

BIRCO

DRAINAGE
IN ITS BEST FORM

Landscaping

Drainage solutions for landscaping



“THE BEST FOR OUR WATER”

Intelligent solutions to complete the water cycle.

Your application area	This brochure							
	BIRCOplus	BIRCOlight	BIRCOlight triloc®	BIRCO steel covers	BIRCOprofil	BIRCOtop Series S	BIRCOtop Series F	BIRCOtopline®
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	✓ ✓	✓	✓	✓		✓ ✓	✓ ✓	✓ ✓

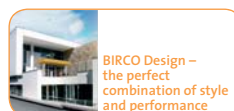
Your area of application is not included? We are happy to advise you individually. You will find our contact data on the back cover.

Your application area	This brochure							
	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.



Category	Sub-category	Item
Category 1	Sub-category 1.1	Item 1.1.1
		Item 1.1.2
		Item 1.1.3
		Item 1.1.4
		Item 1.1.5
	Sub-category 1.2	Item 1.2.1
		Item 1.2.2
		Item 1.2.3
		Item 1.2.4
		Item 1.2.5
Category 2	Sub-category 2.1	Item 2.1.1
		Item 2.1.2
		Item 2.1.3
		Item 2.1.4
		Item 2.1.5
	Sub-category 2.2	Item 2.2.1
		Item 2.2.2
		Item 2.2.3
		Item 2.2.4
		Item 2.2.5
Category 3	Sub-category 3.1	Item 3.1.1
		Item 3.1.2
		Item 3.1.3
		Item 3.1.4
		Item 3.1.5
	Sub-category 3.2	Item 3.2.1
		Item 3.2.2
		Item 3.2.3
		Item 3.2.4
		Item 3.2.5

Mark: ✓ recommended, ✓ ✓ highly recommended

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Mark: ✓ recommended, ✓ ✓ highly recommended

BIRCOquality | System Development

Individual. Reliable. With planning security. As one of the leading manufacturers of channel systems in Europe, BIRCO designs and develops innovative drainage solutions.

Surface drainage as a comprehensive concept

Tailored to the specific project

Drainage for spaces and buildings covers a wide spectrum of tasks. Among the first of these is establishing the size and surface properties of the drainage area, its average precipitation and the applicable drainage or seepage possibilities. Afterwards the channel system, nominal width and outfalls are selected.

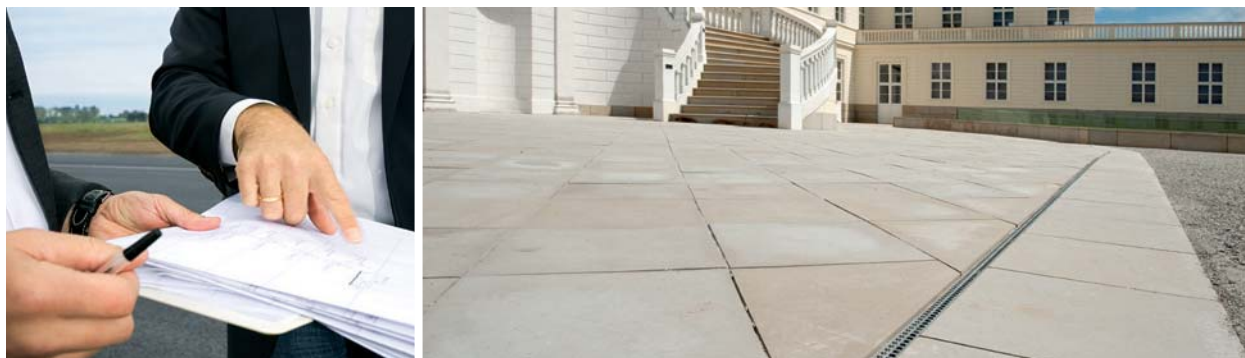
The detail planning is determined by the anticipated loads, amount of traffic and the peak loads that the concrete body and the covers will have to sustain for years.

Another important factor is the hydraulic performance. Does the site already have a natural slope or should the channels have their own inbuilt falls? Is line drainage or point drainage the better solution, or even a combination of both?

Individual supervision in every phase

In order to ensure its channel systems provide top functionality, BIRCO develops balanced, comprehensive concepts and supervises every stage of the work from planning through to the completed implementation.





BIRCO experts support planners and architects from the first concept through to laying, at the drawing board and every day at the building site.

Variable landscaping systems

Material properties and manufacture

Traffic areas that are subjected to changing loads and load types pose a special challenge in the planning of drainage solutions.

The same applies to building façade engineering, with its transitional areas from interiors to exteriors and the necessity of integrating drainage facilities ideally into the overall architectural concept.

The materials and manufacture for this have to be capable of ensuring that the channel bodies and matching covers feature the best performance, best handling and best optics for the specific property for years to come.

Planning, realization and value retention

Channel laying performance, value retention and installation safety are the decisive factors to keep costs and work times under control and to provide long-term investment protection at building sites that are often complex or in multi-stage planning procedures.

BIRCO unites all of these qualities in its products and services. BIRCO's advice, choice of materials, drainage performance and its laying advantages form a consistent complete system designed to provide lasting performance adapted to the customer's individual needs.

BIRCOquality | Materials

Drainage elements are exposed to loads and weather on any surface. BIRCO's use of high quality construction materials ensures the necessary security and long-term investment protection.

High quality channel materials for every situation

Stability and sustainability

BIRCO channels are manufactured from especially pressure-resistant C 40/50 concrete and feature high load reserves, even under extreme usage conditions. The low water-cement ratio ensures top abrasion ratios, proven durability against frost and de-icing salt and a low water-penetration depth. All in all, the side stability of BIRCO drainage channels is up to three times higher than that of conventional, thin-walled construction components.



Stainless steel in building façade engineering

Stainless steel is acknowledged as a particularly high quality, long-lasting material thanks to its malleability, its great durability, its resistance to corrosion and the consistency of its surface properties. The look of its surface can be refined mechanically through brushing, polishing and high-pressured cleaning or chemically through bating and electrolytic polishing. The amount of chrome in stainless steel reduces corrosion, creating ideal conditions for applying it to the demanding visual standards of building façade engineering.





BIRCO's materials and processing guarantee lasting performance far beyond the 5-year limit.

Solid steel angles

4 mm solid steel – 70 µm galvanised

BIRCO only uses high quality 4 mm solid steel angles with a 70µm zinc coating or angles made of stainless steel. Massive anchors stably connect the solid steel angles with the concrete channels. This makes it possible to conduct sealing of the base courses directly at the channel/solid steel edge when laying BIRCO concrete channels. That creates the optimum connection with the very best de-icing salt and corrosion protection.

4 mm | 70 µm



Clamp cover



Bolted cover

Top bolting

Fast, safe, low-maintenance

BIRCO landscaping channel systems can be fitted with a variety of fastening options ranging from combi-fastener locks to bolts to Easylock fasteners, stainless steel channels fitted with bolts or easily removable clamp covers. And all of these options are quick and safe to handle.

BIRCOLight triloc®

New locking principle for fast maintenance

The BIRCOLight system is a light and robust concrete channel for higher hydraulic requirements. Thanks to the BIRCOLight triloc® locking principle, the cover is locked into place quickly, easily and in a shift-proof manner. The sophisticated spring concept ideally connects the cover with the channel and even permits an optional bolt fastening, which can also be applied retrospectively.



BIRCOLight triloc®

BIRCOquality | Manufacture

Loads exert forces from above and horizontally onto the channel bodies and covers. BIRCO has developed a range of product specifications to consistently safeguard drainage lines in urban and landscaping construction.

Anchoring system

Firmly anchored to the base structure

The anchoring system of BIRCO's AS product family (for example BIRCOLight) firmly bond the drainage channel to the adjoining base structure. When professionally laid, this virtually excludes the possibility of the sway or disengagement of the channels from the base structure.

Safety sealing joint

Connection in accordance with EN 1433

In order to ensure a permanently stable connection between the individual channel units, all BIRCO concrete channels are fitted with a EN 1433-compliant safety sealing joint. Each safety sealing joint is visible from above, making inspection fast and easy.





Individual drainage solutions tailored to the respective construction plan. Cutting to measure makes precise laying possible at the building site.

Individual customizations

Customized 90° and mitred cuts

BIRCO's factory service offers you a variety of customized channel solutions, either at a 90° angle or mitred. The concrete parts including the covers are cut so that installation at the building site can be conducted faster and with greater precision.

Horizontal and vertical bore holes

We can fit BIRCO channels with horizontal or vertical bore holes for directly fitting feed and drainage lines according to our plans. The available connections range from DN 70 to DN 315. The diameters are matched with channel base pipes; different pipes are available upon request.

Radial and polygonal laying

Building façade engineering encompasses interesting challenges for running channel lines and for unusual radii, for instance in reception areas or alongside buildings. BIRCO produces variable polygonal drainage lines that add an extra optical bonus to the corresponding building.



BIRCOquality | Project Management

BIRCO offers a consultancy and calculation service for planners and architects that supervises every construction plan from its conception through to completion.

Individual solutions

Solutions for planners and architects

Frequently, drainage projects cannot be executed in a standardized fashion. Specific projects can have unique requirements, ranging from the combination of different channel systems to customized pre-cuts and continuing up to specifically designed inbuilt falls and discharge options.

BIRCO's office personnel and sales team experts apply their years of experience in supporting planners and architects. BIRCO's staff work together with them to come up with innovative solutions for surface drainage right from the planning and continuing through to calculation, implementation and execution on the building site.

Hydraulic calculations

Planning security right from the start

BIRCO calculates the hydraulic performance of your building project and helps you decide on the drainage system you need. Whether you order a standard product or an individual solution, you receive plans created with the aid of the latest CAD technology along with complete part lists of all required accessories, as well as laying plans.





Strict material and process testing ensures the functionality and long serviceable life of all BIRCO systems.

Quality management

Ensuring BIRCO quality

BIRCO tests the materials from its suppliers and its own products regularly with the very latest metrology technology. Testing is conducted by our own quality management experts as well as by external, independent monitoring institutions. To this end, a supervision agreement was concluded with argus cert bau, one of the leading German organisations for testing, quality control and certification services for construction products. Consistent testing plans allow us to register all of the relevant data and compose comprehensible test reports.

From the material up to the finished product

We inspect all goods received for the stipulated quality characteristics, we conduct initial sample testing (documented in a corresponding report) and we monitor product quality continuously throughout the production process. In this way, our own production processes as well as those of our suppliers are under constant surveillance. All of this results in a quality standard that you can rely on.

Certification

Confirmed quality and processes

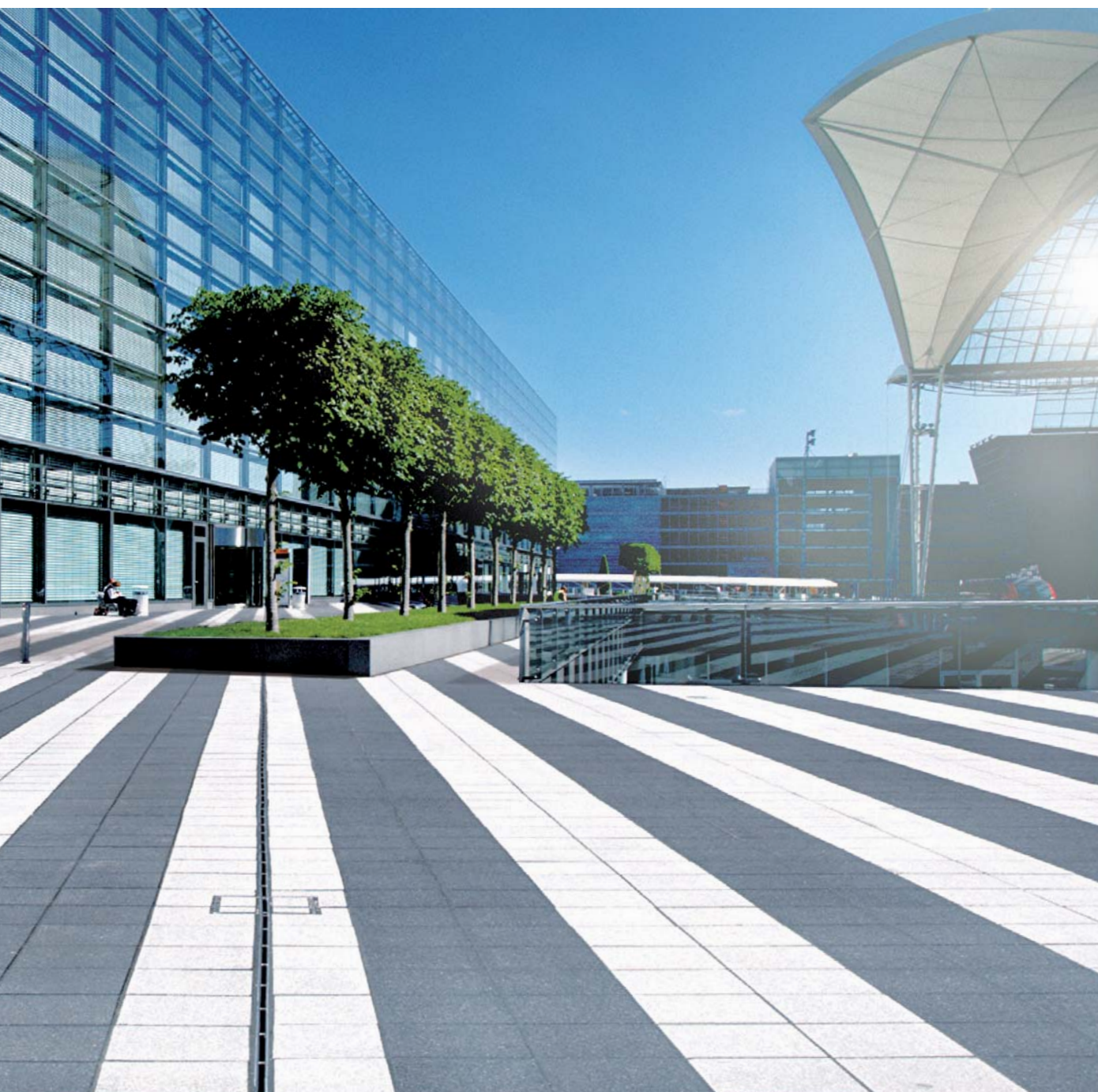
Our seamless quality control means that BIRCO products not only comply with the required standards, but are also certified by a variety of construction supervisory authorities. This is a standard that we are proud of and that we are working on each day to improve even more.

In addition, BIRCO maintains an integrated management system (IMS) consisting of quality management in accordance with EN ISO 9001:2008, environmental management in accordance with EN ISO 14001 and in accordance with EWG 1836/93, and a management system for work safety and workplace safety in accordance with OHRIS guidelines.

BIRCOproductsystem | For the landscaping sector



Combining design and function.



BIRCOLight | Modern design – Perfect handling

Surface drainage with BIRCOLight can be integrated harmoniously into any architecture concept. BIRCOLight is particularly suitable for landscaping construction or urban construction of public spaces with high quality surfaces. BIRCOLight's attractive range of covers can provide a characteristic element in urban or public space design while additionally providing sufficient load reserves for those times when traffic is heavier.

+ A 15 to E 600



For the drainage of areas featuring a sophisticated optical and architectural design.

BIRCOLight | Areas of application

- + Gardening & landscaping construction
- + Residential and town construction
- + Private building owners
- + Properties with sophisticated architectural requirements

BIRCOLight | Facts

- + Channel system: NW 100 AS, 150 AS with and without inbuilt falls
- + With anchoring system (AS)
- + Also available as a shallow channel
- + Construction lengths: 0.5 and 1.0 meters
- + Load class: A 15 – E 600
- + Broad range of covers: Ductile iron covers, long bar grating, design covers, mesh covers and pattern-rolled covers. Mesh gratings and galvanized steel perforated and bar grating (stainless steel upon request)



BIRCOLight | Modern Design – Perfect Handling

Optically variable, easy to handle and stable under heavy loads. BIRCOLight is the ideal solution in sophisticated landscaping or urban construction.

Corrosion protection

- + Stability and corrosion protection: 4 mm solid steel angles with a 70 µm zinc coating anchored in concrete.
- + The connection between the surface pavement and the solid steel angle is flush.

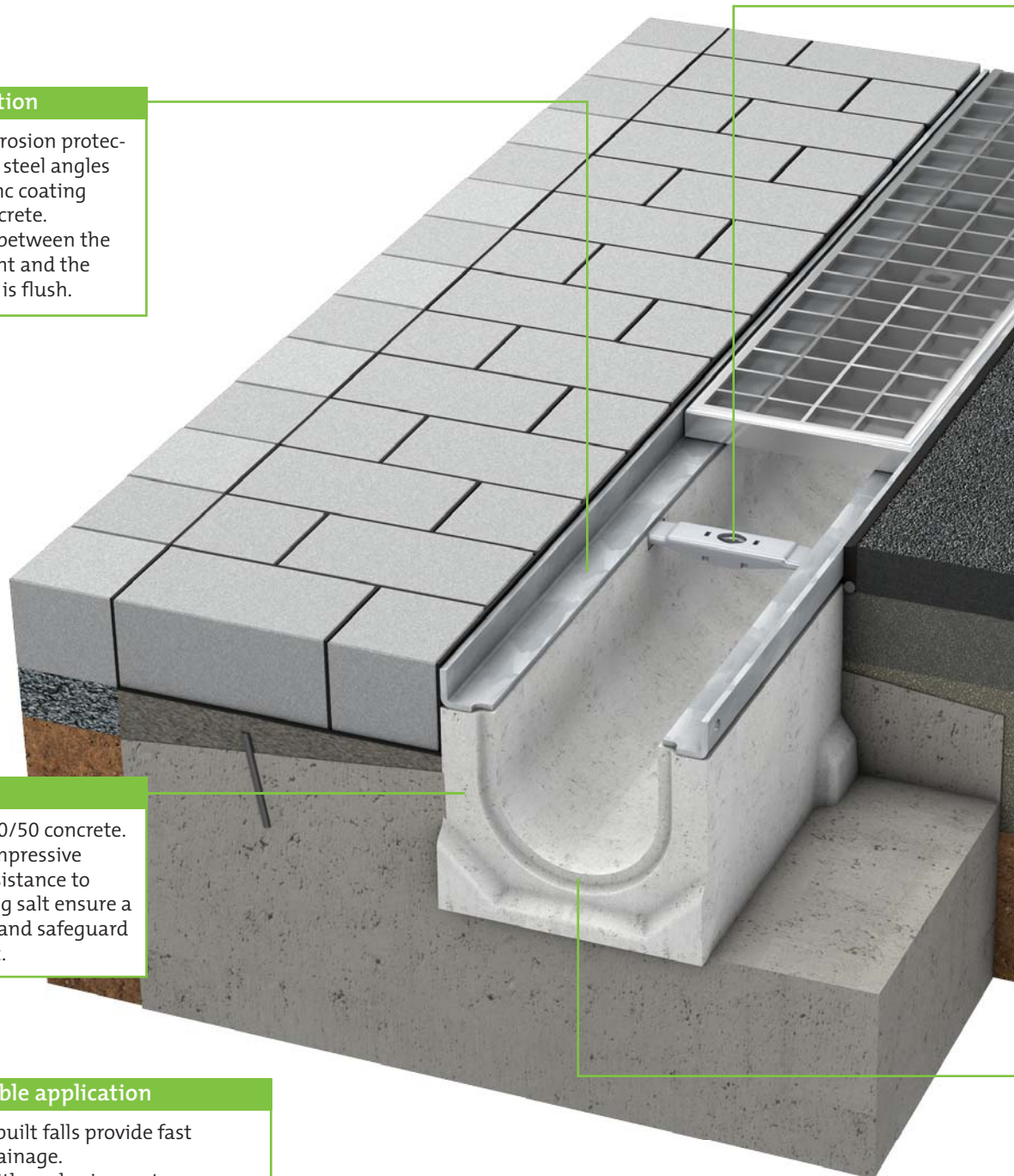
Material quality

- + High quality C 40/50 concrete.
- + High level of compressive strength and resistance to frost and de-icing salt ensure a long service life and safeguard your investment.



Flexible application

- + Inbuilt falls provide fast drainage.
- + With anchoring system.



This picture is exemplary. For installation, please observe our installation instructions or installation examples.

We were able to actively support customers here:

Traffic safety

- + High level of traffic safety thanks to the 2 bolt connections per meter.
- + Connection options: Easylock or individually threaded.



Valga City Center, Estonia



Washingtonplatz Berlin Main Train Station



Al Ain Wildlife Park, Dubai



Attractive design

- + Best architectural design possibilities thanks to the diversity of grating varieties.

Safety seam

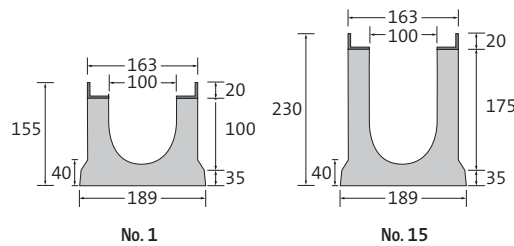
- + Visually inspectable safety sealing joint for the stable connection of the channel units (can be additionally grouted with BIRCO SF-Connect sealant).

BIRCOLight | NW 100 AS

The stable concrete channel with a large variety of gratings

Channel elements with anchoring system | 0.5 % internal inbuilt fall

- + Hot-dipped galvanized solid steel angle and combi-closure toggle
- + As special solution with stainless steel angle (V2A) and combi-closure toggle (combi-closure toggle not in V2A)
- + Safety sealing joint



Description	Length	Width at top/ at ground	Construction height at groove/tongue	Weight	Load class EN 1433	Article No.
Channel No. 1	1000 mm	163/189 mm	155/160 mm	36.2 kg	A 15 – E 600	021001
Channel No. 2	1000 mm	163/189 mm	160/165 mm	38.2 kg	A 15 – E 600	021002
Channel No. 3	1000 mm	163/189 mm	165/170 mm	38.7 kg	A 15 – E 600	021003
Channel No. 4	1000 mm	163/189 mm	170/175 mm	39.3 kg	A 15 – E 600	021004
Channel No. 5	1000 mm	163/189 mm	175/180 mm	39.7 kg	A 15 – E 600	021005
Channel No. 6	1000 mm	163/189 mm	180/185 mm	40.7 kg	A 15 – E 600	021006
Channel No. 7	1000 mm	163/189 mm	185/190 mm	41.2 kg	A 15 – E 600	021007
Channel No. 8	1000 mm	163/189 mm	190/195 mm	41.7 kg	A 15 – E 600	021008
Channel No. 9	1000 mm	163/189 mm	195/200 mm	42.2 kg	A 15 – E 600	021009
Channel No. 10	1000 mm	163/189 mm	200/205 mm	42.7 kg	A 15 – E 600	021010
Channel No. 11	1000 mm	163/189 mm	205/210 mm	43.2 kg	A 15 – E 600	021011
Channel No. 12	1000 mm	163/189 mm	210/215 mm	44.2 kg	A 15 – E 600	021012
Channel No. 13	1000 mm	163/189 mm	215/220 mm	44.7 kg	A 15 – E 600	021013
Channel No. 14	1000 mm	163/189 mm	220/225 mm	45.2 kg	A 15 – E 600	021014
Channel No. 15	1000 mm	163/189 mm	225/230 mm	45.7 kg	A 15 – E 600	021015

Please note special installation instructions for classes D 400 and E 600.
Exception up to D 400: Not for use across the carriage-way of highways or motorways.

Channel elements with anchoring system | without internal inbuilt fall

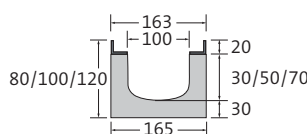
- + Hot-dipped galvanized solid steel angle and combi-closure toggle
- + As special solution with stainless steel angle (V2A) and combi-closure toggle (combi-closure toggle not in V2A)
- + Safety sealing joint

Description	Length	Width at top/ at ground	Construction height at groove/tongue	Weight	Load class EN 1433	Article No.
Channel No. 0/0	500 mm	163/189 mm	155/155 mm	17.9 kg	A 15 – E 600	021031
Channel No. 0/0	1000 mm	163/189 mm	155/155 mm	36.2 kg	A 15 – E 600	021026
Channel No. 5/0	500 mm	163/189 mm	180/180 mm	19.9 kg	A 15 – E 600	021032
Channel No. 5/0	1000 mm	163/189 mm	180/180 mm	39.7 kg	A 15 – E 600	021027
Channel No. 10/0	1000 mm	163/189 mm	205/205 mm	42.7 kg	A 15 – E 600	021028
Channel No. 15/0	1000 mm	163/189 mm	230/230 mm	45.7 kg	A 15 – E 600	021029

Channel No. 0/0 and 5/0 also available with socket DN 100 for a vertical outlet. Article No. 021033/021034 for a length of 1000 mm

Shallow channels | without internal inbuilt fall

- + Hot-dipped galvanized solid steel angle and combi-closure toggle
- + As special solution with stainless steel angle (V2A) and combi-closure toggle (combi-closure toggle not in V2A)
- + Safety sealing joint



Description	Length	Width at top/ at ground	Construction height at groove/tongue	Weight	Load class EN 1433	Article No.
Construction height 80	1000 mm	163/165 mm	80/80 mm	20.2 kg	A 15 – E 600	031026
Construction height 100	1000 mm	163/165 mm	100/100 mm	24.2 kg	A 15 – E 600	031027
Construction height 120	1000 mm	163/165 mm	120/120 mm	25.7 kg	A 15 – E 600	031028

Please note special installation instructions for classes D 400 and E 600.
Exception up to D 400: Not for use across the carriage-way of highways or motorways.

End caps

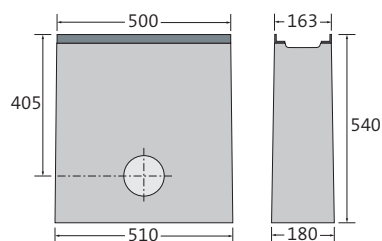
- + Also available in stainless steel (V2A)
- + With or without tack-welded run-off socket



Description	Width	For construction height	Weight	Article No.
End cap, galvanized, No. 0/0 – 4	160 mm	155 – 175 mm	0.3 kg	021080
End cap, galvanized, No. 5 – 8	160 mm	175 – 195 mm	0.3 kg	021081
End cap, galvanized, No. 9 – 12	160 mm	195 – 215 mm	0.4 kg	021082
End cap, galvanized, No. 13 – 15	160 mm	215 – 235 mm	0.4 kg	021083
Shallow end cap, galvanized, construction height 80	160 mm	80 mm	0.1 kg	031040
Shallow end cap, galvanized, construction height 100	160 mm	100 mm	0.2 kg	031041
Shallow end cap, galvanized, construction height 120	160 mm	120 mm	0.2 kg	031042
End cap with outlet DN 110, galvanized, No. 0/0	160 mm	155 mm	0.6 kg	021045
End cap with outlet DN 110, galvanized, No. 5/0	160 mm	180 mm	0.7 kg	021046
End cap with outlet DN 110, galvanized, No. 10/0	160 mm	205 mm	0.7 kg	021047
End cap with outlet DN 110, galvanized, No. 15	160 mm	230 mm	0.8 kg	021048

In-line outfall unit | 1-piece

- + 1- or 2-sided channel connection until No. 15/0
- + PP silt bucket
- + Integrated sockets for DN 110 pipe connection
- + PP odour trap
- + Hot-dipped galvanized solid steel angle and combi-closure toggle
- + As special solution with stainless steel angle (V2A) and combi-closure toggle (combi-closure toggle not in V2A)



Description	Length at top/ at ground	Width at top/ at ground	Construction height	Weight	Load class EN 1433	Article No.
In-line outfall unit	500/510 mm	163/180 mm	540 mm	61.4 kg	A 15 – E 600	021035

Mesh gratings | ductile iron

- + Black immersion-lacquered
- + Also available as galvanized version
- + 2-point per meter M12/A2 bolt connection
- + 2-point per meter Easylock-fastening (alternatively)



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross-section	Load class EN 1433	Article No. with Easylock	Article No. with bolt connection
black	500 mm	153 mm	20 mm	3.5 kg	MW 20/30 mm	815 cm ² /m	A 15 – C 250	021085e	021085

MW = mesh width
Please note special installation instructions for classes D 400 and E 600.
Exception up to D 400: Not for use across the carriage-way of highways or motorways.

Ductile iron slotted grating

- + Black immersion-lacquered
- + Also available as galvanized version
- + 2-point per meter M12/A2 bolt connection
- + 2-point per meter Easylock-fastening (alternatively)
- + Anti-slip classification R11/V10



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross-section	Load class EN 1433	Article No. with Easylock	Article No. with bolt connection
black	500 mm	153 mm	20 mm	3.9 kg	SW 100/13 mm	469 cm ² /m	A 15 – C 250	021072e	021072
black	500 mm	153 mm	20 mm	5.0 kg	SW 100/13 mm	469 cm ² /m	A 15 – E 600	021075e	021075

Ductile iron slotted grating | narrow slots

- + Black immersion-lacquered
- + 2-point per meter M12/A2 bolt connection
- + 2-point per meter Easylock-fastening (alternatively)
- + Anti-slip classification R11/V10



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross-section	Load class EN 1433	Article No. with Easylock	Article No. with bolt connection
black	500 mm	153 mm	20 mm	3.7 kg	SW 100/6 mm	260 cm ² /m	A 15 – C 250	021073e	021073
black	500 mm	153 mm	20 mm	4.3 kg	SW 100/6 mm	260 cm ² /m	A 15 – E 600	021071e	021071

Longitudinal bar gratings | ductile iron

- + Black immersion-lacquered
- + Also available as galvanized version
- + 2-point per meter M12/A2 bolt connection
- + 2-point per meter Easylock-fastening (alternatively)



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross-section	Load class EN 1433	Article No. with Easylock	Article No. with bolt connection
black	500 mm	153 mm	20 mm	4.6 kg	MW 73/10 mm	716 cm ² /m	A 15 – C 250	021095e	021095
black	500 mm	153 mm	20 mm	5.5 kg	MW 32/10 mm	614 cm ² /m	A 15 – E 600	021096e	021096

Design ductile iron grating „Ellipse“

- + Black immersion-lacquered
- + 2-point per meter M12/A2 bolt connection
- + 2-point per meter Easylock-fastening (alternatively)

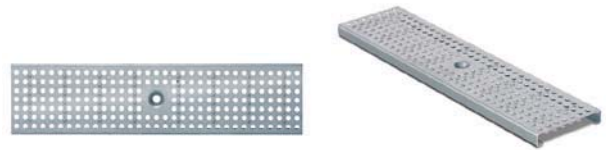


Description	Length	Width	Height	Weight	Inlet opening	Inlet cross-section	Load class EN 1433	Article No. with Easylock	Article No. with bolt connection
black	500 mm	153 mm	20 mm	5.7 kg	–	417 cm ² /m	A 15 – E 600	021077e	021077

Article No. with e = with Easylock, SW = slot width, MW = mesh width
 Please note special installation instructions for classes D 400 and E 600.
 Exception up to D 400: Not for use across the carriage-way of highways or motorways.

Perforated gratings | circular hole | hot-dipped galvanized steel

- + Also available in stainless steel (V2A)
- + 2-point per meter M12/A2 countersunk-hexagonal head bolt connection



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross-section	Load class EN 1433	Article No.
galvanized	500 mm	153 mm	20 mm	2.1 kg	Ø 8 mm	237 cm ² /m	A 15 – B 125	021090
galvanized	1000 mm	153 mm	20 mm	4.1 kg	Ø 8 mm	237 cm ² /m	A 15 – B 125	021089
galvanized	500 mm	153 mm	20 mm	2.7 kg	Ø 8 mm	237 cm ² /m	A 15 – C 250	021069
galvanized	1000 mm	153 mm	20 mm	5.4 kg	Ø 8 mm	237 cm ² /m	A 15 – C 250	021059

Longitudinal bar gratings | comb | hot-dipped galvanized steel

- + Also available in stainless steel (V2A)
- + 2-point per meter M12/A2 bolt connection



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross-section	Load class EN 1433	Article No.
hot-dipped galvanized	500 mm	153 mm	20 mm	1.8 kg	MW 220/15 mm	1103 cm ² /m	A 15	021087
hot-dipped galvanized	1000 mm	153 mm	20 mm	3.6 kg	MW 220/15 mm	1122 cm ² /m	A 15	021086
hot-dipped galvanized	500 mm	153 mm	20 mm	2.7 kg	MW 73/15 mm	937 cm ² /m	A 15 - C 250	021098
hot-dipped galvanized	1000 mm	153 mm	20 mm	5.7 kg	MW 73/15 mm	1010 cm ² /m	A 15 - C 250	021097

Slotted gratings | hot-dipped galvanized steel

- + Also available in stainless steel (V2A)
- + 2-point per meter M12/A2 bolt connection
- + 2-point per meter Easylock-fastening (alternatively, just galvanized)



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross-section	Load class EN 1433	Article No. with Easylock	Article No. with bolt connection
galvanized	500 mm	153 mm	20 mm	1.3 kg	SW 80/12 mm	334 cm ² /m	A 15	021066e	021066
galvanized	1000 mm	153 mm	20 mm	2.7 kg	SW 80/12 mm	334 cm ² /m	A 15	021056e	021056
galvanized	500 mm	153 mm	20 mm	2.6 kg	SW 80/12 mm	334 cm ² /m	A 15 – C 250	021068e	021068
galvanized	1000 mm	153 mm	20 mm	5.4 kg	SW 80/12 mm	334 cm ² /m	A 15 – C 250	021058e	021058

SW = slot width, MW = mesh width
 Please note special installation instructions for classes D 400 and E 600.
 Exception up to D 400: Not for use across the carriage-way of highways or motorways.

Mesh gratings | hot-dipped galvanized steel

- + Also available in stainless steel (V2A)
- + 2-point per meter M12/A2 bolt connection
- + 2-point per meter Easylock-fastening (alternatively, just galvanized)
- + Anti-slip classification R10/V10 (Article No. 021061, 021051, 021063, 021053)



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross-section	Load class EN 1433	Article No. with Easylock	Article No. with bolt connection
hot-dipped galvanized	500 mm	153 mm	20 mm	2.0 kg	MW 30/30 mm	1080 cm ² /m	A 15 – C 250	021062e	021062
hot-dipped galvanized	1000 mm	153 mm	20 mm	3.9 kg	MW 30/30 mm	1080 cm ² /m	A 15 – C 250	021052e	021052
hot-dipped galvanized	500 mm	153 mm	20 mm	2.0 kg	MW 30/15 mm	1035 cm ² /m	A 15 – B 125	021061e	021061
hot-dipped galvanized	1000 mm	153 mm	20 mm	3.8 kg	MW 30/15 mm	1035 cm ² /m	A 15 – B 125	021051e	021051
hot-dipped galvanized	500 mm	153 mm	20 mm	2.1 kg	MW 30/15 mm	1035 cm ² /m	A 15 – C 250	021063e	021063
hot-dipped galvanized	1000 mm	153 mm	20 mm	4.4 kg	MW 30/15 mm	1035 cm ² /m	A 15 – C 250	021053e	021053
hot-dipped galvanized	500 mm	153 mm	20 mm	4.4 kg	MW 10/30 mm	1051 cm ² /m	A 15 – E 600	021064e	021064
hot-dipped galvanized	1000 mm	153 mm	20 mm	8.2 kg	MW 10/30 mm	1051 cm ² /m	A 15 – E 600	021054e	021054

Mesh gratings with flat edge | hot-dipped galvanized steel

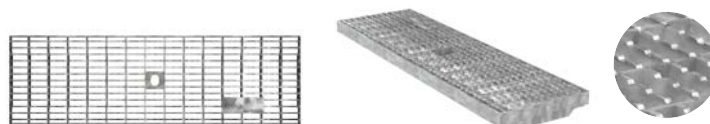
- + Also available in stainless steel (V2A)
- + 2-point per meter M12/A2 bolt connection
- + 2-point per meter Easylock-fastening (alternatively, just galvanized)
- + Anti-slip classification R10/V10



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross-section	Load class EN 1433	Article No. with Easylock	Article No. with bolt connection
hot-dipped galvanized	500 mm	153 mm	20 mm	2.0 kg	MW 30/10 mm	1051 cm ² /m	A 15 – B 125	021094fre	021094fr
hot-dipped galvanized	1000 mm	153 mm	20 mm	4.0 kg	MW 30/10 mm	1051 cm ² /m	A 15 – B 125	021093fre	021093fr

Mesh grating with flat edge, anti-slip classification R11/V10 | hot-dipped galvanized steel

- + 2-point per meter M12/A2 bolt connection
- + 2-point per meter Easylock-fastening
- + Anti-slip classification R11/V10



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross-section	Load class EN 1433	Article No. with Easylock	Article No. with bolt connection
hot-dipped galvanized	500 mm	153 mm	20 mm	2.0 kg	MW 30/10 mm	1051 cm ² /m	A 15 – B 125	021094fr11e	021094fr11
hot-dipped galvanized	1000 mm	153 mm	20 mm	4.0 kg	MW 30/10 mm	1051 cm ² /m	A 15 – B 125	021093fr11e	021093fr11

MW = mesh width

Please note special installation instructions for classes D 400 and E 600.

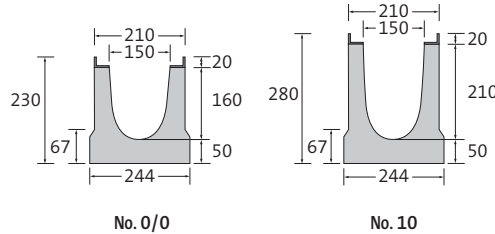
Exception up to D 400: Not for use across the carriage-way of highways or motorways.

BIRCOLight | NW 150 AS

The stable concrete channel with a large variety of gratings

Channel elements with anchoring system | 0.5 % internal inbuilt fall

- + Hot-dipped galvanized solid steel angle and combi-closure toggle
- + As special solution with stainless steel angle (V2A) and combi-closure toggle (combi-closure toggle not in V2A)
- + Safety sealing joint



Description	Length	Width at top/ at ground	Construction height at groove/tongue	Weight	Load class EN 1433	Article No.
Channel No. 1	1000 mm	210/244 mm	230/235 mm	63.2 kg	A 15 – E 600	021101
Channel No. 2	1000 mm	210/244 mm	235/240 mm	64.1 kg	A 15 – E 600	021102
Channel No. 3	1000 mm	210/244 mm	240/245 mm	64.7 kg	A 15 – E 600	021103
Channel No. 4	1000 mm	210/244 mm	245/250 mm	65.2 kg	A 15 – E 600	021104
Channel No. 5	1000 mm	210/244 mm	250/255 mm	65.7 kg	A 15 – E 600	021105
Channel No. 6	1000 mm	210/244 mm	255/260 mm	66.7 kg	A 15 – E 600	021106
Channel No. 7	1000 mm	210/244 mm	260/265 mm	67.2 kg	A 15 – E 600	021107
Channel No. 8	1000 mm	210/244 mm	265/270 mm	68.2 kg	A 15 – E 600	021108
Channel No. 9	1000 mm	210/244 mm	270/275 mm	68.7 kg	A 15 – E 600	021109
Channel No. 10	1000 mm	210/244 mm	275/280 mm	69.7 kg	A 15 – E 600	021110

Channel elements with anchoring system | without internal inbuilt fall

- + Hot-dipped galvanized solid steel angle and combi-closure toggle
- + Safety sealing joint

Description	Length	Width at top/ at ground	Construction height at at groove/tongue	Weight	Load class EN 1433	Article No.
Channel No. 0/0	500 mm	210/244 mm	230/230 mm	31.1 kg	A 15 – E 600	021131
Channel No. 0/0	1000 mm	210/244 mm	230/230 mm	62.2 kg	A 15 – E 600	021126
Channel No. 5/0	1000 mm	210/244 mm	255/255 mm	66.2 kg	A 15 – E 600	021127
Channel No. 10/0	1000 mm	210/244 mm	280/280 mm	70.2 kg	A 15 – E 600	021128
Channel No. 15/0	1000 mm	210/244 mm	305/305 mm	73.3 kg	A 15 – E 600	021129

Channel No. 0/0 and 10/0 also available with stainless steel angles (V2A) – Art. No. 023126/023128, for a length of 1000 mm.

Combi-closure toggle not in V2A.

Channel No. 0/0 also available with socket DN 150 for a vertical outlet - Art. No. 021132.

End caps

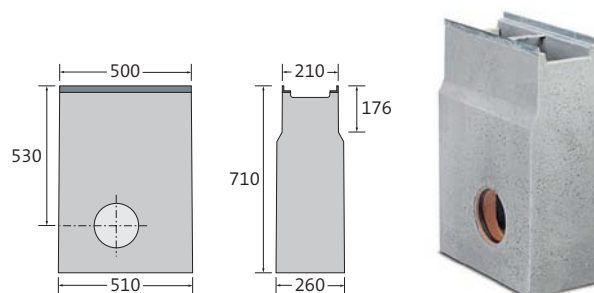
- + Also available in stainless steel (V2A)
- + With or without tack-welded run-off socket



Description	Width	For construction height	Weight	Article No.
End cap, galvanized, No. 0/0 – 4	210 mm	230 – 250 mm	0.6 kg	021140
End cap, galvanized, No. 5/0 – 8	210 mm	250 – 270 mm	0.7 kg	021141
End cap, galvanized, No. 9 – 10	210 mm	270 – 280 mm	0.8 kg	021142
End cap, galvanized, No. 15/0	210 mm	305 mm	0.9 kg	021143
End cap with outlet DN 160, galvanized, No. 0/0	210 mm	230 mm	0.9 kg	021145
End cap with outlet DN 160, galvanized, No. 5/0	210 mm	255 mm	1.0 kg	021146
End cap with outlet DN 160, galvanized, No. 10/0	210 mm	280 mm	1.1 kg	021147
End cap with outlet DN 160, galvanized, No. 15/0	210 mm	305 mm	1.1 kg	021149

In-line outfall unit with anchoring system | 1-piece

- + 1- or 2-sided channel connection until No. 15/0
- + PP silt bucket
- + Integrated sockets for DN 160 pipe connection
- + PP odour trap
- + Hot-dipped galvanized solid steel angle and combi-closure toggle
- + As special solution with stainless steel angle (V2A) and combi-closure toggle (combi-closure toggle not in V2A)



Description	Length at top / at ground	Width at top / at ground	Construction height	Weight	Load class EN 1433	Article No.
In-line outfall unit	500/510 mm	210/260 mm	710 mm	110.6 kg	A 15 – E 600	021135

Ductile iron slotted grating

- + Black immersion-lacquered
- + Also available galvanized
- + 2-point per meter M12/A2 bolt connection
- + 2-point per meter Easylock-fastening (alternatively)
- + Anti-slip classification R11/V10



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross-section	Load class EN 1433	Article No. with Easylock	Article No. with bolt connection
black	500 mm	200 mm	20 mm	5.6 kg	SW 150/13 mm	650 cm ² /m	A 15 – C 250	021172e	021172
black	500 mm	200 mm	20 mm	6.5 kg	SW 150/13 mm	650 cm ² /m	A 15 – E 600	021175e	021175

SW = slot width

Please note special installation instructions for classes D 400 and E 600.

Exception up to D 400: Not for use across the carriage-way of highways or motorways.

Mesh gratings | ductile iron

- + Black immersion-lacquered
- + Also available galvanized
- + 2-point per meter M12/A2 bolt connection
- + 2-point per meter Easylock-fastening (alternatively)



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross-section	Load class EN 1433	Article No. with Easylock	Article No. with bolt connection
black	500 mm	200 mm	20 mm	5.4 kg	MW 20/30 mm	920 cm ² /m	A 15 – C 250	021185e	021185
black	500 mm	200 mm	20 mm	6.7 kg	MW 20/30 mm	920 cm ² /m	A 15 – E 600	021186e	021186

Mesh gratings | hot-dipped galvanized steel

- + Hot-dipped galvanized
- + 2-point per meter M12/A2 bolt connection
- + 2-point per meter Easylock-fastening (alternatively)
- + 2-point per meter Easylock-fastening (alternatively, just galvanized)
- + Anti-slip classification R10/V10



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross-section	Load class EN 1433	Article No. with Easylock	Article No. with bolt connection
hot-dipped galvanized	500 mm	200 mm	20 mm	3.6 kg	MW 30/15 mm	1398 cm ² /m	A 15 – C 250	021163e	021163
hot-dipped galvanized	1000 mm	200 mm	20 mm	7.1 kg	MW 30/15 mm	1398 cm ² /m	A 15 – C 250	021153e	021153

Longitudinal bar gratings | comb | hot-dipped galvanized steel

- + Hot-dipped galvanized
- + Also available in stainless steel (V2A)
- + 2-point per meter M12/A2 bolt connection



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross-section	Load class EN 1433	Article No.
hot-dipped galvanized	500 mm	200 mm	20 mm	4.5 kg	MW 73/15 mm	1277 cm ² /m	A 15 – C 250	021198
hot-dipped galvanized	1000 mm	200 mm	20 mm	9.4 kg	MW 73/15 mm	1278 cm ² /m	A 15 – C 250	021197

**Anchoring system | Firmly anchored to the base structure**

- + The anchoring system of BIRCO's AS product family (for example BIRCOLight) firmly bond the drainage channel to the adjoining base structure. When professionally laid, this virtually excludes the possibility of the sway or disengagement of the channels from the base structure.

MW = mesh width

Please note special installation instructions for classes D 400 and E 600.
Exception up to D 400: Not for use across the carriage-way of highways or motorways.



BIRCOLight, Washingtonplatz, Berlin, Germany

BIRCOLight triloc® | Channel with new locking principle for fast maintenance

The channel system with a clever quick-release fastener, designed for a large variety of building projects. The covers are quickly locked or unlocked thanks to the integrated spring. A long lasting combination of shift protection, quick-release fastener and optional screw connection. In short: triloc®.

- + A 15 to E 600
(NW 100/150)



- + A 15 to D 400
(NW 200)



BIRCOLight triloc®: the cover is locked into place quickly, easily and in a shift-proof manner.

BIRCOLight triloc® | Areas of application

- + Gardening & landscaping construction
- + Residential and town construction
- + Private building owner
- + Parking lots
- + Entrance and exit areas



BIRCOLight NW triloc® | Facts

- + Channel system: NW 100, 150 and 200 with and without internal inbuilt falls
- + With anchoring system (AS)
- + No crossbars
- + Construction length: 0.5, 1.0 meters
- + Load class NW 150: A 15 – E 600
Load class NW 200: A 15 – D 400
- + Ductile iron slotted grating with BIRCOtriloc®, also for bolt fastening
- + Mesh grating, hot-dipped galvanized, with bolt fastening



BIRCOLight triloc® |

New size – new locking principle

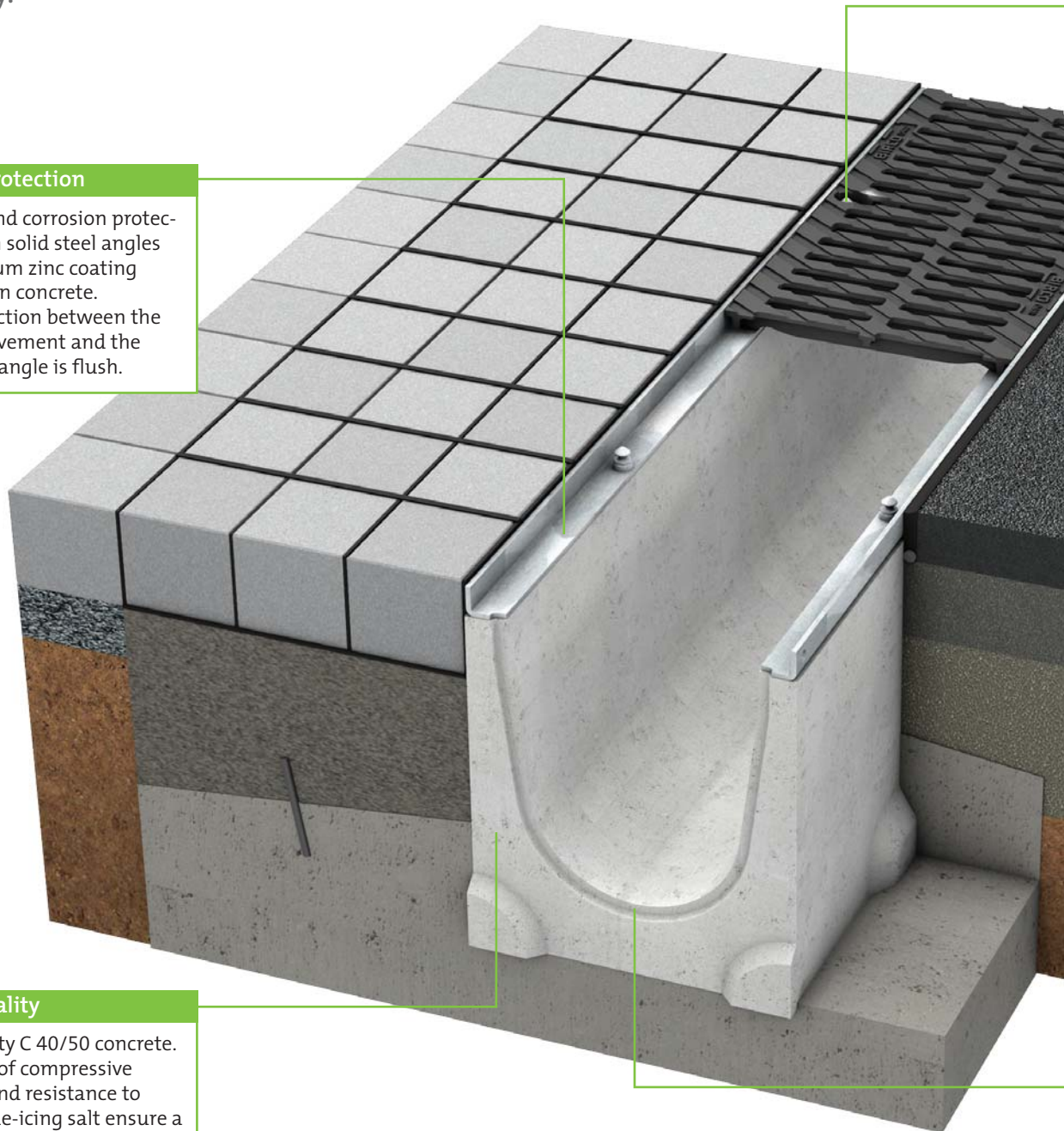
Thanks to the BIRCOtriloc® locking principle, the cover is locked into place quickly, easily and in a shift-proof manner. The sophisticated spring concept ideally connects the cover and the channel and even permits an optional bolt fastening, which can also be applied retrospectively.

Corrosion protection

- + Stability and corrosion protection: 4 mm solid steel angles with a 70 µm zinc coating anchored in concrete.
- + The connection between the surface pavement and the solid steel angle is flush.

Material quality

- + High quality C 40/50 concrete.
- + High level of compressive strength and resistance to frost and de-icing salt ensure a long service life and safeguard your investment.



This picture is exemplary. For installation, please observe our installation instructions or installation examples.

The intelligent “three-in-one system” BIRCOtriloc®

1. Quick-release fastener



Quickly closed after installing the channel and quickly opened for cleaning and maintenance. The sturdy quick-release fastener meets the requirements for safety and locking according to EN 1433. The most common drainage projects can be realized with the load class D 400. The system locks tightly and firmly. The open design minimizes contamination, which means that the unlatching and latching still work even after years.

2. Shift protection



A stable anchorage of the covers in the channel is essential for the longevity of box channels. A stable shift protection offers some advantages compared to the most varied alternative solutions, especially for rotating vehicles or acceleration at an angle to the line drainage. BIRCOLight triloc® has 4 locking points per meter, which ensures an exact fit of the covers.

3. Optional and retrofitted screw connection



Flexibility beyond today's planning. Only the intelligent BIRCOtriloc® offers the connection of a quick-release fastener and anchorage with screws. The thread for M8 screws can be useful whether planned now from the start or first desired later, by removing the quick-release fastener. A screwed system can also easily be converted to a quick-release system.

Locking principle

- + Fast insertion and firm hold of the covers in the channel due to the spring.
- + Optionally also with screwed connection / retrofit screw connection possible.



Flexible application

- + Inbuilt falls provide fast drainage.
- + With anchoring system.

Safety seam

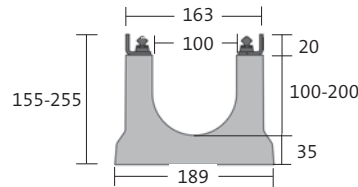
- + Visually inspectable safety seam for the stable connection of the channel units (can be additionally grouted with BIRCO SF-Connect sealant).

BIRCOLight triloc® | NW 100

New locking principle for fast maintenance

Rinnenelemente mit Aufschwemmsicherung | 0,5 % Innengefälle

- + Hot-dipped galvanized solid steel angle
- + With anchoring system
- + Safety sealing joint
- + BIRCOtriloc® fastener
- + Alternatively BIRCOtriloc® bolt fastening (Art.-No. with f)



Description	Length	Width at top/ at ground	Construction height at groove/tongue	Weight	Load class EN 1433	Article No. with BIRCOtriloc® bolt fastening	Article No. with BIRCOtriloc® quick-release fastener
Channel No. 1	1000 mm	163/189 mm	155/160 mm	35.2 kg	A 15 – E 600	2021001f	2021001
Channel No. 2	1000 mm	163/189 mm	160/165 mm	35.9 kg	A 15 – E 600	2021002f	2021002
Channel No. 3	1000 mm	163/189 mm	165/170 mm	36.6 kg	A 15 – E 600	2021003f	2021003
Channel No. 4	1000 mm	163/189 mm	170/175 mm	37.4 kg	A 15 – E 600	2021004f	2021004
Channel No. 5	1000 mm	163/189 mm	175/180 mm	38.1 kg	A 15 – E 600	2021005f	2021005
Channel No. 6	1000 mm	163/189 mm	180/185 mm	38.8 kg	A 15 – E 600	2021006f	2021006
Channel No. 7	1000 mm	163/189 mm	185/190 mm	39.5 kg	A 15 – E 600	2021007f	2021007
Channel No. 8	1000 mm	163/189 mm	190/195 mm	40.3 kg	A 15 – E 600	2021008f	2021008
Channel No. 9	1000 mm	163/189 mm	195/200 mm	40.9 kg	A 15 – E 600	2021009f	2021009
Channel No. 10	1000 mm	163/189 mm	200/205 mm	41.7 kg	A 15 – E 600	2021010f	2021010

Channel elements with anchoring system | without internal inbuilt fall

- + Hot-dipped galvanized solid steel angle
- + BIRCOtriloc® fastener
- + Alternatively BIRCOtriloc® bolt fastening (Art.-No. with f)
- + Safety sealing joint

Description	Length	Width at top/ at ground	Construction height at groove/tongue	Weight	Load class EN 1433	Article No. with BIRCOtriloc® bolt fastening	Article No. with BIRCOtriloc® quick-release fastener
Channel Nr. 0/0	500 mm	163/189 mm	155/155 mm	17.2 kg	A 15 – E 600	2021031f	2021031
Channel Nr. 0/0	1000 mm	163/189 mm	155/155 mm	34.8 kg	A 15 – E 600	2021026f	2021026
Channel Nr. 5/0	500 mm	163/189 mm	180/180 mm	19.0 kg	A 15 – E 600	2021032f	2021032
Channel Nr. 5/0	1000 mm	163/189 mm	180/180 mm	38.4 kg	A 15 – E 600	2021027f	2021027
Channel Nr. 10/0	1000 mm	163/189 mm	205/205 mm	42.1 kg	A 15 – E 600	2021028f	2021028
Channel Nr. 15/0	1000 mm	163/189 mm	230/230 mm	45.7 kg	A 15 – E 600	2021029f	2021029

Constructed in accordance with non-settling frost-free sub-bases.
Exception up to D 400: Not for use across the carriage-way of highways or motorways.

End caps

- + Strip galvanized
- + With spot-welded runoff supports

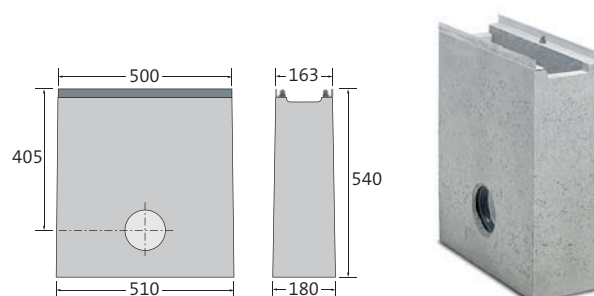


Description	Width	For construction height	Weight	Article No.
End cap, galvanized, No. 0/0 – 4	160 mm	155 – 175 mm	0.3 kg	2021040
End cap, galvanized, No. 5 – 8	160 mm	175 – 195 mm	0.3 kg	2021041
End cap, galvanized, No. 9 – 12	160 mm	195 – 215 mm	0.4 kg	2021042
End cap, galvanized, No. 13 – 16	160 mm	215 – 235 mm	0.4 kg	2021043
Endscheibe mit Ablauf DN 100, galvanized, No. 0/0	160 mm	155 mm	0.6 kg	2021045
End cap with outlet DN 100, galvanized, No. 5/0	160 mm	180 mm	0.7 kg	2021046
End cap with outlet DN 100, galvanized, No. 10/0	160 mm	205 mm	0.7 kg	2021047
End cap with outlet DN 100, galvanized, No. 15/0	160 mm	230 mm	0.8 kg	2021048

Also available in stainless steel (V2A).

In-line outfall unit with anchoring system | 1-piece

- + 1- or 2-sided channel connection until No. 10/0
- + Galvanized silt bucket
- + Integrated sockets for DN 160 pipe connection
- + without odour trap
- + Hot-dipped galvanized solid steel angle
- + BIRCOtriloc® fastener
- + Alternatively BIRCOtriloc® bolt fastening (Art.-No. with f)



Description	Length at top / at ground	Width at top / at ground	Construction height	Weight	Load class EN 1433	Article No. with BIRCOtriloc® bolt fastening	Article No. with BIRCOtriloc® quick-release fastener
In-line outfall unit	500/510 mm	163/180 mm	540 mm	62.3 kg	A 15 – E 600	2021035f	2021035

Constructed in accordance with non-settling frost-free sub-bases.
Exception up to D 400: Not for use across the carriage-way of highways or motorways.

Ductile iron slotted grating

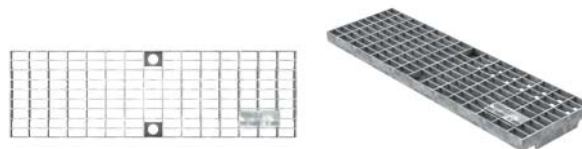
- + Black immersion lacquered
- + 4-point per meter BIRCOtriloc® fastener
- + Alternatively 4-point per meter M8 bolt fastening (Art.-No. with f)



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No. with BIRCOtriloc® bolt fastening	Article No. with BIRCOtriloc® quick-release fastener
black	500 mm	153 mm	20 mm	3.9 kg	SW 43/16 mm	469 cm ² /m	A 15 – C 250	2021072f	2021072
black	500 mm	153 mm	20 mm	5.0 kg	SW 43/16 mm	469 cm ² /m	A 15 – E 600	2021075f	2021075

Mesh grating | hot-dipped galvanized steel

- + 4-point per meter M8 bolt fastening



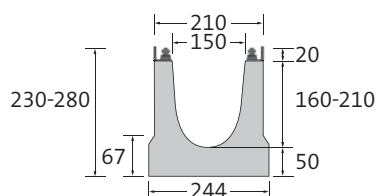
Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No. with BIRCOtriloc® bolt fastening
Hot-dipped galvanized	500 mm	153 mm	20 mm	2.0 kg	MW 30/15 mm	1150 cm ² /m	A 15 – C 250	2021063f
Hot-dipped galvanized	1000 mm	153 mm	20 mm	3.9 kg	MW 30/15 mm	1150 cm ² /m	A 15 – C 250	2021053f

BIRCOLight triloc® | NW 150

New locking principle for fast maintenance

Channel elements with anchoring system | 0.5 % internal inbuilt fall

- + Hot-dipped galvanized solid steel angle
- + With anchoring system
- + Safety sealing joint
- + BIRCOtriloc® fastener
- + Alternatively BIRCOtriloc® bolt fastening (Art.-No. with f)



Description	Length	Width at top/ at ground	Construction height at groove/tongue	Weight	Load class EN 1433	Article No. with bolt fastening	Article No. with BIRCOtriloc®
Channel No. 1	1000 mm	210/244 mm	230/235 mm	63.0 kg	A 15 – E 600	2021101f	2021101
Channel No. 2	1000 mm	210/244 mm	235/240 mm	63.8 kg	A 15 – E 600	2021102f	2021102
Channel No. 3	1000 mm	210/244 mm	240/245 mm	64.5 kg	A 15 – E 600	2021103f	2021103
Channel No. 4	1000 mm	210/244 mm	245/250 mm	65.3 kg	A 15 – E 600	2021104f	2021104
Channel No. 5	1000 mm	210/244 mm	250/255 mm	66.0 kg	A 15 – E 600	2021105f	2021105
Channel No. 6	1000 mm	210/244 mm	255/260 mm	66.8 kg	A 15 – E 600	2021106f	2021106
Channel No. 7	1000 mm	210/244 mm	260/265 mm	67.5 kg	A 15 – E 600	2021107f	2021107
Channel No. 8	1000 mm	210/244 mm	265/270 mm	68.2 kg	A 15 – E 600	2021108f	2021108
Channel No. 9	1000 mm	210/244 mm	270/275 mm	69.0 kg	A 15 – E 600	2021109f	2021109
Channel No. 10	1000 mm	210/244 mm	275/280 mm	69.7 kg	A 15 – E 600	2021110f	2021110

Channel elements with anchoring system | without internal inbuilt fall

- + Hot-dipped galvanized solid steel angle
- + BIRCOtriloc® fastener
- + Alternatively BIRCOtriloc® bolt fastening (Art.-No. with f)
- + Safety sealing joint

Description	Length	Width at top/ at ground	Construction height at groove/tongue	Weight	Load class EN 1433	Article No. with bolt fastening	Article No. with BIRCOtriloc®
Channel No. 0/0	500 mm	210/244 mm	230/230 mm	31.0 kg	A 15 – E 600	2021131f	2021131
Channel No. 0/0	1000 mm	210/244 mm	230/230 mm	62.6 kg	A 15 – E 600	2021126f	2021126
Channel No. 5/0	1000 mm	210/244 mm	255/255 mm	66.4 kg	A 15 – E 600	2021127f	2021127
Channel No. 10/0	1000 mm	210/244 mm	280/280 mm	70.1 kg	A 15 – E 600	2021128f	2021128

Constructed in accordance with non-settling frost-free sub-bases.
Exception up to D 400: Not for use across the carriage-way of highways or motorways.

End caps

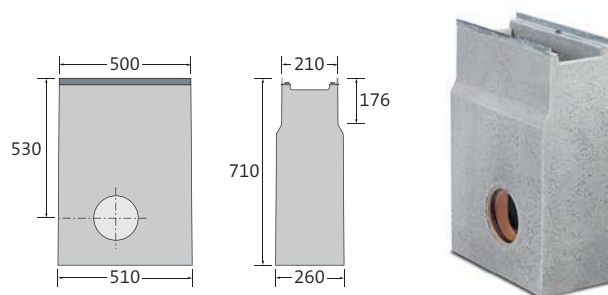
- + Strip galvanized
- + With spot-welded runoff supports



Description	Width	For construction height	Weight	Article No.
End cap, galvanized, No. 0/0 – 4	210 mm	230 – 250 mm	0.6 kg	2021140
End cap, galvanized, No. 5/0 – 8	210 mm	250 – 270 mm	0.7 kg	2021141
End cap, galvanized, No. 9 – 10	210 mm	270 – 280 mm	0.8 kg	2021142
End cap with outlet DN 160, galvanized, No. 0/0	210 mm	230 mm	0.9 kg	2021145
End cap with outlet DN 160, galvanized, No. 5/0	210 mm	255 mm	1.0 kg	2021146
End cap with outlet DN 160, galvanized, No. 10/0	210 mm	280 mm	1.1 kg	2021147

In-line outfall unit with anchoring system | 1-piece

- + 1- or 2-sided channel connection until No. 10/0
- + Galvanized silt bucket
- + Integrated sockets for DN 160 pipe connection
- + without odour trap
- + Hot-dipped galvanized solid steel angle
- + BIRCOtriloc® fastener
- + Alternatively BIRCOtriloc® bolt fastening (Art.-No. with f)

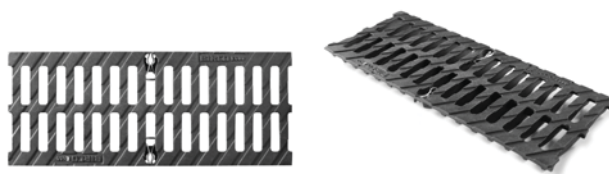


Description	Length at top/ at ground	Width at top/ at ground	Construction height	Weight	Load class EN 1433	Article No. with bolt fastening	Article No. with BIRCOtriloc®
In-line outfall unit	500/510 mm	210/260 mm	710 mm	112.0 kg	A 15 – E 600	2021135f	2021135

Constructed in accordance with non-settling frost-free sub-bases.
Exception up to D 400: Not for use across the carriage-way of highways or motorways.

Ductile iron slotted grating

- + Black immersion lacquered
- + Also available as galvanized version
- + 4-point per meter BIRCOtriloc® fastener
- + Alternatively 4-point per meter M8 bolt fastening (Art.-No. with f)
- + Anti-slip classification R12/V10



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No. with bolt fastening	Article No. with BIRCOtriloc®
black	500 mm	200 mm	20 mm	5.6 kg	SW 68/16 mm	685 cm ² /m	A 15 – C 250	2021172f	2021172
black	500 mm	200 mm	20 mm	6.1 kg	SW 68/16 mm	685 cm ² /m	A 15 – E 600	2021175f	2021175

Mesh grating | hot-dipped galvanized steel

- + 4-point per meter M8 bolt fastening
- + Anti-slip classification R10/V10



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No. with bolt fastening
Hot-dipped galvanized	500 mm	200 mm	20 mm	3.5 kg	MW 30/15 mm	1529 cm ² /m	A 15 – C 250	2021163f
Hot-dipped galvanized	1000 mm	200 mm	20 mm	6.8 kg	MW 30/15 mm	1529 cm ² /m	A 15 – C 250	2021153f

SW = Slot width, MW = Mesh width

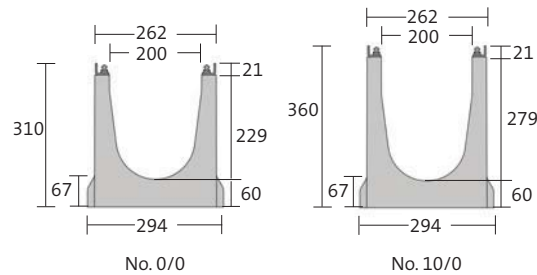
Exception up to D 400: Not for use across the carriage- way of highways or motorways.

BIRCOlight triloc® | NW 200

New size, new locking principle for fast maintenance

Channel elements with anchoring system | 0.5 % internal inbuilt fall

- + Hot-dipped galvanized solid steel angle
- + With anchoring system
- + Safety sealing joint
- + BIRCOtriloc® fastener
- + Alternatively BIRCOtriloc® bolt fastening (Art.-No. with f)



Description	Length	Width at top/ at ground	Construction height at groove/tongue	Weight	Load class EN 1433	Article No. with bolt fastening	Article No. with BIRCOtriloc®
Channel No. 1	1000 mm	262/294 mm	310/315 mm	93.1 kg	A 15 – D 400	2021201f	2021201
Channel No. 2	1000 mm	262/294 mm	315/320 mm	93.8 kg	A 15 – D 400	2021202f	2021202
Channel No. 3	1000 mm	262/294 mm	320/325 mm	94.6 kg	A 15 – D 400	2021203f	2021203
Channel No. 4	1000 mm	262/294 mm	325/330 mm	95.3 kg	A 15 – D 400	2021204f	2021204
Channel No. 5	1000 mm	262/294 mm	330/335 mm	96.0 kg	A 15 – D 400	2021205f	2021205
Channel No. 6	1000 mm	262/294 mm	335/340 mm	96.8 kg	A 15 – D 400	2021206f	2021206
Channel No. 7	1000 mm	262/294 mm	340/345 mm	97.5 kg	A 15 – D 400	2021207f	2021207
Channel No. 8	1000 mm	262/294 mm	345/350 mm	98.2 kg	A 15 – D 400	2021208f	2021208
Channel No. 9	1000 mm	262/294 mm	350/355 mm	98.9 kg	A 15 – D 400	2021209f	2021209
Channel No. 10	1000 mm	262/294 mm	355/360 mm	99.7 kg	A 15 – D 400	2021210f	2021210

Channel elements with anchoring system | without internal inbuilt fall

- + Hot-dipped galvanized solid steel angle
- + BIRCOtriloc® fastener
- + Alternatively BIRCOtriloc® bolt fastening
- + Safety sealing joint

Description	Length	Width at top/ at ground	Construction height at groove/tongue	Weight	Load class EN 1433	Article No. with bolt fastening	Article No. with BIRCOtriloc®
Channel No. 0/0	500 mm	262/294 mm	310/310 mm	47.0 kg	A 15 – D 400	2021231f	2021231
Channel No. 0/0	1000 mm	262/294 mm	310/310 mm	92.7 kg	A 15 – D 400	2021226f	2021226
Channel No. 5/0	1000 mm	262/294 mm	330/330 mm	95.7 kg	A 15 – D 400	2021227f	2021227
Channel No. 10/0	1000 mm	262/294 mm	360/360 mm	100.0 kg	A 15 – D 400	2021228f	2021228

Constructed in accordance with non-settling frost-free sub-bases.
Exception up to D 400: Not for use across the carriage- way of highways or motorways.

End caps

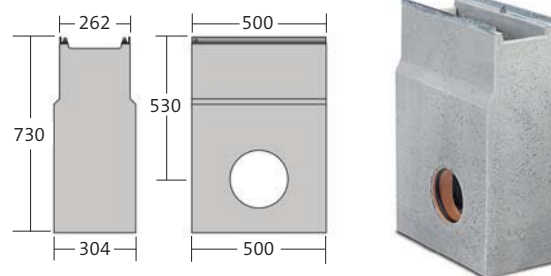
- + Strip galvanized
- + With spot-welded runoff supports



Description	Width	For construction height	Weight	Article No.
End cap, galvanized, No. 0/0 – 4	260 mm	310 – 330 mm	1.1 kg	2021240
End cap, galvanized, No. 5/0 – 8	260 mm	330 – 350 mm	1.2 kg	2021241
End cap, galvanized, No. 9 – 10	260 mm	350 – 360 mm	1.2 kg	2021242
End cap with outlet DN 200, galvanized, No. 0/0	260 mm	310 mm	1.7 kg	2021245
End cap with outlet DN 200, galvanized, No. 5/0	260 mm	330 mm	1.8 kg	2021246
End cap with outlet DN 200, galvanized, No. 10/0	260 mm	360 mm	1.8 kg	2021247

In-line outfall unit with anchoring system | 1-piece

- + 1- or 2-sided channel connection until No. 10/0
- + Galvanized silt bucket
- + Integrated sockets for DN 200 pipe connection
- + Without odour trap
- + Hot-dipped galvanized solid steel angle
- + BIRCOtriloc® fastener
- + Alternatively BIRCOtriloc® bolt fastening



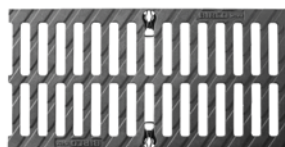
Description	Length at top/ at ground	Width at top/ at ground	Construction height	Weight	Load class EN 1433	Article No. with bolt fastening	Article No. with BIRCOtriloc®
In-line outfall unit	500/500 mm	262/304 mm	730 mm	126.0 kg	A 15 – D 400	2021235f	2021235

Constructed in accordance with non-settling frost-free sub-bases.
Exception up to D 400: Not for use across the carriage- way of highways or motorways.

BIRCOLight triloc® DN 200

Ductile iron slotted grating

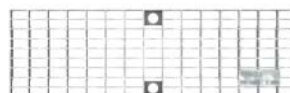
- + Black immersion lacquered
- + Also available as galvanized version
- + 4-point per meter BIRCOtriloc® fastener
- + Alternatively 4-point per meter BIRCOtriloc® bolt fastening (Art.-No. with f)
- + Anti-slip classification R12/V10



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No. with bolt fastening	Article No. with BIRCOtriloc®
black	500 mm	250 mm	20 mm	6.9 kg	SW 93/17.5 mm	947 cm²/m	A 15 – D 400	2021274f	2021274

Mesh grating | hot-dipped galvanized steel

- + 4-point per meter M8 bolt connection



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No. with bolt fastening
Hot-dipped galvanized	500 mm	250 mm	20 mm	4.3 kg	MW 30/10 mm	1839 cm²/m	A 15 – B 125	2021263f
Hot-dipped galvanized	1000 mm	250 mm	20 mm	8.4 kg	MW 30/10 mm	1815 cm²/m	A 15 – B 125	2021253f

SW = Slot width, MW = mesh width
 Constructed in accordance with non-settling frost-free sub-bases.
 Exception up to D 400: Not for use across the carriage-way of highways or motorways.

BIRCOLight / light triloc® |

Installation Instructions

A number of details must be observed when installing BIRCOLight / light triloc®. You will find a comprehensive description below.

To guarantee smooth operation and compliance with the requirements of EN 1433, the following general valid installation instructions must be observed:

1. Prior to installation, the correct load class in accordance with EN 1433 must be selected.

2. Thanks to the high level of stability, laying the BIRCO channels is conducted on an earth-moist C 25/30 strip of foundation concrete at least 15 cm high which must be tapered in a conical shape on both sides. No additional encasing or reinforcement on the sides is required⁽¹⁾. Begin laying the channel line following the outfall units with the highest channel at the drain and form the channel line with the next-smallest number.

3. All adjoining pavement surfaces must run **permanently about 3 to 5 mm higher than the upper edge of the channel. In order to keep the adjacent surface covering permanently 3 to 5 mm above the upper edge, we recommend laying the first two to three rows of pavement surfacing in the mortar bed.** Since there is no concrete casing, the surface pavement can run right up to the channel. For slab or paving connections, a permanent sealing gap of about 10 mm must be maintained between the channel and the covering. The joints between the first two to three series of slab or paving connection must be permanently sealed. It must be ensured that no horizontal forces act on the paving laid in the mortar bed due to displacement or expansion of the paving covering.

4. For installation in concrete surfaces or reinforced concrete constructions, expansion joints must be provided on both sides parallel to the channel in order to compensate horizontal forces that emerge. These joints should be installed at a distance of 1 m to 2 m parallel to the channel. When compacting the adjacent surfaces, it must be ensured that there is no mechanical damage to the channel elements is excluded. Expansion joints running diagonally to the channel line must be arranged every 8 - 12 meters in the adjacent concrete surfaces (in-situ concrete), so that they run through a channel joint. All joints have to be planned from an engineering perspective and executed professionally. The expansion joints (e.g. PE foam boards) must run across the entire channel cross-section through the foundation and the lateral concrete casing.

5. BIRCO drainage units are fitted with a safety seam on the channel end. In accordance with EN 1433, once laying has been completed this safety seam can be further treated with a plastic modified mortar or a permanently elastic sealing material (for example SF-Connect).

6. Proceed analogously when installing the outfall unit.

7. Local particularities can require special installation methods that have to be examined and taken into account by the planner(s).

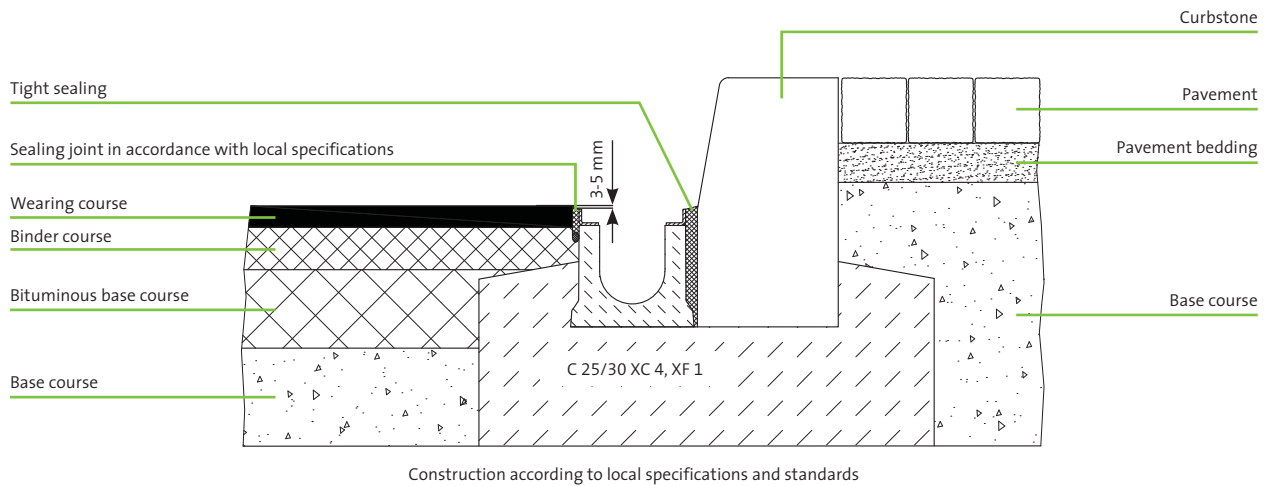
⁽¹⁾ Exception:

When using BIRCOLight/light triloc® for load class D 400/E 600 in heavy-duty areas with frequent traffic, it may be necessary to encase the channel with concrete on the sides to compensate for the high levels of horizontal forces that could potentially emerge.

Installation Examples BIRCOLight

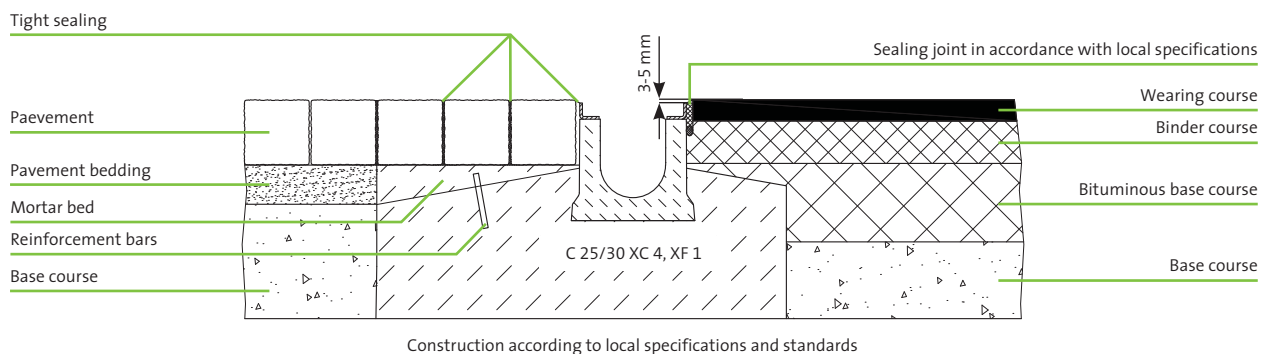
BIRCOLight NW 100 AS and 150 AS, load class A 15 to C 250, Type M

Drawing no. 21050 and 21051



BIRCOLight NW 100 AS and 150 AS, load class A 15 to C 250, Type M

Drawing no. 21050 and 21051



Installation surrounding can be reduced/optimized depending on traffic frequency and types of vehicles.

The planning of expansion joints must be conducted from on the basis of engineering considerations. When laying the channel line in a full concrete casing, expansion joints at right angles to the channel line must be installed every 8–12 meters.

See Page 31 for installation dimensions.

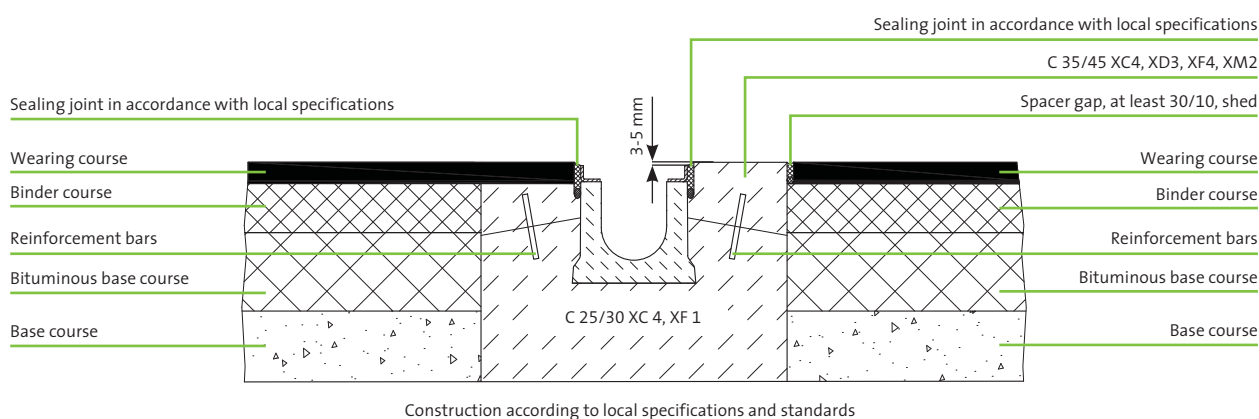
Constructed using non-settling frost-free sub-bases.

Exception up to D 400: Not for use across the carriage-way of highways or motorways.

Additional installation examples for loose/sliding pavements, for example large-scale plates

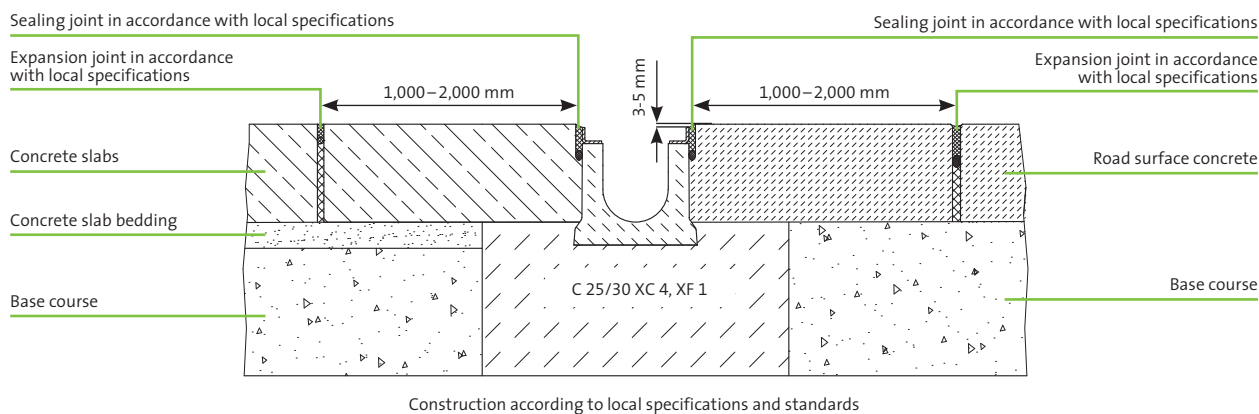
BIRCOLight NW 100 AS and 150 AS, load class D 400 to E 600, Type M

Drawing no. 21050 and 21051



BIRCOLight NW 100 AS and 150 AS, load class D 400 to E 600, Type M

Drawing no. 21050 and 21051



Installation surrounding can be reduced/optimized depending on traffic frequency and types of vehicles.

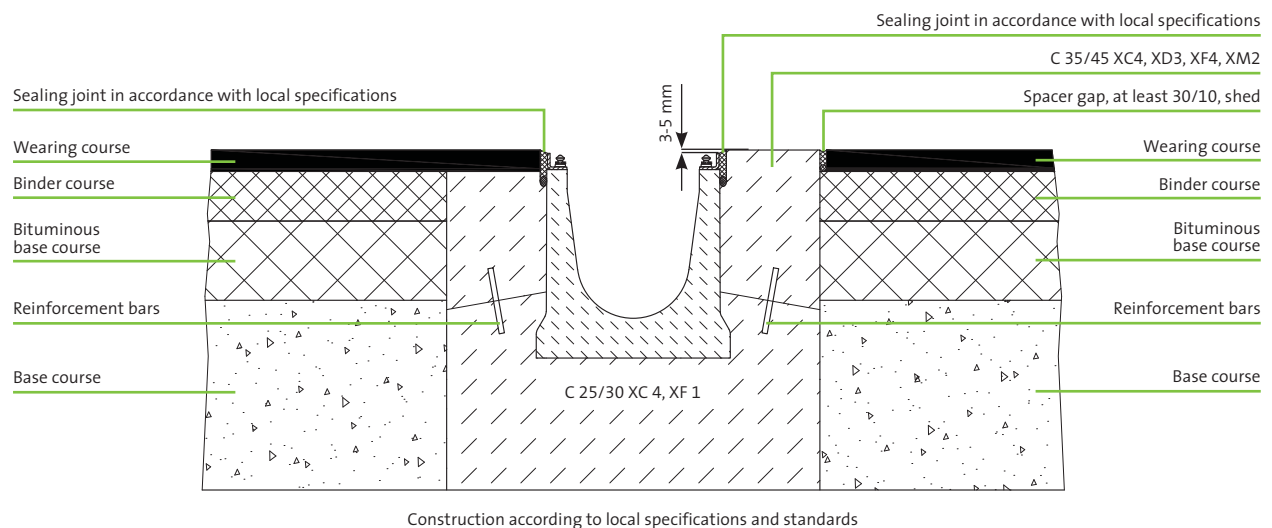
The planning of expansion joints must be conducted from on the basis of engineering considerations. When laying the channel line in a full concrete casing, expansion joints at right angles to the channel line must be installed every 8–12 meters. See Page 31 for installation dimensions.
Constructed using non-settling frost-free sub-bases.
Exception up to D 400: Not for use across the carriage-way of highways or motorways.

Installation Examples BIRCOLight triloc®

Installation instructions for areas with higher hydraulic requirements

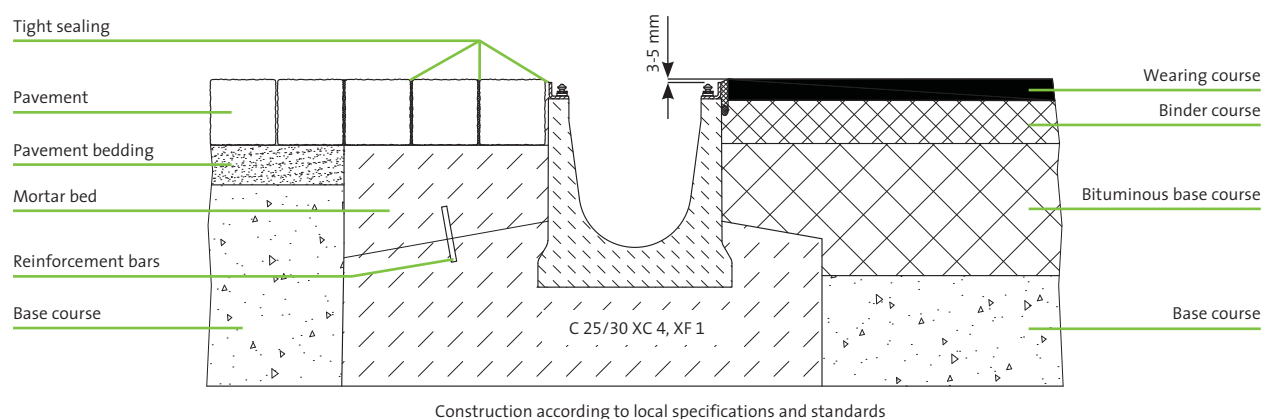
BIRCOLight triloc® NW 150 and NW 200, load class A 15 – C 250, Type M

Drawing No. 21114 and 21115



BIRCOLight triloc® NW 150 and NW 200, load class A 15 – C 250, Type M

Drawing No. 21114 and 21115



Installation surrounding can be reduced/optimized depending on traffic frequency and types of vehicles.

The planning of expansion joints must be conducted from on the basis of engineering considerations. When laying the channel line in a full concrete casing, expansion joints at right angles to the channel line must be installed every 8–12 meters.

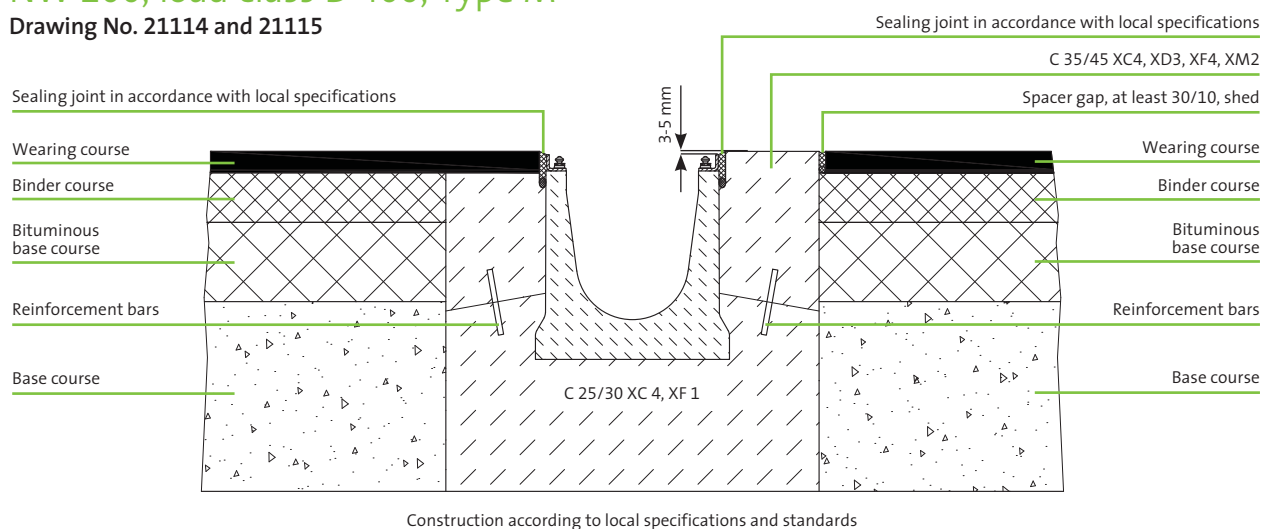
See Page 31 for installation dimensions.

Constructed using non-settling frost-free sub-bases.

Exception up to D 400: Not for use across the carriage-way of highways or motorways.

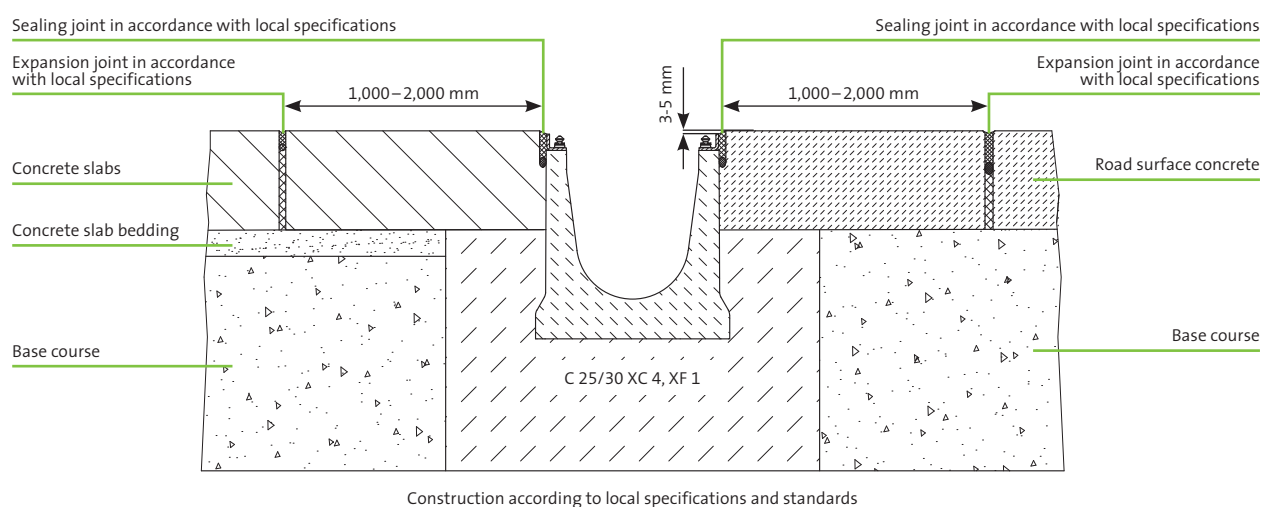
BIRCOLight triloc® NW 150, load class D 400 – E 600 and NW 200, load class D 400, Type M

Drawing No. 21114 and 21115



BIRCOLight triloc® NW 150, load class D 400 – E 600 and NW 200, load class D 400, Type M

Drawing No. 21114 and 21115



When pavement surfaces are being laid and pressed, it must be ensured that the pavement material is not forced against the channels.

The dimensions of the concrete casing must be adapted to the circumstances on-site and must consist of at least 15 cm. If no bond can be created between the base and the casing, then dowel bars or flotation control made of Ø 8 mm reinforced bars are to be installed every 30 cm. The concrete qualities indicated are minimum values. Requirements related to the installation location according to DIN

1045-2 or EN 206-1 regarding for instance resistance to frost and de-icing salt are to be taken into account in the choice of the concrete.

Bolting connection note:

The covers of the BIRCOLight triloc® can be screwed on. Tightening torques of M8 = 35 Nm are to be applied for the screw connection of the covers.

The bolts on the gratings must be retightened at regular intervals.

The planning of expansion joints must be conducted from on the basis of engineering considerations. When laying the channel line in a full concrete casing, expansion joints at right angles to the channel line must be installed every 8–12 meters. See Page 31 for installation dimensions. Constructed using non-settling frost-free sub-bases. Exception up to D 400: Not for use across the carriage-way of highways or motorways.

Installation surrounding can be reduced/optimized depending on traffic frequency and types of vehicles.

BIRCOLight concrete casing overview

The manufacturer's installation instructions must be followed in order to comply with the requirements stipulated by EN 1433.

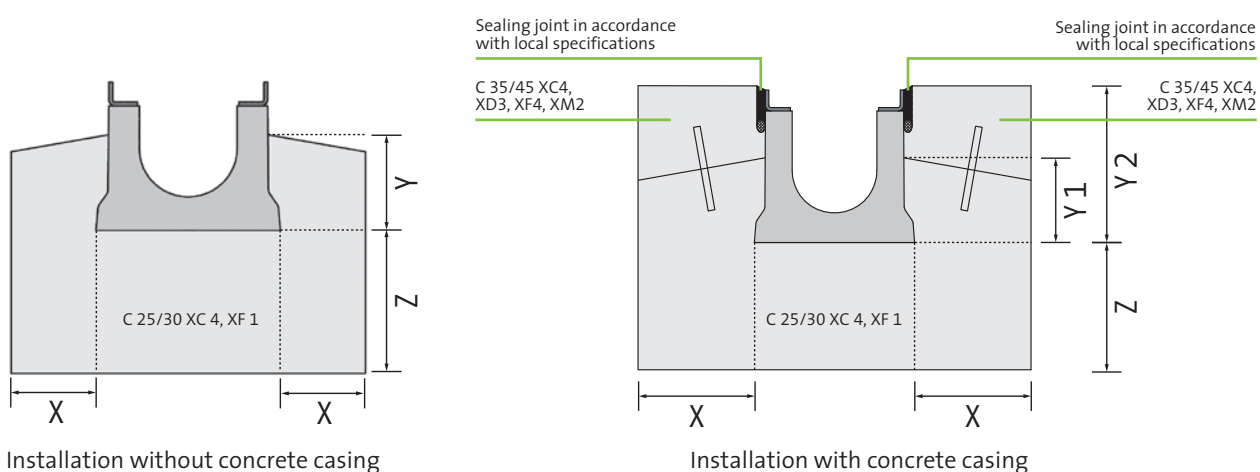
BIRCOLight

Nominal width	Type	Load class	X	Y/Y 1	Y 2	Z	Drawing no.
BIRCOLight 100 AS	M	A 15 – C 250	≥ 100	≥ 100	–	≥ 150	21050
BIRCOLight 100 AS	M	D 400 – E 600	≥ 150	≥ 100	Construction height + 5 mm	≥ 200	21050
BIRCOLight 150 AS	M	A 15 – C 250	≥ 150	≥ 100	–	≥ 150	21051
BIRCOLight 150 AS	M	D 400 – E 600	≥ 150	≥ 100	Construction height + 5 mm	≥ 200	21051

BIRCOLight triloc®

Nominal width	Type	Load class	X	Y/Y 1	Y 2	Z	Drawing no.
BIRCOLight triloc® 150	M	A 15 – C 250	≥ 100	≥ 100	–	≥ 150	21114
BIRCOLight triloc® 150	M	D 400 – E 600	≥ 150	≥ 100	Construction height + 5 mm	≥ 200	21114
BIRCOLight triloc® 200	M	A 15 – C 250	≥ 150	≥ 100	–	≥ 150	21115
BIRCOLight triloc® 200	M	D 400	≥ 150	≥ 100	Construction height + 5 mm	≥ 200	21115

Schematic structure



BIRCOLight Drainage capacities

BIRCO channel systems provide outstanding drainage performance. BIRCO offers a calculation service in addition to this diagram.

BIRCOLight NW 100 AS

CL = 1000 mm	Drainage capacity at the channel end	Cross-sectional area at the channel end
No. 0/0	4.96 l/sec	89.0 cm ²
No. 1	5.55 l/sec	94.0 cm ²
No. 2	5.85 l/sec	99.0 cm ²
No. 3	6.14 l/sec	104.0 cm ²
No. 4	6.44 l/sec	109.0 cm ²
No. 5	6.73 l/sec	114.0 cm ²
No. 5/0	6.35 l/sec	114.0 cm ²
No. 6	7.03 l/sec	119.0 cm ²
No. 7	7.32 l/sec	124.0 cm ²
No. 8	7.62 l/sec	129.0 cm ²
No. 9	7.91 l/sec	134.0 cm ²
No. 10	8.21 l/sec	139.0 cm ²
No. 10/0	7.74 l/sec	139.0 cm ²
No. 15/0	9.13 l/sec	164.0 cm ²

BIRCOLight NW 150 AS

CL = 1000 mm	Drainage capacity at the channel end	Cross-sectional area at the channel end
No. 0/0	10.20 l/sec	183.6 cm ²
No. 1	11.25 l/sec	191.0 cm ²
No. 2	11.70 l/sec	198.5 cm ²
No. 3	12.13 l/sec	205.9 cm ²
No. 4	12.57 l/sec	213.4 cm ²
No. 5	13.01 l/sec	220.8 cm ²
No. 5/0	12.27 l/sec	220.8 cm ²
No. 6	13.45 l/sec	228.3 cm ²
No. 7	13.89 l/sec	235.7 cm ²
No. 8	14.33 l/sec	243.2 cm ²
No. 9	14.77 l/sec	250.7 cm ²
No. 10	15.21 l/sec	258.1 cm ²
No. 10/0	14.34 l/sec	258.1 cm ²
No. 15/0	16,99 l/sec	299,3 cm ²



BIRCOservice

Page 145

- + BIRCO offers you an individual customization and bore hole service ex-factory.



These diagrams can only provide the desired result in a few cases since the job definition is influenced in large part by the conditions on-site, i.e. the location of the existing drains, the number of drainage lines, etc. Therefore we recommend a hydraulic calculation from our personnel with a proposed design.

BIRCOLight triloc® Drainage capacities

BIRCO channel systems provide outstanding drainage performance. BIRCO offers a calculation service in addition to this diagram.

BIRCOLight triloc® NW 150

CL = 1000 mm	Drainage capacity at the channel end	Cross-sectional area at the channel end
No. 1	12.81 l/sec	193.60 cm ²
No. 2	13.42 l/sec	201.05 cm ²
No. 3	14.03 l/sec	208.51 cm ²
No. 4	14.64 l/sec	215.96 cm ²
No. 5	15.26 l/sec	223.42 cm ²
No. 6	15.87 l/sec	230.87 cm ²
No. 7	16.49 l/sec	238.33 cm ²
No. 8	17.11 l/sec	245.78 cm ²
No. 9	17.73 l/sec	253.24 cm ²
No. 10	18.35 l/sec	260.69 cm ²
No. 0/0	10.34 l/sec	186.14 cm ²
No. 5/0	12.41 l/sec	223.42 cm ²
No. 10/0	14.48 l/sec	260.69 cm ²

BIRCOLight triloc® NW 200

CL = 1000 mm	Drainage capacity at the channel end	Cross-sectional area at the channel end
No. 1	31.70 l/sec	382.64 cm ²
No. 2	32.70 l/sec	392.65 cm ²
No. 3	33.70 l/sec	402.65 cm ²
No. 4	34.70 l/sec	412.66 cm ²
No. 5	35.70 l/sec	422.66 cm ²
No. 6	36.70 l/sec	432.67 cm ²
No. 7	37.70 l/sec	442.68 cm ²
No. 8	38.70 l/sec	452.68 cm ²
No. 9	39.80 l/sec	462.69 cm ²
No. 10	40.80 l/sec	472.69 cm ²
No. 0/0	20.70 l/sec	372.64 cm ²
No. 5/0	23.48 l/sec	422.66 cm ²
No. 10/0	26.26 l/sec	472.69 cm ²

Horizontal and vertical bore holes

Depending on the circumstances on-site, drainage channels sometimes have to be fitted with a bore hole for connection to the sewage line. We can fit BIRCO channels with horizontal or vertical bore holes for directly fitting feed and drainage lines according to your plans. The connections

available differ according to the nominal widths, extending in the standard range from DN 110 to DN 200. The diameters are matched with channel base pipes; different pipes are available upon request.

BIRCOLight | Maximum bore hole diameter

Nominal width	Bore hole, horizontal maximal	Bore hole, vertical maximal
100 mm	DN 110 / DN 160*	DN 110
150 mm	DN 160**	DN 160

* Starting from channel No. 15/0, ** Starting from channel No. 10/0

Bore holes must be a distance of least 100 mm away from the end of the channel.

BIRCOLight triloc® | Maximum bore hole diameter

Nominal width	Bore hole, horizontal maximal	Bore hole, vertical maximal
150 mm	DN 110 / DN 160*	DN 160
200 mm	DN 150 / DN 200**	DN 200

* Starting from channel No. 5/0, ** Starting from channel No. 10/0

Bore holes must be a distance of least 100 mm away from the end of the channel.

These diagrams can only provide the desired result in a few cases since the job definition is influenced in large part by the conditions on-site, i.e. the location of the existing drains, the number of drainage lines, etc. We therefore recommend making use of our hydraulic calculation service which provides you with a draft proposal.

Details and fastening BIRCOLight triloc®



Index bolt
inside the angle



Cover with
integrated spring fastening



Insertion
of the cover



2-point per meter
fastening per cover



Click
into place



Release
through lifting



Simple switch from spring to bolt fastening



BIRCOplus | The drainage channel for garages and entranceways

BIRCOplus – the concrete channel for private building owners. BIRCOplus is made of high quality C 40/50 concrete, but is still easy to transport and install. The pavement surface can be laid up flush to the channel cover and no additional concrete casing is necessary. BIRCOplus: easy to handle with safe, reliable performance.

+ A 15 to C 250



For the drainage of private construction projects. Concrete channels with ideal performance and easy installation.

BIRCOplus | Areas of application

- + Garages, courtyard entranceways
- + Gardening construction
- + Residential construction
- + Sporting grounds
- + Railroad platforms

BIRCOplus | Facts

- + Channel system: NW 100
- + Low-weight concrete channel, with and without inbuilt falls
- + Construction lengths: 0.50, 1.00 meters
- + Load class: A 15 – C 250
- + In-line outfall unit with outstanding drainage performance
- + A variety of clamping covers made of galvanized steel
- + Bolt connection ductile iron cover with bolt clamp



BIRCOplus | The drainage channel for garages and entranceways

Excellent appearance, easy installation and the best BIRCO material quality. BIRCOplus provides ideal, reliable drainage for entranceways, garages or sporting grounds.



Easy, safe installation

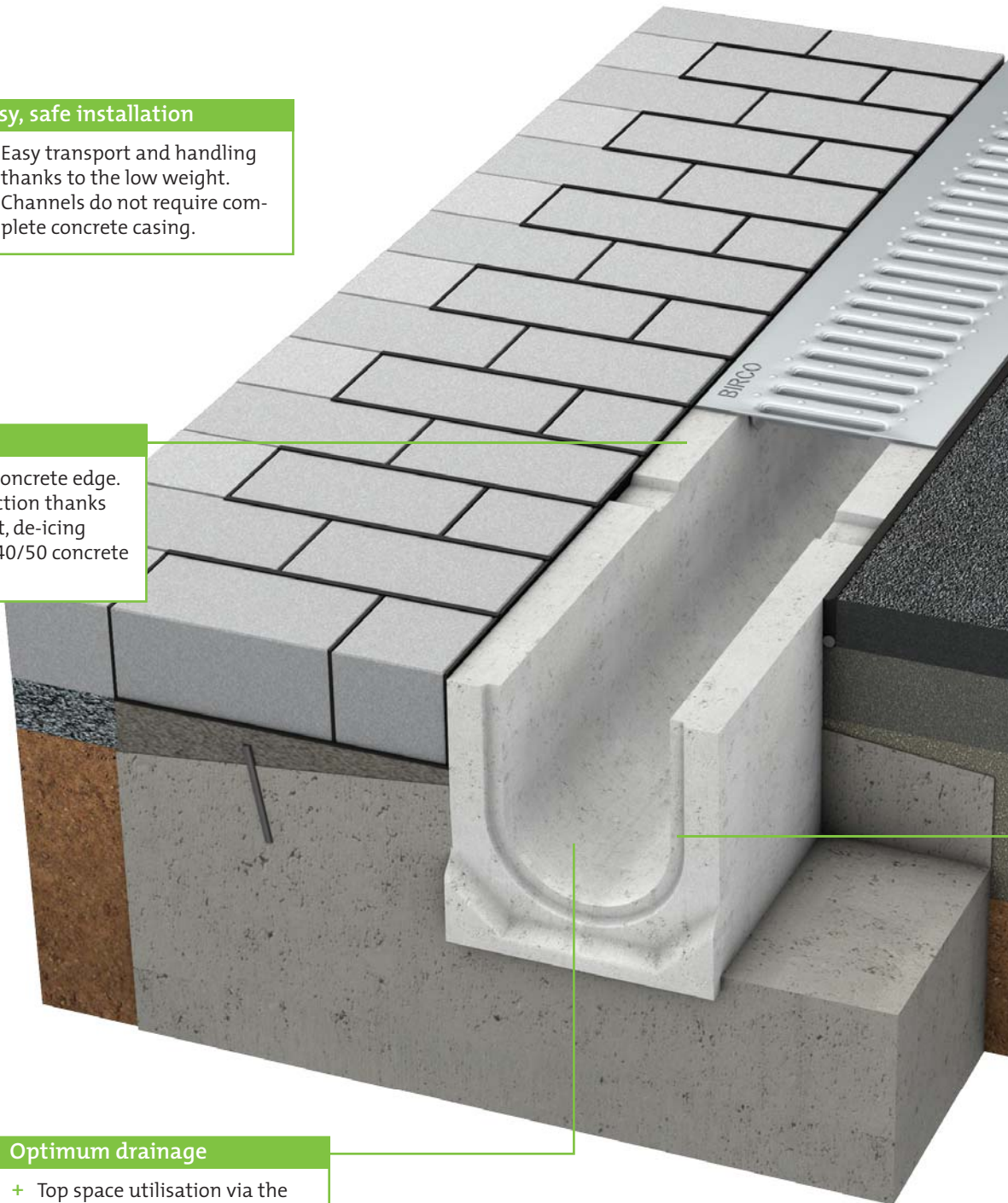
- + Easy transport and handling thanks to the low weight.
- + Channels do not require complete concrete casing.

Quality material

- + Sturdy covered concrete edge.
- + Corrosion protection thanks to frost-resistant, de-icing salt-resistant C 40/50 concrete quality.

Optimum drainage

- + Top space utilisation via the fast drainage of water.

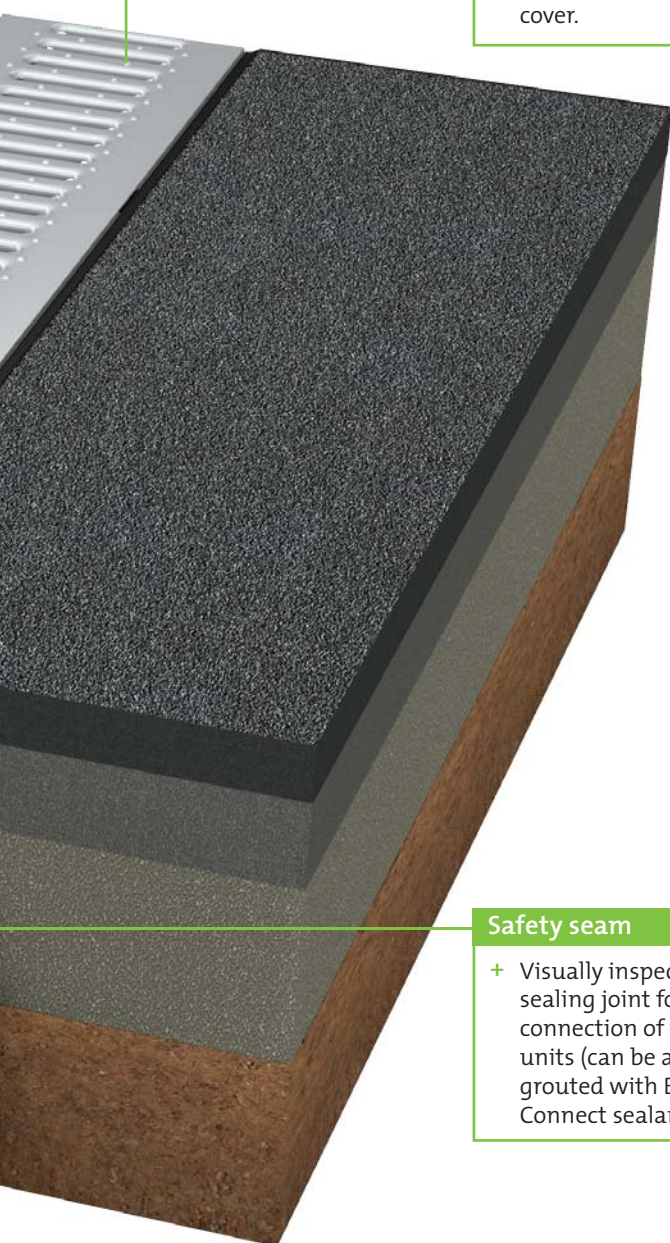


This picture is exemplary. For installation, please observe our installation instructions or installation examples.

We were able to actively support customers here:

Attractive design

- + Design possibilities with galvanized steel clamping covers.
- + Bolt connection ductile iron cover.



Safety seam

- + Visually inspectable safety sealing joint for the stable connection of the channel units (can be additionally grouted with BIRCO SF-Connect sealant).



Beelitz train station



Train platform, Sinsheim



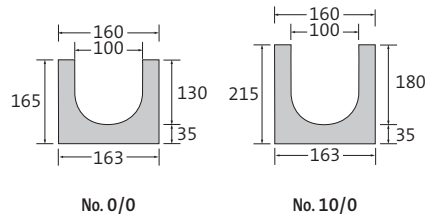
Quay d'Ivry, France

BIRCOplus | NW 100

Light Concrete Channel – Ideal Laying

Channel elements | 0.5 % internal inbuilt fall

- + Concrete edge of the channel concealed by the grating
- + Safety seam



Description	Length	Width	Construction height at groove / tongue	Weight	Load class EN 1433	Article No.
Channel No. 1	1000 mm	160 mm	165/170 mm	37.5 kg	A 15 – C 250	012001
Channel No. 2	1000 mm	160 mm	170/175 mm	38.3 kg	A 15 – C 250	012002
Channel No. 3	1000 mm	160 mm	175/180 mm	39.0 kg	A 15 – C 250	012003
Channel No. 4	1000 mm	160 mm	180/185 mm	39.8 kg	A 15 – C 250	012004
Channel No. 5	1000 mm	160 mm	185/190 mm	40.6 kg	A 15 – C 250	012005
Channel No. 6	1000 mm	160 mm	190/195 mm	41.4 kg	A 15 – C 250	012006
Channel No. 7	1000 mm	160 mm	195/200 mm	42.2 kg	A 15 – C 250	012007
Channel No. 8	1000 mm	160 mm	200/205 mm	43.0 kg	A 15 – C 250	012008
Channel No. 9	1000 mm	160 mm	205/210 mm	43.8 kg	A 15 – C 250	012009
Channel No. 10	1000 mm	160 mm	210/215 mm	44.6 kg	A 15 – C 250	012010

Channel elements | without internal inbuilt fall

- + Concrete edge of the channel concealed by the grating
- + Safety seam

Description	Length	Width	Construction height at groove / tongue	Weight	Load class EN 1433	Article No.
Channel No. 0/0	500 mm	160 mm	165/165 mm	19.0 kg	A 15 – C 250	012031
Channel No. 0/0	1000 mm	160 mm	165/165 mm	37.0 kg	A 15 – C 250	012026
Channel No. 5/0	1000 mm	160 mm	190/190 mm	41.0 kg	A 15 – C 250	012027
Channel No. 10/0	1000 mm	160 mm	215/215 mm	44.0 kg	A 15 – C 250	012028

Channel No. 0/0 and 5/0 also available with socket DN 110 for a vertical outlet. Art.-No. 012033 and Art.-No. 012034 for a length of 1000 mm.

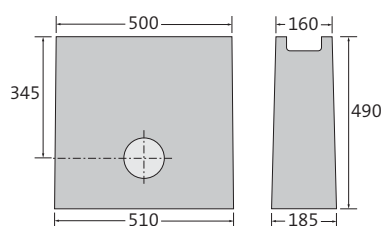
End caps



Description	Width	For construction height	Weight	Article No.
End cap, galvanized, No. 0/0 – 2	160 mm	165 – 175 mm	0.3 kg	012090
End cap, galvanized, No. 3 – 6	160 mm	175 – 195 mm	0.3 kg	012091
End cap, galvanized, No. 7 – 10	160 mm	195 – 215 mm	0.4 kg	012092
End cap with outlet DN 110, galvanized, No. 0/0	160 mm	165 mm	0.6 kg	012045
End cap with outlet DN 110, galvanized, No. 5/0	160 mm	190 mm	0.7 kg	012046
End cap with outlet DN 110, galvanized, No. 10/0	160 mm	215 mm	0.8 kg	012047

In-line outfall unit | 1-piece

- + 1- or 2-sided channel connection unit No. 10
- + PP silt bucket
- + PP odour trap
- + Integrated socket for DN 110 pipe connection



Description	Length	Width	Construction height	Weight	Load class EN 1433	Article No.
until No. 10	500 mm	160 mm	490 mm	58.0 kg	A 15 – C 250	012035

Slotted ductile iron grating

- + Black immersion-lacquered
- + 2-point per meter M12/A2 bolt connection with bolt clamp
- + The cover adds 5 mm to the construction height



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
black	500 mm	158 mm	5 mm	3.5 kg	SW 85/10 mm	312 cm ² /m	A 15 – C 250	012070

Outlet openings, cuts on special length and mitre cuts available upon request.
SW = slot width

Slotted gratings | hot-dipped galvanized steel

- + Galvanized
- + As clamped grating
- + The cover adds 2.5 mm to the construction height



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
Clamp-type fastening	500 mm	158 mm	2.5 mm	1.3 kg	SW 80/12 mm	334 cm ² /m	A 15	012066
Clamp-type fastening	1000 mm	158 mm	2.5 mm	2.4 kg	SW 80/12 mm	334 cm ² /m	A 15	012056

Mesh gratings | clamped grating | hot-dipped galvanized steel

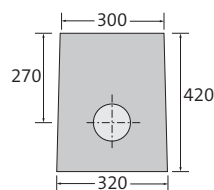
- + Hot-dipped galvanized
- + The cover adds 2 mm to the construction height



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
hot-dipped galvanized	500 mm	158 mm	2 mm	1.7 kg	MW 30/16 mm	800 cm ² /m	A 15 – B 125	012062
hot-dipped galvanized	1000 mm	158 mm	2 mm	3.3 kg	MW 30/16 mm	800 cm ² /m	A 15 – B 125	012052
hot-dipped galvanized	500 mm	158 mm	2 mm	1.7 kg	MW 30/10 mm	720 cm ² /m	A 15 – B 125	012063
hot-dipped galvanized	1000 mm	158 mm	2 mm	3.4 kg	MW 30/10 mm	720 cm ² /m	A 15 – B 125	012053

Outfall unit 30/30 | 1-piece

- + 2-sided channel connection until No. 10
- + PP silk bucket
- + PP odour trap
- + Integrated socket for DN 110 pipe connection



Description	Length	Width	Construction height	Weight	Load class EN 1433	Article No.
until No. 10	300 mm	300 mm	400 mm	55.3 kg	A 15 – B 125	080105

Outlet openings, cuts on special length and mitre cuts available upon request
 SW = slot width, MW = mesh width

Slotted grating | clamped grating | for outfall unit 30/30 | hot-dipped galvanized steel

- + Galvanized
- + The cover adds 2 mm to the construction height



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
Clamp fastening	300 mm	300 mm	2 mm	1.4 kg	SW 185/10 mm	117 cm ² /m	A 15	080117

Mesh grating | clamped grating | for outfall unit 30/30

- + Hot-dipped galvanized
- + The cover adds 2 mm to the construction height



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
Clamp fastening	300 mm	300 mm	2 mm	2.7 kg	MW 30/16 mm	489 cm ² /m	A 15 – B 125	080116

Outfall unit 19/19 | grating incl.

- + PP silk bucket
- + PP odour trap
- + Integrated socket for DN 110 pipe connection
- + With mesh or ductile iron grating



Description	Length	Width	Construction height	Weight	Load class EN 1433	Article No.
Outfall unit incl. ductile iron grating	230 mm	230 mm	205 mm	18.2 kg	A 15	080100
Outfall unit incl. mesh grating	230 mm	230 mm	205 mm	19.0 kg	A 15	080104

Outlet openings, cuts on special length and mitre cuts available upon request
 SW = slot width, MW = mesh width

BIRCOplus | Installation Instructions

A number of details must be observed when installing BIRCOplus. You will find a comprehensive description below.

To guarantee smooth operation and compliance with the requirements of EN 1433, the following general valid installation instructions must be observed:

1. Prior to installation, the correct load class in accordance with EN 1433 must be selected.

2. Thanks to the high level of stability, laying the BIRCO channels is conducted on an earth-moist C 25/30 strip of foundation concrete at least 15 cm high which must be tapered in a conical shape on both sides. No additional encasing or reinforcement on the sides is required. Begin laying the channel line following the outfall unit with the highest channel at the drain and form the channel line with the next-smallest number.

3. All adjoining pavement surfaces must run **permanently about 3 to 5 mm higher than the upper edge of the channel⁽¹⁾**. In order to achieve this, we recommend laying the first two to three rows of pavement surfacing in the mortar bed. Because there is no concrete casing, the surface pavement can run right up to the channel without any problems.

For slab or paving connections, a permanent sealing gap of about 10 mm must be maintained between the channel and the adjoining surface. The joints between the first two to three series of slab or paving connections must be permanently sealed. It must be ensured that no horizontal forces act on the paving laid in the mortar bed due to displacement or expansion of the paving covering.

4. For installation in concrete surfaces or reinforced concrete constructions, expansion joints must be provided on both sides parallel to the channel to compensate horizontal forces that emerge. These joints should be installed at a distance of 1 m to 2 m parallel to the channel. When compacting adjacent surfaces, it must be ensured that mechanical damage to the channel elements is excluded. Expansion joints running diagonally to the channel line must be arranged every 8 – 12 meters in the adjacent concrete surfaces (in-situ concrete) so that they run through a channel joint.

All joints have to be planned from an engineering perspective and executed professionally. The expansion joints (e.g. PE foam boards) must run across the entire channel cross-section through the foundation and the lateral casing.

5. BIRCO drainage units are fitted with a safety seam on the channel end. In accordance with EN 1433, once laying has been completed this safety seam can be further treated with a plastic modified mortar or a permanently elastic sealing material (for example SF-Connect).

6. Proceed analogously when installing the outfall unit.

7. Local particularities can require special installation methods that have to be examined and taken into account by the planner(s).

⁽¹⁾ Please note that with BIRCOplus the height of the cover must be added on top of the construction height.

Fast, safe installation | Efficient time and cost management

- + Easy transport and handling thanks to the low weight.
- + Channels do not require complete concrete casing.
- + Compatible for loads up to Class C 250 thanks to the ductile iron cover with fastening clip.

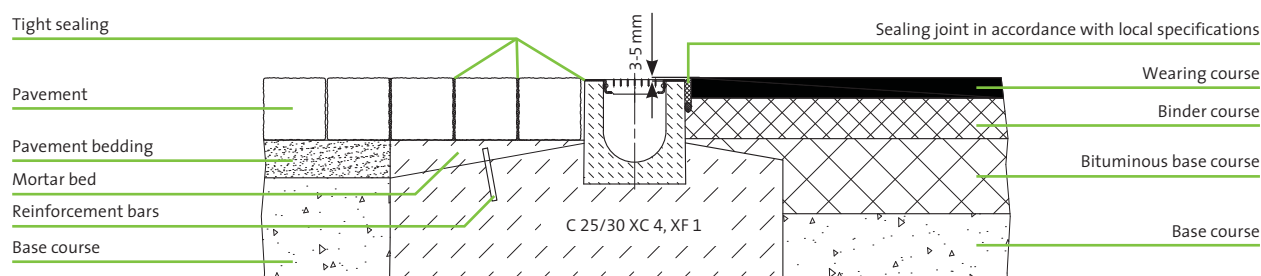
BIRCOplus Installation Examples

Expanded installation instructions for pedestrian zones.

Pedestrian zones | Footpaths

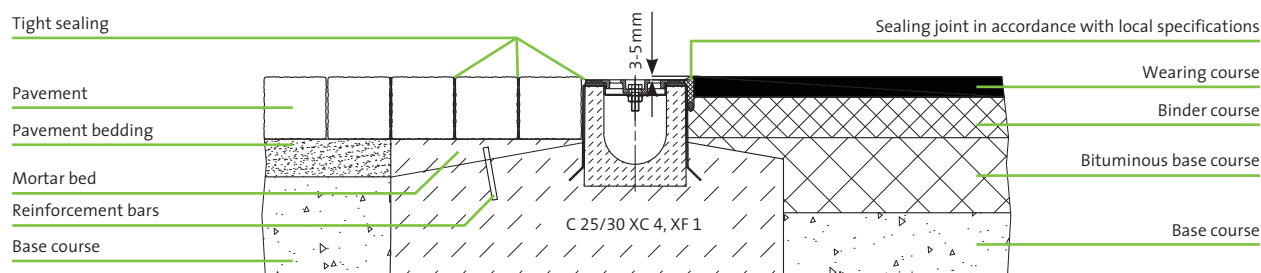
BIRCOplus, load class A 15 – B 125, Type M

Drawing No. 21065



BIRCOplus, load class A 15 – C 250, Type M

Drawing No. 21064



When pavement surfaces are being laid and pressed, it must be ensured that the pavement material is not forced against the channels.

Installation surrounding can be reduced/optimized depending on traffic frequency and types of vehicles.

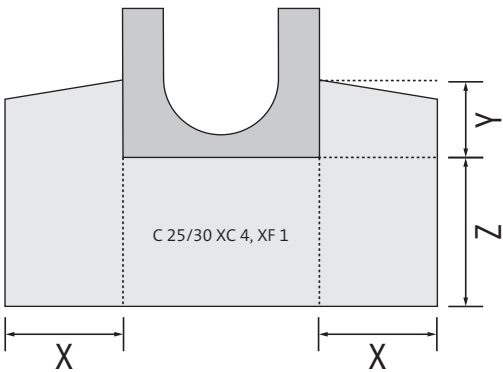
The planning of expansion joints must be conducted from on the basis of engineering considerations. When laying the channel line in a full concrete casing, expansion joints at right angles to the channel line must be installed every 8 – 12 meters. Constructed in accordance with non-settling frost-free sub-bases.

BIRCOplus concrete casing overview

The manufacturer’s installation instructions must be followed in order to comply with the requirements stipulated by EN 1433.

BIRCOplus						
Nominal width	Type	Load class	X	Y	Z	Drawing no.
BIRCOplus	M	A 15 – C 250	≥ 100	≥ 100	≥ 150	21064, 21065

Schematic structure



Installation without lateral concrete casing

BIRCOplus Drainage Capacities

BIRCO channel systems provide outstanding drainage performance. BIRCO offers a calculation service in addition to this diagram.

BIRCOplus NW 100

CL = 1000 mm	Drainage capacity at the channel end	Cross-sectional area at the channel end
No. 0/0	6.10 l/sec	110.0 cm ²
No. 1	6.70 l/sec	115.0 cm ²
No. 2	7.00 l/sec	120.0 cm ²
No. 3	7.30 l/sec	125.0 cm ²
No. 4	7.60 l/sec	130.0 cm ²
No. 5	7.90 l/sec	135.0 cm ²
No. 5/0	7.50 l/sec	135.0 cm ²
No. 6	8.20 l/sec	140.0 cm ²
No. 7	8.50 l/sec	145.0 cm ²
No. 8	8.80 l/sec	150.0 cm ²
No. 9	9.10 l/sec	155.0 cm ²
No. 10	9.40 l/sec	160.0 cm ²
No. 10/0	8.90 l/sec	160.0 cm ²

Horizontal and vertical bore holes

Depending on the circumstances on-site, drainage channels sometimes have to be fitted with a bore hole for connection to the sewage line. We can fit BIRCO channels with horizontal or vertical bore holes for directly fitting feed and drainage lines according to your plans. The connections

available differ according to the nominal widths, extending in the standard range from DN 110 to DN 160. The diameters are matched with channel base pipes; different pipes are available upon request.

BIRCOplus | Maximum bore hole diameter

Nominal width	Bore hole, horizontal maximal	Bore hole, vertical maximal
100 mm	DN 110 / 160*	DN 110

* Starting from channel No. 5

Bore holes must be a distance of least 100 mm away from the end of the channel.



BIRCOservice

- + BIRCO offers you an individual customization and bore hole service ex-factory.



These diagrams can only provide the desired result in a few cases since the job definition is influenced in large part by the conditions on-site, i.e., the location of the existing drains, the number of drainage lines, etc. We therefore recommend making use of our hydraulic calculation service which provides you with a draft proposal.

BIRCOslotted steel covers | The invisible drainage solution

BIRCOslotted steel covers are the perfect combination of functionality and design. Virtually invisible, they provide efficient line drainage of public spaces or building façades in residential and town construction. They accommodate the highest standards in architectural requirements, and with their 4 mm material thickness they guarantee reliable stability even in areas exposed to heavy traffic.

+ A 15 to E 600



For virtually invisible drainage of public open spaces or building façades. For separations between pavement surfaces or in private residential construction.

BIRCOslotted steel covers | Areas of application

- + Public open spaces and building façades
- + Properties with sophisticated architectural requirements
- + Private residential construction
- + Stairs (asymmetrical slotted cover)
- + Urban and industrial construction
- + Ideal for separating pavements

BIRCOslotted steel covers | Facts

- + For channels NW 100 and 150 AS
- + Construction lengths: 0.5, 1.0 meter
- + Different construction heights
- + Design: galvanized steel, stainless steel (4 mm or 1.5 mm for light loads)
- + Load class: A 15 – E 600 (C 250 in the case of material thickness of 1.5 mm)
- + Symmetrical or asymmetrical designs
- + Acces covers for cleaning or maintenance



BIRCOslotted steel covers |

The invisible drainage solution

When construction designs demands invisible drainage, BIRCOslotted steel covers are the best solution.

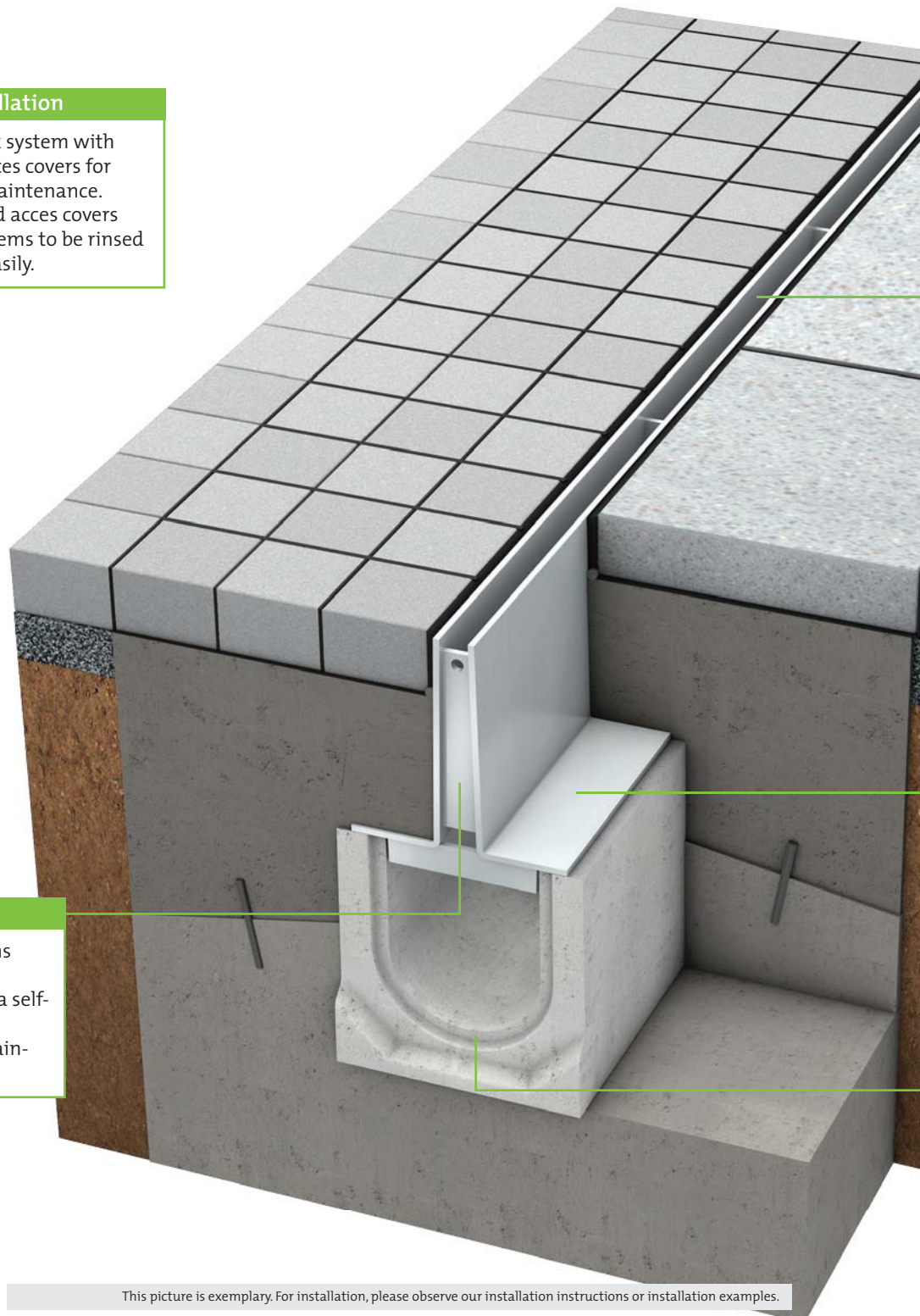


Fast, safe installation

- + Building block system with integrated access covers for cleaning or maintenance.
- + The integrated access covers allow the systems to be rinsed quickly and easily.

Low-maintenance

- + The inlet slot, which opens further downwards in a conical shape, generates a self-cleaning effect.
- + Reliable prevention of drainage slot clogging.



This picture is exemplary. For installation, please observe our installation instructions or installation examples.



Flexible application

- + 2 nominal widths, 2 material thicknesses, different construction heights and a variety of construction shapes translate into a wide variety of application possibilities.

Attractive design

- + Combines architectural demands with top drainage performance.
- + Ideal for separating pavements.

Material quality

- + Galvanized or stainless steel V2A ensures a long service life and safeguards your investment.
- + Material thickness of 4 mm until class E 600 or 1.5 mm for class C 250.

Safety seam

- + Visually inspectable safety sealing joint for the stable connection of the channel units (can be additionally grouted with BIRCO SF-Connect sealant).

We were able to actively support customers here:



Belval, Luxemburg



Bluewater residential, Dubai



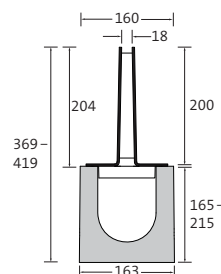
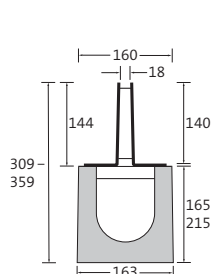
Le Louvre, Abu Dhabi

BIRCOslotted steel covers | for NW 100

Material thickness 4 mm – hot-dipped galvanized 70 µm

Slotted steel covers | symmetrical | material thickness 4 mm

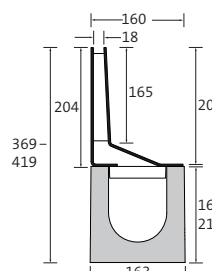
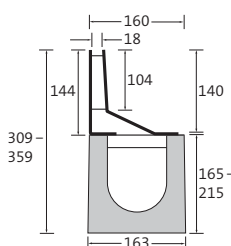
- + Hot-dipped galvanized 70 µm
- + Also available in stainless steel (V2A)
- + For channel elements NW 100
- + Connection height 140/200, total height 144/204



Description	Length	Width	Construction height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
hot-dipped galvanized	500 mm	160 mm	144 mm	6.6 kg	SW 18 mm	180 cm²/m	A 15 – E 600	083182
hot-dipped galvanized	1000 mm	160 mm	144 mm	13.0 kg	SW 18 mm	180 cm²/m	A 15 – E 600	083181
hot-dipped galvanized	500 mm	160 mm	204 mm	8.5 kg	SW 18 mm	180 cm²/m	A 15 – E 600	087182
hot-dipped galvanized	1000 mm	160 mm	204 mm	16.7 kg	SW 18 mm	180 cm²/m	A 15 – E 600	087181

Slotted steel covers | asymmetrical | material thickness 4 mm

- + Hot-dipped galvanized 70 µm
- + Also available in stainless steel (V2A)
- + For channel elements NW 100
- + Connection height 104/165, total height 144/204



Description	Length	Width	Construction height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
hot-dipped galvanized	500 mm	160 mm	144 mm	6.9 kg	SW 18 mm	180 cm²/m	A 15 – E 600	083184
hot-dipped galvanized	1000 mm	160 mm	144 mm	13.7 kg	SW 18 mm	180 cm²/m	A 15 – E 600	083183
hot-dipped galvanized	500 mm	160 mm	204 mm	9.0 kg	SW 18 mm	180 cm²/m	A 15 – E 600	087184
hot-dipped galvanized	1000 mm	160 mm	204 mm	17.6 kg	SW 18 mm	180 cm²/m	A 15 – E 600	087183

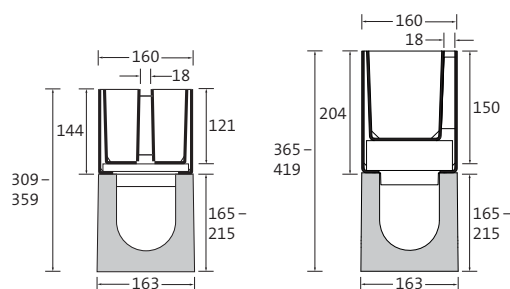
SW = slot width

Other connection heights on request.

Exception up to D 400: Not for use across the carriage way of highways or motorways.

Access covers | 2-piece | material thickness 4 mm

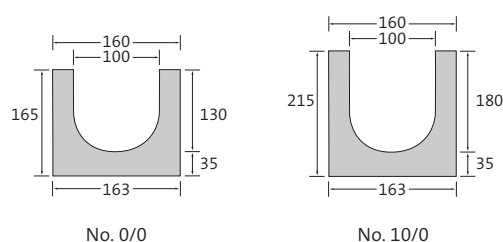
- + Hot-dipped galvanized 70 µm
- + Also available in stainless steel (V2A)
- + For channel elements/outfall units NW 100
- + For total height 144/204
- + With removable insert as maintenance and cleaning opening



Description	Length	Width	Construction height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
symmetrical slot	500 mm	160 mm	144 mm	16.9 kg	SW 18 mm	180 cm ² /m	A 15 – E 600	083159
asymmetrical slot	500 mm	160 mm	144 mm	13.4 kg	SW 18 mm	180 cm ² /m	A 15 – E 600	083160
symmetrical slot	500 mm	160 mm	204 mm	16.9 kg	SW 18 mm	180 cm ² /m	A 15 – E 600	087159
asymmetrical slot	500 mm	160 mm	204 mm	13.4 kg	SW 18 mm	180 cm ² /m	A 15 – E 600	087160

Channel elements NW 100 for slotted steel covers/access covers | without internal inbuilt fall

- + Covered concrete edge by slotted steel cover/access cover
- + Safety sealing joint
- + Channel elements with internal inbuilt fall upon request



Description	Length	Width	Construction height at groove/tongue	Weight	Load class EN 1433	Article No.
No. 0/0	500 mm	160 mm	165/165 mm	19.0 kg	A 15 – E 600	012031
No. 0/0	1000 mm	160 mm	165/165 mm	37.0 kg	A 15 – E 600	012026
No. 5/0	1000 mm	160 mm	190/190 mm	41.0 kg	A 15 – E 600	012027
No. 10/0	1000 mm	160 mm	215/215 mm	44.0 kg	A 15 – E 600	012028

SW = slot width

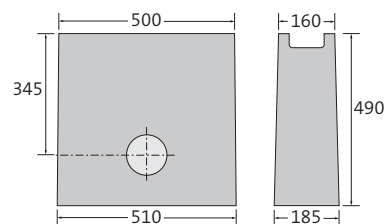
Other connection heights on request.

Exception up to D 400: Not for use across the carriage way of highways or motorways.

BIRCOslotted steel covers for NW 100

Outfall unit NW 100 for access covers | 1-piece

- + 1- or 2-sided channel connection to No. 10/0
- + PP silt bucket
- + PP odour trap
- + Integrated sockets for DN 110 pipe connection



Description	Length at top/ ground	Width at top/ at ground	Construction height	Weight	Load class EN 1433	Article No.
until No. 10	500/510 mm	160/185 mm	490 mm	57.0 kg	A 15 – E 600	083335

Lifting device for access covers | Set



Description	Weight	Article No.
Lifting device for all access covers with slot (symmetrical or asymmetrical), Set of 2	0.4 kg	083191

End caps

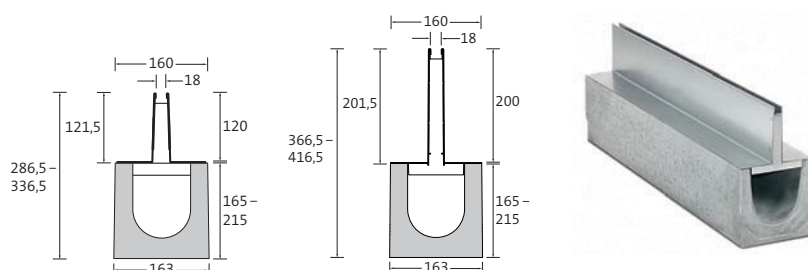
Description	Width	For construction height	Weight	Article No.
End cap, galvanized, No. 0/0-4	160 mm	155-175 mm	0.3 kg	012090
End cap, galvanized, No. 5-8	160 mm	175-195 mm	0.3 kg	012091
End cap, galvanized, No. 9-10	160 mm	195-215 mm	0.4 kg	012092

BIRCOslotted steel covers | for NW 100

Material thickness 1.5 mm

Slotted steel covers | symmetrical | material thickness 1.5 mm

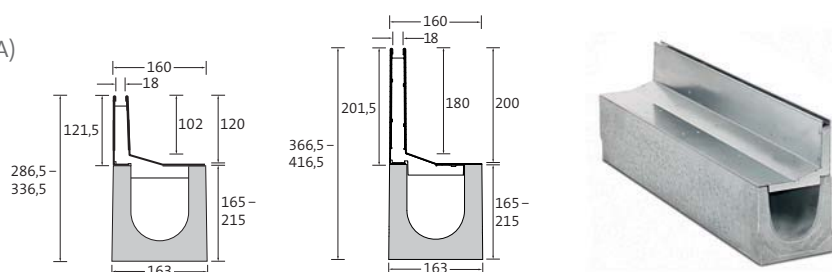
- + Galvanized
- + Also available in stainless steel (V2A)
- + For channel elements NW 100
- + Connection height 120/200, total height 121.5/201.5



Description	Length	Width	Construction height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
galvanized	500 mm	160 mm	121.5 mm	2.6 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	083164
galvanized	1000 mm	160 mm	121.5 mm	5.2 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	083163
galvanized	500 mm	160 mm	201.5 mm	3.7 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	087164
galvanized	1000 mm	160 mm	201.5 mm	7.3 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	087163

Slotted steel covers | asymmetrical | material thickness 1.5 mm

- + Galvanized
- + Also available in stainless steel (V2A)
- + For channel elements NW 100
- + Connection height 102/200, total height 121.5/201.5



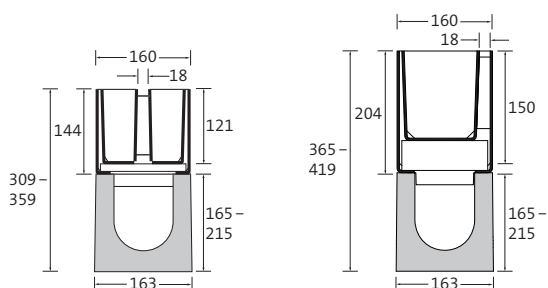
Description	Length	Width	Construction height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
galvanized	500 mm	160 mm	121.5 mm	2.7 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	083180
galvanized	1000 mm	160 mm	121.5 mm	5.5 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	083169
galvanized	500 mm	160 mm	201.5 mm	3.8 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	087180
galvanized	1000 mm	160 mm	201.5 mm	7.4 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	087169

SW = slot width
Other connection heights on request.

BIRCOslotted steel covers for NW 100

Access covers | 2-piece | material thickness 1.5 mm

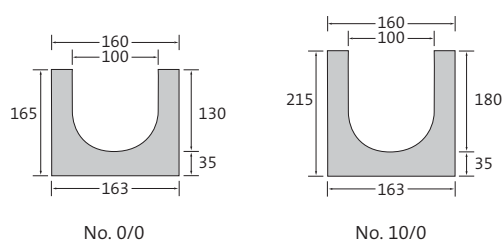
- + Galvanized
- + Also available in stainless steel (V2A)
- + For channel elements/outfall units NW 100
- + For total height 121.5/201.5
- + With removable insert as maintenance and cleaning opening



Description	Length	Width	Construction height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
symmetrical slot	500 mm	160 mm	121.5 mm	6.8 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	083185
asymmetrical slot	500 mm	160 mm	121.5 mm	5.2 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	083186
symmetrical slot	500 mm	160 mm	201.5 mm	9.8 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	087185
asymmetrical slot	500 mm	160 mm	201.5 mm	7.6 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	087186

Channel elements NW 100 for slotted steel covers/access covers | without internal inbuilt fall

- + Covered concrete edge by slotted steel cover/access cover
- + Safety sealing joint
- + Channel elements with internal inbuilt fall upon request

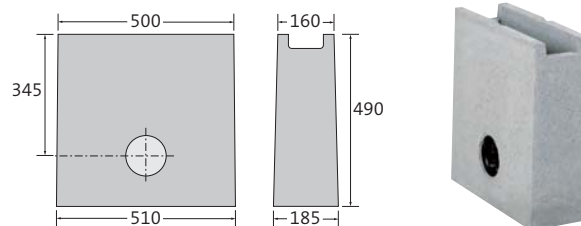


Description	Length	Width	Construction height at groove/tongue	Weight	Load class EN 1433	Article No.
No. 0/0	500 mm	160 mm	165/165 mm	19.0 kg	A 15 – E 600	012031
No. 0/0	1000 mm	160 mm	165/165 mm	37.0 kg	A 15 – E 600	012026
No. 5/0	1000 mm	160 mm	190/190 mm	41.0 kg	A 15 – E 600	012027
No. 10/0	1000 mm	160 mm	215/215 mm	44.0 kg	A 15 – E 600	012028

SW = slot width
 Other connection heights on request.
 Exception up to D 400: Not for use across the carriage way of highways or motorways.

Outfall unit NW 100 for access covers | 1-piece

- + 1- or 2-sided channel connection to No. 10/0
- + PP silt bucket
- + PP odour trap
- + Integrated sockets for DN 110 pipe connection



Description	Length at top/ at ground	Width at top/ at ground	Construction height	Weight	Load class EN 1433	Article No.
until No. 10	500 mm	160/185 mm	490 mm	57.0 kg	A 15 – E 600	083335

Lifting device for access covers | Set



Description	Weight	Article No.
Lifting device for all access covers with slot (symmetrical or asymmetrical), Set of 2	0.4 kg	083191

End caps

Description	Width	For construction height	Weight	Article No.
End cap, galvanized, No. 0/0-4	160 mm	155-175 mm	0.3 kg	012090
End cap, galvanized, No. 5-8	160 mm	175-195 mm	0.3 kg	012091
End cap, galvanized, No. 9-10	160 mm	195-215 mm	0.4 kg	012092

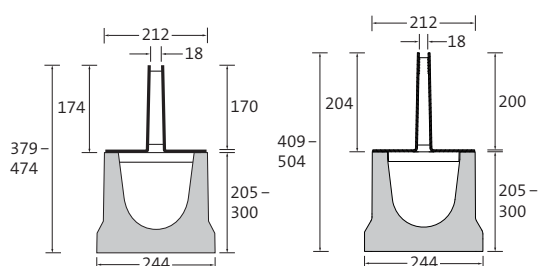
Exception up to D 400: Not for use across the carriage way of highways or motorways.

BIRCOslotted steel covers | f. NW 150 AS

Material thickness 4 mm – hot-dipped galvanized 70 µm

Slotted steel covers | symmetrical | material thickness 4 mm

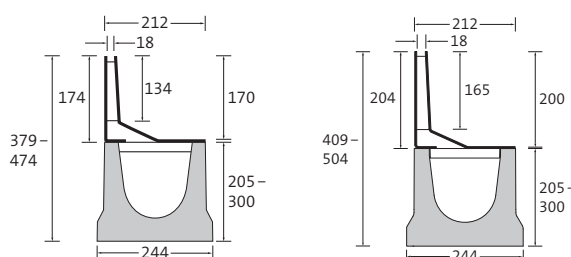
- + Hot-dipped galvanized 70 µm
- + Also available in stainless steel (V2A)
- + For channel elements NW 150 AS
- + Connection height 170/200, total height 174/204



Description	Length	Width	Construction height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
hot-dipped galvanized	500 mm	212 mm	174 mm	8.7 kg	SW 18 mm	180 cm²/m	A 15 – E 600	083560
hot-dipped galvanized	1000 mm	212 mm	174 mm	17.1 kg	SW 18 mm	180 cm²/m	A 15 – E 600	083550
hot-dipped galvanized	500 mm	212 mm	204 mm	9.7 kg	SW 18 mm	180 cm²/m	A 15 – E 600	087560
hot-dipped galvanized	1000 mm	212 mm	204 mm	19.0 kg	SW 18 mm	180 cm²/m	A 15 – E 600	087550

Slotted steel covers | asymmetrical | material thickness 4 mm

- + Hot-dipped galvanized 70 µm
- + Also available in stainless steel (V2A)
- + For channel elements NW 150 AS
- + Connection height 134/165, total height 174/204

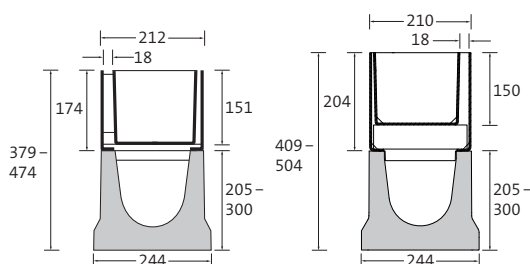


Description	Length	Width	Construction height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
hot-dipped galvanized	500 mm	212 mm	174 mm	8.9 kg	SW 18 mm	180 cm²/m	A 15 – E 600	083561
hot-dipped galvanized	1000 mm	212 mm	174 mm	17.5 kg	SW 18 mm	180 cm²/m	A 15 – E 600	083551
hot-dipped galvanized	500 mm	212 mm	204 mm	9.9 kg	SW 18 mm	180 cm²/m	A 15 – E 600	087561
hot-dipped galvanized	1000 mm	212 mm	204 mm	19.4 kg	SW 18 mm	180 cm²/m	A 15 – E 600	087551

SW = slot width
Other connection heights on request.

Access covers | 2-piece | material thickness 4 mm

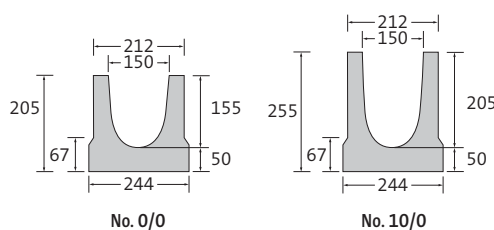
- + Hot-dipped galvanized 70 µm
- + Also available in stainless steel (V2A)
- + For channel elements/outfall units NW 150 AS
- + For total height 174/204
- + With removable insert as maintenance and cleaning opening



Description	Length	Width	Construction height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
symmetrical slot	500 mm	212 mm	174 mm	21.2 kg	SW 18 mm	180 cm²/m	A 15 – E 600	083387
asymmetrical slot	500 mm	212 mm	174 mm	17.6 kg	SW 18 mm	180 cm²/m	A 15 – E 600	083487
symmetrical slot	500 mm	212 mm	204 mm	24.6 kg	SW 18 mm	180 cm²/m	A 15 – E 600	087387
asymmetrical slot	500 mm	212 mm	204 mm	20.3 kg	SW 18 mm	180 cm²/m	A 15 – E 600	087487

Channel elements NW 150 AS for slotted steel covers/access covers | without internal inbuilt fall

- + Channel element with with anchoring system
- + Covered concrete edge by slotted steel cover/access cover
- + Safety sealing joint
- + Channel elements with internal inbuilt fall upon request



Description	Length	Width at top/at ground	Construction height at groove/tongue	Weight	Load class EN 1433	Article No.
No. 0/0	500 mm	212/244 mm	205/205 mm	31.2 kg	A 15 – E 600	083731
No. 0/0	1000 mm	212/244 mm	205/205 mm	59.0 kg	A 15 – E 600	083726
No. 5/0	1000 mm	212/244 mm	230/230 mm	63.0 kg	A 15 – E 600	083727
No. 10/0	1000 mm	212/244 mm	255/255 mm	67.0 kg	A 15 – E 600	083728

SW = slot width

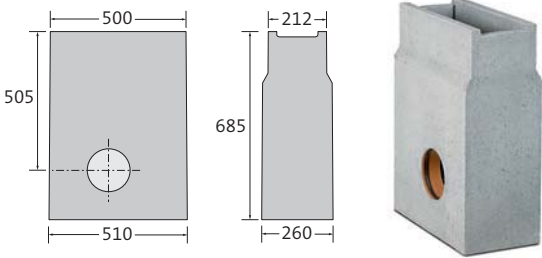
Other connection heights on request.

Exception up to D 400: Not for use across the carriage way of highways or motorways.

BIRCOslotted steel covers for NW 150 AS

Outfall unit NW 150 AS for access covers | 1-piece

- + 1- or 2-sided channel connection to No. 10/0
- + PP silt bucket
- + PP odour trap
- + Integrated sockets for DN 160 pipe connection



Description	Length at top/ground	Width at top/ground	Construction height	Weight	Load class EN 1433	Article No.
until No. 10	500/510 mm	212/260 mm	685 mm	109.2 kg	A 15 – E 600	083736

Lifting device for access covers | Set



Description	Weight	Article No.
Lifting device for all access covers with slot (symmetrical or asymmetrical), Set of 2	0.4 kg	083191

End caps

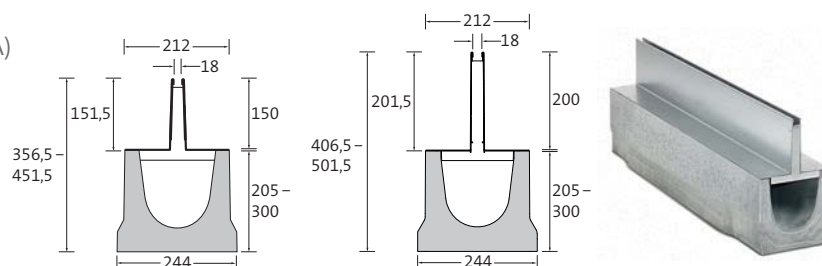
Description	Width	For construction height	Weight	Article No.
End cap, galvanized, No. 0/0-4	212 mm	230-250 mm	0.6 kg	083770
End cap, galvanized, No. 5/0-8	212 mm	250-270 mm	0.7 kg	083771
End cap, galvanized, No. 9-10	212 mm	270-280 mm	0.8 kg	083772

BIRCOslotted steel covers | f. NW 150 AS

Material thickness 1.5 mm

Slotted steel covers | symmetrical | material thickness 1.5 mm

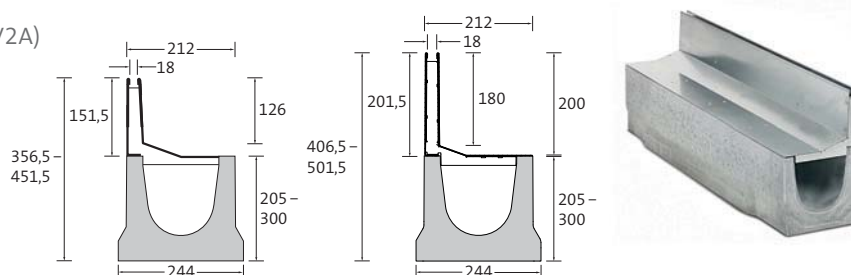
- + Galvanized
- + Also available in stainless steel (V2A)
- + For channel elements NW 150 AS
- + Connection height 150/200, total height 151.5/201.5



Description	Length	Width	Construction height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
galvanized	500 mm	212 mm	151.5 mm	3.4 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	083760
galvanized	1000 mm	212 mm	151.5 mm	6.8 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	083750
galvanized	500 mm	212 mm	201.5 mm	4.1 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	087760
galvanized	1000 mm	212 mm	201.5 mm	8.0 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	087750

Slotted steel covers | asymmetrical | material thickness 1.5 mm

- + Galvanized
- + Also available in stainless steel (V2A)
- + For channel elements NW 150 AS
- + Connection height 126/180, total height 151.5/201.5



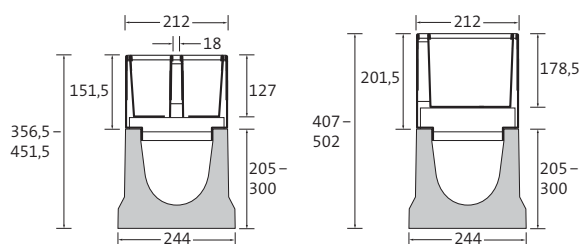
Description	Length	Width	Construction height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
galvanized	500 mm	212 mm	151.5 mm	3.4 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	083761
galvanized	1000 mm	212 mm	151.5 mm	6.8 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	083751
galvanized	500 mm	212 mm	201.5 mm	4.1 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	087761
galvanized	1000 mm	212 mm	201.5 mm	8.1 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	087751

SW = slot width
Other connection heights on request.

BIRCOslotted steel covers for NW 150 AS

Access covers | 2-piece | material thickness 1.5 mm

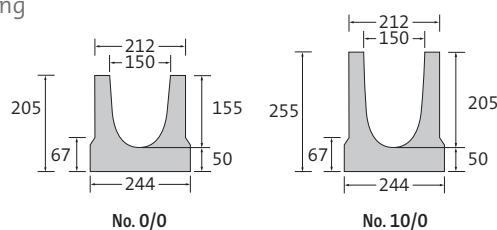
- + Galvanized
- + Also available in stainless steel (V2A)
- + For channel elements/outfall units NW 150 AS
- + For total height 151.5/201.5
- + With removable insert as maintenance and cleaning opening



Description	Length	Width	Construction height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
symmetrical slot	500 mm	212 mm	151.5 mm	8.9 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	083187
asymmetrical slot	500 mm	212 mm	151.5 mm	6.8 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	083188
symmetrical slot	500 mm	212 mm	201.5 mm	10.5 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	087187
asymmetrical slot	500 mm	212 mm	201.5 mm	8.7 kg	SW 18 mm	180 cm ² /m	A 15 – C 250	087188

Channel elements NW 150 AS for slotted steel covers/access covers | without internal inbuilt fall

- + Channel element with with anchoring system
- + Covered concrete edge by slotted steel cover/access cover
- + Safety sealing joint
- + Channel elements with internal inbuilt fall upon request

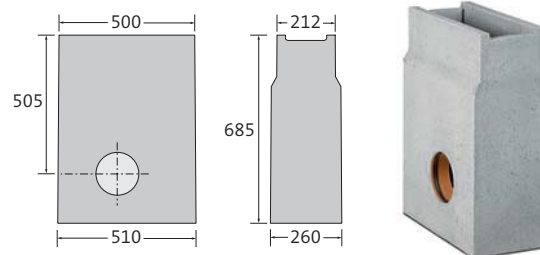


Description	Length	Width at top/ at ground	Construction height at groove/tongue	Weight	Load class EN 1433	Article No.
No. 0/0	500 mm	212/244 mm	205/205 mm	31.2 kg	A 15 – E 600	083731
No. 0/0	1000 mm	212/244 mm	205/205 mm	59.0 kg	A 15 – E 600	083726
No. 5/0	1000 mm	212/244 mm	230/230 mm	63.0 kg	A 15 – E 600	083727
No. 10/0	1000 mm	212/244 mm	255/255 mm	67.0 kg	A 15 – E 600	083728

SW = slot width
Other connection heights on request.
Exception up to D 400: Not for use across the carriage way of highways or motorways.

Outfall unit NW 150 AS for access covers | 1-piece

- + 1- or 2-sided channel connection to No. 10/0
- + PP silt bucket
- + PP odour trap
- + Integrated sockets for DN 160 pipe connection



Description	Length at top/ground	Width at top/ground	Construction height	Weight	Load class EN 1433	Article No.
until No. 10	500/510 mm	212/260 mm	685 mm	109.2 kg	A 15 – E 600	083736

Lifting device for access covers | Set



Description	Weight	Article No.
Lifting device for all access covers with slot (symmetrical or asymmetrical), Set of 2	0.4 kg	083191

End caps

Description	Width	For construction height	Weight	Article No.
End cap, galvanized, No. 0/0-4	210 mm	230-250 mm	0.6 kg	083770
End cap, galvanized, No. 5/0-8	210 mm	250-270 mm	0.7 kg	083771
End cap, galvanized, No. 9-10	210 mm	270-280 mm	0.8 kg	083772

Exception up to D 400: Not for use across the carriage- way of highways or motorways.

BIRCOslotted steel covers

Installation Instructions

A number of details must be observed when installing BIRCOslotted steel covers. You will find a comprehensive description below.

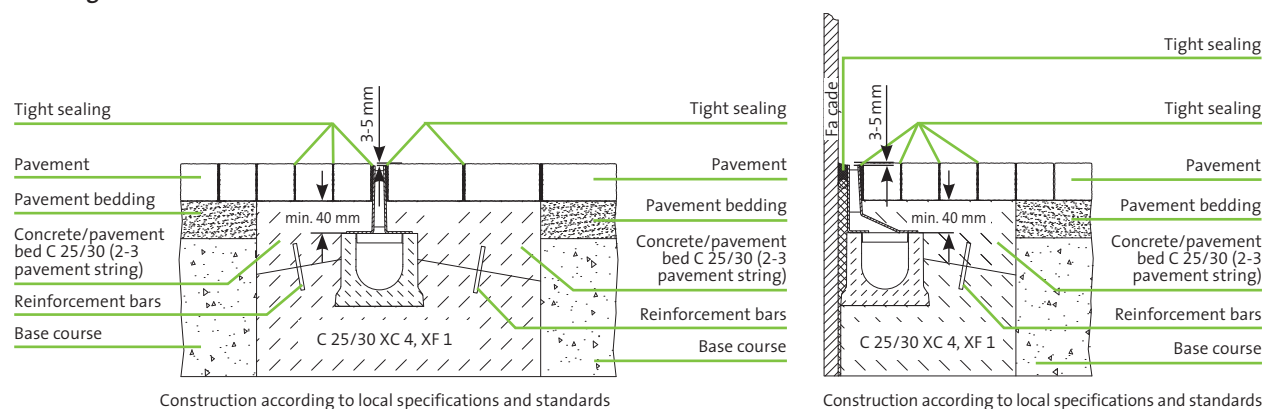
To guarantee smooth operation and compliance with the requirements of EN 1433, the following general valid installation instructions must be observed:

1. Prior to installation, the correct load class in accordance with EN 1433 must be selected.
2. **Thanks to the high level of stability, laying the BIRCO channels is conducted on an earth-moist C 25/30 strip of foundation concrete at least 15 cm high which must be tapered in a conical shape on both sides.** Complete encasing or reinforcement on the sides is not generally required (NW 100 starting from load class D 400 is an exception). Begin laying the channel line following the outfall unit with the highest channel at the drain and form the channel line with the next-smallest number. The structural dimensions of the attachment must be considered when establishing the height level of the channel. **We recommend inserting the slot attachment into the channel directly after the concrete units have been laid in order to protect them from soiling or to equalise the tolerances in the upper piece of the slot attachment**
3. All adjoining pavement surfaces must run **permanently at a level of some 3 to 5 mm higher than the upper edge of the slot channel attachment.** In order to achieve this, we recommend laying the first two to three rows of pavement surfacing in the mortar bed. Because there is no concrete casing, the surface pavement can run right up to the channel without any problems. For slab or paving connections, a permanent sealing gap of about 10 mm must be maintained between the channel and the covering. The joints between the first two to three series of slab or paving connection must be permanently sealed. It must be ensured that no horizontal forces act on the paving laid in the mortar bed due to displacement or expansion of the paving covering.
4. For installation in concrete surfaces or reinforced concrete constructions, running joints must be provided on both sides to compensate horizontal forces that emerge. These joints should be installed at a distance of 1 m to 2 m parallel to the channel. When compacting the adjacent surfaces, it must be ensured that mechanical damage to the channel elements is excluded. Expansion joints running diagonally to the channel line must be arranged every 8 - 12 meters in the adjacent concrete surfaces (in-situ concrete), so that they run through a channel joint. All joints have to be planned from an engineering perspective and executed professionally. The expansion joints (e.g. PE foam boards) must run across the entire channel cross-section through the foundation and the lateral concrete casing.
5. Proceed analogously when installing the outfall unit.
6. Furthermore, when using slotted steel covers it must be ensured that the joints to the adjacent building components are executed in a permanently elastic fashion.
7. BIRCO drainage units are fitted with a safety sealing joint on the channel end. In accordance with EN 1433, once laying has been completed this safety sealing joint can be further treated with a plastic modified mortar or a permanently elastic sealing material (for example SF-Connect, see also page 123).
8. Local particularities can require special installation methods that have to be examined and taken into account by the planner(s).

Installation examples BIRCOslotted steel covers – material thickness 4 mm

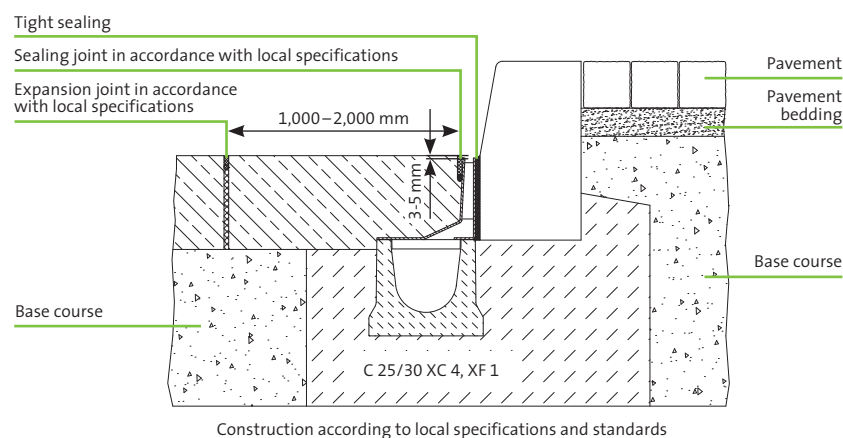
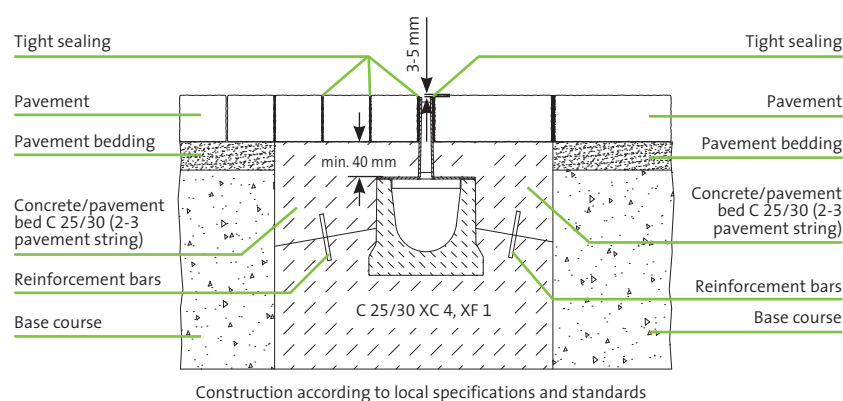
For NW 100, material thickness 4 mm, load class A 15 to E 600

Drawing No. 21246



For NW 150 AS, material thickness 4 mm, load class A 15 to E 600

Drawing No. 21246



Installation surrounding can be reduced/optimized depending on traffic frequency and types of vehicles.

Notice

- When laying paving stones or plates, it must be ensured that, depending on their dimensions, they are lying completely on the entire concrete bed.

The planning of expansion joints must be conducted from on the basis of engineering considerations. When laying the channel line in a full concrete casing, expansion joints at right angles to the channel line must be installed every 8-12 meters. Constructed using non-settling frost-free sub-bases.

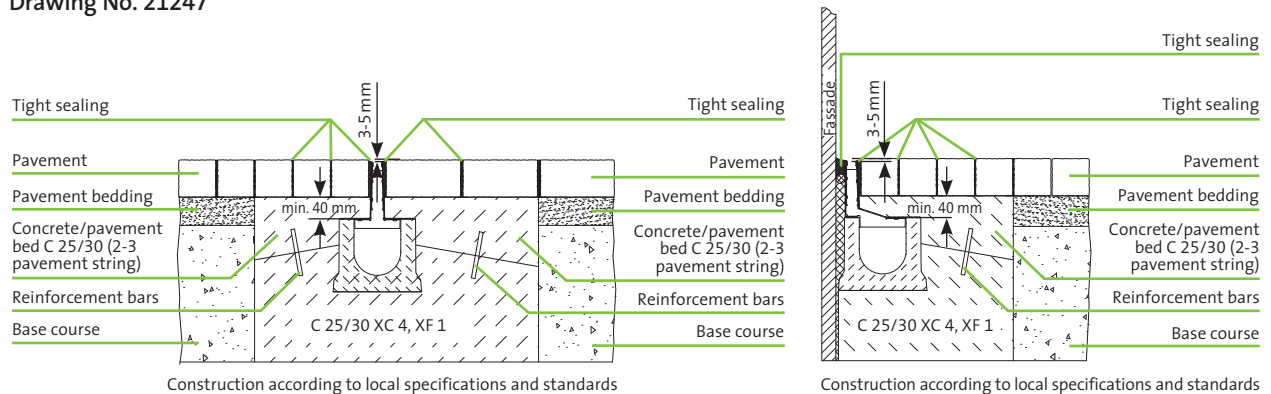
Installation examples BIRCOslotted steel covers – material thickness 1,5 mm

Installation instructions for traffic areas with light traffic.

Lorry parking lots | Curb areas

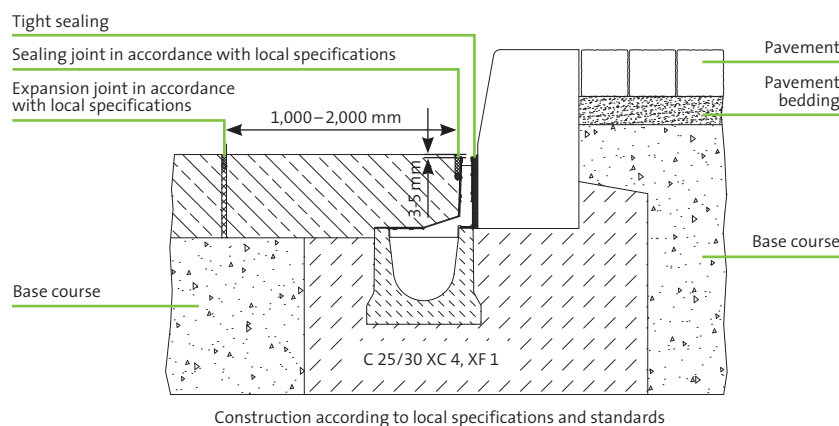
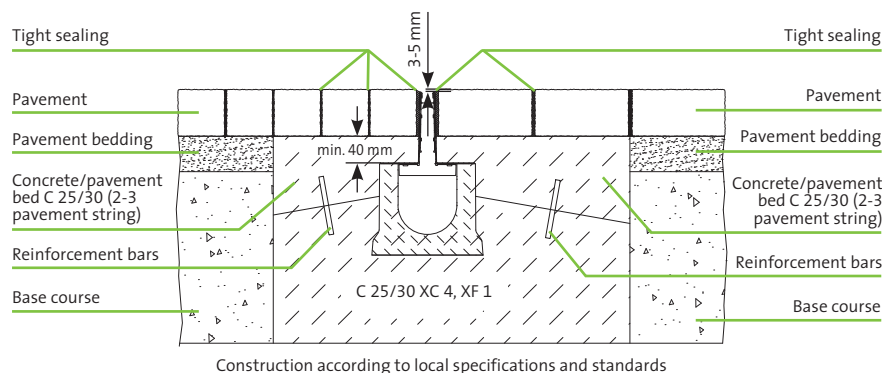
For NW 100, material thickness 1.5 mm, load class A 15 to C 250

Drawing No. 21247



For NW 150 AS, material thickness 1.5 mm, load class A 15 to C 250

Drawing No. 21247



Installation surrounding can be reduced/optimized depending on traffic frequency and types of vehicles.

! Notice

- + When laying paving stones or plates, it must be ensured that, depending on their dimensions, they are lying completely on the entire concrete bed.

The planning of expansion joints must be conducted from on the basis of engineering considerations. When laying the channel line in a full concrete casing, expansion joints at right angles to the channel line must be installed every 8-12 meters. Constructed using non-settling frost-free sub-bases.

BIRCOslotted steel covers – Drainage examples

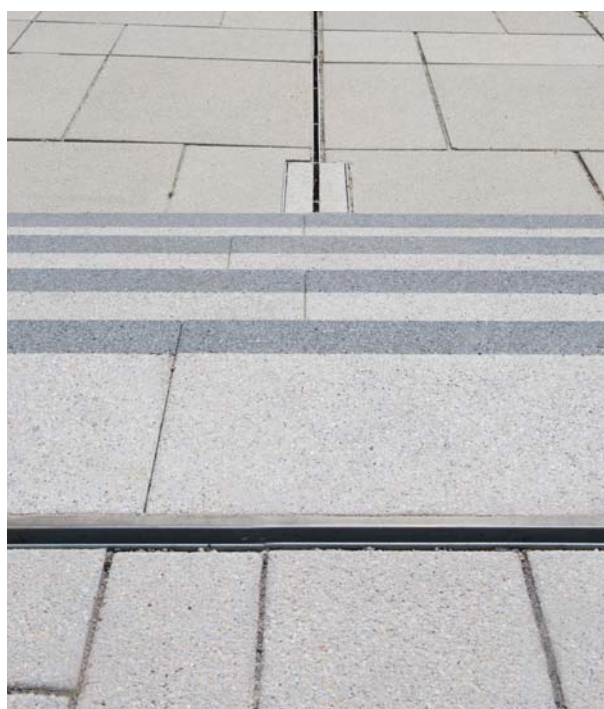
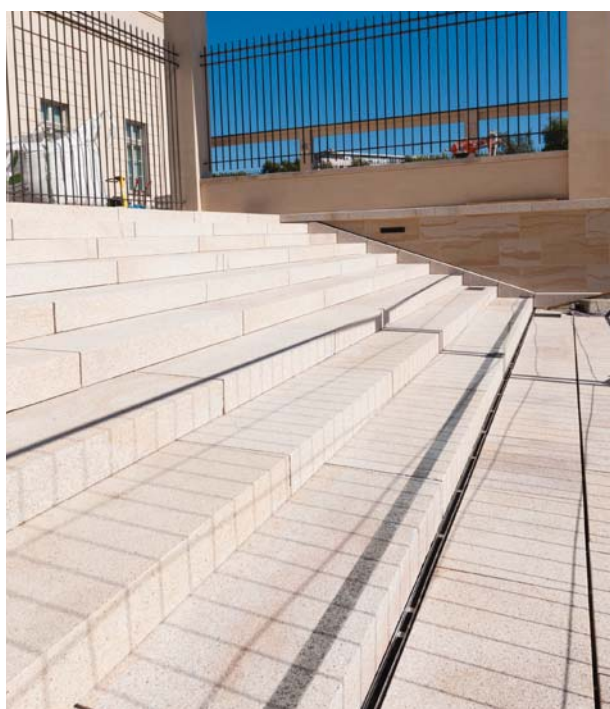
Slotted covers as safety concept

Drainage of staircases

Outdoor staircases should be provided with drainage systems to assure permanent traffic safety.

In the present example, the drainage was realized through a concrete channel with asymmetrical slot cover at the

foot of a staircase. Thus, the accumulating water can be directly induced in the underlying drainage channel and purposefully discharged. This „invisible“ drainage solution fits perfectly into any drainage concept.



Drainage of the flooring edge

Thanks to the one-sided design of the asymmetrical slot cover, the higher part can be used as a visible stop edge. The metallic edge of the slot cover marks the threshold due to its different appearance and thus designates a possible

tripping hazard. Its height is of approx. 35 mm. At the same time the slot cover serves for the drainage of the stairs or accumulating surface water.

BIRCOtop Series F |

Optimum building façade drainage

BIRCOtop protects building façades and adjoining building extensions. It is ideal for draining rainwater and subsequently for protection against waterlogging. BIRCOtop additionally represents an elegant, attractive transition point from “outside” to “inside”. This creates more design lee-way for planners and reduces accident risks for residents.

+ Walkable



For the drainage of building façades and adjoining building extensions without the formation of tripping points.

BIRCOtop Series F | Areas of application

- + Building façades
- + Terrace areas
- + Roof gardens and flat roofs
- + New construction and renovation
- + Barrier-free living

BIRCOtop Series F | Facts

- + Box channels with a variety of construction widths and heights
- + Construction height until 3.00 meters
- + Series F: Fixed construction height
- + With and without visible edge
- + With one-sided or two-sided perforation
- + Design: Galvanized steel, stainless steel
- + Load class: Walkable
- + Large selection of covers and accessories
- + BIRCOtop Series F is also available as a radial channel with matching covers



BIRCOtop Series F |

Optimum building façade drainage

With BIRCOtop the surface pavement or covering can be laid up to 20 mm underneath the entrance door. Attractive appearance, ideal drainage and reliable tripping protection.



Fast, safe installation

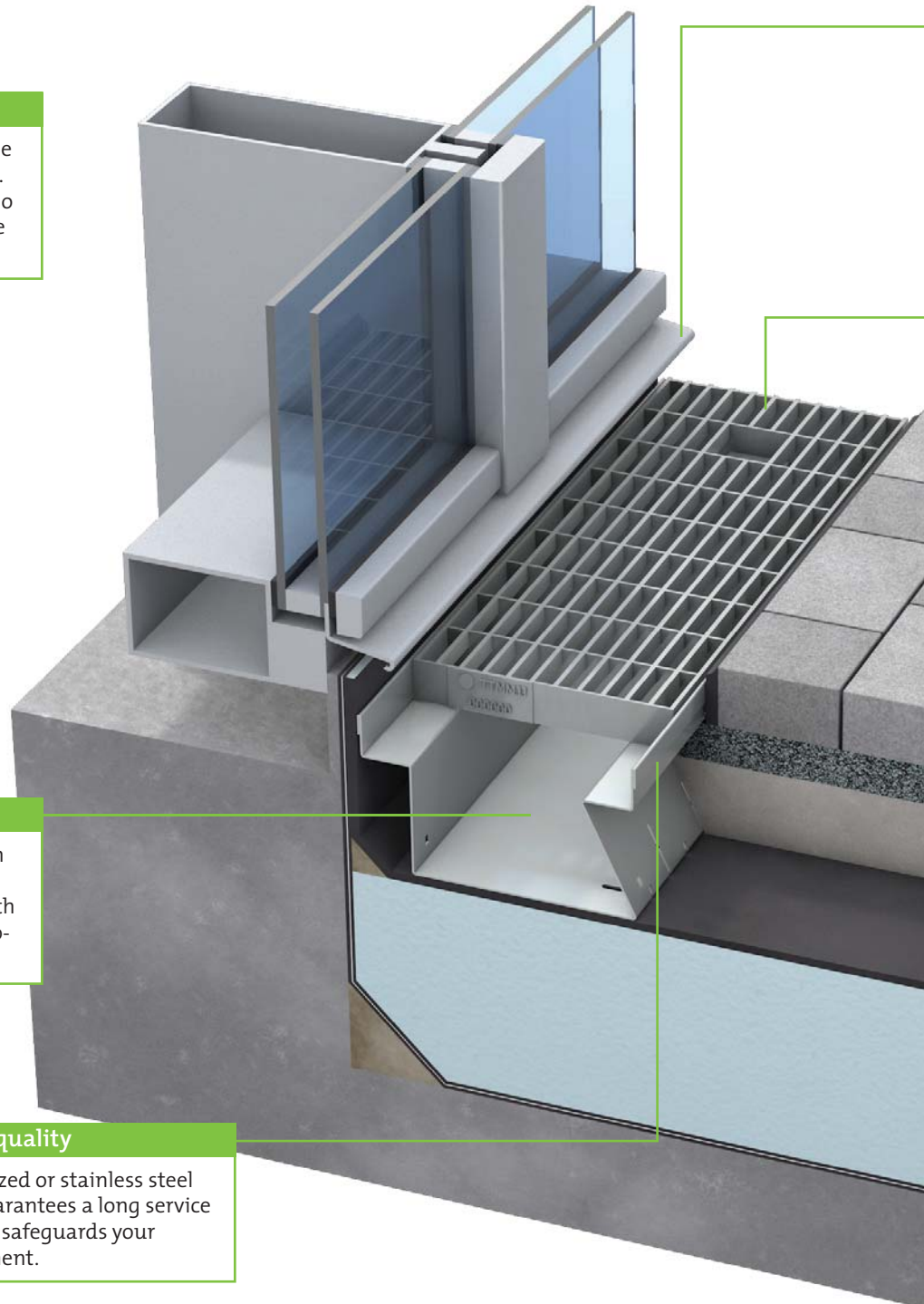
- + 3 meter channel units enable fast laying with fewer joints.
- + Ready-to-use components, no complicated assembly at the building site.

Efficient drainage

- + High drainage volumes even during heavy rainfall.
- + Targeted water drainage with and without perforation protects the building structure.

Material quality

- + Galvanized or stainless steel V2A guarantees a long service life and safeguards your investment.



This picture is exemplary. For installation, please observe our installation instructions or installation examples.

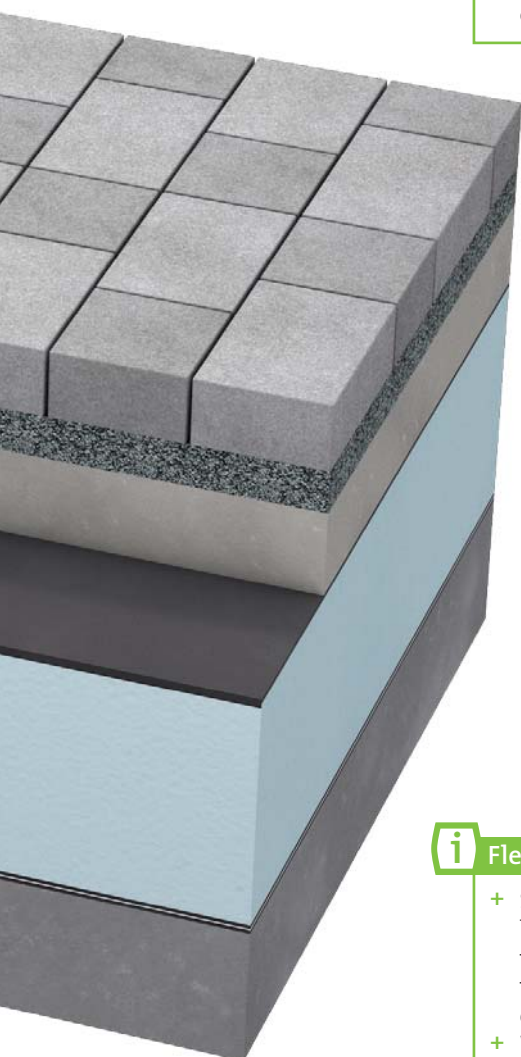
We were able to actively support customers here:

Barrier-free living

- + The height of the transition line from living space to the outdoor area can be reduced to be handicapped accessible.

Attractive design

- + Large selection of covers and accessories offer a wide range of application possibilities.



Flexible application

- + Series F: Fixed construction height, four different widths for one height provide leeway for implementing a variety of drainage concepts.
- + With and without visible edge.



Bank, Bad Aibling



Convention house, Baden-Baden



London Bridge Station,
Great Britain

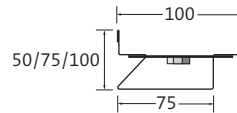


BIRCOtop | Series F 100

Optimum building façade drainage in fixed construction height

Channel elements | without visible edge | perforated on one side

- + Galvanized
- + Also available in stainless steel (V2A)
- + Bolt connection bar
- + Also available without perforation
- + Also available with two-sided perforation
- + Special heights on demand



Description	Length	Width	Construction height	Weight	Load class	Article No.
Construction height 1, galvanized	500 mm	100 mm	50 mm	1.0 kg	walkable	074011
Construction height 1, galvanized	1000 mm	100 mm	50 mm	2.0 kg	walkable	074012
Construction height 1, galvanized	3000 mm	100 mm	50 mm	5.8 kg	walkable	074014
Construction height 2, galvanized	500 mm	100 mm	75 mm	1.2 kg	walkable	074031
Construction height 2, galvanized	1000 mm	100 mm	75 mm	2.3 kg	walkable	074032
Construction height 2, galvanized	3000 mm	100 mm	75 mm	6.9 kg	walkable	074034
Construction height 3, galvanized	500 mm	100 mm	100 mm	1.3 kg	walkable	074071
Construction height 3, galvanized	1000 mm	100 mm	100 mm	2.7 kg	walkable	074072
Construction height 3, galvanized	3000 mm	100 mm	100 mm	8.0 kg	walkable	074074

End caps

- + Also available in stainless steel (V2A)



Description	Width	for construction height	Weight	Load class	Article No.
End cap, galvanized, construction height 1	100 mm	50 mm	0.1 kg	walkable	074040
End cap, galvanized, construction height 2	100 mm	75 mm	0.1 kg	walkable	074041
End cap, galvanized, construction height 3	100 mm	100 mm	0.1 kg	walkable	074042

Pipe socket

- + Up to DN 75, Length 150 mm
- + For BIRCOtop series F
- + Also available in stainless steel (V2A)

Description	Article No.
Pipe socket, separate unit, galvanized	631000

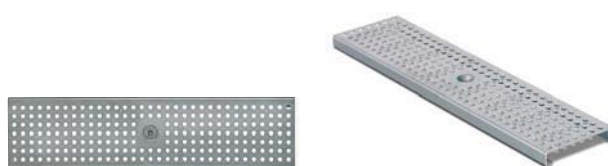
Service

- + Up to DN 75, Length 150 mm
- + For BIRCOtop series F (outlet included)
- + Also available for stainless steel (V2A) channels

Description	Article No.
Allowance for factory-provided riveting of pipe sockets, galvanized steel	631001
Allowance for factory provided welding of pipe sockets, galvanized steel	631002

Perforated gratings | circular hole | galvanized steel

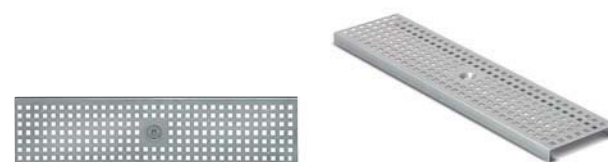
- + Also available in stainless steel (V2A)
- + Inlet opening 8 mm
- + 2-point per meter M10/A2 inbus countersunk head bolt connection



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	92 mm	20 mm	1.0 kg	ø 8 mm	156 cm ² /m	walkable	064550
galvanized	1000 mm	92 mm	20 mm	2.0 kg	ø 8 mm	156 cm ² /m	walkable	064551

Perforated gratings | square hole | galvanized steel

- + Also available in stainless steel (V2A)
- + Inlet opening 8 mm
- + 2-point per meter M10/A2 inbus countersunk head bolt connection



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	92 mm	20 mm	1.0 kg	8/8 mm	200 cm ² /m	walkable	064552
galvanized	1000 mm	92 mm	20 mm	2.0 kg	8/8 mm	200 cm ² /m	walkable	064553

Slotted gratings | galvanized steel

- + Also available in stainless steel (V2A)
- + 2-point per meter M10/A2 inbus countersunk head bolt connection



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	92 mm	20 mm	1.0 kg	SW 68/8 mm	161 cm ² /m	walkable	064556
galvanized	1000 mm	92 mm	20 mm	2.0 kg	SW 68/8 mm	161 cm ² /m	walkable	064557

SW = slot width

Longitudinal bar grating | galvanized steel

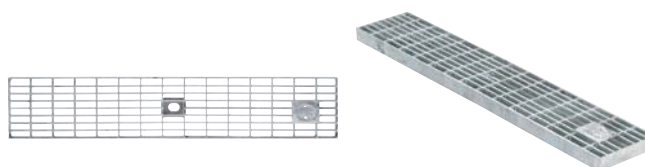
- + Also available in stainless steel (V2A)
- + 2-point per meter M6/A2 inbus countersunk head bolt connection



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	92 mm	20 mm	1.0 kg	SW 215/15 mm	691 cm ² /m	walkable	064576
galvanized	1000 mm	92 mm	20 mm	1.9 kg	SW 230/15 mm	694 cm ² /m	walkable	064577

Mesh gratings | galvanized steel

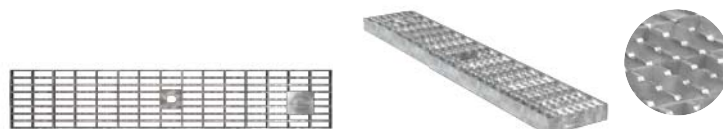
- + Also available in stainless steel (V2A)
- + 2-point per meter M10/A2 bolt connection
- + Anti-slip classification R10/V10



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	92 mm	20 mm	1.2 kg	MW 30/10 mm	688 cm ² /m	walkable	064580
galvanized	1000 mm	92 mm	20 mm	2.4 kg	MW 30/10 mm	688 cm ² /m	walkable	064581

Mesh grating with anti-slip classification R11/V10 | galvanized steel

- + Galvanized
- + 2-point per meter M10/A2 bolt connection
- + Anti-slip classification R11/V10



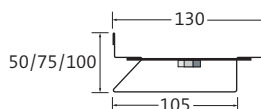
Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	92 mm	20 mm	1.2 kg	MW 30/10 mm	688 cm ² /m	walkable	064580r11
galvanized	1000 mm	92 mm	20 mm	2.4 kg	MW 30/10 mm	688 cm ² /m	walkable	064581r11

BIRCOtop | Series F 130

Optimum building façade drainage in fixed construction height

Channel elements | without visible edge | perforated on one side

- + Galvanized
- + Also available in stainless steel (V2A)
- + Bolt connection bar
- + Also available without perforation
- + Also available with two-sided perforation
- + Special heights on demand



Description	Length	Width	Construction height	Weight	Load class	Article No.
Construction height 1, galvanized	500 mm	130 mm	50 mm	1.1 kg	walkable	074111
Construction height 1, galvanized	1000 mm	130 mm	50 mm	2.2 kg	walkable	074112
Construction height 1, galvanized	3000 mm	130 mm	50 mm	6.6 kg	walkable	074114
Construction height 2, galvanized	500 mm	130 mm	75 mm	1.3 kg	walkable	074131
Construction height 2, galvanized	1000 mm	130 mm	75 mm	2.6 kg	walkable	074132
Construction height 2, galvanized	3000 mm	130 mm	75 mm	7.6 kg	walkable	074134
Construction height 3, galvanized	500 mm	130 mm	100 mm	1.5 kg	walkable	074171
Construction height 3, galvanized	1000 mm	130 mm	100 mm	2.9 kg	walkable	074172
Construction height 3, galvanized	3000 mm	130 mm	100 mm	8.8 kg	walkable	074174

End caps

- + Also available in stainless steel (V2A)



Description	Width	for construction height	Weight	Load class	Article No.
End cap, galvanized, construction height 1	130 mm	50 mm	0.1 kg	walkable	074140
End cap, galvanized, construction height 2	130 mm	75 mm	0.1 kg	walkable	074141
End cap, galvanized, construction height 3	130 mm	100 mm	0.1 kg	walkable	074142

Pipe socket

- + Up to DN 110, Length 150 mm
- + For BIRCOtop series F
- + Also available in stainless steel (V2A)

Description	Article No.
Pipe socket, single unit, galvanized	631000

BIRCOtop Series F 130

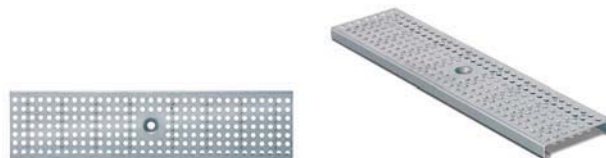
Service

- + Up to DN 110, Length 150 mm
- + For BIRCOtop series F (outlet included)
- + Also available for stainless steel (V2A) channels

Description	Article No.
Allowance for factory provided riveting of pipe sockets , galvanized steel	631001
Allowance for factory provided welding of pipe sockets , galvanized steel	631002

Perforated gratings | circular hole | galvanized steel

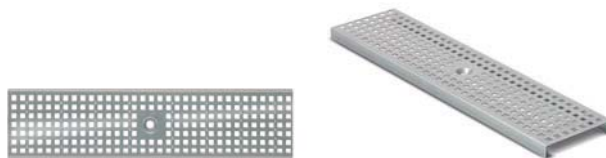
- + Also available in stainless steel (V2A)
- + Inlet opening 8 mm
- + 2-point per meter M10/A2 bolt connection



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	122 mm	20 mm	1.2 kg	ø 8 mm	223 cm ² /m	walkable	064650
galvanized	1000 mm	122 mm	20 mm	2.4 kg	ø 8 mm	223 cm ² /m	walkable	064651

Perforated gratings | square hole | galvanized steel

- + Also available in stainless steel (V2A)
- + Inlet opening 8 mm
- + 2-point per meter M10/A2 bolt connection



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	122 mm	20 mm	1.2 kg	8/8 mm	284 cm ² /m	walkable	064652
galvanized	1000 mm	122 mm	20 mm	2.3 kg	8/8 mm	284 cm ² /m	walkable	064653

Slotted gratings | galvanized steel

- + Also available in stainless steel (V2A)
- + 2-point per meter M10/A2 bolt connection

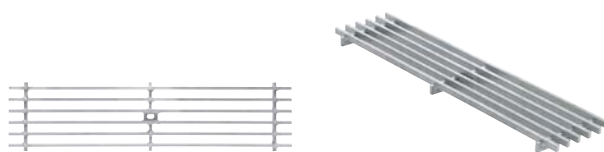


Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	122 mm	20 mm	1.2 kg	SW 98/8 mm	233 cm ² /m	walkable	064656
galvanized	1000 mm	122 mm	20 mm	2.4 kg	SW 98/8 mm	233 cm ² /m	walkable	064657

SW = slot width

Longitudinal bar grating | galvanized steel

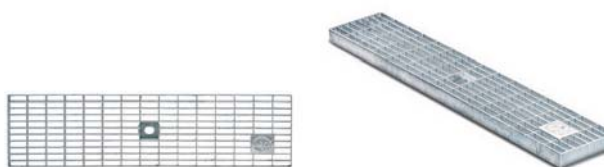
- + Also available in stainless steel (V2A)
- + 2-point per meter M6/A2 inbus countersunk head bolt connection



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	122 mm	20 mm	1.4 kg	SW 215/15 mm	885 cm ² /m	walkable	064676
galvanized	1000 mm	122 mm	20 mm	2.8 kg	SW 230/15 mm	889 cm ² /m	walkable	064677

Mesh gratings | galvanized steel

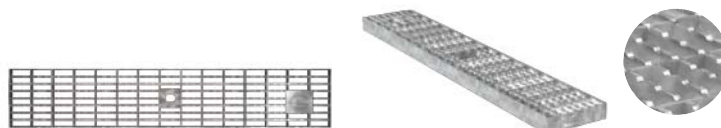
- + Also available in stainless steel (V2A)
- + 2-point per meter M10/A2 bolt connection
- + Anti-slip classification R10/V10



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	122 mm	20 mm	1.5 kg	MW 30/10 mm	934 cm ² /m	walkable	064680
galvanized	1000 mm	122 mm	20 mm	2.9 kg	MW 30/10 mm	934 cm ² /m	walkable	064681

Mesh grating with anti-slip classification R11/V10 | Galvanized steel

- + Galvanized
- + 2-point per meter M10/A2 bolt connection
- + Anti-slip classification R11/V10



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	122 mm	20 mm	1.5 kg	MW 30/10 mm	934 cm ² /m	walkable	064680r11
galvanized	1000 mm	122 mm	20 mm	2.9 kg	MW 30/10 mm	934 cm ² /m	walkable	064681r11

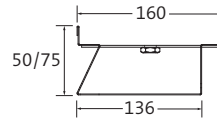
SW = slot width, MW = mesh width

BIRCOTop | Series F 160

Optimum building façade drainage in fixed construction height

Channel elements | without visible edge | perforated on one side

- + Galvanized
- + Also available in stainless steel (V2A)
- + Bolt connection bar
- + Also available with two-sided perforation
- + Also available without perforation
- + Special heights on demand



Description	Length	Width	Construction height	Weight	Load class	Article No.
Construction height 1, galvanized	500 mm	160 mm	50 mm	1.3 kg	walkable	074321
Construction height 1, galvanized	1000 mm	160 mm	50 mm	2.5 kg	walkable	074322
Construction height 1, galvanized	3000 mm	160 mm	50 mm	7.4 kg	walkable	074324
Construction height 2, galvanized	500 mm	160 mm	75 mm	1.4 kg	walkable	074331
Construction height 2, galvanized	1000 mm	160 mm	75 mm	2.8 kg	walkable	074332
Construction height 2, galvanized	3000 mm	160 mm	75 mm	8.5 kg	walkable	074334

End caps

- + Also available in stainless steel (V2A)



Description	Width	for construction height	Weight	Load class	Article No.
End cap, galvanized, construction height 1	134 mm	50 mm	0.1 kg	walkable	074341
End cap, galvanized, construction height 2	134 mm	75 mm	0.1 kg	walkable	074342

Pipe socket

- + Up to DN 110, Length 150 mm
- + For BIRCOTop series F
- + Also available in stainless steel (V2A)

Description	Article No.
Pipe socket, separate unit, galvanized	631000

Service

- + Up to DN 110, Length 150 mm
- + For BIRCOtop series F (outlet included)
- + Also available for stainless steel (V2A) channels

Description	Article No.
Allowance for factory provided riveting of pipe sockets , galvanized steel	631001
Allowance for factory provided welding of pipe sockets , galvanized steel	631002

Mesh gratings with flat edge | galvanized steel

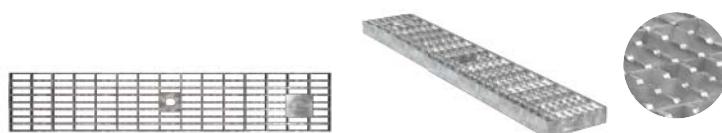
- + Also available in stainless steel (V2A)
- + 2-point per meter M12/A2 bolt connection
- + Anti-slip classification R10/V10



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	153 mm	20 mm	2.0 kg	MW 30/10 mm	1051 cm ² /m	walkable	074361fr
galvanized	1000 mm	153 mm	20 mm	4.0 kg	MW 30/10 mm	1051 cm ² /m	walkable	074351fr

Mesh grating with anti-slip classification R11/V10 | galvanized steel

- + 2-point per meter M10/A2 bolt connection
- + Anti-slip classification R11/V10



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	153 mm	20 mm	2.0 kg	MW 30/10 mm	1051 cm ² /m	walkable	074361fr11
galvanized	1000 mm	153 mm	20 mm	4.0 kg	MW 30/10 mm	1051 cm ² /m	walkable	074351fr11

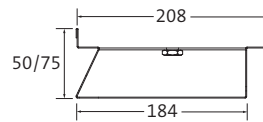
MW = mesh width

BIRCOtop | Series F 210

Optimum building façade drainage in fixed construction height

Channel elements | without visible edge | perforated on one side

- + Galvanized
- + Also available in stainless steel (V2A)
- + Bolt connection bar
- + Also available with two-sided perforation
- + Also available without perforation
- + Special heights on demand



Description	Length	Width	Construction height	Weight	Load class	Article No.
Construction height 1, galvanized	500 mm	210 mm	50 mm	1.4 kg	walkable	074421
Construction height 1, galvanized	1000 mm	210 mm	50 mm	2.8 kg	walkable	074422
Construction height 1, galvanized	3000 mm	210 mm	50 mm	8.5 kg	walkable	074424
Construction height 2, galvanized	500 mm	210 mm	75 mm	1.6 kg	walkable	074431
Construction height 2, galvanized	1000 mm	210 mm	75 mm	3.2 kg	walkable	074432
Construction height 2, galvanized	3000 mm	210 mm	75 mm	9.6 kg	walkable	074434

End caps

- + Also available in stainless steel (V2A)



Description	Width	for construction height	Weight	Load class	Article No.
End cap, galvanized, construction height 1	183 mm	50 mm	0.1 kg	walkable	074441
End cap, galvanized, construction height 2	183 mm	75 mm	0.1 kg	walkable	074442

Pipe socket

- + Up to DN 110, Length 150 mm
- + For BIRCOtop series F
- + Also available in stainless steel (V2A)

Description	Article No.
Pipe socket, single unit, galvanized	631000

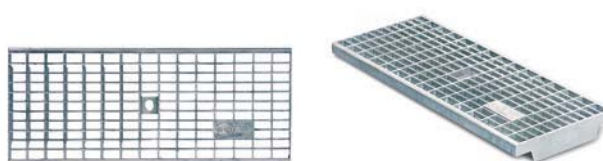
Service

- + Up to DN 110, Length 150 mm
- + For BIRCOtop series F (outlet included)
- + Also available for stainless steel (V2A) channels

Description	Article No.
Allowance for factory provided riveting of pipe sockets , galvanized steel	631001
Allowance for factory provided welding of pipe sockets , galvanized steel	631002

Mesh gratings | galvanized steel

- + Also available in stainless steel (V2A)
- + 2-point per meter M12/A2 bolt connection
- + Anti-slip classification R10/V10



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	200 mm	20 mm	2.3 kg	MW 30/10 mm	1484 cm ² /m	walkable	074461
galvanized	1000 mm	200 mm	20 mm	4.4 kg	MW 30/10 mm	1484 cm ² /m	walkable	074451

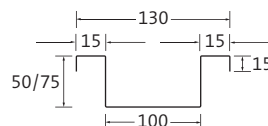
MW = mesh width

BIRCOtop | Series F 130

Optimum building façade drainage in fixed construction height

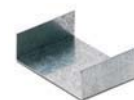
Channel elements | with visible edge | perforated on two sides

- + Galvanized
- + Without bolt connection
- + Special heights on demand
- + Also available with one-sided or perforation



Description	Length	Width	Construction height	Weight	Load class	Article No.
Construction height 1, galvanized	500 mm	130 mm	50 mm	0.9 kg	walkable	074121
Construction height 1, galvanized	1000 mm	130 mm	50 mm	1.8 kg	walkable	074122
Construction height 2, galvanized	500 mm	130 mm	75 mm	1.1 kg	walkable	074125
Construction height 2, galvanized	1000 mm	130 mm	75 mm	2.2 kg	walkable	074126

End caps



Description	Width	for construction height	Weight	Load class	Article No.
End cap, galvanized, construction height 1	100 mm	50 mm	0.1 kg	walkable	074241
End cap, galvanized, construction height 2	100 mm	75 mm	0.1 kg	walkable	074242

Pipe socket

- + Up to DN 90, Length 150 mm
- + For BIRCOtop series F
- + Also available in stainless steel (V2A)

Description	Article No.
Pipe socket, separate unit, galvanized	631000

Service

- + Up to DN 110, Length 150 mm
- + For BIRCOtop series F (outlet included)
- + Also available for stainless steel (V2A) channels

Description	Article No.
Allowance for factory provided riveting of pipe sockets , galvanized steel	631001
Allowance for factory provided welding of pipe sockets , galvanized steel	631002

Mesh gratings | clamped grating | galvanized steel



Description	Length	Width	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	130 mm	1.3 kg	MW 30/10 mm	720 cm ² /m	walkable	064160
galvanized	1000 mm	130 mm	2.6 kg	MW 30/10 mm	720 cm ² /m	walkable	064161

Slotted gratings | clamped grating | galvanized steel



Description	Length	Width	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	130 mm	0.9 kg	SW 80/12 mm	334 cm ² /m	walkable	064158
galvanized	1000 mm	130 mm	1.8 kg	SW 80/12 mm	334 cm ² /m	walkable	064159

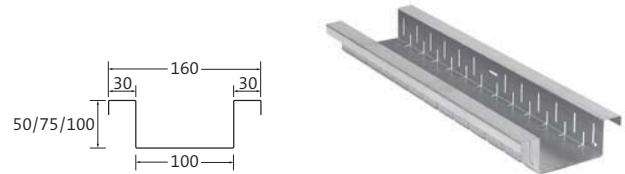
MW = mesh width, SW = slot width

BIRCOtop | Series F 160

Optimum building façade drainage in fixed construction height

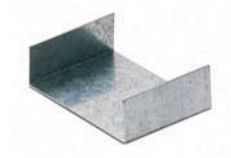
Channel elements | with visible edge | perforated on two sides | galvanized steel

+ With and without bolt connection bar



Description	Length	Width	Construction height	Weight	Load class	Article No.
Construction height 1, without bolt connection	500 mm	160 mm	50 mm	0.9 kg	walkable	074201
Construction height 1, without bolt connection	1000 mm	160 mm	50 mm	1.7 kg	walkable	074202
Construction height 1, without bolt connection	3000 mm	160 mm	50 mm	5.2 kg	walkable	074204
Construction height 2, without bolt connection	500 mm	160 mm	75 mm	1.3 kg	walkable	074261
Construction height 2, without bolt connection	1000 mm	160 mm	75 mm	2.5 kg	walkable	074262
Construction height 2, without bolt connection	3000 mm	160 mm	75 mm	7.6 kg	walkable	074264
Construction height 3, without bolt connection	500 mm	160 mm	100 mm	1.5 kg	walkable	074291
Construction height 3, without bolt connection	1000 mm	160 mm	100 mm	2.9 kg	walkable	074292
Construction height 3, without bolt connection	3000 mm	160 mm	100 mm	8.8 kg	walkable	074294

End caps



Description	Width	for construction height	Weight	Load class	Article No.
Construction height 1, galvanized	160 mm	50 mm	0.1 kg	walkable	074241
Construction height 2, galvanized	160 mm	75 mm	0.1 kg	walkable	074242
Construction height 3, galvanized	160 mm	100 mm	0.2 kg	walkable	074243

Pipe socket

- + Up to DN 90, Length 150 mm
- + For BIRCOtop series F
- + Also available in stainless steel (V2A)

Description	Article No.
Pipe socket, separate unit, galvanized	631000

Service

- + Up to DN 110, Length 150 mm
- + For BIRCOtop series F (outlet included)
- + Also available for stainless steel (V2A) channels

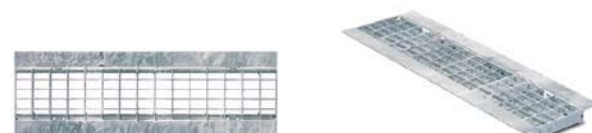
Description	Article No.
Allowance for factory provided riveting of pipe sockets , galvanized steel	631001
Allowance for factory provided welding of pipe sockets , galvanized steel	631002

Slotted gratings | clamped grating | galvanized steel



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	158 mm	20 mm	1.3 kg	SW 80/12 mm	334 cm ² /m	walkable	110666
galvanized	1000 mm	158 mm	20 mm	2.6 kg	SW 80/12 mm	334 cm ² /m	walkable	110656

Mesh gratings | clamped grating | galvanized steel



Description	Length	Width	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	158 mm	1.7 kg	MW 30/16 mm	800 cm ² /m	walkable	110662
galvanized	1000 mm	158 mm	3.3 kg	MW 30/16 mm	800 cm ² /m	walkable	110652
galvanized	500 mm	158 mm	1.7 kg	MW 30/10 mm	720 cm ² /m	walkable	110663
galvanized	1000 mm	158 mm	3.4 kg	MW 30/10 mm	720 cm ² /m	walkable	110653

SW = slot width, MW = mesh width

BIRCOtop Series S | For the discreet line drainage of building façades

BIRCOtop Series S is designed as a slot channel enabling the pavement to be laid virtually flush to the building façade. The cross web-reinforced channel body ensures lasting drainage functionality and the removable rectangular hole cover provides an appealing appearance.

+ Walkable



For the virtually invisible drainage of building façades and building extensions.

BIRCOtop Series S | Areas of application

- + Plaster façades
- + Direct attachment to the building façade
- + Roof gardens and flat roofs
- + Steps and stairways
- + New construction and renovation
- + Design element for separating pavements
- + Revolving door

BIRCOtop Serie S | Facts

- + Slot channel in a closed design or perforated on one side
- + Including removable rectangular hole cover
- + Also available as a symmetrical channel
- + Design: stainless steel (V2A), also available in galvanized steel
- + Construction length: 3.00 m
- + Load class: walkable
- + Accessories: maintenance chambers, end caps, connection shoes
- + Also available as a radial channel



BIRCOtop Series S | For the discreet line drainage of building façades

BIRCOtop Series S provides all planners with an interesting alternative in building façade drainage. Attractive, sturdy and providing top performance.



Fast, safe installation

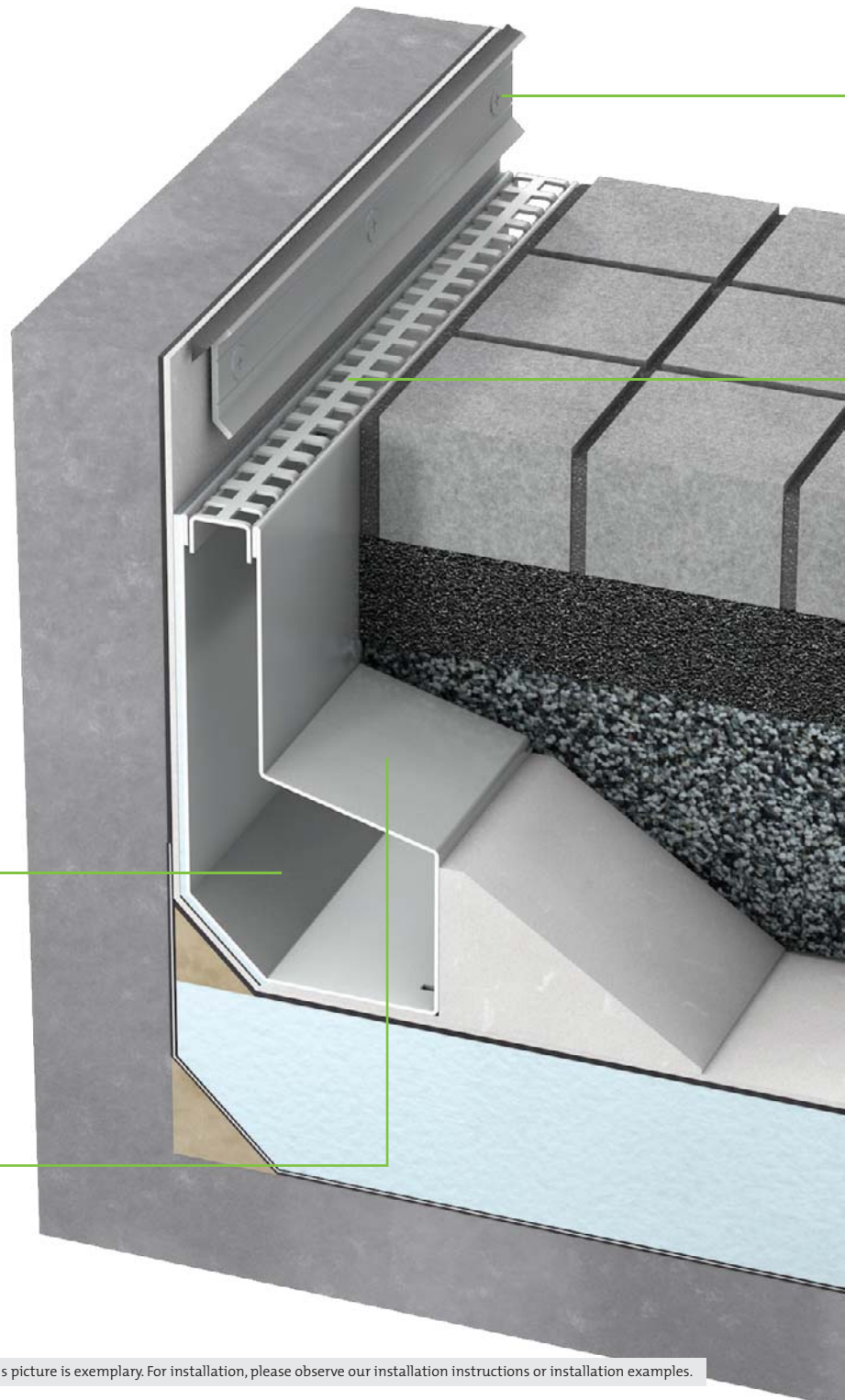
- + 3 meter channel units enable fast laying with fewer joints.
- + Ready-to-use components, no complicated assembly at the building site.

Efficient drainage

- + Cross web reinforcement of the channel body ensure consistently high drainage volumes.
- + Targeted water drainage with and without perforation protects the building structure.

Material quality

- + Stainless steel V2A guarantees a long service life and safeguards your investment.
- + Also available in galvanized steel.



This picture is exemplary. For installation, please observe our installation instructions or installation examples.

We were able to actively support customers here:

Barrier-free living

- + The height of the transition line from living space to the outdoor area can be designed to be barrier-free.

Attractive design

- + Including matching, removable rectangular hole covers.
- + Virtually invisible: Pavement can be laid almost right up to the building façade.



Flexible application

- + Optional slotted or closed design variations provide leeway for implementing a variety of drainage concepts.



Castle Herrenhausen, Hannover



Festival hall, Weissach



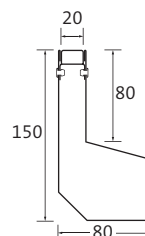
Sporting Monte-Carlo, Monaco

BIRCOtop | Serie S

For the discreet line drainage of building façades

Channel elements | asymmetrical

- + Stainless steel (V2A)
- + Also available in galvanized steel
- + Closed or perforated on one side
- + Including removable rectangular hole cover
- + Other construction heights, construction lengths (up to a maximum of 3000 mm) and slot widths as well as other covers (perforated and slotted covers) available upon request
- + Also available as a symmetrical slot channel
- + Drainage openings, tailored special lengths and mitred cuts are also possible



Description	Length	Width	Construction height	Weight	Inlet opening	Inlet cross section	Load class	Article no.
Channel, closed	500 mm	80 mm	150 mm	2.3 kg	20 mm	106 cm ² /m	walkable	065905
Channel, closed	1000 mm	80 mm	150 mm	4.5 kg	20 mm	106 cm ² /m	walkable	065903
Channel, closed	3000 mm	80 mm	150 mm	13.4 kg	20 mm	106 cm ² /m	walkable	065901
Channel, perforated	500 mm	80 mm	150 mm	2.2 kg	20 mm	106 cm ² /m	walkable	065906
Channel, perforated	1000 mm	80 mm	150 mm	4.4 kg	20 mm	106 cm ² /m	walkable	065904
Channel, perforated	3000 mm	80 mm	150 mm	13.2 kg	20 mm	106 cm ² /m	walkable	065902

End caps and connection shoe

- + Stainless steel (V2A)
- + Also available in galvanized steel
- + Sealing required on the building site



End cap



connection shoe

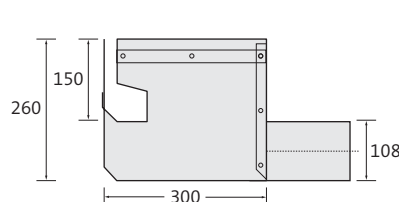
Description	Width	Height	Weight	Load class	Article no.
End cap, right	80 mm	150 mm	0.1 kg	walkable	065940
End cap, left	80 mm	150 mm	0.1 kg	walkable	065941
Connection shoe	80 mm	55 mm	0.1 kg	walkable	065925

Maintenance chambers

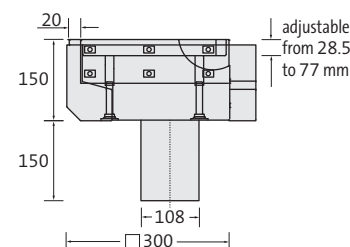
- + Stainless steel (V2A)
- + Also available in galvanized steel
- + Horizontal or vertical outlet DN 110
- + Excavation for cobblestone pavements upon request
- + Various connection possibilities



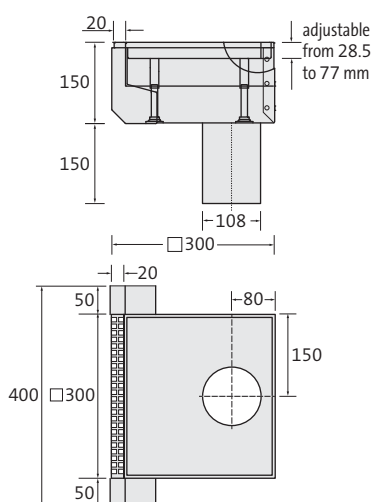
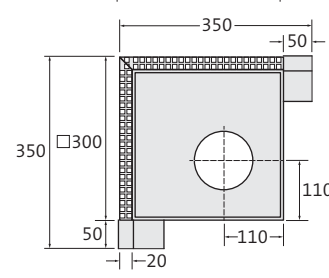
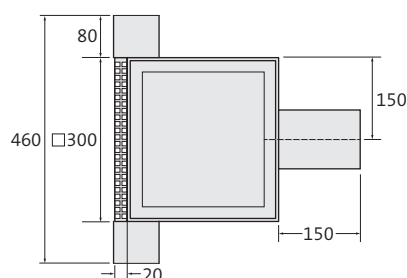
Maintenance chamber
with connection on two sides



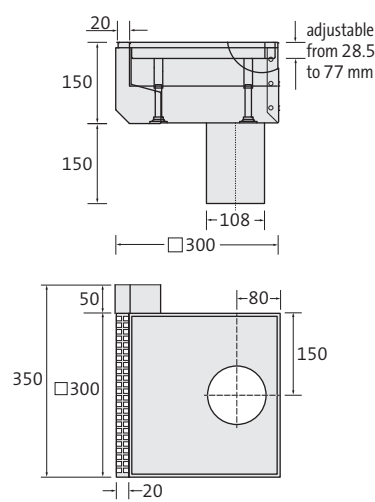
Horizontal outlet DN 100,
connection on two sides



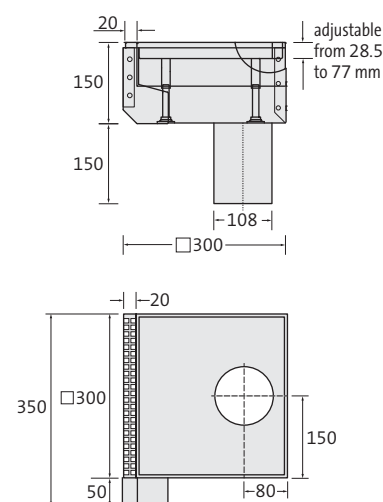
Vertical outlet DN 100,
corner connection



Vertical outlet DN 100,
bilateral connection



Vertical outlet DN 100,
connection right



Vertical outlet DN 100,
connection left

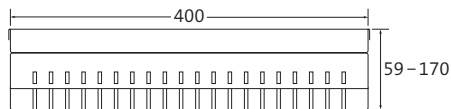
Description	Length	Width	Height	Weight	Load class	Article No.
Rightsided connection, for closed channel	300 mm	300 mm	150 mm	5.9 kg	walkable	065928
Leftsided connection, for closed channel	300 mm	300 mm	150 mm	5.9 kg	walkable	065929
Bilateral connection, for closed channel	300 mm	300 mm	150 mm	6.0 kg	walkable	065931
Corner connection, for closed channel	300 mm	300 mm	150 mm	6.2 kg	walkable	065930
Rightsided connection, for perforated channel	300 mm	300 mm	150 mm	5.9 kg	walkable	065932
Leftsided connection, for perforated channel	300 mm	300 mm	150 mm	5.9 kg	walkable	065933
Bilateral connection, for perforated channel	300 mm	300 mm	150 mm	6.0 kg	walkable	065935
Corner connection, for perforated channel	300 mm	300 mm	150 mm	6.2 kg	walkable	065934

BIRCOtop Accessories 40x40

Top piece with covers for terraces

Top pieces | 40/40 | galvanized

- + Also available in stainless steel
- + Construction height adjustable on-site
- + Revolving perforation
- + Without cover



Similar to illustration

Description	Length	Width	Constr. height min – max	Weight	Load class	Article No.
Constr. height 1, galvanized	400 mm	400 mm	59 – 83 mm	2.6 kg	walkable	064335
Constr. height 2, galvanized	400 mm	400 mm	82 – 117 mm	3.2 kg	walkable	064336
Constr. height 3, galvanized	400 mm	400 mm	115 – 170 mm	4.3 kg	walkable	064337

Perforated gratings | circular hole | for top piece 40/40 | galvanized

- + Also available in stainless steel
- + 1-point per meter M10/A2 inbus countersunk head bolt connection



Similar to illustration

Description	Length	Width	Höhe	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	392 mm	392 mm	20 mm	2.7 kg	ø 8 mm	310 cm²/m	walkable	064421

Slotted grating | for top piece 40/40 | galvanized

- + Also available in stainless steel
- + 1-point per meter M10/A2 inbus countersunk head bolt connection



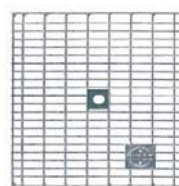
Similar to illustration

Description	Length	Width	Höhe	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	392 mm	392 mm	20 mm	2.9 kg	SW 98/8 mm	247 cm²/m	walkable	064408

SW = Slot width

Mesh grating | for top piece 40/40 | galvanized

- + Also available in stainless steel
- + 1-point per meter M10/A2 inbus countersunk head bolt connection



Similar to illustration

Description	Length	Width	Höhe	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	392 mm	392 mm	20 mm	3.9 kg	MW 30/10 mm	1180 cm ² /m	walkable	064427

Branch canal | galvanized

- + Also available in stainless steel
- + Two sided perforation



Description	Length	Width	Höhe	Weight	Load class	Article No.
galvanized	2000 mm	100 mm	30 mm	4.3 kg	walkable	071080

Also available with one-sided perforation

BIRCOTopline® |

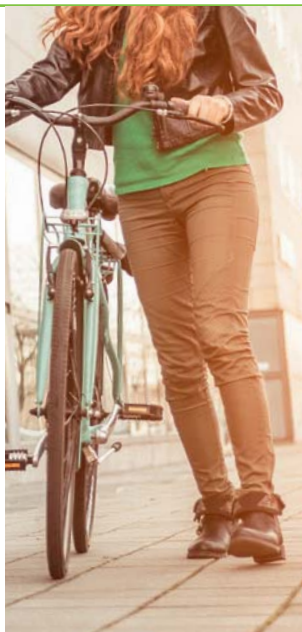
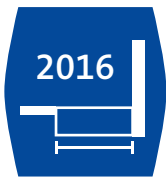
The user-friendly steel channel

Specially developed using requirements from planners, processors and retailers. A high quality steel product in the best processing quality for professional projects and with an attractive price-performance ratio.

+ walkable



+ Flat roof directive



Three construction widths in two construction heights each allow for absolute planning freedom according to the flat roof directive.

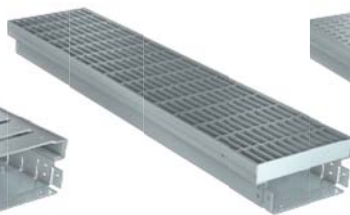
BIRCOLight | Areas of application

- + Facades
- + Terraces
- + Roof gardens / green roofs
- + Areas in gardening and landscaping

BIRCOTopline® | Attractive design



Slotted grating



Mesh grating



Perforated grating
with round holes



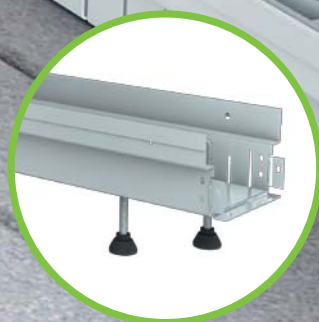
Perforated grating
with square holes



Practical connection system from above.

BIRCOtopline® | Facts

- + Channel system: Width 100, 130 and 160 mm
- + Installation lengths: 0.50, 1.00, 3.00 meters
- + Installation heights: 50, 75 mm
- + One-sided perforation
- + Prefabricated 90° angled elements
- + Design: Galvanized steel
- + Installation from above via the connection system
- + Height-adjustable via the leveling feet
- + Load class: walkable
- + Slip-resistant surface nubs



Optional leveling feet for variable height adjustment.

BIRCOTopline® | absolute freedom

Installation from above, stable locking, complete modular system.
When it comes to flexibility and steel, you have the right system with BIRCOTopline®.



Flexible application

- + Used in new construction, renovation or retrofitting. "Flexible installation height"

Fast and safe installation

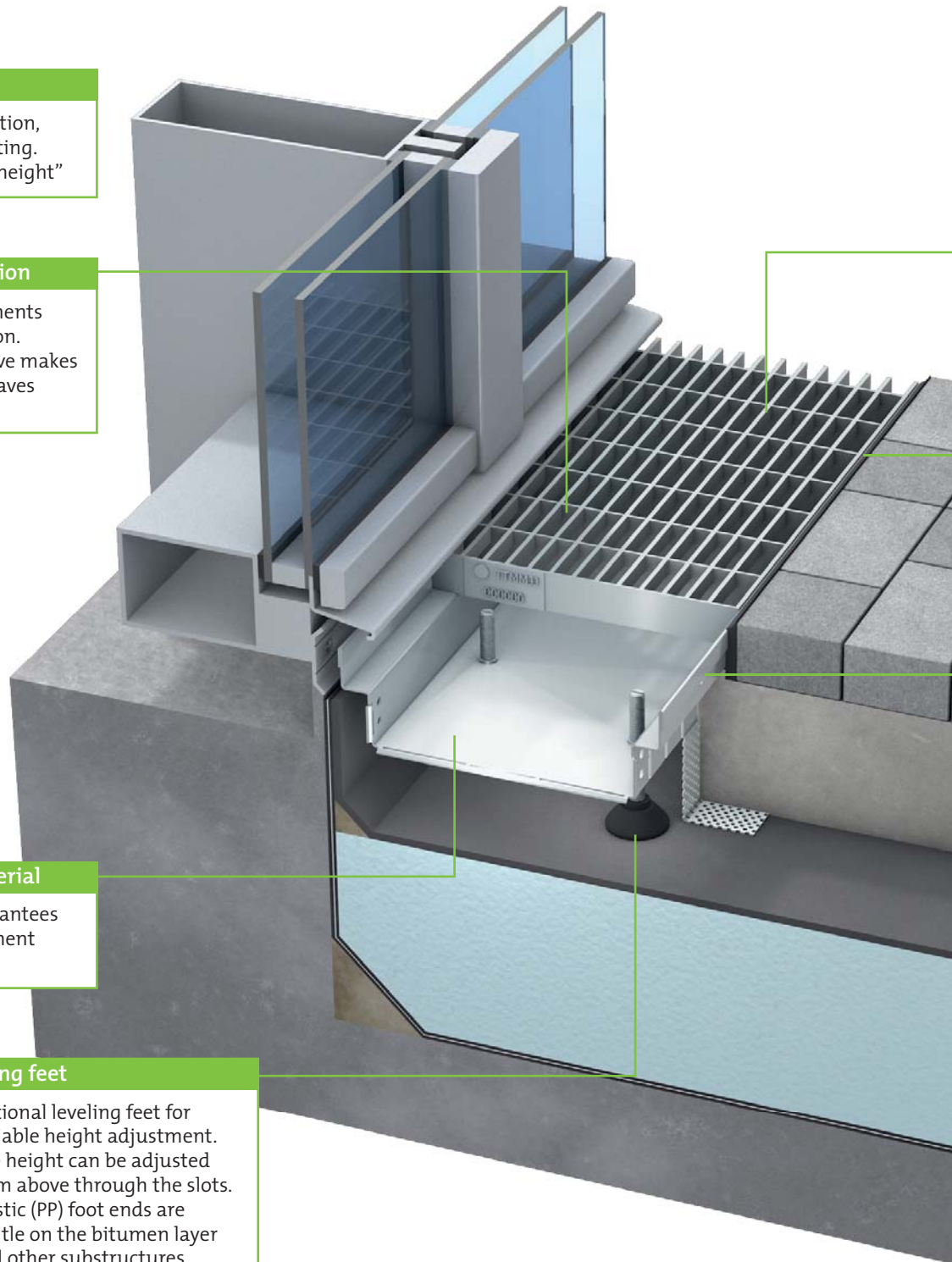
- + 3-meter channel elements allow quick installation.
- + Installation from above makes the work easier and saves time.

High-quality raw material

- + Galvanized steel guarantees longevity and investment protection.

Leveling feet

- + Optional leveling feet for variable height adjustment.
- + The height can be adjusted from above through the slots.
- + Plastic (PP) foot ends are gentle on the bitumen layer and other substructures.



This picture is exemplary. For installation, please observe our installation instructions or installation examples.

We were able
to actively support
customers here :

Attractive design

- + Design visual accents with four different cover versions.

Safety

- + The covers snap securely and precisely into place on the frame at 4-points per meter.

Construction widths and heights



- + A wide range of versions allows for different planning scenarios. With or without leveling feet.
- + Planning according to the flat roof guideline 2016, without roofing with the installation width 160.



Modular system

- + Prefabricated 90° angle elements save miter cuts on the construction site.
- + Connection elements for custom lengths.



Infrastructures,
Campus Tower – HafenCity, Hamburg



Facade drainage,
Campus Tower – HafenCity, Hamburg



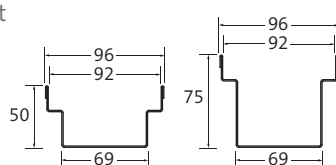
Landscaping,
Campus Tower – HafenCity, Hamburg

BIRCOtopline® | Installation width 100

New system with two construction heights and adjustable feet

Channel elements | without visible edge | perforated on one side

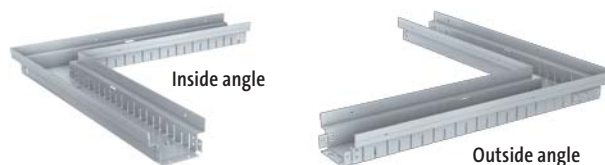
- + Galvanized
- + Screw thread for leveling feet



Description	Length	Width on top/ on base	Construction height	Weight	Load class	Article No.
Construction height 1, galvanized	500 mm	96/69 mm	50 mm	1.0 kg	walkable	066003
Construction height 1, galvanized	1000 mm	96/69 mm	50 mm	2.0 kg	walkable	066002
Construction height 1, galvanized	3000 mm	96/69 mm	50 mm	6.0 kg	walkable	066001
Construction height 2, galvanized	500 mm	96/69 mm	75 mm	1.3 kg	walkable	066012
Construction height 2, galvanized	1000 mm	96/69 mm	75 mm	2.5 kg	walkable	066011
Construction height 2, galvanized	3000 mm	96/69 mm	75 mm	7.0 kg	walkable	066010

Angle elements | without visible edge | perforated on one side

- + Galvanized
- + Screw thread for leveling feet



Description	Length	Width on top/ on base	Construction height	Weight	Load class	Article No.
Construction height 1, Inside angle 500 x 500 mm	500 mm	96/69 mm	50 mm	2.0 kg	walkable	066004
Construction height 1, Outside angle 500 x 500 mm	500 mm	96/69 mm	50 mm	2.0 kg	walkable	066005
Construction height 2, Inside angle 500 x 500 mm	500 mm	96/69 mm	75 mm	2.5 kg	walkable	066013
Construction height 2, Outside angle 500 x 500 mm	500 mm	96/69 mm	75 mm	2.5 kg	walkable	066014

Leveling feet-Set | Set of 4 leveling feet

- + Galvanized
- + For height adaption:
Construction height 1: 65 – 90 mm
Construction height 2: 90 – 115 mm



i Minimum requirement per channel

- + 500 mm: 1 Set = 4 Leveling feet
- + 1000 mm: 1 Set = 4 Leveling feet
- + 3000 mm: 2 Sets = 8 Leveling feet
- + Angle element: 2 Sets = 8 Leveling feet

Description	Weight	Article No.
Leveling feet, Set, 4 pieces	0.5 kg	066095

End caps

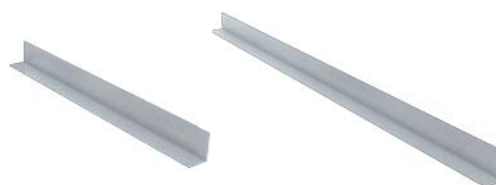
+ Galvanized



Description	Construction height	Weight	Load class	Article No.
End caps, construction height 1	50 mm	0.1 kg	walkable	066041
End caps, construction height 2	75 mm	0.1 kg	walkable	066045

Gravel strip | Angle piece with round holes

+ Galvanized



Description	Construction height	Width/Height	Weight	Load class	Article No.
Gravel strip, for construction height 1 and 2	500 mm	35/45 mm	0.3 kg	walkable	066094
Gravel strip, for construction height 1 and 2	1000 mm	35/45 mm	0.6 kg	walkable	066093

Perforated grating | Round holes | galvanized steel

+ With clamping device

+ Inlet opening 8 mm



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	92 mm	20 mm	1.3 kg	ø 8 mm	166 cm²/m	walkable	066051
galvanized	1000 mm	92 mm	20 mm	2.5 kg	ø 8 mm	166 cm²/m	walkable	066050
for inside and outside angle, galvanized	500 mm	92 mm	20 mm	2.3 kg	ø 8 mm	146 cm²/m	walkable	066052

Perforated grating | Square holes | galvanized steel

- + With clamping device
- + Inlet opening 8 mm



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	92 mm	20 mm	1.3 kg	8/8 mm	211 cm ² /m	walkable	066054
galvanized	1000 mm	92 mm	20 mm	2.5 kg	8/8 mm	211 cm ² /m	walkable	066053
for inside and outside angle, galvanized	500 mm	92 mm	20 mm	2.3 kg	8/8 mm	186 cm ² /m	walkable	066055

Slotted grating | galvanized steel

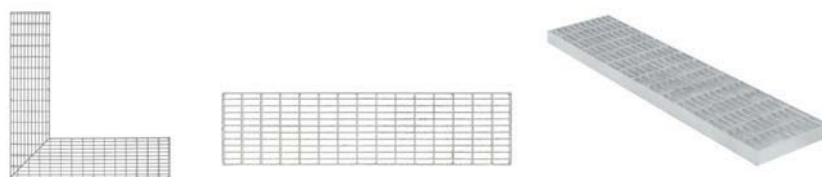
- + With clamping device



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	92 mm	20 mm	1.0 kg	SW 68/8 mm	170 cm ² /m	walkable	066057
galvanized	1000 mm	92 mm	20 mm	2.0 kg	SW 68/8 mm	170 cm ² /m	walkable	066056
for inside and outside angle, galvanized	500 mm	92 mm	20 mm	1.9 kg	SW 68/8 mm	140 cm ² /m	walkable	066058

Mesh grating | galvanized steel

- + With clamping device



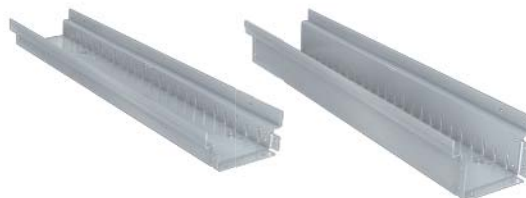
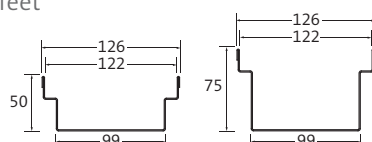
Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	92 mm	20 mm	1.2 kg	MW 30/10 mm	688 cm ² /m	walkable	066081
galvanized	1000 mm	92 mm	20 mm	2.4 kg	MW 30/10 mm	688 cm ² /m	walkable	066080
for inside and outside angle, galvanized	500 mm	92 mm	20 mm	2.3 kg	MW 30/10 mm	616 cm ² /m	walkable	066082

BIRCOTopline® | Installation width 130

New system with two construction heights and adjustable feet

Channel elements | without visible edge | perforated on one side

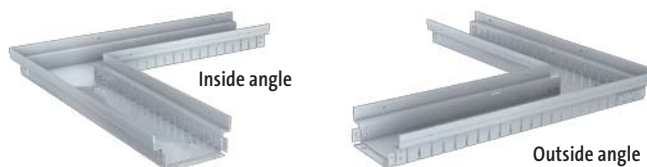
- + Galvanized
- + Screw thread for leveling feet



Description	Length	Width on top/ on base	Construction height	Weight	Load class	Article No.
Construction height 1, galvanized	500 mm	126/99 mm	50 mm	1.3 kg	walkable	066103
Construction height 1, galvanized	1000 mm	126/99 mm	50 mm	2.5 kg	walkable	066102
Construction height 1, galvanized	3000 mm	126/99 mm	50 mm	7.0 kg	walkable	066101
Construction height 2, galvanized	500 mm	126/99 mm	75 mm	1.4 kg	walkable	066112
Construction height 2, galvanized	1000 mm	126/99 mm	75 mm	2.8 kg	walkable	066111
Construction height 2, galvanized	3000 mm	126/99 mm	75 mm	8.0 kg	walkable	066110

Angle element | without visible edge | perforated on one side

- + Galvanized
- + Screw thread for leveling feet



Description	Length	Width on top/ on base	Construction height	Weight	Load class	Article No.
Construction height 1, Inside angle 500 x 500 mm	500 mm	126/99 mm	50 mm	2.5 kg	walkable	066104
Construction height 1, Outside angle 500 x 500 mm	500 mm	126/99 mm	50 mm	2.5 kg	walkable	066105
Construction height 2, Inside angle 500 x 500 mm	500 mm	126/99 mm	75 mm	2.8 kg	walkable	066113
Construction height 2, Outside angle 500 x 500 mm	500 mm	126/99 mm	75 mm	2.8 kg	walkable	066114

Leveling feet-Set | Set of 4 leveling feet

- + Galvanized
- + For height adaption:
Construction height 1: 65 – 90 mm
Construction height 2: 90 – 115 mm



i Minimum requirement per channel

- + 500 mm: 1 Set = 4 Leveling feet
- + 1000 mm: 1 Set = 4 Leveling feet
- + 3000 mm: 2 Sets = 8 Leveling feet
- + Angle element: 2 Sets = 8 Leveling feet

Description	Weight	Article No.
Leveling feet, Set, 4 pieces	0.5 kg	066095

End caps

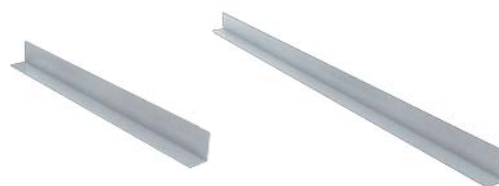
+ Galvanized



Description	Construction height	Weight	Load class	Article No.
End caps, construction height 1	50 mm	0.1 kg	walkable	066141
End caps, construction height 2	75 mm	0.1 kg	walkable	066145

Gravel strip | Angle piece with round holes

+ Galvanized



Description	Construction height	Width/Height	Weight	Load class	Article No.
Gravel strip, for construction height 1 and 2	500 mm	35/45 mm	0.3 kg	walkable	066094
Gravel strip, for construction height 1 and 2	1000 mm	35/45 mm	0.6 kg	walkable	066093

Perforated grating | Round holes | galvanized steel

+ With clamping device

+ Inlet opening 8 mm



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	122 mm	20 mm	1.5 kg	ø 8 mm	232 cm²/m	walkable	066151
galvanized	1000 mm	122 mm	20 mm	3.0 kg	ø 8 mm	232 cm²/m	walkable	066150
for inside and outside angle, galvanized	500 mm	122 mm	20 mm	2.9 kg	ø 8 mm	197 cm²/m	walkable	066152

Perforated grating | Square holes | galvanized steel

- + With clamping device
- + Inlet opening 8 mm



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	122 mm	20 mm	1.5 kg	8/8 mm	296 cm ² /m	walkable	066154
galvanized	1000 mm	122 mm	20 mm	3.0 kg	8/8 mm	296 cm ² /m	walkable	066153
for inside and outside angle, galvanized	500 mm	122 mm	20 mm	2.9 kg	8/8 mm	251 cm ² /m	walkable	066155

Slotted grating | galvanized steel

- + With clamping device



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	122 mm	20 mm	1.3 kg	SW 98/8 mm	246 cm ² /m	walkable	066157
galvanized	1000 mm	122 mm	20 mm	2.8 kg	SW 98/8 mm	246 cm ² /m	walkable	066156
for inside and outside angle, galvanized	500 mm	122 mm	20 mm	2.7 kg	SW 98/8 mm	196 cm ² /m	walkable	066158

Mesh grating | galvanized steel

- + With clamping device



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	122 mm	20 mm	1.5 kg	MW 30/10 mm	934 cm ² /m	walkable	066181
galvanized	1000 mm	122 mm	20 mm	2.9 kg	MW 30/10 mm	934 cm ² /m	walkable	066180
for inside and outside angle, galvanized	500 mm	122 mm	20 mm	2.8 kg	MW 30/10 mm	787 cm ² /m	walkable	066182

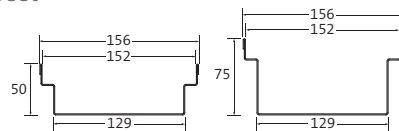
SW = Slot width, MW = Mesh width

BIRCOtopline® | Installation width 160

New system with two construction heights and adjustable feet

Channel elements | without visible edge | perforated on one side

- + Galvanized
- + Screw thread for leveling feet



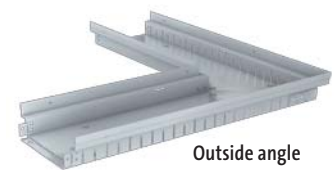
Description	Length	Width on top/ on base	Construction height	Weight	Load class	Article No.
Construction height 1, galvanized	500 mm	156/129 mm	50 mm	1.4 kg	walkable	066203
Construction height 1, galvanized	1000 mm	156/129 mm	50 mm	2.8 kg	walkable	066202
Construction height 1, galvanized	3000 mm	156/129 mm	50 mm	8.0 kg	walkable	066201
Construction height 2, galvanized	500 mm	156/129 mm	75 mm	1.5 kg	walkable	066212
Construction height 2, galvanized	1000 mm	156/129 mm	75 mm	3.0 kg	walkable	066211
Construction height 2, galvanized	3000 mm	156/129 mm	75 mm	9.0 kg	walkable	066210

Angle element | without visible edge | perforated on one side

- + Galvanized
- + Height adjustable up to 40 mm



Inside angle



Outside angle

Description	Length	Width on top/ on base	Construction height	Weight	Load class	Article No.
Construction height 1, Inside angle 500 x 500 mm	500 mm	156/129 mm	50 mm	2.0 kg	walkable	066204
Construction height 1, Outside angle 500 x 500 mm	500 mm	156/129 mm	50 mm	2.0 kg	walkable	066205
Construction height 2, Inside angle 500 x 500 mm	500 mm	156/129 mm	75 mm	2.5 kg	walkable	066213
Construction height 2, Outside angle 500 x 500 mm	500 mm	156/129 mm	75 mm	2.5 kg	walkable	066214

Leveling feet-Set | Set of 4 Leveling feet

- + Galvanized
- + For height adaption:
Construction height 1: 65 – 90 mm
Construction height 2: 90 – 115 mm



i Minimum requirement per channel

- + 500 mm: 1 Set = 4 Leveling feet
- + 1000 mm: 1 Set = 4 Leveling feet
- + 3000 mm: 2 Sets = 8 Leveling feet
- + Angle element: 2 Sets = 8 Leveling feet

Description	Weight	Article No.
Leveling feet, Set, 4 pieces	0.5 kg	066095

End caps

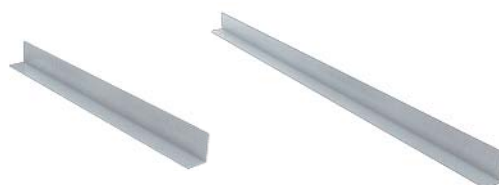
+ Galvanized



Description	Construction height	Weight	Load class	Article No.
End caps, Construction height 1	50 mm	0.1 kg	walkable	066241
End caps, Construction height 2	75 mm	0.1 kg	walkable	066245

Gravel strip | Angle piece with round holes

+ Galvanized



Description	Construction height	Width/Height	Weight	Load class	Article No.
Gravel strip, for Construction height 1 and 2	500 mm	35/45 mm	0.3 kg	walkable	066094
Gravel strip, for Construction height 1 and 2	1000 mm	35/45 mm	0.6 kg	walkable	066093

Perforated grating | Round holes | galvanized steel

+ With clamping device

+ Inlet opening 8 mm



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	152 mm	20 mm	1.8 kg	ø 8 mm	299 cm²/m	walkable	066251
galvanized	1000 mm	152 mm	20 mm	3.5 kg	ø 8 mm	299 cm²/m	walkable	066250
for inside and outside angle, galvanized	500 mm	152 mm	20 mm	3.3 kg	ø 8 mm	244 cm²/m	walkable	066252

Perforated grating | Square holes | galvanized steel

- + With clamping device
- + Inlet opening 8 mm



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	152 mm	20 mm	1.8 kg	8/8 mm	380 cm ² /m	walkable	066254
galvanized	1000 mm	152 mm	20 mm	3.5 kg	8/8 mm	380 cm ² /m	walkable	066253
for inside and outside angle, galvanized	500 mm	152 mm	20 mm	3.3 kg	8/8 mm	311 cm ² /m	walkable	066255

Slotted grating | galvanized steel

- + With clamping device



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	152 mm	20 mm	1.7 kg	SW 128/8 mm	323 cm ² /m	walkable	066257
galvanized	1000 mm	152 mm	20 mm	3.3 kg	SW 128/8 mm	323 cm ² /m	walkable	066256
for inside and outside angle, galvanized	500 mm	152 mm	20 mm	3.1 kg	SW 128/8 mm	247 cm ² /m	walkable	066258

Mesh grating | galvanized steel

- + With clamping device



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class	Article No.
galvanized	500 mm	152 mm	20 mm	1.9 kg	MW 30/10 mm	1331 cm ² /m	walkable	066281
galvanized	1000 mm	152 mm	20 mm	3.7 kg	MW 30/10 mm	1331 cm ² /m	walkable	066280
for inside and outside angle, galvanized	500 mm	152 mm	20 mm	3.5 kg	MW 30/10 mm	945 cm ² /m	walkable	066282

BIRCOtop | BIRCOtopline® | Installation Instructions

A number of details must be observed when installing BIRCOtop / BIRCOtopline®. You will find a comprehensive description below.

Drainage systems for facades and surfaces made of galvanized steel / stainless steel

In order to ensure a long-term functionality and durability of high-quality steel elements, some points must be taken into account by the customer. Of course, specific local conditions must be considered.

- + When moving the up to 3-meter long components, care must be taken that they are not damaged from distortion during transport or incorrect carrying techniques. During the installation, the channels must be stiffened with the cover before walking on them.
- + Contact of visible surfaces with alkaline materials, such as with plaster or cement screed, must be avoided, since damage from corrosion of galvanized materials may occur here and visible defects may occur with stainless steel products.
- + When installing steel elements in screed or concrete / single-grain concrete, we recommend using stainless steel alloys due to the alkaline environment. Mechanical damage must be avoided in order to ensure lasting corrosion protection of galvanized materials.
- + During installation, the products can always be positioned in the vertical position by lining with filling material.
- + After cleaning the facade, the channel must be flushed with clean water so that the cleaning agents do not remain in the channel and possibly corrode it.
- + If channel elements made from galvanized material are exposed to aggressive media (e.g. de-icing salt, cleaning agents), these must be immediately and thoroughly rinsed afterwards in order to prevent corrosion. Also with V2A material, corrosion can only be permanently prevented if aggressive media are rinsed.

Installation instructions for BIRCOtop / BIRCOtopline®

- + After laying the channels, the supplied covers must be inserted in order to reduce the risk of injury or to prevent the channel from warping. If cleaning work is required due to the stage of construction, the drainage elements

(channel and cover) are to be adequately covered and protected against mechanical and chemical damage.

- + Before cleaning the slot channels, the covers are to be removed and then reinserted afterwards, because they prevent the ingress of coarse dirt and contamination.



- + The drainage elements can be easily and effectively connected to one another if necessary by using the connection clips.
- + After the installation, the adjacent surface coverings should be permanently closed about 3-5 mm above the channel or cover surface.
- + Care should always be taken that the edges of the parts in the joint area do not damage the insulation.
- + Special local conditions must be taken into consideration. In "handicapped accessible" application cases, the requirements pursuant to DIN 18030 (accessible construction) as well as property-specific characteristics are to be taken into consideration.

General information about the installation

Stainless steel materials can easily be integrated, for example, into concrete pavement. In the case of stringent requirements regarding the impermeability of the surroundings or when connecting surface coatings, sealing joints are to be arranged to the right or left along the channel element in order to seal the material transition from concrete to stainless steel accordingly.

The length expansion coefficients must be taken into consideration when installing stainless steel or galvanized channels. This is particularly applicable if the channels are used in areas with high temperature fluctuations.

In order to ensure the functional capability of a drainage system, it is necessary to attach corresponding end plates at the end of the drainage elements. End plates are offered for different systems here, which are easily clicked into place by the customer. This creates a clear separation of the channel system and the adjacent materials and the channels are protected against the ingress of these materials.

Application examples of flat roof guideline / combination examples

Drainage channels from BIRCOtop / BIRCOtopline® reduce tripping thresholds. In addition, many of the BIRCO channel systems can be combined, like in a modular system. This lends the necessary freedom to design ideas.

Compliance with the flat roof guideline

According to the requirements of DIN 18195, waterproofing of horizontal or slightly inclined surfaces is to be raised to subsequently higher components, usually 150 mm above the surface of the protective layer of the covering or

overflow, and secured there. This results in an offset of at least 150 mm (see figure a).

Fig. a

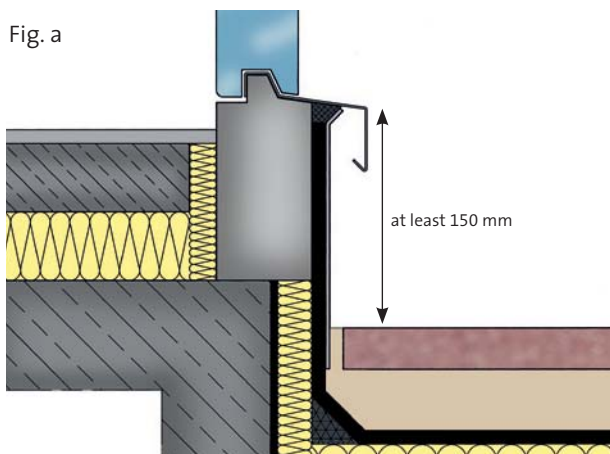


Figure a shows the prescribed transition from the inside to the outside without drainage channels. Generally the offset constitutes a restriction of use, but in any case causes an increased risk of an accident.

Fig. c

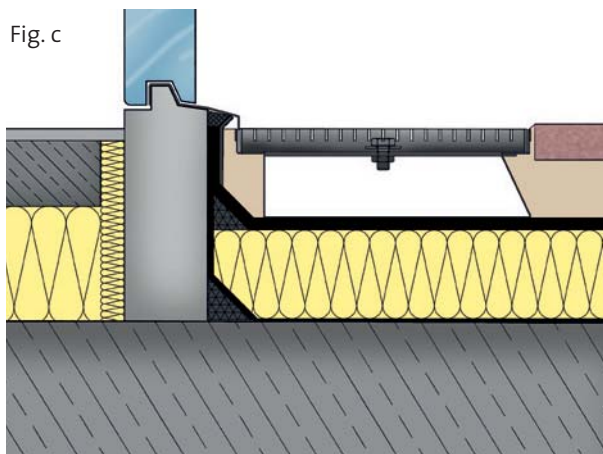
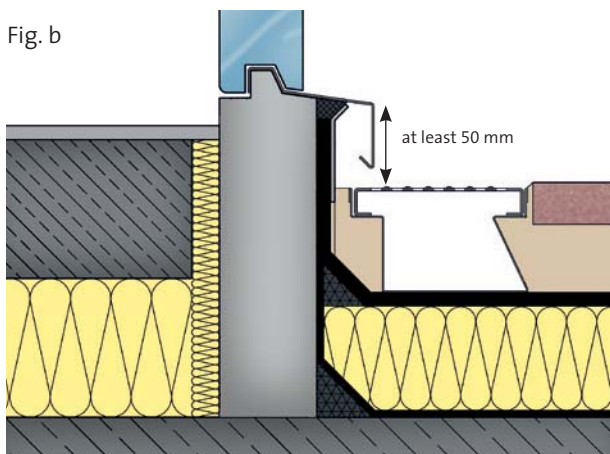


Figure c: depending on the property, the transition can be realized by using drainage channels without barriers, thus allowing for handicapped accessible construction that is also suitable for seniors.

Fig. b

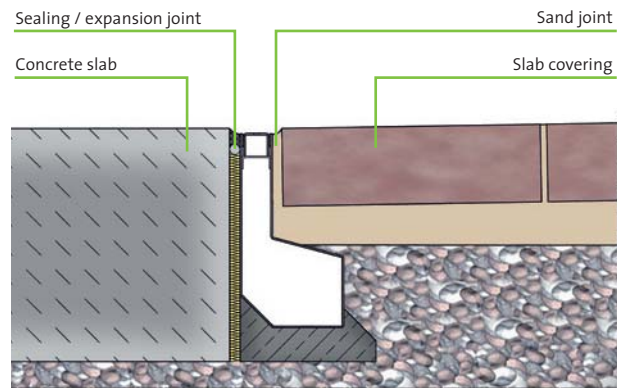


In figure b, the transition is reduced to 50 mm by installing a drainage channel. This thus creates an easily accessible transition.

However, since the problem of sealing in the area of the door element in particular is difficult to technically solve here, additional measures must be taken into consideration to accompany the drainage element. For example, covering the channels with grates with the largest possible inlet cross-section as well as (if possible) roofing in the area of the transition from the inside to the outside in order to reduce the risk of splashing and impact water in the event of heavy rain. Furthermore, backup-free drainage must be ensured at all times, even in the event of large amounts of water. The selection of the adjacent drainage-capable covering is therefore also crucial. The existing details are to be reviewed in detail prior to realization due to the problem described above.

Covering separation

Different settling behavior of the substructure or the time-delayed completion of working sections and covering separations with different foundations often result in damage to the drainage elements arranged at the intersection. In the case shown here, the problem was solved with an asymmetrically closed BIRCOtop slot channel: The channel element was leaned on an existing concrete slab, thus forming a clean end or transition between the different coverings. An optically disturbing separation can hardly be detected. The type of installation must be modified depending on the load-bearing capacity or traffic load.



BIRCOtop drainage performance

The channel systems from BIRCO have an excellent drainage performance. In addition to this table, BIRCO offers a property-related hydraulic calculation service.

BIRCOtop series F 100 | without visible edge

Construction height	Drainage performance	Cross-sectional area
50 mm	0.83 l/sec	14.97 cm ²
75 mm	1.67 l/sec	30.15 cm ²
100 mm	2.52 l/sec	45.41 cm ²

BIRCOtop series F 130 | without visible edge

Construction height	Drainage performance	Cross-sectional area
50 mm	1.26 l/sec	22.62 cm ²
75 mm	2.52 l/sec	45.30 cm ²
100 mm	3.78 l/sec	68.06 cm ²

BIRCOtop series F 160 | without visible edge

Construction height	Drainage performance	Cross-sectional area
50 mm	1.15 l/sec	20.77 cm ²
75 mm	2.21 l/sec	39.84 cm ²

BIRCOtop series F 210 | without visible edge

Construction height	Drainage performance	Cross-sectional area
50 mm	3.65 l/sec	65.74 cm ²
75 mm	6.21 l/sec	130.98 cm ²

BIRCOtop series F 160 | with visible edge

Construction height	Drainage performance	Cross-sectional area
50 mm	2.27 l/sec	41.00 cm ²
75 mm	3.67 l/sec	66.00 cm ²
100 mm	5.06 l/sec	91.00 cm ²

BIRCOtop series F 130 | with visible edge

Construction height	Drainage performance	Cross-sectional area
50 mm	1.70 l/sec	30.60 cm ²
75 mm	3.20 l/sec	57.60 cm ²

BIRCOtop series S | asymmetrical

Construction height	Drainage performance	Cross-sectional area
150 mm, neck 80 mm	2.57 l/sec	37.75 cm ²

This table only provides reference values for the dimensioning. Local conditions, i.e. the length of the existing drainage shafts, the number of sections, etc., cannot be taken into consideration. We therefore recommend making use of our hydraulic calculation service which provides you with a draft proposal.

BIRCOtopline® drainage performance

The channel systems from BIRCO have an excellent drainage performance. In addition to this table, BIRCO offers a property-related hydraulic calculation service.

BIRCOtopline® 100

Construction height	Drainage performance	Cross-sectional area
50 mm	1.07 l/sec	19.28 cm ²
75 mm	1.99 l/sec	35.90 cm ²

BIRCOtopline® 130

Construction height	Drainage performance	Cross-sectional area
50 mm	1.55 l/sec	27.98 cm ²
75 mm	2.89 l/sec	52.10 cm ²

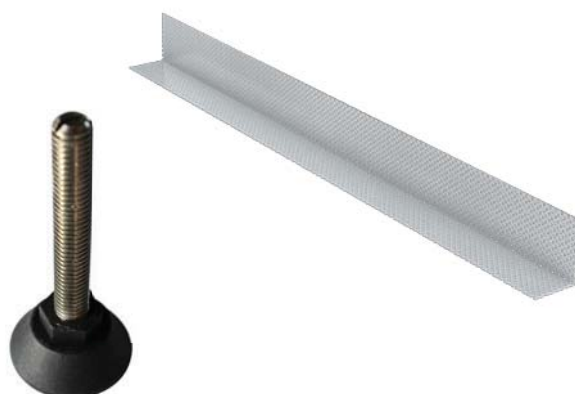
BIRCOtopline® 160

Construction height	Drainage performance	Cross-sectional area
50 mm	2.04 l/sec	36.68 cm ²
75 mm	3.79 l/sec	68.30 cm ²

This table only provides reference values for the dimensioning. Local conditions, i.e. the length of the existing drainage shafts, the number of sections, etc., cannot be taken into consideration. We therefore recommend making use of our hydraulic calculation service which provides you with a draft proposal.

Installation with optional leveling feet

- + When using leveling feet, add the desired height to the installation height of the channel body in advance. Maximum additional height from the leveling feet: 35 mm.
- + When using screw-on feet, we recommend using gravel strips in order to achieve a high drainage performance and to avoid a sagging of the adjacent covering.
- + Combining with roofing paper, bitumen layers, insulating layers or substrates is to be checked with the respective manufacturer with respect to the point loading.
- + When retrofitted, the BIRCOtopline® with leveling feet can be installed from above. The slots at the upper end of the leveling feet allow for a precise adjustment by using a screwdriver.



BIRCOprofil | Top performance with low heights

BIRCOprofil combines the broadest range of requirements into one high-performance profile. The steel channel is applicable for low construction heights and ensures optimum drainage performance, reliable traffic safety and attractive design. It also takes on entrained water and functions as a relief and evaporation channel.

+ A 15 to C 250



For the drainage of areas with low construction heights that are subjected to heavy dynamic loads.



BIRCOprofil | Areas of application

- + Parking garages and parking decks
- + For the drainage of entrained water
- + Functions as an evaporation channel
- + New construction and renovation
- + Applicable everywhere only limited installation depths are available for jointing

BIRCOprofil | Facts

- + Channel system: Width 160, 196 mm
- + Construction lengths: 0.5, 1.0, 3.0 meters
- + Construction heights: 50, 75 mm
- + Design: Galvanized steel, stainless steel
- + Uplift guard from the special channel form and mounting anchor
- + Load class: A 15 – C 250 (in special installations up to E 600)
- + Broad range of covers



BIRCOprofil | Top performance with low heights

Low construction heights and high demands on the load-bearing capability of the channel. BIRCOprofil provides top drainage and traffic safety in equal measure.

Traffic safety

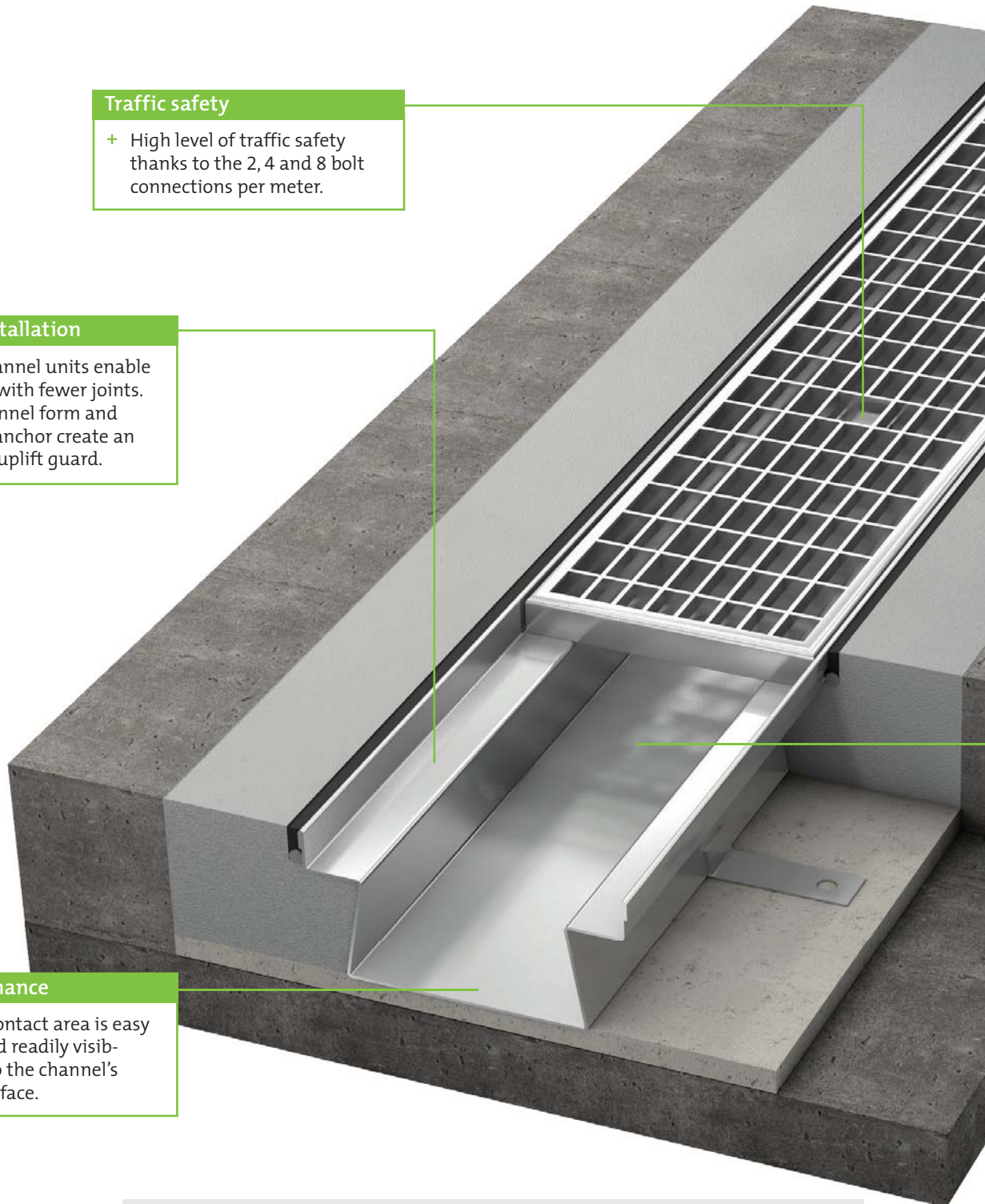
- + High level of traffic safety thanks to the 2, 4 and 8 bolt connections per meter.

Fast, safe installation

- + 3 meter channel units enable fast laying with fewer joints.
- + Special channel form and mounting anchor create an integrated uplift guard.

Low-maintenance

- + The large contact area is easy to clean and readily visible thanks to the channel's smooth surface.



This figure is illustrative. Please note the installation instruction and installation examples provided.

We were able
to actively support
customers here :



Attractive design

- + The broad range of covers available provides the very best architectural possibilities.

Material quality

- + Galvanized or stainless steel V2A ensure a long service life and safeguard your investment.



Flexible application

- + Ideal for new construction, renovation or subsequent installation.
- + 3 nominal widths and 2 different construction heights cover the broadest range of applications.



Train station, Luettich, Belgium



Max-Rieble-Platz, Donaueschingen



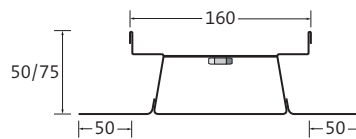
Media centre, Berlin

BIRCOprofil | 160

Top performance with low heights

Channel elements

- + Galvanized steel
- + Also available in stainless steel (V2A/V4A)
- + With welded bolt clamp
- + With mounting anchor
- + Drainage opening tailored to the property (connection to the local pipe systems)
- + Installation of a 2nd drainage level is possible



Description	Length	Width	Construction height	Weight	Load class EN 1433	Article No.
Channel construction height 1, galvanized	500 mm	160 mm	50 mm	2.9 kg	A 15 – E 600*	061001
Channel construction height 1, galvanized	1000 mm	160 mm	50 mm	6.0 kg	A 15 – E 600*	061002
Channel construction height 1, galvanized	3000 mm	160 mm	50 mm	18.4 kg	A 15 – E 600*	061004
Channel construction height 2, galvanized	500 mm	160 mm	75 mm	3.4 kg	A 15 – E 600*	061011
Channel construction height 2, galvanized	1000 mm	160 mm	75 mm	7.0 kg	A 15 – E 600*	061012
Channel construction height 2, galvanized	3000 mm	160 mm	75 mm	21.4 kg	A 15 – E 600*	061014

*Please observe separate installation, otherwise load class C 250

Connection shoes

- + Galvanized steel
- + Also available in stainless steel (V2A)
- + Sealing required on the building site for ex. with BIRCOconnect



Description	Width	For construction height	Weight	Article No.
Connection shoe, galvanized, construction height 1	160 mm	50 mm	0.2 kg	061050
Connection shoe, galvanized, construction height 2	160 mm	75 mm	0.2 kg	061051

End caps

- + Galvanized steel
- + Also available in stainless steel (V2A)
- + Welded ex-factory and subsequently cold galvanized



Description	Width	For construction height	Load class	Article No.
End cap, galvanized, construction height 1	160 mm	50 mm	0.2 kg	061045
End cap, galvanized, construction height 2	160 mm	75 mm	0.2 kg	061046

Pipe socket

- + Up to DN 90, Length 150 mm
- + For BIRCOprofil
- + Also available in stainless steel (V2A)

Description	Article No.
Pipe socket, separate unit, galvanized	631000

Service

- + Up to DN 90, Length 150 mm
- + For BIRCOprofil (outlet included)
- + Also available for stainless steel channels (V2A)

Description	Article No.
Allowance for factory provided riveting of pipe sockets, galvanized	631001
Allowance for factory provided welding of pipe sockets, galvanized	631002

Ductile iron slotted gratings

- + Black-immersion lacquered
- + Also available galvanized
- + 2-point per meter M12/A2 bolt connection
- + Anti-slip classification R11/V10



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
black	500 mm	153 mm	20 mm	3.9 kg	SW 100/13 mm	469 cm ² /m	A 15 – C 250	261072
black	500 mm	153 mm	20 mm	5.0 kg	SW 100/13 mm	469 cm ² /m	A 15 – E 600	261075

Please note that the channel in combination with this cover has a reduced drainage cross-section as a result of the notch. We therefore recommend using the channel construction height of 75 mm.

Mesh gratings | hot-dipped galvanized

- + Also available in stainless steel (V2A)
- + 2-point per meter M12/A2 bolt connection
- + Anti-slip classification R10/V10 for article no. 261063 and article no. 261053



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
hot-dipped galvanized	500 mm	153 mm	20 mm	2.1 kg	MW 30/15 mm	1035 cm ² /m	A 15 – C 250	261063
hot-dipped galvanized	1000 mm	153 mm	20 mm	4.3 kg	MW 30/15 mm	1035 cm ² /m	A 15 – C 250	261053
hot-dipped galvanized	500 mm	153 mm	20 mm	4.4 kg	MW 10/30 mm	1051 cm ² /m	A 15 – E 600	261064
hot-dipped galvanized	1000 mm	153 mm	20 mm	8.2 kg	MW 10/30 mm	1051 cm ² /m	A 15 – E 600	261054

Please note that the channel in combination with this cover has a reduced drainage cross-section as a result of the notch. We therefore recommend using the channel construction height of 75 mm.

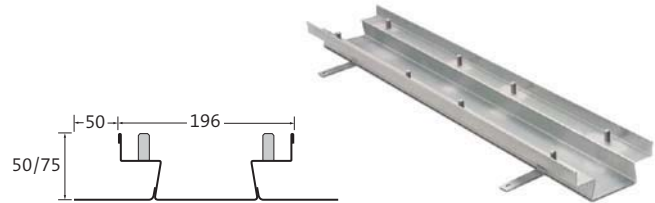
SW = slot width, MW = mesh width

BIRCOprofil | 196

Top performance with low heights

Channel elements

- + Galvanized steel
- + Also available in stainless steel (V2A)
- + With bolting device
- + With mounting anchor
- + Drainage opening tailored to the property (connection to the local pipe systems)
- + Installation of a 2nd drainage level is possible



Description	Length	Width	Construction height	Weight	Load class EN 1433	Article No.
Channel construction height 1, galvanized	500 mm	196 mm	50 mm	3.1 kg	A 15 – E 600*	061101
Channel construction height 1, galvanized	1000 mm	196 mm	50 mm	6.2 kg	A 15 – E 600*	061102
Channel construction height 1, galvanized	3000 mm	196 mm	50 mm	18.6 kg	A 15 – E 600*	061108
Channel construction height 2, galvanized	500 mm	196 mm	75 mm	3.6 kg	A 15 – E 600*	061104
Channel construction height 2, galvanized	1000 mm	196 mm	75 mm	7.2 kg	A 15 – E 600*	061105
Channel construction height 2, galvanized	3000 mm	196 mm	75 mm	21.6 kg	A 15 – E 600*	061107

*Please observe separate installation, otherwise load class C 250

Connection shoes

- + Galvanized steel
- + Also available in stainless steel (V2A)
- + Sealing required on the building site for ex. with BIRCOconnect



Description	Width	For construction height	Weight	Article No.
Connection shoe, galvanized, construction height 1	196 mm	50 mm	0.2 kg	061150
Connection shoe, galvanized, construction height 2	196 mm	75 mm	0.2 kg	061151

End caps

- + Galvanized steel
- + Also available in stainless steel (V2A)
- + Welded ex-factory and subsequently cold galvanized



Description	Width	For construction height	Weight	Article No.
End cap, galvanized, construction height 1	196 mm	50 mm	0.2 kg	061145
End cap, galvanized, construction height 2	196 mm	75 mm	0.2 kg	061146

Pipe socket

- + Up to DN 90, Length 150 mm
- + For BIRCOprofil
- + Also available in stainless steel (V2A)

Description	Article No.
Pipe socket, separate unit, galvanized	631000

Service


- + Up to DN 90, Length 150 mm
- + For BIRCOprofil (outlet included)
- + Also available for stainless steel channels (V2A)


Description	Article No.
Allowance for factory provided riveting of pipe sockets, galvanized	632001
Allowance for factory provided welding of pipe sockets, galvanized	632002

Ductile iron slotted gratings

- + Black-immersion lacquered
- + Also available galvanized
- + Load class A 15 - D 400 with twofold slots
- + 8-point per meter M12/A2 self locking bolt connection
- + Anti-slip classification R11/V10



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
black	500 mm	187 mm	30 mm	5.0 kg	SW 100/13 mm	469 cm ² /m	A 15 - C 250	262172
black	500 mm	187 mm	30 mm	4.7 kg	SW 60/18 mm	591 cm ² /m	A 15 - D 400	262174
black	500 mm	187 mm	30 mm	6.4 kg	SW 100/13 mm	469 cm ² /m	A 15 - E 600	262175 

 Please note that the channel in combination with this cover has a reduced drainage cross-section as a result of the notch. We therefore recommend using the channel construction height of 75 mm.

Mesh gratings | ductile iron

- + Black-immersion lacquered
- + Also available galvanized
- + 8-point per meter M12/A2 self locking bolt connection



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
black	500 mm	187 mm	30 mm	7.0 kg	MW 20/30 mm	876 cm ² /m	A 15 - E 600	262186

SW = slot width, MW = mesh width

Mesh gratings

- + Hot-dipped galvanised
- + Also available in stainless steel (V2A)
- + 4-point per grating M12/A2 self locking bolt connection



Description	Length	Width	Height	Weight	Inlet opening	Inlet cross section	Load class EN 1433	Article No.
hot-dipped galvanized	500 mm	187 mm	30 mm	3.3 kg	MW 30/12 mm	1154 cm ² /m	A 15 – C 250	262163
hot-dipped galvanized	1000 mm	187 mm	30 mm	6.1 kg	MW 30/12 mm	1154 cm ² /m	A 15 – C 250	262153



BIRCOprofil surface drainage at the high speed train terminal Luettich/Belgium

BIRCO
system finder

BIRCOquality

BIRCOLight

BIRCOLight triloc®

BIRCOplus

BIRCOslotted
steel covers

BIRCOtop

BIRCOtopline®

BIRCOprofil

BIRCOservice

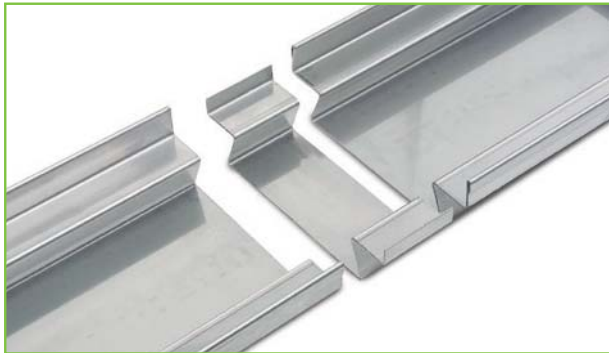


BIRCOprofil | Installation Instructions

A number of details must be observed when installing BIRCOprofil. You will find a comprehensive description below.

- + When using drainage elements in ceilings or building parts with greater sealing tightness requirements, we recommend using stainless steel products and welding of the channel ends on the building site. A sealing tightness test (water level test) must be conducted before installation is completed.
- + When installing in concrete fittings, the transition points (where the channel meets the adjacent concrete slabs) must be grouted with a permanently elastic sealing material (for example with SF-Connect or another polyurethane-based sealant). Expansion joints must be laid out in such manner that horizontal forces do not exert pressure on the drainage unit and run through the channel end instead.
- + Mechanical processing of the drainage units on the building site must be conducted taking into consideration that, in particular with galvanized materials, the connection interfaces will be primed and subsequently galvanized. Otherwise there would be no lasting corrosion protection.
- + With drainage elements installed in areas that are subjected to being driven over permanently it must be observed that the screws are tightened with the stipulated torque moments.
- + The contact surfaces of slots in concrete ceilings must be treated in advance with a bonding course.
- + The channel must be safeguarded against “flooding” during the concrete work and secured in its position.
- + Individual requirements must be taken into account according to the on-site circumstances and considered by the planner(s).
- + When bolting the covers it must by all means be observed that the torque moment (M12) 20 Nm is not exceeded.

BIRCOprofil Jointing

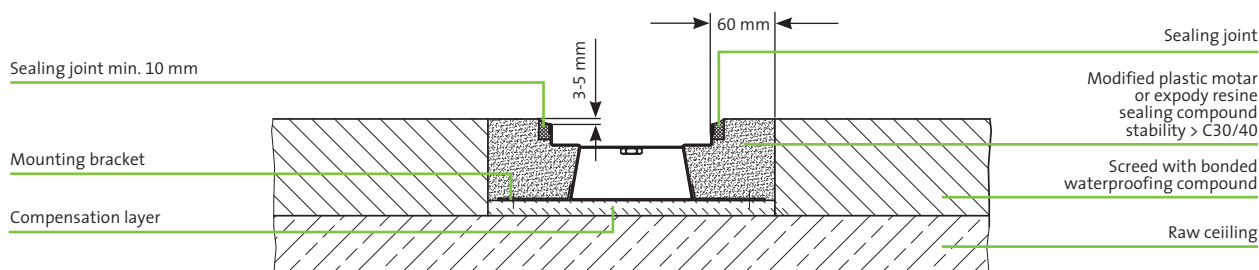


In situations with greater demands on sealing tightness, we recommend welding the channel ends and appropriately sealing the work joints.

BIRCOprofil Installation Examples

BIRCOprofil, load class A 15 – E 600

Drawing no. 14947 b



When pavement surfaces are being laid and pressed, it must be ensured that the pavement material is not forced against the channels.

The concrete qualities indicated are minimum values. Requirements related to the installation location according to DIN 1045-2 or EN 206-1 regarding for instance resistance to frost and de-icing salt are to be taken into account in the choice of the concrete.

Bolting connection note:

Torque moments for screw fastening the gratings are to be set at M12 = 60 Nm.

The bolts on the gratings must be retightened at regular intervals.

Channel elements made of galvanized steel that have been exposed to aggressive media (such as de-icing salt, cleaning agents, etc.) must be thoroughly rinsed straight after the exposure, so as to prevent corrosion. With V2A stainless steel as well, prevention of corrosion in the long term is only possible when aggressive media are rinsed off.

Fast, safe installation | Efficient time and cost management

- + 3 meter channel elements enable fast laying with fewer joints.
- + The special channel shape and mounting anchor create an integrated uplift guard.

The planning of expansion joints must be conducted from on the basis of engineering considerations. When laying the channel line in a full concrete casing, expansion joints at right angles to the channel line must be installed every 8–12 meters. Constructed in accordance with non-settling frost-free sub-bases. Exception up to D 400: Not for use across the carriage- way of highways or motorways.

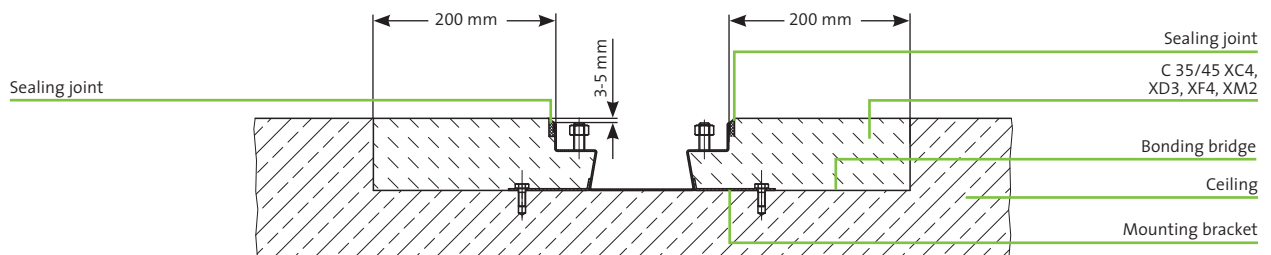
BIRCOprofil in renovation

BIRCOprofil is particularly suited for renovations due to its constructive properties and low construction heights. The channel units are fitted into the corresponding ceiling recess using mounting anchors to attach them to the base. The channel ends are mounted using the supplied connection elements. Sealing is conducted on the building site, for example with SF-Connect. Should height adaptations be required, we recommend using lumps of cement: They serve in adjusting the height on the one hand and in ensuring the stabile positioning of the channel units on the other. Prior to conducting concrete work, the existing concrete surfaces must be treated with a bonding course.

It must be ensured that the down-flow of the channel unit occurs without bubbles and that the channel is fully encased with concrete. A sealing joint must be provided in order to prevent penetration in the area of the raised edge of the channel where the material changes to concrete. In newly built structures where a corresponding surface coating is stipulated, for instance, depending on the property's needs the flanks of the steel frame connectors can be treated with an epoxy resin and sanding for better adhesion. A variety of traffic-safe bolt connections is available to ensure traffic safety or to prevent clattering of the covers.

BIRCOprofil renovation, load class A 15 – E 600

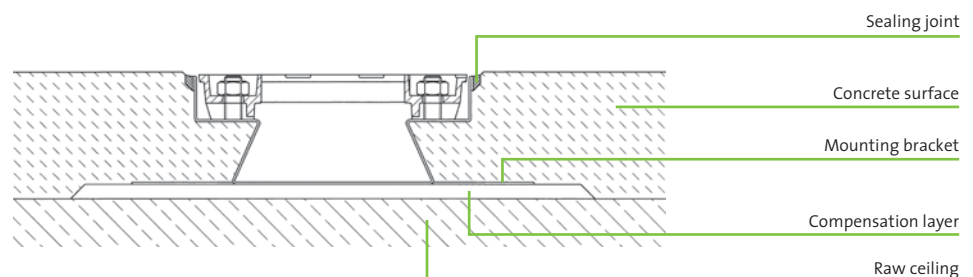
Drawing no. 14947



BIRCOprofil in double-walled ceiling construction

The drainage channel can also be integrated into the screed due to its low construction height. To do this, the unit is laid flush onto the raw ceiling levelling course and then worked directly onto the screed. When attaching the screed it must be ensured that it fully encompasses the channel unit with no bubbles. A sealing joint should be executed at the transition area of the channel's raised edge up to the screed in order to prevent the penetration of water. A prepared frame connector flank for jointing can also be executed in the area where the surface coat-

ing is conducted in order to provide better adhesion. The sealing tightness requirements for the entire system must be examined prior to installation. The channel ends of the drainage units must be connected with a sealing shoe. If a high level of seal tightness or absolute seal tightness be required, then the ends have to be additionally welded on the building site. In the event of high sealing tightness requirements, a water level inspection must be conducted in any case prior to attachment of the screed.



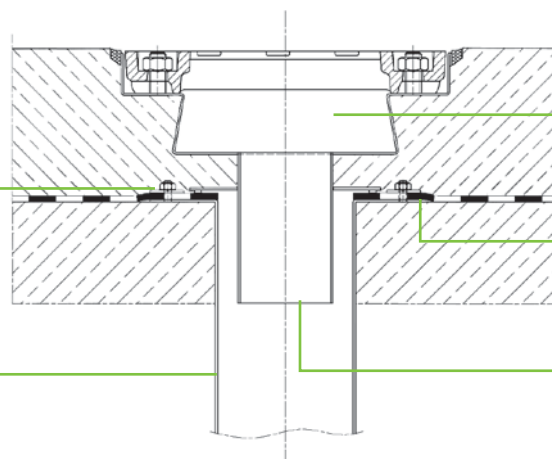
Second drainage level

With BIRCOprofil, a second drainage level can be installed. For this, the channel unit is fitted ex-factory with a welded, sealed pipe socket that is integrated directly into the ceiling opening. The sealing course is pressed together with the ceiling opening flange connection. The attached PE

disc with spacer nubs prevents the penetration of gravel or cement-bonded material. The formation of the nubs on the collar ensures drainage of the second level.

Drawing-No. 13892

PE disc with spacer nubs prevents the penetration of gravel into the drainage pipe



BIRCOprofil channel

Sealing course pressed

Ceiling duct

Pipe socket, welded with a tight seal

BIRCOprofil drainage performance

BIRCO channel systems provide outstanding drainage performance. BIRCO offers a calculation service in addition to this diagram.

BIRCOprofil 160, load class C 250

CL = 1000 mm	Drainage capacity at the channel end	Cross-sectional area at the channel end
Construction height 50 mm	1.38 l/sec	24.92 cm ²
Construction height 75 mm	2.96 l/sec	53.29 cm ²

BIRCOprofil 196, load class C 250

CL = 1000 mm	Drainage capacity at the channel end	Cross-sectional area at the channel end
Construction height 50 mm	1.05 l/sec	18.92 cm ²
Construction height 75 mm	2.58 l/sec	46.41 cm ²

These diagrams can only provide the desired result in a few cases since the job definition is influenced in large part by the conditions on-site, i.e. the location of the existing drains, the number of drainage lines, etc. We therefore recommend making use of our hydraulic calculation service which provides you with a draft proposal.

Handling and maintenance instructions for BIRCO galvanized steel products and stainless steel products

1. Preliminary remarks

In order to ensure the long-term functionality and durability of high-quality steel elements, certain points must be taken into account by the customer. Specific local conditions must also be considered.

In principle, a combination of galvanized steel and stainless steel should be avoided. Otherwise, certain chemical reactions can cause corrosion.

Please observe our installation instructions in this respect.

When plastering or painting façades, care should be taken to prevent the soiling of channels and covers (e.g. covering with construction foil). Eventual paint residues and stains on the channels and covers should be removed promptly with a damp cloth.

2. Handling

When installing the up to 3-meter long components, care must be taken to ensure that they do not become damaged by distortion during transport or incorrect carrying techniques. During installation, the channels should be braced with a cover before walking on them. Take appropriate measures to protect galvanized steel and stainless steel products from being stained (jointing material/concrete, etc.) and damage (aggressive media).

Visible surfaces should not be allowed to come into contact with alkaline materials, such as plaster or cement screed, or these alkaline materials must be removed directly by thorough cleaning, since damage from corrosion of galvanized materials may occur here and visible defects may occur on stainless steel products.

When installing steel elements in screed or concrete/ single-grain concrete, we recommend using stainless steel alloys due to the alkaline environment. Stainless steel must also be cleaned to remove visible defects.

Mechanical damage must be avoided in order to ensure lasting corrosion protection of the materials.

During installation, the products can always be positioned vertically by lining with filling material or by mounting and adjusting the setting feet (BIRCO-topline®).

Before handling stainless steel products, remove any foreign metal from the tools and do not use steel tools.

3. Surface changes on galvanized products

Galvanized steel products can visibly change over time. However, this does not affect the functionality of the components. The following changes can occur:

3.1 Surface loses its shine (matt surface)

This is a natural and necessary phenomenon, induced by the climate. The change to the surface results from the formation of a passivation layer (protective layer) which considerably decelerates or prevents corrosion.

3.2 Spotting (white rust)

White rust can form under certain local conditions such as restricted access of CO₂, or under conditions containing chloride or sulfate. White rust must be removed. Regular drying of the galvanized steel products enables the protective layer to form or regenerate.

4. Maintenance instructions

4.1 Maintenance instructions for galvanized steel products

In principle, galvanization prevents corrosion from forming. To maintain corrosion protection in the long term, a few points must be observed:

4.1.1. After cleaning the façade elements (such as glass fronts), the channel must be flushed with clean water so that the cleaning agents do not remain in the channel and possibly corrode it. Do not use aggressive cleaning agents. Cleaning agents should first be checked for zinc tolerance.

4.1.2. If channel elements made from galvanized steel are exposed to aggressive media (e.g. de-icing salt, alkaline or acidic liquids), industrial salt or cooking salt, this must be immediately and thoroughly rinsed afterwards in order to prevent corrosion.

4.1.3. Galvanized steel products should not be exposed to long-lasting moisture.

4.1.4. Do not use fine-grained/grainy cleaning agents.

4.1.5. Avoid heat exposure through flying sparks, welding, fire, etc. as this will destroy the protective layer.

4.1.6. Any damaged zinc layers must be post-treated by applying, for example, a zinc dust coating with a brush.

4.2 Maintenance instructions for stainless steel products

To maintain corrosion protection in the long term, a few points must be observed:

4.2.1. Cleaning: We recommend cleaning at least every six months. While doing so, also check the products for any changes.

In the event of contact with foreign metals, e.g. metal filings or surface rust, and aggressive media such as cleaning agents or de-icing salt, thoroughly clean the stainless steel elements immediately.

Use a non-ferrous cleaning agent and a sponge. Do not use a chlorinated cleaning agent, hydrochloric acid (even if diluted) or cement residue remover under any circumstances.

Immediately remove any iron particles and surface rust from stainless steel products to keep the protective layer intact and avoid contact corrosion. Any foreign metal particles such as paint and plaster splashes can be removed with

a cleaning agent containing phosphoric acid or with phosphoric acid itself. Oil and grease can be removed using organic agents and paint residues with alkaline agents.

After cleaning, the channel must be flushed with clean water so that the cleaning agents do not remain in the channel and possibly corrode it.

4.2.2. Avoid the use of non-stainless steel materials and tools (such as spatulas, files, steel wool and granular detergents, etc.) which can corrode the surface.

4.2.3. Avoid heat exposure through flying sparks, fire, drilling, etc. as this will destroy the top layer. Post-process any fresh welding areas.

4.2.4. If using salt (e.g. de-icing salt, cooking salt), this should first be checked for stainless steel compatibility. We strongly recommend flushing the channel regularly with clean water after using de-icing salt.

5. Spare parts and technical support are available from the following address

BIRCO GmbH, Herrenpfädel 142, 76532 Baden-Baden, Germany
Phone: +49 (0) 7221-5003-1000,
info@birco.de
www.birco.de

BIRCOservice | For the landscaping sector



Special solutions for your specific project are produced in BIRCO's own workshops.



BIRCOservice |

Variable drainage solutions

BIRCO drainage solutions are adapted individually to your specific project in accordance with the latest construction guidelines.

Systematic drainage solutions

Linear drainage

Linear drainage (in contrast to point drainage) consists of a line of drainage channels collecting the water flowing in from the surface and feeding this water to the drain. The channel line can also serve as an intermediate storage facility and delay drainage. Precise calculations have to be made in order for this type of channel system to work properly: The size and surface properties of the drainage area must be taken into consideration, as well as the average level of precipitation in the area. Since the adjacent surfaces and pavements have to be slanted toward the drainage line, a pavement profile generally emerges between the channel lines.



Linear drainage



Linear drainage with inbuilt fall



Linear drainage with opposing directional falls

Channel elements with inbuilt falls

BIRCO channels are available both with and without inbuilt falls. The inbuilt fall eases the flow of water toward the outfall unit. A combination of channels with and without an inbuilt fall can ensure rapid drainage performance.

Point drainage

Point drainage (in contrast to linear drainage) is a system in which rainwater is collected at individual points in a decentralised fashion and fed to the drainage pipe. Accordingly, the drainage points must be located at the lowest point on the site.



Horizontal and vertical bore holes

Pipe connections to fit your needs

We can fit BIRCO channels with horizontal or vertical bore holes (min. 100 mm distance from the end of the channel) for directly fitting feed and drainage lines according to your plans. The connections available differ according to the nominal widths, extending in the standard range from DN 100 to DN 300. The diameters are matched with channel base pipes; different pipes are available upon request.

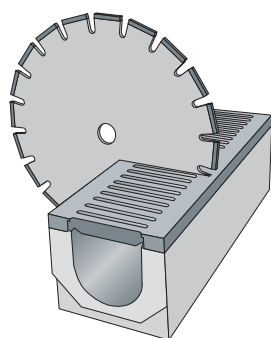
BIRCO also supplies ready-made pipe connections upon request and sludge buckets for channels with vertical bore holes.

The design of the pipe connection can also be supplied with double walls. Standard components from specialist retailers are also available for the junction between the sealed PE pipe and stoneware or PVC pipe.

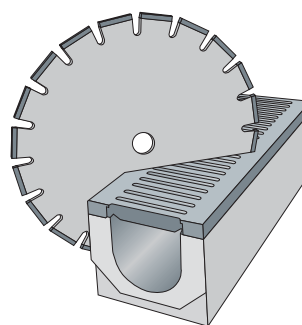
Individual customisations for every nominal width

Your plans are in good hands

BIRCO's factory service offers you a variety of customised channel unit solutions, either at a 90° angle or mitred. The concrete parts are cut including the covers so that installation at the building site can be conducted faster and with greater precision..



Channel section 90° including cover



Mitre cut according to degree specification, including cover. Please note that two mitre cuts are required and calculated per corner connection.

BIRCOservice |

Ideal laying and jointing

Matching accessories for fast, uncomplicated installation. Systematic tools for smooth operation.

Fastening

Fast, secure, low-maintenance

BIRCO channel systems in landscaping are fitted with the broadest range of fastening options, from combi-fastener locks to bolts to Easylock fasteners, stainless steel channels fitted with bolts or easily removable clamp covers. And all of these options are quick and safe to handle.

BIRCO offers different cover options tailored to the particular channel system and application (from top to bottom):

- + Clamping covers for easy handling under low loads for BIRCOplus, BIRCOtop and BIRCOtopline.
- + Covers with two M12 / A2 bolts per meter for loads up to class E 600 for BIRCOLight and BIRCOprofil with a nominal width of 160 mm. As an alternative, BIRCOLight covers can be attached with Easylock.
- + BIRCOprofil channel in width 196 with stud bolts as anti-shift protection for the cover.
- + Covers with four M12 / A2 bolts for a secure and safe hold even under heavy traffic loads.

+ BIRCOtriloc®

The cover is quickly and easily locked securely against shifting with the closure principle BIRCOtriloc®. The sophisticated spring concept optimally connects the cover and channel and even allows for an optional screw connection, even subsequently.



Jointing with SF-Connect

Sealing of the BIRCO safety joint with SF-Connect provides additional security of the channel's seal.

Grouting of the channel end/ safety joint with SF-Connect after laying of the drainage channels has been completed. Additional areas of application: Adhesion of concrete, clinker, steel, stainless steel, aluminium, polyester (GFK), PVC, acrylic, polystyrene, glass, wood.

Properties:

Coated bases must be inspected in advance for adhesion and compatibility. The hardening period depends on the temperature and moisture. Higher temperatures reduce the drying period time. SF-Connect does not contain solvents, isocyanate and silicones and does not require special warning labelling. Prior to beginning the work, it is necessary to inform oneself regarding handling and safety instructions by reading the material safety data sheet

Benefit:

SF-Connect can be used on a moist sub-surface and without the prior application of any primers!

Material requirements

The amount of SF-Connect required changes according to the system and the length of the channel line. Upon request, BIRCO will conduct a calculation for your specific project.



Working instructions:

1. Use an industrial grouting pistol to apply the sealant to the channel end/safety seam.
2. Important! Prior to applying the sealant to the safety joint, clean the channel end/safety joint and remove separating agents, dust, soiling, oil and other residues that could diminish adhesion.
3. Wear protective gloves and eyewear when conducting the work.
4. Insert 600 ml tubular bag into the industrial grouting gun.
5. Squirt out SF-Connect.
6. Then smooth out the channel end surface/joint surface with a jointer or putty knife that has been dipped in a soap solution.
7. Allow material residue to dry. Dried residue can be disposed of as residual waste.

BIRCOservice |

Advice around the clock

BIRCO provides a comprehensive ranges of advice and services, offering you our expertise personally, by phone, via the internet or on-site.

Sharing our expertise with you – Service on-site

BIRCO is there for you anytime

By phone or on-site, our experts are ready to help you find your way around the BIRCO product range, select the right channel system for your needs and answer specific questions about the arrangement and layout you need.

On-site throughout Europe

BIRCO's sales team experts are at your side right from the start of your construction project in planning, problem resolution, bid tenders and implementation. Our sales reps are located throughout Europe and have years of experience and training in the very latest industrial developments.



BIRCOservice |

On-site – personalized – reliable

The excellent quality of our products includes completely personalized support and service. It's our job to advise you with your drainage project, from planning to completion, with confidence, day in, day out.



✓ Advice for clients and project managers

- + Personalized support from our experts and engineers
- + Responsiveness and availability
- + Absolute reliability
- + Expert advice on individual drainage solutions

✓ Advice for municipal service providers and policymakers

- + Complete performance declaration for all our products
- + Supporting documents and test reports
- + Hydraulic assessment notes
- + Putting together technical documentation
- + Creating documentation for calls for tenders

✓ Trace advice

- + Wide range of products
- + Timely deliveries
- + Availability of products, short delivery times
- + Flexibility for problem-free modification of orders (even in case of "last-minute" changes)

✓ Advice for design offices and architects

- + Latest advice on design and hydraulic assessment of drainage solutions
- + Precise layout plans
- + Expert know-how for special solutions, environmental issue and custom variants
- + Optimum combination of functionality and architectural esthetics

✓ Advice for costing experts

- + The best price/performance ratio
- + BIRCO's many innovations reduce installation times and site work
- + The durability of our products protects your investment and ensures long-term operation
- + Low maintenance costs enable you to calculate long-term costs

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BIRCOservice | Notes

Tradition of responsibility

As a family business with almost 100 years of history we can look back on many developments. What remains is the attitude towards our customers and the desire to offer the best building materials made in Germany.



BIRCO Qualität seit 1927



The company today – BIRCO International

Headquartered in Baden-Baden, BIRCO is firmly rooted in southwestern Germany and, with over 170 employees, is also a well-known employer. In many regions BIRCO is synonymous with drainage channels and a well-known partner of the building materials trade. BIRCO is represented in over 17 countries and realizes major international orders. The BIRCO employees convince by competence in the handling of rainwater. For more customer service, we invested in our own logistics center directly on the highway A5. Precise deliveries to the distributors and the construction site are always in focus.



What we intend to do now: shape the future

“The human being is at the center of our thoughts and actions” is how the managing director and co-partner Christian Merkel describes it. “With this premise, BIRCO wants to make the world a little bit better and positively shape the future of our children. The topic of water is an essential building block in our considerations since it is a precious and vital resource. We also look forward to your suggestions.”



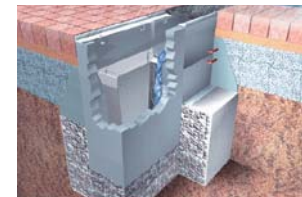
The detail makes the difference

“Often it is the little things that inspire our customers with our products, such as the solid steel frame with screw connection anchored in the concrete of the BIRCOsir. Again and again our product developers managed to improve the components, and from 1976 to this day, this channel stands for a genuine brand product of the building materials trade.”, sums up Frank Wagner, managing partner and grandson of company founder Fritz Birnbräuer.



Joy of innovation

Every year, the employees prove their joy of innovation with innumerable suggestions. The best are realized and make it possible that BIRCO always ignites a firework of news at the big fairs. With the release of the infiltration channel BIRCOdirect in 1998, the company became a pioneer among manufacturers of rainwater management systems.



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German Sustainable Building Council

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