



2009 INSTALLATION GUIDELINES

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Important Information Before You Start

These installation guidelines will direct you through the process of installing a Procell Decking System. Most contractors will find this process very similar, if not identical to the installation of a regular wood deck. There are, however, certain areas that you will want to pay closer attention to.

The following pages depict installation methods that have proven successful and are therefore recommended by the manufacturer. Please keep in mind that they may not cover every installation scenario you may encounter. Since each installation is unique in its performance requirements, the ultimate installation method used is the sole responsibility of the installer.

Procell Decking Systems disclaims any liability or responsibility for the improper installation of this product. The purchaser is solely responsible for compliance with applicable local codes as to the deck's intended use. Procell Decking Systems recommends that all designs be reviewed by a licensed architect, engineer or local building official before installation. Procell Decking Systems will provide, at the purchaser's request, independent laboratory results to assist in your planning process.

Expansion and Contraction

Procell Decking Systems are vinyl-based products. For this reason, a certain amount of expansion and contraction is natural with significant temperature changes (see chart below). These changes are most significant during the installation process, and should be accounted for if working in extreme temperatures. A good example would be cutting your planks during a hot afternoon, letting them sit outside overnight in the cool air and then installing them the next morning. Chances are, you will notice a certain amount of contraction.

The best way to avoid this problem is to fasten your planks as soon after cutting them as possible. A plank that is fastened securely using two screws per joist will have minimal expansion or contraction.

This means that it is possible to attach planks end-to-end if done in the manner described above. A good rule of thumb is to fit planks tightly at the end or splices on warm days above 80° F and provide (1/16" approx. gap) on cooler days below 32° F.

(CHART A) UNATTACHED EXPANSION AND CONTRACTION BASED UPON A 50° TEMPERATURE CHANGE

LENGTH	EXPANSION/CONTRACTION
12' Plank	3/16" or .190 inches
16' Plank	1/4" or .253 inches
20' Plank	5/16" or .317 inches

Care and Maintenance

Cleaning

It is recommended that you wash your Procell Decking System periodically to remove grease, dirt and debris. Use a liquid soap such as dish or car wash detergent in combination with a garden hose and towel. Stubborn stains may be removed with a 4:1 solution of water to chlorine bleach. To remove rust stains use a household cleaner with phosphoric acid as the active ingredient. Also, in addition to the above cleaners mentioned, there are specially formulated deck cleaners readily available in stores. **AVOID USING CLEANERS CONTAINING ABRASIVES, WHICH WILL DULL THE SURFACE OF THE DECK. ALSO, AVOID THE USE OF RUBBER-BACKED MATS.**

Ice Removal

For ice removal, either rock salt or calcium chloride may be used without damage to the deck surface. However, either of these products may leave a white residue, which would have to be cleaned from the deck later. Either rinsing with water, or a mild soap/water solution should achieve this.

BASIC INSTALLATION



16" Centers

This completed deck substructure is ready for installation. (Refer to Illustration A in "Preparation").

12" Centers

Use 12" on center when deck planks are not applied at a 90° angle to the joists. (Refer to Illustration C in "Preparation").

Use 12" on center for commercial applications.



Set and Square

Set the first decking plank on the substructure and square the plank to the framing. Notice how the ends of the planks overhang the edge of the framing.

NOTE: You may also cut your planks to their exact length prior to installing. If you choose to do this, it is recommended that you fasten the planks as soon after cutting as possible, as large temperature swings may cause unattached planks to expand or contract. (Refer to Chart A on "Expansion/Contraction")



Screw Depth

Countersink your screws as shown above. Adjust the depth on your driver to drive the screw to a depth of $\frac{1}{32}$ " to $\frac{1}{16}$ " below the top surface of the plank. For best results, the screws should slightly penetrate the surface, similar to installing dry-wall.



Board Spacing (continued)

Continue fastening and spacing each plank as directed until the surface has been covered. Other methods of spacing may be used such as ceramic tile spacers, or using the edge of a square as shown above.



Obstructions

Use a jigsaw to easily cut around obstructions such as posts for railings as shown above.



Cutting Preparation

Check to make sure that each plank is fastened securely along its entire length. Allow the decking plank to overhang the rim joist a maximum of $\frac{1}{8}$ ", use a chalk line to mark the location in order to cut the planks to length. This will insure proper rim joist cover fit.

PICTURE FRAME INSTALLATION



Substructure

Completed deck substructure is ready for the new Procell decking surface. (Refer to Illustration B in "Preparation").

NOTE: With this method of installation, you will need to install some additional joists to support the outer decking plank where it runs parallel to the main joists.



Miter Cut

Miter cut the corners and lay down the perimeter planking to form the "picture frame" as shown above.



Fasten Frame

Be sure to let the decking plank overhang the rim joist $\frac{1}{2}$ " up to 1" as shown above. Check for proper fit at each miter cut. Then begin fastening the perimeter planking in place using screws at each joist at 16" on center max.



4 Screw Spacing

When fastening, always position screws $\frac{3}{4}$ " to 1" from the side of the plank. Procell decking planks should not split or crack if screws are needed closer to the edge.



5 No Pre-Drilling

Drive screws through the plank as shown above. Use two screws per joist to secure properly.



6 Board Spacing

Use a spacer to create a gap of $\frac{1}{8}$ " to $\frac{1}{4}$ " maximum between each plank. This will allow for proper drainage of moisture and dirt that accumulates on the surface. The spacer used here is a standard size and is commercially available at most hardware stores.



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Cutting Planks to Length

Use a circular saw with a fine-toothed carbide-tipped finish trim blade to cut off the edges of the overhanging planks. A 20-grit diamond-tipped blade with a miter saw can also be used.



11

Installing Rim Joist Cover

Apply an exterior grade construction glue to the back of the rim joist cover. Be careful not to get glue on the deck surface. Miter cutting the corners will eliminate exposed edges.



12

Rim Joist Cover

Use Procell's rim joist cover to cover the face of the rim joist and the edge of the decking planks. Attach using screws roughly 12" on center.



4

Proper Spacing

Use your preferred spacing method to allow for the $\frac{1}{8}$ " to $\frac{1}{4}$ " gap between planks. Fasten planks using two screws per joist.



5

Finish Install

Continue to attach planks until surface is complete.



6

Cover Rim Joist

Use decking planks or rim joist cover to cover the rim joist as shown above. (For rim joist installation, refer to steps 11 and 12 in "Basic Installation"). Miter cutting the corners will provide a clean, finished look.

Material Requirements

Start by calculating the square footage of your deck surface. Once you know this number, divide it by **5.5** for 12' planks, **7.333** for 16' planks and **9.167** for 20' planks (These numbers represent the total square footage for the 12', 16' and 20' Procell Decking System planks). When calculating the amount of decking you will need, it is recommended that you add roughly **3%** to the total for a scrap factor.

Example:

Length x Width = Total Square Footage

Square Footage ÷ by **5.5(12')**, **7.333(16')** or **9.167(20')** = Planks Needed (*Round up*)

Planks Needed + **3% (Scrap Factor)** = Final Number of Planks Needed (*Round up*)

NOTE: You will need approximately **3.54** fasteners per 1 square foot of decking when using 16" centers. You will need approximately **4.64** fasteners per 1 square foot of decking when using 12" centers.

Remember that if you are attaching the planks at an angle, you will likely generate more scrap from cutting, so more material may be required. A drawing to scale may help you determine how much more plank material will be required.

Fasteners

Color-matched stainless steel fasteners are available. Two recommended color-coated screws are:

FLATHEAD			
Size: #8	Length: 2 1/2"	Head Style: Flat	Head Diameter: 0.313"
Drive: #2 Square	Tip: #17 Self-Drilling	Material: 305 Stainless	Color: Color-Matched
TRIM HEAD			
Size: #8 x 2 1/4"	Length: 2 1/4"	Head Style: Trim	Head Diameter: 0.280"
Drive: #2 Square	Tip: #17 Self-Drilling	Material: 305 Stainless	Color: Color-Matched

There are other types of fasteners available including those designed for composite decking, which may be used. When selecting an alternative fastener, we recommend the following requirements are met: **Stainless Steel Composition; Minimum Screw Size: #7; Minimum Length: 2 1/4"**.

Tools Required

Procell Decking Systems can be installed with a minimum number of readily available tools. There are, however, many other tools available to contractors that can provide even greater efficiency and ease of installation. The following chart shows some of the basic tool requirements:

Circular Saw	Cordless Driver	Carpenter Square
Chalk Line	Spacing Tools	Tape Measure

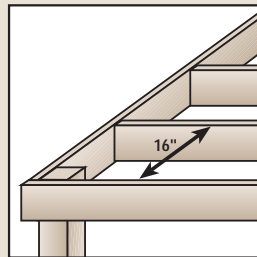
A power miter saw and jigsaw can also be very helpful during installation. Use the jigsaw to cut around obstructions such as posts. Self-feeding screw guns can be used to drive screws properly with minimal physical effort. It is recommended that you use a circular saw with a fine-toothed carbide-tipped finish trim blade or a 20-grit diamond-tipped blade to achieve the neatest cuts. Safety glasses should be used during the entire installation process.

Preparation

Proper joist spacing is required for proper installation. Check to make sure that the joist spacing on your substructure does not exceed 16" center-to-center (12" for commercial applications). If tearing off existing decking material first, check to see that all joists are level, structurally sound and that there are no nails or screws protruding.

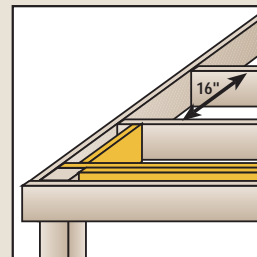
If you plan to run decking planks on a 45° angle such as with a herringbone pattern, the joists should not exceed 12" center-to-center. As always, all supports for attaching railings should be in place before installing your planks. Procell Decking System products should not be used for railing supports.

Illustration A



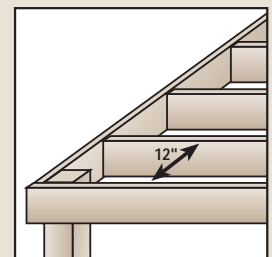
Basic Installation Substructure
16" on center max. joists.
(12" for commercial applications).

Illustration B



Picture Frame Installation Substructure
16" on center max. joists plus additional support for the picture frame structure.
(12" for commercial applications).

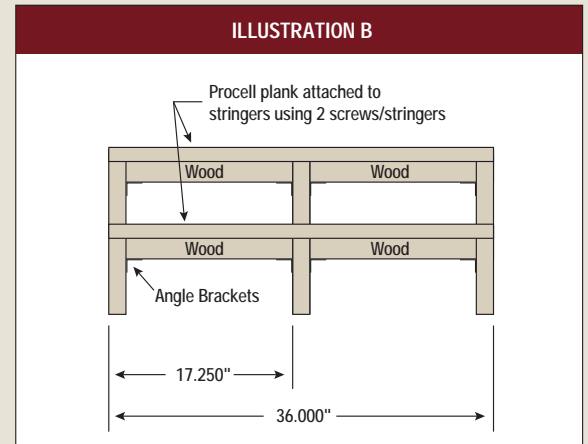
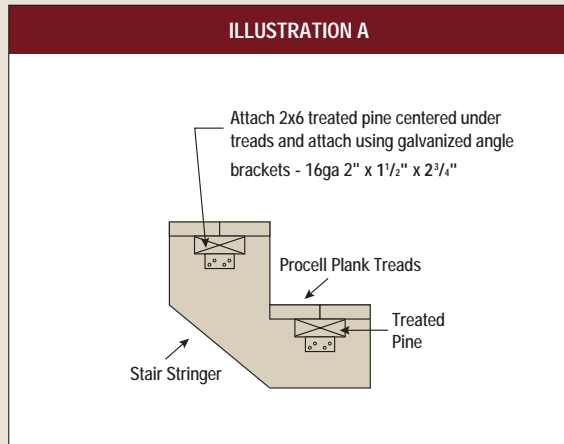
Illustration C



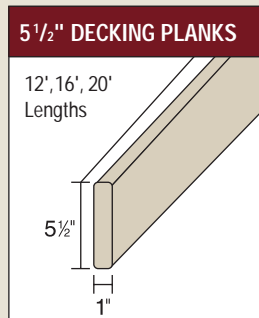
Diagonal Installation Substructure
12" on center max. joists.

STAIR CODE COMPLIANCE

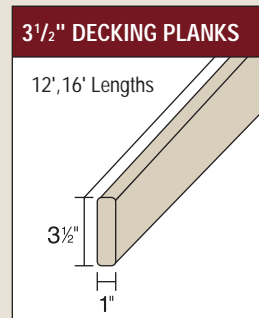
In order to meet the AC174 Requirement for stair loading, the following method of construction is necessary:



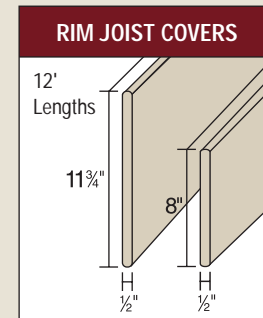
SIZE SPECIFICATIONS



Decking Planks are 1" x 5 1/2" and are available in 12', 16' and 20' lengths.



Decking Planks are 1" x 3 1/2" and are available in 12' and 16' lengths.



Rim Joist Covers are 1/2" x 11 3/4" and 1/2" x 8", and are 12' in length.