

FIREWALL - INSTALLATION GUIDE

Before installing Firewalls, it is recommended to check any special requirements or restrictions according to local building regulations. Any construction or use of Déco products must comply with all local planning and/or building regulations. The diagrams and instructions in this guide are for illustrative purposes only and are not intended to replace a licensed professional. The consumer assumes all risks and responsibilities associated with the construction and use of these products.

SAFETY

Be sure to wear protective clothing and safety equipment, such as safety goggles, gloves, dust masks and long sleeves, a procedure that must be carried out every time you work on a construction project.

TOOLS

You can use standard woodworking tools, including electric and impact drills. We recommend the use of hard aluminium blades with negative 32 teeth. For installation, only Déco-supplied accessories and standard screws made of stainless steel or with a suitable coating should be used, depending on the installation site.

STRUCTURE

In order to properly install Déco products, a clean, smooth, flat and solid surface is required to support the weight of the decking and any extra loads that may be placed on it. Before installing any materials, check local building codes. If installation does not take place immediately, Déco products should always be stored in a place protected from the weather and laid on a flat surface. Firewall planks are NOT intended to be used as columns, support posts, beams, stringers or other primary load bearing components. They may not be installed over existing decking boards or be supported by a suitable sub-frame that complies with these installation instructions.

EXCESSIVE HEAT

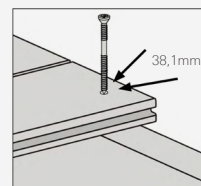
Although the planks are certified class B fl, excessive heat from external sources, such as fire or reflection of sunlight from energy efficient window products containing low emitting glass can damage the surface of Firewall products. Current or potential Déco customers who have concerns about possible damage caused by low emissivity glass should contact the manufacturer of such products to find a solution that will reduce or eliminate the effects of reflected sunlight.

SCREWS

Always use screws intended for use with composite material. Always test the screws on a scrap piece of decking to ensure that the screws do not cause swelling of the decking surface around the screw head. All screws used must be long enough to be fixed into the substructure joist.



All exposed-fixed screws must always be inserted at a 90-degree angle to the decking surface.

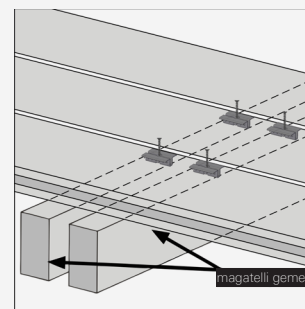


All exposed screws must always be made of stainless steel or adequately coated. When fixing exposed screws, they must always be inserted at least 38 mm away from the ends and width of the board.

When concealed fixings are not used, the decking must have two screws per deck, with no screws closer than 38 mm to any edge. All fastened screws must be inserted taking care to pre-drill into the planks 1 mm larger than the screw diameter.

FASTENINGS

All fastenings must be on mallets. When two ends of the planks approach each other head-on, there must be a minimum of 5 mm between the twin shakes to allow water to run down between the shakes.



ACCLIMATISATION

We recommend acclimatising the planks at least 2 days before installation. In any case, it is advisable to proceed with the installation of the planks, taking care to keep the planks to be installed at a temperature/exposure similar to that of the portion of the flooring/covering that is being laid. It is advisable to lay most of the flooring without completely blocking the clips and to adjust the head spacings between the planks at a later date when the planks laid have all reached the same expansion.

Note:

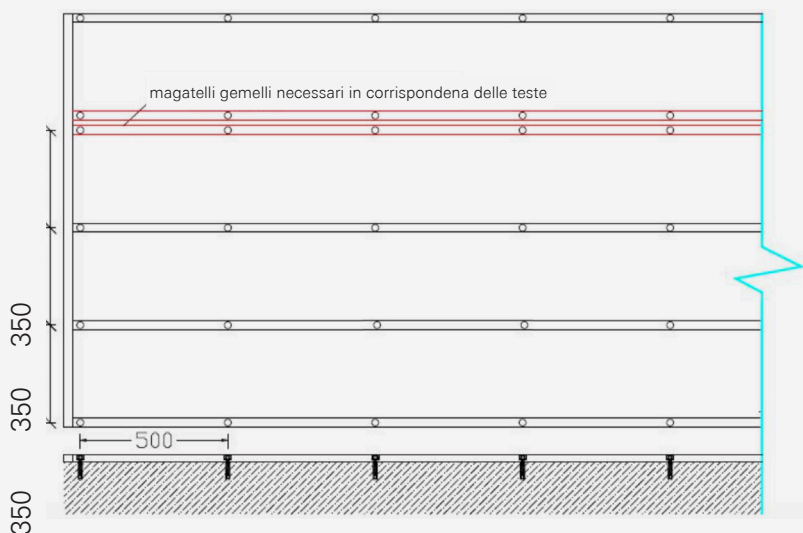
Always remember that when leaving the boards on site to acclimatise, it is important to place them on a flat, even surface. If they are placed on an uneven surface, it is possible that the boards will deform according to the shape of the ground.

STORAGE

Deco products must always be stored on flat, solid surfaces. Surfaces such as earth and grass are not sufficient because they can shift over time.

UNDERSTRUCTURE

Determine the width of the pavement and therefore the distance between the mallets. The mallets must be installed on a clean, smooth, level and resistant surface, with a thickness of the dowelling subfloor of not less than 6 cm. If aluminium hollow core slabs are used, the heads of the hollow core slabs must be suitably spaced to allow for expansion of the materials when they are laid one after the other. We recommend a maximum distance of 350 mm between the rafters (centre to centre) for residential use.



Distanza magatelli e sbalzo		
residenziale	commerciale	sbalzo massimo doghe
350 mm	300 mm	25 mm

FASTENINGS ELEMETS

The expansion clip provides approximately 6 mm between the decking staves, allowing it to expand and contract.

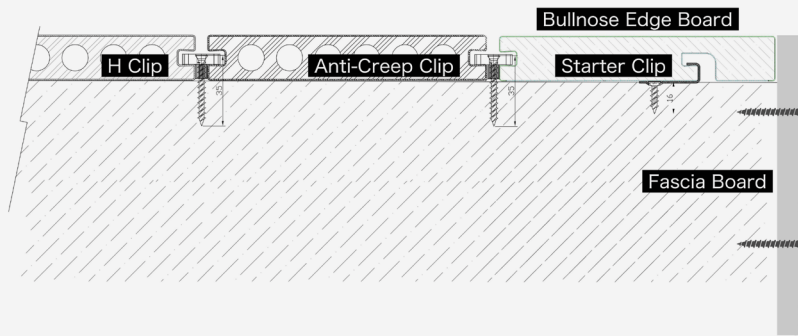
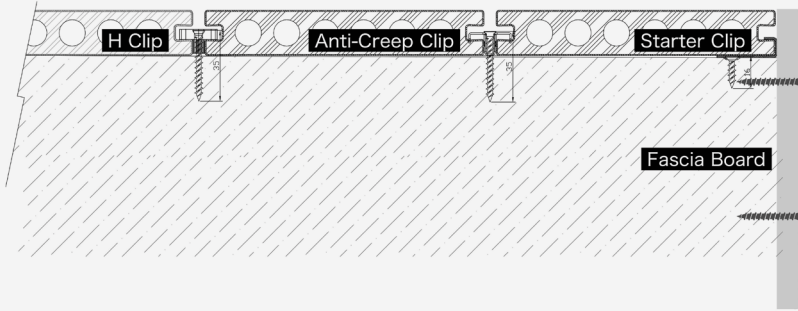
The starting clip (stainless steel) is used on the first plank, the last plank and the decking stair treads.

The reduced escape clip (stainless steel) provides approximately 2 mm between the decking boards.

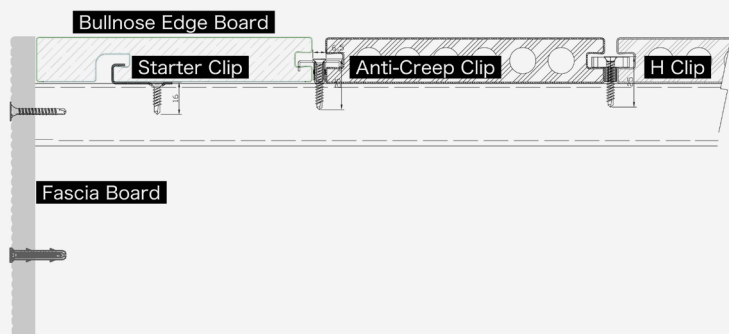
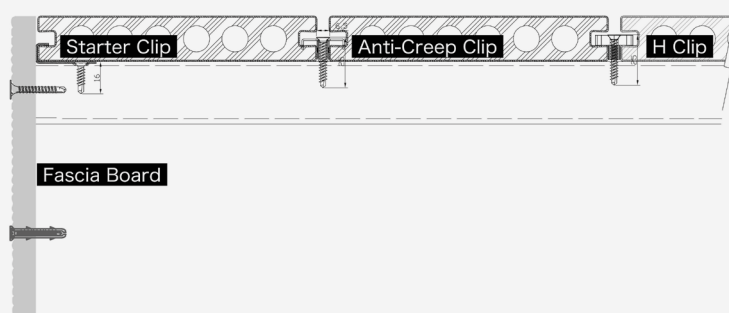
The locking clip (stainless steel) is used to prevent the decking planks from creeping over time and due to the expansion and contraction of the material on the decking boards by altering the head distances.

Use a single locking clip for each plank and fasten it to the centre or end slab as required (see diagram).

Timber joists



Metal joists

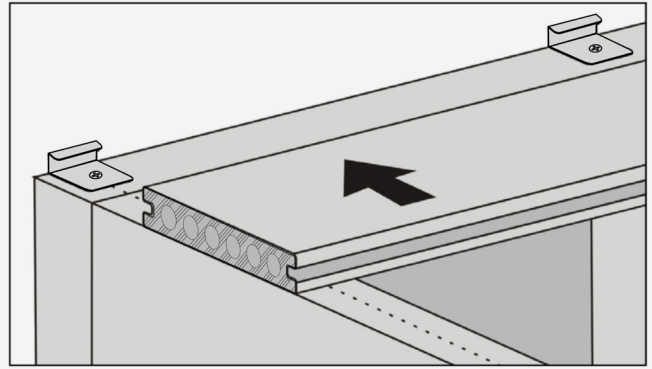
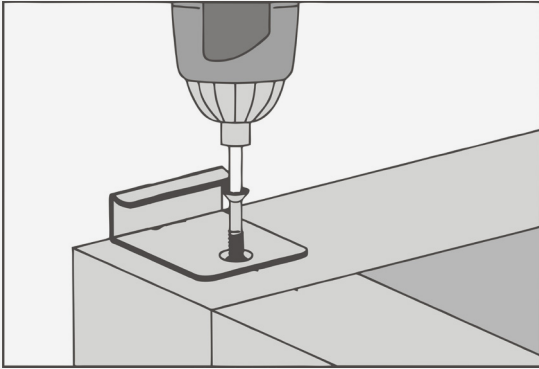


DECKING INSTALLATION

Firewall staves, like all wpc, are subject to expansion and contraction, although the staves are dimensionally stable, with a contraction rate of $\geq 0.15\%$.

Before and during installation, expansion and contraction must be taken into account, especially for longer staves. Once the decking span has been calculated and the substructure has been created according to our installation instructions, the first plank is ready to be installed. You will then proceed to lay the first row of decking, you can fasten the planks with screws or with our starting clips.

If you choose our starting clip, fasten it into the batten (first test it on a scrap piece to determine if pre-drilling is necessary; which we always recommend), then fasten the starting/end clips, take the first plank and push it towards the clips.

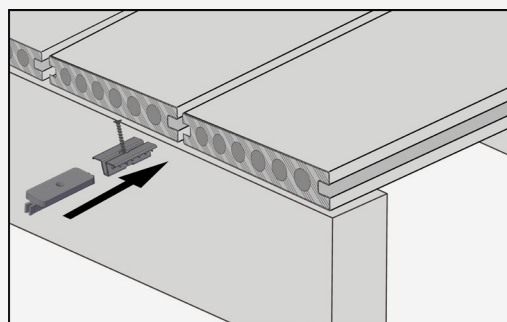
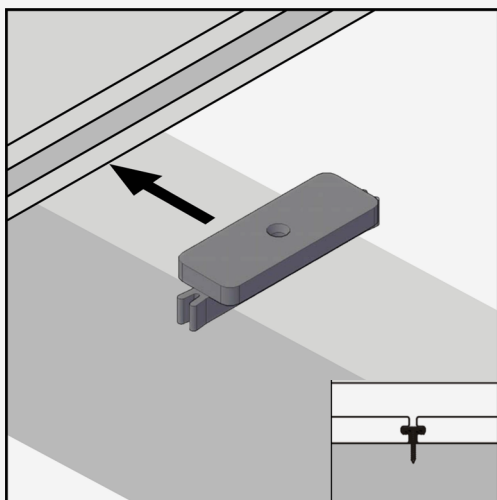


Then, after positioning the first row, place the clips at the top of each stave (clips per stave), these will separate the first row from the second row by determining the lateral distance.

To have a correct lateral joint it is important to pre-tighten the clips until the screw heads are flush with the top of the staves before placing the second row of staves.

It is important that the locking clips are positioned correctly, taking care to lay them all in the same direction with the serrated side facing the stave to be locked.

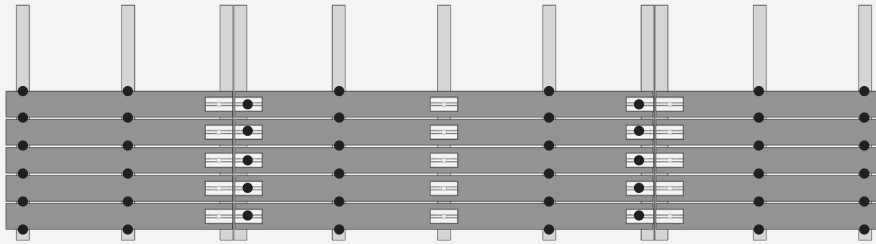
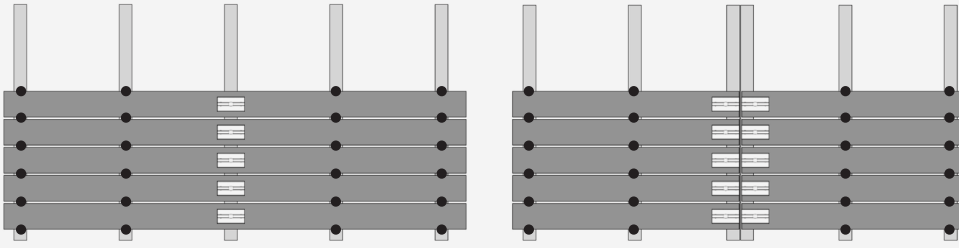
Continue this procedure until the second to last row of staves.



Anti-Creep Clip Position

One Length

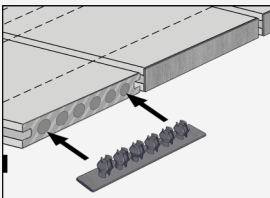
Two Length



Leave the penultimate row open and move on to the last row of slats, installing them using the same method as the first row. Position the staves, slide the expansion clips into the grooves and slide them to the correct position, then screw them to the slats.

If the last plank is to be trimmed, the trim side should be fixed with screws.

To finish the planking, we recommend using our accessories, bullnose staves, caps or perimeter frames.



UNDERSTRUCTURES AND NATURAL WOODS - INSTALLATION GUIDELINES

Instructions about Preparation of Soil and Installation of the Substructure are to be applied both to Natural Woods and Composite Woods - Ultrashield and Décowood.

While for all specific instructions about Composite Woods, please see next pages.

Not only about great quality and look. The procedure for installing your decking highly contributes to meeting the expectations of the customer. Carefully following the installation guidelines significantly limits the risk that the wood, a natural living element, might move, therefore compromising the overall tightness of the floor. We recommend that you read carefully the following requirements. If you encounter any questions or concerns during the design or installation, please do not hesitate to contact us and we will be happy to offer you all the assistance needed. The general instructions about the installation of joists are suitable for hardwood as well as Ultrashield and Décowood. The specific instructions for Ultrashield and Décowood installation are in the next few pages.

STORAGE

Déco profiles must always be stored horizontally, on stable, flat surfaces, taking care not to allow materials to protrude beyond the support surface and not to load them with additional weights. Uneven surfaces such as ground or grass, or otherwise unstable surfaces, are not suitable.

Déco profiles are supplied packaged, strapped and protected with film on special pallets to allow the materials to rest correctly; if the pallets are repaired, the same conditions must be repeated. It is compulsory to store the materials under cover, away from direct sunlight, rain and humidity, in dry and ventilated places. Failure to comply with the storage instructions will result in the guarantee being invalidated.

PREPARATION OF THE UNDERSTRUCTURE

Joists must be as straight as possible. It is mandatory that all ends of the boards are placed on and fixed to a joist, designing and assembling the understructure as a result, by doubling the joists where two ends meet. This is because the heads of the boards are the most sensitive area for the movement of the wood and it is important to be well anchored to the substructure, being them fixed with two screws or clips.

1. INSTALLATION ON AN UNSTABLE GROUND (FIG. 1)

In case of installation on an unstable ground (Fig.1) it is necessary to dig the ground according to the dimensions of the joists that will be used and perfectly level the surface. Then, spread a layer of fabric to prevent the regrowth of the grass. In order to stabilize the surface upon which the joists will be laid, it is necessary to use concrete beams sized 40x40cm or similar. It is recommended to build a double frame with two perpendicular rows of joists, the first with 50cm distance (according to the strength of the first frame), the second with a distance of about 30cm (in case of installation with clips) or about 45 cm (in case of installation with screws): this will make the structure perfectly stable. In order to achieve the best stability, Déco recommends to build the substructure in durable wood, even in case of different heights and uneven soil. This recommendation applies in case of installation of hardwood decking as well as Ultrashield or Décowood.

2. INSTALLATION ON A PIERCEABLE GROUND (FIG. 2)

The ground floor must be made flat with a slope of about 2 cm per linear meter. To correct an uneven slope you can use "compensation heels" - that is wooden pieces derived from the same joists and fixed to the ground and/or the joists. The distance between joists must be no more than 30 cm in case of installation with clips and about 45 cm in case of installation with visible screws.

Joists must be fixed to the ground with bolts at least every 50 cm.

3. INSTALLATION ON AN UNPIERCEABLE GROUND (FIG. 3)

If the joists cannot be fixed to the ground (e.g. terrace with waterproof sheeting), build a structure with braces (Fig. 3) or a double frame (see above 1st point).

INSTALLATION OF DECKING

For a proper installation of decking, it is important to wash the boards before proceeding. This is to ensure that the tannins in the wood is released therefore preventing it from staining the areas adjacent to the pavement. A tolerance of 3% in the dimension of boards is acceptable. Because of that, before installation all boards must be cut at 90 degrees in order to uniform lengths. There are two ways to install decking: with visible screws and with clips.

4. VISIBLE SCREWS (FIG. 4)

Visible screws are undoubtedly the most secure method because they allow the boards to anchor directly to the substructure. Despite the overall look is considered less attractive by some, this remains the preferred method.

The procedure is as follows:

- Install the first row of boards, which must be perfectly straight.
- Once having installed all the boards, it will be necessary to use a chisel (or any suitable object to act as a lever) to space the boards evenly at 5 mm.
- It is always necessary to make a pilot hole (Fig. 4.1) and countersink before installing the screws. These must be at a distance of approx. 2 cm from the ends and the sides of the boards in order to avoid cracks in the wood (Fig. 4.2).
- The boards are then installed with the convex side towards the previous ones and firstly fixed with screws only at the ends. The end has to be pushed to the board, this way also determining the correct distance between the two strips (no less than 5 mm) (Fig. 4.2).
- Finally screw the boards to the joists (Fig. 4.2), using a wiretap to draw a perfectly straight line and this way improve the look of the pavement (Fig. 4.3).

5. CLIPS (FIG. 5)

The clips do not allow the boards to be directly fixed to the joists, thus exposing the flooring to the risk of movements. This type of installation is therefore recommended only with proven stability woods. Moreover, the inspection and / or replacement of damaged boards will be very difficult with this type of installation.

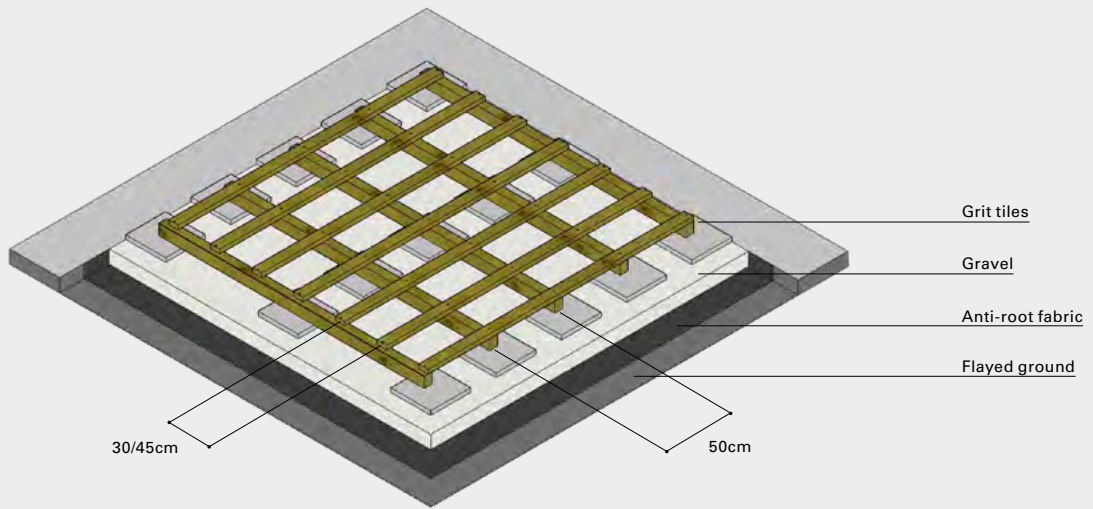
The procedure is as follows:

- Install the first row of boards, which must be perfectly straight and secured with screws on the very outer side (Fig. 5.1).
- Insert the clips into the groove, ensuring that they are properly seated (Fig. 5.2).
- Tighten the clips to the underneath joist (Fig. 5.1).
- Proceed this way with the further rows, then check every 3 or 4 boards that the distance between the first and the last ones is always the same along the whole line. Otherwise you should review the parallels.
- Complete the deck and fix the outer side of the last board with screws.
- A possible pattern is shown in Fig. 5.3.

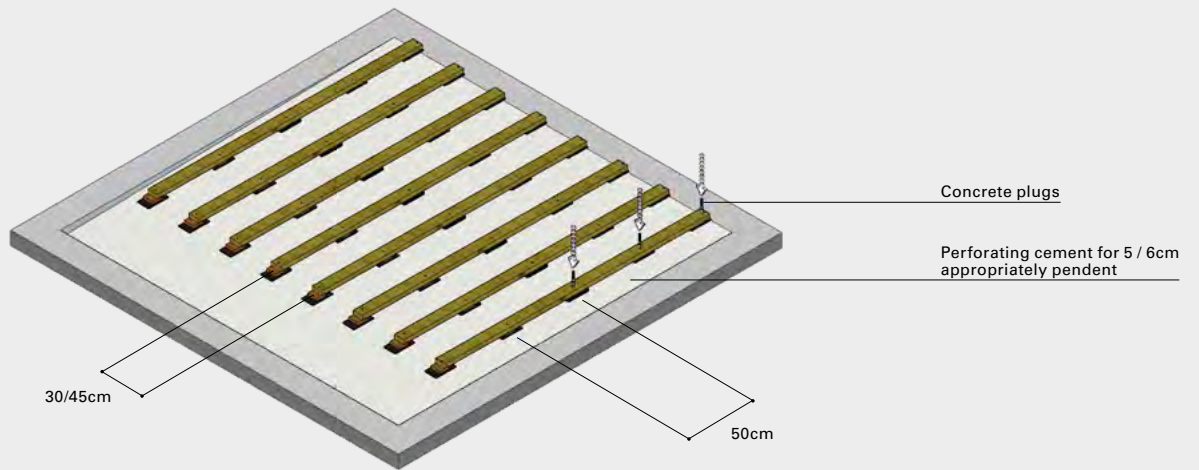
OILING (OPTIONAL)

Once decking is installed, it is recommended to apply two coats of exterior oil, 72 hours one after the other. This operation, to be repeated every 6 months/1 year depending on weather conditions, it is necessary to preserve the colour of the wood and prevent it from cracking, especially on the ends of the boards. On the other hand, the lack of this kind of maintenance does not affect the stability of the floor at all.

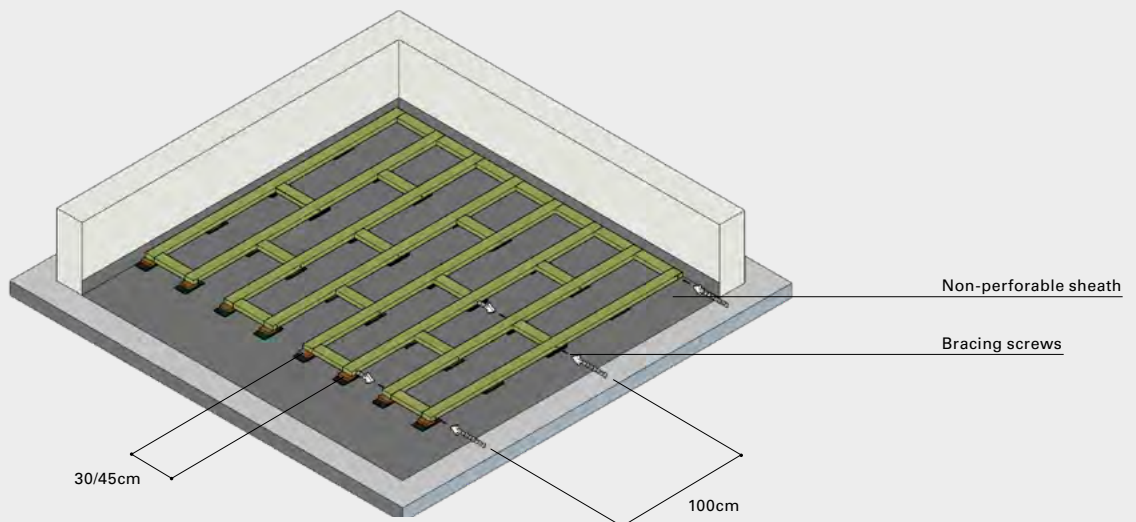
1 INSTALLATION ON UNSTABLE SURFACE



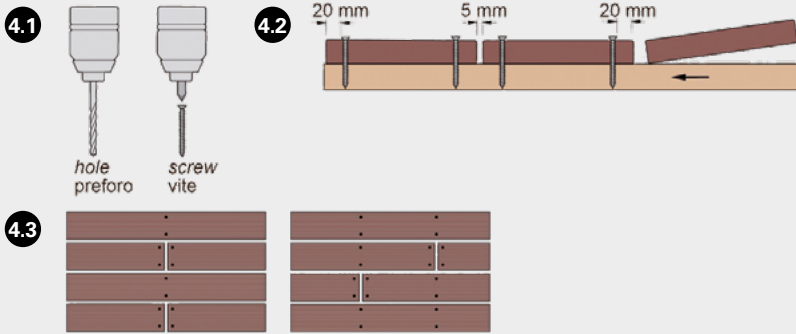
2 INSTALLATION ON CONCRETE



3 INSTALLATION ON WATERPROOF SHEETING

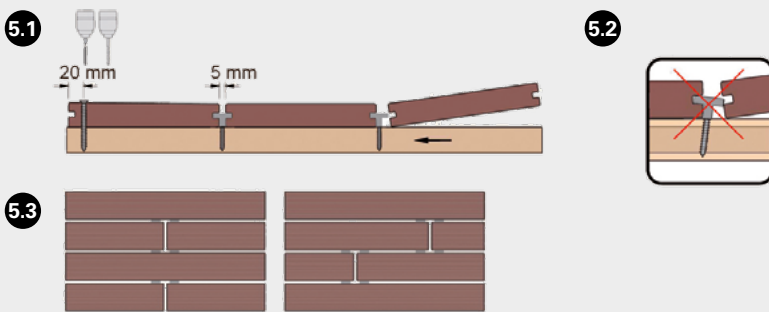


4 INSTALLATION WITH VISIBLE SCREWS



Boards must be fixed with screws in correspondence with each joist. Every board end must be fixed with two screws. If necessary, double the joist.

5 INSTALLATION WITH CLIPS



Boards must be fixed with screws in correspondence with each joist. Every board end must be fixed with two screws. If necessary, double the joist.