Monte De Oro
Installation Instructions

Important Information Before You Begin

It is EXTREMELY IMPORTANT that you read and understand this information completely prior to starting, since improper installation can void the warranties. Only a professional hardwood floor installer should perform the installation.

If at any time during the installation of this flooring you have a question or a concern, STOP and call your dealer! Verify that the color, gloss and distressing and T&G fit are acceptable prior to starting the installation.

Manufacture will only be responsible for obvious issues in flooring that has not been installed.

READ THIS CAREFULLY: The primary cause of problems with any hardwood floor is moisture, either too much or too little. It is the contractor's / homeowner's responsibility to ensure that the conditions prior to install, as well as for the life of the hardwood floor, meet certain criteria. The wood sub-floor to which you are gluing your hardwood floor must have a moisture content (MC) of 12% or less when measured with a properly calibrated pin-type moisture meter, and should be within 3% of the measured MC of the hardwood flooring prior to installation. The sub-floor must remain at 12% or less MC throughout the life of the hardwood floor. It is the contractor's / homeowner's responsibility to verify those measurements, and to ensure that the environment, including the crawl-space, is and will remain dry. Other factors which can affect the MC of the floor, and cause problems, are uncontrolled environmental relative humidity (RH). It is the homeowner's responsibility to install, operate and monitor such systems as necessary to maintain a RH of between 35% and 55%, and a temperature range of between 60o and 80 o F at all times. Failure to ensure a maintain a dry sub-floor and/or crawl-space or failure to regulate environmental RH or temperature as required can lead to excessive cupping, splitting, checking and gapping. Such occurrences will not be covered as manufacturing defects by any Quality Woods warranty.

INSTALLER/OWNER RESPONSIBILITY

Prior to installation the Installer/Owner should perform a final inspection of the grade, manufacturing and factory finish of the purchased products. Materials installed with visible defects are not covered under warranty. Remember – Wood is a natural product that can vary in color, grain, and contains natural characteristics that varies from plank to plank and is to be expected. We do not warrant against these natural variations from plank to plank or variations from sample to plank. If you are not satisfied with the flooring prior to installation, simply return the cartons to your dealer for a full replacement. Accepting or rejecting the material must be done on full shipment of quantities only, not carton by carton or plank by plank. . The Installer must use reasonable selectivity and hold out or cut off pieces with defects, whatever the cause. Beautiful hardwood floors are a product of nature and therefore not perfect. Our wood floors are manufactured in accordance with accepted industry standards, which permit a defect tolerance not to exceed 5%. The defects may be of a manufacturing or natural type.

Manufacture shall not accept responsibility for visible defects in flooring that has already been installed. Before installing floors, the Installer and Owner should ascertain that the jobsite and subfloor meet all necessary requirements of installation as outlined in these instructions. The manufactures Limited Warranties do not cover flooring failures resulting from poor jobsite and/or sub floor conditions.

Jobsite Conditions and Acclimation– All Installations

A. GENERAL CONDITIONS

It is the installer/ Owners' responsibility to ensure that the jobsite conditions and jobsite subfloor are environmentally and structurally acceptable prior to the installation of any hardwood flooring. The manufacturer declines any responsibility for failures or deficiencies of hardwood flooring resulting from or related to sub-floor, subsurface, or job-site environmental conditions. All substrates must be clean, flat, dry, and structurally sound.

- Subfloors must be clean and free of dirt, curing compounds, sealers, drywall mud, paint, wax, grease, urethane, or other materials that may affect the integrity of the flooring material or adhesives used to install the flooring.

- All subfloors and subfloor systems must be structurally sound and must be installed following their manufacturer's recommendations. Local building codes may only establish minimum requirements of the flooring system and may not provide adequate rigidity and support for proper installation and performance of a hardwood floor. Whenever possible install the planks perpendicular to the floor joists for maximum stability. Our warranties DO NOT cover any problems caused by inadequate substructures or improper installation of said substructures.

- Test subfloor moisture content and choose adhesive system according to the Glue-Down Installations section. Record the results of the test with permanent marker on the subfloor such that it can be found later.

- A “DRY” SLAB, AS DEFINED BY THESE TESTS CAN BE WET AT OTHER TIME OF THE YEAR. THESE TESTS DO NOT GUARANTEE A DRY SLAB.

- Basements and crawl spaces must be dry. Use of a 6 mil black polyethylene is required to cover 100% of the crawl space earth. Crawl space clearance from ground to underside of joist to be no less than 18” and perimeter vent spacing should be equal to 1.5% of the total square footage of the crawl space area to provide cross ventilation. Where necessary, local regulations prevail.

- The subfloor must be flat, meeting a minimum of 1/8” within 10’.

- Repair all cracks in the subfloor greater than 1/8” before applying flooring adhesive.

- All “wet” work – i.e. – paint, drywall, concrete, masonry, plumbing must be complete and dry well in advance of delivery of hardwood flooring.

- Gutters and downspouts should be in place and the exterior grade complete to allow for proper drainage of water away from the building’s exterior perimeter.

- Flooring should not be exposed to extremes of humidity or moisture.

- Permanent HVAC should be on and operational a minimum of 7 days and maintained between 60o and 80o F and a relative humidity of 35%- 55% prior to delivery, during, and after installation of the flooring.

- If HVAC is not possible at time of installation the environmental conditions must be at or near normal living conditions between 60o and 80o F and at the average yearly relative humidity for the area.

- It is the Installer’s/Owner’s responsibility to ensure that the conditions are acceptable prior to the installation of the hardwood floors. The manufacturer declines any and all problems with the hardwood flooring that are related to or attributed to improper jobsite conditions.

- **B. RECOMMENDED SUBFLOOR SURFACES**

- Concrete subfloors: Newly poured concrete must be cured for a minimum of 42 days before installation. Concrete subfloors must meet the requirements for the adhesive or adhesive system selected.

- Wood Subfloors – Preferred: 3⁄4” CDX grade Plywood subfloor/ underlayment, 4’x8’ sheets or 3⁄4” OSB subfloor/ underlayment grade, PS2 rated, sealed side down, with joist spacing of 19” on center or less.

- Wood Subfloors – Minimum: 5/8” CDX Plywood subfloor/ underlayment, 4’x8’ sheets, maximum 16” on center joist construction. Follow panel manufacturer’s recommendations for spacing and fastening. Typical panel spacing and fastening for joist systems, 1/8” (3.2mm) around perimeter and fastened every 6” on bearing edges and every 12” along intermediate supports.

- Installation of flooring should not be made over joists spacing greater than 19” on center or parallel to the joists unless the subfloor has been properly strengthened, applying a second layer of underlayment may be necessary to bring the overall subfloor thickness to 1-1/8” (minimum).

- Test the moisture content of the wood subfloor and wood flooring with a pin type moisture meter. Wood subfloors must not exceed 12% and the wood flooring should be within 3% of the wood subfloor.

- For existing wood floors install new flooring at right angles to the existing flooring.

- Do not glue hardwood flooring over particle board.

- Do not install over existing glue down hardwood floors.

C. HANDLING, STORAGE, AND ACCLIMATION

- Do not store material in a garage, outside or in a home or building that is not climatized to 35% to 55% RH.

- Storing in environments other than a controlled environment will cause the wood to take on or lose moisture which will cause the flooring to shrink or grow.

- The moisture content of the material will be 8%-10% moisture content and is ready to install and does not require acclimation. Please test prior to installing.

- Only open material that will be installed. Leaving planks outs of plastic wrap exposes the planks to change prior to installation.

Preparing For Installation – All Installations

STOP! All questions or concerns in regard to the grading or milling of this product are required to be resolved prior to installation. The manufacturer accepts no responsibility or liability for the cost of this product, replacement and/or labor when flooring containing grade, milling, distressing or finishing defects has been installed prior to resolutions. Installing this product assumes full acceptance of this flooring.

IMPORTANT!

Per 3M: ScotchBlueTM Painter's Tape Original Multi-Surface 2090 is not recommended for use on pre-finished flooring. The only adhesive tape which should be used with The Manufacture Flooring is ScotchBlueTM Painter's Tape Delicate Surface 2080. Traditional "Blue Tape" contains chemical solvents that, over time, may penetrate and weaken the finish. DO NOT use "Blue Tape". Even when using ScotchBlueTM Painter's Tape Delicate Surface 2080, do not leave tape on flooring for longer than 3 days. When possible, apply tape to baseboards or walls rather than flooring.

Inspect the Flooring: Inspect material for color, finish, milling, and grade. Hold out pieces that may not be acceptable once installed. PLEASE NOTE: We do not accept responsibility for any costs incurred when plank(s) with visible defects have been permanently installed.

Undercut Door Casings: Undercut all door casings 1/16" higher than the thickness of the flooring being installed. To do this, use a scrap piece of flooring as a guide. Lay it on the substrate and cut the casing with a handsaw or use a power jamb saw set at the correct height.

Blending of Cartons: To achieve a uniform appearance across the entire floor, we highly recommend that you open and work from several cartons at a time and dry-lay the flooring, mixing the planks from several cartons. This will allow you to blend the planks for maximum aesthetic appearance. Make certain the room is well lit to ensure color is consistent and that any visual defects can be seen and removed.

Match Transition Moldings: For best appearance, blend all transitions and moldings to planks that have similar color and graining. Set them aside for use as needed.

Layout of Flooring: “Racking the floor” is essential to achieve a random appearance. Start by either using random-length planks found in the carton or by cutting four or five planks in random lengths, differing by at least six inches. As you continue working across the floor try to maintain a six-inch minimum between end joints.

Randomly install different lengths to avoid a patterned appearance.

Never waste materials; the end cuts from starter rows should be used at the opposite side of the room to complete rows or used to start the next row.

Expansion Space: Allow a minimum 5/8” expansion around all vertical obstructions. Large spans exceeding 20’ (6 m) in hardwood flooring width, in areas of high humidity, may require the addition of internal or field expansion. This can be accomplished by using spacers, such as small washers, every 10-20 rows, inserted above the tongue. Remove the spacers after several adjoining rows have been fastened. Do not leave spacers in for more than two hours.

Glue-Down Installation Guidelines

Monte De Oro Engineered Flooring may be installed via glue-down installation. (For installations over Radiant Heat systems, see also the section on Radiant Heat Installations.)
Adhesive and Moisture Barrier Systems from the following manufacturers are permitted for the full-spread glue-down installation of Bavarian Collection Floors:

Please use one of the recommended adhesive products.

Fortane One - Fortane Zero - Fortane LD

Follow the Adhesive Manufacturer’s Installation Instructions for the testing of subfloor moisture content. Choose an adhesive and (if necessary) moisture barrier system that is warranted by the adhesive manufacturer for installation under those circumstances. The Manufactue will not be responsible for problems

that might arise due to moisture transference from a subfloor to the hardwood flooring.

Please note the following exceptions:

Adhesive Removal: Use the adhesive manufacturer's recommended Adhesive Remover according to the instructions on the bottle.

In case of any other conflict between adhesive manufacturer's instructions and Manufacture Installation or Care and Maintenance Instructions, please contact your dealer for resolution.

Guidelines for Installation Over Radiant Heat Systems

All Manufacture Floors are warranted for Installation over Radiant Heat system provided the following installation guidelines as well as the After Installation and Seasonal Operation guidelines detailed herein are strictly followed.

Failure to strictly follow these guidelines may void all Manufacturer Warranties.

- Sub floor must be prepared and tested as detailed under PRE INSTALLATION & JOBSITE CONDITIONS with the following additional requirement: The moisture content for concrete sub floors registered after a calcium chloride test must not be greater than 2 pounds per 1,000 square feet of area. If it exceeds these limits, DO NOT install the flooring.

- Relative humidity of the jobsite must be maintained between 35-55% relative humidity. Use of a humidification system may be required to maintain the proper humidity level. Failure to maintain proper humidity level can result in excessive dryness of flooring.

- It is highly recommended that the radiant heat system be designed specifically to accept a wood floor.

- Use of floor temperature sensor(s) as well as a separate thermostat for each individual room is required.

- An outdoor temperature sensor should be used to adjust water temperature according to anticipated heat loss.

- Prior to installation of flooring the radiant system must be installed per manufacturer's instructions.

- Radiant heat system should be set to run at 2/3 maximum output for a minimum of 2 weeks prior to installation of flooring to further allow moisture from concrete to dissipate and reach a final moisture content. This must be done in both heating and non-heating seasons.

- Prior to installation (4 days) reduce to a temperature of 65°.

- Install flooring following the instructions for glue-down installations as detailed earlier in this document.

NAIL-DOWN INSTALLATION GUIDELINES

(must nail along with full Spread Adhesive)

Additional tools and material needed:

Drill Tapping Block Compressor Air Hose In-line Air Regulator Pneumatic Nailer/Stapler

Before you begin using the following instructions, please refer to the Pre-Installation Jobsite Conditions section above.

IMPORTANT: The Manufacture will not be responsible for any problems caused by damp or humid crawl spaces or basements. It is the contractor's responsibility to make certain crawl spaces are properly covered and ventilated (see Section I.A. on page 2 of this document.) Additionally, the nail-down installation will only

be as good as the subfloor. If the subfloor is unsound or unlevel, this situation must be corrected prior to installation. Manufacture will not be responsible for any problems due to an unlevel or unsound subfloor, especially squeaking and popping.

NOTE: Our products are not warranted against squeaking, popping or crackling when using staple-down or nail-down installation methods. Some squeaking, popping or crackling is normal and possible when using staple-down or nail-down installation methods. These symptoms may be aggravated in arid areas or during dry conditions. This is not a manufacturing defect and is therefore not covered under our warranties (see warranty brochure for complete warranty coverage). You can help reduce squeaking, popping, and crackling by being sure that the subfloor is structurally sound, does not have any loose decking or joists, and is swept clean prior to installation.

SET UP AND USE OF PNEUMATIC STAPLERS AND NAILERS

You must make certain that your stapler or nailer is setting the fastener properly, not damaging the planks, and that you are using the correct nailing schedule. When used improperly, staples or cleats can damage wood flooring. If the tool is not adjusted properly the staples/ cleats may not be positioned at the proper angle and cause blistering, peaking, squeaking, or crackling of the floor. Some models may require the use of an adapter to adjust for proper thickness. Test the tool on a piece of scrap material first - set the stapler/ nailer flush on the tongue side of the plank and install a staple/ cleat. Should the staple/cleat penetrate too deeply reduce the air pressure; if the staple/ cleat is not deep enough then increase the air pressure using an in-line regulator. The crown of the staple/ cleat should sit flush within the nail pocket to prevent damage to the flooring and to reduce squeaking. The flooring manufacturer is not responsible for damage caused by the mechanical fasteners.

IMPORTANT NOTE: Only use manufacturer's recommended staples or cleats.
For 7/8” thick products the recommended length staple/cleat is 1 1⁄2” to 2”.
For 9/16” products the recommended staple/cleat length is 1-1/4”
Read and follow the manufacturer's instructions for complete set-up and operation of equipment.

Getting Started

1. Subfloor needs to be prepped and cleaned.

2. Select a starter wall. An outside wall is best: it's most likely to be straight and square with the room. Measure out from this wall, at each end, the overall width of the plank (board width + tongue + the space needed (3/8" or 1⁄2") for expansion).

3. Snap a chalk line from these points, parallel to that wall.

4. Install the first row of starter planks along the chalk line/straightedge and secure into position with the tongue facing away from the starter wall (toward you). Drill pilot holes through the face of the plank every 6" (in the dark grain); approximately 1" from the back edge of the board and secure planks with 1" finishing nails. Countersink nails and fill with appropriate colored wood filler – remove excess filler from surface.

5. Blind nail at a 45° angle through the tongue 1"-2" from the end joints and every 6" in between along the length of the starter boards (Pre Drill holes to make this easier). Depending on the width of the flooring it may be necessary to do this for the first few rows prior to using a pneumatic stapler/ nailer. NOTE: Proper alignment is critical. Misaligned starter rows can cause side and end gaps to appear in proceeding rows of flooring.

6. Continue to install the flooring making sure to nail/staple 1"-2" from the ends and every 3" – 4" thereafter. Make certain the tool is adjusted properly to ensure that the fastener is at the proper angle and is flush within the nail pocket. As you continue working across the floor try to maintain a six-inch minimum space between end joints. Randomly install different lengths to avoid a patterned appearance.

AFTER INSTALLATION & SEASONAL OPERATION

- 48 hours after completion of installation, slowly raise temperature of the heating system to its preferred operating level over a period of 5 days. Do not allow the surface temperature to exceed 80°.

- Humidity level must be maintained between 35%-55% R.H.

- Seasonal gapping should be expected.

- Surface checking can be expected if the proper humidity level is not maintained between 35-55% R. H. or if the floor's surface temperature exceeds 80°.

- The floor's surface temperature must never be allowed to exceed 80°F. Failure to control the maximum floor temperature may void your Manufacturer Warranty.

- Humidity level must be maintained between 35%-55% R.H. Failure to control the humidity level may void your Manufacture Limited Warranties.

Completing the Job – All Installations

- Sweep or vacuum floor.

- Clean the floor with Behlen Hydro Hardwood Floor Cleaner.

- Install transition pieces -i.e. – thresholds, t-moldings, baseboards and quarter round. Nail moldings to wall, not the floor.

- Inspect final floor for nicks and or minor gaps – fill with appropriate color wood putty.

- Leave Warranty and Maintenance brochure with customer.

- Unused material should be left with owner and stored in a dry place in case of future repairs are needed.

- Use plywood or hardboard when moving heavy appliances or furniture across floor.

FLOOR PROTECTION DURING CONSTRUCTION

- Always protect the surface of the installed flooring during construction by laying a quality rosin paper or other paper that will allow the floor to breathe, taping it to the baseboards. Never use plastic or polyethylene sheeting to cover the floor since they will trap moisture that will damage the flooring.