

# ASSEMBLY INSTRUCTIONS

## 140 INFINIT (with 3 mm gap)

### DECKING BOARDS

- Please read these installation instructions in detail before starting the installation. If you are unsure, contact the manufacturer or your dealer. For more information, visit [www.woodplastic.eu](http://www.woodplastic.eu)
- The installation instructions are intended for installation of the **140 INFINIT** profile using AN OPTION OF CLIPS FOR the 140 INFINIT profile with a gap width of 3 mm: **STANDARD CLIP for 140 INFINIT profile** (V-shaped) and **CLIP for 140 INFINIT BOTH SIDED**.
- This installation procedure **is not allowed for installation of 140 INFINIT profiles by a roofed pool**. In those cases, an installation method with a 5 mm gap must be used.

#### Important product information

- Composite wood products are not a structural material and cannot be used as material for supporting structures, e.g. for balconies, raised decks and hatches. In these cases, a supporting structure made of different material must be constructed under the composite wood decking. Railings, pergolas, pool roofs and similar elements cannot be anchored only to decking boards or composite wood beams.
- Before installation, store composite wood decking boards on a dry and level surface so that the face (brushed) side of the board is protected from sunlight to prevent uneven colour maturing.
- Do not treat the surface of composite wood decking boards with stains, paints, varnishes, waxes, oils, or other similar products unless recommended by the manufacturer for composite wood materials. Avoid the use of solvents and thinners!
- Composite wood products are designed primarily for outdoor use. Exposure to the sun's UV rays and rain makes them easier to maintain, so consult your dealer when using them indoors.
- Composite wood decking boards, joists and finishing boards undergo volumetric changes (expanding and contracting) as the temperature changes. Therefore, observe the prescribed expansion and ventilation gaps.
- It is a natural product, which may have slight colour variations and shading that suggest the natural appearance of the wood, but do not reduce the quality of the product or its durability. We recommend checking the colour of the boards when laying and mixing the decking on the deck if necessary to emphasise the natural character of the deck. We recommend ordering the boards for the whole deck at once.
- When working with composite wood, you can use the same tools as when working with hardwood. To assemble the composite wood decking, you will need a hand circular (mitre) saw (we recommend a blade with teeth made of carbide), a drill with drill bits and a countersink, an electric screwdriver with bits, a tape measure, a spirit level, a pencil, a rubber mallet, a square, safety glasses.

#### MATERIAL CONSUMPTION ESTIMATE PER 1 m<sup>2</sup>

140 INFINIT boards (140 x 23 mm)	clips	joists
7,25 bm	21 pcs	2,8 lm

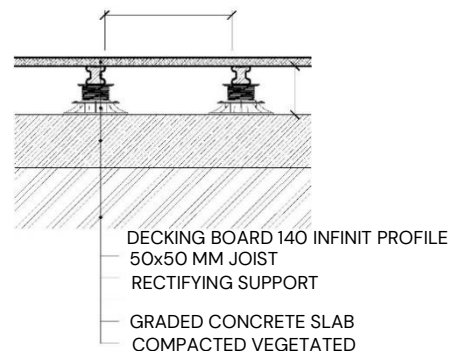
#### 1. Preparation of the subsurface

- 140 INFINIT decking boards create a terrace with partially covered ventilation gaps between the boards, which prevent small objects from falling under the deck, but also make ventilation difficult, so it is necessary to prepare the subsurface so that no water stands in any part of it.
- **Allowed subsurface types:** a sufficiently graded concrete slab with a hydro-insulating coating, a graded hydro insulation (consult the insulation supplier). Do not use elements that soak or hold water, such as concrete bricks, etc., as rests for joists. **The supporting structure must be implemented in such a way that it ensures that water drains from**

**the entire surface of the deck subsurface and that water does not stay anywhere.**

- In the case of gravel subsurface, sufficient water drainage **CANNOT** be guaranteed and therefore a **narrow (3 mm) gap installation CANNOT be used in this case**, please see installation instructions for 140 INFINIT profile with 5 mm gap.
- Joists and decking boards must not be permanently standing in water.
- The subsurface must be stable enough to prevent it from sinking over time.
- For sufficient ventilation, the air gap between the bottom surface of the board and the subsurface **must be at least 100 mm**.
- When embedding the deck in the surrounding ground, **do not cover the sides of the deck by soil**, allow sufficient air access to the sides of the deck. The edge of the deck must be provided with ventilation in the form of a ventilation grille with a minimum width of **100 mm** along the entire length of the deck (such as RELO V).

Fig. 1 Deck composition including heights when using Terafest® 50x50 mm joist



#### 2. Installing Terafest® joists

- The Terafest® 50 x 50 mm joists with **CLIP for 140 INFINIT both sided** are laid freely **with the GROOVE UP**.  
The Terafest® 50 x 50 mm joists with **STANDARD CLIP for 140 INFINIT profile** (V-shaped) are laid freely **with the GROOVE DOWN**.
- The joists do not need to be anchored or embedded in concrete.
- The joists must be underlain throughout the entire surface of the deck so that the height of the underside of the 140 INFINIT profile from the subsurface is **at least 100 mm**:  
Therefore, the use of the low Terafest® 50 x 30 mm joist **is not suitable** for Terafest® 140 INFINIT series deck decking boards.
- Terafest® joists can be substituted with the prescribed spacing, e.g. with the AL support system (AL-joist 40 and 75 mm) only if the **CLIP for 140 INFINIT DOUBLE SIDED** is used together with the AL screw (2/2) and AL nut (1/2) for the **CLIP 140 INFINIT DOUBLE SIDED**.  
These joists must be underlaid so that the resulting height of the bottom side of the 140 INFINIT board above the substructure is **at least 100 mm**.
- **The maximum distance (gap) between the joists (A), see Figures 1 and 2, is given in Table 1.** When combining multiple profiles on a decking, the smallest valid value is used. Do not exceed these values, otherwise any claim will not be accepted.
- For larger or more complex decking, prepare a laying plan before you start laying the base, showing the composition and lengths of the individual boards and supports. Each segment of a decking board (**even short pieces**) should be supported by **at least three joists**.
- If boards are used on footbridges or walkways, they should, as far as possible, be laid perpendicular to the direction of movement of persons

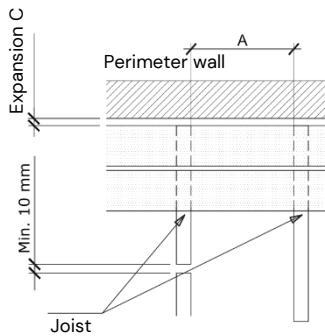
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and the support parallel to this direction. This is especially true for commercial premises.

- Leave an expansion gap of **min. 10 mm** between two adjacent joists and an expansion gap (C) **min. 10 mm** between the joist and the wall or other fixed barrier. (see Fig. 2 and Tab. 2)
- Use levelling pads or pedestals to compensate for any height differences under the joists.
- The unsupported part of the Terafest® 50 x 50 joist can be max. 300 mm. Overhangs without rest can be max. 50 mm.
- The unsupported part of the AL system can be max. 500 mm (AL40) and 1 000 mm (AL75). Overhangs without rest can be max. 50 mm for AL75 then max. 100 mm.
- If possible, cut the supports to the required length before laying the last row of boards.

**Fig. 2 Laying of joists and spacing between them**



**Tab. 1 - Prescribed distance between joists for 140 INFINIT boards see Fig. 2 and 4**

Angle between board and joist	90°	45°	30°
RECOMMENDED distance A between joists for commercial and residential premises according to EN 15534-4. Decking load capacity 1,100 kg/m <sup>2</sup>	250 mm	175 mm	125 mm
MAXIMUM allowed distance A between joists for commercial and residential premises according to EN 15534-4. Decking load capacity 800 kg/m <sup>2</sup>	300 mm	210 mm	150 mm
MAXIMUM allowed distance A between joists for residential premises per ASTM D6662-01 and ASTM D7032-04. Decking load capacity 450 kg/m <sup>2</sup>	350 mm	250 mm	175 mm

### 3. Laying and anchoring of the deck decking boards

- The direction of laying 140 INFINIT boards is clear. Due to the asymmetrical shape of the sides, the 140 INFINIT decking boards can be laid in one direction only to create a partially covered ventilation gap. It is recommended a 2% longitudinal gradient for better drainage of rainwater.

#### WARNING:

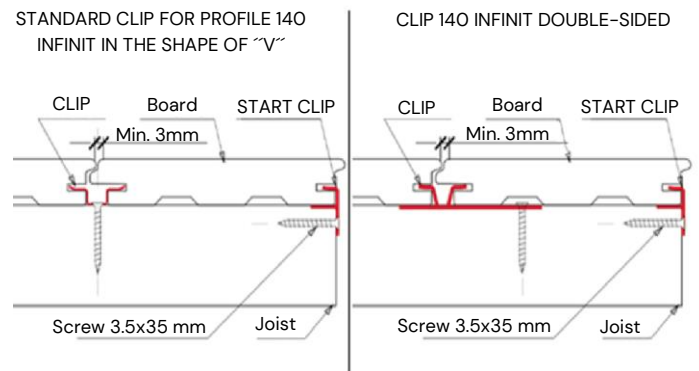
The **STANDARD CLIP for 140 INFINIT profile (V-shaped)** can only be screwed to the joist on one side of the board, the other side almost covers the clip and makes it impossible to tighten the screw.

For the **CLIP for 140 INFINIT DOUBLE SIDED** the restriction of laying possibility only in one direction does not apply.

When using AL- joists for the 140 INFINIT profile, only **CLIP for 140 INFINIT DOUBLE SIDED** must be used together with the AL-bolt and AL-nut for the **CLIP for 140 INFINIT DOUBLE SIDED**.

- Each crossing of the board and the joist must be secured with clips or screws.
- Overlapping of the boards is not recommended (the unsupported board overlap is max. 50 mm).
- Do not adjust or modify the stainless-steel clips.
- Do not use clips from other suppliers.
- **The START CLIP is designed for anchoring the outermost boards.** The first and last decking board is fixed by it. If the building disposition does not allow it, the last decking board at the wall can be attached to the support with a screw or with the **CLICK CLIP**.
- The **CLIP for 140 INFINIT 5 DOUBLE SIDED** and **STANDARD CLIP for 140 INFINIT profile (V-shaped)** is used for fixing the decking boards inside the deck. The clip is inserted into the side groove of the board and is attached to the Terafest® joist with a screw (to the AL joist with AL screw and AL nut). If necessary, the board can be tapped to the clip with a rubber hammer. Once the screw is attached, the next board is slid onto the clip. It is necessary to check that the distance between the boards is **min. 3 mm** (see Fig. 3)

**Fig. 3 Fixing of 140 INFINIT deck decking boards with stainless steel clips and screws**



**Tab. 2 - Minimum expansion gap widths depending on temperature and weather changes - see Fig. 4 and 5**

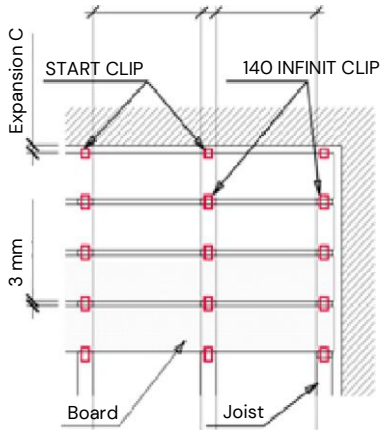
Air temperature	Below +10°C	+10°C to +25°C	Above +25°C in the shade
Expansion gap B between decking boards (adjacent)	5 mm	4 mm	4 mm
Ventilation gap C between the end of the decking board (width- and lengthwise) and the wall	12 mm	10 mm	10 mm

- It is always necessary to pre-drill the hole for the screw for the **START CLIP**, pre-drilling is recommended **CLIP for 140 INFINIT 5 DOUBLE SIDED**. For 3.5 mm screws, use a 2 mm drill bit.
- Tighten stainless steel screws with feeling - remember to set the correct torque.
- When using Terafest® 50x50 mm joists, 3.5 x 35 mm stainless steel screws are supplied with the clips.

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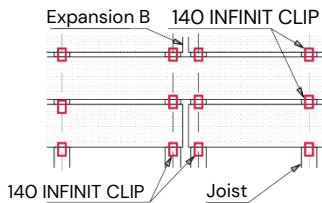
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**Fig. 4 Expansion gaps between boards and between boards and solid wall**



- Always use **2 clips** with 2 parallel joists to connect the decking boards, see Fig. 5. The distance between parallel joists is 10 to 50 mm.
- Leave an expansion gap B between the adjacent boards, see Tab. 2 and Fig. 5.
- An expansion and ventilation gap (C) between the boards and the wall or other solid barrier (see Fig. 4 and Tab. 2) **must be maintained** at minimum 10 mm for the lifetime of the deck

**Fig. 5 Connecting deck decking boards with 140 INFINIT CLIP**



#### 4. Completion of installation

- It is recommended to cut the overlapping boards after all the boards have been laid due to the expansion of the composite wood material.
- The side of the board forming the overlapping gap can be cut off with a circular saw with an attachment and the edge can be cleaned up.
- Use stainless steel screws, e.g. size 4 x 60 mm, to fix the finishing boards.
- The finishing boards are screwed into the middle of the decking board about 10 mm from the 140 INFINIT edge.
- Place for the screw must be pre-drilled for the entire length of the screw (e.g. when using a 4 x 60 mm screw for the finishing boards with a 3 mm drill bit).
- Screw the finishing boards every max 300 mm, shorten the distance if the load is greater or if the finishing board is bent.
- If necessary, the finishing boards can be shaped after heating.
- To cover the supporting structure, it is necessary to ensure air access to the space under the deck by means of a ventilation grille or profile with a minimum width of 100 mm along the entire length of the deck. Fig. 6
- Terafest® finishing boards can be used to cover the rest of the supporting structure.
- In the case of an embedded deck, it is necessary to separate the deck from the surrounding terrain, for example with a concrete curb,

the last board at the curb should be replaced with a fitted ventilation profile (e.g. RELO V).

**Fig. 6 Example of installation of a ventilation grille to cover the supporting structure**

