

Apex[®]

PVC DECKING

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About California Proposition 65
<https://fortressbp.com/about/californiaproposition65>

INTRODUCTION

READ INSTRUCTIONS COMPLETELY BEFORE STARTING INSTALLATION

Guideline Limitations

This installation guide is intended only for Apex. The person using these guidelines should already have a general understanding of deck-building practices. Decks must be built in accordance with all relevant bylaws and building codes.

It is the responsibility of the installer to meet all code and safety requirements, and to obtain all required building permits. The deck and railing installer should determine and implement appropriate installation techniques for each installation situation. Fortress Building Products and its distributors shall not be held liable for improper or unsafe installations. These guidelines are designed to assist you with Apex installation and advise you on the unique installation requirements for this product.

Note:

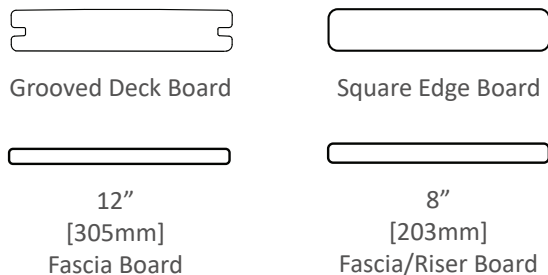
- Joist spacing for Apex profiles can be up to 16" [406.5mm] O.C. in most residential applications. Exceeding this length can jeopardize the performance of your deck.
- Double joists should be used at all butt joints. Ensure that hidden fasteners are installed within 1" [25.5mm] of the end of the Apex decking board.
- Breaker-boards running perpendicular to other decking boards should be used at butt joints to assist with controlling the expansion and contraction of Apex decking. Top-fixed boards should be fastened at least 1-3/16" [30mm] from any edge of the board.
- Expansion gaps are needed at both the ends and sides of each board to allow the material to naturally expand and contract without issue.

Required Tools



PRE-INSTALLATION

Fortress Decking: Apex Installation Board Options



Standards

Before installing any Fortress Building Products, ensure that the application complies with the local building codes. Be sure to comply with material manufacturer specifications. Where manufacturers and building codes differ, revert to the building code requirements. Check that your choice of products is suitable for its intended application. For further product specification and information visit www.fortressbp.com.

Safety

Recommended Tools:



Goggles



Safety
Gloves



Dust
Mask



Hard-Bristled
Broom



Vacuum

- Always wear appropriate personal protection equipment (PPE). Comply with the local occupational health and safety legislation.
- Refer to the applicable Material Safety Data Sheet (MSDS).
- Work in well-ventilated area.
- Maintain a clean work area.
- Cutting Apex produces fine particulate matter.
- Cut boards may have sharp edges (particularly mitered cuts).

Storage & Handling

- Boards are bundled for convenience and can, as a result, be heavy. Take care when lifting, placing or removing from raised pallets. More than one person may be required for lifting depending on the length of the boards and the number of boards within a bundle.
- When handling lengths of boards greater than 12ft [3658mm], ensure both ends are lifted simultaneously and evenly. Lift the boards 3ft [915mm] from each end to provide better control.
- Handle the boards carefully. Dropping the boards (and all high impact loads in general) can result in damage to the profiles.
- During transportation use corner protectors where strapping is required.
- All components should be stored completely under cover.
- When storing boards, a pallet or flat surface should be used to support the full length of each component.
- No component should sit in water or similar.
- Avoid over-stacking and/or irregular stacking.


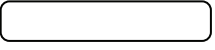


Plan

- Assess the building site and ensure the product is suitable for the intended application.
- Determine appropriate spans for the selected profile. This will depend on the application and the loading class for the region. Suggested spans are provided for typical residential scenarios.
- Develop a maintenance plan to ensure the longevity of the system. This should consider drainage, corrosion and vegetation under and around the deck.

Site Preparation

- Ensure adequate drainage below the deck footprint. Prevent pooling water and/or erosion.
- Remove vegetation from the deck footprint and place an appropriate geotextile to prevent regrowth.

Deck Board Profile

Description	Profile Width in[mm]	Profile Height in[mm]	Profile Length in[mm]	Weight lbs/ft	Max. Spans in[mm]
 Grooved Deck Board	5-1/2" [140mm]	.945" [24mm]	144", 192", 240" [3658mm, 4877mm, 6096mm]	1.57	16" [407mm]
 Square Edge Board	5-1/2" [140mm]	.945" [24mm]	240" [6096mm]	1.65	16" [407mm]
 12" [305mm] Fascia Board	11-3/4" [299mm]	.63" [16mm]	144" [3658mm]	2.22	N/A
 8" [203mm] Fascia/Riser Board	7-1/4" [184mm]	.55" [14mm]	144" [3658mm]	1.27	N/A

INSTALLATION: EXPANSION & CONTRACTION

Note:

All conditions anticipate temperatures are the temperature of the board at time of installation. Racking boards in the shade for a minimum of 30 minutes will help acclimatize boards.

Table 1: Gapping

	If < 30°F (-1°C)	If > 30°F (-1°C) & < 50°F (10°C)	If > 50°F (11°C) & < 70°F (21°C)	If > 70°F (22°C) & < 90°F (32°C)	If > 90°F (32°C)
End-To-End & Butt Joints (Minimum Allowed)	5/16" [8mm]	1/4" [6mm]	3/16" [5mm]	1/8" [3mm]	1/16" [2mm]
Edge-To-Edge When Face Fastened (Minimum Allowed)	1/8" [3mm]	1/8" [3mm]	1/8" [3mm]	1/8" [3mm]	1/8" [3mm]
Edge-To-Edge With HULK HFS (Minimum Allowed)	3/16" [5mm]	3/16" [5mm]	3/16" [5mm]	3/16" [5mm]	3/16" [5mm]

Acclimating Boards

Installation can take place over a few days, resulting in varying installation temperatures, depending on the project site, the boards may experience differing heating and cooling rates. Allow boards to acclimate on-site for 24 hours before installing. Once the installation is complete, wait to cut the ends of the installed boards to the desired length in order to allow the boards to fully acclimate to the site.

Breaker Boards

Breaker or border boards (boards laid at 90° to the rest of the deck) can be used to create a border around the deck and will aid in controlling expansion & contractions. Blocking will need to be used to support the breaker board, at a maximum spacing of 16" [407mm] O.C. The breaker board will need to be surface mounted to the blocking with composite screws. As shown in Fig. 2.

Note:

- Use a breaker board between long run boards to assist in controlling expansion and contraction. This approach has the added benefit of creating a more visually pleasing aesthetic. Reference Supports & Spans section on page 13.
- Breaker boards must be supported by joists or blocking.
- Where breaker boards cannot be used, double joists must be used to support the butt joins. Use a minimum of two fasteners per joist, evenly spaced and a minimum of 1-3/16" [30mm] from any board edge.
- Joist spans should be altered in cases where boards are installed diagonally.

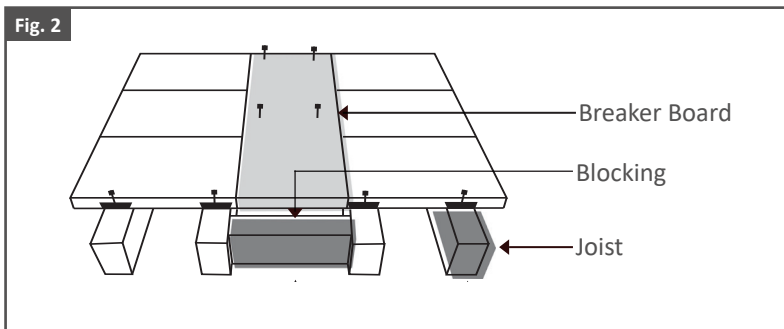
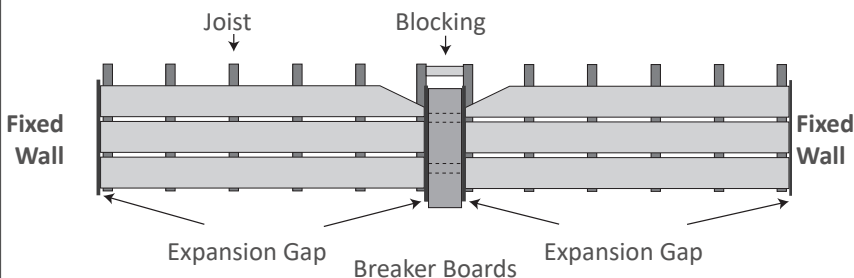
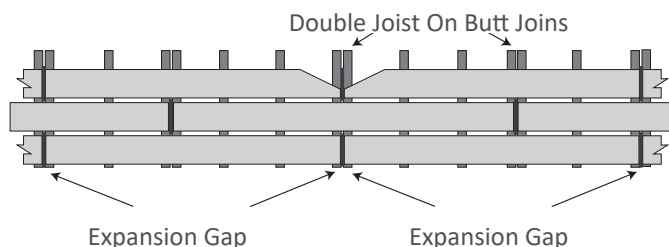
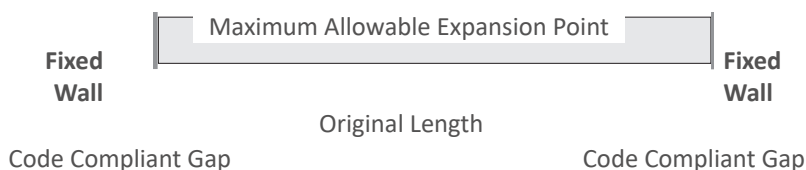


Fig. 3**Single Board Lengths (TOP VIEW)****Fig. 4****Multiple Board Lengths Placed Consecutively (TOP VIEW)**

Expansion gap provided for the change in length of both boards

**Code Compliance**

When installing against vertical structures, allow for both the code required spacing and the required expansion gap to ensure board remain code compliant after board expansion. As shown in Fig. 5.

Fig. 5**TOP VIEW**

INSTALLATION: FASTENING

Installation Tips:



Nails



Fasteners

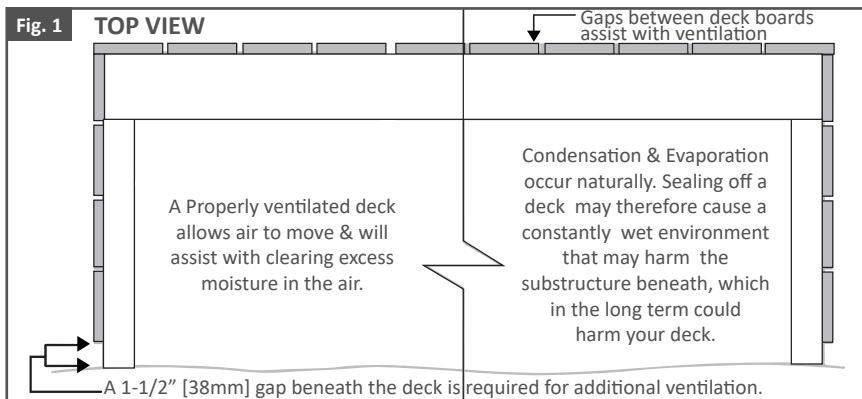


Drill

- **DO NOT** use nails to fasten Apex boards.
- Use high quality HULK fasteners suitable for the life span of the deck and the atmospheric conditions of the site.
- Apex boards require two fasteners points per joist.
- Fasten 1-3/16" [30mm] from any edge of a board.
- A drill with adjustable torque settings is recommended.
- Pre-drill in temperatures below 40°F [5°C].
- Pre-drilling hole size should be equal to the smallest diameter of the screw.
- **DO NOT** pre-drill wood substructure.

Board Application

- The installation of Apex boards is comparable to that of other composite or decking boards.
- Apex profiles **ARE NOT** intended for use as structural members.
- The surface overhang of the deck must be limited to a maximum of 1-1/4" [32mm] and take into consideration the thickness of the fascia or trim.
- Reflective surfaces (for example, low-E glass or metallic siding) may cause unusual UV impact and/or heat build-up on a deck, which may cause unexpected results in the Apex material. Design your deck to allow for this where possible.
- Provide ground clearance for adequate ventilation. Ventilation can have the added benefit of assisting with expansion and contraction. As shown in Fig. 1.

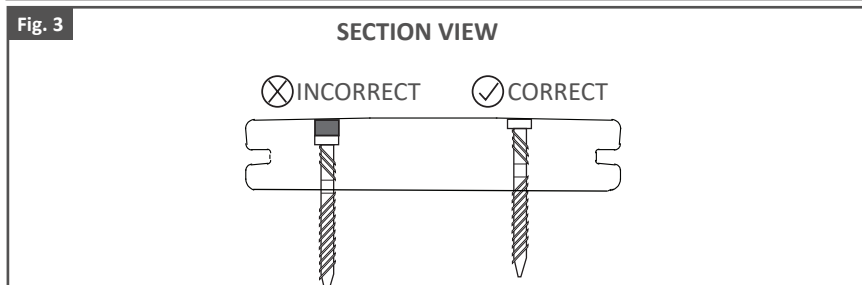
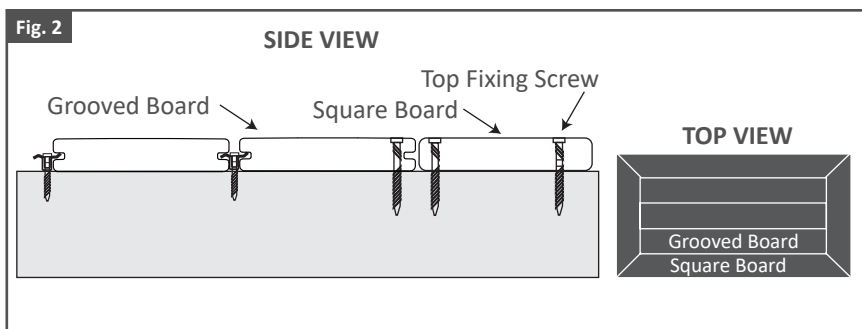


Fastening Points Using A Single Grooved Edge Board

- This perimeter board should be top-fixed using color matching composite deck screws.
 - The screws should be located at least 1-3/16" [30mm] away from any edge of the Apex profile.
 - Use HULK hidden fasteners between decking profiles.
- As shown in Fig. 2 & 3.

Note:

DO NOT overdrive the screw into the decking surface.



INSTALLATION: BOARD RIPPING GUIDELINES

Top Fixing Guidelines for Ripped Boards

- Boards can be fastened using Top Fixing Screws in certain circumstances, particularly if the boards have been ripped.
- All boards require two fasteners at every joist. Either two HULK clips, a HULK clip and a Composite Screw or two Composite Screws to be adequately fastened to the frame. As shown in Fig. 2.
- All top fixing screws should be positioned at least 1-3/16" [30mm] from the edge of the board.
- HULK fasteners are best suited for securing Apex boards wherever possible.
- Wherever possible, if an Apex board has been ripped, face the ripped edge inwards towards the other decking boards and allow the non-ripped edge to act as the end of the deck.

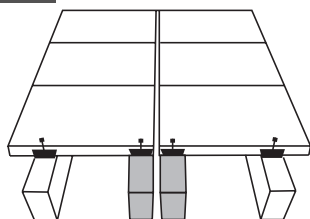
Cutting

- Apex boards should not be cut thinner than 2-1/2" [63mm].
- If necessary rip both the first and last Apex boards to fit your installation space.
- Use a minimum of two fasteners per joist, evenly spaced and a minimum of 1-3/16" [30mm] from any board edge.
- Boards can be mitered. Use two fasteners, evenly spaced and a minimum 1-3/16" [30mm] from any edge, per mitered board. **DO NOT** router boards.

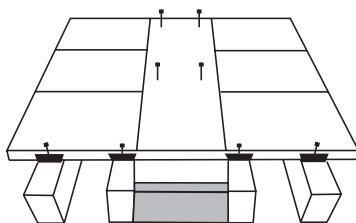
Supports & Spans

- The choice of structural material will effect the life span of a deck. Make certain that local building codes are followed.
- Boards should not be allowed to overhang more than 1-1/4" [32mm]. Additional Support are necessary, As shown in Fig. 4 & 5 .

Fig. 4



Double Joists = Butt Joints



Blocking = Breaker Boards

Fig. 5

TOP VIEW

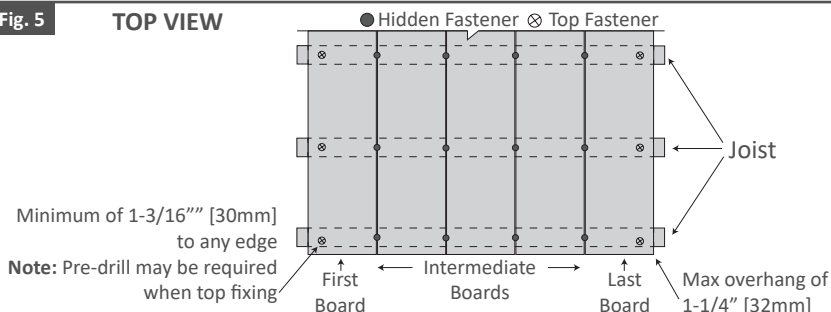
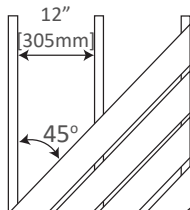
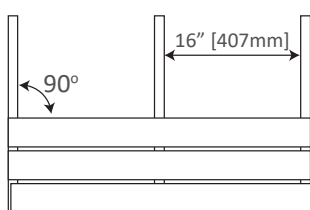


Fig. 6

TOP VIEW

16" [407mm] On-center
Spacing for 90° Deck Boards

12" [305mm] On-center
Spacing for 45° Deck Boards



Joist Spacing For Grooved & Square Boards At an Angle

90°	60°	45°	30°
16" [407mm]	14" [356mm]	12" [305mm]	8" [203mm]



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