Eurotec®

The specialist for fastening technology

OUR

TERRACE MODULAR SYSTEM TERRA

ALUMINIUM SYSTEM PROFILES

PROFILE CONNECTOR

SUPPORT

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WE'D BE HAPPY
TO ADVISE YOU!

BUILDING A PATIO MADE EASY!

Do you have any questions about Eurotec terraces?
Get in touch with our experts now!

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technik@eurotec.team

TERRA ALUMINIUM SYSTEM PROFILES

Eurotec's TERRA aluminium system profiles are a modular system for constructing aluminium decking substructures. The modular system includes everything needed for decking construction and can be used in combination with our Profi-Line and BASE-Line adjustable feet.

TERRA system profiles are used as aluminium substructure profiles for decking construction. To complement the various designs of the aluminium system profiles, the modular system also includes angle and profile connectors as well as flexible joints for installation at 90° and 180° angles. In this way, the modular system can be used to create a stable and long-lasting terrace substructure.

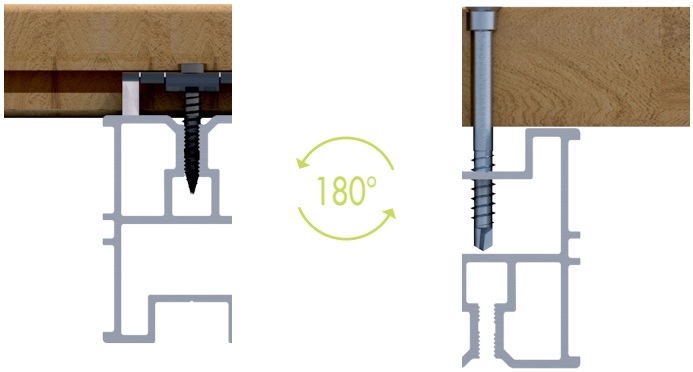
MATERIAL

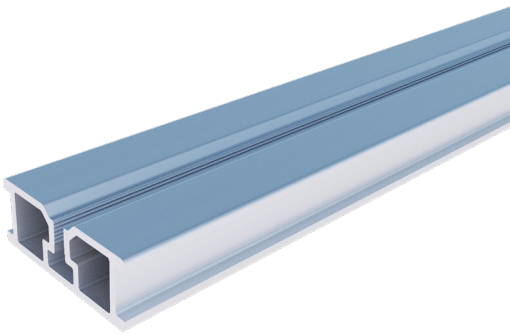
- Aluminium

NOTE

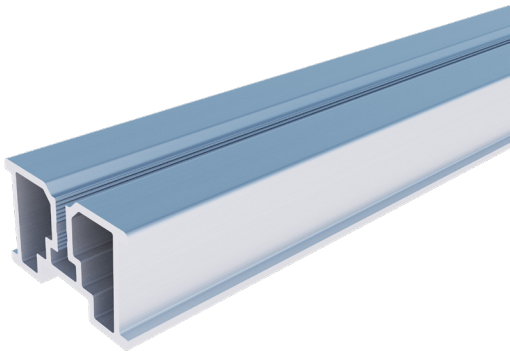
If the profiles are used in combination with products for concealed floorboard fixing, they should be positioned with the screw channel facing upwards.

If you wish to fix the decking boards directly to the profiles using screws, turn the profile so that the underside is facing upwards. This way, the special shape of the profiles allows the screws sufficient room to move, thereby reducing the risk of breakage.

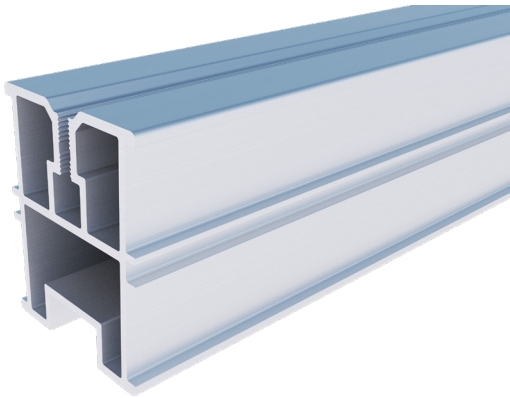




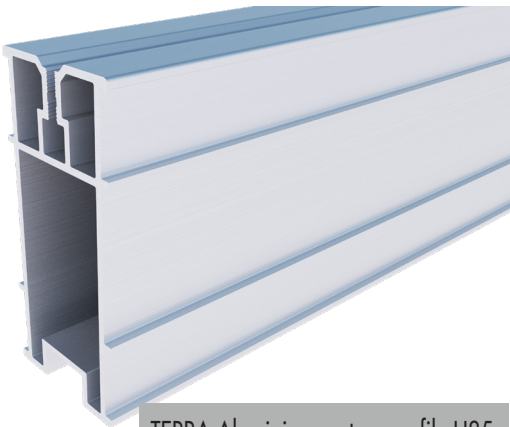
TERRA Aluminium system profile H15*



TERRA Aluminium system profile H24*



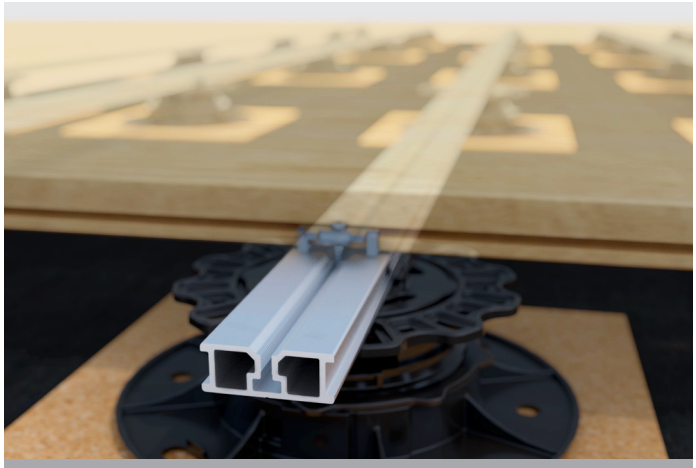
TERRA Aluminium system profile H50*



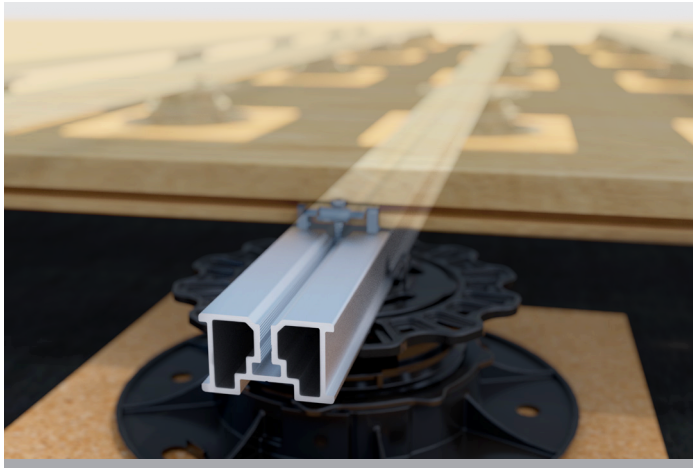
TERRA Aluminium system profile H85

*The profiles are also available in black.

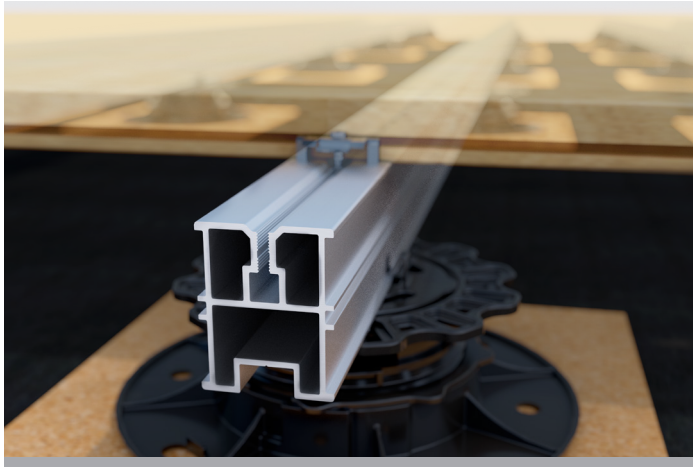
APPLICATION IMAGES – CONCEALED FIXING



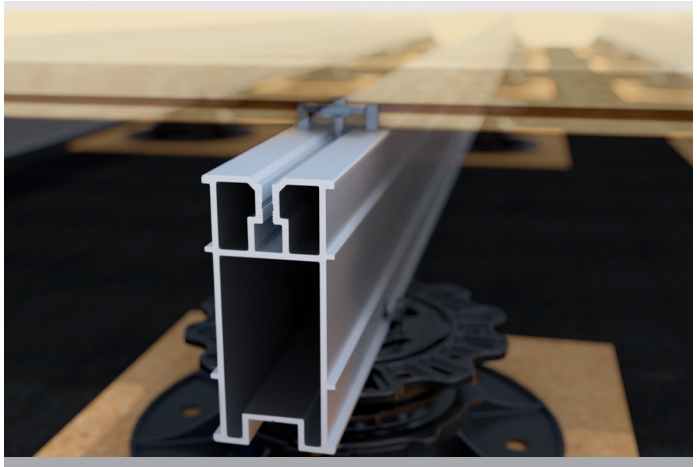
Example of use: TERRA aluminium system profile H15



Application example: TERRA aluminium system profile H24

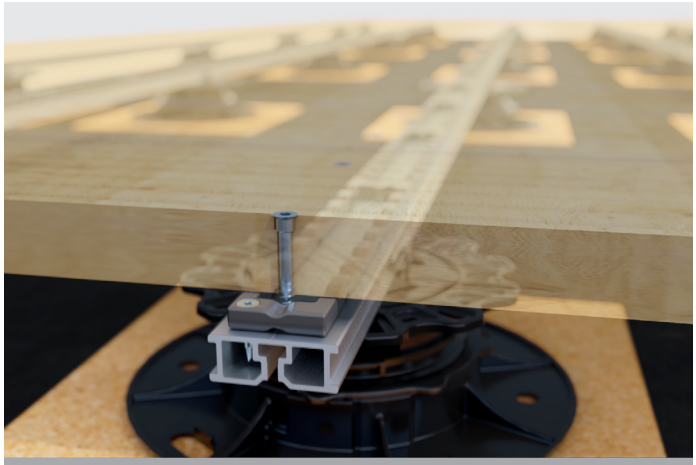


Application example: TERRA aluminium system profile H50

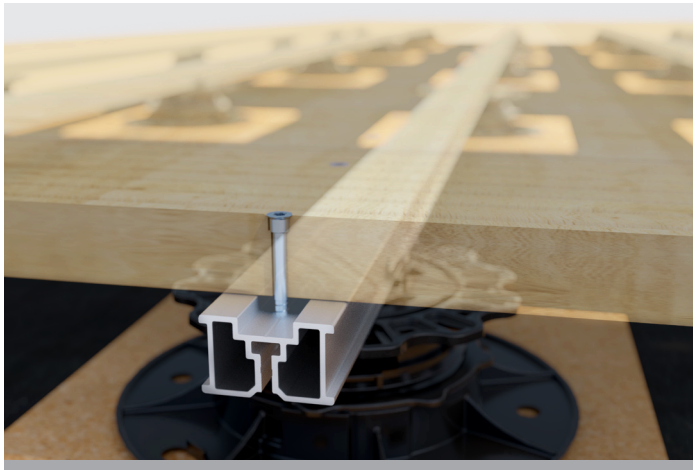


Application example: TERRA aluminium system profile H85

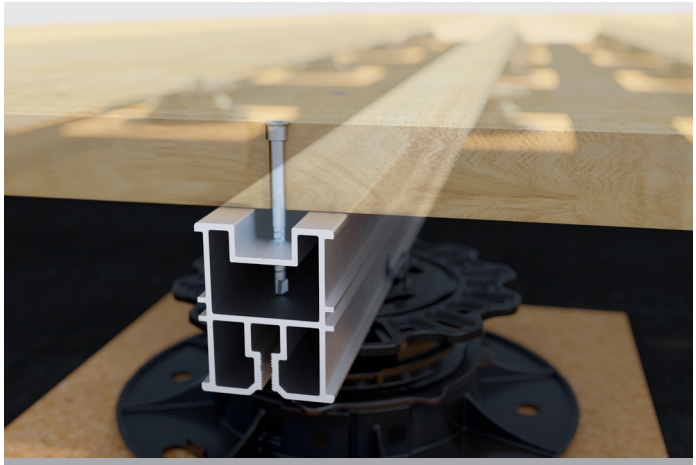
APPLICATION IMAGES – VISIBLE FIXING



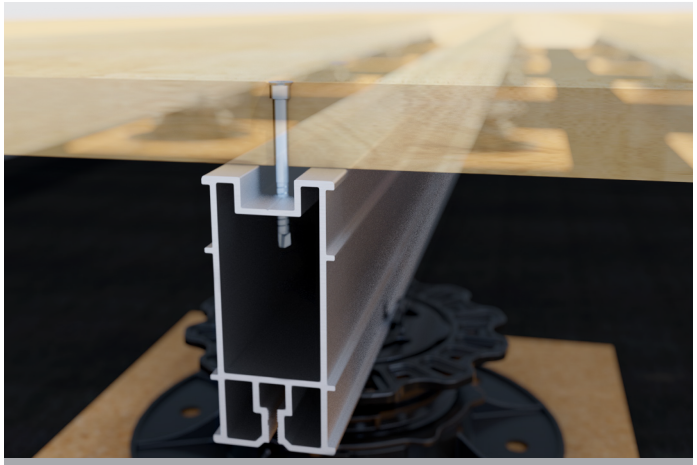
Application example: TERRA aluminium system profile H15



Application example: TERRA aluminium system profile H24



Application example: TERRA aluminium system profile H50



Application example: TERRA aluminium system profile H85

To go with this*

BASE-Adapter 40

Adjustable feet BASE-Line

Click-Adapter 40

Adjustable feet Profi-Line

*Not included

THE RIGHT SURFACE
FOR ADJUSTABLE FEET

If you wish to build a sturdy and durable patio, the condition of the ground plays a key role in the success of the project and should therefore be carefully prepared in advance.

If no foundation is available, we recommend using adjustable feet. In general, a load-bearing base made of gravel, crushed stone or concrete slabs is required for a professionally constructed decking structure. These can transfer any loads that arise down into the ground. The substructure, made of aluminium profiles or load-bearing timber, is then laid on top of this.

- In principle, a load-bearing substrate is required.
- If the substrate is loose, appropriate preparations must be made.
- Mark out the planned area and remove any existing vegetation, such as grass, stones and weeds.
- Remove the topsoil, which contains humus and soil organisms as well as inorganic matter.
- Once the topsoil has been removed, dig out a bed 20–30 cm deep. Fill it with crushed gravel or grit and compact each layer individually to ensure a stable base.
- Here too, a gradient of 1–2% towards the garden should be ensured.
- Pure sand and gravel are not recommended, as the individual grains do not form a stable base due to displacement.
- Lay out concrete slabs measuring approx. 30 x 30 cm at equal intervals to form the foundation.
- If necessary, a root barrier should be laid to prevent unwanted root and plant growth. Once the base has been laid, the adjustable feet and system profiles can be installed.
- If there is a risk of vibration on the decking, the decking feet should be secured in place. Furthermore, decking feet that are subjected to high-frequency loads should be secured against twisting using a screw.

FURTHER INFORMATION ON THE SUBJECT OF SUB-BASES CAN BE FOUND IN THE PATIO CATALOGUE

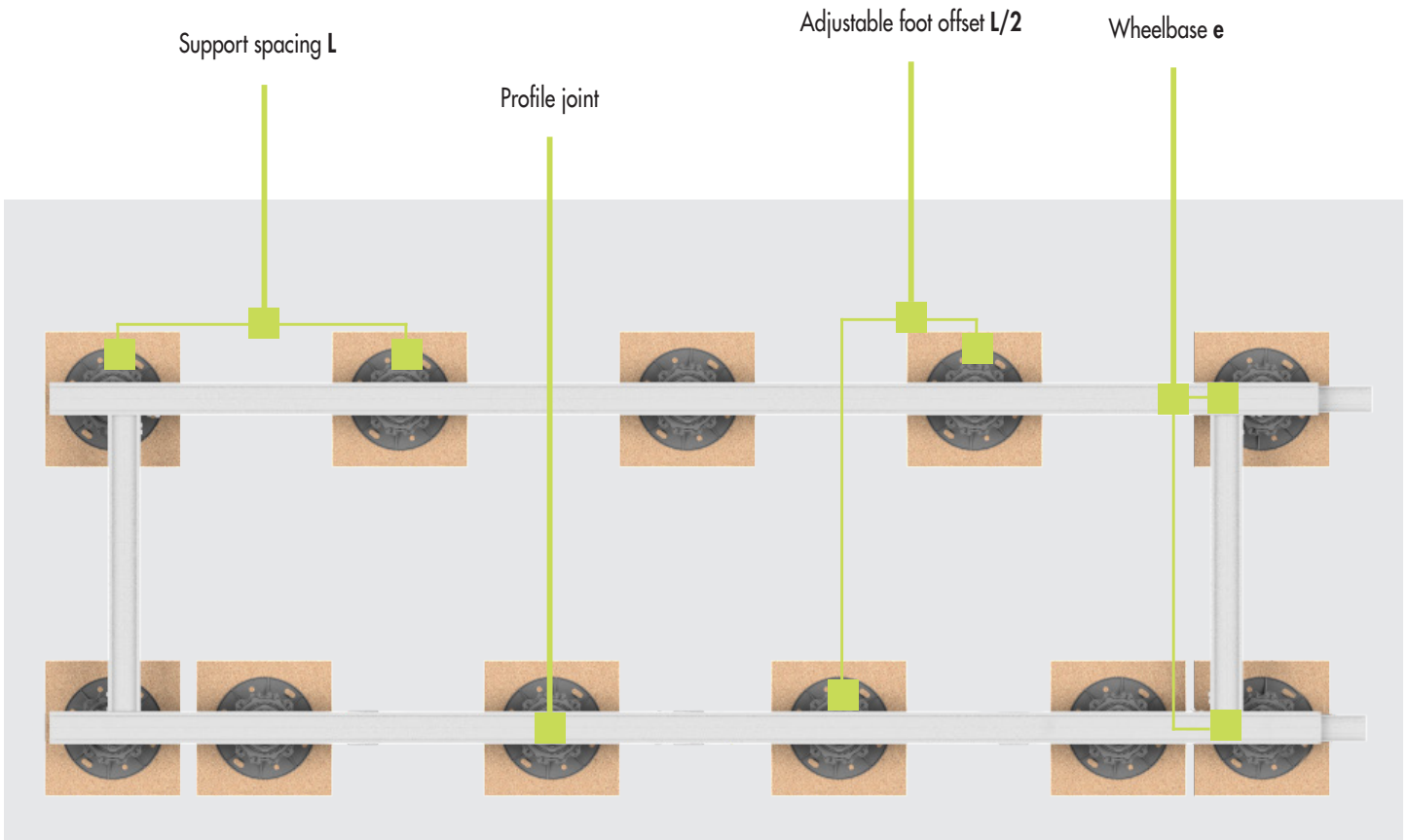
THE CORRECT SUPPORT SPACING FOR YOUR PATIO

The load-bearing capacity is determined by the choice of substructure, the spacing of the adjustable feet/supports along the profile, and the height as well as the type of decking.

The following example presents the pre-calculated values for different substructure profiles in tabular form. These can be selected from the table for live loads of 2, 3, 4 or 5 kN/m². A recommended centre-to-centre distance 'e' is determined based on the height and type of the top layer. For example, a 25 mm thick larch layer can be installed with a centre-to-centre distance of 500 mm. When selecting a load-bearing capacity/live load of 2.0 kN/m² (200 kg/m²), an adjustable foot from the Profi-Line with a tested compressive load of 8.0 kN must be installed at support spacing L every 900 mm along the aluminium sub-frame profile.

Example:

Payload [kN/m²]	Adjustable feet Profi-Line, zul. F = 8,0 kN							
	Centre-to-centre distance e [mm] between the profiles[b)]							
	300	350	400	450	500	550	600	800
2,0	1000	1000	1000	950	900	850	850	750
3,0 [d)]	1000	950	900	850	850	800	800	700
4,0 [c)]	900	850	850	800	750	750	700	650
5,0 [c)]	850	800	800	750	700	700	650	600



THE CORRECT SUPPORT SPACING FOR YOUR PATIO

Assessment of support loads[d]

- Bearing force ≤ 2,2 kN
- Bearing force 2,3 kN bis 8 kN

Max. support spacing L on adjustable feet or concrete for **TERRA aluminium system profile H15**

Payload [kN/m²]	Centre-to-centre distance e between the profiles in mm[b]								
	e=	250	300	350	400	450	500	550	600
2,0	L=	550	550	500	500	450	450	400	400
4,0[c]	L=	450	400	400	400	350	350	350	350
5,0[c]	L=	400	400	350	350	350	300	300	300

Max. support spacing L on adjustable feet or concrete for **TERRA aluminium system profile H24**

Payload [kN/m²]	Centre-to-centre distance e between the profiles in mm[b]								
	e=	250	300	350	400	450	500	550	600
2,0	L=	800	750	700	700	650	650	600	600
4,0[c]	L=	650	600	550	550	500	500	500	450
5,0[c]	L=	600	550	550	500	500	450	450	450

Max. support spacing L on adjustable feet or concrete for **TERRA aluminium system profile H50**

Payload [kN/m²]	Centre-to-centre distance e between the profiles in mm[b]								
	e=	250	300	350	400	450	500	550	600
2,0	L=	1200	1400	1350	1300	1250	1200	1200	1150
4,0[c]	L=	1250	1150	1100	1050	1000	950	950	900
5,0[c]	L=	1150	1150	1000	1000	950	900	900	850

Max. support spacing L for H85 support type, simply supported beam L[a)]

Payload [kN/m²]	Centre-to-centre distance e between the profiles in mm[b)]								
	e=	250	300	350	400	450	500	550	600
2,0	L=	2500	2350	2250	2150	2050	2000	1900	1850
4,0[c)]	L=	2000	1900	1800	1700	1650	1600	1550	1500
5,0[c)]	L=	1850	1750	1650	1600	1550	1500	1450	1400

Max. support spacing L for H85 support type, two-span beam L[a)]

Payload [kN/m²]	Centre-to-centre distance e between the profiles in mm[b)]								
	e=	250	300	350	400	450	500	550	600
2,0	L=	2850	2700	2550	2450	2350	2250	2200	2150
4,0[c)]	L=	2300	2150	2050	1950	1850	1800	1750	1700
5,0[c)]	L=	2100	1950	1900	1800	1750	1700	1600	1600

a)For live loads of 2, 4 and 5 kN/m², with an average floorboard thickness of 25 mm and a floorboard density of 7 kN/m³ (larch, pine, Douglas fir). Deflection is limited to L/250.

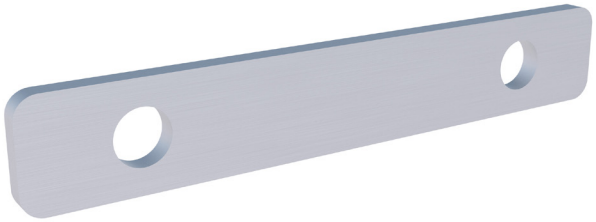
b)When using WPC decking, the centre-to-centre distance e between the profiles must not exceed 400 mm!

c)Live loads in accordance with DIN EN 1991-1; roof terraces = 4 kN/m², terraces in public spaces = 5 kN/m².

d)Maximum support loads categorised as support forces ≤ 2.2 kN for the HS Terra Classic series of adjustable feet and support forces ranging from 2.3 kN to 8 kN for the HS Terra Xpert series of adjustable feet.

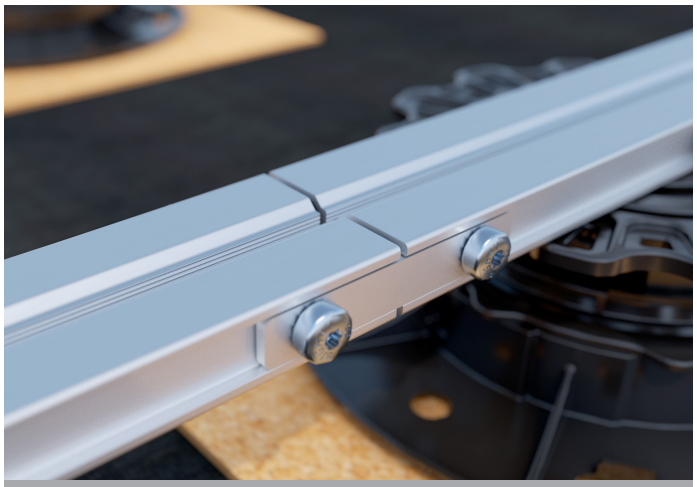
PROFILE CONNECTOR H15

The Eurotec H15 profile connector is the ideal fastening solution for joining two aluminium system profiles together in a decking substructure. The H15 profile connector is designed for use with the TERRA H15 aluminium system profile. For all other profile heights, the Decking Edge Set profile connector can be used.



MATERIAL

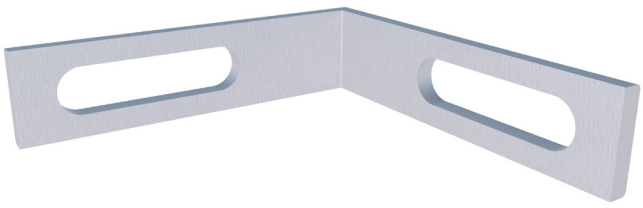
- Aluminium



Connecting two profiles using the profile connector H15.

TERRA CORNER BRACKET LOW

The TERRA low angle connector from Eurotec is used to create right-angled (90°) joints between two aluminium system profiles, as is often the case with cross-bracing, for example. The TERRA low angle connector should be used for structures built with the TERRA H15 aluminium system profile. For all other profile heights, the EVECO corner connector can be used.



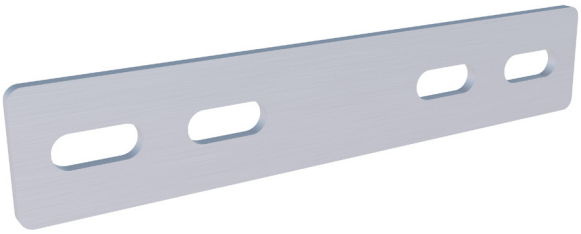
MATERIAL

- Aluminium

Example of use: TERRA angle connector low

TERRACE EDGE PROFILE CONNECTOR SET

The Eurotec Terrace Edge Profile Connector Set is the ideal fastening solution for joining two TERRA aluminium system profiles together in the terrace substructure. The Terrace Edge Profil Connector Set is designed for use in combination with the TERRA aluminiumsystem profile H24/H50/H85



THE SET CONSISTS OF

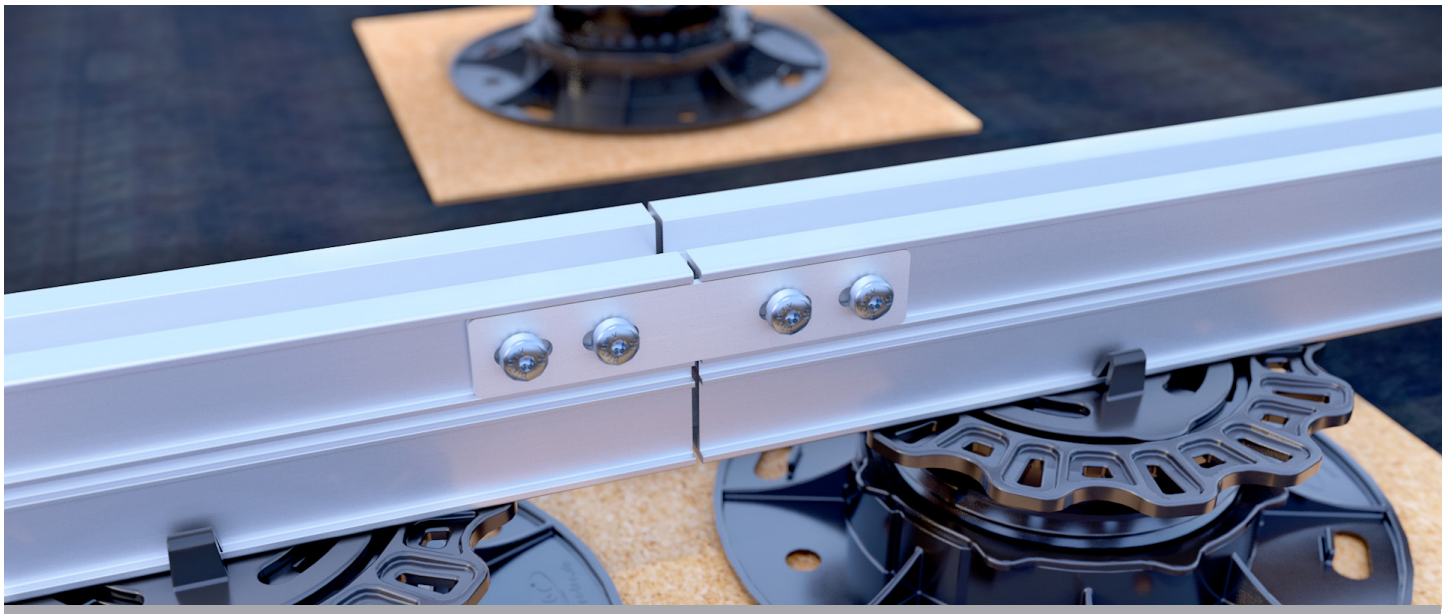
- 2 Profile connectors
- 8 Self-tapping screws 4,8 x 25 mm

MATERIAL

- Aluminium

Note

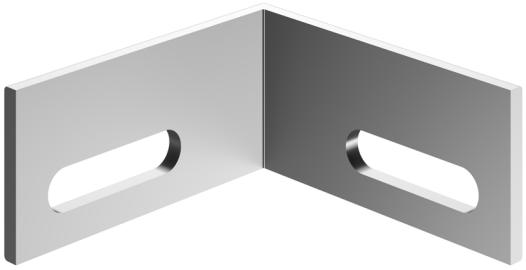
When using the TERRA H85 aluminium system profile, it is recommended that two profile connectors be used.



Example of use: Terrace edge profile connector set

CORNER JOINT EVECO

The Eveco corner connector from Eurotec is used to create right-angled (90°) joints between two aluminium system profiles, as is often the case, for example, with cross-bracing. The EVECO corner connector should be used for structures built with the TERRA aluminium system profile H24/H50/H85.



MATERIAL

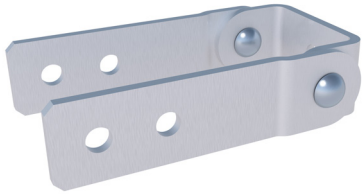
- Aluminium

Example of use: Corner connector EVECO

Example of use: Corner connector EVECO

TERRA JOINT 90° AND 180°

The TERRA joints ensure that the TERRA aluminium system profiles are optimally connected to one another. As the joints can rotate freely on one side, they can be positioned individually along the profile rail. When constructing terrace substructures, the TERRA joints are suitable for angles of up to 90° or 180°.



TERRA Joint 90°

TERRA Joint 180°

FEATURES

- Freely rotating joint
- For angles up to 90° or 180°
- Custom positioning on the profile rail
- The rivet is made of A2 stainless steel in accordance with DIN 6791

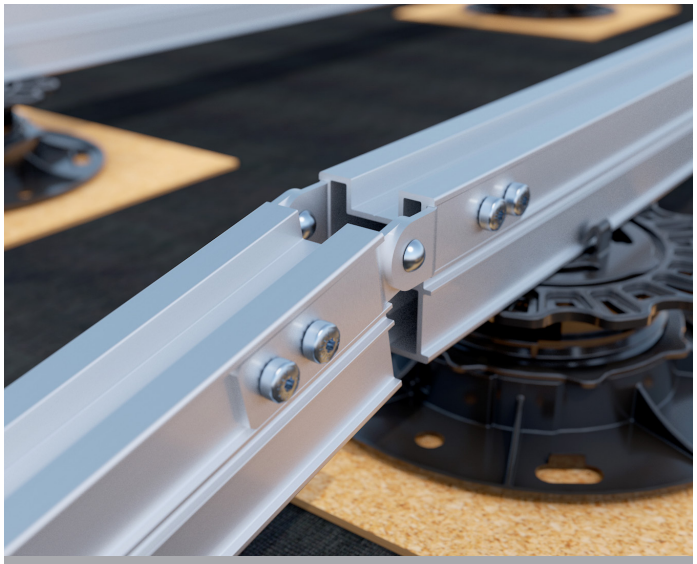
MATERIAL

- S235 hot-dip galvanised / A2 rivet

Note

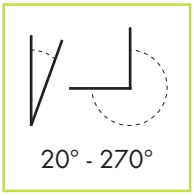
For TERRA aluminium system profiles H24/H50/H85. only

Example of use of the TERRA 90° joint



Example of use of the TERRA 180° joint

HINGE CONNECTOR EVO



The EVO hinge connector is the universal fastener for profiles that need to be fixed at an angle other than 90° to one another. It is simply screwed onto the side of the profiles and then flexibly adapts to any specific angle.

ADVANTAGES

- Versatile
- Easy to use for connections greater than or less than 90°
- Polygonal shapes are easier to construct
- For walkable structures, we recommend two securing devices per junction.

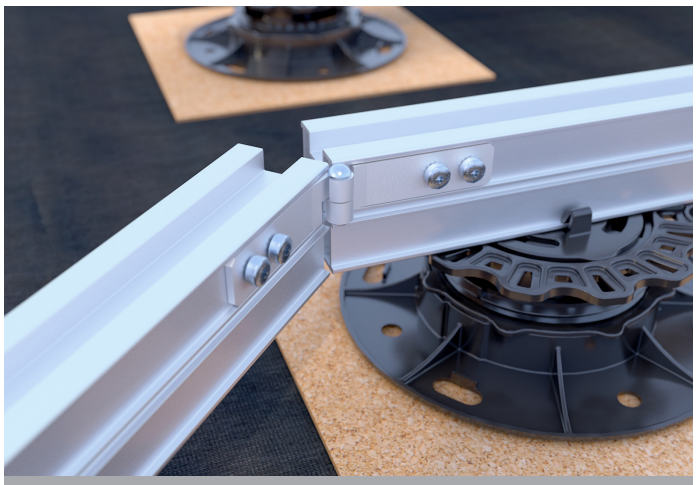
We recommend our BiGHTY PH 954090-50 self-tapping screw. Not included.

MATERIAL

- S235 Hot-dip galvanised / Rivet A2

CAN BE COMBINED WITH:

- TERRA Aluminium system profile H24/H50/H85
- Aluminium system profile EVO
- Aluminium system profile EVO-Light

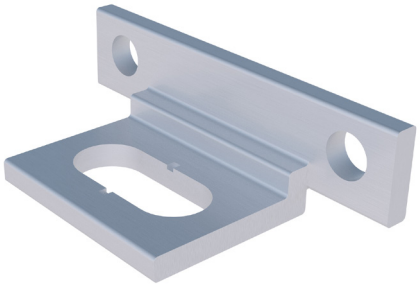


An example of the EVO hinge connector in use at a bend.

Example of the EVO hinge connector in use at an 80° angle.

TERRA CONCRETE CONNECTORS H15

The TERRA H15 concrete connector from Eurotec is designed for the direct connection of TERRA H15 aluminium system profiles to concrete floors. The TERRA H15 concrete connector is only compatible with the TERRA H15 aluminium system profile.



MATERIAL

- Aluminium

Note

For use with the TERRA aluminium system profile H15 only.

Application example: TERRA concrete connector H15

ALUMINIUM-CONCRETE ANGLE BRACKET

The Eurotec aluminium-concrete bracket enables the installation of our TERRA aluminium system profiles, EVO and EVO Light, on concrete.

ADVANTAGES

- Quick and easy installation
- Pre-drilled hole for fixing with the Rock concrete screw Hexagon/Hexagon with flange 7.5 mm
- Slotted hole to accommodate the thermal expansion of the aluminium

MATERIAL

- Aluminium

CAN BE COMBINED WITH:

- TERRA Aluminium system profile H24/H50/H85
- Aluminium system profile EVO
- Aluminium system profile EVO-Light

Example of use: aluminium-concrete angle bracket

WALL MOUNTING BRACKET EVO

The EVO wall mounting bracket is ideal for securing an aluminium decking substructure. The bracket is used to fix the TERRA and EVO aluminium system profiles directly to the wall. Two wall brackets are fitted opposite each other at the end of the substructure. These are screwed into both the profile and the wall. The slotted holes in the wall bracket allow the substructure to expand without any problems, thereby preventing it from slipping.

FEATURES

- Slotted hole diameter: 6 mm or 7 mm
- Length of the slotted hole: 15 mm
- Material thickness: 3 mm

MATERIAL

- Aluminium

CAN BE COMBINED WITH:

- TERRA Aluminium system profile H24/H50/H85
- Aluminium system profile EVO

Anwendungsbeispiel Wandanschlusswinkel EVO

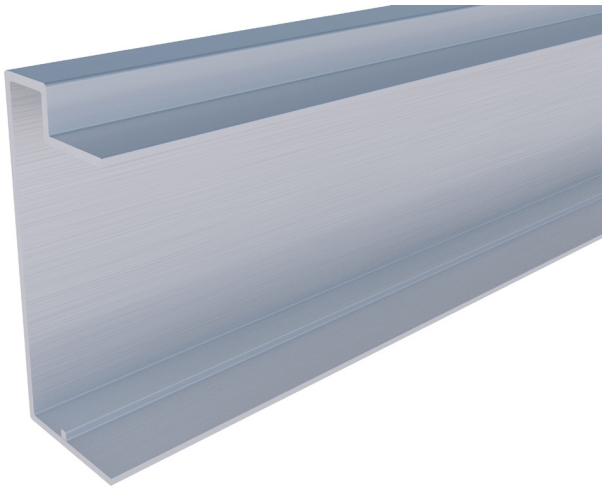
APPLICATION NOTE

Depending on the position of the wall, a waterproofing membrane must be installed. The fixing system is intended solely for connection to the wall and thus to secure the position of our profiles. No specific load specifications are provided for the fixing system, as it is not a load-bearing element. We recommend securing each profile.

Please note the following:
For fixing the wall connection bracket in concrete we recommend the Rock concrete screw and the Eurotec sealing plug for fixing in masonry. These are not included in the scope of delivery.

TERRA BLEND PROFILE H85

The TERRA H85 profile from Eurotec is used in combination with the TERRA H85 aluminium system profile to form a closed frame around the patio. Using just two system components, an entire patio structure can be created.



FEATURES

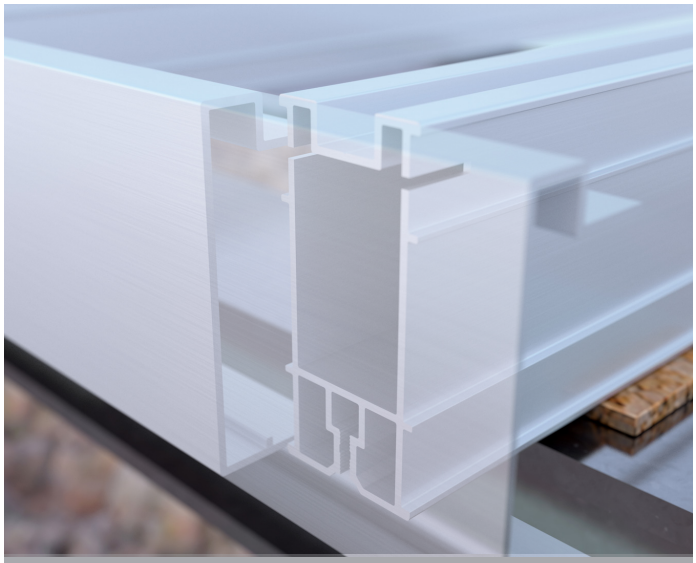
- A clean, closed modular system
- Just two components for a complete patio substructure
- High dimensional stability and flatness
- Large spans are possible
- Lightweight
- High flexibility in design and installation
- High durability

MATERIAL

- Aluminium

Note

Compatible exclusively with the TERRA H85 aluminium system profile.



Application example: TERRA Blend Profile H85

Application example: TERRA Blend Profile H85

TERRA CENTRE AND EDGE SUPPORT

The TERRA centre support and TERRA edge support have been specially developed for the TERRA aluminium system profiles. These make it easy to secure concrete and natural stone slabs to our TERRA aluminium system profiles.

TERRA Centre support

TERRA Edge support

FEATURES

- For snap-on installation on TERRA aluminium system profiles.
- To prevent the stone slabs from slipping at the edges, the clips must be secured using a 4.2 x 35 mm self-tapping screw.
- The joint width is 4 mm.
- The joint spacers can be removed individually as required.

MATERIAL

- PP (polypropylene)

TERRA CENTRE PANEL

Manufacturing tolerances of up to 2 mm in stone slabs can be compensated for using the adjustable centre piece of the TERRA centre support.

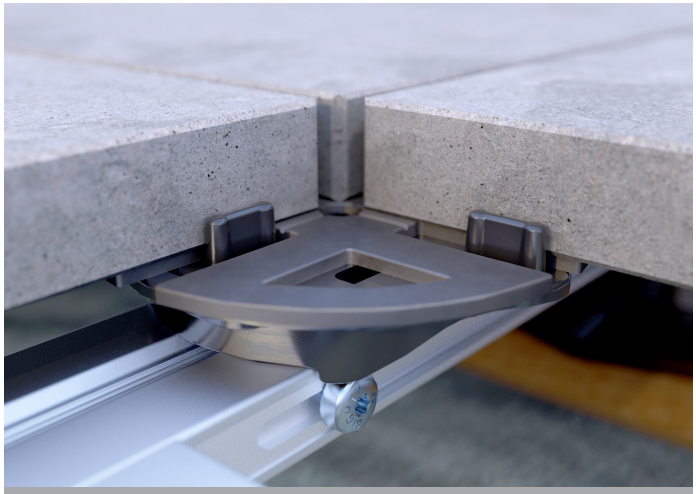
Note

The TERRA edge support is designed solely to prevent the stone slabs from slipping sideways. Due to the lever arm effect, it is not a load-bearing structure capable of withstanding mechanical stress.

To go with this*

Impact sound insulation panel Ø 90

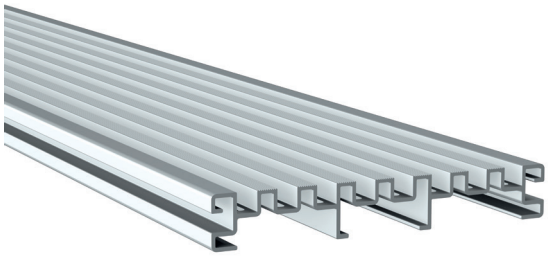
*Not included



The TERRA intermediate layer used in conjunction with the Ø 90 impact sound insulation disc.

The TERRA edge trim used in conjunction with the Ø 90 impact sound barrier.

RELATED PRODUCTS

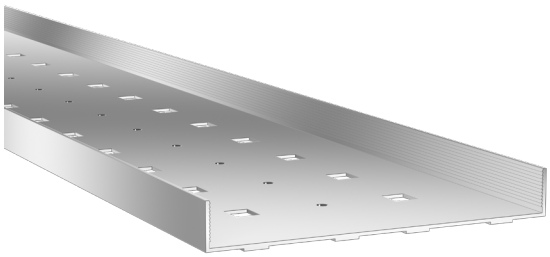


Alu-Drainagerost DrainTec

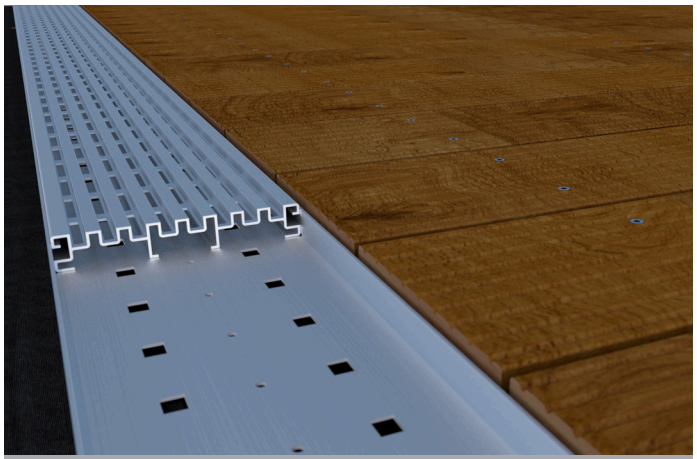
DrainTec Clip

Without DrainTec, rainwater splashes against the door panel or the cladding.

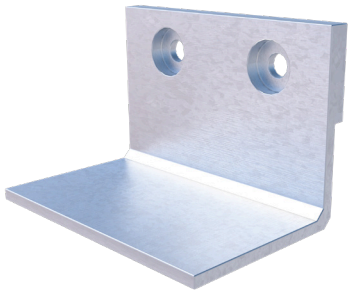
With DrainTec, rainwater is drained away in a controlled manner and flows directly into the ground.



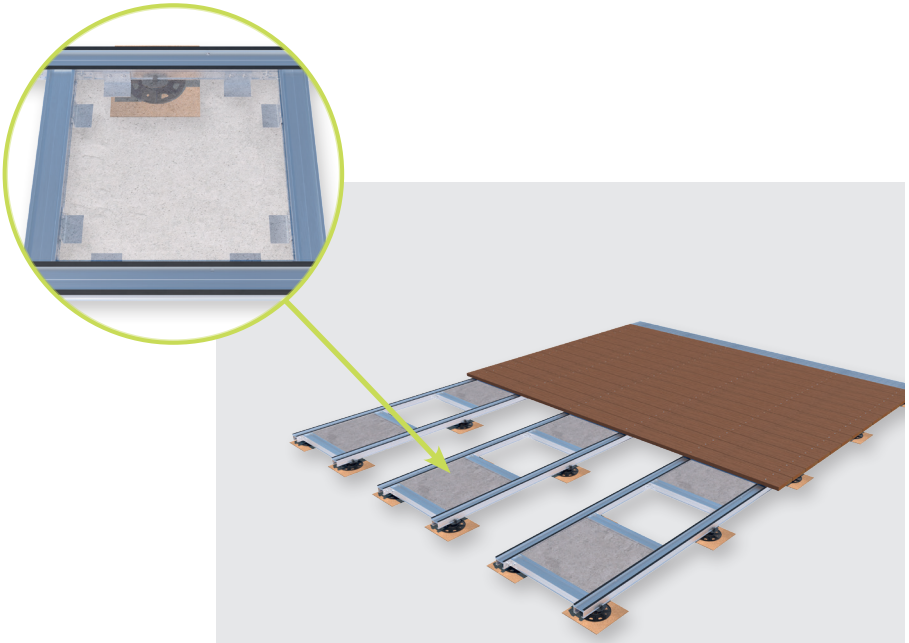
DrainTec Base



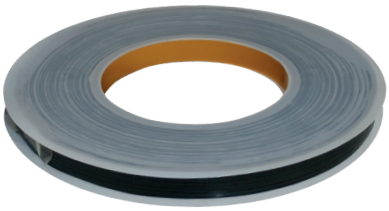
DrainTec Base in combination with the DrainTec drainage grate without a sub-frame.



Load-bearing bracket

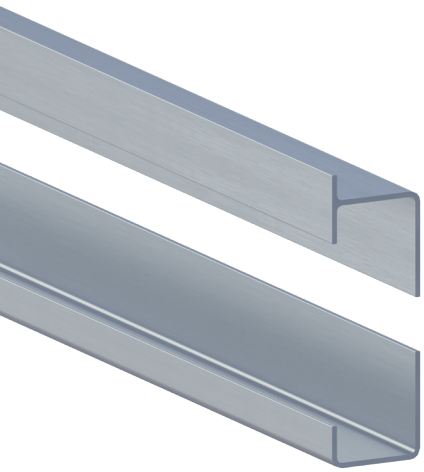


Wind-load securing for wooden decking using concrete slabs and ballast brackets.

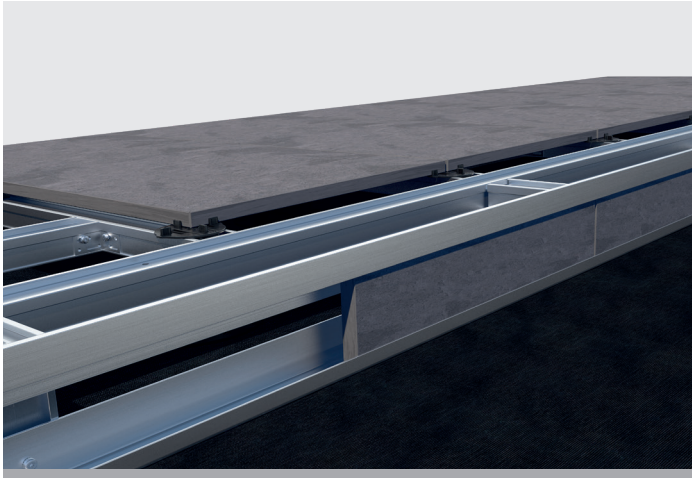


MaTre-Band

Example of use: MaTre tape



Finishing profiles for aluminium substructure



Example of use: Finishing profiles for aluminium substructure

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