

## Choosing the Correct Trench Drain

Trench drains are designed to capture and carry surface water. They give a neat linear appearance and complement simple slab/pavement grades. During planning, designers need to risk assess the importance of various issues surrounding a product's application and hydraulic performance requirements. These are summarised opposite.

In some instances, typically, wharves, it is most critical to address the physical capabilities of a product so that the correct load rating and materials are selected for a long service life. In other applications, where regular foot traffic is anticipated e.g. streetscape, then the choice of grate design is important. In situations where flood damage to property or personal risk are of concern e.g. thresholds, then it is prudent to focus closely on the hydraulic requirements.

ACO offers several support services to help designers mitigate or eliminate these risks whilst keeping within the design and cost restraints of the project (see below).

### 1. Application

How and where the product can be used.

#### 1a Loading

Traffic type and frequency.



#### 1b Durability

Address liquids to be drained and surrounding environment.



#### 1c User Requirements

Project specific site, user, aesthetic and legislative requirements including slip resistance.



### 2. Hydraulic Performance

Volume of liquid to be removed in a given timeframe.



## ACO Service & Support

ACO has an established Technical Services Department with many years experience advising on surface drainage.

This free service is offered with no obligation and is supported with extensive, high quality information, brochures and technical documentation.

Services include advice at project design stage through to on-site advice when required.

### 1. Trench Hydraulics

Flow calculations to ensure correct sizing of trenches.

### 2. Grate Hydraulics

Intake calculations to ensure flow is captured.

### 3. Run Layouts

Plan and profile layouts complete with bill of materials.

### 4. Ponding Analysis

Risk analysis of flood situations, including duration.

### 5. Chemical Resistance

Choosing correct materials to withstand work environment.



## Other ACO Product Ranges

### ACO INFRASTRUCTURE

A range of linear drainage solutions for transport infrastructure projects - roads, motorways, container ports, airport tarmacs and other heavy duty applications

### ACO SPORT

A range of surface drainage systems and ancillary products for sport fields, running tracks and stadiums

### ACO HOME

A range of economical domestic drainage products, ideal for homes, gardens and landscaped areas

### ACO STAINLESS

A range of high performance stainless steel drainage channels, grates and floor drains for hygiene and aesthetic applications

### QuARTz By ACO

A range of compact floor drainage systems, complete with the industry's largest selection of highly aesthetic grates

### ACO PASSAVANT

A range of above and below ground grease separators for full or partial disposal

### ACO PIPE

Grade 316 stainless steel socketed pipe systems. Chemically pickle passivated for optimum durability and corrosion resistance

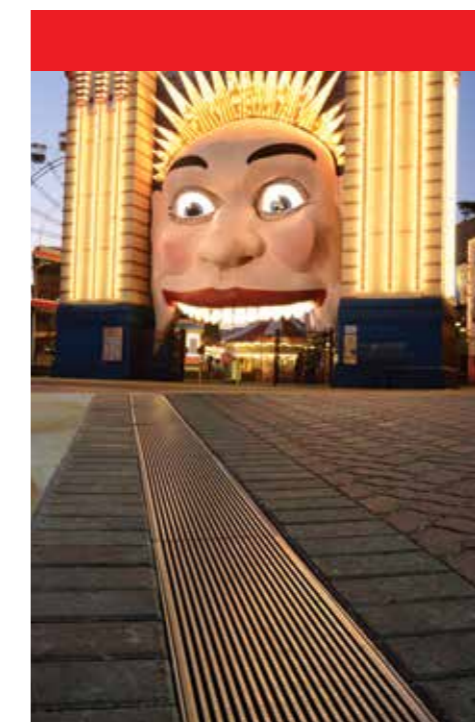
### ACO CABLEMATE

A range of electrical and communication cable jointing pits and surface ducting systems

### ACO ACCESS

A range of ductile iron, galvanised steel and composite access covers in a wide range of sizes and configurations from single to large multi-parts units

## Commercial Trench Drains



## ACO DRAIN®

Introduction and Overview Brochure

### A Summary of the ACO Drain® Product Brand

**KlassikDrain** - general purpose trench drains

**PowerDrain** - heavy duty trench drains

**SlabDrain** - shallow channel trench drains

**Specialty Products**

### ACO Polycrete Pty Ltd

ABN 65 050 102 942

[www.acoaus.com.au](http://www.acoaus.com.au)

#### Sales Hotlines

Australia 1300 765 226  
New Zealand 0800 448 080  
International +61 2 4747 4000  
Email [sales@acoaus.com.au](mailto:sales@acoaus.com.au)

#### Technical Services

Email [technical@acoaus.com.au](mailto:technical@acoaus.com.au)

#### NSW and Head Office

134-140 Old Bathurst Road  
Emu Plains NSW 2750  
Telephone +61 2 4747 4000  
Facsimile +61 2 4747 4040  
[aconsw@acoaus.com.au](mailto:aconsw@acoaus.com.au)

#### QLD

467 Tufnell Road  
Banyo QLD 4014  
Telephone (07) 3292 4500  
Facsimile (07) 3292 4599  
[acoqld@acoaus.com.au](mailto:acoqld@acoaus.com.au)

#### VIC & TAS

9 Overseas Drive  
Noble Park VIC 3174  
Telephone (03) 9790 8800  
Facsimile (03) 9790 8899  
[acovic@acoaus.com.au](mailto:acovic@acoaus.com.au)

#### WA

33-35 Sorbonne Crescent  
Canning Vale WA 6155  
Telephone (08) 6250 3700  
Facsimile (08) 6250 3799  
[acowa@acoaus.com.au](mailto:acowa@acoaus.com.au)

#### SA & NT

Unit 14, 17-19 Churchill Road North  
Dry Creek SA 5094  
Telephone (08) 8162 7800  
Facsimile (08) 8162 7899  
[acosa@acoaus.com.au](mailto:acosa@acoaus.com.au)

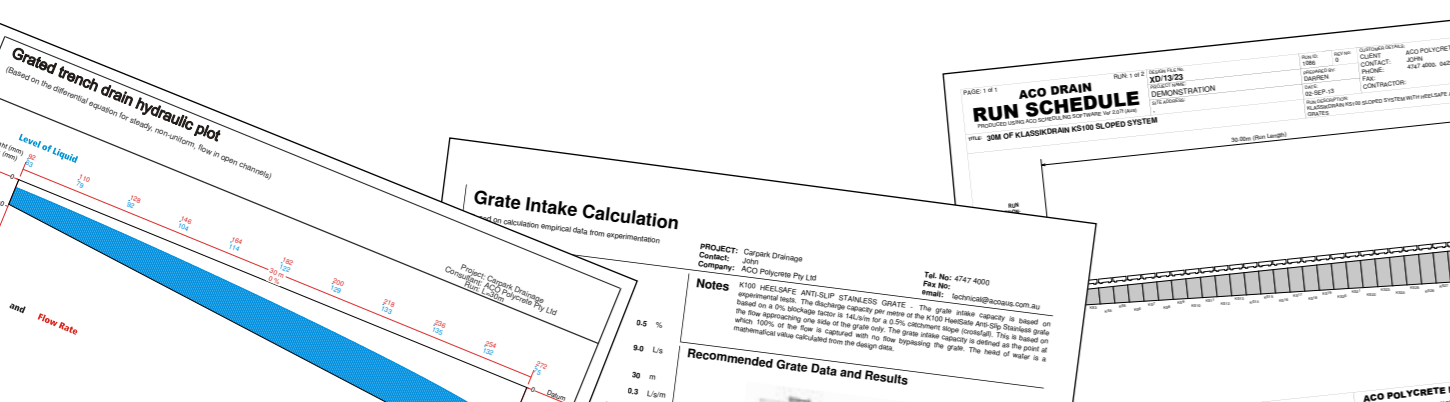
© 2017 ACO Polycrete Pty Ltd. All reasonable care has been taken in compiling the information in this document. All recommendations and suggestions on the use of ACO products are made without guarantee since the conditions of use are beyond the control of the company. It is the customer's responsibility to ensure that each product is fit for its intended purpose and that the actual conditions are suitable. ACO Polycrete Pty Ltd. pursues a policy of continuous product development and reserves the right to amend specifications without notice.



Quality Endorsed Company

ISO 9001  
OEC 1883  
S4I Global  
Assurance Services

BR0007  
(2017- 5000)



## The ACO Group

Established in 1946, the ACO Group has manufactured products for over 60 years for the construction and building industry.

The group operates on a global basis through subsidiaries and manufacturing facilities in over 40 countries. ACO employs more than 3,800 people and has sales in excess of \$1 billion.

ACO, established in Australia in 1993, offers an extensive portfolio of stormwater and building drainage products; cable pit and ducting enclosures; access covers and other products for niche applications, both external and internal.

ACO's manufacturing plant is located at Emu Plains, NSW and supports five offices and warehouses throughout Australia. ACO also supplies products to South East Asia and the Pacific Islands through its partners.

## ACO Drain®

ACO Drain® is produced at ACO's manufacturing facility in NSW.

ACO Drain® offers a comprehensive range of trench drain solutions for every application.

Products are available in a variety of widths, depths, lengths, and load ratings with grates to suit.



## ACO. The future of drainage.

### System Chain

ACO's products address all the phases of the water cycle and support Water Sensitive Urban Design (WSUD).

ACO's Surface Water Management products address the 'Collect', 'Clean', 'Hold' and 'Release' phases of the water cycle in the external environment.



### Service Chain

To support the extensive product range, ACO provides support from the initial design conception to the final installation.

Services include in-house project specific design services, field support and post-installation advice. Product training and professional education seminars provide the design community with updates on the latest product innovations.

## Product Overview

### KlassikDrain - K100/K200/K300

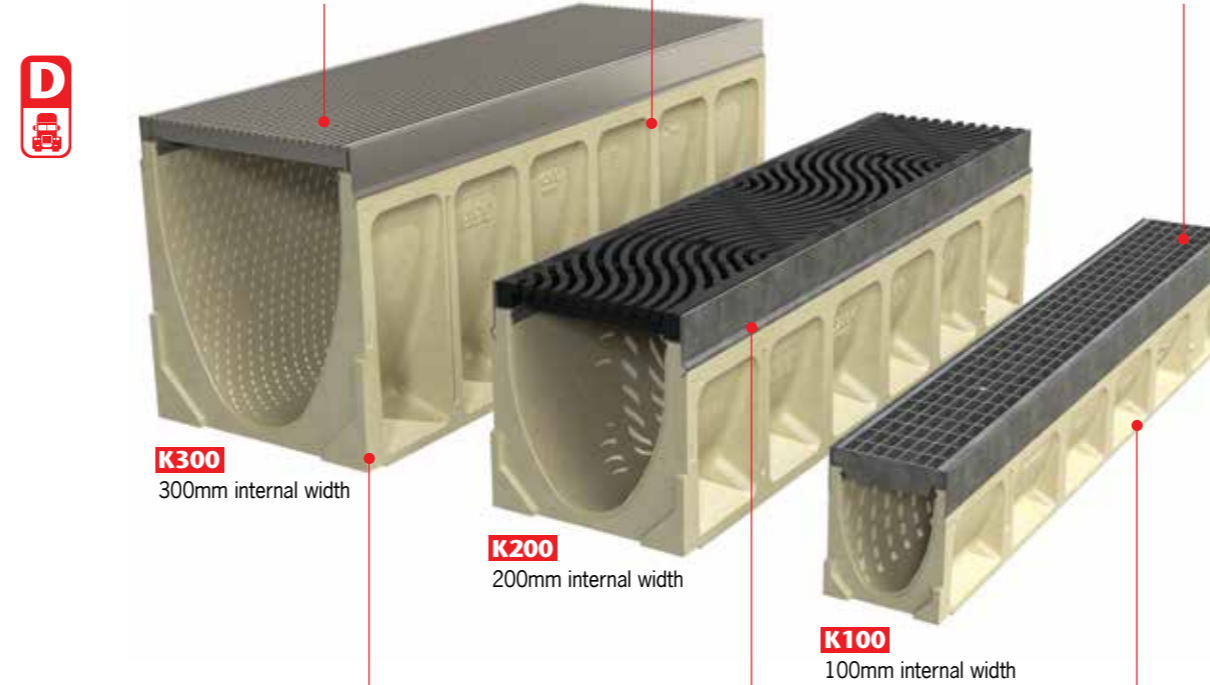
#### General purpose steel edged, modular trench drain system

A general purpose modular drainage system, ideal for pedestrian, commercial and light industrial applications. Available in a choice of three internal widths – 100mm, 200mm and 300mm.

**Wide choice of grates** - in various materials and styles (including Heelsafe® Anti-Slip) for applications from load class A to load class D (up to approx. 8 tonne wheel load) AS 3996.

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

**DrainLok** - patented, barless and boltless locking system provides quick fitting and removal of grates. Helps reduce installation/maintenance time and cost. Provides four locking points per metre.



**Polymer concrete** - a durable, yet lightweight material made from polyester resin binder reinforced by mineral aggregates and fillers.

**Steel edge rail** - provides additional strength and protects channel body from damage. (Galvanised or stainless steel rail available.)

**Sloped (0.5%) channel units** - metre long units provide 40 metre continuous slope. This equates to 5mm fall per metre. Five neutral channels extend run lengths. Four half-metre units and accessories also available.

### PowerDrain - S100K/S200K/S300K

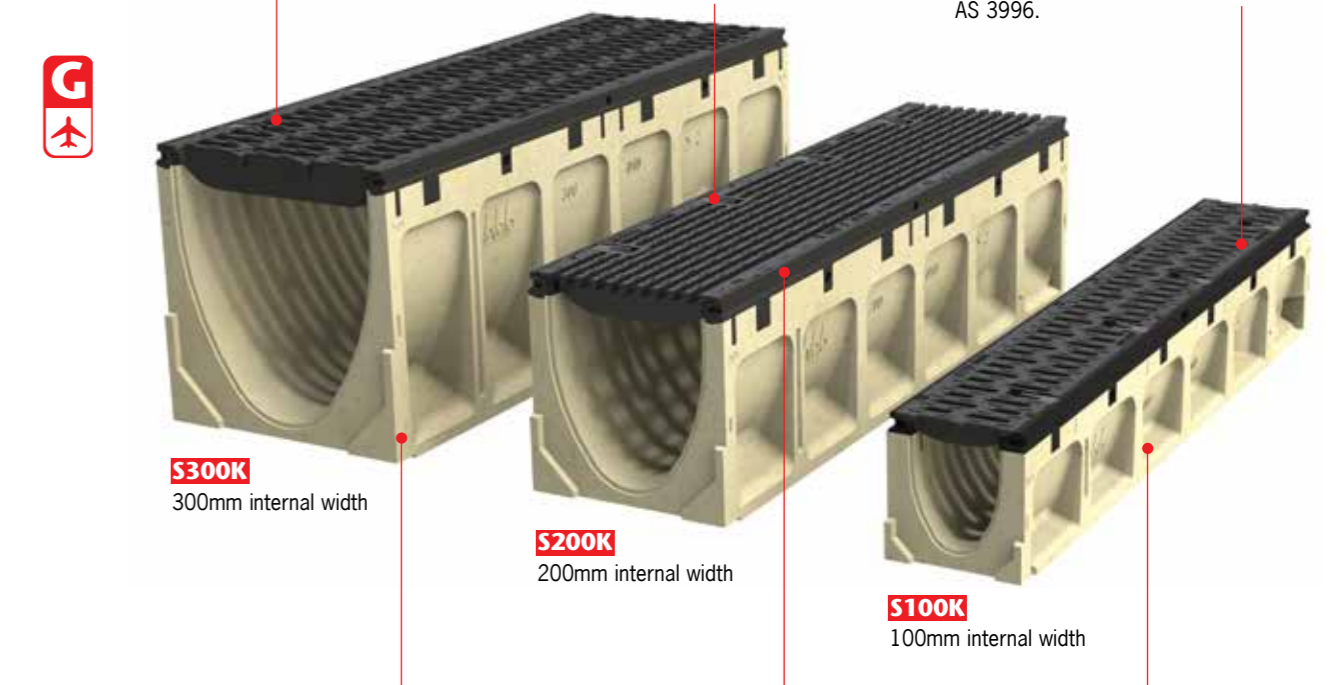
#### Heavy duty ductile iron edged, modular trench drain system

A heavy duty modular drainage system, ideal for industrial and heavy commercial applications. Available in a choice of three internal widths – 100mm, 200mm and 300mm.

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

**PowerLok** - a patented, barless and boltless locking system that provides quick fitting and removal of grates. Helps reduce installation/maintenance time and cost.

**Ductile iron grates** - heavy duty iron grates in a choice of Slotted or Intercept Heelsafe® Anti-Slip, rated up to load Class G (approx. 30 tonne wheel load) AS 3996.



**Polymer concrete** - a durable, yet lightweight, material made from polyester resin binder reinforced by mineral aggregates and fillers.

**Ductile iron edge rail** - integrally cast-in rail provides maximum strength and protection for channel body.

**Sloped (0.5%) channel units** - metre long units provide 40 metre continuous slope. This equates to 5mm fall per metre. Five neutral channels extend run lengths. Four half metre units and accessories also available.

### SlabDrain

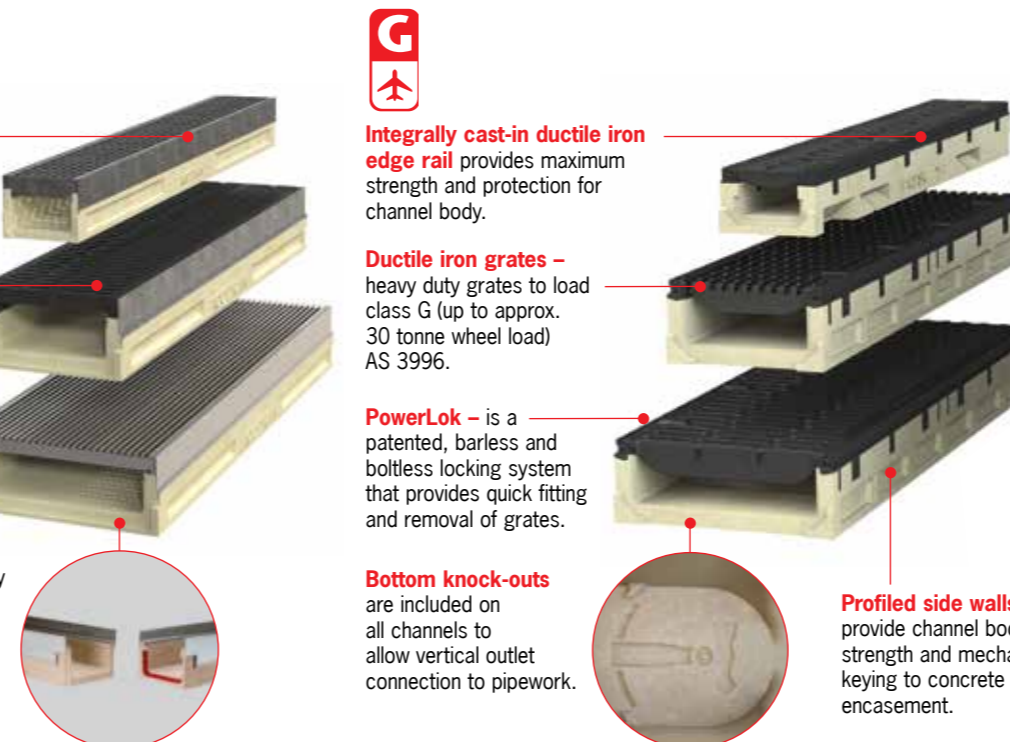
#### Shallow invert metal edged, modular trench drain system

A shallow invert modular drainage system in a choice of 3 widths - 100mm, 200mm and 300mm.

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

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

**Interconnecting end profiles** allow easy and effective joining of channels.  
**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.



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

**Ductile iron grates** - heavy duty grates to load class G (up to approx. 30 tonne wheel load) AS 3996.

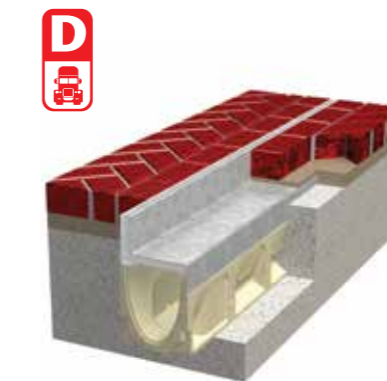
**PowerLok** - is a patented, barless and boltless locking system that provides quick fitting and removal of grates.

**Bottom knock-outs** are included on all channels to allow vertical outlet connection to pipework.

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

## Specialty Products

### Brickslot



**Brickslot** is a discreet, drainage solution for use with brick or stone pavers up to 63mm deep. The steel slot (galvanised or stainless) blends in with paving joints giving an aesthetic solution.

The **Brickslot** unit is typically used on the **KlassikDrain** K100 and K200 channels, but can also be used on the **SlabDrain** H100K and H200K channels.

The access unit enables easy entry to the channel or in-line pit for maintenance.

### MiniKlassik



**MiniKlassik** is a compact trench drainage system for high profile, small-scale projects where a barrier is required to separate wet and dry areas.

A choice of **Heelsafe® Anti-Slip** grates are available in stainless steel and ductile iron.

**DrainLok** is a patented, barless and boltless locking system that provides quick fitting and removal of grates reducing installation time, maintenance time and cost.

### Grated Pits



For use where an existing pavement has been finished with undulating falls for point drainage, or for the collection of concentrated surface water runoff.

Grated pits are available in a wide range of sizes, are lightweight, easy to transport and handle. Choice of grates in 3 styles including **Heelsafe® Anti-Slip**. Lockable grates also available.

## ACO DRAIN®