



VILLAGIO FLOORS, INC.  
TOLL FREE: 888.488.3331 Fax: 323.406.8207  
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## INSTALLATION INSTRUCTIONS

### INSTALLER/OWNER RESPONSIBILITY:

Inspect all flooring material carefully for correct product and visible defects BEFORE INSTALLATION. Warranties do not cover visible defects once they are installed (a defect/irregular tolerance of up to 10% is allowed). As all wood is unique, with no two pieces alike, review and compare the new flooring with the “sample board” from which the floor was selected to ensure it meets the homeowners’ expectations prior to the installation. If flooring is not acceptable, contact your distributor immediately and arrange for replacement. It is the responsibility of the installer/owner to ensure subfloor and jobsite conditions are environmentally and structurally acceptable for wood floor installation. Problems or failures related to deficiencies in subfloor or job site damage after installation are not covered by our warranty.

- ❖ Receive the floor and make sure it meets the owner's expectations.
- ❖ Grade out and separate any pieces with visible defects/irregularities.
- ❖ Test the subfloor and jobsite itself, including ambient temperature/relative humidity and all other variables that may adversely affect a wood floor.
- ❖ Record the flooring moisture content upon delivery and at time of installation - **RETAIN THESE RECORDS**
- ❖ Acclimate flooring to appropriate site conditions. Follow NWFA Installation Guidelines for Acclimation on Jobsite (Section I, Chapter 2)

Villagio flooring products are designed to perform within a typical residential environment. Wood installed in areas where relative humidity is below 30% may cup and shrink (a humidifier may be necessary to keep the relative humidity within recommended levels of 30% to 50% year round). Flooring installed on wet



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subfloors may crown and buckle. CORRECT ANY OVERLY DRY OR WET CONDITIONS BEFORE INSTALLATION.

### PRE INSTALLATION/JOBSITE REQUIREMENTS:

ACCLIMATION IS CRITICAL. Allow floors to acclimate to the appropriate jobsite conditions. Proper acclimation is particularly important in extremely dry climates (e.g. Utah, Arizona, Nevada, Idaho, Colorado). See NWFA Installation Guidelines, Section I, Chapter 2 for more acclimation details.

Upon delivery, check wood flooring moisture content (MC) with a moisture meter to establish a baseline for required acclimation. Record MC at time of delivery AND at time of installation. **RETAIN THESE RECORDS.**

Out of the box acclimation is the most effective and what is recommended by Villagio Floors, Inc. Allow planks to lay flat for a minimum of 5 – 7 days (**not directly on concrete**), or as long as necessary for the planks to meet the job site moisture conditions. Use a moisture meter to monitor the flooring and job-site conditions as they acclimate. The equilibrium moisture content (EMC) for Villagio Floors, Inc. is between 6% and 9%.

### DRIER CLIMATES

- Subfloor and walls must be tested for moisture prior to installation. Subfloor MC must be less than 10% while walls' MC must be less than 20%. Higher moisture content in either will affect the acclimation process as well as stability in the flooring.



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- When using an HVAC unit, it is essential to raise/lower indoor temperature gradually, 5° over the span of 6 hours is recommended. This pace provides flooring the necessary time to acclimate properly. Quick shifts in heat or cold may promote rapid moisture loss and result in face checking, splitting, and/or cupping.
- Due to large, natural shifts in moisture during the winter season, indoor RH must be maintained at 40% in order to prevent damages; the use of a humidifier may become necessary.
- It is strongly recommended to closely monitor, and carefully alter any environment where wood floors are stored or installed. Doing so will protect against any unwanted reactions in the wood.

### HANDLING AND STORAGE

Hardwood flooring should be one of the last items installed on any new construction or remodel project. All work involving water or moisture should be completed before the installation of flooring.

Do not deliver wood flooring to the job site until the building is entirely closed and until appropriate temperature and humidity conditions have been achieved. Appropriate temperature and humidity conditions are defined as those conditions to be experienced in the building after occupancy. Temperature and humidity of installation areas should be consistent with normal, year-round living conditions for at least ONE WEEK before the installation of wood flooring. Room temperatures of 60° - 80°F and a humidity range of 30% to 50% should be maintained year-round.



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HVAC should be in operation before, and during installation (refer to NWFA Installation Guidelines Section I, Chapter 1, Part 1 for further information).

**KEEP FLOORING DRY:** Protect flooring from moisture during storage and transportation. Store material in a flat, dry and totally enclosed area. Garages, exterior patios, for example are not acceptable areas to store wood flooring. The moisture content (MC) of hardwood should generally be between 6% and 9%. For wide width flooring (6-½" or wider), there should be no more than 2% difference in moisture content between properly acclimated wood flooring and wood subfloor.

#### SUBFLOOR TYPES AND CONDITIONS:

Types: (Refer to NWFA Installation Guidelines, Section II for Subfloor Information)

- ❖ CD: Exposure 1 plywood, minimum ¾" thick.
- ❖ Solid board: 1" x 6" wide, square edge, kiln dried.
- ❖ OSB: Exposure 1 (minimum ¾" thick).
- ❖ Concrete (Refer to NWFA Installation Guidelines, Section II, Chapter 5 & 6).

The subfloor must be clean, dry, and flat to within 3/16" per 10' radius. If necessary, sand or plane high spots, and fill low areas using a cement based patching/leveling compound. Secure any loose boards or panels to prevent squeaking. The surface temperature of the subfloor, at time of installation should be at least 59°F but never exceed 80°F.

Damage due to moisture issues is not a product failure and is not covered by our warranty.



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**BASEMENT AND CRAWL SPACES:** Keep dry and ventilated. A minimum ventilation of 1% equivalent to the total area being covered is required (1' for every 100 square feet). Crawl spaces must be a minimum of 18" from ground to underside of joists. Exposed earth should be fully covered by a minimum 6 mil black polyethylene vapor barrier with joints overlapped and sealed with a moisture resistant tape.

**CONCRETE SUBFLOOR:** New concrete should be completely cured for at least 50-60 days. Test for excessive moisture. A reading of over 3lbs./1000 sq. ft. by Calcium Chloride test requires the application of a vapor retarder. Ensure concrete has a minimum of 3000 PSI Compression. Over a lightweight concrete (less than 3000 PSI) use a floating installation. To check for lightweight concrete, draw a nail across the top. If it scratches or indents, it is probably a lightweight concrete.

**WOOD SUBFLOOR:** When floating over a wood subfloor, cover wall to wall with an underlayment overlapped 8" at seams. It is recommended to tape overlapped edges with a cellophane tape. To prepare the wood subfloor for installation, re-nail any loose areas to prevent squeaking. Sand or plane high spots and fill low areas. The moisture content (MC) of a wood subfloor should not exceed 12%. In general the moisture content of hardwood flooring is between 6% and 9% and the MC difference between the subfloor and flooring should not exceed 2% on a 6-½" or wider flooring.



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## GENERAL INSTALLATION

REFER TO NAWFA INSTALLATION GUIDELINES, SECTION III, CHAPTER 9

Villagio Floors, Inc. products can be installed above, on-grade or below-grade. Installation methods can be either: Direct Glue, Floating or Nail/Staple.

Due to the extra width and length of planks, it is recommended to glue all end joints, regardless of the installation method. This can reduce excessive seasonal gapping. Use Dri-Tac 8100 or Titebond T&G glue. Plan the layout: "Rack" out (dry-lay) the flooring before installing to avoid close end joints and to blend color and grain patterns. To blend the visual differences from board to board it is recommended to work from several cartons alternatively. Leave ½" gap at all vertical objects, undercut all door jams.

GLUE DOWN METHOD (preferred):

Villagio brand UT-5 and/or UT-25 urethane adhesives in combination with Dri-Tac 8100 glue (for the end joints) are recommended for the installation of these floors. Bostik Vapor Lock, BST, and Best are also suitable alternatives. Carefully read and follow the instructions provided by the adhesive manufacturers for the use and application of their product, the recommended trowel size is a V-notch ¼" x ¼". Check with your flooring retailer for other adhesives that are compatible with engineered floors. Adhesive that is allowed to dry to the plank surface can be difficult to remove and may damage the floors. Be sure to clean any surplus adhesive off the surface of planks as you go, problems resulting from or related to



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adhesive residue are not covered by Villagio warranties. It is recommended to test any product(s) on scrap pieces or a small area before using it throughout.

The first step is to snap a starting line from the wall the width of 2 or 3 boards plus a ½" expansion space. Nail or fasten a holding board, i.e. 1" x 2' (1-inch x 2 feet) or 1" x 4' (1-inch by 4-feet) length of straight wood along the line, this will help keep the first rows straight and firmly in place. Apply the adhesive to the subfloor (including the T&G adhesive in end joints) and place the first plank down up against the holding board with the groove side facing the wall. Continue laying the first row using the tongue and groove method. Tighten all joints by the use of a wooden or plastic tapping block and soft mallet. Gently knock the boards in from the tongue side. Never use a hammer directly on the plank as this can cause damage to the finish. Use a pull-bar to pull the last row into place and tighten joints. Remember to clean surplus adhesive as you work. Continue laying the second row, staggering end joints of boards from row-to-row a minimum of 16" apart. Repeat row-by-row using the same method until the entire section is complete. Remove the holding boards and complete the area from the starting boards to the wall.

**COMPLETING THE JOB:** Roll every 2 to 3 hours and on completion with a 100lb. to 150lb. roller to ensure all planks are flat and in contact with the adhesive. Remove any spacer wedges. Cover all expansion spaces along walls with moldings. Always nail moldings to the adjacent wall, not the flooring! Clean, sweep, and vacuum installed flooring before use.

#### FLOATING METHOD:

When choosing the floating method for engineered wood, it is critical that the subfloor is flat to within 3/16" per 10' radius. Villagio Floors, Inc. will not honor



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warranty claims for products damaged due to plank movement or flexing due to an uneven floor. For floating installation, a 6 mil., age-resistant polyethylene plastic sheet is required as a moisture barrier. Follow the underlayment manufacturer's instructions. Decide which direction the flooring will run and install cushioning underlayment running in the same lengthwise direction that you plan to install the flooring.

Starting from left to right across the floor, begin by snapping a chalk line the width of the plank (e.g. 9 ½") plus the ½" expansion space, off the starting wall. Nail a series of holding boards (i.e. 1" x 4' lengths of wood) along the chalk line, this will help keep the first rows straight and firmly in place. Lay the first plank and align with chalk line, up against the holding boards with groove side facing the wall. Take second plank and apply a tongue and groove wood adhesive i.e. Dri-Tac 8100 glue or T&G glue made for flooring (follow adhesive manufacturer's instructions) to the groove on board's end, and join to the first plank. Continue the same steps until the first row is completed. When reaching the end of the first row, cut the last board to fit; use spacing wedges to maintain a ½" expansion space between wall and end of plank. Make sure all end joints are tight and square. Remember to clean adhesive as you work. Begin the second row by cutting board - if necessary - to ensure a staggered end joint of approximately 16" between end joints of adjacent planks. Apply tongue and groove adhesives to end and side grooves; join to the first row, repeat until the second row is complete. The floor can be installed in successive rows or with a stair-step approach. The stair-step approach ensures a tighter fit for the first few rows and limits board separation during the initial set-up. Always use a random pattern to begin installation. Tighten all joints by the use of a wooden tapping block to gently knock the boards in from the tongue side. Do not use excessive force and never use a hammer directly on the plank. Use a special pull bar to tighten joints from the sides and clamps to hold. Undercut door jams and slide plank under the cut for a cleaner look. Repeat all steps and install



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the rest of the floor. The last row may need cutting lengthwise to fit (remember to allow expansion space). Use a pull-bar to pull the last row in place and tighten joints. Use spacing wedges to maintain the space.

**COMPLETING THE JOB:** Allow the finished floor to be free of traffic for a minimum of 8 hours and before spacing wedges are removed. Be sure all expansion spaces are covered with appropriate moldings. Always nail moldings to the adjacent wall, not the flooring! NEVER attach any molding to a floating floor. Clean, sweep, and vacuum installed flooring before use.

#### STAPLE/NAIL DOWN METHOD:

Due to extra width and length of planks, it is recommended to glue end joints with Dri-Tac 8100 or Titebond T&G.. Staple/naildown installation uses supplemental adhesives.

Carefully remove any baseboard trim around the perimeter of the room. Save for replacement after the floor is installed. Cover wood subfloor wall to wall with the vapor retarder or 15 lb. asphalt saturated felt. Overlapped 4" at seams. This will not only retard moisture, but may help prevent squeaks. Snap a working line along the longest continuous wall the width of 2 or 3 boards plus a ½" expansion space. Direction of the planks should be at right angles to the joists for highest strength of flooring. Lay one row of planks along the entire length with a groove facing the wall. If necessary, use spacing wedges to maintain expansion space. Top nail the first row, placing nails perpendicular to the surface as close as possible to the wall so that after completion the head of the nail will be hidden by the base molding. Apply T&G glue to all end joints. Remember to clean surplus adhesive as you



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work. Blind nail the other side of the plank through the tongue (use 1 ½" length nails with a ¾" ply subfloor) with the nail slightly inclined and the head driven flush. Staples should be placed 3" - 4" apart and cleats every 4" - 6" apart. All fasteners should be placed 1" - 2" from end joints. Hand nail the first row if necessary, then a nailing machine can be used.

Start the second row in the same manner. If necessary, cut the first board to stagger end joints of boards a minimum of 16" from row-to-row. From the second row onward nailing is done on the tongue side only. Use a tapping block or soft-head mallet to engage tongue & groove as a hard-head mallet can damage the milling of the plank. The last row usually requires cutting the plank lengthwise to fit the space (remember to maintain the expansion gap). Nail the last row in the same manner as the first.

**COMPLETING THE JOB:** Once the nailing is complete, remove any spacing wedges and install the base molding. Always nail moldings to the adjacent wall, not the flooring! Clean, sweep and vacuum installed flooring before use. Inspect the completed floor for any scratches, nicks and minor gaps. Use touch-up kit, filler or wood putty as needed.

\*Stapled or nailed down products are not warranted against squeaking or popping sounds.

#### OVER RADIANT HEATED FLOOR:

Prior to installation over radiant heat systems it is important to refer to the NWFA Installation Guidelines Section IV. Appendix H. Failure to follow these guidelines can void your warranty and may produce unsatisfactory results. Use only over



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water-heated systems, not recommended over electrically heated systems. Villagio Floors, Inc. accepts no responsibility for flooring damaged as a result of improperly installed heated flooring systems.

*NWFA - National Wood Flooring Association: 800-422-4556 (USA) / 800-848-8824 (Canada).*

Radiant Heat Subfloors can be concrete, wood or a combination of both. The type of subfloor determines the subfloor preparation. If the Radiant Heat subfloor is concrete the system should be fully operating at a normal temperature for a minimum of 21 days prior to floor installation, to dry out residual moisture. The system **MUST** then be turned off 24 hours prior to installation and must remain off for 24 hours after installation so that the adhesive does not cure excessively fast. After the 24 hours, the system temperature can be gradually raised again (over a 7 day period) up to the desired level. The maximum allowable subfloor surface temperature over radiant heat is 80°F. Radiant heat is a dry heat, for that reason a humidification system is recommended to maintain wood flooring in its comfort zone. Surface checking, excessive gapping, etc. can be expected if the proper humidity level is not maintained between 30-50% year round, or the surface temperature exceeds 80°F. To minimize the effect

that a rapid change in temperature will have on the moisture content of the wood floor, an outside thermostat is recommended.

**INSTALLATION METHODS:** The following installation methods can be used over radiant heated floors:



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**FLOATING (RECOMMENDED)** - See floating method above. Install over approved subfloor. A minimum 6 mil poly vapor retarder should be used over a concrete subfloor. A foam or resilient approved underlayment must be installed prior to installation of wood flooring. Use Dri-Tac 8100 or Titebond T&G glue for grooves.

**GLUE DOWN** - See glue down method above. Use over an approved subfloor. Use only approved adhesives – Villagio Floors, Inc. recommends UT-5, UT-25 and Bostik adhesives. For grooves use Dri-Tac 8100 or Titebond T&G glue.

**STAPLE / NAIL DOWN** - See staple/nail down Method above. Install over approved subfloor. Be sure fasteners are not so long as to penetrate the heat source.

**TOOLS:** Some standard tools you may need include: Pencil, Tape Measure, Wooden Tapping Block, Rubber Mallet, Power Saw, Wood or Plastic Spacers, Pry Bar, and Chalk Line (among others). **STAPLE/NAIL DOWN:** Air-Stapler/Nailer with appropriate nail down adapter.

### IMPORTANT:

AFTER INSTALLATION, ANY PROTECTIVE COVERING USED SHOULD BE TAPED DOWN USING A LOW ADHESION TAPE. ATTACH TAPE TO OVERLAPPING COVERING, BASE SHOE, OR MOLDING.

**AVOID TAPING DIRECTLY TO FLOOR SURFACE AS**

**MANY TAPES CAN DAMAGE THE FINISH.**

**Tape damage is not covered under Villagio's warranty.**

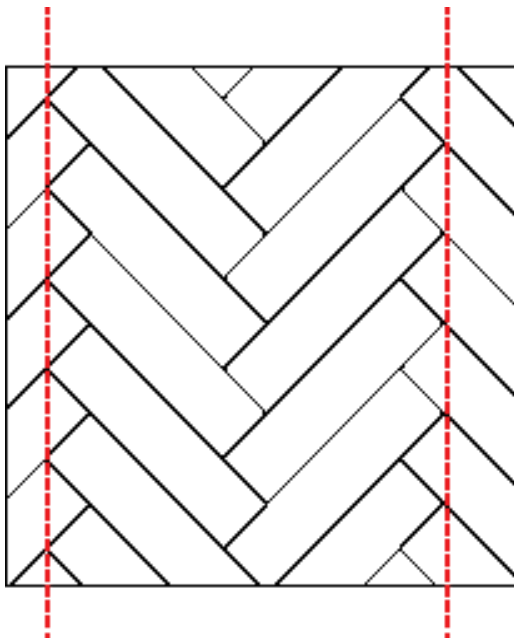


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## Single Herringbone Pattern | Chevron Pattern (Left & Right)

Set out a parallel laser or chalk line beginning from the centre of the room, generally orienting the layout to follow the longest wall. Continue using parallel reference lines throughout the installation to maintain consistent pattern alignment, keeping pieces tight together and tapping into place where needed. Only work across small sections at a time to prevent the adhesive from setting prematurely, wiping away any excess that squeezes out as you progress — keep cleaning wipes close to hand. Adhesive left to dry on the surface of the board may cause damage when removing.

### Single Herringbone Pattern



### Chevron Pattern

