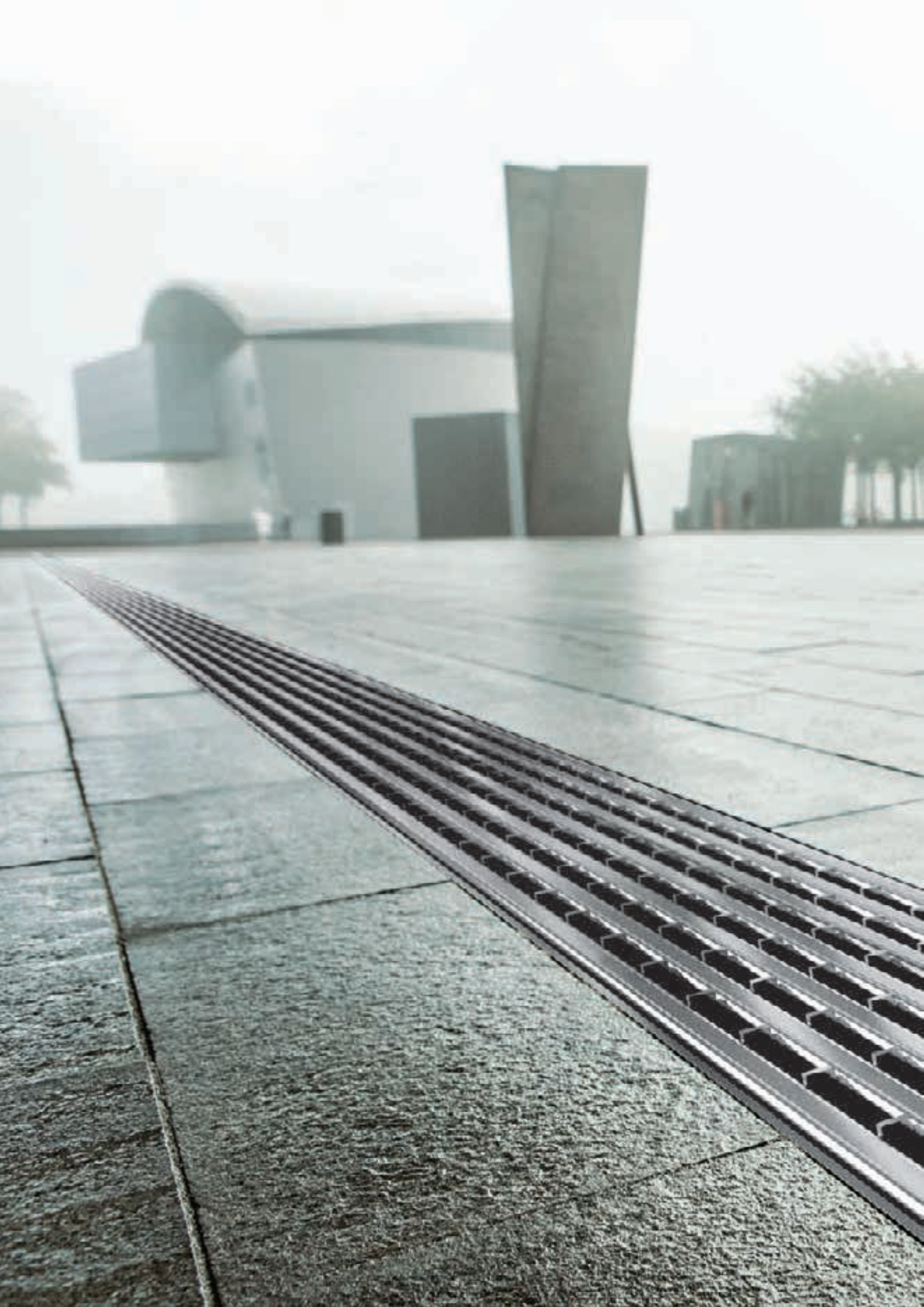


*ACO. The future of drainage.*

**The ACO Group – drainage and water treatment solutions**







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# ACO. The future of drainage.



## The ACO system chain provides the drainage solutions for tomorrow's environmental conditions.

Increasingly extreme weather must be counteracted by more complex and sophisticated drainage concepts. ACO achieves this with intelligent system solutions which have a dual purpose: protecting people from water, and water from people.

Every ACO product within the ACO system chain therefore safely controls the water as it passes along the chain to ensure that it can be ecologically and economically reused in a viable way.

[www.aco.com](http://www.aco.com)



The headquarter of the ACO Group in Rendsburg, Germany



Iver and Hans-Julius Ahlmann (managing partners of the ACO Group) in the plastic production plant in Rendsburg, Germany



## ACO Group

We are present with independent companies in over 40 countries on all continents. We have our own production sites in 15 countries including Australia, the USA and China. At the same time as respecting national cultural differences, the focus of our marketing activities is always the ACO brand with its excellent image, high quality standards and unique competence.

ACO Group is the worldwide leader in the manufacture and supply of drainage technology for external and internal applications. With more than 50 years of valuable experience ACO stands for professional drainage, efficient cleaning, and the controlled discharge or reuse of water.



The ACO Academy in Rendsburg, Germany

### ACO at a glance

- 1946, company founded by Josef-Severin Ahlmann
- 4,400 employees in more than 40 countries (Europe, North and South America, Asia, Australia, Africa)
- 30 production sites in 15 countries
- Sales 2016: Euro 711 million

# Four guiding questions in surface water management



**How do surface water management and water protection begin?**

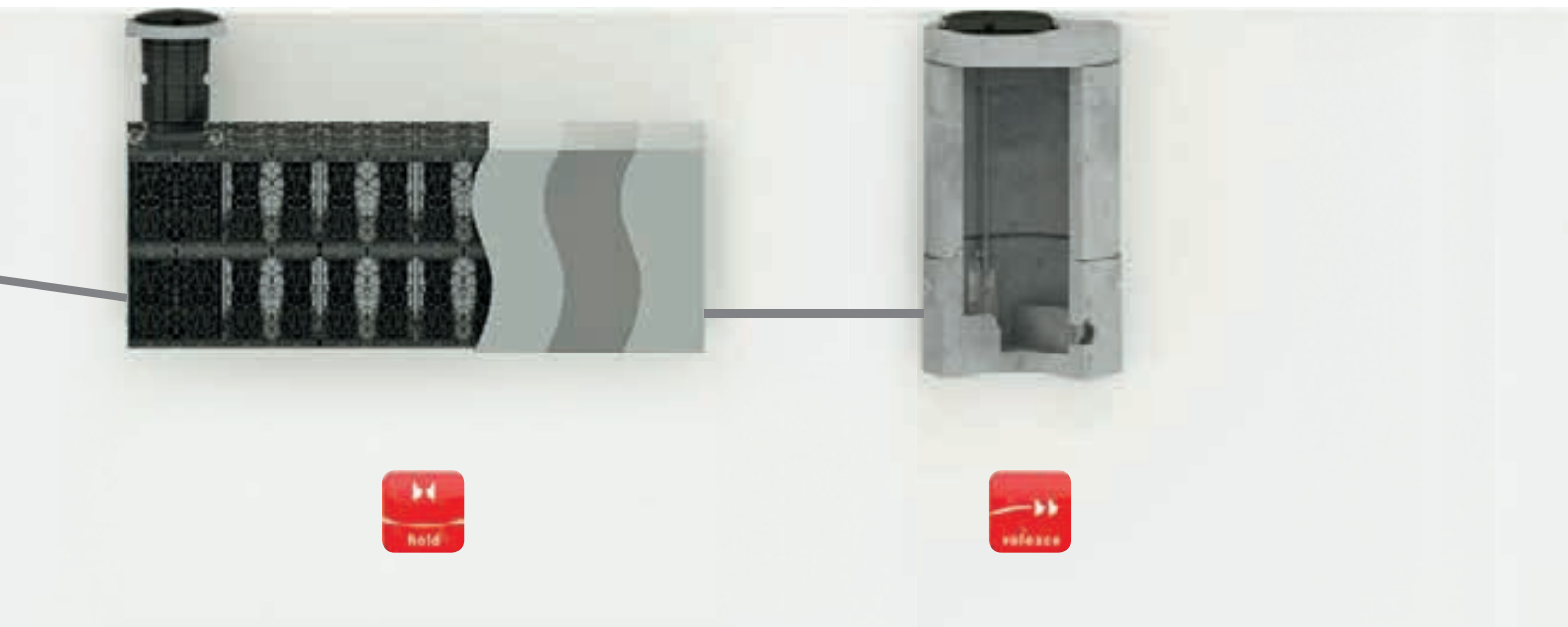
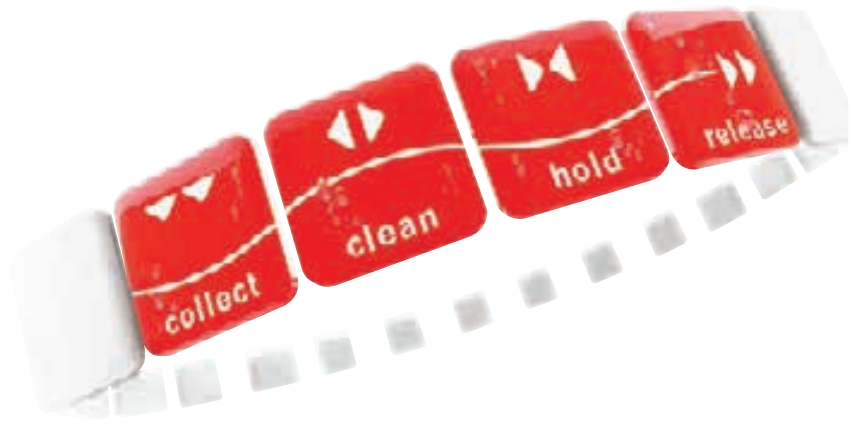
## ACO surface water drainage

- Drainage channels
- Road and yard drains
- Gully tops
- Manhole covers

**How to achieve the right water quality?**

## ACO cleaning systems

- Separators
- Sedimentation and filtration systems



## How to reduce surface runoff to a natural level?

### ACO infiltration/attenuation systems

- Control valve shafts
- Infiltration and attenuation systems
- Retention basins made of concrete

## How to control the discharge rate to the required level?

### ACO control systems

- Flow control systems
- Pump shafts



## ACO materials

*In the design of components and structural elements, the choice of suitable material determines the aesthetic and functional qualities of the product. The materials used by ACO are characterised by their strength, ageing resistance and their resistance to aggressive media, frost, heat and sunlight. Thanks to their long life and recyclability, they are equally sustainable and environmentally compatible and are used in an application-orientated way.*

## Polymer concrete

With 30 production locations worldwide, we consistently implement our ideas of product quality, economic efficiency and on-time delivery to our customers. Each of our factories has special materials expertise, from which the entire ACO Group profits. Keeping our production technology and ecological performance up-to-date and in line with the latest standards is part of our standard of acting responsibly as a company and to be a worldwide leader.



### **ACO polymer concrete – a better idea**

The special material composition and state-of-the-art production technology give polymer concrete its outstanding properties profile. ACO polymer concrete products have high strength values and a low weight. ACO polymer concrete is waterproof. Water dries quickly. Frost damage is excluded. The smooth surface of ACO polymer concrete allows water and dirt particles to run off quickly and is easy to clean. Polymer concrete is also resistant to aggressive media without requiring additional coatings and can be used versatilely and durably even under extreme conditions.



## Cast iron



### **ACO cast iron – quality for all standards**

The types of cast iron used by ACO Guss in Kaiserslautern and Aarbergen are adapted to the continuously increasing requirements through intensive innovation and development processes: Both cast iron with lamellar graphite (grey cast iron GJL) and cast iron with nodular graphite (spheroidal cast iron GJS) have proven their worth as materials for use in cast iron sewers due to their high corrosion resistance. ACO Guss offers the optimum solution for the respective application, independent of the material.

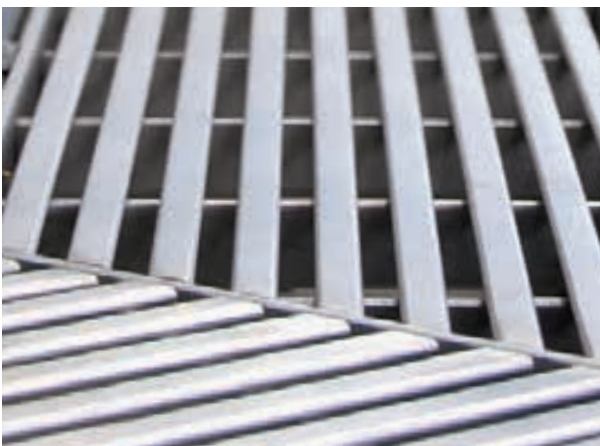
## Plastic



### **ACO plastic – innovative and flexible**

Components made of plastic offer the greatest possible design freedom with regard to form and function. We use this potential to avoid expensive material combinations and time-consuming jointing processes and to develop intelligent solutions “cast in one piece” to take their place. The plastics used by ACO are characterised not only by their high breaking stress (crushing strength) but also by their outstanding resistance to environmental influences. Simple machining options and low weight are the reasons for the outstanding user-friendliness of our plastic solutions.

## Steel/stainless



### **ACO steel/stainless steel – sophisticated components**

The processing of both steel and stainless steel is a core expertise of ACO in the different production facilities of the ACO Group worldwide. Large investment sums ensure that our production facilities are always state-of-the-art. The high qualification of our skilled workers ensure high-quality products. Our own in-house plants for surface protection and finishing are used, among other things, in the production of ACO Drainlock gratings.

## Concrete



### **ACO concrete – durable and reliable**

Concrete is a material that plays a decisive role in tank construction for separator and drainage technology. ACO tanks for drainage technology are made from a highly waterproof concrete, have a very high resistance and stability. The tanks can be used as separators, pumping stations, accident (spillage) systems or special chambers and can also be equipped with a plastic coating or lining. ACO tanks made of concrete are a durable solution for the drainage and treatment of water.

## External Drainage

### ACO DRAIN® line drainage channel Multiline Seal in

*The drainage channel ACO DRAIN® Multiline Seal in collects the rainwater and leads it without loss to stormwater treatment and ultimately to natural rain water cycle. Thus it plays a crucial role to catch and discharge polluted surface water safe. Damage in buildings, weakening of concrete foundations and pollution of ground-water be prevented.*

Contamination by traces of ...

**Heavy metals**

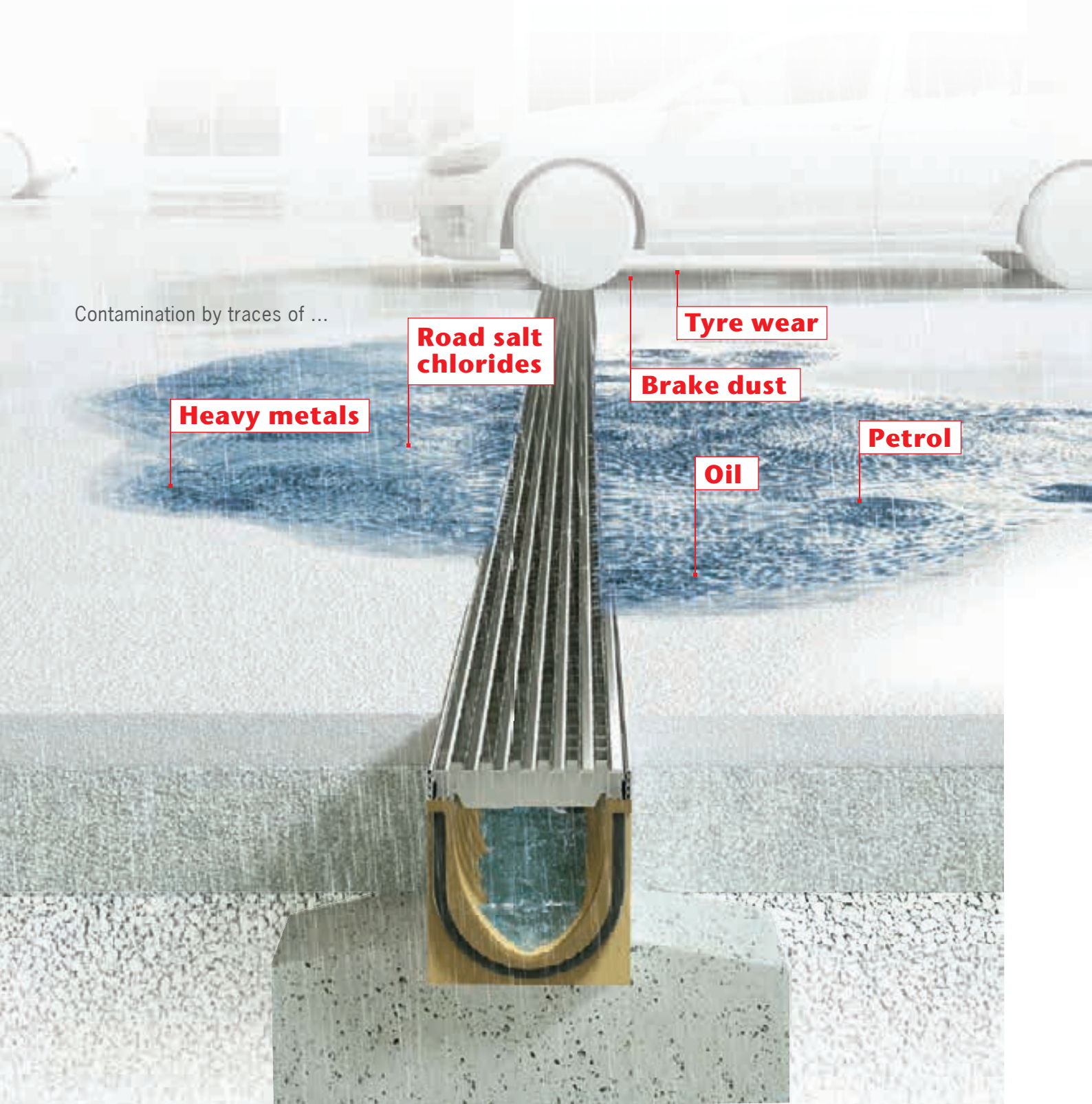
**Road salt chlorides**

**Tyre wear**

**Brake dust**

**Oil**

**Petrol**







# Seal in

TECHNOLOGY

- Integrated seal as standard
- Made of ACO polymer concrete
- Tried-and-trusted, simple installation
- Robust channel body
- Improved self-cleaning

### Structural Protection

Most structures are built on solid concrete foundations; these should be protected against the effect of chlorides in order to prevent corrosion and an associated weakening of the foundations.

### Groundwater Protection

Recommended actions stipulate how to deal with rainwater on both public and private surfaces. The tightness of drainage is becoming more and more important in this regard.

### Preventing irreversible damage early on

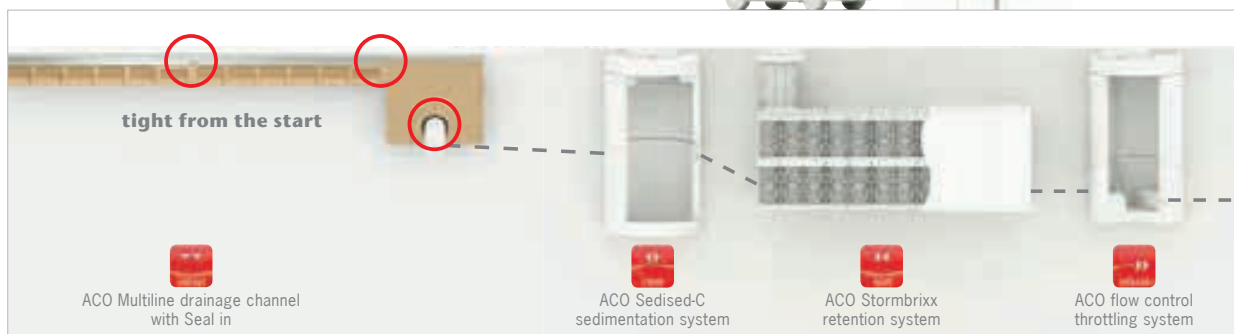
Rainwater that runs off from traffic areas often contains lots more impurities than one would expect: heavily frequented roads are exposed to harmful substances from tyres (wear), brake dust and exhaust emissions, as well as traces

of petrol and oil. That's not to mention deicing products used during the winter months. When it rains, all these impurities are inevitably washed into structures and groundwater, where they can cause considerable damage. For example, the chlorides present in road salt can lead to corrosion and a weakening of a building's foundations. The ACO DRAIN® Multiline Seal in drainage channel, which is equipped with integrated seal as standard, collects the water and feeds it to the rainwater treatment system, then finally into the natural rainwater cycle, without any avoidable loss. As such, it plays a crucial part in reliably collecting and diverting impure surface water. It is therefore possible to minimise irreversible damage caused to structures, the weakening of concrete foundations and the load to which groundwater is subjected from the very start.

Soot

Sediments

## Sustainable surface water management



## Versatile gratings for good-looking projects

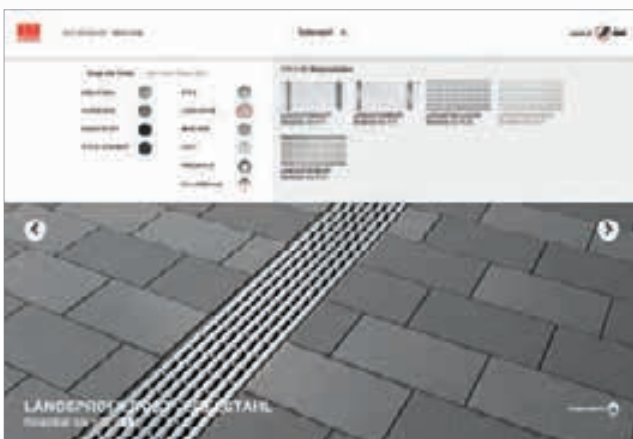
*ACO Multiline Seal in can be combined with all Drainlock gratings, so there is a huge range of gratings available in lots of different shapes, colours and materials – cast iron or stainless steel, hot-dip galvanised steel or plastic. These options are able to meet any and all demands in terms of aesthetics, functionality and load.*



[www.draindesign.de](http://www.draindesign.de)

### Longitudinal profile grating

Galvanised steel  
Stainless steel



### The complete grating range in the Grating Configurator

You will find all the technical details relating to the new ACO DRAIN® Multiline Seal in channel system, as well as the full range of gratings, in the supplementary price list and the Grating Configurator. The Configurator enables you to choose gratings by viewing them in different scenarios. You can download technical information or save it to the property file.



Awards for the longitudinal profile grating



# Highlights from the A15 – E600 range of gratings

## Longitudinal bar grating

Stainless steel



## Mesh grating Q+

Galvanised steel  
Stainless steel



## Composite grating with microgrip

Anti-slip plastic



## Slotted grating

Galvanised steel  
Stainless steel  
Ductile iron



## Cross bar grating

Stainless steel



## Perforated grating

Galvanised steel  
Stainless steel



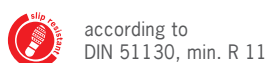
## Composite grating

**Heelguard**  
Ductile iron



## Composite grating

Ductile iron



## **Heavy duty ACO DRAIN® S 100 K to S 300 K**

*ACO DRAIN® S 100 K to S 300 K systems are ACO's heavy duty solution – suitable for all load classes from A 15 to F 900 to EN 1433.*



### **Typical applications**

- Line drainage on motorways
- Storage and filling yards
- Industrial surfaces
- Airports
- Container transshipment surfaces
- Petrol stations

ACO DRAIN® heavy duty channels are also available with bolted grates





## Stability under the highest loads

### Load resistance

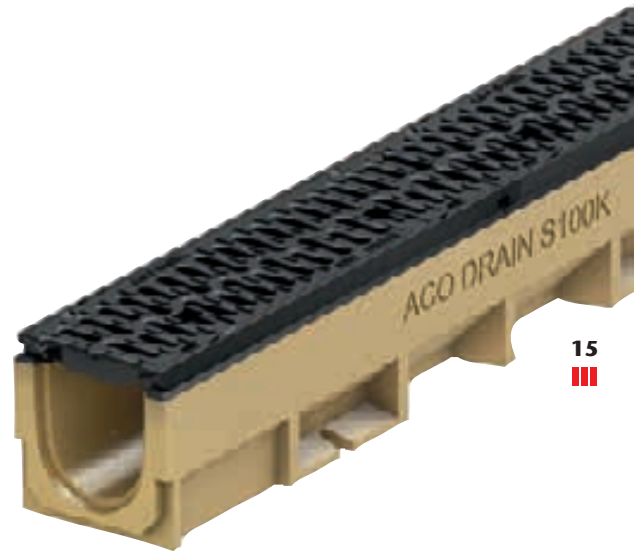
The high strength of this heavy duty channel system is based on many details:

- Reinforcing ribs increase side wall strength and optimise load distribution
- Special anchoring feet provide perfect stability in the concrete surround
- Integrated anti-shunt lugs to prevent longitudinal grating movement, and low centre of gravity provides safety even during installation
- An abutting edge rail for paviers of 10 cm height avoids unnecessary seams
- Smooth lateral walls are free of any protrusions, permitting easy abutment of surface coverings such as paviers, asphalt or concrete
- powerlock boltless locking replaces bolts for easier assembly and maintenance

### Award winning design

This product was awarded a German product design (recognition) award for its excellent combination of form and function. A great design with many beneficial features:

- High load resistance
- High inflow profile
- Longitudinal bars preventing water by-pass
- Powerlock boltless locking
- Anti-shunt lugs to prevent longitudinal grate movement
- High quality coating to prevent corrosion
- Grate installation independent of channel direction



15  
■■■

### S 100 K channel.

Appearance and functionality optimised by a new grating design



## **ACO DRAIN® Powerdrain – the allrounder**

*The ACO DRAIN® Powerdrain system is a real allrounder. The product line boasts a convincing new scale of nominal widths, universal stability, functionality and design freedom, not to mention innovative noise damping.*







## Slim, quiet and extremely efficient

Slim solutions are not just good looking: the combination of crucial product properties make the ACQ Powerdrain a real professional all-round solution in polymer concrete. Its compelling features include unusually good hydraulic specifications, extremely high safety, and outstanding stability right up to the toughest heavy duty class F. All of these product benefits are founded on four main properties:

- reduced nominal widths
- innovative V-channel profile
- rugged sidewall construction
- integrated damping

The nominal widths differ from traditional widths: the Powerdrain was developed with internal widths of 75, 125, 175 and 275 mm. The design retains the hydraulically highly effective V-profile – an innovation launched by ACQ for line drainage solutions – and is made of high-strength polymer concrete. This not only makes the new slim Powerdrain systems extremely tough, they also have efficiencies

comparable to the previously standard 100, 150, 200 and 300 channels. The special elastomer damping between the grating and the channel, combined with the safely locked but still flexibly bedded grating, means permanent noise damping when vehicles drive over the channel.



ACQ DRAIN® PowerDrain  
V 75/100 P to V 275/300 P



**quiet:** the special elastomer damping means permanent noise damping



**efficient:** the boltless lock and tried-and-tested installation aids boost safety and efficiency at the construction site

◀ **slim:** V-profile for high hydraulic performance

## **Monocast ACO DRAIN® Monoblock**

*The system can hardly be compared with other channels: ACO DRAIN® PD 100 V and PD 200 V Monoblock are an innovation in gardening and landscaping. The monoblock is cast from polymer concrete in a special process: it is a single component without any loose parts.*



**The channel is designed as an architectural element**

The demands being made on drainage components are increasing constantly; especially with reference to design and aesthetics. The entire block is solidly coloured in anthracite black in the case of the PD 100 V Monoblock channel. The monoblock becomes an attractive element of design in this way.

The simple modular concept has only six components in the system, which makes it suitable for solving the most diverse applications easily and neatly; thereby giving the greatest possible scope to the partner.

**Polymer concrete makes Monoblock:**

- light
- age-resistant
- high-strength
- rust-free
- frost, de-icing salt and chemical resistant

**Installation and maintenance without any problems**

The ACO DRAIN® PD 100 V and PD 200 V Monoblock are convincing because the system's parts are easy and economical to use. The monoblock can be installed like a kerb – with C12/15 grade concrete for the B 125 loading class – and it can be handled without slipping. No stiffeners are required. It can also be maintained without excessive cost. The monoblock is cleaned by rinsing it with a high-pressure or low-pressure jet of water; the half-metre long block has a removable grating that allows free access to the channel and the underlying inlet box.

**Characteristic features of the product**

- The innovative tongue-and-groove system enables the monoblocks to be universally laid together in any direction with the aid of a long crowbar
- Peripheral groove for the gasket
- 'V' cross-section

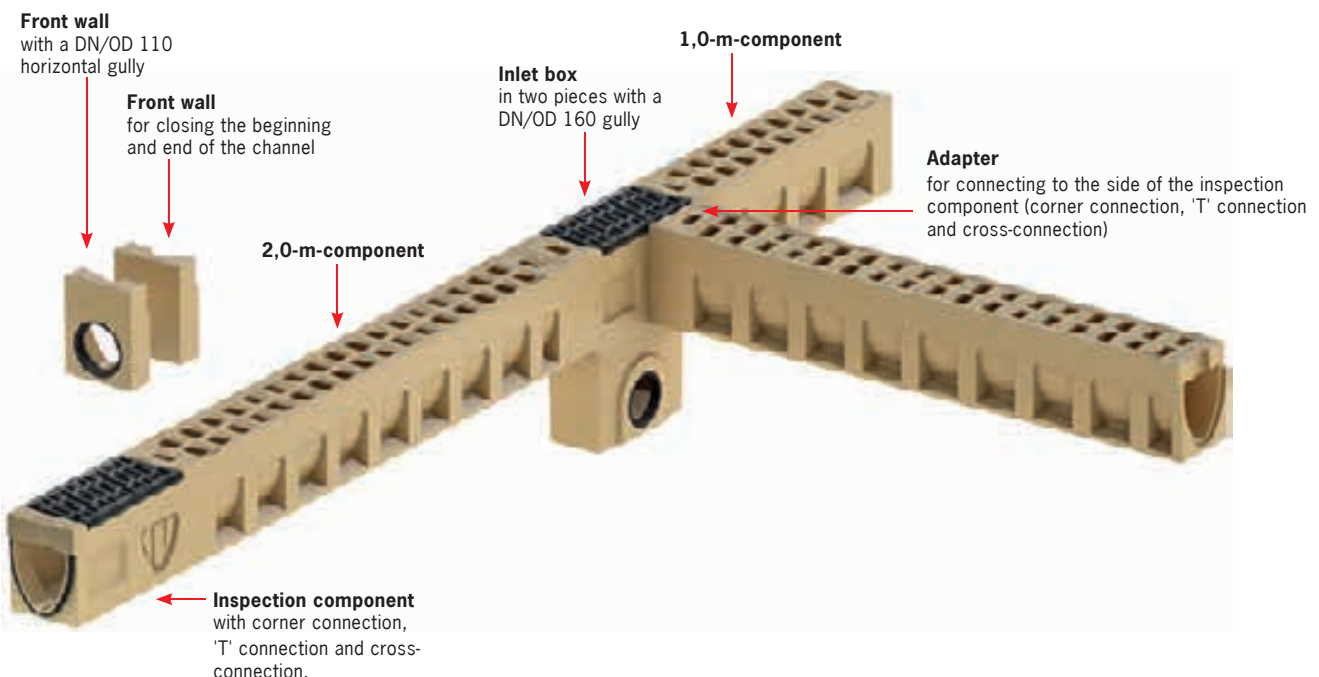


ACO DRAIN® Monoblock PD 200 V: polymer concrete in a natural colour.

ACO DRAIN® Monoblock PD 100 V: solidly coloured polymer concrete.

**Review of the RD 100 V/200 V system**

Illustration shows the RD 200 V 0.0 (tight) version of ACO DRAIN® Monoblock





## **Large capacity ACO Qmax – an advanced drainage system**

*The ACO Qmax line drainage system was developed to satisfy demands for economical high-capacity drainage systems for large catchment areas. ACO Qmax has passed independent load tests to class F 900 in accordance with EN 1433.*





### Qmax features

ACO Qmax was designed to handle high hydraulic capacities, enable minimum installation times, and be lightweight and yet rigid enough to withstand the rigours of typical construction site handling practice. Manufactured from tough, chemically resistant medium density polyethylene (MDPE), ACO Qmax is light, easy to handle and quick to install. Connecting to pipes is also made easy with the availability of a special side inlet unit.

The ACO Qmax system is a patented design currently available in four sizes for effective and economical drainage of a range of catchment sizes: ACO Qmax 225 can carry flows of around 25 l/s even when laid level (depending on channel length etc.). The largest ACO Qmax 900 can carry flows of around 300 l/s when laid level and considerably more when laid with a gradient.



### Typical applications

- Airport surfaces
- Distribution centres
- Highways
- Car parks



ACO Qmax is available in different sizes and lengths providing an effective and economical drainage solution for the application requirement

## **Roadside drainage with ACO DRAIN® KerbDrain**

*A new generation: kerbs with integrated line drainage. KerbDrain stands for the brilliant concept of combining kerbstones with drains, to create one compact unit.*



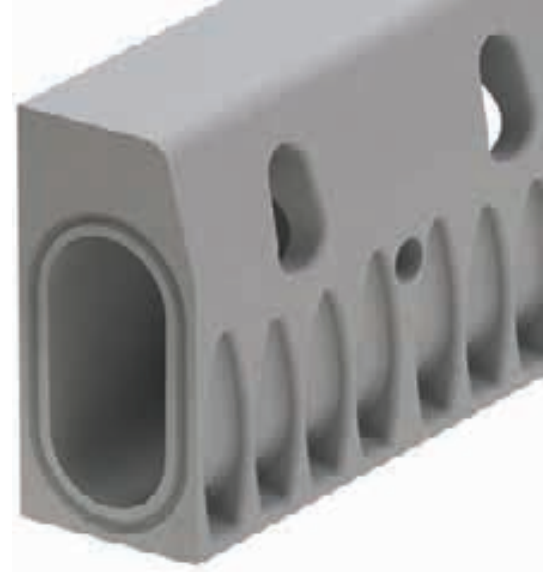


### Two functions and one solution

ACO DRAIN® KerbDrain is made from one piece of polymer concrete kerbstone and it functions simultaneously as a drainage channel. The system's excellent hydraulic discharge rate throughout the kerbstone's length is convincing and therefore it offers an ideal solution for draining areas like roads, roundabouts and car parks. The Kerb Drain's standardized coloured concrete kerbstones make it suitable to use whenever a uniform aesthetic appearance is desired. Its advantageous cost results from low weight, a drainage channel that is integrated into the kerbstone and easy cleaning: starting from the installation to the final usage.

### A versatile system

This intelligent modular system has channels for radii as well as inlet boxes with mud traps, chamfered kerbs and flat kerbs, which makes the ACO DRAIN® KerbDrain versatile to use. The openings of the inlets on the side have a cross-section of 147 cm<sup>2</sup>/m, which achieves a high and rapid draining performance: it is very effective not only in sensitive areas like for example bus stops – where great demands are made on effective drainage – but also in spacious areas where conventional construction requires a large number of gullies.



ACO DRAIN® KerbDrain  
(available in heights 305 und 480 mm)



Kerbstone and drain in one, ACO DRAIN® KerbDrain



ACO DRAIN® KerbDrain system is used at a bus stop:  
the passengers enter the bus unobstructedly with the aid of the 18 cm high kerb

### Roundabout application

ACO DRAIN® KerbDrain is ideal for draining roundabouts. It makes it possible to optimally drain the traffic lanes in roundabouts towards the inside or the outside, up to load class D 400. In addition, KerbDrain can be extended to optimally connect up to existing drainage systems.

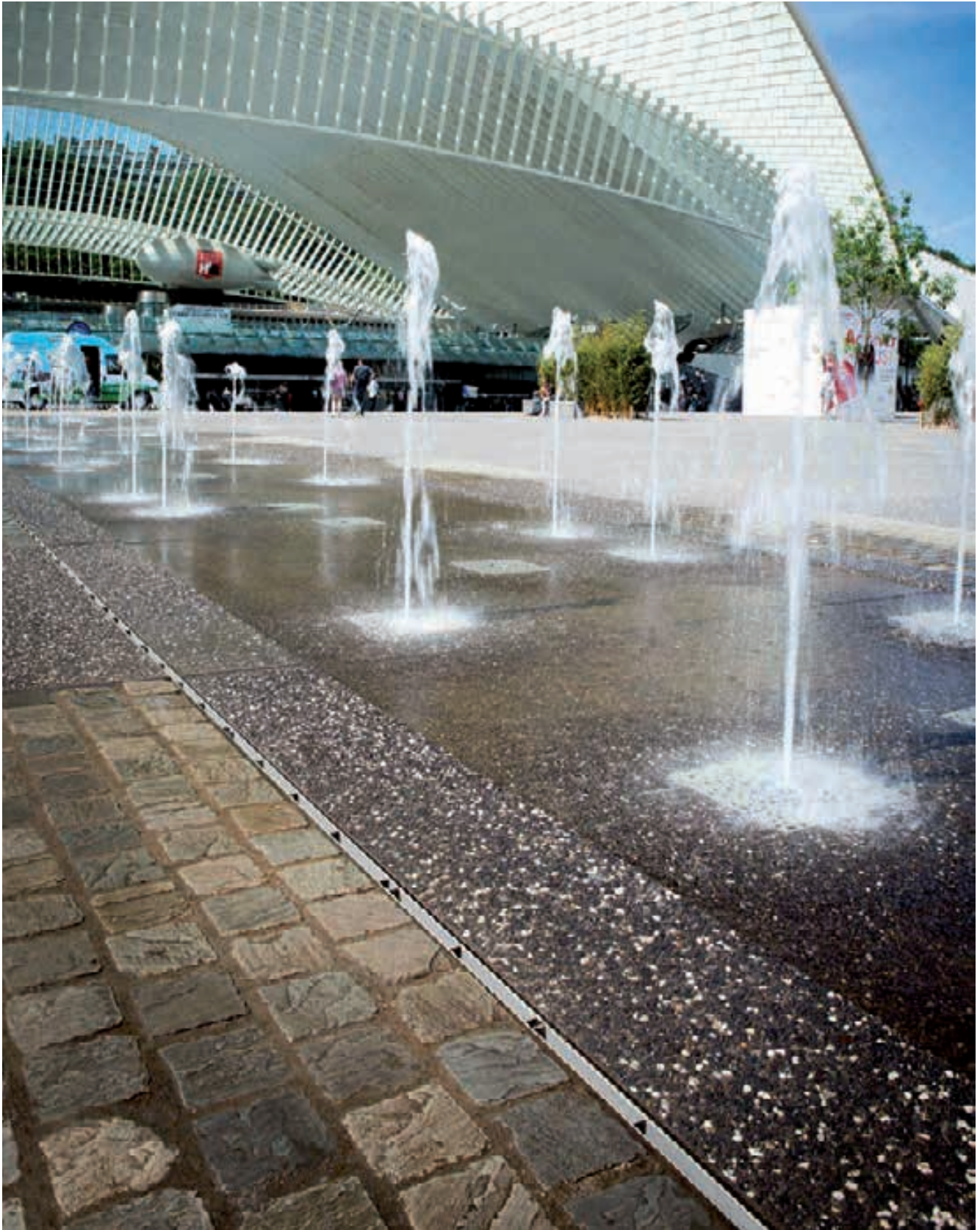
### Versatile

ACO DRAIN® KerbDrain is an extremely versatile system that can be used wherever drainage is required for paved surfaces, such as car parks, bus stops and traffic calming zones.



## **Architecturally attractive solutions – slotted channel systems**

*Discreet and inconspicuous, the V 100 S and V 150 S ACO DRAIN® slotted channel systems open up a new approach to designing open spaces. A narrow slot replaces the grating and forms a clean, unobtrusive line in the paving.*







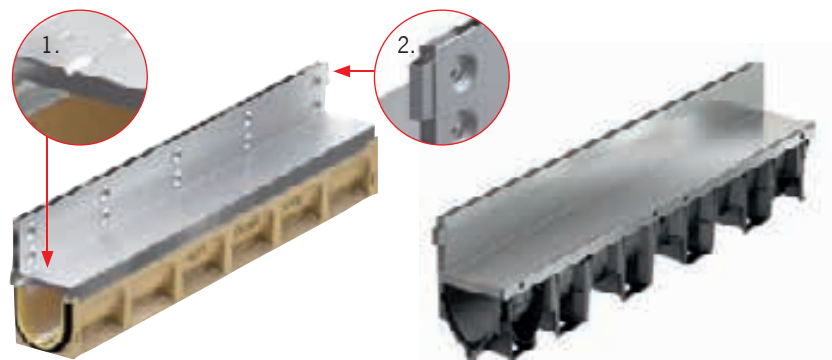
## ACO DRAIN® slotted channel system

### Designing with clear lines

The system is also ideal for transitions between two different surfaces. The slotted frame consisting of galvanised steel or stainless steel is compatible with all standard paviers or stone slabs and joins the two surfaces almost seamlessly. This system is superb for the drainage of façades and optically sophisticated surfaces.

### Functionality and maintenance

Simple cleaning and maintenance with low or high pressure washers. Access openings simplify maintenance of the subsurface polymer concrete or plastic channels with their excellent hydraulic performance.



ACO Multiline Seal in with slotted frame made from polymer concrete

The plastic body of the ACO XtraDrain channel with a slotted frame

### Typical applications

- Piazzas
- Paths
- Facades

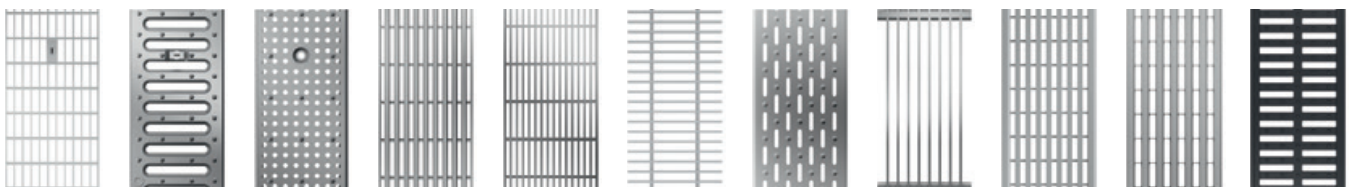
The slotted frame of the ACO Multiline Seal in drainage channel – which was introduced in January 2017 – is technologically innovative and it has an improved design. The draining angle (1) underneath the frame prevents the mo-

lecules of water adhering to the surface and therefore it improves the discharge of water directly into the channel. The new type of connector (2) optimizes aligning the slots when laying them on top of the channel.



## **Facade and Roof Drainage – ACO Profiline**

*ACO Profiline is a complete channel drainage system for draining vertical façades, as well as terraces, balconies, flat roofs, green roofs and roof gardens – the perfect solution for sophisticated function and design projects.*







## Planning and design with no limitations

The ACO Profiline channel system is a reliable professional solution for the drainage of façades, terraces and balconies. It is available in fixed heights of 5.0 and 7.5 cm, as well as in continuously adjustable versions between 6 to 16.5 cm. Customised versions can also be supplied upon request.

The advantages for planners and designers: ACO Profiline enables the connection height to building seals to be reduced from 15 cm to 5 cm.

The channel system works on two levels: it drains the water from the surface as well as water from the underlying drainage layer. Water flowing down façades is also reliably collected and removed. Backflow reservoirs prevent the build-up of water puddles during sudden downpours.

ACO Profiline is available in galvanised steel and stainless steel versions and therefore perfectly harmonises with visually sophisticated settings.



### Typical applications

- Facades
- Terraces
- Balconies
- Flat roofs
- Green roofs
- Roof gardens

## **ACO Freestyle cast iron gratings**

*The desire for individual solutions in landscape architecture can be met so easily when it comes to line drainage: with its Freestyle cast iron gratings, ACO provides unique design options for cast iron gratings.*







**ACO cast iron gratings with LED lighting**

A very special effect is achieved by the optional addition of ACO Eyeleds: the round LED lights, 20 mm in diameter, are supplied at the same time, securely fixed into the cast iron grating. This allows the individual design to be emphasised by lights that serve as a focal point.

**ACO Freestyle cast iron gratings – creativity in landscape architecture**

An important and unique feature of ACO Freestyle cast iron gratings is the freedom given to the customer in designing the visible surface of the grating. Variable production tools enable imaginative and individual designs to be realised, which provide every planner with the opportunity to shape the appearance of the grating surface and, consequently, the open area to be drained. In this way, distinctive grating designs can be created and produced for special open areas in a very simple way.

- ACO Freestyle cast iron gratings are available with a nominal width of 100, 150, 200 and 300, each with a length of 500 mm
- Made of spheroidal graphite iron EN-GJS-500-7, coated or uncoated
- Load class D 400 as per EN 1433
- The screwless ACO Drainlock grating locking guarantees the gratings are securely locked into the drainage channel
- Customisable grating design

**A new freedom in line drainage: ACO Freestyle cast iron gratings can be easily shaped according to the design specifications of the customer:**



ACO Freestyle „Flag“



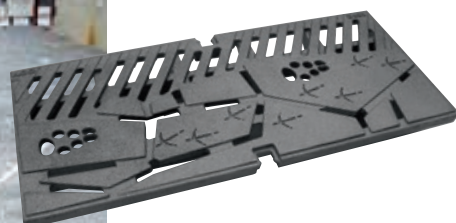
ACO Freestyle „Leaf“



ACO Freestyle „Flensburger Wave“



ACO Freestyle "Sturgeon"



ACO Freestyle "Animal Tracks" cast iron grating installed in Geilo, Norwegen

**Grating Configurator**

The new Multiline Grating Configurator enables all Multiline gratings to be combined with various surface coatings. Different materials, shapes and colours are available for both components and can be teamed up at

[www.draindesign.de](http://www.draindesign.de)



### Architecturally attractive solutions – ACO DRAIN® Lightline, Sideline, Lightpoint and ACO Eyeleds

*ACO DRAIN® Lightline, ACO DRAIN® Sideline, ACO DRAIN® Lightpoint and ACO Eyeleds provide highlights in architectural and open space designs. Public areas, entrance halls and paths become more attractive and more functionally designed. Technical perfection and individual design flexibility provide planners and builders with a wealth of versatile applications.*



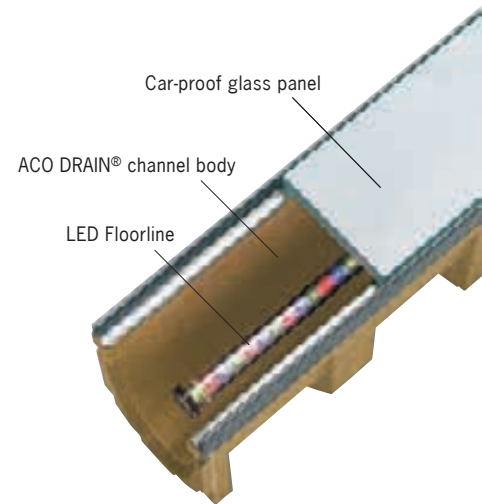
#### Typical applications

- Piazzas
- Paths
- Entrance halls

## Lighting instead of drainage – ACO DRAIN® Lightline

The new ACO DRAIN® Lightline with its variable colour effects provides planners with numerous application possibilities in the colour design of open spaces. ACO DRAIN® Multiline channels in combination with LED Floorline and car-proof non-slip glass technology merge perfectly to create an architectural lighting design element.

LED Floorline is available in the standard colours white, blue and green. Other technologies are available for lighting with customised colours and for creating colour effects and sequences. The ACO DRAIN® Lightline cover panel consists of a safety-glass cover which is non-slip and car-proof, and securely enclosed in a stainless steel frame.



## ACO DRAIN® Sideline

For some years now, drainage channels disguised as narrow slots have been upgrading squares and paths, as well as gardens and parks, with their clean lines. Slotted drainage channels have now become even more attractive with the addition of another design dimension: the new ACO Sideline stands out with its sophisticated symbiosis of drainage and LED technology. The enhanced feeling of safety is an important plus point in addition to the highly effective design character.



## ACO DRAIN® Lightpoint

The LED Lightpoint is available in various colours (e.g. white, blue). 18 lightpoints can be run from a modular plug-in power supply unit. The lightpoints are interconnected by a simple plug arrangement.

The LED Lightpoint is simply inserted into the special opening in the ductile iron grate and fixed into place to retain the drainage function of the grate and the channel.



31  
III



## ACO Eyeleds

Light and expressive – the LED points are installed in a high-strength composite grating. The LED technology creates a powerful lighting effect even though the lights are only 2 cm in diameter. Garage drives, squares, footpaths, pedestrian zones, access routes, boulevards and railway platforms can all be attractively highlighted by ACO Eyeleds. In addition to decorative effects ACO Eyeleds can also improve overall safety in busy areas.



Trend-setting lighting and aesthetics in perfect harmony: ACO DRAIN® Lightline, Sideline, Lightpoint and Eyeleds for customised use.



## **ACO XtraDrain composite channels for professional solutions**

*The new ACO composite drainage channel XtraDrain: A great new drainage channel, especially for applications involving the design of open spaces, and gardening and landscaping – which all benefit from this technically perfect and aesthetic solution for line drainage.*





## ACO XtraDrain

Easy handling right down to the last detail, combined with the highest quality. Technical details like for example the proven 'V' profile or the hexagonal shape of the side walls satisfy all of the demands that are made on a contemporary drainage channel. The high-speed flow and the good self-cleaning property minimize the cost of conserving and maintaining the channel system. The tongue-and-groove connection where the channel begins and ends enables this system to be installed simply and conveniently.

### Typical applications

- Footpaths, pedestrian areas
- pedestrian precincts
- public and private car parking spaces
- open spaces around business premises such as banks, insurance companies, hospitals
- housing areas/estates
- schools
- railway station entrances
- façade drainage
- railway platforms



The ACO XtraDrain provides a permanently attractive effect and functionality. Above: The photo shows the facade channel on the stadium of St. Pauli Football Club in Hamburg



Cover gratings with the Drainlock screwless locking device are available for various models of the ACO XtraDrain drainage channel in the A 15 to C 250 loading classes.



The ACO XtraDrain drainage channel has a plastic composite grating. It is permanently resistant to corrosion and it is a visually attractive unit in the B 125 loading class.

## **ACO individual solutions in stainless steel – accents for good architecture**

*In addition to perfect function, another key feature of ACO brand policy is the high aesthetic quality of its products. This gives rise to added value which is appreciated just as much by our customers as the professionals because many ACO products have already won awards for their innovative design.*



### **Typical applications**

- Piazzas
- Facades
- Pedestrian areas
- Arcades and passages





## Customised for sophisticated planning

### Form and function

Chrome-nickel steel combines durability and beauty: form and function in perfect harmony. All of the components are durable, tough, non-deformable, corrosion-resistant and long-lived.

### Design

The broad spectrum of finishes and shapes gives you complete freedom with your designs. Even unusual concepts can be easily realised using stainless steel. Customers individual project designs can be supported by our expert team with tailor-made services for your specific project with full proposal information, CAD layout drawings and assembly instructions.

## External Drainage

### ACO DRAIN® point drains

*ACO point drainage systems are ideal for surfaces which require point drainage for structural or topographical reasons.*





### Drainage precisely where it is needed

The yard drain is made from polymer concrete. The top top has a ductile iron frame, an inset ductile iron grating and a Pointlock screwless locking system for loading classes up to B 125. This system can be advantageously used in many areas:

- It can be installed with little handling.
- Versions of the system are available for all surfaces and loading classes up to B 125.
- It is supplied with a filtering bag for connecting to soakaway systems. The water will be cleaned in this way before it is conducted to the soakaway

### ACO DRAIN® point gully

The ACO DRAIN® point Gully E 600 – F 900 is designed for all heavily loaded surfaces in industrial areas, airports and road gutters where it is required to utilize point drainage systems on the terrain because of technical reasons. This point gully has been developed especially for point drainage up to Class F 900 and it excels at high flexibility. The proven Powerlock screwless locking device ensures that it permanently opens and closes without any screws at all.



The yard gully is made from polymer concrete. It has a superimposed cast frame, an internally located cast frame or a grating made from galvanized steel mesh and it is fixed with the Pointlock system of screwless locking devices.

The levelling component for adjusting the installed height to match the paved surface, as well as the gully frames that can be stacked to raise the installed height, have a side connection, e.g., for downpipes.

### Typical applications

- roads, paths, piazzas
- car parks
- railway platforms
- school yards
- industrial areas
- airports



## **ACO road gully Combipoint PP**

*The innovative road gully ACO Combipoint has been specially developed to satisfy today's technological demands in the area of road drainage.*







### A flexible modular system

The flexibility is new, but the material is as light and robust as ever. For the first time, the ACO Combipoint PP includes a plastic road gullies which can be twisted, telescoped, shortened and set at an angle. Thanks to their innovative modular construction, the gully bodies can be made a perfect fit to the local topography. The drainage modules, made out of highly resistant PP, only weigh 2.5 to 2.8 kg. The system is completed with gully tops in class C 250/ D 400. You can remove the need for mortar joints, which bring expensive renovation work in their wake. The load separation is taken care of by the telescopic principle within the drain components.

- rotatable – for optimal pipe-connection
- telescopic – for flexible height adjustment
- load decoupled – to avoid settling
- no mortar joints, therefore without weakness
- light units – easy handling during installation

### Typical applications

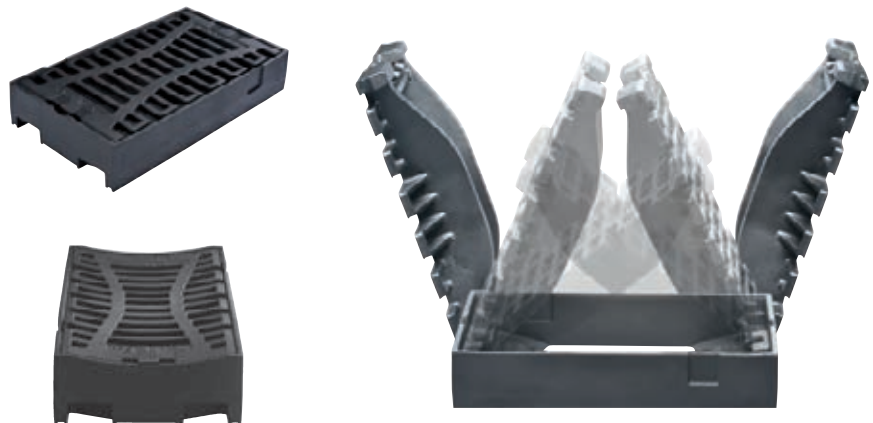
- kerbs
- traffic lanes
- car parks and industrial surfaces
- school yards
- pedestrian zones



The ACO Combipoint PP system is the first system made of plastic that can be rotated, stretched or shortened telescopically

### ACO riser units Multitop

The new riser unit designs for class C 250 to D 400 Multitop storm water discharges feature long service lives, easy handling and simple maintenance. The frames and grates are made of ductile iron. The most important detail is the unbreakable maintenance-free double hinge which allows the grid to be folded out to around 115 degrees on either side or completely removed. 4-point vibration absorption integrated within the frame reduces rattling noises. Other features include the low weight of the grate and the grate securing system using a boltless non-corroding spring lock.



The riser units Multitop are available with a channel or flat profile (300 x 500 and 500 x 500)



## Manhole covers – ductile iron

*The brand new concept for manhole covers: MultiTop class D 400 in accordance with EN 124.*

*The focus of the new technical concept is safety, weight and maintenance-friendliness.*

*All are incorporated in the new manhole covers developed by ACO.*





The ACO manhole top program with ACO CityTop, ClassicTop and MultiTop



## For tomorrow's infrastructure –

### ACO manhole covers: CityTop, ClassicTop and MultiTop

Operational safety, durability and cost efficiency are the main criteria defined for high traffic infrastructure. With the ACO range of manhole covers, top sections and inlet gratings, ACO satisfies all specifications pursuant to DIN EN 124/E DIN 1229. Intelligent product features such as lightweight covers and gratings, boltless locks, damping frame inserts, and hydraulic, optically attractive and technically sophisticated surface designs, underpin the ACO Manhole product line's high engineering standards.

#### Typical applications

- roads, paths, piazzas
- airports and ports
- control shafts

#### Benefits

- durability and reliability
- high securing level and long lifetime
- user-friendly and safe in operation

#### Cover features

- ClassicTop is secured by highest mass per unit area
- CityTop and MultiTop are secured by screwless and maintenance free locking devices
- two anti-theft devices can be installed to prevent theft of CityTop

#### Frame features

- a cushioning insert is placed in the frame of all ACO manhole tops
- Bituplan frames offer highest load transfer to protect mortar bedding and shaft top
- a mobile entry-facility tool is firmly fixed in Multitop Lift or Bituplan frames



Maintenance-free, boltless, traffic-proof lock made of heavy-duty wear-and-tear resistant plastic in accordance with EN 124

## A Plus for tomorrow's infrastructure –

### ACO manhole cover Multitop Plus

A dramatic increase in goods traffic is expected in the next few years. Roads remain the number one mode of transport. ACO has adapted the Multitop Plus manhole cover to the increasing market requirements. We have retained the tried and tested weight, handling, wear and mortar joint solutions and focussed on the new product advantages: Quiet. Air permeable. Slip resistant.

- **Quiet** by means of safe, damping inserts and by mechanically machined, extremely flat bearing surfaces on the cover and frame.
- **Permeable** through 323 cm<sup>2</sup> ventilation cross sections for better ventilation of the sewer.
- **Slip resistant** through a special surface profile on the cover and frame – at least R11 according to DIN 51130.



## **ACO access and manhole covers – multiple and recessed covers for shafts and supply ducts**

*ACO has a wide spectrum of high-precision access covers and riser units for all load classes and for the complete range of shaft and sewage structures. The single and series covers use high quality technology to lengthen service lives and reduce operating costs.*



### **Typical applications**

- Telecommunication installations
- Airports and ports
- Railway stations
- Tunnels
- Bridges
- Emergency exits
- Water and gas supplies
- Control shafts
- Water treatment and sewage works

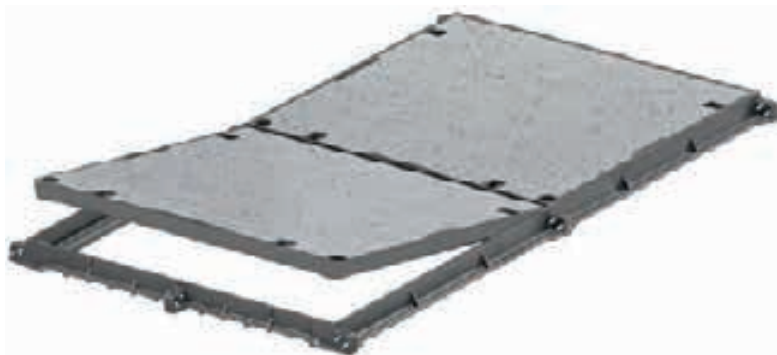


## The ACO Secant range of shaft covers

The ACO Secant range of shaft covers is a very flexibly used system and it is available in various lengths. The covers can span shafts that have clear widths of up to 1,050 mm and they are offered for practically any preferred length of shaft. They are ideal for covering inspection shafts, maintenance shafts,

supply shafts and disposal shafts, as well as cable conduits or cable drawshafts in industrial, public or private areas. The high-quality mechanical processing and the cover's sound seating ensure that this covering system is free of rattle and wear, which prolongs the service life and reduces the ongoing

operating costs. No cross-beams are required underneath the butt joints between the individual covers. The covered openings always remain entirely accessible. The clear width is unobstructed, e.g., for assembly work.



- Selectable surface
- Filled with concrete in the factory (BEGU cover)
- Supplied with a cast-iron frame
- Foldable and free of wear
- Optionally available with a screwed connection to prevent it from being lifted without permission
- The covers can be opened independently of each other, subject to considering the opening direction
- One version has a device that prevents backflow from lifting it
- One version is sealed against surface water
- Covers are available in the B 125 und D 400 loading classes

## The ACO Servokat GD shaft covers

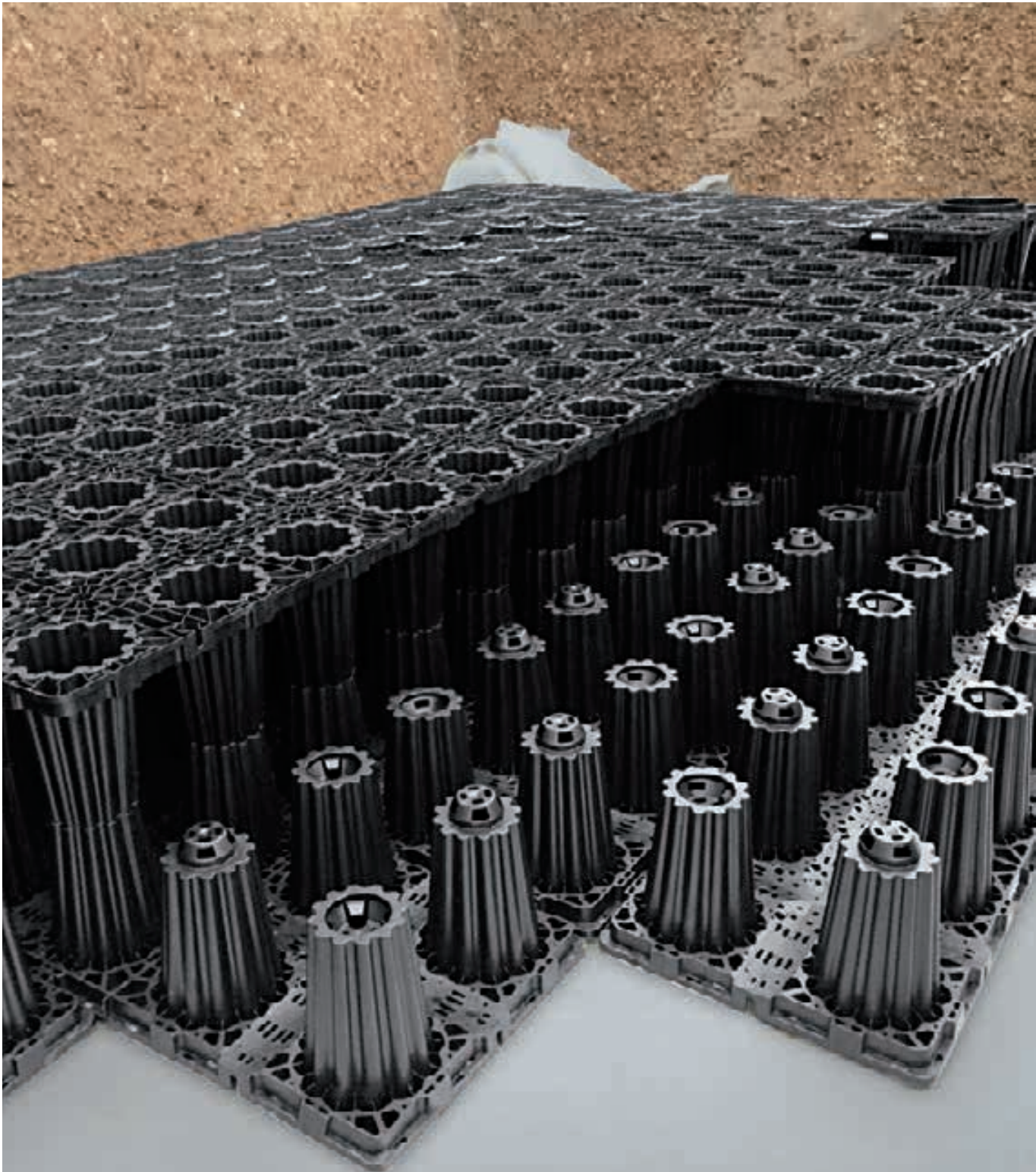
The ACO Servokat GD shaft covers resist gas pressure and they are the right solution whenever the covers must be frequently handled for the purposes of maintenance or inspection. The covers have integrated opening devices that can be released by one person without any problem and without additional lifting aids. The covers are suitable for climbing out of the shaft in an emergency: they are equipped with special locks and reinforced opening devices according to the intended use: this means that the covers are particularly easy to open from underneath. The locks of these versions can be operated from above or below. The customer or his building contractor should take suitable measures during the design to protect the cover from freezing solid if it will be exposed to the weather, e.g., installing self-regulating heating strips.

- The screwed connection with an operating key can be opened and closed from above
- The cover is optionally available with a lock that can be rapidly released from underneath for climbing out of the shaft in an emergency
- A gasket seals the cover against surface water
- The surface has a diagonally ribbed, corrugated texture
- A gas-filled pneumatic spring enables the cover to be opened easily.
- The cover is automatically secured against slamming shut after it has been opened
- The opening angle of 88° ensures that one can climb into the shaft and out of it quickly and safely
- The material is galvanized steel or 1.4301 grade stainless steel



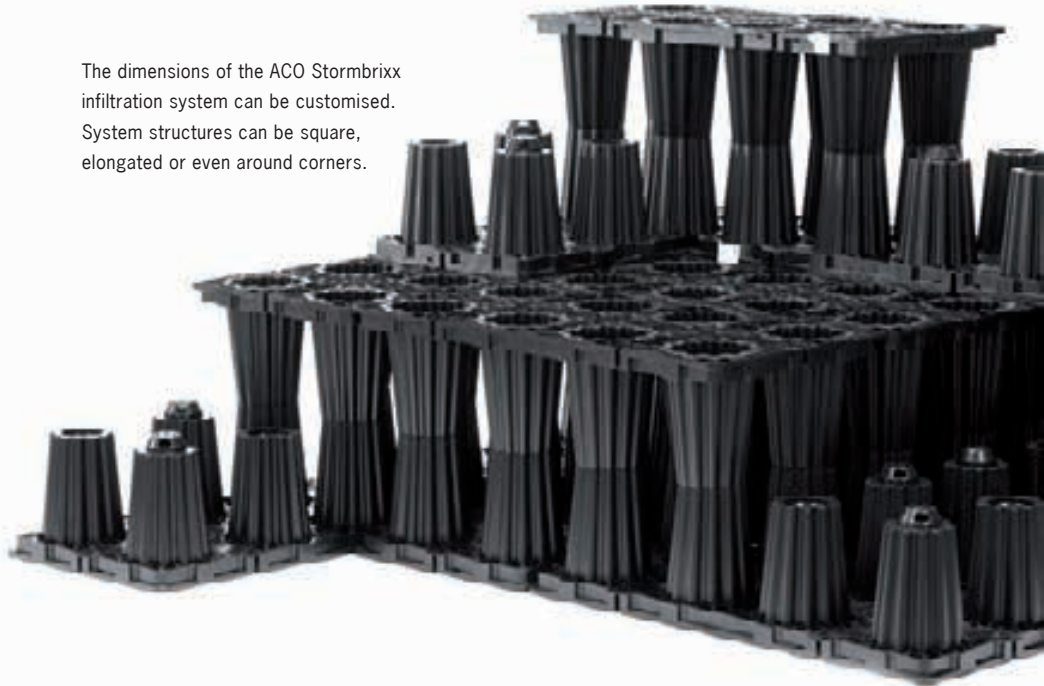
## ACO Stormbrixx – a modular infiltration system

*ACO Stormbrixx is a modular infiltration system made from synthetic materials, which on the one hand provides storage of water from storm water and on the other hand is used to provide infiltration of the storm water. The basis of the system are the building blocks which are laid in bonded patterns using an intelligent snap lock system, and give the overall system its structural rigidity.*





The dimensions of the ACO Stormbrixx infiltration system can be customised. System structures can be square, elongated or even around corners.



### Stability thanks to brickbonding

The basis of the new ACO Stormbrixx system is provided by the basic components, which are combined on site into an interconnected system of blocks. By laying the individual components in patterns and using an intelligent snap lock system, an exceptional level of structural solidity is achieved for the overall system.

After the basic components have been assembled, the load-bearing pillars of the system are precisely vertically aligned above each other, so that loads are distributed downwards evenly. The brickbonding combination of the components is one of the key features of ACO Stormbrixx. It provides a stable construction for the complete infiltration system. All that is required are connectors between the individual layers to prevent the basic components from slipping.

### Open system for user-friendly inspection and cleaning

The special design of ACO Stormbrixx makes it possible to pass the camera and flush in every direction: the system can be optimally serviced and controlled both lengthwise and crosswise.

The ACO Stormbrixx infiltration system is accessed via the LW 400 manhole cover. Combined with the intermediate/bottom shaft section (Ø 400 mm), polluted water can be rinsed and suctioned at the same time.



ACO Stormbrixx installation video



ACO Stormbrixx HD was awarded the general official approval Z-42.1-500 by the German Institute for Building Technology (DIBt) as an additional level of certainty. ACO Stormbrixx SD was tested in 2017 by MFPA Leipzig.

### Stormbrixx SD – suitable for car traffic and emergency services

- Height of 1 layer: 914 mm
- Basic elements/m<sup>3</sup>: 3
- Volume/basic element: 319 l
- Storage coefficient: 97 %
- Min. cover depth: 0.8 m
- Max. cover depth: 2.0 m
- Tested by MFPA Leipzig

### Stormbrixx HD – suitable for heavy traffic use

- Height of 1 layer: 610 mm
- Basic elements/m<sup>3</sup>: 4.5
- Volume/basic element: 209 l
- Storage coefficient: 95 %
- Min. cover depth: 1.0 m
- Max. cover depth: 3.40 m
- DIBt certified



The modular ACO Stormbrixx infiltration system reduces transport costs and therefore more than halves CO<sub>2</sub> consumption and the storage space required in storerooms and on the construction site compared to other systems.

## **ACO Self® – domestic and economical solutions**

*ACO Self® drainage systems keep entrances, pathways and terraces free of rain and waste water, thus protecting the building fabric.*



### **Typical applications**

- Garages
- Patios
- Drives
- Pedestrian areas



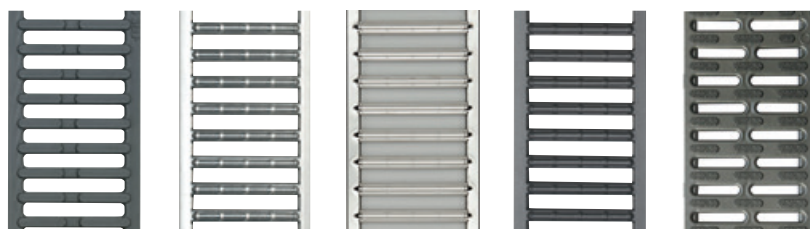


## Modular system – a channel for every application

ACO Self® drainage was developed especially for private usage and combines optimum standard with high-quality design. The covers can be produced from a range of different materials from galvanised powder painted steel through high-grade steel and cast to plastic. This allows for a wide array of design possibilities. The channel bodies are either made from plastic, polymer concrete or steel. You can create individual solutions for every construction situation using the modular principle.

### Slotted top for ACO Self – More stylish looks for your outdoor areas

The ACO Self slotted top replaces the 12 cm wide drainage channel grating with a less than 2 cm wide slot which fits elegantly into the overall look – at the end of your drive, on your patio, or alongside a garage.



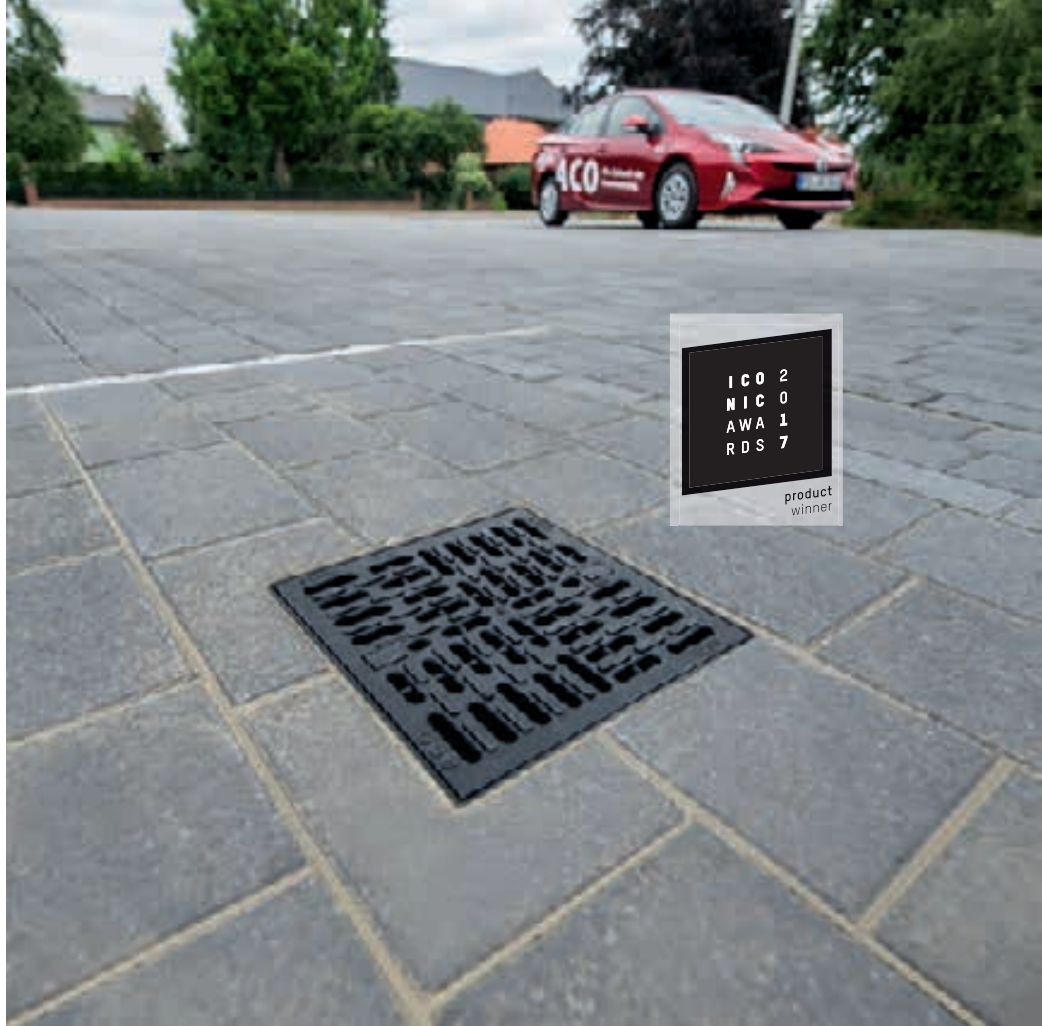
## ACO Self® point drainage system

*Point gullies are often used under the tap of a standpipe in the garden or yard, or as point drainage in suitable terrain. They work just like drainage channels while doing so. In other words, the gullies always drain the waste water and rainwater reliably, so that puddles and sludge do not have any chance to form.*





Cobblestones, flagstones or asphalt are the customary coverings that are used nowadays for paving the areas around the house, as well as the large areas around public buildings and commercial buildings. Rainwater and waste water cannot soak away naturally because these pavings usually seal the ground. The pavings must not only be laid skilfully but they must also ensure that the surface water will be collected and drained in order to prevent puddles from forming. The ACO Self® Point gullies are a simple and practical solution for draining the surfaces of yards, driveways and large areas. The frostproof gullies for waste water and rainwater, which are passable by vehicles and resistant to thawing salt, reliably ensure that the surface water is collected quickly and drained via the point gullies from these areas or underneath the tap of a standpipe in the garden or yard.



#### The XtraPoint gullies made from plastic

- Passable by motor car (Class B125)
- Shallow installing height
- Large mud trap with a handle
- Permanently colourfast
- It is possible to pave directly up to the gully
- The gullies comply with DN 100
- The draining performance is at least 4.5 l/s

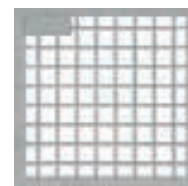


#### Typical applications

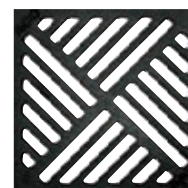
- car parks
- domestic water tap
- school yards

#### The yard gully made from polymer concrete

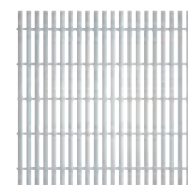
- Removable odour seal
- Removable mud trap
- Frostproof
- The depth of penetration by water into the polymer concrete is 0 mm
- The drainage capacity is up to 4.0 l/s
- Surface-draining performance: 150 m<sup>2</sup>



Mesh grating, galvanized steel



Ductile iron grating



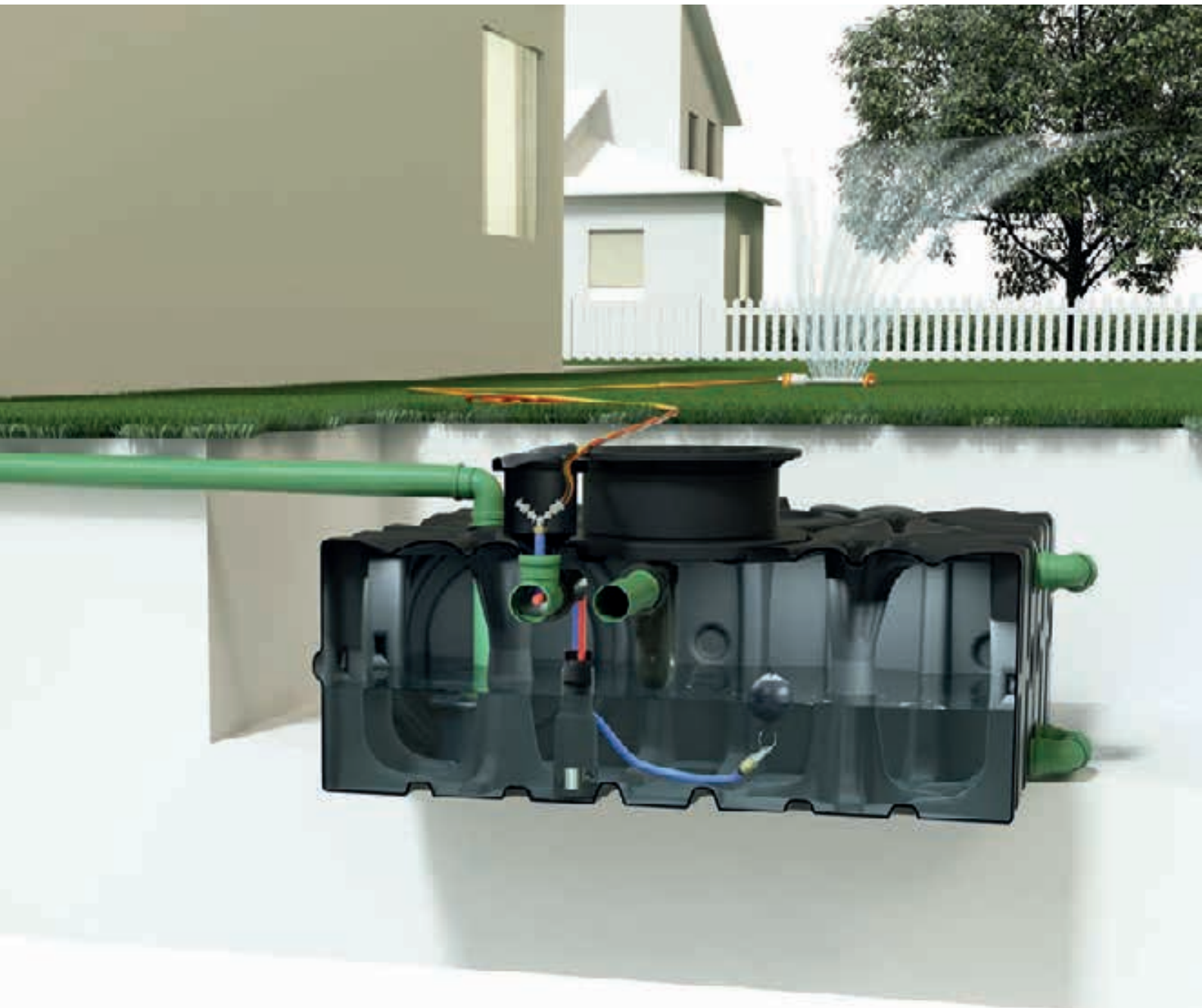
Longitudinal profile grating, stainless steel



Slotted grating, galvanized steel

## **ACO Rain4me – Rainwater harvesting for home and garden**

*Clean water is a very precious resource. Worldwide groundwater consumption is fifteen times larger than its regeneration. That is why the groundwater declines continuously. The heavy rain of short duration leads to an excess of water. You can collect and store the rainwater in your garden and consume it as required.*



### **Complete solutions**

- Garden Basic
- Garden Plus
- House and Garden Compact
- House and Garden Professional

Garden Plus





House and Garden Professional

ACO Rain4me flat rainwater tanks are installed underground and can be arranged flexibly in accordance with the size of the garden. Due to the flat form a significantly smaller excavation compared to a cylindrical cistern is needed. That saves time and cost.

The combination of several rainwater tanks enables an adjustment for every garden size and usage – enlargement is possible, too. The solid material PE-LLD “Made in Germany” is recyclable and has been approved statically.

**Product details**

- material: black plastic (PE-LLD)
- wall Thickness: approx. 8 mm
- volume: 2.000 liters
- turnable and extendable

**Product benefits**

- sustainable use of rainwater
- responsible approach towards water
- flexible adjustment for every garden size and usage
- complete system with tank and rainwater management

## ACO Self® Gravel Grid pro

*A recyclable system for stabilising gravel and chippings. The hexagonal honeycomb structure made of tough polypropylene is specially designed to create a strong and rugged foundation for the professional laying of gravel surfaces.*



### Environmental stabilisation

The honeycomb structure of the gravel stabilisation ensures that stones stay where they belong. They can no longer move left or right. This maintains a smooth surface with no ridges, troughs or holes. The ACO Gravel Stabilisation can be filled with high-grade chippings or ornamental gravel to create a customised surface.

Laying a water-permeable geotextile beneath the gravel stabilisation improves drainage of the surface. This saves having to pay municipal surface drainage fees for sealed surfaces, and prevents the formation of puddles.

Laying is very fast and easy because the honeycomb mats are laid loose next to one another. The ACO Gravel Stabilisation is perfect for municipal lands-

caping (e.g. in parks and cemeteries), on garden paths and patios, yards, car parking areas, driveways and access routes, as well as roofs. The bendable ACO Edging is the ideal accessory for gravel stabilisation to create permanent attractive edges to lawns, flower beds, paths/paved surfaces and patios. Three materials are available: galvanised steel, stainless steel, and corten steel.



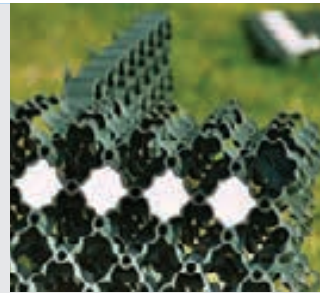
## ACO Grass Grid – pro nature

*Green areas are vital for environmental protection.*

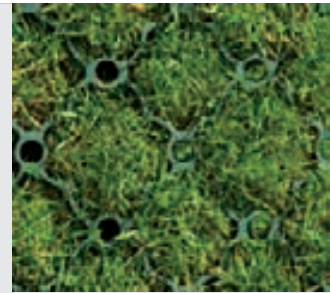
*The unnecessary sealing of areas exposed to minor traffic destroys valuable green space.*



Drive-on surface



ACO Grass Grid



Parking space with Grass Grid (left) and chippings (right)



ACO Grass Grid used as access route

Urban sprawl and the construction of paved areas means less and less natural ground drainage. This can mean bigger and more expensive water treatment systems to deal with the water flowing into sewers. A better solution is to ensure the large-scale seepage of rainwater back into the ground. Many industrial nations have listened, and are counteracting the sealing of surfaces by stipulating building restrictions

and regulations limiting surface sealing. ACO Grass Grid is made from plastic, and ensures free rainwater seepage in parking lots, yard driveways, terraces, walkways, storage spaces, emergency routes and river bank reinforcements. These areas will remain green, yet are still load-bearing. Through the use of recycled materials, ACO promotes environmental protection. Surface drainage systems such as ACO Self® or

ACO DRAIN® can be used when sealed surfaces are required to aid area drainage. ACO Grass Grid is lightweight for easy transport and handling, and simply snaps together for fast installation. While regionally varying, many building regulations specify a certain amount of “green” spaces. ACO Grass Grid allows vehicular use of these areas.

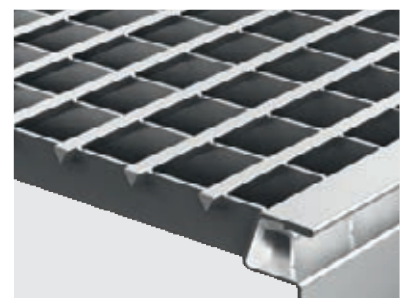


## **ACO Therm® light shaft**

*The ACO Therm® light shafts are highly rigid and they can be used not only for standard areas but also for pressurized water. They can be adapted to the existing level of the ground or floor with the help of stacking components.*



Design profile grating



Design bar grating



The ACO Therm® light shaft is available with depths of 40 cm, 50 cm or 60 cm. The compact body is made from glass-fibre reinforced polypropylene, which is particularly resistant and especially suitable for all areas that are exposed to high loading during installation. The universal basic body can be equipped with special accessories for all important applications: whether it be passable by pedestrians, passable by vehicles or impermeable to pressurized water.

The versatile grating of the ACO light shaft is made from galvanized steel as standard and the latest version of it is made from stainless steel, which is suitable for a greater range of applications. The assortment of gratings is also supplemented by a high-quality stacking frame made from stainless steel for covering the white edge of the light shaft.



**It protects the basement from rising ground water and backflow**

ACO offers reliable protection for your basement and therefore for your valuable objects. The ACO Therm® basement protection system, which comprises the ACO Therm® Block with an integrated window that is proof against flooding\*, together with the ACO Therm® light shaft that is mounted so that it resists pressurized water, as well as the ACO light shaft drainage and the ACO back-flow protection, ensure that the rooms in the basement are dry, warm and brightly lit naturally.



Awards for the design profile grating:

**Plus X Award**

- Best product 2016/2017
- High quality, design and functionality

**Iconic Award 2016**

- Winner category products facades

## ACO Vario – keeping the dirt out

*First impressions count – especially in an entrance area, which performs the function of a business card.*

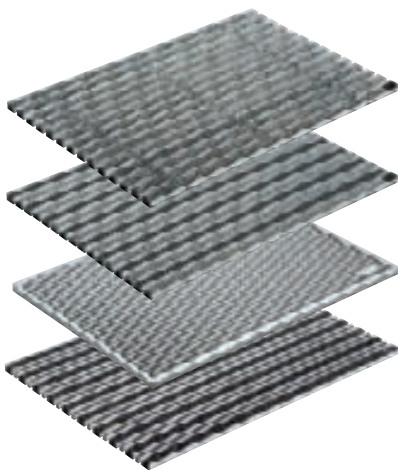
*An effective shoe scraper system is therefore an integral part of a well-designed and well-maintained entrance.*





ACO offers professional solutions that are extremely variable and functional, and also look good. Shoe scrapers that aren't permanently sliding around an entrance area are less annoying. ACO Vario shoe scrapers take care of dust and fine dirt. Keeping your entrance clean, and protecting your expensive flooring. The shoe scraper mats are framed to stop them from slipping, and are installed

flush with the floor surface, so level access to the entrance area is easy to achieve. ACO shoe scraper systems are available in standard dimensions that meet the requirements of a huge range of installation situations. The shoe scrapers are easy to install and suitable for people building their own homes too, since they consist of prefabricated elements.



**A choice of grates and mats**

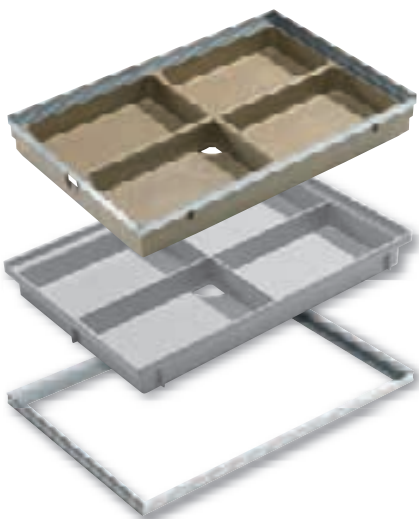
Available for indoor and outdoor use to allow individual designs.

- 60 x 40 cm
- 75 x 50 cm
- 100 x 50 cm

**Indoor shoe scraper**

anthrazite or grey

- 60 x 40 cm
- 75 x 50 cm



**Polymer concrete tray – Vario (Outdoor)**

- 60 x 40 cm
- 75 x 50 cm
- 100 x 50 cm

**Plastic tray – Vario Light (Outdoor)**

- 60 x 40 cm

**Angle frame**

- 60 x 40 cm
- 75 x 50 cm
- 100 x 50 cm

## **ACO amphibian protection – ACO wildlife**

*Constructing wild animal protection systems is a safe, effective measure for wildlife.*

*Efficiently linking habitats with safe corridors requires custommade construction solutions.*



Climate tunnel KT 500 with climate slots



Guide wall LEP 100



Entrance unit KP 1000-700





**Tunnel and guide wall systems for amphibians and other small wildlife**

Amphibians and small animals occupy a wide range of habitats which are often divided by roads. Amphibians in particular undertake seasonal migration between land habitats and their vital spawning grounds. Because they move slowly, and can spend a relatively long period on the roads that they cross, many amphibians and other small animals are doomed to join the countless victims of road-kill. Animals undertaking mass migrations at the end of winter, or in the summer after thunderstorms, experience a very high risk of being hit by vehicles. There is even a danger of complete eradication of local animal populations. In addition to animal protection is the risk to drivers and passengers from animals on roads, when vehicles swerve to avoid them. Public safety and species protection are mutual benefits from the Wildlife protection systems designed by ACO.





## **ACO SPORT drainage systems – for running tracks and sport facilities**

*ACO SPORT includes drainage systems and construction elements for sports and recreational facilities, helping them to remain in good playing condition throughout the year.*



The successful partnership between ACO and the Olympic Games first began in 1972. This was the year that ACO kitted out the award-winning “Olympiastadion” in Munich with ACO SPORT® products! Since then ACO has firmly established itself as a key partner to the largest sporting event in the world.



The hockey facility of the Olympic Games 2016 in Rio is equipped with ACO drainage channels



Photo London used under Creative Commons from interbeat

ACO SPORT® Drainage systems for athletics facilities Type A, B, C



## Football grounds

Pitches in football stadiums are generally covered with real grass. However, many football pitches are covered with infilled artificial turf, to allow them to be used more intensively, for longer, without any deterioration in playability. The infill used in the artificial turf is a mixture of sand and rubber granules. This makes the surface very water-permeable, just like real grass.

The ACO SPORT® shallow channel drainage system has proven ideal for removing surface water from this kind of surface, and from adjacent auxiliary areas. Because of the low (15 mm) depth of these channels, which conforms to DIN 18035, they are safe, drain the water away reliably, and are easy to clean of granules. Because the sides of the symmetrical channel are only slightly off-vertical, it is easy to lay paving stones against it.



Catch basin



Shallow channel for rectangular sports fields

## Sports pitches, games areas and recreation grounds

All-weather pitches, small sports surfaces, tennis and volleyball courts and leisure installations also all need to be quickly drained of surface water.

The components used for drainage must also be extremely low-maintenance and sturdy, and must not pose a risk of injury.

ACO SPORT® shallow channels are the ideal solution, as demonstrated by many decades of use on numerous facilities of this kind. The channel is wide, compact, and securely anchored to the bedding material, meaning it is safe, sturdy, self-cleaning, and presents vandals with no point of attack. For point drainage of the sports surface, a robust stainless steel catch basin, covered with a grating with a small mesh to prevent injuries, is recommended. Concrete edging panels can additionally be used to form a wide border with adjacent areas of vegetation, providing long-term protection to sports surfaces with synthetic coverings. By surrounding these games surfaces with ACO SPORT® elastic perimeter kerbs, additional safety can be provided for users.



Shallow channel



Shallow channel with anchorage groove



Catch basin



Elastic perimeter kerbs



Grass edging panel



Stainless steel point drain

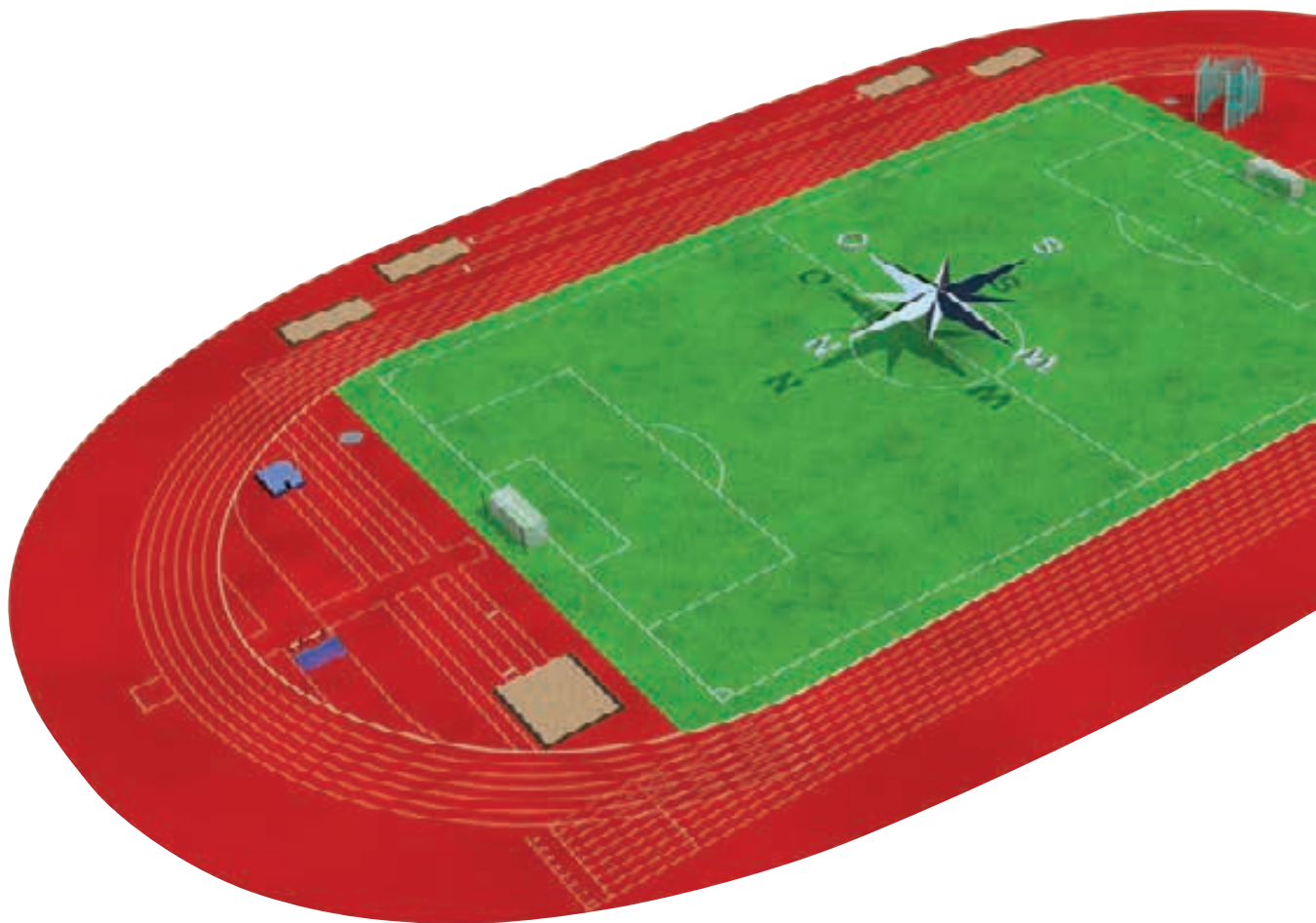
### Example Type B arena

Type B sports facilities are not only used for athletics, but primarily for football or other ball games. To make sure the playing conditions are safe for all users, particularly due to the 5 cm high border required around the running track, the large playing area is also built 5 cm above the level of the running track. This means the border edge can be permanently installed on the raised edge of the playing field directly, by means of a hidden channel construction, thus

presenting no obstacle to step over. The sectors designed as artificial surfaces for athletics competitions run flush with the level of the running track at the prescribed surface gradient.

The ACO SPORT® NW 125 drainage system is a combination of hidden channels and hollow-profile channels. The system intelligently unites fast surface drainage of the sporting surfaces and the particular requirements of all users of modern

sports facilities. For example, if there is a raised playing field, the drainage is routed through hidden channels designed as box channels with a stationary stable cover, which also serves as the 5 cm high border around the running track. The channels are raised above the side of the playing field via a 4 cm high cast-on turf support. Water enters from the running track at the side, through the supported plastic cover with its inlet slots that conform to standard.



Hidden box channel

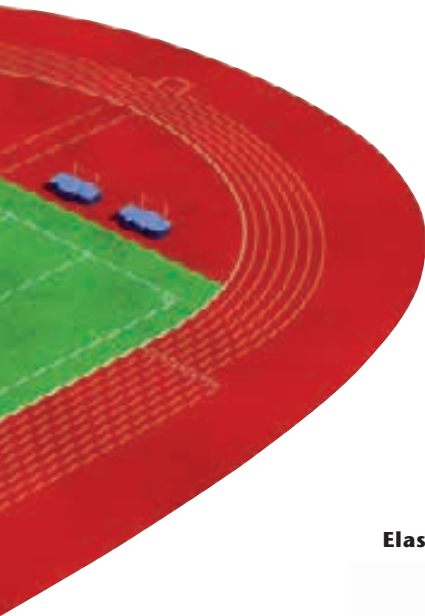


Inlet shaft for box channel





The sectors are drained via integrated hollow-profile channels, which are layered over with a synthetic surface in situ. The plastic cover and its mobile elements are plugged into the slots arranged above the running track in order to create the required border around it. This border can be dismantled quickly, which means the sectors can be accessed easily from the running track, thus ensuring technical discipline as regards athletics.



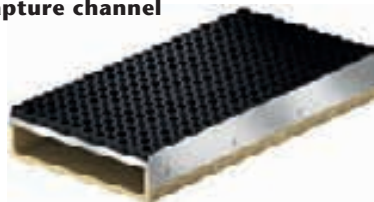
**Sport surrounding kerb**



**Cable distribution shaft**



**Sand capture channel**



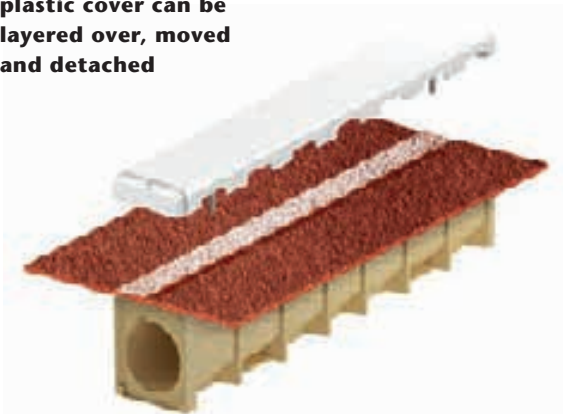
**Elastic kerbstones**



**Inlet shaft for slot channel and inspection box**



**Slot channel clear width 125 plastic cover can be layered over, moved and detached**



### ACO gravity and siphonic roof drainage

*Flat roofs are sensitive architectural areas. That is why it is especially critical to plan their drainage systems professionally. When rain falls onto a flat roof, large volumes of water can collect rapidly. Unless there is an effective way of draining off precipitation, this can lead to excess loads being placed on the building's structure. ACO Haustechnik offers functional solutions which are specially designed for flat roof areas and which ensure the water is drained effectively. For smaller surfaces, gravity drainage systems are the solution. For larger roofs of 150 m<sup>2</sup> or more, siphonic systems can be installed.*







### Gravity roof drainage

Flat roof gullies for gravity drainage are always used for draining small flat roofs with a surface area of less than 150 m<sup>2</sup> per gully. But this kind of drainage can also be used for larger roofs too. Whether the roof covering is a membrane, concrete or gravel: ACO Spin flat roof gullies can be flexibly adapted to the different requirements. The individual components of the gullies such as gratings, top sections and gully bodies can be combined as needed using our building block system.

With the correct accessory components the ACO Spin flat roof gullies can also be used to drain green roofs. Given increasingly dense construction in towns, more and more ecological surfaces are being sealed over. With an intensive or extensive green flat roof it is a relatively simple matter to compensate for this.

### Syphonic roof drainage

Roof areas without traffic larger than 150 m<sup>2</sup>, such as for example production buildings, hangars or sports stadiums, are suitable for syphonic drainage. When the rainfall is heavy enough, the gullies create reduced pressure in the pipe system. This means that increased drainage performance level can be achieved compared to simple gravity drainage. Syphonic drainage can be used on membrane, concrete and gravel roofs, as well as on green roofs with extensive planting. Syphonic drainage systems operate with specially designed flat roof drains which, unlike gravity drainage systems, are configured to work with completely full pipes (degree of fill h/d 1.0). This can only be achieved by assuring amongst other things that no air is sucked in with the rain water to form bubble vortexes in the pipe systems. Special components are used in the ACO Jet flat roof drains to prevent these vortexes from forming. Once the dimensioning rainfall volumes are reached which get the syphonic system operational, the system works with completely filled pipes which rapidly and safely drain the roof.





## **ACO pipe work systems and balcony drains of stainless steel and galvanised steel**

*The functional strength and service lives of rainwater and sewage pipes are being increasingly challenged by the rising level of technology in homes, the growing demands for more housing and sanitation comfort, and the presence of aggressive media in domestic wastewater. ACO rises to this challenge with a complete programme of pipes, fittings and gullies in stainless steel and galvanised steel.*







## Stainless steel pipe system

ACO PIPE is reliable, lightweight and durable push-fit pipe work system, designed, produced and tested for soil, waste, rainwater and industrial wastewater drainage applications. Together with the other products of ACO Group it creates a perfect system and offers a sustainable drainage solution with unique advantages to the customers. Especially with the ACO gully and ACO stainless steel channel systems provide a unique system for building drainage. The push-fit system ensures quick and easy assembly for a reliable installation for gravity and vacuum drainage.

### Typical applications

- ACO PIPE stainless steel pipe is the fast alternative to ductile iron or PVC pipe systems, and is available in standard pipe sizes with easy to assemble push-on fittings.

### Benefits

ACO PIPE stainless steel pipes save on installation costs and long-term care and maintenance

- highly corrosion resistant
- light and easy to handle
- very reliable double-seal joining system
- simple push-fit assembly
- low expansion co-efficient
- fire resistance



## Balcony and terrace gullies

Different solutions are required depending on the installation situation when planning modern balcony and terrace drainage systems. ACO's balcony and terrace product line is therefore intelligently designed around a modular system.

Everything starts with the drain bodies: depending on the model, drains with vertical or horizontal outlet sockets can be supplied. And depending on the model, the drain body can be combined with intermediate sections and a range of top section systems which allows the right drainage solution to be created for each application and floor structure.



## **ACO Floor gullies – a wide range of multi-application and high performance products**

*ACO's product line includes a broad range of height-adjustable floor gullies suitable for any type of floor.*

*Drainage is vertical or horizontal. The ACO modular system has a large number of flexible combination options for every installation situation.*





## Floor gullies

A floor gully and drainage channel guide wastewater from floors into the drainage pipe, safely for people and without damage to structures. It is the installation location, for example, a large catering kitchen, which primarily determines which variant of a gully or chan-

nel for the drainage has to be selected. Depending on their type, they can be combined with extensions. ACO offers gullies made of cast iron, stainless steel and plastic. The most important factors in the design include:

- Wastewater quantity
- Traffic load and load capacity of the grating
- Slip resistance
- Waterproofing/seals
- Fire protection requirements
- Hygienic properties



## Fire protection floor gullies

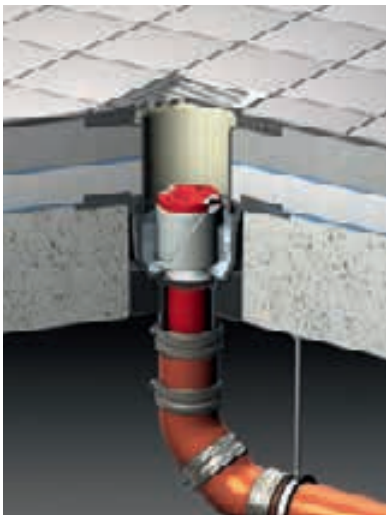
### ACO Passavant fire protection floor drains R 30 to R 120 with odour seals and vertical outlet sockets

The ACO passavant fire protection floor drain series is made of inflammable ductile iron.

A replaceable and retrofittable fire protection kit is fitted into the floor drains. The fire protection kit varies according to the floor drain and consists of a fire

protection odour seal with intumescent material in the head. This ensures safe sealing of the floor drain during a fire to prevent fires spreading from above the ceiling to below the ceiling. There is also a fire protection cartridge containing intumescent material which securely blocks off the floor drain and prevents fire spreading from beneath the ceiling to the floor above.

"Preventative fire protection for all floor gullies" has attracted an increasing amount of interest in recent years – particularly for installation in buildings for special uses, e.g. hotels, hospitals, care homes or schools – where fire-resistance specifications already exist for ceilings and floors.



Function of the ACO Haustechnik fire protection floor drains before a fire



If a fire is present beneath the ceiling, the intumescent mass in the cartridge safely blocks the socket in the drain



A fire on top of the ceiling expands. The intumescent mass in the odour seal to completely block the drain

## **ACO shower channels – architecturally attractive solutions**

*Function and design are combined perfectly in the ACO Showerdrain and the ACO designer gratings.*

*The high-quality stainless steel look of the channel and the gully satisfy sophisticated demands for continuous level floors.*



### **Shower channels as design elements**

The Showerdrain is a channel built into the shower floor which beautifully combines form with function.

The Showerdrain is the perfect high quality solution for high-class bathrooms featuring glass fixtures and natural stone floors, as well as public applica-

tions where the absence of barriers is an important consideration.

The rigid channel body manufactured from stainless steel has a lateral channel gradient to ensure positive drainage of the water.

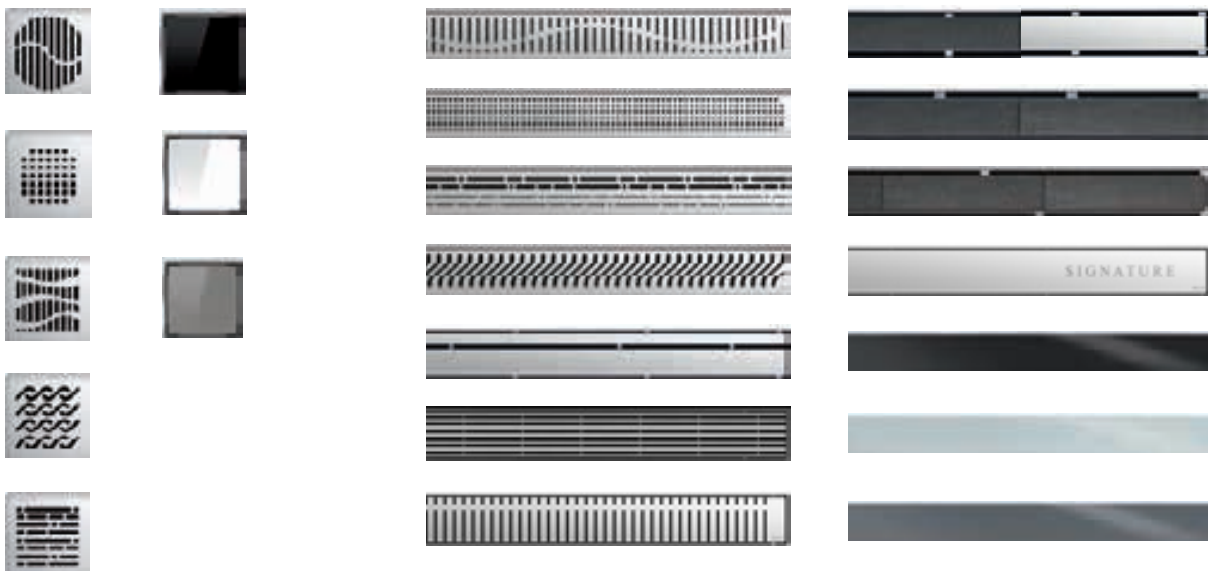


## ACO designer gratings

The ACO stainless steel designer gratings are laser-cut and have an electro-polish finish. They are elegant, individual and superbly functional.

The gratings fit the 150 x 150 mm and Ø 136 mm frames and are therefore used as standard with the MEKU or AV-SELECTA PP risers from ACO for the thin mortar bed sealing method. The risers can be combined with all ACO ductile iron and stainless steel gullies in sizes DN 50 and DN 70 and the plastic floor gullies DN 50-100.

ACO designer gratings can also be individually made to customer specifications. In addition to the patterns shown here, any other pattern can be cut out and customised from stainless steel plate. ACO Showerdrains are available in standard lengths from 700 to 1000 mm. The Showerdrain is an attractive alternative to a conventional shower tray in high-class bathrooms as well as in public areas.



## ACO Lightline Pro

ACO Lightline Pro allows you to create exclusive lighting designs in the bathroom. The floor lighting system produces impressive light effects, is easy to install, offers huge scope for design, and is extremely safe and durable. The idea behind ACO Lightline Pro is as simple as it is clever: A stainless steel U-profile filled with transparent resin to make it

utterly leak tight houses a strip of LED lights (protection class IP68) that is connected to the electric circuit and is therefore switchable. In addition to enhancing individual lighting design in modern private bathrooms, ACO Lightline Pro is also ideal for designing and implementing floor guidance systems in large spa and wellness facilities.



## ACO stainless steel drainage

*Stainless steel is the ideal material for applications where cleanliness and hygiene are the highest priority.*



Because of its high strength, good metal-forming properties, corrosion resistance, and its smooth permanently attractive surface, stainless steel is highly prized as an extremely high qua-

lity, durable and hygienic material. It is virtually completely resistant to dirt, preservatives, micro-organisms and the proteins found in meat, blood, fat and drinks, etc. Proteins and bacteria do not

readily adhere to the smooth surface and can be easily removed with suitable cleaning products and disinfectants.





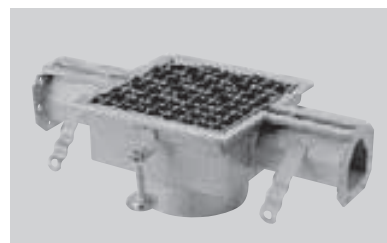
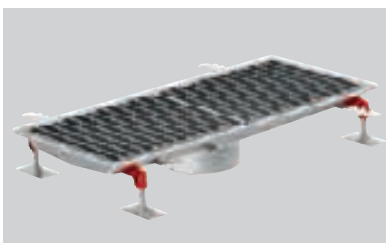
#### Product benefits

- channel widths from 150 mm to 500 mm
- special edge profiles for abutment with tiles, artificial resin/mortar floors and thin mortar bed seals
- range of gratings and covers for classes L 15 and M 125
- all stainless steel parts pickle passivated to ensure full corrosion protection

#### Customised solutions upon request

- customised channel widths
- material grade 316
- extra-flat models
- section types: NF, NFH and NK

## Stainless steel drainage channels



#### Drainage channels

A welded construction available upon request in various channel widths and channel lengths with customised pipe connections. Drainage channels with widths of 150 mm, 300 mm and 450 mm are produced as standard in 500 mm lengths ex warehouse.

#### Slotted drainage channel

Slotted channels are supplied ex-works in lengths of 1000 mm, 2500 mm and 5000 mm. Customised solutions can be easily manufactured upon request.

#### Modular 1000/2000

A wide range of high quality channels, gratings and industrial gullies, manufactured from 2 mm thick austenitic stainless steel provides practical solutions for floor drainage problems.

## Stainless steel floor gullies



#### Floor gullies

Consists of floor gully units with nominal widths from DN 70 to DN 150, and risers with a range of gully gratings suitable for classes K 3 to M 125.

**Available with fire protection sets for fire resistance classes R 30 – R 120**

#### Product benefits

- sophisticated modular system with floor gullies from DN 70 to DN 150
- special AV-VARIANT riser element for thin mortar bed sealing
- floor gullies with retaining edge, adhesive flange and pressed sealing flange
- all stainless steel parts pickle passivated in submersion baths
- calibrated pipe connections for direct connection to SML pipe
- non-slip gully gratings
- all gullies directly combinable with our drainage channels in stainless steel

#### Special models upon request e.g.:

- risers with round gratings
- gullies with lateral inflows
- material grade 316

#### Typical applications

- industrial kitchens in canteens, hospitals, care homes, businesses, catering companies
- pubs, restaurants, fast food outlets, cafeterias
- abattoirs and meat-processing industry, butchers
- food and drink industry
- pharmaceutical industry, cosmetics industry

## **ACO Passavant grease separators – Fully developed products compliant with international standards**

*Grease separators need to be adapt-able and versatile, and be available in various sizes and materials to meet the enormous range of differ-ent industrial and commercial needs. ACO has many years of experience in the production of grease separators. Its comprehensive product line includes free-standing and underground grease separators. Precise engineering and in-depth expertise guarantee fully developed, quality-assured and completely tested products that satisfy all international standards.*



The ACO product line has an optimum solution for every application. Free-standing grease separators are manufactured from stainless steel or polyethylene. In addition to the two materials, there are also two disposal systems: partial and full disposal. Partial disposal only involves disposal of the grease and solids – this is carried out by ACO's manually operated LIPATOR or the fully-automatic LIPATOMAT.

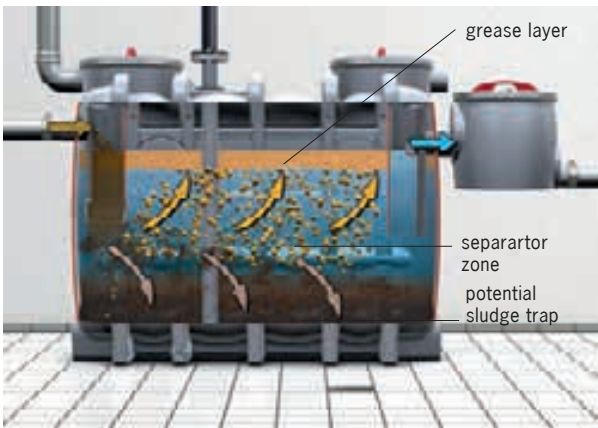
Partial disposal saves water and disposal costs. Full disposal grease separators remove all of the contents. Grease separator for below ground installation are made of reinforced concrete or polyethylene. The Lipumax P grease separator series offers economic solutions and product variations as well enabling both easy disposal and tank cleaning.

### **Typical applications**

- meat processing
- kitchens
- restaurants
- grilling, roasting and frying kitchens
- motorway services
- catering facilities

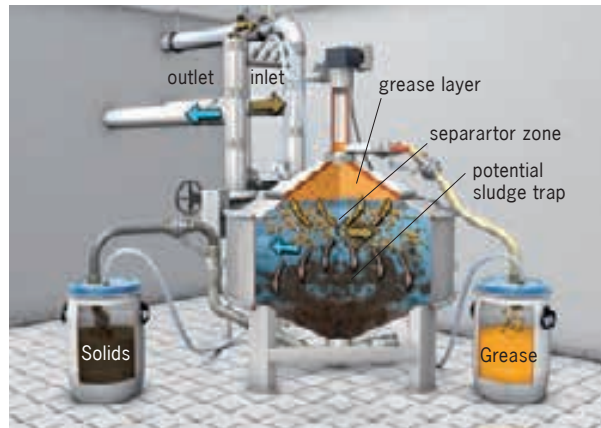


## Full disposal



EN 1825 function diagram Grease separator with both integrated sludge trap and grease storage area

## Partial disposal



The main applications of this type of grease separator are restaurants, canteens and catering operation kitchens.

The grease collects in the upper cone. The sludge sinks to the bottom of the lower cone. The grease is kept fluid by heating the upper cone

## ACO Lipulift-C – grease separator, sampling and pumping station in one shaft

With the Lipulift-C, ACO offers a 3-in-1 standard-compliant solution for confined spaces, which takes into account all legal requirements and provides additional benefits for building contractors, operators and planners. Instead of having the grease separator, sampling shaft and pumping station in separate structures as is usual on the market, ACO's compact and unique approach combines the 3 functions in one structure. This results in huge time and cost savings during installation, significantly reduces the space required and ensures reliable performance and lower risks.



**3-in-1**  
the innovative combination

## **Light liquid separators – Pre-cleaning water-endangering substances**

*ACO has completely upgraded its light-oil separators in response to the new European standard EN 858.*

*This product line now sets new benchmarks for separator technology.*



In an individual case, it can be useful to use a light liquid separator to EN 858 in conjunction with surface water infiltration or retention. Surface water can become contaminated, e.g. when it occurs on hardened surfaces. Surface water that has become mixed with light liquids of mineral origin in specific applications, must be treated via suitable separator systems or retention devices must be provided. The treated surface water must then be fed into the wastewater sewer (DIN 1999-100).

Laws, for example the law on prevention and remediation of environmental damage, require maximum operating safety of plants that handle water polluting liquids. ACO offers practical solutions with new and innovative technology. If the contaminated surface water is to be discharged into a body of water, the respective authority must decide what treatment plant must be used depending on the degree of contamination and the sensitivity of the receiving water.

### **Typical applications**

- Petrol stations, car parks
- Car washes, vehicle washes
- Automotive workshops, automotive trade
- Filling areas, unloading zones
- Petroleum storages, maintenance operations
- Transformer stations, power plants
- Industry and commerce



## Low-maintenance due to filterless

### multi-channel technology

In addition to the light liquids in wastewater, coalescence separators also filter out suspended substances and fine sludge fractions. As these substances attach themselves to the light liquid droplets, they adhere to the surface of the coalescence filter. As a consequence the element must be cleaned at regular intervals to prevent blockaging and thus malfunctioning of the separator.

Not the case with the Oleosmart Pro: Thanks to the filterless multi-channel technology it is almost maintenance free. Interruptions in operation to clean the coalescence unit are therefore completely unnecessary (self-cleaning by flow energy), follow-up costs are reduced substantially due to the lack of wear in the element.

DIBt

National technical approval issued by the DIBt Berlin



ACO Oleosmart Pro



ACO Oleosmart Pro –  
made of polymer concrete

### Effective coalescence separator

The Oleopator-C light liquid separator works effectively and is nonetheless space-saving. The nominal performance and volume of the sludge trap are determined for each specific project based on the actual requirements. Another advantage for the operating costs: All separators in this series are tested as petrol and coalescence separators. This means that when the coalescence element is replaced, the wastewater flow does not have to be interrupted, as the petrol separation continues to run. The petrol separator ensures safe, reliable, simple and cost-effective operation, provided it is inspected regularly according to the self-monitoring regulations.

The light liquid separator with coalescence separator is also available as an ACO Oleopator Pro polymer concrete separator.

DIBt

National technical approval issued by the DIBt Berlin



ACO Oleopator-C



ACO Oleopator Pro –  
made of polymer concrete

### Environmentally-friendly solutions for water protection – ACO catch pits, separators and pumping stations

The drainage pipe network beneath large aprons can often not accommodate the volumes of water quick enough after episodes of very heavy rain – ACO rainwater catch pits act as buffer tanks to throttle the outfall. Residues from airport operations such as petroleum products

must not pollute sewer networks. This can be prevented by low-maintenance and reliable ACO light-oil separators which collect the separated-out materials. The ACO big tank system is used when large volumes of rain or groundwater need to be treated or contained. ACO pump stations guarantee 100 % protection against backflow – even from flooded sewers.



## **ACO backflow stops – compact design for versatile utilisation**

*Previously an occasional hazard, the risk of backflows will undoubtedly increase in future in line with the predicted greater frequency of heavy rain storms. This is because sewers are only designed to cope with average rainfall volumes for economic and technical reasons. Mixed water sewers can therefore very quickly fill up completely during major cloud bursts. It therefore only makes sense to permanently protect all rooms and areas in single family houses lying below the backflow level from the risk of backflow from public sewers.*





## ACO cellar gullies with backflow prevention

The cellar gully ACO Junior provides compact dimensions which makes it the perfect choice for replacement of insufficient gullies without backflow prevention or for subsequent installation during renovation. The removable foul air trap serves as a sludge trap as well. ACO Junior is pre-dominantly installed in private basements which need gullies with backflow prevention.

### Product benefits

- telescopic, height-adjustable raising tube
- removable foul air trap and backflow unit
- optional lateral inlet with foul air trap
- easily removable grating with lifting hole



## ACO backflow stops for grey water

Various drainage situations require the appropriate product if protection against backflow is needed.

The ACO backflow stop series Triplex fulfills all demands defined in EN 13564 and fits for protection of drainage pipes conveying water or grey water from showers, sinks or washing machines below the backflow level.

The compact product dimensions enable quick and uncomplicated installation – for both new buildings and renovation. The quick fasteners of the covers allow simple maintenance without the utilization of tools.

The ACO Triplex series is available in the dimensions DN 50 - 150.

### Product benefits

- in-situ test according to EN 13564 already for DN 50/DN 70 possible
- maintenance without tools
- quick fasteners for cover locking
- DN 100 – DN 150 with large openings for inspection and cleaning
- with test funnel also for DN 50 and DN 70



Easing of maintenance through innovative cover locking

## ACO backflow stops for black water

The backflow stop ACO Quatrix-K is designed according to EN 13564. The product is for use with black water (waste water with faeces). According to EN 13564, these backflow stops must be applied whenever toilets in private premises are installed below the backflow level. When water from the sewers backflows into the pipes, the operating stop closes automatically via a pressure sensor.

As soon as the waste water rises up above the permissible height in the pipe, an under pressure sensor sends a signal back to the control unit. The control unit automatically operates the electric motor to close the operating stop. When water no longer backflows into the system, a sensor informs the control unit and the flap is automatically reopened.

The items are applied in single-family houses below the backflow level in which, among others, a urinal or a toilet have to be protected against backflow

### Product benefits

- gradient between inlet and outlet only 12 mm
- 71 cm mounting opening without reverse slope
- perfect for renovation
- accessible for inspection cameras
- selectively with height-adjustable flange for ground water protection
- trouble-free backflow detection through pneumatic control system



ACO Quatrix-K backflow stop for black water according to EN 13564, the control unit is delivered ready for on-site connection



ACO Quatrix-K backflow stop for black water according to EN 13564, with shaft system for installation below.

## ACO lifting systems – a complete range for professionals

*Professional lift systems are one of the main areas of ACO product excellence in its building drainage product line. ACO has a complete range of intelligent solutions suitable for several application areas, as well as a flexible tank system enabling customization for specific requirements.*



### ACO wastewater lift plants

**Muli-Star** lifting plants are designed to raise wastewater from deeper lying rooms such as conveniences, cloak-rooms, showers or complete bathrooms. Also available with a redundant unit for higher operating reliability in housing blocks or small offices.

#### Product benefits

- optimum tank volume utilisation – less hysteresis and pump wear
- microprocessor-controlled switchbox for simple operation
- Low-noise pumps
- Special connection piece for rapid assembly to pressure pipe



The **Muli-Pro** lift plants are mainly used in public and commercial buildings e.g. office buildings, schools, hotels and factories. These lift plants can be equipped with several lifting heights and flow rates.

#### Product benefits

- high-quality tank in polyethylene
- designed for wastewater containing grey and black water
- free diameter up to 100 mm
- variable by up to four inflow connection options
- wide scope for positioning in the installation space





## Muli-Max F/ Powerlift P- pumping stations

### for non-soil wastewater and soil

Muli-Max F and Powerlift-P pump stations are suitable for below ground installation outside buildings.

These fully-fledged pumping stations are mainly used for draining surfaces and deeper lying areas in private and commercial buildings.

The complete pumping stations ensure optimal pressure pump drainage of domestic wastewater.

#### Product benefits

- float-resistant PE tanks
- encrustation-resistant collecting tank
- low maintenance and flexible over-fill pressure switch
- flexible inlet invert with raising tubes and covers for load class A, B or D



Powerlift- P



Muli-Max F

## Pumping stations

Pumping stations are installed in already existing tank systems which are designated to serve a collecting for tanks for pump stations with submersible pumps. They are used for drainage of single or multiple family houses and larger courtyards and similar surfaces.

The pumps are available with several performance power for different lifting heights and flow rates.

#### Product benefits

- selected combination of several materials for prolonged downtimes
- pre-assembled pressure piping
- construction height and interior customizable according to modular system
- submersible coupling system with sliding tube



## **ACO wastewater treatment technology**

*In face of declining drinking water reserves and increasing unit costs, ACO has focused its attention on the recycling of wastewater for re-use. ACO systems use aeration, filtration and biological purification methods.*



### **ACO Maripur – the highest standards of wastewater treatment**

The ACO Maripur system purifies water by biological wastewater treatment combined with submerged negative pressure micro-filtration membrane technology to filter out activated sludge, bacteria and viruses.

With no need for any final purification, ACO Maripur technology purifies water in compliance with numerous quality standards: IMO/MARPOL, HELCOM, German Federal Law Gazette No. II, Page 1378 and No. I, page 1221, USCG, US Federal Law Gazette No. 40, Section 133, ADNOC Australia and Australian Federal Environmental Agency requirements as Alaska Agreement. ACO Maripur was developed as a modular system with four basic sizes for purifying wastewater ge-

nerated by 25, 50, 100 and 200 people. We can also produce customised solutions upon request.

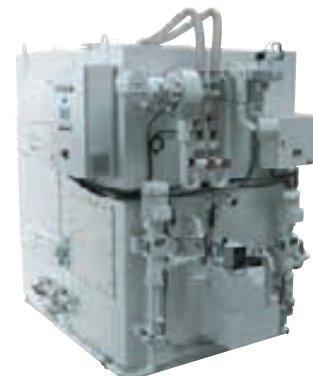
The bioreactor is in stainless steel AISI 316Ti as standard. Construction in other materials is also possible upon request.

#### **Benefits**

- low operating costs
- smaller dimensions and more compact than conventional solutions
- insensitive to movement on board ship
- options for purifying black and grey water, or black water only
- suitable for gravity and vacuum sewage systems
- easy installation and commissioning
- automatic operation, easy maintenance

#### **Typical application**

- superyachts and megayachts
- military ships
- ferries
- river cruises
- special ships
- offshore



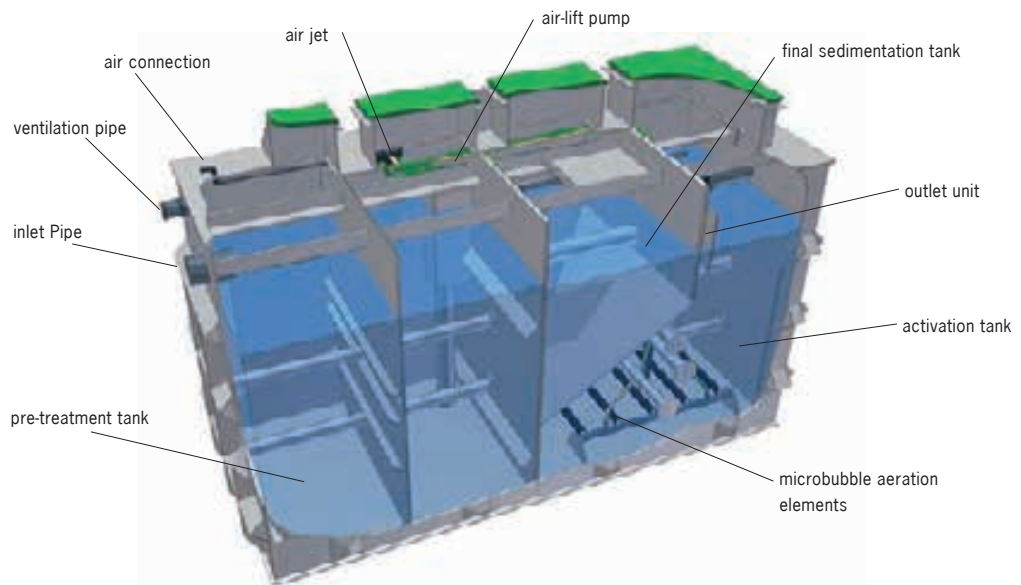


## ACO Clara – For the treatment of wastewater from single-family households and small business units

ACO Clara sewage treatment plants are designed for the complete biological purification of domestic waste water.

### Typical application

- single-houses
- residential areas
- hotels
- boarding-houses
- companies, etc.



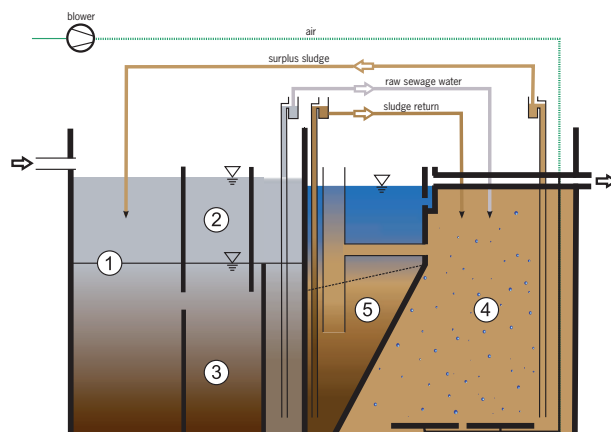
### Treatment process

- mechanical pre-treatment
- biological treatment by activated sludge
- final gravity sedimentation

### Benefits

- perfect statics
- easy installation with no additional concreting
- very stable and high treatment efficiency during irregular hydraulic and biological loads – overload-resistant
- first-class electrical components
- effective purification
- low maintenance
- low energy consumption
- odour-proof access cover with smart construction
- high volume of storage tank

The ACO Clara sewage treatment plant consists of a mechanical pre-treatment part and a biological compartment. The mechanical pre-treatment part is formed of a sedimentation tank with a high buffer area volume and the biological part consists of an activation tank and a built-in final sedimentation tank. Surplus sludge is stored in the storage area, which in fully loaded plants is capable of holding about 100 - 150 days' capacity.

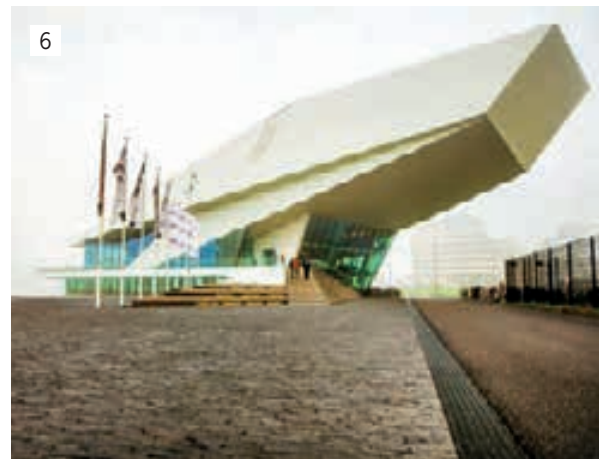


### Key

1. pre-treatment
2. buffer area
3. storage area
4. activation tank
5. final sedimentation tank

## ACO references

*ACO products provide you with reliable drainage wherever they are used. Versatility and quality of ACO products will solve the most mundane problems of every day life, as well as the challenges of major projects.*







- 1 Maracanã Stadium, Brazil
- 2 Dubai Opera, UAE
- 3 Royal Arena, Denmark
- 4 Harbour Bridge, Australia
- 5 Gare Des Guillemins, Belgium
- 6 Eye Filmuseum, Netherlands
- 7 The Garden Offices, Netherlands
- 8 Formula 1 circuit, China
- 9 Zeche Zollverein, Germany
- 10 One World Trade Center, USA
- 11 Le Jardin D'acclimatation, France
- 12 Airport Frankfurt, Germany
- 13 De Blob, Netherlands
- 14 King Abdullah Financial District, Saudi Arabia
- 15 Elbphilharmonie, Germany
- 16 Central Railway Station, Austria



## The ACO Group worldwide

WWW.ACO.COM

### Australia

ACO Polycrete Pty Ltd  
Emu Plains, Sydney  
Adeleide  
Brisbane  
Melbourne  
Perth  
www.acoaus.com.au

### Austria

ACO GmbH  
Baden  
www.aco.co.at

### Belgium

ACO Passavant NV/SA  
Merchtem  
www.aco.be

### Bosnia and Herzegovina

ACO d.o.o.  
Sarajevo  
www.aco.ba

### Bulgaria

ACO Building Elements Ltd  
Sofia  
www.aco.bg

### Brazil

ACO Soluções em Drenagem LTDA  
Rio Abaixo, Jacarei - São Paulo  
www.acodrenagem.com.br

### Canada

ACO Systems Ltd.  
Mississauga, Ontario  
www.acocan.ca

### Chile

ACO Spa  
Santiago de Chile  
www.aco-spa.cl

### China

ACO Drainage Technology  
Co. Ltd.  
Shanghai  
www.aco.cn

ACO Technologies Ltd.  
Hongkong  
www.aco.cn

### Croatia

ACO Gradevinski elementi d.o.o.  
Zagreb  
www.aco.hr

### Czech Republic

ACO Industries k.s.  
Přibyslav  
www.aco.cz

ACO Stavební prvky spol. s.r.o.  
Jihlava  
www.aco.cz

ACO Industries Tabor s.r.o.  
Sezimovo Ústí  
www.aco.cz

ACO Marine s.r.o.  
Prague  
www.acomarine.com

### Denmark

ACO Nordic A/S  
Ringsted  
www.aco.dk

Plastmo A/S  
Ringsted  
www.plastmo.dk

ACO Funki A/S  
Herning  
www.aco-funki.com

Hvidbjerg Vinduet A/S  
Hvidbjerg/Thyholm  
www.hvidbjergvinduet.dk

### Estonia

ACO Nordic OÜ  
Tallinn  
www.aco.ee

### Finland

ACO Nordic Oy  
Espoo, Helsinki  
www.acodrain.fi

### France

ACO s.a.s  
Notre Dame de l'Isle  
www.aco.fr

ACO Funki France  
Landerneau  
www.aco-funki.com

ACO Hydrocast SAS  
Saint Romain de Jalonas  
www.hydrocast.fr

### Germany (Headquarter)

ACO Severin Ahlmann  
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Rendsburg/Büdelndorf  
www.aco.com

ACO Tiefbau Vertrieb GmbH  
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www.aco-tiefbau.de

ACO Hochbau Vertrieb GmbH  
Reith  
www.aco-hochbau.de

ACO Selbstbau Vertrieb GmbH  
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www.aco-selbstbau.de

ACO Passavant GmbH  
Philippsthal  
Stadtlengsfeld  
www.aco-haustechnik.de

ACO Beton GmbH  
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www.aco.com

ACO Guss GmbH  
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www.aco-guss.com

ACO Passavant Guss GmbH  
Michelbacher Hütte, Aarbergen  
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ACO Eurobar GmbH  
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www.aco-eurobar.de

ACO Edelstahl GmbH  
Philippsthal  
www.aco-industrie.de

ACO Industrie Vertrieb GmbH  
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www.aco-industrie.de

ACO Funki A/S  
Rendsburg/Büdelndorf  
www.aco-funki.de

Aguss Vertrieb GmbH  
Michelbacher Hütte, Aarbergen  
www.aguss.de

HAVO Strangguss GmbH  
Plettenberg  
www.havo-strangguss.de



Inotec Sportanlagen-  
und Edelstahltechnik GmbH  
Rendsburg/Büdelndorf  
www.inotec.biz

#### **Hungary**

ACO Kereskedelmi Kft.  
Dunaharaszti, Budapest  
www.aco.hu

#### **India**

ACO Systems and Solutions  
Pvt.Ltd.  
Bangalore  
www.aco.in

ACO Technology Centre Pvt. Ltd.  
Bangalore  
www.aco.in

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ACO Passavant S.p.A  
Bagnolo in Piano  
www.aco.it

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ACO Nordic SIA  
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www.aco.lv

#### **Lithuania**

ACO Nordic UAB  
Vilnius  
www.aco.lt

#### **Malaysia**

ACO Polycrrete Pty Ltd  
Kuala Lumpur  
www.acoaus.com.au

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ACO Productos de Contruccion,  
S.A. de C.V.  
Tlalnepantla, Mexico City  
www.acomex.com.mx

#### **Netherlands**

ACO B. V.  
Doetinchem  
www.aco.nl

#### **New Zealand**

ACO Limited  
Auckland  
www.aconz.co.nz

#### **Norway**

ACO Nordic A/S  
Lysaker  
www.acodrain.no

Plastmo A/S  
Slemmestad  
www.plastmo.no

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ACO Elementy Budowlane  
Sp.z o.o.  
Legionowo, Warsaw  
www.aco.pl

Plastmo Polska Sp. z o.o.  
Janki, Warsaw  
www.plastmopolska.pl

ACO Funki Sp. z o. o.  
Gorzno  
www.aco-funki.com

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Elementos de Construção,  
Unipessoal Lda.  
Matosinhos  
www.aco.pt

#### **Romania**

ACO s.r.l.  
Afumati  
www.aco.ro

#### **Russia**

ACO Drainage Solutions LLC  
Moscow  
www.acodrain.ru

#### **Serbia**

ACO gradjevinski elementi d.o.o.  
Belgrade  
www.aco.rs

#### **Slovakia**

ACO Stavěbné prvky, s.r.o.  
Bratislava  
www.aco.sk

#### **Slovenia**

ACO gradbeni elementi,  
zastopanje, d.o.o.  
Šmarje pri Jelsah  
www.aco.si

#### **South Africa**

ACO Systems SA  
Germiston, Johannesburg  
www.aco.co.za

ACO Casting Services South Africa (Pty) Ltd  
Johannesburg  
www.aco-cast-iron.co.za

#### **Spain**

ACO Productos Polímeros, S.A.  
Maçanet de la Selva  
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#### **Sweden**

ACO Nordic AB  
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www.aco-nordic.se

#### **Switzerland**

ACO Passavant AG  
Netstal, GL  
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ACO Yapi Malzemeleri San. ve Tic. Ltd. Sti.  
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#### **Ukraine**

ACO Building Elements Ltd.  
Kiev  
www.aco.ua

#### **United Arab Emirates**

ACO Systems FZE  
Dubai  
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#### **United Kingdom**

ACO Technologies plc  
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www.aco.co.uk

ACO Building Drainage

Bedford  
www.acobuildingdrainage.co.uk

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