

DeckWise® Ipe Clip® Hidden Deck Fastener System

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DIVISION: 05 - METALS

Section: 05090 - Metal Fastenings

DeckWise®®, The Ipe Clip®® Fastener Company, LLC

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1.0 SUBJECT

DeckWise® Ipe Clip® Hidden Deck Fastener installation with DeckWise® Colormatch Deck Screws, DeckWise® Composite Deck Screws, DeckWise® Heat-Treated Deck Screws, or DeckWise® Self-Tapping Metal Joist Deck Screws.

1.1 DeckWise® Ipe Clip® Hidden Deck Fastener System is a patented, state-of-the-art deck fastening system for hardwoods, thermally modified wood and composite decking. Hidden deck fasteners are edge-mounted to hide unsightly screws - and eliminate top-side nail usage - from showing on the top of the deck boards and help to prevent warping, cracking, rotting, splitting and fastener pop-ups while eliminating the potential hazard to bare feet. Ipe Clip® Fasteners create a sleek, smooth surface for an elegant clean finish.

2.0 DESCRIPTION

DeckWise® Ipe Clip® Hidden Fastener Systems consist of corrosion resistant, black oxide stainless steel inserts coated in malleable UV and chemical-resistant polypropylene secured with DeckWise® proprietary screws used to attach hardwood, thermally modified wood or composite deck boards to wood or metal underlying joists.

2.1 General: DeckWise® Ipe Clip® Hidden Fasteners fasten hardwoods, thermally modified softwoods, exotic hardwoods, solid and hollow core composites.

2.1.1 IPE CLIPS®

Patented reinforcing Stainless Steel (304) insert molded inside

Corrosion resistant black oxide coated stainless steel insert

Molded of a malleable plastic polymer resin coating

Polymer resin adds UV resistant & high-strength qualities

Use with lengthwise pre-grooved slots, job site biscuit joiner or router

Standard edge profile of 5/32" (4.0mm) by 1/2" (13.0mm)

A Symmetrical wood edge profile allows for reversible boards

Fastener color camouflages & conceals between the board gaps

Tested to 96 hour salt spray test per ASTM B117

Tested to withstand over 1,000 pounds of force without breaking

- Extreme™: For use with Air-dried and Composite Deck Boards.
3/32" (2.38mm) Spacing
.995" (25.27mm) Overall Width
.390" (9.91mm) Overall Height
.148" (3.76mm) Tab Thickness
.242 (6.15mm) Leg Height
* Extreme™ tall version has .375"(9.53mm) Leg Height
and .523" (13.28mm) Overall Height.
- Extreme4™: For use with Air-dried or Kiln-dried Lumber and Composites.
5/32" (4.00mm) Spacing
.995" (25.27mm) Overall Width
.390" (9.91mm) Overall Height
.148" (3.76mm) Tab Thickness
.242 (6.15mm) Leg Height
- ExtremeKD™: For use with Kiln-dried Lumber and Composites.
1/4" (6.35mm) Spacing
.995" (25.27mm) Overall Width
.390" (9.91mm) Overall Height
.148" (3.76mm) Tab Thickness
.242 (6.15mm) Leg Height
- Standard: Economical alternative for use with air-dried and composite deck boards.
3/32" (2.38mm) Spacing
.945" (24.00mm) Overall Diameter
.390" (9.91mm) Overall Height
.148" (3.76mm) Tab Thickness
.242 (6.15mm) Leg Height
* Standard Tall version has .520"(13.21mm) leg height
and .668" (16.97mm) overall height.

2.1.2 SCREWS

DeckWise® Colormatch Deck Screws

Painted Head Stainless Steel Deck Screws

305 Grade Stainless Steel

T15 Star Drive Finish Heads

Type 17 Auger Tips

96 hour salt spray test

Shadowline Black, Hardwood Brown or Stainless Steel head finish

#8 x 1-1/2", #8 x 2", #8 x 2-1/2", or #8 x 3-1/8"

DeckWise® Composite Deck Screws

Painted Head Stainless Steel Composite Deck Screws
305 Grade Stainless Steel
T20 Star Drive Finish Heads
Type 17 Auger Tips
96 Hour Salt Spray Test
Sand, Hardwood Brown, or Composite Grey head finishes
#10 x 2-1/2"

DeckWise® Heat-Treated Deck Screws

410 Stainless Steel
Bright Hardened
TTAP® T15 Star Drive Finish Head
Type 17 Auger Tip
#3 Drill Point
96 Salt Spray Test
#8 x 2" or #8 x 3-1/4"

DeckWise® Self-Tapping Metal Joist Deck Screw

410 Stainless Steel
Xylan Coated
Bright Hardened
T15 Star Drive Finish Head
Type 17 Auger Tip
#3 Drill Point
96 Hour Salt Spray Test

2.1.3 Plugs

Hardwood plugs designed to fill in countersunk screw holes where face screwing boards is necessary.
Custom sizes available.

DeckWise® Hardwood Plugs - Smooth

3/8" Diameter
Tapered Design
Cumaru, Tigerwood, Ipe, or Massaranduba

DeckWise® Extreme Plugs - Ribbed

3/8", 10mm, or 12mm
Ribbed for greater hole tolerances
Cumaru, Tigerwood, Ipe, Garapa, or Massaranduba

3.0 Installation

3.1: Installing the First Deck Board - Apply DeckWise® Joist Tape™ or a bead of exterior adhesive to each joist approximately 3/8" in width. For adhesives, you may want to do this as you go so, that, it does not dry before completion if you have a larger area to install. While adhesive adds hold-down strength to the boards, it does not prevent wood rot. DeckWise® Joist Tape™ prevents joist wood rot as well as seals around deck screws. Even though joists may seem even, changes in weather can cause board movement. Both Joist Tape™ and/or adhesive will also help prevent squeaking from uneven joists in the future.

3.2: 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 Ipe Clip® 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 Ipe Clip® 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.)

3.3: Drill a 3/8" Countersink Hole Approximately 3/8" Deep - 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.

3.4: Drive a Deck Screw Through the Countersunk Hole - Next, securely drive a deck screw down into the countersunk hole into the joist below. (All Ipe Clip® 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.

3.5: Put a Drop of Glue Into the Countersunk Hole (Polyurethane based recommended) - 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.

3.6: Insert a Wood Plug Into Countersunk Hole - Insert a 3/8" tapered (or Extreme ribbed) wood plug and tap it down with a hammer so it fits snug into the hole. Wipe away any excess glue that may squeeze out. *NOTE: We always encourage finding the wood grain in the plug and aligning it with the deck board grain. This will help ensure the plug is hidden as much as possible.*

3.7: 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.

3.8: Sand for Hardwood Oil Finish - 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 sand paper works best. When sanding is finished, we suggest using Ipe Oil™ for a beautiful natural wood color on your entire deck.

3.9: Cut Slots for Ipe Clip® Fasteners - Use a biscuit jointer or a router (with a 5/32" X 1/2" slot cutting bit) to cut a slot in the edge of deck board above each joist. You will want to center this groove in the board so there is a symmetrical profile for best results using the Ipe Clip® Hidden Deck Fasteners by DeckWise®. *NOTE: Pre-grooved deck boards are now available from many decking suppliers. If you are using pre-grooved decking, skip this step and proceed to step 10.*

3.10: Predrill a Pilot Hole (For hardwood decking only.) - Insert one Ipe Clip® fastener into the groove of the deck board above each joist. Where two boards meet on a single joist, only one fastener is needed. Drill a 1/8" pilot hole at a 45° angle for each screw when installing Ipe Clip® fasteners into hardwood decking. You only need to pre-drill through the hardwood. This is to avoid splintering and to make sure the decking is pulled tight to the joist by the screw in the next step.

3.11.1: Screwing Ipe Clip® Fasteners (Use (3.11.1) for hardwood decking.) - Run the stainless steel screws at approximately a 45° angle through the hole in the center of the Ipe Clip® fastener, through the deck board, and down 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 screwgun 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. Where two boards meet on a single joist, only one centered fastener is needed at their meeting point.

3.11.2: Screwing Ipe Clip® Fasteners (Use (3.11.2) for composite/PVC decking only.) - Run the stainless steel screws straight down through the center of the Ipe Clip® 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 screwgun 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. Where two boards meet on a single joist, only one centered fastener is needed at their meeting point.

3.12: Installing the Next Board Over the Exposed Side of the Fastener - Slide the next deck board onto the installed Ipe Clip® fastener protruding from the previous deck board. Again, if pre-grooved decking is not being used, use a biscuit jointer or a router (with a 5/32" X 1/2" slot cutting bit) to cut a slot into the edge of the next deck board above the joist. Keep in mind, this next board will also have Ipe Clip® hidden fasteners installed on it's opposite edge for fastening, and so forth.

NOTE: When using Ipe Clip® ExtremeKD™ or Extreme4™ fasteners, use the DeckWise® 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.

Repeat steps 3.10-3.12 until all deck boards are installed up to the last board.

3.13: 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.

3.14 PROTECTION - No finish is required for the DeckWise® Ipe Clip®s or screws. However, regular inspections are suggested to identify fasteners that may need replacement. Ipe Oil™ is suggested to finish hardwood boards including Ipe Seal™ for end grain sealing.

3.15 COUNTRY OF ORIGIN - All DeckWise® Ipe Clip® Hidden Deck Fasteners are proudly manufactured in the United State of America, Bradenton Florida.