



Installation Guideline for Lunawood Decking



Contents

	Installation Guideline - Foreword	5
01	Initial considerations	6
01.1.	Height and area for the decking	7
01.2.	Type of use: Often or occasional	8
02	Preparing the base	10
03	Choosing a support system	13
04	Assembling the subframe	16
04.1.	Ventilation space under the decking	17
04.2.	Positioning the supports	18
04.3.	Building the subframe	20
05	Installation of Lunawood decking	22
05.1.	Optimising the cut of the decking boards	23
05.2.	Considering the side of the board to use	23
05.3.	Attaching the decking boards	24
05.4.	General recommendations for installing Lunawood decking	27
06	Decking construction details	30
06.1.	Covering the sides of the decking	31
06.2.	Ensure drainage against building façades	33
06.3.	Remove vegetation from under and around the decking	34
06.4.	Separate the decking from swimming pool edges	34
07	Materials handling and storage	38
07.1.	How to storage timber on the construction site	39
07.2.	Handle with care	39
08	Tools and equipment needed	40
08.1.	Materials	41
08.2.	Tools	41
08.3.	Personal Protective Equipment (PPE)	41
08.4.	Tips for working with Lunawood Thermowood	41
09	Cleaning and maintenance	42

Installation Guideline

Foreword


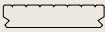
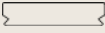






Lunawood Thermowood decking is an ecological and chemical-free wood material that retains its shape in all seasons. Its natural look and feel are combined with excellent durability and dimensional stability, even in the most challenging climate conditions. Being toxic-free, Lunawood is safe to use. What's more, the wood is lightweight which makes it easy to handle. The Luna Profix hidden fixing clip enables quick and easy installation and creates a clean, elegant appearance without visible screws.

Ventilation is a key element in designing a Lunawood Thermowood decking. A long-lasting deck requires at least 100 mm of continuous ventilation space under the supporting beam frame. Another key element is the direction of passage on the decking to avoid the risk of slipping. Decking, which will be subject to heavy use, such as public decking, should only be built by a qualified professional. When designing a public decking, note that Lunawood's thermally modified wood is made of spruce or pine, which are softwood species. This means that the surface of the decking will wear out faster than decking made with a harder wood species. The brushed surface of Lunawood Thermowood helps to fade any visual harm.

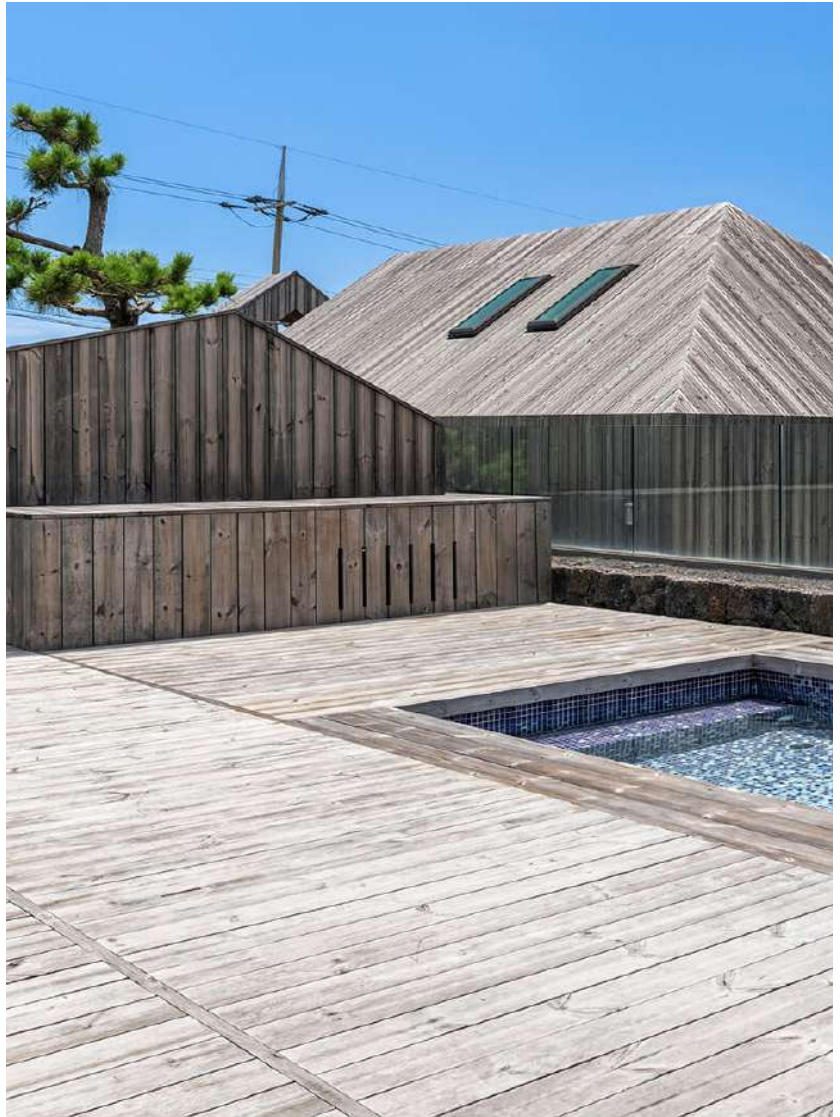
Decking must withstand wear and tear, as well as rain, humidity, and sunlight. However, proper surface treatment and cleaning regularly will ensure your decking retains its beautiful appearance and good condition for many years. Surface treatment also helps to preserve your decking's the original colour and reduce cracking and splintering typical to wood materials over time. Without treatment, Thermowood gradually turns grey due to UV and weathering. The grey colour does not affect the wood's resistance to decay.

This Lunawood Decking Installation Guideline is based on the premium properties of Lunawood ThermoWood® and the best practices and research in wood construction. When building your decking, you should always follow local building codes and instructions and take the local circumstances into consideration in general. For this reason, we recommend working with professionals who know the material and know how to properly install wooden decking. Contact your local Lunawood supplier for comprehensive and up-to-date information.

Selection of Lunawood decking

	Product name	Surface	Fixing system	Lunawood decking fixing product
	Luna Deck 2 Profix 2 26x92	Grooved	Hidden fixing	Profix 2 Plus or Profix 2
	Luna Deck 2 Profix 2 26x117	Grooved	Hidden fixing	Profix 2 Plus or Profix 2
	Luna SHP Profix 2 26x117	Planed	Hidden fixing	Profix 2 Plus or Profix 2
	Luna SHP Profix 2 26x140	Planed	Hidden fixing	Profix 2 Plus or Profix 2
	Luna SHP Profix 2 26x140	Brushed	Hidden fixing	Profix 2 Plus or Profix 2
	Luna SHP Profix 3 32x166	Brushed	Hidden fixing	Profix 3
	Luna SHP Profix 3 42x185	Planed	Hidden fixing	Profix 3
	Luna SHP 26x117	Planed	Visible screws	-
	Luna SHP 26x140	Planed	Visible screws	-

■ The Wind Hill -
a private village,
South-Korea,
doojin hwang
architects.
Photo: Lunawood



■ Private house,
South Africa.
Starkey Architects.
Photo: @ johannlourens-
photography

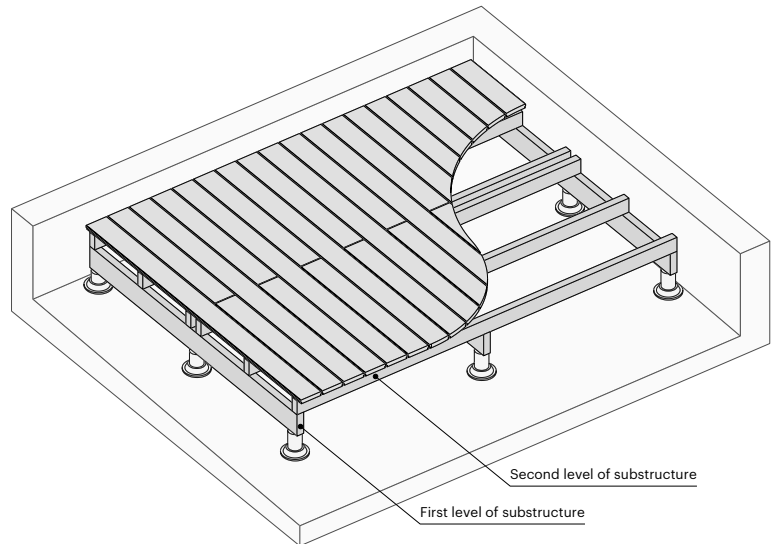
Initial considerations

01

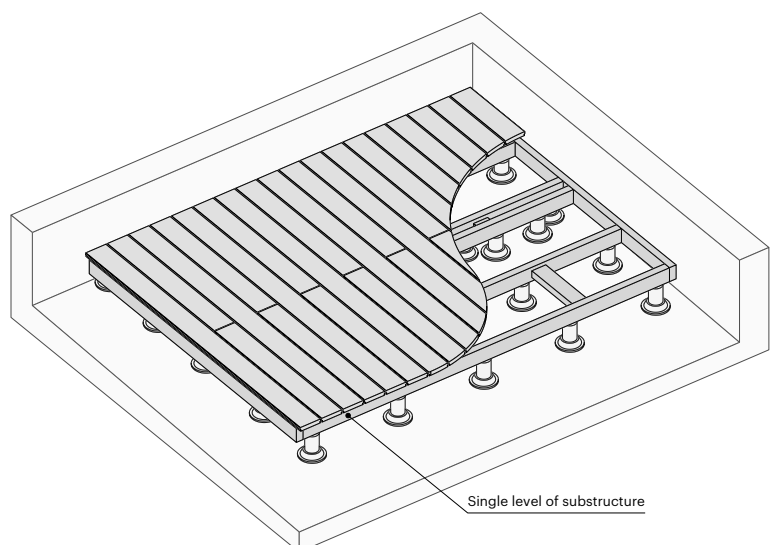
01.1. Height and area for the decking

Before you start building your decking, consider the available area and height for all the decking components.

Ensure proper water drainage and ventilation of the wood elements (see illustrations below). We highly recommend installing Lunawood Thermowood decking boards on a double-level subframe and ensuring sufficient clearance from the ground.



A single-level subframe is also possible in cases where the clearance is insufficient. However, the ventilation in the air cavity under the decking will decrease, and installation will be more complicated. This installation method requires that you plan the position and length of the decking boards before installing the lower supports. This will ensure that all the boards fit correctly onto the subframe.



Whenever possible, however, we recommend building a double-level subframe according to the instructions in this guideline.

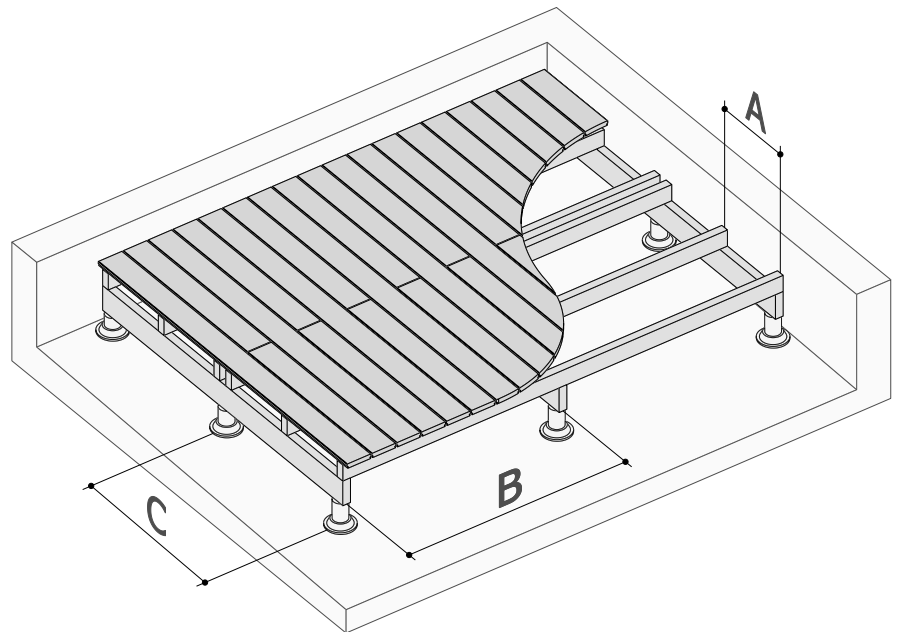
01.2. Type of use: Often or occasional

Considering how much you will use your Lunawood decking is necessary for choosing the right decking boards. Do you intend to use it often or just occasionally?

Frequency of use determines the following general factors which influence the decking design:

- Distance between supports in the ground
- Distance between subframe elements
- Thickness of the Lunawood decking boards

The chart below shows the distance between the elements for a double-level subframe as well as board thicknesses according to frequency of use.

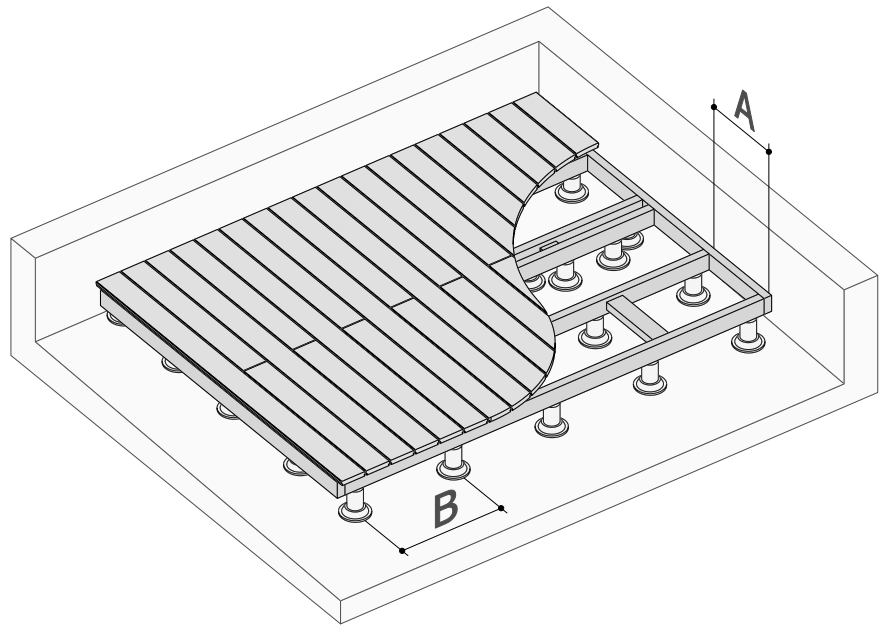


Decking installed on a double-level subframe

	Lunawood decking board thickness (mm)	A Maximum distance between second-level subframe elements (mm)	B Maximum distance between first-level subframe elements (mm)	C Distance between ground supports (m)		Estimated number of supports/m²	
				45x95 mm	45x145 mm	45x95 mm	45x145 mm
Low use	26	450		0.80	1.20	0.89	0.60
	32/40	600	1.40	0.80	1.20	0.96	0.64
High use	32/40	450	1.30	0.45	0.70	2.22	1.43

The measurements in the charts above are only to guide you.

The chart below shows the distance between the elements for a single-level subframe as well as board thicknesses according to frequency of use.



Decking installed on a single-level subframe

	Lunawood decking board thickness (mm)	A Maximum distance between subframe elements (mm)	B Distance between ground supports (m)		C Estimated number of supports/m²	
			45x95 mm	45x145 mm	45x95 mm	45x145 mm
Low use	26	450	1.40	2.00	1.59	1.11
	32/40	600	1.30	1.80	1.28	0.93
High use	32/40	450	1.00	1.40	2.22	1.59

The measurements in the charts above are only to guide you.

The decking boards and the subframe must be supported at three points, at least. During the design phase, a qualified technician must verify that the ground bearing capacity and the load bearing capacity of the support system is enough for the intended frequency of use.

Preparing the base

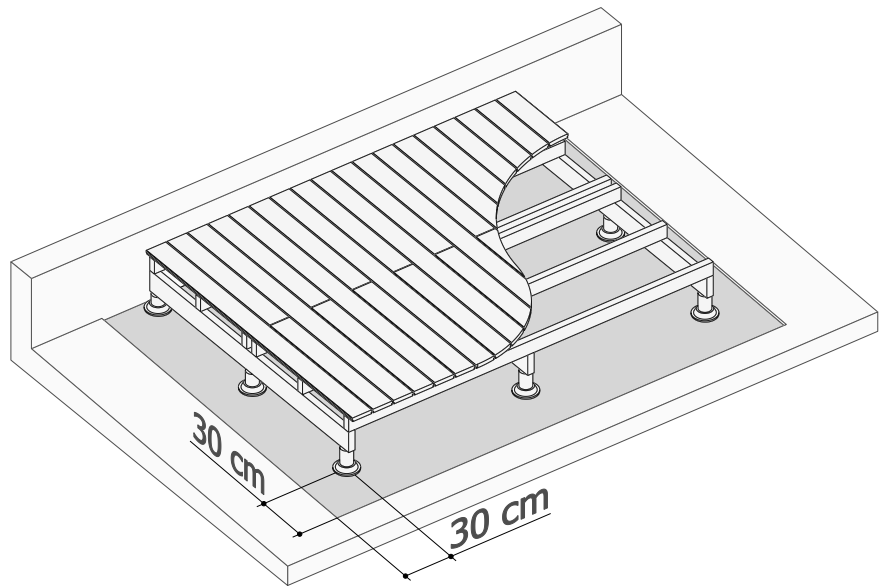
02

Wooden decking must be above the ground to ensure ventilation and water drainage under the decking. These two factors are essential for the good performance of any wood element exposed to the elements.

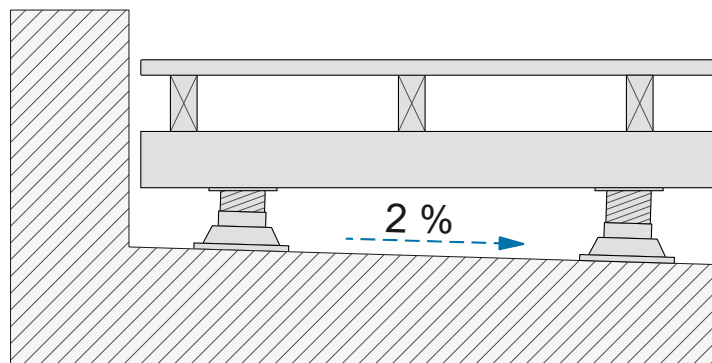
The base must have enough bearing capacity to support the decking and the weight to be applied to it. Natural soil, gravel, sand, cobblestone pavement and concrete slabs are all suitable to use for the base.

A. Natural soil

Building your decking on natural soil will require some preparations. To ensure adequate ventilation, the area where the decking will be located should be at least 30 cm larger on each side than the decking surface itself.

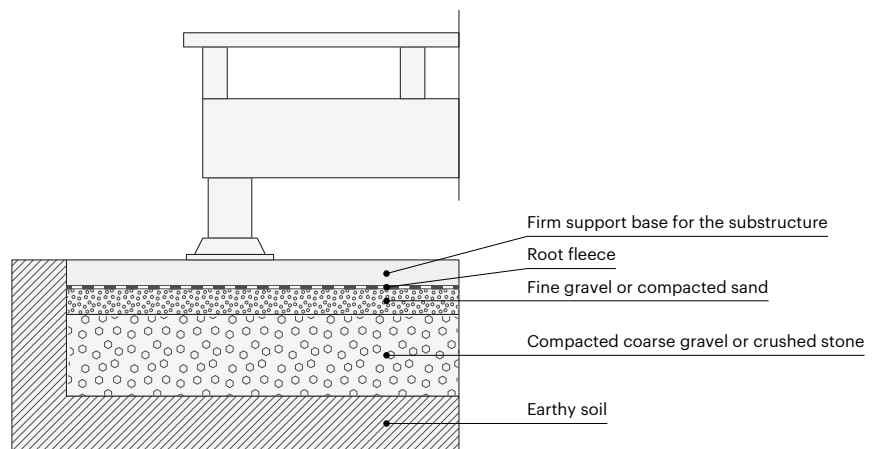


The ground must have a slope of at least 2% to allow drainage and avoid water accumulating under the decking.



Preparing the ground

- Remove the topsoil and smoothen out the surface.
- Make a small drainage trench to improve water infiltration into the soil.
- Make sure that the base can bear the weight of the decking.
- Make sure that the soil is water-permeable, insulated from frost and well compacted.
- Use compacted coarse gravel or crushed stone, about 15 cm thick, to make a base layer.
- Cover it with a layer of fine gravel or compacted sand, about 5 cm thick.
- Lay water-permeable weed mat on the ground to prevent weeds from growing under your decking.
- Lay the base for the subframe: concrete slab, adjustable supports, flagstones, etc.



B. Installation on pavement/slabs

If the base on which the decking will be installed is impermeable (concrete slab, cobblestone pavement, flagstones, etc.), it will only be necessary to ensure enough slope on the surface to allow adequate drainage for rainwater.

Choosing a support system

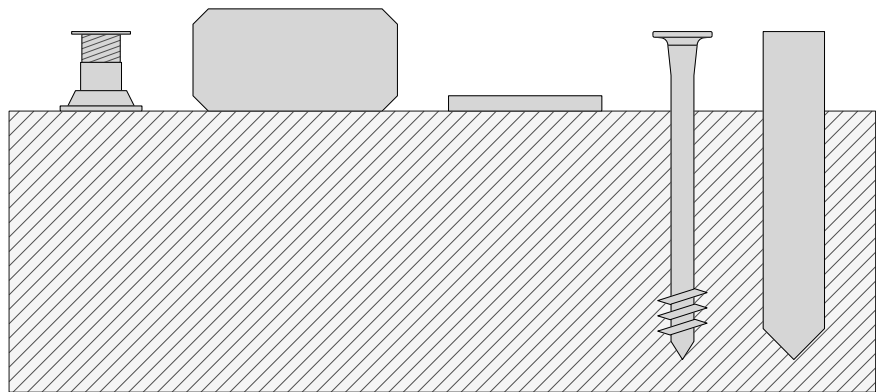
03

Once the base has been prepared, it is time to choose the support system on which the subframe and Lunawood Thermowood decking will be installed.

The Lunawood decking system can be built on different types of supports:

- Adjustable supports
- Concrete blocks
- Cement slabs or flagstones
- Metal screw piles
- Wooden foundation piles driven into the soil (*)

(*) The wooden pile is in direct contact with the soil and, therefore, is in Use Class 4 (wood in direct contact with ground and/or fresh water and often wet). Make sure that you choose a wood species and type of preservative treatment (if necessary) can withstand such conditions well. We do not recommend using wooden foundation piles in areas of high humidity; metal or plastic supports are more suitable for the purpose.



Whatever support system you decide to choose, it must allow ventilation, and water must be able to drain from under the decking.

Support type	Advantages	Disadvantages
Adjustable supports	Quick and easy assembly. Height and slope easy to adjust. Suitable for aluminium and wooden subframes.	Require a smooth, stable base.
Concrete blocks	Provide adequate space between the wood and ground. Do not require a lot of precision when laying them.	More difficult to level. Require the installation of a spacing element under the subframe to prevent the rising damp by capillary action.
Cement slabs or flagstones	Simple and easy installation.	More difficult to level. Little space between the subframe and the ground. Require the installation of a spacing element under the wooden subframe to prevent rising moisture due to capillarity.
Metal screw piles	Simple and easy installation. Do not require a lot of precision in preparing the base. They can be reused. Suitable for temporary structures.	The installation requires machinery fit for the purpose. Cannot be used in humid environments.
Wooden foundation piles	Suitable for installations in natural environments where environmentally friendly solutions are preferred.	Cannot be used in humid environments.

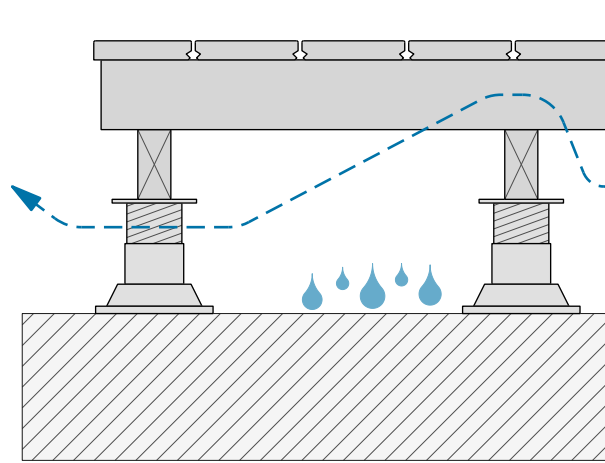
The distance between the supports depends on how frequently the decking will be used and the amount of weight it will need to withstand, the size and span between the subframe elements and the load bearing capacity of each support as per the supplier's recommendations. Consider the supplier's recommendations when planning the decking.

Assembling the subframe

04

This step involves making the subframe on which to assemble the Lunawood Thermowood decking boards. The subframe not only provides support for the decking, but it also separates the decking from the ground, allowing for a dry and ventilated cavity under the decking to:

- Keep the wooden decking boards dry
- Prevent the rise of moisture from the ground
- Drain the possible rainwater from the decking

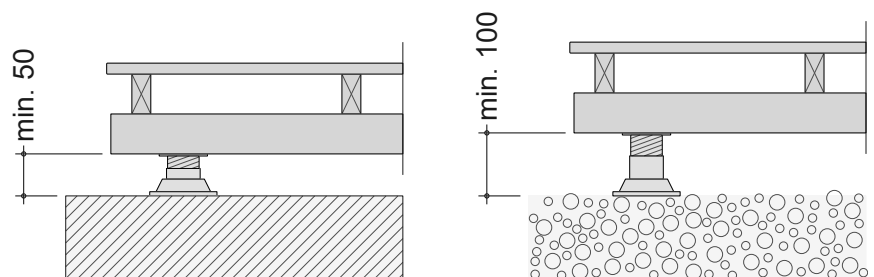


04.1. Ventilation space under the decking

We strongly advise against installing Lunawood Thermowood decking boards directly on the ground without a subframe.

Allow some free space between the ground and the subframe elements to ensure ventilation and water drainage. This space should have a minimum height of:

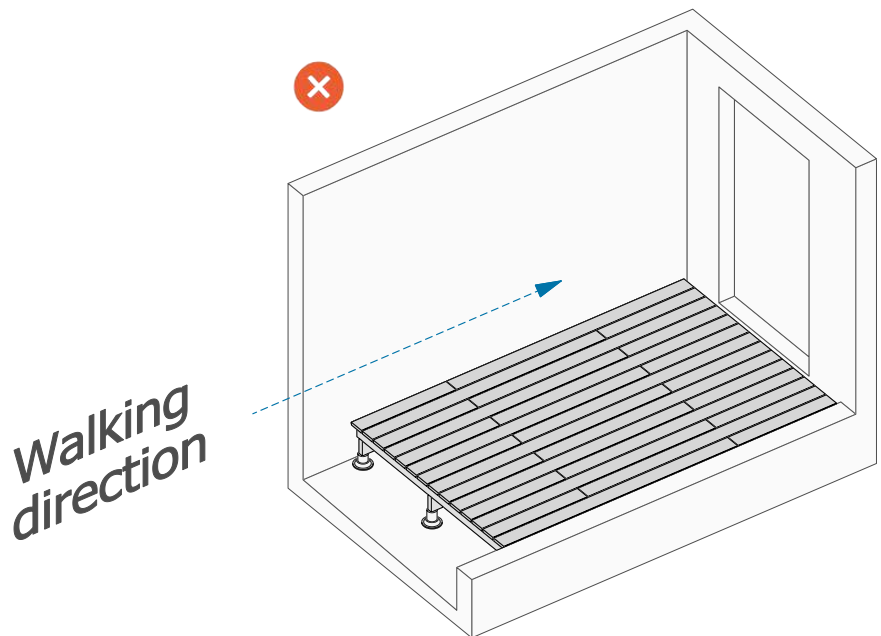
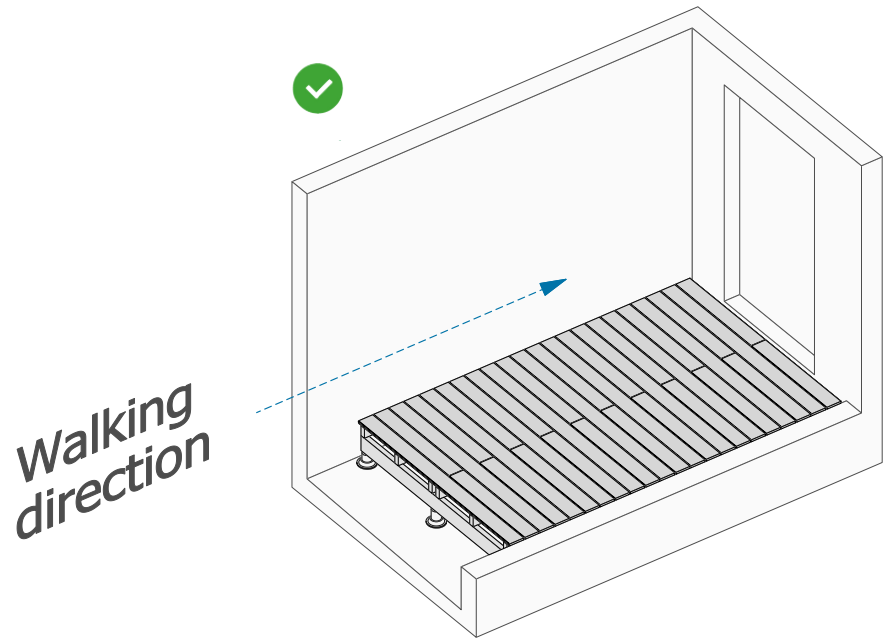
- 50 mm if the decking is installed on a waterproof surface (concrete slab, cobblestone pavement, flagstones, etc.)
- 100 mm if the decking is installed on natural soil.



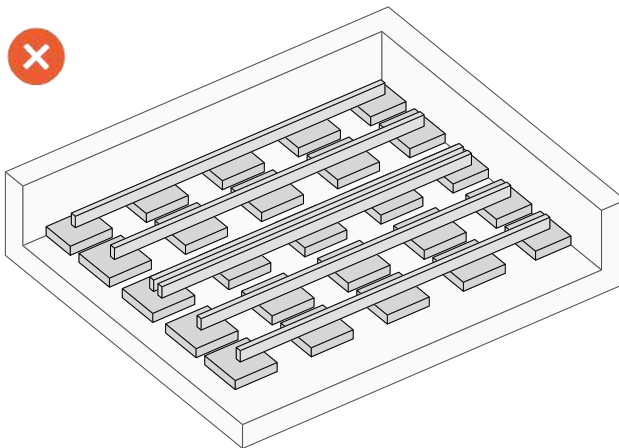
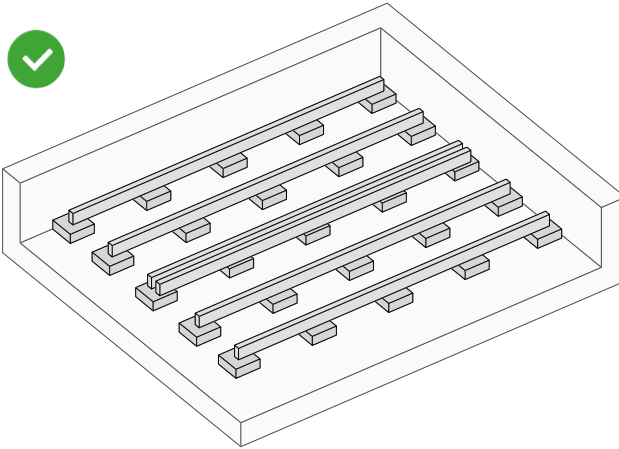
04.2. Positioning the supports

The final orientation of the decking boards determines the layout of the subframe
- consider this right from the initial phase of setting out the supports.

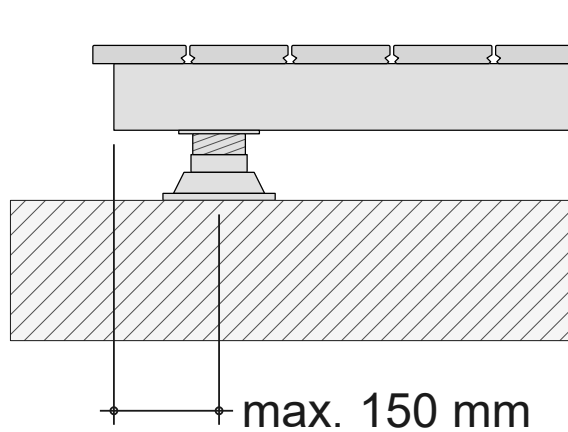
Align the decking boards as perpendicular as possible to the main direction of walking reduce the risk of slipping.



If you install the decking on a single-level subframe, be sure to leave enough distance between the support points. The total area occupied by the supports should not exceed 20% of the total area of the decking to ensure ventilation underneath.



To prevent the supports from protruding beyond the perimeter of the decking and to allow placement of the side elements, you can move the first support towards the centre of the decking a maximum of 150 mm.

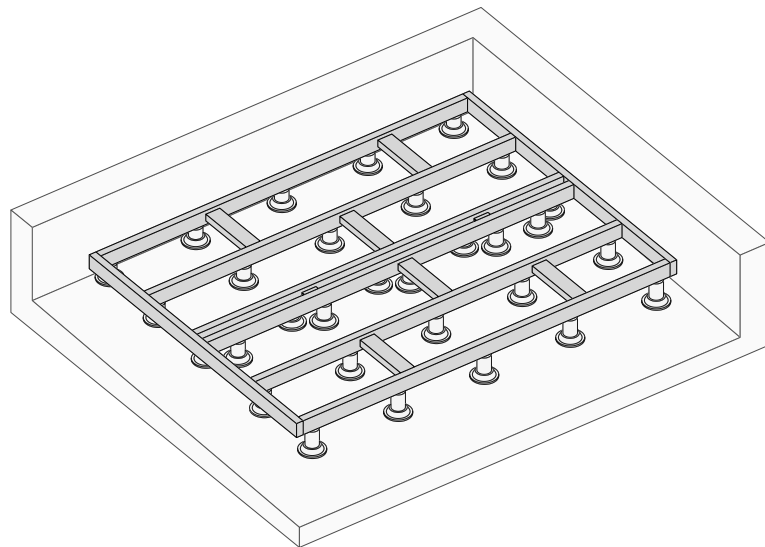


04.3. Building the subframe

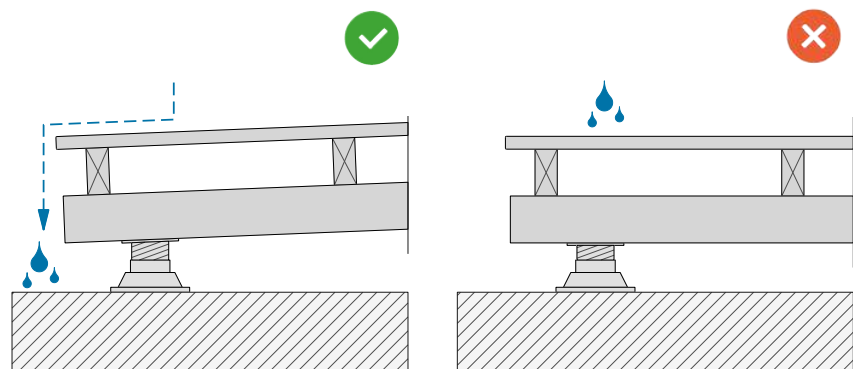
The subframe can be of metal or wood. If you choose to build a wooden subframe, the elements should be pressure impregnated timber or a naturally durable species suitable for Use Class 3.2.

A metal subframe is the best option when the distance between the subframe and the ground is less than the minimum distance.

For a single-level subframe, use support beams to support and combine the load-bearer joists. Place the support beams between the load-bearer joints. Place the support beams min. 20 mm lower than the top edge of the load-bearing joists to ensure air ventilation between support joists and the decking boards.



Sloping the decking by 1–2% helps to carry rainwater that may run off the decking as far as possible from the building. Without this sloping, water may accumulate on the decking, causing puddles and eventually mould. Formation of puddles and possible cracking could also easily appear in the boards due to the excess of moisture. Horizontal decks need a proper maintenance plan and can be more slippery than decking with a slight slope. Therefore, it is extremely important to consider the sloping of the decking when designing it.

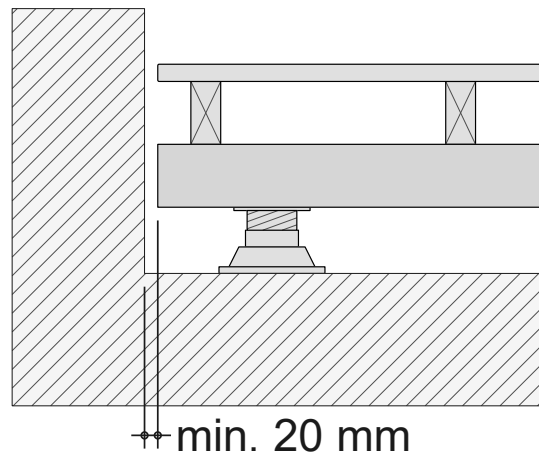


You should also consider water piping and the wiring for lighting and electricity when assembling the subframe. The electrician and plumber can do the installations during construction of the subframe. This way, all the installations will be ready before attaching the decking to the subframe.

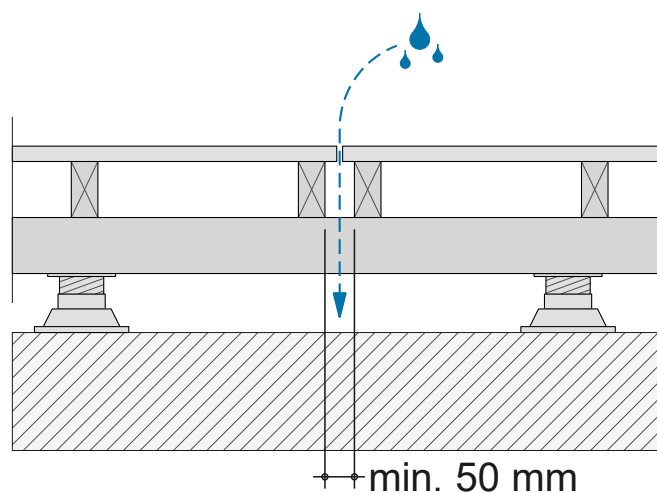
The method for attaching the subframe to the supports on the ground depends on whether you have a metal subframe or a wood subframe. Before assembling the subframe, make sure the attachment method, supports and material are suitable to use together. Follow the manufacturers' instructions and recommendations for the different components. Note that the bearing beams and the joists must have at least three supports under them.

For wood subframes, use AISI 304 (A2) stainless steel self-drilling screws suitable for timber to attach the elements.

Make sure there is a gap of at least 20 mm between the subframe and the wall of a building, for example, for sufficient ventilation.



Pay particular attention to the joints of the decking boards. Assemble a double row of joists under the end points of the boards. Leave at least 50 mm spacing between both boards to facilitate water run-off.



Installation of Lunawood decking

05

05.1. Optimising the cut of the decking boards

Lunawood decking boards come in several different lengths. Careful planning optimises use of the material, saving costs and reducing waste.

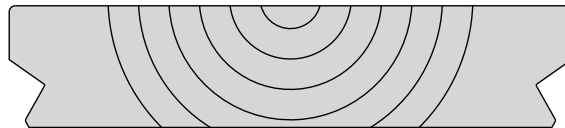
When planning, consider the total area of the decking, including paths, walkways, stairs, side edges and any special features that may be necessary for the intended structure.

As stated above, the decking boards need at least three supports, which you should consider when planning your decking.

05.2. Considering the side of the board to use

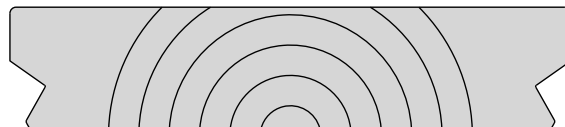
The using side of Lunawood Thermowood decking boards is determined by the wood species. Boards made of thermally modified Nordic pine wood use the heart side as the working side because it is more durable. This way of placing also reduce the risk of delamination due to the fibre properties that pine wood has.

Heart side



However, in boards made of thermally modified Nordic spruce, the using side is the sap side. The straight grain of spruce allows the use of the sapwood side without the risk of delamination.

SAP side




All Lunawood Thermowood decking boards are carefully selected and classified, but you should keep in mind that wood is a natural material with certain typical characteristics, such as knots, slight grain deviations and differences in colour. These characteristics do not mean the wood has defects and do not affect normal use of the decking.

05.3. Installing the decking boards

You have various options for installing Lunawood decking boards. You can use either hidden or visible fixing, depending on how you want the decking to look.

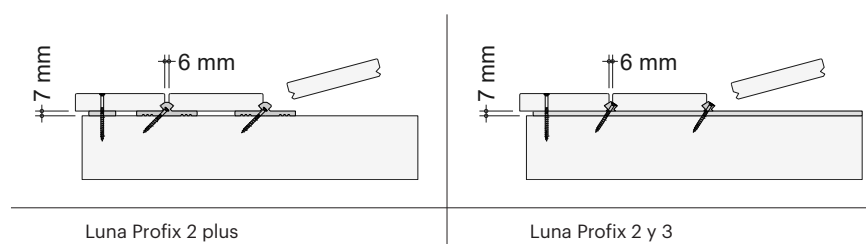
A. Installation with Lunawood hidden fixing system

Lunawood decking boards can be fixed according to the type of decking chosen by selecting the appropriate Lunawood concealed fixing system: Luna Profix 2 Plus, Luna Profix 2 and Luna Profix 3. All these fixing systems allow for quick installation of decking using fewer screws and achieving a neat and stylish appearance without visible fixings.

Lunawood hidden fixing system		
Luna Profix 2 plus	Luna Profix 2	Luna Profix 3
		
For 26 mm boards	For 26 mm boards	For 32 mm and 40 mm boards
4x40 or 4.2x45 mm screws	4x40 or 4.2x45 mm screws	5x50 mm screws

Use with Lunawood hidden fixing system only screws provided by Lunawood, which are self-drilling stainless steel AISI 304 (A2) screws or AISI 316 or A4 screws if you live on the coast or if your terrace is next to a swimming pool. This condition is because an incorrectly shaped wedge of the screw can break the fixing. The fixing can also break if the screw is overtightened.

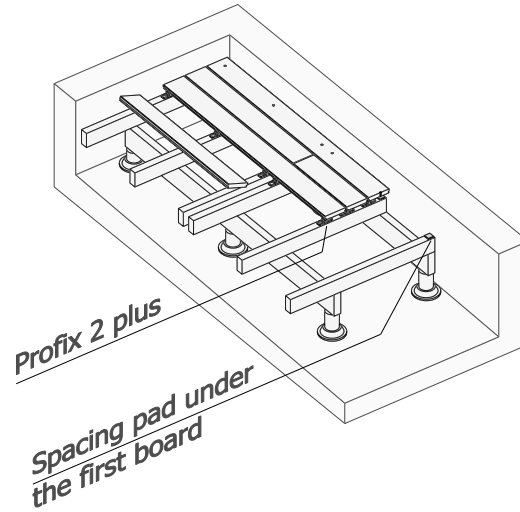
The Lunawood hidden fixing system is designed to maintain a 6-mm gap between the decking boards for a flawless and homogeneous look.



Installation with Luna Profix 2 Plus:

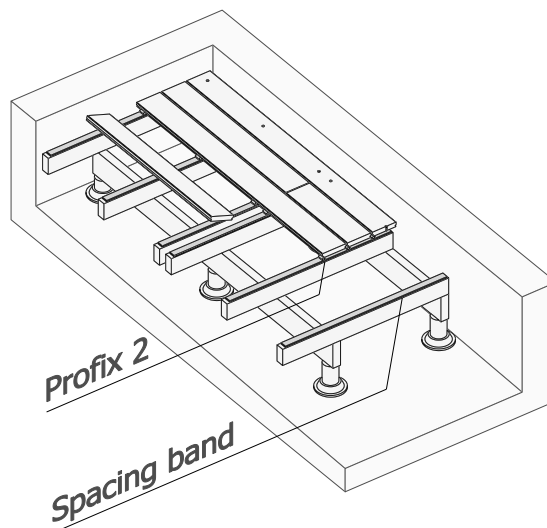
Luna Profix 2 Plus fixings help to keep the boards drier thanks to the 7 mm ventilation gap the system generates between the boards and the substructure.

The first and last row of decking boards are connected directly to the substructure with visible self-drilling screws suitable for timber made of AISI 304 (A2) stainless steel. Under these two boards place a spacing pad or profile made of granulated rubber to stop the rise of capillary moisture.



Installation with Luna Profix 2 and Luna Profix 3:

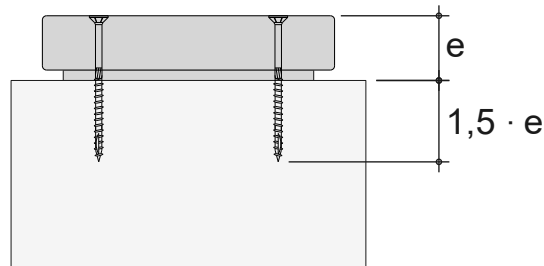
If you use the Luna Profix 2 or Luna Profix 3 hidden fixing system, place a spacing band that covers the entire top of the joists to stop the rise of moisture.



B. Installation with a visible attachment system

You can also fix the Lunawood decking boards directly to the subframe with visible AISI 304 (A2) self-drilling stainless steel screws suitable for timber. Use AISI 316 or A4 screws if you live on the coast or if the decking will be by a pool.

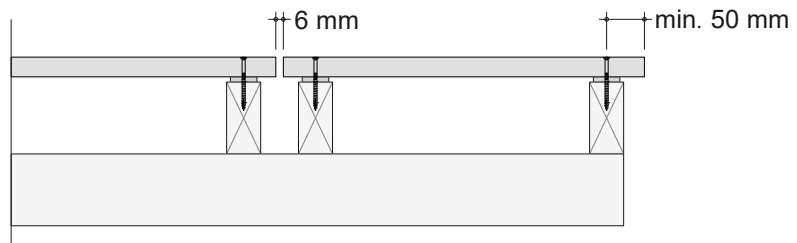
To ensure the decking is fixed properly, the screw length is the sum of the decking thickness and the spacing pad thickness plus 1.5 times that figure. For example, to fasten a 26-mm thick board on a joist with a 4-mm spacing pad, you will need screws of at least 75 mm in length: $(26 + 4) + 1.5 \times (26 + 4) = 75$ mm



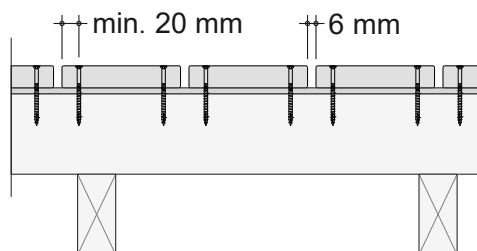
We recommend that you pre-drill all the screw holes to avoid cracking the boards during installation. Note that pre-drilling is always needed when attaching the ends of the decking boards.

Adhere to the following distances from the edges of the boards to avoid cracking during installation:

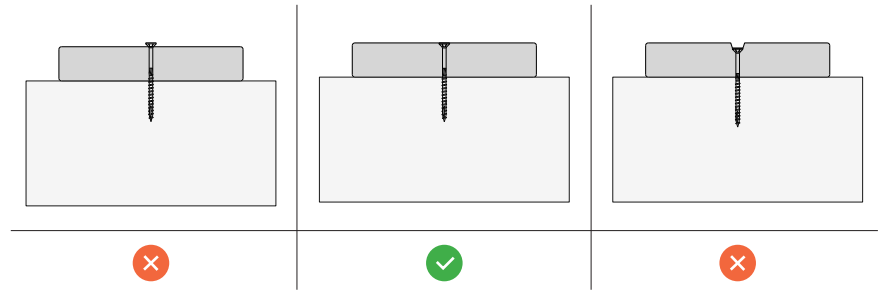
- Leave a gap of 6 mm between the boards, both at the ends and on the sides of the boards, to facilitate ventilation and water run-off
- Drill the points of attachment at least 50 mm from the end of the board



- Keep a distance of at least 20 mm between the screw and the side edge of the board



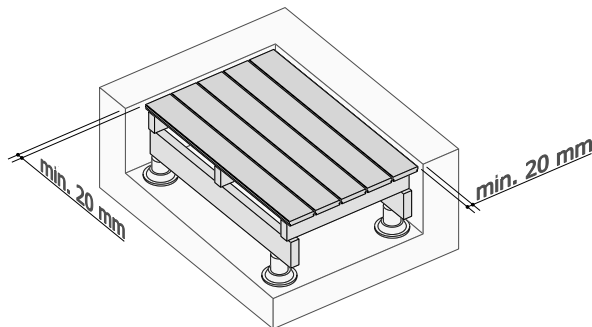
Fasten the screws to the correct depth. The screws must not protrude from the surface to avoid snags and injuries. The screw head must be flush with the decking board surface or at a maximum depth of 2 mm to avoid water accumulating in the hole. The maximum screw depth for surface treated decking should be no more than 1 mm.



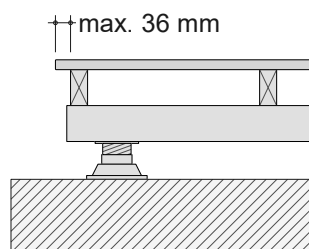
We recommend using screw depth stops and spacers between boards to achieve a uniform installation.

05.4. General recommendations for installing Lunawood decking

A. Leave a gap of at least 20 mm between the decking boards and the other structures to ensure ventilation and avoid unwanted accumulation of rainwater.

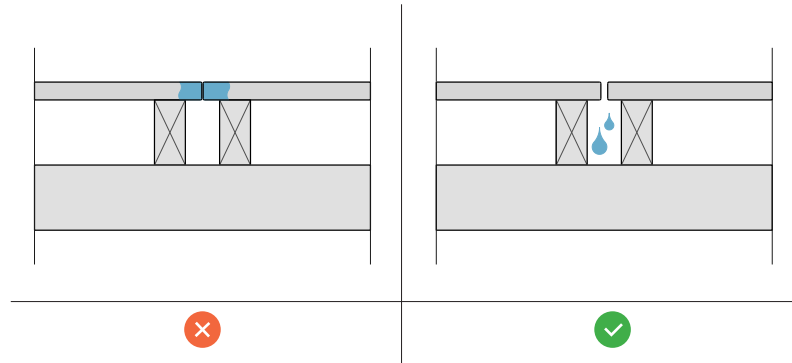


B. Make sure the board does not protrude more than 36 mm beyond the outer side of the subframe.

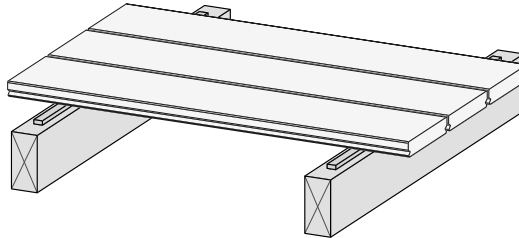


C. Leave a gap of at least 6 mm between the edges of the boards to provide ventilation and water drainage. If you use Lunawood hidden fixing system, the fixings ensure the minimum gap required between boards. Use spacers during installation to achieve a uniform joint pattern when working with visible screws.

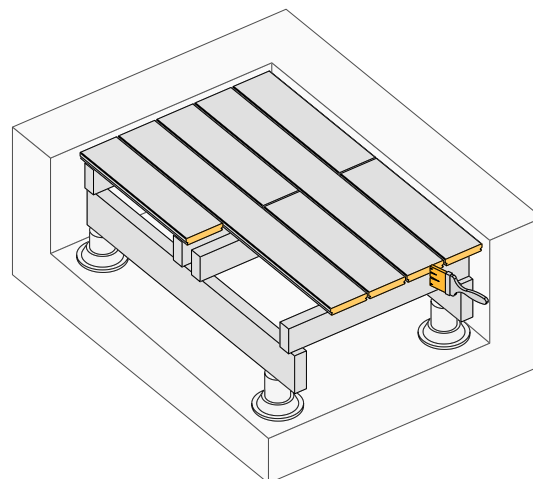
If you are extending an existing decking, leave a gap of at least 6 mm with the original decking boards, also.



D. Minimise wood-to-wood contact to ensure rainwater drainage and airflow between the decking boards and subframe elements. We recommend using spacing pads on the subframe to do this. There are a wide range of spacing pads made of plastic, EPDM, cork, butyl or rubber on the market. The Lunawood Luna Profix 2 Plus hidden fixing system creates this ventilation gap without having to use additional spacers.

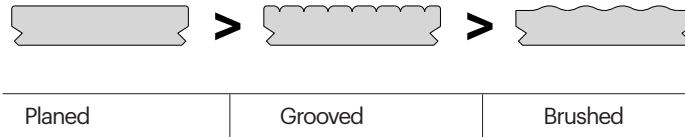


E. Apply an end-grain sealant on the ends of the boards and after cutting the boards to reduce the formation of cracks at the cut edges.



F. Despite what may be intuitively assumed, the tests carried out by Lunawood indicate that slip resistance is directly proportional to the contact surface between foot and wooden board. For this reason, boards with a planed surface have a higher slip resistance than grooved and brushed boards.

Slip resistance according to the type of profile board



However, it should be noted that mould, algae and moss make the boards very slippery. For this reason, it is important to regularly clean and upkeep your decking during its service life, removing leaves, dust and dirt to avoid the accumulation of water.

In certain cases, surface treatments or non-slip bands could help to improve slip resistance. We recommend consulting with the Lunawood Technical Department for more information.

Decking construction details

06

06.1. Covering the sides of the decking

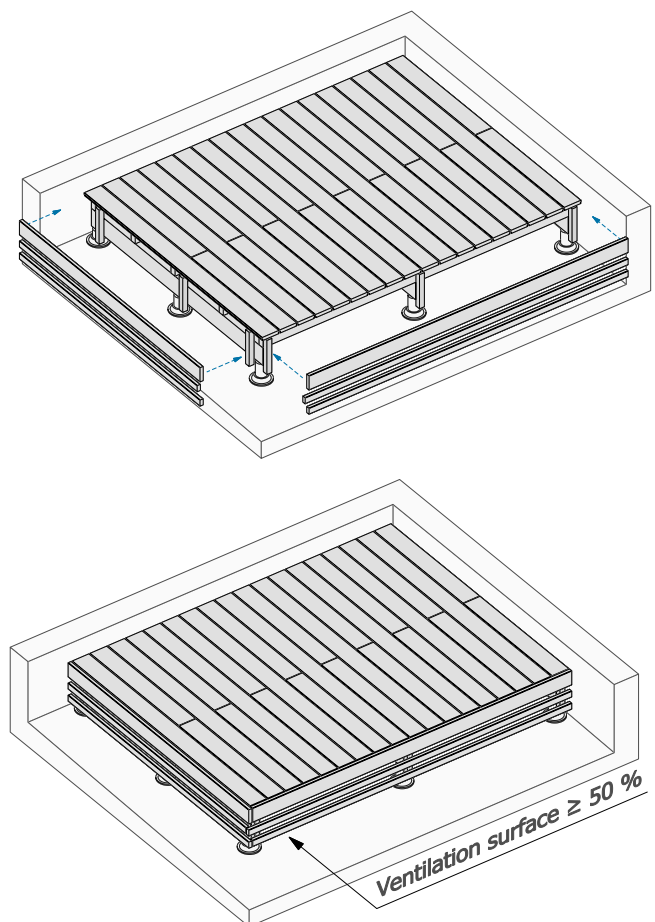
Covering the sides of the decking blocks the view of the substructure below the terrace. While it is visually appealing, it will also reduce the service life of the decking if the covering side elements prevent good ventilation of the cavity under the deck boards.

The sides can be covered with wood, with other materials that allow ventilation or with a combination of them. Choose a design that covers only 50% of the lateral area to ensure adequate ventilation of the space under the decking.

Using Thermowood boards as side covering

If you choose to cover the sides of the decking with Thermowood, you should take this into consideration when building the subframe to achieve a clean finish and ensure that the cover can be properly fixed with the screws. You can use boards with the same profile as the decking or wood with a smaller cross-section, such as battens, to finish the sides.

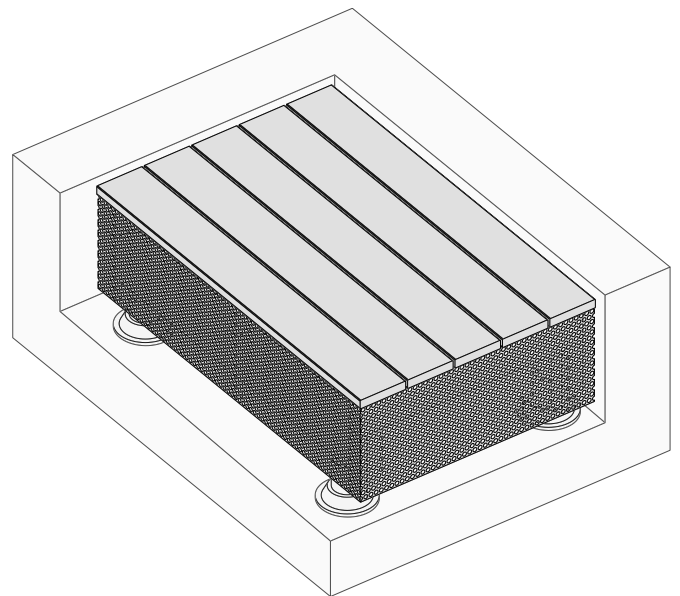
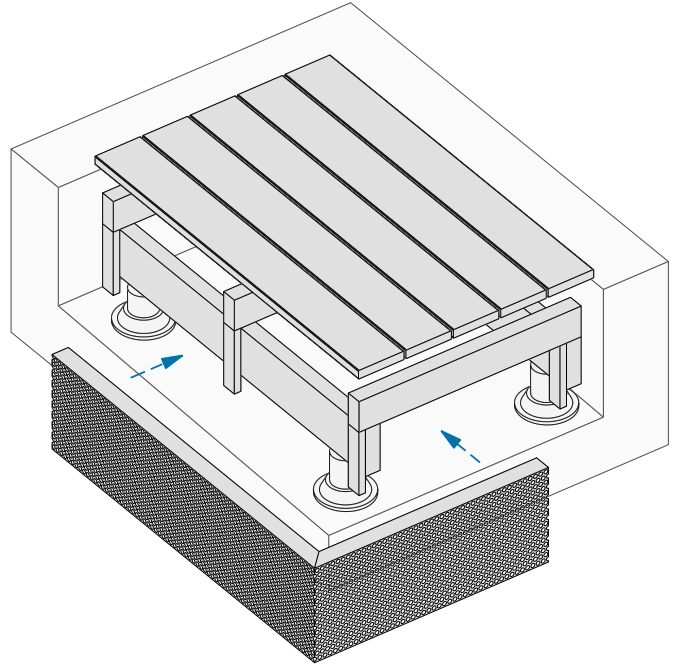
To install side covering, you will need vertical spacers made of pressure impregnated timber or a naturally durable wood species suitable for Use Class 3.2, which are screwed to the subframe. The spacers ensure airflow and water drainage. Neither the subframe nor the spacers should be in direct contact with the ground. The distance between the ground and the spacers should be a minimum of 50 mm if the subframe is built on concrete slabs, etc., and 100 mm if the base underneath is soil. Leave a minimum of 6 mm between the horizontal and vertical decking boards.



Using an aluminium perforated slats as side covering

Using an aluminium perforated slats for the side covering is also an alternative. Since the slats are thinner than wooden boards, there is no need to reposition the decking boards.

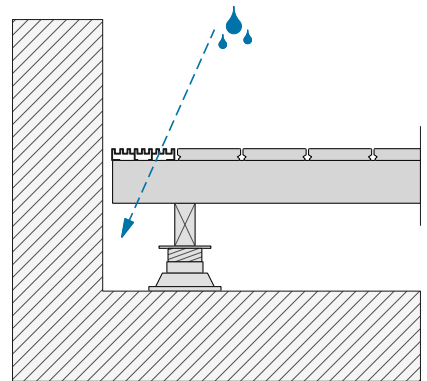
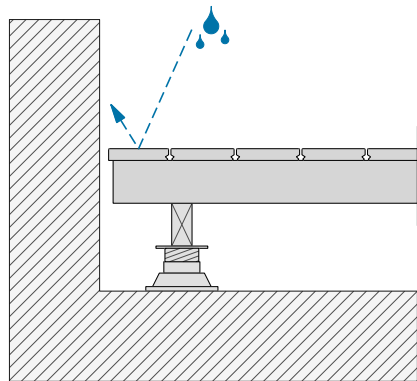
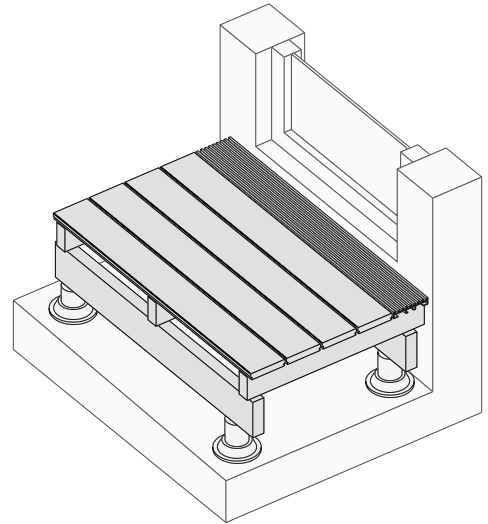
The holes in the perforated slats allow airflow below the decking. Also, ground contact is not a major issue because the slats are made of metal.



06.2. Ensure drainage against building facades

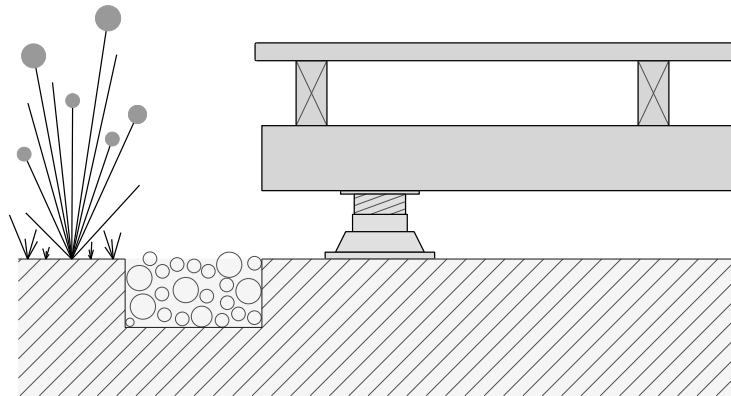
Installing a metal grate around the perimeter of the decking significantly reduces rainwater from splashing onto the façade, windows and doors of a building. Drainage grates also enhance the airflow under the decking next to the building wall.

The grates are about 150 mm wide and separate the wooden decking from the building. Leave a 20-mm gap between the grate and the building façade.



06.3. Remove vegetation from under and around the decking

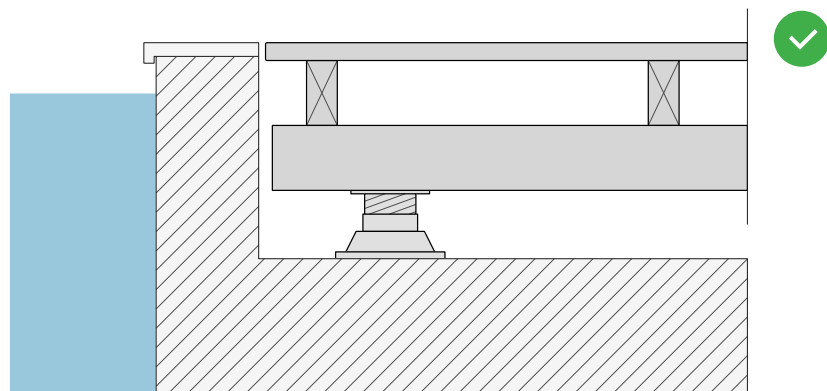
The decking should not be in direct contact with vegetation because the moisture from it can have a negative impact on the wood. Shrubs and bushes that come into contact with the decking or are very close to it could prevent the airflow under the decking. Also, take care not to hit the decking while gardening or removing vegetation. For these reasons, we recommend putting gravel around the decking to separate it from the vegetation, ensure ventilation and facilitate maintenance.



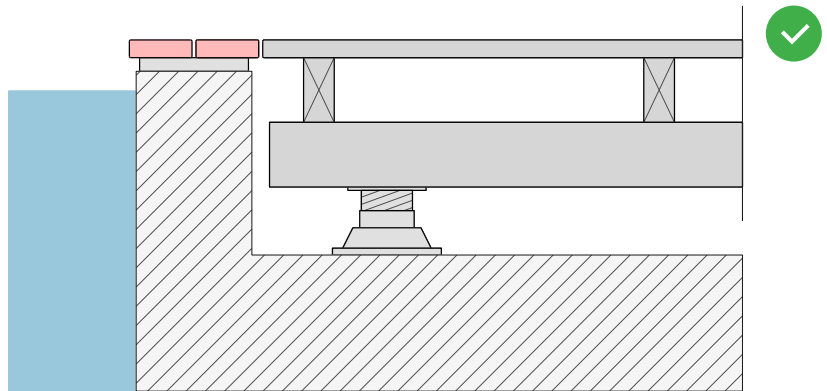
06.4. Separate the decking from swimming pool edges

Decking near swimming pools are exposed to higher moisture. Follow the instructions below to ensure your Lunawood Thermowood decking stays as dry as possible.

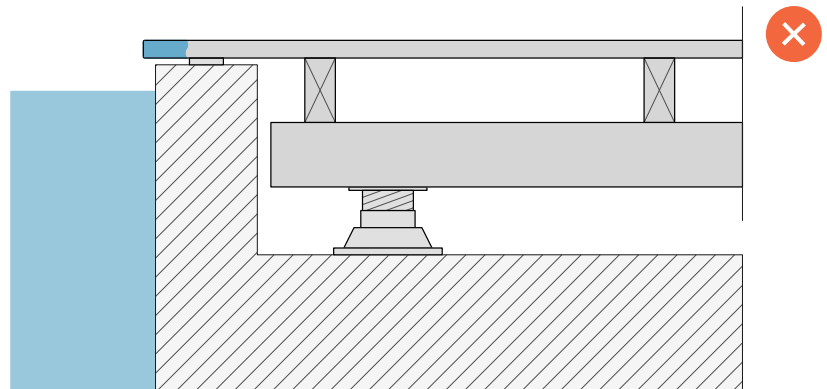
Separate the decking from the water with a stone or ceramic pool edge.



If you choose to use wood around the edge of the pool, make sure they can be replaced without having to damage the decking on the decking. They should be installed on a metal support structure.



Avoid orientation of the board ends in the pool.



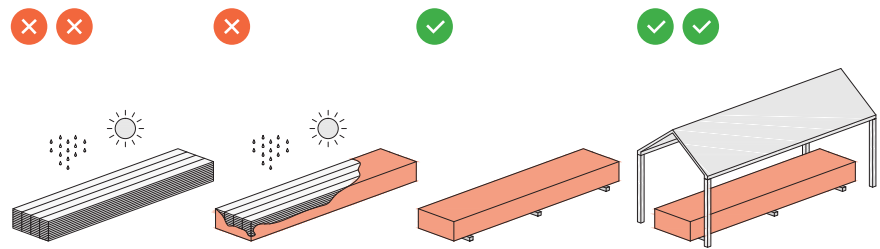
Materials handling and storage

07

07.1. How to storage timber on the construction site

To preserve the high quality of Lunawood Thermowood products, the following recommendations must be followed when material arrives at the construction site:

- Store timber in a dry ventilated place, protected from direct sunlight and precipitation. Due to UV radiation, wood exposed to sunlight may experience a change of colour.
- Completely and tightly cover the stored material with UV-protective wraps before and during installation. It is recommended to store Lunawood Thermowood in its original packaging.
- Lunawood timber packages must be kept ventilated and separated from the ground a minimum of 75 mm high. Use battens to create an even base that allow airflow below the package.
- They must be placed in a horizontal and dry surface, with a sufficient number of supports to avoid an excessive bending.



07.2. Handle with care

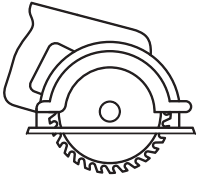
- Place the materials in a secure and stable way to prevent deterioration during storage.
- Handle and install the product with care to avoid knocking against hard surfaces.
- Tongue and groove profiles must be handled with care to avoid damage during the material unloading and transport. The edges of this type of profiles are delicate points that could be damaged if handled roughly.

Tools and equipment needed

08

08.1. Materials

- Lunawood Thermowood Decking boards
- Profix 2, Profix 2 Plus or Profix 3 fixing system
- Rubber pad strips
- Impregnated wood or hardwood or metal battens
- Support beams and accessories (depending on the material chosen)
- Metal brackets (if necessary)
- Self-drilling stainless steel (austenitic) minimum grade AISI 304 (A2) self-drilling screw anchors
- Specific fixings for concrete/factory walls
- Anti-root mesh
- Gravel
- Oil for the decking
- End-grain sealant



08.2. Tools

- Measuring tape
- Ruler
- Laser level
- Precision level
- Pencil
- Powder marker
- Hygrometer or moisture meter for wood
- Lever clamps
- Cutter
- Carpenter's square
- Screwdriver or nail gun
- Drill
- Twist drill bits
- Circular saw
- Mitre saw



8.3. Personal Protective Equipment (PPE)

- Protective glasses
- Anti-dust mask with active carbon filter
- Protective gloves suitable for wood working
- Working clothes
- Safety footwear
- Helmet for workplace safety
- Harness
- Fall protection device

8.4. Tips for working with Lunawood Thermowood

Planning

When working with Thermowood, set the wood planer as for working with hardwood species. Planning speed for Lunawood Thermowood should be less than used for working unmodified wood. Pay attention to feed roll settings and pressures configuration to prevent the risk of cracking the profiles surface.

Sanding

No additional sanding is required because the surface quality of Lunawood Thermowood is excellent after planing.

Sawing

The sawing of Thermowood is easy and does not differ from working with untreated wood.

Pre-drilling

Pre-drill the screw holes when the fixing point is less than 70 mm from the end of the cladding profile.

This avoids the risk of cracks appearance during installation. Pre-drilling hole diameter must be 0,5Ø – 0,8Ø (Ø = screw diameter).

Screwing

With visible screws fixing system, fasten screws to the correct depth. The screw head must be flush with the decking profile surface in order to prevent splits, surface staining and moisture traps, as well as for aesthetic reasons.

Cleaning and maintenance

09

Keeping the decking clean of leaves and dirt

Wooden decking requires regular cleaning to keep the surface clean of leaves and dirt. This is especially important after the winter. Airborne impurities such as pollen, soot or dust particles that accumulate on the decking can form a soapy film on the damp surface, encouraging the formation of algae and moss. This unsightly film makes the surface slippery and, if not removed regularly, could encourage the growth of wood-boring fungi. The decking can be swept to remove the accumulated dirt and then rinsed with low pressure water. Pressure washing is not recommended as it may damage the surface.

Remove snow with caution and care

It is not recommended to use salt to help melt the snow. It could rust and damage the metal fasteners and damage the surface of the wooden deck. The use of sand is also not recommended to avoid scratches and damage to the surface of the parts. It is recommended to use safe snow and ice melting products that do not damage the wood and are environmentally friendly. To avoid unwanted scratches and damage to the decking, it is advisable to use a wooden or rubber shovel instead of a metal shovel to manually remove the accumulated snow from the deck.

Avoid placing heavy objects in permanent direct contact with the decking

Always keep the decking as dry as possible. Items that could prevent water from draining off the surface should not be placed in direct contact with the wooden planks. Flower pots, umbrella stands, furniture or large objects should be placed on 15-20 mm thick shims to allow air circulation and water drainage between them and the wooden deck. If very heavy objects such as planters are to be installed, the load-bearing capacity of the structure must be checked before installation.

Protecting the decking from sharp edges

It is advisable to pay attention to and protect the sharp and pointed edges of objects placed on the wooden decking because they could damage the surface of the boards.

Chair and table areas, as well as parasol and sunshade supports, can cause increased wear and tear on terraces in common areas of public buildings, such as hotels and restaurants. Through a regular maintenance and control plan, possible damage can be detected in time and the areas can be used again without major limitations.

Moving heavy objects with care

If it is necessary to move heavy objects across the decking surface, appropriate protective measures must be taken to avoid damaging the wooden surface. For very bulky items, the use of lifting aids is recommended to facilitate transport. Dragging parasol bases should be avoided as this could damage the decking surface.

Do not lay carpets directly on the decking

In entrance areas of hotels and other public buildings that are used throughout the year, it is common to lay carpets on the floor. These carpets should never be in direct contact with the wooden decking because water puddles can cause irreversible damage to the wood. To ensure optimal drainage of rainwater, it is recommended to use grids or "tramex" type elements between the carpets or rugs and the wooden surface to ensure ventilation and prevent water from accumulating on the decking.



Private Villa in Finland.
Plus Arkkitechdit.
Photo 1: Lunawood,
Photo 2: Kuvatoimisto KUVIO



Warn users that the terrace may be wet

Where necessary, it is advisable to place a warning sign "Caution: danger of slipping" to inform users that the decking surface may be wet. This can easily prevent unwanted slips.

In addition to keeping the decking surface clean, regular inspection of the entire structure is recommended.

In hotels and catering establishments, as well as in public areas, wooden decking should be carefully inspected at least every 2 years. In private buildings, roofs or terraces with wooden decking should be inspected regularly. Damaged or defective elements must be repaired or replaced. Inspections must always be recorded in writing. In case of doubt about how to deal with defective or damaged elements, it is recommended to consult professional experts.

More detailed information on the care and maintenance of Lunawood decking is available on the website:

<https://lunawood.com/download-centre/>

The following key points should be checked during inspections:

- Check that the water drainage elements are working and are free of leaves and accumulated dirt.
- Check the condition of the deck components, including the substructure. If the inspection reveals attacks by xylophagous fungi, the damaged elements must be repaired and replaced.
- Check the decking surface for possible damage that could cause accidents or tripping.
- Replace any parts that have become excessively worn.
- Check the corrosion and stability of screws and other fasteners.
- Check the decking boards with visible screws to confirm that the boards are still firmly installed and, if necessary, tighten any screws that have loosened.

LEGAL DISCLAIMER – Lunawood Collection – Decking Installation

Product characteristics

The decking products within the Lunawood Collection are carefully manufactured and inspected to ensure quality. However, these are natural wood products and are subject to variations in weight, density, color, grain. Wooden decking is naturally subject to dimensional changes as the moisture content in the wood fluctuates with humidity in the air. Swelling, shrinkage, surface checking, and other movement of individual pieces are normal occurrences in wooden decking. Nevertheless, with Lunawood decking boards the swelling and shrinkage are minimal compared to kiln dried Scandinavian Pine or Spruce.

Before installation

Decking products within the Lunawood Collection should be stored and treated according to Lunawood guidance, see Lunawood technical guideline www.lunawood.com

An adequate air circulation under the decking (subframes and decking boards) must be ensured in order to have long lasting Lunawood decking.

Use safeguards for personal protection (safety glasses, dust mask and gloves) always when with Lunawood Thermowood. We recommend an active carbon filter dust mask when drilling, sawing, sanding, or machining Thermowood.

Installation

Lunawood installation guidance must be followed. Local building codes must be consulted when building a decking with decking products within the Lunawood Collection.

Decking must be built in accordance with regulatory requirements. Most countries may require building permits.

Drawings and schematics used to show where to place screws are for reference purposes only.

Maintenance

Like all timber products Lunawood Thermowood will go grey upon exposure to UV if left untreated, and in time may show some fine cracks or splits on the surface. In order to preserve and maintain the original appearance apply a surface coating that are suitable for Thermowood. Consult your local surface treatment manufacturer and see Lunawood General Maintenance Guide for decking on www.lunawood.com

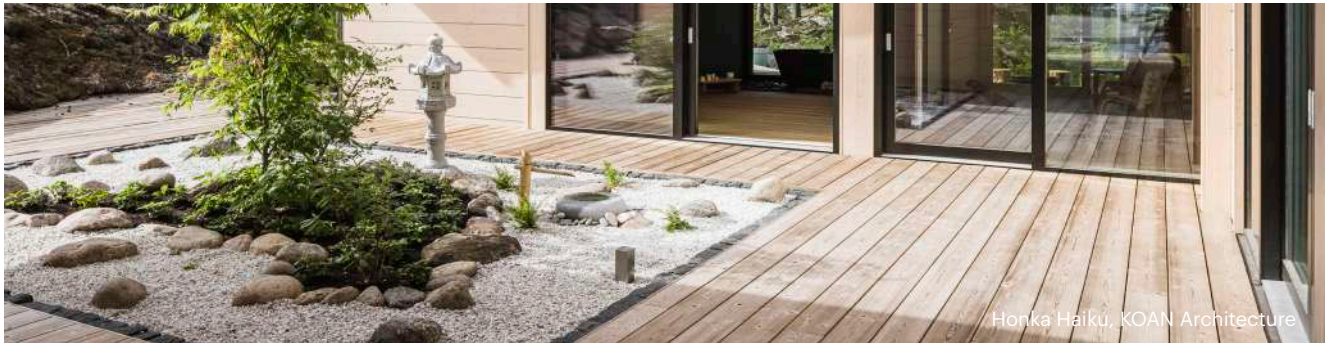
Other information

Technical information contained herein is furnished without charge or obligation and is given and accepted at recipient's sole risk. Because conditions of use may vary and are beyond our control, Lunawood makes no representation about, and is not responsible or liable for the accuracy or reliability of data associated with particular uses of any product described herein. Lunawood reserves the right to modify this document without prior notice.

Every decking is different, and this guide should not be considered to set out how a decking should be constructed in every circumstance. We accept no liability for any loss or injury caused by any reliance placed on this guide.

Lunawood reserves the right to update or revise the Terms and Conditions regarding installation guides in www.lunawood.com. The entire content of the Site is protected by copyright. You may not copy, distribute, or create derivative works from any part of this Web site (including its graphics, pictorial matter, and text) without the prior written consent of Oy Lunawood Ltd unless otherwise expressly permitted by the Site. Lunawood®; Lunawood TWPC and Lunawood Thermowood Plastic Composite and Profix are trademarks, service marks or trade names of Oy Lunawood Ltd and may not be used without prior written

permission. Any links on this document or Lunawood.com to third party Web sites are not an endorsement, sponsorship, or recommendation of the third parties or the third parties' ideas, products, or services. Similarly, any references in this Site or document to third parties and their products or services do not constitute an endorsement, sponsorship, or recommendation. If you follow links to third party Web sites, including the Web sites of any other companies affiliated or unaffiliated with Lunawood, you are subject to the terms and conditions and privacy policies of those sites, and Lunawood makes no warranty or representations regarding those sites. Further, Lunawood is not responsible for the content of third party or affiliated company sites or any actions, inactions, results, or damages caused by visiting those sites.



Lunawood Thermowood Decking Maintenance and Care

Lunawood Thermowood decking is an ecological and chemical-free wood material that retains its shape throughout all seasons. With proper surface treatment, the terrace retains its beautiful appearance and remains in good condition for many years. We recommend a regular surface treatment for Thermowood decking when used in applications subject to varying weather conditions. Surface treatment will help to retain the original colour and reduce cracking and splintering that are typical to wood materials over time.

If left untreated, Thermowood will gradually turn gray under the influence of UV radiation and weather. The grey color does not affect the wood's resistance to decay. Note that clear UV-protective terrace oil without brown pigment, does not prevent natural greying, but slows down the weathering process.

Horizontal surfaces, such as terraces subject to wear and direct weather effects, need suitable protective agents to ensure the mechanical durability of the wood material. In other words, regular surface treatment with terrace oil helps reduce cracking and extends the product's lifespan.

After Installation

To preserve the brown tint of the wood, you should treat the terrace immediately after installation using a brown pigmented terrace oil intended for thermally modified wood, such as Tikkurila Valtti Plus -wood oil tinted with Lunawood Brown, TVT 5051 or TVT 5071. Check the correct shades with your paint shop. To retain the correct shade, we recommend repeating the treatment every two years or depending on weather conditions and use of the terrace.

Make sure you also apply the wood oil to all sawn surfaces and extensions.

If you want your decking to grey naturally, you should choose a clear terrace oil. Note that clear oil slows down the natural greying of wood, so the gradual change can take a few years and even longer in shadow.

Lunawood Thermowood can be surface treated to other shades as well, but it should be noted that the color samples tinted to bright wood do not correspond to the final color tone due to the specific characteristic brown tone of Thermowood. We recommend testing the oil in an inconspicuous area.

Basic Maintenance of Thermowood decking

All that is needed to perform basic maintenance of a terrace with Lunawood Thermowood decking during the terrace season is to brush away loose materials and wash with water and a soft brush. Pressure washing is not recommended in order to avoid splintering.

Maintenance with oil

Before oiling, brush away loose materials from the terrace surface. Carefully wash the surface using a detergent intended for decking (such as Tikkurilan Tehopesu). Rinse and let the terrace dry thoroughly. Smooth the surface using fine sandpaper, if needed. If the surface has a clear film after washing, remove it before continuing.

Apply 1–2 layers of pigmented terrace oil, such as Tikkurila Valtti Plus -wood oil tinted with Lunawood Brown, TVT 5051 or TVT 5071.



Comparison of Tikkurila oils applied to Lunawood Thermowood

Following surface treatments are also suitable for Lunawood decking profiles:

- Osmo Decking Oil - 010 Thermowood
- Teknos Woodex Aqua Wood Oil – Factory brown
- Owatrol Aquadecks – for instance tones: Honey, Movingui and Teak
- Bona Decking Oil - for instance tone Teak

Follow the instructions for the surface treatment agent. For more information on application and maintenance, contact your local surface treatment supplier for your project.

Greying and Restoring the brown colour of the wood

If left untreated, Thermowood will gradually turn grey over time. Sun, humidity, shadow and other surrounding conditions determine how quickly the wood will grey. Note that Thermowood is a natural wood product, which may have hairline cracks due to the weather, but this does not affect the product's durability.

If your decking has already turned grey and you want to restore its original colour, you can use a strong washing liquid and/or sanding. After that, the surface can be treated normally, for instance with brown-pigmented oil that helps to maintain the colour. See the instructions under "Maintenance With Oil".



Untreated Lunawood decking (Thermo-pine) 2 years after installation. Small hairline cracks can be seen on the surface.



Terrace of a private home in South Africa. The decking in the sunny area has turned gray faster compared to the shaded area.

Black Spots on decking

Impurities in the air such as soot or pollen, or metallic dust can cause small black spots on the surface of the decking. Black spots can be also caused by the chromogenic fungi, especially when the air humidity is high. In some cases, a decking base containing sulphate combined with water can colour the wood. Black spots can be prevented by using pigmented decking oil right after installing the terrace.

Black spots can be removed by following these instructions:

1. Wash the surface carefully using a detergent intended for decking. Note that water only won't remove the black spots.
2. Rinse and allow the terrace dry thoroughly. If the surface has a clear film after washing, remove it before continuing.
3. Smooth the surface using a fine sandpaper if needed.
4. Apply 1-2 layers of pigmented terrace oil, such as Tikkurila Valtti Plus -wood oil, tinted with



Impurities can cause small black spots on the surface of the decking.