perform decking

Installation Guide

The future of decking

Sustainable Production + Natural Look and Feel

perform decking

Contents

The System

Perform Decking Capped Deck Profile

Perform Decking (140 x 22mm)

Timber

Sub-Framework Bar (150 x 47mm)

Perform Decking Edge Coverings

Deck Facia (138 x 15mm)
Step Board (138 x 22.5mm)

Deck Facia Board

Step Board

Perform Decking Standard Pack Tub For Decking And Sub-Framework

Installation Clip
Starter Clip
Countersunk Screw 4.0 (x25)
Countersunk Screw 4.0 (x35)
Torx Bit T20
Drill Bit

INSTALLATION CLIP

STARTER CLIP

COUNTERSUNK SCREW 4.0

COUNTERSUNK SCREW 4.0

TORX BIT T20

DRILL BIT

System Design

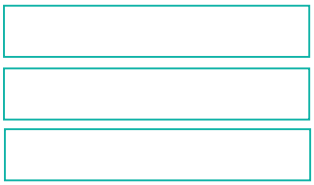
The illustrations show two types of structure which can be constructed to support your new decking.

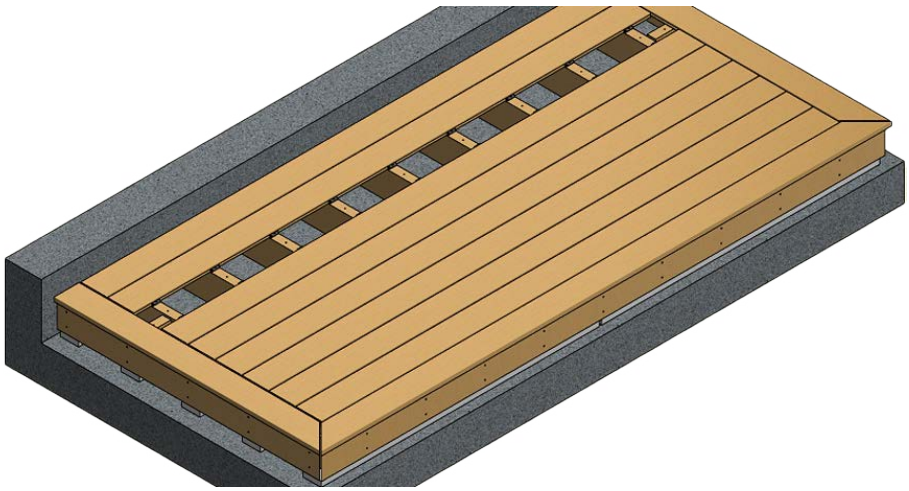
System Design 1.0

The screws and anchors for fastening the sub-framework bars and edge covering profiles are not included in the Perform Decking product selection.

Installation Type

Visually closed longitudinal joints.



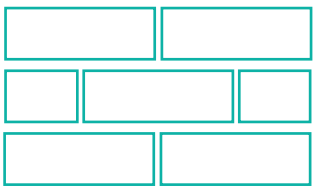


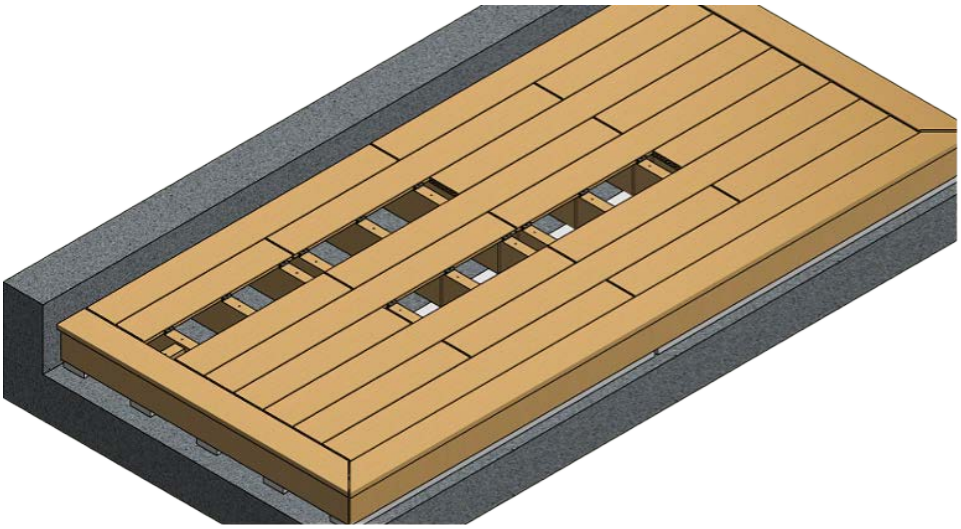
System Design 2.0

The screws and anchors for fastening the sub-framework bars and edge covering profiles are not included in the Perform Decking product selection.

Installation Type

Visually closed longitudinal and transverse joints.





SECTION 1

General Information

1.1 Scope of the installation instructions – what you should know

Please note that the information in these installation instructions is based on standard installation situations. Due to the endless diversity of conceivable floor layouts and terrace sizes, not every individual possibility can be considered in these installation instructions.

If the customer has an issue with the deck they should contact the installer in the following cases:

- Special layouts, e.g. with rounded corners
- Deviating design structures and foundations
- Cases that are not dealt with here
- Other specific questions concerning installation and working with the flooring material that are not answered in these instructions

We would be happy to answer your questions and develop detailed installation recommendations for you.

1.2 Areas of application

Perform Decking Capped Deck profile is ideal as a floor covering for terraces and garden paths, concrete balcony floors, flat roofs and the like. For applications that require approval by building authorities, a load-bearing, closed substructure with sufficiently calculated dimensions is required as a base for the **Perform Decking** profiles and associated sub-framework bars.

1.3 Working with the material - as easy as wood

The **Perform Decking** profile, sub-framework bar, etc. can be sawed, milled or drilled with all typical woodworking tools.

Important: The material must be pre-drilled before inserting any screws to preventing cracking.

1.4 Disposal – what to do with waste

Waste pieces (cutting waste) can be disposed of as household or commercial waste; larger quantities should be disposed of as bulky refuse or at a recycling depot.

1.5 Colour behavior - the natural influence of wood

Perform Decking profile is dye penetrated and will grey naturally over the course of time without losing the basic character of the colour. It consists of the S2 wood-polymer composite (WPC) developed by Perform Decking.

Perform Decking properties due to the wood content

- Colour deviations resulting from UV radiation and moisture are expected and natural.
- A natural lightening occurs in the initial weeks and months, depending on weather influences. This lightening does not represent a defect.
- Colour fluctuations within a profile or a batch are natural and highlight the natural character of wood.

Water spots in the transition area of weathered and partially sheltered terrace surfaces.

Water spots occur due to lignin, a natural constituent of wood that can be washed out under exposure to rain. They can generally be removed with large amounts of clean water and typical household cleaning tools. This effect is minor on surfaces exposed to heavy sunlight or completely rinsed off by rainwater. These water spots do not impair the quality of the terrace profile and do not represent a defect.

1.6 Cleaning and care - fast and easy

The **Perform Decking** profile requires no special care. However, larger instances of soiling should be cleaned off shortly after they occur. To do this, brush off the **Perform Decking** profile lengthwise with water and typical household detergents using a normal household cleaning tool. For stubborn dirt, a high-pressure cleaner may be used (max. 80 bar, at least 20 cm distance from profile surface, no rotary nozzle).

Spots from oil, grease, food, etc. can be removed effectively with products such as the following:

- Stain removal spray
- Power grease remover
- Multi-purpose cleaner

Using a brush can also be very helpful. Afterward, rinse off the profiles well with a large quantity of water.

Algae and moss: Algae and moss as well as mould and fungi can grow on any outdoor surface, including this product. Regular cleaning of the terrace (even when it appears clean) prevents the development of conditions conducive to mould growth.

Ice and snow: De-icing salt can be used on **Perform Decking** profile without concern. To avoid undesirable salt lines, we recommend washing off the terrace surface thoroughly after thawing.

SECTION 2

Planning Principles / Installation Information

2.1 Providing expansion joints

Fluctuations in temperature and moisture levels cause the Perform Decking profile to expand and contract in their length, width and thickness dimensions.

See also section 9, Changes due to climatic influences

The profiles expand by up to 1.5 mm/linear meter of profile length or profile width. This must be taken into account during laying by leaving corresponding expansion joints of 1.5 mm/linear meter on all sides (even for separations between sub-areas see section 7.2). Failure to leave expansion joints can result in stresses that could lead to warping or buckling of the flooring.

The width expansion of the profile is absorbed or compensated for by the hidden installation clip by means of flexible spacers.

Figure 1

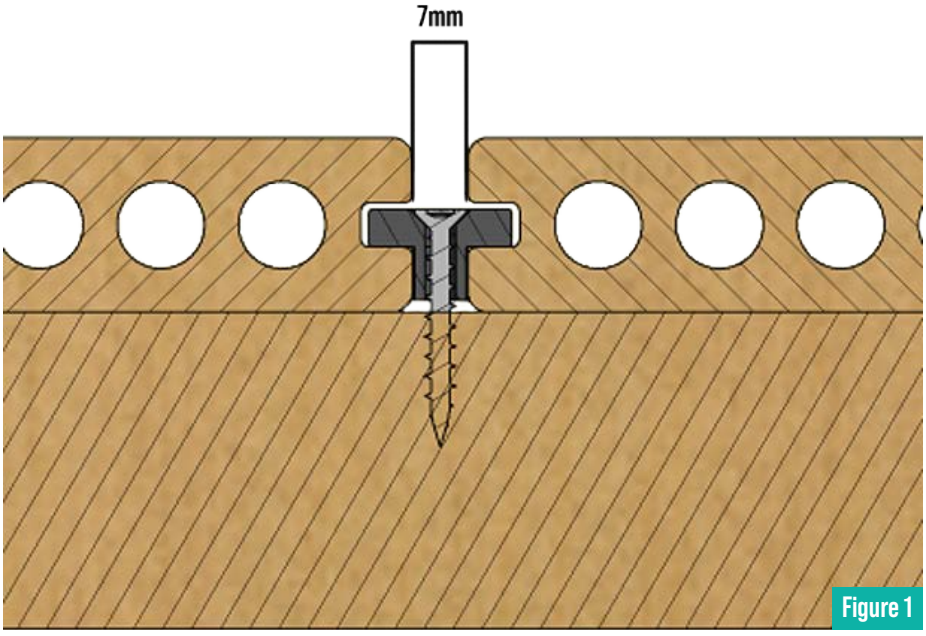


Figure 1

2.2 Planning and accounting for ventilation

The entire terrace structure must have good ventilation. To ensure unhindered air circulation, the open space between and beneath the sub-framework elements may not be filled.

- For terrace surfaces situated at ground level, a border of paving blocks or the like should be provided as separation from the turf or soil.
- A direct connection between the terrace surfaces and turf, soil or walls should absolutely be avoided.

Figure 2

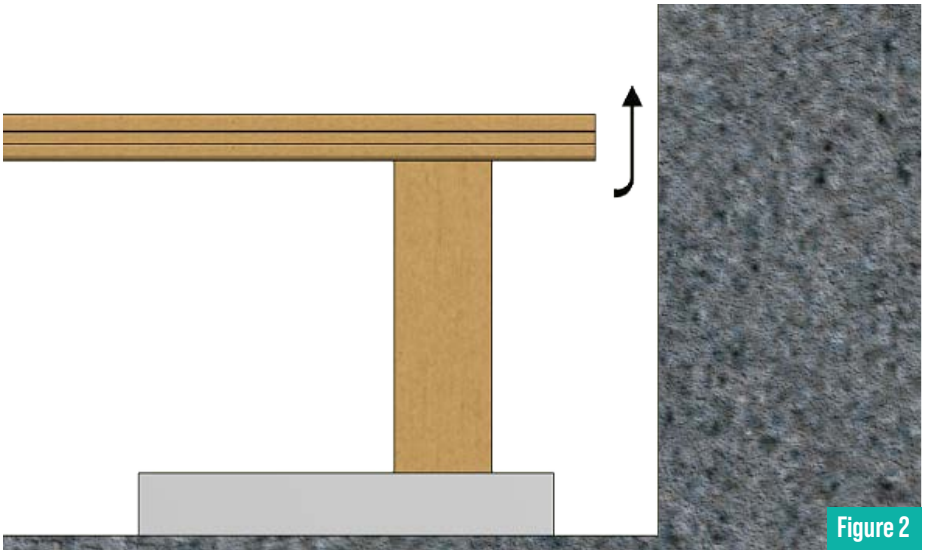


Figure 2

2.3 Surface drainage

The special fastening technique guarantees integrated drainage and a high load capacity by means of a hidden installation clip with flexible spacers. The clip ensures sufficient joint spacing even at maximum expansion to maintain unhindered drainage of surface water. The terrace must be laid with a sufficient incline of 1.5 – 2 %.

Figure 3

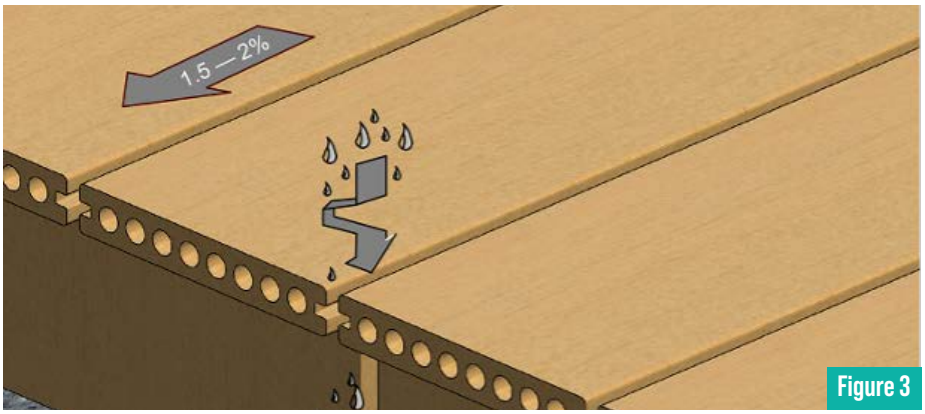


Figure 3

SECTION 3

The optimal foundation

Correct foundation preparation is essential for a perfect installation of Perform Decking profile. Serious problems can be avoided at this stage that would only become apparent when the installation is finished and would be difficult or impossible to correct.

3.1 Inspecting the foundation

Inspect the condition of the foundation. Ensure a sufficiently load-bearing, consolidated foundation of ballast, chippings or the equivalent that is deep enough to prevent frost exposure. Avoid pooling of water underneath the flooring - if necessary, a drain should be installed.

3.2 Preparing the foundation

Natural ground (soil)

- In case of insufficiently consolidated ground, dig out the soil to a sufficient depth (40 – 80 cm)
- Fill the hole with crushed stone and compact the stone by vibration
- Then place an approx. 5 cm thick layer of gravel on top and rake level
- Ensure an incline of at least 1.5 – 2.0 %

Figure 4 (page 9)

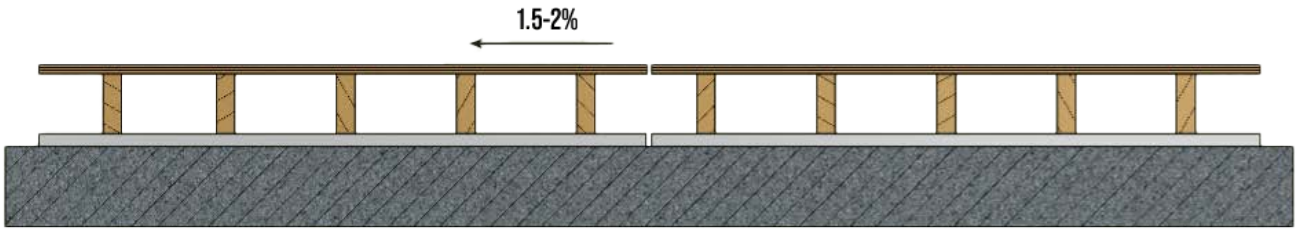
Important: Lay down concrete edging slabs as a base for sub framework bars.

Concrete floors (solid concrete platform)

- Foundation: Load-bearing concrete floor with the required incline to prevent the pooling of water
- Lay the sub-framework bars on the bare concrete platform – the sub-framework bars must not stand in water

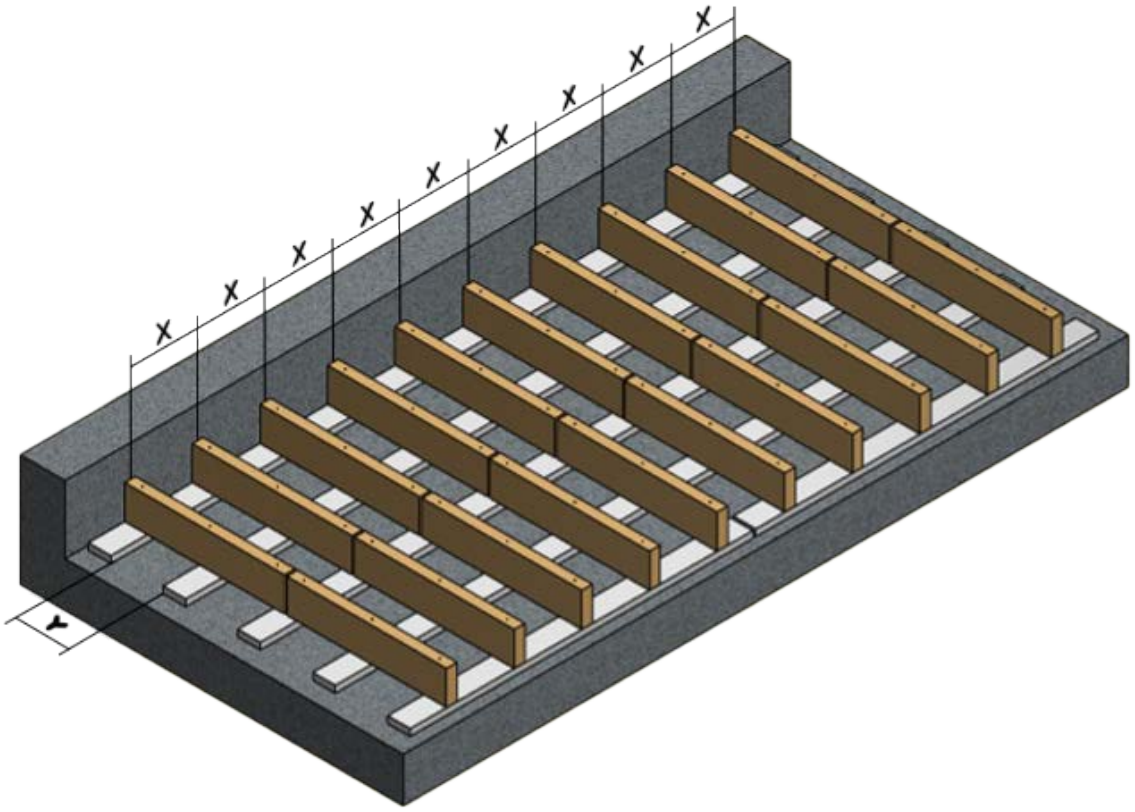
Roof terraces and concrete balconies with top-side sealing layer (bitumen sheeting, etc.)

- Lay rubber pads 100 x 100 x 5 mm or sections of protective matting or the like underneath the sub-framework bars to protect the sealing layer against mechanical damage.



SECTION 4

The Correct Sub-Framework With Sub-Framework Bars



Perform Decking **Perform Decking** profile can be laid on a sub-framework of a timber sub-framework or an aluminium sub-framework. The sub-framework must always have point-like support to prevent the pooling of water (e. g. on concrete slabs, rubber pads, etc.).

Never lay the sub-framework bars in direct contact with soil, on the bed of gravel or on the concrete floor.

4.1 Laying spacing of the sub-framework bars

Always lay the sub-framework bars flat.

- The laying spacing X of the sub-framework bars must not exceed 400 mm (centre-to-centre distance).
- The support spacing Y for the sub-framework bars is max. 400 mm (clear distance between concrete slabs or rubber pads).

For high loads, e. g. carport floors, the laying spacing X and the support spacing Y for the sub-framework bars must be halved.

Spacing of at least 20 mm

- Sub-framework connections to all fixed borders such as walls or the ground must also have expansion joints of at least 20 mm.

  Figures 4 and 5 (pages 9) Mark A
- Sub-framework bar joints must have expansion joints of at least 20 mm and must be arranged with offset surfaces.

  Figures 4 and 5 (pages 9) Mark B

The outermost sub-framework bars laid on both face sides of the Perform Decking Perform Decking profile on each surface (including sub-areas) are called sub-framework edge bars.

4.2 Laying and fastening the sub-framework bars

Perform Decking Perform Decking profile can alternatively be laid on sub-framework with sub-framework bars. Surface expansion free of resistance is accomplished by the installation clips.

SECTION 5

Quick And Easy Installation Of Sub-Framework Bars

5.1 Natural ground and roof terraces. Concrete edging slabs as supports

The sub-framework bars must be vertically fastened at every support point (concrete edging slabs of at least 1000 x 250 x 50 mm with a clear distance between supports of max. 400 mm) with brackets and concrete screws 6 x 170 mm. To compensate for unevenness, additional rubber pads can be placed beneath the sub-framework bars.

Concrete edging slabs

At least 1000 x 250 x 50 mm · Clear distance 400 mm

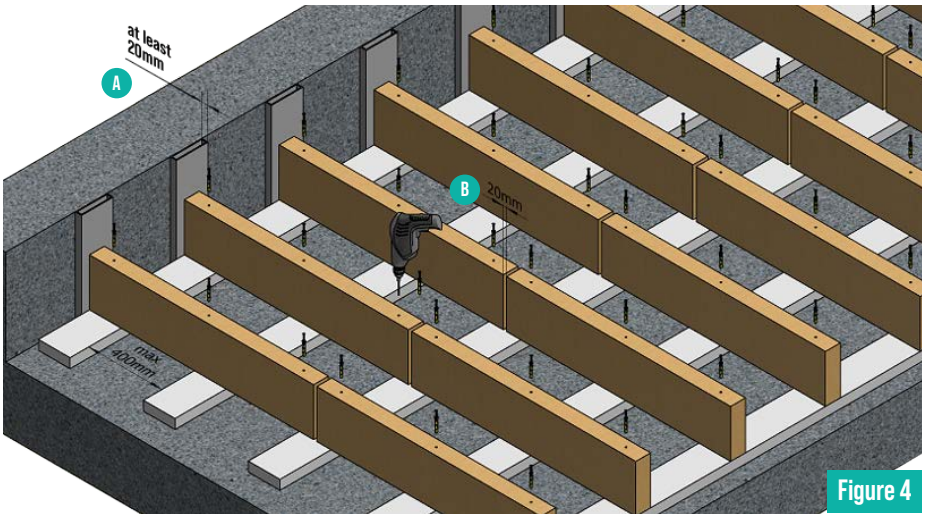


Figure 4

5.2 Concrete floors and roof terraces

The sub-framework bars can be directly screwed to a concrete surface with additional rubber to compensate for unevenness. Fastening material has to be provided by the customer, this is not included in the delivery.

Important: Lay rubber pads 100 x 100 x 5 mm underneath the sub-framework bars.

Edge distance at least 20 mm

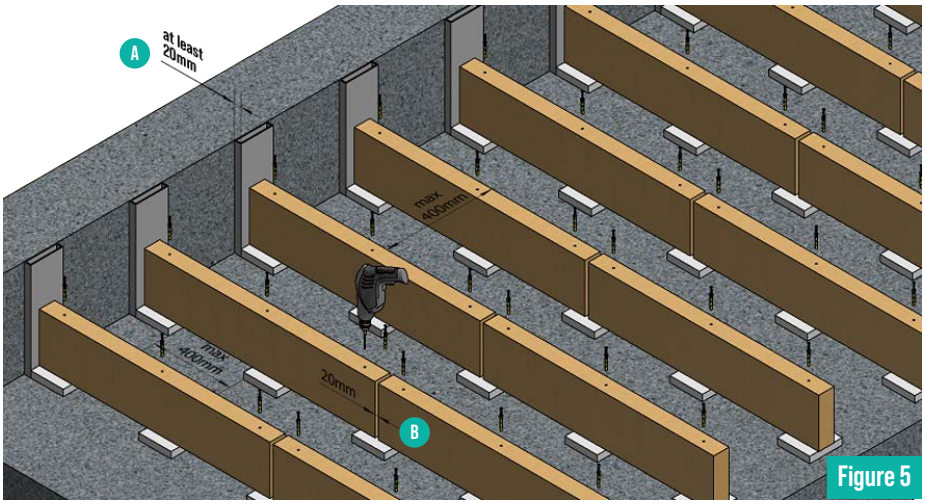


Figure 5

SECTION 6

Laying The Profiles

The fixing of the Perform Decking **Perform Decking** profile is carried out with installation clips and stainless steel countersunk screws 4.0 x 35 mm, and every sub-framework bar must be affixed in this way. One screw must be inserted per installation clip. A minimum of 3 support points (on 3 sub-framework bars) is generally required for the Perform Decking **Perform Decking** profile.

- Overturning the screws reduces the fastening strength and can result in damage over time.
- ***All WPC components must be pre-drilled before installing any screws.***

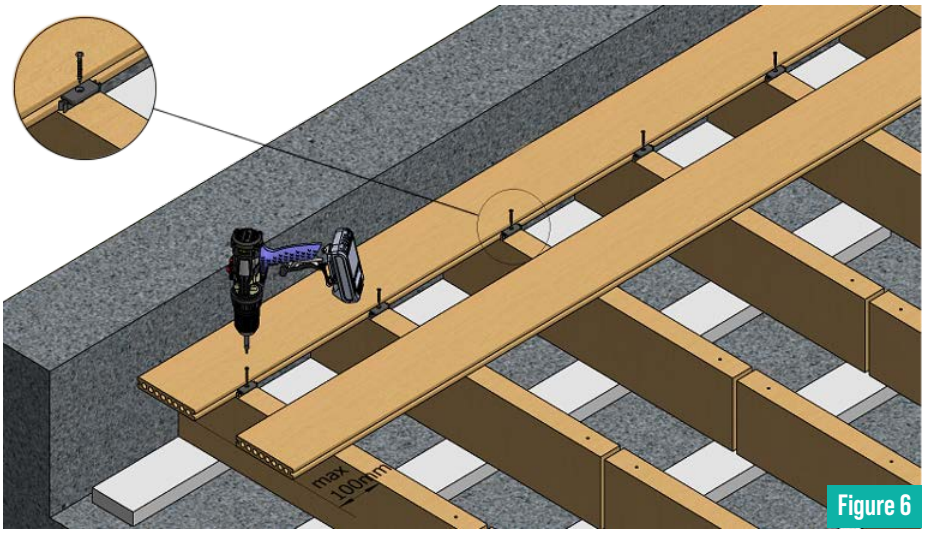


Figure 6

6.1 Laying the starting profile

The starting profile needs to be installed with the hidden Starter clip. Fasten the Starter clip at the edge of sub-framework bar with countersunk screw 4.0 x 25 mm, insert the starting profile with side groove into the Starter clip. Insert a hidden screw with the next installation clip to lock the profile. Pay careful attention to the straight alignment of the starting profile.

Figure 7

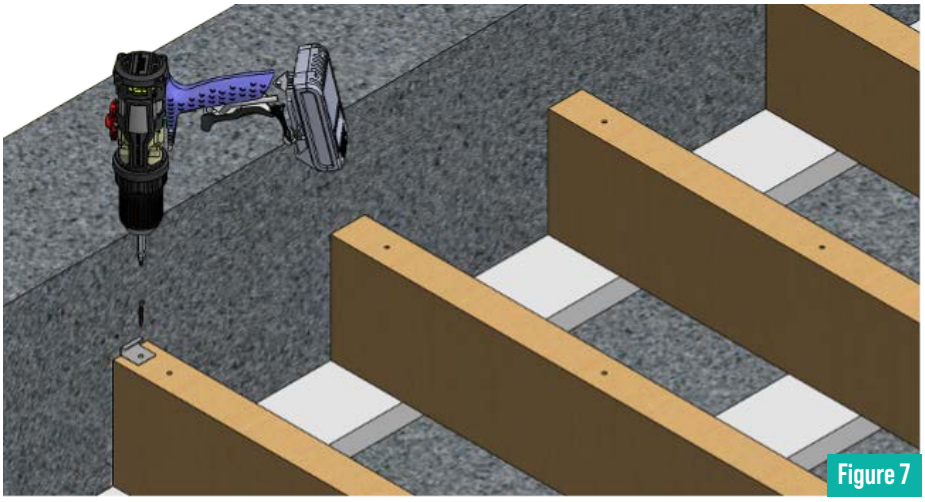


Figure 7

6.2 Continuation of laying

Every additional profile is inserted with the side groove into the installation clip of the previous profile and fastened in turn with hidden countersunk screws 4.0 x 35 mm and installation clips. The installation clip determines the joint width by means of the spacers. The production-related tolerances in the profile coverage width must be taken into account.

Figure 8

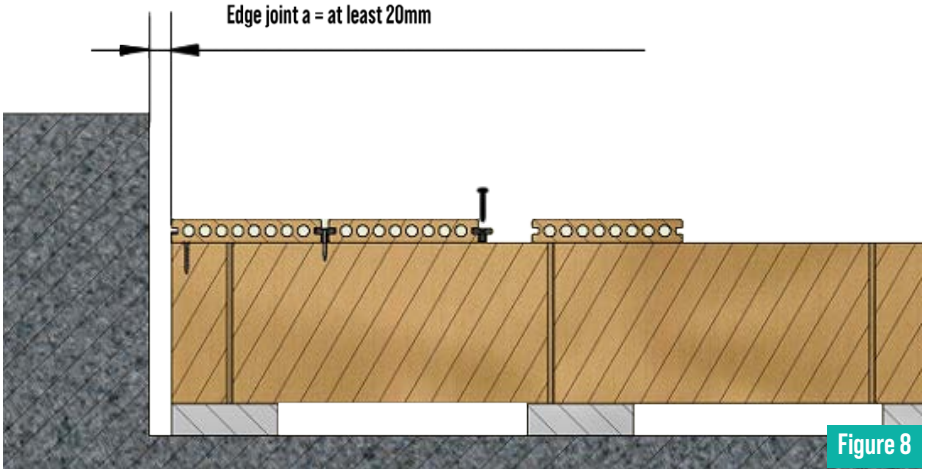


Figure 8

6.3 End of laying

In terms of a close end scenario, the end profile can be fitted by a starter clip as well or individually cut to width and be fixed by a visible screw.

Visible screw connection of the end profile in a countersunk hole of diameter 4mm with 4.0 x 35 mm countersunk screw.

Figure 9

In terms of an open end scenario, see section 8, Edge Covering

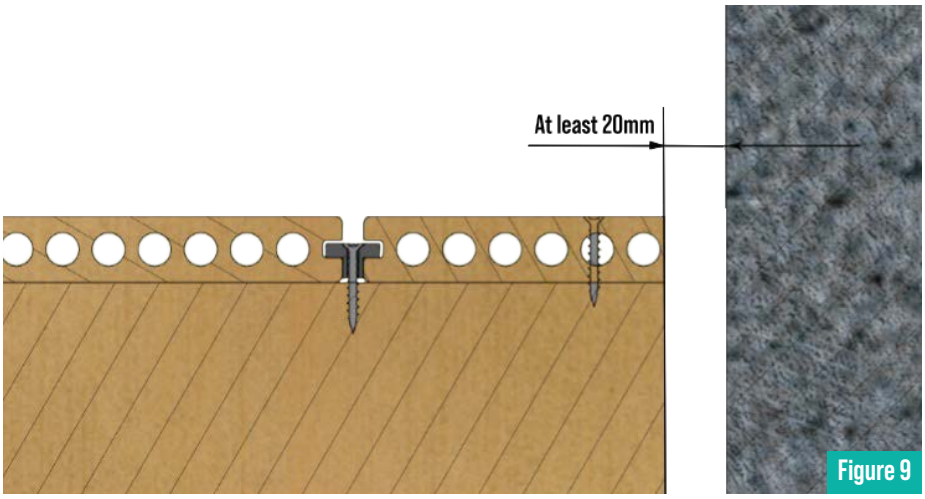


Figure 9

6.4 Profile longitudinal joint

The Perform Decking profile can be laid in a staggered arrangement. There must be one sub-framework bar underneath both conterminal Longitudinal profiles. Longitudinal profile joints must always be cantered on an open butt joint. The size of the open butt joint is at least 7.5 mm.

Figure 10

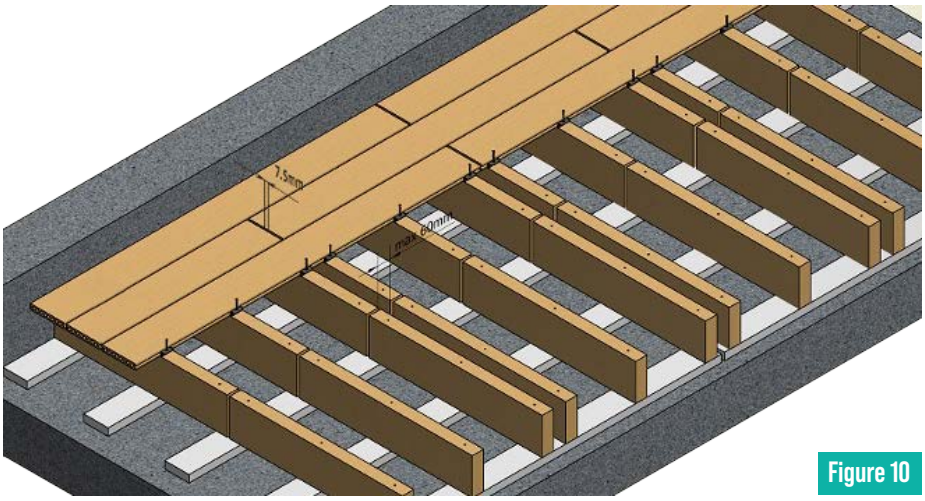


Figure 10

6.5 Profile excess length

The side profile excess length is max. 100 mm.

Figure 11

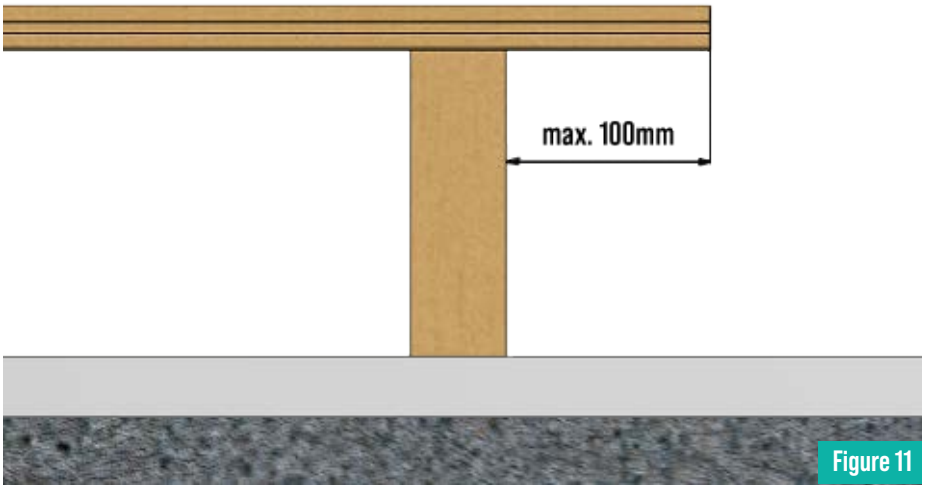


Figure 11

SECTION 7

Expansion Joints

7.1 Areas smaller than 4.8 m in length and width

For areas smaller than 4.8 m in total length, the expansion or edge joints against all fixed borders (e. g. house walls, garden walls, shafts, paving block border, posts, railings, rain pipes, etc.) must be at least 20 mm.

Figure 12

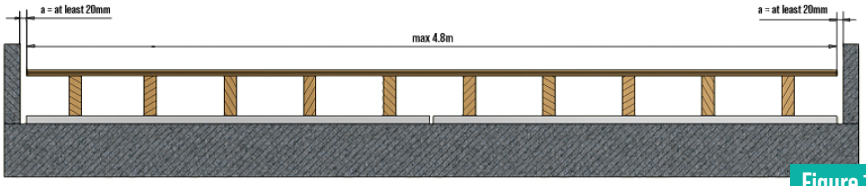


Figure 12

7.2 Areas larger than 4.8 m in length

Expansion joints along the profile length for sub-areas.

Terrace surfaces with a total length (in the profile length direction) greater than 4.8 m must be divided into sub-areas with continuous separating joints between them. The open butt joint is at least 7.5 mm.

Figure 13

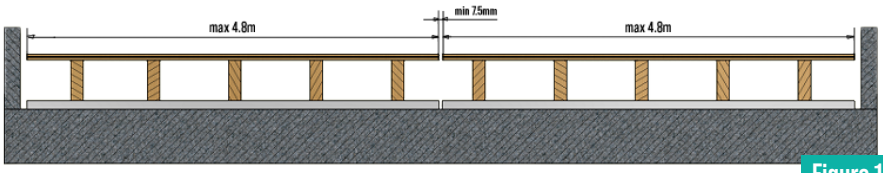


Figure 13

7.3 Expansion joints for mitre laying

When laying with mitre joints, an expansion joint must be ensured at the mitre joint as well. Separating joints must also be created after no more than another 4.8 m of area length.

See Figure 12

Create the mitre joint such that the profile ends of each sub-area rest against a separate sub-framework bar (running parallel to the mitre joint). Fastening of the sub-framework bar in the area of the mitre joint takes place at each end of the sub-framework bar.

Figure 14 (detail image)

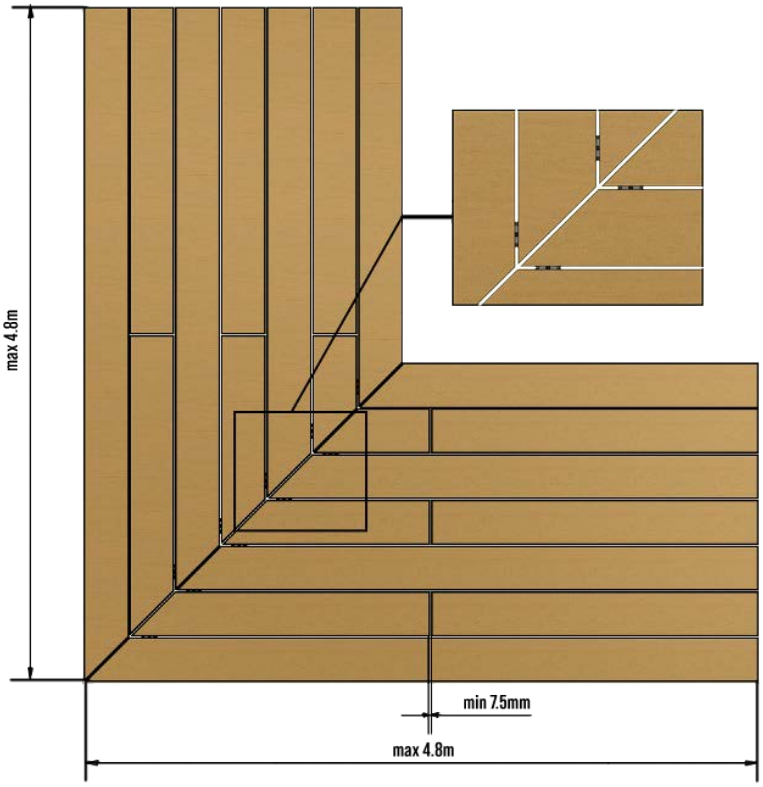
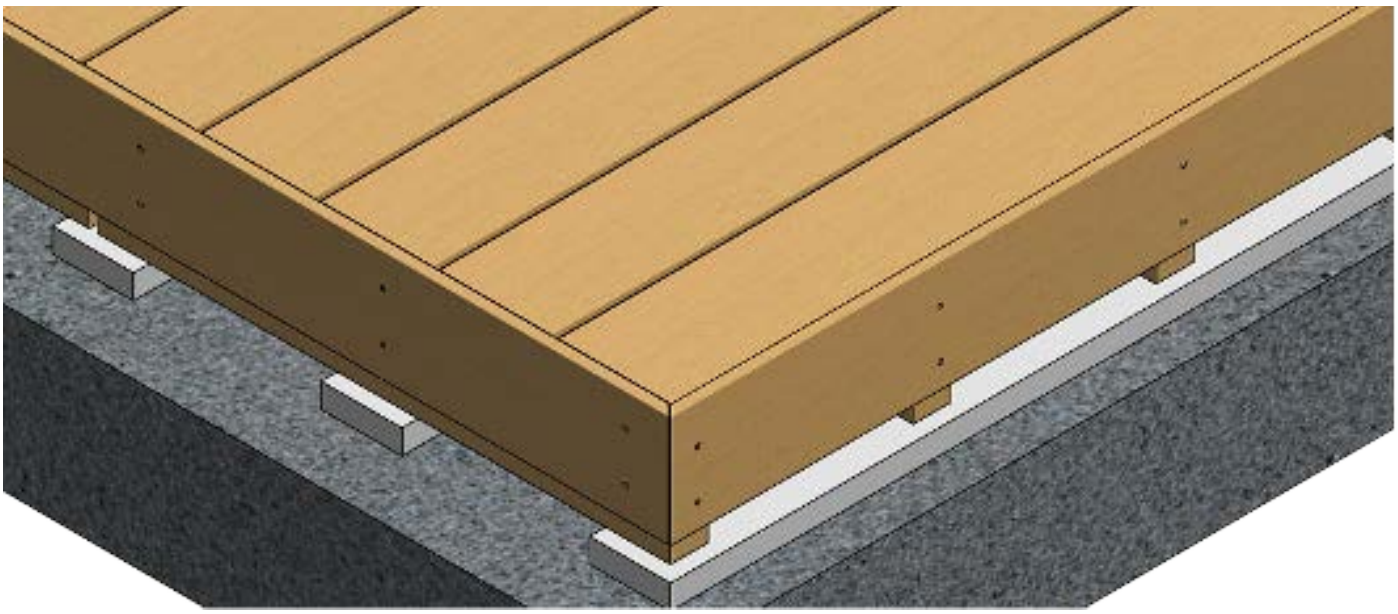


Figure 14

SECTION 8

Edge Covering

8.1 Edge covering with Facia Board



8.2 Edge covering with Step Board

In applications in which the whole sub-framework need to be covered, the Perform Decking Step Board & Facia Board can be used. Fasten the extra sub-framework bars to the concrete support slab on the edges or directly to concrete floor. The edge covering profile is fastened to the extra sub-framework bars with stainless steel counter-sunk screws 4.0 x 35 mm.

Fasten the starter clips on sub-framework and insert the step board in position.

On the length side, slide the fasten clips from the end of board and fix with counter-sunk screws 4.0 x 35 mm.

On the width direction, fix the step board with a visible screw.

Use Facia board to cover the side.

Figures 15 and 16

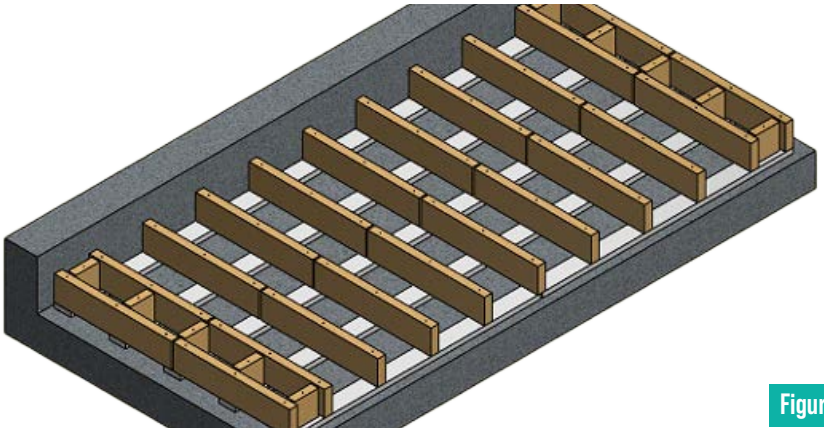


Figure 15

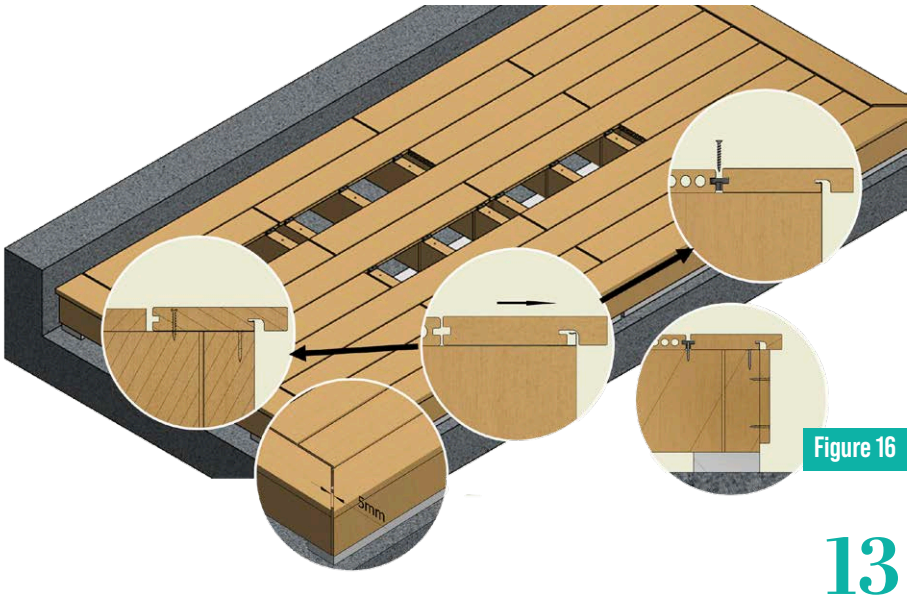


Figure 16

SECTION 9

Changes Due To Climatic Influence

Perform Decking **Perform Decking** profile consists of the high-quality S2 wood-polymer composite (WPC). As with every wood product, this material also reacts to climatic influences in the form of temperature and moisture fluctuations. These affect the dimensions and shape of the product.

Changes to the shape primarily involve the properties of longitudinal elongation, lifting up of the profile ends and changing of the coverage width (and therefore reduction of the joint widths). Within the limits described here, changes to the specified properties are considered normal behaviour of the S2 wood-polymer composite (WPC) and do not represent defects.

9.1 Longitudinal elongation

If a measuring stick with a length of 1 m is placed at the location with the longest elongation, the largest permissible gap between the profile and the measuring stick is 8 mm.

Figures 17

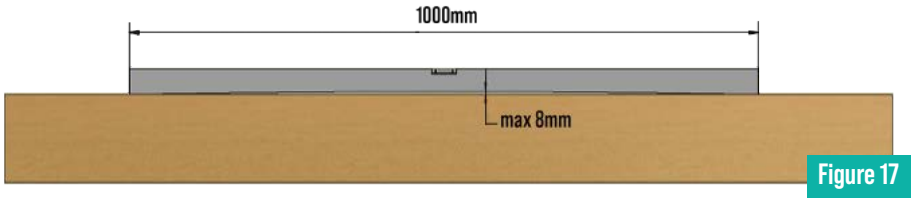


Figure 17

9.2 Lifting up of the profile ends

If a measuring stick with a length of 1 m is placed at the location with the most pronounced flaring, the largest permissible gap between the profile and the measuring stick is 8 mm.

See Figure 18

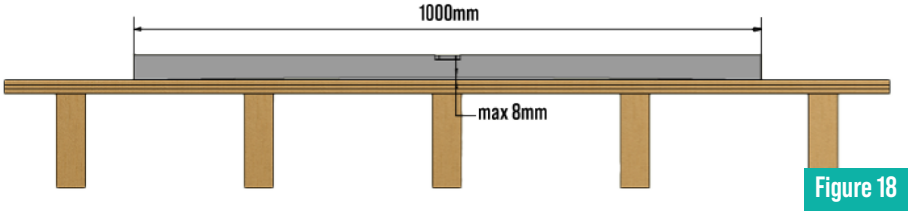


Figure 18