

INSTALLATION GUIDE

1. GENERAL INFORMATION

Product description

3 1/4" (83 mm) and 5" (127 mm) x 3/4" (19 mm) Solid Wood Flooring

Prefinished wood flooring is factory finished under controlled, optimal conditions. The flooring is ready to install, and occupants are not required to leave the premises. They can reposition their furniture immediately following installation.

Recommended use

- 1st story and ground floor.
- 3/4" solid wood floors are not recommended for installation in basement.
- 3/4" solid wood floors are not recommended for use over radiant heating systems.

OWNER AND INSTALLER RESPONSIBILITY

Prior to installation, the installer and owner must ensure the installation site and subfloor comply with the conditions specified in this guide.

- The installer and owner should inspect the flooring before installation to ensure the grade, color, gloss, and quality are consistent with the product purchased.
- The industry standard margin of error for natural imperfections and manufacturing and grade selection defects is 5%.
- If the installer has doubts about a board's grade selection or manufacturing or finish quality and cannot install it in an inconspicuous location or eliminate the imperfection, he should not install it. **Once a board has been installed, it is considered to have been accepted by the installer and the owner, even if the owner is not present during installation.** Depending on the site and the type of installation, flooring orders should include 3% to 5% extra to compensate for cut loss. (45-degree angle installation results in increased cut loss of up to 7% to 9%.)
- Improper installation or poor judgement by an installer are not covered by the warranty. This warranty covers material only and does not cover labor or installation costs.

IMPORTANT NOTICE

FOR PRODUCTS WIDER THAN 5": In addition to the use of mechanical fasteners, assisted glue applications should be used. The glue should be a premium grade urethane construction adhesive applied in a serpentine pattern to the back of each board. Then follow the recommended fastening pattern.

2. SITE REQUIREMENTS

Preparing the installation site

Installing unfinished wood flooring should be the last step in your project. Before the flooring is delivered, inspect the installation site to make sure:

- The concrete, plaster, paint, and subfloor are completely dry.
- Any heating, ventilation, or air conditioning systems are functional and running.
- The building is kept within normal ambient conditions for at least one (1) week before laying the floor, at a temperature of about 68 °F (20 °C) and a relative humidity of about 45% (between 35% and 55%).
- The entire crawl space floor is covered with 6 to 8 mil black polyethylene sheeting.

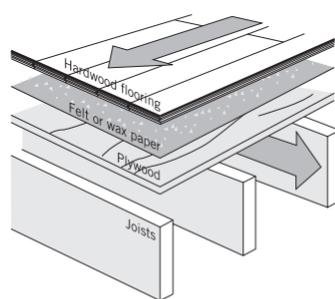
- The installer should check the moisture content of the subfloor (plywood or OSB) and flooring at various locations using a moisture meter for wood.
- The moisture content of the subfloor should not exceed 12%.
- The difference between the moisture content of the subfloor and the flooring must not exceed the moisture content of the flooring by more than 3%.
- The internal moisture content of the flooring should be between 6% and 9%.
- If the humidity of the subfloor or the difference between the flooring and the subfloor is outside recommended levels, heat, ventilate, and dehumidify the site further and delay delivery and installation until recommended levels have been reached.

Acclimation

Once the recommended conditions have been reached, store the flooring at the installation site. Allow the flooring to acclimate for at least 48 hours before installation. Make sure the wood is at the same temperature as the installation site (about 68 °F (20 °C)). Never store flooring in unsuitable locations such as sheds or unheated garages.

3. SUBFLOOR PREPARATION AND LEVELLING

- The subfloor must be structurally sound and securely fastened to the joists with floor screws to prevent movement of the plywood panels, which could cause creaking.
- The subfloor must be flat and level, the maximum tolerance is 3/16" (5 mm) over a distance of 10' (3 m). If necessary, fill or sand any unevenness, depression or bulge in the subfloor.
- The surface of the subfloor must be free of defects. Remove minor imperfections with a sander.
- The surface must be clean and free of all contaminants, including grease, dust, oil, nails, staples, etc. Remove staples, drive in protruding nails, and remove dirt and dust with a vacuum cleaner.



Recommended subfloors

- 3/4" (19 mm) plywood or oriented strand board (OSB) for joists spaced 19 3/16" (488 mm) or less on centre.
- Minimum 5/8" (16 mm) plywood panels for joists spaced 16" (406 mm) or less on centre.

Subfloor with radiant heat systems

Solid 3/4" (19 mm) flooring is not recommended for use over radiant heating systems.

4. TOOLS AND SUPPLIES

Recommended materials and tools

This is not an exhaustive list of the tools that may be needed to install the Solid 3/4" (19 mm) wood floor. Damage caused by improper use of tools are not cover by the warranty.

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| 1. Vacuum or broom | 8. Chalk line |
| 2. Pneumatic Hardwood flooring nailer or stapler | 9. Square |
| • "L" or "T" nails or "U" staples | 10. Mitre saw |
| • 15.5 to 18 ga | 11. Table saw |
| • 1 1/2" (38 mm) or more in length | 12. Tapping block |
| 3. Levelling compound and sander (if necessary) | 13. Handsaw |
| 4. Level | 14. Drill and 3/32" (2.38 mm) bit |
| 5. Moisture meter for the wood and/or concrete | 15. Hammer and nail punch |
| 6. 15 lb. felt or wax paper | 16. Finishing nails of 2" (51 mm) or more in length |
| 7. Measuring tape | |

5. INSTALLATION METHOD PROCEDURE

Recommended installation method

- Plan your project by making a sketch.
- Determine your start point.
- Determine the direction of the flooring. We strongly recommend installing flooring at a 45- or 90-degree angle with respect to the floor joists.
- Use a protective surface under tools and the floor nailer during installation.
- Before you begin, cut the bottoms of door moldings to insert flooring under them.
- Leave space for the wood to expand as a result of humidity changes. The expansion gaps will be hidden by the baseboard and/or quarter round, which should be nailed to the wall, not the floor.
- Pick boards from at least 3 boxes at a time to ensure consistency.
- Vacuum frequently during installation to remove sawdust and dirt.

Installation (nailed or stapled installation only)

Solid 3/4" (19 mm) wood floors can be nailed or stapled directly to a wood subfloor on the ground floor and above.

Using a nailer

- Practice using your floor nailer on a scrap piece of flooring. Follow the manufacturer's instructions and safety guidelines.
- Clean the plate under the nailer frequently to avoid damaging the finish.
- Adjust the pressure on the compressor and check it regularly.

How to install flooring

- Use a chalk line to snap a guide line parallel to the starting wall at a distance of 3/4" (19 mm) more than the width of the boards (e.g., 5 3/4" (146 mm) for flooring that is 5" (127 mm) wide). **This dimension corresponds to the space reserved for the expansion gap.** Flooring in the area between the wall and the guide line should be installed last.
- Make sure your line is straight and square.
- Lay out 4 or 5 rows of boards that match in terms of joints and color. Cut boards with imperfections or place them in less visible areas.
- Use spacers or shims between the edge of the flooring and the walls to leave enough room for the wood to expand due to changes in humidity.
- Install the first board along the guide line, with the tongue towards you and the groove towards the wall.
- Always leave a 1/4" (6 mm) gap on either end of each row for expansion.
- Depending on your nailer, you will need to nail the initial rows by hand, until you have enough space to use the nailer. Drill holes at a right angle to the top of the board as close as possible to the wall and fasten with spiral finishing nails. Drive the nail heads in with a nail punch. Drill holes in the tongue at 45-degree angle and drive spiral nails every 4" (102 mm).
- The last board in each row should be cut. Offcuts that are at least 6" (152 mm) long can be used to start the next row.
- Use a pneumatic nailer for subsequent rows. Boards should be nailed every 6" to 8" (152 mm to 203 mm) and 2" (51 mm) from either end. Each board must be secured with at least two nails. Do not nail closer than 2" (51 mm) from the ends to avoid splitting the tongue.

Fastener Selection Chart

Product	Width	"L" or "T" nails	"U" staples	Fastener's minimum length	Spacing between fasteners	Distance from ends
Solid 3/4" (19 mm)	5" (127 mm)	15,5 ga to 18 ga	15,5 ga to 18 ga	1 1/2" (38 mm)	6" to 8" (152 to 203 mm)	2" (51 mm)

- Fasteners must be installed at a 45-degree angle.
- You may need to use a tapping block to fit the boards together. NEVER use a hammer or a sledgehammer directly on the boards.
- The last rows of boards should be installed in the same manner as the first.
- You may have to rip the last row lengthwise to allow a 3/4" (19 mm) space for expansion.

Image 1

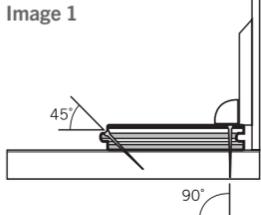
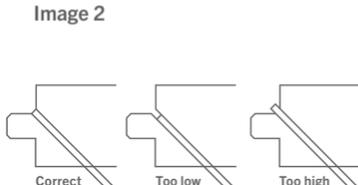


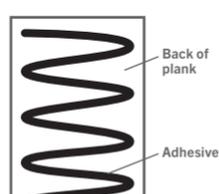
Image 2



Warning!

Split or broken tongues can cause creaking. When working with harder woods, it's important to pay close attention to the pressure on the compressor.

FOR PRODUCTS WIDER THAN 5": In addition to the use of mechanical fasteners, assisted glue applications should be used. The glue should be a premium grade urethane construction adhesive applied in a serpentine pattern to the back of each board. Then follow the recommended fastening pattern.



6. WALL MOLDINGS / TRANSITION

You may need to install stair nosings, T-moldings, quarter-rounds, or reducers. Before installing the flooring, we recommend selecting boards that blend well with your moldings to avoid sharp contrasts in the floor's appearance.

Warning! We recommend pre-drilling pilot holes in the moldings to avoid splitting them. When installing moldings such as baseboard and quarter round, make sure to attach them to the wall, not the wood floor, to allow for movement. Always leave the recommended space for expansion.



- **Stair nosing:** A molding undercut for use as a stair landings trim, elevated floor perimeters, and stair steps. Fasten down firmly with adhesive and nails or screws. Pre-drill nail holes to prevent splitting.
- **Reducer:** A teardrop shaped molding used around fireplaces, doorways, as a room divider, or as a transition between hardwood flooring and adjacent thinner floor coverings. Fasten down with adhesive, small nails or double-faced tape.
- **Threshold:** A molding undercut for use against sliding door tracks, fireplaces, carpet, ceramic tile, or existing thresholds to allow for expansion space and to provide a smooth transition in height difference. Fasten to subfloor with adhesive and/or nails through the heel. Pre-drill nail holes to prevent splitting.
- **T-Molding:** A molding used in the piece of one rigid flooring to another of similar height or to gain expansion spaces. Fasten at the heel in the center of the molding. Additional rigid support may need to be added to the heel of the molding dependent upon the thickness of the goods covered. Do not use this molding as a transition to carpet.
- **Quarter Round:** A molding used to cover expansion space next to baseboards, case goods, and stair steps. Pre-drill and nail to the vertical surface, not into the floor.

7. MAINTENANCE / AFTER CARE

Maintenance

The maintenance routine for your prefinished floor is fast, easy and only takes three steps:

- Vacuum regularly and as often as necessary to protect your wood floors and keep the finish from wearing out prematurely. This will eliminate dust and abrasives on the surface of the floor.
- To clean your floor, spray a recommended prefinished hardwood floor cleaner on a microfiber mop cover and wipe a section of the floor in a back-and-forth motion, along the length of the floorboards.
- Never use fabric softener (sheets or liquid) when washing the mop covers, as these products leave a greasy film on the surface of the floor.
- Avoid spraying directly on the surface of the floor to prevent the accumulation of an excessive amount of product, making cleaning difficult.

Important: Never use wax, a mix of water and vinegar, home cleaning products, concentrated wood cleaners other than a recommended prefinished hardwood floor cleaner, or any oil-based soaps, on the floor. These products can damage the finish and cause it to fade or leave a greasy film, making the floor slippery and hard to maintain. Do not use steam cleaners on your wood floors. Do not wash wood floors using lots of liquid or with a soaked mop.

Wood and water

Be careful with water (liquid, steam, snow). The wood fibers will expand when they absorb water, which can cause the wood and finish to deteriorate. When water seeps into the floor, it can cause the boards to swell, contract, and discolor and lead to the growth of mold between the boards.

- The kitchen and entrance hall are areas where the wood might come in contact with water. Care should be taken to wood floors installed in these areas.
- Immediately wipe up any water, liquid, or detergent from the surface of the floor before the wood fibers absorb it.
- Place carpets in front of the sink, dishwasher and workstations in the kitchen.
- Use carpets in front of any door leading outside to collect water and snow.
- Place watertight saucers under plant pots.

Wood and humidity

Wood is a natural material that constantly reacts to variations in relative humidity by changing dimensions as it absorbs or loses humidity. During humid or dry periods, your floors can present distortion and spacing. The wood will generally return to its initial dimensions once conditions are back to normal.

- Maintain a relative humidity of 45% (between 35% and 55%) and an ambient temperature of around 68 °F (20 °C) in your home. These conditions are also ideal for humans. Note that for each 5% variation in relative ambient humidity, the level of humidity in the wood will vary by approximately 1% and lead to changes in the dimensions of the boards.
- Use appropriate equipment as needed, such as an air exchanger, heating system, dehumidifier, humidifier, etc., to restore ambient conditions

To prevent scratches and dents

- Hardwood species naturally offer good resistance to compression. However, if the pressure applied to the floor is higher than its degree of resistance, it will leave a mark.
- Avoid moving heavy furniture or objects by sliding them across the floor. Stick felt pads under the legs of the furniture and chairs to make moving easier without scratching the surface of the floor.
- Using chairs with wheels directly on the floor's surface is not recommended. Place protective chair mats under narrow wheels or replace them with wider rubber or soft polyurethane wheels.
- Pet claws should be trimmed regularly to reduce the severity of the scratches they can cause. The heavier the animal, the more pronounced the scratches left on the floor.

8. FLOOR REPAIR

Minor damage can be repaired with a touch up kit or filler. Major damage will require board replacement which can be done by a professional floor installer.

How to replace a floorboard

- Select a replacement board slightly longer than the one to be changed. Check to see it matches the surrounding boards.
- Using a circular saw or router, cut the board lengthwise to within 1/2" of the edges. For a glued board, make several cuts close together to separate the board into smaller sections.
- Make a diagonal cut down the center of the board from one end to the other of the cuts made in Step B. It may be necessary to make more than one cut if the board is glued in place.
- Using a wood chisel, remove the central part of the board first (between the side cuts).
- Remove nails or staples (this step does not apply to glued Engineered boards), then remove edges, taking care not to damage the adjacent boards.
- Remove the underlying construction paper or adhesive and clean any residue from the subfloor.
- Trim the replacement board to the desired length, cutting excess length from the tongue end.
- Remove the lower edge of the groove on the end and side of the board.
- Position the board to check the fit, then remove it.
- Apply glue to the subfloor.
- Install the board, using a rubber mallet and a wood block to place it in position.

9. CAUTION/ WARNING (LEGAL)

ATTENTION INSTALLERS

⚠ CAUTION: WOOD DUST

Sawing, sanding and machining wood products can produce wood dust. Airborne wood dust can cause respiratory, eye and skin irritation. The International Agency for Research on Cancer (IARC) has classified wood dust as a nasal carcinogen in humans.

Precautionary Measures: If power tools are used, they should be equipped with a dust collector. If high dust levels are encountered, use an appropriate NIOSH-designated dust mask. Avoid dust contact with eye and skin.

First Aid Measures in Case of Irritation: In case of irritation, flush eyes or skin with water for at least 15 minutes.

WARRANTY GUIDE

Woodland Reserve 3 ¼" (83 mm) and 5" (127 mm) x ¾" (19 mm) Solid Wood Flooring Limited 50-Year Warranty

Installer and/or owner responsibilities

Floor boards are made from natural materials that may have inherent imperfections. The industry standard is a 5% margin of error for natural and manufacturing imperfections. The following responsibilities are incumbent on the owner, even if they are absent at the time of installation.

Prior to installation, the installer and owner must ensure the installation site and subfloor comply with the conditions specified in the Installation and Maintenance Guide.

The installer and the owner are responsible for inspecting the flooring prior to installation. The installer must select floor boards in a reasonable manner and, if necessary, discard, install in an inconspicuous location, or cut boards with irregularities, regardless of the cause. Once a board has been installed, it is considered to have been accepted by the installer and owner, even if the latter is not present at the time of installation.

The manufacturer warrants to the original purchaser of the floor that the finish will resist complete wear and peel for a period of:

- **50-year finish warranty** from the purchase date for normal residential use.
- **5-year finish warranty** from the purchase date for commercial use.

Light commercial use includes installation in commercial buildings without direct outdoor access, such as offices, conference rooms, and stores in shopping centers. Floors installed in restaurants are covered by the 3-year light-commercial warranty from the date of purchase.

Complete wear and peel must affect at least 15% of the total area of the installed flooring.

Variations in color and gloss level are normal and are excluded from the warranty.

Structural lifetime warranty on wood boards

The manufacturer grants the original purchaser a lifetime warranty on the structural integrity of the wood flooring boards.

This warranty is contingent on compliance with the required environmental conditions, including maintaining a relative humidity of 35% to 55% and a ambient temperature of about 68 °F (20 °C).

Because wood boards are made entirely of natural material that reacts to its environment, variations in product dimensions, which can lead to gaps between the boards, cupping, and the development of post-installation splits and checks, are due to environmental factors. **Therefore, they are not covered by this warranty.**

Manufacturer obligations

Under the terms of this warranty, the manufacturer is liable for only one of the following actions, at its discretion and to the exclusion of any other compensation:

- Provide material to replace defective floorboards only (excluding labor, accessories, and any other related costs)
- Provide compensation equivalent to the cost of refinishing the floor in the room where the finish has completely worn off.

Only boards with manufacturing or natural defects exceeding the 5% margin of error (industry standard), excluding cut loss, are covered under the warranty.

Exclusions

The manufacturer bears no responsibility under the terms of the warranties for any of the above-mentioned finishes and will not pay any compensation for:

- Any damages other than those listed in the obligations section, including but not limited to loss of use of space, moving costs, hotel costs, and loss of time or goods;
- Installed flooring that does not comply with the technical specifications listed in the Installation Guide.
- Product defects resulting from improper storage or transportation;
- Claims made without sufficient evidence that the maintenance instructions were followed;
- Damage caused, in whole or in part, by misuse, abrasive substances, dropping or rubbing objects on the floor, moving furniture with or without casters, high heels, hammering, scratching, or any other use that is not considered normal;
- Damage caused, in whole or in part, by factors including but not limited to fluctuations in the moisture content of the wood, extreme flooding, heat, humidity, or dryness; natural disasters, lack of heating, insect infestation, and stains or scratches caused by pets;
- Repairs carried out without prior written approval from the manufacturer;
- Replacement of boards with defects that were detectable when the flooring was installed;
- Wood oxidation or discoloration;
- Any changes in the product other than completely worn off finish;
- Shipping and handling costs;
- Claims made without the original purchase invoice;
- Slight color variations between the sample and the flooring;
- Floors that have not been maintained at the required humidity level and at approximately 68°F (20°C) at all times;
- Solid flooring installed in a basement;
- Solid flooring installed over a radiant heating system;
- Any product damage caused by improper use of the recommended tools;
- Any non-measurable product deformation or the appearance of lines or lighter sections visible only from a specific angle or under a specific lightning;
- Cracking noises, cupping, or telegraphy in floors that are in use;
- Claims made by anyone other than the original buyer;
- Products that have not been paid in full;
- Boards with cracks or splits that appear after the installation;
- For any product purchased through an unauthorized retailer.

Site preparation and floor maintenance

For a full description, please refer to the Installation Guide and Maintenance Guide.

- The subfloor must be structurally sound and solidly attached to the floor joists using flooring screws.
- The moisture content of the subfloor must never exceed 12%, and the difference in moisture content between the subfloor and the flooring must not exceed 3% the internal moisture of the floor boards, which is between 6% and 9%.
- The subfloor must be level, i.e. no more than 3/16" (5 mm) out of level over a distance of 10' (3 m). Failure to follow the maintenance instructions may void your warranty.
- Use a vacuum to remove day-to-day abrasive substances that could damage your floor, such as sand, glass, gravel, etc.
- Clean your floor with a recommended prefinished hardwood floor cleaner.
- Never wash your floor with large amounts of water or a steam cleaner.
- Stiletto heels are not recommended on wood floors as they can mark the surface of the floor.

Normal environmental conditions

"Normal environmental conditions" means that a heating, ventilation, and air conditioning (HVAC) system has been installed and is operating to maintain a temperature of approximately 68°F (20°C) and a relative humidity of 45%.

How to file a claim

If you need to file a claim under this warranty, first contact your flooring retailer from whom the flooring was purchased within 6 months of experiencing a problem.