

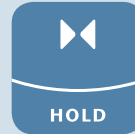
# ACO Civicline

Product Catalogue





# ACO. we care for water

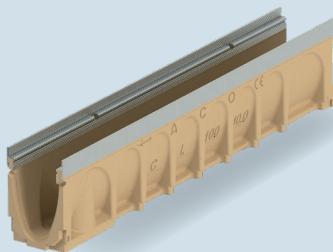


Your question – our answer:

## ACO WaterCycle

The ACO WaterCycle supports you at every stage of drainage, rainwater management and treatment planning and creates the solutions for tomorrow's environmental conditions.

Where surface water management and water protection begins



### ACO surface drainage

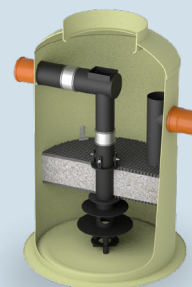
- Drainage channels
- Road and yard drains
- Gully tops
- Manhole covers

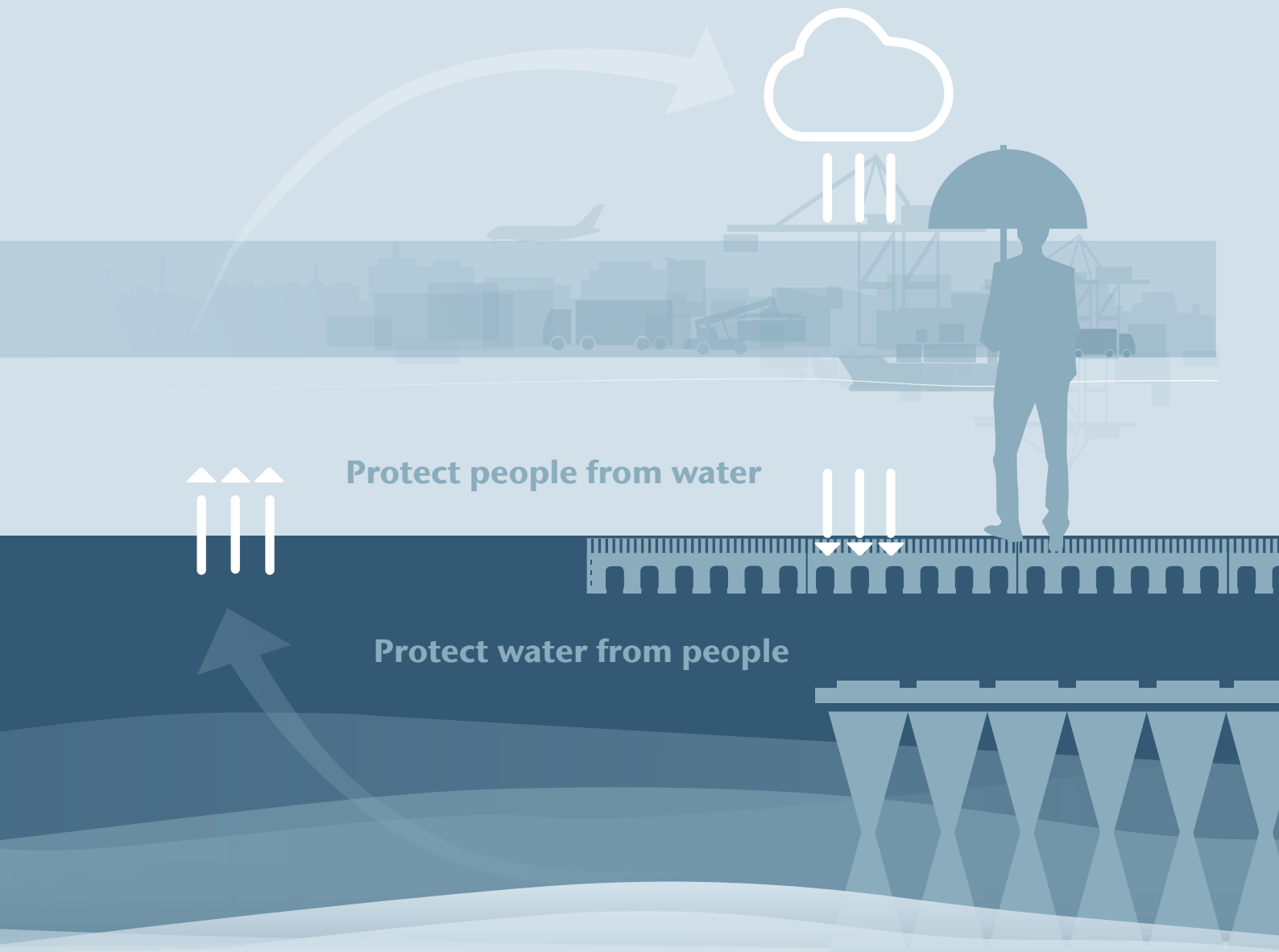


### ACO cleaning systems

- Separators
- Sedimentation and filter systems

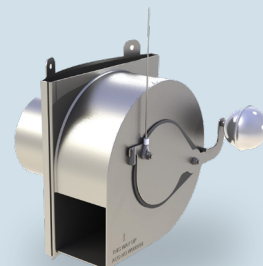
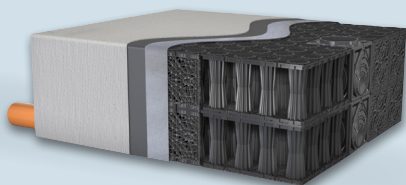
Achieving the right water quality





Reducing surface runoff to a natural level

Control discharge rate to the required level



#### ACO retention and storage systems

- Emergency systems
- Infiltration and attenuation systems
- Surface water retention basin



#### ACO control systems

- Flow control systems
- Pump shafts

# ACO External drainage range

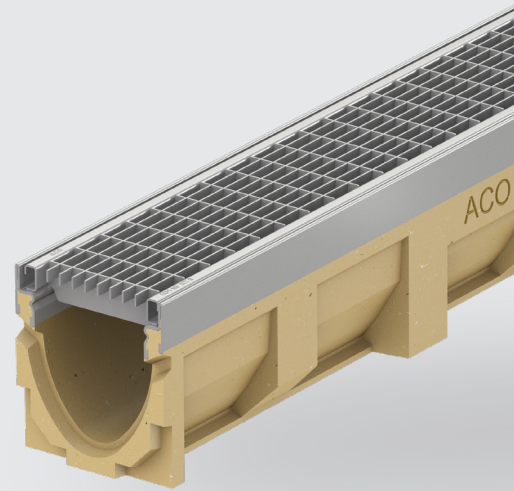
## Qmax®

High-capacity slot drainage made of HD-PE with integrated seal and option for water retention or attenuation



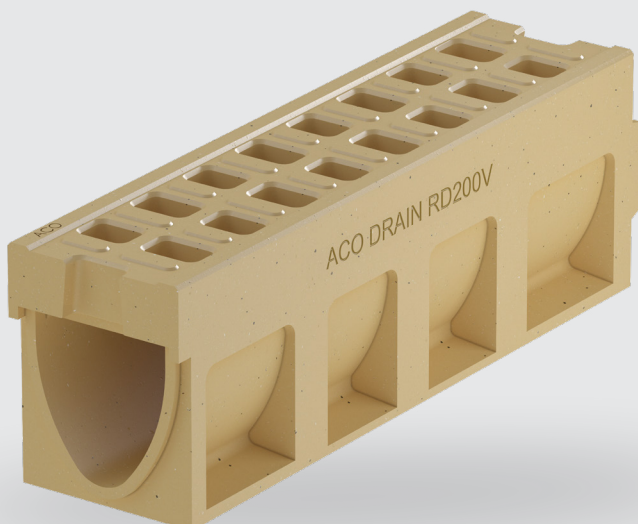
## Multiline

Polymer concrete channel body with large variety of gratings made of cast iron, stainless, galvanized steel or plastic



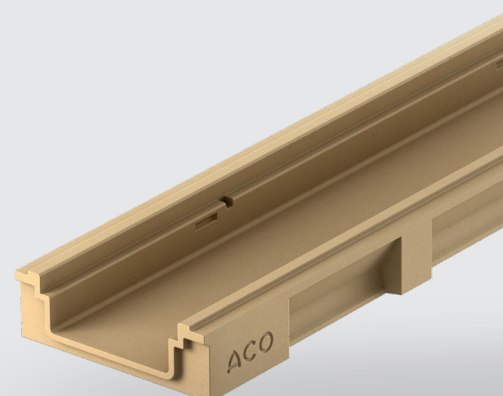
## Monoblock

Monolithic polymer concrete channels for ultimate durability



## Parkdeck

Finest solution for parking houses, shallow channel with 100% tight connection to epoxy layer, resistant to aggressive conditions







#### Note

Any more questions?  
askACO – your local  
ACO team is proud to offer  
experience and service

[www.aco.com/en/  
products-and-services/askaco](http://www.aco.com/en/products-and-services/askaco)

## **ACO. we care for water**

ACO Group 06

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ACO Civiline  
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# ACO. we care for water

ACO is a Water-Tech company that protects water. Building on our global drainage expertise that protects people from water, we increasingly see our mission as also protecting water from people.

With the ACO WaterCycle, ACO provides systems that collect and channel, clean, retain and ultimately reuse water. In this way, ACO contributes to the preservation of clean groundwater as a vital resource, and makes a contribution to tomorrow's world. In its Agenda 2030, the UN global community set the improvement of water quality as one of 17 sustainable development goals.

Intelligent drainage systems from ACO increasingly use smart technology to ensure that rainwater and wastewater are drained, or temporarily stored. With innovative separation and filter technology, we prevent water contamination by pollutants such as fat and grease, fuels, heavy metals and microplastics.

Today, ACO goes one step further: we accept the challenge of reusing water, and thus establishing a resource-saving cycle. For all products and systems, ACO attaches great importance to durability, reusability and a low carbon footprint. The pursuit of sustainability is an ongoing process that we strive to meet every day.

The ACO Group is a global family business that is one of the world market leaders in the Water-Tech segment. Founded in Schleswig-Holstein in 1946, it operates as a transnational network in over 50 countries. Worldwide, ACO is characterised by a high level of decentralised ownership, and explicit regional market proximity.

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



**Holder**  
Iver and Hans-Julius Ahlmann



**Headquarters of the ACO Group**  
in Rendsburg/Büdelstorf





**5.400**

employees in more than  
50 countries (Europe, North  
and South America, Asia,  
Australia, Africa)

**1.14 Billion**

Euro Sales in 2023

**41**

production sites  
in 20 countries



ACO Academy  
for practical training

# ACO Civicline system overview

## Product information

A channel drainage system for light to medium duty traffic applications up to load class C 250 according to EN 1433. It is manufactured from polymerconcrete high strength material and available in two widths – 100 mm and 150 mm. The system is CE marked and fully certified to EN 1433: 2002.



100% recyclable



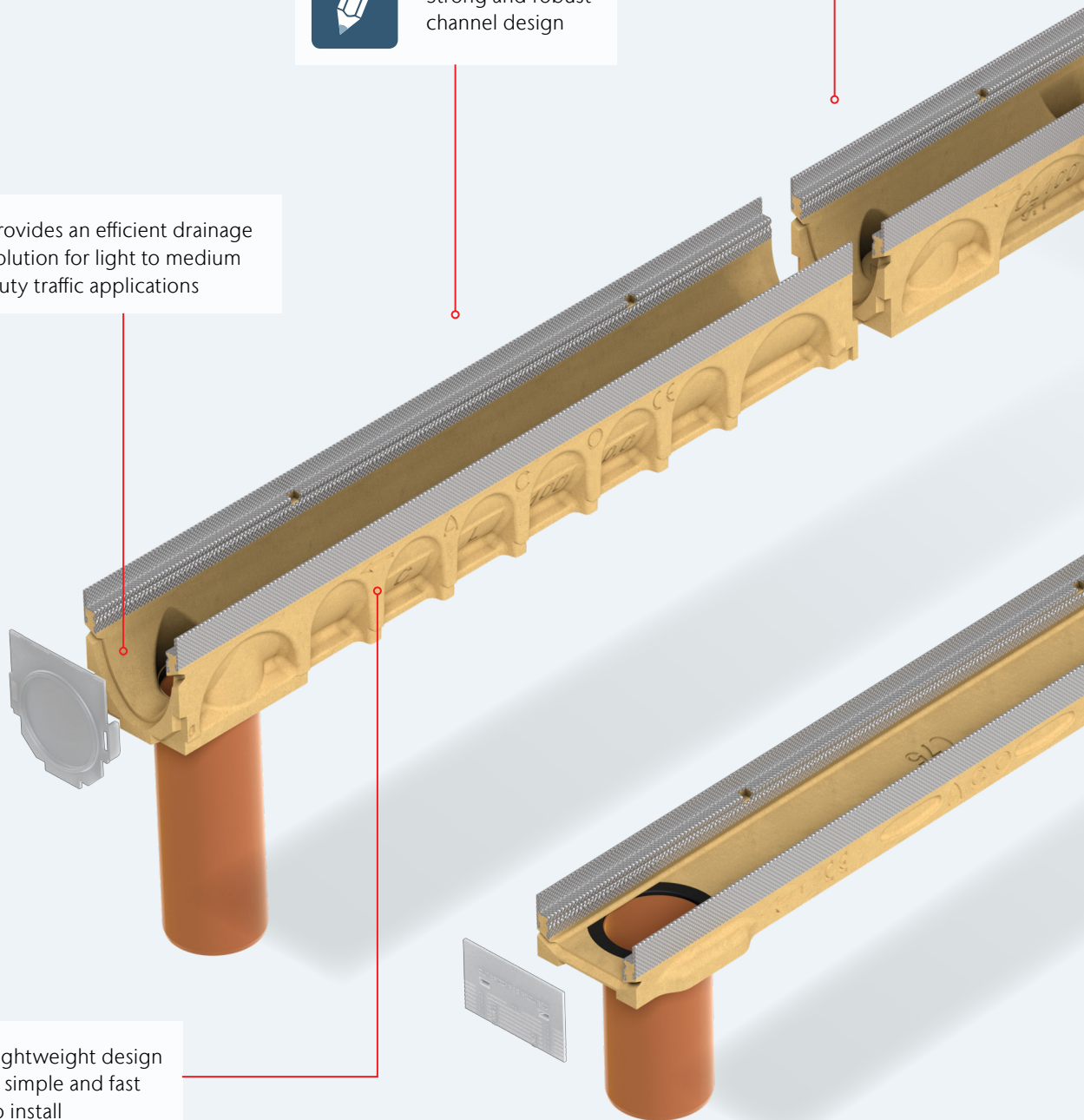
Strong and robust  
channel design



Provides an efficient drainage  
solution for light to medium  
duty traffic applications



Lightweight design  
is simple and fast  
to install







Channel design improves flow velocity, promotes self cleansing

#### Typical applications

- Commercial developments
- Light industrial units
- Public landscaping
- Car parking
- Residential developments



Innovative galvanised steel edge rail for improved strength and bonding



Unique ACO DRAIN®lock grating fixing improves hydraulic capacity



CE marked and  
EN 1433: 2002 certified



Extensive choice of  
Drainlock gratings

## Range layout

To support a wide variety of catchment depths, hydraulic capacities and applications, the system is available in two channel widths, 100 mm and 150 mm and has a choice of constant depths and shallow depth channels.

# Line drainage system Civicline CL 100

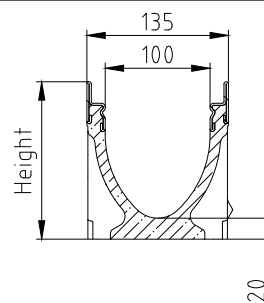
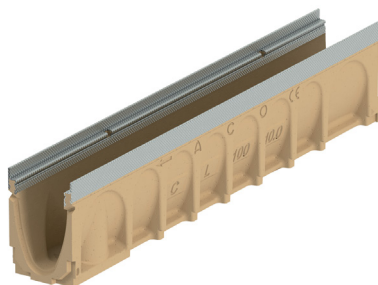
## Product information

### Product benefits

- ACO DRAIN® sealant groove (SF)
- V cross section
- Drainlock boltless locking
- Made from polymerconcrete
- Innovative strengthened steel rail

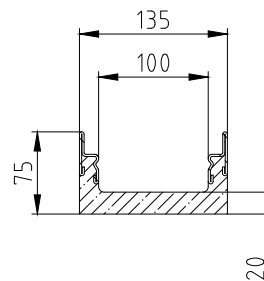
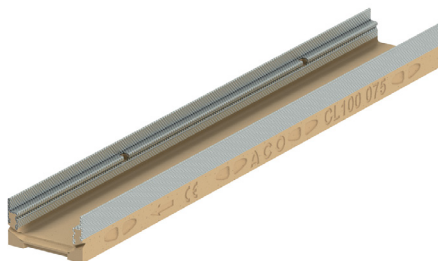
- According to EN 1433
- Clear width 100 mm
- Load class A15 - C250
- Field of application: vehicular and pedestrian area

### Constant depth drainage channels with steel galvanised edge rails



Type	Dimensions			Invert depth	Weight	Item no.
	Length [mm]	Width [mm]	Height [mm]			
0.0 <sup>1)</sup>	1000	135	150	130	13.2	413210
0.1 <sup>1) 2)</sup>	500	135	150	130	7.6	413211
10.0 <sup>1)</sup>	1000	135	200	180	16.2	413214
10.1 <sup>1) 2)</sup>	500	135	200	180	9.2	413215

### Shallow depth drainage channels with steel galvanised edge rails

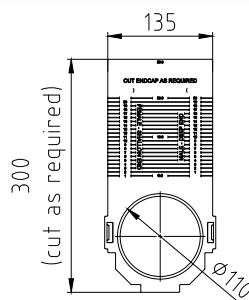


Type	Dimensions			Invert depth	Weight	Item no.
	Length [mm]	Width [mm]	Height [mm]			
075	1000	135	75	55	9.2	413212
075V <sup>3)</sup>	1000	135	75	55	8.85	413213

<sup>1)</sup> Indicates channels supplied with a preformed Ø 110 mm knockout for vertical outlet.  
<sup>2)</sup> Indicates side knockout for 90° channel connection. Knockout on both sides of the channel.



### Multifunctional plastic endcap in grey colour (closing/outlet Ø110 mm)



Type	Dimensions			Invert depth	Weight	Item no.
	Length [mm]	Width [mm]	Height [mm]		[kg]	
		135	75–300	50	0.16	23404*

### Sump units, 500 mm – short form (with LLS pipe connection)



- With NBR lip labyrinth seal (LLS) for horizontal, liquid-tight pipe connection
- With connection cut-out template up to building height 10
- With plastic (PP) sludge bucket

Dimensions			Pipe conn.	PU	Galvanised steel	
Length [mm]	Width [mm]	Height [mm]	DN/OD [mm]		Weigh [kg]	Item no.
500	135	450	110	10	26	132828

### Accessories for galvanised steel design

	Description	Suitable for	Weight [kg]	PU [piece]	Item No.
	<b>Universal closing end cap</b> <ul style="list-style-type: none"> <li>■ For channel beginning and end</li> <li>■ Made of polymer concrete</li> <li>■ With galvanised steel edge protection</li> <li>■ Length 20 mm</li> </ul>	■ V 100 S 0. – 20.	1.6	15	12385
	<b>End cap for channel end (LLS)</b> <ul style="list-style-type: none"> <li>■ Made of polymer concrete</li> <li>■ With integrated lip labyrinth seal (LLS) DN/OD 110 for horizontal, liquid-tight pipe connection</li> <li>■ With galvanised steel edge protection</li> <li>■ Length 30 mm</li> </ul>	■ V 100 S 0.	1.4	6	12386
		■ V 100 S 10.	1.7	6	12388

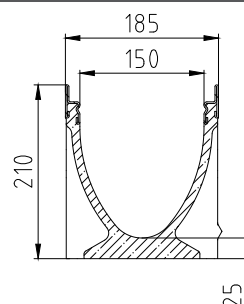
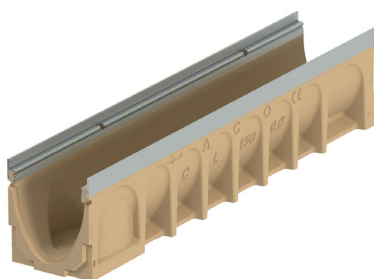
# Line drainage system Civicline CL 150

## Product information

### Product benefits

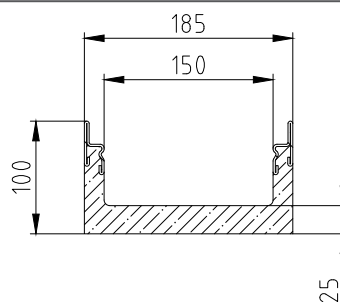
- ACO DRAIN® sealant groove (SF)
- V cross section
- Drainlock boltless locking
- Made from polymerconcrete
- Innovative strengthened steel rail
- According to EN 1433
- Clear width 150 mm
- Load class A15 - C250
- Field of application: vehicular and pedestrian area

### Constant depth drainage channels with steel galvanised edge rails



Type	Dimensions			Invert depth	Weight	Item no.
	Length [mm]	Width [mm]	Height [mm]			
0.0 <sup>1)</sup>	1000	185	210	185	21.6	413216
0.1 <sup>1) 2)</sup>	500	185	210	185	12.7	413217

### Shallow depth drainage channels with steel galvanised edge rails

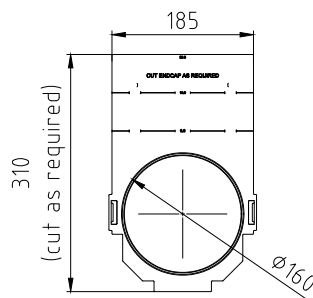


Type	Dimensions			Invert depth	Weight	Item no.
	Length [mm]	Width [mm]	Height [mm]			
0100	1000	185	100	75	15.0	413218
0100V <sup>3)</sup>	1000	185	100	75	14.2	413219

<sup>1)</sup> Indicates channels supplied with a preformed Ø 160 mm knockout for vertical outlet.  
<sup>2)</sup> Indicates side knockout for 90° channel connection. Knockout on both sides of the channel.



### Multifunctional plastic endcap in grey colour (closing/outlet Ø160 mm)



Type	Dimensions			Invert depth	Weight [kg]	Item no.
	Length [mm]	Width [mm]	Height [mm]			
		185	100 to 310	75	0.3	23159*



### Sump units, 500 mm – short form (with LLS pipe connection)



- With NBR lip labyrinth seal (LLS) for horizontal, liquid-tight pipe connection
- With sliceable connection template up to building height 20
- With plastic (PP) sludge basket

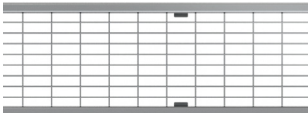
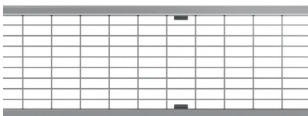
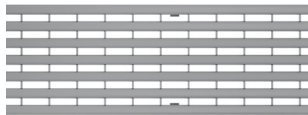
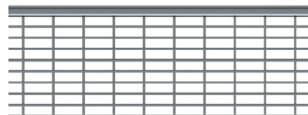
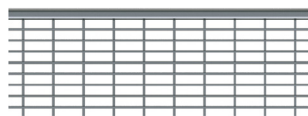
Dimensions			Pipe conn. DN/OD [mm]	PU	Galvanised steel	
Length [mm]	Width [mm]	Height [mm]			Weight [kg]	Item no.
500	185	610	160	8	36.6	450914

### Accessories for galvanised steel design





Description		Suitable for	Weight [kg]	PU [piece]	Item No.
 <b>Universal closing end cap</b> <ul style="list-style-type: none"> <li>■ For channel beginning and end</li> <li>■ Made of polymer concrete</li> <li>■ With galvanised steel edge protection</li> <li>■ Length 20 mm</li> </ul>		■ V 150 S 0. – 20.	2.9	20	12785
 <b>End cap for channel end (LLS)</b> <ul style="list-style-type: none"> <li>■ Made of polymer concrete</li> <li>■ With integrated lip labyrinth seal (LLS) DN/OD 160 for horizontal, liquid-tight pipe connection</li> <li>■ With galvanised steel edge protection</li> <li>■ Length 40 mm</li> </ul>		■ V 150 S 0.	2.2	6	12786
		■ V 150 S 10.	2.8	6	12788

# Gratings Civicline CL 100

- Gratings tested according to EN 1433
- With Drainlock screwless locking
- Optionally anti-slip performance R11 according to EN 16165

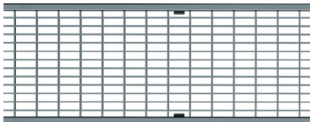
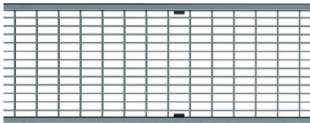
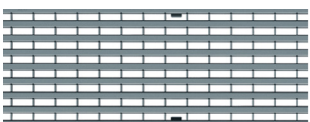
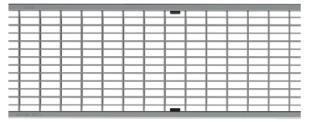
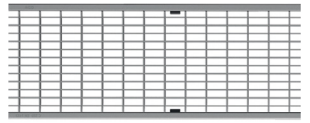
	Material	Dimensions		Size of the inlet opening	Intake area	Weight	PU	Item No.
		Length	Width					
		[mm]	[mm]	[mm]	[cm²/m]	[kg]	[pcs]	
Load class B 125								
Q+ mesh grating								
	Galvanised steel	1000	123	30 × 10	845	3.2	100	132560
		500	123	30 × 10	845	1.6	100	132561
Q+ Mesh grating Anti-slip R11								
	Galvanised steel	1000	123	30 × 10	845	3.1	100	450291
		500	123	30 × 10	845	1.6	100	450292
Longitudinal profile grating								
	Galvanised steel	1000	123	8	430	3.9	100	132555
		500	123	8	430	1.9	100	132550
Load class C 250								
Q+ mesh grating								
	Galvanised steel	1000	123	30x10	800	4.2	100	132880
		500	123	30x10	800	2.1	100	132881
Q+ Mesh grating Anti-slip R11								
	Galvanised steel	1000	123	30 x 10	800	4.1	100	450293
		500	123	30 x 10	800	2.1	100	450294

# Accessories for Gratings Civiline CL 100

	Description	Suitable for	Weight	PU	Item No.
			[kg]	[pcs]	
	<b>Grating hook</b> <ul style="list-style-type: none"> <li>■ For removing cover gratings</li> <li>■ Galvanised steel</li> </ul>	<ul style="list-style-type: none"> <li>■ Cover gratings</li> </ul>	0.3	1	01290
	<b>Grating hook</b> <ul style="list-style-type: none"> <li>■ For removing cover gratings</li> <li>■ Steel, black surface</li> </ul>	<ul style="list-style-type: none"> <li>■ Q+ mesh grating</li> <li>■ Longitudinal bar grating</li> <li>■ Longitudinal profile grating</li> <li>■ Composite grating</li> </ul>	0.25	10	01367
<b>Q+ mesh grating</b>					
	<b>Security set</b> <ul style="list-style-type: none"> <li>■ For locking grating in the channel</li> <li>■ 2 security sets are needed to lock grating of the length 1m</li> <li>■ 1 security set is needed to lock grating of the length 0.5 m</li> <li>■ Stainless steel</li> </ul>	<ul style="list-style-type: none"> <li>■ Gratings made from stainless steel and galvanised steel</li> <li>■ Item no.: 132542, 132559, 132560, 132561, 132880, 132881, 132882, 132883, 450291, 450292, 450293, 450294</li> <li>■ <b>Load class B 125, C 250</b></li> </ul>	0.1	1	445828
<b>Longitudinal profile grating</b>					
	<b>Security set</b> <ul style="list-style-type: none"> <li>■ For locking grating in the channel</li> <li>■ 2 security sets are needed to lock grating of the length 1m</li> <li>■ 1 security set is needed to lock grating of the length 0.5 m</li> <li>■ Stainless steel</li> </ul>	<ul style="list-style-type: none"> <li>■ Gratings made from stainless steel and galvanised steel</li> <li>■ Item no.: 132550, 132551, 132555, 132556</li> <li>■ <b>Load class B 125</b></li> </ul>	0.1	1	445830





# Gratings Civiline CL 150

- Gratings tested according to EN 1433
- With Drainlock screwless locking
- Optionally anti-slip performance R11 according to EN 16165

	Material	Dimensions		Size of the inlet opening	Intake area	Weight	PU	Item No.
		Length	Width					
		[mm]	[mm]	[mm]	[cm <sup>2</sup> /m]	[kg]	[pcs]	
Load class B 125								
Q+ mesh grating								
	Galvanised steel	1000	173	30x10	1182	5.4	100	133601
		500	173	30x10	1182	2.7	50	133602
Q+ Mesh grating Anti-slip R11								
	Galvanised steel	1000	173	30 x 10	1182	5.5	100	450301
		500	173	30 x 10	1182	2.7	50	450302
Longitudinal profile grating								
	Galvanised steel	1000	173	9	687	5.1	100	133625
		500	173	9	687	2.5	50	133626
Load class C 250								
Q+ mesh grating								
	Galvanised steel	1000	173	30x10	1 182	5.8	100	133605
		500	173	30x10	1 182	2.9	50	133606
Q+ Mesh grating Anti-slip R11								
	Galvanised steel	1000	173	30 x 10	1182	5.7	100	450305
		500	173	30 x 10	1182	2.9	50	450306



# Accessories for Gratings Civiline CL 150

	Description	Suitable for	Weight	PU	Item No.
			[kg]	[pcs]	
	<b>Grating hook</b> <ul style="list-style-type: none"> <li>■ For removing cover gratings</li> <li>■ Galvanised steel</li> </ul>	<ul style="list-style-type: none"> <li>■ Cover gratings</li> </ul>	0.3	1	01290
	<b>Grating hook</b> <ul style="list-style-type: none"> <li>■ For removing cover gratings</li> <li>■ Steel, black surface</li> </ul>	<ul style="list-style-type: none"> <li>■ Q+ mesh grating</li> <li>■ Longitudinal bar grating</li> <li>■ Longitudinal profile grating</li> <li>■ Composite grating</li> </ul>	0.25	10	01367
<b>Q+ mesh grating</b>					
	<b>Security set</b> <ul style="list-style-type: none"> <li>■ For locking grating in the channel</li> <li>■ 2 security sets are needed to lock grating of the length 1m</li> <li>■ 1 security set is needed to lock grating of the length 0.5 m</li> <li>■ Stainless steel</li> </ul>	<ul style="list-style-type: none"> <li>■ Gratings made from stainless steel and galvanised steel</li> <li>■ Item no.: 133601, 133602, 133603, 133604, 133605, 133606, 133607, 133608, 133609, 133610, 133611, 133612, 450301, 450302, 450305, 450306</li> <li>■ <b>Load class B 125, C 250</b></li> </ul>	0.12	1	445831
<b>Longitudinal profile grating</b>					
	<b>Security set</b> <ul style="list-style-type: none"> <li>■ For locking grating in the channel</li> <li>■ 2 security sets are needed to lock grating of the length 1m</li> <li>■ 1 security set is needed to lock grating of the length 0.5 m</li> <li>■ Stainless steel</li> </ul>	<ul style="list-style-type: none"> <li>■ Gratings made from stainless steel and galvanised steel</li> <li>■ Item no.: 133625, 133626, 133627, 133628</li> <li>■ <b>Load class B 125</b></li> </ul>	0.15	1	445833

# SlotTop Civicline CL 100


## ACO SlotTop, Class C 250

- SlotTops with no welded joints
- 10 mm lateral slot for SlotTop Single
- 2 x 8 mm lateral slot for SlotTop Double
- 3 x 8 mm lateral slot for SlotTop Triple
- With guide strap
- Slotted frame corresponding fully to EN 1433:2002
- With strengthened top edge
- Slot heights: 65 mm, 105 mm and 150 mm
- **Delivery incl. cover strips as protection during construction period**




Material	Dimensions			Size of the inlet opening	Inlet cross-section	Weight	PU	Item No.
	Length	Width	Height					
	[mm]	[mm]	[mm]	[mm]	[cm <sup>2</sup> /m]	[kg]	[pcs]	

### SlotTop Single


	Galvanised steel	1000	123	65	10	100	4.3	72	445926
		500	123	65	10	100	2.3	100	445927

### SlotTop Single – access unit

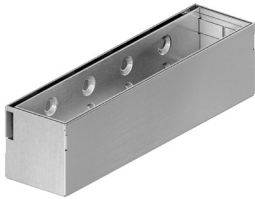
	Galvanised steel	500	123	65	10	100	3.7	60	445931
---	------------------	-----	-----	----	----	-----	-----	----	--------

	Material	Dimensions			Size of the inlet opening [mm]	Inlet cross-section [cm <sup>2</sup> /m]	Weight [kg]	PU [pcs]	Item No.
		Length	Width	Height					
		[mm]	[mm]	[mm]					

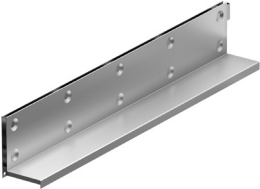
### SlotTop Single

	Galvanised steel	1000	123	105	10	100	5.3	72	445598
		500	123	105	10	100	2.8	100	445599


### SlotTop Single – access unit

	Galvanised steel	500	123	105	10	100	4.9	40	445603
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### SlotTop Single

	Galvanised steel	1000	123	150	10	100	6.4	48	445932
		500	123	150	10	100	3.3	96	445933


### SlotTop Single – access unit

	Galvanised steel	500	123	150	10	100	6.2	40	445937
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### SlotTop Double

	Galvanised steel	1000	123	105	2 x 8	160	5.9	40	447185
		500	123	105	2 x 8	160	3.1	80	447186


### SlotTop Double – access unit

	Galvanised steel	500	123	105	2 x 8	160	5.2	10	447187
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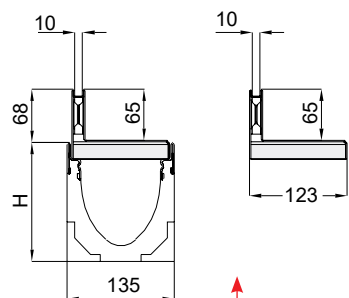
### SlotTop Triple

	Galvanised steel	1000	123	105	3 x 8	240	6.4	40	447768
		500	123	105	3 x 8	240	3.3	10	447769

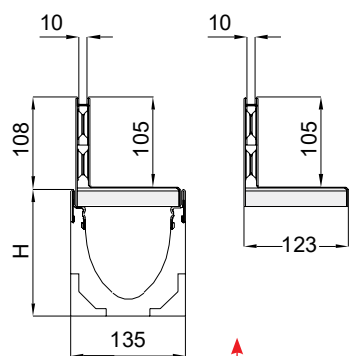
### SlotTop Triple– access unit

	Galvanised steel	500	123	105	3 x 8	240	5.4	10	447770
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Slot Height 65 mm

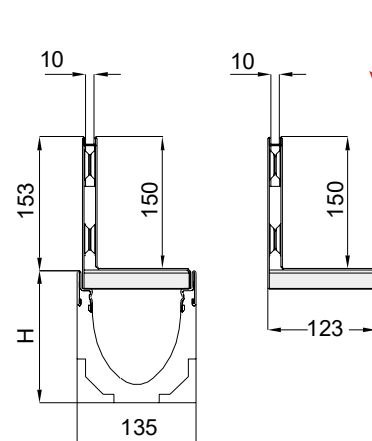


Slot Height 105 mm

### SlotTop Single

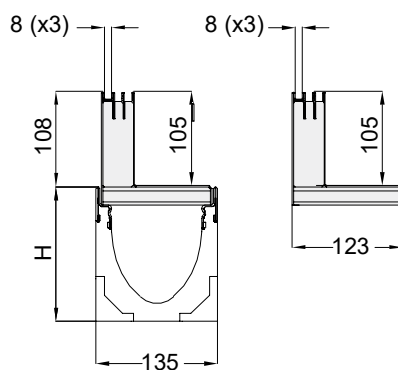
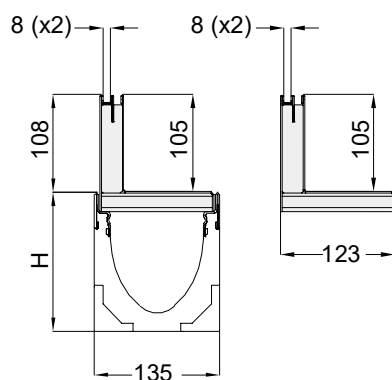
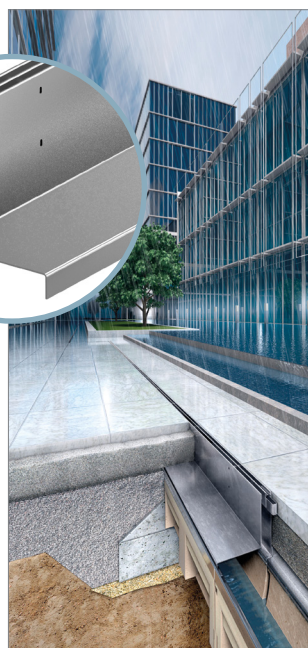


Slot Height 150 mm



Slot Height 105 mm

### SlotTop Double



### SlotTop Triple

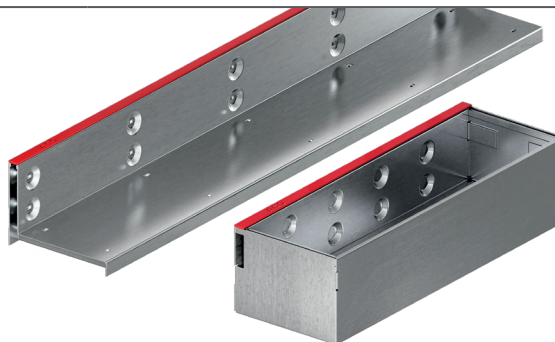


Slot Height 105 mm

# SlotTop Civicline CL 150

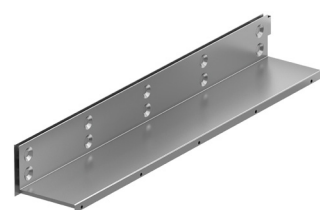
## ACO SlotTop, Class C 250

- 10 mm lateral slot for SlotTop Single
- 2x8 mm lateral slot for SlotTop Double
- 3x8 mm lateral slot for SlotTop Triple
- With guide strap
- Slotted frame corresponding fully to EN 1433:2002
- With strengthened top edge
- Slot height 105 mm
- **Delivery including cover strips as protection during construction period**



Material	Dimensions			Size of the inlet opening	Inlet cross-section	Weight	PU	Item No.
	Length	Width	Height					
	[mm]	[mm]	[mm]	[mm]	[cm <sup>2</sup> /m]	[kg]	[pcs]	

### SlotTop Single



Galvanised steel

1000	173	105	10	100	6.2	40	446128
500	173	105	10	100	3.2	80	446129


### SlotTop Single – access unit




Galvanised steel

500	173	105	10	100	5.7	48	446130
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### SlotTop Double

	Galvanised steel	1000	173	105	2 x 8	160	6.8	40	448215
		500	173	105	2 x 8	160	3.5	80	448216


### SlotTop Double – access unit

	Galvanised steel	500	173	105	2 x 8	160	6	48	448217
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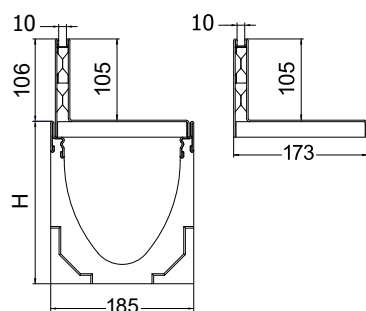
### SlotTop Triple

	Galvanised steel	1000	173	105	3 x 8	240	7.3	40	448227
		500	173	105	3 x 8	240	3.8	80	448228

### SlotTop Triple – access unit

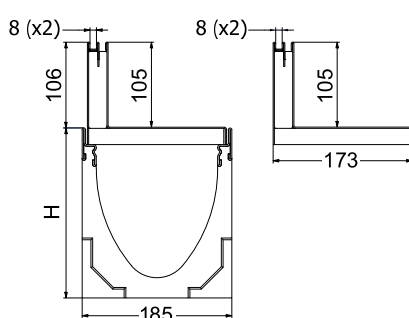
	Galvanised steel	500	173	105	3 x 8	240	6.2	48	448229
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### SlotTop Single



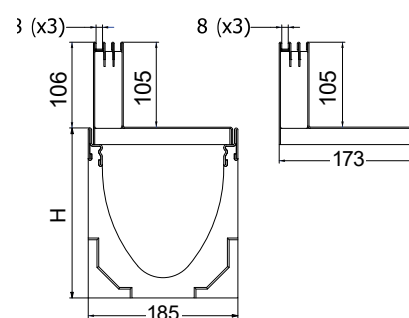
Slot Height 105 mm

### SlotTop Double



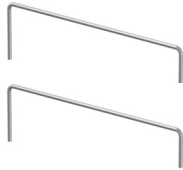

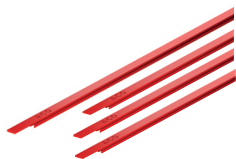


Slot Height 105 mm

### SlotTop Triple



Slot Height 105 mm

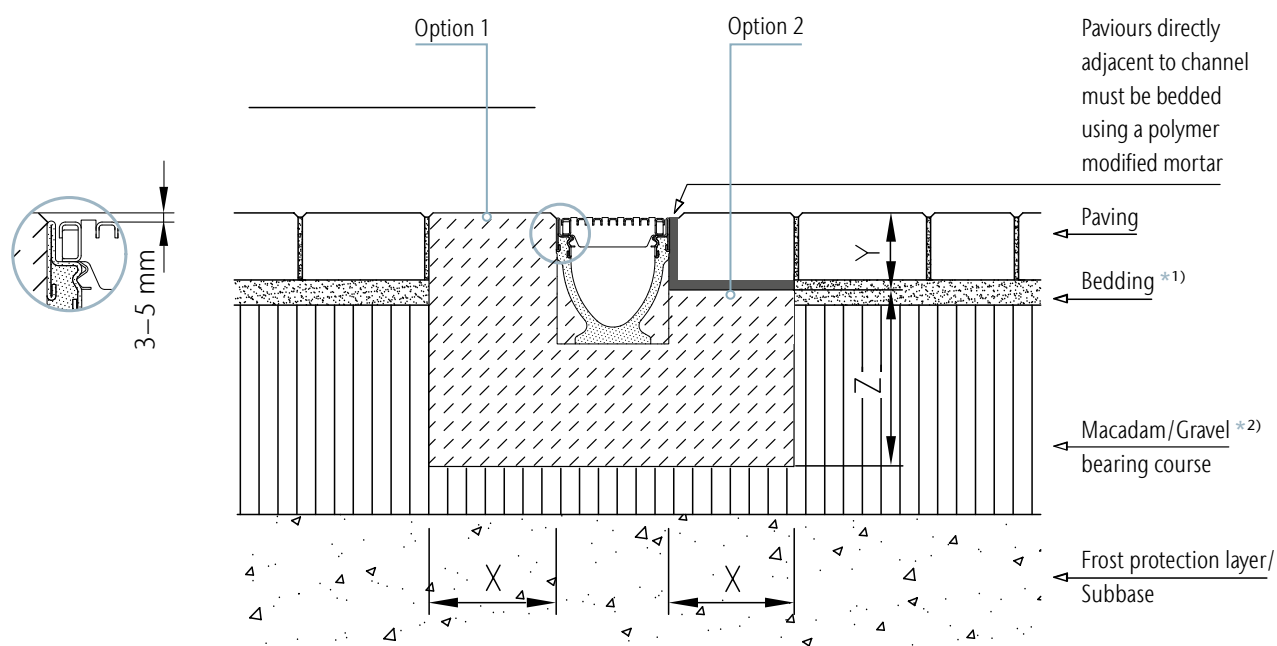
# Accessories for SlotTop

	Description	Suitable for	Weight	PU	Item No.
			[kg]	[pcs]	
	<b>Lifting hook for SlotTop access unit</b> <ul style="list-style-type: none"> <li>■ For lifting SlotTop access unit inner part</li> <li>■ Galvanised steel</li> <li>■ 2 pcs per package</li> </ul>	■ SlotTop access unit	0.5	1	445947
	<b>Lifting key for SlotTop access unit</b> <ul style="list-style-type: none"> <li>■ For lifting SlotTops Single in LC D 400 and SlotTops Double and Triple in LC C250</li> <li>■ Galvanised steel</li> <li>■ 2 pcs per package</li> </ul>	■ SlotTop access unit	0.3	1	447850
	<b>Protective covers for SlotTops</b> <ul style="list-style-type: none"> <li>■ For covering inlets during installation</li> <li>■ PVC</li> <li>■ 10 pcs per package, à 1 m</li> </ul>	■ SlotTop Single	0.8	1	446084
	<b>Single end cap</b> <ul style="list-style-type: none"> <li>■ For covering side openings</li> <li>■ Stainless steel</li> <li>■ 2 pcs per package</li> </ul>	■ SlotTop Single 105	0.1	1	446432
		■ SlotTop Single 150	0.2	1	446433
	<b>End cap Double, Triple, Strip</b> <ul style="list-style-type: none"> <li>■ For covering side openings</li> <li>■ Stainless steel</li> <li>■ 2 pcs per package</li> </ul>	■ SlotTop Double 105	0.1	1	447182
		■ SlotTop Triple 105	0.1	1	447183



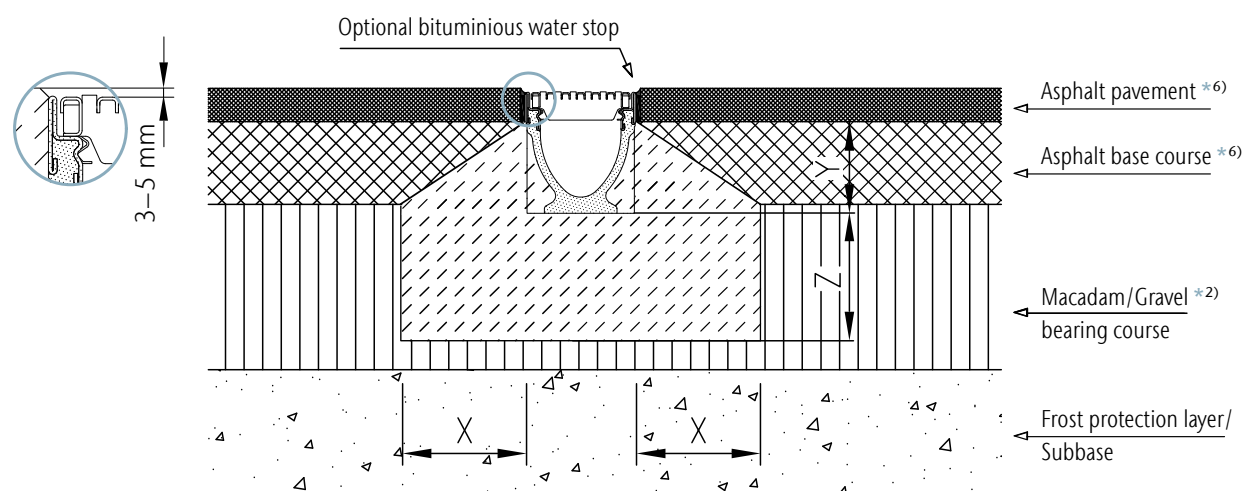
# Installation advice

## Installation in paved areas, load class A 15 to C 250



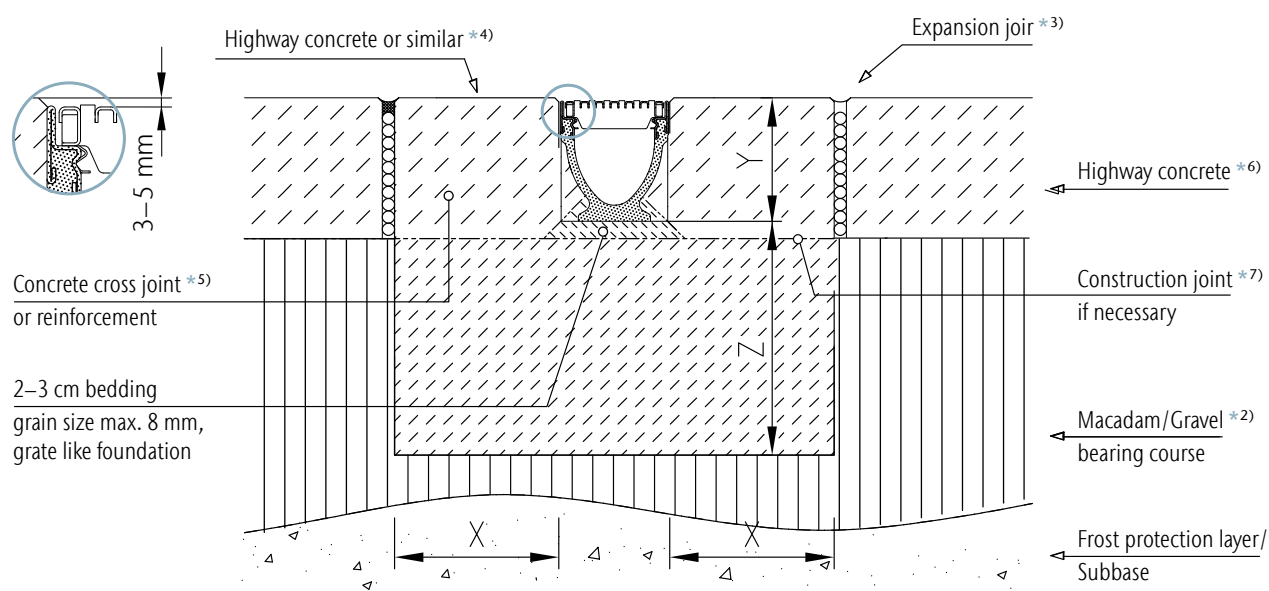
Load class (ref. EN 1433)	A15	B125	C250
Min. quality for bedding concrete (ref. EN 206-1)	≥ C 12/15	≥ C 12/15	≥ C 12/15
Exposure class *4)	(X0)	(X0)	(X0)
	X	≥ 10	≥ 15
Bedding dimensions	Y	Full Channel Height / Paving Height	
	Z	≥ 10	≥ 15

## Installation in asphalt areas, load class A 15 to C 250



Load class (ref. EN 1433)	A15	B125	C250
Min. quality for bedding concrete (ref. EN 206-1)	≥ C 12/15	≥ C 12/15	≥ C 12/15
Exposure class *4)	(X0)	(X0)	(X0)
	X ≥ 10	≥ 10	≥ 15
Bedding dimensions	Y	According to asphalt layer	
	Z ≥ 10	≥ 10	≥ 15

## Installation in concrete areas, load class A 15 to C 250

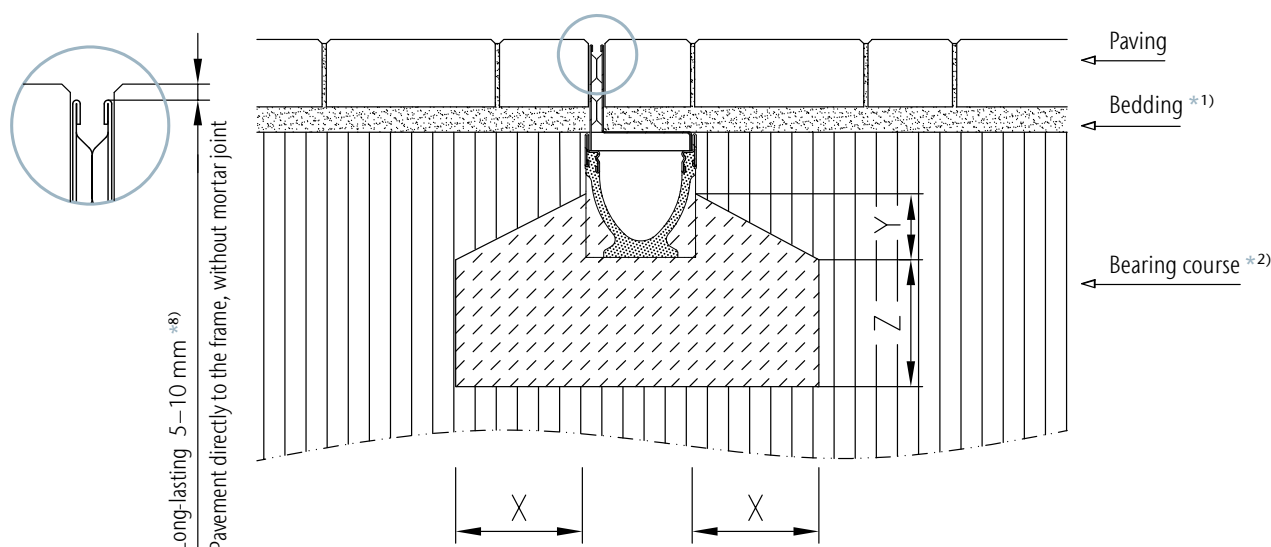


Load class (ref. EN 1433)	A15	B125	C250
Min. quality for bedding concrete (ref. EN 206-1)	≥ C 12/15	≥ C 12/15	≥ C 12/15
Exposure class *4)	(X0)	(X0)	(X0)
	X ≥ 10	≥ 15	≥ 15
Bedding dimensions	Y	Height of channel	
	Z ≥ 10	≥ 10	≥ 15

Not for lateral crossing on high frequent roads,  
in housing estates or in front of railway crossings!

\*...) Please see list of footnotes at the end of chapter drawings.

## Installation of SlotTop frame in paved areas, load class A 15 to C 250



Load class (ref. EN 1433)	A15	B125	C250
Min. quality for bedding concrete (ref. EN 206-1)	≥ C 12/15	≥ C 12/15	≥ C 12/15
Exposure class *4)	(X0)	(X0)	(X0)
	X	≥ 10	≥ 10
	Y	≥ 10	≥ 15
Bedding dimensions	Z	Half height of the channel	≥ 15
		≥ 10	≥ 15

### List of footnotes

- Bedding of paving** Sand, gravel or grit bedding, according to local regulations.
- Layers structure** All layers have to be made frost-free and settlement-free acc. to local regulations.
- Expansion joint** An expansion joint has to go through the entire concrete slab to absorb the movement within the slab due to thermal expansion and shrinkage. The bottom of the joint is filled with backing rod and the top is sealed with a suitable and flexible sealant.
- Concrete quality** X0 is only valid for concrete without reinforcement installed completely below surface. Frequently frost-melting periods are not expected for this way of installation. Requirements for the concrete quality in respect to environmentally influences have to be set by the planner.
- Reinforcement** Concrete haunches up to the top of the channel have to be separated every 1–2 m or they have to be reinforced. Exception: Reinforcement is recommended because of static analysis. Then the static analysis is determinative for the choice and installation of reinforcement.
- Bearing course and top layer** The description of bearing course and top layer is just an example. The needed and accurate measurements of all layers have to be given by the planner. All description according to the channel foundation and haunches are not influenced by that. In case of doubts or for special applications please get in contact with the technical department at ACO.
- Construction joint** Follow the instructions regarding cement and concrete works in the ACO Installation advice.
- Overhang for SlotTop frame** For installation of SlotTop frames in paved areas an overhang of the pavement of permanent 5–10 mm. If pavement is settled down the frame will jut out. This can cause puddles or ice in winter. Furthermore overdriving then could damage frame and channel as well. With a larger overhang sand can enter the channel from the sides of the joints between the single stones. That can cause settlements closed to the channel and the described problem could occur as well.

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Intelligent drainage systems from ACO increasingly use smart technology to ensure that rainwater and wastewater are drained, or temporarily stored. With innovative separation and filter technology, we prevent water contamination. We accept the challenge of reusing water, and thus establishing a resource-saving cycle.

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