LIGNODUR
terrafina®
Floorboard systems

Laying instructions

LIGNODUR terrafina®

Aluminium substructure

MADE IN GERMANY

www.terrafina.de

LIGNODUR terrafina®
Floorboard systems

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Aluminium substructure

Laying instructions:
LIGNODUR terrafina® floorboards
Aluminium substructure

General notes
These laying instructions will help you to properly, safely and economically install **LIGNODUR terrafina®** floorboards on aluminium substructures from the terrafina® system.

Target group for these laying instructions
These installation instructions are intended for landscape gardeners, carpenters, joiners or roofers as well as for experienced do-it-yourselfers.

Obligations in dealing with these laying instructions
Please carefully read the laying instructions in full before installation.

Any person who installs **LIGNODUR terrafina® floorboards** needs to have thoroughly read and understood these instructions in full. Please pay attention to the latest technical developments according to the technical rule 02 BDZ and the GD Holz/wood brochure „Terraces and Ground Coverings". Please always keep these laying instructions handy and in a safe place.

Additional regulations
Complement these laying instructions with current accident prevention regulations related to the workplace and other national and locally valid regulations. The safety regulations and standards of the respective countries must be observed.

Intended use

The **LIGNODUR terrafina® floorboards** and the aluminium substructure profiles from the terrafina® system have been developed for use as a cover for terraces, balconies, walkways or as borders for swimming pools and ponds. Any other use is not in accordance with the intended use and therefore unauthorised and may lead to property and personal damages and injuries.

The floorboards and substructure profiles do not have a general approval by the building inspectorate and therefore should not be used for self-supporting, structural purposes. Before use, please check whether LIGNODUR terrafina® is suitable for the intended use. If necessary, seek advice from an approved structural engineer. **LIGNODUR terrafina® floorboards** may only be installed with the accessories that are available in the terrafina® system.

The „Intended use" also includes the observance of all information in these laying instructions, in particular the observance of the safety notes, the local conditions and building regulations.

In addition, please observe the fire protection regulations regarding the different building classes.

Important information

LIGNODUR terrafina® can be sawn, milled or drilled with conventional woodworking tools. The WPC boards mainly consist of wood fibres. These give the product its mechanical properties. Due to the high proportion of wood, **LIGNODUR terrafina®** has natural expansion properties. When laying the **LIGNODUR terrafina®** floorboards, special care has therefore to be taken with regard to:

- the substrate
- slope
- distances and projections
- edge distances
- ventilation from the rear.

If these important points are ignored, the material could warp. In such cases, the warranty claim expires and consequential costs arising from non-observance of the installation instructions will not be borne or reimbursed.

Production-related dimensional tolerances in length, width and thickness are to be considered when laying the floorboards.

Möller GmbH & Co. KG assumes no liability for damages resulting from unauthorised use, improper laying or a lack of care.

Basic safety instructions related to the foundation

The substrate must be sufficiently strong to bear the load and grounded in such a way that it is free of frost. A substrate that is insufficiently load bearing can lead to damages to the structure and the objects and people on it.

The spacing of the substructure profiles described here is sufficient for a load according to DIN EN 1991-1-1, payloads for buildings for category A: living areas, category B: office areas, category C1: areas with tables etc.

Technical questions?

These laying instructions relate to standard layings. Due to the large number of design possibilities, it is not possible to show all of the details here.
If you have further questions or need any technical advice, please get in touch with our e-mail contact:
terrafina@moeller-profilsysteme.de.
In addition, please observe further notes in our technical information and the cleaning recommendations.

Validity

Our installation instructions have been drawn up on the basis of current technical knowledge and may be adapted to technical progress at any time without notice.

Therefore, please check if you are using the latest version or if an updated version is available from www.terrafina.de.

System components
LIGNODUR terrafina® floorboards
Aluminium substructure

terrafina® lounge

terrafina® lounge XL

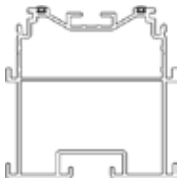
terrafina® massiv
Shipdeck design

terrafina® massiv
Smooth design

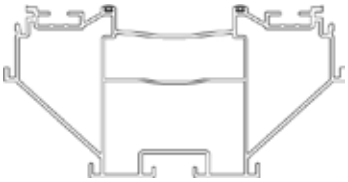
terrafina® massiv XL
fine textured

terrafina® massiv XL
smoothly brushed

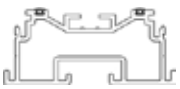
Ventilation and
drainage profile



80 x 80 mm substructure
profile (height x width)



80 x 160 mm substructure
profile (height x width)



35 x 80 mm substructure
profile (height x width)

35 x 160 mm substructure
profile (height x width)

17 x 55 mm substructure
profile (height x width)

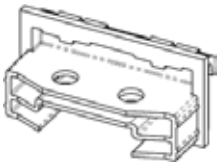
80 x 160 mm anchor for
substructure

Ground fixing element for the
35 x 80 mm and 80 x 80 mm
aluminium substructure

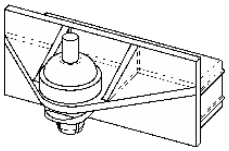
Starter profile 15 cm

Fixing joint 20 cm

Profile connector



Connector



Angle connector

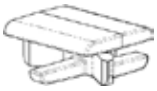
Connector block

Fixing device

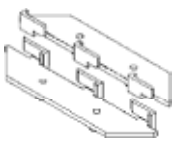
Drilling screws 3.9 x 19 mm

Installation clip

Inspection clip



Spacer 3 mm



Universal connector -
system set incl. screws

Adjustable feet with a clip
adapter
25-40 mm
35-70 mm
65-155 mm
145-225 mm

Building protection mat

LIGNODUR®
Installation adhesive

End panel
lounge

End panel
massiv

General installation instructions

1. Condition of the substrate

The substrate must be load-bearing, frost-free and water-permeable. Controlled water drainage must be ensured. The following are suitable as a substrate: crushed stone (thickness at least 40 cm) or old terrace surfaces such as cobbles, concrete, welding strips on a bitumen or PVC base, wood and steel structures.

The substrate must be designed in such a way that penetrating moisture can either be discharged or drained into the substrate through a drainage layer.

Substrates that absorb and store moisture are not suitable for installation. In case of sealed surfaces, particular attention must be paid to the fact that no depressions exist and that the water drainage is not prevented by installations.

For this reason, no continuous building protection mat, non-woven fabric etc. should be used. The growth of vegetation must be avoided, e.g. by edging with stones, etc. In the case of an application that requires building authority approval, a statically dimensioned, load-bearing substrate is required as a support for the profiles. The local building regulations have to be observed.

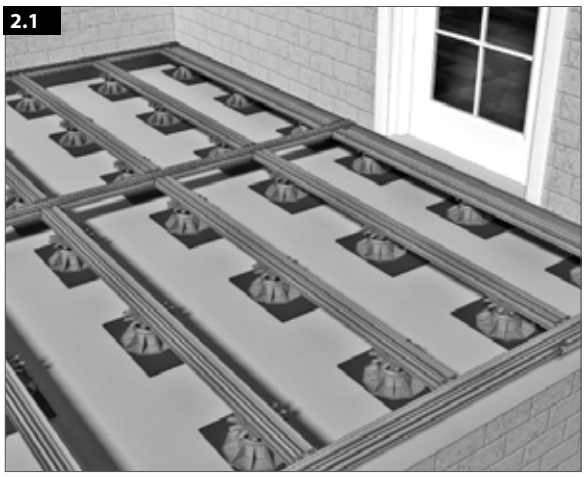
2. General notes

According to the general technical state, the substructure should be carried out as a frame. This setup is suitable for screwable as well as non-screwable substrates. In addition to this, the frame guarantees a clean alignment of the substructure profiles.

Of course, it is still possible to install individual substructures without a frame on suitable, screwable substrates.

For the outer substructure (floorboard end) of each partial area, a double substructure (35 x 160 mm or 80 x 160 mm) should be used or alternatively two sub-floor profiles (35 x 80 mm or 80 x 80 mm) should be installed at a distance of 150 mm max.

2.1



The outer substructure must be fixed against lifting by means of a frame or a corresponding fastening. At least 15 kg/ running metre should be estimated.

3. Slope

LIGNODUR terrafina® lounge, lounge XL, massiv smooth and massiv XL smooth can be installed without slope. This might, however, extend the drying time of the floorboards. This can lead to the formation of water rings and promote the settling of algae and fungi. We therefore recommend a slope of 2% for these types of boards (in the longitudinal direction of the boards).

In the case of the **LIGNODUR terrafina® solid shipdeck and massiv XL fine** floorboards, a slope of 2% is required in the longitudinal direction of the boards, otherwise drainage of the structures cannot take place.

General installation instructions

4. Back ventilation

Basically, a sufficient back ventilation of the areas has to be paid attention to.

The hollow spaces between the substructure profiles are not to be filled in to guarantee an air circulation below the floorboards. The specified edge distances are to be observed.

We recommend the usage of ventilation and drainage profiles. Stagnant moisture under the floorboards has to be prevented.

Validity of the laying instructions

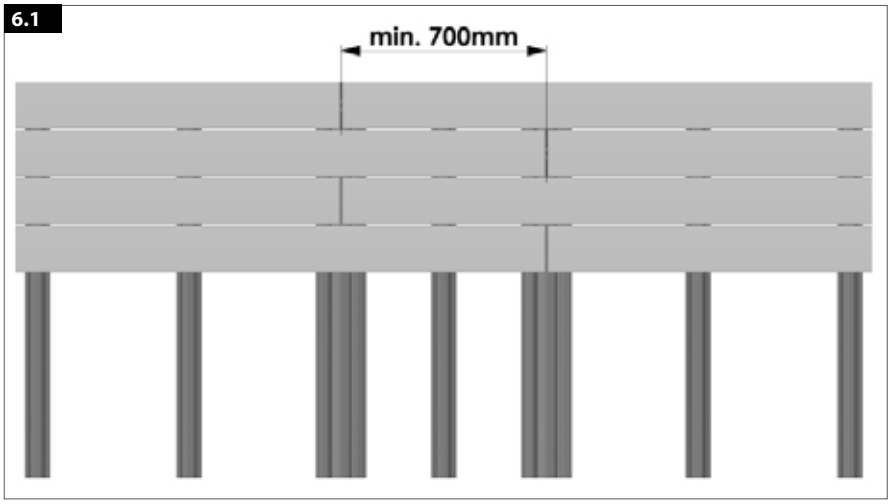
5. Area size

These installation instructions are suitable for standard areas with **maximum length of 24 m in the direction of the floorboards.** Larger surfaces have to be provided with expansion joints.

6. Laying pattern

These installation instructions are suitable for installation patterns where the joints are at least 70 cm apart.

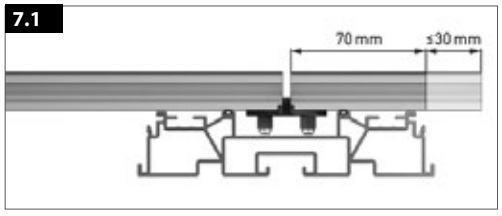
6.1



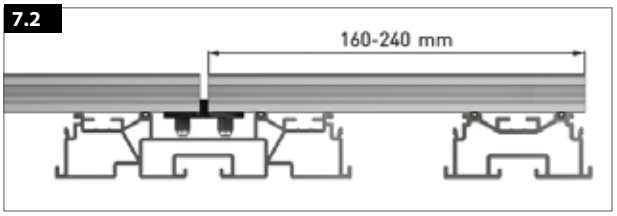
7. Minimum dimension of the floorboards

The shortest possible length of the floorboards in the edge area is 70 mm (100 mm including a projecting end of 30 mm at maximum) for standard laying pattern. (Fig. 7.1) If the length of the remaining pieces is between 100 mm and 160 mm, the installation pattern must be adjusted. In case of using offcuts with a length between 160 and 240 mm, the choice of the substructure profiles has to be aligned. (Fig. 7.2).

7.1



7.2

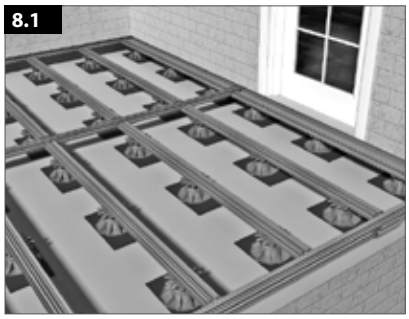


Height adjustment

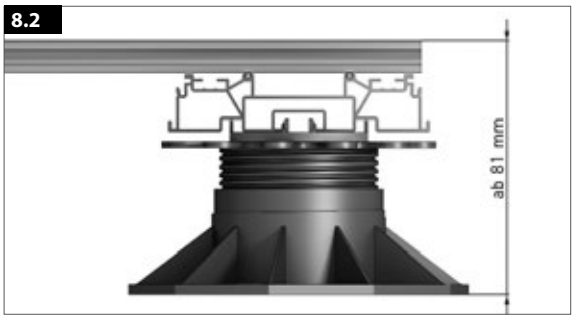
8. Usage of adjustable feet

From an installation height of 81 mm (sealing sheets 89 mm) the usage of adjustable feet is possible.

8.1



8.2

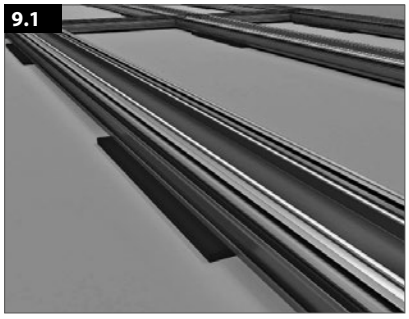


The adjustable feet are clipped into the mounting groove from below.

9. Usage of building protection mats

Building protection mats should always be used for continuous surfaces. Placement takes place in accordance with the max. permissible support distances of the respective aluminium-substructure (see page 13).

9.1



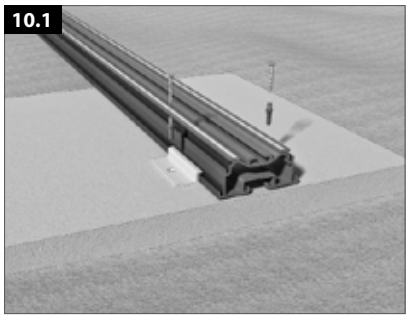
Min. construction heights (building protection mat + substructure profile + floorboard):
aluminium-substructure 17 x 55 mm = from 46 mm
aluminium-substructure 35 x 80 mm = from 64 mm
aluminium-substructure 80 x 80 mm = from 109 mm.

A maximum of 3 building protection mats (H=8mm) up to a total height of 24 mm may be used. Furthermore, adjustable feet from the terrafina® system accessories have to be used..

Fastening the substructure profiles

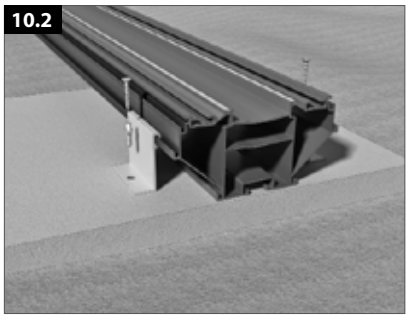
10. Floor fixing / floor anchors

10.1



With the help of the ground fixing element, the 35 x 80 mm and 80 x 80 mm substructure profiles can be fixed to the substrate.

10.2

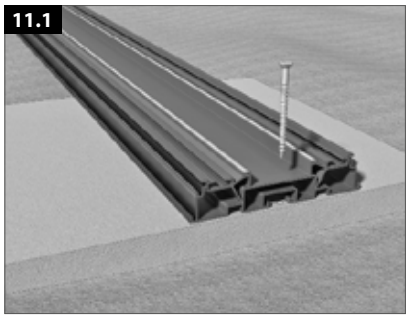


The 80 x 160 mm substructure is screwed to both sides of the profile with the corresponding floor anchors.

Fastening the substructure profiles

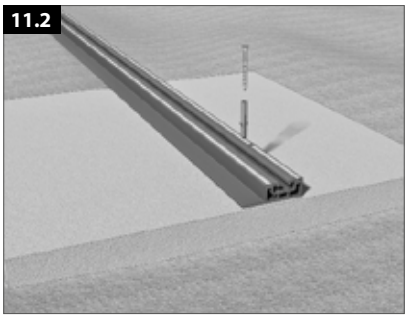
11. Direct fixing

11.1



The 35 x 160 mm substructure profile can centrically be screwed through the substructure profile.

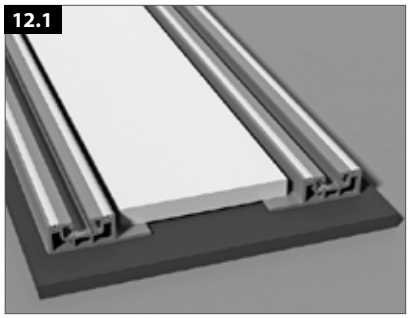
11.2



The 17 x 55 mm substructure is screwed to the substrate through the substructure profile using the screws from the screw set.

12. Special solutions

12.1

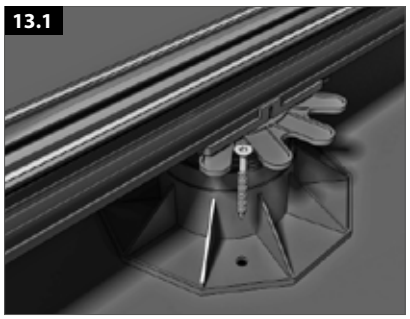


Usage of 150 x 10 mm continuous steel profiles between the 17 x 55 mm substructure profiles. (only for lounge floorboards)

13. Fixing of the adjustable feet (for screwable substrates)

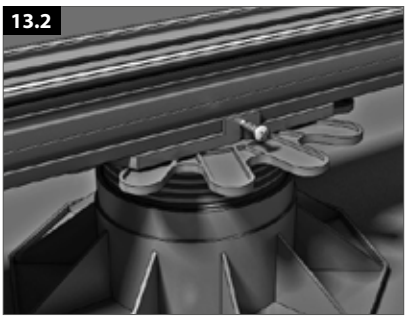
The adjustable feet can either be fixed to the substrate or to the substructure. This prevents the entire surface from moving.

13.1



In each case, the adjustable feet are fixed to the subfloor with 2 opposite screws.

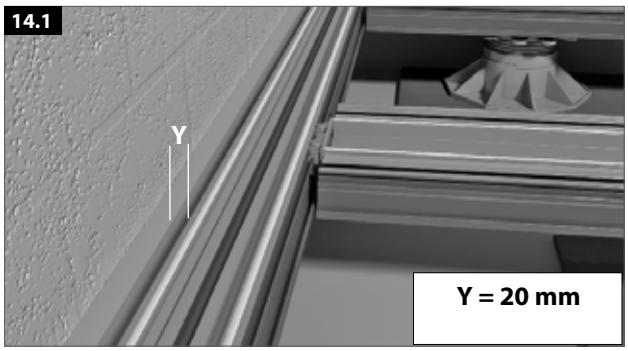
13.2



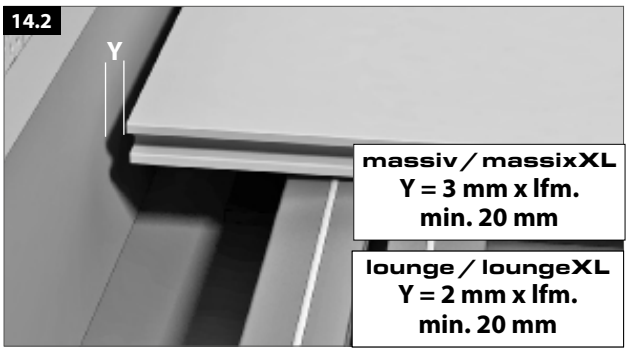
The adjustable foot can be fixed to the 35 x 80 mm, 80 x 80 mm and 80 x 160 mm substructure profiles with the help of a drilling screw.

Edge distances

14. Edge distances



Distance of the substructure profiles



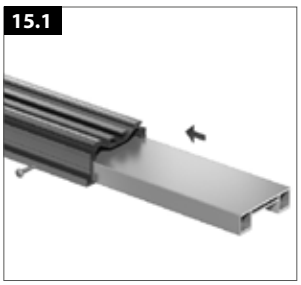
Distance of the floor boards

In order to compensate for changes in length due to temperature and humidity and to ventilate the substrate, the distance to fixed-parts of the building or other fixed points must be at least 20 mm on all sides or 2 or 3 mm per metre in the longitudinal direction of the profile, or at least 20 mm.

Substructure profiles edge to edge

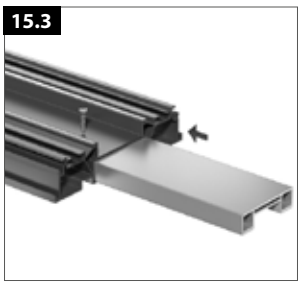
15. Substructure profiles edge to edge

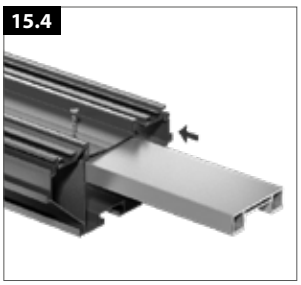
With the help of a profile connector, it is possible to extend all variants of the substructure profiles with the exception of the 17 x 55 mm substructure. This way, remnants of substructure profiles can be used. A combination of different substructure profiles is also possible by this.



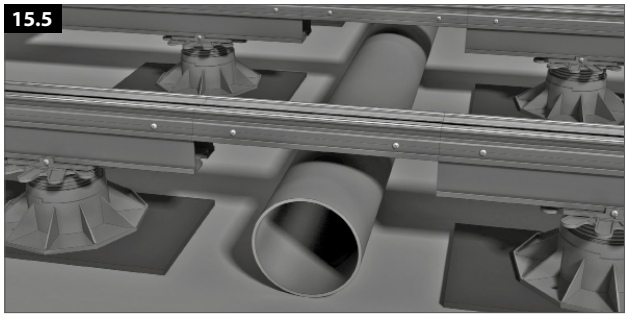
The profile connector is half (20 cm) put into the substructure profiles.

When using the 35 x 80 mm and 80 x 80 mm substructure profiles, the profile connector is screwed in the area of the notch on one side.

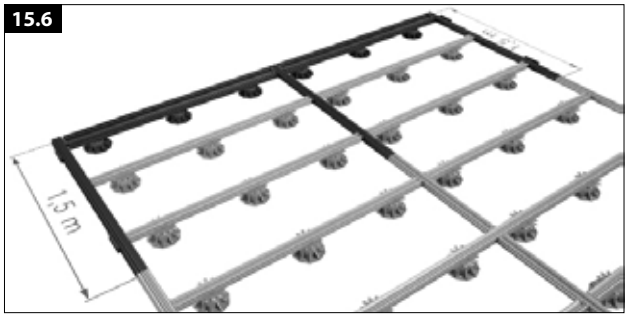




When using the 35 x 160 mm and 80 x 160 mm substructure profiles, the connector is screwed from above..



The different substructure versions can be easily combined by the profile connector. Example: Bridging a pipe.



The profile connector must not be used with self-supporting frames:

- on the outer 1.5 m of a cross-rail
- in the outer substructure profiles at the end of the floor-board.

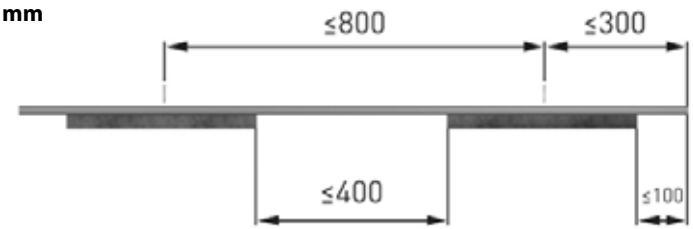
Projecting end substructure profiles, supporting distance

16. Supporting distance and projecting end

For the maximum supporting distances and projecting ends, the following specifications are to be observed:

16.1

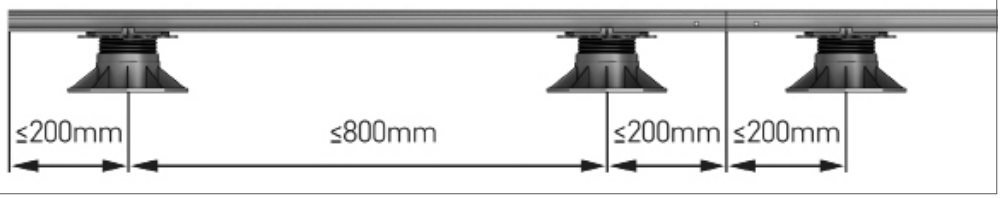
Substructure profile 17 x 55 mm



The distance between the fixing points is a maximum of 800 mm. Use of the substructure on adjustable feet is not intended.

16.2

Substructure profile 35 x 80 mm



The distance between the fixing points is a maximum of 1.200 mm. When using adjustable feet, each adjustable foot must be fastened under the respective outer substructure.

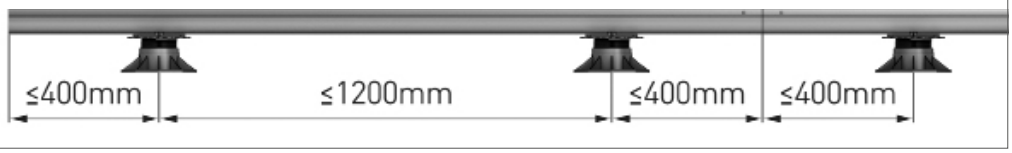
16.3

Substructure profile 35 x 160 mm

When using the substructure profile 35 x 160 mm as an outer substructure profile, the distance should be limited to 800 mm. The distance between the fixing points is a maximum of 1.200 mm. When using adjustable feet, each adjustable foot must be fastened under the respective outer substructure.

16.4

Substructure profiles 80 x 80 mm and 80 x 160 mm



The distance between the fixing points is a maximum of 1.800 mm. When using adjustable feet, each adjustable foot must be fastened under the respective outer substructure.

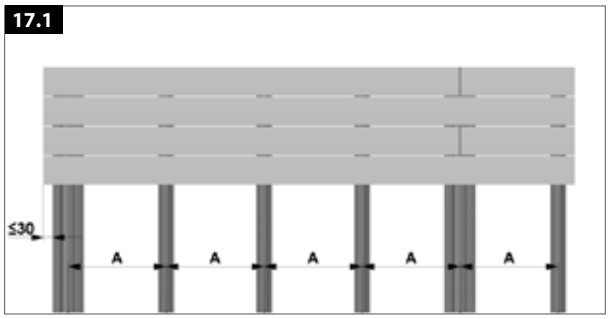
Distance of the substructure profiles, floorboard protrusion

17. Distance of the substructure profiles, permissible floorboard protrusion

The following generally applies:

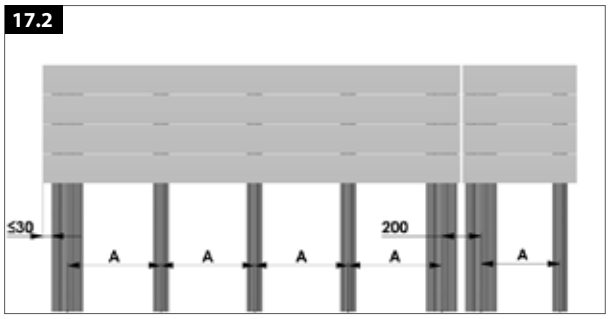
- The projection of the floorboards to the substructure must not exceed 30 mm in the direction of the profile.
- The centre-to-centre distance A of the substructure profiles (measured in the direction of the floorboard), irrespective of the width of the substructure profile, must not exceed - 400 mm for lounge - 500 mm for lounge XL, massiv and massiv XL.
  If two substructure profiles are used instead of one double substructure profile, the centre between the substructure profiles is assumed for the calculation.
- Substructure profiles with a width of 160 mm and two fastening channels are to be used for joints in the half-offset. For continuous joints, 2 substructure profiles with a width of 160 mm are used.

17.1



The substructure arrangement and spacing in the case of half offsets

17.2



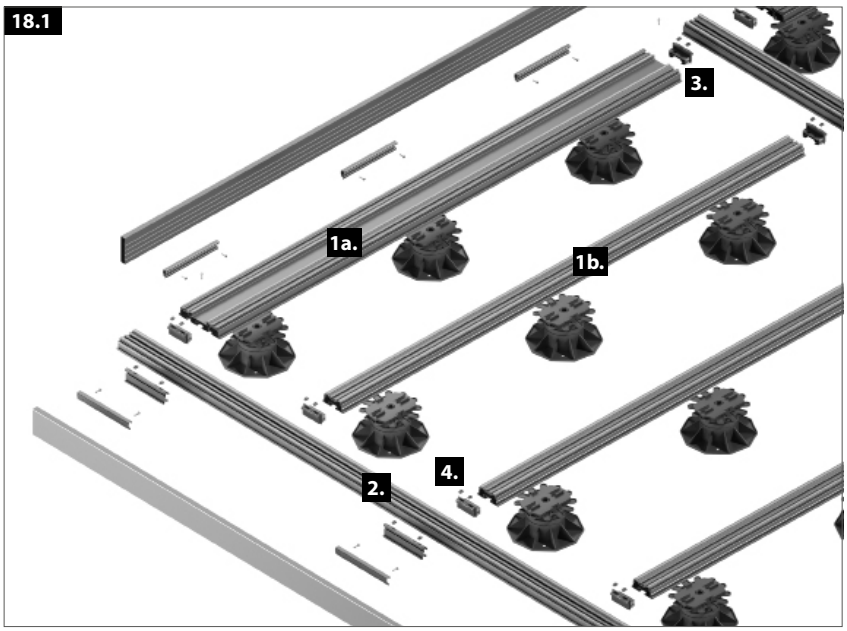
The substructure arrangement and spacing for continuous joints

At least 3 fastening points are required for floorboards which are 0.40 m long or longer. If the floorboards are not laid at 90° to the substructure, the distances must be kept in the direction of the boards.

Formation of the substructure frame

18. Basics

18.1



1a. Substructure profile / fixed length / outer substructure

1b. Substructure profile / fixed length

2. Crossbar

3. Connector

4. Connector blocks

Formation of the substructure frame

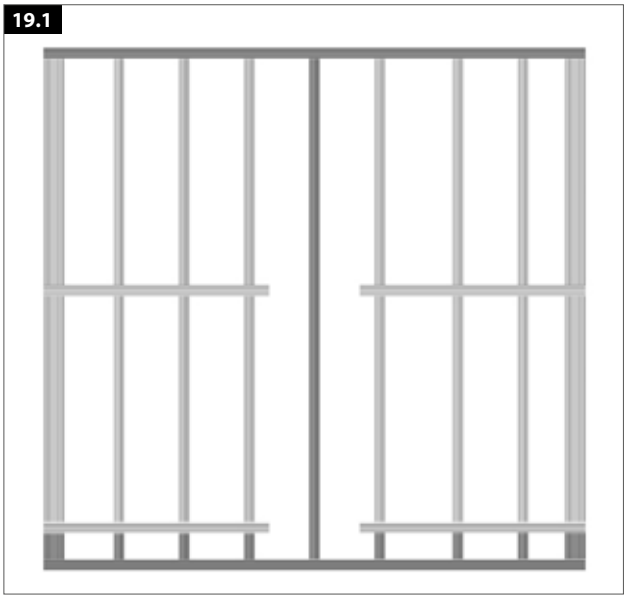
18. Basics

- **The outer substructure (1a.) at the floorboard end of each partial area and the substructure below the joint has to be carried out as a substructure profile with a width of 160 mm (35 x 160 mm or 80 x 160 mm).**
- **The construction of the frame starts on that side where the laying should also begin.**
- The outer substructure profile (1a.) is kept in place and a warping of the floorboards is prevented through the use of crossbars (2.) at an angle of 90° to the normal orientation of the substructure profiles.
- Only substructure profiles with a width of 80 mm are to be used for the crossbars (2.).
- The crossbars (2.) have to pass through to the outer edge of the surface.
- A length of 173.2 cm is sufficient for the crossbars (2.)
- The centre-to-centre distance of the crossbars (2.) is a maximum of 2.0 (3.0) m for the 35 (80) mm high substructure profile. For this purpose, fixed lengths for the sub-structure profiles are available in the delivery programme in the lengths 173.2 cm and 294.5 cm. By using these fixed lengths, it is ensured that the crossbars (2.) are positioned under a floorboard and that the fixing of the installation clips is not affected.
- In each case, a connector (3.) with two connector blocks has to be used at each connection point.
- On the outer substructure profiles (1a), the connector (3.) should be screwed into the substructure profile, as well as on every 5th substructure profile.

19. Optimisation potential by using fixed lengths

The offered fixed lengths enable the partly modular construction of surfaces. For these partial areas, the substructure profiles don't have to be cut any more. The saving of time is correspondingly large. Due to the modular construction, large parts of a surface can be created with ready-made components (marked light grey in the following):

19.1



Example 1, Large area:
For this area covering approx. 33 m², up to 68 % of cut pieces can be saved by using fixed lengths.

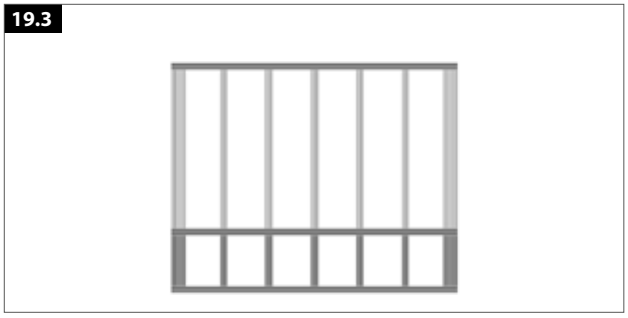
19.2

Example 2, Medium area:
For this area covering approx. 16 m², up to 65% of cut pieces can be saved by using fixed lengths.

Formation of the substructure frame

19. Optimisation potential by using fixed lengths

19.3



Example 3, Small area:
For this area covering approx. 8 m², the use of fixed lengths can save up to 41 % of cuttings.

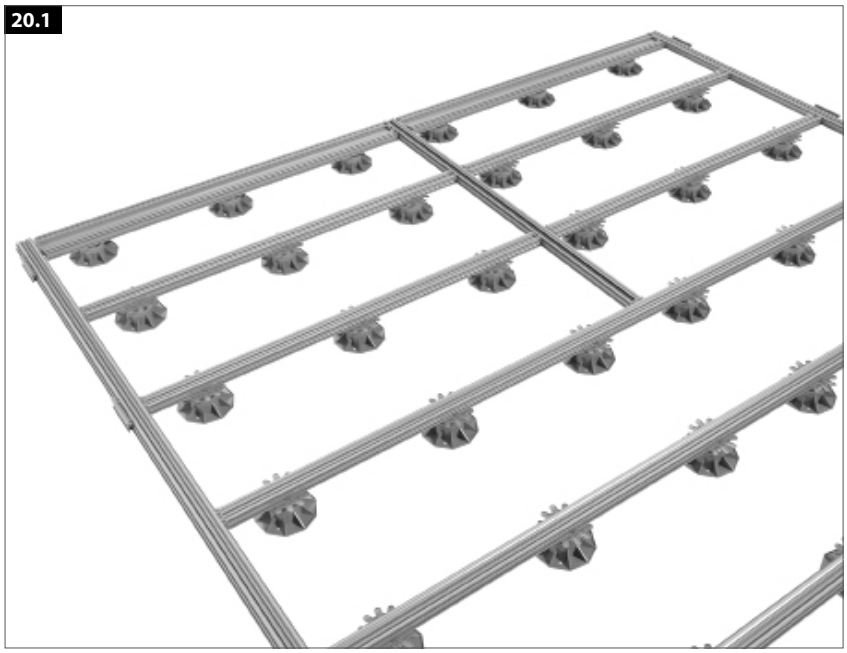
By using fixed lengths, material costs can be optimised and laying times diminished.
(Please note: all indications refer to the above-mentioned area examples. In practice, the savings potential can deviate due to different laying parameters!)

Special features for widths over 12 m:
For area widths over 12 m, it is no longer possible to guarantee that the crossbars (2.) lie under a floorboard due to possible width tolerances of the floorboards. For this reason, in the design with additional crossbars (2.), the length of the substructure profiles / fixed lengths (1a. + 1b.) may have to be adjusted.

20. Construction of the frame on non-screwable substrates

A self-supporting frame has to be built.

20.1

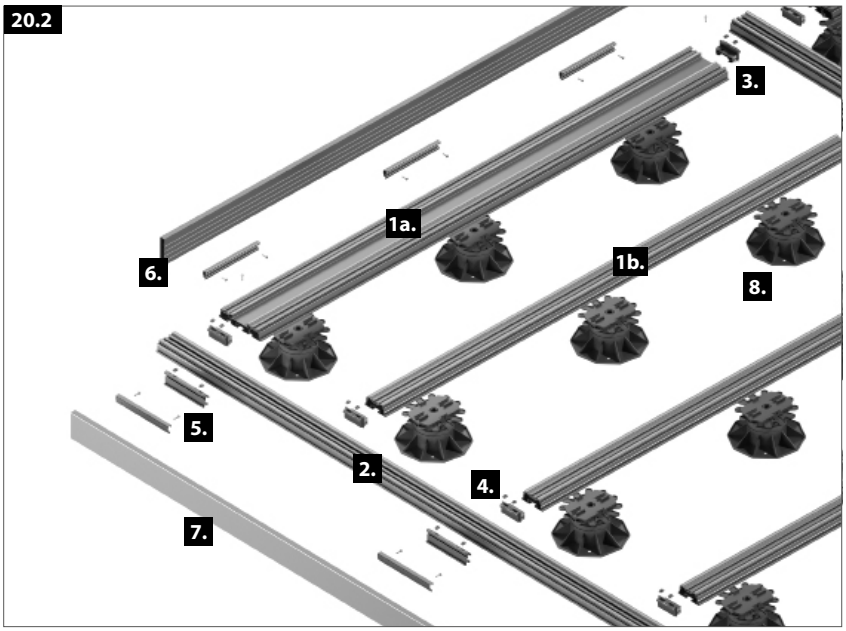


Examples of substrates that cannot be screwed: Sealed surfaces, supports without sufficient pull-out strength / weight (min. 15 kg/ running metre).

Formation of the substructure frame

20. Construction of the frame on non-screwable substrates

20.2



1a. Substructure profile / fixed length / outer substructure

1b. Substructure profile / fixed length

2. Crossbar

3. Connector

4. Connector blocks

5. Starter profile

6. Fixing joint

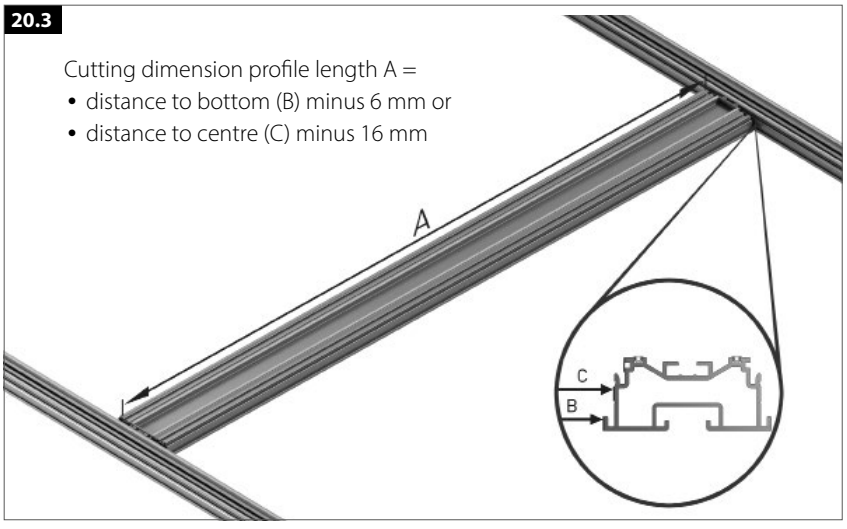
7. Front panel

8. Adjustable feet

At the substructure profiles of 35 mm, height standard modules can be produced with the fixed lengths of 173.2 cm.
At the substructure profiles of 80 mm, height standard modules can be produced with the fixed lengths of 173.2 cm and 294.5 cm.

The substructure profile with a width of 80 mm is used as a crossbar for this purpose. The length of the outer crossbar corresponds to the final total length in the direction of the floorboards.

20.3



For smaller areas, the distance B is best to be determined by a folder ruler / measuring tape.
For larger areas, the distance C is best to be determined by a laser measuring device.

The cut-to-size dimension of the substructure profiles (A) between the crossbars is calculated as follows:

Alternative 1: Bottom distance B minus 6 mm (2 x 3 mm) or
Alternative 2: Distance C measured with a laser minus 16 mm (2 x 8 mm).

Example 1: B is measured as 1,165 mm. A = 1,165 mm minus 6 mm = 1,159 mm.
The substructure is cut to 1,159 mm.
Example 2: C is measured as 5,245 mm. A = 5,245 mm minus 16 mm = 5,229 mm.
The substructure is cut to 5,229 mm.

Formation of the substructure frame

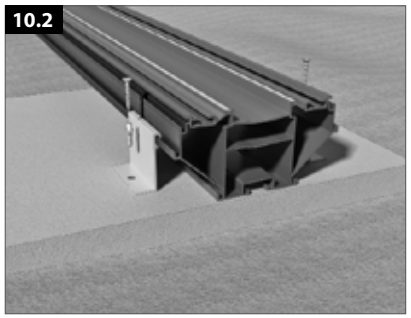
21. Construction of the frame on screwable substrates

Crossbars are only placed outside, the outer substructure profiles are to be fixed at the floorboard edges.

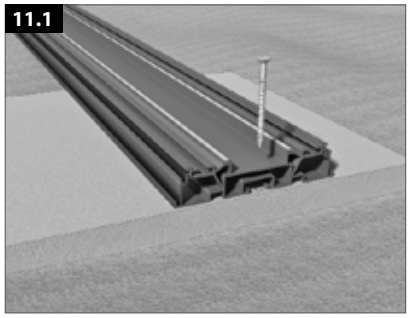
In contrast to installation without a frame (see 24.), this version offers the following advantages:
- End panels can be fastened on all sides
- Easy alignment of the substructure profiles in height and alignment

22.1

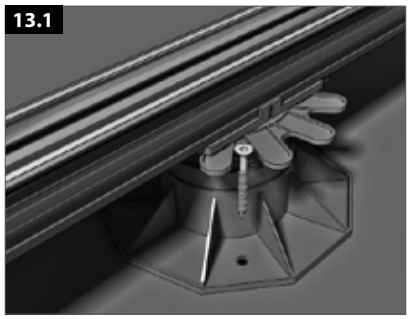
10.2



11.1



13.1



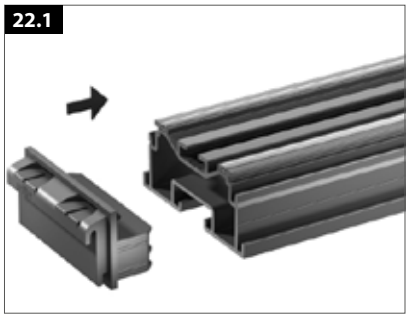
Examples of screwable substrates:
Gravel with concrete slabs (min. 40 x 40 x 4 cm) or lawn edging stones, concrete surfaces, strip foundations, timber or metal constructions.

In this construction, no crossbars are used in the spaces in between.
The outer substructure profiles at the floorboard edges resp. the adjustable feet below have to be screwed to the ground/substrate.
The length of the substructure profiles is calculated as follows:
- for the one-sided use of start profiles: surface width without end strips minus 178 mm
- for the double-sided use of start profiles: Surface width without end strips minus 190 mm

Formation of the substructure frame

22. Installation of the connector

22.1



The connector is plugged into the mounting fixture of the substructure profile up to the stop.

22.2

The connector is plugged into the mounting fixture of the substructure profiles with the hooks down.

22.3

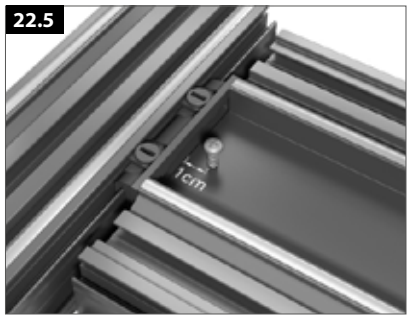
After the positioning has been done, the connector has to be secured by the fixation of two connector blocks.

Necessary fixation The connector must be fixed to the outer substructure profiles and to every 5th substructure profile with a screw (self-drilling screw 3.9 x 19 mm from the product range).

22.4

Substructure profile 35 x 80 mm and 80 x 80 mm:
The screw is inserted at the notch of the profile approx. 1 cm from the end of the profile, and on both sides if possible.

22.5



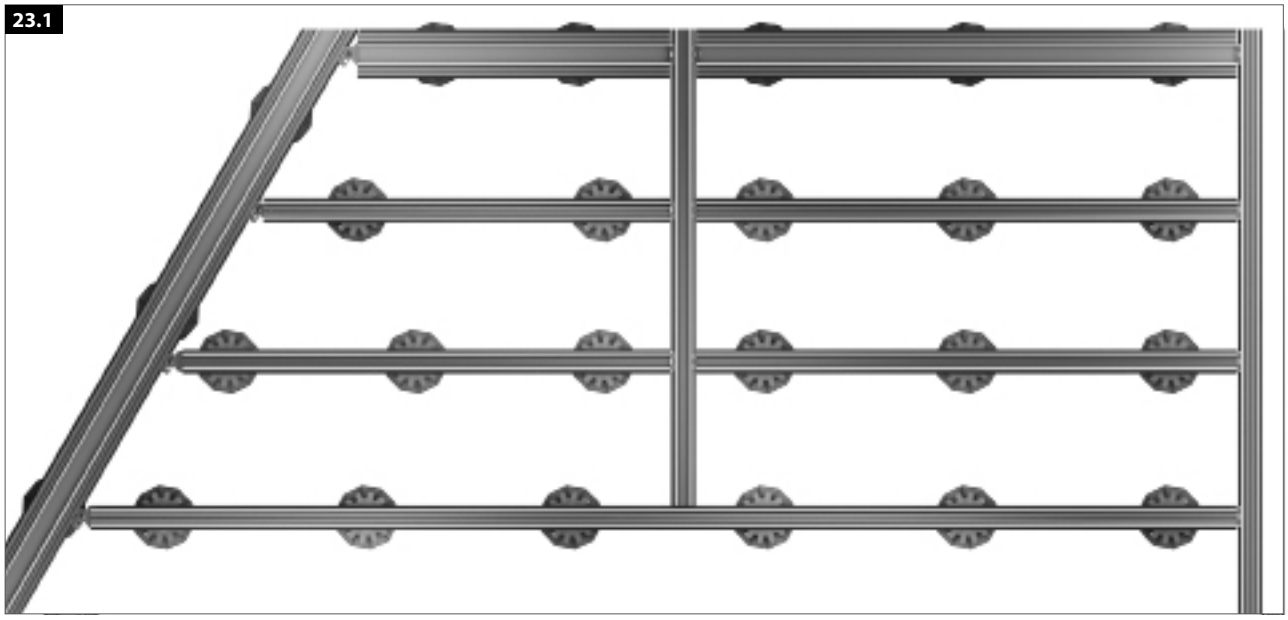
Substructure profile 35 x 160 mm and 80 x 160 mm:
The screw is inserted centrally from above at a distance of 1 cm from the end of the profile.

Formation of the substructure frame

23. Assembly of the angle connector at sloping surfaces

In case of deviations from the right angle an angle connector is additionally used. For this, the 35 x 160 mm or 80 x 160 mm substructure profile is used as the outer cross-bar.

23.1



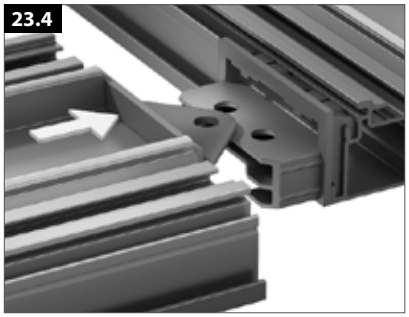
23.2

First the connector is put into the crossbar.

23.3

The angle connector is put into the mounting fixture of the substructure profile.

23.4

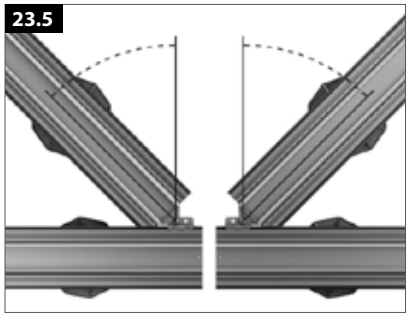


The angle connector is inserted between the walls of the connector with the lower slim bridge.

Formation of the substructure frame

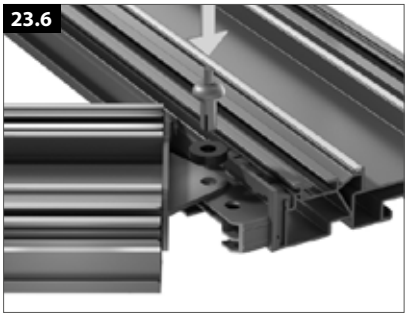
23. Assembly of the angle connector at sloping surfaces

23.5



The hole is used which points into the direction of the substructure profile.

23.6



After positioning, the plastic rivet is inserted together with the spacer disc.

23.7

Push in the pin of the plastic rivet and fix it by this.

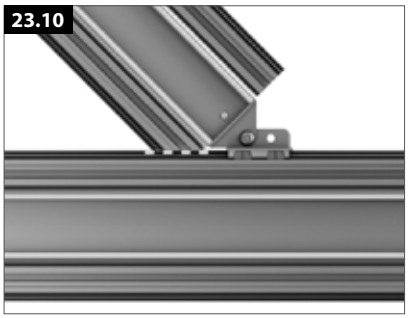
23.8

The connector is now secured with 2 connector blocks.

23.9

The angle connector has to be fixed into the substructure profile with a screw (see „Installation of the connector" for this).

23.10



Depending on the size of the angle the edge of the substructure profile has to be cut off.

Substructure installation without a frame

24. Substructure installation without a frame

Suitable substrates: Dry, screwable substrates
Examples:
- Gravel with concrete slabs, min. 40 x 40 x 4 cm
- Concrete surfaces or strip foundations
- Lawn edging stones set in concrete
- Wooden or metal frames.

The outer sub-grade profiles of a sub-area must be fastened accordingly. This also applies to sub-floor profiles under continuous joints at the respective end of the floorboard.

For the outer substructure (floorboard end) of each partial area, a double substructure (35 x 160 mm or 80 x 160 mm) should be used or alternatively two sub-floor profiles (35 x 80 mm or 80 x 80 mm) should be installed at a distance of 150 mm max.

The fastening must allow a pull-out force of at least 15 kg/running metre of sub-structure profile.

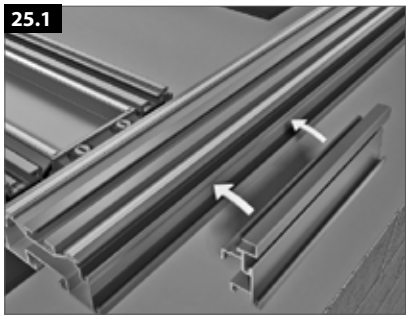
The fixing distances according to point 16 apply.

Installation of the floorboards

25. Usage of the starter profile

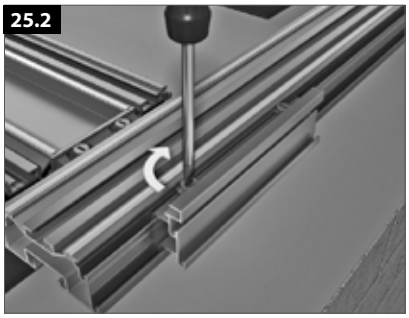
The starter profile is placed on the outside of the outer crossbar. The maximum centre-to-centre distance of the start profiles is 800 mm. An additional starter profile must be fitted on floorboard joints. To enable the fixing of front panels it might be necessary to install further starter profiles (see item 32.2).

25.1



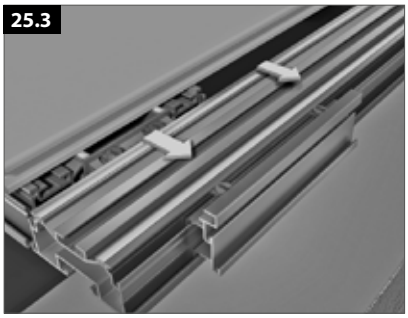
The starter profile is hooked into the substructure profile. This can also be done after constructing the frame.

25.2



The starter profile must be fixed by two connector blocks.

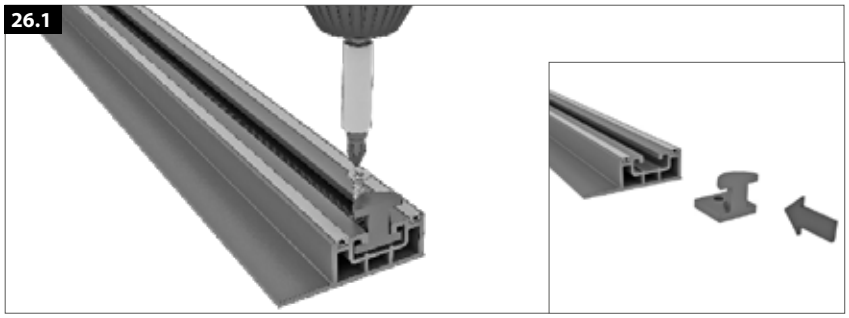
25.3



The floorboards of the first row are inserted into the starter profile.

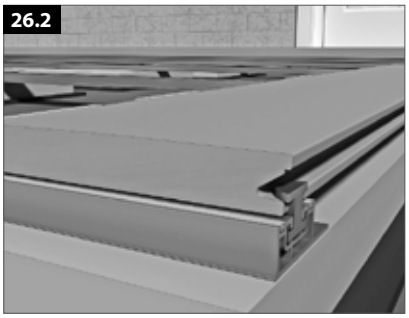
26. Using the start clip

26.1



Position the start clips on all substructure profiles and fix them with the enclosed screws 4 x 20 mm. Please pre-drill the profiles. The start clips must be aligned.

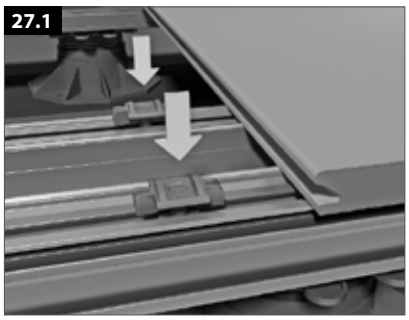
26.2



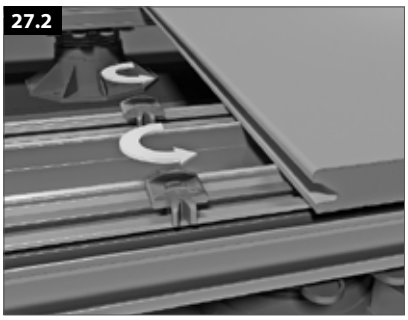
The first floorboard is pushed under the initial clip.

27. Insertion of the installation clips

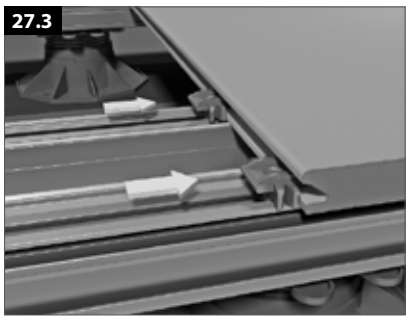
27.1



27.2



27.3

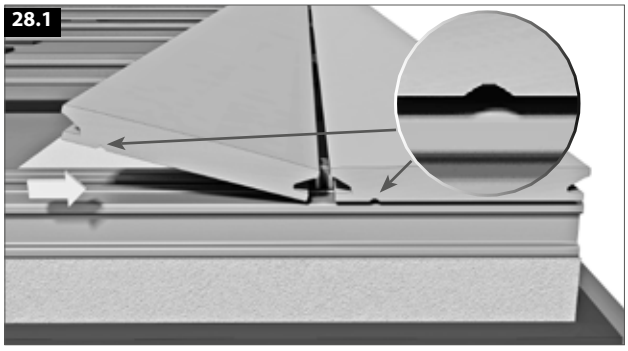


The installation clips are put into the guide of the substructure profiles intended for this, turned and pushed over the lower floorboard edge. For the 160 mm wide substructure, clips have to be inserted in both fastening channels.

Installation of the floorboards

28. Installing the subsequent floorboards / laying them in the same direction

28.1



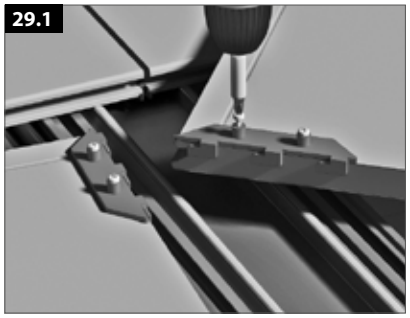
Place the next floor board in the same direction at an angle of approx. 15° to the installation clip and push it under the head of the installation clip as far as it will go. The groove underneath the floorboard is used for laying in the same direction. Please always align the groove using the same positioning. In addition, a direction arrow is printed on the back of the floorboard.

Note: The spring tongues of the installation clips must not be compressed by tensioning or strapping during installation, as otherwise their compensating effect will be lost.

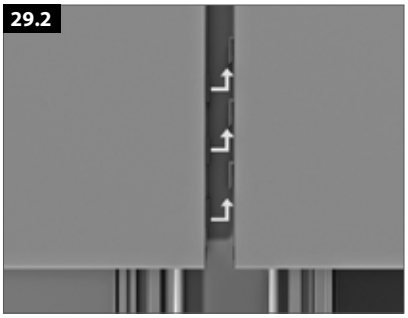
29. Floorboard joints

Floorboards up to a total length of 12m can be joined together using the universal connector **(max. 2 floorboard joints).**

29.1

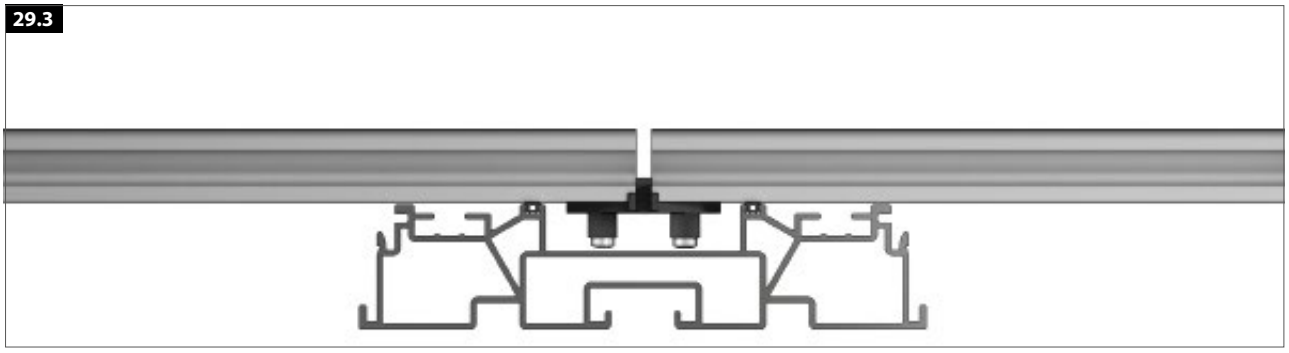


29.2



The universal connectors are each put against the outer pin and screwed to it. The floorboards have to be pre-drilled. The other pin is broken off. The parts are then pushed into each other as shown.

29.3



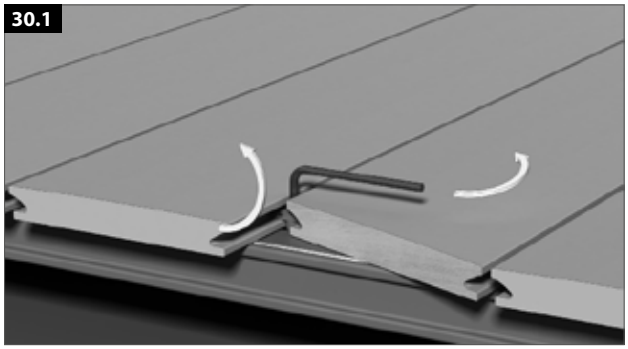
Installation on the substructure 35 x 160 mm and/or analogically in the case of 80 x 160 mm. The universal connector fits into the recess of the subfloor profiles with a width of 160 mm.

Installation of the floorboards

30. Inspection openings

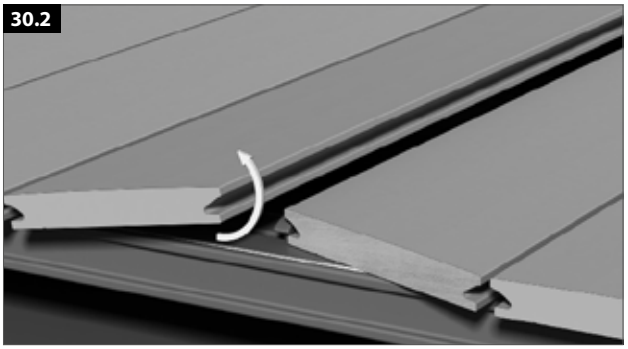
For planned inspection openings the inspection clip can be used. For larger surfaces, it is advisable to put a row of inspection clips into the middle. They facilitate the access to the ground/substrate for inspection work resp. for the exchange of damaged profiles after the first laying. **The inspection clip is not to be used as a replacement for all installation clips.**

30.1



Insert the allen key (4mm) and turn it by 90°.

30.2

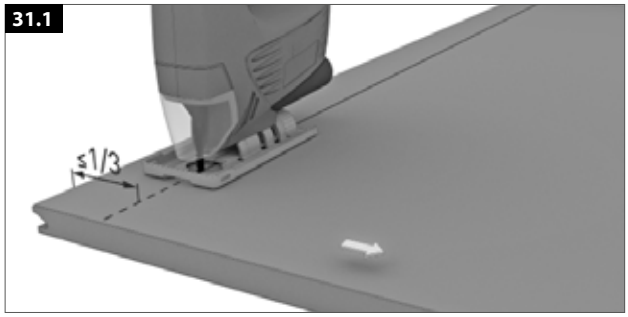


Disassemble the floorboard(s).

31. Installation of the final floorboard

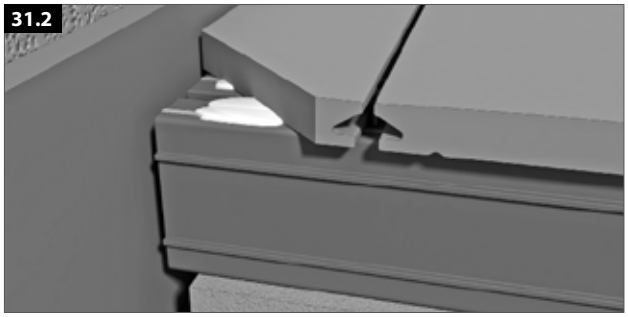
Generally, it should be tried to use a complete floorboard at the end. In this case, a starter profile is mounted at the end and the floorboards are fixed with the help of inspection clips.

31.1



If the dimensions do not allow the use of a complete floorboard, it can be cut. The minimum width should not be less than 2/3 of the floorboard. Make sure that the heating caused by the cut is as low as possible (e.g. with a sharp saw blade, gradual cut). The cutting of the floorboards can lead to deformation. Accordingly, care must be taken to ensure adequate fixing.

31.2



To fix the cut floorboards, the last installation clip is screwed and the floorboard glued by using the LIGNODUR® construction adhesive. *1)

Installation of the floorboards

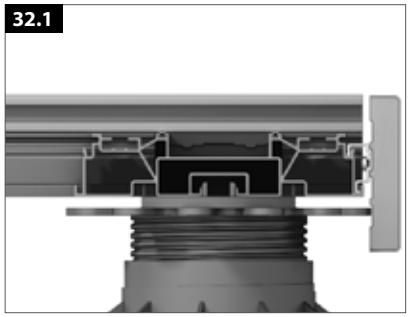
32. Fixing of the fixing joint

With the frame construction shown here, the fixing of the front panels on all sides can also be done later. 100 cm at maximum, 15 cm from the outer edge of the front panel at maximum.

In case of stronger loads, e. g. at stairs, the centre distance should be reduced to 70 cm at maximum. When using the start profiles, the positions of the start profiles are to be adopted.
In the longitudinal direction of the floorboards, no installation is possible below the profile.

Use screws from the set with a length of 12 mm **(pre-drill holes)** in order to screw the fascia board holder to the end fascia boards.

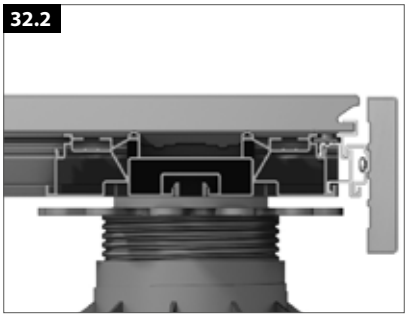
32.1



Installation on the substructure

When installing flush with the surface, the board ends must be installed flush with the substructure. The front side panels are directly hooked into the substructure profile.

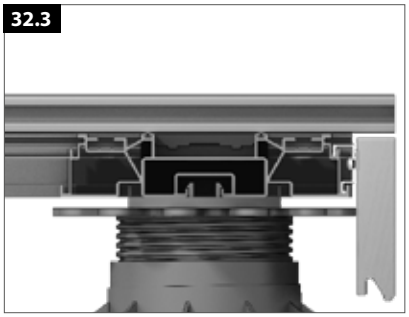
32.2



Installation on the start profile

The end panels on the long side are hooked into the start profile. In the case of cut boards, they are also directly hooked into the sub-structure profile.

32.3



Installation underneath the boards

Installation underneath the boards is only possible on the front side.

*1) Pre-treat according to the instructions on the installation adhesive packaging.

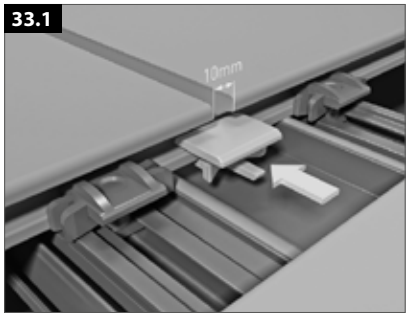
Special features when installing floorboards with a surface length of 12 m to 24 m

From a total length of 12 m up to a maximum of 24 m, the floorboards must be installed without **universal connectors** with a **butt joint of 10 mm.** In order to prevent the butt joint from changing too much, the following additional measures are required:

33. Use of a spacer

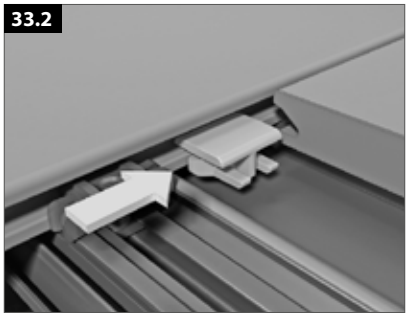
Use of a spacer: this prevents the joint from closing completely.

33.1



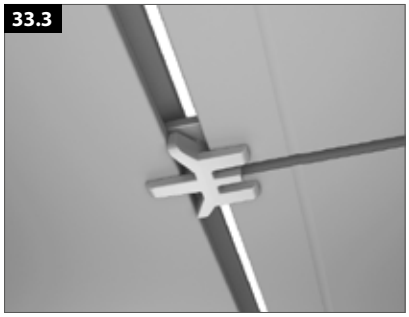
The spacer is inserted subsequently (with the fixed link between the boards). Here, the spacer is held in place by the subsequently installed floorboard.

33.2



Alternatively, the spacer can be inserted subsequently and pushed onto the end of the floorboard.

33.3



The spacer is fixed in the joint with the surface up and the bridge.

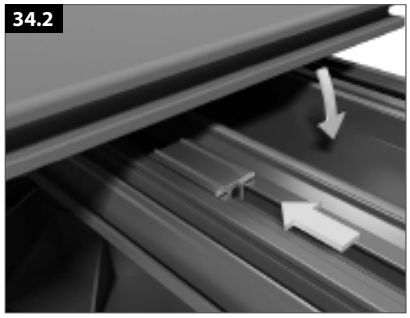
34. Use of fixing inserts

The use of fixing inserts can prevent uncontrolled movements.
For this purpose, 2 fixing inserts are inserted in the substrate, which is located centrally under the floorboard.

34.1

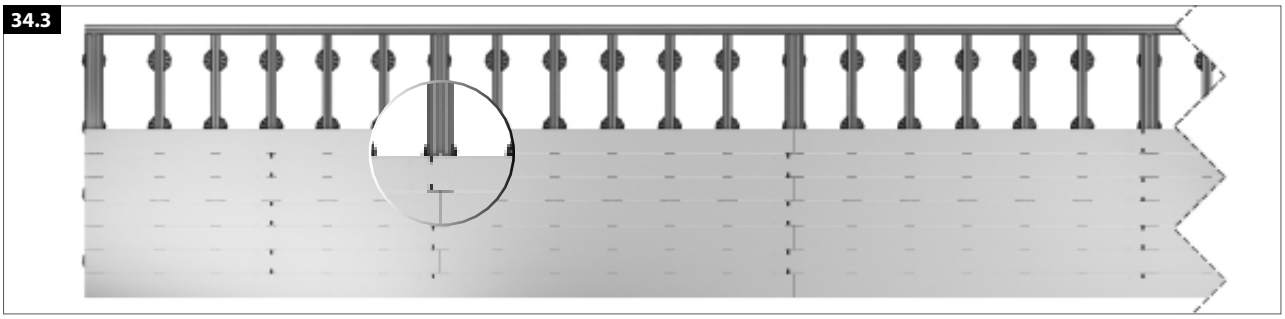
Before installing the floorboard, the fixing insert is inserted into the installation groove and pushed up to the installation clip.

34.2



Before inserting the installation clip, the fixing insert is inserted into the installation groove and positioned so that it is flush with the floorboard.

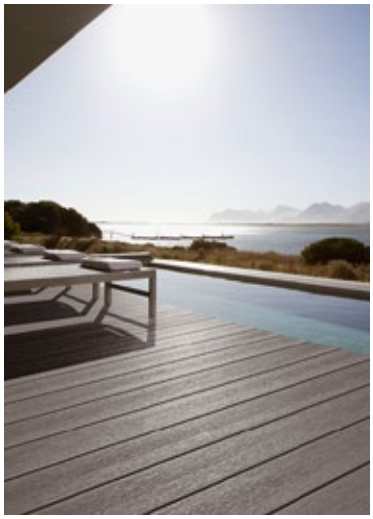
34.3

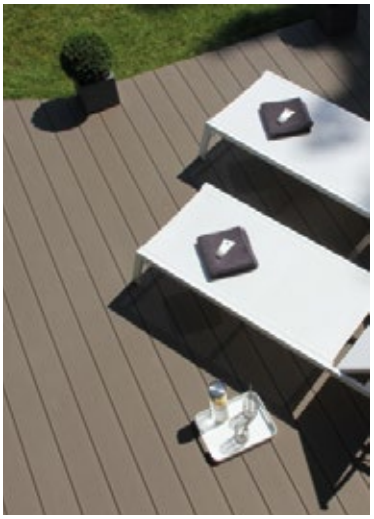


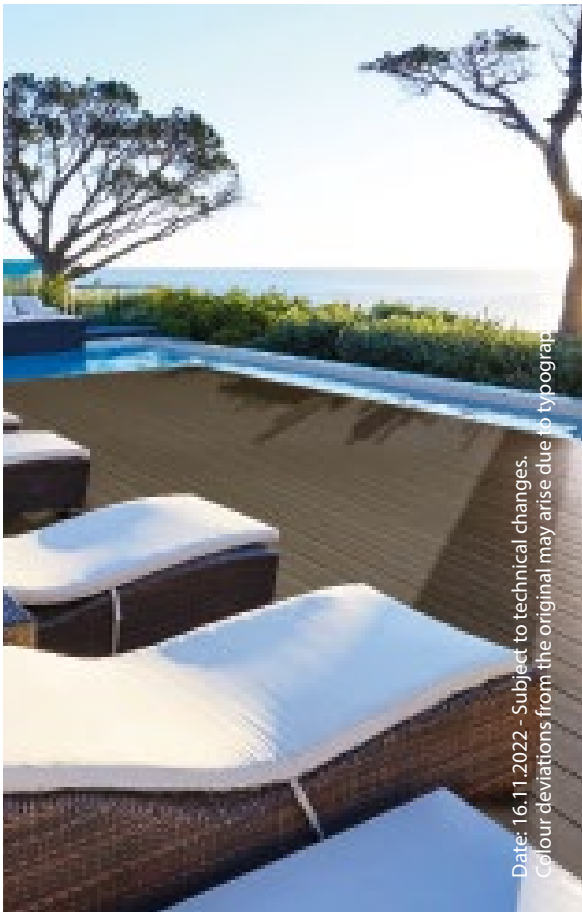
Position of the fixing inserts: Each floorboard is installed lengthwise in the centre with 2 fixing inserts.

Please note that the installation of the profile or the installation clip is made more difficult by the fixing insert. The use of revision clips in connection with the fixing insert is not possible.

Fixing inserts can also be used if there is thrust in the longitudinal direction of the plank due to planned use, e.g. at exit doors.







Date: 16.11.2022 - Subject to technical changes.
Colour deviations from the original may arise due to typograp

Further detailed information, our terrace planner, the latest version of the installation instructions and helpful video tutorials for the installation of the substructure system / the floorboards can be found on the internet at www.terrafina.de.

If you have any technical questions regarding the installation of LIGNODUR terrafina®, please contact: terrafina@moeller-profilsysteme.de.

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