

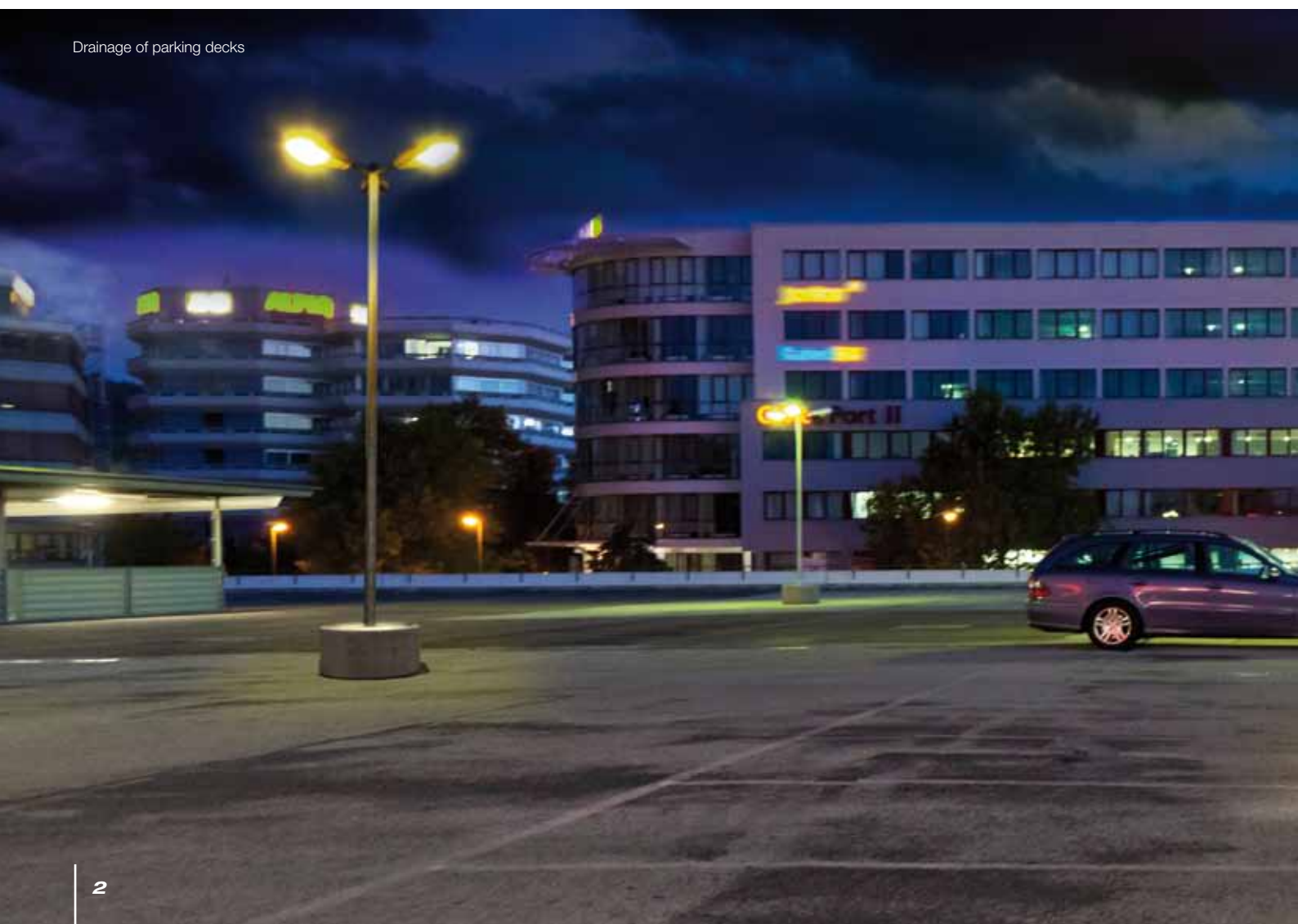
KE-100, KE-150, KE-200

Channel drainage for the load classes A15 to E 600



04	<i>ANRIN Reinforced edge systems</i> Material/Composition/Properties
06	<i>Applications</i> Overview of the load classes
08	<i>KE-100 reinforced edge channels</i> Product specifications/accessories
10	<i>KE-150 reinforced edge channels</i> Product specifications/accessories
12	<i>KE-200 reinforced edge channels</i> Product specifications/accessories
16	<i>Cover gratings</i> Grating design
20	<i>Fastening technology</i> TwistLock fastening/SnapLock fastening
22	<i>UNILINK® Joint</i> Joint system/sealing technology
24	<i>Slope types</i> Slope invert, stepped invert and constant invert
26	<i>Example installations</i> Load classes A15, B125, C250, D400–E600

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!

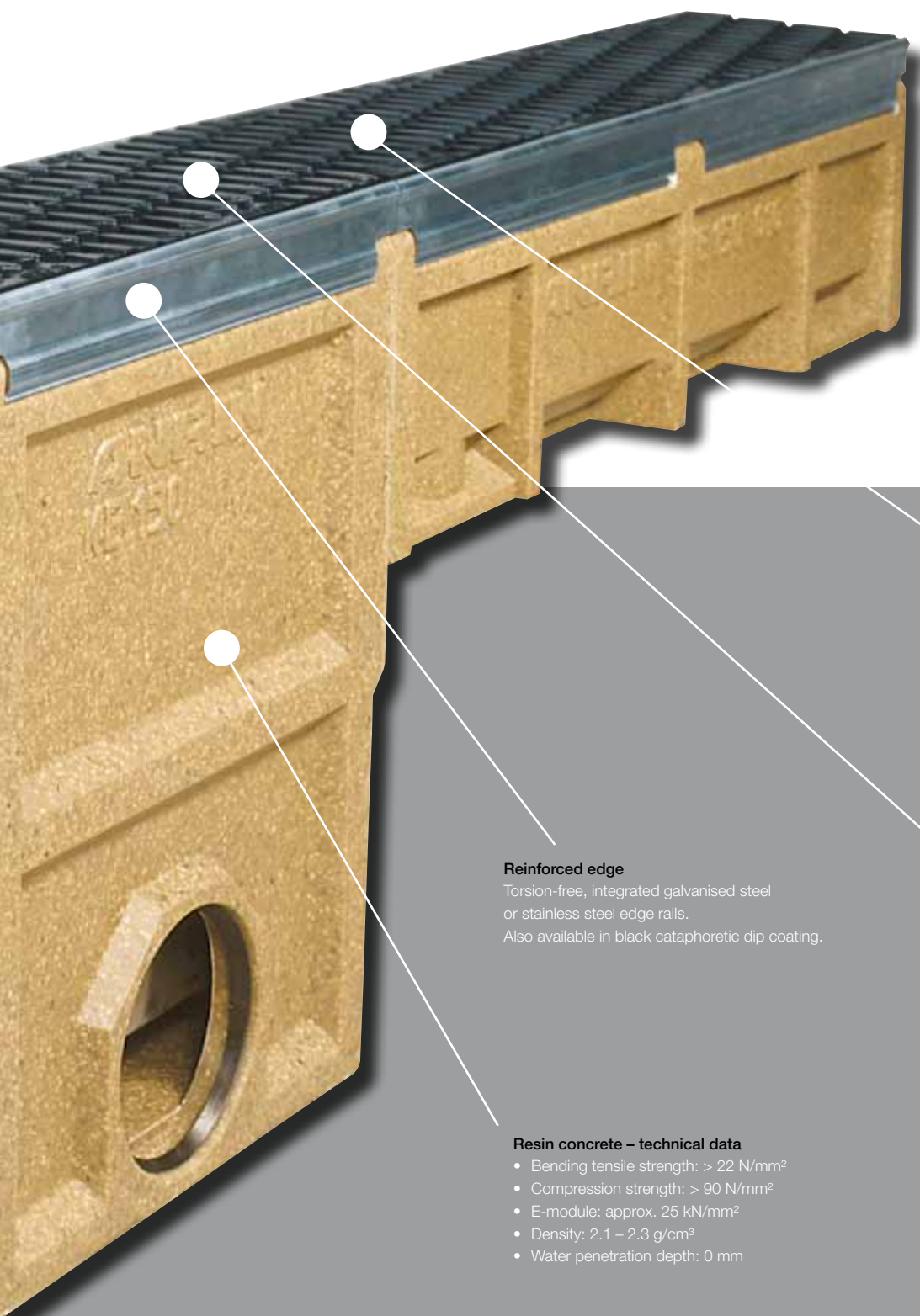


Perforations on the 50 cm elements for
T-junctions
Elbow joints
Cross junctions

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/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 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

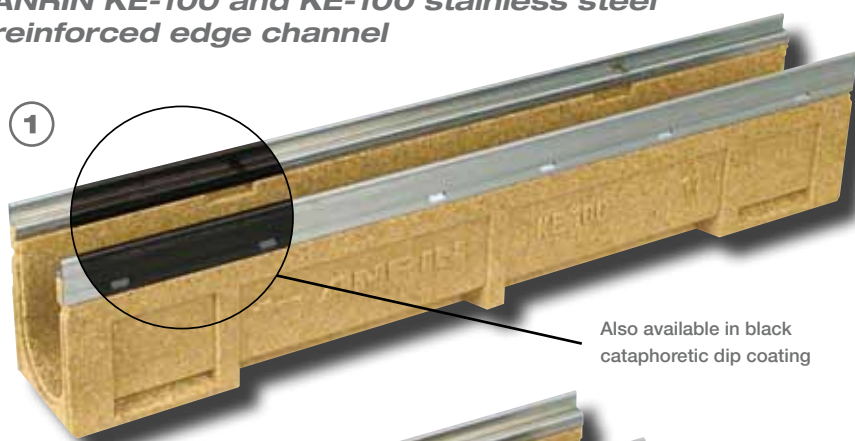
6 Parking lot, Regensburg



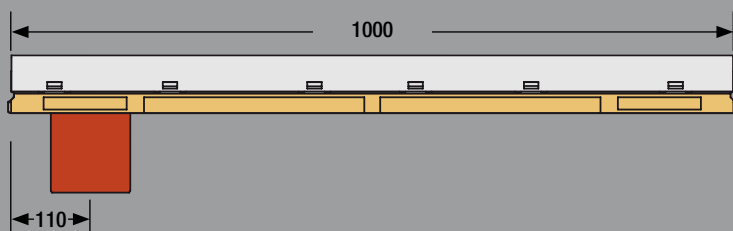
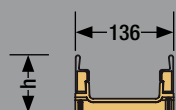
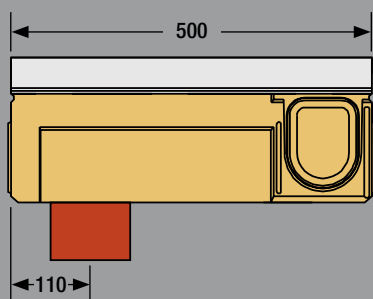
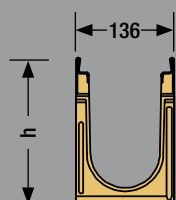
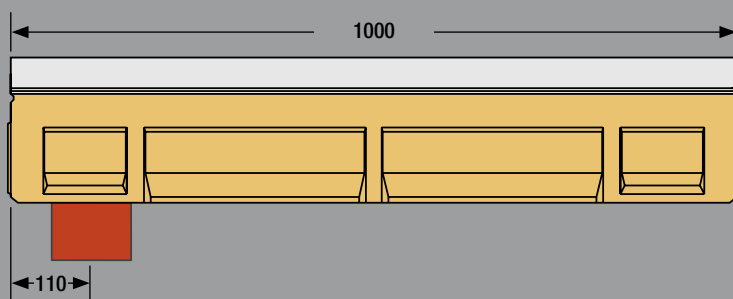
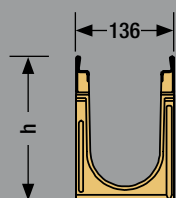
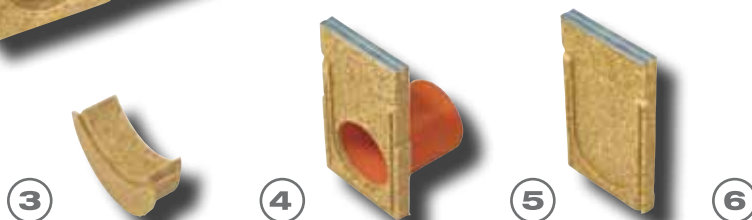
Load classes	Areas of application	KE-100	KE-150	KE-200
A15 (test force 15 kN)	Cycle path and footpaths	●	●	●
	School yards	●	●	●
	Green areas, Gala-Bau	●	●	●
B125 (test force 125 kN)	Walkways, pedestrian zones	●	●	●
	Parking lots, parking decks	●	●	●
	Garage entrances, courtyards	●	●	●
C250 (test force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



- ① **KE-100**
100 cm
- ② **KE-100**
50 cm
- ③ **Pipe socket**
- ④ **End cap**
with pipe connection DA/OD 110
- ⑤ **End cap**
- ⑥ **Sump unit**
with dirt trap bucket
DA/OD 110/160 NBR seal rings

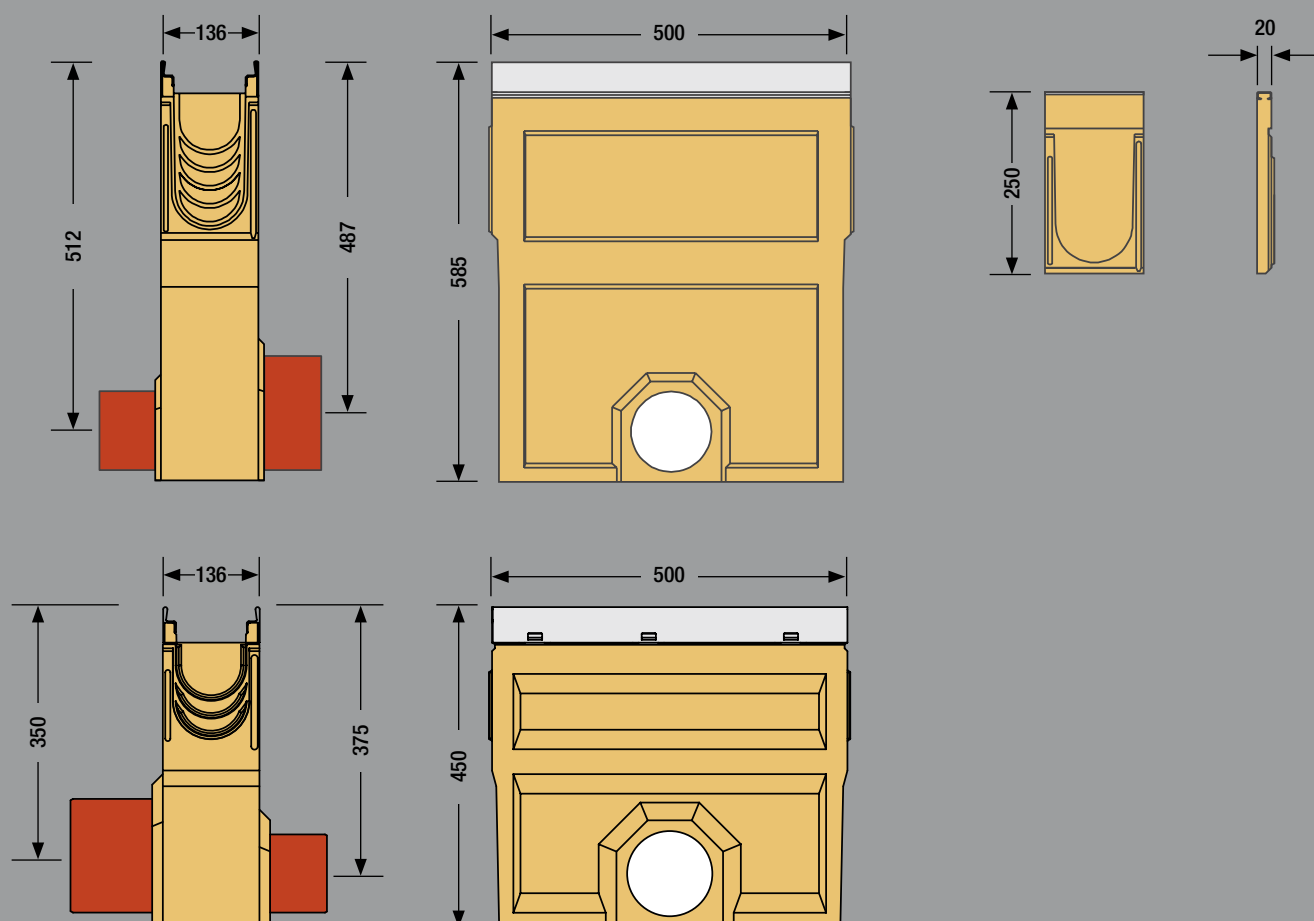


Product specifications	KE - 100	Sump unit
Material	Resin concrete	Resin concrete
Length	50 cm and 100 cm	50 cm
Width	13.6 cm	13.6 cm
Height	6.0 cm, 8.0 cm, 10.0 cm	58.5 cm
	15.0 – 25.0 cm	45.0 cm (low height)
Edge type	Steel edge rail, 6 mm edge width; galvanised, stainless steel or cataphoretic dip-coated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

TwistLock fastening



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

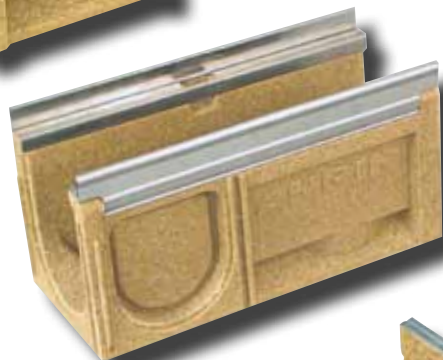


ANRIN reinforced edge channel
KE-150 and KE-150 stainless steel

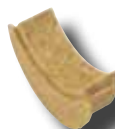
①



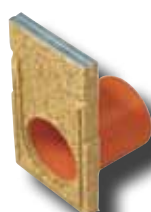
②



③



④



⑤



⑥



① **KE-150**
100 cm

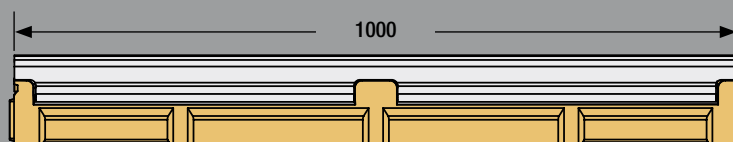
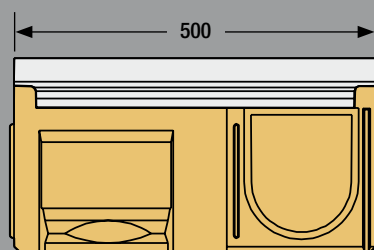
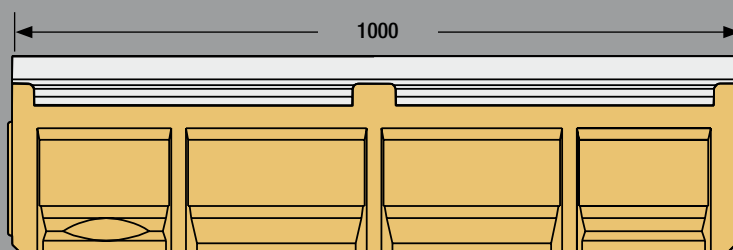
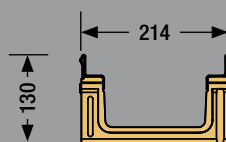
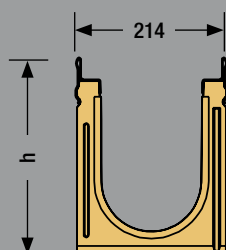
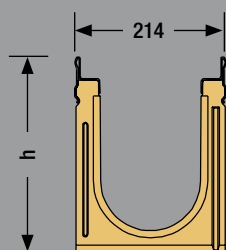
② **KE-150**
50 cm

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

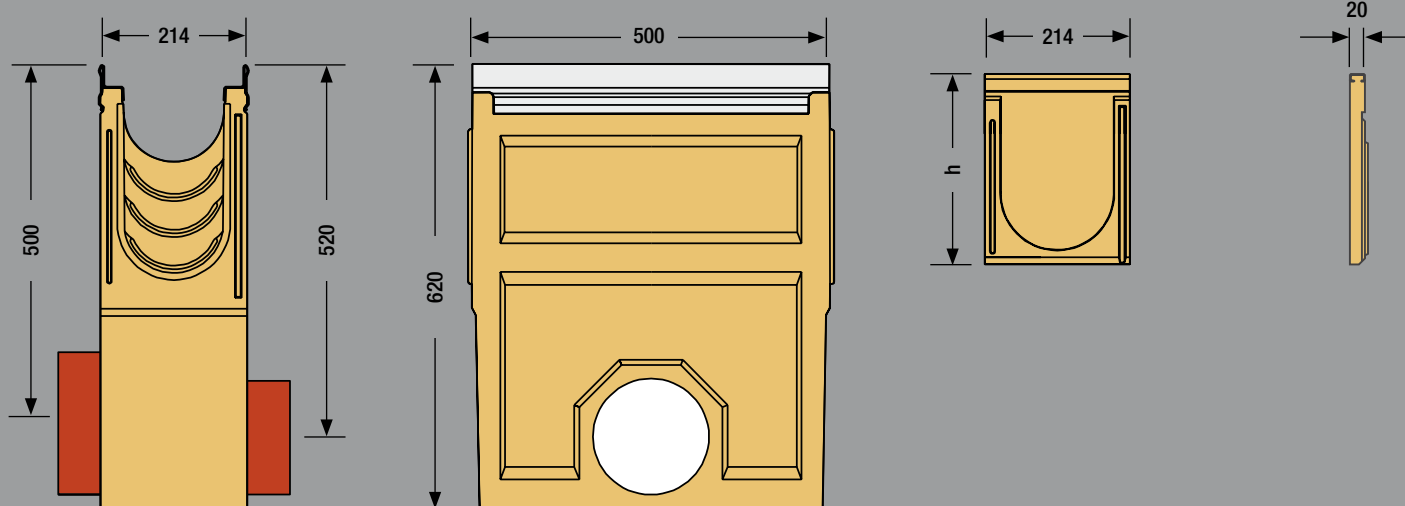


Product specifications	KE - 150	Sump unit
Material	Resin concrete	Resin concrete
Length	50 cm and 100 cm	50 cm
Width	21.4 cm	21.4 cm
Height	13.0 cm, 22.0 to 32.0 cm	62.0 cm
Edge type	Steel edge rail, 6 mm, galvanised or stainless steel	
Nominal width	150 mm	150 mm
Load class	A15 to E600	A15 to E600
Slope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

SnapLock fastening



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



ANRIN

SERVICE provides custom solutions and possibilities for the contract business. Here you benefit from reliable cooperation with our technical office staff and good contact with the field staff. ANRIN is certified according to DIN EN ISO 9001.

ANRIN DIRECT CONTACT: +49 (0) 29 47.97 81-0



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

①



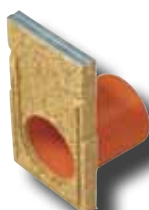
②



③



④



⑤



⑥



① **KE-200**
100 cm

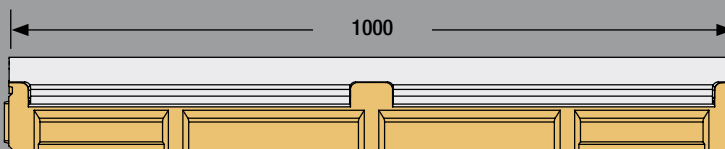
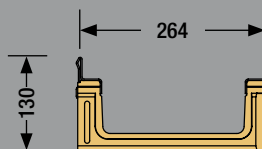
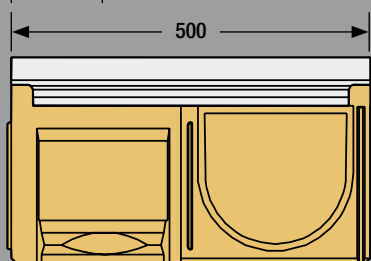
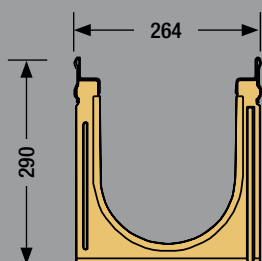
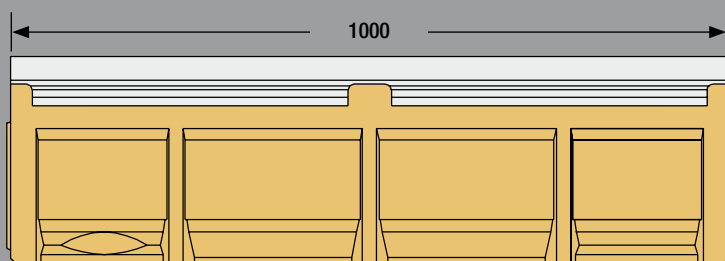
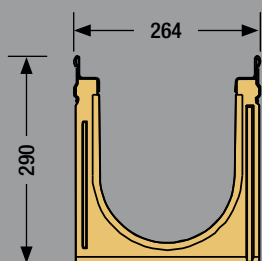
② **KE-200**
50 cm

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

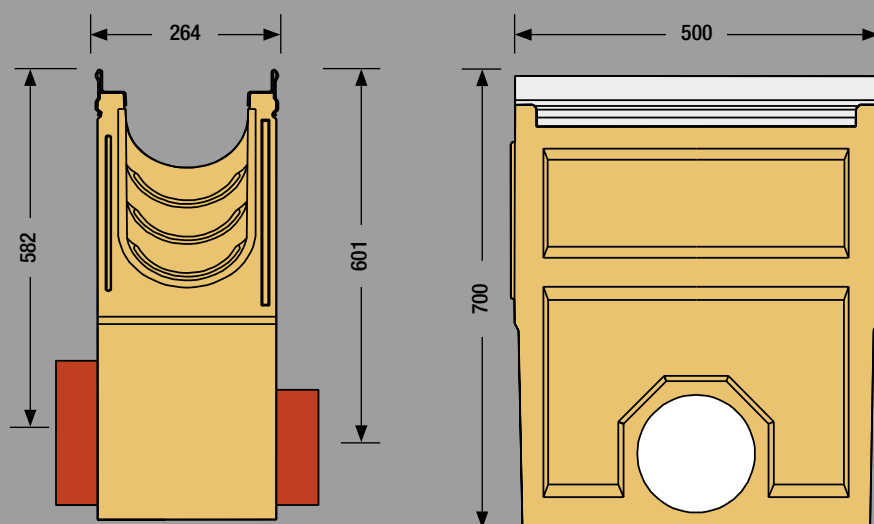


Product specifications	KE - 200	Sump unit
Material	Resin concrete	Resin concrete
Length	50 cm and 100 cm	50 cm
Width	26.4 cm	26.4 cm
Height	13.0 cm, 29.0 cm	70.0 cm
Edge type	Steel edge rail, 6 mm, galvanised or stainless steel	
Nominal width	200 mm	200 mm
Load class	A15 to E600	A15 to E600
Slope type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

SnapLock fastening



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



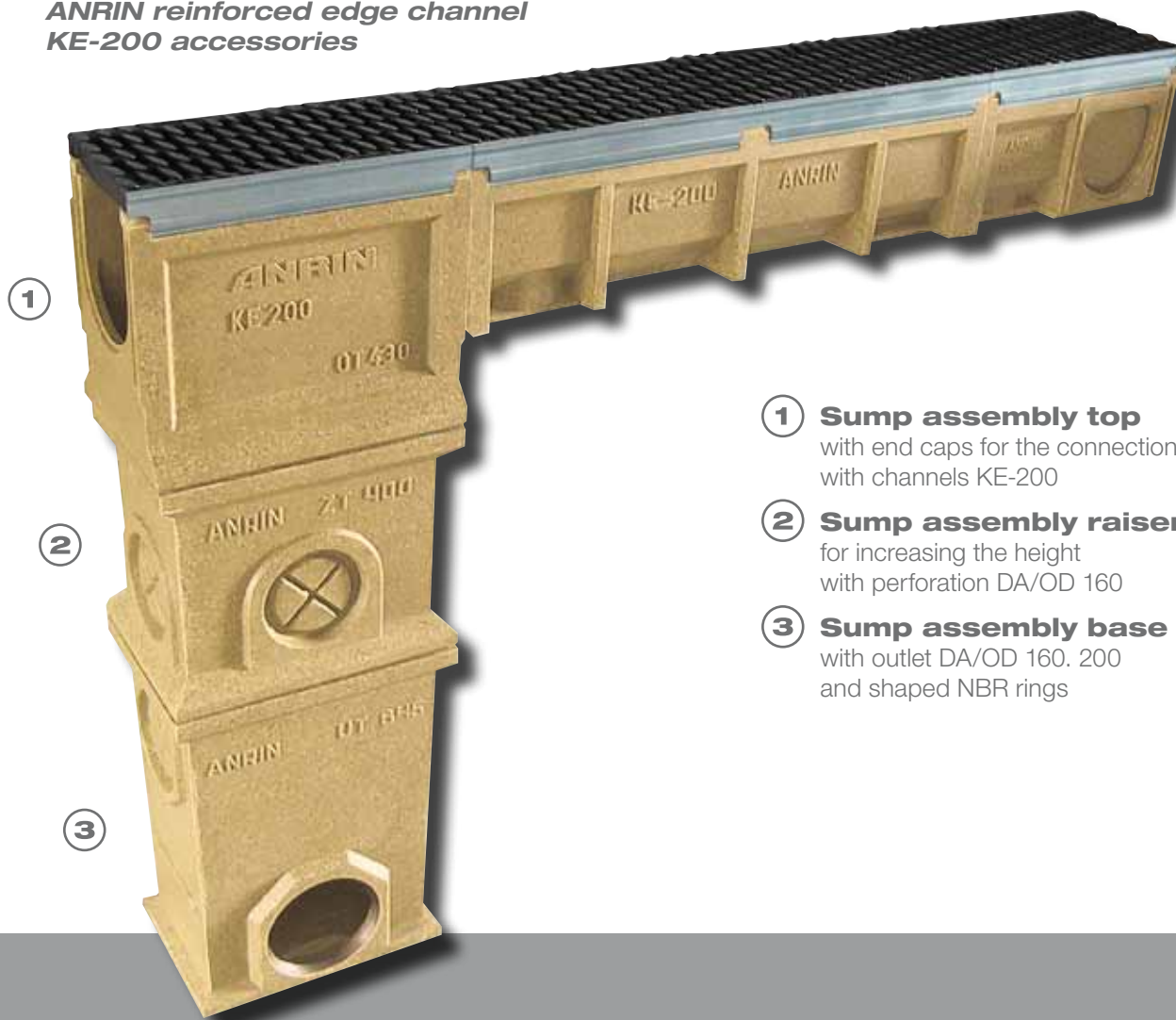
ANRIN

SERVICE provides custom solutions and possibilities for the contract business. Here you benefit from reliable cooperation with our technical office staff and good contact with the field staff. ANRIN is certified according to DIN EN ISO 9001.

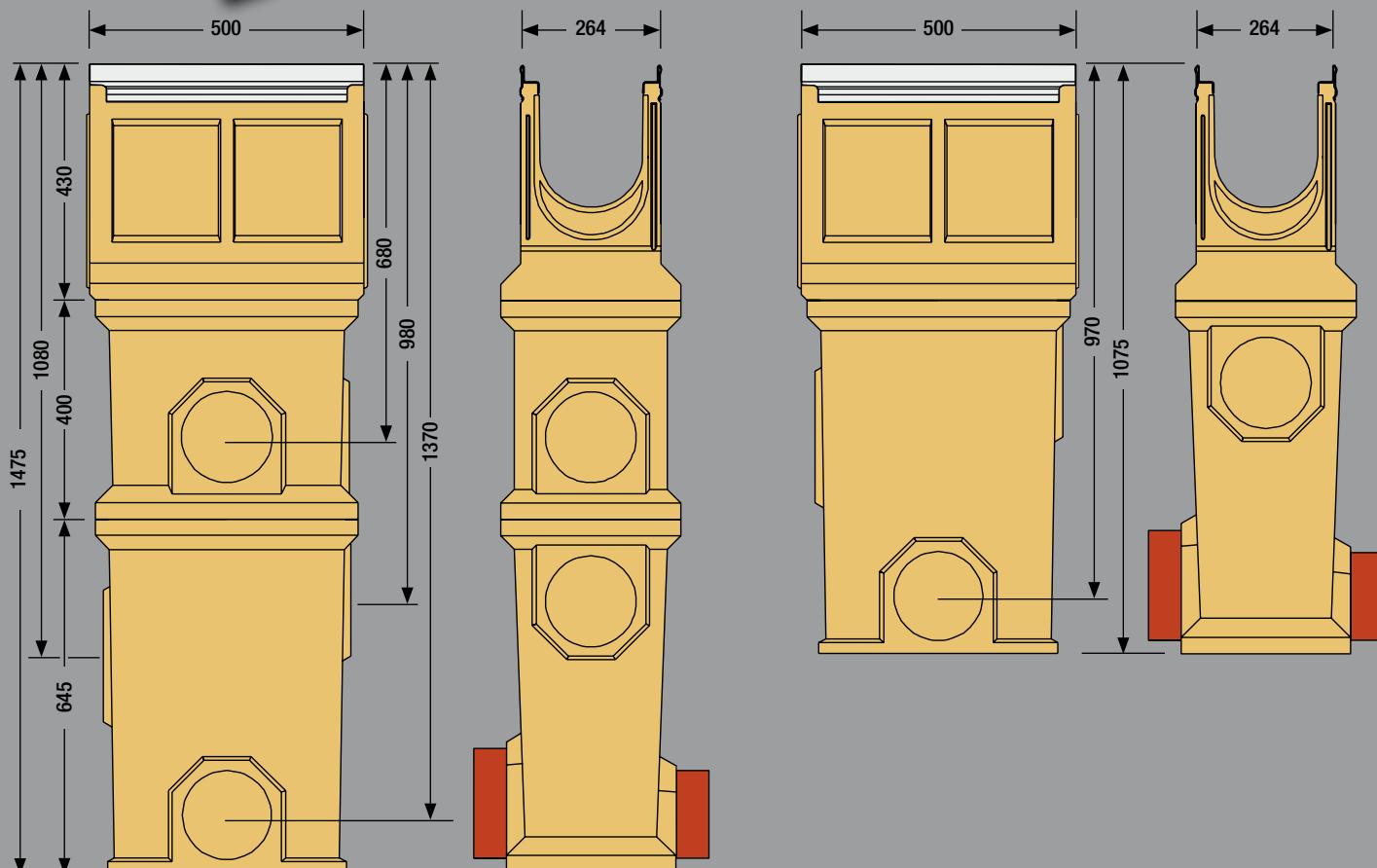
ANRIN DIRECT CONTACT: +49 (0) 29 47.97 81-0



**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

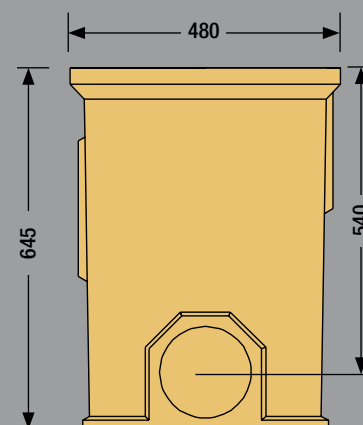
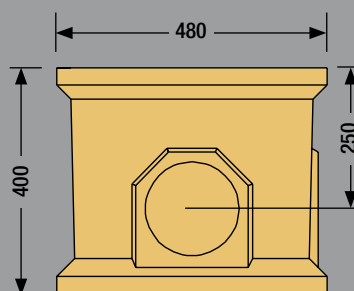
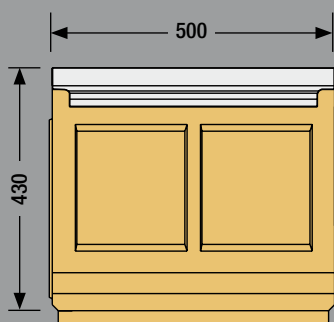


Produktspezifikationen	KE-200 sump assembly
Material	Resin concrete
Length	50 cm
Width	26.4 – 33.0 cm
Height	147.5 and 107.5 cm
Edge type	Steel edge rail, 6 mm, galvanised or stainless steel
Nominal width	200 mm
Load class	A15 to E600
Pipe connections	with DA/OD 160 and DA/OD 200 NBR seal rings
Joint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

SnapLock fastening



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



ANRIN

SERVICE provides custom solutions and possibilities for the contract business. Here you benefit from reliable cooperation with our technical office staff and good contact with the field staff. ANRIN is certified according to DIN EN ISO 9001.

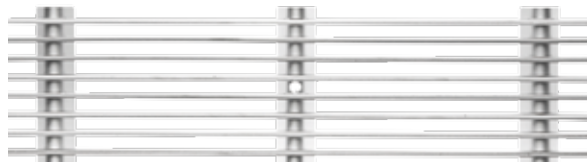
ANRIN DIRECT CONTACT: +49 (0) 29 47.97 81-0



**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



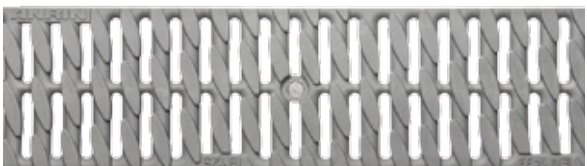
Longitudinal-bar grating, galvanised, stainless steel
Load classes: A15, Length: 50 cm, 100 cm, SW 11 mm



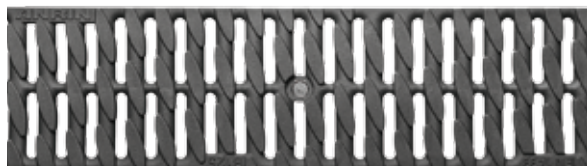
Mesh grating, galvanised, stainless steel
Load classes: B125, C250, D400, Length: 50 cm, 100 cm
MW 30 x 14 mm / 30 x 10 mm / 20 x 14 mm



Cross-bar grating, galvanised, stainless steel
Load classes: B125, Length: 50 cm, 100 cm, SW 13 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**



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



Slotted cast iron 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, cataphoretic dip coating
Load classes: C250, Length: 50 cm, SW 10 mm



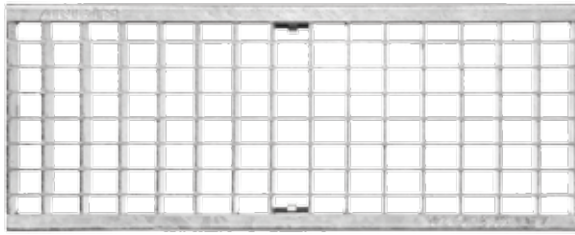
Slotted grating, HEELGUARD, cast iron, coated in black
Load classes: D400*, Length: 50 cm, SW 6 mm



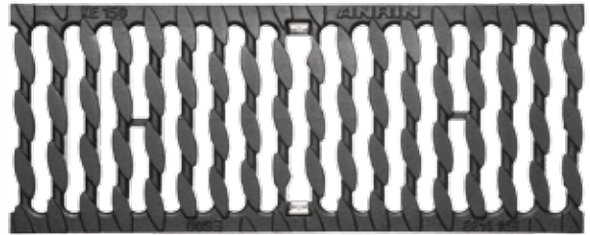
Slotted steel grating, MASSIV 32, cast iron, uncoated
Load classes: E600*, Length: 50 cm, SW 11 mm

* 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



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



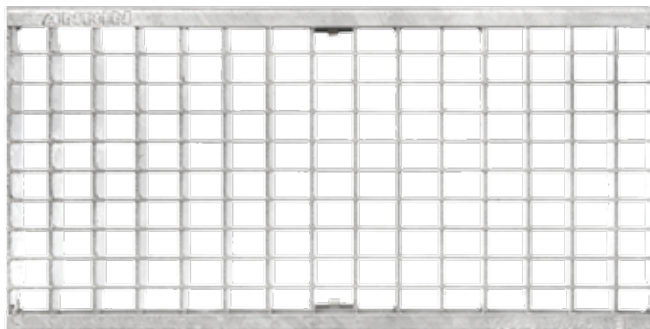
Longitudinal Grating, cast iron GJS
Load classes: D400*, E600*,
Length: 50 cm, MW 25 x 11 mm



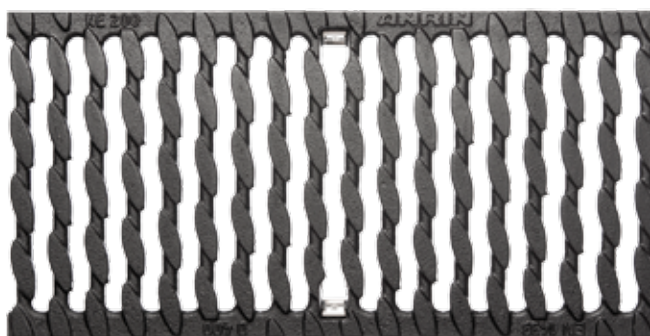
Slotted grating, HEELGUARD, cast iron, coated in black
Load classes: D400*
Length: 50 cm, SW 6 mm

* 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
Load classes: D400*, E600*, Length: 50 cm, SW 12 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

ANRIN fastening technology

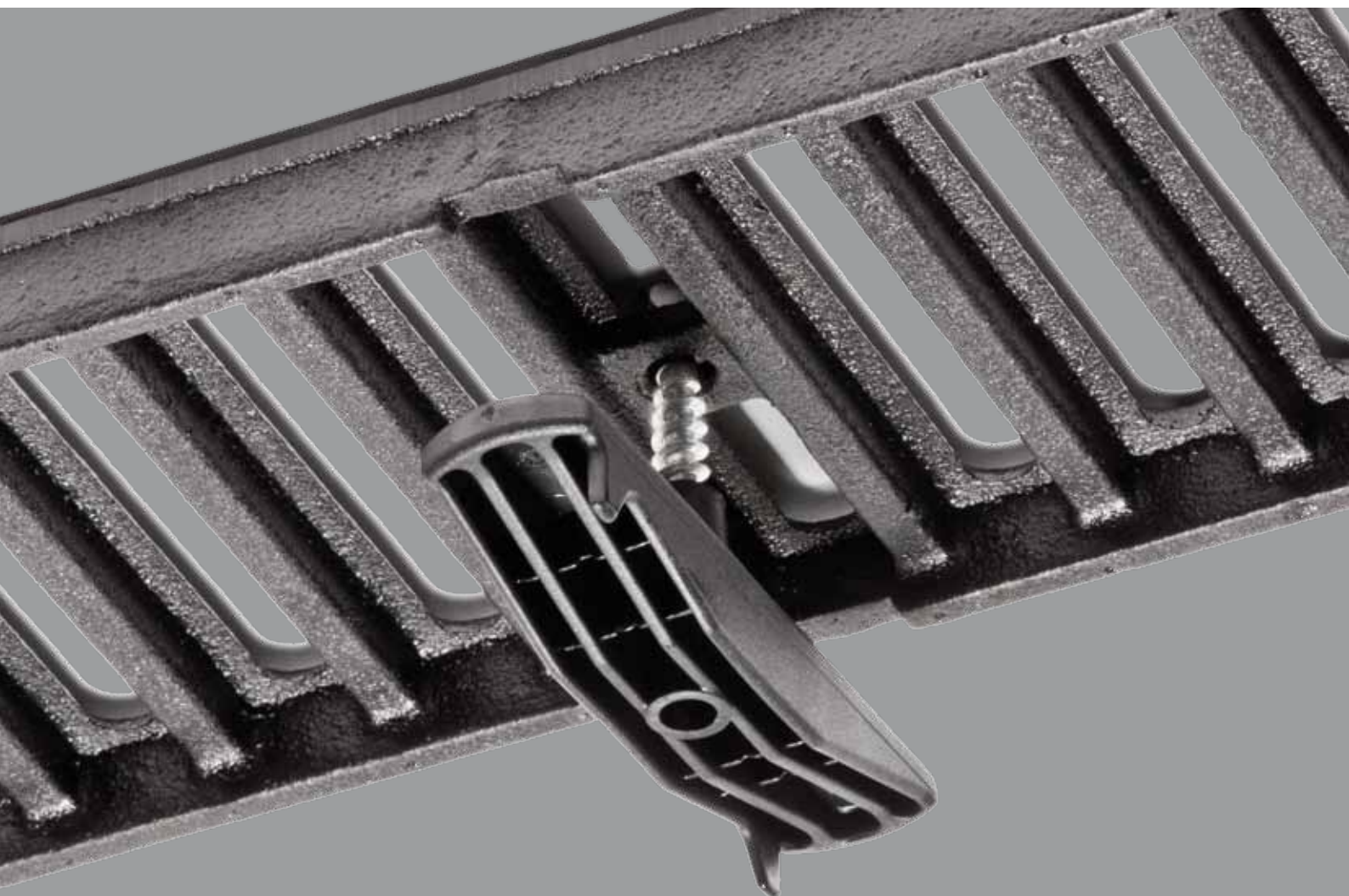
Decades of experience and thorough product development in the areas of assembly, maintenance and cleaning of drainage systems have given rise to outstanding solutions for durable fastening technology.

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 00 508.7

IPC: 833F 1/00

Bezeichnung:
Büschelverriegelung

Gebrauchsmusterinhaber:
WILK Antriebe Rinn Geol. 59809 Anröchte, DE

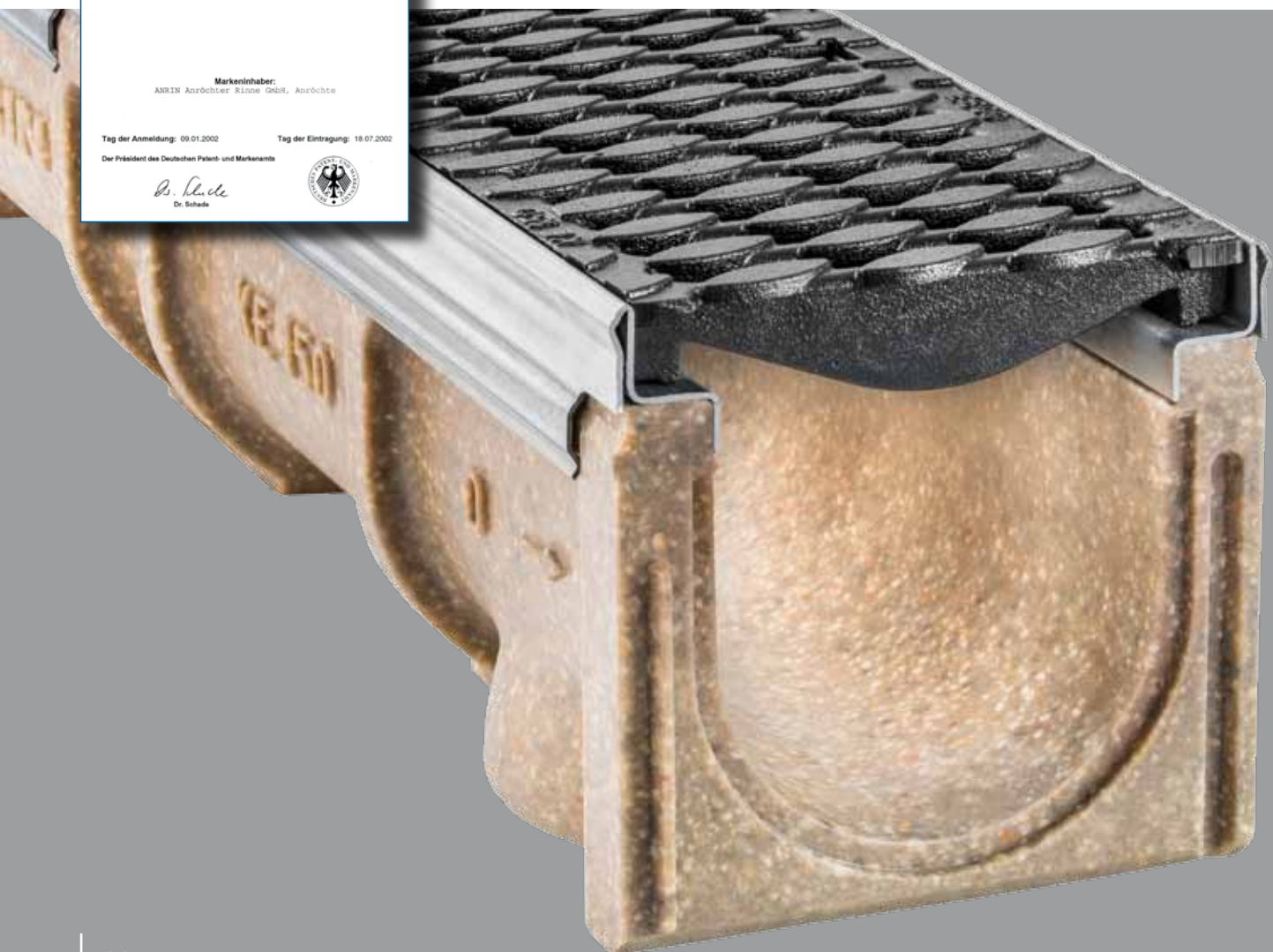
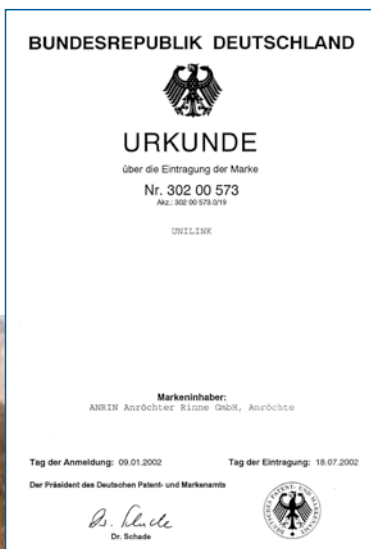
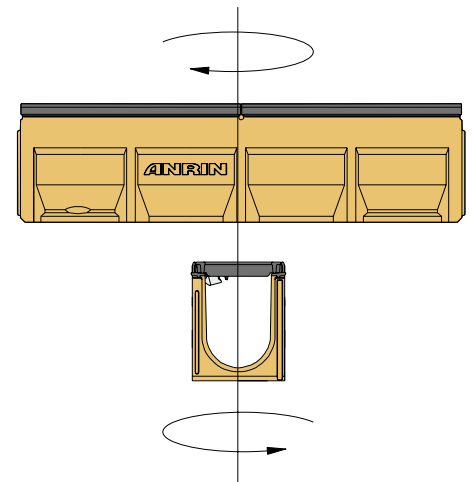
Tag der Anmeldung: 15.01.2002
Tag der Eintragung: 21.03.2002

 Der Präsident des Deutschen Patent- und Markenamts
Dr. Hilde
Dr. Hilde

ANRIN UNILINK® joint

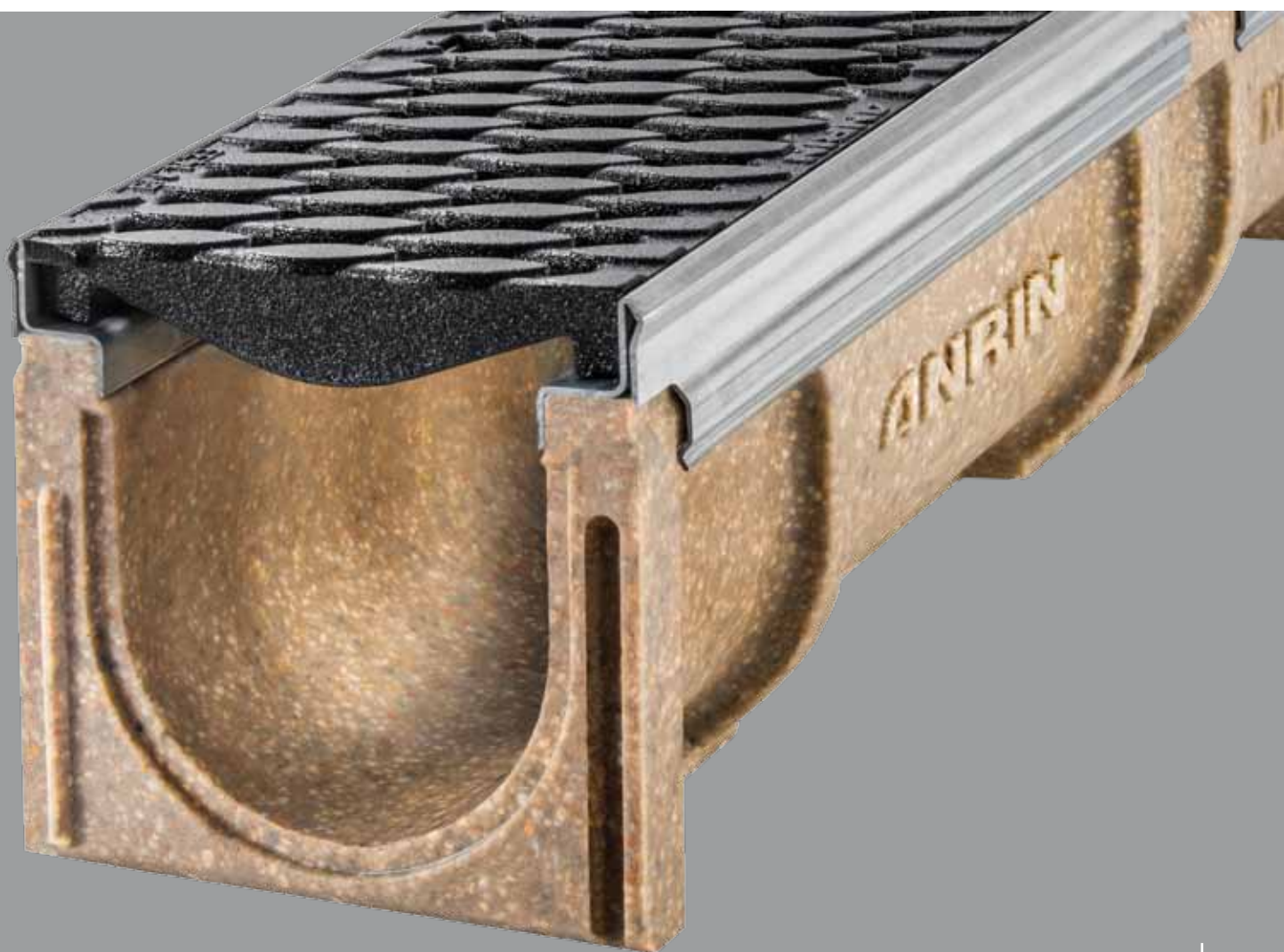
The optimised UNILINK® joint system eliminates the traditional differentiation between the beginning and end of the channel. Elements of an equal installation height can be joined in any arbitrary direction.

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!

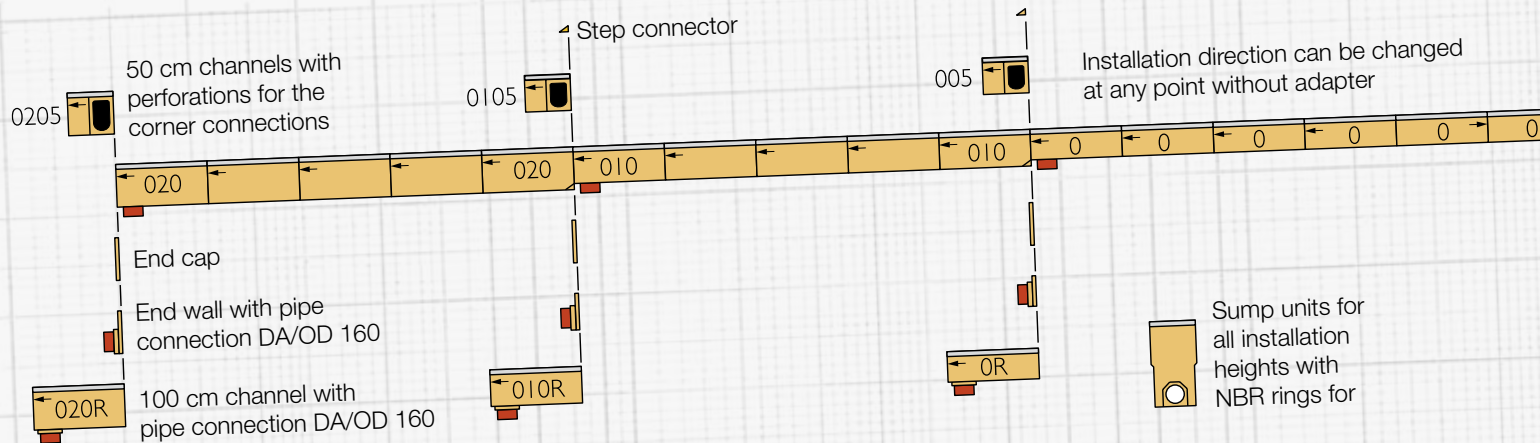


ANRIN sealing technology

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.

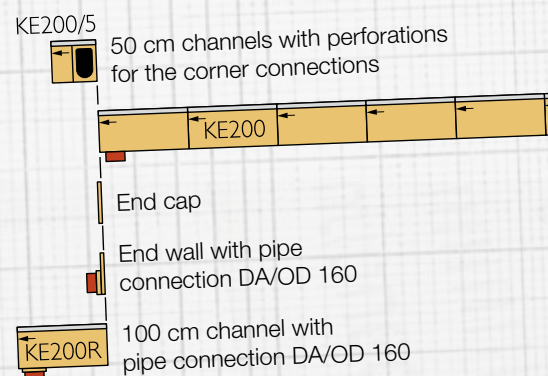


Slope types

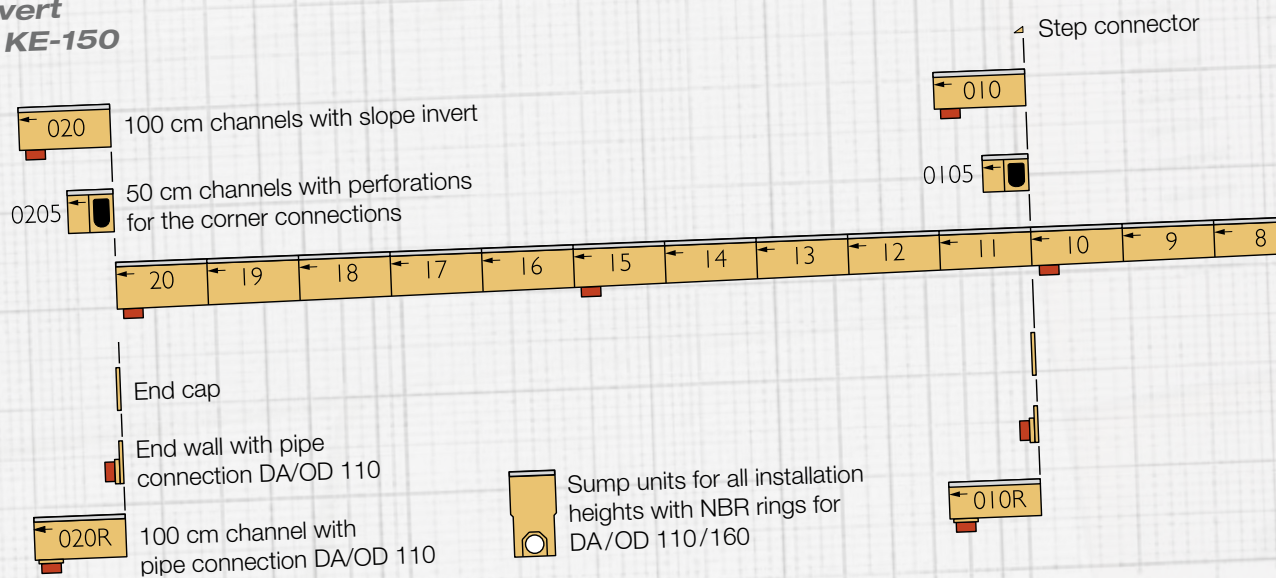


Stepped invert
KE-100, KE-150

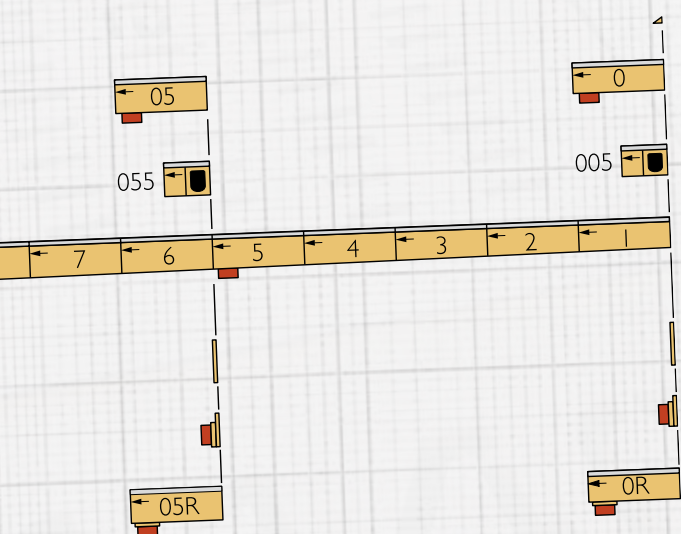
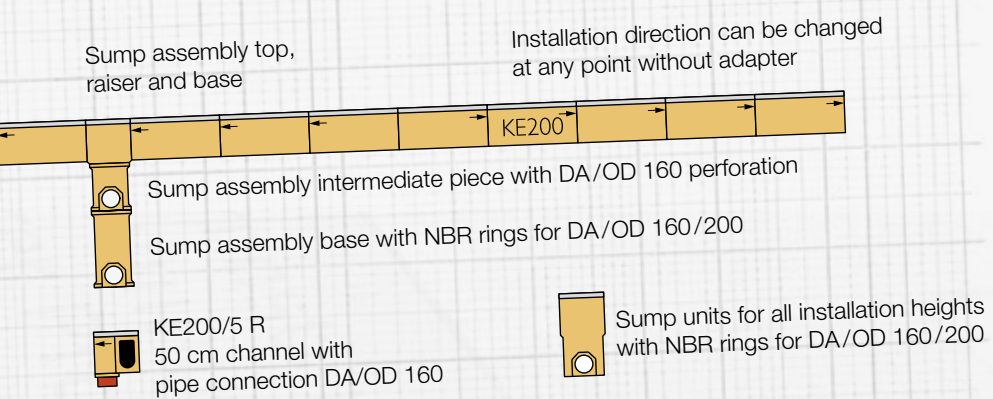
Constant invert
KE-200



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		●	●

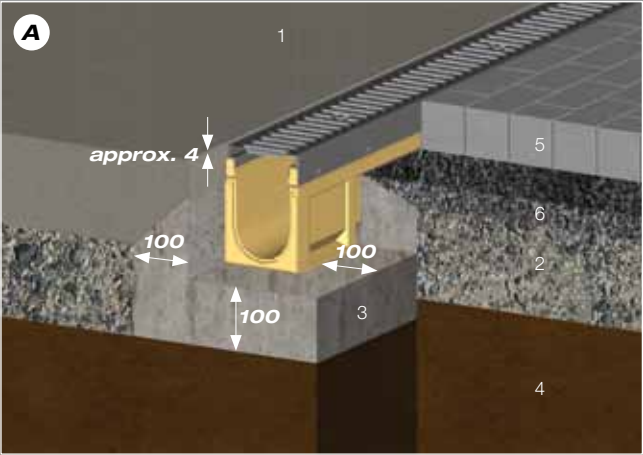
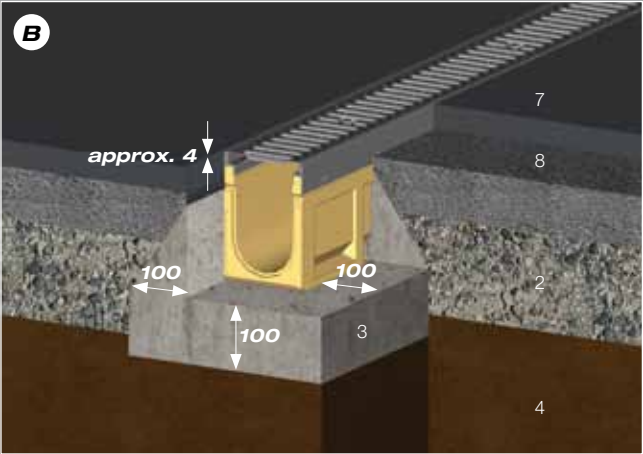
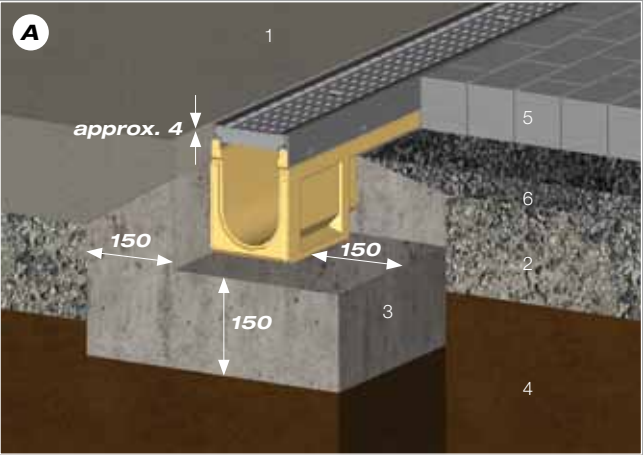
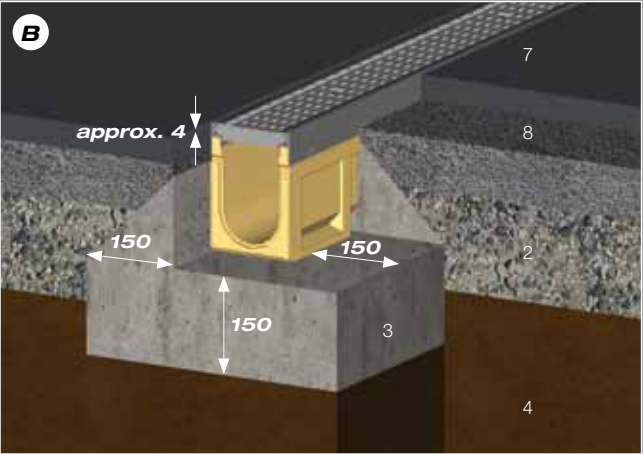


ANRIN installation information

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
(A) Road concrete and/or concrete sheets or paving bed (B) Cast asphalt	(A) Road concrete and/or concrete sheets or paving bed (B) Cast asphalt
 	 

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.

ANRIN GmbH
Siemensstraße 1
D-59609 Anröchte
Phone: +49 (0) 29 47.97 81-0
Fax: +49 (0) 29 47.97 81-50
Email: info@anrin.com
Internet: www.anrin.com

Dealer stamp

