

NZ PRYDA FRAME FIX

Reinforces top plates and common stud that have been compromised by large holes commonly drilled through for services. i.e. plumbing pipe, electrical cabling.

FEATURES AND BENEFITS

SIMPLE: Stiffens the top plate for areas in the region of the penetrations

FAST: Quick installation to top plate by using Pryda self-drilling screws

DURABLE: Suitable for both single & double top plates. Can be installed before or after service pipe penetration. Made from 1.55mm thick G200 Z275 Steel.

SPECIFICATIONS

PRODUCT CODE	PFF2
STEEL	G200
THICKNESS	1.55mm
CORROSION RESISTANCE	Z275
FASTENERS	Pryda 12G x 35mm Timber Connector Screw-painted red head.
SIZE	240 x 34 x 31mm Hole Diameter 60mm max.

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

Alternative Solution to NZS3604 to Section 8, Clause 8.7.5 Holes in plates.



Can be installed underside of top plate for full concealment within wall width.



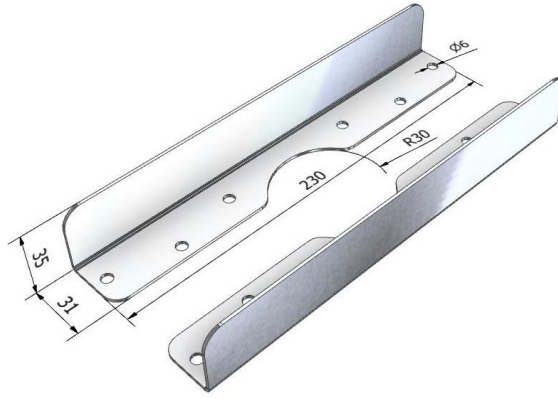
Can be installed on top of top plate with legs facing down if there are no trusses above and face cladding permits.



Can be installed on top of top plate if there are no trusses above.



Can be installed on SG8 common stud.



RANGE

PRODUCT CODE	MATERIAL	SIZE (mm)	MINIMUM TIMBER GRADE	SUITABILITY	QUANTITY
PFF2	G200 Z275 Galvanised Steel	240 x 34 x 31	SG8	Top Plate and Common Stud	10

Notes:

- Design 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.
- Suitable for single or double 90 x 45mm SG8 timber only.
- Frame Fix must be installed in PAIRS.

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 Frame fix 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 ² /m ² or LESS	Pryda Stainless Steel 304 Products ⁽³⁾
		Vented MORE than 7000mm ² /m ²	Pryda Stainless Steel 304 Products ⁽³⁾
	All subfloor fastenings within 600mm of the ground	Sheltered and Exposed	Pryda Stainless Steel 304 Products ⁽³⁾
	All other structural fixings	Sheltered	Pryda Stainless Steel 304 Products ⁽³⁾
Exposed		Pryda Stainless Steel 304 Products ⁽³⁾	
Zone D	All structural fixings	Sheltered and Exposed	Pryda Stainless Steel 304 Products ⁽³⁾

Notes:

- All Pryda galvanised products comply with NZS3604:2011 Table 4.2.
- Refer to NZS3604:2011 for all environment definitions.
- 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 FOR TOP PLATE(S)

Alternative Solution to NZS3604 to Section 8, Clause 8.7.5 Holes in plates.

The PFF2 is intended to re-instate the structural integrity of SG8 90 x 45mm wall frame top plate (including a top plate packer if used) or wall studs that have had a service hole of no greater than 60mm diameter drilled through its center.

Pryda Frame Fix 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).

Top plate(s) installation conditions :

Pryda Frame Fix is suitable for Residential light timber frame dwellings designed where the maximum loaded dimension of the wall for the respective top plate does not exceed that specified in NZS3604, Table 8.16 – Top plates of loadbearing walls.

Frame Fix must be used in accordance with the installation procedures outlined in this document to provide structural support to 90 x 45mm SG8 single or double top plates for a centrally located hole of max 60mm diameter.

The Frame Fix is suitable for use on 90mm wide frames ONLY.

Only 1 Frame Fix (installed in pairs) is to be installed between a set of studs – multiple penetrations are not permitted. Any further penetrations should skip at least 1 bay of studs from the existing location.

Any supported truss near the Frame Fix (PFF2) installation shall have a minimum of 100mm clearance. See Figure 1.

If the Frame Fix is installed in accordance with this document, the top plates in the section that the Frame Fix is installed can be considered structurally adequate as originally designed in accordance with NZS3604.

It is important the timber at Frame Fix installment and within 150mm of Frame Fix is free from any timber defects such as knots, splits, checks, waness or defects that may weaken and compromise the structural integrity of the timber.

The Frame Fix must not be modified in any way, shape or form under any circumstances or conditions.

Note: There should be no large point loads (e.g., from girder trusses, floor beams, etc.) in the top plate sections containing the Frame Fix, or penetrations in general - typically large point loaded elements should be supported directly by studs. The Frame Fix is to be installed on continuous top plates and not over or adjacent to any splice joint.

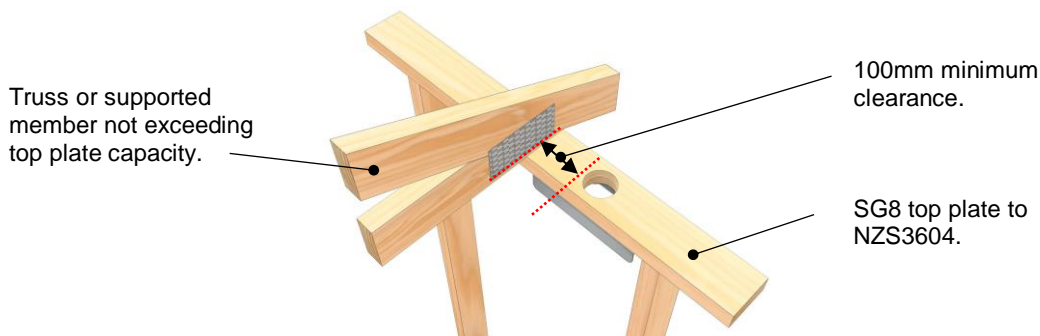
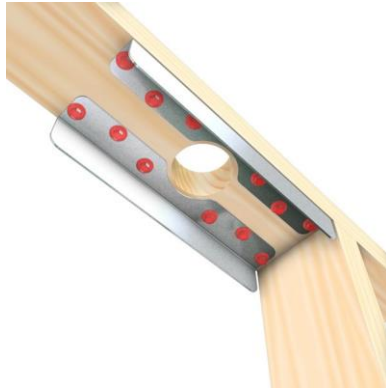


Figure 1 : 100mm minimum truss clearance to penetration with PFF2 reinforcement.

INSTALLATION – TOP PLATE UNDERSIDE

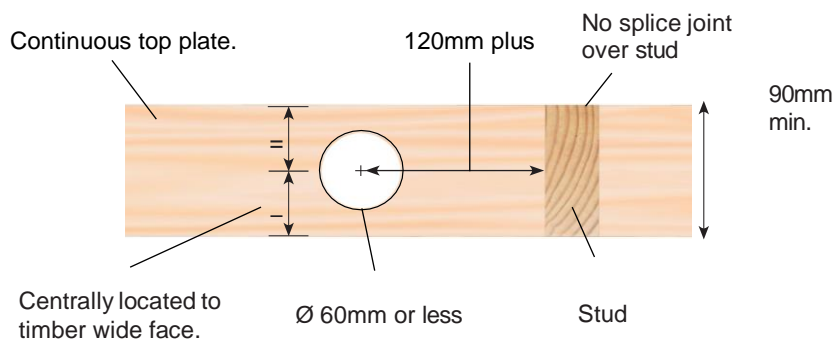
Fixing to underside of top plate where centre of hole is at least 120mm from the nearest stud.



STEP 1

Measure and mark the location on the top plate to be reinforced, ensuring the centre of the hole is no closer than 120mm from the face of the stud. Holes within 120mm of the stud can be reinforced by installing Frame Fix on the top face (see following section). The hole size should be no greater than 60mm diameter and must be centrally located within the 90mm plate width. The Frame Fix can be installed before or after the hole is drilled.

It is important the timber at Frame Fix installment and within 150mm of Frame Fix is free from any timber defects such as knots, splits, checks, waness or defects that may weaken and compromise the structural integrity of the timber.



STEP 2

Drill a hole through the timber to the required diameter at the marked location, not exceeding 60mm.



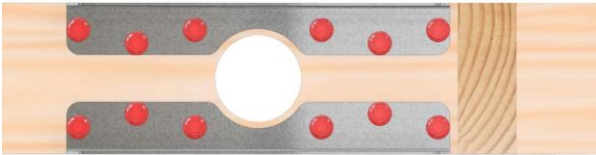
STEP 3

Place the Frame Fix centrally over the hole. The vertical flange should be flush with the edge of the frame. Fix into place using 12 x Pryda 12G x 35mm Timber Connector screws – painted red head. The Frame Fix must always be installed in pairs. For double top plates, insert an additional 2 x 14G Type 17 Hex Head screws, 70mm from the edge of the hole on both sides. Use 14G x 90mm screws for double 45mm top plates.

Note: the additional screw can be omitted if there is already a wall plate tie-down screw installed on that side of the hole. Double top plates are assumed to be laminated in accordance with NZS3604 or to the Project Engineer's requirements; do not rely on the Frame Fix for this purpose. Top plate(s) to be designed in accordance with and not exceeding NZS3604, Table 8.16.

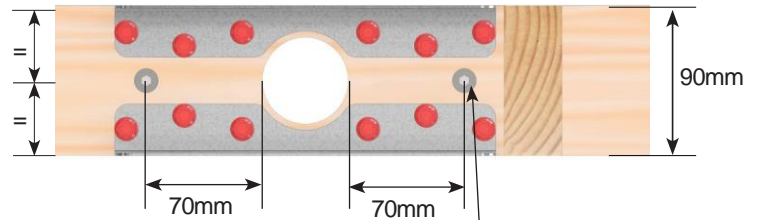
SINGLE TOP PLATE INSTALL

Pryda 12G x 35mm Timber Connector Screws – painted red head.

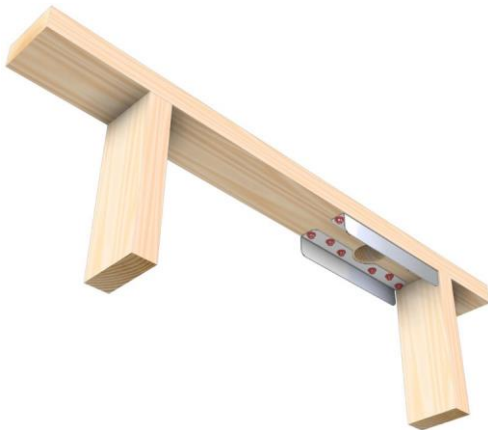


DOUBLE TOP PLATES INSTALL

Pryda 12G x 35mm Timber Connector Screws - painted red head, plus 2 x 14G screws to suit double plates depth.



14G screws to suit double top plates overall depth. One on each side of hole is required. Unless an existing top plate to stud tie-down screw is in place. If so, one 14G screw is required.



INSTALLATION – ON TOP OF TOP PLATE

Fixing to top side of top plate where service hole edge is no closer than 45mm from the stud.

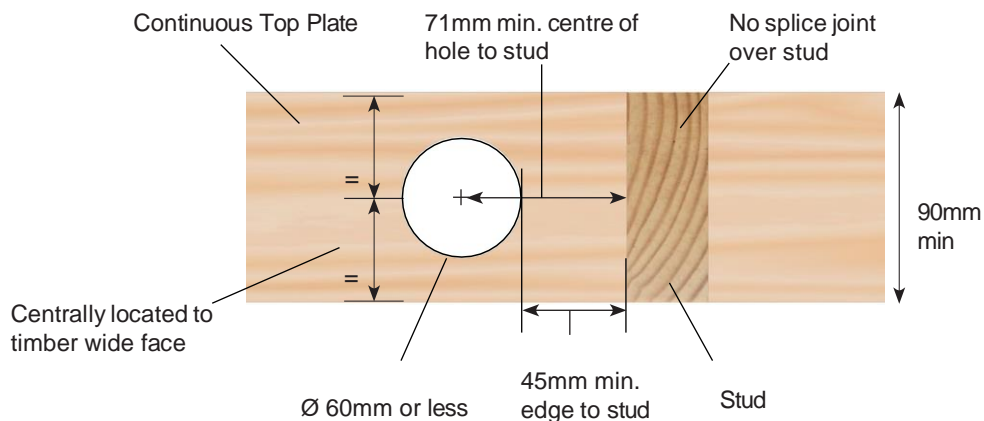


*Single top plate shown with 2 accepted installation orientations.

STEP 1

Measure and mark the location on the top plate to be reinforced, ensuring the centre of the hole is no closer than 120mm from the face of the stud. Holes within 120mm of the stud can be reinforced by installing the Frame Fix on the top face (see following section). Hole size should be no greater than 60mm in diameter and must be centrally located within the 90mm plate width. The Frame Fix can be installed before or after the hole is drilled.

Important Note: Ensure there are no timber defects (i.e., knots, wane, want, resin pockets) within 100mm of the Frame Fix or hole location.



STEP 2

Drill a hole through the timber to the required diameter at the marked location, not exceeding 60mm.



STEP 3

Place the Frame Fix centrally over the hole. The vertical flange should be flush with the edge of the frame. Fix into place using 12 x Pryda 12G x 35mm Timber Connector screws – painted red head. The Frame Fix must always be installed in pairs.

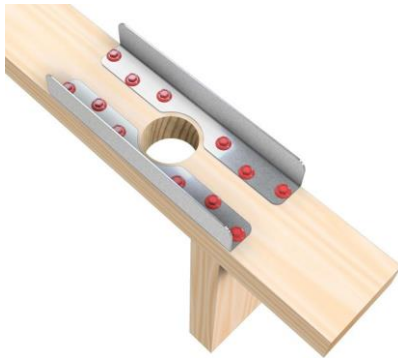
For double top plates, insert an additional 2 x 14G Type 17 Hex Head screws, 70mm from the edge of the hole on both sides. Use 14G x 90mm screws for double 45mm top plates.

Note: the additional screw can be omitted if there is already a wall plate tie-down screw installed on that side of the hole.

Double top plates are assumed to be laminated in accordance with NZS3604 or to the Project Engineer's requirements; do not rely on The Frame Fix for this purpose. Top plate(s) to be designed in accordance with and not exceeding NZS3604, Table 8.16.

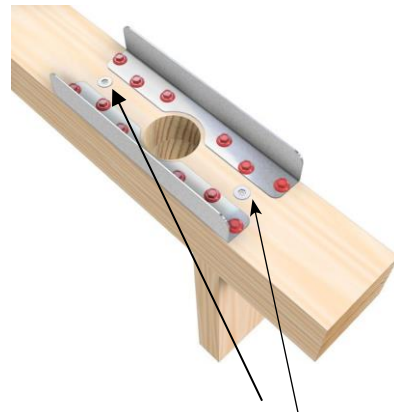
SINGLE TOP PLATE INSTALL

Pryda 12G x 35mm Timber Connector screws-painted red head.

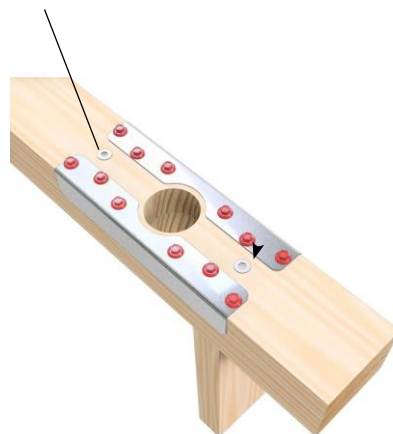


DOUBLE TOP PLATES INSTALL

Pryda 12G x 35mm Timber Connector screws-painted red head plus 2 x 14G screws to suit double plates depth

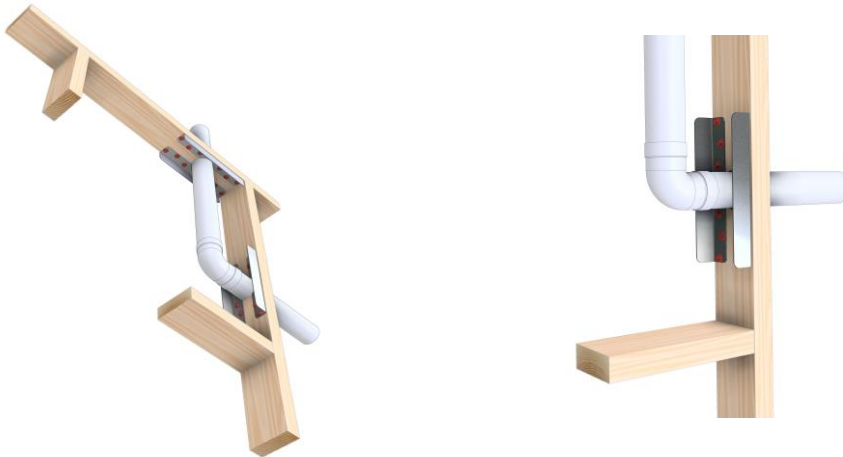


14G screw to suit double top plates overall depth. One on each side of hole is required. Unless an existing top plate to stud tie-down screw is in place. If so, one 14G screw is required.



The overlapping plate edge may interfere with wall cladding. Notching the top plate for a flush finish is NOT RECOMMENDED. It is the builder's responsibility to adopt an appropriate installation orientation to best suit the requirements of the build. Top plate must be continuous and no splice joint over stud.

INSTALLATION – COMMON STUD



Pryda Frame Fix can also be used for common studs up to 3000mm wall heights in residential construction. Pryda Frame Fix is not suited for commercial construction.

APPLICATION AND SCOPE OF USE FOR COMMON STUD

Pryda Frame Fix 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).

Pryda Frame Fix is suitable for Residential light timber frame dwellings designed in accordance with NZS3604.

The Frame Fix must be used in accordance with the installation procedures outlined in this document to provide structural support to 90 x 45mm SG8 unjointed common studs for a centrally located hole of max 60mm diameter.

The Frame Fix is suitable for use on 90mm wide frames ONLY.

Only 1 Frame Fix is to be installed per common stud – multiple penetrations are not permitted.

If the Frame Fix is installed in accordance with this document, then the stud in the section that the Frame Fix is installed, can be considered structurally adequate if the studs were originally designed in accordance with NZS3604 for 90 x 45mm SG8.

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

The Frame Fix must not be modified in any way, shape or form under any circumstances or conditions. There should be no large point loads (e.g., from girder trusses, floor beams, etc.) in the top plate sections directly over or adjacent to the stud containing the Frame Fix, or penetrations in general - typically large point loaded elements should be supported directly by critical studs without any penetrations. The Frame Fix is to be installed on continuous studs and not over or adjacent to any splice joint or jointed stud.

Pryda Frame Fix shall be installed no closer than 300mm from stud end-cut and 120mm from face of noggings / trimmers. Holes size should be no greater than 60mm diameter and must be centrally located within 90mm plate width. The Frame Fix can be installed before or after the hole is drilled.

Common stud installation conditions for external walls :

Penetrations and Frame Fix (PFF2) shall be fixed outside the central third of the stud for common studs for external walls and with a maximum roof load width of 6m. See Figure 2.

PFF2 is NOT suitable for critical studs.

Only install PFF2 to one stud in every 5 to external walls.

Maximum stud height not exceeding 3m and with a maximum wind speed less than or equal to 50m/s.

It is important the timber at Frame Fix installment and within 150mm of Frame Fix is free from any timber defects such as Knots, Splits, Checks, Wanes or defects that may weaken and compromise the structural integrity of the timber by having any penetrations.

Internal Non-load bearing and Non-braced walls :

Pryda Frame Fix can be located at any location along the length of the stud and within the minimum stud end-cut distance. See Figure 3.

It is important the timber at Frame Fix installment and within 150mm of Frame Fix is free from any timber defects such as knots, splits, checks, wanes or defects that may weaken and compromise the structural integrity of the timber.

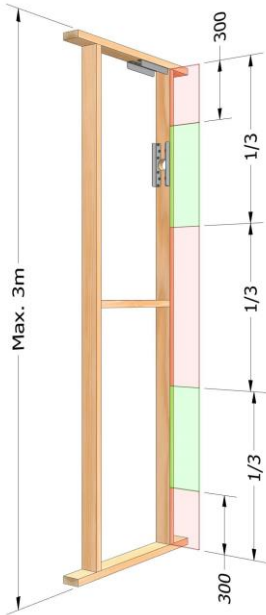


Figure 2, Holes shall be located within green highlighted sections only for external walls.

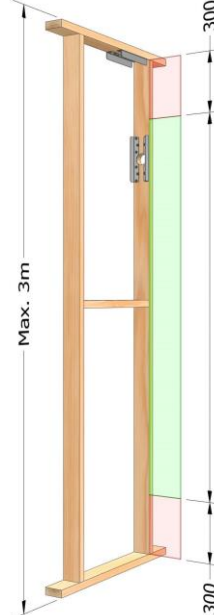
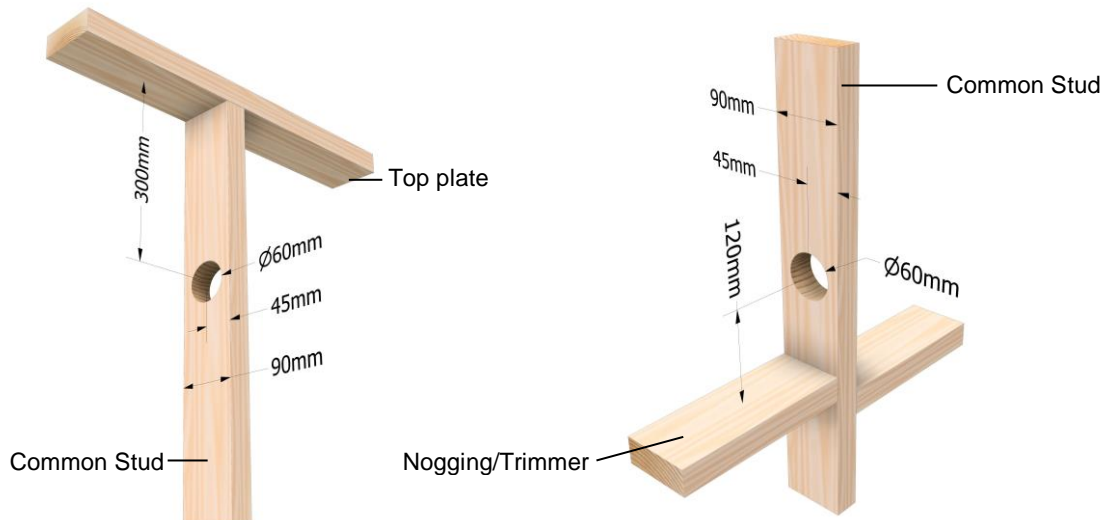


Figure 3, Holes shall be located within green highlighted sections only for internal walls.

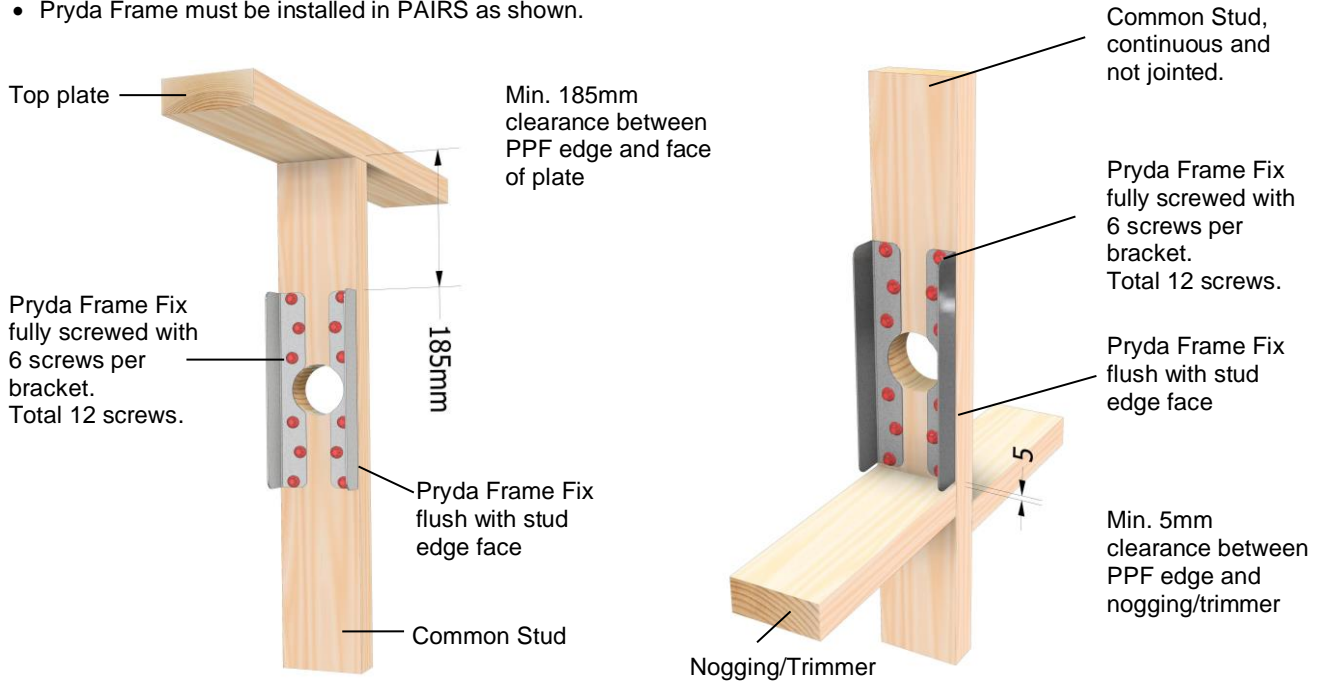
STEP 1

- Check location of the hole top or bottom plate is no less than 300mm.
- If the hole is next to the nogging, ensure the centre of the hole must be a minimum of 120mm from face of nogging/trimmer.
- Stud must be no less than 90mm wide
- The hole must be no greater than 60mm in diameter and located centrally to stud width.
- Common studs only, not supporting any concentrated loads.



STEP 2

- Install Pryda Frame Fix on either side of the hole and fix each bracket with 6 X No.12 x 35mm Pryda Timber Connector screws -painted red head.
- Ensure Frame Fix is vertically centered to the hole.
- Pryda Frame Fix can be installed before or after drilling hole. If before, mark hole following STEP 1 constraints and install PFF. Then drill hole.
- Ensure Pryda Frame Fix is not overhanging pass stud edge.
- Pryda Frame must be installed in PAIRS as shown.



Contact Details	
Manufacture location	Overseas
Legal and trading name of manufacturer	Wigley 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