



A Family Heirloom From Day One

FRONTENAC

Solid Wood Flooring

Installation

GENERAL INSTALLATION GUIDE

STORAGE

Always store the floor and moldings in normal ambient living conditions, i.e. between 35% and 55% relative humidity. Do not store in a garage, basement or other locations where the wood would be exposed to the effects of uncontrolled humidity. Avoid uselessly opening the boxes. Do not open the boxes ends.

RESPONSIBILITY OF INSTALLER AND OWNER

The installation of a hardwood floor should be done according to the floor industry's best practices. This is why we are recommending that you contact a National Wood Flooring Association Certified Professional to install your floor. A list of active NWFCA Certified Professionals can be found online at www.nwfapc.org Before the installation, ensure and confirm that the work environment and the subfloor meet the minimal conditions of this document;

- Inspect the subfloor and verify its moisture content (MC);
- Install your product in normal living conditions; between 35% and 55% relative humidity

Perform final inspection and approbation of floor components with respect to their grade, finish, color and manufacturing quality prior to the permanent installation;

- Any installed floor component will be considered as accepted by the installer and the owner – whether or not the owner is present during installation – and consequently will not be covered by our warranty.

SUBFLOOR

Before proceeding with the installation of your wood floor, carefully inspect the work location in order to determine whether the subfloor and the building's ambient environmental conditions are acceptable. Verify the following:

- For houses that have a crawlspace or a pillar foundation
- Vents shall ensure a transverse ventilation so that air can freely circulate everywhere;
- The foundation shall have a minimum of two vents that are open year-round and whose combined cross-section area is equal or greater than 1.5% of the crawlspace area;
- Cover the crawlspace floor with a black polyethylene vapor barrier of 6 mil (6/1000 in or 0,15 mm).
- The wood subfloor shall be structurally sound and solidly affixed to the joists.
- For plywood subfloors or OSB, they shall conform to the norm "U.S. Voluntary Product Standard PS1-07, Construction and Industrial Plywood" and/or "US Voluntary PS 2-04" and/or the standard Canadian performance norm CAN/CSA 0325.0-92
- Subfloor plywood thickness is determined by the joist spacing:
- A joist spacing of 16 in requires a plywood of 5/8 in or OSB 23/32 in or more
- A joist spacing of 19 in requires a tongue and groove plywood of 23/32 in or OSB 23/32 in or more
- If the subfloor is a wood surface, the floor components shall be installed either perpendicular or at 45 degrees with respect to the joists.
- If the subfloor is a concrete surface, the concrete shall have a minimum compressive strength of 3000 psi.

- The subfloor must be clean, flat, smooth and free of debris of any kind. Flatness tolerance is a maximum of 1/4 in (6 mm) within a radius of 10 ft. (3 m).
- For nailed or stapled installations, the installation of a wood subfloor vapor barrier is recommended. Acceptable vapor barrier must be a membrane with a vapor permeability (infiltration coefficient) equal or greater than 0.7 and equal or lower than 10 when tested as per ASTM E-96 A. The installation of a vapor barrier will reduce the migration of humidity and related vapor problems, but it is not a guarantee that it will eliminate them..

SUBFLOOR MOISTURE

- The wood subfloor moisture shall not exceed 12%.
- The moisture difference between the wood subfloor and the floor itself shall be:
- No more than 4% in floors less than 3 in wide
- No more than 2% in floors wider than 3 in wide
- The moisture evaporation rate for concrete is at most 3 lbs per 1000 ft² / 24 hrs (ASTMF1869 calcium chloride test). If it is higher than that, use a sealer/retarder appropriate for the specific installation.

INSTALLATION - GENERAL REMARKS

For nailed or stapled installation: it is best to start from the middle of the room for rooms less than 20 ft. wide and mandatory to start from the middle of the room for rooms wider than 20 ft. in order to spread out the expansion. Please make sure to allow enough expansion space, min 3/4 in for solid floors. Given the natural wood color variations, the installer shall work at all times with three or four open boxes in order to harmonize the overall look of the floor.

1- Draw a guiding line parallel to the installation orientation

2- Fix a straight support block in order to guide and facilitate the installation of the first rows.

3- Remove the support block and nail – or staple – (depending on the chosen mode of installation) a tongue reversal piece in the groove of the first installed row and continue with the installation.

4- To complete a row, pick a floorboard that has a length difference of at least 6 in (15 cm) with the first floorboard of the previous row, in order to avoid aligning the joints. Install the floorboard and then use its sawed-off section to start the next row.

5- Avoid joint alignment:

- For products of 4 in (width) or less, make sure that the joints are at least 4 in (10 cm) away from each other;
- For products of more than 4 in (width), make sure the joints are away from each other by more than the product width;

6- Install moldings and quarter rounds by nailing them in the wall, NEVER IN THE FLOOR. AFTER INSTALLATION

- Install moldings and other aesthetic parts (when applicable).
- Let the floor breathe. Do not cover with a non-porous material like plastic, rubber or vinyl.

PARTICULARS OF INSTALLATION TYPES

NAILED OR STAPLED INSTALLATION

Using a stapler is impossible when working next to a wall. Those rows will have to be done manually, either by using a manual nailer from the top of the floorboard or by using flexible glue. Using nonflexible glue might interfere with the natural expansion of the wood and cause permanent damage not covered by the warranty. Make sure you follow the recommended spacing of nails or staples; please refer to the table in Annex A "MANDATORY INSTALLATION CONDITIONS BY PRODUCT TYPE". Ensure that each floor board is fixed at least at two different locations, no matter what length it is.

GLUED INSTALLATION

Not recommended for solid floors.

INSTALLATION OVER A RADIANT HEAT SYSTEM

Not recommended for solid floors.

FLOATING INSTALLATION

Not recommended for solid floors

SUGGESTION: Once the first two floor boards are installed, remove all the remaining boards from the box and position them as they will be installed. This will avoid mixing up the two board types during installation. Use easy to remove painter tape like 2080M (blue tape) to hold the boards together. NEVER USE regular tape since it will leave glue residue on the boards that is very difficult to remove. Remove the tape once the installation is completed.