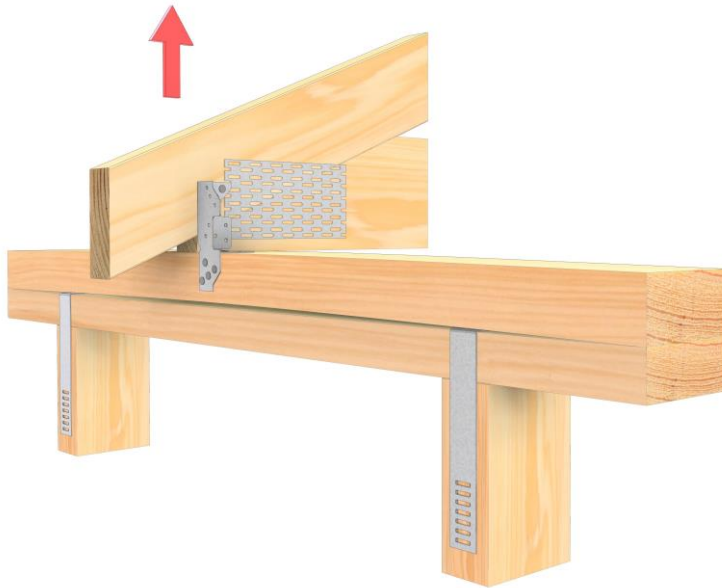
Notes:

- 1.Design values are based on SG8 timber and for timber which meets minimum JD5 timber as defined in AS/NZS 1720.
- 2.Limit State Design capacities are shown in table to resist Wind Uplift.

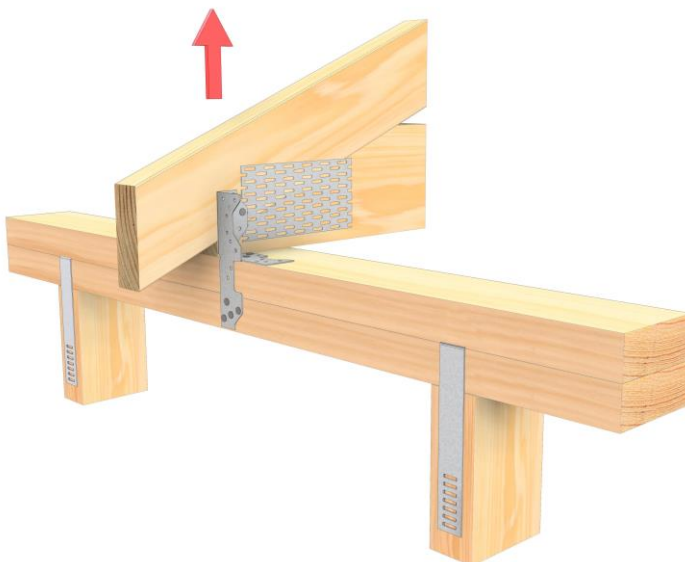


## RIBBON/ DOUBLE TOP PLATE GUIDE

Ribbon/double top plates are required to be tied down if they are designed to resist wind uplift. Standard Multigrips or Triple Grips do not have the required length to cover both the top plate and ribbon plate.



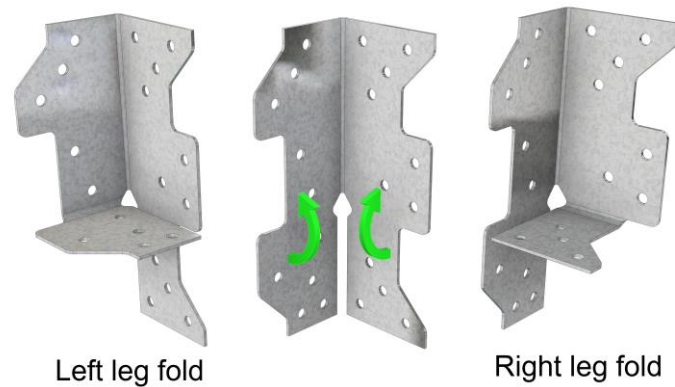
- If the Ribbon plate is not adequately fixed to the lower top plate, it will not be able to contribute to resisting uplift.
- Nail lamination of the ribbon plate to the lower top plate is typically insufficient to resist these loads.
- In this example, if the ribbon plate is not sufficiently tied down to the lower top plate it can de-laminate resulting in the trusses lifting off the building.



- This example illustrates how the longer leg (MPMGL), can engage both top plates.

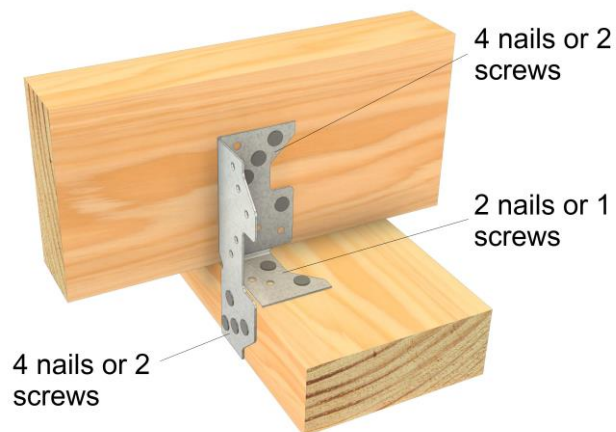
## MPMG, MG/S INSTALLATION FOR TRUSS TIE DOWN CONNECTION TO SUPPORT

### STEP 1



- Determine which leg of the Multigrip is required to be bent and do so at a 90° angle.
- Ensure the bend line is straight, tight, and firm against both vertical and horizontal timber before fixing into position.

### STEP 2



- Fix the Multigrips using Pryda 35 x 3.15mm Timber Connector Nails or Pryda 12G x 35mm Timber Connector screws – painted red head.
- Ensure the correct number of nails or screws are used per leg of the Multigrip as per the image above.

## MPMG, MG/S INSTALLATION FOR BEAM TO BEAM OR TRUSS TO TRUSS CONNECTION

### STEP 1



- Position the supported beam to supporting beam, ensuring both beams are vertically plumb, and all edges are aligned.

### STEP 2



- Position a pair of Multigrips at right angles on either side of the support beam.  
Fix each Multigrip to each timber member with 5 x Pryda 35 x 3.15mm Timber Connector Nails or  
3 x Pryda 12G x 35mm Timber Connector Screws - painted red head.

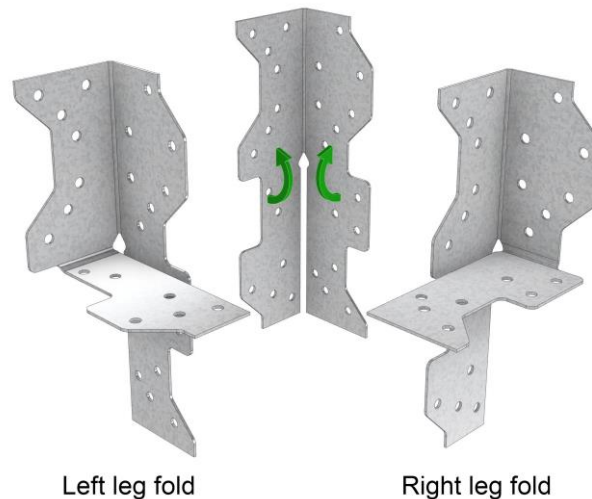
### STEP 3



- Repeat the same fixing method to adjacent Multigrip. Note orientation of each Multigrip and connection must be installed in PAIRS.

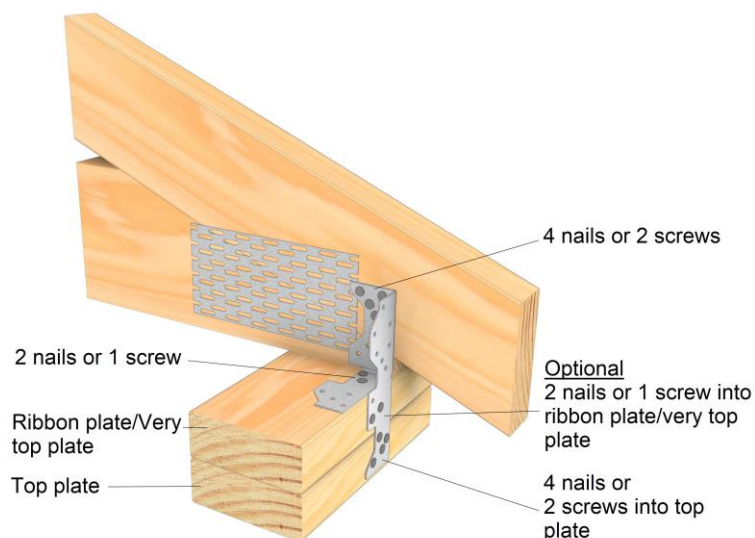
## MPMGL INSTALLATION FOR TRUSS TIE DOWN CONNECTION TO SUPPORT

### STEP 1



- Determine which leg of the Multigrip is required to be bent and do so at a 90° angle.
- Ensure the bend line is straight, tight, and firm against both vertical and horizontal timber before fixing into position.

### STEP 2



- Fix the Multigrips using Pryda 35 x 3.15mm Timber Connector Nails or Pryda 12G x 35mm Timber Connector Screws - painted red head.
- Ensure the correct number of nails or screws are used per leg of the Multigrip as per the image above.

## MPMGL INSTALLATION FOR BEAM TO BEAM OR TRUSS TO TRUSS CONNECTION

### STEP 1



- Position the supported beam to supporting beam, ensuring both beams are vertically plumb, and all edges are aligned.

### STEP 2



- Position a pair of Long Multigrips at right angles on either side of the support beam.
- Fix each Long Multigrip to each timber member with 5 x Pryda 35 x 3.15mm Timber Connector Nails or 3 x Pryda 12G x 35mm Timber Connector Screws -painted red head.

### STEP 3



- Repeat the same fixing method to adjacent Long Multigrip. Note orientation of each Multigrip and connection must be installed in PAIRS.

FASTENING MULTIGRIPS

BUILD WITH CONFIDENCE

Where possible, hand nailing with Pryda Timber Connector nails is always preferred, why?

- Pryda Timber Connector Nails are forged in one piece,unlike clouts that are two pieces soldered together, meaning the head can pop off.
- Pryda Nails are the correct diameter, ensuring a tight fit in pre-punched holes = a stronger connection.
- Design values and testing have all been conductedusing Pryda Timber Connector Nails.
- Hand hammered nails ensure correct nail positioningand drive depth (not driven too shallow or too deep).

Machine driven nails are not recommended for fixing Long Multigrip (MPMGL) and Multigrip (MPMG, MG/S)

Contact details		Contact details	
Manufacture location	Overseas	Manufacture location	New Zealand
Legal and trading name of manufacturer	Pryda Australia -a Division of ITW Australia PTY LTD	Legal and trading name of manufacturer	Fairfit Engineering
Legal and trading name of importer	Pryda New Zealand -a Division of ITW New Zealand	Legal and trading name of supplier	Pryda New Zealand -a Division of ITW New Zealand
Importer address for service	23-29 Poland Road, Wairau Valley, Auckland, 0627, New Zealand	Supplier address for service	23-29 Poland Road, Wairau Valley, Auckland, 0627, New Zealand
Importer website	Pryda.co.nz	Supplier website	Pryda.co.nz
Importer email	info@prydaanz.com	Supplier email	info@prydaanz.com
Importer phone number	0800 88 22 44	Supplier phone number	0800 88 22 44
Importer NZBN	9429039833129	Supplier NZBN	9429039833129
Product Skus	MPMG, MPMGL	Product Skus	MG/S



## NZ Z and U Nails

**CodeMark**   
CMNZ-10029

Versatile and cost-effective tie-down for a variety of connections commonly found on any residential construction.

### FEATURES AND BENEFITS

**SIMPLE:** The “Z” and “U” Nails are cost-effective means of holding down purlins to rafters, rafter and joists to plates, joists to beams.

**FAST:** Both “Z” and “U” Nails are self-nailing and easy to apply with the 85° angle of the nail to the shaft enabling the nails to draw the timbers to each other. Install using a standard carpenter hammer only.

**DURABLE:** Made from 5mm diameter Zinc Galvanised or Stainless Steel 304.

### SPECIFICATIONS

<b>STEEL</b>	5mm Mild Steel Wire to AS2334-1980 or Stainless Steel 304
<b>THICKNESS</b>	5mm
<b>CORROSION RESISTANCE</b>	Zinc Galvanise to NZS 3604:2011 Table 4.2 or Stainless Steel 304
<b>FASTENERS</b>	N/A
<b>LENGTHS</b>	Z Nail 100x40mm, U Nail 100 x 40mm

At the time of print, this product is NOT subject to any known warnings and bans found in Building Act 2004.



Z Nail (MPZL) Left and (MPZR) Right



U Nail MPZU

\*All dimensions shown are in “mm.”



## Z AND U NAILS

PRODUCT CODE	NAIL STYLE	MATERIAL	SIZE (mm)	QUANTITY
MPZL	Z NAIL	Mild Steel to AS2334 Zinc Galvanised	100 x 40 x 5	100
MPZR	Z NAIL			
MPZU	U NAIL		100 x 40 x 5	
MPZL/S	Z NAIL	Stainless Steel 304	100 x 40 x 5	
MPZR/S	Z NAIL			
MPZU/S	U NAIL		100 x 40 x 5	

## DESIGN CAPACITY FOR A PAIR OF CONNECTORS TO NZS 3604:2011 TABLE 2.2 FIXING TYPE E (WIND LOADS ONLY)

LOAD DIRECTION (WIND UP)	FIXING CAPACITY (KN)
Z Nail	4.7 <sup>(1)</sup>
U Nail	

Note:

1. Capacity shown are for a PAIR of connectors + 2/90 x 3.15mm skew nails.

## APPLICATION AND SCOPE OF USE

Pryda Z and U nails are suitable for all roof spaces that are closed. Conforms to NZS 3604:2011 section 2.4.8. Applications include tie-down connections that includes holding down purlins to rafters, rafter and joists to plates, joists to beam.

Pryda Z and U nails are certified when used and installed in accordance with the product datasheet shown connection details. Pryda fasteners approved for the installation form an integral part of the connection and therefore should be used with all Pryda products installation unless otherwise approved by a certified structural Engineer. Only use the product for its intended applications and the selected product material type within the specified environmental condition as outlined in NZS 3604:2011 Table 4.1. (Refer to Durability section for more details).

## DURABILITY

The following table provides an easy guide when selecting a Pryda product corrosion protection finish that will meet and exceeds NZS 3604:2011 Table 4.1.

ZONE	LOCATION		Environment	Product
All Zones	Fully enclosed walls, floors, and roof spaces		Closed	Pryda Zinc Coated Products Z275
Zones B and C	All subfloor fastenings more than 600mm above the ground	Vented 7000mm <sup>2</sup> /m <sup>2</sup> or LESS	Sheltered	Pryda Stainless Steel 304 Products <sup>(3)</sup>
		Vented MORE than 7000mm <sup>2</sup> /m <sup>2</sup>	Exposed	Pryda Stainless Steel 304 Products <sup>(3)</sup>
	All subfloor fastenings within 600mm of the ground	Sheltered and Exposed		Pryda Stainless Steel 304 Products <sup>(3)</sup>
	All other structural fixings	Sheltered		Pryda Stainless Steel 304 Products <sup>(3)</sup>
		Exposed		Pryda Stainless Steel 304 Products <sup>(3)</sup>
Zone D	All structural fixings	Sheltered and Exposed		Pryda Stainless Steel 304 Products <sup>(3)</sup>

### Notes:

- 1.All Pryda galvanised products comply with NZS3604:2011 Table 4.2.
- 2.Refer to NZS3604:2011 for all environment definitions.
- 3.Routine inspection and cleaning using soap and fresh warm water is an integral part of the ongoing care and maintenance of stainless steel to preserve its appearance.

## STORAGE AND HANDLING

Prior to use, the Pryda products shall be stored in a weatherproof environment and protected from moisture. Care must be taken to avoid any damage to the surface of the product protective galvanised coating and profile that may impact the performance.

## COMPLIES WITH THE FOLLOWING PROVISIONS OF THE NEW ZEALAND BUILDING CODE (NZBC)

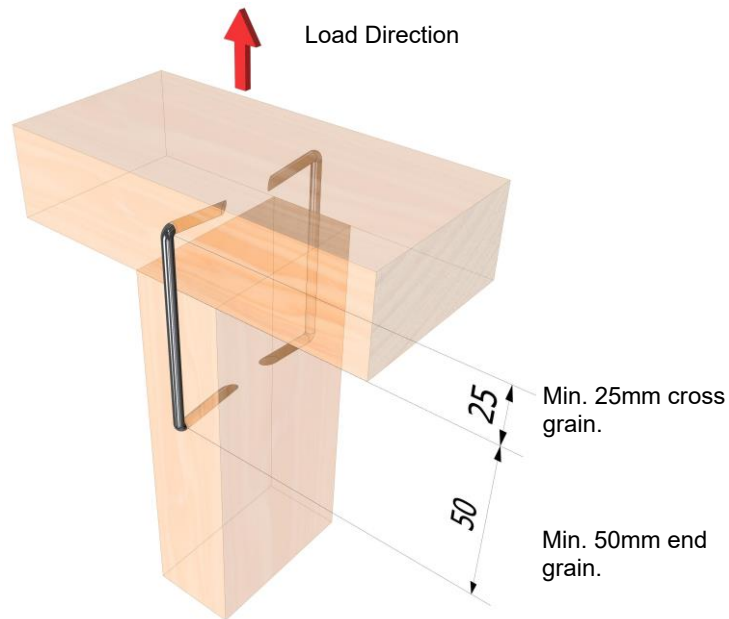
**Clause B1 STRUCTURE:** Performance B1.3.1, B1.3.2 and B1.3.4. Loads arising from self-weight, imposed gravity loads arising from use, earthquake, snow, and wind. (i.e., B1.3.3 (a), (b), (f), (g), and (h)). Only some may apply for a specific use of the component.

**Clause B2 DURABILITY:** Performance B2.3.1 (a) not less than 50 years and B2.3.2.

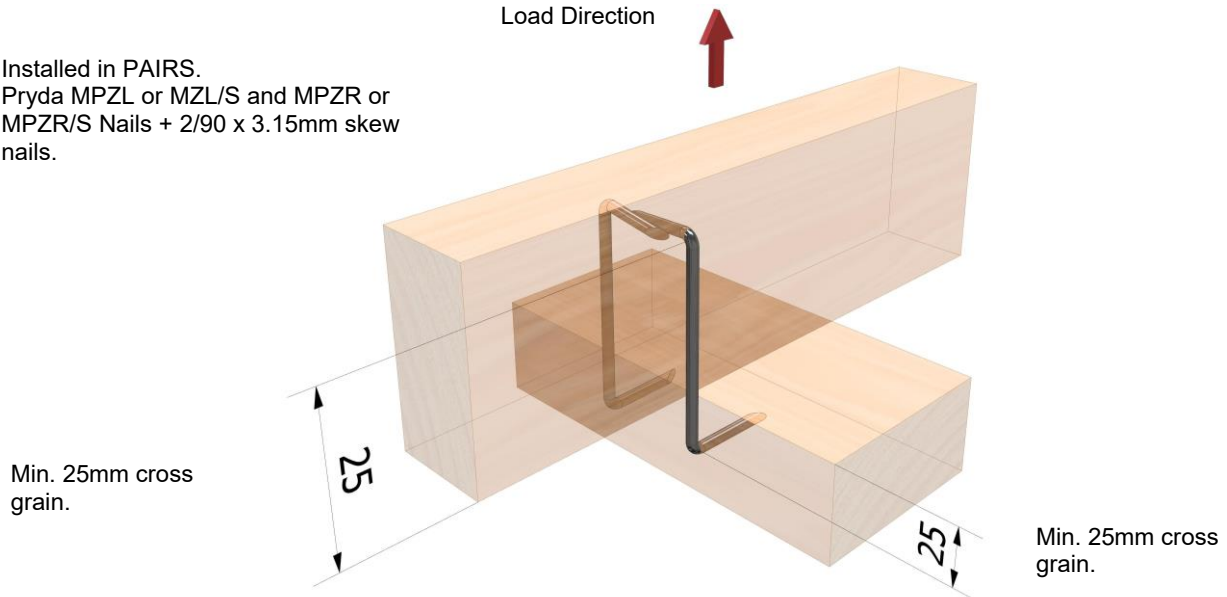
**Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1.

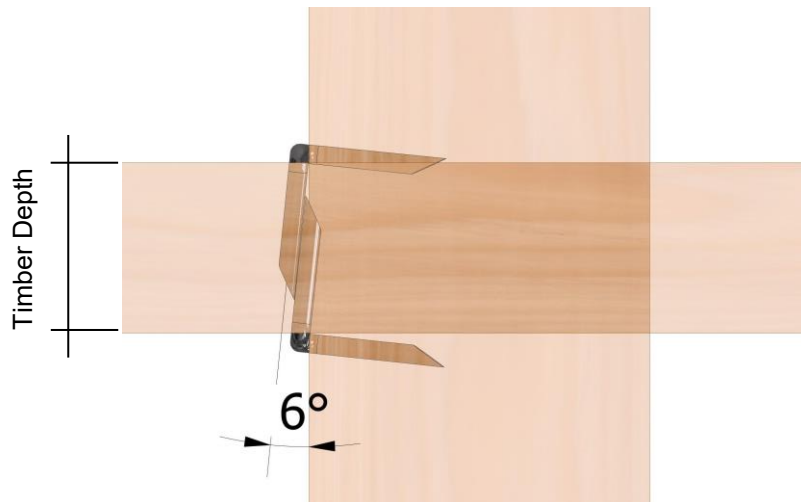
## INSTALLATION

Installed in PAIRS.  
Pryda MPZU or MPZU/S Nail +  
2/90 x 3.15mm skew nails.

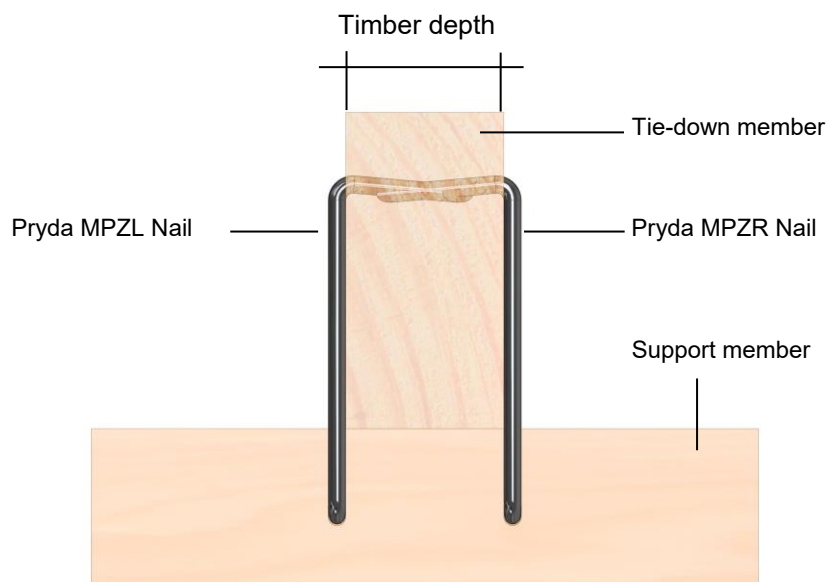


Installed in PAIRS.  
Pryda MPZL or MZL/S and MPZR or  
MPZR/S Nails + 2/90 x 3.15mm skew  
nails.

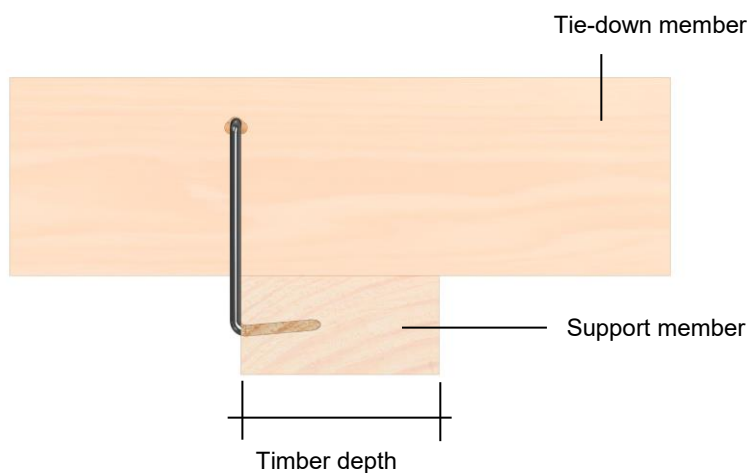




- Pryda Z Nails are to be installed in PAIRS.
- If timber depth is less than 90mm and offsetting Z nail is not possible. Rotate each Z nail approx. 6 degrees as shown to avoid clashing.
- Minimum penetration is 30mm to NZS 3604:2011, therefore minimum timber depth is 35mm for both tie-down and support member.



- Each Z Nail shall be vertically plumb.
- Mark penetration point and drive one end into member while maintaining minimum cross grain and end grain limit.
- Pivot the other end until point is directly against second member, then hammer drive until flush against face of member.
- Z Nails shall be fully driven in flush for both tie-down and support members.



Contact details	
Manufacture location	New Zealand
Legal and trading name of manufacturer	Fairfit Engineering
Legal and trading name of supplier	Pryda New Zealand -a Division of ITW New Zealand
Supplier address for service	23-29 Poland Road, Wairau Valley, Auckland, 0627, New Zealand
Supplier website	Pryda.co.nz
Supplier email	info@prydaanz.com
Supplier phone number	0800 88 22 44
Supplier NZBN	9429039833129

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**[www.pryda.co.nz](http://www.pryda.co.nz)**

**FOR MORE INFORMATION CALL 0800 88 22 44 OR EMAIL [INFO@PRYDA.CO.NZ](mailto:INFO@PRYDA.CO.NZ)**