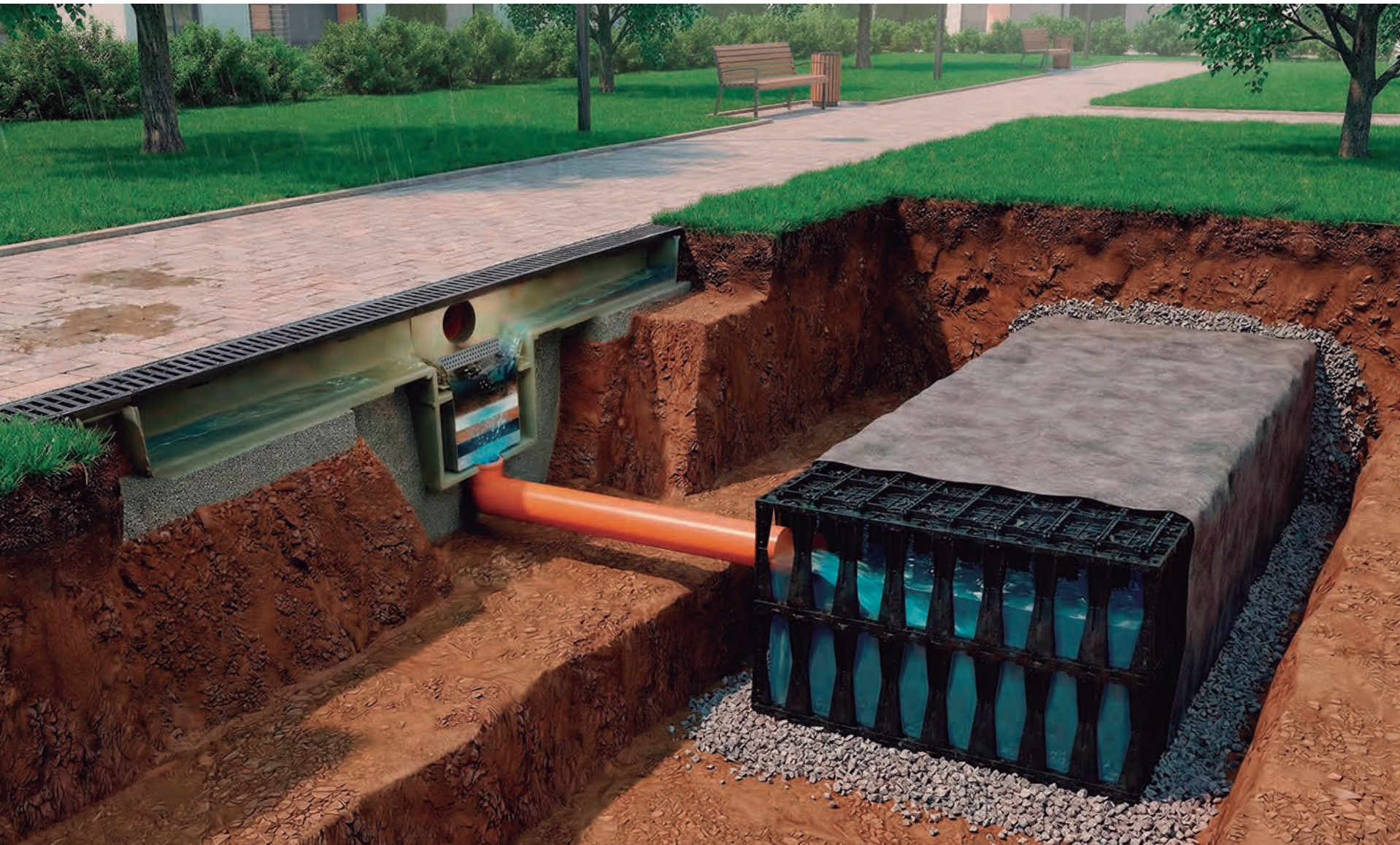


## DRAINAGE SYSTEMS

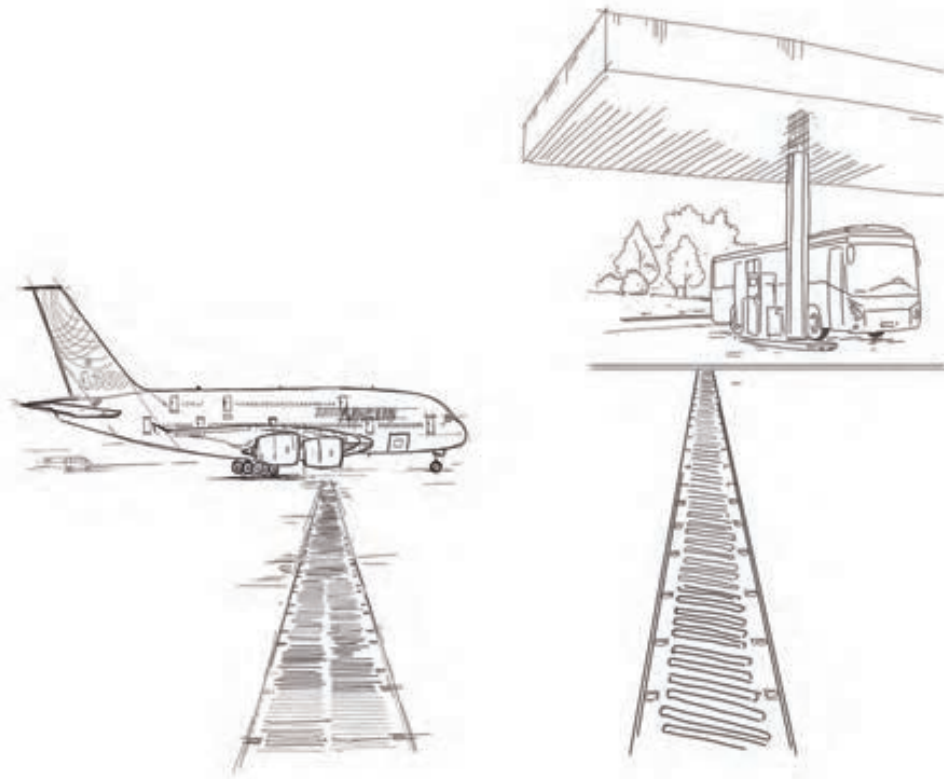


**Where innovation  
meets sustainability**



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## ENGINEERING FOR DEMANDING ENVIRONMENTS

### Engineering for Worldwide Infrastructure Challenges

Infrastructure is evolving under growing environmental and technical demands worldwide. Performance standards are rising. Durability expectations are higher than ever. Sustainability is no longer optional — **it is a fundamental requirement.**

At ULMA Architectural Solutions, we respond to these challenges through engineering. Our drainage systems are designed to withstand extreme loads, optimise hydraulic performance and support responsible water management across urban and industrial environments.

From heavy-duty F900 solutions to efficient A15 systems and sustainable drainage innovations, our portfolio reflects a clear commitment to combining technical excellence with environmental responsibility. Beyond developing sustainable drainage solutions, we also manufacture our polymer concrete using recycled materials, reducing reliance on virgin raw resources.

### Durability is sustainability.

Long-term performance reduces environmental impact. And infrastructure must be engineered with purpose.

We present solutions developed for demanding projects across the world — robust, efficient and aligned with the environments they serve.

We look forward to welcoming you and discussing how engineering can drive responsible progress.



**SERVICES:  
ENGINEERING OFFICE**





Scan to see it in action

## TECHNICAL ADVICE

With its many years of experience in the area of surface drainage, ULMA's technical department is at your disposal to accompany you throughout the entire project.



### SETTING-OUT THE DRAINAGE LINES

Send us your plans and we will help you design the best way to drain the surface of your project. We will also advise you on choosing the right kind of resistance for the channels and gratings depending on their use and location.



### CHOOSING THE MOST OPTIMAL CHANNEL AND GRATING

With our Optimal Drain hydraulic calculation software, we will find the optimal channel with the lowest possible cost.



### COMPLETE DRAINAGE SYSTEM

We will advise you to ensure your drainage project is as complete as possible. We will develop the exploded view of the entire system to ensure no element or accessory is missing. Sump units, connectors, covers...



### DOCUMENTATION FOR THE PROJECT

We will provide you with all the necessary documentation for the project. Data sheets, plans, files, BIM, DOP, quality control certificates...



### ADVICE ON INSTALLATION ON SITE

After we send you the material, we will still be there. We will advise you on installing the channels, defining the necessary concrete reinforcement, in addition to being present on site if required.

**Gain security and peace of mind. Save time by relying on the support of our technical engineering team.**

# AQUORA

## REIMAGINING WATER NEW SUDS PRODUCT RANGE

### Making every water drop better

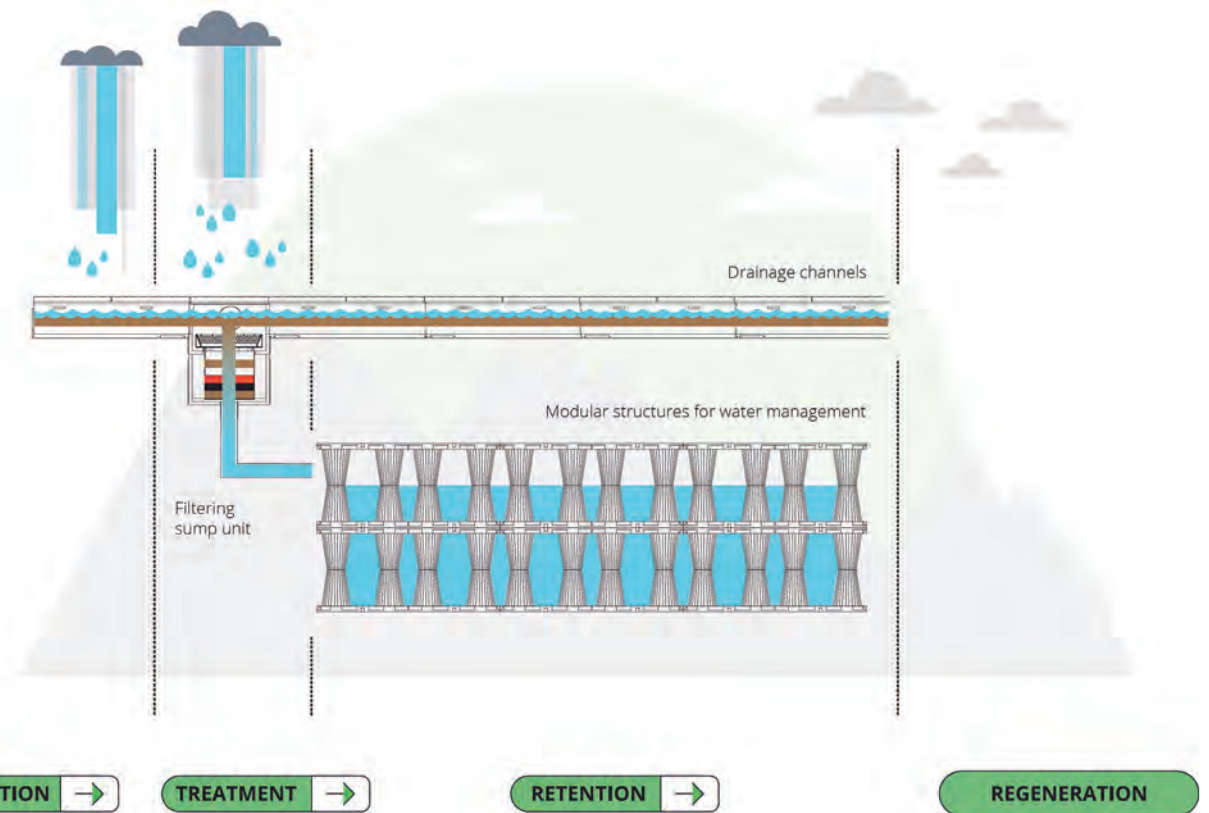
Sustainable Urban Drainage Systems (SUDS) are transforming the way water is managed in urban environments, bringing it closer to the natural behaviour of the hydrological cycle. They enable runoff to be controlled at source, improve water quality and reduce the risk of flooding, addressing today's urban challenges.

At ULMA, innovation is always built on a solid foundation: our polymer concrete drainage channels, the core element for the efficient capture and conveyance of surface water. Building on this, **we are now expanding our range with new SUDS solutions** that complement and enhance the overall system.

Among the latest developments are **the filtering sump unit, equipped with ULMA's exclusive Water Filtration Formula, and modular structures for the infiltration, attenuation and storage of stormwater.**

With these solutions, ULMA goes one step further: not only collecting and conveying water, but also filtering it, regulating it and enabling its reuse. An integrated approach that turns every project into a more efficient, sustainable and future-ready solution.

**ULMA: capture, management and sustainability in a single system.**



# URBAN RUNOFF

## The invisible pathway of pollution

### Green areas

Contribution of high loads of nutrients, pesticides, fertilisers, etc.



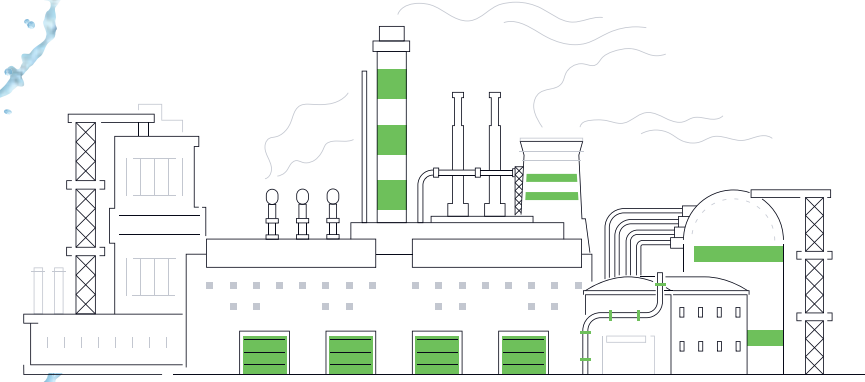
### Traffic

Metals, tyre wear, polycyclic aromatic hydrocarbon (PAH), etc.



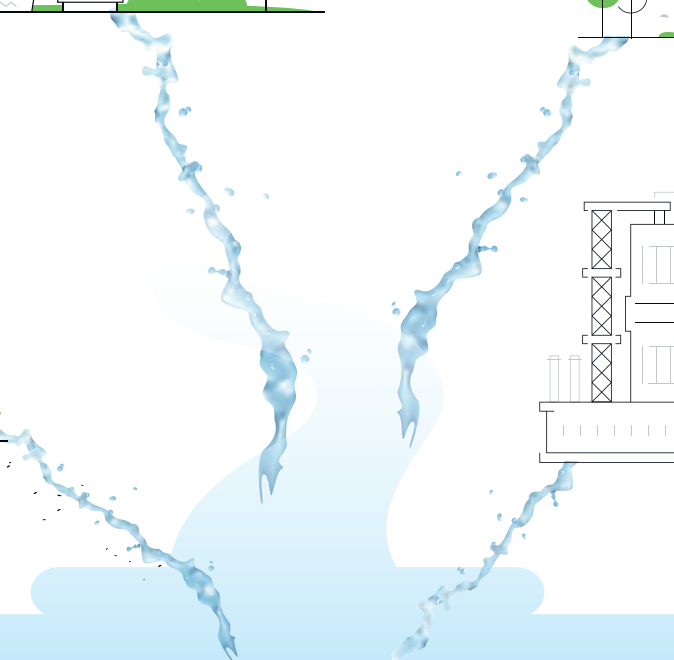
### Pedestrian areas

Litter, fibres, microplastics and microbial contamination.



### Industrial areas

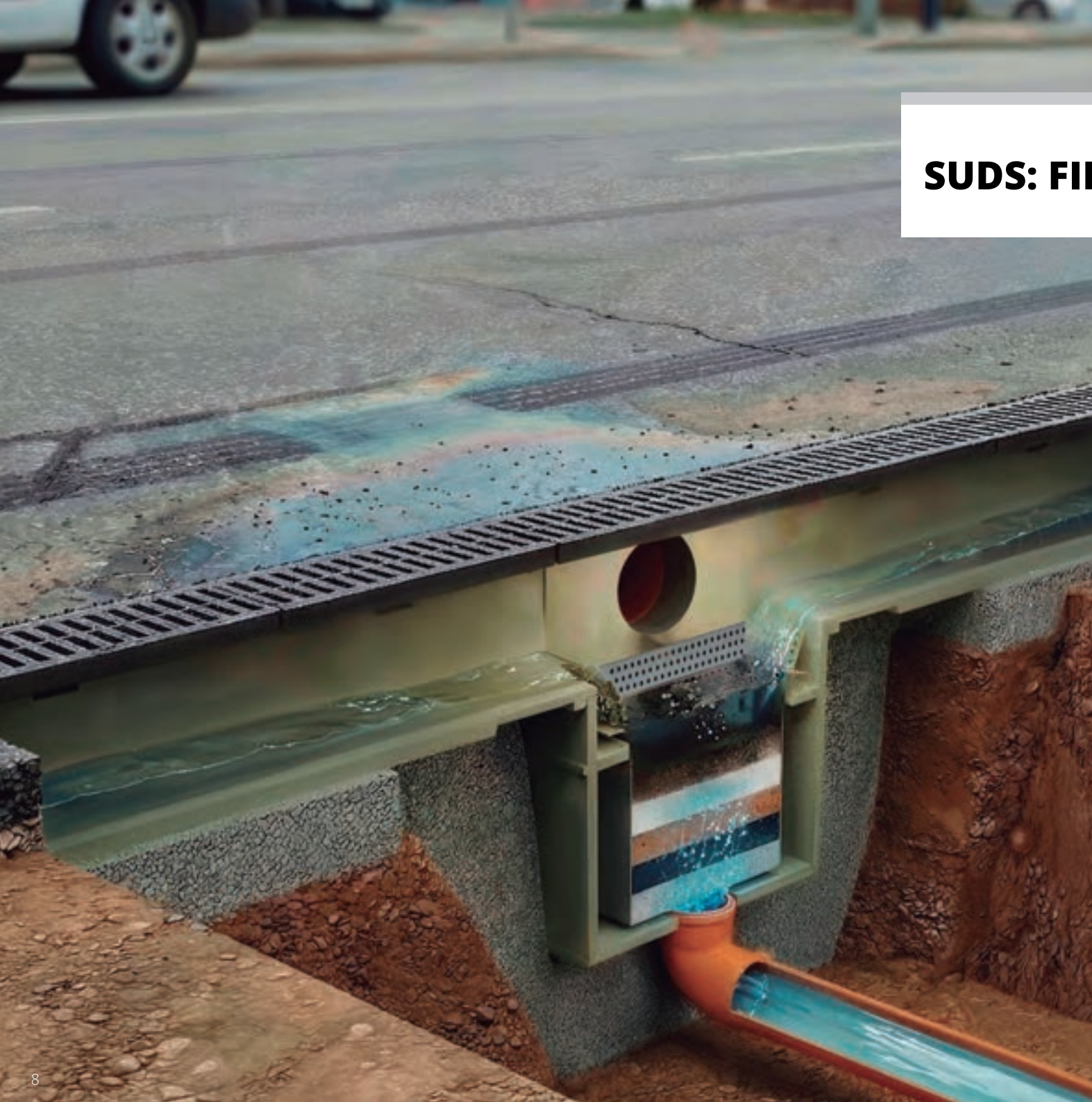
Higher concentrations of critical metals and persistent chemicals.



### Final destination: AQUATIC ECOSYSTEM

**Untreated flow:** Contaminated water flows into streams, rivers, estuaries, and groundwaters without passing through treatment plants.

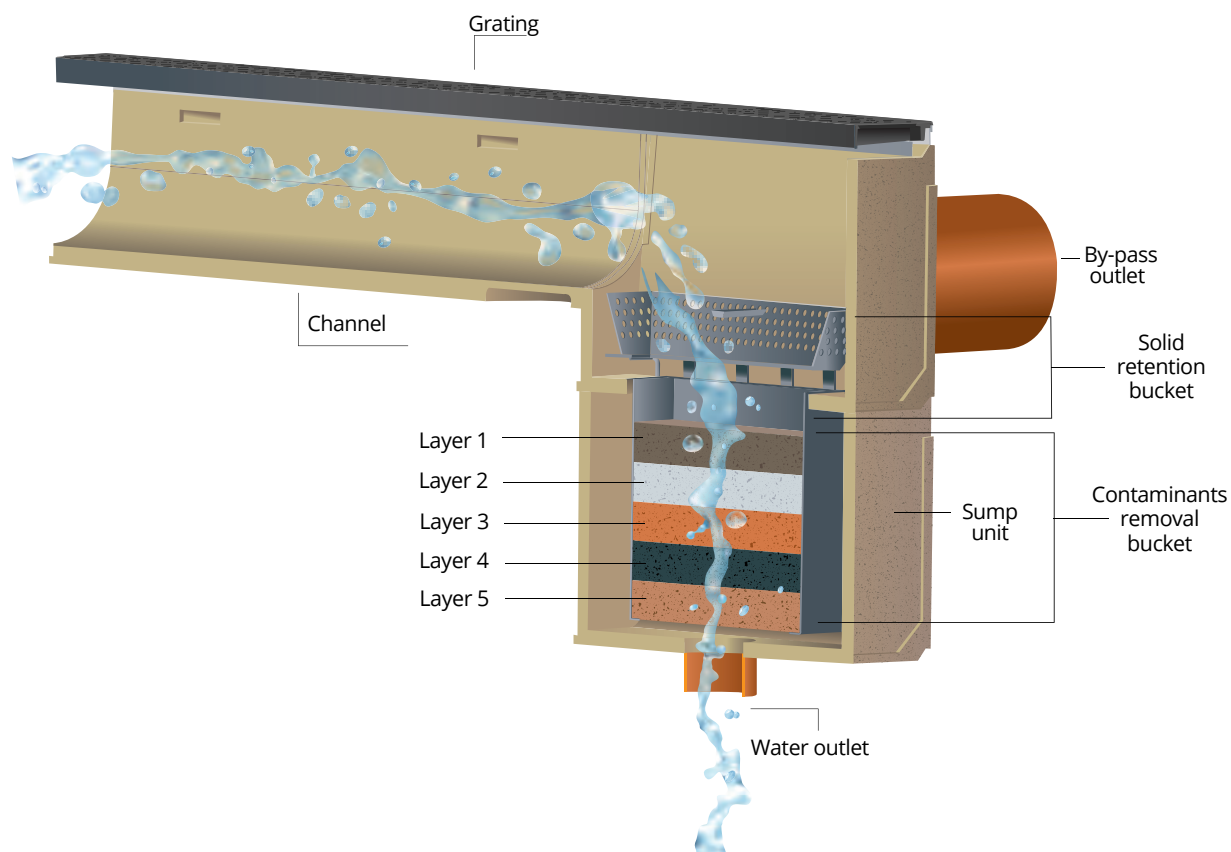
**Threat to life and consumption:** The accumulation of pollutants affects biodiversity and the safety of drinking water.



## SUDS: FILTERING SUMP UNIT

AQUORA

## Filtering Sump Unit with ULMA's Exclusive Water Filtration Formula



# AQUORA

## Rainwater Treatment System

The **FILTERING SUMP UNIT** is a polymer concrete structure designed to connect directly to ULMA drainage channels. It provides a two-stage treatment system for contaminated urban runoff.

### Stage 1 - Solid Retention Bucket

Captures coarse and gross solids, along with the associated pollutants.

Easily accessible and equipped with a handle, for quick removal and maintenance.

### Stage 2 - Pollutant Removal Bucket

Contains a multi-layer system of functionally differentiated media, where each layer is designed to target specific contaminants, enabling effective removal of heavy metals, hydrocarbons and other organic pollutants such as pesticides.

### Integrated Safety Bypass

A lateral safety bypass outlet allows excess water to discharge during extreme rainfall events, preventing overflow and ensuring system reliable operation under peak flow conditions.

### ADVANTAGES:

1. Compatible with different ULMA channel widths.
2. Multi-layer media system, where each layer targets specific pollutants, working sequentially and synergistically.
3. Adaptable to different urban environments and contaminant profiles by adjusting media configuration.
4. Simple, localised maintenance without specialised equipment.
5. Independent maintenance of each treatment stage, extending pollutant removal media lifespan and ensuring optimal performance.

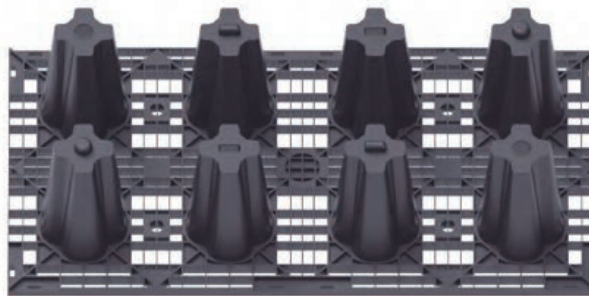
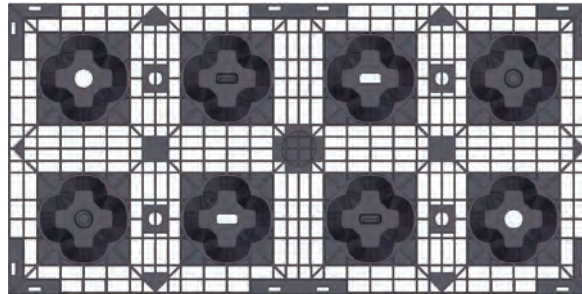
# SUDS: MODULAR STRUCTURES FOR STORMWATER MANAGEMENT

AQUORA



# AQUORA

## MODULAR GEOCELLULAR STRUCTURES FOR STORMWATER MANAGEMENT



### FUNCTIONS:

- Attenuation through temporary storage of stormwater
- Infiltration of stormwater into the surrounding soil
- Stormwater storage for reuse

### ADVANTAGES

Compared to traditional solutions such as surface basins, concrete tanks or granular drainage fills, modular geocellular systems offer several technical and construction advantages:

#### 1. High void ratio efficiency

They can achieve void ratios of up to 95%, allowing large volumes of water to be stored with minimal structural footprint.

#### 2. Modular Design for Faster, Error-Free Installation

As a prefabricated system, it significantly reduces installation times, while a connector design with distinct geometries ensures components can only be assembled in one way—eliminating errors and improving on-site efficiency.

#### 3. Geometric adaptability

The modular nature of the system allows the tank to be easily adapted to the available site geometry, optimising space.

#### 4. Efficient use of urban space

Installed below trafficked surfaces, they enable full use of the surface area for urban applications.

#### 5. Improved inspection and maintenance

The structural design incorporates internal pillars and voids, allowing for inspection and cleaning of the system.

#### 6. Reduced transport costs and associated emissions

The modules are lightweight and stackable, facilitating transport and on-site storage.



**NEW F500:**  
ONE OF THE LARGEST  
DRAINAGE CHANNELS  
AVAILABLE ON THE MARKET



## F500 CHANNELS FOR HEAVY DUTY APPLICATIONS

A high-capacity drainage channel with one of the largest cross-sections on the market, featuring channels 500 mm wide and up to 700 mm in height.

The F system is specifically designed for heavy traffic areas. Areas such as service stations, loading and unloading areas, ports, warehouses, airports, public roads, and heavy vehicle parking areas.

As a result, all channels in the F range are reinforced with galvanized steel or cast iron edges.

This system is available up to the F900 load class and is ideal for public works.



**F500 KH560R**



**F500 KH700R**

**KOMPAQDRAIN®**



## KOMPAQDRAIN® CHANNEL

Specially designed for areas with high traffic density by ULMA Architectural Solutions, specialists in drainage system, this novel compact channel made of polymer concrete, is suitable up to load class F900, according to standard EN-1433.

Motorways, airports, service stations and other intense traffic areas require high drainage and maximum safety, requirements to which **KOMPAQDRAIN®** responds with a combination of features that make it unique on the market.

### ADVANTAGES OF THE SYSTEM

1. COMPACT
2. LONG-LASTING AND RESISTANT
3. SELF-CLEANING
4. MAXIMUM SECURITY
5. QUICK INSTALLATION



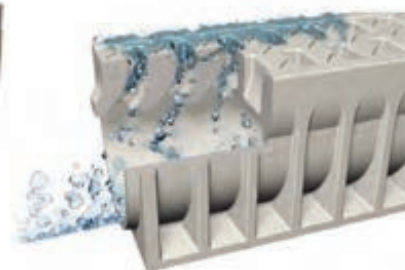
## Max Flow® SYSTEM

The original curved design of the inlets, together with the non-slip surface and water router, achieve the novel **Max Flow®** effect, increasing the water speed and the drainage capacity. Moreover, the progressive widening of the orifices helps the waste pass through more easily. Therefore **KOMPAQDRAIN®** can drain the same volume of water with a smaller channel.

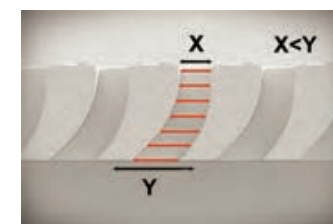
**KOMPAQDRAIN®** meets all requirements of the EN-1433 international standard of quality and reliability.



CURVED DESIGN OF THE INLETS



IT INCREASES THE WATER ENTRY SPEED AND THE DRAINAGE CAPACITY



PROGRESSIVE WIDENING TO PREVENT DIRT BLOCKAGE

# KOMPAQ SLOT® DRAINAGE CHANNEL





## BENEFITS

### Compared to other systems

#### MADE FROM POLYMER CONCRETE: LIGHTWEIGHT AND STRONG

Among its many excellent mechanical properties, polymer concrete.

This is 4 times stronger than traditional concrete. This enables us to considerably reduce the weight and size of the prefabricated products, so we can produce lightweight parts in smaller sizes.

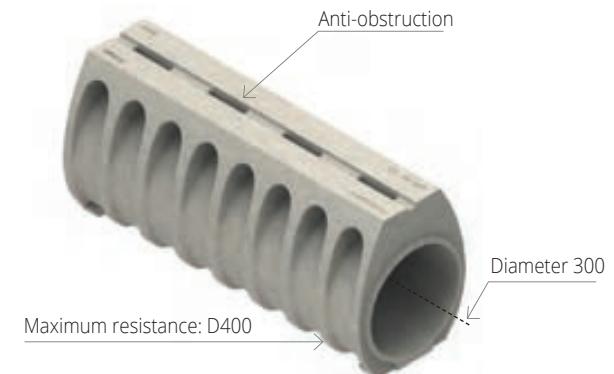
#### SIMPLE FAST INSTALLATION

The lightness of polymer concrete compared to other materials and the 1 metre length of the KompaqSlot® slotted channel makes installation simpler and faster. This technical advantage reduces the need for equipment to transport the material to the site, thus optimising installation efficiency.

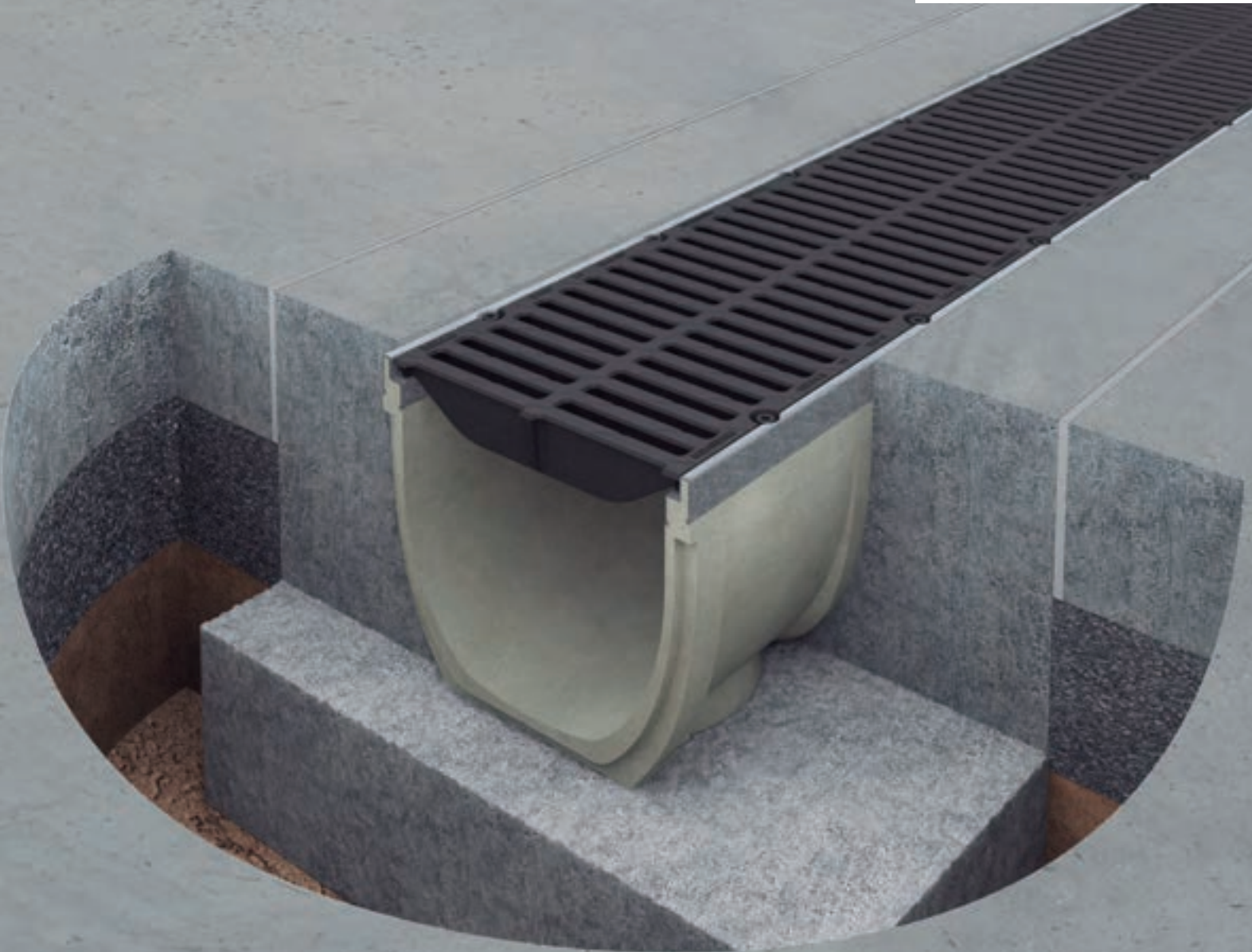
#### DURABILITY

Thanks to the grating incorporated into the structure, these compact channels offer maximum security and increased durability.

The low water absorption coefficient of polymer concrete optimises the durability of the product and its resistance to the freeze-thaw cycle. It is also very highly resistant to a wide range of chemical products.



**New FV+ RANGE  
FOR HEAVY DUTY**



Channels with an innovative open V-shaped geometry, featuring larger effective cross-sections than traditional V-shaped sections, allowing for higher flow capacity.

Rounded shapes and more uniform wall sections, with fewer angles, help to disperse point stresses and minimise peak stress concentration, extending the service life of the channel.

Greater wall thicknesses with smooth thickness transitions enhance the channel's performance under demanding conditions.

### APPLICATIONS

- Road shoulders
- Roads and motorway toll areas
- Car and lorry parks
- Industrial areas and logistics platforms
- Railway track edges
- Tunnels, airports and port areas
- Petrol stations and service areas



### SPECIAL WIDTH PROFILE

A profile with increased surface width provides improved protection of the system against impacts.



## ADVANTAGES OF THE FV+ SYSTEM

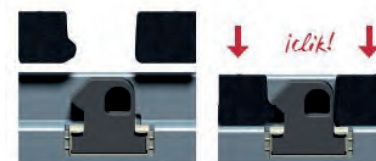
- FV+ OPTIMISED SEMI-V SHAPED SECTION
- MECHANICAL STABILITY WITH 8 FIXING POINTS
- MULTIPLE FIXING OPTIONS
- BOLTED FIXING SYSTEM
- **rapidlock** FIXING SYSTEM

## SYSTEM FEATURES

- No marks on inner surface**  
Prevents turbulences improving drainage capacity
- Grooves**  
in compliance with EN 1433 Standard
- Mechanical stability, with 8 fastening points**  
Higher stability and stress distribution.
- Directional slots**  
Drive water inwards, increasing intake.
- Prejoined sealing point**  
Easier seal installation
- Multiple fastening options**
- Optimised semi-V section**  
Optimised for higher hydraulic efficiency.
- Channel body markings**  
According to EN-1433 Standard.
- Smooth inside finishing**  
Improves hydraulic capacity.
- Male-female vertical and horizontal alignment.**  
For easier installation.
- Vertical outlets**  
Preformed for easier opening.
- Rounded shapes**  
Prevents stress concentrations.
- Smooth edge**  
REAL thickness of 2+2 mm, as required by EN-1433 Standard. No breaking protective zinc layer. Avoids water accumulation, preventing corrosion.
- Vertical locking tab**  
Prevents any floating effect. Easier to install.



**Bolted system**  
Fixing by means of screws for greater security.



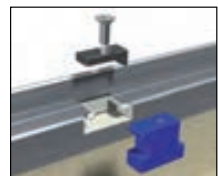
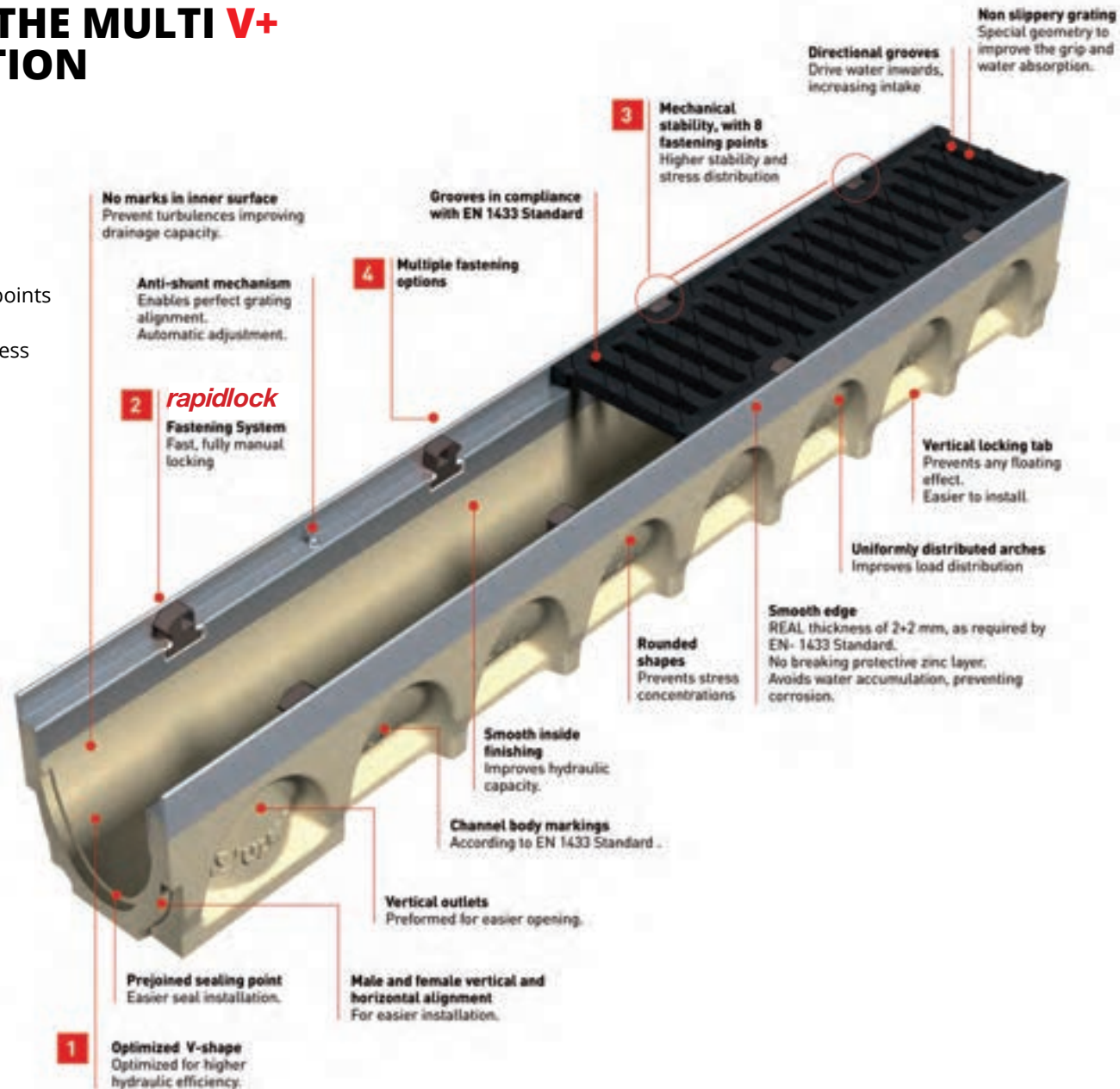
**rapidlock**  
**Fastening System**  
Fast, fully manual locking.  
**Anti-shunt mechanism**  
Enables perfect grating alignment.

## **MULTIV+ MULTIPURPOSE CHANNEL**



# ADVANTAGES OF THE MULTI V+ OPTIMISED SOLUTION

- Optimised V-shaped section
- **rapidlock** fastening system
- Mechanical stability, with 8 fastening points
- Multiple fastening options
- Also available with cast iron and stainless steel edges



**MULTIPLE FASTENING OPTIONS**  
Rapid and screw-fastened systems can be replaced and combined.

\*Several grating options.



**NEW DOMESTIC RANGE:  
RAPIDSELF**

## ADVANTAGES FOR YOU

### RANGE SIMPLIFICATION: WE MAKE IT EASY FOR YOU

This is an optimised range with fewer references covering the same needs. We have unified our grating and created a simpler range.

### V-SHAPED CHANNELS, MODERNISED RANGE

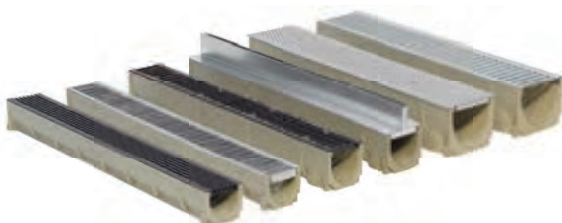
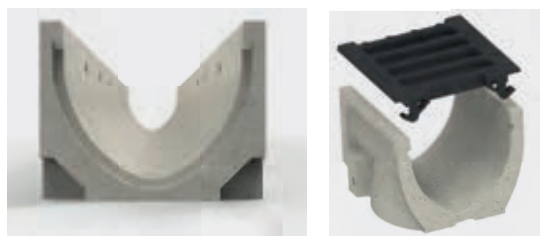
An updated V-shaped design to drain water faster.

### REDUCTION IN STOCK: COST SAVINGS

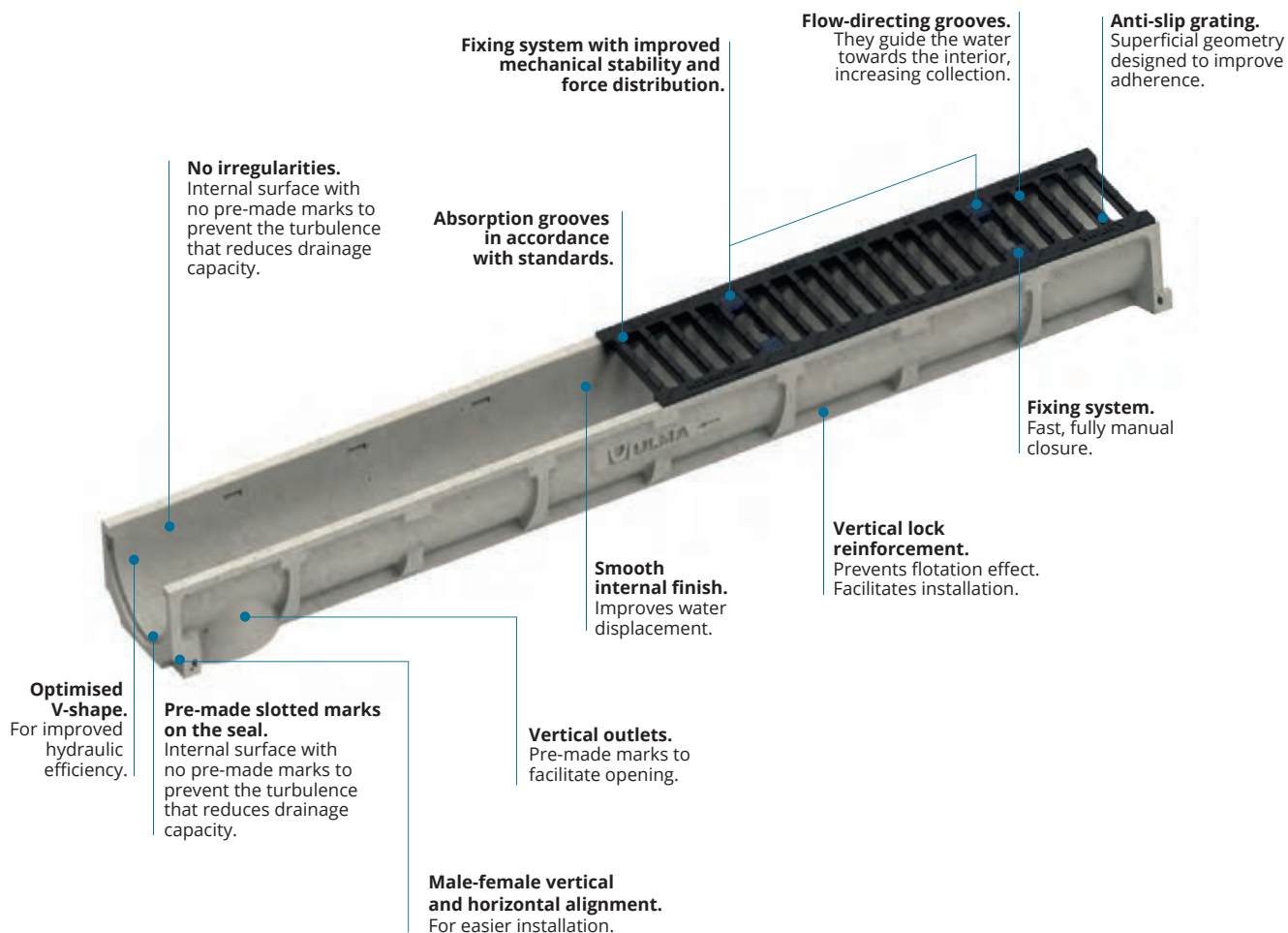
By simplifying the range with fewer references, we can optimise and reduce our stock.

### RAPIDSELF FIXING SYSTEM

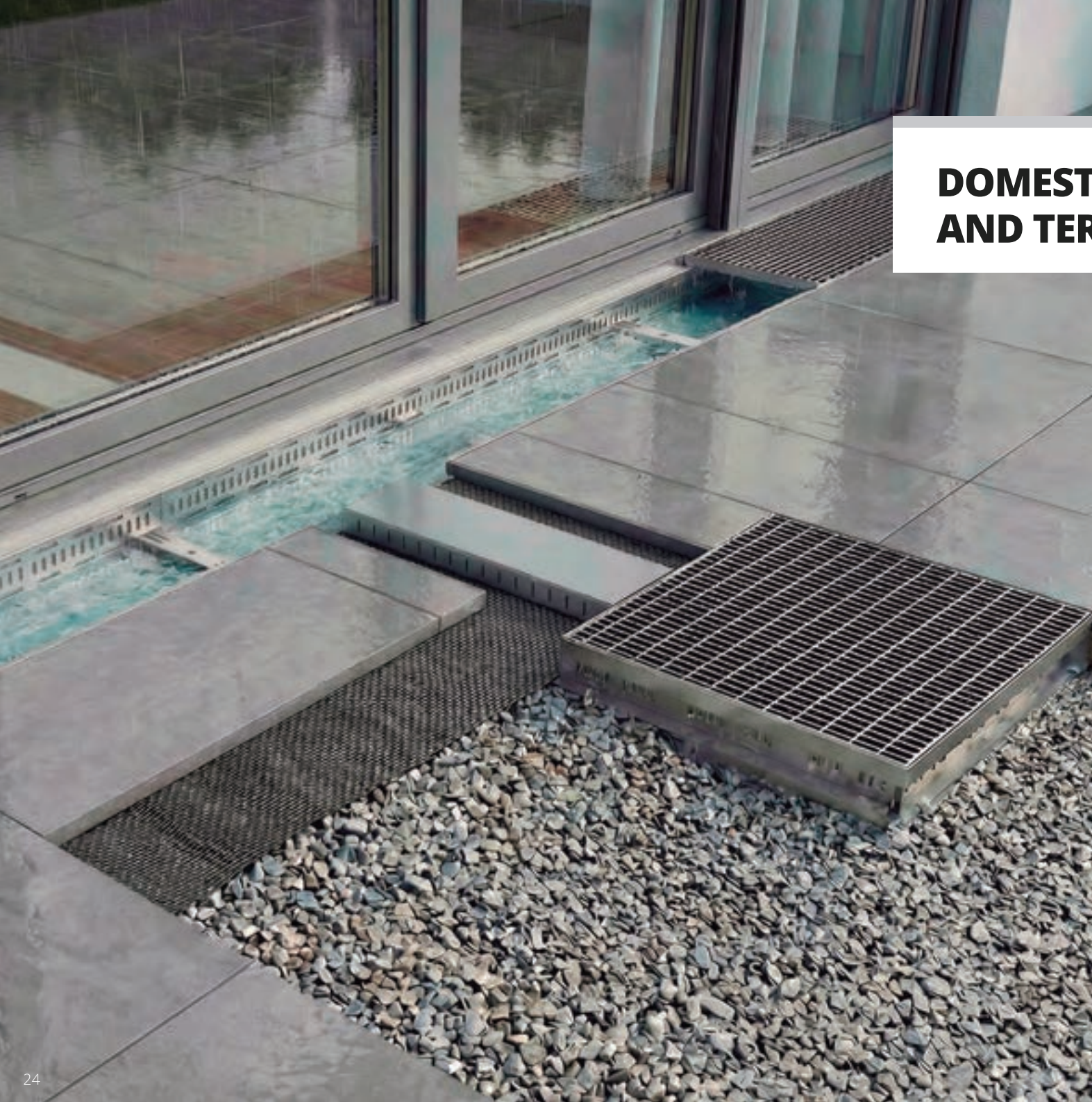
Thanks to the new fast-fixing system, we can remove the locking bars from the entire domestic range, we improve the hydraulic efficiency of channels, and we facilitate system maintenance and cleaning.



## SYSTEM FEATURES



## **DOMESTIC BALCONY AND TERRACE DRAINAGE**



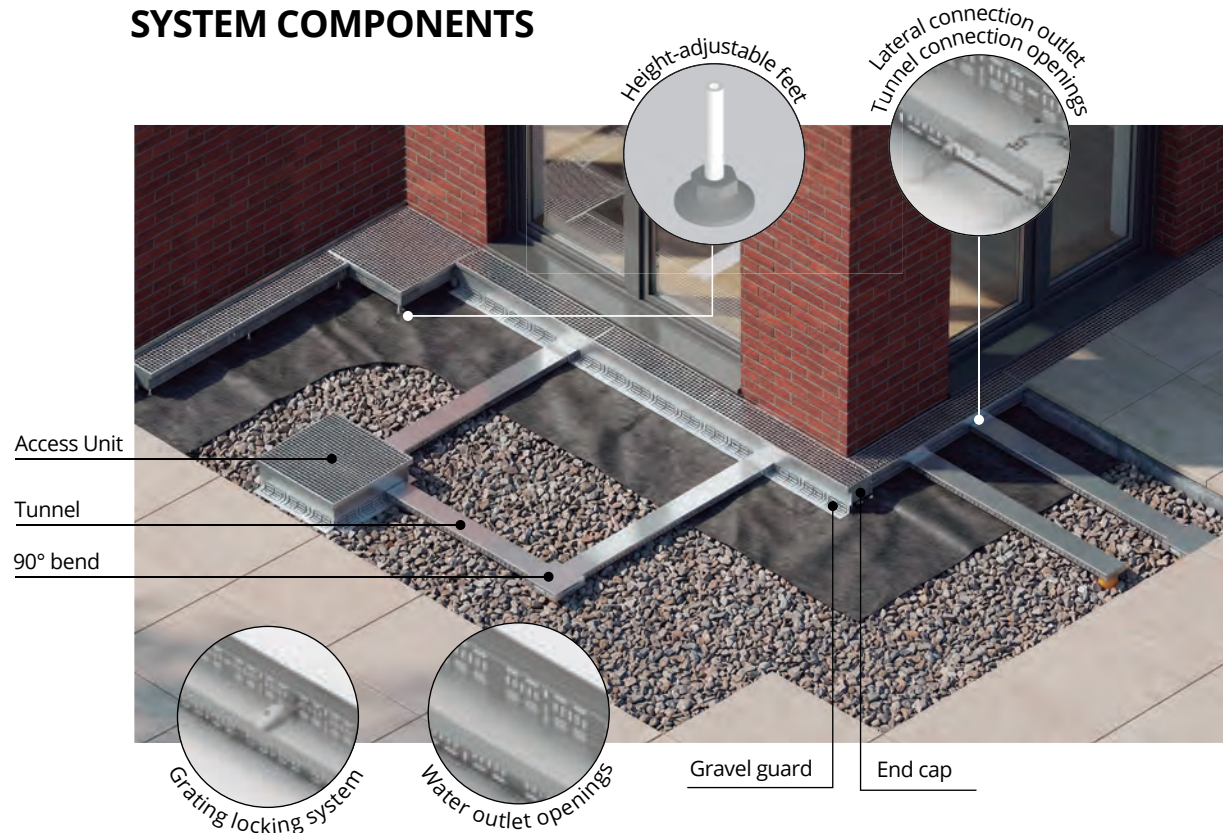
# TERRACE CHANNEL

## Protects the structure and ensures effective drainage on external surfaces

Terrace channels are designed to ensure efficient collection and conveyance of surface water at critical interfaces such as terraces, roofs and external areas. Their correct integration within the construction system prevents water build-up, minimising the risk of water ingress and structural defects.

These solutions combine hydraulic capacity, durability and versatility, adapting to different configurations and finishes while providing discreet integration within the architectural environment without compromising technical performance.

## SYSTEM COMPONENTS



## ADVANTAGES OF ULMA TERRACE CHANNEL

### 1. Efficient water drainage

The channels ensure optimal collection and conveyance of surface water, preventing pooling and improving the hydraulic performance of terraces and roofs.

### 2. Seamless integration into the construction system

The design allows installation compatible with different construction solutions, facilitating connection with waterproofing layers, finishes and drainage outlets.

### 3. Versatile and modular system

The range includes various elements such as channel units, access units, bends and accessories, enabling bespoke solutions tailored to project requirements.

### 4. Simple and safe installation

Prefabricated elements facilitate on-site installation, ensuring stability, alignment and correct system performance.

## CHARACTERISTICS

1. Side openings allowing water discharge
2. Pre-formed knock-outs to facilitate 90° connections between channels and connection to tunnel units
3. Horizontal outlet compatible with DN 75 pipework
4. Height adjustment by means of adjustable feet
5. Possibility of fitting end caps at both ends of the channel

# ULMA WORLDWIDE



FC Viktoria Köln Stadium. Germany



Liberty Bridge, Venice. Italy



DHL Düsseldorf. Germany



Federal Highway B4 near Coburg. Germany



Gaiserstrasse in Schlierbach. Germany



Steinhude am Meer promenade. Germany



Reading's Gateway. United Kingdom



London's Ebury Bridge Estate. United Kingdom



Mesmerode Fire Station. Germany



Interporto Pordenone. Italy



Castillon Tunnel. France



Los Arcos Formula One Racing Circuit. Spain



Silvertown Tunnel. United Kingdom



Port Bandol. France



Square in Salerno, Italy



Lemabri restaurant car park in Boppard-Buchholz. Germany



Port Vauban, Antibes. France



Contact us



[ulmaarchitectural.com](http://ulmaarchitectural.com)

