

COUTURE™
COLLECTION BY KENTWOOD

REVELATION

20mm engineered hardwood flooring

INSTALLATION INSTRUCTIONS

PLEASE READ THESE INSTRUCTIONS COMPLETELY BEFORE BEGINNING THE INSTALLATION

KENTWOOD floors must be installed in accordance with the following instructions. Failure to do so may void the product warranty.



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This floor may be installed:

- On, above or below grade
- With glue down or nail down installation
- Over OSB, plywood or concrete subfloor

This floor may be installed over radiant heat if:

- The specific product style is approved for use over radiant heat (certain species and styles
- Are not approved)
- The floor is installed with glue down installation
- The system is an hydronic (hot water) heat system, or an electric system specifically designed for use with hardwood flooring (must be approved by Kentwood Technical Services)
- The system has an exterior thermostat in addition to interior controls
- The installation conforms to the conditions specified in the Special Instructions for Installation over Radiant Heat (available from your kentwoodfloors.com)
- If approved heat sensors are not installed under the floor in accordance with the Kentwood 'Special Instructions for Installations Over Radiant Heat Systems, Kentwood accepts no responsibility for any damage to the floor caused by a radiant heat system. Such damage is not covered by the product warranty.

KENTWOOD accepts no responsibility for any damage to the floor caused by a radiant heat system. Such damage is not covered by the product warranty.

This floor should **NOT** be installed in a bathroom, laundry room or any area that may experience elevated humidity (sauna, sunroom, etc) Such use will void the product warranty.

KENTWOOD floors are for indoor use only, in residential or light commercial applications. The use of a certified installer is recommended for all installations.

For Technical Assistance in Canada, please call: **1-800-992-3163**
For Technical Assistance in the USA, please call: **1-800-851-3841**
or email techserv@metrofloors.com

INSTALLER'S / CUSTOMER'S RESPONSIBILITY

It is the responsibility of the installer and/or customer to ensure that the KENTWOOD product meets or exceeds their expectations for visual appearance and manufacturing quality.

Because KENTWOOD floors are made from real wood, every piece of KENTWOOD flooring will have a unique appearance, often with naturally-occurring variations in color, texture and grain pattern. Showroom samples and photographic reproductions may not represent the full range of color, texture and grain variations and milling tolerances which can occur in the product itself. It is strongly recommended that, prior to commencing installation, the customer and installer open several boxes of product and loose lay the boards on the floor. Examine the product carefully to ensure that it meets the customer's expectations for appearance, color and visual character and quality before proceeding with the installation.

If the visual appearance or manufacturing quality of the product is deemed unacceptable, it should not be installed. Flooring that has been installed will be deemed to have been inspected and accepted by the installer and customer, even if the customer is not present at the time of installation. Every piece of flooring should be inspected and if any piece does not meet expectations of quality, it should not be installed.

KENTWOOD floors are manufactured in accordance with accepted industry practices which permit a defect tolerance not to exceed 5%. These defects may be the result of manufacturing or naturally occurring characteristics of the material. It is recommended that a minimum 5%

cutting or grading allowance be added to the total square footage when calculating the quantity of flooring required. Boards that are judged to be defective should not be installed or should be installed in an inconspicuous location where they will not be noticeable (e.g. inside a closet).

It is the sole responsibility of the installer to ensure that the job site, subfloor and installation tools and materials meet or exceed these instructions and any applicable industry standards. KENTWOOD accepts no responsibility for problems arising from incorrect or improper site preparation or installation procedures.

For further information on installation standards and guidelines, call

In Canada: 1-800-992-3163:

In the US: 1-800-851-3841

or email techserv@metrofloors.com

SITE PREPARATION**INSTALLATION IN NEWLY-CONSTRUCTED HOME**

Installation of wood flooring is one of the last jobs of a new home construction. Prior to installing a wood floor, the following conditions must be met:

- The building is completely enclosed with all outside doors and windows in place and securable, including a door from an attached garage to house interior
- All concrete, masonry, plastering, drywall, texturing, painting, tiling and other wet work is complete and dry basements must be dry, within recommended temperature and humidity ranges, with no standing water and adequate cross-ventilation in accordance with NWFA guidelines

BEFORE INSTALLATION

PRODUCT INSPECTION & SITE PREPARATION

- Crawl spaces must be dry, with no standing water and adequate cross-ventilation in accordance with local NWFA Guidelines. Exposed earth crawl spaces must also have a vapor retarder (ASTM D 1745 Standard) installed to NWFA guidelines
- Gutters and downspouts are in place, directing water away from the building
- Landscaping is directing water away from the building
- HVAC systems are fully operational, enabling heat and humidity levels to be controlled and maintained throughout the home, and have been operating for a minimum of 5 days prior to installation
- Subfloor is properly inspected and prepared for installation in accordance with these instructions
- If installing over radiant heat, ensure that the system is in full working order and has been fully tested and running for a minimum of two weeks prior to installation. The system should be turned off for 24 hours prior to installation in the install zone

INSTALLATION IN EXISTING HOME (RENOVATION)

Installation in an existing home must meet the same conditions as a new home. If part of a larger remodeling project, ensure that all wet work (painting, wallpapering, texturing, etc.) is completed and thoroughly dry before commencing flooring installation. In addition:

- Remove all furniture, artwork and other valuables from installation area
- Remove baseboards and moldings
- Undercut door casings and jambs (use a piece of the flooring as a depth gauge)
- Remove existing flooring, if necessary
- If installing over radiant heat, it is strongly recommended that a radiant heat technician be consulted prior to installation to ensure that the heating system can be operated effectively at temperatures acceptable to the wood flooring. The system should be turned off for 24 hours prior to installation in the install zone

CLIMATE CONTROL

Conditions at the job site must be maintained with the temperature between 60 - 80°F (15 - 26°C) and humidity at 30-50% before, during and after the installation.

In areas with extreme climate conditions it may be necessary to use humidifiers or dehumidifiers to ensure the humidity is kept within the recommended range.

Flooring material should not be delivered to job site until these conditions have been met and maintained for five days prior to installation.

Following installation, these conditions should be maintained at all times to ensure proper performance of the floor. See Warranty for details.

Required interior conditions for hardwood flooring are temperature of 60 - 80°F (15 - 26°C) and relative humidity of 30 to 50%. When these conditions have been established at the job site, material may be delivered to the site. Do not deliver flooring to job site if climate conditions have not been met and maintained as described above otherwise damage to product may result.

When flooring has been delivered to the job site, leave the boxes closed until ready to commence the installation, and then open only as needed.

BEFORE INSTALLATION**PRODUCT INSPECTION & SITE PREPARATION****MOISTURE CONTENT**

All wood flooring must be tested for moisture content prior to installation to ensure moisture content is within allowable limits. When ready to commence installation, open several boxes of product and test and record moisture content of the flooring using a reliable and accurate moisture testing device. Wood flooring should have a moisture content between 6 and 9 %.

SUBFLOOR PREPARATION

The installer is responsible for ensuring that the subfloor is suitable for the flooring application and properly prepared for installation.

All subfloors must be flat, clean, dry, structurally sound, and free of squeaks and protruding fasteners. The subfloor must be flat to within 3/16" over 10 feet, or 1/8" in 6 feet radius.

Plywood or OSB subfloors the minimum acceptable thickness of the subflooring will be determined by the truss/joist spacing.

Truss/joist spacing. (Measured on center)	Minimum acceptable thickness, 4' x 8' sheets
16" (406mm) or less	<ul style="list-style-type: none"> • 5/8" (19/32", 15.1mm) CD Exposure 1 Plywood or • 23/32" Exposure 1 OSB
More than 16", up to 19.2" (488mm)	<ul style="list-style-type: none"> • 3/4" (23/32", 18.3mm) T&G CD Exposure 1 Plywood, glued and mechanically fastened, or • 3/4" (23/32", 18.3mm) Exposure 1 OSB, glued and mechanically fastened
More than 19.2" (488mm) to a maximum of 24" (610mm)	<ul style="list-style-type: none"> • 7/8" T&G CD Exposure 1 Plywood, glued and mechanically fastened, or • 7/8" Exposure 1 OSB, glued and mechanically fastened or • Two layers of subflooring

In addition to meeting or exceeding the minimum acceptable thickness requirement, the subfloor must be secure to the joists, and free of squeaks and protruding fasteners. Subfloor moisture content must not exceed 12%, and the variance in moisture content between the full thickness of the subfloor and the flooring boards must not exceed 3 percentage points, based on a minimum of 20 tests per 1000sf.

Concrete subfloors must be dry, clean and free of non-compatible sealers, waxes, oil, paint, drywall compound, or other bond-breaking substances. (Check for the presence of sealers by applying drops of water to the slab. If the water beads up, there may be sealers or oils.) All slabs must be tested for moisture content using test method ASTM F2170-11 or equivalent and must return a reading of 75% relative humidity or less.

RACKING

Real wood flooring contains natural variations in color and grain pattern. In order to prevent color clustering or repetitive grain patterns in the finished floor, it is recommended that boards be racked (visually sorted) before installation to create a satisfactory and pleasing color arrangement. Immediately prior to installation, unpack several cartons to get a sense of the range of color variation and arrange the planks to achieve a satisfactory appearance.

BEFORE INSTALLATION

PRODUCT INSPECTION & SITE PREPARATION

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When racking, distribute lengths where possible. Avoid 'H' patterns, stair-steps and other discernible patterns in adjacent rows. When racking, a general rule is to stagger the end joints by a minimum of double the board width (e.g. for boards 5" / 125mm wide stagger joints a minimum of 10" / 250mm).

For products 3" to 5" (8 - 13cm) in width do not use boards of less than 6" (15cm) in length.

For products over 5" (13cm) in width do not use boards of less than 12" (30cm) in length.

When racking, inspect all boards for visible manufacturing defects. Boards with manufacturing defects in excess of industry standards (5% of total quantity) may be replaced by the dealer under the terms of the product warranty. Once installed, boards will be considered to have been accepted by the customer and will not be eligible for replacement. (See Warranty for details.)

EXPANSION SPACE

Wood flooring will expand and contract with changes in ambient temperature and humidity. To allow for this, during installation leave a 1/2" expansion space around the entire perimeter of the floor between the flooring and the walls. Also leave expansion space where the flooring will meet any vertical obstruction, such as stairs, pipes, door sills, tiles, cabinets etc.

Wide-Plank flooring has become increasingly popular in recent years and many of our KENTWOOD products feature wide plank designs. Most of these can be successfully installed using the nail-down method, however with some of the challenges installers face with today's subfloors

in the areas of thickness and type, special consideration should be given to using the full-spread glue method in order to reduce the potential for noise related issues. If you have any concerns in this area please contact one of our specialists through techserv@metrofloors.com

NAIL DOWN INSTALLATION

WIDE PLANK (>7" / 180MM)

When installing hardwood floors wider than 7" using the nail-down installation method, glue-assist applied to the backs of the boards is **required** in addition to end-gluing the butt-joints.

Our nail-down installation guidelines are intended to offer the best "Industry Practices" as they are known to be at this point in time. Adhering to them will help minimize (but may not eliminate) the occurrence of objectionable noises. The National Wood Flooring Association (NWFA) acknowledges that some minor noise associated with hardwood flooring should be considered normal.

When installing these products using the nail-down installation method, always follow the recommendations for fastener selection and the nailing schedule for that specific product. Fastener spacing, gauge, length and type are critical, and it is the obligation of the installer to meet these requirements. Prior to beginning installation, installers are advised to test-nail a couple of pieces of flooring to ensure the nailer/fastener combination is providing a satisfactory result, and to ensure issues such as "dimpling" and "edge-splintering" are not occurring.

Nail down installation requires three different nailing systems:

- A pneumatic or manual blind-nailer
- A pneumatic finish nailer
- A brad nailer for top-nailing

RECOMMENDED FASTENERS & NAILING SCHEDULE

REVELATION 20mm (3/4" thick)

FASTENER	GAUGE	SIZE	NAIL SPACING	DISTANCE FROM END
Staple	15½"	2"	4" - 6"	1" - 2"
Cleat	16	2"	4" - 6"	1" - 2"

COMMENTS: Requires glued end joints and glue assist.

Installation of this product with nail down installation requires glue assist and gluing of butt joints. See notes below. For more information on glue assist techniques, contact techserv@metrofloors.com.

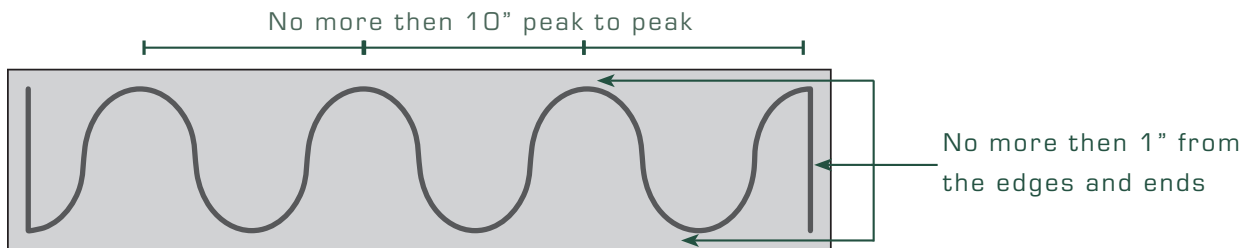
During installation of flooring pieces, push or gently tap boards flush to the previous row. To prevent damage to the finish, avoid tapping the face of the board with a rubber mallet. Use of tapping block is recommended to avoid splintering, and edge damage. Tap against the tongue; tapping the groove may damage the edge.

NAIL DOWN INSTALLATION

WIDE PLANK (>7" / 180MM)

SERPENTINE GLUE-ASSIST

The correct method for serpentine glue-assist is to apply a bead of elastomeric adhesive directly to the back of the individual boards to be installed. **Do not** apply the bead of adhesive directly to the subfloor. The subfloor should be thoroughly vacuumed and free of debris to ensure proper adhesion of the elastomeric adhesive to the subfloor.



For boards widths wider than 7" the installer is also required to glue butt joints with non-crystallizing floating floor adhesive applied to the bottom of the groove.

Failure to follow instructions for 'glue assist' or 'glued butt joints' may result in squeaking and/or other objectionable floor noise. Such noise is not the result of a product defect and is not covered by the product warranty. Some noise can be expected on all nail down installations.

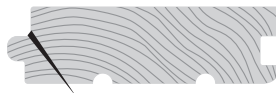
Keep in mind when using the glue-assist method, you will no longer be able to install a Class II perm-rated vapor retarder like AquabarB between the hardwood and the subfloor. If you have concerns regarding vapor migration from below, you may wish to consider applying a roll-on liquid moisture barrier applied to subfloor prior to installation. If you wish additional information in this area please contact one of our specialists through techserv@metrofloors.com

INSTALLATION

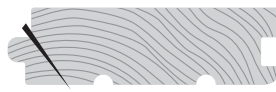
Check nail gun to make sure the depth is set for the appropriate thickness of the flooring. Ensure the nailer is not scratching the floor surface.

Test nail a piece of scrap to make sure the nailer is correctly set up, and that the fasteners are being properly positioned and set.

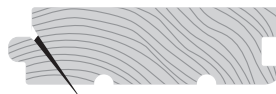
Correct Nail Depth



Incorrect Nail Depth | Protruding



Incorrect Nail Depth | Too Deep



Ensure plywood subfloor is suitable and properly prepared. Verify moisture content of both subfloor and flooring is within allowable limits before commencing installation. Open several packages of flooring and rack and inspect boards. (See Racking, above.)

Apply adhesive in the serpentine pattern as previously outlined as well as add glue to the butt-joints along to the bottom of the groove, and set the first row in place. If required, snap a chalk guideline to act as

NAIL DOWN INSTALLATION**WIDE PLANK (>7" / 180MM)**

a guide. If starting the installation against a wall, place boards with the groove side facing the wall and remember to allow expansion space.

Top nail along the groove edge with the brad nailer using minimum 18g 1 1/2" fasteners set 10 to 12" apart, with a fastener 1 to 3" from each end of each board. Keep the nailer perpendicular to the direction of the flooring and set nails no less 1/4" in from the edge of the board.

Using a pneumatic finish nailer, blind nail along the tongue edge at a 45° angle. Follow the nailing schedule specified above, spacing the recommended fasteners as indicated. Ensure a fastener is placed as indicated near the end of each board.

At the end of the row, cut a board to fit, allowing 1/2" expansion space.

It is a common practice among some installers to use a 'full spread glue down' on the first and last few rows of a nail down installation in order to avoid top nailing. This practice is not recommended

by Kentwood for any nail down installation. Any use of full spread glue down on first and/or last rows within a nail down installation will automatically void the product warranty.

Using glue-assist and butt-joint glue procedures set the second row in place. Use offcuts if lengths are suitable and stagger end joints as required (see above). Blind-nail along the tongue as before or, if working space permits, use the nail gun.

Continue with subsequent rows using glue-assist and butt-joint glue procedures. To avoid a repetitive or predictable board patterns, cut some boards to random lengths to begin rows. Open new packages several at a time and rack and inspect boards as described above. Ensure 1/2" expansion space is maintained at all perimeter walls and other vertical obstacles. Maintain nailing schedule and keep butt joints staggered as described above.

In the last couple of rows, there may not be space to use the nail gun, so revert to using the finish nailer with glue-assist and butt-joint glue procedures as before, blind nailing through the tongue. For the final row, measure the gap to the wall, allowing expansion space, and rip a row of boards to the required width. Top nail the final row into place using brads or finishing nails placed 1/4" in from the edge. Install moldings and transitions as required.

Because some minor collateral damage may occur during the installation of a prefinished floor, minor touch-ups with the use of the appropriate

colored putty, marker-stick or filler is considered acceptable industry practice, provided these repairs pass inspection from a standing position.

GLUE DOWN INSTALLATION

NATURAL OILED PRODUCTS

Glue down installation is the recommended method for all wide-plank floors. Should is recommended to be we recommend that it only be performed by professional wood flooring installers.

For installations over radiant heat, product & installation procedure must also conform to conditions listed in 'product use' above.

During installation of flooring pieces, push or gently tap boards flush to the previous row. To prevent damage to the finish, avoid tapping the face of the board with a rubber mallet. Use of tapping block is recommended to avoid splintering, and edge damage.

Reminder For Installations Over Radiant Heat

Prior to flooring installation, ensure that the radiant heat system is in full working order and has been fully tested and running for a minimum of two weeks prior to installation. The system should be turned off for 24 hours prior to installation in the install zone.

subfloor and flooring is within allowable limits before commencing installation.

Select the starting point for the installation and snap a chalk line and / or install a guide strip to ensure the first row of flooring is installed perfectly straight and, if relevant, parallel to starting wall, cabinetry, tile etc.

Use a moisture-cured urethane adhesive specially formulated for wood flooring installation. KENTWOOD recommends Pro Series 3089 - Urethane adhesive. For trowel selection, adhesive application and all other aspects of adhesive usage, follow the adhesive manufacturer's instructions.

Open several packages of flooring and rack and inspect boards. (See Racking, above.)

Apply adhesive evenly to the subfloor and set first row of boards in place along the chalk line or guide strip with the groove facing outwards, towards the installer.

Leave 1/2" expansion space between the end of the first board and the wall. At the end of the row, cut a board to fit, ensuring board length is not less than minimum specified. Allow 1/2" expansion space to end wall. If desired, use offcut to begin next row.

Set subsequent rows working away from starting point. When installing new boards, avoid pushing them into place across the subfloor as this may unevenly redistribute the adhesive. Instead, hold the new board above the subfloor at an angle, engage the tongue into groove joint, then press the board directly down onto the subfloor. Ensure no glue is forced into tongue & groove joints during installation as this may affect the fit of the joint. Avoid getting adhesive on the flooring surface, and clean up any excess glue immediately. Allowing the adhesive to dry on the surface of the board may permanently the finish. If adhesive has been allowed to dry on the floor surface attempted use of solvents or adhesive cleaners may also damage the floor's finish. DO NOT Use any masking tape on the floor. Use of a ratchet clamp systems is recommended.

Continue with subsequent rows. To avoid a repetitive or predictable board pattern, cut some boards to random lengths to begin rows. Open new packages several at a time and rack and inspect boards as described above. Use offcuts if lengths are suitable and stagger end joints as required (see above). Ensure 1/2" expansion space is maintained at all perimeter walls and other vertical obstructions.

Complete the installation to the far wall. For final row, rip boards to required width (allowing 1/2" expansion space at far wall). Remove the guide strip from the starter row and complete the last ten rows back to the starter wall.

GLUE DOWN INSTALLATION

NATURAL OILED PRODUCTS

When installation is complete, install moldings and transitions as required.

Wait 24 hours or until the adhesive has fully cured before moving furniture or appliances onto floor or before allowing heavy foot traffic. Wait 24 hours before applying a floor protection membrane.

If the flooring was installed over a radiant heating system, wait 24 hours after installation or until the adhesive has fully cured before turning the system back on. Bring the temperature of the system up gradually, in 5°F (2°C) increments per day. Never allow the surface temperature of the floor to exceed 80°F (26°C) and avoid dramatic temperature changes; always adjust the system gradually in 5°F (2°C) increments per day. It is recommended that a dedicated quick recovery thermostat be installed to allow the temperature of the radiant heating system to be accurately controlled.

Because some minor collateral damage may occur during the installation of a prefinished floor, minor touch-ups with the use of the appropriate

colored putty, marker-stick or filler is considered acceptable industry practice, provided the these repairs pass inspection from a standing position.

ON COMPLETION OF THE INSTALLATION

- Inspect the floor from a standing position in non-reflected light.
- Sweep or vacuum the floor.
- DO NOT WASH THE FLOOR WITH ANY LIQUID FOR AT LEAST 2 WEEKS AFTER INSTALLATION IS COMPLETE.
- 2 weeks after installation the floor may be cleaned using the OSMO wash and care cleanser with a microfiber mop.
- DO NOT use steam assisted cleaning mops to clean the floor; they will cause damage to the floor and void the product warranty.
- Perform a visual inspection of the installation with the homeowner or site supervisor.
- Ensure the homeowner or site supervisor is cognizant of the need to maintain heat and humidity at the required levels at all times
- Ensure the homeowner or site supervisor has been given a copy of the Kentwood care & maintenance guidelines (available online at kentwoodfloors.com)
- Complete the installation record form for future reference

If the floor is not being put into use immediately, the use of a floor protection membrane is strongly recommended. Use a material with a Perm Class 3 vapor permeance rating to avoid trapping moisture/vapor on or within the floor. When using floor protection, be sure to:

- Cover the entire floor to avoid exposing a partial area to sunlight causing an uneven color change
- Overlap the seams of the membrane and tape them to each other. Never tape the membrane directly to the floor.
- Run membrane to the perimeter walls and tape to the base or shoe mouldings using low adhesion masking tape.

24 HOURS AFTER INSTALLATION

- Install a floor protection membrane where appropriate (see above)
- If the flooring was installed over a radiant heating system, bring the temperature of the system up gradually, in 5°F (2°C) increments per day. NWFA recommends that an outside thermostat be installed to prevent sudden temperature swings in the floor assembly. Never allow the surface temperature of the floor to exceed 82°F (28°C) and avoid dramatic temperature changes; always adjust the system gradually in 5°F (2°C) increments per day. It is recommended that a dedicated thermostat be installed to allow the temperature of the radiant heating system to be accurately controlled.