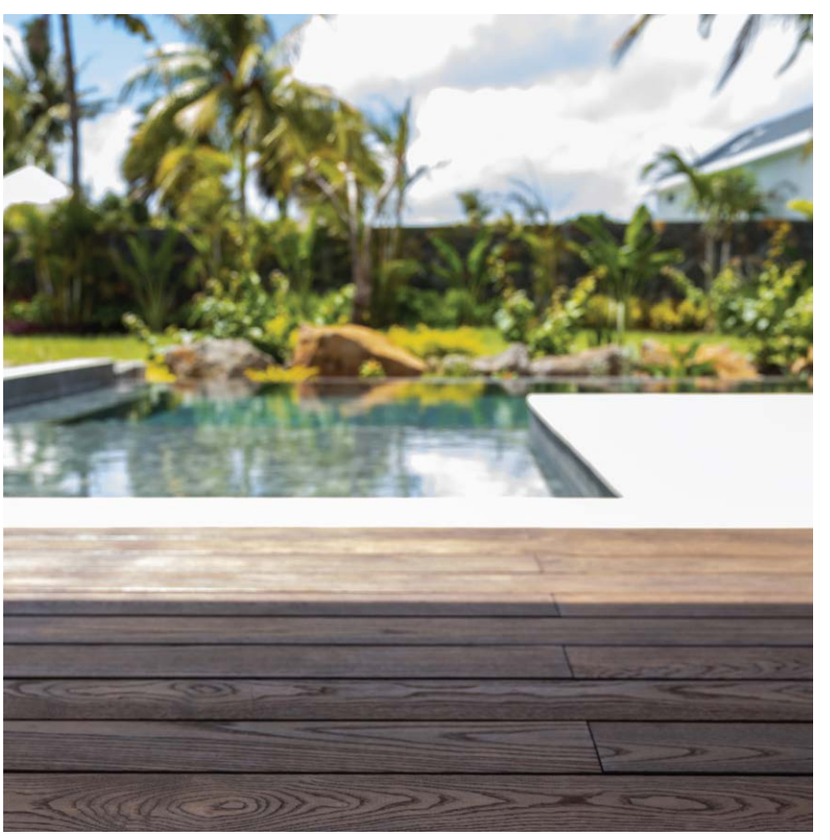
DECO-B
SURFACES



THERMOWOOD DECKING & CLADDING

Wood refined and redefined...

SUMMARY

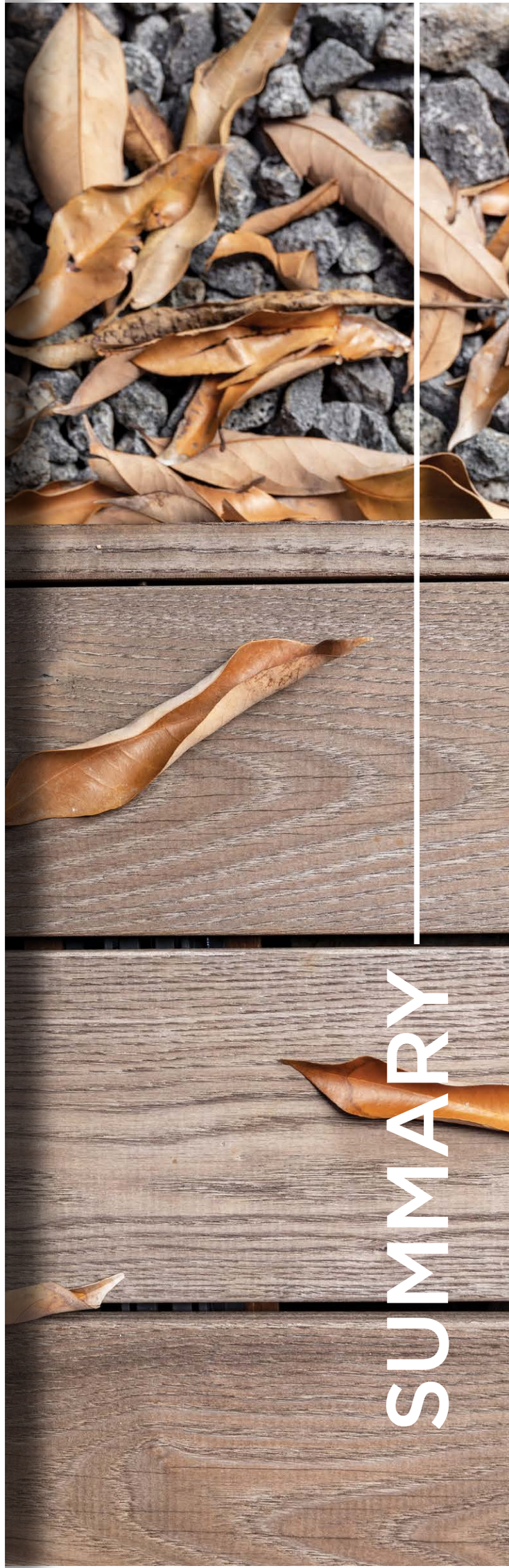
01 Thermowood's Process and Benefits

02 Thermo-Ash and Thermo-Pine Characteristics

03 GRAD clip on system

04 Oiling and Stain options

05 Available formats



THERMOWOOD'S PROCESS AND BENEFITS

Wood in its natural state is biodegradable and prone to dimensional instability, posing limitations in construction. Thermal modification, a non-toxic commercial treatment, enhances wood's properties, improving dimensional stability and biological resistance for building purposes.

PROCESS

Phase 1: Wood is rapidly heated in special kilns with heat and steam to about 100ºC, then gradually to 130ºC (drying takes place), reducing moisture content to nearly zero.

Phase 2: After high-temperature drying, kiln temperature is raised to 185ºC - 215ºC and held constant for 2-3 hours, depending on use.

Phase 3: Cooling and moisture conditioning phase, lowering temperature with water spray systems. Moisture content is increased to 4-7% for usability.

Thermal modification preserves wood's natural beauty and versatility while enhancing durability, stability, and resistance to moisture, rot, and pests. This makes it suitable for various applications like external cladding, and decking, without the release of harmful toxins found in chemically-treated wood

Why choosing a thermally-modified wood?

DURABILITY AND STABILITY

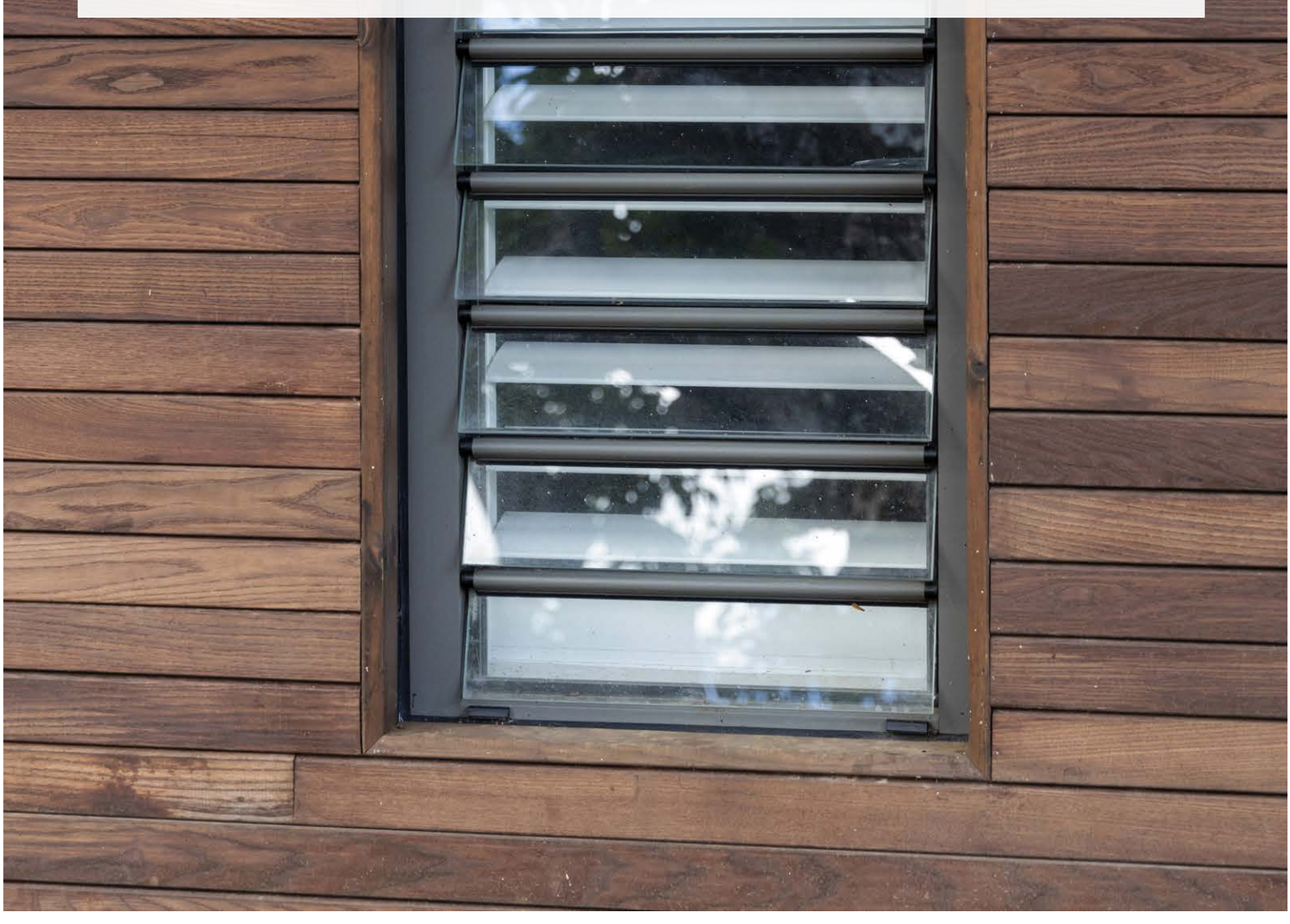
Thermal modification alters wood's chemical and structural composition, reducing hemicellulose content and removing nutrients like resin and sugars. This diminishes appeal to pests and fungi. It also decreases moisture absorbency, eliminating the need for chemical protection against rot. Studies confirm its durability even after weathering, making it suitable for external use without toxic chemicals. Thermally-modified wood has replaced tropical hardwood in some markets due to its enhanced longevity and stability, and the fact that it doesn't warp.

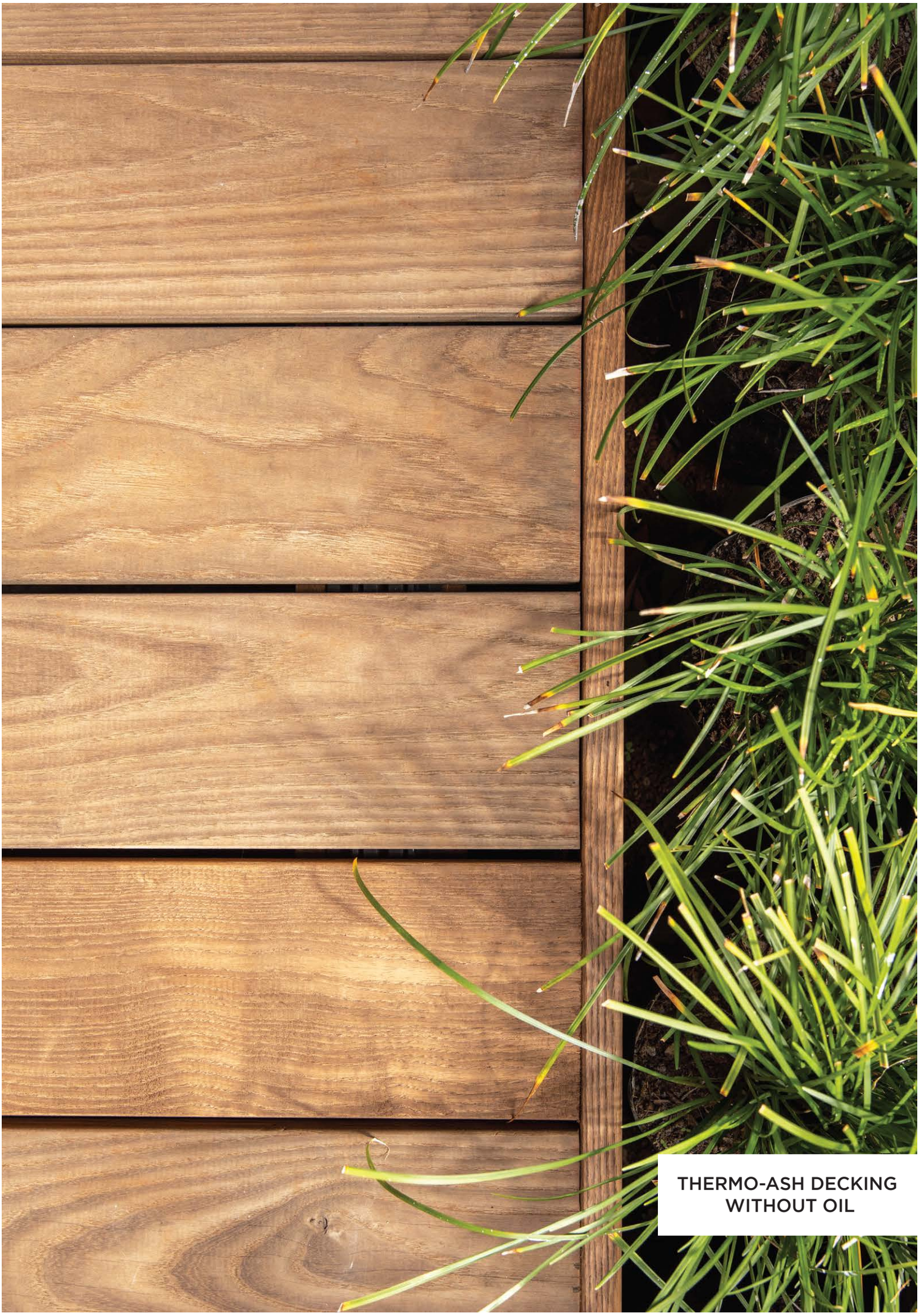
ECO-FRIENDLY AND SUSTAINABLE

Increasing awareness of climate change has boosted demand for sustainable development, elevating wood as a renewable, cost-effective, and environmentally friendly building material. However, some wood species lack resistance to degradation and shape stability, limiting their use. Thermally-modified wood emerges as a superior option for sustainable building due to enhanced characteristics, lightweight nature for energy-efficient construction, minimal impact on natural resources when sourced sustainably, and absence of toxic substances compared to chemical treatments.

LIGHTWEIGHT

Thermal modification removes moisture from wood, resulting in a lightweight end product. This facilitates energy-efficient construction methods, ease of transport, and reduced costs for labor, transport, and installation.




THERMO-ASH DECKING
WITHOUT OIL

02

THERMO-ASH AND PINE CHARACTERISTICS

THERMO-ASH WOOD

Thermo-Ash wood boasts remarkable value, durability, and strength, rendering it an ideal choice for both wall and floor applications. Its captivating aesthetic appeal and alluring texture further enhance its suitability for such surfaces. Through thermal modification, ash wood attains unparalleled durability and adopts an exotic hue, serving as a sustainable substitute for tropical hardwoods.
The color of the wood changes over time, depending on how much it is exposed to UV light.

THERMO-ASH DECKING WITHOUT OIL

THERMO-PINE WOOD

The mechanical prowess of **Thermo-pine** wood renders it highly sought after, owing to its consistently spaced annual rings. Pine undergoes thermal modification exceptionally well, undergoing a notable enhancement in both durability and stability, while acquiring a stunning golden-brown hue in the process. We advice pine wood for cladding especially.
The color of the wood changes over time, depending on how much it is exposed to UV light.

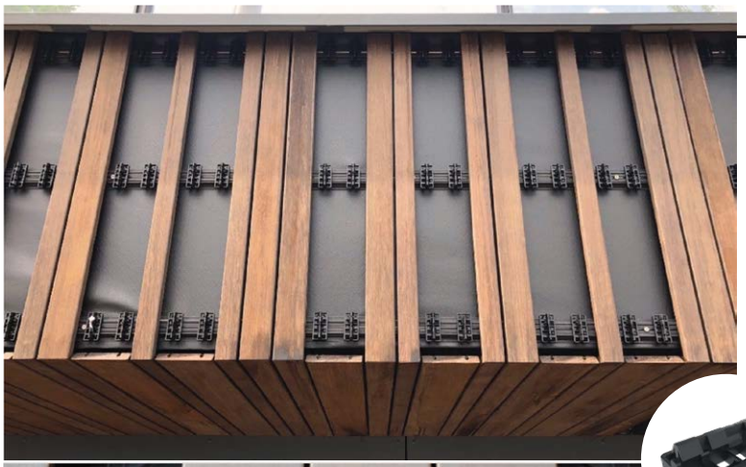
PICTURE: OILED THERMO-PINE CLADDING

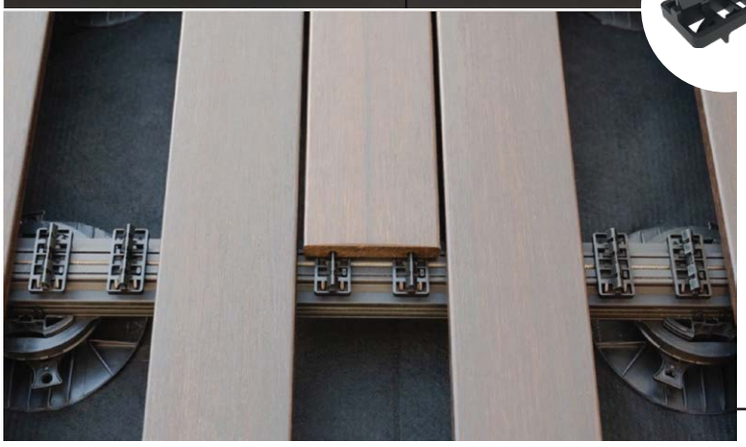
OILED THERMO-ASH DECKING

03

GRAD CLIP ON SYSTEM

Design to last, built to stand the test of time: the Grad® clip ensures the connection between the aluminum structure and the boards.
This system facilitates working conditions for the installer and reduces installation time by up to 50%. Infinitely removable and repositionable



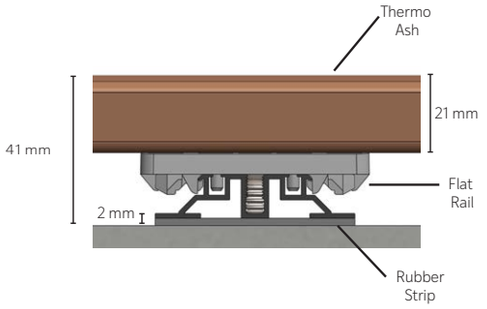


CLADDING

Siding with flawless finishes, no visible screws, adapting to all situations both indoors and outdoors.

DECKING

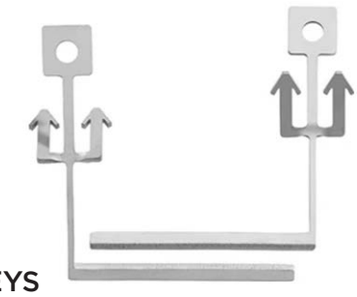
A custom clip-on terrace, without screws, with a perfect finish. All configurations are possible.



ALUMINIUM RAIL
Material: Aluminium EN AW-6060
Colour: Black
maximum length: 1 936 mm

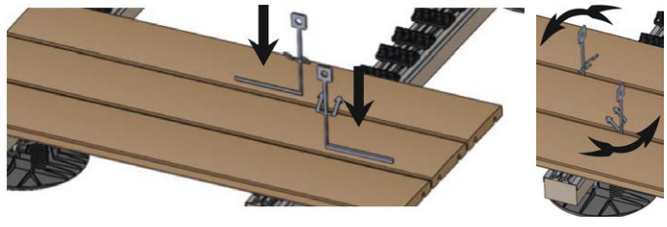
GRAD REMOVABLE SYSTEM

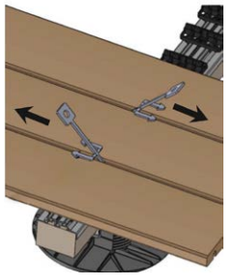
One unique aspect of the Grad™ system is its removable boards. Using the specially designed keys, you can easily take out and replace each board without causing any damage to the structure. This allows for effortless access to the subdeck.



REMOVAL KEYS
Follow the steps below

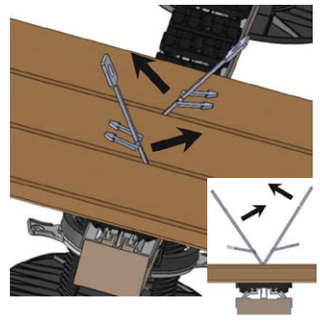
Step 1: Place the keys into the slots on both sides of the board you wish to remove.
Rotate the keys to pivot the lower sections beneath the decking board that needs to be removed.

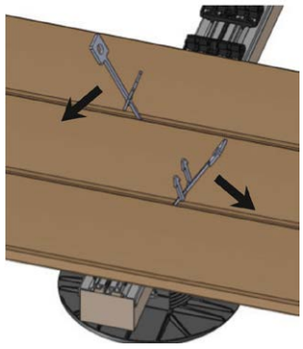




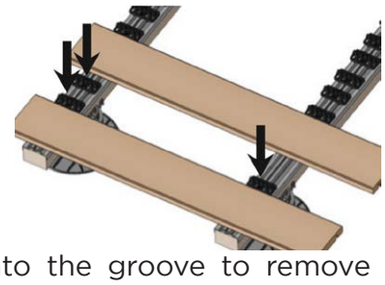
Step 3: Push the keys until they make contact with the rail.

Step 4: Lift the keys until they are upright in a vertical position.





Step 5: Simultaneously press both keys to detach the clips from the aluminum rail.



Step 6: Slide the clips into the groove to remove them from the unclipped board. Reinsert the clips into the positioning holes on the aluminum rail.

Sources: https://www.outdoordeck.co.uk/systems/subframes/grad
https://source.thenbs.com/literature/grad-board-removal-guide/wrCtinmE9nzHPmmn5LuvvE/wrCtinmE9nzHPmmn5LuvvE

THERMO-ASH DECKING
WITHOUT OIL

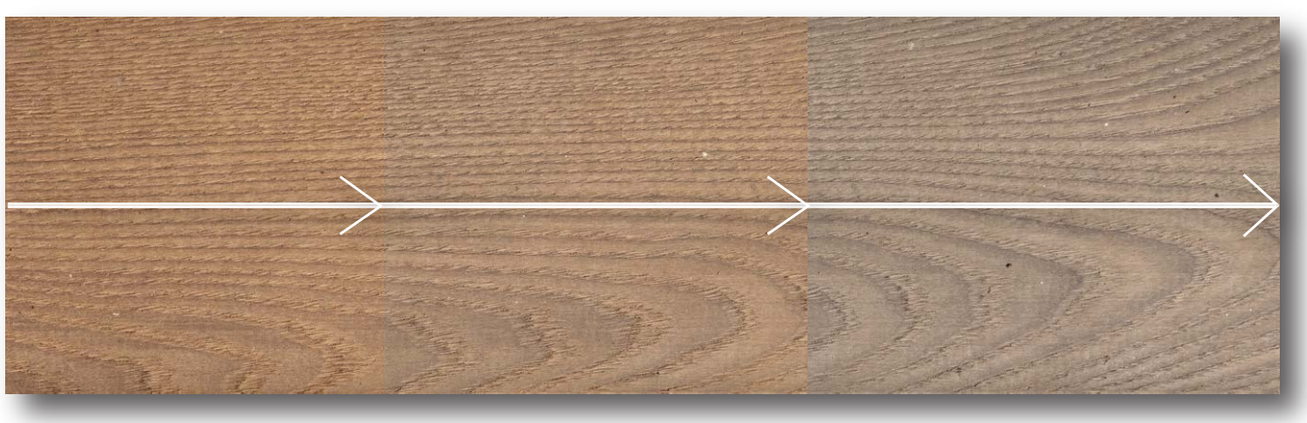
OILING

Our planks can be pre coated with a UV oil, where it helps to maintain the natural tone of the wood.

UV PROTECTION:
The UV oiling protects the wood against UV radiation and help to maintain the wood appearance and structural integrity over time.

HOMOGENEOUS FADING:
Over time with exposure to nature the wood surface undergoes a homogeneous fanding process and turns silvergrey. This natural transition occurs between 5-12 months.

HOMOGENEOUS FADING



04

STAIN OPTIONS

At Deco-B, we offer the choice to have your planks stained with special UV oils for lasting protection.
Please ask your specialist for options available.

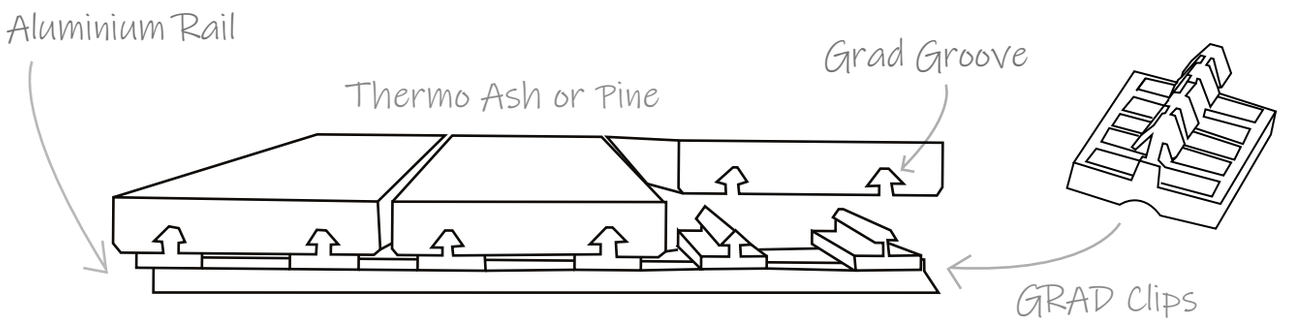
THERMO ASH WOOD PALETTE

THERMO PINE WOOD PALETTE

OILED THERMO-ASH CLADDING

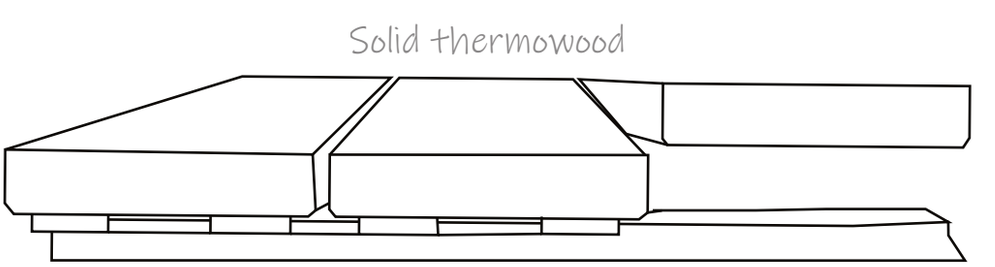
AVAILABLE FORMAT

Decking profile with GRAD Groove

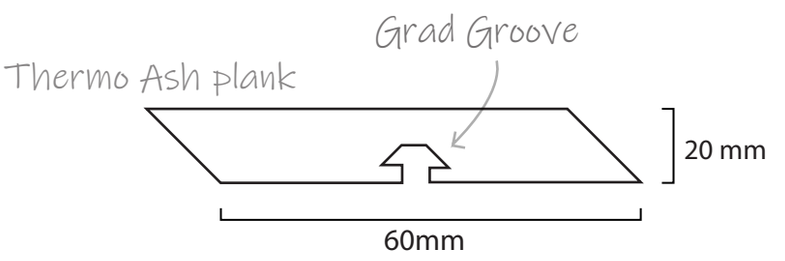


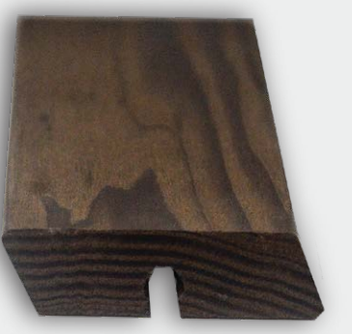
Deco-B also offers solid wood, thermally treated using a conventional fixing method, without clips, where the screws are visible. However, the quality and strength remain the same.

Decking profile (smooth)

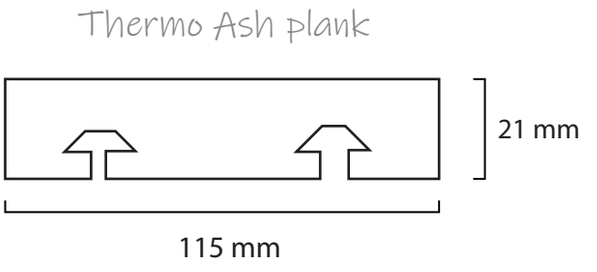


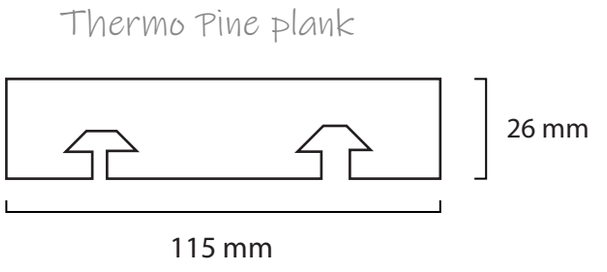
Cladding profile with GRAD Groove





Decking profile with GRAD Groove: Timber Dimensions





OILED THERMO-ASH DECKING

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