

### Floating Installation Instructions:

- **ATTENTION!** Inspect ALL materials carefully BEFORE installation. Warranties DO NOT cover materials with visible defects once they are installed.
- It is the responsibility of the installer/owner to determine if the job site subfloor and jobsite conditions are environmentally and structurally acceptable for wood floor installation.
- Manufacturer declines any responsibility for wood floor failure resulting from or connected with subfloor, subsurface, job site damage or deficiencies after hardwood flooring has been installed.

#### IMPORTANT INSTALLATION TIPS:

- The sub-floor must be flat to 3/16" per 8' radius or floor could flex. In addition to causing squeaking, over time the glue bond could weaken or the tongues may crack causing gaps or loose boards.
- Like all wood floors, a floating floor expands and contracts with seasonal changes. Do not put fasteners (nails, screws, etc) through the floor or "pinch" the floor under doorways, etc. This could cause the floor to pull apart or buckle because it is not allowed to "float" freely. The required expansion space is equal to the product thickness. In areas measuring more than 24 lineal feet in either direction (width or length), use an additional 1/4" expansion for each additional 12 linear feet (i.e. for a 3/8" product in a room that measures 36' x 36' you would leave 5/8" expansion around all vertical surfaces which can be covered by your choice of molding).
- All wood floors require a relative humidity level between 35-55% to perform optimally without gapping, cupping, etc. A humidifier may be required during the winter in some homes to achieve these humidity levels. In addition, interior environment must be maintained between 60-80 degrees year round.
- PLEASE NOTE THESE ARE IMPORTANT TIPS TO REMEMBER: PLEASE READ THE INSTALLATION INSTRUCTIONS THOROUGHLY BEFORE BEGINNING INSTALLATION.

#### PRE-INSTALLATION GUARANTEE:

- Although each board is subject to stringent quality assurance checks before it leaves our factory, the installer should inspect again before installation. Any defects should be reported, and we will immediately arrange for replacements to be provided. We offer pre-installation guarantee of our products returned unused/unopened.

#### PRE-INSTALLATION PLANNING (REQUIREMENTS):

- All flooring products must be stored in a climate controlled area, which is equal to the environment in which it will be installed.
- Planks should be stored flat. Do not open cartons until installation begins.
- Flooring should not be delivered to the job until all "wet trade" work (painting, dry wall, tile work etc.) has been completed, and the subfloor moisture content has been determined to meet the recommended level required for installation. (See Subfloor Moisture Requirements.)
- Engineered flooring can be installed on grade, above grade or below grade.
- Prior to installing the floor, the building must be structurally enclosed, including installation of exterior windows and doors.
- Heating and cooling systems must be fully operational at least 14 days prior to flooring installation, maintaining a minimum room temperature of 60 degrees F.
- Gutters, downspouts and exterior grading, should direct drainage away from the structure's foundation.
- Basements and crawl spaces must be dry and well ventilated. A 6-mil polyethylene (poly) film must cover the ground of all crawl spaces; seams must be overlapped and taped.
- Decide the direction the flooring will be installed. Planks should be installed perpendicular to the flooring joists. Flooring will be accented best, if installed parallel to windows (if possible).
- Preplan the number of rows required to finish the installation. The final row will normally be narrower and have to be ripped lengthwise. If possible, the last row should be wider than 2". You may want to rip both the first and last rows to balance the installation.
- Remove any base, or shoe moldings and interior thresholds. These can be replaced after the floor has been installed. Undercut doorjamb to allow for expansion, and avoid difficult scribe cuts. This can be easily done by using a small piece of the flooring as a guide for your jamb saw.
- Your engineered flooring is NOT guaranteed if it is installed in a full bath.
- Do not use flooring planks or stair nose moldings to build stair treads. Stairnose moldings are designed to transition the floor to a step down or set of stairs, not for individual stair construction.
- The use of putty to fill small gaps or correct minor defects should be considered normal in any hardwood installation. When using putty on a low gloss (sheen) finish, apply putty with a plastic putty knife and remove excess immediately with a soft cloth to prevent gloss up of finish.
- Always install from various boxes to ensure accurate mix of color and grade. This is extremely important when working with wood species or grades that have natural color variation.
- Never install engineered flooring flush to any vertical obstruction; allow the proper expansion space around all vertical surfaces (the expansion space should be equivalent to the thickness of the flooring). In areas measuring more than 24 lineal feet in either direction (width or length), use an additional 1/4" expansion for each additional 12 linear feet. (Board thickness only is required for glue and staple)

#### GENERAL SUBFLOOR REQUIREMENTS:

- All subfloors must be flat to 3/16" per 8' radius. If subfloor prep is required, "high spots" should be sanded or ground down and "low spots" should be filled and leveled with a quality portland based leveling compound. Do not sand surfaces such as vinyl or synthetic tiles that may contain asbestos. Dry sand may be used to fill "low spots" that are less than 1/4" in depth.
- All subfloors must be clean and free of debris.
- Nail or screw any loose areas to prevent squeaking. Subfloors should have minimum deflection (vertical movement).

#### SUBFLOOR REQUIREMENTS:

- Engineered flooring can be floated over any structurally sound, flat, dry subfloor. Refer to Subfloor Moisture Requirements below to determine allowable limits.
- Note: Subfloor Irregularities that cause wood flooring installations to develop movement or hollow spots between the subfloor and the wood flooring, are NOT the result of manufacturing defects and are not covered by warranties.

#### SUBFLOOR MOISTURE REQUIREMENTS:

- For concrete subfloors: When flooring is installed directly to a concrete subfloor, one of the moisture tests (below) must be performed and documented prior to the installation. In any situation when test results indicate moisture exceeding the guideline for that test DO NOT INSTALL THE FLOORING. Most excessive moisture issues can be corrected easily (sealing, etc). When corrected, retest your floor to insure moisture guidelines have been met.
- To assure the moisture warranty will be valid please document the method and results of testing prior to installing. Keep a copy for records and give a copy to the homeowner with the warranty paperwork.

#### CONCRETE TEST METHODS:

- Calcium Chloride Test (maximum 3.0 pounds)
- Tramex Moisture Meter (maximum reading of 4.5)
- Delmhorst G-40 Moisture Meter (reading of green/dry)

- Wooden Subfloors should also be checked for moisture using a reputable manufacturer's moisture meter, designed for use with wood flooring. In general, wood or plywood subflooring should not exceed 14% moisture content, with a maximum moisture variance not to exceed 4% difference between the flooring and subfloor.

#### RADIANT HEAT SUBFLOORS (OAK, CHERRY AND WALNUT ONLY, some collections exempt):

- In-floor radiant heat systems can significantly alter product performance. Only products warranted for radiant heat systems may be used.
- The radiant heat system must be designed, and installed correctly according to the manufacturer's specifications. The subfloor should never exceed 80 degrees F. The overall layout and internal tubing must remain consistent in heat range throughout the entire floor. "Hot" and "Cold" spots within the system can alter floor performance, and void the warranty.
- Prior to beginning any installation, concrete subfloors with radiant heat installed should not exceed 2 lbs. using a standard calcium chloride test. Plywood subfloors should not exceed a 3% difference in moisture content prior to installation.
- To ensure a successful installation and allow excess moisture to evaporate, the heating system should be operational and running for a minimum of 14 days prior to installation. Three to four days prior to installing the floor the system should be reduced or shut off. At time of installation, the subfloor must be between 64-68 degrees F.
- Radiant heat setting temperature should be adjusted gradually and never vary more than 15 degrees F seasonally.
- When using radiant subfloor heating, heat should be increased in 5-degree increments. Never exceed 80 degrees F.

#### SUGGESTED TOOLS AND MATERIALS:

- 6 mil polyethylene film (if needed)
- Foam underlayment
- Measuring tape
- Wood chisel
- Circular or rip saw
- Jamb saw
- Wood or plastic spacers
- Tongue and Groove Adhesive (Or high quality carpenters glue)
- Safety glasses
- Chalk line
- Square
- Pencil

#### INSTALLING FLOOR:

- Roll out foam underlayment (follow instructions inside packaging). On a concrete subfloor, if you are using an underlayment that does not have a vapor barrier attached, loose lay 6 mil poly sheeting with the seams overlapped 8", taped with clear packaging tape and lapped up the wall but not touching the sheetrock. Then roll out underlayment, butting edges. For installations over a plywood subfloor it is not necessary to use poly sheeting, and foam underlayment may or may not have a vapor barrier attached.
- Never open the bundles until ready to start the installation process.

## Floating Installation Instructions Continued:

- When the decision is made on the direction the boards will run, start at one side wall with the first row of boards allowing an expansion space along side and end walls with the use of wood wedges (equivalent spacers, SEE FIGURE 1). The expansion space should be equivalent to the thickness of the flooring (i.e. 3/8" or 1/2"). In areas measuring more than 24 lineal feet in either direction (width or length), use an additional 1/4" expansion for each additional 12 lineal feet (i.e. for a 3/8" product in a room that measures 36' x 36' you would leave 5/8" expansion around all vertical surfaces which can be covered by your choice of molding). If the starting wall is out of square, it is recommended the first row of boards be scribed to allow for expansion and a straight working line.

### **SIDE AND END GLUING:**

- The engineered boards must be side and end glued using wood glue. Apply glue in the groove of each plank as you install (Figure 2). Begin 2" from the end and fill the groove completely in 6" lengths, skipping 6" and repeating the length of the board. Fully glue the end joint. It is very important to fill the groove to its full thickness. This will ensure proper transfer to the tongue of the adjoining planks. Failure to follow proper glue schedule will void all warranties. If any excess glue squeezes up to the finished surface, wipe off using a paper towel or cloth.

- Install the first row using the appropriate expansion space with the groove side facing the wall. The subsequent rows are installed, side and end glued, tapped together with a hammer and tapping block to prevent damage to the protruding tongue. Tapping block should be against tongue only. Do not tap on groove side of boards as this will cause damage! Check for tight fit on sides and ends. Stagger at least 6 inches between end joints of adjacent board rows. End joints should not repeat visually across installed floor. The floor can be installed in successive rows. We recommend using the stagger method to ensure a tight fit for the first few rows, and limiting board separation during initial set-up. Avoid "H" joints and other discernible patterns.

### **INSTALLING THE LAST ROW:**

- The boards in the last row will need to be cut to the necessary width (FIGURE 3). Remember to allow the appropriate expansion space between the last row and any vertical surface it adjoins. Mark the board to the correct width and contours of the wall.
- After the floor is completely installed, remove spacers, install molding and thoroughly clean the floor with an approved Roberts Wood Floor Cleaner. Never cover a newly installed floor with plastic. Always use a breathable material such as craft paper or cardboard.



• Figure 1



• Figure 2



• Figure 3

## Staple/Nail Installation Instructions:

- ATTENTION!** Inspect ALL materials carefully BEFORE installation. Warranties DO NOT cover materials with visible defects once they are installed.
- It is the responsibility of the installer/owner to determine if the job site subfloor and jobsite conditions are environmentally and structurally acceptable for wood floor installation.
- Manufacturer declines any responsibility for wood floor failure resulting from or connected with subfloor, subsurface, job site damage or deficiencies after hardwood flooring has been installed.

### **PLEASE SEE PAGE 1 FOR PRE-INSTALLATION REQUIREMENTS**

#### **GENERAL SUBFLOOR REQUIREMENTS:**

- All subfloors must be flat to 3/16" per 8' radius. If subfloor prep is required, "high spots" should be sanded or ground down. Do not sand surfaces such as vinyl or synthetic tiles that may contain asbestos.
- All subfloors must be clean and free of debris.
- Nail or screw any loose areas to prevent squeaking. Subfloors should have minimum deflection (vertical movement).

#### **SUBFLOOR REQUIREMENTS:**

These products can be installed over dry, flat wood subfloors such as plywood and OSB. If used over an existing subfloor, the thickness of the overlay material must be such as to yield a total of 3/4" subfloor thickness.

- Particle board is NOT recommended for staple down installations.

- Note: Subfloor Irregularities that cause wood flooring installations to develop movement or hollow spots between the subfloor and the wood flooring, are NOT the result of manufacturing defects and are not covered by warranties.

#### **SUBFLOOR MOISTURE REQUIREMENTS:**

Wooden Subfloors should be checked for moisture using a reputable manufacturer's moisture meter, designed for use with wood flooring. In general, wood or plywood subflooring should not exceed 14% moisture content, with a maximum moisture variance not to exceed 4% difference between the flooring and subfloor.

#### **SUGGESTED TOOLS AND MATERIALS:**

- For 3/8"
  - Pneumatic or Manual Nailer/stapler for use with 3/8" floors
  - 80-85 lb of air pressure
  - 1" minimum fastener length
  - 21 Gauge x 1/4" Narrow Crown

- For 1/2"
  - Pneumatic or manual nailer/stapler for use with 1/2" floors
  - 80-85 lb of air pressure
  - 1 1/4" minimum nail/staple

• Hammer	• Chalk line	• Wood chisel
• Measuring tape	• Square	• Circular or rip saw
• Safety glasses	• Pencil	• Jamb saw

#### **INSTALLING THE FLOOR:**

- The clean subfloor surface should be covered, wall-to-wall, with 15-lb. asphalt saturated felt. Lap the edges of the felt 4" when positioning. Double the felt around heating ducts.

- Flooring should be laid at right angles to the floor joists and, if possible, in the direction of the longest dimension of the room.

- Snap a working line parallel to the starting wall, allowing for expansion space. (Expansion space should be equivalent to the thickness of the flooring.)

- With the tongue out, lay one row of planks along the length of the working line. The first row should be face-nailed and countersunk.

- Subsequent rows should be blind nailed wherever possible. With the proper nailer, nail planks every 4"- 6" and within 2" of the end joint. Push or gently tap boards flush to the previous row. Only tap against the tongue; tapping the groove may damage edges.

- Stagger at least 6 inches between end joints of adjacent board rows. End joints should not repeat visually across the installed floor. Avoid "H" joints and other discernible patterns.

- Face-nail and countersink final rows of flooring as necessary.

#### **IMPORTANT NOTES:**

- The use of putty to fill small gaps or correct minor defects should be considered normal in any hardwood installation.

- Hardwood floors should be maintained year round at 35-55% relative humidity and a temperature between 60-80 degrees. A humidifier / de-humidifier may be necessary in some homes to maintain these climate conditions.

## Glue Down Installation Instructions:

- ATTENTION! Inspect ALL materials carefully BEFORE installation. Warranties DO NOT cover materials with visible defects once they are installed.
- It is the responsibility of the installer/owner to determine if the job site subfloor and jobsite conditions are environmentally and structurally acceptable for wood floor installation.
- Manufacturer declines any responsibility for wood floor failure resulting from or connected with subfloor, subsurface, job site damage or deficiencies after hardwood flooring has been installed.

### PLEASE SEE PAGE 1 FOR PRE-INSTALLATION REQUIREMENTS

#### GENERAL SUBFLOOR REQUIREMENTS:

- All subfloors must be flat to 3/16" per 8' radius. If subfloor prep is required, "high spots" should be sanded or ground down and "low spots" should be filled and leveled with a quality leveling compound. Do not sand surfaces such as vinyl or synthetic tiles that may contain asbestos.
- All subfloors must be clean and free of debris.
- Nail or screw any loose areas to prevent squeaking. Subfloors should have minimum deflection (vertical movement).

#### SUBFLOOR REQUIREMENTS:

- Concrete subfloors must be clean, level, sound and of sufficient compression strength (3000 lbs. Pounds Per Square Inch, "P.S.I."), being sure that the surface is not slick. Sections not level such as waviness, trowel marks, etc. are to be eliminated by grinding or with the use of a leveling compound.
- These products can be installed over dry, flat wood subfloors such as plywood and OSB. If used over an existing subfloor, the thickness of the overlay material must be such as to yield a total of ¾" subfloor thickness.
- Particle board is NOT recommended for glue down installations.
- Note: Subfloor Irregularities that cause wood flooring installations to develop movement or hollow spots between the subfloor and the wood flooring, are NOT the result of manufacturing defects and are not covered by warranties.

#### SUBFLOOR MOISTURE REQUIREMENTS:

- For concrete subfloors: When flooring is installed directly to a concrete subfloor, one of the moisture tests (below) must be performed and documented prior to the installation. In any situation when test results indicate moisture exceeding the guideline for that test DO NOT INSTALL THE FLOORING. Most excessive moisture issues can be corrected easily (sealing, etc.) When corrected, retest your floor to insure moisture guidelines have been met.
- To assure the moisture warranty will be valid please document the method and results of testing prior to installing. Keep a copy for records and give a copy to the homeowner with the warranty paperwork.

#### CONCRETE TEST METHODS

- Calcium Chloride Test (maximum 3.0 pounds)
- Tramex Moisture Meter (maximum reading of 4.5)
- Delmhorst G-40 Moisture Meter (reading of green/dry)
- Wooden Subfloors should also be checked for moisture using a reputable manufacturer's moisture meter, designed for use with wood flooring. In general, wood or plywood subflooring should not exceed 14% moisture content, with a maximum moisture variance not to exceed 4% difference between the flooring and subfloor.

#### RADIANT HEAT SUBFLOORS (OAK, CHERRY AND WALNUT ONLY, some collections exempt)

- In-floor radiant heat systems can significantly alter product performance. Only products warranted for radiant heat systems may be used.
- The radiant heat system must be designed, and installed correctly according to the manufacturer's specifications. The subfloor should never exceed 80 degrees F. The overall layout and internal tubing must remain consistent in heat range throughout the entire floor. "Hot" and "Cold" spots within the system can alter floor performance, and void the warranty.
- Prior to beginning any installation, concrete subfloors with radiant heat installed should not exceed 2 lbs. using a standard calcium chloride test. Plywood subfloors should not exceed a 3% difference in moisture content prior to installation.
- To ensure a successful installation and allow excess moisture to evaporate, the heating system should be operational and running for a minimum of 14 days prior to installation. Three to four days prior to installing the floor the system should be reduced or shut off. At time of installation, the subfloor should be between 64-68 degrees F.
- Radiant heat setting temperature should be adjusted gradually and never vary more than 15 degrees F seasonally.
- When using radiant subfloor heating, heat should be increased in 5-degree increments. Never exceed 80 degrees F.

#### SUGGESTED TOOLS AND ACCESSORIES

- Urethane Adhesive
- Trowel
- Hammer
- Tape measure
- Safety glasses
- Chalk line
- Square
- Pencil
- Wood chisel
- Circular or rip saw
- Jamb saw

#### INSTALLING THE FLOOR

- When the decision is made on the direction the boards will run, snap a working line parallel to the starting wall, allowing the width of a board plus the tongue and expansion space. (Expansion space should be equivalent to the thickness of the flooring.) Temporarily nail a straight starter board along the edge of the working line.
- Once the starter board is secured, apply adhesive to the substrate with the proper trowel. (Flooring may be installed using either a "wet-lay" or "walk-on" method. For "wet-lay" installations, flooring is placed into "wet" adhesive; workers do not walk on wood during installation. For "walk-on" installations, spread the adhesive and allow the adhesive to develop "tack", then begin to install the flooring material.) Spread adhesive up to and along the working line.
- Install the first row of planks along the working line with the tongue-side facing the starting wall. Continue installing subsequent rows, inserting the tongue into the groove of the previous row. Boards should be engaged by hand. Stagger at least 6 inches between end joints of adjacent board rows. End joints should not repeat visually across the installed floor. Insure that the proper expansion space is left at the perimeter of the room.
- As you work, immediately clean any adhesive from the surface of the flooring using mineral spirits and a soft cloth, being careful not to damage the finish. Lift a plank periodically to check adhesive transfer. >80% coverage is required.
- After the large part of the room is installed, remove the starter board and complete the installation. Install moldings and thoroughly clean the floor with an approved Wood Floor Cleaner. Never cover a newly installed floor with plastic. Always use a breathable material such as craft paper or cardboard.

#### IMPORTANT NOTES

- The use of putty to fill small gaps or correct minor defects should be considered normal in any hardwood installation.
- Hardwood floors should be maintained year round at 35-55% relative humidity and a temperature between 60-80 degrees. A humidifier / de-humidifier may be necessary in some homes to maintain these climate conditions.

## INSTALLATION INSTRUCTIONS APPLICABLE TO THE FOLLOWING PRODUCTS:

BEACON HILL  
CASCADE HAND-SCRAPED  
CASCADES RESERVE  
CRAFTIQUE TEJAS  
CRAFTIQUE TEXTURES  
DISTINCTIONS ENGINEERED

HAMPTONS COLORCRAFT  
MESA VERDE  
PASSPORT EXOTICS  
TAOS DISTRESSED  
TRAILHOUSE HICKORY  
TRADITIONS ENGINEERED BEVELED

FOR QUESTIONS REGARDING YOUR HARRIS WOOD FLOOR INSTALLATION PLEASE CONTACT OUR TECHNICAL SERVICES DEPARTMENT AT 1-800-258-5758 OR VIA

E-MAIL: INFO@HARRISWOODFLOORS.COM