

Choosing the Correct Trench Drain

Trench drains are designed to capture and carry surface water. They give a neat linear appearance and compliment 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

- where and how product to 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 and 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 Hydraulic Service

Flow calculations to ensure correct sizing of trenches

2. Grate Hydraulics

Intake calculations to ensure flow is captured

3. Run Layout Service

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



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 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 Limited

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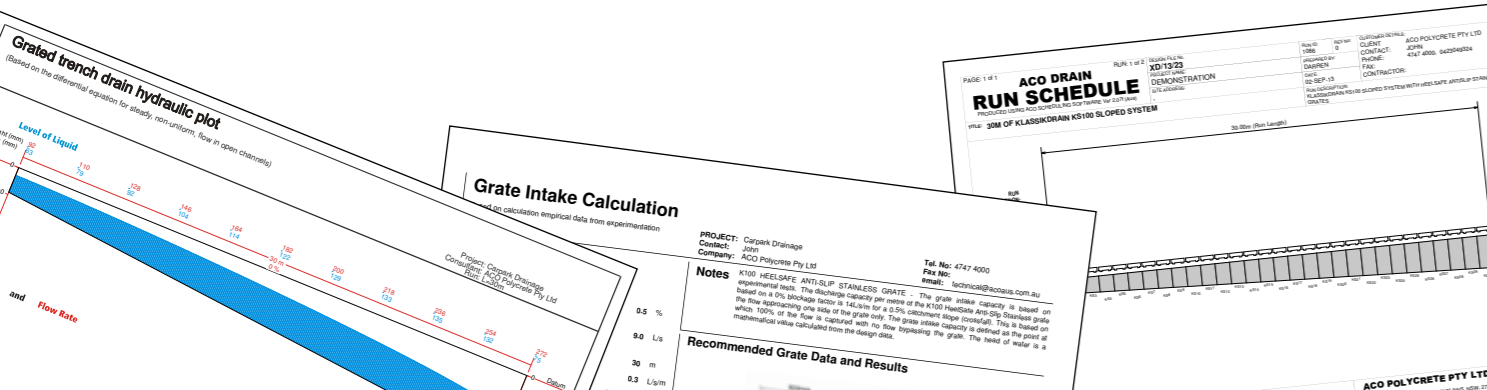
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The ACO Group

Established in 1946, the ACO Group has manufactured products for over 60 years for the construction industry. The group operates on a global basis through its subsidiaries and manufacturing facilities in over 44 countries. ACO employs more than 5,000 people and has sales in excess of NZ\$ 1.56 billion.

ACO was established in Australia in 1993, and was introduced to the New Zealand market over 25 years ago. Established in 2012, ACO uses a variety of materials for its extensive range of surface water drainage, utility enclosure, building drainage and residential products.

ACO Drain®

ACO Drain® is produced at the company's modern manufacturing facilities.

ACO Drain® offers the most comprehensive range of trench drain solutions for every application. Products come in a variety of widths, depths, lengths, and load ratings with grates to suit.



ACO. The future of drainage.

System Chain

ACO is a global leader in water management, with products to collect, clean, hold and release water; addressing all phases of the water cycle and supporting water sensitive urban design.

ACO Drain® focuses on products that address the collection phase.



Service Chain

To support this extensive product range, ACO provides full support from, design conception to installed product.

Services include product training and continuing education seminars to provide updates on product innovation. Full in-house project specific design services, field support and post-installation advice is also available.



Product Overview

KlassikDrain - K100/K200/K300

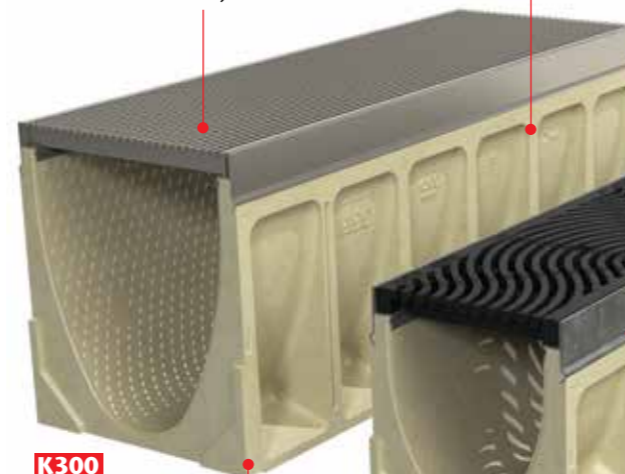
General purpose steel edge, modular trench drain system

A general purpose modular drainage system, in a choice of 3 internal widths - 100mm, 200mm & 300mm. Ideal for pedestrian, commercial and light industrial applications.

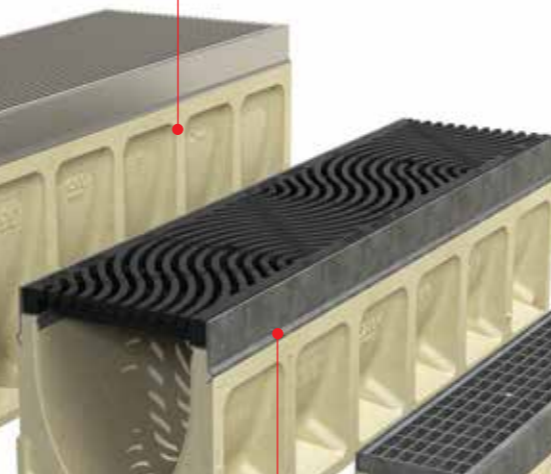
Wide choice of grates - in various materials and styles (including **Heelsafe® Anti-Slip**) for applications from load class A to load class D (up to approx. 8 tonne wheel load) AS 3996.

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

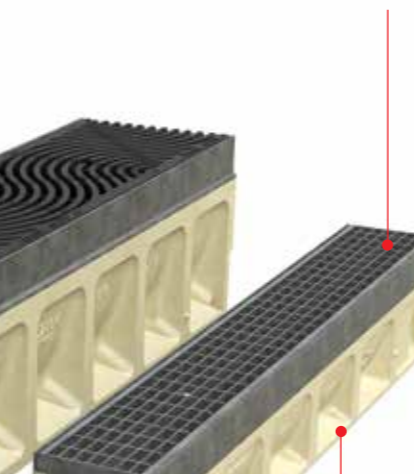
QuickLok - patented, boltless locking system provides quick fitting and removal of grates. Helps reduce installation/maintenance time and cost. Provides two lockings per metre.



K300
300mm internal width



K200
200mm internal width



K100
100mm internal width

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

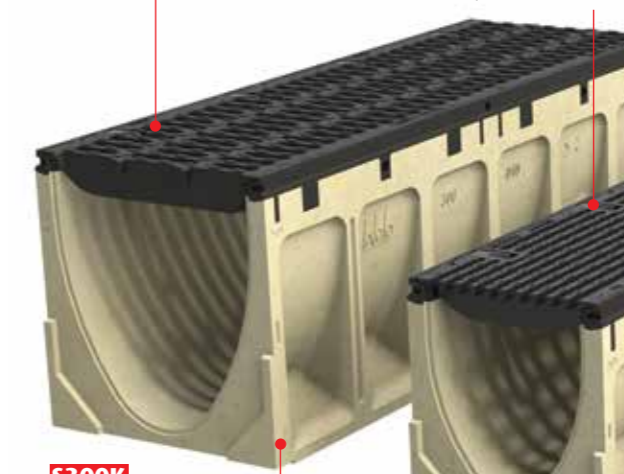
Heavy duty ductile iron edged, multiple lock, modular trench drain systems

An extra heavy duty modular drainage system, in a choice of 3 internal widths - 100mm, 200mm & 300mm. Ideal for industrial and heavy commercial applications.

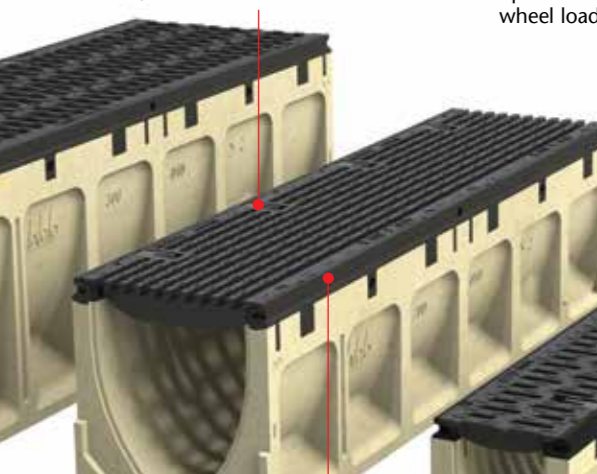
'Anti-shunt' lugs - recesses in grate fit around lugs on the edge rail to prevent longitudinal movement.

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

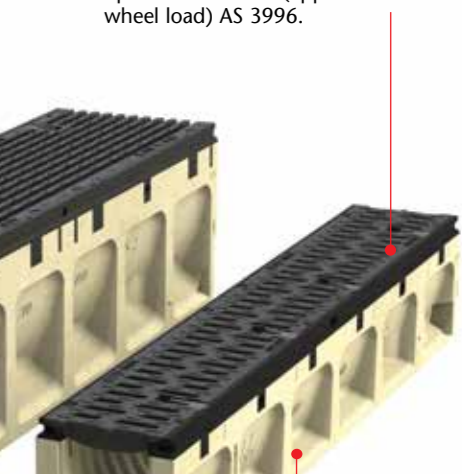
Ductile iron grates - heavy duty iron grates in a choice of Slotted or Intercept **Heelsafe® Anti-Slip**, rated up to load Class G (approx. 30 tonne wheel load) AS 3996.



S300K
300mm internal width



S200K
200mm internal width



S100K
100mm internal width

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.

ACO DRAIN®



SlabDrain

Shallow invert metal edged, modular trench drain system.

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



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

QuickLok - patented, boltless locking system provides quick fitting and removal of grates. Helps reduce installation/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.

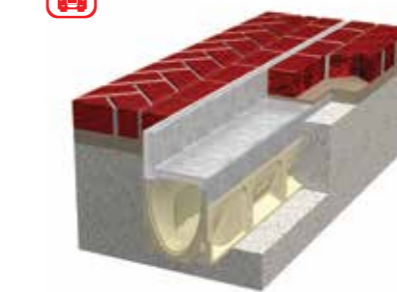
PowerLok - is a patented, boltless locking system that provides quick fitting and removal of grates.

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 discrete, drainage solution for use with brick or stone pavers up to 63mm deep. The 10mm steel slot (galvanised or stainless) blends in with paving joints giving an aesthetic solution.

The **Brickslot** unit is typically used on the **KlassikDrain** K100 channel, but can also be used on the **SlabDrain** H100K channel if depth restrictions are a concern. An access unit provides discrete access to the channel or in-line pit for maintenance.

MiniKlassik



Compact trench drains for high profile, aesthetic applications where a barrier is required to separate wet and dry areas.

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

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**.