



Application guidelines for the TALUX aluminium profile system for dry, unbonded laying of stone, ceramic, calibrated natural stone tiles, as well as timber and WPC boards

System description

The TALUX aluminium profile system means that stone, ceramic and calibrated natural stone tiles as well as wood and WPC boards can be laid easily, quickly and economically. Basically, the system consists of the edge profiles, corner modules (exterior corners, interior corners), secondary profiles, support profiles as well as the joint elements and supports.

System properties

The perimeter edging of the edge profiles and the joint elements with dimples ensure that the boards are impact sound insulated and lay solidly. If properly executed, the tiles can no longer shift or wobble while the joint pattern remains the same.

Application fields

The system is well suited for creating accessible surfaces on balconies, patios, flat roofs, roof terraces and walkways, as well as for special structures such as small and large pool copings, landings or stair treads.

Profile data

The aluminium profiles are supplied in standard lengths of 6 m, 4 m and 3 m and have a press-finished surface. Bespoke lengths and special constructions are possible on request.

Profile variants

- TALUX slim system (profile height 22 mm)
- TALUX raised system (profile height 64 mm)
- Edge profile with lateral upstand from 22 mm to 38 mm
- Secondary profile with central web or screw channel
- Supporting profiles

See data sheets and product overviews for more detailed information

Accessories

Exterior and interior corners | Joint element supports | Joint elements | Connectors | Support pads | Underlays, support feet, wedges | Finishing covers | Drainage elements

Tile material and boards

The Talux system is suitable for the following surfaces:

- For ceramic tiles thicker than 20 mm
- For stone tiles thicker than 38 mm
- Calibrated natural stone tiles from 20 mm thickness
- Timber and WPC boards from 20 mm thickness

Joint width and laying pattern

The joints can be formed in 2 mm and 4 mm widths. Joint-free laying is also possible. The tiles and boards can be laid in a cross-joint, bond or diagonal pattern.

Height compensation

To compensate for differences in height, use the TALUX support feet – consisting of a base plate, spacer rings and support plate – and wedges or commercially available, fully adjustable pedestals. Alternatively, you can also use rectangular paving stones. We recommend using suitable fleece or building protection mats to protect the substrate and, if necessary, a waterproofing layer.

Distributed load

The permissible distributed load depends on the type and dimension of the substrate as well as the tile material used and must not exceed 5 kN/m². Please refer to the tile manufacturer's information and DIN EN 1991-1-1, among others.

Substrate

The TALUX aluminium profile system can be installed on the following substrates:

- Compacted soil (earth, crushed stone and gravel surfaces)
- Concrete surfaces or existing floor coverings such as tiles
- Pile foundation and strip foundation
- Steel or timber girder constructions with breakthrough protection
- Waterproofing membranes and roofing felt

➤ Insulation

When installing on heat insulation, we recommend a compressive strength of at least of at least 150 kN/m² (kPa). Ensure that the load area does not fall below 225 cm² per support and that the distance between the load areas does not exceed 80/40 cm. The insulation must neither sag nor bounce.

➤ Waterproofing

All types of waterproofing in combination with the appropriate protective and separating layers are permissible. Please consult the corresponding standard DIN 18531.

➤ Slope

The substrate and surface slope should be at least 1-2 %. This applies in particular to barrier-free door and window entries as well as transitions.

Further assembly instructions

General advice:

- Examine the substrate for proper waterproofing, a suitable protective covering and sufficient load-bearing capacity (point load of the support points). When installing on insulation, we recommend a compressive strength of at least of at least 150 kN/m² and a load area of at least 225 cm² per support point. When installing on insulation or waterproofing, we strongly recommend that you seek qualified advice (e.g. from a building surveyor) and professional planning and implementation by a qualified specialist company.
- To prevent chemical reactions and mechanical stresses during installation on any waterproofing membranes that may be present, we recommend the use of foil-laminated building protection mats.
- We recommend the use of drainage gutters for door niches and windows – especially for barrier-free transitions. We recommend this in particular for unroofed areas. For more information on this topic, please see: Flat Roof Guidelines DIN 18040-Part 2 and Thresholds on Balcony and Roof Terraces DIN 18531-Part 5.
- The aluminium profiles can be cut to the required length on site using a regular cut-off saw with a metal blade. Wear safety goggles and hearing protection when cutting the profiles. Deburr cut profiles with a file. Do not cut the profiles to size on the waterproofing of a surface to be laid because the shavings are sharp-edged.
- Fasten the edge profiles with screws firmly to the external and internal corners as well as to the flat, longitudinal and corner connectors. This is the only way to ensure that the tiles are firmly positioned in the system and can no longer shift or wobble.
- Fasten the exterior and interior corners as well as the flat, longitudinal and corner connectors with the supplied self-drilling screws 3.5/16 - T15. Pilot drilling the profile with a drill bit (diameter: 3 mm) will make it easier to drive in the screws.
- Long, exposed edge profiles longer than 3,000 mm need to be connected with at least two adjacent rows of secondary profiles. That way, you can be sure that the edge profile will not be pushed outwards under shear forces. We recommend the use of connection profiles or aluminium flat strips which are fastened to the undersides of the profiles using suitable 3.5/16 - T15 self-drilling screws.
- Place the secondary profiles on the horizontal face of the edge profiles. The secondary profiles are laid butt to butt at joints. Ensure a clearance of 3-5 mm and suitable height compensation. For more rigidity, the secondary profiles can be screwed or riveted to the support strip of the edge profile and to each other using the TALUX longitudinal connectors.
- On the TALUX system, you can install ceramic, stone and calibrated natural stone tiles as well as timber and WPC boards from a thickness of 20 mm and in all formats. When installing boards, use the secondary profiles without a central web in combination with suitable screws (visible installation) or fastening clips (invisible installation).
- In the case of uneven substrates or structural conditions that require an installation height above the available profile heights, ensure appropriate height compensation during the installation. The TALUX rubber pads and wedges allow precise levelling of the system in the range of 4-41 mm. The TALUX support feet and wedges can compensate for height differences between 30 and 215 mm. Alternatively, you can use commercially available, fully adjustable pedestals or, for example, rectangular paving stones for substructure and height compensation.
- The minimum spacing between the edge profiles and adjoining building components (walls, parapets ...) should be at least 10 mm.
- The aluminium profiles are made of alloy EN AW 6060 T66 in the press-finished variant, which features high weather resistance and a good resistance to salt water. Due to its chemical properties, it is important to ensure that the aluminium is not exposed to agents (e.g. cleaners or even cement) in the pH range outside 4 to 9.
- Due to the nature of the material and the production process, aluminium in the press-finished version may show minor scratches and some extrusion marks. Furthermore, aluminium may turn dull and appear darker over time when it comes in contact with water and air. Both do not affect the quality and resilience of the material and are purely optical effects. For a higher quality finish, we recommend powder-coated profiles on visible surfaces.

Application instructions for laying tiles

- The secondary profiles always need to follow the longer sides of the tiles to be installed. Take the desired installation pattern (cross joint, bond, diagonal) into account during the planning and before the system is installed.
- The tile material is installed on the profiles using plastic joint elements. This results in a joint width of 4 mm. For the secondary profile without central web, use joint elements and support pads together with the cross joint supports. In this way, it is possible to achieve joint widths of 2 mm.
- We recommend the use of the support profiles for tiles with a width of 600 mm or more to protect them against strong point loads. The profiles are positioned on the horizontal support surfaces of the edge and secondary profiles. To achieve lasting rigidity and to reduce noise, we recommend applying a little silicone to the contact surface. The necessary length of the support profiles corresponds to the width of the tile, minus 60 mm. Owing to possible tolerance variations of the tile manufacturers, check the exact tile dimensions in advance. To minimise noise generation, place a Talux support pad on top of the support profiles. Refer to the following list for the number of recommended support profiles per tile:
 - from a width of 600 mm: 1 supporting profile per tile
 - from a width of 900 mm: 2 supporting profiles per tile
 - from a width of 1200 mm: 3 supporting profiles per tile

- Cut the edge tiles to an exact fit, taking the joint width into account. This is the only way to ensure that the tiles are firmly positioned in the system and can no longer shift or wobble.
- For tile formats of 600/400 mm and larger, we suggest using the square support pads between the tile and the secondary profile at a distance of approx. 300-400 mm to minimise noise.

Application instructions for laying boards

- Make sure to place the secondary profiles at a 90° angle against the running direction of the boards. Accordingly, take the desired laying direction of the boards into account in the planning and before installing the system. For fastening, fasten the secondary profiles onto the support strips to the edge profiles using suitable screws. The TALUX connection profiles can be used to join secondary profiles in length.
- The number and the spacing of the secondary profiles in the installation area results from the spacing specified by the board manufacturer and must not be exceeded.
- Both timber and WPC boards are fastened to the secondary profiles with the help of the screw channel. For visible screw fittings, we recommend pre-drilling the board and secondary profile before fastening the screw. In the case of invisible fixing, use the fixing clips specified by the manufacturer and check for compatibility with the Talux system.
- The choice of suitable screws, both for visible and invisible installation, is the responsibility of the board manufacturer or the installer. Pay special attention to suitable strength, approval, material compatibility and dimensions of the screws.
- When laying the boards, observe the manufacturer's specifications regarding the required ventilation distances.

Application instructions when using the LED profiles and LED technology:

- The LED edge profiles Uplight, Frontlight and Downlight are compatible with the Slim system components (22 mm). They are not compatible with the Raised system or the 38 mm variant. The Inlight 20 light line profile is further compatible with the Raised system (22 mm), the Inlight 20S profile with support strip is further compatible with the Slim and Raised systems (38 mm).
- The installation of the LED edge profiles is done in the usual way using the ready-made corner modules and the internal longitudinal connectors. For corners larger or smaller than 90 degrees and small projections, the profiles can also be mitred to fit and screwed directly to the external connectors.
- The plastic covers serve to diffuse the light and protect the LED strips against contamination and mechanical stress. The diffusers are clipped onto the light channels of the profiles with light pressure. Mitre the plastic covers at the corners as required. Two plastic covers can be laid end to end along their length. Always use a suitable saw blade when cutting the plastic covers to ensure a clean cut without chipping.
- A thorough inspection of the LED strips and their control components prior to installation is mandatory. Any accessories such as cables, IP67 connection terminals etc. are not included in the scope of delivery and must be selected and provided on site or by the electrician.
- During the installation of the LED profiles, make sure that the connecting cables and control lines of the LED technology are correctly positioned and inserted. Pre-drill suitably large holes in the light channel in the corners so that the connecting cables of the LED strips can be pulled through.
- When installing the supply lines, ensure that the cable gauge is suitable for the length of the supply line and the power rating of the attached installation.
- We recommend to start the installation of the LED strip segments from the respective corner points to avoid that strips have to be routed around the corner. However, if this is still necessary, you need to disconnect the strips and reconnect them while restoring the IP67 protection. To achieve a perfect illumination of the corners and to prevent dark corners, position the first luminaire unit of the strip as close as possible to the corner point when installing the LED strips.
- Use waterproof junction boxes to protect IP20 control elements such as WiFi controllers. Ensure that the boxes are installed correctly and that the cables have a suitable gauge.
- You can shorten the LED strips at least every 7 cm at the designated markings and using standard scissors. Re-establish the IP protection after shortening the strip. Use the matching sealing caps and silicone for this purpose.
- We recommend installing the LED control components in a central location that remains accessible at all times.
- Only qualified technicians may install the LED technology and connect it to the supply line. Comply with the manufacturer's instructions on handling, assembly, etc. The customer or the installer is responsible for the professional installation and compliance with the required protection class of the entire LED installation and its individual components. Talux will not assume any liability for damage caused by improper installation or use of LED components.

The information provided in our documentation (product description, data sheets, assembly instructions, etc.) is based on our experience and research. Due to the very different construction site and processing conditions and the local conditions, the relevant rules, regulations and DIN standards must always be observed and included in the planning and implementation.

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