

# Engineered Hardwood Flooring Installation Manual

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## **1.0 EH – Tips on Reading this Manual**

This installation manual is intended to be straightforward and educational. Our manual references industry-standard applications. Before starting installation, read all instructions thoroughly. Should any questions arise please contact Scandura. All installation instructions must be followed to ensure both a successful installation and the life of the product.

## **2.0 EH Acclimation and Jobsite Conditions**

When the product is moved to the jobsite, the building must be weather-tight, with a fully operational HVAC system able to maintain a temperature of 16 to 26°C and a Relative Humidity (RH) of 30% to 55%. All “wet” work must be completed and thoroughly dried, 1 week prior to the flooring being delivered to the jobsite, including and not limited to:

- masonry
- drywalling
- plastering
- painting (except for final coat on the base moldings)

Drywall dust must be eliminated from the jobsite, as drywall dust may permanently embed into the wire-brushed texture of the wood surface.

Room temperature and humidity must be monitored and controlled within the specified guidelines for the lifetime of the flooring, including the installation; this is called the floorings “Service Condition”.

HVAC system must be operational, able to maintain a temperature of 16 to 26°C. The product must be in balance with normal living conditions of 30% to 55% RH; this process is called acclimation, which allows your flooring to adjust to these conditions.

Controlling the Service Condition to be in the ranges defined is one of the most important attributes for the longevity of the flooring.

Basements must be finished prior to the delivery of the flooring.

Crawl spaces must be dry and have adequate cross ventilation with RH consistent with the interior of the Home.

All flooring boxes are to be kept closed on the job site until the installation is underway.

Once ready to install the flooring, use a moisture testing device to confirm the moisture content of the flooring is between 6% and 9%

## Relative Humidity and Temperature Log

Location/Homeowner: \_\_\_\_\_

### Upon Delivery of Plank

Temperature and RH of jobsite: \_\_\_\_\_

Moisture content of plank: \_\_\_\_\_

### Upon Beginning of Plank Installation

Temperature and RH of jobsite: \_\_\_\_\_

Moisture content of plank: \_\_\_\_\_

### Upon Completion of Plank Installation

Temperature and RH of jobsite: \_\_\_\_\_

Moisture content of plank: \_\_\_\_\_

### 3.0 EH Expansion Space

Engineered hardwood will expand and contract with changes in temperature and humidity. To help account for this, it is important to leave a 1/2" expansion gap around the entire perimeter where the floors meet the walls or any permanent object such as, but not limited to:

- stairs / stair railings / stair posts
- door sills
- other flooring(s)
- cabinets.

During installation, it is important to use spacers to maintain the required 1/2" expansion gap. Remove the spacers when the installation is completed.

### 4.0 EH Inspection of Flooring and Layout

Inspect the hardwood flooring in a well-lit area looking for any potential problems. If the hardwood supplied will not satisfy the customer or installer do not proceed with the installation. The decision not to proceed must be made within the first 100 sq/ft or 10% of the job, whichever comes first. Opened boxes beyond this amount will not be refundable. Real wood flooring contains natural variations in color and grain pattern. To prevent the clustering of these variations, it is recommended to use pieces from multiple boxes while installing the flooring. When installing hardwood flooring, it is best to avoid creating noticeable patterns like stair steps or H patterns between adjacent rows. A general rule of thumb when installing is to stagger the end joints by at least double the board's width and do not use boards less than 12" long.

## **5.0 EH Radiant Heat (Hydronic Heat Only)**

Before installing over a radiant heat subfloor turn off the heat for 24 hours. If installation is taking place during the winter and no other source of heat can be used, turn down the heat to 18°C. After installation turn up the floor no more than 1°C per 24-hour period. Note the flooring surface should never exceed 26°C.

## **6.0 EH Concrete Subfloors**

Concrete subfloors must be smooth and level within 3/16" over a 10' radius or 1/8" over a 6' radius.

Patching or leveling of the sub-floor must be done according to patching manufacturers requirements prior to the flooring being installed.

The slab must meet the following conditions:

- Free of sealers, coatings, curing or parting compounds, bond breakers, dust, oils, debris, etc.
- Minimum 90 days old.
- Minimum compressive strength of 3500 psi.
- When tested according to the most current version of ASTM F1869, Moisture Vapor Emission Rate (MVER) level to not exceed 3lbs / 1000sqft / 24 hours.
- Prepare and repair all cracks and imperfections prior to installation.
- Saw cuts / expansion joints in the concrete must be honored through up into the flooring.
- No groundwater permeating the slab

## **7.0 EH Wood Subfloor**

All wood subfloors must be clean, flat, dry, structurally sound, free of squeaks and protruding fasteners. The subfloor must be flat to within 3/16" over a 10' radius or 1/8" over a 6' radius. Patching or leveling of the sub-floor must be done according to patching manufacturers requirements prior to the flooring being installed.

All subfloors must be tested for moisture content and not exceed 10%. Additionally the subfloor moisture content must be within 3% of the flooring being installed.


A subfloor which is built to meet building code may still create squeaks in the finished flooring, as a calculated and anticipated amount of deflection is considered normal for wood frame construction. Factors such as joist height, joist span and subfloor type / thickness can all contribute to deflection.

Truss/Joist Spacing (Measured on Center)	Minimum acceptable thickness, 4'x8' sheets
16" (406mm) or less	5/8" (19/32", 15.1mm) CD exposure 1 plywood <b>or</b> 3/4" (23/32") Exposure 1 OSB
more than 16", up to 19.2" (488mm)	3/4" (23/32", 18.3mm) T&G CD exposure 1 plywood, glued and mechanically fastened <b>or</b> 3/4" (23/32", 18.3 mm) exposure 1 OSB, glued and mechanically fastened
More than 19.2" (488mm) to a max of 24" (610mm)	7/8" T&G CD exposure 1plywood, glued and mechanically fastened <b>or</b> 7/8" exposure 1 OSB, glued and mechanically fastened <b>or</b> two layers of subflooring

### 8.0 EH Tools required

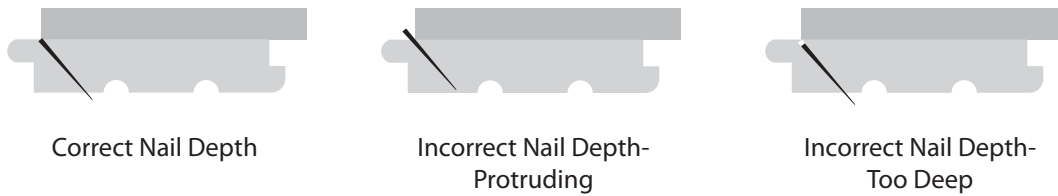
- Expansion wedges and spacers
- painters tape
- tapping block and pull bar
- table saw with finishing blade
- chop saw with finishing blade
- finish nailer
- pneumatic floor nailer

### 9.0 EH Fastener Guide

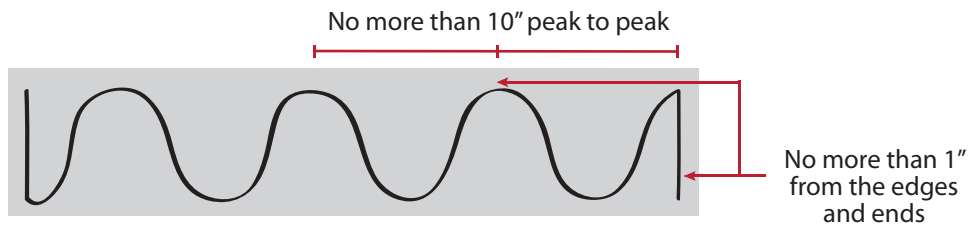
Flooring Thickness: 5/8" (15mm)		SCAN FOR PRIMATECH'S EASY FASTENERS DEPTH CALCULATOR!  
Fastener Type	Fastener Spacing	
18 ga 1-1/2" Cleat/Staple or 18 ga 1-3/4" Cleat	18 ga: 2" from the ends and every 4" along the edge tongues	
16 ga 1-3/4" or 2" Cleat	16 ga: 2" - 3" from the ends and every 6" - 8" apart along the edge tongues	

## 10.0 EH Installation (Mechanically Fastened Method)

Check your nail gun to make sure the depth is set for the appropriate flooring thickness. Test nail a piece of flooring to ensure the nailer is set up correctly.



It is industry standard to supplement a mechanically fastened installation for wood flooring exceeding 5" in width with a flexible wood flooring adhesive. Apply the adhesive in a serpentine pattern to the back of each board taking care not to get any on the face of the plank as this may cause permanent damage. Note the adhesive is to be applied to the back of each board and not the subfloor. If a vapor retarder is required above an unheated crawl space or basement, you must use a roll-on vapor retarder with the "glue assist method".



After selecting a starting point and determining the layout of the flooring, snap the necessary chalk lines required and begin the installation.

Install the first row of planks with the groove side against the wall (cut if required for layout) with a 1/2" expansion joint against the wall. Top nail using an 18 gauge nail along the wall side no less the 3/8" from the long edge and 12" apart staying 3" away from the short side of the board.

Continue subsequent rows using flooring from multiple boxes while maintaining 6" spacing between end joints on all rows. Maintain a 1/2" gap against all permanent objects.

Using an appropriate pneumatic floor nailer follow the fastening guide for gauge and spacing.

To prevent damage to the tongue and groove use a taping block to gently tap boards flush to the previous row. For the last row use a pull bar to set the flooring and then top nail in the same way as the first row.

## **10. EH Installation (Glue Down Installation Method) (Kiesel Bakit EK)**

Be sure to read and follow all Kiesel Bakit EK instructions.

Select a starting point and determine the layout of the flooring snapping all necessary chalk lines you may need and begin the installation.

Apply the adhesive evenly to the subfloor, only applying as much adhesive as you can install flooring within 40 minutes.

Leaving a ½" gap against the wall, begin the installation by placing the first plank with the tongue cut off and the groove side facing the installer.

When installing the next rows, hold the next piece at a 45% angle inserting the tongue into the groove before laying the plank flat.

Be sure not to get glue onto the tongue. If glue gets onto the surface of the plank, remove it immediately.

Use a taping block to tape pieces into position being sure not to damage the tongue or the groove.

To ensure the boards do not open or drift apart use painter's tape to hold planks together while the glue is wet. Ensure the painter's tape used does not affect the finish of the flooring and be sure to remove the painters tape immediately after the glue is dry.

For the last row install use a pull bar to snug planks tight and top nail using an 18 gauge nail along the wall side no less the 3/8" from the long edge and 12" apart staying 3" away from the short side of the board.

If the substrate is concrete, on the last row simply use a tapered wedge to hold the last row into place.

## **11.0 EH Protecting finished floors**

If the installation requires temporary floor protectant be sure that is is suitable to cover engineered hardwood floors. Ensuring before the floors are covered that they are free of any debris that may scratch the floor. Overlap all seams of floor protectant and tape to itself not to the flooring. Prior to starting up the radiant heat system be sure to remove floor protection.

## **12.0 EH Care and Maintenance**

See care and maintenance guide for these details.