



2019
TECHNICAL BROCHURE
INTL





DISCLAIMER - GENERAL NOTES

The information provided by WoodN Industries in this document are solely indicative, they are based on the present state of knowledge and must be considered only as a description of our products and their possible application. Such information must not be interpreted as a guarantee of specific features, performances or warranties of the product. Material's colors and finishes represented in this document are the result of printing techniques so they may slightly differ from the original colors. Original samples are available upon request and constitute only a general indication of the dimensions and the aesthetic appearance of Woodn™ profiles. WoodN Industries may change the information included in this document at any time and without further notice. WoodN Industries does not warrant the accuracy and completeness of the information in this document and furthermore their suitability for the purpose which it is consulted for by the other parties. WoodN's customers or third parties must ascertain they have the most recent version of this document, available at www.woodn.com. It is advised that customers and third parties have a professional adviser to inform them about the suitability of the products for all desired applications and about applicable laws and regulations. WoodN Industries reserves the right to modify products and concerning features without prior notice. WoodN Industries is not liable for any damage arising from, or related to, the use of this document. Woodn™ material does not have structural characteristics and therefore WoodN Industries declines all responsibilities for improper use of the material. No sections of this publication can be reproduced, stored in database, or transmitted in any form or by any other mean without the explicit approval of WoodN Industries. For more information please contact WoodN Industries.

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VERSATILIS/



sunscreen - louvers

pergolas - fences

WOODN VERSATILIS - VERTICAL BEAUTY

LOUVERS: VARIOUS PROPOSALS FOR COUNTLESS SOLUTIONS. IT IS A SUNSCREEN FOR POSITIVE ENERGY BUILDINGS, GUARANTEEING REDUCED CONSUMPTION AND LIVING COMFORT.

ASSEMBLED WINDOWS AND SCREENS: AS YOU LIKE, SEVERAL COMPOSITIONS AND DESIGNS.

FENCES AND PERGOLAS: A READY-MADE SOLUTION, EASY TO ASSEMBLE AND SAFE.

AETERNUS/



outdoor decking

WOODN AETERNUS

AN ULTIMATE SOLUTION FOR OUTDOOR ENVIRONMENTS, IT LEAVES NO SPLINTERS. IT IS CERTIFIED SLIP-RESISTANT, DOES NOT REQUIRE WOOD MAINTENANCE, AND IT IS DIMENSIONALLY STABLE.

MODULATUS/



outdoor cladding -

outdoor/indoor ceilings

WOODN MODULATUS: TOTAL LOOK

CLADDING: A SIDING FOR EXTERIORS, WHICH QUALIFIES THE BUILDING IN TERMS OF BEAUTY AND FUNCTIONALITY. WITH ITS CERTIFIED PROPERTIES, SUCH AS RESISTANCE TO FIRE AND WIND STRENGTH, IT ENSURES HIGH SAFETY STANDARDS.

CEILING: A COMPLETE SYSTEM, EASY TO INSTALL AND MODULAR, WHICH ALLOWS THE COMPLETION AND RENEWAL OF RESIDENTIAL AND COMMERCIAL ENVIRONMENTS.

ORNANS/



indoor cladding mosaic

WOODN ORNANS

IT IS THE TWO-FACED TECHNICAL COVERING CONCEIVED TO BEST MEET THE DEMANDS OF CONTEMPORARY ARCHITECTURE AND INTERIOR DESIGN. LIGHTNESS, THICKNESS AND EASY INSTALLATION MAKE THIS PRODUCT APPLICABLE ON ANY SURFACE.

FINISHES

outdoor colors

Available only in brushed (all profiles) or dune finish (only Q20410-WA)

01 Bianco Carrara



01-PW Avorio



02 Lagorai



99 Cuba



10 Caffè Bogotà



13 Myanmar



28 Grigio Londra



14 Grigio Silverstone



34 Verde Bamboo



48 Black



33 Beige Sahara



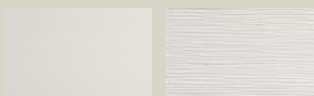
indoor colors

Available in brushed, smooth (all profiles) or dune finish (only Q20410-WA)

01 Bianco Carrara



01-PW Avorio



02 Lagorai



99 Cuba



10 Caffè Bogota



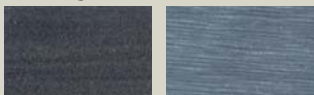
13 Myanmar



28 Grigio Londra



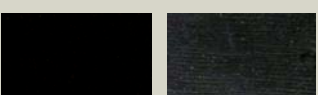
14 Grigio Silverstone



34 Verde Bamboo



48 Black



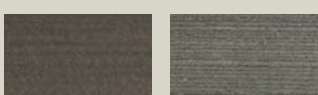
06 Marrakech



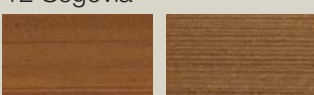
33 Beige Sahara



18 Lanzarote



12 Segovia



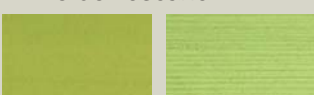
16 Rosso Maranello



26 Azzurro Lido



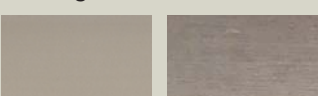
22 Verde Toscano



23 Arancio Siciliano



27 Grigio Lavaredo



Colors and textures shown are purely indicative. Check every time a real sample for approval.
Considering the presence of natural wood fibers, colors may vary from batch to batch.

WOODN VERSATILIS



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MATERIAL'S FEATURES

Mechanical properties

| | | |
|---|---|---|
| Elasticity (bending) | UNI EN ISO 178 | @23 °C @65 °C |
| Yield strenght (flexural) | UNI EN ISO 178 | @23 °C @65 °C |
| Water absorbption and humidity | ASTM D1037 | absorption 0,07% |
| Dynamic- Mechanical analysis of transition temperature | ASTM D4065/95 | 78.8 °C |
| Linear thermal expansion coefficient (from -10 °C to 70 °C) | TMA ASTM E 831/2006 | longitudinal 46,9 x10 ⁻⁶ m/(m°C) trasversal 48 x10 ⁻⁶ m/(m°C) |
| Tensile strenght and tensile strenght after accelerated weathering (exposure to xenon lights) | ASTM D638-10 (tensile test) ASTM G155-050 | difference after 2 months of exposure ~5,21% difference after 3 months of exposure ~6,9% (meet the requirements to comply with Miami Dade and Florida Building Code 2014) |

Reaction to fire

| | | |
|---|--------------------------|--|
| Flammability | UL94 AS 3959-2009 | V-0 Class BAL-29 |
| Flame spread index Smoke developed index | ASTM E84 | Class A |
| Ignition temperature | ASTM D1929 | 476 °C |
| Average critical radiant flux of floor | AS ISO 9239 ASTM E648 | ≥ 11 kW/m ² > 1,03 W/cm ² (class I as per NFPA 101) |
| Ignitability, flame propagation, heat release and smoke release | AS/NZS 1530.3:1999 | Ignitability (0-20) = 8 Spread of Flame (0-10) = 0 Heat Evolved (0-10) = 0 Smoke Developed (0-10) = 7 |

Chemical and biological features

| | | |
|--|------------------------------|--------------------------------|
| Evaluation of the action of microorganisms (scale from 0 to 5) | EN ISO 846:97 | Test result: 1 |
| Heavy metal content (Pb, Ge, Cr, Hg) | GB18584-2001 GB18580-2001 | < 0,5 ppm |
| Formaldehyde emission | EN 717-2:1994 | 0,1 mg HCHO/(m ² h) |





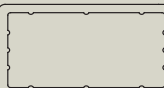
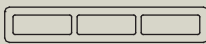

Surface characteristics (only for Aeternus)

| | | |
|--|---------------------|--------------------|
| Surface resistance to slippage while wearing footwear (brushed finish) | DIN 51130 (06/2004) | R12 |
| Surface resistance to slippage while wearing barefoot (brushed finish) | DIN 51097 (1992) | A+B+C |
| Flooring slip resistance (Pendulum test) | AS 4663-2013 | Dry: 98 Wet: 70 |


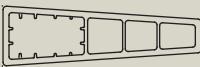




The values shown are indicative and not binding. Test reports available upon request.
The natural aging of the material and temperature variations may cause deviations from the values indicated above.
The product is protected by a warranty in line with legal requirements: for more information see the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

PROFILES SECTION

| profile | cross-section | nominal dimensions [mm] | reinforcement external nominal dimensions [mm] | weight of the plank [kg/m] |
|--|---|---|--|----------------------------|
| LG3020  |  | section 30 x 20 standard length 2000 | 20 x 10 | 0.38 |
| JF4030  |  | section 40 x 30 standard length 2000 | 20 x 10 | 0.63 |
| JF4030-30x20  |  | section 40 x 30 standard length 2000 | 30 x 20 | 0.56 |
| JF5026-15x15  |  | section 50 x 26 standard length 2000 | 15 x 15 | 0.67 |
| JF5026-40x15  |  | section 50 x 26 standard length 2000 | 40 x 15 | 0.61 |
| JF6032  |  | section 60 x 32 standard length 2000 | 20 x 20 | 1.00 |
| JF7040-25x25  |  | section 70 x 40 standard length 2000 | 25 x 25 | 1.20 |

| profile | cross-section | nominal dimensions [mm] | reinforcement external nominal dimensions [mm] | weight of the plank [kg/m] |
|--|---|--|--|----------------------------|
| JF7040-30x15  |  | section 70 x 40 standard length 2000 | 30 x 15 | 1.05 |
| JF7040-50x25  |  | section 70 x 40 standard length 2000 | 50 x 25 | 1.04 |
| TZ9555-R  |  | section 95 x 55 standard length 2000 | 40 x 40 | 1.50 |
| TZ9555  |  | section 95 x 55 standard length 2000 | 80 x 40 | 1.70 |
| JF11020  |  | section 110 x 20 standard length 2000 | — | 1.35 |
| JF12058  |  | section 120 x 58 standard length 2000 | 40 x 40 | 2.27 |
| JF18041  |  | section 180 x 41 standard length 2000 | 30 x 30 <hr/> 40 x 20 | 2.35 |

| profile | cross-section | nominal dimensions [mm] | reinforcement external nominal dimensions [mm] | weight of the plank [kg/m] |
|--|---|---|--|----------------------------|
| JF18041-165x30  |  | section 180 x 41 standard length 2000 | 165 x 30 | 1.95 |
| TZ6060  |  | section 60 x 60 standard length 2000 | 40 x 40 | 1.00 |
| JF7070  |  | section 70 x 70 standard length 2000 | 50 x 50 | 1.27 |
| TZ113113  |  | section 113 x 113 standard length 2000 | 100 x 100 | 2.00 |
| TZ180180  |  | section 180 x 180 standard length 2000 | 162 x 162 | 4.70 |
| JF15238  |  | section 152 x 38 standard length 2000 | 25 x 25 | 1.52 |
| JF20058  |  | section 200 x 58 standard length 2000 | 40 x 40 | 2.56 |

| profile | cross-section | nominal dimensions [mm] | reinforcement external nominal dimensions [mm] | weight of the plank [kg/m] |
|--|--|---|--|----------------------------|
| JF15045-25  |  | section 150 x 45 x 25 standard length 2000 | 50 x 25 | 1.93 |
| DT20936  |  | section 209 x 36 standard length 2000 | - | 3.27 |
| C50R  |  | section Ø 50 standard length 2000 | Ø 38 | 0.53 |

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. Refer to Woodn Technical Department or on website www.woodn.com for cad blocks and manufacturing tolerances.

GENERAL INSTALLATION INSTRUCTIONS

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

- Store the boxes 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 0 °C.
- Open the boxes and immediately remove the polyethylene packaging from the profiles.
- 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 Woodn™'s 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 Woodn 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 immediately after installation. Immediately remove major stains such as paint, concrete or tar residues.
- For cleaning and maintenance instructions refer to page 117 . The WoodN warranty will be rendered null and void in the event of incorrect or improper handling, cleaning and maintenance.

ASSEMBLY CENTRE-TO-CENTRE DISTANCE

The assembly centre-to-centre distance must be adequately sized to meet the loads specified in current regulations. The following pages show the maximum centre-to-centre application distance for each Versatilis profile, according to the visible side, the horizontal or vertical installation of the profiles and the type of metal reinforcement used. The values in the tables have been calculated considering a wind load of 150 kg/m².

The profiles must be mounted using mechanical systems that join the substructure to the metal reinforcement.

IN ORDER TO ALLOW A NORMAL EXPANSION, NO FIXING MUST BE DONE DIRECTLY ON THE WPC PROFILE.

FIXED POINT AND FLOATING POINT

When applying the profiles and fixing them to the substructure, consider making a FIXED POINT, which blocks the profile in a precise position during expansion due to thermal variations.

In all the other fixing points, FLOATING POINTS must be created to let the profile expand freely. The floating points can be made by drilling suitably sized holes or slots depending on the distance between the fixed point and the floating points based on the calculation below:

$$\text{floating point hole diameter} = \text{floating point slot length} = 2 \times L \times 0.003 + \emptyset$$

where L = centre-to-centre distance between the fixed point and the floating point
and \emptyset = diameter of the fixing screw

For example:

$$L = 2000 \text{ mm}, \emptyset = 4 \text{ mm}$$

$$\text{floating point hole diameter} = \text{floating point slot length} = 2 \times 2000 \times 0.003 + 4 = 16 \text{ mm}$$

WARNING: it has to be noted that the failure to comply strictly with the criteria for the application of fixed points and floating points, causes the deformation of the materials and the misalignment of all the expansion joints.

EXPANSION GAP BETWEEN ADJACENT PROFILES

WoodN, due to material's composition's features and extrusion technology, undergoes after the first exposure an initial dimensional shrinkage less than 0.4% of the profile length (max value established according to EN 479: 1995) and presents a linear contraction / dilatation due to temperature variations.

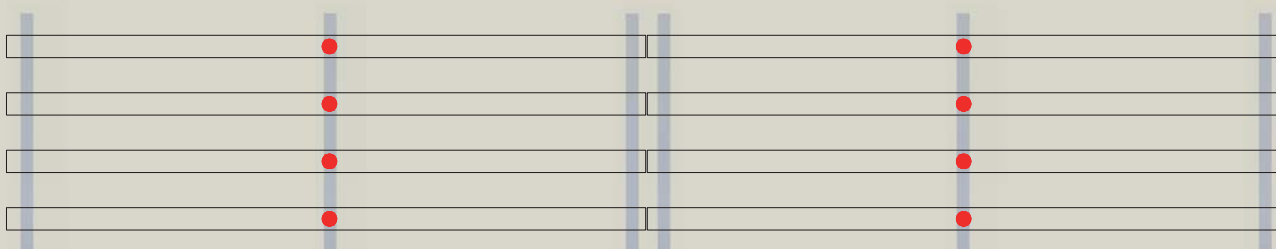
At the end of the profile, leave a gap according to the relative size in the table below:

| Laying temperature | Expansion gap |
|--------------------|---------------|
| < 20 °C | 2 mm/m |
| > 20 °C | 1 mm/m |

To make sure that the expansion spaces will remain over time, we recommend strictly adhering to the FIXED POINT positioning diagram.

LAYING PATTERN - PARALLEL

● = fixed point for expansion



WARNING: if the application requires corners with planks cut at 45°, the fixed point must be in the corner.

WARNING: when mounting planks vertically, we recommend making the fixed point at the top end.

WARNING CONCERNING INSTALLATION: due to the peculiarities of the materials supplied, Woodn Industries expressly declines any liability related to its products if laying and installation are not carried out by specialized personnel, in accordance with the specific instructions, including those related to adhesives and accessories reported in the technical data sheets that come with the products.

WARNING: the structures shown in the drawings in the following pages only represent rough construction guidelines and all their components must be adequately sized by the customer in accordance with current regulations.

For any special needs, please contact our technical department: ufficiotecnico@woodn.com

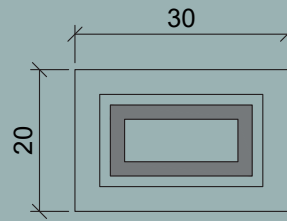
INTERNAL REINFORCEMENT

For all applications, an internal metal (aluminum/steel) reinforcement **MUST** be inserted according to the features of each Woodn profile as described in the technical book.

The metal reinforcement profile must be 40 mm shorter than the WPC profile. When centered in the WPC profile, there must be 20 mm at each end. In the specific case of profiles which have the WoodN closing cap, the reinforcement profile must be 90 mm shorter, leaving 45 mm at the ends of the WPC profile.

WARNING: the lack of using the metal reinforcement inside the louver profiles causes the deformation of the material.

LG3020

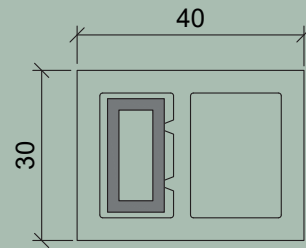


| profile | code | reinforcement dimensions [mm] | side [mm] | maximum horizontal span [mm] | | maximum vertical span [mm] | |
|---------------|---------------|-------------------------------|-----------|------------------------------|-------|----------------------------|-------|
| | | | | aluminum | steel | aluminum | steel |
| LG3020 | LG3020 | 20 x 10 x 2 | 30 | 1200 | 1600 | 1500 | 1900 |
| | | | 20 | 1000 | 1200 | | |

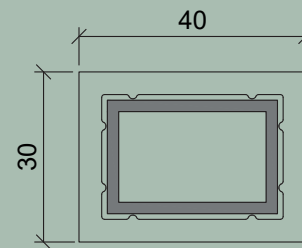
Maximum spans calculated considering:

- maximum permanent deformation due to own weight 2,5 mm
- maximum non-permanent deformation 30 mm considering a wind load of 150 kg/m²

JF4030



JF4030



JF4030-30x20

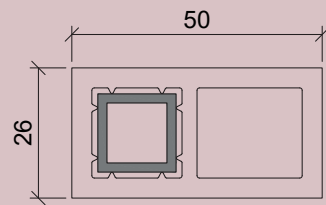


| profile | code | reinforcement dimensions [mm] | side [mm] | maximum horizontal span [mm] | | maximum vertical span [mm] | |
|---------|--------------|-------------------------------|-----------|------------------------------|-------|----------------------------|-------|
| | | | | aluminum | steel | aluminum | steel |
| JF4030 | JF4030 | 20 x 10 x 2 | 40 | 1100 | 1300 | 1800 | 2400 |
| | | | 30 | 1300 | 1600 | | |
| | JF4030-30x20 | 30 x 20 x 2 | 40 | 1800 | 2200 | 2200 | 2900 |
| | | | 30 | 1600 | 1900 | | |

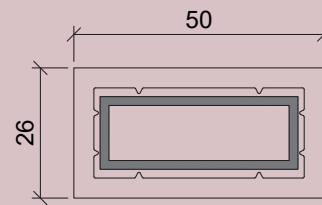
Maximum spans calculated considering:

- maximum permanent deformation due to own weight 2,5 mm
- maximum non-permanent deformation 30 mm considering a wind load of 150 kg/m²

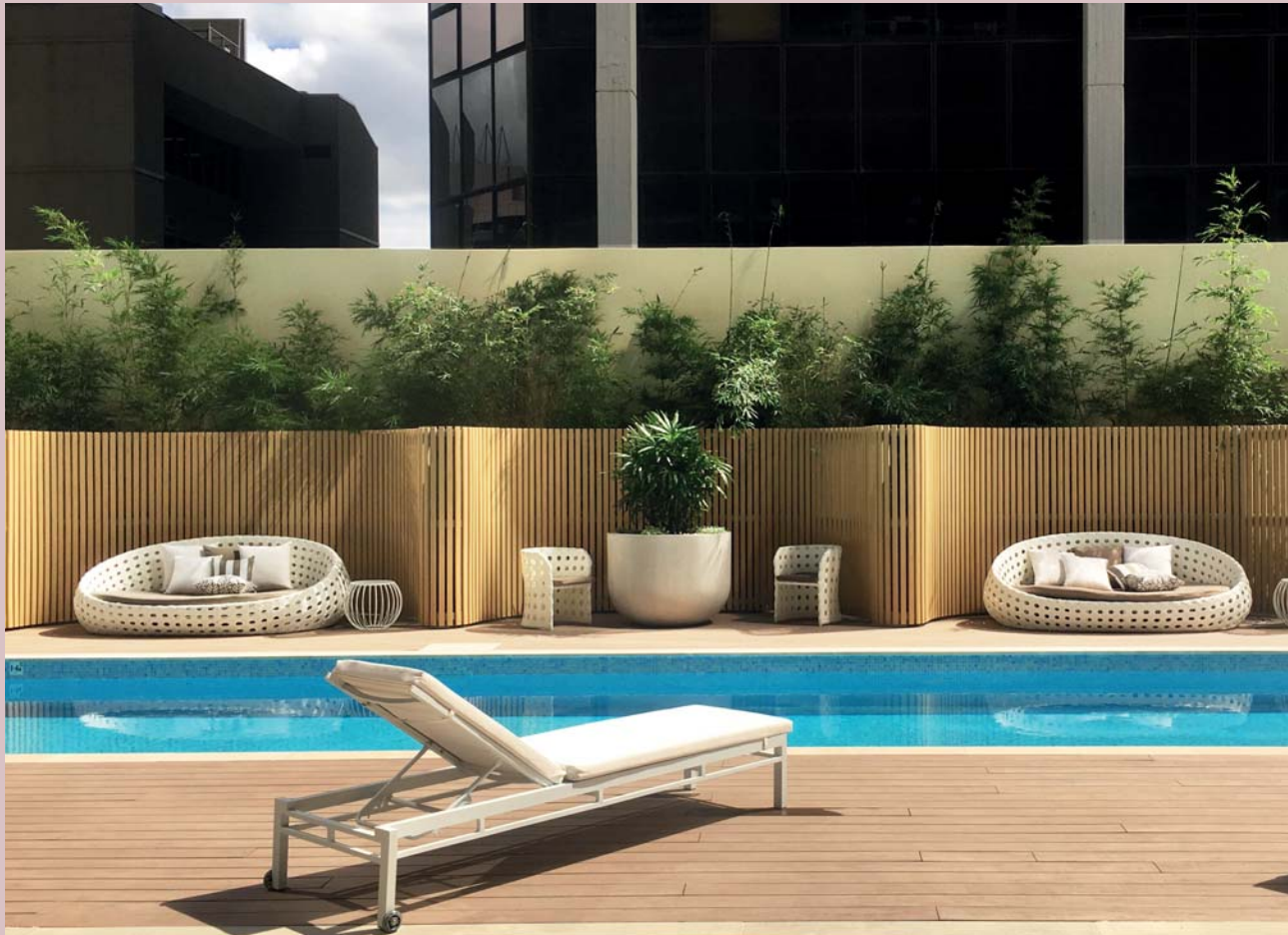
JF5026



JF5026-15x15



JF5026-40x15

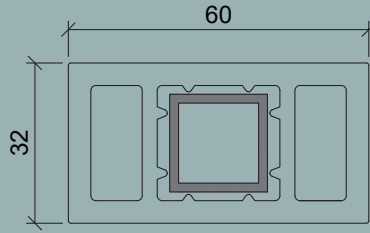


| profile | code | reinforcement dimensions [mm] | side [mm] | maximum horizontal span [mm] | | maximum vertical span [mm] | |
|---------|--------------|-------------------------------|-----------|------------------------------|-------|----------------------------|-------|
| | | | | aluminum | steel | aluminum | steel |
| JF5026 | JF5026-15x15 | 15 x 15 x 2 | 50 | 1300 | 1500 | 1700 | 2100 |
| | | | 26 | 1200 | 1500 | | |
| | JF5026-40x15 | 40 x 15 x 2 | 50 | 1700 | 2400 | 1900 | 2500 |
| | | | 26 | 1400 | 1700 | | |

Maximum spans calculated considering:

- maximum permanent deformation due to own weight 2,5 mm
- maximum non-permanent deformation 30 mm considering a wind load of 150 kg/m²

JF6032

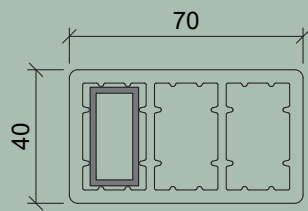


| profile | code | reinforcement dimensions [mm] | side [mm] | maximum horizontal span [mm] | | maximum vertical span [mm] | |
|---------------|---------------|-------------------------------|-----------|------------------------------|-------|----------------------------|-------|
| | | | | aluminum | steel | aluminum | steel |
| JF6032 | JF6032 | 20 x 20 x 2 | 60 | 1600 | 1800 | 1900 | 2400 |
| | | | 32 | 1400 | 1700 | | |

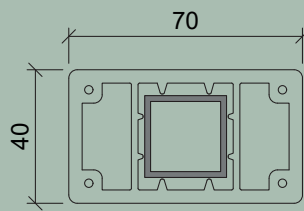
Maximum spans calculated considering:

- maximum permanent deformation due to own weight 2,5 mm
- maximum non-permanent deformation 30 mm considering a wind load of 150 kg/m²

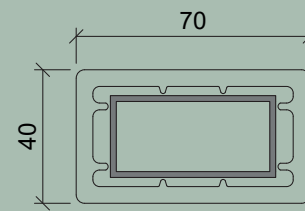
JF7040



JF7040-30x15



JF7040-25x25



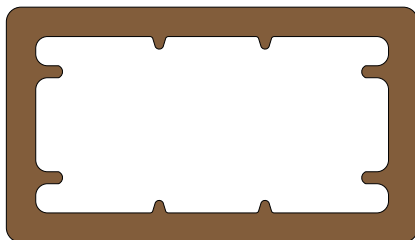
JF7040-50x25



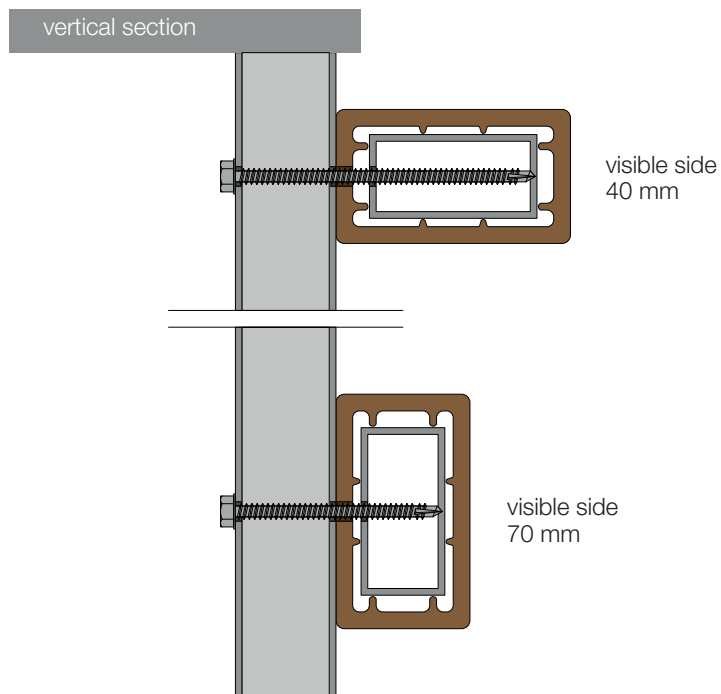
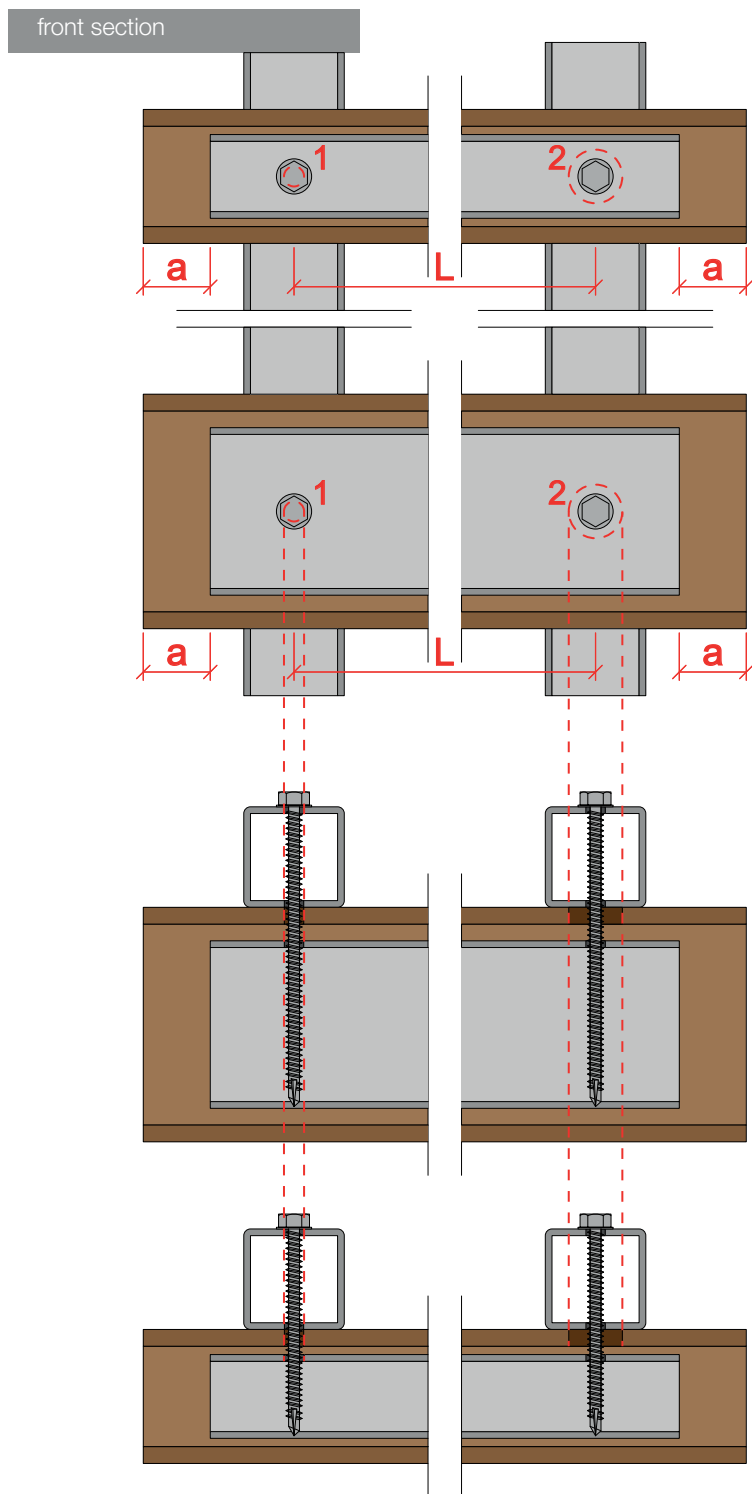
| profile | code | reinforcement dimensions [mm] | side [mm] | maximum horizontal span [mm] | | maximum vertical span [mm] | |
|---------|--------------|-------------------------------|-----------|------------------------------|-------|----------------------------|-------|
| | | | | aluminum | steel | aluminum | steel |
| JF7040 | JF7040-30x15 | 30 x 15 x 2 | 70 | 1500 | 1700 | 2100 | 2600 |
| | | | 40 | 1700 | 2000 | | |
| | JF7040-25x25 | 25 x 25 x 2 | 70 | 1800 | 2100 | 2200 | 2900 |
| | | | 40 | 1700 | 2000 | | |
| | JF7040-50x25 | 50 x 25 x 2 | 70 | 2400 | 3000 | 2600 | 3300 |
| | | | 40 | 1900 | 2300 | | |

Maximum spans calculated considering:

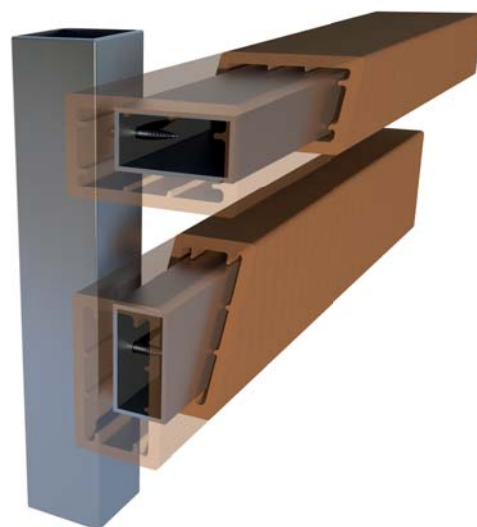
- maximum permanent deformation due to own weight 2,5 mm
- maximum non-permanent deformation 30 mm considering a wind load of 150 kg/m²



JF7040-50x25

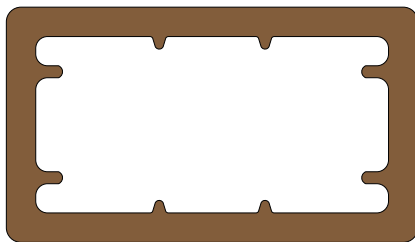


a = 20 mm
a = 45 mm in case of installation of the WAJF7040C_WM cap
1= FIXED POINT - Ø hole = Ø screw
2= FLOATING POINT - Ø hole = 2L x 0.003 + Ø screw [mm]

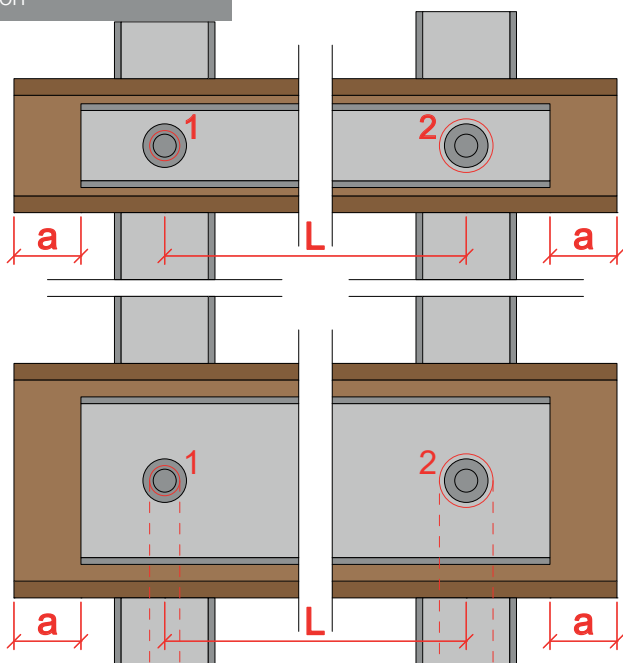


axonometric view

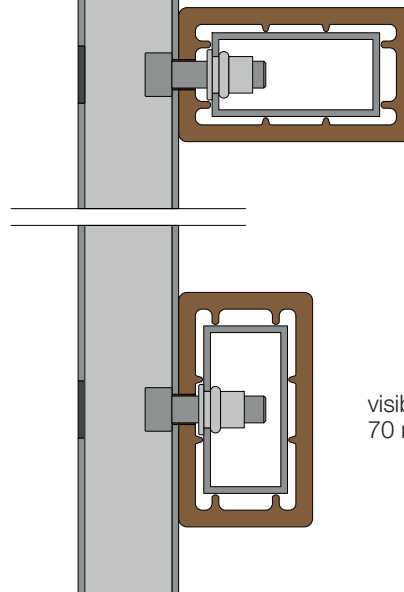
The systems shown are meant as a guide. The drawings show the key points for the design and mounting stages, such as metal reinforcements, fixed point and floating point. All components of the system must be adequately sized and verified by a qualified technician.



front section



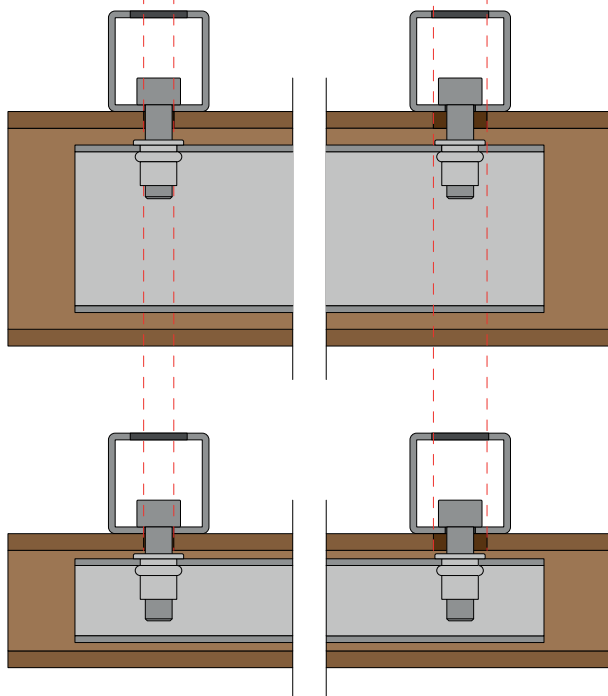
vertical section



visible side
40 mm

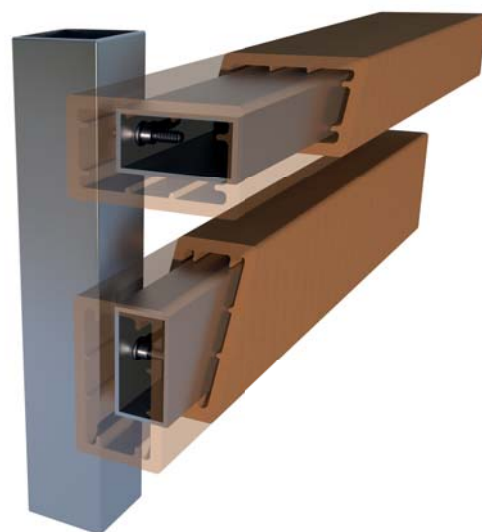
visible side
70 mm

a = 20 mm
a = 45 mm in case of installation of the WAJF7040C-WM cap
1= FIXED POINT - Ø hole = Ø screw
2= FLOATING POINT - Ø hole = $2L \times 0.003 + \text{Ø screw}$ [mm]



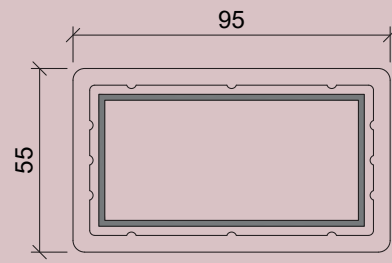
horizontal section

axonometric view

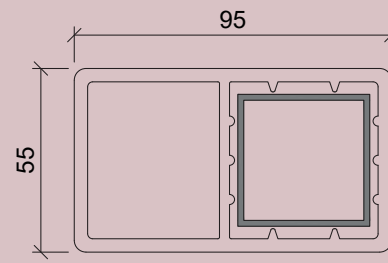


The systems shown are meant as a guide. The drawings show the key points for the design and mounting stages, such as metal reinforcements, fixed point and floating point. All components of the system must be adequately sized and verified by a qualified technician.

TZ9555



TZ9555



TZ9555-R

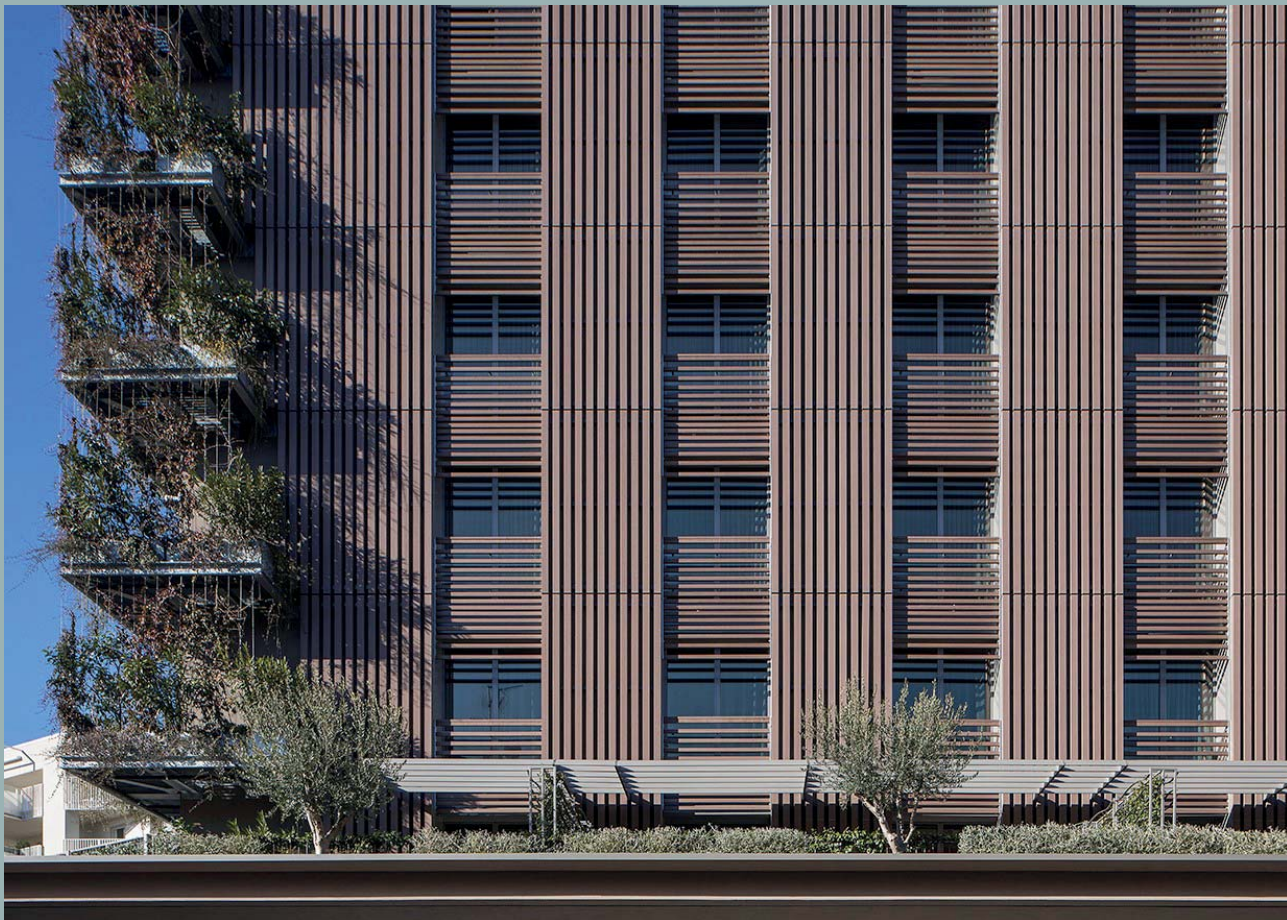
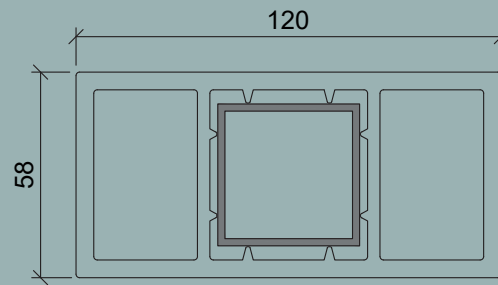


| profile | code | reinforcement dimensions [mm] | side [mm] | maximum horizontal span [mm] | | maximum vertical span [mm] | |
|---------|----------|-------------------------------|-----------|------------------------------|-------|----------------------------|-------|
| | | | | aluminum | steel | aluminum | steel |
| TZ9555 | TZ9555 | 80 x 40 x 2 | 95 | 3400 | 4000 | 3400 | 4400 |
| | | | 55 | 2600 | 3000 | | |
| | TZ9555-R | 40 x 40 x 2 | 95 | 2500 | 2900 | 3000 | 3900 |
| | | | 55 | 2400 | 2800 | | |

Maximum spans calculated considering:

- maximum permanent deformation due to own weight 2,5 mm
- maximum non-permanent deformation 30 mm considering a wind load of 150 kg/m²

JF12058

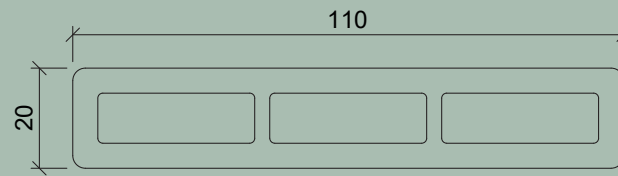


| profile | code | reinforcement dimensions [mm] | side [mm] | maximum horizontal span [mm] | | maximum vertical span [mm] | |
|----------------|----------------|-------------------------------|-----------|------------------------------|-------|----------------------------|-------|
| | | | | aluminum | steel | aluminum | steel |
| JF12058 | JF12058 | 40 x 40 x 2 | 120 | 2400 | 2700 | 2900 | 3700 |
| | | | 58 | 2200 | 2600 | | |

Maximum spans calculated considering:

- maximum permanent deformation due to own weight 2,5 mm
- maximum non-permanent deformation 30 mm considering a wind load of 150 kg/m²

JF11020



WITHOUT REINFORCEMENT

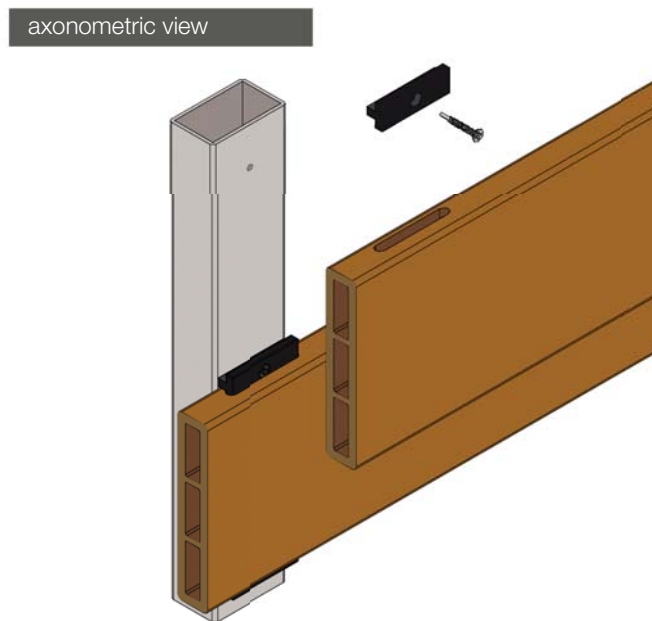
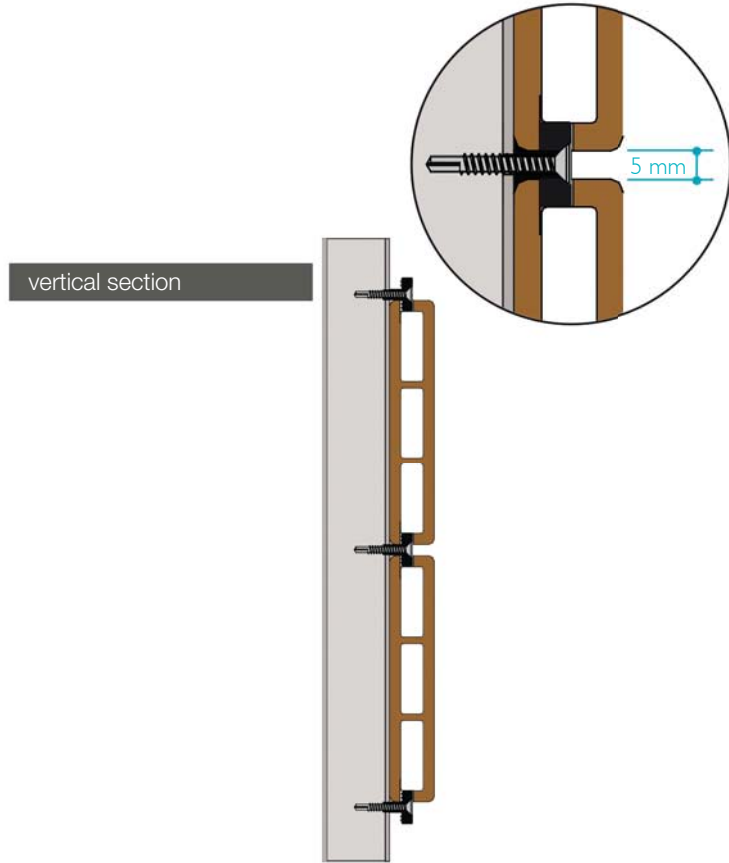
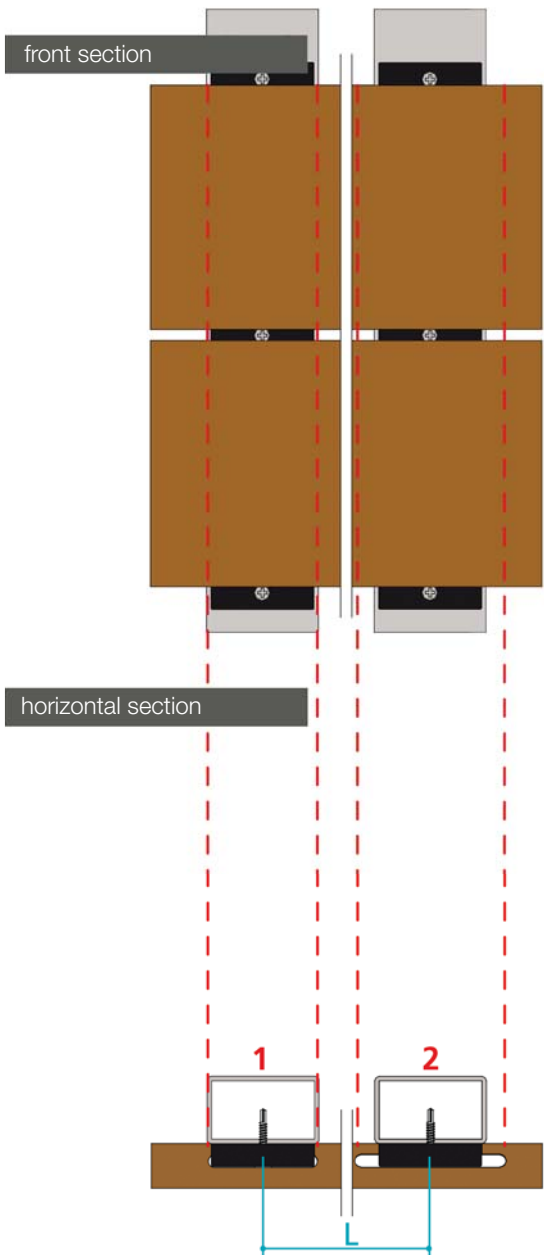
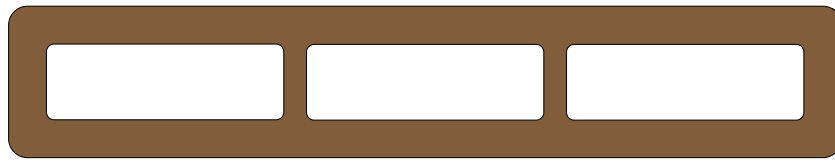
| profile | code | side [mm] | maximum horizontal span [mm] | maximum vertical span [mm] |
|----------------|----------------|-----------|------------------------------|----------------------------|
| JF11020 | JF11020 | 110 | 750 | 750 |

WITH REINFORCEMENT

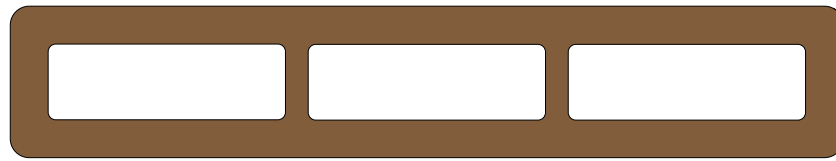
| profile | code | reinforcement dimensions [mm] | side [mm] | maximum horizontal span [mm] | maximum vertical span [mm] |
|----------------|-------------------|-------------------------------|-----------|------------------------------|----------------------------|
| JF11020 | JF11020-WA | "L" profile 30 x 10 x 2 | 110 | 900 | 900 |

Maximum spans calculated considering:

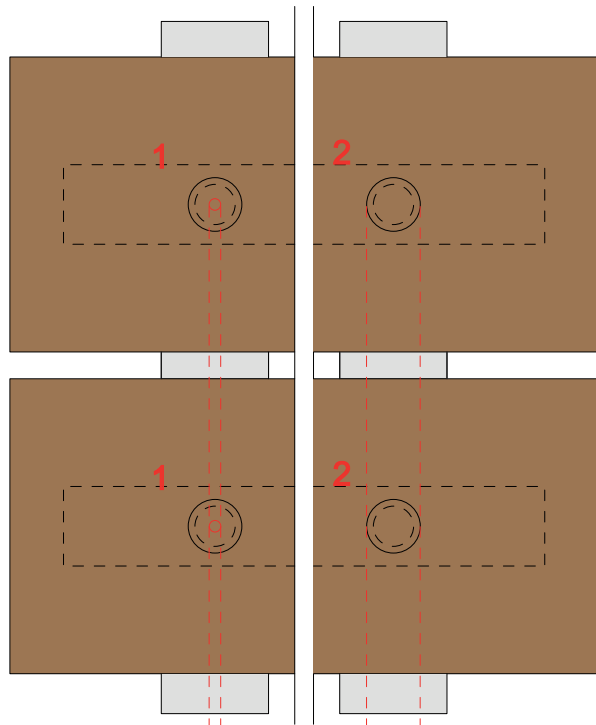
- maximum permanent deformation due to own weight 2,5 mm
- maximum non-permanent deformation 30 mm considering a wind load of 150 kg/m²



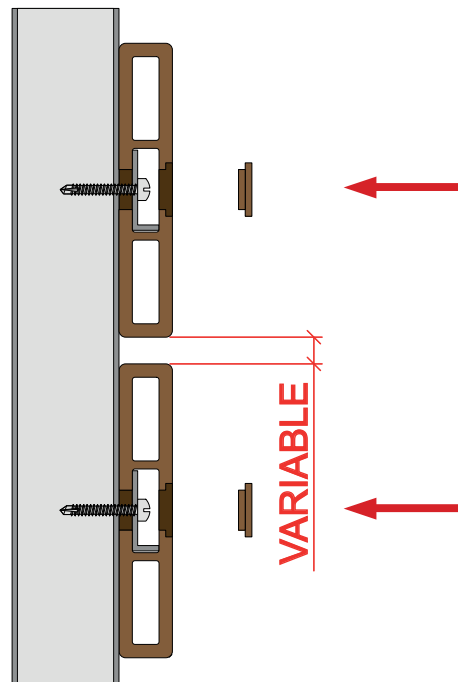
1= FIXED POINT = 49 mm
 2= FLOATING POINT = 49 mm + 2L x 0.003 [mm]



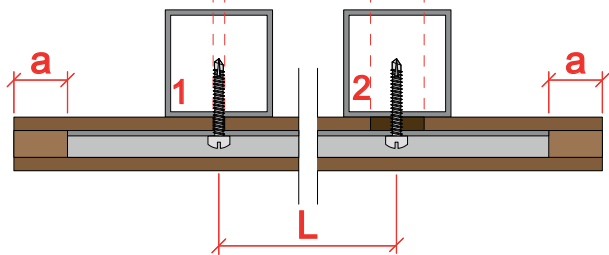
front section



vertical section



$a = 20 \text{ mm}$
 $a = 45 \text{ mm}$ in case of installation of the WAJF11020C-WM cap
 1= FIXED POINT - \varnothing hole = \varnothing screw
 2= FLOATING POINT - \varnothing hole = $2L \times 0.003 + \varnothing$ screw [mm]



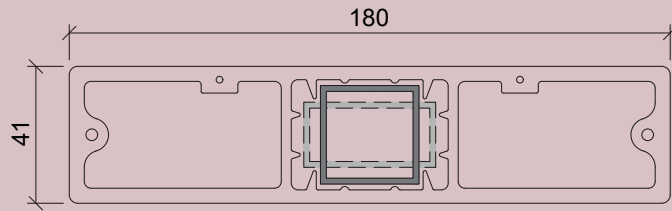
horizontal section

axonomic view



The systems shown are meant as a guide. The drawings show the key points for the design and mounting stages, such as metal reinforcements, fixed point and floating point. All components of the system must be adequately sized and verified by a qualified technician.

JF18041



JF18041



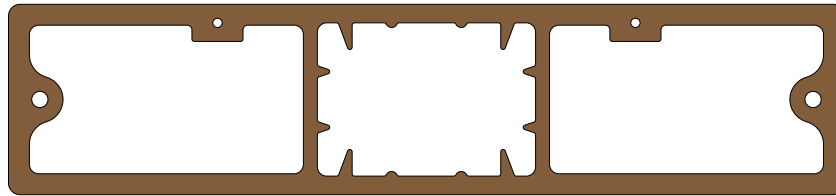
JF18041-165x30



| profile | code | reinforcement dimensions [mm] | side [mm] | maximum horizontal span [mm] | | maximum vertical span [mm] | |
|---------|----------------|-------------------------------|-----------|------------------------------|-------|----------------------------|-------|
| | | | | aluminum | steel | aluminum | steel |
| JF18041 | JF18041 | 40 x 20 x 2 | 180 | 2100 | 2100 | 1800 | 2200 |
| | | | 41 | 1600 | 1800 | | |
| | | 30 x 30 x 2 | 180 | 1900 | 2500 | 2100 | 2500 |
| | | | 41 | 1800 | 2200 | | |
| | JF18041-165x30 | 165 x 30 x 2 | 180 | 3000 | 4200 | 3000 | 3900 |
| | | | 41 | 2300 | 2600 | | |

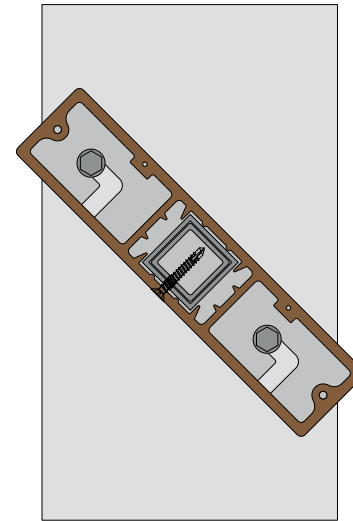
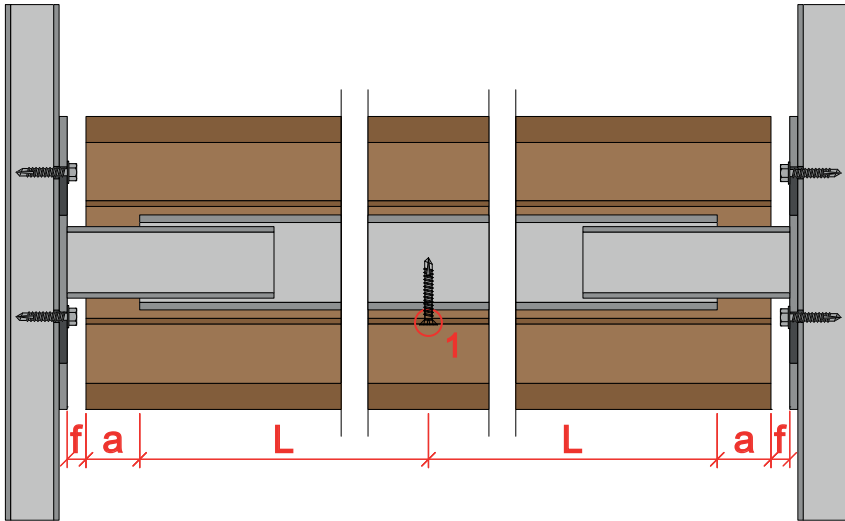
Maximum spans calculated considering:

- maximum permanent deformation due to own weight 2,5 mm
- maximum non-permanent deformation 30 mm considering a wind load of 150 kg/m²

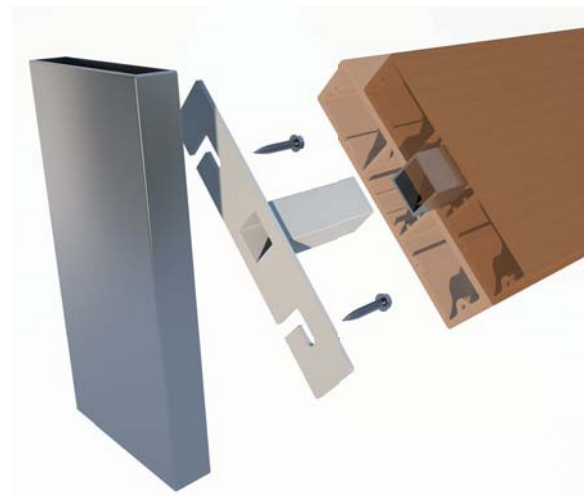
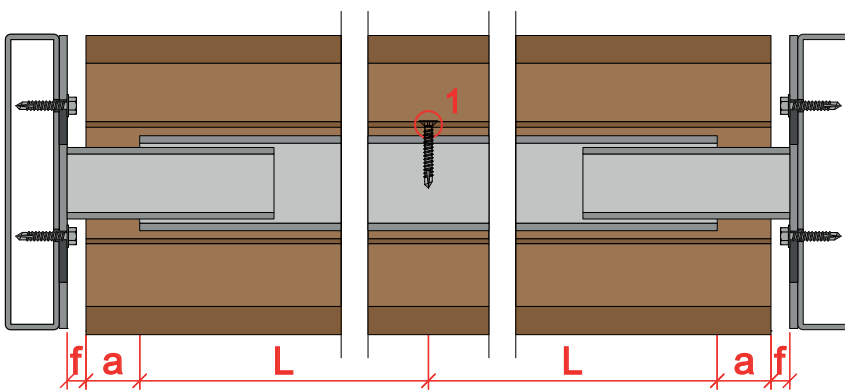


front section

vertical section



a = 20 mm
 1= FIXED POINT - Ø hole = Ø screw
 f = L x 0.003 [mm]

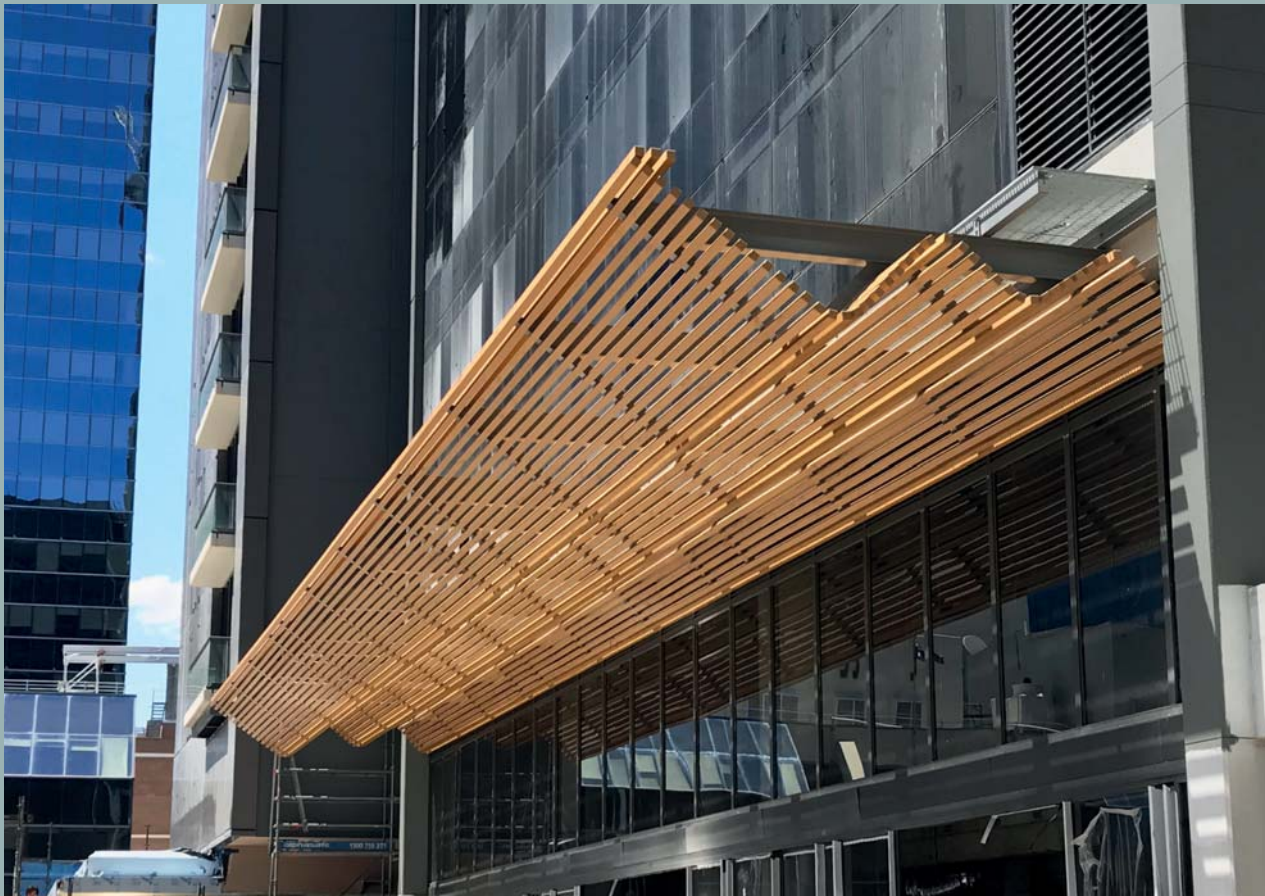
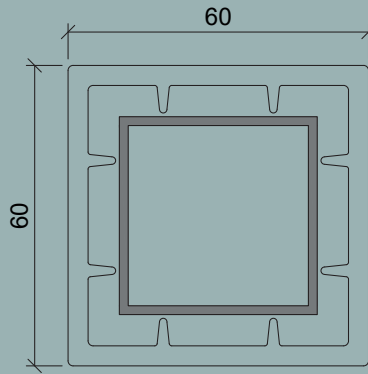


horizontal section

axonometric view

The systems shown are meant as a guide. The drawings show the key points for the design and mounting stages, such as metal reinforcements, fixed point and floating point. All components of the system must be adequately sized and verified by a qualified technician.

TZ6060

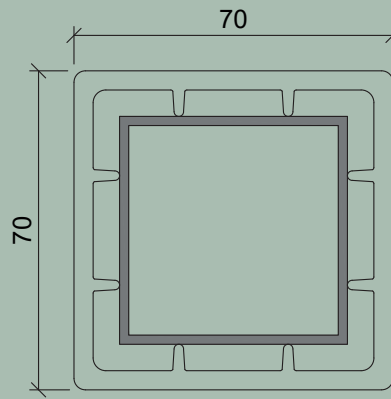


| profile | code | reinforcement dimensions [mm] | side [mm] | maximum horizontal span [mm] | | maximum vertical span [mm] | |
|---------------|---------------|-------------------------------|-----------|------------------------------|-------|----------------------------|-------|
| | | | | aluminum | steel | aluminum | steel |
| TZ6060 | TZ6060 | 40 x 40 x 2 | 60 | 2400 | 2800 | 3200 | 4300 |

Maximum spans calculated considering:

- maximum permanent deformation due to own weight 2,5 mm
- maximum non-permanent deformation 30 mm considering a wind load of 150 kg/m²

JF7070

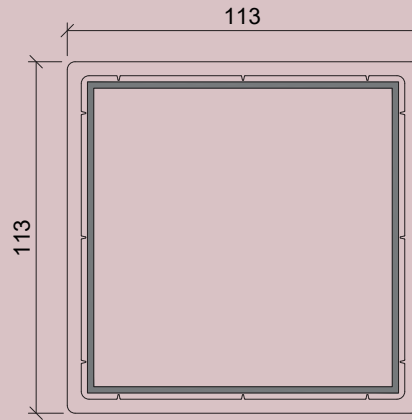


| profile | code | reinforcement dimensions [mm] | side [mm] | maximum horizontal span [mm] | | maximum vertical span [mm] | |
|---------------|---------------|-------------------------------|-----------|------------------------------|-------|----------------------------|-------|
| | | | | aluminum | steel | aluminum | steel |
| JF7070 | JF7070 | 50 x 50 x 2 | 70 | 2500 | 3000 | 3500 | 4600 |

Maximum spans calculated considering:

- maximum permanent deformation due to own weight 2,5 mm
- maximum non-permanent deformation 30 mm considering a wind load of 150 kg/m²

TZ113113

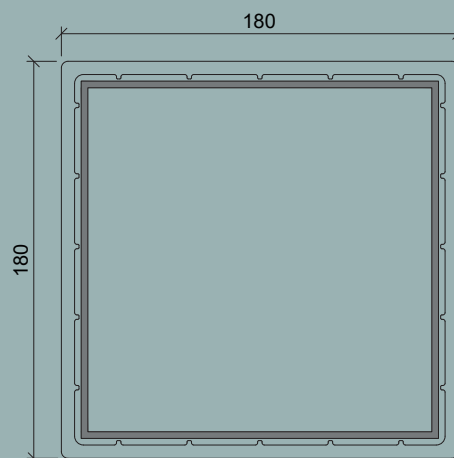


| profile | code | reinforcement dimensions [mm] | side [mm] | maximum horizontal span [mm] | | maximum vertical span [mm] | |
|-----------------|-----------------|-------------------------------|-----------|------------------------------|-------|----------------------------|-------|
| | | | | aluminum | steel | aluminum | steel |
| TZ113113 | TZ113113 | 100 x 100 x 2 | 113 | 4100 | 4700 | 5700 | 7500 |

Maximum spans calculated considering:

- maximum permanent deformation due to own weight 2,5 mm
- maximum non-permanent deformation 30 mm considering a wind load of 150 kg/m²

TZ|80|80

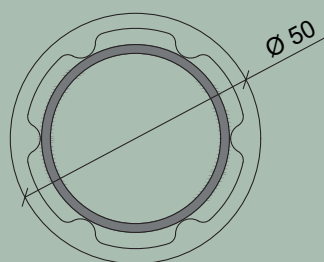


| profile | code | reinforcement dimensions [mm] | side [mm] | maximum horizontal span [mm] | | maximum vertical span [mm] | |
|-----------------|-----------------|-------------------------------|-----------|------------------------------|-------|----------------------------|-------|
| | | | | aluminum | steel | aluminum | steel |
| TZ180180 | TZ180180 | 162 x 162 x 3 | 180 | 5600 | - | 8200 | - |

Maximum spans calculated considering:

- maximum permanent deformation due to own weight 2,5 mm
- maximum non-permanent deformation 30 mm considering a wind load of 150 kg/m²

C50R

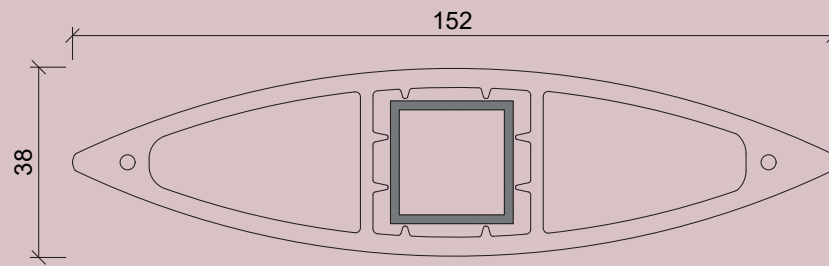


| profile | code | reinforcement dimensions [mm] | side [mm] | maximum horizontal span [mm] | | maximum vertical span [mm] | |
|-------------|-------------|-------------------------------|-----------|------------------------------|-------|----------------------------|-------|
| | | | | aluminum | steel | aluminum | steel |
| C50R | C50R | Ø 38 x 2 | 50 | 2100 | - | 2900 | - |

Maximum spans calculated considering:

- maximum permanent deformation due to own weight 2,5 mm
- maximum non-permanent deformation 30 mm considering a wind load of 150 kg/m²

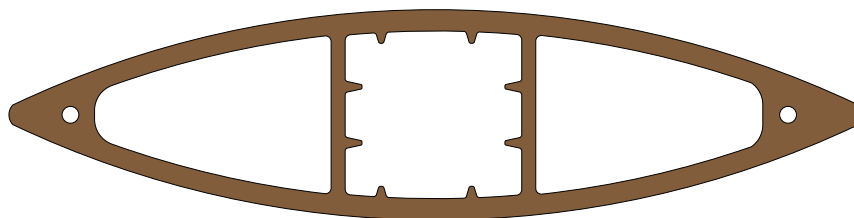
JF15238



| profile | code | reinforcement dimensions [mm] | side [mm] | maximum horizontal span [mm] | | maximum vertical span [mm] | |
|----------------|----------------|-------------------------------|-----------|------------------------------|-------|----------------------------|-------|
| | | | | aluminum | steel | aluminum | steel |
| JF15238 | JF15238 | 25 x 25 x 2 | 152 | 1500 | 2100 | 1800 | 2100 |
| | | | 38 | 1600 | 2000 | | |

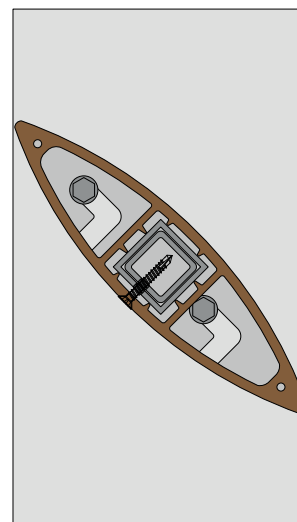
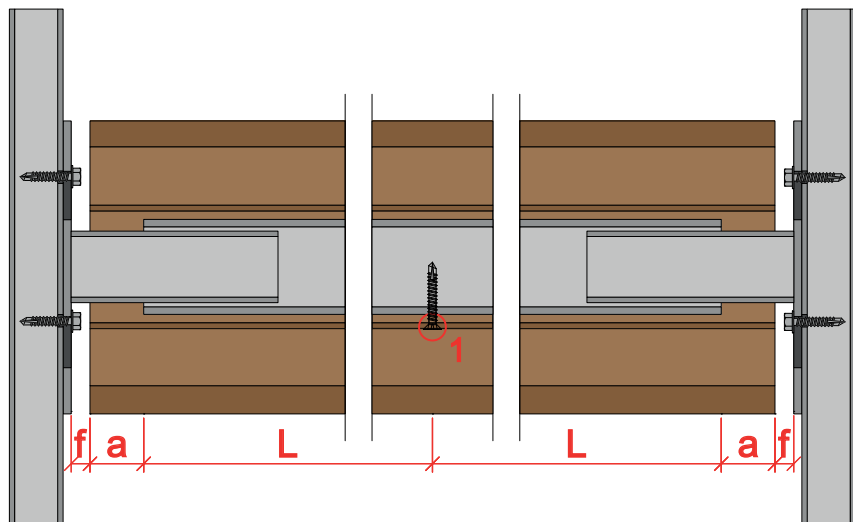
Maximum spans calculated considering:

- maximum permanent deformation due to own weight 2,5 mm
- maximum non-permanent deformation 30 mm considering a wind load of 150 kg/m²

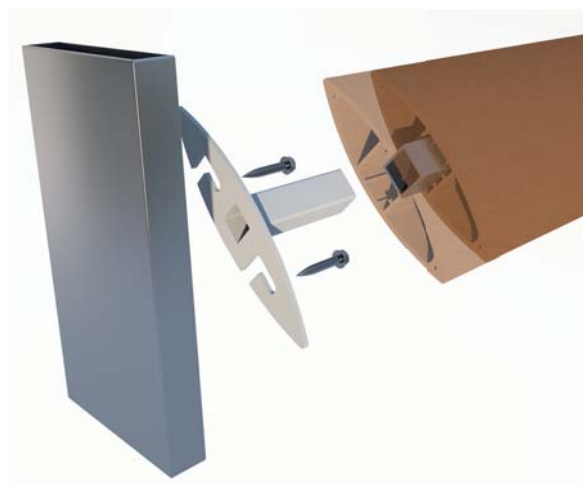
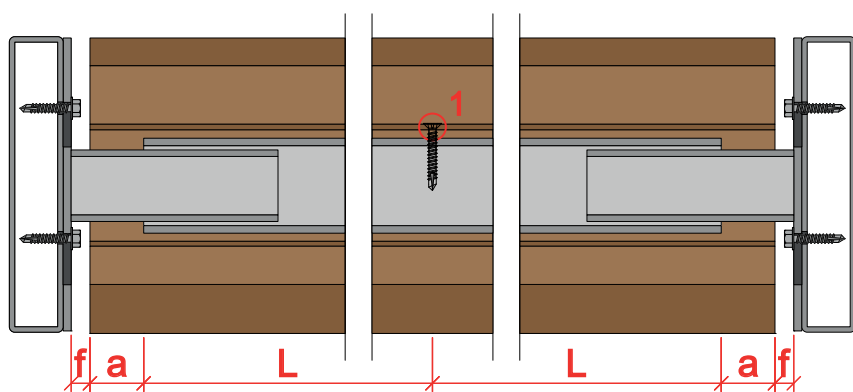


front section

vertical section



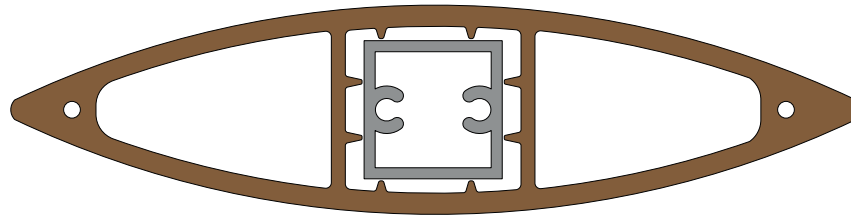
$a = 20 \text{ mm}$
 $1 = \text{FIXED POINT} - \varnothing \text{ hole} = \varnothing \text{ screw}$
 $f = L \times 0.003 \text{ [mm]}$



horizontal section

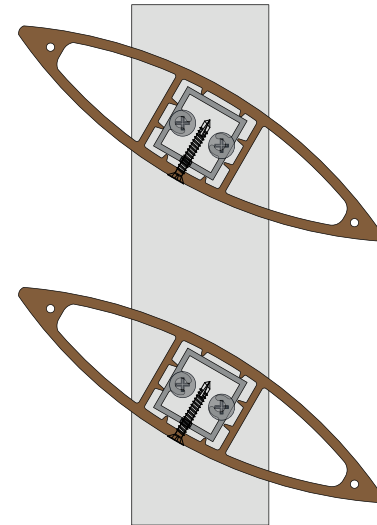
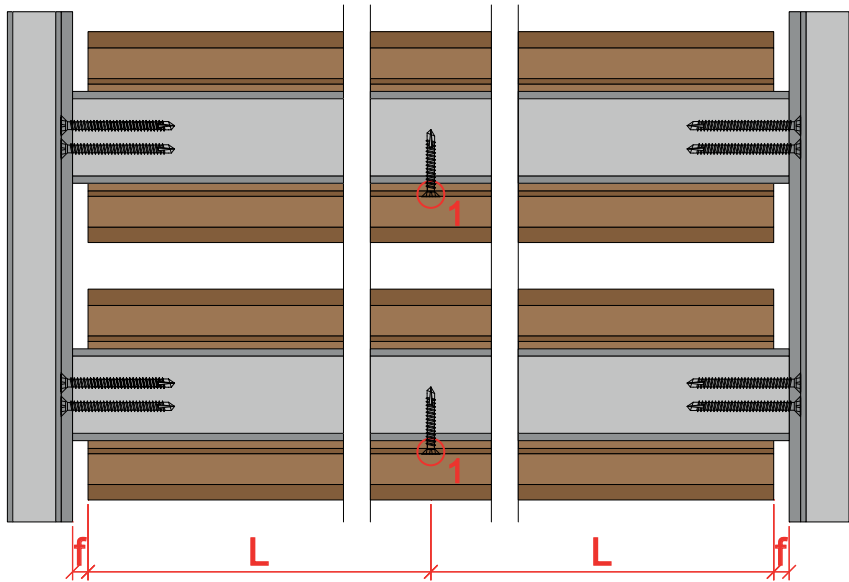
axonometric view

The systems shown are meant as a guide. The drawings show the key points for the design and mounting stages, such as metal reinforcements, fixed point and floating point. All components of the system must be adequately sized and verified by a qualified technician.

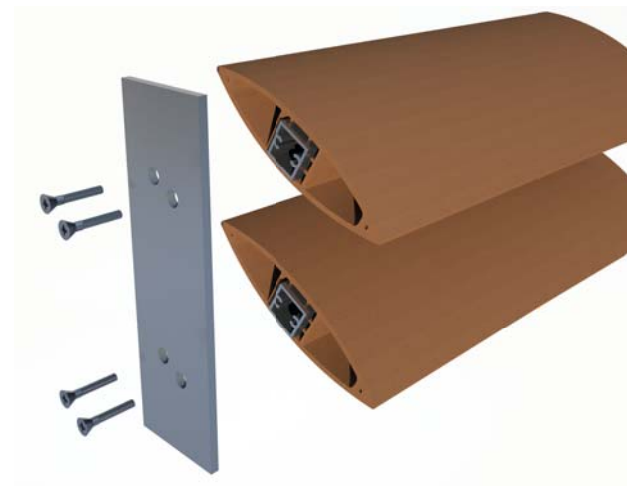
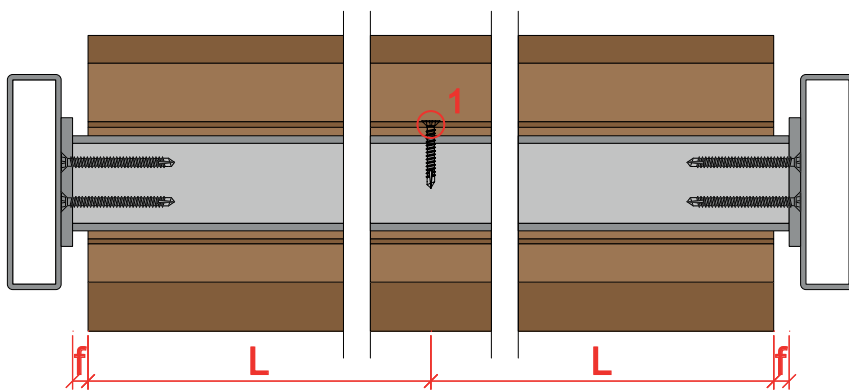


front section

vertical section



1= FIXED POINT - Ø hole = Ø screw
 $f = L \times 0.003$ [mm]

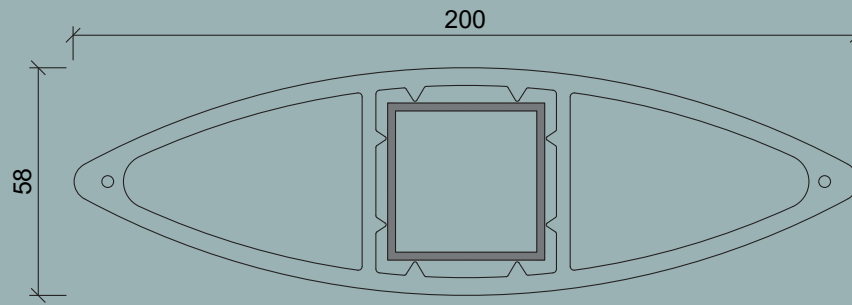


horizontal section

axonometric view

The systems shown are meant as a guide. The drawings show the key points for the design and mounting stages, such as metal reinforcements, fixed point and floating point. All components of the system must be adequately sized and verified by a qualified technician.

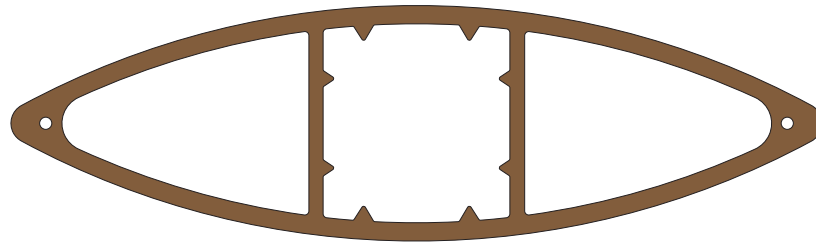
JF20058



| profile | code | reinforcement dimensions [mm] | side [mm] | maximum horizontal span [mm] | | maximum vertical span [mm] | |
|----------------|----------------|-------------------------------|-----------|------------------------------|-------|----------------------------|-------|
| | | | | aluminum | steel | aluminum | steel |
| JF20058 | JF20058 | 40 x 40 x 2 | 200 | 2400 | 2800 | 2500 | 3200 |
| | | | 58 | 2200 | 2600 | | |

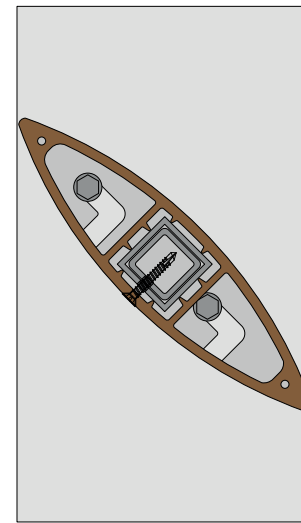
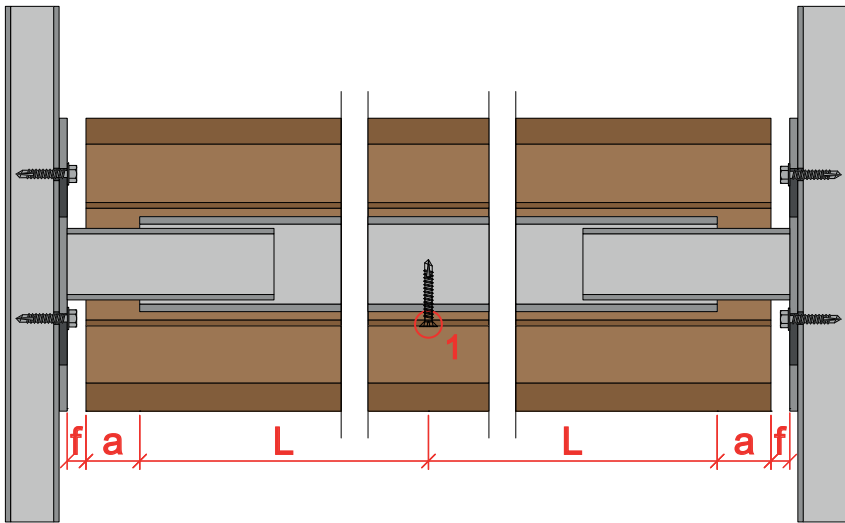
Maximum spans calculated considering:

- maximum permanent deformation due to own weight 2,5 mm
- maximum non-permanent deformation 30 mm considering a wind load of 150 kg/m²

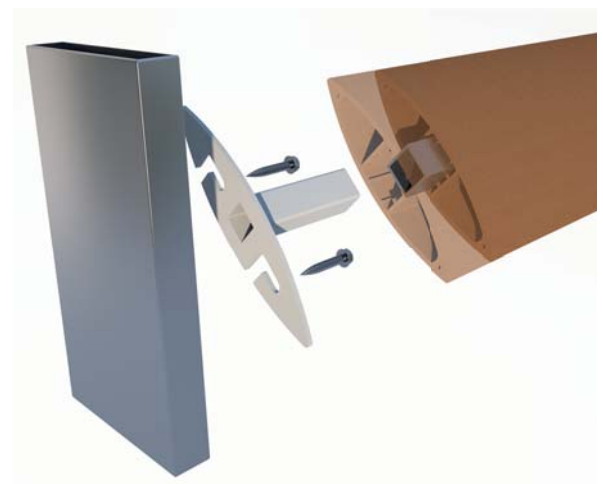
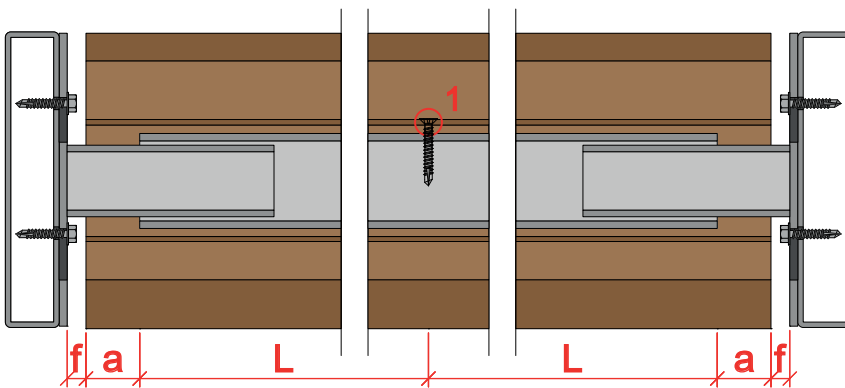


front section

vertical section



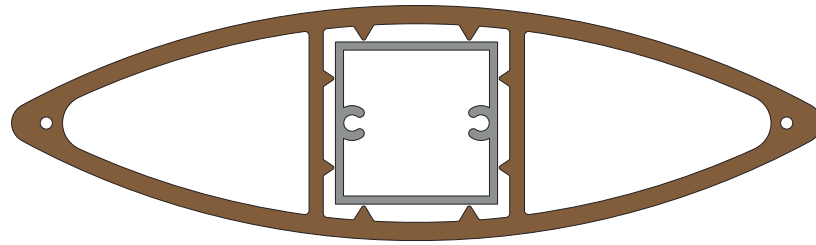
$a = 20 \text{ mm}$
 1 = FIXED POINT - $\varnothing \text{ hole} = \varnothing \text{ screw}$
 $f = L \times 0.003 \text{ [mm]}$



horizontal section

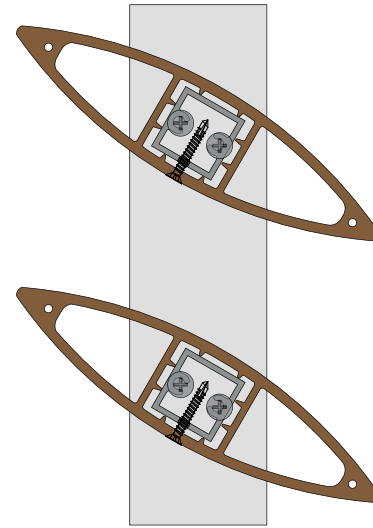
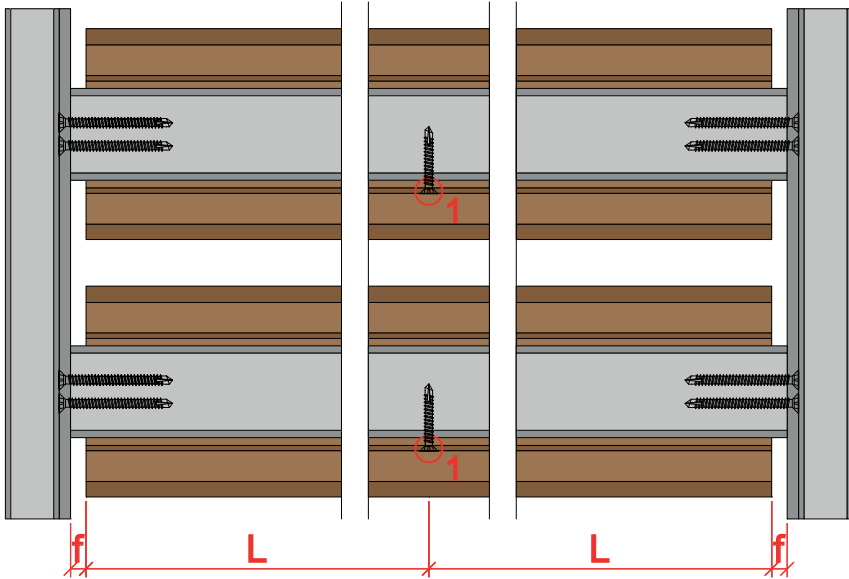
axonometric view

The systems shown are meant as a guide. The drawings show the key points for the design and mounting stages, such as metal reinforcements, fixed point and floating point. All components of the system must be adequately sized and verified by a qualified technician.

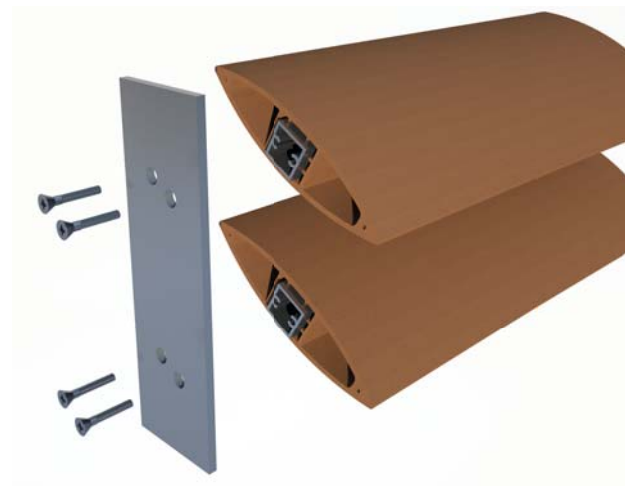
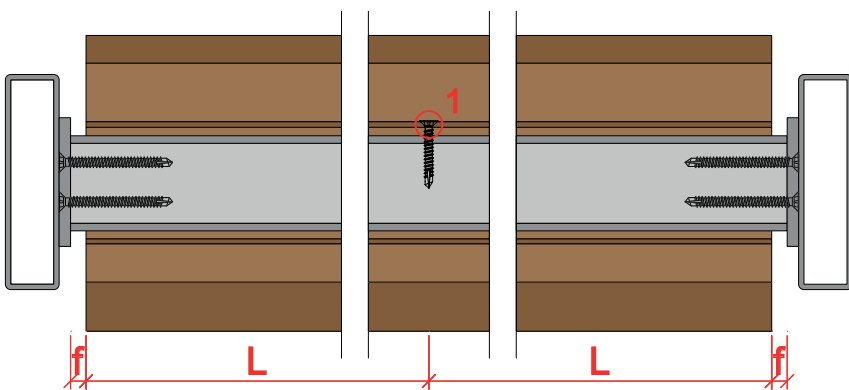


front section

vertical section



1= FIXED POINT - Ø hole = Ø screw
 $f = L \times 0.003$ [mm]

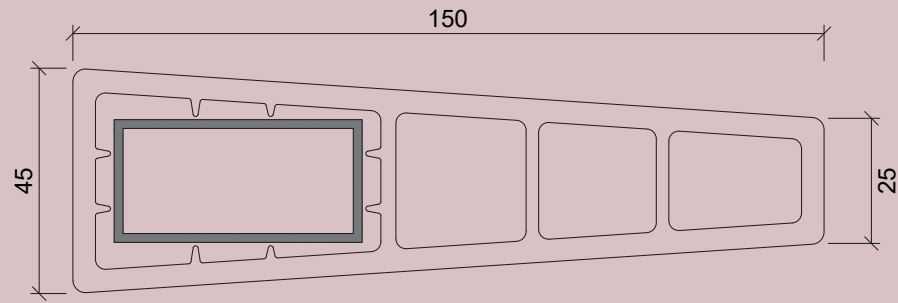


horizontal section

axonometric view

The systems shown are meant as a guide. The drawings show the key points for the design and mounting stages, such as metal reinforcements, fixed point and floating point. All components of the system must be adequately sized and verified by a qualified technician.

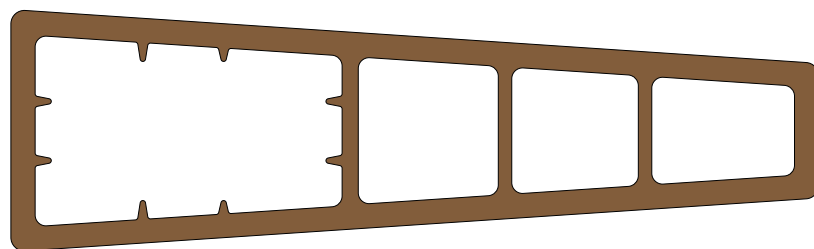
JF15045-25



| profile | code | reinforcement dimensions [mm] | side [mm] | maximum horizontal span [mm] | | maximum vertical span [mm] | |
|----------------|-------------------|-------------------------------|-----------|------------------------------|-------|----------------------------|-------|
| | | | | aluminum | steel | aluminum | steel |
| JF15045 | JF15045-25 | 50 x 25 x 2 | 150 | 1900 | 2700 | 2200 | 2800 |
| | | | 45 | 1800 | 2200 | | |

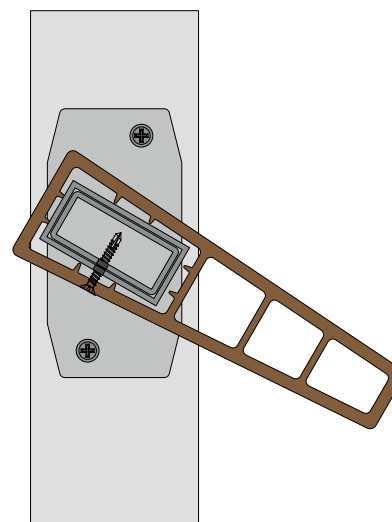
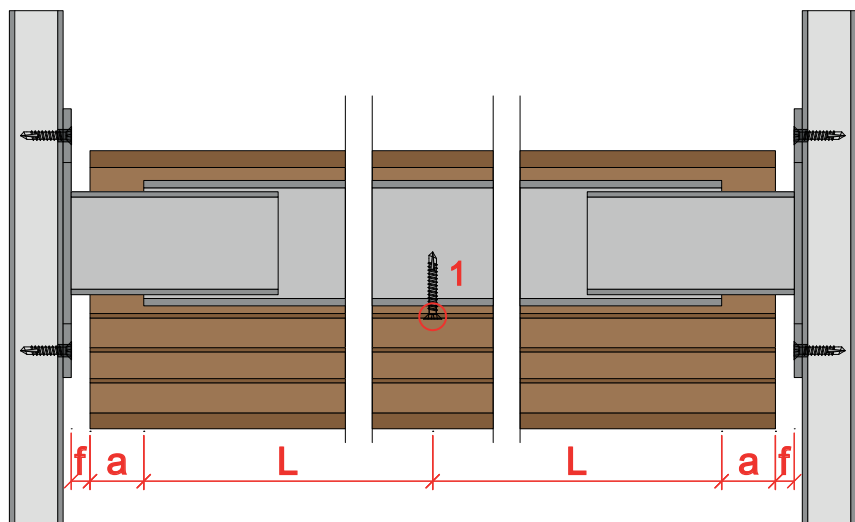
Maximum spans calculated considering:

- maximum permanent deformation due to own weight 2,5 mm
- maximum non-permanent deformation 30 mm considering a wind load of 150 kg/m²

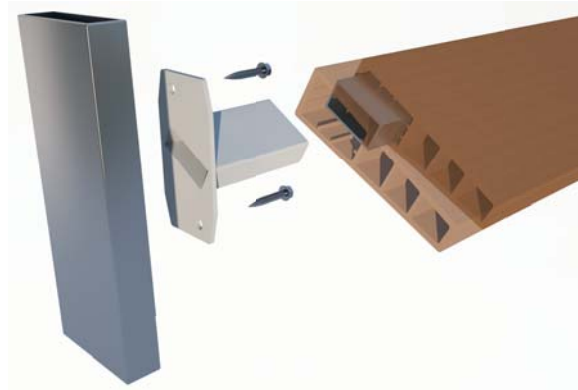
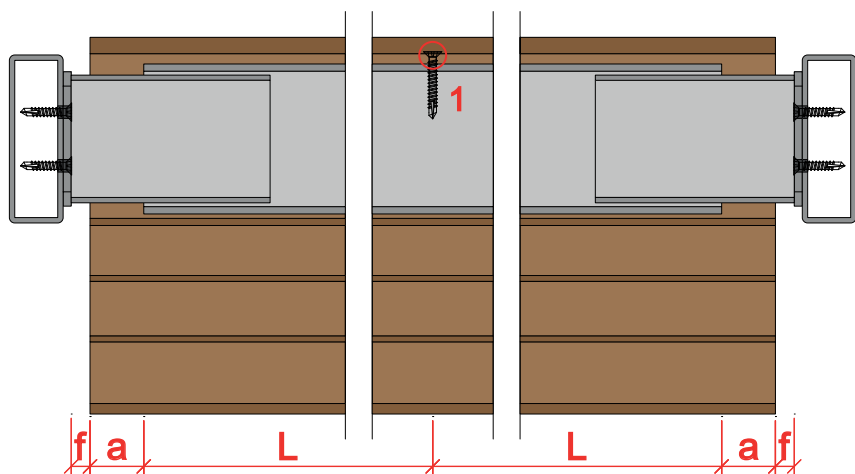


front section

vertical section



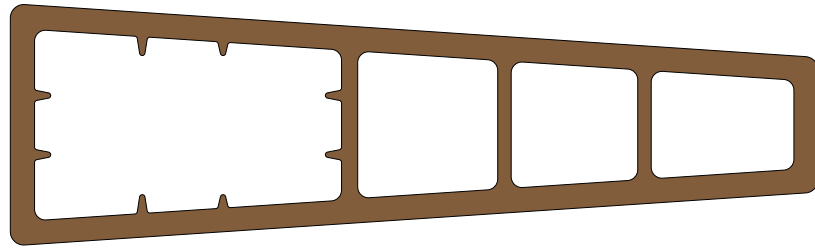
a = 20 mm
 1= FIXED POINT - Ø hole = Ø screw
 f = L x 0.003 [mm]



horizontal section

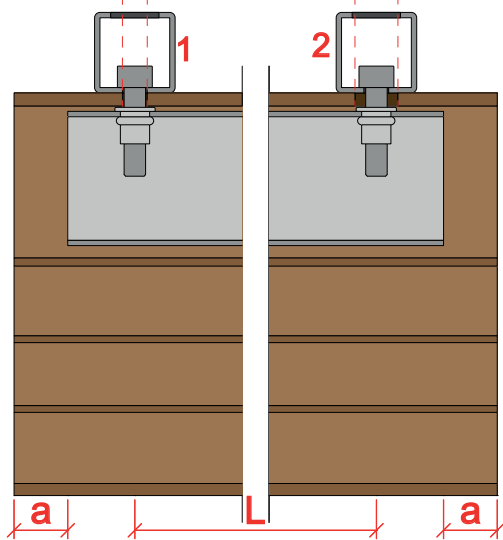
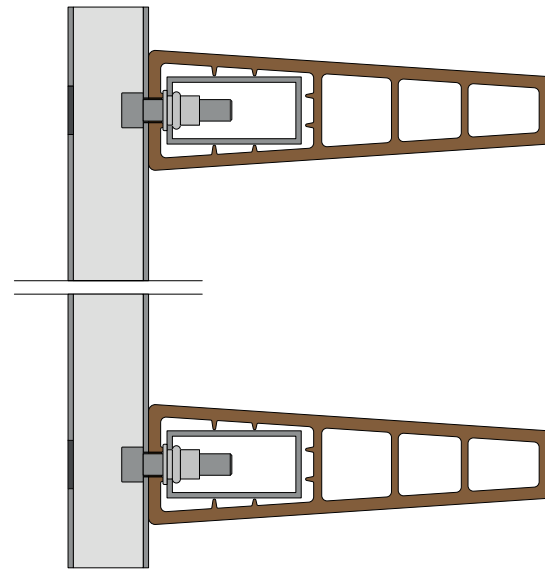
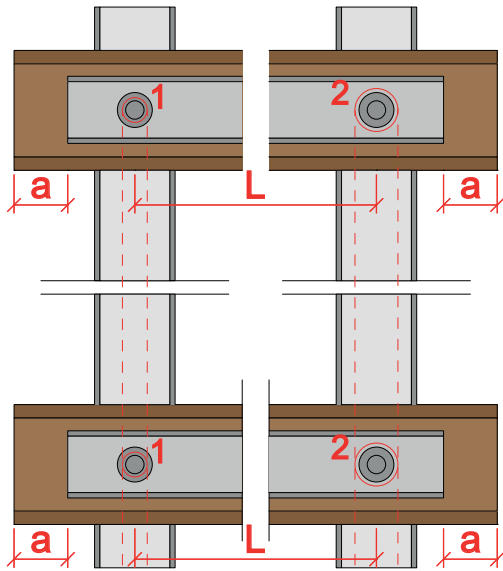
axonometric view

The systems shown are meant as a guide. The drawings show the key points for the design and mounting stages, such as metal reinforcements, fixed point and floating point. All components of the system must be adequately sized and verified by a qualified technician.

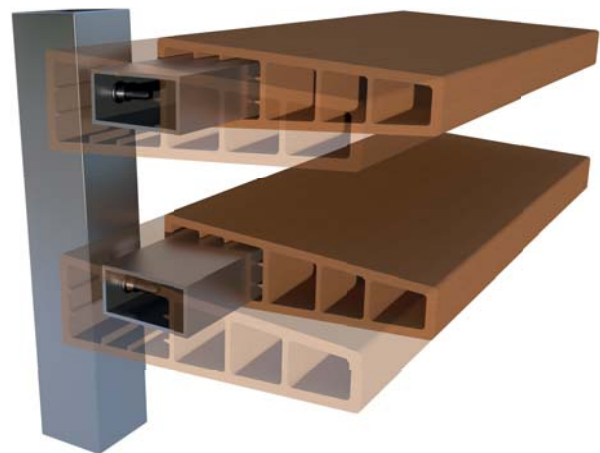


front section

vertical section



a = 20 mm
 a = 45 mm in case of installation of the WAJF15045C-WM cap
 1= FIXED POINT - \varnothing hole = \varnothing screw
 2= FLOATING POINT - \varnothing hole = $2L \times 0.003 + \varnothing$ screw [mm]



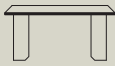

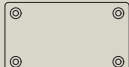


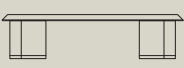












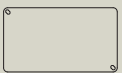
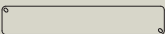


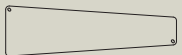

horizontal section

axonometric view

The systems shown are meant as a guide. The drawings show the key points for the design and mounting stages, such as metal reinforcements, fixed point and floating point. All components of the system must be adequately sized and verified by a qualified technician.

CAPS

| accessory code | design | compatible profiles | nominal dimensions [mm] | material | colour |
|--------------------------|---|--|-------------------------|----------|--------|
| WAJF4030C-WM |  | JF4030 | 39 x 29 | Woodn | All |
| WAJF5026C-WM |  | JF5026-15x15 JF5026-40x15 | 49.5 x 25.5 | Woodn | All |
| WAJF6032C-WM |  | JF6032 | 59.5 x 31.5 | Woodn | All |
| WAJF7040C-WM |  | JF7040-25x25 JF7040-30x15 JF7040-50x25 | 69 x 39 x 28.5 | Woodn | All |
| WAJF7040-2525C-WH |  | JF7040-25x25 | 69 x 39 x 3 | Woodn | All |
| WATZ9555C-WM |  | TZ9555 TZ9555-R | 94 x 54 | Woodn | All |
| WAJF11020C-WM |  | JF11020 | 109 x 19 | Woodn | All |
| WAJF12058C-WM |  | JF12058 | 119 x 57 | Woodn | All |
| WAJF18041C-WM |  | JF18041 | 179 x 40 | Woodn | All |
| WATZ6060C-WM |  | TZ6060 | 59 x 59 | Woodn | All |
| WATZ6060C-WH |  | TZ6060 | 59 x 59 | Woodn | All |
| WAJF7070C-WM |  | JF7070 | 69 x 69 | Woodn | All |
| WATZ113113C-WM |  | TZ113113 | 112 x 112 | Woodn | All |
| WATZ180180C-WM |  | TZ180180 | 179 x 179 | Woodn | All |
| WATZ180180C-WH |  | TZ180180 | 179 x 179 | Woodn | All |
| WAJF15045C-WM |  | JF15045-25 | 149.5 x 44 | Woodn | All |

| accessory code | design | compatible profiles | nominal dimensions [mm] | material | colour |
|-------------------------|---|--|-------------------------|----------|----------------------------------|
| WAC50C-WM |  | C50 | Ø 48.5 | Woodn | All |
| WAJF4030C-H2 |  | JF4030 | 39 x 29 | Aluminum | maple / bronze silver / ebony |
| WAJF7040C-H2 |  | JF7040-25x25 JF7040-30x15 JF7040-50x25 | 69 x 39 | Aluminum | maple / bronze silver / ebony |
| WAJF11020C-H2 |  | JF11020 | 109 x 19 | Aluminum | maple / bronze silver / ebony |
| WAJF18041C-H2 |  | JF18041 | 179 x 40 | Aluminum | maple / bronze silver / ebony |
| WAJF15238C-H2 |  | JF15238 | 151 x 37 | Aluminum | maple / bronze silver / ebony |
| WAJF15045C-H2 |  | JF15045-25 | 149 x 44-24 | Aluminum | maple / bronze silver / ebony |
| WAJF15045-25C-H2 |  | JF15045-25 | 149 x 44-24 | Aluminum | maple / bronze silver / ebony |

NOTE: If end caps of different sizes are needed, they will be evaluated according to project's needs.

INSTALLATION OF THE END CAPS

Woodn interlocking caps (WAJF7040C-WM and similar)

All caps made of Woodn are supplied in sanded finish/surface, regardless the surface finish of the Versatilis profile surface. Remove any residual material from the profile due to cutting and with a dry cloth remove any remaining dust. Remove the protective film from the adhesive strips placed under the cap. Insert the cap into the profile, make sure it is centered. Apply light pressure with your hand to ensure the adhesive strips adhere well. If possible, mechanically fasten the caps on both sides of the profile with staples. For a better fixing, we recommend the use of WEISS CHEMIE COSMO SL-660.130 glue.

Woodn caps with screws (WAJF7040C-WH and similar) and aluminium caps with screws (WAJF7040C-H2 and similar)

Remove any residual material from the profile due to cutting and with a dry cloth remove any remaining dust. Remove the protective film from the adhesive placed under the cap. Glue the cap to the end of the profile, make sure it is centered. Apply light pressure with your hand to ensure the adhesive strips adhere well to the profile's cross-section. Make 1.8 mm pre-holes that match the holes on the cap and install DIN7981 2.2 x 6.5 mm screws using hand-operated tools.

Follow the reported instructions to install end caps with a structure similar to the ones reported here above. If you have any doubts, please contact Woodn Industries' technical office at ufficiotecnico@woodn.com.

WOODN AETERNUS



DISCLAIMER - GENERAL NOTES

The information provided by WoodN Industries in this document are solely indicative, they are based on the present state of knowledge and must be considered only as a description of our products and their possible application. Such information must not be interpreted as a guarantee of specific features, performances or warranties of the product. Material's colors and finishes represented in this document are the result of printing techniques so they may slightly differ from the original colors. Original samples are available upon request and constitute only a general indication of the dimensions and the aesthetic appearance of Woodn™ profiles. WoodN Industries may change the information included in this document at any time and without further notice. WoodN Industries does not warrant the accuracy and completeness of the information in this document and furthermore their suitability for the purpose which it is consulted for by the other parties. WoodN's customers or third parties must ascertain they have the most recent version of this document, available at www.woodn.com. It is advised that customers and third parties have a professional adviser to inform them about the suitability of the products for all desired applications and about applicable laws and regulations. WoodN Industries reserves the right to modify products and concerning features without prior notice. WoodN Industries is not liable for any damage arising from, or related to, the use of this document. Woodn™ material does not have structural characteristics and therefore WoodN Industries declines all responsibilities for improper use of the material. No sections of this publication can be reproduced, stored in database, or transmitted in any form or by any other mean without the explicit approval of WoodN Industries. For more information please contact WoodN Industries.

MATERIAL'S FEATURES

Mechanical properties

| | | |
|---|--|---|
| Elasticity (bending) | UNI EN ISO 178 | @23 °C @65 °C |
| Yield strenght (flexural) | UNI EN ISO 178 | @23 °C @65 °C |
| Water absorbption and humidity | ASTM D1037 | absorption 0,07% |
| Dynamic- Mechanical analysis of transition temperature | ASTM D4065/95 | 78.8 °C |
| Linear thermal expansion coefficient (from -10 °C to 70 °C) | TMA ASTM E 831/2006 | longitudinal 46,9 x10 ⁻⁶ m/(m°C) trasversal 48 x10 ⁻⁶ m/(m°C) |
| Tensile strenght and tensile strenght after accelerated weathering (exposure to xenon lights) | ASTM D638-10 (tensile test) ASTM G155-050 | difference after 2 months of exposure ~5,21% difference after 3 months of exposure ~6,9% (meet the requirements to comply with Miami Dade and Florida Building Code 2014) |

Reaction to fire

| | | |
|---|--------------------------|--|
| Flammability | UL94 AS 3959-2009 | V-0 Class BAL-29 |
| Flame spread index Smoke developed index | ASTM E84 | Class A |
| Ignition temperature | ASTM D1929 | 476 °C |
| Average critical radiant flux of floor | AS ISO 9239 ASTM E648 | ≥ 11 kW/m ² > 1,03 W/cm ² (class I as per NFPA 101) |
| Ignitability, flame propagation, heat release and smoke release | AS/NZS 1530.3:1999 | Ignitability (0-20) = 8 Spread of Flame (0-10) = 0 Heat Evolved (0-10) = 0 Smoke Developed (0-10) = 7 |

Chemical and biological features

| | | |
|--|------------------------------|--------------------------------|
| Evaluation of the action of microorganisms (scale from 0 to 5) | EN ISO 846:97 | Test result: 1 |
| Heavy metal content (Pb, Ge, Cr, Hg) | GB18584-2001 GB18580-2001 | < 0,5 ppm |
| Formaldehyde emission | EN 717-2:1994 | 0,1 mg HCHO/(m ² h) |


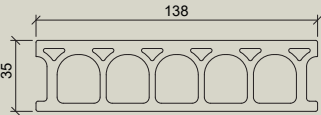

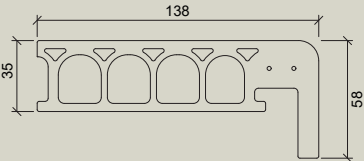

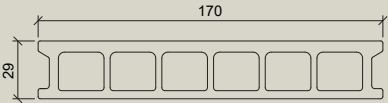

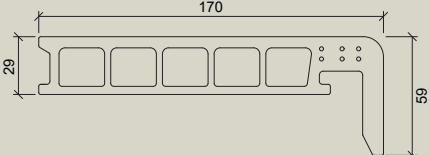
Surface characteristics (only for Aeternus)

| | | |
|--|---------------------|--------------------|
| Surface resistance to slippage while wearing footwear (brushed finish) | DIN 51130 (06/2004) | R12 |
| Surface resistance to slippage while wearing barefoot (brushed finish) | DIN 51097 (1992) | A+B+C |
| Flooring slip resistance (Pendulum test) | AS 4663-2013 | Dry: 98 Wet: 70 |

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

PROFILE'S SECTION



| | | |
|---------|---|---|
| DT13835 |  |  |
| DT13858 |  |  |
| DT17029 |  |  |
| DT17059 |  |  |

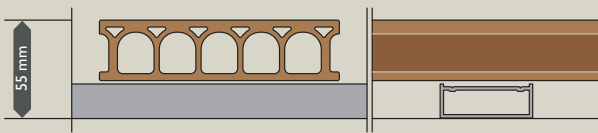
The external dimensions listed are nominal values. The weights of the planks indicated in the tables are indicative and not binding. Refer to Woodn Technical Department or on website www.woodn.com for cad blocks and manufacturing/cutting tolerances.

Planks dimension and logistic

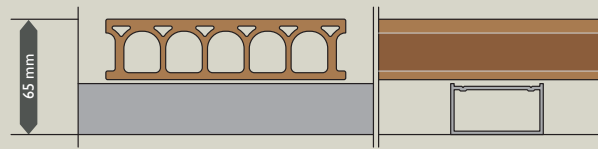
| | DT13835 | DT13858 | DT17029 | DT17059 |
|-------------------------|--------------------|--------------------|--------------------|--------------------|
| Dimensions of the plank | 138 x 35 x 2000 mm | 138 x 58 x 2000 mm | 170 x 29 x 2000 mm | 170 x 59 x 2000 mm |
| Incidence | 7,20 m/sqm | - | 5,90 m/sqm | - |
| Weight of a plank | ~ 4.30 kg | ~ 6.05 kg | ~ 4.47 kg | ~ 5.91 kg |

System height DT13835

LAYING ON ALUMINUM JOISTS 55 x 20 mm (W x H)

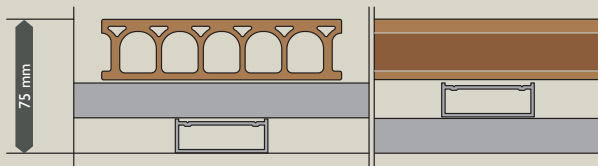


LAYING ON ALUMINUM JOISTS 55 x 30 mm (W x H)

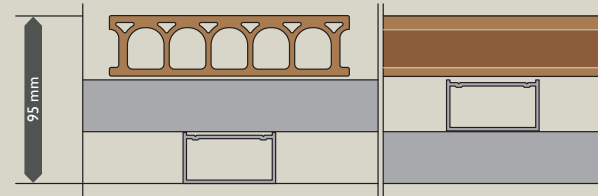


PLANK
ALUMINUM JOIST

LAYING ON ALUMINUM JOISTS AND CROSSPIECES 55 x 20 mm (W x H)
WITH SUPERIMPOSED FRAME



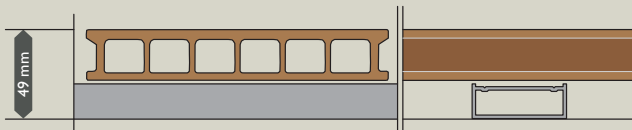
LAYING ON ALUMINUM JOISTS AND CROSSPIECES 55 x 30 mm (W x H)
WITH SUPERIMPOSED FRAME



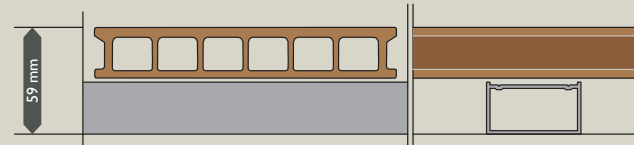
PLANK
ALUMINUM JOISTS
ALUMINUM CROSSPIECE

System height DT17029

LAYING ON ALUMINUM JOISTS 55 x 20 mm (W x H)

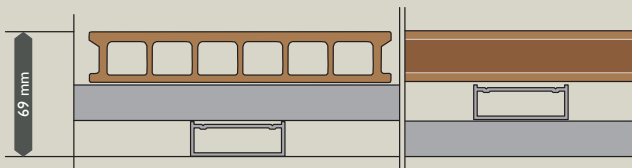


LAYING ON ALUMINUM JOISTS 55 x 30 mm (W x H)

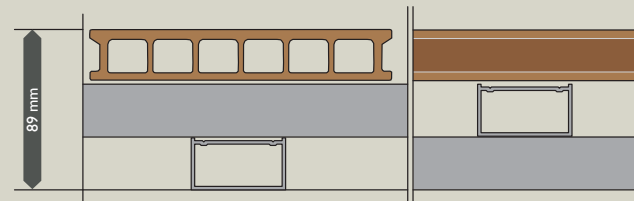


PLANK
ALUMINUM JOIST

LAYING ON ALUMINUM JOISTS AND CROSSPIECES 55 x 20 mm (W x H)
WITH SUPERIMPOSED FRAME



LAYING ON ALUMINUM JOISTS AND CROSSPIECES 55 x 30 mm (W x H)
WITH SUPERIMPOSED FRAME



PLANK
ALUMINUM JOISTS
ALUMINUM CROSSPIECE

Size of the joints

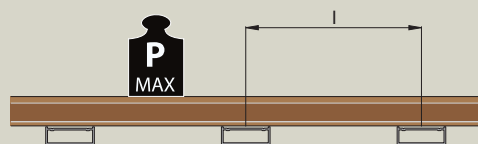
The size of the joints depends on the type of clip used, as follows:

| Clip model | Joint size [mm] |
|---|---------------------|
| Stainless steel clip (code ZCLW-KKDT13835_4024_4.2) | Approximately 4.5 * |
| Plastic clip (code ZCLW-WADT13835-ST) | Approximately 4.5 * |

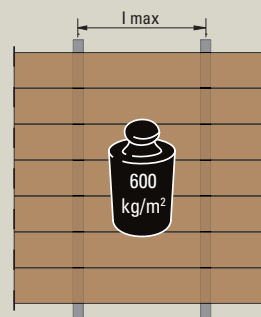
*IMPORTANT: The dimensions shown are approximate and may vary depending on the accuracy, tolerance and method of installation.

Laying instructions

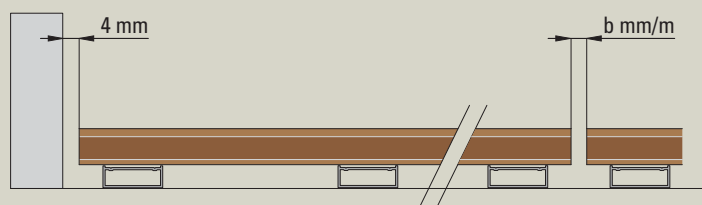
| | Maximum centre-to-centre joists distance [mm] l_{max} | Maximum load on a single plank [kg] P_{max} |
|-------------------------|--|--|
| Woodn™ Aeternus DT13835 | 500 | 120 |
| Woodn™ Aeternus DT17029 | 350 | 180 |



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

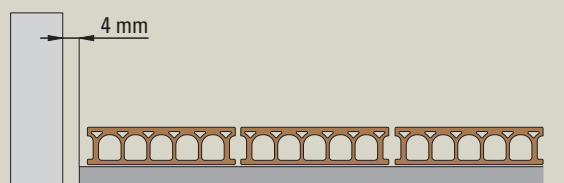


Load distributed over 1 m²



The minimum distance between the ends of the plank and the wall must be at least 4 mm.

The minimum distance between the ends of two consecutive planks must be equal to "b" mm per meter of plank length, as indicated in the table.



The distance between the joist and the wall must be at least 4 mm regardless of the width of the surface.



Position the joist no more than 30 mm from the end of the plank.

GENERAL INSTALLATION INSTRUCTIONS

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

- Woodn recommends to use max 6' long boards.
- Store the boxes 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 0 °C.
- Open the boxes and immediately remove the polyethylene packaging from the profiles.
- 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 Woodn™'s 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 Woodn 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 immediately after installation. Immediately remove major stains such as paint, concrete or tar residues.
- For cleaning and maintenance instructions refer to page 117 . The WoodN warranty will be rendered null and void in the event of incorrect or improper handling, cleaning and maintenance.

EXPANSION GAP BETWEEN ADJACENT PROFILES

WoodN, due to material's composition's features and extrusion technology, undergoes after the first exposure an initial dimensional shrinkage less than 0.4% of the profile length (max value established according to EN 479: 1995) and presents a linear contraction / dilatation due to temperature variations.

Therefore, during laying, WoodN recommends an adequate gap between the board's ends, as shown in the table below:

If it is not possible to follow distances "a" and "b" due to the design of the installation areas, adequately reduce the length of the planks.

| Laying temperature | Distance b | Distance b for planks 2000 mm long |
|--------------------|------------|------------------------------------|
| < 20 °C | 2 mm/m | 4 mm |
| > 20 °C | 1 mm/m | 2 mm |

WARNING: it has to be noted that the failure to comply strictly with the criteria for the application of fixed points and floating points, causes the deformation of the materials and the misalignment of all the expansion joints.

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

TOOLS REQUIRED FOR INSTALLATION:

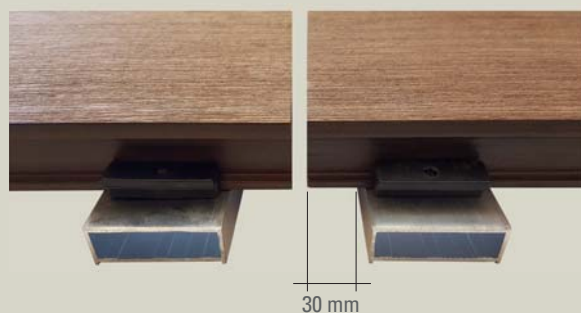
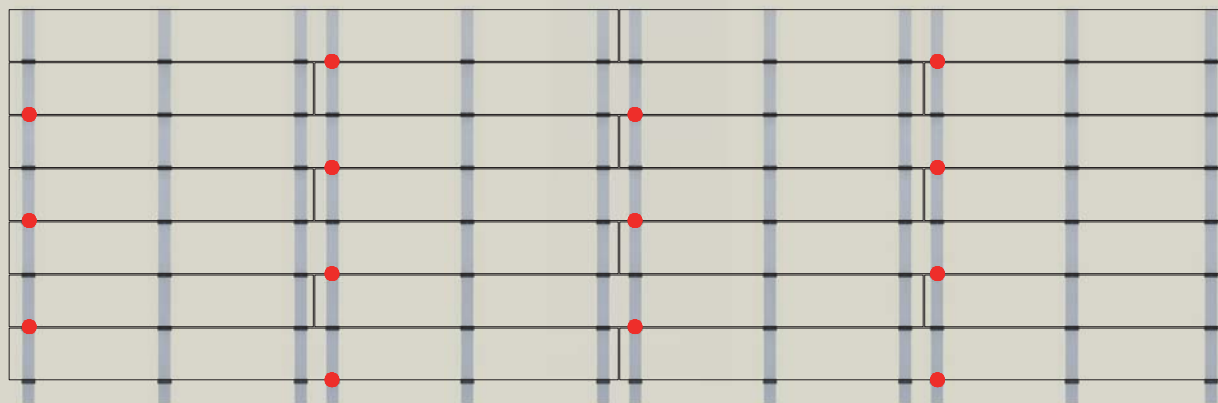
- Impact drill
- Electric screwdriver
- Electric saw
- Rubber mallet
- Various materials for tracing purpose

FIXED POINT

To make sure that the expansion gap will remain over time, in outdoor applications a FIXED POINT should be made on each plank. We also recommend strictly adhering to the positioning pattern of the fixed point.

LAYING PATTERN - RUNNING BOND

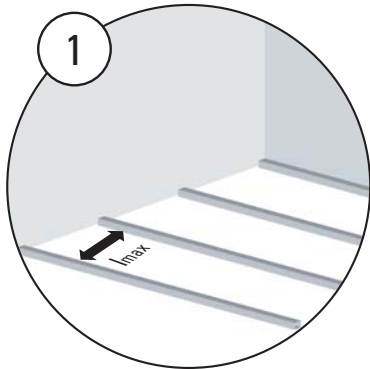
● = fixed point for expansion



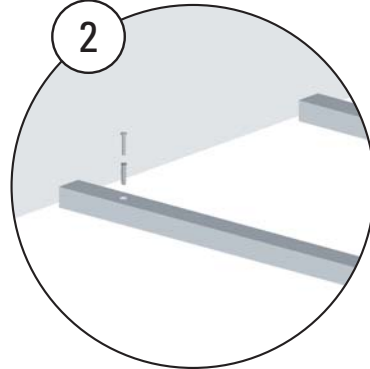
In correspondence of the heads of two consecutive planks, the aluminum joists must be doubled as shown in the photo.

LAYING AND FIXING OF ALUMINUM JOISTS (standard 55 x 20 mm)

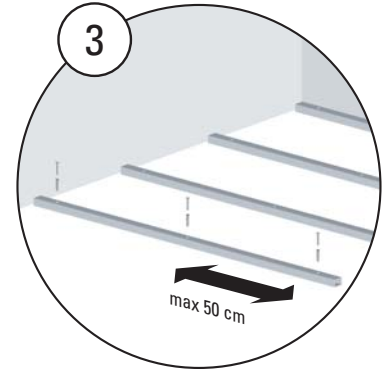
Arrange the joists on the ground in a position perpendicular to the plank laying direction, with a maximum centre-to-centre distance equal to l_{max} (page 56) from each other. The positioning of the joists is closely connected to the laying surface of the planks. We recommend laying out the planks on 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.



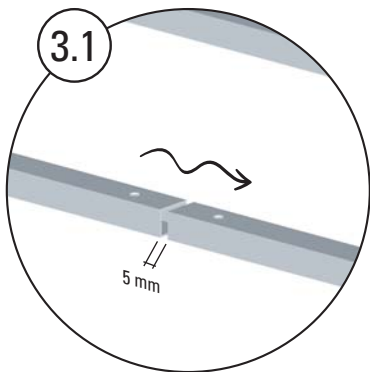
1 Arrange the joists on the ground with a maximum centre-to-centre distance of l_{max} (page 56), and take into account the floor laying pattern.



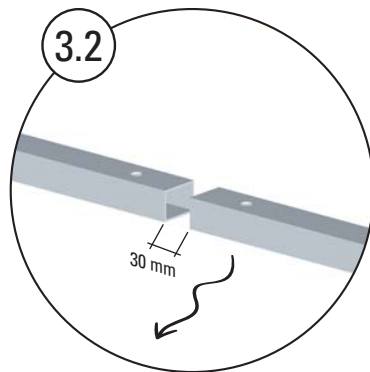
2 Drill a through hole with a diameter 1-2 mm greater than the diameter of the screw shank and another of a diameter greater than the diameter of the screw head on with the upper surface of the joist.



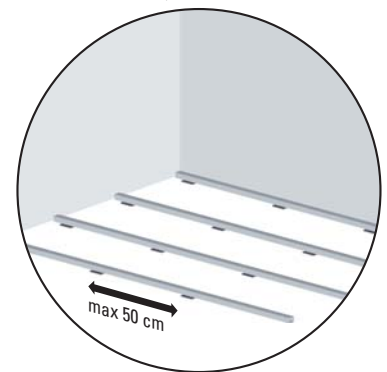
3 Attach the joists to the ground using suitable screw plugs; the centre-to-centre distance of the fixing points must not exceed 50 cm.



3.1 The distance between the ends of adjacent joists must be at least 5 mm in the case of installation of the joists along the sloping side of the floor (fig. 3.1) and 30 mm in case of installation perpendicular to the slope to allow for the outflow of rainwater (fig. 3.2).

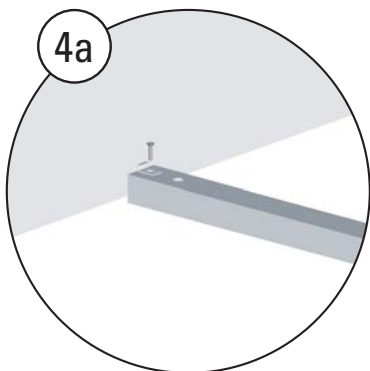


SHIMMING, IF REQUIRED

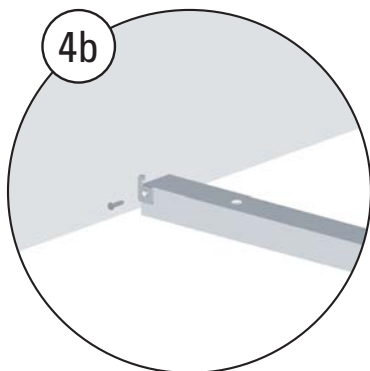


If the ground is uneven-, and shimming is therefore required, ensure support to the aluminium joists at least every 50 cm with Woodn™ Ormans strips or other durable materials.

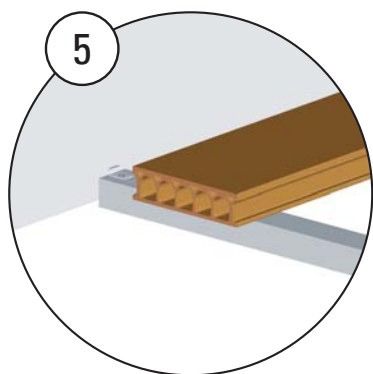
INSTALLATION OF THE PLANKS



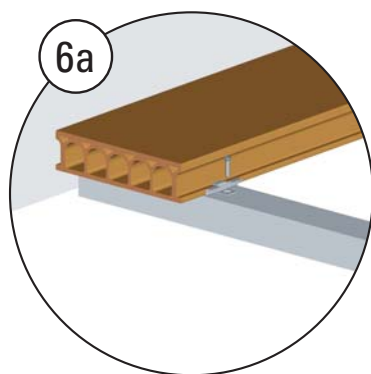
4a For installation with clip ZCLW-KKDT13835_4024_4.2, apply starting clip ZCLW-KKDT13835_2314, by screwing it to the joist and make sure the clips are all aligned.



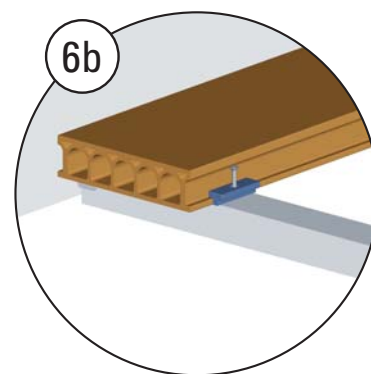
4b For installation with clip ZCLW-WADT13835-ST, apply starting clip ZCLW-WADT13835_ST, by screwing it to the joist and make sure the clips are all aligned.



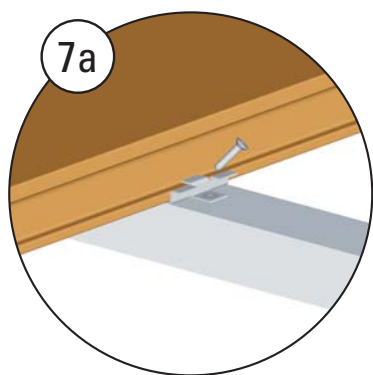
Install the first plank by inserting the lower flap into the cavity of the clip.



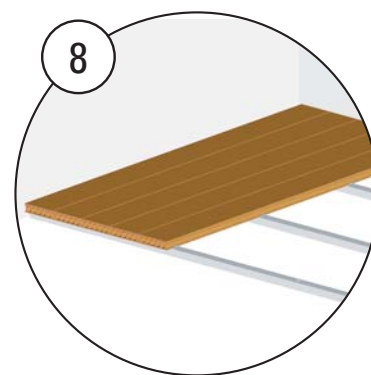
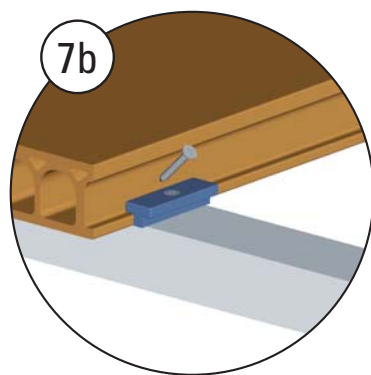
Insert clip ZCLW-KKDT13835_4024_4.2 and fasten the screws for the fastening to the joist.



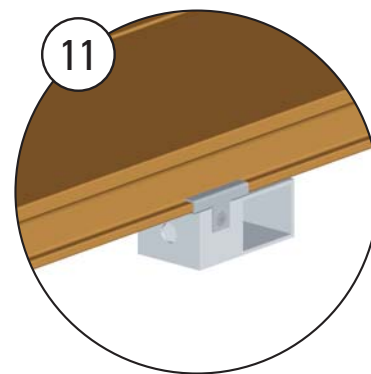
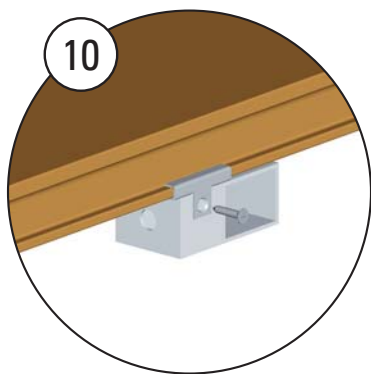
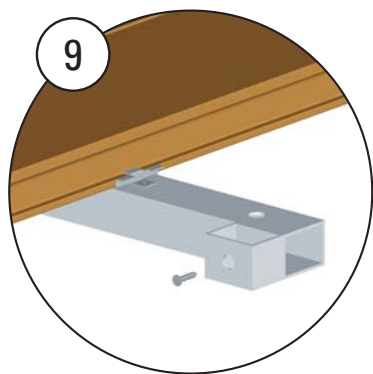
Insert the ZCLW-WADT13835-ST and fasten the screws for attachment to the slat.



Install ONE screw in each plank as shown in the figure, so as to avoid the sliding of the plank in the direction of its length. Drill a through hole of the plank. To identify this FIXED POINT, see the instructions in the diagrams of the laying patterns.



Repeat the above steps until completion of the cladding, in the installation order indicated in the following paragraph.



In the case of clip ZCLW-KKDT13835_4024_4.2, complete installation using locking clip ZCLW-KKDT13835_4013, while in the case of clip ZCLW-WADT13835-ST complete installation using clip ZCLW-WADT13835-ST.

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

TOOLS REQUIRED FOR INSTALLATION:

- Impact drill
- Electric screwdriver
- Electric saw
- Rubber mallet
- Various materials for tracing purpose
- Straightedge, bubble or laser level

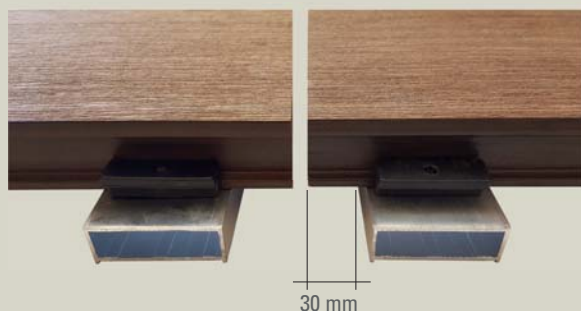
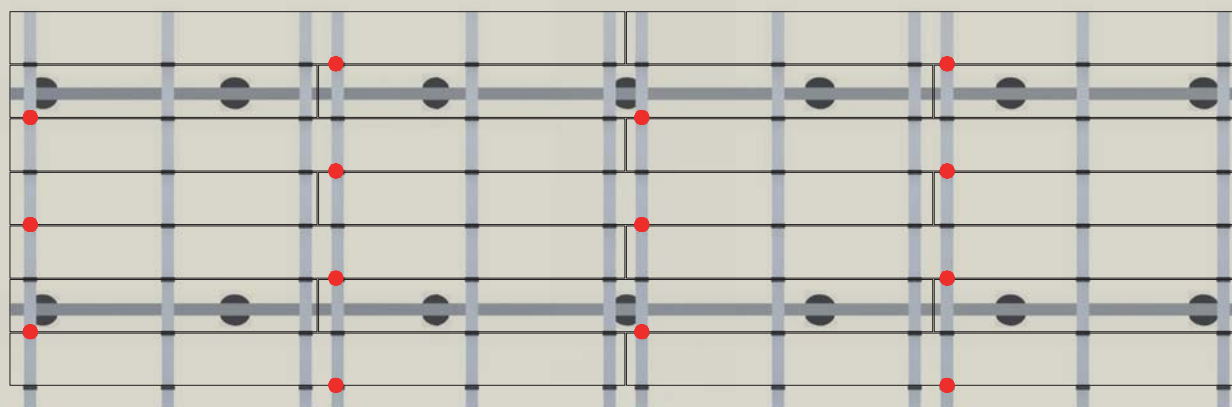
FIXED POINT

To make sure that the expansion gap will remain over time, in outdoor applications a FIXED POINT should be made on each plank. We also recommend strictly adhering to the positioning pattern of the fixed point.

LAYING PATTERN - RUNNING BOND

● = fixed point for expansion

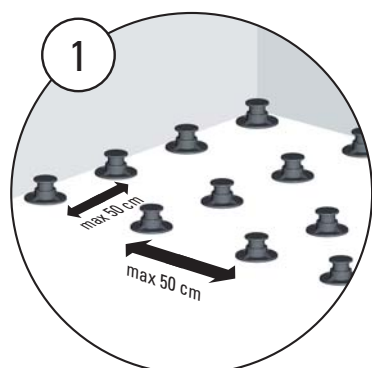
● = position of support in case of raised floor



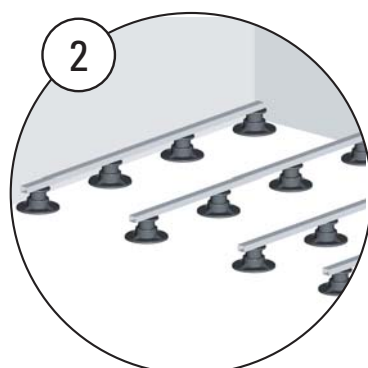
In correspondence of the heads of two consecutive planks, the aluminum joists must be doubled as shown in the photo.

LAYING OF RAISING SUPPORTS

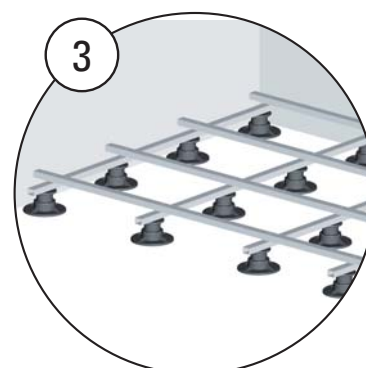
In the case of raised floors, place the supports in accordance with the laying pattern. In any case, the distance between the supports must be maximum 50 cm in the direction parallel to the length of the planks and 50 cm in the direction perpendicular to the length of the planks (with aluminium 55x20 mm).



Place crosspieces and joists as shown in the figure.

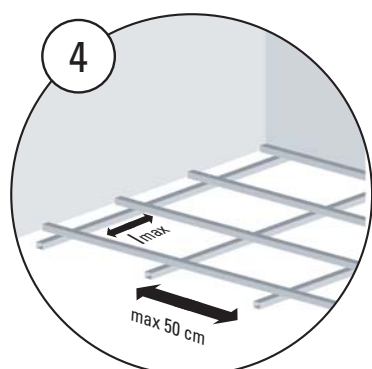


Then create the frame as indicated in the following paragraph. Mechanically fix crosspieces and joists to the supports.

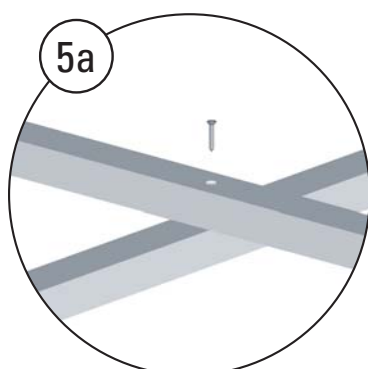


CREATING THE ALUMINIUM FRAME

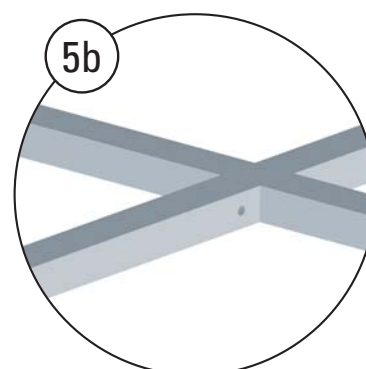
Place on crosspieces and joists in accordance with the chosen laying pattern, maintaining a maximum centre-to-centre distance of l_{max} (page 56) between the joists and 50 cm between the crosspieces (with aluminium 55x20 mm).



The joists must be firmly fixed to the crosspieces.



In the case of a superimposed frame, drill through holes with a 5 mm diameter on the joist and widen them to 12 mm on the upper surface. Then, fix it with the self-drilling screw.



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.

ALUMINIUM CAPACITY (centre-to-centre distance crosspieces)

| Joists | l_{max} |
|--------------------|-----------|
| 55 x 20 mm (W x H) | 50 cm |
| 55 x 30 mm (W x H) | 65 cm |
| 55 x 40 mm (W x H) | 80 cm |

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™ Aeternus DT13835

| Support code | Support height | Height of the finished surface* | Frame configuration |
|-------------------|----------------|---------------------------------|---------------------|
| ZPSC-AC010#2235 | 22 - 35 mm | 97 - 110 mm | Overlapped |
| ZPSC-AC010#3555 | 35 - 55 mm | 110 - 130 mm | Overlapped |
| ZPSC-AC010#5595 | 55 - 95 mm | 130 - 170 mm | Overlapped |
| ZPSC-AC010#95165 | 95 - 165 mm | 170 - 240 mm | Overlapped |
| ZPSC-AC010#165235 | 165 - 235 mm | 240 - 310 mm | Overlapped |

The heights reported above are calculated considering aluminum joists and crosspieces 55 x 20 mm (W x H)

Woodn™ Aeternus DT17029

| Support code | Support height | Height of the finished surface* | Frame configuration |
|-------------------|----------------|---------------------------------|---------------------|
| ZPSC-AC010#2235 | 22 - 35 mm | 91 - 104 mm | Overlapped |
| ZPSC-AC010#3555 | 35 - 55 mm | 104 - 124 mm | Overlapped |
| ZPSC-AC010#5595 | 55 - 95 mm | 124 - 164 mm | Overlapped |
| ZPSC-AC010#95165 | 95 - 165 mm | 164 - 234 mm | Overlapped |
| ZPSC-AC010#165235 | 165 - 235 mm | 234 - 304 mm | Overlapped |

The heights reported above are calculated considering aluminum joists and crosspieces 55 x 20 mm (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 100 mm.

For example:

System composed of: ZPSC-AC010#95165 overlapped frame + 2 extensions finished floor height = (170 - 240) + (2 x 100) = 370 - 440 mm (370 mm minimum height, 440 mm maximum height).

THEORETICAL SUPPORT INCIDENCES FOR RAISED DECKING

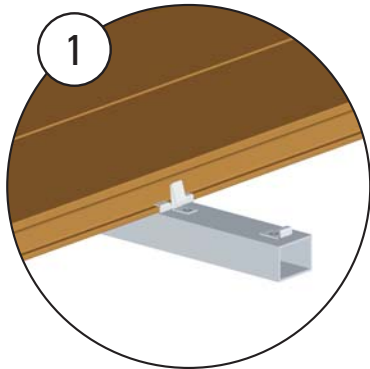
| | stacked bond | running bond |
|-------------------------|--------------|--------------|
| Woodn™ Aeternus DT13835 | 5 pcs/sqm | 5 pcs/sqm |
| Woodn™ Aeternus DT17029 | 5 pcs/sqm | 5 pcs/sqm |

The actual calculation of the number of supports needed must be defined based on the chosen laying surface.

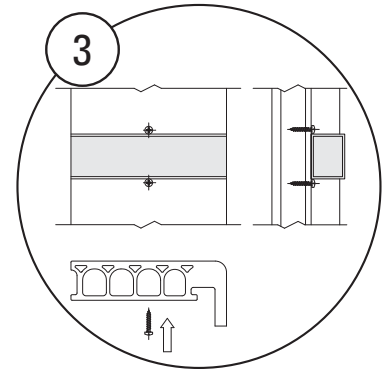
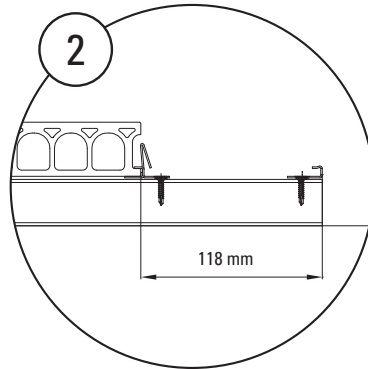
EDGE - INSTALLING THE FINISHING EDGE

Install corner profile DT13858 to close the decking on the sides.

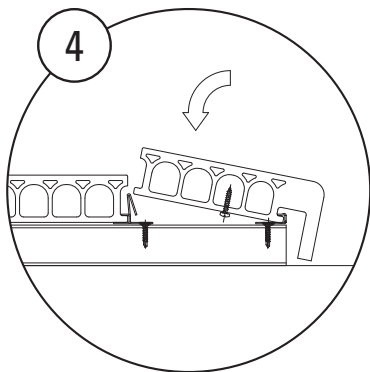
INSTALLATION WITH STAINLESS STEEL CLIP



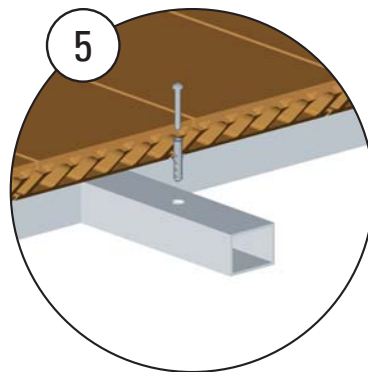
Install clip ZCLW-KKDT13835_4029 on the long end of the planks as shown in the figure.



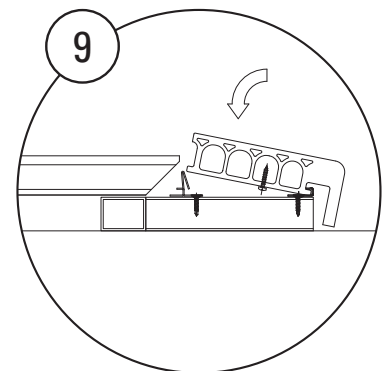
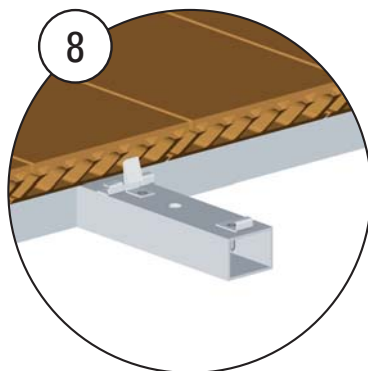
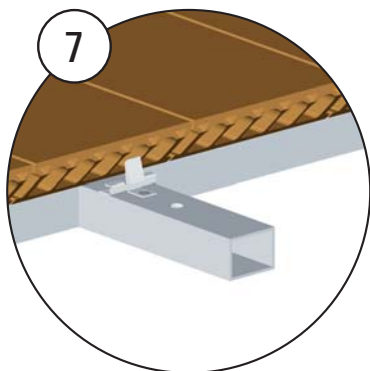
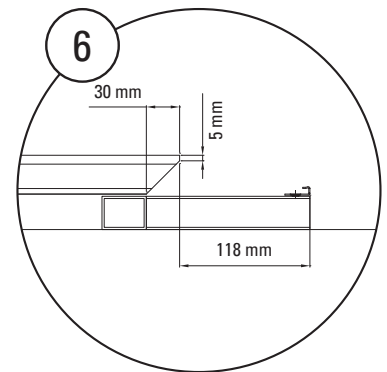
Create the **FIXED POINT** on the finishing profile by fixing two screws matching the position of one of the support planks (the head of the screws should prevent horizontal movement of the profile).



Then install the finishing profile by inserting the clip and turning it as shown.

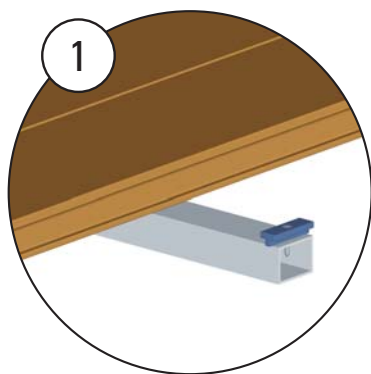


On the short side of the planks, create the substructure support for the finishing profile (in this case, the centre-to-centre distance between the support profiles should be at most 50 mm). On this side, the planks must be cut as indicated in the figure to allow for the application of the fixing clip.

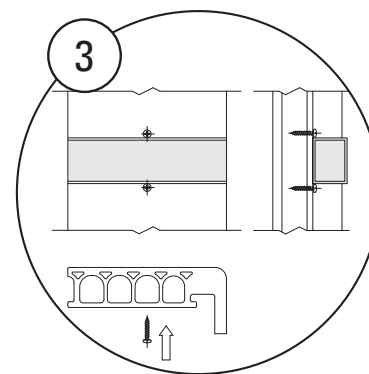
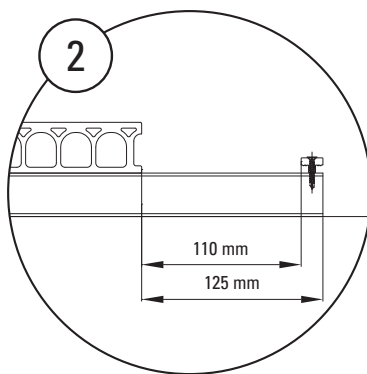


Then apply the finishing edges as on the long side of the planks, remember you need to make the **FIXED POINT** on the finishing profile.

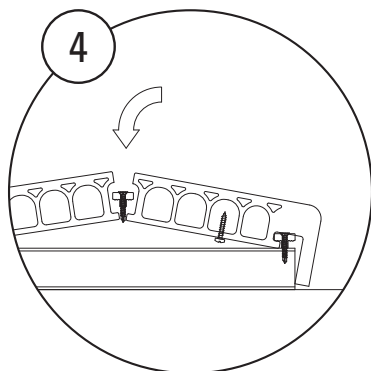
INSTALLATION WITH PLASTIC CLIP



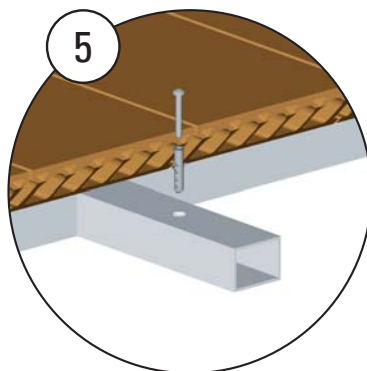
Install clip ZCLW-WADT13835-ST on the long end of the planks as shown in the figure.



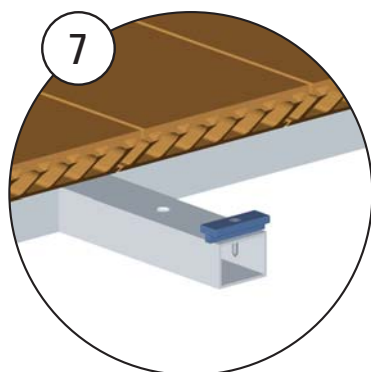
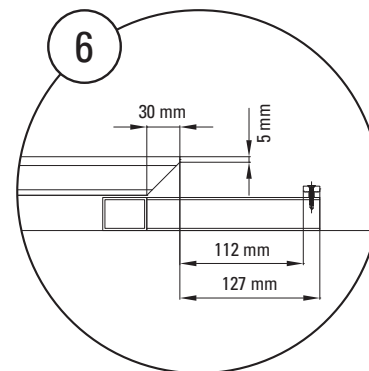
Create the **FIXED POINT** on the finishing profile by fixing two screws matching the position of one of the support planks (the head of the screws should prevent horizontal movement of the profile).



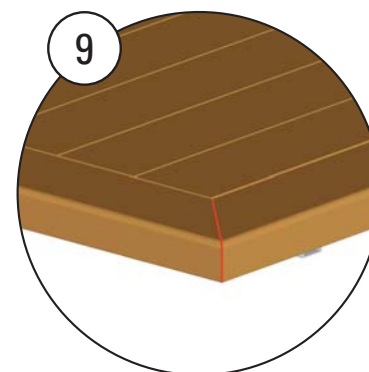
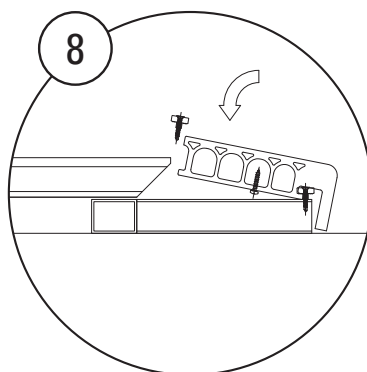
Then install the finishing profile by turning it as shown and attaching it with clip ZCLW-WADT13835-ST.



On the short side of the planks, create the substructure support for the finishing profile (in this case, the centre-to-centre distance between the support profiles should be at most 50 mm). On this side, the planks must be cut as indicated in the figure to allow for the application of the fixing clip.


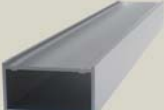
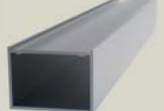
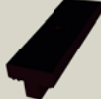

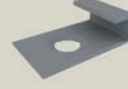





Then apply the finishing edges as on the long side of the planks, remember you need to make the **FIXED POINT** on the finishing profile.



Mitre cuts can be performed in the corners; in this case we recommend making the **FIXED POINT** as close as possible to the corner and matching the adjacent sides of the two profiles.

ACCESSORIES

| accessory code | design |
|--|---|
| <p>Joists ZPCM-55X20-6060-T6 55 x 20 (W x H)</p> |  |
| <p>Joists ZPCM-55X30-6060-T6 55 x 30 (W x H)</p> |  |
| <p>Joists ZPCM-55X40-6060-T6 55 x 40 (W x H)</p> |  |
| <p>Plastic clip ZCLW-WADT13835-ST</p> |  |
| <p>Stainless steel clip ZCLW-KKDT13835_4024_4.2</p> |  |
| <p>Stainless steel clip ZCLW-KKDT13835_2314</p> |  |
| <p>Stainless steel clip ZCLW-KKDT13835_4013</p> |  |
| <p>Stainless steel clip ZCLW-KKDT13835_4029</p> |  |
| <p>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</p> |  |

WOODN MODULATUS



DISCLAIMER - GENERAL NOTES

The information provided by WoodN Industries in this document are solely indicative, they are based on the present state of knowledge and must be considered only as a description of our products and their possible application. Such information must not be interpreted as a guarantee of specific features, performances or warranties of the product. Material's colors and finishes represented in this document are the result of printing techniques so they may slightly differ from the original colors. Original samples are available upon request and constitute only a general indication of the dimensions and the aesthetic appearance of Woodn™ profiles. WoodN Industries may change the information included in this document at any time and without further notice. WoodN Industries does not warrant the accuracy and completeness of the information in this document and furthermore their suitability for the purpose which it is consulted for by the other parties. WoodN's customers or third parties must ascertain they have the most recent version of this document, available at www.woodn.com. It is advised that customers and third parties have a professional adviser to inform them about the suitability of the products for all desired applications and about applicable laws and regulations. WoodN Industries reserves the right to modify products and concerning features without prior notice. WoodN Industries is not liable for any damage arising from, or related to, the use of this document. Woodn™ material does not have structural characteristics and therefore WoodN Industries declines all responsibilities for improper use of the material. No sections of this publication can be reproduced, stored in database, or transmitted in any form or by any other mean without the explicit approval of WoodN Industries. For more information please contact WoodN Industries.

MATERIAL'S FEATURES

Mechanical properties

| | | |
|---|---|---|
| Elasticity (bending) | UNI EN ISO 178 | @23 °C @65 °C |
| Yield strenght (flexural) | UNI EN ISO 178 | @23 °C @65 °C |
| Water absorbption and humidity | ASTM D1037 | absorption 0,07% |
| Dynamic- Mechanical analysis of transition temperature | ASTM D4065/95 | 78.8 °C |
| Linear thermal expansion coefficient (from -10 °C to 70 °C) | TMA ASTM E 831/2006 | longitudinal 46,9 x10 ⁻⁶ m/(m°C) trasversal 48 x10 ⁻⁶ m/(m°C) |
| Tensile strenght and tensile strenght after accelerated weathering (exposure to xenon lights) | ASTM D638-10 (tensile test) ASTM G155-050 | difference after 2 months of exposure ~5,21% difference after 3 months of exposure ~6,9% (meet the requirements to comply with Miami Dade and Florida Building Code 2014) |

Reaction to fire

| | | |
|---|--------------------------|--|
| Flammability | UL94 AS 3959-2009 | V-0 Class BAL-29 |
| Flame spread index Smoke developed index | ASTM E84 | Class A |
| Ignition temperature | ASTM D1929 | 476 °C |
| Average critical radiant flux of floor | AS ISO 9239 ASTM E648 | ≥ 11 kW/m ² > 1,03 W/cm ² (class I as per NFPA 101) |
| Ignitability, flame propagation, heat release and smoke release | AS/NZS 1530.3:1999 | Ignitability (0-20) = 8 Spread of Flame (0-10) = 0 Heat Evolved (0-10) = 0 Smoke Developed (0-10) = 7 |

Chemical and biological features

| | | |
|--|------------------------------|--------------------------------|
| Evaluation of the action of microorganisms (scale from 0 to 5) | EN ISO 846:97 | Test result: 1 |
| Heavy metal content (Pb, Ge, Cr, Hg) | GB18584-2001 GB18580-2001 | < 0,5 ppm |
| Formaldehyde emission | EN 717-2:1994 | 0,1 mg HCHO/(m ² h) |






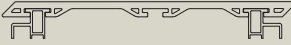




Surface characteristics (only for Aeternus)

| | | |
|--|---------------------|--------------------|
| Surface resistance to slippage while wearing footwear (brushed finish) | DIN 51130 (06/2004) | R12 |
| Surface resistance to slippage while wearing barefoot (brushed finish) | DIN 51097 (1992) | A+B+C |
| Flooring slip resistance (Pendulum test) | AS 4663-2013 | Dry: 98 Wet: 70 |

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













DIMENSIONS

outdoor cladding

| profile | cross-section | nominal dimensions [mm] | weight of the plank [kg/m] |
|--|---|--|----------------------------|
| Q9510  |  | section 95 x 10 standard length 2000 | 0.48 |
| Q13010HD  |  | section 130 x 10 standard length 2000 | 1.00 |
| Q20410  |  | section 204 x 10 standard length 2000 | 1.93 |
| TH14830HD-4  |  | section 148 x 30 standard length 2000 | 0.86 |
| TH6050HD  |  | section 54 x 60 standard length 2000 | 0.68 |

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.

indoor ceiling/outdoor soffit

| profile | cross-section | nominal dimensions [mm] | weight of the plank [kg/m] |
|---|---|--|-------------------------------|
| TH5025HD  |  | section 25 x 50 standard length 2000 | 0.37 |
| TH3050HD  |  | section 50 x 30 standard length 2000 | 0.38 |
| TH6050HD  |  | section 54 x 60 standard length 2000 | 0.68 |
| TH9050HD  |  | section 50 x 90 standard length 2000 | 0.86 |
| TH14830HD-4  |  | section 148 x 30 standard length 2000 | 0.86 |
| TH22430HD  |  | section 224 x 30 standard length 2000 | 1.18 |

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.

GENERAL INSTALLATION INSTRUCTIONS

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

- Store the boxes 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 0 °C.
- Open the boxes and immediately remove the polyethylene packaging from the profiles.
- 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 Woodn™'s 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 Woodn 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 immediately after installation. Immediately remove major stains such as paint, concrete or tar residues.
- For cleaning and maintenance instructions refer to page 117. The WoodN warranty will be rendered null and void in the event of incorrect or improper handling, cleaning and maintenance.

EXPANSION GAP BETWEEN ADJACENT PROFILES

WoodN, due to material's composition's features and extrusion technology, undergoes after the first exposure an initial dimensional shrinkage less than 0.4% of the profile length (max value established according to EN 479: 1995) and presents a linear contraction / dilatation due to temperature variations.

In outdoor applications, leave a gap at the end of the profile according to the relative size in the table below:

| Laying temperature | Expansion gap |
|--------------------|---------------|
| < 20 °C | 2 mm/m |
| > 20 °C | 1 mm/m |

For example:

For laying conditions with a temperature around 30 °C and a plank length of 2000 mm, it should be left gaps measuring $2000 \times 1 \text{ mm/m} = 2 \text{ mm}$

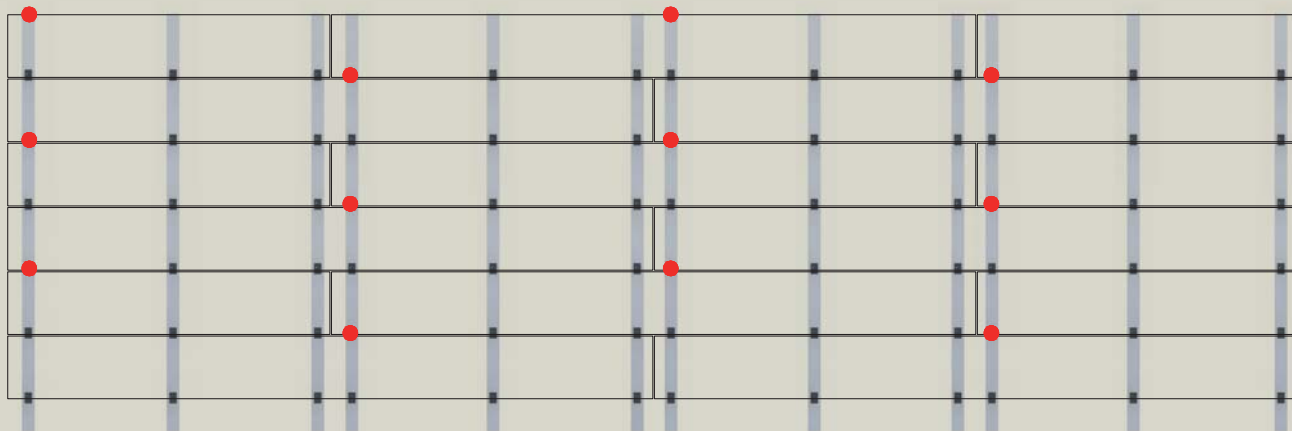
WARNING: it has to be noted that the failure to comply strictly with the criteria for the application of fixed points and floating points, causes the deformation of the materials and the misalignment of all the expansion joints.

FIXED POINT

To make sure that the expansion gap will remain over time, in outdoor applications a FIXED POINT should be made on each plank. We also recommend strictly adhering to the positioning pattern of the fixed point.

LAYING PATTERN - RUNNING BOND

● = fixed point for expansion



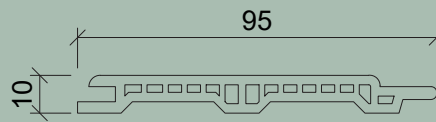
ALIGNMENTS

We recommend to align and plumb the substructure before you starting the installation. We recommend leaving an expansion joint between the heads of the substructure profiles in correspondence with the floors slabs for possible settling of the building.

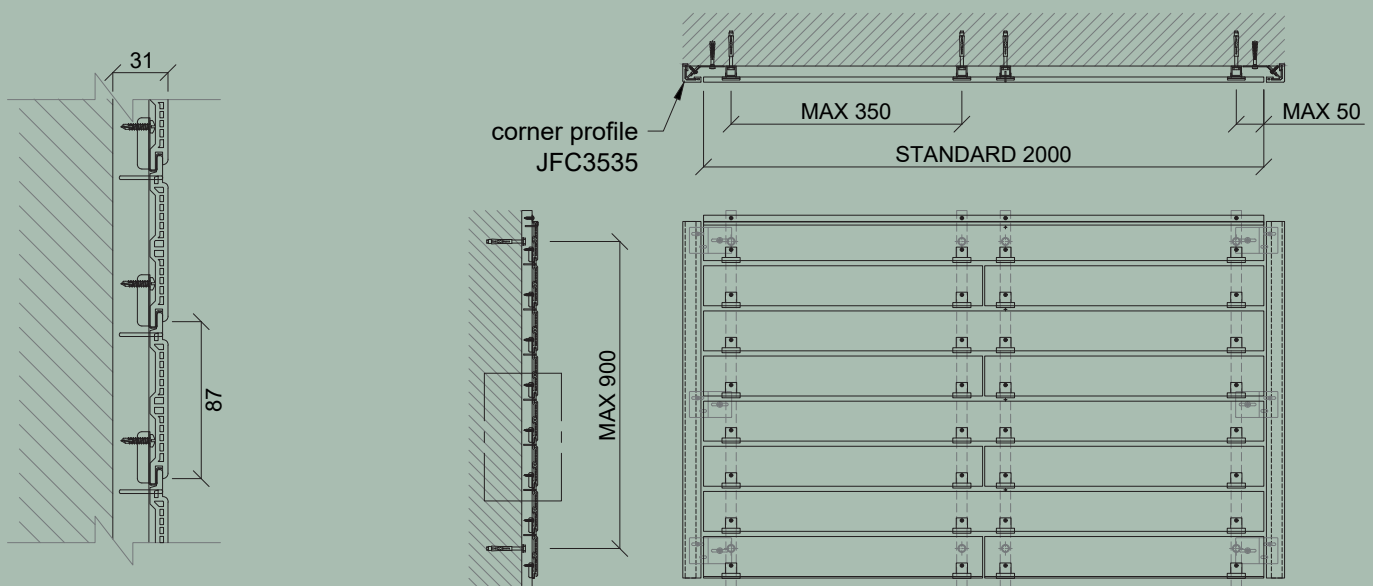


In correspondence of the heads of two consecutive planks, the aluminum joists must be doubled as shown in the photo.

Q9510 - outdoor cladding



MOUNTING SYSTEM



*Measures in millimeters
Dimensions considering a wind load of 120 kg/m².

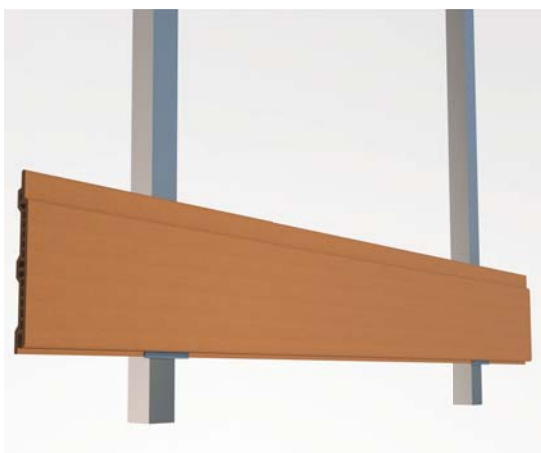
ASSEMBLY INSTRUCTIONS



1. Screw the aluminum joist profiles to support with suitable screws and wall plugs (*)



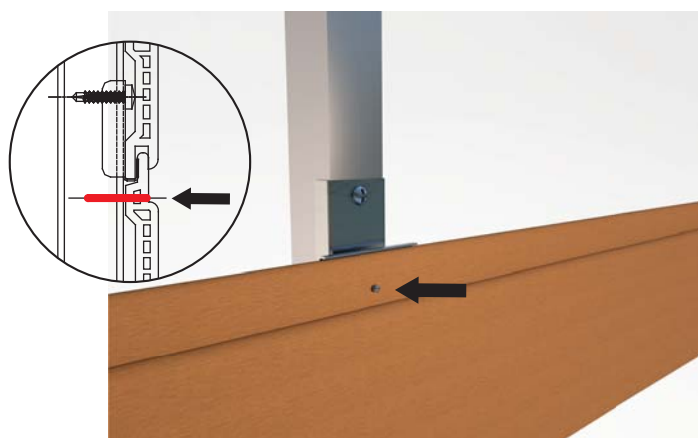
2. Apply the first row of ZCLW-KK3530 clips at the bottom with self-drilling screws



3. Fit the plank in the respective clip slot



4. Insert the second row of clips to lock the plank



5. Install a cylindrical pin the fixed point (make a pre-hole \varnothing 1.8 mm)



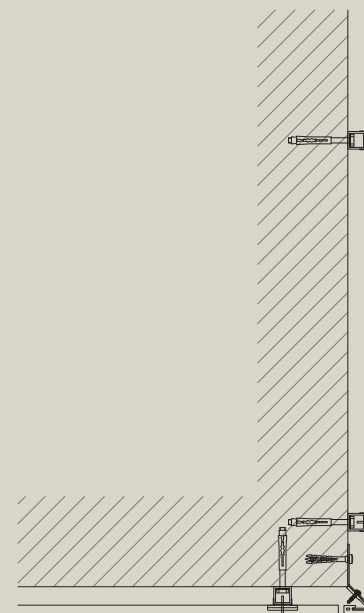
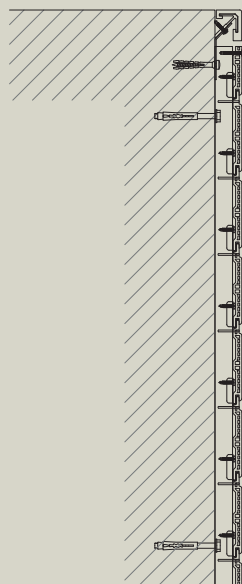
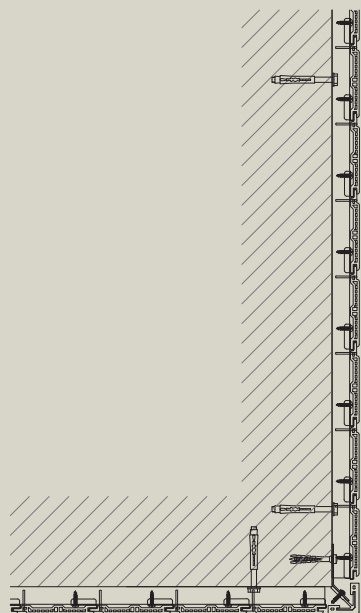
6. Repeat as described from step 3 up to the top to complete the cladding

*Screws and wall plugs must be chosen according to the type of wall support


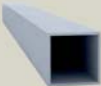



DETAILS FOR CORNERS

VERTICAL PLANKS




HORIZONTAL PLANKS



SYSTEM COMPONENTS

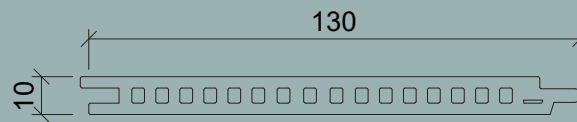
| | | | | | |
|-----------------------------------|---|--|---|---|--|
| Profile Q9510 |  | 11.50 m/sqm | Substructure profile ZTQM-20X20X2-6060-T6 |  | 3.40 m/sqm (stacked bond) 3.90 m/sqm (running bond) |
| Fixing clip ZCLW-KK3530 |  | 40 pz/sqm (stacked bond) 45 pz/sqm (running bond) | Screw ZRHW-3.5X16-A2-7504N |  | 40 pz/sqm (stacked bond) 45 pz/sqm (running bond) |
| Dowel pin ZCPW-D2X24-A2 |  | 6 pz/sqm (stacked bond) 6 pz/sqm (running bond) | | | |

CORNERS COMPONENTS

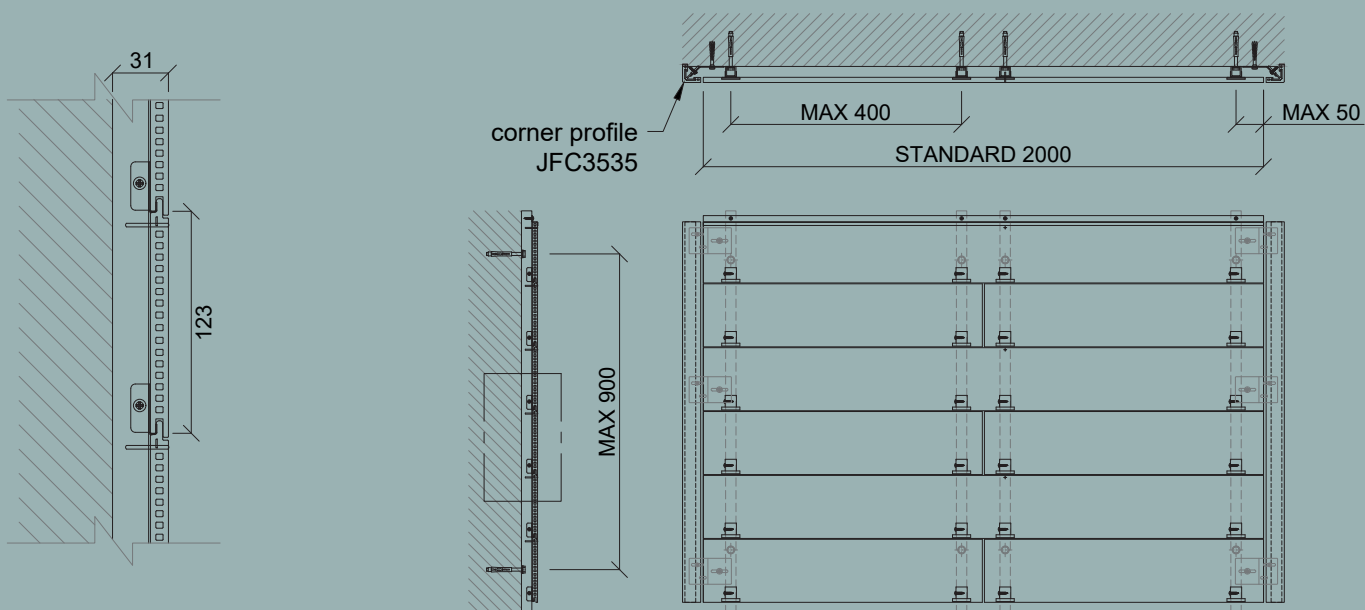
| | | | | | |
|---------------------------|---|--|--|--------------------------------------|---|
| Profile JFC3535 |  | Fixing bracket ZCLW-WAJFC3535_6050 |  | Screw ZRHW-3.5X16-A2-7504N |  |
|---------------------------|---|--|--|--------------------------------------|---|

WARNING: the incidences of accessory material indicated refer to application according to the European standards, which provides for planks 2000 mm long and slats/substructure with maximum distance o.c. up to 350 mm. For any installation that differs from the standard a cutting plan must be designed; it shall calculate precisely the number of points of intersection between the planks and the substructure, allowing the correct identification of the number of clips and screws required for each type of application.

QI3010HD - outdoor cladding

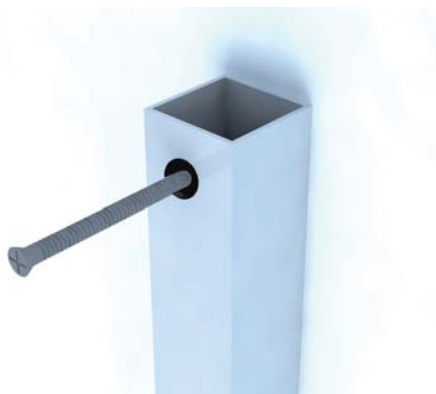


MOUNTING SYSTEM



*Measures in millimeters
Dimensions considering a wind load of 120 kg/m².

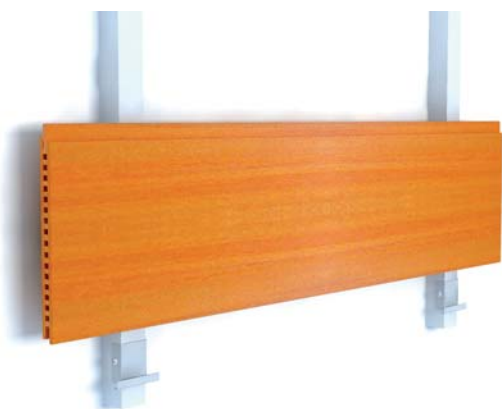
ASSEMBLY INSTRUCTIONS



1. Screw the aluminum joist profiles to support with suitable screws and wall plugs (*)



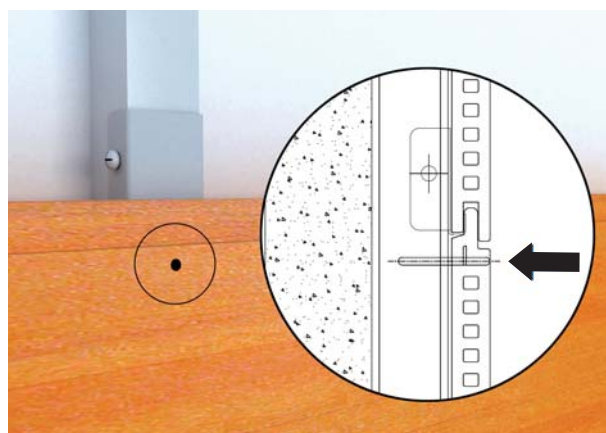
2. Apply the first row of ZCLW-KK2806 clips at the bottom with self-drilling screws.



3. Insert the first plank into the respective slot.



4. Insert the second row of clips and attach them to the structure's profile.



5. For outdoor applications, create the fixed point on each plank with dowel pins ZCPW-D2X24-A2 (make a pre-hole \varnothing 1.8mm)

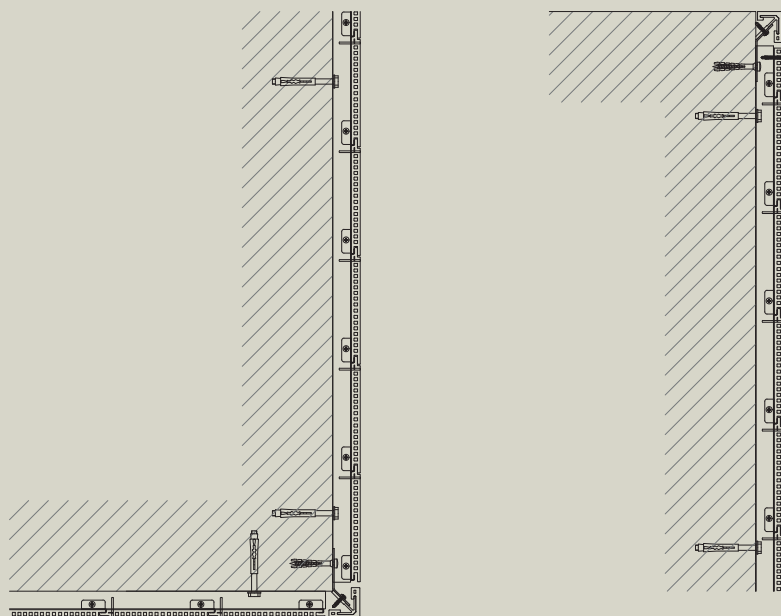


6. Repeat as described from step 3 up to the top to complete the cladding.

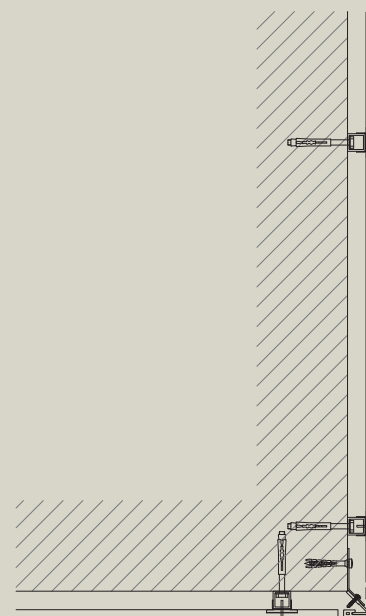
*Screws and wall plugs must be chosen according to the type of wall support

DETAILS FOR CORNERS


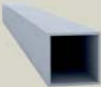



VERTICAL PLANKS






HORIZONTAL PLANKS



SYSTEM COMPONENTS

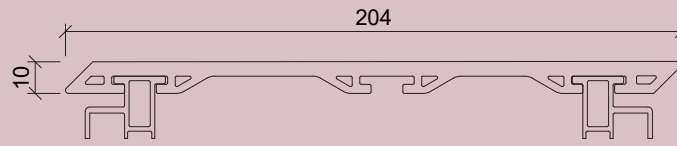
| | | | | | |
|-----------------------------------|---|--|---|---|--|
| Profile Q13010HD |  | 8.20 m/sqm | Substructure profile ZTQM-20X20X2-6060-T6 |  | 3.00 m/sqm (stacked bond) 3.50 m/sqm (running bond) |
| Fixing clip ZCLW-KK2806 |  | 25 pz/sqm (stacked bond) 29 pz/sqm (running bond) | Screw ZRHW-3.5X16-A2-7504N |  | 25 pz/sqm (stacked bond) 29 pz/sqm (running bond) |
| Dowel pin ZCPW-D2X24-A2 |  | 5 pz/sqm (stacked bond) 5 pz/sqm (running bond) | | | |

CORNERS COMPONENTS

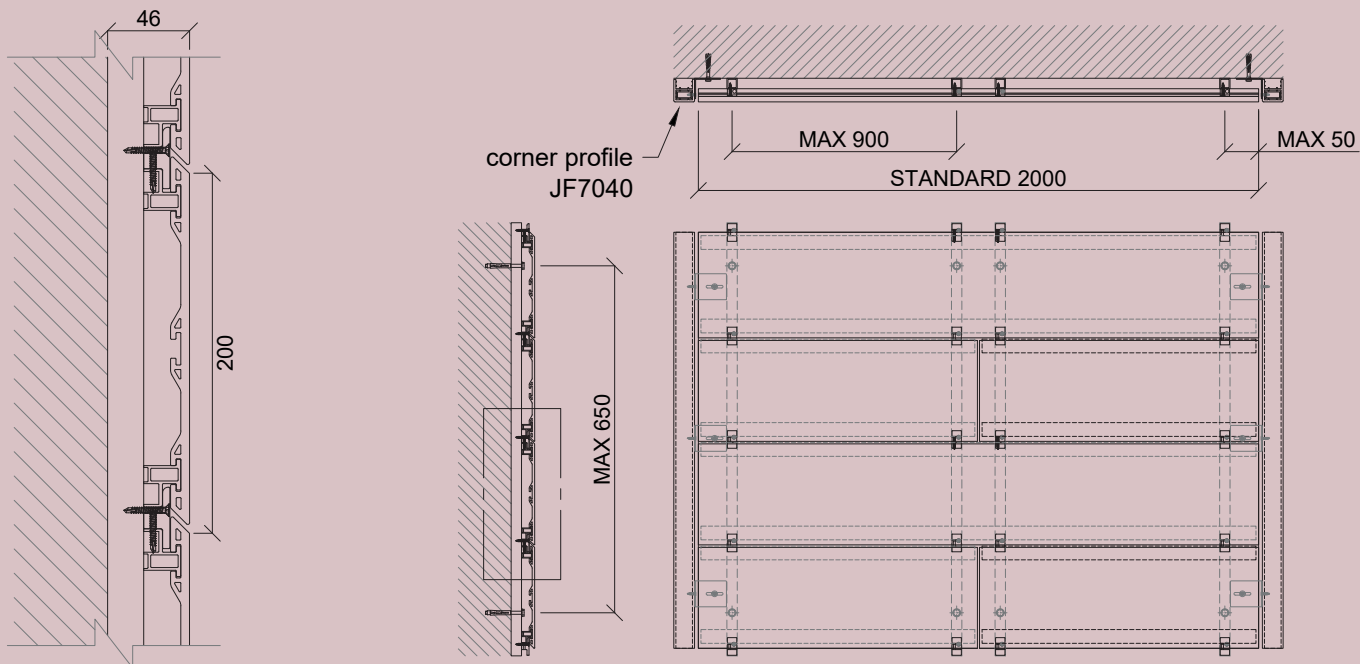
| | | | | | |
|---------------------------|---|--|--|--------------------------------------|---|
| Profile JFC3535 |  | Fixing bracket ZCLW-WAJFC3535_6050 |  | Screw ZRHW-3.5X16-A2-7504N |  |
|---------------------------|---|--|--|--------------------------------------|---|

WARNING: the incidences of accessory material indicated refer to application according to the European standards, which provides for planks 2000 mm long and slats/substructure with maximum distance o.c. up to 400 mm. For any installation that differs from the standard a cutting plan must be designed; it shall calculate precisely the number of points of intersection between the planks and the substructure, allowing the correct identification of the number of clips and screws required for each type of application.

Q20410 - outdoor cladding



MOUNTING SYSTEM

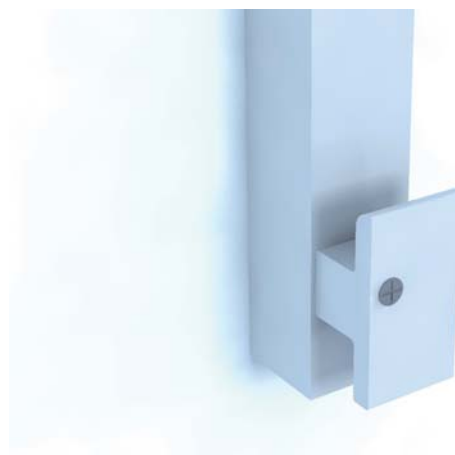


*Measures in millimeters
Dimensions considering a wind load of 120 kg/m².

ASSEMBLY INSTRUCTIONS



1. Screw the aluminum joist profiles to support with suitable screws and wall plugs (*)



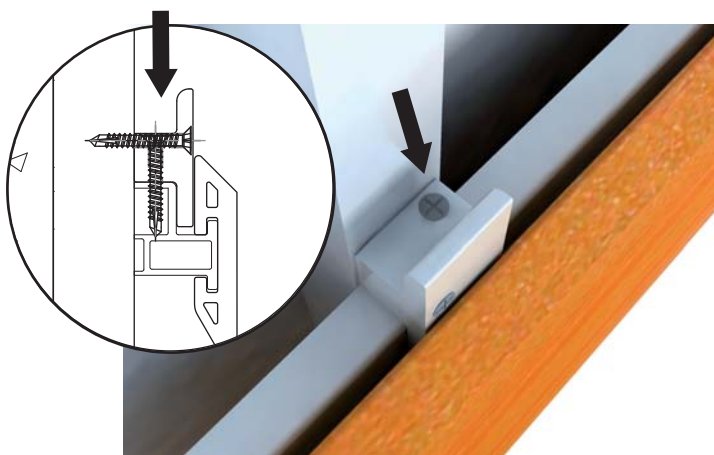
2. Insert the first row of ZCLW-KK3418 clips at the bottom and fix them with self-drilling screws.



3. Insert the first plank into the respective clip slot matching the aluminium reinforcements at the back.



4. Insert the second row of clips to lock the plank.



5. Install the screw to form the fixed point (make a pilot hole to make the step easier). Only apply 1 fixed point for each plank.



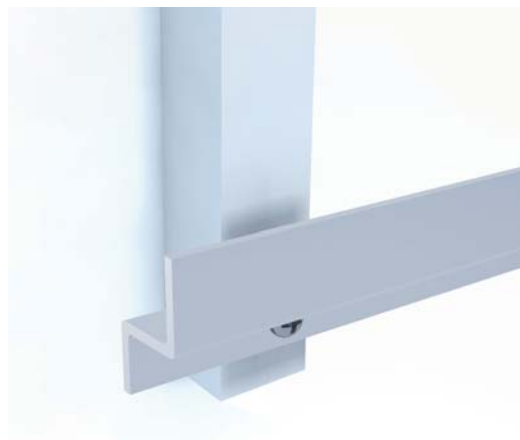
6. Repeat as described from step 3 up to the top to complete the cladding.

*Screws and wall plugs must be chosen according to the type of wall support

ALTRNATIVE - STARTING WITH "Z" PROFILE



1. Screw the aluminum joist profiles to support with suitable screws and wall plugs (*)

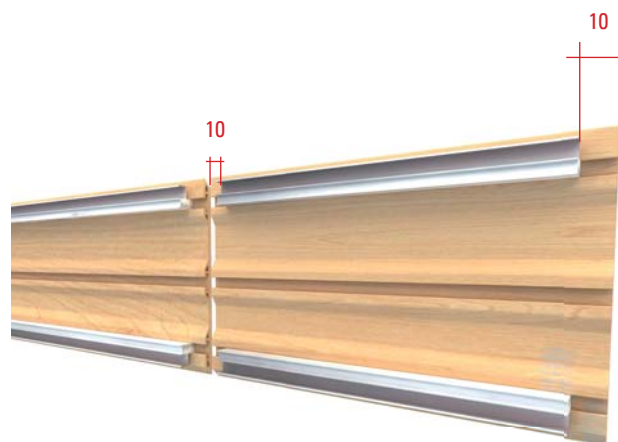


2. Install the Z starting profile in the lower part using self drilling screws.
Continue with points 3 to 6 of the previous page.

CUTTING THE PROFILES



1. Remove the screws from the fixed points.



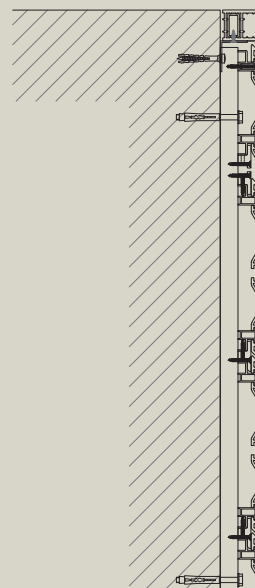
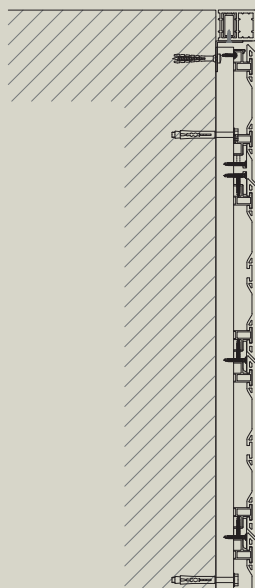
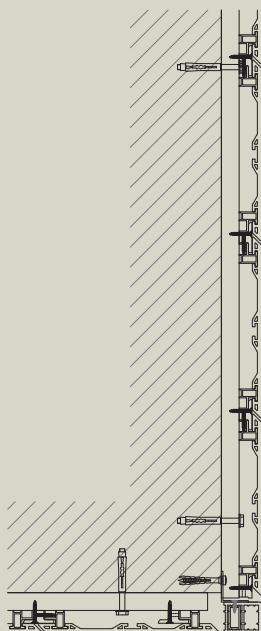
2. Cut the profiles to the required length. The aluminum profiles must be cut 20 mm shorter than the Woodn profile.



3. Insert the screws into the fixed points (ZRHW-3.5X13-A2-7504N).

DETAILS FOR CORNERS


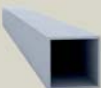





VERTICAL PLANKS






HORIZONTAL PLANKS



SYSTEM COMPONENTS

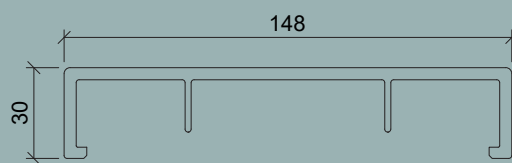
| | | | | | |
|--|---|---|--|---|--|
| Profile Q20410 |  | 5.0 m/sqm | Substructure profile ZTQM-20X20X2-6060-T6 |  | 1.70 m/sqm (stacked bond) 2.20 m/sqm (running bond) |
| Fixing clip ZCLW-KK3418 |  | 9 pz/sqm (stacked bond) 11 pz/sqm (running bond) | Screw ZFHC-3.5X25-A2-7504P |  | 12 pz/sqm (stacked bond) 14 pz/sqm (running bond) |
| Fixing clip ZCLW-KK1515 |  | available upon request | Z starting profile ZTQW-10X10X13X1.5-6060-T6 |  | available upon request |
| Starting clip ZCLW-WAQ20410_3018 |  | available upon request | | | |

CORNERS COMPONENTS

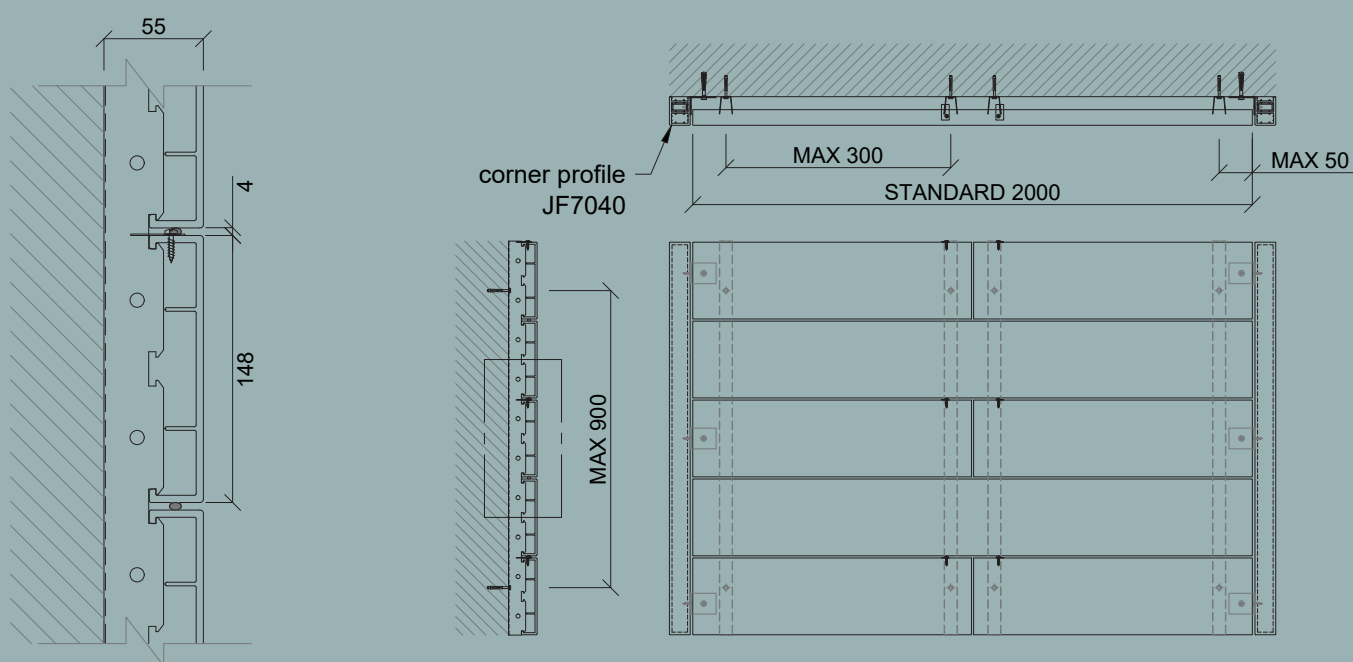
| | | | | | |
|--------------------------------|---|---|--|--------------------------------------|---|
| Profile JF7040-30X15 |  | Fixing bracket ZCLW-WAQ20410_6040 |  | Screw ZRHW-3.5X16-A2-7504N |  |
|--------------------------------|---|---|--|--------------------------------------|---|

WARNING: the incidences of accessory material indicated refer to application according to the European standards, which provides for planks 2000 mm long and slats/substructure with maximum distance o.c. up to 900 mm. For any installation that differs from the standard a cutting plan must be designed; it shall calculate precisely the number of points of intersection between the planks and the substructure, allowing the correct identification of the number of clips and screws required for each type of application.

THI4830HD-4 - outdoor cladding



MOUNTING SYSTEM



*Measures in millimeters
Dimensions considering a wind load of 120 kg/m².

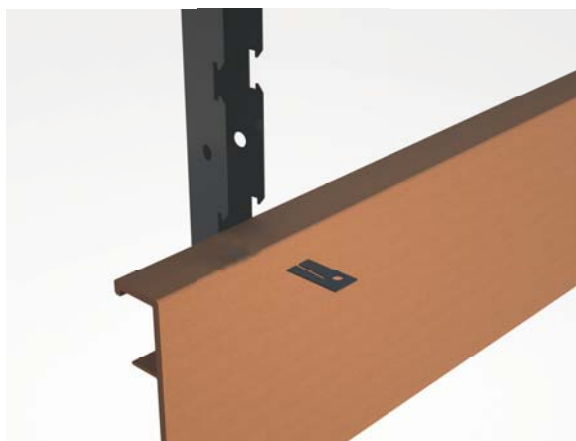
ASSEMBLY INSTRUCTIONS



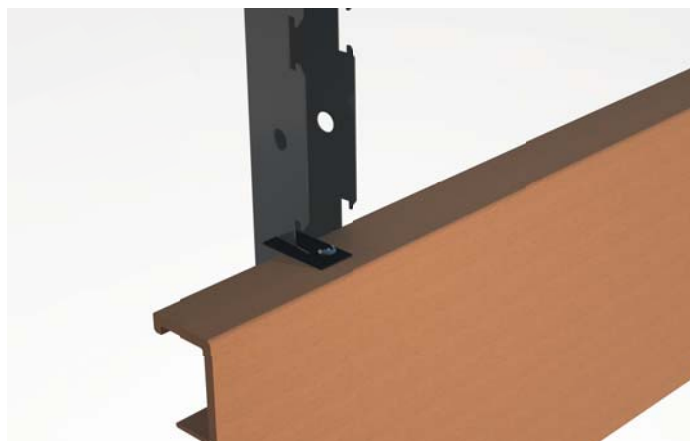
1. Screw the ZSSW-LG3326V profiles to support with suitable screws and wall plugs (*)



2. Install the first TH14830HD-4 profile.



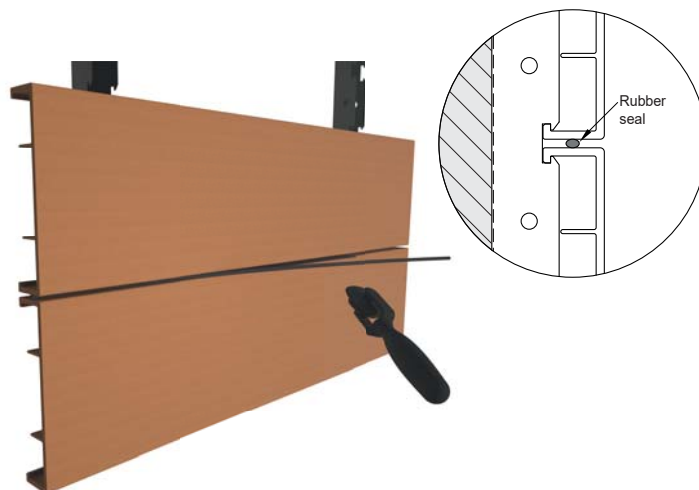
3. Apply the clip for the FIXED POINT with self-drilling screws to the profile.



4. NOTE: the clip has to slot in the substructure.



5. Repeat as described from step 2 up to the top to complete the cladding

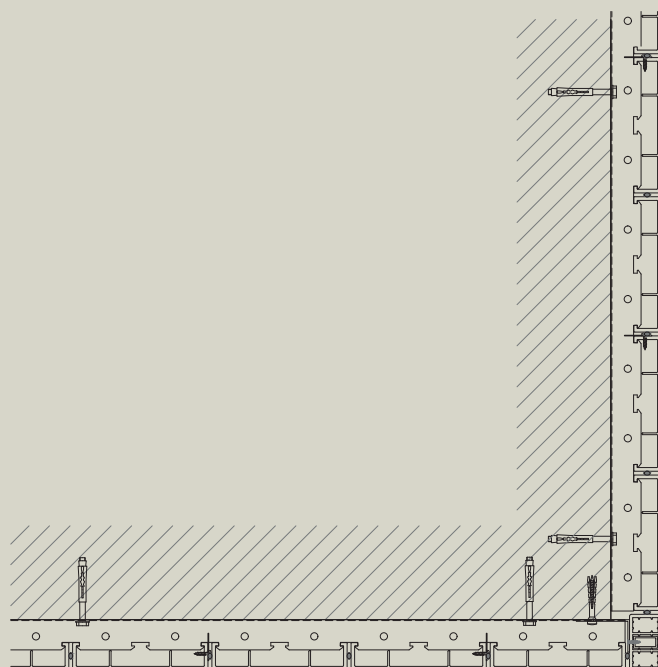


6. Insert the rubber seal into the joint using the supplied tool

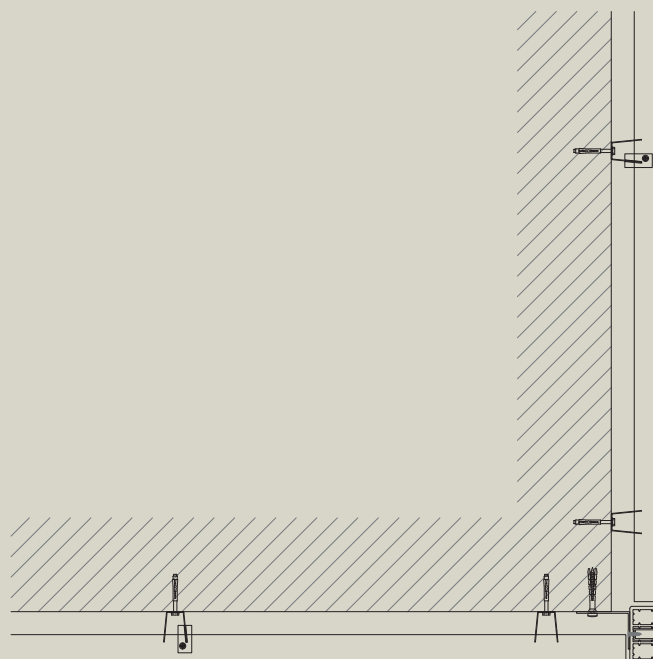
*Screws and wall plugs must be chosen according to the type of wall support

DETAILS FOR CORNERS







VERTICAL PLANKS




HORIZONTAL PLANKS



SYSTEM COMPONENTS

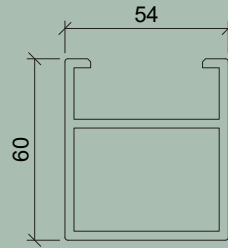
| | | | | | |
|--|---|------------|---|---|--|
| Profile TH14830HD-4 |  | 6.60 m/sqm | Substructure profile ZSSW-LG3326V joint 4 mm |  | 5.00 m/sqm (stacked bond) 5.70 m/sqm (running bond) |
| Clip for fixed point ZCLW-KK3015 |  | 4 pz/sqm | Screw ZRHW-3.5X16- A2-7504N |  | 4 pz/sqm |
| Rubber seal ZAMW-RS-TH14830 |  | 6.60 m/sqm | Insertion tool ZAMW-IT-TH14830 |  | 1 pz |

CORNERS COMPONENTS

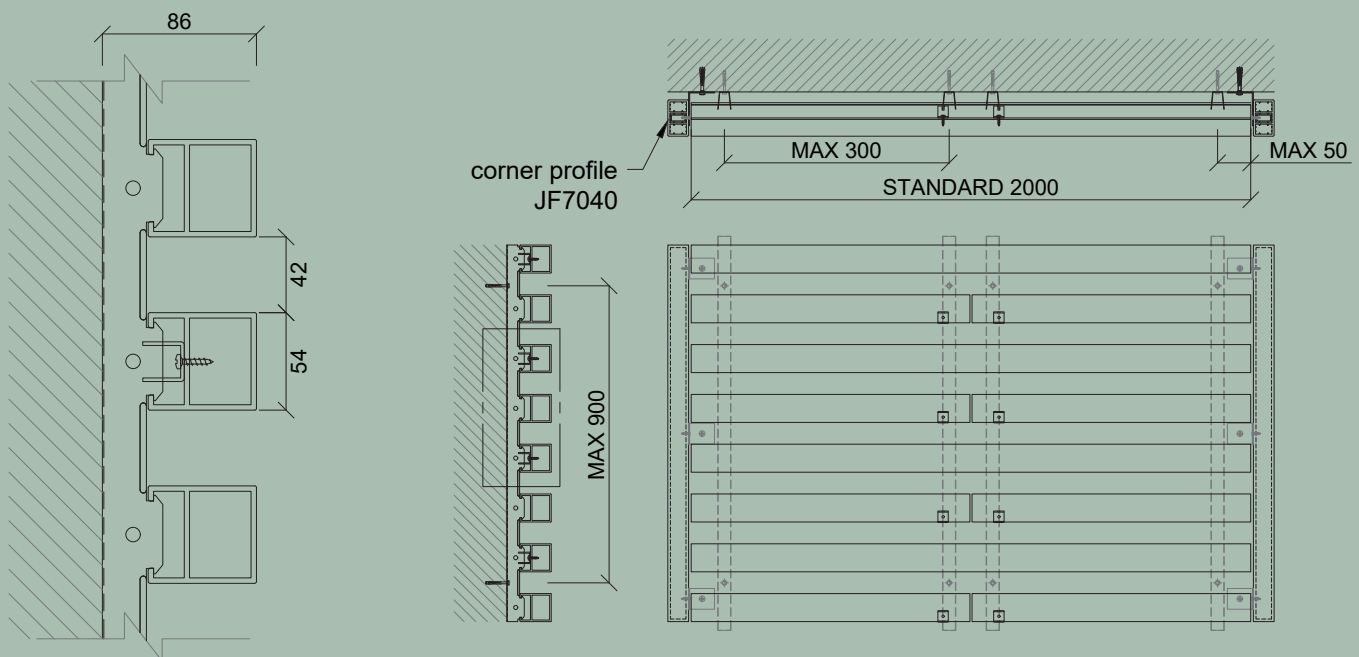
| | |
|--------------------------------|---|
| Profile JF7040-30X15 |  |
|--------------------------------|---|

WARNING: the incidences of accessory material indicated refer to application according to the European standards, which provides for planks 2000 mm long and slats/substructure with maximum distance o.c. up to 300 mm. For any installation that differs from the standard a cutting plan must be designed; it shall calculate precisely the number of points of intersection between the planks and the substructure, allowing the correct identification of the number of clips and screws required for each type of application.

TH6050HD - outdoor cladding



MOUNTING SYSTEM

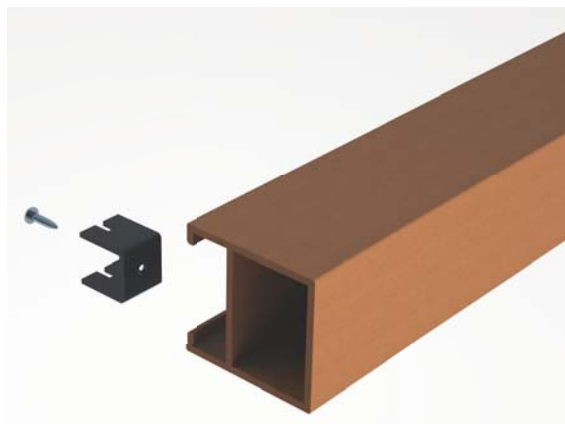


*Measures in millimeters
Dimensions considering a wind load of 120 kg/m².

ASSEMBLY INSTRUCTIONS



1. Screw the ZSSW-LG9637V profiles to support with suitable screws and wall plugs (*)



2. Apply the clip for the FIXED POINT with self-drilling screws to the profile.



3. Install the first TH6050HD profile.



4. NOTE: the clip has to slot in the substructure.



5. Install, if expected, the accessory THZ5004HD profile.

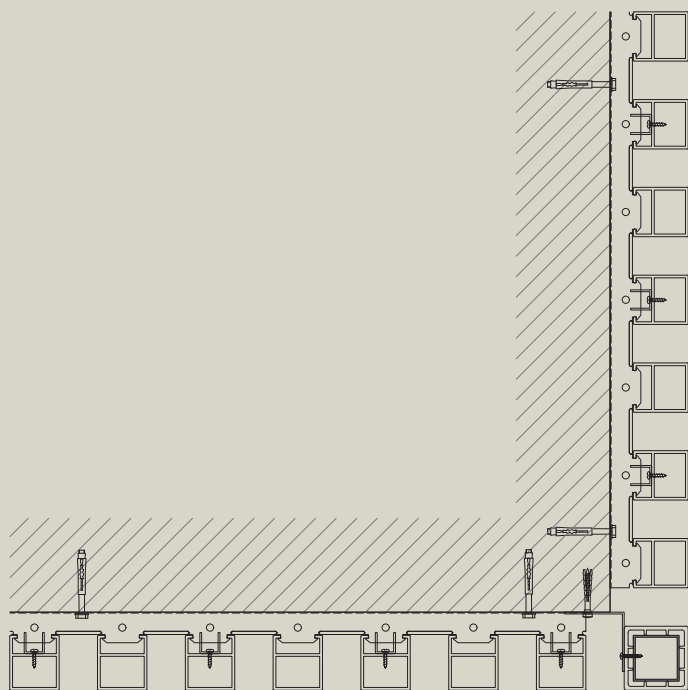


6. Repeat as described from step 2 up to the top to complete the cladding

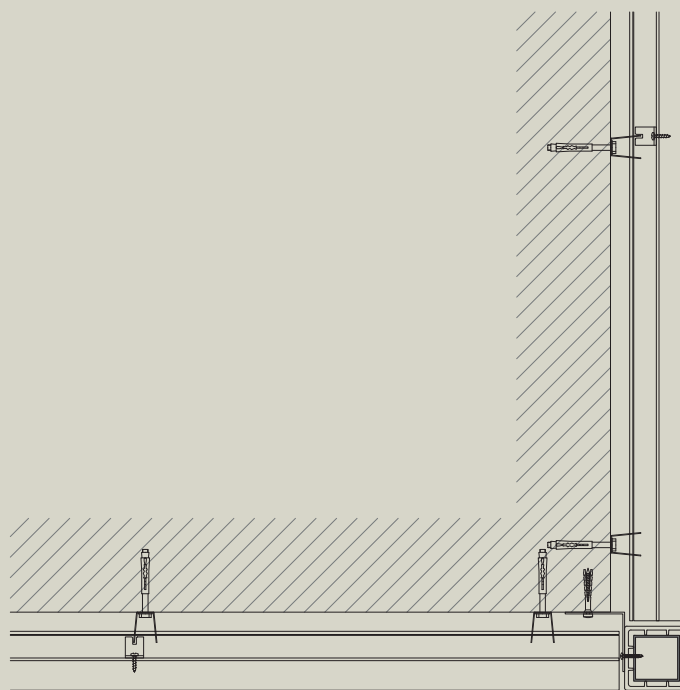
*Screws and wall plugs must be chosen according to the type of wall support

DETAILS FOR CORNERS






VERTICAL PLANKS





HORIZONTAL PLANKS



SYSTEM COMPONENTS

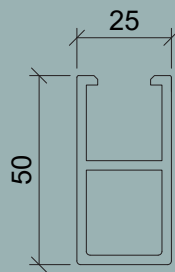
| | | | | | |
|--|---|-------------|---|---|--|
| Profile TH6050HD |  | 10.50 m/sqm | Substructure profile ZSSW-LG9637V |  | 5.00 m/sqm (stacked bond) 5.70 m/sqm (running bond) |
| Clip for fixed point ZCLW-KK2722 |  | 6 pz/sqm | Screw ZRHW-3.5X16-A2-7504N |  | 6 pz/sqm |
| Accessory closing piece piece THZ5004HD |  | 10.50 m/sqm | | | |

CORNERS COMPONENTS

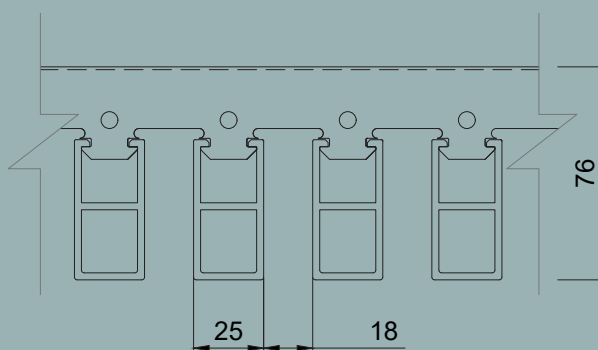
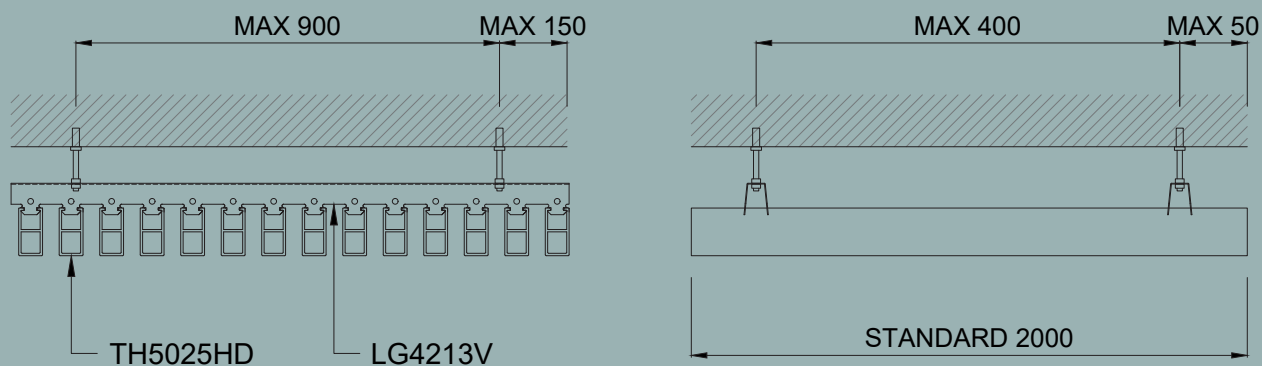
| | | | |
|--------------------------------|---|--------------------------|--|
| Profile JF7040-30X15 |  | Profile JF7070 |  |
|--------------------------------|---|--------------------------|--|

WARNING: the incidences of accessory material indicated refer to application according to the European standards, which provides for planks 2000 mm long and slats/substructure with maximum distance o.c up to 300 mm. For any installation that differs from the standard a cutting plan must be designed; it shall calculate precisely the number of points of intersection between the planks and the substructure, allowing the correct identification of the number of clips and screws required for each type of application.

TH5025HD - indoor ceiling/outdoor soffit



MOUNTING SYSTEM



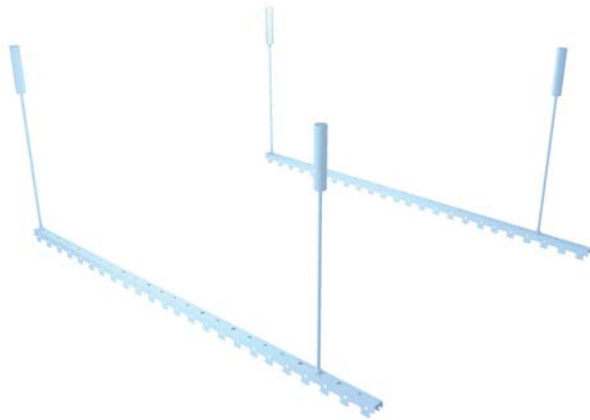
WEIGHT OF THE SYSTEM \approx 10.90 kg/sqm

*Measures in millimeters

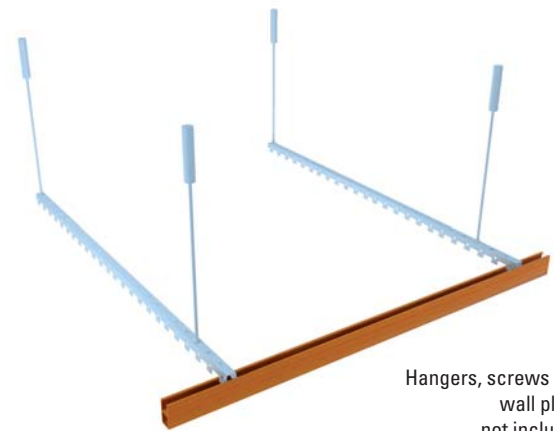
REV.00-2019

pag. 90

ASSEMBLY INSTRUCTIONS

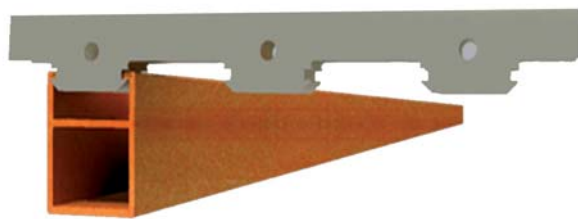


1. Fix the ZSSW-LG4213V bars directly to the ceiling using screws and wall plugs suitable for the type of support, or lower the structure with suitable hangers.

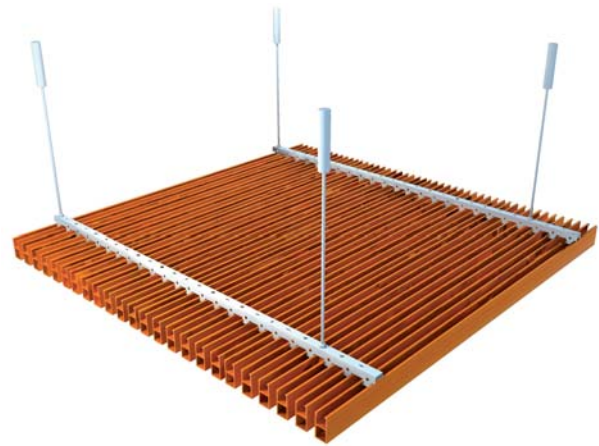


Hangers, screws and wall plugs not included

2. Install the first TH5025HD profile.





3. Attach the plank to the substructure.



4. Complete the work by repeating the steps described in 2 and 3.

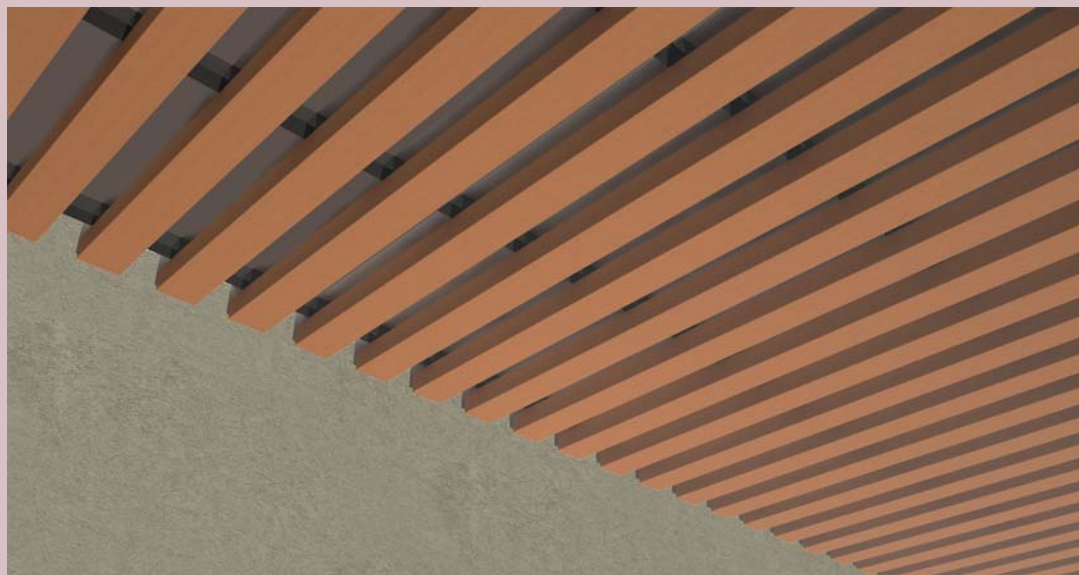
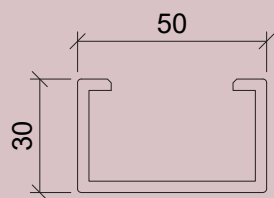
NOTE: for outdoor installation, the perimeter of the ceiling must be closed on all sides.

SYSTEM COMPONENTS

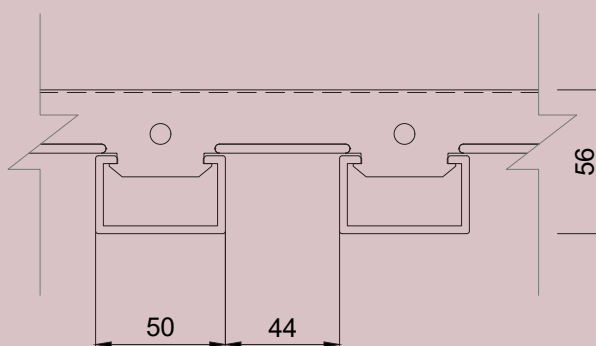
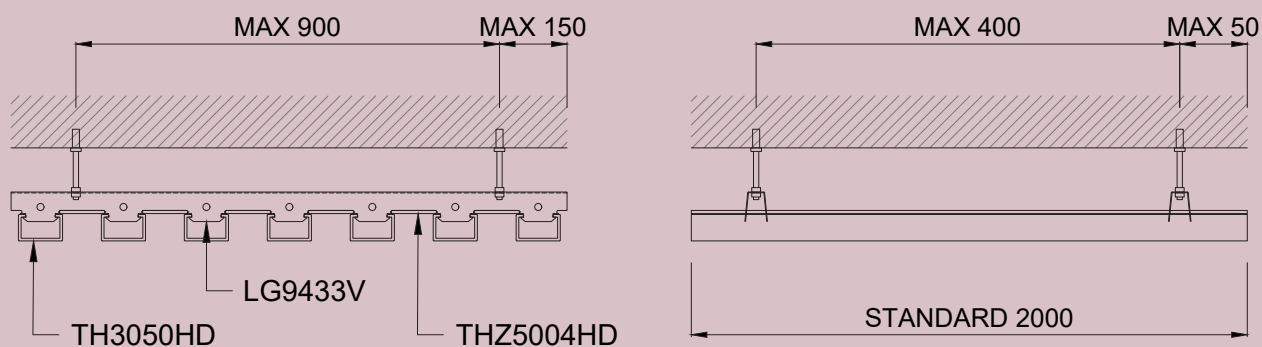
| | | | | | |
|----------------------------|---|-------------|---|---|--|
| Profile TH5025HD |  | 23.30 m/sqm | Substructure profile ZSSW-LG4213V |  | 3.90 m/sqm (stacked bond) 4.60 m/sqm (running bond) |
|----------------------------|---|-------------|---|---|--|

WARNING: the incidences of accessory material indicated refer to application according to the European standards, which provides for planks 2000 mm long and slats/substructure with maximum distance o.c. up to 400 mm. For any installation that differs from the standard a cutting plan must be designed; it shall calculate precisely the number of points of intersection between the planks and the substructure, allowing the correct identification of the number of clips and screws required for each type of application.

TH3050HD - indoor ceiling/outdoor soffit



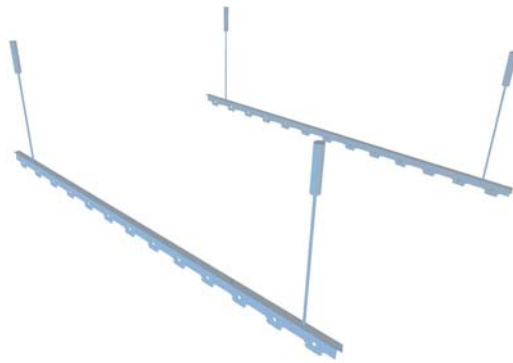
MOUNTING SYSTEM



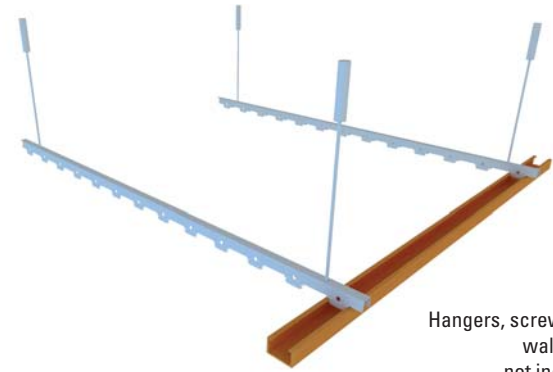
WEIGHT OF THE SYSTEM (without THZ5004HD) \approx 6.40 kg/sqm
 WEIGHT OF THE SYSTEM (with THZ5004HD) \approx 8.80 kg/sqm

*Measures in millimeters

ASSEMBLY INSTRUCTIONS

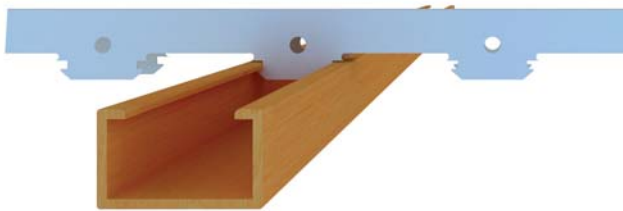


1. Fix the ZSSW-LG9433V bars directly to the ceiling using screws and wall plugs suitable for the type of support, or lower the structure with suitable hangers.



Hangers, screws and wall plugs not included

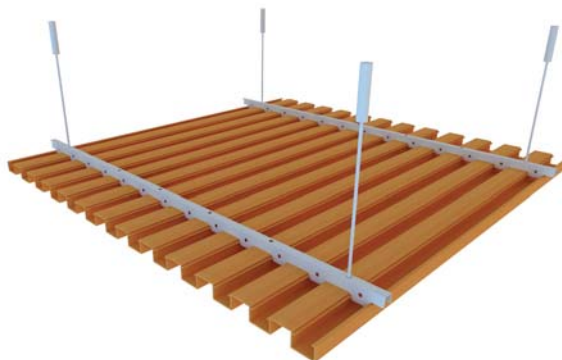
2. Install the first TH3050HD profile.



3. Attach the plank to the substructure.






4. Install, if provided, the accessory profile THZ5004HD.



5. Complete the work by repeating the steps described in 2, 3 and 4.

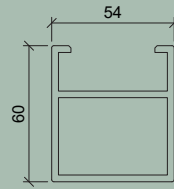
NOTE: for outdoor installation, the perimeter of the ceiling must be closed on all sides.

SYSTEM COMPONENTS

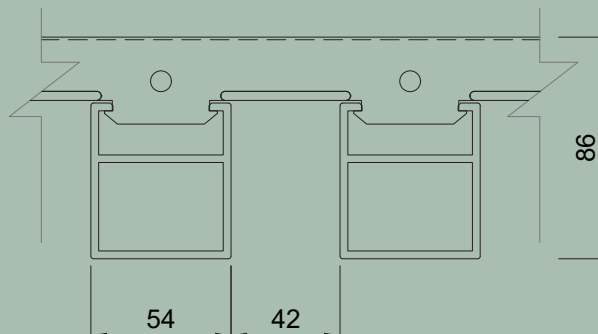
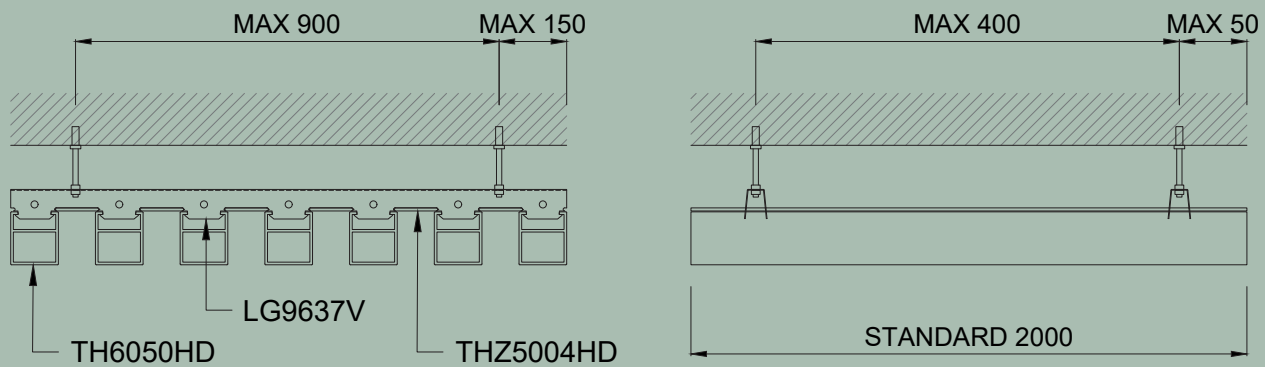
| | | | | | |
|---|---|---|---|---|--|
| Profile TH3050HD |  | 10.50 m/sqm | Substructure profile ZSSW-LG9433V |  | 3.90 m/sqm (stacked bond) 4.60 m/sqm (running bond) |
| Accessory closing piece THZ5004HD |  | 10.50 m/sqm optional element for closing the false ceiling | | | |

WARNING: the incidences of accessory material indicated refer to application according to the European standards, which provides for planks 2000 mm long and slats/substructure with maximum distance o.c. up to 400 mm. For any installation that differs from the standard a cutting plan must be designed; it shall calculate precisely the number of points of intersection between the planks and the substructure, allowing the correct identification of the number of clips and screws required for each type of application.

TH6050HD - indoor ceiling/outdoor soffit



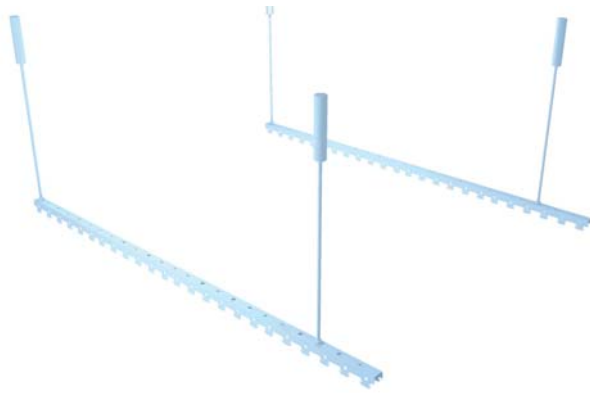
MOUNTING SYSTEM



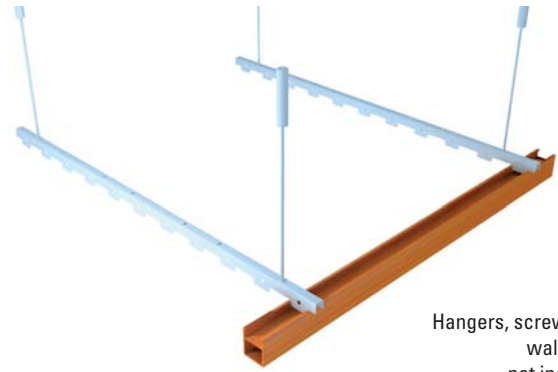
WEIGHT OF THE SYSTEM (without THZ5004HD) \approx 9.50 kg/sqm
 WEIGHT OF THE SYSTEM (with THZ5004HD) \approx 11.80 kg/sqm

*Measures in millimeters

ASSEMBLY INSTRUCTIONS



1. Fix the ZSSW-LG9637V bars directly to the ceiling using screws and wall plugs suitable for the type of support, or lower the structure with suitable hangers.



Hangers, screws and wall plugs not included

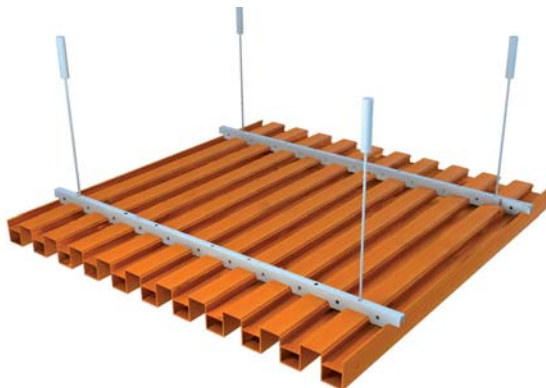
2. Install the first TH6050HD profile.



3. Attach the plank to the substructure.






4. Install, if provided, the accessory profile THZ5004HD.



5. Complete the work by repeating the steps described in 2, 3 and 4.

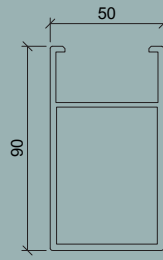
NOTE: for outdoor installation, the perimeter of the ceiling must be closed on all sides.

SYSTEM COMPONENTS

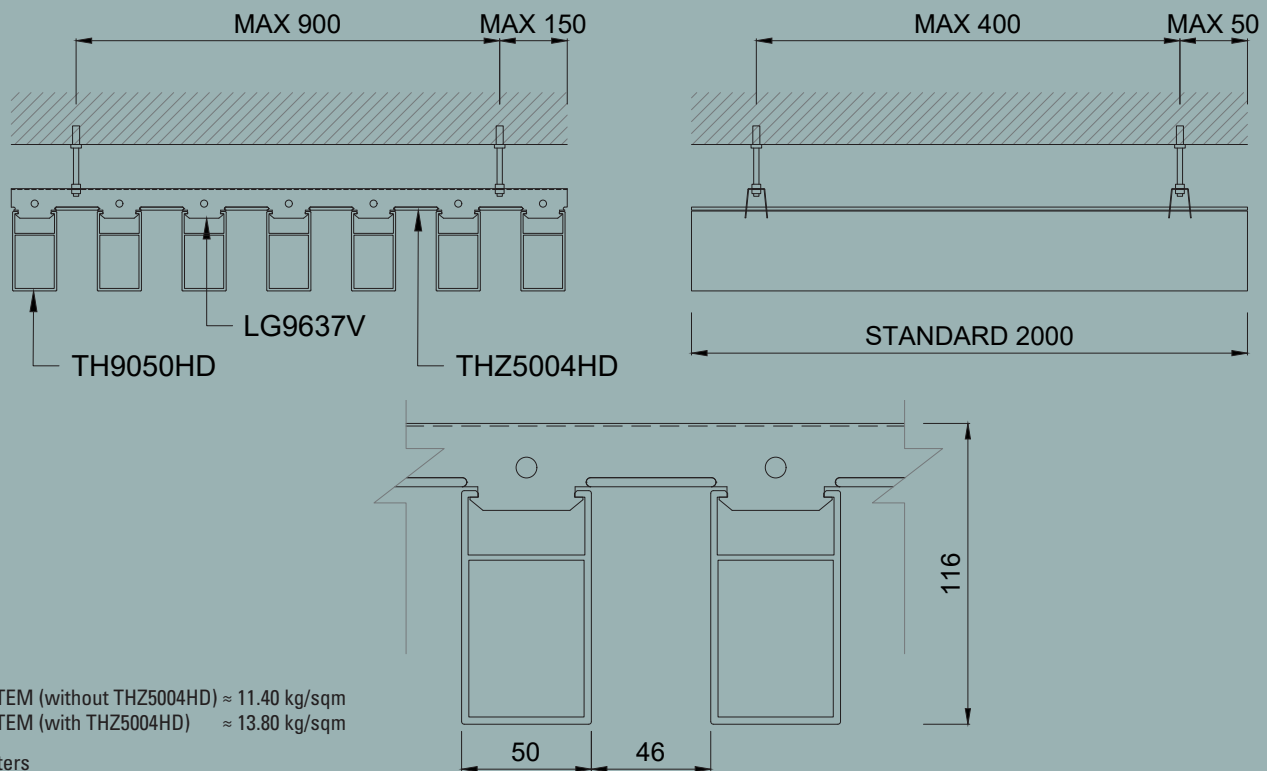
| | | | | | |
|---|---|---|---|---|--|
| Profile TH6050HD |  | 10.50 m/sqm | Substructure profile ZSSW-LG9637V |  | 3.90 m/sqm (stacked bond) 4.60 m/sqm (running bond) |
| Accessory closing piece THZ5004HD |  | 10.50 m/sqm optional element for closing the false ceiling | | | |

WARNING: the incidences of accessory material indicated refer to application according to the European standards, which provides for planks 2000 mm long and slats/substructure with maximum distance o.c. up to 400 mm. For any installation that differs from the standard a cutting plan must be designed; it shall calculate precisely the number of points of intersection between the planks and the substructure, allowing the correct identification of the number of clips and screws required for each type of application.

TH9050HD - indoor ceiling/outdoor soffit



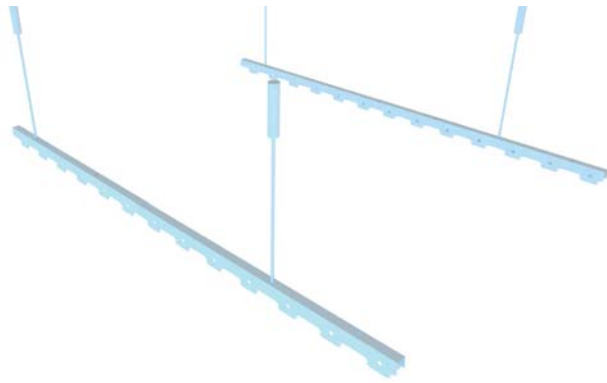
MOUNTING SYSTEM



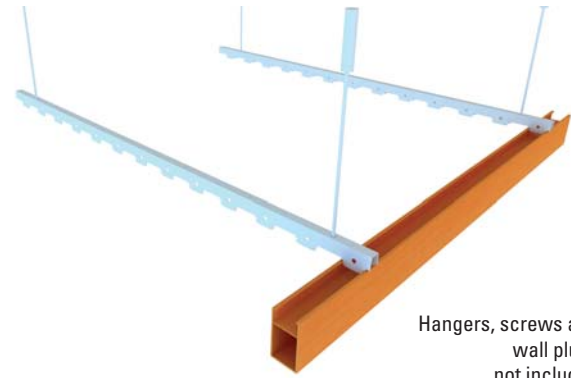
WEIGHT OF THE SYSTEM (without THZ5004HD) \approx 11.40 kg/sqm
 WEIGHT OF THE SYSTEM (with THZ5004HD) \approx 13.80 kg/sqm

*Measures in millimeters

ASSEMBLY INSTRUCTIONS



1. Fix the ZSSW-LG9637V bars directly to the ceiling using screws and wall plugs suitable for the type of support, or lower the structure with suitable hangers.



Hangers, screws and wall plugs not included

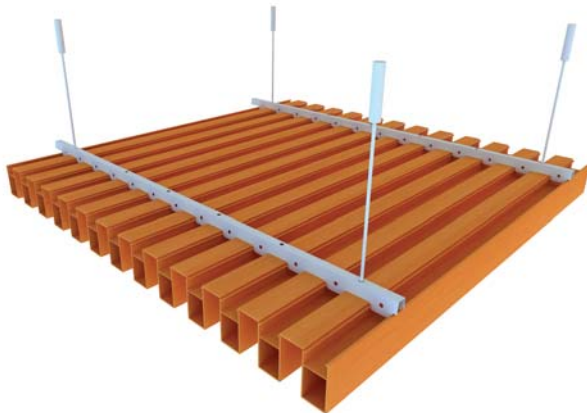
2. Install the first TH9050HD profile.



3. Attach the plank to the substructure.






4. Install, if provided, the accessory profile THZ5004HD.



5. Complete the work by repeating the steps described in 2, 3 and 4.

NOTE: for outdoor installation, the perimeter of the ceiling must be closed on all sides.

SYSTEM COMPONENTS

| | | | | | |
|---|---|---|---|---|--|
| Profile TH9050HD |  | 10.50 m/sqm | Substructure profile ZSSW-LG9637V |  | 3.90 m/sqm (stacked bond) 4.60 m/sqm (running bond) |
| Accessory closing piece THZ5004HD |  | 10.50 m/sqm optional element for closing the false ceiling | | | |

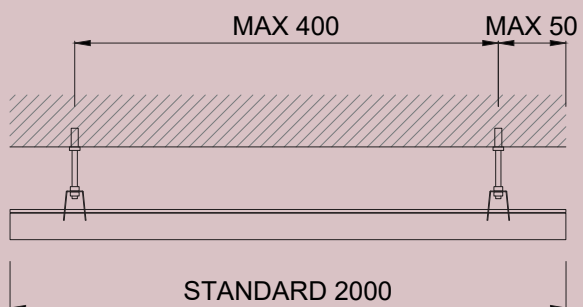
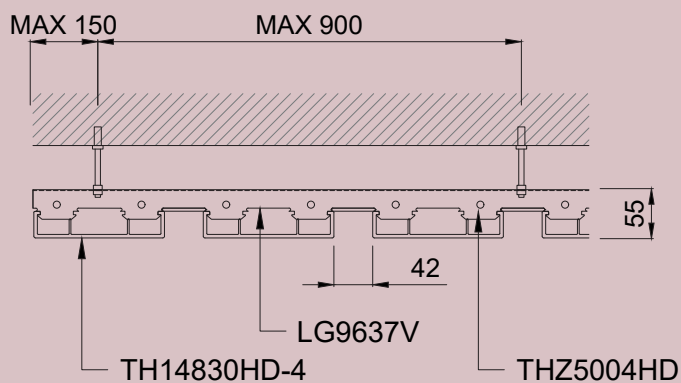
WARNING: the incidences of accessory material indicated refer to application according to the European standards, which provides for planks 2000 mm long and slats/substructure with maximum distance o.c. up to 400 mm. For any installation that differs from the standard a cutting plan must be designed; it shall calculate precisely the number of points of intersection between the planks and the substructure, allowing the correct identification of the number of clips and screws required for each type of application.

TH14830HD-4 - indoor ceiling/outdoor soffit

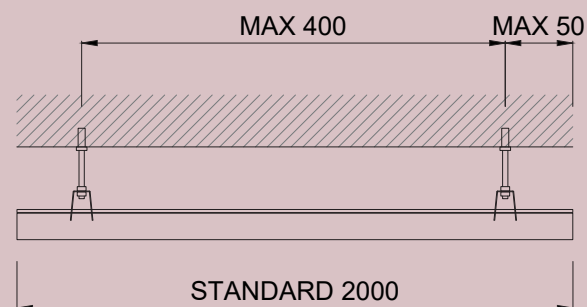
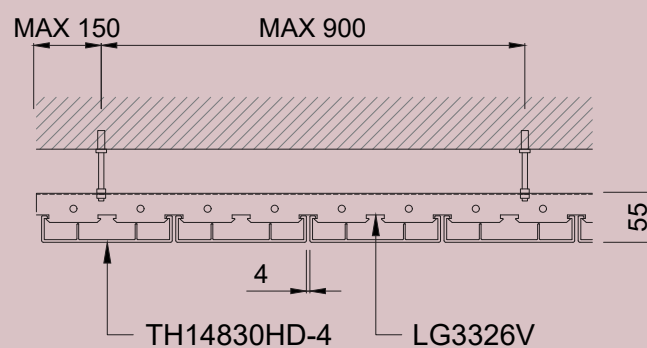


MOUNTING SYSTEM

JOINT 40 mm



JOINT 4 mm

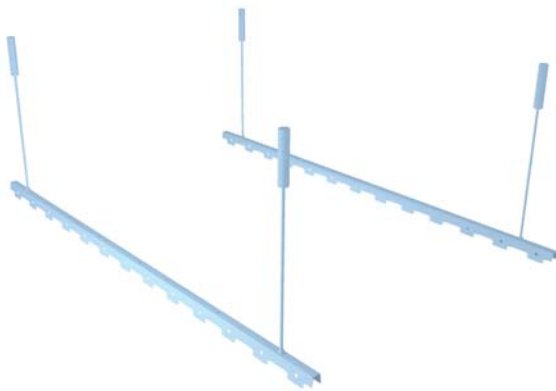


WEIGHT OF THE SYSTEM (without THZ5004HD) \approx 7.00 kg/sqm
 WEIGHT OF THE SYSTEM (with THZ5004HD) \approx 8.20 kg/sqm

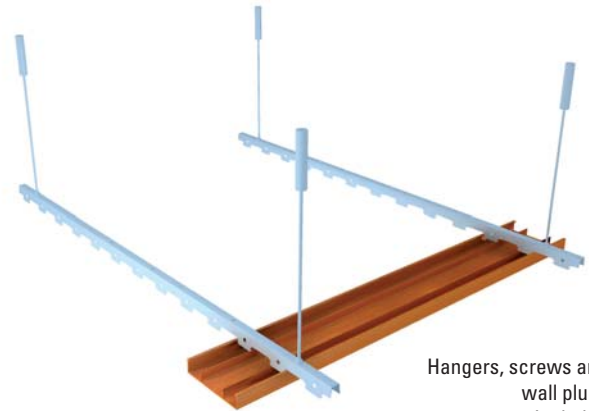
*Measures in millimeters

WEIGHT OF THE SYSTEM (joint 4 mm) \approx 8.00 kg/sqm

ASSEMBLY INSTRUCTIONS

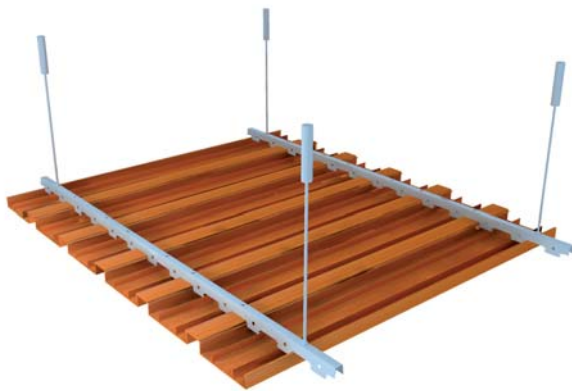


1. Fix the ZSSW-LG9637V or ZSSW-LG3326V bars directly to the ceiling using screws and wall plugs suitable for the type of support, or lower the structure with suitable hangers.



Hangers, screws and wall plugs not included

2. Install the first TH14830HD-4 profile, fitting the planks to the substructure, alternating them with the THZ5004HD profiles if applicable.



3. Complete the work by repeating the steps described in 2.

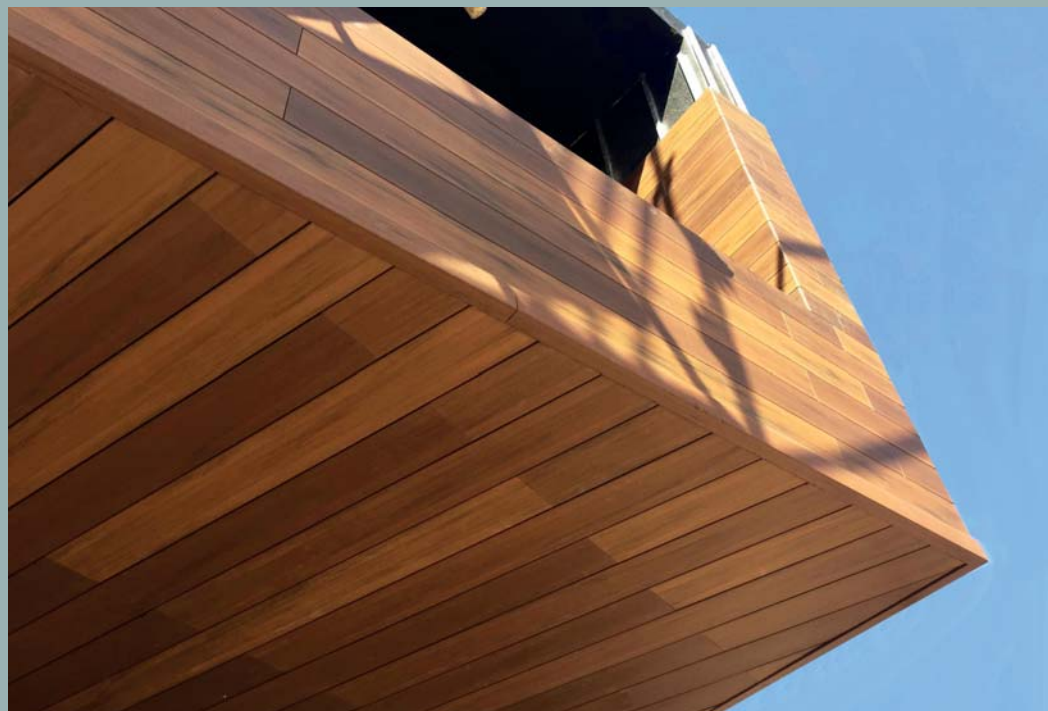
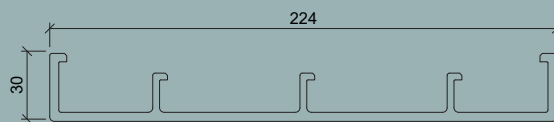
NOTE: for outdoor installation, the perimeter of the ceiling must be closed on all sides.

SYSTEM COMPONENTS

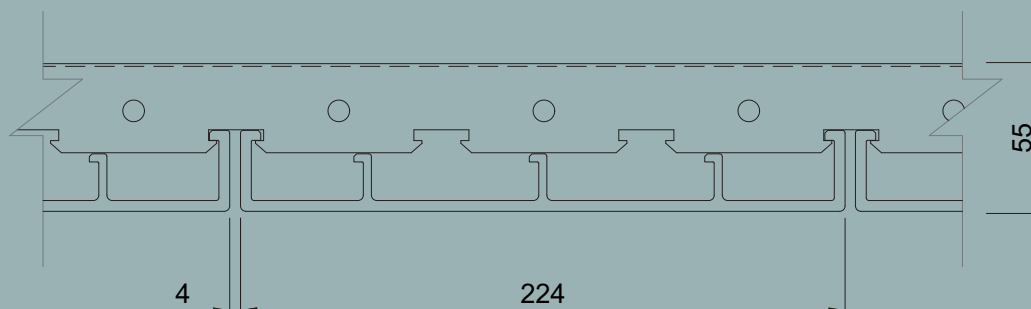
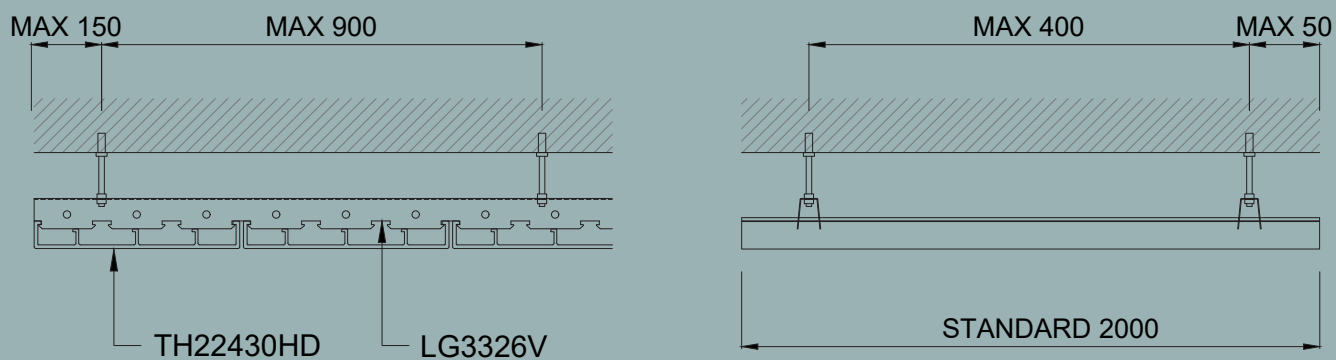
| | | | | | |
|--|--|--|---|--|---|
| Substructure profile ZSSW-LG9637V joint 40 mm | | 3.90 m/sqm (stacked bond) 4.60 m/sqm (running bond) | Profile TH14830HD-4 | | 5.40 m/sqm (joint 40 mm) 6.60 m/sqm (joint 4 mm) |
| Substructure profile ZSSW-LG3326V joint 4 mm | | 3.90 m/sqm (stacked bond) 4.60 m/sqm (running bond) | Accessory closing piece THZ5004HD | | 5.40 m/sqm (joint 40 mm) |

WARNING: the incidences of accessory material indicated refer to application according to the European standards, which provides for planks 2000 mm long and slats/substructure with maximum distance o.c. up to 400 mm. For any installation that differs from the standard a cutting plan must be designed; it shall calculate precisely the number of points of intersection between the planks and the substructure, allowing the correct identification of the number of clips and screws required for each type of application.

TH22430HD - indoor ceiling/outdoor soffit



MOUNTING SYSTEM



WEIGHT OF THE SYSTEM \approx 7.60 kg/sqm

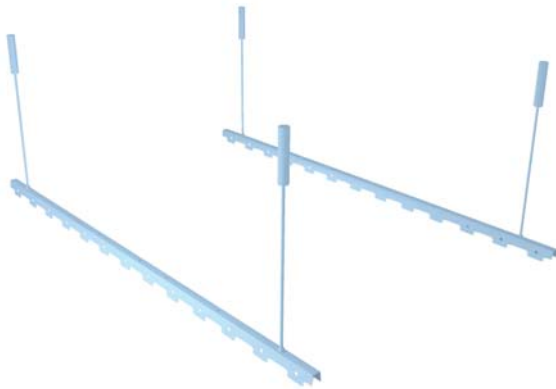
*Measures in millimeters

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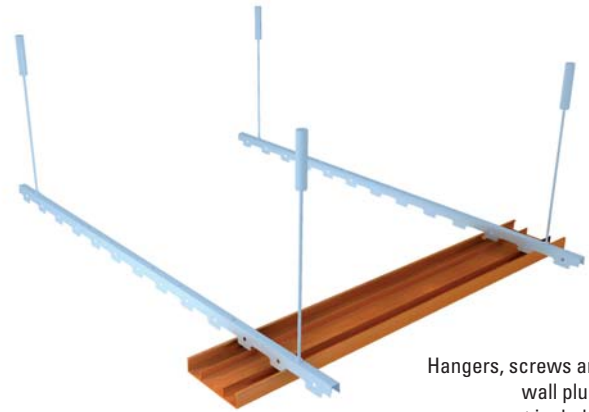
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WOODN

ASSEMBLY INSTRUCTIONS

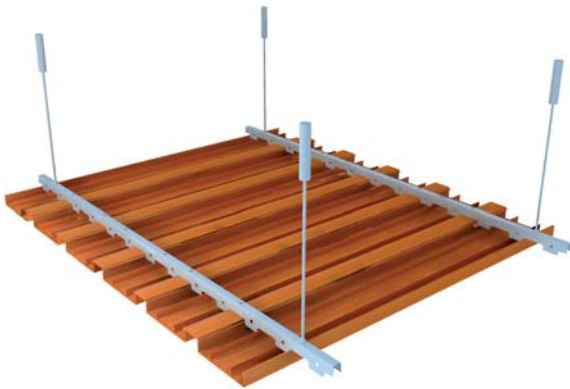


1. Fix the ZSSW-LG3326V bars directly to the ceiling using screws and wall plugs suitable for the type of support, or lower the structure with suitable hangers.



2. Install the first TH22430HD profile.



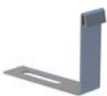
Hangers, screws and wall plugs not included



3. Complete the work by repeating the steps described in 2.

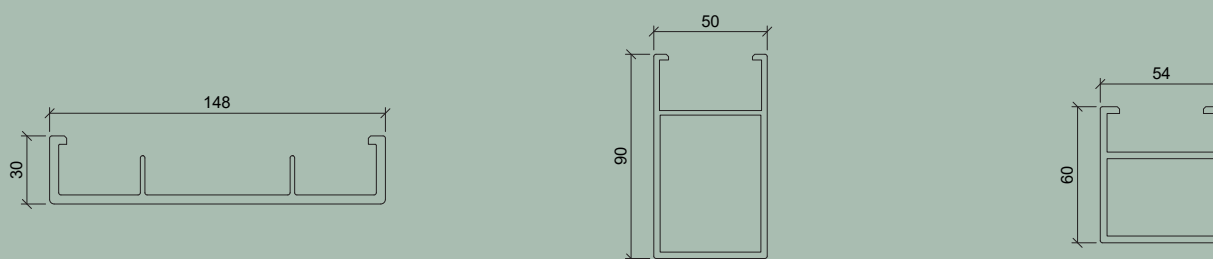
NOTE: for outdoor installation, the perimeter of the ceiling must be closed on all sides.

SYSTEM COMPONENTS

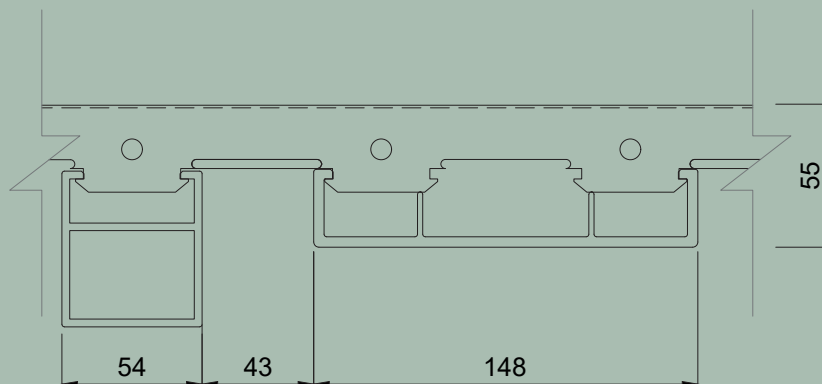
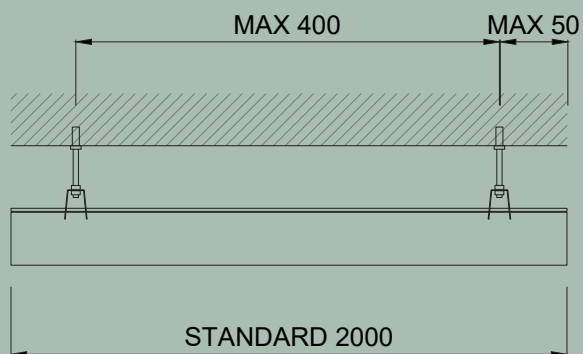
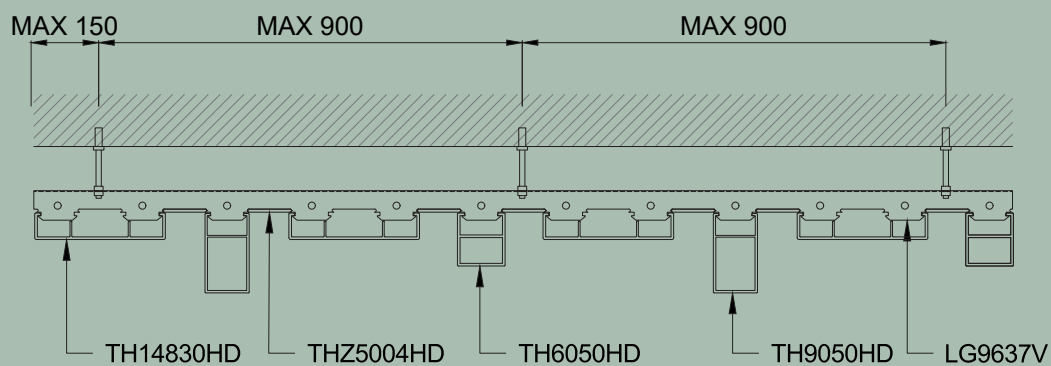
| | | | | | |
|---|---|------------------------|---|---|--|
| Profile TH22430HD |  | 4.40 m/sqm | Substructure profile ZSSW-LG3326V |  | 3.90 m/sqm (stacked bond) 4.60 m/sqm (running bond) |
| Fixing clip for cut profile ZCLW-KK5743 |  | available upon request | | | |

WARNING: the incidences of accessory material indicated refer to application according to the European standards, which provides for planks 2000 mm long and slats/substructure with maximum distance o.c. up to 400 mm. For any installation that differs from the standard a cutting plan must be designed; it shall calculate precisely the number of points of intersection between the planks and the substructure, allowing the correct identification of the number of clips and screws required for each type of application.

3D (TH14830HD-4+TH9050HD+TH6050HD) - ceiling/soffit



MOUNTING SYSTEM



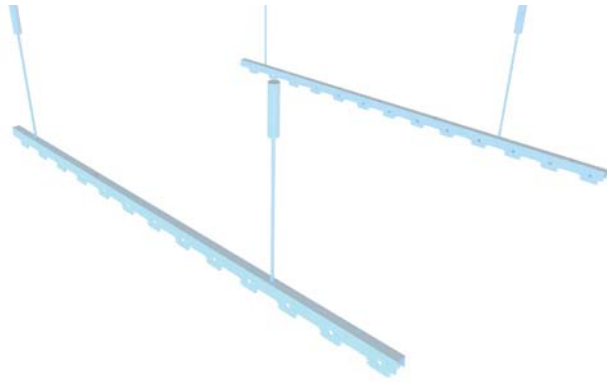
WEIGHT OF THE SYSTEM ≈ 8.40 kg/sqm

*Measures in millimeters

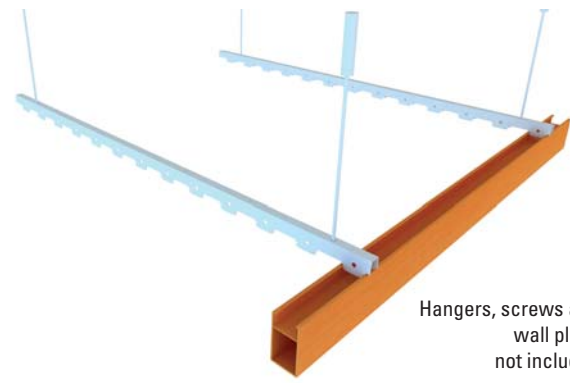
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ASSEMBLY INSTRUCTIONS

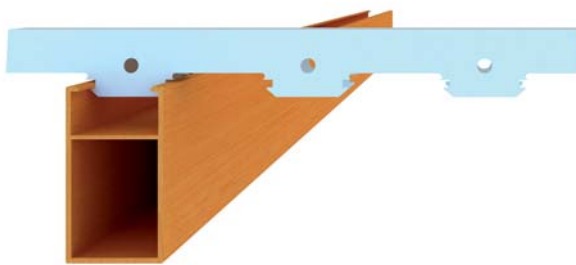


1. Fix the ZSSW-LG9637V bars directly to the ceiling using screws and wall plugs suitable for the type of support, or lower the structure with suitable hangers.

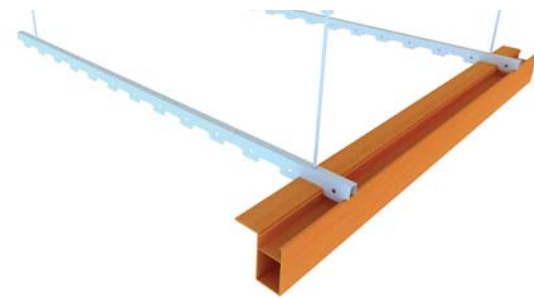


Hangers, screws and wall plugs not included

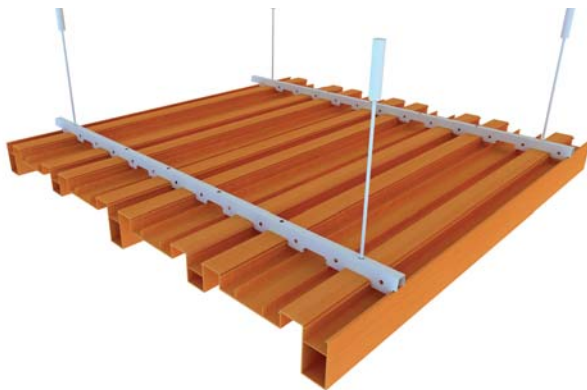
2. Install the first profile.



3. Attach the plank to the substructure.





4. Install, if provided, the accessory profile THZ5004HD.



5. Complete the work by repeating the steps described in 2, 3 and 4.

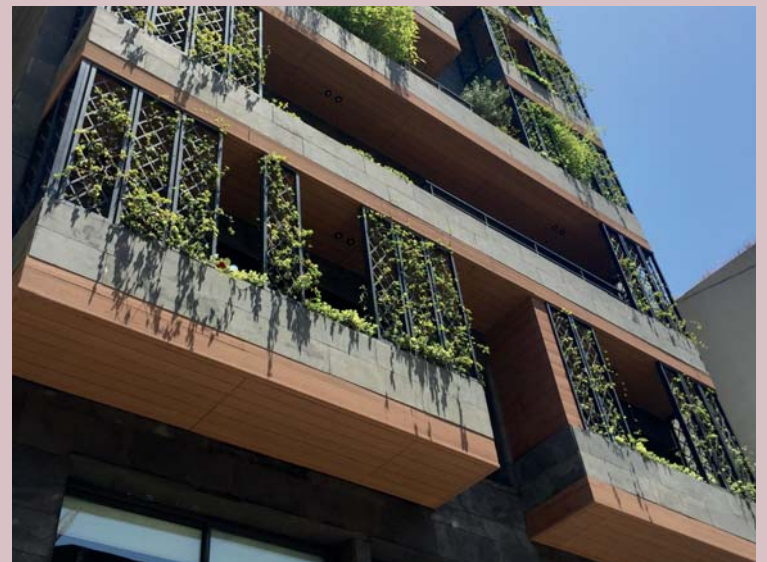
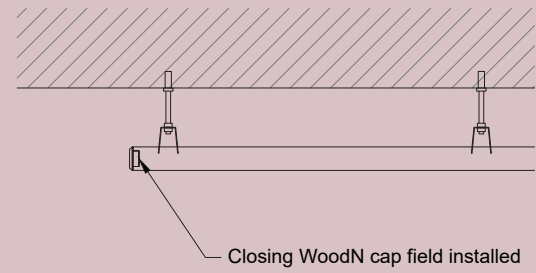
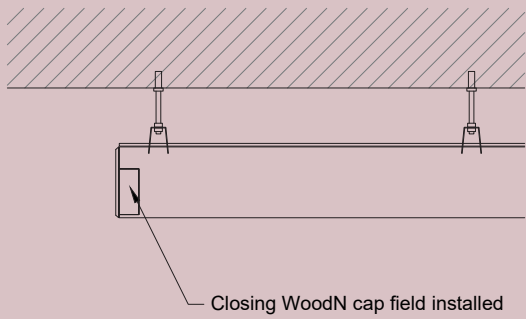
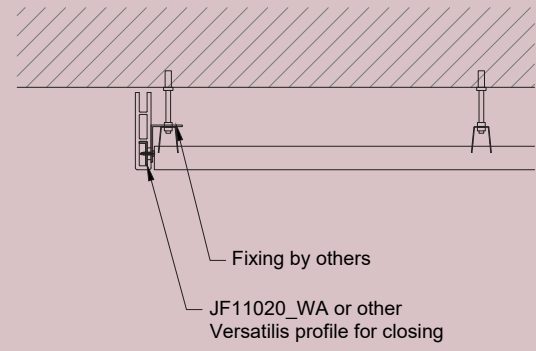
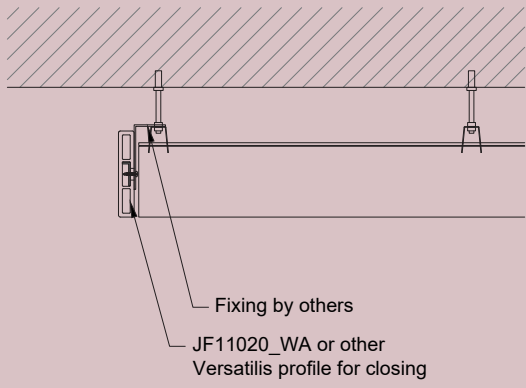
NOTE: for outdoor installation, the perimeter of the ceiling must be closed on all sides.

SYSTEM COMPONENTS

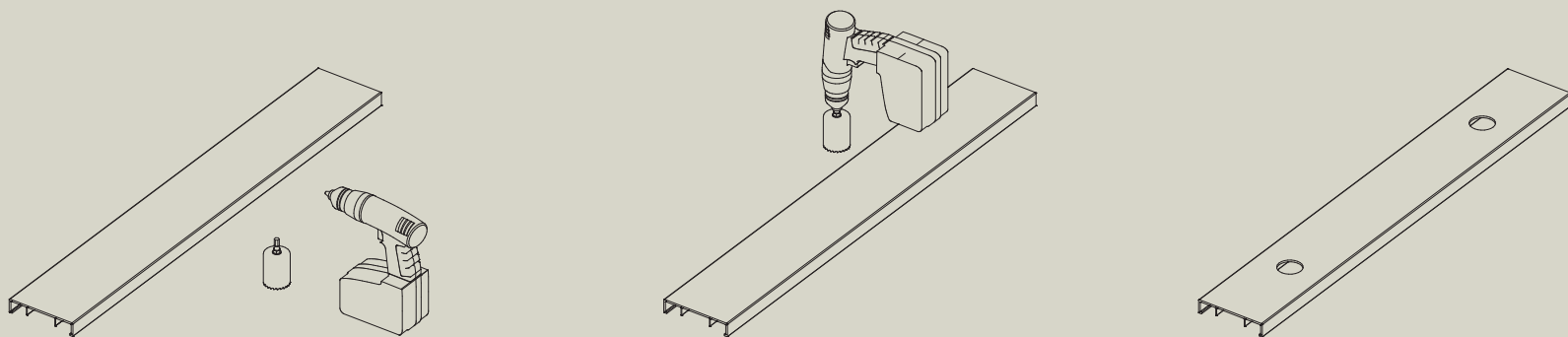
| | | | | | |
|---|---|--|---|---|--|
| <p>Substructure profile ZSSW-LG9637V</p> |  | <p>3.90 m/sqm (stacked bond) 5.20 m/sqm (running bond)</p> | <p>Accessory closing piece THZ5004HD</p> |  | <p>5.30 m/sqm optional element for closing the false ceiling</p> |
|---|---|--|---|---|--|

WARNING: the incidences of accessory material indicated refer to application according to the European standards, which provides for planks 2000 mm long and slats/substructure with maximum distance o.c. up to 400 mm. For any installation that differs from the standard a cutting plan must be designed; it shall calculate precisely the number of points of intersection between the planks and the substructure, allowing the correct identification of the number of clips and screws required for each type of application.

Solutions for the ceiling/soffit closure



Drill to position lights and other recessed elements



WOODN ORNANS



DISCLAIMER - GENERAL NOTES

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MATERIAL'S FEATURES

Mechanical properties

| | | |
|---|---|---|
| Elasticity (bending) | UNI EN ISO 178 | @23 °C @65 °C |
| Yield strenght (flexural) | UNI EN ISO 178 | @23 °C @65 °C |
| Water absorbption and humidity | ASTM D1037 | absorption 0,07% |
| Dynamic- Mechanical analysis of transition temperature | ASTM D4065/95 | 78.8 °C |
| Linear thermal expansion coefficient (from -10 °C to 70 °C) | TMA ASTM E 831/2006 | longitudinal 46,9 x10 ⁻⁶ m/(m°C) trasversal 48 x10 ⁻⁶ m/(m°C) |
| Tensile strenght and tensile strenght after accelerated weathering (exposure to xenon lights) | ASTM D638-10 (tensile test) ASTM G155-050 | difference after 2 months of exposure ~5,21% difference after 3 months of exposure ~6,9% (meet the requirements to comply with Miami Dade and Florida Building Code 2014) |

Reaction to fire

| | | |
|---|--------------------------|--|
| Flammability | UL94 AS 3959-2009 | V-0 Class BAL-29 |
| Flame spread index Smoke developed index | ASTM E84 | Class A |
| Ignition temperature | ASTM D1929 | 476 °C |
| Average critical radiant flux of floor | AS ISO 9239 ASTM E648 | ≥ 11 kW/m ² > 1,03 W/cm ² (class I as per NFPA 101) |
| Ignitability, flame propagation, heat release and smoke release | AS/NZS 1530.3:1999 | Ignitability (0-20) = 8 Spread of Flame (0-10) = 0 Heat Evolved (0-10) = 0 Smoke Developed (0-10) = 7 |

Chemical and biological features

| | | |
|--|------------------------------|--------------------------------|
| Evaluation of the action of microorganisms (scale from 0 to 5) | EN ISO 846:97 | Test result: 1 |
| Heavy metal content (Pb, Ge, Cr, Hg) | GB18584-2001 GB18580-2001 | < 0,5 ppm |
| Formaldehyde emission | EN 717-2:1994 | 0,1 mg HCHO/(m ² h) |


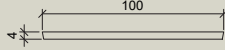

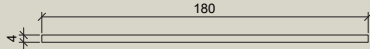

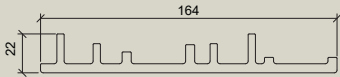
Surface characteristics (only for Aeternus)

| | | |
|--|---------------------|--------------------|
| Surface resistance to slippage while wearing footwear (brushed finish) | DIN 51130 (06/2004) | R12 |
| Surface resistance to slippage while wearing barefoot (brushed finish) | DIN 51097 (1992) | A+B+C |
| Flooring slip resistance (Pendulum test) | AS 4663-2013 | Dry: 98 Wet: 70 |

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


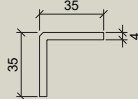


DIMENSIONS

| profile | cross-section | nominal dimensions [mm] | weight of the plank [kg] | number of planks per m ² |
|---|--|--|--------------------------|-------------------------------------|
| WIT10004R  |  | section 100 x 4 standard length 2000 | ≈ 0.80 | 5 |
| WIT18004R  |  | section 180 x 4 standard length 2000 | ≈ 1.57 | 2.78 |
| Q16422  |  | section 164 x 22 standard length 2000 | ≈ 2.45 | 3.10 |

The Woodn Ormans cladding is brushed on the backside to allow a proper fixing with the adhesive.

CORNERS COMPONENTS

| | | | | |
|-----------------------------|---|---|---|------------------------|
| Profile WITK3535A |  |  | section 35 x 35 standard length 2000 | inner and outer corner |
|-----------------------------|---|---|---|------------------------|

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.
 Refer to Woodn Technical Department or on website www.woodn.com for cad blocks and manufacturing tolerances.

INSTALLATION AND MAINTENANCE INSTRUCTIONS

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

- Store the boxes 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 0 °C.
- Open the boxes and immediately remove the polyethylene packaging from the profiles.
- 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 Woodn™'s 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 Woodn 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 immediately after installation. Immediately remove major stains such as paint, concrete or tar residues.
- For cleaning and maintenance instructions refer to page 117. The WoodN warranty will be rendered null and void in the event of incorrect or improper handling, cleaning and maintenance.

PREPARATION OF THE BASE

Check the stability of the support on which the installation will be carried out: a surface subject to expansion and movements of any kind can compromise the success of the installation. For an easy, fast and safe installation of Woodn™ Ormans, a properly levelled substrate is required. Any irregularities of the floor and wall will affect the surface of the cladding.

Before applying the adhesive to the substrate, check the following:

- cleanliness (namely: the absence of oily or greasy substances in general, which may jeopardise the adhesion of the adhesive to the substrate; absence of debris, which may seriously compromise the aesthetic result of the installation);
- absence of surface and rising moisture.

ADHESIVE

Installation may be carried out correctly using different types of adhesive among those available on the market. We recommend using the following products depending on the substrate on which you perform the application.

WoodN Industries does not take responsibility for the bonding and laying methods.

| products | cured and consolidated plaster* | dusty plaster* | plaster* | plasterboard* | cured and consolidated screed | dusty screed* | plastics** | metals** | ceramics** | cured and consolidated screed*** |
|--|---------------------------------|----------------|----------|---------------|-------------------------------|---------------|------------|----------|------------|----------------------------------|
| MAPEI KERALASTIC two-component polyurethane | | | | | • | | • | • | • | • |
| MAPEI KERALASTIC T two-component polyurethane | • | • | • | • | • | • | • | • | • | • |
| SLC-KERAKOLL SLCPU31 PRIMER polyurethane single-component solvent (to use before the adhesive) | | • | | | | • | | | | |
| SLC-KERAKOLL SLCEP21 PRIMER epoxy single-component (to use before the adhesive) | | • | | | | • | | | | |
| SLC-KERAKOLL L34 two-component epoxy-polyurethane | • | • | • | • | • | • | | | | |
| TOVER PRIMERFIX (to use before the adhesive) | | • | | | | • | | | | |
| TOVER TOVCOL PU 2C two-component polyurethane | • | • | • | • | • | • | • | • | • | • |
| TOVER TOVCOL T91 two-component epoxy-polyurethane | | | | | • | • | • | • | • | • |
| TOVER TOVCOL T91-V two-component epoxy-polyurethane | • | • | • | • | • | • | • | • | • | • |

* Absorbent floors (indoors) ** Non-absorbent floors *** Outdoor applications

The amount of adhesive to be prepared depends on the experience and skill of the installer, on the “open time” of the adhesive (catalysis rate) and on the ambient temperature (heat accelerates the catalysis while a low temperature can slow down the process): we recommend carefully reading the instructions for use.

To apply the adhesive properly, use a trowel with triangular teeth (2 mm is ideal). Then prepare a uniform base of adhesive on an appropriate portion of the surface you need to cover (size varies depending on the dexterity of the installer).

It may happen that for every 20 mq to 30 mq of laying, the teeth of the trowel become worn to the point of not allowing for an ideal application. In this case, we recommend promptly replacing the trowel.

WALL APPLICATION

A smooth wall free from surface irregularities is required for the laying stage, as described above. For application on a wall, we recommend proceeding from the bottom up. It is important to gradually check the correct positioning of the planks so you can correct any irregularities before the adhesive catalyses. Apply an even layer of adhesive on the portion of surface you need to cover and then apply the planks; until you complete the cladding. To prevent downwards slippage of the planks, fix them using pins or small nails that can later be removed once the adhesive catalyses.

For outdoor applications, the surface must be made with a hydraulic binder, have high mechanical strength and be compact and cured at the time of installation. We also recommend using planks less than or equal to 500 mm length.

FLOOR APPLICATION

The Woodn™ Ormans planks can also be applied on the floor: for example, in bathrooms or rooms of private homes, shop windows and in general areas with foot traffic (equivalent to class 21 according to EN 685:2007). Installation on the floor must be carried out without stepping on freshly-laid planks, therefore it must be done by moving backwards across the room towards the exit. Do not walk on the floor for at least 24 hours after completing the installation.

Once the installation is done, to limit surface abrasions and scratches on the planks we recommend creating a 'buffer zone', using loose-laid mats according to standard EN14041. Please make sure that the mechanical properties of the product (see p. 109) are compatible with the intended use of the floored premises.

TIPS FOR LAYING

The plank should be laid with a movement perpendicular to the application surface, make sure you do not slide it parallel to the substrate. Every 3 mq to 4 mq laid, apply pressure on the widest possible surface to make the planks adhere evenly to the substrate, using square trowels with a rubber base. For this step, we do not recommend using your fingers or the palm of your hand. Any excess adhesive should be eliminated as you go, to keep the adhesive from adhering to the visible surfaces. The adhesive may harden long after the laying itself (for instance, when the laying is done in low temperature environments). In these cases we recommend passing the square trowel a second time, if necessary.

We recommend until the hardening is completed, using adhesive tape from a body shop (made of paper and with low adhesiveness) to hold the planks together, in order to avoid cracks forming between them.

ROUTINE MAINTENANCE

The material is water resistant and can be washed with traditional liquids such as water, neutral soap, alcohol, etc. Carefully avoid using solvents (especially acetone) that could damage the surface of the planks. For example, the cladding can be washed with neutral soap and/or a capful of ammonia per each 5 L bucket of water. To remove dust, we recommended avoiding the use of abrasive tools, such as sorghum brooms. We recommend checking the level of wear of the brushes in your vacuum cleaner, in order to avoid scratches.



For special applications please contact our Woodn Industries' technical department. As part of a normal technological evolution, there may be changes in colour/appearance of the product; we recommend requesting recently-made samples when you order. We will not accept claims involving differences in colour or appearance outside commercial tolerances, if choices have been made based on old samples. We reserve the right to terminate, update, make technical changes to improve the quality and appearance of the material, without prior notice.

HANDLING, CLEANING AND MAINTENANCE NOTES



DISCLAIMER - GENERAL NOTES

The information provided by WoodN Industries in this document are solely indicative, they are based on the present state of knowledge and must be considered only as a description of our products and their possible application. Such information must not be interpreted as a guarantee of specific features, performances or warranties of the product. Material's colors and finishes represented in this document are the result of printing techniques so they may slightly differ from the original colors. Original samples are available upon request and constitute only a general indication of the dimensions and the aesthetic appearance of Woodn™ profiles. WoodN Industries may change the information included in this document at any time and without further notice. WoodN Industries does not warrant the accuracy and completeness of the information in this document and furthermore their suitability for the purpose which it is consulted for by the other parties. WoodN's customers or third parties must ascertain they have the most recent version of this document, available at www.woodn.com. It is advised that customers and third parties have a professional adviser to inform them about the suitability of the products for all desired applications and about applicable laws and regulations. WoodN Industries reserves the right to modify products and concerning features without prior notice. WoodN Industries is not liable for any damage arising from, or related to, the use of this document. Woodn™ material does not have structural characteristics and therefore WoodN Industries declines all responsibilities for improper use of the material. No sections of this publication can be reproduced, stored in database, or transmitted in any form or by any other mean without the explicit approval of WoodN Industries. For more information please contact WoodN Industries.

HANDLING, CLEANING AND MAINTENANCE

This document is intended to provide general recommendations only.

HANDLING AND STORAGE

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

- Store the boxes 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.
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- The accumulation of electrostatic charges is a natural phenomenon commonly found in plastic materials, and under exceptional environmental conditions this may also occur in Woodn™'s 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 Woodn 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 immediately after installation. Immediately remove major stains such as paint, concrete or tar residues.

CLEANING AND MAINTENANCE

Although WoodN requires minimum maintenance, as all the exterior building materials it's recommended to clean the material upon completion of installation, then regularly under normal conditions of use. As ordinary maintenance it is advised to carry out periodical cleaning, as needed, **using pressure water and, possibly, neutral detergent** (upon completion, it is advised to remove excess water). The frequency may vary depending on the area, type of application and the care taken with processing and assembly. The appearance and the consequent effect of dirt on WoodN material vary depending on the cause.

For examples, rain or moisture drops flowing on a surface may concentrate a more visible deposit of dust and dirt. Such residues shall be quickly removed, as they may cause non-homogeneous discoloration of the material.

In outdoor applications, brushed products may present surface rings after being exposed to rainfall and humidity.

This phenomenon, caused by a rising on the surface of tannin, a natural component of any wood fibre, is to be considered normal and will disappear after a few washes with water or after rain. In case of staining, it is advised to remove the stain as soon as possible using water and a neutral detergent (absolutely avoid using abrasive products or solvents, especially acetone).

Do not use cleaning agents with abrasive or polishing components. Only use sponges, nylon brushes or cloths. If there is a more serious cleaning issue, it is important to identify the problem before trying to solve it.

After cleaning, rinse very well the residues of any detergent used; the residues may cause an uneven discoloration of the surface.

WoodN's warranty do not apply in case of improper or incorrect cleaning or handling.

Dirt cleaning

Dirt can easily be removed with pressure water. Apply neutral detergent and brush the interested area using a soft nylon brush (or cloth). Rinse plentifully with water paying attention to remove all the residues of detergent from the surface.

COLOR'S ACCELERATED AGING TEST



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ACCELERATED AGING RESISTANCE TEST

COLOUR STABILITY

Colour stability has been tested in compliance with accelerated weathering tests (UNI EN ISO 4892-2:2009 and UNI EN ISO 2105-A02:1996); the result of the test is expressed by assigning a numerical value to colour variation according to the international greyscale, which is a useful method to measure colors differences.

PURPOSE OF THE TEST

Resistance to accelerated aging on Woodn profiles according to UNI norms EN ISO 4892-2:2009 and EN 20105-A02:1996.

TEST METHOD

The equipment used is fitted with a 6500 watt water-cooled Xenon lamp.

The equipment is set according to the following parameters:

- exposure to continuous light
- light source on the samples: 0.50 W/m² at 340 nm, corresponding to 580 W/m²
- total power exposed to the sample: 2.50 GJ/m² and 7.5 GJ/m²
- exposure program: 102 min. of light exposure and 18 min. of light exposure + sprayed deionized water.

| sample | color | Greyscale degree* after 3600h of exposure against original samples | Greyscale degree** after 3600h of exposure compared to samples aged for 1200 h |
|--------|-------------------------|--|--|
| 1 | Carrara White** | 3 | 4/5 |
| 2 | Lagorai** | 3 | 4/5 |
| 5 | Marostica | 3/4 | 4/5 |
| 6 | Marrakech | 3/4 | 4/5 |
| 9 | Cuba** | 3/4 | 4/5 |
| 10 | Bogota Coffee** | 4 | 4 |
| 12 | Segovia | 3 | 4/5 |
| 13 | Myanmar** | 4 | 4 |
| 14 | Silverstone Grey** | 4 | 4/5 |
| 15 | Mediterraneo Light Blue | 2/3 | 4/5 |
| 16 | Maranello Red | 2/3 | 4/5 |
| 18 | Lanzarote | 3/4 | 4/5 |
| 26 | Lido Light Blue | 3 | 4/5 |
| 27 | Lavaredo Grey | 2/3 | 4/5 |
| 28 | London Grey** | 3 | 4/5 |
| 33 | Sahara Beige | 3/4 | 5 |
| 34 | Bamboo Green** | 3/4 | 4/5 |

(*) The international greyscale goes from Grade 1 (maximum colour difference) to Grade 5 (minimum colour difference).

(**) Colour recommended for outdoor applications.

Hereunder are the photos of samples used for the test.

| sample | color | Original color | Aged color (1200 hours) | Aged color (3600 hours) |
|--------|------------------|---|---|---|
| 2 | Lagorai |  |  |  |
| 9 | Cuba |  |  |  |
| 14 | Silverstone Grey |  |  |  |

The above photos are an approximate indication of the change in the shade of colour of the product after being exposed to atmospheric agents. Effective ageing of the product depends on its exposure to atmospheric agents, which, in turn, depends on multiple factors (for example, the geographic position and orientation of the application). Woodn Industries shall not be held responsible for any difference between the actual ageing and what is reported above.





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