

# INSTALLATION INSTRUCTIONS of Engineered Hardwood Flooring



# TABLE OF CONTENTS

---

- 3 •** USING THE PRODUCT
- 3 •** YOUR RESPONSIBILITIES
- 4 •** PRE-INSTALLATION INSPECTION
- 5 •** BASIC TOOLS NEEDED FOR INSTALLATION
- 6 - 8 •** GLUE-DOWN INSTALLATION
- 9 - 11 •** STAPLE/NAIL-DOWN INSTALLATION
- 11 - 13 •** FLOATING INSTALLATION
- 14 •** AFTER INSTALLATION PROCEDURES
- 14 •** MAINTENANCE PROCEDURES

## 3 • USING THE PRODUCT



**Novus Wood** hardwood floors are designed to be used for a wide variety of projects, both commercial and residential. Our floors can be installed:

- on ground level
- below ground level
- above ground level
- over a variety of sub-flooring, such as concrete, plywood, OSB sub-floor, and others
- with floor and radiant heating systems
- in bathrooms, kitchens and laundry rooms

There are three different ways our products can be installed: glue-down, staple/nail-down, and floating installation. Though a self-installation is possible, it's not recommended. Making mistakes can be costly and difficult to fix. Never try to glue-down Novus **Wood** floors on your own, as professional installation is an absolute necessity.

**NOTE:** Please take the time to read through this installation guide before beginning, improper installation is likely to void your warranties.

## YOUR RESPONSIBILITIES

When you receive your Novus wood materials, immediately inspect it for defects before attempting installation. It is your responsibility to find these problems and contact a Novus **Wood** representative right away. They can help you find replacement materials at no extra charge, but only if you report them before installation. Installed planks are considered to have been found acceptable by both the person installing the wood and the owner of the wood. This is true even if you weren't present during installation. In this instance, any extra costs of replacement or repairing installed defect planks are not the responsibility of Novus **Wood**.

Natural variations in wood grain and colour are to be expected, so we can't guarantee complete uniformity between planks.

Minor defects, such as small scratches, will likely need to be corrected with filler, putty sticks, or stains. These repair procedures are quick and easy to perform and will get the floor looking great.

A margin of on-site cutting waste of about 5-7% for regular and 12-13% for angle installation is recommended. This helps avoid cutting waste and grading variance errors. Please note that this cutting allowance must be added to your floor square-footage before purchase.

**NOTE:** When building a new home or renovating an existing one, try to install your hardwood floor last. This helps keep the floor safe from damage caused by foot traffic and construction.

## 4 •

# PRE-INSTALLATION INSPECTION



Inspect the job-site and its sub-floor before installation to ensure that it is environmentally and structurally acceptable. If your Novus **Wood** floors are damaged by installation without you checking for potentially damaging environments, no warranty will be provided.

This simple checklist will help you gauge whether or not your sub-floor and job-site are safe. These checks must be performed by the installer and the owner before installation.

Please meet the following pre-installation requirements before installing our wood floors:

- A sub-floor must be properly installed, structurally sound, flat, dry, and clean.
- The temperature at the job-site must be maintained at room temperature (18-25 degrees Celsius or 64-77 degrees Fahrenheit), with a relative humidity of 40-60%. This temperature must be maintained at least five days for radiator-heated homes and two weeks for floor-heated homes. Dehumidifiers and humidifiers are suggested for this task. REMEMBER: These recommendations should also be maintained after installation.
- All basement and crawl spaces underneath the sub-floors must be well ventilated, either through windows or vents. Concrete sub-floors must have a moisture level no higher than 2% when the wood should not exceed 12%. Use a moisture meter to take readings in three locations every 100 m<sup>2</sup> (1075 square feet).
- Any deviations in sub-floor level cannot be higher than 2 mm (0.08") for each 2 meters (78.74") on the sub-floor. Test the sub-floors level and use a grinder or edger to lower higher areas or self-levelling materials to build up the dips in the floor.
- Don't open your product boxes when you receive them, but store them in the area where they will be installed for a minimum of 24 hours. This helps the materials settle after shipping. Only open them when it's time to install the floor.
- Ensure that all foundations and concrete slabs for below-grade installation are leak-proof. Even a small amount of leakage can result in severely damaged flooring.
- Test the strength of your concrete sub-floor by scratching it with a nail. If it crumbles into powder, it is not strong enough for your wooden floor and you CANNOT install it. This is because the compression strength of the concrete is too low.

### CAUTION: Wood dust is a serious danger

Whenever cutting or installing hardwood floors, please wear dust masks and safety goggles. Wood dust can cause severe respiratory problems, as well as eye and skin rashes. In fact, the wood dust has been classified as a carcinogen by the International Agency for Research on Cancer. Flushing irritated areas with water for 15 minutes should help reduce minor irritation, but medical attention may be necessary in cases of severe irritation.

## 5 • BASIC TOOLS NEEDED FOR INSTALLATION



- 8-15 mm (1/3"-1/2") spacers
- Chalk line
- Dusk mask
- Hammer
- Hand or electric saw
- Hardwood repair kit (filler, putty stick or stain)
- Knocking block
- Measuring tape
- Mitre saw
- Pry bar
- Soft rags
- Square
- Wood moisture meter

Staple/nail-down installation also requires the following: power drill, nail punch, hardwood nailer or stapler, and finishing staples or nails (for example, 35 mm or 1 ½"). Glue-down and floating installation also requires: ratchet floor clamps, blue tape, and a notched towel, as well as a glue cleaner (for glue-down installation).

## 6 • GLUE-DOWN INSTALLATION



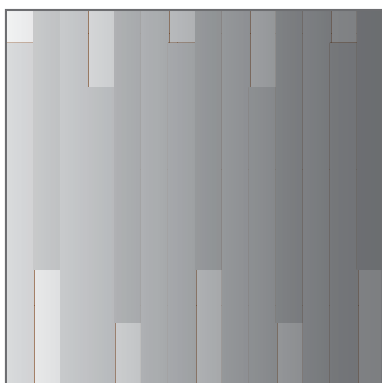
Glue-down installation is best used on concrete, plywood, or OSB sub-floors. It is also recommended as the only installation method for any sub-floor that uses radiant heating.

### Step 1 - Priming (only on concrete subfloor)

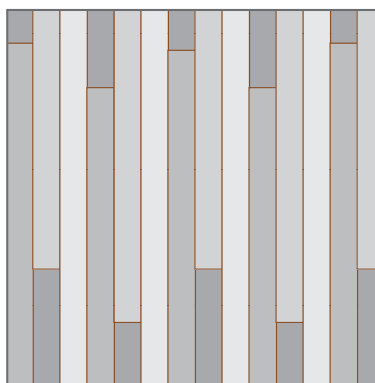
- Apply your primer to the sub-floor with brushes you feel comfortable using. Wait about 4-5 hours for the primer to dry before proceeding. In a case of confusion, read the manufacturer's instructions before priming.

### Step 2 - Choosing floor layout

- Open your plank containers and sort the individual planks by color. The planks can be installed by merging the colour gradually for an even, homogenous effect and by mixing the colour for a more vibrant look (see below).

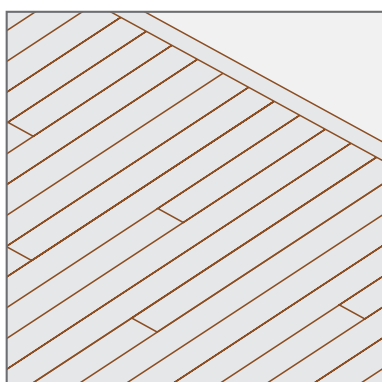


**MERGING COLOUR**

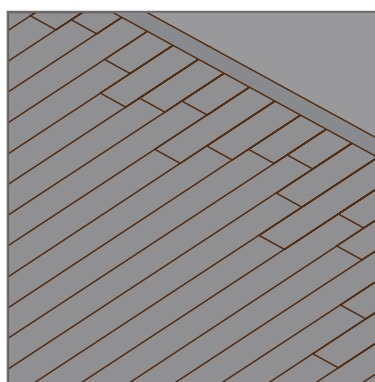


**MIXING COLOUR**

- Choose four or five planks and cut them to random lengths. The length should vary by at least the width of the board or minimum 40 cm (16 inches) if installing in a brick pattern. The last board in every row will be cut to fit the remaining space. Use the remainder to start the next row. See the example below for a good example of board arrangement.



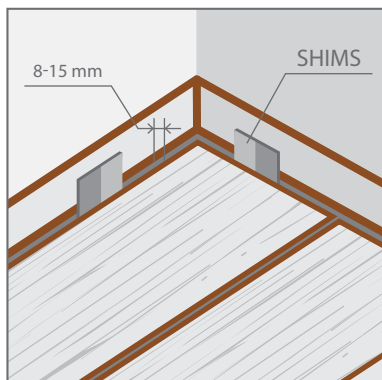
**RECOMMENDED**



**NOT RECOMMENDED**

- When laying your boards, the last one will be cut to fit the remaining space.

## 7 • GLUE DOWN INSTALLATION



### Step 3 – Getting started

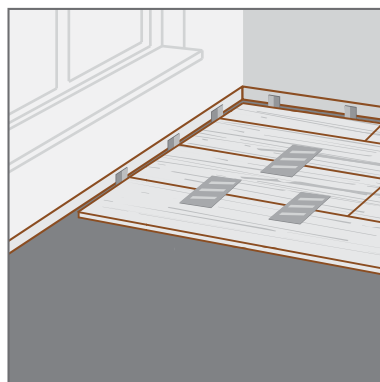
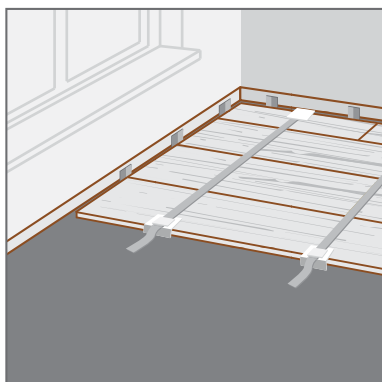
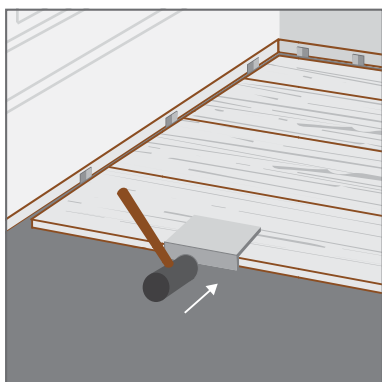
- Leave an 8-15 mm (1/3"-1/2") gap between the wood and the wall and elements of the wall all the way around the perimeter (see picture on left). This gap is necessary for expansion and will be covered later by baseboard.
- Place spacers in the gap of your starting board to keep it even. If you don't have spacers, nail the first row onto the sub-floor to keep it in place. Make sure to use sprig nails on a concrete sub-floor.

### Step 4 – Applying adhesive

- When applying your adhesive to the floor, hold your trowel at a 45-degree angle. This spreads the adhesive more evenly and avoids build-up.
- Don't get ahead of yourself by applying adhesive over the whole floor. The typical adhesive will dry in two hours, though temperature and humidity can change this drying time. Consider your work speed and apply only enough adhesive for 3-4 rows/ lines at a time. We recommend to measure and mark the area to be glue down each time. Install the planks and repeat the process. Try to stay clean of glue all the time.

### Step 5 – Installing starter rows

- Apply adhesive on the floor where your first row will be installed. Spread it to the width of two planks and press your first board down on the adhesive. Adjust it so that it is even with the wall.
- Always apply your boards from left to right, with the groove side of the board facing the wall. Remember to use planks with tongues on both, short and long side of a plank for your starter rows to ensure proper alignment. Move to the next row after finishing the first.
- Stand back after laying three rows and check your board alignment. Make sure it is even with the wall and the other boards. Correct any alignment issues by adjusting board position and the width of the expansion gap. After the first alignment check, make sure to check and adjustment alignment every 3-5 rows.
- As you lay your boards, hit them on the side with a knocking block to tighten the flooring joints. Every 3-5 rows, stop and tighten them with a ratchet floor clamp (see below).
- Tape the boards together with painter's tape (see below) to hold them in place while they dry.



## 8 • GLUE DOWN INSTALLATION

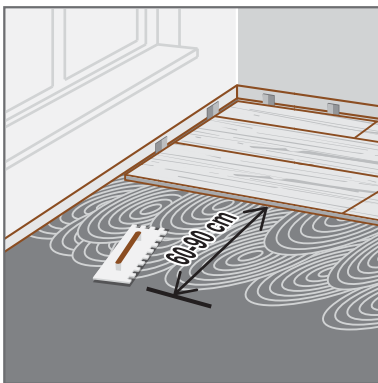


- Let the first three-strip rows sit for 1-2 hours to glue dry before moving on.

NOTE: When adjusting board position or tightening joints, avoid rubber mallets or hammers. Though effective and easier to use than a knocking block, they will damage the flooring and finish.

### OPTIONAL: COMBINED GLUE/STAPLE/NAIL-DOWN INSTALLATION

When installing on plywood or OSB board sub-floors, you can combine glue-down and staple/nail-down installation. This will create a firm and stable floor. This method requires following both procedures and takes a little more time but is often worth it for the extra floor stability. Talk to your Novus **Wood** expert or installer to learn more about this process.



### Step 6 – Job completion

- After your starting rows have dried, continue installation by spreading adhesive for 60-90 cm (2-3 feet) and following the same installation process (see picture on left). Make sure to always press each board firmly down and adjust its position to keep it straight with the starter rows. If any adhesive falls on the surface of your boards, clean it immediately before it dries.
  - Use boards of different length in each row to stagger your transverse seams. If these seams are lined up, your floor will look unprofessional.
- When installing the last row, cut the boards in the way that allows an expansion gap of 8-15mm (1/3"-1/2") against the wall.



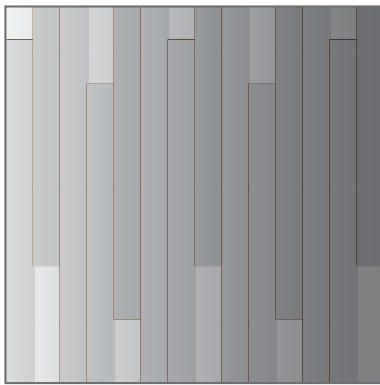
## 9 • STAPLE/NAIL-DOWN INSTALLATION



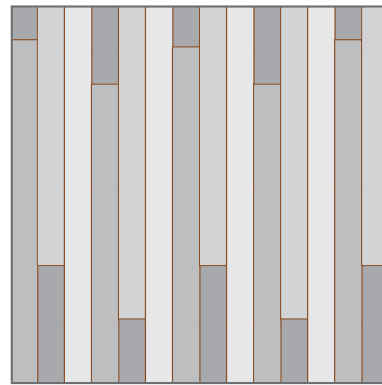
This particular installation method is typically used over plywood and OSB board sub-floors. It takes a little work adjusting and adhering the boards when compared to glue-down. Special pneumatic hammers that hammer the nail at 45 degrees are recommended for this type of installation.

### Step 1 - Layout of flooring

- The layout process is essentially the same as that of the glue-down method.
- Open your plank containers and sort the individual planks by color. The planks can be installed by merging the colour gradually for an even, homogenous effect and by mixing the colour for a more vibrant look. Select your favorite method (See the example below).

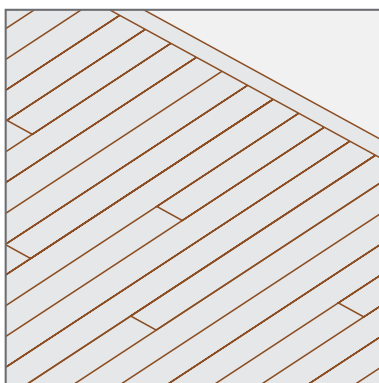


**MERGING COLOUR**

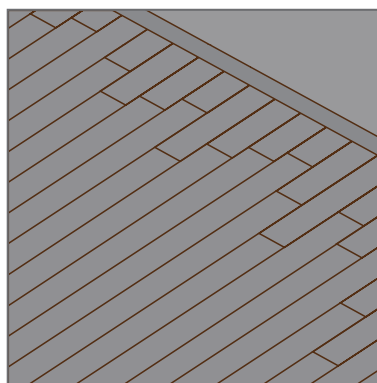


**MIXING COLOUR**

- Cut four or five random planks to random lengths, varying the length by at least a board width or minimum 40 cm (1' 1/4") if installing in a brick pattern. The last board in every row will be cut to fit the remaining space. Use the remainder to start the next row. See the example below for a good example of board arrangement.

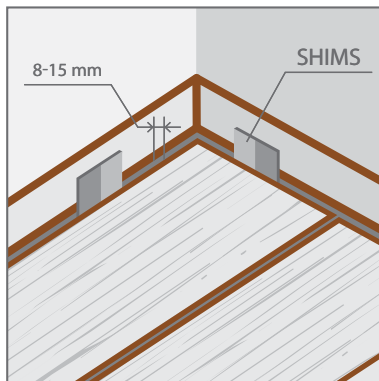


**RECOMMENDED**



**NOT RECOMMENDED**

# 10 • STAPLE/NAIL-DOWN INSTALLATION

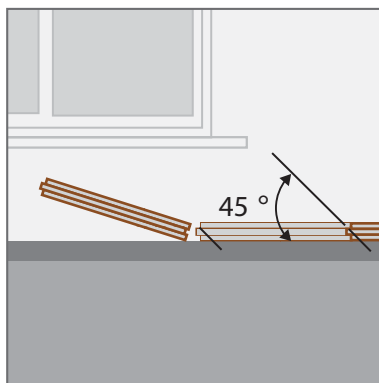


## Step 2 – Getting started

- Insert spacers along the wall (see picture on left) where you will install your first row. These spacers will create an 8-15mm (1/3"-1/2") expansion gap that will be covered later by baseboard. Make sure to leave the same gap around floor elements, such as ceramic tiles and radiator pipes.

## Step 3 – Installation

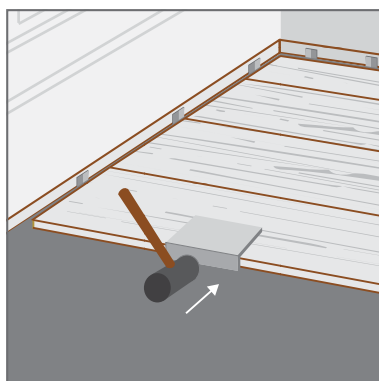
- Place your first board along the wall using your spacers as a guide. Carefully lay the rest of your first row boards from left to right, with the board groove facing the wall. Hand-staple or nail this first row in place, positioning the nails every 20-25 cm (8"-10") and 5-7 cm (2"-3") from board ends. These staple or nail heads will be covered later with baseboard.



- Attach each board with at least two nails at the end, no matter the length of the board. When attaching along the tongue side, please nail or staple at a 45-degree angle through the tongue (see picture on left).

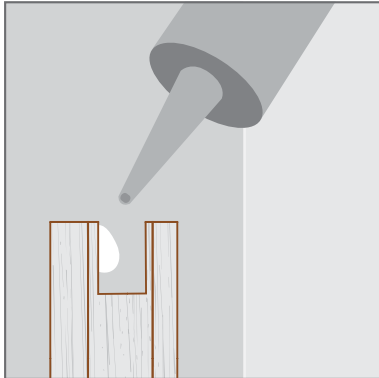
- Carefully tighten the joints by hitting a knocking block against the side of the boards (see picture on left). As with the glue-down method, avoid using hammers or mallets, as they will damage the floor if used improperly.

- When laying your first row (and all subsequent ones), alternate board lengths in a way that staggers your transverse seams. This creates a random arrangement that looks more attractive and professional.



- Once you're down to the last few boards, you need to start fastening them by hand. This requires drilling holes at 45-degree angles to the floor through the edge of the boards and attaching them using 25 mm (1") nails or staples (see below). You can also drill pilot holes every 15 mm (1/2") in the darker areas on the face of the wood and attaching with the 25 mm (1") nails or staples. Countersink them and fill holes with wood filler.

## 11 • STAPLE/NAIL-DOWN INSTALLATION



- Cut the boards of the last row to allow for an expansion gap of 8-15 mm (1/3"-1/2").

### GLUE GROOVES (OPTIONAL)

For extra stability, you can apply glue directly into the grooves of each board during installation. This will help avoid squeaks and movement on your floor after its laid (see picture on left).

## FLOATING FLOOR INSTALLATION

Concrete sub-floors are best served by floating floor installation, as it doesn't require any nails or staples. However, it can also be used on plywood and OSB board subfloors. Talk to your contractor or a Novus **Wood** sales expert for suggestions on which installation method works best for your floor.

### Step 1 - Priming

- Always prime your sub-floor before performing a floating floor installation. Follow the manufacturer's instructions of primer and let the primer dry for at least 4-5 hours before continuing.

### Step 2 - Layout of flooring

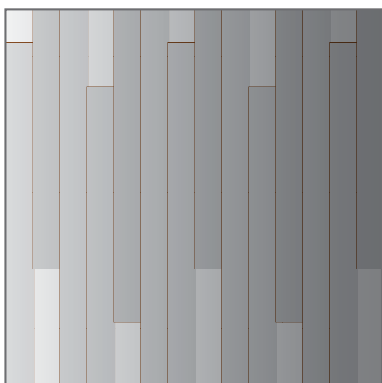
- Talk to your Novus **Wood** sales expert to choose an underlayment material that works best for your floor type.
- Unroll your underlayment foam across your floor and cut off the rest with a utility knife.
- Carefully and evenly tack the foam to the sub-floor and use duct tape to seal the seams around the edges.
- Before moving on, make sure your sub-floor is completely flat by adding flooring screws to prevent movement. This will help keep your floor from squeaking. Don't worry about leveling the subfloor: it just needs to be flat, not perfectly level.

# 12 • FLOATING FLOOR INSTALLATION

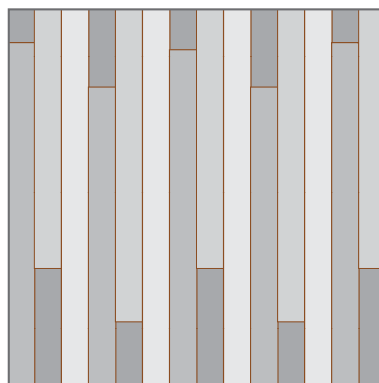


## Step 3 – Layout of flooring

- Remove all your planks from their containers and sort the individual planks by color. The planks can be installed by merging the colour gradually for an even, homogenous effect and by mixing the colour for a more vibrant look. Select your favorite method (see picture below).

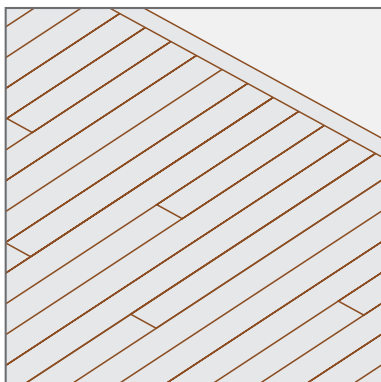


**MERGING COLOUR**

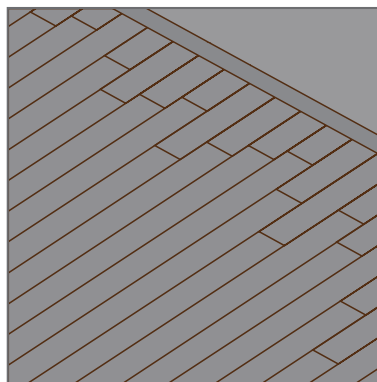


**MIXING COLOUR**

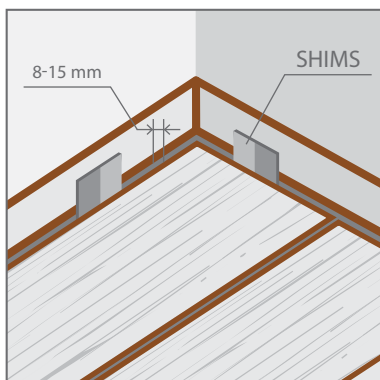
- Cut 4-5 planks at random lengths, separating their length by at least a board width or minimum 40 cm (1' 1/4") if installing in a brick pattern. This helps create a more staggered look when you install your floor. When finishing a row, cut the last board to fit and use what's left of it to start the next row (see below).



**RECOMMENDED**



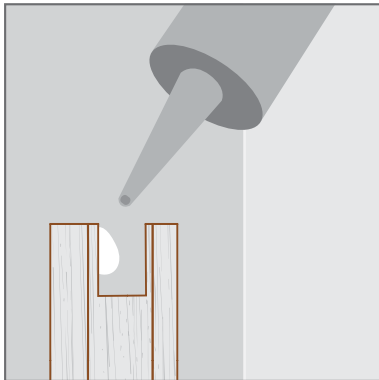
**NOT RECOMMENDED**



## Step 4 – Getting started

- As with all installation methods, please leave an 8-15mm (1/3"-1/2") expansion gap around the perimeter of your wall. Keep this gap even around all elements on the floor, and maintain it during installation by adding spacers (see picture on left) against the starting wall.

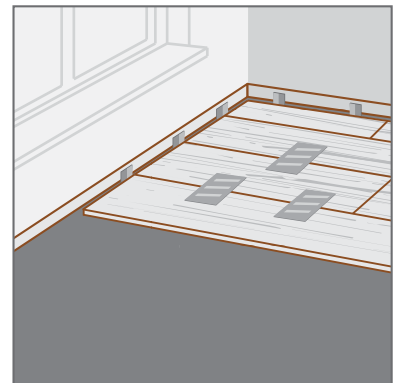
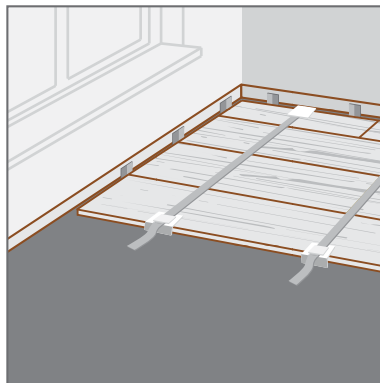
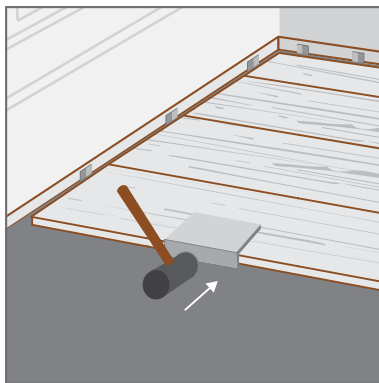
# 13 • FLOATING FLOOR INSTALLATION



## Step 5 – Installing starter rows

- Start by applying glue into the grooves of every board you plan on using in your first row. This includes the length and end joints (see picture on left). Place your boards on the underlayment and spread in a left-to-right fashion. Fit their grooves together to attach them. Adjust their position as you go to create an even look.

- Make sure that all the boards in your first row have tongues on short and long side. This is critical for creating a proper alignment throughout the rest of your floor.
- Stop after installing three rows and check board alignment. They should be even with the sides of the walls and with each other. Adjust their position if necessary, including the distance of the expansion gap. After this adjustment, check and adjust alignment after every three rows.
- As you fit your glued grooves together, tighten the joints by hitting the side of the board with a knocking block. Never use a rubber mallet or hammer directly on the flooring. Tighten the floor with a ratchet floor clamp every 3-5 rows to further tighten and add painter's tape on top of the boards to keep them from moving. (see below for all three procedures)



- Let the first three rows glue dry for at least two hours before moving on. They will serve as the guide and stabilizer for the rest of the process.

## Step 6 – Job completion

- Continue laying your rows after the glue on the initial rows is dry. Alternate board lengths as you lay to position transverse seams randomly. Always clean the glue off boards immediately to avoid damage.
- All boards of the last row need to be cut to allow for an expansion gap of 8-15mm (1/3"-1/2"). As it is unlikely that your floor will perfectly line up, be prepared to remove as much board as necessary.

## 14 • AFTER INSTALLATION PROCEDURES



Complete these simple steps after each installation process to finish your floor.

- After you finish laying your floor, you can remove the spacers and install transition pieces.
- Nail baseboard and shoe moldings to the wall around the edge of your floor.
- Vacuum and wipe with special hardwood floor cleaners to give it a beautiful shine. Stay off the floor for at least 10-12 hours and don't add any furniture to its surface for a full 24 hours.
- Protect the floor from damage by placing felt pads under all furniture legs.
- Keep the remaining planks in storage in case of repairs.

## MAINTENANCE PROCEDURES

Maintenance procedures for hardwood floors require a few simple processes that are fully outlined in our "Novus Wood Maintenance and Repair Instructions" guide. Please, read through this completely after you install your floor to get cleaning, maintenance, and repair suggestions that can add years to your floor's life.