

*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 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!

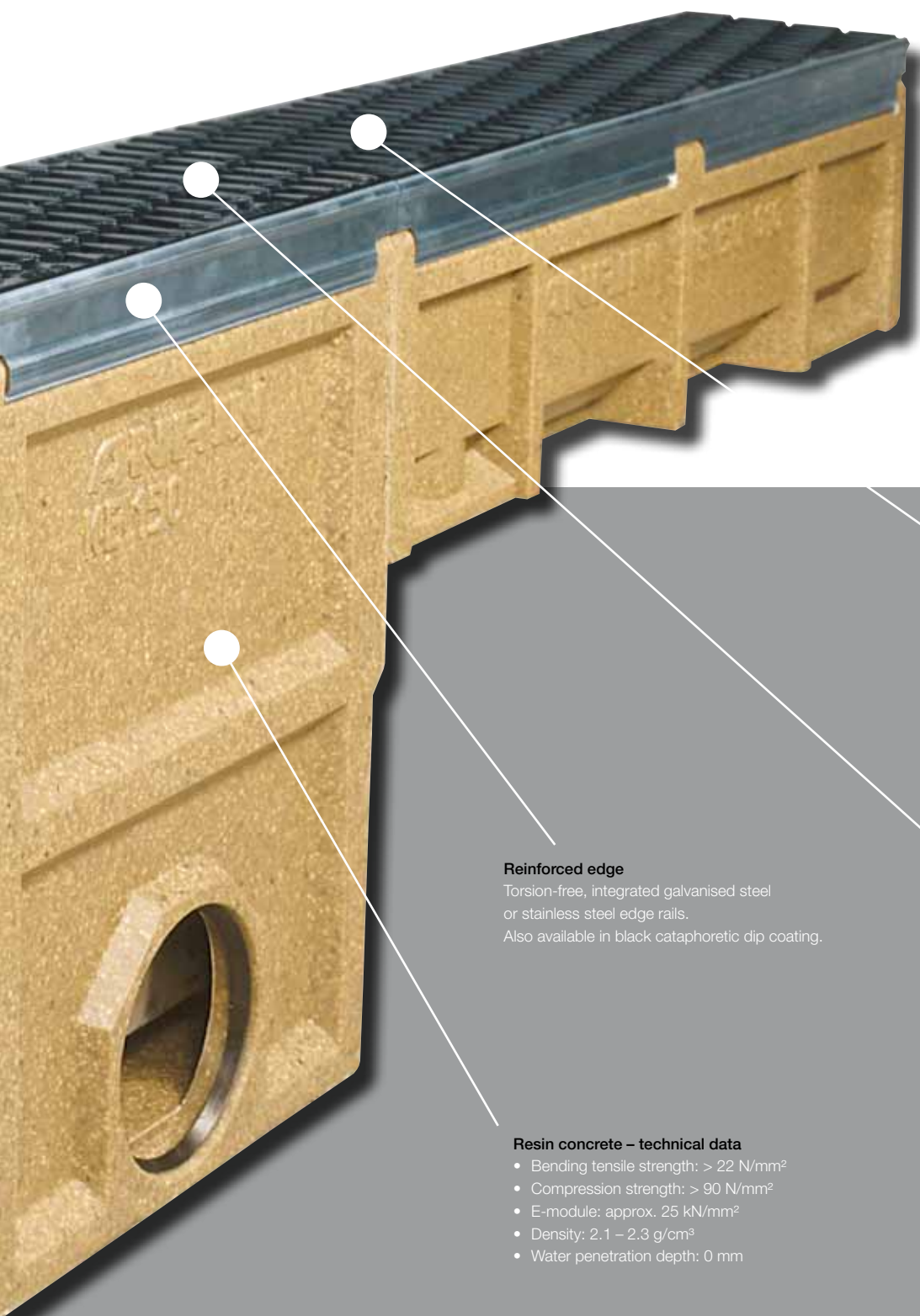


Perforations on the 50 cm elements for  
T-junctions  
Elbow joints  
Cross junctions

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 A15–E600
- 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/mm<sup>2</sup>
- Compression strength: > 90 N/mm<sup>2</sup>
- E-module: approx. 25 kN/mm<sup>2</sup>
- Density: 2.1 – 2.3 g/cm<sup>3</sup>
- Water penetration depth: 0 mm

### Channel drainage for the load classes A15 to E600

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**

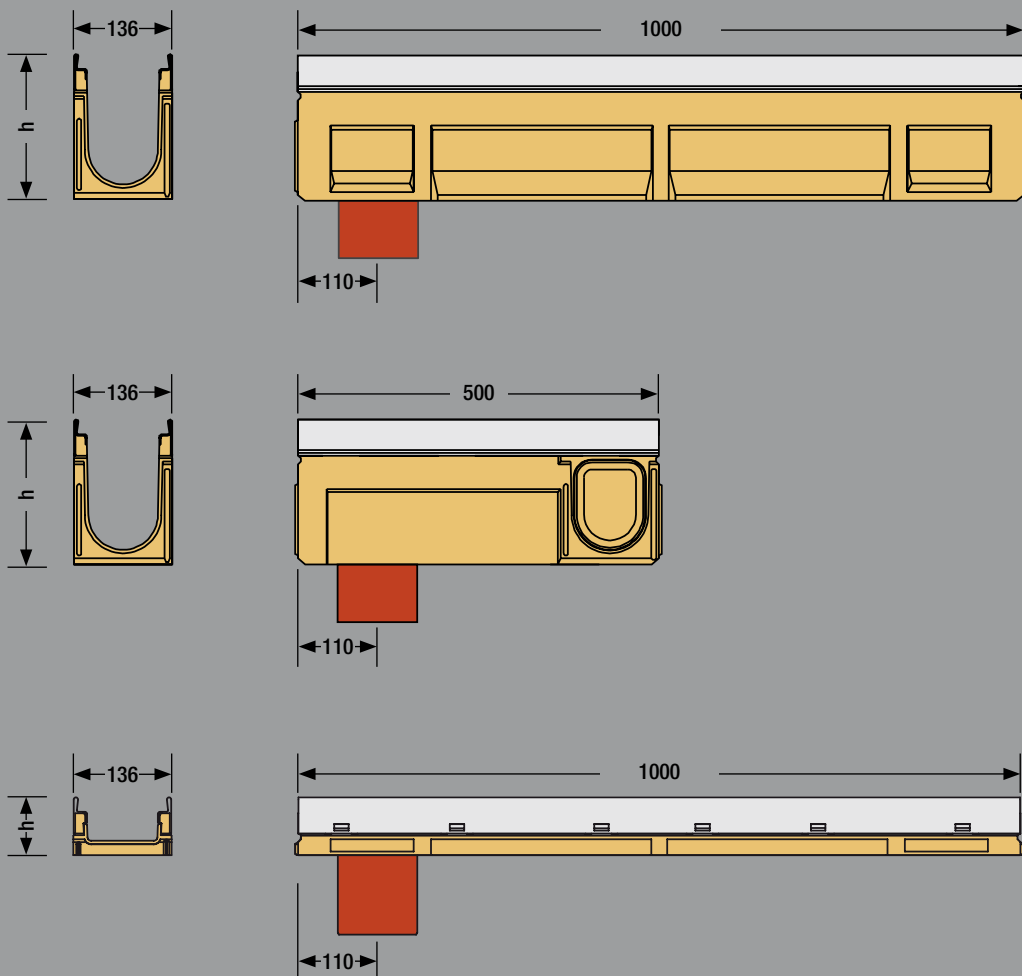
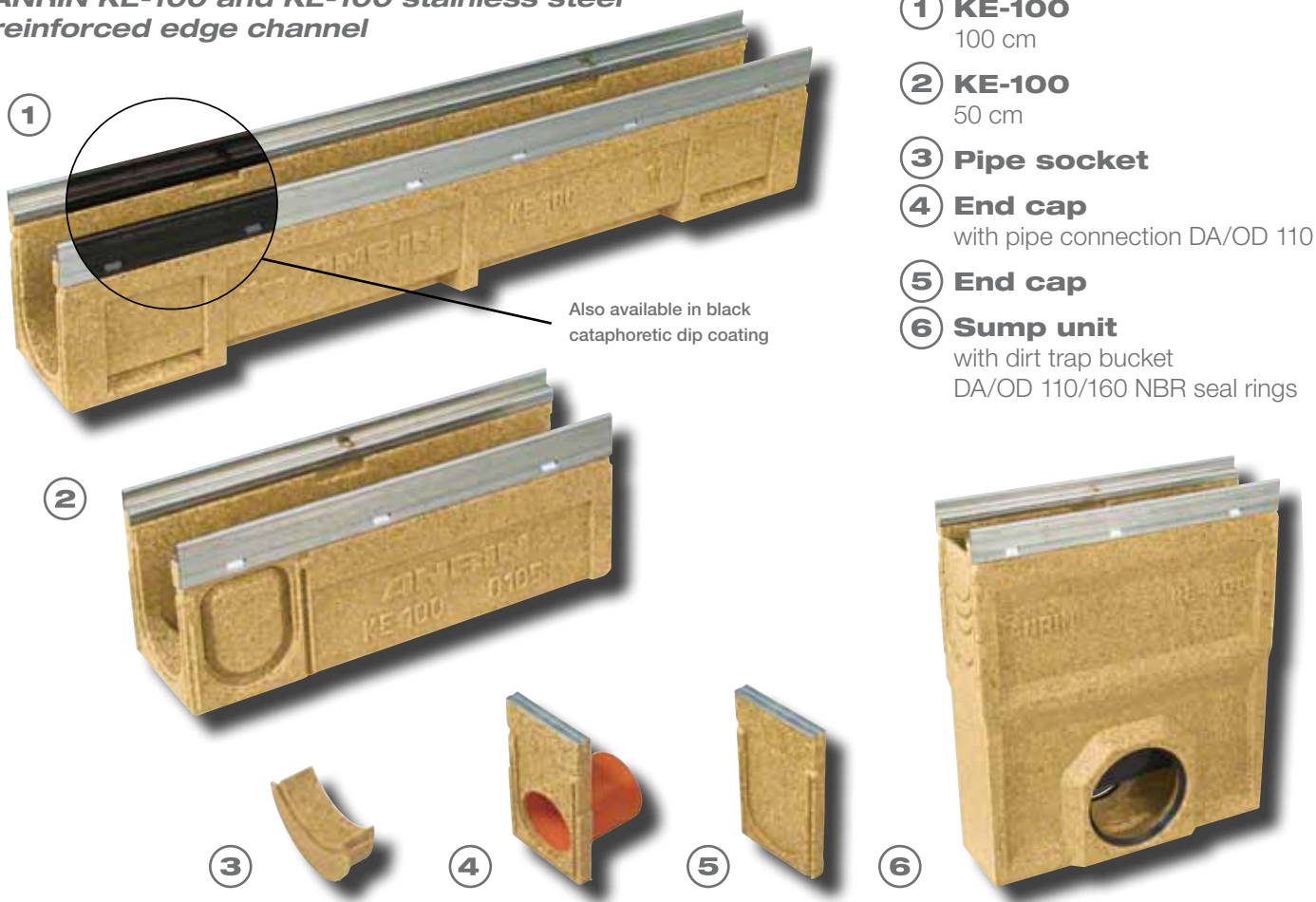
**6 Parking lot, Regensburg**



<b>Load classes</b>	<b>Areas of application</b>	<b>KE-100</b>	<b>KE-150</b>	<b>KE-200</b>
<b>A15 (test force 15 kN)</b>	Cycle path and footpaths	●	●	●
	School yards	●	●	●
	Green areas, Gala-Bau	●	●	●
<b>B125 (test force 125 kN)</b>	Walkways, pedestrian zones	●	●	●
	Parking lots, parking decks	●	●	●
	Garage entrances, courtyards	●	●	●
<b>C250 (test force 250 kN)</b>	Road edge drainage	●	●	●
	Channels and shoulders	●	●	●
<b>D400 (test force 400 kN)</b>	Roads	●	●	●
	Parking lots, federal motorway parking lots	●	●	●
	Pedestrian roads	●	●	●
<b>E600 (test force 600 kN)</b>	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**



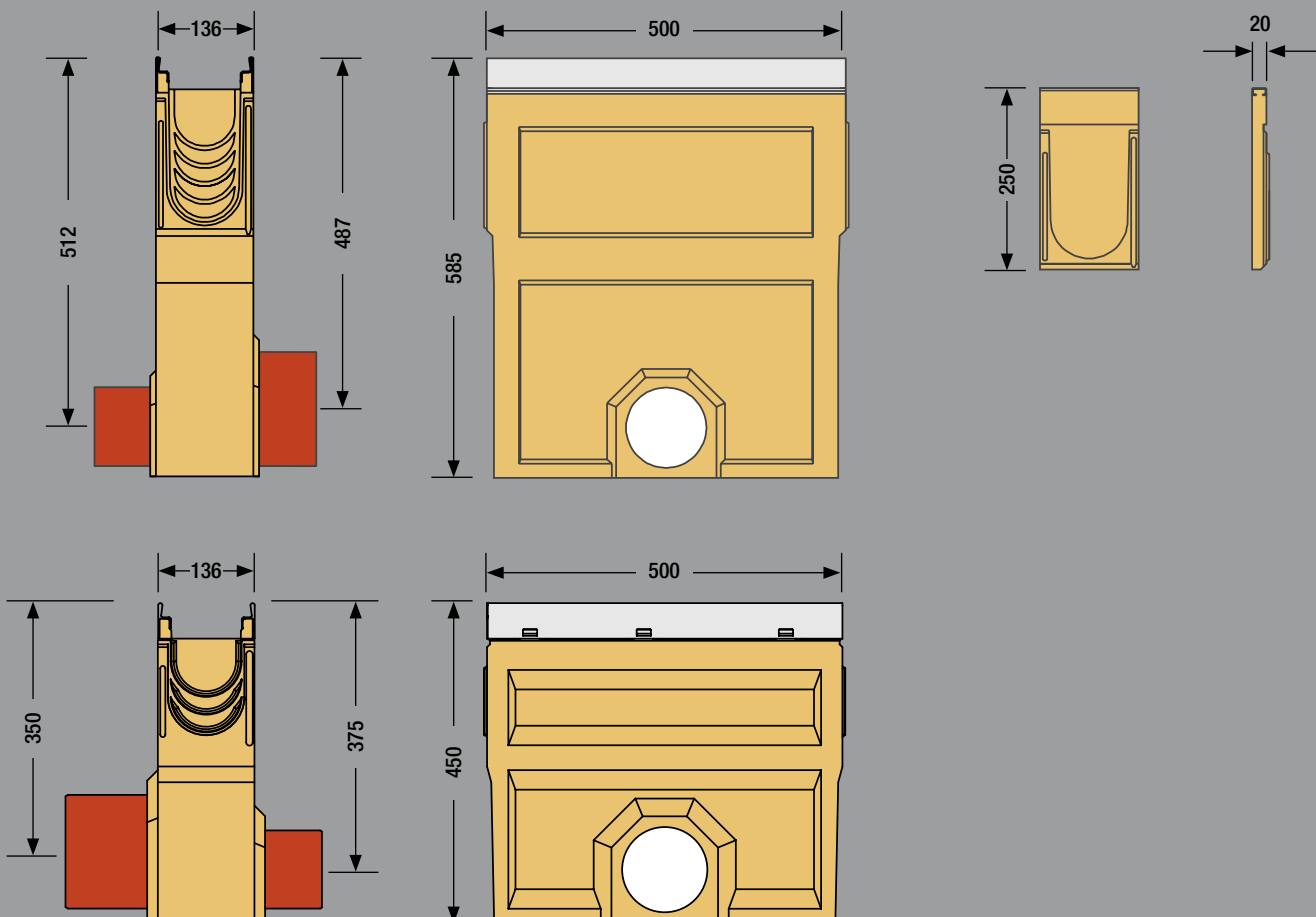


<b>Product specifications</b>	<b>KE - 100</b>	<b>Sump unit</b>
Material	Resin concrete	Resin concrete
Length	50 cm and 100 cm	50 cm
Width	13.6 cm	13.6 cm
Height	6.0 cm, 8.0 cm, 10.0 cm	58.5 cm
	15.0 – 25.0 cm	45.0 cm (low height)
Edge type	Steel edge rail, 6 mm edge width; galvanised, stainless steel or cataphoretic dip-coated in black	
Nominal width	<b>100 mm</b>	<b>100 mm</b>
Load class	A15 to E600	A15 to E600
Slope type	Slope invert 0.5 %	
	Stepped invert	
	Constant invert	
Joint type	<b>UNILINK® joint</b>	<b>UNILINK® joint</b>
Fastening	TwistLock fastening	TwistLock fastening

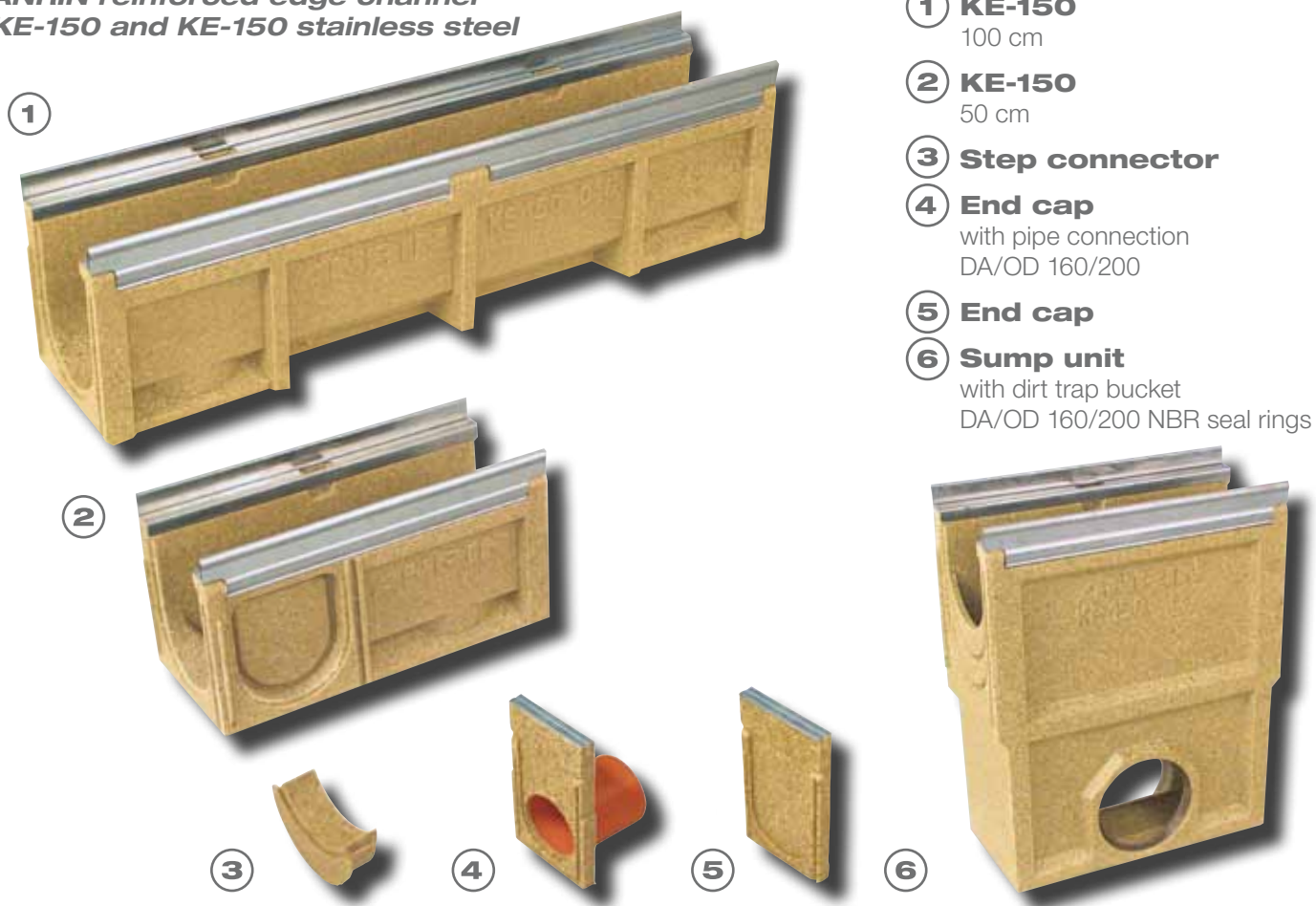
### TwistLock fastening



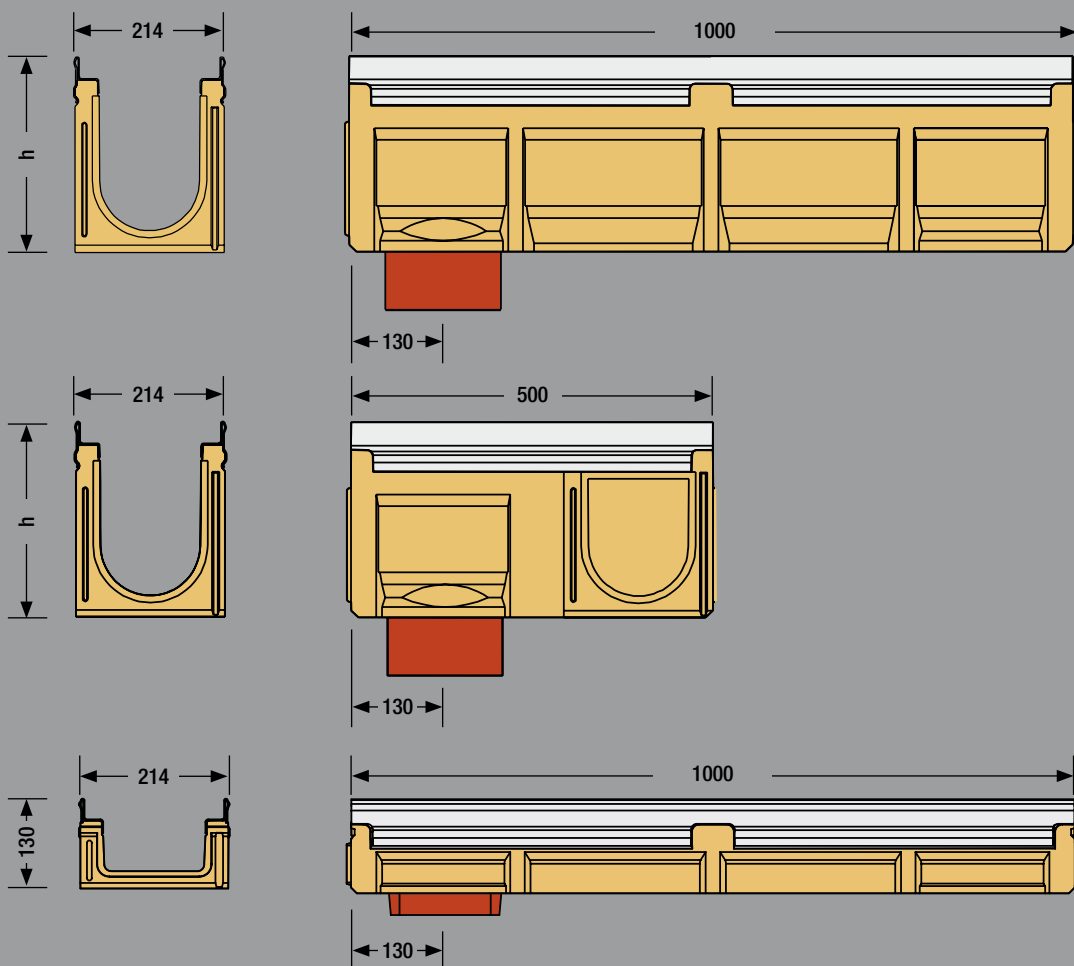
The **TwistLock fastening** is used for grating types for channels with a nominal width of 100 mm.



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



- ① **KE-150**  
100 cm
- ② **KE-150**  
50 cm
- ③ **Step connector**
- ④ **End cap**  
with pipe connection  
DA/OD 160/200
- ⑤ **End cap**
- ⑥ **Sump unit**  
with dirt trap bucket  
DA/OD 160/200 NBR seal rings

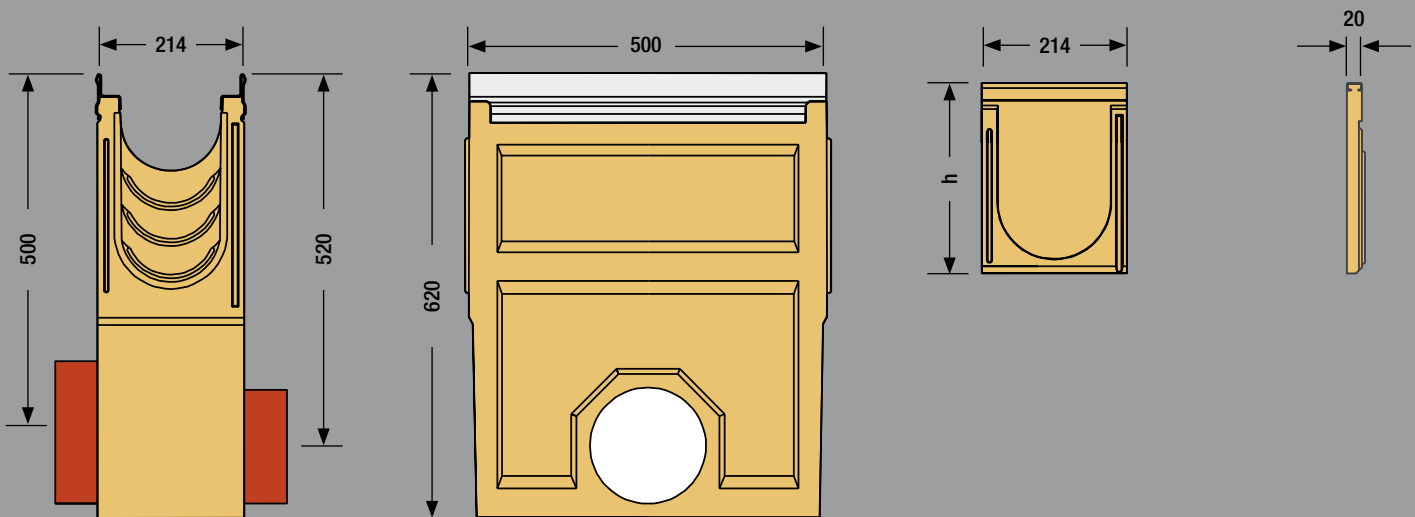


<b>Product specifications</b>	<b>KE - 150</b>	<b>Sump unit</b>
Material	Resin concrete	Resin concrete
Length	50 cm and 100 cm	50 cm
Width	21.4 cm	21.4 cm
Height	13.0 cm, 22.0 to 32.0 cm	62.0 cm
Edge type	Steel edge rail, 6 mm, galvanised or stainless steel	
Nominal width	<b>150 mm</b>	<b>150 mm</b>
Load class	A15 to E600	A15 to E600
Slope type	Slope invert 0.5 %	
	Stepped invert	
	Constant invert	
Joint type	<b>UNILINK® joint</b>	<b>UNILINK® joint</b>
Fastening	SnapLock fastening	SnapLock fastening

**SnapLock fastening**



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



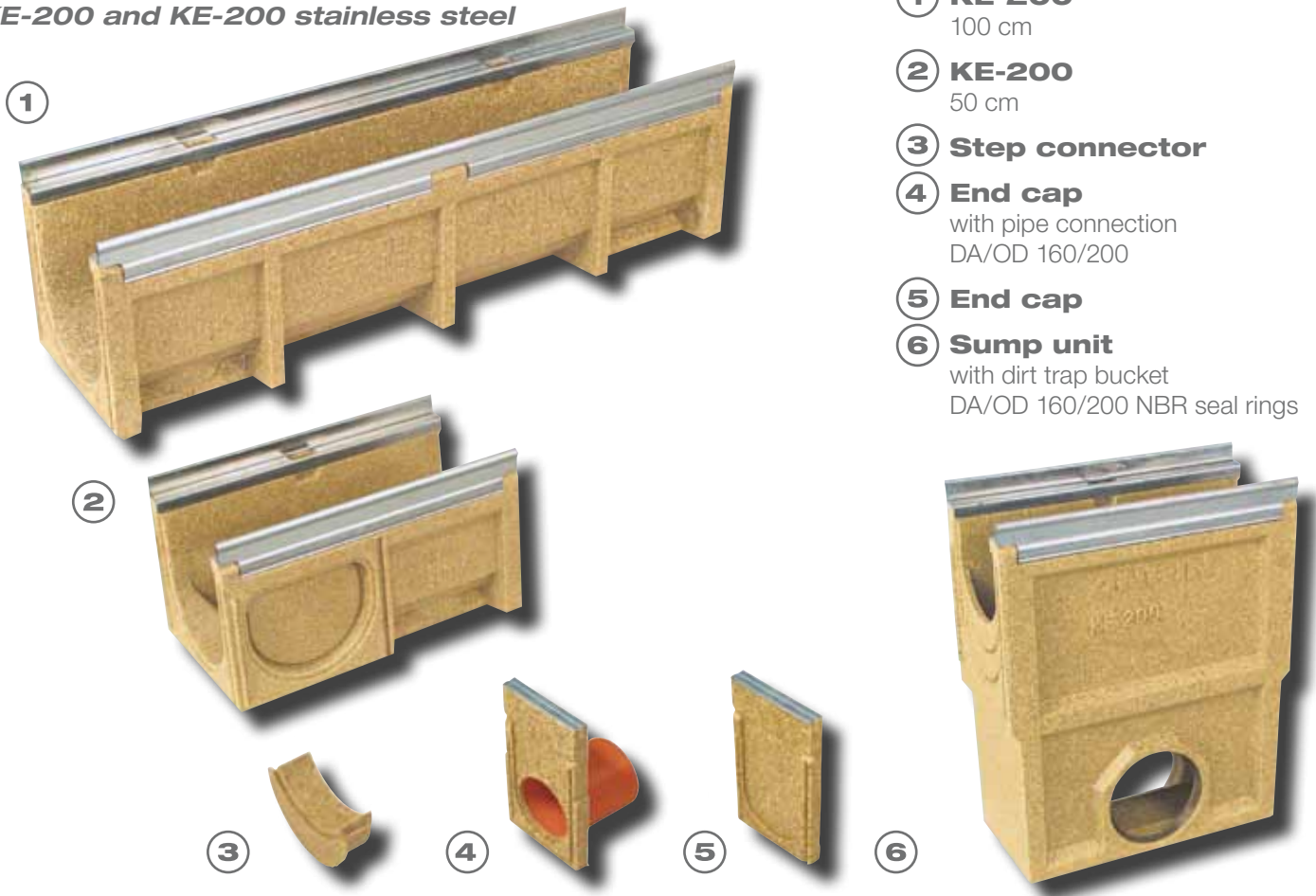
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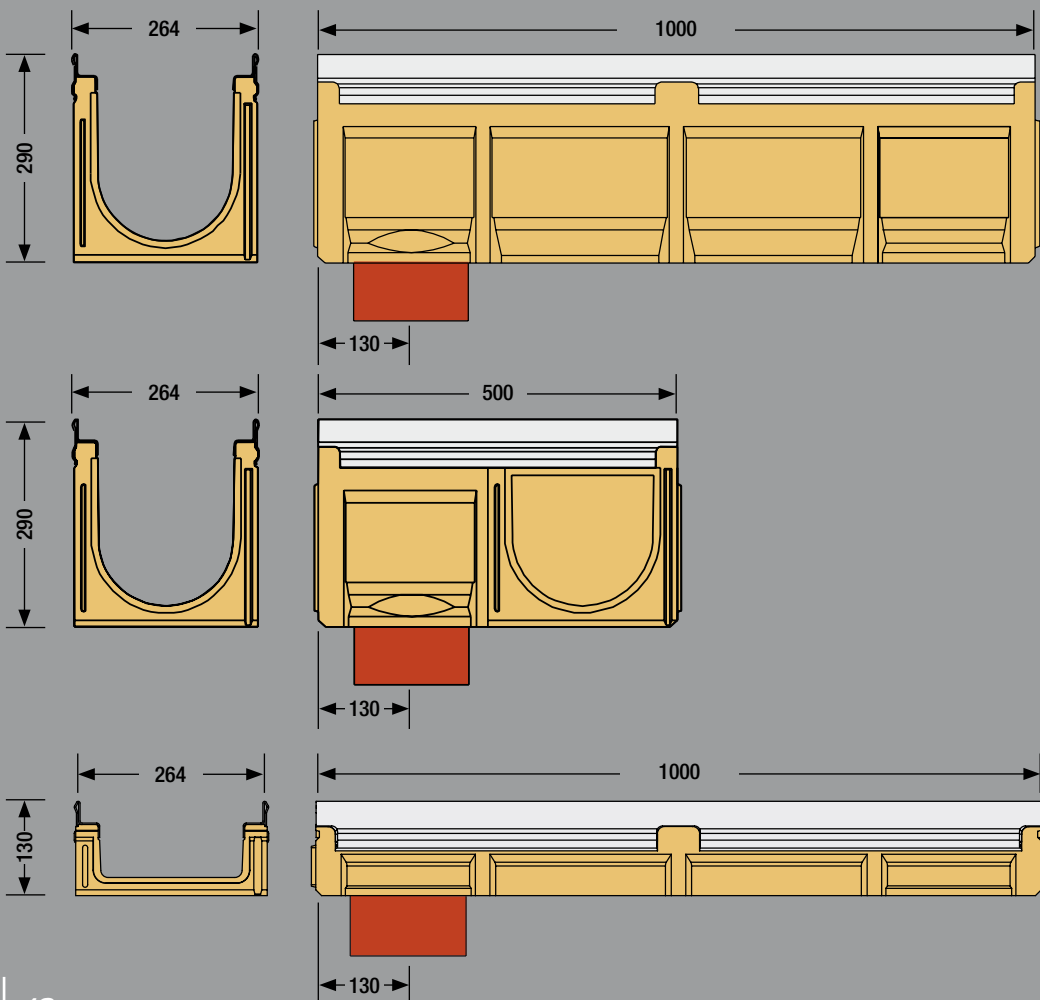


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**ANRIN reinforced edge channel**  
**KE-200 and KE-200 stainless steel**



- ① **KE-200**  
100 cm
- ② **KE-200**  
50 cm
- ③ **Step connector**
- ④ **End cap**  
with pipe connection  
DA/OD 160/200
- ⑤ **End cap**
- ⑥ **Sump unit**  
with dirt trap bucket  
DA/OD 160/200 NBR seal rings

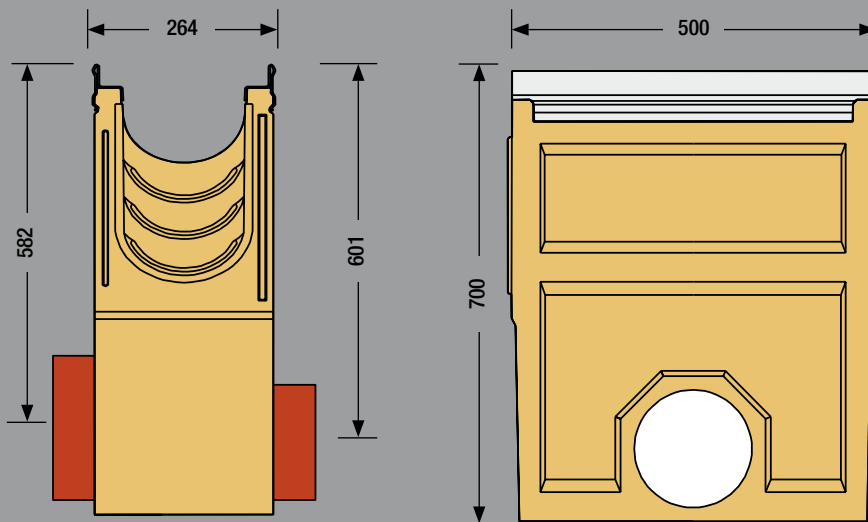


<b>Product specifications</b>	<b>KE - 200</b>	<b>Sump unit</b>
Material	Resin concrete	Resin concrete
Length	50 cm and 100 cm	50 cm
Width	26.4 cm	26.4 cm
Height	13.0 cm, 29.0 cm	70.0 cm
Edge type	Steel edge rail, 6 mm, galvanised or stainless steel	
Nominal width	<b>200 mm</b>	<b>200 mm</b>
Load class	A15 to E600	A15 to E600
Slope type	Constant invert	
Joint type	<b>UNILINK® joint</b>	<b>UNILINK® joint</b>
Fastening	SnapLock fastening	SnapLock fastening

### SnapLock fastening



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



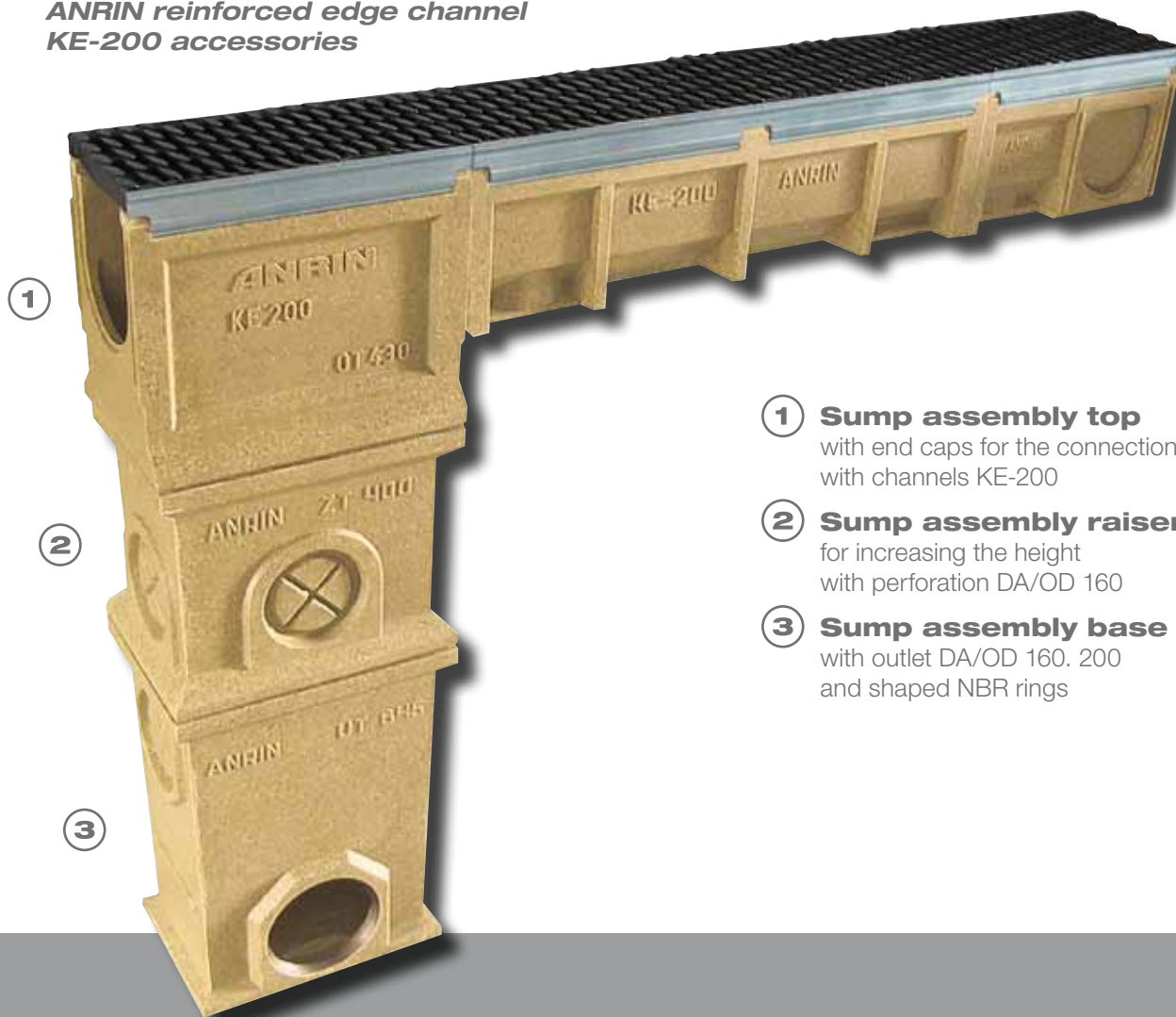
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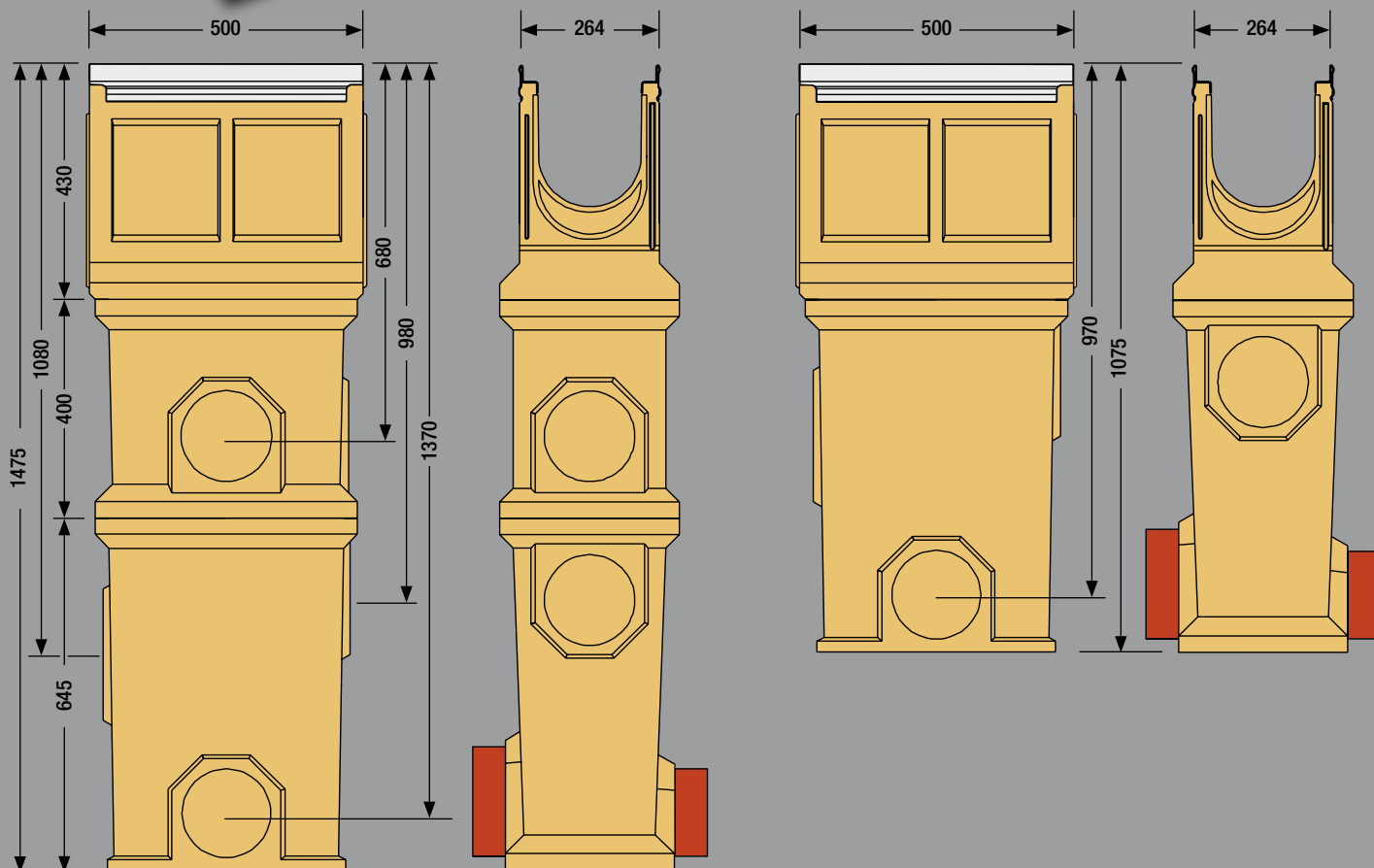
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ANRIN reinforced edge channel  
KE-200 accessories



- ① **Sump assembly top**  
with end caps for the connection  
with channels KE-200
- ② **Sump assembly raiser**  
for increasing the height  
with perforation DA/OD 160
- ③ **Sump assembly base**  
with outlet DA/OD 160, 200  
and shaped NBR rings

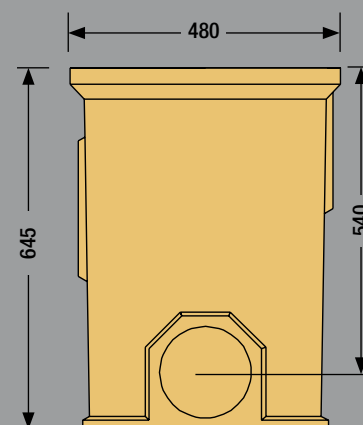
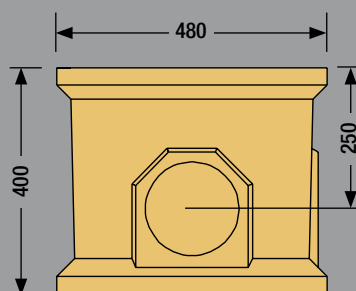
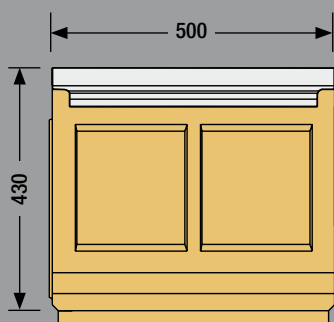


<b>Produktspezifikationen</b>	<b>KE-200 sump assembly</b>
Material	Resin concrete
Length	50 cm
Width	26.4 – 33.0 cm
Height	147.5 and 107.5 cm
Edge type	Steel edge rail, 6 mm, galvanised or stainless steel
Nominal width	<b>200 mm</b>
Load class	A15 to E600
Pipe connections	with DA/OD 160 and DA/OD 200 NBR seal rings
Joint type	<b>UNILINK® joint</b>
Fastening	SnapLock fastening

### SnapLock fastening



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



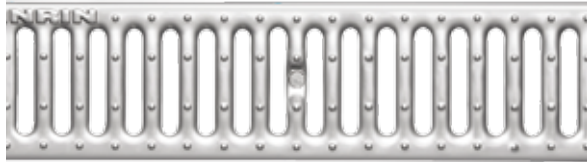
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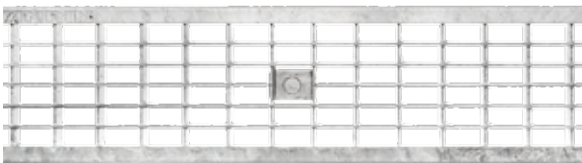
**Gratings for KE-100 reinforced edge channels with TwistLock fastening**



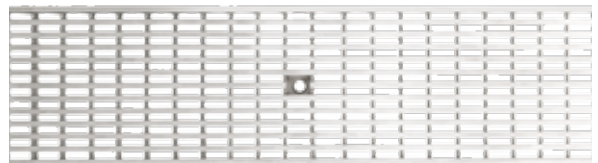
**Slotted steel grating, Double slotted steel grating**, galvanised, stainless steel  
Load classes: A15, C250, Length: 50 cm, 100 cm, SW 10 mm



**Perforated grating**, galvanised, stainless steel  
Load classes: A15, C250, Length: 50 cm, 100 cm, Ø 6 mm



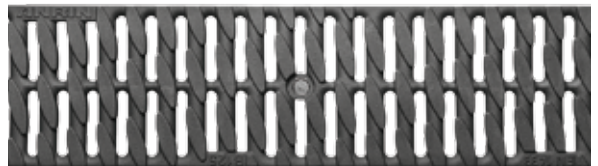
**Mesh grating**, galvanised, stainless steel  
Load classes: B125, C250, D400, Length: 50 cm, 100 cm  
MW 30 x 14 mm / 30 x 10 mm / 20 x 14 mm



**Longitudinal profile grating**, stainless steel  
Load classes: B125, D400, Length: 50 cm, 100 cm, SW 5 mm



**Slotted plastic grating, Oval Grip Design**, plastic, gray  
Load classes: B125, Length: 50 cm, SW 8 mm



**Slotted plastic grating, Oval Grip Design**, plastic, black  
Load classes: C250, Length: 50 cm, SW 8 mm



**Slotted grating SW 10**, cast iron, coated in black  
Load classes: C250, Length: 50 cm, SW 10 mm

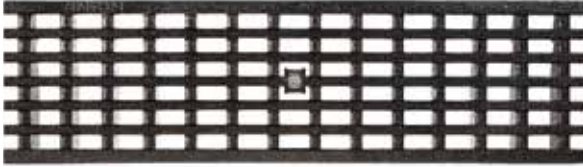


**Slotted grating, Oval Grip Design**, cast iron, cataphoretic dip coating  
Load classes: C250, E600\*, Length: 50 cm, SW 10 mm

\* Exception: Cross-road drainage of busy roads  
SW = slot width / MW = mesh width



**Gratings for KE-100 reinforced edge channels  
with TwistLock fastening**



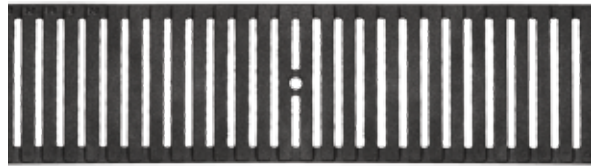
**Longitudinal-bar grating**, cast iron, cataphoretic dip coating  
Load classes: D400\*, Length: 50 cm, MW 25 x 10 mm



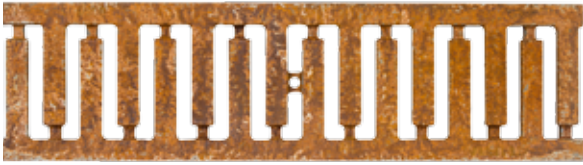
**Design grating, LEAF**, cast iron, uncoated  
Load classes: C250, Length: 50 cm, SW 5 - 9 mm



**Design grating, CELTIC**, cast iron  
Load classes: C250, Length: 50 cm, SW 10 mm



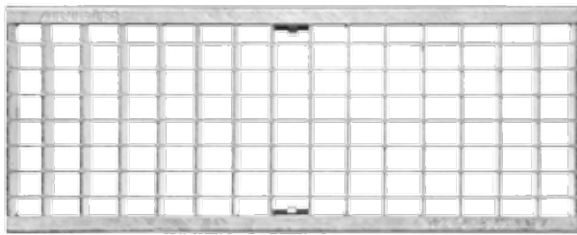
**Slotted grating, HEELGUARD**, cast iron, coated in black  
Load classes: D400\*, Length: 50 cm, SW 6 mm



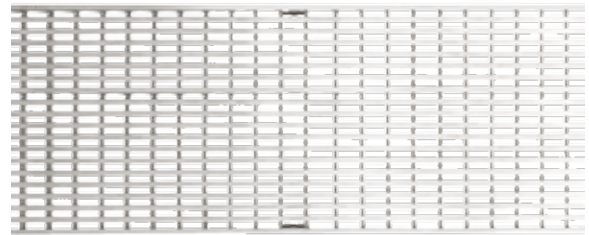
**Slotted steel grating, MASSIV 32**, cast iron, uncoated  
Load classes: E600\*, Length: 50 cm, SW 11 mm

\* Exception: Cross-road drainage of busy roads  
SW = slot width / MW = mesh width

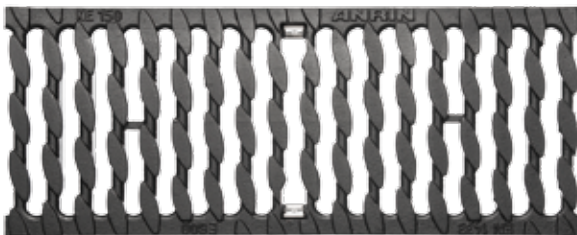
**Gratings for KE-150 reinforced edge channels  
with SnapLock fastening**



**Mesh grating**, galvanised, stainless steel  
Load classes: C250, D400\*,  
Length: 50 cm, 100 cm, MW 30 x 10 mm / 20 x 20 mm



**Longitudinal profile grating**, stainless steel  
Load classes: C250  
Length: 50 cm, 100 cm, SW 5 mm



**Slotted cast iron grating, OvalGrip Design**, cast iron GJS, cataphoretic dip coating  
Load classes: D400\*, E600\*,  
Length: 50 cm, SW 12 mm



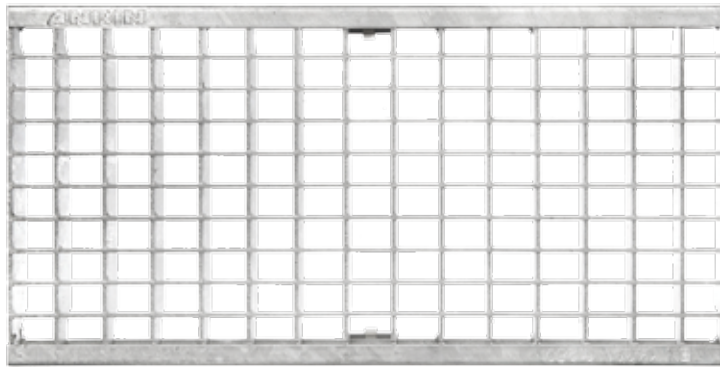
**Longitudinal Grating**, cast iron GJS, cataphoretic dip coating  
Load classes: D400\*, E600\*,  
Length: 50 cm, MW 25 x 11 mm



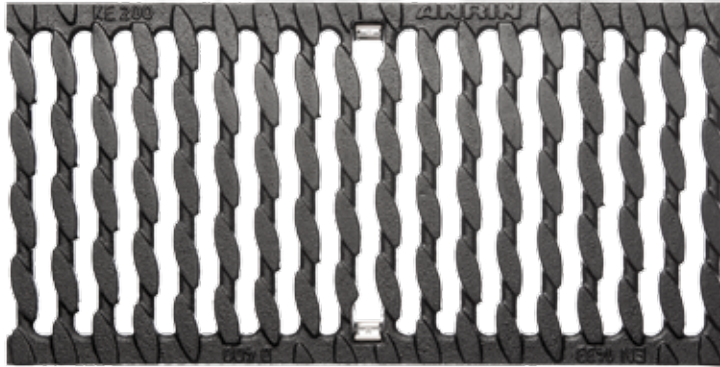
**Slotted grating, HEELGUARD**, cast iron, coated in black  
Load classes: D400\*  
Length: 50 cm, SW 6 mm

\* Exception: Cross-road drainage of busy roads  
SW = slot width / MW = mesh width

**Gratings for KE-200 reinforced edge channels  
with SnapLock fastening**



**Mesh grating**, galvanised, stainless steel  
Load classes: C250, D400\*, Length: 50 cm, 100 cm, MW 30 x 20 mm / 20 x 20 mm



**Slotted cast iron grating, OvalGrip Design**, cast iron, cathaphoretic dip coating  
Load classes: D400\*, E600\*, Length: 50 cm, SW 12 mm



**Slotted grating, HEELGUARD**, cast iron, cathaphoretic dip coating, coated in black  
Load classes: D400\*, Length: 50 cm, SW 6 mm

\* Exception: Cross-road drainage of busy roads  
SW = slot width / MW = mesh width

### **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.

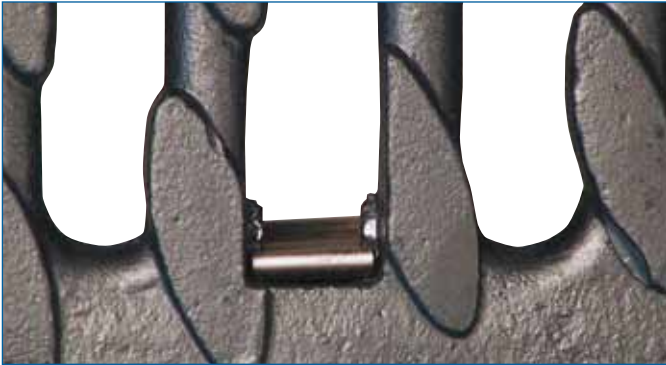
ANRIN grating fastenings are optimised for the respective load class and combine safety and brand quality with functional design.

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





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



**BUNDESREPUBLIK DEUTSCHLAND**


**URKUNDE**  
über die Eintragung des  
**Gebrauchsmusters**  
Nr. 202 00 509.7

IPC: 83P 1/00

Bezeichnung:  
Blechrostverriegelung

Gebrauchsmuster-Inhaber:  
W&B Wirtzner Wirtz Gebr., 59609 Arnsdorf, DE

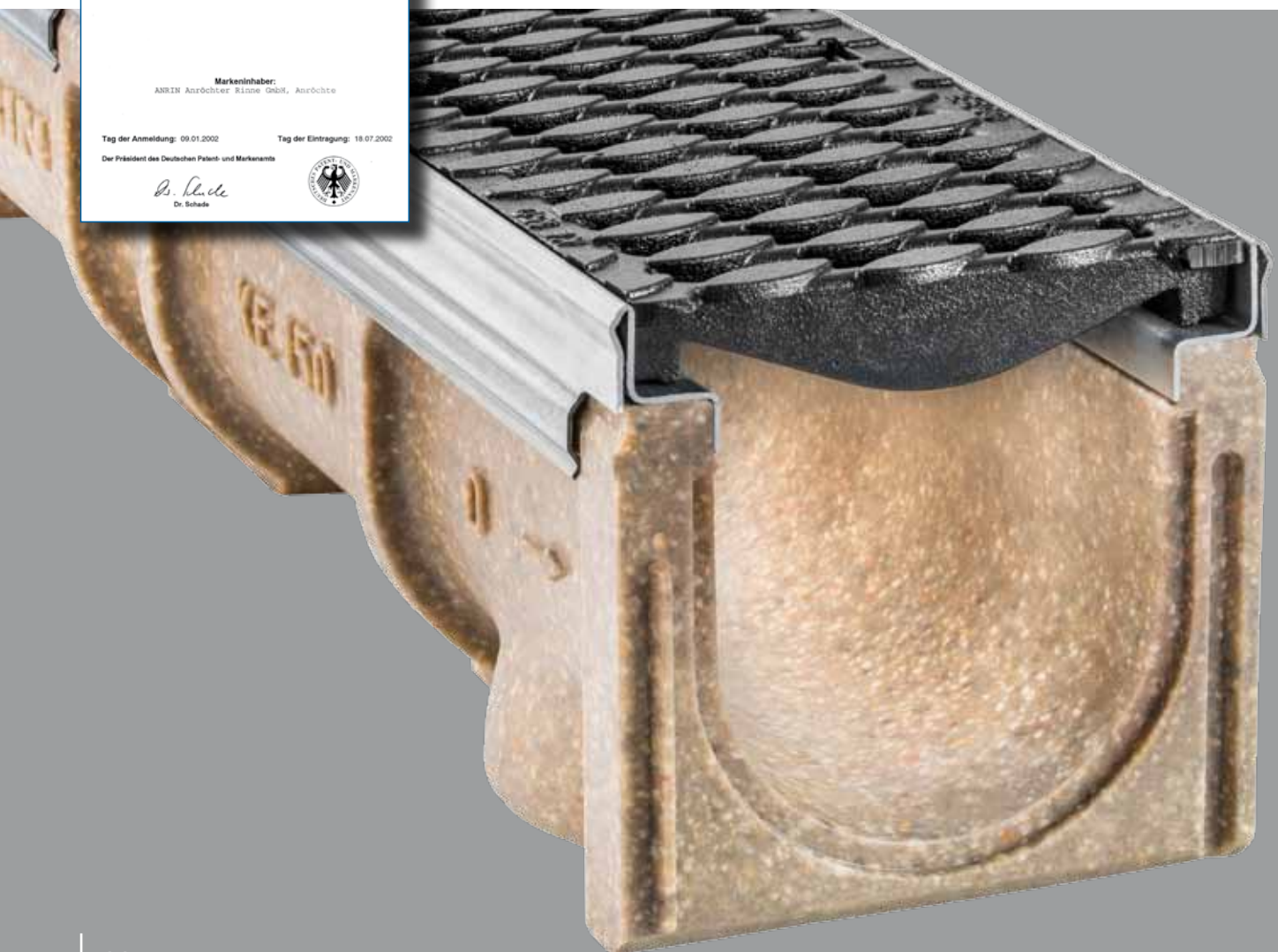
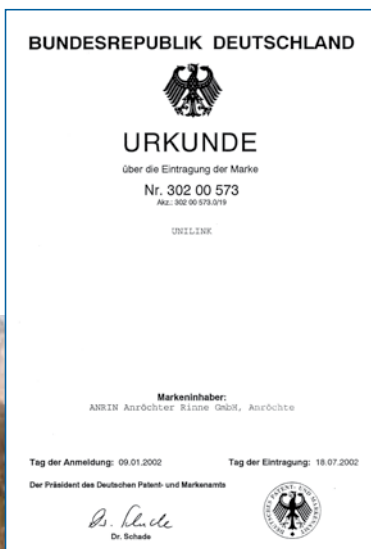
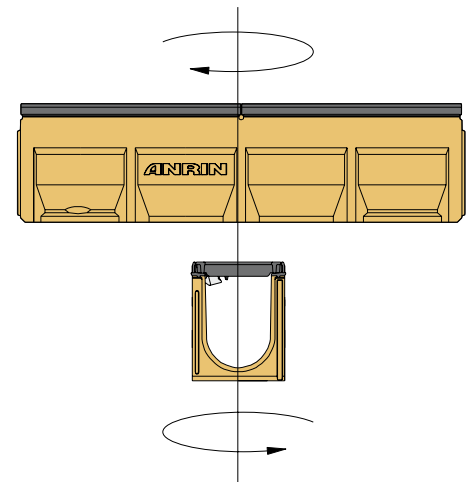
Tag der Anmeldung: 15.01.2002  
Tag der Eintragung: 21.03.2002

 Der Präsident des Deutschen Patent- und Markenamts  
*J. K. K.*  
Dr. Schab

**ANRIN UNILINK® joint**

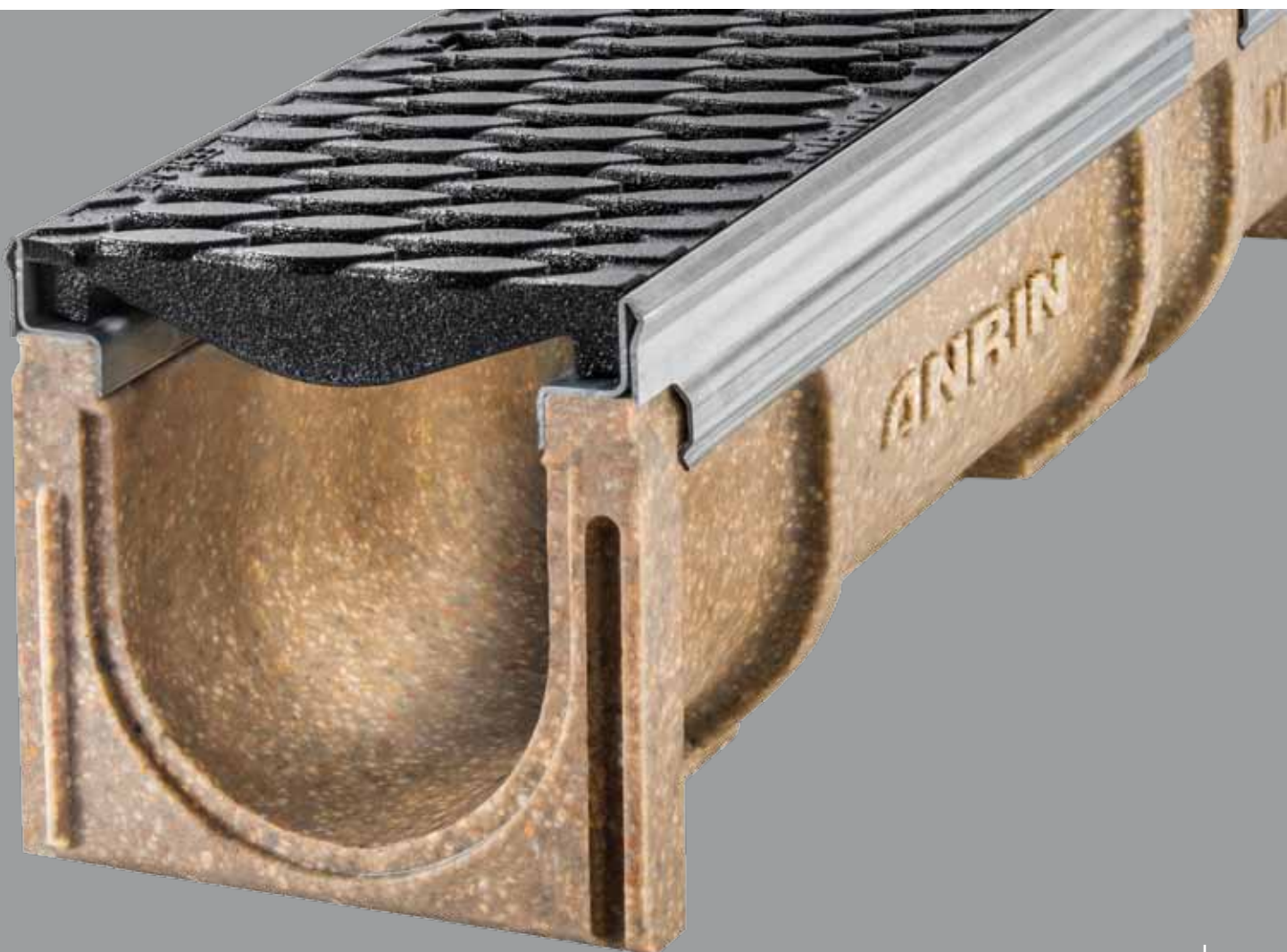
The optimised UNILINK® joint system eliminates the traditional differentiation between the beginning and end of the channel. Elements of an equal installation height can be joined in any arbitrary direction.

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!

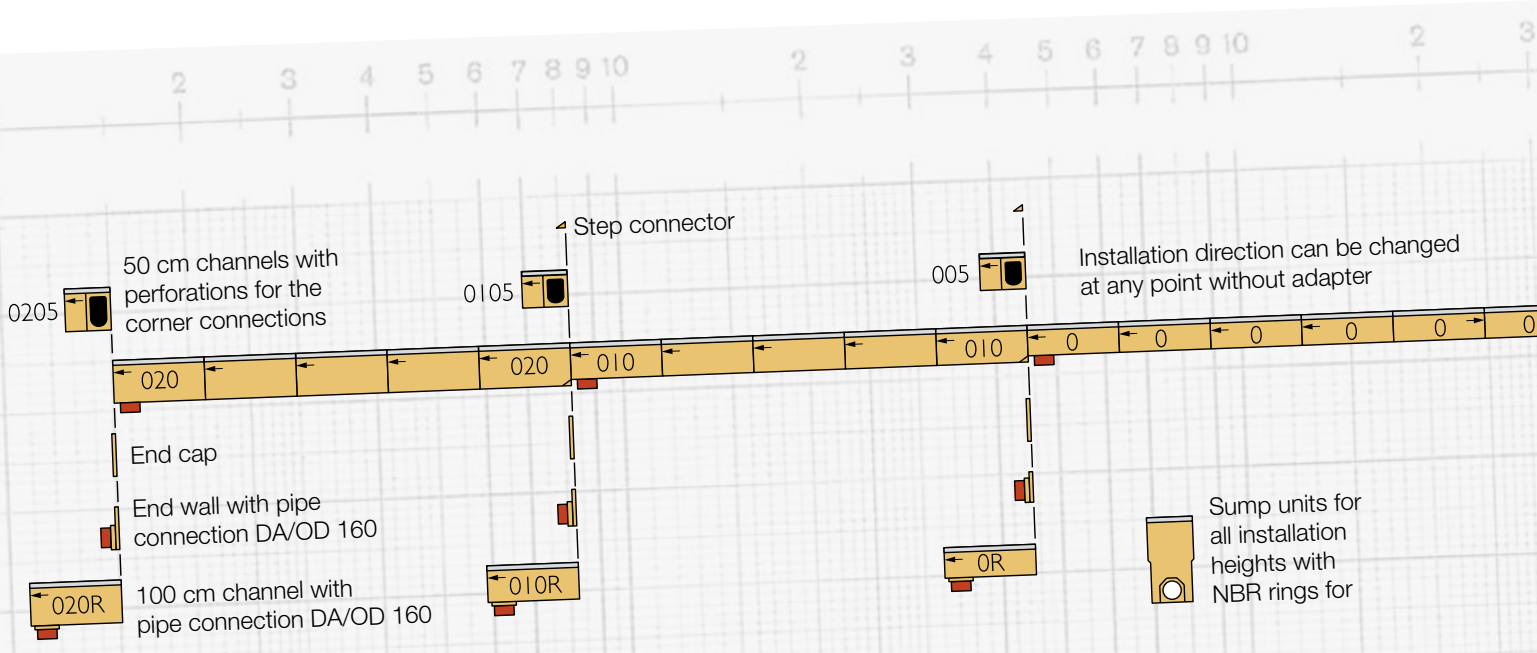


**ANRIN sealing technology**

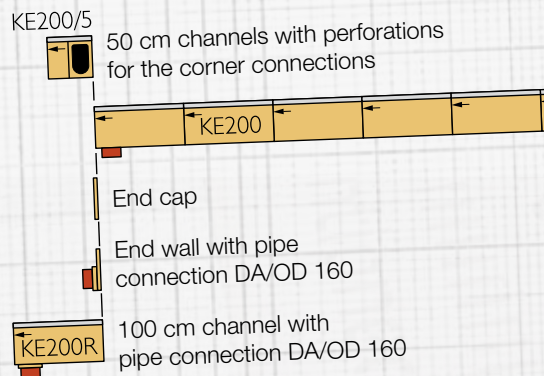
The tightness of the channel joints plays an essential role for the functionality. With the ANRIN joint seal set, comprised of a sealer (poly sulphide based two-component sealant), a primer, a mixer column, incl. spiral and a hand pump sprayer, water-tight channel joints for special installation situations,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



Slope types

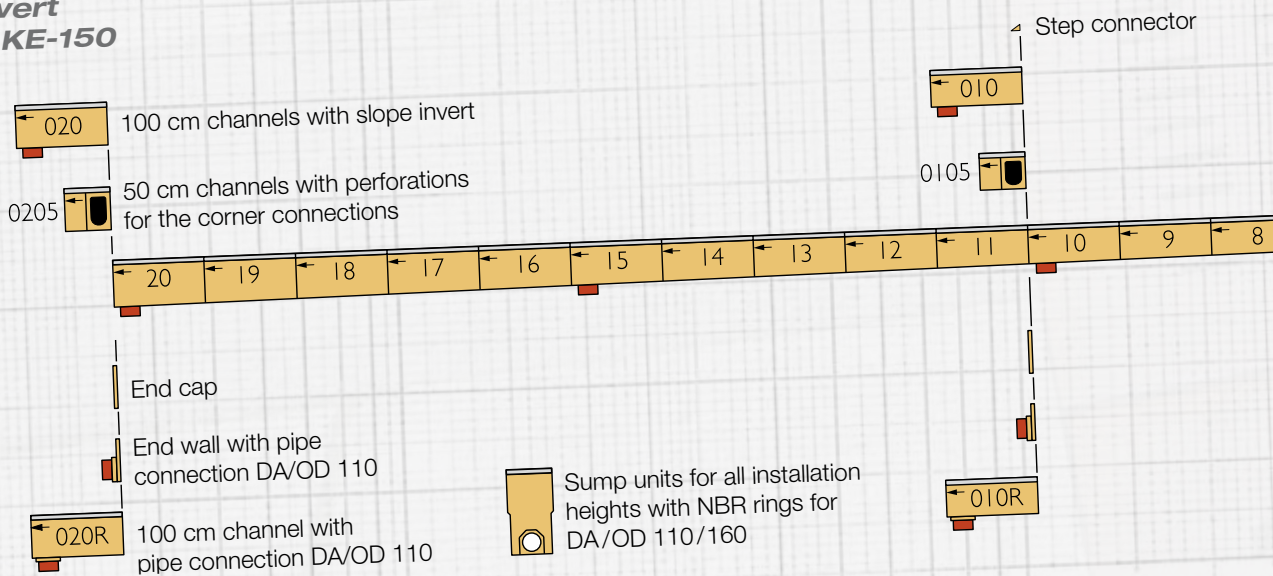


**Stepped invert**  
KE-100, KE-150



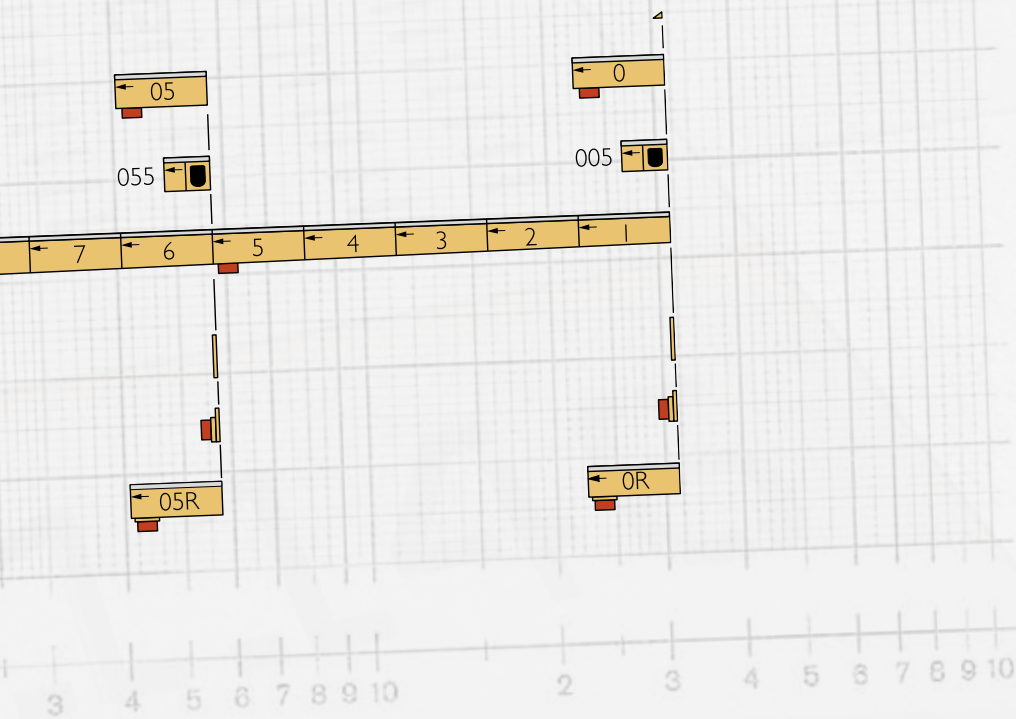
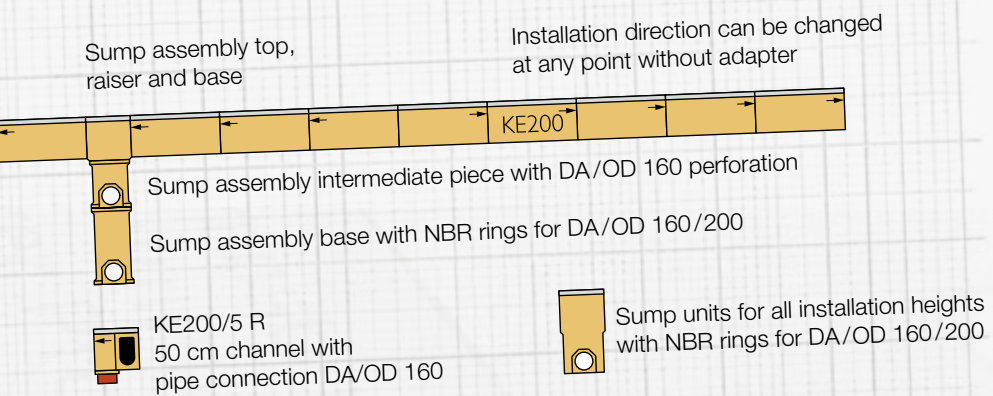
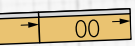
**Constant invert**  
KE-200

**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.

The following installation guidelines are schematic representations. These are provided as examples and are non-binding.

- 1 In-situ road concrete
- 2 Base course
- 3 Concrete cladding of the channel body B 25  
Concrete class C12/15 (A15–C250)  
Concrete class C12/25 (A 400–E600)
- 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

A15	B125
<p><b>(A)</b> Road concrete and/or concrete sheets or paving bed</p> <p><b>(B)</b> Cast asphalt</p>	<p><b>(A)</b> Road concrete and/or concrete sheets or paving bed</p> <p><b>(B)</b> Cast asphalt</p>

All length specifications in millimetres

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.

Important: Insert gratings for the installation.

The current guidelines and regulations of the state-of-the-art technology must be observed for the installation. For example, these are:

- 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", to be observed, in particular: ZTV concrete StB 07 for the construction of base courses with hydraulic binders and concrete road wearing courses.
- 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"

<b>C250</b>	<b>D400 - E600</b> Exception: Cross-road drainage of busy roads
<ul style="list-style-type: none"> <li><b>(A)</b> Road concrete and/or concrete sheets or paving bed</li> <li><b>(B)</b> Cast asphalt</li> </ul>	<ul style="list-style-type: none"> <li><b>(A)</b> Road concrete and/or concrete sheets or paving bed</li> <li><b>(B)</b> Cast asphalt</li> </ul>

All length specifications in millimetres



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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