



NewTechWood
AUSTRALIA

Marina Decking
Installation Guide

Contents

| | |
|--|-----------|
| Important Notes | 5 |
| Before Starting | 5 |
| Intended Use | 5 |
| Safety Instructions | 5 |
| Tools | 5 |
| Environment | 6 |
| Planning | 6 |
| Construction | 6 |
| Static | 6 |
| Care and Maintenance | 7 |
| Ventilation | 7 |
| Fire and Heat | 7 |
| Fasteners and Face-Fixing Decking Boards | 7 |
| Framing | 9 |
| Decking Span | 9 |
| Sealing the Ends | 9 |
| Joists | 10 |
| Acclimatisation | 10 |
| Routing | 10 |
| Storage | 11 |
| | |
| Technical Data | 12 |
| Expansion / Contraction Values | 12 |
| Manual Calculation of Expansion / Contraction Values | 12 |

| | |
|---|---------------|
| Installation | 13 |
| Decking Layout Options | 13 |
| Starting Board Installation | 14 |
| US71H • Face-Fixing..... | 15 |
| Decking Board Installation | 16 |
| TC30 250 (8.5mm Gap) | 16 |
| Locking the Decking Boards for Contraction and Expansion | 17 |
| One Length | 17 |
| Two Lengths | 18 |
| Three (3+) Lengths | 19 |
| Breaker Board Installation | 20 |
| Corner and Mitring Detail | 21 |
| Fascia Installation | 22 |
| Contact Details | 24 |
| Distributor Information | 24 |

Important Notes

Please read all of the instructions before starting

BEFORE STARTING

- It is recommended that you check with local building codes for any special requirements or restrictions.
- The diagrams and instructions outlined in this guide are for illustration purposes only; they are not meant to replace, or imply replacement of the expertise of a licensed professional.
- Any construction or use of NewTechWood must be in accordance with all local zoning and/or building codes.
- The consumer assumes all risks and liabilities associated with the construction and use of this product.

INTENDED USE

- This product is designed for outdoor use.
- This product is NOT intended for use as columns, support posts, beams, joist stringers, or other primary load-bearing members.
- Any other use or modification of this product is considered improper use and can cause significant hazards.

SAFETY INSTRUCTIONS

- **Important: This product must not be used as fall protection and does not have technical approval for such purposes.**
- Always wear the appropriate safety equipment to avoid risk of injury. The following safety equipment is recommended: gloves, respiratory protection, long sleeves, long pants, safety footwear, and safety glasses.
- Check the product regularly for defects and traces of wear and tear.
- This product cannot be used as installation for structural support.
- Do not install directly on the ground or on top of existing decking boards. Always install on a code-compliant substructure or joists.
- **Note:** To keep your NewTechWood boards in top condition, always store and mount them correctly. Improper handling and storage may cause warping or deformation. Avoid placing heavy loads on a single point.
- Store the components in such a way that they are protected from rain and direct sunlight. The latter could cause the material to heat up unnecessarily.
- Do not install during frosty or high temperature weather. The ideal ambient ground temperature is between +5°C and +25°C.

TOOLS

- Standard woodworking tools may be used. It is recommended that all blades have a carbide tip, and should have 60+ teeth. Standard stainless steel or acceptable coated deck screws are preferred.

ENVIRONMENT

- Make sure the surface for installation is clean, smooth, flat, and strong.
- Check the local building codes before installing any type of decking.
- If installation does not occur immediately, store the product on a flat surface at all times.

PLANNING

- Plan a layout for your decking before starting, to ensure the best possible design for your project. It is recommended to draw a site plan of your proposed project to minimise errors and achieve the best outcome.
- Note that building codes and zoning regulations generally apply to permanent structures, meaning anything that is anchored to the ground or attached to the house.

CONSTRUCTION

- NewTechWood products are NOT intended for use as columns, support posts, beams, joist stringers, or other primary load-bearing members.
- NewTechWood products must be supported by a code-compliant substructure.
- Whilst NewTechWood products are great for retrofitting, NewTechWood products CANNOT be installed directly on top of existing decking boards.

STATIC

- Like all co-extruded composite decking products, NewTechWood's boards may occasionally experience a build-up of static electricity under certain environmental conditions.
- Static is generally more likely to occur in areas with low humidity or dry weather and may also be influenced by factors such as the type of subframe materials used, particularly if they include metal components like balustrades.
- These conditions are outside of NewTechWood's control and, as such, static build-up is not covered under warranty.
- If static becomes noticeable, it can be reduced with an anti-static spray (e.g., ACL Staticide or similar product). These water-based solutions may need to be reapplied after rain or prolonged exposure to the elements. Alternatively, insulating key contact points, such as balustrades or door handles, with UV-resistant, outdoor-grade clear coating can help create a longer-term barrier. Multiple applications may be required for the best results.
- In most cases, any static build-up will naturally diminish over time as the decking surface settles and wears in.

CARE AND MAINTENANCE

- If building projects or renovations are taking place, cover the deck to prevent concrete or gyprock dust getting onto the deck. Mineral deposits left over from construction can mix with water and evaporate, leaving deposits behind which create a white haze on the deck's surface. It is recommended to leave the laying of your new deck until after all other works have been completed.

VENTILATION

- NewTechWood products CANNOT be installed directly onto a flat surface. Decking must be installed onto a substructure, to ensure there is adequate and unobstructed air flow beneath the decking to prevent excessive water and moisture build-up.
- Please refer to the NewTechWood Fixing Specification (Decking Span) table on page 9 for the minimum distance requirements between the ground surface and the deck boards.

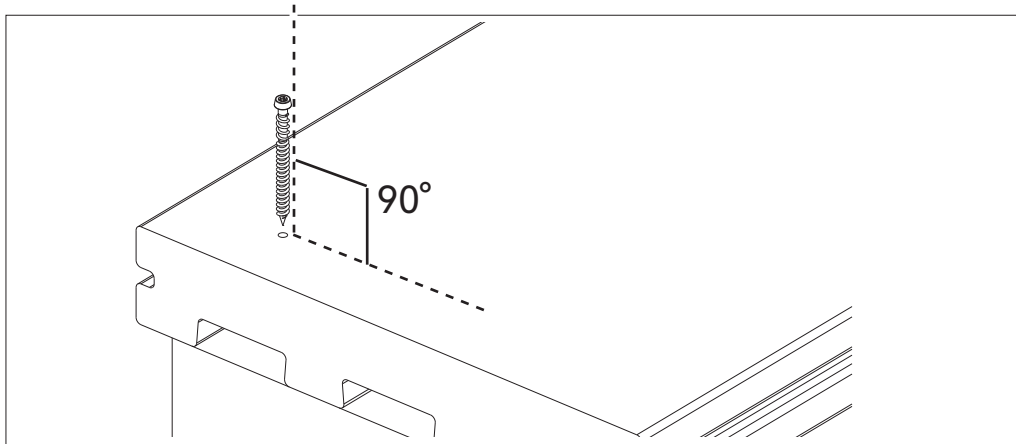
FIRE AND HEAT

- Excessive heat on the surface of NewTechWood products from external sources such as fire or reflected sunlight from energy efficient window products (low-emissivity, Low-E glass) can potentially harm NewTechWood products. Low-E glass is designed to prevent passive heat gain within a structure and can cause unusual heat build-up on exterior surfaces. This extreme elevation of surface temperatures, which exceeds that of normal exposure, can potentially cause NewTechWood products to melt, sag, warp, discolour, increase expansion/contraction, and accelerate weathering over time.
- Consumers who are concerned about possible damage by Low-E glass should contact the manufacturer of the product that contains Low-E glass for a solution to reduce or eliminate the effects of reflected sunlight.

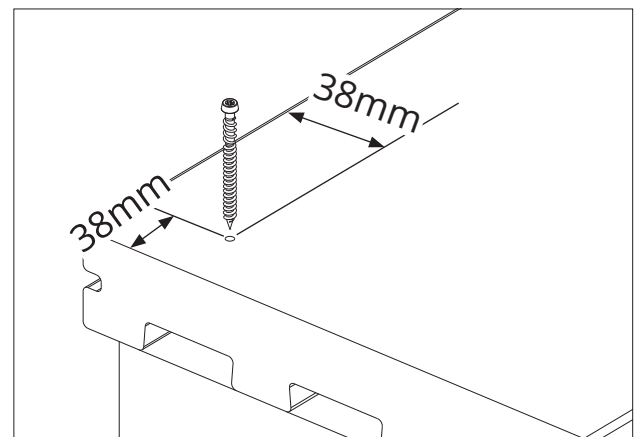
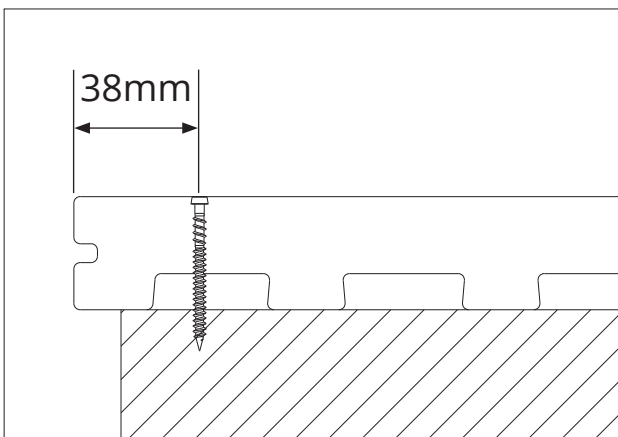
FASTENERS AND FACE-FIXING DECKING BOARDS

- NewTechWood composite decking boards are designed to be installed with the NewTechWood hidden fix system, which is available in a gapping of 8.5mm. The NewTechWood hidden fixing system allow the boards to expand and contract freely.
- It is not recommended to face-fix the complete deck as the decking boards may not perform as designed.
- If face-fixing is unavoidable, it is important to pre-drill the screw hole slightly larger than the screws to allow for any ongoing expansion and contraction. Depending on the type of screw used, it may be necessary to also countersink the holes to avoid "mushrooming of the cap layer".

- When fastening NewTechWood products, all screws that are face fastened must be driven in at a 90-degree angle to the decking surface. An extra joist should be added if a 90-degree angle cannot be used.



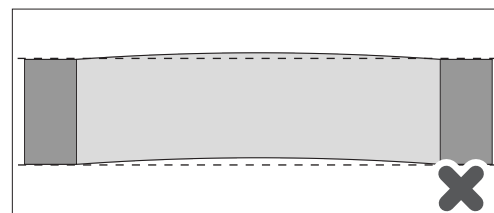
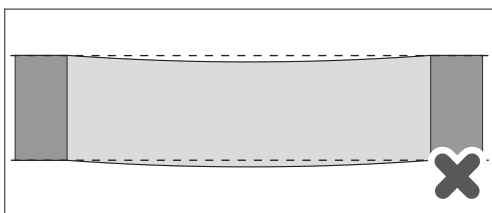
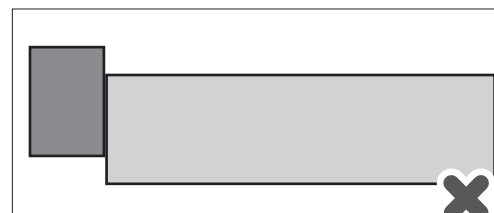
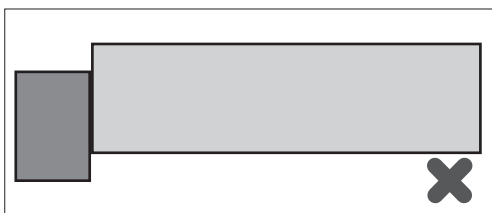
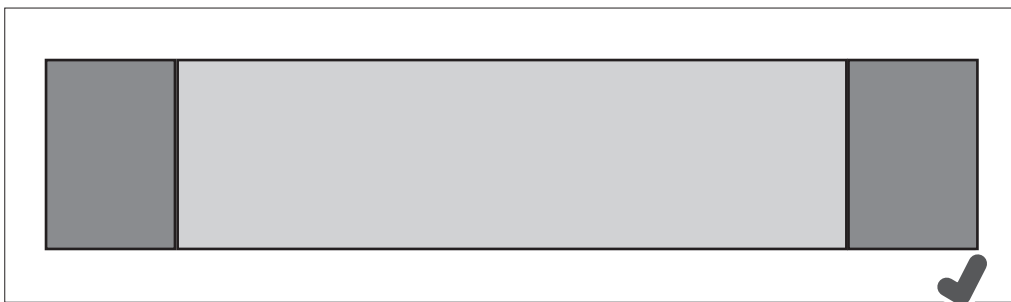
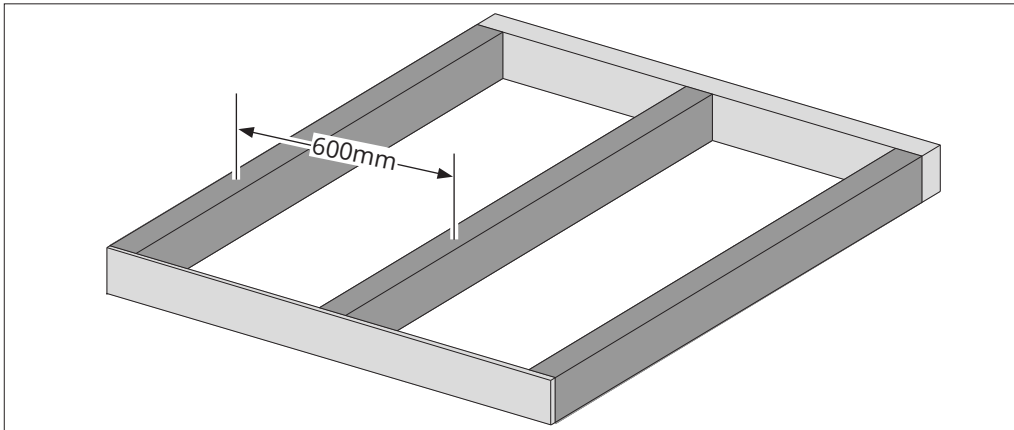
- Always fix fasteners to their own independent joists.
- Use only white chalk, straight boards, or string lines as templates for straight lines. Never use coloured chalk as they will permanently stain NewTechWood products and are not recommended.
- It is recommended to use stainless steel composite screws. When face-fixing fascias or picture frame boards, always drive the screw in at least 38mm from the ends and 38mm from the edges of the board.
- Always use screws designated for use with composite decking material / wood. Using screws that are not designed for composite material could potentially damage the decking.
- Always test the screws on a scrap piece of board to ensure the screws do not cause the surface of the decking to mushroom or bulge around the head of the screw. If this happens, change to a different brand of screw.
- If you are unsure which screw to use, contact the manufacturer for more information.



(Note: NewTechWood's Metal Fix screws are suitable for steel joists of up to 2mm in thickness. If thicker than 2mm, then each hole must be pre-drilled. Metal Fix clips are not covered under the warranty for fixing to Stratco Probeam or similar double-wall steel profiles.)

FRAMING

1. Determine the decking span, i.e., centre-to-centre joist spacing.
2. Ensure the frame is completely level before installing any boards.



Decking Span

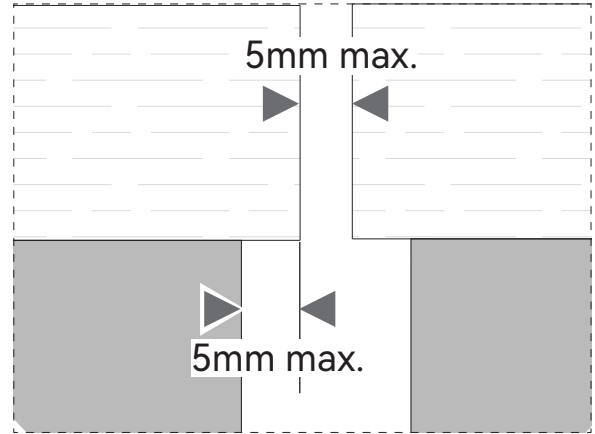
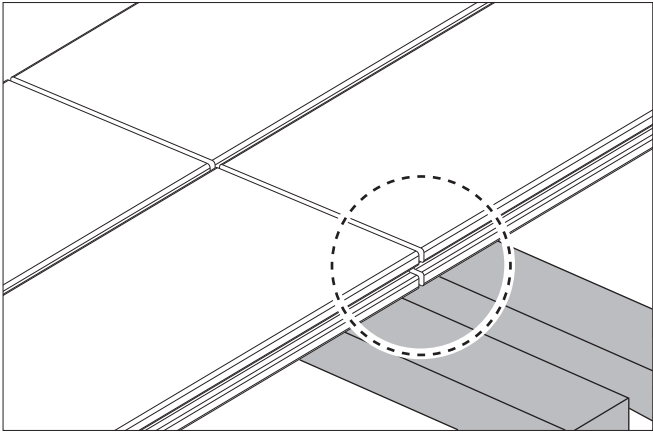
| Code | Span | Min. Ground Clearance Over Soil | Min. Ground Clearance Over Concrete |
|-------|-------|---------------------------------|-------------------------------------|
| US71H | 600mm | 100mm | 40mm |

Sealing the Ends

It is recommended to seal cut ends with an appropriate, clear, solvent-based sealer, especially for areas exposed to constant moisture, such as, but not limited to, areas around swimming pools, lakes, and spas.

JOISTS

- Each decking board must sit on its own joist.
- When two board ends butt to each other, always use a sister joist. Make sure there is a gap (maximum 5mm) between joists to allow water to drain between the joists. Excessive build-up of water over long periods can potentially result in swelling at the ends.



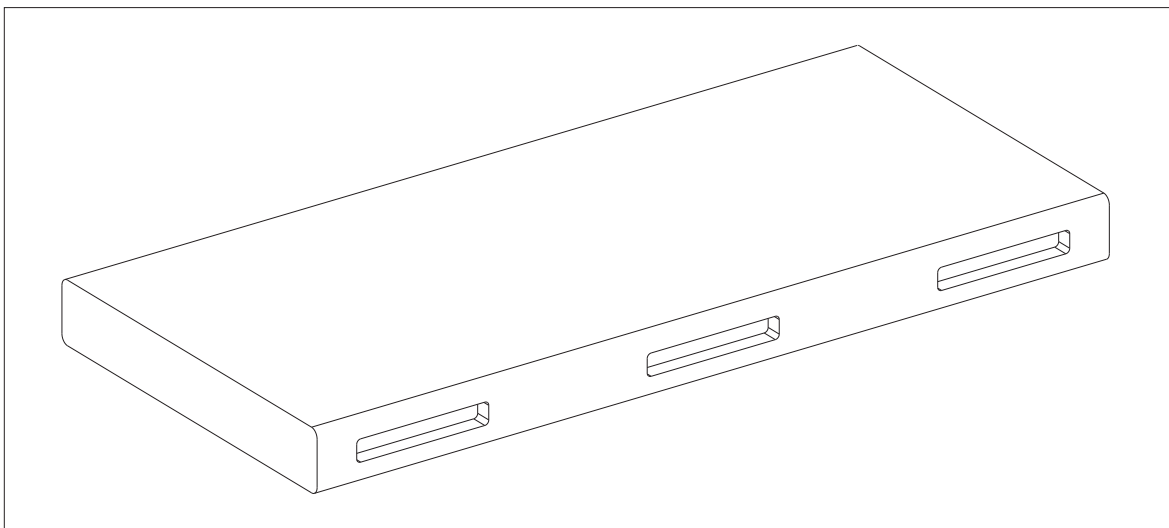
ACCLIMATISATION

- It is recommended that after delivery of the product that it is allowed to sit for at least 2 days to acclimate.
- Acclimating the boards will minimise shrinkage issues during and after installation.
- Always place the boards on a flat and even surface. If placed on an uneven surface, the boards may warp to the shape of the terrain.

ROUTING

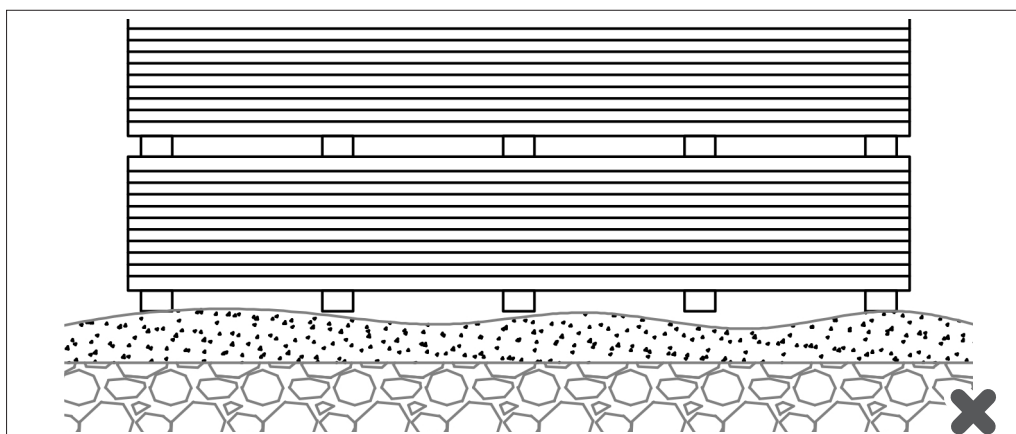
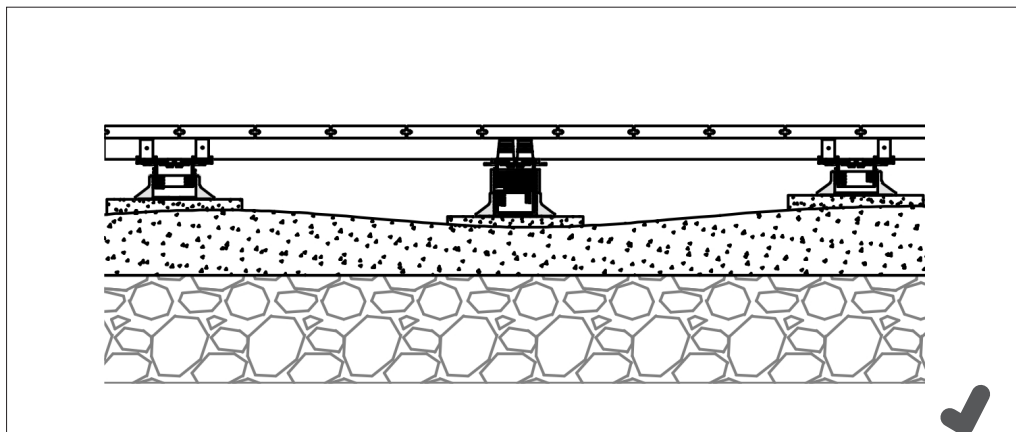
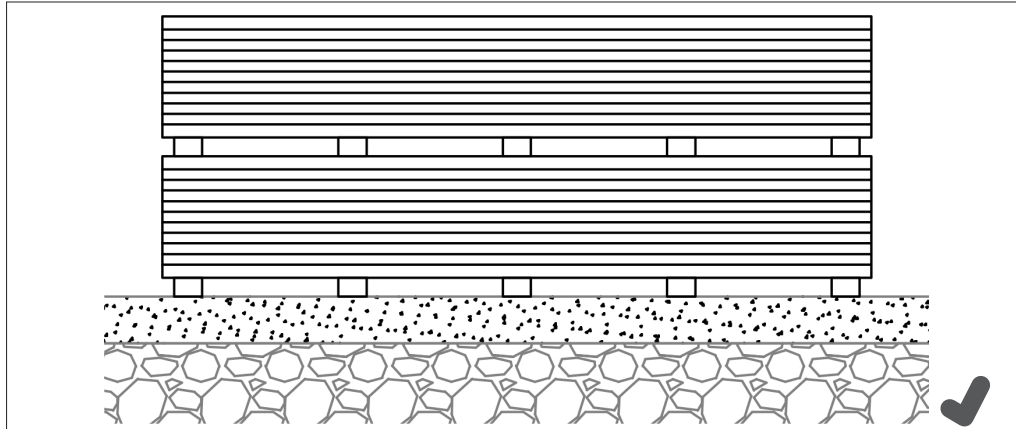
- Solid boards can be routed for hidden fasteners to be placed (see diagram below).
- Fascia boards can also be routed to allow for expansion and contraction.

Note: Boards should never be routed their entire length.



STORAGE

- Always store NewTechWood products on flat, solid surfaces. Surfaces such as dirt and grass are insufficient as they can move over time.
- Always store NewTechWood products on a flat surface on joists. If the surface is uneven, pedestals and jacks can be used.
- Never store NewTechWood products on an uneven surface as the products can warp and distort.



EXPANSION / CONTRACTION VALUES

- NewTechWood decking boards will expand and contract with changes in temperature.
- Fasten the decking boards according to the below gapping requirements.

| | | Installation Temperature (°C) | | | | | | | | Gap (mm) to Leave Between Boards* |
|-------------|------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----------------------------------|
| | | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | |
| Length (m)* | 1 | 1.2 | 1.4 | 1.2 | 1.0 | 0.8 | 0.6 | 0.4 | 0.2 | |
| | 2.44 | 3.9 | 3.4 | 2.9 | 2.4 | 2.0 | 1.5 | 1.0 | 0.5 | |
| | 2.8 | 4.5 | 3.9 | 3.4 | 2.8 | 2.2 | 1.7 | 1.1 | 0.6 | |
| | 3 | 4.8 | 4.2 | 3.6 | 3.0 | 2.4 | 1.8 | 1.2 | 0.6 | |
| | 3.66 | 5.9 | 5.1 | 4.4 | 3.7 | 2.9 | 2.2 | 1.5 | 0.7 | |
| | 3.9 | 6.2 | 5.5 | 4.7 | 3.9 | 3.1 | 2.3 | 1.6 | 0.8 | |
| | 4 | 6.4 | 5.6 | 4.8 | 4.0 | 3.2 | 2.4 | 1.6 | 0.8 | |
| | 4.88 | 7.8 | 6.8 | 5.9 | 4.9 | 3.9 | 2.9 | 2.0 | 1.0 | |
| | 5.4 | 8.6 | 7.6 | 6.5 | 5.4 | 4.3 | 3.2 | 2.2 | 1.1 | |

* If the decking boards have a **gap at each end**, halve the value shown.

Manual Calculation of Expansion / Contraction Values¹

Gapping =

$CLE (°C) \times \text{Length of Board (m)} \times (\text{Max. / Min. Temp in your region} - \text{Installation Temp } (°C))$

- Coefficient of Linear Expansion (CLE): 0.04mm/m (°C)
- Length of the Board (m)
- Installation Temperature (°C)
- Maximum or Minimum Temperature (°C) in your region:
 1. When installing at a low temperature, always use the maximum temperature in your region to calculate.
 2. When installing at a high temperature, always use the minimum temperature in your region to calculate.

¹ If you are still unsure what gapping to use, contact the manufacturer for assistance.

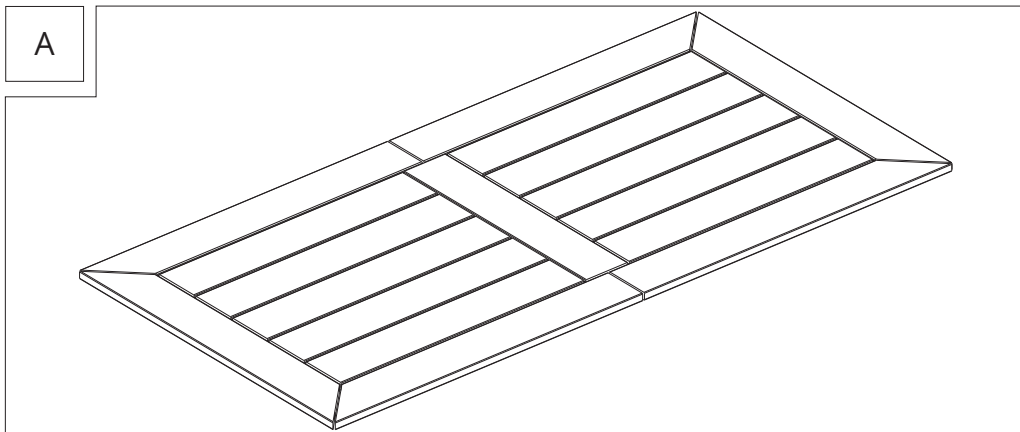
INSTALLATION

DECKING LAYOUT OPTIONS

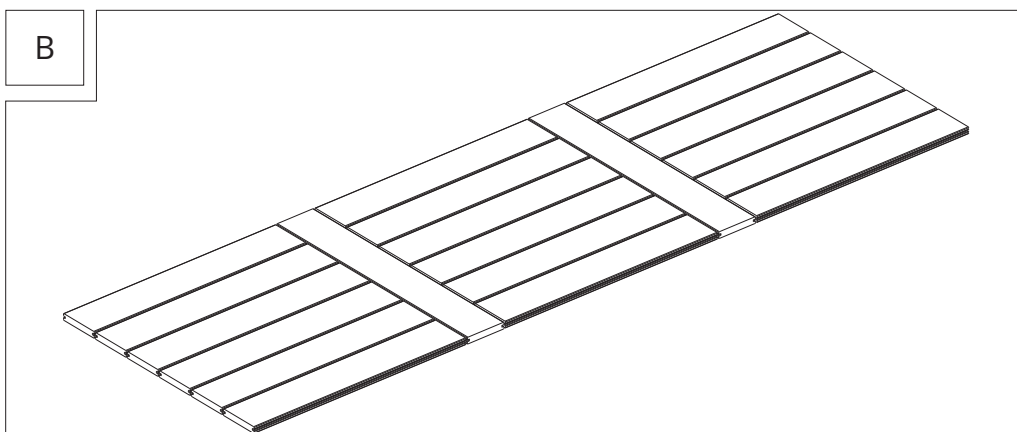
CAUTION

Balustrades, handrails, and the like must **never** be directly fixed to the decking board.

There are a plethora of decking patterns and designs to choose from. This installation guide is centred around two popular models:



Decking with a breaker board (a vertical board that divides the deck when it is too long) and picture framing (a border wrapping around the deck).



Decking with breaker boards (vertical boards that divides the deck when it is too long). Breaker boards help minimise the appearance of expansion and contraction.

STARTING BOARD INSTALLATION

When installing a deck, the first and last boards require starting and ending accessories. All other boards use hidden fasteners for installation.

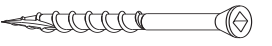


The accessory option for the starting board is a face-fixing screw:

| Board | Accessory | Description | Screw Option | Notes |
|-------|-----------|-------------------|------------------------|-------|
| US71H | CDS / CSM | Face-fixing Screw | Timber Fix / Metal Fix | - |

The last board is face-fixed and requires pre-drilling and face-fixing screws.

The following hidden fastener is used for the middle boards:

| Clip | Description | Screw Size | Timber Fix | Metal Fix |
|----------|-----------------------------|------------|------------|-----------|
| TC30 250 | Marina Board Decking T-Clip | 10G × 45mm | ✓ | ✓ |

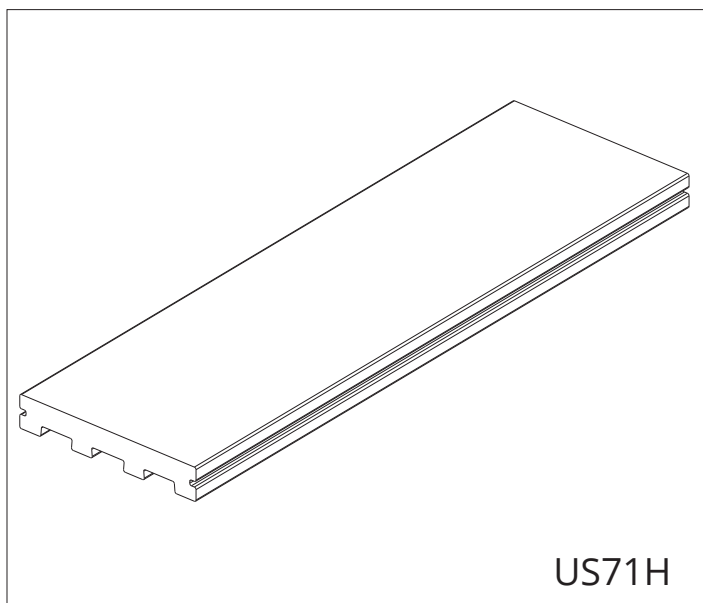
| Decking / Fascia Screw | Size | Decking | Fascia | Timber Fix | Metal Fix |
|---|------------|---------|--------|------------|-----------|
|  CS | 8G × 50mm | ✗ | ✓ | ✓ | ✗ |
|  CDS | 10G × 65mm | ✓ | ✓ | ✓ | ✗ |
|  CSM | 12G × 45mm | ✓ | ✓ | ✗ | ✓ |

(Note: NewTechWood's Metal Fix screws are suitable for steel joists of up to 2mm in thickness. If thicker than 2mm, then each hole must be pre-drilled. Metal Fix clips are not covered under the warranty for fixing to Stratco Probeam or similar double-wall steel profiles.)

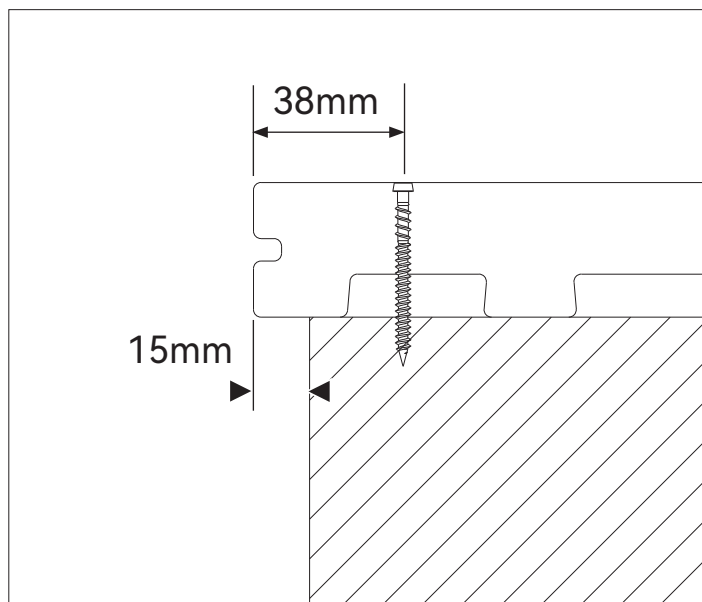
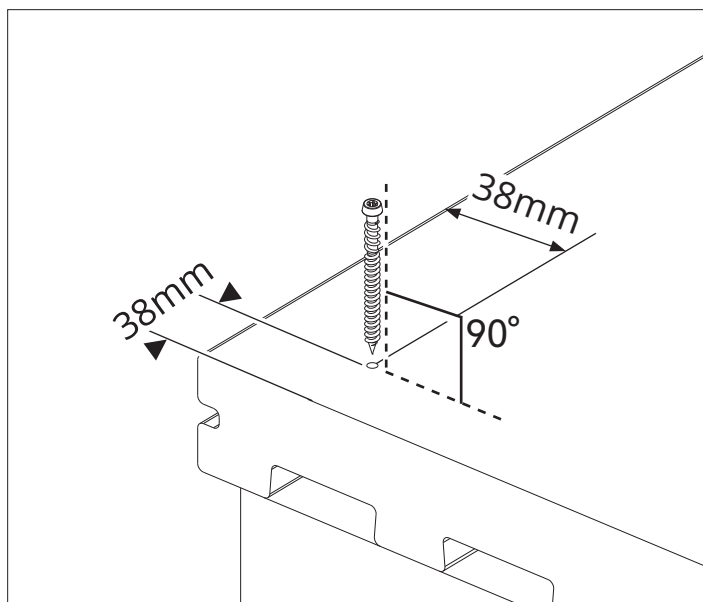
STARTING BOARD INSTALLATION

US71H • Face-Fixing

Items needed:



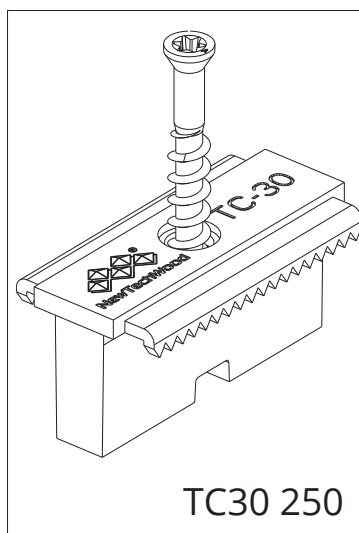
1. Pre-drill the screw hole into the joist, then fix the starting accessory onto the joist along the length of the deck.



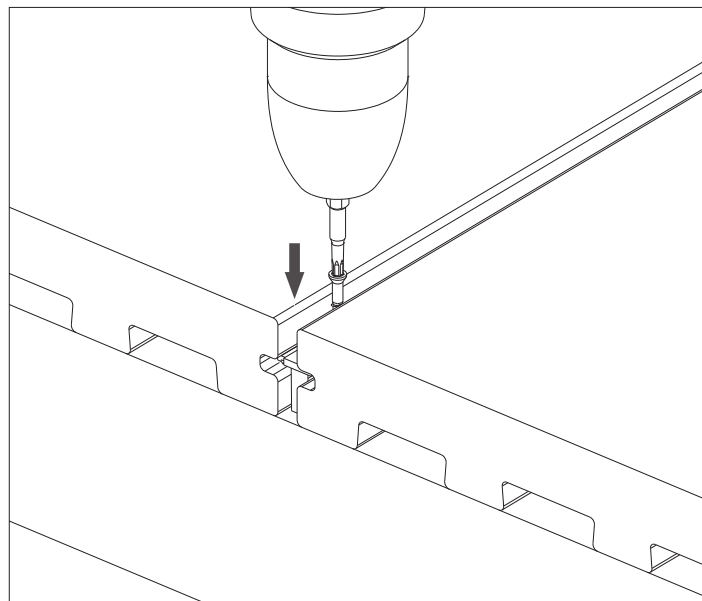
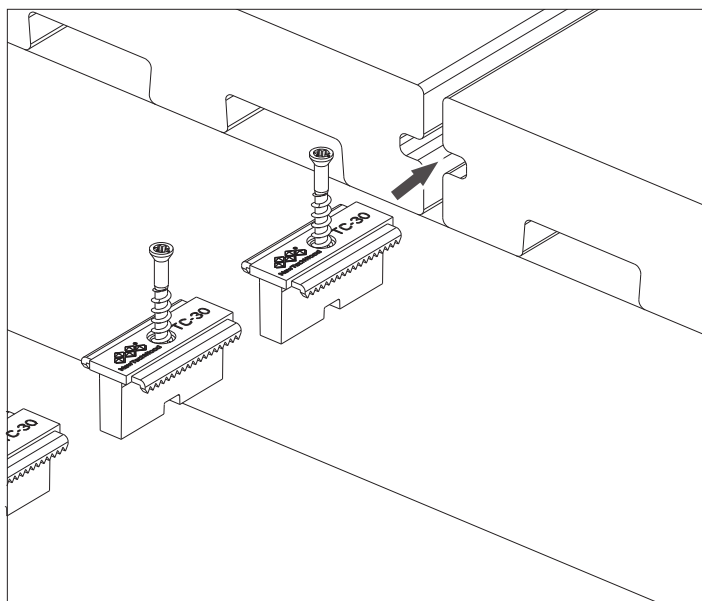
Decking Board Installation

TC30 250

* 8.5mm Gap



1. Insert the TC30 250 clips into the grooves of two decking boards.



Note:

- Make sure each clip sits on its own, individual joist.
- When 2 board ends meet, always use a sister joist – each board must sit on its own joist.

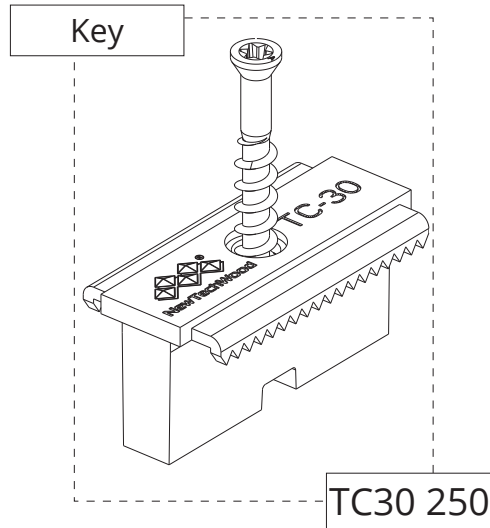
2. Tighten each TC30 250 screw to secure the boards.
3. Repeat Step 2 for the remaining boards.
4. Go to Page 17 to continue the installation.

LOCKING THE DECKING BOARDS FOR CONTRACTION AND EXPANSION

- Depending on the lengths of the decking board, the TC30 250 clips are placed in a specific location. The below diagrams show where each clip sits.

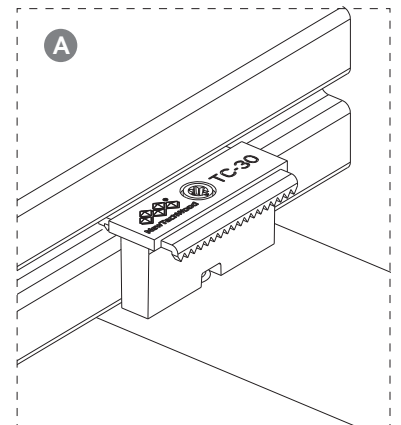
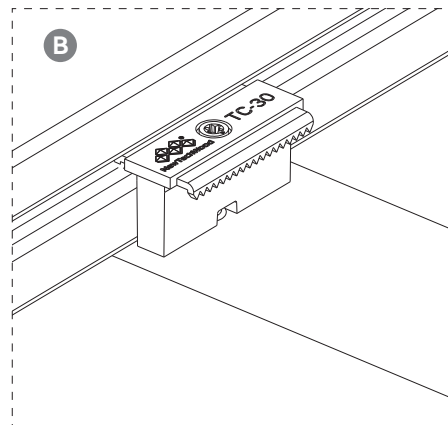
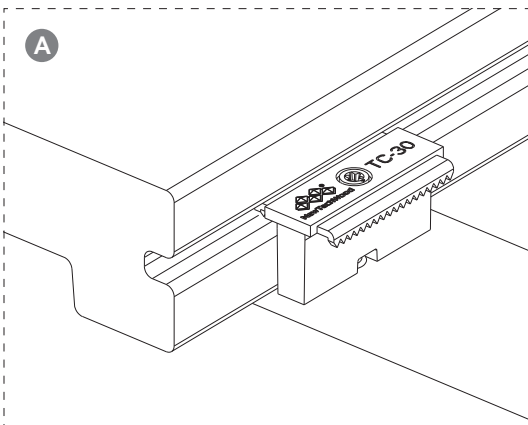
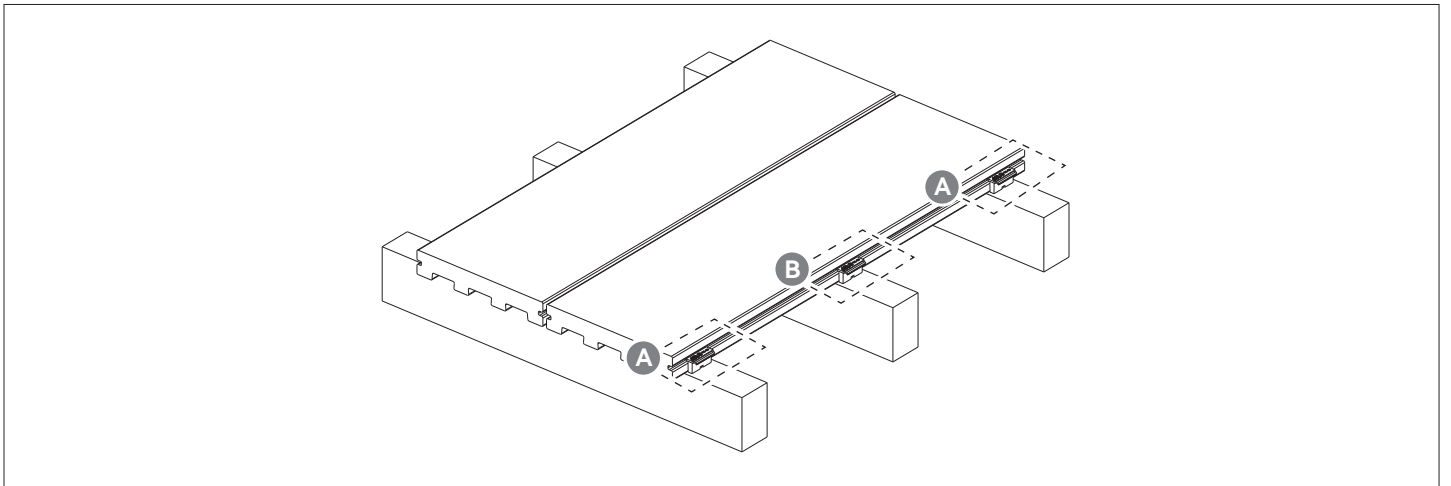
Note:

- Make sure each clip sits on its own, individual joist.
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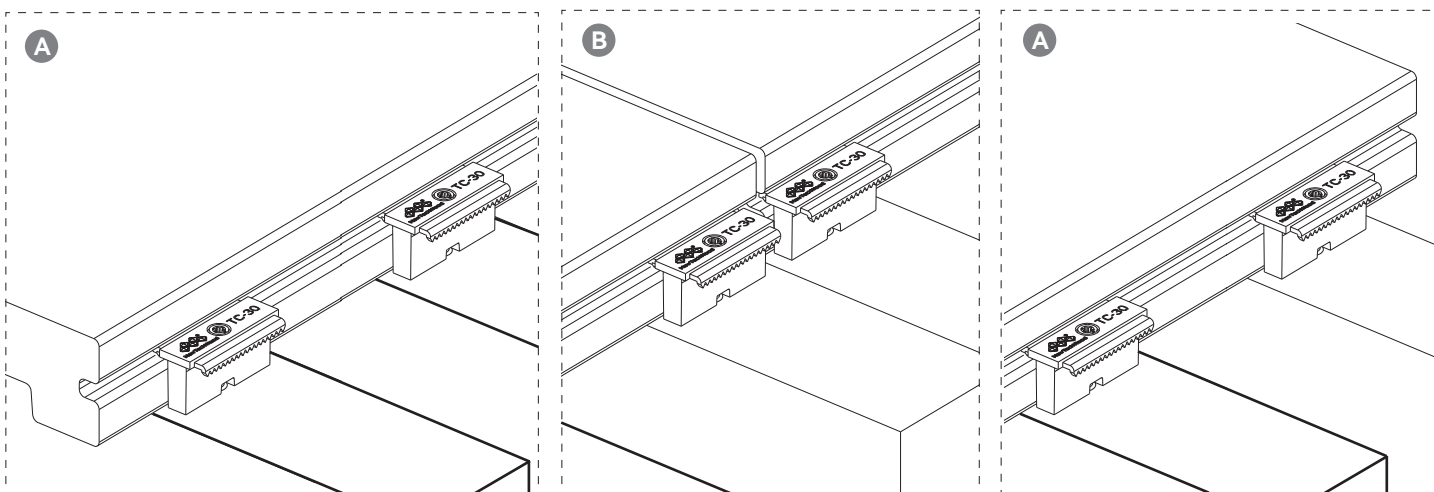
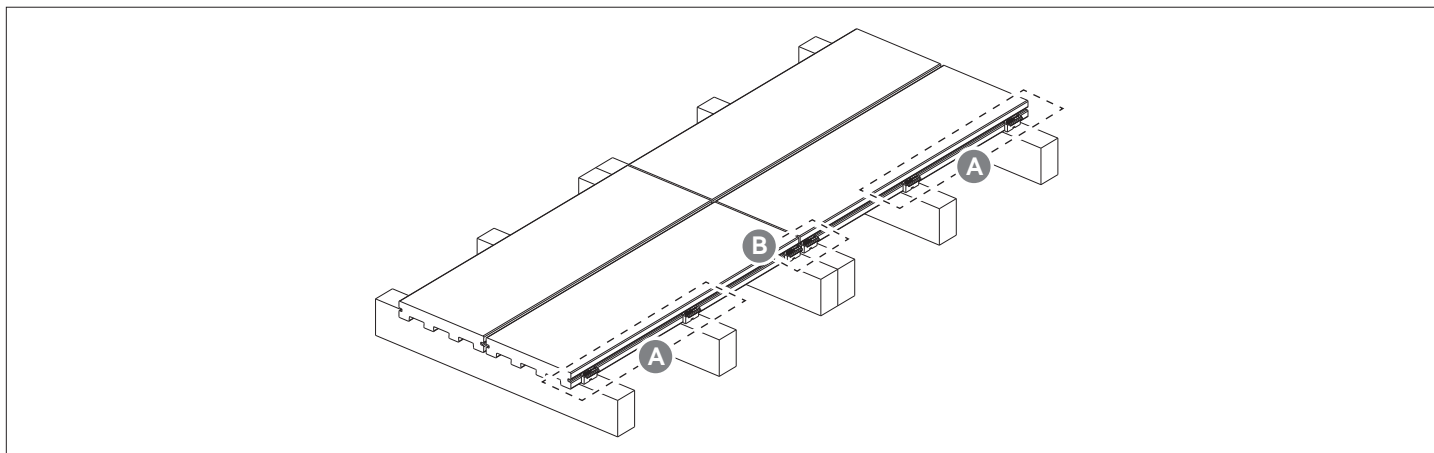
One Length

- TC30 250 is used to secure the decking board into place and manage expansion / contraction; it is used at the ends **A** and in the middle **B** of the board.



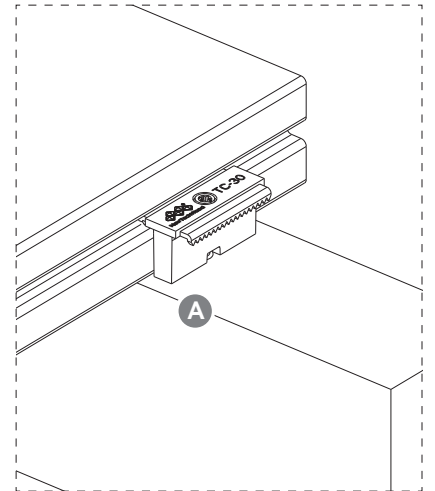
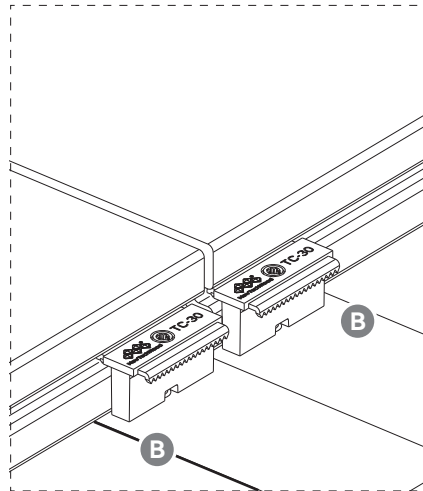
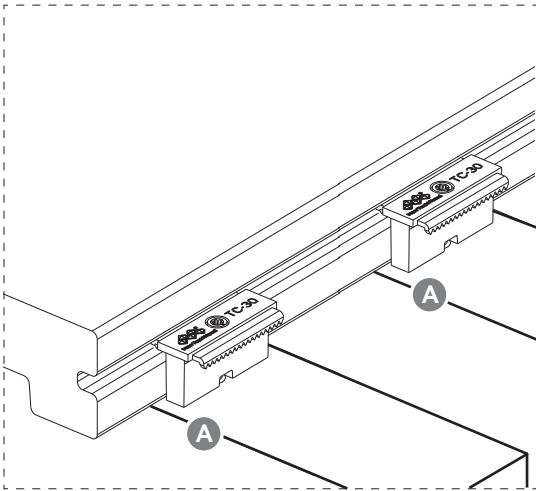
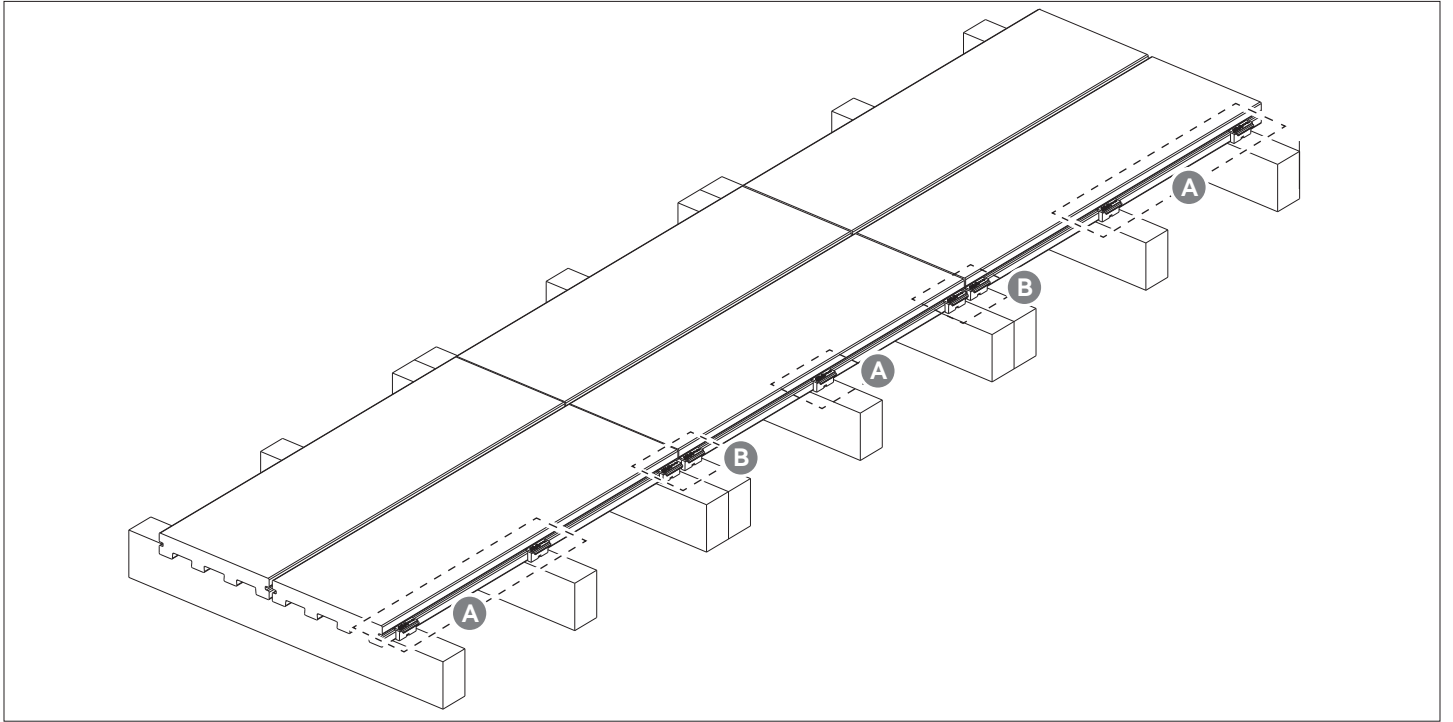
Two Lengths

- TC30 250 is used to secure the decking board into place and manage expansion / contraction; it is used at the ends **A** and in the middle **A** of the board. It is also used when two board ends meet **B**.



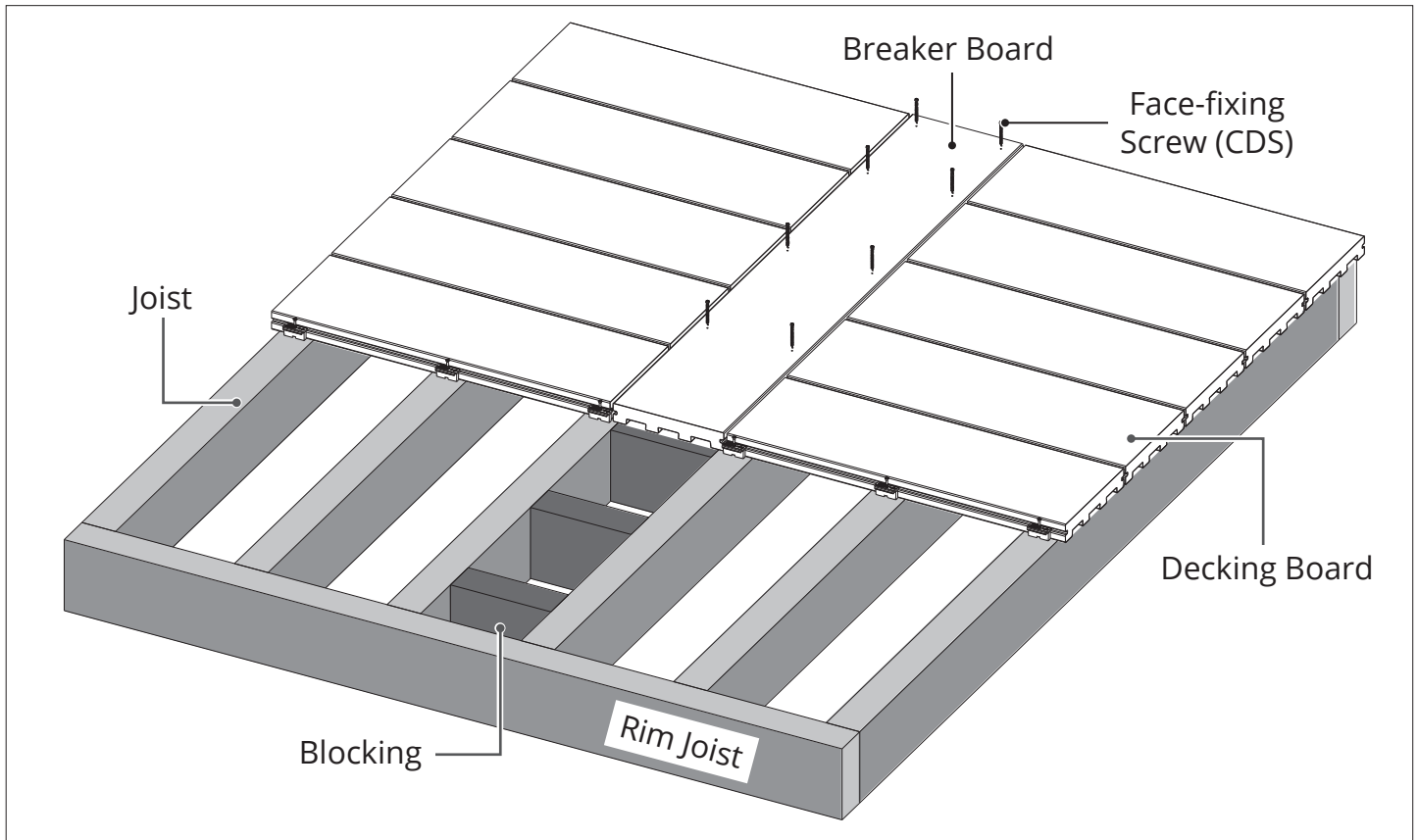
Three (3+) Lengths

- TC30 250 is used to secure the decking board into place and manage expansion / contraction; it is used at the ends **A** and in the middle **A** of the board. It is also used when two board ends meet **B**.

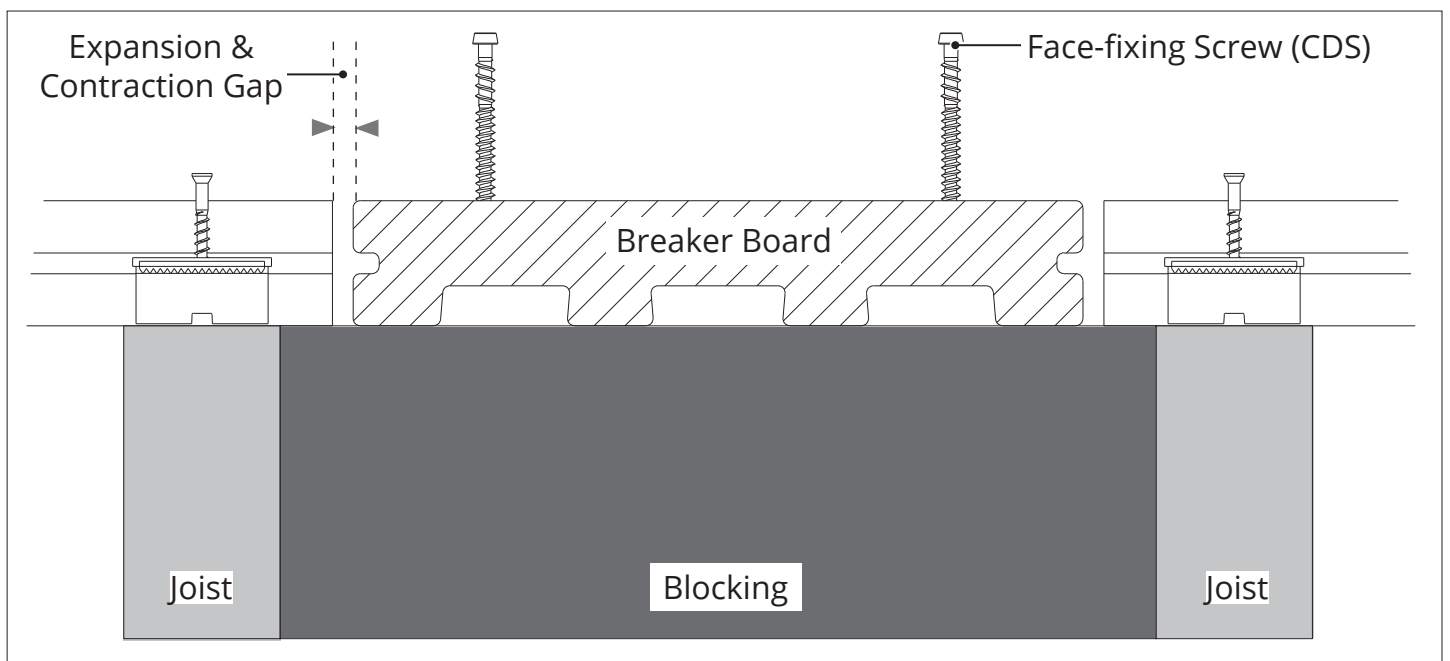


BREAKER BOARD INSTALLATION

- It is recommended to use breaker boards when there is more than one butt joint.
- The below diagram shows a ladder joist structure where the frame is perpendicular to the boards that.

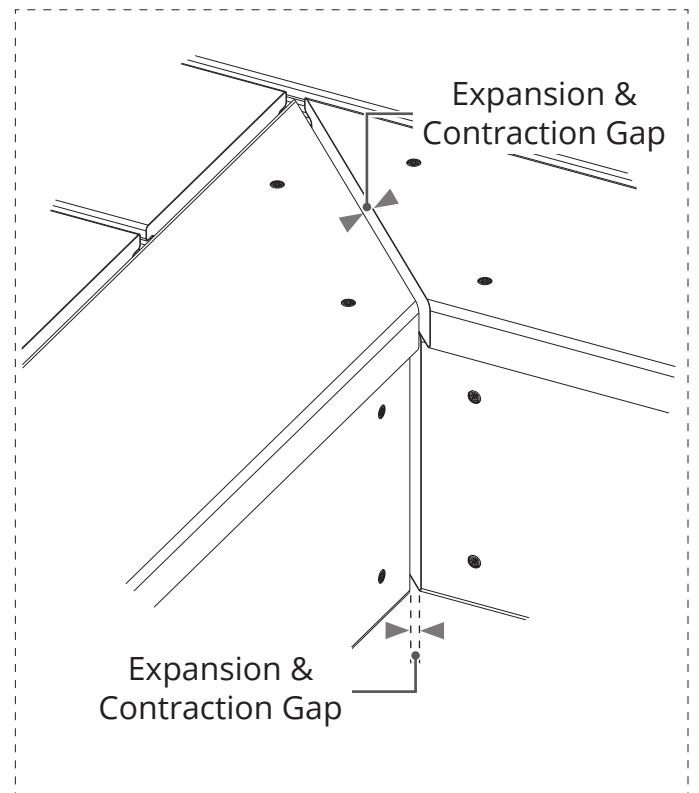
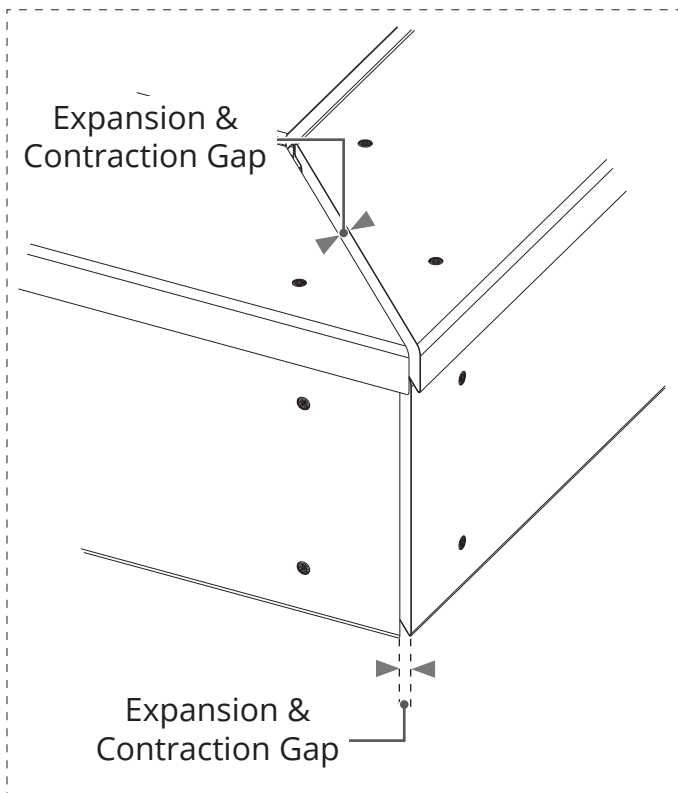
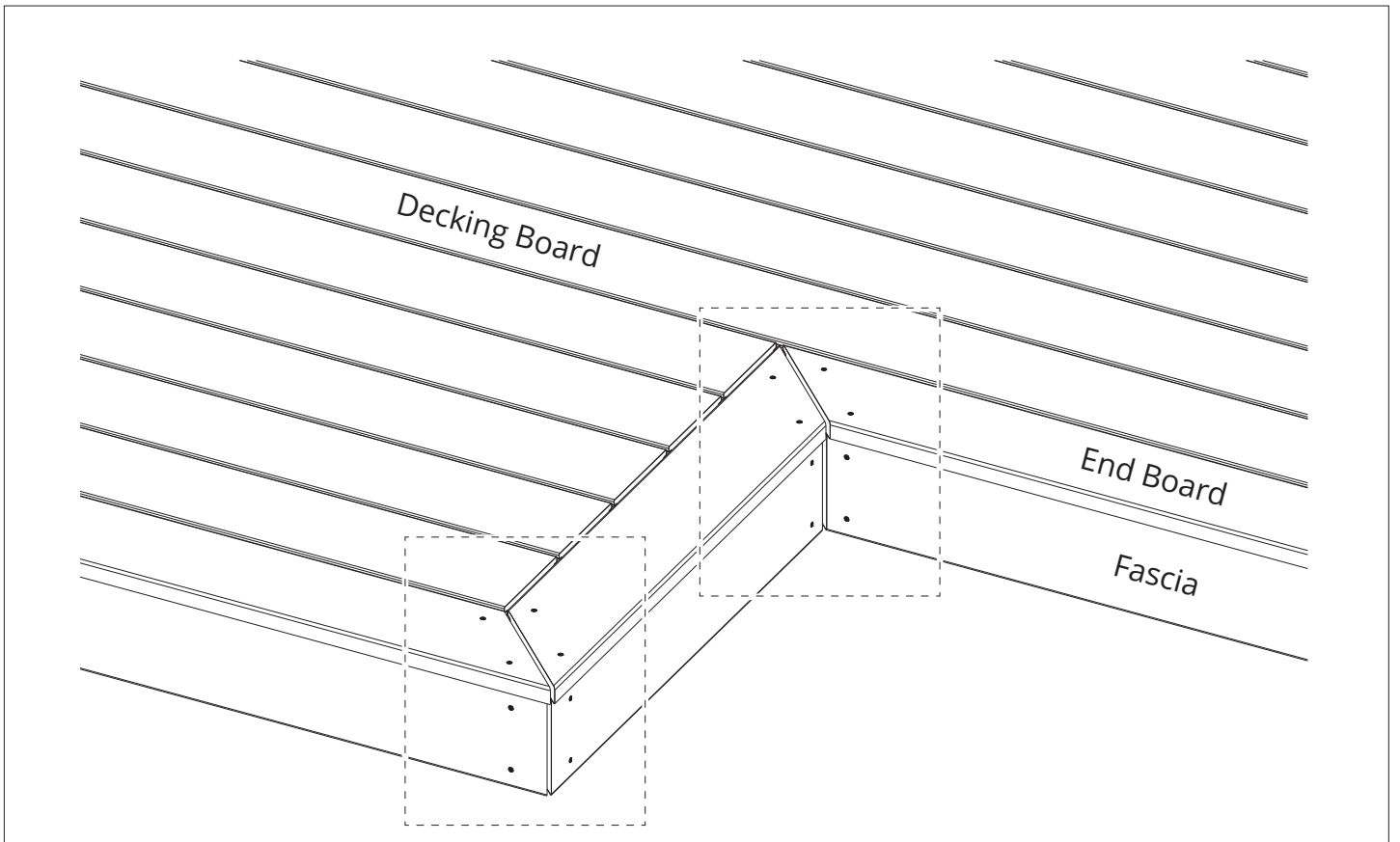


- Face-fix the breaker board to the blocking using face-fixing screws CDS.
- Make sure a gap is left on either side of the breaker board to allow for expansion and contraction.



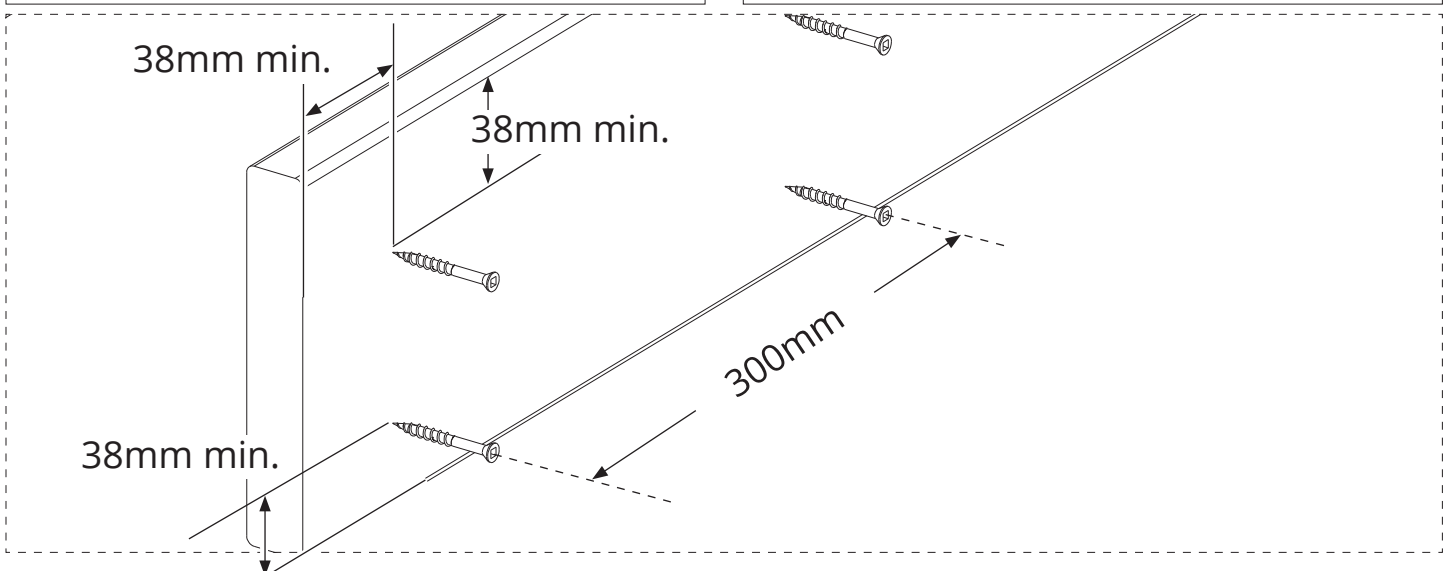
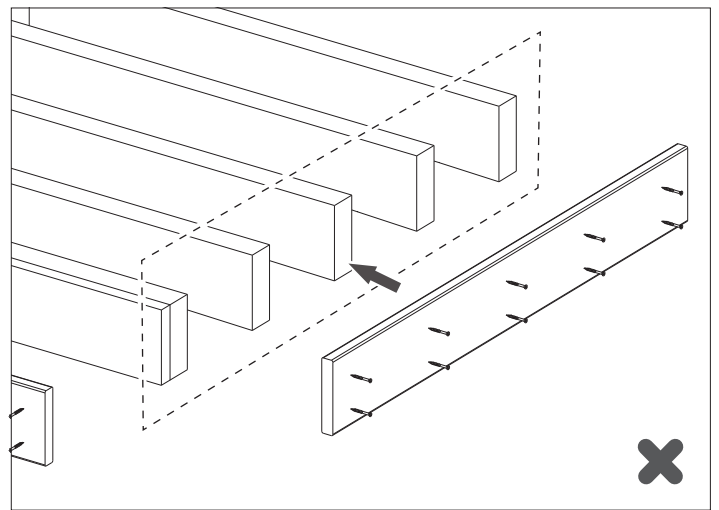
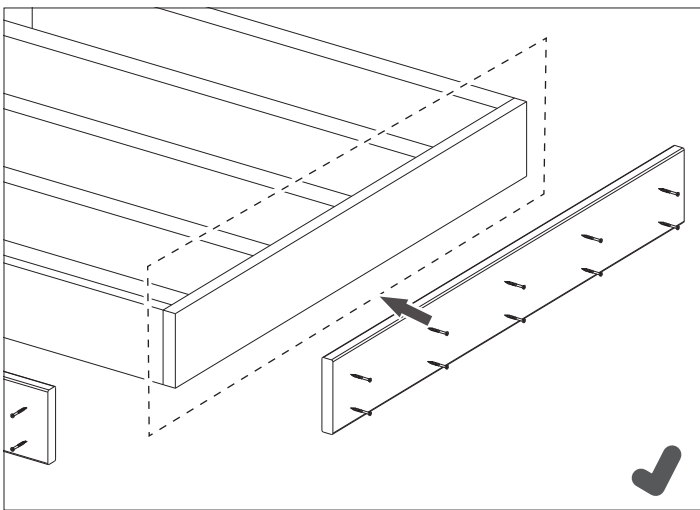
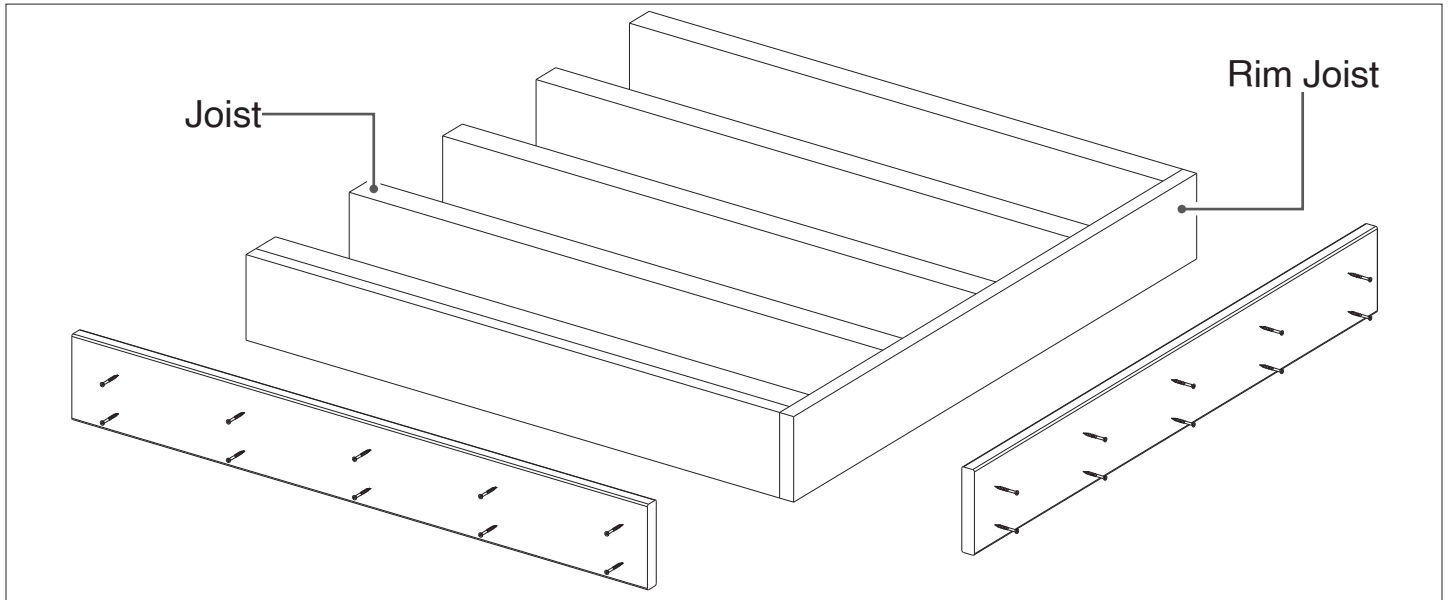
CORNER AND MITRING DETAIL


- When installing the mitring, make sure a gap is left between boards to allow for expansion and contraction.



FASCIA INSTALLATION

- Always install the fascia onto a rim joist. Never install the fascia directly on the joists. Never install the fascia directly on the decking.
- Always pre-drill the holes for the fascia. Make sure the holes are slightly larger than the screws or routed to allow for expansion and contraction. If fixing larger holes, use washers.
- When face-fixing the fascia, always fasten the screw at a 90° angle to the fascia.
- All face-fixing screws must be at least 38mm × 38mm from the ends and the width of the board.
- Remember to securely fix the fascia at the end or in the middle.





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