# pryda

# PRODUCT DATA SHEET



### FEATURES AND BENEFITS

EASY: Pre-punch holes ready for onsite application using nail fix or screw fix.

FAST: Simply select the correct plate size and type, place into position, and fasten through the pre-punched holes to suit design application.

VERSATILE: Can be used for joining trusses on-site that have been made in parts in the factory. Fixing trusses to poles. Any heavy-duty timber connection where a Knuckle nailplate will not suffice. Joining beams. Repair work over existing fixings.

### SPECIFICATIONS

| STEEL                   | G300 or equivalent                               |
|-------------------------|--|
| THICKNESS               | 0.8mm 1mm for Z275,<br>0.9mm for Stainless Steel |
| CORROSION<br>RESISTANCE | Z275 or Stainless Steel                          |
| PRODUCT<br>DIMENSION    | Sizes shown in Design Capacities table           |
| QUANTITY                | Approx. 1.2 square metre per carton              |











## DESCRIPTION

Pryda Nail-on Plates are flat, galvanised or stainless-steel plates which are nail-fixed to timber to form various types of joints. Their medium to high load capacities and wide range of sizes makes them ideally suited for on-site work. Product codes below are made up from: Width/Length.

| CODE        | WIDTH | LENGTH | THICKNESS | BOX QTY |
|-------------|-------|--------|-----------|---------|
| NPA75/125   | 75mm  | 125mm  | 1.0mm     | 60      |
| NPA75/190   | 75mm  | 190mm  | 1.0mm     | 40      |
| NPA75/250   | 75mm  | 250mm  | 1.0mm     | 30      |
| NPA75/315   | 75mm  | 315mm  | 1.0mm     | 25      |
| NPA75/380   | 75mm  | 380mm  | 1.0mm     | 20      |
| NPA100/190  | 100mm | 190mm  | 1.0mm     | 28      |
| NPA150/250* | 150mm | 250mm  | 1.0mm     | 15      |
| NPA150/315  | 150mm | 315mm  | 1.0mm     | 12      |

#### Note: Product marked with \* is no longer available.



### INSTALLATION

Use only 35 x 3.15 mm galvanised Pryda Timber Connector Nails or equivalent nails with these connectors. Stainless steel nails must be used with stainless steel Nail-on plates.

| NUMBER OF NAIL HOLES PER PLATE |                   |     |     |     |     |     |  |  |
|--------------------------------|-------------------|-----|-----|-----|-----|-----|--|--|
| PLATE<br>WIDTH                 | PLATE LENGTH (MM) |     |     |     |     |     |  |  |
|                                | 50                | 125 | 190 | 250 | 315 | 380 |  |  |
| 75                             |                   | 24  | 36  | 48  | 60  | 72  |  |  |
| 100                            |                   |     | 48  |     |     |     |  |  |
| 150                            |                   |     |     | 96  | 120 |     |  |  |

#### NOTES:

- 1. Nail density is approx. one nail per 400 mm<sup>2</sup>.
- 2. Nails must be driven into all holes (ie, all holes filled), except for holes within 63 mm of timber ends and 16 mm of timber edges, to achieve the full Design Capacities see Design Capacities for a Typical Splice Joint.

### **IMPORTANT:**

READ THIS DATASHEET IN CONJUNCTION WITH PRYDA BRACKETS & FIXES DESIGN GUIDE AND REFER TO ESSENTIAL NOTES AND GENERAL NOTES.

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## **DESIGN CAPACITIES FOR A TYPICAL SPLICE JOINT**

Limit State Design capacities for Pryda Nail-on Plates per pair of plates are as tabulated below with conditions:

- All nail holes filled except within 60 mm of timber ends.
- Minimum edge distance to nail centre = 5D = 16 mm.
- Minimum edge distance plate to timber edge = 5 mm.
- Loading case = 1.2G+1.5Qr (Roof Live + Dead Load).
- · Nails within 63 mm of butt joint are neglected.
- Positioning tolerance along plate length = 3 mm.



| PLATE MININ<br>WIDTH WID<br>(MM) (MI | MINIMUM | DES | DESIGN CAPACITY ØNJ (KN) FOR A PAIR OF PLATES IN JD4 TIMBER (1.2G+1.5QR) |     |                  |      |      |                |              |  |  |
|--------------------------------------|---------|-----|--|-----|------------------|------|------|----------------|--------------|--|--|
|                                      | TIMBER  |     |  | Р   | STEEL CAPACITIES |      |      |                |              |  |  |
|                                      | (MM)    | 50  | 125  | 190 | 250              | 315  | 380  | MAX<br>TENSION | MAX<br>SHEAR |  |  |
| 75 x 1.0                             | 90      |     | N/S  | 6.4 | 12.8             | 19.2 | 24.4 | 35.2           | 21.2         |  |  |
| 100 x 1.0                            | 120     |     |  | 9.0 |                  |      |      | 46.0           | 27.6         |  |  |
| 150 x 1.0                            | 170     |     |  |     | 26.0             | 40.0 |      | 70.2           | 42.5         |  |  |

#### NOTES:

- 1. These design capacities apply directly for Category 1 joints as described in Table 2.2 of AS1720.1:2010. For Category 2 and Category 3 joints, multiply these capacities by 0.94 and 0.88 respectively.
- 2. The nail capacities (ΦNj) given in the table above is capable of resisting a resultant design force arising from an axial tension and shear forces (i.e vector sum of the axial tension and shear forces).
- 3. The design capacities tabulated above apply directly to joints on JD4 timber for 1.2G+1.5Qr load case using k<sub>1</sub> = 0.77. For other load cases and timber joint groups, multiply these capacities by the load factors given below. The resultant capacity must not exceed the maximum Steel Tension and Steel Shear values tabulated above.
- 4. 'N/S' in the above table signifies that the plate is not suitable for a splice joint connection, due to ineffectiveness of nails resulting from end-distance violations.
- 5. The duration factor (k<sub>1</sub>) for wind load case in the table below is taken as 1.14, as specified in Table 2.3 of AS1720.1:2010.
- 6. Pryda TCS12-35 screws may be substituted for Pryda Timber Connector nails. To achieve equivalent capacity, use 2 screws for every 5 nails (in JD4 or JD3) or 2 screws for every 4 nails (in JD5) The end/edge distance and spacing requirements for screws are different to nails and therefore should be specified by the designer.

| LOAD CASE   | 1.35G |      | 1.2G + | 1.5QF | 1.2G + WD OR 0.9G - WU |     |  |
|-------------|-------|------|--------|-------|------------------------|-----|--|
| Factor      | 0.74  |      | 0.     | 90    | 1.48                   |     |  |
| JOINT GROUP | J4    | J3   | J2     | JD5   | JD3                    | JD2 |  |
| Multiplier  | 0.62  | 0.88 | 1.24   | 0.83  | 1.4                    | 1.8 |  |

