

SlabDrain Product Information Sheet

Product Name:

ACO SlabDrain

Product description and intended use:

ACO SlabDrain is a general-purpose, shallow depth trench drain comprising of modular Polycrete® channels. Each unit is manufactured with integrally cast edge rails of either galvanized steel edge rails (K-type) or stainless-steel edge rails (KS-type).

For heavy duty applications the HSK series is available, based off the PowerDrain grate and rail system comprising of ductile iron edge rails.

SlabDrain K, KS and HSK channels consist of 1-meter-long units.

H100K and H100KS (100mm internal width) are available in 60mm, 80mm and 100mm overall depth

H100SK (100mm overall width), H200K, H200KS and H200SK (200mm internal width) & H300K, KS and HSK (300mm internal width) are available in 100mm overall depth only.

Refer to <https://askaco.nz/aco-slabdrain/> for more information including specification sheets and technical information.

Product identifier:

Channel type identified on the exterior sides of the channel, the channel type is visible before installation. After installation channel can be identified by edge rail (galvanized, stainless steel or ductile iron, depth (100mm or 80mm where applicable) and width (100mm 200mm and 300mm).

Place of manufacture:

Aotearoa New Zealand

Overseas

Legal and trading name of the manufacturer(s):

ACO PTY LTD

Address for service:

Street name: 134-140 Old Bathurst Road

Suburb, State: Emu Plains, NSW

City, Country: Sydney, Australia

Postcode: 2750

Website: www.acoaus.com.auEmail address: sales@acoaus.com.au

Phone number: +61 2 4747 4000

Legal and trading name of the importer (if applicable):

ACO Limited

Address for service:

Street name:	35 Te Tiki Road	Suburb:	Mangere
City, Country:	Auckland, New Zealand	Postcode:	2022
Website:	www.aconz.co.nz		
Email address:	info@aconz.co.nz		
Phone number:	0800 448 080		
NZBN:	9429030838697		

Relevant Building Code clauses:

NBZ E1/AS1 Surface water
NZBC E1/AS2 Surface water
NZBC E2/AS1 External moisture

Statement on how the building product is expected to contribute to compliance:

NZBC E1 Surface Water:

- E1.1/E1.2: ACO SlabDrain Polymer Concrete channel system has been designed to safeguard people from injury or illness, and other property from damage caused by surface water.
- E1.3.1/E1.3.2: Upon selecting the correct size channel for application and installed as per ACO documentation, ACO SlabDrain will protect property from surface water resulting from an event having a 10% probability of occurring annually or from surface water resulting from an event having a 2% probability of occurring entering a building.
- E1.3.3: When appropriately selected and installed correctly, ACO SlabDrain will convey surface water to an appropriate outflow using gravity flow where possible, avoid the likelihood of blockages and provide reasonable access for the maintenance and clearing of blockages within the channel drain system and avoid the likelihood of damage from superimposed loads of normal ground movement.

NZBC E2 External Moisture:

ACO SlabDrain may also be selected for use in E2/AS1 Level entry threshold drainage with supporting documentation & literature from ACO to support the application of the product in the given environment with acceptable, alternative solution as per E2/AS1.

Access covers & grates: ACO SlabDrain grates are available in load classes up to load class G (AS 3996). All access covers and grates are designed and manufactured in full compliance with the requirements of AS 3996. Other ACO Products are independently tested to meet the loading requirements of this standard.

NZBC B2/AS1 Durability:

If properly maintained with normal maintenance, ACO products installed in the correct application and according to ACO's installation instructions will hold their integrity for as long as the adjacent pavement will. ACO SlabDrain will meet the requirements of these such building elements as per B2.3.1 (b) 15 years and (c) not less than 5 years.

Limitations of the use of the building product:

All grates have been tested to AS 3996 standards and are identified by load classification. Concrete encasement for the installation must be adhered to for the selected load class, details for this can be found on the website for a variety of installation types and loadings: www.askaco.nz/aco-slabdrain/

ACO Drain channel bodies are highly resistant to chemical attack, and with the appropriate grate can be used in most environments where acids and dilute alkalis are encountered. Refer to the chemical resistance information found here: <https://www.acodrain.co.nz/resources/technical-data.htm>

Design requirements that would support the use of the building product:

ACO SlabDrain is intended for use in situations where surface water is expected and depth restrictions may occur, some examples are as follows.

Level surface requiring a channel to direct the movement of water towards an outlet.

If required, a fall towards an outlet can be installed by screeding, or building a fall within the channel.

All surface water is not intended to be drained through a permeable surface i.e. grass. In situations where the ponding of surface water is expected and may present a health and safety risk to the public.

Full access to the channel drain is required for maintenance or inspection.

Installation requirements:

The complete drainage system shall be by ACO and be installed for its intended purpose. Any deviation or partial use of the specified system and/or improper installation will void all warranties provided by ACO.

Installation of the channel drain is to be carried out by appropriately qualified personnel to applicable legislative requirements. All work should commence under the direct supervision of a certifying drainlayer as per the Plumbers, Gasfitters and Drainlayers Act 2006.

Please refer to the installation manual and relevant site installation files found on our website. Further site installation support is available: <https://askaco.nz/aco-slabdrain/>

Maintenance requirements:

Regular inspections of the trench drain are recommended. Frequency will depend on local conditions and environment but should at least occur annually.

Inspections should cover:

- Grates and locking devices.
- Pits (sumps) and rubbish baskets.
- Concrete surround & adjacent paving.

All items should be inspected for damage, blockage or movement and compared with site drawings if needed.

Is the building product/building product line subject to warning or ban under section 26? No

SlabDrain HK Series – Light to medium duty steel edged drains

H100K

100mm internal width
130mm external width

H200K

200mm internal width
260mm external width

H300K

300mm internal width
360mm external width

Wide choice of grates in a variety of materials and designs including Heelsafe® Anti-Slip grates.

Shallow depth
60mm, 80mm or
100mm (H100K)

Shallow depth
130mm (H200K)

Shallow depth
130mm (H300K)

Integrally cast-in galvanised steel edge rail provides additional strength and protects channel body from damage. (Stainless steel edge rail also available).


Profiled side walls provide channel strength and mechanical keying to concrete encasement.

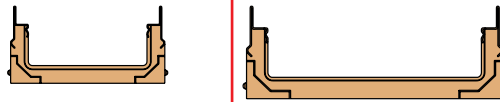
DrainLok patented, barless and boltless locking system provides quick fitting and removal of grates. Helps reduce installation time, maintenance time and cost.

Knock-outs are included on all channels to allow vertical outlet connection to the pipework.



Parts table

H100K – 60, 80, 100															
															
	H100K-60 100mm internal width				H100K-80 100mm internal width				H100K-100 100mm internal width						
	Part No.	Galv	S/S	Invert ¹ mm	Weight kg	Part No.	Galv	S/S	Invert ¹ mm	Weight kg	Part No.	Galv	S/S	Invert ¹ mm	Weight kg
Neutral channel (1m)	141803	141804		45	7.6	141785	141786		65	9.0	141787	141788		85	12.5
End cap	141805			60 ³	0.1	141793			80 ³	0.5	141794			100 ³	0.6
Debris strainer for 100mm drill-out	93488			–	0.1	93488			–	0.1	93488			–	0.1
Grate removal tool	01318			–	0.1	01318			–	0.1	01318			–	0.1

												
	H200K 200mm internal width				H300K 300mm internal width							
	Part No.	Galv	S/S	Invert ² mm	Weight kg	Part No.	Galv	S/S	Invert ² mm	Weight kg		
Neutral channel (1m)	141789	141790		100	27.2	141791	141792		100	33.7		
End cap	141795			130 ³	1.0	141796			130 ³	1.4		
Debris strainer for 100mm drill-out	93488			–	0.1				–	0.1		
Grate removal tool	01318			–	0.1	01318			–	0.1		

SF Sealant Groove – a groove is cast into the ends of every channel. The combined groove allows for a bead of appropriate flexible sealant to be inserted at joints, if required.



Interconnecting end profiles allow easy and effective joining of channels.

Notes:

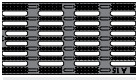

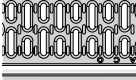





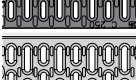
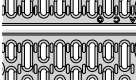
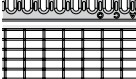

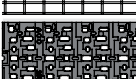
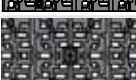

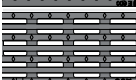



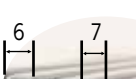




- H100K-60, H100K-80, H100K-100 overall channel depth add 15mm to invert depth.
- H200K, H300K overall channel depth add 30mm to invert depth.
- Overall depth of end caps.



SlabDrain HK Series DrainLok grates




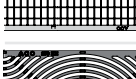








H100K grates

Length mm Part No. Wgt kg    

LOAD CLASS A – AS 3996 – 10kN – approximate wheel load 330kg							
	Type 494D Black Plastic Intercept Heelsafe® Anti-Slip	500	142459	0.8	✓	✓	✓
	Type 495D Grey Plastic Intercept Heelsafe® Anti-Slip	500	142460	0.8	✓	✓	✓
	Type 420D/421D Galv Slotted	1000	12610	2.7	✓	✗	✗
	Type 450D/452D Stainless Slotted	500	12611	1.4	✓	✗	✗
	Type 450D/452D Stainless Slotted	1000	12640	2.7	✓	✗	✗
	Type 450D/452D Stainless Slotted	500	12641	1.4	✓	✗	✗
LOAD CLASS B – AS 3996 – 80kN – approximate wheel load 2,670kg							
	Type 443D/444D Stainless 5 Star ¹ Heelsafe® Anti-Slip	1000	142217	3.2	✓	✓	✓
	Type 443D/444D Stainless 5 Star ¹ Heelsafe® Anti-Slip	500	142218	1.6	✓	✓	✓
	Type 437D/438D Galv Longitudinal Heelsafe® Anti-Slip	1000	132556	4.0	✓	✓	✓
	Type 437D/438D Galv Longitudinal Heelsafe® Anti-Slip	500	132551	2.1	✓	✓	✓
	Type 439D/440D Stainless Longitudinal Heelsafe® Anti-Slip	1000	132555	4.0	✓	✓	✓
	Type 439D/440D Stainless Longitudinal Heelsafe® Anti-Slip	500	132550	2.1	✓	✓	✓
LOAD CLASS D – AS 3996 – 210kN – approximate wheel load 8,000kg							
	Type 492D Plastic Slotted ¹ Heelsafe® Anti-Slip	500	132720	1.0	✓	✓	✓
	Type 425D/426D Galv Slotted	1000	12614	4.0	✓	✗	✗
	Type 425D/426D Galv Slotted	500	12615	2.0	✓	✗	✗
	Type 455D/457D Stainless Slotted	1000	12644	4.0	✓	✗	✗
	Type 455D/457D Stainless Slotted	500	12645	2.0	✓	✗	✗
	Type 405Q/406Q Galv Mesh ²	1000	142401	4.3	✗	✗	✗
	Type 405Q/406Q Galv Mesh ²	500	142402	2.2	✗	✗	✗
	Type 430Q/431Q Stainless Mesh ²	1000	142403	4.1	✗	✗	✗
	Type 430Q/431Q Stainless Mesh ²	500	142404	2.1	✗	✗	✗
	Type 480D Iron Wave ¹ Heelsafe® Anti-Slip	500	142461	4.5	✓	✓	✓
	Type 481Q Iron Decorative Heelsafe® Anti-Slip	500	97120	4.1	✓	✓	✓
	Type 461D Iron Slotted	500	12670	4.6	✓	✗	✗
	Type 478D Iron Intercept ¹ Heelsafe® Anti-Slip	500	142171	5.8	✓	✓	✓
	Type 477D Iron Galv Intercept ¹ Heelsafe® Anti-Slip	500	142172	5.8	✓	✓	✓

H200K grates

Length mm Part No. Wgt kg    

LOAD CLASS B – AS 3996 – 80kN – approximate wheel load 2,670kg							
	Type 643D/644D Stainless 5 Star ¹ Heelsafe® Anti-Slip	1000	142221	7.5	✓	✓	✓
	Type 643D/644D Stainless 5 Star ¹ Heelsafe® Anti-Slip	500	142222	3.7	✓	✓	✓
	Type 607Q/608Q Galv Transverse ²	1000	141749	7.8	✗	✗	✗
	Type 607Q/608Q Galv Transverse ²	500	141716	4.2	✗	✗	✗
LOAD CLASS D – AS 3996 – 210kN – approximate wheel load 8,000kg							
	Type 605Q/606Q Galv Mesh ²	1000	141741	13.8	✗	✗	✗
	Type 605Q/606Q Galv Mesh ²	500	141742	7.1	✗	✗	✗
	Type 630Q/631Q Stainless Mesh ²	1000	141746	13.0	✗	✗	✗
	Type 630Q/631Q Stainless Mesh ²	500	141747	6.6	✗	✗	✗
	Type 680D Iron Wave ¹ Heelsafe® Anti-Slip	500	142462	12.7	✓	✓	✓
	Type 681Q Iron Decorative Heelsafe® Anti-Slip	500	142177	12.0	✓	✗	✗
	Type 678D Iron Intercept ¹ Heelsafe® Anti-Slip	500	142173	10.0	✓	✓	✓
	Type 677D Iron Galv Intercept ¹ Heelsafe® Anti-Slip	500	142174	10.0	✓	✓	✓

Stainless Wire Cross-sections



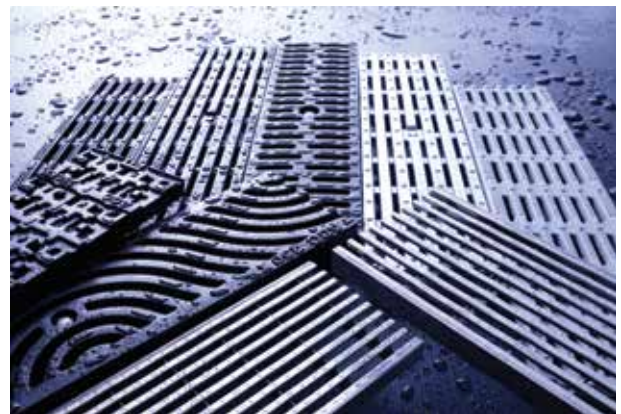
★ Wedgewire 5 Star

▲ Longitudinal

Heelsafe® Anti-Slip grates



ACO believes that pedestrian friendly grates and slip resistance go hand in hand. The grates with the trademark, **Heelsafe® Anti-Slip** comply to AS 3996, AS 4586 and all the specific user requirements described opposite. For more information visit www.heelsafe.com.au




SlabDrain's Heelsafe® Anti-Slip grate range (HK Series)



H300K grates



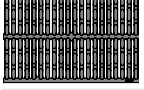


Length mm Part No. Wgt kg    

LOAD CLASS B – AS 3996 – 80kN – approximate wheel load 2,670kg

	Type 843D/844D Stainless 5 Star ¹ Heelsafe® Anti-Slip	1000	142225	12.5	✓	✓	✓	✓
		500	142226	6.2				
	Type 807Q/808Q Galv Transverse ²	1000	142413	12.4	✗	✗	✓	✗
		500	142414	6.3				

★ See Below pg 4

LOAD CLASS D – AS 3996 – 210kN – approximate wheel load 8,000kg

	Type 805Q Galv Mesh ²	500	142409	12.7	✗	✗	✓	✗
	Type 830Q Stainless Mesh ²	500	142410	15.1				
	Type 880Q Iron Wave ¹ Heelsafe® Anti-Slip	500	142463	21.8	✓	✓	✓	✓
	Type 861Q Iron Slotted	500	13870	19.0	✓	✗	✓	✗
	Type 878Q Iron Intercept ¹ Heelsafe® Anti-Slip	500	93901	15.9	✓	✓	✓	✓
	Type 877Q Iron Galv Intercept ¹ Heelsafe® Anti-Slip	500	142176	15.9	✓	✓	✓	✓





▲ See Below pg 4

¹ Meets ASME A112.6.3 Section 7.12 (American high heel standard).

² Denotes QuickLok grates. QuickLok bar included in grate Part Number.

Specific user requirements

ACO's grates meet some or all of the legislative requirements described below:

-  Wheelchair compliant to AS 1428.2, Clause 9(c). Slots cannot exceed 13mm (width), 150mm (length). Longitudinal grates are to be placed at right angles to the principal direction of travel.
-  Grates designed to resist the penetration of a 10mm heel.
-  Bicycle tyre penetration resistant to AS 3996. Criteria on slot length dependant on slot width.
-  Pedestrian safe grates with slip resistance, rated to AS 4586.

DrainLok – barless and boltless locking system



Fast locking device removes the need for bars and bolts and improves the channels hydraulic capacity. The DrainLok mechanism simply clips into the channel edge rail for quick installation. ACO's DrainLok grates are fitted with anti-shunt lugs that restrict grate movement when installed, improving durability and longevity of the system.

1



PLACE GRATE

Position grate onto channel and align anti-shunt lugs with the recess in the rail.

2



SECURE GRATE

Push down or stand on the grate until it clicks into position.

3



GRATE REMOVAL

To remove first grate, insert grate removal tool into slots at the end of the grate and pull up sharply. Remaining grates can be removed by hand.

SlabDrain HSK Series – Heavy duty iron edged drains

H100SK

100mm internal width
160mm external width

H200SK

200mm internal width
260mm external width

H300SK

300mm internal width
360mm external width

Ductile iron grates – heavy duty grates to load class G (approx. 30 tonne wheel load).

'Anti-shunt' lugs – recesses in grate fit around lugs on the edge rail to prevent longitudinal movement.

Shallow depth
100mm (H100SK)

Integrally cast-in ductile iron edge rail – provides maximum strength and protection for channel body.

Shallow depth
130mm (H200SK)

Profiled side walls – provide channel strength and mechanical keying to concrete encasement.

PowerLok – a patented, barless and boltless locking system that provides quick fitting and removal of grates.

Shallow depth
130mm (H300SK)


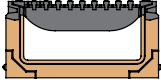

SF Sealant Groove – a groove is cast into the ends of every channel. The combined groove allows for a bead of appropriate flexible sealant to be inserted at joints, if required.

Knock-outs are included on all channels to allow vertical outlet connection to the pipework.

Interconnecting end profiles allow easy and effective joining of channels.



Parts table

	 H100SK 100mm internal width			 H200SK 200mm internal width			 H300SK 300mm internal width		
	Channel Part No.	Invert ¹ mm	Weight kg	Channel Part No.	Invert ² mm	Weight kg	Channel Part No.	Invert ² mm	Weight kg
Neutral channel (1m)	93412	75	20.4	63456	100	27.6	63466	100	37.3
End cap	97334	100 ³	0.5	93460	130 ³	0.5	93470	130 ³	0.6
Debris Strainer for 100mm knockout	93488	–	0.1	93488	–	0.1	–	–	–
Grate removal tool	01318	–	0.1	01318	–	0.1	01318	–	0.1
PowerLok safety clip	10443	–	–	10443	–	–	10443	–	–

Notes:



- H100SK overall channel depth, add 25mm to invert depth.
- H200SK, H300SK overall channel depth, add 30mm to invert depth.
- Overall depth of end caps.



SlabDrain HSK Series PowerLok grates

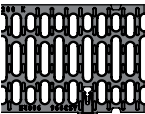
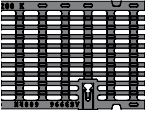
H100SK grates

Length mm Part No. Wgt kg    

LOAD CLASS G – AS 3996 – 900kN – approximate wheel load 30,000kg								
	Iron Slotted	500	96082	5.6	✓	✗	✓	✗
	Iron Intercept ¹ Heelsafe® Anti-Slip	500	141299	6.8	✓	✓	✓	✓

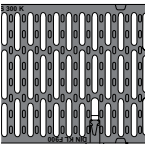
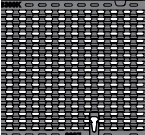
H200SK grates

Length mm Part No. Wgt kg    

LOAD CLASS G – AS 3996 – 900kN – approximate wheel load 30,000kg								
	Iron Slotted	500	71976	14.5	✗	✗	✓	✗
	Iron Intercept ¹ Heelsafe® Anti-Slip	500	142685	8.5	✓	✓	✓	✓

H300SK grates





Length mm Part No. Wgt kg    

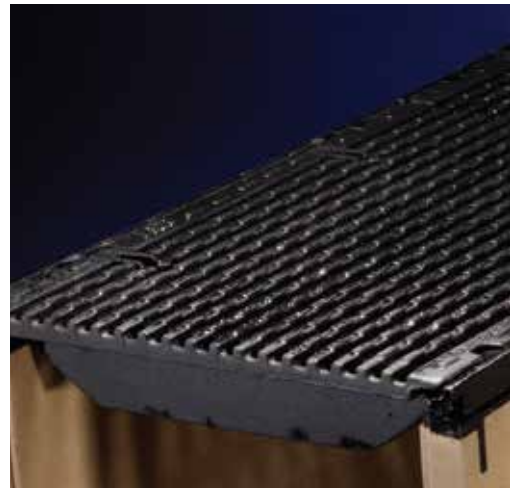
LOAD CLASS G – AS 3996 – 900kN – approximate wheel load 30,000kg								
	Iron Slotted	500	02445	24.4	✗	✗	✓	✗
	Iron Intercept ¹ Heelsafe® Anti-Slip	500	142686	15.0	✓	✓	✓	✓

¹ Meets ASME A112.6.3 Section 7.12 (American high heel standard).

Specific user requirements

ACO's grates meet some or all of the legislative requirements described below:

-  AS 1428.2, Clause 9(c) – slots cannot exceed 13mm (width); 150mm (length). Longitudinal grates need to be placed at right angles to the principal direction of travel.
-  Grates designed to resist the penetration of a 10mm heel.
-  Bicycle tyre penetration resistance to AS 3996. Criteria on slot length dependant on slot width.
-  Pedestrian safe grates with slip resistance. Rated to AS 4586.



Iron Intercept Heelsafe® Anti-Slip grate

PowerLok – barless and boltless locking system



To open PowerLok, insert tool between rail and PowerLok device.



Rotate tool 90°; PowerLok device should push away from rail.



To close, place hook part of tool into 'V' and push towards rail.

PowerLok – safety clip (optional)



For areas of security or safety concerns, the PowerLok safety clip provides a visual alert to confirm the grate is locked and secure.



The safety clip push-fits next to the locked PowerLok device. Safety clip sits flush with grate surface and grate cannot be unlocked.



To open PowerLok device, the safety clip must be removed. If no red block is visible, the locking is not guaranteed. This provides a visual alert that grates may not be locked.