



# INSTALLATION GUIDELINES

BENTHAM PLANK  
2023

# INTRODUCTION

**IMPORTANT** - We require that you read and understand the information thoroughly before receiving/installing Bentham Plank flooring products, because improper installation may void the warranty. For you to enjoy and appreciate the presence of our flooring products for a long time, we highly recommend you follow this installation guide.

## Owner/Installer Responsibility

Please carefully inspect all materials before installation for defects. Materials installed with visible defects, damages, or other unsatisfactory appearances are not covered under warranty.

**PLEASE NOTE** - Wood is a natural product that contains natural characteristics, thus natural variations of color and grain from each plank are to be expected. Our warranty does not cover these natural characteristics and variations from each wood plank. To avoid dramatic variations mainly caused by aging, we highly recommend completing the entire flooring installation process in the same lot.

## Remember

- Upon receipt of the Bentham Plank flooring products, the owner/installer/job adviser can open up to 5 cartons to inspect if the material is satisfactory.
- If any problem is found, do not open any additional cartons. Please contact Bentham Plank or your local retailer or distributor immediately.
- Do not install damaged or visibly defective material. Installing a plank constitutes acceptance of its appearance by the installer and buyer/homeowner/end-user.
- Accepting or rejecting the material must be done on full shipment of quantities only, not bundle by bundle or plank by plank.

Careful adherence to these guidelines is required for a successful and fully warranted installation. Certain wood species and plank sizes are not warranted for installation over any type of radiant heat.

**IMPORTANT** - Bentham Plank does not offer a warranty on **ANY** flooring installed over **Electric** radiant heat systems. Only **Hydronic** (water) systems may be approved. In wood flooring installations over radiant heat, moderate surface checking, cracking (especially at the ends of planks and around knots), shrinkage, gapping between planks, and slight cupping are all to be expected and do not constitute a manufacturing defect.

For questions about the installation process, please contact our authorized Bentham Plank dealer or email [support@benthamplank.com](mailto:support@benthamplank.com).

Our installation instructions take precedence over NWFA installation guidelines, however, in situations not specifically covered by our installation guide, we highly recommend checking out the NWFA installation guidelines.

# GENERAL TOOLS AND ACCESSORIES

## General Tools

- Vacuum Cleaner or Broom
- Table Saw
- Hand Saw
- Miter Saw
- Wood or Plastic Wedges (15mm(5/8") Spacers)
- Scraper
- Measuring Tape
- Level
- Leveling Bar
- Safety Glasses
- Breathing Protection
- Chalkline and Chalk
- Claw Hammer
- Nylon/Plastic Tapping Block
- OSMO Initial Maintenance Kit
- Wood and/or Concrete Moisture Meter
- Nail Punch
- Pry Bar
- Plank Liner Floor Protection
- Leveling Compound (Optional)
- #20 Grit Sandpaper (Optional)
- Slip Tongues and Wood Glue (Optional)

## Glue Down Installation Tools

- Recommended Adhesives
- Straight Edge
- Woodstikk 19 (formerly Gekko Woodstikk 18)
- 3M 2090 Blue Adhesive Tape
- Non-abrasive towels to clean hands and tools
- Trowel (make sure the size matches the wood plank size)

## Glue & Nail Installation Tools

- 30mm(1-1/4") Staples (minimum)
- Power Drill and 1.5mm(1/16") Bits
- Compressor
- Finishing Nails 38mm(1-1/2")
- In-line Regulator
- Flooring Screws
- Pneumatic Nailer/Stapler
- Woodstikk 10 600ml adhesive and dispenser or Woodstikk 19 adhesive and recommended trowel B11(or V-notched Trowel)

# JOBSITE INSPECTION AND PREPARATION

## Weather/Climate Considerations

RegionalClimateVariations: The average outdoor temperature and humidity vary from region to region. Across every region, wood floors can successfully be installed; however, all wood floors cannot be installed in the same manner in all climate regions. The regional variability of the exterior climate will affect the indoor conditions of the space.

## Exterior Conditions

Check the exterior of the structure to ensure the jobsite is ready to receive wood floors. Walk around the structure to identify any potential concerns that may affect your wood floor installation. The document, take photographs and address all concerns with the homeowner and/or builder.

## Above, On, or Below Grade

Note the grade level where the flooring is to be installed to ensure the flooring selected is appropriate.

- **Above-grade** is defined as any portion of the subfloor where wood flooring is to be installed, that is above the plane of the surrounding ground.
- **On-grade** is defined as any portion of the subfloor where wood flooring is to be installed, that is at, or above, the same plane as the surrounding ground.
- **Below-grade** is defined as any portion of the subfloor where wood flooring is to be installed, that is 3" or more below ground level.

**NOTE** - Bentham Plank engineered wood floors can be installed above-grade, on-grade, and below-grade.

## Site Drainage

- Exterior surface drainage (e.g., gutters, and landscaping) should direct water away from the building. Water from rain, snowmelt, nearby water sources, and irrigation systems can naturally travel toward the foundation and into the structure.
- Lots should be graded to drain surface water away from the foundation walls. Normal building code requires a minimum fall of 6" (152 mm) within the first 10 feet (3.048 m). Impervious surfaces (pavement) should be sloped a minimum of 2 percent away from the building.

- If any obvious concerns are observed related to the exterior site drainage, they should be addressed by a qualified landscape professional before wood flooring delivery or installation.

## **Interior Conditions**

The conditions in the space in which the wood flooring is being installed will directly affect the performance of the wood floors. Wood flooring should not be delivered, stored, or packages opened, on a jobsite or within any facility with uncontrolled environmental conditions, or that is outside of the conditions set forth by the manufacturer (temperature and RH) of the flooring product.

## **Subfloor Conditions**

**NOTE** - For inspections and preparations of various subfloor conditions, we recommend following the NWFA Install Guide.

# BEFORE INSTALLATION

## Acclimation

Before installation, upon receipt of cartons and confirmation with the end-user that the appearance of our products is acceptable, proceed to acclimate all cartons to site conditions. Distribute the cartons to the rooms/areas where they will be installed. South & West facing rooms will generally have different temperature ranges than North & East facing rooms. Only after occupancy-ready site conditions have been established, carefully open both ends of each carton by cutting slits in the packaging, being careful not to tear the packaging in case a return is needed. Only open the cartons other than the ends, and only cut the straps inside the carton once acclimation is complete. Removal of the flooring from the cartons/straps before installation could result in bowing/bending which could make the flooring difficult to install. When the cartons are first opened, use a pin-type moisture meter and take 20-30 moisture content readings per thousand feet of flooring. Also, use a hygrometer to check the Relative Humidity in the space. Record all readings. Repeat this process every few days until the moisture content has stopped changing and the wood has reached Equilibrium Moisture Content (EMC). Most jobsite conditions will require an acclimation time of at least 5 days, but the assessment of proper acclimation should be based on moisture content, not time.

# INSTALLATION INSTRUCTIONS

## Glue Down Installation

Glue down installation guidelines, applicable for 15mm(5/8") - 21mm(3/4") thickness.

### Applicable Subfloors

- Plywood
- Concrete
- Radiant Heat Subfloors (Hydronic)

### Underlayment Recommendation

- Cement Underlayment (For Concrete Subfloors)
- Thin Foam Pad
- Cork/Rubber Acoustic Underlayment (Double Glue Down with Woodstikk 19 if Sound Reduction is Required)

## Installation Steps

1. Select a starter wall. It is recommended to start the installation along an exterior wall; it's more likely to be straight and square with the room.

- Measure out from the wall the width of two planks plus a 15mm (5/8") expansion gap and mark each end of the room and snap your chalk line.
- Secure a straight edge inside the chalk line before you spread your adhesive to ensure alignment, which is a critical part of the installation. This prevents the movement of the planks which can cause misalignment.
- Check along the wall to make sure there isn't too large of a gap.

2. Using the recommended trowel (B11 (23/48) or 1/4"x3/16" V-notched trowel) at a 45° angle to get the proper spread of adhesive applied to the subfloor is important; doing so will produce a proper and permanent bond. Improper bonding can cause loose or hollow spots.

- Spread adhesive from the straight edge out about 750mm. Working in small sections is helpful for this method as it will allow you to reach across the adhesive to install the wood flooring without putting any weight on it and will ensure proper transfer of the adhesive to the wood flooring.

**NOTE** - Change the trowel every 185m<sup>2</sup> (2000 sq ft) to 275m<sup>2</sup> (3000 sq ft) due to wear down of the notches. This assures you always get the proper spread of adhesive.

3. Install the first row of starter planks with the tongue side of the plank facing the straight edge and secure into position (make sure the first row of starter planks has a whole tongue to ensure you end up with straight rows). Pull in tight together and tape with 3M blue mask tape to prevent movement and continue with the installation.

**NOTE** - Make sure the planks used for the starter row have full tongues. Proper alignment is critical. Misaligned starter rows can cause side and end gaps in proceeding flooring rows. When you have the starter rows complete, you can begin the next row

4. Once the starter rows are secure, spread 750mm(2.5') of adhesive along the length of the room.

Never spread more adhesive than can be covered using the open-time recommendation listed in the instructions on the adhesive label. If the adhesive has skinned over remove the dried adhesive and trowel the new adhesive.

- Place the tongue of one plank into the groove of another plank and press them firmly into the adhesive. Never slide planks through the adhesive. Never install planks further than you can comfortably reach.
- As you continue working across the floor try to maintain a 24" minimum space between end joints. Randomly install different lengths of planks to avoid significant variations in flooring appearances.



- **NOTE** - Please be cautious when using a rubber mallet to butt material together, as it can burnish the finish and cause marring.
- Test for proper bond by occasionally lifting a plank and looking for good coverage (90%), and then replace it with the adhesive.
- Clean any adhesive off the surface, as you work, before it cures using a non-abrasive towel.
- As you approach the end wall it may be necessary to cut the width of the last row – be sure to allow for the expansion space along the end wall. Once the final cuts are made, set planks into place.
- Use 3M 2090 blue mask tape to hold planks securely in place as you install the planks and continue the process throughout the installation.
- After the floor is complete remove the straight edge and complete the installation in the same manner. Use a pry bar to fit the last row of planks into place and be sure to leave the minimum required 5/8" (15mm) expansion gap.
- Restrict light foot traffic for a minimum of 10-12 hours and wait 24 hours before permitting the moving of furniture onto the floor.
- Clean any wet adhesive from the flooring with a lightly dampened clean cloth. If the adhesive has healed, you may remove it with a plastic scraper and dry, non-abrasive towel, taking care not to damage the finish.
- Flooring that is not flat should be weighted to apply pressure to installed sections while the adhesive is still active (app. 30–60 min.) to ensure proper contact between the flooring and substrate. Use protective padding to avoid damage to the floor surface. When installing unfinished wood flooring, wait a minimum of 72 hours before sanding.

## Final Inspection

After the floor has been cleaned, inspect the floor for nicks, scratches, gaps, or planks that may have moved during installation, as well as any other imperfections that need attention. Touch up nicks and scratches with touch-up products. In typical climates, the new floor can accept foot traffic within 24 hours. In areas where additional curing time is required, more time may be needed.

## NOTES:

- Never work on top of the flooring when installing with the glue-down method.
- Always remove the 3M 2090 blue masking tape within 4 hours of applying, otherwise, the tape may form a permanent bond that can remove the finish.
- When used, acoustic underlayment must be glued down over the subfloor before gluing down planks using a premium multipurpose adhesive.
- Extremely precise plank milling may require the use of tapping blocks for better tongue and groove fit.

- Row-to-row installation requires that no glue seeps into grooves at any time for perfect tongue and groove fit.

## **Glue & Nail Installation**

Glue & Nail Installation is required when nailing down planks over 7.5" wide and is also recommended when nailing down all planks over 5" wide.

### **Applicable Subfloors**

- Plywood
- OSB
- Existing Wood Flooring (Meets subfloor conditions)

### **Underlayment Recommendation**

- Felt
- Underlayment Paper

### **Installation Steps**

1. Measure out from the starting wall the width of one flooring plank plus the appropriate expansion space for that thickness of the flooring. Mark two points toward each end of the starting wall and snap a chalk line along the full length of the wall through the marks.

2. Trowel spread the adhesive on the subfloor along the chalk line wide enough to allow the first row of flooring to be installed, being careful not to cover the line. Follow the adhesive manufacturer's recommendations for wet lay times before proceeding to the next step.

3. Lay the tongue side of the first row of flooring along the chalk line. Face nail (top nail) the first row of flooring in place. Place the fasteners approximately 3/4" from the wall side (groove side) of the plank every 4" to 6". Once the face nails are set, use 6-d finish nails or the pneumatic finish nailer to blind/edge nail along the tongue of the first row, every 4" to 6" and every 2" to 3" from every end joint. Check to make sure the first row is still straight along the chalk line before proceeding.

4. Trowel spread enough adhesive to install 2-3 more rows.

5. Install the second row by sliding the groove side onto the tongue of the first row. Blind/edge nail it into place, with fasteners every 4" to 6" and 2" to 3" from each end joint. Stagger end joints by at least 8".

6. Continue nailing and gluing 2-3 rows at a time in this manner across the room. Avoid creating "H" patterns (where an end joint is adjacent to another end joint in the second

to last row installed). Use cut ends to start the subsequent row, discarding any pieces shorter than 8”.

7. Most adhesives require that the installer clean the glue off the flooring planks during the installation. Follow the adhesive manufacturer’s recommendations for this procedure. If adhesive remover is needed, use only the recommended Pacific Pride Orange Adhesive Remover and use it only as needed to remove localized adhesive spots. Never use any adhesive remover to clean large areas.

8. Trim the last row of flooring to maintain the minimum expansion space at the far wall.

9. At the far (finish) wall, it may be necessary to face-nail the last 2-3 rows due to the angle of the stapler/nailer. The last row or two of flooring may need to be pulled together using a pulling bar.

10. Complete the installation by reinstalling or installing new base moldings.

## **Floating Installation**

Bentham Plank engineered wood flooring can be installed using the floating method. With floating-floor installations, flooring panels are not attached to the substrate. Wood floors that can be floated either feature a tongue-and-groove construction, or edges with a locking mechanism. For floating-floor installations, we recommend following the NWFA Install Guide.

### **Applicable Subfloors**

- Plywood
- Concrete
- OSB/Particle Board

### **Underlayment Recommendation**

- Rubber
- Cork

### **Installation Steps**

For floating-floor installations, we highly recommend following the NWFA Install Guide.

## AFTER INSTALLATION

**NOTE** - Always remove the 3M 2090 Blue Masking Tape within 4 hours of applying the tape. Always wait 10-12 hours to resume light foot traffic and 18-24 hours for regular traffic after installation to allow proper cure time for glue.

- Install transition pieces -i.e. – thresholds, t-moldings, baseboards, and quarter round. Nail moldings to the wall, not the floor.
- Please use a sweep or a vacuum cleaner to remove debris, dirt, and dust.
- Inspect the final floor for nicks, cracks, and scratches – Contact Bentham Plank for approved touch-up materials.
- Clean the floor with the correct hardwood floor cleaner and complete initial maintenance following **Bentham Plank Care & Maintenance instructions**.
- Unused material should be left with the owner and stored in a dry place in case future repairs are needed.
- Use plywood or hardboard when moving heavy appliances or furniture across the floor.

## Natural Wood Color Changes

Bentham Plank flooring products are made of natural wood species, so natural color changes may occur after a certain period and should not be considered product defects. Depending on the intensity in which the floor is exposed to the sunlight, lighter wood usually turns darker while darker wood typically becomes lighter, especially during the first 3-6 months.

**NOTE** - For further questions and concerns, please contact the Bentham Plank Service Team at any time.



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