



Decking Installation Manual

dasso.XTR Storage and Handling

For best results, dasso.XTR should be kept out of direct sunlight and should not be exposed to weather before installation. dasso.XTR is a dry product and can be installed right away; there is no need to wait and acclimate the product to its surroundings.

When the dasso.XTR material arrives on the jobsite, keep it off the ground by placing a few pieces of lumber underneath the packaging. Cover material with a tarp to protect it from wind and sunlight before installation.

Product Variations

dasso.XTR is carefully manufactured and inspected to ensure the highest-quality. However, the bamboo strand is a natural product and is subject to variations of color, weight, and performance. Wood decking is also subject to dimensional changes as the moisture content fluctuates with the humidity in the air. Swelling, shrinking, checking, and other movement are normal occurrences in wood decking.

Safety

Drilling, sawing, sanding, and machining wood generates wood dust. Avoid inhaling wood dust by wearing a dust mask. Visit dassoXTR.com for MSDS.

Recommended Installation

dasso.XTR can be installed in the same ways as standard hardwood decking. To maximize the features and benefits of dasso.XTR decking, we recommend using the TigerClaw® TC-120 clip system in combination with the dasso.XTR ProPlug® System.

In addition, the following items are recommended for use in installation:

- Plastic mallet
- Corded drill
- Drill bits
- Safety glasses
- Power screw gun with ratcheting torque setting
- Chop saw
 - dasso.XTR can be crosscut with a quality chop saw, using a carbide-tipped blade. Ripping can be done on a standard table saw, using a properly aligned quality fence with a carbide-tipped blade.
 - When drilling dasso.XTR, always use high-quality drill bits. When you are drilling into the face, we recommend using a countersink bit with a positive stop. This will ensure a consistent depth for all the screws.
 - dasso.XTR can be routed or planed with high-speed steel or carbide cutters. To complete your project, we recommend using a slow-feed speed and sanding.

NOTE: Local building codes must always be consulted when building an exterior deck. Most counties require building permits.

Material Application

Spacing

Using the recommended installation technique with the Tiger Claw® TC-120 clip, the decking will be spaced at 3/16". This spacing allows for air circulation and room for expansion, and will provide a uniform look for the deck.

NOTE: If you chose to use a face-screwed installation, board spacing should still be 3/16".

Span

The recommended span for dasso.XTR is 16" centers. End joints can be used when falling between the joists, per ASTM 00732. When decking installation is on an angle, the joist spacing should be 12" centers. Determine the final joist spacing only after talking with local building code officials.

Recommended Products for Use with dasso.XTR

Fasteners

dasso.XTR was built for a hidden fastener application, and the boards are run with a continuous groove designed for easy installation. Although the groove is cut in accordance with most manufactured fasteners, we recommend using the Tiger Claw® TC-120 clip, which is one of the fastest, easiest ways to hide fasteners in hardwood decking. The TC-120 is made of 304-grade stainless steel and is approved for use in saltwater applications and ACQ or chemically treated lumber, for long-term performance. The clip's sharp prongs embed into the upper portion of the groove for strong holding power.

NOTE: Screws may also be used for installing dasso.XTR. We recommend using stainless steel screws through the face of every board, with two screws per joist. Although there are self-tapping stainless steel screws on the market, we recommend pre-drilling the ends of all the boards to prevent splitting.

Hiding the Fasteners

Top-down screwing is widely recognized as the most secure way to fasten deck boards. While there are numerous hidden deck fastener systems on the market today, these products generally employ fastening techniques other than traditional top-down screwing.

Starborn offers two products that have the strength of top-down screwing with a high finish look similar to hidden fastener systems:

1. Standard Headcote screws are available in Brown (#34), which is an excellent match for the color of Ipe, essentially hiding the fastener.
2. The Pro Plug System is a complete system for plugging and includes the Pro Plug Tool, specially engineered hardwood plugs, the Pro Plug glue nozzle, and stainless steel screws available in Ipe.

Number of Fasteners Needed

Approximately 350 fasteners are needed for each 100 square feet (9 square meters) of decking, assuming joists are 16" on center.

Ventilation

The deck should be built at least 6" above the ground. There must be adequate air circulation underneath the deck to prevent cupping and warping of the boards. In applications where the deck is being built closer to the ground, a vapor barrier is recommended to prevent water from absorbing into the underside of the material.

NOTE: For roof decks and applications above concrete, extra spacing for ground-generated moisture is not necessary

Screw Material and Type

Always use stainless steel screws with hardwoods. Standard Headcote screws are available in Grade 305 stainless steel for excellent corrosion resistance. For locations close to or on the water, especially saltwater, Grade 316 stainless steel will provide even greater corrosion resistance.

End Sealer

dasso uses end sealer as part of its normal production to help prevent splitting and checking at the ends of the boards. We recommend that all boards be end sealed as soon as reasonably possible after cutting, using a clear, water-resistant wax. Anchorseal from UC Coatings is one of the most well-known end sealer products, although there are others available.

NOTE: Failure to end seal the boards at the time of installation will void any claims made against the warranty.

Finishing

Although dasso.XTR is a manufactured product, its primary component is bamboo. dasso.XTR will behave like a natural building material, and therefore, you must coat dasso.XTR after installation to maintain its original color. dasso.XTR comes with a factory coat of oil that tends to wear off during installation. Use of penetrating oils such as Penofin or Messmers is fine; however, we recommend using XTRGuard by Carver.

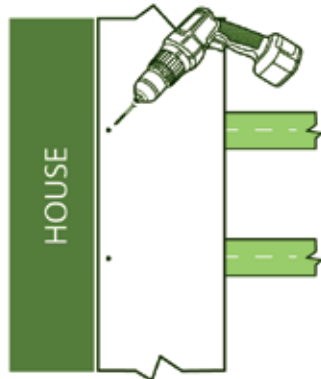
Contact Information

**Tiger Claw
Hidden Deck Fasteners**
153 Bowles Rd
Agawam, MA 01001
800-518-3569
deckfastener.com

Starborn Industries
(Headcote, Smart-Bit, Pro Plug)
45 Mayfield Ave
Edison NJ 08837
800-596-7747
starbornindustries.com

Step 1

INSTALL FIRST BOARD



Fasten the flat edge of the dasso.XTR starter board to each joist using a quality 1 5/8" stainless steel deck screw. It is important to ensure that the first board is straight and well secured.

The deck stairs will be completed at the outer edge of the deck. The flat edge of the starter board should face outward and should be installed in the same manner as the first board.

Step 3

INSTALL FIRST FASTENER

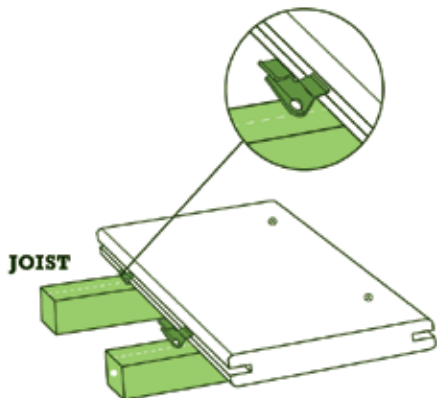


While standing on the deck board, install the provided screw at a 45° angle through the fastener and into the joist, while applying pressure on the fastener.

Install one fastener and screw at each support joist, making sure the fastener body is vertical to the deck board and the screw is tightly holding the fastener to the support joist. Adjust the torque setting on the screw gun to prevent spinout of the screw head.

Step 2

POSITION FASTENERS

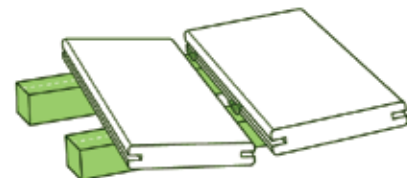


Fully insert the TC-120 fastener into the grooved edge of the first deck board. Line up the screw hole with the center of the support joist.

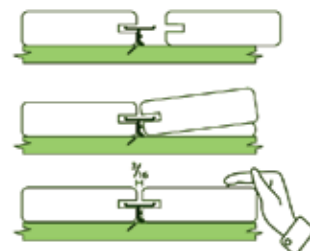


Step 4

COMPLETING INSTALLATION OF BOARDS



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



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

The Smart-Bit Pro Plug™ System for Wood Installation Instructions

What You Will Need

1. **PRO PLUG™ Tool for Wood** – Depending on the number of holes and density of the wood you are drilling, extra replacement bits may be necessary.
2. **PRO PLUG™ Plug & Fastener Kit** – Kits vary by wood plug species and fastener and contain an equal number of plugs and fasteners. A general rule of thumb for decks is to use 350 pieces for each 100 square feet (9 square meters) of decking. There are two available types of fasteners: 2-1/2" (62mm) stainless steel screws for decks and other outdoor projects, and 1-5/8" (42mm) hardened steel zinc-plated screws for flooring and other indoor projects. Each kit also contains a driver bit(s) and a PRO PLUG™ Glue Nozzle.
3. **Your decking or flooring manufacturer's instructions**
4. **A power drill**
5. **A power sander with sandpaper** – 60 grit works well for dense boards such as Ipe. For less-dense boards such as Cambara or Meranti, 100 to 120 grit is suggested. Please consult your decking or flooring installation instructions for their sanding recommendations.
6. **A source of compressed air** (from a small can or a compressor)
7. **A water clean-up wood glue with a cap that is interchangeable with the PRO PLUG™ Glue Nozzle** – Wood glue products made by Elmer's® that work with the nozzle are available in the following sizes: 4 oz. (118ml), 8 oz. (236ml), and 16 oz. (472ml). Wood glue products made by Franklin International (sold under their Titebond® line) are available in the following sizes: 4 oz. (118ml) and 8 oz. (236ml). For exterior projects, be sure to use appropriately rated exterior glues, such as Elmer's® Waterproof Wood Glue or Titebond® III. *(Note: Epoxy adhesives can also be used for plugging, but will not work with the PRO PLUG™ Glue Nozzle.)*
8. **A plastic or wood mallet**
9. **A rag**

How To Use The PRO PLUG™ System

Note: Before gluing, practice using the PRO PLUG™ Glue Nozzle on a few holes drilled in scrap wood. This will get the nozzle fully loaded with glue and give you a feel for how the nozzle works

1. Read your decking or flooring manufacturer's installation instructions.
2. Determine the locations where screws are needed.
3. Pre-drill holes with the PRO PLUG™ Tool for Wood. The hole is complete when the stop collar stops spinning.
4. Blow out sawdust from the holes with compressed air.
5. Insert PRO PLUG™ Fasteners so that they are flush with the countersink at the bottom of each hole. *(Note: Wood should be kept dry and holes free of debris before gluing and inserting plugs.)*
6. Attach the PRO PLUG™ Glue Nozzle to the wood glue bottle. Follow the glue manufacturer's usage recommendations, including working temperature and set time.
7. With the work surface in a horizontal position, place the nozzle in the hole and push the glue bottle down. This will open the nozzle. Gently squeeze. Turn the bottle a 1/4 turn to ensure full coverage of the side wall. Pull the nozzle out of the hole. This will close the holes in the nozzle. The objective is to coat the inside walls of the hole while leaving as little glue at the bottom of the hole as possible.
8. You can glue several holes at a time and then go back to insert the plugs, so long as you do so before the glue begins to set. Use a rag to wipe off any excess glue that builds up on the nozzle tip.
9. Insert a PRO PLUG™ Plug in each hole, chamfered end first, with the wood grain aligned with the work piece. *(Note: All plugs are face grained.)* Using only moderate force, pound plugs in with a plastic or wooden mallet until flush or nearly flush with the work surface. Wipe any excess glue clean with a damp rag.
10. Sand the work surface. We recommend delaying sanding until after the glue has set, following the glue manufacturer's directions.

Note: PRO PLUG™ Glue Nozzles can be easily maintained and reused even after becoming caked with dry adhesive. Simply wash the nozzle clean with warm water and, if necessary, use the end of a paperclip to clear the nozzle holes