



# STEP INTO A WORLD BEYOND WOOD

ACRE™ Decking Installation Guide

ACRE™ BY MODERN·MILL





## **BUILD BETTER WITH ACRE**

Modern Mill is leading the way toward a more sustainable future, one tree-free board at a time.

Our award-winning building material, ACRE, is the ideal alternative to wood for countless exterior and interior applications.

It's beautiful, easy to work with, easy to care for and better for the environment. ACRE is strong, water-resistant and guaranteed not to rot or splinter.

**ACRE is a sustainable choice that doesn't sacrifice performance.**

# Keys to Success

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These are THE critical considerations for your successful ACRE installation.

Pay close attention to the following sections in this guideline:

## FASTENING

- Proper fasteners include Cortex screws & plugs, CAMO Edge, EdgeX, and EdgeX Metal hidden fasteners, or minimum #8 x 2 1/2" screws.
- NO BRADS, FINISH/TRIM HEAD NAILS OR STAPLES.
- Always fasten with 1 1/2" penetration into solid framing.
- For any questions, please reach out to your Modern Mill Rep.
- Position face fasteners not closer than 1/2" from board ends and 3/4" from board edges.

## FINISHING

- Use approved water-based coatings with LRV 55 or greater.
- If the coating's LRV is below 55, or if you're not sure, contact your Modern Mill rep.

## CLIMATE CONDITIONS AND INSTALLATION TEMPERATURE

- Ambient temperature and temperature of ACRE material at time of installation MUST be considered.
- Pay careful attention to Expansion and Contraction guidance on page 13.
- For best results, keep product out of direct sun until immediately prior to installation.

## UNIQUE APPEARANCE

- Note that rice hulls, like wood, can vary slightly in color, which can be seen in the final product both prior to and after staining. For best appearance it's important to mix boards from various pallets or various points of the stack.

### DISCLAIMER

These installation instructions reflect current best practices and may be updated over time. Always check for the latest guide version at [www.modern-mill.com/tech-and-training/](http://www.modern-mill.com/tech-and-training/) or contact your sales rep for the most current installation procedures.

# ACRE™ BY MODERN·MILL

## PRODUCT EXPECTATIONS

### INSTALLATION GUIDES

ACRE contains PVC. It's important to familiarize yourself with its spacing requirements, coatings and all installation guidelines. This will ensure ACRE products perform as designed and to expectations.

— TRIM — DECKING — FENCING  
— SIDING — PORCH BOARDS — SHEETS

### COATING AND FINISHING

PROPER INSTALLATION REQUIRES CLOSE ADHERENCE TO MODERN MILL **COATINGS GUIDELINES**: This is a critical and important step, especially with outdoor applications for ACRE to perform as expected and to avoid the effects of excessive expansion and contraction.

ACRE does not absorb paints, stains, or clear coats as typical woods products do. For best results, we recommend applying coatings with boards on a smooth flat surface prior to installation.

ACRE products generally will not gray like natural woods in exterior applications. However, color may fade over time with increased UV exposure, therefore a UV-resistant stain or paint can help resist fading and make for easier cleaning and care.

### UNIQUE APPEARANCE

Note that rice hulls, like wood, can vary slightly in color, which can be seen in the final product both prior to and after staining. For best appearance it's important to mix boards from various pallets or various points of the stack.

### MOVEMENT

ACRE WILL EXPAND AND CONTRACT WITH ENVIRONMENTAL TEMPERATURE CHANGES. INSTALLATION CONDITIONS AND FINISH COLOR WILL IMPACT EXPANSION AND CONTRACTION. Refer to the proper product installation guide to ensure the best product performance and minimize the effects of expansion and contraction. Be sure to inspect boards prior to installing for shipping damage or other irregularities.

### FASTENERS

USING THE CORRECT TYPE AND NUMBER OF FASTENERS WILL ENSURE MATERIALS PERFORM AS INTENDED. DO NOT USE BRADS, FINISH NAILS OR STAPLES. Fasteners must penetrate solid framing members. All projects and designs are unique. For any installation questions please contact your Modern Mill Rep.

### HEAT RETENTION

Coatings will affect product performance, including heat retention, therefore it's important to read the **Coatings Guide** and use manufacturer approved coatings and finishes.

### BURNING WARNING

Safety Warning: Do not burn ACRE products or scraps. ACRE products are not safe to be discarded by burning, used as a firewood, kindling or as any other source of fuel to create and/or maintain a fire or heat source.

### STORAGE AND HANDLING

We recommend keeping ACRE in a cool, dry spot, out of direct sunlight. Please acclimate ACRE products prior to installation. Always install ACRE immediately after making any cuts.

### ADHESIVES

We recommend utilizing a PVC glue or cement, polyurethane glue or construction adhesives. **Do not use wood glue.**

### STAINS AND CLEANING

ACRE products can be stained by certain foods, drinks and chemicals. Clean up any stains or dirt as quickly as possible and keep areas clean from debris. Soap and water, or a product like Simple Green® can clean most stains. In some cases, light sanding may be required. If using a power washer, we do not recommend pressure above 2500 psi and to use a wide fan tip or oscillating tip and keeping the tip a minimum of 12" from the surface.

### SURFACE MARRING (SCUFFS) AND LIGHT SURFACE DAMAGE

Like wood, ACRE might endure some dings, dents or marring on the job. Most light surface damage can be removed by simply sanding ACRE lightly with 120 grit sandpaper on a pole or block sander in the direction of the grain. Please note, less than 120 grit sandpaper may scratch the surface and affect the finish when stain is applied. We do not recommend the use of an orbital or palm sander as this can affect the ACRE grain structure.

### ENVIRONMENTAL IMPACT

ACRE by Modern Mill is made from upcycled rice hulls in a zero-waste manufacturing facility in the U.S.A. ACRE is tree-free, and free of phthalates, phenol, formaldehyde and adhesives. Contact us at [zen@modern-mill.com](mailto:zen@modern-mill.com) to learn about options for recycling.

### WARRANTY

ACRE products have a limited lifetime guarantee to be free from material defects that are a result of the manufacturing process, rotting or splintering as a direct result of the manufacturing process or by normal use and service provided conditions described in all installation materials and technical guides are met. In no event shall Modern Mill be responsible or liable for labor, installation, re-installation, freight, taxes or any other charges related to defective product. Visit our website to learn more:

[www.modern-mill.com/warranty](http://www.modern-mill.com/warranty)

MODERN·MILL

601-869-5050 | [zen@modern-mill.com](mailto:zen@modern-mill.com) | [modern-mill.com](http://modern-mill.com)

### FIRST TIME USING ACRE?

Be sure to visit our **Product Expectations** page for all our installation guides and best practices before building with ACRE.





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## PRODUCT APPLICATIONS

Please consult with a Modern Mill representative to ensure your intended use of ACRE products is fit for purpose. Published and current installation guidelines must be followed for ACRE's warranty to remain valid. For example, ACRE Siding is only approved as shiplap and board and batten and must follow prescribed installation guides. Lap Siding is not an



Be sure to visit our  
**Product Expectations**  
page for all our  
installation guides and  
best practices before  
building with ACRE

<https://modern-mill.com/product-expectations/>



### BURNING WARNING

Safety Warning: Do not burn ACRE products or scraps. ACRE products are not safe to be discarded by burning, used as firewood, kindling or as any other source of fuel to create and / or maintain a fire or heat source.



### EXTREME HEAT WARNING

Be aware of excess heat on ACRE surfaces such as but not limited to fire, direct or reflective sunlight, reflective sunlight from energy-efficient window products. Low-emissivity (Low-E) glass can harm ACRE products because Low-E glass products are designed to prevent passive heat gain within a structure and can cause unusual heat build up on exterior surfaces from sunlight reflection. The extreme rise of surface temperatures can create an environment which exceeds normal exposures and may create scenarios which can cause ACRE products to melt, sag, warp, discolor, expand and contract beyond acceptable tolerances or accelerate weathering. Be sure to consult Modern Mill's coatings guide, sales representatives or contact us at [zen@modern-mill.com](mailto:zen@modern-mill.com) or 601-869-5050 for consultative assistance before installation.

# Available Profiles

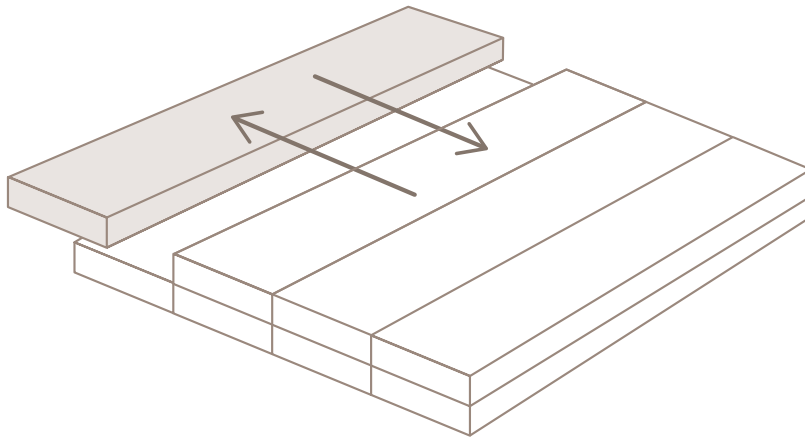


PROFILE	ACTUAL SIZE	COLOR
<p>5/4 Square-Edge Board</p> <p>Available embossed one side, or nonembossed.</p>	<p>0.938" x 5.5" x 8'</p> <p>0.938" x 5.5" x 10'</p> <p>0.938" x 5.5" x 12'</p> <p>0.938" x 5.5" x 16'</p> <p>0.938" x 5.5" x 20'</p>	<p>Natural, raw.</p> <p>Ready to be painted, stained or clear coated. See Coatings Guide for approved finishes.</p>
<p>5/4 Grooved-Edge Board</p> <p>Available embossed one side, or nonembossed.</p>	<p>0.938" x 5.5" x 8'</p> <p>0.938" x 5.5" x 10'</p> <p>0.938" x 5.5" x 12'</p> <p>0.938" x 5.5" x 16'</p> <p>0.938" x 5.5" x 20'</p>	<p>Natural, raw.</p> <p>Ready to be painted, stained or clear coated. See Coatings Guide for approved finishes.</p>

# Storage and Handling

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- Store ACRE Decking horizontally, fully supported on a flat surface.
- Do not place ACRE Decking directly on a surface that can develop excessive heat.
- Store in a cool, dry place.
- We recommend storing with pallet covers to keep it clean and protected.
- Do not allow material to become wet. Allow materials to dry completely before covering with original pallet cover.
- Pull boards across the row and not straight down the stack (see image).
- Acclimate ACRE Decking to the temperature it will be installed at for at least two hours before installation. During installation, be aware of changes in ambient temperature that could affect product gapping.



## Safety

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- Wear safety glasses and appropriate personal protective equipment (PPE) for job site conditions.
- Follow proper safety practices for using all power tools and any job site equipment.

WE WOULD LOVE TO HELP GUIDE YOUR PROJECT TO SUCCESS. PLEASE CONTACT US AT [ZEN@MODERN-MILL.COM](mailto:ZEN@MODERN-MILL.COM) OR 601-869-5050.



# ACRE Decking

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ACRE Decking cannot be used for structural applications. When building your deck and railing, it is imperative to use code-approved structural material for framing and joists.

Check your local building codes or work with a licensed architect or engineer to understand design limitations or safety concerns.

ACRE Decking is a reversible product that can be installed with either side facing up.





# Getting Started

## TOOLS YOU WILL NEED

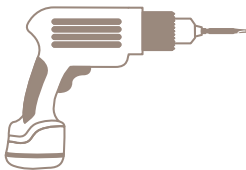
Readily available tools can be used for installing ACRE Decking. The following tools are recommended. Use extreme caution and be sure to use all tools per applicable manufactures' instructions.



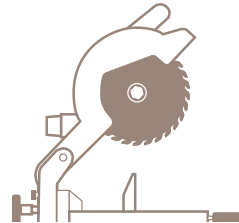
Minimum #8 x 2 1/2" screws for surface finishing, or approved hidden fastener system



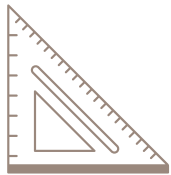
Tape Measure



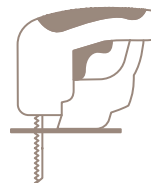
Drill



Miter Saw



Speed Square



Jig Saw



Chalk Line



Safety Glasses



Spacing Tools



Pencil

For best results use a fine-toothed finish blade. A jigsaw can be used to cut around posts and other obstructions depending on the design of your project.

ACRE decking can be stained, painted, or left natural with appropriate clear coat or sealant. Please visit the ACRE Coatings Guidelines for more information.

# Important Information

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## AIRFLOW AND DRAINAGE

Be sure there is adequate and unobstructed airflow under 50% of the deck perimeter to allow for cross-ventilation. This aids in avoiding heat buildup and promotes dryness. Add drainage and grade flat areas so that water can easily flow away. There should be a minimum of 1.5 inches from the bottom of the joists to the ground.

For sleeper installs use a minimum joist height of 1.5 inches (38.1 mm), installed level, in the direction of water runoff and directly to a solid substructure. Be sure to create adequate cross-ventilation for the deck by widening side-to-side spacing between boards to 1/4 inches (6.4 mm) with a maximum of 3/8 inches (9.5 mm) gap. The deck design must allow for a minimum of 1.5 inches (38.1 mm) of unrestricted air flow under the deck at the open joist ends for cross-ventilation and drainage.

Underdeck storage spaces or roof deck installations can restrict airflow and result in a buildup of heat or humidity, which could lead to twisting and warping. Be sure to follow instructions for airflow and drainage requirements. Modern Mill always recommends consultation with a licenced architect, engineer or local building official before installation.

## FIRE PITS OR HEAT SOURCES

Do not install fire pits or heat sources on top of ACRE decking. Always protect ACRE decking products from heat. Wood-burning or gas fire pits can damage the decking due to extreme heat and/or loose burning embers.

## DECORATIVE OBJECTS

Rubber or vinyl products such as welcome mats, tarps, planters, or outdoor decoration may cause discoloration especially with prolonged use.

## WALKING SURFACE

ACRE Decking can be installed sanded side or embossed side up based on customer preference.

## CONSTRUCTION SPACE

During construction, keep the deck's surface clear from excessive sand, dirt, or dust from masonry, landscaping or other products involved in the construction process. Do not use ACRE decking as a work surface. Do not cut, stain, paint or glue on or near ACRE decking. Do not cut or drill metal as metal shavings may be hot and embed into ACRE deck boards.

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**ZEN@MODERN-MILL.COM** OR **601-869-5050**.

## USE OF LADDERS

When using a ladder, we recommend laying down a sheet of plywood over the deck surface to disperse the load of the ladder's feet to nearby underlying joists. Secure the plywood sheets to keep them from slipping in a way that will avoid leaving holes in your decking once the plywood sheet is removed. Always follow ladder manufacturer's instructions and safety tips.

## STATIC ELECTRICITY

The buildup or generation of static electricity is a natural phenomenon that can occur with various materials including composite decking under certain environmental conditions. If excessive static buildup exists, ACL Staticide® can help. See link for more information: <https://www.aclstaticide.com/categories/anti-static-coatings>.

## CANTILEVERING

For best results, do not cantilever over ½”.

## NAILING

Do not nail ACRE deck boards. See section, “Fastening Recommendations”.

## WARRANTY

Modern Mill offers a Limited Lifetime Warranty. Visit [www.modernmill.com](http://www.modernmill.com) for the most up-to-date information.



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# Requirements Before Installation

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## BEFORE GETTING STARTED

- When working on any new construction, renovation or repair project, always wear protective clothing and safety equipment. Safety glasses, gloves, a dust mask, and long sleeves are recommended especially when cutting or sawing.
- Fasteners have sharp edges. Use proper care when handling.
- Safety Data Sheets can be downloaded from [www.modern-mill.com](http://www.modern-mill.com).
- Ensure boards are dry before installation.
- Be sure to inspect boards prior to installing for shipping damage or other irregularities.

## PAINTING, STAINING OR FINISHING ACRE PRODUCTS

Pro Tip: For best results, applying paint, stain, or clear coats on a smooth flat surface is recommended. ACRE products may be finished after installation, however the viscosity of the coating could result in an uneven appearance if not monitored closely.

Coat ACRE with manufacturer recommended water-based paints, stains or sealers.

If you choose to paint ACRE, use a coating with a Light Reflective Value (LRV) 55 or greater. **For any paint or stain color with an LRV below 55 or if you are not sure, contact your Modern Mill rep for help and approval for use.**

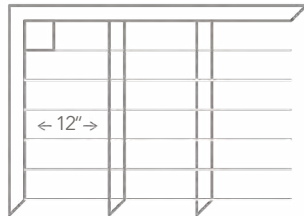


Follow this QR code for a list of finish manufacturers and products that have passed paint-manufacturer testing standards and for technical assistance.

# Joist Preparation

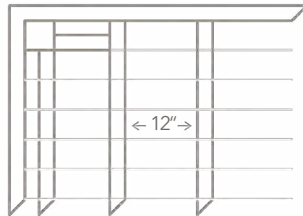
## JOIST LOCATION

- Prior to installation. Be sure that all joists and blocking are level and structurally sound. Ensure that there are no nails or screws protruding.
- Proper joist spacing is required. A joist spacing not exceeding 12" on center is recommended for maximum rigid feel.
- Do not exceed 12" joist spacing when installing any diagonal pattern.
- Each ACRE Decking board must span at least three joists.
- To accommodate heavy items such as hot tubs, planters, etc., consult a local building engineer or inspector for span recommendations.
- As joists are installed, run a string line to ensure that the tops of the joists are in plane, as ACRE Decking boards will conform to the contour of the joists to which it is attached. It may be necessary to shim or plane joists, due to size variations in lumber. Be sure to sort and exclude any extremely crowned joists or lumber material.
- Install solid wood blocking between each joist, placed in rows at maximum every 4' to 6' within the structure using exterior grade screws.
- Joists used in construction should be treated 2 inches x 8 inches or larger.



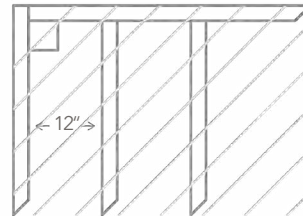
**12" basic installation substructure**

12" on center maximum joists.  
(12" on center for commercial applications)



**Picture frame installation substructure**

12" on center maximum joists plus additional support for picture frame structure.  
(12" on center for commercial applications)



**Diagonal installation substructure**

12" on center maximum joists  
More severe angles may require closer joist spacing.

## STAIR JOISTS

- Reference local building codes when constructing stairs.
- When using ACRE Decking on stairs, use a maximum 8" on center layout for all stair stringers.
- Install using exterior grade minimum #8 x 2 1/2 screws fastened perpendicular at 90 degrees.
- Do not use grooved decking for stair treads.
- If a wider span is desired, ACRE Decking can be installed over stringers up to 24" o.c. when the stair treads are individually supported by pressure treated 2x4 lumber on edge, centered under each tread and secured at both ends with minimum two 12D x 3 1/4" galvanized nails

# Expansion and Contraction

- ACRE products undergo a degree of linear expansion with changes in weather or seasons. Expansion and contraction is most significant where extreme temperatures may exist.
- Be aware of changes in ambient temperature, which could impact the effects of expansion and contraction.
- In areas where extreme temperatures swings are prevalent, adding 2x blocking at butt joints is recommended.
- Store and cut ACRE out of direct sunlight.
- Fasten boards as soon after cutting as possible to minimize the effects of expansion and contraction.
- Securely fasten board ends, splices and abutments directly into framing using two minimum #8 x 2 1/2" face fasteners.
- Position face screws at or within 1/2" of each board end or joint, and 3/4" from the side of the board
- Whenever possible, use shorter lengths, lighter colors, and break long straight runs of decking with splitter / divider boards to reduce the effects of expansion and contraction.
- Framing/sub-structure must be securely attached to ground footings or building structure.
- No floating substructures should be used in any application with ACRE.

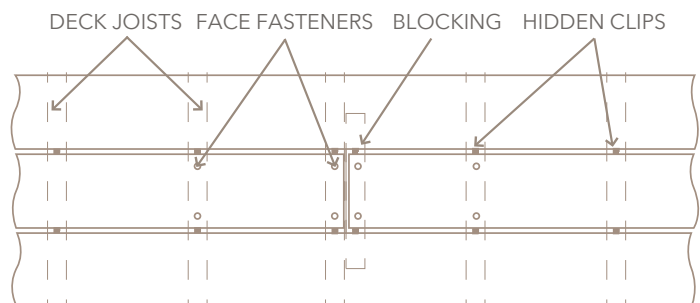


To further minimize expansion and contraction, proper ventilation and air flow should be considered.

In areas with obstructed airflow such as roofs and on-grade applications, a minimum of 1-1/2" sleeper system supported by and connected to the substructure over which the deck is built is required.

Add 2x blocking at all butt joints. When using approved hidden fastener system:

- At all board ends and butt joints, secure boards using two surface fasteners into each of the last two joists of each board to mitigate movement.
- When using hidden fasteners, add two surface fasteners into the deck at the joist location closest to the midpoint of each deck board to "pin" the board in place and make thermal expansion and contraction go equally in both directions.





For end-to-end joints (butt joints) use the following guidelines for installing at various temperatures:

35 Degrees F and below	1/8" / 3.2 mm
36-59 Degrees F	1/16" / 1.2 mm
60-89 Degrees F	Lightly butted
90 Degrees F and above	Tightly butted

## RECOMMENDED FASTENING SYSTEMS

**CAMO Fasteners Edge Clip or EdgeX Clip (for diagonal pattern installations).** Visit the manufacturer's website, [www.camofasteners.com](http://www.camofasteners.com), or see the Appendix for technical and safety information ahead of installation.

## HIDDEN FASTENER INSTALLATION - GROOVED EDGE DECKING

For hidden fastener installation use ACRE Grooved Edge decking profile with CAMO EDGE CLIP or EDGEX CLIP (for diagonal pattern installations) Fasteners. See CAMO's website for more ordering and tutorials, or see Appendix for installation guidelines.

[www.camofasteners.com/products/clips/edge-clips](http://www.camofasteners.com/products/clips/edge-clips)



\*Groove heights are measured from the bottom of the deck board.

**FastenMaster TigerClaw TC-G Grooved Decking Hidden Fastener.** Visit the manufacturer's website, [www.fastenmaster.com](http://www.fastenmaster.com), or see the Appendix for technical and safety information ahead of installation.

## TAKE NOTE

- Use stainless steel screws near water applications.
- Two screws per joist.
- All recommended screws are designed to be installed flush with the decking surface.
- Do not countersink screws unless required by the screw manufacturer for proper installation (i.e. Cortex system & plugs).

**For Decking-Hidden Fasteners:** Several fastening systems work with ACRE decking and we are regularly testing and adding more. See [www.modern-mill.com](http://www.modern-mill.com) for the most up-to-date list.

# Installation

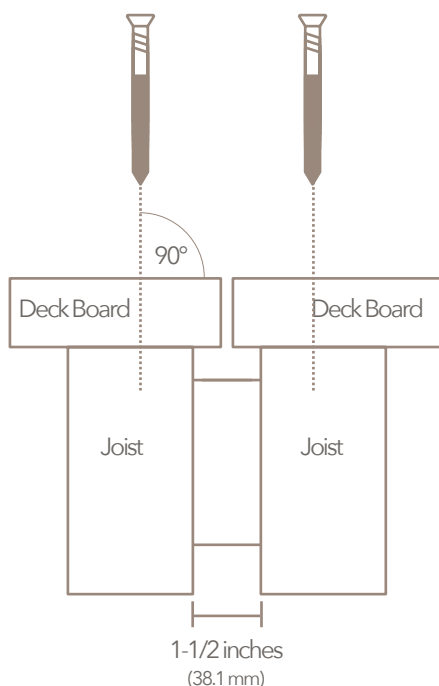
ACRE Decking is available as square or grooved-edge profiles.

For square profiles surface fasten with a high-quality fastener that meets the following specifications:

- Use fasteners rated and approved for exterior use. Note: coastal applications may require special stainless steel fasteners.
- Minimum Screw Size: #8
- Minimum Screw Length: 2 ½"
- Be sure that screws are driven to a minimum depth of 1 ½" into solid wood framing. This will ensure holding power and uplift resistance.
- Be sure to install two screws per joist on each deck board.
- For applications near water, we suggest using the above minimum fastener requirements in stainless steel.

## SURFACE FASTENER INSTALLATION

- Always drive-in surface fasteners at a 90° angle to the decking surface with two fasteners at every joist location.
- Do not angle screws into the joist. Instead, place additional joists to allow perpendicular installation of surface fasteners at board ends (Butt Joints).
- Staggering the placement of butt joints on the deck can lead to a better aesthetic.

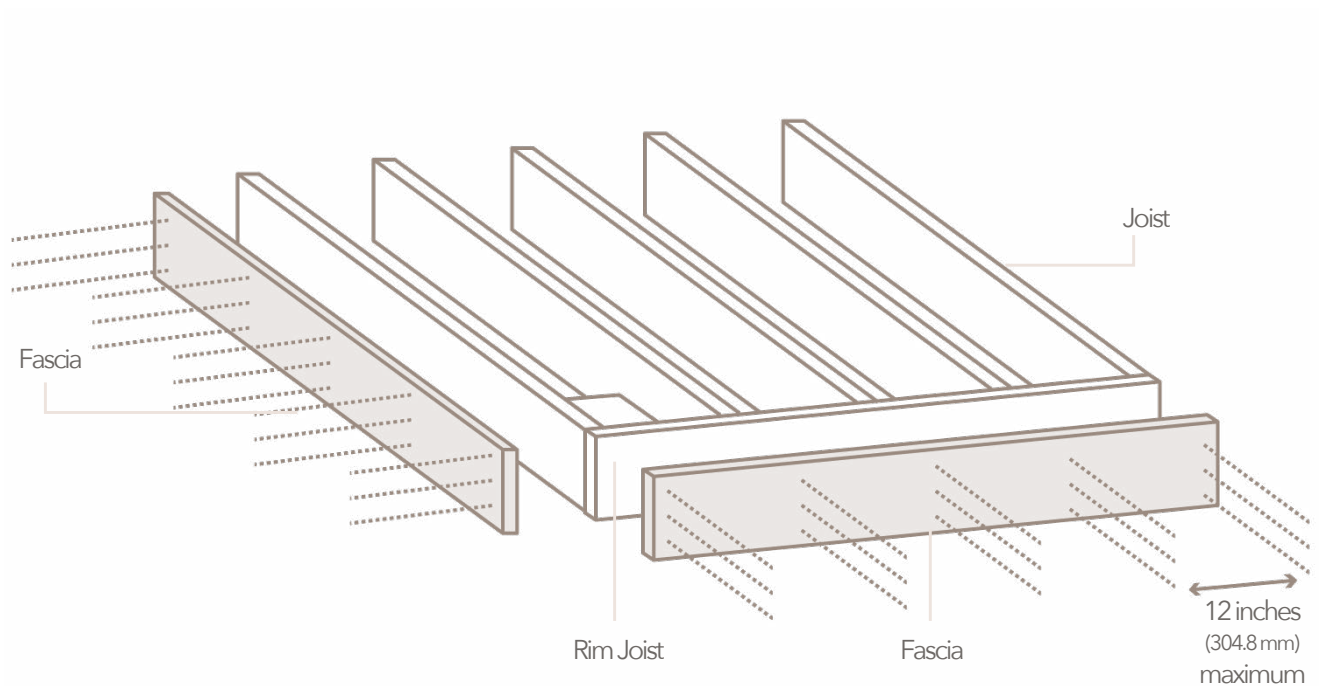


## FOR BEST RESULTS

- Drive screw heads flush with the deck surface unless required by the screw manufacturer for proper installation (i.e. Cortex system & plugs)
- Pre-drilling is not essential but may improve performance and look.
- Pre-drilling is recommended in temperatures 40F or below (also consult the screw manufacturer's requirements)
- Use caution to avoid over-driving fasteners.
- Use white chalk, straight boards, or string lines as guides for installing fasteners in straight rows.

## FASCIA INSTALLATION

ACRE Fascia is a non-structural covering for rim joists, risers, and stringers. Install screws at a maximum 12 inch (304.8 mm) apart, having at least three screws across the face at each interval. Fasteners utilized should be long enough to penetrate the solid substrate a minimum of 1 ½". We recommend using exterior grade screws or ring shank nails. Fascia should always be installed UNDER decking edges / ends.



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[ZEN@MODERN-MILL.COM](mailto:ZEN@MODERN-MILL.COM) OR 601-869-5050.



# Finishing and Adhesives

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- Apply stains or clear coats on the ground before installation.
- Coat ACRE products with manufacturer recommended water-based paints, stains, or sealers.
- If you choose to paint or stain ACRE use an approved coating with a Light Reflective Value (LRV) 55 or greater.
- **For any color with an LRV below 55, or if you are not sure, contact your Modern Mill rep for help and approval for use.**

## ADHESIVES

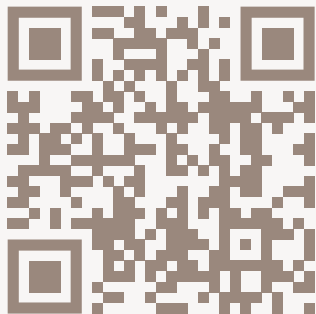
- Use recommended PVC glue, cement, polyurethane glue, or construction adhesives.
- DO NO USE WOOD GLUE.
- When gluing a joint, the use of mechanical fasteners on each side of the joint is recommended to allow the bonding time.
- For best results, surfaces to be glued should be smooth, clean, and in complete contact with each other.

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# Cleaning and Care

- Wash down the exterior surface with water every 6-12 months, or as needed.
- For easier care and cleaning, we recommend coating your ACRE deck with an exterior grade water soluble paint or stain and protective coating.
- Avoid the use of rubber-backed mats, tarps, or landscape items.
- Be mindful of products which contain chemicals may alter the appearance of ACRE decking.
- To clean ACRE products use a gentle all-purpose cleaner such as Simple® Green with a natural all fiber brush.
- Follow manufacturer instructions on all cleaning products. Test first on an inconspicuous area of the deck to ensure the surface remains undisturbed.
- Do not use traditional composite deck cleaners. ACRE decks are made from natural fibers and PVC / polymers. Use gentle cleaning products as recommended.
- If using a power washer, we do not recommend pressure washing above 2500 psi. We suggest testing in an inconspicuous area first to ensure it will not damage the product's surface.
- If power washing, we recommend using a wide fan tip or oscillating tip, and keeping the tip a minimum of 12" from product surface.
- As with any walking surface take caution in icy or wet weather conditions.
- For ice removal, most products containing calcium chloride can be used without damage to the deck / porch surface. These products may leave a white residue which can be cleaned using the cleaning guidelines above.
- Metal shovels or plastic shovels with a metal edge may damage the surface of your ACRE deck and are not recommended for clearing snow or ice from the porch surface.
- We recommend clearance between ACRE products and landscaping. Prune any vegetation back that is touching the wall.
- To remove rust stains, use household cleaners such as Krud Kutter "the must for rust".



Be sure to visit our online **Tech & Training** center for informative technical videos and downloads.

[www.modern-mill.com/tech\\_and\\_training](http://www.modern-mill.com/tech_and_training)









# Appendix

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## INSTALL DECKING IN HALF THE TIME

INSTALLATION GUIDE & WARRANTY INFORMATION

**EDGECLIP™**

**EDGE<sup>X</sup>CLIP™**  
FOR ANY ANGLED INSTALL



Note: Before beginning installation, please visit [camofasteners.com/installation](http://camofasteners.com/installation) for best practices.

REV. 8/19/19

# EDGECLIP™

FOR USE WITH COMMON 90° DECKING PATTERN

**Fastening the first board and last board:** Secure the first board along the house or at the outside of the deck. By face fastening with the appropriate screw for the deck material at each joist.



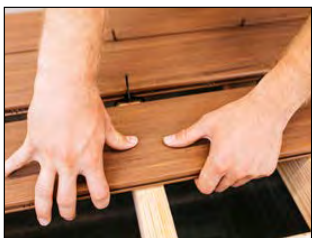
1. On the outside edge of your installed starter board, simply place EDGECLIP™ onto the joist allowing the "legs" of the clip to snugly grasp the joist and hold the clip in place.



At the same time, slide the metal gusset into to the groove of the deck board.  
**NO NEED TO PRE-SET SCREW INTO JOIST.**  
The clip will now stand firmly in place.



2. Place EDGECLIP™ at every joist along the length of the board.



3. You are now ready to slide your next board up against the EDGECLIPS between the two boards.



4. Holding the new board tightly in place, screw down all of the clips between the boards. Use the yellow **Never-Miss™ Guide** (shown here) included, to perfectly engage the driver bit with the screw head for fastest installation.



5. Follow the same process for each deck board.

WE WOULD LOVE TO HELP GUIDE YOUR PROJECT TO SUCCESS. PLEASE CONTACT US AT [ZEN@MODERN-MILL.COM](mailto:ZEN@MODERN-MILL.COM) OR 601-869-5050.



# EDGE<sup>X</sup>CLIP<sup>TM</sup> FOR USE WITH ANY ANGLED DECKING PATTERN

**Fastening the first board and last board:** Secure the first board along the house or at the outside of the deck. By face fastening with the appropriate screw for the deck material at each joist.



1. On the outside edge of your installed starter board, simply pinch the "wings" of EDGE<sup>X</sup>CLIP<sup>TM</sup> together and slide the clip into the groove.



The "wings" of the clip will expand, holding the clip in place.  
***NO NEED TO PRE-SET  
SCREW INTO JOIST.***



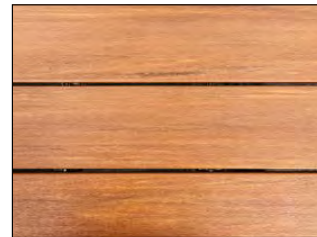
2. Place EDGE<sup>X</sup>CLIP<sup>TM</sup> at every joist along the length of the board.



3. You are now ready to slide your next board up against EDGE<sup>X</sup>CLIPS between the two boards.



4. Holding the new board tightly in place, screw down all of clips between the board.  
Use the yellow **Never-Miss<sup>TM</sup> Guide** (shown here) included, to perfectly engage the driver bit with the screw head for fastest installation.



5. Follow the same process for each deck board.

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# INSTALLING EDGECLIP™ OR EDGEXCLIP™ AT BUTT JOINTS



Always install a double joist at the butt joints. Use a separate clip to secure each board end.



You will need 4 clips for each butt joint. Simply remove the snap-off legs off EDGECLIP™ or the wings off EDGEXCLIP™ so that the clips can sit side-by-side on the double joists.



**Please follow your deck board manufacturer's instructions for end to end board gapping distance to allow for expansion and contraction at this joint.**

Once boards are positioned correctly, place the clips in the board groove, centered on joists on both sides of the boards and partially fasten the screws to hold the clips in place until next parallel board is in place and then fully tighten screws securing the clips.

## HOW MANY CLIPS DO YOU NEED?

JOIST SPACING (ON CENTER)	NUMBER OF CLIPS NEEDED		
	50 SQ. FT.	100 SQ. FT.	200 SQ. FT.
12 in.	117	233	466
16 in.	90	180	360
24 in.	59	117	234

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## REMOVING AND REPLACING A DECK BOARD - FOR EITHER CLIP

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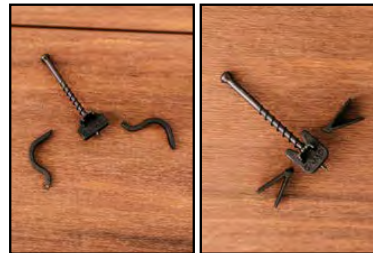
1. EDGECLIP™ and EDGEXCLIP™ make removing or replacing a board easy. Start by backing all of the screws out of the joist that are holding the board.



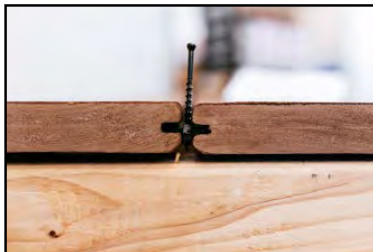
2. Pull up on the board and it will come easily out of position.



3. Clean away any clips remaining on the joists and lay the new deck board in position **without** any clips in place.



4. Count the number of clips needed and snap-off both legs or wings on each clip.



5. Take the clip (screws and gussets) and from the board end, slide down the groove and positioning a clip over each joist.

6. Repeat for all joists and fasten clips securely in place using the Never-Miss™ Guide.

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## WARRANTY

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### **CAMO® CLIPS (UNIVERSAL HIDDEN FASTENERS), CAMO® EDGECLIP™ AND CAMO® EDGEXCLIP™ LIMITED WARRANTY**

What This Limited Warranty Covers; Period of Coverage. NNC warrants to the first retail purchaser that CAMO® Clips, EdgeClip™ or EdgeXClip™ (the “Product”) will be (1) free from defects in material and workmanship for the life of the Product, and (2) is guaranteed against rust and corrosion for the life of the project in which the Product is first used. NNC will replace any defective Product at no charge, including shipping cost of replacement Product, subject to the limitations or exclusions contained in this Limited Warranty.

Additionally, if CAMO® Clips, EdgeClip™ or EdgeXClip™, installed in accordance with applicable building codes, laws, rules and regulations, and CAMO® and deck board manufacturers’ installation instructions, and accepted building practices, cause the deck board product to fail, NNC will replace the damaged deck board product at no charge. This does not replace any deck board manufacturers’ warranties, does not apply in cases where defects or damage are not solely and exclusively attributable to the Product, and is subject to the limitations described below. This Limited Warranty does not apply where damage to the deck board product is attributable, in whole or in part, to improper installation of either the deck board product itself or the CAMO® Clips, EdgeClip™ and EdgeXClip™. This is your sole and exclusive remedy for any product defect. NNC assumes no liability for confirming that any product is appropriate for a particular purpose, and each intended use of a product must be reviewed and approved by qualified professionals. This warranty is not transferable.

**To review the complete CAMO® Clips (Universal Hidden Fasteners), CAMO® EDGECLIP™ and CAMO® EDGEXCLIP™ Limited Warranty, please visit [camofasteners.com/warranty-clips](https://camofasteners.com/warranty-clips).**



CAMO<sup>®</sup>

The Better Way to Build a Deck  
La mejor forma de construir una cubierta

EDGE<sup>X</sup>METAL<sup>™</sup>

UNIVERSAL DECK CLIPS

*GANCHOS UNIVERSALES PARA CUBIERTA*

DESIGNED FOR 14-18GA

**METAL**  
**SUBSTRUCTURE**

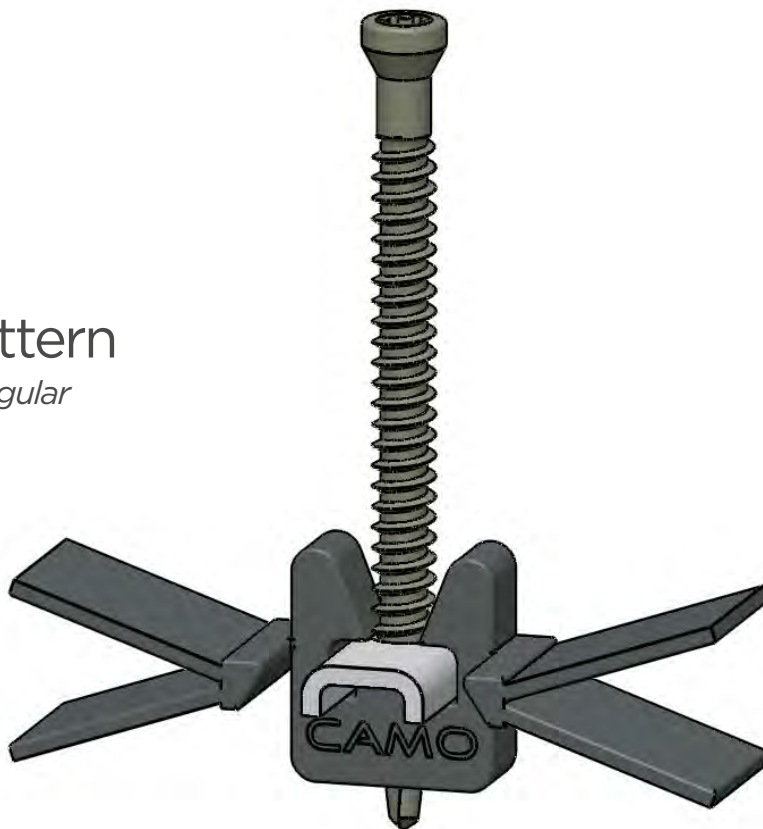
*DISEÑADO PARA CALIBRE  
14-18 SUBESTRUCTURA  
DE METAL*

## Quick Start Guide

*Guía de Inicio Rápido*

For any angled deck pattern

*Para Cualquier Patrón de Cubierta Angular*



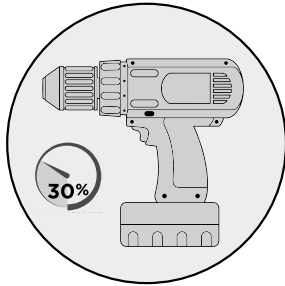
[camofasteners.com](http://camofasteners.com)

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ZEN@MODERN-MILL.COM OR 601-869-5050.

# EDGE<sup>X</sup>METAL™ - UNIVERSAL DECK CLIPS

## Quick Start Guide

EDGE<sup>X</sup>METAL™ - GANCHOS UNIVERSALES PARA CUBIERTA Guía de Inicio Rápido



**Set your drill to 30% of maximum torque**

*Ajuste su taladro para el 30 % de la torsión máxima*

**NOTE: Do not use impact drivers**

*NOTA: No use taladros de impacto*

**1**

**Secure the first board with CAMO STARTER Clips using 1-5/8" (41mm) Drill Point screws for metal joists (not included)**

*Sujete el primer tablón con CAMO STARTER Clips utilizando tornillos perforantes de 1-5/8" (41 mm) para vigas de metal (no incluidas)*



**2**

**Place EDGE<sup>X</sup>METAL™ clips in the groove at every joist**

*Colocar los ganchos EDGE<sup>X</sup>METAL™ en la ranura de cada viga*



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3

Slide the next board in place

*Deslice el siguiente tablón  
en su lugar*



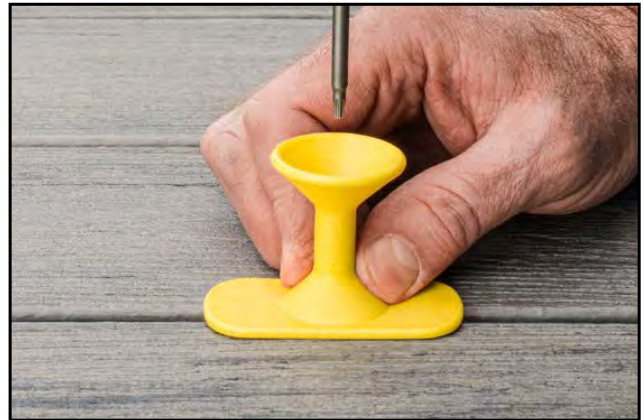
4

Fasten the clip

*Ajuste el gancho*

with the included  
**NEVER-MISS™ Guide**

*con la guía incluida  
NEVER-MISS™*



**or**

up to 5X faster from your  
feet with **DRIVE™**  
(sold separately)

*hasta 5 veces más rápido  
con DRIVE™ (se vende  
por separado)*



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[ZEN@MODERN-MILL.COM](mailto:ZEN@MODERN-MILL.COM) OR 601-869-5050.



Our products are backed by a **CAMO**<sup>®</sup> Warranty.

Install deck boards according to manufacturer's instruction, and if our clips damage the board or cause the board to fail, we'll replace the boards. That means you can confidently use our clips with Trex<sup>®</sup>, TimberTech<sup>®</sup>, AZEK<sup>®</sup>, Deckorators<sup>®</sup>, Fiberon, and more.

Subject to limitations, read the full warranties at [camofasteners.com](http://camofasteners.com)

Nuestros productos están respaldados por la garantía **CAMO**<sup>®</sup>. Instale los tablonces de la cubierta de acuerdo con las instrucciones del fabricante, y si nuestros ganchos dañan el tablón o provocan fallas en su funcionamiento, reemplazaremos los tablonces. Eso significa que puede usar con confianza nuestros ganchos con Trex<sup>®</sup>, TimberTech<sup>®</sup>, AZEK<sup>®</sup>, Deckorators<sup>®</sup>, Fiberon y más.

Sujeto a limitaciones; lea las garantías completas en [camofasteners.com](http://camofasteners.com)

This product may be covered by one or more of the following U.S. Pats: 6,478,209; 6,779,700; 6,966,389; 6,968,945; 7,207,095; 7,344,058; 7,481,346; 7,530,483; 7,836,970; 8,382,414; 8,480,343; 8,672,204; 8,747,043; 8,925,644; 8,955,210; 9,051,726; 9,120,214; 9,144,896; 9,222,269; 9,751,197; 9,784,296; 9,802,300; 6,145,725; 5,947,362; D662808; D677147; D693210; D704018; D742730; other U.S. Pats. may be pending. Further, this product may be covered by one or more of the following country or regional patents: Canadian Pats. 2573867; 2725335; 2725340; 2820655; 2827504; Australian Pats. 2010251785; 2010251791; 2013206456; Taiwanese Pat. 1361861; European Pat. 2517834; European Community Design Regs. 001295810-0001; 001295810-0002; 001295810-0003; 001295810-0004; 001309819-0001.



Grand Rapids, MI 49519  
[www.nationalnail.com](http://www.nationalnail.com)

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[ZEN@MODERN-MILL.COM](mailto:ZEN@MODERN-MILL.COM) OR 601-869-5050.



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# INSTALLATION PROCESS

For TC-G (TC-150) for use with 1" (25mm) or thicker decking

TC-120 for use with 3/4" (19mm) decking

## Tiger Claw<sup>®</sup> Hidden Deck Fasteners

153 Bowles Road • Agawam, MA 01001

Email: tigerclaw@deckfastener.com  
Tech Support: 800-518-3569 toll free  
Customer Service: 800-518-3569 toll free  
Fax: 413-786-1760

### GETTING STARTED / INSTALLATION TIPS

**IMPORTANT!** Read all instructions carefully and completely to ensure proper installation.

**WARNING!** Parts have sharp points & edges. Use extreme caution when handling & installing. Wear safety glasses at all times.

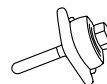
#### Tools & Materials Needed



Safety Glasses



Power screw gun with ratcheting torque setting



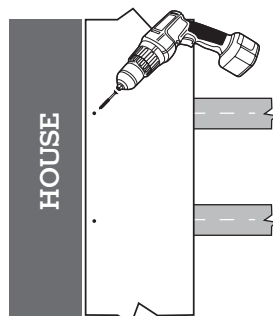
Tiger Claw Slot Cutter



Router

#### Step 1

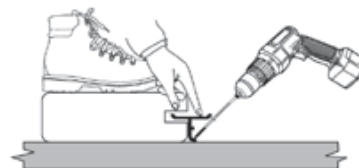
##### INSTALL FIRST BOARD



Fasten one edge of the first board at each framing support using a quality 2 1/2" (64mm) deck screw. It is important that this board is straight and well secured.

#### Step 3

##### INSTALL FIRST FASTENER

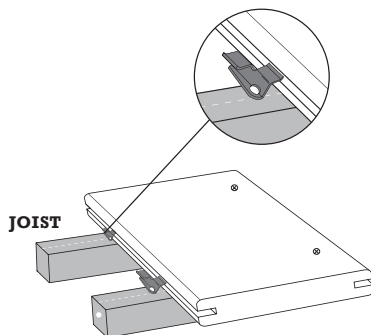


While standing on deck board, install provided screw at 45° angle through fastener and into joist, while applying pressure on fastener. Install one fastener and screw at each support joist.

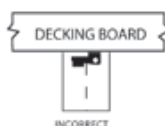
Make sure fastener body is vertical to deck board and the screw is holding fastener down tight to support joist. adjust torque setting on screw gun to prevent spin out of the screw head.

#### Step 2

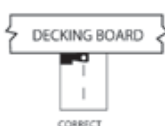
##### POSITION FASTENERS



Fully insert TC-G or TC-120 fastener into grooved edge of deck board. Screw hole should line up with the center of support joist.



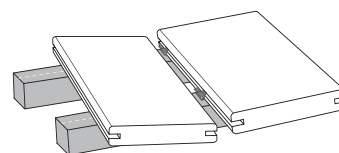
INCORRECT



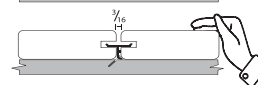
CORRECT

#### Step 4

##### COMPLETING INSTALLATION OF BOARDS



**a** Place next deck board into position against fasteners. Slightly raise outer edge of board being installed and slide board onto fastener until board contacts spacer tabs.



**b** Check gap between boards for consistency. Apply force to ensure board is fully installed.

Repeat steps 2 thru 4 until deck is complete.

## HELPFUL TIPS

### Coverage

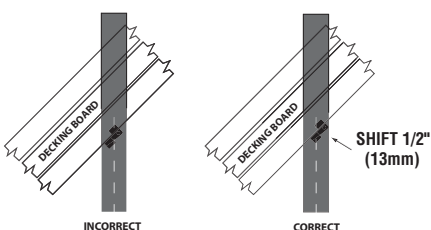
- Multiply the number of joists by the number of decking boards to equal the number of fasteners needed.
- 90 fasteners will cover approximately 50 sq. ft. (4.6 m) using 5.5" (140mm) decking boards on 16" (410mm) centers or 35 sq. ft. (3.3 m) using 3.5" (90mm) decking boards on 16" (410mm) on centers.

### How do you attach the last board?

To finish, we recommend using either finish nails or trim screws to secure the last board along its edge. Or, you can angle a screw through the deck frame and into the bottom of the deck board.

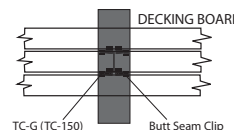
### 45° angle installation

**When deck is in the walled corner of the house:** always start with small piece of decking in that corner and work your way out. **When installing TC Fasteners,** offset the center  $\frac{1}{2}$ " (13mm) towards the long point of joist, so screw will not exit side of joist when driven.

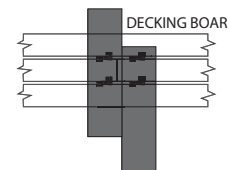


### How to do a butt seam

**For TC-G (TC-150):** Butt Seam clip is available to use with the TC-G (TC-150)



**For TC-120:** First, install a small framing board 10-12" (250-300mm) alongside the joist on which the seam is going to land. Install additional fastener into previous board above small framing block. Line up your first board in the center of the joist and the small framing board. Install fasteners and screw at each joist of the first board including the joist at the seam. Then install your second board in the same fashion, and place a second fastener at the seam attaching it to the small framing block. Be sure you follow the end-to-end gapping instructions provided by decking manufacturer.



### How to replace a board

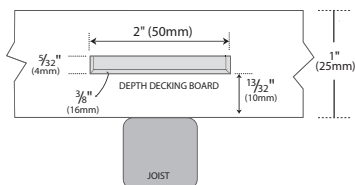
- Make two parallel cuts down the center of the board to be replaced, and remove the center piece.
- Using a small pry bar, remove the remaining pieces of decking from the tabs.
- Using a reciprocating saw, remove the tabs on the side of the board with the screw heads showing.
- Position new board into place, and carefully slide onto remaining tabs.
- Once board is set into position, secure the lead edge with finish nail, finish screw, or counter drill, screw and plug.

### To use the TC-G or TC-120 fastener on solid-edge boards

Use a router to create a groove at every intersection of the deck board and support joists, or groove the entire edge of the deck board.



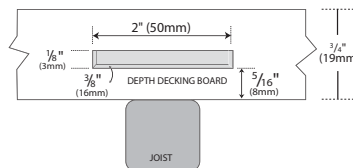
**For TC-G (for use in 1" (25mm) or thicker decking):**  
Use the **Tiger Claw TC-G Slot Cutter** to create the groove shown below.



**NOTE:** The groove should start  $\frac{13}{32}$ " (10mm) above the **BOTTOM** of the deck board. Groove should be at least  $\frac{7}{16}$ " (11mm) deep.

**NOTE:** When using material with expected expansion greater than  $\frac{1}{8}$ " (3mm), in width allow additional spacing between deck boards. (Check with your lumber supplier for expected expansion in your area.)

**For TC-120 (for use with  $\frac{3}{4}$ " (19mm) decking):**  
Use with **Tiger Claw TC-120 Slot Cutter** to create the grooves shown below.



**NOTE:** The groove should start  $\frac{5}{16}$ " (8mm) above the **BOTTOM** of the deck board. Groove should be at least  $\frac{7}{16}$ " (11mm) deep.

**NOTE:** When using material with expected expansion greater than  $\frac{1}{8}$ " (3mm), in width allow additional spacing between deck boards. (Check with your lumber supplier for expected expansion in your area.)

### Remember: Tiger Claw has a fastener for all your decking needs:

**TC Pneumatic Installation Gun**  
For the fastest installation of TC-G

**TC-1 Softwood Deck Fastener**  
Coated Steel fastener for Pressure-Treated, Cedar, and Redwood

**TC-2 Softwood Deck Fastener**  
Stainless Steel fastener for Pressure-Treated, Cedar, and Redwood

**TC-3 Composite Deck Fastener**  
Stainless Steel fastener for Composite, PVC & Mahogany

**TC-4 Hardwood Deck Fastener**  
Stainless Steel fastener for Exotic Hardwoods

**Proclip Cellular PVC Deck Fastener**  
Stainless Steel fastener for AZEK decking

**TC-G Grooved Board Fastener**  
Stainless Steel fastener for 1" (25mm) grooved decking

**TC-120 Grooved Board Fastener**  
Stainless Steel fastener for  $\frac{3}{4}$ " (19mm) grooved decking

**Butt Seam Grooved Board Clip**  
Stainless Steel clip to use in conjunction with the TC-G (TC-150) fastener.





# ACRE™ BY MODERN·MILL

It's better building,  
one tree-free board at a time.

MODERN·MILL

[modern-mill.com](https://modern-mill.com)

ACREDeckInstallGuide\_2025.05