

**ENGINEED HARDWOOD
GENERAL INSTALLATION INSTRUCTIONS FOR STAPLE/NAIL DOWN FLOORING**

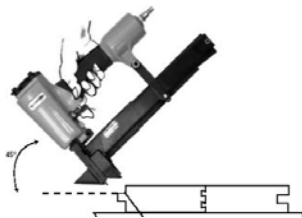
SUBFLOOR PREPARATION

Wood subfloors

- All wood subfloor components must not exceed 12% moisture content.
- Moisture readings between subfloor and installation product must be within a 4% variance of moisture content.
- Do not install flooring directly over floor joist without subflooring. Subfloors provide strength and a proper nailing base.
- All structural subfloor panels must be APA approved flooring grade tongue and groove, with a minimum 3/4" (19mm) thickness. Check panel for codes.
- **Particleboard, Luan or pressure treated plywood are not acceptable substrates**, remove or cover with 3/8" (9.5 mm) plywood.
- Minimum of 3/8" (9.5 mm) CDX panel thickness is recommended when used as an underlayment over an existing subfloor.
- Staple/Nail down installations are not recommended with radiant heat floor systems.

Note that joist spacing determines minimum subfloor thickness.

- Joist spacing 16" (40.6 cm) on center (OC)
 - Plywood: minimum of 3/4" (19 mm)
 - Oriented Strand Board (OSB): minimum 3/4" (19 mm), 23/32" (18 mm)
 - Advantech: minimum 3/4" (19 mm), 23/32" (18 mm)
- Joist spacing 16" (40.6 cm) up to 19.2" (48.8 cm) OC
 - Plywood: minimum of 3/4" (19 mm), 23/32" (18 mm) Tongue and Groove
 - Oriented Strand Board (OSB): minimum of 3/4" (19 mm), 23/32" (18 mm) Tongue and Groove



NAILING TIPS

- Test nail a couple of planks in a well-lit area.
- Place fasteners on tongue side that runs the length of the planks. Do not place fasteners into the groove.
- If the staples do not go in far enough, raise the air pressure on the compressor up slightly and re-test until staples sit flush into the wood above the tongue.
- If the staples go in too deep, lower air pressure until staples sit flush above the tongue. Some floor staplers have the ability to adjust the depth of the fastener. This may need to be adjusted for the staples to seat correctly.
- Tongue fractures can be reduced by lowering the compressor's PSI and using the recommended floor stapler.

- Dimples can be reduced by seating the floor staplers correctly on the board or using thinner gauge fasteners like 20 gauge staples. Make sure the staples are sitting flush in the wood or dimples can occur. Adjusting the depth of the stapler to seat fasteners a bit deeper can help minimize dimples.
- Only use pneumatic nail guns designed for engineered wood flooring. Stanley Bostich, Powernail, and similar engineered flooring staplers are acceptable.
- Check for squeaks after nailing. Squeaks can occur due to tongue fracture, uneven subfloor, improper fasteners, or improper fastener spacing. Squeaks can be corrected or minimized by adding a PVA floating floor wood glue to the tongue and groove of the plank before nailing.
- It's best to pre-drill and hand nail the first row using a 3/32" (2 mm) drill bit and 6d finish nail. This will help prevent finish chipping due to pneumatic finish or brad nailer.

FASTENER GUIDE FOR ENGINEERED HARDWOOD

- For flooring up to 15/32" (12mm) use: 1 1/2" (3.8 cm) 16 or 18 gauge staple or nails.
- For flooring over 15/32" (12mm) but less than 3/4" (19mm) use: 2" (5 cm) 15.5 or 16 gauge staple or nails.

Fastener Spacing

Place fasteners 3"- 4" (7.6 cm – 10 cm) apart (for staples) within 1"- 2" (2.5 cm – 5 cm) from each end with at least two fasteners.

Note: Only use flooring staplers that are fully adjustable and that engage the top profile over the tongue at the appropriate angle. Make sure that the flooring stapler is in good working condition and seats properly against the board to prevent top edge and surface dimple damage. Test and adjust air pressure to ensure proper setting of fasteners. Any damage caused by fasteners or nailer is not covered by the Beaulieu® warranty.

INSTALLATION PREPARATION

- **NOTE TO INSTALLERS: When using knee pads, insure that the cap is a soft material. Never use hard cap knee pads as these may scratch the flooring.**
- Use a manual or electric jamb saw to undercut all door jambs/casing to allow enough clearance for the wood flooring to easily slide underneath. A credit card thick gap between the top of the wood flooring and bottom of the door jamb is acceptable.
- Sand down high areas of the subfloor. Correct low areas (see Subfloor Preparation).
- Sweep or vacuum the subfloor clean of dust and debris.
- Install moisture resistant underlayment, and staple it down to prevent movement/sliding.

NAILDOWN INSTRUCTIONS

- Nail wood flooring perpendicular to the floor joist.
- Always use approved moisture resistant underlayment with a minimum 25 lb per cubic foot density and a thickness no greater than 1/8" (3.2 mm), including Beaulieu's Moisture Barrier Underlayment or a 15 lb asphalt-based felt that is overlapped and stapled.
- Follow all moisture level requirements previously mentioned in this document.
- When nailing over existing solid wood tongue and groove flooring, install additional 3/8" (9.5 mm) plywood over the top.
- Insure that the starter rows are straight and square to the room.

STEP 1: THE FIRST THREE ROWS

- 1) Determine the starting wall, usually the longest or outside foundation wall. At the two opposite ends of this wall, measure out the width of the board including the tongue, plus the expansion space, and place a mark. An expansion gap must be left around the perimeter and at all vertical obstructions. This gap will be the same as the thickness of the new flooring. For example: 1/2" (12.7 mm) flooring requires 1/2" (12.7 mm) expansion gap.
- 2) Snap a chalk line connecting the two marks. Align the tongue side of the first row of boards on the chalk line with the groove side towards the starting wall, maintain the expansion space.
- 3) Install the flooring with the tongue side facing away from the starting wall. Use long straight planks for the first two rows.
- 4) Pre-drill and top nail the first row of boards using a 3/32" (2 mm) drill bit and 6d finishing nails about 1" (2.5 cm) from the back edge. Pneumatic finish nail guns or brad nail guns can also be used. If hand nailing, countersink the finish nail using a nail punch and fill with matching wood filler. Depending on the width of the wood product being installed, nail the second and third rows using the flooring stapler, and seat the staples flush with the tongue. Insure that these rows are completely straight and square to the room before proceeding with the install.

STEP 2: MIXING THE FLOORING

After installation of the first three rows, dry lay as much of the room as possible. Start this procedure 4" or 5" (10 cm or 12.7 cm) away from the last secured row. Open several boxes to mix board color and sizes (if applicable) to create a random look. Visually inspect flooring for defects while racking. Stagger boards as randomly as possible to avoid creating patterns. Starter boards can be taken from the cut piece of the previously installed row.

NOTE: When installing material that has the same length, be mindful of stair step patterns. Mix the starter boards randomly.

STEP 3: INSTALLATION CONTINUED

Continue nailing until you get to the last two rows. The last one or two rows may have to be top nailed. Again, pre-drill using a 3/32" (2 mm) drill bit and 6d finishing nails. The last rows can be pulled tightly together using a wall Jack or pry bar. Protect base boards before using these tools. The last row may have to be ripped down in width to fit. If the last row is less than 1" (2.5 cm) in width, use a PVA carpenters' wood glue to join the last piece to the previous row.

STEP 4: FINISHING UP

- Fill in nail holes and minor gaps with matching wood filler.
- Install any base board molding and shoe molding.
- Install transition molding if applicable.



Homeowner Obligations

To maintain the coverage under the terms of these warranties and ensure fast and easy warranty service, the homeowner is responsible for the following:

- Keep five (5) planks of the engineered flooring product after installation for testing purposes.
- Keep and be able to provide the original sales receipt or documentation illustrating proof of purchase and installation date of the product.
- Make sure the flooring is installed according to Beaulieu Installation Instructions.
- Keep a list of products used to clean your flooring.

Please visit our website at beaulieuflooring.com for the most up-to-date version of this document as it may have been revised and updated since this printed version.

Warranty Guide as well as Care and Maintenance instructions can also be found on our website at beaulieuflooring.com, or you may contact:
Technical Services at 800-944-2840 or tek.services@beaulieugroup.com

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