

## Schlüter®-TROBA-LEVEL

Tile and paver system

Support components for external applications  
with tile and pavers

# 7.6

Product data sheet

### Application and function

**Schlüter®-TROBA-LEVEL** is a combinable tile and paver support system that enables individual assembly heights from 3 mm to over 1 m. It is suitable for levelling any sloped assembly of up to 10%.

Unbonded (or loose lay) installation is suitable for balconies, terraces, roof terraces and other accessible spaces. It enables access to pipelines and floor drains in the remaining hollow space.

Please refer to the Technical Data table later in this document for information about combination options and further details.

Due to the open joints between the tiles and pavers, surface water can freely drain on to the substrate and, if fitted, into the drainage system beneath.

Typically the tiles and pavers will be at least 20 mm thick. They must be self supporting. The load bearing, environmental and slip resistance properties of the tiles and pavers must be determined from the manufacturer or supplier to ensure they are suitable for use with the pedestal system and external applications.

The 10mm high stackable tile and paver supports **Schlüter®-TROBA-LEVEL-PL 10** are made of a sound-insulating special synthetic material and can be installed on top of the substrate or, if present, directly over the waterproofing assembly. Up to 20 can be stacked together to create an assembly height of between 10 and 200mm. The integral 3 mm connectors enable a consistent joint appearance and are able to absorb movements in the covering.

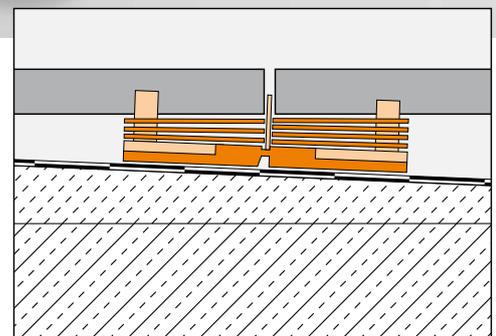
The 30mm adapter blocks **Schlüter®-TROBA-LEVEL-PLA 30** must be used between two Schlüter®-TROBA-LEVEL-PL



10 tile and paver supports. As up to 10 x Schlüter®-TROBA-LEVEL-PL 30 adapter blocks can be stacked together this means they can be used to create an assembly height of between 50 and 320mm.

**Schlüter®-TROBA-LEVEL-AP 1** levelling platelets adjust the assembly height by 1mm. Up to 10 x Schlüter®-TROBA-LEVEL-AP 1 platelets can be stacked together, enabling the assembly height at the corner of each paver or tile to be adjusted by up to 10mm, thus accommodating minor variations in tile or paver thickness or substrate level.

**Schlüter®-TROBA-LEVEL-PLV 60** are pre-assembled, rotatable tile and paver supports that can be variably adjusted from 60 - 130 mm with an adjustment ring and two opposing threads. The thread of Schlüter®-TROBA-LEVEL-PLV 60 features





a protection mechanism against accidental loosening and a vibration lock.

The paver support head incorporates 3 mm connectors and a perimeter spacer.

Depending on the condition of the substrate, **Schlüter®-TROBA-LEVEL-LV 3** can be installed in combination with Schlüter®-TROBA-LEVEL-PL 10 and Schlüter®-TROBA-LEVEL-PLA 30 for load distribution. Schlüter®-TROBA-LEVEL-LV 3 can also be used as stand-alone tile and paver supports in combination with Schlüter®-TROBA-LEVEL-AP 1 for particularly low assembly heights. Schlüter®-TROBA-LEVEL-LV 3 features 3 mm connectors.

The height adapters **Schlüter®-TROBA-LEVEL-PLA 70** are fully screwed into the bottom plate of Schlüter®-TROBA-LEVEL-PLV 60. The thread of Schlüter®-TROBA-LEVEL-PLA 70 features a protection mechanism against accidental loosening and a vibration lock.

## Material

Schlüter®-TROBA-LEVEL system products are made of PE or PP materials.

The protective pad **Schlüter®-TROBA-LEVEL-PLS 6** is manufactured from rubber granulate with an aluminium lining laminated on one side.

All products are UV-resistant, non-rotting, recyclable, physiologically harmless and compatible with bitumen.

They are temperature resistant from -40 °C to +100 °C.

## Material properties and areas of application

Schlüter®-TROBA-LEVEL is designed for use with tiles and pavers on balconies, terraces, roof terraces and other accessible spaces.

Schlüter®-TROBA-LEVEL can be installed over any kind of waterproofing assembly. Please refer to the Technical Data table later in this document for further information.

## Notes

The products of the Schlüter®-TROBA-LEVEL system require no special maintenance or care.

## Installation

The installation instructions of paver manufacturers and national standards applicable in individual countries (DIN standards, technical bulletins etc.) must be followed for installation!

The design requirements with regard to the slope situation, compression strength of the installed insulation materials, and waterproofing substances (film compatibility) must be verified.

Pavers can be installed in any assembly type (manufacturer specifications may need to be met).

**Recommendation:** To guarantee sufficient construction space, we recommend starting with a tile and paver support height of at least 10 mm.

As a full-area waterproofing protection, we recommend the use of the drainage mats Schlüter®-TROBA-PLUS or Schlüter®-DITRA-DRAIN.

It is best to create an installation diagram for neat joint appearance.

1. The substrate must be load-bearing, with a recommended minimum slope of 1.5 - 2.0%.

Manufacturer specifications regarding the load-bearing capacity of tile and pavers must be observed. The installation of additional paver supports may be necessary.

- 1a. Schlüter®-TROBA-LEVEL enables the installation of large-format pavers and tiles on terraces.

Please use the configuration tool on our website to determine the required number of tile and paver supports.

- 1b. Please refer to installation drawing 1b for a first overview of the number of support points – always start your installation at the highest point of the slope.

Drawing:

First panel = 4 support points  
Edge panels = 2 support points  
Area panels = 1 support point

2. Schlüter®-TROBA-LEVEL-PL 10 tile and paver supports (10 mm) can be stacked with a 90° offset.
3. From an assembly height of 50 mm, Schlüter®-TROBA-LEVEL-PLA 30 adapters (30 mm each) can be inserted between two Schlüter®-TROBA-LEVEL-PL 10 tile and paver supports.

4. Levelling the slope: Use a spirit level to check how many Schlüter®-TROBA-LEVEL-AP 1 levelling platelets (1 mm each) must be stacked on top of one another. If more than ten TROBA-LEVEL-AP 1 levelling platelets are needed, an additional Schlüter®-TROBA-LEVEL-PL 10 paver support (10 mm) should be stacked instead. Schlüter®-TROBA-LEVEL-AP 1 levelling platelets (1 mm) are snapped in laterally – make sure they are fully attached.
5. Keep the installation direction in mind.
6. Only stack as many Schlüter®-TROBA-LEVEL-AP 1 levelling platelets as required to reach the level of the adjacent tile and paver.
7. Tile and paver supports at the edge can be stacked with a 90° offset to reach the necessary assembly height. Schlüter®-TROBA-LEVEL-PL 10 supports (10 mm) can be cut into halves or quarters for use at edges or in corners (min. tile or paver width 60 mm). To this end, score the support with a cutter knife, break it off, and then trim off any unneeded connectors. Determine prior to cutting which halves fit together.
8. Edge solution from an assembly height of 50 mm. (including with cove shaped edge formations). Protruding connectors must be trimmed from an assembly height of 60 mm.
9. Corner solution from an assembly height of 50 mm. (including with cove shaped edge formations). Protruding connectors must be trimmed from an assembly height of 60 mm.
10. From an assembly height of 60 mm, you can also install adjustable Schlüter®-TROBA-LEVEL-PLV 60 supports. The individual supports can be variably set up to a height of 130 mm by turning the setting wheel.
11. If necessary, the final levelling and slope adjustment can be carried out with Schlüter®-TROBA-LEVEL-AP 1 levelling platelets (see Item 6).
12. If the required assembly height exceeds 130 mm, the Schlüter®-TROBA-LEVEL-PLV 60 support can be combined with Schlüter®-TROBA-LEVEL-PLA 30 as well as Schlüter®-TROBA-LEVEL-PL 10 supports.
13. All assembly heights from 60 to 520 mm can be achieved by stacking up to four Schlüter®-TROBA-LEVEL-PLV 60 paver supports on top of one another.



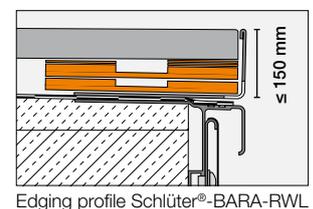
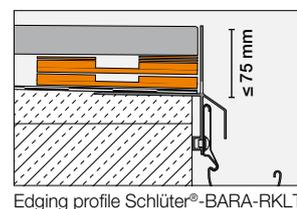
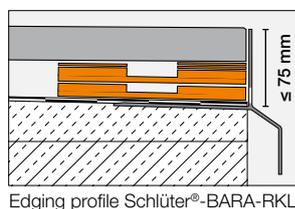
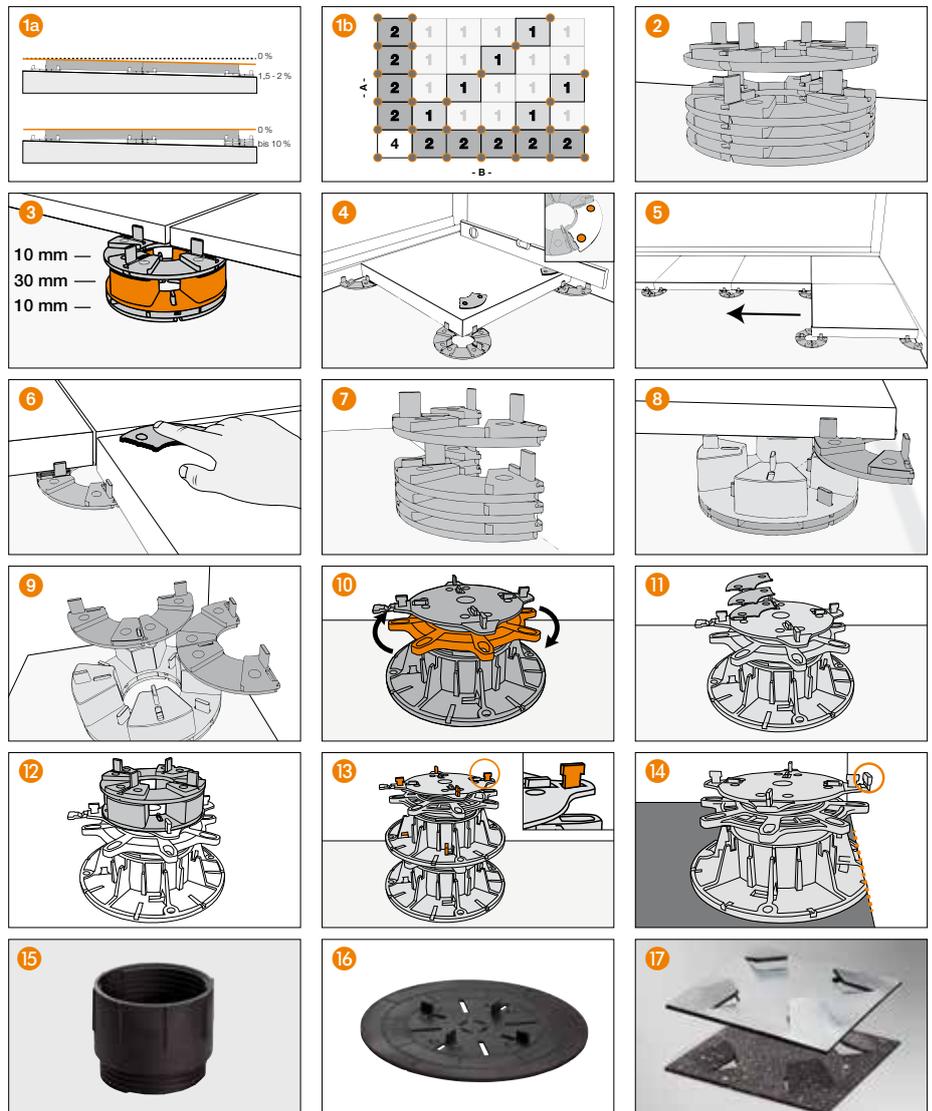
The paver supports must be snapped together.

14. **Edge/corner solution:** Saw off the bottom plate in accordance with the underside cutting mark and fold the wall spacer up (see marking in Figure 14). Any unnecessary connectors can be tapped off. The minimum paver width is 85 mm.

15. **Extension:** Schlüter®-TROBA-LEVEL-PLA 70 (H = 70 mm) enable the quick installation of larger heights. These adapters must be fully screwed into the bottom plate of Schlüter®-TROBA-LEVEL-PLV 60. Schlüter®-TROBA-LEVEL-PLA 70 is not designed for levelling.

16. You can optionally use the tile and paver supports Schlüter®-TROBA-LEVEL-LV 3 (diameter 200 mm, height 3 mm) for load distribution, which can be combined with Schlüter®-TROBA-LEVEL-PL 10 and Schlüter®-TROBA-LEVEL-PLA 30 supports. The tile and paver support Schlüter®-TROBA-LEVEL-LV 3 is also suitable for creating low-height assemblies – final levelling is done with the levelling platelets Schlüter®-TROBA-LEVEL-AP 1. Schlüter®-TROBA-LEVEL-LV 3 can be cut to size and features 3 mm connectors that guarantee an evenly spaced joint formation.

17. Protection of waterproofing assembly: For protective requirements, attach the bottom plates of Schlüter®-TROBA-LEVEL-PLV 60 or Schlüter®-TROBA-LEVEL-LV 3 in the slitted cuts of the protective support pads Schlüter®-TROBA-LEVEL-PLS 6 (6 mm). In the case of PVC waterproofing assemblies, the aluminium separating layer of the protective support pads must be installed facing down. If using Schlüter®-TROBA-LEVEL-PL 10 tile and paver supports, these must be placed in the centre of the pads.



**System products:**

The exposed edge areas of tile and paver support installations must be protected against slippage with an adequate exterior border. For slopes up to 3%, a variety of Schlüter®-BARA profiles are available to finish exposed edge areas (see the corresponding product data sheets). In case of slopes exceeding 3%, the structure must include an exterior border that is able to absorb shear loads from the assembly or the top covering.



Gravel retaining angle  
Schlüter®-TROBA-LINE-TLK-E



Drainage channel  
Schlüter®-TROBA-LINE



**Schlüter®-TROBA-LINE** is a drainage channel that prevents the accumulation of water at door and wall transitions. In combination with the tile and paver support Schlüter®-TROBA-LEVEL-PL 10, we recommend a channel width of 110 mm, while a width of 160 mm is best for Schlüter®-TROBA-LEVEL-PLV 60. The drainage channel must be screw-attached to the corresponding paver supports – for example with stainless steel metal screws.

The gravel retaining angle **Schlüter®-TROBA-LINE-TLK-E** (H = 40/70 mm) is another available option.

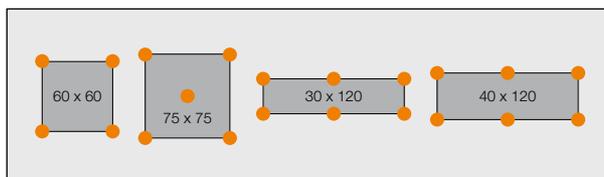
#### Estimated quantity calculation of paver supports:

60 x 60 cm ~ 3.4 supports/m<sup>2</sup>

75 x 75 cm ~ 4.0 supports/m<sup>2</sup>

30 x 120 cm ~ 7.0 supports/m<sup>2</sup>

40 x 120 cm ~ 5.4 supports/m<sup>2</sup>



Possible support points – depending on tile format

## Product Overview

Technical data:	Height	Support area diam.	Material	Joint Spacer	Load-bearing capacity	Max. stacking height	Combination options
<b>Schlüter®-TROBA-LEVEL-PL 10</b> Tile and paver support	10 mm	120 mm	PE	3 mm	10000 kg / 100 kN	200 mm	PLA 30 / PLV 60 / LV 3 / AP 1
<b>Schlüter®-TROBA-LEVEL-PLA 30</b> Adapter block	30 mm	–	PE	–	5000 kg / 50 kN	300 mm + 20 mm (2 x PL 10)	PL 10 / LV 3 / PLV 60
<b>Schlüter®-TROBA-LEVEL-AP 1</b> Levelling platelet	1 mm	–	PE	–	–	10 mm	PL 10 / PLV 60 / LV 3
<b>Schlüter®-TROBA-LEVEL-PLV 60</b> Height-adjustable tile and paver support	60 - 130 mm	200 mm	PP	3 mm	1000 kg / 10 kN	520 mm	PL 10 / PLA 30 / PLA 70 / AP 1
<b>Schlüter®-TROBA-LEVEL-LV 3</b> Tile and paver support	3 mm	200 mm	PP	3 mm	1000 kg / 10 kN	6 mm	PLA 30 / PL 10 / AP 1
<b>Schlüter®-TROBA-LEVEL-PLA 70</b> Height adapter	70 mm	–	PP	–	1000 kg / 10 kN	910 mm + 130 mm (PLV 60)	PLV 60
<b>Schlüter®-TROBA-LEVEL-PLS 6</b> Protective support pad	6 mm	260 x 260 mm	Rubber granulate/ one-sided aluminium lining	–	–	–	PL 10 / PLV 60 / LV 3

**Text template for tenders:**

\_\_\_\_\_ units of Schlüter®-TROBA-LEVEL paver supports for balcony and terrace coverings made of a special UV-resistant, sound-insulating synthetic material with integrated 3 mm connectors to be installed for support and height adjustment. The items are to be combined according to the necessary height adjustment, following manufacturer's specifications - including the necessary levelling platelets Schlüter®-TROBA-LEVEL-AP 1 for precision adjustment.

Substrate:

■ Area drainage and installation mat Schlüter®-TROBA-PLUS ...

Area drainage to be invoiced separately

■ existing, waterproof installation area on site.

Article:

■ Schlüter®-TROBA-LEVEL-PL 10 paver support, height 10 mm

■ Schlüter®-TROBA-LEVEL-PLA 30 height adapter, height 30 mm

■ Schlüter®-TROBA-LEVEL-LV 3 paver support / load distribution panel, height 3 mm

■ Schlüter®-TROBA-LEVEL-PLV 60 height-adjustable paver support, height 60 - 130 mm

■ Schlüter®-TROBA-LEVEL-PLA 70 height adapter, height 70 mm

Properties

Material: PP or PE

UV resistant, non-rotting, recyclable, physiologically harmless

Temperature resistance: -40 °C to +100 °C

Load-bearing capacity: min. 1,000 kg/support  
integrated connectors: 3 mm

Height adjustment: ..... mm

The manufacturer's installation instructions must be observed.

Art.-No. \_\_\_\_\_

Material: \_\_\_\_\_ .../unit

Labour: \_\_\_\_\_ .../unit

Total: \_\_\_\_\_ .../unit

\_\_\_\_\_ units of Schlüter®-TROBA-LEVEL-PLS

6 protective pads on existing, waterproof installation area on site

(installation side to be verified).

The manufacturer's installation instructions must be observed.

Art.-No.: \_\_\_\_\_

Material: \_\_\_\_\_ .../unit

Labour: \_\_\_\_\_ .../unit

Total: \_\_\_\_\_ .../unit

