

Builders' Choice

Engineered Longstrip Hardwood Floor INSTALLATION INSTRUCTIONS

PLEASE READ THESE INSTRUCTIONS COMPLETELY BEFORE BEGINNING THE INSTALLATION. Builders' Choice Engineered Longstrip Hardwood Flooring must be installed in accordance with the following instructions. Failure to do so may void the product warranty. Professional installation is recommended for nail down or floating installation and required for glue down installation.

INSTALLER'S / OWNER'S RESPONSIBILITY

As a natural product, hardwood contains inherent variations in color, grain and appearance and other visual imperfections. Builders' Choice Hardwood Flooring is manufactured in accordance with accepted industry standards which permit a defect tolerance not to exceed 5%. These defects may be the result of manufacturing or naturally occurring characteristics of the material. It is recommended that a 5% cutting or grading allowance be added to the total square footage when calculating the quantity of flooring required.

It is the sole and joint responsibility of the installer and owner to conduct a quality inspection of all flooring prior to installation. All pieces of flooring should be examined for quality of manufacture, finish and color. If the product quality is deemed unacceptable, it should not be installed. Flooring that has been installed will be deemed to have been inspected and accepted by the installer and owner.

It is the sole responsibility of the flooring installer to ensure that the job site, subfloor and installation tools and materials meet or exceed all applicable industry standards. Builders' Choice accepts no responsibility for problems arising from incorrect or improper site preparation or installation procedures.

PRODUCT USE:

Builders' Choice Engineered Longstrip Hardwood Flooring is for indoor residential use only. This flooring may be installed:

- on, above or below grade

- with nail down, glue down or floating installation

- over plywood or concrete subfloor

- over existing hard surface flooring (ceramic tile, sheet vinyl, linoleum) (floating install only)

This floor may be installed over radiant heat if:

- the floor is installed with floating installation

- the installation conforms to the conditions specified in the Special Instructions for Installation over Radiant Heat (available from your dealer)

- the floor is not made from Jatoba, Kempas, Beech or Maple – these species may *not* be used over radiant heat

***NOTE: SPECIAL INSTRUCTIONS FOR INSTALLATION OVER RADIANT HEAT APPEAR THROUGHOUT THIS**

BROCHURE. THESE INSTRUCTIONS APPLY ONLY TO STYLES OF FLOORING THAT ARE SPECIFICALLY APPROVED FOR USE OVER RADIANT HEAT AND MEET THE CONDITIONS GIVEN ABOVE. INSTALLATION OF NON-PROVED PRODUCTS, OR INSTALLATION OF APPROVED PRODUCTS IN A NON-APPROVED MANNER, OVER RADIANT HEATING SYSTEMS WILL VOID THE PRODUCT WARRANTY.

This product should NOT be installed in bathrooms or laundry rooms. Use in either of these applications will void the product warranty.

Check local building codes and bylaws before commencing installation to ensure compliance with local requirements. In the event of a discrepancy between local codes and manufacturer's guidelines, local codes should be followed. For further information on installation standards and guidelines, consult the National Wood Flooring Association at www.nwfa.org (Valid member ID# required for access).

SITE PREPARATION:

Installation in newly-constructed home

Installation of wood flooring is one of the last jobs of a new home construction. Prior to installing a wood floor, ensure that:

- the building is completely enclosed with all outside doors and windows in place and securable, including a door from an attached garage to house interior

- all concrete, masonry, plastering, drywall, texturing, painting and other wet work is complete and thoroughly cured and dry

- basements and crawlspaces are dry. Crawlspaces must have no standing water and have a vapor barrier installed in accordance with local building codes. Crawlspaces must also have adequate cross ventilation (15 sq/ft of ventilation per 1000 sq/ft of floor space) and have insulation installed between the floor joists.

- gutters and downspouts are in place, directing water away from the building

- HVAC systems are fully operational, enabling heat and humidity levels to be controlled and maintained throughout the home

- subfloor is properly prepared for installation

- if installing over radiant heat, ensure that the system is in full working order and has been fully tested and running for a minimum of two weeks prior to installation. The system should be turned off for 24 hours prior to installation in the install zone.*

Installation in existing home (Renovation)

Installation in an existing home must meet the same conditions as a new home. If part of a larger remodeling project, ensure that all wet work (painting, wallpapering, texturing, etc) is completed and thoroughly dry before commencing flooring installation. In addition:

- remove all furniture, artwork and other valuables from installation area

- remove baseboards and moldings

- undercut door casings (use a piece of flooring as a depth

gauge)

- remove existing flooring, if necessary

- if installing over radiant heat, it is strongly recommended that a radiant heat technician be consulted prior to installation to ensure that the heating system can be operated effectively at temperatures acceptable to the wood flooring. The system should be turned off for 24 hours prior to installation in the install zone.*

Site conditions

Conditions at the job site must be maintained with the temperature between 65-75°F (18-24°C) and humidity at 35-55% before, during and after the installation. If installing over plywood, these conditions should be maintained for one week prior to installation. If installing over concrete, for two weeks. Following installation, these conditions should be maintained at all times to ensure proper performance of the floor. See Warranty for details.

Flooring material should not be delivered to job site until the site has been acclimatized as detailed above. After delivery, the flooring must be allowed to acclimatize on the job site for 48 hours prior to installation. Do not open packages during the acclimatization period; leave boxes sealed until ready to commence the installation, and then open only as needed. If stacking the boxes, cross-stack to ensure good air flow between layers. Do not place boxes directly on concrete subfloors during acclimatization; elevate them on blocks.

Subfloor preparation

The installer and customer are jointly and solely responsible for ensuring that the subfloor is suitable for the flooring application and properly prepared for installation.

All subfloors must be clean, dry, structurally sound and flat to within 1/8" in 8'. All subfloors must be tested for moisture content according to NWFA guidelines.

Plywood subfloors must meet local building code requirements (minimum 5/8" tongue & groove plywood or 3/4" approved tongue & groove OSB on 16" centers). They must be secure to the joists, free of squeaks and protruding fasteners. Subfloor moisture content must not exceed 12%, and the variance in moisture content between the subfloor and the flooring boards must not exceed 4 percentage points.

Concrete subfloors must be fully cured (60 days) prior to installation. Moisture content of the slab should not exceed 3 lb / 1000 sq/ft / 24 hours, or as specified by the NWFA for the region and concrete material involved.

If the flooring is being installed over a radiant heating system, moisture content of the slab should not exceed 2 lb / 1000 sq/ft / 24 hours. The system should be turned off in the installation zone for 24 hours before installation begins and left off for the duration of the installation period. *

Color racking

Real wood flooring contains natural variations in color and grain pattern. In order to prevent color "grouping" or repetitive grain patterns in the finished floor, it is recommended that boards be racked (visually sorted) before installation to create a satisfactory and pleasing color arrangement. Immediately prior to installation,

unpack 1 or 2 cartons to get a sense of the range of color variation and arrange the planks to achieve a satisfactory appearance.

When racking, inspect all boards for visible manufacturing defects. Boards with manufacturing defects in excess of industry standards (5% of total quantity) may be replaced by the dealer under the terms of the product warranty. Once installed, boards will be considered to have been accepted by the customer and will not be eligible for replacement. (See Warranty for details.)

Expansion space

Wood flooring will expand and contract with changes in ambient temperature and humidity. To allow for this, during installation leave a 1/2" expansion space around the entire perimeter of the floor between the flooring and the walls. Also leave expansion space where the flooring will meet any vertical obstacle, such as stairs, pipes, door sills, tiles, cabinets etc.

NOTE: In climates with extreme variations in humidity (beyond the range of 35 to 55%), or in large installations (800+ feet), a larger expansion space may be required.

Starting Wall

All wood flooring installations require that the flooring be installed in perfectly straight rows parallel to the starting wall. To verify that the starting wall itself is straight, measure out 12 inches from each end of the wall and snap a chalkline parallel to it. Measure the distance from the line to the wall every 2 or 3 feet. If it is consistent, the wall is straight. If there is a variance anywhere of more than a quarter inch, cut the first row of floor boards to match the shape of the wall.

NAIL DOWN installation

The following nailer / fastener combinations are recommended for nail down installation:

- Bostitch M111FS, 1½"-2" staple, 15½ g (1 shim, wheels lowered)

- Bostitch M111FN, 1½" - 2" cleat, 15½ g (1 shim, wheels lowered)

- Powernail 50P, 1¾" cleat, 18 g

- Powernail 445, 1½" - 2" cleat, 15½ g (use 5/8 shim)

Check your nail gun to make sure the depth gauge is appropriate for the thickness of the flooring. Put tape or felt on the bottom of the nailer to prevent scraping the floor. Replace it as necessary. Test nail a piece of scrap to make sure the gun is correctly set up, and that the cleats or staples are being properly set. You will also require a pneumatic finish nailer and a brad nailer for topnailing.

Ensure plywood subfloor is suitable and properly prepared. Verify moisture content is within allowable guidelines. Open 1 or 2 packages of flooring and rack and inspect boards. (See Color Racking, above.) Select your starting wall and verify straightness as described above.

Set the first row in place with the groove side facing the wall. As a guide, measure in from the chalkline used to check the straightness of the wall to the finished top edge of the board. Remember to allow expansion space.

Glue the butt edges together using a non-crystallizing wood flooring glue (eg Deccobond). Apply glue in a 1/8" bead to upper

edge of groove portion of joint only. Set joints closed using a white rubber mallet or hammer and tapping block. Never use a hammer directly on the tongue and groove joints as damage to the joint may result. Clean up excess glue immediately according to glue manufacturer's instructions. Note: gluing of butt joints for nail down installation is recommended but not mandatory.

Using a pneumatic finish nailer, blind nail along the tongue edge at a 45° angle. Space nails every 8" to 10" along the length of the boards. Ensure there is a nail 4" to 5" from each end of each board, but do not put nails less than 4" from the end of the board as splitting may result. At the end of the row, cut a board to fit, allowing ½" expansion space.

Top nail along the opposite edge with the brad nailer. Keep the nailer perpendicular to the grain of the wood and set nails ¼" in from the edge of the board, so they'll be covered by molding.

Before proceeding, place an underlay of 15 lb building paper, roofing felt or similar material over the rest of the subfloor. It can lay loose, and should not run all the way to first row - leave a space of about half a board width.

Set the second row in place and set the tongue and groove joints. Do not use boards of less than 12" in length, and stagger all butt joints by a minimum of 20". Glue butt joints if desired and, using the nail gun, nail along the tongue, spacing nails every 8" to 10" along the length of the board. Continue with subsequent rows. To avoid a repetitive or predictable board pattern, cut some boards to random lengths to begin rows. Open new packages 1 or 2 at a time and rack and inspect boards as described above. Ensure 1/2" expansion space is maintained at all perimeter walls and other vertical obstacles. Maintain nailing schedule and keep butt joints staggered as described above.

In the last couple of rows, there may not be space to use the nail gun, so revert to using the finish nailer as before, blind nailing through the tongue. For the final row, measure the gap to the wall, allowing expansion space, and rip a row of boards to the required width. Top nail the final row into place using brads nails placed ¼" in from the edge. Install moldings and transitions as required. Ensure baseboard moldings are affixed to the wall, not the floor.

GLUE DOWN INSTALLATION

GLUE DOWN INSTALLATION SHOULD ONLY BE PERFORMED BY PROFESSIONAL WOOD FLOORING INSTALLERS.

Ensure subfloor is suitable and properly prepared. Verify moisture content is within allowable guidelines.

There are several acceptable techniques for starting a glue down installation. The following is one common procedure; installers may prefer another method with which they are more familiar.

Select the starting wall and verify straightness as described above. Snap a chalk line parallel to it at a distance equal to 2 to 5 rows of flooring, plus expansion space. Nail a guide strip along the chalk line on the starter wall side.

Use a moisture-cured urethane adhesive specially formulated

for wood flooring installation (eg Bostik's Best, Bostik TKO, Franklin 811). For trowel selection, adhesive application and all other aspects of adhesive usage, follow the adhesive manufacturer's instructions.

Open 1 or 2 packages of flooring and rack and inspect boards. (See Color Racking, above.) Apply adhesive to the subfloor and set first row of boards along the guide strip with the tongue against the strip. Leave 1/2" expansion space between the end of the first board and the wall. At the end of the row, cut a board to fit, ensuring board length is not less than 12". Allow 1/2" expansion space to end wall. If desired, use offcut to begin next row.

Set subsequent rows working away from starter wall. When installing new boards, avoid pushing them into place across the subfloor as this may unevenly redistribute the adhesive. Instead, hold the new board above the subfloor at an angle, engage the tongue and groove joint, then press the board directly down onto the subfloor. Ensure no glue is forced into tongue & groove joints during installation as this may affect the fit of the joint. Avoid getting adhesive on the flooring surface, and clean up any seepage or spills immediately according to manufacturer's instructions.

To prevent boards shifting after they have been set into place, strap them with blue mask tape. (Do not use regular masking tape as it may leave a residue of adhesive on the surface.)

Continue with subsequent rows. To avoid a repetitive or predictable board pattern, cut some boards to random lengths to begin rows. Open new packages 1 or 2 at a time and rack and inspect boards as described above. Do not use boards of less than 12" in length, and stagger all butt joints by a minimum of 20". Ensure 1/2" expansion space is maintained at all perimeter walls and other vertical obstacles.

Complete the installation to the far wall. For final row, rip boards to required width (allowing 1/2" expansion space at far wall). Remove the guide strip from the starter row and complete the last ten rows back to the starter wall.

When installation is complete, remove all the blue mask tape from the floor. (Do not leave the blue mask tape on the floor for more than 24 hours.) If desired, roll the floor with a padded roller of recommended weight (100 to 150 lbs.) Install moldings and transitions as required. Ensure baseboard moldings are affixed to the wall, not the floor. Wait 24 hours before moving furniture or appliances onto floor.

FLOATING FLOOR Installation

NOTE: THIS INSTALLATION METHOD MUST BE USED IN ALL INSTALLATIONS OVER RADIANT HEAT. PRODUCT & INSTALLATION MUST ALSO CONFORM TO CONDITIONS LISTED IN 'PRODUCT USE' ABOVE.

Ensure subfloor is suitable and properly prepared. Verify moisture content is within allowable guidelines.

If installing over radiant heat, place approved heat sensors on the subfloor in accordance with manufacturer's instructions. A minimum of 5 sensors must be placed for every 1000 square

feet of flooring installed. (Sensors and Special Instructions For Installation Over Radiant Heat are available from your dealer. Failure to install the product in accordance with these instructions will void the product warranty.)

If the flooring is being installed on a concrete sub-floor, or over a crawlspace, or below ground level, a vapor barrier must be installed. Lay a single layer of 6 mil polyethylene sheeting over the entire subfloor. Allow an 8" overlap between seams and seal seams with duct tape along their entire length. Leave an excess of 4" of sheeting extending up the wall at all outer edges and hold in place with blue or painter's masking tape. (This excess will be trimmed away later.)

Install underlay. Underlay may be cork, rubber, foam or other specialized material designed for floating floor installation. Your Builders' Choice dealer can assist with choosing an appropriate underlay. Install according to manufacturer's instructions.

Open 1 or 2 packages of flooring and rack and inspect boards. (See Color Racking, above.) Verify straightness of starting wall as described above. Snap chalk guideline if desired.

Set first row of boards in place with the long groove side facing the starting wall. Glue the butt edges together. Use a non-crystallizing wood flooring glue specially designed for floating floor installation (eg: Deccobond). Apply glue in an even 1/8" bead to upper edge of groove portion of joint only, fit joint together, and lay new board into place. Set joint closed using a tapping block. (Don't use a hammer on the tongue and groove joints; you might damage the joint.) Clean up excess glue immediately according to glue manufacturer's instructions. Strap joints with blue mask tape to secure them. (Don't use regular masking tape; it may leave a residue on the surface.)

At the end of the row, cut a board to fit. Use the off-cut to begin the next row if you wish. Insert ½" wedges along length of wall and at each end of the row to set expansion spaces.

Begin second row. Run a 1/8" bead of glue along the upper edge of the groove on the long side. Align left hand edge with first row and set in place. Work the tapping block down the length of the new board to set the joint. Use a hardwood tapping block at least 18" in length when setting the long side joints. Tap down the length of the board two or three times gently, rather than once hard. (Stand on the boards, parallel to them, with your feet straddling the joint, to help hold the boards flat while you tap the long side joint closed.)

Apply glue to long side and butt joint of the next board. Engage butt joint with previous board and set new board into place with the long joint slightly open. Stand on the boards with your feet straddling the joint and work the tapping block down the length of the new board to set the joint. Start tapping at the far end of the new board and work towards the butt joint with the previous board.

Each time you close a joint, immediately clean any excess glue off the flooring surface. Note: if excess glue is being forced out every time you close a joint, or if you have difficulty getting the joints to close tightly, use a narrower bead of glue.

Repeat for subsequent boards in second row. Ensure butt joints

are staggered by at least 20", and do not use offcuts of less than 12" in length. When second row is completed, strap the boards to the first row with blue mask tape and leave for one hour for glue to set.

After one hour, resume installation using same technique for gluing and setting joints. Open new packages 1 or 2 at a time and rack and inspect boards as described above. Do not use boards of less than 12" in length, and stagger all butt joints by a minimum of 20". Maintain 1/2" expansion space at all perimeter walls and other vertical obstacles. Strap each row to the previous row as you complete it and periodically check to ensure joints are staying tightly closed.

For final row, rip boards to fit gap and use a pulling bar to close joints. Ensure all excess glue has been cleaned from the floor surface. Strap final row with blue mask tape and leave for 24 hours. Keep floor free of traffic during this period.

After 24 hours, carefully remove blue mask tape. (Do not leave blue mask tape on the floor longer than 24 hours.) Remove wedges and trim the vapor barrier flush with floor surface. Install moldings and transitions as required. Ensure baseboard moldings are affixed to the wall, not the floor.

If the flooring was installed over a radiant heating system, wait 24 hours after installation or until the adhesive has fully cured before turning the system back on. Bring the temperature of the system up gradually, in 5° increments. Never allow the surface temperature of the floor to exceed 82°F (28°C) and avoid dramatic temperature changes; always adjust the system gradually in 5° increments. It is recommended that a dedicated quick recovery thermostat be installed to allow the temperature of the radiant heating system to be accurately controlled.

IMPORTANT REMINDERS:

DO NOT OPEN BOXES until you are ready to install the product. Boards that are left unpackaged and uninstalled may begin to "bow". Only unpack the boards immediately prior to installing them.

RACK ALL BOARDS BEFORE INSTALLING Builders' Choice Engineered Longstrip Flooring is made from real wood, not a manufactured imitation, so every board will have a unique appearance with natural variations in color and character. Racking the boards before installing them will prevent color groupings (dark or light boards grouped together) and help create a pleasing visual appearance.

CHECK GROOVE JOINTS BEFORE APPLYING ADHESIVE Clear all grooves of any wood fragments using a screwdriver or similar tool. Loose fragments may impede the fit of the joint.

APPLY ADHESIVE CAREFULLY IN AN EVEN 1/8" BEAD. DO NOT OVER-APPLY. Too much glue will impede the fit of the joint. If you are consistently getting seepage on the surface when you close the joint you are using too much glue.

CLEAN GLUE OFF FLOOR SURFACE IMMEDIATELY using a clean, damp cloth.