



GRASPOINTNER
Sustainable innovation.



Uniquely efficient
multi-storey car park
drainage in all its facets.

BG-FILCOTEN[®]

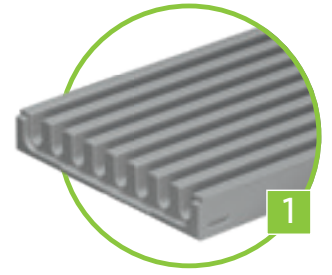
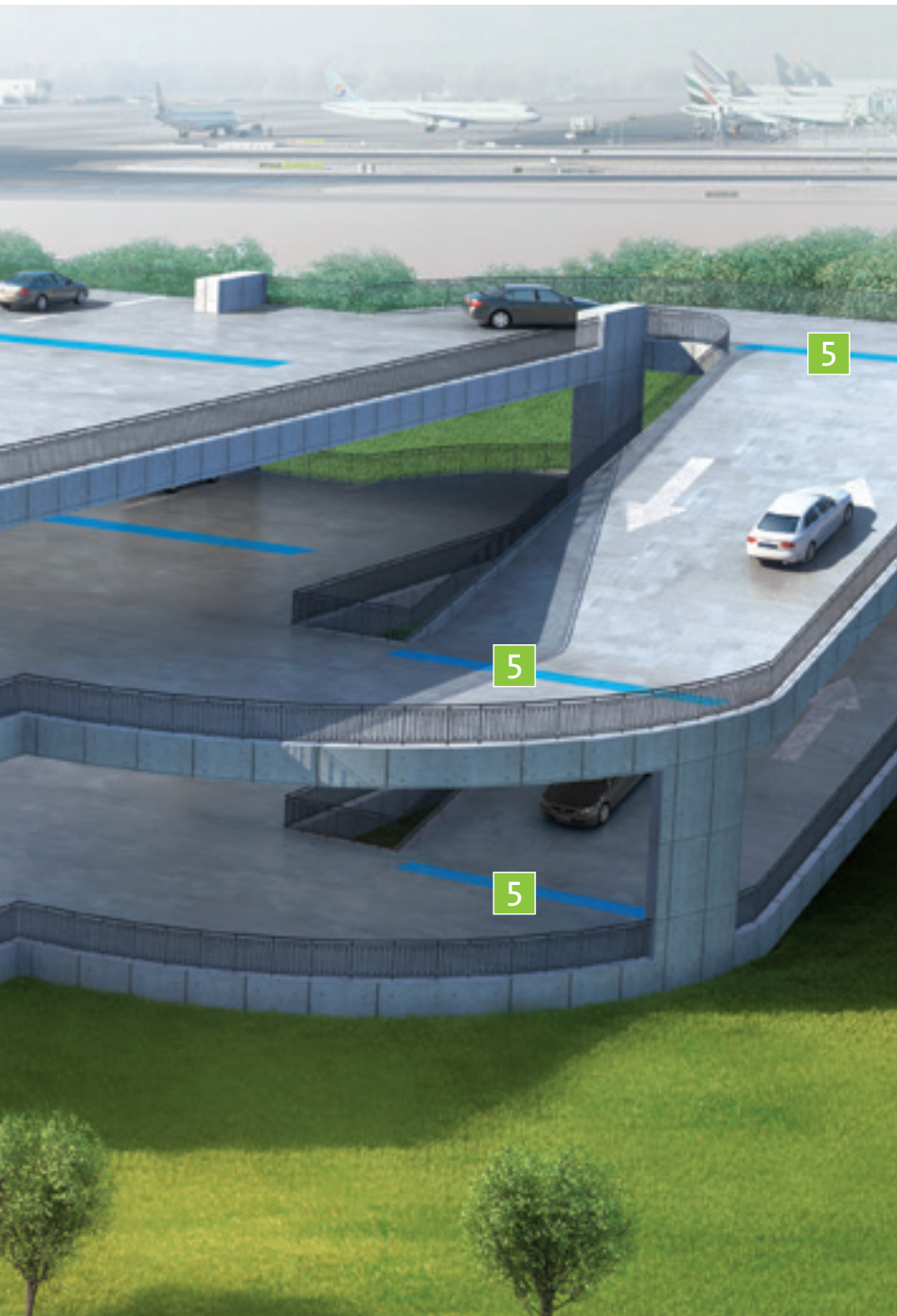
BG-FLEX

Multi-storey
car park drainage

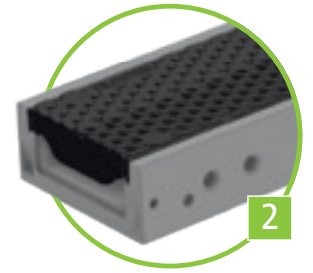
Whether **entering**
or **exiting**,
always the **right choice.**



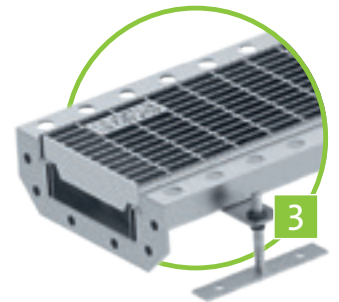
GRASPOINTNER
Sustainable innovation.



BG-FILCOTEN® parkline
up to class C | page 6 – 13



BG-FILCOTEN® city mini
up to class C | page 14 – 17



BG-FLEX sigma tec
up to class C | page 20 – 23



BG-FILCOTEN® spot-p
up to class C | page 24 – 25



BG-FILCOTEN® pro & pro mini
up to class E | page 26 – 29

Our **channel systems** especially for **multi-storey car parks**.

More than up to the Challenges ...

Multi-storey car parks are not an easy area to employ drainage systems given the extent of the challenges this poses. But the qualities of our channel systems are equally extensive and no less practical.



Author: Bill Bradley



Reliable protection from reinforcement corrosion.

The challenge.

Reinforcements corrode when the building has not been fully and properly proofed or the proofing erodes or even damaged due to constant use of the building. In these circumstances, saline condensation enters the concrete cover and eats away at the steel structural reinforcement. In the worst-case scenario, this leads to the building's structural being compromised – but most certainly to very costly refurbishment work on the multi-storey car park.

Our solution.

Our special car park channels have been designed to perfectly support the building's proofing system. These are spearheaded by the BG-FLEX sigma tec: Their innovative construction, which employs special sealing and coated flanges, means they can be directly incorporated into the concrete coating.

Corrosion through de-icing salt is a thing of the past.

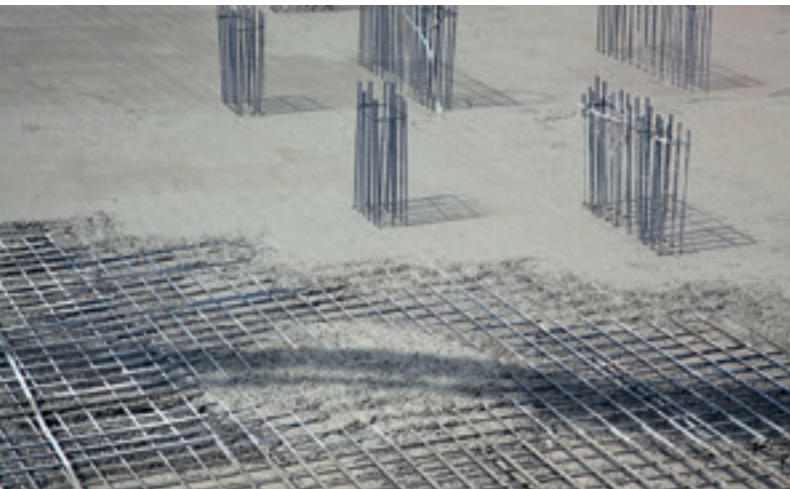
The challenge.

Cars drag in de-icing salt into multi-storey car parks in the winter. Whilst this aggressive rust driver washes away when the car is the open air, it eats away at gratings and edging inside the parking facility. This not rapidly makes for a dishevelled look but also shortens the lifespan of the gratings and edges as well as the system as a whole. Significant refurbishment costs are certain to arise shortly thereafter as a result. If the edging has completely corroded, the grating is also susceptible to caving in and creating a dangerous trip hazard.

Our solution.

Our special corrosion-free car park channel systems can brave de-icing salt. These are made up either of corrosion-free gratings and edging (BG-FILCOTEN[®] tec/pro), are made entirely of stainless steel (BG-FLEX) or are made of corrosion-free FILCOTEN[®] HPC (High Performance Concrete) in a monolithic structure (BG-FILCOTEN[®] city mini/parkline). What's more, they make light work of cleaning tasks on parking surfaces after the winter season.





Minimal construction height with maximum drainage performance

The issue.

Multi-storey car park ceilings need to be constructed as low as possible. This requires the channel systems to be correspondingly flat whilst still delivering ample drainage capacity.

Our solution.

The channel systems shown here feature a very low construction height which enables them to be incorporated into flat ceiling structures without a great deal of engineering effort.



Enhanced safety thanks to fire protection class A1

The challenge.

Fire prevention is one of the most essential safety challenges that needs to be considered when planning a multi-storey car park. In these situations, low inflammability alone is enough – the mere production of smoke renders escape routes hard to detect and hinders any attempts at extinguishing fires.

Our solution.

All our multi-storey car park drainage systems, such as our **BG-FLEX** steel channels or our **FILCOTEN®** HPC (High Performance Concrete) systems, are in compliance with the A1 fire protection class. This means that, unlike channels made of polymer concrete or plastic and compliant with the B1 fire protection class they contain no combustible components and thus emit no smoke emissions.

Quiet channels for a quiet parking facility.

The challenge.

The exceptionally heavy traffic that rolls into multi-storey car parks, especially at peak times, is not only a source of noise pollution for parking guests and the neighbouring areas but also pose a particular challenge to the installed drainage systems due to the dynamic loads to which they are subjected. Such a traffic volume can quickly result in significant wear and tear on the structure. The consequences: noisy, clattering sounds and unnecessary refurbishment work.

Our solution.

BG-Graspointner car park channels are exceptionally robust and durable and easily cope with the very dynamic loads as well as the high shear forces and torques. Monolithic channel systems (**BG-FILCOTEN®** parkline) or channels with fixed covers minimise any rolling noises.

Rocks the parking facility like none before.

The conditions inside a multi-storey car park pose very different challenges for drainage systems. In the BG-FILCOTEN® parkline, a channel has been created to cope with these conditions like no other.

This is all made possible by the FILCOTEN® HPC (High Performance Concrete).

A modern, high-performance mineral concrete that makes a highly-developed structure possible and which gives the channel a wealth of positive features in a multi-storey car park.

The best drainage performance, with maximum efficiency.

Alongside optimized drainage performance, the parkline system also offers a variety of properties for entirely new opportunities for increasing efficiency, both during installation and in day to day use.



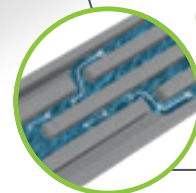
Intelligent drain cover

- Stainless steel drain cover
- Can easily be removed for cleaning
- Functions as a sturdy walkway bridge



Drainage-optimized channel body

The draining water is channeled into the drain in the center via the two branch channels.



bottom outlet

DN 100 (drainpipe, required on-site)

Comb profile

- Suitable for wheelchairs
- Slot width of 12.5 mm, 17 mm or 18 mm, based on the requirements of EN 1433
- Almost no height difference from the surrounding roadway



System representation: BG-FILCOTEN® parkline NW 150, BH 35



Innovative connecting element

- Allows for a wide variety of combinations for channel runs (cross, T/L connection)
- Made entirely from FILCOTEN[®] HPC, high stability
- Efficient water conductivity thanks to intelligent construction

Perfectly engineered sealing joint

- Sealable butt joint, easily accessible
- and inspectable
- in line with EN 1433
- In order to create a sealed system and connect with the surface coating system, a seal should be made below the parkline elements.

Verified LCA (Life Cycle Assessment)

- low greenhouse gas emission levels
- Manufactured with 100% green electricity
- Resource-efficient manufacturing process

Load class C 250

Installation height/width

Available in three versions:
H = 35 mm / W = 150 mm
H = 50 mm / W = 150 mm
H = 50 mm / W = 300 mm

Perfect for renovations.

- Can be applied regardless of previously used systems owing to the flat construction
- Can be installed in existing recesses

A perfect fit

Side fixing pouches reinforce the firm fit in the concrete bed and ensure additional stability.



Very quiet

- The even cross-section & monolithic construction prevents noise when driven over
- No complaints from residents about rattling gratings



Powerful connection

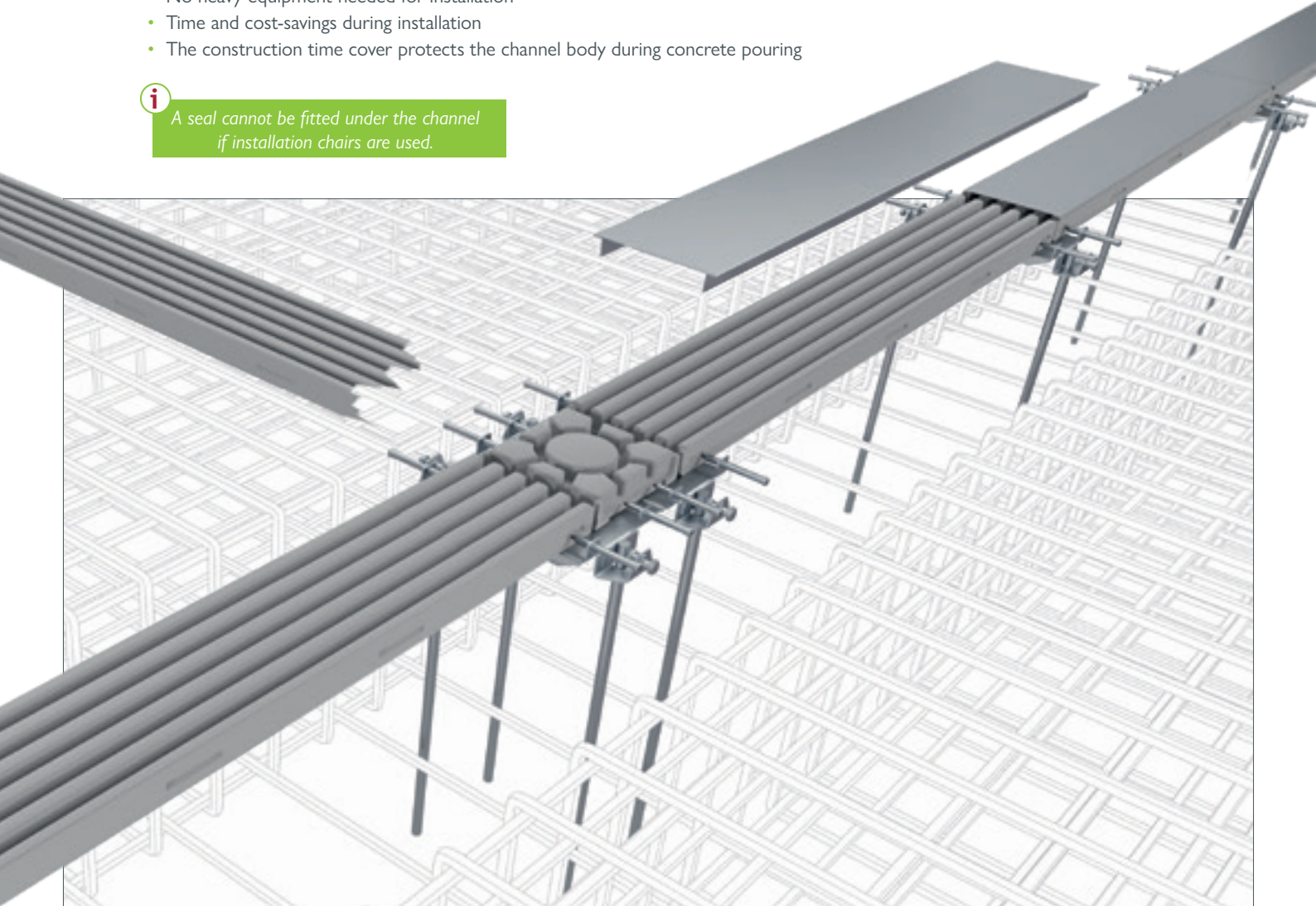
The coefficient of expansion for FILCOTEN[®] HPC is identical to that of concrete, meaning that the material is perfectly suited to ensuring a long-term, firm fit.

Simple, extremely sturdy laying.

- Mounting with installation chairs possible
- Channel bodies are pre-installed with elevation and are then completely set in concrete
- Fastening with screws ensures quick and easy laying as well as high stability
- No heavy equipment needed for installation
- Time and cost-savings during installation
- The construction time cover protects the channel body during concrete pouring



A seal cannot be fitted under the channel if installation chairs are used.



Easy cleaning and maintenance

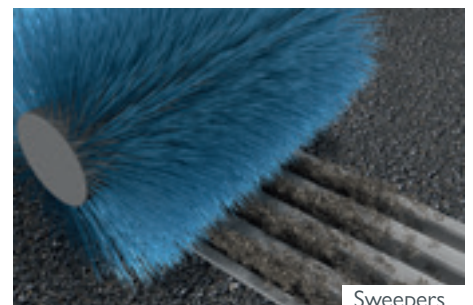
- No separate grates
- Easy to check for contamination without removing gratings
- Easy to clean thanks to clear outlet cross-sections without covers



Joint raking



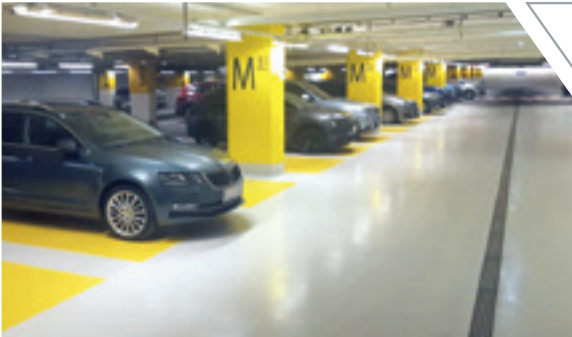
Pressure washer



Sweepers

Take the practical test – with our BG blog.

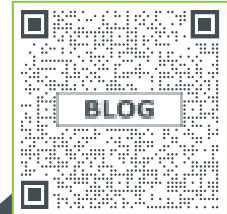
Discover our case studies on multi-storey car park drainage.



SILLPARK SHOPPING CENTER

Only the best

Nowadays, shopping centers are modern, vibrant urban spaces offering a wealth of experiences. A pleasant journey ...



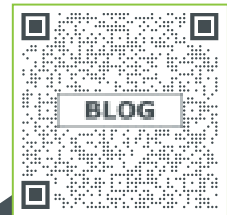
www.say.bg/en/blog-sillpark



APARTMENT BUILDINGS GÜMLIGEN

Looking for the right material

Sometimes it's worth sitting out on tendering and looking for alternative possibilities ...



www.say.bg/en/blog-guemlingen



BG-FILCOTEN® parkline

Keep calm and park your car.

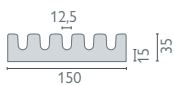
When it comes to drainage, multi-storey car park planners and operators are faced with a number of challenges ...



www.say.bg/en/blog-parkline

up to load class C 250

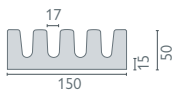
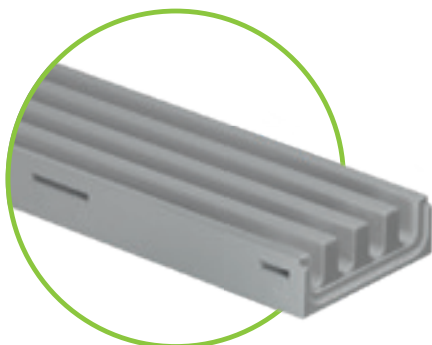
BG-FILCOTEN® parkline



BG-FILCOTEN® parkline, nominal width 150 – BH 35 mm

Channel made of FILCOTEN® HPC (High Performance Concrete) up to class C

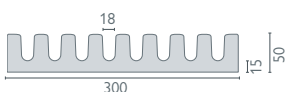
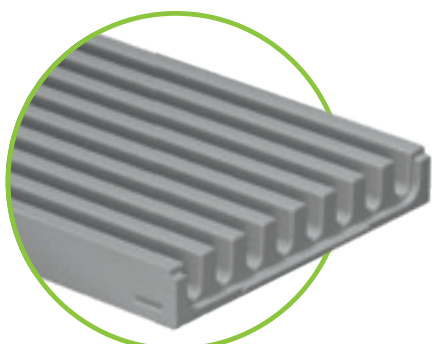
Item no.	SW in mm	Length in mm	Height in mm	Volume in running m.	Weight in kg
Channel without slope					
12515005	12,5	1000	35	1,1	9,2
Channel with bottom outlet DN 100					
12515075	12,5	1000	35	1,1	8,9



BG-FILCOTEN® parkline, nominal width 150 – CH 50 mm

Channel made of FILCOTEN® HPC (High Performance Concrete) up to class C

Item no.	SW in mm	Length in mm	Height in mm	Volume in running m.	Weight in kg
Channel without slope					
12515001	17	1000	50	2,0	11,9
Channel with bottom outlet DN 100					
12515071	17	1000	50	2,0	11,6



BG-FILCOTEN® parkline, nominal width 300 – CH 50 mm

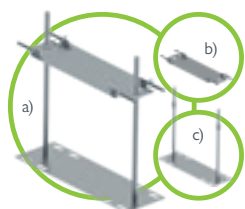
Channel made of FILCOTEN® HPC (High Performance Concrete) up to class C

Item no.	SW in mm	Length in mm	Height in mm	Volume in running m.	Weight in kg
Channel without slope					
12530000	18	1000	50	4,5	25,3
Channel with bottom outlet DN 100					
12530070	18	1000	50	4,5	25,0

Accessories

for BG-FILCOTEN® parkline

Item no.	Accessories	Material	Weight in kg
parkline, nominal width 150 – CH 35 mm			
12515084	Cross corner element, 150/150/35 mm, H = 35 mm, SW 12.5 mm	FILCOTEN® HPC	1,3
12515383	Drain cover, double bridge	stainless steel	0,2
12515385	Front cap	stainless steel	0,1
19015926	SET installation supports, size 1, lower section, including nuts ¹⁾	galvanised	1,1
19015927	SET installation supports, size 1, top section, including bolts	galvanised	0,4
12515291	Construction time cover, 1000/150/14 mm	galvanised steel	1,5
12515392	Cleaning rake (without handle)	stainless steel	0,3
parkline, nominal width 150 – CH 50 mm			
12515081	Cross corner element, 150/150/50 mm, H = 50 mm, SW 17 mm	FILCOTEN® HPC	1,8
12515384	Drain cover	stainless steel	0,1
12515386	Front cap	stainless steel	0,1
19015926	SET installation supports, size 1, lower section, including nuts ¹⁾	galvanised	1,1
19015927	SET installation supports, size 1, top section, including bolts	galvanised	0,4
12515292	Construction time cover, 1000/150/14 mm	galvanised steel	1,3
12515391	Cleaning rake (without handle)	stainless steel	0,2
parkline, nominal width 300 – CH 50 mm			
12530080	Cross corner element, 300/300/50 mm, H = 50 mm, SW 18 mm	FILCOTEN® HPC	7,6
12515384	Drain cover	stainless steel	0,1
12530386	Front cap	stainless steel	0,1
19030926	SET installation supports, size 3, lower section, including nuts ¹⁾	galvanised	1,4
19030927	SET installation supports, size 3, top section, including bolts	galvanised	0,7
12530291	Construction time cover, 1000/300/20 mm	galvanised steel	2,8
12530390	Cleaning rake (without handle)	stainless steel	0,5

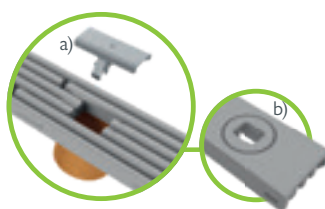


Installation supports, galvanised, to match NW

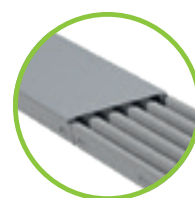
- a) Top part set + lower part set
- b) Top part set incl. bolts
- c) Lower part set incl. nuts



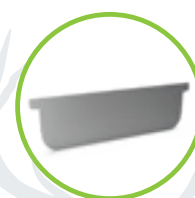
cross element from FILCOTEN® HPC for easy creation of train crossings



a) Drain cover made of stainless steel
b) Outlet opening



Construction time cover to fit nominal width made of galvanised steel



Front cap made of stainless steel

¹⁾ If the lower part is not used, threaded rods and nuts must be provided by the customer.

BG-FILCOTEN[®] When opposites,

FILCOTEN[®] HPC (High Performance Concrete) is a material that unites outstanding technical properties with ecological sustainability. The optimised high-density structure of HPC makes it possible to construct highly stable lightweight drainage channels – but it's the idea behind it that makes it unique.

Unique concept, revolutionary results.

Our engineers wanted to create something which combines two extreme opposites: maximum performance with minimal environmental impact.

Maximum performance, minimal environmental impact.

After intensive development, they finally achieved their goal. FILCOTEN[®] HPC embodies these opposites, making it unique in the marketplace.



Minimal weight

- FILCOTEN[®] HPC enables a lightweight construction
- quick and easy to install
- Dimensionally stable, robust concrete elements



Maximum robustness

- Unsurpassed stability and durability
- High pressure resistance clearly exceeding the requirements per EN 1433 for concrete channels



Resistant to extreme temperatures and UV light

- Maximum resistance to frost and de-icing salt
- UV resistant



Fireproof

- Non-combustible building material – Class A1
- Therefore emits no toxic smoke



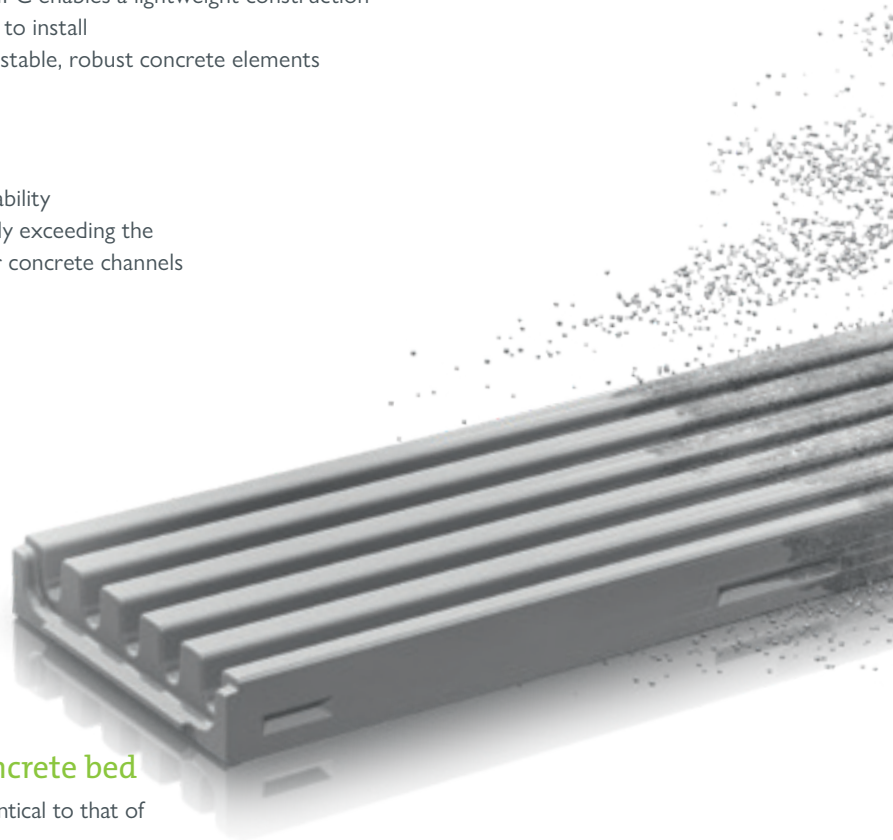
Perfect hold: in the concrete bed

- Ideal expansion coefficient, identical to that of the surrounding concrete



High drainage performance

- Low water absorption and penetration
- Smooth channel surface for high drainage performance and optimal self-cleaning effect



attract great things.



Verified Life Cycle Assessment

- ecological transparency under ISO 14040/14044 and EN 15804
- ideal for sustainable construction projects



Sustainable production

- Manufactured with 100% green power
- Resource-efficient manufacturing process
- approx. 40% from in-house photovoltaic plant



End-to-end resource conservation

- 100% recyclable, certified
- Quality class U-A (certified by the Bautechnische Versuchs- und Forschungsanstalt Salzburg (bvfs)).



Certified for sustainability and low emissions

- Certified environmental and energy management under ISO 14001 or 50001 at the location of Oberwang / AT
- certified biologically sound construction material that meets the stringent testing criteria of the IBR, the Institute for Biologically Sound Construction, for heavy metals, VOCs, biocides and radioactivity, styrene free ¹⁾



The **car park channel** that **really** thinks outside the **box.**

The new reference class for parking garages and underground car parks:
BG-FILCOTEN® city mini: the first drainage channel made entirely of
FILCOTEN® HPC, with all the corresponding advantages: extremely
sturdy and robust, yet lightweight, highly effective and fully sealable.

Double the efficiency: for corrosion protection and costs.

The city mini does not require any edge protection, making it both
cost-effective and fully corrosion-resistant. Because edges without
galvanised steel or cast iron don't corrode.



up to load class C 250

One-material drainage channel

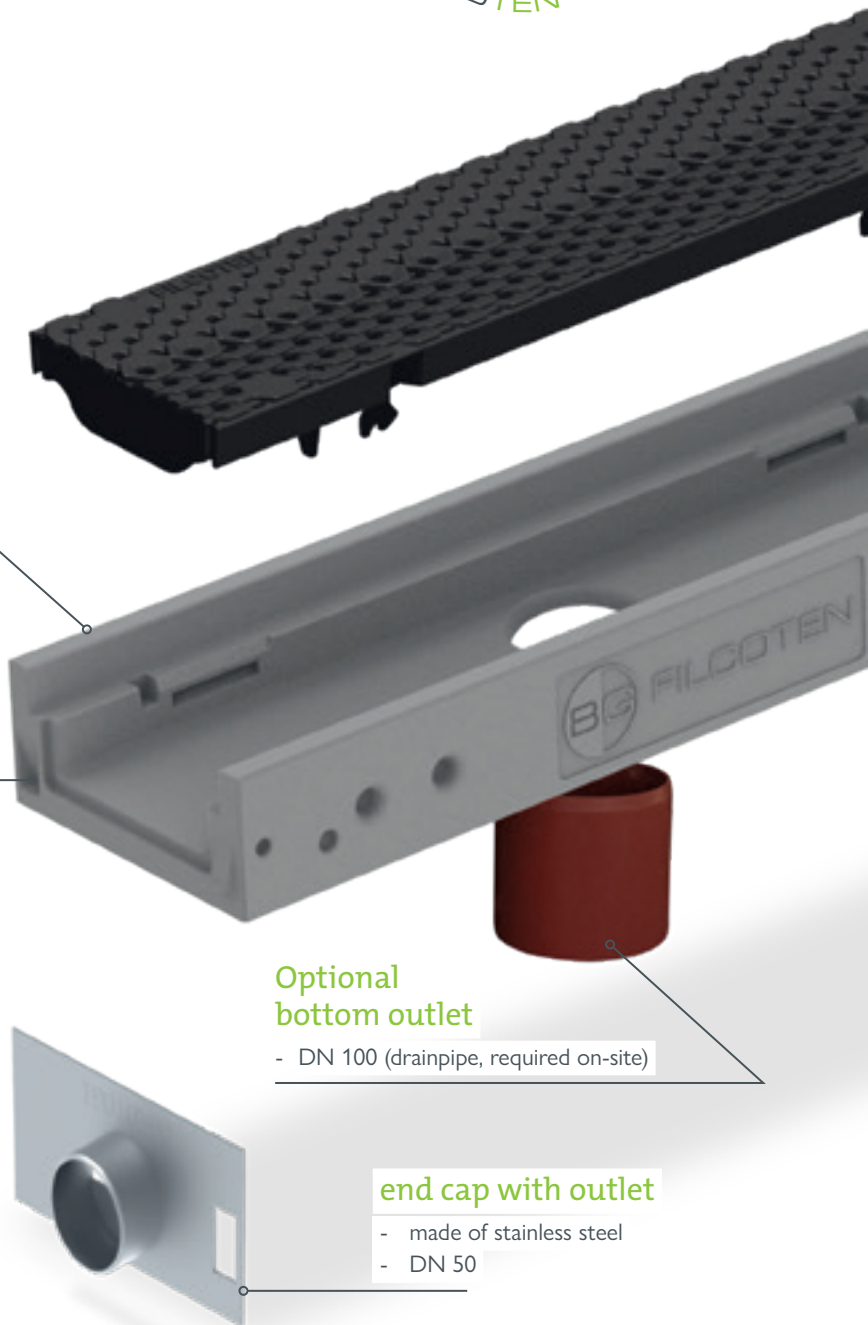
- Complete manufactured HPC unit
 - channel body, edge and grating bearing
- Guards against longitudinal movement and fiX-locking recess in the HPC channel body
- very low construction height of 65 mm

Tongue/tenon system

- non-directional positioning possible
- Rebated channel edge seals off the water flow

Your benefits at a glance:

- Drainage channel made entirely of FILCOTEN® HPC
- environmentally friendly, stable and lightweight
- quick and easy installation
- With COMBee designer grating or plastic slotted grating for a completely corrosion-free system
- integrated anchoring pockets
- with optional DN 100 drain
- very low construction height of 65 mm
- up to load class C 250



Optional bottom outlet

- DN 100 (drainpipe, required on-site)

end cap with outlet

- made of stainless steel
- DN 50



Plastic slotted grating, SW 8x40

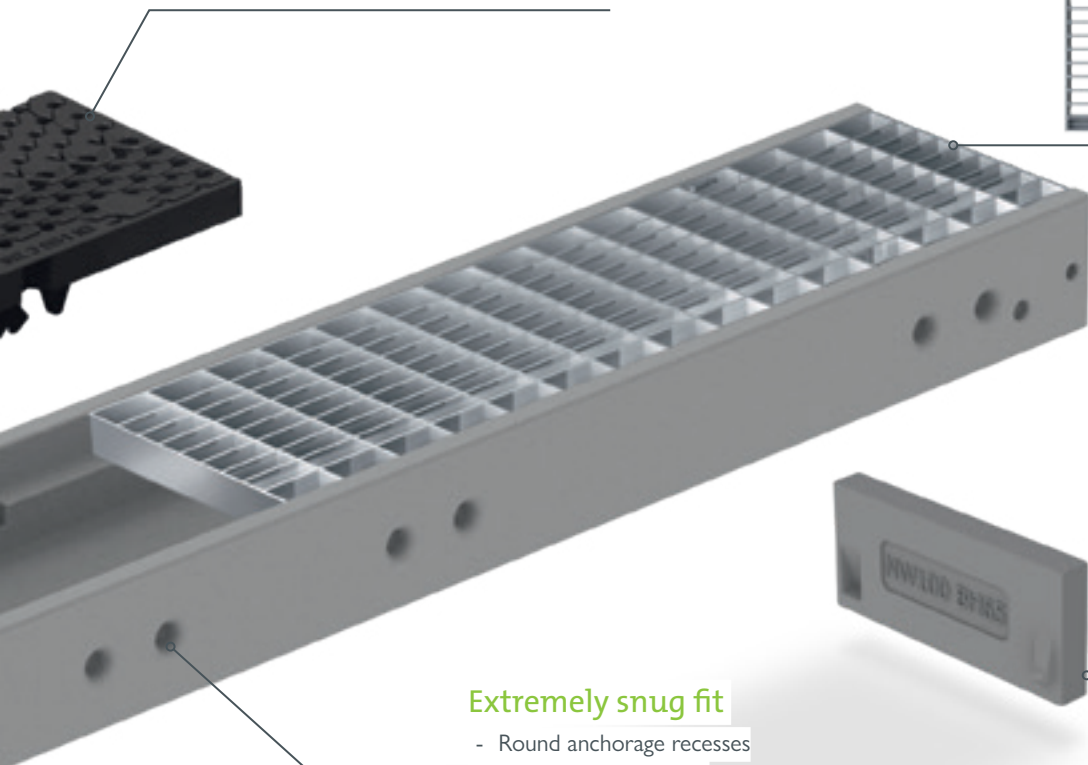
- made of PA6 polyamide; corrosion-free and UV-resistant
- up to load class C 250
- fiX-locking
- R11 slip resistance

COMBee design grating

- made of polyamide PA6; corrosion-free and UV-resistant
- up to load class C 250
- fiX locking system, protection against longitudinal movement
- anti-slip honeycomb profile

Mesh grating, MW 30/10

- made of stainless steel
- up to load class C 250
- fiX locking system, protection against longitudinal movement



front cap

- from FILCOTEN[®] HPC

Extremely snug fit

- Round anchorage recesses make for durable hold
- Permanent fit in the foundation thanks to identical linear expansion coefficient
- Perfect connection between HPC and concrete

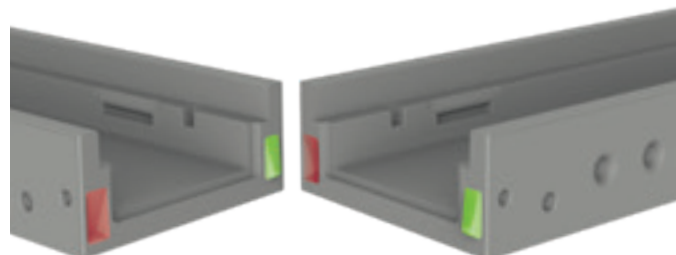
Download here:

Tender text, datasheets, DoP, installation guidelines, installation detail, product drawing, BIM-Data



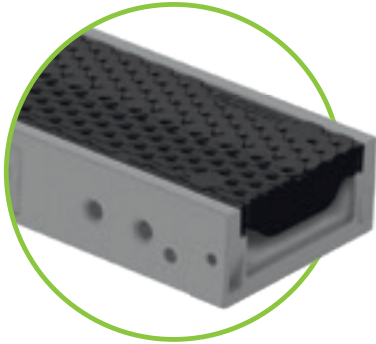
Innovation for increased precision:

The wedge-shaped connector system enables direction-independent installations and precise connection of the channel elements. In this way, the installation of the BG-FILCOTEN[®] city mini becomes much easier and more space-saving.

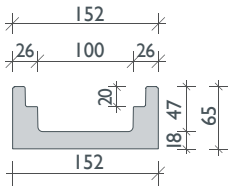


up to load class C 250

BG-FILCOTEN® city mini



BG-FILCOTEN® city mini 100
incl. COMBee design grating



BG-FILCOTEN® city mini

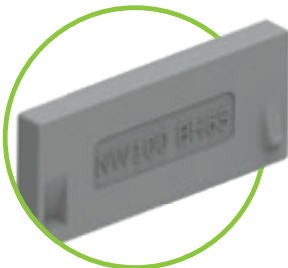
Complete drainage channel made of FILCOTEN® HPC (High Performance Concrete) incl. edge and grating bearing, protection against longitudinal movement and fiX-locking

Item no.	Type channel	Length in mm	Height ¹⁾ in mm	Weight in kg
Channel without slope				
10810000	city mini	1000	65	10,2
Channel with bottom outlet DN 100				
10810070	city mini	1000	65	10,0

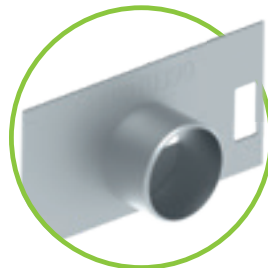
Accessories

for BG-FILCOTEN® city mini, NW 100

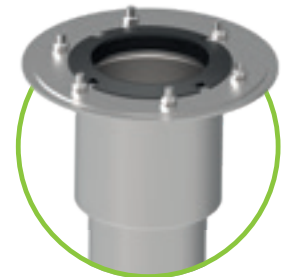
Item no.	Accessories	Material	Weight in kg
19010001	Front cap	FILCOTEN® HPC	0,3
19010390	End cap with outlet DN 50	Stainless steel	0,2
24910300	Point drainage with trim ring	Stainless steel	3,3



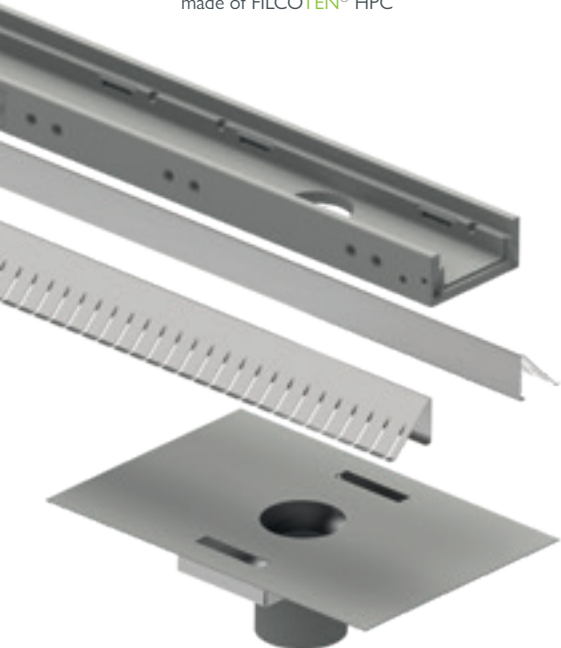
city mini front cap,
made of FILCOTEN® HPC



end cap with outlet DN 50,
made of stainless steel



point drainage (V2 1.4301 stainless steel)
with vertical outlet DN 110



Bespoke solution: city mini with second drainage level

BG-FILCOTEN® city mini with optionally available version for a second drainage level, with drainage angle bracket perforated on both sides and point drainage (1.4301 stainless steel) to seal the building roofing with a vertical outlet DN 110.



Drainage angle bracket perforated on both sides and point drainage (1.4301 stainless steel) for second drainage level available on request.



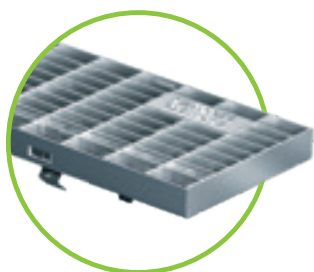
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Sustainable innovation.

³⁾ No anti-vandalism locking device possible.

Gratings

for BG-FILCOTEN® city mini, NW 100

Item no.	Gratings	Material	Dimensions in mm	Load class as per EN-standard	Slot/mesh width in mm	Weight in kg	Inlet cross-section
17010322	1 Mesh grating	Stainless steel	1000/122/20	C 250	MW 30/10	3,3	910 cm ² /m
17010401	2 COMBee designer grating ¹⁾	Plastic PA6	500/123/20	B 125	Ø 7.3 mm	0,9	290 cm ² /m
17010402		Plastic PA6	500/123/20	C 250	Ø 7.3 mm	1,1	290 cm ² /m
17010403	3 Plastic slotted grating ¹⁾	Plastic PA6	500/123/20	B 125	SW 8x40	0,9	420 cm ² /m
17010404		Plastic PA6	500/123/20	C 250	SW 8x40	1,1	420 cm ² /m



1 Mesh grating



2 COMBee design grating



3 plastic slotted grating

Further gratings for the BG-FILCOTEN® pro and pro mini can be found in the channel and grate system or BG-BLACKLABEL design line brochure:

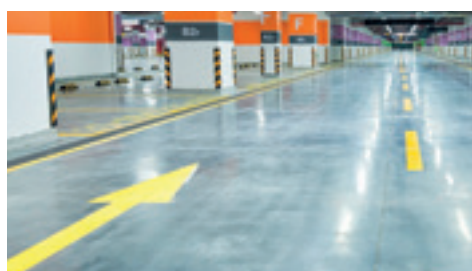


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References



When environmental protection is part of the DNA ...

Sustainability

is one of the most important components of our corporate culture. This becomes obvious from our materials, manufacturing processes and energy sources. After all, we are a member of the **Climate Alliance Austria**, the country's largest climate protection network, for a reason.

Our view of entrepreneurship is not to look at the profit alone.

The company's success and development will always be closely connected to its responsibility for the community – and for the environment. After all, what good is a huge profit if you can't bare to look at yourself in the mirror at the end of the day?

Lived sustainability in all its facets.

For this reason, the sustainable use of our environment is a central element of our corporate culture. BG-Graspointner attaches great importance to transparency.

Certified environmentally friendly production.

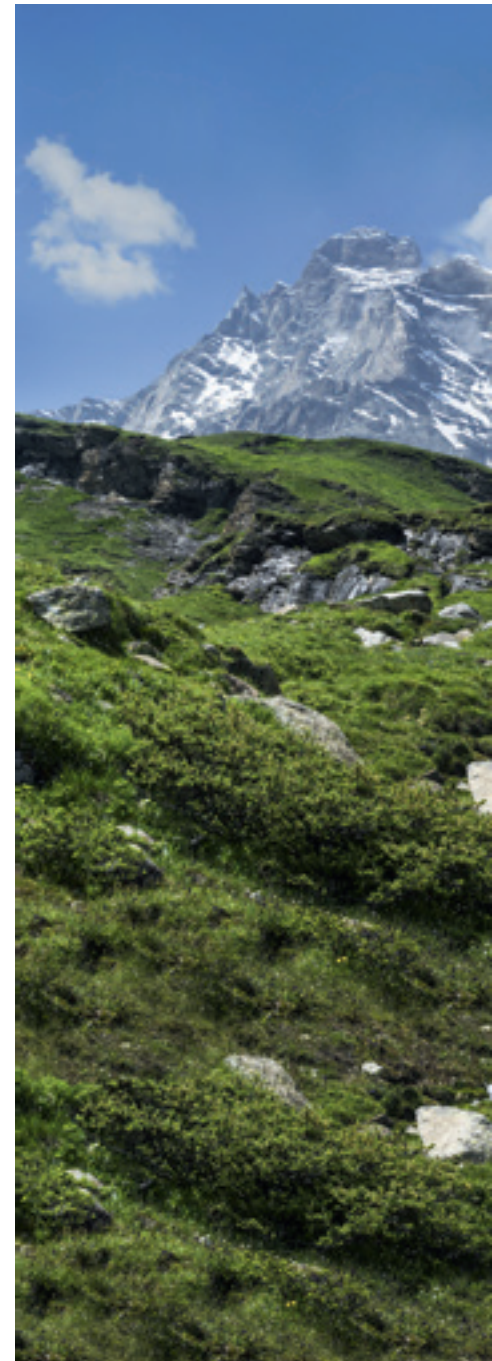
In the production process, we focus on maximum environmental protection, whether in the selection of raw materials or in the avoidance of unnecessary waste. With this in mind, we have implemented a certified environmental and energy management system in accordance with ISO 14001 and 50001 at our location in Oberwang, Austria.

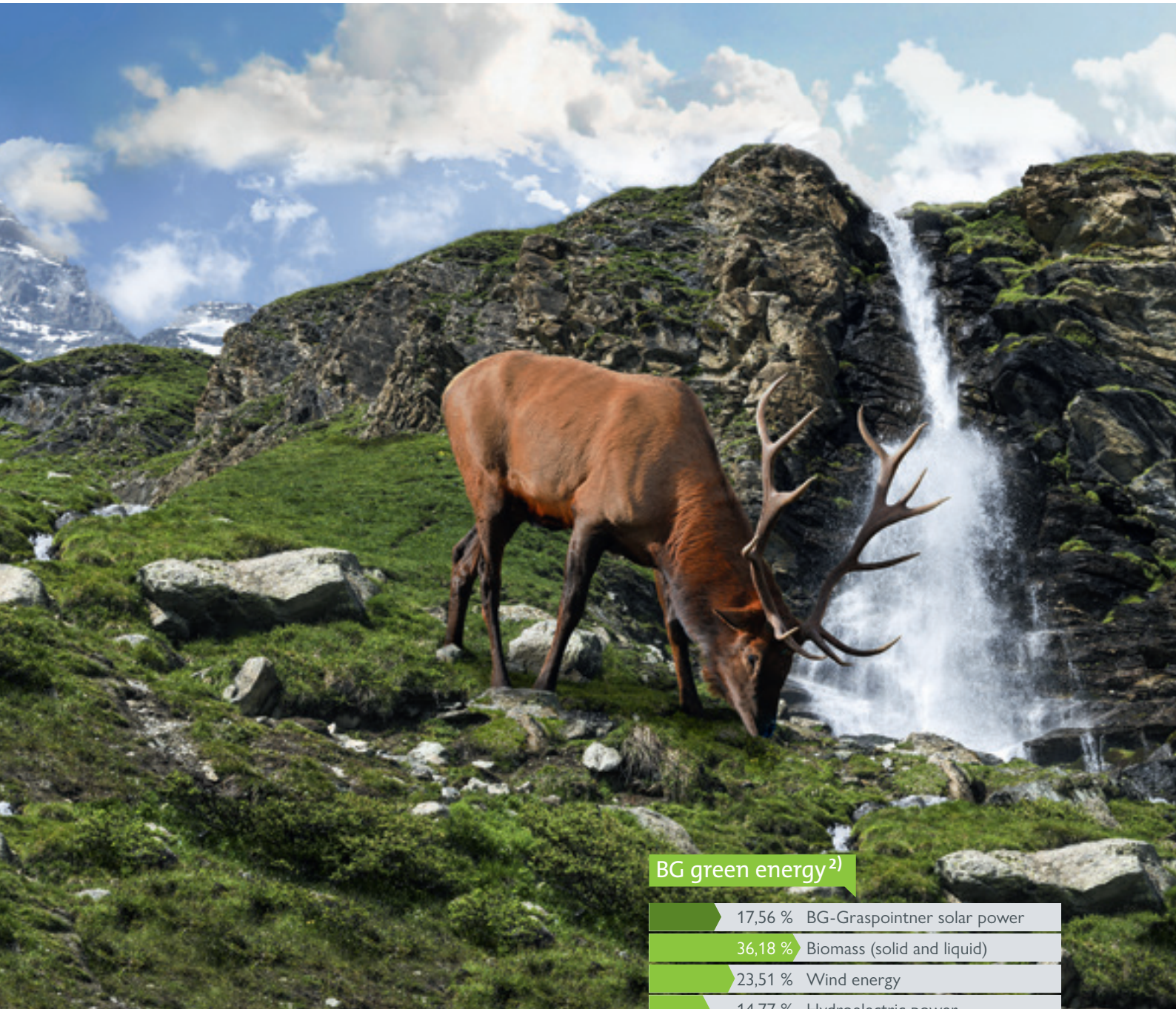
High-performance products: with a view to protecting people and nature.

We develop our products with the aim of making them as efficient as possible. And by efficiency, we also understand that these products protect people and the environment as much as possible.

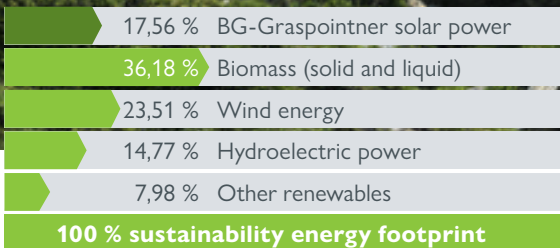
FILCOTEN® HPC as an example: environmental compatibility guaranteed.

Our most innovative material, FILCOTEN® HPC, is tested for harmful substances¹⁾ – guaranteed environmentally compatible and IBR-certified, 100% recyclable, and the economical use of raw materials make FILCOTEN® HPC unique in terms of its environmental performance.





BG green energy²⁾



- Yield from own PV-system in 2022
- Data external electricity mix 2022

Sustainable to the end: We use recyclable raw materials.

Most of our products are made of mineral raw materials or metal. They are therefore 100% recyclable and can be assigned to quality class U-A according to the certification by the Salzburg Institute for Construction Engineering Research (bvfs), a state accredited test and research facility for building constructions and building materials.

Clean energy for clean products.

We rely on the use of green energy. With our BG-FILCOTEN® channels we even use 100% renewable energies and completely renounce fossil fuels.



Coated concrete has a new best friend...

Drainage channel system BG-FLEX sigma tec

The BG-FLEX sigma tec lets nothing get through – especially when combined with coated concrete coverings. Especially designed for multi-storey and underground car parks, the drainage system is made of 1.4301 stainless steel, with higher-grade qualities available on request.

Perfectly fitted and tightly-sealed for long-lasting building structure protection.

Floor coatings can be laid so they are snug with the channel system for the long-lasting protection of the building structure. This is made possible by the channel-side flange that enables the completely snug and tightly-sealed fitting of floor coverings. This lastingly prevents the reinforcements from corroding through dripping and melt water contaminated with de-icing salt. Depending on the nominal width, stainless steel or plastic gratings can be selected from the BG-FILCOTEN® product range up to load class C 250.

up to load class C 250

Liquid-tight joints

- Bolted flange
- NBR seal
- Complete with stainless steel M8 bolting

front cap

- for a clean finish to the channel run
- Incl. surface strip
- With bolted seal

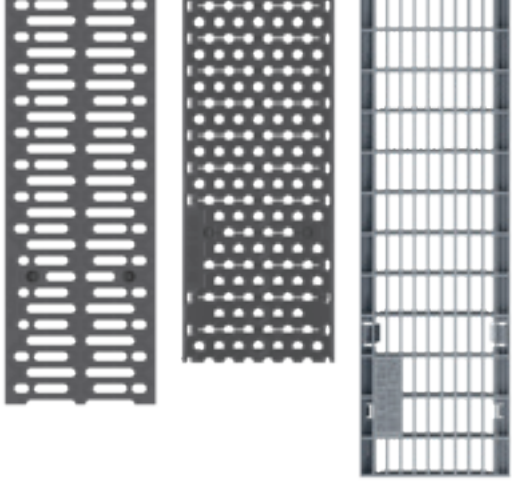
Elevation

- Height-adjustable mounting system as a complete kit

Perforated coating slot

- Permanently connects the floor coating to the perforated slot connection plate





Gratings

- COMBee designer grating and slotted grating made of plastic or mesh grating made of stainless steel
- Hole size 7 mm, SW 8x40 or MW 30/10
- Load class B 125 or C 250
- with fiX-locking
- bolting available at extra cost

Sump pit frame

- As connecting element
- Also for T, corner and cross connections
- as a stacking frame for a catch basin/sump pit constructed on-site

Anchor bar

- for permanent fixing of the channel body in the adjacent floor structure

Channel body

- made of 1.4301 stainless steel
- Nominal width: 100 mm
visible width: 125 mm
- Element length: 2000 mm
(adjustable to the line length)
- Material thickness: 1,5 mm

Outlet units

- outlet pipe with diameter DN 100
- individual placement in the channel run
- outlet as a supply line, e.g. for an oil separator



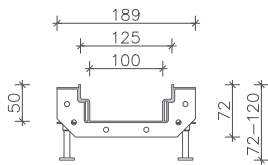
Further steel channel systems can be found in the BG-FLEX brochure:



say.bg/en/bg-flex_pdf

up to load class C 250

BG-FLEX sigma tec Drainage channel system



BG-FLEX sigma tec, nominal width 100 – STAINLESS STEEL

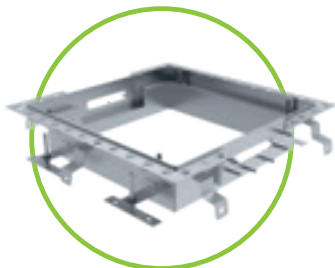
Channel element, without incline, with welded-on sealing flange, incl. elevation, seal and bolted butt joint

Item no.	Length in mm	External height in mm	Internal height in mm	Visible width in mm	Weight in kg
Flanged channels, no incline – material thickness: 1.5 mm					
20710351	2000	72	50	125	10,2
20710352	500	72	50	125	3,3
20710353	1000	72	50	125	5,6
20710354	1500	72	50	125	8,5

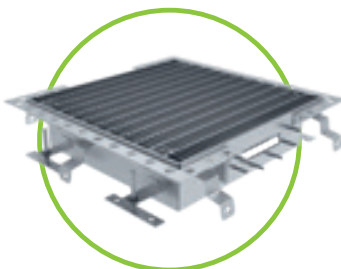
BG-FLEX sigma tec outlet elements

Sump pit frame, can be placed anywhere in the channel run, as a connecting, end, T or cross element

Item no.	Outlet elements	Material	Height in mm	Weight in kg
Outlet elements, material thickness 1.5 mm				
20710361	Channel element NW 100, L 500 mm, with outlet DN100		72	3,8
20710362	Fitting piece NW 100, length available on request, incl. downwards outlet DN 100		72	10,8
Sump pit frame, material thickness 1.5 mm				
20710371	End piece 400/400	stainless steel	100	4,0
20710372	Straight connection piece	stainless steel	100	4,0
20710373	Corner piece 90° 400/400	stainless steel	100	4,0
20710374	T-piece 400/400	stainless steel	100	4,0
20710375	Cross piece 400/400	stainless steel	100	4,0
Sump pit frame grating				
20700301	Mesh grating 397/397/30, MW 30/10, class B 125		30	10,0
20700302	Mesh grating 398/398/30, MW 30/10, class C 250		30	11,8



sigma tec
Sump pit frame



sigma tec
Sump pit frame
with mesh grating

Accessories

for BG-FLEX sigma, NW 100

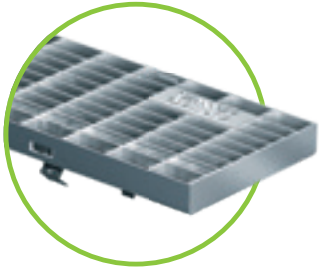
Item no.	Accessories	Material	Weight in kg
20710317	Front cap NW 100, incl. seal and fasteners	Stainless steel	0,6
Custom build	Base outlet 150x150 mm material thickness: 3 mm, outlet nozzles DN 100, incl. mesh grating	Stainless steel	0,5



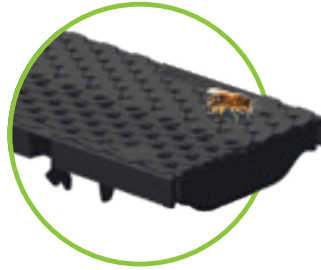
Gratings

for BG-FLEX sigma tec drainage channels, nominal width 100

Item no.	Gratings	Material	Dimensions in mm	Load class as per EN-standard	Slot/mesh width in mm	Weight in kg	Inlet cross-section
17010322 ¹⁾	1 Mesh grating	Stainless steel	1000/122/20	C 250	MW 30/10	3,3	910 cm ² /m
17010401 ²⁾	2 COMBee design grating	Plastic PA6	500/123/20	B 125	Ø 7.3 mm	0,9	290 cm ² /m
17010402 ²⁾		Plastic PA6	500/123/20	C 250	Ø 7.3 mm	1,1	290 cm ² /m
17010403	3 plastic slotted grating	Plastic PA6	500/123/20	B 125	SW 8x40	0,9	420 cm ² /m
17010404		Plastic PA6	500/123/20	C 250	SW 8x40	1,1	420 cm ² /m



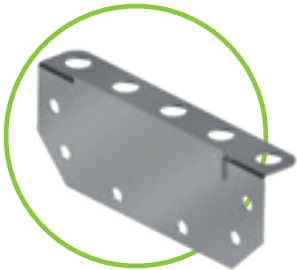
1 Mesh grating class C



2 COMBee design grating



3 plastic slotted grating



Front cap

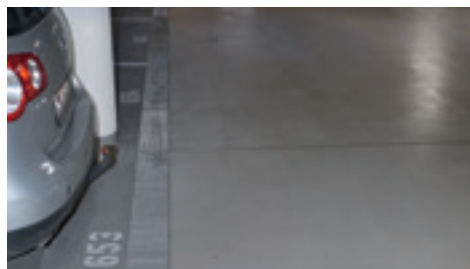


Custom build:
Base outlet 150x150 mm



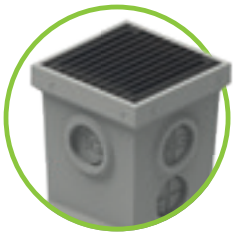
Please note that these products are manufactured to order – they are not stock products!

References



up to load class C 250

BG-FILCOTEN[®] spot-p sump pit



BG-FILCOTEN[®] spot-p

Sump pit made of FILCOTEN[®] HPC (High Performance Concrete) incl. preformed in- and outlet opening with forsheda-sealings

Item no.	Type channel	Length in mm	Width in mm	Height ¹⁾ in mm	Weight in kg/pc.
14140000	spot-p	440	440	500	51,5

Accessories

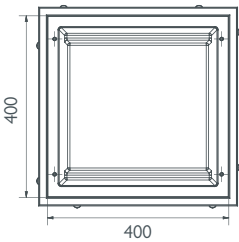
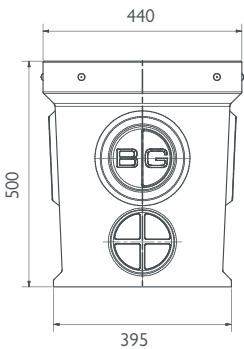
for BG-FILCOTEN[®] spot-p sump pit

Item no.	Accessories	Material	Weight in kg/pc.
30033	Surcharge for 1 x drilling DN 100 (Ø 138 mm)		
31310	Forsheda sealing DN 100	Elastomer	0,4
32108	fixing bolt M8x25 A2 (quantity: 4 pcs. per grating)	stainless steel	

Gratings

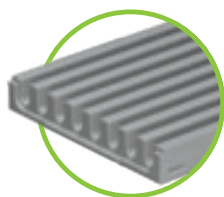
for BG-FILCOTEN[®] spot-p sump pit

Item no.	Gratings	Material	Dimensions in mm	Load class as per EN-standard	Weight in kg/pc.
17540201	Mesh grating	galvanised	400/400/30	car accessible	3,3
20700301		Stainless steel	400/400/30	B 125	10,0
20700302		Stainless steel	400/400/30	C 250	11,8



BG-FILCOTEN[®] spot-p sump pit made of FILCOTEN[®] HPC with preformed part (Ø 138 mm) for a Forsheda sealing DN 100

Compatible channel systems for BG-FILCOTEN[®] spot-p:



BG-FILCOTEN[®] parkline element heights 35 and 50 mm up to class



BG-FILCOTEN[®] city mini up to class C



BG-FLEX sigma tec up to class C



The **best choice** when a lot comes together in the **multi-storey car park.**

The BG-FILCOTEN® spot-p sump pit.

Made of innovative FILCOTEN® HPC, the BG-FILCOTEN® spot-p sump pit is the most tolerant component in our product range with its capacity to connect up to four different channels all at the same time.

Four connections, easy handling and maximum reliability.

Underground car parks, private garages, carports and workshops are the preferred terrain for the monolithically constructed BG-FILCOTEN® spot-p. With its 47-litre retention capacity, the spot-p feels very much at home here collecting surface water. The retained water can be quickly and easily pumped away: simply remove the grating, insert the pump, run the pump, done.

Innovative material

- monolithic component
- made entirely of FILCOTEN® HPC
- sturdy, durable and lightweight

Three different gratings

- B 125 and C 250 grates, 4-point boltable, made of 1.4301 stainless steel
- Car accessible, made of galvanised steel

Four connections

- Connectable on up to 4 sides
- With drain option if required
- Compatible with channel systems with a low construction height of up to 80 mm
- Connects via a DN 100 PVC pipe elbow and Forsheda seal

Optional outlet

- Drain option available for discharge into mineral oil separator

Your benefits at a glance:

- Sturdy, lightweight and durable thanks to the FILCOTEN® HPC monolithic structure
- Can connect up to four different channels
- Easy to handle and maintain
- Suitable for garages, carports, underground car parks and workshops

On your ramp set go

Even multi-storey car parks need to be exceptionally robust at times. This is where the BG-FILCOTEN® pro channel system squares the circle – because it is not only extremely durable up to class E 600, whereby bolted gratings provide high levels of strength and resistance to the dynamic loads acting against the ramps. The system is also lightweight and easy to install.

Maximum hydraulic power, minimal water overshoot.

When all is said and done, the hydraulic performance of the BG-FILCOTEN® pro is what makes it a stand-out product. We recommend mesh or longitudinal bar grating – this minimises any overshoot and is therefore ideal for use on ramps.

And on the subject of major benefits: Low construction heights are frequently required in multi-storey car parks. This is where the BG-FILCOTEN® pro mini comes into play – to make your building project a reality.

Load class E 600



Three edge variants

Edges can be made of galvanised steel, stainless steel or cast as required.

Channel geometry / smooth surface

The optimised channel geometry and the smooth surface of FILCOTEN® HPC ensure maximum flow and perfect self-cleaning effects.

Safety joint

A sealable safety seam enables a sealed connection between the individual segments.

Outlet points, as standard

Every channel body without an inner slope has a vertical outlet option.

Noiseless thanks to bolted-on ductile iron grating

As an alternative to the fiX locking system, cast iron gratings in cl. D or E (see table depending on the nominal width) can be bolted to the cast iron edge with 4-point bolting. This ensures that the grating will not rattle when driven on, including during high traffic frequency. At the same time, the fasteners can be replaced quickly and easily at any time. The cage nuts are replaceable and securely fit in the cast iron edge.



Download here:

Tender text, datasheets, DoP, installation guidelines, installation detail, product drawing, BIM data



www.say.bg/en/pro/download

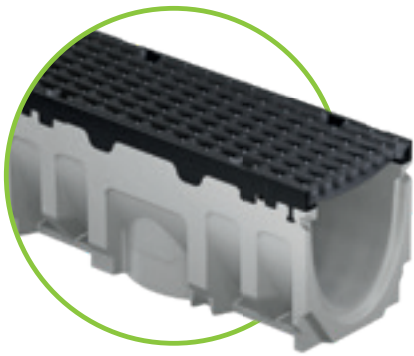
Perfect channel installation

Anchoring ribs ensure a secure bonding and anchoring of the channel with the surrounding concrete bed.

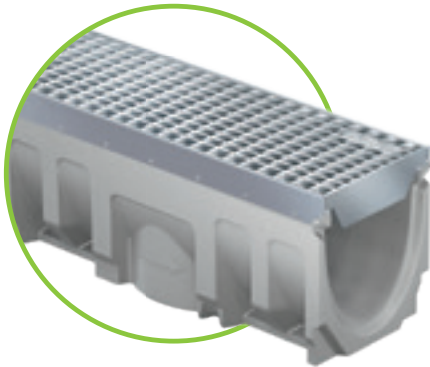


up to class E 600

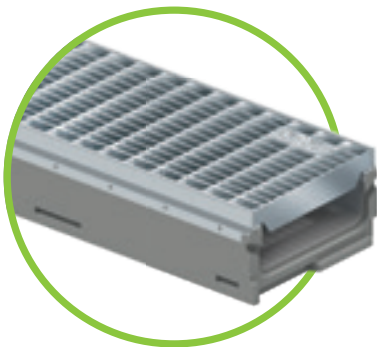
BG-FILCOTEN[®] pro



BG-FILCOTEN[®] pro G 150
incl. cast iron edge



BG-FILCOTEN[®] pro E 150
incl. stainless steel edge

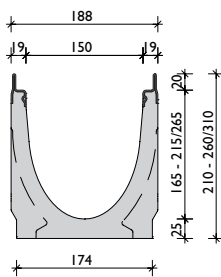


BG-FILCOTEN[®] pro mini E 150
incl. stainless steel edge

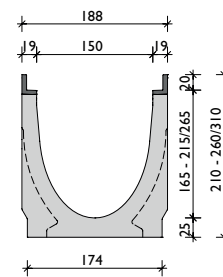
BG-FILCOTEN[®] pro NW 150 – channel body

Drainage channel made of FILCOTEN[®] HPC (High Performance Concrete) with integrated cast iron (G) or stainless steel edge (E), up to class E

Item no. G-edge	Item no. E-edge	Type channel	Length in mm	Height ¹⁾ in mm	Weight in kg	
					G	E
Channel without slope						
10615100	10615300	0	1000	210	31,8	30,8
10615180	10615380	0	500	210	15,7	15,2
10615161	10615361	5-0	1000	235	35,6	34,6
10615181	10615381	5-0	500	235	21,2	20,7
10615162	10615362	10-0	1000	260	38,8	37,8
10615182	10615382	10-0	500	260	19,8	19,3
10615164	10615364	20-0	1000	310	48,7	47,7
Channel with bottom outlet DN 150						
10615170	10615370	0	1000	210	30,7	29,7
10615171	10615371	5-0	1000	235	34,5	33,5
10615172	10615372	10-0	1000	260	37,7	36,7
10615174	10615374	20-0	1000	310	47,6	46,6
Channel with 0.5 % slope						
10615101-10	10615301-10	1 – 10	1000	215-260	32.5-38.5	31.5-37.5



stainless steel edge

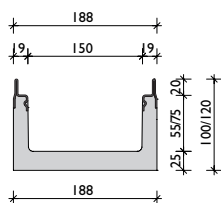


Ductile iron edge

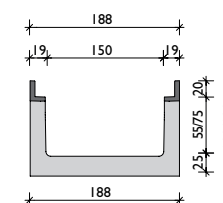
BG-FILCOTEN[®] pro mini NW 150 – channel body

Drainage channel made of FILCOTEN[®] HPC (High Performance Concrete) with integrated cast iron (G) or stainless steel edge (E), up to class E – very low construction height

Item no. G-edge	Item no. E-edge	Type channel	Length in mm	Height ¹⁾ in mm	Weight in kg	
					G	E
Channel without slope						
10515102	10515302	mini	1000	100	19,8	18,9
10515100	10515300	mini	1000	120	21,7	20,2
Channel with bottom outlet DN 150						
10515172	10515372	mini	1000	100	18,8	18,0
10515170	10515370	mini	1000	120	20,6	19,3



stainless steel edge



Ductile iron edge



Grating for ramps

for BG-FILCOTEN® pro & pro mini with integrated cast iron (G)
or stainless steel edge (E), up to class E

Item no.	Gratings	Material	Dimensions in mm	Load class as per EN-standard	Slot/mesh width in mm	Weight in kg	Inlet cross-section
17010322	1 Mesh grating	Stainless steel	1000/172/20	C 250	MW 30/10	6,9	1280 cm ² /m
17010323		Stainless steel	500/172/20	C 250	MW 30/10	3,6	1240 cm ² /m
17010101	2 Ductile iron elongated bar grating	Ductile iron	500/172/20	C 250	MW29/13	5,1	710 cm ² /m
17015111	3 Ductile iron slotted grating	Ductile iron	500/172/20	B 125	SW 10/150	4,5	515 cm ² /m
17010103	4 Ductile iron elongated bar grating, 4-point boltable	Ductile iron	500/172/20	D 400	MW25/13	5,2	725 cm ² /m
17010184	5 Ductile iron designer grating VIA	Ductile iron	500/172/20	D 400	SW 6-7	3,6	420 cm ² /m

i We recommend a mesh grating or longitudinal bar grating – this will minimise any over-shooting, thus making it ideal for use on ramps.

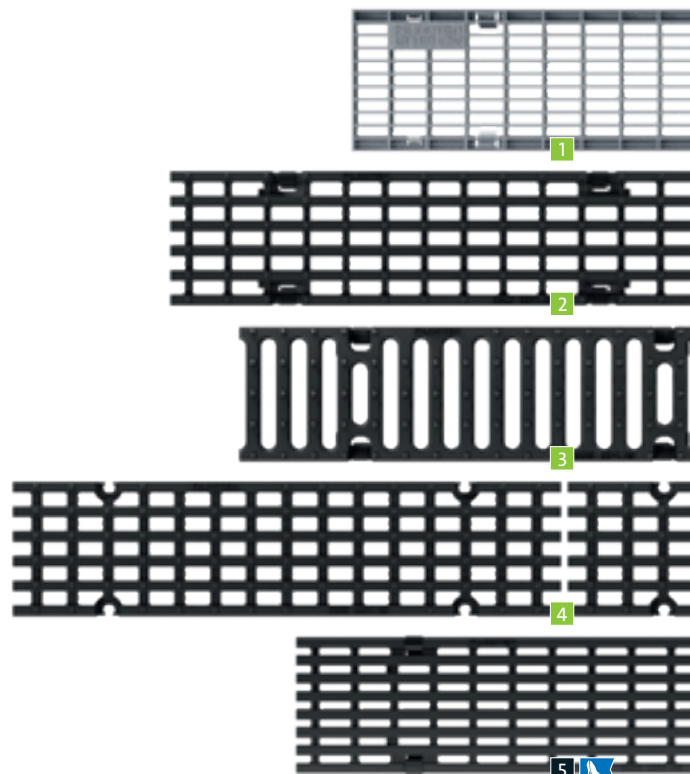
Further gratings for the BG-FILCOTEN® pro and pro mini can be found in the channel and grate system or BG-BLACKLABEL design line brochure:



www.say.bg/en/blacklabel_pdf



www.say.bg/en/bg-filcoten_pdf

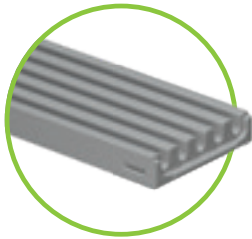


BG-BLACKLABEL
design line

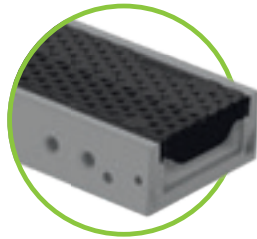
References



channels performance easily calculated.



BG-FILCOTEN® parkline
Available in three versions
Height: 35 to 50 mm
up to class C | page 6 – 13



BG-FILCOTEN® city mini
up to class C | page 14 – 17



BG-FLEX sigma tec
up to class C | page 20 – 23



BG-FILCOTEN® pro & pro mini
up to class E | page 26 – 29

ideal for ramp areas

Hydraulic channel bodies

Drainage channel made of FILCOTEN® HPC (High Performance Concrete) with integrated cast iron (G) or stainless steel edge (E), up to class E – very low construction height

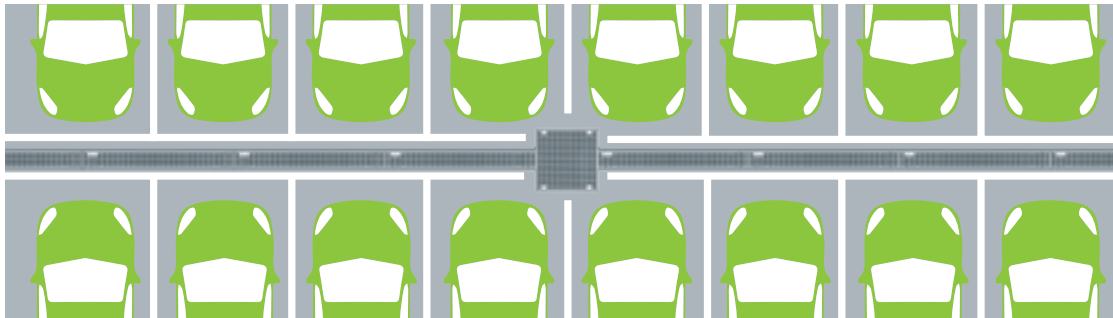
Channel type	parkline		city mini		sigma tec	pro mini
Nominal width	150	150	300	100	150	100
Height:	35	50	50	65	50	60
Capacity (l/m)	1,1	2	4,5	2,7	2,8	2,3
Qmax (l/s)	0,2	0,3	0,7	0,4	0,4	0,2
Safety reserve	400 %	650 %	1650 %	900 %	900 %	400 %



The average calculation of shallow and steel channels is based on a line length of 10 metres and free run-out for each channel type specified. In the sigma tec channels, the low construction height results in a very shallow water table, which allows only a small drainage capacity. We will be pleased to provide an exact hydraulic calculation adapted to the local conditions for you at any time.



Sample calculation drip water accumulation:

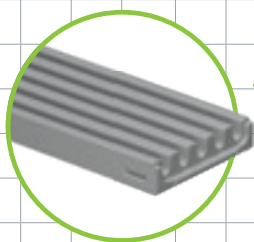
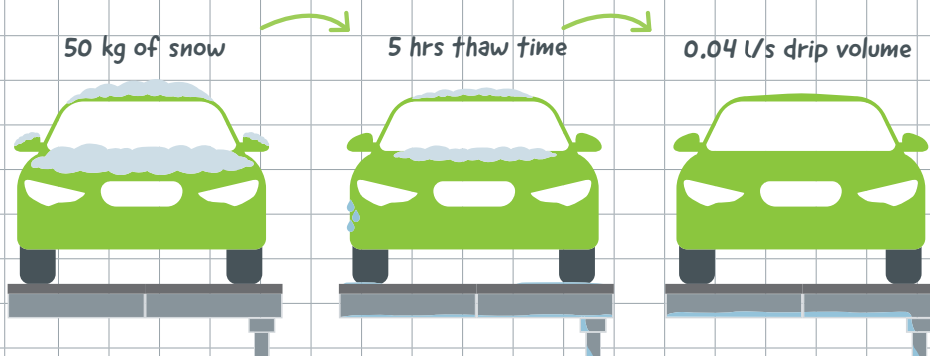


As a starting point, the extreme case of 16 cars is taken whereby these are covered in 50 kg of snow and parked in an underground car park.

$16 \text{ cars} \times 50 \text{ kg of snow} = 800 \text{ litres of water}$

Thaw and dripping time of snow: 5 hours $\times 60 \text{ min} \times 60 \text{ sec} = 18,000 \text{ sec}$

$800 \text{ l} : 18,000 \text{ sec} = 0.0444 \sim 0.04 \text{ l/s} = 100\% = \text{absolute minimum requirement}$



BG-FILCOTEN® parkline, NW 150, BH 35 mm

Drainage performance: 0.2 l/s based on 10m of channel run with outlet

= 400% safety reserve for longer maintenance intervals

Kickstart your project.

Get to know our **technical support**.

Which channel system do I need exactly?

How many channels do I need?

What should I consider with regard to the installation?

Which cover grates will fit?

What channel size is needed for the ramp?



To ensure that all your questions are answered and the project really gets going, you need very good support.
Like our technical support.

We lead by example.

You can find a few installation examples on the following pages to get an idea of what we do. Here, you'll find the first pieces of important information and suggestions for your project.

Schedule a consultation appointment.

You would like to get started right away? Then simply schedule a consultation appointment with our technical support before you get started on your project:

Phone: +43 6233/89 00-0

E-mail: office@bg-graspointner.com

We look forward to meeting you and discussing your project.

Yours sincerely, Robert Eder
Technical support

Tip: Further installation examples are available online at:



www.say.bg/en/installation

B G

Installation examples – for coatings

BG-FILCOTEN® city mini & parkline

General notes

The following installation guidelines and installation examples are intended for standard applications. The load class and the installation location according to EN 1433 have to be adapted to the location conditions from the planner. The generally-recognised technical rules and regulations must be observed during installation. For special cases, please contact the BG Technical Support team.

1. BG-FILCOTEN® city mini and parkline are set in a recess over an on-site structure seal – in accordance with the listed surface finishing system.
2. Begin by laying the channel runs from the junction to the outlet.
3. The channels are (selectively) set in the desired position using earth-moist concrete and are then infilled with epoxy – see sectional drawings for details.
4. The rebated joint between the channel bodies can be sealed or glued using appropriate sealing compounds – for a description of material and quantity calculations, see BG Sealing System (www.say.bg/en/sealingkit_pdf).
5. All adjoining coverings should slope towards the channel runs in order to ensure the water drainage.
6. In areas where higher exposure to chemical substances (e.g. de-icing chemicals, acids, bases, etc.) is to be expected, we recommend cleaning the channel runs and rinsing them with clean water sufficiently often.



BG-Sealing System

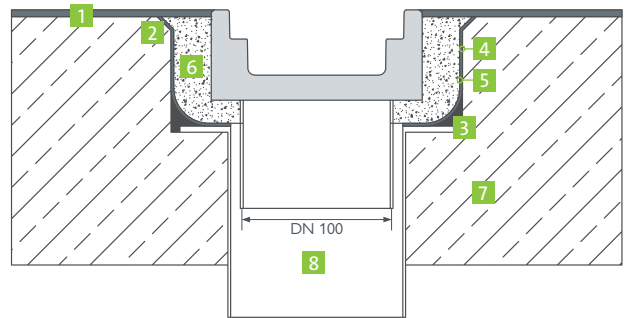
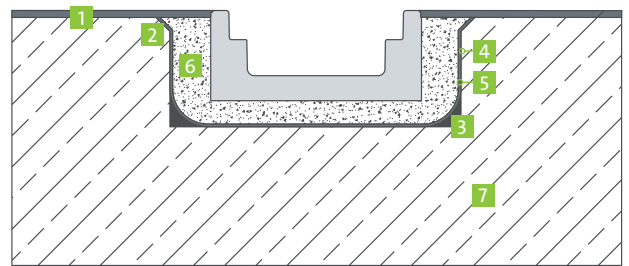
Sealing system suitable for all channels with safety seam – for sealing the channel joints

Download our materials description and materials calculation here:



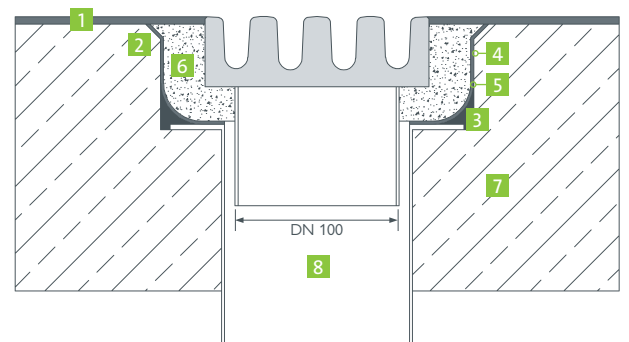
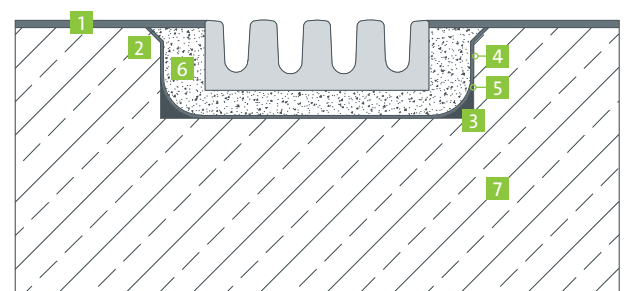
www.say.bg/en/sealingkit_pdf

BG-FILCOTEN® city mini: coated concrete Class A – C



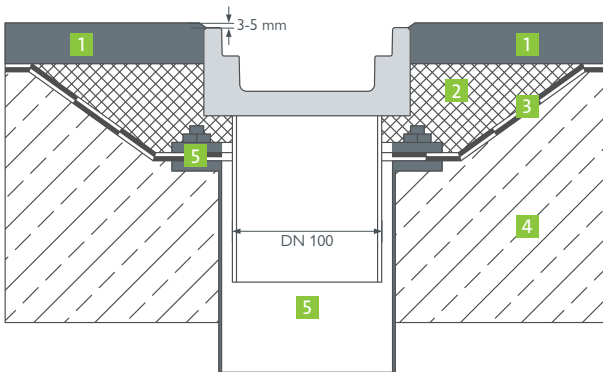
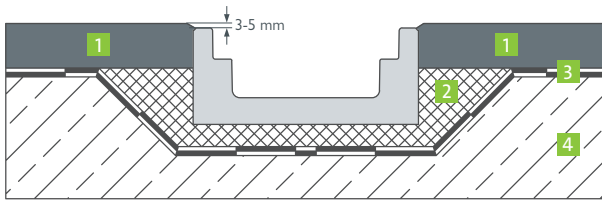
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|--|---|
| 1 coating according to specification of the planer | 5 building sealing with fleece reinforced |
| 2 Chamfering | 6 Epoxy grouting mortar |
| 3 Smoothing with epoxy mortar | 7 Steel-reinforced concrete surface |
| 4 Primer | 8 Pipe fair lead with bonding flange |

BG-FILCOTEN® parkline: coated concrete: Class A – C



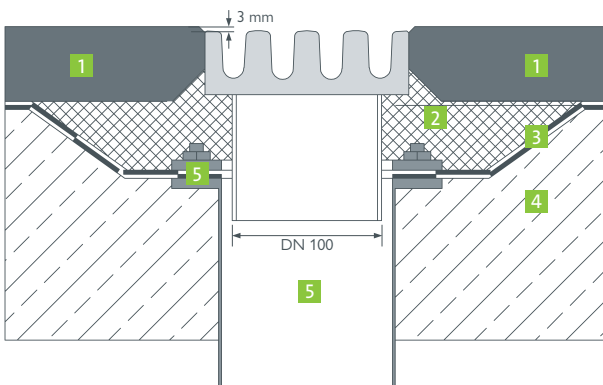
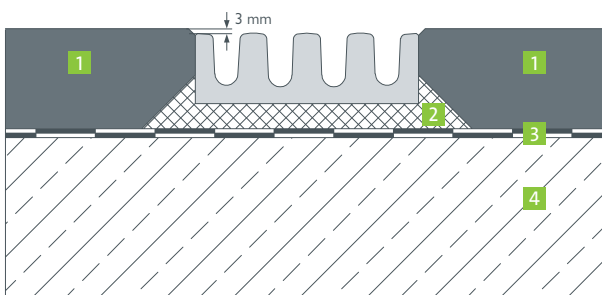
Installation examples – for asphalt

BG-FILCOTEN® city mini: Asphalt: Class A – C



- | | |
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| 1 Asphalt: | 4 Steel-reinforced concrete surface |
| 2 Microfine concrete | 5 Pipe fair lead with bonded flange |
| 3 waterproofing layer | |

BG-FILCOTEN® parkline: Asphalt, class A-C



for BG-FILCOTEN® city mini & parkline

General notes

The following installation guidelines and installation examples are intended for standard applications. The load class and the installation location according to EN 1433 have to be adapted to the location conditions from the planner. The generally-recognised technical rules and regulations must be observed during installation. In special cases, contact the BG applications engineering department.

1. BG-FILCOTEN® city mini and parkline channels are laid using bitumen lug sealing on a concrete foundation which is at least 2 cm thick in accordance with the Austrian standard B4710-1 or in micro-fine concrete in accordance with RVS 08.18.01 or a flex adhesive spreader. Depending on the structural requirements, a side wheel leveller setting in concrete is required – see cross-sections for details.
2. Begin by laying the channel runs from the junction to the outlet.
3. The rebated joints between the individual channel bodies can be sealed or glued using appropriate sealing compounds – for a description of material and quantity calculations, see BG Sealing System (www.say.bg/en/sealingkit_pdf).
4. When sealing the superstructure and the surface layer (asphalt), always ensure that the channel bodies are not damaged.
5. All adjacent cover layers should always be installed 3-5 mm above the upper surface of the channel in order to avoid mechanical damage and ensure that the water drains.
6. In areas where higher exposure to chemical substances (e.g. de-icing chemicals, acids, bases, etc.) is to be expected, we recommend cleaning the channel runs and rinsing them with clean water sufficiently often.

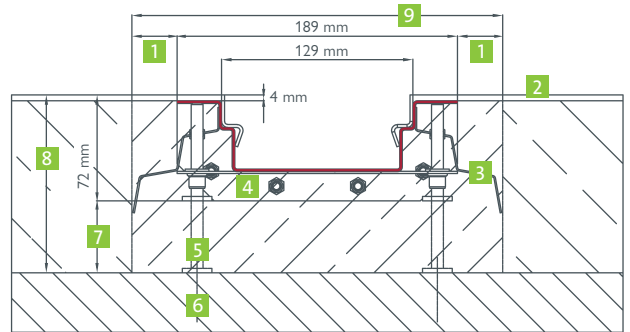
Installation examples – sigma tec

General notes

The following BG installation and maintenance guidelines and installation examples are provided for standard applications. The load class and the installation location according to EN 1433 have to be adapted to the location conditions from the planner. The generally recognised technical rules and regulations must be observed. In special cases, please contact the BG Technical Support team.

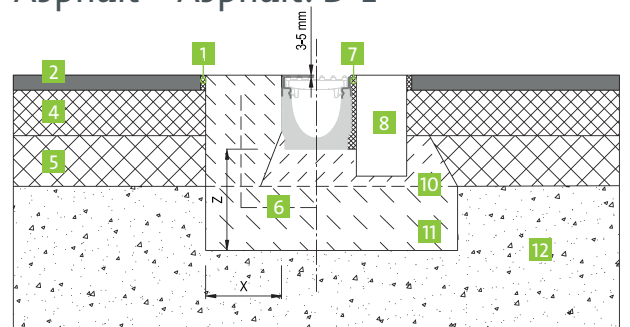
1. A recess in accordance with the installation examples must be provided to be able to create epoxy resin grouting, or the channel will be concreted with the base plate.
2. The channel elements should be laid according to the laying plan/installation instructions in the designated location and rotated correctly to be able to establish a sealed flange connection – care must be taken to ensure that the size/height of the flanges is the same.
3. First, the pipe nozzles/outlet piece will need to be connected to the sewer and levelled in height with the lower nut of the supports – the channel edge provides the level of the finished floor. If a sump pit frame or a sump pit basin is used (instead of connection to the outlet), place this over the sump pit first and level accordingly.
4. Clean the flanges of the channel elements thoroughly (dirt must be removed) and bolt together, including the seal – the seal and the fasteners are included in the scope of delivery as standard.
5. When bolting the flanges, take care to ensure that the channel run is exactly aligned (plumb line, scale beam).
6. Once the entire run is aligned and levelled, add concrete or grouting to ensure that it cannot slip or shift – to this end, tighten the second nut on the feet from above and dowel them or set them in concrete locally.
7. We recommend that you protect the channel elements from becoming soiled during the concreting/grouting process (by taping over them for example).
08. The perforated flange plate must be evenly concreted/grouted.
9. When applying the grouting, care must be taken to ensure that it fully encloses the external contour of the channel, without forming bubbles. The channel must lie 100% flat. Otherwise the channel body may deform under loading at a later point.
10. When pouring and moving the concrete, take care that the position and shape of the channel body does not change.
11. Cleaning and maintenance work: In areas in which higher exposure to chemical substances (e.g. de-icing chemicals, acids, bases, etc.) is to be expected, we recommend cleaning the channel regularly in order to prevent deposits.

BG-FLEX sigma tec: Concrete with coating



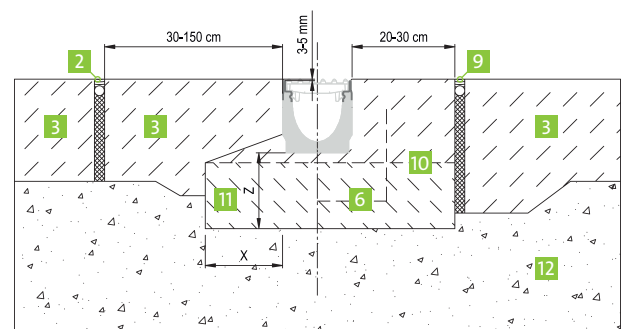
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| 1 at least 30 mm with | 6 adjustable feet |
| 2 grouting | 7 anchoring |
| 3 coating | 8 at least 10 mm with grouting |
| 4 anchor bars | 9 min. 85 mm – max. 120 mm |
| 5 flange for bolting | min. 250 mm with grouting (recess) |

BG-FILCOTEN® pro NW 150: Asphalt – Asphalt: D-E

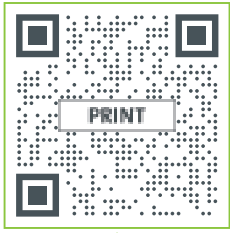


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|--|--|
| 1 bit. sealing tape | 7 cavity-free joint sealing-free |
| 2 Surface course | 8 stretcher brick 10x20 |
| 3 concrete pavement | 9 expansion joint |
| 4 bitumen gravel | 10 working joint |
| 5 bitumen layer | 11 concrete foundation acc. to static calculations |
| 6 class E: with structural reinforcement | 12 load-bearing gravel layer |

BG-FILCOTEN® pro NW 150: concrete – concrete: D-E



For installation examples using BG-FILCOTEN® pro, see www.say.bg/pro/download



www.say.bg/en/print

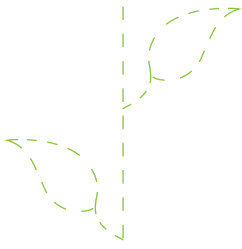
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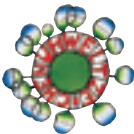
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Find out more about our dedication to sustainable print products in our blog article.



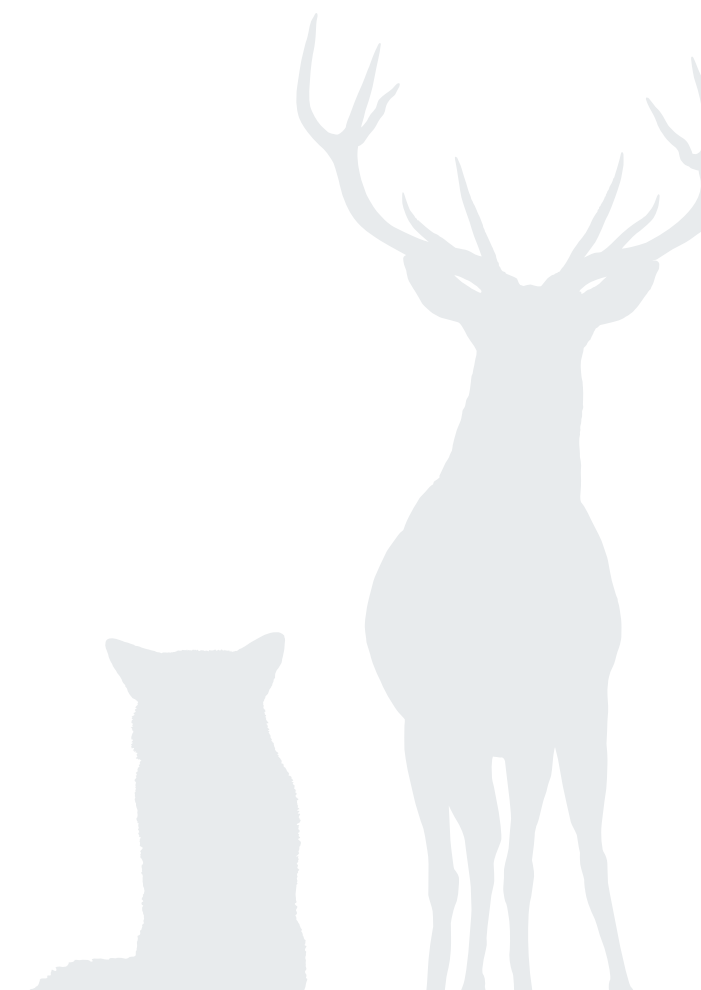
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