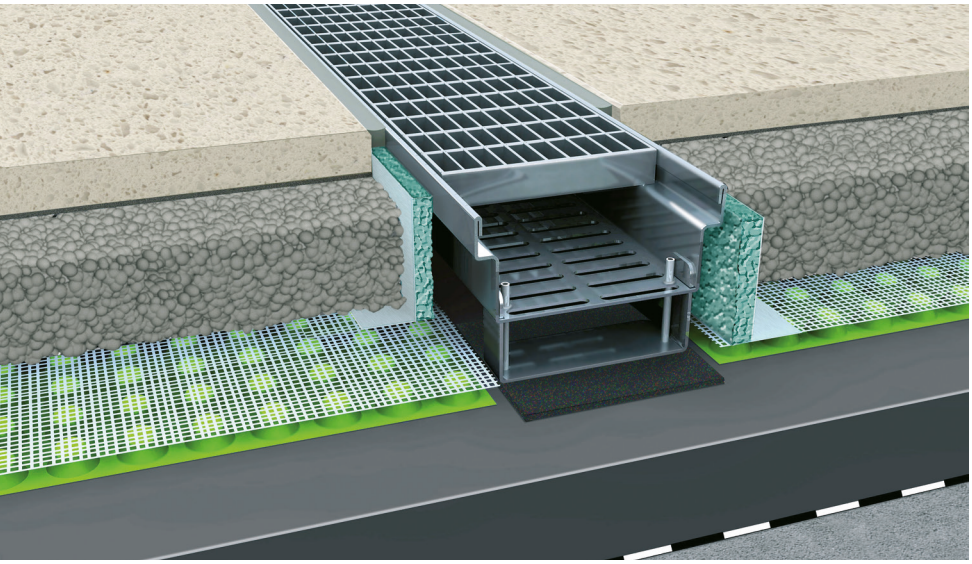
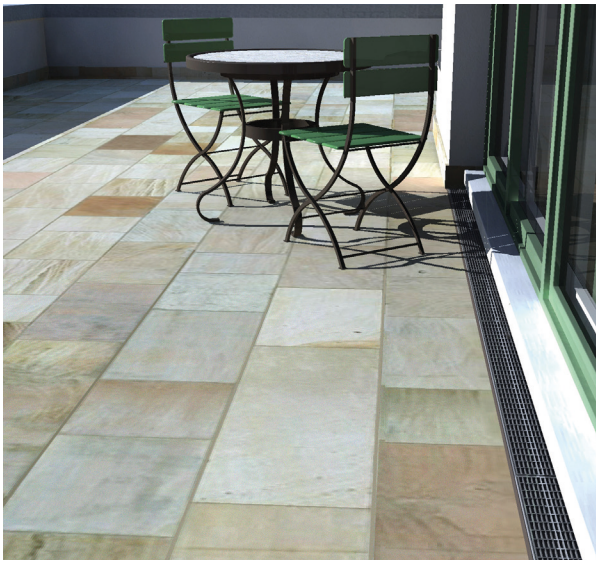
PROLINE

PROCOLINE

Facade channel/drain channel for balconies and terraces





Fields of application:

PROCOLINE is a façade and drainage channel for balconies, terraces and courtyards as well as pathways that are not driven over.
PROCOLINE supplements the PROCODRAIN drainage system for the construction of balconies and terraced areas of practically the same height and without barriers. It serves to securely drain large areas, prevent water collection within bordered areas (e.g. loggias) and arrange slopes favourably where surfaces geometries pose problems.
PROCOLINE can be deployed along door and window elements, façades and balustrades as well as within areas. At open ends of balconies or terraces, PROCOLINE can prevent severe overflowing of surface water. The surface water is channelled to the lower drainage level and flows along the lower slope to the dedicated drainage points or is brought close to the roof gutter.
PROCOLINE can be used in conjunction with loose coverings and ballast, tiles and slab surfaces on cement and reaction resin screed or tile and slab covered surfaces on coarse grain mortar or screed.
PROCOLINE is built up on the seal over protective layers.

- In balcony and terrace coverings
- In loggias and roof terraces
- In courtyards and pathways that are not driven on
- Numerous other areas of application

Product advantages:

PROCOLINE can be set-up as an individual element or in a joined line with attachment elements.
The frame sections can be adjusted in height from above and at an angle with infinite variability.
The height adjustment can be carried out easily and precisely and is still possible after the surfaces have been installed. PROCOLINE drainage channels can be cut to size at any point.
The frame sections and height adjustment elements are made from an alloy that is also particularly resistant to corrosion.
As a result, they are very light and easy to work with, though extremely sturdy thanks to their geometry. If higher loads are expected (e.g. from wheelchairs or similar), further height adjustment elements can be installed as additional supports. With two different frame heights, installation heights from 35 to 90 mm can be realised without difficulty.
Grilles made from galvanised steel or stainless steel V2A (1.4301) as well as designer perforated grilles made from stainless steel with elegant rope structure are available.
The drainage channels can be adapted extremely well to the prevailing ambience of the surfaces.

- Easy and quick to install
- Height and tilt adjustment from above without increments
- As individual element or in a line, can be shortened at any point

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- Innovative material selection, sturdy and can be used universally
- Long lasting functionality with high quality finish
- Aesthetic and creative selection opportunities

Delivery form:

Drainage line housing: Length 1,00 m, With 12 cm

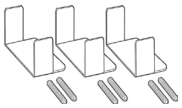
	Height 35 – 60 mm	Height 55 - 90 mm
Stepless angle adjustment range	to 18°	to 15°
Art.no.:	93360	93361

Grille, size approx. 1000 x 114 x 20 mm

Grille, steel hot-galvanized MW 30/10	Art.no. 93370
Grille, stainless steel V2A MW 30/10	Art.no. 93371
Designer perforated grille, stainless steel V2A	Art.no. 93372

3 additional height adjustment elements

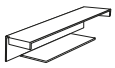
with screws as a set packed in a box



Height 35 – 60 mm	Height 55 - 90 mm
Art.no.: 93350	Art.no.: 93352

Grille end caps

for finishing cut grille ends, individual, loose



Aluminium (for galvanised grille)	Art.no.: 93348
Stainless steel V2A (for grille/perforated grille V2A)	Art.no.: 93349

Connectors

to connect channel bodies in line

Height 35 - 60 mm	Height 55 -90 mm
with 4 adjusting screws 30 mm	with 4 adjusting screws 45 mm
Art.no.: 93353	Art.no.: 93354

Side Walls

to close the channel bodies at the ends

Height 35 - 60 mm	Height 55 -90 mm
Art.no.: 93355	Art.no.: 93356

Specifications:

Drainage line housing with drainage slots

Material	AlMg3, material thickness approx. 1.5 mm
Length	approx. 1000 mm
Width	approx. 123 mm
Frame height	approx. 32 mm / approx. 48 mm
Screw drive	30 mm / 45 mm - hexagon socket size 3

Connectors, height adjustment elements

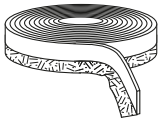
Material	AlMg3, material thickness approx. 2 mm

Supplementary products:

PROSTRIP S edge insulating strip

Fleece backed PE edge insulating strip for lower installation heights with self-adhesive foot and clinging technique.
Can be affixed securely to the drainage mat along rising installations, such as walls, doors, railing posts, etc.

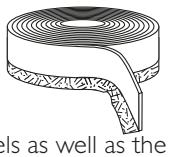
Height	Thickness	Length	Art.no.
50 mm	8 mm	25 m	93520



PROSTRIP L edge insulating strip

Fleece backed PE edge insulating strip for higher installation heights with self-adhesive foot and clinging technique. Can be affixed securely to the drainage mat along rising installations, such as walls, doors, railing posts, etc.

Height	Thickness	Length	Art.no.
100 mm	8 mm	25 m	93521



For functional drainage of water-channelling levels as well as the lower drainage level, the following drainage systems must be used depending on the area of application:

PROCODRAIN GK

Drainage mat for tile and slab covered surfaces exposed to weather on drainage-suited coarse grain mortar and screed flooring

	8 mm high Art.no.: 93320	20 mm high Art.no.: 93321
Material	HDPE stud membrane with textile lattice laminated	
Colour - Membrane	green	
Textile lattice	Glass lattice MW 1.5x1.5 mm with alkaliresistant finish	

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PROCODRAIN S		
Drainage mat for loosely laid coverings with and without ballast in outside areas		
	8 mm high Art.no.: 93322	20 mm high Art.no.: 93323
Material	HDPE stud membrane with thermally bonded geotextile fleece backing	
Colour - membrane	green	
Colour - geotextile fleece	grey	

PROCODRAIN E		
Drainage mat for tile and slab covered surfaces exposed to weather on screed mortar		
	8 mm high Art.no.: 93324	20 mm high Art.no.: 93325
Material	HDPE stud membrane laminated with filter fleece.	
Colour - membrane	yellow	
Colour - fleece	white	
Type of material	PET/PES fleece, grammage approx. 110 gr/m²	

PROBAND L	
self-adhesive butt-joining tape for PROCODRAIN GK	Art.no.: 93723

PROCODRAIN S SV	
self-adhesive butt-joining tape for PROCODRAIN S	Art.no.: 93327

PROCODRAIN E SV	
self-adhesive butt-joining tape for PROCODRAIN E	Art.no.: 93328

PROCHANNEL sound insulation mat	
PU-bonded rubber granulate 1250 x 1250 mm, 6 mm thick	Art.no.: 95351

PROLINE cutting discs	
Specially designed for cutting stainless steel,	
Ø115 mm	Art.no.: 94230
Ø125 mm	Art.no.: 94240

Storage and transportation:

Store and transport in dry areas that are protected against dirt and other foreign matter.
Boxes must be stored and transported laying flat along their length. Do not throw or launch. Do not bend or subject to loads.

Corrosion protection:

- Protect against gases containing chlorine and the influence of media containing chlorine (such as hydrochloric acid, chloric gas, salt with chlorine compositions and their dilutions), as well as strong alkaline or strong acidic media.
- Protect against flying sparks from welding and cutting operations.
- Protect against swarf from normal or structural steel.

Disposal:

Clean channel sections can be disposed of through the metal recycling system. Observe local authority regulations.
PROLINE supports the German Grüner Punkt (green dot) recycling system.
Product packaging can be disposed of in the appropriate manner.

Thermal degradation / conditions to avoid:

No degradation if used in the correct manner.
Hazardous reactions:
No hazardous reactions known.

Instructions on hazardous goods and substances:

No special measures required.
This product is classed as non-hazardous according to EC criteria.
Environmental protection measures:
No special measures required.

Preparatory measures:

Check that the seal is undamaged.
Lay out the protective layers.
Determine the position and height of the channel/s by measuring. Set-up the channel element/s and align in height and direction.

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Processing:

Setting up as single element:
Build up the channel elements using the height adjustment elements above the seal and a suitable, protective intermediate layer (e.g. PROCHANNEL sound insulation mat or 4 layers of PE film 0.4 mm). The protective layer serves as an additional means of protection against perforation of the sealing level.
Align the drainage line housing to the three inserted height adjustment elements (left, centre, right). Turn the screws in or out to adjust to the height and achieve the desired angle.
For easier adjustment of the angles, the guide rails from the height adjustment elements can be bent slightly towards the base plate.

Installing as line drainage:
Remove the side wall and the height adjustment element from the drainage line housing on the side on which the attachment element is to be fitted.
Then join the base element with a connector to the drainage line housing to be fitted. Continue this procedure until the line is completely installed. During this work, fit the attachment elements with the required height elements.

The height adjustment element and side wall of the base element that were removed at the start can now be inserted and grouted in the slot at the end of the last attachment element.
Lay protective intermediate layers under the height adjustment elements.
Straighten the line to its final position and adjust its height and angle. To facilitate better guidance and a sturdier position, it is advantageous during installation and use to lay and adjust the grilles so that they are half offset to the channel bodies.
Aligning height:
Always perform final adjustment of the outer height adjustment elements first. Then tighten the screws of the centre height adjustment element/s enough so that they take the load lightly.
If necessary, check the channel bodies again after the coverings have been laid and align the height.
When installing the screws, always turn vertically with minimal force. (Hexagon socket drive no. 3)

Shortening channels and grilles:
To shorten channels made from stainless steel (V2A grille/ V2A designer perforated grille), ideally use PROLINE cutting discs, item no. 94230, and, after initial use, employ only for this purpose thereafter.
With other tools and cutting/saw blades, always ensure that these have not been used on any metals other than stainless steel and do not generate 'normal' steel waste/swarf (risk of corrosion).
Protect the galvanised grilles at the cutting points against corrosion using suitable barrier layers (zinc content ≥ 92 %, multiple application).
After shortening the grilles, fit the grille end caps – aluminium for galvanised grilles, V2A for stainless steel grilles – to counteract the risk of injury from the cut edges of the grilles. Then insert the grille.
Shorten the channel body in such a way that at least two guide apertures remain for the height adjustment elements.
If necessary, cut equal lengths off the beginning and end of a line or an individual element.
To do this, conventional tools and machines can be used for cutting. Shorten the grilles at the same position to the same length (the screw spacing should coincide with the apertures in the grille).

Working in drainage mats and coverings:
After setting up the drainage channels, fit or cut the drainage mats (and potentially separating layers) up to the edges of the channels.
Bond PROSTRIP S/L edge strips to the drainage mats so that the edge strips stand vertically all around the channels.
With higher mortar or gravel layers, appropriate butt-joining tape can be used for reinforcement. Apply approx. 5 mm under the edge of the channel downwards in a straight line and then bond to the drainage mat at an angle. Then attach PROSTRIP S/L edge strips in the way previously described.
After laying the surfaces, cut the edge strips in such a way that an elastic seal with a thickness of approx. 5 mm can be created between the covering and channel body. Fit the seal using suitable material (e.g. neutrally cross-linked silicone) and sand off excess if necessary.
Right at the end of rising components, fit/bond either PROSTRIP S/L edge strips or bond a closed-cell round cord to the upper frame section and seal it later by elastic means as previously described.

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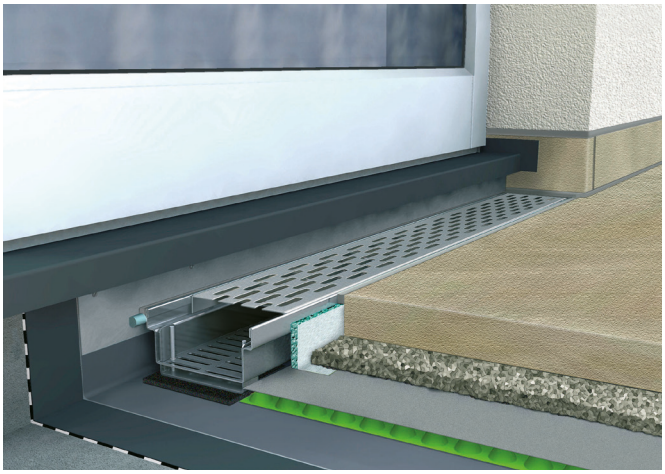

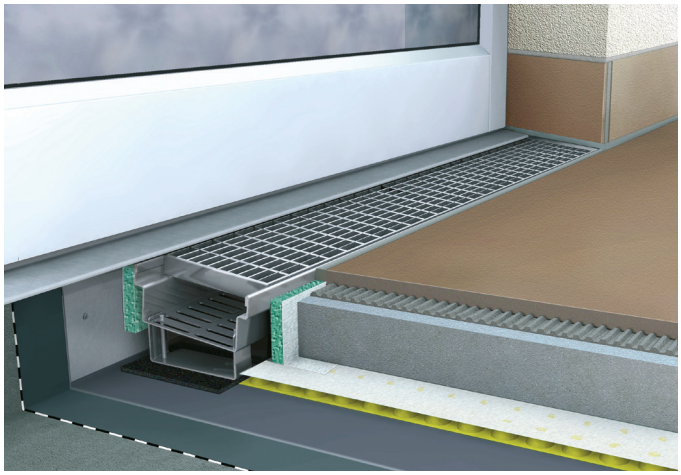

Chemical and physical resilience:

The chemical and physical load bearing capability is orientated around the materials V2A and aluminium.
With moderate chemical load, the chemicals and their compositions that the parts are expected to be exposed to should be checked to determine whether they have any corrosive or damaging effect on the material of the profiles.
The wide variety of cleaning devices and machinery and their bristles and scouring pads mean that the manufacturers are obliged to check for any damaging abrasive effect of this equipment.
In accordance with the specifications of the stainless steel manufacturing industry, the profiles must not be exposed to media containing chlorine (such as hydrochloric acid, chloric gases, salt with chlorine compositions and their dilutions). Cleaning agents and other aggressive substances should be checked in advance. (Information is available from *www.bssa.org.uk*)
The channels have been developed for areas with pedestrian traffic. Where wheelchairs are used, for example, with pneumatic tyres or solid rubber wheels, additional height adjustment elements may need to be installed.
High point loads should be avoided. The larger the wheel diameter, the lower the point load. Wheelchairs with an overall weight of 200 kg do not pose a problem if additional height adjustment elements are used.

Care, cleaning and maintenance:

The channels are designed for drainage of clean surface water from rain or snow. They are not designed for waste water disposal. Heavy contaminants in the channel can lead to functional failure.
The channel bodies should be checked and cleaned of washed in contaminants and deposits on a regular basis. Ensure that no substances fall through the drainage slots during cleaning. Use an industrial vacuum cleaner if necessary.
Use a soft hand brush and normal water to clean. If necessary, add a small amount of mild household detergent (e.g. washing-up liquid) and rinse fully with copious amounts of water.
Clean the grilles outside the channel body (e.g. using a high pressure cleaner). Waste water must not find its way into the channel body.
Make sure that no sediment forming substances or substances containing soil enter the channel or the neighbouring drainage mats as this would impair the drainage performance of the overall drainage system.

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Important information:

- *The number and distribution of channels in the field and along rising components is decisive for the quality of the surface water drainage and the prevention of overflowing water.*
- *If heavy water-driving winds are expected, it may be necessary to install custom widths (on request) or two channels in parallel butted up against each other with short spacing.*
- *For the drainage behaviour in the channels, the existing slope and height of the drainage mat is decisive. The greater the expected quantity of water, the greater the slope and the higher the drainage mat.*
- *Stainless steel grilles should only be processed with tools that are used exclusively for stainless steel. Where this requirement cannot be met, use new tools.*

Standards and regulations:

- ATV DIN 18352 Tile laying work
- ATV DIN 18332 Natural stone work
- ATV DIN 18333 Cast stone work
- ATV DIN 18353 Screed work
- DIN 18202 'Tolerances in surface construction'
- ZDB bulletin 'Expansion joints' (recent edition)
- ZDB bulletin 'Flooring/covering subjected to high loads' (recent edition)
- DIN 18560 'Screeds in building construction'
- DIN EN 13813 'Screed mortar, screed mass… Properties and requirements'
- DIN EN 13318 'Screed mortar and screed flooring – terminology'
- ZDB information 'Maintenance and warranty of elastic joints'
- Trade rules for seals – Guideline for flat roofs
- DIN 18195 Building seals
- DIN 18025 'Barrier-free flats'
- Information in English can be found at http://*www.bssa.org.uk*, particularly: http://www.bssa.org.uk/topics.php?article=77.

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