[Woodn modulatus]

Technical brochure

WOODN™
SPECIES UNICA

[*Colours*]

01 *Bianco Carrara*

02 *Lagorai**

05 *Marostica*

09 *Cuba**

10 *Caffè Bogotà*

13 *Myanmar**

14 *Grigio Silverstone*

26 *Azzurro Lido*

28 *Grigio Londra*

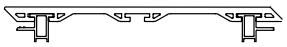
34 *Verde Bamboo*

* colours available in stock

The images shown in this catalog are only indicative of the grain and colour of the product. As the product contains natural fibers, there may be slight variations in colour/appearance depending on the production lot. The sending and/or delivery of any samples constitute only general indications of the dimensions and the aesthetic appearance of Woodn products. For more precise and detailed information about their characteristics, please refer solely to the technical information by visiting our website www.woodn.com. Woodn Industries reserves the right to terminate, update, make technical changes to improve the quality and appearance of the material, without prior notice. Woodn assumes no responsibility for product applications that are not specifically mentioned for its own products.

[Dimensions]

[outdoor cladding]

profile	cross-section image	dimensions [mm]	weight [g/m]	planks per package	dimensions of the package [mm]	package weight [kg]	mq per package
Q9510 		95 x 10	480	18	2020 x 210 x 90	18~	3,10
Q20410-WA 		204 x 10	1930	5	2020 x 215 x 135	20~	2,00
Q16618 		166 x 18	1100	10	2020 x 176 x 170	22,5~	3,10

[indoor cladding]

profile	cross-section image	dimensions [mm]	weight [g/m]	planks per package	dimensions of the package [mm]	package weight [kg]	mq per package
Q16010 		160 x 10	560	15	2020 x 170 x 160	17,3~	4,60
Q14520 		145 x 20	700	8	2020 x 155 x 158	11,7~	2,20
Q10010 		100 x 10	450	20	2020 x 233 x 111	19,7~	4,20
Q13010 		130 x 10	890	12	2020 x 140 x 130	22,6~	2,90
Q17012 		170 x 12	960	10	2020 x 200 x 133	19,7~	3,40

[*indoor false-ceiling*]

profile	*cross-section image*	*dimensions [mm]*	*weight [g/m]*	*planks per package*	*dimensions of the package [mm]*	*package weight [kg]*	*mq per package*
TH5025 		50 x 25	300	15	202 x 211 x 131	12,5~	1,70
TH6050 		60 x 50	490	12	2020 x 226 x 190	12,3~	2,20
THZ5004 		50 x 4	140	54	2020 x 211 x 78	17,8~	10,00 *with profile TH6050* 21,00 *with profile TH14830*
TH14830 		148 x 30	585	10	2020 x 173 x 158	12,2~	3,8 *with profile LG9637V* 3,00 *with profile LG3326V*

[*outdoor false-ceiling*]

profile	*cross-section image*	*dimensions [mm]*	*weight [g/m]*	*planks per package*	*dimensions of the package [mm]*	*package weight [kg]*	*mq per package*
TH14830 HD-4 		148 x 30	938	10	2020 x 173 x 158	18,8~	3,8 *with profile LG9637V* 3,0 *with profile LG3326V*

Note: *The figures reported in the table refer to the nominal dimensions and theoretical weights of the profiles.*

[Tests]

• Mechanical tests •

Elasticity (bending)	UNI EN ISO 178	@ 23°C	1980 Mpa
		@ 65°C	550 Mpa
Yield strength (flexural))	UNI EN ISO 178	@ 23°C	35,1 Mpa
		@ 65°C	7,17,30 Mpa
Moisture content	EN 322:93		3,13 %
Dynamic-mechanical analysis	ASTM D4065/95		78,7°C
Resistance to temperature fluctuations (after 15 cycles, range -20°/+50°C)	UNI 9429:89		Level 5: there are no surface defects
Dimensional changes associated with changes in temperature	UNI 9429:89 modified	After 24h to +50°C	Longitudinal 0,07% Transversal -0,15%
		After 24h to -20°C	Longitudinal -0,03% Transversal -0,30%
Dimensional changes associated with water absorption (after 7 days' immersion, 20°C)	/		Longitudinal 0,07% Transversal 0,23% Thickness 1,22% Peso 2,89%
Dimensional changes associated with changes in humidity (tested at 20°C)	EN 318:2002		From 65% U.R. to 85% U.R. - Longitudinal 0,3 mm/m - Thickness 0,1 % From 65% U.R. to 30 % U.R. - Longitudinal -0,2 mm/m - Thickness -0,1%
Coefficient of linear thermal expansion (range -10°/+70°C)	TMA ASTM E 831/2006		Longitudinal: 46,9 µm/(m°C) Transversal: 48,9 µm/(m°C)

• Reaction to fire •

Fire classification	UL94	Class V-0

[Assembly instructions]

• Expansion space between adjacent profiles •

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

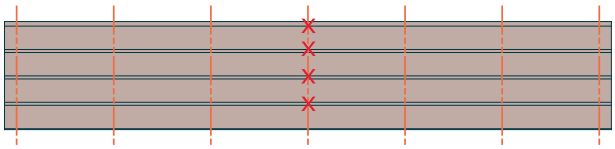
Laying temperature	Wxpansion space
< 20°C	2,1 mm/ml
> 20°C	1,6 mm/ml

For example, for laying conditions with a temperature around 30°C and plank length of 2.5 m, one should leave joints (interspaces) of a width of 2.5 ml x 1.6 mm/ml = 4 mm

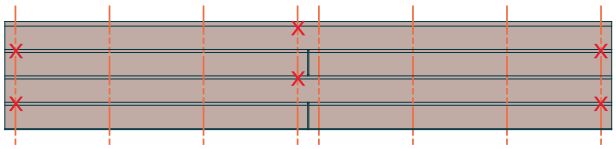
• Fixed points •

In order to ensure the expansion space will remain over time, in outdoor applications a fixed point should be made on each plank. It is also recommended to adhere strictly to the positioning pattern of the fixed point.

[Laying pattern diagram]



PARALLEL LAYING



ALTERNATING LAYING

X = fixed point for expansion

• Alignments •

We recommend plumbing and aligning the substructures before starting to assemble the profiles.

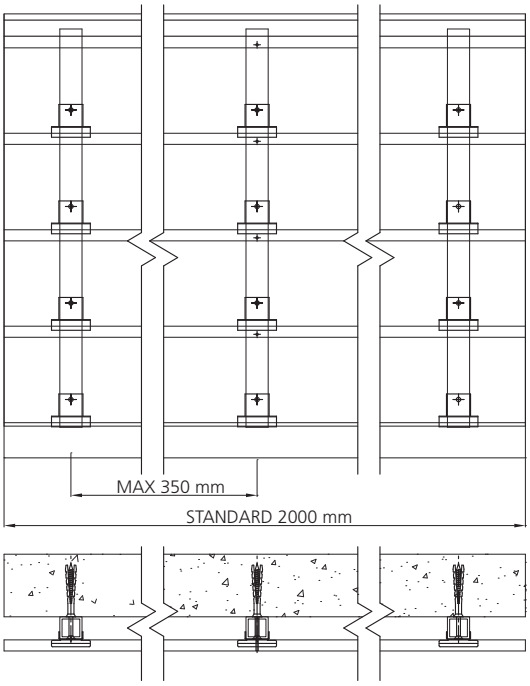
WOODN
SPECIES UNICA

[components of the system]

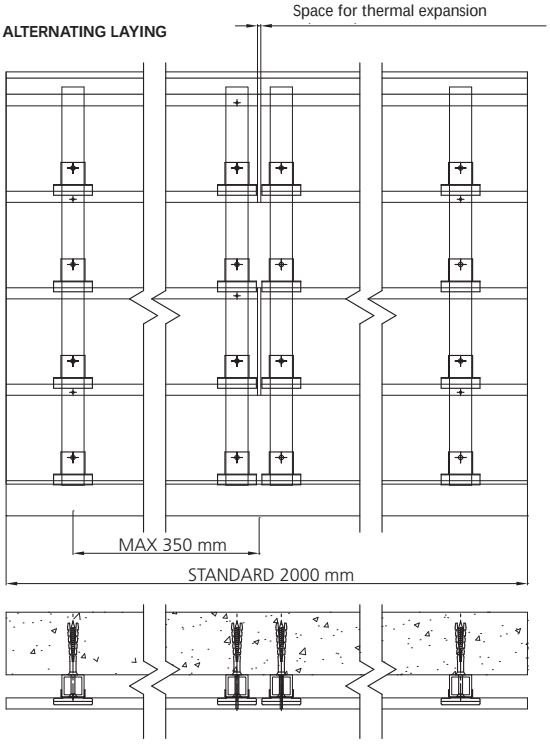
			pieces necessary per m²
WPC profiles - Q9510 smooth finish - Q9510B brushed finish		Substructure profile MP2020_2AL		3,5 ml (parallel laying) 4,0 ml (alternating laying)
		Fixing clip KK3530		41 pz (parallel laying) 46 pz (alternating laying)
		Screw SDRH 3,5x16 A2		41 pz (parallel laying) 46 pz (alternating laying)
		Dowel pin CP_D 2x24 A2		6 pz (parallel laying) 6 pz (alternating laying)

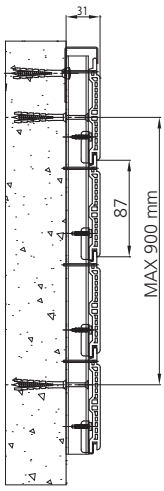
[assembly diagram]

PARALLEL LAYING



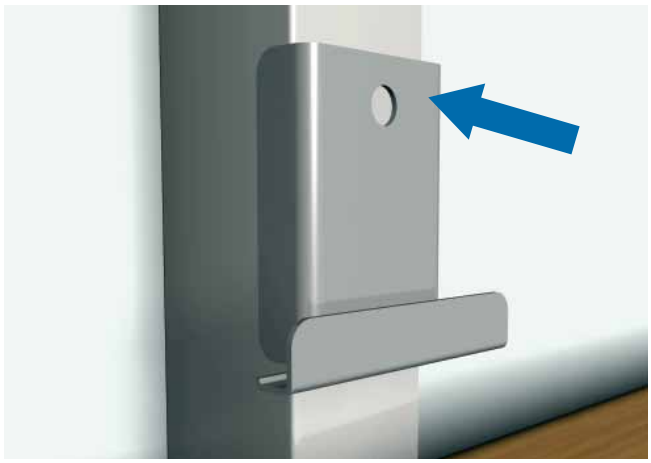
ALTERNATING LAYING





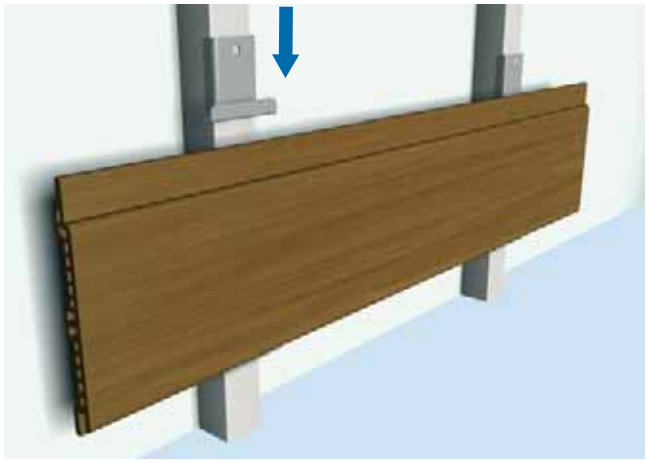
[assembly instructions]

1. Screw the MP2020_2AL profiles to the support with the proper screws and wall plugs every 40 cm (*).

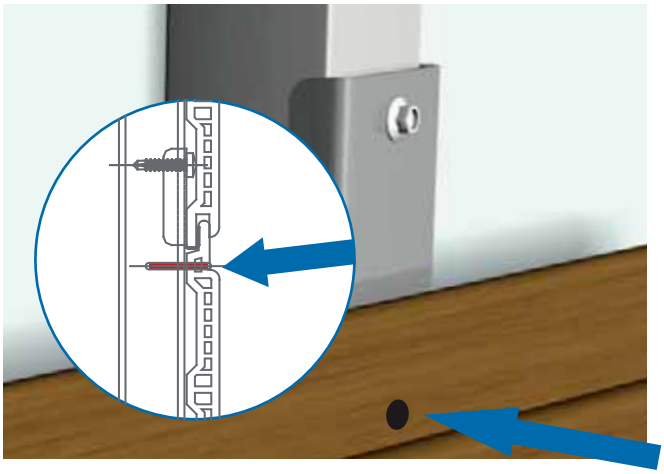


2. Apply the first row of KKQ16618 clips to the profile.

3. Fit the plank in the respective plate slot.



4. insert the second row of plates pushing them to lock the plank. Screw the plate to the support and make the fixed point on each plank with cylindrical pins CP_D2x24A2.



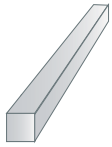
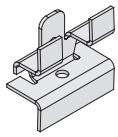
5. Fit the second plank onto the first and repeat steps 4 and 5 until completion of the cladding.

6. Continue repeating as described from step 3 onwards to complete the cladding.

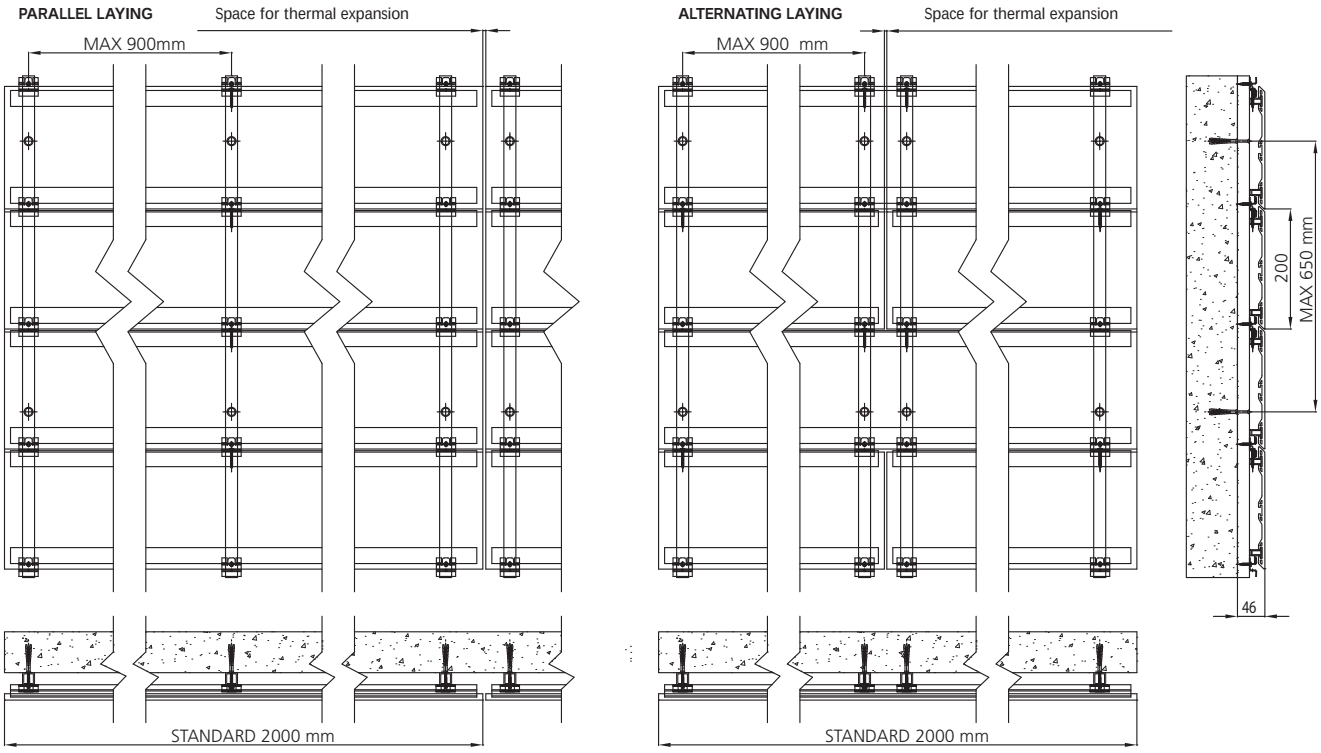
(*) Screws and wall plugs must be chosen according to the type of wall support.

WOODN
SPECIES UNICA

[components of the system]

			pieces necessary per m²
WPC profiles - Q20410_WA Tribbed finish - Q20410S_WA Smooth finish - Q20410SB_WA Brushed finish		Substructure profile MP2020_2AL		1,5 ml (parallel laying) 2,0 ml (alternating laying)
		Fixing clip KK3231		7,5 pz (parallel laying) 10 pz (alternating laying)
Note: unless specifically requested, the profiles are furnished with a fixed point in a central position on their length.		Screw SDFH 3,5x16 A2		7,5 pz (parallel laying) 10 pz (alternating laying)
		Screw SDRH 3,5x32 A2		2,5 pz (parallel laying) 5 pz (alternating laying)

[assembly diagram]



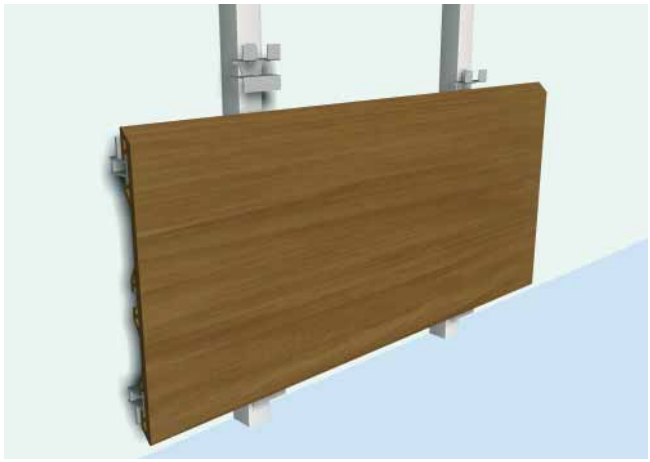
The dimensions shown are for the design situation with a wind load of 120 kg/mq.

[assembly instructions]

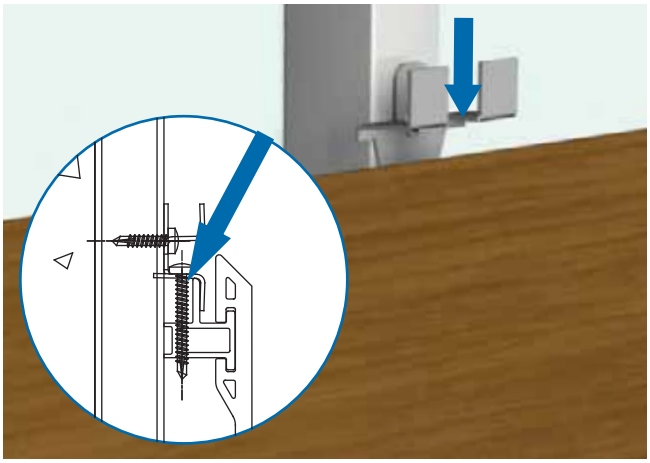
1. Screw the LG2418V profiles to the support with the proper screws and wall plugs every 40 cm (*).

2. Insert the first row of KK4143 clips, rotating them clockwise.

3. insert the first plank into the respective slot.



4. insert the second row of clips and push them downwards to lock the plank.



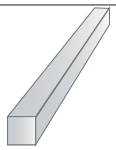
5. Continue as described in step 4, completing the installation of the clips.

6. Continue repeating as described from step 3 onwards to complete the cladding.

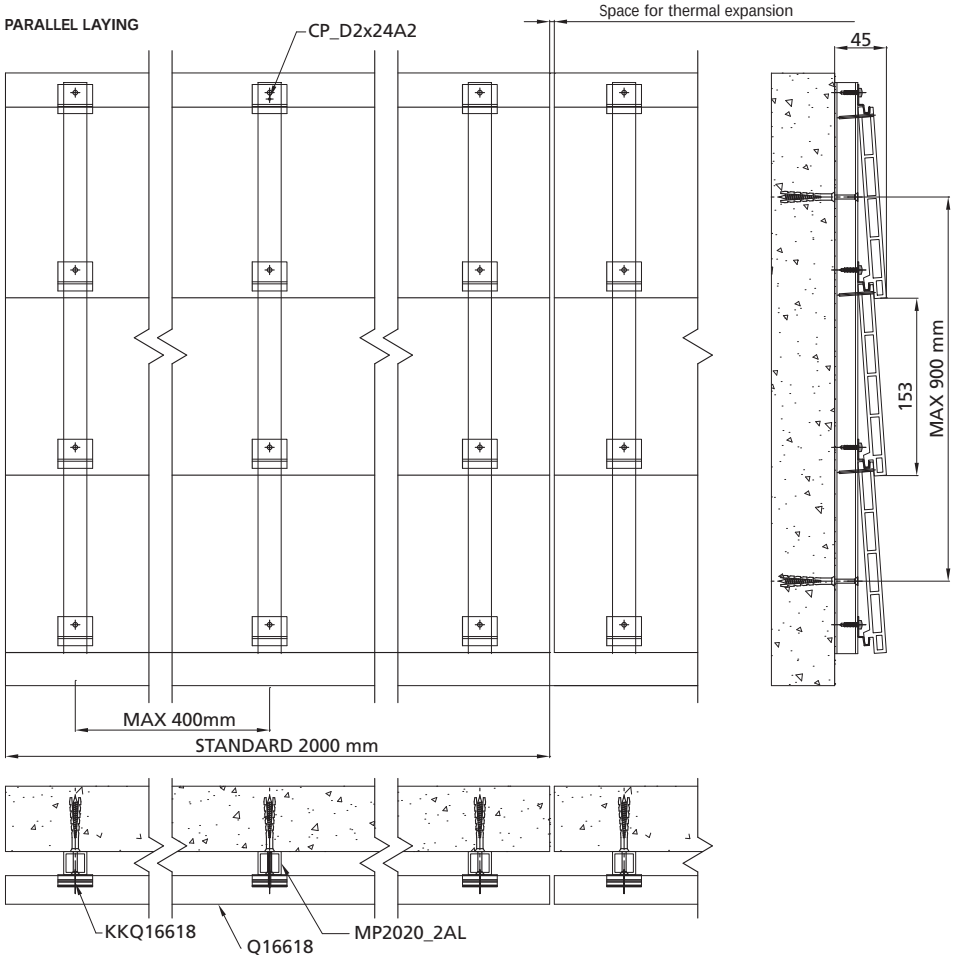
(*) Screws and wall plugs must be chosen according to the type of wall support.

WOODN
SPECIES UNICA

[components of the system]

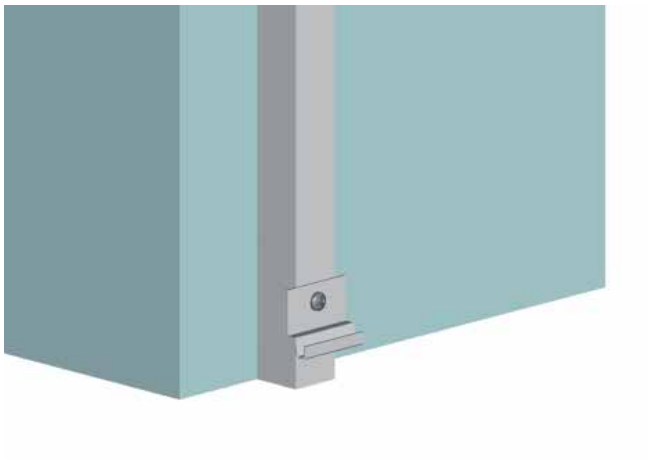
			pieces necessary per m²
WPC profile Q16618 	Fixing clip KKQ16618		19,6 pz (parallel laying) 22,9 pz (alternating laying)
	Profilo MP2020_AL		3,0 ml (parallel laying) 3,5 ml (alternating laying)
	Screw SDRH 3,5x16 A2		19,6 pz (parallel laying) 22,9 pz (alternating laying)
	Dowel pin CP_D2x24 A2		4,0 pz (parallel laying) 4,0 pz (alternating laying)

[assembly diagram]



[assembly instructions]

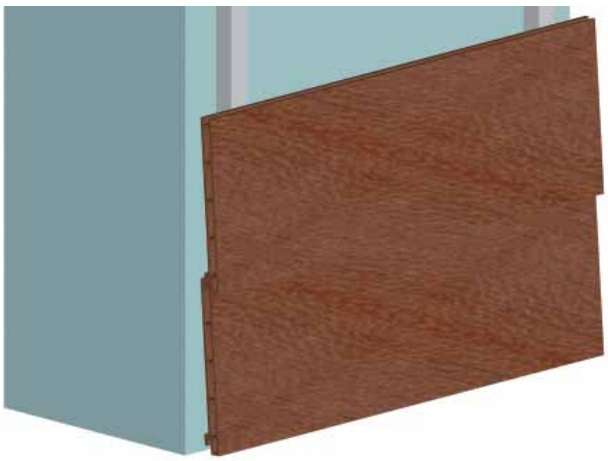
1. Screw the MP2020_2AL profiles to the support with the proper screws and wall plugs every 40 cm (*).



2. Apply the first row of KKQ16618 clips to the profile.

3. Fit the plank in the respective plate slot.

4. insert the second row of plates pushing them to lock the plank. Screw the plate to the support and make the fixed point on each plank with cylindrical pins CP_D2x24A2.



5. Fit the second plank onto the first and repeat steps 4 and 5 until completion of the cladding.

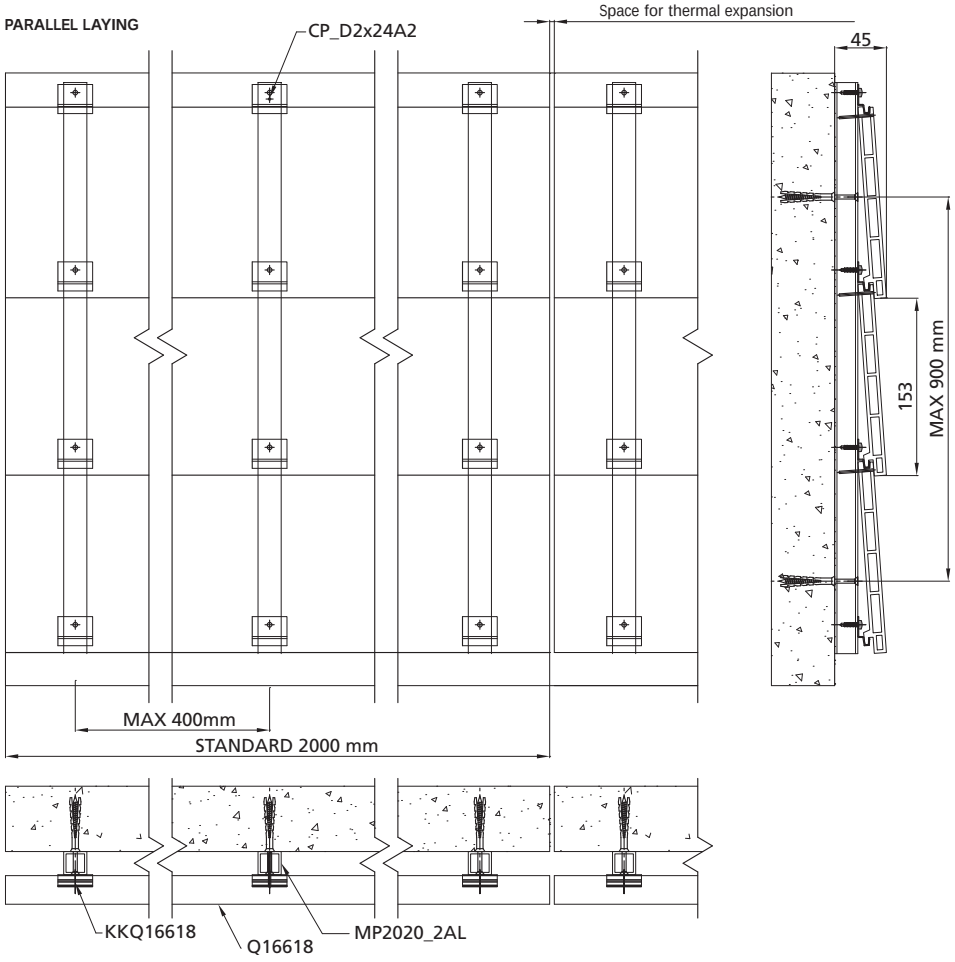
(*) Screws and wall plugs must be chosen according to the type of wall support.

WOODN
SPECIES UNICA

[components of the system]

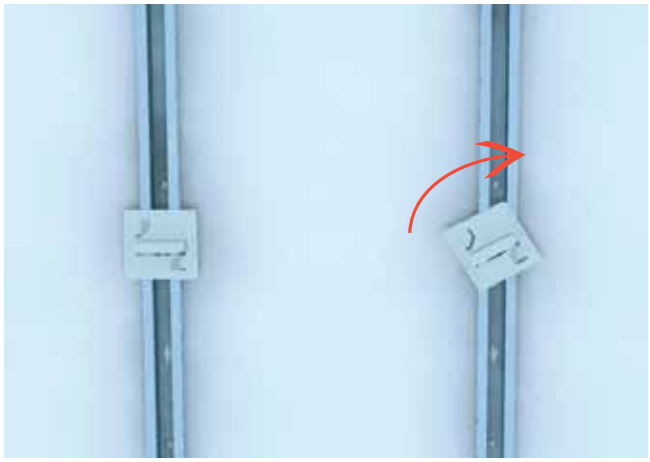
			pieces necessary per m²
WPC profile Q10010 	Substructure profile LG2418V		3,0 ml (parallel laying) 3,5 ml (alternating laying)
	Fixing clip KK4143		29,1 pz (parallel laying) 34,0 pz (alternating laying)

[assembly diagram]



[assembly instructions]

1. Screw the LG2418V profiles to the support with the proper screws and wall plugs every 40 cm (*).



2. Insert the first row of KK4143 clips, rotating them clockwise.

3. insert the first plank into the respective slot.

4. insert the second row of clips and push them downwards to lock the plank.

5. Continue as described in step 4, completing the installation of the clips.

6. Continue repeating as described from step 3 onwards to complete the cladding.

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

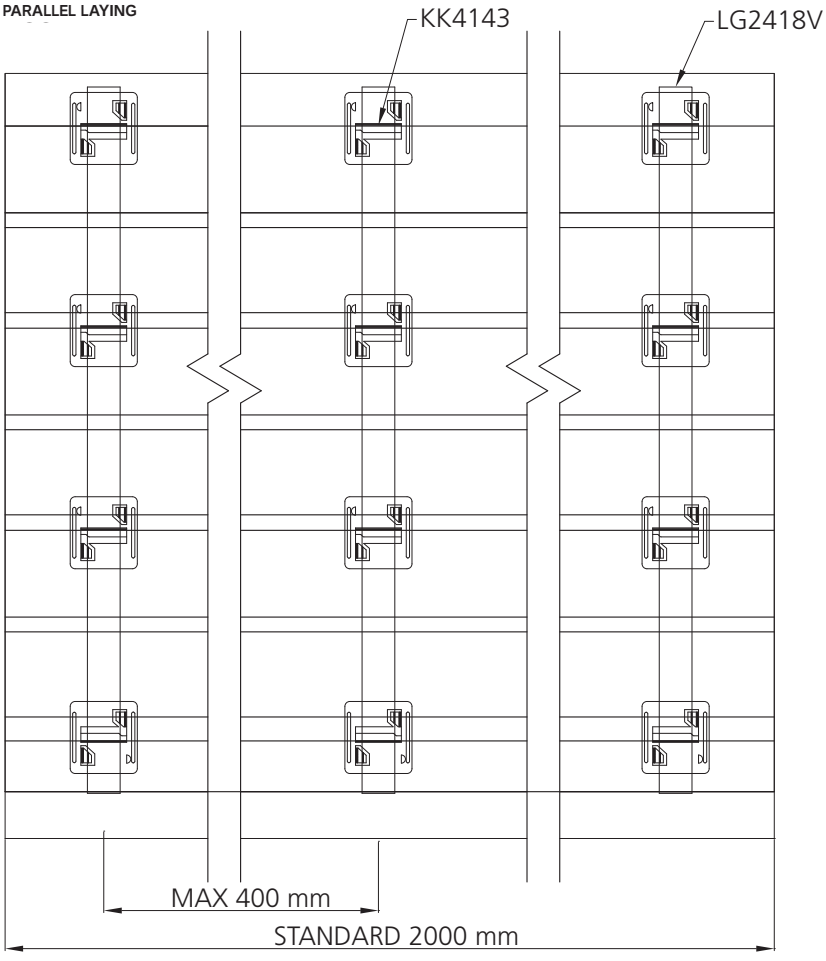
WOODN
SPECIES UNICA

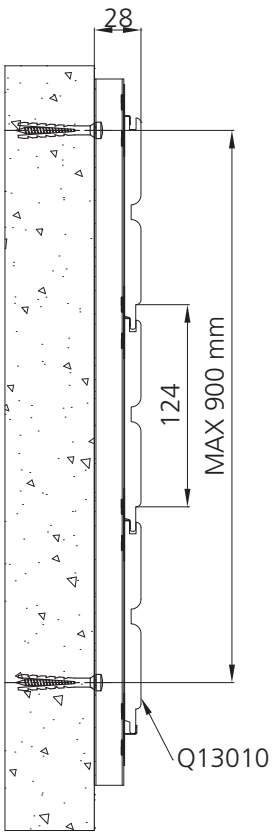
[components of the system]

			pieces necessary per m²
WPC profile Q13010 	Substructure profile LG2418V		3,0 ml (parallel laying) 3,5 ml (alternating laying)
	Fixing clip KK4143		24,2 pz (parallel laying) 28,2 pz (alternating laying)

[assembly diagram]

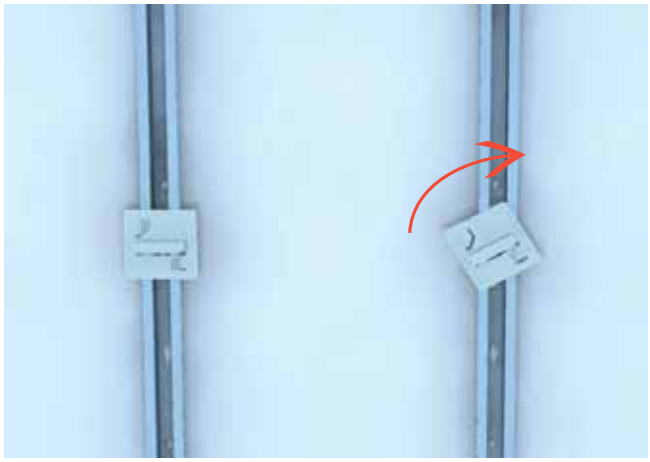
PARALLEL LAYING





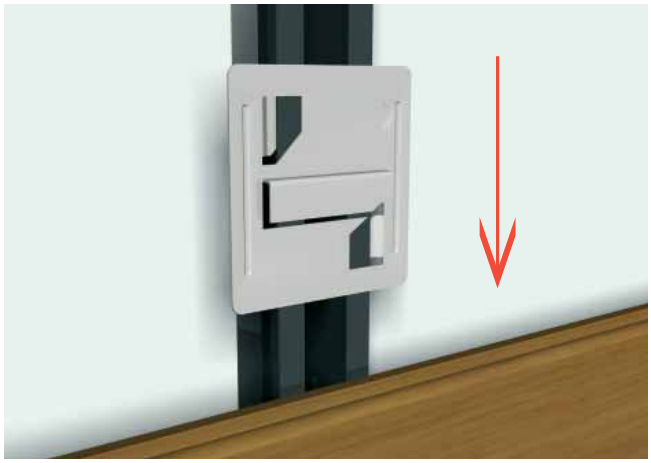
[assembly instructions]

1. Screw the LG2418V profiles to the support with the proper screws and wall plugs every 40 cm (*).



2. Insert the first row of KK4143 clips, rotating them clockwise.

3. insert the first plank into the respective slot.



4. insert the second row of clips and push them downwards to lock the plank.

5. Continue as described in step 4, completing the installation of the clips.

6. Continue repeating as described from step 3 onwards to complete the cladding.

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

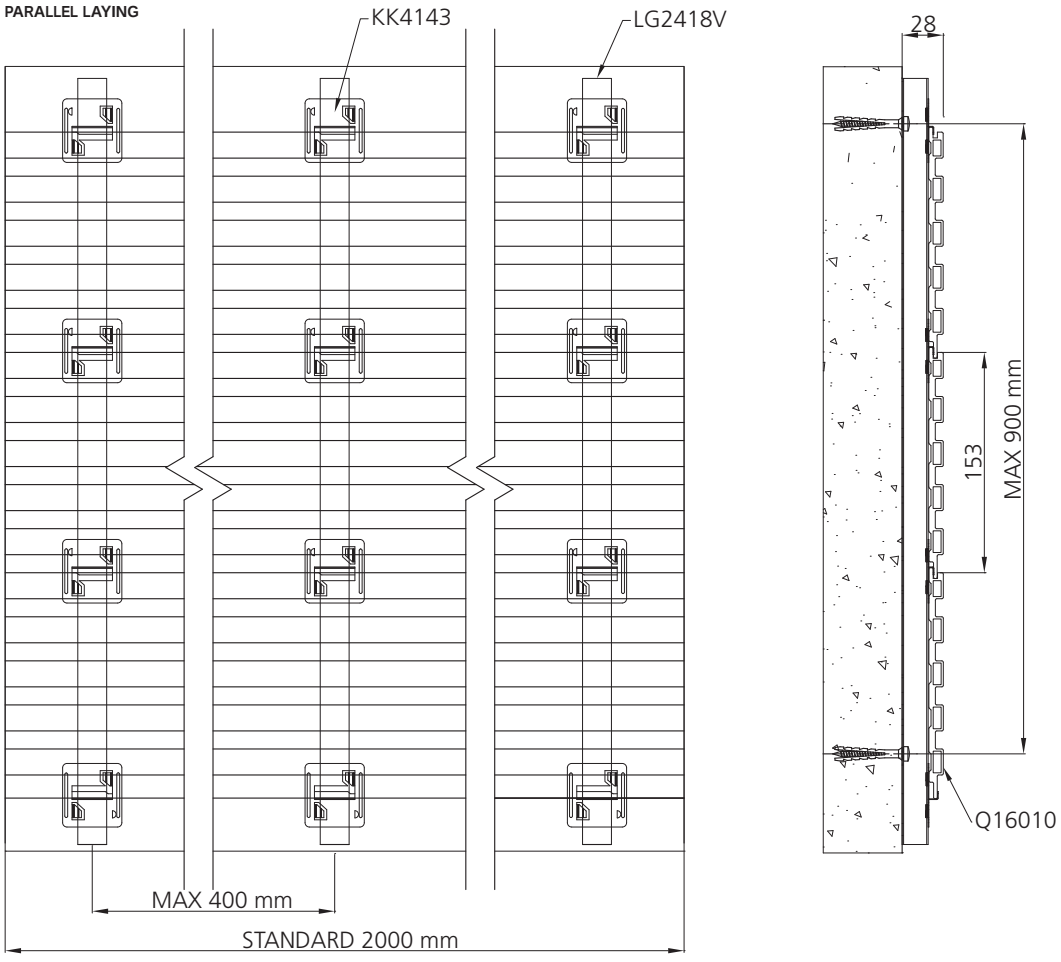
WOODN
SPECIES UNICA

[components of the system]

			pieces necessary per m²
WPC profile Q16010 	Substructure profile LG2418V		3,0 ml (parallel laying) 3,5 ml (alternating laying)
	Fixing clip KK4143		19,6 pz (parallel laying) 22,9 pz (alternating laying)

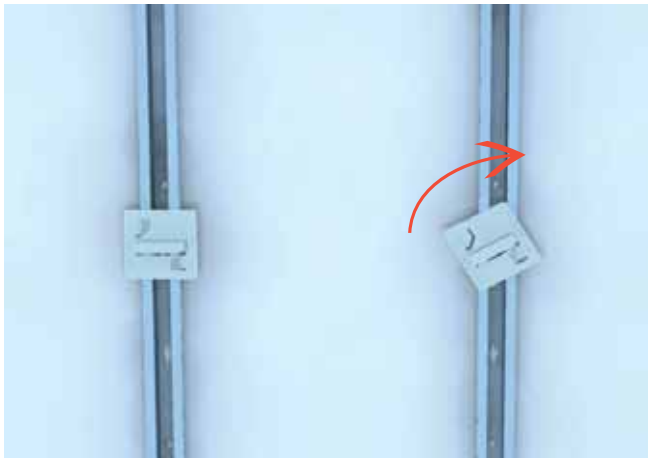
[assembly diagram]

PARALLEL LAYING



[assembly instructions]

1. Screw the LG2418V profiles to the support with the proper screws and wall plugs every 40 cm (*).



2. Insert the first row of KK4143 clips, rotating them clockwise.

3. insert the first plank into the respective slot.

4. insert the second row of clips and push them downwards to lock the plank.

5. Continue as described in step 4, completing the installation of the clips.

6. Continue repeating as described from step 3 onwards to complete the cladding.

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

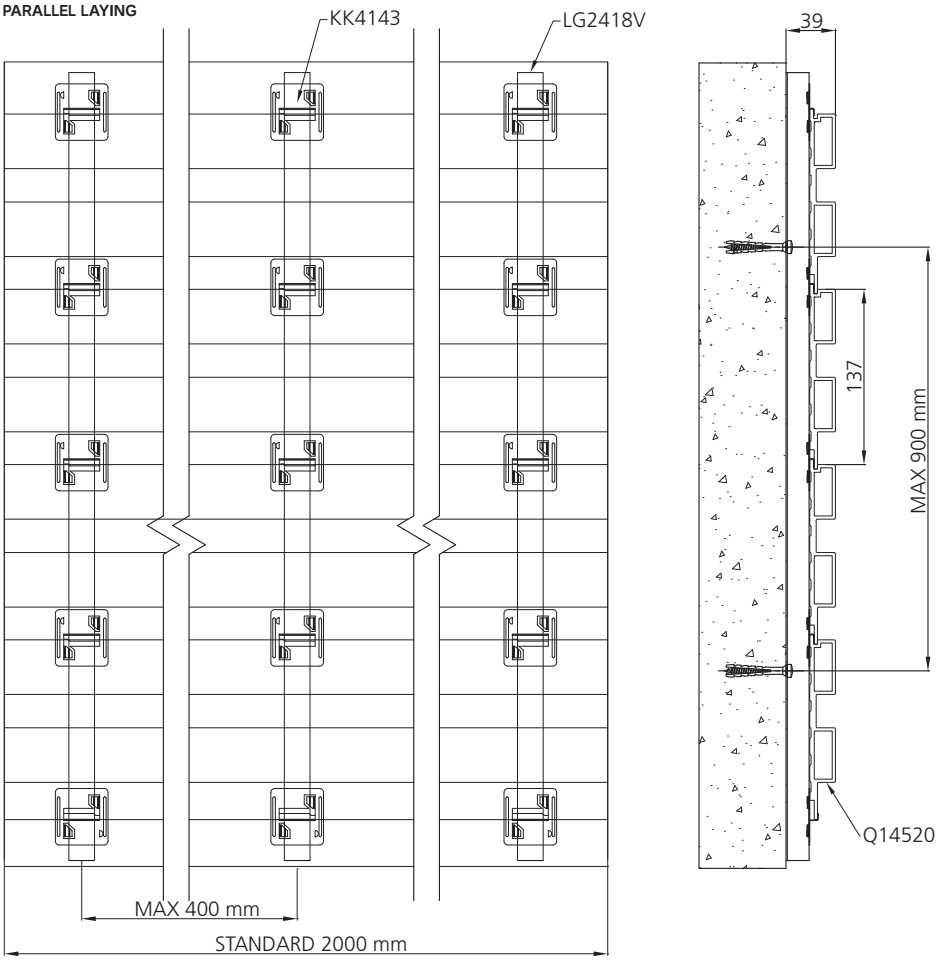
WOODN
SPECIES UNICA

[components of the system]

			pieces necessary per m²
WPC profile Q14520 	Substructure profile LG2418V		3,0 ml (parallel laying) 3,5 ml (alternating laying)
	Fixing clip KK4143		21,9 pz (parallel laying) 25,5 pz (alternating laying)

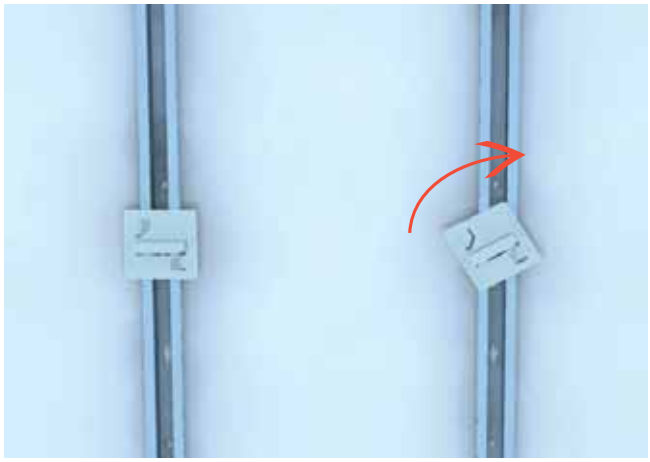
[assembly diagram]

PARALLEL LAYING



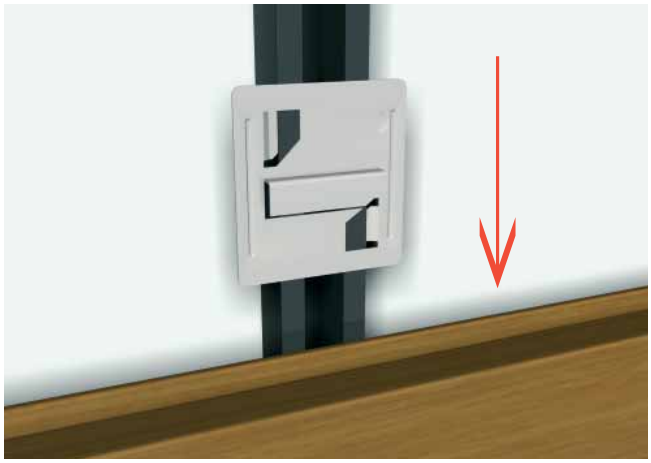
[assembly instructions]

1. Screw the LG2418V profiles to the support with the proper screws and wall plugs every 40 cm (*).

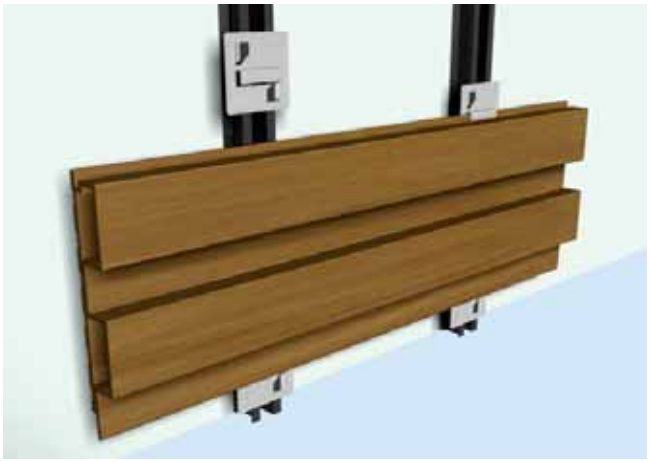


2. Insert the first row of KK4143 clips, rotating them clockwise.

3. insert the first plank into the respective slot.



4. insert the second row of clips and push them downwards to lock the plank.



5. Continue as described in step 4, completing the installation of the clips.

6. Continue repeating as described from step 3 onwards to complete the cladding.

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

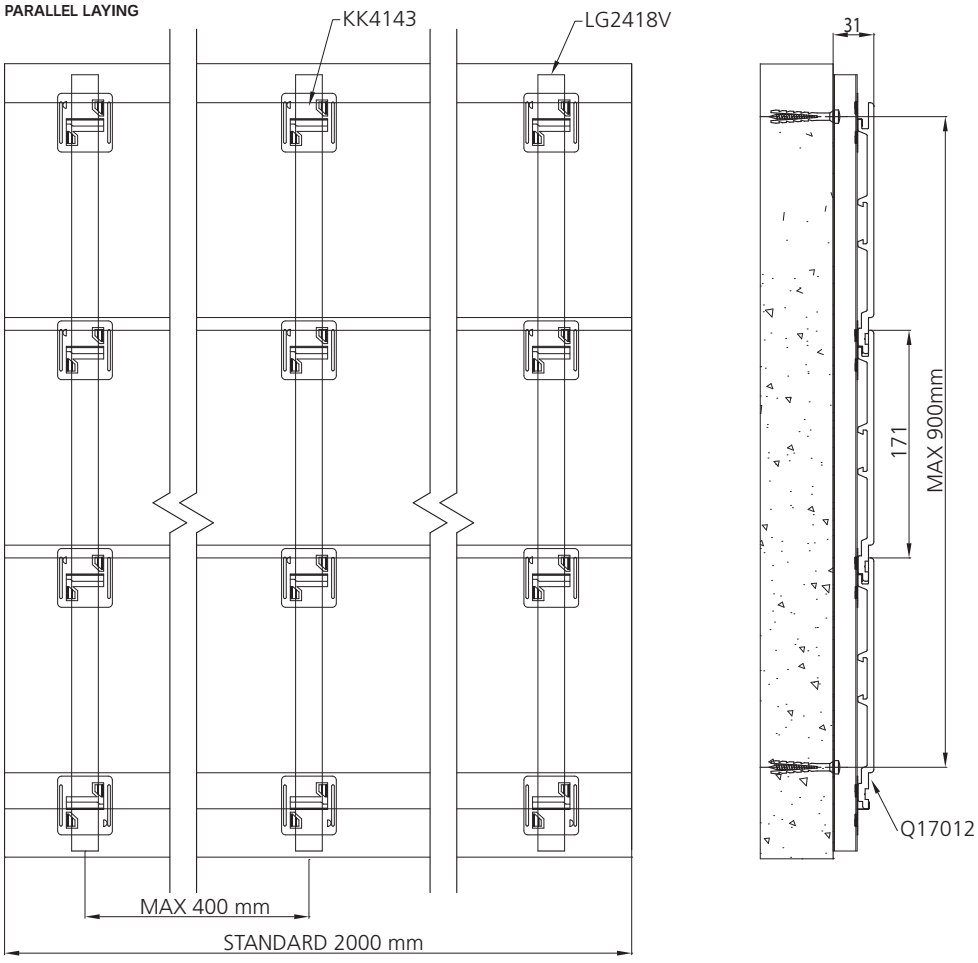
WOODN
SPECIES UNICA

[components of the system]

			pieces necessary per m²
WPC profile Q17012 	Substructure profile LG2418V		3,0 ml (parallel laying) 3,5 ml (alternating laying)
	Fixing clip KK4143		17,59 pz (parallel laying) 20,5 pz (alternating laying)

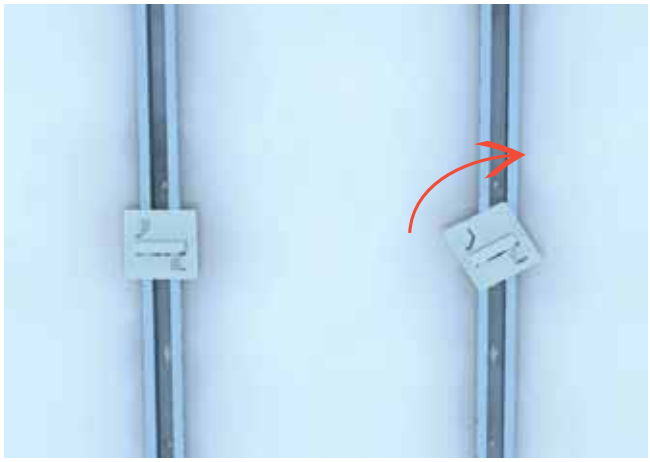
[assembly diagram]

PARALLEL LAYING



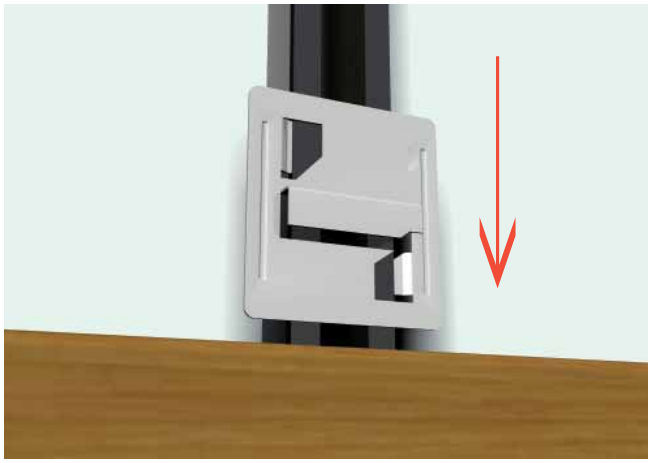
[assembly instructions]

1. Screw the LG2418V profiles to the support with the proper screws and wall plugs every 40 cm (*).



2. Insert the first row of KK4143 clips, rotating them clockwise.

3. insert the first plank into the respective slot.



4. insert the second row of clips and push them downwards to lock the plank.

5. Continue as described in step 4, completing the installation of the clips.

6. Continue repeating as described from step 3 onwards to complete the cladding.

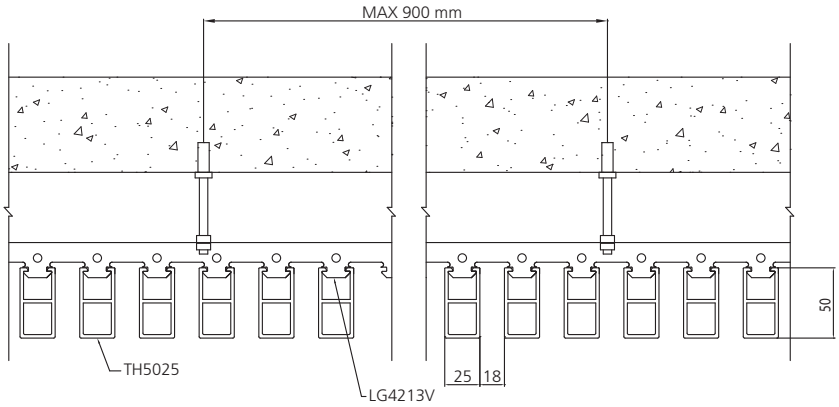
(*) Screws and wall plugs must be chosen according to the type of wall support.

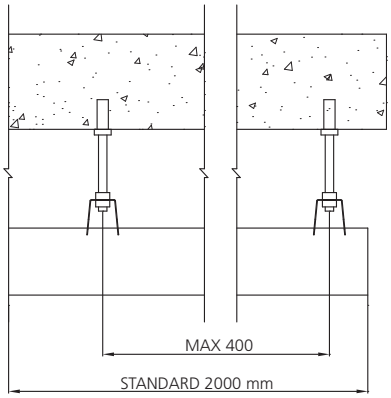
WOODN
SPECIES UNICA

[components of the system]

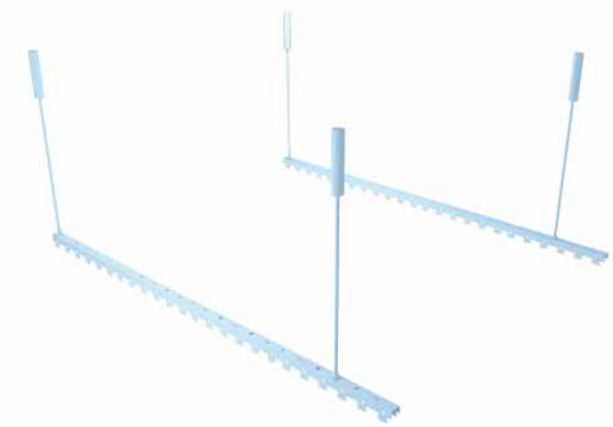
			pieces necessary per m²
WPC profile TH5025		Substructure profile LG4213V		3,0 ml
		Profile THUX3321		Elemento opzionale per finitura bordi

[assembly diagram]

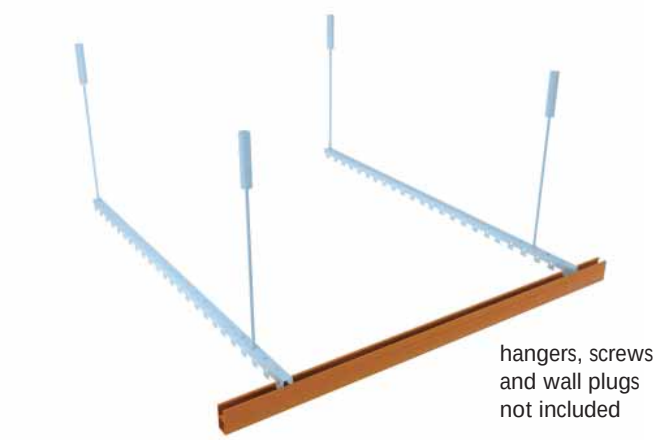




[assembly instructions]

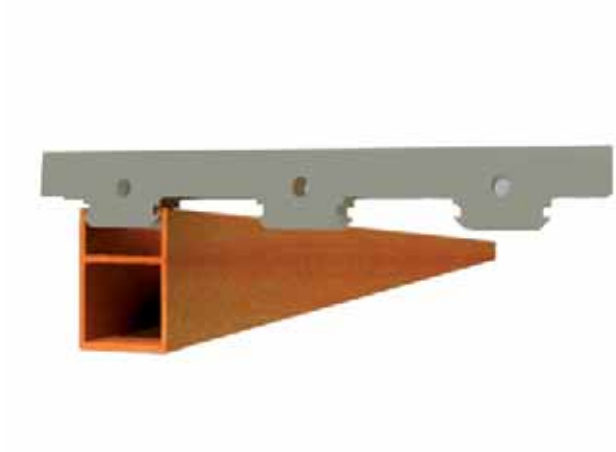


1. Fix the LG4213V bars directly to the ceiling using screws and wall plugs suitable for the type of support, or lower the structure with suitable hangers.

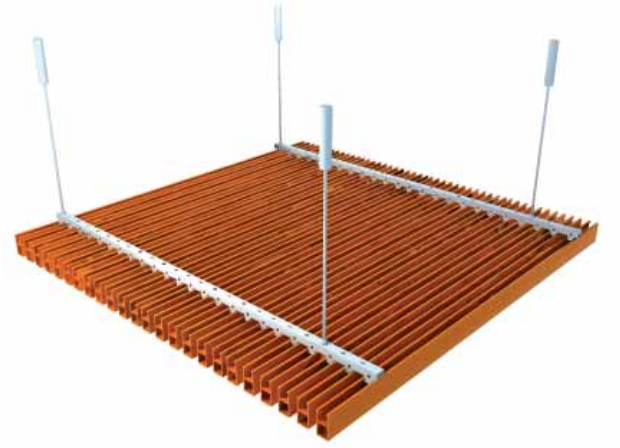


hangers, screws and wall plugs not included

2. Install the first TH5025 profile.



3. Attach the plank to the substructure.



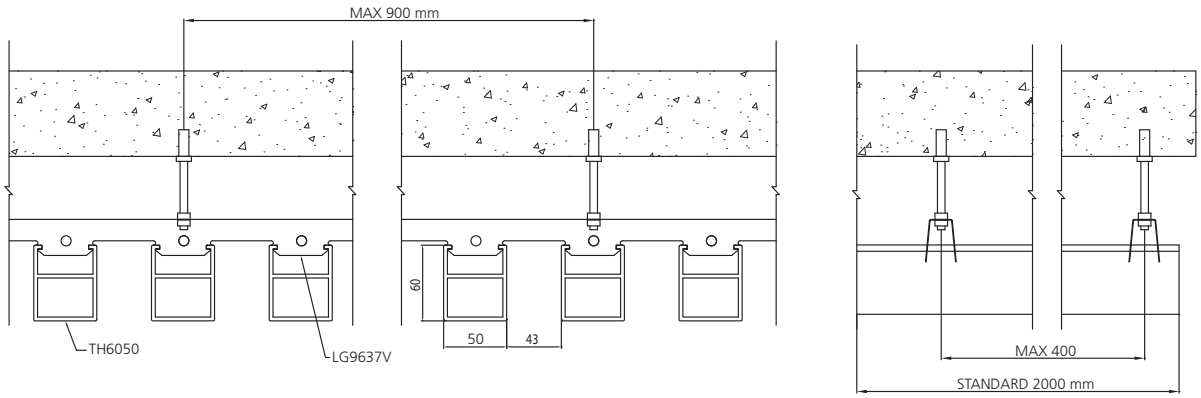
4. Complete the work by repeating the steps described in steps 2 and 3.

[components of the system]

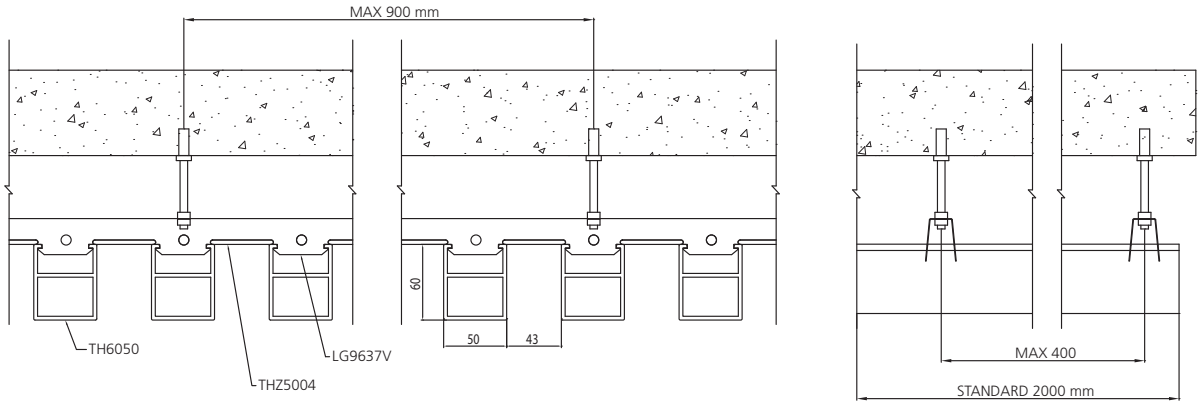
			pieces necessary per m²
WPC profile TH6050		Substructure profile LG9637V	3,0 ml
		Accessory closing piece THZ5004	10,7 ml optional element for closing the false-ceiling
		Profile THUX3321	Optional element for closing the false-ceiling

[assembly diagram]

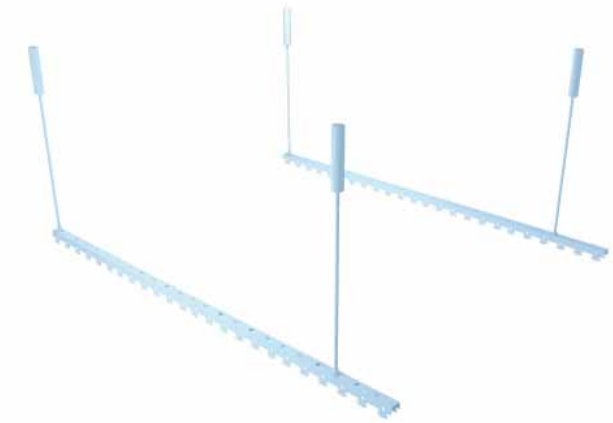
SYSTEM WITHOUT CLOSING PIECE THZ5004



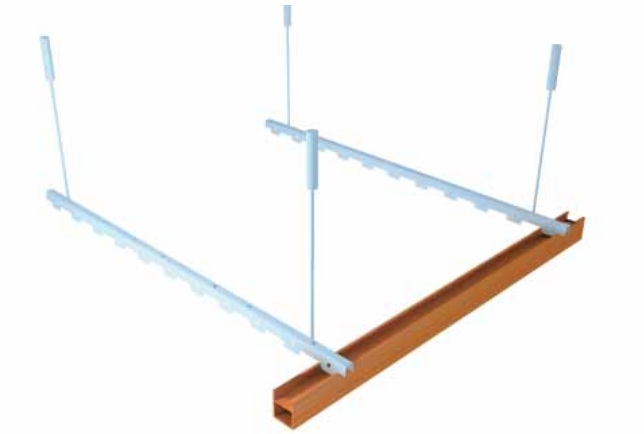
SYSTEM WITH CLOSING PIECE THZ5004



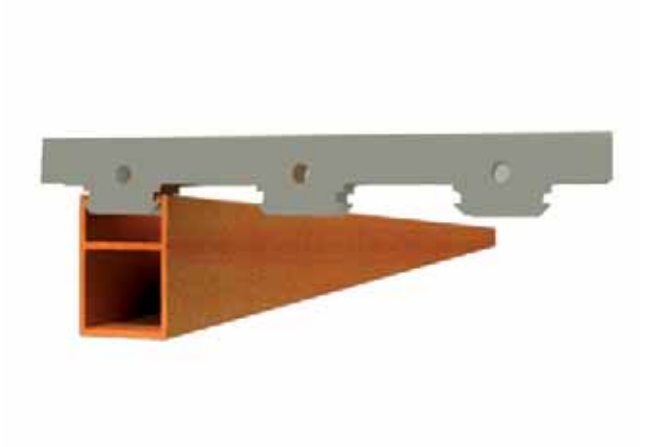
[assembly instructions]



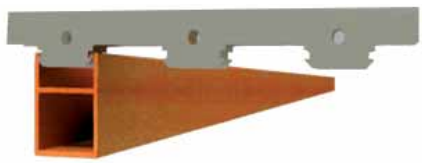
1. Fix the LG9637V bars directly to the ceiling using screws and wall plugs suitable for the type of support, or lower the structure with suitable hangers.



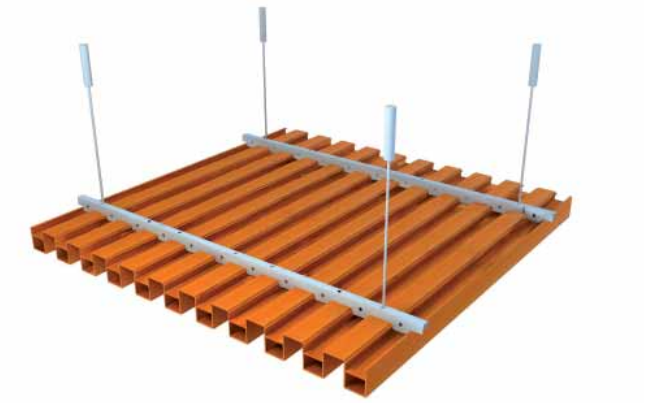
2. install the first TH6050 profile.



3. Attach the plank to the substructure.



4. install, if applicable, the accessory THZ5004 profile.



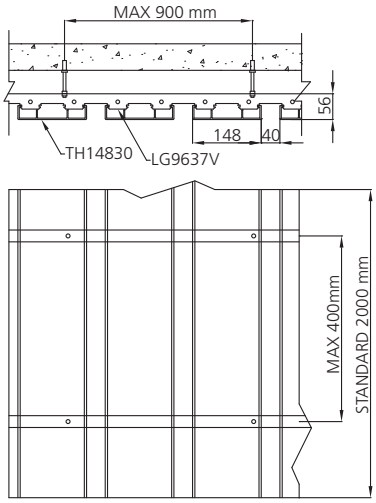
5. Complete the work by repeating the steps described in steps 2, 3 and 4.

[components of the system]

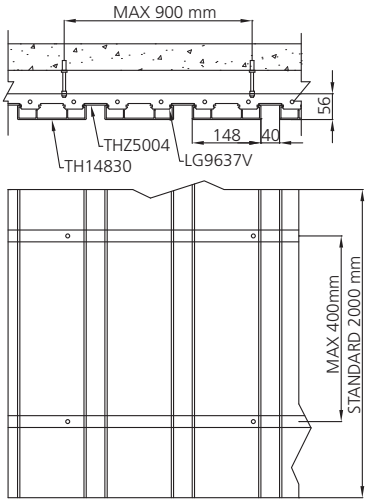
			pieces necessary per m²
WPC profile TH14830 	Substructure profile LG9637V		3,0 ml
	Substructure profile LG3326V		3,0 ml
	Accessory closing piece THZ5004		5,31 ml optional element for closing the false-ceiling

[assembly diagram]

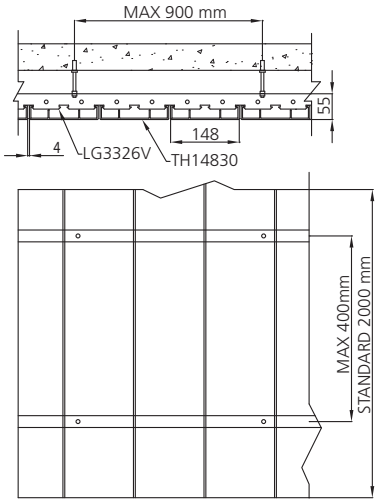
TH14830 with LG9637V



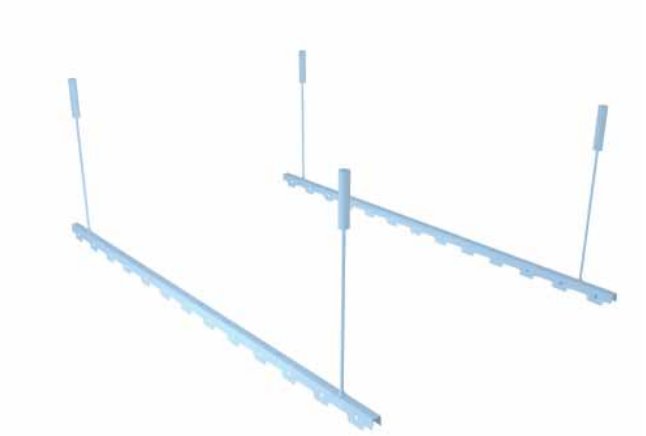
TH14830 + THZ5004 with LG9637V



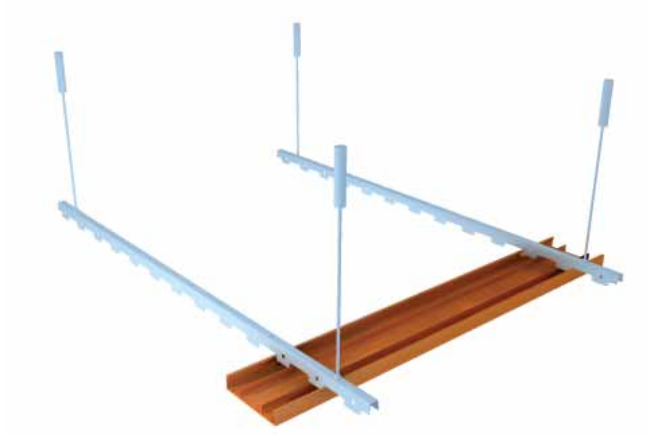
TH14830 with LG3326V



[assembly instructions]



1. Fix the LG9637V or 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 TH14830 profile, fitting the planks to the substructure, alternating them with the THZ5004 profiles if applicable.

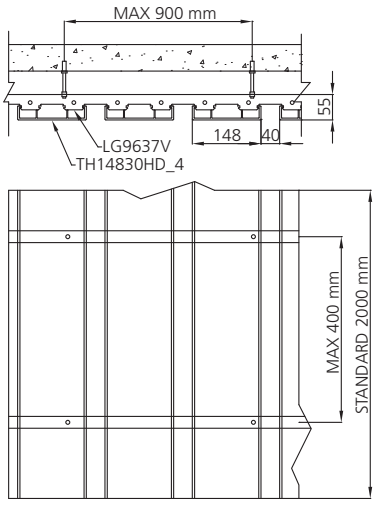
3. Complete the work by repeating the steps described in step 2.

[components of the system]

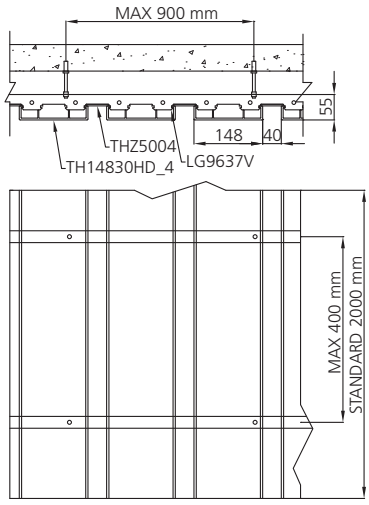
			pieces necessary per m²
WPC profile TH14830 	Substructure profile LG9637V		3,0 ml
	Substructure profile LG3326V		3,0 ml
	Accessory closing piece THZ5004		5,31 ml optional element for closing the false-ceiling

[assembly diagram]

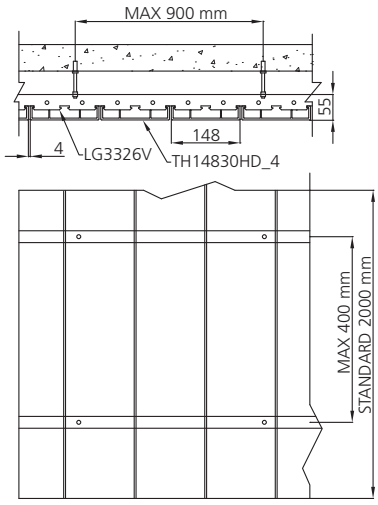
TH14830HD_4 with LG9637V



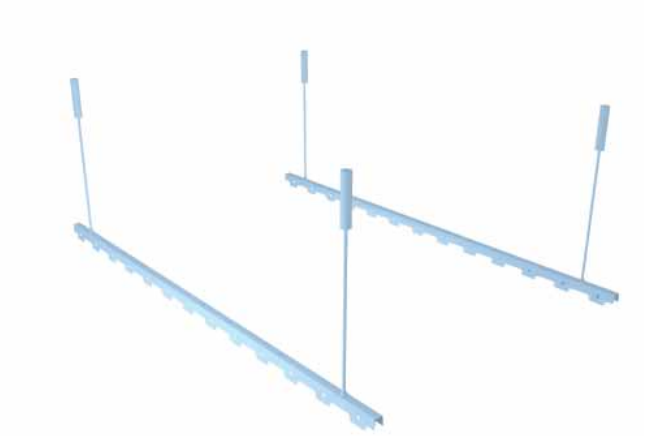
TH14830HD_4 + THZ5004 with LG9637V



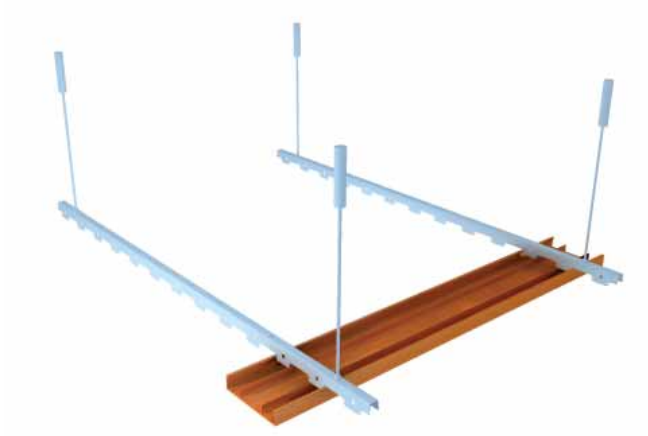
TH14830HD_4 with LG3326V



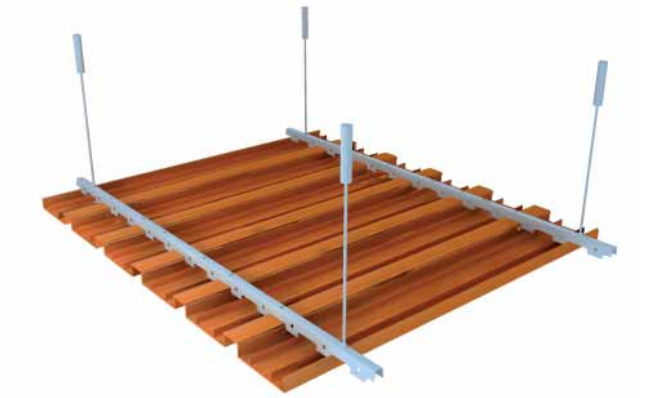
[assembly instructions]



1. Fix the LG9637V or 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 TH14830 profile, fitting the planks to the substructure, alternating them with the THZ5004 profiles if applicable.



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

[Cleaning and maintenance]

• Outdoor applications •

To keep the colouring of the profiles as unchanged as possible over time it is recommended to treat the surface with UV oiling and renew this treatment as needed (follow manufacturer's instructions).

Among the products on the market we suggest the following.

- **TOVER Oil 4 Sun**
- **SLC KERAKOLL Oildeck HPX**

• Indoor applications •

To protect the surface from stains and marks, you may want to treat it with periodic oiling, as needed.
Please note that any product applied to the surface causes a more or less marked variation in colour tone.

[Cleaning]

It is recommended to periodically clean as necessary with a vacuum cleaner or damp cloth and by washing with water or neutral detergent.
In the case of staining of the profile, we recommend that you remove the stain as soon as possible using water and a neutral detergent (avoid using abrasive cleaners or solvents, particularly acetone, alcohol, bleach).

Below is a table with the most common types of stain and their respective remedies:

Type of stain	*Solution to adopt*
Rust	*Rub the stain with neutral detergent. Rinse thoroughly.*
Grease - oil	*Rub the stain with neutral detergent. Rinse thoroughly.*
Coffee	*Rub the stain with neutral detergent. Rinse thoroughly.*
Tea	*Rub the stain with diluted bleach. Rinse thoroughly.*
Soft drinks (eg. Coca Cola)	*Rub the stain with neutral detergent. Rinse thoroughly.*

Type of stain	Solution to adopt
Alcoholic drinks	*Rub the stain with neutral detergent. Rinse thoroughly.*
Red wine	*Rub the stain with neutral detergent. Rinse thoroughly.*
Fruit juice	*Rub the stain with neutral detergent. Rinse thoroughly.*
Ink	*Rub the stain with diluted bleach. Rinse thoroughly.*
Burn (eg. cigarette)	*Scuff lightly with fine sandpaper (or with steel brush) in the direction of the brushing (*).*
Organic solvent	*Scuff lightly with fine sandpaper (or with steel brush) in the direction of the brushing (*).*
Paint	*Remove the excess paint with the blade of the cutter and then scuff lightly with fine sandpaper (or with steel brush) in the direction of the brushing (*).*
Silicone	*Remove the excess silicone with the blade of the cutter then scuff lightly with fine sandpaper (or with steel brush) in the direction of the brushing (*).*
Glue	*Remove the excess glue with the blade of the cutter then scuff lightly with fine sandpaper (or with steel brush) in the direction of the brushing (*).*
Candle wax	*Remove the excess wax with the blade of the cutter then scuff lightly with fine sandpaper (or with steel brush) in the direction of the brushing (*).*
Shoes smears	*Wipe with diluted bleach and rinse thoroughly.* *To remove any scratches you may scuff lightly with fine sandpaper (or with steel brush) in the direction of the brushing.* *To remove any residual rubber that have ended up inside the brushed surface, use a sharp knife (*).*
Mortar	*If the mortar has not yet taken hold, wash with water and rinse thoroughly.* *If the mortar is dry, gently remove the excess mortar;* *then abrade with a steel brush in the direction of the brushing (*).*

(*) Only for sanded or brushed finishes.

For optimum results we recommend attempting to remove the stain as soon as possible.
After removing the stain it is advisable to restore the surface treatment not only on the treated part but over the entire plank so that the colour is uniform.

Accelerated aging test

• *Purpose of the test* •

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

• *Test method* •

The apparatus used is equipped 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
- program of exposure: 102 min. of light exposure and 18 min. of light exposure + sprayed deionized water.

Test results

Sample	*Colour*	*Grayscale degree* after 3600h of exposure (compared to samples aged for 1200h)*
1	Bianco Carrara	4/5
2	Lagorai	4/5
3	Folgendros	4/5
4	Esterel	4/5
5	Marostica	4/5
6	Marrakesh	4/5
8	Piemonte	4/5
9	Cuba	4/5
10	Caffè Bogotà	4
11	Posillipo	4/5
12	Segovia	4/5
13	Myanmar	4
14	Grigio Silverstone	4/5
15	Azzurro Mediterraneo	4/5
16	Rosso Maranello	4/5
17	Tundra	4/5
18	Lanzarote	4/5
26	Blu	4/5
27	Grigio	4/5
28	Grigio	4/5
33	Grigio	5
34	Verde Bambù	4/5

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

[*Technical specifications* | Woodn modulatus]

Profile made of composite material, hollow, of nominal size for plank cladding, parapets, false-ceilings, for indoor and outdoor use, obtained from natural recycled plant materials, joined with thermoplastic polymer (PVC) in a homogeneous extruded compound, without the use of harmful volatile substances.
Self-extinguishing material.

Colouration and grain in pulp, available in different colours.
Dimensions are stable in the presence of moisture, thermoformable, drillable, can be sawed and sanded, free of formaldehyde, solvents and heavy metals.

Not affected by termites and pests, free from present or latent cracking and chipping.

The product can contribute to satisfying LEED credits.	**MRc 4** *Recycled content*	**MRc 6** *Rapidly renewable materials*