



INSTALLATION GUIDELINES

Responsibility of Koetter Woodworking

1. Material has been milled from lumber that has been kiln dried to a moisture content of 6% to 9% (unless otherwise specified by the customer).
2. Keeping consistent the grading of our flooring products.
3. Shipping of accurate quantities and items.

Responsibility Of Distributor/Dealer/Retailer

1. Verify that the grade, quantity, material conditions are consistent with their order and expectations.
2. Educate the installer/owner on the natural characteristics of wood floors, site preparation, installation, finishing, maintenance, and warranty purchased from Koetter.

Responsibility Of Installer/Owner

1. Verify they have received the accurate materials and quantities they have ordered before any installation begins. The installer has final inspection responsibility. If there are doubts about the quality of grade, manufacture, or finish, do not install the product.
2. Understand and follow the manufacturers installation guidelines.
3. Don't place on site until HVAC is on and after uniform environmental conditions have been achieved.

Koetter Wood Floors does not recommend the use of solid wood flooring below grade and it is recommended for nail or glue down application only.

Site Preparations and Conditions

Job Site Conditions

Check the job site before delivery. Be sure the flooring will not be exposed to excessive periods of sunlight, high humidity or moisture. The surface grade or slope should direct water away from the building.

Basements and crawl spaces must be dry and well ventilated. In joist construction with no basement, outside cross ventilation through vents or other openings in the foundation walls must be provided with no dead air areas. 16 square feet of vent opening for every 1000 square feet of crawl space surface area is required. 100% surface cover of 6 mil polyethylene film is essential as a vapor retardant in crawl space construction.

Don't place flooring on site until HVAC is on and after uniform environmental conditions have been achieved. A 35-45% relative humidity is recommended. This may require a humidifier or dehumidifier in your region to achieve. The building should be closed in with outside windows and doors in place. All concrete, masonry, sheetrock and framing members, etc. should be thoroughly dry before flooring is delivered to the job site. **(NOTE: Consult your local dealer or installer for appropriate humidity levels in your geographical area.)**



INSTALLATION GUIDELINES

Job Site Conditions cont...

From the time flooring is delivered and until occupancy, temperature and humidity should be maintained at or near occupancy levels. After occupancy, continue to control the environment. Extended times (more than 1 month) without HVAC controls can promote elevated moisture conditions which can adversely affect flooring.

Because materials used to provide energy efficient structures trap moisture in a residence, it may be necessary to delay delivery and installation of flooring to allow the excessive moisture trapped during construction to evaporate. The average moisture content of framing members and sub-flooring should be below 12% before delivery of the flooring. Moisture contents above 12% can cause moisture related problems.

Protect flooring from excessive heat. Flooring installed over a heating plant or un-insulated heating ducts may develop cracks unless protection from the heat is provided. Use a double layer of 15 lb., or a single layer of 30 lb. asphalt felt/building paper, or 1/2" standard insulation board between joists under the flooring in these areas. Over a heating plant the insulation used should be non-flammable.

When job site conditions are satisfactory, have the flooring delivered and broken up into small lots and stored in the rooms where it will be installed. Allow at least 5 days for the flooring to become acclimated to occupancy level conditions. If flooring is packaged, open or remove packaging for acclimation.

Sub Floor Preparation

Installations Over A Concrete Slab

Hardwood flooring can be installed successfully over a slab which is on-grade or above grade. Below-grade installations are not recommended. When installing solid wood, the slab must be constructed properly (dry and flat with a trowel finish). Koetter Woodworking recommends the use of the SIKA Brand system for this type of installation.

Watch out for water. New concrete is heavy with moisture, an inherent enemy of wood. Proper on-grade slab construction requires a vapor retarder such as 6 mil polyethylene film between the gravel fill and the slab. While this prevents moisture entry through the slab, this membrane also retards curing of the slab. So test for dryness, even if the slab has been in place over two years. Slabs younger than 60-days are generally too wet for flooring installation.

Testing Concrete for Excessive Moisture

NOTE: Slabs must be a minimum of 30 days old. When tests indicate too much moisture in the slab, do not install hardwood floors. For a moist slab, wait until it dries naturally, or accelerate drying with heat and ventilation then test again.

Recommended Testing Methods

Polyfilm: One test per 200 s/f (minimum 2 tests per jobsite). Completely tape down 2' X 2' (600 mm X 600 mm) polyfilm squares and leave them for 48 hours. Check for condensation under the plastic. Condensation indicates slab has moisture. Noticeable color changes indicate moisture.



INSTALLATION GUIDELINES

Recommended Testing Methods cont...

Phenolphthalein: One test per 200 s/f (minimum 2 tests per jobsite). Chip small section of concrete off floor and apply 3% phenolphthalein in alcohol solution (available at most pharmacies) in the area. Red color indicates moisture. ALWAYS chip concrete as this protects against the possibility that a concrete sealer was applied.

IMPORTANT: Keep phenolphthalein out of direct sunlight. Average shelf life of phenolphthalein is six (6) months.

NOTE: IF ANY OF THESE TESTS INDICATE MOISTURE IS PRESENT IN THE SLAB, THE CALCIUM CHLORIDE TEST SHOULD BE RUN.

Calcium Chloride Test: One test per 1000 s/f for 24 hours. The surface where the test patch is to be placed must be brushed clean to remove any waxes, surface sealers, dust, dirt, oils or other surface contaminants. At the time the test is conducted, the temperature of the floor and the surrounding area should be at least 65 degrees Fahrenheit. Follow the test kit instructions. Calcium chloride kits are generally available through your distributor or call NWFA at 800-422-4556 U.S. or 800-848-8824 Canada for the source nearest you. ALWAYS FOLLOW MANUFACTURERS INSTRUCTIONS FOR ACCEPTABLE MOISTURE BARRIERS.

Slab Preparation

The slab must be sound and flat. To prepare the slab grind off any high spots, fill low spots, clean up grease, oil and other contaminants, and sweep clean. If the slab is "mealy" and excessively dusty, it may not be of proper strength (at least 3000 PSI).

Vapor Retarder

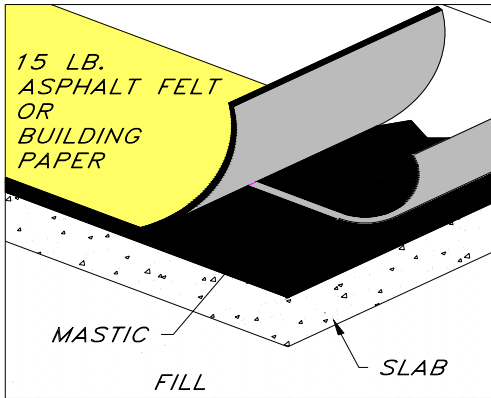
To be certain normal slab moisture does not reach the finished floor, a proper vapor retarder must be used on top of the slab. Where this is placed will depend on the type of system used. The vapor retarder should have a U.S. perm rating of less than 1 perm. 6 mil polyethylene film has a 0.04 perm rating and is considered a good choice.

With 3/4" plywood used as a nailing base, the recommended vapor retarders are affixed to the slab. These systems may be either 2 membrane asphalt felt/building paper and mastic or a 4-6 mil polyethylene film or an equivalent system as described below.

Sealant Application

Koetter Woodworking recommends the use of SIKA Brand primer, moisture regulator and adhesives for bonding wood flooring to concrete.

INSTALLATION

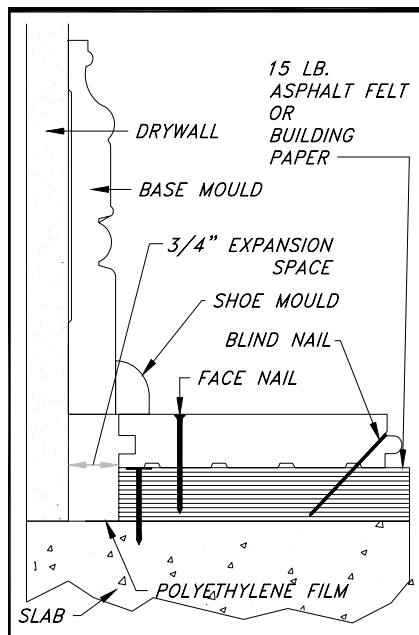


Two membrane asphalt felt or building paper system. Prime and apply cold cut-back asphalt mastic with a notched trowel at the rate of 50 sq. ft per gallon. Let set 2 hours. Roll out 15 lb. asphalt felt/building paper, lapping edges 4". Butt ends. Over this apply a second similar coating of mastic and roll out a second layer of asphalt felt/building paper. Lay both layers of felt in the same direction, but stagger the overlaps to achieve a more even thickness.

Polyethylene method. When slabs are well above grade and the expected annual rainfall is light to moderate, cover the entire slab with 4- to 6-mil polyethylene film, overlapping edges 4-6" and allowing enough to extend under the baseboard on all sides.

Where moisture conditions are considered more severe prime and apply* cold-type cut-back asphalt mastic with a straight-edge or fine tooth trowel over the entire slab surface (100 sq. ft. per gal.). Allow to dry about 1 hour. Lay the 4-6 mil polyethylene film over the slab, covering the entire area and lapping edges 4-6". "Walk in" or roll in the film, stepping on every square inch of the floor to insure proper adhesion. Small bubbles are of no concern, and may be punctured to allow captive air to escape.

Plywood-On-Slab System



This system uses 3/4" or thicker sheathing grade exterior plywood as the sub floor over the appropriate vapor retarder. Loose lay 3/4" plywood panels over entire floor. Laying plywood on a diagonal to the direction of the finished floor will help prevent cracks associated with panel edges.

Stagger plywood and joints every 4' by cutting the first sheet of every other run in half. Leave 3/4" space at all wall lines and 1/4" to 1/2" between panels. Cut plywood to fit within 1/8" near and around door jambs and other obstructions where finish trim will not be used.

Fasten the plywood with a power-actuated concrete nailer or hammer-driven concrete nails. To be sure to flatten out the plywood, start at the center of the panel and work toward the edges. Use at least nine nails per panel or more to fasten securely.



INSTALLATION GUIDELINES

Installation Over Wood Joist Construction

Sub-flooring

If plywood, 5/8" (19/32") or 3/4" (23/32") performance rated products are preferred. Also, 3/4" (23/32") OSB is a comparable substrate. With 1/2" thick plank flooring use a 3/4" (23/32") sub floor. Use a 3/4" (23/32) 4 X 8 CDX plywood or 3/4" OSB sub floor/underlayment with joist spacing of 19.2" on center or less.

Follow panel manufacturer recommendations for spacing and fastening. Typical panel spacing and fastening for joist systems, 1/8" (3.2mm) around perimeter and fastened every 6" (150mm) on bearing edges and every 12" (300mm) along intermediate supports.

Mark location of joists so flooring can be nailed into them.

Good nailing is important. It keeps the boards rigid, preventing creeping sometimes caused by shrinkage in subfloor lumber. Without adequate nailing it is impossible to obtain solid, non-squeaking floors.

Radiant Heat Installations

Koetter Woodworking Inc. warrants its Quartersawn flooring for radiant heat applications, provided that the following guidelines are met:

1. Quartersawn flooring approved for radiant heat applications must be installed following recommended procedures set forth by the National Wood Flooring Association (See Insert on Following Pages).
2. Species permitted for radiant heat installations are limited to Red Oak, White Oak, Cherry, & Walnut, in widths not exceeding 4". Other Quartersawn species not listed above (including hard Maple) will **not** be warranted.

APPENDIX H

RADIANT HEAT INSTALLATIONS

With radiant heat, the heat source is directly beneath the flooring, so the flooring may dry out faster than a similar floor in a home with a conventional heating system. Wood flooring can be installed over radiant heat as long as you understand radiant heat and how it can impact wood flooring, what precautions to take, and what type of wood flooring to use.

Types of wood flooring that are best suited-for radiant heat subfloor are products that possess improved dimensional stability such as:

- Engineered wood flooring is more dimensionally stable than solid wood flooring.
- Certain species are known for their inherent dimensional stability such as North American oak, American cherry, American walnut and others. Denser species such as maple and Brazilian cherry are less stable.
- Quartersawn and rift-sawn wood flooring is more dimensionally stable in width than plain sawn wood flooring.
- Narrow boards are more dimensionally stable than wide boards.

GENERAL RADIANT HEAT INSTALLATION GUIDELINES

- To minimize the effect that rapid changes in temperature will have on the moisture content of the wood floor, NWFA recommends that an outside thermostat be installed. If one is not present, suggest to your customer that this should be considered. Unlike conventional heating systems, which switch on as needed, radiant systems work most effectively and with less trauma to the wood floor if the heating process is gradual, based on small incremental increases in relation to the outside temperature.
- Subfloors should have proper moisture tests according to the moisture testing procedures outlined in Chapter 3.
- The essential requirement in proper applications of wood flooring over radiant heated systems is to avoid penetration of the heating element. Radiant-heated subfloor systems can be concrete, wood or a combination of both. The type of subfloor as described in the previous chapters determines subfloor preparation.
- If the subfloor is concrete and it has cured, turn the heat on, regardless of season, and leave it on for at least 5-6 days to drive out residual moisture before installation of the wood flooring. Some installation systems, particularly glue-down applications, require the heat to be reduced or even turned off before installation of the flooring begins, so the adhesive does not cure excessively.
- With water-heated radiant-heat systems, a pressure test must be performed and documented by a qualified plumber or the system installer prior to beginning the installation of the wood flooring.
- If flooring materials that conduct heat at different rates are on the same circuit or heating zone, check with the HVAC mechanical engineer before proceeding.

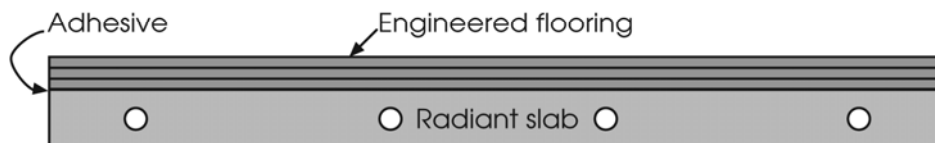
- Radiant heat is dry heat. A humidification system may be necessary to maintain wood flooring in its comfort zone.

The following installation and subfloor systems can be used successfully over radiant heat:

- 1. Glue-down, engineered or solid parquet
- 2. Floating engineered
- 3. Direct-nail, solid wood or engineered wood flooring to wood subfloor
- 4. Solid T&G floor direct-nail to sleepers
- 5. Single layer of plywood on sleepers
- 6. Double plywood floating subfloor
- 7. Loose-lay single layer of $\frac{3}{4}$ " plywood cut in 16" planks staggered with $\frac{1}{2}$ " gap between laid perpendicular to wood direction

GLUE-DOWN, ENGINEERED OR SOLID PARQUET

NOTE: Follow manufacturer's installation instructions.



Install over approved subfloor. Refer to Chapter 7, Parquet Installation and Chapter 8, Engineered Flooring Installation.

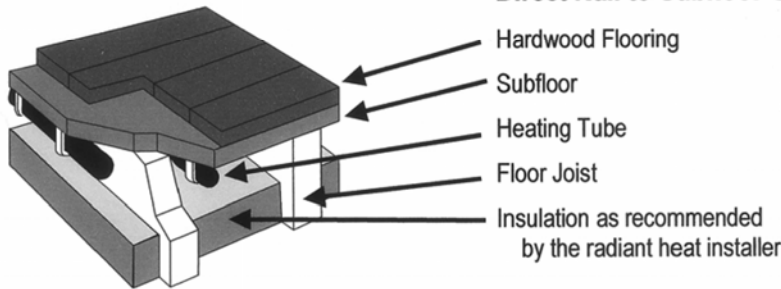
- Use an adhesive approved by the manufacturer.
- The heating system has to be turned off before installation.
- The maximum allowable subfloor surface temperature is 85° F (29.44° C).
- Expect some heating season shrinkage.

DIRECT NAIL, SOLID WOOD OR ENGINEERED TO WOOD SUBFLOOR

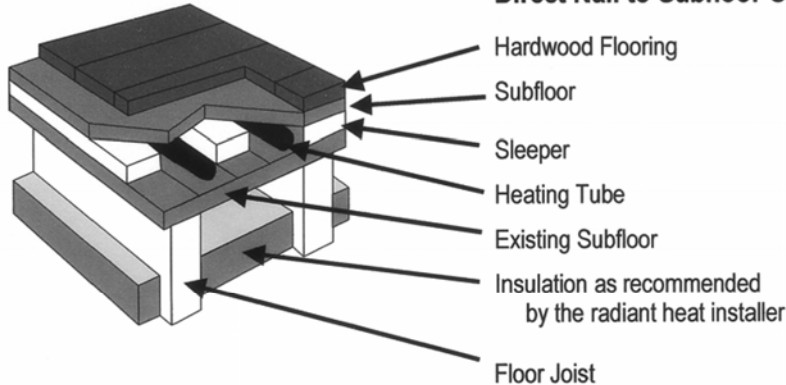
NOTE: Follow manufacturer’s installation instructions.

- Install over approved subfloor. Refer to Chapter 8, Engineered Flooring Installation, and Chapter 9, Solid Strip & Plank Installation.
- Always check for subfloor moisture. See Chapter 3, Moisture Requirements and Moisture Testing.
- Solid wood must be properly acclimated to normal living conditions.
- All other installation procedures are the same as outlined in Chapter 8, Engineered Flooring Installation, and Chapter 9, Solid Strip & Plank Installation.
- Be sure fasteners are not so long as to penetrate heating elements.
- Maximum subfloor surface temperature-85° F (29.44° C).

Direct Nail to Subfloor Over Joists

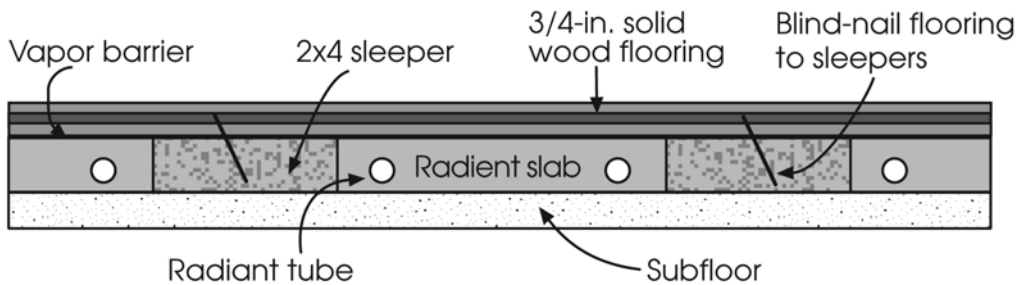


Direct Nail to Subfloor Over Sleepers



SOLID T & G FLOOR DIRECT NAIL TO SLEEPERS

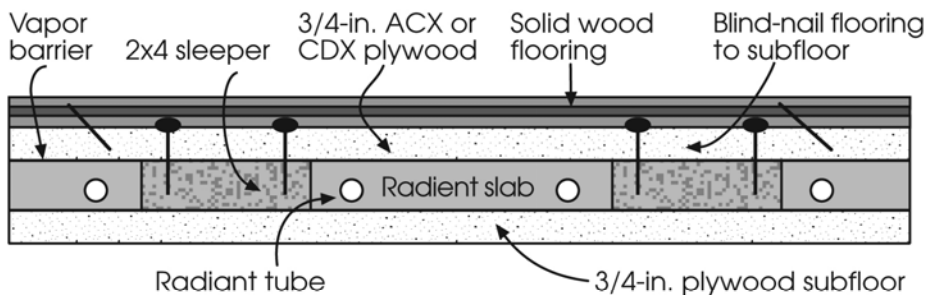
NOTE: Follow manufacturer's installation instructions.



- The use of solid wood flooring 4 inches and wider is not recommended over sleepers.
- Solid wood must be properly acclimated.
- Cannot use shorts.
- Maximum subfloor surface temperature - 85° F (29.44° C)

SINGLE LAYER OF PLYWOOD ON SLEEPERS

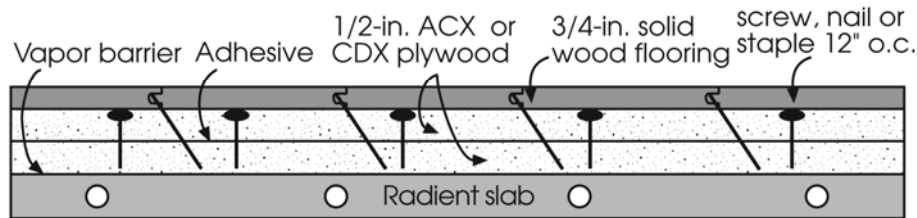
NOTE: Follow manufacturer's installation instructions.



- Solid wood must be properly acclimated.
- Maximum subfloor surface temperature-85° F (29.44° C)

DOUBLE PLYWOOD

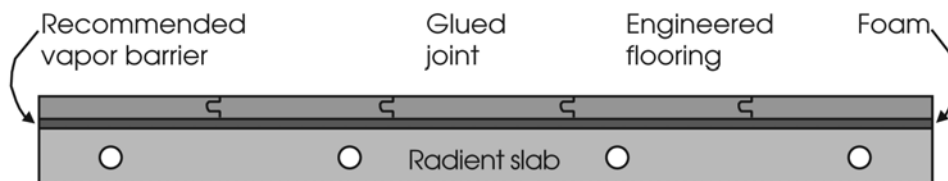
NOTE: Follow manufacturer's installation instructions.



- Solid wood must be properly acclimated.
- Maximum subfloor surface temperature - 85° F (29.44° C)

FLOATING ENGINEERED

NOTE: Follow manufacturer's installation instructions.



- Install over approved subfloor. Refer to Chapter 8, Engineered Flooring Installation.
- A 6 mil or better polyethylene vapor retarder should be installed over concrete subfloors. In some cases, this may be part of the flooring underlayment.
- A foam or resilient underlayment recommended by the flooring manufacturer must be installed prior to application of the wood flooring.
- Use an adhesive approved by the manufacturer for side and/or end joints.
- Maximum subfloor surface temperature-85° F (29.44° C).



WOOD FLOORS

INSTALLATION GUIDELINES

Plank Flooring

Unfinished/Factory finished solid plank should be installed perpendicular to the joists or on a diagonal for any single layer sub floor.

CAUTION: When laying ½” or ¾” solid plank flooring parallel with the floor joists either add an additional layer of minimum ½” (15/32”) CDX plywood underlayment to the existing sub floor (as previously recommended) to the existing sub floor or brace between joists with 2” X 6” or wider boards every 24” minimum.

- Sub-floor must be within 4% moisture content of the hardwood floor before installing.**
- Before installing wood flooring place 15 lb. asphalt felt paper that meets ASTM Standard D4869 over wood sub floor.
- Snap a working chalk line parallel to the starting wall allowing ¾” expansion space between the starting wall and the edge of the first plank run.
- A ¾” expansion space must be left around the perimeter and at all vertical obstructions.
- Lay one row of plank along the entire length of the working chalk line, with the tongue facing toward the center of the room.
- Top and blind nail the first row (hand nail if necessary), using appropriate fasteners. Each succeeding row should be blind nailed with the nailing machine wherever possible. At the finishing wall and other obstructions, it may be necessary to blind nail by hand until top nailing is required.
- Stagger end joint a minimum of 6” between pieces on adjacent rows, see figure 1-1. Avoid H joints.
- Add each additional row of flooring, watching the pattern repeat and offsetting or staggering the end joints at least 6 inches.
- On floors wider than 20’ additional spacing may be required. Please contact your distributor for additional information.

¾” Floor

Nailing: Blind nail through the tongue using 2” barbed flooring cleat, 7d or 8d flooring nail, or 2” (15 gauge) staples with ½” crown. Use 1 ½” length, fasteners with ¾” plywood sub floor direct to concrete slab. Face nail boards where needed using 7d or 8d flooring nail – casing nail – galvanized nail – finishing nail, or flooring cleat. Fasteners should be spaced every 8”.

Blind nail and face nail, as necessary, to complete the final rows.

½” Floor

Nailing: Blind nail through the tongue using 1 1/2” barbed flooring cleat, 5d flooring nail, or 1 1/2” (15 gauge) staples with ½” crown. Use 1 ½” length, fasteners with ¾” plywood sub floor direct to concrete slab. Face nail boards where needed using 5d flooring nail – casing nail – galvanized nail – finishing nail, or flooring cleat. Fasteners should be spaced every 8”.

Blind nail and face nail, as necessary, to complete the final rows.

** - When installing Hickory, the sub-floor should be within a 2% moisture content of the hardwood floor.



INSTALLATION GUIDELINES

Plank Flooring

Finishing

Pre-finished - is factory sanded and has a six-coat finish with a, UV-cured, urethane finish with aluminum oxide.

Un-finished - allow 48 hours between installation and sanding. Before sanding, make sure the interior environment is at normal occupancy condition. The floor should be swept and inspected carefully to insure that the floor has been properly fastened or adhered to the substrate.

Suggested Sanding and Finishing Sequence

Step 1: Inspect, repair and clean

Step 2: Belt/drum sander; coarse-cut, 36-or 40-grit (use only as coarse a grit as necessary to do the job).
Spot- or trowel-fill if necessary.

Step 3: Edger; medium 50- or 60-grit

Step 4: Clean and sweep

Step 5: Belt/drum sander; medium-cut 50- or 60-grit

Step 6: Clean and sweep

Step 7: Spot- or trowel-fill if necessary

Step 8: Edger; fine-cut 80- or 100-grit

Step 9: Belt/drum sander; fine-cut 80- or 100-grit. (Note: Some wood species (maple, for example) might require a 120-grit paper on the edger or belt/drum sander for the final sanding)

Step 10: Clean and sweep

Step 11: Hand-scrape corner and inaccessible places

Step 12: Hand-sand perimeter and scraped areas, and/or use oscillating sander if stain is to be applied

Step 13: Buffer; fine-screen 100- or 120-grit (check with finish manufacturer for screen-cut recommendation)

Step 14: Clean and vacuum

Step 15: Apply sealer or stain-and-sealer (Always use high quality finish on solid wood floors and be sure to follow manufacturer's recommendations)

Step 16: Use screen, fiber pad or steel wool, depending on the finish manufacturer's recommendations.)

Step 17: Apply finish coat (be sure to follow manufacturer's recommendations)

Step 18: Use screen, fiber pad or steel wool, depending on the finish manufacturer's recommendations.

Step 19: Sweep, vacuum and tack

Step 20: Repeat Steps 18, 19 and 20 as necessary (be sure to follow manufacturer's recommendations.)

Maintenance

- Install floor protector pads on the bottom of all furniture.
- Place protective rugs or mats at all entrances to the area. These rugs help trap grit and also absorb moisture before either one has a chance to damage the floor. These should be placed after the finish is fully cured.
- High heels should be kept in good repair – if they lose their protective cap, they will dent the surface of any floor.
- The floor should be swept, vacuumed and/or dust mopped with Koetter floor cleaner regularly to remove dirt and grit, and rugs should be shaken out frequently (Use only vacuums that have a special hard-surface setting).
- Do not wet mop.
- Never use a household dust treatment.
- Never use wax on top of a non-wax surface finish.
- Wipe up spills immediately with a lightly dampened cloth.
- Never use petroleum-based cleaners on water-based finishes.
- When the floor loses its luster, it's time for a recoat.

INSTALLATION INSTRUCTIONS CUSTOM CLASSICS & PARQUET

Note: See separate instructions for Custom Borders & Designer Collection.

To the Owner/Installer:

Nature has created the unique beauty of this wood flooring material. Accordingly, there will be variations in color and grain from piece to piece. These floors are manufactured with care in accordance with accepted industry standards, which permit grading variation not to exceed 5%. The owner/installer has the final inspection responsibility.

A cutting waste allowance of 5% must be added to the actual square footage needed. (Note: 10% for imported species.) If you have doubts about the quality of grade, manufacture or finish, do not install these pieces. We will not be responsible for labor cost associated with replacement of defective materials.

The installer is encouraged to refer to installation instructions developed by the National Wood Flooring Association installation Guidelines Committee (available at www.nwfa.org) for detailed instructions required for correct installation of this product.

The instructions that follow below will supersede any external references to the contrary.

Job Site Conditions:

All phases of construction, except baseboard and shoe moulding must be complete prior to the floor installation. HVAC must be on and uniform environmental conditions must be maintained.

Equipment Requirements

A. Pre-finished Parquet - Broom, brush or vacuum for cleaning sub floor; tape, chalk line and square for making layout; saw (preferably a small, power saw) for cutting at walls and doors; notched trowel (recommended notch size 1/4" x 1/4" spaced 1/4" apart); and rubber mallet or tapping block for seating the parquet in the mastic.

B. Unfinished (Paper face) Parquet - Same as for Pre-finished Parquet except notch size should be 1/8" x 1/8" spaced 3/8" center to center. Also, a sponge and water bucket for removal of paper and sanding and finishing equipment (see Finishing).

C. 3/4" Thick Parquet and Plank - Same as A or B above except use 1/4" x 1/4" square notched trowel with 1/4" between notches. A power nailer is required for solid plank.

Sub Floor Preparation

Concrete-

The sub floor must be thoroughly dry, level and clean. You can test for slab dryness by using a 3% phenolphthalein solution in grain alcohol. Place a few drops at various locations on the slab. If a red color appears within a few minutes, moisture is present. An alternate test is to place a rubber mat on the concrete and leave overnight. If moisture is present on the underside, the slab is too wet. A moisture retarder with permanence equivalent to 4-mil polyethylene film is always required over the concrete slab.

Generally speaking, we do not recommend installation on slabs below ground level unless an engineered flooring product is used. If a concrete sealer or curing compound has been applied previous to present installation, grind the slab to remove these materials and apply the specified moisture retarder.

Plywood and old wooden sub floors –

If the floor is not level, light sanding may be necessary. Remove all foreign material including wax. As with concrete, sub floor must be level, dry, clean and also sound. Plywood of at least 5/8" thickness is recommended. Apply the specified moisture retarder.

Resilient tile –

Ensure all tile is firmly bonded. If not, remove to sub floor including old tile cement. If firmly bonded, sand the surface to remove all wax and roughen up. Do not install over rubber tile. Use asphalt adhesive with asphalt tile.

General –

Remove old shoe molding. Ensure the parquet tiles will slip under baseboards and door jambs. If not, cut underneath them so the tiles will fit easily.

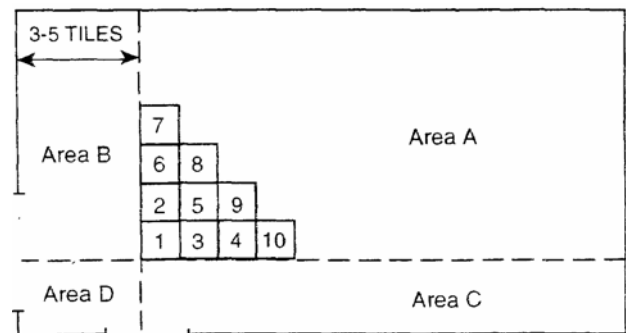


Figure 1

Layout for parquet –

Use a chalk line to lay out working lines (Figure 1). Walls are seldom square, so be sure lines are at right (90°) angles to each other. One test for this is to measure from the intersection 3 feet down one line and 4 feet down the other. The distance between these two points should be 5 feet. Lines should be placed 3 to 5 tiles distance from each wall or centered on physical features of the room (e.g. doors, bay windows and fireplaces). Measuring with actual tiles will save unnecessary cutting at these two walls. Small areas such as closets may not require working lines.

Adhesive Application –Before spreading mastic, read instructions on the container. **Koetter Woodworking recommends the use of the SIKA Brand adhesive system.**

A. Pre-finished Parquet - Spread adhesive in Area A (Figure 1) being careful to leave working lines visible. Spread should be approximately 50 square feet per gallon using a 1/4" notched trowel. Do not exceed open time (length of time adhesive remains tacky) of the adhesive. Check bonding by lifting occasional tile to see if adhesive transfer has taken place.

B. Unfinished (Paper face) Parquet - Spread enough adhesive to lay 4-5 sections. Spread should be about 70 square feet per gallon using the 1/8" notched trowel.



WOOD FLOORS

INSTALLATION INSTRUCTIONS CUSTOM CLASSICS

Adhesive Application (cont...)

- C. ¾" Thick Parquet and Laminated Plank. Use same as above, except spread should be approximately 50 square feet per gallon with the ¼" trowel.

Installation

- A. Pre-finished Parquet - Lay tiles beginning at the intersection of the working lines. Proceed as shown by the numbers in the diagram. The first ten tiles are particularly important. Position tiles and press down firmly. Do not slide into place. At walls, tiles may have to be cut to fit using a saw. When sawing, hold firmly on the work bench to avoid breaking apart of mosaic pieces. Leave an expansion space of approximately ½" between the parquet and the wall. Expansion space can be maintained by using cork blocking. When Area A is complete, install Sections B, C and D using the same stair-step pattern as in Area A. To prevent tile movement during installation, use plywood as a knee board. An alternate method is to lay the parquet squares in a diagonal pattern. Although slightly more difficult, the change in appearance can be dramatic. Measure equal distances from one corner of a room, along both walls, and snap a chalk line between these points to form the base line (see Figure 2). This pattern need not be at a precise 45 degree angle to walls in order to appear perfect. A test line should again intersect the center of the base line at an exact 90 degree angle.

Figure 2

- B. Unfinished (Paper face) Parquet - Immediately after spreading adhesive, dampen the face paper with warm water using a sponge. A small amount of liquid detergent added to the warm water will facilitate paper removal. Lay the parquet unit in the mastic and seat thoroughly using a rubber mallet or tapping block. Repeat this procedure until 4-5 units are installed. Leave hairline cracks between units to allow for expansion. Remoisten the face paper on the 4-5 units and remove the paper. Begin in one corner and pull the face paper with hand close to the floor. Adjust individual slats if necessary being careful to maintain hairline spacing between each slat. Repeat the above procedure until installation is complete.

- C. ¾" Parquet and Plank - Koetter Wood Floors ¾" thick "Custom Classics" are shipped tongue and groove for easy installation. They may be glued down using the procedure for pre-finished parquet in Section A.

Solid Plank must be nailed to a plywood or screed sub floor. Our ¾" Laminated Plank may be glued down to any sub floor.

When cutting a Custom Classics section, place strips of carpet tape on the face side on both sides of the impending cut to end up with two pieces instead of many pieces after the cut has been made.

Finishing

- A. **Pre-finished** - factory sanded and finished with a UV-cured finish.
B. **Unfinished** - Allow at least 48 hours between installation and sanding. Three sandings with progressively finer paper are recommended. The final cut should be with a rotary (disc) sander. Hairline cracks should be filled with color matching filler. All high quality floor finishes are acceptable for unfinished Koetter Wood Floors. Certain dense or oily woods, e.g., teak or rosewood, will need to be rubbed with mineral spirits prior to sealing in order to remove surface oils. Seal and urethane.

Maintenance

- A. **Pre-finished** — flooring has been factory finished with a UV-cured finish. Continued maintenance to preserve the natural beauty of your finished floor should include:
- Vacuum as often as you would your carpet. If necessary brush dirt out of eased edges between parquet tiles.
 - Clean with Koetter Wood Floors Cleaner
 - Before urethane wears off, screen and recoat with urethane.
- B. **Unfinished** - The exact maintenance requirements will depend upon the finish used. See your local dealer for recommendations. The instructions above constitute a general outline for installation and maintenance of Koetter Wood Floors. However, a brief outline cannot cover all situations. If you have further questions, see your local Koetter Wood Floors dealer.

Notes:

1. In order to maintain uniform environmental conditions during the dry winter months, we strongly recommend the use of a humidifier to keep your floor from shrinking and showing objectionable cracks between component pieces. In high humidity areas we recommend using a dehumidifier.
2. Cleaning will be made easier by using two doormats at each entry door: a course mat outside to remove grit and a cloth one inside to absorb moisture. Areas which receive excessive water/wear, e.g. the area in front of a sink or the area behind a cash register, should have a mat which will provide additional protection.



WOOD FLOORS

INSTALLATION INSTRUCTIONS

COMMERCIAL

Herringbone or Strip (3/8" x 2 1/4" or 2 1/2" or 3" x RL) (NOTE: Herringbone requires a special order of a specified length)

Materials Required:

Tape Measure, Chalk Line, Notched Trowel, SIKA Bond, Skill Saw, and Base Shoe

Sub floor: **Plywood** level, clean, dry & sound. **Concrete** must be thoroughly dry, level and clean. You can test for slab dryness by using a 3% phenolphthalein solution in grain alcohol. Place a few drops at various locations on the slab. If a red color appears within a few minutes, moisture is present. An alternate test is to place a rubber mat on the concrete and leave overnight. If moisture is present on the underside, the slab is too wet. A moisture retarder with permanence equivalent to 4-mil polyethylene film is always required over the concrete slab. **USE ONLY SIKA Concrete Sealer or equivalent.** Generally speaking, we do not recommend installation on slabs below ground level unless an engineered flooring product is used. If a concrete sealer or curing compound has been applied previous to present installation, grind the slab to remove these materials and apply the specified moisture retarder.

A. Plank:

Measure 38" out from the longest wall (36 1/2" for 3" material) and snap chalk line. Spread SIKA according to instructions on the can in the field area of the room beginning at the chalk line. The 38" space between the chalk line and the wall will provide a working area. Spread SIKA holding the trowel as close as possible to a 90 degree angle so that spread rate of 50 sq ft/gallon is achieved. (Note: The floor can also be stapled rather than glued.)

Start laying the slats with the grooves facing forward (out) and the tongues properly lined up along the chalk line. Lay the material row by row, inserting the tongues into the grooves before placing firmly into the mastic. **PLANK:** Stagger the slats, spacing the end-joints irregularly. Leave 1/2" expansion space at the walls parallel to the slats. If laid on the diagonal, leave 1/2" expansion space around the entire perimeter of the room. Cover the slat edges and expansion space at the perimeter with Base Shoe.

B. Herringbone: An equal amount of rights and lefts should be on site prior to starting the installation.

Snap two intersecting chalk lines to form a 90 degree angle at the center or main viewing point of the room. Establish 45 degree chalk lines through this center point. Follow the above instructions for mastic application. The first slat should line up along this intersecting line with the tongue facing forward (out) and the groove touching the chalk line. The second slat should form an arrow in the direction that the pattern is to be installed. Lay the floor making sure that the respective slats line up along the 45 degree chalk lines. Leave 1/2" expansion at the perimeter of the room. Cover the expansion space with Base Shoe.

C. Versailles:

After laying field and allowing adequate space for 8" border and perimeter feature strip, glue down Versailles, starting at each corner with full miter and working to the mid-point of each side. At the mid-points cut the border to fit.

D. Aquatica:

Follow Ashlar or Plank installation instructions, alternating rows of wider plank and narrower feature strip.

MAINTENANCE INSTRUCTIONS

Vacuum and then clean with Koetter Wood Floors Cleaner. This will be made easier by using two doormats at each entry door; a coarse mat outside to remove grit and a cloth one inside to absorb moisture. Areas which receive excessive water/wear, e.g., the area in front of a sink or the area behind a cash wrap, should have a mat which will provide additional protection. Screen and recoat with water-borne urethane when necessary, i.e., before the factory applied urethane has worn off.

Notes:

1. **The Installer has final inspection responsibility. If there are doubts about the quality of grade, manufacture or finish, do not install these pieces.**
2. Don't place on site until HVAC is on & after uniform environmental conditions have been achieved and can be maintained.
3. Acclimate predominately native U.S. species for 48 hours prior to installation. **Do not acclimate predominately imported species**, but do take measures which will accommodate future expansion or shrinkage.



INSTALLATION INSTRUCTIONS

CUSTOM BORDERS

Carefully read all instructions prior to beginning installation

Materials Required:

- Tape Measure, Chalk Line, Notched Trowel, SIKA adhesive, Skill or Table Saw, 1/2' Plywood when used with 3/4" thick flooring Sub floor:
 - Plywood or Concrete which is level, clean, dry & sound.
1. From the walls, measure the width of the border plus 3/4' for an expansion space. If desired, use one or more rows of Feature Strip, in which case add this width to the above width before dropping chalk lines parallel to the walls.
 2. When used with 3/4" thick flooring, cut 1/2 plywood to the width of the border and nail or anchor in place inside the chalk lines. If joints of adjacent pieces of plywood are not level, sand until level.
 3. Spread SIKA according to the instructions on the can.
 4. Install all corner blocks with the tape side up (Versailles excluded since this patterns does not utilize corner blocks).
 5. Install first run of border with the tape side up. Where border hits the location of the second corner block, cut at a 90 degree angle, using the offal from this cut as the starting piece for the second run. Proceed until you return to the first corner block.
 6. Install the field (and Feature Strip, if used).
 7. When mastic has set, remove the tape, sand, fill and finish.

MAINTENANCE INSTRUCTIONS

Vacuum and then clean with Koetter Wood Floors Cleaner. This will be made easier by using two doormats at each entry door; a coarse mat outside to remove grit and a cloth one inside to absorb moisture. Areas which receive excessive water/wear, e.g., the area in front of a sink or the area behind a cash wrap, should have a mat which will provide additional protection. Screen and recoat with water-borne urethane when necessary, i.e., before the factory applied urethane has worn off.

Notes:

1. **The Installer has final inspection responsibility. If there are doubts about the quality of grade, manufacture or finish, do not install these pieces.**
2. Don't place on site until HVAC is on & after uniform environmental conditions have been achieved and can be maintained.
3. Acclimate predominately native U.S. species for 48 hours prior to installation. **Do not acclimate predominately imported species**, but do take measures which will accommodate future expansion or shrinkage.