PROFILE OF INNOVATION

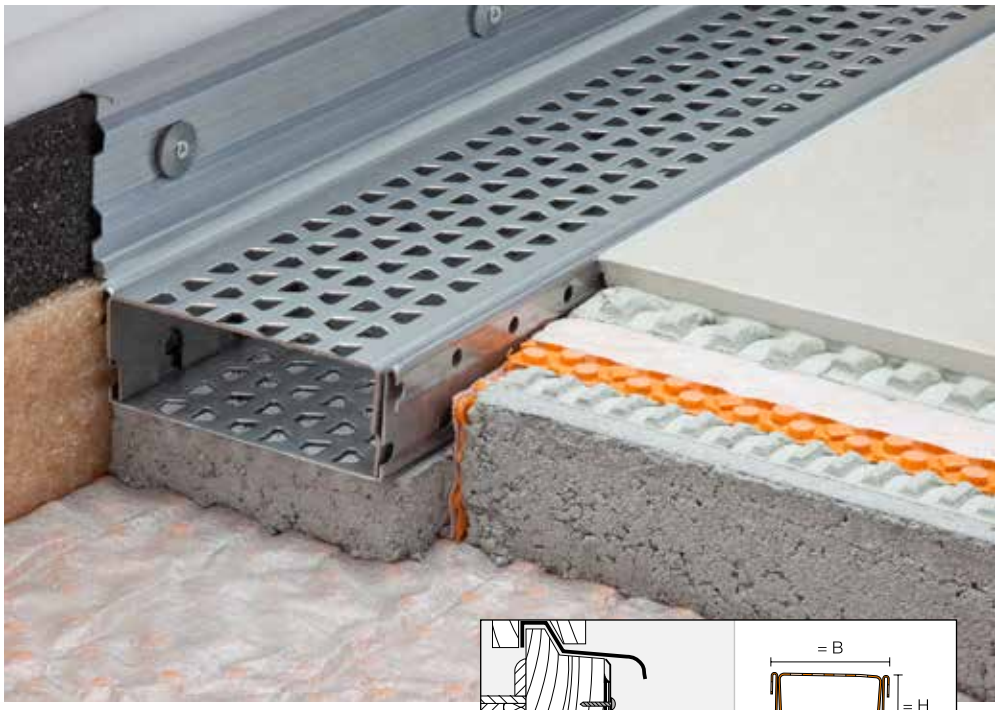
Schlüter®-TROBA-LINE

Drainage channel
for low connecting heights

7.4
Product data sheet

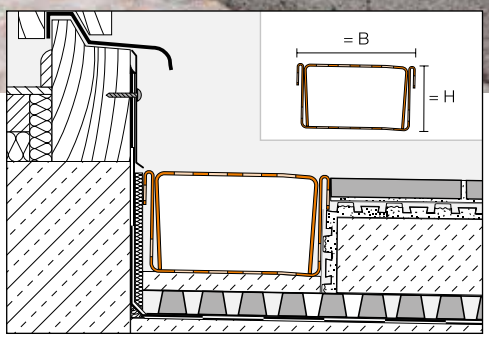
Application and Function

Waterproofing assemblies on balconies and terraces frequently lack sufficient height to connect smoothly to fixed building parts, door elements or walls.
According to DIN 18195-5, 7.1.6, waterproofing layers must overlap the upper edge of the covering by 15 cm. The same DIN standard requires door connections to have thresholds with a height of 15 cm. However, this requirement may be waived in accordance with building directives for flat roofs if suitable measures are in place to ensure drainage. The installation of Schlüter-TROBA-LINE guarantees drainage even with low connection heights. The system also allows for special constructions with stepless transitions.
Schlüter-TROBA-LINE-TL consists of a perforated, U-shaped lower section and a perforated, U-shaped upper section. It is installed over the area drainage systems Schlüter-TROBA or Schlüter-TROBA-PLUS.
Schlüter-TROBA-LINE-TLR is a drainage channel with an upper grate element made of galvanized steel or stainless steel (TLR-E), which is inserted into the U-shaped base made of stainless steel. The water drains through the openings of the channel to the waterproofing layer, where it runs off in the area drainage between the waterproofing layer and the surface covering toward the drainage exit. This prevents the accumulation of water in the door area or in all places with low connecting heights.
Schlüter-TROBA-LINE-TLG and **-TLGR** are variants with a closed base, in which the water flow is directed to a lateral outlet.

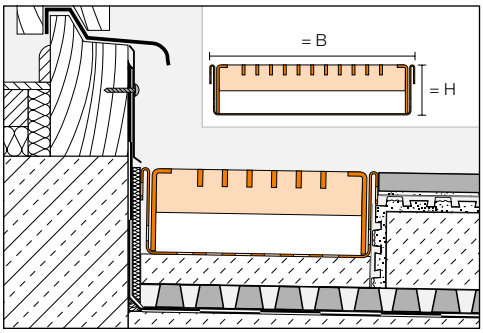


Material

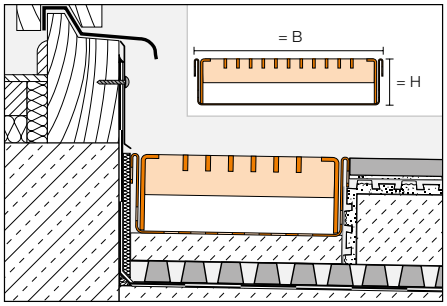
Schlüter-TROBA-LINE-TL /-TLG are made of stainless steel V2A (material no. 1.4301 =AISI 304) and are formed from perforated stainless steel strip material.
The upper grate of TROBA-LINE-TLR/-TLGR, which is inserted into the lower section of stainless steel, is made of galvanized steel.
The upper grate of TROBA-LINE-TLR-E/-TLGR-E is made of stainless steel V2A.



Schlüter®-TROBA-LINE-TL



Schlüter®-TROBA-LINE-TLR /-TLR-E



Note: The visible grate of Schlüter®-TROBA-LINE-TLR is divided into two pieces in the 1.50 m (2 x 0.75 m) and the 2.00 m model.

Fig. 1

Fig. 2

Connectors/ end caps:
All Schlüter®-TROBA-LINE drainage channels are supplied with two U-shaped parts, which can be used either for connecting two channel elements or as end caps.

Material properties and areas of application

The suitability of the various drainage elements and the appropriate width (75 mm, 110 mm, 160 mm) must be clarified for each project in accordance with the anticipated volumes of water as well as mechanical and other stresses.
Stainless steel is particularly well suited for applications that, in addition to heavy mechanical stresses, require resistance to chemicals such as acidic or alkaline detergents. Even stainless steel is not resistant to all chemical stresses, and may be affected by hydrochloric and hydrofluoric acid or certain chloride and brine concentrations. In certain cases, this also applies to seawater pools. Special anticipated stresses should therefore be verified in advance.

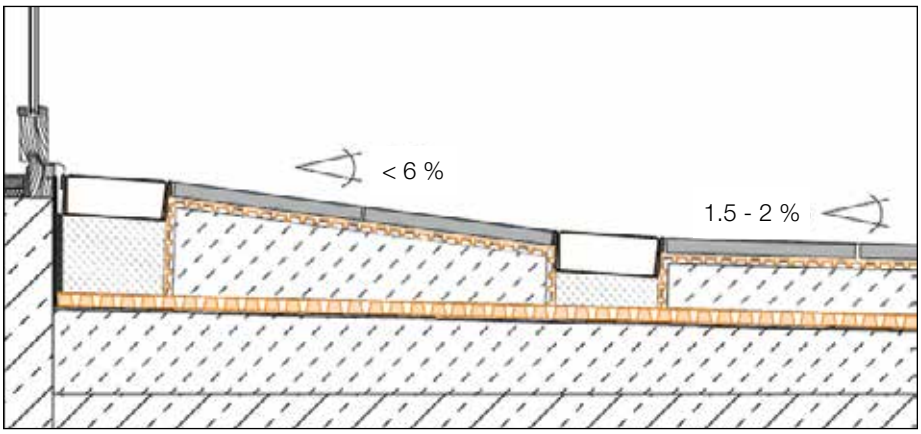
Installation

1. The balcony or terrace area must feature a functional and sloped waterproofing assembly.
2. Set TROBA-LINE onto mortar points or install TROBA-LINE-TL/H in the area of door elements or wall connections with the use of the height adjustment feature to stop water from accumulating.
3. When installing TROBA-LINE, it must be ensured that the number of mortar points or height adjustments, on which TROBA-LINE rests, matches the expected loads. In order to guarantee proper water drainage, a sufficient part of the channel may not have mortar underneath.
   In typical installations, TROBA or TROBA-PLUS should first be laid over the waterproofing layer as an area drainage and protective layer.
   Regardless of the installation system of the surface covering, a sufficiently large drainage space must be ensured above the waterproofing layer, in which the water draining off through TROBA-LINE can securely run off to the drainage exit.
4. If several channel elements are to be combined, they can be connected with the U-shaped parts (see Fig. 1). The same U-shaped parts can also serve as end caps (Fig. 2).
5. The screed or other selected covering construction is now installed in such a way that it abuts the properly aligned TROBA-LINE.

Reinforcement:
When using the drainage channels TROBA-LINE-TL and -TLG in the widths 110 mm and 160 mm, it may be necessary to install the reinforcement Schlüter-TROBA-LINE-TL/V, depending on the load.

Maintenance

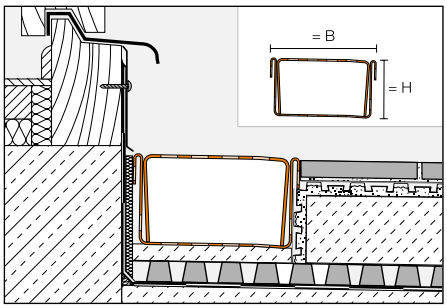
Schlüter-TROBA-LINE does not require special maintenance or care. The drainage channel must be kept clean and free of debris that can cause clogging. The upper section can be removed for cleaning out the lower section. We recommend the use of the stainless steel cleaning polish Schlüter-CLEAN-CP.



Seamless transitions can be produced with special constructions, in which two Schlüter®-TROBA-LINE channels are installed parallel with a space and the covering between the two channels is heavily sloped (approx. < 6 %).

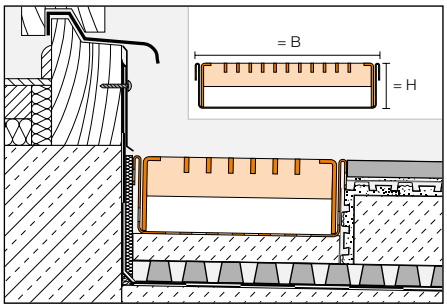
Schlüter®-TROBA-LINE-TL

Schlüter-TROBA-LINE-TL is a drainage channel of stainless steel, which can be installed in balconies and terraces with a low connecting height to door elements to prevent the accumulation of water. Water runs off below the surface covering in the area drainage system to the drainage exit.
Width: 75 mm / 110 mm / 160 mm
Height: 20 mm / 40 mm
Length: 0.75 m / 1.0 m / 1.5 m / 2.0 m



Schlüter®-TROBA-LINE-TLR / -TLR-E

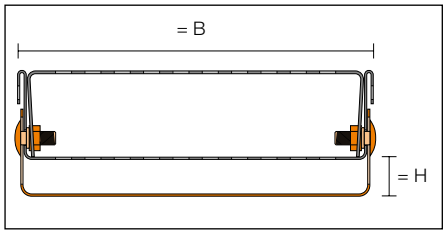
Schlüter-TROBA-LINE-TLR/-TLR-E is a drainage channel with a lower part of stainless steel and an upper drainage grate made of either galvanised steel or stainless steel V2A. It can be installed at low levels to create doorsill or wall connections on balconies and terraces to prevent water accumulation. Water runs off below the surface covering in the area drainage system to the drainage exit. The grates are able to support relatively high traffic loads.
Width: 110 mm / 160 mm
Height: 20 mm / 40 mm
Length: 0.75 m / 1.0 m / 1.5 m / 2.0 m



Supplementary system products

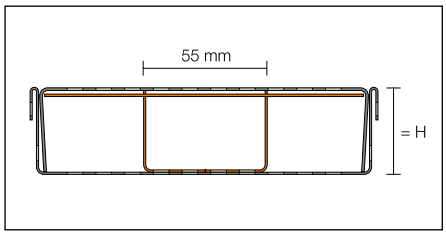
Schlüter®-TROBA-LINE-TL/H

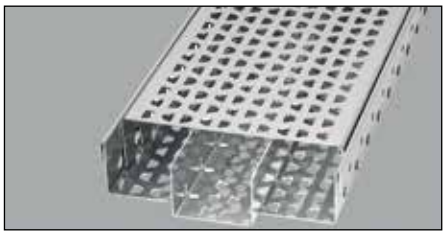
Schlüter-TROBA-LINE-TL/H is a height adjustment feature that allows for the stepless alignment of the perforated 40-mm drainage channels TROBA-LINE-TL and TROBA-LINE-TLR / -TLRE from 0 to 40 mm.
TL2H
height adjustment from H = 0 - 20 mm
TL4H
height adjustment from H = 20 - 40 mm
Width: 75 mm / 110 mm / 160 mm
Length: 135 mm



Schlüter®-TROBA-LINE-TL/V

In the event of higher traffic loads, e.g. from foot traffic or wheelchairs, it is recommended to use the reinforcement TROBA-LINE-TLV along with the widths 110 and 160 mm.
Height: 20 mm / 40 mm
Length: 0.75 m / 1.0 m / 1.5 m / 2.0 m





Product Overview

Schlüter®-TROBA-LINE-TL

TL = Channel of perforated stainless steel

Supplied length: 2.00 m, 1.50 m, 1.00 m and 0.75 m

TL	H = 20 mm	H = 40 mm
B = 75 mm	•	•
B = 110 mm	•	•
B = 160 mm	•	•

Schlüter®-TROBA-LINE-TLR

TLR = Channel of perforated stainless steel with grate of galvanized steel

Supplied length: 2.00 m, 1.50 m, 1.00 m and 0.75 m

TLR	H = 20 mm	H = 40 mm
B = 110 mm	•	•
B = 160 mm	•	•

Schlüter®-TROBA-LINE-TLR-E

TLR-E = Perforated channel, stainless steel with stainless steel grate

Supplied length: 2.00 m, 1.50 m, 1.00 m and 0.75 m

TLR-E	H = 20 mm	H = 40 mm
B = 110 mm	•	•
B = 160 mm	•	•

Schlüter®-TROBA-LINE-TLG

TLG = Closed channel, stainless steel

Supplied length: 2.00 m, 1.50 m, 1.00 m and 0.75 m

TLG	H = 20 mm	H = 40 mm
B = 75 mm	•	•
B = 110 mm	•	•
B = 160 mm	•	•

Schlüter®-TROBA-LINE-TLGR

TLGR = Closed channel of stainless steel with grate of galvanized steel

Supplied length: 2.00 m, 1.50 m, 1.00 m and 0.75 m

TLGR	H = 40 mm
B = 110 mm	•
B = 160 mm	•

Schlüter®-TROBA-LINE-TLGR-E

TLGR-E = Closed channel, stainless steel with stainless steel grate

Supplied length: 2.00 m, 1.50 m, 1.00 m and 0.75 m

TLGR-E	H = 40 mm
B = 110 mm	•
B = 160 mm	•

Schlüter®-TROBA-LINE-TLV

TLV = Reinforcement for TL and TLG

Supplied length: 2.00 m, 1.50 m, 1.00 m and 0.75 m

H = mm	20	40
TLV	•	•

Schlüter®-TROBA-LINE-TLH

TLH = Height adjustment

Supplied length: 135 mm

TLH	0 - 20 mm	20 - 40 mm
B = 75 mm	•	•
B = 110 mm	•	•
B = 160 mm	•	•

Text template for tenders:

_____ linear metres of Schlüter-TROBA-LINE-TL as a stainless steel drainage channel consisting of a trapezoid perforated U-shaped lower section and a trapezoid perforated U-shaped upper section, to be supplied and professionally installed in the door element/ wall transition area, while observing the manufacturer's instructions.

Height: ■ 20 mm ■ 40 mm

Width: ■ 75 mm ■ 110 mm ■ 160 mm

Art.-No.: _____

Material: _____...../m

Labour: _____...../m

Total: _____...../m

Text template for tenders:

_____ linear metres of Schlüter-TROBA-LINE-TLR as a drainage channel consisting of a galvanized steel screen inserted into a trapezoid perforated stainless steel U-shaped lower section, to be supplied and professionally installed in the door element/ wall transition area, while observing the manufacturer's instructions.

Height: ■ 20 mm ■ 40 mm

Width: ■ 110 mm ■ 160 mm

Art.-No.: _____

Material: _____...../m

Labour: _____...../m

Total: _____...../m

Text template for tenders:

_____linear metres of Schlüter-TROBA-LINE-TLR-E as a drainage channel consisting of an upper stainless steel grate and a trapezoidal perforated U-shaped stainless steel base, to be professionally installed in the area of door openings/wall connections, while observing the manufacturer's instructions.

Height: ■ 20 mm ■ 40 mm

Width: ■ 110 mm ■ 160 mm

Art.-No.: _____

Material: _____...../m

Labour: _____...../m

Total: _____...../m

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