

BELVEDERE COLLECTION INSTALLATION INSTRUCTIONS

Before you Begin:

READ INSTALLATION INSTRUCTIONS COMPLETELY BEFORE BEGINNING THE INSTALLATION

- Subfloor must be clean, sound, level and dry. See details below:
- Radiant Heat systems cannot exceed 81 degrees F (27 degrees Celsius).
- Relative humidity levels should remain between 30% and 55% RH before, during and after installation.
- For wood subfloors, it is recommended to repair any loose areas or squeaks prior to installation.
- Maintain indoor room temperatures between 55 and 72 degrees F (12 and 21 degrees Celsius).
- Using a straight edge, check for subfloor levelness. The subfloor must be level to within 2mm over a 2m (6') span. For wooden subfloors, sand high areas or joints. Use newspaper, roofing shingles or thin plywood to fill low areas. Do not use foam or other soft materials. For concrete subfloors, fill low areas (no more than 1/8") with a "cement-type" filler no less than 3,000 psi. Sand high areas.
- Subfloors should always be tested for moisture prior to installation. Moisture readings should be documented.
- NOTE: The National Wood Flooring Association recommends to all its member manufacturers that an installer should allow for an additional 5% of material to compensate for cutting waste and natural or manufacturing defects.
- The flooring installer assumes all responsibility for final inspection of product quality before installation. Thus, the installer shall not install any product with notable defects. Claims related to visible defectives must be made prior to installation. Each board should be inspected to ensure that the quality is acceptable. No claims relating to visible surface defects can be accepted after installation.
- Wood is a natural product. Blend the flooring by working from several cartons during the installation. This method ensures a uniform appearance throughout the installation.

Testing Wood Subfloors for Moisture:

Test with an approved moisture meter in several areas. Document all moisture readings. The wood subfloor cannot have moisture content above 12%.

Testing Concrete Subfloors for Moisture:

According to the National Wood Flooring Association, moisture content in a concrete slab can be tested by securely taping a 2' square piece (10 cm²) of plastic sheeting to a slab in 3 to 4 locations. Let the piece of plastic stand for 24 hours. The presence of moisture is certain, if after the plastic is removed, the slab under the plastic is discolored, or the plastic is cloudy, or especially if there are water droplets on the underside of the plastic sheet. If tests indicate too much moisture is in the concrete, do not install hardwood floors. In the case of a moist slab, wait until it dries naturally, or accelerate the drying process via heat and ventilation, and then test again. Calcium Chloride (CC) tests and approved concrete moisture meters are the preferred means to determine the level of moisture in concrete. For the CC test, allowable moisture level is 3 lbs.(1.3KG) per 1000 s/f per 24 hours. NOTE: Concrete moisture meters such as Wagner and the Tramex should read no higher than 5%. If you are not certain that the concrete slab is sufficiently dry, contact a flooring installation or concrete industry professional.



Radiant Floor Heating

BELVEDERE WHITE OAK is recommended for installation over HYDRONIC radiant heated subfloors.

Electric radiant heated systems are not approved.

Species such as HICKORY AND HARD MAPLE are very dense and may split or check when subjected to rapid changes in temperature and/or relative humidity. MAYFAIR HICKORY AND HARD MAPLE are not recommended or warranted for installation over radiant heated subfloors.

Pre- Installation

Measure the area to be installed and define the installation direction. It is recommended to install the length direction of the planks parallel to the main light direction. The board width of the last row shall not be less than approx. 2" (50mm). It may be necessary to adjust the width of the first row installed to accommodate the width of the last row. When measuring, leave an expansion space requirement of 3/8" (10mm) around the floor perimeter. In narrow hallways, install the floor parallel to the hall length if possible. Always ensure the end-joints are spaced appropriately. Normal end-joint spacing is between 8" and 12", not less than 6".

Floating installation Preparation

The Belvedere Collection is designed to be installed using a floating method by gluing the tongue and groove on the side joint and end joint using a PVA T&G adhesive (e.g. D3 or Titebond T&G flooring adhesive). Before installation using the floating method, install an approved underlay. Please note that all cement subfloors and screeds require an approved moisture barrier (i.e. age resistant PE film, min. 0.20 mm (8 mil) thickness. Overlap edges a minimum 20 cm (8") and tape seams. Approved underlay materials include 2 mm cork, high density foams (over 30 kg/m³) with a maximum thickness of 2mm. The underlay should be butted side-by-side with no overlap. Tape seams together.

Leave an open expansion gap of minimum 3/8" (10mm) around the entire perimeter (use distance wedges), also at pipes, stairs, columns, doorframes and thresholds. In large rooms, a larger expansion space may be required. Install maximum 10m (32 ln ft) length or width without an expansion space. If installing a distance greater than 10m (32 ln ft), we recommend gluing or stapling the floor. If floating, the floor requires an expansion gap at 32 ft. The gap must be covered with a T-moulding or similar profile.

Floating floors must be able to move freely throughout the installed area. Do not pin under cabinets or islands. Do not connect or install tight to any construction member. An expansion space is required in all door openings. Similarly, rooms with off square areas, for example L, F, T, or U-shapes, require that the separate areas be allowed to expand and contract independently by installing an expansion space between these areas. If you have any further installation questions, contact your retailer.

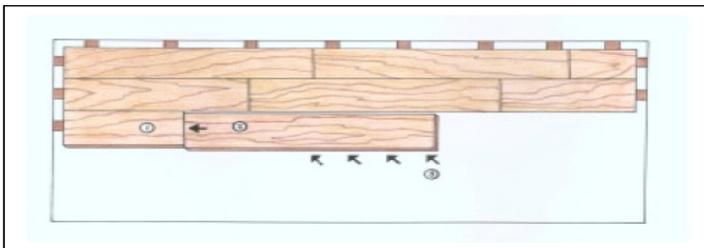
Floating installation method details:

1. First plank / first row. Work left to right. Place the first plank against the starting wall, with the front edge placed with 3/8" (10mm) expansion space. After 3 rows, position the flooring with distance of approximately 3/8" 10mm, from the starting wall using spacers. Leave additional space for floors exceeding 32 lin. ft. Ensure the first rows are straight.
2. T&G glue placement is very important. The glue must be placed along the topside of the groove for the full length of the grooved side and end. This can be accomplished by inverting the plank and applying a bead of glue (3/32") to the topside of the groove (side of the groove nearest the face of the plank), when



the plank is turned back over the glue will run down the back of the groove giving total coverage. Apply only a 3/32" bead of glue; if the groove is filled with glue it will be difficult to close the seam, not allowing a tight fit.

3. Second plank, first row. Place this plank tight to the short end of the first plank, after applying a bead of T&G adhesive along the top of groove on the short end. Continue to the end of the first row.
4. At the end of the first row, cut the last plank to fit, leaving a 3/8" (10mm) expansion space at the end. Use the remaining piece to start another row, but only if at least 18" (500mm) in length.
5. Second row. The first plank must be min length of 18" (500mm). Put a distance of approx. 3/8" (10mm) against the wall. Generally, minimum distance between end-joints in parallel rows shall not be less than approx. 6" (150mm). Apply adhesive and engage the T&G on the long side.
6. Second plank – Apply adhesive and engage T&G. Use a tapping block to ensure side and end joints are tight. Tape seams at corners to ensure the planks stay engaged while the adhesive cures.
7. Clean as you go. If adhesive pushes to the surface, clean-up prior to adhesive curing.
8. After 2-3 rows adjust the distance to the front wall by placing 3/8" (10mm) spacers at the perimeter. Ensure first rows remain straight.



9. Last row: The minimum width of the last row (and first row) is 2" (50mm). Ensure to make this accommodation before installation begins. Minimum distance to keep away from end wall is 3/8" (10mm). Cut the planks lengthwise to fit.

Glue-Down Installation Details

Use a premium moisture-cured urethane wood flooring adhesive. Refer to the adhesive manufacturer container for specific recommendations with respect to spread rate, recommended trowel, etc. Trowel only enough adhesive in an area you can comfortably work within during the working time of the adhesive.

1. There are two ways to install when using a moisture cured urethane wood flooring adhesive (wet lay; meaning to lay directly into wet adhesive and dry-lay method; meaning to allow the adhesive to flash or to tack up).
2. Select a starter wall. It is recommended to start the installation along an exterior wall as it's more likely to be straight and square with the room. Measure out from the wall the width of two planks and mark each end of the room and snap your chalk line.
3. Spread the moisture cured urethane wood flooring adhesive from the chalk line to the starter wall using the recommended trowel size specified by the glue manufacturer. It is important to use the correct trowel at a 45° angle to get the proper spread of adhesive applied to the subfloor, which will produce a proper and permanent bond. Improper bonding can cause loose or hollow spots.
4. Install the first row of starter planks with the tongue facing the starter wall and secure into position. Alignment is critical and can be achieved by securing a straight edge along the chalk line (2x4's work well), or by top nailing the first row with finishing nails (wood subfloor), or sprig/pin nails (concrete subfloor). This prevents slippage of the planks that can cause misalignment. Leave a 1/2" expansion

space around the entire perimeter and at all vertical obstructions such as pipes, columns, cabinets, door frames and hearths.

5. Once the starter rows are secure, spread 2 1/2" to 3 feet of adhesive the length of the room. (Never lay more adhesive than can be covered in approximately 2 hrs). Place tongue into groove of plank or strips and press firmly into adhesive; never slide planks or strips through adhesive. (Note: Do not use a rubber mallet to butt material together, it can burnish the finish and cause marring). Use a tapping block to fit planks snug together at side and butt ends.
6. Clean any adhesive off the surface before it cures using clean terry cloth towels, mineral spirits or adhesive manufacturer's glue removal product.

An underlayment is not required when using the glue-down method. If using an underlayment for sound abatement, the pad must be glued to the subfloor. Ensure the underlayment is approved for double-glue installations.

Nail or Staple-Down Installation

Prior to installing the flooring using the staple down method, install either 15 lb. roofing felt or resin paper over plywood or OSB subfloors. This will deter moisture from below and help to prevent squeaks. Keep in mind that there is no complete moisture barrier system for staple-down installations. Ensure the wooden subfloor is approved for stapling or nailing wood flooring. Particle board is not an acceptable subfloor in staple-down installations (though it is acceptable for glue-down installations). Engineered hardwood floors may be installed over wood subfloors using staples or flooring cleats. It is necessary to use the proper type of flooring stapler or nailer for the thickness of the engineered wood flooring that is being installed.

1. Use an 18 gauge, 1-1/4" length staple or longer with a 1/4" crown. (Note: you must use an appropriate adapter for the thickness of the wood on some flooring staplers). The nailing schedule which is 1" to 2" from the ends and 4" to 6" in the field. 18 gauge flooring cleats or 20 gauge staples are also acceptable.
2. It is recommended to initially set the compressor at 80 PSI and adjust the pressure as needed in order to properly set the fastener and keep the staples from going through or breaking the tongues. Improper stapling techniques can cause squeaks in the floor. Adjustments may be necessary to provide adequate penetration of the nail or staple into the nail bed. It must be flush in the nail pocket above the tongue. Use a scrap piece of flooring material to set tools properly before installation.
3. Place the planks with the tongue facing away from the wall and along your chalk line. Use brads or small finishing nails to secure the first starter row along the wall edge 1" to 2" from the ends and every 4" to 6" along the side. Counter sink the nails and fill with wood filler that blends with the flooring installed. Place the nails in a dark grain spot in the board. The base or shoe molding will cover the nails when installed after completion of the installation. Leave a 1/2" expansion space around the entire perimeter and at all vertical obstructions such as pipes, columns, cabinets, door frames and hearths.
4. Blind nail at a 45° angle through the tongues. Nail 1" to 2" from the ends and every 4" to 6" along the sides. It will be necessary to blind nail the next 2 rows. A brad nailer with 1" to 1 3/8" brads can also be used to blind nail and no pre-drilling is needed.
5. Continue the installation using an engineered wood flooring stapler, using staples or nails recommended by the nailer or stapler manufacturer. Nail or staple the flooring 1" to 2" from the ends and every 4" to 6" along the edge tongues.



Glue Assist Installation for Wide Plank Engineered Flooring:

It is not necessary, but it is recommended that installation of products with a board width of 6” and wider, installed using the nail-down installation method, be supplemented by the use of adhesive. Without the supplement with adhesive, nail-down installations of wide plank flooring may result in board movement. Noises that emanate from installed flooring are not considered to be a manufacturing defect. These noises are always related to movement caused by insufficient fastening, un-level subfloors, or pressure related to lack of expansion space.

Adhesives used in the glue-assist method may be trowelled, or laid down in a bead, using a cartridge or sausage adhesive. Follow adhesive manufacturer’s general guidelines. If using the trowel method, spread rows of adhesive perpendicular to the plank direction, no more than 12” apart. If laying down a bead of adhesive, apply the bead in a serpentine pattern, directly onto the subfloor, in the direction of the planks.

Recommended adhesives:

Trowel Method; Moisture Cured Urethane (e.g. Bostik Best, or equivalent)

Bead method: Bona R850T (or equivalent)

Do not use PL Premium or similar construction adhesives. The adhesive must remain flexible to allow normal expansion and contraction of the wood flooring.

Be sure to follow adhesive manufacturers cleaning guidelines as adhesive that cures on the flooring surface will be difficult to remove.

