

# Installation-II

## FLOATING INSTALLATION

### FLOATING INSTALLATION:

1. Spread or unroll the required polyethylene cushioning underlayment parallel to the longest wall in the room, and extend them a few inches up the wall (they could be trimmed afterwards when installation has been completed). Allow sufficient overlap on all joints with the next sheets; use double-faced adhesive tape to fix the joints. Complete until the whole sub-surface is covered with the underlayment.

2. Pick the first board and align it with the closest wall, groove side facing the wall. This way, ideally the installation should start from the right corner of the room. Use 12 mm (1/2 inch) temporary spacing-wedges to create the necessary gaps from the walls (see fig. 1). Pick the second board, apply 3mm (? 1/8") glue bead at the inner topside of the groove of the board's end, and start jointing the board in the row. Never apply glue onto the tongue (see fig. 2).

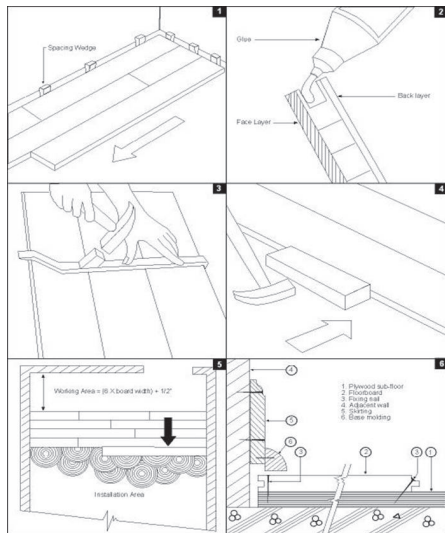
Continue the same steps until the first row is completed. Use a specially designed crowbar to pull the last board into place and to push all the joints tight at the same time (see fig. 3). Make sure that ? 12 mm (? 1/2 inch) gap to the wall is also provided at the ends, and drive the spacing wedges in.

Clean any excess glue immediately. Start the second row by using leftovers from the first row or a fresh board; cut it if necessary to ensure staggered joints that at least 500 mm (? 20") apart.

Apply ? 3 mm (? 1/8") continuous glue bead along the inner topside of the groove and install the board. Repeat similar steps and complete the second row. Tighten all joints by the use of a small, square wooden block to knock the boards from the tongue's side. Do not exert any excessive force for the process; and never use hammer to knock directly on the floorboards (see fig. 4). Use the special crowbar to tighten joints from the sides, and use clamps whenever necessary to ensure tight and square joints. Never fail to wipe-off any glue excess immediately. Repeat all steps and install the rest of the floor.

3. The last or the final row is usually narrow and it might be required to cut floorboards lengthwise to fill-in this row. Measure the remaining space and cut the boards accordingly, ensuring that a 12 mm (1/2") gap to the wall should also be provided at all sides. Use the special crow bar to pull these last floorboards into place and to tighten their joints, and drive the 12 mm (1/2") spacing wedges in afterwards.

Allow the finished floor to be free from load and traffic for at least 8 hours to settle, before all the temporary spacing wedges are removed. Install all the skirting/molding the next day. Make sure that all skirtings or moldings are fixed onto the adjacent wall only, and not directly fixed onto the floor (see fig. 6).



## GLUE-DOWN INSTALLATION

### GLUE-DOWN INSTALLATION:

1. For this method of installation, follow very carefully all the detailed instructions provided by the adhesive manufacturer for the usage and the application of their product, including all the recommended tools to do the job. Do not hesitate to seek professional advice whenever required.

2. This method of installation may also require fans to create airflow and to help speed-up the drying time of the adhesives. Sufficient cross-ventilation should also be provided during installation and up to 24 hours after its completion.

3. Concrete sub-floors should have at least 3000-PSI compression strength.

4. The first step is to determine the working area to begin with the installation. Determine the longest wall in the room with access, and draw a straight line on the floor parallel to that wall, by a distance of [6 X (width of 1 floorboard) + 1/2"]. For example, when installing CARLTON flooring with 127 mm (5") width, the distance of the line should be [6 X 5") + 1/2" = 30.5" from the wall. The area formed between the wall and the line will be the working-area, the rest of the area in the room will be the installation-area, and the line itself will be the starting line (see fig. 5).

5. Depending on the exact-width of the room, the working-area may need to be adjusted as needed, in order to avoid very narrow cut on the last floorboards for the final row. Make a test and lay floorboards beforehand if necessary. A starting block, i.e. a length of a straight, firm wooden block is recommended to help the initial floorboards's placements. Nail the starting block down firmly along the starting line, within the working area. This block will help to hold the first row of the installed floorboards firmly in place.

6. This type of installation does not need any cushioning underlayment, and once the working-area and the installation-area have been established, the adhesive spreading can be started. Following all the directions and recommendations from the adhesive manufacturer and using all the proper, recommended tools, the adhesive can be spread only over an area that can be laid with floorings within 1-3 hours, depending on the curing time of the adhesive used. Pick the first floorboard and align it with the starting-line/ the starting block, along the groove side.

7. This way the installation should ideally start from the right side. Lay the first floorboard, ensure that a 12 mm (1/2") gap from the adjacent wall is provided; use spacing wedge or nail it down if necessary. Pick the second board, apply 3 mm (1/8") glue bead on the inner topside of the groove at the board's end, and start jointing the board in the row. Never apply glue onto the tongue. Continue the same steps with the next floorboards and complete the first row. Cut the last piece to allow 12 mm (1/2") gap to the wall. Use a specially designed crowbar to pull the last board into place.

8. Push joints tight and drive spacing-wedges in. Clean any excess glue from the joints immediately. Start the second row by either using board left-over from the first row or fresh board; cut the board if necessary to create staggered joints at least 500 mm (20") apart. Repeat steps similar to the first row and complete the second row.

9. Note that unlike the floating installation method, longitudinal tongue and groove gluing (along the length of each row) is not compulsory with this glue-down method. Tighten all joints and use soft-rubber mallet to speed-up the process if needed. Make periodic checks of adhesive transfer during installation, by inspecting the back of a floorboard. Adhesive transfer must be adequate and should at least cover 80% or more of the floorboards back area. Add more adhesive with roller or brush onto that area when needed. Insufficient adhesive transfer may cause poor results.

10. To prevent any movement, tape down every 3 completed rows across the face together using temporary-adhesive/masking tape like 3M 2090 Blue MaskTape. Never fail to wipe off any glue excess from all joints immediately. Repeat all steps and install the rest of the floor within the installation-area.

11. Every 2-3 hours and upon completion, roll the floorboards surface with 50-70 kg (?100-150 pounds) roller to ensure that all boards are flat and in contact with the adhesive. Wrap the roller with cloth or thin foam-pad to avoid scratches or dents on the floor's surface if needed.

12. The last or the final row is usually narrow and it might be required to cut floorboards lengthwise to fill-in this row. Measure the remaining space and cut the boards accordingly, ensuring that a 12 mm (1/2") gap to the walls should also be provided at all sides. Use the special crowbar to pull these last floorboards into place and to tighten their joints, and drive the 12mm (1/2") spacing wedges in afterwards. Add more spacing wedges around the perimeter of the installed floor if necessary, to keep all joints tight.

13. Next, cover the remaining, working-area. Remove the starting block and spread the adhesive in the same manner as described before. Install flooring the same way as the first stage, making sure to put glue beads on the inner topside of the grooves at each board's end before jointing the floorboards. Work from the area away from the access and work "backward" toward the access. Clean any excess glue from the joints immediately. Tape down rows and roll floorboards surface as before. Complete the installation and spare 12 mm (1/2") expansion space to the wall. Put additional spacing wedges wherever required around the perimeter, or any stationary object.

14. Allow the finished floor to be free from load and heavy foot-traffic for at least 24 hours after completion. Remove all adhesive tape from the first stage area and clean the surface thoroughly. Repeat the process afterwards on the remaining area. Do not cover the surface and allow the flooring to breathe. Remove all the temporary spacing wedges and install all the skirting/molding the next day. Make sure that all skirtings/moldings are fixed onto the adjacent wall only, not to the floor (see fig. 6)

## NAIL-DOWN/STAPLE INSTALLATION

### NAIL-DOWN INSTALLATION:

1. This method of flooring installation may give some advantages over the other methods in installation-speed, reduced labor and installation materials, and the more immediate "use" of the floor. However the process is consequently more difficult and some professional-hands might be required, because of the possible use of special cleats, and the need for some professional tools and equipment to carry out the work.

2. This method demands plywood sub-floor with thickness of at least 18 mm (?3/4") installed to reach the degree of surface flatness as specified in "SURFACE PREPARATION". Gaps for expansion-space between plywood boards and around the perimeter of the installed plywood sub-floor must be provided in accordance with their manufacturer's specifications. The moisture-content of the plywood must be ensured to meet what is specified under "INSPECTION & PREPARATION".

3. The first step is to locate the longest wall in the room by which the direction of the flooring should follow. Depending on the type of floorings used, draw a starting line on the plywood sub-floor parallel to that wall, by a distance of (the width of the floorboard chosen + 1/2"). For instance, when installing CARLTON flooring with 90 mm (? 3.5") width, the distance from the wall should be (3.5" + 0.5") = 4". The 1/2" additional space is meant to create space for expansions. Ensure that the line is totally straight and that installation started with perfectly straight and square start.

4. Pick the first floorboard and align it along the start-line, with the groove's side facing to the wall. This way the installation should ideally start from the right side of the room. Alignment must be done between the outer edge of the floorboard and the start-line, not between the tip of the tongue and the start-line. Use spacing wedge if necessary to ensure the correct distance to create the needed 12 mm (1/2") expansion-gap. Once the floorboard is aligned perfectly, face-nail the board with the nail perpendicular to the surface. Place nails as close as possible to the wall, so that after completion, when the base molding is fixed, the head of the nail will be concealed under the base molding. Nailing the other long side of the floorboard on the tongue for this first row has to be done with the nail slightly inclined and the nail-head driven flush with a nail punch (see fig. 6).

5. Care must be taken on the placement of the nails. The nails should be spaced every 10 to 12 cm (every ? 4 to 5 inch) apart, and should be more than 5 cm (2") from either ends of each floorboards. Use 1-1.5" finishing nails depending on the thickness of the floorboards installed.

6. Continue the same step until the first row is completed. Ensure to cut floorboard for the last piece in the row to create the needed expansion gap of 12 mm (1/2") from the wall. Start the second row in the same manner, use the remaining board from the first row or use fresh floorboard; cut the board if necessary to create staggered joints that at least 500 mm (20") apart.

7. From this second row onward, nailing is done on the tongue side only. The first couple of rows must be nailed-down by hand because they are closer to the wall, which may cause vertical obstructions, if nailing-machine is used. Continue to install all the remaining rows, use a nailing-machine if necessary to speed-up the job (except for the last couple of rows, which again may have vertical obstructions from the wall of the other side of the room).

8. If a nailing machine is used, do not hesitate to sacrifice some pieces of floorboards to test and adjust the machine. Hardwood species used for the floor material vary in their densities between one species and the other and the machine has to be adjusted from time to time accordingly to suit the particular job. The base-plate of the nailing machine must be clean, smooth and free from any nicks and scratches to avoid damages to the flooring's surfaces. Do not put down machine directly over the pre-finished floor's surface; always use protective cardboard or mats. Do not hesitate to seek professional assistance whenever required.

9. The last or the final row is usually narrow and it might be required to cut floorboards lengthwise to fill-in this row. Measure the remaining space and cut the boards accordingly, ensuring that a 12 mm (1/2") gap should also be provided at all sides. Nail down this last row in the same manner like the nailing of the first row, and complete the installation.

10. Once the nail-down work is completed, install all the skirting and moldings. Make sure that all skirtings/moldings are fixed onto the adjacent wall only, and not directly fixed onto the floor (see fig. 6). Clean the floor's surface and refer to the "CARE AND MAINTENANCE" for additional information.