ENGINEERED WOOD FLOORING
COMMERCIAL AND RESIDENTIAL INSTALLATION INSTRUCTIONS

Caution: Wood Dust

- The International Agency for Research on Cancer has classified wood dust as a nasal carcinogen.
- The sawing, sanding, and/ or machining of wood products can produce wood dust that can cause respiratory, eye, and skin irritations. Equipment should be equipped with a dust collector to reduce airborne wood dust.
- Wear an appropriate NIOSH designated dust mask to reduce exposure to airborne wood dust. Avoid contact with eyes and skin. In case of irritation, flush your eyes or skin with water for at least 15 minutes. In cases of severe irritation, seek immediate medical attention.

Approved Installation Methods

Determine the best installation method that suits your application. Floors:

- Floated (not secured to the subfloor)
- Glued (secured to the concrete or wood subfloor)
- Stapled (secured to wood subfloor) note: minor noises within the floor can be expected.

Scheduling Installation

Wood must not be installed until all other work, e.g. painting, wallpapering, and tiling, is completed. The site must have the correct temperature and relative humidity levels. This avoids dents, scratches, and moisture related damage to the floor.

Storage and Acclimation Requirement

- DO NOT STORE IN unacclimatized buildings, garages, sheds, directly on bare concrete or next to outside walls. Cartons should be placed close to the center of the installation area as possible. Keep out of direct sunlight and away from heat/air vents.
- Do not store cartons outside in truck trailers. Extreme heat developed during the summer months could distort the wood.
- ACCLIMATE A MIMIMUM OF FIVE (5) days prior to installation at 60-80° Fahrenheit and relative humidity of 35-55%. DO NOT OPEN THE CARTONS. Each pallet and carton will arrive at the job site packaged to maintain its most desirable installation moisture content. If material needs to be inspected prior to installation, carefully remove from carton. After inspecting, place back in the carton and secure with tape until installation. DO NOT REMOVE PACKAGING UNTIL THE DAY OF INSTALLATION. Wood that has not been used within a day should be returned to the carton and sealed until ready for installation. Removing the wood from the carton prior to installation could lead to distortion *(bowing, crowning, twisting, cupping)*.

Inspection of Wood

It is always easier to rectify faults if they are discovered early. Always make a habit of inspecting the product at the time of installation. Faulty products can, of course, be exchanged. From 36” standing distance, wood with obvious faults (Color, Gloss, Texture) should be detectable before installation must not be used. Always make sure that inspection and installation are carried out in good light. We recommend to lay out 100 square feet prior to installation for visual inspection. We will only be responsible for the first 100 square feet installed.

PRE-INSTALLATION CHECKLIST

☐ **1: INSPECT ALL MATERIALS CAREFULLY BEFORE INSTALLATION.**

☐ **2: ACCLIMATE A MIMIMUM** OF FIVE (5) days prior to installation at 60-80° Fahrenheit and relative humidity of 35-55%. DO NOT OPEN THE CARTONS.

☐ **3: CALCULATE THE TOTAL SURFACE AREA** of the room(s) and add 5-10% for cutting and waste, and for future repairs.

☐ **4: HEATING AND COOLING SYSTEMS** must be fully operational at least 14 days prior to flooring installation, maintaining a minimum room temperature between 60-80° Fahrenheit and relative humidity of 35-55% *(to perform optimally without gapping, cupping, warping)*. Warranties do not cover natural expansion and contraction which results in separation between boards. This is especially true in seasonal or vacation homes without proper indoor climate conditions.

☐ **5: APPROVED INSTALLATION LEVELS** installations require maintaining a minimum room temperature between 60-80° Fahrenheit and relative humidity of 35-55% *(to perform optimally without gapping, cupping, warping)*. **HIGH RISE NOTE:** the higher the elevation, the drier the indoor climate *(a permanent HVAC system must be ON and operational, maintaining a relative humidity of 35-55% in the location of the installation)*.

GRADE	ENGINEERED FLOOR
Above Grade	X
On Grade	X
Below Grade	X

☐ **6. MOST WOOD FAILURES RESULT FROM JOBSITE MOISTURE**. Do not unpack wood until moisture problems are corrected. Sources of moisture should be identified and corrected before installation.
- For concrete subfloors, not greater than 3 pounds per 1000 square feet *(based on calcium chloride test)*.
- For wood subfloors and walls, there should be no more than 13% moisture content and moisture content of wood should be within 4% of the subfloor.

☐ **7. DO NOT INSTALL IN** wet areas, saunas, pool rooms, or outdoors.

☐ **8. SUB-FLOOR MUST BE LEVEL** or floor could flex, causing creaking. Level subfloor to 3/16″ in 8′ radius.

☐ **9. DO NOT INSTALL FLOOR OVER** carpeting, existing floating floors, or electric baseboard heaters.

☐ **10**. **EXPANSION SPACE IS REQUIRED FOR FLOORING** ½” around perimeter walls and vertical surfaces. Do not install flooring under permanent or fixed cabinetry. **NOTE:** floating installations, floor must have 1/16” clearance under the door casing to be able to float freely without vertical restriction.

☐ **11**. **COLOR VARIATION** wood is a natural material and variations in color, grain, knots, and mineral lines are to be expected. Mix wood from 3-4 cartons at a time to ensure a good blend of the natural variation.

☐ **12. ALWAYS STAGGER THE END JOINTS** of adjacent rows a min. of 8”, for strength and visually appealing design.

☐ **13. AFTER THE FLOOR IS COMPLETELY INSTALLED** never cover a newly installed floor with plastic. Use breathable material such as Kraft paper. Non-breathing coverings can cause the floor to become damaged from humidity buildups.

☐ **14. RADIANT HEATED SUBFLOORS** floating installation method only. Glue down is NOT APPROVED. Run systems at 2/3 maximum output for a minimum of 14 days. 4 days prior to installation reduce the temperature to 65 degrees.

FLOATING ENGINEERED FLOOR

REQUIREMENTS
PRE-INSTALLATION CHECK LIST MUST BE FOLLOWED

A FLOATING FLOOR EXPANDS AND CONTRACTS WITH SEASONAL CHANGES. Do not put fasteners *(nails, screws, etc.)* through the floor or "pinch" the floor under doorways, etc. This could cause the floor to pull apart or buckle because it is not allowed to "float" freely.

INSTALL OVER A PREMIUM UNDERLAYMENT WITH A MOISTURE BARRIER. Excessive creaking and gapping can result from too soft an underlayment. *(Underlayment membrane with a maximum thickness of 1/8" [3 mm]; ≥ 5 PSI, with 25% compression.)*

PVA TYPE II WOOD ADHESIVE carefully apply a smooth, equal ribbon of glue at least 1/16" (1.6 mm) wide, but not exceeding 1/8" (3 mm) on the bottom of the groove only. Never apply glue onto the tongue and groove located at the end of the board.
NOTE: it is important to apply the glue according to instructions. If the glue is poorly applied or of inadequate quantity, the joint could separate, while too much glue might unnecessarily complicate the task.

T-MOLDING is required in doorways, hallways, between adjoining rooms and between rooms to allow individual floor sections to expand and contract independently.

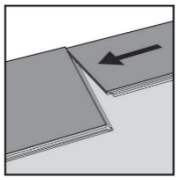
MAXMIMUM FLOOR SIZE is width 40 feet and length 80 feet. If the floor is wider or longer, split the installation into two; expansion gaps can be hidden with transition pieces.

REQUIRED TOOLS AND MATERIALS

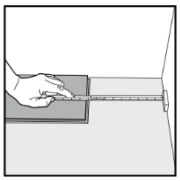
1. Pull bar - used at ends of installation in tight areas 2. Tapping block - used to engage boards by tapping tongue 3. Wood or plastic spacers (1/2") - to maintain perimeter expansion space 4. Straps or 3M blue tape - sometimes necessary to hold the boards in place while the glue dries	5. PVA Type II Wood Adhesive (polyvinyl acetate-based adhesive used for *Floating Floor Installation*) 6. Premium Underlayment - underlayment membrane with a maximum thickness of 1/8" [3 mm]; ≥ 5 PSI, with 25% compression)

INSTALLATION PROCEDURE

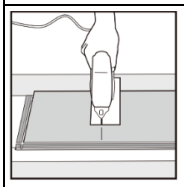
1. First board, first row. Position the board against the starter wall, leaving an expansion gap of ½" to the left.



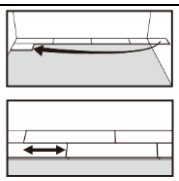
2. Second board, first row. Place the board tightly against the short end of the first board. Press or tap carefully on the short end.



3. At the end of the first row, measure the length of the last board to fit. Be sure leave an expansion gap of ½" at the end of the row.



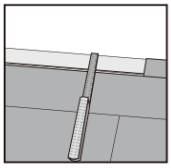
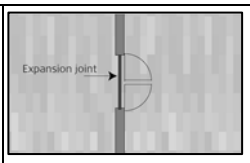
4. Once you have determined your measurement, make your cut (reminder, leave an expansion gap of ½" where this board will end).



5. Second row. The first board (in any row) should be at least 8" in length. Leave an expansion gap of ½" against the wall as you start the second row.

Minimum distance between short ends of boards in any parallel rows should not measure less than 12". Follow details of steps 2-4 to place additional boards in row.

6. After 3 rows are installed, slightly pull the entire 3 rows away from the long wall to for your 1/2" expansion. Then continue installing each additional row as instructed above.

 7. For the last row, you will need to cut the board lengthways to fit against the far wall. Do not forget to leave the 1/2" expansion. Note: it is not recommended for the last board to be less than 1 ¼" in width *(which may mean making adjustments to the first row)*.	 8. Installed T-moldings are required in doorways, hallways, between adjoining rooms, and between rooms to allow individual floor sections to expand and contract independently.

STAPLE ENGINEERED FLOOR

REQUIREMENTS

PRE-INSTALLATION CHECK LIST MUST BE FOLLOWED

INSTALL VAPOR RETARDER. Prior to installing flooring, roll out 15 lb. asphalt saturated felt paper *(or similar for stated use)*, overlap joints 6" and staple if needed. However, by today's standards, asphalt saturated Kraft or felt paper may not be an effective vapor retarder in all applications. This material will help to keep the floor clean and help to retard moisture from below *(there is no complete moisture barrier system for staple or nail-down applications)*.

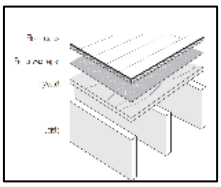
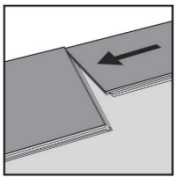
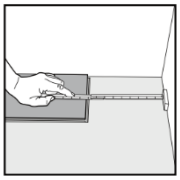
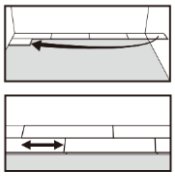
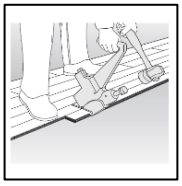
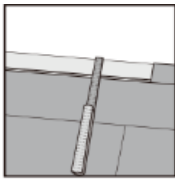
STAPLES to effectively countersink the staples, your air pressure must be correct. **HELPFUL HINT – TEST:** set the compressor at 70 PSI. If groove damage occurs, lower air pressure. You can test this before beginning. Check for surface damage, air pressure setting, groove damage, edge blistering, etc., before proceeding. Make all adjustments and corrections before installation begins. Once proper adjustments have been made, remove and destroy the test boards. Practice handling the floor stapler on a scrap board. Follow the manufacturer's instructions and the safety instructions.

REQUIRED TOOLS AND MATERIALS

1. 15 lb. asphalt saturated felt paper (or similar vapor retarder) 2. 4D or 6D finishing nails 3. Air pressure stapler	4. Staples (per manufacturer specifications) 5. Wood or plastic spacers (1/2")

Staples	Staple	"L" or "T" nails	Min Length
Consult staple manufacture to confirm best size	18 gauge	18-20 gauge	1-1/4 inch

INSTALLATION PROCEDURE

 1. Roll out 15 lb. asphalt saturated felt paper (or similar for stated use).	 2. First board, first row. Position the board against the starter wall, leaving an expansion gap of ½" to the left.	 3. For the entire first row, the groove extension is facing away from the start wall. Pre-drill holes 1" away from the back starting edge of the first row. These holes will be used to face-nail 4D or 6D finishing nails.
 4. At the end of the first row, measure the length of the last board to fit. Be sure leave the expansion space of ½" at the end of the row.	 5. Second row. The first board (in any row) should be at least 8" in length. Leave an expansion gap of ½" against the wall as you start the second row.	 6. After 3 rows are installed, you should be able to use stapler.
 7. For remaining rows, continue to work from left to right by stapling at 45° angle through the groove of every board approximately 1" to 2" from each of the ends of every plank, and then in 3" to 4" intervals in between.	 8. For the last row, do not forget to leave the ½" expansion.	

GLUE ENGINEERED FLOOR

REQUIREMENTS

PRE-INSTALLATION CHECK LIST MUST BE FOLLOWED

ADHESIVE MANUFACTURER read and follow the detailed installation procedures. The adhesive should not be applied in the groove or the tongue of the flooring.

CONCRETE SUBFLOOR be sure subfloor is not prone to shifting as this will case the boards to separate.

STRAPS OR CLAMPS many installers use straps or clamps to force board rows tighter together during installation. Be advised that over-strapping can adversely affect the floor and may result in glue-bond failure, seam peaking, twisted boards, or out-of-square floorboard alignment.

REQUIRED TOOLS AND MATERIALS

Consult with adhesive manufacturer for the best adhesive for your application.

INSTALLATION PROCEDURE

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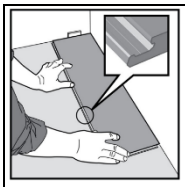
<td> 
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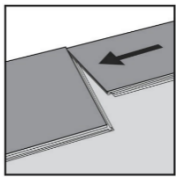
<td> 
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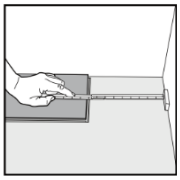
<td> 
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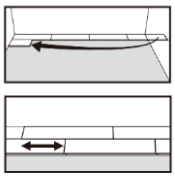
<td>4. Once the first row of boards is correctly aligned and adhesive in place, weight down the planks while the adhesive sets (or use wedges against wall). HELPFUL HINTS: any surplus adhesive that may get on the surface of the planks must be removed immediately per the adhesive manufacturer’s instructions. The adhesive should not be applied in the groove or the tongue of the flooring.</td>
<td> 
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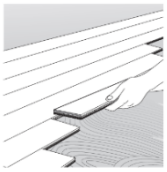
<td> 
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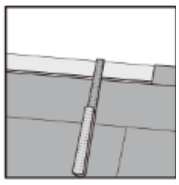
<td colspan="3"> 
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