

ENGINEERED WOOD INSTALLATION GUIDE: The Cardinal Collection

READ BEFORE INSTALLATION OF OILED FINISHED FLOORING

DO'S

1. Do mix wood from several boxes of flooring during installation.
2. Do make your best effort to avoid dragging or dropping tools.
3. Do use straps, tapping blocks and wall spacers to ensure tight joints during installation.
4. Do use appropriate removable cleating when starting in an area that will require traffic during the beginning of the installation. This will allow a stable base to push the floor against to keep it straight and tight until you reach a wall where you can use wall spacers.
5. Do clean up glue immediately as you install flooring. A dry or dampened cloth with distilled water is best.
6. Do clean up any liquid spills and wipe dry using a terry cloth towel.
7. Do wipe away any dirty finger prints, pencil lead, or any other smudges from the surface as you go with a Terry Cloth Towel.
8. Do use a soft bristle brush on a vacuum or broom to clean up dirt and saw dust on flooring.

DO NOT'S

1. Do not use any kind of tape on the surface of the flooring including tapes which you may have used on other floors. This will damage the finish.
2. Do not use any urethane or solvent based cleaners on the surface, including but not limited to: (Ammonia, Mineral Spirits, Acetone, Paint Thinner and Lacquer Thinner.)
3. Do not allow liquids to pool or stand on oiled surface for long periods especially products that contain ammonia.
4. Do not drag your feet (Rocks on shoes) or tools on the floors surface.

Owner / Installer Responsibility

The beauty and uniqueness of wood is characterized by distinctive variations in grain and color. These natural variations are not flaws but are part of the natural beauty. However as natural material, hardwood may reveal imperfections. The accepted standards in the industry allow a defect tolerance and grading variance not to exceed 5%, which may be of manufacturing or natural type.

Inspection of all floor boards shall be done before installation. Products with unacceptable grade, color, finish, or manufacturing quality shall not be installed and shall be immediately reported to the seller. To get a uniform appearance across the complete floor, it is important to blend several cartons of flooring boards. VIUS suggests retaining and storing a few boards in case a future repair or replacement is required.

Grade, color, finish and manufacturing quality of installed flooring remains the sole and joint responsibility of installer and owner, even if owner is absent at time of installation. Once installed in place, any floor board is deemed as having been accepted by installer and owner.



OWNER / INSTALLER RESPONSIBILITY (Cont.)

Installer must exercise reasonable judgment based on common sense, before and during installation. Floor boards showing visible defects or imperfections must be trimmed and installed in hidden places or not used at all. Use of stain, filler or putty stick during installation shall be accepted as normal procedure. Individual pieces to be in doubt as to grade, finish, or manufacturing quality shall not be installed, if unable to be trimmed or used in hidden places.

Prior to installation, installer must make sure that sub-floor and pre-installation inspections are carried out and all applicable standards and recommendations of the constructions and materials industries are satisfactorily met or exceeded. VIUS as manufacturer declines any responsibility for job failures resulting from or associated with subsurface or job site environment deficiencies.

When ordering hardwood flooring, it is a normal practice to add 5% to the actual square footage needed as allowance for trimming and color grade variation.

If any installed floor board must be replaced on a later date, VIUS's liability shall be solely limited to the replacement of defective products i.e. materials only in excess of the 5% industry accepted norm, excluding trimming waste allowance. In any case VIUS shall not be liable for installer's lack of judgment, quality of installation, labor, installation costs or any other consequential losses.

INSTALLATION PROCEDURES

RECOMMENDED TOOLS, MATERIAL AND ACCESSORIES

- Broom or vacuum cleaner
- Hand saw
- Recommended adhesive and adhesive remover
- Electric saw with carbide blade
- Recommended hardwood flooring cleaner
- Wood and/or concrete moisture meter
- Tape measure
- Trowel
- Chalk line and chalk
- Pull bar
- Level
- Tapping block
- Straight edge
- Claw hammer
- Carpenter square
- Stapling machine
- ½ in (7 mm) wall spacers
- Recommended staples

Approved safety goggles or glasses shall be worn at all times.

PRE-INSTALLATION CHECK LIST

- As a rule of thumb, pre-finished hardwood floor installation shall be the very last step performed on any construction or renovation project.
- Make sure the sub-floor is dry, even and level.
- Engineered hardwood flooring may be installed below, on, or above ground level. Do not install in full bathroom. For below ground installation, make sure that foundations and concrete slabs are thoroughly leak proof.
- To avoid moisture related damage, check the sub floor for moisture content using appropriate testing method. Air conditioning and heating systems shall be in place and operational. A consistent room temperature of 75o F (24o C) and relative humidity of 40% to 60% RH shall be maintained in the installation site for 14 days prior, during installation, and until occupied to allow for proper acclimation. VIUS floor boards can only be installed on a maximum 82o F (28o C) surface temperature.

INSTALLATION PROCEDURES (CONT.)

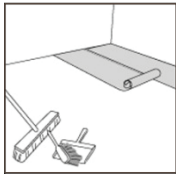
PRE-INSTALLATION PLANNING (Cont.)

- Keep the floor boards in its original unopened package for at least 48 hours in room temperature. Allow at least 4 in (10 cm) space under pallet or carton for air circulation. Package shall only be opened just before the start of the installation.

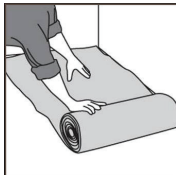
SUB-FLOOR PREPARATION

- The sub-floor must be clean, dry, flat and level, and free from any cracks. Irregularities must not exceed 0.2 in every 10 ft (1.5 mm every 1 m).
- Use leveling compound to level the sub-floor when necessary in accordance with the builder's recommendation.
- Concrete sub-floor must be completely cured and dried with maximum moisture content of 2% dry weight basis.
- For glue down installation, make sure that concrete sub-floor has compression strength of at least 3,000 psi.
- For nail-down installation, plywood sub-floor shall be provided with at least $\frac{3}{4}$ in (18 mm) thickness.

FLOATING INSTALLATION



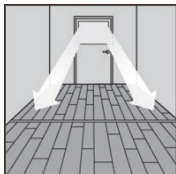
After cleaning the sub floor, roll over the vapor barrier sheet with a minimum 8 in (20 cm) overlap. Unroll the sheet along the longest wall.



Underlayment may be used for sound insulation and/or for smoothing out slight irregularities of the sub-floor. Do not overlap the underlayment.



Lay a loose board upside down as a proper height guide against the door jamb. Cut the bottom of the frame off, leaving the required expansion gap allowance.



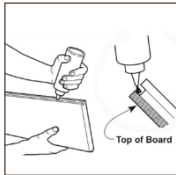
Boards shall run lengthwise against the longest wall. When possible try to run floor boards parallel to incoming sunlight or main light source. T-molding is required for rooms exceeding 1,080 sq ft (100 sq m).



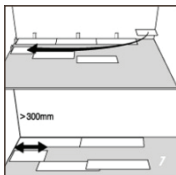
Begin laying from the left hand corner, tongue-side against the wall. Use spacers to maintain an even expansion gap allowance.

INSTALLATION PROCEDURES (CONT.)

FLOATING INSTALLATION (Cont.)



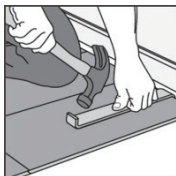
Apply a continuous line of bead of adhesive to the upper part of the grooves' inside edge. Immediately wipe off any excessive adhesive with damp cloth.



On starting the next row, always make sure to stagger the end joints by at least 12 in (30 cm). Try to use cut piece from previous row to start new row.



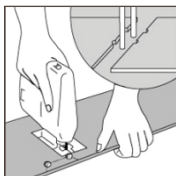
All joints shall have a tight fit. Use tapping block and hammer to tap any gapped joints as necessary. Never hit the floor board directly with hammer.



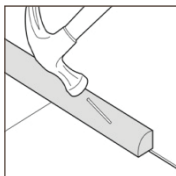
Use pull bar and hammer to tap gapped joints at adjoining wall and door jamb.



To lay the last row, place a full length floor board directly on top of the last installed row. Measure and cut the correct width by putting a full width scrap board with spacers inserted against the wall.



On encountering pipes, ensure the position and diameter of the pipe; drill hole(s) with diameter 3/8 in (10 mm) larger. Cut off as shown in the figure and lay the board in place. Apply adhesive to the loose piece and fit it in place.

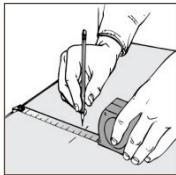


Make sure to remove all spacers once the laying procedure is completed. Skirting boards or moldings shall be fastened to the adjacent wall by nail or screw, overlapping the expansion gap allowance.

Important: Please remember that floor boards in floating installation are not meant to be fastened in any manner. Obstruction to the floor's natural movement may cause severe damage and void the warranty.

INSTALLATION PROCEDURES (CONT.)

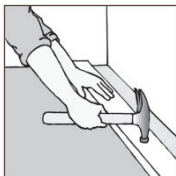
GLUE-DOWN INSTALLATION



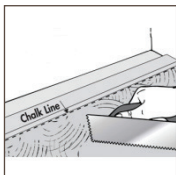
At each end of the starter wall, measure out the width of two boards plus the tongue and expansion gap allowance.



Snap a chalk line from these measured points, parallel to the starter wall and perpendicular to the adjacent wall. While most walls are not square, trim the boards to fit along the adjacent wall.



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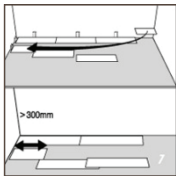
Spread recommended adhesive using notched trowel, from the chalk line/straight edge to approximately the width of two boards.



Lay the first row of starter boards along the chalk line/straight edge. Starting from the left corner, secure the boards into position with tongue-side facing the wall.



Apply a continuous line of bead of adhesive to the upper part of the grooves' inside edge. Immediately wipe off any excessive adhesive with damp cloth.



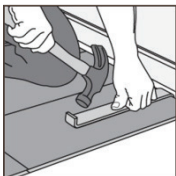
On starting the next row, always make sure to stagger the end joints by at least 12 in (30 cm). Try to use cut piece from previous row to start new row. Never spread more adhesive than can be covered in 30 minutes.

INSTALLATION PROCEDURES (CONT.)

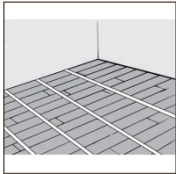
GLUE-DOWN INSTALLATION (Cont.)



All joints shall have a tight fit. Use tapping block and hammer to tap any gapped joints as necessary. Never hit the floor board directly with hammer.



Use pull bar and hammer to tap gapped joints at adjoining wall and door jamb.



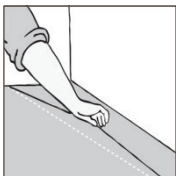
After every 3 rows of boards are laid down, stick strips of masking tape e.g. 3M 2090 Blue Mask™ to hold the boards together to prevent minor shifting or gapping.



To lay the last row, place a full length floor board directly on top of the last installed row. Measure and cut the correct width by putting a full width scrap board with spacers inserted against the wall.

Once the remainder of the board has been installed, go back to the beginning part and remove the straight edge. Spread adhesive on.

STAPLE OR NAIL-DOWN INSTALLATION



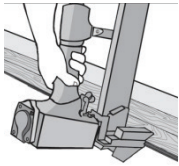
Snap a chalk line from these measured points, parallel to the starter wall and perpendicular to the adjacent wall. While most walls are not square, trim the boards to fit along the adjacent wall.



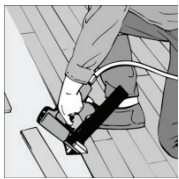
Install the first row of starter board along the chalk line/straight edge. Secure into position with groove-side facing the wall. Drill pilot holes on the board's face near the chalk line and fasten with finish nail.

INSTALLATION PROCEDURES (CONT.)

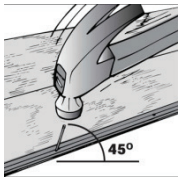
STAPLE OR NAIL-DOWN INSTALLATION (Cont.)



Engage the nailer onto the tongue-side of the board. Drive the nail no further than 1 in (2.5 cm) from each end of the board and 4 to 6 in (10 to 15 cm) from either sides of the center.



Make sure the starter row is straight and secure before continuing to staple the remaining rows.



The last rows will not allow the use of the stapler. Manual nailing has to be done on the tongue. Pre drill pilot holes at 45o and drive finishing nail.



On the far wall, place a full length floor board directly on top of the last installed row. Measure and cut the correct width by putting a full width scrap board.

Once the remainder of the board has been installed, go back to the beginning and remove the straight edge. Install the remaining boards to fully cover the room.

Special Note:

Some squeaking, popping or crackling of the floor boards are inherent to all staple or nail-down flooring installation. This is not a manufacturing defect and therefore is not covered under VIUS's warranty.

ATTENTION!

This guide is a general instruction that covers VIUS's range of classic tongue and groove products. While specific product may require specific installation method, please consult VIUS's authorized seller or retailer for the right laying method for your new floor installation.

For installation on under-floor heating system, please strictly follow the heating system supplier instructions. VIUS's flooring can be installed over maximum 82o F (28o C) floor surface temperature.

Beech and Maple expand and contract more than other wood species, giving greater risk of gaps to appear in floor. VIUS does NOT recommend choosing these species for installation on under-floor heating system.



PURE FLOORING SOURCE

CAUTION: WOOD DUST

ATTENTION!

Sawing, sanding and machining wood products produce wood dust. Airborne wood dust can cause respiratory, eye and skin irritation.

PRECAUTIONS

Equip power tools with dust collector. Use appropriate NIOSH designated dust mask in high dust level environment. Avoid dust contact with eyes and skin.

FIRST AID MEASURES

In case of irritation, flush eyes or skin with fresh water for at least 15 minutes.