NZ PRYDA FASTFIX™ TRUSS SCREW SYSTEM

TECHNICAL GUIDE

The Pryda FastFix™ Truss Screw System is designed for site fixing of tie-down screws for trusses or rafters to frames and beams. The proprietary guide (FTSG FastFix Truss Screw Guide) positions the FastFix Truss Screw in the correct location for compliant installation every time.

The system complements Pryda SpeedTruss™ with site-based fixing of smaller trusses and rafters. Where SpeedTruss is not used, FastFix enables a complete site-based tie-down system using precisely installed, high-capacity screws.

This simplifies roof tie-downs, providing a safer, faster, easier and fully compliant screw-based solution.

PREFERED TIE-DOWN METHOD SELECTION CHART

1

Pryda SpeedTruss

Use the FTSG guide to complement SpeedTruss for tie-downs to truss horizontal top chords or beams.

SpeedTruss is the best method for truss tie-down to plates.

2

Top-down Fixing

Use the FTSG guide for direct top-down fixing of trusses to single or double top plates.

This is the preferred method if not using SpeedTruss.

3

Underside Fixing

Use the FTSG guide for direct underside fixing of trusses to single or double top plates, and for truss heel tie-down onto truss horizontal top chords or beams.

4

Side block Fixing

Use side block fixing method in situations where interference prevents underside fixing options.

5

Pryda Tie Down Connectors

Use the range of timber connectors for all other tie-down requirements, or if in doubt on what to use for the above applications.

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Things to consider when using Pryda FastFix Truss Screw system.

Selecting a tie-down system during the design stage will save you money and time. Pryda recommends SpeedTruss™ for an efficient, time-saving, and safer installation for all roof truss projects. Pryda FastFix Truss Screw System is fully integrated into Pryda's software and compliance documentation and provides a site-fixed option with the same high capacity as SpeedTruss.

The Pryda FastFix Truss Screw System requires consideration as follows:

- Design and installation shall closely follow the details found within the Pryda FastFix Truss System technical guide. Please familiarise yourself with this technical guide before using the system for the first time.
- Pryda recommends top-down installation from a stepladder located inside the wall frame to minimise work at heights.
- The system is designed for 70mm or 90mm deep rafters and truss chords only. Alternate connectors should be used for deeper members.
- Timber quality near tie-down locations is important for site-installed screws. If timber defects are present, use an alternate tie-down connector. These defects include, but are not limited to knots, splits, wane, checks, imperfections, and pre-existing fractures from skew nailing. If screws are then used in the vicinity of above-mentioned defects/weak points, there is an increased chance of splitting the timber members. In addition, thin sections of timber such as tapered bottom chord members are more prone to splitting; however these are not typically structurally critical.
- In the unlikely event that the chord splits during installation, cease using the FastFix screw and seek an alternative tie-down connector from the fabricator or designer. Hairline cracks, in most instances, will still be structurally adequate. Refer to the Pryda Engineering Team for additional guidance if required.
- LVLs can be prone to split when fasteners are fixed through their edge, especially near end cuts. Pre-drilling a 6.5mm pilot hole is recommended. Alternatively, adopt side block fixing methods using structural soft woods to mitigate issues.
- High density timbers and deep members will require pre-drilling a 6.5mm diameter pilot hole on the centreline. This helps prevent misalignment of the screw during installation.

INSTALLATION USING PRYDA FASTFIX™ TRUSS SCREW GUIDE

IMPORTANT

To ensure code compliance, structural adequacy, proper alignment, accurate positioning, and to achieve the capacities shown in the Pryda FastFix Screw Truss System, **it is critical that the Pryda FastFix screws are installed using FastFix Truss Screw Guide every time**.

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NZ PRYDA FASTFIX™ TRUSS SCREW SYSTEM

TECHNICAL GUIDE

CONNECTION DETAILS SUMMARY

Navigate to the required detail by clicking on the desired summary link below:

FTSG = FastFix Truss Screw Guide. This is the red guide you will use to install Pryda Screws

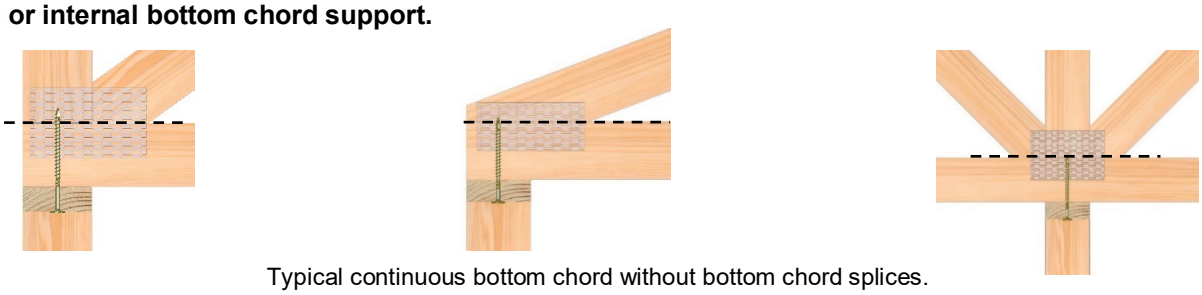
FASTFIX™ TRUSS SCREW SYSTEM

This technical guide is for use with trusses supported on 70mm or 90mm external or internal walls.

Minimum requirements for compliance are:

- Use Pryda FastFix screws:
  - Top down or Underside Tie-down (Identification Tag available): WM8150PS
  - Underside Tie-down (No Tags available, adopt approved alternatives): WM8200PS
- Use Pryda Compliance Tag for connections at height or as required: TAG-150
- Adopt one of the approved compliance identification options to identify Pryda screw used when Tags are not available.
- Wall Top plates are to be a minimum of 90 x 45mm SG8.
- For top-down applications, this guide is only suited for 90mm truss/rafter top chords using the FTSG guide. Pryda recommends using the Pryda proprietary SPEED TRUSS system for greater depth truss top chord, pre-installed FastFix™ screw tie-down and certified design connection. Contact Pryda or your nearest Pryda fabricator for more details.
- Truss bottom chord is to have a minimum grade and size of 90 x 45mm SG8.
- Truss Bottom chord is to be continuous (i.e., no splicing or taper cuts) over the support wall.
- Installed using Pryda FastFix Truss Screw Guide (FTSG) for correct location of screw for the different applications. Refer to section **FASTFIX™ INSTALLATION USING PRYDA FASTFIX™ TRUSS SCREW GUIDE** for detailed installation instructions.

Common truss support types suitable for FastFix truss screw from underside of top plate to bottom chord heel or internal bottom chord support.



Typical continuous bottom chord without bottom chord splices.

- Screws are to be fixed at the centreline of the truss bottom chord ONLY. See Figure 2.
- Screws are to be fixed vertically ONLY.
- Pryda FastFix Truss Screw Guide MUST be used when installing screws.
- For 90mm wide frame, screw should be installed a minimum of 45mm from the square cut end of the truss bottom chord and between 30mm and 45mm from the edge of the wall plate – this area is highlighted in GREEN in Figure 1.
- Ensure sufficient timber depth exist such that the screw threads should be fully embedded into timber so the end point of the screw is not exposed, as this may present a safety hazard.

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INSTALLATION USING PRYDA FASTFIX™ TRUSS SCREW GUIDE

IMPORTANT

To ensure code compliance, structural adequacy, and achieve the capacities shown in the FastFix Screw Technical Guide, it is critical that the Pryda truss screws are installed using Pryda FastFix Truss Screw Guide (Product code: FTSG).

COMPLIANCE AND EASY IDENTIFICATION

The use of Pryda screw tags is highly recommended to assist in the easy verification of site fixed screws by certifiers for connections at height.

PRODUCT CODE	SIZE	PACK QUANTITY
FTSG	FASTFIX TRUSS SCREW GUIDE	20
WM8150PS	FASTFIX SCREW M8 X 150mm	200
WM8200PS	FASTFIX SCREW M8 X 200mm	150
TAG-150	ID TAG FOR 150mm SCREW	1000
TAG-200	ID TAG FOR 200mm SCREW	1000

Note: Alternative compliance identification methods can be used where Tags are not available. Pryda recommends using Tags for connections that are at height such as top chord extensions over truncated trusses for roof truss tie-down applications.

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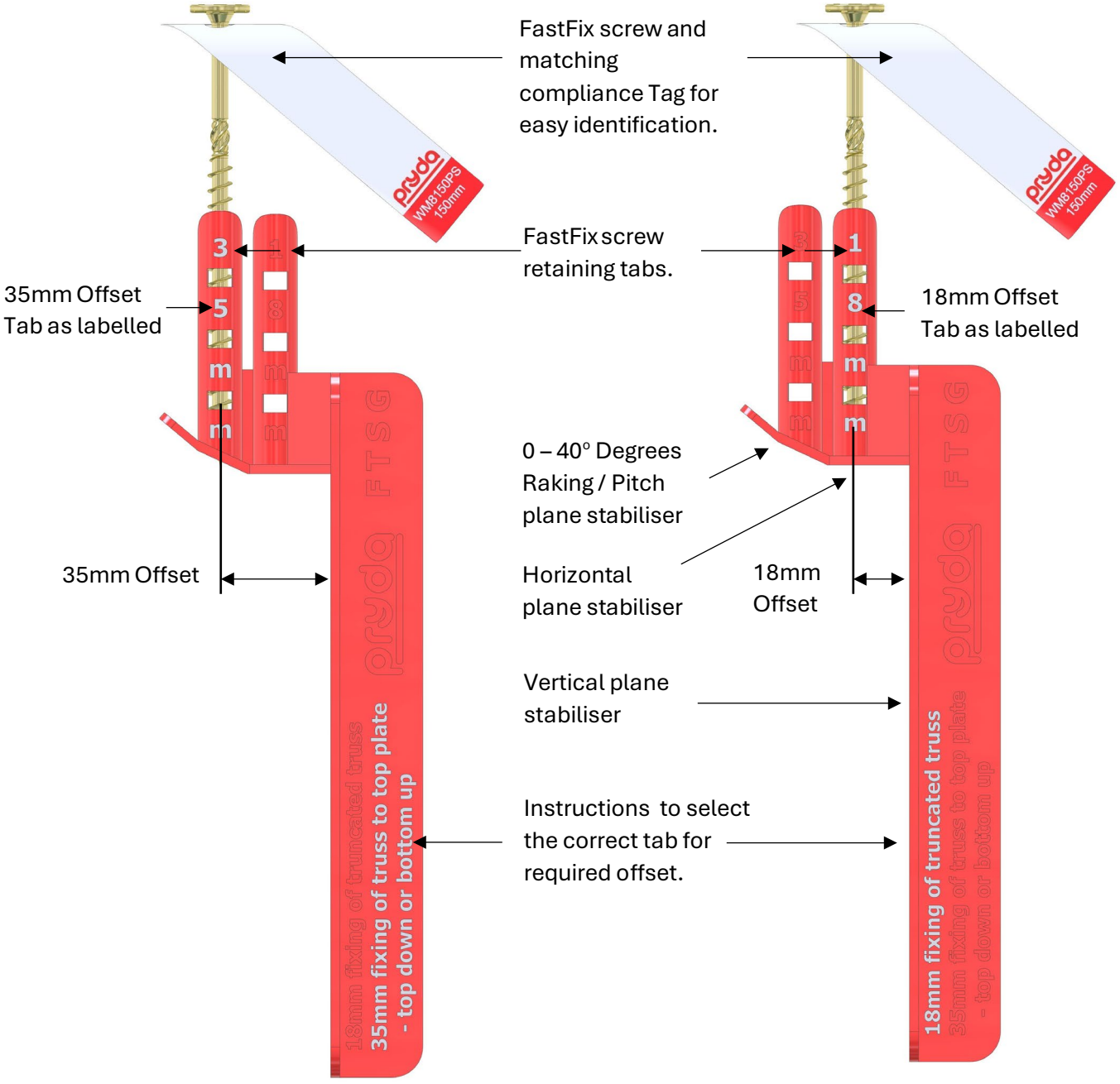
PRYDA FASTFIX™ TRUSS SCREW GUIDE (FTSG) DESIGN FEATURES



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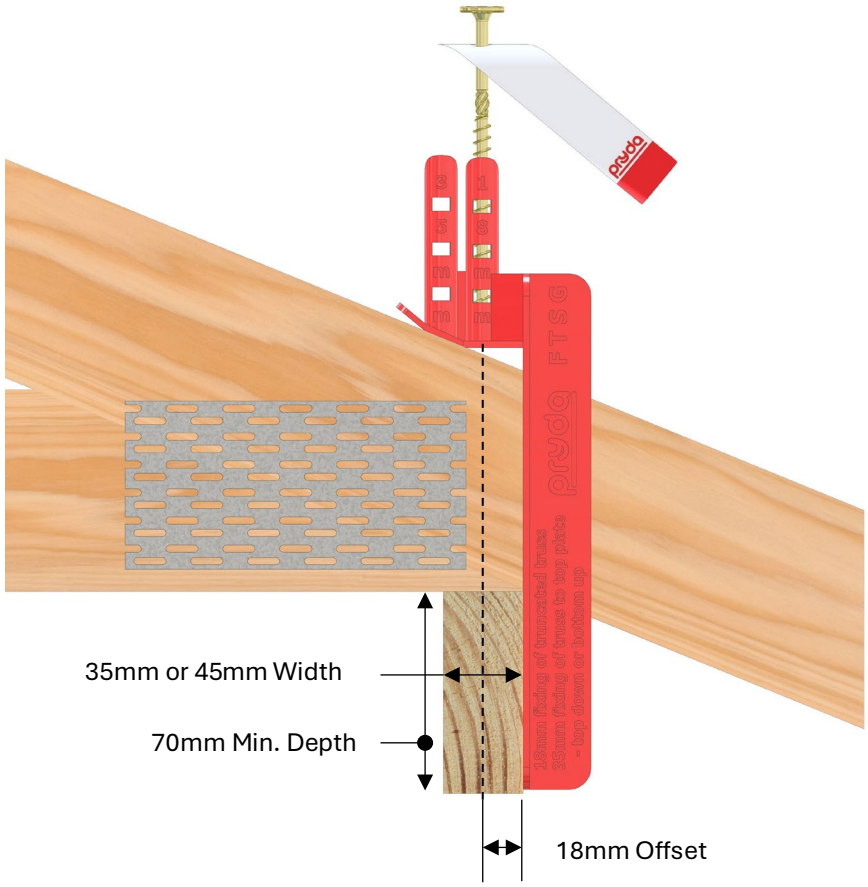
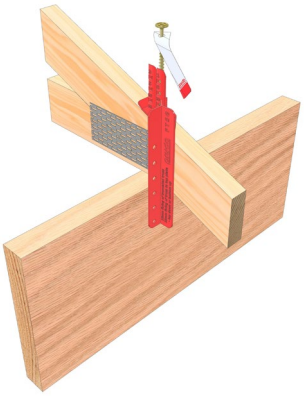
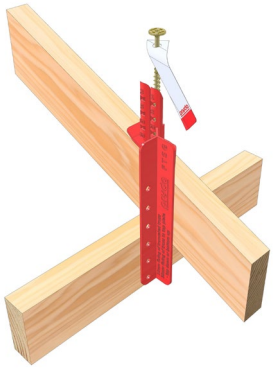
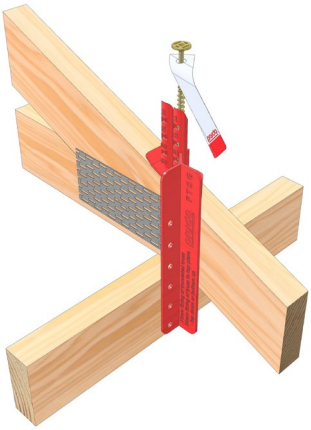
FTSG screw offset features.

- 18mm offset screw guide is to be used with supporting timber that is 35mm to 45mm in width.
    - Solid beams – truss or rafters supported on solid beam narrow edge.
    - Truncated truss horizontal top chords.









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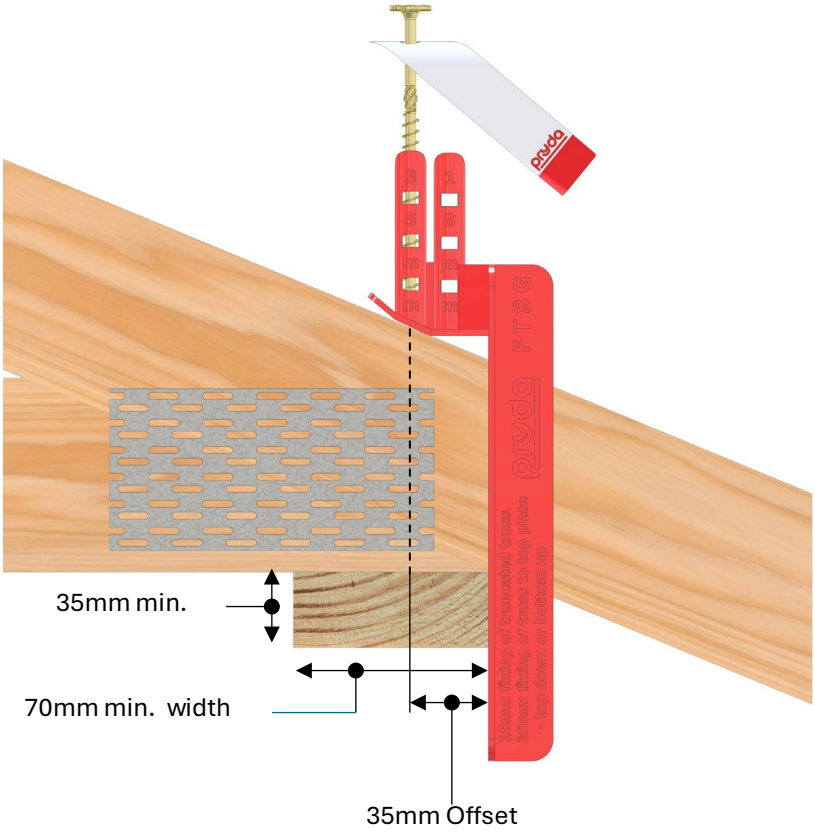
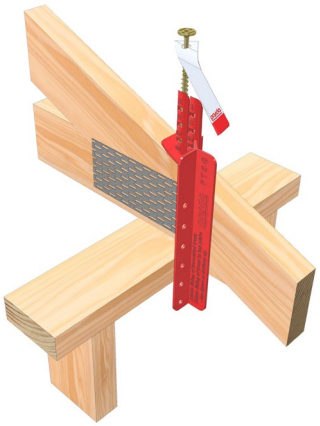
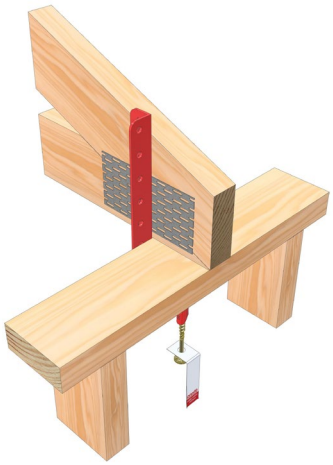
- 35mm offset screw guide is to be used with supporting timber that is 70mm to 90mm in width.
    - Top plates.
    - Wide bearers.







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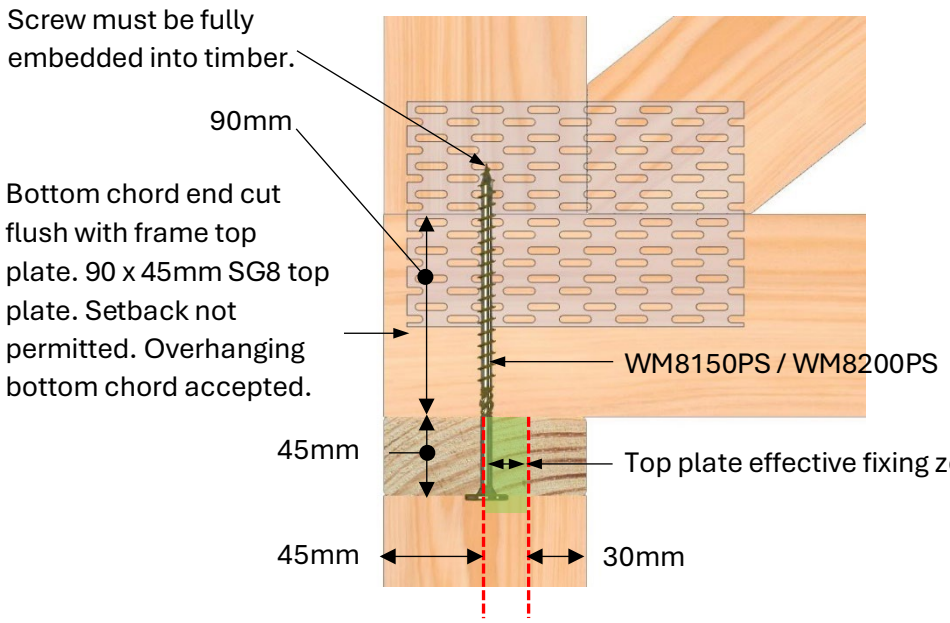
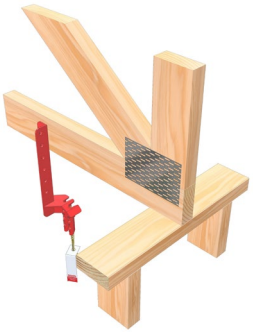
For single 45mm SG8 top plate and WM8150PS (150mm) or WM8200PS (200mm) Pryda Screws.

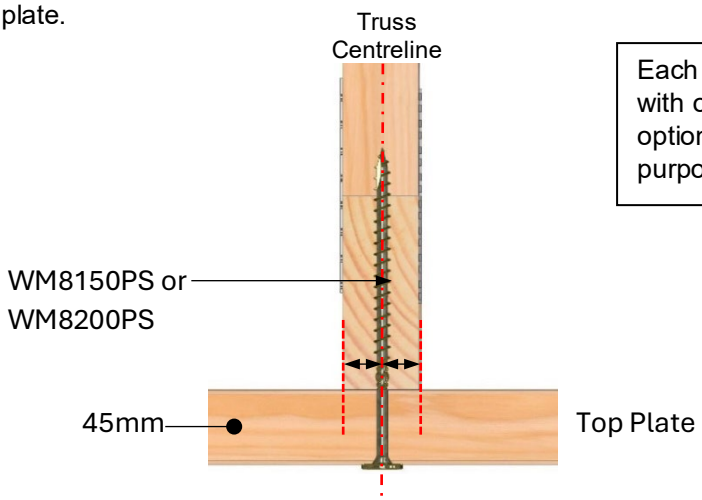
For 90mm wide frame, screw should be installed a minimum of 45mm from the end of the truss bottom chord and between 30mm and 45mm from the edge of the wall plate – this area is highlighted in GREEN in Figure 1. The screw should be fixed near the centreline of the truss bottom chord (using FTSG guide) – Refer to Figure 2. Section through top plate at external support or cutoff truss – Refer to Figure 1.





- Position FTSG as shown to underside.
- Select 35mm Offset.

Figure 1 – illustration showing effective fixing zone for support condition with truss bottom chord end cut flush with supporting wall top plate.



Each connection should be accompanied with one of the compliance identification options. Not shown in detail for clarity purposes.

Figure 2 – illustration showing screw installed centreline of truss bottom.

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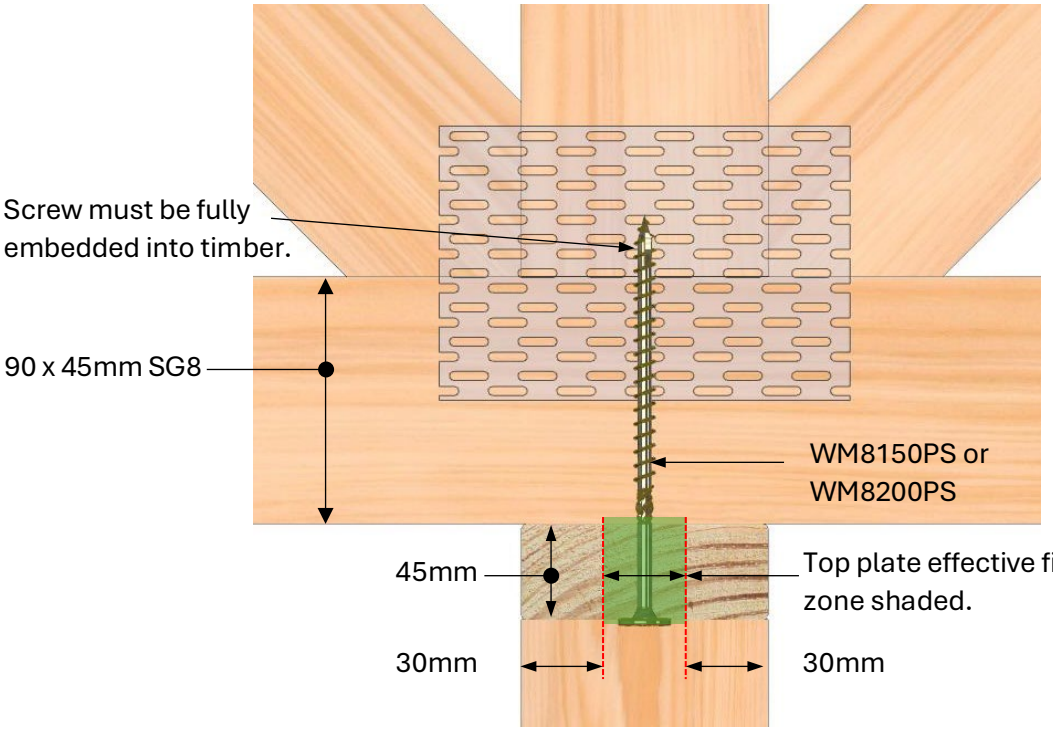
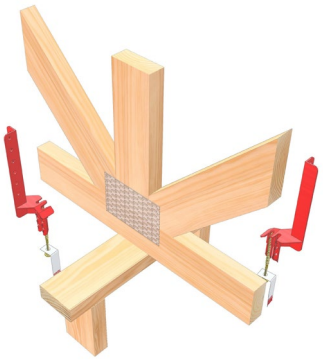


Each connection should be accompanied with one of the compliance identification options. Not shown in detail for clarity purposes.



- FTSG can be position on either locations as shown to underside.
- Select 35mm Offset.

Figure 3 - Showing internal support with a continuous bottom chord over the support wall. In this case the screw can be fixed in the green zone – anywhere having a minimum of 30mm from either edge of the top plate.

Based on the screw being installed in accordance with these conditions the design uplift capacity will be:

For 1 x 45mm SG8 top plate capacities are:

WM8150PS = 7.1 kN (0.9G + Wup)
WM8200PS = 2.7 kN (0.9G + Wup)

Wind Uplift:

(0.9G – Wup) = Permanent and Wind Up Actions (or Dead & Wind up)

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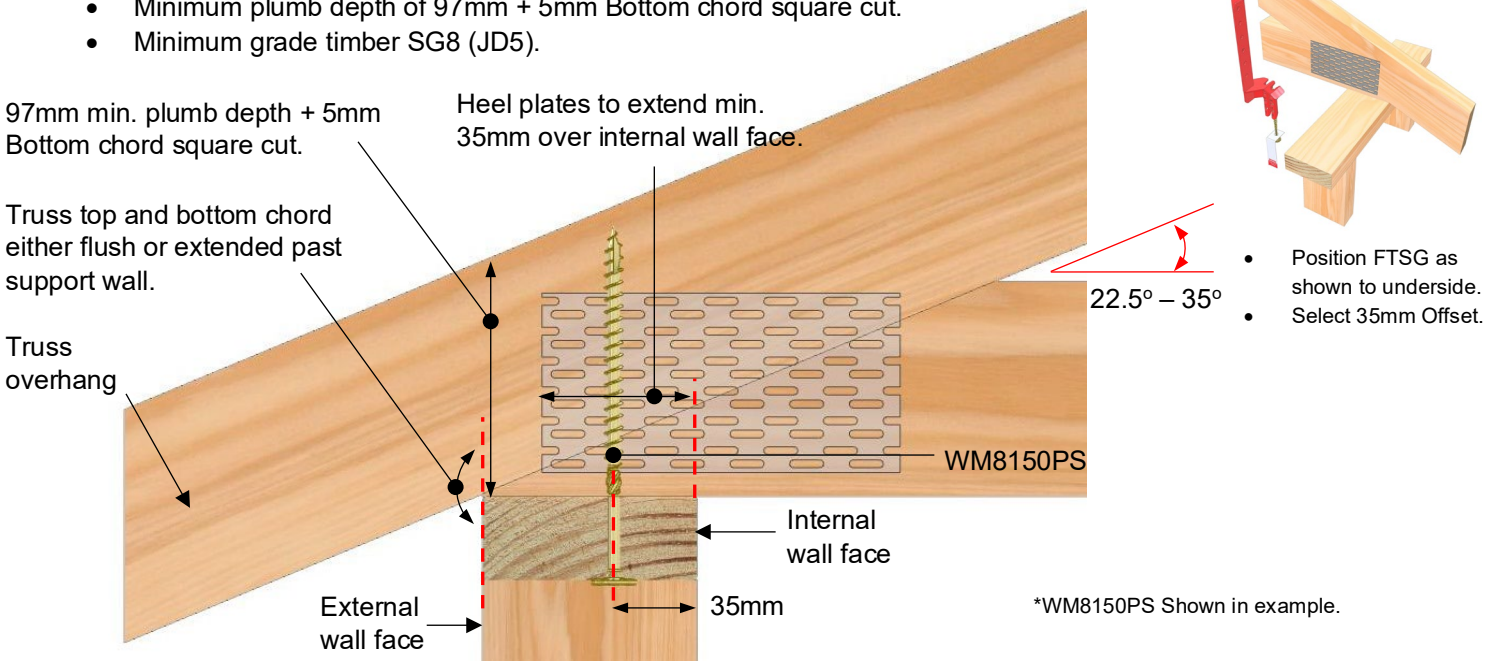
For trusses at heel points where there is a sloping top chord (as shown below) the following conditions are required to be met.

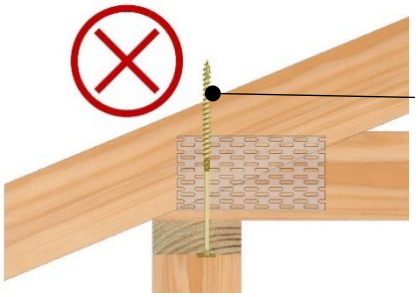
Design criteria:

- Claw plates must be present at the heels of the trusses and must extend to a minimum of 35mm over the internal wall face of supporting wall.
- Pitch of trusses between 22.5-35 degrees.
- Minimum plumb depth of 97mm + 5mm Bottom chord square cut.
- Minimum grade timber SG8 (JD5).



- Position FTSG as shown to underside.
- Select 35mm Offset.

Figure 4 – Truss heel with roof pitch between 22.5 – 35 degrees on 90 x 45mm top plate.



Selected screw MUST not extend past top chord.

Important Note: WM8200PS should NOT be used unless plumb depth of the truss or rafter is > 165mm as the tip of the screw will protrude through the truss and create a potential safety issue. Contact Pryda Engineering for design.

Each connection should be accompanied with one of the compliance identification options. Not shown in detail for clarity purposes.

Based on the screw being installed in accordance with these conditions the design uplift capacity will be:

For 1 x 45mm SG8 top plate capacities are:

WM8150PS = 8.0 kN (0.9G + Wup)

Wind Uplift:
(0.9G – Wup) = Permanent and Wind Up Actions (or Dead & Wind up)

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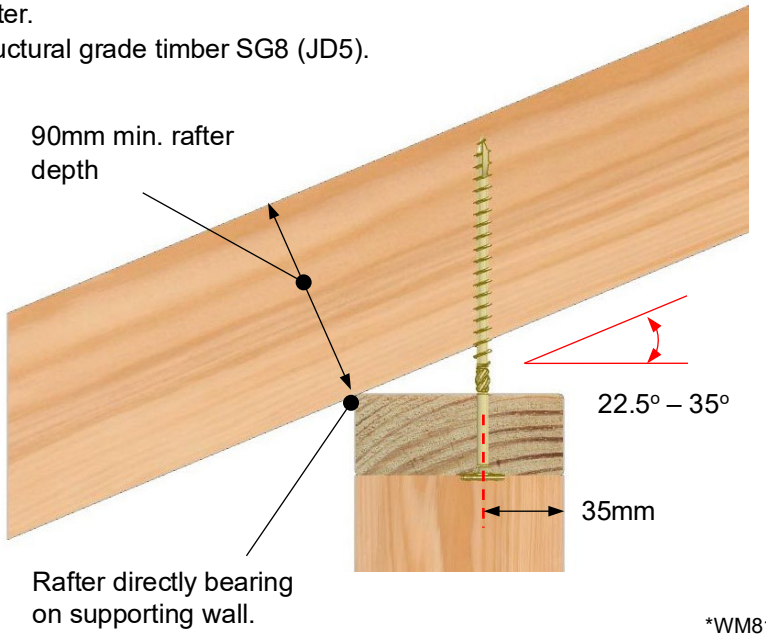
Fix to non-plated trusses or rafters with single top plate.

WM8150PS, 1 x 45mm top plate, capped at 35° pitch: Wind uplift (0.9G+Wup) = 5.3 kN

Wind Uplift:
(0.9G – Wup) = Permanent and Wind Up Actions (or Dead & Wind up)

Design criteria:

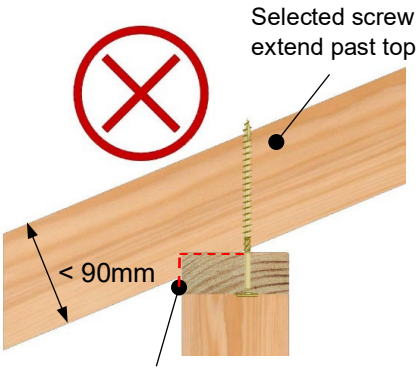
- Pitch of trusses between 22.5° - 35° degrees.
- Minimum plumb depth of 99mm.
- Birdsmouths are NOT recommended on <90mm rafters as this may cause the screw to protrude through the top of the rafter.
- Minimum structural grade timber SG8 (JD5).



- Position FTSG as shown to underside
- Select 35mm Offset.

*WM8150PS Shown in example.

Figure 5 - Sloping top chord / rafter with roof pitch between 22.5° – 35° degrees on 90 x 45mm top plate.



Birdsmouths are NOT recommended on < 90mm rafters. Contact Pryda Engineering Services for all other Birdsmouth conditions.

Important Note: WM8200PS should NOT be used unless plumb depth of the truss or rafter is > 165mm as the tip of the screw will protrude through the truss and create a potential safety issue.

Each connection should be accompanied with one of the compliance identification options. Not shown in detail for clarity purposes.

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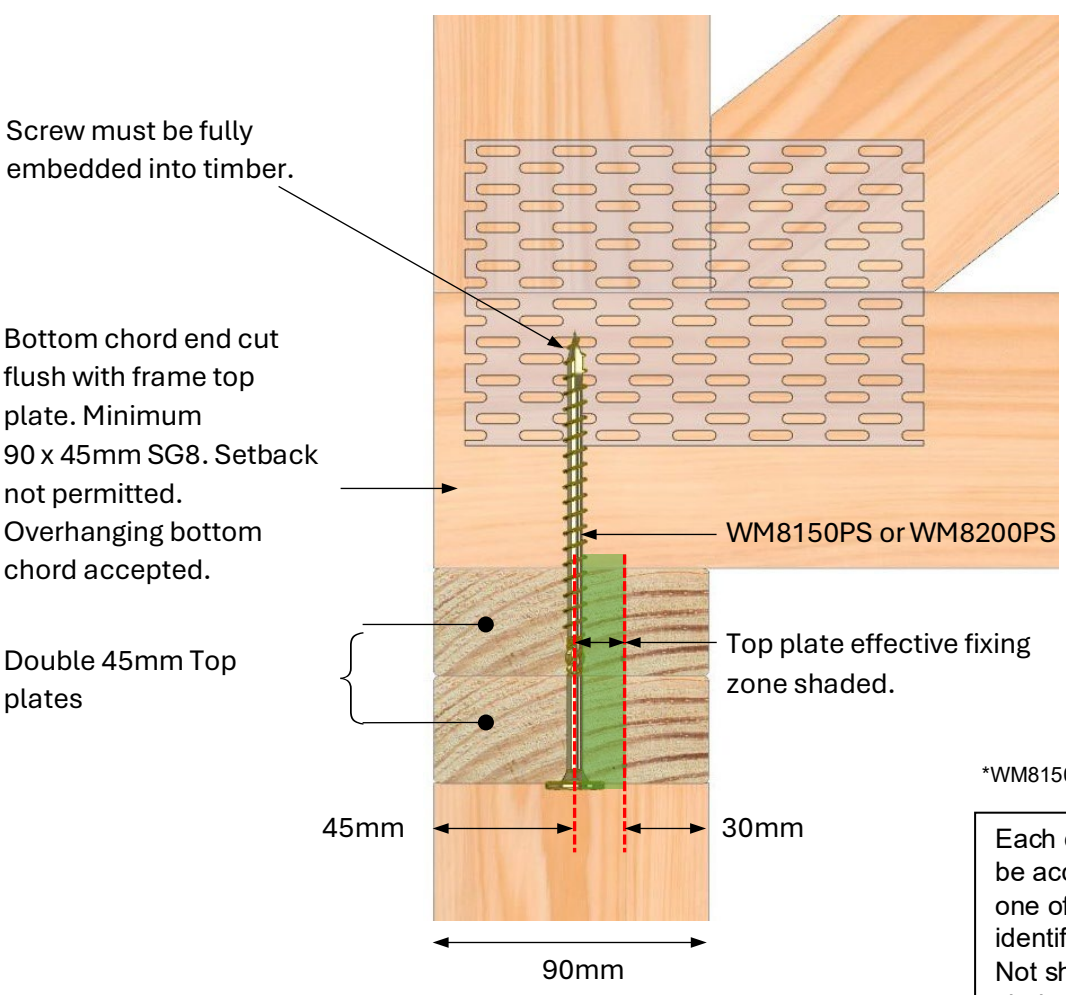
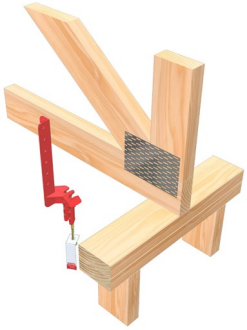
For 2 x 90 x 45mm top plates and WM8150PS / WM8200PS Pryda Screws.

For 90mm wide frame, screw should be installed a minimum of 45mm from the end of the truss bottom chord and at a min edge distance of between 30mm and 45mm from the edge of the wall plate – this area is highlighted in GREEN in Figure 6.





- Position FTSG as shown to underside.
- Select 35mm Offset.

*WM8150PS shown in example.

Each connection should be accompanied with one of the compliance identification options. Not shown in detail for clarity purposes.

Figure 6 – illustration showing effective fixing zone for support condition with truss bottom chord end cut flush with supporting wall double top plates.

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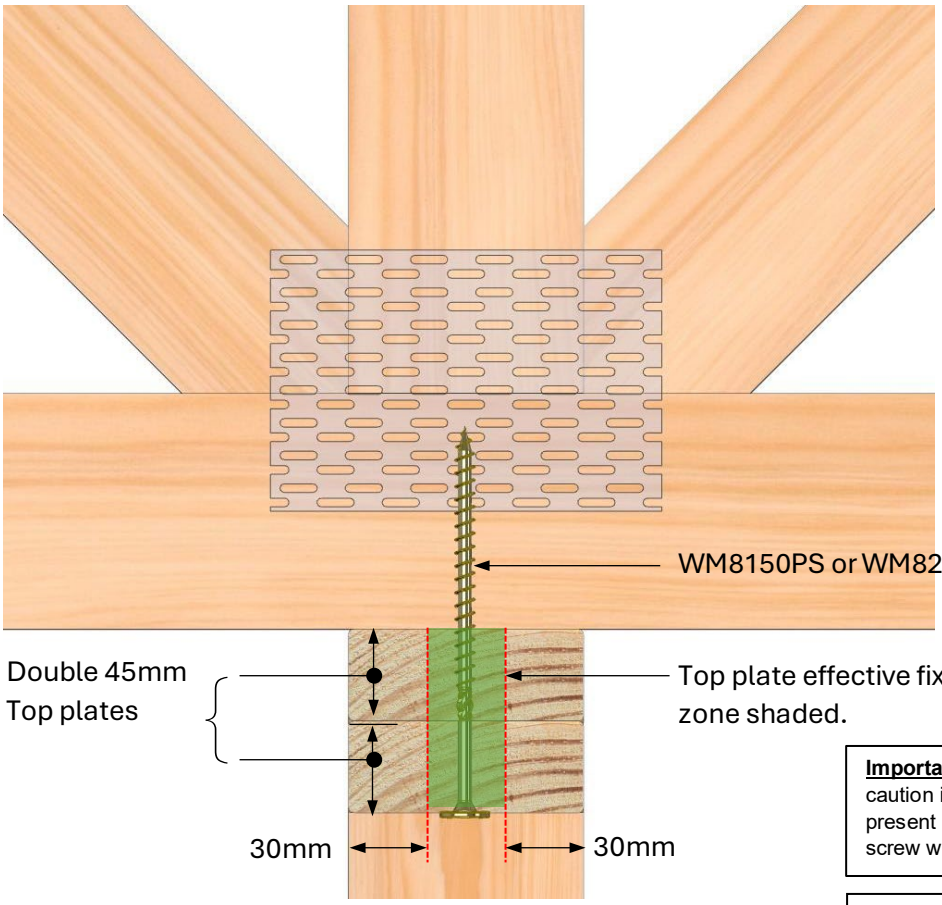
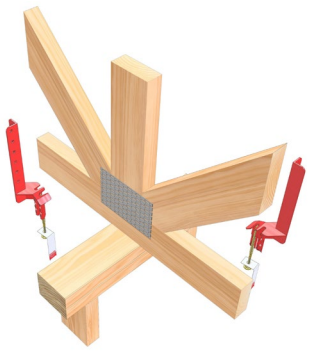
Similar installation conditions exist with double top plates for trusses with continuous bottom chord over supports.





- FTSG can be position on either locations as positioned to underside.
- Select 35mm Offset.

Important Note: For using the 200 mm screws caution is advised as timber webs must be present over the joint being fixed otherwise the screw will protrude through the chord.

Each connection should be accompanied with one of the compliance identification options. Not shown in detail for clarity purposes.

Figure 7 - Showing internal support with a continuous bottom chord over the support wall. In this case the screw can be fixed in the green zone – anywhere having a minimum of 30mm from either edge of the double top plates.

Based on the screw being installed in accordance with these conditions the design uplift capacity (0.9G + Wup) will be:

For 2 x 45mm SG8 top plates capacities are:

WM8150PS = 4.8 kN (0.9G + Wup)
WM8200PS = 6.4 kN (0.9G + Wup)

Wind Uplift:
(0.9G – Wup) = Permanent and Wind Up Actions (or Dead & Wind up)

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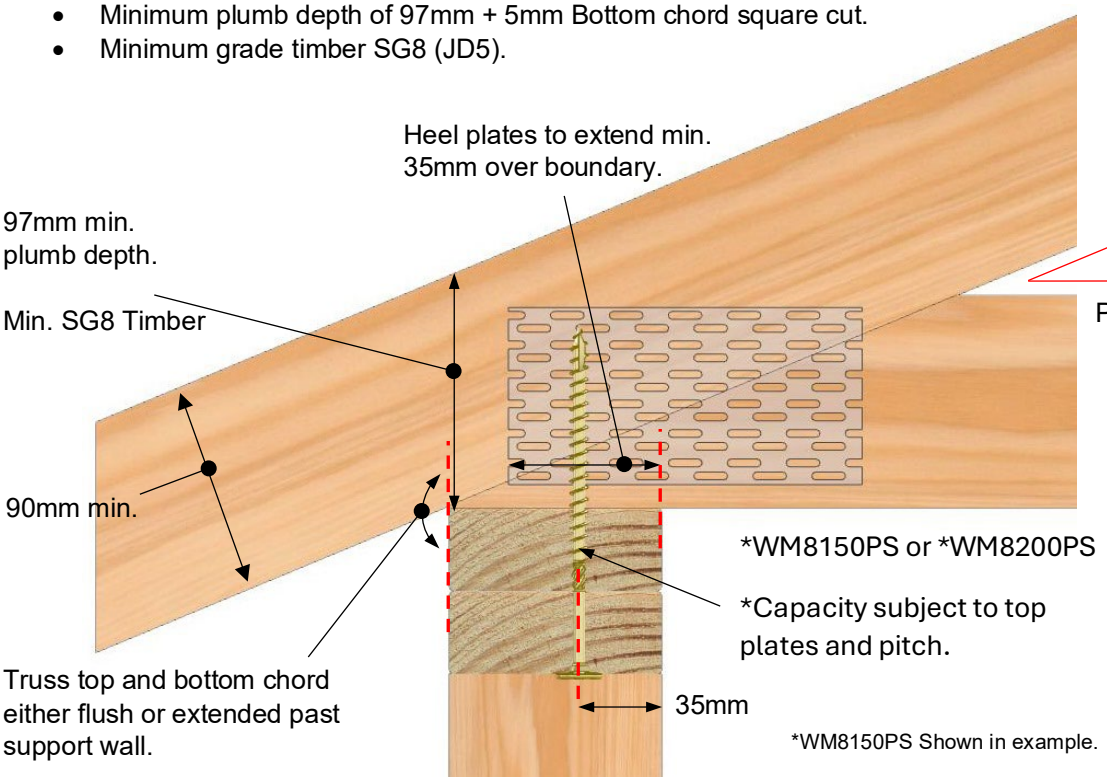
For trusses at heel points where there is a sloping top chord (as shown below) the following conditions are required to be met.

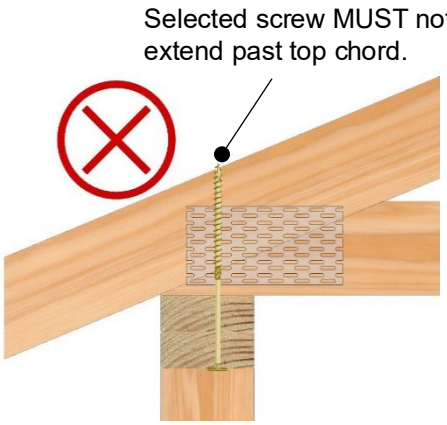
Design criteria:

- Claw plates must be present at the heels of the trusses and must extend min 35mm over the boundary of the wall plate.
- Pitch of trusses between 15° – 35° degrees with 2 x 45mm top plates.
- Minimum plumb depth of 97mm + 5mm Bottom chord square cut.
- Minimum grade timber SG8 (JD5).



- Position FTSG as shown to underside.
- Select 35mm Offset.

Figure 8 – Truss heel on double top plates.



Important Note: WM8200PS should NOT be used in circumstances where the tip of the screw will protrude through the truss and create a potential safety issue.

Each connection should be accompanied with one of the compliance identification options. Not shown in detail for clarity

*See capacities on next page for the above fixing conditions.

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Based on the screw being installed in accordance with the following conditions, the design uplift capacity (0.9G + Wup) will be:

For 2 x 45mm SG8 top plates, pitch up to 35° capacities are:

WM8150PS: Wind uplift (0.9G + Wup) = 4.8 kN

For 2 x 45mm SG8 top plates, pitch between 15° – 35° capacities are:

WM8200PS: Wind uplift (0.9G + Wup) = 8.0 kN

Wind Uplift:

(0.9G – Wup) = Permanent and Wind Up Actions (or Dead & Wind up)

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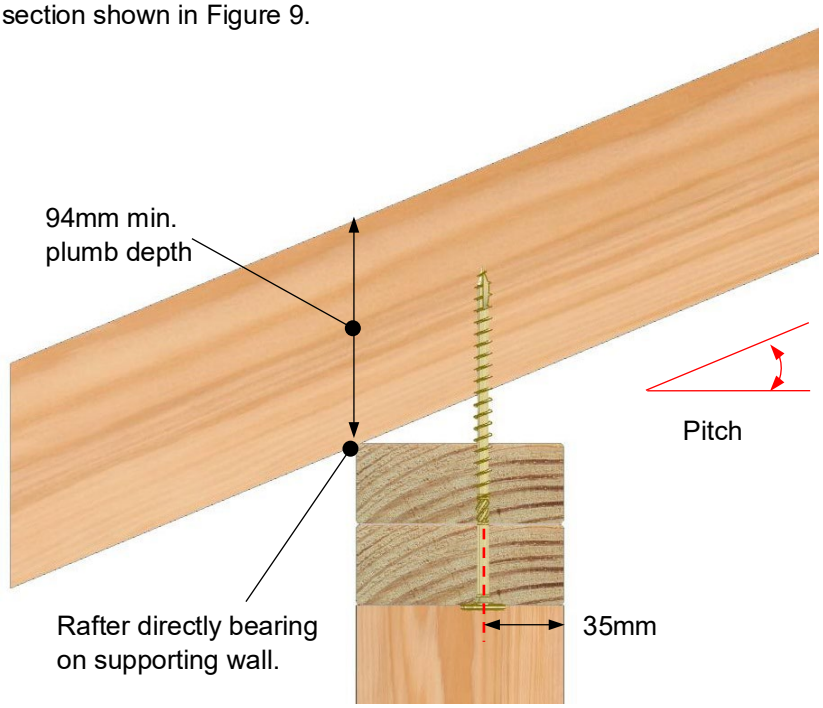
Fix to non-plated trusses or rafters with double top plates.

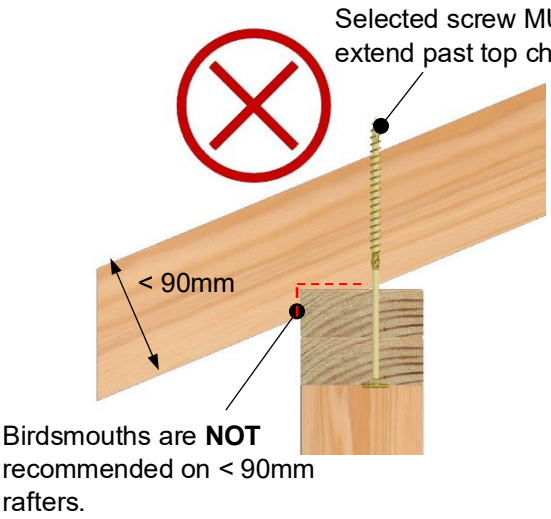
Typical section shown in Figure 9.



*WM8150PS shown in example.

- Position FTSG as shown to underside.
- Select 35mm Offset.

Figure 9 - Sloping top chord / rafter with roof pitch on double top plates.



Each connection should be accompanied with one of the compliance identification options. Not shown in detail for clarity purposes.

*See capacities on next page for the above fixing conditions.

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Design criteria.

For rafter pitch under or equal to 25° degrees, Min. SG8

2 x 45mm SG8 top plates

For rafter pitch under or equal to 25° degrees, Min. SG8

WM8150PS Wind uplift (0.9G + Wup) = 2.7 kN

For rafter pitch equal or greater than 20° and under or equal to 25° degrees, Min. SG8

WM8200PS Wind uplift (0.9G + Wup) = 6.7 kN

Design criteria:

For rafter pitch greater than 25° degrees and under or equal to 35° degrees, Min. SG8

2 x 45mm SG8 top plates

WM8150PS Wind uplift (0.9G + Wup) = 1.7 kN
WM8200PS Wind uplift (0.9G + Wup) = 5.6 kN

Notes:

1. The same pitch, timber grade and plumb conditions exist as for plated trusses.
2. Birdsmouths are NOT recommended on < 90mm rafters as this may cause the screw to protrude through the top of the rafter.
3. NR =Not recommended
4. Wind Uplift: (0.9G – Wup) = Permanent and Wind Up Actions (or Dead & Wind up)

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Side Block fixing Design Capacities and fixing.

See typical side block fixing at external walls to truss heels shown below (Figure 10):

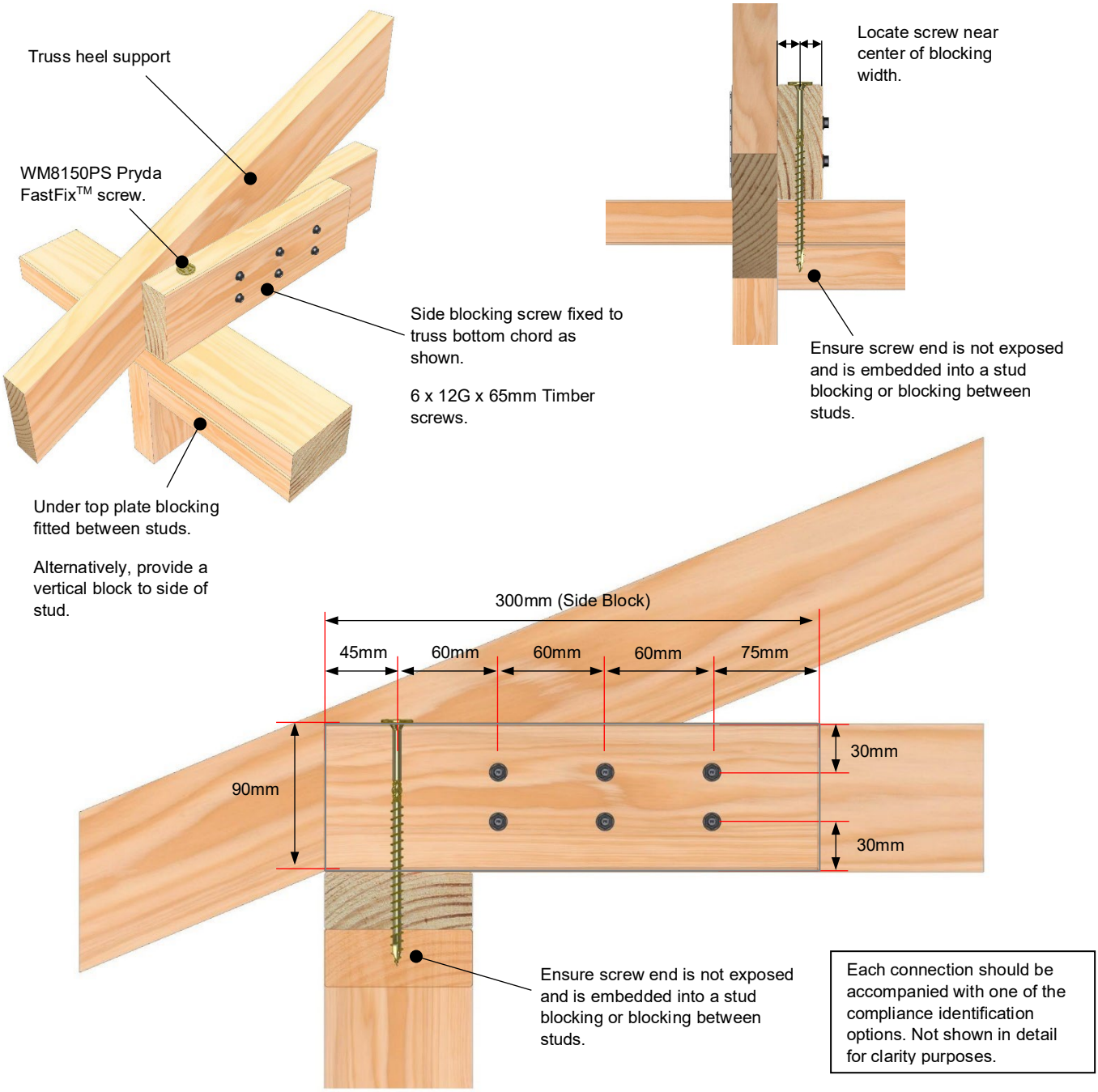

Figure 10 – Side block fixing to truss heel to facilitate tie-down screw from top of side block.

*See capacities on next page for the above fixing conditions.

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Installation conditions for side block fixing.

Block is to be a minimum of 90 x 45mm SG8 300mm long
Pryda Screw is to be a minimum WM8150PS pre-drilled and fixed 45mm from end of timber block
Side fixing screw are to be a minimum of 6 x 12 Gauge 65mm screws

Design Capacities are:

WM8150PS and WM8200PS

1 x 45mm top plate (0.9G + Wup) = 3.0 kN

Note: Stated capacities multiple top plates must be site laminated together adequately and/or a stud tie down connection over the very top plate to achieve full design capacities.

For ribbon plates that are fixed on site, and nail laminated the following design capacities can be used:

WM8200PS

2 x 45mm top plates (0.9G + Wup) = 3.0 kN

Wind Uplift:

(0.9G – Wup) = Permanent and Wind Up Actions (or Dead & Wind up)

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For fixing over internal support walls or at external support walls where TC/BC is continuous (as shown below) (e.g., for cantilevers)

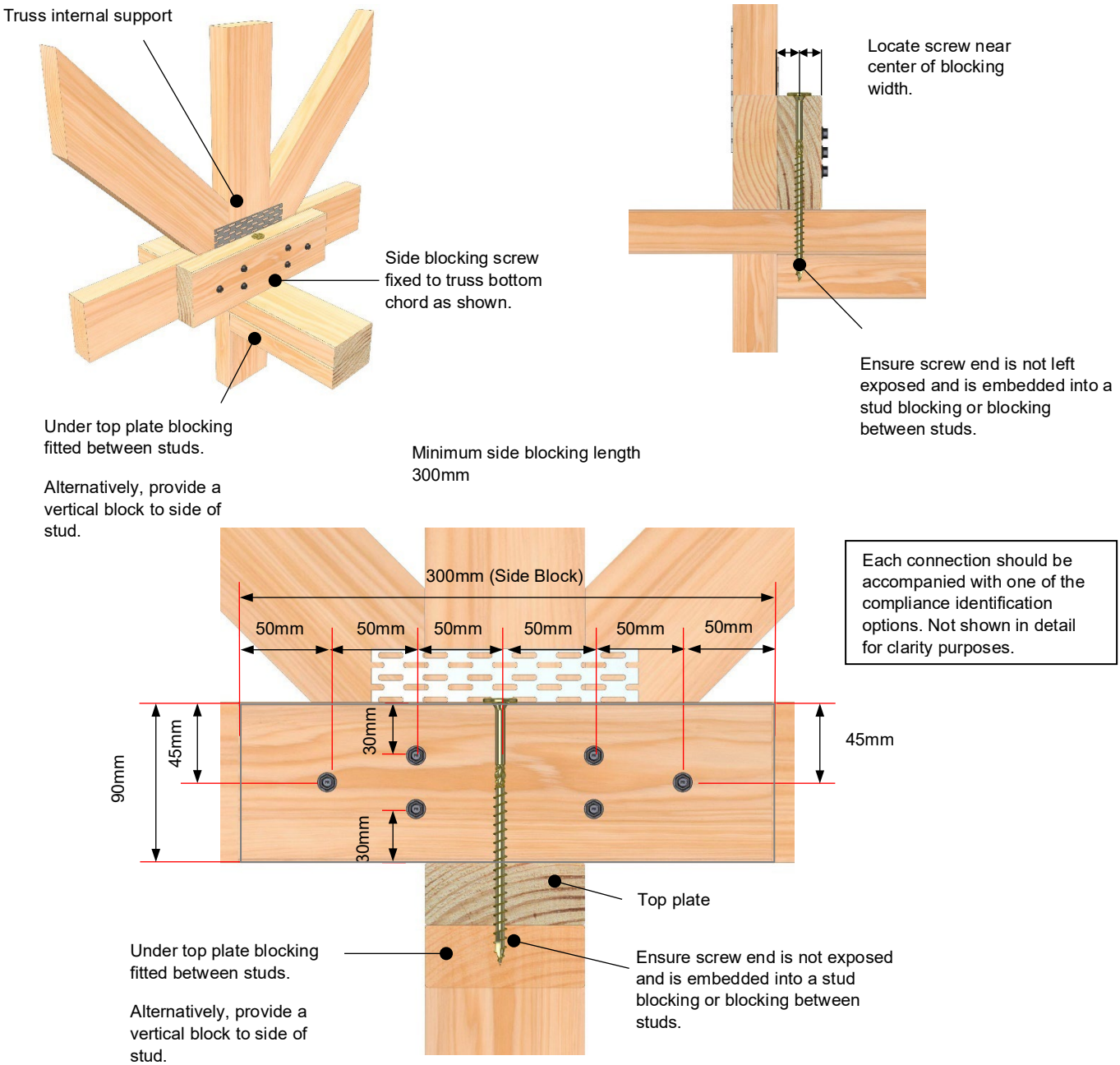

Figure 11 – Side block fixing to truss to facilitate tie-down screw from top.

*See capacities on next page for the above fixing conditions.

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Installation conditions for side block fixing.

Block is to be a minimum of 90 x 45mm SG8 and 300mm long
Pryda Screw is to be a minimum WM8150PS pre-drilled and fixed at the midpoint (and centerline) of the block
Side fixing screw are to be a minimum of 6 x 12 Gauge 65mm screws in pattern shown above.

Design Capacities:

WM8150PS

1 x 45mm top plate (0.9G + Wup) = 3.1 kN
2 x 45mm top plates (0.9G + Wup) = 4.0 kN

WM8200PS

1 x 45mm top plate (0.9G + Wup) = 3.1 kN
2 x 45mm top plates (0.9G + Wup) = 6.3 kN

Note: Stated capacities multiple top plates must be site laminated together adequately and/or a stud tie down connection over the very top plate to achieve full design capacities

For ribbon plates that are fixed on site, and nail laminated the following design capacities can be used:

WM8200PS

2 x 45mm top plates (0.9G + Wup) = 3.1 kN

Wind Uplift:

(0.9G – Wup) = Permanent and Wind Up Actions (or Dead & Wind up)

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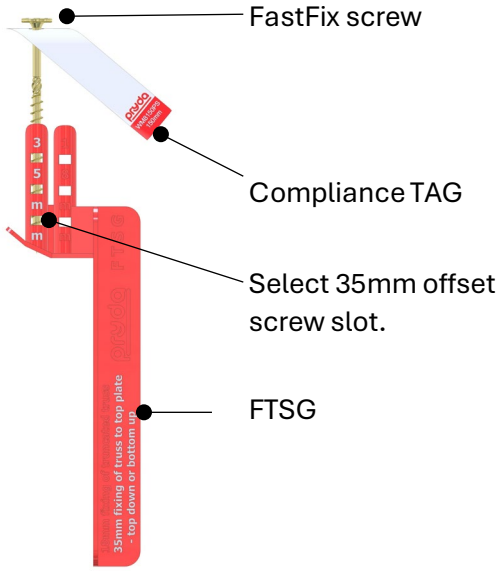
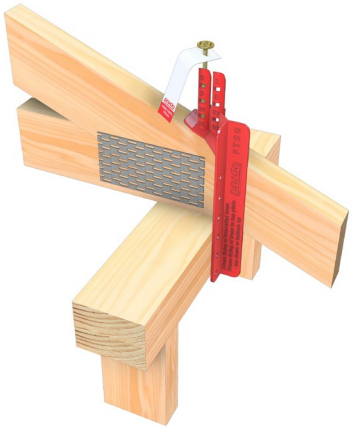
Top-down truss heel joint to top plates using Pryda FastFix™ Truss Screw Guide (FTSG).

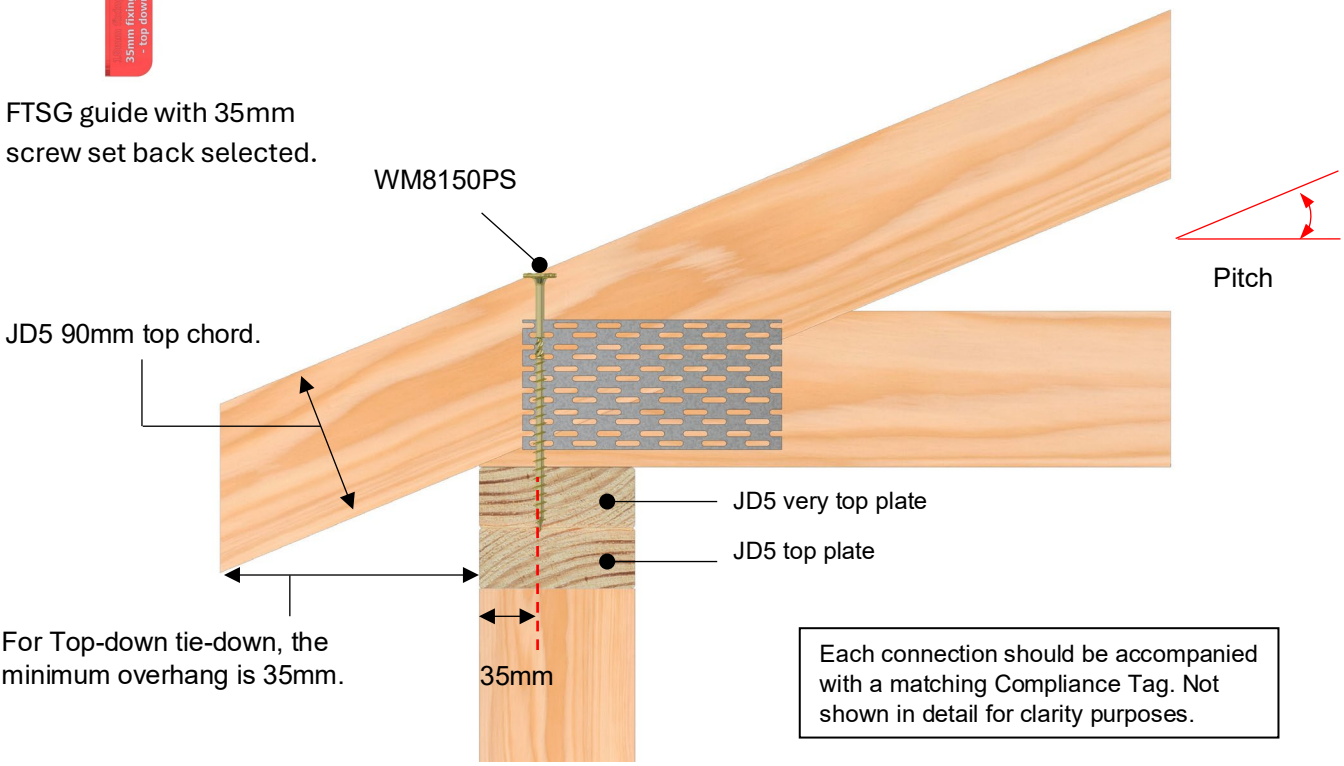
For screws fixed through truss heel top chord to double top plates, the following design capacities are achieved:
Typical section of fixing shown below:



FTSG guide with 35mm screw set back selected.



FTSG placement to achieve shown connection.



For Top-down tie-down, the minimum overhang is 35mm.

Each connection should be accompanied with a matching Compliance Tag. Not shown in detail for clarity purposes.

Connection shown using Pryda FastFix screw 150mm length, 35mm setback, installed with FTSG. Suitable for single 35mm or 45mm top plates. For double top plates, the very top plate must be secured to top plate with equivalent tie-down or better capacity then required uplift forces.

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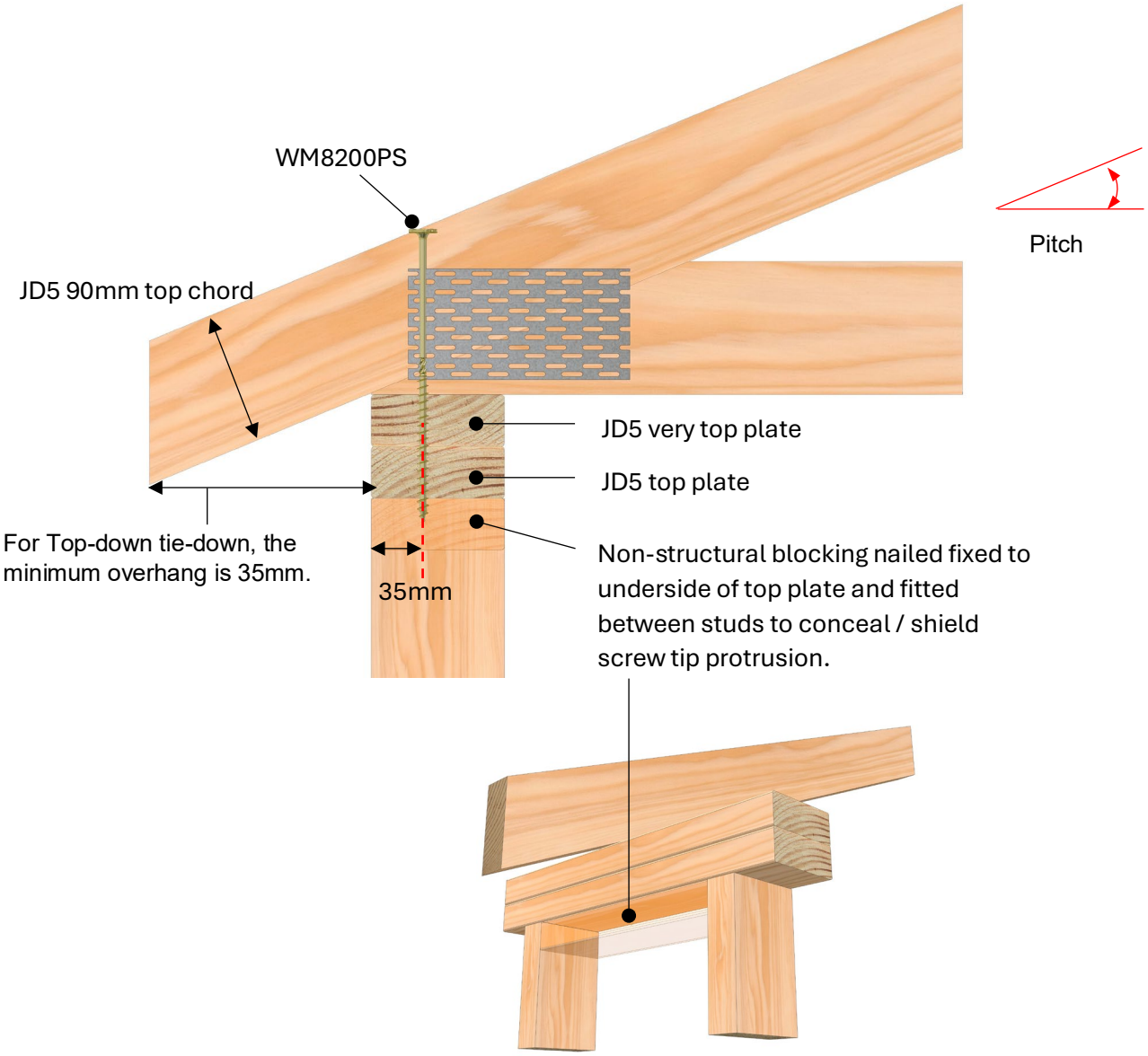

Connection shown using Pryda FastFix screw 200mm length, 35mm setback, installed with FTSG. Suitable for double 45mm top plates.

Screws to be fixed @ centreline of truss using Pryda FastFix Truss Screw Guide (FTSG).

For roof trusses with 90mm top chord, 5mm bottom chord square cut, and roof pitches 22.5*-35* degrees
Capacity given is for JD5 top plates, pitch and top plates assembly as nominated. Not all pitches are available, contact Pryda for further assistance with pitches not shown in this document.

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Design Capacity:

90 x 35mm JD5 very top plate and 90 x 45mm JD5 top plate. Pitch 22.5

WM8150PS: Wind uplift (0.9G + Wup) = 2.6 kN
WM8200PS: Wind uplift (0.9G + Wup) = 6.4 kN

90 x 45mm JD5 very top plate and 90 x 45mm JD5 top plate. Pitch 22.5

WM8150PS: Wind uplift (0.9G + Wup) = 2.6 kN
WM8200PS: Wind uplift (0.9G + Wup) = 6.6 kN

---

90 x 35mm JD5 very top plate and 90 x 45mm JD5 top plate. Pitch 25

WM8150PS: Wind uplift (0.9G + Wup) = 2.3 kN
WM8200PS: Wind uplift (0.9G + Wup) = 6.3 kN

90 x 45mm JD5 very top plate and 90 x 45mm JD5 top plate. Pitch 25

WM8150PS: Wind uplift (0.9G + Wup) = 2.3 kN
WM8200PS: Wind uplift (0.9G + Wup) = 6.3 kN

---

90 x 35mm JD5 very top plate and 90 x 45mm JD5 top plate. Pitch 35

WM8150PS: Wind uplift (0.9G + Wup) = 0.8 kN
WM8200PS: Wind uplift (0.9G + Wup) = 4.8 kN

90 x 45mm JD5 very top plate and 90 x 45mm JD5 top plate. Pitch 35

WM8150PS: Wind uplift (0.9G + Wup) = 0.8 kN
WM8200PS: Wind uplift (0.9G + Wup) = 4.8 kN

Wind Uplift:

(0.9G – Wup) = Permanent and Wind Up Actions (or Dead & Wind up)

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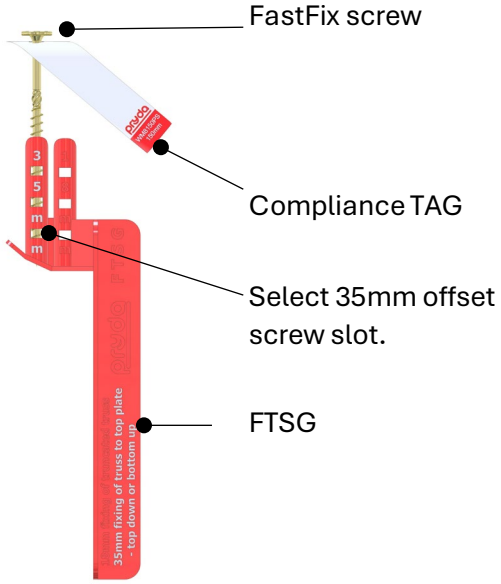
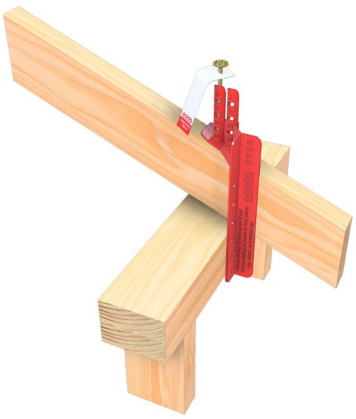
Top-down rafter to top plates using Pryda FastFix™ Truss Screw Guide (FTSG).

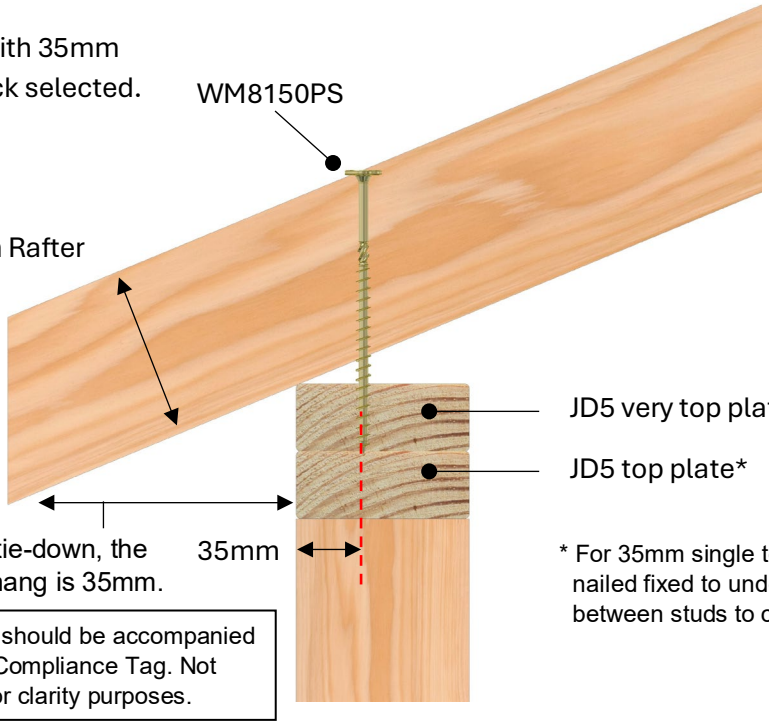
For screws fixed through truss heel top chord to double top plates, the following design capacities are achieved:
Typical section of fixing shown below:



FTSG guide with 35mm screw set back selected.



FTSG placement to achieve shown connection.



Pitch

For Top-down tie-down, the minimum overhang is 35mm.

Each connection should be accompanied with a matching Compliance Tag. Not shown in detail for clarity purposes.

* For 35mm single top plates, a non-structural blocking nailed fixed to underside of top plate and fitted between studs to conceal / shield screw tip protrusion.

Connection shown using Pryda FastFix screw 150mm length, 35mm setback, installed with FTSG. Suitable for single 35mm or 45mm top plates. For double top plates, the very top plate must be secured to top plate with equivalent tie-down or better capacity then required uplift forces.

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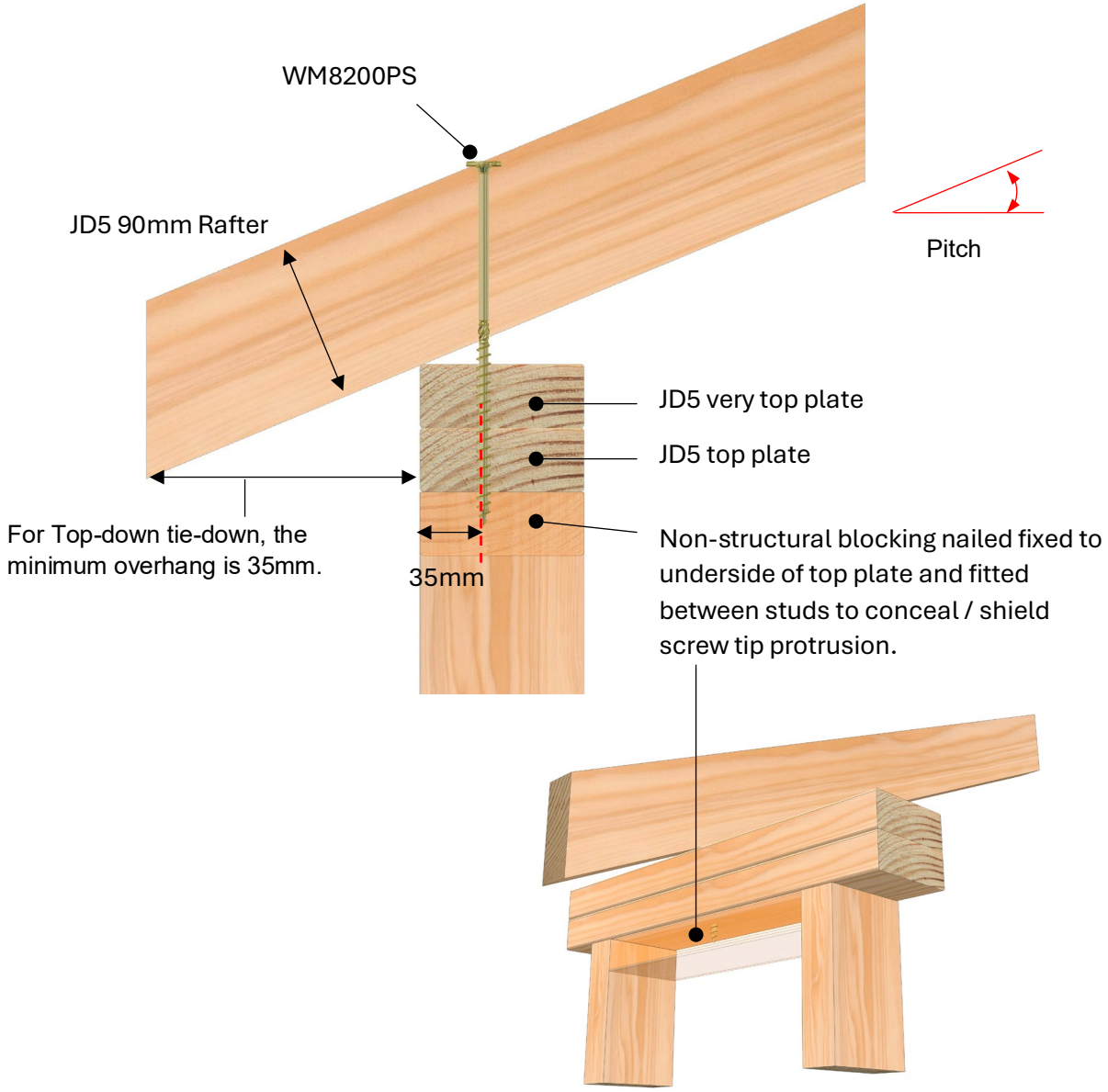
NZ PRYDA FASTFIX™ TRUSS SCREW SYSTEM

TECHNICAL GUIDE



Connection shown using Pryda FastFix screw 200mm length, 35mm setback, installed with FTSG. Suitable for double 35mm or 45mm top plates.

Screws to be fixed @ centreline of truss using Pryda FastFix Truss Screw Guide (FTSG).

For roof trusses with 90mm top chord, 5mm bottom chord square cut, and roof pitches 22.5*-35* degrees
Capacity given is for JD5 top plates, pitch and top plates assembly as nominated. Not all pitches are available, contact Pryda for further assistance with pitches not shown in this document.

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Design Capacity:

90 x 35mm JD5 very top plate and 90 x 45mm JD5 top plate. Pitch 22.5

WM8150PS: Wind uplift (0.9G + Wup) = 3.0 kN
WM8200PS: Wind uplift (0.9G + Wup) = 6.4 kN

90 x 45mm JD5 very top plate and 90 x 45mm JD5 top plate. Pitch 22.5

WM8150PS: Wind uplift (0.9G + Wup) = 3.0 kN
WM8200PS: Wind uplift (0.9G + Wup) = 7.0 kN

---

90 x 35mm JD5 very top plate and 90 x 45mm JD5 top plate. Pitch 25

WM8150PS: Wind uplift (0.9G + Wup) = 2.7 kN
WM8200PS: Wind uplift (0.9G + Wup) = 6.4 kN

90 x 45mm JD5 very top plate and 90 x 45mm JD5 top plate. Pitch 25

WM8150PS: Wind uplift (0.9G + Wup) = 2.7 kN
WM8200PS: Wind uplift (0.9G + Wup) = 6.7 kN

---

90 x 35mm JD5 very top plate and 90 x 45mm JD5 top plate. Pitch 35

WM8150PS: Wind uplift (0.9G + Wup) = 1.2 kN
WM8200PS: Wind uplift (0.9G + Wup) = 5.2 kN

90 x 45mm JD5 very top plate and 90 x 45mm JD5 top plate. Pitch 35

WM8150PS: Wind uplift (0.9G + Wup) = 1.2 kN
WM8200PS: Wind uplift (0.9G + Wup) = 5.2 kN

Wind Uplift:

(0.9G – Wup) = Permanent and Wind Up Actions (or Dead & Wind up)

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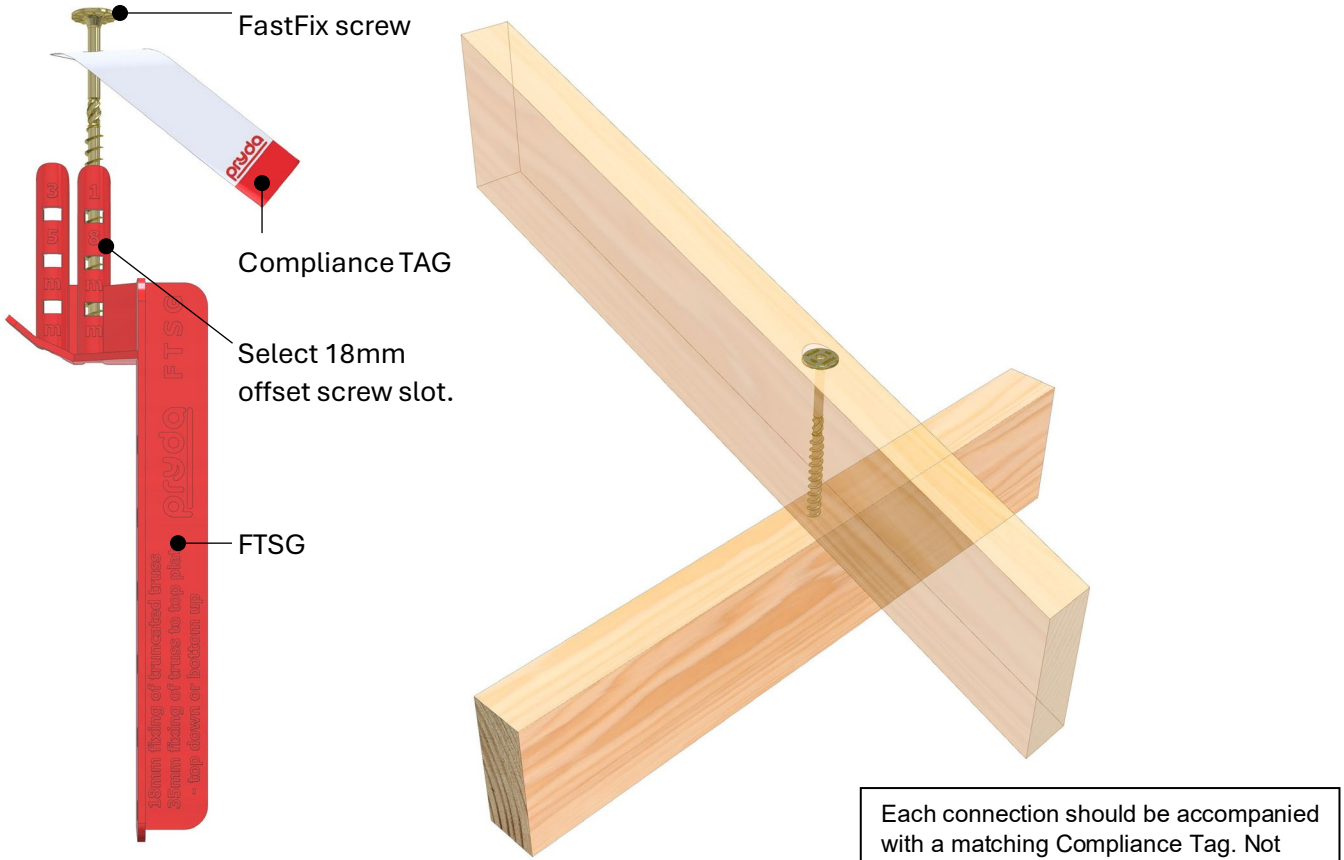
Rafter / Top chord extension over Truncated Horizontal Top Chord using Pryda FastFix™ Truss Screw Guide (FTSG).

For screws fixed through jack/hip rafters and Truncated Girder or Truncated Standard trusses the following design capacities are achieved:

Typical section of fixing shown below:



Each connection should be accompanied with a matching Compliance Tag. Not shown in detail for clarity purposes.

Screws to be fixed @ centreline of rafter and through the HTC top edge using Pryda FastFix Truss Screw Guide (FTSG).

For Rafter depths of 90mm and roof pitch < 25 degrees

Design Capacity:

WM8150PS: Wind uplift (0.9G + Wup) = 3.6 kN

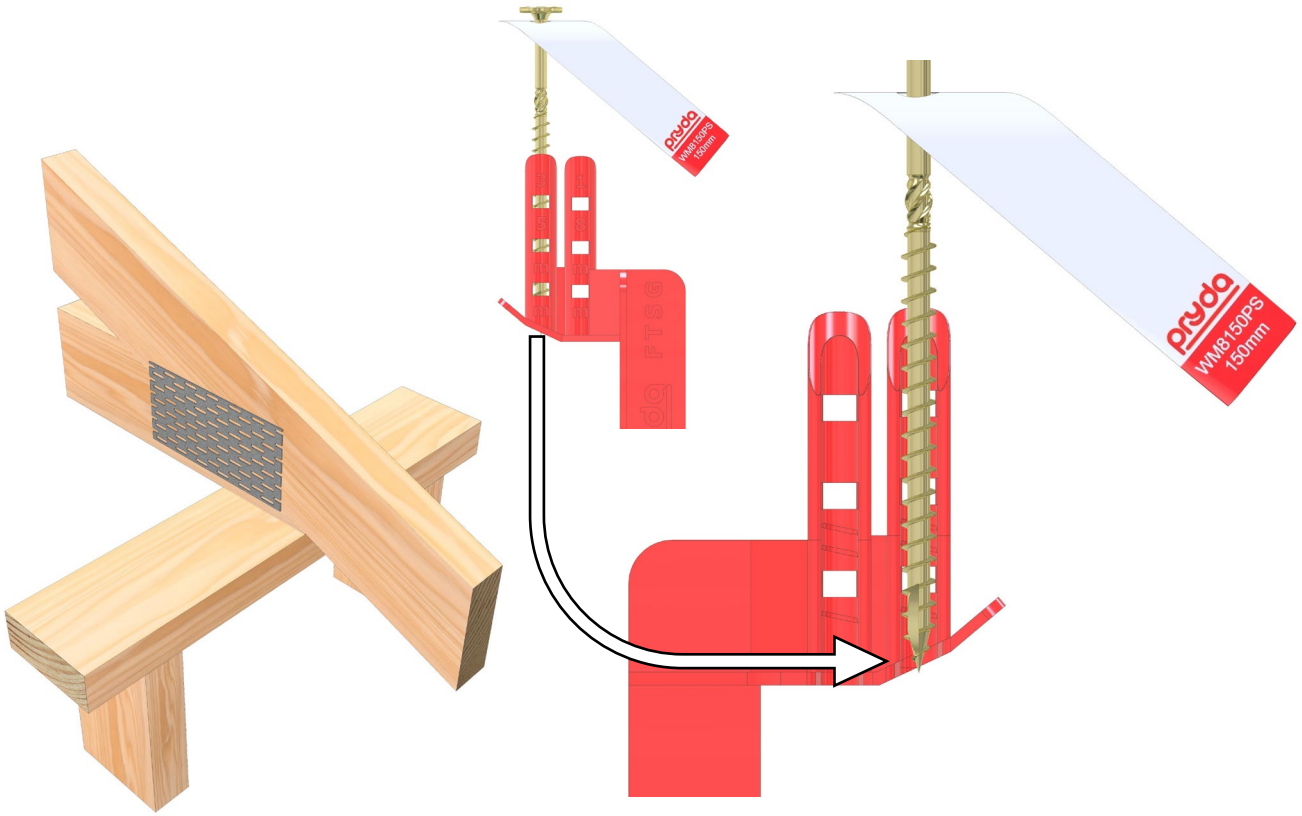
Wind Uplift:

(0.9G – Wup) = Permanent and Wind Up Actions (or Dead & Wind up)

FTSG top down installation on to 90mm top plate.

STEP 1

- Match the connection to the approved connections shown in the FastFix Truss Screw Technical Guide.
- Check the required capacity to meet uplift requirements.
- Ensure the area of the truss heel and supporting member are free from defects including, but not limited to, knots, splits, and any other imperfections that could compromise the structural integrity of the timber end connection.
- Ensure the tie-down point of the supported and supporting truss is not over or within 150mm of a splice joint.
- Truss heel must be fully bearing across the supporting member width.
- Supported truss is vertically plumb.
- Ensure the truss heel details and supporting member meet the conditons of the selected approved connection detail.
- Select the correct Pryda FastFix screw length and matching compliance Tag.
- Wear appropriate PPE when handling the screw.
- Snap the screw with Tag inserted, into the desired offset slot. For this example, 35mm offset is selected.
- Locate the screw tip slightly above the horizontal seat (horizontal stabiliser plane).



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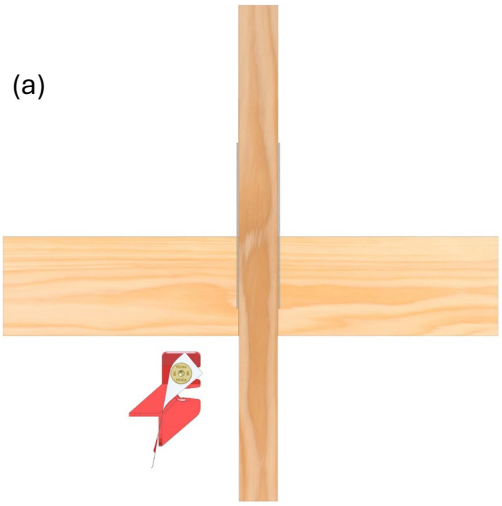
STEP 2

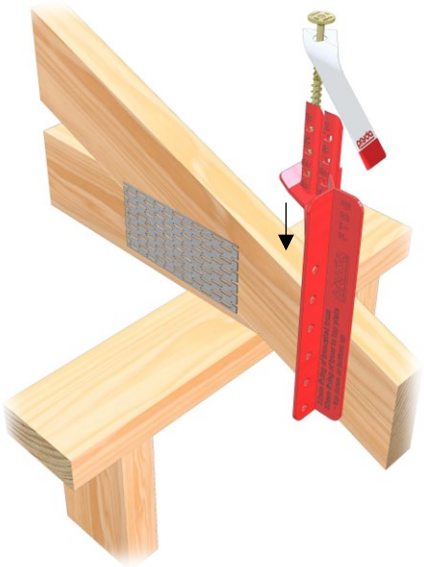
a. Locate the FTSG with screw and tag in place to the nominated quadrant for required connection.
b. Position the guide vertically against the supported truss side face.
c. Lower the FTSG until the raking stabiliser is directly in contact with truss top edge.
d. While holding the guide against the face of the truss, slide along the top chord to supporting wall.

(a)

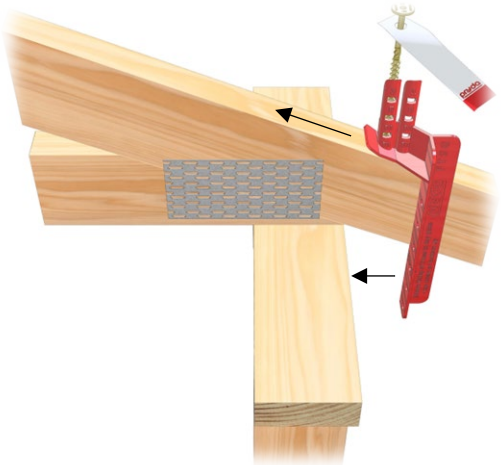


(b)

(c)



(d)



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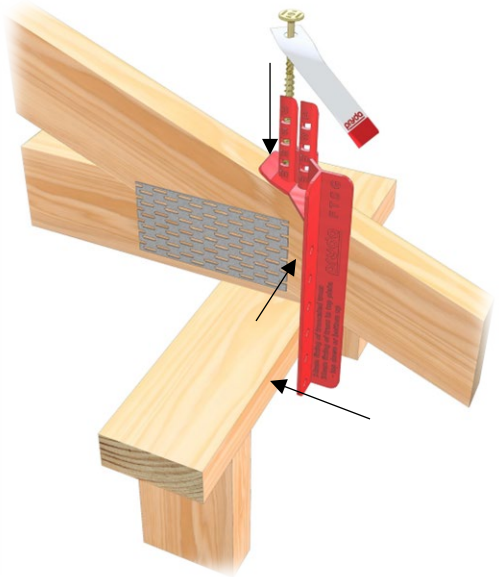
STEP 3

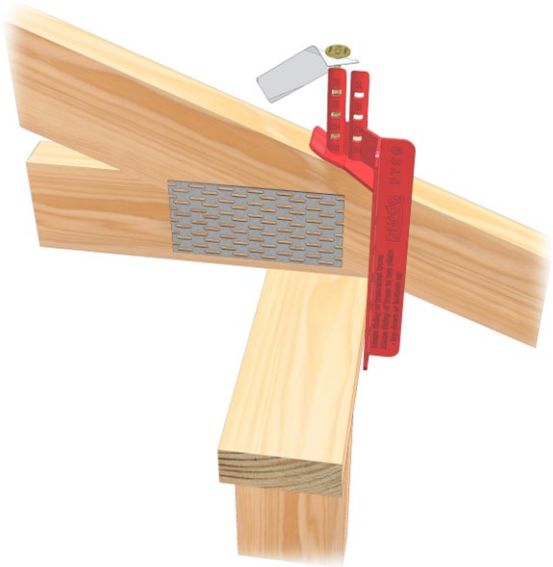
e. It is crucial the FTSG makes **3 point contact** with the supporting and supported member. Hold the guide firmly against the truss face and wall plate edge, ensuring the guide is vertically plumb and resting on the top edge of the truss top chord.

f. While holding the guide in position with one hand, drive the FastFix screw with the other with an impact driver or similar until the screw head is approximately 5-10mm above the guide.

(e)



(f)



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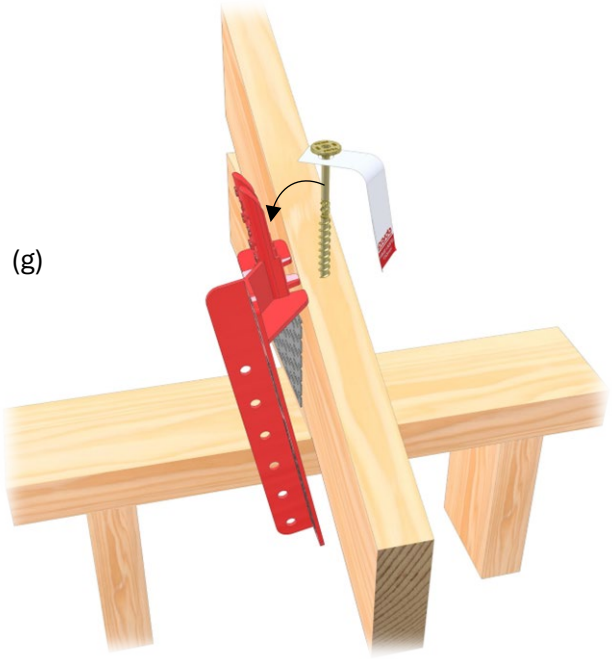
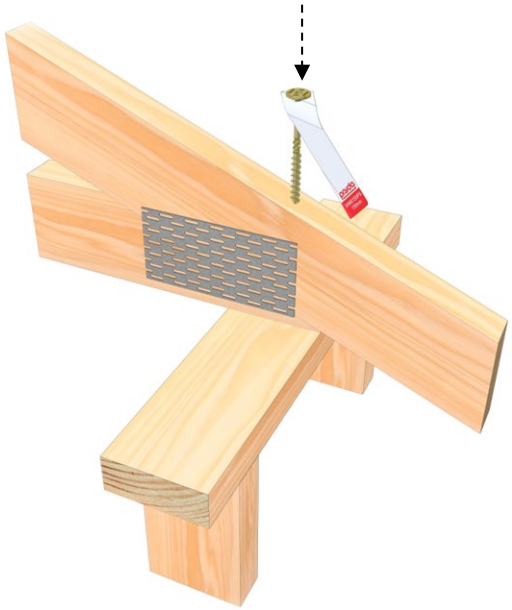
STEP 4

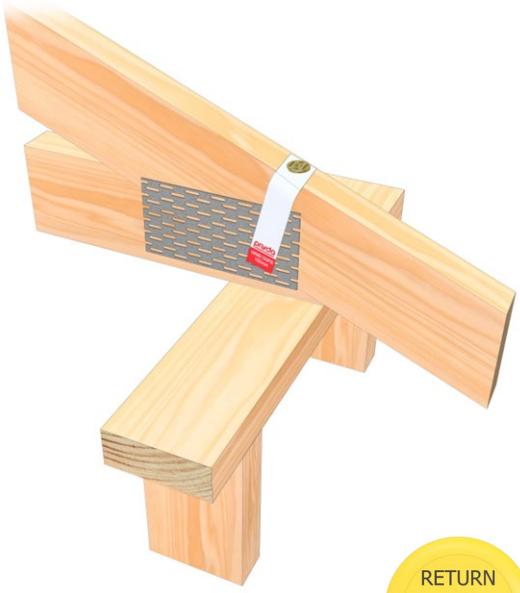
g. Unclip the FTSG by rotating it away from the embeded screw.
h. Drive home the screw until the screw head is in full contact with the top chord. While doing so, position the tag to the desired side of the truss before the screw head makes contact. Slight embedment of the leading edge of the screw head is acceptable. Do not over drive the screw.

(g)





(h)



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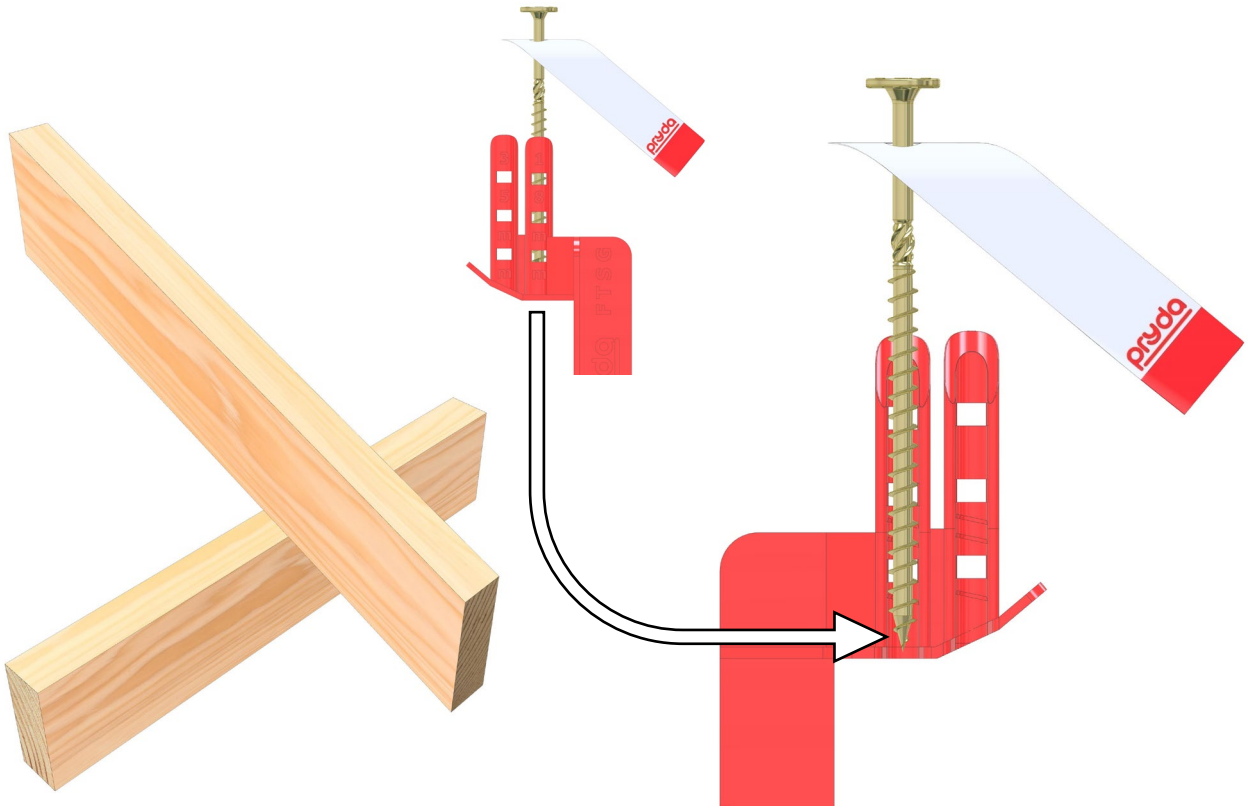
FTSG top down installation on to 35mm horizontal top chord.

STEP 1

- Match the conection to the approved connections shown in the FastFix Truss Screw Technical Guide.
- Check the required capacity to meet uplift requirements.
- Ensure the area of the supported truss and supporting truss top chords are free from defects including, but not limited to, knots, splits, and any other imperfections that could compromise the structural integrity of the timber end connection.
- Ensure the tie-down point of the supported and supporting truss is not over or within 150mm of a splice joint.
- Ensure the supported truss top chord is bearing on the supporting horizontal top chord.
- Supported truss is vertically plumb.
- Ensure the truss top chord details and supporting member meet the conditons of the selected approved connection detail.
- Select the correct Pryda FastFix screw length and matching compliance Tag.
- Wear appropriate PPE when handling the screw.
- Snap the screw with Tag inserted, into the desired offset slot. For this example, 18mm offset is selected.
- Locate the screw tip slightly above the horizontal seat (horizontal stabiliser plane).



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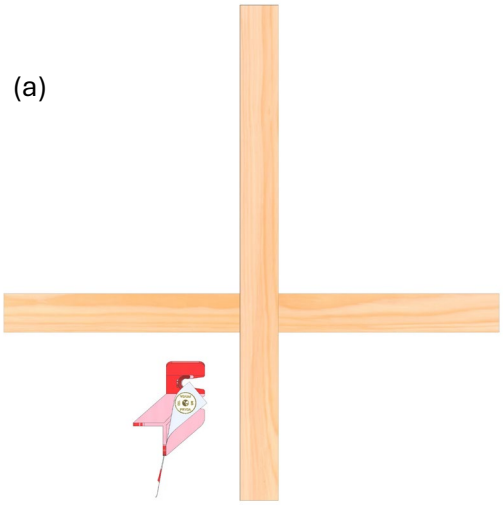
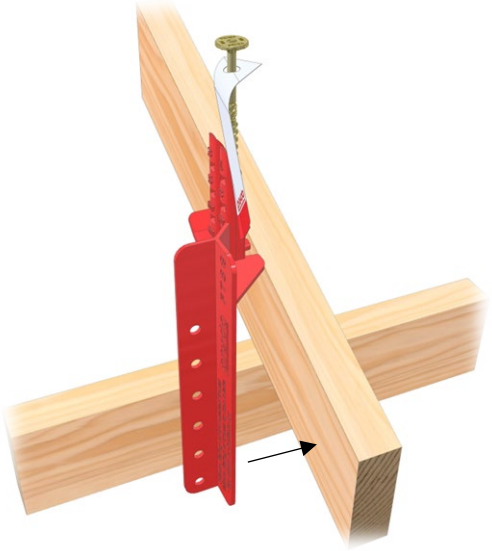
STEP 2

a. Locate the FTSG with screw and tag in place to the nominated quadrant for required connection.
b. Position the guide vertically against the supported truss side face.
c. Lower the FTSG until the raking stabiliser is directly in contact with truss top edge.
d. While holding the guide against the face of the truss, slide along the top chord to the supporting truss horizontal top chord.

(a)



(b)



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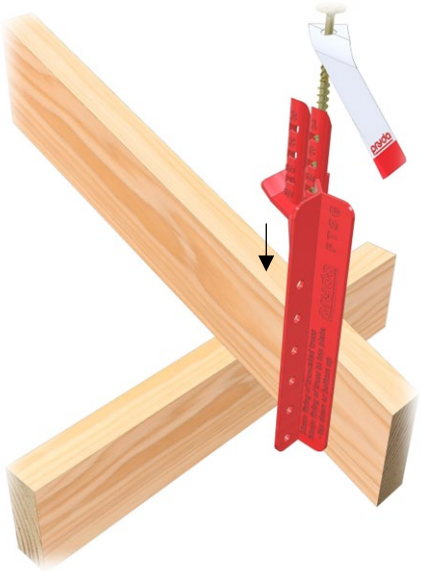
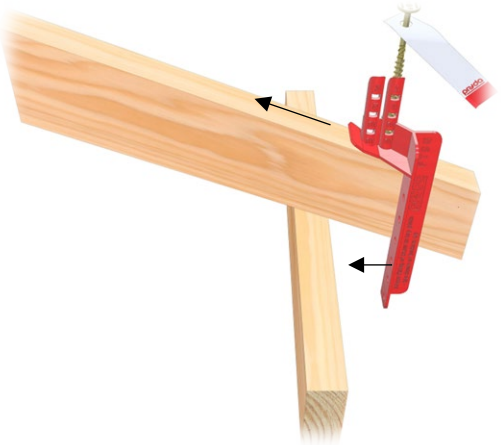


(d)



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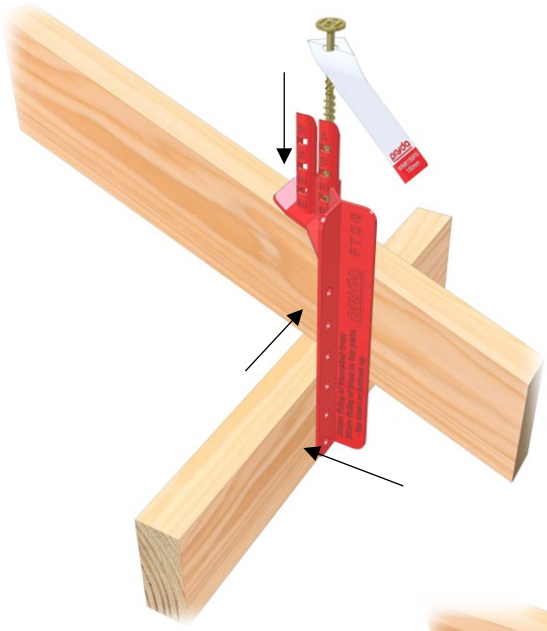
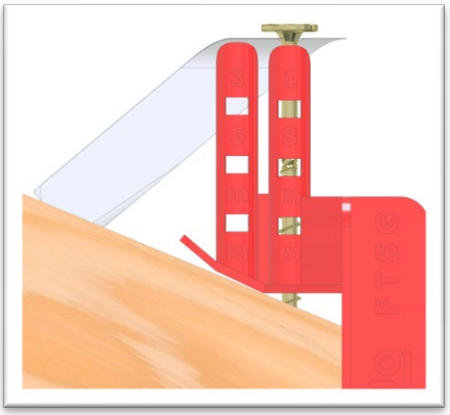
STEP 3

e. It is crucial the FTSG makes **3 point contact** with the supporting and supported member. Hold the guide firmly against the supported truss side face and supporting horizontal truss top chord, ensuring the guide is vertically plumb and resting on the top edge of the truss top chord.

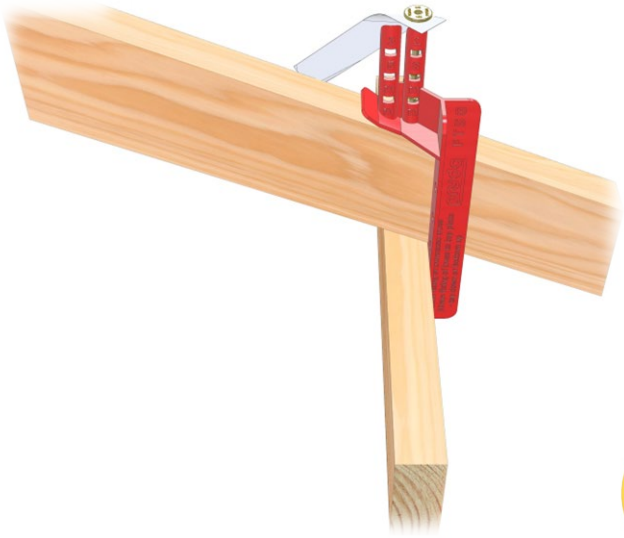
f. While holding the guide in position with one hand, drive the FastFix screw with the other with an impact driver or similar until the screw head is approximately 5-10mm above the guide.

(e)





(f)



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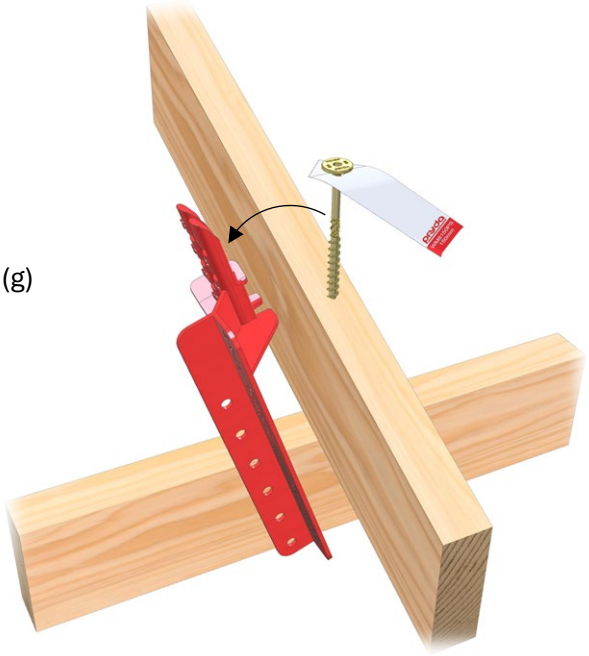
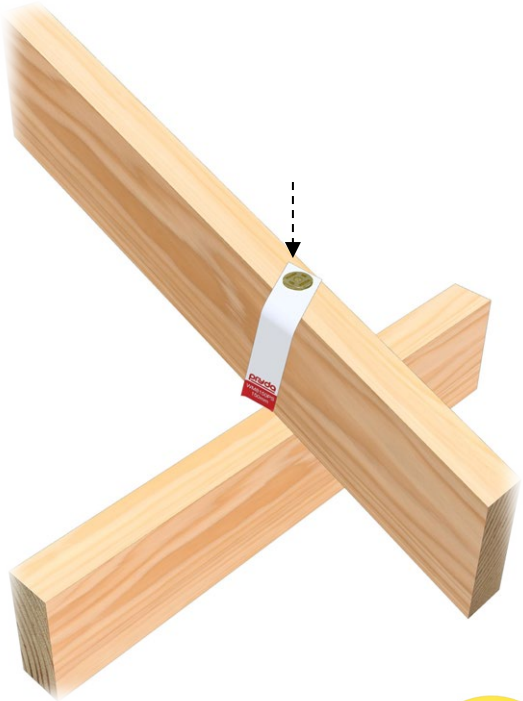
STEP 4

g. Unclip the FTSG by rotating it away from the embeded screw.
h. Drive home the screw until the screw head is in full contact with the top chord. While doing so, position the tag to the desired side of the truss before the screw head makes contact. Slightly embedding the leading edge of the screw head is acceptable. Do not over drive the screw.

(g)



(h)



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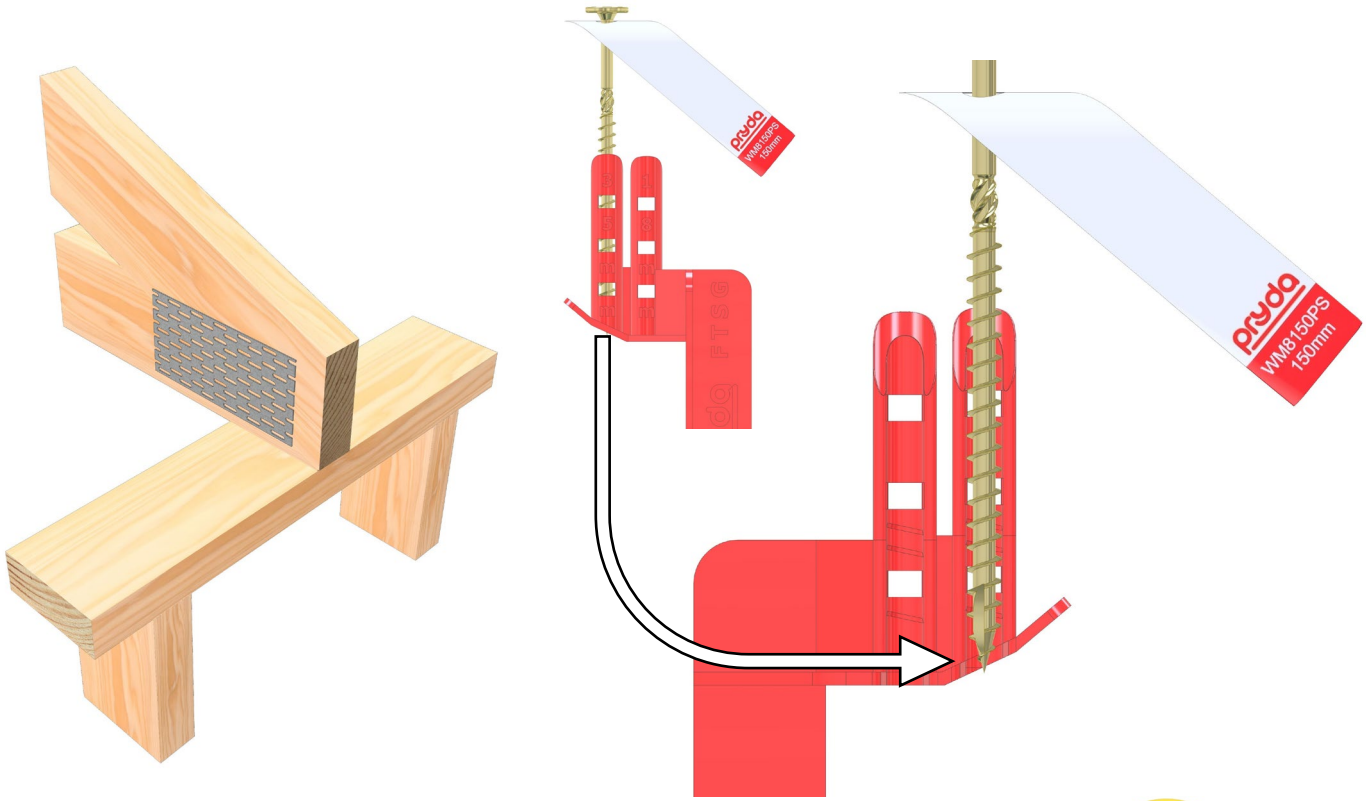
FTSG underside installation on to 35mm truss heel.

STEP 1

- Match the conection to the approved connections shown in the FastFix Truss Screw Technical Guide.
- Check the required capacity to meet uplift requirements.
- Ensure the connection area of the supported truss and supporting member are free from defects including, but not limited to, knots, splits, and any other imperfections that could compromise the structural integrity of the timber end connection.
- Ensure the tie-down point of the supported truss and supporting wall plate is not over or within 150mm of a splice joint.
- Ensure the supported truss is fully bearing across the supporting wall plate width.
- Supported truss is vertically plumb.
- Ensure the truss heel details and supporting member meet the conditions of the selected approved connection detail.
- Select the correct Pryda FastFix screw length and matching compliance Tag.
- Wear appropriate PPE when handling the screw.
- Snap the screw with Tag inserted, into the desired offset slot. For this example, 35mm offset is selected.
- Locate the screw tip slightly above the horizontal seat (horizontal stabiliser plane).



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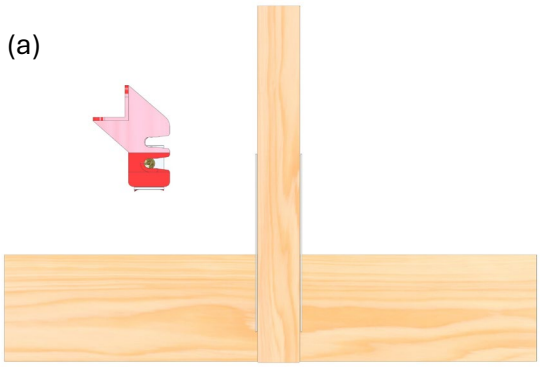
STEP 2

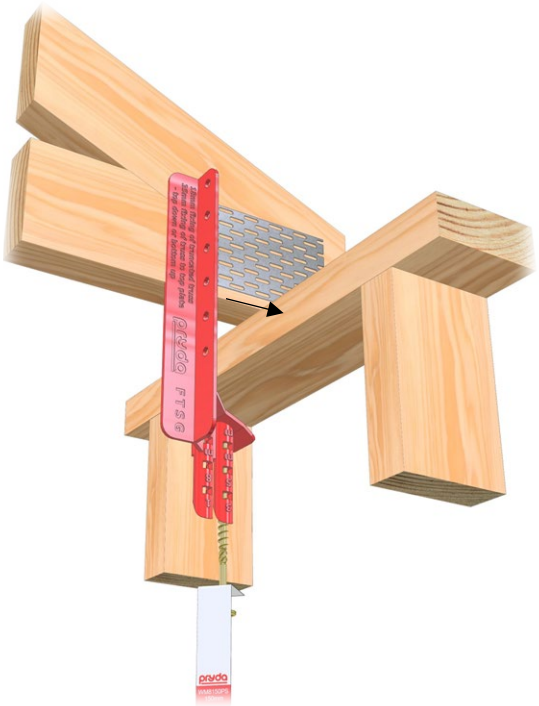
a. Locate the FTSG with screw and tag in place to the nominated quadrant for required connection.
b. Position the guide vertically against the supported truss side face.
c. Slide guide along truss face until it is firmly against the top plate edge.
d. While holding the guide against the face of the truss and wall plate edge, raise the guide until it is directly bearing to underside of the wall plate.

(a)

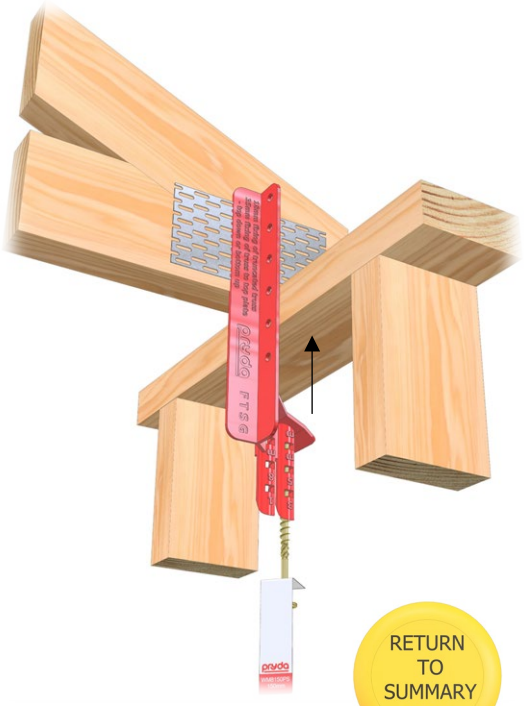


(b)

(c)



(d)



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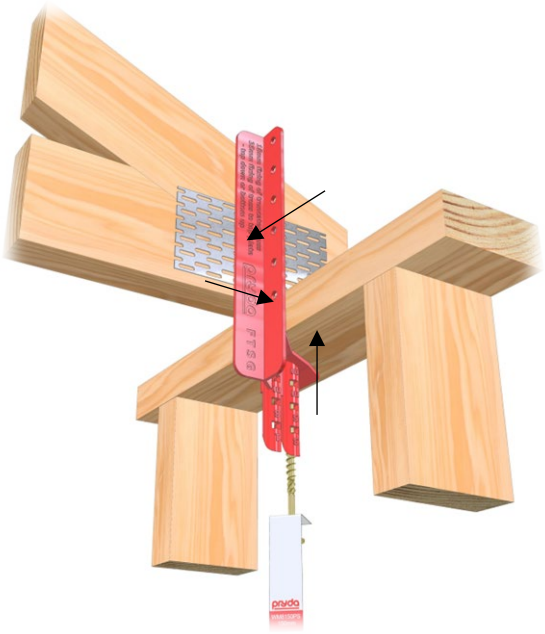
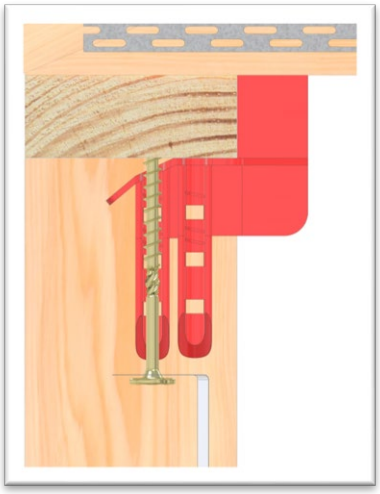
STEP 3

e. It is crucial the FTSG makes **3 point contact** with the supporting and supported member. Hold the guide firmly against the truss face, supporting wall plate edge, and firmly against the underside of the wall plate.

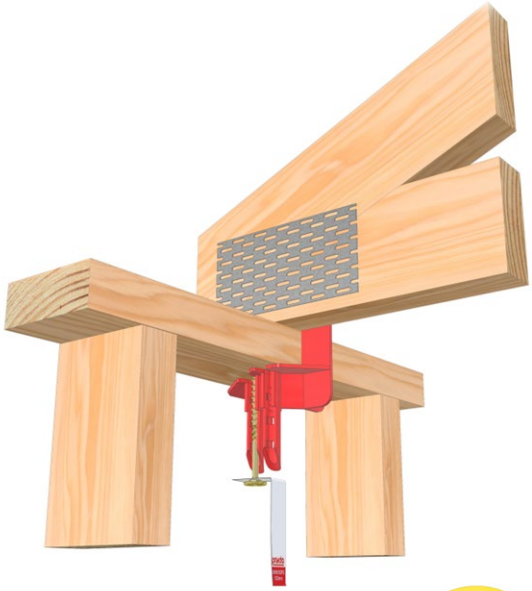
f. While holding the guide in position with one hand, drive the FastFix screw with the other with an impact driver or similar until the screw head is approximately 5-10mm away from the guide.

(e)





(f)



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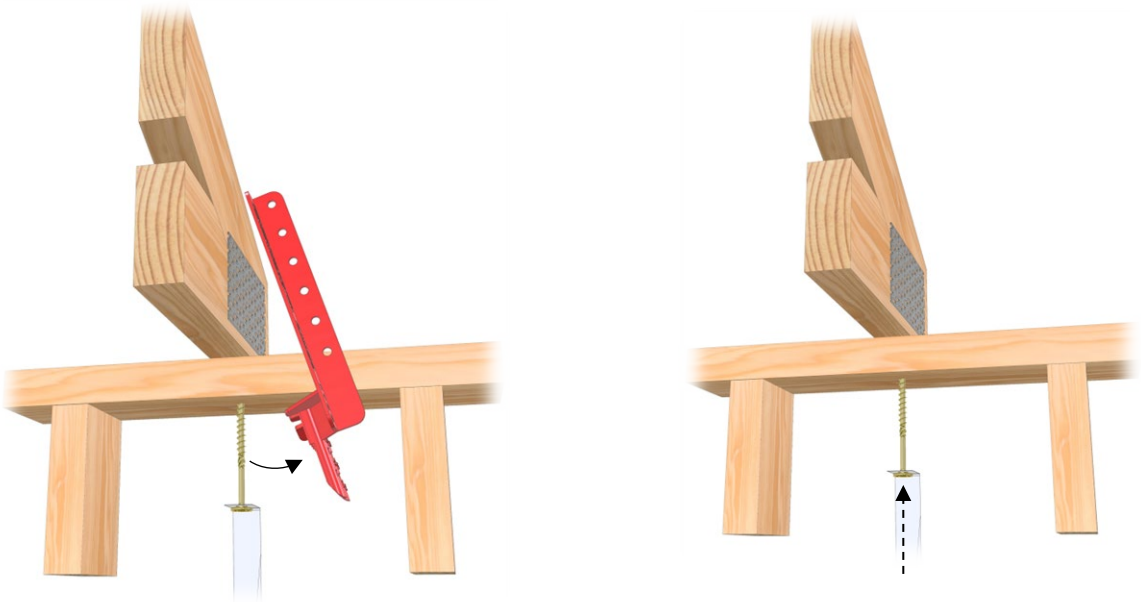
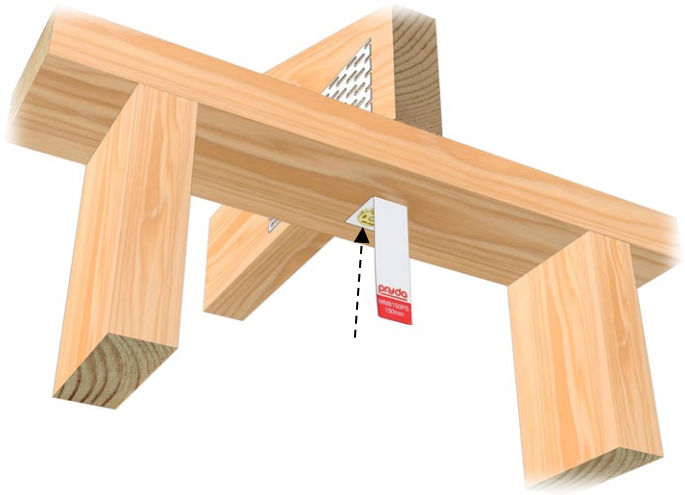
STEP 4

g. Unclip the FTSG by rotating it away from the embeded screw.
h. Drive home the screw until the screw head fully contacts with underside of the top plate. While doing so, position the tag to the desired side of the wall frame before the screw head makes contact. Do not over drive the screw.

(g)



(h)



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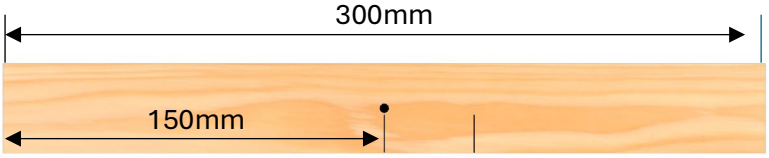
FTSG on 300mm side block tie-down.

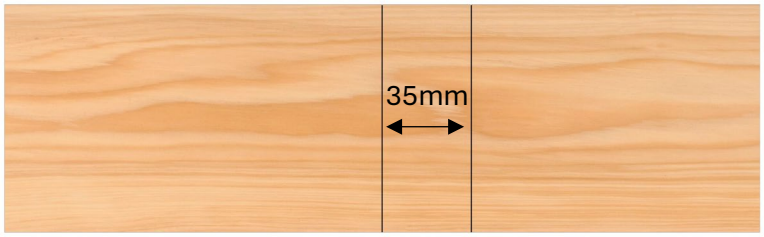
STEP 1

a. On a 300mm 90 x 35mm SG8 or 90 x 45mm SG8 block, mark the top and face of the block coinciding with the desired hole location. For this example, we want the screw to be located mid-point of the block.
b. Mark a secondary line offset 35mm away from the original line.

(a)



(b)

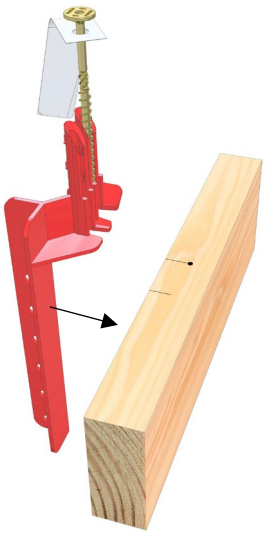


STEP 2

c. Snap the screw with Tag inserted, into the desired offset slot. For this example, 35mm offset is selected to match the secondary line 35mm offset.
d. Place FTSG next to the block facing the non-printed side with the blocked marked face.

(c)

(d)



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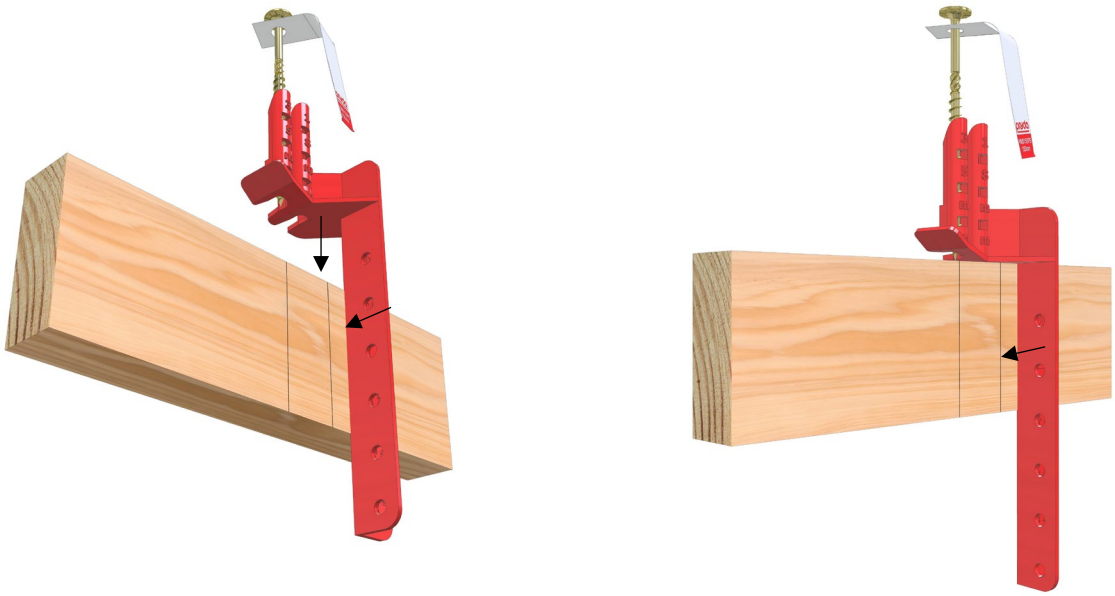
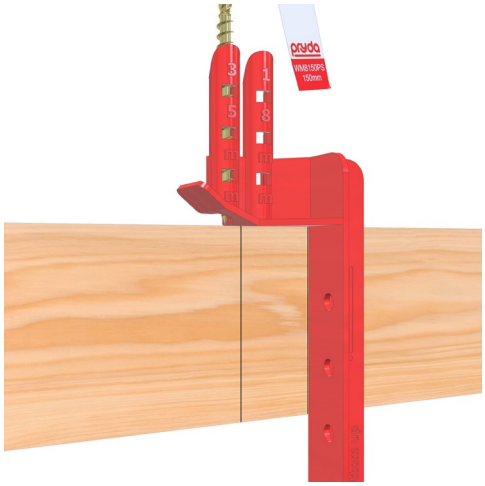
STEP 3

e. While holding the guide against the block side, rest the horizontal stabiliser on top of the block.
f. Slide the guide along the block and align the vertical stabiliser leg with the secondary line.

(e)



(f)



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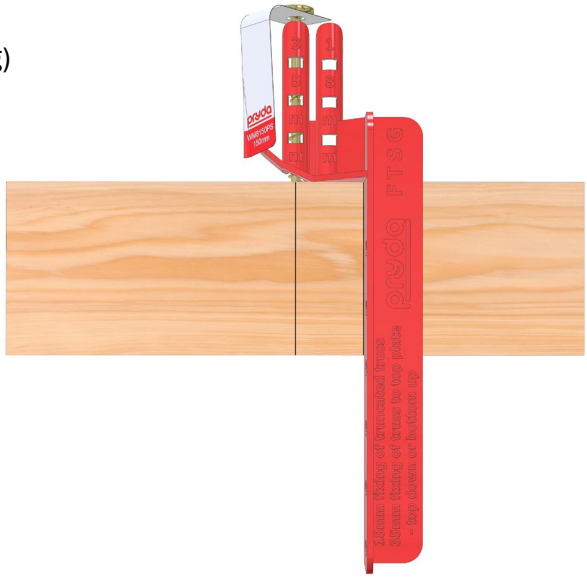
STEP 4

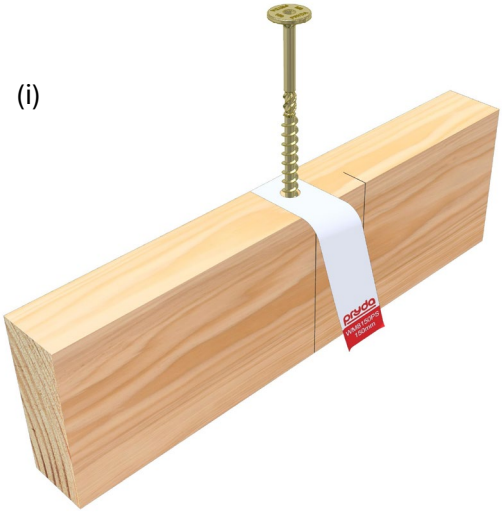
g. While holding the guide in position with one hand, drive the FastFix screw with the other with an impact driver or similar until the screw head is approximately 5-10mm away from the guide.
h. Unclip the FTSG by rotating it away from the embeded screw.
i. The block is ready to be installed as per the connection detail for side block tie-down.

(g)



(h)

(i)



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