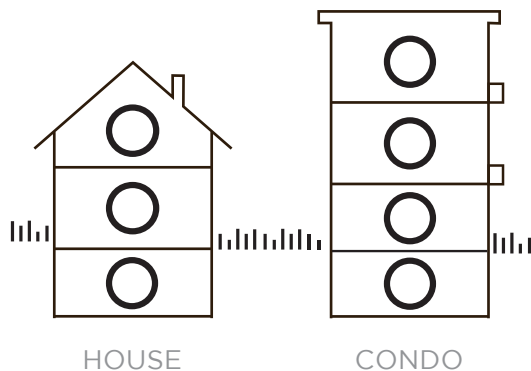


HANDLING AND STORING

Hardwood is a natural living material, which reacts to changes of relative humidity. It absorbs and releases moisture before and after it is installed, depending on the variations in the environment. Hardwood expands in summer and shrinks in winter. To prevent excessive expansion or shrinkage of your hardwood floor, it is recommended to maintain the relative humidity level in your home, office, chalet, cottage, etc. (location of wood installed), at the appropriate humidity level for your area (between 37% and 50% approximately) throughout the year.

Your authorized Dealer / Distributor supplies you with specially designed cartons that have been stored in a heated and well-ventilated warehouse. It is important not to transport your wood under raining and/or damp conditions, nor should you store it in a non-heated or poorly ventilated area beyond values indicated above.

LOCATION



ABOUT INSTALLATION

To ensure that your hardwood floor is installed properly, Preverco recommends that you follow the installation instructions whether you install it yourself or hire an authorized professional installation company.

- Preverco cannot be held responsible for the poor quality of the installation.
- If you decide to hire an installer who will install your hardwood floor without your supervision, it is your responsibility to ensure the practical judgment of the installer. The installer should use reasonable selectivity in assessing the quality of the wood, the appearance, and arranging the boards according to the natural color variations of the species selected. Preverco cannot be held responsible for any error due to the installer's bad judgment.
- It is the owner's responsibility to ensure that the wood delivered is the wood that has been ordered and chosen.

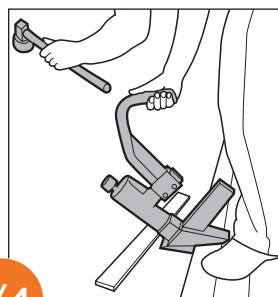
- The installer and/or the owner should select boards appropriately and, either discard, relocate in hidden places or cut out pieces with defects, if any, when required.
- **Installer:** please take the time to carefully read over our detailed installation instructions as they could be different from other engineered products.
- A 5% material waste allowance should be included within your total square footage to allow for material defects. The use of wood putty, filler, or stain might be required during the installation process and is considered an industry standard.
- If at any time you feel that in any way our Preverco product is not to standard in reference to appearance, width, color, sheen, milling, tongue or groove placement, **STOP installation and contact immediately the retailer where you purchased your floors for assistance**.

Preverco engineered floors can be installed in a basement as well as above grade.

TOOLS AND MATERIAL REQUIRED

- Tongue and groove adhesive (floating method)
- Vacuum cleaner or broom
- Leveling bar
- Tape measure
- Scraper
- Chalk line
- Drill
- Jamb saw (for under cutting door frames and casing)
- Wood/concrete moisture meters
- Circular saw
- 3 mm tape or painters tape
- Chisel
- Tapping block
- Last board puller
- Nail punch
- Chop saw or hand saw
- Hammer
- 1.5 in finishing nails (for wood subfloors only)
- Preverco touch up and maintenance kits
- 1/8 in close cell foam (floating method)
- Proper nailer (nailed down method) with cleats/staples.
- Moisture cure urethane adhesive (glued down method)

NOTE: The selection of mechanical fasteners such as nailers varies by manufacturer, offering the installer the choice of manual or air-assisted. Therefore, it is the installer's responsibility to ensure that the cleat is properly set as dimpling of the wood face is not considered a manufacturing defect. It is recommended to test a couple of pieces by nailing them down and examine the edge where the two (2) pieces meet. Particularly in installations of 90 degrees to outside walls, dimpling could be very apparent in direct sunlight.



Our engineered products are designed to perform on concrete (glued down or floated), plywood and O.S.B. (nailed or glued down) to thickness and distance recommended by NWFA. Please consult your source of supply or Preverco technical department for questions regarding the above or any reference to the installation instruction hereafter.

CONDITIONS & INSPECTIONS

- 1. STRUCTURALLY SOUND:** Nail or screw down the subfloor (plywood or OSB) if there are any loose areas that could cause squeaks. Gluing or nailing a hardwood floor down to the subfloor will not take away any problems of squeaking. It may only hide it somewhat. The subfloor must meet the NWFA and National Building Code requirements. Your installation will only be as good as the subfloor underneath. We suggest the use of plywood, CDX and concrete
- 2. DRY:** Conduct a moisture test in different areas of the subfloor and record your readings. For plywood and OSB subfloors, the percentage moisture difference between the hardwood floor and the subfloor must not exceed 2 points with a maximum of 12% for the subfloor. For concrete subfloors, the moisture content of the concrete should never exceed 4% with electrical conduction device (Tramtex or equivalent) or 75% ASTM Test F 2170. The installer and the floor owner are both responsible for measuring the moisture content of the subfloor and making sure it is within the recommended level prior to installation.
- 3. CLEAN:** Broom sweep the area and vacuum. Ensure that there is no contaminant like: wax, paint spills, oil, or any other materials that could cause a problem with the adhesive adhering to the substrate.
- 4. FLATNESS:** Using a straight edge or level, check to see if the subfloor (concrete) is within 3/16" in 10' or 1/8" in 6'. If there is a need to patch/fill in the low areas, make sure to use a filler from a cement/polymer type base that has a strength of 3000 p.s.i. Read over the cement/patches maximum thickness allowed or you might overfill in deep areas or voids, and the strength of cement filler will not be strong enough to support heavy objects. Make sure that the subfloor is free of any imperfections (including nails or screws).
- 5. FOR THE PURPOSE OF ACOUSTICS AND STABILITY,** we recommend the installation of the SoundLoc 2.0 underlayment (or an underlayment up to 1/8" (3 mm) thick with a maximum compression of 20 percent. You must also install a vapor barrier to avoid any deformation of the hardwood from subfloor humidity). In order to obtain optimal installation and full warranty coverage, the subfloors must be rectified prior to installation, leveling out any irregular surfaces (concrete OR subfloor plywood) that may cause improper installation (refer to point 4 in section "Subfloor conditions and inspection"). You may correct these irregularities by using a self-leveling concrete. Please contact our customer service agents for more details and to obtain a products authorized by the manufacturer.

Our engineered products are designed to perform on concrete, plywood or O.S.B. subfloors. Subfloors can be made of different material as long as they are structurally strong enough to support the overall weight of the Preverco floor.

IMPORTANT: Wall to wall carpeting and flexible surface must be removed before installing your new hardwood floor.

PLYWOOD: The industry now allows for the use of CDX plywood (exterior grade) with a minimum of 5/8" (16 mm) tongue and

groove. Check that the subfloor is fastened down with the proper fastener (deck screws work well). The use of drywall screws is not acceptable. The recommended nailing/ screwing down pattern is 4"- 6" (10 to 15 cm) in the field area and 2"- 4" (5 to 10 cm) on the seams. Contact with the joist is always preferred. Always check for moisture content to not exceed 12% prior to installation using a wood moisture meter. Also, make sure that the percentage moisture content of the engineered flooring is within 2% of that of the subfloor.

O.S.B.: 3/4" (19 mm) OR 23/32" (18,5 mm) stamped exterior grade also is approved. Install hardwood 90 degrees to joists only. Always check for moisture content to not exceed 12% prior to installation using a wood moisture meter. Also, make sure that the percentage moisture content of the engineered flooring is within 2% of that of the subfloor.

CONCRETE: For new concrete, allow a minimum of 30 days cure time prior to start of concrete moisture tests. Various methods and testing devices exist to check the moisture level of a concrete subfloor.

- **Polyethylene test** (ASTM D 4263), surface test. Tape a plastic film of 2'x2' (60 x 60 cm) over concrete for 48 hours to see if concrete changes color or condensation occurs. This information will indicate that the concrete floor is wet and the wooden floor should not be installed. This method is empirical and is a preliminary test, further analysis will be required.

- **Relative moisture test** (ASTM F 2170), thorough test. Using an ultrasonic sensor and a sensor, check the relative humidity of the concrete slab to 40% of its depth. A reading of 75% RH or less indicates that the concrete slab is ready to receive the wooden floor; a reading between 75% and 85 % indicates that it is preferable to place a waterproof membrane before installing the wood floor. Never install a hardwood floor when moisture level is greater than 85%.

- **Calcium chloride test** (ASTM F 1869), thorough test. A calcium chloride test must be conducted to determine whether the moisture content of the concrete exceeds 3 lbs. / 1000 ft² per 24 hours. If so, but less than 7 lbs. / 1000 ft², one can use an approved waterproof membrane to cover the concrete. Never install a hardwood floor when the calcium chloride test exceeds 7 lbs. / 1000 ft² per 24 hours. Even if the test indicate that the subfloor is dry, it is preferable to use a vapor barrier because conditions can change.

Concrete leveling is a very important point. Concrete must be flat/ level within 3/16th over a 10 ft. span (< 5 mm over 3 m or 1/8" in 6').

RADIANT HEATING: To apply Preverco engineered floor over this type of heating, make sure that the system has gone through a heat/leak test and has run on and off for a few weeks prior to the floor installation. The system must be turned off and allowed to cool to room temperature before installing the floor. After the entire installation is finished, you can gradually (3.0°C / 5.4°F per day) bring the heating system back to normal. The system's surface temperature should never exceed 29°C / 85°F. Moreover, if radiant heat pipes are exposed or apparent from the subfloor, a 3/8" (9,5 mm) plywood or a concrete layer of 1/2" (12.7 mm) must be used to cover the pipes in order to spread out the heat more evenly.

NOTE: The warranty of your Preverco floor could be void if an improper use of installation of a radiant heat system is demonstrated.

RESILIENT TILE: Do not remove as some tiles are adhered with a black cut back adhesive which could cause the engineered adhesive to not stick properly.

SOFTWOOD 1"X 5" OR 6" DIAGONAL BOARDS: The use of 5/8" (16 mm) plywood or 3/4" (19 mm) O.S.B. must be nailed/ screwed to this existing subfloor.



FLOATING FLOOR INSTALLATION

STEP 1: For ease of installation, always roll out the underlayment in the same direction as the engineered product. Tape edges of underlayment together (Tuck tape is the best choice). Some underlayments already have a pressure sensitive tape on edges. For optimized acoustic and stability performance, we recommend to use SoundLoc 2.0 underlayment or any other vapor-barrier underlayment with a maximum thickness of 1/8" (3 mm) with a 20% minimum compression.

STEP 2: Always leave a proper expansion space from all walls. Engineered platforms used in a floating floor method requires the use of wedges or spacers against starting wall to help keep the flooring from shifting or moving during installation. Make sure that the starting wall is straight and perpendicular to the room. Refer to the following table.

STEP 3: Apply the same T&G floating floor adhesive to the BOTTOM of the GROOVES (side and end). Reverse the plank direction by having the tongue side (edge) facing the starter board. Remember to leave a proper expansion gap along the end wall. Engage plank boards together.

STEP 4: Continue on using engineered boards for 1st row. Cut off last board in 1st row leaving a proper expansion space. Use the cut off for the 2nd row.

Install 3rd, 4th, etc rows. If cut off from end piece is too small, discard and use a new piece. The use of a tapping block is required. Never hit the groove side or edge of any board as damage may occur. Simply wipe off any adhesive that comes in contact with the sawed board face. A dampened cloth (water only required) works well. Check with adhesive manufacturer for details.

NOTE: If possible, be careful to stagger all end joints approximately twice their width (min. 6 1/2" total) to achieve best visual. Use boards of different random lengths and grain appearance for best results. A tool referred to as a board puller can be used to engage end joints if needed.

STEP 5: In most installations, the last or final row will need to be ripped to width. Remember to calculate into your measurement a proper space for expansion.

STEP 6: Take final inspection of installation, making sure there is no adhesive or residue left on the engineered floor face. Ensure you use the right products recommended by the manufacturer and compatible with the Preverco products.

FLOATING FLOOR INSTALLATION WARNING

THE FLOOR MUST NOT BE FIXED TO ANY SURFACE AND CANNOT BE SUBMITTED TO ANY MOVEMENT RESTRICTIONS.

Expansion gaps play a fundamental role in the performance of a floating floor installation. They allow the flooring room to expand and contract freely in relation to changes in ambient humidity and prevent damage that can affect the aesthetics and structural integrity of the floor. When the room humidity varies strongly, cumulative expansion and contraction can become damaging for the aesthetics and durability of the floor.

1/2" (13 mm) minimum expansion gaps are standard for most installations of floating flooring. The expansion gaps must be respected on all walls, columns, doorways, moulding, etc. (ANY FIXED ELEMENTS). The use of spacers during installation insures that appropriate expansion gaps will be respected. IF LENGTH OR WIDTH OF THE ROOM EXCEEDS 26' (8 METERS). See reference table below.

REFERENCE TABLE EXPANSION GAP:

Required expansion Gap	Maximum room width	Maximum room length
1/2 in (13 mm)	Up to 26' (8 meters)	Up to 52' (16 meters)
3/4 in (19 mm)	Between 26' to 40' (7 to 12 meters)	Between 52' to 80' (14 to 24 meters)

NOTE: The installation of a "T" moulding might be necessary for any room exceeding 40' in length or width. The drywall should be undercut to obtain the necessary expansion room.

INSTALLING MOULDINGS:

Adequate expansion space must be envisioned for the installation of all mouldings. We recommend the use of engineered flooring adhesive to attach the moulding to the subfloor. Never attach mouldings to the floating floor. Take care when installing the moulding to ensure that it will not inhibit the floor's ability to move. Quarter round and baseboards are to be nailed only to the wall and never to the floating floor.

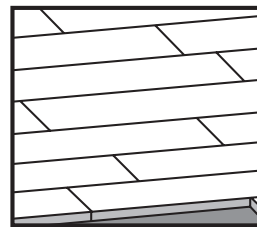


FIGURE 1.1 (CORRECT)

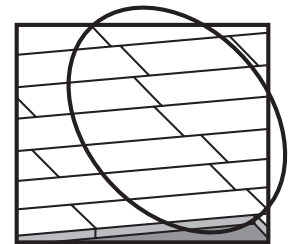


FIGURE 1.2 (INCORRECT)

REGULAR AND PREVENTIVE MAINTENANCE

Preverco offers a complete selection of maintenance products specially designed to preserve the original appearance of your hardwood floor. Quick and easy to use, they will make cleaning as easy as ABC and protect your investment for a lifetime.

- Maintain proper humidity conditions within your home. It is recommended that the humidity level stay in the recommended range between 37% and 50% throughout the year. Problems related to humidity level variations can be minimized by proper ventilation, humidifying, dehumidifying or heating.
- Regularly vacuum the floor to prevent sand or abrasive dust from accumulating and scratching the finish.
- Entrance doormats help reduce dirt, stones, gravel, and sand from damaging your new hardwood floor.
- Remember that wood and water do not mix! Never wash your Preverco floor with water and do not leave water or any other liquid to dry on your hardwood floor. Wipe up spots and spills immediately.

NOTE: Avoid vinegar.

- Be sure to keep pets' nails cleaned and trimmed as they could damage the finish of your hardwood floor.
- Although our finish is very durable and resistant, sharp and pointed objects can cause damage to your floor.
- Never use wax, household detergents, or soap, as they will leave a greasy film on your floor. Avoid all oily products and all products designated for the maintenance of hardwood furniture. These types of products are not designed for the maintenance of your hardwood floor. Use Preverco maintenance products specially designed for the care of your hardwood floor. Always clean your hardwood floor lengthwise following wood grain.
- Avoid wearing high heels on your hardwood floor. Do not wear shoes that are covered with dirt, gravel, or abrasive dust.
- Use adequate floor protection (felt pads) under all furniture and chair legs, in order to ease their movement and to prevent scratching the floor. Use protective mats at doorways.
- Protect the floor while moving heavy pieces of furniture and appliances i.e. stove, fridge, etc. Carry them or place them on a rug, wrong side up, and slide the rug. The use of one or more piece(s) of clean plywood 5/8" (1.6 cm) could also be used to move objects on.

REPAIRS

If an incident should damage your Preverco prefinished hardwood floor, replacing the affected board(s) is easy. Your Preverco Authorized Dealer can assist you regarding any repairs.

MANUFACTURER COMMITMENT

If the proper maintenance and conditions indicated in this document are respected and the quality of the product or the finish does not comply with the established quality standards, Preverco will repair your floor with the superior quality products available in the market. For more information, please consult the warranty documents.



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