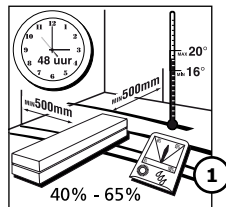


# INSTALLATION INSTRUCTIONS

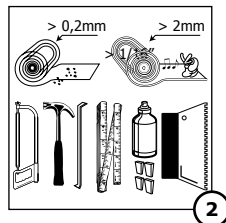
Carefully read these instructions before you start work. Check whether the floor panels are undamaged and fault-free, since the guarantee only applies to hidden defects

**Important note:** Place the material in the room in which the installation is to be done, without opening the packing, and allow it to acclimatise for at least 48 hours. The material should be placed flat on the floor in the horizontal position, at a distance of at least 50 cm from the wall. (see 1).



## WHAT YOU WILL NEED

The only tools you need is a hammer, a fine-toothed (hand or jig)saw, a folding ruler, a pencil, a tensioning wire (cord) along the length of the room, and an installation set that consists of a stop block, a stop iron and spacer blocks. Wood glue for a floating floor. Glue and a glue comb to glue the floor (consult your supplier) (see 2).



## STORAGE

The room in which you will be installing the floor panels should be dry. The floor panels should be installed at a room temperature of at least 16 °C. The relative air humidity in the room, to be measured using a hygrometer, should not be less than 40 % and not exceed 65 %. The humidity should also remain within these limits during and after the installation. When the level of air humidity is too high you should ensure that there is sufficient air circulation and add humidity to the air with the help of a humidifier during long dry periods, i.e. the heating season. If the floor panels are going to be stored (in the packing) for long periods of time, such storage should always be at room temperature. The storage space should have an average relative humidity not exceeding 65 %. The floor panels should not be stored in a room with a high level of humidity.

## BEFORE STARTING INSTALLATION

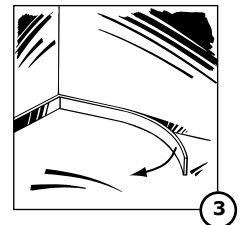
Your flooring has been manufactured with the best possible care. However, we would still advise you to check the floor panels for visible deviations such as damage, extreme color differences and shape or dimensional deviations, if these are not in accordance with the specification. Contact your dealer for the correct specifications of your floor.

Complaints concerning visible deviations will not be entertained after floor panels have been installed. Ensure good lighting when installing the floor.

## SKIRTING BOARDS

You may remove the existing skirting boards and reinstall them after installation (see 3).

To enable the floor to shrink and expand freely under the skirting boards, end-piece and transition skirting boards should be fixed on the walls. Flat skirting boards can be glued to the floor panels. Because wood naturally expands when it gets wet and shrinks when it is dry, you should always leave a (an expansion) gap between the wall and your Solidfloor, which gap is equal to the thickness of your floor panel. For that reason, floors with a thickness of 15 mm require an expansion gap of 15 mm. These expansion gaps can be created by using special spacer blocks, which should be placed every 40 cm. This expansion gap is also needed for possible columns, heating pipes and other fixed objects in the room in which the installation will be done. Remove the spacers after 24 hours and replace them by resilient cork or rubber blocks/strips.



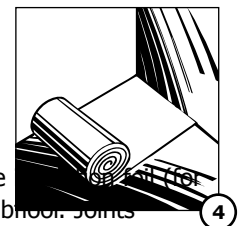
## SUBFLOORS

Solidfloor panels can be installed on practically any subfloor. This subfloor should, however, be permanently dry, hard, flat, clean, and have adequate load-bearing capacity. A floor is flat if there is less than 2 mm height difference over a distance of one continuous meter. Unevenness exceeding 2 mm/meter should be levelled out.

## CONCRETE SUBFLOORS

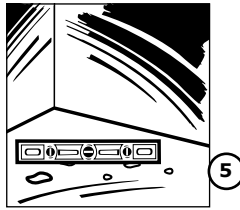
A concrete floor should not contain more than 2 % moisture (your supplier can measure this for you with a moisture meter). You should install an underlayment on top of this. A 3 mm underlayment will be adequate from the technical point of view (see 4).

You should also always install a moisture (example building foil) underneath the subfloor. Joints should be thoroughly sealed. The foil should extend behind and up the full height of the skirting board.



## WOODEN SUBFLOORS

The wood moisture content of a wooden subfloor should not exceed 14 %. Your supplier can carry out the required measurements using a wood humidity meter. You must first check the floor for loose parts and tighten the same in place (see 5). You may level the floor by sanding it down or installing a chipboard sheet. The wooden subfloor should have an underlayment. A 3 mm underlayment will be adequate from the technical point of view but a 7 mm natural board fibre plate has a better levelling effect and is recommended for floors with slight differences in height. Do not lay the panels if the crawl space is wet. Always make sure there is sufficient ventilation to allow the subfloor to 'breathe'.



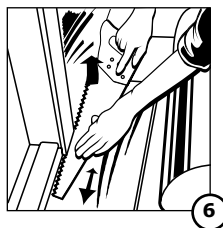
## UNDER FLOOR HEATING AND COOLING

If you want to install a wooden floor on top of the under floor heating and cooling, there are certain guidelines you must follow. It is important to know what type of system is being used, but also the type of subfloor and the type of parquet. Beech, Ash, Maple and Jatoba are wood types that easily warp and, therefore, are not recommended for use in combination with under floor heating or cooling. The guarantee will not apply when these wood types are installed in combination with under floor heating or cooling. For more information about the guidelines: [www.solidfloor.com](http://www.solidfloor.com)

## REQUIREMENTS WITH REGARD TO NOISE REDUCTION

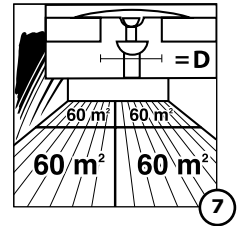
There are situations where a sound-damping subfloor is required. Your supplier has various kinds of underlayment in its range that meet these requirements. Ask for the test report.

**MODIFICATION OF DOORS** Check whether your doors can open and close with the combined height of the flooring and your subfloor if any. If not, you may modify (shorten) your doors according to the changed situation (see 6).



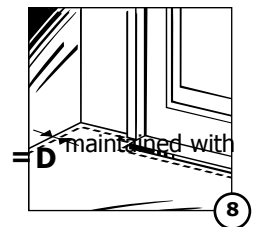
## DILATATION

Movement joints should be installed if floors are more than 10 m long or more than 6 m wide, as well as near door openings, between rooms, at turns in passages, etc. (see 7). These movement joints may be finished using specially developed dilatation joint profiles. There should be an offset of at least 40 cm between the cross-cut ends of the floor panels in consecutive rows.



## EXPANSION GAP

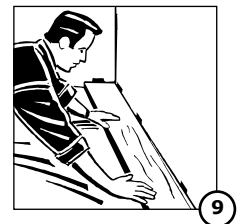
If the humidity level and temperature change, the floor may shrink or expand to some extent. For this reason, an expansion gap should be respect to all fixed boundaries such as: walls, thresholds, columns and central heating pipes, which is as thick as the floor itself (D) (see 8).



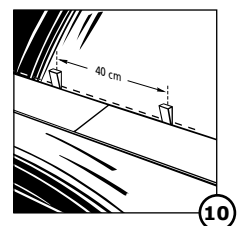
## FLOATING INSTALLATION OF ENGINEERED PLANK FLOORING

The panels are laid 'floating' by gluing the panels together using water-proof PVAC wood glue (D3 wood glue).

1. After the underlayment has been installed, the next step is to start installing the panels in a corner of the room which is immediately visible when entering the room (see 9). First calculate the number of tracks that you will be laying. You will obtain best results if the first and the last track are of approximately the same width. Now, lay the first panel with the groove of the length facing the wall. Usually, the panels are laid lengthways in the house (in the direction of the light).



2. An expansion joint of around the thickness of the floor should be installed all around the floor. Place a spacer block at every 40 cm (see 10). Remove them 24 hours after the floor has been laid.



# INSTALLATION INSTRUCTIONS

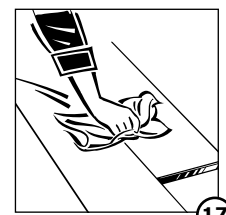
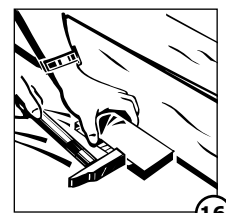
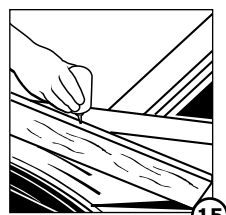
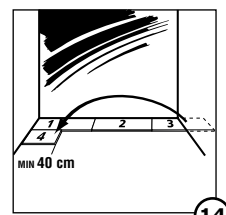
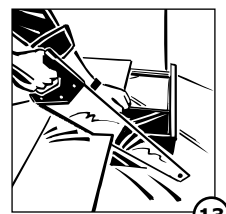
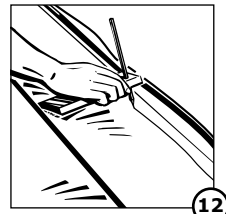
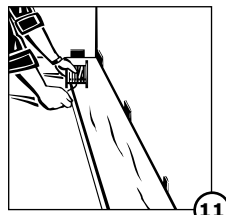
Now place the second floor panel, and so on, until the installation of the first row of floor panels is completed. Now check whether the first row is fully straight by tensioning a rope along the length (see 11). After the third row has been laid, check again if the floor is level.

3. If the wall is not fully straight, you should transfer the unevenness to the floor panels. This may be done using a spacer with a lead pencil (see 12). After the floor panels have been marked out, saw the same as required so that the recesses, etc., fit together. Keep in mind the expansion joint. Use a fine-toothed saw for this purpose. If a hand saw is used, make sure the décor side is facing upwards; if a jigsaw is used, keep the décor side facing downwards (see 13).

4. Lay the first row of panels by gluing each subsequent panel on the short side. In the second row, start with the remaining part of the first row (see 14). This part, however, must be at least 40 cm in length, so as to ensure that the floor has optimum stability and also to ensure minimum loss of material. The panels should be glued along the entire length and width. Do not use too much glue! (see 15).

5. Use a stop block when tightening the panels to avoid damage. Always place the stop block against the tongue to avoid damaging the surface layer (see 16). After the panels have been tightened, remove any residual glue immediately with a slightly moist cloth (see 17). After the glue has dried, it will be almost impossible to remove any residue.

6. While fitting the last row of floor panels, lay the floor panels with the décor side down with the groove against the wall.

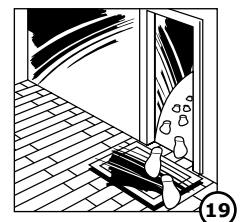
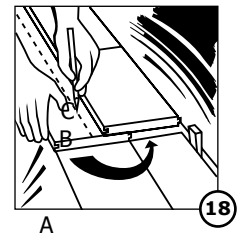


Now make the required markings and cut with the saw. Also keep in mind the prescribed expansion joint (see 18). If it is

difficult to reach the last row, lay the panels one by one as close as possible against the panels of the last row but one. Then push them together lengthwise using a pull iron and a hammer. The cross-cut ends are tightened using a stop block or a pull iron and hammer.

## AFTER INSTALLATION

You can start using the floor immediately after installation (see 19). You can now start finishing operations on the floor. You may also start installing the skirting boards. If you have installed oxidative oiled floors, it is recommendable to apply Solidfloor™ Ultimate Hardwax oil to the floor after installation. Consult the maintenance instructions for this.



## GLUED INSTALLATION OF ENGINEERED PLANK FLOORING

Apart from installing floating floors it is also possible to glue the floors. It is actually highly recommended to glue the floor to achieve the highest yield possible in respect of under floor heating and cooling.

## GLUING ON CONCRETE, SAND CEMENT FLOORS OR TILED FLOORS

If the floor is above a basement, a crawl space or any other room where rising damp can be expected, a moisture barrier should be placed on top of the floor (a special damp-resistant epoxy resin). In this case the glue should also be adjusted to the epoxy moisture barrier. A primer may have to be applied to the floor (apply primer). Follow the instructions of the glue supplier.

## GLUING ON AN ADHESIVE SUBFLOOR (WOODEN FLOOR PANELS OR UNDERLAYMENT)

If the floor is above a basement, a crawl space or any other room where rising damp can be expected, a moisture barrier should be placed on top of the floor. It is also an option to place damp-resistant polyethylene foil (construction foil) with a thickness of at least 0.2 mm between the wooden underlayment and chipboard, the tracks must be installed with an overlap of at least 200 mm and after that the joints must be made damp-proof with tape. (or a special damp-resistant epoxy resin can be applied to the chipboard; in this case the glue should also be adjusted to the epoxy)

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# INSTALLATION INSTRUCTIONS

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After the epoxy resin and/or the primer has dried up, the floors can be glued. The glue must be used in accordance with the instructions of the glue supplier. The glue must be applied with the right glue comb. Do not apply glue to too big of a floor surface but apply plank by plank or, if necessary, row by row to prevent the glue from hardening. Follow the same instructions as for installing a floating floor but make sure that the parquet planks are pressed into the glue with force.

The next floor panels must be positioned in such a way that they are connected to the panel already installed while being slid towards that panel. Be careful not to spill glue on the parquet.

It is recommendable to put a heavy weight on the glued floor for at least 12 hours to press it into the glue bed well. The freshly glued floor may not be used for 24 hours or otherwise if the glue instructions say differently.

Other requirements for gluing:

- The glue must touch at least 80% of the parquet floor panel.
- The underlayment must at least meet the following requirements:
  - Flaking strength min. 1Mpa
  - Pressure strength min. 25 Mpa

Only polyurethane glue and synthetic glue should be used, especially intended for the installation of ready-made parquet floor panels according to the supplier and that can be used on top of floor heating. Dispersion glue should not be used.

NOTE: The gluing does not reduce natural shrinkage or expansion (warping of wood) so make sure that there are sufficiently big expansion gaps. It is important to use glues, epoxy resins and primers of the same manufacturer and to use the same system to ensure compatibility.

## AFTER INSTALLATION

It is recommendable to put a heavy weight on the glued floor for at least 12 hours so that it is pressed into the glue bed well.

The freshly glued floor may not be used for 24 hours or otherwise if the glue instructions say differently.

You cannot finish the floor with skirtings, or clean it or apply oil on it afterwards until after the floor has dried for 24 hours.

Use oxidative oiled floor Hardwax oil if you want to apply oil after installation.

Any guarantee on the floor will expire if the above instructions are not followed or if the wrong glue is used, and the floor may damage as a result.

## INSTALLATION OF ENGINEERED PLANK FLOORING WITH CLICK CONNECTIONS

For floors with a click connection you should use an underlayment that is not thicker than 3 mm and is not resilient. Install the first row of floor panels, starting with the tongue toward the wall. Always work from left to right. Saw off the tongue on the left cross-cut end (only the first part) and long end on the side of the wall of the parquet. Make sure that all the cross-cut ends of the first row are accurately connected to prevent that gaps will be created in the next rows. Then slowly push down the floor panel until the pieces are flat and firmly fixed in place. Tighten it by hand or use a hammer and stop block.

In the second row, start with the remaining part of the first row. This part must however be at least 40 cm in length, so as to ensure that the floor has optimum stability and also causes minimum loss of material. Make sure to keep the same distance to the wall when installing the first panel of each new row. Always saw off the tongue on the left side of the panel.

The floor panels will be fixed to each other at the top by turning the tongue of the floor panel into the groove of the installed floor panel at an angle of 20-30 °C. Then slide the panel below this corner accurately against the cross-cut end of the already installed panel on the left. Slowly push down the floor panel until the pieces are flat and firmly fixed in place. Tighten it by hand or use a hammer and stop block. Finish the row in the same way and repeat this procedure for each following row.

While fitting the last row of floor panels, lay the floor panels with the décor side down with the groove against the wall. Now make the required markings and cut with the saw. Also keep in mind the prescribed expansion joint of 15 mm. If it is impossible to lay the last row, lay the panels one by one as close as possible against the panels of the last row but one. Then push them together lengthwise using a pull iron and a hammer. The cross-cut ends are tightened using a stop block or a pull iron and hammer.