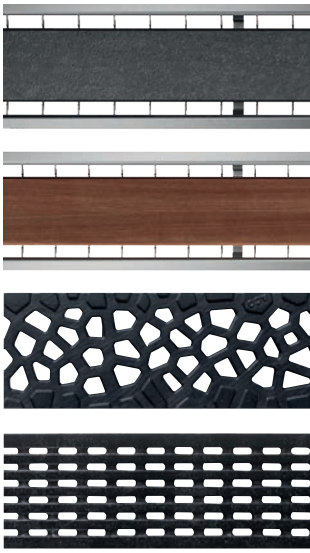
NEW DESIGN GRATING



Versatile. Simple. Beautiful.

Everything for residental outdoor areas

ACO House & Garden
ACO Self® Line drainage

Versatile. Simple. Beautiful.

Rainwater that is not properly drained damages the structure of buildings - inside and out. Anyone building or renovating a property is therefore automatically faced with the question: What systems around the house are necessary to keep indoor and outdoor living-spaces clean, beautiful and moisture-free? And how can functionality and aesthetics be combined? In the wake of climate change, properly functioning drainage systems are becoming increasingly important in private and public spaces.

This is because in Central Europe climate change is not only leading to a rise in temperature, but also to more extreme precipitation, often after prolonged dry periods. To avoid damage caused by these violent shifts in the weather, it is important to build with foresight around the house, be it on driveways, paths, terraces or façades.

With the ACO Self® range, ACO offers drainage channels for every conceivable property situation and requirement.
They guarantee the professional drainage of rainwater and are therefore much more than just a simple functional system: They are available in a wide variety of versions and combine functionality and design of the highest quality. The drainage channel fits perfectly into the design of the property in line with your aesthetical requirements.

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ACO Self® drainage systems keep driveways, paths, terraces and façade areas free of rain and dirty water and therefore protects the structure the building‘s structure.

Entrance areas and facades

The water must be drained safely
The following applies to areas that lead from open spaces into the building, such as balconies and terraces, but also entrances, plinths and façades:
“The water must be drained safely“.

The transition from outdoor spaces into buildings is a vulnerable area. Standing water can lead to structural damage over the medium term. Entrance areas are particularly at risk, where low threshold constructions are often used.

In these standards and regulations, the height of the waterproofing on rising facades is clearly regulated:

- DIN 18533
- FLL recommendation for planning, construction and maintenance of transition areas from open spaces to buildings
- Flat roof guidelines

This states that the waterproofing against soil moisture and temporary infiltrated water must be installed 30 cm above the top edge of the ground, so that when completed, it does not fall below 15 cm from the top edge of the finished surface to the top of the waterproofing.

Note: Waterproofing is integrated into the structure of the wall and may not be visible from the outside. If the connection height of the waterproofing (15 cm) is not reached, the transition from the open area to the building must be provided with an efficient drainage system. It is also necessary to significantly reduce the splash water volume.

The Microgrip grating not only impresses with its unique look, but also makes a major contribution to safety thanks to its anti-slip surface structure.

ACO Self® drainage with plastic slotted frame

Two safe solutions for façade drainage

With **closed channel systems** such as the **ACO Self® Euroline** or the **ACO Self® Hexaline** and a connection to a drainage or infiltration system such as the ACO Self® Sickerbox, rainwater can be safely drained away.

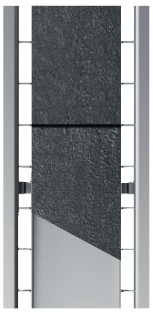
Note: An ACO Self® shoe scraper with connection to the drainage system also provides a good practical solution in the entrance area with double the benefits.

Another drainage solution is the **ACO Self® Highline** façade channel. It is an **open channel system** that allows rainwater to seep away, similar to a gravel strip around the house. Care must be taken here to avoid increasing the moisture load on the basement wall. Furthermore, this channel system can be used on roof gardens, roof terraces and balconies in accordance with the flat roof guideline.

All channel systems use the same gratings.

Design grating

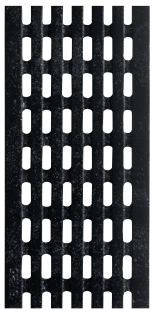
Double slotted grating [1)]
„Wood“
Stainless steel
(to be filled on site)



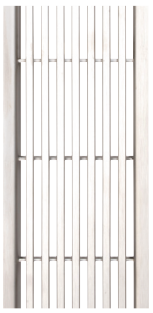
Double slotted grating [1)]
„Tile“
Stainless steel
(to be filed on site)

Double slotted grating [1)]
„Stone“
Stainless steel
(to be filed on site)

Surface grating
„Voronoi“
Cast iron[2)]



Longitudinal grating
„Intercept“
Cast iron[2)]



Longitudinal grating
Stainless steel

Slotted grating
Stainless steel
Galvanised steel

1)The double slotted gratings are only suitable for use with Euroline and Hexaline (in combination with the flat channel or the Highline, the drainage capacity would be too low).

2)Cast iron gratings are not recommended as a cover for the Highline (contact corrosion).

ACO Self® Construction Kit

A channel for every application

Today, a drainage channel is no longer just a mechanical construction element that is determined solely by its function. Increasingly, customers want to include drainage channels as an architectural design element in the outdoor design of their own home.

The popular ACO Self® construction kit now includes new stainless steel gratings that can be individually filled on site with wood, tiles or stone, as well as two cast iron gratings with an extraordinary design that allows them to be assembled in harmony with their surroundings. The standard gratings are also still available in various materials - from galvanised or powder-coated steel to stainless steel, cast iron and plastic. This results in a wide range of design options. The channel bodies are made of polymer concrete (ACO Self® Euroline) or plastic (ACO Self® Hexaline), the ACO Self® Highline façade channel is available in stainless steel and galvanised steel. This allows you to put together a customised solution for every building scenario and application.
The ACO Self® Euroline 60 flat channel was developed as a special solution for areas with low installation heights. With the ACO Self® Highline, façade drainage is possible with an open channel system, which is particularly appealing for balconies and terraces. The ACO Self® drainage system was specially developed for private applications and combines the best quality with premium design. Most gratings are trafficable and therefore meet all the requirements which are relevant for rainwater drainage of areas around the house.

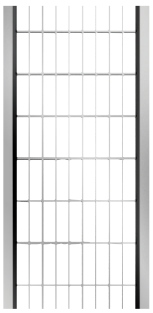
Standard grating

anti-slip microgrip plastic grating

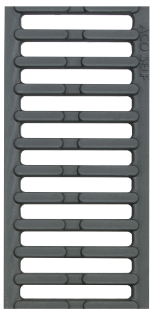
Slotted grating, galvanised steel

Slotted grating, polished stainless steel

powder-coated anthracite grating



Mesh grating Stainless steel Galvanised steel



Cast iron grating[2)]

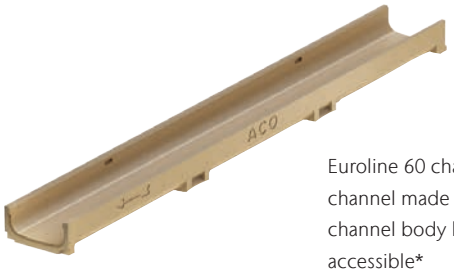
Plastic slot attachment

A wide range of grating designs is available.

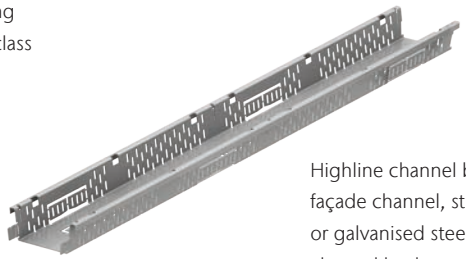
Combine them with one of the four channel bodies.

Euroline channel body made of polymer concrete - trust in the long-standing expertise of ACO, Channel body load class B 125*

Hexaline channel body made of plastic, load class car accessible*



Euroline 60 channel body - shallow channel made of polymer concrete, channel body load Class car accessible*

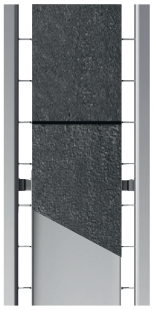


Highline channel body - ACO façade channel, stainless steel or galvanised steel, load class of channel body max. accessible

*When combining channel and grating, the lower load-bearing product determines the maximum class in the application.

Design grating

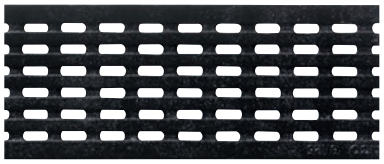
1 – Double slotted stainless steel grating „Wood“
The new stainless steel grating can be individually fitted with 24 mm thick wood on-site. On each side, 8 mm slots ensure the reliable drainage of accumulating surface water. Blending in with wooden terraces, or standing out as a unique element as part of high-quality stone terraces.



2 – Double slotted stainless steel grating „Tile“
The new stainless steel grating can be individually fitted with 20 mm strong tiles on site. On each side, 8 mm slots ensure the reliable drainage of accumulating surface water. It can be used in combination with patio tiles, or as a unique element in high-quality stone terraces.

3 – Double slotted stainless steel grating „Stone“
The new stainless steel grating can be individually fitted with 30 mm thick stone on-site. On each side, 8 mm slots ensure the reliable drainage of accumulating surface water. Ideal for large stone surfaces.

4 – Surface grating „Voronoi“ cast iron
The cast iron grating with its extraordinary design features a high-quality surface. Inspired by the beauty of nature, the cast iron grating looks at home in both mineral and botanical environments.



5 – Longitudinal cast iron grating „Intercept“
High quality cast iron grating with linear design in black for sleek surfaces.

6 – Longitudinal stainless steel grating
The narrow triangular profiles and a brushed surface give the longitudinal rod grating a particularly elegant appearance. In addition, it is made of high-quality stainless steel and is therefore extremely durable.

7 – Slotted grating
Stainless steel or galvanised steel
The offest slotted gratings allow for particularly discreet drainage of your outdoor areas. They blend discreetly into stylishly designed paved surfaces and thereby maintain the overall visual design.

The slotted gratings are available in both galvanised steel and stainless steel.
The Connector Clip ensures a harmonious look. In one simple step, the slotted frames can be perfectly aligned during installation. This gives you continuous alignment for optimal function at all times.

Drainage is discreetly integrated into the overall appearance with the narrow slot channel

Inspired by the beauty of nature

ACO Voronoi design-grating

reddot winner 2020

Standard grating

Car-accessible

UV stable

Consistently black cast appearance without the corrosion-related patina typical of cast iron

easily shortened to any length

Gratings with sophisticated details

The new generation of ACO Self® drainage is not only characterised by its extensive variety of designs, but also has some innovative features.

The surface with Microgrip ensures high slip resistance even in wet conditions. The unique structure on the plastic grating is patent pending

The patented screwless grating stop serves as a displacement and spreading guard for all gratings in the ACO Self® construction kit

1 – anti-slip microgrip grating

In the area of terraces or house entrances, flat surfaces can quickly become a slip hazard in damp conditions. Many ground coverings are equipped with anti-slip surfaces for this reason. To round off the solution, ACO's new plastic grating with Microgrip is the first system to provide a slip-resistant cover for drainage systems around the house.

In addition to the proven dimpled structure, the gratig is equipped with many tiny elevations that provide sure-footedness even with high moisture. The structure is moulded directly into the grating surface and is therefore especially durable. Even with heavy traffic, the plastic grating retains its anti-slip properties.

Microgrip achieves class R11 slip resistance according to DIN 51130

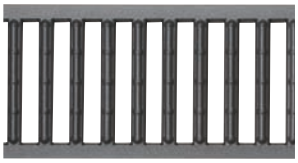
2 – Slotted grating, galvanised steel
The galvanised steel grating is the classic of the ACO Self® grating family. The grating is distinguished by its simplicity and functionality.

3 – Slotted grating, polished stainless steel
The tried-and-tested stainless steel grating shines in a whole new light. The high-quality electropolish is not only visually appealing, but also reduces the adhesion of dirt due to its special surface texture.

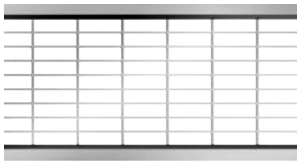
A particularly high degree of gloss is achieved by electropolishing the surface

4 – Powder-coated grating
In addition to the zinc coating, the powder coating offers additional corrosion protection and the UV-stable colour retains its appearance even after years.

Powder coating offers additional corrosion protection and modern design options thanks to the UV-stable colour



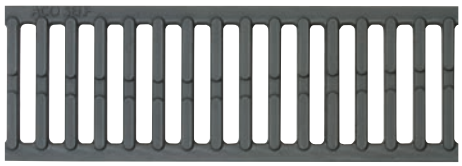
5 – Mesh grating
Mesh gratings have a particularly large inlet cross-section due to their highly stable yet slender support structure. Even larger amounts of water are quickly absorbed and safely drained away via the channel. Excessive water is therefore avoided even in downhill situations.
The mesh size of 30 x 10 mm offers a stylish look.



Available in galvanised steel or stainless steel.

6 – Slot attachment made of plastic
The corrosion-resistant and UV-stable plastic ensures a durable design solution that blends inconspicuously into the overall look as a slotted top - at the end of the driveway, terrace or along the garage. An inspection element makes cleaning easy.

7 – Cast iron grating
Another classic in the gratings range is the cast iron grating. The robust material and the striking shaft design have been quality features for years. The cast iron grating is particularly suitable for areas subjected to heavy traffic.



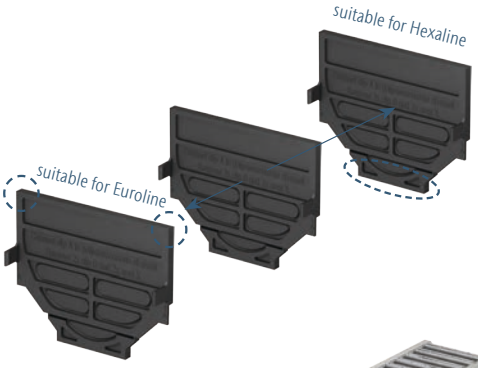
Façade and driveway - continuity in design with identical gratings

A complete system with many possibilities

ACO Self® Euroline – the polymer concrete channel body

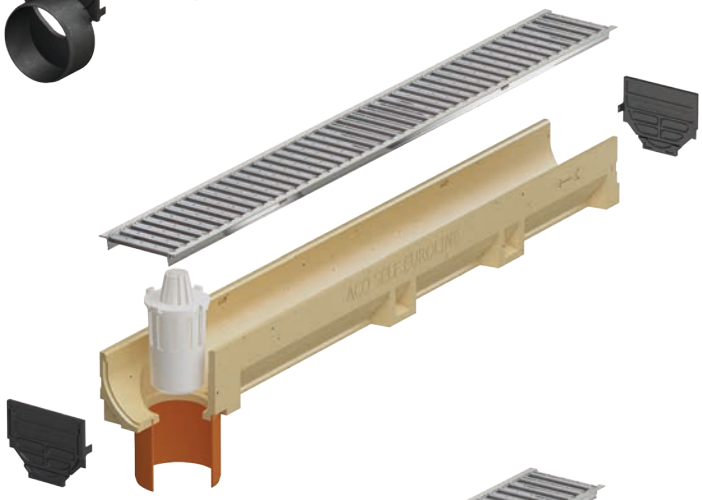
ACO product advantages

- 3 Channel elements made of polymer concrete (0.5 m and 1 m channel element closed and with DN 100 socket) enable various system structures to be used
- frost-resistant
- low self-weight, high strength
- smooth surface for high flow rate and cleaning comfort
- V-shaped cross-section for safe drainage of even small amounts of water
- free channel cross-section for an easier maintenance
- boltless grating locking devices
- Load class of the channel body max. B125
- Euroline 60 car-accessible



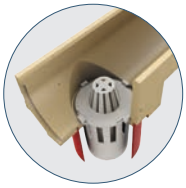
An end cap for Euroline/Hexaline

Connection to the pipe system via the end cap with DN 100 socket



Connection to the pipe system via the channel element with outlet opening and moulded socket DN 100, with optional odour trap

Odour trap can be retrofitted



Connection of the Euroline 60 to the pipe system via the channel element with drainage opening and moulded socket DN 100

End cap for Euroline 60

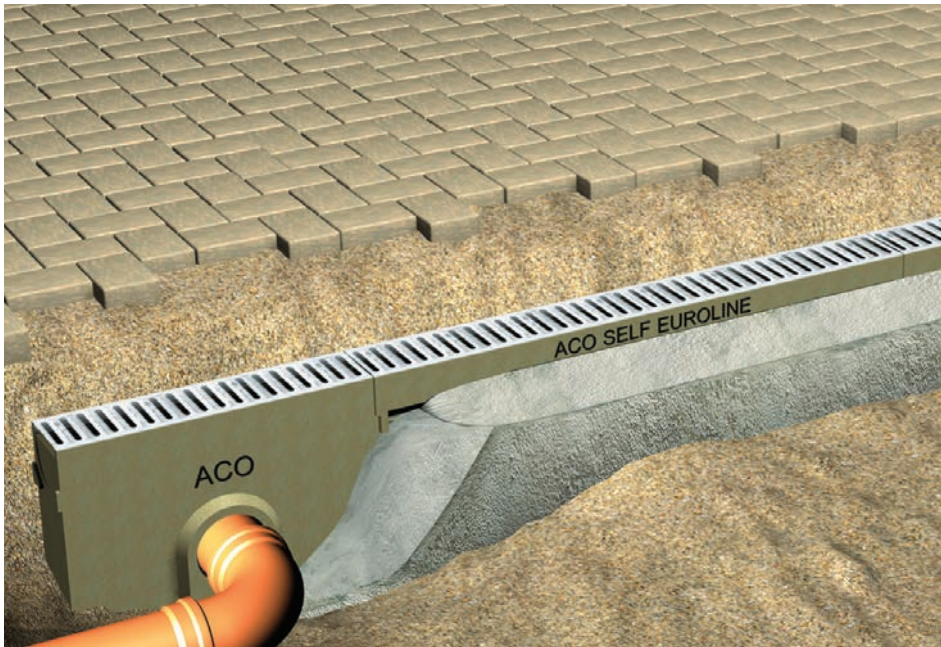
Tip

The connection of the channel via the sump unit offers particular convenience. The integrated silt bucket offers two advantages: Silt is reliably prevented from entering the pipe system and cleaning is significantly simplified.

Connection to the pipe system via the sump unit (does not fit the Euroline 60 flat channel)

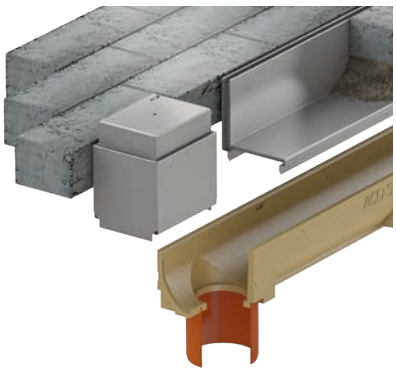
With a water flow rate of 6.0 l/s, the sump unit is the most powerful among the outlet connections and therefore offers more safety against overloading.
(Details on the hydraulic performance of the channel systems can be found at www.aco-hochbau.de/selfhydraulik)

Regular cleaning of a drainage system is essential. Heavy soiling can reduce the drainage capacity by more than 50 %.
To prevent unpleasant odours from escaping from the sewer system, an optional odour trap can also be added in the sump unit.



System design and maintenance of the ACO Self® slot channel

Maintenance of the ACO Self® channels with slotted cover is carried out via an inspection element that is placed directly above the drain. Depending on the system design, a half-metre element or a 15 cm element is available for this purpose. The inspection element should be opened and the channel run flushed about twice a year. Depending on the local conditions, it is recommended to flush more frequently or to provide a second inspection element at the other end of the channel run to facilitate cleaning.

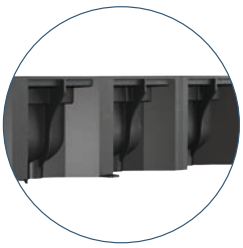


The smaller inspection element is suitable for use on the Hexaline channel body or the Euroline channel body with outlet socket in combination with a slotted grating with a length of 850 mm.

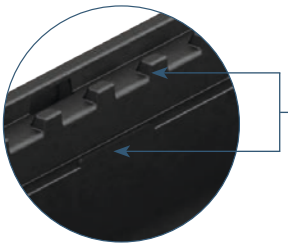
ACO Self® Hexaline – the plastic channel body

ACO product advantages

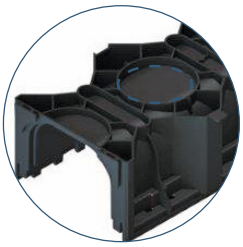
- 1 Channel element made of plastic for flexible applications
- frost-resistant
- particularly low weight, easy assembly and handling
- smooth surface for high flow rate and cleaning comfort
- high sidewall stability due to hexagonal structure
- boltless grating locking devices
- Load class of the channel body max. car- accessible



High sidewall stability due to honeycomb shape



Double grating support with integrated spreading and displacement guard for improved load transfer



8 connection points for the vertical drain connection are possible per metre (can be knocked out)

1 Cutting guide for sawing 0.5 m channel elements. It is also possible to shorten the channel at any point.

2 Corner element for easy production of corner/T/cross connections

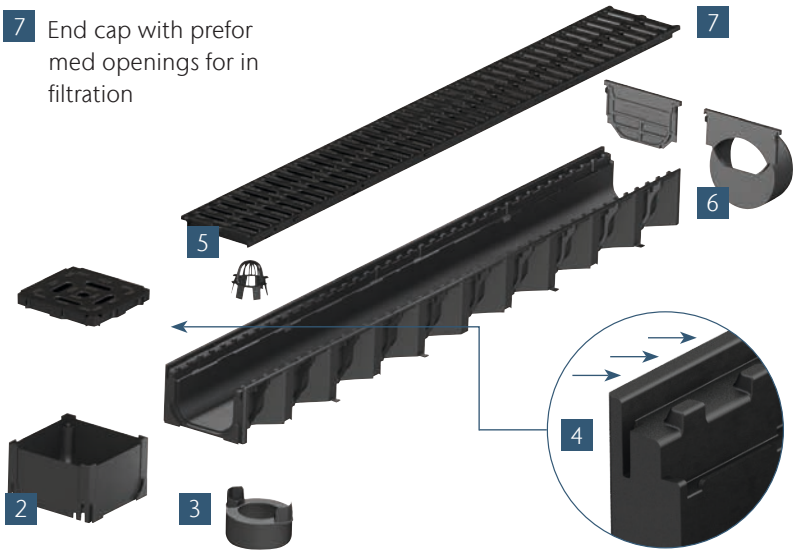
3 Vertical drain connection

4 Paving edge for easy surface preparation

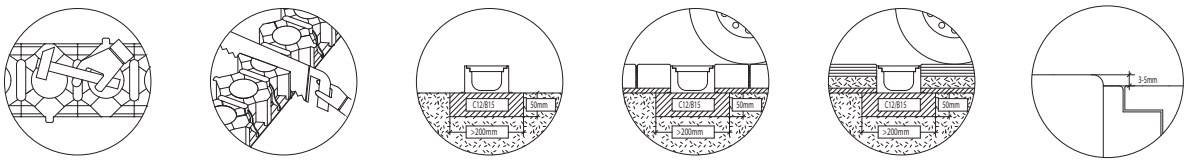
5 Leaf trap

6 End cap with DN 100 socket

7 End cap with prefor med openings for in filtration



Installation instructions on the underside of the ACO Hexaline

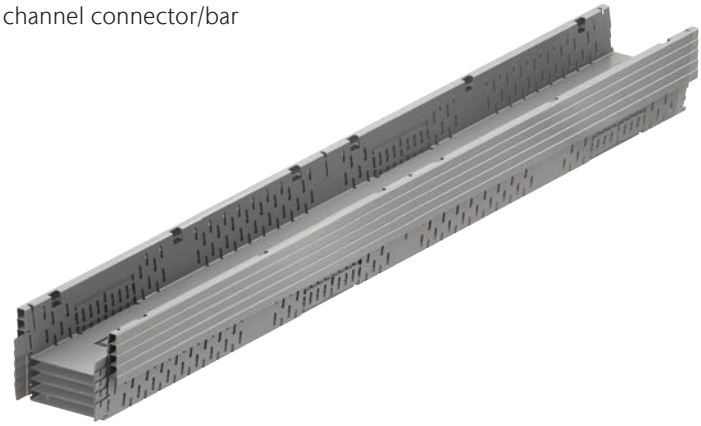


ACO Self® Highline – the open channel system for façade drainage

ACO product advantages

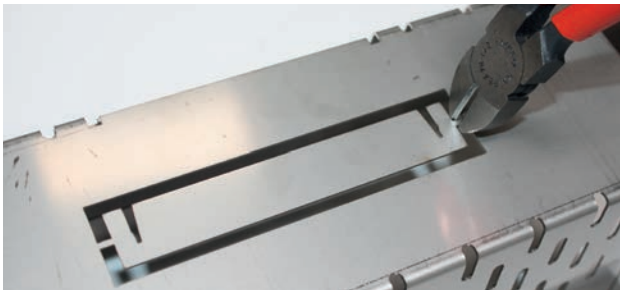
- availabale in stainless steel or galvanized
- Lengths up to 3 m
- Channel bodies can be stacked: space-saving storage, easy handling on the construction site
- Channel connector integrated into the channel base (also available separately)
- Channel connector can be used as: reinforcement bars, channel connector and end cap fixer
- Load class of the channel body max. accessible by foot

- Width 12 cm
  Building height: 5 and 7.5 cm
  Length: 50, 100, 200 and 300 cm
- Accessories:
  End cap and channel connector/bar



End cap and channel connector/bar

Important!
The channel system is not car-accessible. When using the Highline in areas that can be walked on, 3 connector elements per metre must be used. If the channel is not exposed to a load from above, no bars for reinforcement are required.



The channel connector/bar is available as an accessory and integrated into the base of each channel element

The integrated channel connector can be easily removed using a wire cutter

Space-saving thanks to stacking

Open channel
with drainage via the roof waterproofing: Balconies with ACO Self® Highline

Alternatively closed channel
with connection to infiltration: Façade with ACO Self® Hexaline

Open channel without connection: Terrace with ACO Self® Highline

The complete system at a glance

Figure	Information	Length [mm]	Width [mm]	Height [mm]	Article no.
ACO Self® Euroline made of polymer concrete, max. B125					
	Channel element without grating	1000	118	97	38500
	Channel element without grating	500	118	97	38502
	Channel element with outlet socket, without grating	1000	118	97	38501
	Sump unit ACO Self® Euroline without grating incl. dirt bucket (does not fit on the Euroline 60)	500	118	300	38503
ACO Self® Euroline 60 flat channel made of polymer concrete, max. car accessibility					
	Flat channel element without grating	1000	118	55	810000
	Flat channel element without grating	500	118	55	320276
	Flat channel element with outlet socket, without grating	1000	118	55	810010
ACO Self® Hexaline made of plastic, max. car accessibility					
	Channel element without grating	1000	129	79	319200
ACO Self® Highline, max. accessibility					
	Façade gutter element without grating, galvanised steel	2000	120	50	320094
		1000	120	50	320095
		500	120	50	320096
	Façade channel element without grating, stainless steel	2000	120	50	320102
		1000	120	50	320103
		500	120	50	320104

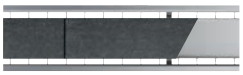
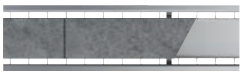
Figure	Information	Length [mm]	Width [mm]	Height [mm]	Article no.
ACO Self® Designer Cover Gratings					
	Double slotted grating „Wood“ ■ Stainless steel ■ Walk-on capable ■ (to be filled on site)	1000	118	-	310314
	**Double slotted grating „Tile“** ■ Stainless steel ■ Walk-on capable ■ (to be filled on site)	1000	118	-	310315
	**Double slotted grating „Stone“** ■ Stainless steel ■ Walk-on capable ■ (to be filled on site)	1000	118	-	310317
	„Voronoi“ surface grating ■ Cast iron ■ B 125 ■ not recommended for the ACO Self® Highline	500	118	-	310319
	„Intercept“ longitudinal bar grating ■ Cast iron ■ B 125 ■ not recommended for the ACO Self® Highline	500	118	-	310321
	Longitudinal bar grating ■ Stainless Steel ■ Car-accessible	1000	118	-	10323
		500	118	-	10324

Figure	Information	Length [mm]	Width [mm]	Height [mm]	Slot height [mm]	Article no.
ACO Self® Slotted attachment						
	Slotted attachment ■ Steel, galvanised ■ Car-accessible	1000	118	-	105	415838
		850	118	-	105	415840
		500	118	-	105	415850
	Inspection element ■ Steel, galvanised ■ Car-accessible	500	118	105	-	415839
		150	118	105	-	415841
	Slotted attachment ■ Stainless steel ■ Car-accessible	1000	118	-	105	415842
		850	118	-	105	415844
		500	118	-	105	415851
	Inspection element ■ Stainless steel ■ Car-accessible	500	118	105	-	415843
		150	118	105	-	415845

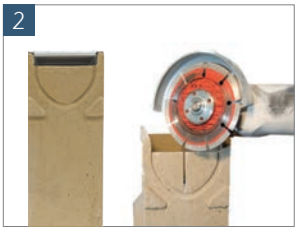
Figure	Information	Length [mm]	Width [mm]	Height [mm]	Article no.
ACO Self® Standard grating					
	Anti-slip microgrip grating ■ Plastic ■ Car-accessible	1000	118	-	319250
		500	118	-	319251
	Slotted grating ■ Electro-polished stainless steel ■ Car-accessible	1000	118	-	310307
		500	118	-	310308
	Slotted grating ■ Steel, galvanised ■ Car-accessible	1000	118	-	38516
		500	118	-	38517
	Slotted grating ■ anthracite powder coated ■ Car-accessible	1000	118	-	10305
		500	118	-	10306
	Mesh grating ■ Stainless steel ■ Car-accessible	1000	118	-	310312
		500	118	-	310311
	Mesh grating ■ Steel, galvanised ■ B 125	1000	118	-	310310
		500	118	-	310311
	Cast iron grating ■ not recommended for the ACO Self® Highline	500	118	-	310309

Figure	Information	Length [mm]	Width [mm]	Height [mm]	Slot height [mm]	Article no.
ACO Self® plastic slot cover						
	Slotted attachment ■ Plastic ■ Car-accessible	500	125	-	60	319554
	Inspection element ■ Plastic ■ Car-accessible	125	125	146	-	319560

Figure	Information	Article no.
Accessories for ACO Self® Euroline		
	Odour trap for channel (does not fit the Euroline 60 flat channel) ■ two-part	01666
	Sump unit odour trap ■ DN 100	01682
	Silt bucket ■ for sump unit	01682
	Connector Clip ■ Plastic ■ Suitable for slotted attachments made of steel	11143
	ACO Waterseal ■ 300 ml for sealing the channel bodies	74520
Accessories for ACO Self® Hexaline		
	Vertical drain connection	19282
	Leaf trap	319282
	Universal part ■ for 90°, 180° and 270° connections	19280
Common accessories for ACO Self® Hexaline and Euroline		
	End cap with socket ■ for channel start and end	319288
	End cap with socket ■ for channel end	319289
	Grating hook	03429
	Lifting aid ■ for slotted frame revision element 0.5 m	415924
Accessories for ACO Self® Hexaline		
	End cap ■ Galvanised steel, 50 mm	320097
	Stirnwand ■ Stainless steel, 50 mm	320105
	Channel connector ■ Steel, galvanised	320123
	Channel connector ■ Stainless steel	320122
Accessories for ACO Self® Euroline 60 shallow channel		
	End cap ■ Polymer concrete	810200

Easy installation perfect solutions

The step by step installation of the ACO Self® Euroline with sump unit in front of a garage



1. Soil excavation according to installation recommendations for ACO Self® Euroline: Channel run with sump unit. (Download installation details at: www.aco-hochbau.de/service/technische-dokumente/)

2. To connect the channel body, cut the preform on the sump unit in the centre using an angle grinder with a diamond disc as shown....

3. ... and knock it out with a hammer from the outside to the inside.

4. Install the channel foundation according to the installation recommendation. Compact the channel foundation. Prepare the DN 100 drain.
5. Insert underground drainage pipe with lubricant into the sump unit.

6. Apply loose concrete to the already compacted foundation.

7. Insert the gratings into the channel bodies. Attaching the channel body to the sump unit. Align the channel run. The 2 cm garage threshold is designed so that the door closes between the threshold and the channel.

8. Attach the end cap before setting the last channel body.
See also page 25.

9. Prepare lateral concrete support according to installation recommendation.

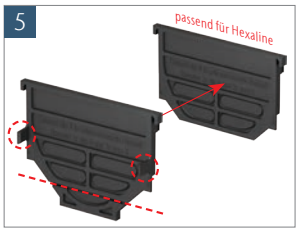
10. Determine or set the slope position. The plaster should be applied so that the channel run runs 3-5 mm below the plaster.

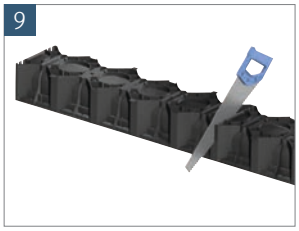
11. Place the paving on the channel run.

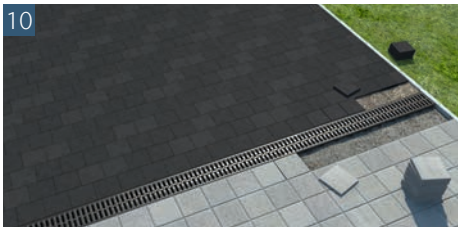
12. Completed channel run in the paved area in front of the garage.

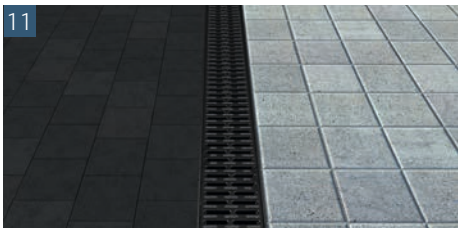
http://www.aco-hochbau.de/download/einbauanleitungen/

Step-by-step explanation of the installation of the ACO Self® Hexaline.







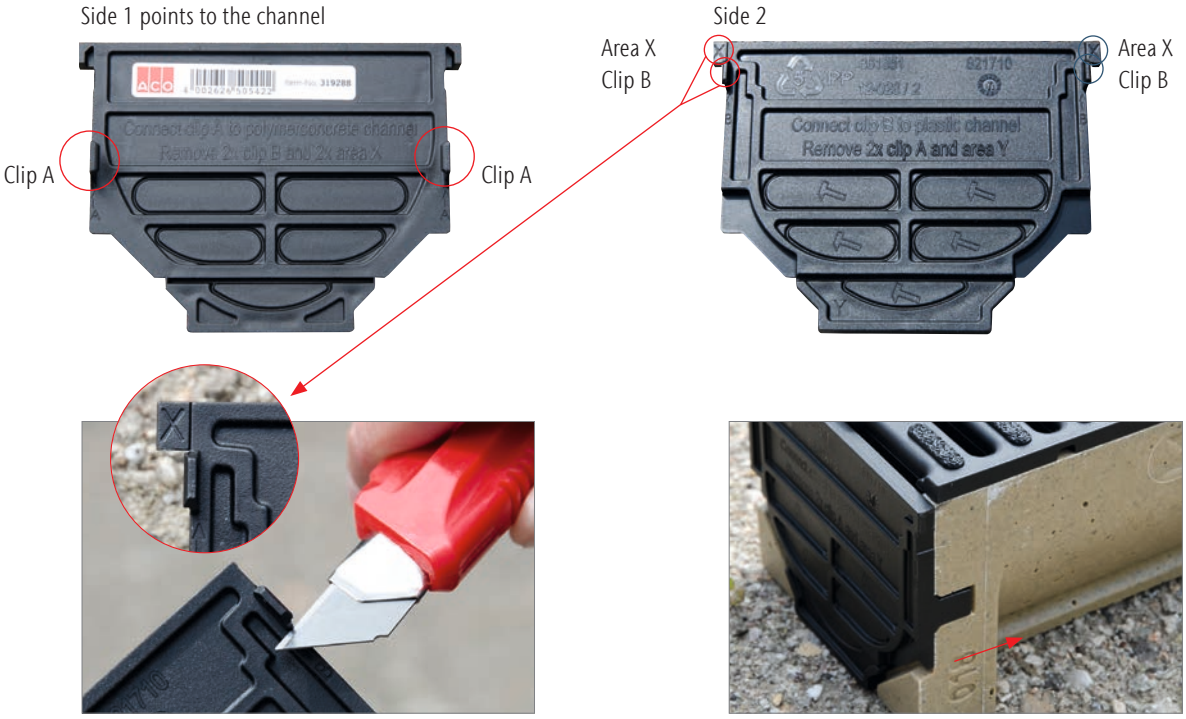


1. Dig the trench for the concrete bed. The concrete bed should eventually have a minimum height of 5 cm and a width of 20 cm. We recommend that the front and back rows of paving stones also be placed in a concrete bed. (see page 25)
2. Fill the earth-moist lean concrete (C 15/B 15) into the trench and compact it.
3. Level the concrete bed to the desired height (82 - 85 mm to the surface covering).
4. Knock out the preform for drainage at the desired location of the channel.
5. For an optimal fit, cut the end cap according to the labelling. The area marked with a «Y» and the two clips «A» are to be removed.
6. Place the drain connection on the channel and the leaf trap on the drain opening. Place one end cap at the start and one at the end of the channel run.
7. Connect the channel elements to each other using the tongue and groove system.
8. Place the complete channel run with gratings in the desired position.
9. For lengths of more than 5 m, please lay appropriate elements from the outlet opening.
10. You have the option of shortening the channel with plastic grating at any point.
11. Apply the surface coating to the channel body. Make sure that the upper edge of the channel is approx. 3-5 mm below the surface covering.

Installation video
ACO Self® Hexaline

Connection of the end cap to ACO Self® Euroline

Connect clip A to the polymer concrete channel body.
Remove clip B twice and area X twice.

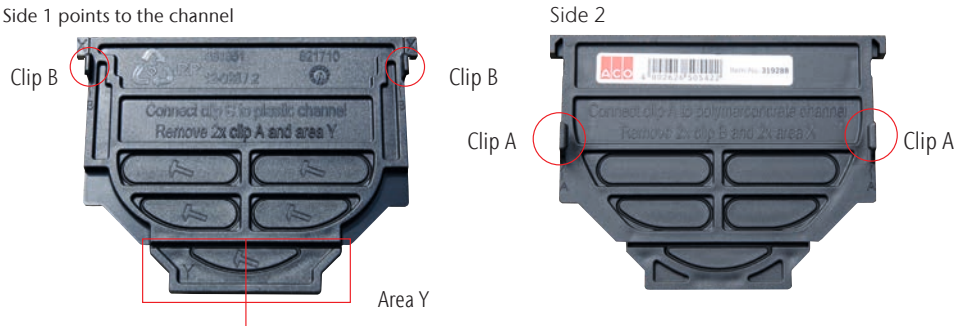


1. Remove area X and clip B left and right with the cutter

2. Snap in clips A

Connection of the end cap to ACO Self® Hexaline

Connect clip B to the plastic channel body.
Remove clip B twice and area X twice.



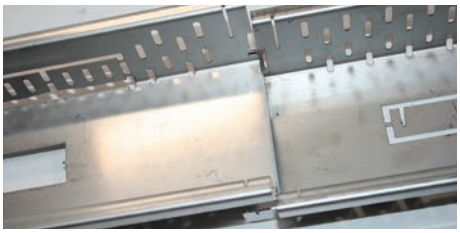
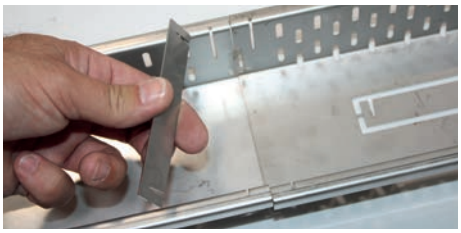
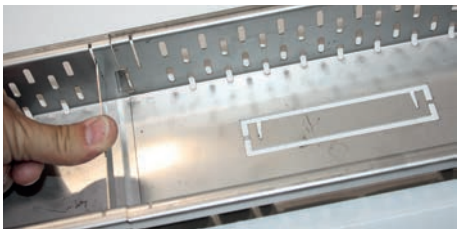
1. Break off area Y at predetermined breaking point

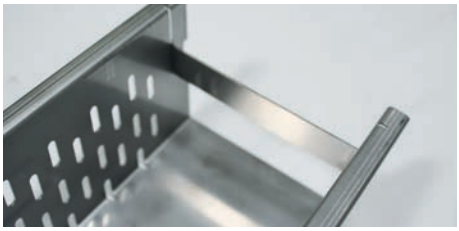
2. Remove clip A left and right with the cutter

3. Snap in clips B

Installation instructions for ACO Self® Highline

The channel connector as a bar and reinforcement

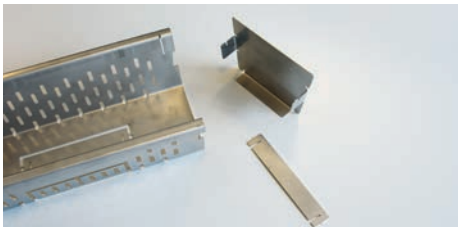
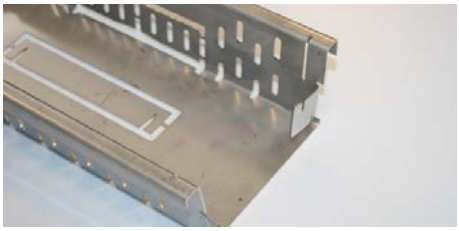


Caution channel bracing!

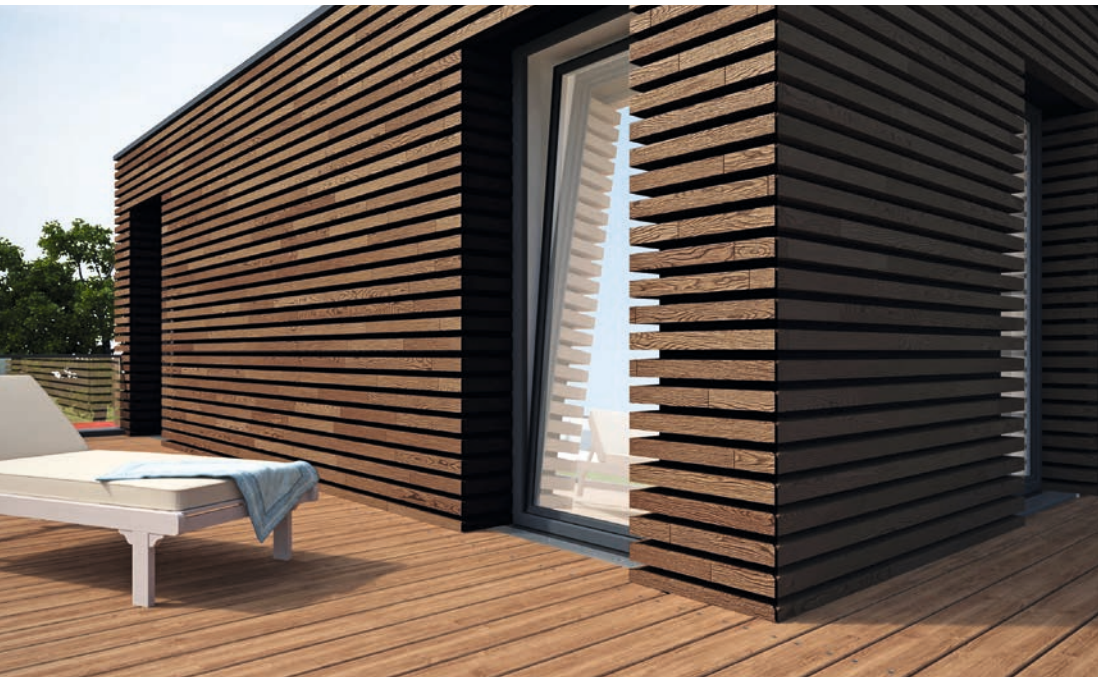
If the ACO Self® Highline is used in an area that can be walked on, 3 connector elements per metre must be used. If the channel is not exposed to a load from above, no bars for reinforcement are required.

The end cap

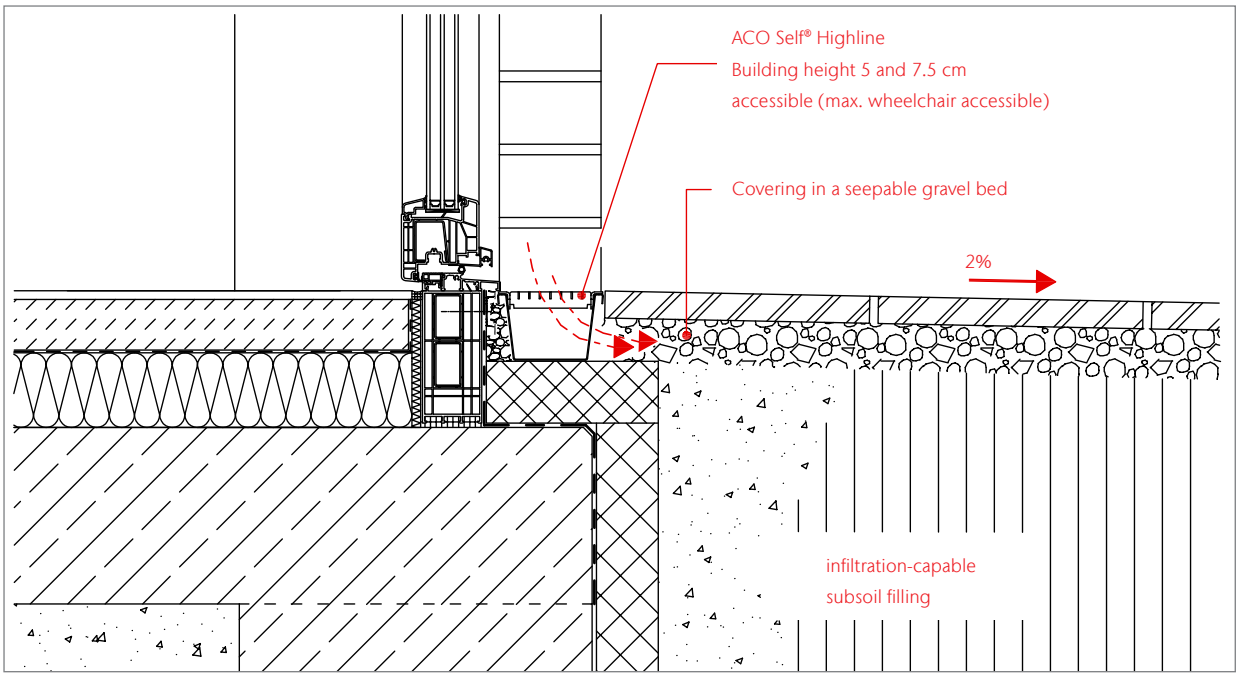
Can be used from both sides and fixed with the channel connector.

Bending before inserting the end cap



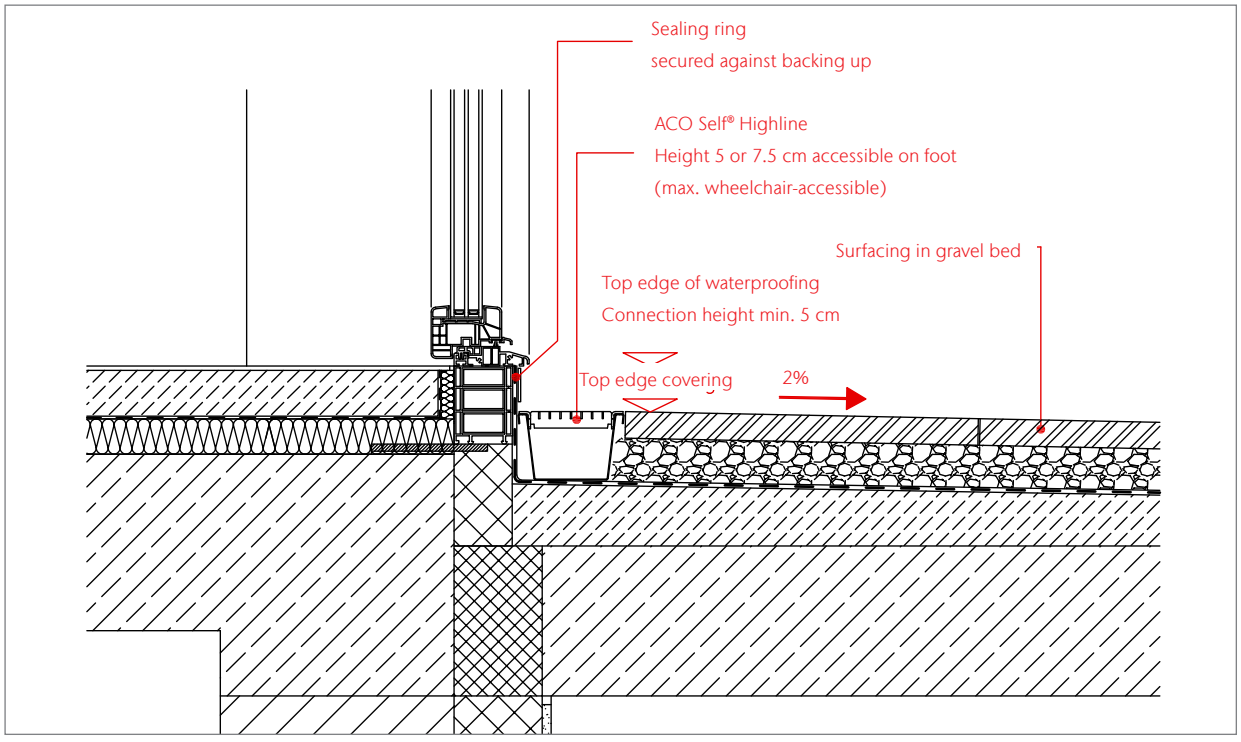
Installation in contact with the ground on façades



Façade drainage with ACO Self® Highline is an open channel system that allows rainwater to seep away, similar to a gravel strip around the house.

Care must be taken that this may increase the moisture stress on the basement wall.

Installation on balconies



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