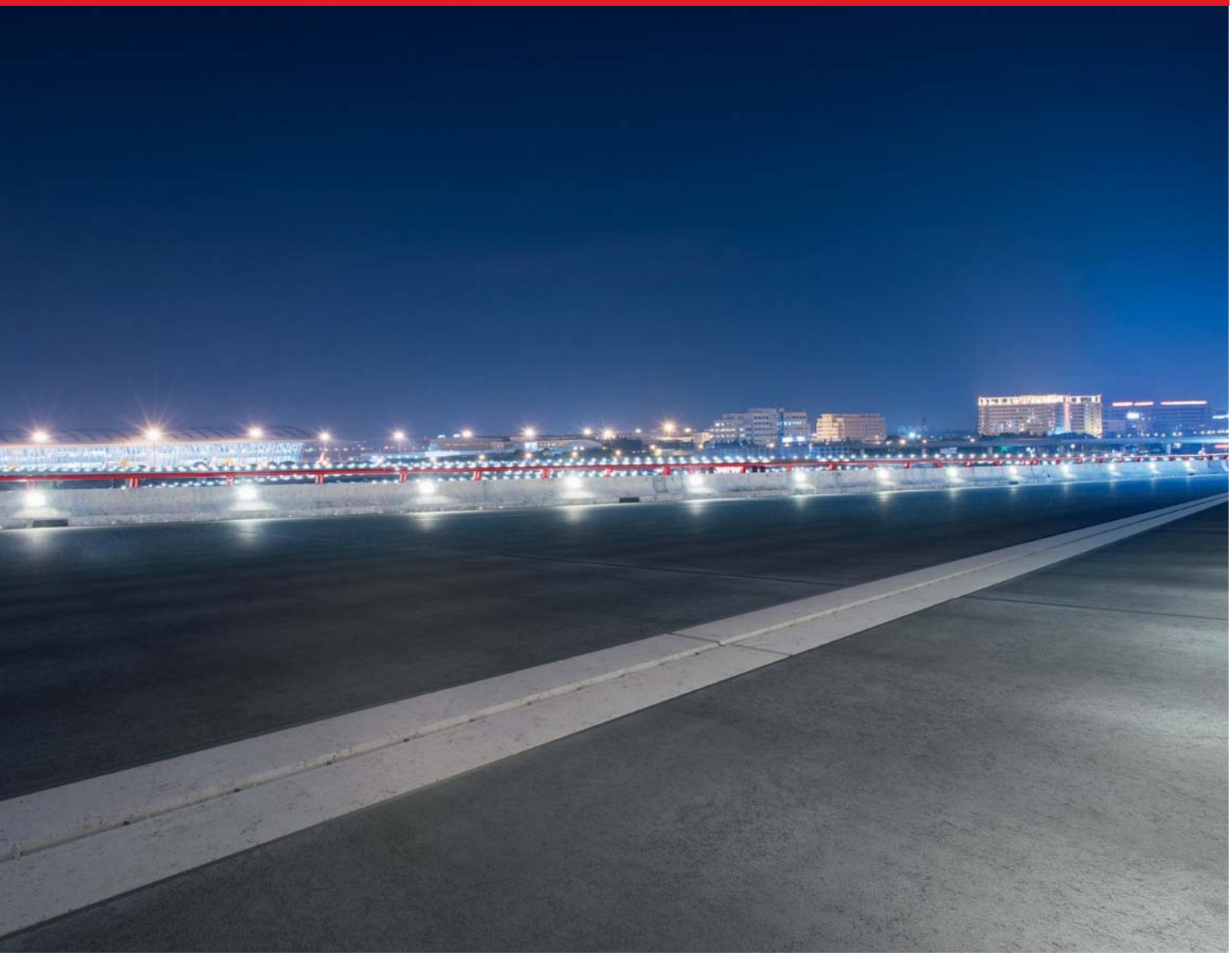
DRAINAGE IN
ITS BEST FORM BIRCO

BIRCOslot channels made of concrete

Monolithic Type I channels for areas exposed to high loading



“THE BEST FOR OUR WATER”

Intelligent solutions to complete the water cycle.

Your application area	 BIRCOplus	 BIRCOlight	 BIRCOlight triloc®	 BIRCO Slotted tops	 BIRCO Filcoten® self	 BIRCO Filcoten® L	 BIRCO Filcoten® tec	 BIRCO Filcoten® pro
Roads		✓✓	✓				✓	✓
Industrial areas		✓						✓
Commercial areas		✓	✓			✓	✓	✓
Logistics areas								
Hall construction		✓	✓				✓	✓
Chemical industry								
Airports airside								
Ports								
Agriculture		✓						
Residential / office building	✓	✓	✓	✓	✓	✓	✓	✓
Underground parking garages		✓						
Multi-story parking garages								
Train stations		✓	✓	✓			✓	✓
Landscaping	✓✓	✓✓	✓✓	✓	✓	✓✓	✓✓	✓
Urban design		✓✓	✓✓	✓✓			✓✓	✓✓
Private areas	✓✓	✓	✓	✓	✓✓	✓✓	✓✓	

Your area of application is not included? We are happy to advise you individually. You will find our contact data on the back cover.

This brochure

Your application area	 BIRCOsir NW 100 – 200	 BIRCOsir NW 300 – 500	 BIRCOsir Point drainage	 BIRCOsir Rail track drainage	 BIRCOmassiv	 BIRCOcanal	 BIRCOmax-i	 BIRCOsolid Slot channel, type Pfuhler
Roads	✓✓	✓✓	✓	✓	✓	✓	✓✓	✓
Industrial areas	✓	✓	✓	✓	✓✓	✓✓	✓✓	✓✓
Commercial areas	✓✓	✓	✓	✓	✓✓	✓	✓✓	✓✓
Logistics areas	✓	✓	✓	✓	✓✓	✓	✓✓	✓✓
Hall construction	✓	✓✓		✓	✓✓	✓✓	✓	
Chemical industry								✓
Airports airside					✓		✓✓	✓✓
Ports					✓✓		✓✓	✓✓
Agriculture	✓	✓	✓					
Residential / office building	✓		✓					
Underground parking garages	✓							
Multi-story parking garages								
Train stations	✓	✓	✓	✓✓		✓	✓	
Landscaping	✓							
Urban design	✓✓	✓✓	✓✓				✓	
Private areas	✓							

Your area of application is not included? We are happy to advise you individually. You will find our contact data on the back cover.

The BIRCO system finder

You can order and download all catalogs as PDFs on www.birco.com.

BIRCO Filcoten® parkline	BIRCOprofil	BIRCOtop Series S	BIRCOtop Series F	BIRCOtopline®	BIRCO Design – the perfect combination of style and performance	BIRCO Project management – Object-related planning, consultation and calculation
✓	✓				✓	✓
					✓	✓
✓	✓				✓	✓
					✓	✓
✓	✓				✓	✓
					✓	✓ ✓
					✓	✓ ✓
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Mark: ✓ recommended, ✓ ✓ highly recommended

This brochure									
BIRCOport	BIRCO twinpack®	BIRCOsed®	BIRCOpur® Filtration	BIRCO Chambers by StormTech®	BIRCOprotect	BIRCOdicht	BIRCOsolid Box channel	BIRCOsolid Slot channel
	✓ ✓	✓ ✓	✓ ✓	✓	✓	✓	✓	✓
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	✓ ✓	✓ ✓	✓ ✓	✓ ✓				
	✓	✓	✓	✓				

Mark: ✓ recommended, ✓ ✓ highly recommended

BIRCOslot channels made of concrete

The solution for surfaces exposed to maximum loads. Monolithic components offer utmost stability and high drainage performance. Economists having to face increasing cost pressures are delighted with the installation as a Type I channel.

Demands: high

Load-bearing capacity, durability, performance and cost efficiency. Demands are high on areas exposed to heavy-duty, continuous traffic, industrial sites, airports and logistics centers (including container hubs). The same applies for the characteristics and performance features of BIRCOslot channels. A drainage system that can withstand extreme dynamic loads and guarantee quick and safe transport of water while at the same time enabling cost-efficient and on-schedule planning, laying and maintenance. A range of channels which, as a system, is tailored to the needs of constructors, and can be individually customized to the specific on-site conditions – down to the last detail.

Efficiency: outstanding

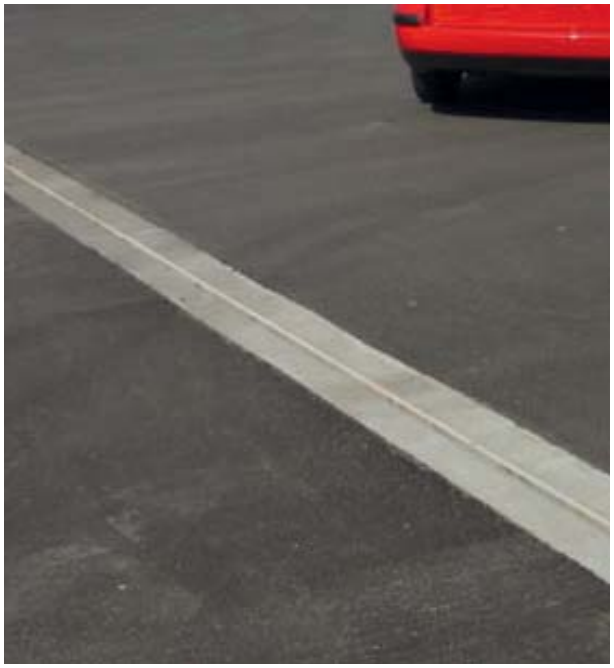
At complex building sites or in multi-stage planning processes, laying performance, value conservation and installation safety are crucial economic factors for keeping costs and work schedules under control and securing investments in the long term.

BIRCOslot channels are all “Type I” channels. This means that they can be laid without foundations or concrete surrounds, which significantly reduces the need for formwork and concrete work and clearly saves time and money. At the same time, channel lengths of up to 5 meters ensure the quick progress of construction work and put less strain on joints.

Outstanding drainage performance also makes large distances between manholes possible. This reduces the number of connection points to the sewage network which is an added benefit for projects with fiercely competitive costs.

Design: fully customized

In addition to the outstanding characteristics of BIRCOslot channels, system extensions are also available to complete the drainage system and customize it to the on-site conditions – right down to the last detail. This could be the case, for example, for preformed curbs as a complete system, connections to special asphalting (such as open-pore “whisper concrete”) or customized slot widths and channel sizes. BIRCO’s experts work with you to develop optimum solutions for your construction project.



BIRCOquality | Raw materials

Permanent loads demand product solutions with a great performance reserve. BIRCO slot channel systems combine maximum stability with minimum installation costs.

Raw material: concrete

BIRCO channel elements are made of particularly pressure-resistant C 40/50 concrete, and have high load reserves even under extreme conditions. The low water/cement ratio ensures excellent abrasion resistance, high resistance to frost and de-icing salt, and a low water penetration depth. Therefore, as a whole, the lateral stability of BIRCO drainage channels is up to three times greater than that of conventional, thin-walled components. The excellent adhesion of the concrete surface achieves the perfect connection to adjoining in-situ concrete. In addition, BIRCO was the first channel manufacturer to undergo – and pass – the ASR performance test. Designers and builders are becoming increasingly aware of concrete damage caused by alkali-silica reactions (ASR). For instance, the alkalis in de-icing fluids and salts pose a risk to the pavements of airports and motorways.

The ASR performance test is used to verify that the concretes used for this purpose are suitable in the long run. The BIRCO concrete in the BIRCOslot channels has met these stringent testing requirements, which proves that it is entirely suitable for use at airports and runways.

passed ASR PERFORMANCE-TEST

Structural shape: monolithic

Produced from one piece, BIRCO slot channels are made of a single monolithic reinforced concrete body which facilitates laying and handling. The completely manufactured and prefabricated channel elements can be laid more quickly, withstand maximum loads and increase safety on traffic surfaces. This means that, even in the event of an accident, no loose or flying ductile iron covers or individual parts will disrupt the flow of traffic.

Use: customizable

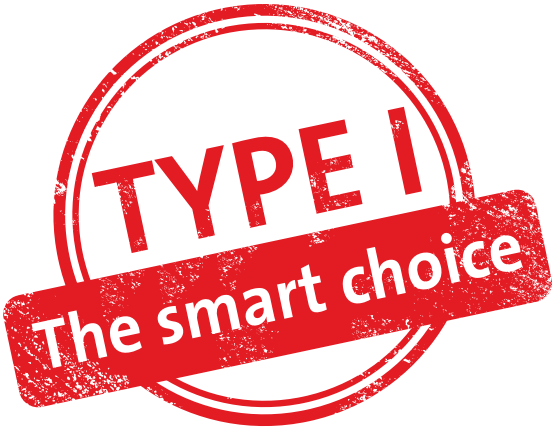
We don't deliver "off-the-shelf" solutions – we provide you with your own customized solution. With our channel element, maintenance channel and outfall unit system, we offer an optimum drainage concept for all traffic and operational areas. The wide choice of products and numerous system expansions can be specifically customized to your individual on-site conditions.

BIRCO also offers sophisticated planning and processing services. Our experts not only provide you with support in performing hydraulic calculations and writing planning tenders – if required, we can also supply precisely cut and customized channel lengths which can be laid on site, accurately and quickly.

BIRCOslot channels Type I

In addition to load-bearing capacity, durability and hydraulic performance, the main advantage of BIRCOslot channels is that they are all built as Type I channels.

"BIRCO Type I channels – intrinsic economic performance"



Type I installation offers many advantages in terms of overall costs, raw materials and supplies, and installation periods. However, less expense does not mean reduced stability. The overall concept of BIRCO channels provides you with maximum stability in your project and an optimum service life for the permanent operation of the surface in question.

"BIRCOservices – bringing economic potential to your project."

Convincing performance – BIRCO services

+ Support and advice at the planning stage
+ Precise calculation of channel systems
+ Decades of experience from large-scale projects
+ Customized, factory-made cuts before the start of construction
+ On-schedule delivery

This brings an economic advantage which, particularly for building projects with fiercely competitive costs, gives a crucial lead over competitors.

We would be delighted to advise you on other special solutions and BIRCO's innovative products which bring decisive advantages to your construction project.

BIRCOslot channel |
Always the best drainage solution



	Roads, highways, parking lots, downtown areas, agricultural holdings	Highway tunnels	Expressways, freeways	
BIRCOslot channel Solidrain S C 250, Type I 4.00 m NW 200, 300 300/400 profile				
BIRCOslot channel Pfuhler D 400 D 400, Type I 4.00 m NW 200, 300, 400, 500 200/300, 300/400 profile				
BIRCOslot channel Pfuhler F 900 F 900, Type I 4.00 m NW 200, 300, 400, 500 200/300, 300/400 profile				
BIRCOslot channel Reachstaker F 900 Type I 4.00 m 300/400 profile				
Building solutions				
BIRCOport F 900 F 900, Type I 5.00 m NW 300 NW 340				
BIRCOslot channel Type BBI F 900 Type I 2.50 m NW 400				
Requirements	+ Permanent traffic loads + High drainage capacity	+ Permanent traffic loads + Low installation depths + High drainage capacity	+ High longitudinal loading + Easy to clean + High drainage capacity	

PRODUCT FINDER FOR SLOT CHANNELS
QUICK OVERVIEW



	Industrial sites, logistics centers, large-scale agricultural operations	Airports and ports	Container hubs	
				From page 10
				From page 22
				From page 22
	Advantages with high point loads, e.g. steel wheels			From page 54
		High degree of customization		From page 60
		High degree of customization		From page 62
	+ High wheel loads + Long service life + High drainage capacity	+ Extreme dynamic forces + Surface strain + High drainage capacity + Special requirements	+ High drainage capacity + Special requirements	

BIRCOslot channel Solidrain S | Draining traffic surfaces effectively

Solidrain S provides planners and constructors with a comprehensive system for draining surfaces quickly and reliably. The excellent quality of the concrete and the effective installation concept make BIRCOslot channel Solidrain S an ideal and cost-efficient solution in daily project planning.

+ A 15 to C 250

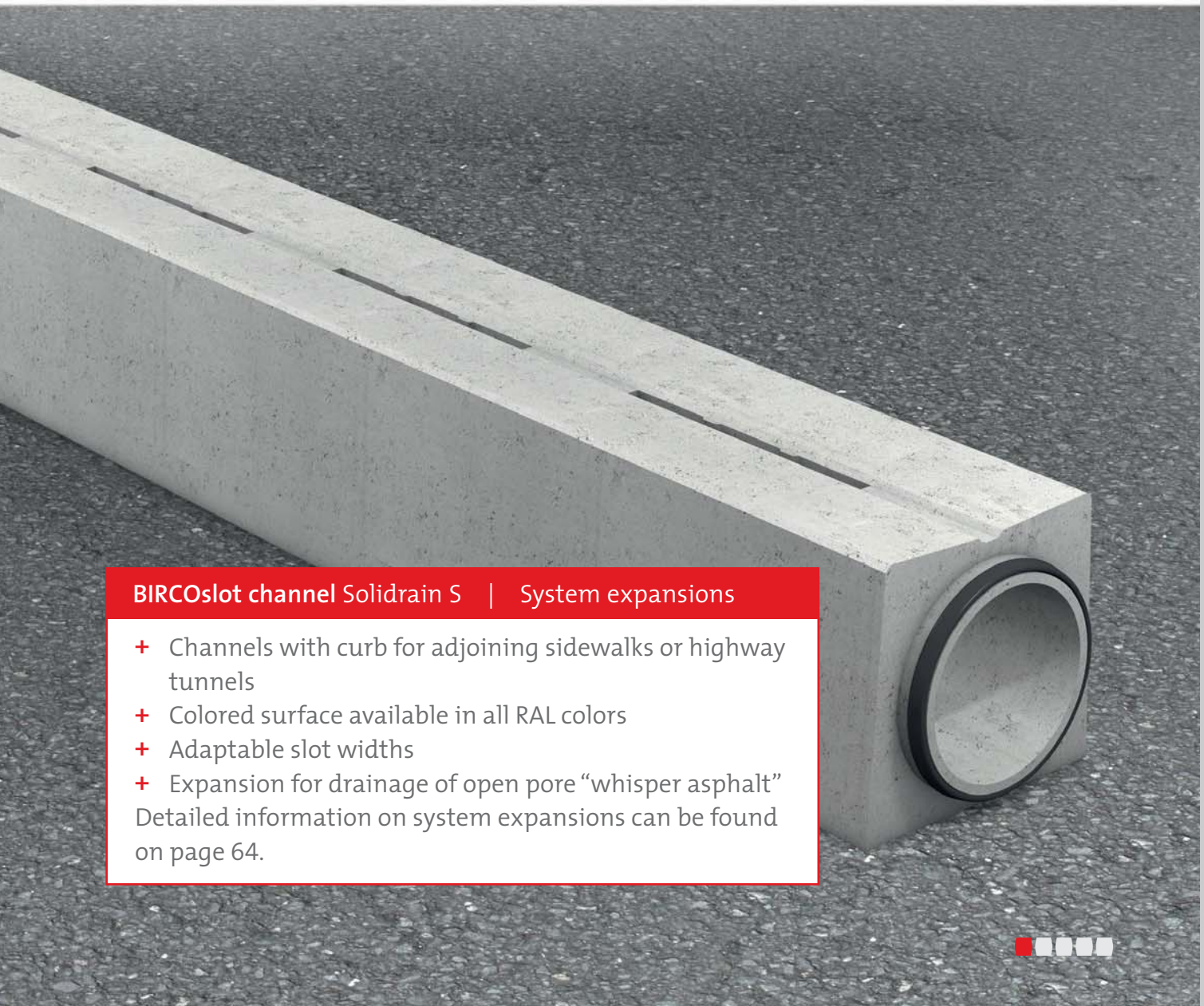
Fast, reliable drainage of all traffic areas where there is a risk of hydroplaning.

BIRCOslot channel Solidrain S | Areas of application

+ Traffic areas
+ Mainly traffic moving in the longitudinal direction
+ Emergency lanes, tunnels
+ Agricultural operations
+ Pedestrian areas, market places, urban depots
+ Parking lots

BIRCOslot channel Solidrain S | Facts

+ Type I slot channel system:
  Round profile: 200, 300
  Oval profile: 300/400
+ Monolithic concrete body (C 40/50)
+ Conical slot 30/50, intermittent
+ Inlet-optimized, inclined surface
+ Installation length: 4.00 m (other lengths on request)
+ Outfall-unit (1.00 m) and maintenance channel (1.00 m) with removable ductile iron cover
+ Load class A 15 – C 250



BIRCOslot channel Solidrain S | System expansions

+ Channels with curb for adjoining sidewalks or highway tunnels
+ Colored surface available in all RAL colors
+ Adaptable slot widths
+ Expansion for drainage of open pore “whisper asphalt”

Detailed information on system expansions can be found on page 64.

BIRCOslot channel Solidrain S |
Effective draining of traffic surfaces

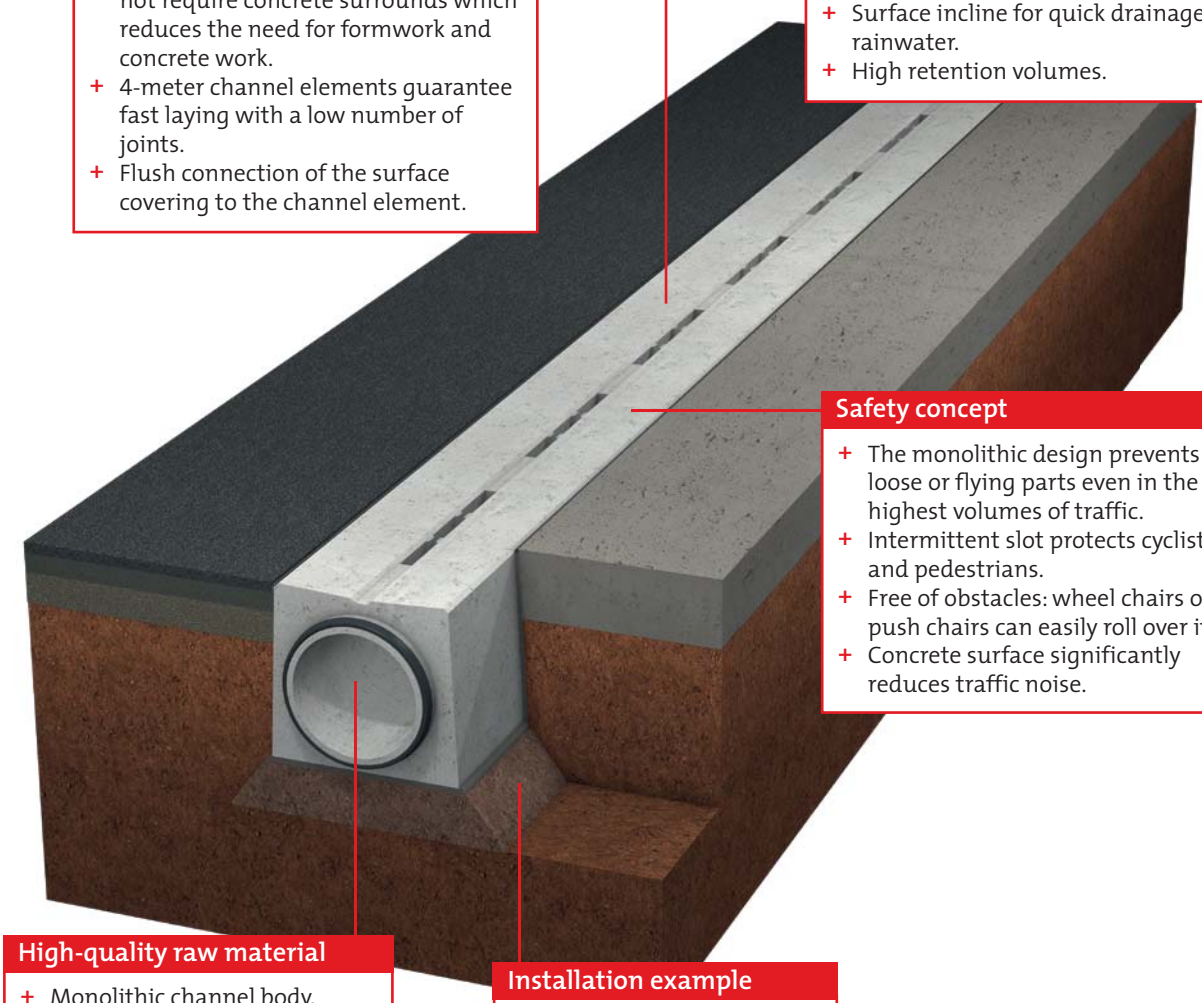
Civil engineering must be efficient during the planning and implementation stages and in terms of costs and future sustainability. Surface operators rely on the long service life of modern drainage systems. You're on the safe side with BIRCOslot channels Solidrain S.

Faster, cost-optimized installation

+ One-piece Type I channel elements do not require concrete surrounds which reduces the need for formwork and concrete work.
+ 4-meter channel elements guarantee fast laying with a low number of joints.
+ Flush connection of the surface covering to the channel element.

High-performance drainage

+ High drainage capacity.
+ Surface incline for quick drainage of rainwater.
+ High retention volumes.



Safety concept

+ The monolithic design prevents loose or flying parts even in the highest volumes of traffic.
+ Intermittent slot protects cyclists and pedestrians.
+ Free of obstacles: wheel chairs or push chairs can easily roll over it.
+ Concrete surface significantly reduces traffic noise.

High-quality raw material

+ Monolithic channel body.
+ Resistance to frost and de-icing salt ensures durability and investment protection.
+ No ingress of external water through the high density drainage section.

Installation example

+ Type I.
+ Condensed substrate.

Optimum implementation of traffic projects

Advantage: cost efficiency in traffic route engineering

Type I channel elements eliminate the need for load-bearing foundations or concrete surrounds. This reduces costs and significantly speeds up the pace at which BIRCOslot channel Solidrain S can be laid. In addition, the installation length of 4 meters guarantees quick progress especially in large-scale road construction projects. The on-schedule delivery of pre-fabricated concrete components optimized for the project provides a reliable basis for planning and ensures customized implementation at the building site.

Advantage: optimum maintenance

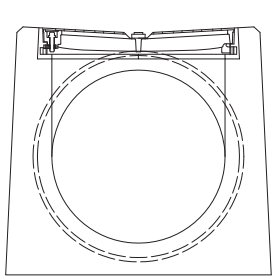
Easy to clean thanks to the maintenance channel and easily removable ductile iron covers, even when the surface is being used. Particularly when using a maintenance truck. The conical slot design also reliably prevents blockage of the inlet slots.

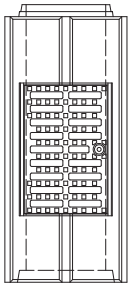
Advantage: long service life

The high material quality secures private and public investments. The C 40/50 concrete is particularly durable thanks to its high resistance to frost and de-icing salt, and the ductile iron covers are long-lasting and break-proof. And when dismantled, the channels can be fully recycled.

Advantage: high drainage capacity

The surface incline of the BIRCOslot channel Solidrain S guarantees fast drainage of rainwater even in heavy rainfall. The channel also offers ample retention volume in traffic areas which significantly reduces the risk of aquaplaning and increases safety in public spaces.





Advantage: variable system expansions

The BIRCOslot channel Solidrain S can be directly delivered with a preformed curb which brings huge time and cost benefits for highway construction and building of public open spaces. Equipment for draining open pore asphalt, concrete in colors that match the surroundings and obstacle-free, stationary surfaces make Solidrain S the ideal system for public spaces.

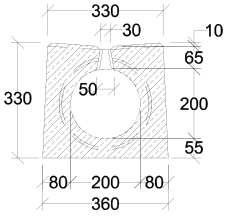
Detailed information on system expansions can be found on page 64.

BIRCOslot channels

Solidrain S DN 200

Slot channel element | without internal inbuilt fall | intermittent slot | inclined surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

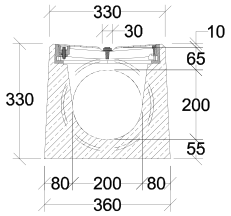


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0	4000 mm	330/360 mm	330 mm	784.0 kg	314 cm²	17.44 l/sec	A 15 – C 250	054120426

Maintenance channel | inclined surface

+ Monolithic concrete body
+ Inclined surface
+ With ductile iron cover

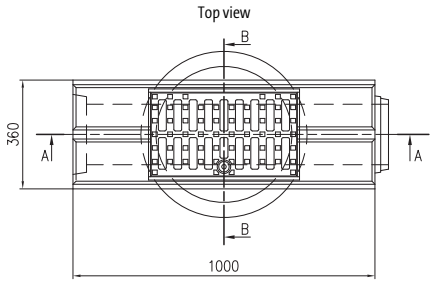


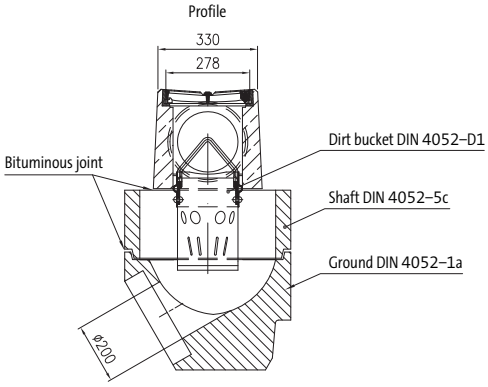
Description	Length	Width at top/ at ground	Construction height	Weight	Load class EN 1433	Article No.
Maintenance channel	1000 mm	330/360 mm	330 mm	222.0 kg	A 15 – C 250	054120427

Not for use across the roadway of highways or expressways.
200/300 profile on request.

Outfall unit | inclined surface

+ Monolithic concrete body
+ Inclined surface
+ 3-part
+ With ductile iron cover
+ With DN 200 outlet





Description	Length	Width at top	Construction height	Weight	Load class EN 1433	Article No.
Outfall unit	**1000 mm**	**330 mm**	**930 mm**	**338.0 kg**	**A 15 – C 250**	**054120431**

End cap

+ Galvanized sheet steel with wedge-shaped sliding seal

Description	For construction height	Weight	Article No.
End cap	**330 mm**	**1.7 kg**	**054120847**

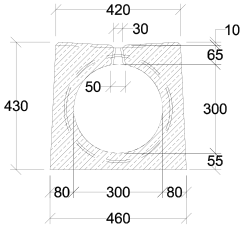
Not for use across the roadway of highways or expressways.
200/300 profile on request.

BIRCOslot channels

Solidrain S DN 300

Slot channel element | without internal inbuilt fall | intermittent slot | inclined surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

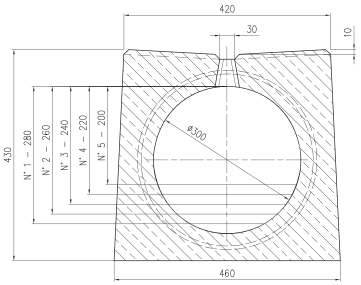


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0 intermittent slot	4000 mm	420/460 mm	430 mm	1132.0 kg	706 cm²	39.22 l/sec	A 15 – C 250	054130426

Slot channel element | with internal inbuilt fall | intermittent slot | inclined surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request



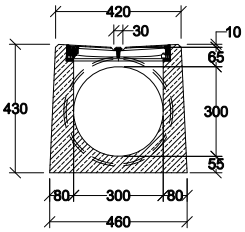
Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 1 intermittent slot	4000 mm	420/460 mm	430 mm	1140.0 kg	706 cm²	62.22 l/sec	A 15 – C 250	054130461
Channel no. 2 intermittent slot	4000 mm	420/460 mm	430 mm	1172.0 kg	668 cm²	59.58 l/sec	A 15 – C 250	054130462
Channel no. 3 intermittent slot	4000 mm	420/460 mm	430 mm	1212.0 kg	650 cm²	55.02 l/sec	A 15 – C 250	054130463
Channel no. 4 intermittent slot	4000 mm	420/460 mm	430 mm	1240.0 kg	606 cm²	49.52 l/sec	A 15 – C 250	054130464
Channel no. 5 intermittent slot	4000 mm	420/460 mm	430 mm	1270.0 kg	555 cm²	43.52 l/sec	A 15 – C 250	054130465

Not for use across the roadway of highways or expressways.
200/300 profile on request.

Maintenance channel | inclined surface

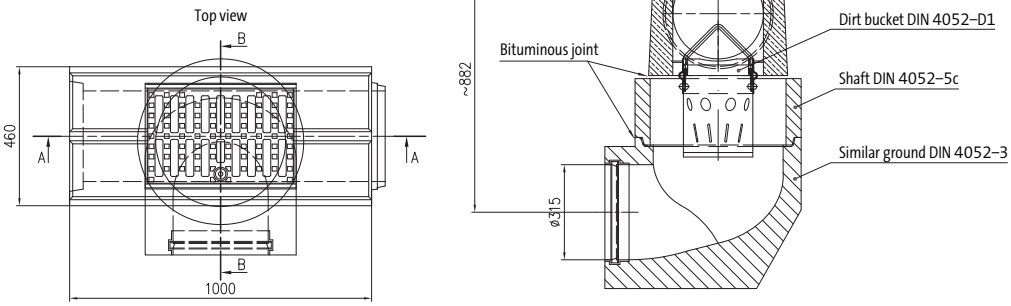
+ Monolithic concrete body
+ Inclined surface
+ With ductile iron cover



Description	Length	Width at top/ at ground	Construction height	Weight	Load class EN 1433	Article No.
Maintenance channel	**1000 mm**	**420/460 mm**	**430 mm**	**236.0 kg**	**A 15 – C 250**	**054130427**

Outfall unit | inclined surface

+ Monolithic concrete body
+ Inclined surface
+ 3-part
+ With ductile iron cover
+ With DN 315 outlet



Description	Length	Width at top	Construction height	Weight	Load class EN 1433	Article No.
Outfall unit	**1000 mm**	**420 mm**	**1140 mm**	**485.0 kg**	**A 15 – C 250**	**054130431**

Not for use across the roadway of highways or expressways.
200/300 profile on request.

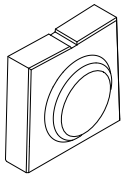
End cap | for channels without internal inbuilt fall

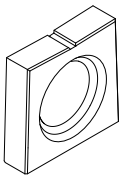
+ Galvanized sheet steel with wedge-shaped sliding seal

Description	For construction height	Weight	Article No.
End cap	430 mm	3.2 kg	054130847

End caps | for channels with internal inbuilt fall

+ Made of concrete





Description	For construction height	Weight	Article No.
End cap with sleeve	430 mm	45.0 kg	054130845
End cap with spigot end	430 mm	49.0 kg	054130846

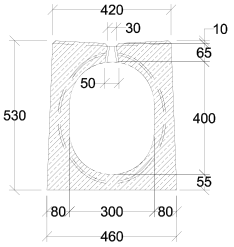
Not for use across the roadway of highways or expressways.
200/300 profile on request.

BIRCOslot channels

Solidrain S 300/400 profile

Slot channel element | without internal inbuilt fall | intermittent slot | inclined surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

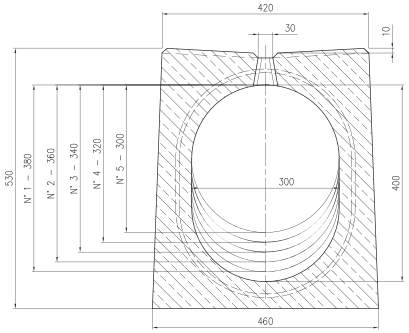


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0 intermittent slot	4000 mm	420/460 mm	530 mm	1272.0 kg	1006 cm²	55.88 l/sec	A 15 – C 250	054134426

Slot channel element | with internal inbuilt fall | intermittent slot | inclined surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request



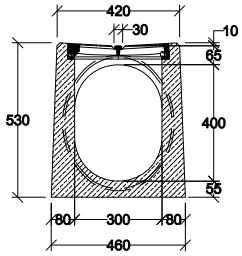
Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 1 intermittent slot	4000 mm	420/460 mm	530 mm	1302.0 kg	1006 cm²	98,70 l/sec	A 15 – C 250	054134461
Channel no. 2 intermittent slot	4000 mm	420/460 mm	530 mm	1362.0 kg	946 cm²	91,23 l/sec	A 15 – C 250	054134462
Channel no. 3 intermittent slot	4000 mm	420/460 mm	530 mm	1421.0 kg	886 cm²	83,84 l/sec	A 15 – C 250	054134463
Channel no. 4 intermittent slot	4000 mm	420/460 mm	530 mm	1480.0 kg	826 cm²	76,54 l/sec	A 15 – C 250	054134464
Channel no. 5 intermittent slot	4000 mm	420/460 mm	530 mm	1540.0 kg	766 cm²	69,33 l/sec	A 15 – C 250	054134465

Not for use across the roadway of highways or expressways.
200/300 profile on request.

Maintenance channel | inclined surface

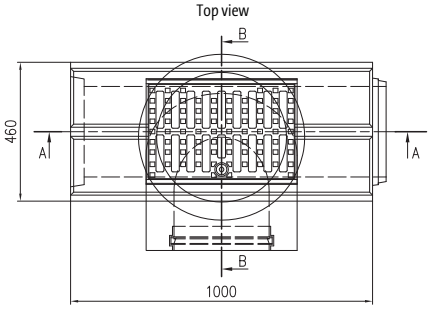
+ Monolithic concrete body
+ Inclined surface
+ With ductile iron cover

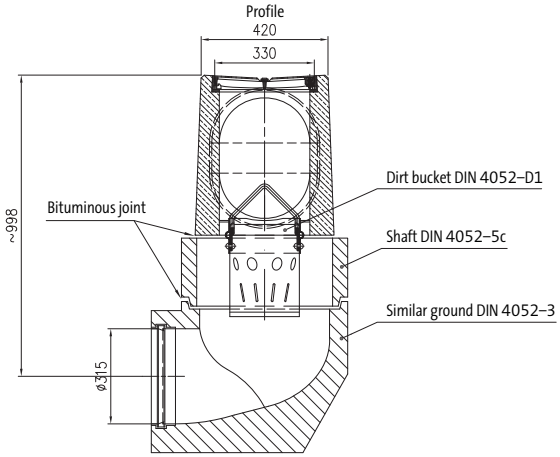


Description	Length	Width at top/ at ground	Construction height	Weight	Load class EN 1433	Article No.
Maintenance channel	**1000 mm**	**420/460 mm**	**530 mm**	**317.0 kg**	**A 15 – C 250**	**054134427**

Outfall unit | inclined surface

+ Monolithic concrete body
+ Inclined surface
+ 3-part
+ With ductile iron cover
+ With DN 315 outlet





Description	Length	Width at top	Construction height	Weight	Load class EN 1433	Article No.
Outfall unit	**1000 mm**	**420/460 mm**	**1240 mm**	**516.0 kg**	**A 15 – C 250**	**054134431**

Not for use across the roadway of highways or expressways.
200/300 profile on request.

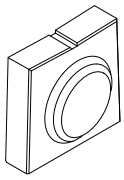
End cap | for channels without internal inbuilt fall

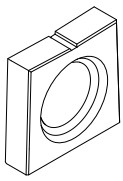
+ Galvanized sheet steel with wedge-shaped sliding seal

Description	For construction height	Weight	Article No.
End cap	530 mm	4.2 kg	054134847

End caps | for channels with internal inbuilt fall

+ Made of concrete





Description	For construction height	Weight	Article No.
End cap with sleeve	530 mm	49.0 kg	054134845
End cap with spigot end	530 mm	54.0 kg	054134846

BIRCOslot channel Pfuhler |
From logistics centers to airports

The universal slot channel in two load classes for all areas with dynamic continuous loading. As a complete system with a maintenance channel and outfall unit, the BIRCOslot channel Pfuhler is convincing in terms of its highly variable, high-performance and cost-optimized installation.

+ A 15 to D 400

+ A 15 to F 900

Optimum drainage and large retention volumes for surfaces exposed to high and maximum dynamic horizontal forces.

BIRCOslot channel Pfuhler | Areas of application

+ Heavy duty areas exposed to heavy loading
+ Logistics centers operating fork lift trucks
+ Industrial sites with continuous traffic
+ Large-scale agricultural operations
+ Traffic moving in the transversal and longitudinal directions
+ Truck parking
+ Airports

BIRCOslot channel Pfuhler | Facts

+ Type I slot channel system:
  DN 200, 300, 400, 500
  Oval profile: 200/300, 300/400
+ Monolithic constructively reinforced concrete body (C 40/50)
+ Conical slot 30/50 (intermittent or continuous)
+ Plane or inclined surface
+ Installation length: 4.00 m (other lengths on request)
+ Outfall unit (1.00 m) and maintenance channel (1.00 m) with removable ductile iron cover
+ Load class A 15 – D 400 or A 15 – F 900

Also available with continuous slot

BIRCOslot channel Pfuhler | System expansions

+ Channels with curb for adjoining sidewalks or highway tunnels
+ Colored surface available in all RAL colors
+ Adaptable slot widths
+ Expansion for drainage of open pore “whisper asphalt”

Detailed information on system expansions can be found on page 64.

BIRCOslot channel Pfuhler

Many variants to enable more options

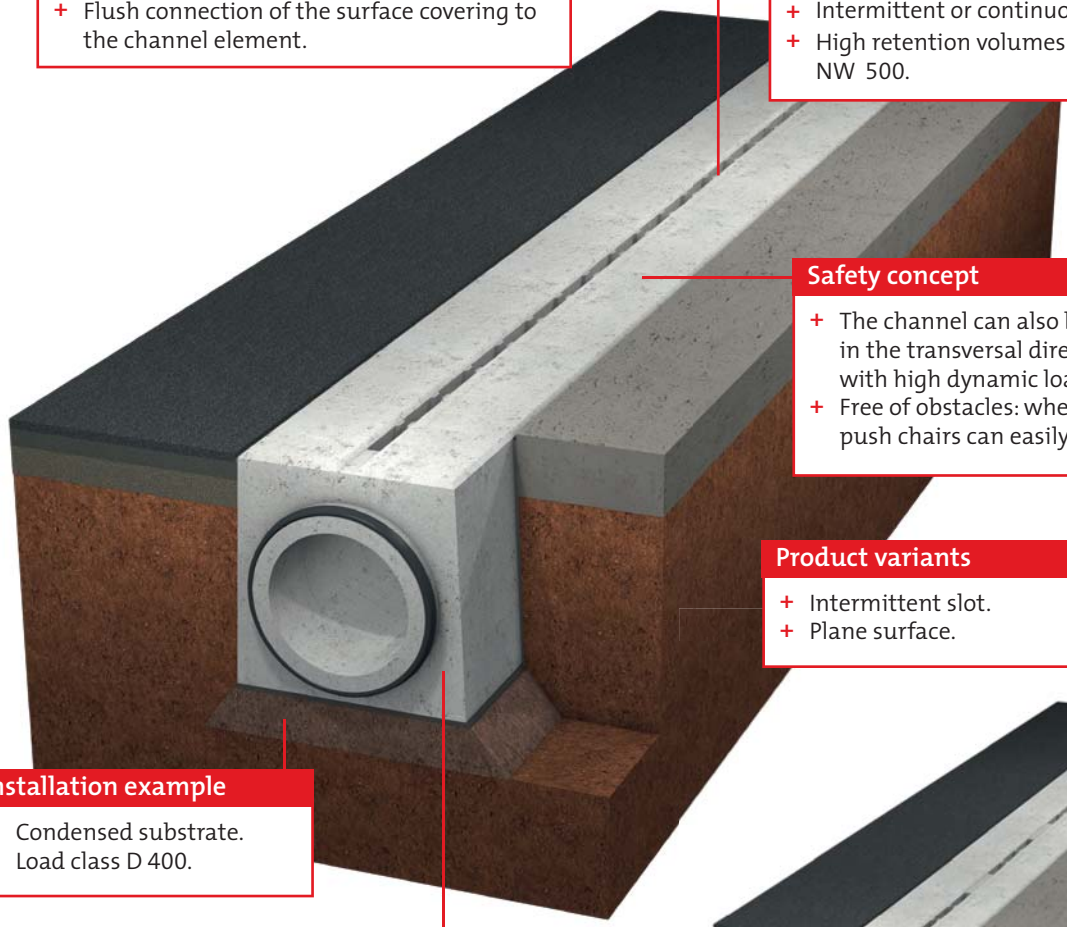
The many different product variants ensure greater flexibility when planning intermittent or continuous slot, plane or inclined surfaces. Installed as a Type I channel with sealed substrate or concrete foundation strips.

Efficient processing, fast laying

+ One-piece Type I channel elements do not require concrete surrounds which reduces the need for formwork and concrete work.
+ 4-meter channel elements guarantee fast laying with a low number of joints.
+ Flush connection of the surface covering to the channel element.

High-performance drainage

+ Surface inclines and/or internal inbuilt falls ensure fast drainage of water even in heavy rainfall.
+ Intermittent or continuous slot.
+ High retention volumes of up to NW 500.



Safety concept

+ The channel can also be crossed in the transversal direction even with high dynamic loads.
+ Free of obstacles: wheel chairs or push chairs can easily roll over it.

Product variants

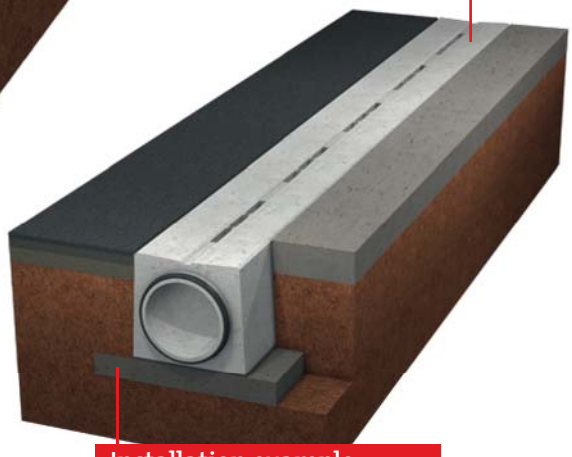
+ Intermittent slot.
+ Plane surface.

Installation example

+ Condensed substrate.
+ Load class D 400.

High-quality raw material

+ Monolithic concrete body made of structurally rated C 40/50 concrete.
+ Resistance to frost and de-icing salt ensure durability and investment protection.
+ No leakage or seepage of water through high density drainage section.



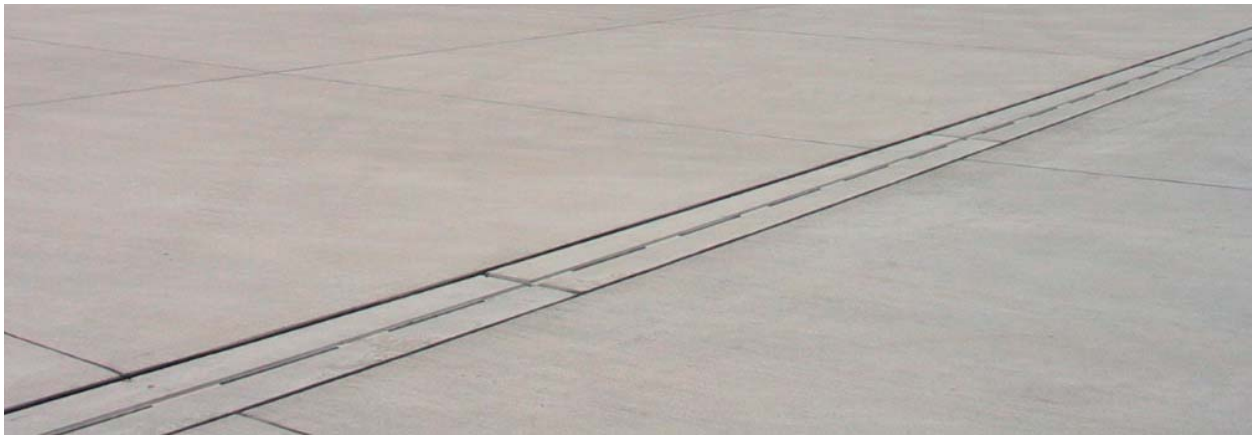
Installation example

+ Concrete foundation strips.
+ F 900 load class.

Variety and efficiency for modern civil engineering

Advantage: optimum processing and laying

Type I channel elements eliminate the need for load-bearing foundations or concrete surrounds. This reduces costs and significantly speeds up the pace at which BIRCOslot channel Pfuhler can be laid. In addition, the installation length of 4 meters ensures quick progress at the building site. The on-schedule delivery of pre-fabricated concrete components optimized for the project provides a reliable basis for planning and ensures customized implementation at the building site.



Advantage: low maintenance costs

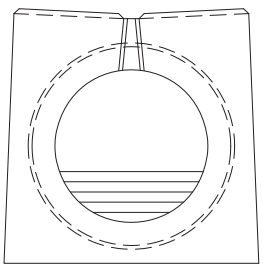
Easy to clean thanks to the maintenance channel and easily removable ductile iron covers, even when the surface is being used. The conical slot design reliably prevents blockage of the inlet slots.

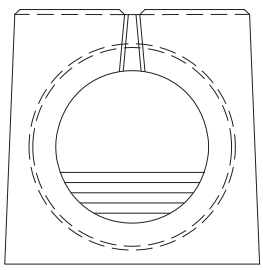
Advantage: durability secures investments

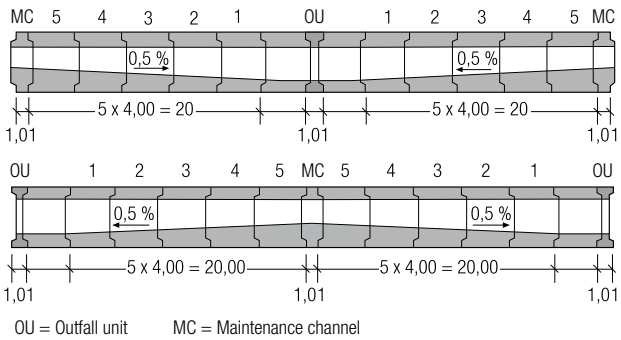
Investment protection through the ultimate quality of the materials. The C 40/50 concrete is particularly durable thanks to its high resistance to frost and de-icing salt, and the ductile iron covers are non-corrosive and break-proof. The structural reinforcement prevents the channel from collapsing, ensuring its long-lasting performance. And when dismantled, the channels can be fully recycled.

Advantage: high-performance drainage with variable inclines

BIRCOslot channel Pfuhler are available with two different surface structures: Channel element up to load class D 400 with a surface incline and channel element up to load class F 900 with a plane surface. Similarly, the channel system is available with and without an internal inbuilt fall. Variations on request.







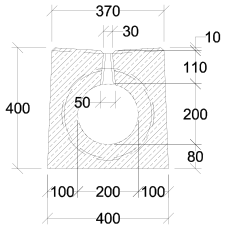
OU = Outfall unit MC = Maintenance channel

BIRCOslot channels

Pfuhler DN 200, class D 400

Slot channel element | intermittent slot | inclined surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

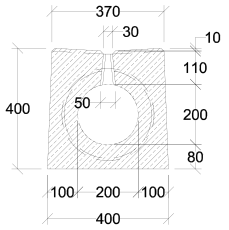


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0 intermittent slot	**4000 mm**	**370/400 mm**	**400 mm**	**1136.0 kg**	**314 cm²**	**17.44 l/sec**	**A 15 – D 400**	**047120526**

Slot channel element | continuous slot | inclined surface

+ Monolithic concrete body
+ Continuous slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

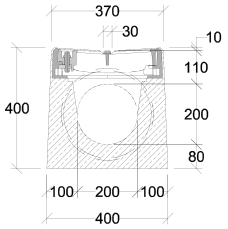


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0 continuous slot	**4000 mm**	**370/400 mm**	**400 mm**	**1120.0 kg**	**314 cm²**	**17.44 l/sec**	**A 15 – D 400**	**047120525**

Maintenance channel | inclined surface

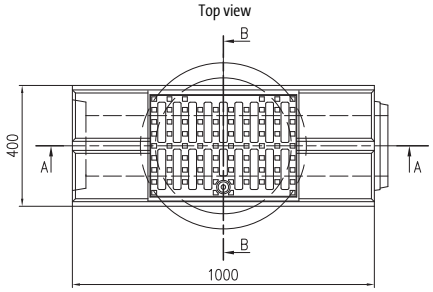
+ Monolithic concrete body
+ Inclined surface
+ With ductile iron cover

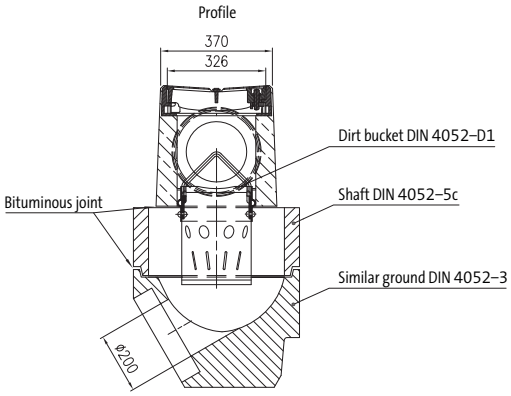


Description	Length	Width at top/ at ground	Construction height	Weight	Load class EN 1433	Article No.
Maintenance channel	**1000 mm**	**370/400 mm**	**400 mm**	**313.0 kg**	**A 15 – D 400**	**047120527**

Outfall unit | inclined surface

+ Monolithic concrete body
+ Inclined surface
+ 3-part
+ With ductile iron cover
+ With DN 200 outlet





Description	Length	Width at top	Construction height	Weight	Load class EN 1433	Article No.
Outfall unit	**1000 mm**	**370 mm**	**1000 mm**	**426.0 kg**	**A 15 – D 400**	**047120531**

End cap

+ Galvanized sheet steel with wedge-shaped sliding seal

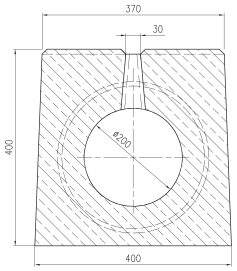
Description	For construction height	Weight	Article No.
End cap	**400 mm**	**1.7 kg**	**047120847**

BIRCOslot channels

Pfuhler DN 200, class F 900

Slot channel element | intermittent slot | plane surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Plane surface
+ Special lengths on request
+ Channel with preformed curb on request

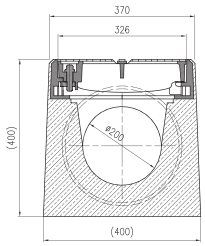


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0 intermittent slot	**4000 mm**	**370/400 mm**	**400 mm**	**1180.0 kg**	**314 cm²**	**17.44 l/sec**	**A 15 – F 900**	**047120829**

Maintenance channel | plane surface

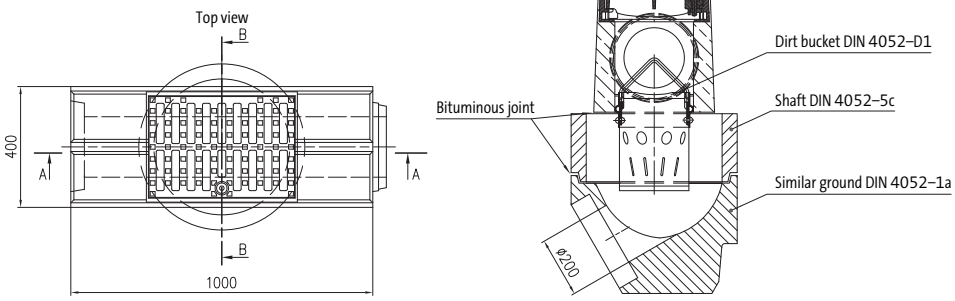
+ Monolithic concrete body
+ Plane surface
+ With ductile iron cover



Description	Length	Width at top/ at ground	Construction height	Weight	Load class EN 1433	Article No.
Maintenance channel	**1000 mm**	**370/400 mm**	**400 mm**	**317 kg**	**A 15 – F 900**	**047120832**

Outfall unit | plane surface

+ Monolithic concrete body
+ Plane surface
+ 3-part
+ With ductile iron cover
+ With DN 200 outlet



Description	Length	Width at top	Construction height	Weight	Load class EN 1433	Article No.
Outfall unit	**1000 mm**	**370 mm**	**1000 mm**	**430.0 kg**	**A 15 – F 900**	**047120833**

End cap

+ Galvanized sheet steel with wedge-shaped sliding seal

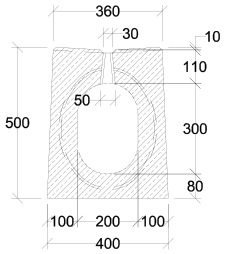
Description	For construction height	Weight	Article No.
End cap	**400 mm**	**1.7 kg**	**047120847**

BIRCOslot channels

Pfuhler 200/300 profile, class D 400

Slot channel element | without internal inbuilt fall | intermittent slot | inclined surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

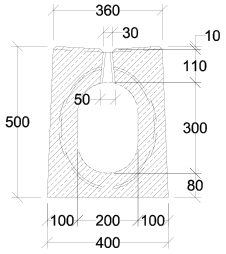


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0 intermittent slot	**4000 mm**	**360/400 mm**	**500 mm**	**1288.0 kg**	**514 cm²**	**28.55 l/sec**	**A 15 – D 400**	**047123526**

Slot channel element | without internal inbuilt fall | continuous slot | inclined surface

+ Monolithic concrete body
+ Continuous slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

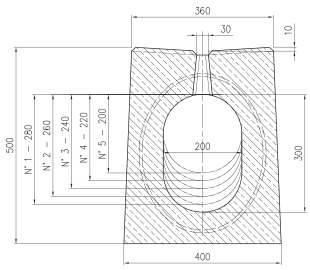


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0 continuous slot	**4000 mm**	**360/400 mm**	**500 mm**	**1272.0 kg**	**514 cm²**	**28.55 l/sec**	**A 15 – D 400**	**047123525**

Slot channel element | with internal inbuilt fall | intermittent slot | inclined surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

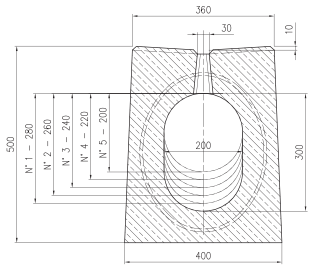


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 1 intermittent slot	**4000 mm**	**360/400 mm**	**500 mm**	**1308.0 kg**	**514 cm²**	**39.90 l/sec**	**A 15 – D 400**	**047123561**
Channel no. 2 intermittent slot	**4000 mm**	**360/400 mm**	**500 mm**	**1344.0 kg**	**474 cm²**	**36.03 l/sec**	**A 15 – D 400**	**047123562**
Channel no. 3 intermittent slot	**4000 mm**	**360/400 mm**	**500 mm**	**1384.0 kg**	**434 cm²**	**32.21 l/sec**	**A 15 – D 400**	**047123563**
Channel no. 4 intermittent slot	**4000 mm**	**360/400 mm**	**500 mm**	**1420.0 kg**	**394 cm²**	**28.44 l/sec**	**A 15 – D 400**	**047123564**
Channel no. 5 intermittent slot	**4000 mm**	**360/400 mm**	**500 mm**	**1460.0 kg**	**354 cm²**	**24.73 l/sec**	**A 15 – D 400**	**047123565**

Slot channel element | with internal inbuilt fall | continuous slot | inclined surface

+ Monolithic concrete body
+ Continuous slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

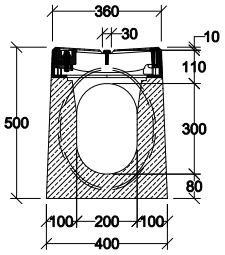


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 1 continuous slot	**4000 mm**	**360/400 mm**	**500 mm**	**1292.0 kg**	**514 cm²**	**39.90 l/sec**	**A 15 – D 400**	**047123581**
Channel no. 2 continuous slot	**4000 mm**	**360/400 mm**	**500 mm**	**1328.0 kg**	**474 cm²**	**36.03 l/sec**	**A 15 – D 400**	**047123582**
Channel no. 3 continuous slot	**4000 mm**	**360/400 mm**	**500 mm**	**1368.0 kg**	**434 cm²**	**32.21 l/sec**	**A 15 – D 400**	**047123583**
Channel no. 4 continuous slot	**4000 mm**	**360/400 mm**	**500 mm**	**1404.0 kg**	**394 cm²**	**28.44 l/sec**	**A 15 – D 400**	**047123584**
Channel no. 5 continuous slot	**4000 mm**	**360/400 mm**	**500 mm**	**1440.0 kg**	**354 cm²**	**24.73 l/sec**	**A 15 – D 400**	**047123585**

Maintenance channel | inclined surface

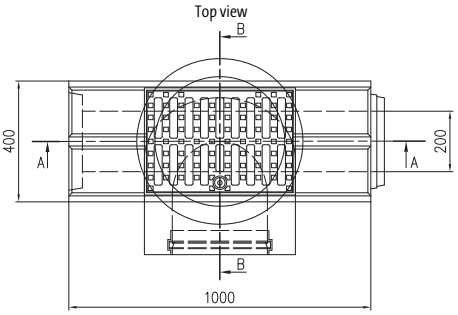
+ Monolithic concrete body
+ Inclined surface
+ With ductile iron cover

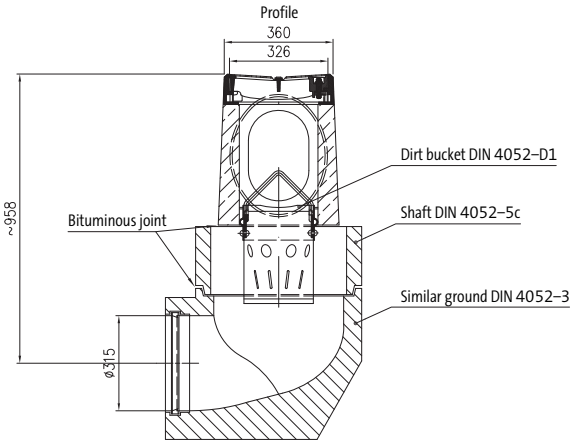


Description	Length	Width at top/ at ground	Construc- tion height	Weight	Load class EN 1433	Article No.
Maintenance channel	**1000 mm**	**360/400 mm**	**500 mm**	**327.0 kg**	**A 15 – D 400**	**047123527**

Outfall unit | inclined surface

+ Monolithic concrete body
+ Inclined surface
+ 3-part
+ With ductile iron cover
+ With DN 315 outlet





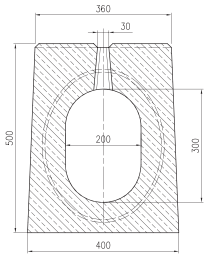
Description	Length	Width at top	Construction height	Weight	Load class EN 1433	Article No.
Outfall unit	**1000 mm**	**360 mm**	**1210 mm**	**534.0 kg**	**A 15 – D 400**	**047123531**

BIRCOslot channels

Pfuhler 200/300 profile, class F 900

Slot channel element | without internal inbuilt fall | plane surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Plane surface
+ Special lengths on request
+ Channel with preformed curb on request

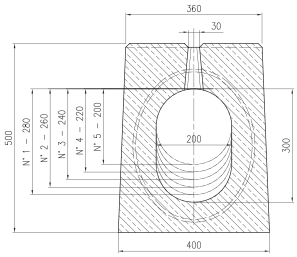


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0	4000 mm	360/400 mm	500 mm	1304.0 kg	514 cm²	28.55 l/sec	A 15 – F 900	047123829

Slot channel elements | with internal inbuilt fall | plane surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Plane surface
+ Special lengths on request
+ Channel with preformed curb on request

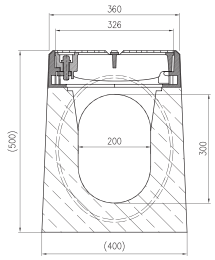


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 1	4000 mm	360/400 mm	500 mm	1352.0 kg	514 cm²	39.90 l/sec	A 15 – F 900	047123871
Channel no. 2	4000 mm	360/400 mm	500 mm	1392.0 kg	474 cm²	36.03 l/sec	A 15 – F 900	047123872
Channel no. 3	4000 mm	360/400 mm	500 mm	1428.0 kg	434 cm²	32.21 l/sec	A 15 – F 900	047123873
Channel no. 4	4000 mm	360/400 mm	500 mm	1464.0 kg	394 cm²	28.44 l/sec	A 15 – F 900	047123874
Channel no. 5	4000 mm	360/400 mm	500 mm	1504.0 kg	354 cm²	24.73 l/sec	A 15 – F 900	047123875

Maintenance channel | without internal inbuilt fall | plane surface

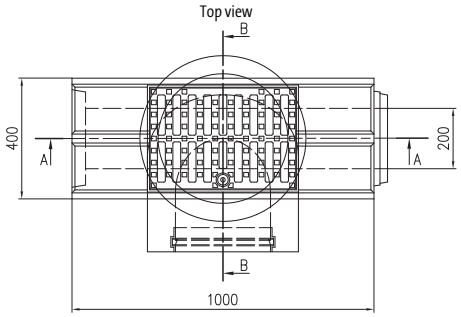
+ Monolithic concrete body
+ Plane surface
+ With ductile iron cover

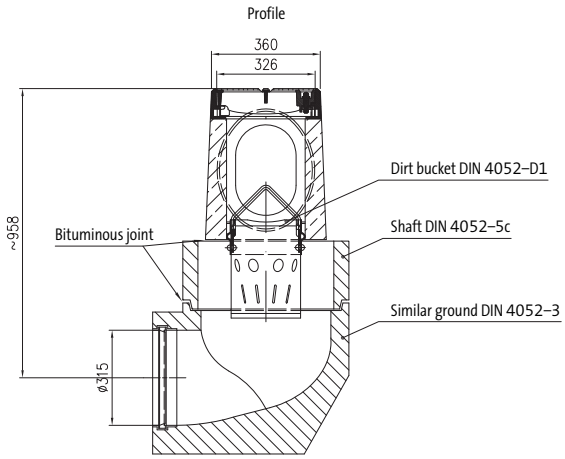


Description	Length	Width at top/ at ground	Construc-tion height	Weight	Load class EN 1433	Article No.
Maintenance channel	1000 mm	360/400 mm	500 mm	327.0 kg	A 15 – F 900	047123832

Outfall unit | without internal inbuilt fall | plane surface

+ Monolithic concrete body
+ Plane surface
+ 3-part
+ With ductile iron cover
+ With DN 315 outlet





Description	Length	Width at top	Construction height	Weight	Load class EN 1433	Article No.
Outfall unit	**1000 mm**	**360 mm**	**1210 mm**	**537.0 kg**	**A 15 – F 900**	**047123833**

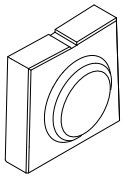
End cap | for channels without internal inbuilt fall

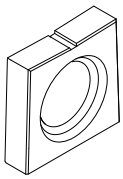
+ Galvanized sheet steel with wedge-shaped sliding seal

Description	For construction height	Weight	Article No.
End cap	**500 mm**	**2.4 kg**	**047123847**

End caps | for channels with internal inbuilt fall

+ Made of concrete for channels with internal inbuilt fall





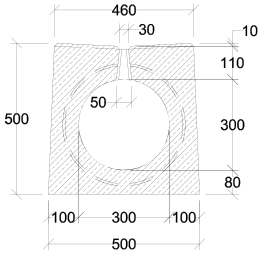
Description	For construction height	Weight	Article No.
End cap with sleeve	**500 mm**	**32.0 kg**	**047123845**
End cap with spigot end	**500 mm**	**37.0 kg**	**047123846**

BIRCOslot channels

Pfuhler DN 300, class D 400

Slot channel element | without internal inbuilt fall | intermittent slot | inclined surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

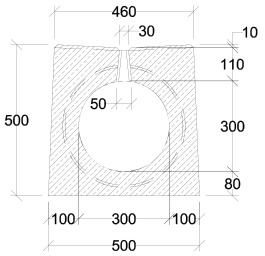


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0 intermittent slot	**4000 mm**	**460/500 mm**	**500 mm**	**1572.0 kg**	**706 cm²**	**39.22 l/sec**	**A 15 – D 400**	**047130526**

Slot channel element | without internal inbuilt fall | continuous slot | inclined surface

+ Monolithic concrete body
+ Continuous slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

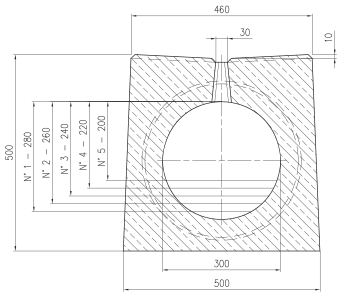


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0 continuous slot	**4000 mm**	**460/500 mm**	**500 mm**	**1556.0 kg**	**706 cm²**	**39.22 l/sec**	**A 15 – D 400**	**047130525**

Slot channel element | with internal inbuilt fall | intermittent slot | inclined surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

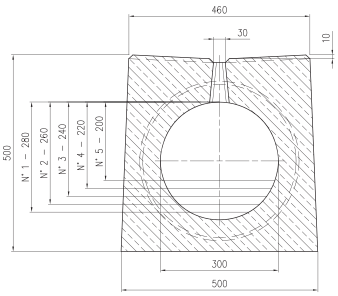


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 1 intermittent slot	**4000 mm**	**460/500 mm**	**500 mm**	**1576.0 kg**	**706 cm²**	**62.22 l/sec**	**A 15 – D 400**	**047130561**
Channel no. 2 intermittent slot	**4000 mm**	**460/500 mm**	**500 mm**	**1608.0 kg**	**668 cm²**	**59.58 l/sec**	**A 15 – D 400**	**047130562**
Channel no. 3 intermittent slot	**4000 mm**	**460/500 mm**	**500 mm**	**1644.0 kg**	**650 cm²**	**55.02 l/sec**	**A 15 – D 400**	**047130563**
Channel no. 4 intermittent slot	**4000 mm**	**460/500 mm**	**500 mm**	**1688.0 kg**	**606 cm²**	**49.52 l/sec**	**A 15 – D 400**	**047130564**
Channel no. 5 intermittent slot	**4000 mm**	**460/500 mm**	**500 mm**	**1740.0 kg**	**555 cm²**	**43.52 l/sec**	**A 15 – D 400**	**047130565**

Slot channel element | with internal inbuilt fall | continuous slot | inclined surface

+ Monolithic concrete body
+ Continuous slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

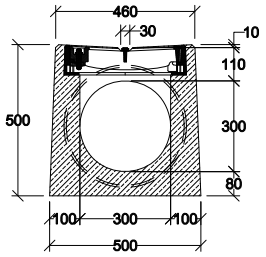


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 1 continuous slot	**4000 mm**	**460/500 mm**	**500 mm**	**1560.0 kg**	**706 cm²**	**62.22 l/sec**	**A 15 – D 400**	**047130581**
Channel no. 2 continuous slot	**4000 mm**	**460/500 mm**	**500 mm**	**1592.0 kg**	**668 cm²**	**59.58 l/sec**	**A 15 – D 400**	**047130582**
Channel no. 3 continuous slot	**4000 mm**	**460/500 mm**	**500 mm**	**1628.0 kg**	**650 cm²**	**55.02 l/sec**	**A 15 – D 400**	**047130583**
Channel no. 4 continuous slot	**4000 mm**	**460/500 mm**	**500 mm**	**1672.0 kg**	**606 cm²**	**49.52 l/sec**	**A 15 – D 400**	**047130584**
Channel no. 5 continuous slot	**4000 mm**	**460/500 mm**	**500 mm**	**1723.0 kg**	**555 cm²**	**43.52 l/sec**	**A 15 – D 400**	**047130585**

Maintenance channel | inclined surface

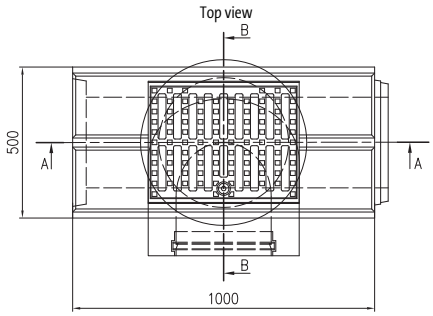
+ Monolithic concrete body
+ Inclined surface
+ With ductile iron cover

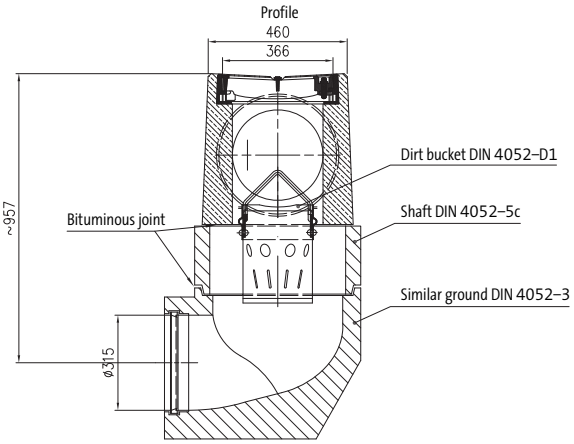


Description	Length	Width at top/ at ground	Construction height	Weight	Load class EN 1433	Article No.
Maintenance channel	1000 mm	460/500 mm	500 mm	394.0 kg	A 15 – D 400	047130527

Outfall unit | inclined surface

+ Monolithic concrete body
+ Inclined surface
+ 3-part
+ With ductile iron cover
+ With DN 315 outlet





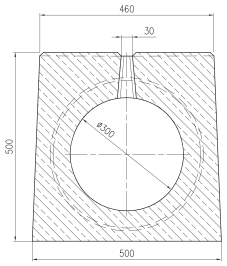
Description	Length	Width at top	Construction height	Weight	Load class EN 1433	Article No.
Outfall unit	1000 mm	460 mm	1210 mm	579.0 kg	A 15 – D 400	047130531

BIRCOslot channels

Pfuhler DN 300, class F 900

Slot channel element | without internal inbuilt fall | intermittent slot | plane surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Plane surface
+ Special lengths on request
+ Channel with preformed curb on request

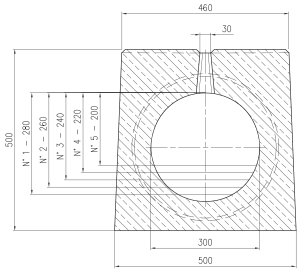


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0 intermittent slot	**4000 mm**	**460/500 mm**	**500 mm**	**1616.0 kg**	**706 cm²**	**39.22 l/sec**	**A 15 – F 900**	**047130829**

Slot channel elements | with internal inbuilt fall | intermittent slot | plane surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Plane surface
+ Special lengths on request
+ Channel with preformed curb on request

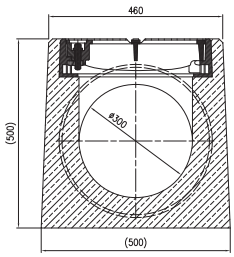


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 1 intermittent slot	**4000 mm**	**460/500 mm**	**500 mm**	**1631.0 kg**	**706 cm²**	**62.22 l/sec**	**A 15 – F 900**	**047130871**
Channel no. 2 intermittent slot	**4000 mm**	**460/500 mm**	**500 mm**	**1663.0 kg**	**668 cm²**	**59.58 l/sec**	**A 15 – F 900**	**047130872**
Channel no. 3 intermittent slot	**4000 mm**	**460/500 mm**	**500 mm**	**1699.0 kg**	**650 cm²**	**55.02 l/sec**	**A 15 – F 900**	**047130873**
Channel no. 4 intermittent slot	**4000 mm**	**460/500 mm**	**500 mm**	**1743.0 kg**	**606 cm²**	**49.52 l/sec**	**A 15 – F 900**	**047130874**
Channel no. 5 intermittent slot	**4000 mm**	**460/500 mm**	**500 mm**	**1795.0 kg**	**555 cm²**	**43.52 l/sec**	**A 15 – F 900**	**047130875**

Maintenance channel | without internal inbuilt fall | plane surface

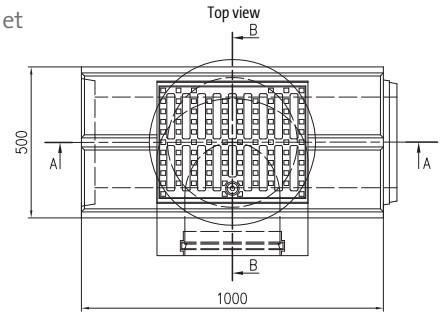
+ Monolithic concrete body
+ Plane surface
+ With ductile iron cover

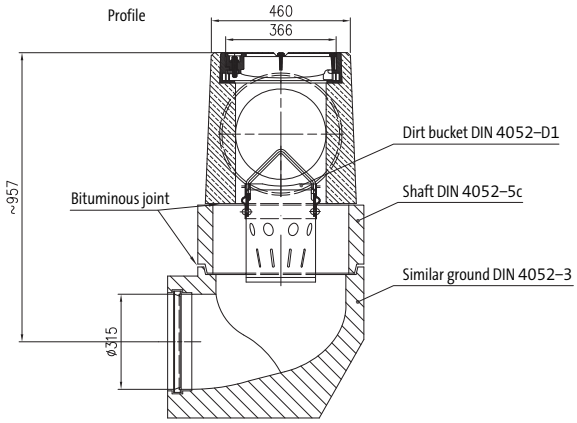


Description	Length	Width at top/ at ground	Construction height	Weight	Load class EN 1433	Article No.
Maintenance channel	1000 mm	460/500 mm	500 mm	406.0 kg	A 15 – F 900	047130832

Outfall unit | without internal inbuilt fall | plane surface

+ Monolithic concrete body
+ Plane surface
+ 3-part
+ With ductile iron cover
+ With DN 315 outlet





Description	Length	Width at top	Construction height	Weight	Load class EN 1433	Article No.
Outfall unit	1000 mm	460 mm	1210 mm	579.0 kg	A 15 – F 900	047130833

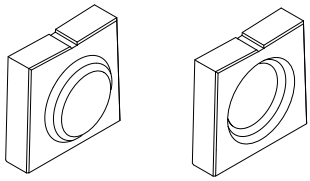
End cap | for channels without internal inbuilt fall

+ Galvanized sheet steel with wedge-shaped sliding seal

Description	For construction height	Weight	Article No.
End cap	500 mm	3.2 kg	047130847

End caps | for channels with internal inbuilt fall

+ Made of concrete for channels with internal inbuilt fall



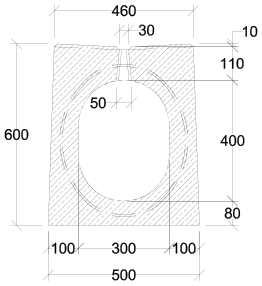
Description	For construction height	Weight	Article No.
End cap with sleeve	500 mm	45.0 kg	047130845
End cap with spigot end	500 mm	49.0 kg	047130846

BIRCOslot channels

Pfuhler 300/400 profile, class D 400

Slot channel element | without internal inbuilt fall | intermittent slot | inclined surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

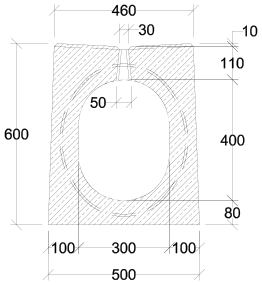


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0 intermittent slot	**4000 mm**	**460/600 mm**	**600 mm**	**1740.0 kg**	**1006 cm²**	**55.88 l/sec**	**A 15 – D 400**	**047134526**

Slot channel element | without internal inbuilt fall | continuous slot | inclined surface

+ Monolithic concrete body
+ Continuous slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

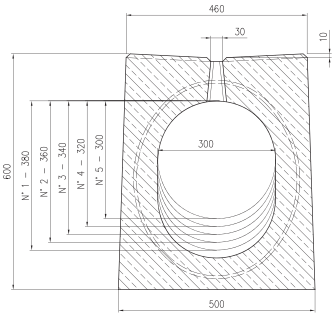


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0 continuous slot	**4000 mm**	**460/600 mm**	**600 mm**	**1728.0 kg**	**1006 cm²**	**55.88 l/sec**	**A 15 – D 400**	**047134525**

Slot channel element | with internal inbuilt fall | intermittent slot | inclined surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

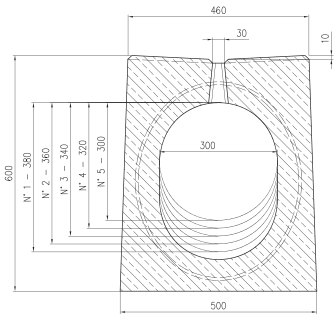


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 1 intermittent slot	**4000 mm**	**460/600 mm**	**600 mm**	**1768.0 kg**	**1006 cm²**	**98.70 l/sec**	**A 15 – D 400**	**047134561**
Channel no. 2 intermittent slot	**4000 mm**	**460/600 mm**	**600 mm**	**1828.0 kg**	**946 cm²**	**91.23 l/sec**	**A 15 – D 400**	**047134562**
Channel no. 3 intermittent slot	**4000 mm**	**460/600 mm**	**600 mm**	**1884.0 kg**	**886 cm²**	**83.84 l/sec**	**A 15 – D 400**	**047134563**
Channel no. 4 intermittent slot	**4000 mm**	**460/600 mm**	**600 mm**	**1940.0 kg**	**826 cm²**	**76.54 l/sec**	**A 15 – D 400**	**047134564**
Channel no. 5 intermittent slot	**4000 mm**	**460/600 mm**	**600 mm**	**1996.0 kg**	**766 cm²**	**69.33 l/sec**	**A 15 – D 400**	**047134565**

Slot channel element | with internal inbuilt fall | continuous slot | inclined surface

+ Monolithic concrete body
+ Continuous slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

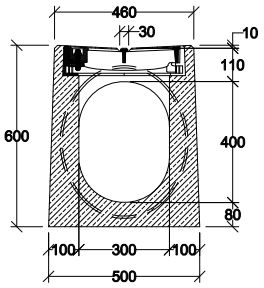


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 1 continuous slot	**4000 mm**	**460/600 mm**	**600 mm**	**1760.0 kg**	**1006 cm²**	**98.70 l/sec**	**A 15 – D 400**	**047134581**
Channel no. 2 continuous slot	**4000 mm**	**460/600 mm**	**600 mm**	**1816.0 kg**	**946 cm²**	**91.23 l/sec**	**A 15 – D 400**	**047134582**
Channel no. 3 continuous slot	**4000 mm**	**460/600 mm**	**600 mm**	**1872.0 kg**	**886 cm²**	**83.84 l/sec**	**A 15 – D 400**	**047134583**
Channel no. 4 continuous slot	**4000 mm**	**460/600 mm**	**600 mm**	**1928.0 kg**	**826 cm²**	**76.54 l/sec**	**A 15 – D 400**	**047134584**
Channel no. 5 continuous slot	**4000 mm**	**460/600 mm**	**600 mm**	**1984.0 kg**	**766 cm²**	**69.33 l/sec**	**A 15 – D 400**	**047134585**

Maintenance channel | inclined surface

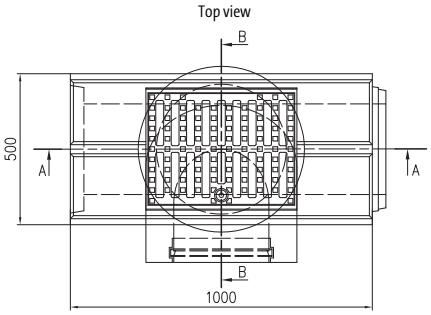
+ Monolithic concrete body
+ Inclined surface
+ With ductile iron cover

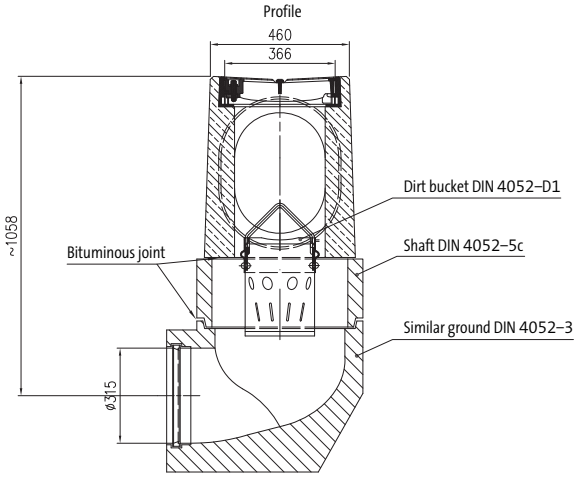


Description	Length	Width at top/ at ground	Construction height	Weight	Load class EN 1433	Article No.
Maintenance channel	**1000 mm**	**460/600 mm**	**600 mm**	**434.0 kg**	**A 15 – D 400**	**047134527**

Outfall unit | inclined surface

+ Monolithic concrete body
+ Inclined surface
+ 3-part
+ With ductile iron cover
+ With DN 315 outlet





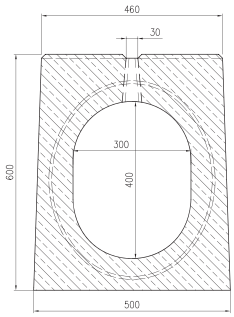
Description	Length	Width at top	Construction height	Weight	Load class EN 1433	Article No.
Outfall unit	**1000 mm**	**460 mm**	**1310 mm**	**630.0 kg**	**A 15 – D 400**	**047134531**

BIRCOslot channels

Pfuhler 300/400 profile, class F 900

Slot channel element | without internal inbuilt fall | intermittent slot | plane surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Plane surface
+ Special lengths on request
+ Channel with preformed curb on request

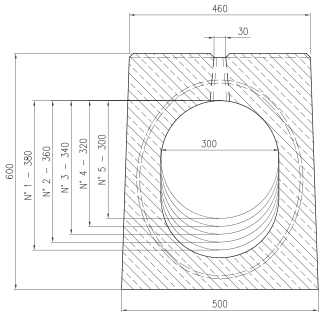


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0 intermittent slot	4000 mm	460/600 mm	600 mm	1800.0 kg	1006 cm²	55.88 l/sec	A 15 – F 900	047134829

Slot channel elements | with internal inbuilt fall | intermittent slot | plane surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Plane surface
+ Special lengths on request
+ Channel with preformed curb on request

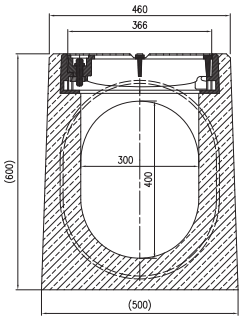


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 1 intermittent slot	4000 mm	460/600 mm	600 mm	1828.0 kg	1006 cm²	98.70 l/sec	A 15 – F 900	047134871
Channel no. 2 intermittent slot	4000 mm	460/600 mm	600 mm	1884.0 kg	946 cm²	91.23 l/sec	A 15 – F 900	047134872
Channel no. 3 intermittent slot	4000 mm	460/600 mm	600 mm	1944.0 kg	886 cm²	83.84 l/sec	A 15 – F 900	047134873
Channel no. 4 intermittent slot	4000 mm	460/600 mm	600 mm	2000.0 kg	826 cm²	76.54 l/sec	A 15 – F 900	047134874
Channel no. 5 intermittent slot	4000 mm	460/600 mm	600 mm	2056.0 kg	760 cm²	69.33 l/sec	A 15 – F 900	047134875

Maintenance channel | without internal inbuilt fall | plane surface

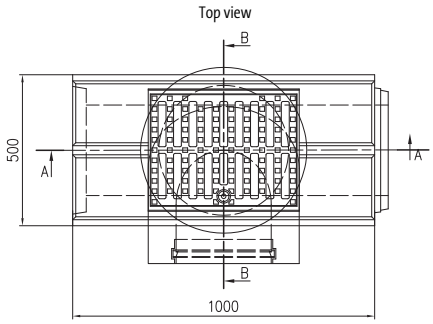
+ Monolithic concrete body
+ Plane surface
+ With ductile iron cover

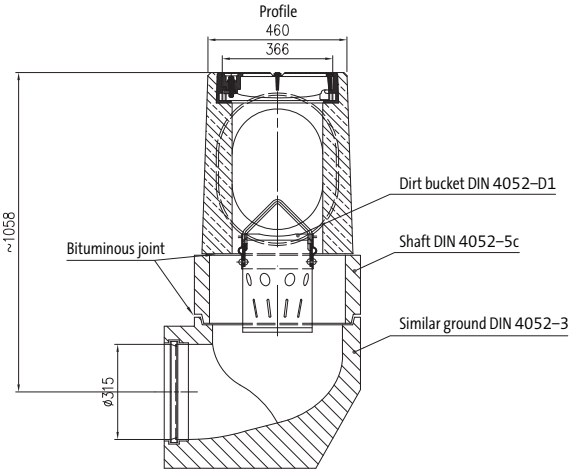


Description	Length	Width at top/ at ground	Construction height	Weight	Load class EN 1433	Article No.
Maintenance channel	**1000 mm**	**460/600 mm**	**600 mm**	**446.0 kg**	**A 15 – F 900**	**047134832**

Outfall unit | without internal inbuilt fall | plane surface

+ Monolithic concrete body
+ Plane surface
+ 3-part
+ With ductile iron cover
+ With DN 315 outlet





Description	Length	Width at top	Construction height	Weight	Load class EN 1433	Article No.
Outfall unit	**1000 mm**	**460 mm**	**1310 mm**	**630.0 kg**	**A 15 – F 900**	**047134833**

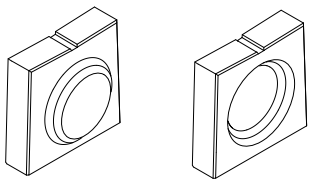
End cap | for channels without internal inbuilt fall

+ Galvanized sheet steel with wedge-shaped sliding seal

Description	For construction height	Weight	Article No.
End cap	600 mm	4.1 kg	047134847

End caps | for channels with internal inbuilt fall

+ Made of concrete for channels with internal inbuilt fall



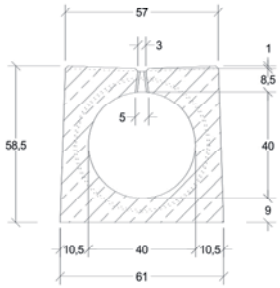
Description	For construction height	Weight	Article No.
End cap with sleeve	600 mm	49.0 kg	047134845
End cap with spigot end	600 mm	54.0 kg	047134846

BIRCOslot channels

Pfuhler DN 400, class D 400

Slot channel element | intermittent slot | inclined surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

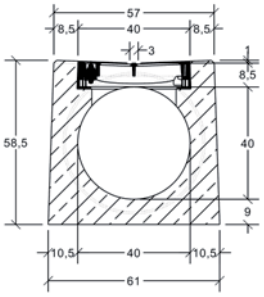


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0	4000 mm	570/610 mm	585 mm	2108.0 kg	1256 cm²	69.77 l/sec	A 15 – D 400	047140526

Maintenance channel | inclined surface

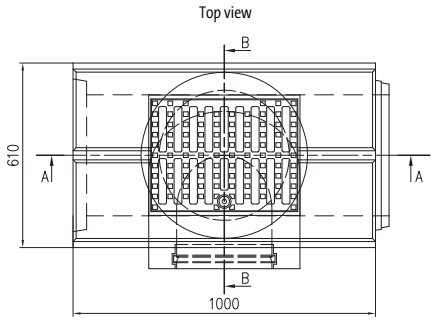
+ Monolithic concrete body
+ Inclined surface
+ With ductile iron cover

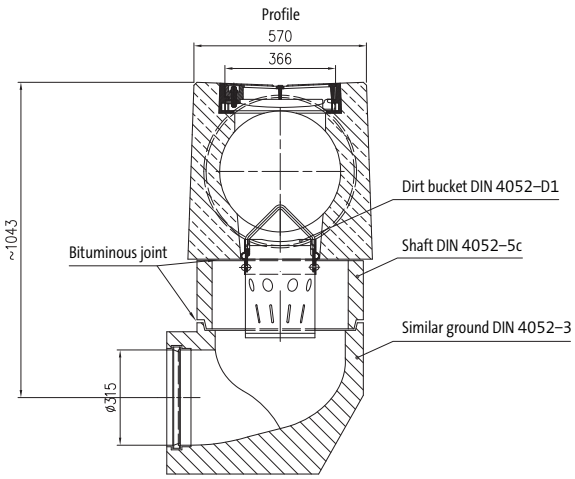


Description	Length	Width at top/ at ground	Construc-tion height	Weight	Load class EN 1433	Article No.
Maintenance channel	1000 mm	570/610 mm	585 mm	531.0 kg	A 15 – D 400	047140527

Outfall unit | inclined surface

+ Monolithic concrete body
+ Inclined surface
+ 3-part
+ With ductile iron cover
+ With DN 315 outlet

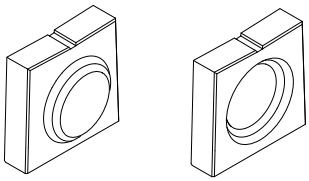




Description	Length	Width at top	Construc-tion height	Weight	Load class EN 1433	Article No.
Outfall unit	**1000 mm**	**570 mm**	**1295 mm**	**725.0 kg**	**A 15 – D 400**	**047140531**

End caps

+ Made of concrete



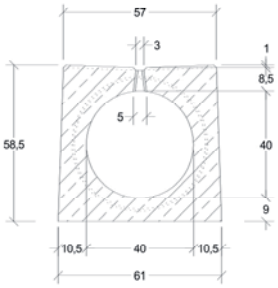
Description	For construction height	Weight	Article No.
End cap with sleeve	**585 mm**	**51.0 kg**	**047140845**
End cap with spigot end	**585 mm**	**58.0 kg**	**047140846**

BIRCOslot channels

Pfuhler DN 400, class F 900

Slot channel element | without internal inbuilt fall | inclined surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

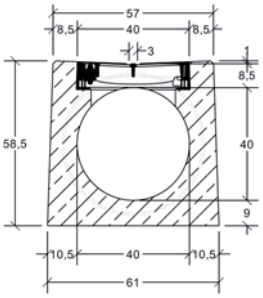


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0	4000 mm	570/610 mm	585 mm	3712 kg	1256 cm²	69.77 l/sec	A 15 – F 900	047140826

Maintenance channel | without internal inbuilt fall | inclined surface

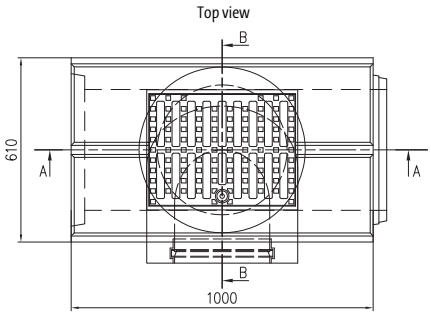
+ Monolithic concrete body
+ Inclined surface
+ With ductile iron cover

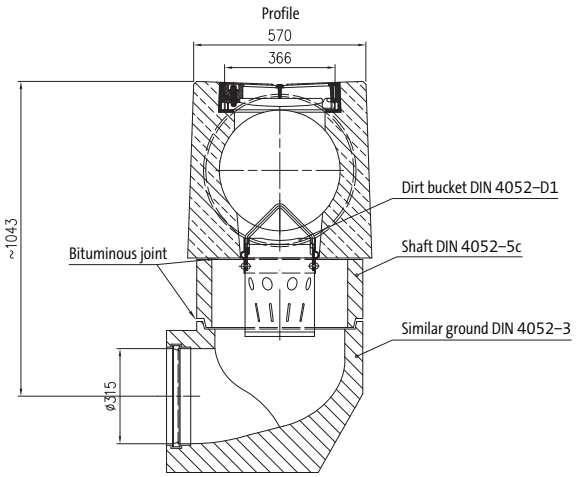


Description	Length	Width at top/ at ground	Construc-tion height	Weight	Load class EN 1433	Article No.
Maintenance channel	1000 mm	570/610 mm	585 mm	804 kg	A 15 – F 900	047140827

Outfall unit | without internal inbuilt fall | inclined surface

+ Monolithic concrete body
+ Inclined surface
+ 3-part
+ With ductile iron cover
+ With DN 315 outlet

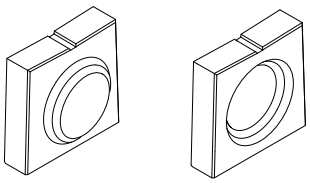




Description	Length	Width at top	Construc-tion height	Weight	Load class EN 1433	Article No.
Outfall unit	**1000 mm**	**570 mm**	**1295 mm**	**1017.0 kg**	**A 15 – F 900**	**047140831**

End caps

+ Made of concrete



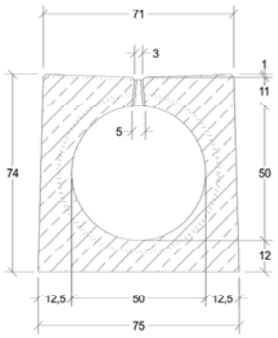
Description	For construction height	Weight	Article No.
End cap with sleeve	**585 mm**	**51.0 kg**	**047140845**
End cap with spigot end	**585 mm**	**58.0 kg**	**047140846**

BIRCOslot channels

Pfuhler DN 500, class D 400

Slot channel element | intermittent slot | inclined surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

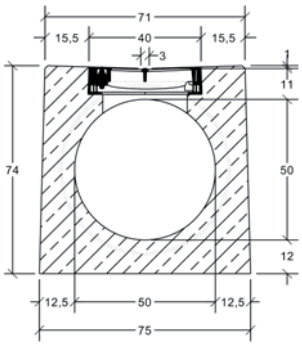


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0	4000 mm	710/750 mm	740 mm	3312.0 kg	1962 cm²	109.00 l/sec	A 15 – D 400	047150526

Maintenance channel | inclined surface

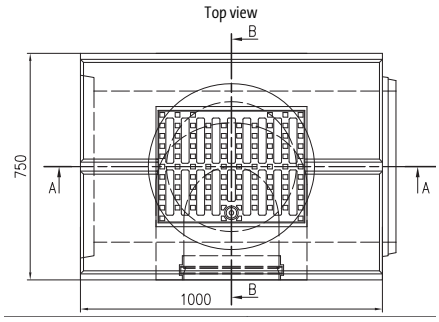
+ Monolithic concrete body
+ Inclined surface
+ With ductile iron cover

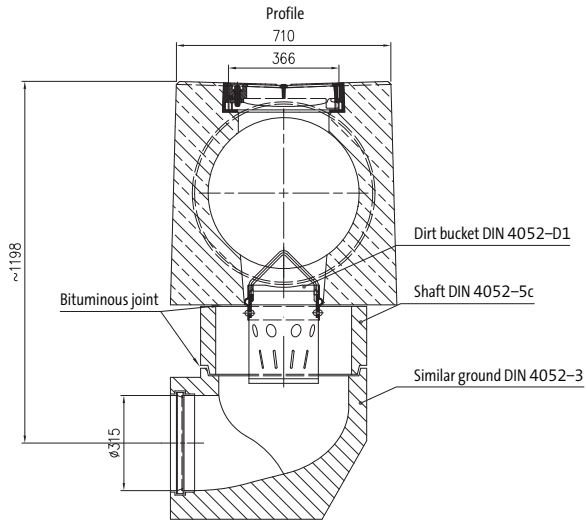


Description	Length	Width at top/ at ground	Construction height	Weight	Load class EN 1433	Article No.
Maintenance channel	1000 mm	710/750 mm	740 mm	832.0 kg	A 15 – D 400	047150527

Outfall unit | inclined surface

+ Monolithic concrete body
+ Inclined surface
+ 3-part
+ With ductile iron cover
+ With DN 315 outlet

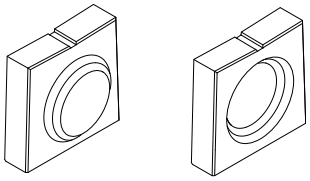




Description	Length	Width at top	Construction height	Weight	Load class EN 1433	Article No.
Outfall unit	**1000 mm**	**710 mm**	**1450 mm**	**1013.0 kg**	**A 15 – D 400**	**047150531**

End caps

+ Made of concrete



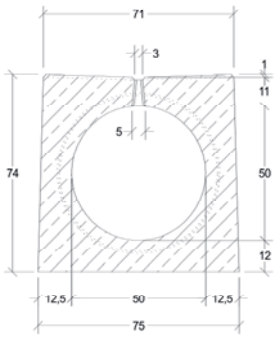
Description	For construction height	Weight	Article No.
End cap with sleeve	**740 mm**	**76.0 kg**	**047150845**
End cap with spigot end	**740 mm**	**84.0 kg**	**047150846**

BIRCOslot channels

Pfuhler DN 500, class F 900

Slot channel element | without internal inbuilt fall | inclined surface

+ Monolithic concrete body
+ Intermittent slot, slot width 30/50 mm
+ Inclined surface
+ Special lengths on request
+ Channel with preformed curb on request

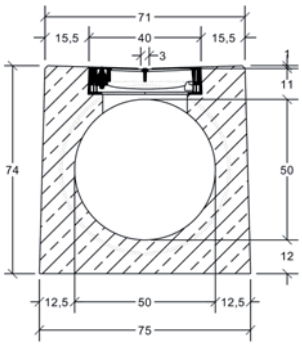


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0	4000 mm	710/750 mm	740 mm	4572 kg	1962 cm²	109.00 l/sec	A 15 – F 900	047150826

Maintenance channel | without internal inbuilt fall | inclined surface

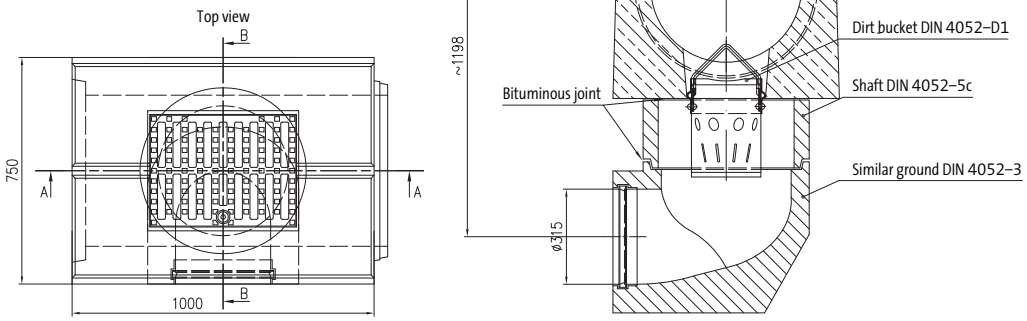
+ Monolithic concrete body
+ Inclined surface
+ With ductile iron cover



Description	Length	Width at top/ at ground	Construction height	Weight	Load class EN 1433	Article No.
Maintenance channel	1000 mm	710/750 mm	740 mm	1134 kg	A 15 – F 900	047150827

Outfall unit | without internal inbuilt fall | inclined surface

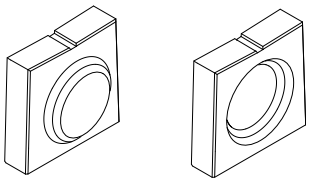
+ Monolithic concrete body
+ Inclined surface
+ 3-part
+ With ductile iron cover
+ With DN 315 outlet



Description	Length	Width at top	Construction height	Weight	Load class EN 1433	Article No.
Outfall unit	**1000 mm**	**710 mm**	**1325 mm**	**1307.7 kg**	**A 15 – F 900**	**047150831**

End caps

+ Made of concrete



Description	For construction height	Weight	Article No.
End cap with sleeve	**740 mm**	**76.0 kg**	**047150845**
End cap with spigot end	**740 mm**	**84.0 kg**	**047150846**

BIRCOslot channel Reachstaker |
Strong beyond measure

A channel equipped with extraordinarily strong reinforcement. This makes the BIRCOslot channel Reachstaker far tougher than is actually shown on the F 900 certification. The heavy-weight version for airports, container hubs and ports.

+ A 15 to F 900

The heavy-weight version for extreme loading and reliable operational activities.

BIRCOslot channel Reachstaker | Areas of application

Heavy duty areas exposed to extreme loads:

+ Airports
+ Container hubs
+ Ports
+ Haulage firms with heavy-duty transport
+ Military sites
+ Traffic moving in the transversal and longitudinal directions

BIRCOslot channel Reachstaker | Facts

+ Type I slot channel system:
  Oval profile: 300/400 (other sizes on request)
+ Monolithic concrete body (C 40/50)
+ Reinforced steel reinforcement
+ Conical slot 30/50 (intermittent)
+ Installation length: 4.00 m (other lengths on request)
+ Outfall unit (1.00 m) and maintenance channel (1.00 m) with removable ductile iron cover
+ Load class A 15 – F 900

BIRCOslot channel Reachstaker

From logistics centers to airports

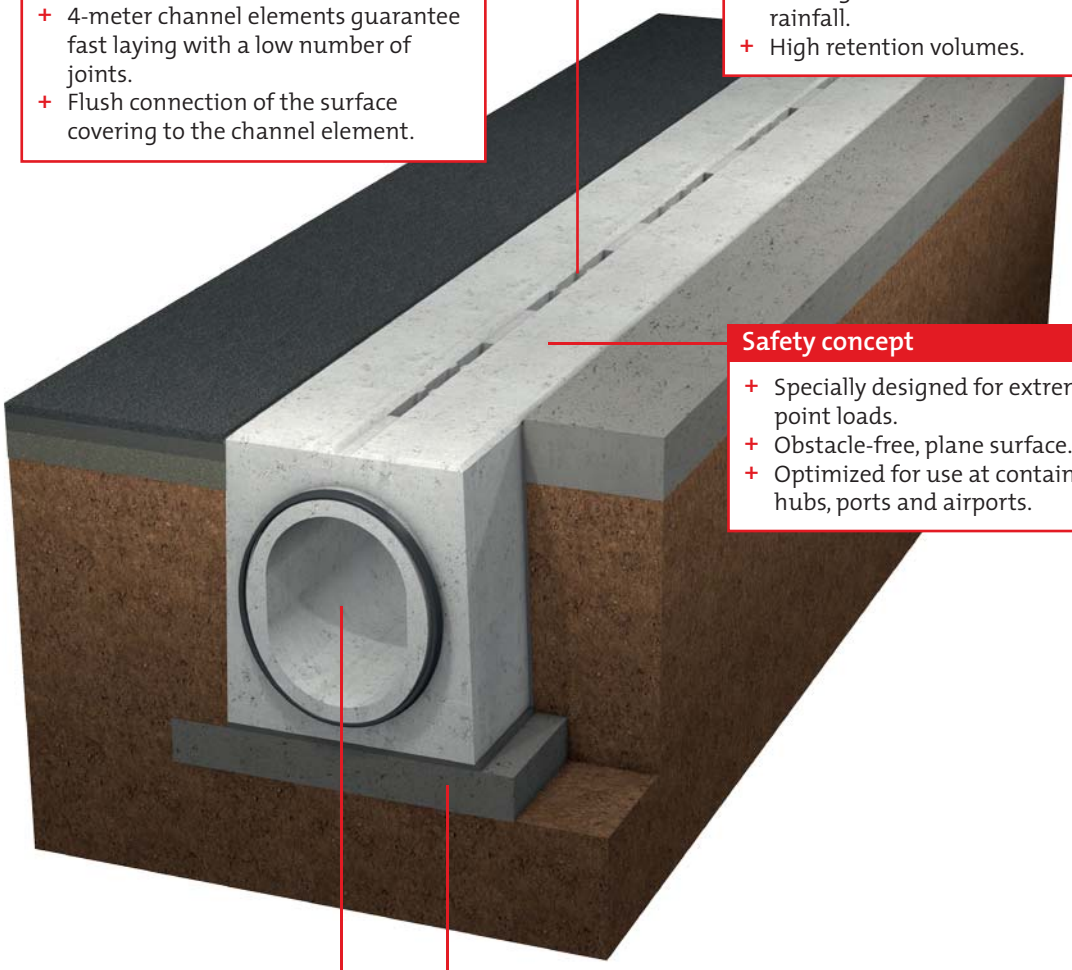
Specially developed to withstand high point loads at logistics centers. Long-lasting stability for trouble-free operation.

Faster, cost-optimized installation

+ One-piece Type I channel elements do not require concrete surrounds which reduces the need for formwork and concrete work.
+ 4-meter channel elements guarantee fast laying with a low number of joints.
+ Flush connection of the surface covering to the channel element.

High-performance drainage

+ Optimum slot design ensures fast drainage of water even in heavy rainfall.
+ High retention volumes.



Safety concept

+ Specially designed for extreme point loads.
+ Obstacle-free, plane surface.
+ Optimized for use at container hubs, ports and airports.

High-quality raw material

+ Monolithic concrete body With reinforced steel reinforcement.
+ Resistance to frost and de-icing salt ensure durability and investment protection.
+ No leakage or seepage of water through high density drainage section.

Installation example

+ Concrete foundation strips.
+ F 900 load class.

Mastering extreme loads

Advantage: excellent processing, fast laying

Type I channel elements eliminate the need for load-bearing foundations or concrete surrounds. This reduces costs and significantly speeds up the pace at which BIRCOslot channel Reachstaker can be laid. In addition, the installation length of 4 meters ensures quick progress especially in large areas. The on-schedule delivery of pre-fabricated concrete components optimized for the project provides a reliable basis for planning and ensures customized implementation at the building site.

Advantage: straightforward maintenance

Easy to clean thanks to the maintenance channel and easily removable ductile iron covers, even when the surface is being used. Particularly when using a maintenance truck. The conical slot design also reliably prevents blockage of the inlet slots.

Advantage: protection of investment

BIRCO material quality ensures long-term investments. The C 40/50 concrete is particularly durable thanks to its high resistance to frost and de-icing salt, and the ductile iron covers are non-corrosive and break-proof. The structural reinforcement prevents the channel from collapsing, ensuring long-lasting performance. And when dismantled, the channels can be fully recycled.

Advantage: high-performance drainage in sensitive areas

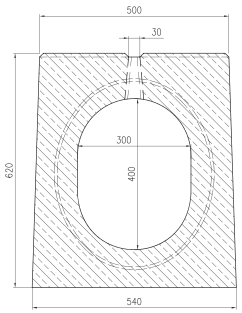
Fast drainage is crucial for ensuring smooth operation at airports, ports or container hubs/transshipment centers. The sophisticated slot design of the BIRCOslot channel Reachstaker ensures reliable drainage even of large amounts of precipitation, reduces the risk of hydroplaning and significantly increases operating safety.

BIRCOslot channel |

Reachstaker 300/400 profile

Slot channel elements | intermittent slot | plane surface

+ Monolithic concrete body
+ With reinforced steel reinforcement
+ Intermittent slot, slot width 30/50 mm
+ Plane surface
+ Special lengths on request
+ Channel with preformed curb on request

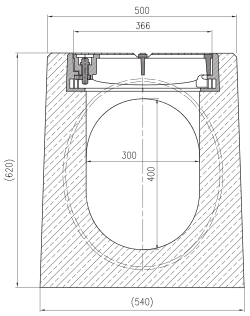


Similar to illustration

Description	Length	Width at top/ at ground	Construction height	Weight	Cross-section area at end of channel	Drainage performance at end of channel	Load class EN 1433	Article No.
Channel no. 0/0	4000 mm	500/540 mm	620 mm	2185.0 kg	1006 cm²	55.88 l/sec	A 15 – F 900	058134829

Maintenance channel | plane surface

+ Monolithic concrete body
+ With reinforced steel reinforcement
+ Plane surface
+ With ductile iron cover

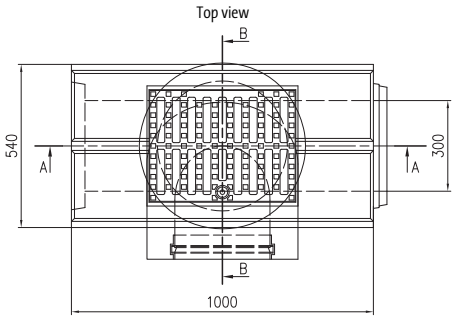


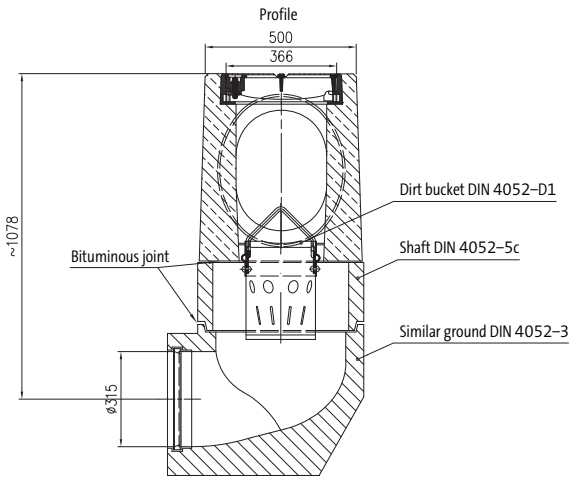
Description	Length	Width at top/ at ground	Construc- tion height	Weight	Load class EN 1433	Article No.
Maintenance channel	1000 mm	500/540 mm	620 mm	522 kg	A 15 – F 900	058134832

Other sizes on request.

Drainage gully | plane surface

+ Monolithic concrete body
+ With reinforced steel reinforcement
+ Plane surface
+ 3-part
+ With ductile iron cover
+ With DN 315 outlet





Description	Length	Width at top	Construction height	Weight	Load class EN 1433	Article No.
Drainage gully	**1000 mm**	**500 mm**	**1330 mm**	**693.0 kg**	**A 15 – F 900**	**058134833**

End cap

+ Galvanized sheet steel with wedge-shaped sliding seal

Description	For construction height	Weight	Article No.
End cap	**620 mm**	**4.2 kg**	**058134847**

Other sizes on request.

BIRCOport DN 340 | Individual building solutions for airports and ports

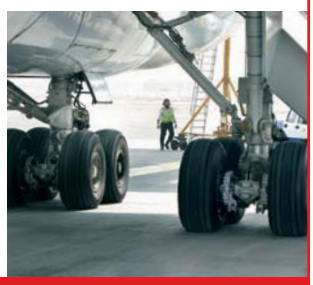
Cost-efficient and able to withstand heavy loads

BIRCO's latest development, the BIRCOport, is the ideal solution for large surfaces exposed to heavy loading. Customizable, highly efficient drainage and customer-friendly laying – a simple yet ingenious solution for new construction projects and existing systems in renovation projects. BIRCO's wide range of advice and services enable the systems to be perfectly adapted to the specific construction project.

+ A 15 to F 900

F 900

DIBt
Bauaufsichtliche Zulassung
Z-74.4-114



5 meter-long channels without foundations perfectly tailored to the requirements of airports and ports.

ASR PERFORMANCE-TEST passed

BIRCOport | Facts

+ Type I slot channel system DN 340
+ Monolithic constructively reinforced concrete body (C 50/60)
+ ASR-resistant concrete mix
+ Conical slot 30/50, intermittent
+ Profiled surface
+ Installation length: 5.00 m
+ Removable, ductile iron honeycomb cover with a large inlet cross-section for easy inspection of sealed gaps
+ DIBt-certification for storage, filling and transfer facilities for water-contaminating substances (LAU)
+ Pre-assembled flexible foam panels on the channel joints

Ingenious at the planning stage, during installation and when in operation

+ Optimized assembly, in terms of time and money, without foundation beams
+ Fast progress of construction work thanks to 5 meter-long channel elements
+ No settlement differences
+ Settlement-free connection to adjoining concrete surface
+ Low construction height: 590 + 640 mm/width: 800 mm
+ Building-related, customized adaptation of channels to the client's specifications

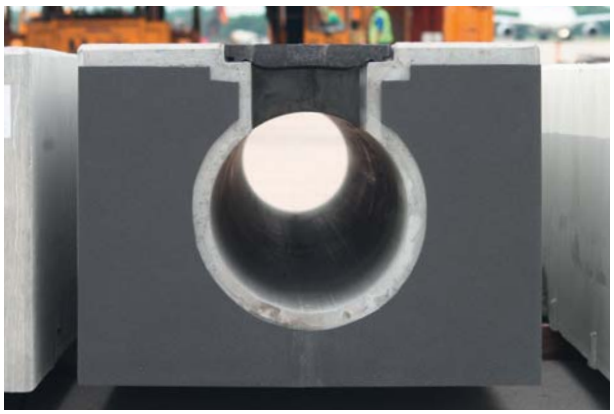
Stable channels to withstand maximum vertical and horizontal forces.

Ingenious handling and balancing of performance

+ Fast drainage of water and large retention volume
+ Suitable for storage, filling and transfer facilities for water-contaminating substances, fuels, oil and de-icing agents
+ Easy maintenance
+ Variable positioning of the outfall unit
+ Profiled surface for optimum grip even in wet conditions
+ Lasting performance thanks to the ultimate quality of the materials and the minimum strain on joints

The high-performance channel for safety-sensitive operating surfaces.

Customized in every detail to Munich's international airport



Munich's "Franz Josef Strauß" airport relies on BIRCO's innovative technology to drain its rolling surfaces along with BIRCO's sophisticated service and planning competence. A total of 5.6 kilometers of BIRCOport were laid during a large scale renovation project.

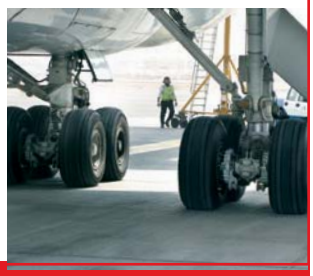
The main challenge of this project was to meet the operator's many specific requirements. Right at the start of the work, an analysis of the actual surface load was performed. The BIRCOport components were then modified in accordance with the load profile and properties of the existing surface covering and substrate so that the channel system could be accurately and, above all, quickly integrated into the existing surface.

BIRCOslot channel type BBI | Individual building solutions for airports and ports

The ideal combination of the ability to withstand heavy-duty loads and environmental expertise

Particularly at airports operating 24 hours a day, high load-bearing capacity, absolute reliability and exceptional ease of maintenance are crucial as far as the drainage system is concerned. In this two-part system, the reinforced concrete cover can be easily removed for inspection and maintenance purposes or when carrying out renovation work. A decisive advantage for continuous operation.

+ A 15 to F 900



A modern, extremely hard-wearing and environmentally-sound special channel for airports and ports.

BIRCOslot channel type BBI | Facts

+ Drainage channels and outfall units composed of a base part and a top part
+ U-shaped channel element with a nominal width of 400
+ Reinforced concrete cover with inlet slots
+ ASR-resistant concrete mix
+ Conical slot 30/50, intermittent
+ Installation length: 2.50 m
+ Outfall unit including inspection opening with 4 mm solid steel angle and ductile iron cover
+ DIBt-certification for storage, filling and transfer facilities for water-contaminating substances (LAU)

passed ASR PERFORMANCE-TEST

Cost-efficient laying on-schedule

+ Optimized assembly, in terms of time and money, as a Type I channel
+ Special spacers compensate for longitudinal expansion and dynamic loads
+ Building-related, customized adaptation of channels to the client's specifications

High performance on specialized operational areas

+ Faster drainage of water, maximum retention volume
+ Suitable for storage, filling and transfer facilities for water-contaminating substances, kerosene, oil and de-icing agents
+ Easy maintenance
+ Sealing joint can be viewed through the built-in inspection opening
+ Sustained performance through the ultimate quality of the materials and the densely grouted channel joints

The concept for maximum performance reserve

Drainage is essential at airports – especially on takeoff and landing strips which can soon become dangerously slippery in the rain. BIRCO supplied Berlin's new city airport – Berlin Brandenburg International (BBI) – with custom-made channels to ensure environmentally sound drainage.

Just like on roads, if rainfall is not completely, directly and rapidly discharged into the sewage system but remains on the surface, hydroplaning can occur on airport takeoff and landing strips. So, high-performance drainage is crucial if safety on the runway is to be ensured at all times – including in the event of sudden heavy rainfall. And torrential rain is becoming increasingly common, particularly under changing climatic conditions. Therefore, a complex drainage system must be borne in mind during the planning stage as was the case for Berlin Brandenburg International (BBI) airport. Drainage faces great challenges on the runway, whether it's small aircraft or an Airbus 380 – which weighs up to 560 tons with passengers on board– that are moving along it.

The drainage system must be able to withstand extreme point loads and high dynamic horizontal forces of aircraft, on the one hand, and permanent loads, on the other. The drainage solution specially designed for the BBI construction project consists of two parts – a U-shaped channel element with a clear nominal width of 400, and a reinforced concrete cover with inlet slots. Spacers compensate for longitudinal expansion and, above all, withstand and transfer dynamic loads in a structurally demonstrable way.

System expansions for BIRCOslot channels | Individual adaptation

Each drainage concept is different; each operating surface has its own specific conditions. BIRCO offers numerous expansions for the standardized channel versions which deliver additional advantages.

Edge reinforcement

BIRCO slot channels can be protected from spalling under high mechanical loading by two different edge reinforcements:

1. Reinforcement on slot openings with galvanized L-frames
2. Galvanized edge protection of external edges
   Particularly suitable for operating surfaces subject to high volumes of steel-wheeled vehicles or near gravel areas such as container transshipment centers.

Round openings

Instead of slots, BIRCO also offers special solutions with round openings for the BIRCOslot channel Reachstaker (DN 250). The round openings prevent small wheels from getting caught and also offer better edge protection from steel wheels.

Adapted slot widths

The slot widths of BIRCO slot channels can be reduced or increased on request according to whether you wish to increase the inlet capacity or pay particular attention to the flow of traffic. BIRCO experts will be delighted to advise you about this in more detail.

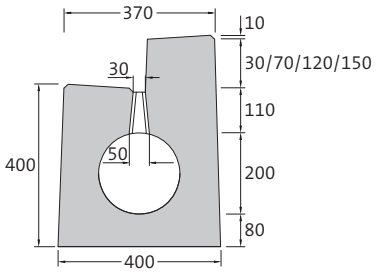
Colored surfaces

To create a visual connection (or clear distinction) between the channel surface and the adjoining surface, the concrete can be dyed in all RAL colors up to a depth of 10 to 15 cm. Impressive visual appearance with perfect functionality.

Channels with preformed curbs

In all areas with adjoining sidewalks or in highway tunnels, BIRCO offers the ideal solution for combining drainage systems with the separation of roadways and pedestrian areas: slot channels with monolithic preformed curbs.

Available in four curb heights: 3, 7, 12, 15 cm
For all channels with a continuous slot
DN 200, 300, 400
200/300, 300/400 profile
Individual curb solutions on request



Special solutions for highway tunnels

According to the German Guidelines for equipment and operation of road tunnels (RABT) and the Additional Technical Conditions for the Construction of Road Tunnels (ZTV), in the event of a disaster, if flammable liquids are spilled in a tunnel, they must flow into reinforced concrete slot channels where they are transported away via outfall units equipped with surface water-and projection-proof covers.

The use of BIRCO reinforced concrete slot channels in connection with outfall units has been well proven in numerous construction projects. BIRCO experts will be delighted to advise you about this in more detail.

OPA channels for draining open pore asphalt

Open pore concrete/asphalt, known as “whisper asphalt”, plays a major part in minimizing vehicle driving noise. At the same time, its coarse aggregate allows precipitation to quickly seep through the asphalt. A 15 cm-deep layer of bitumen is integrated, however, to prevent the precipitation from seeping down into the groundwater. Special drainage channels – OPA channels – must be incorporated to safely transport the water which accumulates on the bitumen layer.

The OPA channels have side inlet openings at the level of the draining bitumen layer on the roadway side. The seeping precipitation is guided by these channels towards the drainage system and transported away. The perfect interaction between an innovative road surface and a perfectly matching drainage solution.

BIRCO Concrete slot channels | Installation instructions

To ensure flawless operation and to observe the requirements of standard EN 1433, please follow the general instructions below:

1. Receipt of goods
Prior to unloading, the customer should check the shipment against the delivery note. The quality, sizes of slot channels and accessories should also be checked.
A delivery note on which no reservations have been written confirms that the goods have been delivered in perfect condition. If there are no reservations on the delivery note, later claims will not be accepted.

2. Unloading and storage
The reinforced concrete slot channels must be unloaded slowly and carefully with a hoisting crane. Do not make sudden or jerking movements when lifting or lowering the goods.
To avoid damaging the reinforced concrete slot channels during handling, only use the handling beams provided in conjunction with a spreader (not supplied by BIRCO/BNU). This spreader must have a minimum load capacity of 5.5 tons (for R40 - R50 profiles) and 3 tons for other profiles for a beam spacing of ffl 1.00 m.
It is important to make sure that the channels are centered on the spreader. The handling system (beams + spreader) must be positioned as stipulated on the diagram to observe a minimum spacing of 1.0 m. After inserting the handling beams into the channel, turn them a quarter of a turn then lock. DO NOT lift a slot channel using just one beam. When unloading using forklift trucks (in exceptional cases), make sure that the edges and corners of the reinforced concrete are not damaged. If the goods are being temporarily stored, insert a runner between the channels.

3. Foundations
Reinforced concrete slot channels are installed in different ways depending on the type of surface and the volume of traffic.
Concrete slot channels are installed as EN 1433 standard Type I channels which means that no load-bearing foundations are required to withstand vertical and horizontal forces.
For load class D 400, the channels must be installed on a bed face to be implemented according to the operating loads, and must be protected from frost (see page 68).
For load class F 900, the channels must be installed on a reinforced concrete spread footing to be defined by the engineering and design department of the installation company, according to the ground conditions and operating loads.
The uniform and homogeneous laying of the channel on the bed face/spread footing must be guaranteed which is why we recommend the use of fresh, non-shrink wedging mortar with no hard spots.
To take possible moisture into account, mortar which is frost- and de-icing salt-resistant should be used.

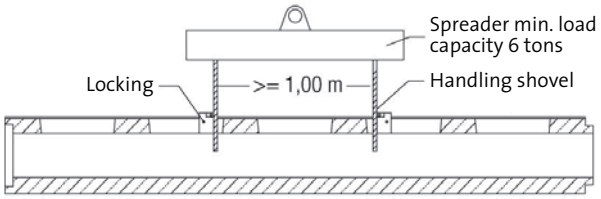
4. Installation
Reinforced concrete slot channels must be installed using suitable lifting gear as indicated in point 2 on a substructure as indicated in point 3.
If using channel leveling wedges, the gap between the channel and the bed face or the spread footing must be filled with non-shrink wedging mortar to ensure that the channel is fully supported.
Before fitting the channels, clean the sleeve and joint carefully. The joint must be adequately coated with lubricant.
Once this has been done, simply fit the channel into the channel which has already been laid using the handling system (beam + spreader). Make sure that the joint has been fitted uniformly. Once fitted, make sure that the joint is correctly in place. If this is not the case, separate the two channels, refit the joint correctly and reassemble the channels.
Make sure that the space between two channels is approx. 10 mm (minimum tolerance: 5 mm, maximum tolerance: 15 mm).
Elastomer spacers at the end of the channel, on the male side, facilitate verification.
The channels must be fitted so that the spacers are in contact with both channels (and are not crushed).
If any spacers are missing (cuts), use wooden wedges with an equivalent thickness to the spacers. Make sure that they are placed on both sides of the sleeve when fitting the channel, to ensure regular spacing between the channels.
The tops of the channels should not come into direct contact with each other under any circumstances.
The channel should not be exposed to any stress (such as dilations) caused by surfacing adjacent to the channel.
If the surfacing is “rigid” as is the case with concrete, for example, take account of the preceding comment during the planning phase.
Suitable expansion joints should also be provided along the reinforced concrete slot channels.

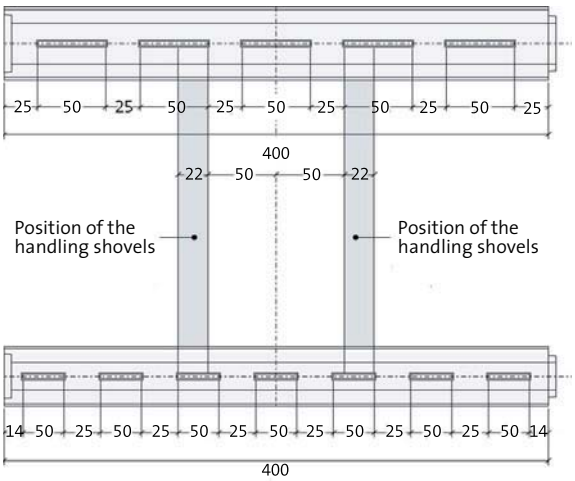
Set up a rigid panel made from EPS EN 13163 CS(10)150 expanded polystyrene or equivalent along the full height of the channel to allow the channel to transfer dynamic braking forces to the lateral surfacing.
The lateral backfill must not be allowed to compress these panels so that the transmission of horizontal forces is ensured.
Once the asphalt/lateral surfacing has been laid, fill the transversal and longitudinal joints, if necessary, with a suitable flexible sealing material.
Make sure that any movement forces caused by expansion can be absorbed permanently by the transversal joints.
To prevent the joints from spalling, use a flexible product rather than mortar or concrete. Do not allow traffic to circulate on the channels until the surfacing adjacent to the channel has been laid. Before allowing circulation on the channels (after the surfacing has been laid), the surface of the channel must be cleaned (e.g. by removing stones and gravel).

Make sure that the compacting equipment does not damage the channels when compacting the adjoining surfaces.

5. General information
These general installation instructions do not take the specific characteristics of individual sites into account.
Consequently, any additional installation requirements stipulated (e.g. by the tender text, static dimensioning, etc.) must be observed.
These installation instructions are only valid for conventional concrete slot channels. For any other type of channel, please contact us.

Positioning the handling equipment





Handling equipment for concrete slot channels

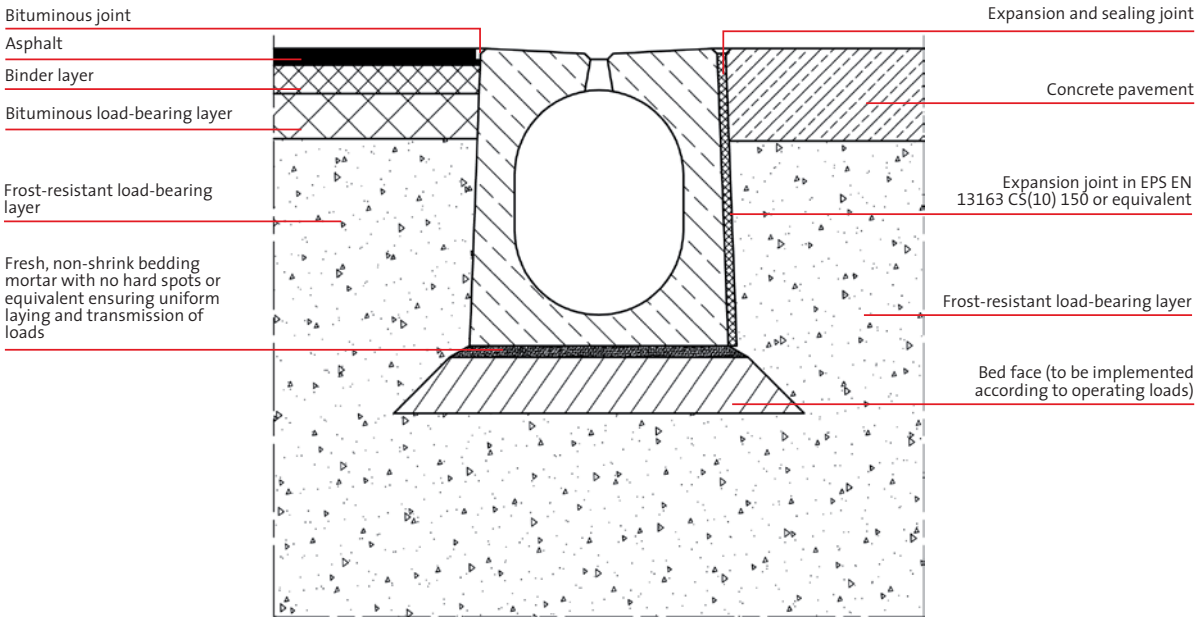
+ Set of two shovels
+ DEHA lifting system

The expansion joints must be defined by an engineering firm.
If the channels are fully coated, one transversal expansion joint should be provided every 12 meters.
Assembly in accordance to local specifications.
Exception: load class D 400: not for use across the roadway of highways or expressways.

BIRCO Slot channel – installation example

Class A 15 to D 400, Type I, DN 200, 300, 400, 500, 200/300, 300/400 profile

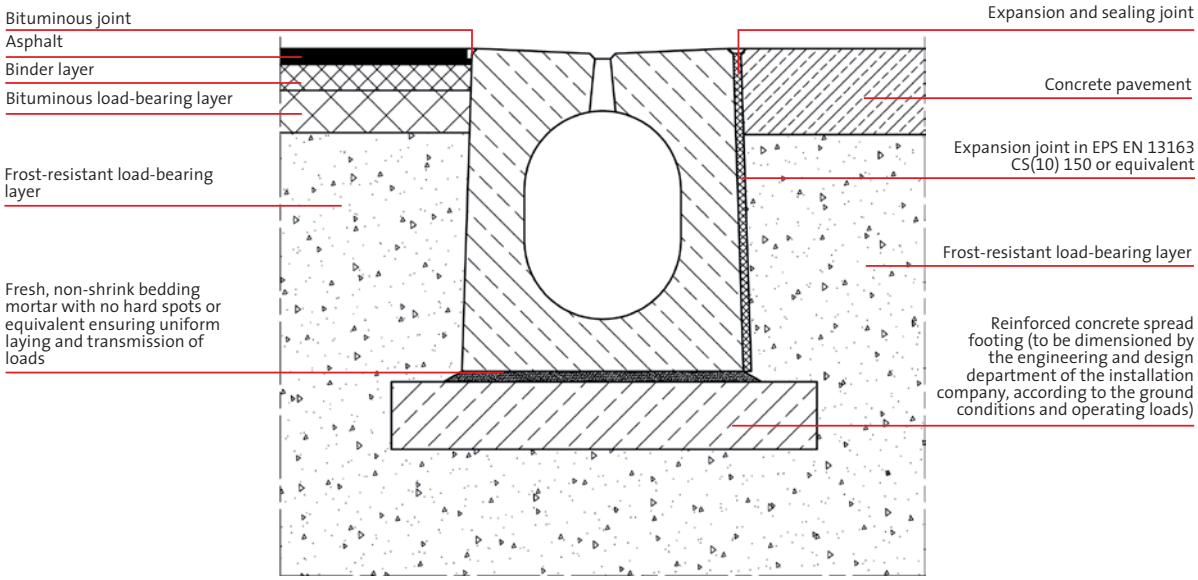
Drawing no.: 18065



BIRCO Slot channel – installation example

Class A 15 to F 900, Type I, DN 200, 300, 400, 500, 200/300, 300/400 profile

Drawing no.: 19011



The expansion joints must be defined by an engineering firm.
If the channels are fully coated, one transversal expansion joint should be provided every 12 meters.
Assembly in accordance to local specifications.
Exception: load class D 400: not for use across the roadway of highways or expressways.

BIRCOservice | Notes

BIRCOservice |
On site – Personal – Reliable

Not only do we supply excellent quality products, we also offer equally outstanding support and a completely personal service. Our daily aspiration is to faithfully accompany you in your drainage project, from planning through to implementation.

Service competence for constructors

+ Personal and trustworthy support by our field workforce
+ Easy accessibility and short response times
+ Absolute reliability
+ Competent advice on individual drainage solutions

Service competence for local authorities and public decision-makers

+ Comprehensive declarations of performance for all our products
+ Complete supporting documents and test reports
+ Precise calculation documents
+ Totally transparent tender preparation

Service competence for trade

+ Large product range
+ Fully accurate deliveries
+ High product availability, short delivery times
+ Uncomplicated, flexible changes to orders (including “last minute”)

Service competence for architects

+ Intensive design advice and calculation of drainage solutions
+ Accurate and comprehensible calculations and designs of drainage systems
+ Expert knowledge of special solutions, environmental issues and individual construction variations
+ Optimum combination of functionality and building aesthetics

Service competence for economists

+ Best price-performance ratio
+ Numerous BIRCO innovative products reduce laying time and installation work at the building site
+ The durability of our products protects investments and functionality in the long term
+ Reduced maintenance expenses mean predictable costs even in the long run

BIRCO direct contact
+49 (0) 7221 5003-1120

www.birco.com

BIRCOslot channels | Type I

In addition to features such as load-bearing capacity, durability and hydraulic performance, the main advantage of BIRCO concrete slot channels is that they are all built as type I channels. That means that they can be installed without load-bearing foundations or concrete surrounds which significantly reduces time-consuming formwork and concrete work and saves time and money.

The services offered by BIRCO

+ Precise calculation of channel systems
+ Customized, factory-made cuts before the start of construction
+ On-schedule delivery

bring an economic advantage which, particularly for building projects with fiercely competitive costs, gives a crucial lead over competitors.

We would be delighted to advise you about other special solutions and BIRCO's innovative products which bring decisive advantages to your construction project.

"Type I channels – intrinsic economic potential."

BIRCO direct contact
+49 (0) 7221 5003-1120

www.birco.com

BIRCO GmbH
International
Herrenpfädel 142
76532 Baden-Baden
GERMANY
Phone +49 (0) 7221 5003-1120
Fax +49 (0) 7221 5003-1129
E-Mail info@birco.com
Internet www.birco.com

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Print compensated
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