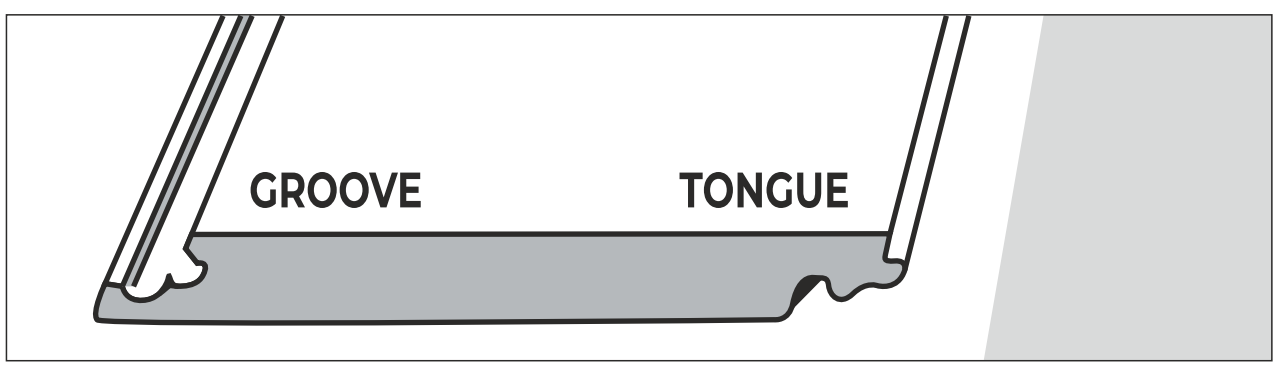
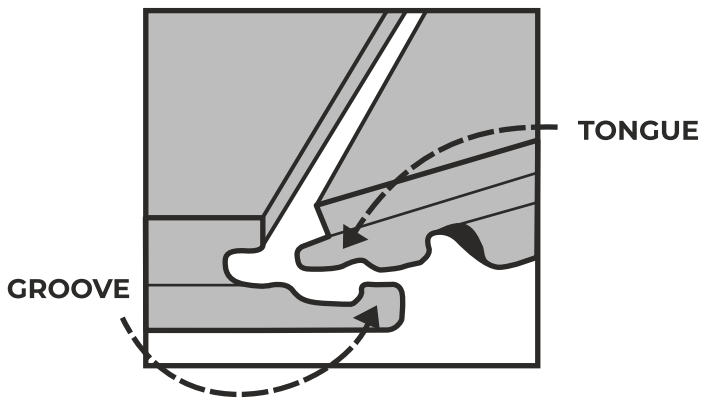
KEO®
SURFACES

INSTALLATION INSTRUCTIONS

Keo Surfaces uses Uniclic® for the installation of its rigid core flooring (SPC floors). Uniclic® is a ground-breaking, patent-pending interlocking technology that eliminates the need for glue, adhesives, or any other materials. Because of the tongue and groove's clever design, the panels may be assembled by simply clicking them together.

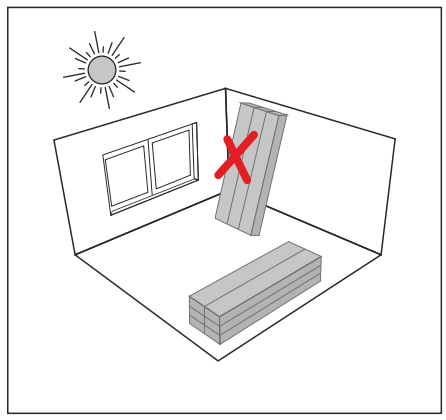




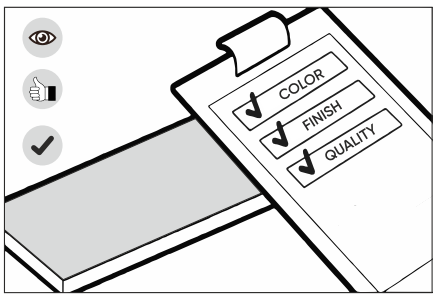
BEFORE INSTALLATION, PLEASE READ ALL THE INSTRUCTIONS TO VOID WARRENTY.

- SPC floors are intended for interior use only.
- To avoid subtle color and gloss differences, we advise ordering all the plank for the flooring project at once.
- SPC flooring mimics the appearance of a natural product with inherent color and texture variations. Installing similar boards next to one another will not create the best visual effect. Instead, mix up the planks from various cartons.

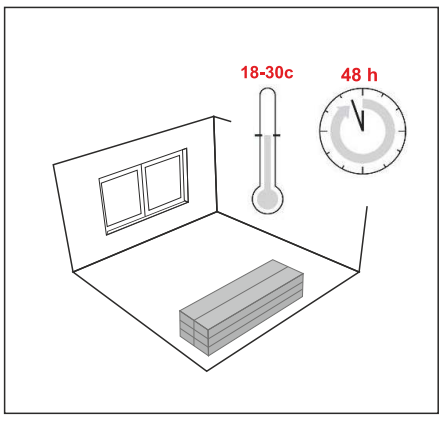
A. BOX HANDLING AND ACCLIMATIZATION



- To avoid distortions, always handle KEO Surfaces SPC flooring with care during storage and transportation. Stack the boxes neatly on a level surface for storage. Never keep the boxes upright or in an environment that is damp or dirty. SPC flooring shouldn't be left in the sun's direct light for too long.



- Prior to installation, carefully inspect the planks for color, finish, and quality. The manufacturer is not liable for flooring that has been installed with obvious flaws.



- Keep the boxes away from extremely cold (<5°C), extremely hot (>35°C), and humid environments. Keo Surfaces SPC floors must be acclimated in the installation room between 18-30°C (64- 86 °F) for at least 48 hours before installation.

- It is necessary to condition flooring in an environment where temperatures are less than 40°F (5°C) or more than 95°F (35°C), or when relative humidity is less than 35% or more than 70%, by spreading it out in unopened cartons, not stacking, in the room where installation will take place for at least 12 hours in order to achieve the recommended humidity and temperature levels.

- It is important to make sure that the floor area is always dry, spotless, level, structurally sound, and free of all contaminants (e.g., dust, solvents, grease, chemicals, residual adhesive, adhesive removers, alkaline salts, mold, mildew, debris, etc.) The SPC flooring will feel unsteady and suffer early damage if the subfloor is uneven.

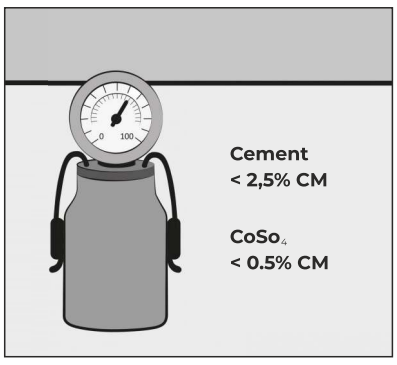
B. JOBSITE REQUIREMENTS / PREPARATION

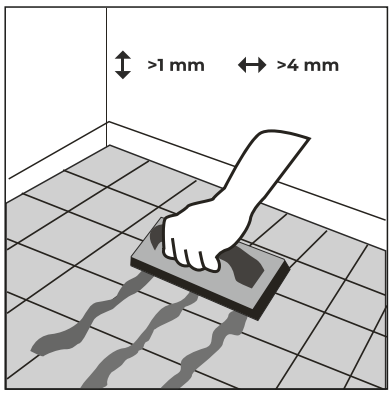
- **Ideal Condition** : In order to ensure optimal installation conditions, the installation area should be maintained at 15–20 °C with a relative humidity of 50–60%, consistent with the average room temperature and humidity of the area where the installation is taking place. and after the installation, the temperature of the floor and room must remain constant for at least 24 hours. A temperature range of 18 to 30°C is required for installation. A HEAT underlay must be used if the floor temperature exceeds 45°C. Failure to adhere to these guidelines may result in a poorly installed floor with an unreliable life span.

- **Leveling :** There should be 4.7 mm (3/16") of flatness per 3.3 meters (10 feet) of radius on the subfloor. It is important that they are sturdy, sound, and flat without any abrupt height differences. A non-shrinking, water-resistant Portland based leveling or patch compound should be applied to the substrate if the slope is greater than 1 inch per 6 feet in any direction.

- **Standard :** Subfloor preparation must adhere to the most recent editions of applicable national codes of practice for flooring, such as ASTM F710 (for the USA), AS/NZS 1884, BS 8203, BS 8204, DIN 18365 (Teil. C), DTU 53.2, or other relevant national standards. max RH (90) and pH (9) (for concrete floors) in accordance with ASTM F2170. Required Moisture Testing The maximum moisture level for concrete according to ASTM 1869 CaCl is 8 pounds, and according to ASTM 2170 In-Situ Relative Humidity of 90% per 1000 square feet in 24 hours, it should have a pH level of 6 to 10.

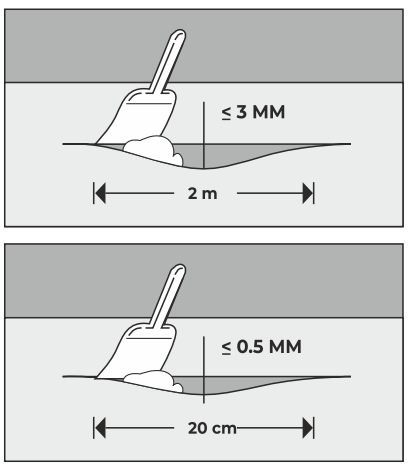
- The subfloor's moisture content must be less than 2.5% CM (75% RH) for cement screed or less than 0.5% CM (50% RH) for anhydrite screed (subfloor). In the case of floor heating, the results must be 1.5% CM at 60% RH and 0.3% CM at 40% RH, respectively. Moisture content results should always be measured, written down, and kept.

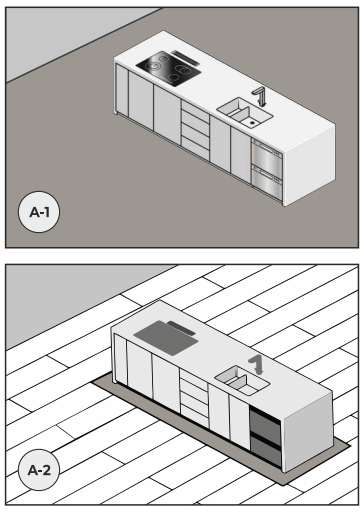




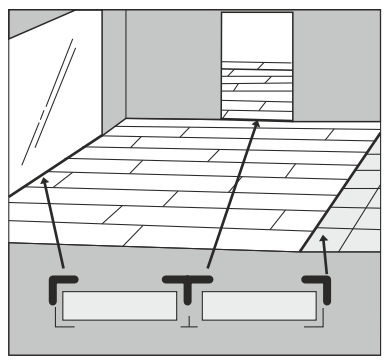
- If the existing flooring is in good condition and is securely fastened, then the SPC floors, can be installed over the current existing floor, which includes wood, non-cushioned vinyl or linoleum, ceramic or porcelain tile, and so on, with a 4mm width and 1mm depth. SPC floors cannot be installed over carpet. The warranty is void for installations made over carpet.

- Verify that the subfloor is entirely flat. It is advisable to level cement joints between tiles and any other gaps that are larger than 1 mm (0.04 inch) in depth and 4 mm (0.16 inch) in width. Over a length of 20cm (7.87 inches), any unevenness that is greater than 0,5mm (0.02 inch) must be leveled out. The same holds true for inconsistencies greater than 3mm (0.12 inch) along a 2meter length (78.7 inches). Sanding or scraping should be used to get rid of bumps. Determine whether a primer or sealer is required if a suitable leveling compound is required.



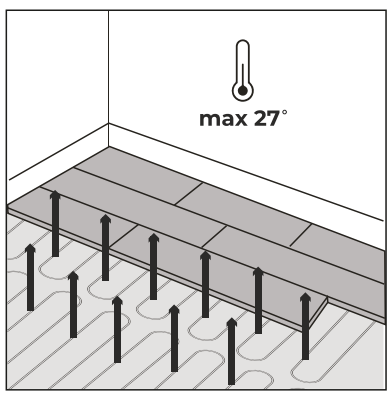


- Never obstruct the floor. Heavy objects should be installed first, followed by SPC flooring. Any heavy objects with radiant heat, such as a stove or accumulator, should have a recommended protective plate underneath. As shown in Fig. A1. Therefore, place the heavy item first, as shown in Fig. A2. As it is a floating installation, it should ALWAYS remain buoyant!



- It is necessary to install a T-profile with expansion gaps of at least 5mm on each side in separate rooms that have floor heating, don't have floor heating, or have different temperature controllers. When the temperature in adjacent rooms will vary differently above and below the T-range of 18 to 30°, the use of an expansion profile is required. Always make sure the end profile is at the end of the installation.

- The maximum room size for typical residential use is 13 m × 13 m at ordinary temperatures (15-35 °C).
- For rooms with more extreme temperatures (5–65 °C), the maximum room size is 8 m x 8 m.
- For rooms with HVAC systems (18–25°C), the maximum room size is 30 m x 30 m.



- If considering Radiant heat, only Hydronic radiant heat is allowed. The heating components must have a minimum 3/8” separation from the product. The system must be operational for a minimum of two weeks prior to installation. Five days prior to installation, the temperature should be reduced to 65°F (18°C). After installation, the temperature can be raised gradually (5°F per hour) to a maximum operation temperature of 80°F (27°C). An in-floor thermostat is recommended to avoid overheating, and a transition strip must be used for any installation longer than 40’ in any direction. It is also suggested to use T-Molding in doorways.

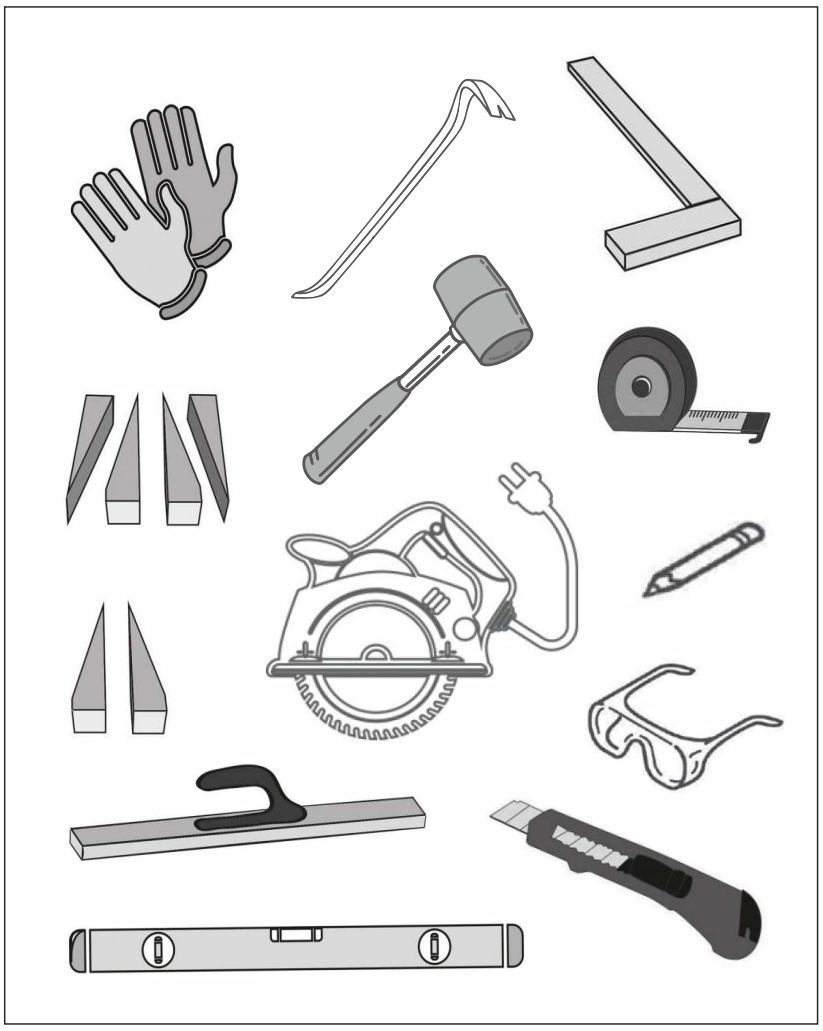
Note: It is not advised to use electric heated mats underneath flooring, as doing so will void the product warranty. Instead, use mats that are embedded into the subfloor.

- In the case of a floating installation, the right underlay needs to be selected. The combined thermal resistance (R) of the underlay and KEO floor cannot be greater than 0.15 m2/W.
- The recommended heat resistance for floor cooling is 0.09 m^2K /W. The range of KEO Floor's heat resistance is 0.02 m2K/W to 0.07 m^2K /W (with underlay). Therefore, a slight capacity loss should be considered.

PLEASE NOTE:

- Despite being a waterproof floating floor, this product shouldn't be used to protect an existing floor from moisture. Floors are waterproof, but they do not act as a moisture barrier. It can't stop mold from growing or stop structural issues brought on by flooding, too much moisture, alkalis in the subfloor, or circumstances brought on by hydrostatic pressure.
- If IXPE foam is already secured to the flooring, additional foam is not necessary.
- Before installation, always check the flooring planks to make sure the grooves are clear of debris.

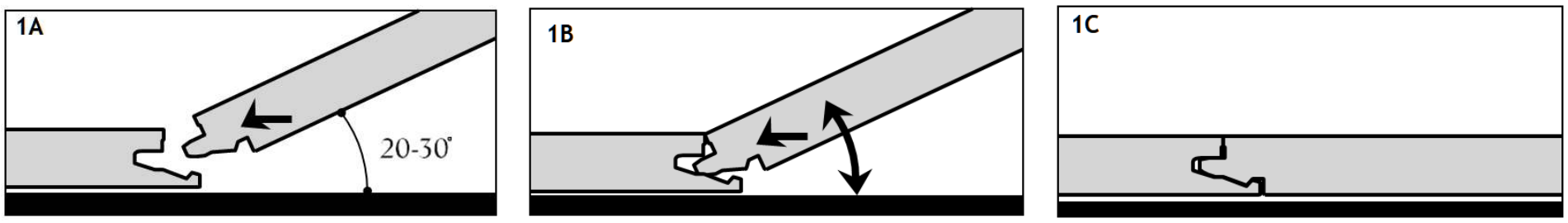
C. INSTALLATION TOOLS



- Tape measure
- Taping block (trimmed portion of Keo SPC flooring): Do not use with additional tapping blocks. There will be damage to the SPC core.
- Safety Glasses
- ¼” or ½” spacers
- Utility knife / concave cutting knife
- Straight Edge Ruler or T-Square
- Pencil
- Rubber mallet
- Pry bar or pull bar
- Chalk line
- Crosscut power saw / Circular Saw

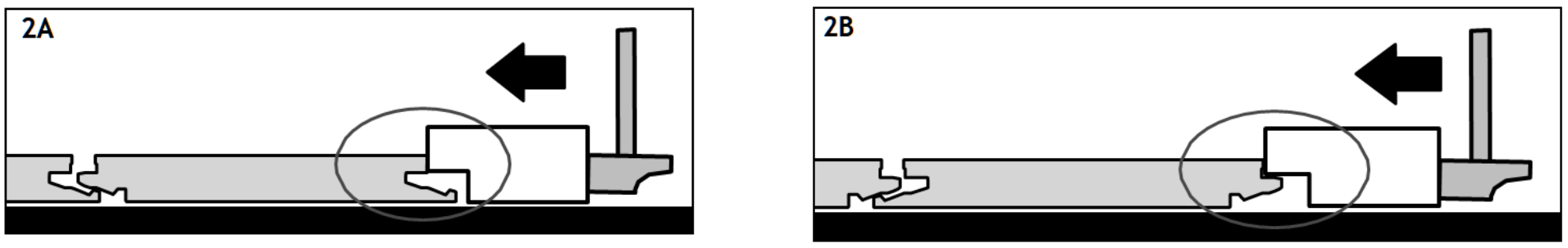
D. INSTALLATION PROCEDURES

1. LOCKING METHOD



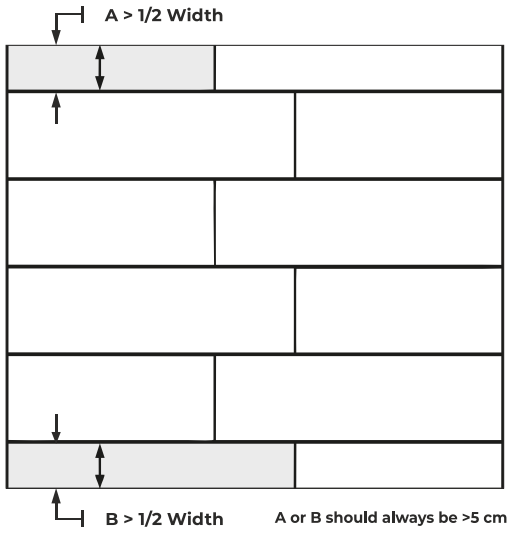
Installing Uniclic can be done in one of two ways. The technique that is preferred is method A (angle-angle):

- Method A: Position the panel to be installed at an angle of 20 to 30° to the panel already installed. Move the panel gently up and down and at the same time exert forward pressure. The panels will automatically click into place. You can either insert the tongue into the groove, or the groove on to the tongue. The tongue in groove method is the most common and easiest way.
See diagram 1A 1B 1C.



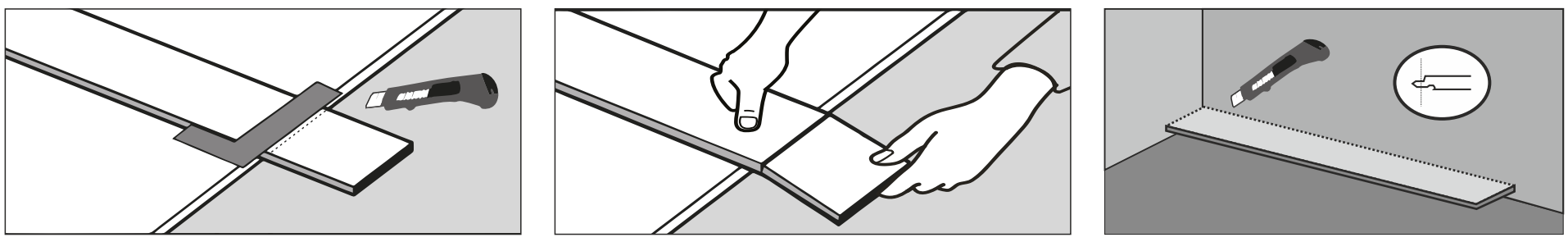
- Using method B (tapping) is an option if method A is impractical (for instance, in difficult-to-reach locations): By tapping the planks into one another, you can join the panels with Uniclic without having to lift them. This technique needs the unique Uniclic tapping block. It is not recommended to tap the planks together just once. You must tap the panels together gradually to prevent damaging them. The plank's short or long side can be angled first, and the other side can then be connected by tapping.

2. PLANNING



- Prior to installation, plan the layout of the plank format carefully to avoid placing any narrow pieces along any wall junctions. Measure the room's length and width before you begin so that you can create a precise layout and give the floor a balanced appearance. Additionally, this will prevent the last row from being too small. If the last row is less than 5 cm wide, narrowing the first row's planks will make installation simpler and better. For best appearance, starting and finishing wall plank widths should be determined using calculated dimensions or a dry layout such that both exceed at least a half-plank width. Trim the initial plank row based on the measurements found.

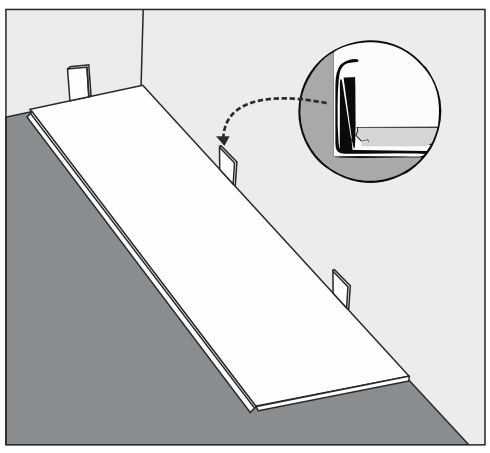
3. CUTTING AND TRIMMING :



- SPC planks may easily be sliced using a concave utility knife. When cutting the plank, mark the line with the décor side facing up and make a clean cut with the knife. then use both hands to sever the plank. Never try to cut all the way through the floor.

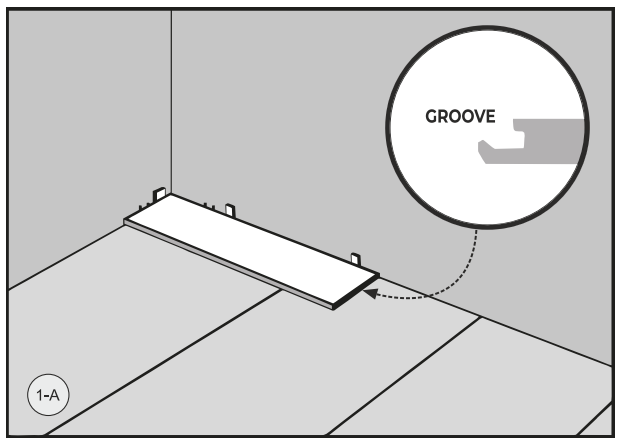
- From the first plank, remove the tongue (on both the long and short sides). The first row's entire plank should have its tongue (on the long side) removed. This will guarantee that the finished trim will be installed with the flooring's decorative surface underneath. To easily cut off the tongue, score it with a utility knife several times.

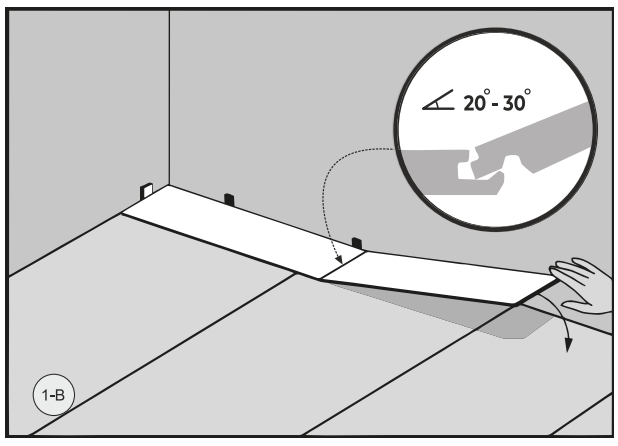
4. SET SPACERS

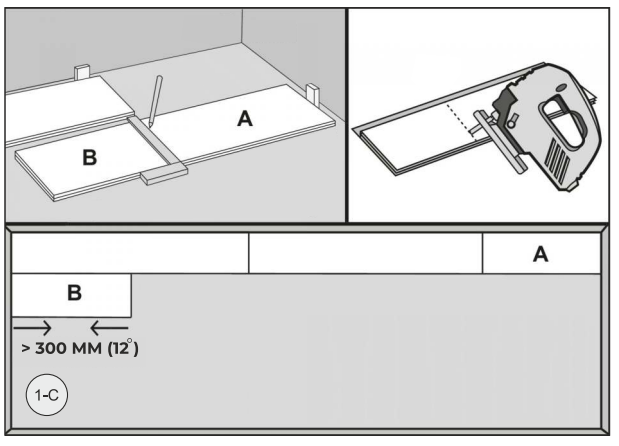


- Use spacers to establish the necessary expansion space between the wall and the perimeter planks, as shown in fig. On the short and long ends of the plank, place spacers with a thickness equal to the required expansion between the plank and the wall. Wait until the installation is finished before removing them. When choosing your starting plank width, remember to account for 5/16" (8 mm) spacing along all walls.

5. INSTALL



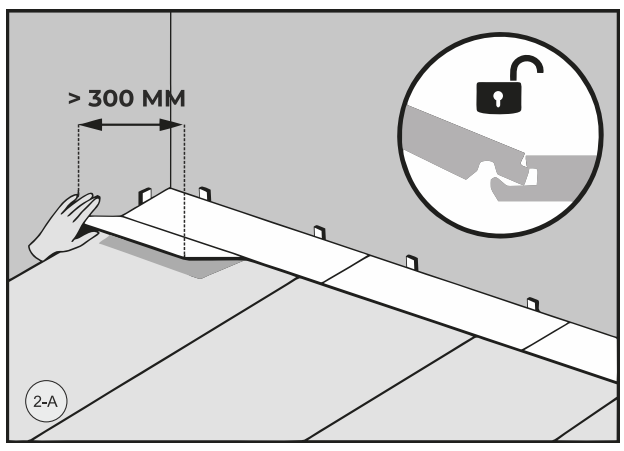


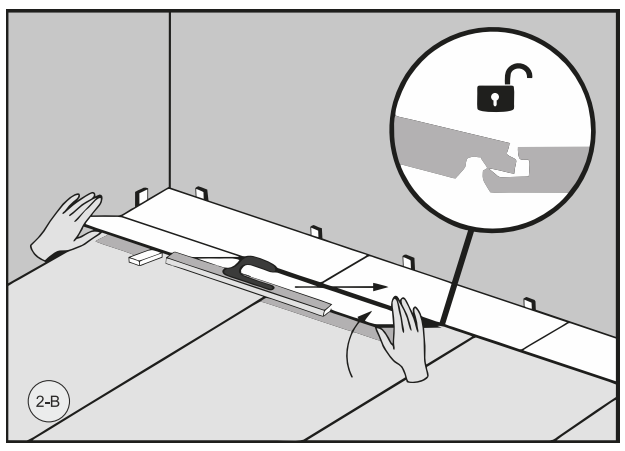


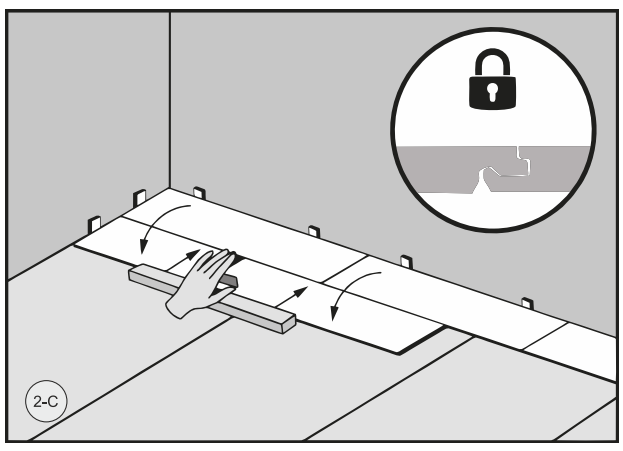
- A1, start at the left-most corner of the longest wall and work your way outward, keeping the grove facing outward and the tongue sides (the first plank with its trimmed side) facing the walls.

- Position as shown in Fig A2, the ends of the first and second planks can be joined by elevating the second plank, slipping the tongue on the short side into the groove of the first plank, and then lowering it into position. Finish out the first row by paying careful attention to the corners and edges. Use a straight edge and a sharp utility knife to score a line on the top of the final plank in the row. On the score line, the plank should split without difficulty.

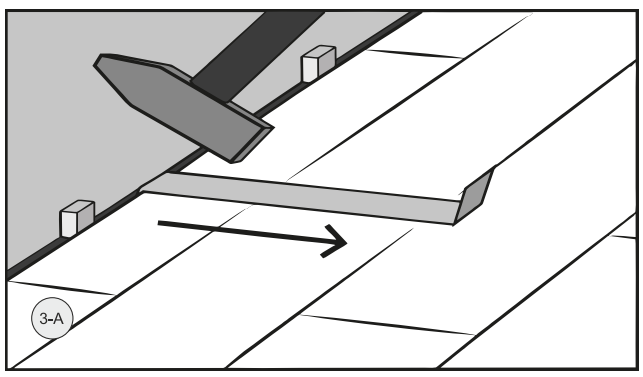
- **Note: The length of the end pieces must be greater than 8". Depending on the size of the room, this may require cutting a plank to begin a row.**







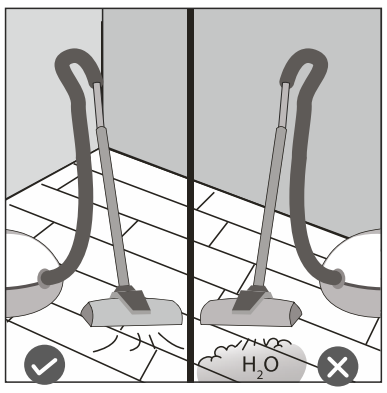
- When starting with the 2nd row, make sure the 1st row planks are aligned properly. As shown in Fig. 2A. This will ensure the seamless and uniform appearance of the flooring. It is also important to stagger the end joints of the planks in adjacent rows to prevent a repetitive pattern. The second plank should be attached to the first plank in the second row by inserting the short end tongue first into the groove of the first plank. The short side tongue should be low-angledly inserted into the groove of the adjacent plank. When the tongue is in the groove, it should feel locked in. Lift both planks and gently push or drag them into the long side of the first row shown in Figs. 2B and 2C, with the short side first, followed by the long side.
NOTE: The length of the 1st plank should not be equal to the previous row's 1st plank, as shown in Fig. 3A.



- For the last row to be installed the planks should be cut to size to fit along the wall. For the long edges to be locked together, use a pull bar. On the shorter edges, do not use the pull bar. Quarter round molding should be installed with finishing nails to complete the room's perimeter.

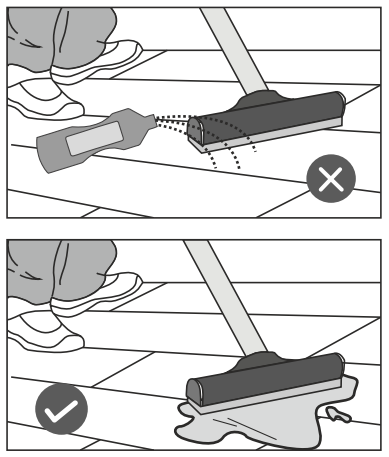
- Remove the spacers to complete the project. Avoid trapping or pinning the floor down while covering the expansion area with quarter round or other trim.

6. MAINTENANCE

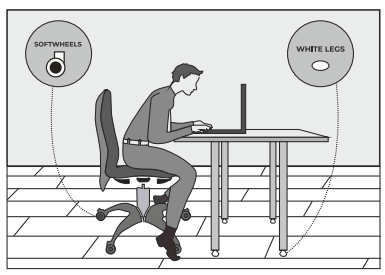


- Your new KEO Surfaces SPC floor is ready for use after it has been installed. For 24 hours, avoid heavy traffic. For upkeep, we advise using a vacuum cleaner or mop. Make sure the vacuum cleaner has soft wheels and a specific brush to prevent floor damage.
NOTE: It is not permitted to use a steam cleaner.

- A wet or damp mop can be used to clean your SPC flooring. Never use natural soap detergents as they leave a sticky film on surfaces, which makes them difficult to clean and attracts dust and dirt. The same is true for detergents that contain abrasive particles; these could matt the surface. AVOID using harsh chemicals or cleaners on the floor. DO NOT use abrasive cleaning equipment. Surface stains may be caused by products containing oil or petroleum. Never overdo any cleaning agent because doing so will cause a buildup of cured agent that is challenging to remove without the aid of a vinyl stripper. Always sweep up spilled liquids from the floor right away.



- Use desk mats that are suitable for SPC floors to protect the floors from the hard and sharp wheels of chairs. Use soft wheels and the proper safety equipment for sharp legs.



- Heavy furniture should always be lifted rather than dragged across the floor. Use floor protectors with large surface areas for a more even distribution of weight over the floors. Use appropriate protection if needed. Install non-rubber or non-slip furniture mats to prevent scratches and scuffs on the floor.

- To make your SPC floor last longer, it is recommended not to wear high heels for prolonged periods of time, as they can cause damage to the surface. Avoid using metal or razor scrapers to remove dirt, residues, or other marks from the floor.
- To make your floor last longer and require less repair and upkeep. Please be warned that prolonged contact with some rubber types may cause stains that are difficult to remove. Install non-rubber backed mats at all outside doors to prevent soil, grit, and filth from being tracked onto your floor. Hence, invest in non-staining mats.
- To prevent permanent stains or burns on the floor, it is recommended to be cautious while using cigarettes, matches, or other hot objects.

- Make sure the temperature inside is always greater than 5°C (41°F) and, ideally, between 18 and 30°C (64 and 86°F). Maintaining the subfloor in the aforementioned temperature range is also crucial. Prolonged exposure to direct sunlight must be avoided. During the hours of maximum sunlight, draw the drapes or blinds. Thermal degradation occurs in flooring that is overheated and overlit.