



GRASPOINTNER
Sustainable innovation.



Because there's space
for efficiency and
sustainability everywhere.



FILCOTEN[®]

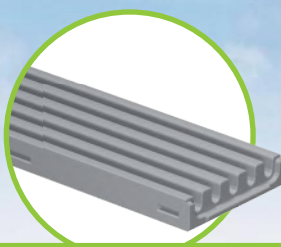
mini
parkline

SIGMA / stainless steel

Parking drainage solutions

Versatility

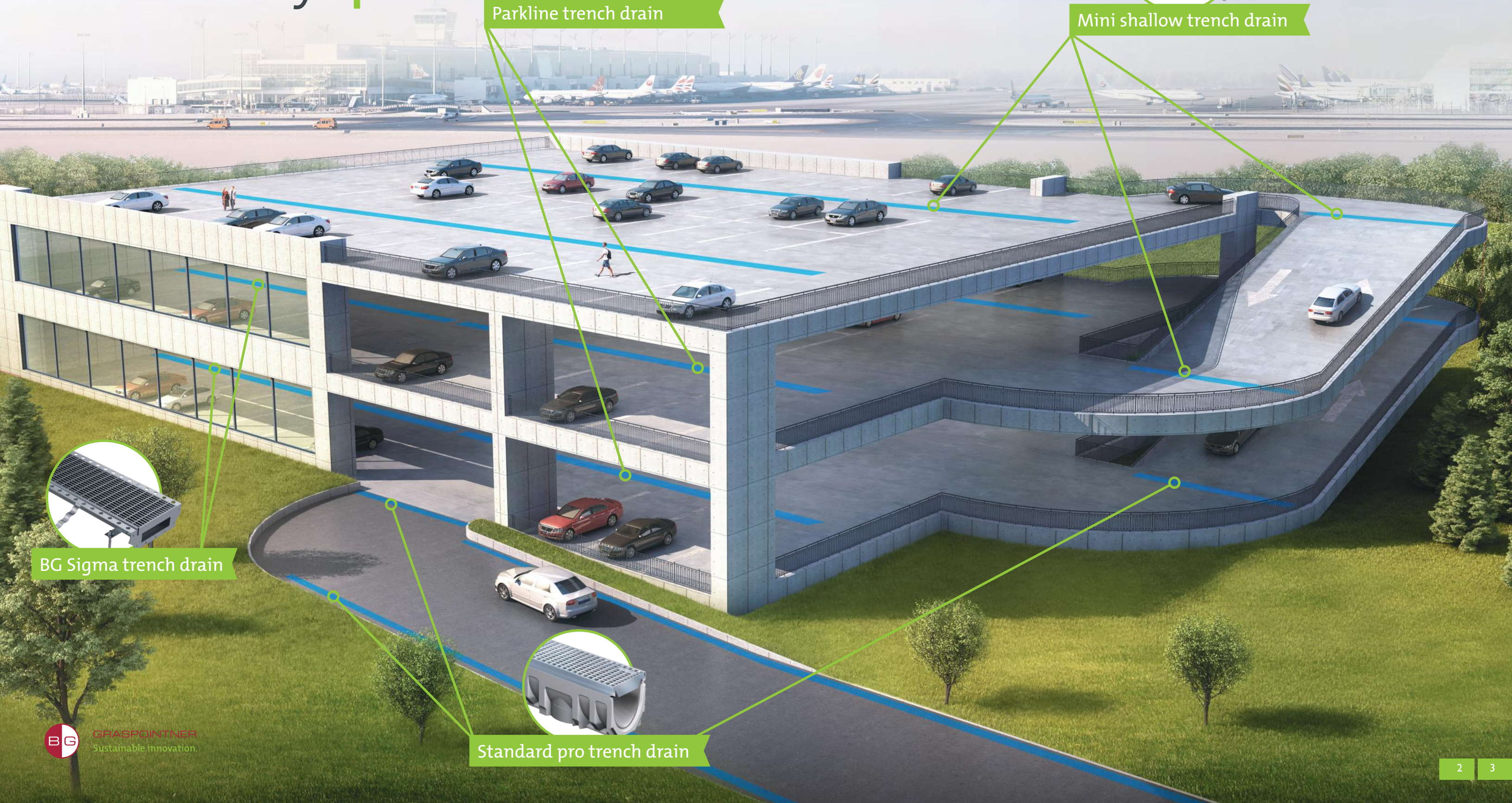
An application
for every space.



Parkline trench drain



Mini shallow trench drain



BG Sigma trench drain



Standard pro trench drain

Strong but gentle to the environment:



Impact strength and environment-friendliness are just two of the many features which makes FILCOTEN® unique.

The material combines the positive features of concrete channels with the benefits of resin bonded cements by using a patented fiber enriched formula instead of the environmentally harmful resins.

FILCOTEN® is still unrivaled in the market place, being admired for its sustainability and its unique channel strength. FILCOTEN® complies with the EN 1433 standard and the ASTM A112.6.3.2001 floor and trench drain standard.

World class design and craftsmanship

The flat inner surface of FILCOTEN® channels are well crafted to make the surface extremely smooth in order to minimize friction. This attention to detail achieves the best possible flow characteristics and a superior self-cleaning action. The textured outer surface ensures a perfect bond with the concrete bed.

Surface Properties: (µm)

36µm	Polymer concrete
	Glass fiber modified concrete
	Concrete
	FILCOTEN®

High compressive strength

A high quality cement mixed with a great proportion of fibers enables thin-walled channel design while yielding a very high compression strength. FILCOTEN® channels are therefore lighter yet easily out preform most competitors.

Compressive Strength: (N/mm²)

	Polymer concrete
	Glass fiber modified concrete
	Concrete
	FILCOTEN®



Temperature, Frost and UV-resistant

FILCOTEN® channels are made from cement-bonded fiber composites, which react to changes in temperature in the same way as the surrounding concrete bedding. This achieves a continuous integral unit reacting and flexing with the environment delivering a long service life for the entire channel system. Resistant to frost down to -40°F (-40°C). Also resistant to de-icing salts.



Product impact stability

The high impact resistance and stability of FILCOTEN® ensures easy, quicker installation, and greater safety when installing the channels.



100 % recyclable

Every ounce of a FILCOTEN® channel is completely recyclable. FILCOTEN® has been tested by the soil and building materials testing facility in Linz, Austria.



Lower transport costs, swifter installation

Depending on the type of channel, FILCOTEN® channels are up to 70 % lighter than conventional concrete channels. This is a huge savings in terms of fuel consumption. FILCOTEN® is committed to conserving resources and decreasing its -40°F (-40°C) proportional CO₂ emissions. The lower weight also facilitates on site installation.



0% Harmful substances, heavy metals or VOC's
 FILCOTEN® is free from artificial resins and solvents. This means that it is harmless to the environment, our employees and the installation team. FILCOTEN® channel bodies have been bioconstructively tested and are recommended by the IBR (Institut für Baubiologie Rosenheim GmbH).



Non-flammable

While plastics are both flammable and often emit hazardous fumes when ignited, the complete absence of resins, catalysts and bonding agents make FILCOTEN® completely non-flammable. FILCOTEN® has a Fire Rating of A1.

Fire protection classes:

▶	Polymer concrete: B1 difficult to ignite
▶	Plastic: B2 normal combustibility
▶	Glass fiber reinforced plastic: B2 normal combustibility
▶	FILCOTEN®: A1 non-combustible



GRASPOINTNER
Sustainable innovation.



A heavyweight when it comes to Engineered features:

With our FILCOTEN[®] mini channel, you don't have to compromise on quality or durability. It's stable yet lightweight, and can be adapted to site conditions. FILCOTEN[®] is available in galvanized or stainless steel rails up to class E 600 (acc. to EN 1433).

Ideal for threshold applications, the FILCOTEN[®] pro mini range is the most complete range of its class. We carry two different heights for 4, 6, 8 and 12" (100, 150, 200, or 300 mm) trench drains, starting at a height of 2.36" (60 mm).

Shallow trench drains reduce the need for thicker concrete slabs; lowering costs and allowing more flexibility in the design.

Fast and secure fiX snap-on-anchoring system

The intelligent fiX connection connection is amazingly simple. It uses an integral secure four-point, quick-release and spring-loaded design to securely hold the grate in place.

Channel geometry/surfacing

The flat inner surface of the FILCOTEN[®] channels are well crafted making each channel smooth, in order to minimize surface friction. This achieves the best possible flow and a superior self-cleaning effect.

Galvanised steel rails

The special design of the galvanised steel rails allows for secure grating locking with the fiX self-locking system. Adjacent covering surfaces can easily be attached to the edges of the rails.

Anchoring and fixing recesses

In addition to the optimal concrete adhesion property of FILCOTEN[®] the recesses grant a secure fit in the surrounding concrete base.

Comprehensive product range:

- Front/end cap
- No hub bottom outlets
- Rebar support
- Option for protection against vandalism
- Grating variations

Perfect fit

Intelligently distributed fixing points, both on the inner and outer sides of the rails, guarantees ideal bonding with the FILCOTEN[®] material.

Prefabricated sealant groove

Sealant groove for waterproof installations.





Channels and gratings

Channel body FILCOTEN[®] pro – E/V 100 (4") mini shallow body – heavy duty series

Body part number		Channel type	Slope	Overall body depth		Maximum flow rate			Weight (less grate)	
galvanized rails	stainless steel rails			A (Min.)	B (Max.)	GPM [†]	LPS [†]	CFS [†]	LBS	kg.
10510200	10510300	mini 60	0 %	2.36" (60 mm)	2.36" (60 mm)	4.8	0.30	0.01	20.06	9.10
10510201	10510301	mini 80	0 %	3.15" (80 mm)	3.15" (80 mm)	12.7	0.80	0.03	23.59	10.7

Channel body FILCOTEN[®] pro – E/V 150 (6") mini shallow body – heavy duty series

Body part number		Channel type	Slope	Overall body depth		Maximum flow rate			Weight (less grate)	
galvanized rails	stainless steel rails			A (Min.)	B (Max.)	GPM [†]	LPS [†]	CFS [†]	LBS	kg.
10515202	10515302	mini 100	0 %	3.94" (100 mm)	3.94" (100 mm)	34.87	2.20	0.0777	39.24	17.8
10515200	10515300	mini 120	0 %	4.72" (120 mm)	4.72" (120 mm)	57.06	3.60	0.1271	44.09	20.0
10515201	10515301	mini 170	0 %	6.69" (170 mm)	6.69" (170 mm)	106.20	6.70	0.2366	52.47	23.8

Channel body FILCOTEN[®] pro – E/V 200 (8") mini shallow body – heavy duty series

Body part number		Channel type	Slope	Overall body depth		Maximum flow rate			Weight (less grate)	
galvanized rails	stainless steel rails			A (Min.)	B (Max.)	GPM [†]	LPS [†]	CFS [†]	LBS	kg.
10520202	10520302	mini 100	0 %	3.94" (100 mm)	3.94" (100 mm)	47.6	3.00	0.11	45.42	20.6
10520200	10520300	mini 120	0 %	4.72" (120 mm)	4.72" (120 mm)	79.3	5.00	0.18	50.71	23.0
10520201	10520301	mini 200	0 %	7.87" (200 mm)	7.87" (200 mm)	79.3	5.00	0.18	66.58	30.2

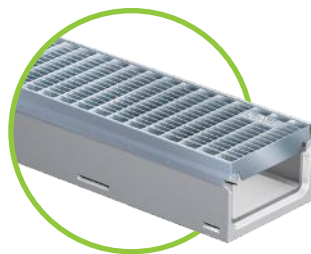
Channel body FILCOTEN[®] pro – V 300 (12") mini shallow body – extra heavy duty series

Body part number		Channel type	Slope	Overall body depth		Maximum flow rate			Weight (less grate)	
galvanized rails	stainless steel rails			A (Min.)	B (Max.)	GPM [†]	LPS [†]	CFS [†]	LBS	kg.
10530200		mini 120	0 %	4.72" (120 mm)	4.72" (120 mm)	120.46	7.60	0.2684	83.56	37.90

[†] GPM = Gallons per minute, LPS = Liters per second, CFS = Cubic feet per second



FILCOTEN[®] pro – E/V 100 mini with stainless steel or galvanized steel rails



FILCOTEN[®] pro – E/V 150 mini with stainless steel or galvanized steel rails



FILCOTEN[®] pro – E/V 200 with stainless steel or galvanized steel rails



FILCOTEN[®] pro – V 300 with galvanized steel rails

Gratings FILCOTEN[®] pro 100 (4") with fiX self-locking system.

Item no.	Gratings	Material	Dimensions in inches / mm	Load class as per EN-standard	Slot / Mesh width	Weight		Inlet cross-section sq. inches	Inlet cross-section cm ² /m
						LBS	kg.		
17010202	3. Reinforced slotted grating	galvanized steel	39.40"-4.80"-0.78" 1000-122-20 mm	A 15 kN	0.31" wide x 3.15" slots (8x80 mm)	3.31	1.5	34.88	225
17010203		galvanized steel	19.70"-4.80"-0.78" 500-122-20 mm	A 15 kN	0.31" wide x 3.15" slots (8x80 mm)	1.76	0.8	34.88	225
17010204	4. ADA HEELPROOF Perforated grating	galvanized steel	39.40"-4.80"-0.78" 1000-122-20 mm	A 15 kN	Ø 1/4" hole (6.0 mm)	4.19	1.9	20.77	134
17010205		galvanized steel	19.70"-4.80"-0.78" 500-122-20 mm	A 15 kN	Ø 1/4" hole (6.0 mm)	2.2	1.0	20.77	134
17010220	1. ADA Mesh grating	galvanized steel	39.40"-4.80"-0.78" 1000-122-20 mm	B 125 kN	MW 1.18" x 0.39" (MW 30x10 mm)	6.17	2.8	151.90	980
17010221		galvanized steel	19.70"-4.80"-0.78" 500-122-20 mm	B 125 kN	MW 1.18" x 0.39" (MW 30x10 mm)	3.09	1.4	147.25	950
17010206	3. Reinforced slotted grating	galvanized steel	39.40"-4.80"-0.78" 1000-122-20 mm	C 250 kN	0.31" wide x 3.15" slots (8x80 mm)	9.92	4.5	42.63	275
17010207		galvanized steel	19.70"-4.80"-0.78" 500-122-20 mm	C 250 kN	0.31" wide x 3.15" slots (8x80 mm)	4.85	2.2	42.63	275
17010222	1. ADA Mesh grating	galvanized steel	39.40"-4.80"-0.78" 1000-122-20 mm	C 250 kN	MW 1.18" x 0.39" (MW 30x10 mm)	7.28	3.3	141.05	910
17010223		galvanized steel	19.70"-4.80"-0.78" 500-122-20 mm	C 250 kN	MW 1.18" x 0.39" (MW 30x10 mm)	3.53	1.6	137.18	885
17010228	4. ADA HEELPROOF Perforated grating	galvanized steel	39.40"-4.80"-0.78" 1000-122-20 mm	C 250 kN	Ø 1/4" hole (6.0 mm)	7.28	3.3	20.77	134
17010229		galvanized steel	19.70"-4.80"-0.78" 500-122-20 mm	C 250 kN	Ø 1/4" hole (6.0 mm)	3.75	1.7	20.77	134
17010402	5. ADA HEELPROOF COMBee grating	polyamide	19.70"-4.84"-0.78" 500-123-20 mm	C 250 kN	Ø 0.29" hole (7.3mm)	2.43	1.1	44.95	290
17010106	6. ADA HEELPROOF Ductile iron longitudinal grating	ductile iron	19.70"-4.80"-0.78" 500-122-20 mm	C 250 kN	Mesh 1.14" x 0.24" (29x6 mm)	7.94	3.6	49.6	320
17010110	7. ADA Ductile iron longitudinal grating	ductile iron	19.70"-4.80"-0.78" 500-122-20 mm	D 400 kN	Mesh 1.1" x 0.35" (28x9 mm)	7.50	3.4	73.63	475
17010104	7. Ductile iron longitudinal grating	ductile iron	19.70"-4.80"-0.78" 500-122-20 mm	D 400 kN	Mesh 1.14" x 0.51" (29x13 mm)	7.50	3.4	73.63	475
17010105	8. Ductile iron slotted grating	ductile iron	19.70"-4.80"-0.78" 500-122-20 mm	E 600 kN	0.55" wide x 3.94" slots (14x100 mm)	8.38	3.8	72.08	465
17015180	9. HEELPROOF Ductile iron grating VILLE	ductile iron	19.70"-4.80"-0.78" 500-122-20 mm	E 600 kN	0.31" wide slots (SW 8 mm)	11.46	5.2	24.8	160

i Stainless steel gratings available on request.

Grating variations for FILCOTEN[®] pro and pro mini NW 100, 150, 200

Gratings FILCOTEN[®] pro 150 (6") with fiX self-locking system.

Item no.	Gratings	Material	Dimensions in inches / mm	Load class as per EN-standard	Slot/Mesh width	Weight		Inlet cross-section sq. inches	Inlet cross-section cm ² /m
						LBS	kg.		
17015220	1. ADA Mesh grating	galvanized steel	39.40"-6.77"-0.78" 1000-172-20 mm	B 125 kN	MW 1.18" x 0.39" (MW 30x10 mm)	10.14	4.6	206.15	1.330
17015221		galvanized steel	19.70"-6.77"-0.78" 500-172-20 mm	B 125 kN	MW 1.18" x 0.39" (MW 30x10 mm)	5.29	2.4	199.18	1.285
17015222	1. ADA Mesh grating	galvanized steel	39.40"-6.77"-0.78" 1000-172-20 mm	C 250 kN	MW 1.18" x 0.39" (MW 30x10 mm)	15.21	6.9	198.40	1.280
17015223		galvanized steel	19.70"-6.77"-0.78" 500-172-20 mm	C 250 kN	MW 1.18" x 0.39" (MW 30x10 mm)	7.94	3.6	192.20	1.240
17015226	2. ADA Mesh grating	galvanized steel	39.40"-6.77"-0.78" 1000-172-20 mm	D 400 kN	MW 0.98" x 0.39" (MW 25x10 mm)	22.93	10.4	167.40	1.080
17015227		galvanized steel	19.70"-6.77"-0.78" 500-172-20 mm	D 400 kN	MW 0.98" x 0.39" (MW 25x10 mm)	11.68	5.3	166.63	1.075
17015104	7. ADA Ductile iron longitudinal grating	ductile iron	19.70"-6.77"-0.78" 500-172-20 mm	D 400 kN	Mesh 1.14" x 0.51" (MW 29x13 mm)	11.46	5.2	110.05	710
17015105	8. Ductile iron slotted grating	ductile iron	19.70"-6.77"-0.78" 500-172-20 mm	E 600 kN	0.55" wide x 5.91" slots (SW 14x150 mm)	15.43	7.0	110.05	710
17015180	9. HEELPROOF Ductile iron grating VILLE	ductile iron	19.70"-6.77"-0.78" 500-172-20 mm	E 600 kN	0.31" wide slots (SW 8 mm)	17.42	7.9	35.34	228



Entire range also available in Stainless steel.



1. Mesh grating
MW 1.18" x 0.39" (30x10 mm)
cl. B galvanized
cl. C galvanized or stainless steel V2A
for NW 100 to 200



2. Mesh grating
MW 0.98" x 0.39" (25x10 mm)
NW 100 galvanized
or stainless steel V2A
NW 150 and 200 only galvanized



3. Slotted grating
SW 0.31" x 3.15" (8x80 mm)
cl. C galvanized
or stainless steel V2A
for NW 100



4. Perforated grating
Ø 0.25" (6 mm)
cl. C galvanized
or stainless steel V2A
for NW 100 to 200



5. COMBee design grating
Ø 0.30" (7.3 mm)
cl. C plastic PA6
for NW 100



6. Ductile iron elongated bar grating
MW 1.14" x 0.24" (29x6 mm)
cl. C narrow MW
for NW 100



7. Ductile iron elongated bar grating
MW 1.14" x 0.51" (29x13 mm)
cl. C or cl. D
for NW 100 to 200



8. Ductile iron slotted grating
SW 0.55" x 3.94" (14x100 mm)
SW 0.55" x 5.91" (14x150 mm)
SW 0.55" x 7.87" (14x200 mm)
for NW 100 to 200
cl. E with fix self-locking system



9. Ductile iron design grating VILLE
SW 0.31" (8 mm), cl. E
for NW 100 and 200

Channels and gratings

Gratings FILCOTEN® pro 200 (8") with fiX self-locking system.

Item no.	Gratings	Material	Dimensions in inches / mm	Load class as per EN-standard	Slot/Mesh width	Weight		Inlet cross-section sq. inches	Inlet cross-section cm ² /m
						LBS	kg.		
17020220	1. ADA Mesh grating	galvanized steel	39.40"-8.74"-0.78" 1000-222-20 mm	B 125 kN	MW 1.18" x 0.39" (MW 30x10 mm)	13.23	6.0	275.13	1.775
17020221		galvanized steel	19.70"-8.74"-0.78" 500-222-20 mm	B 125 kN	MW 1.18" x 0.39" (MW 30x10 mm)	6.83	3.1	266.6	1.720
17020222	1. ADA Mesh grating	galvanized steel	39.40"-8.74"-0.78" 1000-222-20 mm	C 250 kN	MW 1.18" x 0.39" (MW 30x10 mm)	19.40	8.8	255.75	1.650
17020223		galvanized steel	19.70"-8.74"-0.78" 500-222-20 mm	C 250 kN	MW 1.18" x 0.39" (MW 30x10 mm)	9.92	4.5	247.23	1.595
17020228	4. ADA HEELPROOF Perforated grating	galvanized steel	39.40"-8.74"-0.78" 1000-222-20	C 250 kN	Ø 1/4" hole (6.0 mm)	29.76	13.5	44.64	288
17020229		galvanized steel	19.70"-8.74"-0.78" 500-222-20 mm	C 250 kN	Ø 1/4" hole (6.0 mm)	14.77	6.7	44.64	288
17020226	2. ADA Mesh grating	galvanized steel	39.40"-8.74"-0.78" 1000-222-20	D 400 kN	MW 0.98" x 0.39" (MW 25x10 mm)	34.61	15.7	217.0	1.400
17020227		galvanized steel	19.70"-8.74"-0.78" 500-222-20 mm	D 400 kN	MW 0.98" x 0.39" (MW 25x10 mm)	17.64	8.0	215.45	1.390
17020104	7. ADA Ductile iron longitudinal grating	ductile iron	19.70"-8.74"-0.78" 500-222-20 mm	D 400 kN	Mesh 1.14" x 0.51" (MW 29x13 mm)	7.50	3.6	145.7	940
17020105	8. Ductile iron slotted grating	ductile iron	19.70"-8.74"-0.78" 500-222-20 mm	E 600 kN	0.55" wide x 7.87" slots (SW 14x200 mm)	18.96	8.6	149.6	965
17020180	9. HEELPROOF Ductile iron grating VILLE	ductile iron	19.70"-8.74"-0.78" 500-222-20 mm	E 600 kN	0.31" wide slots (SW 8 mm)	23.59	10.7	45.9	296



Entire range also available in Stainless steel.

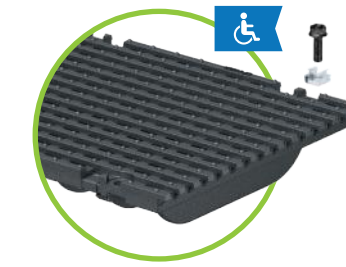
Gratings FILCOTEN® pro 300 (12") with fiX self-locking system and additional 4-point bolting.

Item no.	Gratings	Material	Dimensions in inches / mm	Load class as per EN-standard	Slot/Mesh width	Weight		Inlet cross-section sq. inches	Inlet cross-section cm ² /m
						LBS	kg.		
17030222	10. ADA Mesh grating	galvanized steel	39.40"-13.66"-0.98" 1000-347-20 mm	C 250 kN	MW 1.18" x 0.39" (MW 30x10 mm)	50.92	23.1	357.27	2.305
17030223		galvanized steel	19.70"-13.66"-0.98" 500-347-20 mm	C 250 kN	MW 1.18" x 0.39" (MW 30x10 mm)	25.57	11.6	355.72	2.295
17030103	11. Ductile iron longitudinal grating	ductile iron	19.70"-13.66"-0.98" 500-347-20 mm	E 600 kN	Mesh 1.14" x 0.51" (MW 29x13 mm)	39.46	17.9	227.08	1.465
17030180	12. HEELPROOF Ductile iron grating VILLE	ductile iron	19.70"-13.70"-0.98" 500-348-20 mm	E 600 kN	0.31" wide slots (SW 8 mm)	43.87	19.9	80.60	520

Grating variations for FILCOTEN® pro and pro mini NW 300



10. Mesh grating
MW 1.18" x 0.39" (10x30 mm)
cl. C galvanized steel
4-point bolted



11. Ductile iron longitudinal grating
MW 1.14" x 0.51" (29x13 mm)
cl. D or cl. E
4-point bolted



12. Ductile iron VILLE grating
SW 0.31" (8 mm), cl. E
4-point bolted

We always
do the same:
forge new paths.



Projects



Our shallow trench drain is never a superficial solution.

Drainage systems in car parks are a necessity and faced with a wide range of challenges, which are not usually dealt with by traditional drainage systems. FILCOTEN® parkline is a different story: our system shows that HPC (High Performance Concrete), a modern mineral material combined with a sophisticated structure, is the right solution for any challenge.

The best drainage performance with maximum efficiency.

Alongside optimized drainage performance, the parkline system offers a variety of properties for increasing efficiency, both during installation and in daily use.

Innovative connecting element

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

Sophisticated sealing joint

- Sealable butt joint, easily accessible and inspectable
- Based on requirements of 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.

Intelligent drain cover

- Drain cover made from V2A stainless steel
- Can easily be removed for cleaning
- Functions as a sturdy cover and walkway bridge and thus increases accessibility

C250 class

Comb Profile

- Suitable for wheelchairs
- Slot width of 0.5" or 0.72" (12.5 or 18 mm), based on requirements of EN 1433
- Almost no height difference from the surrounding roadway

Powerful connection

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

Perfect fit

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



Drainage-optimized channel body

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

Very quiet

- Even cross-section & monolithic construction prevent noise when driven over
- No complaints from residents about rattling grates

Vertical outlet
DN 100

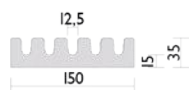
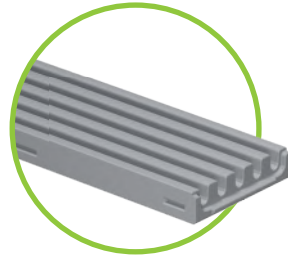
Installation height / width

Available in three versions:
 H = 1.4" (35 mm) W = 6" (150 mm) (as shown.)
 H = 2" (50 mm) W = 6" (150 mm)
 H = 2" (50 mm) W = 12" (300 mm)

Easy cleaning and maintenance

- No separate grates
- Easy to check for soiling without removing grates
- Easy to clean thanks to clear cross section without covers



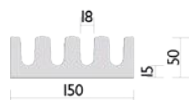
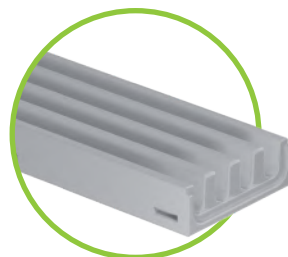


FILCOTEN® parkline, nominal width 150 - installation height 1.37" (35 mm)

Comb Channel made from FILCOTEN® HPC (High Performance Concrete) up to class C, Capacity: 1.1 l/m

Art. no.	Channel body	Slope	Weight lbs/kg	Pc./pallet
12515005	FILCOTEN parkline 150, H=1.37" (35 mm), SW=0.49" (12.5 mm)	0 %	20.24/9.2	80
12515075	FILCOTEN parkline 151, H=1.37" (35 mm), SW=0.49" (12.5 mm), with outlet	0 %	19.58/8.9	80
Art. no.	Accessories	Material	Weight lbs/kg	Pc./pallet
12515084	Cross corner element, 6.02"-6.02"-1.37" (153-153-35 mm), H=1.37" (35 mm), SW=0.49" (12.5 mm)	FILCOTEN	2.94/1.34	
12515383	Drain cover, double bridge	V2A steel	0.13/0.06	
12515385	Front or end plate	V2A steel	0.04/0.02	
12515296	Parkline installation chair - set incl. screws Required: number of channels +1	galvanized	1.40/0.64	30
12515291	Construction cover, 39.37"-5.91"-0.55" (1000-150-14 mm)	galvanized	3.30/1.50	
12515392	Cleaning rake (without handle)	V2A steel	0.55/0.25	

Technical specifications: www.hydrobg.com

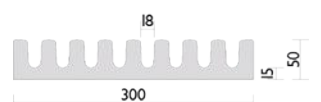
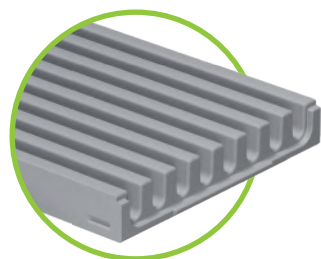


FILCOTEN® parkline, nominal width 150 - installation height 1.97" (50 mm)

Comb Channel made from FILCOTEN® HPC (High Performance Concrete) up to class C, Capacity: 2.25 l/m

Art. no.	Channel body	Slope	Weight lbs/kg	Pc./pallet
12515000	FILCOTEN parkline 150, H=1.97" (50 mm), SW=0.7" (18 mm)	0 %	26.62/12.1	60
12515070	FILCOTEN parkline 151, H=1.97" (50 mm), SW=0.7" (18 mm), with outlet	0 %	25.96/11.8	60
Art. no.	Accessories	Material	Weight lbs/kg	Pc./pallet
12515380	Cross corner element with hole pattern, 6.85"-6.06"-1.96" (174-154-50 mm), H=1.97" (50 mm), SW=0.7" (18 mm)	V2A steel	2.46/1.12	
12515381	Drain cover	V2A steel	0.11/0.05	
12515382	Front or end plate	V2A steel	0.08/0.04	
19010902	Parkline installation chair - set incl. screws Required: number of channels +1	galvanized	1.36/0.62	50
12515291	Construction cover, 39.37"-5.91"-0.55" (1000-150-14 mm)	galvanized	3.3/1.50	
12515390	Cleaning rake (without handle)	V2A steel	0.55/0.25	

Technical specifications: www.hydrobg.com

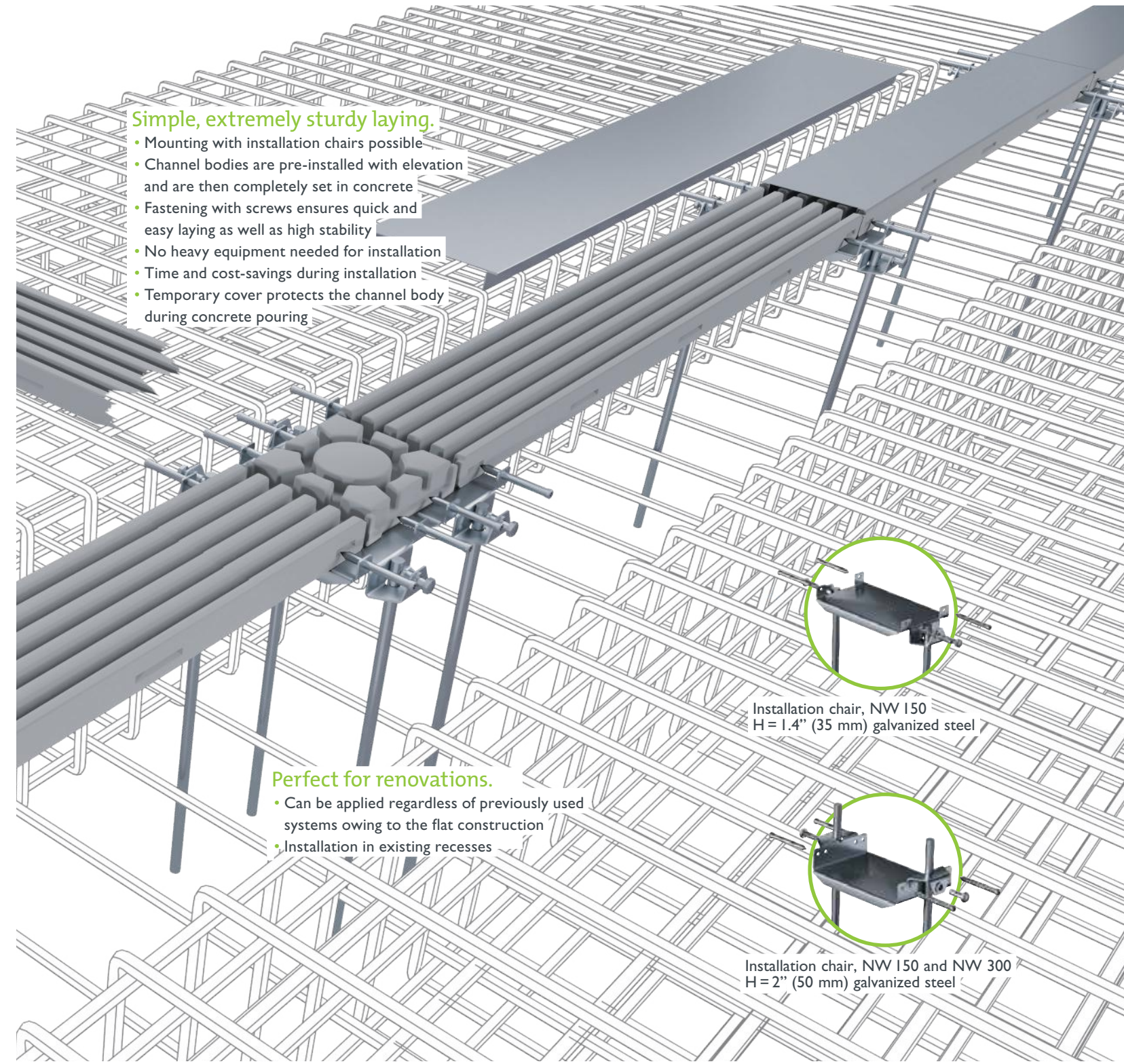


FILCOTEN® parkline, nominal width 300 - installation height 1.97" (50 mm)

Comb Channel made from FILCOTEN® HPC (High Performance Concrete) up to class C, Capacity: 4.5 l/m

Art. no.	Channel body	Slope	Weight lbs/kg	Pc./pallet
12530000	FILCOTEN parkline 300, H=1.97" (50 mm), SW=0.7" (18 mm)	0 %	55.66/25.3	30
12530070	FILCOTEN parkline 301, H=1.97" (50 mm), SW=0.7" (18 mm), with outlet	0 %	55/25.0	30
Art. no.	Accessories	Material	Weight lbs/kg	Pc./pallet
12530080	Cross corner element, 11.86"-11.86"-1.97" (305-305-50 mm), H=1.97" (50 mm), SW=0.7" (18 mm)	FILCOTEN	16.72/7.60	
12515381	Drain cover	V2A steel	0.11/0.05	
12530386	Front or end plate	V2A steel	0.19/0.09	
19030902	Parkline installation chair - set incl. screws Required: number of channels +1	galvanized	2.35/1.07	20
12530291	Construction cover, 39.37"-12"-0.78" (1000-300-20 mm)	galvanized	6.16/2.80	
12530390	Cleaning rake (without handle)	V2A steel	1.1/0.50	

Technical specifications: www.hydrobg.com



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
- Temporary cover protects the channel body during concrete pouring

Perfect for renovations.

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

Installation chair, NW 150
H = 1.4" (35 mm) galvanized steel

Installation chair, NW 150 and NW 300
H = 2" (50 mm) galvanized steel

Projects



Sustainable in every respect,
high-performance down to the last fibre,
or simply FILCOTEN®.

BG green electricity:

As of 2018

51,33%	Hydroelectric power
44,12%	Biomass (solid & liquid)
2,11%	Biogas
1,27%	Wind power
1,14%	Solar energy
0,03%	Other green energy
100%	Sustainable energy mix.

Sustainability and innovation are the central components of our company's culture. This can be seen from the materials, the manufacturing processes and the energy used. Thus, we are a member of Climate Alliance Austria: the largest municipal climate protection network in Austria. FILCOTEN® HPC (High Performance Concrete) is not just a highly advanced material, but ultimately the result of all our efforts to create cutting-edge technology that is in harmony with nature.



Environmentally friendly production process.

We also focus on environmental protection in the production process. Whether it be in selecting raw materials or avoiding unnecessary waste. Consequently, we have implemented a certified environmental/energy management scheme in line with ISO 14001 and 50001 at our site in Oberwang, Austria.



Mineral raw material, recyclable and energy-efficient.

FILCOTEN® HPC is a mineral raw material that is 100% recyclable (certified by BPS GmbH, the Upper Austrian soil and construction materials test center) and free from resins and solvents. To manufacture it, we rely 100% on green electricity and it is nearly free from the use of resins and solvents.



Certified: non-toxic.

- meets the strict criteria of the Rosenheim Institute for Building Biology (IBR)
- does not harm people's health and the environment
- guaranteed to be ecologically safe as it is tested for biocides, solvents, VOC, heavy metals and radioactivity



The right fit that seals well.

BG-SIGMA stainless steel shallow channel system.

The BG-SIGMA drainage channels are made from 1.4301 or higher quality stainless steel and are used to conduct water from the floor area into a waste water collecting system. The specially developed flange connector ensures leak-proof laying of the channel run.

This unique, high-quality drainage system can be adapted to suit any needs. Most height, width and load capacity are possible. Stainless steel gratings up to class C 250 are obtainable as covers.

Areas of application:

Car parks, parking areas, food processing sites, chemical plants, breweries, dairies, supermarkets, catering, hospitals, etc.

up to class C 250

Liquid-tight joints

- Bolted flange
- Seal made from NBR
- Complete with stainless steel M6 bolting

Perforated, continuous flange plate

- Durable connection of the floor coating to the drainage channels

Adjustable installation supports

Grating

- 1.4301 (V2A) stainless steel mesh grating
- Mesh 1.2"x0.4" or 1.2"x1.2" (30x10 or 30x30 mm)
- Load class B 125 or C 250
- Optional bolting upon demand

Sump pit frame

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

Front/end plate

- Tightly welded (incl. perforated flange plate)
- Tight closure of channel run

Channel body

- Made from 1.4301 or higher quality stainless steel
- Nominal size: 6" (150 mm)
- Visible width: 8.32" (208 mm)
- Element length: 160" (4000 mm) (adjustable to the line length)
- Material thickness: 0.06" (1.5 mm)

Sump pit well

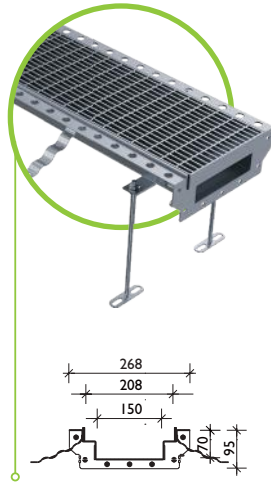
- As a connecting element
- Also for T, corner and cross connections
- Can be placed anywhere in the channel run
- With leak-proof, welded stainless steel basin
- As a catch basin or retention basin

Anchor bar

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

Outlet elements

- Outlet nozzle with diameter of choice
- Can be placed individually in the channel run
- Outlet as a supply line, e.g. for an oil separator



BG-SIGMA grid unit, nominal size 150 - Stainless Steel V2A

Channel element without slope, with welded on sealing flange, standard length 157.48" (4000 mm)

BG-SIGMA without slope - material thickness: 0.05" (1.5 mm)	Length in/mm	Height in/mm	Weight lbs/kg	Can/US price
BG-SIGMA box drainage system with flange nominal size 150, without slope, standard length: 157.48" (4000 mm) visible width: 8.19" (208 mm) / nominal size: 6" (150 mm) / internal height: 2.75" (70 mm) / incl. stainless steel mesh grating 1.4301 (V2A)	157.48"/4000	3.74"/95	63.80/29	upon request

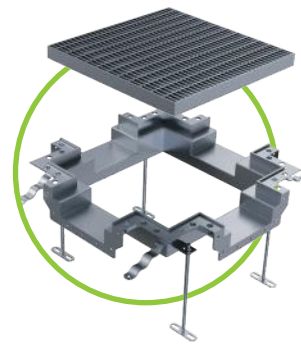


Flange connection with NBR seal bolted

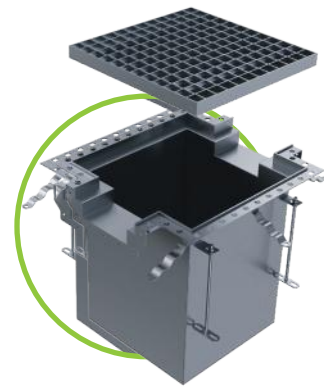
BG-SIGMA drain elements

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

Sump pit frame	Material	Height in/mm	Weight lbs/kg	Can/US price
BG-SIGMA Sump pit frame - end piece	V2A stainless steel	3.94"/100	11.66/5.3	upon request
BG-SIGMA Sump pit frame - corner or connecting piece	V2A stainless steel	3.94"/100	12.10/5.5	
BG-SIGMA Sump pit frame - T-element	V2A stainless steel	3.94"/100	12.54/5.7	
BG-SIGMA Sump pit frame - +-element	V2A stainless steel	3.94"/100	12.76/5.8	
Sump pit well	Material	Height in/mm	Weight lbs/kg	Can/US price
BG-SIGMA Sump pit well - end piece	V2A stainless steel	18.97"/482	29.26/13.3	upon request
BG-SIGMA Sump pit well - corner or connecting piece	V2A stainless steel	18.97"/482	29.48/13.4	
BG-SIGMA Sump pit well - T-element	V2A stainless steel	18.97"/482	29.92/13.6	
BG-SIGMA Sump pit well - +-element	V2A stainless steel	18.97"/482	30.36/13.8	
Gratings for sump unit	Kl. It. EN 1433	Height in/mm	Weight lbs/kg	Euro/pc.
Grating 15.63"-15.63"-1.18" (397-397-30 mm), MW 1.18"x0.39" (30x10 mm)	B 125 kN	1.18"/30	15.4/7.0	upon request
Grating 15.63"-15.63"-1.18" (397-397-30 mm), MW 1.18"x1.18" (30x30 mm)	B 125 kN	1.18"/30	11/5.0	
Grating 15.63"-15.63"-1.18" (397-397-30 mm), MW 1.18"x0.39" (30x10 mm)	C 250 kN	1.18"/30	17.16/7.8	
Grating 15.63"-15.63"-1.18" (397-397-30 mm), MW 1.18"x1.18" (30x30 mm)	C 250 kN	1.18"/30	13.2/6.0	



BG-SIGMA Sump pit frame



BG-SIGMA Sump pit well

i Please note that these products are manufactured to order – no in-stock products!

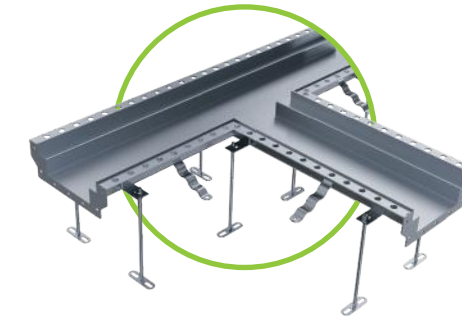
Gratings and accessories

for BG-SIGMA box drainage systems, nominal size 6" (150 mm)

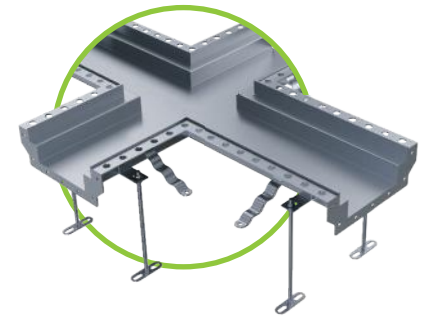
Gratings without screw connection	Kl. It. EN 1433	Height in/mm	Weight lbs/kg	Can/US price
Grating 39.37"-7.75"-1.18" (1000-197-30 mm), MW 1.18"x0.39"/30x10 mm	B 125 kN	1.18"/30	17.60/8.0	upon request
Grating 39.37"-7.75"-1.18" (1000-197-30 mm), MW 1.18"x1.18" (30x30 mm)	B 125 kN	1.18"/30	13.20/6.0	
Grating 39.37"-7.75"-1.18" (1000-197-30 mm), MW 1.18"x0.39" (30x10 mm)	C 250 kN	1.18"/30	22/10.0	
Grating 39.37"-7.75"-1.18" (1000-197-30 mm), MW 1.18"x1.18" (30x30 mm)	C 250 kN	1.18"/30	17.60/8.0	
Accessories	Material	Height in/mm	Weight lbs/kg	Can/US price
BG-SIGMA corner piece 90°, leg length 27.56"x27.56" (700x700 mm)	V2A stainless steel	3.74"/95	19.58/8.9	upon request
BG-SIGMA T piece, leg length 39.37"x27.56" (1000x700 mm)	V2A stainless steel	3.74"/95	3.52/11.6	
BG-SIGMA cross piece, leg length 39.37"x27.56" (1000x700 mm)	V2A stainless steel	3.74"/95	24.64/11.2	
Surcharge for tightly welded drain nozzles DN 100 downward				
Surcharge for screw-fastened grate per running meter / grate incl. sump pit				



BG-SIGMA corner piece 90° leg length 27.56"x27.56" (700x700 mm)



BG-SIGMA T piece leg length 39.37"x27.56" (1000x700 mm)



BG-SIGMA cross piece leg length 39.37"x27.56" (1000x700 mm)

For installation with self-leveling epoxy pavements



Grate load class definitions

There are two main grate definitions in the trench drain industry to help specifiers select the appropriate grate:

ANSI A112.21.1M Grates and top rims shall be designed to meet the following loading classifications in a static condition.

- Light Duty** All grates having safe live load (as calculated in paragraph 6.1.6 of the ANSI Standard) under 2,000 lbs. (900 kg.) For pedestrian foot traffic only.
- Medium Duty** All grates having safe live load (as calculated in paragraph 6.1.6 of the ANSI Standard) between 2,000 lbs. (900 kg.) and 4,999 lbs. (2,250 kg.) For light pneumatic tire traffic only. Sidewalks and residential parking.
- Heavy Duty** All grates having safe live load (as calculated in paragraph 6.1.6 of the ANSI Standard) between 5,000 lbs. (2,250 kg.) and 7,499 lbs. (3,375 kg.) For Commercial Pneumatic tire traffic patterns and tractor trailers.
- Extra Heavy Duty** All grates having safe live load (as calculated in paragraph 6.1.6 of the ANSI Standard) between 7,500 lbs. (3,375 kg.) and 10,000 lbs. (4,500 kg.) For forklift traffic. Roads and Highways. H-20 Load Rated.
- Special Duty** All grates having safe live load (as calculated in paragraph 6.1.6 of the ANSI Standard) over 10,000 lbs. (4,500 kg.) For airport traffic.

DIN 19580/ EN1433 Grates and top rims shall be designed to meet the following loading classifications in a static condition.

- Load Class A** Light Duty Grate design load up to or exceeding 3,372 lbs (1530 kg) per foot. (15 kn). For pedestrian foot traffic only.
- Load Class B** Medium Duty Grate design load of at least 28,100 lbs (12,746 kg) per foot. (125 kn). For light pneumatic tire traffic only. Sidewalks and residential parking.
- Load Class C** Heavy Duty Grate design load of at least 56,200 lbs (25,492 kg) per foot. (250 kn). Commercial Applications.
- Load Class D** Grate design load of at least 89,920 lbs (40,787 kg) per foot. (400 kn). For pneumatic forklift traffic. Extra Heavy Duty. Roads and Highways. H-20 Load Rated.
- Load Class E** Grate design load of at least 134,800 lbs (61,144 kg) per foot. (600 kn). For Commercial Solid tire traffic patterns, and impacts from steel struts or metal wheels (forklifts).
- Load Class F** Grate design load of at least 202,320 lbs (91,771 kg) per foot. (900 kn). For airport traffic. Requires Engineer designed system, please call for additional information.

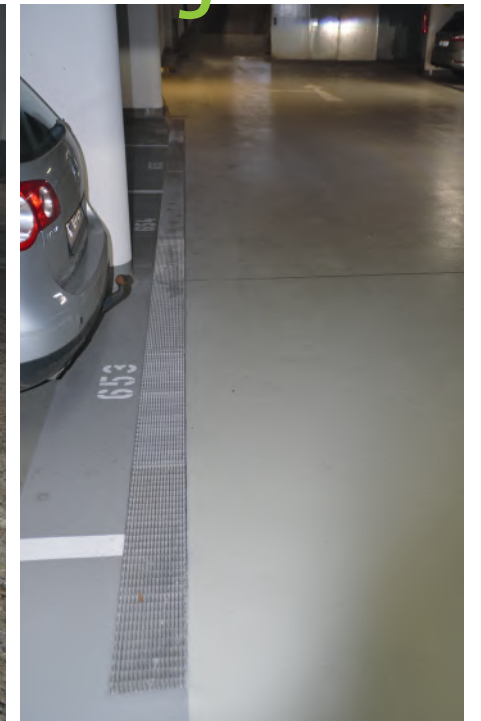
Transportation Classifications

The American Association of State Highway and Transportation Officials' (AASHTO) "Standard Specification for Highway Bridges" defines H-20 loading as a two-axle truck with a maximum dual-wheel load of 16,000 lbs. HS-20 loading is defined as a tractor truck with a tandem axle semi-trailer with a dual-wheel load of 16,000 lbs (7,250 kg).

The FAA (Federal Aviation Administration) Advisory Circular AC 150/5320-6D describes aircraft loading as 100,000 lbs (45,360 kg), placed over a 9" x 9" (228 x 228 mm) area. The Americans with Disabilities Act (ADA) stipulates that the slot width be limited on gratings in walkways and elongated slots must be placed longitudinally so that they are perpendicular to the dominant direction of travel.

Heel Proof is defined as slots or perforations that are less than 0.25" (6.4 mm) in width or diameter.

Projects





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