

# ACO Surface Water Management



**ACO DRAIN®**  
*Slab Drain Leaflet*

**Introduction to the shallow channel SlabDrain System**

**H100K/H100SK – 100mm width, metallic edge channels**

**H200K/H200SK – 200mm width, metallic edge channels**

**H300K/H300SK – 300mm width, metallic edge channels**



## ACO DRAIN®

ACO Drain® is the leading modular trench drain system and is ideal for commercial applications ranging from petrol stations to airports.

ACO Drain® systems comprise Polycrete® Channels\*, factory manufactured modular units made from corrosion resistant polymer concrete. Channels are to be used with grates from a variety of materials for all loading applications. ACO Drain® systems are available in 50mm, 100mm, 200mm and 300mm internal widths, and most systems have a built-in slope for up to 40 continuous metres.

The ACO Drain® brand is segmented into different product ranges, dependent on use.

### 1. Standard Products

KlassikDrain  
PowerDrain  
SlabDrain

### 2. Specialty Products

Brickslot  
MiniKlassik  
Grated Pits



## SlabDrain

SlabDrain is available in 100mm, 200mm and 300mm widths and is a shallow invert trench drain comprising modular Polycrete® Channels\*. The range is ideal where site depth restrictions are of concern. Each interconnecting unit is manufactured complete with integrally cast metal edge rails.

A variety of grates is available in different materials and styles up to load class G (AS 3996). This is equivalent to approximately 30 tonne wheel load. There is also a specialist range of grates marketed under the trademark, Heelsafe® Anti-Slip. These are pedestrian friendly grates with certified slip ratings to AS 4586.

For quick fitting and removal during installation and maintenance, most grates are locked down with a patented, barless and boltless mechanism, DrainLok or PowerLok.

\* Polycrete® refers to ACO Products made from polymer concrete

### Typical applications

- *Restricted depth applications*
- *Parking stations*
- *Elevated slabs*
- *Retro-fit*
- *Threshold applications*
- *Balconies*
- *Outdoor entertainment areas*



# 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.

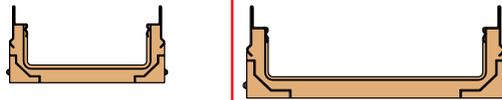
DrainLok patented, barless and boltless locking system provides quick fitting and removal of grates. Helps reduce installation time, maintenance time and cost.

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 <sup>1</sup> mm	Weight kg	Part No.	Galv	S/S	Invert <sup>1</sup> mm	Weight kg	Part No.	Galv	S/S	Invert <sup>1</sup> 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 <sup>3</sup>	0.1	141793			80 <sup>3</sup>	0.5	141794			100 <sup>3</sup>	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 <sup>2</sup> mm	Weight kg	Part No.	Galv	S/S	Invert <sup>2</sup> mm	Weight kg		
Neutral channel (1m)	141789	141790		100	27.2	141791	141792		100	33.7		
End cap	141795			130 <sup>3</sup>	1.0	141796			130 <sup>3</sup>	1.4		
Debris strainer for 100mm drill-out	93488			–	0.1	93488			–	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.

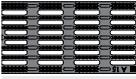
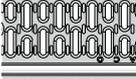
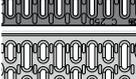
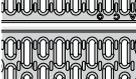
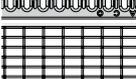
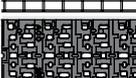
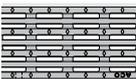
### Notes:

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

# SlabDrain HK Series DrainLok grates

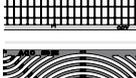
## H100K grates

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 <sup>1</sup> Heelsafe® Anti-Slip	1000	142217	3.2	✓	✓	✓
	Type 443D/444D Stainless 5 Star <sup>1</sup> 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 <sup>1</sup> 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 <sup>2</sup>	1000	142401	4.3	✗	✗	✗
	Type 405Q/406Q Galv Mesh <sup>2</sup>	500	142402	2.2	✗	✗	✗
	Type 430Q/431Q Stainless Mesh <sup>2</sup>	1000	142403	4.1	✗	✗	✗
	Type 430Q/431Q Stainless Mesh <sup>2</sup>	500	142404	2.1	✗	✗	✗
	Type 480D Iron Wave <sup>1</sup> 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 <sup>1</sup> Heelsafe® Anti-Slip	500	142171	5.8	✓	✓	✓
	Type 477D Iron Galv Intercept <sup>1</sup> 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 <sup>1</sup> Heelsafe® Anti-Slip	1000	142221	7.5	✓	✓	✓
	Type 643D/644D Stainless 5 Star <sup>1</sup> Heelsafe® Anti-Slip	500	142222	3.7	✓	✓	✓
	Type 607Q/608Q Galv Transverse <sup>2</sup>	1000	141749	7.8	✗	✗	✗
	Type 607Q/608Q Galv Transverse <sup>2</sup>	500	141716	4.2	✗	✗	✗
LOAD CLASS D – AS 3996 – 210kN – approximate wheel load 8,000kg							
	Type 605Q/606Q Galv Mesh <sup>2</sup>	1000	141741	13.8	✗	✗	✗
	Type 605Q/606Q Galv Mesh <sup>2</sup>	500	141742	7.1	✗	✗	✗
	Type 630Q/631Q Stainless Mesh <sup>2</sup>	1000	141746	13.0	✗	✗	✗
	Type 630Q/631Q Stainless Mesh <sup>2</sup>	500	141747	6.6	✗	✗	✗
	Type 680D Iron Wave <sup>1</sup> Heelsafe® Anti-Slip	500	142462	12.7	✓	✓	✓
	Type 681Q Iron Decorative Heelsafe® Anti-Slip	500	142177	12.0	✓	✗	✗
	Type 678D Iron Intercept <sup>1</sup> Heelsafe® Anti-Slip	500	142173	10.0	✓	✓	✓
	Type 677D Iron Galv Intercept <sup>1</sup> Heelsafe® Anti-Slip	500	142174	10.0	✓	✓	✓

## Stainless Wire Cross-sections



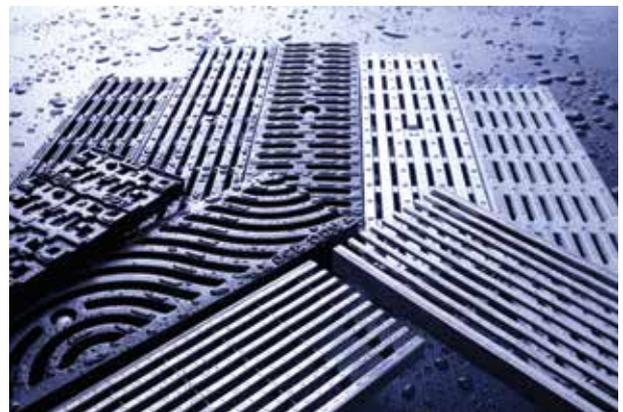
★ Wedgewire 5 Star

▲ Longitudinal

## Heelsafe® Anti-Slip grates



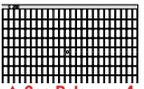
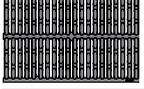
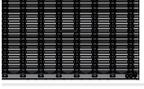
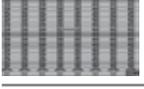
ACO believes that pedestrian friendly grates and slip resistance go hand in hand. The grates with the trademark, **Heelsafe® Anti-Slip** comply to AS 3996, AS 4586 and all the specific user requirements described opposite. For more information visit [www.heelsafe.com.au](http://www.heelsafe.com.au)



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 <sup>1</sup> Heelsafe® Anti-Slip	1000	<b>142225</b>	12.5	✓	✓	✓
		500	<b>142226</b>	6.2	✓	✓	✓
★ See Below pg 4							
	Type 807Q/808Q Galv Transverse <sup>2</sup>	1000	<b>142413</b>	12.4	✗	✗	✓
		500	<b>142414</b>	6.3	✗	✗	✗
★ See Below pg 4							
LOAD CLASS D – AS 3996 – 210kN – approximate wheel load 8,000kg							
	Type 805Q Galv Mesh <sup>2</sup>	500	<b>142409</b>	12.7	✗	✗	✓
	Type 830Q Stainless Mesh <sup>2</sup>	500	<b>142410</b>	15.1	✗	✗	✗
▲ See Below pg 4							
	Type 880Q Iron Wave <sup>1</sup> Heelsafe® Anti-Slip	500	<b>142463</b>	21.8	✓	✓	✓
	Type 861Q Iron Slotted	500	<b>13870</b>	19.0	✓	✗	✓
	Type 878Q Iron Intercept <sup>1</sup> Heelsafe® Anti-Slip	500	<b>93901</b>	15.9	✓	✓	✓
	Type 877Q Iron Galv Intercept <sup>1</sup> Heelsafe® Anti-Slip	500	<b>142176</b>	15.9	✓	✓	✓

<sup>1</sup> Meets ASME A112.6.3 Section 7.12 (American high heel standard).

<sup>2</sup> 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)

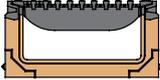
**SF Sealant Groove** – a groove is cast into the ends of every channel. The combined groove allows for a bead of appropriate flexible sealant to be inserted at joints, if required.

**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 <sup>1</sup> mm	Weight kg	Channel Part No.	Invert <sup>2</sup> mm	Weight kg	Channel Part No.	Invert <sup>2</sup> mm	Weight kg
Neutral channel (1m)	93412	75	20.4	63456	100	27.6	63466	100	37.3
End cap	97334	100 <sup>3</sup>	0.5	93460	130 <sup>3</sup>	0.5	93470	130 <sup>3</sup>	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	–	–

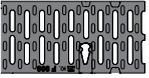
### Notes:

- 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

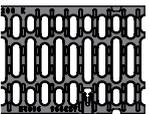
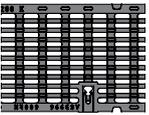
## H100SK grates

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 <sup>1</sup> Heelsafe® Anti-Slip	500	141299	6.8	✓	✓	✓	✓

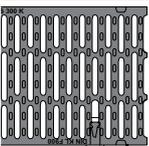
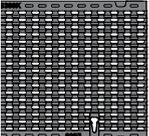
## H200SK grates

Length mm    Part No.    Wgt kg       

LOAD CLASS G – AS 3996 – 900kN – approximate wheel load 30,000kg								
	Iron Slotted	500	71976	14.5	✗	✗	✓	✗
LOAD CLASS D – AS 3996 – 210kN – approximate wheel load 8,000kg								
	Iron Intercept <sup>1</sup> Heelsafe® Anti-Slip	500	142685	8.5	✓	✓	✓	✓

## H300SK grates

Length mm    Part No.    Wgt kg       

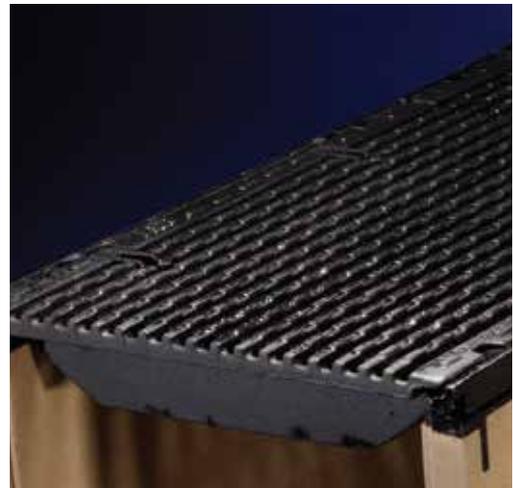
LOAD CLASS G – AS 3996 – 900kN – approximate wheel load 30,000kg								
	Iron Slotted	500	02445	24.4	✗	✗	✓	✗
LOAD CLASS D – AS 3996 – 210kN – approximate wheel load 8,000kg								
	Iron Intercept <sup>1</sup> Heelsafe® Anti-Slip	500	142686	15.0	✓	✓	✓	✓

<sup>1</sup> 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.

## ACO Products

### Building Drainage

#### ACO Wexel

Cast iron floor and roof drains

#### ACO Stainless

Industrial stainless steel linear drainage systems

#### ACO Food

Stainless steel drainage systems for food and beverage applications

#### ACO Gully

Stainless steel floor gullies for hygiene and chemical resistance.

#### ACO Pipe

Stainless steel push-fit waste pipe system.

#### ACO Buildline

Drainage products for thresholds, balconies, green roofs and building facades.

#### ACO Passavant

Grease separators, freestanding and in ground types

#### QuARTz by ACO

Designer bathroom floor drainage solutions

### Surface Water Management

#### ACO Drain

Modular trench drain systems for commercial, industrial and landscape applications.

#### ACO Sport

Surface drainage and building accessories for track & field.

#### ACO Infrastructure

Surface drainage products engineered for highways, urban roads and bridges.

#### ACO Cablemate

Electrical and communication pits/ducts with a variety of covers.

#### ACO StormBrixx

A unique and patented plastic geocellular storm water management system.

#### ACO Self

Simple drainage and building components

#### ACO Access

Access covers available in a number of sizes and materials

## ACO Limited

aconz.co.nz

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