

A modern house with a large deck overlooking a mountain valley. The deck is made of dark brown composite decking. The house has a brown facade and large windows. The background shows a valley with trees and mountains under a clear blue sky.

# CALI DECKING™

TruOrganics®

## Installation Guide

*Distributed by Bamboo Design & Architecture*

(844) 293-6060

[www.BambooDesignArchitecture.ca](http://www.BambooDesignArchitecture.ca)

## Decking Systems



**TRUORGANICS 3G**  
5-7/16" Wide  
Plank Dims: 192"L x 5-7/16"W x 7/8"H



**TRUORGANICS 3G WIDE**  
8-1/4" Wide  
Plank Dims: 96"L x 8-1/4"W x 7/8"H



**TRUORGANICS SQUARE EDGE**  
5-7/16" Wide  
Plank Dims: 192"L x 5-7/16"W x 7/8"H

## Decking Accessories



**3G END CAP**



**3G WIDE END CAP**



**LOCKING CLIP TC-1**



**T-CLIP TC-2**



**STARTER  
ACCESSORY**

## Available Colors



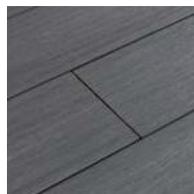
**SEDONA**



**GLACIER**



**DENALI**



**YOSEMITE**



**MOJAVE**



**CARIBOU**

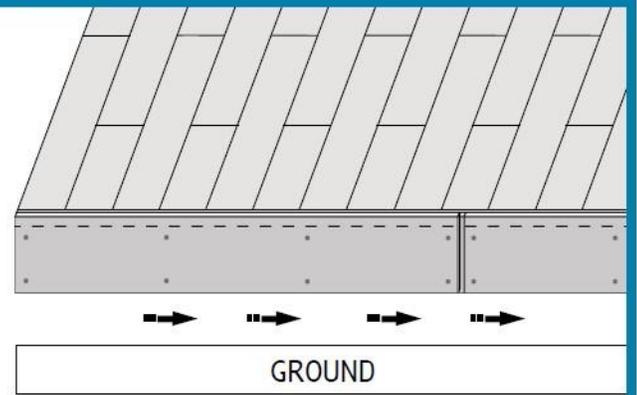
Before you begin installation, remember to take your T.I.M.E. with the checklist below. Full installation instructions and maintenance guidelines can also be found online at [www.BambooDesignArchitecture.ca](http://www.BambooDesignArchitecture.ca)

## T I M E TAKE TIME TO READ



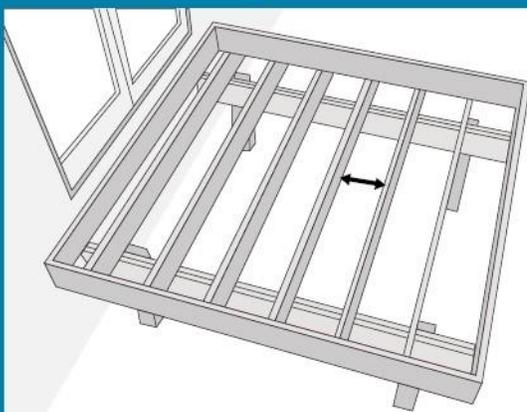
Take time to read the local building codes for any special requirements or restrictions.

## T I M E INSTALL VENTILATION



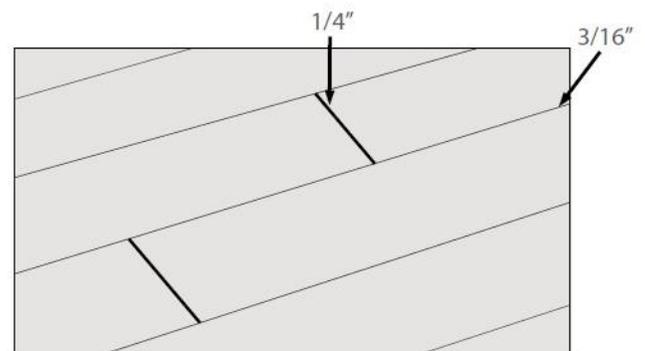
Install 4 inches of continuous net free area under the decking surface for adequate ventilation.

## T I M E MEASURE YOUR JOIST



Measure your joist spacing to ensure it is 16" on center for residential applications and 12" on center for commercial applications.

## T I M E EXPANSION SPACE



Expansion space is required! Decking boards should always have 3/16" expansion space between boards and 1/4" expansion space on all butt ends.

## IMPORTANT: Pre-Installation Guidelines

**Note: Decking not used for its intended purpose will not be covered under warranty.** For the most up-to-date information, please visit our website at [BambooDesignArchitecture.ca](http://BambooDesignArchitecture.ca)

Prior to installing any composite decking 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 and are not meant or implied to replace a licensed professional. Any construction or use of TruOrganics® must be in accordance with all local zoning and/or building codes. The consumer assumes all risks and liability associated with the construction and use of this product.

## Safety

When dealing with any type of construction project it is necessary to wear appropriate safety equipment to avoid any risk of injuries. Cali Bamboo® recommends the following safety equipment when handling, cutting, and installing Cali Bamboo® decking: gloves, respiratory protection, long sleeves, pants, and safety glasses.

## Tools Needed

Standard woodworking tools may be used. It is recommended that all blades have a carbide tip. Standard stainless steel or acceptable coated deck screws and nails are recommended.

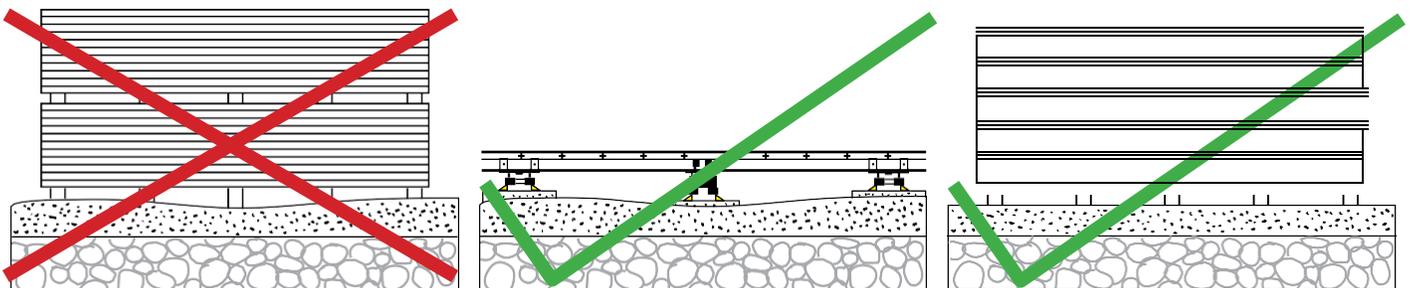
Typical tools needed include but are not limited to:

- Hammer
- Circular Saw (Carbide Tipped Blade)
- Level
- Tape Measure
- Screw Gun
- Chalk Line
- Rasp
- Miter Saw

**Note:** Any time the decking boards need to be marked use white chalk, straight boards, or string lines as templates for straight lines. NEVER USE COLORED CHALK. Colored chalk will permanently stain TruOrganics® products and is not recommended.

## Storage

A clean, smooth, flat, and strong frame is needed to install TruOrganics® products correctly. TruOrganics® products need to be stored on a flat and even surface at all times. Surfaces such as dirt and grass are not recommended as they can move over time and potentially cause warping or distortion. Always remember to keep TruOrganics® boards dry until you are able to start installation.



## Planning

Plan a layout for your decking before starting to ensure the best possible look for your project. Building codes and zoning ordinances generally apply to permanent structures, meaning anything that is anchored to the ground or attached to the house. Therefore, nearly every kind of decking requires permits and inspections from a local building department.

## Construction

TruOrganics® decking is NOT intended for use as columns, support posts, beams, joist stringers or other primary load-bearing members. TruOrganics® must be supported by a code-compliant substructure. While TruOrganics® products are great for retrofits, they should not be installed on existing decking boards.

## Static

Static build-up is a natural occurring phenomenon that can occur with many plastic products. Dry and windy environments may make this more apparent and varies depending on the climate and age of the decking.

## Ventilation

TruOrganics® products CANNOT be directly installed on a flat surface. They must be installed on a substructure so there is adequate and unobstructed air flow under the decking to prevent excessive water absorption. A minimum of 4 inches of continuous net free area under the decking surface is required for adequate ventilation. This will ensure air can circulate between adjacent members to promote drainage and drying.

## Heat and Fire

Excessive heat on the surface of TruOrganics® products from external sources such as fire or reflection of sunlight from energy efficient window products can cause passive heat gain within a structure. This can lead to unusual heat build-up on exterior surfaces. This extreme elevation of surface temperatures can make TruOrganics® products susceptible to melting, sagging, warping, discoloration, increased expansion/contraction, and accelerated weathering.

## Framing

A clean, smooth, flat, and strong frame is needed to install TruOrganics® products. Determine the joist spacing of the frame and ensure that it is completely level before installing any boards. Adequate spacing between the joists is required to keep the deck boards from bending. Please review the chart below to see what spacing is required for your profile.

**Maximum Decking Spans on Center-to-Center**

Profile	Dimensions	Residential Span	Commercial Span
TruOrganics®, Solid Board	5.5" x 0.9"	16"	12"
TruOrganics®, 3G Board	5.5" x 0.9"	16"	12"

**Joist Spanning on Center-to-Center with Angled Decking Installations**

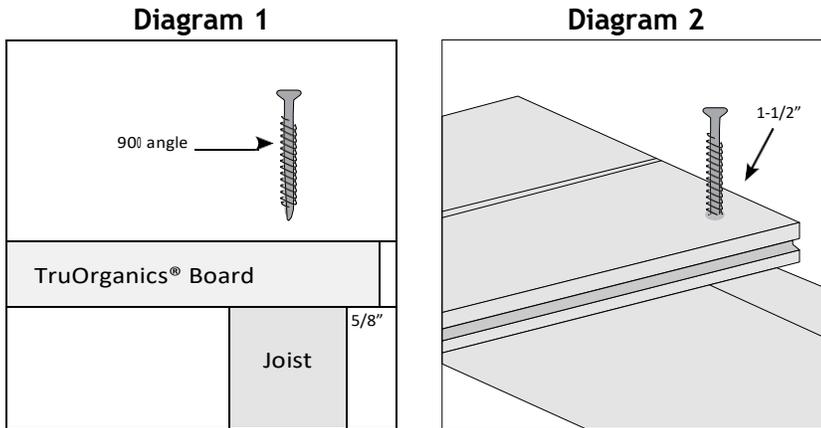
Degree of Angle	Dimensions	Spacing
90	5.5" x 0.9"	Refer to table above
60	5.5" x 0.9"	2" less than the span stated in the above table
45	5.5" x 0.9"	4" less than the span stated in the above table
30	5.5" x 0.9"	1/2 the distance stated in the table above

## Face Fasteners

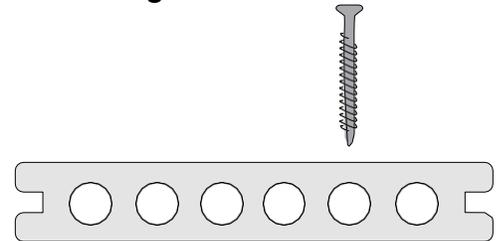
When fastening TruOrganics® products all screws that are face fastened must be driven in at a 90 degree angle to the decking surface. See Diagram 1. An extra (sister) joist should be added if a 90 degree angle cannot be driven into the board. Never toe/edge screw the deck boards.

See Diagram 11 on page 7 for more details on sister joists.

All screws that are face fastened must be stainless steel. When face fastening always go in at least 1-1/2 inch from both ends of the deck board as shown in Diagram 2.



**Tip:** When face fastening it is a best practice to line the screw up with one of the holes in the 3G decking.



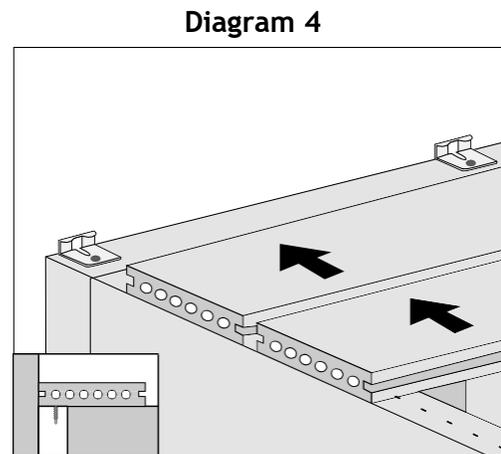
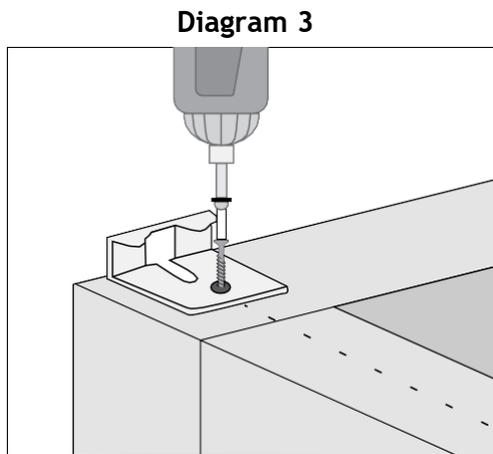
Always use screws designated for use with composite decking material. Test the screws on a scrap piece of board to ensure the screws do not cause the surface of the decking to mushroom or bulge around the head of the screw. If it does cause this issue, change to a different brand of screw.

## Decking Installation

When installing the deck, the first and last board of your project will need to use a starting accessory. Every other board will use the hidden fastener for its installation.

### Starting Accessory Installation

1. After calculating the decking span and making the frame of your deck the first board is ready to be installed.
2. First pre-drill into the joist then fix the starting accessory into the joist as shown in Diagram 3.
3. Then take your first board and push it into the starting accessory as shown in Diagram 4.



## TruOrganics® T-Clip and TC-1 Locking Clip Installation

1. First slide the TC-1 and TC-2 clips into the grooves of the boards with screws facing up as show in Diagram 5 and line them up with their respective joists.

Diagram 5

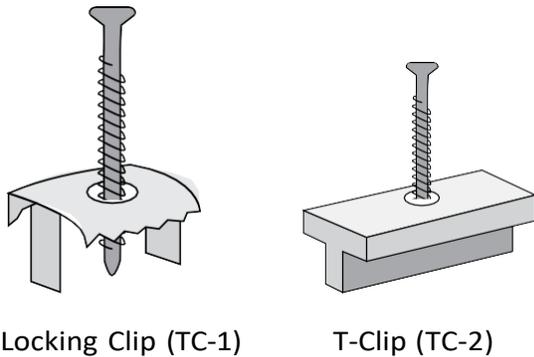
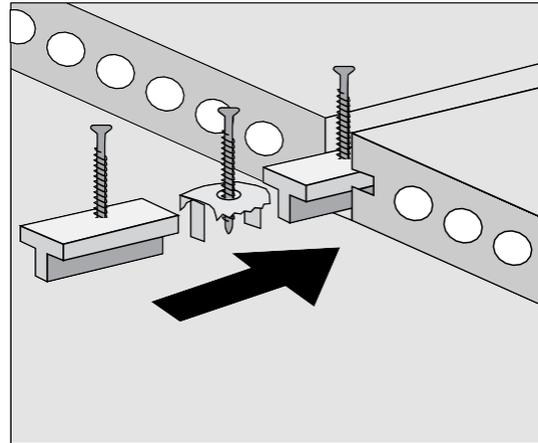


Diagram 6



2. After getting all the TC-1 and TC-2 clips into position above each respective joist, begin to fasten them from above as shown in Diagram 6 and 7.

**Note:** The quickest way to install the boards is to push them together, slide the clips into the grooves from the side and then screw from above.

Diagram 7

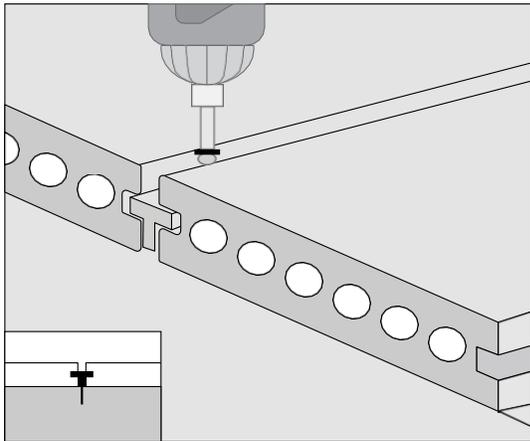
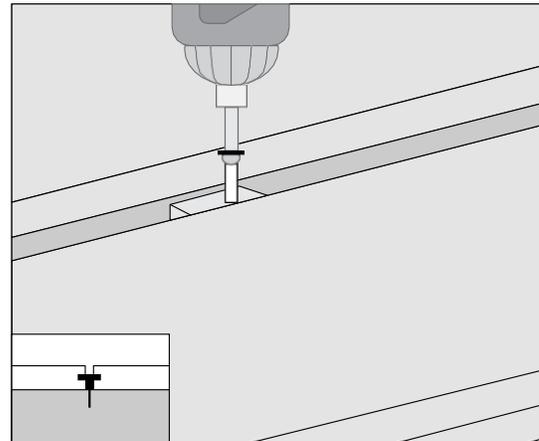


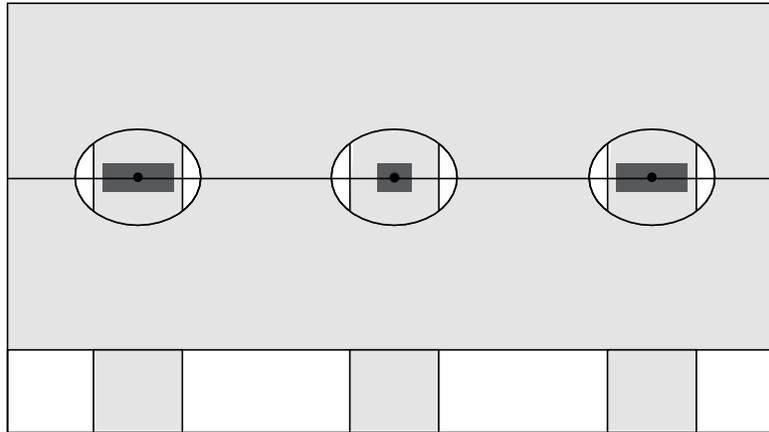
Diagram 8



3. The final installed clips should look like Diagram 8.

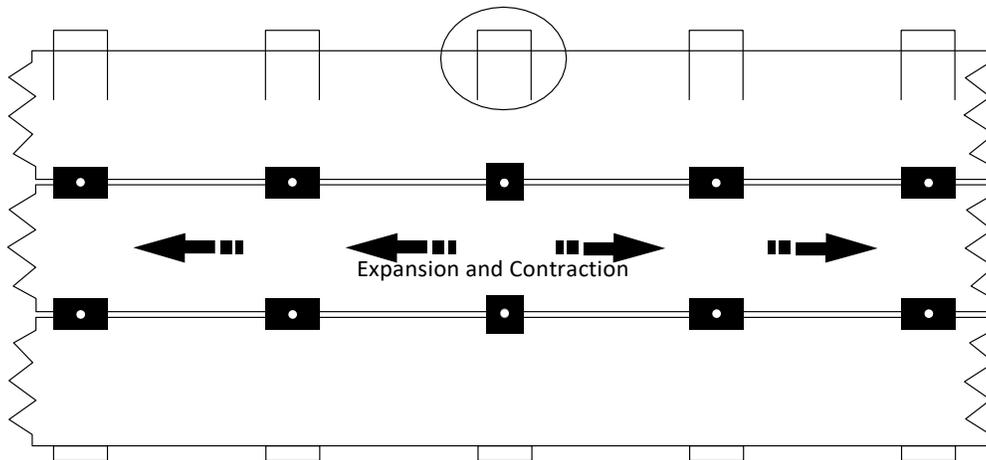
**Note:** TruOrganics® boards should always T Clip have 3/16" expansion space on all sides. Using the recommended TC clips will ensure proper expansion space is set between the boards.

Diagram 9



When installing boards we recommend locking the board in the middle to allow for even expansion and contraction to take place on both ends as shown in Diagram 10.

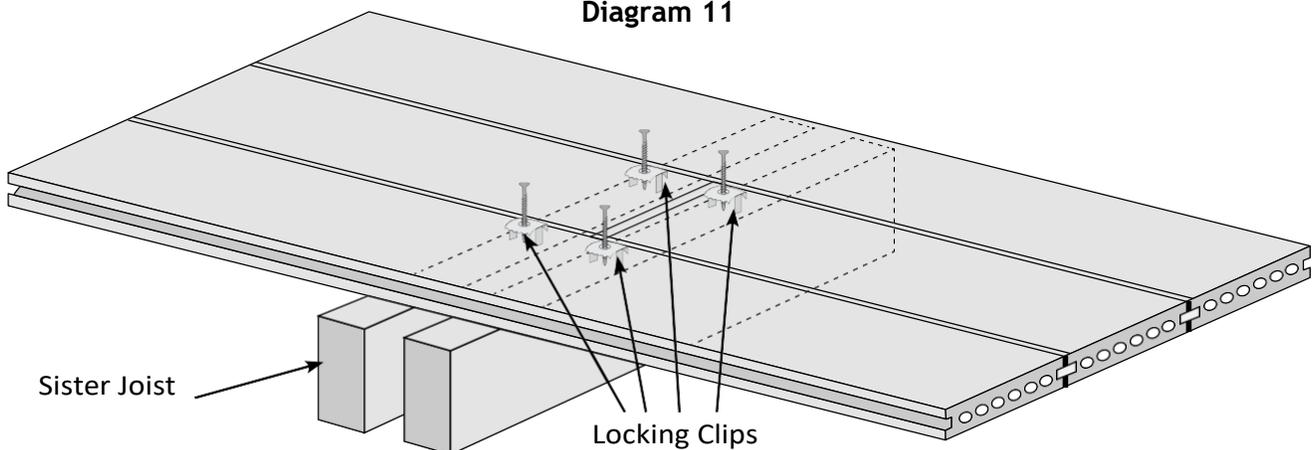
Diagram 10



When installing two boards across the deck, locking clips are recommended at the butt joints to help manage proper gapping during expansion and contraction as shown in Diagram 11.

All fasteners should be on their own independent joists. When two board ends meet each other there must be a sister joist. The end of each board must sit on its own joist as shown in Diagram 11.

Diagram 11



## End Cap Installation - Installing the End Caps

1. Place the end cap in front of the TruOrganics® 3G boards holes and push in as shown in Diagram 12. If additional pressure is needed to install the end caps a rubber mallet should be used.
2. Silicone (shown in Diagram 12) should be used on the end cap or inside the holes of the board in order to secure the end caps and seal the end of the deck board.
3. When finished, the ends of the boards should look like Diagram 13 below.

Diagram 12

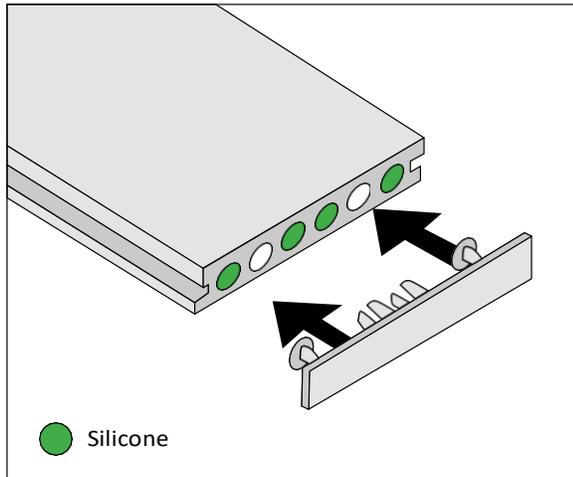
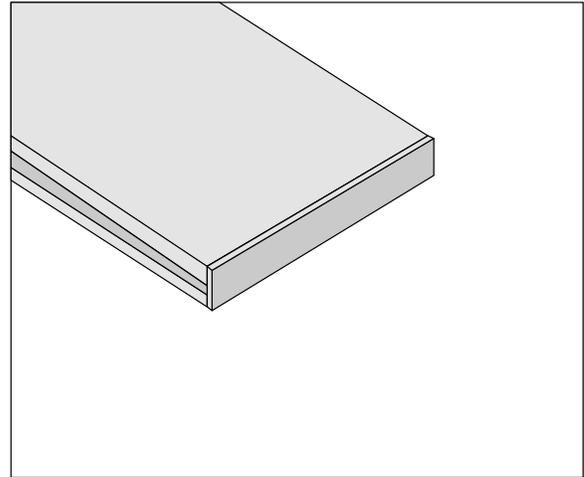


Diagram 13



## Additional Installation Information

### Routing

Solid boards can be routed for hidden fasteners to be placed in them as shown in Diagram 14. Please note that boards should not be routed the entire length of the deck.

### Expansion Space in Extreme Climates: Manual Equation

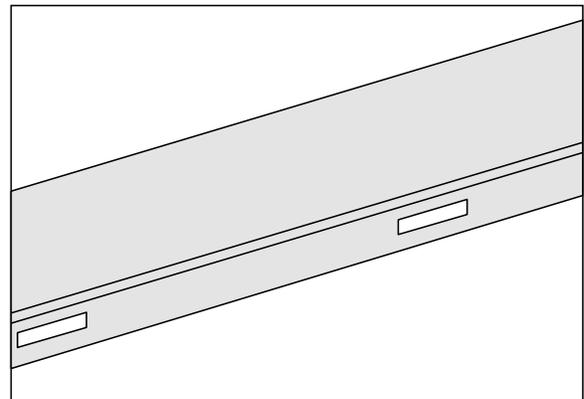
In extreme climates additional expansion space between the boards may be necessary. Please reference the formula below to calculate your expansion space.

### What you will need to know:

- Coefficient of Linear Expansion (CLE): 0.04 mm/m (°C) / 20.2 x 10E-6 inch/inch/ (°F)
- Installation Temperature (°C or °F)
- Max or Minimum Temperature in your region (°C or °F)
  - A. When installing at a low temperature always use the maximum temperature in your region to calculate
  - B. When installing at a high temperature always use the minimum temperature in your region to calculate
- Length of the Board (mm / inches)

**Expansion space** = Coefficient of Linear Expansion (CLE, °C or °F) x Length of the Board (mm / inches) x (Max. or Min. Temp. in your region - Installation Temp., (°C or °F).

Diagram 14



## Breaker Board Installation

When a length of more than two boards is needed to install the deck, we recommend adding a breaker board as shown in Diagram 16.

Diagram 15 and 16 show the framework and installation of the breaker board respectively.

Diagram 15 framework uses a ladder joist installation where the user is building a frame perpendicular to the board that will be running down it.

Diagram 15

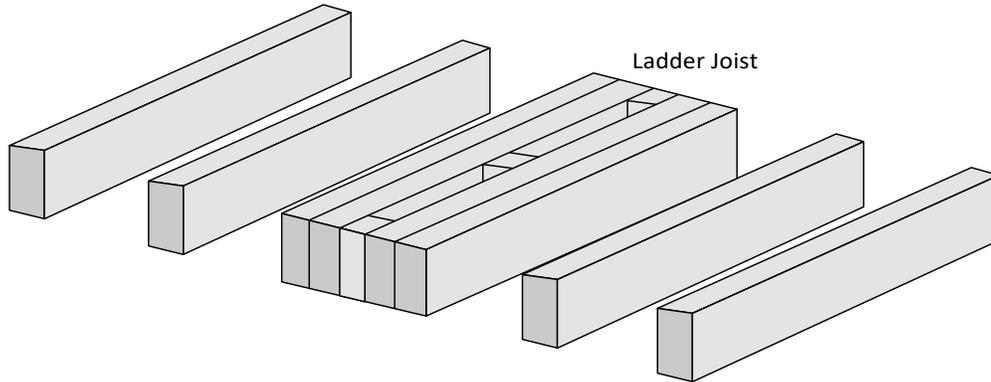


Diagram 16

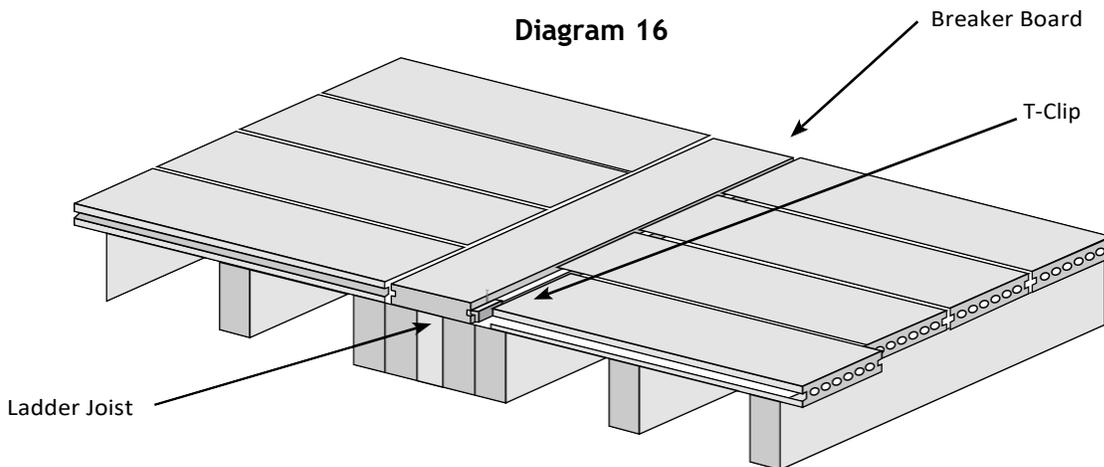
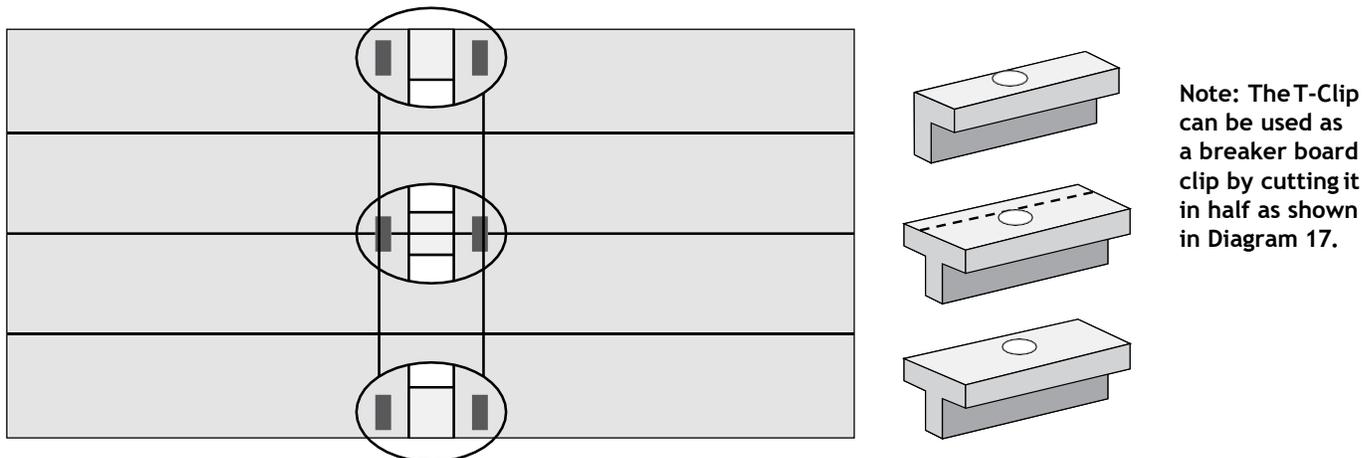


Diagram 17



Note: View from above of completed breaker board with T-Clips cut in half.

## Stair Tread Installation

Stair treads built with TruOrganics® must meet requirements set forth by major national building codes. Consult your local municipality for specific requirements.

Review Diagram 18 and reference the table below with the maximum spacing from center to center for stair tread installation.

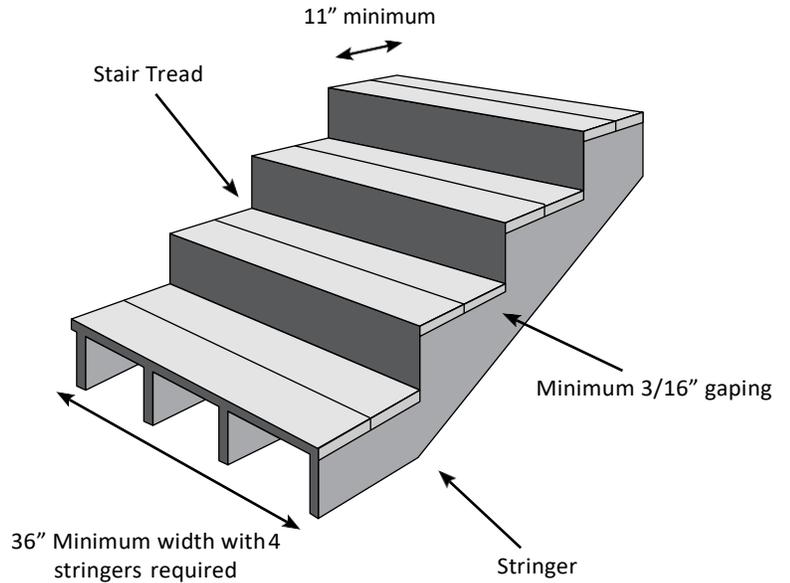
A minimum of four (4) stringers are required. Overhang on a stair tread should not exceed more than 5/8".

For installing the deck boards, face screw the front and back ends of the decking as show in Diagram 19. Remember to pre-drill before face fixing into the board. Face fixing must happen at a 90 degree angle and must be at least 1" 1/2 by 1" 1/2 from the ends and the width of the board.

Slide the clips into the two grooves and glide them along until they are on their respective joists. Finally, screw the clips into the joists as shown in Diagram 20 and 21.

**Note: Stair treads should only be installed using solid profiles. Using any type of hollow board for stair treads will not be warrantied.**

Diagram 18



Maximum Spacing Center-to-Center on Stair Stringers and Decking

Profile	Dimensions	Spacing
TruOrganics®, Solid Board	5.5" x 0.9"	12"

Diagram 19

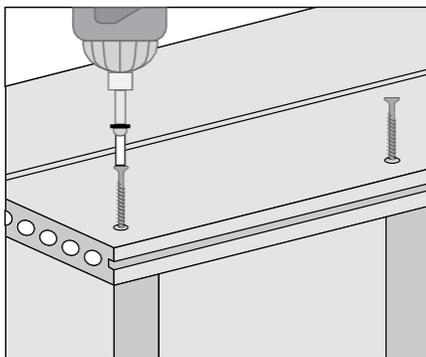


Diagram 20

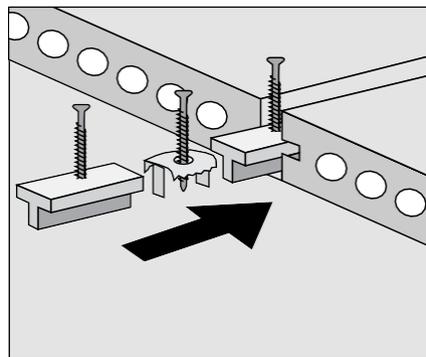


Diagram 21

