



INSTALLATION INSTRUCTIONS and WARRANTY

RESIDENTIAL 3/4" SOLID HARDWOOD FLOORING

PLEASE READ AND REVIEW THE ENTIRE INSTALLATION INSTRUCTIONS BEFORE

PROCEEDING WITH THE ACTUAL INSTALLATION

OWNER/INSTALLER RESPONSIBILITY

Hardwood flooring is a beautiful and unique product of nature, which is characterized by distinctive variations in grain and color. These natural variations in color and grain are not flaws but are a part of the natural beauty and uniqueness of hardwood flooring. (These inherent variations should be expected and serve to enhance the natural beauty and enduring charm.) Robinson Hardwood Floors are manufactured in accordance with accepted industry standards, which permit a perfection tolerance not to exceed 5%. The imperfections may be of a manufacturing or natural type.

- The owner/installer assumes all responsibility for final inspection of product quality. This inspection of all flooring should be done **before** installation. **REMEMBER INSTALLATION CONSTITUTES ACCEPTANCE OF THE HARDWOOD FLOORING PRODUCT AND ASSURES THAT ALL PRE-INSTALLATION REQUIREMENTS IN THIS INSTALLATION GUIDELINES HAVE BEEN SATISFIED.** Carefully examine the flooring for color, finish and quality before installing it. Use reasonable selectivity and hold out or cut off pieces with unacceptable deficiencies whatever the cause. If material is not acceptable, contact your Robinson Hardwood Flooring distributor immediately. Installation related failures are not covered by the manufacturer warranty.
- Before beginning the installation of any hardwood flooring product, the installer must determine that the environment of the jobsite conditions and type of the subfloor involved is acceptable, insuring that it meets or exceeds all requirements which are stipulated in the Robinson Hardwood Flooring installation instructions which follow. Robinson Lumber Company, Inc. declines any responsibility for job failure resulting from or associated with inappropriate or improperly prepared subfloors or jobsite environment deficiencies.
- The use of stain, filler or putty stick for the correction of any inconsistencies during installation should be accepted as normal procedure.
- When Robinson Hardwood Flooring is ordered, add additional 3% minimum for cutting waste, plus the manufacture imperfection allowance of 5% for a total of 8%. Depending on layout such as diagonal or cut/chopped up areas will require additional 3-5%.
- Follow all recommendations of the National Wood Flooring Association, Installation Guidelines, and revised February 2016. Certain aspects of installation are noted below, all of which follow these guidelines, and however, the installer is required to follow all NWFA recommendations even if not noted within these guidelines. Contact your distributor or www.NWFA.ORG if you do not have access to a copy of NWFA guidelines.

JOBSITE INSPECTION & ACCLIMATION/CONDITIONING

Definitions:

- Acclimation: The process of adjusting (conditioning) the moisture content of wood flooring to the environment in which it is expected to perform. With pre-finished wood floors, we “**condition**” the jobsite to be ready to receive the wood flooring for installation. This means the jobsite temperature at 60-80° F and 40 - 60 % relative humidity at all times.
- Equilibrium Moisture Content: The moisture content of wood when in equilibrium with its environment. When wood is neither gaining nor losing moisture, equilibrium moisture content (EMC) has been reached.

All pre-finished wood flooring including Robinson Hardwood Flooring should be one of the last items installed during construction. All wet trades involving water or moisture (plumbing, acoustical ceilings, dry wall taping, etc.) should be completed prior to wood flooring being installed. The HVAC (heating/cooling) must be fully operating to maintain a consistent room temperature at 60-80° F and 40 - 60 % relative humidity

- Flooring should not be delivered until the building has been totally closed in and cement work, plastering, painting and other materials are completely dry. Concrete and plaster should be dry and at least 60 to 90 days old. Check basements and under floor crawl space to ensure they are dry and well ventilated to avoid flooring damage caused by moisture.
- Flooring should be delivered to the conditioned jobsite at least 72 hours prior to installation, but acclimation may take longer. Opening the cartons and spreading out the flooring speeds up the acclimation process.
- Handle with care. Do not stand on ends. Store Robinson Hardwood Flooring in a dry conditioned space being sure to provide at least a four-inch air space under and around cartons.
- Do not store directly upon on grade concrete or next to outside walls. Cartons should be placed in the climate-controlled installation areas.
- The installation site should be conditioned to have consistent room temperature of **60° - 80° F** and a constant relative humidity level of **40 - 60 %** for a minimum of 5 days prior to installation of any Robinson Hardwood Flooring product. This is achieved by having either the heating and/or air conditioning operating before, during and after installation.

CONDITION your interior climate to be within 40-60% relative humidity and 60-80° F before bringing in your Robinson Hardwood Floor to the jobsite. It is the **OWNERS/INSTALLERS** responsibility to test and document the jobsite conditions, failure may result in gaps, splits, cupping or buckling of wood flooring weeks or months after installation.

Failure to comply with these requirements may result in irreversible structural damage and void all related warranties.

Refer to the National Wood Flooring Association 2016 Installation Guidelines, Chapter 2, page 8 to better understand the acclimation/conditioning process.

Temperature		Moisture content (%) at various relative humidity values																		
(°C)	(°F)	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%
-1.1	(30)	1.4	2.6	3.7	4.6	5.5	6.3	7.1	7.9	8.7	9.5	10.4	11.3	12.4	13.5	14.9	16.5	18.5	21.0	24.3
4.4	(40)	1.4	2.6	3.7	4.6	5.5	6.3	7.1	7.9	8.7	9.5	10.4	11.3	12.3	13.5	14.9	16.5	18.5	21.0	24.3
10.0	(50)	1.4	2.6	3.6	4.6	5.5	6.3	7.1	7.9	8.7	9.5	10.3	11.2	12.3	13.4	14.8	16.4	18.4	20.9	24.3
15.6	(60)	1.3	2.5	3.6	4.6	5.4	6.2	7.0	7.8	8.6	9.4	10.2	11.1	12.1	13.3	14.6	16.2	18.2	20.7	24.1
21.1	(70)	1.3	2.5	3.5	4.5	5.4	6.2	6.9	7.7	8.5	9.2	10.1	11.0	12.0	13.1	14.4	16.0	17.9	20.5	23.9
26.7	(80)	1.3	2.4	3.5	4.4	5.3	6.1	6.8	7.6	8.3	9.1	9.9	10.8	11.7	12.9	14.2	15.7	17.7	20.2	23.6
32.2	(90)	1.2	2.3	3.4	4.3	5.1	5.9	6.7	7.4	8.1	8.9	9.7	10.5	11.5	12.6	13.9	15.4	17.3	19.8	23.3
37.8	(100)	1.2	2.3	3.3	4.2	5.0	5.8	6.5	7.2	7.9	8.7	9.5	10.3	11.2	12.3	13.6	15.1	17.0	19.5	22.9

Important Note:

- Robinson 3/4" Solid Hardwood Flooring can be installed on or above grade installations only! Our 3/4" Solid Flooring **cannot** be installed over radiant heat applications.

SUBFLOORS

The quality and preparation of the subfloor is critical to the proper installation of your new Robinson Hardwood Flooring.

Subfloor Requirements

Wood Substrates:

- APA Sturd-1-Floor, ACX, BCX, CDX 3/4" or thicker plywood.
- Pre-existing hardwood floors can be installed at right angle (90 degrees) only).
- Subfloor must be clean and structurally sound, free of all debris, staples, nails, scraped or sanded smooth, swept, free of wax, grease, paint, oil and other substances that may prevent a successful installation.
- Check subfloor for any loose or noisy areas and nail or screw down every 6", replace any damaged subflooring or underlayment's.
- **Smooth/flat** - Within 3/16" in 10' or 1/8" in 6'. Sand high areas or joints, fill low areas.

Moisture Testing:

- Moisture testing of the jobsite conditions and subfloors is critical to a successful hardwood flooring installation. Visual checks are not reliable.
- Test the moisture of the wood substrate using a calibrated moisture meter approved for testing wood moisture content according to the meter manufacturer. Be sure the species correction factor is applied. The reading should not vary higher/lower more than a 2% (percentage points) higher than moisture content for wide width flooring (3" and wider) being installed. If subfloor moisture exceeds acceptable levels, the source(s) of this moisture

must be corrected and re-tested before the hardwood flooring is delivered to the jobsite. Be sure to document your test results of subfloor and wood flooring before delivery, before/during installation.

Moisture Testing Results:

Wood Subfloor _____ MC % Date _____

Wood Floor MC _____ MC % Date _____

Subfloor Installation on Plywood and Wood Substrates:

Do not install over particleboard.

- Subfloor should be constructed of 3/4" or thicker CD Exposure 1 Plywood subfloor panels when installing directly over 16" on center joists or floor trusses at 19.2". Plywood or High Density (i.e. AdvanTech) OSB panels should be laid with grained outer plies at right angles to joists/trusses, adjacent rows staggered four feet. Leave a 1/8" gap at the edges, glue and mechanically fasten using 8d ringshank nails or screws every 6" at the edges and every 12" in grid pattern through the interior of each sheet of plywood.
- When installing directly over old wood or strip floor, sand any high spots, re-nail old floor to eliminate squeaks or loose boards, and install new planks at right angle (perpendicular) to the old floor, or overlay the floor with 1/4" plywood underlayment. When 3/4" Robinson Hardwood Flooring is laid parallel with the floor joists/trusses, follow one of these two steps below:
 1. Add a layer of minimum 1/2" (15/32") CD Exposure 1 (CDX) plywood underlayment to the existing subfloor (as previously recommended).
 2. Or brace between truss/joists in accordance with the truss/joist manufacturer's recommendations and with local building codes. Some truss/joist systems cannot be cross-braced and still maintain stability.

Concrete Substrates

Robinson Hardwood Flooring does not recommend installing solid 3/4" exotic flooring by direct glue method to concrete. Should you choose this method, Robinson Hardwood Flooring will not accept responsibility/liability for any failures/problems that may develop.

Smooth/flat - Within 3/16" in 10' or 1/8" in 6'. Sand high areas or joints, fill low areas (no more than 1/8") with a cement type filler no less than 3000 p.s.i. **Hint-** 2 pennies are equal to 1/8."

- Regardless of previous or existing floor covering, the concrete must have a minimum of 3/4" plywood installed with a minimum of 6 mil polyfilm vapor barrier. Robinson recommends to mechanically secure plywood to the concrete. However, if the installer uses the plywood floating method Robinson Hardwood Flooring will not be held liable/responsible for any vertical deflection/movement including but not limited to hollows when walked upon.

Follow the **National Wood Flooring Association 2016 Installation Guidelines, Chapter 3, page 12** when testing for moisture in concrete and installing a plywood sub-floor over concrete. A vapor retarder is recommended anytime solid 3/4" wood flooring is installed over concrete. A vapor retarder is required for installation over concrete with a calcium chloride reading greater than 3 pounds, a relative humidity reading of greater than 75%. Remember always use a vapor retarder because a concrete slab that is tested and recorded dry today, may contain excess moisture in the future.

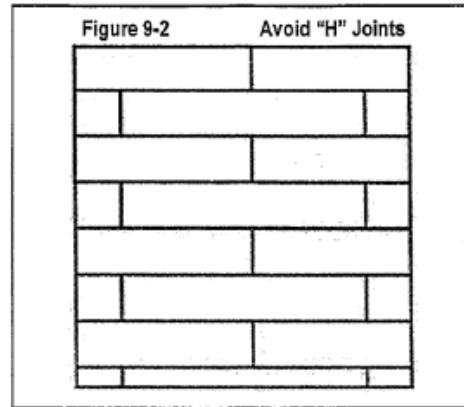
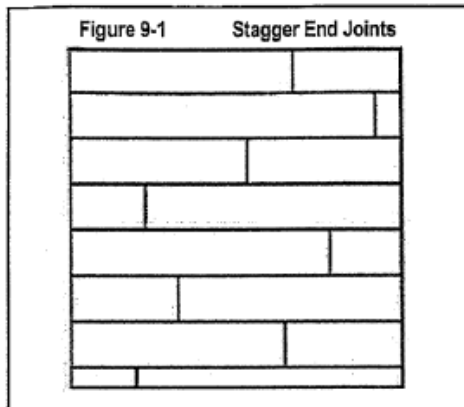
BEFORE FLOORING INSTALLATION

- Verify that the subfloor and hardwood flooring are within 2 percentage points of each other.
 - Remove door thresholds, base/shoe moldings and replace after flooring installation.
 - Always leave at least 3/4" expansion space between flooring and all walls and vertical obstructions. This gap will be covered by the baseboard and quarter round trim.
 - Undercut the door casings to fit flooring thickness by placing a piece of flooring on the subfloor as a height guide for sawing.
 - Cover the subfloor with a good grade of #2 vapor retarders (see NWFA Perm Rating Chart in Chapter 3) ASTM 4869, (i.e. asphalt 15 lb. paper) lapped 2"- 4" along the edge seams. This retards moisture movement from below. Extend the felt/building paper completely to the walls.

INSTALLING THE FLOOR

Wall Line Layout Method

- Installation should begin next to an outside wall with tongue facing out, as it is usually the straightest wall and used as a reference point in establishing a straight working line.
- Measure the distance from the wall at the width of the plank plus another 3/4" for an expansion space when establishing your working line by snapping a chalk line. If the wall is out of square, the first row will require scribing as needed.
- Racking rule of thumb: Avoid H patterns. Stagger end joints of boards row to row a minimum of 6" for strip flooring, 8"-10" for 3" to 5" plank, and for plank wider than 5 inch, stagger as much as possible with minimal or no H joints. See Figures 9-1 and 9-2.



- Align the first piece on the chalk line. The groove side and end will be facing the starting wall.

Fastener Schedule

Nailing: Blind-nail through the tongue using 1½" to 2" fasteners. Use 1½" fasteners with ¾" plywood subfloor direct to concrete slab.

Pre-drill and face -nail the first row, using appropriate finish nails (preferably 7D or 8D) or screw type flooring nails into the face of the board every 10"-12" approximately ½" - ¾" from the edge closest to the starting wall and within 2" - 3" from the ends.

Blind nail the next few rows by driving the same type nails at a 45° angle through the tongue of the flooring, spacing the nails every 6" - 8" and countersink each nail and within 2" - 3" from the ends. This process should be repeated for each piece in the next few rows.

Install each succeeding row of planks by blind nailing the tongue side every 6" - 8" and within 2" - 3" from the ends of the planks. Flooring cleats or staples can be used as long as they were designed for wood floor installation. Be attentive to staggering the ends of the boards at least 6" in adjacent rows to avoid clustering end joints. Upon reaching the last row to be installed, the planks should be ripped to allow a ¾" expansion space. The last row must be fastened by nailing approximately ½" - ¾" from the back edge of the board every 12". If it appears that the holes will not be covered by the wall base or quarter round trim, fill the holes with Floor Putty, which blends with your floor.

If adhesive is used with nailing, follow adhesive manufacturer's instructions for installing plank flooring.

Make sure when the installation is complete that the ¾" expansion space is covered with the appropriate moulding such as, baseboard and quarter round.

Center Line Layout Method

- Find the center of the room, measuring off the two longest walls, and snap a line working down the center of that room.
- Install a starter board on the line. Fasten the starter board to the floor using wood screws.
- Nail the first row of flooring against the starter board, being careful not to move the starter board when nailing. The groove edge should be against the starter board.

- Drill and blind nail the first three rows through the tongue. Do not use top nails.
- Use a blind nailer (floor nailing machine) to install the remaining rows of flooring following fastening schedule described earlier in this section.
- After installing in one direction remove the starter board and start rows going in the opposite direction. This requires installation of a spline or slip tongue to join the groove edges and reverse direction.
- Drill and blind nail through the spline/slip tongue to secure this side of the plank
- Install the remaining rows in the opposite direction. Use the nailing practices described earlier in this section.

Special Circumstances:

Pipes, vents and other fixed objects: Each can be unique, but the general rule is to measure very carefully before you cut and remember to leave a 3/4" expansion gap between the object and the flooring. You will cover expansion gaps with moulding, vent covers or pipe rings when the floor is complete.

Sound Control in Condominiums:

Sound deadening requirements are standard with all multi-family residences such as condominiums. It is the responsibility of the retailer/installer to research what the building HOA or state/city building requirements for STC and IIC. Robinson Hardwood makes no warranty to sound related concerns/complaints relating to sound control.

GENERAL FLOOR CARE

Your Robinson Hardwood Floor will add warmth and beauty to your home for many years to come.

Place walk-off floor mats or area rugs with a soft felt backing near entrances and high traffic areas to prevent loose sand, dirt, debris and other abrasive substances from being tracked directly onto flooring surface. The use rubber backed mats is not permitted due to these will damage the finish, dis-color the floor and void the finish manufacturer warranty.

Sweep, dust or vacuum the floor regularly to prevent accumulation of dirt or grit that can scratch or dull the floor finish.

Hardwood flooring that is installed in the kitchen, care should be taken in areas that are subject to cooking splatter, spills and water splashes, etc. Throw rugs with soft felt backing should be placed in front of the stove, dishwasher, oven, cooktop and sink.

Use felt chair protectors under furniture that is movable furniture, including chairs, tables, sofas and heavy furniture. As a rule of thumb, the heavier the object, the wider the floor protector should be.

Periodically rearrange rugs and furniture so the hardwood wood and/or finish ages evenly. UV sunlight exposure may change the flooring color over time and is not considered a manufacturing defect.

Maintain a consistent room temperature of 60°- 80° F with relative humidity levels of 40% to 60% for the life of the hardwood flooring at all times to minimize the natural expansion and contraction of wood.

Heating Season (Dry): In colder climates a **humidifier** is recommended to prevent excess shrinkage due to low humidity levels. Wood stove and electric heat tends to create very dry conditions.

Non-Heating Season (Wet): An air conditioner or dehumidifier can maintain humidity during the summer months. Avoid excessive exposure to moisture/water during periods of inclement weather.

Keep pet nails trimmed to minimize indentations and scratches. All hardwood floors will dent with enough force or when exposed to sharp/pointed objects. Don't walk on your floor with stiletto-style heels, spiked golf shoes or cleats; they may cause indentations in your floor.

Rearrange area rugs and furniture periodically so the floor ages evenly. UV sunlight will affect the tone of different species of hardwood to varying degrees

Use an appliance cart when moving heavy furniture or appliances.

Only use hardwood cleaning products specifically formulated for your flooring product finish. Improper use of cleaning products will damage the factory finish.

Following a few simple maintenance steps, however, will help protect your investment and keep your Robinson Hardwood Floor like new.

MAINTENANCE

- Use a cloth to blot up spills and spots as soon as they happen. For tough spots such as oil, paint, markers, lipstick, ink, tar or cigarette marks, use acetone/nail polish remover, then wipe with a damp cloth. Always avoid allowing liquids to stand on your floor.
- Vacuum, (using the hard floor brush attachment not the beater bar), dust mop or sweep the floor to minimize abrasive grit and dirt.
- Periodically clean the floor with a Hardwood Flooring Cleaner, which is specially formulated for factory finished floors. Brands include Bona X, Basic Coatings, Armstrong, Mirage.
- Do not use oil based, wax, polish, or strong ammoniated or abrasive cleaners, steel wool or scouring powder to clean the floor.
- Do not wash or wet-mop the floor with soap, water, oil soap detergent or any other liquid cleaning material. This could dull the finish and cause swelling or warping and void the warranty.
- Do not steam clean under any circumstances
- Do not use any type of buffing machine.

This Robinson Factory Finished Hardwood Floor comes with a 25-year finish and wear warranty.

This warranty, which begins from the date the flooring is installed purchased, applies to wood flooring used in dry residential applications only.

What the Robinson Lumber Company, Inc. Factory Finish Limited Warranty covers:

Finish and Wear Warranty -Robinson Lumber Company, Inc warrants to the original purchaser that its finish surface will not peel off or wear through for 25 years from the date the factory finished flooring is installed. This warranty is non-transferable.

Product determined to have any possible defect by the person doing the installation should be returned to your dealer for inspection and possible replacement **PRIOR TO INSTALLATION**. All questions of product quality are to be addressed prior to installation. Installation implies acceptance.

What you should do if peeling or wear through occurs and you need warranty service:

You (the original retail customer) should notify the dealer or distributor from which the original purchase was made of any defect no later than 30 days after discovering the defect, but within the time period of the applicable limited warranty.

You (the original retail customer) must present to that dealer or distributor the following items for a warranty claim to be considered:

- a valid proof of purchase in the form of a sales receipt or other documents which establish proof of purchase
- a description of the problem and a photograph or sample that clearly shows the warranty problem

The dealer or distributor will then forward this information to:

Robinson Lumber Company, Inc.

4000 Tchoupitoulas St.

New Orleans, LA 70115

USA

PH: 1-504-895-6377

Fax: 1-504-897-0820

Flooring@roblumco.com

www.roblumco.com/flooring

What Robinson Lumber Company, Inc. will do should you need warranty service:

If Robinson Lumber Company, Inc. accepts a claim under this limited warranty, it will authorize your dealer or distributor to repair or replace, at Robinson Lumber Company, Inc. 's option, the affected flooring material. Robinson Lumber Company, Inc. will pay the reasonable labor and actual materials costs to perform the replacement or repair during the first five years from the date of the original purchase. Robinson Lumber Company, Inc. will pay the reasonable materials costs to perform the replacement or repair during the next twenty years from the date of the original purchase. In the event that the style installed in the home is no longer available, Robinson Lumber Company, Inc. will authorize your dealer to replace the affected floor with another style of equal value. The above described remedy is the customer's sole and exclusive remedy for claim under this limited warranty.

This Robinson Lumber Company, Inc. Limited Warranty is subject to the following conditions:

This limited warranty is valid only in North America. The warranty is not transferable. It extends only to the original retail consumer. This limited warranty applies only where the affected area of the Robinson Lumber Company, Inc. finished flooring is visible and covers an area greater than 10% of the room. The flooring must be installed in accordance with National Wood Flooring Association (NWFA) recommended installation guidelines.

Limited warranty shall not apply to damage arising from and specifically excludes any of the following:

- Natural color variations, nor the normal difference between color samples or photographs and colors of installed floors.
- Indentation, scratches or damage caused by negligence, water moisture, insects, animals, and high heeled or spiked shoes, or failure to use pads under rolling chairs or other furniture.
- Excessive or inadequate humidity in the area. Relative humidity in the area of use must be within a normal range of 40%-60%.
- Damage caused during the installation process.
- Improper or insufficient protection, care and maintenance.
- Accidents abuse or misuse. Warranty will be made void if man-made or natural disasters
- Including leaking or broken plumbing, fire, flood, earthquake, or standing water occur during or after installation.
- Improper alteration of original manufactured product. Alterations or repairs to the manufacturer's original product will void any and all warranties
- Changes in color due to full or partial exposure to sunlight and weather
- Hardwood Flooring may darken due to light exposure. This is a natural occurrence and is not covered by this warranty.

- This warranty does not cover removal or replacement of cabinets, appliances, furniture or other fixtures.
- Gloss reduction is not considered wear.
- Freight

Please Note:

Robinson Lumber Company, Inc. does not grant to any person or entity the authority to create for it any obligation or liability in connection with wood flooring finished by Robinson Lumber Company, Inc. Robinson Lumber Company, Inc. shall not be liable to the consumer or any other person for any incidental, special or consequential damages, arising out of breach of this limited warranty or any implied limited warranty (excluding merchantability). No other warranties expressed or implied are made including merchantability or fitness for any particular purpose. Some states do not allow the excluding of limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to the purchaser. This warranty gives the customer specific legal rights, such rights may vary from state to state.