



AMERICANA™

THERMALLY MODIFIED HARDWOOD



INSTALLATION GUIDEBOOK

Thermally Modified Decking

Working with Thermally Modified Hardwoods

Before Installation

- ▶ *Acclimate:* Allow the wood to adjust to its environment for at least 2 weeks.
- ▶ *Store Properly:* Stack the wood off the ground, protected from the elements, and with spacers to maximize airflow.

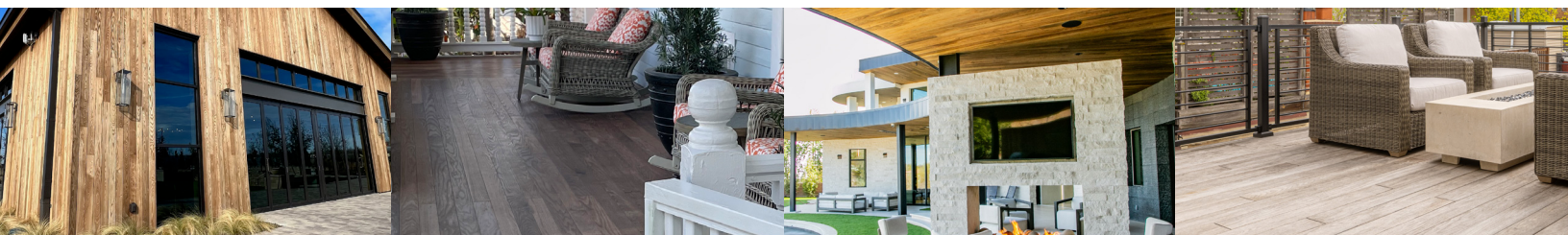
During Installation

- ▶ *Ventilation and Drainage:* Ensure proper airflow and drainage to prevent moisture buildup.
- ▶ *Careful Handling:* Handle the wood with care, as it can be more brittle than unmodified wood.
- ▶ *Fastening:* Use only stainless steel fasteners and pre-drill holes to minimize splitting.
- ▶ *Spacing:* Allow for expansion and contraction by spacing the boards appropriately. See product-specific Installation Guides.
- ▶ *Board Orientation:* Install boards with the bark side facing up (rainbow orientation) to reduce checking and cracking.
- ▶ *End Sealing:* Seal the ends of the boards to prevent moisture absorption.
- ▶ *Color:* Thermally modified wood will naturally silver when exposed to sunlight, especially on horizontal surfaces. This can be mitigated with pigmented finishes and reversed with cleaning or sanding; consult the Finishing Guide for details.

Troubleshooting

- ▶ *Checking and Cracking:* These are natural occurrences and can be minimized by following best practices.
- ▶ *Cupping:* Indicates a moisture imbalance. Address drainage and ventilation issues.
- ▶ *Splitting, Shelling, or Grain Lift:* Contact the manufacturer for evaluation.
- ▶ *Over-Expansion:* Check for inadequate ventilation, drainage, or spacing.

By following these guidelines, you can maximize the beauty and longevity of your thermally modified hardwood project.



Decking Installation Information

Decking Introduction

- ▶ Americana™ Thermally Modified Wood Decking designs are easy to work with. We feature a symmetrical profile that integrates with DeckWise® ThermoClip™ clips. You choose which side of the board you see, and with our Structural End Match (optional), the deck can be laid like flooring with joints floating at random between joists. Less waste, less time.

Acclimation

- ▶ Allow the wood to acclimate to local conditions for at least two weeks before installation. This can be expedited by placing sticks between layers of boards to ensure more even air circulation.

UV Exposure

- ▶ Avoid direct sunlight before installation as UV rays can lighten the wood's tone.

Handling

- ▶ Handle with care. Thermally Modified wood is less flexible than non-modified wood and can crack or chip with rough handling.

Storage

- ▶ If the wood will not be used in the near term, ideally store indoors or cover with a waterproof tarp if outside. Keep the wood elevated off the ground and uniformly stacked. Ensure the tarp ends are open to prevent moisture buildup.

Color

- ▶ Thermal modification caramelizes the naturally occurring sugars in the wood resulting in beautiful, rich tones which extend through the full thickness of the material. Americana™ is still a natural product and is subject to variations in weight, density, color, and grain. In an exterior environment, unfinished Americana™ products will eventually turn silver. This does not impact the performance characteristics of the wood itself. The speed of this silvering process depends on the intensity of exposure to environmental elements like the sun and rain combined with the type of application. To maintain the original color we recommend applying Cutek Extreme® along with a UV Colortone as Cutek Extreme® by itself is not UV resistant. A light sanding or application of Cutek Proclean will remove the surface silvering and restore the original wood tones. Product color and factory applied finishes are not covered under the product warranty.

Grain Pattern, Checks, & Hairline Cracks

- ▶ As Americana™ is a natural wood product, there will be a variation in grain from board to board. It is also possible to observe some small surface checking and/or hairline cracks in the wood. These instances are a natural occurrence and are not a reason for a claim. Regular application of Cutek Extreme® can help minimize the occurrence of surface hairline cracks.



Decking Installation Information

Finishing

- ▶ Pre-finishing all deck boards prior to assembly is the only way to ensure that all 4 sides are coated evenly. It is highly recommended to coat all wood decking with Cutek Extreme® on all sides. This process helps the wood acclimate more evenly and minimizes surface checking and wood movement. Even if your goal is to allow the wood to naturally gray or silver out over time, finishing at this point will help protect the wood when it is most vulnerable. You can apply a coat of Cutek + a Colortone of your choice on visible surfaces after installation to prevent silvering and to stain the decking to your desired color.

Deck Framing

Joist Spacing					
Decking Size		Fastening Method		End to End Board Connections	
Nominal	Net	Face Screws	ThermoClips	Butt Joints on Joist	Structural End Match
1 x 4	0.75" x 3.50"	16" OC	16" OC	16" OC	12" OC
1 x 6	0.75" x 5.50"	16" OC	16" OC	16" OC	12" OC
5/4 x 4	1.00" x 3.50"	16" OC	16" OC	16" OC	16" OC
5/4 x 6	1.00" x 5.50"	16" OC	16" OC	16" OC	16" OC

- ▶ Minimum distance from ground is 12". **IT IS ESSENTIAL** that air can circulate freely under the deck to equalize humidity. Do **NOT** trap moisture. Do **NOT** install directly over a concrete pad or roof membrane without adequate ventilation **AND** drainage.
- ▶ Maximum overhang for Decking and Stair Treads is 1/4".

Care & Maintenance

- ▶ It is important to ensure the surface of your wood remains clean. Black surface stains can be caused by dirt, debris, pollen and other airborne and microscopic elements resting on the surface of the material. Certain environments provide exceptional growing conditions for mold and fungus, conditions that often fall within, but are not limited to shaded decks or siding. This does not impact the integrity of the wood but it does mean you should be clearing the surface of your deck more often and taking additional preventative care considering surrounding conditions. It is important to remember the same occurrence can happen on any surface, such as rocks, glass, PVC, and composite products. This staining is removable with light pressure washing and a renewing/cleaning agent.

**For Information, How-To Videos
& More, Follow The QR Code Below**



DeckWise® ThermoClip™ Installation Steps

Note: Stair treads and perimeter deck boards should be installed with traditional face fastening methods. Do **NOT** use clips on stair treads.

Step 1: Preparing the Joists

- ▶ Apply DeckWise® JoistTape™ (recommended but not required) to the top of all joists. JoistTape™ prevents joist wood rot as well as seals around deck screws. Even though joists may seem even, changes in weather can cause board movement. JoistTape™ will also help prevent squeaking from uneven joists in the future.

Step 2: Drill A 1/8" Pilot Hole

- ▶ Use a 1/8" drill bit to pre-drill a pilot hole for the initial face driven screws. Drill deep enough to penetrate the deck board and NOT the underlying joist material. (All ThermoClip™ Hidden Deck Fastener systems, 175 count and above, include a 1/8" High Speed Drill Bit. We suggest using the 3-in-1 DeckWise® Drill & Drive™ (not included in ThermoClip™ Fastener kits), which has a 1/8" drill bit, 3/8" countersink bit, and screw gun T15 tip that will help speed up this process).

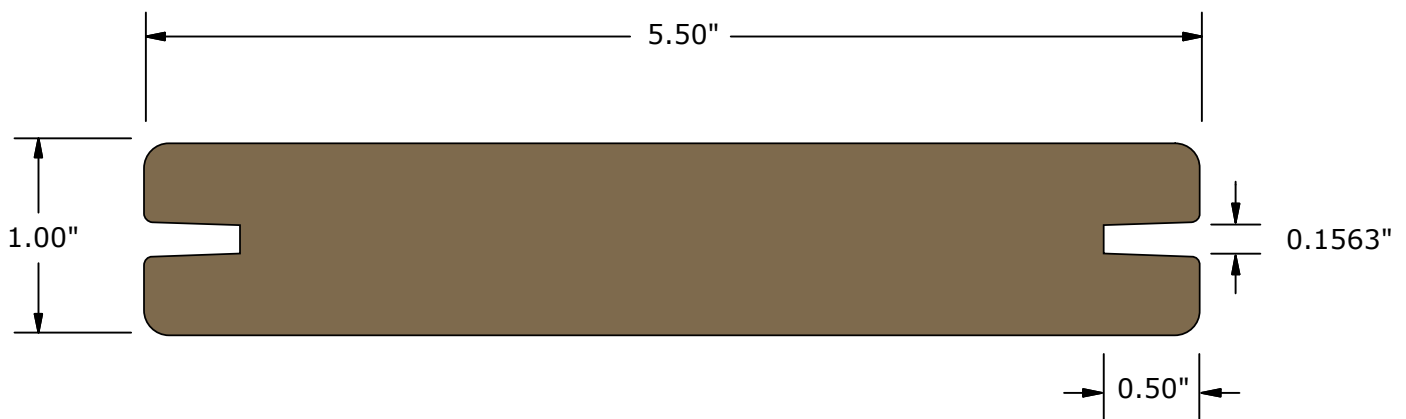
Step 3: Drill A 3/8" Countersink Hole Approximately 3/8" Deep (Plug Installation Only)

- ▶ Use a 3/8" countersink bit to bore a hole approximately 1/4" to 3/8" deep (depending on your deck board thickness) for each screw to be hidden by a hardwood plug. Be sure your countersink bit is sharp and leaves a clean edge. If using trim head screws, proceed to step 4.

Step 4: Drive A Deck Screw Through The Countersunk Hole

- ▶ Next, securely drive a deck screw down into the countersunk hole into the joist below. (All ThermoClip™ fastener kits, 175 count and above, have extra stainless steel deck screws included in them for starter boards.) Wood plugs will next be installed into the holes to hide the deck screws and create a smooth, blemish free surface.

Deck Board Profile



DeckWise® ThermoClip™ Installation Steps (Continued)

Note: Stair treads and perimeter deck boards should be installed with traditional face fastening methods. Do **NOT** use clips on stair treads.

Step 5: Insert Wood Plug In Countersunk Hole

- ▶ Place a dab of wood glue (Gorilla Glue® is suggested) into the countersink hole from the above steps. This will secure the wood plug from popping up in the future. Plus, it will act as a moisture barrier, sealing the countersunk hole and screw. Insert wood plug while glue is still moist.

Step 6: Flush Cut Any Plug Material

- ▶ Once the plug is hammered in and the glue is dry, remove any excess plug material protruding above the surface of the deck board. You can accomplish this by using a flush cut pull saw, belt sander or an orbital sander with 80 grit sand paper.

Step 7: Sand For Hardwood

- ▶ Sand smooth all areas where a plug was installed so that plug is flush with deck surface. A round, random orbit sander with 80-120 grit sandpaper works best.

Step 8: Proceed With Deck Board Installation

- ▶ Run the stainless steel screws straight down through the center of the ThermoClip™ fastener and into the joist. It should not take much torque to fasten the deck board. Once the board is snug to the joist you can install the next fastener on the next joist. A screw gun with a clutch setting works great for this as you can turn the clutch down to avoid overdriving screws. Fasten each board using one fastener and one screw per joist.

Step 9: Proceed With Next Board

- ▶ Slide the next deck board onto the installed ThermoClip™ fastener protruding from the previous deck board. This next board will also have ThermoClip™ hidden fasteners installed on it's opposite edge for fastening, and so forth.

End-To-End Boards: How To Install Butt Joints

- ▶ Where two boards meet on a single joist, the preferred method is to use a sister joist parallel to the main joist. Install 2 (two) ThermoClip™ Hidden Deck Fasteners — one on each joist — where the boards meet. However, only one centered fastener can be installed at their meeting point.

NOTE: When using ThermoClip™ fasteners, use the DeckWise® Deck Spacer tools provided to ensure that fastener legs are not crushed while keeping your deck boards tight. Remove spacer tools as soon as any deck board is fastened.



DeckWise® ThermoClip™

Installation Steps (Continued)

Note: Stair treads and perimeter deck boards should be installed with traditional face fastening methods. Do **NOT** use clips on stair treads.

How to Install Americana's Optional Structural End Match

- ▶ Decking boards with Structural End Match do not need to meet end-to-end on a joist. However, 1 x 6 boards must span 3 joists (maximum 12" OC) on either side of End Match, while 5/4 x 6 must span 2 joists (maximum 16" OC) either side. Structural End Matches can be randomized throughout the deck like interior flooring.

Step 10: Installing The Last Deck Board

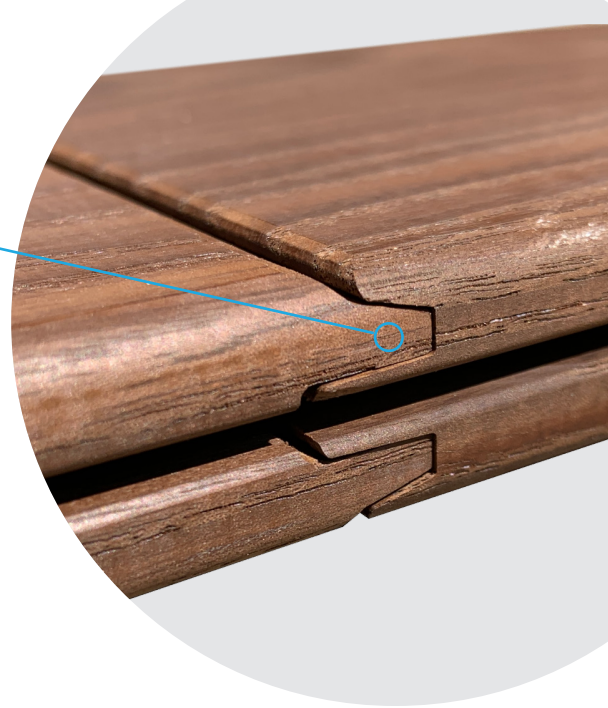
- ▶ On the last deck board, fastening clips will not be used and it is necessary to fasten the outside edge with surface screws. These surface screws can be concealed by countersinking a 3/8 " hole and using the wood plugs supplied. It is also recommended to apply a small amount of construction adhesive on the outside joist for securing the last or outside edge deck boards.
- ▶ Maximum overhang is 1/4".



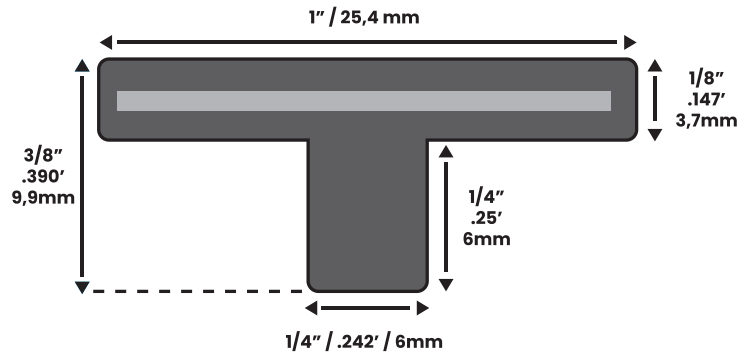
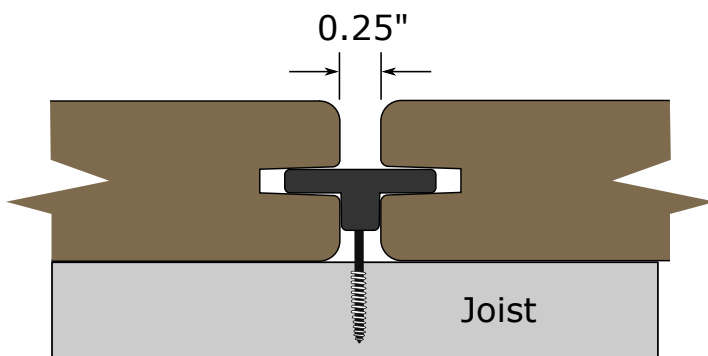
Structural End Match Detail

Structural End Match

With our structural end joint, decking can be installed like flooring, with joints floating anywhere between joists. This innovation reduces waste and saves time. Ensure Structural End Match is fully seated with no gap between the ends of the boards. Failure to do so can result in breakage. See photo at right for reference.



DeckWise® ThermoClip™ Specification Details



Material	Stainless Steel Insert	Color
Polyethylene	.833" x .833" Thickness: .036" 22,4mm" x 22,4mm Thickness: 9mm	Black



Face Fastening Installation For Non-Grooved Deckboards

Step 1: Preparing the Joists

- ▶ Apply DeckWise® JoistTape™ (recommended but not required) to the top of all joists. JoistTape™ prevents joist wood rot as well as seals around deck screws. Even though joists may seem even, changes in weather can cause board movement. JoistTape™ will also help prevent squeaking from uneven joists in the future. Decking must be installed with 1/4" space between boards, no exceptions. Use spacers to ensure consistent 1/4" gaps.
- ▶ Maximum overhang is 1/4".

Step 2: Drill and Countersink

- ▶ Predrill and countersink at the appropriate depth for face screws. (Optional: use Starborn Wood Tool with Pro Plug system for Wood. See details at www.StarbornIndustries.com)

Remove debris from hole.

Step 3: Drive A Deck Screw Through The Countersunk Hole

- ▶ Next, securely drive a deck screw down into the countersunk hole into the joist below (Do not overtighten). Use only high-quality stainless steel screws. Maintain 1/4" spacing between boards using spacers.

How to Install Americana's Optional Structural End Match

- ▶ Decking boards with Structural End Match do not need to meet end-to-end on a joist. However, boards on either side of a Structural End Match must span a minimum of 2 joists. Structural End Matches can be randomized throughout the deck like interior flooring.

Step 4: Insert Wood Plug In Countersunk Hole

- ▶ Fit Pro Plug glue nozzle on glue bottle. Apply glue to hole by pushing down and gently squeezing the bottle while rotating it one quarter turn, then remove. Glue should coat the side walls of the hole.

Step 5: Insert Plug

- ▶ Insert plug into hole, align grain of plug to match grain of board, and tap with a smooth-faced hammer until the plug is flush with board.

Step 6: Sanding

- ▶ Sand smooth all areas where a plug was installed so that plug is flush with deck surface. A round, random orbit sander with 80-120 grit sandpaper works best.

Mitered Corners

Mitered corners are an elegant design detail. However, the nature of wood used outdoors does not lend itself to maintaining tight connections. Thermally Modified hardwood boards must be allowed to move independently.

- ▶ For best results, we recommend gapping mitered corners 1/8" and round-over (or "pillow") the angled ends with a 1/8" radius router bit.
- ▶ Toe-in the outside points (i.e., cut angles at 44° from base).





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