

KE-100, KE-150, KE-200

Channel drainage for the load classes A15 to E 600



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Drainage of parking decks



ANRIN – the drainage system

At our production and logistics centre located in Anröchte, North Rhine Westphalia, we have been developing and producing pioneering drainage channels made of resin concrete and cover gratings for all physical and artistic demands of modern channel drainage since 1971.

Thanks to our especially efficient distribution, we are able to supply any construction site in Germany in less than 48 hours as well as many other countries within just a few days. Always new, creative and patented channel and grating systems give our demanding construction managers, architects, tradesmen and specialist dealers the safe and secure feeling that they have made the right choice for the long term.

Millions of metres of installed channel and certification in accordance with DIN EN ISO 9001:2008 assure the high quality of our owner-operated family company. We place a special emphasis on technical and application-based consultation, with the goal of continuously finding the best solution for your individual construction project. Contact us and put our expertise to the test.



ANRIN reinforced edge systems made of resin concrete

The material comprised of naturally occurring mineral quartzes and resin is distinguished by its structural and environmental benefits.

In comparison with conventional, cement-bound materials, resin concrete allows for unit weights which are much easier to handle. By processing the material on the construction site, time and money are saved.



UNILINK® joint

The optimised UNILINK® joint system eliminates the traditional differentiation between the beginning and end of the channel. Elements with an equal installation height can be joined in any arbitrary direction. The symmetrically divided half-joints enable the optional sealing of the splicing. Vertically aligned grooves and tongues support an efficient installation: In the process, the installation alignment can be chosen arbitrarily! The flexibility in the design and installation phases enters a new dimension with the UNILINK® joint!

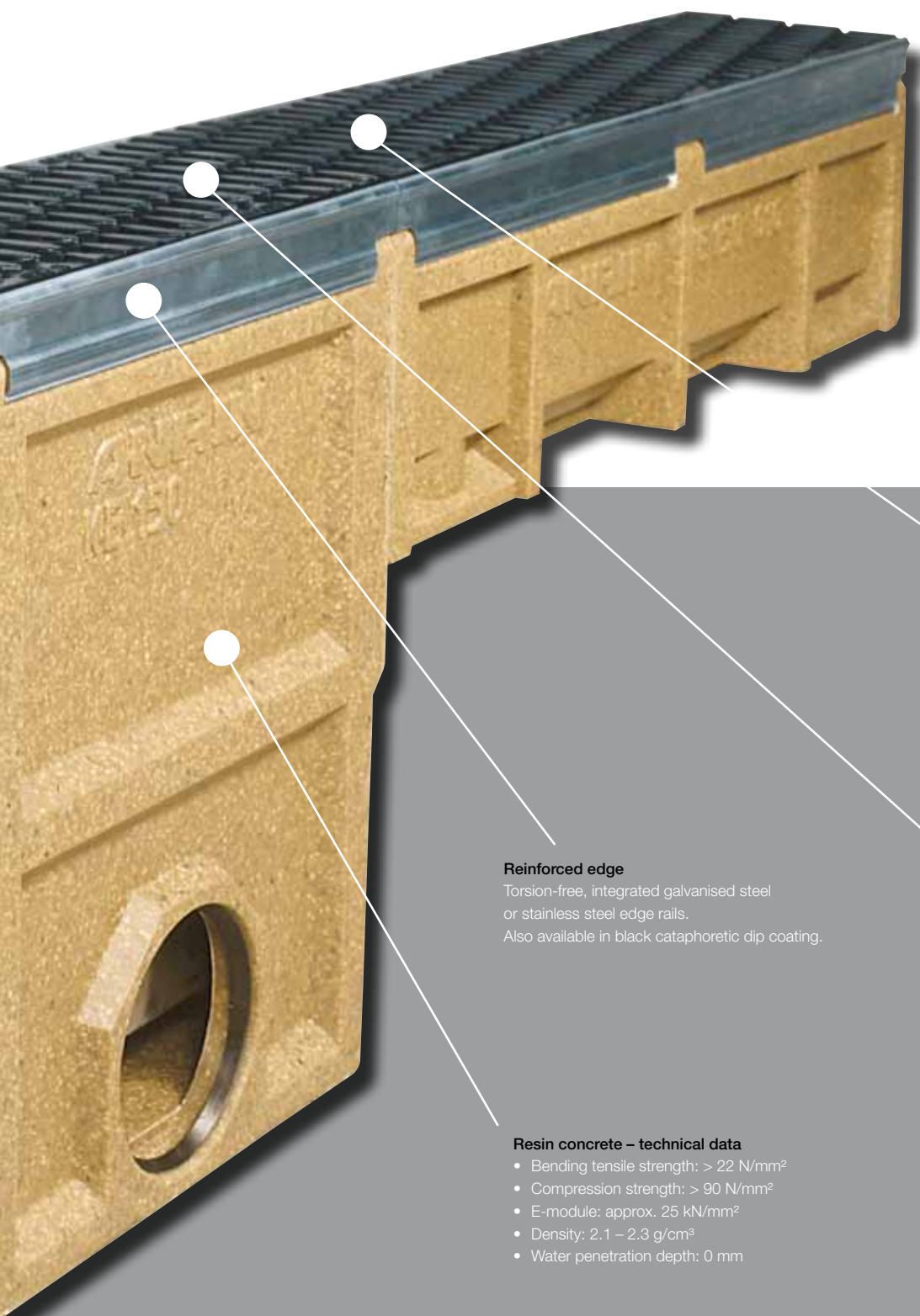


Perforations on the 50 cm elements for
T-junctions
Elbow joints
Cross junctions

The high quality of the individual components as well as the closed material matrix make the ANRIN resin concrete watertight and highly resistant to corrosion as well as a number of substances.

As a result, surfaces can be designed which purposefully drain off rainwater and the ground water can be reliably protected against environmental pollution.

Our drainage systems (KE and SF) are tested and certified in accordance with DIN EN 1433 and KIWA BRL 5211.



Fastening system

TwistLock for NW 100 and SnapLock for NW 150 and 200 work reliably even with heavily soiling and can be easily unlocked for cleaning work.

Gratings

- Models for all load classes A 15 – E 600
- Available in steel, stainless steel, plastic and cast iron
- OvalGrip design for all KE systems

Reinforced edge

Torsion-free, integrated galvanised steel or stainless steel edge rails. Also available in black cataphoretic dip coating.

Resin concrete – technical data

- Bending tensile strength: > 22 N/mm²
- Compression strength: > 90 N/mm²
- E-module: approx. 25 kN/mm²
- Density: 2.1 – 2.3 g/cm³
- Water penetration depth: 0 mm

**Channel drainage
for the load classes
A 15 to E 600**

According to DIN 19580/EN 1433 “Drainage channels for vehicular and pedestrian areas”, these surfaces are assigned to specific load classes depending on the use.

Accordingly, the respective suitable ANRIN reinforced edge system can be selected with the corresponding cover grating. The following tables include a list of typical areas of application and the channel systems which can be used.

1 Pedestrian zone, Czech Republic

For the drainage of a pedestrian zone in Cheb (Czech Republic) with the KE-100 system, the company Ronn Drain had special covers produced, which simultaneously drain rainwater and introduce visitors to the city's history.

2 Square, Regensburg

3 City entrance, Amberg

4 City entrance, Amberg

5 Zoo, Czech Republic

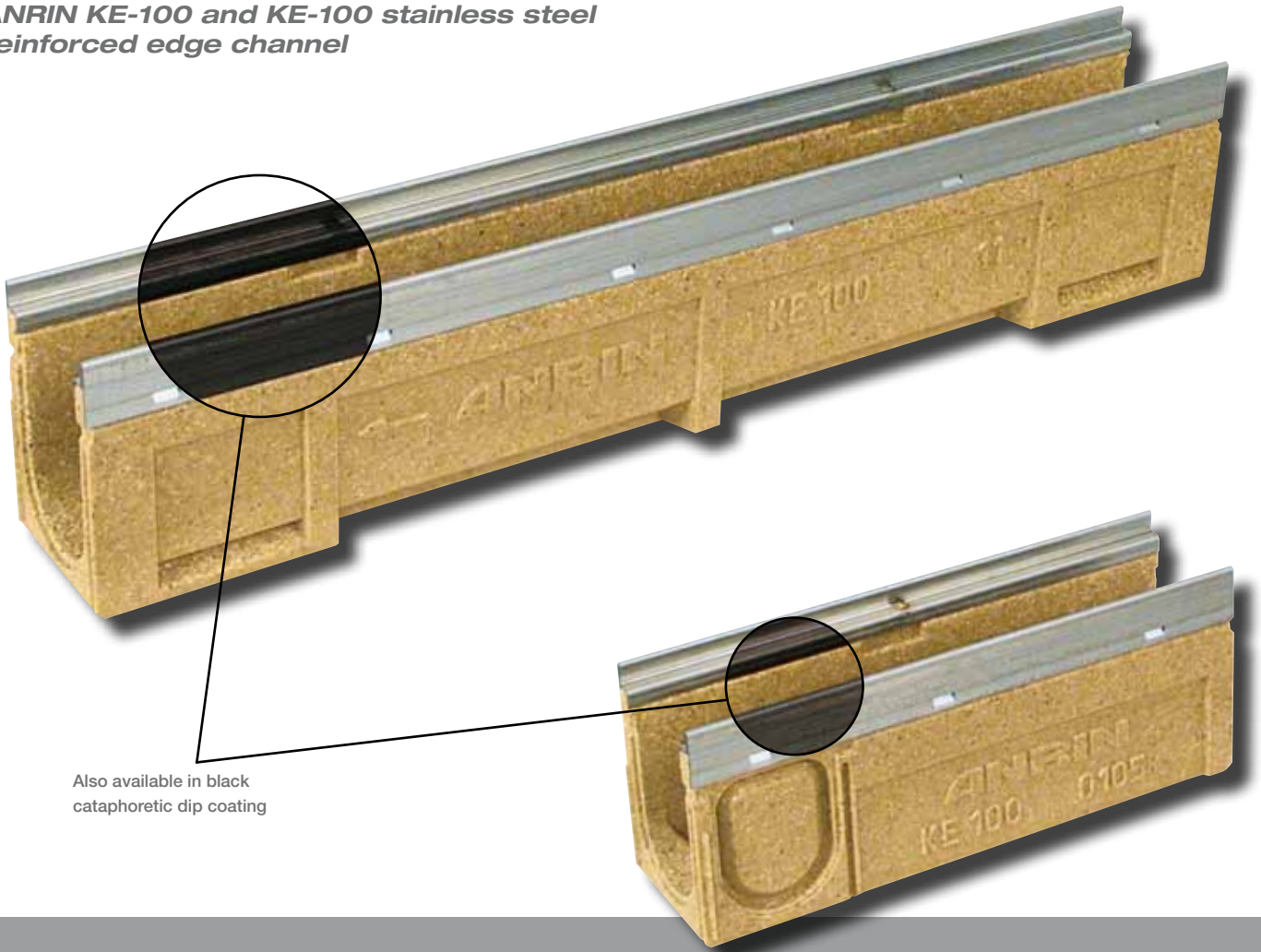
6 Parking lot, Regensburg



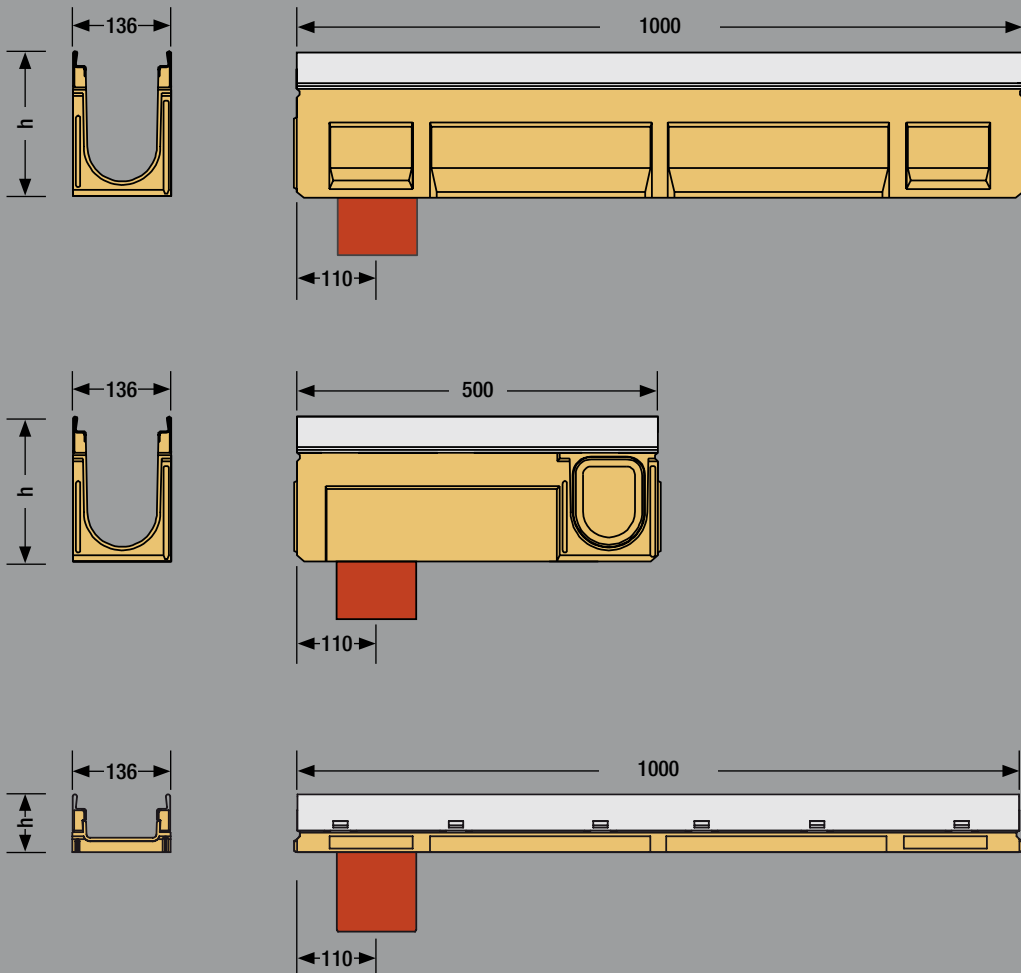
Load classes	Areas of application	KE-100	KE-150	KE-200
A 15 (test force 15 kN)	Cycle path and footpaths	●	●	●
	School yards	●	●	●
	Green areas, Gala-Bau	●	●	●
B 125 (test force 125 kN)	Walkways, pedestrian zones	●	●	●
	Parking lots, parking decks	●	●	●
	Garage entrances, courtyards	●	●	●
C 250 (test force 250 kN)	Road edge drainage	●	●	●
	Channels and shoulders	●	●	●
D 400 (test force 400 kN)	Roads	●	●	●
	Parking lots, federal motorway parking lots	●	●	●
	Pedestrian roads	●	●	●
E 600 (test force 600 kN)	Traffic routes in industrial areas	●	●	●
	Surfaces with high wheel loads	●	●	●
	Non-public traffic surfaces	●	●	●












ANRIN KE-100 and KE-100 stainless steel reinforced edge channel



Also available in black cataphoretic dip coating



Cover gratings for KE-100 system

									
	KE-100 Slotted steel grating	KE-100 Slotted steel grating OvalGrip	KE-100 Slotted steel grating OvalGrip	KE-100 Slotted steel grating SW 10	KE-100 Mesh steel grating	KE-100 Longitudinal-bar grating	KE-100 Cross-bar grating	KE-100 Perforated grating	KE-100 Longitudinal-bar grating
A 15	●					●			
B 125		●			●		●		
C 250	●	●	●	●	●			●	
D 400					●				●
E 600			●						
Galvanised steel	●				●	●	●	●	
Stainless steel	●				●	●	●	●	
Cast iron			●	●					●
Plastic		●							
Length (cm)	50, 100	50	50	50	50, 100	50, 100	50, 100	50, 100	50

Product specifications for KE-100

Material	Resin concrete
Length	50 cm and 100 cm
Width	13.6 cm
Height	6.0 cm, 8.0 cm, 10.0 cm 15.0–25.0 cm
Edge type	Steel edge rail, 6 mm edge width; galvanised, stainless steel or cataphoretic dip-coated in black
Nominal width	100 mm
Load class	A 15 to E 600
Slope type	Slope invert 0.5 % Stepped invert Constant invert
Joint type	UNILINK® joint
Fastening	TwistLock fastening

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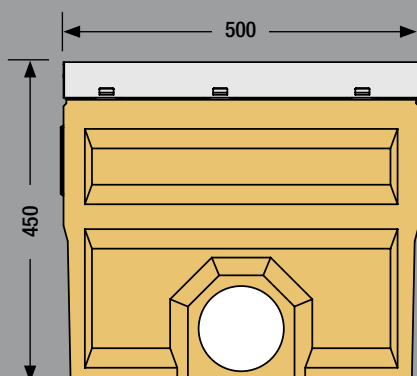
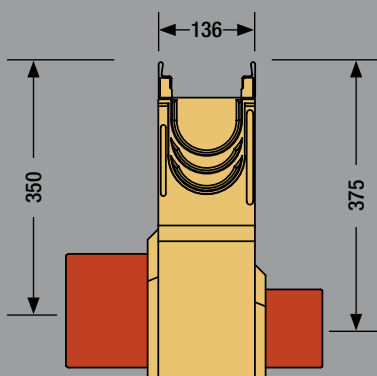
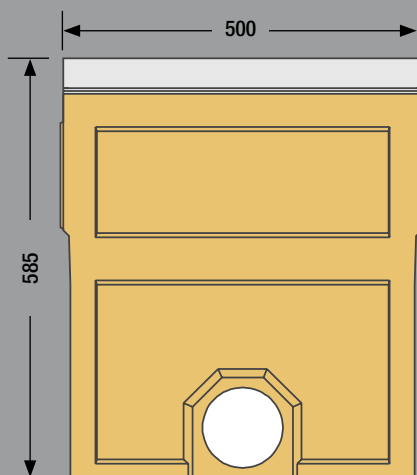
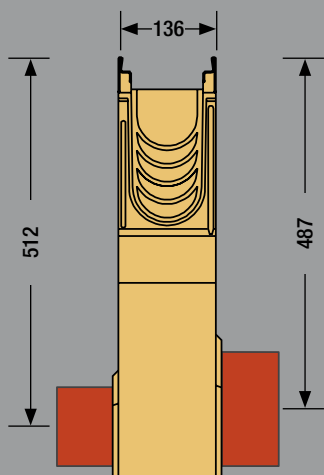
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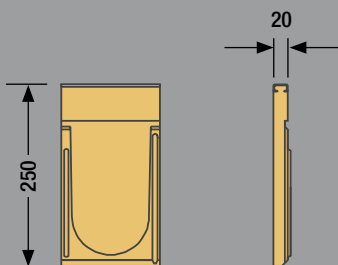
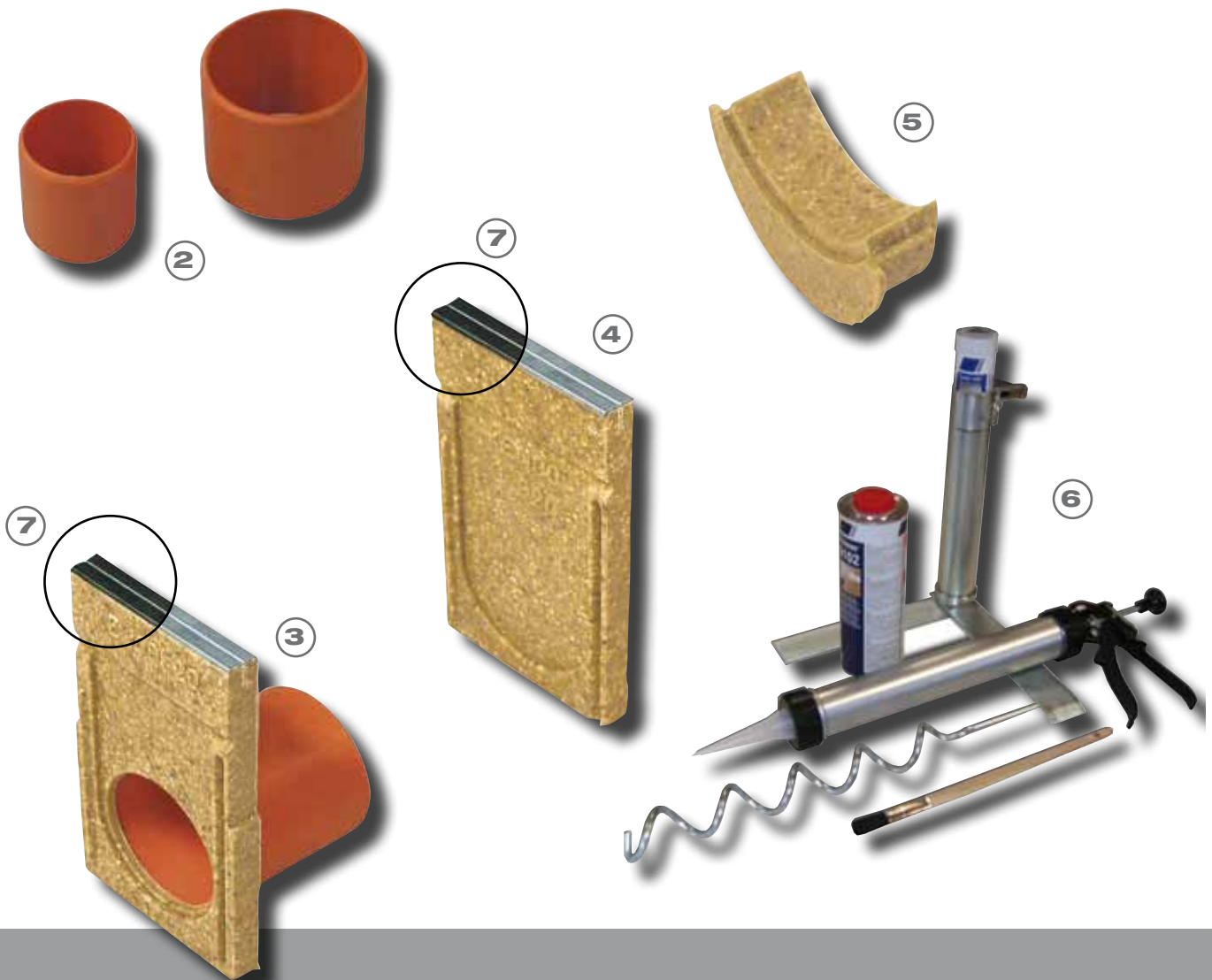
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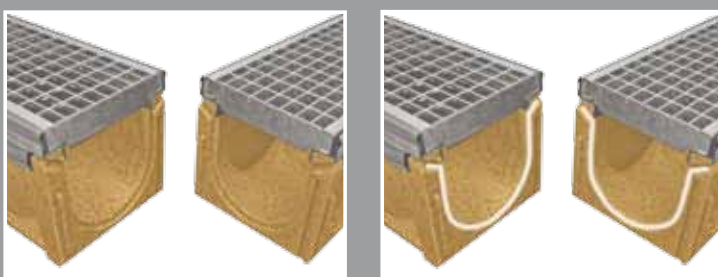
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ANRIN reinforced edge channel
KE-100 accessories



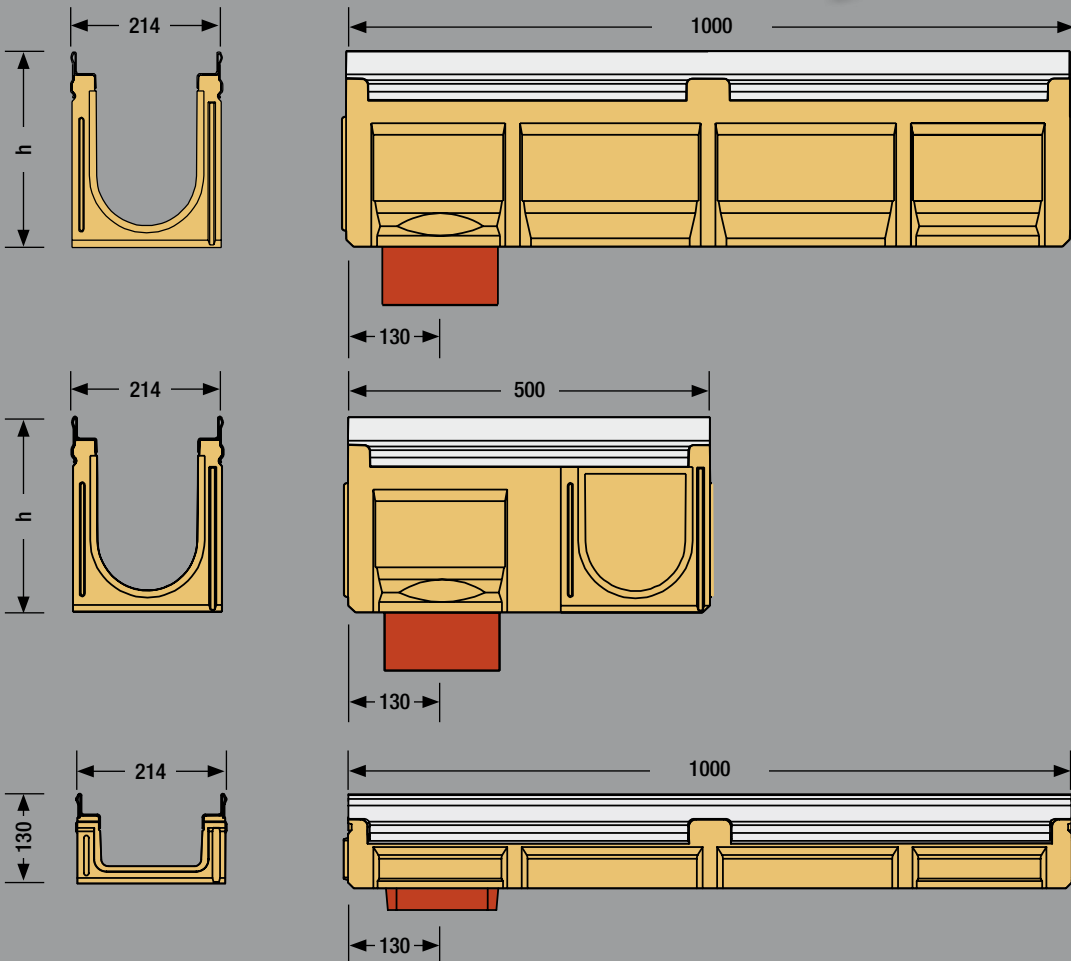


- 1 Sump unit**
with dirt trap bucket
DA/OD 110/160 NBR seal rings
- 2 Pipe socket**
PP
- 3 End cap**
with pipe connection DA/OD 110
- 4 End cap**
closed
- 5 Step connector**
- 6 Seal set**
- 7 Steel edge rail**
galvanised, stainless steel or
cataphoretic dip-coated in black

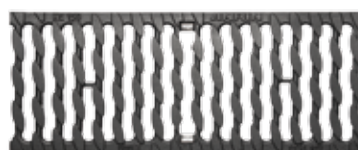
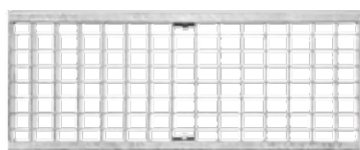


The tightness of the channel joints plays an essential role for the functionality. With the ANRIN joint seal set, comprised of a sealer (poly sulphide based two-component sealant), a primer, a mixer column, incl. spiral and a hand pump sprayer, water-tight channel joints for special installation situations can be made easily, quickly and safely.

ANRIN reinforced edge channel
KE-150 and KE-150 stainless steel



Cover gratings for KE-150 system



	KE-150 Mesh steel grating MW 30x20	KE-150 Slotted steel grating OvalGrip	KE-150 longitudinal Cast-Iron
A 15			
B 125			
C 250	●		
D 400	●	●	●
E 600		●	●
Galvanised steel	●		
Stainless steel	●		
Cast iron		●	●
Length (cm)	50, 100	50	50

Product specifications for KE-150

Material	Resin concrete
Length	50 cm and 100 cm
Width	21.4 cm
Height	13.0, 22.0 to 32.0 cm
Edge type	Steel edge rail, 6 mm, galvanised or stainless steel
Nominal width	150 mm
Load class	A 15 to E 600
Slope type	Slope invert 0.5 %
	Stepped invert
	Constant invert
Joint type	UNILINK® joint
Fastening	SnapLock fastening

ANRIN

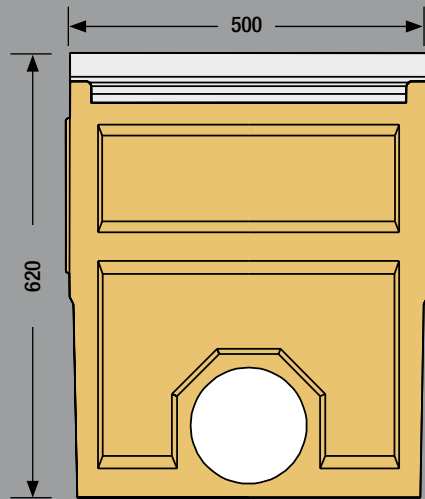
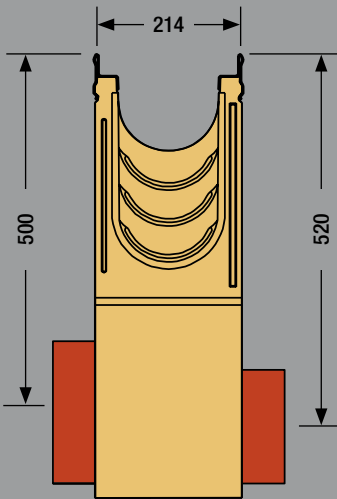
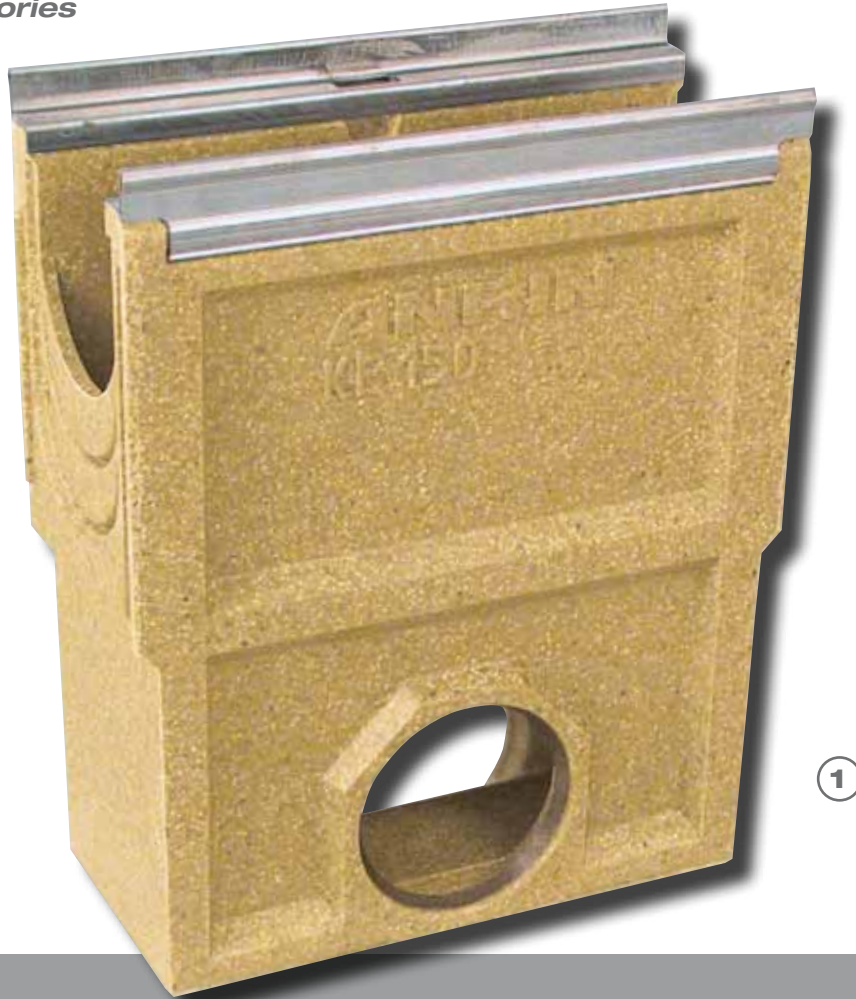
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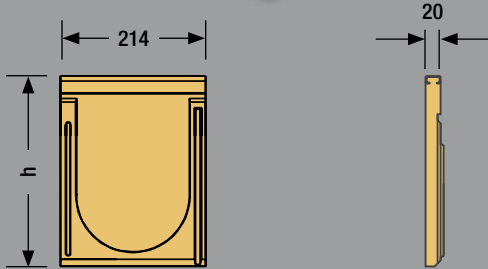
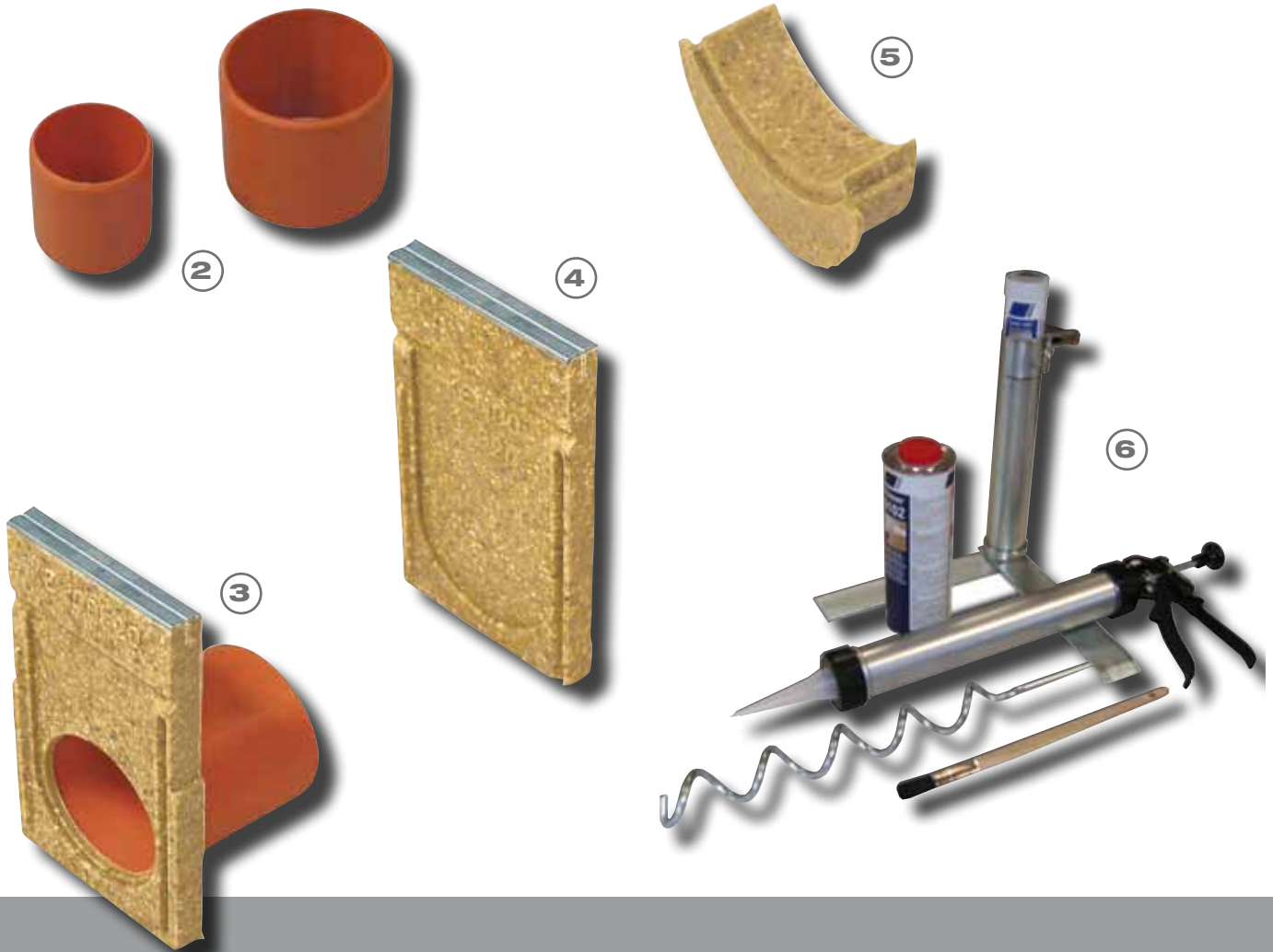
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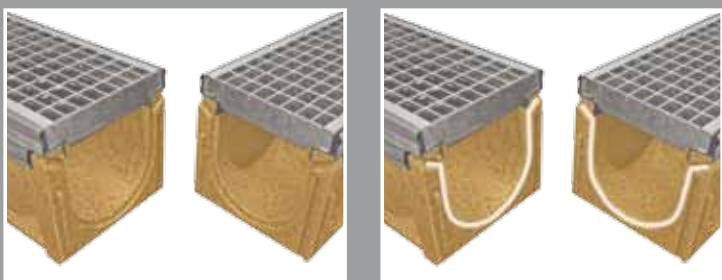
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ANRIN reinforced edge channel
KE-150 accessories



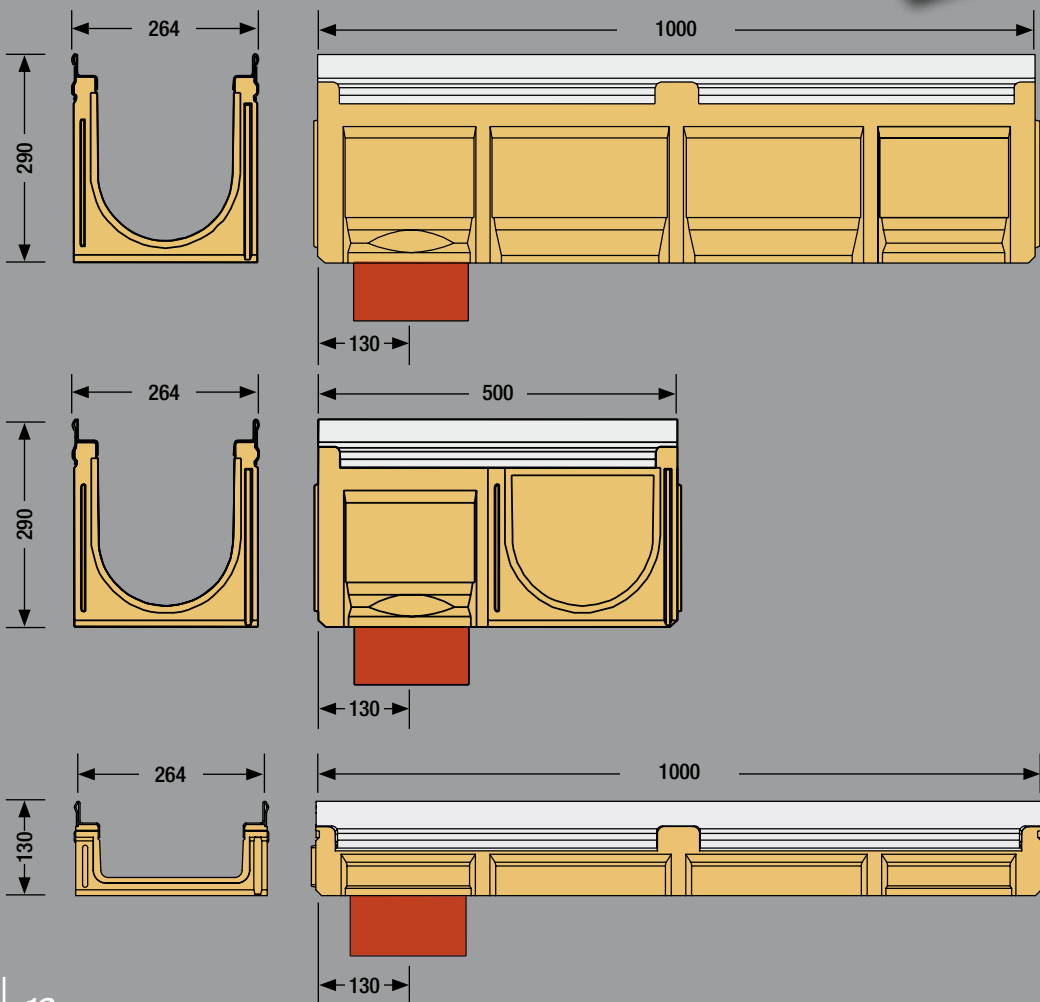


- 1 **Sump unit**
with dirt trap bucket
DA/OD 160/200 NBR seal rings
- 2 **Pipe socket**
PP
- 3 **End cap**
with pipe connection DA/OD 160
- 4 **End cap**
closed
- 5 **Step connector**
- 6 **Seal set**

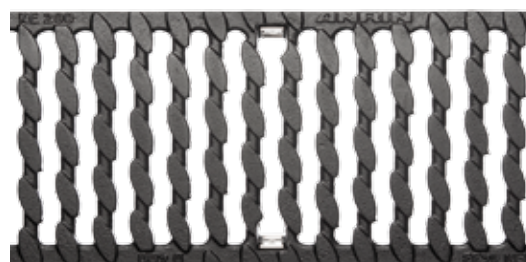
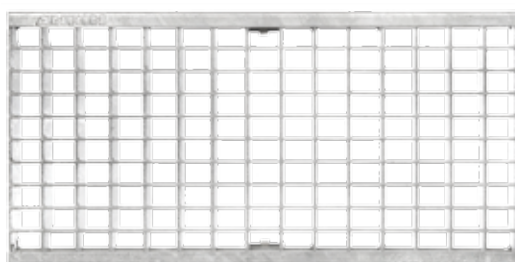


The tightness of the channel joints plays an essential role for the functionality. With the ANRIN joint seal set, comprised of a sealer (poly sulphide based two-component sealant), a primer, a mixer column, incl. spiral and a hand pump sprayer, water-tight channel joints for special installation situations can be made easily, quickly and safely.

ANRIN reinforced edge channel
KE-200 and KE-200 stainless steel



Cover gratings for KE-200 system



	KE-200 Mesh steel grating	KE-200 Slotted steel grating OvalGrip
A 15		
B 125		
C 250	●	
D 400	●	●
E 600		●
Galvanised steel	●	
Stainless steel	●	
Cast iron		●
Length (cm)	50, 100	50

Product specifications for KE-200

Material	Resin concrete
Length	50 cm and 100 cm
Width	26.4 cm
Height	13.0 cm, 29.0 cm
Edge type	Steel edge rail, 6 mm, galvanised or stainless steel
Nominal width	200 mm
Load class	A 15 to E 600
Slope type	Constant invert
Joint type	UNILINK® joint
Fastening	SnapLock fastening

ANRIN

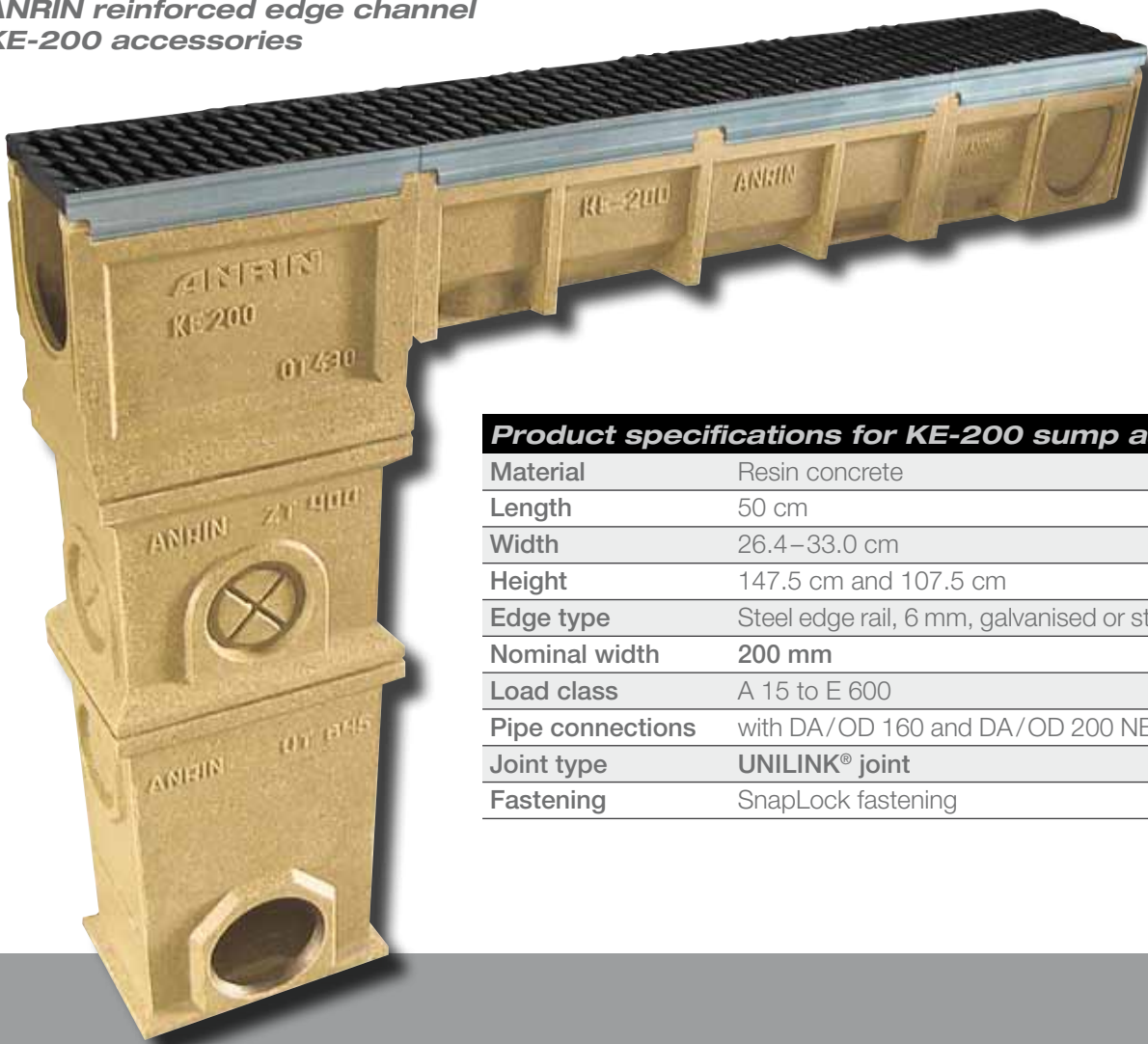
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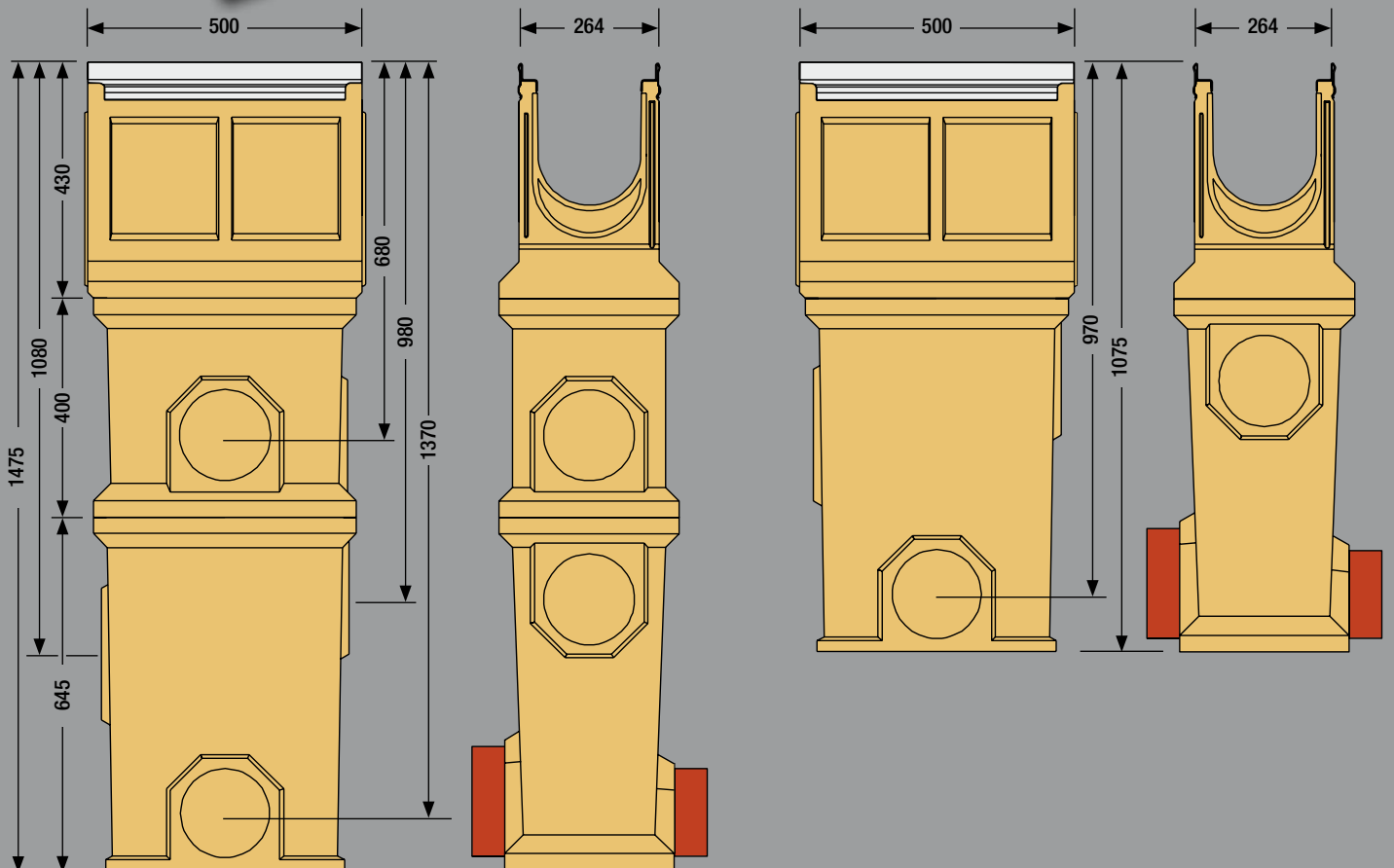
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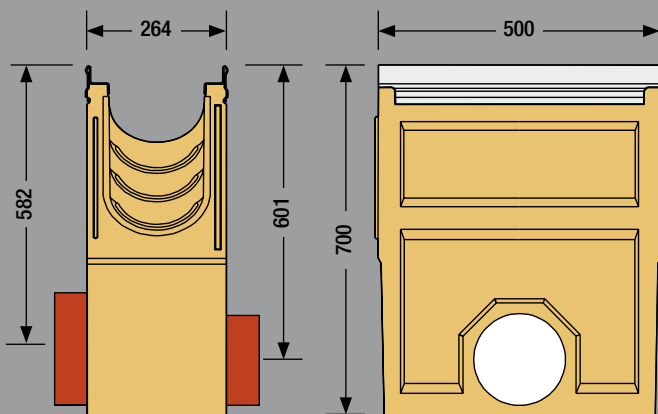
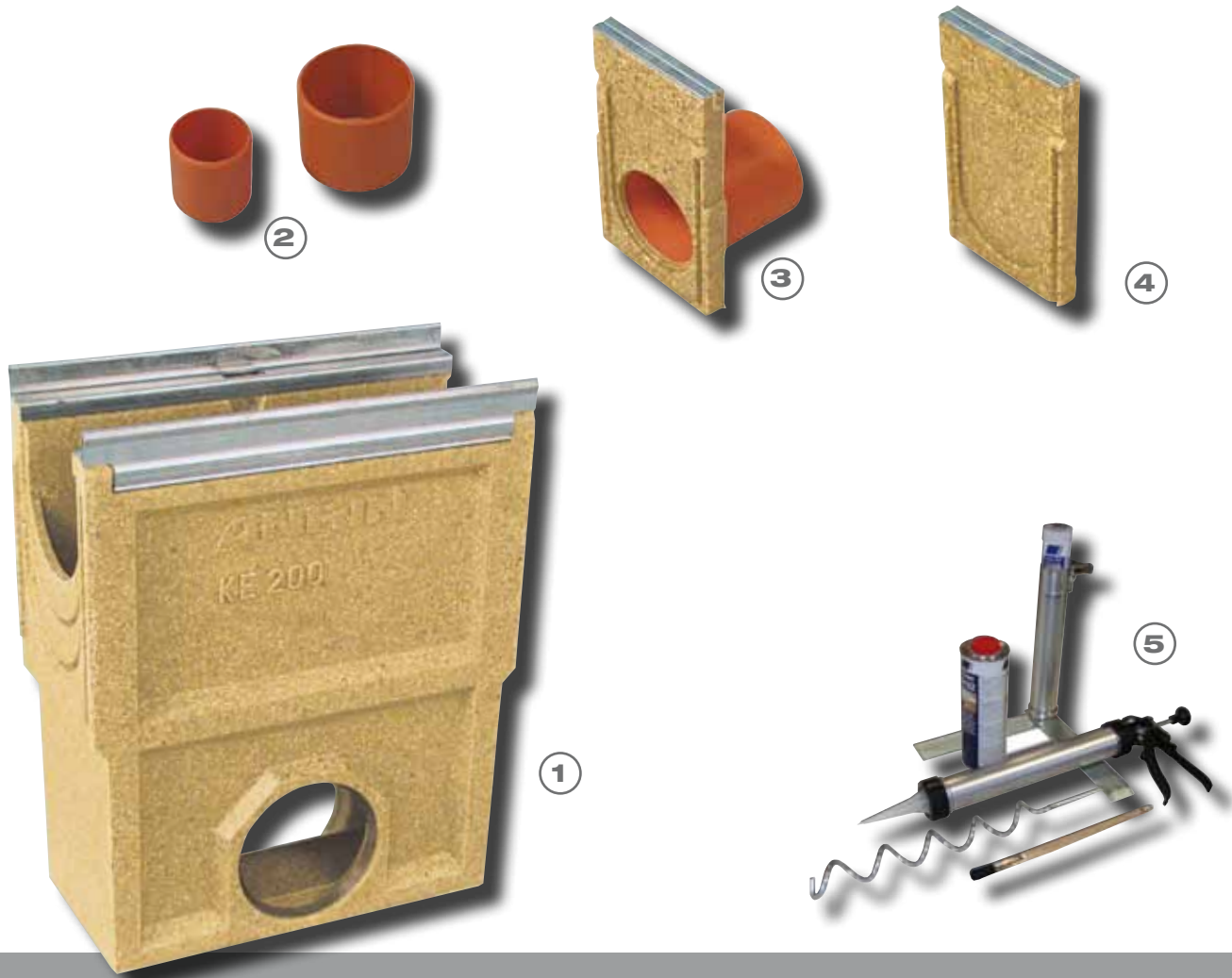
ANRIN reinforced edge channel
KE-200 accessories



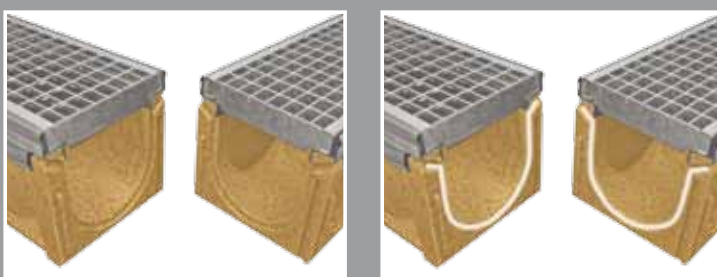
Product specifications for KE-200 sump assembly

Material	Resin concrete
Length	50 cm
Width	26.4–33.0 cm
Height	147.5 cm and 107.5 cm
Edge type	Steel edge rail, 6 mm, galvanised or stainless steel
Nominal width	200 mm
Load class	A 15 to E 600
Pipe connections	with DA/OD 160 and DA/OD 200 NBR seal rings
Joint type	UNILINK® joint
Fastening	SnapLock fastening





- 1 **Sump unit**
with dirt trap bucket
DA/OD 160/200 NBR seal rings
- 2 **Pipe socket**
PP
- 3 **End cap**
with pipe connection DA/OD 160
- 4 **End cap**
closed
- 5 **Seal set**

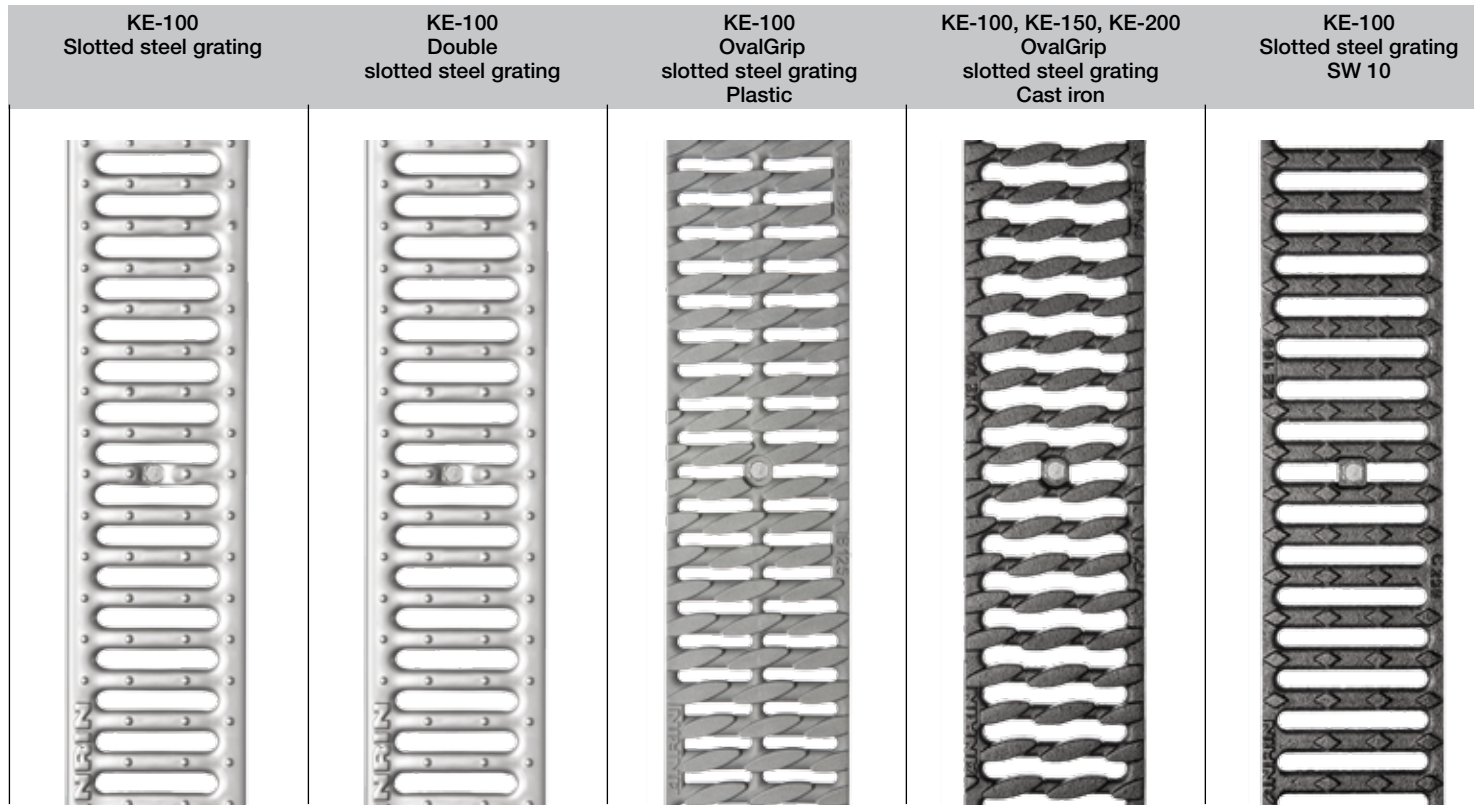


The tightness of the channel joints plays an essential role for the functionality. With the ANRIN joint seal set, comprised of a sealer (poly sulphide based two-component sealant), a primer, a mixer column, incl. spiral and a hand pump sprayer, water-tight channel joints for special installation situations can be made easily, quickly and safely.

ANRIN cover gratings

A large number of different cover gratings varying in material and design complement the ANRIN reinforced

edge system. For any aesthetic needs and various application possibilities,

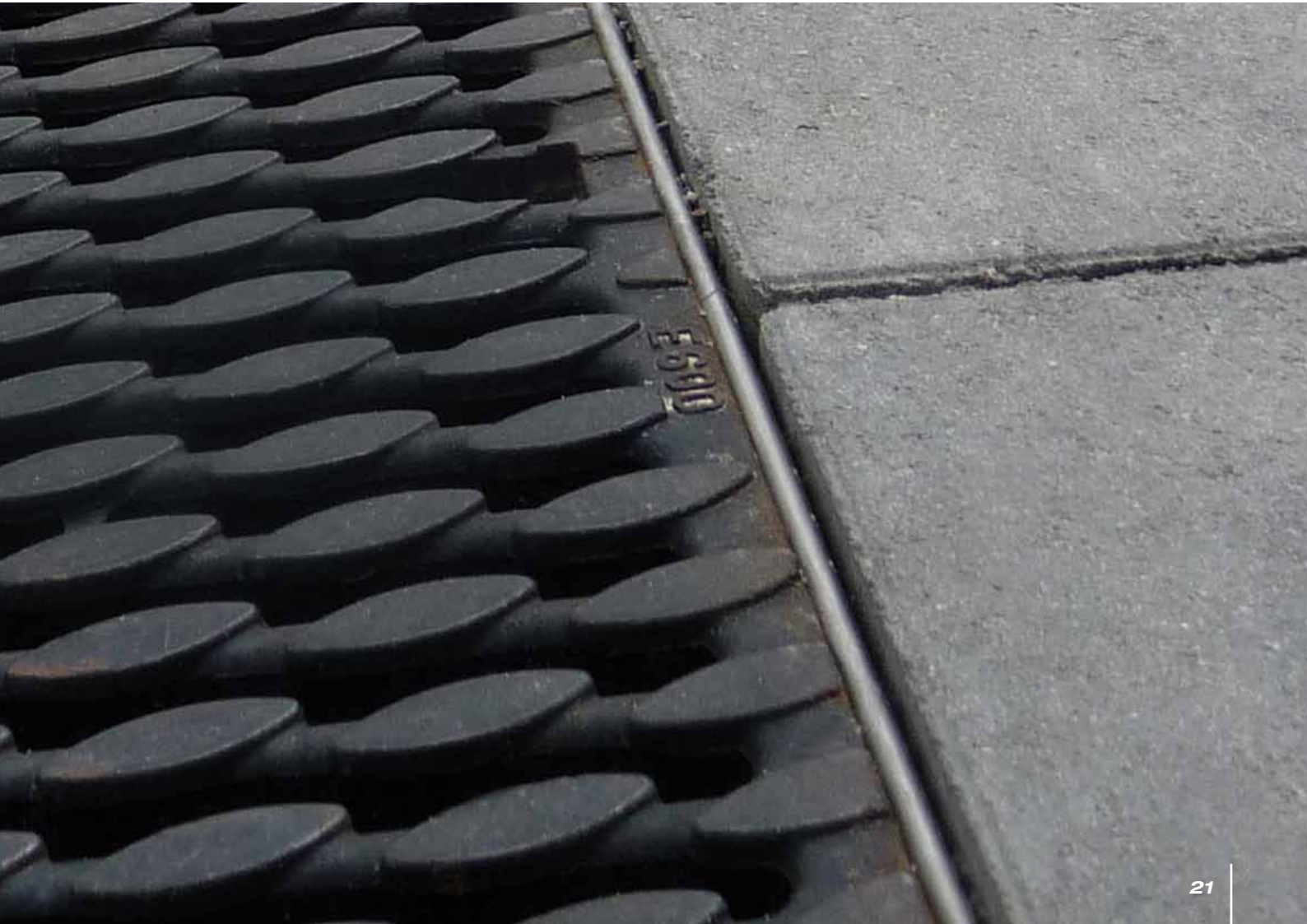


cover gratings from ANRIN offer a safe and long-lasting channel cover.

They are available in load classes A 15 to E 600.

All cover gratings and profiles conform to DIN 19580/EN 1433.

KE-100 Longitudinal-bar grating	KE-100, KE-150, KE-200 Mesh steel grating	KE-100 Cross-bar grating	KE-100 Perforated grating	KE-100, KE-150 longitudinal Cast-Iron



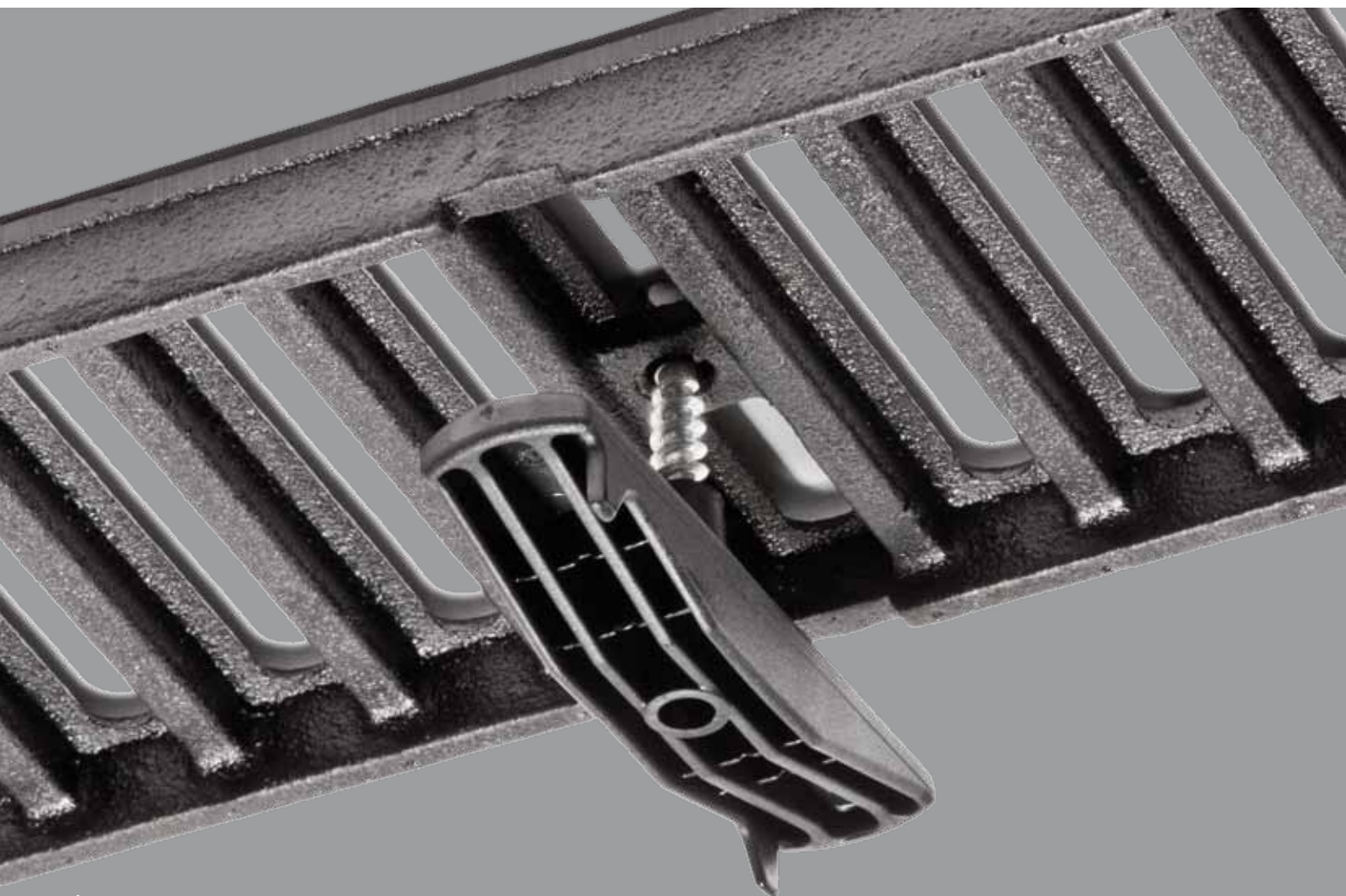
ANRIN fastening technology

Decades of experience and thorough product development in the areas of assembly, maintenance and cleaning of drainage systems have given rise to outstanding solutions for durable fastening technology.

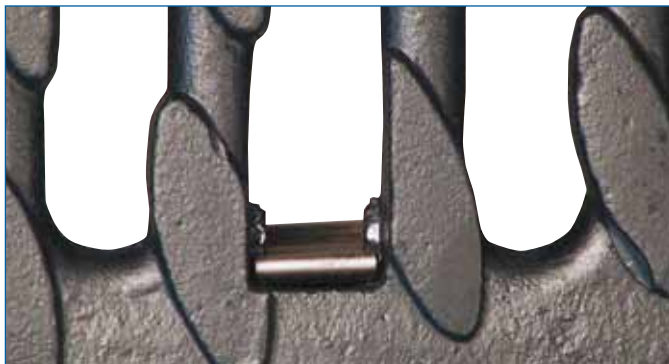
The **TwistLock fastening** is used for grating types for channels with a nominal width of 100 mm.

Advantages:

- Put in place – one rotation – fixed
- Assembly without special tools
- No rattling, no loosening
- No disruptive bars in the channel interior area
- Maintenance-friendly
- Resistant to corrosion



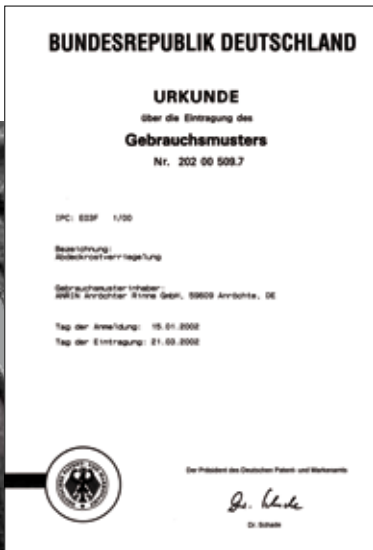
ANRIN grating fastenings are optimised for the respective load class and combine safety and brand quality with functional design.



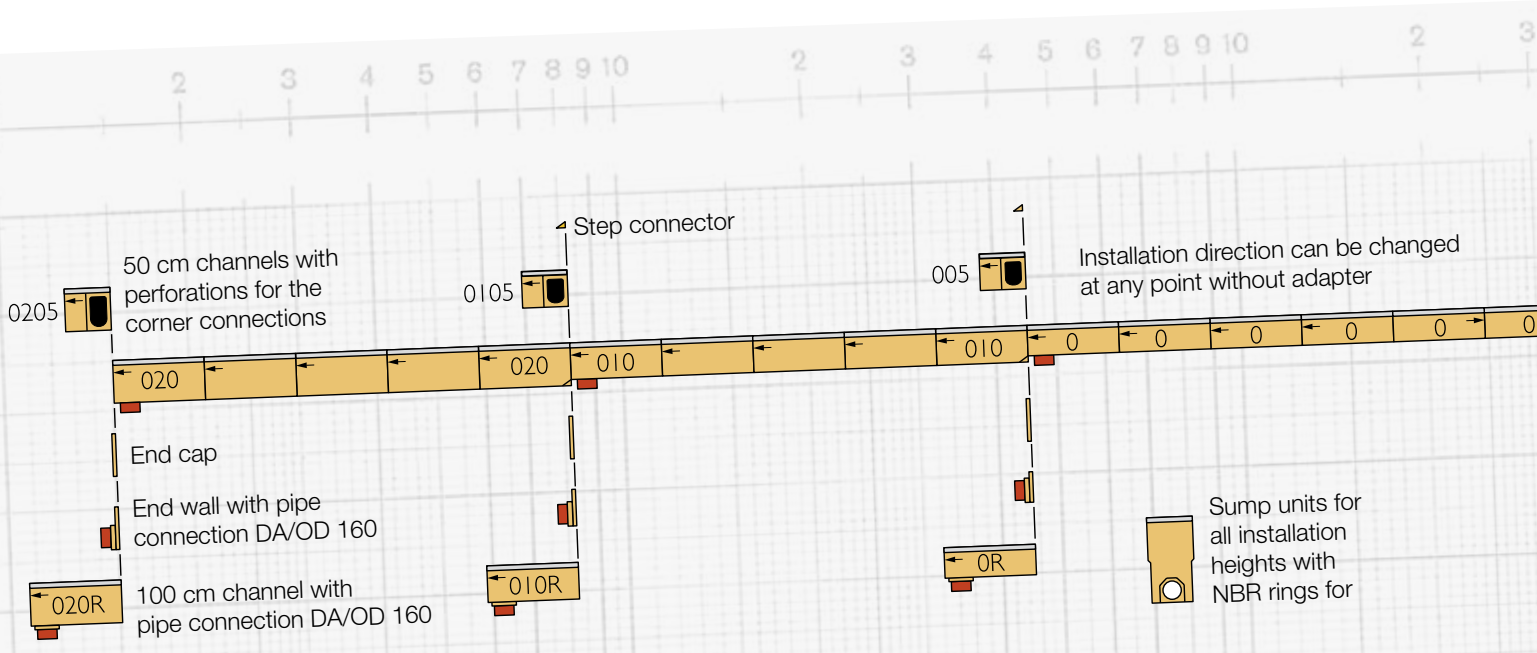
The **SnapLock fastening** is used for gratings for channels with nominal widths of 150 and 200 mm.

Advantages:

- Put in place – press on – snap in place
- Assembly without special tools
- Impervious to transverse forces
- Non-corrosive stainless steel springs
- Reliable function even when heavily soiled
- Grating and channel body intermesh to form a sturdy unit

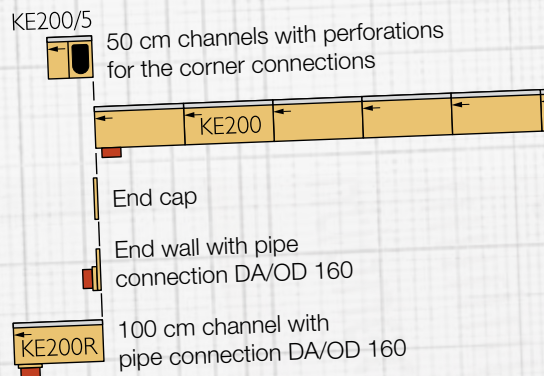


Slope types

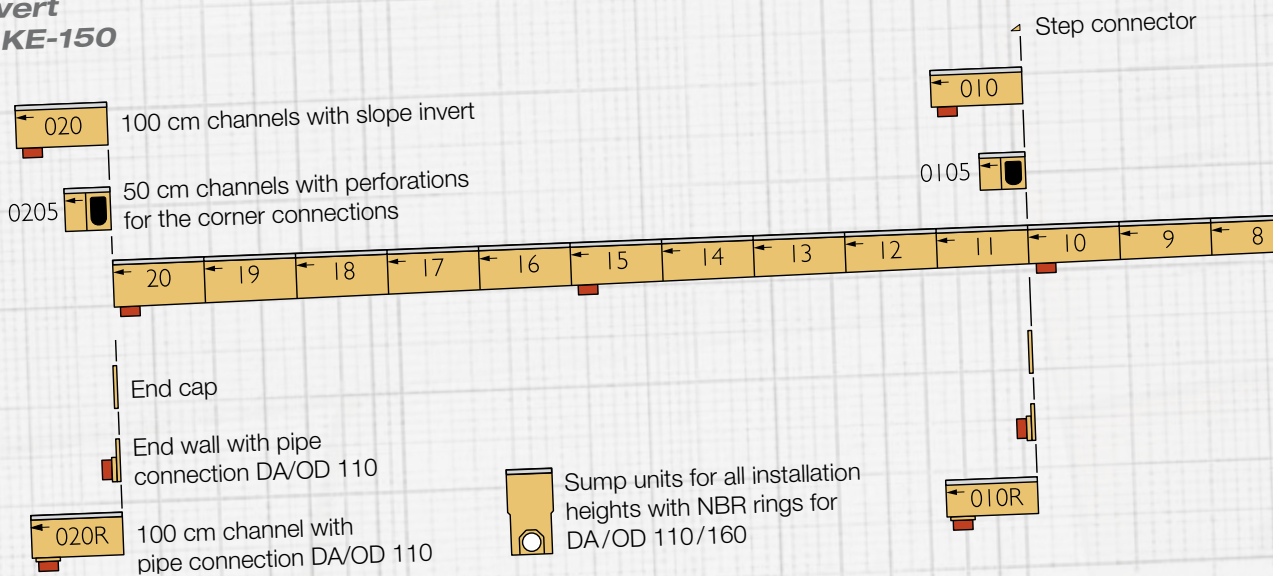


Stepped invert
KE-100, KE-150

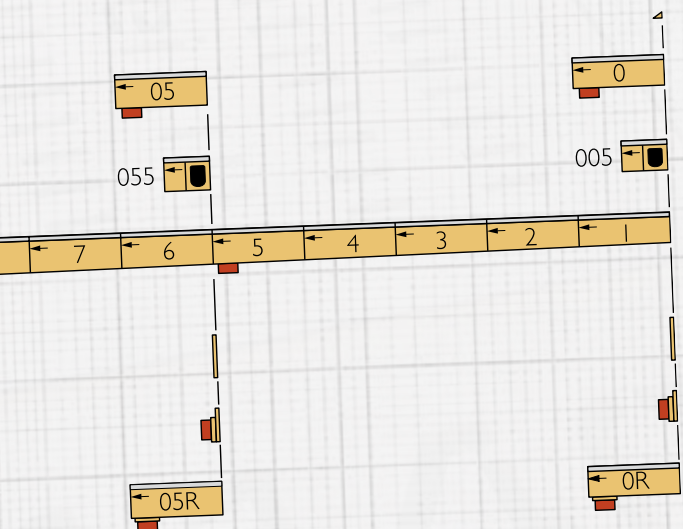
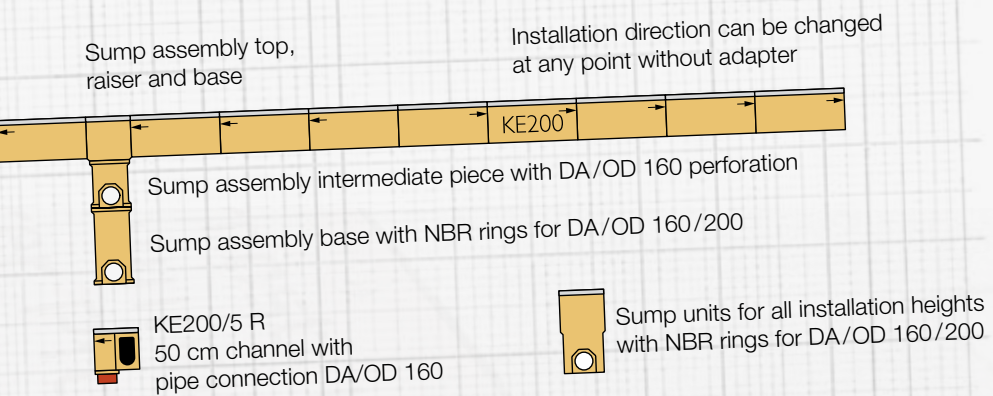
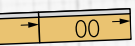
Constant invert
KE-200



Slope invert
KE-100, KE-150



Product specification		KE-100	KE-150	KE-200
Material	Resin concrete	●	●	●
Edge type	Steel edge rail, galvanised or stainless steel	●	●	●
Nominal width	100 mm	●		
	150 mm		●	
	200 mm			●
Slope type	Slope invert 0.5 %	●	●	
	Stepped invert	●	●	
	Constant invert	●	●	●
Joint type	UNILINK® joint	●	●	●
Fastening	TwistLock fastening	●		
	SnapLock fastening		●	●



ANRIN
installation information

With ANRIN drainage systems, accumulating rainwater should be drained

safely and quickly. Moreover, the structural elements have the task of accommodating dynamic loads arising from traffic-related demands and dispersing them to the area of the foundation. Amongst others, the following technical

rules and regulations in their respective valid versions must be observed for the selection, design and installation of ANRIN drainage systems:

- DIN EN 1433 "Drainage channels for vehicular and pedestrian areas"
- DIN EN 19580 "Drainage channels for vehicular and pedestrian areas"
- RStO "Guidelines for the standardisation of the superstructure of vehicular areas"
- DIN EN 206-1 "Concrete. Specification, performance, production and conformity"
- DIN EN 1045-2 "Concrete, reinforced and prestressed concrete structures. Part 2: Concrete – Specification, properties, production and conformity; Application rules for DIN EN 206-1"

A 15	B 125
<p>(A) Road concrete and/or concrete sheets or paving bed</p> <p>(B) Cast asphalt</p>	<p>(A) Road concrete and/or concrete sheets or paving bed</p> <p>(B) Cast asphalt</p>

The following installation guidelines are schematic representations. These are provided as examples and are non-binding. The information provided here is based on our long-term experience in excavation and road construction as well as the state-of-the-art technology. Despite this, designers and planners are always obligated to check the products and the installation instructions for their appropriateness. The example details are simplified recommendations for execution. Constructions are to be re-created on a project-specific basis.

- 1 In-situ road concrete
- 2 Base course
- 3 Concrete cladding of the channel body B 25
Concrete class C12/15 (A 15–C 250)
Concrete class C12/25 (A 400–E 600)
- 4 Foundation, mature soil
- 5 Prefabricated concrete sheets and/or stone systems
- 6 Paving bed
- 7 Wearing course
- 8 Bonding course
- 9 Bitumen base course

Important: Insert gratings for the installation.

All length specifications in millimetres

C 250	D 400-E 600 Exception: Cross-road drainage of busy roads
<p>(A) Road concrete and/or concrete sheets or paving bed</p> <p>(B) Cast asphalt</p>	<p>(A) Road concrete and/or concrete sheets or paving bed</p> <p>(B) Cast asphalt</p>



We invite you
to discover more.

Whether you are already planning a specific project or simply want to learn more about the general possibilities: Contact us and put our expertise to the test.

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Dealer stamp

