GREENWOOD GREENDECK

SPECIES UNICA

BORN IN VENICE

REV.00-2021

Alpiana Resort Merano (GREENDECK)

Mechanical properties

Flexural elastic modulus	UNI EN ISO 178:2003	3300 Mpa
Flexural strength	UNI EN ISO 178:2003	25 Mpa
Elastic tensile modulus	EN ISO 527:1996	3300 Mpa
Tensile strength	EN ISO 527:1996	12 Mpa
Elongation at break	EN ISO 527:1996	0,78 %
Charpy impact resistance	EN ISO 179-1:2007	5,65 KJ/m^2
Coefficient of linear thermal expansion longitudinal (from -10 °C to 45 °C)	TMA ASTM E 831/2005	33,3 $x10^{-6}$ m/(m°C)

Reaction to fire

Reaction to fire (critical flux)	UNI EN 9239-1:2006	2,24 kW/ m^2

Chemical and biological features

Mold/mildew resistance	ASTM G21:2009	Fungal growth: no visible growth

Surface characteristics

Slip resistance, USRV coefficient	UNI ENV 12633:2006	> 52
Friction coefficient	B.C.R.A. Rep. CEC. 6/81	> 0.4

The values shown are indicative and not binding. Test reports available upon request.
The natural aging of the material and temperature variations may cause deviations from the values indicated above.
The product is protected by a warranty in line with legal requirements: for more information see the SPECS on www.woodn.com

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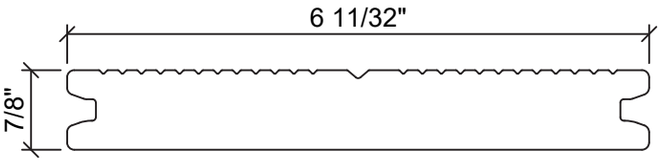
GREENDECK - outdoor decking



Woodn recommends to refer only to the values expressed in mm the US values are to be considered approximate).

PLANKS DIMENSION AND LOGISTIC

Code	TV01
Dimensions of the plank	161 x 22 x 1830 mm (≈ 6"11/32 x 7/8" x 6')
Incidence	1,86 ft/sqft
Weight of a plank	≈ 2,60 lb/ft

The external dimensions listed are nominal values.
The weights of the planks indicated in the tables are indicative and not binding.
Length tolerances according UNI EN-ISO 22768: class UNI EN-ISO 22768-vL.

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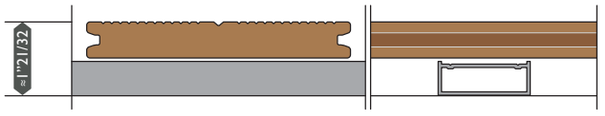
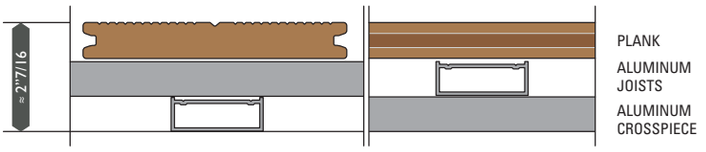
System height

LAYING ON ALUMINUM JOISTS 2"3/16 x 13/16" (W x H)



LAYING ON ALUMINUM JOISTS AND CROSSPIECES 2"3/16 x 13/16" (W x H)
WITH SUPERIMPOSED FRAME

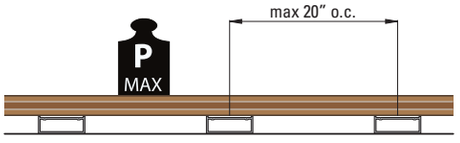


Size of the joints

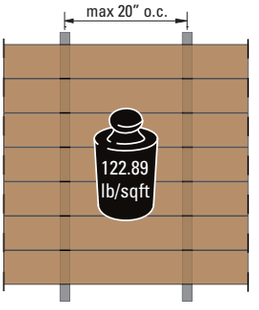
Clip model	Joint size [ft]
Stainless steel clip (code ZCLG-AC017)	Approximately 5 mm (≈ 3/16") *

*IMPORTANT: The dimensions shown are approximate and may vary depending on the accuracy, tolerance and method of installation.

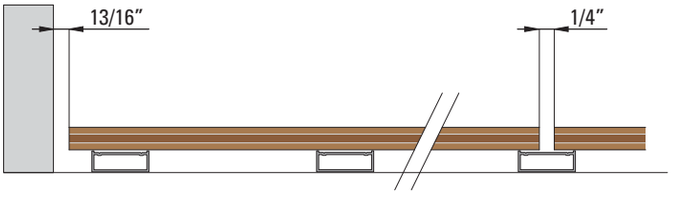
Laying instructions



The Greendeck floor is suitable for foot traffic, but not vehicle traffic.

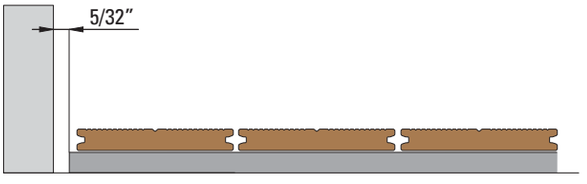


Load distributed over 1 sqft

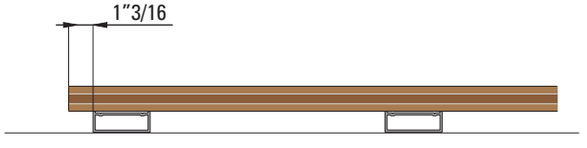


The minimum distance between the ends of the plank and the wall must be at least 20 mm (≈ 13/16").

The minimum distance between the ends of two consecutive planks must be 6-7 mm (≈ 1/4") for planks 6' long.



The distance between the joist and the wall must be at least 4 mm (≈ 5/32") regardless of the width of the surface.



Position the joist no more than 30 mm (≈ 1"3/16) from the end of the plank.

For correct installation, every piece of board (including those shorter than 20") must always be supported and fixed to the substructure in at least 3 points.

WARNING: it has to be noted that the failure to comply strictly with the criteria for a correct installation, causes the deformation of the materials and the misalignment of all the expansion joints.

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GENERAL INSTALLATION INSTRUCTIONS

Key points to be followed before and during the installation process:

- Store the material on a flat surface providing for a stable support on the whole surface, in a dry, clean area, protected from frost and direct sun light.
- Before starting the installation, carefully check the material and notify immediately of any manufacturing issues. Complaints will not be accepted after installation.
- Before starting the installation, check project's drawings (or shop drawings if provided) and the correspondence of the received material against the packing list.
- Acclimate the material in stock to the temperature of the jobsite for at least 48 hours prior to installation.
- The installation temperature must be higher than 32 °F.
- Do not cover the product with sheets made with non-breathable material (nylon, polyethylene and similar materials). For this purpose it is advisable to use breathable material such as painter felt sheets.
- The accumulation of electrostatic charges is a natural phenomenon commonly found in plastic materials, and under exceptional environmental conditions this may also occur in Greenwood products.
- Profiles shall be handled with care in order to prevent damages. It is recommended to lift the profiles on the whole length during displacement and not make them slide on top of each other. Always use clean fabric gloves when handling profiles.
- Prevent the formation of dirt on and between profiles; in particular, make sure that mechanical processes carried out on other materials, near Greenwood products, do not determine the accumulation of chips or dust of any kinds. During the installation/ assembly phase do not apply any label or sticker; if already applied, please remove immediatly after installation. Immediately remove major stains such as paint, concrete or tar residues.
- For cleaning and maintenance instructions refer to page 129. The WoodN Industries warranty will be rendered null and void in the event of incorrect or improper handling, cleaning and maintenance.

EXPANSION GAP BETWEEN ADJACENT PROFILES AND WALLS

The composite wood being subject to limited expansion, due to temperature changes and limited water absorption, there must be maintained a lateral distance of around 3/16" between individual boards. This distance is provided automatically by the use of the clip which at the same time carries out the functions of template and spacer during fixing operations.

The heads of the boards must always rest on a substructure. The clips should be positioned in line with the substructure profile to fix both ends of the boards.
Maintain distances of 1"3/16 from the rigid structures present in the vicinity of the decking. In the head joints there must be a distance between the boards of 1/4" (for 6' long pieces) which must be increased as the length of the boards increases.
A distance of 7/16" must also be maintained for direction changes.

WARNING: For correct installation, every piece of board (including those shorter than 20") must always be supported and fixed to the substructure in at least 3 points. This is to ensure durability over time.

TOOLS REQUIRED FOR INSTALLATION:

- Impact drill
- Electric screwer
- Electric saw
- Rubber mallet
- Various materials for tracing purpose

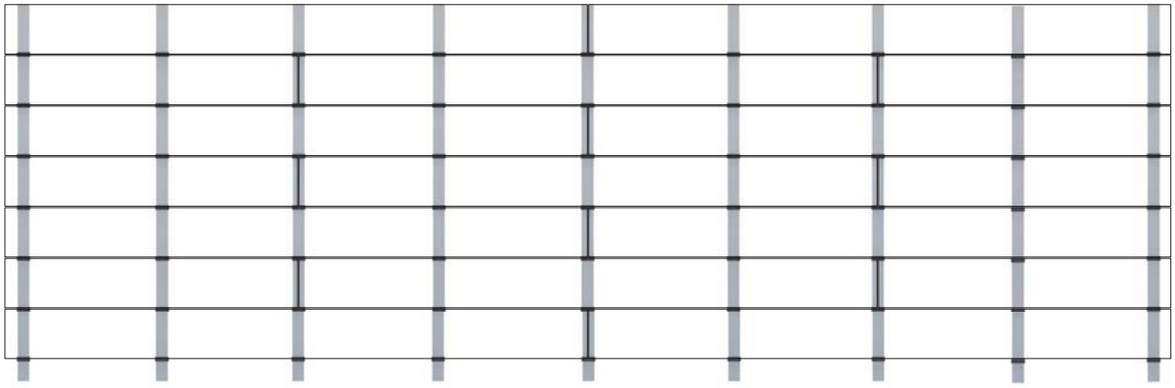
LAYING METHOD 1 - SINGLE FRAME

LAYING ON STABLE GROUND

Installation on aluminum joists involves mechanical fixing them to the ground and is suitable for installation on stable and drillable floors such as: concrete sub-bases, existing stone floors and industrial decking.
In the presence of concrete screeds laid to protect waterproofing membrane, check the actual available thickness to choose the size of the plug to fix the joists, so as not to damage the underlying membrane.

For installation in circumstances and on grounds that differ from the above, contact the Woodn Industries' technical department at the following e-mail address: ufficiotecnico@woodn.com

LAYING PATTERN - RUNNING BOND



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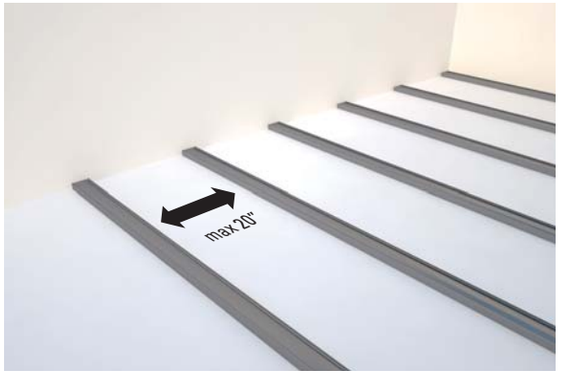
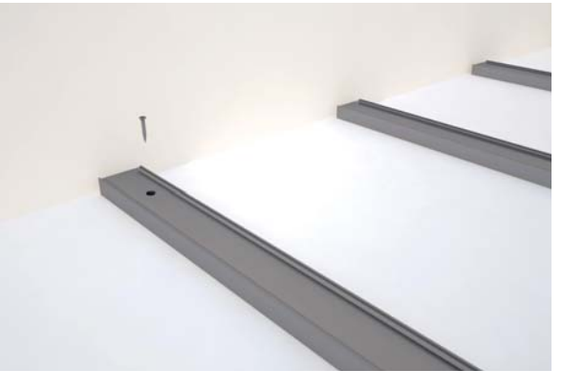
LAYING AND FIXING OF ALUMINUM JOISTS (standard 2” 3/16 x 13/16”)

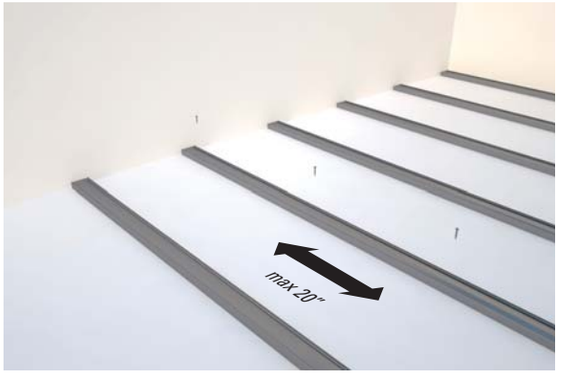
Arrange the joists on the ground in a position perpendicular to the plank laying direction, with a maximum centre-to-centre distance equal to **500 mm (≈ 20”)** from each other. The positioning of the joists is closely connected to the laying surface of the planks. We recommend laying out the planks on the ground to locate the exact positions of the joists, their centre-to-centre distance may vary depending on the laying surface and the cut of the floor planks.



1. Arrange the joists on the ground with a maximum centre-to-centre distance of **500 mm (≈ 20”)**, and take into account the floor laying pattern.

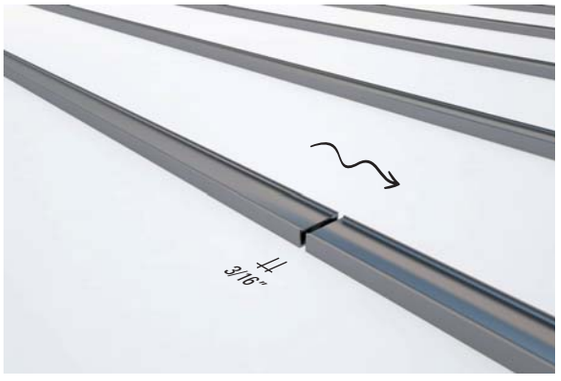


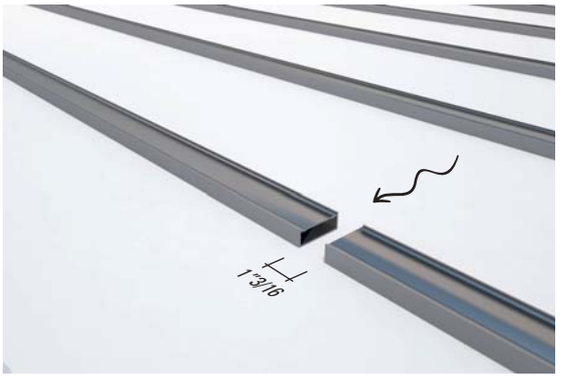
2. Drill a through hole with a diameter 1/16” to 1/8” greater than the diameter of the screw shank and another of a diameter greater than the diameter of the screw head on with the upper surface of the joist.



3. Attach the joists to the ground using suitable screw plugs, the centre-to-centre distance of the fixing points must not exceed 500 mm (≈ 20”).

4. If the ground is uneven, and shimming is therefore required, ensure support to the aluminium joists at least every 500 mm (≈ 20”).





5. The distance between the ends of adjacent joists must be at least 5 mm (≈ 3/16”) in the case of installation of the joists along the sloping side of the floor and 30 mm (≈ 1”3/16) in case of installation perpendicular to the slope to allow for the outflow of rainwater.

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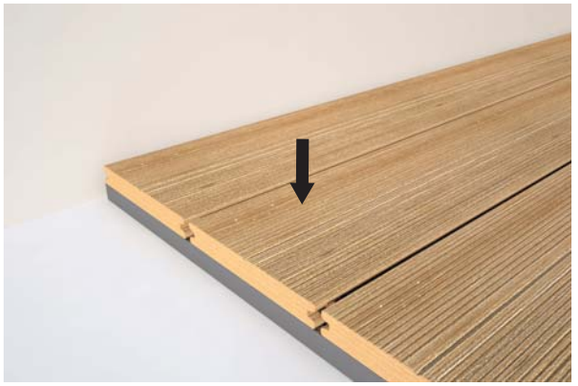
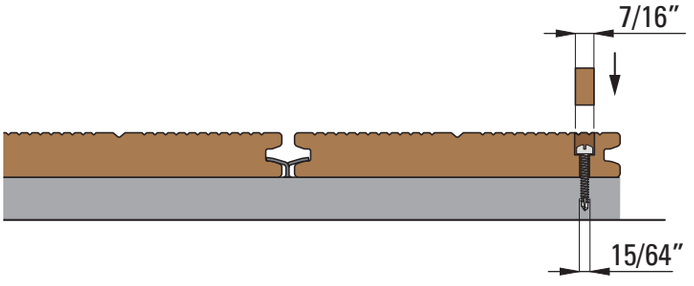


1. The brushed side (Loft or Solarium) must be installed facing upwards as it is treated to give it the characteristic aesthetic effect desired.

2. Apply starting clip ZCLG-AC003, by screwing it to the joist and make sure the clips are all aligned.

3. Insert the clip ZCLG-AC017 in the appropriate on the joist and fix it with self-drilling screws 3.5x19 mm.

4. Repeat the above steps until completion of the decking.



5. Where boards have to be fixed using screws, the fixing can be done with a recessed screw and the special dowel provided.
• Make a Ø 6 mm (≈ 15/64”) hole on the board in order to create the site for the screw 4.8x25 mm. Increasing the diameter is necessary to allow the natural movement of the board.
• Enlarge the hole in the upper 2/3 of the board to Ø 11 mm (≈ 7/16”).
• Fix the board to the pilot hole in the aluminium with the screw 4.8x25 mm.
• Plug the hole with the dowel and sand the surface so as to recreate the finish of the board.

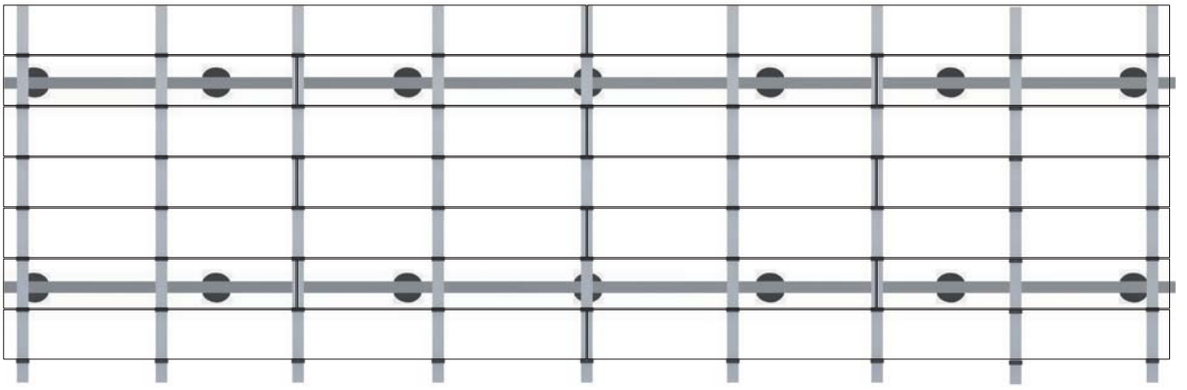
LAYING METHOD 2 - DOUBLE FRAME

LAYING ON UNSTABLE OR ELEVATED GROUND

The laying system involves the creation of a frame consisting of aluminum joists and crosspieces and does not require fixing to the ground; it is suitable for laying on unstable or not drillable grounds such as: soil with vegetation, stabilized gravel, sand, waterproofed floors with a sheath or in general for raised floors.

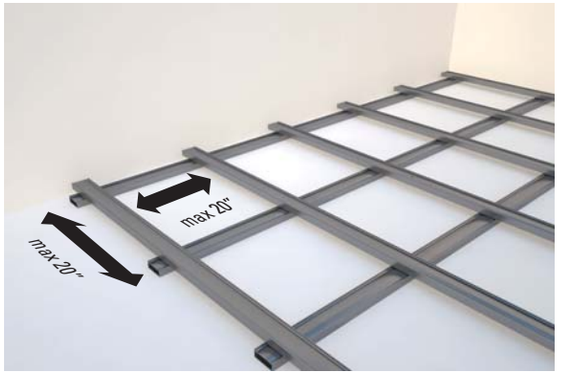
For installation in circumstances and on grounds that differ from the above, contact the Woodn Industries' technical department at the following e-mail address: ufficiotecnico@woodn.com

LAYING PATTERN - RUNNING BOND

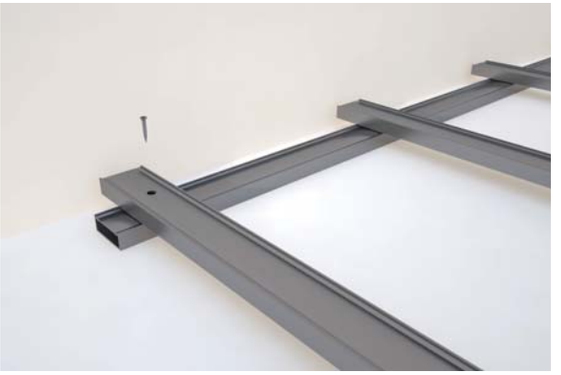


CREATING THE ALUMINIUM FRAME and LAYING OF RAISING SUPPORTS (standard 2” 3/16 x 13/16”)

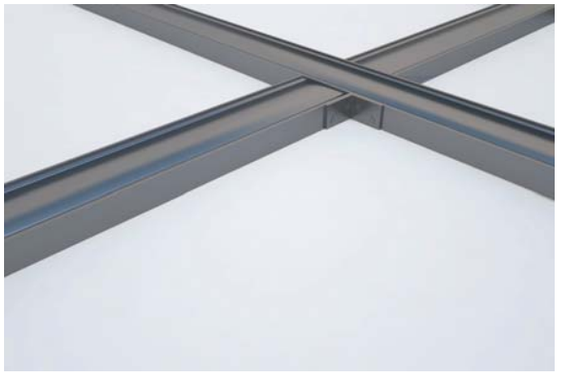
Place on crosspieces and joists in accordance with the chosen laying pattern, maintaining a maximum centre-to-centre distance of **500 mm (≈ 20”)** between the joists and 500 mm (≈ 20”) between the crosspieces. In the case of raised floors, place the supports in accordance with the laying pattern. In any case, the distance between the supports must be maximum 500 mm (≈ 20”) in the direction parallel to the length of the planks and 500 mm (≈ 20”) in the direction perpendicular to the length of the planks.



1. Place crosspieces and joists as shown in the figure. The joists must be firmy fixed to the crosspieces.



2. In the case of a superimposed frame, drill through holes with a Ø 5 mm (≈ 3/16”) on the joist and widen them to Ø 12 mm (≈ 15/32”) on the upper surface. Then, fix it with the self-drilling screw.



3. In the case of a coplanar frame, for a proper system rigidity the stringers should be fitted whole, interrupting the spars instead at the intersections. Common L-brackets, which can be found in any hardware store, can be used for fixing.

4. In the case of raised floors, place the supports as shown in the figure.

5. Then create the frame as indicated in the steps 1 and 2.
Mechanically fix crosspieces and joists to the supports.
Other forms of fix are not allowed (for example chemical, cement, etc.)

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ALUMINIUM CAPACITY (centre-to-centre distance crosspieces)

Joists	I_{max}
2″ 3/16 x 13/16″ (W x H)	500 mm (≈ 20″)
2″ 3/16 x 1″ 3/16 (W x H)	650 mm (≈ 26″)
2″ 3/16 x 1″ 5/8 (W x H)	800 mm (≈ 31″)

INSTALLATION OF THE PLANKS

Proceed with the installation of the planks as described in paragraph “Laying method 2”.

HEIGHT OF THE ELEVATED SYSTEM

The total height of the decking system is obtained by adding the overall size of the joist, crosspiece, plank and support. Here are the possible combinations:

Woodn™ Greendeck

Support code	Support height	Height of the finished surface*	Frame configuration
ZPSC-AC010#2235	≈ 7/8″ - 1″3/8	≈ 3″5/16 - 3″13/16	Overlapped
ZPSC-AC010#3555	≈ 1″7/16 - 2″3/16	≈ 3″13/16 - 4″19/32	Overlapped
ZPSC-AC010#5595	≈ 2″3/16 - 3″3/4	≈ 4″19/32 - 6″3/16	Overlapped
ZPSC-AC010#95165	≈ 3″3/4 - 6″1/2	≈ 6″3/16 - 8″15/16	Overlapped
ZPSC-AC010#165235	≈ 6″1/2 - 9″5/16	≈ 8″15/16 - 11″11/16	Overlapped

The heights reported above are calculated considering aluminum joists and crosspieces 2″ 3/16 x 13/16″ (W x H)

To the ZPSC-AC010#95165 and ZPSC-AC010#165235 supports (and only to them) the extension code ZPSC-AC010#PROL can be applied, up to a maximum of 3 extensions. Each extension applied increases the height of the system by 3″15/16.

For example:
System composed of: ZPSC-AC010#95165 overlapped frame + 2 extensions finished floor height = (6″3/16 - 8″15/16) + (2 x 3″15/16) = 14″3/64 - 16″13/16 (14″3/64 minimum height, 16″13/16 maximum height).

THEORETICAL SUPPORT INCIDENCES FOR RAISED DECKING

	stacked bond	running bond
Woodn™ Greendeck	0,46 pcs/sqft	0,46 pcs/sqft

ACCESSORIES

accessory code	design
Aluminum Joist ZPCM-55X20-6060-T6 55 x 20 mm (W x H) (≈ 2”3/16 x 13/16”)	
Aluminum Joist ZPCM-55X30-6060-T6 55 x 30 mm (W x H) (≈ 2”3/16 x 1”3/16)	
Aluminum Joist ZPCM-55X40-6060-T6 55 x 40 mm (W x H) (≈ 2”3/16 x 1”5/8)	
Burnished stainless steel clip ZCLG-AC017	
Stainless steel clip (starting clip) ZCLG-AC003	
Screw hole dowel AC008	
Smooth board for bullnose GW001	
Raised floor supports ZPSC-AC010#SPESS / ZPSC-AC010#H15 ZPSC-AC010#2235 / ZPSC-AC010#3555 ZPSC-AC010#5595 / ZPSC-AC010#95165 ZPSC-AC010#165235 / ZPSC-AC010#PROL	

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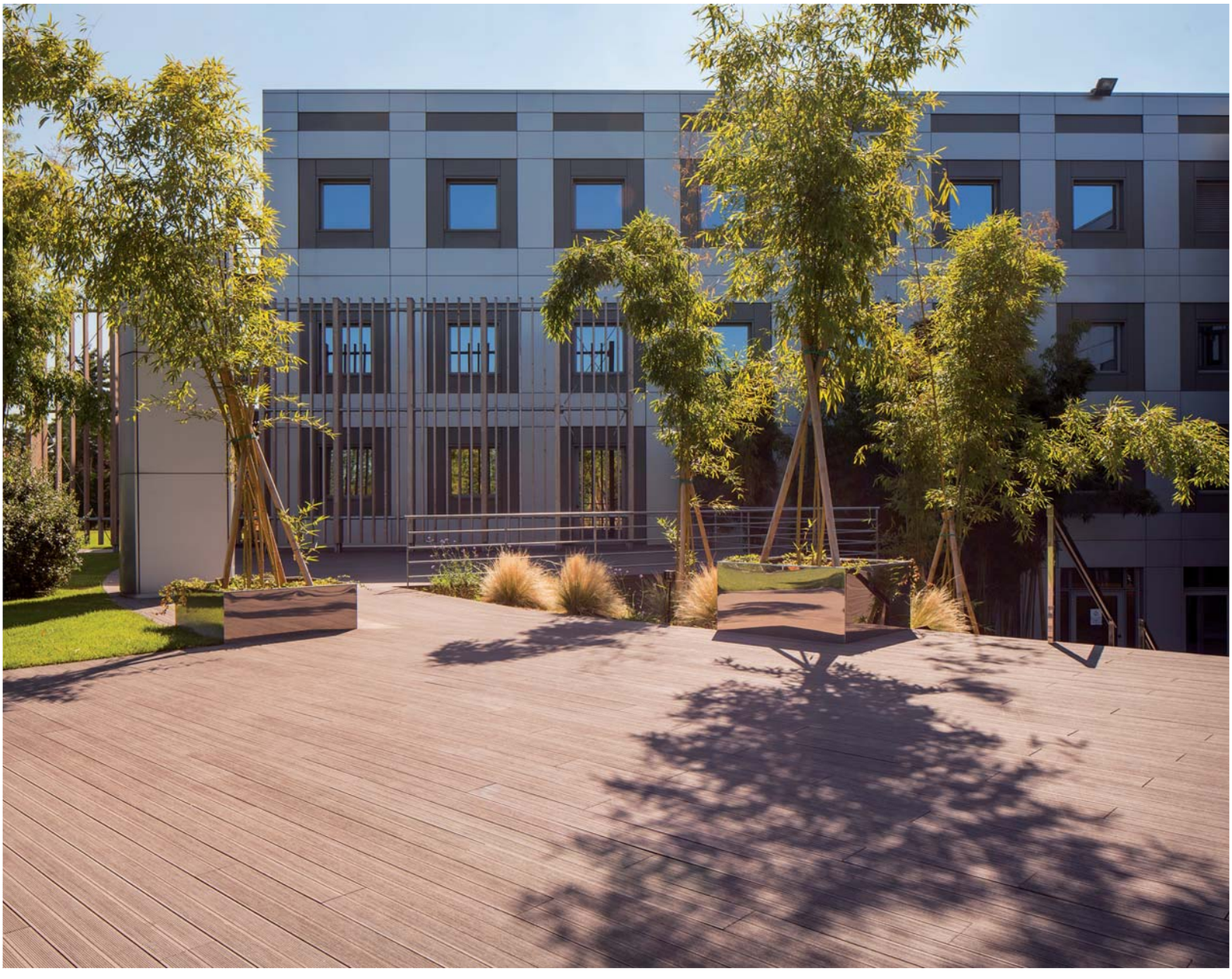

Zingonia Sports Center (GREENDECK)

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REV.00 - 2021

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