

STAPLE/NAIL DOWN INSTALLATION INSTRUCTIONS

REQUIRED TOOLS AND ACCESSORIES

- * Tape Measure
- * Pull Bar
- * Hand Saw or Electric Saw (Recommend Carbide Tip Blade)
- * Hammer
- * Tapping Block
- * Utility Knife
- * 6' Straight Edge
- * Spacers (1/2")
- * 15 lb. asphalt saturated felt
- * Carpenter's Square
- * Broom
- * Safety Equipment (Goggles & Mask)

RECOMMENDED FASTENERS

- * Power Nailer model #200 with 1" cleat nail (pneumatic) or #250 (manual)
- * Primatech R610 Flooring Nailer with 1" T Cleats (manual)
- * Porta-Nailer 461 Flooring Stapler with 1" staples with 1/4" crown (pneumatic)
- * Stanley Bostich Floor Runner Stapler with 1" staples with 3/16" crown (pneumatic)

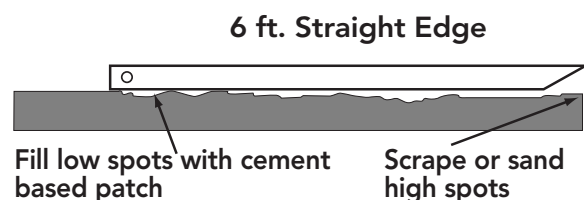
SUBFLOOR PREPARATION

Approved Subfloor Types:

1. APA approved 5/8" minimum thickness, preferred 3/4" or thicker exterior plywood .
Note: When installing approved plywood, refer to specific structural panel manufacturer's instructions.
2. 3/4" (23/32") OSB on 16" center floor joists properly nailed
3. Concrete slab with additional approved subfloor of sleepers or screeds
4. Existing wood floors (installed at right angle only)
5. Resilient tile and sheet vinyl only over an above mentioned and approved subfloor.

Subfloors must be:

- CLEAN - Scraped or sanded, swept, free of wax, grease, paint, oil and other debris



- LEVEL/FLAT - Within 3/16" in 10' span and/or 1/8" on 6' span. Sand high areas or joints, fill low areas (no more than 1/8") with a cement type filler
- STRUCTURALLY SOUND - Nail or screw any loose areas that squeak. Replace any water damaged sub-flooring or underlayments.
- DRY - Moisture content of the subfloor must not exceed 14% on a wood moisture meter, or read more than a 5% difference than moisture content of product being installed.

Concrete Slabs: Must have a minimum of 3/4" plywood with a minimum of 6 mil polyfilm vapor barrier secured to the slab. All concrete subfloors should be tested for moisture content. Below are methods to test for moisture:

- Tape down 2' x 2' polyfilm squares (a garbage bag or plastic drop cloth will do) in several places on the floor. Wait 24 - 48 hours, then check for the appearance of condensation on the inside of the bag or plastic or for a darkening of the concrete subfloor. Either occurrence signals the likely presence of excess moisture, requiring a Calcium Chloride Test.
- Perform a Calcium Chloride test. The maximum acceptable reading is 3 lbs./24 hours/1000 sq. ft. for moisture emissions and a pH reading of 6-9 on a number scale of 1-14.
- Use a Delmhorst moisture meter, Model G-40 or Tramex Concrete Encounter. Check the subfloor in several locations.

Remember: The moisture content of the subfloor must not exceed 14% on the moisture meter or read more than a 5% difference than the moisture content of the product being installed.

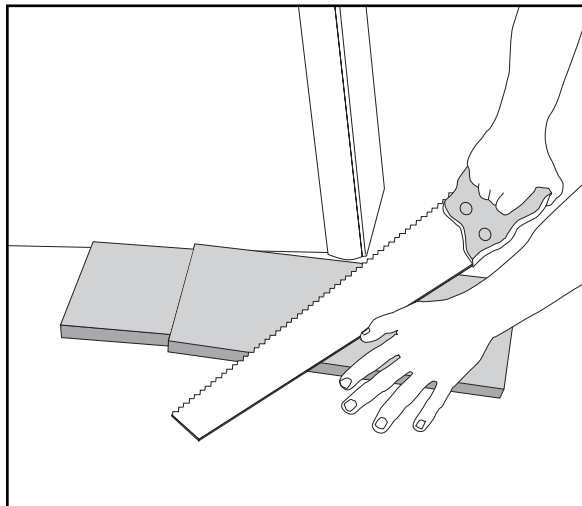
Installations Below the Soil Line: All Engineered Shaw Hardwood Flooring™ products can be installed on, above, or below the outside soil line. Below grade installations require that not only the floor, but all surfaces exposed to the ground are to be effectively water/moisture proofed prior to installation.

Important: If a room or subfloor on, above, or below the soil line has too much moisture, correct the problem before installing any Shaw Hardwood Flooring™ product.

Important: Do Not use Venetian and Avalon on Radiant Heat Flooring.

JOB SITE PREPARATION

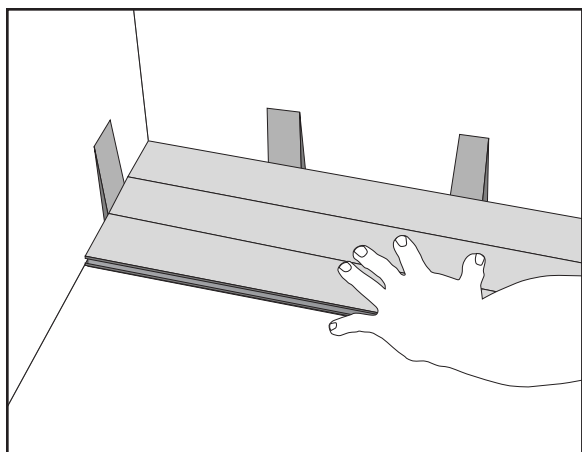
- Undercut door casings.
- Remove any existing wall base, shoe molding, quarter round or doorway threshold.
- Cover the clean subfloor, wall to wall, with 15 lb. asphalt saturated felt. Butt the edges together.



Step 1: GETTING STARTED

1. Choose a wall to start on. Measure the size of the room carefully to make sure the final row of boards (which almost always needs to be cut) is at least 2" wide. If it is not, cut off the long side of the boards on the first row.

Note: To cut the boards, always saw with the teeth cutting down into the face or top of the board. Cutting from the top down helps protect the surface.



2. Begin installing the first row in the left corner at the base wall, so that the short grooved side will be against the wall to your left and the long grooved length of the board will be

against the wall in front of you. The first row of boards should be face nailed and side nailed through the tongue. Place face nails 1/2" from back (groove) edge, 1 - 2" from each end and at least at 3" intervals. Side nail the tongue at 8" intervals. Counter sink heads and fill with filler. Be sure to put 1/2" expansion spacers between the floor and walls at 12" intervals. You will place spacers around the entire room as you go. Always place expansion spacers against the wall where two boards meet. This will make maintaining a good square seam easier.

Note: Larger rooms require additional expansion space. Add 1/16" to the width of the spacers for every 3' the room extends beyond 25'.

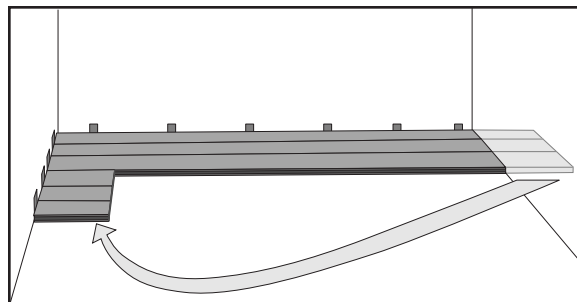
3. If the starting wall is out of square, it will be necessary to scribe the first row to match the wall, allowing the opposite side of the row to present a true square base for the rest of the floor. When the first row is complete, you must have a straight, even base established.

Step 2: INSTALLING THE REST OF THE FLOOR

Important: The flooring should be installed from several cartons at the same time to insure proper color, grain, and shade mix.

For 3" (or less) Wide Planks/Strips: Be attentive to staggering the ends of the boards at least 18" in adjacent rows to avoid clustering end joints.

After face nailing the first row, begin the second row by side nailing each board through the tongue at 8" intervals and within 2 - 3" of the end of each board using the recommended fastener with the proper size staples or cleats. Continue this procedure throughout the remaining rows of flooring until you reach the last row.



For 3" (or less) Wide Planks/Strips: You may have to face nail the first row next to the wall and blind nail through the tongue by hand using 8d finish

nails until you have no vertical obstruction which will prohibit using the staple gun to nail through the tongue.

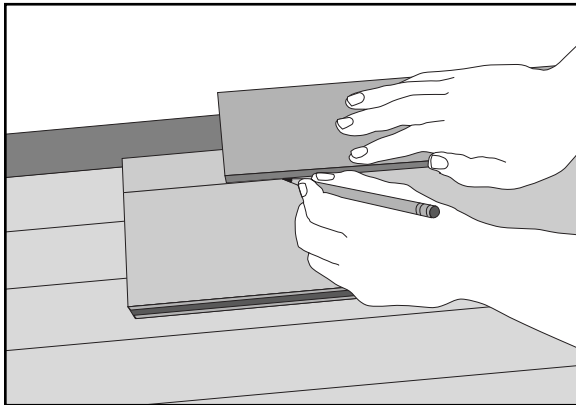
Important: Set air compressor to 80 PSI (or follow manufacturer's suggested PSI setting). Adjust the air pressure to insure proper setting of staples. If tongue damage occurs, lower the air pressure.

Important: If you need to remove a side nailed staple, do not pull straight up from the tongue. This will damage the surface of the board. Instead, pull out the staple from the tongue at the front of the board with all pressure from the hammer head directed into the subfloor.

Step 3: INSTALLING THE LAST ROW

Most often the entire length of the last row will need to be cut so that it is narrow enough to fit the remaining space. When this occurs, follow this simple procedure:

- Lay a row of boards with the tongue toward the wall, directly on top of the last row installed.
- Take a full width scrap piece of the Shaw Hardwood™ product that is being installed with the tongue side against the wall. Use 1/2" spacers against the wall to ensure the proper expansion space.



- Draw a line along the row moving down the wall. The resulting line gives the proper width for the last row which, when cut, can then be wedged into place using the pull bar.

The last row will need to be faced nailed following the same instructions from the first row, nailing 1/2" from back (tongue) edge, 1 - 2" from each end and at least at 3" intervals. Counter sink heads and fill with filler.

For 3" (or less) Wide Planks/Strips: Just as it may have been necessary to hand nail the second or third rows of the installation, it may also be necessary to hand nail the second or third rows from the ending wall because of vertical obstruction which may prohibit using the staple gun to nail through the tongue.

Make sure when the installation is complete that the spacers are removed and the expansion space is covered with an appropriate molding as described in **MOLDINGS, TRIMS & TRANSITION PIECES**.