Barcelona Herringbone Flooring Installation Instructions

INSTALLATION WARNING

Installation conditions – including temperature, sun exposure and humidity – will affect this product's performance over time. For best results, room temperature and humidity of installation area must be kept consistent with normal, year-round living conditions for a minimum of one week prior to installation. All products require a specific temperature range of 60°F to 80°F with 35% to 55% relative humidity. Installation outside of these recommended ranges or over a wet subfloor will likely cause movement in the flooring, including potential shrinkage, tip-raising, gapping between pieces, cupping and face-checking. **Barcelona Engineered Hardwood Flooring MUST be installed according to the National Wood Flooring Association's (NWFA) installation guidelines in order for the Limited Warranties to be valid.** The most current publication of the NWFA guidelines is available to all NWFA members, and can be found at www.nwfa.org (800-422-4556)

INSTALLER'S / OWNERS RESPONSIBILITY

As a natural product, hardwood contains inherent variations in color, grain and appearance and other visual imperfections. Barcelona Engineered Hardwood Flooring is manufactured in accordance with 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 sq footage when calculating the quantity of the flooring required. It is the sole and joint responsibility of the installer and owner to conduct a quality inspection of all the 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 industry standards. Barcelona Hardwood voids all responsibility for problems arising from incorrect or improper site preparations or installations procedures. **IMPORTANT!** Adhesive/masking tape applied directly to hardwood floor surface will damage the factory finish and void the manufacturer warranties.

SITE PREPARATION

- The building is completely enclosed with all outside doors and windows in place and secured.
- All concrete, masonry, plastering, drywall, texturing, painting and other wet work is complete and has been allowed to cure and dry completely.
- Basements and crawlspaces are dry. Crawlspaces must have no standing water and have a vapor barrier installed in accordance with local building codes.
- Exterior surface drainage is directing water away from the house.
- Interior heat and humidity levels can be controlled and maintained at recommended levels for the duration of the acclimatization and installation period.
- Sub-floor is properly prepared for installation.

FLOORING ACCLIMATIZATION AND CLIMATE CONTROL

- Climate control at the job site must be maintained with the temperature between 60-80°F and humidity at 35-55% before and during the installation. These conditions should be maintained for at least one week prior to installation.
- 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 72 hrs prior to installation.
- Do not open packages during the acclimatization period, leave boxes sealed until ready to start installation, and then only as needed.

SUBFLOOR PREPARATION

Wood Sub-floors

- Sub-floor must be structurally sound and properly secured with nails or screws every 6 inches along joists to reduce the possibility of squeaking.
- Wood sub-floors must be dry and free of wax, paint, oil, and debris. Replace any water-damaged or delaminated sub-flooring or underlayment.
- Additional requirements for flatness are required for floating floors as stated in installation guidelines.
- Preferred sub-flooring-3/4" CDX Grade Plywood or ¾" OSB PS2 Rated sub-floor/underlayment, sealed side down, with joist spacing of 19.2" or less. Minimum sub-floors-5/8" CDX Grade Plywood sub-floor/underlayment with joist spacing of no more than 16". If joist spacing is greater than 19.2" on center, add a second layer of subflooring material to bring the overall thickness to 1-1/8" for optimum floor performance. Hardwood flooring should be installed perpendicular to flooring joist. If flooring is installed parallel with joist then an additional layer of ½" plywood must be installed to meet minimum requirements of 1-1/8".
  Sub –floor moisture check. Measure the moisture content of both the sub-floor and the hardwood flooring with a pin moisture meter. Sub-floor must not exceed 12% moisture content. The moisture difference between sub-floor and hardwood flooring shall not exceed 4%. If sub-floors exceed this amount, an effort should be made to locate and eliminate the source of moisture before further installation.
- Do not nail or staple over particle board or similar product.

Concrete Sub-floors

- Concrete slabs must be of high compressive strength with a minimum of 3,000 psi. In addition, concrete sub-floors must be dry, smooth and free of wax, paint, oil grease, dirt, non-compatible sealers and drywall compound etc.
- Engineered hardwood flooring may be installed on, above, and/or below-grade.
- Concrete substrates must meet or exceed adhesive manufactures guidelines for flatness.
- Additional requirements for flatness are required for floating floors as stated in the installation guideline.
- Lightweight concrete that has a dry density of 100 pounds or less per cubic foot is not suitable for engineered wood floors. To check for lightweight concrete, draw a nail cross the top. If it leaves an indentation, it is probably lightweight concrete.
- Concrete sub-floors should always be checked for moisture content prior to the installation of wood flooring. Standard moisture tests for concrete sub-floors include relative humidity testing, calcium chloride test and calcium carbide test.
- Measure the moisture content of the concrete slab using a TRAMEX concrete moisture meter. If it reads 4.5% or above, then this slab must be checked using calcium chloride tests. Flooring should not be laid if the test result exceeds 3 lbs per 1000 sq ft of vapor emission in a 24-hour period. Please follow the ASTM guideline for concrete moisture testing.

Other Sub-floors

- Ceramic, terrazzo, resilient tile and sheet vinyl, and other hard surfaces are suitable as a sub-floor for engineered hardwood flooring installation.
- The above tile and vinyl products should be level and permanently bonded to the sub-floor by appropriate methods. Clean and abrade surfaces to remove any sealers or surface treatments to insure a good adhesive bond. Do not install over more than one layer that exceeds 1/8” in thickness over suitable sub-floor.
- Substrate must meet or exceed adhesive manufacturers guidelines for flatness.
- Additional requirements for flatness are required for floating floors as stated in installation guidelines.

EXPANSION SPACE

Hardwood flooring will expand and contract with changes in ambient temperature and humidity. To allow for this, during installation leave a ½” expansion space around the entire perimeter of the floor between the flooring and the walls. Also leave a ½” 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, it may be necessary to leave a larger expansion space.

IMPORTANT

- Herringbone flooring can be installed in many different patterns as the planks are universal (not left and right) as they have one tongue and 3 grooves. Please note that some patterns will require false tongues to ensure a stable installation.
- Herringbone flooring must be installed using glue down method only.

GLUE-DOWN INSTALLATION GUIDELINES

Recommended Adhesive:

Sika or TEC

Suggested Trowels:

Consult with adhesive manufactures to confirm the trowel size.

Glue Down Installation Instructions

- Make sure properly test the subfloor before installation, following subfloor preparation instructions previously aforementioned.
- Apply a moisture barrier to slab. Sika or TEC is recommended.
- A urethane-based adhesive should be used exclusively. Sika or TEC is recommended.
- A 1⁄2" expansion space should be left around the perimeter. Roll the whole floor with a 150 lb. roller within 3-6 hours after installation. Finished areas should be covered with breathable protective paper, NEVER PLASTIC, immediately after installation to prevent damage. Do not tape protective paper to the finished surface of the wood for extended periods of time.
- Clean wet adhesive from the surface of the floor frequently using the manufacturers recommended remover. Use clean towels, changing frequently to prevent haze and residue. Contact the adhesive manufacturer for adhesive removal remedies.
- Do not allow foot traffic on the finished floor for 24 hours after installation is completed.

Step 1 - Setting The First Row (Refer to the diagram below)

It is important to be precise with a herringbone installation so ensuring the first row is correctly positioned and square is key. Herringbone installations should always be started at a center point and to avoid constant movement and repositioning during the installation it is easier to start from a fixed point. So an initial row should be laid and fully bonded, this row is then used to install the rest of the floor.
The following method makes use of a square template to help set the first row. The template can be made from pieces of plywood with sides equal to or larger than the lengths of the planks. Make sure the square is true, the diagonals of the square are of equal length. Once correctly positioned and screwed to the subfloor, the square template will provide a solid start point making it easier to move the planks into position without gaps opening up.

1. Plan the direction of the herringbone pattern, usually this will follow the length of the room.
2. Find the center of the room and use a plumb line to mark out the center line. The apex of the first row of planks will run along this line.

Note: If the center line is used to align the square template, then the row apex will be offset by the depth of the tongue which is approximately 5 mm. If total accuracy is required, then first find the room's center line and then mark an offset guideline 5 mm to its right and use this line to place the square template.

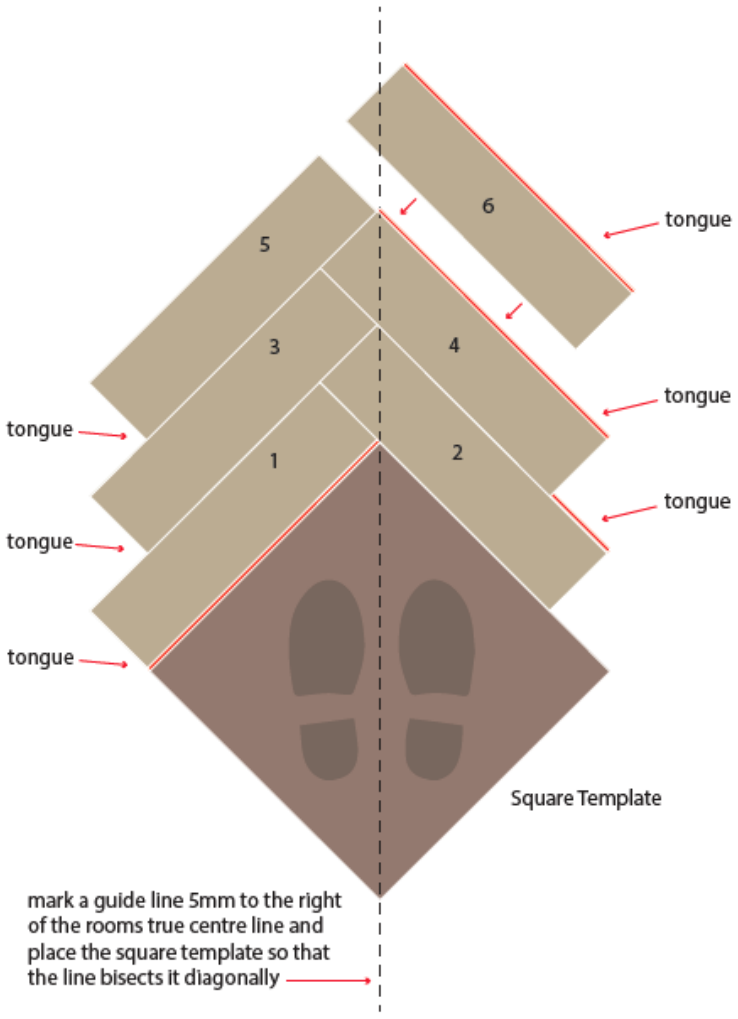
3. Starting close to the wall place the square template so that the offset guideline bisects square diagonally from opposite angles. Once positioned screw the template to the subfloor.
4. Working from this template will ensure the first row's apex follows the center line.
5. Standing on or behind the square template, apply adhesive with a Trowel to the area in front of the square.

Note: It is good practice to loose lay the first row to make sure you are happy with the orientation guide line and placement of the square template.

Tip: It is also important to mix the blocks to ensure an even distribution of grade, grain and color variation across the finished floor.

6. As per the diagram below, place plank 1, with tongue against the left-hand side of the square template so that the leading header is in line with the right-hand edge of the square template.
7. Place plank 2 with tongue facing away so that the grooved edge is pressed against both the header joint of plank 1 and the righthand side of the square template.
8. Repeat points 6 & 7 placing planks onto the bed of adhesive ensuring that they connect, the leading corner of the herringbone pattern should be positioned over the center line which is 5 mm left of the guideline. Tip: Use a hammer and tapping block to push the planks together, occasionally lift a block and check the adhesive has full coverage.
9. Once the first row has reached the opposite end of the room or the finish point, use a tapping block and hammer to make any adjustments while the adhesive is still wet and remove any adhesive which has not been covered.

Important Tip: Remove any adhesive spills from the face of the planks while it is wet with a damp cloth before the adhesive sets. Allow the adhesive to fully cure and this row will form a fixed point template for subsequent rows.



Step 2 - Complete the Installation (refer to the diagram below)

1. Working off the first row, loose lay the second row placing checking that that the apex of the second row is parallel to the center line.
2. Once you are happy to install, apply adhesive to the area adjacent to the first row.
3. Starting at the 'End Wall', install the first half of the second row in two halves. The first plank (19) should be placed so that the long-grooved edge is pressed against the header joint from the last plank in the first row (18) and the header joint groove connects with the next section of exposed tongue the next plank (16) in the first row. Repeat this process with the first half the second row until the square template is reached.
4. Once the first half of the second row is in place there is no need to wait for the adhesive to set. The second half of the second row is installed. Beginning at the 'Start Wall' place the next plank (28) so that the long-grooved edge is pressed against the header joint of the last plank (27) and the grooved header joint connect with the exposed tongue of the next plank (26)
5. Repeat this process to fill both sides of the first row cutting planks to fit the perimeter of the room so that adequate expansion gap is maintained which can then be covered by skirting or molding.
6. A border may be installed using a plunge saw to cut away the blocks to make the required space. A groove can then be machined into the cut edge so that planks can be joined.