




Installation Instructions


Engineered Hardwood HDF WR 5Gi

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Products Included	Approved Grade Levels	Approved Installation Method
All Engineered Hardwood HDF Water Resistant Click and Tap Locking System	Above Grade. On Grade. Below Grade	Floating Indoor Environment

CALIFORNIA RESIDENTS

 **WARNING:** This product can expose you to formaldehyde gas which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

 **WARNING:** Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov/wood.

CAUTION: ASBESTOS IN EXISTING FLOOR

Home Legend product does not contain asbestos. Existing installed resilient flooring and asphaltic adhesive may contain **asbestos fillers or crystalline silica**. **Do not sand, dry sweep, dry scrape, drill, saw, bead-blast, or mechanically chip or pulverize existing resilient flooring, backing, lining felt, asphaltic “cutback” adhesive or other adhesive.** See “Recommended Work Practices for Removal of Resilient Floor Coverings” (rfci.com) for detailed information and instructions on removing all resilient covering structures.

MINNESOTA STATUTE

"IMPORTANT HEALTH NOTICE.

SOME OF THE BUILDING MATERIALS USED IN THIS HOME (OR THESE BUILDING MATERIALS) EMIT FORMALDEHYDE. EYE, NOSE, AND THROAT IRRITATION, HEADACHE, NAUSEA AND A VARIETY OF ASTHMA-LIKE SYMPTOMS, INCLUDING SHORTNESS OF BREATH, HAVE BEEN REPORTED AS A RESULT OF FORMALDEHYDE EXPOSURE. ELDERLY PERSONS AND YOUNG CHILDREN, AS WELL AS ANYONE WITH A HISTORY OF ASTHMA, ALLERGIES, OR LUNG PROBLEMS, MAY BE AT GREATER RISK. RESEARCH IS CONTINUING ON THE POSSIBLE LONG-TERM EFFECTS OF EXPOSURE TO FORMALDEHYDE.

REDUCED VENTILATION MAY ALLOW FORMALDEHYDE AND OTHER CONTAMINANTS TO ACCUMULATE IN THE INDOOR AIR. HIGH INDOOR TEMPERATURES AND HUMIDITY RAISE FORMALDEHYDE LEVELS. WHEN A HOME IS TO BE LOCATED IN AREAS SUBJECT TO EXTREME SUMMER TEMPERATURES, AN AIR-CONDITIONING SYSTEM CAN BE USED TO CONTROL INDOOR TEMPERATURE LEVELS. OTHER MEANS OF CONTROLLED MECHANICAL VENTILATION CAN BE USED TO REDUCE LEVELS OF FORMALDEHYDE AND OTHER INDOOR AIR CONTAMINANTS.

IF YOU HAVE ANY QUESTIONS REGARDING THE HEALTH EFFECTS OF FORMALDEHYDE, CONSULT YOUR DOCTOR OR LOCAL HEALTH DEPARTMENT."

Owner/Installer Responsibility

The owner is advised to be at home during the installation for consultation/direction. The owner and installer should discuss installation and layout to maximize satisfaction. If this is not possible, consultation should be done prior to installation. Installers should be familiar with installation guidelines from National Wood Flooring Association (woodfloors.org).

The owner/installer assumes all responsibility for product quality of completed installation.

PERFORM PRE-INSTALL INSPECTION. FOR CLAIMS PURPOSES, YOU ARE ALLOWED TO OPEN UP TO 4 BOXES FOR PRODUCT INSPECTION. DO NOT OPEN ALL THE BOXES. OPENING ALL THE BOXES CONSTITUTES YOUR ACCEPTANCE OF THE PRODUCT. INSPECT ALL THE PLANKS IN THESE 4 BOXES CAREFULLY. EXAMINE FLOORING FOR COLOR, FINISH AND QUALITY. IF YOU DISCOVER THAT PRODUCTS ARE DEFECTIVE, OR IF MATERIAL IS QUESTIONABLE, YOU SHOULD CONTACT THE RETAILER. IF YOU ARE SATISFIED, PROCEED WITH INSTALLATION.

The length of each plank in any box can vary from 12 inches to the maximum full length stated on the packaging or other product descriptions. Each box can contain all full-length boards or a combination of full length and shorter boards. There is no specific percentage of product length distribution.

Prior to installation, rack up planks from several boxes to ensure uniform distribution of colors, shades and characters in the installed flooring. Planks having similar widths should be placed together in the same row to minimize gaps between boards.

Wood floors are natural products containing natural variations. Variations in color, tone, grain, mineral streaks, small knots and other characters are found from plank to plank. Similar variations exist between samples, pictures and purchased flooring. They are normal and it does not mean the product is defective.

Flooring to be installed in one large area should be purchased at the same time. Product purchased at a later time than the first purchase may vary beyond your expectations.

Accessories, trims and moldings are manufactured to coordinate with the varied appearances of the floor planks. Any exact matches are coincidental. Non-matching accessories are not defective products.

This product is manufactured according to strict quality standards. In the event that defects are discovered in the field, the industry standards permit a defect tolerance not to exceed 5%. The defects may be of any type, whether manufactured or natural. Order an additional 5% extra for cutting wastage and grading allowances (10% for diagonal installations).

During installation, inspect the planks continuously. Defects that can be seen from a standing position should be cut off or held out. Installing defective planks implies acceptance.

Squeaking and clicking noises are the result of interactions among flooring, joists and subfloors when they move. Limiting the movements of the flooring system usually eliminates most of these noises. Sometimes, it is impossible to eliminate them completely and minor squeaking or clicking noises are to be accepted as normal flooring phenomenon. Minor scratches can generally be repaired with the use of putty, stain or filler. It is an industry standard practice of flooring installation and it should be accepted as normal by the home owner.

If You Need More Information

To assure the warranty is not inadvertently voided, before proceeding with any activity that is not covered in this manual, please contact our Technical Support Department.

Acclimation and In-service Conditions		
Acclimation is the process of adjusting (conditioning) the moisture content of hardwood flooring to the environment in which it is expected to perform. The hardwood flooring is fully acclimated when its moisture content and dimensions (width and length) are stable. For example, the averaged dimensions and moisture content remain constant for 3 consecutive days. Flooring must acclimate for as long as necessary to reach fully acclimated stage. Acclimation time varies depending on geographical area, interior climate control and time of the year. Minimum acclimation time is 48 hours. In open box, open plastic wrap. Elevate cartons from the floor by placing them on 2"X 2" lumber or equivalence. Place spacers (3/4" to 1" sticks) between each layer or cross stack the layers for maximum exposure to ambient conditions. Acclimation temperature range is 60°F-80°F and relative humidity (RH) of 35%-55%. Conditions in which the floor was acclimated should be maintained continuously thereafter. Document as much acclimation information as possible below.		
Date: _____ Relative Humidity (%): _____ Temperature (°F): _____ Subfloor Type: _____ Subfloor Avg. Moisture Content (%): _____ Acclimation Period: _____	Pre-acclimation Flooring Avg. Moisture Content (%): _____ Pre-acclimation Flooring Width: _____ Pre-acclimation Flooring Length: _____	Post-acclimation Flooring Avg. Moisture Content (%): _____ Post-acclimation Flooring Width: _____ Post-acclimation Flooring Length: _____

Job Site Condition

Prior to installation, the installer must ensure that at the time of installation, the job site conditions including subfloor/substrate, ambient temperature and relative humidity, and all impacting variables will not negatively affect floor. Home Legend will decline responsibility for damages associated with improper installation or poor site conditions.

Storage and Conditions

Do not store flooring in uncontrolled environmental conditions. For example, garages and exterior patios are not acceptable areas to store flooring. Handle and unload wood flooring with care and store within the environmentally controlled site in which it is expected to perform. Flooring stored on concrete slab should be elevated at least four inches to allow air circulation under cartons.

Existing Home

Existing home should have a consistent room temperature of 60°F-80°F and relative humidity (RH) of 35%-55%. Continual deviation from these conditions will affect the dimensions of flooring. During heating season, humidity may be much lower than the acceptable range. During heating season, a humidifier is recommended to prevent excess shrinkage flooring to low humidity levels. During the non-heating season, humidity levels can be maintained by using an air conditioner, dehumidifier, or by turning on your heating system periodically.

New Construction or Remodel

All work involving water, such as pouring basement concrete floors, drywall and plasterwork, plumbing, etc. must be completed well in advance of the floor delivery. Ensure that the building is enclosed. Where building codes allow, permanent heating and/or air conditioning systems should be operating at least five days preceding installation to promote proper acclimation and should be maintained during and after installation. If it is not possible for the permanent heating and/or air conditioning system to be operating before, during and after installation, a temporary heating and/or dehumidification system that simulate normal living (occupied) conditions can enable the installation

to proceed until the permanent heating and/or air conditioning system is fully operational.

Your job site should have a consistent temperature of 60°F-80°F and relative humidity (RH) of 35%-55% which should be maintained continuously thereafter.

Basements and Crawl Spaces

Concrete slab or ground must be dry. The ground in the crawl spaces must be completely covered using 6 mil black polyethylene. Crawl space clearance between the earth and underside of joists should be no less than 18 inches and the perimeter vent area should be equal to 1.5% of the total square footage of the crawl space or as mandated by code.

Concrete Subfloor Requirements

It must have minimum rated strength of 3000 psi.

It must be flat. It should be flat to within 1/8" in a 6-foot span or 3/16" in a 10-foot span; no bumps or low spots. High spots can be removed by grinding; depressions can be filled with patching compound formulated for use in floor installation.

It must be clean; no construction debris, soil, mud and any other objects on/or adhering to the floor; if necessary, scrape and sweep away before the installation; no protrusions of nails, debris, metals should remain.

New concrete slab must cure for at least 60 days. It must have a minimum 10 mil polyethylene sheet between the ground and the concrete. It must meet concrete moisture requirement below.

It must be free from moisture related conditions which can damage the installed flooring.

Light Weight Concrete

It is concrete which rated strength is less than 3000 psi.

Perform a quick check by drawing a nail across the top; if it leaves indentation, it is probably light concrete.

For glue-down application, the concrete must possess shear strength greater than the glue. If concrete rated psi is unknown, contact the adhesive manufacturer for guidance.

Concrete Moisture

All concrete subfloors should be tested for moisture content and the results documented. Visual checks are not reliable. Perform tests at locations around exterior doorways, near walls containing plumbing, near foundation walls and in the center of the room. Minimum sample size is 3 per 1000 square feet of area and one test for every additional 1000 square feet thereafter.

Its moisture content should meet one of the following criteria below:

- 4.5% when tested using Tramex Concrete Moisture Encounter
- Less than 3 pounds per 1000 square feet per 24 hours when using Calcium Chloride test (ASTM F 1869)
- 75% when using Relative Humidity Testing (ASTM F-2170).

Please note: Concrete moisture content may be acceptable the time of the test, but these tests do not guarantee a perpetual "dry" concrete slab. The concrete slab moisture content can vary at other times of the year. We are not responsible for moisture related damage to installed flooring.

Wood Subfloor Requirements

It must be clean; no presence of construction debris, soil, mud and any other objects on or adhering to the floor; no protrusions of nails, debris, metals should remain. If necessary, scrape and sweep the subfloor before the installation.

It must be structurally sound and stable: no movements or squeaks, no loose panels or loose nails, no signs of ply de-lamination or other damages. Repair all shortcomings before installation.

It must be flat with no visible bumps or low spots; the subfloor should be flat to within 1/8" in 6 feet span or 3/16" in 10 feet.

Test for moisture using reliable moisture meter. Perform tests at locations around exterior doorways, near foundation walls, near walls containing plumbing lines and in the center of the room. Measure 20 locations per 1000 square feet.

Moisture content of subfloor should be less than 12%.

Moisture content difference between subfloor and acclimated flooring should be 4% or less.

Plywood or Oriented Strand Board (OSB) Specifications

On truss/joist spacing of 16" (406mm) O/C or less, the industry standard for single-panel subflooring is minimum 5/8" (19/32", 15.1 mm) CD Exposure 1 plywood subfloor panels (CD Exposure 1) or 23/32" OSB Exposure 1 subfloor panels, 4' x 8' sheets. Expansion gap between panels should be 1/8" (3 mm). If panels are not tongued and grooved and there is not sufficient spacing or is inadequate, cut in the required spacing with a circular saw. Do not cut in expansion space on tongue and groove panels.

Particle Board or Fiber Board

Only for floating installation.

Existing Floors

Installation over existing floor requires the installer to consider potential issues related to moisture damage, adhesive failure and fastener failure. Acceptable floor coverings include: solid hardwood, linoleum, terrazzo, ceramic tile and other "moisture sealing floors."

Unacceptable floor coverings include: carpet, needle punch felt, edge glued linoleum and other "moisture absorbing flooring."

Radiant Heated Subfloor

This product can be installed over radiant heated subfloor. Operating surface temperature must be less than 84°F. Decrease temperature before installation. Increase temperature gradually after installation. Contact heater manufacturer for specific installation instruction.

Moisture Barrier and Moisture Retarder

Concrete Subfloor: For floating installation, use 6 mil polyethylene film or other means with equivalent permeability. Overlap the edge seams and tape it together. Extend moisture barrier up to the wall about 1 inch high. For direct glue installation, use a moisture barrier if moisture level exceeds requirement (see Concrete Moisture section above).

Wood Subfloor: Use asphalt-saturated kraft paper or #15 or #30 felt that meets ASTM Standard D4869 or UU-B-790, Grade D. Overlap along the edge seams 2" - 4" wide. This retards moisture movement from below. Extend the moisture retarder to about 1" from the walls. Secure to the subfloor as necessary.

Sound Control Underlayment

Check with sound control manufacturer for application guidelines. Generally, the less compressive underlayment is preferred.

Expansion Gap

Required gap width is 1/2". It is required around the perimeter of the floor and between floor and all vertical obstructions. Do not place permanently installed structures such as kitchen counter/cabinet on the installed floor.

Transition Molding

For floating installation, transition T-molding is required in the following cases: floor spanning greater than 40 feet in length or width; floor areas interrupted by wall sections extending out of the wall, floor areas which are not rectangular, wall openings-with or without door, L shaped or otherwise not rectangular rooms requires T-molding to split it into rectangular sections.

Tools and Materials

Basics:

Tape measure • Moisture meter (wood, concrete or both) • Chalk line & chalk • Hammer • Electric power saw • Carbide tipped saw blade for fine cut • NIOSH-designated dust mask • Hand saw or jamb saw • Eye protection • Straight edge or Spacers • Pry Bar • Mallet • Broom • Color matched wood putty • Tapping block • Pull bar

Safety and Health Precautions

Power tools can be dangerous. Operate in strict accordance to manufacturer's operating instructions and safety precautions. Unsafe and improper use can cause serious injuries.

Avoid inhalation and exposures to wood dust by mechanical means and by wearing personal protective equipment.

Wear appropriate personal protective equipment (PPE) which include NIOSH or OSHA approve dust masks, safety goggle and work gloves.

Helpful Pointers

General Tips

- Make sure your work area is well lit. Good visibility ensures that color is consistent and that visually defective planks are detected and removed.
- The minimum length of the first and last plank is 12". If the last plank will be less than 12", adjust the length of the first plank. The remainder of the last plank can be used as a starter board on the following rows.
- Using a shorter piece at undercut door jams will help when fitting flooring in place.

Cutting the Last Row to Width

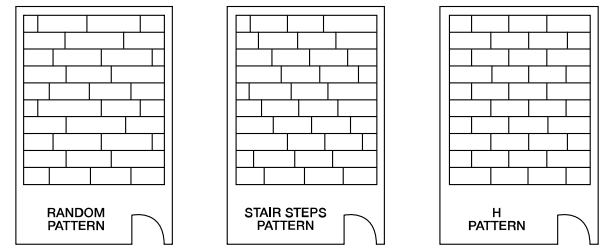
- Most often the entire length of the last row will need to be cut so that it is narrow enough to fit the remaining space.
- Measure the distance between the floor face edge (exclude the tongue) to the wall. Subtract 1/2" from this measurement for expansion gap. Draw a line. Cut through the line. Discard the excess piece. Proceed with installation.

Pre-install Activities

- Subfloors should be in clean condition.
- Remove existing base, shoe molding or threshold carefully. They can be used to cover the expansion gap left around the edges of the room.
- Understand the parts of the locking mechanism of the flooring plank. The tongue is the thinner extension coming out of the side of the planks. The groove is the wider extension coming out of the other side of the floor plank. The ends do not have tongue and groove. There is an upper drop-lock end on one side and a lower-drop lock end on the other side. Short ends are locked by pressing down on the overlapping ends or tapping down with non-metallic hammer head.
- Ensure that the width of first and last row is not less than 2 inches wide. Measure the distance of room in the direction of the width of the plank. Divide by the width of the plank and express it in decimals. Multiply the decimal portion by the width of the plank, the result is the width of the last plank. This is the width of the last plank. If it is less than 2 inches, modify the width of the first plank. Determine the width of the first and last row by adding the calculated width of the last plank to the width of the whole plank. Divide this number by 2. Subtract expansion gap from the result. The result is the width of the first and last row.
- Rack up planks from several boxes.
- Ensure that end joints are staggered at least 6" between the rows.
- Inspect product for defects. If material is questionable, contact the retailer immediately. Do not proceed with installation.
- If the first row of floor panels had already been trimmed in width to meet minimum requirement, there is no need to trim it again.

Racking Pattern

- There are several options, but the most common one is the random pattern.
- It is important to ensure there is a minimum of 6 inch joint stagger between the rows.
- Lack of sufficient stagger joint length may compromise the stability of the whole flooring installation.



Installation Process

Step 1

- Install the product from left to right, across the room.
- Place the first floor plank with the locking groove facing the room.
- Ensure there is expansion gaps between floor and the wall; and all vertical fixtures during installation.
- Place the short side tongue of the next floor panel right over the top of the short side groove of the first one and lay it flat.
- Make sure the edges are perfectly lined up and square. Notice that the short sides have an easy to install tongue and groove.
- Use a soft hammer and gently tap the tongue into the groove to lock them together.
- Continue with the next floor panels in the same way.

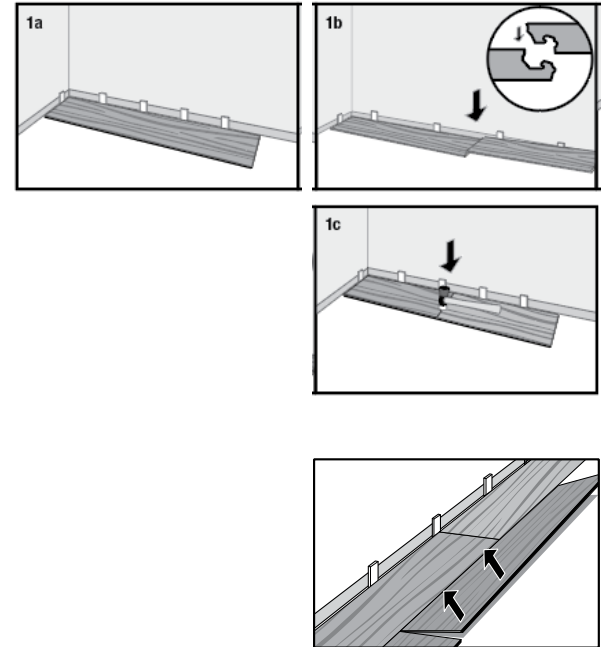


Figure 1

Attention.

Disassembling the planks at the short sides.

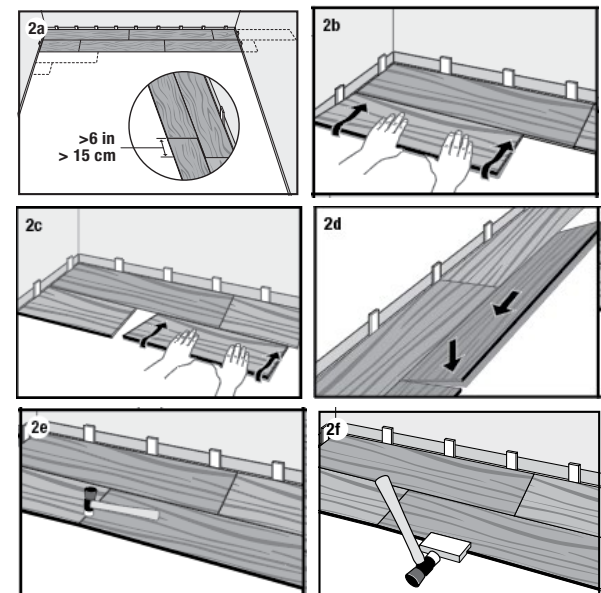
Place the joined planks on flat surface, lift the free long side of the plank and rotate it toward the joined side of the plank. See Figure 1.

Once the short end is completely disengaged except at the corner, pull the plank out from the groove at an angle.

Do not disassemble by lifting the far end of the short side. This will damage the locking mechanism.

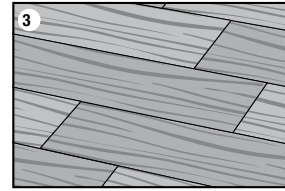
Step 2

- If you have a cut piece from the previous row and it is longer than 12 inches long, you can use this piece to start the next row. Plan it so that you will have at least 6 inches short joints stagger between the rows.
- Begin installing the first plank in the second row. Use an angling technique, insert the tongue into the groove of the previous row, push gently, then lay the plank flat to lock the long edges together.
- Insert the tongue of the next plank into the groove about a few inches away from the previous plank. Slide the plank toward the first plank until the tongue and groove line up with each other.
- Lay the plank flat ensuring there is no gap on the long edge joints.
- Use a non metal headed hammer to tap the short end joint.
- If the joints are not locked properly, the planks will not lay flat or a gap will appear. To solve this problem, use a tapping block. Make sure you follow tapping block manufacturer instruction to avoid damaging the planks edges.
- Continue in the same way with the rest of the subsequent rows.



Step 3

- Continue in the same way until all the rows are installed, except the last row.
- Ensure staggering the short end joints between rows at a minimum 6 inches.
- Making sure there is expansion gaps between the walls and flooring parameters. Use spacers to maintain consistent expansion gaps as directed in Step 2.



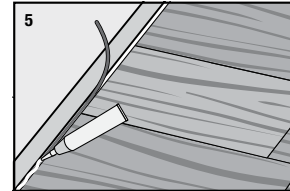
Step 4

- When you come to the last row, or tight spaces, you will need to use the pull back to ensure the joints are securely locked in place.



Step 5

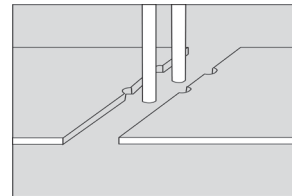
- Seal the perimeter of the flooring. This is also recommended for other gaps around vertical objects.
- Fill the expansion gap with compressable PE foam backer rod, then use 100% silicone caulk to seal the gap.



Special Situations

Expansion gaps around pipes.

- Measure the diameter of the pipes and mark the position on the floorboard. There should be a ½ inch expansion gaps between the floor panel and the pipe or other vertical structures.
- Cut out the holes.
- Saw the board widthwise through the holes.



Door frames have to be undercut.

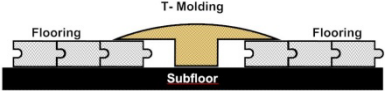
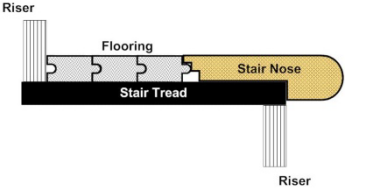
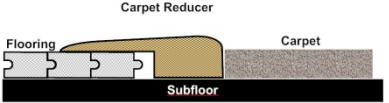
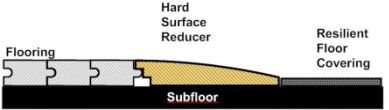
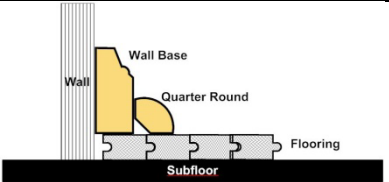
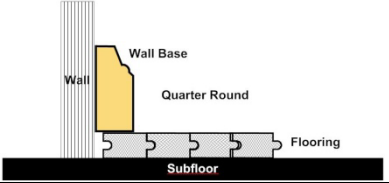
- Use a floor panel as a guide as to how much to saw.
- Put the floor panel faced down as a guide.
- Saw off the bottom of the door frame to allow the floor panel to slide under it.

Finishing Touches

- Clean the floor.
- Use matching putty where necessary
- Install or reinstall all wall trim pieces. Nail them through the wall, but not to the subfloor to avoid restricting the expansion gap.
- Install transition trim pieces. Nail them to the subfloor, not the flooring.
- At doorways, transitions should be used to protect the edges of the floor and to provide a decorative transition from one floor type to another.
- If the floor is to be covered to prevent damage during construction, use a breathable material such as cardboard. Do not cover with plastic.

Accessories

Pictures are for general illustrative purposes only. Actual products may differ from picture.

	<p>T-Molding is used to create a transition between floor coverings of similar heights or to cover an expansion gap.</p>
	<p>Stair Nose is used in conjunction with flooring installed on stair steps or finished edge of a higher-level floor like in a sunken living room.</p>
	<p>Carpet Reducer (also called Baby Threshold or End Cap) is used to transition floor coverings of differing heights. This reducer strip is also commonly used to border a fireplace, sliding glass door and other exterior door jambs.</p>
	<p>Hard Surface Reducer is used to transition to another hard surface flooring of different heights such as tile, vinyl, concrete.</p>
	<p>Quarter Round is used to cover the expansion space between the Wall Base and your flooring. It can also be used them to make smooth transitions between the floor and cabinetry. It can be used with or without Wall Base molding.</p>
	<p>Wall Base is used to give a finished look at the base of the walls. It can be used with or without Quarter Round.</p>

Technical Support

For installation information and technical questions not covered in this installation guide, please contact our Technical Support Representative by calling the toll-free number below.

Toll Free Number: 877-630-1800 or 877-960-8001

Warranty

This flooring product comes with a Home Legend Limited Wear Warranty. The warranty applies to original purchaser of the flooring. It warrants the original purchaser that the finish surface will not wear through for duration of the stated warranty from the date of purchase. Please contact our Customer Service Representative by calling our toll-free number 877-630-1800 or 877-960-8001 or send in the warranty registration below for a written copy which provides detail terms of coverage and limitations. You may also email your request to claims@homelegend.com.

WARRANTY REGISTRATION

UPON RECEIPT OF THIS REGISTRATION FORM AND COPY OF RECEIPT, WE WILL SEND YOU A WRITTEN WARRANTY DOCUMENT. SEND ONE COMPLETED FORM ALONG WITH A COPY OF PROOF OF PURCHASE TO:

HOME LEGEND, LLC
WARRANTY REGISTRATION
P.O. BOX 887
ADAIRSVILLE, GA 30103

Customer Name	
Customer Address	
City, State, ZIP Code	
Phone/E-mail	
Product Model Number	
Product Description	
Date Purchase	
Retailer Name	
Retailer Address	
City, State, ZIP Code	
Installer	