

CAMO Edge Fastening System

Tropical Hardwood Decking

Installation Guidelines



Failure to install CAMO Edge Deck Screws in accordance with this installation guide may affect fastener performance and void product warranty.



CAMO Edge Deck Screws are intended for attaching deck boards directly to deck substructure using CAMO guides. Any other use is not recommended or covered by warranty.

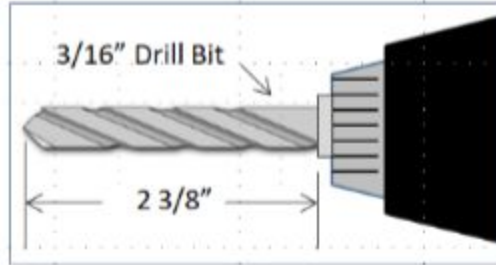
Tropical Hardwood Deck Board Installation: Twisting, warping, and cupping are common performance attributes with hardwood decks. The following installation recommendations will reduce but not eliminate the normal behavior of hardwood deck boards.

- **Acclimating:** Tropical hardwood decking needs to be acclimated to the environment prior to installation.
 - We recommend that the boards be on-site at least 7 days prior to installation.
 - Do not store directly on the ground or on top of concrete. Decking should be elevated at least 12" off the ground.
 - Cover the material with a sheet of plywood to keep it dry until installation.
 - Do not cover the material with a tarp or plastic as both can trap moisture.
 - Place 1"x shims/stickers between the rows of boards to allow for airflow.
- **Board Spacing:** A minimum of 1/16" spacing is required to allow for expansion and contraction. Expect 1/8" - 1/4" of side-to-side board shrinkage.
- **Airflow/Drainage:** You must have unobstructed airflow under 50% of the deck to allow for sufficient cross-ventilation from one side to the other. This allows the underside of the deck structure to dry and prevents heat build-up.
 - Your deck should not be installed directly over any solid surface such as concrete.
 - Sleeper Systems: Typical sleeper systems will not meet the minimum airflow requirements for hardwood installation.
- **Cutting:** Board ends should be sealed with end grain sealant within 24 hours of cutting.
- **Deck Slope:** Your deck surface should be sloped a minimum of 1/4" per 12' of horizontal run to allow for moisture run-off.
- **Double (sister) joists** at all butt joints (where two board ends meet) on deck surface are required.
- **Fastening with Edge Fasteners:** Always use Edge Stainless Steel screws with the following CAMO Pre-drill process

- Use CAMO 3/16" partial pre-drill bit (item #345035) **with your CAMO Guide in place on the deck board**



(or utilize the partial pre-drill method with your own 3/16" drill chucked at 2 3/8" from the nose of the drill) to eliminate pushout and splitting



- Do not fasten within 1" of the deck board ends
- Use two fasteners on every board at each joist location
- Do not force the Edge screw. Allow the Edge screw to scrape and auger the board with light pressure. This action allows the Edge screw to enter the board without splitting.

Recommended CAMO guides :

CAMO Marksman Pro[®]-X1 (1/16" gap)

Recommended CAMO Edge screws:

- **Stainless Steel:** To reduce the potential for tannin staining
- Length
 - 1 7/8" CAMO Edge screws are recommended for board thicknesses of 1" or less
 - 2 3/8" CAMO Edge screws are recommended for board thicknesses over 1"

CAMO Edge Fastening System

PVC Decking

Installation Guidelines



Failure to install CAMO Edge Deck Screws in accordance with this installation guide may affect fastener performance and void product warranty.



CAMO Edge Deck Screws are intended for attaching deck boards directly to deck substructure using CAMO guides. Any other use is not recommended or covered by warranty.

PVC Deck Board Installation: Expansion and contraction due to variation in air temperature are performance attributes that must be understood when installing PVC decking.

- **Board Spacing:** Always review and follow your deck manufacturer's gap and spacing requirements for deck board installation. These requirements can vary by manufacturer and installation temperature/environment.
- **Airflow/Drainage:** You must have unobstructed airflow under 50% of the deck to allow for sufficient cross-ventilation from one side to the other. This allows the underside of the deck structure to dry and prevents heat build-up.
 - Your deck should not be installed directly over any solid surface such as concrete.
 - **Sleeper Systems:**
 - You must allow a minimum of 1.5" of unobstructed airflow on both ends of the deck beneath the deck in the direction that the joist runs.
 - Board gap spacing must be a minimum 3/16".
 - Never use CAMO Edge Fasteners to attach decking to a floating substructure.
- **Deck Slope:** Your deck surface should be sloped a minimum of 1/4" per 12' of horizontal run to allow for moisture run-off.
- **Double (sister) joists** at all butt joints (where two board ends meet) on deck surface are required.
- **Fastening with CAMO Edge Fasteners**
 - Stainless Steel Edge screws are always recommended with PVC
 - Do not fasten within 1" of the deck board ends
 - Use two fasteners on every board at each joist location

Recommended CAMO guides :

CAMO Marksman Pro® (3/16" gap), AZEK SIDELOC Guide (1/8" gap), and CAMO DRIVE™ (with secondary 3/16" spacing)

Recommended CAMO Edge screws:

- Stainless Steel
 - CAMO Edge Screws
 - SIDELOC Screws
- Length
 - 1 $\frac{7}{8}$ " CAMO Edge screws are recommended for board thicknesses of 1" or less
 - 2 $\frac{3}{8}$ " CAMO Edge screws are recommended for board thicknesses greater than 1"

CAMO Edge Fastening System

Capped Composite Decking

Installation Guidelines



Failure to install CAMO Edge Deck Screws in accordance with this installation guide may affect fastener performance and void product warranty.



CAMO Edge Deck Screws are intended for attaching deck boards directly to deck substructure using CAMO guides. Any other use is not recommended or covered by warranty.

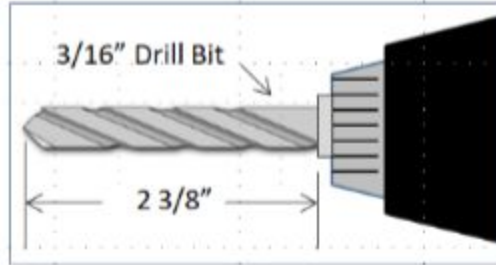
Capped Composite Deck Board Installation: Expansion and contraction due to variation in air temperature are performance attributes that must be understood when installing capped composite decking. The following installation recommendations will reduce problems associated with board movement.

- **Board Spacing:** Always review and follow your deck manufacturer's gap and spacing requirements for deck board installation. These requirements vary depending on the specific board material.
- **Airflow/Drainage:** You must have unobstructed airflow under 50% of the deck to allow for sufficient cross-ventilation from one side to the other. This allows the underside of the deck structure to dry and prevents heat build-up.
 - Your deck should not be installed directly over any solid surface such as concrete.
 - **Sleeper Systems:**
 - You must allow a minimum of 1.5" of unobstructed airflow on both ends of the deck beneath the bottom of the deck surface in the direction that the joist runs.
 - Board gap spacing must be a minimum 3/16".
 - Never use CAMO Edge Fasteners to attach decking to a floating substructure.
- **Deck Slope:** Your deck surface should be sloped a minimum of 1/4" per 12' of horizontal run to allow for moisture run-off.
- **Double (sister) joists** at all butt joints (where two board ends meet) on deck surface are required.
- **Fastening with Edge Fasteners:**
 - Pre-drill: Using the partial pre-drill process below with capped composite boards is **required**.

- Use CAMO 3/16" partial pre-drill bit (item #345035) **with your CAMO Guide in place on the deck board**



(or utilize the partial pre-drill method with your own 3/16" drill chucked at 2 3/8" from the nose of the drill) to eliminate pushout and splitting



- - Do not fasten within 1" of the deck board ends
 - Use two fasteners on every board at each joist location
 - Do not force the Edge screw. Allow the Edge screw to scrape and auger the surface with light pressure. This action allows the Edge screw to enter the board without splitting.

Recommended CAMO guides :

CAMO Marksman Pro® (3/16" gap)

Recommended CAMO Edge screws:

- Alloy/Coating:
 - Stainless Steel: For ultimate corrosion resistance
 - ProTech Coated: CAMO ProTech coated screws are approved for use in treated lumber applications
- Length
 - 1 7/8" CAMO Edge screws are recommended for board thicknesses of 1" or less
 - 2 3/8" CAMO Edge screws are recommended for board thicknesses more than 1"

CAMO Edge Fastening System

Cedar/Redwood Decking

Installation Guidelines



Failure to install CAMO Edge Deck Screws in accordance with this installation guide may affect fastener performance and void product warranty.



CAMO Edge Deck Screws are intended for attaching deck boards directly to deck substructure using CAMO guides. Any other use is not recommended or covered by warranty.

Cedar/Redwood Deck Board Installation: Cedar and Redwood naturally resist moisture which causes splitting, twisting, and cupping, so it tends to be stable as a deck board.

- **Board Spacing:** For Cedar/Redwood deck board installation, CAMO recommends $\frac{1}{8}$ " to $\frac{1}{4}$ " gapping between boards at the time of installation.
- **Airflow/Drainage:** You must have unobstructed airflow under 50% of the deck to allow for sufficient cross-ventilation from one side to the other. This allows the underside of the deck structure to dry and prevents heat build-up.
 - Your deck should not be installed directly over any solid surface such as concrete.
 - **Sleeper Systems:**
 - You must allow a minimum of 1.5" of unobstructed airflow on both ends of the deck beneath the deck in the direction that the joist runs.
 - Board gap spacing must be a minimum $\frac{3}{16}$ ".
 - Never use CAMO Edge Fasteners to attach decking to a floating substructure.
- **Deck Slope:** Your deck surface should be sloped a minimum of $\frac{1}{4}$ " per 12' of horizontal run to allow for moisture run-off.
- **"Frown down"** is a best practice. When you look at board ends you will see the growth rings of the lumber. Make sure those rings are facing downward—the direction of a frown—when laid flat on the joists for fastening. This will reduce the natural tendency for the board to cup upward when it dries.
- **Double (sister) joists** at all butt joints (where two board ends meet) on deck surface are required.
- **Fastening with Edge Fasteners:**
 - Always use CAMO Stainless Steel Edge screws

- Do not fasten within 1" of the deck board ends
- Use two fasteners on every board at each joist location
- Do not force the Edge screw. Allow the Edge screw to scrape and auger the surface with light pressure. This action allows the Edge screw to enter the board without splitting.

Recommended CAMO guides :

CAMO Marksman Pro® (3/16" gap) and CAMO DRIVE™ (with minimum 3/16" secondary spacing)

Recommended CAMO Edge screws:

- Stainless Steel fasteners are always recommended for Edge installation of Cedar and Redwood deck boards since they reduce the potential for tannin staining
- Length
 - 1 7/8" CAMO Edge screws are recommended for board thicknesses of 1" or less
 - 2 3/8" CAMO Edge screws are recommended for board thicknesses greater than 1"

CAMO Edge Fastening System

KDAT Pressure Treated Lumber Decking

Installation Guidelines



Failure to install CAMO Edge Deck Screws in accordance with this installation guide may affect fastener performance and void product warranty.



CAMO Edge Deck Screws are intended for attaching deck boards directly to deck substructure using CAMO guides. Any other use is not recommended or covered by warranty.

KDAT Pressure Treated Lumber (PTL) Deck Board Installation: Twisting, warping, cupping, and splitting are expected performance attributes with PTL decks. The following installation recommendations will reduce, but not eliminate, the normal behavior of PTL deck boards.

- **KDAT Board weatherization treatment:** KDAT deck boards **MUST** always be sealed with a water repellent with UV protection before or immediately after installation. If you choose a stain, use a penetrating stain with water repellent and UV stabilizer. If painting, use an oil-based primer followed by two coats of latex (acrylic) paint.
- **Board Spacing:** Install Kiln Dried PTL with a minimum of 3/16" gapping between boards. KDAT boards are installed in a thirsty state and will expand slightly as they are exposed to moisture.
- **Airflow/Drainage:** You must have unobstructed airflow under 50% of the deck to allow for sufficient cross-ventilation from one side to the other. This allows the underside of the deck structure to dry and prevents heat build-up.
 - Your deck should not be installed directly over any solid surface such as concrete.
 - **Sleeper Systems:**
 - You must allow a minimum of 1.5" of unobstructed airflow on both ends of the deck beneath the deck in the direction that the joist runs.
 - Never use CAMO Edge Fasteners to attach decking to a floating substructure.
- **Deck Slope:** Your deck surface should be sloped a minimum of 1/4" per 12' of horizontal run to allow for moisture run-off.
- **"Frown down"** is a best practice. When you look at board ends you will see the growth rings of the lumber. Make sure those rings are facing downward—the direction of a

frown—when laid flat on the joists for fastening. This will reduce the natural tendency for the board to cup upward when it dries.

- **Double (sister) joists** at all butt joints (where two board ends meet) on deck surface are required.
- **Fastening with Edge Fasteners:**
 - Do not fasten within 1" of the deck board ends
 - Use two fasteners on every board at each joist location
 - Do not force the Edge screw. Allow the Edge screw to scrape and auger the surface with light pressure. This action allows the Edge screw to enter the board without splitting.

Recommended CAMO guides :

CAMO Marksman Pro® (3/16" gap) and CAMO DRIVE™ (with a secondary 3/16" minimum spacer) are acceptable for KDAT PTL Edge installations

Recommended CAMO Edge screws:

- Alloy/Coating:
 - Stainless Steel: For ultimate corrosion resistance
 - ProTech Coated: CAMO ProTech coated screws are approved for use in treated lumber applications
- Length
 - 1 7/8" CAMO Edge screws are recommended for board thicknesses of 1" or less
 - 2 3/8" CAMO Edge screws are recommended for board thicknesses greater than 1"

CAMO Edge Fastening System

Pressure Treated Lumber Decking (green/wet)

Installation Guidelines



Failure to install CAMO Edge Deck Screws in accordance with this installation guide may affect fastener performance and void product warranty.



CAMO Edge Deck Screws are intended for attaching deck boards directly to deck substructure using CAMO guides. Any other use is not recommended or covered by warranty.

Pressure Treated Lumber (PTL) “wet/green” state Deck Board Installation: Twisting, warping, cupping, and splitting are expected performance attributes with PTL decks. The following installation recommendations will reduce, but not eliminate, the normal behavior of PTL deck boards.

- **Board Spacing:** Typical PTL (moisture content above 19%) needs little to no gapping between boards at the time of installation. As the boards dry, they will shrink, creating a space naturally.
- **Airflow/Drainage:** You must have unobstructed airflow under 50% of the deck to allow for sufficient cross-ventilation from one side to the other. This allows the underside of the deck structure to dry and prevents heat build-up.
 - Your deck should not be installed directly over any solid surface such as concrete.
 - *Sleeper Systems:* CAMO Edge Fasteners are not recommended for sleeper systems using treated lumber.
- **Deck Slope:** Your deck surface should be sloped a minimum of $\frac{1}{4}$ " per 12' of horizontal run to allow for moisture run-off.
- **“Frown down”** is a best practice. When you look at board ends you will see the growth rings of the lumber. Make sure those rings are facing downward—the direction of a frown—when laid flat on the joists for fastening. This will reduce the natural tendency for the board to cup upward when it dries.
- **Double (sister) joists** at all butt joints (where two board ends meet) on deck surface are required.
- **Fastening with Edge Fasteners:**
 - Do not fasten within 1" of the deck board ends
 - Use two fasteners on every board at each joist location

- Do not force the Edge screw. Allow the Edge screw to scrape and auger the surface with light pressure. This action allows the Edge screw to enter the board without splitting.

Recommended CAMO guides :

CAMO DRIVE™ (no gap), CAMO Edge™ Guide (no gap), and the CAMO Marksman Pro®-X1 (1/16" gap) are acceptable for typical PTL Edge installations

Recommended CAMO Edge screws:

- Alloy/Coating:
 - Stainless Steel: For ultimate corrosion resistance
 - ProTech Coated: CAMO ProTech coated screws are approved for use in treated lumber applications
- Length
 - 1 $\frac{7}{8}$ " CAMO Edge screws are recommended for board thicknesses of 1" or less
 - 2 $\frac{3}{8}$ " CAMO Edge screws are recommended for board thicknesses greater than 1"

CAMO Fasteners

Coastal Waterways and Marine environments

Installation Guidelines



Failure to install CAMO Fasteners in accordance with this installation guide may affect fastener performance and void product warranty.

Salt water environments can create an environment of severe rust and corrosion. Proper fastener selection is extremely important to avoid structural failure in addition to diminished aesthetic quality of the fasteners. Fasteners that are subjected to direct contact with salt water and fasteners that are within reach of exposure to aerosolized salt water carried by the wind from breaking waves are highly susceptible to highly increased corrosion rates.

The following are requirements for choosing the correct CAMO Fastener for your installation.

Within 3000 feet of saltwater shoreline:

316 stainless steel fasteners are required for use within 3000 feet of the shoreline. The following CAMO fasteners are available for installations in those areas.

CAMO 316 Composite screws - color matched available
CAMO 316 Edge Screws
CAMO 316 Edge Screws Collated
CAMO 316 Bugle head deck screws
CAMO 316 Trim head Screws - color matched available

3000 feet to 10 miles from shoreline:

Aerosolized salt water can be present up to 10 miles from the body of water increasing the risk of accelerated corrosion. CAMO stainless steel fasteners are required. The following CAMO fasteners are available for installations in this area.

CAMO EdgeClip
CAMO EdgeXClip
CAMO EdgeXMetal
CAMO Starter Clip
CAMO Collated 304 Stainless Steel Bright Composite screws (For use with DRIVE)
CAMO 305 stainless steel Bugle head deck screws
(CAMO 316 Stainless Steel fasteners are of course also fine for this distance if maximum corrosion resistance is desired)